

## Air Conditioning System

Installation Manual for



350-00-011-HP AEC Basic Version

(Revised: April 22, 2024, Rev: AE)

| 1  | KIT INVENTORY                  |                     |
|----|--------------------------------|---------------------|
| 2  | AIRCRAFT PRE-INSPECTION        |                     |
| 3  | AIRCRAFT PREPARATION           |                     |
| 4  | REMOVAL OF FACTORY COMPONENTS  |                     |
| 5  | INSTALLATION OF AFT EVAPORATOR |                     |
| 6  | INSTALLATION OF CONDENSER      |                     |
| 7  | INSTALLATION OF FWD EVAPORATOR | \$10 00 E           |
| 8  | INSTALLATION OF COMPRESSOR     |                     |
| 9  | INSTALLATION OF ELECTRICAL     | THE PERSON NAMED IN |
| 10 | INSTALLATION OF HOSES          | The Party           |
| 11 | PAPERWORK                      | 7                   |
| 12 | CONTINUED AIRWORTHINESS        |                     |
| 13 | PARTS BREAK DOWN               | できる 大学              |
| 14 | T&C/WARRANTY/RMA               |                     |
| 15 | TROUBLE SHOOTING GUIDE         |                     |



### **RECORD OF REVISIONS**

| Revision | Description                            | Date          | Revised By |
|----------|--|---------------|------------|
| IR       | Initial Release                        | 04 Nov. 2009  | IFS        |
| А        | Revised Compressor Install             | 05 Feb. 2010  | IFS        |
| В        | Added EMI-RFI filter                   | 28 Jan. 2011  | IFS        |
| С        | Updated sect. 11, 12, 13, 14 & 15      | 21 Mar. 2011  | IFS        |
| D        | Section 1 & 6 Revised                  | 20 May, 2011  | IFS        |
| Е        | Updated Section 1                      | 14 Feb. 2013  | RSG        |
| F        | Updated Section 1                      | 19 Mar. 2014  | RSG        |
| G        | Formatted document to RSG Products     | 01 Jun. 2015  | RSG        |
| Н        | Updated sections 1, 5 - 8, & 11        | 06 Nov. 2015  | RSG        |
| К        | Updated Section 1                      | 24 Mar. 2016  | RSG        |
| L        | Updated sections 1, 5-7, and 9 and 11. | 03 Mar. 2017  | RSG        |
| М        | Updated sections 1, 6, 7, & 8          | 25 Sept. 2018 | RSG        |
| N        | Updated Section 1                      | 25 Jan. 2019  | RSG        |
| Р        | Updated Section 1                      | 20 Jan. 2020  | RSG        |
| R        | Updated Section 1                      | 17 Mar. 2020  | RSG        |
| S        | Updated MSDS Section 1                 | 4 June 2020   | RSG        |
| Т        | Updated sections 5 & 6                 | 3 July 2021   | RSG        |
| U        | Updated sections 1 & 7                 | 11 Nov. 2021  | RSG        |
| V        | Updated section 9                      | 16 Dec. 2021  | RSG        |
| W        | Updated section 5 & 7                  | 18 Mar. 2022  | RSG        |
| Х        | Updated section 1, 5 & 7               | 26 May 2022   | RSG        |
| Υ        | Updated sections 1, & 5-14             | 13 Aug. 2022  | RSG        |
| AA       | Updated sections 5, 7, 8, 10, 11, & 12 | 5 Dec. 2022   | RSG        |
| AB       | Updated section 1, 5, 7, 8, 11, & 14   | 17 Mar. 2023  | RSG        |
| AC       | Updated section 1                      | 17 April 2023 | RSG        |
| AD       | Updated section 1 kit list             | 14 July 2023  | RSG        |
| AE       | Updated sections 1, 5-8, 10-12, & 14   | 22 April 2024 | RSG        |

### **LIST OF EFFECTIVE PAGES**

| Rev | Section | Pgs | Description               | Date     |
|-----|---------|-----|---------------------------|----------|
| Υ   | 1       | 10  | Updated 1-3-AS350 drawing | 08/13/22 |

| Г Г |   |        |  |          |
|-----|---|--------|--|----------|
| D   | 1 | Insert | Revised Parts List   | 05/20/11 |
| E   | 1 | Insert | Revised Parts List   | 02/14/13 |
| F   | 1 | Insert | Insert Revised Parts List 03/1   |          |
| G   | 1 | Insert | Revised Parts List and added MSDS docs.                                    | 06/01/15 |
| Н   | 1 | Insert | Revised Parts List   | 11/06/15 |
| K   | 1 | Insert | Revised Parts List   | 03/24/16 |
| L   | 1 | Insert | Revised Parts List   | 03/03/17 |
| М   | 1 | Insert | Revised Parts List   | 09/25/18 |
| N   | 1 | Insert | Revised Parts List   | 01/25/19 |
| Р   | 1 | Insert | Revised Parts List   | 01/20/20 |
| R   | 1 | Insert | Revised Parts List   | 03/17/20 |
| U   | 1 | Insert | Revised Parts List   | 11/11/21 |
| Χ   | 1 | 12-27  | Revised Kit Parts List   | 05/26/22 |
| Υ   | 1 | 11-26  | Revised Kit Parts List   | 08/13/22 |
| AB  | 1 | 7-22   | Updated Kit Parts List   | 03/17/23 |
| AC  | 1 | 7-22   | Revised Kit Inventory List   | 04/17/23 |
| AD  | 1 | 7-22   | Revised Kit Inventory List   | 07/14/23 |
| AE  | 1 | 8-23   | Revised Kit Inventory List   | 04/22/24 |
| S   | 1 | 28-31  | -31 Removed MSDS for spray cans 0  |          |
| IR  | 2 | 1-4    | Initial Release  |          |
| IR  | 3 | 1-3    | Initial Release 11   |          |
| IR  | 4 | 1-2    |  |          |
| IR  | 5 | 1-5    | Initial Release  | 11/04/09 |
| G   | 5 | Insert | Updated drawings   | 06/01/15 |
| Н   | 5 | 5      | Update Step 5.17   | 11/06/15 |
| Н   | 5 | Insert | Updated drawing  | 11/06/15 |
| L   | 5 | Insert | Updated drawings.  | 03/03/17 |
| Т   | 5 | 46-51  | Updated drawing  | 07/03/21 |
| W   | 5 | 56-58  | Updated 5-21-AS350 drawing   | 03/18/22 |
| Х   | 5 | 46-53  | Updated 4-3-AS350 drawing  | 05/26/22 |
| Υ   | 5 | 45-51  | Updated 4-3-AS350 drawing  | 08/13/22 |
| AA  | 5 | 45-61  | Updated 4-3-AS350, 4-13-AS350 & 5-10-AS350 drawings                        | 12/05/22 |
| AB  | 5 | 45-56  | Updated 4-3-AS350 drawing  | 03/17/23 |
| AE  | 5 | 46-53  | Updated 4-3-AS350, 4-13-AS350, 5-10-AS350, 5-21-AS350 & 3-4-AS350 drawings | 04/22/24 |
| Υ   | 5 | 53-57  | Updated 5-10-AS350 drawing   | 08/13/22 |
| Χ   | 5 | 58-66  | Updated 5-21-AS350 & 3-4-AS350 drawings                                    | 05/26/22 |
| Υ   | 5 | 58-60  | Updated 3-4-AS350 drawing  | 08/13/22 |

| AA | 5 | 66-69                                | Updated 3-4-AS350 drawing                            | 12/05/22 |
|----|---|--------------------------------------|--|----------|
| Α  | 6 | 1-5                                  | Step 6.22 screw increased length.                    | 05/20/11 |
| G  | 6 | 4 Step 6.20 Type of fiberglass 06/01 |  | 06/01/15 |
| G  | 6 | Insert                               | Updated drawings                                     | 06/01/15 |
| Н  | 6 | Insert                               | Updated drawings                                     | 11/06/15 |
| L  | 6 | 3                                    | Step 6.12 and 6.14. Updated drawings.                | 03/03/17 |
| М  | 6 | 2                                    | Step 6.6. Updated drawings.                          | 09/25/18 |
| Υ  | 6 | 62                                   | Updated instructions on Step 6.11                    | 08/13/22 |
| Т  | 6 | 66-74                                | Updated drawing                                      | 07/03/21 |
| Y  | 6 | 67-70                                | Updated 7-2-AS350 drawing                            | 08/13/22 |
| Υ  | 6 | 72-76                                | Updated 8-2-AS350 & 8-11-AS350 drawings              | 08/13/22 |
| AE | 6 | 65-66                                | Updated 8-2-AS350 drawing                            | 04/22/24 |
| IR | 7 | 1-2                                  | Initial Release                                      | 11/04/09 |
| G  | 7 | 3                                    | Step 7.9 and 7.10                                    | 06/01/15 |
| G  | 7 | Insert                               | Updated drawings                                     | 06/01/15 |
| Н  | 7 | Insert                               | Updated drawing                                      | 11/06/15 |
| L  | 7 | Insert                               | Updated drawing                                      | 03/03/17 |
| М  | 7 | Insert                               | Updated drawing                                      | 09/25/18 |
| U  | 7 | 84-90                                | Updated 4-21-AS350 drawing                           | 11/11/21 |
| W  | 7 | 86-95                                | Updated 4-21-AS350 drawing                           | 03/18/22 |
| Х  | 7 | 78-81                                | Updated 8-2-AS350                                    | 04/18/22 |
| X  | 7 | 85                                   | Added doubler & rivets to Step 7.5                   | 05/26/22 |
| X  | 7 | 87-96                                | Updated 4-21-AS350 drawing                           | 05/26/22 |
| Y  | 7 | 77                                   | Updated instructions in Step 7.7                     | 08/13/22 |
| Y  | 7 | 80-88                                | Updated 4-21-AS350, 5-26-AS350 & 5-10-AS350 drawings | 08/13/22 |
| AA | 7 | 89-104                               | Updated 4-21-AS350, 5-26-AS350 & 5-10-AS350 drawings | 12/05/22 |
| AB | 7 | 90-105                               | Updated 4-21-AS350 & 5-26-AS350 drawings             | 03/17/23 |
| AE | 7 | 71-78                                | Updated 4-21-AS350, 5-26-AS350 & 5-10-AS350 drawings | 04/22/24 |
| Α  | 8 | 1-5                                  | Revised Instructions                                 | 02/05/10 |
| G  | 8 | 4                                    | Step 8.9   | 06/01/15 |
| G  | 8 | Insert                               | Updated drawings                                     | 06/01/15 |
| Н  | 8 | 4                                    | Updated Step 8.9                                     | 11/06/15 |
| М  | 8 | Insert                               | Updated drawing                                      | 09/25/18 |
| Υ  | 8 | 94                                   | Updated 6-2-AS350 drawing                            | 08/13/22 |
| Υ  | 8 | 95-98                                | Updated 6-3-AS350 drawing                            | 08/13/22 |
| AA | 8 | 111-115                              | Updated 6-3-AS350 drawing                            | 12/05/22 |
| AB | 8 | 116-121                              | Updated 6-3-AS350 drawing                            | 03/17/23 |

| AE  | 8  | 85-90   | Updated 6-3-AS350 drawing  | 04/22/24 |
|-----|----|---------|--|----------|
| Α   | 9  | 1-2     | Added EMI-RFI filter   | 01/28/11 |
| G   | 9  | 2       | Steps 9.4, 9.6, & 9.7  | 06/01/15 |
| G   | 9  | Insert  | Updated drawings   | 06/01/15 |
| L   | 9  | Insert  | Updated drawings.  | 03/03/17 |
| V   | 9  | 127-131 | Updated 2-21-AS350 drawing   | 12/16/21 |
| Y   | 9  | 105     | Updated 2-29-AS350 drawing   | 08/13/22 |
| Υ   | 9  | 106-107 | Updated 2-11-AS350 drawing   | 08/13/22 |
| Υ   | 9  | 108-109 | Updated 2-21-AS350 drawing   | 08/13/22 |
| IR  | 10 | 1-3     | Initial Release  | 11/04/09 |
| G   | 10 | Insert  | Updated drawings   | 06/01/15 |
| L   | 10 | Insert  | Updated drawing.   | 03/03/17 |
| Y   | 10 | 113-115 | Updated 3-4-AS350 drawing  | 08/13/22 |
| AA  | 10 | 130-133 | Updated 3-4-AS350 drawing  | 12/05/22 |
| AE  | 10 | 105     | Updated 3-4-AS350 drawing  | 04/22/24 |
| N/A | 11 | N/A     | Removed Weight & Balance, now in I.C.A., STC<br>Amended.                             | 03/21/11 |
| G   | 11 | 2       | Updated to RSG   | 06/01/15 |
| G   | 11 | Insert  | Updated STC Cover Sheet  | 06/01/15 |
| G   | 11 | Insert  | Updated RFMS's   | 06/01/15 |
| Н   | 11 | Insert  | Updated STC Cover Sheet  | 11/06/15 |
| Н   | 11 | Insert  | Updated RFMS's 11  |          |
| L   | 11 | Insert  | Added MDL.   | 03/03/17 |
| Y   | 11 | 119-140 | Updated STC & foreign applicability  | 08/13/22 |
| AB  | 11 | 140     | Moved foreign applicability to website (www.rotorcraftservices.com/customer-support) | 03/17/23 |
| AA  | 11 | 136     | Updated weight & balance information   | 12/05/22 |
| AE  | 11 | 108     | Updated weight & balance page (revision change)                                      | 04/22/24 |
| Υ   | 11 | 141-152 | Updated MDL  | 08/13/22 |
| AE  | 11 | 112-123 | Updated MDL to Rev V   | 04/22/24 |
| AA  | 11 | 171-217 | Updated RFMS for all models  | 12/05/22 |
| AB  | 11 | 152     | Moved RFMSs to website (www.rotorcraftservices.com/customer-support)                 | 03/17/23 |
| С   | 12 | 1-100   | Updated I.C.A.   | 03/21/11 |
| G   | 12 | Insert  | Updated ICA  | 06/01/15 |
| Υ   | 12 | 246-351 | Updated ICA to Rev F   | 08/13/22 |
| AE  | 12 | 125-229 | Updated ICA to Rev F-1   | 04/22/24 |
| В   | 13 | 1-9     | Revised Parts Break Down   | 03/21/11 |
| G   | 13 | 1-5     | Updated to RSG   | 06/01/15 |
| Υ   | 13 | 353-357 | Updated parts break down list  | 08/13/22 |

| N/A | 14 | Insert  | Air Conditioning Performance Test Procedure & Supporting Documents. (Added) | 03/21/11 |
|-----|----|---------|---|----------|
| Υ   | 14 | 359-364 | Updated Warranty Policy, removed warranty claim form & added new RMA form   | 08/13/22 |
| AB  | 14 | 271     | Updated Section Title   | 03/17/23 |
| AE  | 14 | 239-242 | Updated T&C, Warranty Policy, Warranty<br>Registration Form & RMA Form      | 04/22/24 |
| D   | 15 | 1-6     | Moved Warranty to Sect. 15. Trouble Shooting now in I.C.A.                  | 03/21/11 |
| Υ   | 15 | 366-381 | Updated TS guide with RSG logos & removed outdated information              | 08/13/22 |





## Step 1

## **Kit Inventory**

# P/N 350-00-011-HP AEC Basic Version

(Rev. AD)

April 22, 2024

#### **RECORD OF REVISIONS**

| Rev | Description   | Date          | Revised By |
|-----|---|---------------|------------|
| IR  | Initial Release of Configuration  | 04 Nov. 2009  | IFS        |
| Α   | Removed Comp/Belt/Intake  | 02 Feb. 2010  | IFS        |
| В   | Corrected Screw Stp. 5.10/5.17  | 03 May 2010   | IFS        |
| С   | Added Optional EMI-RFI filter & ring terminals                                  | 28 Jan. 2011  | IFS        |
| D   | Screw length increased at Step 6.22   | 20 May 2011   | IFS        |
| Е   | Added Compressor Bracket Kit Upgrades   | 14 Feb. 2013  | RSG        |
| F   | Added Brushless motor option; corrected part numbers; added optional EMI filter | 19 Mar. 2015  | RSG        |
| G   | Formatted to RSG Products. Updated and added P/N's.                             | 1 Jun. 2015   | RSG        |
| Н   | Removed items and corrected P/N's   | 18 Aug. 2015  | RSG        |
| K   | Added Alt. P/N.   | 24 Mar. 2016  | RSG        |
| L   | Added 50A limiter   | 14 Jul. 2016  | RSG        |
| М   | Remove Alt. P/N   | 21 Oct. 2016  | RSG        |
| N   | Remove items in Steps 6.12 and 6.14   | 03 Mar. 2017  | RSG        |
| Р   | Add hardware for alt. elect. box location.                                      | 25 Sept. 2018 | RSG        |
| Q   | Add hose clamp and corrected hardware qty for comp. bkt. kit                    | 15 Jan. 2019  | RSG        |
| R   | Added rivets in Step 5.4  | 14 Jun. 2019  | RSG        |
| S   | Added alt. p/n of drain hose and grommet  | 21 Nov. 2019  | RSG        |
| Т   | Updated air outlet assembly options, clamps and EMI filters                     | 20 Jan. 2020  | RSG        |
| U   | Added 30 additional feet of foil tape in Step 5.16                              | 17 Mar. 2020  | RSG        |
| V   | Changed grommet & band clamp in section 7                                       | 11 Nov. 2021  | RSG        |
| W   | Added doubler & additional hardware to Step 7.5                                 | 28 Mar. 2022  | RSG        |
| Х   | Updated hardware requirements in Step 7.5                                       | 5 May 2022    | RSG        |
| Y   | Changed grommet part number in Step 7.7   | 8 Aug. 2022   | RSG        |
| AA  | Updated drawing & document lists  | 17 Mar. 2023  | RSG        |
| AB  | Updated Step 9.4 & removed reference to Illustrated Parts Catalog               | 31 Mar. 2023  | RSG        |
| AC  | Updated grommet part number in Step 7.7   | 30 June 2023  | RSG        |
| AD  | Updated compressor bracket kit part numbers                                     | 22 April 2024 | RSG        |

#### **LIST OF EFFECTIVE PAGES**

| Rev | Pgs | Description                       | Date       |
|-----|-----|-----------------------------------|------------|
| Α   | 8   | Removed P/N's 590008 and 060018-1 | 02/02/2010 |



| В | 5  | MS35206-244 is now MS35206-230  | 03/05/2010 |
|---|----|---|------------|
| В | 4  | AN525-10R6 is now AN525-10R7  | 03/05/2010 |
| С | 13 | Changed Kit List for: Compressor Bracket Installation Kit (Was: IFS-350/130-507, Is: 350-11-031-02)         | 01/29/2013 |
| С | 9  | Added Hose Disconnect Bracket to Step 10.3 (P/N:04-130-21-107-01)   | 01/29/2013 |
| С | 8  | Changed P/N for Step 8.9<br>(Was: IFS-350/130-507, Is: 350-11-031-02)                                       | 01/29/2013 |
| D | 14 | Added P/N's, removed 04-130-21-107-01 and adding it to step 10.3  | 03/03/2014 |
| Е | 4  | Corrected P/N in 5.10 ABA4-4 is now AD44ABS in step 5.10  | 7/24/2014  |
| Е | 6  | Updated quantities of rivets MS20470AD-4-3, -4, and -5 to step 6.11   | 7/24/2014  |
| Е | 9  | Changed SD-507 Compressor Assy. To SD-507 Compressor Assy. (Grooved) in step 8.10                           | 7/24/2014  |
| Е | 9  | Added option for smooth belt compressor P/N 590008  | 7/24/2014  |
| Е | 9  | Added option for smooth belt P/N 060018   | 7/24/2014  |
| Е | 10 | Changed part number from 22CR4HM to ZZCR4HM in step 9.4   | 7/24/2014  |
| F | 4  | Changed part number from 1/16" i.d. to GM1 in step 5.4  | 1/16/2015  |
| F | 4  | Changed part number from #8 x ½ to 050020-4 and #8 to 050020-5 in step 5.9                                  | 1/16/2015  |
| F | 9  | Added alternate part numbers for fwd evap high and low hat assemblies                                       | 1/16/2015  |
| F | 10 | Changed part numbers of electrical connectors from description to actual RSG part numbers steps 9.4 and 9.5 | 1/16/2015  |
| G | 9  | Added new style vents and vent mounts in steps 7.9 and 7.10   | 6/1/2015   |
| G | 10 | Added harness assembly for micro switches in step 9.4   | 6/1/2015   |
| G | 10 | Added new instrument panel & new aft switch assembly in steps 9.6 and 9.7                                   | 6/1/2015   |
| Н | 6  | Corrected P/N in step 5.17 was: 490017-1 is: 490017-1-02 Removed Resistor and components in step 5.17       | 8/18/2015  |
| Н | 9  | Corrected P/N was: 050084-7** is: IFSS 050084-7**. Added config01 and -02 to P/N: IFSS 050084-7**           | 8/18/2015  |
| Н | 9  | Removed P/N 050084-6** in step 6.26   | 8/18/2015  |
| Н | 10 | Replaced P/N 350-11-031-02 with note "SEE PAGE 15" in step 8.9  | 8/18/2015  |
| Н | 12 | Removed P/N 070003 in step 10.9   | 8/18/2015  |
| Н | 15 | Removed Kit P/N.  | 8/18/2015  |
| K | 10 | Added alternate P/N CR4HM in Step 9.4   | 3/24/2016  |
| L | 11 | Added 50A limiter in Step 9.5   | 7/14/2016  |
| М | 15 | Remove alt. P/N 261155 from Compressor Bracket Inst. Kit.   | 10/21/2016 |
| N | 6  | Remove 260002 from Step 6.12 and (2) AN3-5A and AN960-10 from Step 6.14                                     | 03/03/2017 |
| Р | 8  | Add hardware for alt. elect. box location.  | 09/25/2018 |
| Q | 12 | Add hose clamp p/n MS21919WDG13   | 01/15/2019 |
| Q | 16 | Update quantity of p/n MS21042-L4 from 2 to 3   | 01/15/2019 |
| R | 6  | Added 3 new rivets in step 5.4, quantity 30 each  | 06/14/2019 |
|   |    |   |            |



| S  | 10 | Added alt. drain hose p/n in Step 6.26 and Step 7.7; added alt. grommet p/n in Step 7.7  | 11/21/2019 |
|----|----|--|------------|
| Т  | 10 | Update air outlet assembly options in Step 7.9; changed vent mount note in Step 7.10   | 01/20/2020 |
| Т  | 11 | Made EMI-RFI filter p/n LS03-01012 in Step 9.4 optional and moved to after Step 10.9   | 01/20/2020 |
| Т  | 12 | Added alt. adel clamp p/n MS21919WDG14 after Step 10.3   | 01/20/2020 |
| Т  | 13 | Removed EMI filter and mounting hardware after Step 10.9 as this is included in filter kit p/n 050143-2                              | 01/20/2020 |
| U  | 7  | Added 30 more feet of p/n 070076 in Step 5.16 for total of 60 feet   | 03/17/2020 |
| V  | 10 | Changed grommet p/n in Step 7.7 & band clamp in Step 7.8   | 11/11/2021 |
| W  | 10 | Added p/n 260373, grommet & additional hardware to Step 7.5  | 03/28/2022 |
| Х  | 10 | Added 3 rivets sizes and reduced grommet from 3' down to 1.5'  | 5/05/2022  |
| Y  | 10 | Changed grommet from MS35489-123 to MS35489-75   | 08/08/2022 |
| AB | 11 | Updated ring terminals & splice part quantities in Step 9.4  | 03/31/2023 |
| AA | 14 | Removed sheet count from drawing list; Aft Evaporator, Condenser, & Baggage Compartment Mod  | 03/17/2023 |
| AA | 15 | Updated document descriptions in document list; moved RFMS & Foreign Approvals to website; corrected description for section 14 & 15 | 03/17/2023 |
| AB | 13 | Updated section 13 to remove reference to Illustrated Parts Catalog  | 03/31/2023 |
| AC | 10 | Changed grommet p/n from MS35489-75 to MS35489-72  | 06/30/2023 |
| AD | 16 | Changed alt p/n for AN960-416, AN960-516L & AN960-616L   | 04/22/2024 |
|    |    |  |            |



### Kit Configuration Inventory List: 350-00-011-HP AEC Basic Version

### **Customer Information**

| Sales Order Number:        |
|----------------------------|
|                            |
| Shipping Date:             |
|                            |
| Customer:                  |
|                            |
| Customer P.O. Number:      |
|                            |
| Notes:                     |
|                            |
|                            |
|                            |
|                            |
|                            |
| Kit Specifics              |
| Kit S/N:                   |
|                            |
| Condenser S/N:             |
|                            |
| Condenser Blower S/N:      |
|                            |
| Aft Evaporator Blower S/N: |
|                            |
| Compressor S/N:            |



|      | PART                                |                |            | CHK'D | VERF'D |
|------|-------------------------------------|----------------|------------|-------|--------|
| STEP | PART NAME                           | NUMBER         | NUMBER QTY |       | ВҮ     |
| 5.1  | Aft Evaporator Fan Doubler          | 260328-1 1     |            |       |        |
|      |                                     |                |            |       |        |
| 5.4  | Rivets                              | MS20470AD4-4   | 100        |       |        |
| 5.4  | Rivets                              | MS20470AD4-5   | 25         |       |        |
| 5.4  | Rivets                              | MS20470AD4-5.5 | 30         |       |        |
| 5.4  | Rivets                              | MS20470AD4-6   | 30         |       |        |
| 5.4  | Rivets                              | MS20426AD4-4   | 15         |       |        |
| 5.4  | Rivets                              | MS20426AD4-5   | 30         |       |        |
| 5.4  | Rivets                              | CR3243-4-03    | 2          |       |        |
| 5.4  | Caterpillar Grommet (1/16" I.D.)    | GM1            | 1.5 ' Ft.  |       |        |
| 5.5  | Aft Evaporator Assembly             | 560010-"O"-5   | 1          |       |        |
| 5.5  | Bolt                                | AN3-5A         | 4          |       |        |
| 5.5  | Washer                              | AN960-10       | 4          |       |        |
|      |                                     |                |            |       |        |
| 5.6  | Doubler, Return Air                 | 260322-1       | 1          |       |        |
| 5.8  | Angle                               | 260322-2       | 1          |       |        |
| 5.8  | Rivets                              | MS20470AD4-3   | 25         |       |        |
| 5.8  | Rivets                              | CR3243-4-03    | 25         |       |        |
| 5.8  | Rivets                              | CR3243-4-04    | 25         |       |        |
| 5.8  | Rivets                              | MS20470AD4-4   | 10         |       |        |
| 5.8  | Rivets                              | MS20426AD4-4   | 10         |       |        |
| 5.9  | Return Air Screen                   | 080022-1       | 1          |       |        |
| 5.9  | Chrome Screw                        | 050020-4       | 4          |       |        |
| 5.9  | Chrome Washer                       | 050020-5       | 4          |       |        |
|      |                                     |                |            |       |        |
| 5.10 | Angle Return Air Connector Assembly | 510261         | 1          |       |        |
| 5.10 | Rivets                              | AD44ABS        | 15         |       |        |
| 5.10 | Screw                               | AN525-10R7     | 2          |       |        |
| 5.10 | Return Air Cover Connector          | 250166         | 1          |       |        |
| 5.11 | Return Air Duct                     | 250149         | 1          |       |        |
|      |                                     | -              | I          | 1     |        |

| STEP | PART NAME                            | PART<br>NUMBER    | CHK'D<br>BY  | VERF'D<br>BY |  |
|------|--------------------------------------|-------------------|--------------|--------------|--|
| 5.15 | Rivnut                               | A10K80 3          |              |              |  |
| 5.15 | Screws                               | AN525-10R6        | AN525-10R6 3 |              |  |
| 5.15 | Screws                               | AN525-10R10       | 4            | 4            |  |
| 5.15 | Clip Nut (Alt P/N: 13100000-5)       | RM52LHA4972-10-02 | 4            |              |  |
| 5.16 | Aluminum Foil Tape                   | 070076            | 60' Ft.      |              |  |
| 5.16 | Cork Insulation Tape                 | 070078-0          | 6′ Ft.       |              |  |
| 5.17 | Aft Evaporator Fan Assy. (Brushless) | 490017-1-02       | 1            |              |  |
| 5.17 | Bolt                                 | AN3-5A            | 5            |              |  |
| 5.17 | Washer                               | AN960-10          | 5            |              |  |
| 5.18 | Aft Transition Elbow Assembly        | 520036-3          | 1            |              |  |
| 5.20 | Bolt                                 | AN3-6A            | 6            |              |  |
| 5.20 | Nut                                  | MS21044N3         | 6            |              |  |
| 5.20 | Washer                               | AN960-10          | 12           |              |  |
| 5.20 | Transition Elbow Strap               | 261299            | 1            |              |  |
| 5.21 | 6" Band clamp                        | 060035            | 2            |              |  |
| 5.21 | Ø5.0" Duct 25" Long                  | 060004            | 25" in       |              |  |
| 5.21 | Insulation Foam Tape                 | 070078            | 20′ Ft.      |              |  |
| 5.22 | Air Duct Closure Assembly            | 510092            | 1            |              |  |
| 5.23 | Hose Doubler, Baggage Comp.          | 260369            | 1            |              |  |
| 5.23 | Rivets                               | MS20470AD4-4      | 10           |              |  |
| 6.1  | Condenser Fan Mount                  | 260148-3          | 1            |              |  |
| 6.1  | Fan Channel Base Angle               | 260020            | 1            |              |  |
| 6.3  | Filler                               | 260862            | 1            |              |  |

| STEP | PART NAME                              | PART<br>NUMBER | PART |  | VERF'D<br>BY |
|------|--|----------------|------|--|--------------|
| 6.4  | Battery Compartment Shelf              | 260333 1       |      |  |              |
| 6.4  | Battery Comp. Shelf Angle Fwd./Aft     | 260335         | 2    |  |              |
|      |  |                |      |  |              |
| 6.6  | Electrical Box Assembly                | 540028-C-2-A   | 1    |  |              |
| 6.6  | Bolt                                   | AN3-4A         | 3    |  |              |
| 6.6  | Washer                                 | AN960-10       | 3    |  |              |
|      | Hardware for alt. Elect. Box location. |                |      |  |              |
|      | Bolt                                   | AN3-7A         | 3    |  |              |
|      | Spacer                                 | NAS43DD3-32FC  | 3    |  |              |
|      | Washer                                 | AN960-10       | 3    |  |              |
|      |  |                |      |  |              |
| 6.7  | Rivets                                 | MS20470AD4-3   | 30   |  |              |
| 6.7  | Rivets                                 | MS20470AD4-4   | 10   |  |              |
| 6.7  | Bolt                                   | AN3-3A         | 5    |  |              |
| 6.7  | Bolt                                   | AN3-4A         | 3    |  |              |
| 6.7  | Bolt                                   | AN3-5A         | 3    |  |              |
| 6.7  | Washer                                 | AN960-10       | 20   |  |              |
| 6.7  | Nut                                    | MS21044N3      | 20   |  |              |
| 6.7  | Screw                                  | AN507-1032R10  | 18   |  |              |
| 6.7  | Rivet                                  | CR3243-4-03    | 6    |  |              |
| 6.7  | Battery Comp. Shelf Angle Fwd. Assy.   | 510265         | 1    |  |              |
|      |  |                |      |  |              |
| 6.8  | Aft Condenser Channel Assembly         | 510007         | 1    |  |              |
| 6.8  | Fwd. Condenser Channel Assembly        | 510008         | 1    |  |              |
|      |  |                |      |  |              |
| 6.10 | Rivet                                  | MS20470AD4-4   | 30   |  |              |
| 6.10 | Rivet                                  | MS20470AD4-5   | 30   |  |              |
|      |  |                |      |  |              |
| 6.11 | Nutplate                               | MS21059-L3     | 1    |  |              |
| 6.11 | Rivet                                  | CCR264SS3-03   | 2    |  |              |
| 6.11 | Rivet                                  | MS20470AD4-4   | 30   |  |              |
| 6.11 | Rivet                                  | MS20470AD4-5   | 30   |  |              |
|      |  |                | 1    |  |              |
| 6.12 | Bolt                                   | AN3-4A         | 2    |  |              |
| 6.12 | Washer                                 | AN960-10       | 2    |  |              |
|      | 1                                      | 1              |      |  |              |



| STEP | PART NAME                                       | PART<br>NUMBER     | I OTY    |  | VERF'D<br>BY |
|------|---|--------------------|----------|--|--------------|
| 6.13 | Condenser Mount Angle                           | 260002             | 260002 1 |  |              |
| 6.13 | Bolt  | AN3-4A             | 2        |  |              |
| 6.13 | Washer  | AN960-10           | 2        |  |              |
|      |   |                    |          |  |              |
| 6.14 | Condenser Assembly                              | 550007-1           | 1        |  |              |
| 6.14 | Bolts   | AN3-5A             | 3        |  |              |
| 6.14 | Washer  | AN960-10           | 3        |  |              |
| 6.14 | Rivet   | CCR264SS3-03       | 8        |  |              |
| 6.15 | Condenser Air Intake Assembly                   | 520071-1           | 1        |  |              |
| 6.19 | Screen Assembly, Condenser Exhaust              | 520052-2           | 1        |  |              |
| 6.20 | Fiberglass Cloth 7.5 oz. 18" x 38"              | 7.5 oz. 18" x 38"  | 2        |  |              |
| 6.22 | Screw   | AN525-10R8         | 5        |  |              |
| 6.22 | Washer  | AN970-3            | 5        |  |              |
| 6.22 | Tinnerman Countersunk Washer                    | A3235-020-24A      | 16       |  |              |
| 6.22 | Screw (Alt: NAS517-3-13)                        | MS24693-S278       | 16       |  |              |
| 6.22 | Washer  | AN960-10           | 16       |  |              |
| 6.22 | Nut (Alt: MS21083N3)                            | MS20364-1032C      | 16       |  |              |
| 6.22 | Delron Insert                                   | 405SE1032-06-2     | 5        |  |              |
|      | (Alt. Shurlock SL601-3-3A)                      | (Alt. NAS1832-3-3) |          |  |              |
| 6.24 | Battery Door Angle                              | 260339             | 1        |  |              |
|      |   |                    |          |  |              |
| 6.24 | Battery Door Decal                              | 120087             | 1        |  |              |
| 6.25 | Rivet   | MS20470AD4-3       | 10       |  |              |
| 6.26 | Ø7.0" Vane Axial Blower***                      | IFSS 050084-7(**)  | 1        |  |              |
|      | (IFSS 050084-7-2 Short<br>IFSS 050084-7-3 Long) |                    |          |  |              |
| 6.26 | Condenser Exhaust Elbow Assy.                   | 520032-1           | 1        |  |              |

<sup>\*\*</sup>Or Approved Alternate 7" Blower Assembly

| STEP | PART NAME   | PART<br>NUMBER QTY |          | CHK'D<br>BY | VERF'D<br>BY |
|------|---|--------------------|----------|-------------|--------------|
| 6.26 | 7-8" Band Clamp   | 060038 1           |          |             |              |
| 6.26 | 3/8" I.D. Drain Hose (Alt: 090018-1 1/2" Drain Hose)          | 090018             | 5′ Ft.   |             |              |
| 7.3  | Forward Evaporator Assembly                                   | 560025-0           | 1        |             |              |
|      | (Config01 Low Hat<br>Config02 High Hat)                       |                    |          |             |              |
| 7.4  | Nut Plate   | MS21059-L3         | 1        |             |              |
| 7.4  | Rivet   | CCR264SS3-03       | 3        |             |              |
| 7.5  | Doubler   | 260373-1           | 1        |             |              |
| 7.5  | Rivets  | CR3243-4-03        | 18       |             |              |
| 7.5  | Caterpillar Grommet   | GM1                | 1.5′ Ft. |             |              |
| 7.5  | Doubler   | 260373             | 1        |             |              |
| 7.5  | Rivets  | CR3212-4-02        | 4        |             |              |
| 7.5  | Rivets  | CR3213-4-02        | 2        |             |              |
| 7.5  | Rivets  | CR3213-4-03        | 2        |             |              |
| 7.7  | 3/8" I.D. Drain Hose (Alt: 090018-1 1/2" Drain Hose)          | 090018             | 10′ Ft.  |             |              |
| 7.7  | Grommet   | MS35489-72         | 1        |             |              |
|      |   |                    |          |             |              |
| 7.8  | Bolt  | AN3-4A             | 4        |             |              |
| 7.8  | Washer  | AN960-10           | 4        |             |              |
| 7.8  | Band Clamp 1"   | 61434114           | 1        |             |              |
| 7.8  | Nut   | MS21044N3          | 3        |             |              |
| 7.9  | Air Outlet Assembly   | 510259-3           | 2        |             |              |
| 7.9  | Air Outlet Assy. L.H.*** (optional upgrade @ additional cost) | 520156HP           | 1        |             |              |
|      | Air Outlet Assy. R.H.*** (optional upgrade @ additional cost) | 520157HP           | 1        |             |              |
| 7.10 | Rivet   | CR3243-4-04        | 6        |             |              |
| 7.10 | Vent Mount (for optional air outlet upgrade)                  | 261335HP-01        | 2        |             |              |
|      | Screw   | AN525-832R8        | 6        |             |              |
|      | Nutplate  | MS21042L08         | 4        |             |              |

| STEP |   | DART NAME I TOTY |     | CHK'D | VERF'D |
|------|---|------------------|-----|-------|--------|
|      |   | NUMBER           |     | ВҮ    | BY     |
| 7.11 | 3" Band Clamp   | 060036           | 5   |       |        |
| 7.11 | Duct Ø2.5" X 120" Long                                  | 060025           | 1   |       |        |
| 8.5  | 4 Groove Belt***  | 060005           | 2   |       |        |
| 8.5  | Smooth Belt*** (Alt. P/N: 060018)                       | 060018-1         | 2   |       |        |
| 8.9  | Compressor Bracket Kit                                  | SEE PAGE 16      | 1   |       |        |
| 8.10 | SD-507 Compressor Assy.(Grooved)***                     | 590008-1         | 1   |       |        |
| 8.10 | SD-507 Compressor Assy. (Smooth)***                     | 590008           | 1   |       |        |
| 9.4  | Tie Wrap (10" Length Min.)                              | 63128            | 100 |       |        |
| 9.4  | Tie Block (Alt. P/N: CR4HM)                             | ZZCR4HM          | 25  |       |        |
| 9.4  | Butt Splice 16-14                                       | 050020-1         | 4   |       |        |
| 9.4  | Ring Terminal 16-14 X 1/4"                              | MS25036-154      | 4   |       |        |
| 9.4  | Knife Splice 22-16                                      | 050020-6         | 2   |       |        |
| 9.4  | Ring Terminal 16-14 #10                                 | 050020-8         | 4   |       |        |
| 9.4  | Knife Splice 16-14                                      | 050020-2         | 8   |       |        |
| 9.4  | 1/4" Heat Shrink 4" inches long                         | 070077           | 4   |       |        |
| 9.4  | Electrical Harness Assembly***                          | 540044-4         | 1   |       |        |
|      | (Config01 for non-microswitch Config02 for microswitch) |                  |     |       |        |
| 9.4  | Ring Terminal   | MS25036-157      | 2   |       |        |
| 9.5  | Harness Assembly  | 540045-1         | 1   |       |        |
| 9.5  | Ring Terminal   | 050020-9         | 1   |       |        |
| 9.5  | Limiter 50 AMP  | ANL-50           | 1   |       |        |
| 9.6  | Instrument Panel Switch***                              | 540044-8         | 1   |       |        |
|      | (Config01 for non-microswitch Config02 for microswitch) |                  |     |       |        |
| 9.6  | Dzus Rail for -02 Switch Assembly                       | 261348HP-01      | 2   |       |        |
| 9.6  | Rivets  | MS20426AD4-7     | 6   |       |        |



| STEP | PART NAME   | PART<br>NUMBER   | QTY | CHK'D<br>BY | VERF'D<br>BY |
|------|---|------------------|-----|-------------|--------------|
| 9.7  | Aft Switch Assembly***                                  | 540089           | 1   |             |              |
|      | (Config01 for non-microswitch Config02 for microswitch) |                  |     |             |              |
| 10.3 | Hose Assy Fwd Evap to Aft. Evap To<br>Comp              | 570087-"O"-A     | 1   |             |              |
| 10.3 | #10 "O" Ring  | 090094           | 3   |             |              |
| 10.3 | Adel Clamp  | MS21919WDG12     | 6   |             |              |
| 10.3 | Nut   | MS21044N3        | 6   |             |              |
| 10.3 | Screw   | AN525-10R10      | 6   |             |              |
| 10.3 | Washer  | AN960-10         | 12  |             |              |
| 10.3 | Hose Disconnect Bracket                                 | 04-130-21-107-01 | 2   |             |              |
|      | Adel Clamp  | MS21919WDG13     | 2   |             |              |
|      | Adel Clamp  | MS21919WDG14     | 2   |             |              |
|      |   |                  |     |             |              |
| 10.4 | Hose Assy. #6 Fwd. Evap. To Drier                       | 570072-"O"-A     | 1   |             |              |
| 10.4 | #6 "O" Ring   | 090092           | 2   |             |              |
| 10.4 | Adel Clamp  | MS21919WDG10     | 6   |             |              |
| 10.4 | Nut   | MS21044N3        | 6   |             |              |
| 10.4 | Screw   | AN525-10R10      | 6   |             |              |
| 10.4 | Washer  | AN960-10         | 12  |             |              |
|      |   |                  |     |             |              |
| 10.6 | Hose Assembly #8 Comp. Discharge                        | 570024-O-A       | 1   |             |              |
| 10.6 | #8 "O" Ring   | 090093           | 3   |             |              |
| 10.6 | Adel Clamp  | MS21919WDG11     | 4   |             |              |
| 10.6 | Nut   | MS21044N3        | 4   |             |              |
| 10.6 | Screw   | AN525-10R10      | 4   |             |              |
| 10.6 | Washer  | AN960-10         | 8   |             |              |
|      |   |                  |     |             |              |
|      |   |                  |     |             |              |



| STEP | PART NAME  | PART<br>NUMBER | QTY     | CHK'D<br>BY | VERF'D<br>BY |
|------|--|----------------|---------|-------------|--------------|
| 10.7 | Receiver/Drier Bottle "O" Type                                 | 090016-5       | 1       |             |              |
| 10.7 | Band Clamp 3"  | 060036         | 1       |             |              |
| 10.7 | Rec/Drier Mount Bracket  | 260123-2       | 1       |             |              |
| 10.7 | Bolt   | AN3-5A         | 2       |             |              |
| 10.7 | Nut  | MS21044N3      | 2       |             |              |
| 10.7 | Washer   | AN960-10       | 4       |             |              |
|      |  |                |         |             |              |
| 10.8 | Hose Assembly #6 Condenser to Drier                            | 570020-"O"-A   | 1       |             |              |
| 10.8 | #6 "O" Ring  | 090092         | 3       |             |              |
|      |  |                |         |             |              |
| 10.9 | Low Pressure Switch  | 050107         | 1       |             |              |
| 10.9 | High Pressure Switch   | 090004         | 1       |             |              |
|      | Spiral Wrap Ø3/4"  | SW12BKV        | 12′ ft. |             |              |
|      |  |                |         |             |              |
|      |  |                |         |             |              |
|      | EMI-RFI Filter *** (optional - for brushless motors)           | LS03-01012     | 1       |             |              |
|      |  |                |         |             |              |
|      | Aft Evap EMI Filter Kit ***  (optional - for brushless motors) | 050143-2       | 1       |             |              |

<sup>\*\*\*</sup> Indicates it has alternate or optional configuration.



#### **DRAWING LIST**

| DRAWING NAME                  | DRAWING #   | QTY | CHK'D<br>BY | VERF'D<br>BY |
|-------------------------------|-------------|-----|-------------|--------------|
| AIR CONDITIONING OVERVIEW     | 1-3-AS350   | 1   |             |              |
|                               |             |     |             |              |
| ELECTRICAL ROUTING            | 2-11-AS350  | 1   |             |              |
| ELECTRICAL DIAGRAM            | 2-21-AS350  | 1   |             |              |
| ELECTRICAL DIAGRAM            | 2-29-AS350  | 1   |             |              |
|                               |             |     |             |              |
| PLUMBING DIAGRAM              | 3-4-AS350   | 1   |             |              |
| PLUMBING DIAGRAM              | 3-14-AS350  | 1   |             |              |
|                               |             |     |             |              |
| AFT EVAPORATOR INSTALL        | 4-3-AS350   | 1   |             |              |
| AFT EVAPORATOR INSTALL        | 4-13-AS350  | 1   |             |              |
| FORWARD EVAPORATOR INSTALL    | 4-21-AS350  | 1   |             |              |
|                               |             |     |             |              |
| AIR DISTRIBUTION              | 5-10-AS350  | 1   |             |              |
| AIR DISTRIBUTION              | 5-21-AS350  | 1   |             |              |
| AIR DISTRIBUTION              | 5-26-AS350  | 1   |             |              |
|                               |             |     |             |              |
| COMPRESSOR INSTALLATION       | 6-2-AS350   | 1   |             |              |
| COMPRESSOR INSTALLATION       | 6-12-AS350  | 1   |             |              |
| COMPRESSOR INSTALLATION       | 6-21-AS350  | 1   |             |              |
| COMPRESSOR INSTALLATION*      | 6-3-AS350*  | 1*  |             |              |
| COMPRESSOR INSTALLATION*      | 6-13-AS350* | 1*  |             |              |
| COMPRESSOR INSTALLATION*      | 6-22-AS350* | 1*  |             |              |
|                               |             |     |             |              |
| CONDENSER INSTALL             | 7-2-AS350   | 1   |             |              |
| CONDENSER INSTALL             | 7-11-AS350  | 1   |             |              |
|                               |             |     |             |              |
| BAGGAGE COMPARTMENT MOD SHEET | 8-2-AS350   | 1   |             |              |
| BAGGAGE COMPARTMENT MOD       | 8-11-AS350  | 1   |             |              |
|                               |             |     |             |              |

<sup>\*</sup> Indicates drawings required for newer Gimbal Housing design



### **DOCUMENT LIST**

| DOCUMENT DESCRIPTION                         | LOCATION   | QTY   | CHK'D<br>BY | VERF'D<br>BY |
|--|------------|-------|-------------|--------------|
| KIT CONFIGURATION INVENTORY LIST (IFS 33.41) | SECTION 1  | 1     |             |              |
| MAT'L SAFETY DATA SHEETS                     | SECTION 1  | 1 EA. |             |              |
| AIRCRAFT PRE-INSPECTION                      | SECTION 2  | 1     |             |              |
| AIRCRAFT PREPERATION                         | SECTION 3  | 1     |             |              |
| REMOVAL OF FACTORY INSTALLED COMPONENTS      | SECTION 4  | 1     |             |              |
| INSTALLATION OF AFT EVAPORATOR               | SECTION 5  | 1     |             |              |
| INSTALLATION OF CONDENSER                    | SECTION 6  | 1     |             |              |
| INSTALLATION OF FORWARD EVAPORATOR           | SECTION 7  | 1     |             |              |
| INSTALLATION OF COMPRESSOR                   | SECTION 8  | 1     |             |              |
| INSTALLATION OF ELECTRICAL                   | SECTION 9  | 1     |             |              |
| INSTALLATION OF HOSES                        | SECTION 10 | 1     |             |              |
| STC# SH3509SW                                | SECTION 11 | 1     |             |              |
| WEIGHT AND BALANCE                           | SECTION 11 | 1     |             |              |
| INSTRUCTIONS FOR CONTINUED AIRWORTHINESS     | SECTION 12 | 1     |             |              |
| MASTER PARTS LIST                            | SECTION 13 | 1     |             |              |
| TOC/WARRANTY/RMA                             | SECTION 14 | 1     |             |              |
| TROUBLE SHOOTING GUIDE                       | SECTION 15 | 1     |             |              |
| AIR CONDITIONING SCHEMATIC                   | SECTION 15 | 1     |             |              |
|  |            |       |             |              |

#### **COMPRESSOR BRACKET INSTALLATION KIT**

| ITEM DESCRIPTION              | Part Number      | QTY | Comment                       | CHK'D<br>BY | VERF'D<br>BY |
|-------------------------------|------------------|-----|-------------------------------|-------------|--------------|
| COMPRESSOR MOUNT BRACKET      | 04-130-21-101-01 | 1   |                               |             |              |
| COMPRESSOR MOUNT TENSION BOLT | 04-130-21-102-01 | 1   |                               |             |              |
| JAM NUT DRILLED               | 04-130-21-104-01 | 2   |                               |             |              |
| COMPRESSOR CLAMP              | 04-130-21-105-01 | 2   |                               |             |              |
| BUSHING, SD 507               | 261007           | 2   |                               |             |              |
| COMPRESSOR STAND OFF          | 300067-1         | 1   |                               |             |              |
| SHIM                          | 300363-2         | 2   |                               |             |              |
| THREADED ROD END              | 2434K39          | 1   |                               |             |              |
| PIN                           | 300095           | 1   |                               |             |              |
| STRAP HOUSING                 | 530100-1         | 1   |                               |             |              |
| WASHER                        | NAS1149D0416H    | 1   | Or NAS Hardware<br>equivalent |             |              |
| WASHER                        | NAS1149D0632H    | 6   | Or NAS Hardware equivalent    |             |              |
| WASHER                        | NAS1149D0532H    | 2   | Or NAS Hardware<br>equivalent |             |              |
| WASHER                        | AN960-416        | 4   | Alternate<br>(NAS1149F0463P)  |             |              |
| WASHER                        | AN960-516L       | 1   | Alternate<br>(NAS1149F0532P)  |             |              |
| WASHER                        | AN960-616L       | 2   | Alternate<br>(NAS1149F0632P)  |             |              |
| NUT                           | MS21042-L5       | 2   | Alternate<br>(MS20364-524C)   |             |              |
| NUT                           | MS21042-L4       | 3   | Alternate (AN365-424)         |             |              |
| NUT                           | MS21042L6        | 4   | Or NAS Hardware<br>equivalent |             |              |
| BOLT                          | AN4-5A           | 1   | Or NAS Hardware equivalent    |             |              |
| BOLT                          | AN4-14A          | 2   | Or NAS Hardware equivalent    |             |              |
| BOLT                          | AN5-34A          | 1   | Or NAS Hardware<br>equivalent |             |              |
| BOLT                          | AN6-13A          | 2   | Or NAS Hardware equivalent    |             |              |
| BOLT HEX DRIVE                | AN6-12           | 1   | Or NAS Hardware equivalent    |             |              |
| BOLT                          | AN6-33A          | 1   | Or NAS Hardware equivalent    |             |              |

### **Getting Started**

The air conditioning system installation instructions are laid out step-by-step starting with one (1) thru nine (9) for installation and ten (10) thru fifteen (15) for care and airworthiness, the instructions are designed to be easy – to – use.

The example below is designed to give you a basic overview of how the steps work.

**Example:** A. In the step below there is a number **5.1** The "**5**" stands for step 5 and the "**1**" stands for direction 1.

## Installation of Aircraft Systems

**Example:** B. When the parts are called out in a step: **5.1**, locate the part and parts that go with this step (5.1). It is best to organize your parts by step numbers so they can be drawn from as needed.

| Step | <u>Procedure</u>  | Mech | Insp |
|------|---|------|------|
|      | Position the aft evaporator doubler, P/N 261370, on the upper transmission deck per the dimensions shown on drawing number 4-1EC130. Mark and remove all existing rivets, bolts, and nut plates to allow the doubler to sit flat on deck. (Ref photo 501) |      |      |

Should you have any questions, problems or need technical support, do not hesitate to call, fax, E-mail, or write us:

Phone: 1-888-545-8371 E-Mail: info@rotorcraftservices.com

Fax: 1-800-624-6603

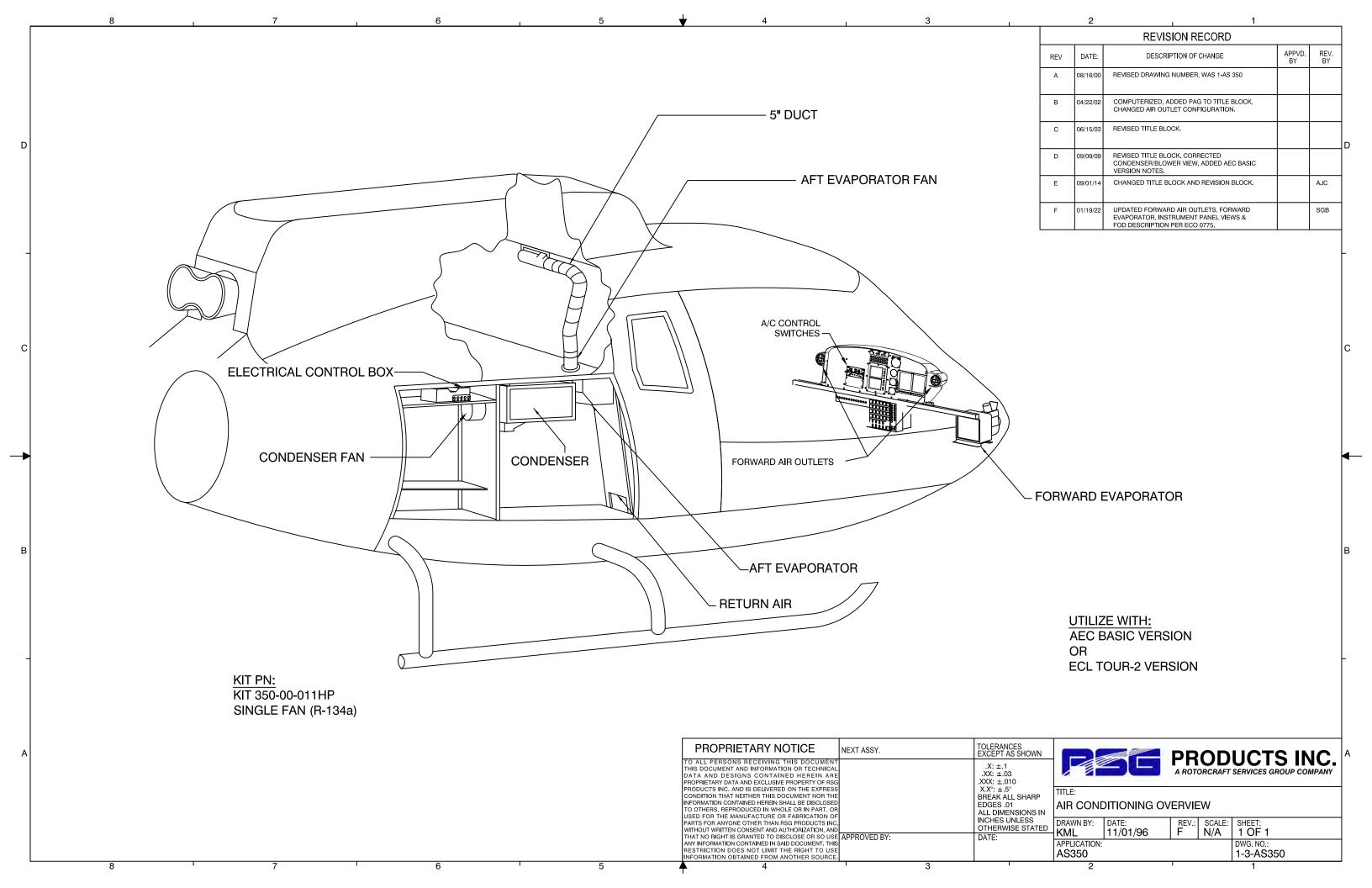
## RSG Products Inc. REQUIRED TOOLS – AS350 Air-Conditioning

## **Required Tools**

| 1.  | Drill ¼ or 3/8 Capacity / Straight and 90 degrees  |
|---|--|
| 2.  | Rivet Gun - #4 & #5 Rivet Set  |
| 3.  | Blind Rivet Puller   |
| 4.  | Assorted Drill Bits - 40, 30, 10, ¼, & 21  |
| 5.  | Standard Wrenches - ¼, 1-¼   |
| 6.  | Metric Wrenches - 5mm to 19mm  |
| 7.  | Standard Sockets - ¼ to ¾ cap Ratchet & Extensions   |
| 8.  | Metric Sockets - 5mm to 19mm   |
| 9.  | Torque Wrench (For Coupling) 200 <u>inch</u> lbs   |
| 10.   | Rotary File (Die Grinder)  |
| 11.   | Drum Sander  |
| 12.   | Hole Finder - #30 & #10  |
| 13.   | Cleco - #30, #21 & #40   |
| 14.   | C-Clamps – Vise Grip Clamps  |
| 15.   | Wire Cutters   |
| 16.   | Phillips Screw Driver  |
|   |  |
| 17.   | Torque-Bite (For Belly Pan) Pan American Tool 170-10 & 170-8 Power Torque  |
| 17.<br>18.                                    | Torque-Bite (For Belly Pan) Pan American Tool 170-10 & 170-8 Power Torque  Common Screw Drivers  |
|   |  |
| 18.   | Common Screw Drivers   |
| 18.<br>19.                                    | Common Screw Drivers Cape Chisel   |
| 18.<br>19.<br>20.                             | Common Screw Drivers  Cape Chisel  Center Punch  |
| 18.<br>19.<br>20.<br>21.                      | Common Screw Drivers  Cape Chisel  Center Punch  6oz Ballpeen Hammer for Removing Rivets   |
| 18.<br>19.<br>20.<br>21.<br>22.               | Common Screw Drivers  Cape Chisel  Center Punch  6oz Ballpeen Hammer for Removing Rivets  Assorted Bucking Bars                                  |
| 18.<br>19.<br>20.<br>21.<br>22.<br>23.        | Common Screw Drivers  Cape Chisel  Center Punch  6oz Ballpeen Hammer for Removing Rivets  Assorted Bucking Bars  Safety Wire .032                |
| 18.<br>19.<br>20.<br>21.<br>22.<br>23.<br>24. | Common Screw Drivers  Cape Chisel  Center Punch  6oz Ballpeen Hammer for Removing Rivets  Assorted Bucking Bars  Safety Wire .032  Wire Twisters |

## RSG Products Inc. REQUIRED TOOLS – AS350 Air-Conditioning

| 27. | Adjust Wrench Cap 1-1/2              |
|-----|--------------------------------------|
| 28. | Vacuum Pump                          |
| 29. | Gauge Manifold                       |
| 30. | Nitrogen                             |
| 31. | R-134A                               |
| 32. | Blocks for Supporting Forward Engine |
| 33. | Vacuum Cleaner                       |
| 34. | Rivnut Puller                        |



Trade Name: Johnsen's Ester 100

 MSDS NO.
 6711

 Revision Date:
 03/26/2007

 Date Printed
 12/30/2008

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Johnsen's Ester 100
Chemical Family: Refrigeration Oil

Synonyms: None

Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300

Supplier: Technical Chemical Company, P.O. Box 139, Cleburne, Texas 76033

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

| Component                   | Weight % | OSHA TWA   | OSHA STEL  | OSHA SKIN  |
|-----------------------------|----------|------------|------------|------------|
| Ester Propietary Inhibitor  | 0-20     | Not Listed | Not Listed | Not Listed |
| Package                     |          |            |            |            |
| Mixture                     |          |            |            |            |
| Ester Propietary Base Stock | 20-80    | Not Listed | Not Listed | Not Listed |
| Mixture                     |          |            |            |            |

| Component                   | Weight % | OSHA Z PEL | OSHA Z TWA | OSHA Z Ceiling |
|-----------------------------|----------|------------|------------|----------------|
| Ester Propietary Inhibitor  | 0-20     | Not Listed | Not Listed | Not Listed     |
| Package                     |          |            |            |                |
| Mixture                     |          |            |            |                |
| Ester Propietary Base Stock | 20-80    | Not Listed | Not Listed | Not Listed     |
| Mixture                     |          |            |            |                |

| Component                   | ACGIH TLV TWA | ACGIH TLV STEL | ACGIH TLV Ceiling |
|-----------------------------|---------------|----------------|-------------------|
| Ester Propietary Inhibitor  | Not Listed    | Not Listed     | Not Listed        |
| Package                     |               |                |                   |
| Mixture                     |               |                |                   |
| Ester Propietary Base Stock | Not Listed    | Not Listed     | Not Listed        |
| Mixture                     |               |                |                   |

other: Contains no ingredients in concentrations greater than 0.1% that are now known to be hazardous as defined by OSHA.

#### 3. HAZARDS IDENTIFICATION

Emergency Overview: Ingestion of this product may cause gastrointestinal distress with symptoms of nausea, vomiting, diarrhea

and abdominal pain. May cause irritation to skin and eyes.

HMIS Classification:Health: 1Flammability: 1Physical Hazard: 0NFPA Rating:Health: 1Flammability: 1Reactivity: 0

#### 4. FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting

the upper and lower lids. Seek medical attention if irritation persists.

Ingestion: DO NOT INDUCE VOMITING. Give nothing by mouth. Get medical attention! If vomiting occurs, keep

head lower than hips to prevent aspiration.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If

breathing is difficult give oxygen. Get medical attention.

Skin Contact: Remove contaminated clothing and shoes, and launder before reuse. Get medical attention if irritation

persists. Wash with soap and water. Use skin cream for defatted areas.

**Trade Name:** Johnsen's Ester 100

MSDS NO. 6711 **Revision Date:** 03/26/2007 **Date Printed** 12/30/2008

#### FIRE FIGHTING MEASURES

Flammable Properties

Flash Point °F(°C): >482 (<250) **Flash Point Method:** COC

Flammable Limits in Air - Lower (%): Not Determined Flammable Limits in Air - Upper (%): Not Determined Autoignition Temperature °F(°C): Not Determined

**Extinguishing Media: Protection Of Fire-Fighters:**  Carbon dioxide. Dry chemical. Foam.

**Special Fire-Fighting Procedures:** Wear approved positive-pressure self-contained breathing apparatus and protective clothing. Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity.

**Hazardous Combustion Products:** 

Oxides of carbon, nitrogen and phosphorus. Not Applicable

**Aerosol Comments:** 

#### **ACCIDENTAL RELEASE MEASURES** 6.

**Personal Precautions:** Wear appropriate protective clothing and equipment to prevent skin and eye contact. **Spill Procedures:** Wear protective equipment specified. Contain any liquid from leaking containers.

Action to be taken if material is released

or spilled:

Absorb spills on inert material such as perlite, vermiculite, sand or dirt. Place in double polyethylene bags. Isolate from other waste materials. Wash walking surfaces with detergent and water to reduce slipping

**Environmental Precautions:** 

Do not allow to enter sanitary drains, sewer or surface and subsurface waters.

#### 7. HANDLING AND STORAGE

Handling and Storage: Avoid contact with eyes. Keep containers tightly closed when not in use. Use only in a well ventilated area.

Good hygienic practices should be observed. Work clothes should be washed separately at the end of each work day. Contaminated disposable clothing should be discarded in accordance with local, state and federal rules. Wash thoroughly after handling. Do Not Swallow. Store at room temperature. Avoid

prolonged/repeated breathing of vapors, mists or fumes.

#### **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Engineering Controls:** Eyewash stations. Showers. Use local exhaust.

Chemical goggles; also wear a face shield if splashing hazard exists. Eves:

**Skin Protection:** Neoprene coated apron or clothing.

**Respiratory Protection:** Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to

protect against inhalation exposure.

#### PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear to light yellow liquid

MILD ETHER Odor: Not Determined pH Value: Vapor Pressure: Not Determined Vapor Density (Air=1): Not Determined Boiling Point (°F): >300 C. **Melting/Freezing Point:** Not Determined Solubility in Water: **INSOLUBLE** Bulk Density at 20°C: Not Determined Molecular Weight: Mixture Specific Gravity (H20=1): 1.04 @ 60F **Viscosity:** 100 cSt @ 40C **Evaporation Rate:** Not Determined

VOC Content(%): Not determined. **Decomposition Temperature:** Not Known

Trade Name: Johnsen's Ester 100

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#### 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of handling, use and transportation.

Conditions to Avoid: High temperatures.

Materials to Avoid: Strong oxidizing agents.

Hazardous Decomposition Products: Oxides of nitrogen. Oxides of carbon. Oxides of sulfur.

Hazardous Polymerization: WILL NOT OCCUR

#### 11. TOXICOLOGICAL INFORMATION

#### Toxicological Data:

| Component                   | Route      | Species | Dose       |
|-----------------------------|------------|---------|------------|
| Ester Propietary Inhibitor  | Inhalation | Rats    | Not known. |
| Package                     |            |         |            |
| Mixture                     |            |         |            |
| Ester Propietary Base Stock | Inhalation | Rats    | Not known. |
| Mixture                     |            |         |            |

#### Carcinogenicity:

| Component                   | IARC       | NTP        | OSHA       |
|-----------------------------|------------|------------|------------|
| Ester Propietary Inhibitor  | Not Listed | Not Listed | Not Listed |
| Package                     |            |            |            |
| Mixture                     |            |            |            |
| Ester Propietary Base Stock | Not Listed | Not Listed | Not Listed |
| Mixture                     |            |            |            |

Comments: No component known to be present in this product at >.1% is presently listed as a carcinogen by IARC, NTP or OSHA.

#### 12. ECOLOGICAL INFORMATION

Remarks: Ecological testing has not been conducted on this product.

#### 13. DISPOSAL CONSIDERATION

Waste Classification: This product as purchased does not fall under current U.S. EPA RCRA difinitions of hazardous waste.

Under RCRA it is the generator's responsibility to determine the status of the waste at the time of its

disposal. This product does not contain any CERCLA regulated materials.

Waste Management: Not determined.

Disposal Method: Disposal of this material to the land may be banned by federal law (40 CFR 268).

#### 14. TRANSPORTATION INFORMATION

U.S. DOT:

Proper Shipping Name:Not RegulatedHazard Class:Not ApplicableUN/NA Number:Not ApplicableDOT Packing Group:Not Applicable

IMDG:

Proper Shipping Name:Not RegulatedHazard Class:Not ApplicableHazard Subclass:Not ApplicableUN No.:Not ApplicablePacking Group:Not Applicable

Marine Pollutant: No

Trade Name: Johnsen's Ester 100

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 03/26/2007

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 12/30/2008

#### 15. REGULATORY INFORMATION

#### **US Federal Regulations:**

| Component                   | SARA 313   | SARA 302   | TPQ        | RQ         |
|-----------------------------|------------|------------|------------|------------|
| Ester Propietary Inhibitor  | Not Listed | Not Listed | Not Listed | Not Listed |
| Package                     |            |            |            |            |
| Mixture                     |            |            |            |            |
| Ester Propietary Base Stock | Not Listed | Not Listed | Not Listed | Not Listed |
| Mixture                     |            |            |            |            |

**US OSHA HEALTH CLASSIFICATION:** Hazardous per OSHA 29 CFR 1910.1200

SARA 311/312 Hazard Catagories: Immediate Health: Yes, Delayed Health: No, Fire: No, Reactive: No, Pressure: No.

#### State Regulations:

| Component                   | California Prop. 65<br>Cancer list | California - Prop 65 Developmental Toxicity | California Prop. 65<br>Reproductive Female | California Prop. 65<br>Reproductive Male |
|-----------------------------|------------------------------------|---|--|--|
| Ester Propietary Inhibitor  | Not Listed                         | Not Listed                                  | Not Listed                                 | Not Listed                               |
| Package                     |                                    |   |  |  |
| Mixture                     |                                    |   |  |  |
| Ester Propietary Base Stock | Not Listed                         | Not Listed                                  | Not Listed                                 | Not Listed                               |
| Mixture                     |                                    |   |  |  |

U.S. TSCA:
 Canadian Inventory:
 One or more components of this product is not listed on the TSCA Inventory.
 One or more components of this product is not listed on the Canadian DSL or NDSL Inventory.

Consumer Product Safety Improvement Act of 2008 General Conformity Certification

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product container.

#### 16. OTHER INFORMATION

General Notes: Disclaimer: Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system. The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

#### RSG Products Inc. AIRCRAFT PRE-INSPECTION – AS350 Air Conditioning

## Step 2

## **Aircraft Pre-Inspection**

Date: 08/13/22

Section 2: Aircraft Pre-Inspection Page 1 of 4

## RSG Products Inc. AIRCRAFT PRE-INSPECTION – AS350 Air Conditioning

### **Aircraft Pre-Inspection**

| STEP | PROCEDURE   | MECH | INSP |
|------|---|------|------|
| 2.1  | Inspect the aircraft for other kits and Modifications that may effect the installation of The air conditioning kit. |      |      |
| 2.2  | Inspect the airframe structure for any obvious Structural damage or corrosion.                                      |      |      |
| 2.3  | Repair discrepancies that are found prior to Installation of kit.   |      |      |
| 2.4  | Inspect aircraft paperwork for damage history that may effect the installation of this kit.                         |      |      |

Date: 08/13/22

Section 2: Aircraft Pre-Inspection Page 2 of 4

#### RSG Products Inc. AIRCRAFT PRE-INSPECTION – AS350 Air Conditioning

### **General Safety Instructions**

#### **PROCEDURE**

**WARNING:** Always handle the refrigerant fluids carefully.

<u>WARNING:</u> Do not mix other refrigerant fluids with the R134a. Do not use refrigerant canned for pressure-operated accessories (such as boat air horns). This refrigerant is not pure and will cause malfunctions in the system.

**WARNING:** When the system must be opened to do maintenance, before you do the work, you must drain the air conditioning system.

**WARNING:** When you open the system, you must collect the refrigerant in accordance with Federal and Local regulations.

**WARNING:** When the R134a is used in normal conditions, it is not flammable. Do not use it near a source of heat to prevent the risk of separation of the vapors.

**WARNING:** Avoid skin and eye contact with R-134a. The liquid R-134a, at normal atmospheric temperatures evaporates so quickly that it will freeze anything is comes in contact with.

**WARNING:** Wear safety goggles when servicing any part of the refrigerant system.

**WARNING:** Never heat a R-134a supply cylinder to produce additional pressure or attempt to empty the container completely.

**WARNING:** Insure adequate ventilation when servicing the refrigerant system.

**WARNING:** If the R-134a and lubrication oil are mixed with water they make hydrochloric acid. This will cause corrosion of the system components.

Date: 08/13/22

Section 2: Aircraft Pre-Inspection Page 3 of 4

## RSG Products Inc. AIRCRAFT PRE-INSPECTION – AS350 Air Conditioning

### **General Safety Instructions**

#### **PROCEDURE**

**WARNING:** You must replace the filter drier each time you open the system.

**WARNING:** Comply with the regulations in force in the country where the aircraft is operated when working on the air conditioning system.

**WARNING:** Only use nitrogen or Alcohol to clean the system components.

<u>WARNING</u>: Always keep the R-134a supply cylinder in an upright position when admitting refrigerant into the system. If a cylinder is on its side or upside down, liquid will enter the R-134a system and cause damage to the compressor.

Date: 08/13/22

Section 2: Aircraft Pre-Inspection Page 4 of 4

#### RSG Products Inc. AIRCRAFT PREPARATION – AS350 Air Conditioning

## Step 3

## **Aircraft Preparation**

Date: 08/13/22

Section 3: Aircraft Preparation Page 1 of 3

## RSG Products Inc. AIRCRAFT PREPARATION – AS350 Air Conditioning

### **Aircraft Preparation**

| STEP  | PROCEDURE  | MECH | INSP |
|-------|--|------|------|
| 3.0   | Remove or disconnect the battery.  |      |      |
| 3.1   | Remove pilot and co-pilots doors.  |      |      |
| 3.2   | Remove right rear door as needed.  |      |      |
| 3.3   | Remove rear seats.   |      |      |
| 3.4   | Remove co-pilot anti-torque pedals.                                      |      |      |
| 3.5   | Drop the cabin headliner.  |      |      |
| 3.6   | Remove the two side screws from both sides of the glare shield.          |      |      |
| 3.7   | Remove back wall covering.   |      |      |
| 3.8   | Remove the right side baggage door.                                      |      |      |
| 3.9   | Remove the forward closeout panel in the right hand baggage compartment. |      |      |
| 3.10  | Access panel Aft of landing light.                                       |      |      |
| 3.11  | Remove the right hand transmission cowling.                              |      |      |
| 3.12  | Remove the left hand transmission cowling.                               |      |      |
| 3.13  | Remove lower nose right window.  |      |      |
| 3.14  | Remove the front belly cowling.  |      |      |
| 3.15  | Remove the center belly cowling.   |      |      |
| 3.15a | Remove the right middle belly cowling.                                   |      |      |
| 3.15b | Lower the rear belly cowling.  |      |      |

Date: 08/13/22

Section 3: Aircraft Preparation Page 2 of 3

#### RSG Products Inc. AIRCRAFT PREPARATION – AS350 Air Conditioning

### **Aircraft Preparation**

| STEP | PROCEDURE   | MECH | INSP |
|------|---|------|------|
| 3.16 | Remove the cargo net from the rear baggage compartment. (If installed)                              |      |      |
| 3.17 | Remove the rear cargo compartment floor.  |      |      |
| 3.18 | Remove the electrical compartment cover.  |      |      |
|      | <b>NOTE:</b> Determine location for air conditioning power hook up. Reinstall cover to prevent FOD. |      |      |
| 3.19 | Remove the rear cargo compartment forward floor panel.  |      |      |

### **NOTE:**

After installation of system, a thorough inspection of all areas affected must be performed to determine security component installations and workman-ship standards prior to reassembly of aircraft and return to service by a qualified individual.

Date: 08/13/22

Section 3: Aircraft Preparation Page 3 of 3

### Step 4

# **Removal of Factory Installed Components**

Date: 08/13/22

Section 4: Removal of Factory Installed Components

## RSG Products Inc. REMOVAL OF FACTORY INSTALLED COMPONENTS – AS350 Air Conditioning

### **Removal of Factory Installed Components**

| STEP | PROCEDURE   | MECH | INSP |
|------|---|------|------|
| 4.1  | Unbolt oil cooling fan and shroud tiewrap to transmission.  |      |      |
| 4.2  | Disconnect oil cooler assembly from aft cabin wall and the wrap to transmission. Do not disconnect oil lines. |      |      |
| 4.3  | Remove fresh air duct between oil cooler and discard.   |      |      |
| 4.4  | Remove aft right side seat mount bracket for installation of doubler. Ref 5-21-AS350                          |      |      |
| 4.5  | (Intentionally left Blank)  |      |      |
| 4.6  | Remove warning horn forward of co-pilots feet.<br>Hold for reinstallation.                                    |      |      |
| 4.7  | Remove NR digital indicator box forward of copilots feet. Hold for reinstallation.                            |      |      |
| 4.8  | Remove glare shield.  |      |      |
| 4.9  | Remove T4 correction chart holder. Hold for reinstallation.   |      |      |

Date: 08/13/22

Section 4: Removal of Factory Installed Components

## RSG Products Inc. INSTALLATION OF AFT EVAPORATOR – AS350 Air Conditioning

## Step 5

# Installation of Aft Evaporator

Date: 08/13/22

Section 5: Installation of Aft Evaporator Page 1 of 5

## RSG Products Inc. INSTALLATION OF AFT EVAPORATOR – AS350 Air Conditioning

### **Installation of Aft Evaporator**

| STEP | PROCEDURE   | MECH | INSP |
|------|---|------|------|
| 5.1  | Remove Right Hand Transmission Cowling Forward latch. (See photo 1). Hold for reinstallation. Position the aft evaporator doubler P/N 260328-1 on the upper transmission deck per drawing 4-3-AS350 sheet 1 of 2. Mark around doubler and remove all existing rivets, bolts, and nut plates to allow the doubler to sit flat on deck. |      |      |
| 5.2  | Drill through deck using pilot holes in doubler. Back drill the doubler from existing holes in the deck.  |      |      |
| 5.3  | Mark and cut openings in the transmission deck using doubler P/N 260328-1 as a template.  |      |      |
| 5.4  | Install aft evaporator doubler P/N 260328-1 on right hand upper transmission deck in accordance with drawing 4-3-AS350 sheet 1 of 2 using rivets as shown. Re-install Right Hand Transmission Cowling Forward latch as shown in drawing 4-3-AS350 sheet 1 of 2.   |      |      |
| 5.5  | Next temporarily install Aft evaporator assembly P/N 560010-"O"-5 with 4 ea. AN3-5A bolts and 4 ea. AN960-10 washers per drawing 4-13-AS350.  |      |      |
| 5.6  | Position return air doubler P/N 260322-1 against aft cabin bulk head as shown in drawing 5-21-AS350 trace outline on bulkhead. Remove doubler and drill out rivets inside trace.  |      |      |
| 5.7  | Reposition doubler P/N 260322-1. Back drill all holes and Cleco in place. Using doubler as guide pen route out return air hole.   |      |      |
| 5.8  | Remove doubler, clean holes. Install doubler P/N 260322-1 and angle P/N 260322-2 rivet in place per drawing 5-21-AS350.   |      |      |
|      | NOTE: Two different situations, requiring different doublers are utilized depending on the type and location of the aft seat harness reel (if installed). See drawing for specifics.  |      |      |

Date: 08/13/22

Section 5: Installation of Aft Evaporator Page 2 of 5

## RSG Products Inc. INSTALLATION OF AFT EVAPORATOR – AS350 Air Conditioning



**PHOTO 1** 

Date: 08/13/22

Section 5: Installation of Aft Evaporator Page 3 of 5

## RSG Products Inc. INSTALLATION OF AFT EVAPORATOR – AS350 Air Conditioning

### **Installation of Aft Evaporator**

| STEP  | PROCEDURE  | MECH | INSP |
|-------|--|------|------|
| 5.9   | Install return air screen P/N 080022-1 as per drawing 5-21-AS350.  |      |      |
| NOTE: | Before final install of evaporator. Install condenser channel and P/N 510008. (See condenser install: S  |      | 007  |
| 5.10  | Locate "Return Air Connector" P/N 250166. Trial fit to the aft side of the cabin wall, immediately in front of the aft evaporator. The open side of the connector must face aft. Slide the connector upward until it contacts the forward side of the evaporator. Mark with a pencil, the inside of the connector position on to the evaporator. Remove the connector and evaporator. Reference drawing 4-13-AS350. Draw a line one (1) inch above the lower/forward face of the evaporator case. Trial fit "Return Air Connector" to the evaporator, ensuring that the flanges of the connector <b>DO NOT go past the inboard/outboard sides of the evaporator.</b> Confirm the pencil lines. Remove the connector. Cut out the area within the pencil lines, leaving the one (1) inch lower lip on the evaporator case as a drain seal.  NOTE: ENSURE DURING DRILLING THAT THE |      |      |
|       | COIL INSIDE THE CASE IS NOT DAMAGED.  Seal and secure the Return Air Duct Connector PN: 250166 with rivets to the Evaporator PN: 560010-O-5 case per drawing 4-13-AS350. Next install the connector angle assembly P/N 510261, per drawing 4-3-AS350 Sheet 1 of 2 and 4-13-AS350. This holds the upper part of the return air duct.  |      |      |
| 5.11  | Position the aft evaporator return air duct P/N 250149 in the right side baggage compartment as shown on drawing 4-13-AS350. Use the return air opening to locate the return air duct. Trim the return air duct as required to fit.  |      |      |
| 5.12  | Remove the access panel from the outboard side of the aft evaporator P/N 560010-O-5.   |      |      |
| 5.13  | Temporarily install the aft evaporator, P/N 560010-O-5 using 4 each, AN3-5A, bolts and AN960-10, washers.  |      |      |

Date: 08/13/22

Section 5: Installation of Aft Evaporator Page 4 of 5

## RSG Products Inc. INSTALLATION OF AFT EVAPORATOR – AS350 Air Conditioning

### **Installation of Aft Evaporator**

| STEP | PROCEDURE  | MECH | INSP |
|------|--|------|------|
| 5.14 | Locate and drill the holes for mounting the aft evaporator return air duct connector P/N 250166. Ref. 4-13-AS350   |      |      |
| 5.15 | Attach Return Air Duct P/N 250149 per drawings 4-3-AS350 sheet 1 of 2 and 4-13-AS350.  |      |      |
| 5.16 | SEAL THE EVAPORATOR TO THE RETURN AIR  DUCT WITH ALUMINUM FOIL TAPE  PN: 070076 as required by reaching through the outboard opening in the evaporator. Re-install the aft evaporator access panel.  |      |      |
| 5.17 | Install the Aft Evaporator Fan Assembly, P/N 490017-1-02, using five each AN3-5A bolts, and 5 ea. AN960-10 washers.  |      |      |
| 5.18 | Locate Transition Elbow P/N 520036-3. This will be mounted on upper Aft Cabin Wall on transmission side. See drawing 4-3-AS350 Sheets 1 and 2. Remove oil coolers from upper deck dog house. (Do Not Disconnect oil Lines) Position as to be able to modify Aft cabin wall. Do Not Re-install until step 5.22. |      |      |
| 5.19 | Mark hole to be cut out in aft cabin wall per drawing 4-3-AS350 Sheet 1 of 2. Be careful not to cut the cabin air duct bonded to aft cabin wall. Drill a couple of # 40 holes to see if you clear duct.  |      |      |
| 5.20 | Cut out hole and mount elbow as shown in drawing No. 4-3-AS350 Sheet 1 and 2 of 2.   |      |      |
| 5.21 | Install a 5-inch flex duct (25"in) long from the aft evaporator fan assembly to the aft air distribution elbow end with two each 6" band clamps P/N 060035. Insulate the duct with foam tape P/N 070078 and wrap with aluminum tape P/N 070076.  |      |      |
| 5.22 | Modify over head wemac's as shown in drawing 5-10-AS350 if S/N 1302 or lower. Remove existing spacer air duct between oil coolers. Install new Air Duct Closure Assembly PN: 510092 using existing hardware. Re-install oil cooler assembly.   |      |      |
| 5.23 | Install hose doubler P/N 260369 per drawing 3-4-AS350.   |      |      |

Date: 08/13/22

Section 5: Installation of Aft Evaporator

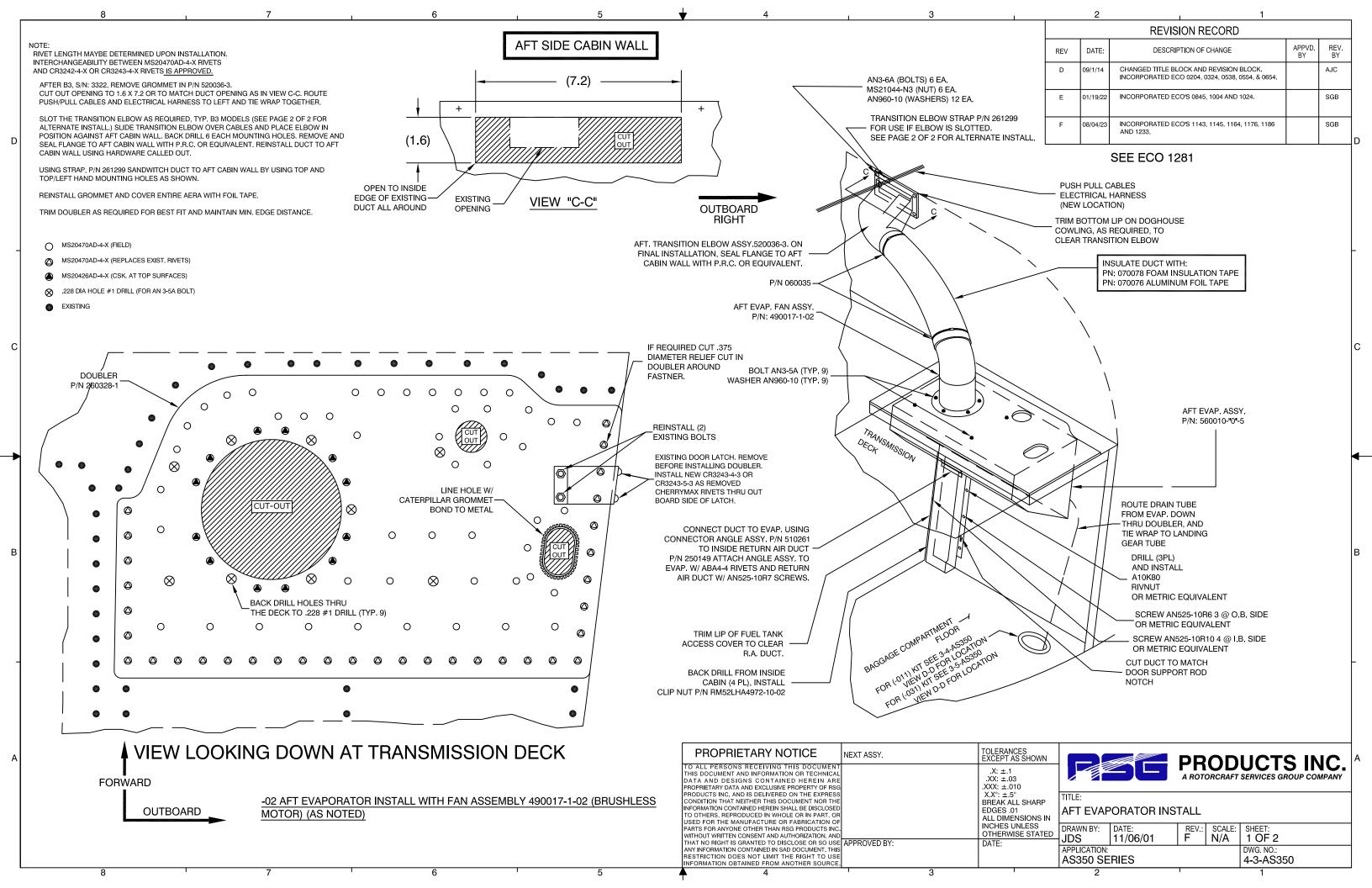
## RSG Products Inc. INSTALLATION OF CONDENSER – AS350 Air Conditioning

## Step 6

## **Installation of Condenser**

Date: 08/13/22

Section 6: Installation of Condenser Page 1 of 6



NOTES: TRIM MATING SURFACES OF ELBOW FOR ALIGNMENT OF ELBOW TO CABIN DUCT. POSITION ELBOW ABOVE CABLES AND ALIGN WITH CABIN DUCT. TRACE CABLE ROUTING ONTO LOWER SIDE OF ELBOW. CUT ELBOW TO ALLOW CABLES TO PASS THROUGH WITHOUT INTERFERENCE. OPEN AFT END OF CUT TO APPROX 1 AND INSTALL GROMMET.
INSTALL ELBOW TO CABIN AFT WALL PER STANDARD INSTALLATION TABLE 1 FILTER KIT P/N: 050143-2 INSTRUCTIONS. ITEM DESCRIPTION PART NUMBER QTY SEAL OPENINGS BOTH INSIDE AND OUT WITH ALUMINUM FOIL, SEAL AREA BETWEEN CABLES AND GROMMET WITH SEALING CORK PN: 070078-6 OR PROSEAL 890 TO ENSURE THAT ELBOW IS AIR TIGHT. FILTER 13619-RF16883 EMI FILTER PLACARD 13619-RF16883P EMI FILTER KIT P/N: 050143-2. (SEE TABLE 1) EMI FILTER BRACKET 04-350-21-108-01 1 ALTERNATE PROCEEDURE FOR INSTALLING CHERRY NUT PLATE RIVET CCR264CS3-02 4 AFT TRANSITION ELBOW ASSEMBLY PN: 520036-3, NUT PLATE MS21075-3N 2 AS350-B3 SERIES TO AVOID REROUTING OF ROTORBRAKE AND FUEL SELECTOR CABLES. SCREW MS27039-1-07 2 WASHER (#10) NAS1149D0316J 2 04-350-21-108-01 (AFT EVAP EMI FILTER BRACKET) 1EA 13619-RF16883 (EMI FILTER) 1EA MS21075-3N (NUTPLATE) 2EA CCR264CS-3-02 (RIVET) 4EA MS27039-1-07 (SCREW) 2EA NAS1149D0316J (WASHER) 2EA FOR BRACKET ATTACHMENT USE EXISTING AN3-5A BOLTS, 3 PLACES TRIM BRACKET 04-350-21-108-01 AS NECESSARY TO FIT AGAINST MOTOR AND SEAL UNDER FOOT WITH RTV 732 OR EQUIVALENT AS REQUIRED FOR FOD PREVENTION BURNISHING REQUIREMENTS: REMOVE PROTECTIVE FINISH LOCALLY FROM SURFACES WHERE EQUIPMENT MOUNTING HOLES ARE LOCATED, TO ASSURE A PROPER ELECTRICAL BOND MEASURING A MAXIMUM OF 2.5 MILLIOHMS. PRODUCTS INC. A ROTORCRAFT SERVICES GROUP COMPANY AFT EVAPORATOR INSTALL DRAWN BY: DATE: 11/06/01 SCALE: SHEET: N/A 2 OF 2 APPLICATION: DWG. NO.: AS350 SERIES 4-3-AS350

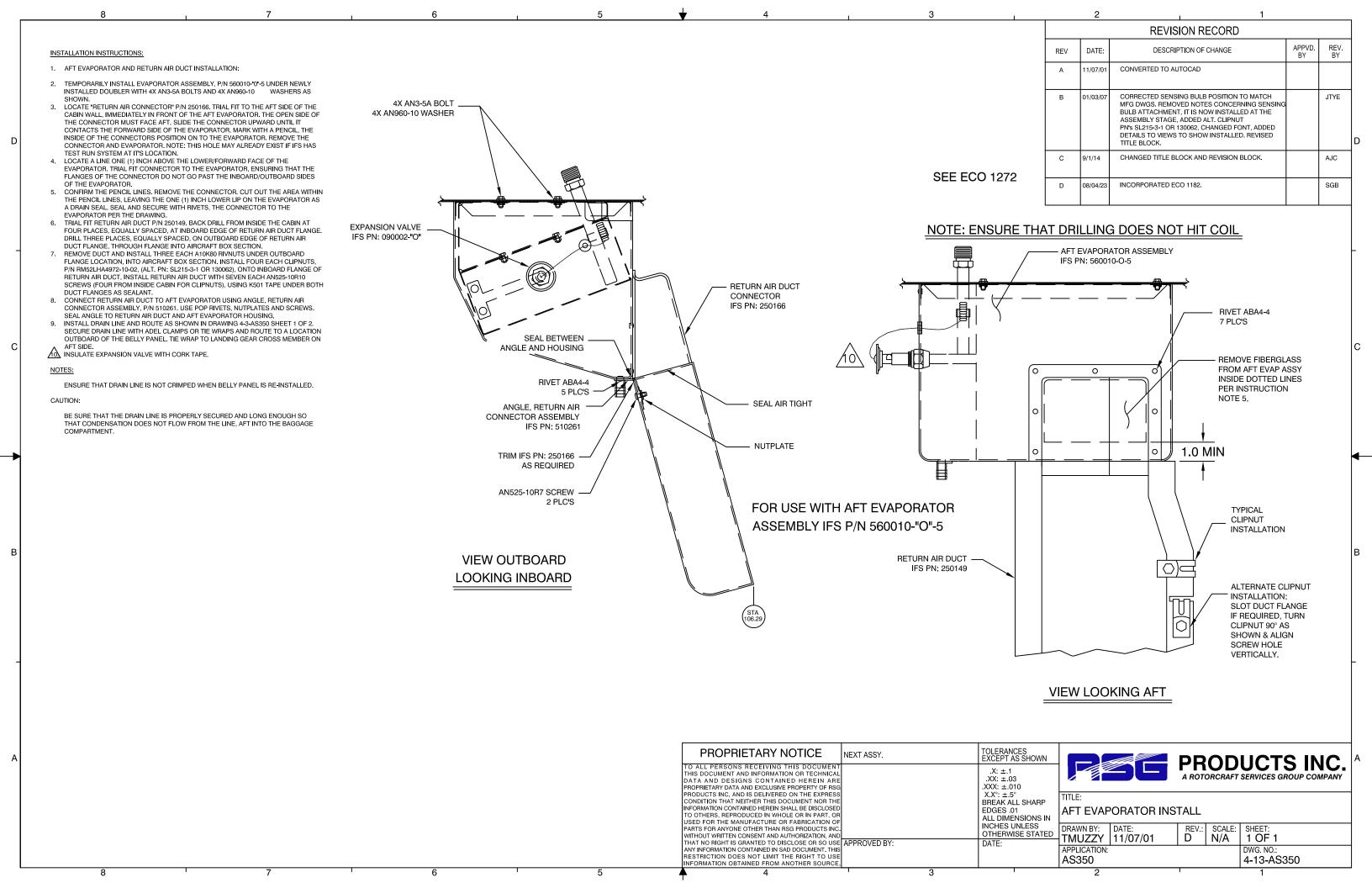
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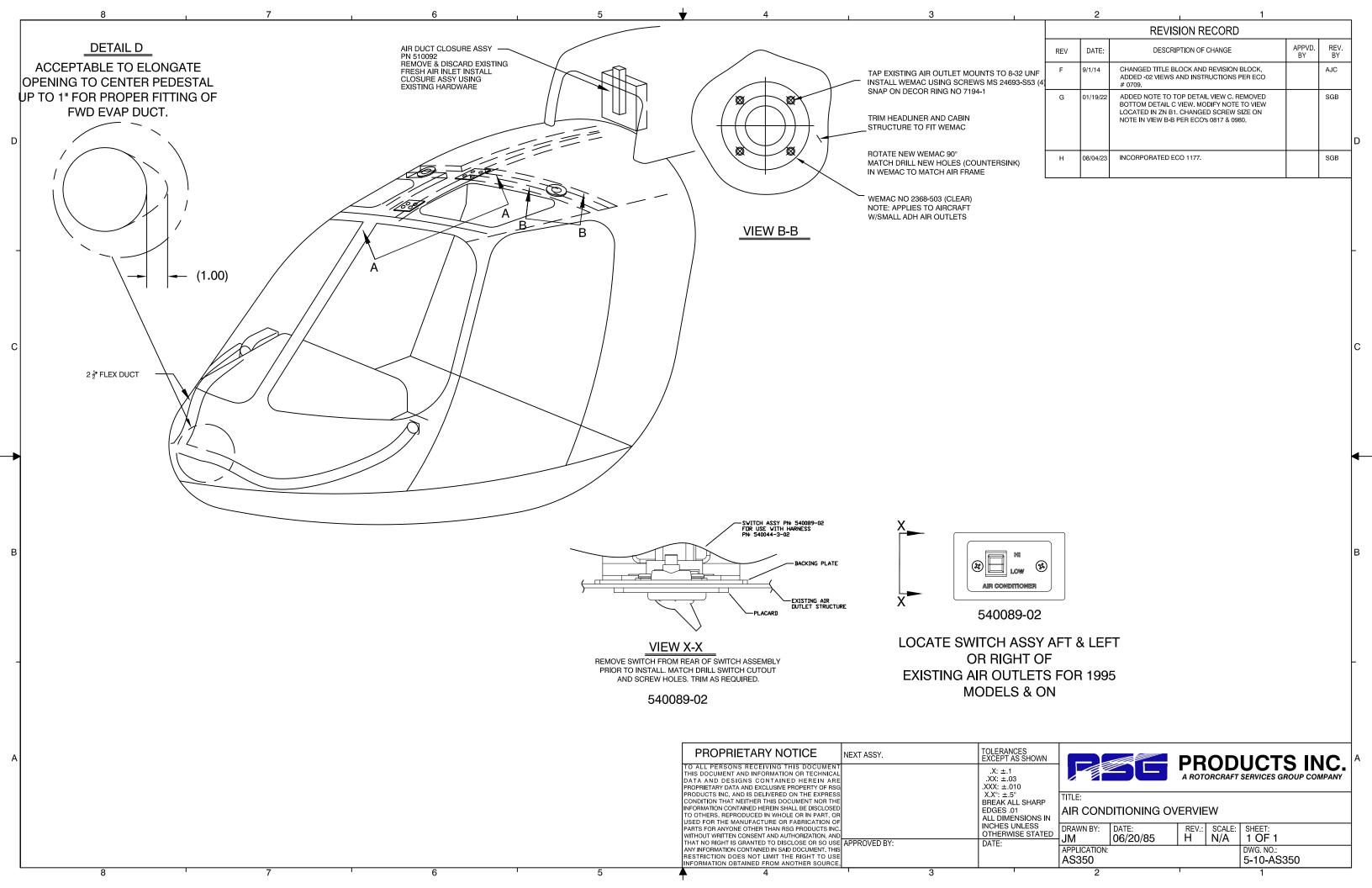
|  | <b>E</b> NGINEERING  | ECO No. 1281  | SHT 1 OF 1                           |
|--|--|---|--------------------------------------|
|  | CHANGE   | DWG No. 4-3-AS350   | REV F                                |
| PRODUCTS INC.  | <b>O</b> RDER  | DWG No.   | REV                                  |
| CHANGE CLASS:  | • RDLR   | DWG No.   | REV                                  |
| ☐ RECORD CHG. PARTS NOT AFFECTED ☐ NO  |  | REF. STC No. CLIO FOOCYA  |                                      |
| ■ INTERCHANGEABLE PARTS ☐ OTH  | HER  | SH3509SW  |                                      |
| EXISTING/IN-WORK STOCK DISPOSITION:  RECORD CHG. PARTS NOT AFFECTED RE- SCRAP EXISTING STOCK   | work existing stock<br>HER <u>break in at next</u> build   | EFFECTIVITY:  ☐ ALL UNITS THIS CUSTOMER ☐ LI. ☐ ALL UNITS MFG'D AFTER THIS DATE ☐ O | MITED UNITS SPECIFIED THER ALL UNITS |
| DESCRIPTION OF CHANGE: C THE MAIN NOTES 'BACK DRILL CHANGE QTY FROM 6 TO 8 ( WAS:  NOTE: RIVET LENGTH MAYBE DETERMINED UPON INSTALLA INTERCHANGEABILITY BETWEEN MS20470AD-4-X RIV AND CR3242-4-X RIVETS IS APPROVED.  AFTER B3, S/N: 3322, REMOVE GROMMET IN P/N 52 CUT OUT OPENING TO 1.6 X 7.2 OR TO MATCH DUC PUSH/PULL CABLES AND ELECTRICAL HARNESS TI  SLOT THE TRANSITION ELBOW AS REQUIRED, TYP ALTERNATE INSTALL.) SLIDE TRANSITION ELBOW POSITION AGAINST AFT CABIN WALL MOTH P.R.C. OR CABIN WALL USING HARDWARE CALLED OUT.  USING STRAP, P/N 261299 SANDWITCH DUCT TO A TOP/LEFT HAND MOUNTING HOLES AS SHOWN.  REINSTALL GROMMET AND COVER ENTIRE AERA W REMOVE EXISTING AIRBUS BRACKET P/N 350A7246 AS NECESSARY. | ATION. 2 TIMES) AND QTY 12 ATION. 20036-3. 21 OPENING AS IN VIEW C-C. ROUTE O LEFT AND TIE WRAP TOGETHER. 21 B3 MODELS (SEE PAGE 2 OF 2 FOR DVER CABLES AND PLACE ELBOW IN 3 EACH MOUNTING HOLES. REMOVE AN EQUIVALENT. REINSTALL DUCT TO AFT FT CABIN WALL BY USING TOP AND WITH FOIL TAPE. | E HOLES" AND FOV NOTES IN 3<br>2 TO 16.  AN3-6A (BOLTS MS21044-N3 (N AN960-10 (WAS  | SECTION D3  S) 6 EA. JUT) 6 EA.      |
| NOTE: RIVET LENGTH MAYBE DETERMINED UPON INSTALL/ INTERCHANGEABILITY BETWEEN MS20470AD-4-X RIV AND CR3242-4-X RIVETS IS APPROVED.  AFTER B3, S/N: 3322, REMOVE GROMMET IN P/N 5: CUT OUT OPENING TO 1.6 X 7.2 OR TO MATCH DUC PUSH/PULL CABLES AND ELECTRICAL HARNESS T  SLOT THE TRANSITION ELBOW AS REQUIRED, TYP ALTERNATE INSTALL.) SLIDE TRANSITION ELBOW POSITION AGAINST AFT CABIN WALL WITH P.R.C. OR CABIN WALL USING HARDWARE CALLED OUT.  USING STRAP, P/N 261299 SANDWITCH DUCT TO A TOP/LEFT HAND MOUNTING HOLES AS SHOWN.  REINSTALL GROMMET AND COVER ENTIRE AERA V REMOVE EXISTING AIRBUS BRACKET P/N 350A724 AS NECESSARY.  | VETS  20036-3. CT OPENING AS IN VIEW C-C. ROUTE O LEFT AND TIE WRAP TOGETHER.  P. B3 MODELS (SEE PAGE 2 OF 2 FOR OVER CABLES AND PLACE ELBOW IN B EACH MOUNTING HOLES. REMOVE AN B EQUIVALENT. REINSTALL DUCT TO AFT  FT CABIN WALL BY USING TOP AND WITH FOIL TAPE.                         |   | IÚT) 8 EA.                           |
| REMARKS: MINOR CHANGE.   |  | ENGINEERING REVIE   |                                      |
| CHANGE QTY IN MULTIPLE LOC   | CATIONS  | SIGNATURE STAM  |                                      |
| CHANGE OF IN MOEIN LE LOC  | <i>3,</i> (1101 to)  | MRB   |                                      |
|  |  | In The CA   |                                      |
|  |  | TOYM PO   | 16 1/23/2024                         |
|  |  | INCORPORATION STA   | TUS                                  |

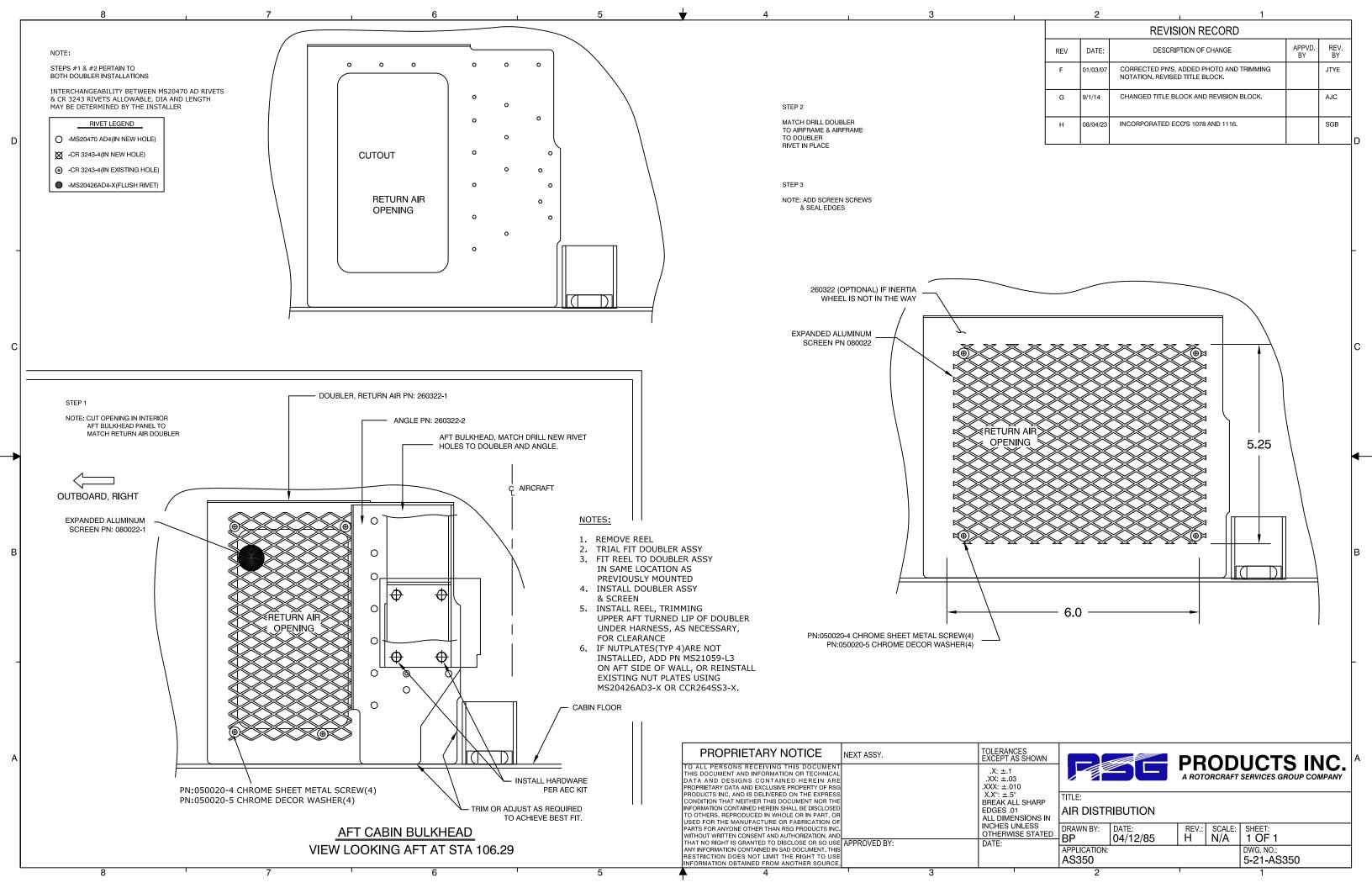
OUTSTANDING

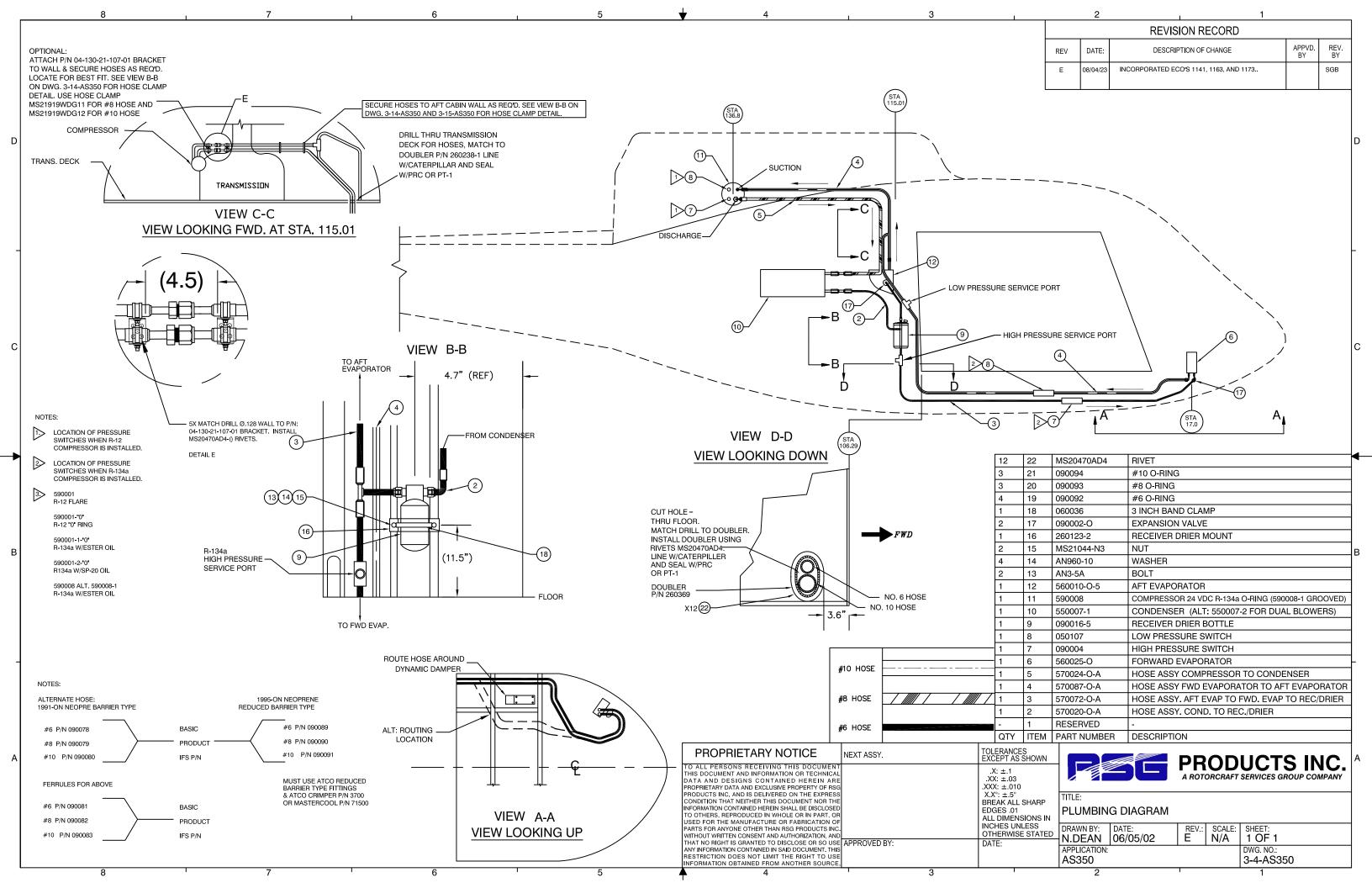
☐ IMMEDIATE



|   |  | 05 - 1          |
|---|--|-----------------|
| <b>E</b> NGINEERING   | ; ECO No. 1272                                   | SHT 1 OF 1      |
| Change  | DWG No. 4-13-AS350                               | REV D           |
| DECEMBER 1810   | DWG No.  | REV             |
| URDER ORDER   | DWG No.  | REV             |
| CHANGE CLASS:  ☐ RECORD CHG. PARTS NOT AFFECTED ☐ NON-INTERCHANGEABLE PARTS                                     | REF. STC No.                                     |                 |
| ■ INTERCHANGEABLE PARTS □ OTHER   | SH3509SW   |                 |
| EXISTING/IN-WORK STOCK DISPOSITION:   | EFFECTIVITY:  ALL UNITS THIS CUSTOMER  LIMITED U | INITS SPECIFIED |
| ☐ RECORD CHG. PARTS NOT AFFECTED ☐ RE-WORK EXISTING STOCK ☐ SCRAP EXISTING STOCK ☐ OTHER BREAK IN AT NEXT BUILD | ALL UNITS MFG'D AFTER THIS DATE OTHER            |                 |
| DESCRIPTION OF CHANGE: UPDATE DEPICTION (<br>CHANGED FOR CLARITY.   | OF DRAIN NIPPLE. ONLY SHOWING                    | WHAT            |
| WAS:  |  | *               |
| IS:   |  |                 |
| REMARKS: MINOR CHANGE.  | ENGINEERING REVIEW BOAI                          | RD DATE         |
| UPDATED VIEW.   | MRB04  | 12/6/2023       |
|   | 1 1/m 0422                                       | 12/6/2023       |
|   | 33411 P016                                       | B/11/2023       |
|   | INCORPORATION STATIS                             |                 |
|   | INCORPORATION STATUS  ☐ IMMEDIATE ☐ OUTSTANDIN   | 1G              |







### RSG Products Inc.

### $INSTALLATION\ OF\ CONDENSER-AS350\ Air\ Conditioning$

### **Installation of Condenser**

| STEP  | PROCEDURE   | МЕСН       | INSP  |
|-------|---|------------|-------|
| NOTE: | Do not install P/N 260148-3 before installing mount channels 510008. Complete steps 6.8 thru 6.11 prior to step 6.7.  | P/N 51000° | 7 and |
| 6.1   | Locate Condenser Fan Mounting Channel P/N 260148-3 and Fan Channel Base Angle P/N 260020 these will be mounted in the right hand baggage compartment.   |            |       |
| 6.2   | Remove support channel AEC P/N 2105000001 per drawing 7-2-AS350 Sheet 1 of 2.   |            |       |
| 6.3   | Position in place P/N 260148-3 and P/N 260020 as shown in drawing 7-2-AS350 Sheet 1 of 2. Back drill in place and Cleco. Fit filler P/N 260862 and drill in place per drawing 7-2-AS350 Sheet 1 and 2.  |            |       |
| 6.4   | Position Battery compartment shelf P/N 260333 with mount angles, P/N 260335, drill in place, see drawing 7-2-AS350 Sheet 1 of 2.  |            |       |
| 6.5   | Be sure to pick up all holes as shown in drawing 7-2-AS350 Sheet 1 of 2, including upper shelf shown in drawing 7-11-AS350.   |            |       |
| 6.6   | Align electrical panel assembly P/N 540028-C-2-A as shown in drawing 7-11-AS350. Create paper template for hole pattern on bottom of electrical panel assy. Use template to mark and drill shelf, mount P/N 540028-C-2-A using 3 ea. AN3-4A bolts. See drawing 7-2-AS350 for alternate electrical box location. |            |       |
| 6.7   | Remove all parts, clean holes, reinstall and rivet in place, as shown in drawings 7-2-AS350, Sheets 1 and 2 of 2.   |            |       |
| 6.8   | Locate forward and aft condenser channel assemblies, P/N 510008 and P/N 510007. These will be located in the upper right hand baggage compartment.  |            |       |
| 6.9   | Position forward channel P/N 510008 as shown in drawing 7-2-AS350 Sheet 2 of 2. Back drill all holes.   |            |       |

Date: 08/13/22

Section 6: Installation of Condenser Page 2 of 6

## $\label{eq:RSG_Products} \mbox{Inc.} \\ \mbox{INSTALLATION OF CONDENSER} - \mbox{AS350 Air Conditioning} \\$

### **Installation of Condenser**

| STEP | PROCEDURE  | MECH | INSP |
|------|--|------|------|
| 6.10 | Remove and clean holes and rivet in place as per drawing 7-2-AS350 Sheet 2 of 2.   |      |      |
| 6.11 | Repeat steps 6.9 and 6.10 for install of P/N 510007 nutplate, and other OEM equipment, as required for best fit to COND FAN MTG CHANNEL per drawing 7-2-AS350 sheet 2 of 2.  |      |      |
| 6.12 | If required: Install mount angle P/N 260002 on condenser: Measure 1.5" from aft (left) of condenser, draw a line parallel to aft end. Center mount angle over existing 3 holes on top of condenser. Align vertical flange over line drawn on condenser. Now transfer 3 holes to mount angle. Drill holes in mount angle. Next mount angle to condenser with 3 ea. AN3-5A bolts and 3 ea. AN960-10 washers as shown in drawing 7-11-AS350.  |      |      |
| 6.13 | Position the other mount angle P/N 260002 in fwd overhead channel as shown in drawing 7-2-AS350 Sheet 2 of 2, and adjust height as shown in drawing 7-11-AS350. Position condenser assembly in aircraft using previously installed (aft) angle as a guide and slide it up into the aft channel assembly. When condenser is level and at the correct height, check and make sure aft end of condenser is tight against condenser fan channel P/N 260148-3. If not, adjust aft mount angle.  |      |      |
| 6.14 | Now mark aft mount angle using 2 holes in aft channel assembly P/N 510007 as shown in drawing 7-2-AS350 sheet 1 of 2. Remove condenser and drill holes. Reinstall condenser assembly and temporarily bolt into position. Next mark position of fwd mount angle onto condenser, also mark 7" diameter fan hole along with 4 ea. mounting holes using condenser fan mounting channel 260148-3 as a guide. Remove condenser assembly, position fwd mounting angle on condenser using marking as a guide. Pick up existing 3 holes on condenser. Drill and mount angle using 3 ea. AN3-5A bolts and 3 ea. AN960-10 washers. Now cut out 7" diameter hole as marked and drill out 4 mounting holes.  NOTE: Be careful not to cut or drill condenser coil inside condenser, You have about 1" clearance from the end of the housing to the coil. Now mount existing fan mount ring inside of the end of the condenser using drilled mount holes to align ring. Install 4 ea. screws or bolts. Drill 2 ea. #40 holes on either side of each screw (do not drill through nutplates on mount ring) and install with CCR264SS3-3 rivets. Install condenser assembly. |      |      |

Date: 08/13/22

Section 6: Installation of Condenser Page 3 of 6

## $\label{eq:RSG_Products} \mbox{Inc.} \\ \mbox{INSTALLATION OF CONDENSER} - \mbox{AS350 Air Conditioning} \\$

|      | INSTALLATION OF CONDLINGLE ASSOCIATION   | 8 |  |
|------|--|---|--|
| 6.15 | Locate condenser air intake assembly P/N 520071 or 520071-1. This will be installed in right baggage door per drawing 8-2-AS350, 1 and 2 of 2.   |   |  |
| 6.16 | Temporarily install right baggage door. Take measurements from door frame to find center of condenser. Mark this center on door. Cut 4" Dia. Hole on center. Put hand through hole and using condenser cut out as guide to mark back of door. Remove door, place air intake assembly P/N 520071(-1) on back of door with lip towards door. Aligning the Aft Lip to mark on door.  NOTE: The lip is the part that will be inserted into the door, not the mounting flange.  Adjust up and down. See if top line is 3.2" down from top of door. Fit inside of top and bottom marks. Make sure you keep Air Intake level with tip edge of door. Now trace around lip. |   |  |
| 6.17 | Cut out hole using marks. Cut inside marks, and cut or sand as necessary to fit air intake.  |   |  |
| 6.18 | Temporarily install door. Insert air intake. Adjust cutout in condenser as necessary to fit air intake. Do not cut beyond Aft face of condenser. Leave flange going towards condenser. The Fwd end of the condenser can be cut as necessary. The bottom flange of condenser can be trimmed a little, but, leave at least .75" lip. Top can be trimmed almost to top of flange.   |   |  |
| 6.19 | Mark and cut out fan outlet hole per drawing 8-2-AS350 Sheet 1 of 2. Fit Screen Assy. Cond. Exhaust PN: 520052-1 or -2, adjust holes as necessary. Position Screen Assy. as shown in drawing 8-2-AS350 sheet 2 of 2 and drill 5 holes as shown in drawing 8-2-AS350 sheet 1 of 2.  |   |  |
| 6.20 | Lay 2 layers of 7.5 oz. – 8 oz. Cloth with resin as shown per drawing 8-2-AS350 sheet 1 of 2.  |   |  |
| 6.21 | Remove door inner core 1" inside of both cut outs. Next fill in with Hysol 960 or Metalset A-4.  |   |  |
| 6.22 | Reinstall inlet and outlet. Drill mounting holes and install with MS24693S278 screws, Tinnerman washers A3235-020-24A and nuts MS20364-1032C.  |   |  |
| 6.23 | Paint to match.  |   |  |
|      |  |   |  |

Date: 08/13/22

Section 6: Installation of Condenser

## RSG Products Inc. INSTALLATION OF CONDENSER – AS350 Air Conditioning

### **Installation of Condenser**

| STEP | PROCEDURE   | MECH | INSP |
|------|---|------|------|
| 6.24 | Modify battery cover, P/N 260339 per drawing 8-2-AS350 Sheet 2 of 2.  |      |      |
| 6.25 | Modify cargo net as shown in drawing 8-11-AS350. Install as shown.  |      |      |
| 6.26 | When condenser assembly P/N 550007-1 is installed, mount condenser fan assembly, P/N 050084-6** and elbow assembly P/N 520032-1. See drawing 7-2-AS350 Sheet 1 of 2. Install Drain Hose P/N 090018. |      |      |
|      |   |      |      |

<sup>\*\*</sup> Or Approved Alternate 7" Blower Assembly. See Sect. 13, for current approved part.

Date: 08/13/22

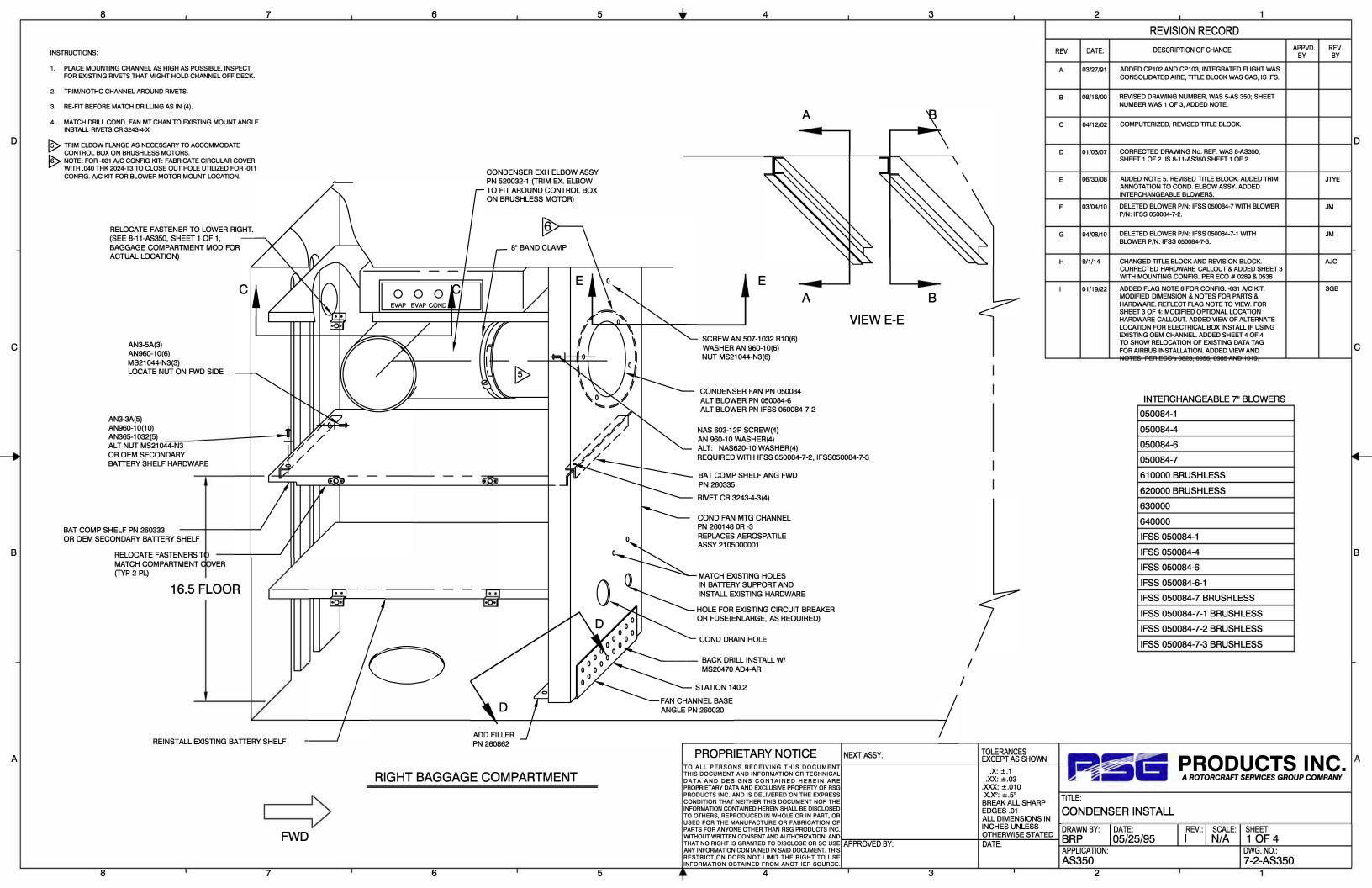
Section 6: Installation of Condenser Page 5 of 6

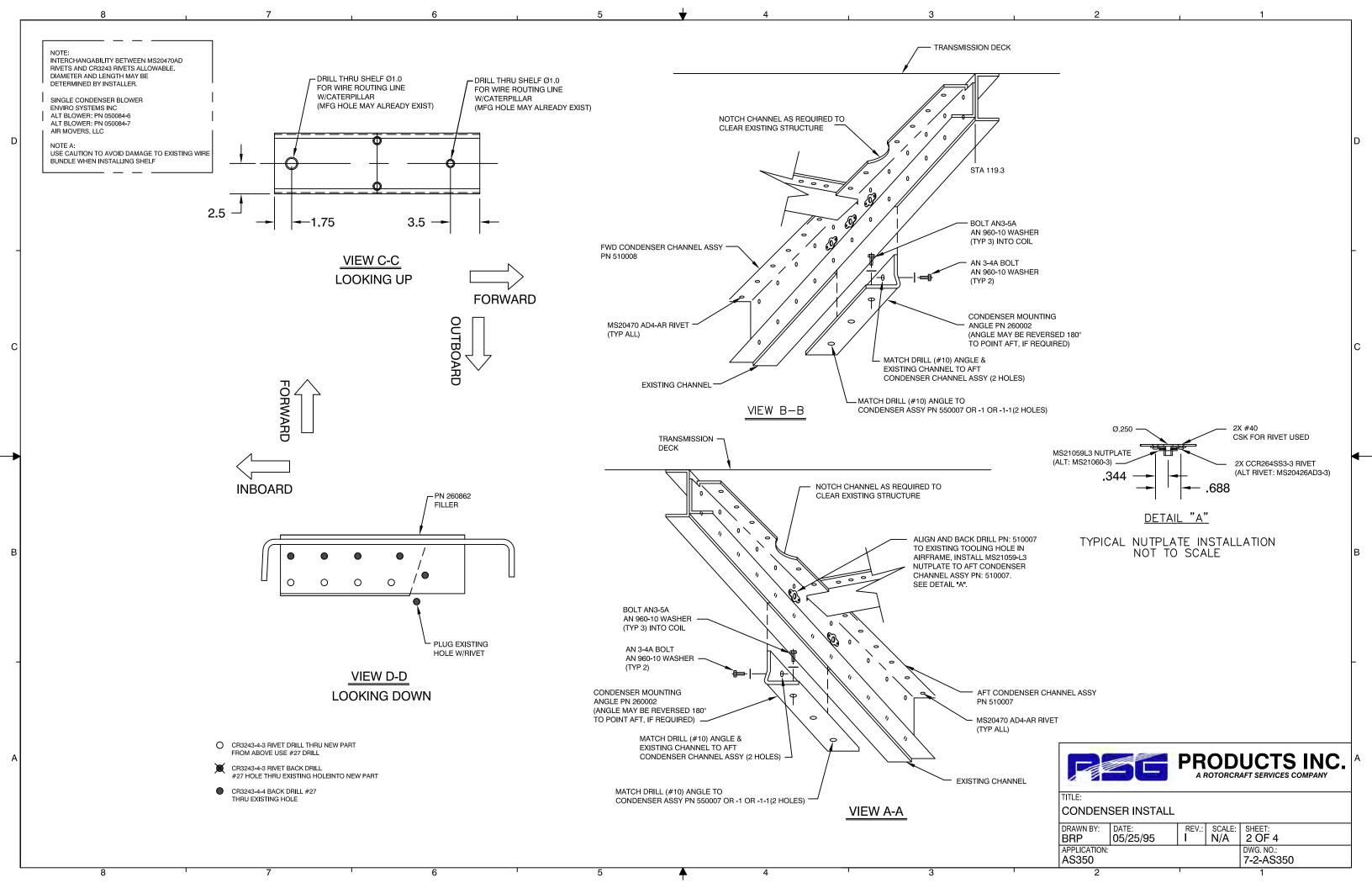
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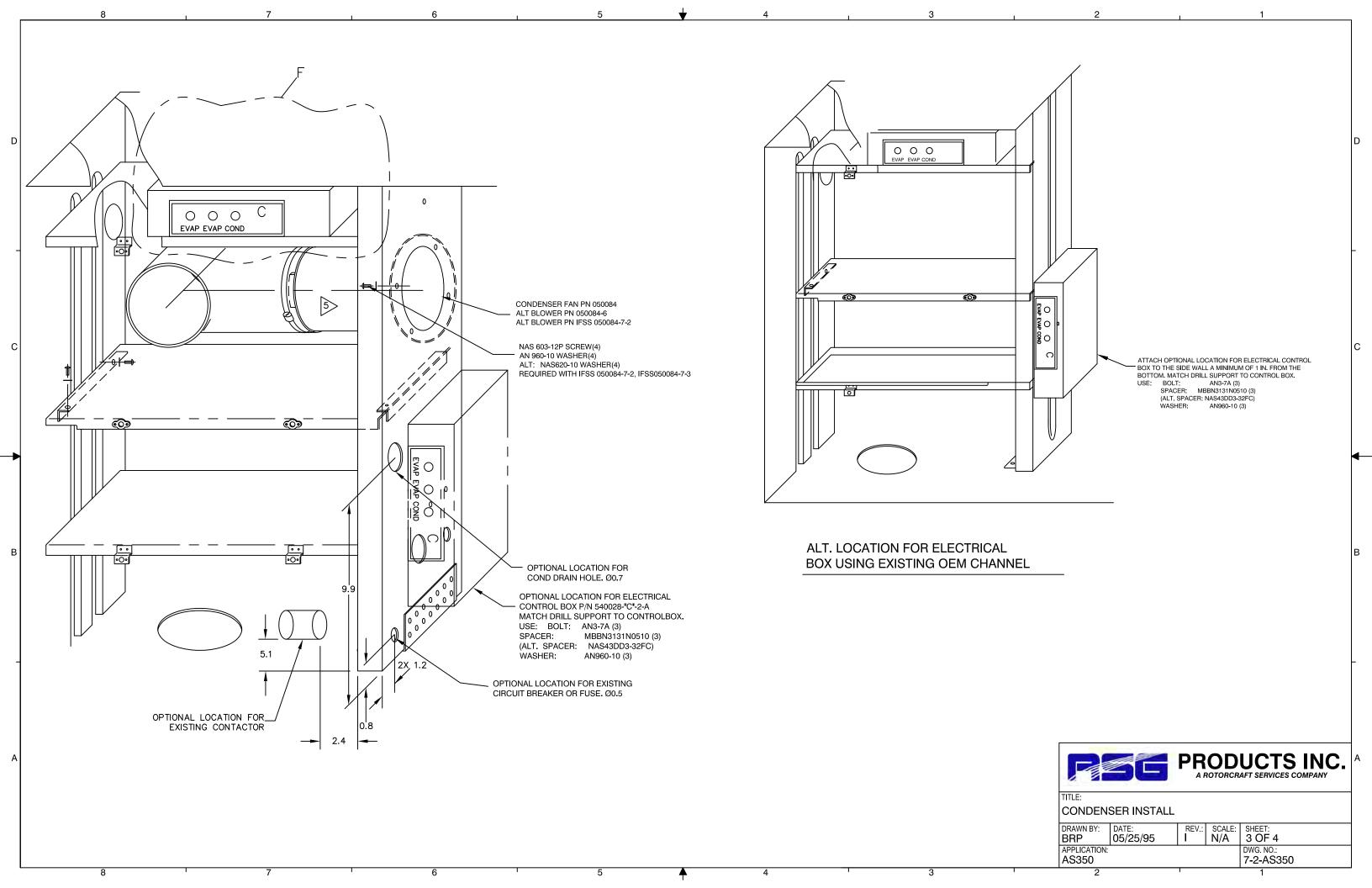
### NOTES:

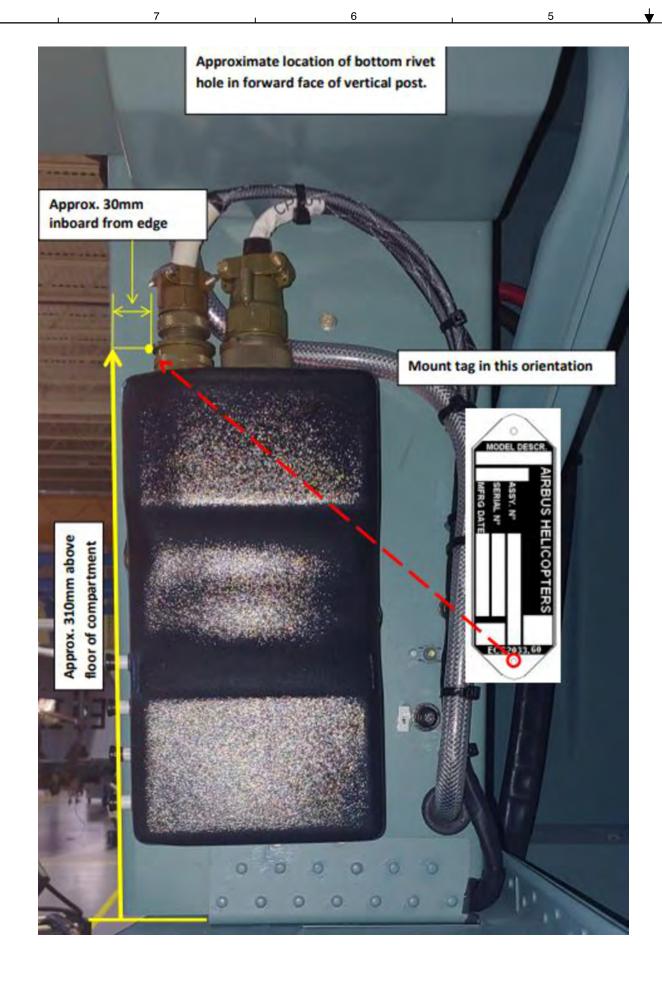
Date: 08/13/22

Section 6: Installation of Condenser

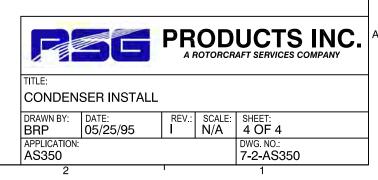




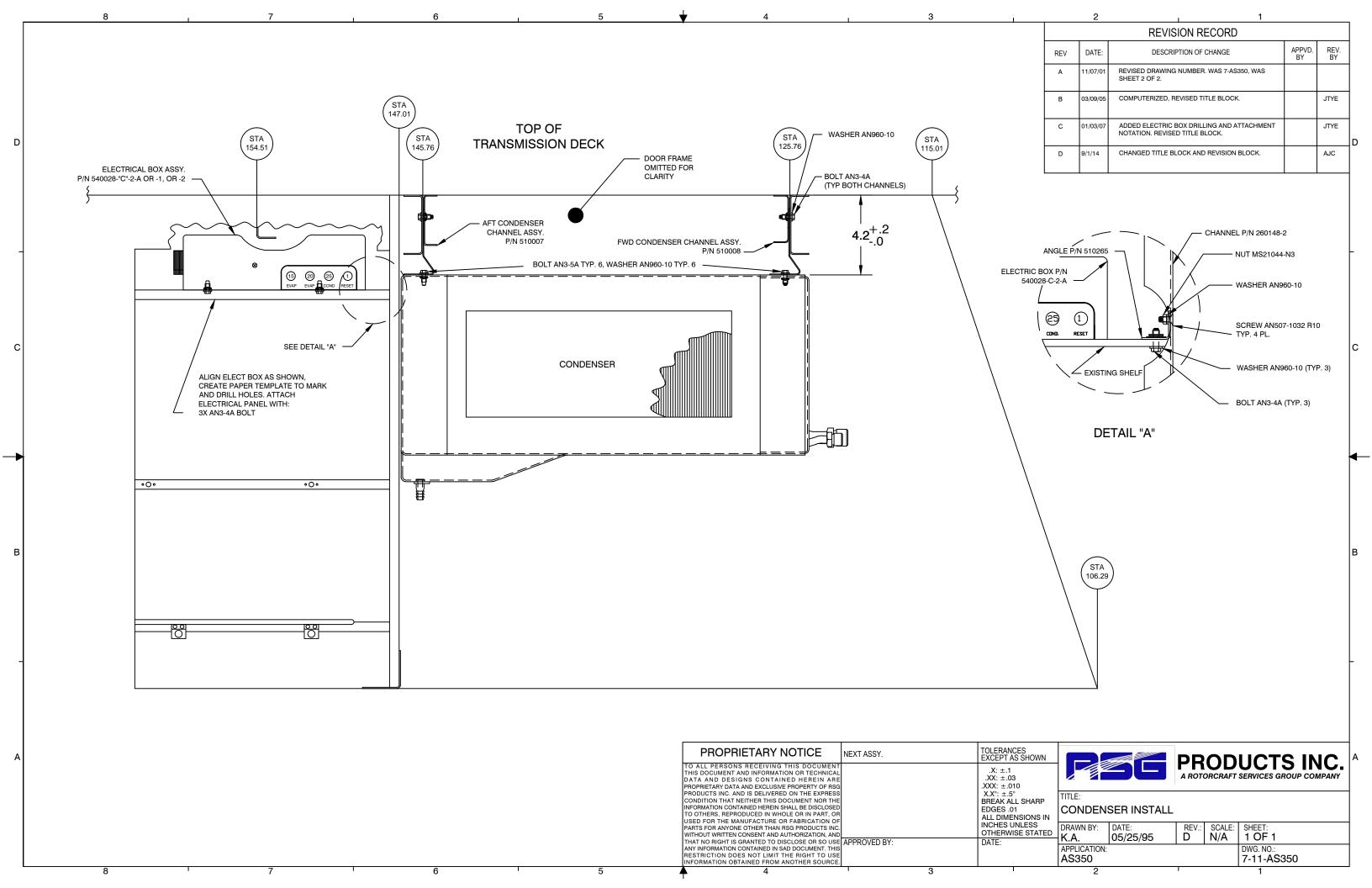


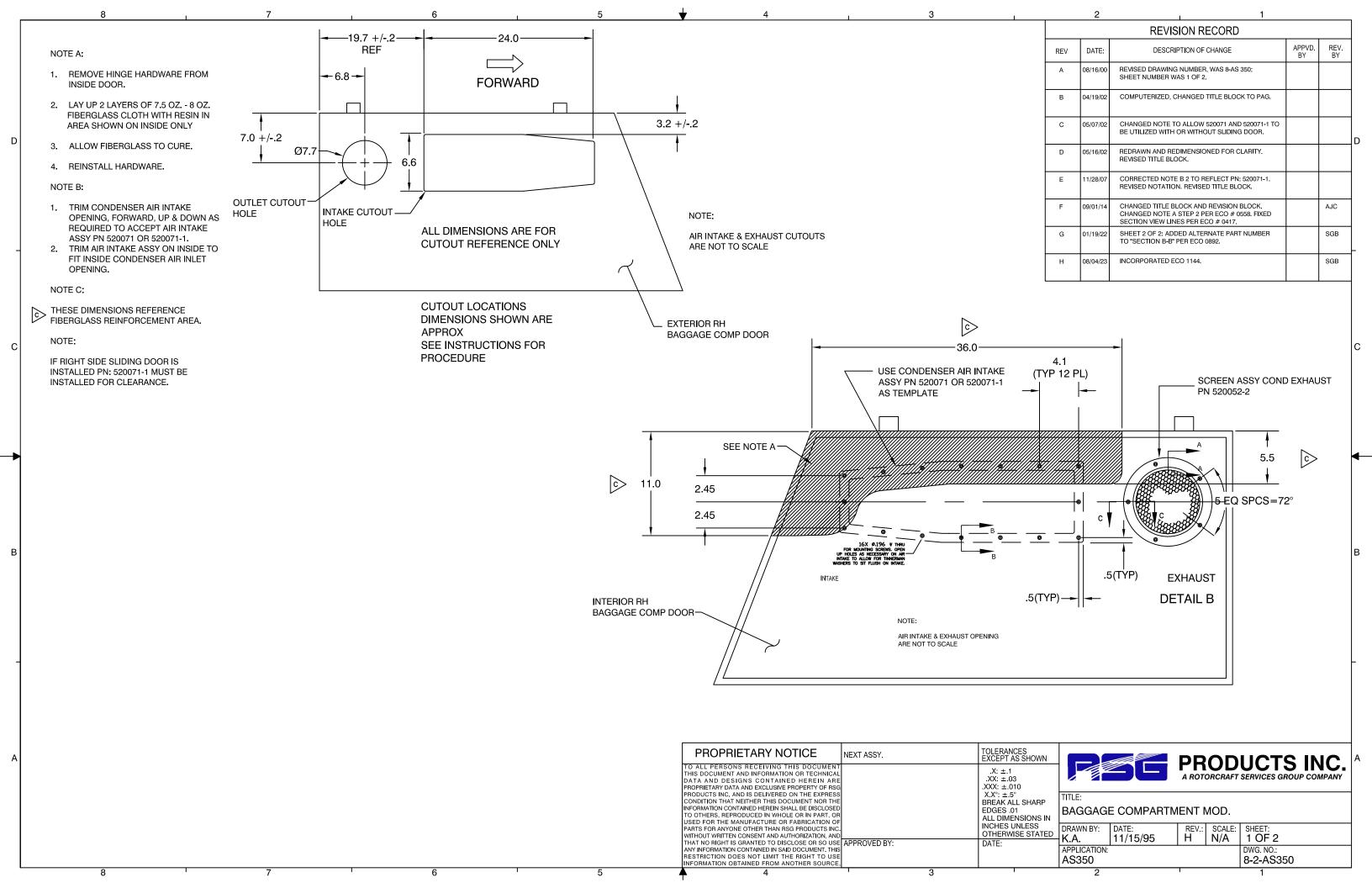


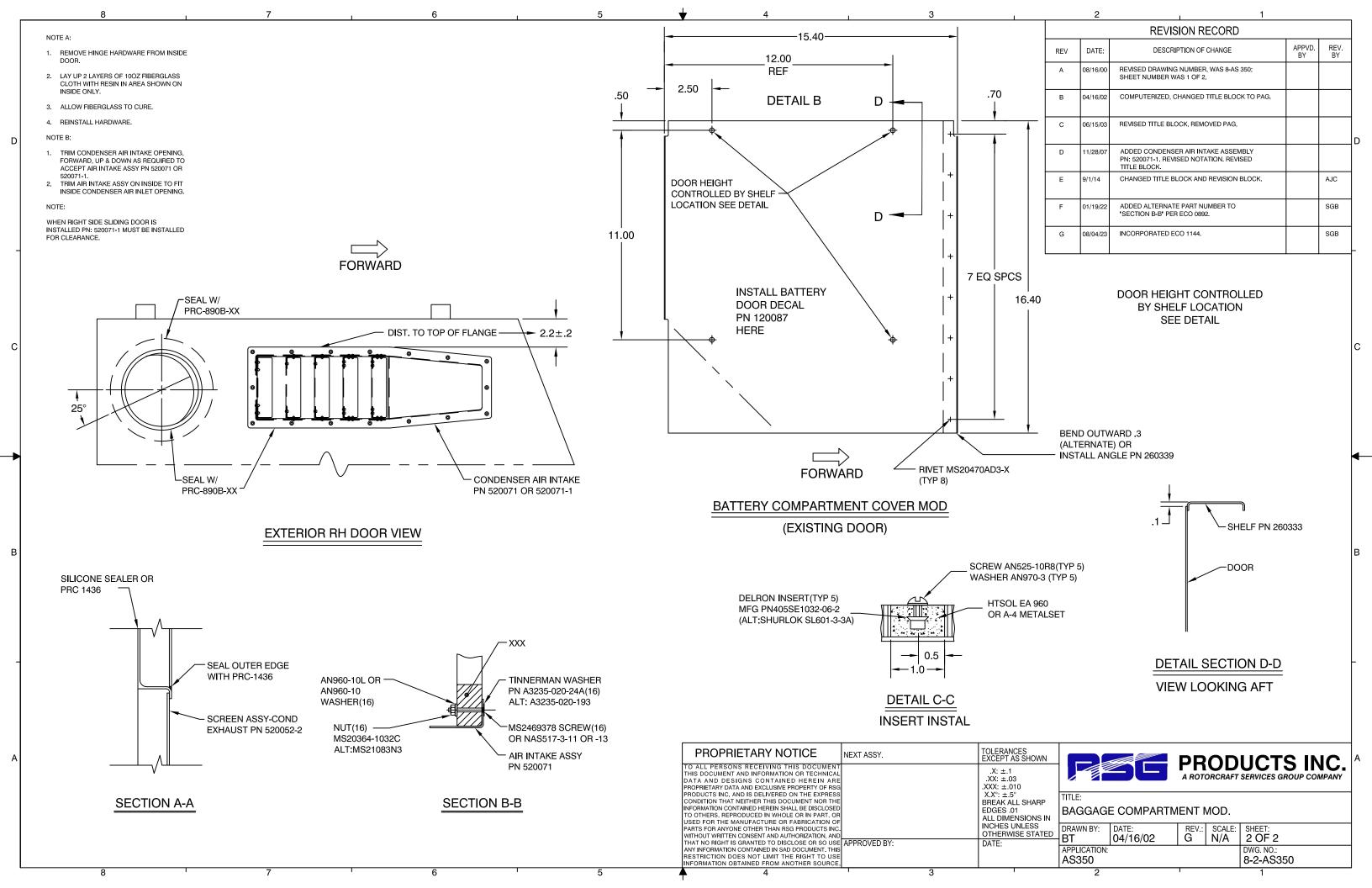
REMOVE DATA TAG ECS 2033.60 FROM TC VERTICAL POST IN RH BAGGAGE COMPARTMENT. INSTALL TAG ON FORWARD FACE OF RSG P/N 260148-3. MAINTAIN ORIGINAL ORIENTATION WHEN MOUNTING. TAG TO BE MOUNTED USING TWO (2) MS20470AD4-5 RIVETS.

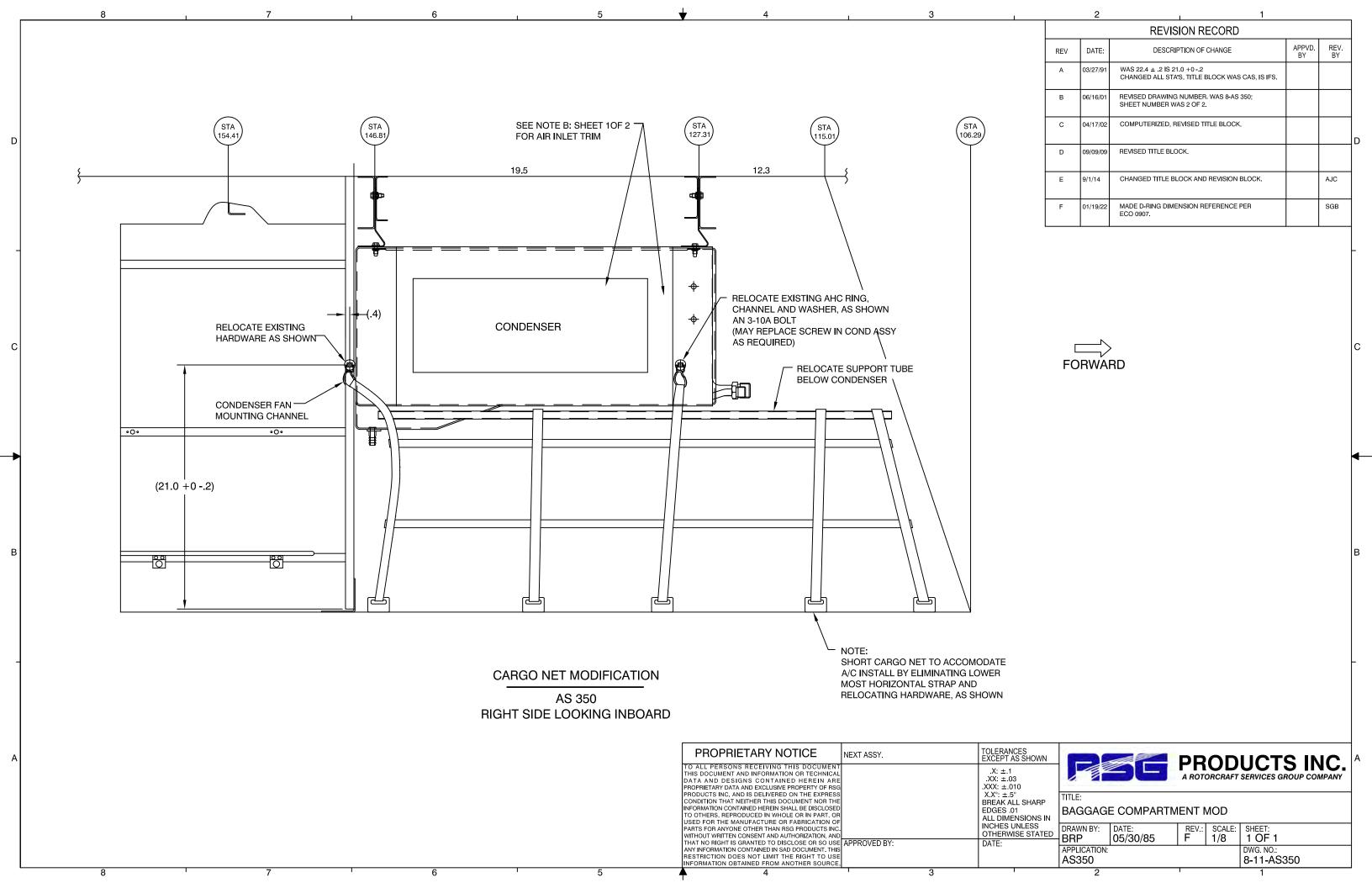


8 7 6 5 4 3









## ${\it RSG~Products~Inc.} \\ INSTALLATION~OF~FORWARD~EVAPORATOR-AS 350~Air~Conditioning$

## Step 7

# Installation of Forward Evaporator

Date: 08/13/22

Section 7: Installation of Forward Evaporator Page 1 of 3

## RSG Products Inc. INSTALLATION OF FORWARD EVAPORATOR – AS350 Air Conditioning

### **Installation of Forward Evaporator**

| STEP | PROCEDURE   | MECH | INSP |
|------|---|------|------|
| 7.1  | Relocate NR digital indicator. Higher 12" min., and aft of pitot static lines, using assisting hardware. See note on drawing 4-21-AS350.  |      |      |
| 7.2  | Relocate warning horn up and forward as required.   |      |      |
| 7.3  | Position forward evaporator assembly, P/N 560025-O, as shown in drawing 4-21-AS350. Mark rivets to be drilled out and existing bolts that will be used to mount evaporator. Also mark location on inboard forward mount hole on floor as shown in note on drawing 4-21-AS350.   |      |      |
| 7.4  | Remove and drill out rivets and marked hole. Install nut plate on evaporator.   |      |      |
| 7.5  | Position doublers P/N 260373 and P/N 260373-1 as shown in drawing 4-21-AS350, drill and install as shown. Cut out center. Line hole with Caterpillar (if needed), bond to edge of metal.  |      |      |
| 7.6  | Do not install evaporator until Freon lines are connected.  |      |      |
| 7.7  | Install drain line from the evaporator out through the cabin floor. The existing hole normally found in the aircraft skin (right forward side) can be utilized. Cutting of the aircraft skin will not usually be required. "IF" no vacant hole is found, or more direct routing is required to allow for appropriate drainage, locate and drill a hole according to the detail "A" on drawing 4-21-AS350. Install grommet. Secure drain line and cut off at a negative angle. |      |      |
| 7.8  | When connecting Freon lines, make sure you install sensing bulb on #10 line. Wrap cork tape around fittings. See drawing 4-21 AS350 "Expansion Valve Detail". After all lines are attached install Fwd Evaporator with hardware per drawing 4-21-AS350.   |      |      |

Date: 08/13/22

Section 7: Installation of Forward Evaporator Page 2 of 3

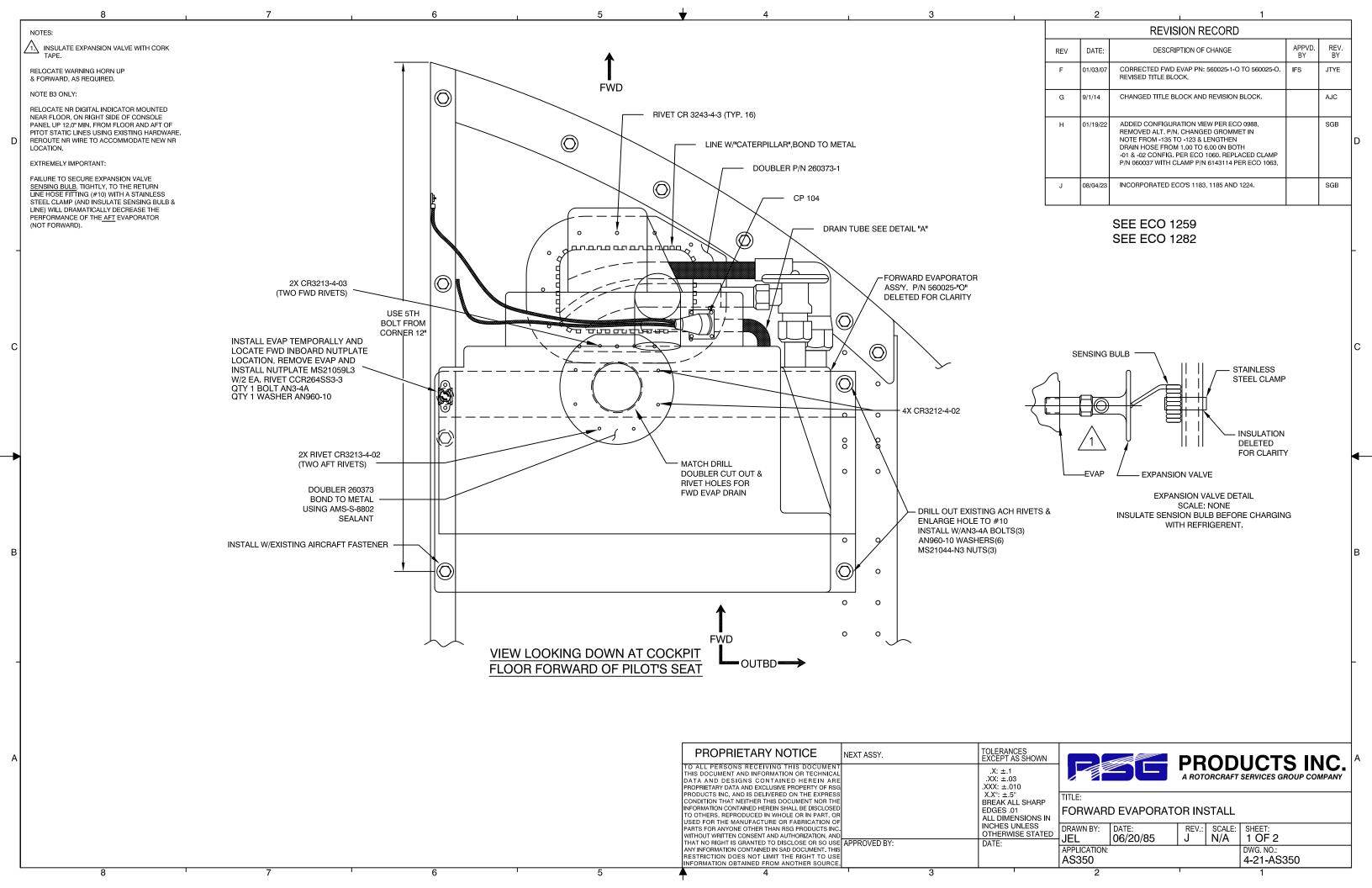
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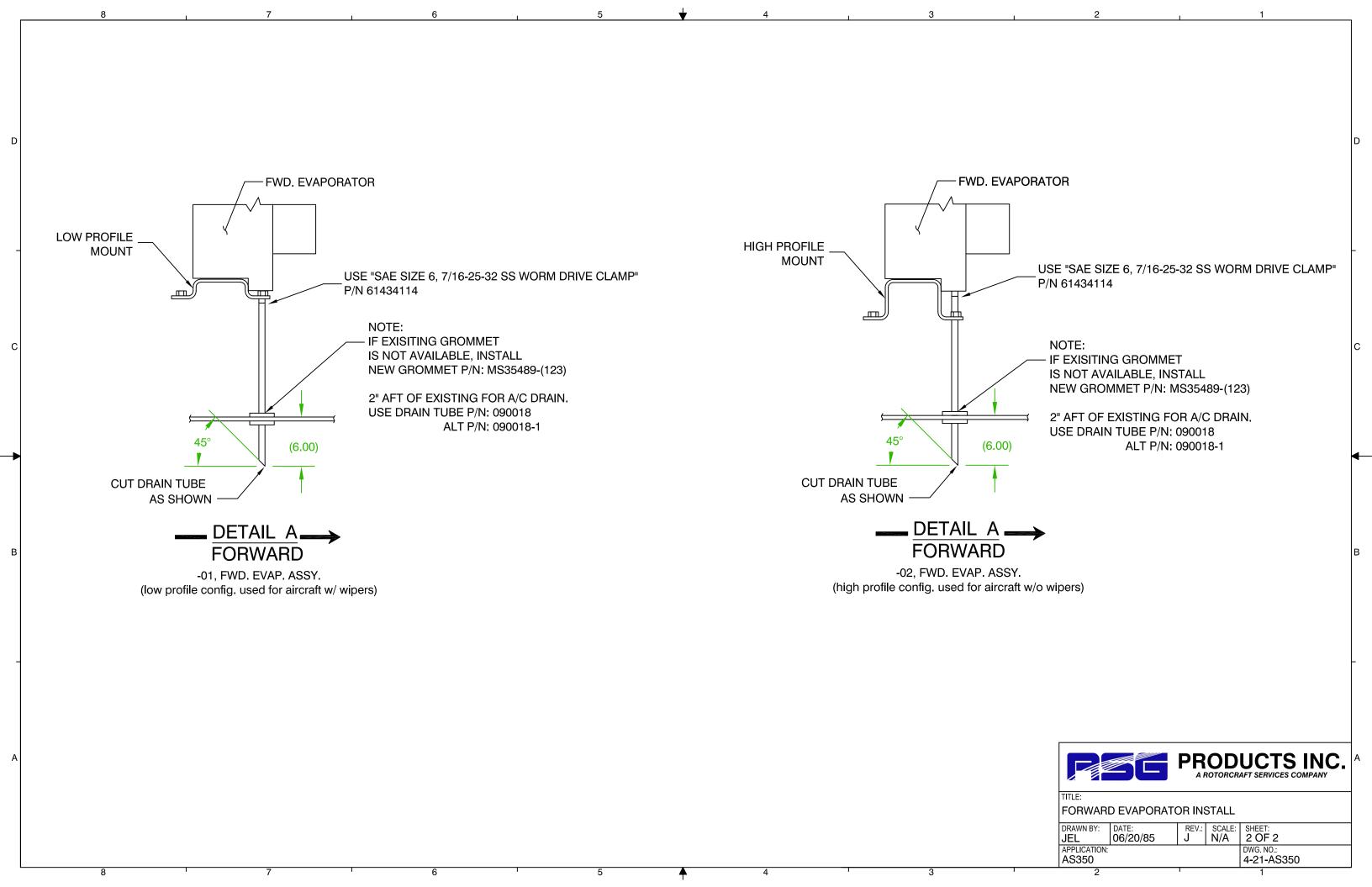
### **Air Distribution**

| STEP | PROCEDURE   | MECH | INSP |
|------|---|------|------|
|      | AIR DISTRIBUTION:   |      |      |
| 7.9  | Drawings 5-26-AS350, 5-10-AS350 and 5-21-AS350  |      |      |
|      | For config01: Locate the air outlets on the left and right underside of panel support bar as shown in drawing 5-26-AS350.  For config02: Locate the air outlets on the left and right upper side of panel as shown in drawing 5-26-AS350.   |      |      |
| 7.10 | For config01: Install 2 each Air Outlet Assembly PN: 510259-3 per drawing 5-26-AS350 View A-A, sheet 1 of 3.  |      |      |
|      | For config02: Install 2 each Air Outlet Assembly PN's: 520156HP-01 and 520157HP-01 per drawing 5-26-AS350 sheet 2 of 3.   |      |      |
| 7.11 | After installation of air outlet assemblies, attach 2 ½" flex hoses from the assemblies to the evaporator. The hose to the right hand air outlet is very straight forward.  |      |      |
|      | The installation of the left side flexible air hose can vary according to the avionics package installed. In some aircraft, it is quite simple to route the hose aft of the radio stack through existing holes in the vertical sheet metal aircraft parts. In other aircraft, due to the type of radios installed, it will be necessary to cut a round hole in the vertical aircraft sheet metal components and route the flex hose through this hole after lining the edges with Caterpillar for protection against chafing of the hose. |      |      |

Date: 08/13/22

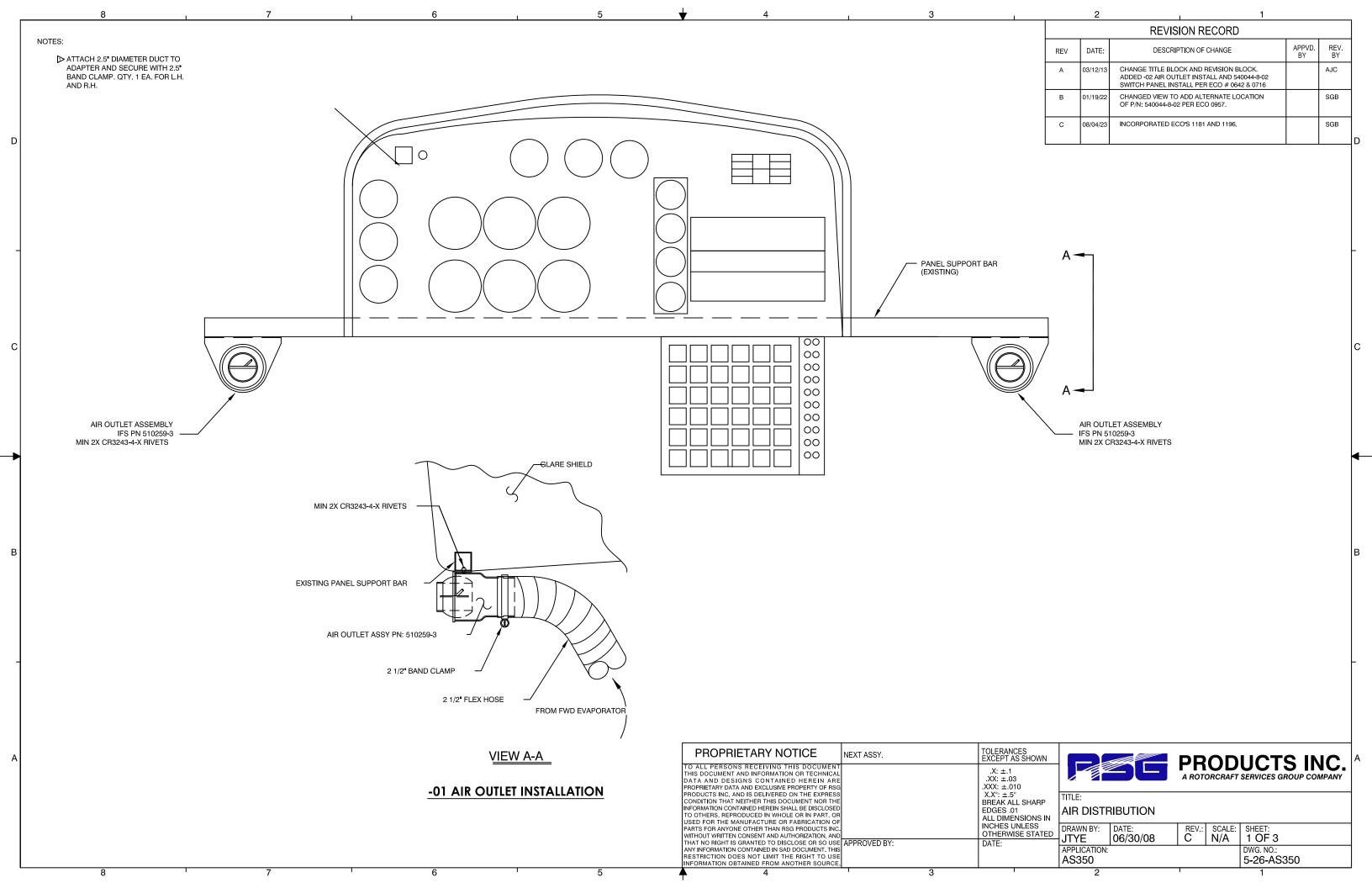
Section 7: Installation of Forward Evaporator Page 3 of 3

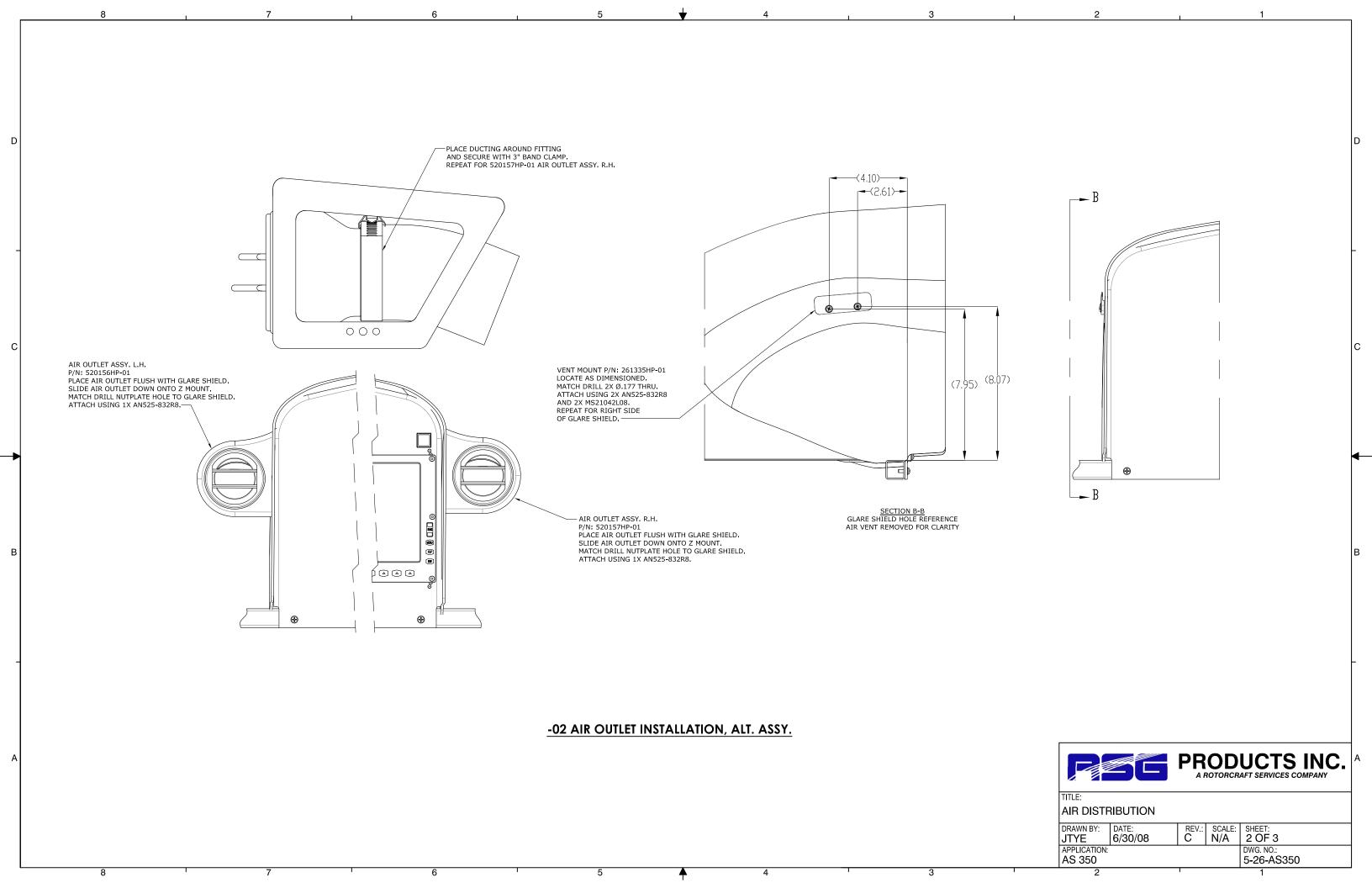


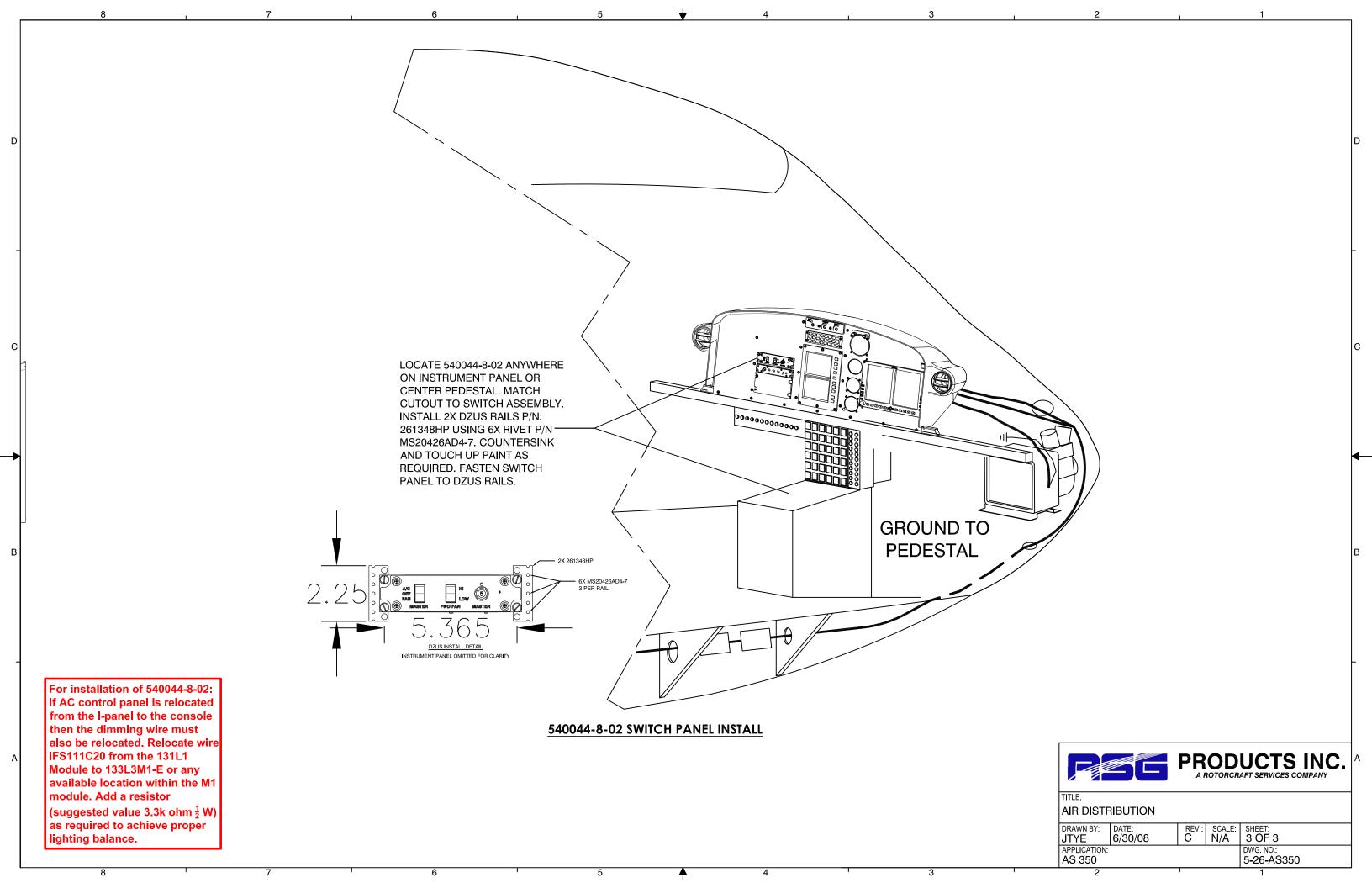


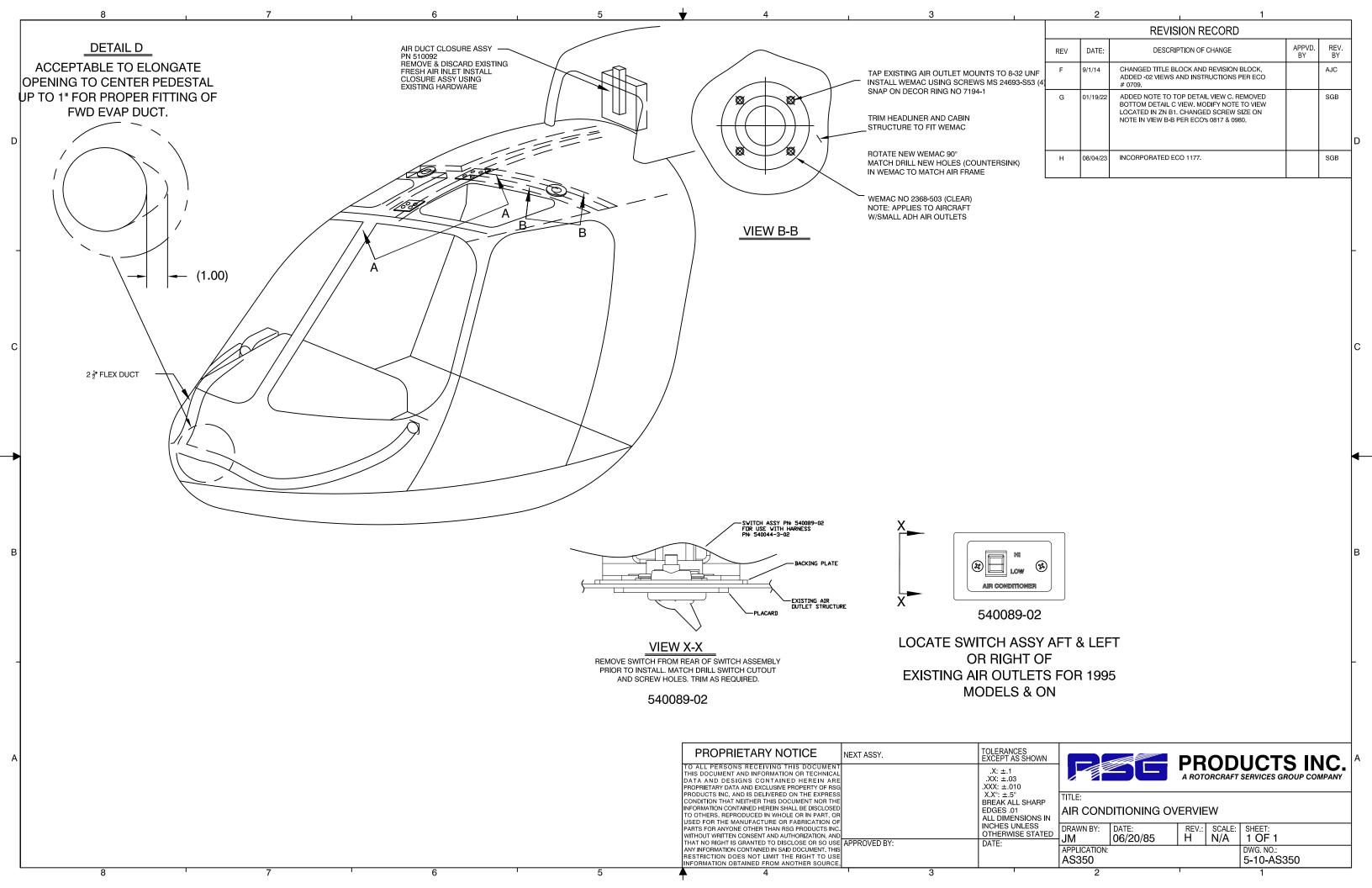
| Engineering   | ECO No. 1259                                      | SHT 1 OF 1  |
|---|---|---|
| CHANGE  | DWG No. 4-21-AS350                                | REV J   |
| DDDDLICTC INC   | DWG No.   | REV   |
| O RDER  | DWG No.   | REV   |
| CHANGE CLASS:  ☐ RECORD CHG. PARTS NOT AFFECTED ☐ NON-INTERCHANGEABLE PARTS   | REF. STC No.                                      |   |
| ■ INTERCHANGEABLE PARTS   | SH3509SW  |   |
| EXISTING/IN-WORK STOCK DISPOSITION:  ☐ RECORD CHG. PARTS NOT AFFECTED ☐ RE-WORK EXISTING STOCK  | EFFECTIVITY:  ☐ ALL UNITS THIS CUSTOMER  ☐ LIMITE | D UNITS SPECIFIED   |
| SCRAP EXISTING STOCK  OTHER BREAK IN AT NEXT BUILD  | ☐ ALL UNITS MFG'D AFTER THIS DATE ■ OTHER         |   |
| DESCRIPTION OF CHANGE: ON SHEET 2: CHANG TO "(72)"  WAS:  FWD. EVAPORATOR H   | E REFERENCE FOR GROMMET FRO                       | OM"(123)"   |
| NOTE: IF EXISITING GROMMET IS NOT AVAILABLE, INSTALL NEW GROMMET PIN: MS35489-(123)  2" AFT OF EXISTING FOR A/C DRAIN. USE DRAIN TUBE P/N: 090018 ALT P/N: 090018-1 | IS NOT AVINEW GRC                                 | NG GROMMET<br>/AILABLE, INSTALL<br>MMET P/N: MS35489-(123)<br>: EXISTING FOR A/C DRAIN.<br>N TUBE P/N: 090018<br>ALT P/N: 090018-1  |
|   |   |   |
| LOW PROFILE MOUNT  NOTE:  | HIGH PROFILE MOUNT                                |   |
| IF EXISITING GROMMET IS NOT AVAILABLE, INSTALL NEW GROMMET P/N: MS35489-(72)  2" AFT OF EXISTING FOR A/C DRAIN. USE DRAIN TUBE P/N: 090018  ALT P/N: 090018-1       | IS NOT A' NEW GRC                                 | NG GROMMET<br>VAILABLE, INSTALL<br>DMMET P/N: MS35489-(72)<br>F EXISTING FOR A/C DRAIN.<br>IN TUBE P/N: 090018<br>ALT P/N: 090018-1 |
| NEW A DICE  | ENGINEERING REVIEW B                              | OARD  |
| REMARKS: MINOR CHANGES FOR PRODUCT IMPROVEMENT.   | SIGNATURE STAMP                                   | DATE  |
| THE CAN CAN THOUSAND THE REPORT OF THE CAN  | MRB04   | 9/25/2023   |
|   | Syllin DO10                                       | 10/2/2013   |
|   | PO16  | In Johnson  |
|   | incorporation status                              |   |
| 1   | ☐ IMMEDIATE ■ OUTSTAN                             | IDING   |

| Engineering   | ECO No. 1282  | SHT 1 OF 1   |
|---|---|--|
| CHANGE  | DWG No. 4-21-AS350                                  | REV J  |
| DDODLICTS INC   | DWG No.   | REV  |
| ORDER   | DWG No.   | REV  |
| CHANGE CLASS:  ☐ RECORD CHG. PARTS NOT AFFECTED ☐ NON-INTERCHANGEABLE PARTS                                 | REF. STC No.  |  |
| ■ INTERCHANGEABLE PARTS □ OTHER   | SH3509SW  |  |
| EXISTING/IN-WORK STOCK DISPOSITION:  ☐ RECORD CHG. PARTS NOT AFFECTED ☐ RE-WORK EXISTING STOCK              | EFFECTIVITY:  ☐ ALL UNITS THIS CUSTOMER ☐ LIM       | ITED UNITS SPECIFIED   |
| SCRAP EXISTING STOCK  OTHER BREAK IN AT NEXT BUILD  | ☐ ALL UNITS MFG'D AFTER THIS DATE ■ OTH             |  |
| DESCRIPTION OF CHANGE: ADD ALT. RIGID DRAI  | n tube assy p/n to sheet 2 o                        | F 2.   |
|   |   |  |
|   |   |  |
| WAS:  |   |  |
|   |   |  |
| T T   |   |  |
|   |   |  |
| 560025-O-01 NOTE: FWD. EVAP. ASSY. IF EXISITING GROMMET   |   | XISITING GROMMET   |
| (low profile config. used for aircraft w/ wipers)  IS NOT AVAILABLE, INSTALL NEW GROMMET P/N: MS35489-(123) |   | OT AVAILABLE, INSTALL<br>V GROMMET P/N: MS35489-(123)                        |
| 2° AFT OF EXISTING FOR A/C DRAIN. USE DRAIN TUBE P/N: 090018 ALT P/N: 090018-1                              | USE   | FT OF EXISTING FOR A/C DRAIN,<br>DRAIN TUBE P/N: 090018<br>ALT P/N: 090018-1 |
| (6.00)  | (6.00)  | AET 17/14, 0300/10-1   |
| CUT DRAIN TUBE<br>AS SHOWN  | CUT DRAIN TUBE<br>AS SHOWN                          |  |
|   |   |  |
|   |   |  |
|   |   |  |
| IS:   |   |  |
|   |   |  |
| <b># #</b>  |   |  |
|   |   |  |
|   | FWD, EVAP, ASSY.                                    | ITING GROMMET<br>AVAILABLE, INSTALL  |
|   | gh profile config. used NEW G raircraft w/o wipers) | ROMMET P/N: MS35489-(123)<br>OF EXISTING FOR A/C DRAIN.                      |
| USE DRAIN TUBE P/N: 090018 ALT P/N: 090018-1  | USE DF  | RAIN TUBE P/N: 090018<br>ALT P/N: 090018-1                                   |
| 45° ALT P/N: 090018-02 (RIGID)  | (6.00)  | ALT P/N: 090018-02 (RIGID)   |
| CUT DRAIN TUBE<br>AS SHOWN  | CUT DRAIN TUBE<br>AS SHOWN                          |  |
|   |   |  |
|   |   | INC. A DD  |
| REMARKS: MINOR CHANGE.  | ENGINEERING REVIEW SIGNATURE STAMP                  |  |
| ADDED ALT. P/N.   | MRB0  | 4 2/12/2024  |
|   | Ch The OA2  | 2 2/12/2024  |
|   | HAMM PO1  | 6 2/14/2024  |
|   | INCORPORATION STATU                                 |  |
|   | □ IMMEDIATE ■ OUTST                                 |  |









#### RSG Products Inc. INSTALLATION OF COMPRESSOR – AS350 Air Conditioning

#### Step 8

# Installation of Compressor

Date: 08/13/22

Section 8: Installation of Compressor Page 1 of 5

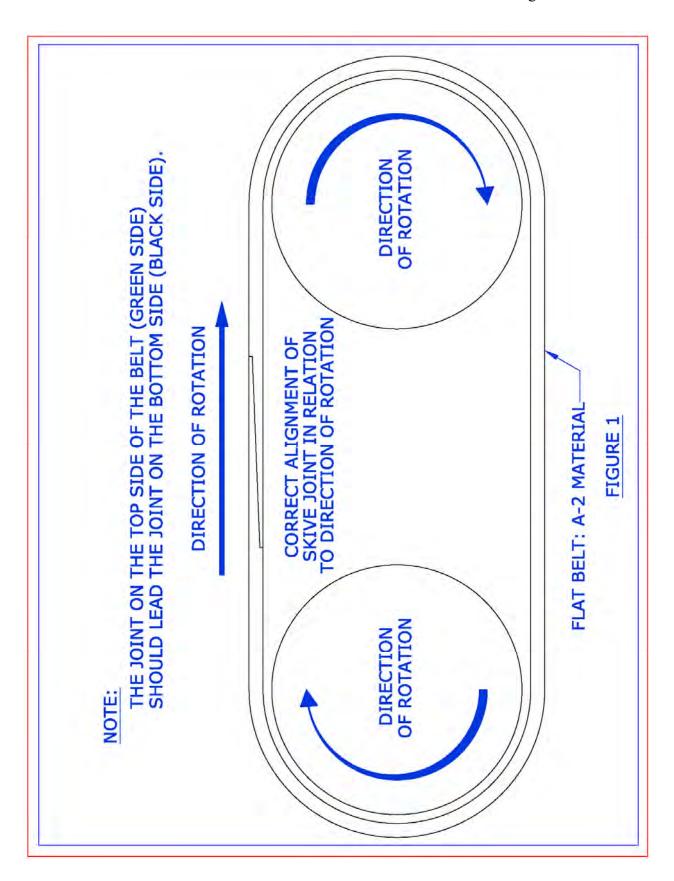
# ${\small \textbf{RSG Products Inc.}} \\ {\small \textbf{INSTALLATION OF COMPRESSOR} - \textbf{AS350 Air Conditioning}}$

#### **Installation of Compressor**

| STEP | PROCEDURE   | MECH | INSP |
|------|---|------|------|
| 8.0  | NOTE: MUST BE PERFORMED IN ACCORDANCE WITH CURRENT EUROCOPTER TECHNICAL DATA.   |      |      |
| 8.1  | Place a support on the transmission deck to support the engine drive while the shaft is disconnected for belt installation.   |      |      |
| 8.2  | Remove the cotter pins from the four pins holding the "Gimble Ring" at the Thomas coupling.                                   |      |      |
| 8.3  | Slide the "Gimble Ring" aft to gain access to the Thomas coupling.  |      |      |
| 8.4  | Remove the 6 bolts and Thomas coupling connecting the drive shaft and shift slightly aft.                                     |      |      |
| 8.5  | Install two (2) Compressor Drive belts  |      |      |
| 8.6  | Reassemble the Thomas coupling per AEC Specifications.  Torque and Safety Coupling!! Torque Mark all bolts.                   |      |      |
|      | Secure 1 belt to the outside of the drive shaft cover for a spare and slip one through the housing and over the drive pulley. |      |      |
| 8.7  | <b>NOTE:</b> THE CURRENT BELT P/N 060018-1 HAS A SPECIFIC DIRECTION OF ROTATION. (See figure 1, page 3)                       |      |      |
|      | NOTE: THE CURRENT BELT P/N 060005 HAS NO SPECIFIC DIRECTION OF ROTATION.  |      |      |

Date: 08/13/22

Section 8: Installation of Compressor Page 2 of 5



Date: 08/13/22

Section 8: Installation of Compressor

## RSG Products Inc. INSTALLATION OF COMPRESSOR – AS350 Air Conditioning

#### **Installation of Compressor**

| STEP | PROCEDURE  | MECH | INSP |
|------|--|------|------|
| 8.8  | Install the "Gimble Ring" pins and cotter pins. Remove supports.   |      |      |
| 8.9  | Install Compressor Bracket in accordance with: 6-2-AS350, 6-12-AS350 and 6-21-AS350 or 6-3-AS350, 6-13-AS350 and 6-22-AS350.   |      |      |
| 8.10 | Install the Forward Compressor Bracket, Compressor Standoffs and Compressor per Drawings:  6-2-AS350, 6-12-AS350 and 6-21-AS350 or 6-3-AS350, 6-13-AS350 and 6-22-AS350  |      |      |
| 8.11 | Install the compressor drive belt on the drive pulley and the compressor clutch pulley. Tighten bolts at the adjustment arm assuring the belt proper amount of tension. Tighten the lower forward mounting bolt. |      |      |
| 8.12 | This tension may be performed by either pull scale. (See Belt Tension Recommendation)  |      |      |
| 8.13 | 50/30 lbs pull tension at tension adjustment bolt should provide adequate belt tension. (See figure 2, page 5)   |      |      |

#### **BELT TENSION RECOMMENDATION:**

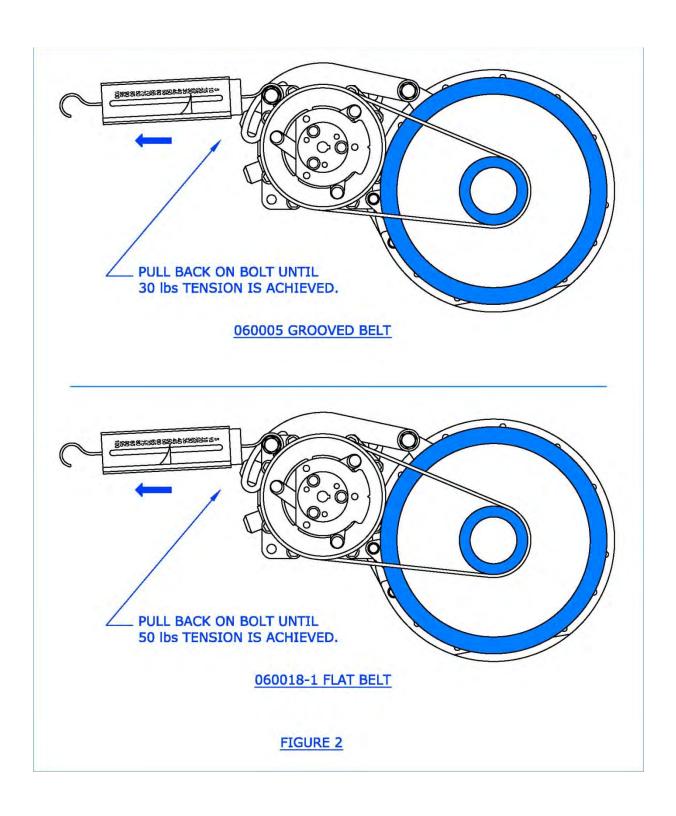
FLAT BELT IFS P/N 060018-1\_\_\_\_\_TENSION TO 50lbs

GROOVED BELT IFS P/N 060005\_\_\_\_TENSION TO 30lbs

Date: 08/13/22

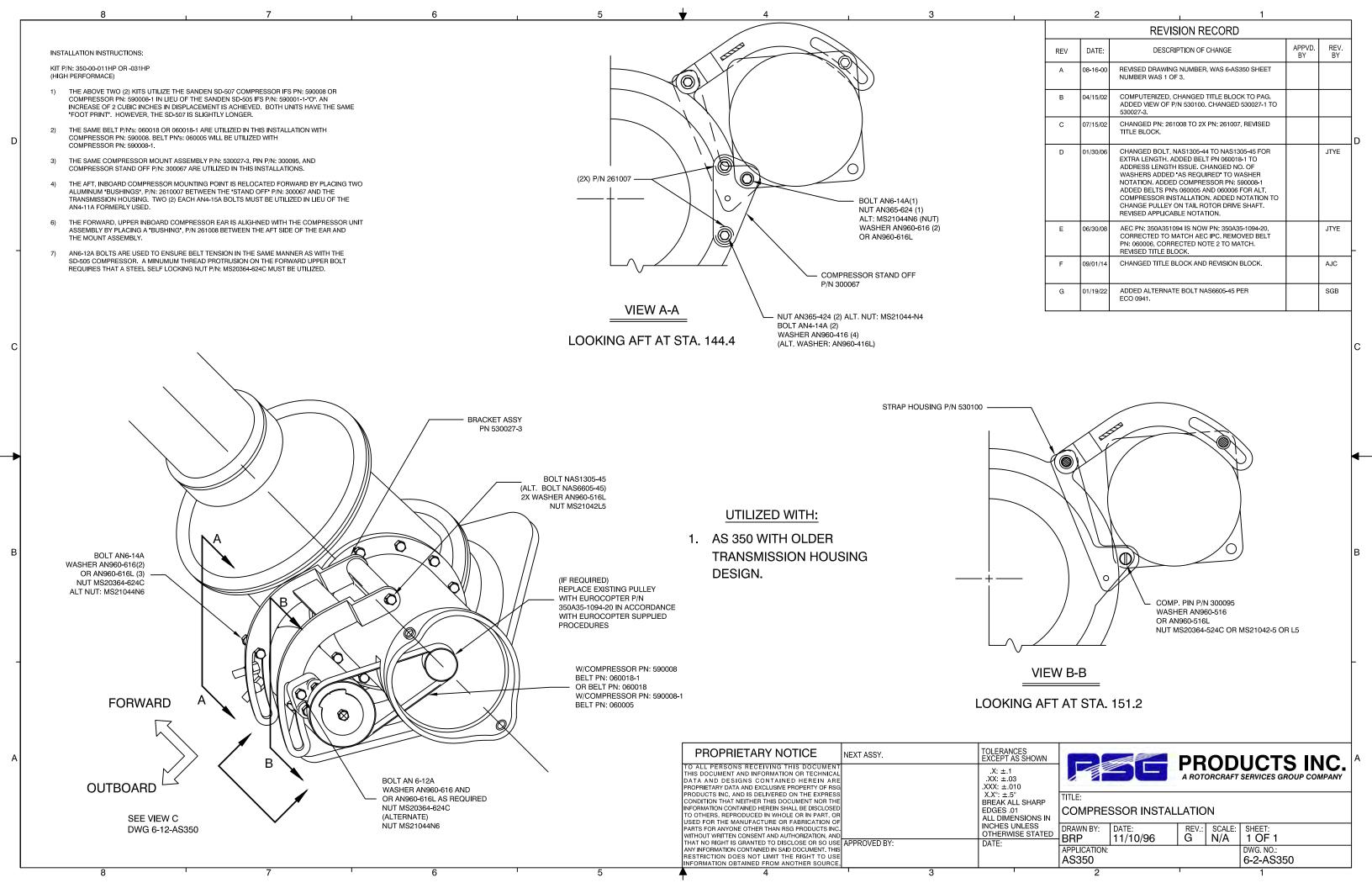
Section 8: Installation of Compressor Page 4 of 5

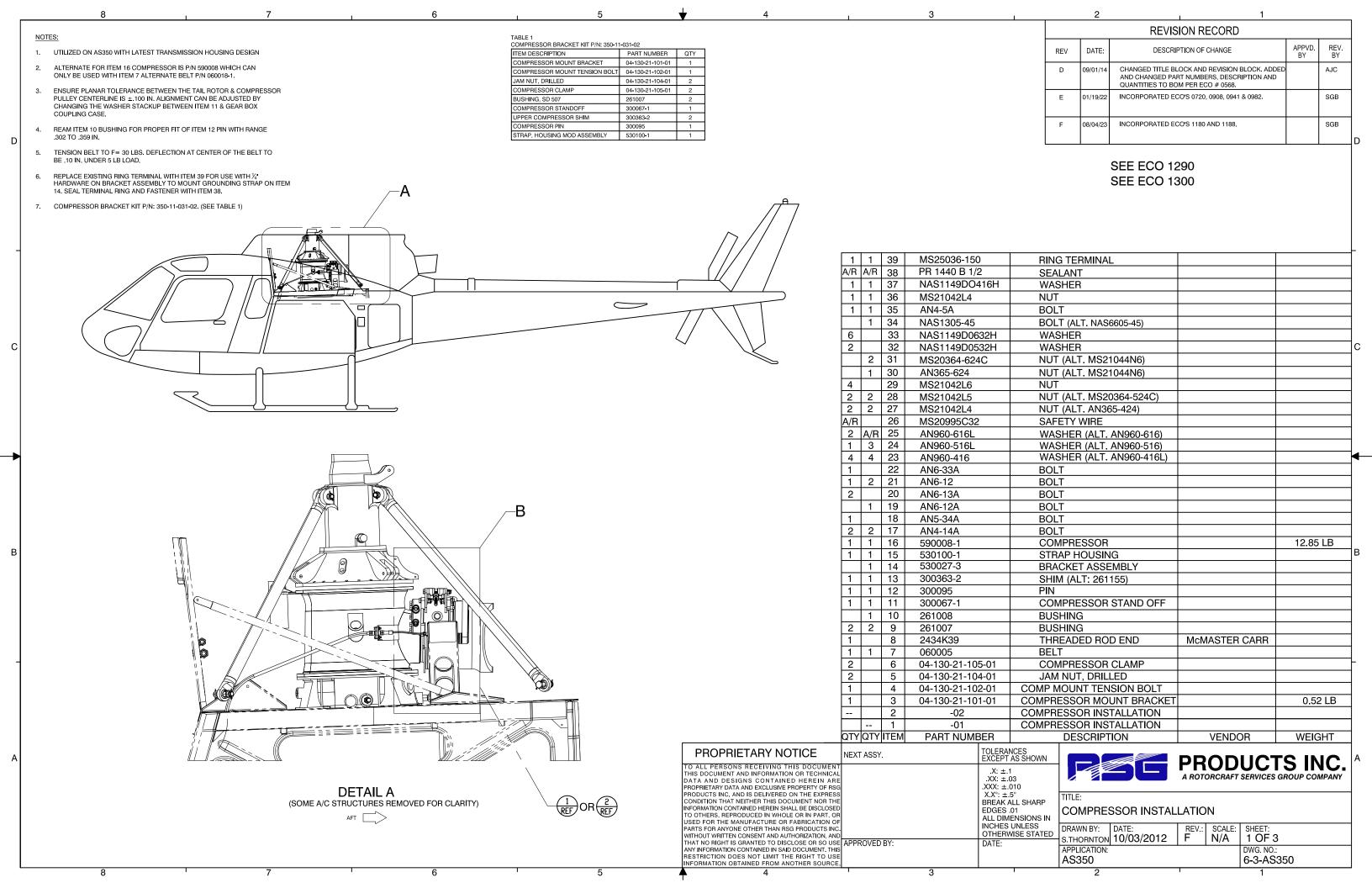
#### RSG Products Inc. INSTALLATION OF COMPRESSOR – AS350 Air Conditioning

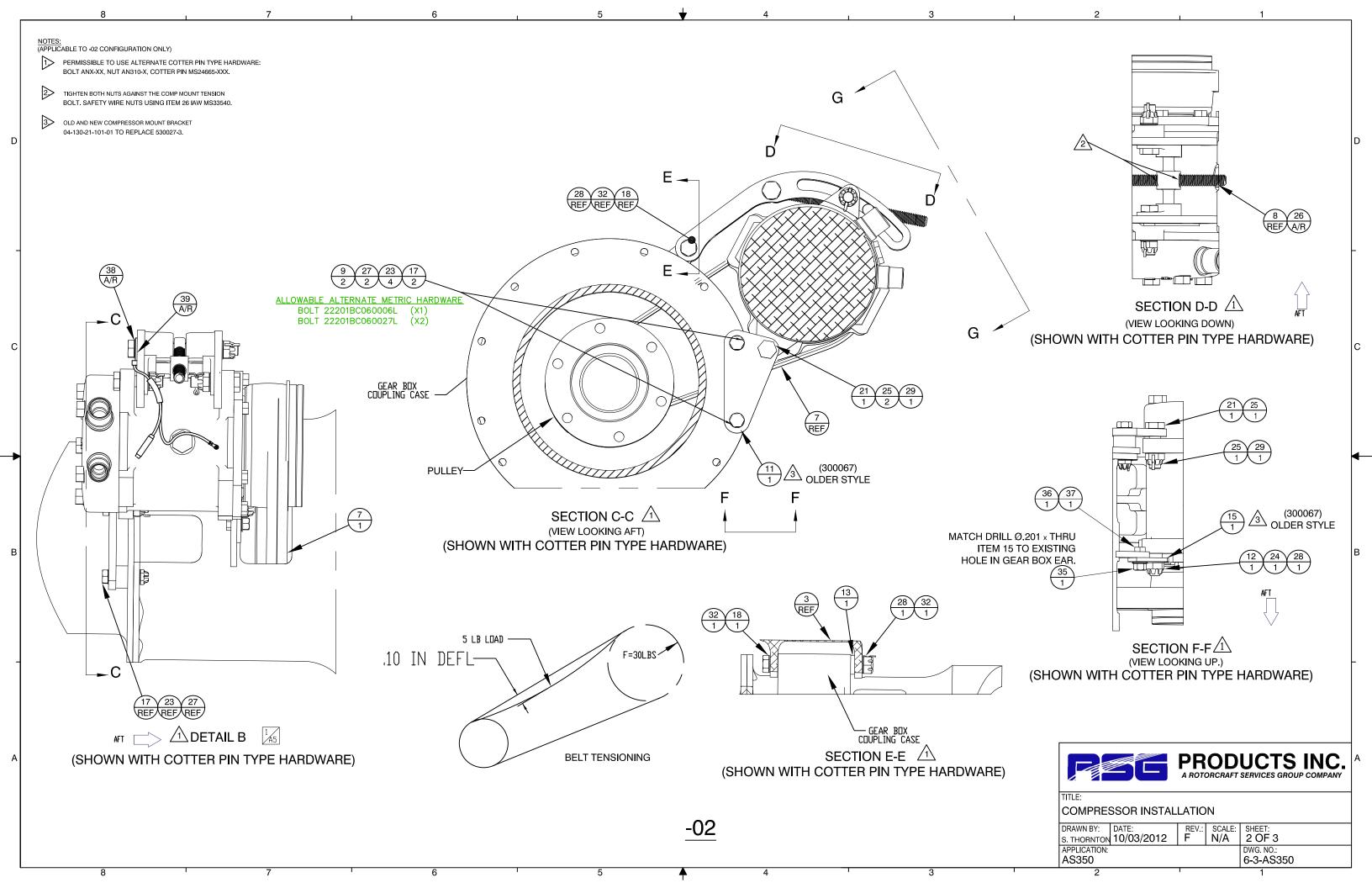


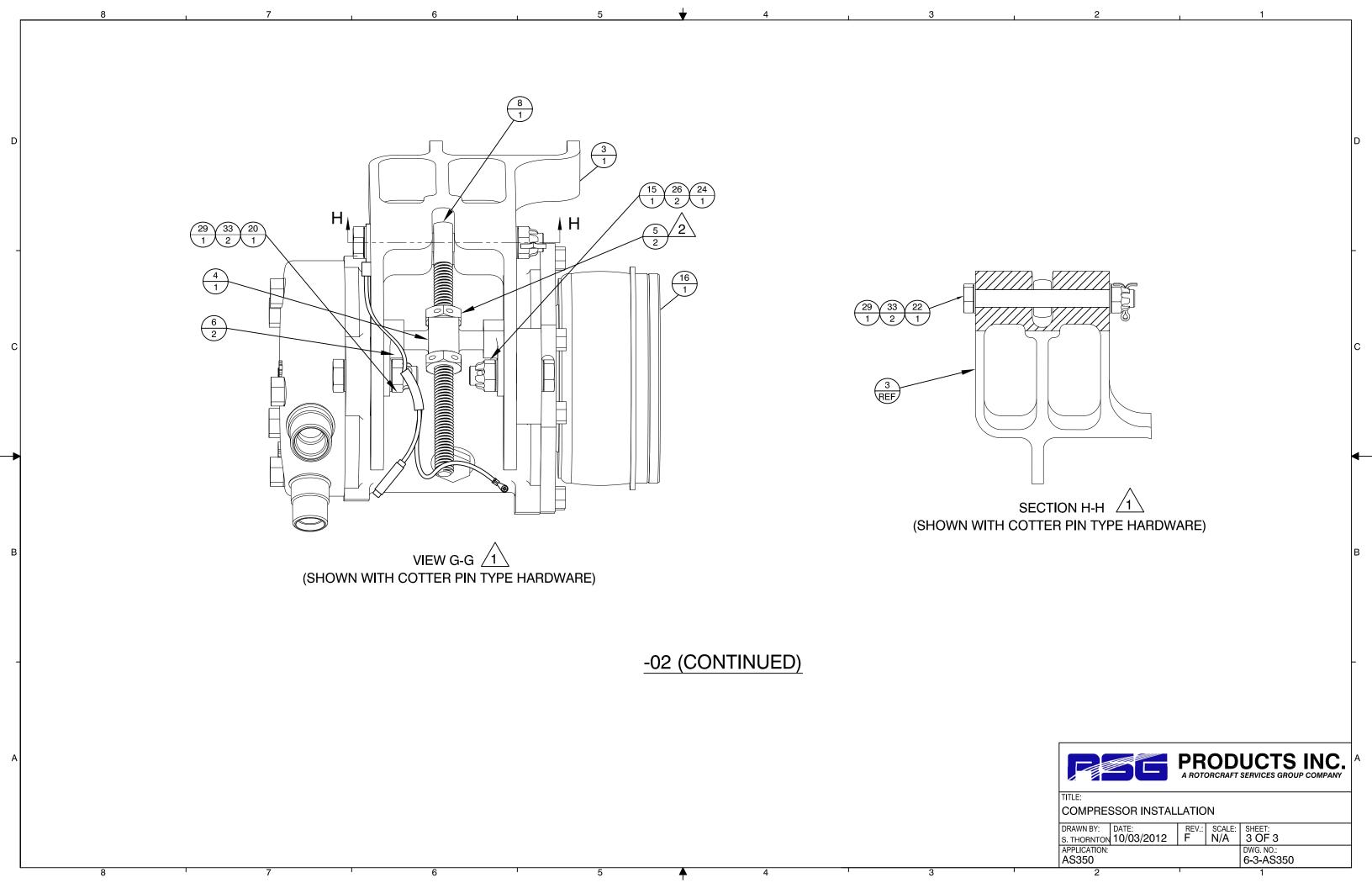
Date: 08/13/22

Section 8: Installation of Compressor









|                      |   | Engineering               | ECO No. 129  | 70                      | SHT <b>1</b> OF <b>1</b> |
|----------------------|---|---------------------------|--------------|-------------------------|--------------------------|
|                      |   | Change                    | DIMO NI-     | -AS350                  | REV <b>F</b>             |
| PI                   | RODUCTS INC.  | ORDER                     | DWG No.      | 7.0000                  | REV                      |
| CHANGE CLASS         |   | RDER                      | DWG No.      |                         | REV                      |
| 1                    | 6. Parts not affected 🗌 no                          | N-INTERCHANGEABLE PARTS   | REF. STC No. |                         |                          |
| INTERCHANG           | EABLE PARTS   | HER                       | St           | 13509SW                 |                          |
|                      | RK STOCK DISPOSITION:<br>B. PARTS NOT AFFECTED  RE- | WORK EXISTING STOCK       | EFFECTIVITY: | CUSTOMER LIM            | ITED UNITS SPECIFIED     |
|                      |   | HER BREAKIN AT NEXT BUILD | _            | G'D AFTER THIS DATE OTH |                          |
| DESCRIP <sup>*</sup> | TION OF CHANGE: C                                   | CORRECT ALT. PART N       | NUMBERS FO   | R ITEMS 23, 24 ANI      | O 25.                    |
|                      |   |                           |              |                         |                          |
|                      |   |                           |              |                         |                          |
|                      |   |                           |              |                         |                          |
| WAS:                 |   |                           |              |                         |                          |
| WAS.                 |   |                           |              |                         |                          |
|                      |   |                           |              |                         |                          |
| 2 A/R 25             | AN960-616L  | WASHER (ALT. /            | AN960-616)   |                         |                          |
| 1 3 24               |   | WASHER (ALT. /            | AN960-516)   |                         |                          |
| 4 4 23               |   | WASHER (ALT. A            |              | VENDOD                  | MEIOLIT                  |
| QTY QTY ITE          | PART NUMBER   | DESCRIPT                  | ION          | VENDOR                  | WEIGHT                   |
|                      |   |                           |              |                         | 1                        |
|                      |   |                           |              |                         |                          |
|                      |   |                           |              |                         | 4                        |
|                      |   |                           |              |                         |                          |
|                      |   |                           |              |                         |                          |
| IS:                  |   |                           |              |                         |                          |
|                      |   |                           |              |                         |                          |
|                      |   |                           |              |                         |                          |
| 2 A/R 25             | AN960-616L  | WASHER (ALT. NAS          | 1149F0632P)  |                         |                          |
| 1 3 24               | AN960-516L  | WASHER (ALT. NAS          |              |                         |                          |
| 4 4 23               |   | WASHER (ALT. NAS          |              |                         |                          |
| QTY QTY ITEM         | PART NUMBER   | DESCRIPTI                 | ION          | VENDOR                  | WEIGHT                   |
|                      |   |                           |              |                         |                          |
|                      |   |                           |              |                         |                          |
|                      |   |                           |              |                         |                          |
|                      |   |                           |              |                         |                          |
|                      |   |                           |              |                         |                          |
| REMARKS:             | MINOR CHANGE.                                       |                           | SICN         | ENGINEERING REVIEW      |                          |
| CORRECTE             | D ALT. P/N'S.                                       |                           | SIGN         | MRB04                   |                          |
|                      |   |                           | A VIII       |                         | 1/10/2027                |
|                      |   |                           | TO IN        | A POIE                  | 1/18/2024                |
|                      |   |                           | 134          | 1010                    | 111818007                |
|                      |   |                           |              | INCORPORATION STATUS    |                          |
|                      | · ·   |                           |              | MEDIATE OUTSTA          | ANDING                   |

|            |                            | FUCINEEDING                       | ECO No. 1300                         |           |                 | SHT 1 OF 2      |
|------------|----------------------------|-----------------------------------|--------------------------------------|-----------|-----------------|-----------------|
|            |                            | ENGINEERING CHANGE                | DWG No. 6-3-A                        | \$350     | )               | REV <b>F</b>    |
|            | DDODLIOTO IN               |                                   | DWG No.                              | .5050     | )               | REV             |
|            | PRODUCTS IN                | O <sub>RDER</sub>                 | B. (10.10.                           |           |                 | INE V           |
| CHANGE     | CLASS:                     |                                   | DWG No.                              |           |                 | REV             |
|            |                            | ☐ NON-INTERCHANGEABLE PARTS       | REF. STC No.                         | _         |                 |                 |
| ■ INTERCI  | HANGEABLE PARTS            | OTHER                             | SH3                                  | 509S      | W               |                 |
| EXISTING/I | IN-WORK STOCK DISPOSITION: | :                                 | EFFECTIVITY:                         |           |                 |                 |
|            |                            | RE-WORK EXISTING STOCK            | ALL UNITS THIS CUST                  |           |                 | JNITS SPECIFIED |
| ☐ SCRAP    | EXISTING STOCK             | OTHER BREAK IN AT NEXT BUILD      | ☐ ALL UNITS MFG'D A                  | FTER THIS | DATE OTHER      | ALL UNITS       |
|            | ABLE 1.                    | GE: ADD MISSING HARDW             | VARE PARTS FOR                       | СОМ       | PRESSOR BR      | ACKET KIT       |
|            |                            | TABLE 1                           |                                      |           |                 |                 |
|            |                            | COMPRESSOR BRACKET KIT P/N: 350   | )-11-031-02                          |           | _               |                 |
|            |                            | ITEM DESCRIPTION                  | PART NUMBER                          | QTY       |                 |                 |
|            |                            | COMPRESSOR MOUNT BRACKET          | 04-130-21-101-01                     | 1         | 4               |                 |
|            |                            | COMPRESSOR MOUNT TENSION BO       |                                      | 1         | 4               |                 |
|            |                            | JAM NUT, DRILLED COMPRESSOR CLAMP | 04-130-21-104-01<br>04-130-21-105-01 | 2         | +               |                 |
|            |                            | BUSHING, SD 507                   | 261007                               | 2         | +               |                 |
|            |                            | COMPRESSOR STANDOFF               | 300067-1                             | 1         | 1               |                 |
|            |                            | UPPER COMPRESSOR SHIM             | 300363-2                             | 2         | 1               |                 |
|            |                            | COMPRESSOR PIN                    | 300095                               | 1         | ]               |                 |
|            |                            | STRAP, HOUSING MOD ASSEMBLY       | 530100-1                             | 1         |                 |                 |
|            |                            |                                   |                                      |           |                 |                 |
| REMAR      | KS: MINOR CHANG            | E.                                | SIGNATUR                             |           | ING REVIEW BOAF | RD DATE         |
| ADD N      | MISSING PARTS.             |                                   | JIGIVATUR                            |           | MRB04           | 3/14/2024       |
|            |                            |                                   | An The                               |           | OA22            | 3/4/2024        |
|            |                            |                                   | V82001                               | '         | P016            | 3/15/2024       |

INCORPORATION STATUS

☐ IMMEDIATE

OUTSTANDING



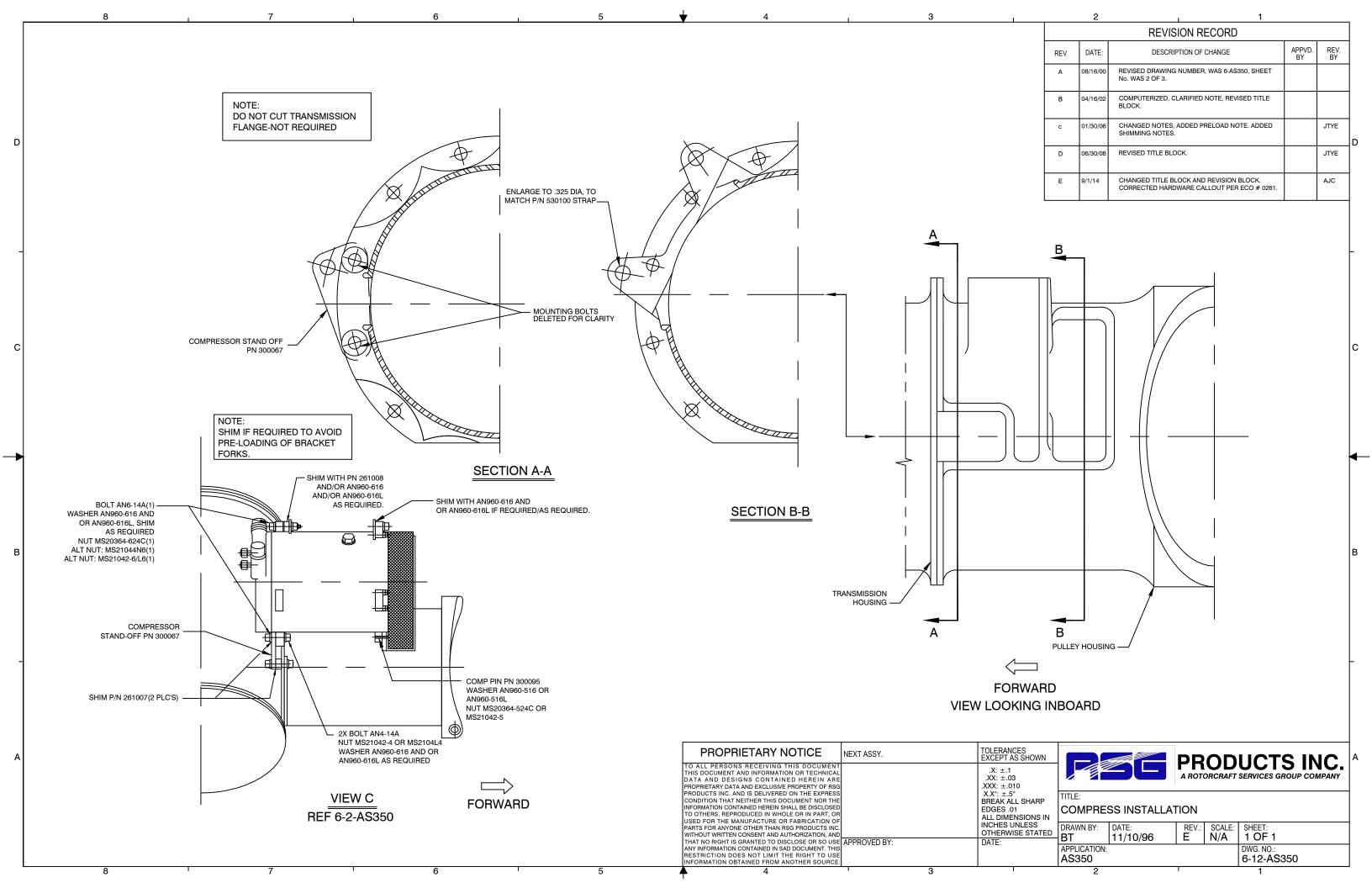
ENGINEERING CHANGE ORDER

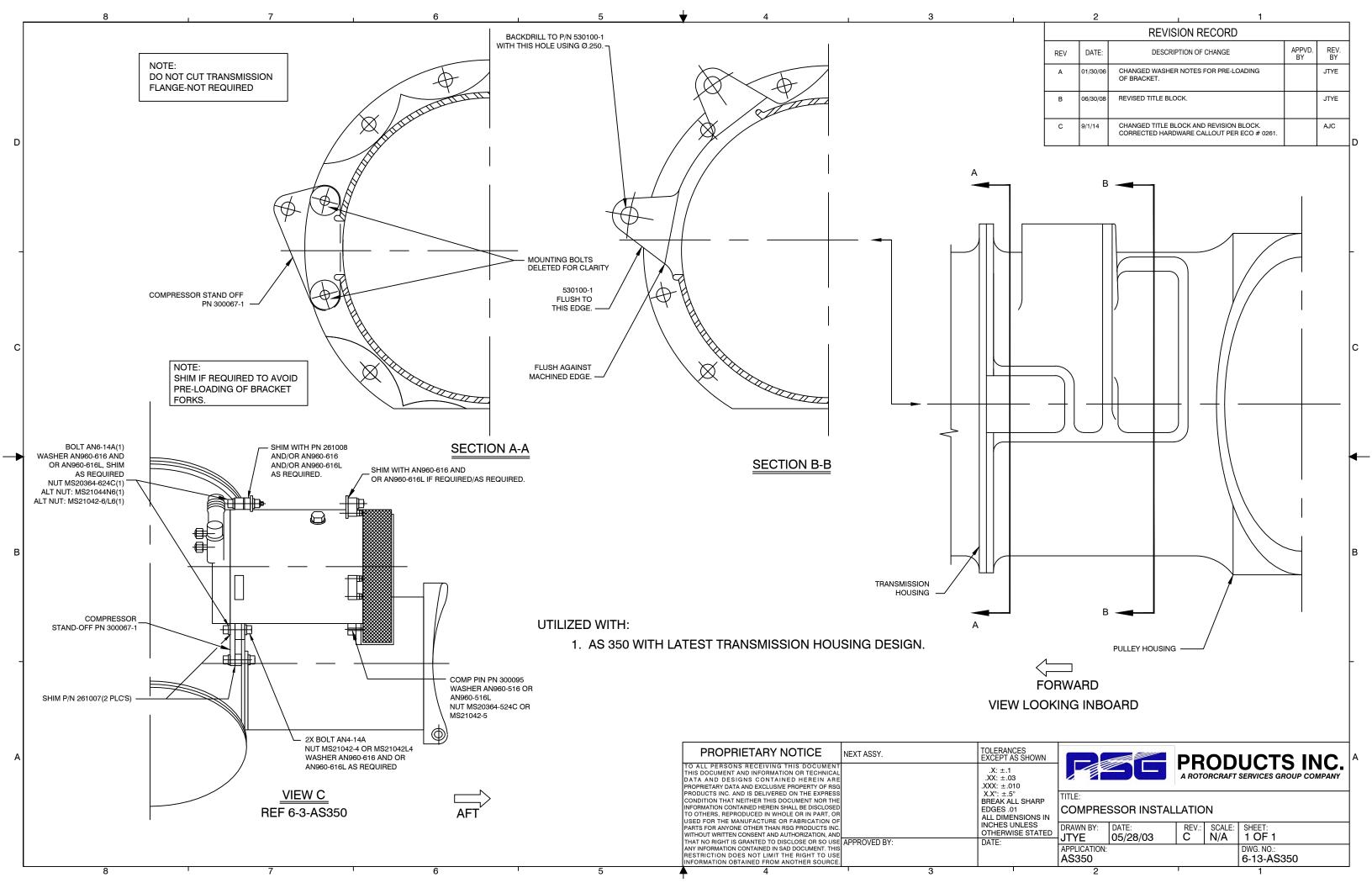
| ECO No. 1300          | SHT 2 OF 2   |
|-----------------------|--------------|
| DWG No. 6-3-AS350     | REV <b>F</b> |
| DWG No.               | REV          |
| DWG No.               | REV          |
| REF. STC No. SH3509SW |              |

IS:

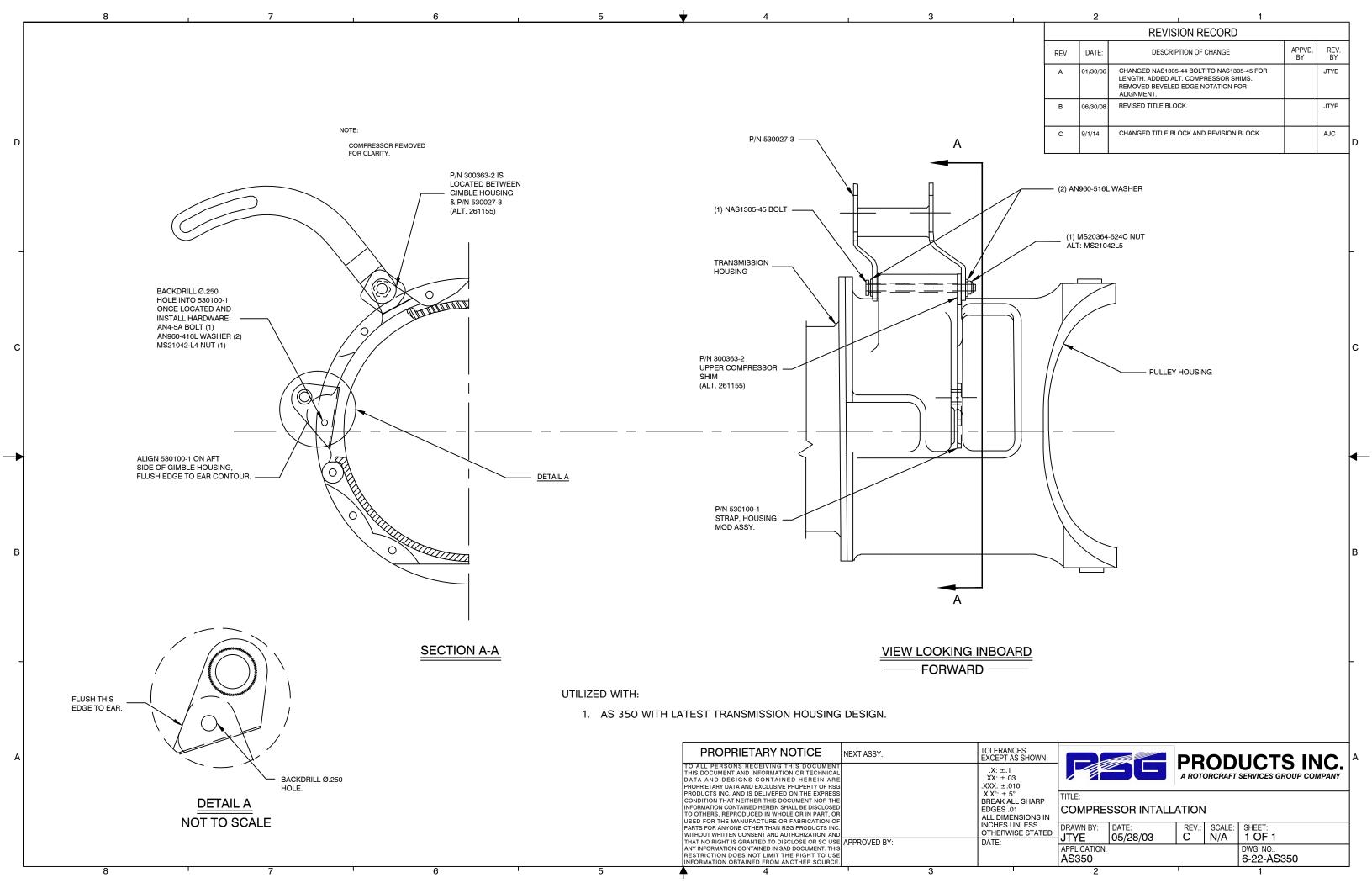
TABLE 1 COMPRESSOR BRACKET KIT P/N: 350-11-031-02

| COMIT NESSON BRACKET KITT /N. 550-1 | 1-001-02         |     |                            |
|-------------------------------------|------------------|-----|----------------------------|
| ITEM DESCRIPTION                    | PART NUMBER      | QTY | COMMENT                    |
| COMPRESSOR MOUNT BRACKET            | 04-130-21-101-01 | 1   |                            |
| COMPRESSOR MOUNT TENSION BOLT       | 04-130-21-102-01 | 1   |                            |
| JAM NUT, DRILLED                    | 04-130-21-104-01 | 2   |                            |
| COMPRESSOR CLAMP                    | 04-130-21-105-01 | 2   |                            |
| BUSHING, SD 507                     | 261007           | 2   |                            |
| COMPRESSOR STANDOFF                 | 300067-1         | 1   |                            |
| UPPER COMPRESSOR SHIM               | 300363-2         | 2   |                            |
| COMPRESSOR PIN                      | 300095           | 1   |                            |
| STRAP, HOUSING MOD ASSEMBLY         | 530100-1         | 1   |                            |
| THREADED ROD END                    | 2434K39          | 1   |                            |
| WASHER                              | NAS1149D0416H    | 1   | OR NAS HARDWARE EQUIVALENT |
| WASHER                              | NAS1149D0635H    | 6   | OR NAS HARDWARE EQUIVALENT |
| WASHER                              | NAS1149D0532H    | 2   | OR NAS HARDWARE EQUIVALENT |
| WASHER                              | AN960-416        | 4   | ALT (NAS1149F0463P)        |
| WASHER                              | AN960-516L       | 1   | ALT (NAS1149F0532P)        |
| WASHER                              | AN960-616L       | 2   | ALT (NAS1149F0632P)        |
| NUT                                 | MS21042-L5       | 2   | ALT (MS20364-524C)         |
| NUT                                 | MS21042-L4       | 3   | ALT (AN365-424)            |
| NUT                                 | MS21042L6        | 4   | OR NAS HARDWARE EQUIVALENT |
| BOLT                                | AN4-5A           | 1   | OR NAS HARDWARE EQUIVALENT |
| BOLT                                | AN4-14A          | 2   | OR NAS HARDWARE EQUIVALENT |
| BOLT                                | AN5-34A          | 1   | OR NAS HARDWARE EQUIVALENT |
| BOLT                                | AN6-13A          | 2   | OR NAS HARDWARE EQUIVALENT |
| BOLT HEX DRIVE                      | AN6-12           | 1   | OR NAS HARDWARE EQUIVALENT |
| BOLT                                | AN6-33A          | 1   | OR NAS HARDWARE EQUIVALENT |
|                                     |                  |     |                            |





**REVISION RECORD** APPVD. BY REV. BY DATE: DESCRIPTION OF CHANGE REV INSTALLATION INSTRUCTIONS: KIT P/N: 350-00-01, -011, -031, -011HP, AND -031HP REDRAWN INTO AUTOCAD, REVISED DRAWING No. 08/16/00 WAS 6-AS350: SHEET No. WAS 3 OF 3 ADDED ITEMS 6 TO "INSTRUCTIONS". CHANGED "CASING" TO THE ABOVE KITS UTILIZE THE SANDEN SD-505 OR SD-507 COMPRESSOR (SEE "HOUSING". ADDED VIEW A, B AND C. DRAWING 350-00-011HP OR -031HP FOR DETAILS OF SD-507 INSTALLATION)... REVISED TITLE BLOCK. CHANGED 530027-2 TO 530027-3, CONVERTED TO AUTOCAD IN EARLY 1997 IT WAS NOTICED BY AMERICAN EUROCOPTER AND LATER EUROCOPTER CANADA, LTD. THAT A FEW AS350 MODELS WERE ARRIVING WITH A DIFFERENT "ENGINE TO MAIN GEAR BOX COUPLING CASING", COMMONLY С 01/30/06 CHANGED NAS1305-44 BOLT TO NAS1305-45 FOR JTYE CALLED A "HOUSING", INSTALLED. THE PART NUMBER SHOWN IN THE EUROCOPTER IPC WAS: 350A35-1104-03, THIS COMPONENT HAS "EARS" EXTENDING OFF THE "HOUSING", ON BOTH SIDES, 37 mm IN LENGTH (SEE REVISED TITLE BLOCK. JTYE 06/30/08 D THE NEW "HOUSING" PART NUMBER IS 350A08-1635-21. IT HAS ONE EAR ON THE LEFT SIDE THAT IS ONLY 25 mm LONG. CHANGED TITLE BLOCK AND REVISION BLOCK. AJC 9/1/14 THE 25 mm LONG EAR WILL NOT ALLOW AN INTEGRATED FLIGHT SYSTEMS, INC. SD-505 OR SD-507 COMPRESSOR TO BE INSTALLED IN IT'S USUAL THE "LOGICAL ANSWER" WAS TO LOCATE THE "MOUNTING POINT" OF THE COMPRESSOR(S) SO THAT A DIFFERENT LENGTH BELT, ETC. WOULD NOT P/N 530027-3 NOTE: Α ONLY TWO (2) PART CHANGES WERE REQUIRED TO ALLOW ITEM 3 TO OCCUR (2) AN960-516L WASHER a. COMPRESSOR MOUNT ASSEMBLY 530027-1 WAS CHANGED TO -2 (.125 COMPRESSOR REMOVED WIDER AT THE TOP MOUNTING POINT). ÀLT: MS21042L5 FOR CLARITY. b. A NEW COMPONENT, NOT PREVIOUSLY USED, "STRAP, HOUSING MOD. (1) NAS1305-45 BOLT -ASSEMBLY", P/N: 530100 IS UTILIZED TO LOCATE THE COMPRESSOR (1) MS20364-524C NUT MOUNTING POINT BACK TO IT'S ORIGINAL LOCATION. c. A AN3-5A BOLT AND ASSOCIATED HARDWARE SECURES THE "STRAP" TO THE "HOUSING" **PULLEY HOUSING** IN SOME CASES IT MAY BE NECESSARY TO REMOVE A SMALL AMOUNT OF 37mm MATERIAL FROM THE OUTER EDGE OF THE 25 mm EAR TO ALLOW THE "NEW" TRANSMISSION IFS COMPONENT TO LAY IN IT'S PROPER LOCATION. THIS IS DUE TO THE "SHIM" HOUSING WELDED ON THE FORWARD SIDE OF THE COMPONENT WHICH ALLOWS VIEW A AFTER P/N 530100 IS ALIGNMENT TO THE COMPRESSOR EAR. ANY PAINT REMOVED FROM THE LOCATED, BACKDRILL #10 A MILITARIA "HOUSING" EAR MUST BE TOUCHED UP BEFORE INSTALLING THE IFS PARTS. HOLE INTO HOUSING, INSTALL HARDWARE: IF AERO AIRE OR OTHER SIMILAR TYPE A/C COMPRESSOR HAS BEEN PREVIOUSLY INSTALLED PER VIEW "B" or "C", IT MAY BE NECESSARY TO AN3-5A BOLT (1) FOLLOW THE STEPS IN ITEM 5 FOR CORRECT CLEARANCE. AN960-10L WASHER (2) P/N 530100 IS MS21042-L3 NUT (1) LOCATED BETWEEN  $\oplus$ GIMBLE HOUSING & P/N 530027-3 25mm VIEW B REMOVE TOP OF EAR. AS NECESSARY, TO ENSURE P/N 530100 SEATS FLUSH -AGAINST RECESS IN THE GIMBLE HOUSING - VIEW A, B, C 25mm OR LESS VIEW C SECTION A-A VIEW LOOKING INBOARD — FORWARD TOLERANCES EXCEPT AS SHOWN PROPRIETARY NOTICE NEXT ASSY. PRODUCTS INC. TO ALL PERSONS RECEIVING THIS DOCUMEN .X: ±.1 THIS DOCUMENT AND INFORMATION OR TECHNICAL DATA AND DESIGNS CONTAINED HEREIN ARE .XX: ±.03 PROPRIETARY DATA AND EXCLUSIVE PROPERTY OF RSG PRODUCTS INC. AND IS DELIVERED ON THE EXPRESS .XXX: ±.010 CONDITION THAT NEITHER THIS DOCUMENT NOR THE BREAK ALL SHARP INFORMATION CONTAINED HEREIN SHALL BE DISCLOSED TO OTHERS, REPRODUCED IN WHOLE OR IN PART, OR COMPRESSOR INSTALLATION EDGES .01 ALL DIMENSIONS IN USED FOR THE MANUFACTURE OR FABRICATION OF INCHES UNLESS OTHERWISE STATED REV. SCALE: SHEET: N/A 1 OF DRAWN BY: PARTS FOR ANYONE OTHER THAN BSG PRODUCTS INC WITHOUT WRITTEN CONSENT AND AUTHORIZATION, AND
THAT NO RIGHT IS GRANTED TO DISCLOSE OR SO USE APPROVED BY: 1 OF 1 KLM 11/10/96 DATF: ANY INFORMATION CONTAINED IN SAD DOCUMENT. THIS APPLICATION DWG. NO.: RESTRICTION DOES NOT LIMIT THE RIGHT TO USE INFORMATION OBTAINED FROM ANOTHER SOURCE. AS350 6-21-AS350



#### RSG Products Inc. INSTALLATION OF ELECTRICAL – AS350 Air Conditioning

## Step 9

#### **Installation of Electrical**

Date: 08/13/22

Section 9: Installation of Electrical Page 1 of 2

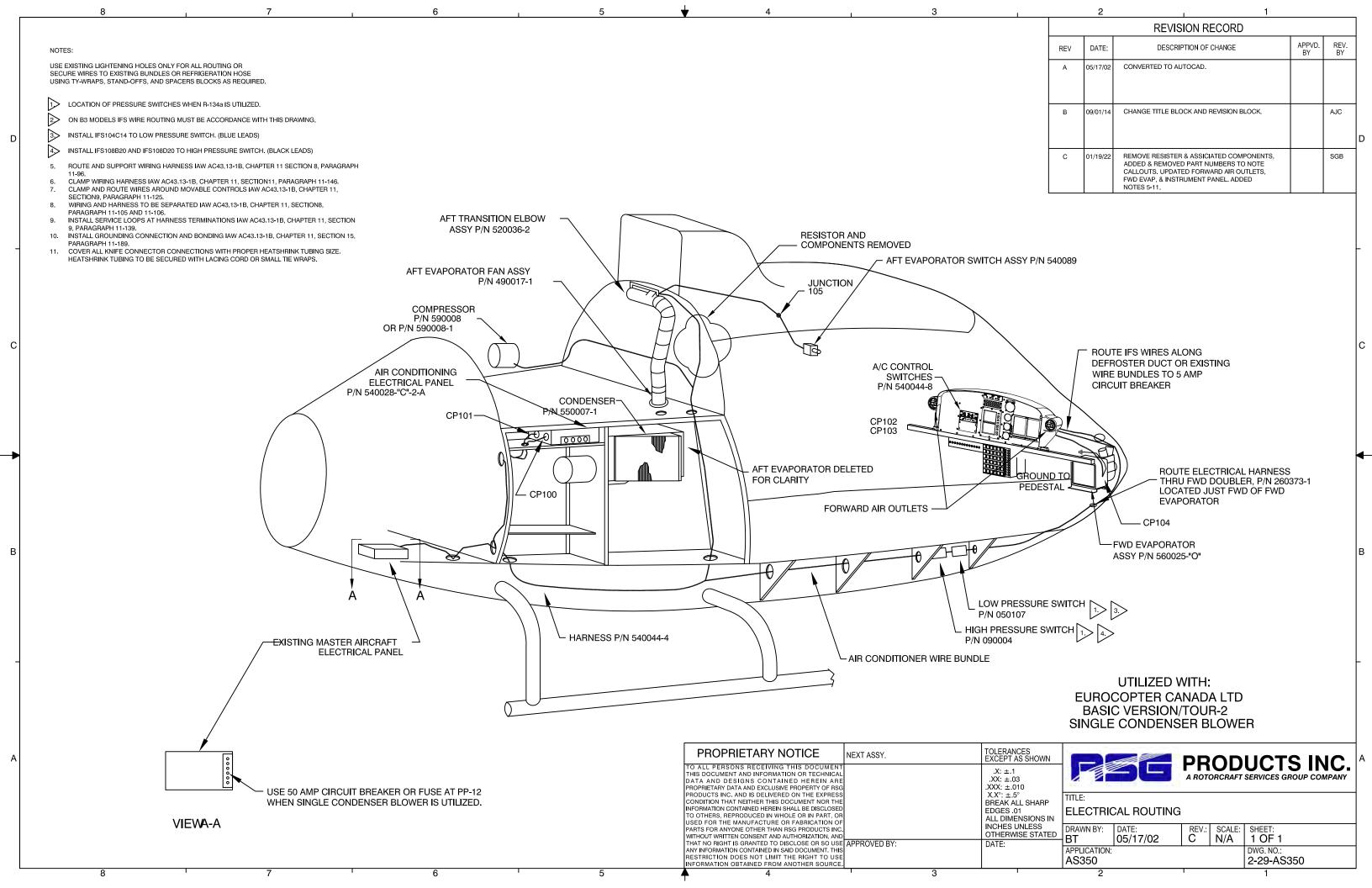
## RSG Products Inc. INSTALLATION OF ELECTRICAL – AS350 Air Conditioning

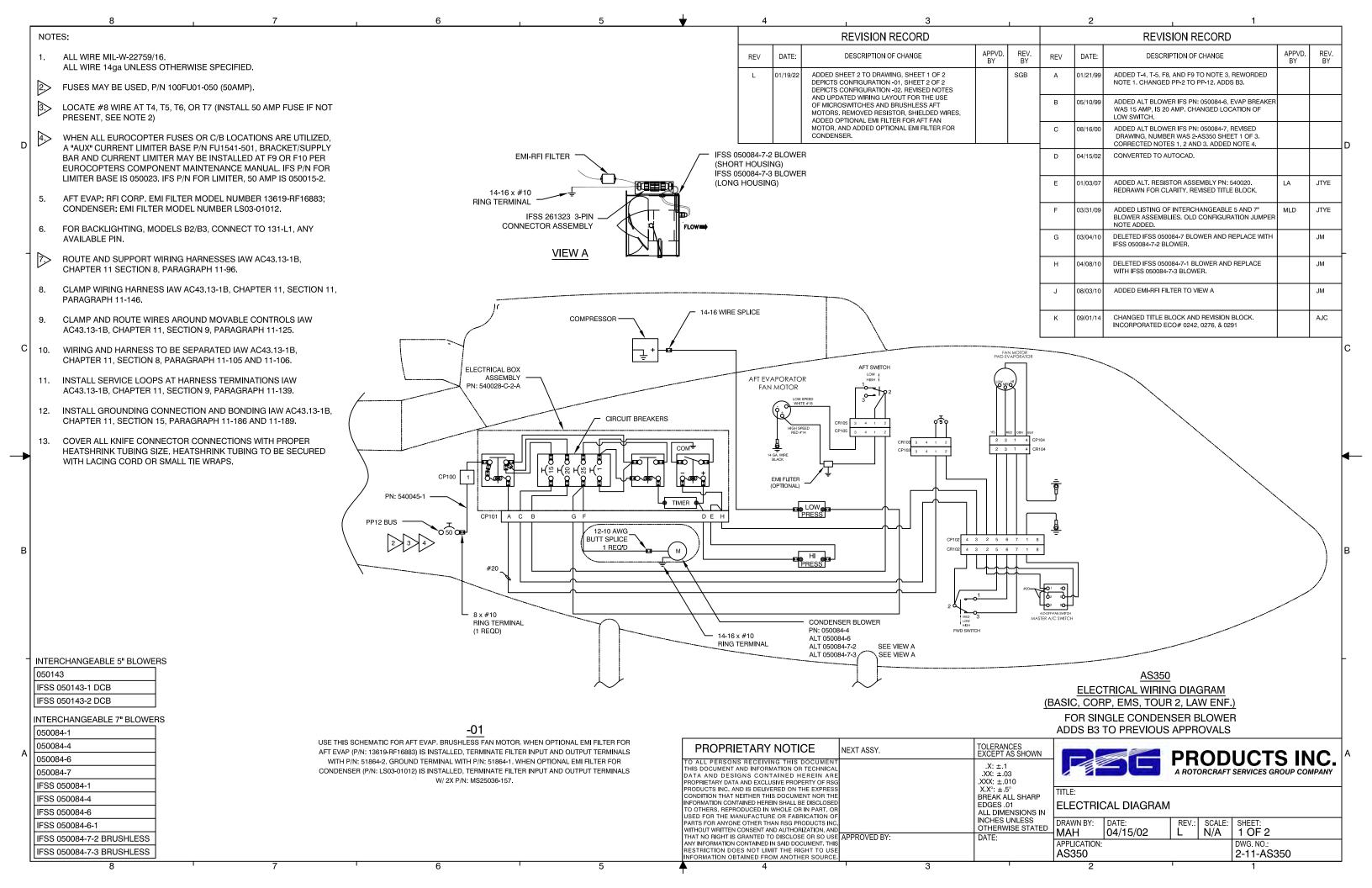
#### **Installation of Electrical**

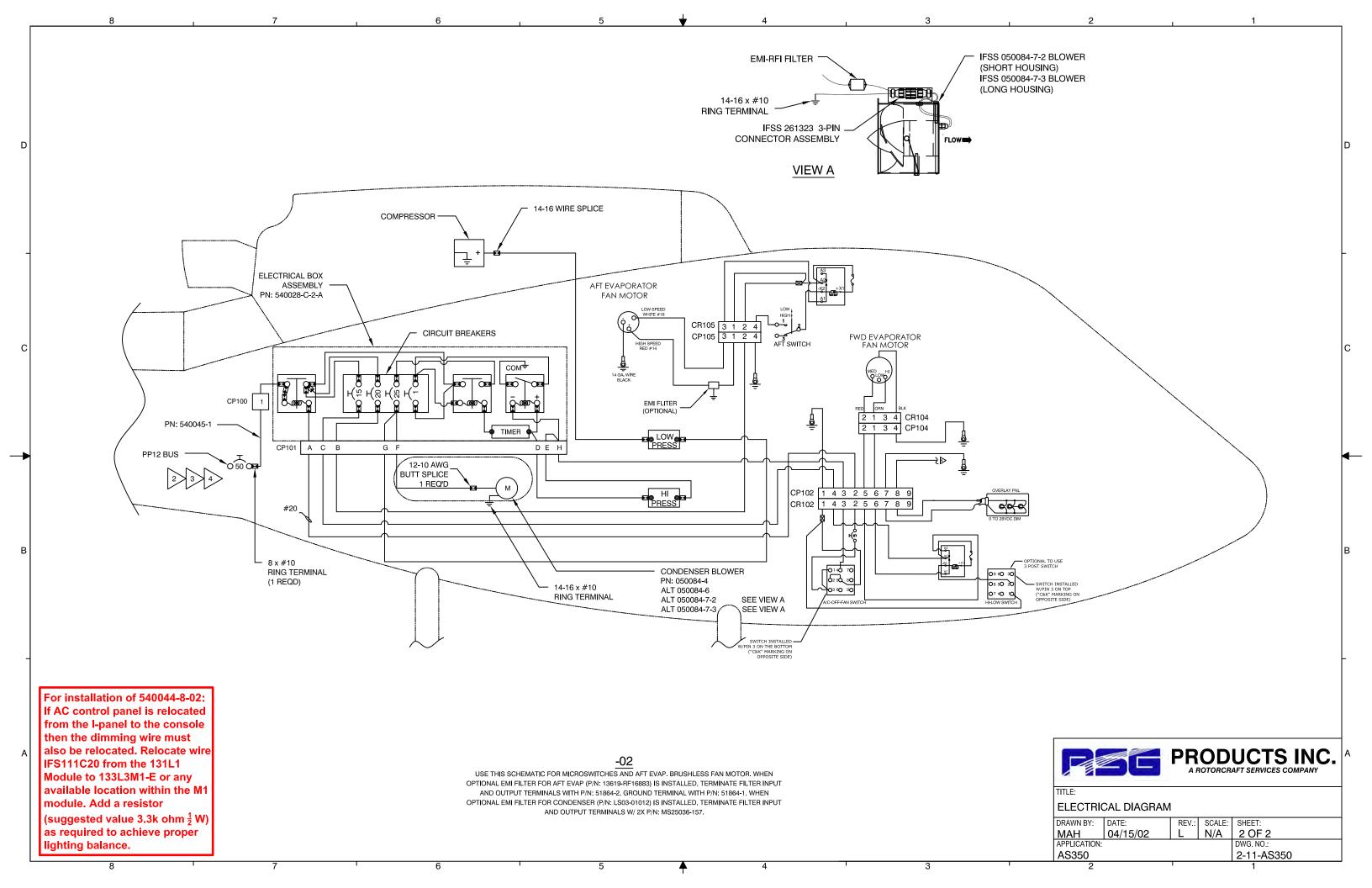
| STEP | PROCEDURE   | MECH | INSP |
|------|---|------|------|
| 9.1  | (Intentionally left blank)  |      |      |
| 9.2  | (Intentionally left blank)  |      |      |
| 9.3  | (Intentionally left blank)  |      |      |
| 9.4  | Install and route the electrical harness, P/N 540044-4 config01 or -02, per Drawing 2-29-AS350, 2-11-AS350 and 2-21 AS350. Install optional EMI-RFI filter per drawing 2-11-AS350 View A with hardware shown. |      |      |
| 9.5  | Install and route electrical harness P/N 540045-1 using 1 ea. 8 x #10 Ring Terminal and ANL-50 Limiter (not incl.).   |      |      |
| 9.6  | Install Instrument Panel Switch P/N 540044-8 config01 or -02, per drawing 5-26-AS350.   |      |      |
| 9.7  | Install aft switch assembly P/N 540089 config01 or -02, per drawings 5-10-AS350, 2-29-AS350, 2-11-AS350 and 2-21-AS350  |      |      |

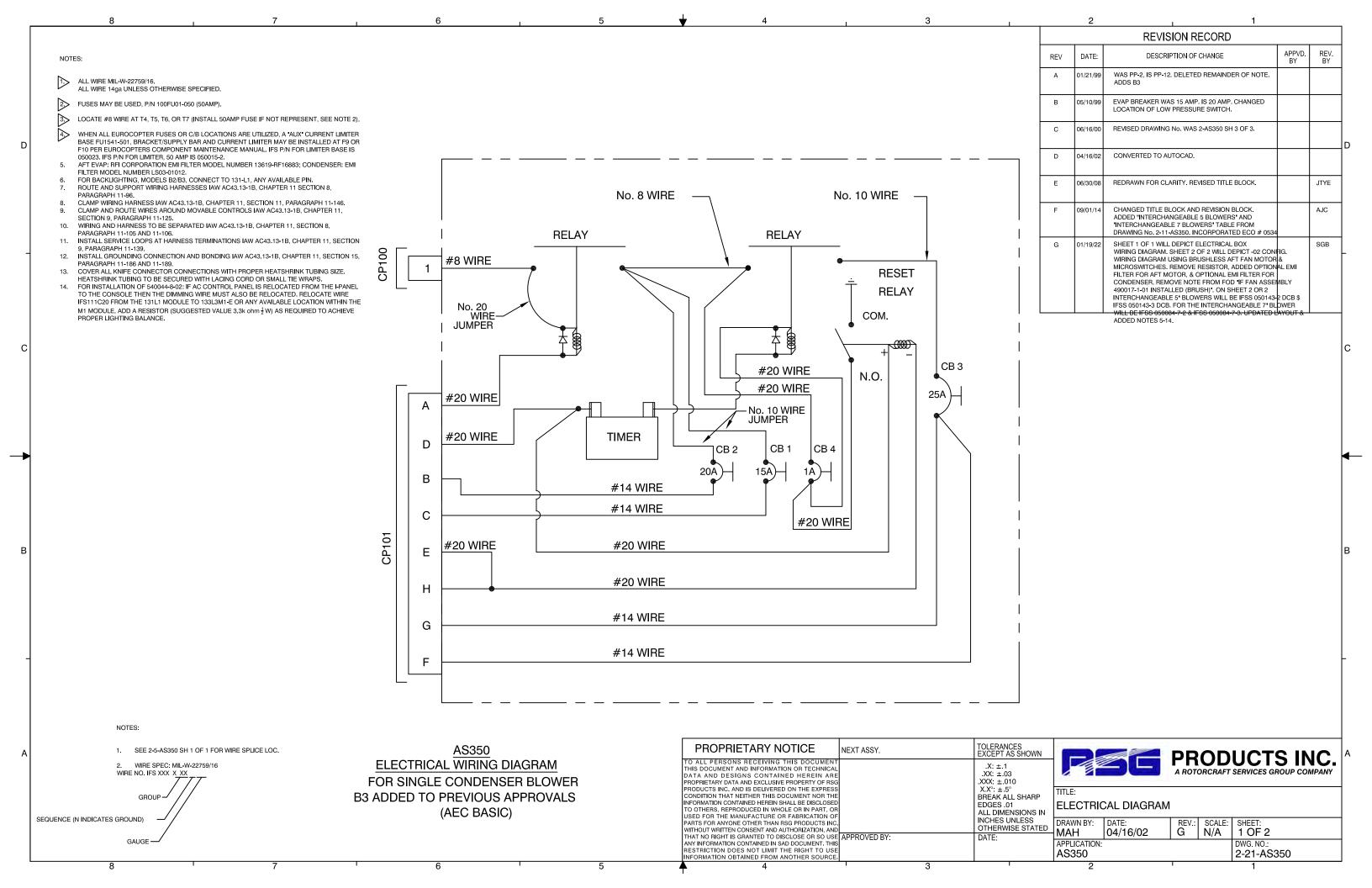
Date: 08/13/22

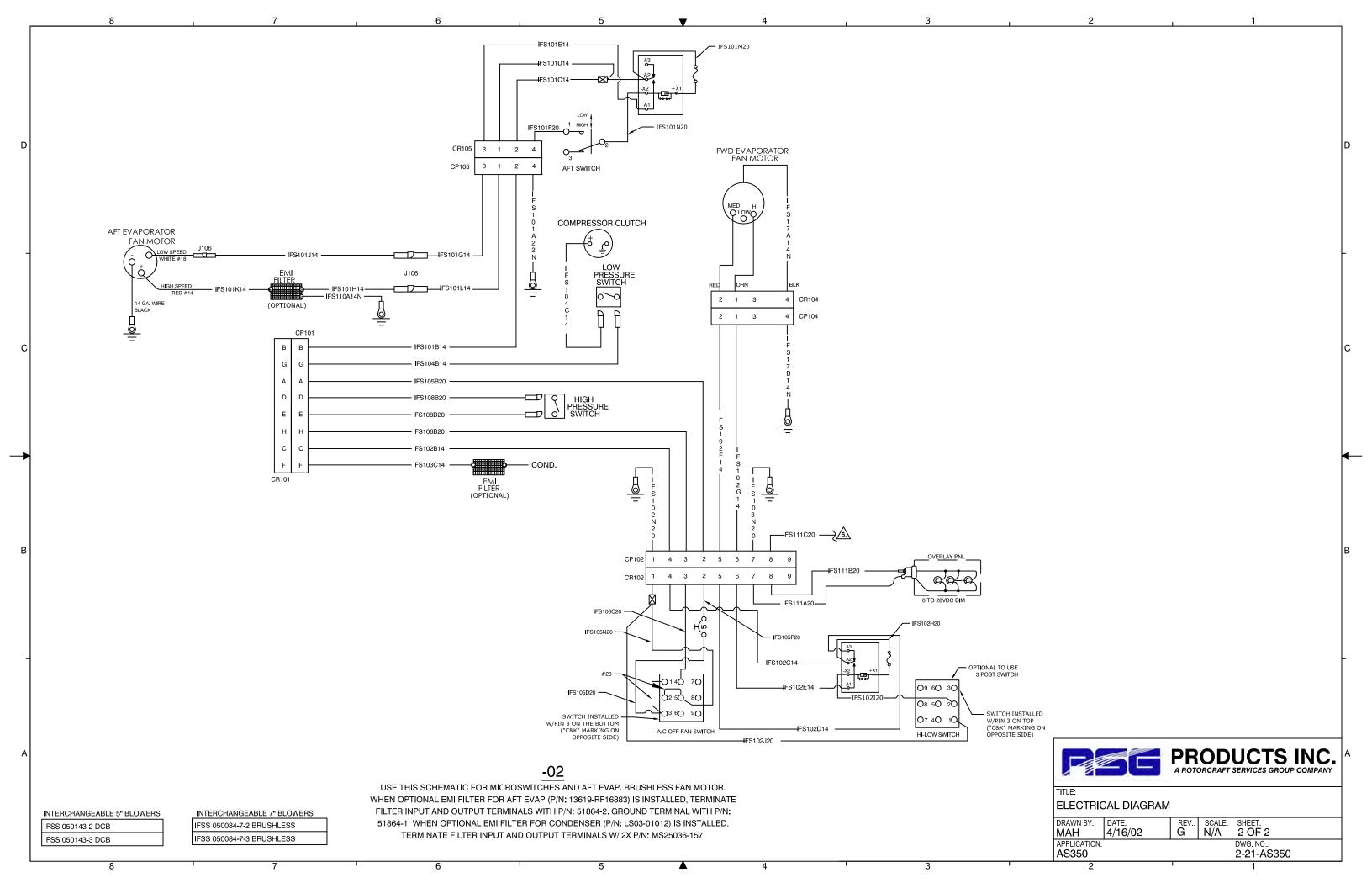
Section 9: Installation of Electrical Page 2 of 2











## RSG Products Inc. INSTALLATION OF HOSES – AS350 Air Conditioning

## Step 10

#### **Installation of Hoses**

Date: 08/13/22

Section 10: Installation of Hoses Page 1 of 3

## $\label{eq:RSG Products Inc.} RSG\ Products\ Inc. \\ INSTALLATION\ OF\ HOSES-AS350\ Air\ Conditioning$

#### **Installation of hoses**

| STEP | PROCEDURE  | МЕСН | INSP |
|------|--|------|------|
| 10.1 | Review Install Drawings 3-4-AS350 and 3-14-AS350.  |      |      |
| 10.2 | WARNING: Before connecting hoses, be sure all fittings have R134 approved "O" Rings installed.   |      |      |
| 10.3 | Route evaporator return line hose assembly #10 suction hose (tee fitting above deck), P/N 570087-O-A from the upper transmission deck down through the right side baggage compartment, through the existing opening in the baggage compartment floor, under the floor forward to the forward evaporator. The short length of hose connects to the Aft evaporator return fitting above the transmission deck. The longer length above the transmission deck is routed against the cabin back wall to the compressor suction fitting located on the left side of the transmission. |      |      |
| 10.4 | Route the evaporator expansion valve supply line high pressure hose assembly #6, P/N 570072-O-A from the baggage department down through the existing opening in the baggage compartment floor, under the floor forward to the forward evaporator. The tee fitting connects to the "out" or supply fitting on the dryer bottle. The short length to the evaporator.  |      |      |
| 10.5 | Clamp the coil on the end of the expansion valve to the return hose fitting (#10 large line) with a 1-inch band clamp. Assure the fitting is clean where the coil is clamped. Insulate the coil completely with cork tape, P/N 070078-0.   |      |      |
| 10.6 | Route the condenser supply line hose assembly #8, P/N 570024-"O"-A from the compressor discharge fitting against the cabin back wall to the right side of the transmission deck. Route down the same opening in the transmission deck as the return hose was routed. Connect to condenser. Ref. Drawing No. 3-4-AS350.   |      |      |

Date: 08/13/22

Section 10: Installation of Hoses Page 2 of 3

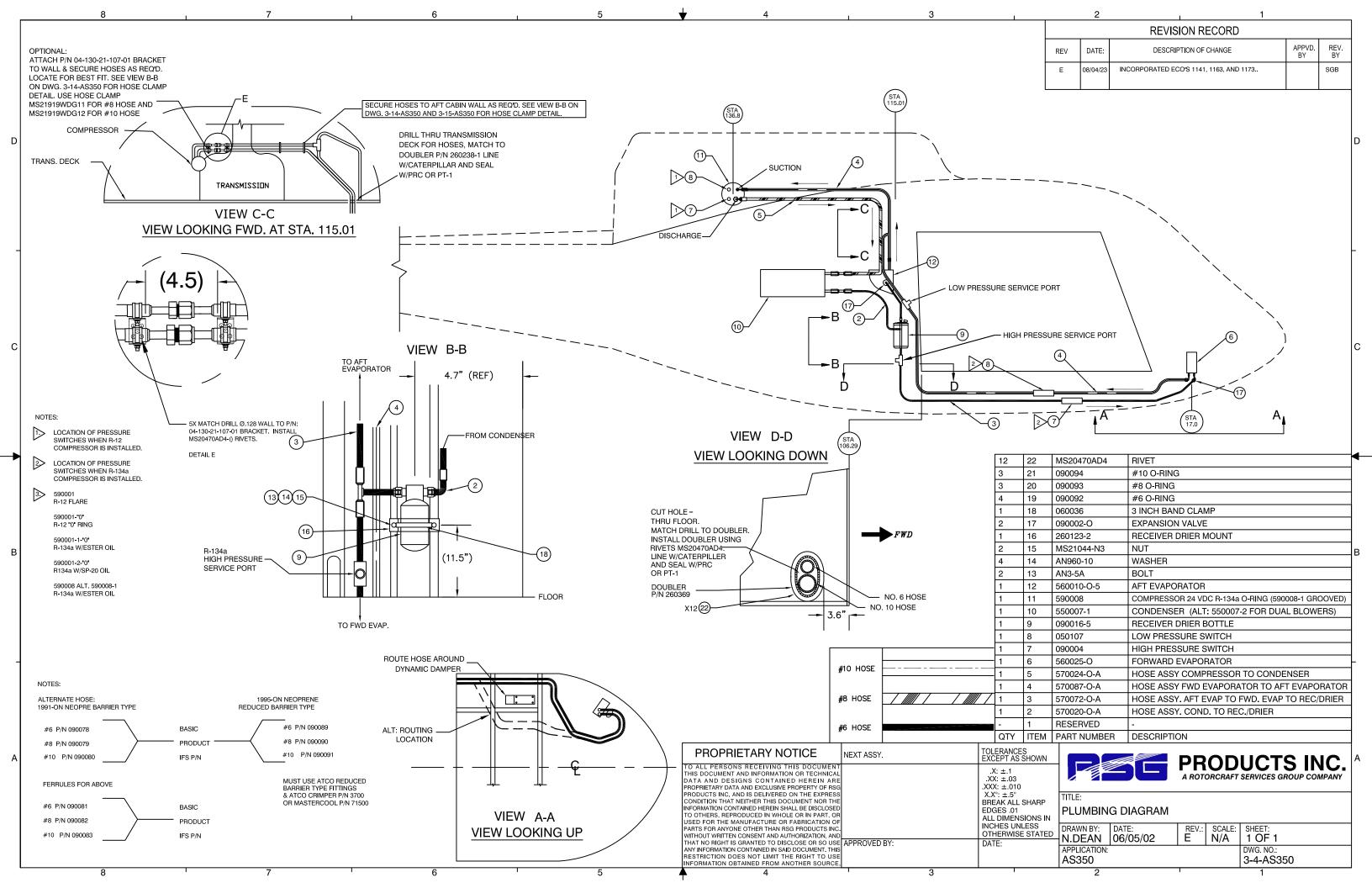
## RSG Products Inc. INSTALLATION OF HOSES – AS350 Air Conditioning

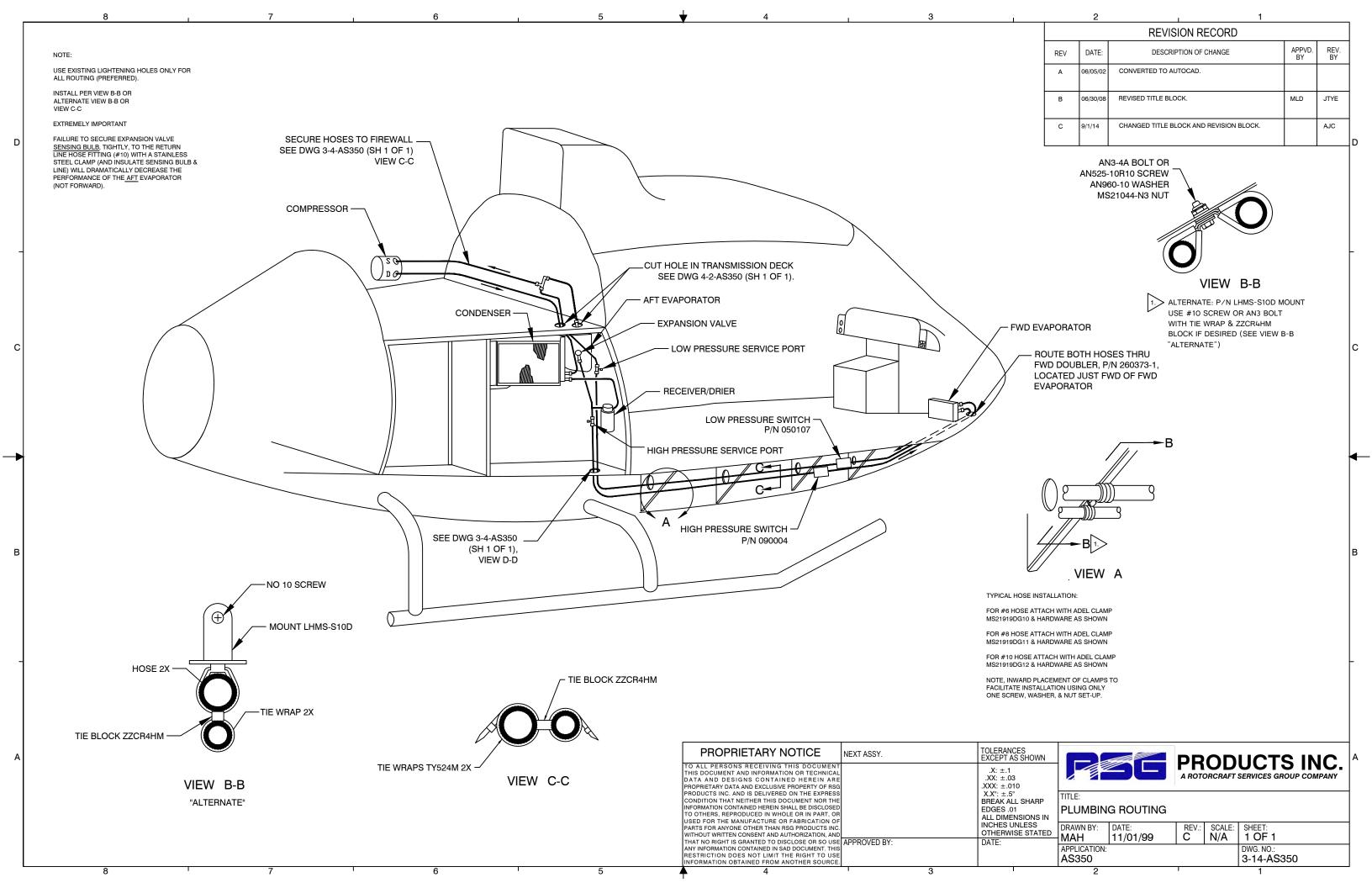
#### **Installation of Hoses**

| STEP | PROCEDURE  | MECH | INSP |
|------|--|------|------|
| 10.7 | Install drier mount bracket, P/N 260123-2 per Drawing No. 3-4-AS350 and drier bottle, P/N 090016-5.  |      |      |
| 10.8 | Do not connect drier bottle up until all lines are connected and you are ready to vacuum down system. Install hose assembly, P/N 570020-"O"-A.               |      |      |
| 10.9 | Connect high and low pressure switches. Be sure to connect the correct wire to each switch. Low pressure switch P/N 050107, High pressure switch, P/N 90004. |      |      |

Date: 08/13/22

Section 10: Installation of Hoses Page 3 of 3





## RSG Products Inc. PAPERWORK – AS350 Air Conditioning

## Step 11

# **Paperwork**

Date: 08/13/22

Section 11: Paperwork Page 1 of 2



| DATE:      | DOC No.:  | REV: | PAGE:    |
|------------|-----------|------|----------|
| 08/04/2023 | IFSE-0007 | F-1  | 96 of 99 |

TITLE:

Air Conditioning System Installation Instructions For Continued Airworthiness for Airbus Helicopters AS-350 B, C, D, D1, B1, B2, B3, BA & EC-130 B4

#### **APPENDIX A** Weight and Balance

#### PERTAINS TO KIT #350-00-011 Weight (#) X Arm (") = Moment ("#)

| ITEM                            | WEIGHT (#) | ARM (") | MOMENT ("#) |
|---------------------------------|------------|---------|-------------|
| Forward Evaporator Assembly     | 13.50      | 19.00   | 256.50      |
| Forward Air Outlets             | .50        | 31.32   | 15.66       |
| Aft Evaporator and Return Air   | 11.50      | 120.00  | 1380.00     |
| Aft Evaporator Blower           | 5.00       | 120.85  | 604.25      |
| Condenser Coil and Mount        | 19.50      | 133.80  | 2609.10     |
| Condenser Blower and Mount      | 14.00      | 148.60  | 2080.40     |
| Compressor and Mount            | 17.00      | 147.80  | 2512.60     |
| Electrical Relay Panes          | 4.0        | 153.70  | 614.80      |
| Refrigerant, Hoses and Fittings | 7.50       | 76.90   | 576.75      |
| Sub Total:<br>(Air Conditioner) | 92.5       |         | 10650.06    |



#### United States of America Department of Transportation Federal Aviation Administration

## Supplemental Type Certificate

Number: SH3509SW

This certificate issued to:

RSG Products Inc. 440 West Lane Suite 100 Saginaw TX, 76131

Certifies that the change in the type design for the following product with the limitations and conditions Federal Aviation Regulations therefore as specified hereon meets the airworthiness requirements of 27 of

Original Product

Make: Airbus Helicopters

Type Certificate Number:

H9EU

Model: AS350 B, B1, B2, B3, BA, C, D, D1;

EC130B4

Description of Type Design Change:

Installation of a Single and Dual Condenser Blower Air Conditioning System in accordance with Integrated Flight Systems (IFS) Master Drawing List (MDL), Document No. DL-9 (Vapor Cycle Air Conditioning System with Belt Driven Compressor Utilizing Refrigerant R134a), Rev. T, dated 09/01/2014, or later FAA approved revision.

(See continuation sheet 3 of 3)

Limitations and Conditions:

The installer must determine whether this design change is compatible with previously approved modifications. If the holder agrees to permit another person to use this certificate to alter a product, the holder must give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of Application: September 10, 1984

Date Reissued: April 30, 1991; August 22, 2001; October 23, 2008;

August 26, 2011; November 29, 2021

Date of Issuance:

September 20, 1985

Date Amended: February 11, 1999; February 9, 2009; February 23, 2009;

November 5, 2010; September 14, 2015

By Direction of the Administrator

SARAH F COX Digitally signed by SARAH F COX Date: 2021,12.06 08:09:25 -06:00

Signature: Jim Grigg

Title:

Manager, Fort Worth ACO Branch Compliance & Airworthiness Division

Aircraft Certification Service

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with 14 CFR 21.47. Possession of this Supplemental Type Certificate (STC) document by persons other than the STC holder does not constitute rights to the design data nor to alter an aircraft, aircraft engine, or propeller. The STC's supporting documentation (drawings, instructions. specifications, flight manual supplements, etc.) is the property of the STC holder. An STC holder who allows a person to use the STC to alter an aircraft, aircraft engine, or propeller must provide that person with written permission acceptable to the FAA. (Ref. 14 CFR 21.120).



# United States of America Department of Transportation Federal Aviation Administration Supplemental Type Certificate

| Number: SH3509SW   |
|--|
| NSTRUCTIONS: The transfer endorsement below may be used to notify the appropriate FAA Aircraft certification Office of the transfer of this Supplemental Type Certificate. The FAA will reissue the certificate at the name of the transferee and forward it to him. |
| Transfer Endorsement   |
| Transfer the ownership of Supplemental Type Certificate Number:  |
| o (Name and address of transferee):  |
|  |
| From (Name and address of grantor):  |
|  |
|  |
| Extent of Authority (if licensing agreement):  |
|  |
|  |
| Date of transfer:  |
|  |

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with 14 CFR 21.47. Possession of this Supplemental Type Certificate (STC) document by persons other than the STC holder does not constitute rights to the design data nor to alter an aircraft, aircraft engine, or propeller. The STC's supporting documentation (drawings, instructions, specifications, flight manual supplements, etc.) is the property of the STC holder. An STC holder who allows a person to use the STC to alter an aircraft, aircraft engine, or propeller must provide that person with written permission acceptable to the FAA. (Ref. 14 CFR 21,120).

Signature of grantor:



## United States of America Department of Transportation Federal Aviation Administration

## Supplemental Type Certificate

(Continuation Sheet)

Date Reissued: November 29, 2021

Description of Type Design Change

For Single Condenser Configurations the following FAA Approved Flight Manual Supplements (FMSs) and revisions, or later FAA approved revisions, are required accordingly:

AS350B, C, D, D1: FMS 19-350-21-002-011, Rev. D, dated 11/17/2014.

AS350B1: FMS 19-350-21-004-011, Rev. C, dated 11/17/2014.

AS350B2: FMS 19-350-21-006-011, Rev. B, dated 11/17/2014.

AS350B3: FMS 19-350-21-008-011, Rev. B, dated 11/17/2014.

AS350BA: FMS 19-350-21-010-011, Rev. B, dated 11/17/2014.

EC130B4: FMS dated 2/6/04.

For Dual Condenser Configurations the following FAA approved FMSs and revisions, or later FAA approved revisions, are required accordingly:

AS350B, C, D, D1: FMS 19-350-21-001-031, Rev. D, dated 11/17/2014.

AS350B1: FMS 19-350-21-003-031, Rev. C, dated 11/17/2014.

AS350B2: FMS 19-350-21-005-031, Rev. B, dated 11/17/2014.

AS350B3: FMS 19-350-21-007-031, Rev. B, dated 11/17/2014.

AS350BA: FMS 19-350-21-009-031, Rev. B, dated 08/18/2015.

Instructions for Continued Airworthiness, IFS Document No. IFSE-0007, Rev. C, dated 8/12/2010, or later revision is required.

-----END-----

Any alteration of this certificate and/or the Type Certificate Data Sheet is punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with Title 14 of the Code of Federal Regulations, part 21, section 21.47 (14 CFR 21.47). A transfer must be endorsed as provided on the reverse hereof. A Type Certificate holder who allows a person to use the Type Certificate to manufacture a new aircraft, aircraft engine, or propeller must provide that person with a written licensing agreement acceptable to the FAA. (Ref. 14 CFR 21.55).



| DRAWING NUMBER           | DRAWING TITLE                          | # OF PAGES | DRAWING DATE         | REVISION | DESCRIPTION   | AS 350 | EC130B4 | SIZE   | NEW/RVSD  |
|--------------------------|--|------------|----------------------|----------|---|--------|---------|--------|-----------|
| 1-0-AS350                | AIR CONDITIONING CONFIGURATION CONTROL | 2          | 01/19/22             | D        | AS 350  | X      |         | В      | TO REV. D |
| 1-0-EC130                | AIR CONDITIONING CONFIGURATION CONTROL | 1          | 09/01/14             | В        | EC 130 B4   |        | X       | В      | TO REV. B |
| 1-00-EC130               | CONFIGURATION AND ADD OPTIONS          | 1          | 09/01/14             | В        | EC 130 B4   |        | X       | В      | TO REV. B |
| 1-1-AS350                | AIR CONDITIONING OVERVIEW              | 1          | 09/01/14             | G        | CORPORATE VERSION                                   | X      |         | В      | TO REV. G |
| 1-2-AS350                | AIR CONDITIONING OVERVIEW              | 1          | 09/01/14             | D        | EMS-2 VERSION                                       | X      |         | В      | TO REV. D |
| 1-3-AS350                | AIR CONDITIONING OVERVIEW              | 1          | 01/19/22             | F        | ECL TOUR-2 VERSION                                  | X      |         | В      | TO REV. F |
| 1-4-AS350                | AIR CONDITIONING OVERVIEW              | 1          | 09/01/14             | D        | ECL TOUR-1 VERSION                                  | X      |         | В      | TO REV. D |
| 1-5-AS350                | AIR CONDITIONING OVERVIEW              | 1          | 08/04/23             | F        | AFT MOUNTED CONDENSER                               | X      |         | В      | TO REV. F |
| 1-6-AS350                | AIR CONDITIONING OVERVIEW              | 1          | 09/01/14             | В        | LAW ENFORCEMENT                                     | X      |         | В      | TO REV. B |
| 1-7-AS350                | AIR CONDITIONING OVERVIEW              | 1          | 01/19/22             | С        | ECL TOUR 1  | X      |         | В      | TO REV. C |
| 1-8-AS350                | AIR CONDITIONING OVERVIEW              | 1          | 09/01/14             | В        | EMS 1   | X      | .,      | В      | TO REV. B |
| 1-1-EC130                | AIR CONDITIONING OVERVIEW              | 1          | 09/01/14             | В        | EC130   |        | X       | В      | TO REV. B |
| 2-00-AS350               | ELECTRICAL ROUTING                     | 1          | 09/01/14             | В        | AS350   | X      |         | В      | TO REV. B |
| 2-1-AS350                | ELECTRICAL ROUTING                     | 1          | 09/01/14             | F        | SINGLE CONDENSER BLOWER                             | X      |         | В      | TO REV. F |
| 2-2-AS350                | ELECTRICAL ROUTING                     | 1 1        | 09/01/14             | D        | EMS-2 VERSION                                       | X      |         | В      | TO REV. D |
| 2-3-AS350                | ELECTRICAL ROUTING                     | 1          | 01/19/22             | E        | SINGLE COND/ECL/TOUR                                | X      |         | В      | TO REV. E |
| 2-4-AS350                | ELECTRICAL ROUTING                     | 1          | 01/19/22             | E<br>D   | DUAL AFT/ECL TOUR                                   | X      |         | B<br>B | TO REV. E |
| 2-5-AS350                | ELECTRICAL ROUTING ELECTRICAL ROUTING  | 1          | 09/01/14             | _        | DUAL COND. BLOWER/AFT MOUNT                         | X      |         |        | TO REV. C |
| 2-6-AS350<br>2-8-AS350   | ELECTRICAL ROUTING                     | 1          | 09/01/14<br>09/01/14 | C        | DUAL COND/SIDE MOUNT CORP, TOUR 2, EMS AND LAW ENF. | X      |         | B<br>B | TO REV. C |
| 2-6-AS350<br>2-9-AS350   | ELECTRICAL ROUTING                     | 1          | 09/01/14             | В        | EMS/ LAW ENFORCEMENT                                | X      |         | В      | TO REV. B |
| 2-9-AS350<br>2-10-AS350  | ELECTRICAL ROUTING  ELECTRICAL ROUTING | 1          | 09/01/14             | В        | EMS-1   | X      |         | В      | TO REV. B |
| 2-10-AS350<br>2-11-AS350 | ELECTRICAL ROOTING  ELECTRICAL DIAGRAM | 1          | 01/19/22             | D I      | ADDED EMI-RFI FILTERS                               | X      |         | В      | TO REV. L |
| 2-11-A3350<br>2-13-AS350 | ELECTRICAL DIAGRAM                     | 1          | 01/19/22             | -        | ADDED EMI-RFI FILTERS                               | X      |         | В      | TO REV. L |
| 2-13-A3350<br>2-14-AS350 | ELECTRICAL DIAGRAM                     | 1          | 01/19/22             | E        | AFT MOUNTED/ECL TOUR                                | X      |         | В      | TO REV. E |
| 2-16-AS350               | ELECTRICAL DIAGRAM                     | 1          | 01/19/22             | G        | DUAL COND. BLOWER/AFT MOUNT                         | X      |         | В      | TO REV. G |
| 2-10-AS350               | ELECTRICAL ROUTING                     | 1          | 01/19/22             | D        | ECL TOUR 2  | X      |         | В      | TO REV. D |
| 2-21-AS350               | ELECTRICAL DIAGRAM                     | 1          | 01/19/22             | G        | SINGLE COND BLOWER                                  | X      |         | В      | TO REV. G |
| 2-23-AS350               | ELECTRICAL DIAGRAM                     | 1          | 01/19/22             | F        | SINGLE COND/ECL TOUR 1                              | X      |         | В      | TO REV. F |
| 2-24-AS350               | ELECTRICAL DIAGRAM                     | 1          | 01/19/22             | Ë        | DUAL AFT/ECL TOUR 1                                 | X      |         | В      | TO REV. E |
| 2-25-AS350               | ELECTRICAL DIAGRAM                     | 1          | 01/19/22             | F        | DUAL COND BLOWER                                    | X      |         | В      | TO REV. F |
| 2-29-AS350               | ELECTRICAL ROUTING                     | 1          | 01/19/22             | C        | ECL TOUR 2  | X      |         | В      | TO REV. C |
| 2-1-EC130                | ELECTRICAL ROUTING                     | 1          | 08/04/23             | C        | EC130   |        | Х       | В      | TO REV. C |
| 2-3-EC130                | ELECTRICAL DIAGRAM                     | 1          | 09/01/14             | В        | EC130   |        | Х       | В      | TO REV. B |
| 3-4-AS350                | PLUMBING DIAGRAM                       | 1          | 08/04/23             | Е        | AFT EVAP/SIDE MOUNT                                 | Х      |         | В      | TO REV. E |
| 3-5-AS350                | PLUMBING DIAGRAM                       | 1          | 08/04/23             | D        | ALT AFT EVAP/AFT MOUNT                              | Х      |         | В      | TO REV. D |
| 3-14-AS350               | PLUMBING ROUTING                       | 1          | 09/01/14             | С        | AFT EVAP/SIDE MOUNT                                 | Х      |         | В      | TO REV. C |
| 3-15-AS350               | PLUMBING DIAGRAM                       | 1          | 09/01/14             | С        | ALT AFT EVAP/AFT MOUNT                              | Х      |         | В      | TO REV. C |
| 3-1-EC130                | PLUMBING DIAGRAM                       | 1          | 09/01/14             | В        | PLUMBING DIAGRAM                                    |        | X       | В      | TO REV. B |
| 3-2-EC130                | PLUMBING ROUTING                       | 1          | 09/01/14             | В        | PLUMBING DIAGRAM                                    |        | X       | В      | TO REV. B |
| 4-3-AS350                | AFT EVAP INSTALL                       | 2          | 08/04/23             | F        | AFT EVAPORATOR                                      | X      |         | В      | TO REV. F |
| 4-13-AS350               | AFT EVAP INSTALL                       | 1          | 08/04/23             | D        | AFT EVAPORATOR INSTALL                              | X      |         | В      | TO REV. D |
| 4-21-AS350               | FWD EVAP INSTALL                       | 1          | 08/04/23             | J        | FWD EVAPORATOR INSTALL                              | Х      |         | В      | TO REV. J |
| 4-1-EC130                | AFT EVAP INSTALL                       | 2          | 08/0423              | D        | AFT EVAPORATOR INSTALL                              |        | X       | В      | TO REV. D |
| 4-2-EC130                | AFT EVAP INSTALL                       | 1          | 09/01/14             | В        | AFT EVAPORATOR INSTALL                              |        | X       | В      | TO REV. B |
| 4-3-EC130                | FWD EVAP INSTALL                       | 2          | 09/01/14             | В        | FWD EVAPORATOR INSTALL                              |        | X       | В      | TO REV. B |
| 4-4-EC130                | FWD DRAIN HOSE INSTALL                 | 1          | 09/01/14             | A        | FWD DRAIN HOSE INSTALL                              |        | X       | В      | TO REV. A |
| 5-1-AS350                | AIR DISTRIBUTION                       | 1          | 09/01/14             | E        | CORPORATE   | X      |         | В      | TO REV. E |
| 5-2-AS350                | AIR DISTRIBUTION                       | 1          | 09/01/14             | E        | EMS 2   | X      |         | В      | TO REV. E |
| 5-4-AS350                | AIR DISTRIBUTION                       | 1          | 01/19/22             | F        | ECL TOUR VERSION                                    | X      |         | В      | TO REV. F |
| 5-5-AS350                | AIR DISTRIBUTION                       | 1          | 09/01/14             | D        | ECL TOUR 2  | X      |         | В      | TO REV. D |
| 5-6-AS350                | AIR DISTRIBUTION                       | 1          | 09/01/14             | В        | EMS-1   | X      |         | В      | TO REV. B |
| 5-9-AS350                | AIR CONDITIONING OVERVIEW              | 1          | 09/01/14             | E        | LAW ENFORCEMENT                                     | X      | ļ       | В      | TO REV. E |
| 5-10-AS350               | AIR CONDITIONING OVERVIEW              | 1          | 08/04/23             | Н        | EMS-1   | X      |         | В      | TO REV. H |
| 5-11-AS350               | AIR DISTRIBUTION                       | 1          | 09/01/14             | E        | EMS-2/LAW ENFORCEMENT                               | X      |         | В      | TO REV. E |



| DRAWING NUMBER           | DRAWING TITLE  | # OF PAGES | DRAWING DATE         | REVISION | DESCRIPTION                                 | AS 350 | EC130B4  | SIZE   | NEW/RVSD  |
|--------------------------|--|------------|----------------------|----------|---|--------|----------|--------|-----------|
| 5-12-AS350               | AIR DISTRIBUTION   | 1          | 09/01/14             | Е        | MULTIPLE                                    | Х      |          | В      | TO REV. E |
| 5-21-AS350               | AIR DISTRIBUTION   | 1          | 08/04/23             | Н        | EMS/ LAW ENFORCEMENT                        | Х      |          | В      | TO REV. H |
| 5-22-AS350               | AIR DISTRIBUTION   | 1          | 09/01/14             | С        | ECL TOUR                                    | Х      |          | В      | TO REV. C |
| 5-24-AS350               | AIR DISTRIBUTION   | 1          | 09/01/14             | В        | LAW ENFORCEMENT                             | Х      |          | В      | TO REV. B |
| 5-25-AS350               | AIR DISTRIBUTION   | 1          | 09/01/14             | В        | ECL TOUR 1                                  | X      |          | В      | TO REV. B |
| 5-26-AS350               | AIR DISTRIBUTION   | 1          | 08/04/23             | С        | AEC BASIC CONFIGURATION                     | X      |          | В      | TO REV. C |
| 5-1-EC130                | AIR DISTRIBUTION   | 1          | 01/19/22             | D        | EC130                                       |        | X        | В      | TO REV. D |
| 5-2-EC130                | AIR DISTRIBUTION   | 1          | 09/01/14             | В        | EC130                                       |        | X        | В      | TO REV. B |
| 5-3-EC130                | AIR DISTRIBUTION   | 1          | 09/01/14             | С        | EC130                                       |        | X        | В      | TO REV. C |
| 5-4-EC130                | A/C INSTURMENTATION CONFIGURATIONS                       | 1          | 01/19/22             | С        | EC 130 B4                                   |        | X        | В      | TO REV. C |
| 6-2-AS350                | COMPRESSOR INSTALL                                       | 1          | 01/19/22             | G        | HP COMPRESSOR                               | Х      |          | В      | TO REV. G |
| 6-3-AS350                | COMPRESSOR INSTALL                                       | 1          | 08/04/23             | F        | HP COMPRESSOR NEWER B3,B4                   | X      |          | В      | TO REV. F |
| 6-12-AS350               | COMPRESSOR INSTALL                                       | 1          | 09/01/14             | E        | HP COMPRESSOR                               | Х      |          | В      | TO REV. E |
| 6-13-AS350               | COMPRESSOR INSTALL                                       | 1          | 09/01/14             | С        | HP COMPRESSOR NEWER B3,B4                   | X      | X        | В      | TO REV. C |
| 6-21-AS350               | COMPRESSOR INSTALL                                       | 1          | 09/01/14             | E        | BRACKET INSTALLATION                        | Х      |          | В      | TO REV. E |
| 6-22-AS350               | COMPRESSOR INSTALL                                       | 1          | 09/01/14             | С        | HP COMPRESSOR NEWER B3,B4                   | Х      | X        | В      | TO REV. C |
| 6-1-EC130                | COMPRESSOR INSTALLATION                                  | 1          | 01/19/22             | D        | COMPRESSOR INSTALLATION                     |        | X        | В      | TO REV. D |
| 6-2-EC130                | COMPRESSOR INSTALLATION                                  | 1          | 09/01/14             | В        | COMPRESSOR INSTALLATION                     |        | X        | В      | TO REV. B |
| 6-3-EC130                | COMPRESSOR INSTALLATION                                  | 1          | 09/01/14             | В        | COMPRESSOR INSTALLATION                     |        | X        | В      | TO REV. B |
| 6-5-EC130                | BELT TENSION   | 11         | 09/01/14             | В        | EC 130 B4                                   |        | Х        | В      | TO REV. B |
| 7-2-AS350                | CONDENSER INSTALL  | 2          | 01/19/22             | <u> </u> | ADDED BLOWERS                               | X      |          | В      | TO REV. I |
| 7-11-AS350               | CONDENSER INSTALL  | 11         | 09/01/14             | D        | RIGHT SIDE BAGGAGE                          | X      |          | В      | TO REV. D |
| 7-22-AS350               | CONDENSER INSTALL  | 1          | 08/04/23             | F        | AFT CONDENSER INSTALL                       | X      |          | В      | TO REV. F |
| 7-23-AS350               | LH AIR EXIT DOUBLER INSTALL                              | 1          | 08/04/23             | F        | AFT MOUNTED CONDENSER                       | X      |          | В      | TO REV. F |
| 7-24-AS350               | RH AIR EXIT DOUBLER INSTALL                              | 1 1        | 08/04/23             | F        | AFT MOUNTED CONDENSER                       | X      | +        | В      | TO REV. F |
| 7-25-AS350               | INSTALL AIR INLET DOUBLER LH                             |            | 01/19/22             | E        | AFT MOUNTED CONDENSER                       | X      |          | B<br>B | TO REV. E |
| 7-26-AS350               | INSTALL AIR INLET DOUBLER RH                             | 1          | 09/01/14             | D        | AFT MOUNTED CONDENSER                       |        |          | В      | TO REV. D |
| 7-28-AS350<br>7-29-AS350 | R.H. AIR EXIT DOUBLER INSTALL                            | 1          | 08/04/23<br>08/04/23 | C        | AFT MOUNTED CONDENSER                       | X      |          | В      | TO REV. C |
| 7-1-EC130                | L.H. AIR EXIT DOUBLER INSTALL AFT CONDENSER INSTALLATION | 1          | 09/01/14             | В        | AFT MOUNTED CONDENSER AFT CONDENSER INSTALL | ^      | X        | В      | TO REV. B |
| 7-1-EC130<br>7-2-EC130   | AFT CONDENSER EXHAUST INSTALLATION                       | 1          | 09/01/14             | В        | AFT CONDENSER INSTALL AFT CONDENSER INSTALL |        | X        | В      | TO REV. B |
| 7-2-EC130<br>7-3-EC130   | INSTALLATION AIR INLET DOUBLER                           | 1          | 09/01/14             | В        | AIR INLET DOUBLER                           |        | X        | В      | TO REV. B |
| 8-2-AS350                | BAGGAGE COMPARTMENT MOD.                                 | 1 OF 2     | 08/0423              | H        | AIR INTAKE                                  | Х      | ^        | В      | TO REV. H |
| 8-2-AS350                | BAGGAGE COMPARTMENT MOD.                                 | 2 OF 2     | 08/04/23             | G        | AIR INTAKE                                  | X      | -        | В      | TO REV. G |
| 8-11-AS350               | BAGGAGE COMPARTMENT MOD.                                 | 1          | 08/04/23             | F        | EMS/ LAW ENFORCEMENT                        | X      | -        | В      | TO REV. G |
| 8-1-EC130                | ELECTRIC BOX SHELF                                       | 1          | 09/01/14             | C        | EC130                                       | _ ^    | Х        | В      | TO REV. C |
| 8-2-EC130                | ELECT. BOX VERTICAL INSTALLATION                         | 1          | 09/01/14             | В        | AS 350, EC 130 B4                           | X      | X        | В      | TO REV. B |
| 0-2-LC130                | ELECT. BOX VERTICAL INSTALLATION                         | 1          | 03/01/14             | В        | A3 330, EC 130 B4                           | _ ^    | ^        | ь      | TO KEV. B |
|                          | 1  | MAI        | NUFACTURE DE         | AWINGS   |   | 1      | !        | !      | -         |
| 020011-"O"               | CONDENSOR COIL   | 1          | 09/01/14             | D        |   |        | Х        | В      | TO REV. D |
| 020024-"O"-1             | CONDENSOR COIL   | 1 1        | 08/04/23             | G        |   | Х      | <u> </u> | В      | TO REV. G |
| 020027-"O"-4             | EVAPORATOR COIL  | 1          | 01/19/22             | F        |   | X      | Х        | В      | TO REV. F |
| 020031-"O"-1             | EVAPORATOR COIL  | 1          | 01/19/22             | D        |   | X      | X        | В      | TO REV. D |
| 020044-"O"               | CONDENSOR COIL   | 1          | 08/04/23             | E        |   | X      | İ        | В      | TO REV. E |
| 030011                   | LOUVER (MOD)   | 1          | 09/01/14             | В        |   | X      |          | В      | TO REV. B |
| 030021-1                 | PLASTIC WEMAC, BLACK                                     | 1          | 01/19/22             | C        |   | X      |          | В      | TO REV. C |
| 030021-2                 | WEMAC MODIFIED   | 1          | 09/01/14             | Č        |   | X      |          | В      | TO REV. C |
| 040001-1                 | BLOWER HOUSING   | 1          | 08/04/23             | Ē        |   | X      |          | В      | TO REV. E |
| 040002-1                 | MOTOR COVER PLATE  | 1          | 09/01/14             | D        |   | X      | 1        | В      | TO REV. D |
| 040002-4                 | BLOWER COVER MODIFICATION                                | 1          | 09/01/14             | C        |   | X      | İ        | В      | TO REV. C |
| 040003                   | VENTURI RING   | 1          | 01/19/22             | Ē        |   | X      | İ        | В      | TO REV. E |
| 040003-1                 | VENTURI RING   | 1          | 09/01/14             | D        |   | X      |          | В      | TO REV. D |
| 050007-1                 | SWITCH BUTTON "A/C-OFF-FAN"                              | 1          | 09/01/14             | C        |   | X      | Х        | В      | TO REV. C |
| 050007-1                 | SWITCH BUTTON  | 1 1        | 09/01/14             | C        |   | X      | X        | В      | TO REV. C |



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| 050007-4       | SWITCH BUTTON                    | 1          | 09/01/14     | С        |             | Х      | X       | В    | TO REV. C |
| 050052-1       | BLOWER MOTOR MODIFIED, RH        | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D |
| 050084-6       | 7" VANE AXIAL BLOWER ASSEMBLY    | 3          | 09/01/14     | E        |             | X      | X       | В    | TO REV. E |
| 050143         | 5" VANE AXIAL BLOWER ASSEMBLY    | 1          | 09/01/14     | С        |             | Х      | X       | В    | TO REV. C |
| 050145         | MOTOR 28 VDC                     | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 070069         | STANDOFF                         | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 080007         | EVAPORATOR COVER SCREEN          | 1          | 09/01/14     | С        |             |        | X       | В    | TO REV. C |
| 080008         | FRESH AIR SCREEN                 | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A |
| 080010         | AFT RETURN AIR SCREEN            | 1          | 09/01/14     | D        |             |        | X       | В    | TO REV. D |
| 080011         | CONDENSER EXHAUST SCREEN         | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B |
| 080012         | CONDENSER COVER SCREEN           | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B |
| 080020         | SCREEN, CONDENSER INLET          | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |
| 080021         | SCREEN, CONDENSER EXHAUST        | 1          | 09/01/14     | E        |             | X      |         | В    | TO REV .E |
| 080022         | RETURN AIR SCREEN                | 1          | 09/01/14     | E        |             | X      |         | В    | TO REV. E |
| 080022-1       | RETURN AIR SCREEN                | 1          | 08/04/23     | F        |             | X      |         | В    | TO REV. F |
| 080024         | RETURN AIR SCREEN FWD. EVAP      | 1          | 09/01/14     | E        |             | X      |         | В    | TO REV. E |
| 080035         | SCREEN, CONDENSER INLET          | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |
| 080039         | AIR OUTLET SCREEN                | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |
| 080040         | AIR INLET SCREEN                 | 1          | 09/01/14     | E        |             | X      |         | В    | TO REV. E |
| 110008         | AFT RETURN AIR SCREEN DOUBLER    | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A |
| 110009         | SERVO COVER (FRESH AIR)          | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B |
| 110010         | CONDENSER COVER                  | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A |
| 110011         | INNER EXHAUST RING CONDENSER     | 1          | 01/19/22     | С        |             |        | X       | В    | TO REV. C |
| 110012         | OUTER EXHAUST RING CONDENSER     | 1          | 01/19/22     | С        |             |        | X       | В    | TO REV. C |
| 110013         | NIPPLE (FRESH AIR)               | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A |
| 110015         | RETURN AIR DUCT                  | 1          | 08/04/23     | D        |             |        | X       | В    | TO REV. D |
| 110016         | AIR OUTLET ADAPTER LOWER         | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A |
| 110017         | AIR OUTLET ADAPTER UPPER         | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A |
| 110018         | INNER CLOSEOUT SKIRT             | 1          | 01/19/22     | В        |             |        | X       | В    | TO REV. B |
| 110019         | OUTER CLOSEOUT SKIRT             | 1          | 01/19/22     | В        |             |        | X       | В    | TO REV. B |
| 120019         | PLACARD, SWITCH                  | 2          | 09/01/14     | F        |             | X      |         | В    | TO REV. F |
| 120019-1       | PLACARD AFT CABIN                | 1          | 09/01/14     | F        |             | X      |         | В    | TO REV. F |
| 120020         | PLACARD DUAL ROCKER SWITCH       | 1          | 09/01/14     | В        |             | X      |         | В    | TO REV. B |
| 120021         | PLACARD                          | 1          | 09/01/14     | E        |             | X      |         | В    | TO REV. E |
| 120024         | PLACARD, AC MASTER               | 1          | 09/01/14     | F        |             | X      |         | В    | TO REV. F |
| 120025         | CIRCUIT BREAKER PLACARD          | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C |
| 120085-1       | A/C MASTER PLACARD               | 1          | 09/01/14     | Α        |             | X      |         | В    | TO REV. A |
| 120087         | BATTERY COVER DECAL              | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C |
| 120104         | AIR DUCT CLOSURE DECAL           | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C |
| 120105         | SWITCH PLACARD                   | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C |
| 120105-1       | SWITCH PLACARD                   | 1          | 09/01/14     | В        |             | Х      | X       | В    | TO REV. B |
| 120106         | PLACARD, CIRCUIT BREAKER         | 1          | 09/01/14     | С        |             | Х      | X       | В    | TO REV. C |
| 120106-1       | PLACARD, CIRCUIT BREAKER         | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A |
| 120107         | PLACARD, CIRCUIT BREAKER         | 1          | 09/01/14     | Е        |             | X      |         | В    | TO REV. E |
| 120117         | REFRIGERANT LABEL                | 1          | 08/04/23     | D        |             | Х      | X       | В    | TO REV. D |
| 120152         | A/C MASTER PLACARD               | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A |
| 120214         | FREON SERVICING STICKER          | 1          | 09/01/14     | Α        |             | Х      | X       | В    | TO REV. A |
| 250022         | FWD. LOUVER HOUSING R.H. OUTER   | 1          | 09/01/14     | E        |             | X      |         | В    | TO REV. E |
| 250022-1       | FWD. LOUVER HOUSING R.H. INNER   | 1          | 01/19/22     | F        |             | Х      |         | В    | TO REV. F |
| 250022-2       | FWD. LOUVER HOUSING R.H. INNER   | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |
| 250036         | FWD. LOUVER HOUSING L.H. OUTER   | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |
| 250037         | FWD. LOUVER HOUSING L.H. INNER   | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |
| 250148         | SPACER, AIR DUCT CLOSURE CHANNEL | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |
| 250148-1       | SPACER AIR DUCT CLOSURE CHANNEL  | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |



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| 250149           | RETURN AIR DUCT                        | 1          | 09/01/14     | E        |             | Х      |          | В    | TO REV. E |
| 250157           | FWD. EVAPORATOR WYE INNER              | 1          | 09/01/14     | E        |             | Х      |          | В    | TO REV. E |
| 250158           | FWD. EVAPORATOR WYE OUTER              | 1          | 09/01/14     | D        |             | Х      |          | В    | TO REV. D |
| 250160           | AFT EVAPORATOR FAN ELBOW, INNER        | 1          | 09/01/14     | В        |             | Х      |          | В    | TO REV. B |
| 250161           | AFT EVAPORATOR FAN ELBOW, OUTER        | 1          | 09/01/14     | В        |             | Х      |          | В    | TO REV. B |
| 250164           | ELECTRIACL BOX COVER                   | 1          | 09/01/14     | G        |             | Х      | Х        | В    | TO REV. G |
| 250165           | AFT EVAP. HOUSING                      | 1          | 09/01/14     | С        |             | Х      |          | В    | TO REV. C |
| 250165-1         | AFT EVAP. HOUSING                      | 1          | 09/01/14     | С        |             | Х      | Х        | В    | TO REV. C |
| 250166           | RETURN AIR CONNECTOR                   | 1          | 08/04/23     | J        |             | Х      |          | В    | TO REV. J |
| 250168           | MOTOR SHROUD                           | 1          | 09/01/14     | F        |             | Х      |          | В    | TO REV. F |
| 250168-1         | MOTOR SHROUD                           | 1          | 09/01/14     | E        |             | Х      |          | В    | TO REV. E |
| 250174           | FWD, EVAP, ENCLOSURE                   | 1          | 01/19/22     | G        |             | Х      |          | В    | TO REV. G |
| 250175           | AFT EVAP HOUSING DRAIN                 | 1          | 01/19/22     | Н        |             | Х      | Х        | В    | TO REV. H |
| 250176-1         | FWD.EVAP. FWD. ENCLOSURE               | 1          | 08/04/23     | F        |             | X      |          | В    | TO REV. F |
| 250176-2         | FEW. EVAP. REMOVABLE COVER             | 1          | 09/01/14     | C        |             | X      |          | В    | TO REV. C |
| 250188           | CONDENSER COVER, FORWARD               | 1          | 09/01/14     | Č        |             | X      | 1        | В    | TO REV. C |
| 250188-1         | CONDENSER HOUSING CLOSEOUT             | 1          | 09/01/14     | Ä        |             | X      | <b>†</b> | В    | TO REV. A |
| 250239-1         | SCREEN RETAINER COND. EXHAUST          | 1          | 09/01/14     | В        |             | X      | 1        | В    | TO REV. B |
| 250239-2         | SCREEN RETAINER COND. EXHAUST          | 1          | 09/01/14     | C        |             | X      | <b>†</b> | В    | TO REV. C |
| 250254           | AIR TUBE                               | 1          | 09/01/14     | Č        |             | X      |          | В    | TO REV. C |
| 250254-1         | AIR TUBE                               | 1          | 09/01/14     | Č        |             | X      |          | В    | TO REV. C |
| 250269           | COND. HOUSING                          | 1          | 01/19/22     | F        |             | X      |          | В    | TO REV. F |
| 250272           | AFT EVAP. ELBOW / INNER                | 1          | 09/01/14     | E        |             | X      |          | В    | TO REV. E |
| 250272           | AFT EVAP. ELBOW / OUTER                | 1          | 09/01/14     | E        |             | X      |          | В    | TO REV. E |
| 250273           | CONDENSER AIR INTAKE                   | 1          | 01/19/22     | D        |             | X      |          | В    | TO REV. D |
| 250292           | VENT ADAPTER                           | 1          | 09/01/14     | E        |             | X      |          | В    | TO REV. E |
|                  | AFT BAGGAGE CLOSEOUT PANEL             | 1          | 09/01/14     | В        |             | X      |          | В    | TO REV. B |
| 250301<br>250311 | EVAP. MOTOR SHIM PLATE                 | 1 1        | 09/01/14     | В        |             | X      |          | В    | TO REV. B |
| 250311           | INNER COVER                            | 1          | 01/19/22     | C        |             | X      |          | В    | TO REV. C |
| 250314           | AIR OUTLET HOUSING, R.H.               | 1          | 09/01/14     | C        |             |        |          | В    | TO REV. C |
|                  |  | 1 1        |              |          |             | X      | V        | В    |           |
| 250319-1         | AIR TUBE                               |            | 09/01/14     | С        |             | X      | Х        |      | TO REV. C |
| 250324           | AIR EXIT COLLAR                        | 1          | 09/01/14     | В        |             | Х      |          | В    | TO REV. B |
| 250355           | AFT EVAP HOUSING                       | 1 1        | 09/01/14     | E        |             | V      | X        | В    | TO REV. E |
| 250370           | FILLER                                 | 1          | 09/01/14     | D        |             | Х      | X        | В    | TO REV. D |
| 250393           | FWD EVAPORATOR ENCLOSURE               | 1          | 09/01/14     | A        |             |        | X        | В    | TO REV. A |
| 250394           | REMOVABLE COVER                        | 1          | 08/04/23     | В        |             |        | Х        | В    | TO REV. B |
| 250402           | AFT TRANSITION ELBOW                   | 1          | 08/04/23     | G        |             | X      |          | В    | TO REV. G |
| 250408           | RIGHT HAND AIR TUBE                    | 1          | 09/01/14     | С        |             | X      | -        | В    | TO REV. C |
| 250409           | LEFT HAND AIR TUBE                     | 1          | 09/01/14     | В        |             | X      |          | В    | TO REV. B |
| 250431           | AIR TUBE                               | 1          | 09/01/14     | В        |             | Х      | L        | В    | TO REV. B |
| 250440           | AIR DISTRIBUTION MANIFOLD NOZZLE FWD   | 1          | 09/01/14     | В        |             |        | X        | В    | TO REV. B |
| 250441           | AIR DISTRIBUTION MANIFOLD LOWER        | 1          | 09/01/14     | A        |             |        | X        | В    | TO REV. A |
| 250442           | AIR DISTRIBUTION MANIFOLD UPPER        | 1          | 09/01/14     | A        |             |        | X        | В    | TO REV. A |
| 250443           | AIR DISTRIBUTION MANIFOLD NOZZLE, REAR | 1 1        | 09/01/14     | В        |             |        | X        | В    | TO REV. B |
| 250444           | CONDENSER EXHAUST TUBE                 | 1          | 09/01/14     | A        |             |        | X        | В    | TO REV. A |
| 250445           | AIR OUTLET LEFT SIDE                   | 1          | 09/01/14     | В        |             |        | X        | В    | TO REV. B |
| 250446           | AIR OULET RIGHT SIDE                   | 1          | 09/01/14     | В        |             |        | X        | В    | TO REV. B |
| 250447           | AIR OUTLET LEFT SIDE                   | 1          | 09/01/14     | Α        |             |        | X        | В    | TO REV. A |
| 250448           | AIR OUTLET MOUNT RIGHT SIDE            | 1          | 09/01/14     | Α        |             |        | X        | В    | TO REV. A |
| 250449           | FWD EVAPORATOR HOUSING ASSY            | 1          | 09/01/14     | В        |             |        | X        | В    | TO REV. B |
| 250450           | EVAP COVER ASSEMBLY ENCLOSURE          | 1          | 09/01/14     | A        |             |        | X        | В    | TO REV. A |
| 250458           | AIR DISTRIBUTION BAFFLE                | 1          | 09/01/14     | A        |             |        | X        | В    | TO REV. A |
| 260002           | COND. MTG. ANGLE                       | 1          | 09/01/14     | D        |             | X      |          | В    | TO REV. D |
| 260004           | COND. MTG. SUPPORT FWD                 | 1          | 09/01/14     | D        |             | X      |          | В    | TO REV. D |



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| 260005         | COND. MTG. SUPPORT SPACER           | 1          | 08/04/23     | F        |             | Х      |         | В    | TO REV. F |
| 260006         | COND. MTG. SUPPORT SPACER           | 1          | 01/19/22     | E        |             | X      |         | В    | TO REV. E |
| 260007         | COND. MOUNTING SUPPORT AFT          | 1          | 09/01/14     | F        |             | X      |         | В    | TO REV. F |
| 260008         | COND. MTG. SUPPORT SPACER           | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |
| 260009         | COND. MTG. SUPPORT SPACER           | 1          | 08/04/23     | G        |             | X      |         | В    | TO REV. G |
| 260020         | FAN CHANNEL BASE ANGLE              | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |
| 260123-2       | MOUNT RECEIVER / DRIER              | 2          | 08/04/23     | D        |             | X      | X       | В    | TO REV. D |
| 260148         | CONDENSER FAN MOUNT                 | 1          | 08/04/23     | E        |             | X      |         | В    | TO REV. E |
| 260148-3       | CONDENSER FAN MOUNT                 | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D |
| 260216         | AIR DUCT CLOSURE CHANNEL            | 1          | 09/01/14     | F        |             | X      |         | В    | TO REV. F |
| 260234         | AIR DUCT CLOSURE INSERT             | 1          | 09/01/14     | E        |             | X      |         | В    | TO REV. E |
| 260321         | CONDENSER FAN MOUNT RING            | 1          | 09/01/14     | E        |             | X      |         | В    | TO REV. E |
| 260322         | DOUBLER, RETURN AIR                 | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D |
| 260322-1       | DOUBLER, RETURN AIR                 | 1          | 08/04/23     | F        |             | X      |         | В    | TO REV. F |
| 260322-2       | ANGLE                               | 1          | 08/04/23     | F        |             | X      |         | В    | TO REV. F |
| 260325         | AFT. EVAP. CLOSEOUT, FWD.           | 1          | 08/04/23     | F        |             | X      | X       | В    | TO REV. F |
| 260325-1       | AFT. EVAP. CLOSEOUT, FWD.           | 1          | 08/04/23     | В        |             | X      | X       | В    | TO REV. B |
| 260326         | EVAP. CLOSEOUT, AFT.                | 1          | 08/04/23     | F        |             | X      | X       | В    | TO REV. F |
| 260327         | AFT EVAP. CLOSEOUT INBOARD          | 1          | 08/04/23     | F        |             | X      | X       | В    | TO REV. F |
| 260327-1       | AFT EVAP. CLOSEOUTOUTBOARD          | 1          | 08/04/23     | F        |             | X      | X       | В    | TO REV. F |
| 260328-1       | AFT EVAP. FAN DOUBLER               | 1          | 08/04/23     | F        |             | X      |         | В    | TO REV. F |
| 260333         | BATTERY COMP. SHELF                 | 1          | 09/01/14     | F        |             | X      |         | В    | TO REV. F |
| 260335         | BATTERY COMPARTMENT SHELF ANGLE FWD | 1          | 09/01/14     | E        |             | X      |         | В    | TO REV. E |
| 260339         | ANGLE BATTERY COVER                 | 1          | 08/04/23     | E        |             | X      |         | В    | TO REV. E |
| 260343         | ELECTRICAL BOX BODY                 | 1          | 08/04/23     | E        |             | X      |         | В    | TO REV. E |
| 260343-1       | ELECTRICAL BOX BODY                 | 1          | 08/04/23     | E        |             | X      | X       | В    | TO REV. E |
| 260344         | ELECTRICAL BOX SHIM                 | 1          | 08/04/23     | E        |             | X      | X       | В    | TO REV. E |
| 260344-1       | ELEC. BOX ANGLE                     | 1          | 08/04/23     | E        |             | X      | X       | В    | TO REV. E |
| 260350         | UPPER CLOSEOUT, AFT EVAPORATOR      | 1          | 08/04/23     | F        |             | X      | X       | В    | TO REV. F |
| 260351         | AFT SWITCH BACKING PLATE            | 1          | 08/04/23     | F        |             | X      |         | В    | TO REV. F |
| 260354         | ANGLE , RETURN AIR CONNECTOR        | 1          | 08/04/23     | F        |             | X      |         | В    | TO REV. F |
| 260369         | HOSE DOUBLER, BAG COMP.             | 1          | 09/01/14     | G        |             | X      |         | В    | TO REV. G |
| 260372         | FWD. EVAP. ANGLE                    | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D |
| 260373         | DOUBLER                             | 1          | 08/04/23     | E        |             | X      |         | В    | TO REV. E |
| 260373-1       | DOUBLER                             | 1          | 08/04/23     | G        |             | X      | X       | В    | TO REV. G |
| 260486-1       | FWD EVAP SUPPORT VERTICAL           | 1          | 09/01/14     | С        |             |        | X       | В    | TO REV. C |
| 260862         | FILLER                              | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D |
| 260863         | FWD. EVAP. MOUNT                    | 1          | 08/04/23     | E        |             | X      |         | В    | TO REV. E |
| 260863-1       | FWD. EVAP. MOUNT                    | 1          | 08/04/23     | С        |             | X      |         | В    | TO REV. C |
| 260915         | RING                                | 1          | 08/04/23     | D        |             |        | X       | В    | TO REV. D |
| 260947         | TURNING VANE                        | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D |
| 260951         | ANGLE                               | 1          | 01/19/22     | D        |             | X      |         | В    | TO REV. D |
| 260951-1       | ANGLE                               | 1          | 01/19/22     | D        |             | Х      |         | В    | TO REV. D |
| 260952         | CLIP                                | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D |
| 260953         | CLIP                                | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D |
| 261006         | ANGLE                               | 1          | 09/01/14     | C        |             | X      |         | В    | TO REV. C |
| 261006-1       | ANGLE R.H. LOWER WEMAC MOUNT        | 1          | 09/01/14     | В        |             | X      |         | В    | TO REV. B |
| 261006-2       | ANGLE                               | 1 1        | 09/01/14     | В        |             | X      |         | В    | TO REV. B |
| 261006-3       | ANGLE                               | 1          | 08/04/23     | В        |             | Х      |         | В    | TO REV. B |
| 261007         | BUSHING, SD-507                     | 1          | 01/19/22     | E        |             | X      | X       | В    | TO REV. E |
| 261008         | BUSHING, SD-507                     | 1          | 08/04/23     | F        |             | X      | Х       | В    | TO REV. F |
| 261012         | STRINGER, OUTBOARD                  | 1          | 08/04/23     | С        |             | X      |         | В    | TO REV. C |
| 261013         | L/H AIR INLET DOUBLER               | 1 1        | 08/04/23     | D        |             | X      | ļ       | В    | TO REV. D |
| 261013-2       | R/H AIR INLET DOUBLER               | 1          | 08/04/23     | С        |             | X      |         | В    | TO REV. C |



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| 261014         | STRAP                              | 1          | 08/04/23     | С        |             | Х      |         | В    | TO REV. C  |
| 261071         | CLOSEOUT PANEL                     | 1          | 08/04/23     | E        |             | X      | X       | В    | TO REV. E  |
| 261072         | CLOSEOUT PANEL DOUBLER             | 1          | 08/04/23     | Е        |             | Х      | X       | В    | TO REV. E  |
| 261074         | PLATE, BACK                        | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D  |
| 261075         | CLOSEOUT, TOP/BOTTOM               | 1          | 08/04/23     | С        |             | X      |         | В    | TO REV. C  |
| 261076         | FILLER                             | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D  |
| 261077         | ANGLE CLOSEOUT                     | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D  |
| 261078         | CLOSEOUT, SIDE                     | 1          | 08/04/23     | С        |             | X      |         | В    | TO REV. C  |
| 261079         | MOTOR MOUNT                        | 1          | 08/04/23     | E        |             | X      |         | В    | TO REV. E  |
| 261080         | CHANNEL, SUPPORT, FORWARD          | 1          | 08/04/23     | С        |             | X      |         | В    | TO REV. C  |
| 261081         | CHANNEL, SUPPORT, AFT              | 1          | 08/04/23     | С        |             | Х      |         | В    | TO REV. C  |
| 261082         | ANGLE                              | 1          | 08/04/23     | С        |             | Х      |         | В    | TO REV. C  |
| 261083         | BAFFLE                             | 1          | 08/04/23     | С        |             | Х      |         | В    | TO REV. C  |
| 261086-1       | SWITCH PLATE                       | 1          | 09/01/14     | В        |             | Х      | X       | В    | TO REV. B  |
| 261086-2       | SWITCH PLATE                       | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D  |
| 261087         | ANGLE                              | 1          | 08/0423      | С        |             | X      |         | В    | TO REV. C  |
| 261089-1       | WEMAC MOUNT                        | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D  |
| 261094         | FILLER STRIP UPPER                 | 1          | 08/04/23     | С        |             | Х      |         | В    | TO REV. C  |
| 261095         | FILLER STRIP LOWER                 | 1          | 08/04/23     | С        |             | Х      |         | В    | TO REV. C  |
| 261096         | ANGLE UPPER RH                     | 1          | 08/04/23     | D        |             | Х      |         | В    | TO REV. D  |
| 261097         | ANGLE UPPER LH                     | 1          | 08/04/23     | D        |             | Х      |         | В    | TO REV. D  |
| 261098         | ANGLE LOWER RH                     | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D  |
| 261099         | ANGLE LOWER LH                     | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D  |
| 261100         | RH AIR EXIT DOUBLER                | 1          | 08/04/23     | D        |             | Х      |         | В    | TO REV. D  |
| 261100-1       | RH AIR EXIT DOUBLER                | 2          | 08/04/23     | В        |             | X      |         | В    | TO REV. B  |
| 261101         | LH AIR EXIT DOUBLER                | 1          | 08/04/23     | D        |             | X      |         | В    | TO REV. D  |
| 261101-1       | LH AIR EXIT DOUBLER                | 2          | 08/04/23     | В        |             | X      |         | В    | TO REV. B  |
| 261107         | RELAY STRAP                        | 1          | 08/04/23     | D        |             | X      | X       | В    | TO REV. D  |
| 261107-2       | RELAY STRAP                        | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A  |
| 261176         | FAN BLADE HUB                      | 1          | 09/01/14     | С        |             | X      | X       | В    | TO REV. C  |
| 261299         | TRANSITION ELBOW STRAP             | 1          | 08/04/23     | E        |             | Х      |         | В    | TO REV. E  |
| 261333HP       | VENT HOUSING                       | 2          | 08/04/23     | В        |             | X      |         |      | TO REV. B  |
| 261335HP       | VENT MOUNT                         | 1          | 09/01/14     | NC       |             | Х      |         |      | TO REV. NC |
| 261336HP       | BACK PLATE                         | 1          | 09/01/14     | NC       |             | Х      |         |      | TO REV. NC |
| 261346HP       | MOUNTING PLATE                     | 1          | 09/01/14     | NC       |             | Х      |         |      | TO REV. NC |
| 261347HP       | RELAY BRACKET                      | 1          | 09/01/14     | NC       |             | X      |         |      | TO REV. NC |
| 261348HP       | DZUS RAIL, SWITCH ASSEMBLY         | 1          | 09/01/14     | NC       |             | X      |         |      | TO REV. NC |
| 261351         | CLIP (FRESH AIR DOOR)              | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 261352         | HINGE DOOR                         | 1          | 09/01/14     | С        |             |        | X       | В    | TO REV. C  |
| 261353         | SERVO MOUNT                        | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 261354         | DOOR                               | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 261355         | FWD EVAP SUPPORT LOWER             | 1          | 01/19/22     | В        |             |        | X       | В    | TO REV. B  |
| 261356         | FWD EVAP SUPPORT UPPER             | 1          | 01/19/22     | В        |             | 1      | Х       | В    | TO REV. B  |
| 261357         | FWD EVAP MOUNT SHIM                | 1          | 09/01/14     | В        |             | 1      | X       | В    | TO REV. B  |
| 261358         | NUT PLATE STRIP FORWARD EVAPORATOR | 1          | 09/01/14     | Α        |             | 1      | X       | В    | TO REV. A  |
| 261359         | DOOR HANDLE                        | 1          | 09/01/14     | В        |             | 1      | X       | В    | TO REV. B  |
| 261360         | FWD BRACE CONDENSER                | 1          | 09/01/14     | A        |             | 1      | X       | В    | TO REV. A  |
| 261361         | AFT BRACE CONDENSER                | 1          | 08/04/23     | С        |             | 1      | X       | В    | TO REV. C  |
| 261362         | MOUNT PLATE                        | 1          | 09/01/14     | A        |             | 1      | X       | В    | TO REV. A  |
| 261363         | FWD EVAP MOUNT PLATE               | 1          | 08/04/23     | В        |             | 1      | X       | В    | TO REV. B  |
| 261364         | CONDENSER MOUNT LEFT & RIGHT       | 1          | 09/01/14     | Α        |             | 1      | X       | В    | TO REV. A  |
| 261365         | SERVO MOUNT PLATE                  | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 261366         | CONDENSER BODY                     | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A  |
| 261367         | CONDENSER ANGLE LEFT               | 1          | 08/04/23     | С        |             |        | X       | В    | TO REV. C  |



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| 261367-1       | CONDENSER ANGLE RIGHT               | 1          | 08/04/23     | В        |             |        | Х       | В    | TO REV. B |
| 261368         | AFT MANIFOLD BRACKET                | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B |
| 261369         | AIR VALVE BODY                      | 1          | 08/04/23     | С        |             |        | X       | В    | TO REV. C |
| 261370         | R.H. FAN DOUBLER                    | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B |
| 261371         | R.H. FAN DOUBLER SHIM               | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B |
| 261374         | AFT MANIFOLD BRACKET BASE           | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A |
| 261375         | ELECTRICAL BOX SHELF                | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B |
| 261377         | AC MASTER PLATE                     | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A |
| 261511         | LH. STRAP                           | 1          | 08/04/23     | В        |             | Х      |         | В    | TO REV. B |
| 261512         | R.H. STRAP                          | 1          | 08/04/23     | В        |             | Х      |         | В    | TO REV. B |
| 261513         | FILLER                              | 1          | 08/04/23     | В        |             | Х      |         | В    | TO REV. B |
| 261585         | RESISTOR MOUNT                      | 1          | 09/01/14     | Α        |             | Х      | X       | В    | TO REV. A |
| 300066         | PULLEY MODIFIED                     | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C |
| 300066-1       | PULLEY MODIFIED                     | 1          | 09/01/14     | Α        |             | Х      |         | В    | TO REV. A |
| 300067         | COMPRESSOR STAND OFF                | 1          | 01/19/22     | G        |             | Х      |         | В    | TO REV. G |
| 300067-1       | COMPRESSOR STAND OFF                | 1          | 01/19/22     | В        |             | Х      | Х       | В    | TO REV. B |
| 300068-1       | COMPRESSOR MOUNT, ARM               | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C |
| 300068-2       | ARM, COMPRESSOR MOUNT               | 1          | 09/01/14     | В        |             | Х      | Х       | В    | TO REV. B |
| 300068-3       | ARM COMPRESSOR MOUNT                | 1          | 09/01/14     | D        |             | Х      | Х       | В    | TO REV. D |
| 300069-1       | ARM, COMP, MT.                      | 1          | 09/01/14     | С        |             | Х      | Х       | В    | TO REV. C |
| 300069-2       | ARM COMPRESSOR MOUNT                | 1          | 09/01/14     | D        |             | Х      | Х       | В    | TO REV. D |
| 300070-1       | GUSSET                              | 1          | 09/01/14     | D        |             | Х      | Х       | В    | TO REV. D |
| 300095         | COMPRESSOR PIN                      | 1          | 09/01/14     | D        |             | Х      | Х       | В    | TO REV. D |
| 300329         | SPACER TUBE                         | 1          | 09/01/14     | E        |             | Х      | Х       | В    | TO REV. E |
| 300355         | PULLEY MODIFIED                     | 1          | 09/01/14     | D        |             | Х      |         | В    | TO REV. D |
| 300355-2       | PULLEY MODIFIED                     | 1          | 08/04/23     | F        |             | Х      |         | В    | TO REV. F |
| 300363         | COMPRESSOR HOUSING SUPPORT          | 1          | 09/01/14     | D        |             | Х      |         | В    | TO REV. D |
| 300363-1       | COMP. HOUSING SUPPORT LOWER         | 1          | 09/01/14     | Α        |             | Х      | X       | В    | TO REV. A |
| 300363-2       | COMPRESSOR SHIM UPPER               | 1          | 09/01/14     | Α        |             | Х      | X       | В    | TO REV. A |
| 300364         | COMPRESSOR HOUSING BUSHING          | 1          | 01/19/22     | D        |             | Х      | X       | В    | TO REV. D |
| 300396         | 5 GROOVE PULLEY                     | 1          | 08/04/23     | D        |             |        | Х       | В    | TO REV. D |
| 490015         | BLOWER HOUSING ASSY                 | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C |
| 490015-1       | BLOWER HOUSING ASSY                 | 1          | 08/04/23     | F        |             | Х      |         | В    | TO REV. F |
| 490016-1       | FWD. BLOWER ASSEMBLY                | 1          | 08/04/23     | E        |             | Х      |         | В    | TO REV. E |
| 490017-1       | AFT EVAPORATOR FAN                  | 1          | 08/04/23     | G        |             | Х      |         | В    | TO REV. G |
| 500001         | LEFT SIDE AIR OUTLET ASSEMBLY       | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B |
| 500002         | RIGHT SIDE AIR OUTLET ASSEMBLY      | 1          | 09/01/14     | В        |             |        | Х       | В    | TO REV. B |
| 500008-1       | LOUVER ASSEMBLY, RH                 | 1          | 09/01/14     | E        |             | Х      |         | В    | TO REV. E |
| 500010-1       | LOUVER HOUSING ASSY. R.H.           | 1          | 09/01/14     | F        |             | Х      |         | В    | TO REV. F |
| 500011-1       | LOUVER HOUSING ASSY. L.H.           | 1          | 09/01/14     | F        |             | Х      |         | В    | TO REV. F |
| 500018         | AIR OUTLET ASSY, RH                 | 1          | 01/19/22     | Е        |             | Х      |         | В    | TO REV. E |
| 500018-1       | AIR OUTLET ASSY, RH                 | 1          | 01/19/22     | D        |             | Х      |         | В    | TO REV. D |
| 500018-2       | AIR OUTLET ASSY, L/H                | 1          | 09/01/14     | D        |             | Х      |         | В    | TO REV. D |
| 500033         | INNER COVER ASSEMBLY                | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B |
| 510007         | AFT. CHANNEL COND. SUPPORT ASSEMBLY | 1          | 08/04/23     | Е        |             | Х      |         | В    | TO REV. E |
| 510008         | FWD COND. CHANNEL ASSEMBLY          | 1          | 01/19/22     | Е        |             | Х      |         | В    | TO REV. E |
| 510091         | COND. FAN MOUNT RING ASSEMBLY       | 1          | 09/01/14     | E        |             | Х      |         | В    | TO REV. E |
| 510091-2       | COND. FAN MOUNT RING ASSY           | 1          | 09/01/14     | С        |             | Х      | X       | В    | TO REV. C |
| 510092         | AIR DUCT CLOSURE ASSEMBLY           | 1          | 09/01/14     | C        |             | Х      |         | В    | TO REV. C |
| 510099         | UPPER CLOSEOUT, AFT EVAPORATOR ASSY | 1          | 09/01/14     | D        |             | Х      | Х       | В    | TO REV. D |
| 510200         | BOX ASSY                            | 1          | 09/01/14     | D        |             | Х      |         | В    | TO REV. D |
| 510200-1       | BOX ASSY                            | 1          | 09/01/14     | C        |             | X      | Х       | В    | TO REV. C |
| 510233         | RING ASSEMBLY                       | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B |
| 510259         | AIR OUTLET ASSEMBLY                 | 1          | 09/01/14     | D        |             | Х      | İ       | В    | TO REV. D |



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| 510259-1       | AIR OUTLET ASSEMBLY, LOWER              | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C  |
| 510259-2       | AIR OUTLET ASSEMBLY                     | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C  |
| 510259-3       | AIR OUTLET ASSEMBLY                     | 1          | 09/01/14     | Α        |             | Х      |         | В    | TO REV. A  |
| 510261         | ANGLE RETURN AIR CONECTOR ASSY          | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 510265         | BATTERY COMP. SHELF ANGLE FWD ASSY.     | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 510266         | RETURN AIR DOUBLER ASSEMBLY             | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C  |
| 510283         | CLOSEOUT, BOTTOM ASSEMBLY               | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C  |
| 510284         | CLOSEOUT, SIDE ASSEMBLY                 | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 510372         | CLIP ASSEMBLY (FRESH AIR)               | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A  |
| 510373         | NUT PLATE STRIP ASSY FWD EVAP           | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A  |
| 510374         | SERVO MOUNT SHELF ASSY                  | 1          | 08/04/23     | С        |             |        | X       | В    | TO REV. C  |
| 510375         | SERVO MOUNT FRAME ASSENBLY              | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A  |
| 510376         | ASSEMBLY (FRESH AIR DOOR)               | 1          | 08/04/23     | С        |             |        | X       | В    | TO REV. C  |
| 510377         | FRESH AIR ASSY (METAL)                  | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 510378HP       | OVERLAY ASSEMBLY                        | 1          | 09/01/14     | NC       |             | X      |         |      | TO REV. NC |
| 510379         | FWD EVAP SUPPORT ASSY UPPER             | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A  |
| 510380         | FWD EVAP SUPPORT ASSY LOWER             | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A  |
| 510381         | MOUNT PLATE ASSEMBLY                    | 1          | 01/19/22     | В        |             |        | X       | В    | TO REV. B  |
| 510384         | ELECT BOX MOUNT ASSEMBLY                | 1          | 09/01/14     | Α        |             | Х      | X       | В    | TO REV. A  |
| 510463         | RESISTOR MOUNT ASSEMBLY                 | 1          | 09/01/14     | Α        |             | Х      | X       | В    | TO REV. A  |
| 520001         | CONDENSER EXHAUST ASSEMBLY              | 1          | 09/01/14     | Α        |             |        | X       | В    | TO REV. A  |
| 520002         | AIR DISTRIBUTION MANIFOLD ASSY          | 1          | 08/04/23     | D        |             |        | X       | В    | TO REV. D  |
| 520003-130     | AIR DIST. MANIFOLD ASSY COMP            | 1          | 09/01/14     | С        |             |        | X       | В    | TO REV. C  |
| 520004-130     | CONDENSER ASSY                          | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 520005         | MANIFOLD NOZZLE ASSEMBLY                | 1          | 08/04/23     | E        |             |        | X       | В    | TO REV. E  |
| 520032-1       | CONDENSER EXHAUST ELBOW                 | 1          | 09/01/14     | В        |             | X      |         | В    | TO REV. B  |
| 520033         | EVAPORATOR WYE ASSEMBLY                 | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 520033-1       | FWD EVAP WYE ASSY                       | 1          | 08/04/23     | D        |             | Х      |         | В    | TO REV. D  |
| 520034         | AFT EVAPORATOR FAN ELBOW ASSY.          | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B  |
| 520036-3       | AFT TRANSITION ELBOW ASSEMBLY           | 1          | 08/04/23     | E        |             | Х      |         | В    | TO REV. E  |
| 520052-1       | SCREEN ASSEMBLY COND. EXHAUST           | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 520052-2       | SCREEN ASSY- COND. EXHAUST              | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 520061         | AFT EVAPORATOR FAN ELBOW ASSY.          | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D  |
| 520071         | CONDENSER AIR INTAKE ASSY               | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B  |
| 520071-1       | CONDENSER AIR INTAKE ASSY               | 1          | 08/04/23     | D        |             | Х      |         | В    | TO REV. D  |
| 520073         | FWD. EVAP. REMOVABLE COVER ASSY.        | 1          | 08/04/23     | С        |             | Х      |         | В    | TO REV. C  |
| 520120         | AIR OUTLET ADAPTER ASSEMBLY             | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 520156HP       | AIR VENT ASSEMBLY L.H.                  | 1          | 08/04/23     | Α        |             | Х      |         |      | TO REV. A  |
| 520157HP       | AIR VENT ASSEMBLY R.H.                  | 1          | 09/01/14     | NC       |             | X      |         |      | TO REV. NC |
| 530027-1       | SD-505 COMPRESSOR MOUNT ASSY            | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D  |
| 530027-2       | SD-505 COMPRESSOR MOUNT ASSY            | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B  |
| 530027-3       | COMPRESSOR MOUNT ASSY                   | 1          | 09/01/14     | F        |             | Х      | Х       | В    | TO REV. F  |
| 530084         | VENTURI RING ASSY.                      | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B  |
| 530100         | STRAP, HOUSING MOD ASSY                 | 1          | 09/01/14     | D        |             | Х      |         | В    | TO REV. D  |
| 530100-1       | STRAP, HOUSING MOD ASSY                 | 1          | 09/01/14     | В        |             | Х      | Х       | В    | TO REV. B  |
| 540007         | FRESH AIR INTAKE ASSEMBLY               | 2          | 08/04/23     | E        |             |        | Х       | В    | TO REV. E  |
| 540008         | FRESH AIR SERVO WIRING DIAGRAM          | 1          | 09/01/14     | В        |             |        | Х       | В    | TO REV. B  |
| 540008-1       | FRESH AIR SERVO CIRCUIT BOARD ASSY/DIAG | 1          | 01/19/22     | С        |             |        | X       | В    | TO REV. C  |
| 540009         | ELECTRICAL BOX ASSY                     | 1          | 08/04/23     | Е        |             |        | Х       | В    | TO REV. E  |
| 540010         | HARNESS ASSEMBLY                        | 1          | 09/01/14     | A        |             |        | X       | В    | TO REV. A  |
| 540011         | SWITCH ASSEMBLY                         | 1          | 01/19/22     | С        |             |        | Х       | В    | TO REV. C  |
| 540012         | PANEL MOUNT SWITCH ASSEMBLY             | 1          | 09/01/14     | A        |             |        | Х       | В    | TO REV. A  |
| 540020         | RESISTOR ASSEMBLY                       | 1          | 09/01/14     | A        |             | Х      | X       | В    | TO REV. A  |
| 540028-C       | ELECTRICAL BOX ASSEMBLY                 | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C  |



| DRAWING NUMBER | DRAWING TITLE                      | # OF PAGES | DRAWING DATE | REVISION | DESCRIPTION | AS 350 | EC130B4 | SIZE | NEW/RVSD   |
|----------------|------------------------------------|------------|--------------|----------|-------------|--------|---------|------|------------|
| 540028-"C"-1   | ELECTRICAL BOX ASSEMBLY            | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B  |
| 540028-"C"-1-A | ELECTRICAL BOX ASSEMBLY            | 1          | 08/04/23     | F        |             | X      |         | В    | TO REV. F  |
| 540028-"C"-2   | ELECTRICAL BOX ASSEMBLY            | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 540028-"C"-2-A | ELECTRICAL BOX ASSEMBLY            | 2          | 08/04/23     | F        |             | X      |         | В    | TO REV. F  |
| 540044         | HARNESS ASSEMBLY                   | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 540044-2       | HARNESS ASSEMBLY                   | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 540044-3       | HARNESS ASSEMBLY                   | 1          | 08/04/23     | J        |             | X      |         | В    | TO REV. J  |
| 540044-4       | HARNESS ASSEMBLY                   | 1          | 08/04/23     | Н        |             | X      |         | В    | TO REV. H  |
| 540044-5       | HARNESS ASSEMBLY                   | 2          | 01/19/22     | F        |             | X      |         | В    | TO REV. F  |
| 540044-6       | HARNESS ASSEMBLY                   | 1          | 01/19/22     | E        |             | X      |         | В    | TO REV. E  |
| 540044-7       | HARNESS ASSEMBLY                   | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 540044-8       | INSTRUMENT PANEL SWITCH            | 1          | 01/19/22     | D        |             | X      |         | В    | TO REV. D  |
| 540044-9       | 5 AMP CIRCUIT BREAKER ASSY         | 1          | 09/01/14     | В        |             | X      |         | В    | TO REV. B  |
| 540045-1       | HARNESS ASSEMBLY                   | 1          | 01/19/22     | D        |             | Х      | Х       | В    | TO REV. D  |
| 540056         | ELECT. BOX VERTICAL MOUNTING ASSY  | 1          | 09/01/14     | Α        |             | X      | X       | В    | TO REV. A  |
| 540089         | AFT EVAPORATOR SWITCH ASSY         | 1          | 01/19/22     | E        |             | Х      |         | В    | TO REV. E  |
| 550002-"O"     | COND. COIL ASSY                    | 1          | 09/01/14     | E        |             | Х      |         | В    | TO REV. E  |
| 550002-"O"-1   | COND. COIL ASSY                    | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C  |
| 550003-"O"     | AFT CONDENSER ASSY                 | 3          | 01/19/22     | С        |             |        | Х       | В    | TO REV. C  |
| 550004-"O"     | CONDENSER COIL ASSY                | 1          | 09/01/14     | Α        |             |        | Х       | В    | TO REV. A  |
| 550007-1       | COND. ASSEMBLY                     | 1          | 08/04/23     | G        |             | X      |         | В    | TO REV. G  |
| 550022         | COND. ASSEMBLY                     | 1          | 08/04/23     | J        |             | Х      |         | В    | TO REV. J  |
| 560004         | FORWARD EVAPORATOR ASSEMBLY        | 2          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 560005         | FWD EVAPORATOR COIL ASSEMBLY       | 1          | 08/04/23     | С        |             |        | Х       | В    | TO REV. C  |
| 560006         | FWD EVAP COIL HOUSING ASSY         | 1          | 01/19/22     | С        |             |        | Х       | В    | TO REV. C  |
| 560010-"O"-5   | AFT EVAPORATOR ASSEMBLY            | 1          | 08/04/23     | F        |             | Х      |         | В    | TO REV. F  |
| 560012-"O"-3   | AFT EVAPORATOR COIL ASSEMBLY       | 1          | 01/19/22     | Е        |             | X      | X       | В    | TO REV. E  |
| 560016-"O"     | COIL ASSEMBLY FWD                  | 1          | 09/01/14     | В        |             | X      |         | В    | TO REV. B  |
| 560016-"O"-1   | AFT EVAPORATOR ASSEMBLY            | 1          | 08/04/23     | D        |             |        | X       | В    | TO REV. D  |
| 560025-"O"     | FWD. EVAP. ASSY.                   | 1          | 08/04/23     | G        |             | X      |         | В    | TO REV. G  |
| 560052-"O"     | COIL ASSY FORWARD                  | 1          | 01/19/22     | E        |             | X      |         | В    | TO REV. E  |
| 570020-"O"-A   | HOSE ASSEMBLY, COND. TO REC/ DRIER | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 570021-"O"-A   | HOSE ASSY. FWD. EVAP. TO AFT EVAP  | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 570022-"O"-A   | HOSE ASSY. EVAP. TO EVAP.          | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 570023-"O"-A   | HOSE ASSEMBLY, COMP. SUCTION       | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 570024-"O"-A   | HOSE ASSY, COMPRESSOR DISCHARGE    | 1          | 09/01/14     | E        |             | X      |         | В    | TO REV. E  |
| 570067-"O"-A   | HOSE ASSY, COND TO REC/DRIER       | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D  |
| 570070-"O"-A   | HOSE ASSY, COMPRESSOR TO COND      | 1          | 09/01/14     | D        |             | X      | X       | В    | TO REV. D  |
| 570071-"O"-A   | HOSE ASSY, FWD EVAP. TO AFT EVAP.  | 1          | 09/01/14     | В        |             | X      |         | В    | TO REV. B  |
| 570072-"O"-A   | HOSE ASSY, EVAP TO EVAP            | 1          | 01/19/22     | E        |             | X      |         | В    | TO REV. E  |
| 570087-"O"-A   | HOSE ASS, FWD EVAP. TO AFT EVAP    | 1          | 01/19/22     | F        |             | X      |         | В    | TO REV. F  |
| 570103         | HIGH PRESSURE HOSE, #6 ASSEMBLY    | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 570104         | CONDENSER TO REC DRYER #6 ASSY     | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 570105         | RETURN HOSE #10 ASSEMBLY           | 1          | 09/01/14     | В        |             |        | X       | В    | TO REV. B  |
| 580000         | 5" HUB & PROPELLER ASSY            | 1          | 09/01/14     | С        |             | X      |         | В    | TO REV. C  |
| 590001-1-"O"   | SD-505 COMPRESSOR ASSEMBLY         | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C  |
| 590008         | COMPRESSOR ASSEMBLY                | 1          | 08/04/23     | E        |             | X      | X       | В    | TO REV. E  |
| 590008-1       | COMPRESSOR ASSEMBLY                | 1          | 08/04/23     | D        |             | X      | X       | В    | TO REV. D  |
| 590010         | MOTOR 28 VDC MODIFIED              | 1          | 09/01/14     | D        |             | X      |         | В    | TO REV. D  |
| 600002         | FRESH AIR ASSMBLY                  | 1          | 01/19/22     | С        |             |        | X       | В    | TO REV. C  |
| 04-130-21-101  | COMPRESSOR MOUNT BRACKET           | 1          | 05/18/12     | Α        |             | Х      | X       | В    | TO REV. A  |
| 04-130-21-102  | COMPRESSOR MOUNT TENSION BOLT      | 1          | 01/19/22     | Α        |             | Х      | X       | В    | TO REV. A  |
| 04-130-21-104  | JAM NUT, DRILLED                   | 1          | 04/30/12     | NC       |             | X      | X       | В    | TO REV. NC |
| 04-130-21-105  | COMPRESSOR CLAMP                   | 1          | 04/30/12     | NC       |             | Х      | X       | В    | TO REV. NC |



| DRAWING NUMBER             | DRAWING TITLE                              | # OF PAGES | DRAWING DATE  | REVISION | DESCRIPTION | AS 350 | EC130B4 | SIZE   | NEW/RVSD   |
|----------------------------|--|------------|---------------|----------|-------------|--------|---------|--------|------------|
| 04-130-21-107              | HOSE DISCONNECT BRACKET                    | # OF FAGES | 04/30/12      | NC NC    | DESCRIPTION | X      | Х       | B      | TO REV. NC |
| IFSS 050084-7-2            | 7" DC BRUSHLESS BLOWER ASSEMBLY            | 1          | 01/19/22      | E        |             | X      | X       | В      | TO REV. NC |
| IFSS 050084-7-2            | 7" DC BRUSHLESS BLOWER ASSEMBLY            | 1          | 01/19/22      | E        |             | X      | X       | В      | TO REV. E  |
| IFSS 261323                | 3-PIN CONNECTOR W/COLLAR ASSY              | 1          | 01/19/22      | C        |             | X      | X       | В      | TO REV. C  |
| IFSS 540126-1              | CONTROLLER ASSEMBLY                        | 1          | 01/19/22      | C        |             | X      | X       | В      | TO REV. C  |
| IFSS 261319                | CURVED BASE MOUNT                          | 1          | 01/19/22      | В        |             | X      | X       | В      | TO REV. B  |
| IFSS 261314-1              | CURVED BASE MOUNT ASSY                     | 1          | 01/19/22      | В        |             | X      | X       | В      | TO REV. B  |
| IFSS 261314-1              | 7" BLOWER HOUSING, STEEL                   | 1          | 01/19/22      | С        |             |        | X       | В      | TO REV. B  |
| IFSS 040021<br>IFSS 050193 |  | 3          | 01/19/22      | В        |             | X      |         |        | TO REV. C  |
|                            | MOOG DC BRUSHLESS MOTOR                    | -          |               |          |             | X      | X       | В      | TO REV. B  |
| IFSS 040020                | 7" HOUSING, SINGLE FLANGE WITH BEAD, STEEL | 1 1        | 08/04/23      | D        |             | X      | X       | B<br>B |            |
| IFSS 040019                | 7" PROPELLER - MOOG                        |            | 01/19/22      | В        |             | X      | X       | _      | TO REV. B  |
| IFSS 050176-1              | 7" PROPELLER HUB                           | 1          | 01/19/22      | В        |             | X      | X       | В      | TO REV. B  |
| IFSS 540131                | CONTROLLER                                 | 1          | 01/19/22      | В        |             | X      | X       | В      | TO REV. B  |
| IFSS 510362                | MOUNTING PLATE ASSEMBLY                    | 1          | 01/19/22      | В        |             | X      | X       | В      | TO REV. B  |
| IFSS 261322                | FLAT CONTROLLER MOUNTING PLATE             | 1          | 09/01/14      | A        |             | X      | X       | В      | TO REV. A  |
| IFSS 110008                | CONTROLLER COVER                           | 1          | 09/01/14      | A        |             | X      | X       | В      | TO REV. A  |
| IFSS 300398                | PROP ADAPTER                               | 1          | 09/01/14      | A        |             | X      | X       | В      | TO REV. A  |
| IFSS 300396                | KEY  | 1          | 09/01/14      | A        |             | X      | X       | В      | TO REV. A  |
| IFSS 261318                | STANDOFF                                   | 1          | 09/01/14      | Α        |             | X      | X       | В      | TO REV. A  |
| IFSS 120128                | FAA/PMA PLACARD                            | 1          | 09/01/14      | Α        |             | X      | X       | В      | TO REV. A  |
| IFSS 120123                | MANUFACTURERS PLACARD                      | 1          | 09/01/14      | Α        |             | X      | X       | В      | TO REV. A  |
| IFSS 120124                | MANUFACTURERS PLACARD                      | 1          | 09/01/14      | Α        |             | X      | X       | В      | TO REV. A  |
| IFSS 050143-2 DCB          | 5" DC BRUSHLESS 2 SPEED BLOWER ASSEMBLY    | 1          | 08/04/23      | С        |             | X      | X       | В      | TO REV. C  |
| IFSS 050143-3 DCB          | 5" DC BRUSHLESS SINGLE SPEED BLOWER ASSE   | 1          | 08/04/23      | С        |             | X      | X       | В      | TO REV. C  |
| IFSS 250371                | PROPELLER                                  | 2          | 08/04/23      | Α        |             | X      | X       | В      | TO REV. A  |
| IFSS 580000                | 5" HUB & PROPELLER ASSY                    | 2          | 08/04/23      | Α        |             | Х      | X       | В      | TO REV. A  |
| IFSS 540125                | CONTROLLER/COVER ASSEMBLY                  | 1          | 08/04/23      | Α        |             | X      | X       | В      | TO REV. A  |
| IFSS 261176                | HUB, FAN BLADE                             | 2          | 08/04/23      | В        |             | X      | X       | В      | TO REV. B  |
| IFSS 050187                | CONTROLLER                                 | 1          | 08/04/23      | В        |             | Х      | X       | В      | TO REV. B  |
| IFSS 261306                | AFT MOTOR COVER                            | 1          | 08/04/23      | Α        |             | X      | X       | В      | TO REV. A  |
| IFSS 040016                | 5" AXIAL HOUSING                           | 1          | 08/04/23      | Α        |             | X      | X       | В      | TO REV. A  |
| IFSS 040017                | STANDOFF                                   | 1          | 08/04/23      | Α        |             | Х      | X       | В      | TO REV. A  |
|                            |  |            |               |          |             |        |         |        |            |
|                            |  | PURC       | CHASE PARTS D | RAWINGS  |             |        |         |        |            |
|                            |  |            |               |          |             |        |         |        |            |
| 010001-1                   | COMPRESSOR SD-505                          | 1          | 09/01/14      | С        |             | X      |         | В      | TO REV. C  |
| 010001-1-O                 | COMPRESSOR SD-505                          | 1          | 09/01/14      | С        |             | Х      |         | В      | TO REV. C  |
| 010001-2-O                 | COMPRESSOR SD-505                          | 1          | 09/01/14      | В        |             | X      |         | В      | TO REV. B  |
| 010001-3-O                 | COMPRESSOR SD-505                          | 1          | 09/01/14      | С        |             | X      |         | В      | TO REV. C  |
| 010004                     | COMPRESSOR SD-507 (SE-507)                 | 1          | 09/01/14      | В        |             | X      | X       | В      | TO REV. B  |
| 010004-1                   | COMPRESSOR ASSY SD-507                     | 1          | 09/01/14      | В        |             | Х      | X       | В      | TO REV. B  |
| 010004-3                   | COMPRESSOR                                 | 1          | 08/04/23      | С        |             | Х      |         | В      | TO REV. C  |
| 010011                     | BEARING                                    | 1          | 09/01/14      | В        |             | Х      | X       | В      | TO REV. B  |
| 010012                     | CLUTCH PLATE SD-505                        | 1          | 09/01/14      | В        |             | Х      | X       | В      | TO REV. B  |
| 010013                     | CLUTCH PLATE, SD-505                       | 1          | 09/01/14      | В        |             | Х      | X       | В      | TO REV. B  |
| 010014                     | CLUTCH PLATE, SD-507                       | 1          | 09/01/14      | В        |             | Х      | X       | В      | TO REV. B  |
| 010015                     | CLUTCH PLATE, SD-507                       | 1          | 09/01/14      | С        |             | Х      | Х       | В      | TO REV. C  |
| 030010                     | LOUVER                                     | 1          | 09/01/14      | В        |             | Х      |         | В      | TO REV. B  |
| 030010-1                   | LOUVER                                     | 1          | 09/01/14      | В        |             | Х      |         | В      | TO REV. B  |
| 030012-1                   | WEMAC-BLACK                                | 1          | 09/01/14      | В        |             | Х      | Х       | В      | TO REV. B  |
| 030012-3                   | WEMAC, BLACK WITH ADAPTER                  | 1          | 09/01/14      | A        |             | X      |         | В      | TO REV. A  |
| 030021                     | PLASTIC WEMAC, BLACK                       | 1          | 09/01/14      | В        |             | X      | Х       | В      | TO REV. B  |
| 040001                     | BLOWER HOUSING                             | 1          | 09/01/14      | C        |             | X      | , i     | В      | TO REV. C  |
| 040002                     | COVER PLATE                                | 1          | 09/01/14      | Č        |             | X      |         | В      | TO REV. C  |
| 0.000=                     | 1  |            | 00,0.,        | Ü        |             |        |         | _      |            |



| 040003   |                                 | # OF FAGES | DRAWING DATE | REVISION | DESCRIPTION | AS 350 | EC130B4 | SIZE | NEW/RVSD  |
|----------|---------------------------------|------------|--------------|----------|-------------|--------|---------|------|-----------|
| 040003   | VENTURI RING                    | 1          | 09/01/14     | D        |             | Х      |         | В    | TO REV. D |
| 040004-8 | FAN WHEEL CW                    | 1          | 08/04/23     | D        |             | Х      |         | В    | TO REV. D |
| 040004-9 | FAN WHEEL CW                    | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B |
| 050000   | SWITCH W/BUTTON                 | 1          | 09/01/14     | D        |             | Х      | X       | В    | TO REV. D |
| 050001   | SWITCH W/O BUTTON               | 1          | 09/01/14     | С        |             | Х      | Х       | В    | TO REV. C |
| 050002   | SWITCH                          | 1          | 09/01/14     | С        |             | Х      | X       | В    | TO REV. C |
| 050006   | SWITCH W/O BUTTON               | 1          | 09/01/14     | D        |             | Х      | Х       | В    | TO REV. D |
| 050006-2 | SWITCH W/BUTTON                 | 1          | 09/01/14     | D        |             | Х      | X       | В    | TO REV. D |
| 050007   | SWITCH BUTTON                   | 1          | 09/01/14     | С        |             | Х      | X       | В    | TO REV. C |
| 050008   | RELAY 24VDC SPST                | 1          | 09/01/14     | С        |             | Х      | X       | В    | TO REV. C |
| 050019-7 | RELAY 24VDC SPST                | 1          | 09/01/14     | В        |             | Х      | Х       | В    | TO REV. B |
| 050024-2 | RESISTOR 100W 2 OHM             | 1          | 09/01/14     | F        |             | Х      | Х       | В    | TO REV. F |
| 050026   | TIMER                           | 1          | 09/01/14     | С        |             | Х      | X       | В    | TO REV. C |
| 050031   | BRUSH                           | 1          | 09/01/14     | В        |             | Х      | Х       | В    | TO REV. B |
| 050032   | BRUSH CAP                       | 1          | 09/01/14     | В        |             | Х      | Х       | В    | TO REV. B |
| 050033   | COIL, 24 VDC                    | 1          | 01/19/22     | C        |             | X      | X       | В    | TO REV. C |
| 050034   | COIL, 24 VDC                    | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 050035   | BRUSH                           | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 050038   | BRUSH                           | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 050043   | BRUSH                           | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 050044   | CIRCUIT BOARD FRESH AIR         | 3          | 09/01/14     | В        |             |        | X       | В    | TO REV. B |
| 050052   | MOTOR 24VDC DBL. SHAFT          | 1          | 01/19/22     | Е        |             | Х      |         | В    | TO REV. E |
| 050068   | 12V REGULATOR                   | 1          | 09/01/14     | С        |             | Х      | Х       | В    | TO REV. C |
| 050084   | FAN, VANE AXIAL, 24 VDC, 7"     | 3          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 050107   | SWITCH, LOW PRESSURE            | 1          | 09/01/14     | E        |             | X      | X       | В    | TO REV. E |
| 050108   | PLUG. 4 PIN                     | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 050109   | 4 PIN RECPTACLE                 | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 050110   | CABLE CLAMP KIT SHELL SIZE = 11 | 1          | 09/01/14     | D        |             | X      | X       | В    | TO REV. D |
| 050111   | PLUG. 9 PIN                     | 1          | 09/01/14     | С        |             | Х      |         | В    | TO REV. C |
| 050112   | RECEPTACLE, 9 PIN               | 1          | 09/01/14     | C        |             | X      |         | В    | TO REV. C |
| 050113   | CABLE CLAMP KIT SHELL SIZE = 13 | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B |
| 050114   | RECEPTACLE IN LINE              | 1          | 09/01/14     | C        |             | X      |         | В    | TO REV. C |
| 050115   | PLUG, CANNON                    | 1          | 09/01/14     | C        |             | X      | Х       | В    | TO REV. C |
| 050116   | RECEPTACLE SINGLE PIN           | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 050117   | CABLE CLAMP                     | 1          | 09/01/14     | С        |             | Х      | Х       | В    | TO REV. C |
| 050118   | PLUG                            | 1          | 09/01/14     | C        |             | X      | X       | В    | TO REV. C |
| 050119   | RECEPTACLE                      | 1          | 09/01/14     | C        |             | X      | X       | В    | TO REV. C |
| 050131   | RESET RELAY                     | 1 1        | 09/01/14     | Č        |             | X      | X       | В    | TO REV. C |
| 050132   | SERVO                           | 1          | 09/01/14     | D        |             | X      | X       | В    | TO REV. D |
| 050134   | CLEVIS ROD ASSY                 | 1 1        | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 050137   | RESET RELAY                     | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 050144   | BRUSH                           | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 060004   | 5" DUCT                         | 1          | 02/04/08     | A        |             | X      | X       | В    | TO REV. A |
| 060005   | 4 GROOVE BELT                   | 1 1        | 08/04/23     | D        |             | X      | X       | В    | TO REV. D |
| 060006   | 5 GROOVE BELT                   | 1 1        | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 060018   | FLAT BELT                       | 1 1        | 08/04/23     | Ē        |             | X      | 1       | В    | TO REV. E |
| 060018-1 | FLAT BELT                       | 1          | 08/04/23     | Č        |             | X      |         | В    | TO REV. C |
| 060025   | 2 1/2" DUCT                     | 1          | 09/01/14     | В        |             | X      | Х       | В    | TO REV. B |
| 060036   | 3" BAND CLAMP                   | 1          | 01/19/22     | C        |             | X      | X       | В    | TO REV. C |
| 060037   | 1" BAND CLAMP                   | 1 1        | 08/04/23     | Č        |             | X      | X       | В    | TO REV. C |
| 070005   | DRAIN TUBING                    | 1 1        | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 070076   | ALUMINUM FOIL TAPE              | 1 1        | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 070077   | .25 HEATSHRINK                  | 1 1        | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |
| 070077-1 | .125 HEATSHRINK                 | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B |



| DRAWING NUMBER | DRAWING TITLE                           | # OF PAGES | DRAWING DATE | REVISION | DESCRIPTION | AS 350 | EC130B4 | SIZE | NEW/RVSD     |
|----------------|---|------------|--------------|----------|-------------|--------|---------|------|--------------|
| 070077-2       | .375 HEATSHRINK                         | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B    |
| 070077-3       | .50 HEATSHRINK                          | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B    |
| 070078         | FOAM INSULATION TAPE                    | 1          | 08/04/23     | С        |             | X      | X       | В    | TO REV. C    |
| 070078-O       | PT-1 CORK INSULATION TAPE               | 1          | 09/01/14     | Α        |             | Х      | X       | В    | TO REV. A    |
| 070087         | LINKAGE                                 | 1          | 09/01/14     | В        |             | Х      | Х       | В    | TO REV. B    |
| 080005         | SCREEN EM-3                             | 1          | 08/04/23     | D        |             | Х      | Х       | В    | TO REV. D    |
| 080006         | 1/2 X 1/2 ,.047 SCREEN                  | 1          | 09/01/14     | В        |             | Х      | Х       | В    | TO REV. B    |
| 080048         | SCREEN                                  | 1          | 09/01/14     | С        |             | Х      | Х       | В    | TO REV. C    |
| 090002         | EXPANSION VALVE                         | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B    |
| 090002-"O"     | EXPANSION VALVE                         | 1          | 09/01/14     | С        |             | Х      | Х       | В    | TO REV. C    |
| 090002-2       | EXPANSION VALVE                         | 1          | 09/01/14     | В        |             | X      |         | В    | TO REV. B    |
| 090004         | HIGH PRESSURE SWITCH                    | 1          | 08/04/23     | E        |             | X      | Х       | В    | TO REV. E    |
| 090004-1       | HIGH PRESSURE SWITCH                    | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B    |
| 090016-2       | RECIEVER/DRIER                          | 1          | 09/01/14     | C        |             | X      |         | В    | TO REV. C    |
| 090016-5       | RECIEVER / DRIER                        | 1          | 08/04/23     | Ē        |             | X      | Х       | В    | TO REV. E    |
| 090018         | DRAIN TUBE 3/8" I.D.                    | 1          | 09/01/14     | C        |             | X      | X       | В    | TO REV. C    |
| 090018-1       | DRAIN TUBE 1/2" I.D.                    | 1          | 09/01/14     | C        |             | X      | X       | В    | TO REV. C    |
| 090089         | #6 NYLON BARRIER HOSE                   | 1          | 08/04/23     | C        |             | X      | X       | В    | TO REV. C    |
| 090090         | #8 NYLON BARRIER HOSE                   | 1          | 08/04/23     | C        |             | X      | X       | В    | TO REV. C    |
| 090090         | #10 NYLON BARRIER HOSE                  | 1          | 01/19/22     | C        |             | X      | X       | В    | TO REV. C    |
| 090091         | 6# R134A O-RING                         | 1          | 01/19/22     | D        |             | X      | X       | В    | TO REV. D    |
| 090092         | 8# R134A O-RING                         | 1          | 01/19/22     | D        |             |        |         | В    | TO REV. D    |
|                |   |            |              |          |             | X      | X       |      |              |
| 090094         | 10# R134A O-RING                        | 1          | 01/19/22     | D        |             | X      | Х       | В    | TO REV. D    |
| 09-STD-21-101  | #10 FITTING STRAIGHT MALE               | 1          | 08/04/23     | В        |             | X      |         | В    | TO REV. B    |
| 100100         | DRAIN NIPPLE 3/8"                       | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B    |
| 100100-1       | DRAIN NIPPLE 1/2"                       | 1          | 09/01/14     | С        |             | X      | X       | В    | TO REV. C    |
| 100126-"O"     | 5/8" X #10 X 90 FEMALE O-RING           | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B    |
| 100127-"O"     | 5/8" X #10 X 45 FEMALE O-RING           | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B    |
| 100128-"O"     | 5/8" X #10 X STRIGHT FEMALE O-RING      | 1          | 08/04/23     | С        |             | X      | X       | В    | TO REV. C    |
| 100129-"O"     | 1/2" X #8 X 90 FEMALE O-RING            | 1          | 08/04/23     | D        |             | Х      | X       | В    | TO REV. D    |
| 100130-"O"     | 1/2 "X #8 X 45 FEMALE O-RING            | 1          | 08/04/23     | С        |             | X      | X       | В    | TO REV. C    |
| 100131-"O"     | 1/2" X #8 X STRAIGHT FEMALE O-RING      | 1          | 01/19/22     | С        |             | X      | X       | В    | TO REV. C    |
| 100132-"O"     | 3/8" X #6 X 90 FEMALE O-RING            | 1          | 01/19/22     | С        |             | X      | X       | В    | TO REV. C    |
| 100133-"O"     | 3/8" X #6 X 45 FEMALE O-RING            | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B    |
| 100134-"O"     | 3/8" X #6 STRAIGHT FEMALE O-RING        | 1          | 08/04/23     | С        |             | X      | X       | В    | TO REV. C    |
| 100135         | #6 X #6 SPLICE W/R134A SERVICE PORT     | 1          | 08/04/23     | С        |             | X      | X       | В    | TO REV. C    |
| 100136         | #10 X #10 X INLINE W/R134A SERVICE PORT | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B    |
| 100137-"O"     | 3/8" #6 TEE FITTING                     | 1          | 09/01/14     | D        |             | X      | X       | В    | TO REV. D    |
| 100140         | 5/8" X #10 X 90 FEMALE FLARE            | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B    |
| 100141         | #10 X #10 X #10 TEE SPLICER             | 1          | 09/01/14     | В        |             | Х      | Х       | В    | TO REV. B    |
| 100143         | #6 X #6 X #6 T SPLICER                  | 1          | 09/01/14     | В        |             | X      | Х       | В    | TO REV. B    |
| 100144         | 3/8" X #6 SPLICE W.SIGHT GLASS          | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B    |
| 100147-"O"     | 1/2 X #6 X STRIAGHT FEMALE O-RING       | 1          | 09/01/14     | В        |             | Х      |         | В    | TO REV. B    |
| 100148         | 10 X 10 INLINE W/SCHRADER               | 1          | 09/01/14     | В        |             | Х      | Х       | В    | TO REV. B    |
| 100149         | #6 X #6 SPLICE SCHRADER                 | 1          | 08/04/23     | С        |             | Х      | Х       | В    | TO REV. C    |
| 100162         | #10 TEE FITTING                         | 1          | 01/19/22     | D        |             | Х      |         | В    | TO REV. D    |
| 120117         | REFRIGERANT LABEL                       | 1 1        | 09/01/14     | C        |             | X      | Х       | В    | TO REV. C    |
| 120203         | MOTOR AIR FLOW STICKER                  | 1          | 09/01/14     | A        |             | X      | X       | В    | TO REV. A    |
| 120204         | RSG PRODUCTS INC. ID TAG                | 1          | 08/04/23     | C        |             | X      | X       | В    | TO REV. C    |
| 250371         | PROPELLER                               | 1          | 09/01/14     | В        |             | X      | X       | В    | TO REV. B    |
|                | I NOI LLLLIN                            |            | 03/01/17     | 0        |             |        |         | ט    | I O ILL V. D |

## RSG Products Inc. CONTINUED AIRWORTHINESS – AS350 Air Conditioning

## Step 12

## **Continued Airworthiness**

Date: 04/22/24

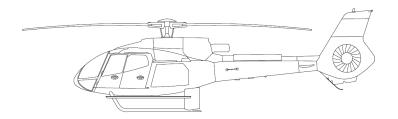
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### Air Conditioning System Installation

Instructions for Continued Airworthiness for
Airbus Helicopters AS-350 B, C, D, D1, B1, B2, B3, BA & EC-130 B4





FAA Project Number: SA3109RC-R STC Number: SH3509SW



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#### **LOG OF REVISIONS**

Instructions for Continued Airworthiness for the Airbus Helicopters AS-350 B, C, D, D1, B, B1, B2, B3, BA and EC-130 B4 Air Conditioning System Installation have been reviewed and found to be acceptable to the Administrator. For the purpose of these Instructions for Continued Airworthiness (ICA), acceptable to the Administrator means the ICA contains the applicable requirements specified in Appendix A to Federal Aviation Regulations Part 27, as appropriate, do not contain any incorrect terminology or incorrect references, and contain a Cover Page, Log of Accepted Revisions, Revision Control Procedure and Record of Temporary Revisions, a list of Effective Pages, and a Table of Contents. Changes to this document will be distributed to owners of the kits within 10 days after the revision is approved. Changes to this document will be indicated by a revision letter in the header, in the Record of Revisions, and on the List of Effective Pages. Contact RSG Products by mail at 440 West Lane Suite 100, Saginaw, TX, 76131. Or by phone at 817-624-6600.

| REV | Date     | Description   | Written By  | Checked<br>By | FAA<br>Approval | Approval<br>Date |
|-----|----------|---|-------------|---------------|-----------------|------------------|
| -   | 05/03/10 | Original Issue  | E. Sherrill | P. Ban        | • •             |                  |
| Α   | 06/11/10 | Incorporated FAA redlines   | E. Sherrill | K. Sheridan   |                 |                  |
| В   | 08/08/10 | Revised to add Brushless Motor part information, page 87  | E. Sherrill | P. Ban        |                 |                  |
| С   | 08/12/10 | Incorporated FAA redlines   | E. Sherrill | P. Ban        |                 |                  |
| C-1 | 12/11/13 | Revised Chapter 5, 100 hour inspection to change belt on condition. Changed Name.   | A. Weidler  | S. Weidler    |                 |                  |
| C-2 | 09/17/14 | Revised Chapter 12 and 21. Removed paragraphs 7 - 9 of Section 12-10-02.d. Removed sight glass troubleshooting information Section 21-00-06 under symptoms. | A. Cuellar  | S. Weidler    |                 |                  |
| C-3 | 09/30/14 | Revised chapter 5 to increase inspection interval to 150 Hours +/- 15   | S. Weidler  | S. Weidler    |                 |                  |
| D   | 11/19/14 | Changed Template. Changed Mfr. Name. Was: Eurocopter, Is: Airbus Helicopters. Updated parts list with newer configurations. Parts list is now               | S. Johnson  | S. Thornton   |                 |                  |



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|     |          | under Chapter 31. Updated electrical and plumbing diagrams and install drawings. Updated annual/150-hour inspection program in sections 05-00-00 and 05-10-00.                                |            |                 |  |
|-----|----------|---|------------|-----------------|--|
| E   | 01/12/17 | Remove 50 hour inspection table and added Component Overhaul/Replacement schedule for blower motors. Remove, add and update images for Sections 11-00-00, 21-00-00, & 21-10-00                | A. Cuellar | S. Weidler      |  |
| F   | 01/19/22 | Update to include changes made<br>for MDL Rev U. Change amount<br>of refrigerant to paragraph 1 and<br>5 on page 18 of 99. Added<br>acceptance criteria to table 5-01<br>item 8               | S. Brewer  | K.<br>Musgraves |  |
| F-1 | 08/04/23 | Change time delay of "4 to 8 seconds" to "15 seconds" on page 28 of 99. Updated Weight and Balance information on pages 97, 98 and 99 of 99. Update also includes changes made for MDL Rev V. | S. Brewer  | K.<br>Musgraves |  |

Typed signatures indicate approval. Handwritten signature approvals of this document are on file at RSG Products Inc.



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| Rev.<br>No. | Issue Date | Date<br>Inserted | Ву | Rev.<br>No. | Issue Date | Date<br>Inserted | Ву |
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|-------------------|------------|-------------------|
|                   | Revision B | February 27, 2013 |
|                   | Revision C | May 14, 2013      |
|                   | Revision D | November 19, 2014 |
|                   | Revision E | January 12, 2017  |
|                   | Revision F | January 19, 2022  |

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| Chapter 11 Markings and Placards                           | 13           | E             |
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| Chapter 31 Illustrated Parts List                          | 60 - 83      | D             |
| Chapter 98 Wiring Diagrams and Plumbing Schematics         | 84 - 96      | D             |
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#### **Chapter 1**

#### Section 01-00-00 Introduction

These are accepted Instructions for Continued Airworthiness for modifications performed in accordance with the Airbus Helicopters AS-350 B, C, D, D1, B, B1, B3, BA and EC-130 B4 Belt-Driven Vapor Cycle Air Conditioning System Installation. All references to the Air Conditioning System in this document will refer to the Belt-Driven Air Conditioning System Installation and other related components specified in STC – SH3509SW. Whether modified by Rotorcraft Services Group or by another Agency with expressed permission from RSG these Instructions for Continued Airworthiness (ICA) should be supplied to the owner/operator of the STC at the time of completion. Subsequent accepted changes to the ICA will be submitted by Rotorcraft Services Group for distribution to owners and operators of the STC.

This, Instructions for Continued Airworthiness, is intended to supplement the AS-350 B, C, D, D1, B, B1, B2, B3, BA, and EC-130 B4 rotorcraft maintenance manuals provided by Airbus Helicopters. The information, procedures, requirements, and limitations contained in this, Instructions for Continued Airworthiness, for this type design change supersede the information, procedures, requirements, and limitations contained in the rotorcraft's maintenance manual when the type design change is installed on the Type Certificate Holder's rotorcraft.



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#### **Chapter 4**

#### **Section 04-00-00 Airworthiness Limitations**

"The Airworthiness Limitations section is FAA approved and specifies inspections and other maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulation unless an alternative program has been FAA approved."

There are no additional airworthiness limitations associated with the Air Conditioning System Installation.

There are no life limited components associated with the Air Conditioning System Installation.



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#### **Chapter 5**

#### Section 05-00-00 Continued Airworthiness Inspection and Overhaul

#### 1. General

This chapter contains time limit intervals for the Component Overhaul Schedule and Scheduled Inspection for the Air Conditioning System. This chapter is to be added to the approved scheduled inspection for the rotorcraft.

#### 2. Component Overhaul Schedule & Scheduled Maintenance Practices

This chapter describes the inspection that must be accomplished on the Air Conditioning System Installation at Scheduled Inspection intervals. Scheduled Inspection requirements must be complied with at the hourly and/or calendar time intervals specified. Refer to Tables 5-01 and 5-02, in Section 05-10-00 for hourly and/or calendar inspection schedules.

#### 3. Conditional Inspection

After any operational incident involving hard landings, sudden stoppage of the drive train or water immersions the system must not be operated and an Annual or 150 flight hour inspection is required.

#### 4. Documentation

Aircraft mechanics, owners, or operators are required to keep records of the aircraft systems inspections and repairs. This includes, but is not limited to, airworthiness directives, service notices, scheduled inspections, records and life limited components.

#### 5. Definitions

The following is short descriptions of words and terms used in the procedures for the required scheduled inspections.

- Ambient air temperature: The temperature of the air surrounding a person.
- Charging station: An air conditioning system service.
- Cold: The absence of heat.
- Condensation: The process of changing a vapor into a liquid.
- Condition: The state of an item or component compared to a known standard.



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- Damage: Physical deterioration of a component.
- **Desiccant:** A material used in the receiver/dryer bottle, to absorb moisture from the refrigerant.
- Evaporate: To change from a liquid into a vapor.
- **Examine:** Look carefully to find the condition of the component. Find how that condition is related to a specific standard.
- **Heat load:** The amount of heat which the air conditioner is required to remove from the aircraft cabin.
- **Inches of Mercury:** A measurement of pressure normally used for pressures below atmospheric, one i-h of mercury is equal to approximately one-half pound per square i-h.
- **Inspection:** A procedure that includes checking, inspecting and examining a system or component.
- Maintenance: The servicing and/or repair of a rotorcraft, a system or a component that keeps it serviceable.
- **Pressure, ambient:** The pressure of the air surrounding a body, normally measured in Pounds per Square i-h, or PSIG.
- Refrigerant: A fluid which is used in an air conditioning system to absorb heat from the cabin and carry it outside the helicopter where it can be transferred to the outside air.
- **Relative Humidity:** The ratio of the amount of water vapor in the air to the amount of water vapor required to saturate the air at the existing temperature.
- Scheduled Inspection: An inspection procedure that must occur at a specified calendar interval or at specific operational time intervals. Scheduled Inspections are required to help ensure the rotorcraft stays airworthy.
- **Security:** Term used for inspection of hardware and components to make sure they are properly attached and tightened.
- **Temperature Differential:** Difference in temperature.
- Thermostat: An air condition control which senses the temperature of the evaporator coil and causes the system to cycle or by-pass to maintain the proper temperature of cooling air.
- **Vacuum:** A negative pressure, or pressure below atmospheric; it is usually expressed in inches of mercury.
- Vapor: The gaseous state of a material.



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#### 6. Abbreviations:

• ICA: Instructions for Continued Airworthiness

• **TD:** Temperature differential

• In: Inches

• InHg: Inches of Mercury

Ibs: Poundsoz: Ounces

• Psig: Pounds per Square I-h (gauge)

gr: Grams kg: Kilograms

• kgcm: Kilograms Per Centimeter

ml: Milliliters
 mm: Millimeters
 N-m: Newton-meters



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#### Section 05-10-00 Continued Airworthiness Scheduled Inspection

#### 1. General

This section contains requirements for scheduled inspection.

#### 2. Scheduled Inspection Program

The Air Conditioning System Installation requires one scheduled inspection in order to maintain continued airworthiness. Every effort should be made to perform the inspection with the aircraft placed in a clean well-lit environment.

- a) Annual or 150-Hour Inspection
- The inspection is required to be performed annually or every 150 hours of rotorcraft time-in-service, whichever comes first, +15 hours not to exceed 165 hours. If inspection is overflown beyond 165 hours then overflown time must be deducted from the next inspection due. Inspection Table 5-01 specifies the requirements of the annual inspection.
- b) Component Overhaul/Replacement Schedule The blower manufacturer recommends TBO at 1000 hours. A blower failure will result in a reduction in cooling, but no safety-of-flight issues are involved. Component Overhaul/Replacement Schedule Table 5-02 specifies the requirements of overhaul/replacement hours.

#### 3. Tools and Special Tools for Scheduled Inspection

Although not necessarily considered special tools, the adjustable ball swivel mirror and bright flashlight and / or drop light are standard requirements for doing inspections. These items should be used freely and frequently to enhance inspection quality and help ensure discrepancies are not missed. It is important to have adequate lighting for all phases of the inspection.

The special tools necessary for the Air Conditioning System Installation inspection are listed as follows:

- a) Vacuum Pump
- b) Gauge Manifold
- c) Vacuum Cleaner
- d) Pull Scale



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Table 5-01 Annual or 150 - Hour Inspection

|          | rable 9-01 Annaar of 100 float inspection   |            |  |  |  |  |
|----------|---|------------|--|--|--|--|
| Re       | gistration No. Serial No. Helicopter Total Hours                                  |            |  |  |  |  |
|          | The inspection shall be accomplished annually or every 150 hours of               |            |  |  |  |  |
|          | rotorcraft time-in-service, whichever comes first, +15 hours not to exceed        |            |  |  |  |  |
|          | 165 hours.  |            |  |  |  |  |
|          | • If inspection is overflown beyond 165 hours then overflown time must be         |            |  |  |  |  |
|          | deducted from the next inspection due.  |            |  |  |  |  |
|          | Initial each item after accomplishing the inspection.                             |            |  |  |  |  |
|          | Record all findings and attach a copy of findings to this inspection form.        |            |  |  |  |  |
|          | After correction of all findings, make maintenance record entry.                  |            |  |  |  |  |
|          | , man democratic et all infamige, mane maniterialise recerta emily.               |            |  |  |  |  |
| PF       | E-INSPECTION  | Initial    |  |  |  |  |
|          | Review Airworthiness Directives.  | 1111111111 |  |  |  |  |
|          | Review records for the Air Conditioning System.                                   |            |  |  |  |  |
|          | Review log books for discrepancies.   |            |  |  |  |  |
| <u> </u> | Teview log books for discrepancies.   |            |  |  |  |  |
| IN       | SPECTION  | Initial    |  |  |  |  |
| 1.       | Perform an operational test of the system in accordance with Section 12-50-00     | miliai     |  |  |  |  |
| 2.       | Inspect the condition of the belt for cracks, deterioration, separation and worn  |            |  |  |  |  |
| ۷.       | or flat spots. Change belt if necessary. Check belt for proper tension (Ref. 12-  |            |  |  |  |  |
|          | 60-00 Belt Tension).  |            |  |  |  |  |
| 3.       | Inspect the compressor for a true turning and free clutch. One mechanic should    |            |  |  |  |  |
| 0.       | turn the main rotor blade while another observes the belt and clutch faceplate.   |            |  |  |  |  |
|          | Turn system to "A/C" and check magnetic operation of clutch faceplate. Inspect    |            |  |  |  |  |
|          | compressor ground wire for condition and conductivity. If clutch plate and        |            |  |  |  |  |
|          | pulley show signs of excessive heat, replace clutch pulley assembly, bearing      |            |  |  |  |  |
|          | and coil (Ref. Section 12-20-00 Clutch Servicing Procedures)                      |            |  |  |  |  |
| 4.       | Inspect the compressor clutch bearing. It is <b>not mandatory</b> to grease the   |            |  |  |  |  |
| ⊣.       | bearing. If the bearing is greased use a hypodermic needle, without removing      |            |  |  |  |  |
|          | the bearing using 3 to 5cc of Mobil 28 grease. This has proven to be              |            |  |  |  |  |
|          | satisfactory when performed at regularly scheduled inspections of 500 hours.      |            |  |  |  |  |
|          | · · · · · · · · · · · · · · · · · · ·   |            |  |  |  |  |
|          | Some operators flying as much as 200 hours per month have found that re-          |            |  |  |  |  |
|          | greasing can occur at more than 500-hour intervals, provided they <b>DO NOT</b>   |            |  |  |  |  |
|          | OVER PACK THE BEARING.  |            |  |  |  |  |
|          | 100% capacity packing of the bearing can cause a failure to occur in 1 to         |            |  |  |  |  |
|          | 1 $\frac{1}{2}$ hours.  |            |  |  |  |  |
| F        |   |            |  |  |  |  |
| 5.       | Inspect hoses for general condition, cuts or swelling. Replace as required.       |            |  |  |  |  |
| 6.       | Check for security of all plumbing fittings (Ref. Section 12-40-00 Fitting Torque |            |  |  |  |  |
|          | Procedures). Replace fittings as needed. Check security of clamps and anti-       |            |  |  |  |  |
|          | chaff material. Perform system leak check (Ref. 12-30-00 System leak check).      |            |  |  |  |  |



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- 7. For brushed motors only, access the Aft Evaporator (Ref. Section 6-00-00 Dimensions and Access). Aft evaporator motor has two (2) removable brushes. Detach elbow from top of blower assembly. Remove brushes one (1) at a time. Note position relative to curvature of armature. Inspect brush for wear. Replace if brush is 5/16" or less. Install new brushes and run at 12 VDC (utilizing an independent power source).
  - Until seating occurs on 70% of the surface (this should be accomplished with motor assembly removed from aircraft). This action will greatly enhance brush life. Reconnect wires to aircraft system and reinstall insulated duct. Run both of the blower/fans in the "FAN" position and perform visual inspection of the assemblies to see that foreign materials have not been ingested into the blower/fan, which might cause blade damage. The blower/fan should also be run at the various speeds available to check the motor operation.
- 8. Access the condenser (Ref. Section 6-00-00 Dimensions and Access). Check the fins of the condenser coil for cleanliness and ensure that they are straight. If damage has occurred to the fins, a fin comb should be utilized to put them in like new condition. If damaged fins that cannot be straighten account for ≤3% of the overall fin-covered surface area of the condenser, the operation of the condenser will remain unaffected.



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Table 5-02 Component Overhaul/ Replacement Schedule

| Description                 | Part Number          | Overhaul/Replacement Hours            |
|-----------------------------|----------------------|---------------------------------------|
| Aft Evaporator Blower Motor | 490017-1-01          | The blower manufacturer               |
|                             | (IFSS 050143-3 DCB)  | recommends TBO at 1000 hrs. At        |
|                             | 490017-1-02          | the discretion of the operator, it is |
|                             | (IFSS 050143-2 DCB)  | acceptable to operate the blower      |
|                             |                      | until failure. A blower failure will  |
|                             |                      | result in a reduction in cooling, but |
|                             |                      | no safety-of-flight issues are        |
|                             |                      | involved.                             |
| Condenser Blower Motors     | IFSS 050143-3 DCB or | Same as above                         |
|                             | IFSS 050084-7-2 &    |                                       |
|                             | IFSS 050084-7-3      |                                       |



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#### **Chapter 6**

#### Section 06-00-00 Dimensions and Access

#### 1. Access Methods

- a) Access Item Identification (Ref. figures 6-01 & 6-02)
  - Condenser- The condenser is located in one of two positions depending on kit part number (Ref. Section 21.00.00 System Description). The aft mounted condenser (Kit numbers 350-00-031HP and 130-00-031HP) (Ref. figure 6-02) is mounted in the tail boom mounted 5 in. above the baggage floor and is accessed by removing the tail boom closeout panel. The side mounted condenser (Kit Number 350-00-011HP) is located in the right baggage compartment (Ref. figure 6-01) and is accessed by removing to baggage compartment close out panel.
  - Compressor- The compressor is located aft and to the left side on main transmission deck. It is accessed by opening the upper transmission cowling.
  - Aft Evaporator- The aft evaporator is located on the right-hand upper transmission deck in all configurations. It is accessed by opening the right-hand transmission cowling forward latch.
  - Forward Evaporator- In the AS-350 series, the forward evaporator is located on the cockpit floor forward of the pilots' controls. In the EC-130, it is located on the cockpit floor forward of the pedestal and mounted to the pedestal. No additional access method is required.
- b) Removal and Installation Methods

**Caution:** Use of power tools during removal or installation of panels and attaching hardware may damage nut plates or deform holes in composite doors, covers, panels, and fairings.



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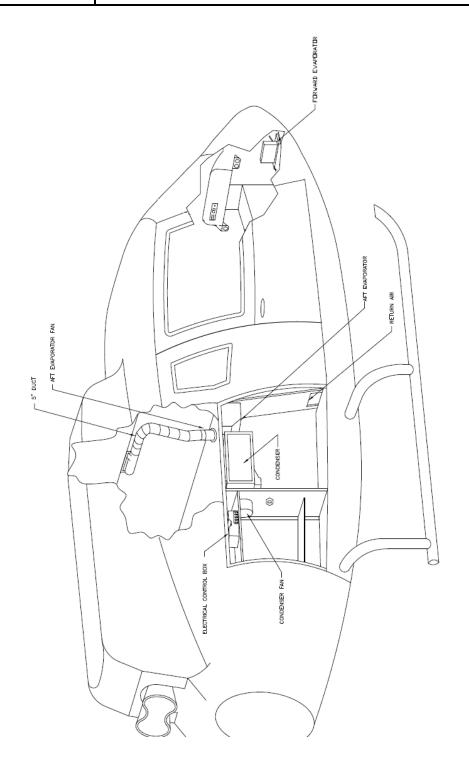


Figure 6-01: Side Mounted Condenser Configuration



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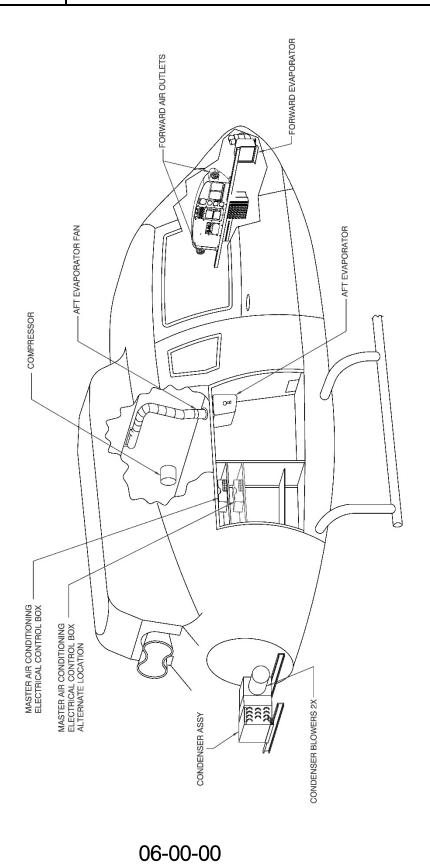


Figure 6-02: Aft Mounted Condenser Configuration



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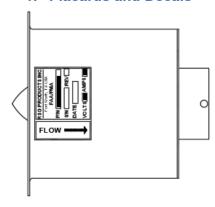
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#### **Chapter 11**

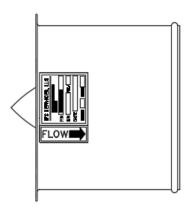
#### Section 11-00-00 Placards and Markings

#### 1. Placards and Decals

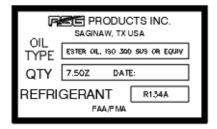




For PN: 550007-1



For PN: IFSS 050143 For PN: IFSS 050084





For PN: 590008 & 590008-1



For PN: 560010-O-5 & 560016-O-1

For PN: 050145



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# **Chapter 12**

# **Section 12-00-00 Servicing Maintenance Practices**

#### 1. General

It is assumed in the following practices that the personnel engaged in Charging, Servicing, or Maintenance of the system will be either an experienced air conditioning mechanic under the supervision of a qualified A & P mechanic or an A & P mechanic possessing good air conditioning skills.



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## **Section 12-10-00 Charging Practices**

#### 1. Reclaiming

- a) Connect the EPA approved recovery unit services hoses, which shall have shut-off valves to the aircraft air conditioning system service ports.
- b) Operate the recovery equipment as covered by the equipment manufacturers recommended procedure.
- c) Start the recovery process and remove the refrigerant from the aircraft air conditioning system. Operate the recovery unit until the aircraft system has been reduced from a pressure to a vacuum. With the recovery unit shut off for at least 5 minutes, determine that there is not refrigerant remaining in the aircraft air conditioning system. If the aircraft system has pressure, additional recover operation is required to remove the remaining refrigerant. Repeat the operation until the aircraft air conditioning system vacuum level remains stable for two minutes.
- d) Close the valves in the service lines and then remove the service lines from the aircraft system. Proceed with the repair/service. If the recovery equipment has automatic closing valves, be sure they are properly operating.

#### 2. Charging

#### a) Prior to Charging the System

Prior to charging the system with R-134a, the evaporator fan/blower and condenser blower should be checked for operation and direction of airflow. This is most easily done by utilizing a GPU unit for electrical power. Since the compressor is belt driven only those maintenance and operational functions that are electrically powered may be checked either in the hanger or on the ramp without running the engine.

After the GPU is connected to the aircraft and the Aircraft Master Switch is "On", the air conditioning system may be turned "On". Place the rocker switch on the Master Air Conditioning Control Panel to "A/C". It does not cause the compressor to run or refrigerant to be pumped. All evaporator blowers and the forward evaporator fan should start immediately. The 7" condenser blower and clutch will not engage until after approximately 4 seconds after evaporator fan start.

NOTE: SYSTEM MUST HAVE MINIMUM 30 PSI CHARGE

Check airflow of each evaporator fan/blower. Determine that air is coming out of the cockpit and the cabin air outlets.



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Check airflow into and out of condenser air openings.

### b) Charging the System

\*NOTE: All evaporators' fan/blower, condenser blowers, and controls are 28-volt DC.

<u>DANGER</u>: R-134a, particularly liquid R-134a, should never be allowed to come in contact with the eyes or skin. Under normal conditions, R-134a as a gas or vapor is an inert substance and non-poisonous. A flame-type leak detector should <u>never be used</u> because of the danger of fire or explosion around an aircraft. Several electronic leak detectors are available on the market.

Never heat a cylinder of R-134a to produce additional pressure or to squeeze that last bit of refrigerant from the cylinder. If the cylinder has become cooled to the point where additional refrigerant cannot be obtained from it, the only approved method is to place the entire cylinder in a container of warm water. **Do Not Exceed 120 Degrees Fahrenheit**.

Never attempt to repair a leak requiring brazing or soldering within the aircraft structure as fire or explosion can result. Remove the entire assembly from the aircraft to a safe location before attempting such a procedure.

CAUTION: Should R-134a come in contact with the eyes or skin, Do Not attempt first aid beyond the immediate washing of the eye or skin with clear water. A doctor should be contacted immediately for diagnosis and treatment even though the injury may be considered slight.

The refrigerant used in this system R-134a, and no other refrigerant is to be considered. Normal safety practices, such as wearing of gloves and the use of goggles, should be utilized as R-134a could freeze the eyeball instantly were it to come in contact with the eye. Also, frostbite could occur to areas of the skin if R-134a were allowed to come in contact.

Charging of the system is a simple procedure whether on initial or recharging after leakage repair. A set of refrigerant gauges with a minimum of three hoses should be connected to the high side and low side service ports provided.

Prior to charging each newly installed system with R-134a, you will not need to charge compressor with oil since 7.5 ounces of ESTER oil has already been



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added. Do not add additional oil if replacing a compressor in an existing system.

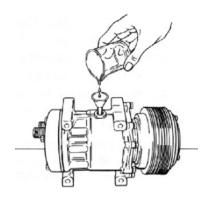


Figure 12 - 01: Adding Oil to the Compressor

#### c) Initial Charging

Tighten any leaking connections or make repairs as necessary to eliminate leaks. Shut off and disconnect hose from the refrigerant cylinder. Connect the hose to a regulator mounted on a cylinder of dry nitrogen. Purge the regulator to center manifold hose. Close low side valve (left) at manifold. Failure to do so can cause pressure to flow to the low side (left) gauge. Failure of gauge can result.

#### Pressurize system to 250-PSI minimum, 300-PSI maximum.

After the system has been rechecked with the leak detector and it is determined that no leaks exist, disconnect the charging hose from the manifold set to the cylinder of nitrogen. Open the valves allowing the R-134a and nitrogen within the system to be collected into an EPA approved recycling until (expelling of refrigerant is not allowed).

Connect a vacuum pump to the center manifold hose. Open both valves and evacuate the system for a minimum of twenty minutes. (**NOTE**: For each 1,000 foot rise in altitude above sea level, a decrease below 30" of vacuum of 1" per one thousand feet rise in altitude will occur).

#### d) Adding R134-a Refrigerant

Close both the manifold valves and connect the center charging hoses to a cylinder of R-134a. Open the valves of the cylinder. Purge the charging hose by loosening it at the charging manifold's center hose. **ONLY THE HIGH SIDE VALVE OF THE CHARGING MANIFOLD MAY NOW BE OPENED** 



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The combination of the vacuum still existing and the pressure in the R-134a cylinder transfers the R-134a from the cylinder into the system, **on the high side only**, without the compressor running. If a scale is available, the cylinder may be pre-weighted and **2.5 pounds of refrigerant R-134a added to the system**. No additional refrigerant should be added after the system is in operation. Close manifold.

The system is now ready for operation. **This must be performed on the flight line with the engine at 100%**. As soon as the "A/C" Master Control Switch is turned to "A/C" all 28 VDC evaporator fans will immediately begin operations.

If, after the system has been in the "A/C" mode for at least 2 minutes and cooling is not being accomplished, then check all circuit breakers.

Determine that 28 VDC power is available for control circuitry. Check operations of the relays and contacts

After the compressor has come on line, the entire system is operational with the manifold valve closed on the high side. The R-134a cylinder valve should be closed initially in order to get an accurate reading on the low side gauge of the "system pressure". The reading on the gauge should not be allowed to go below 10 PSI, as this will indicate that the low-pressure safety switch is possibly set too low. It will disconnect the electrical power to the compressor clutch if allowed to open. Open or close the cylinder valve as required to monitor the flow of R-134a from the cylinder into the low side of the system, if additional R-134a is needed. Smoke test is no longer required for R-134a receiver/drier (without sight glass) like it was for R-12 receiver/drier (with sight glass).

Charge system to 2.5 lbs. The optimum method of determining the correct charge using at least two digital thermometers and place them near the return air and the discharge air of each evaporator. R-134a can then be added or deleted, as required, until the highest T.D. is noted, per the paragraph below. At that time, the correct amount of refrigerant is installed.

A test sheet should be completed noting the average cabin temperature, the temperature on the return or entering air to all evaporators and the discharge air from the evaporators, at the nearest point. If a Temperature Differential (T.D.) of less than 20 degrees Fahrenheit with a humidity of 30% or less in recorded through the evaporators at sea level, the system should be considered as having possible defects, which will need investigation. At altitudes above sea level, less than 20 degrees Fahrenheit temperature difference may be recorded at humidity of 30% or less. This is due to less dense air moving more rapidly through the evaporators.



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### e) Effect of Humidity on TD

It should be noted that in measurements taken and entered on a test sheet that similar measurements made at a later date, when the humidity is considerably higher, would dramatically change the T.D.

The higher the humidity, as compared to a previous T.D. reading taken with a low humidity, will result in a lower T.D. The reason for this lower T.D. measurement is that when a test is performed at lower humidity, only "SENSIBLE HEAT" is being removed. With higher humidity, a different condition exists. It requires that "LATENT HEAT" containing moisture borne heat must first be removed prior to the removal of the sensible heat

If the system is found to be completely empty of R-134a, a set of charging gauges should be connected to both high and low side service ports and to a cylinder of R-134a. Purge the charging hoses from the cylinder to the service ports with R-134a vapor. Open both the low and high side charging valves and allow pressure from the cylinder to equalize through the system until at least 50 PSI is noted. Utilizing an electronic leak detector, check all fittings on the system to determine the point of leakage. Any fitting indicating an oily or dirty condition is a prime suspect.

## f) Recharging the System

After the leaks have been found and corrected, pressurize the system with dry nitrogen. Re-check for leaks. Connect a vacuum pump to the system and evacuate the system for a minimum of 20 minutes from both the high and low sides. If the system has been allowed to become contaminated, then the receiver/drier is to be replaced.

It is always good air conditioning practice to replace the receiver/drier whenever it is suspected that moisture has contaminated the system.

The balance of the recharging procedure is exactly the same as pointed out previously under the **Charging Operation**. A judgment must be made as to the amount of oil, if any, lost at the point of leakage. Additional oil may be required to be added to the system. If the refrigerant has been expelled rapidly by the rupture of a line or similar situation, then two (2) ounces of refrigerant oil of the type previously specified should be applied to the system at this time and immediately prior to charging of the system with R-134a.



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## **Section 12-20-00 Clutch Servicing Practices**

#### 1. General

These clutch servicing practices are applicable to all compressors that can be installed with the Air Conditioning System Installation.

#### a) Clutch Armature Assembly Removal

- (1) If armature dust cover is present, remove the 3 or 6 bolts holding it in place and remove cover. If auxiliary sheet metal pulley is present, remove the screws holding it in place. Then remove pulley.
- (2) Insert pins of armature plate spanner into threaded holes of armature assembly.
- (3) Hold armature assembly stationary while removing retaining nut with 3/4 in, 19 mm or 14 mm socket wrench as appropriate. (Ref. Figure 12-02)



Figure 12 - 02

(4) Remove armature assembly using puller. Thread 3 puller bolts into the threaded holes in the armature assembly. Turn center screw clockwise until armature assembly comes loose. (Ref. Figure 12-03)

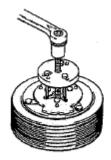


Figure 12 - 03



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- (5) If shims are above shaft key, the key and bearing dust cover (if present) must be removed before the shims can be removed.
- (6) Remove bearing dust cover (if present). Use caution to prevent distorting cover when removing it.
- (7) Remove shaft key by tapping loose with a flat blade screwdriver and hammer.
- (8) Remove shims. Use a pointed tool and a small screwdriver to prevent the shims from binding on the shaft.

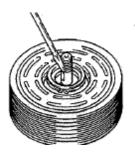


Figure 12 - 04

#### b) Rotor Assembly Removal

- (1) If bearing dust cover has not been removed, remove it now.
- (2) If internal snap ring for bearing is visible above the bearing, remove it with internal snap ring pliers.
- (3) Remove rotor snap ring.
- (4) Remove shaft key.
- (5) Remove rotor assembly: insert the lip of the jaws into the snap ring groove, place rotor puller shaft protector (puller set) over the exposed shaft, align thumb screws to puller jaws and finger tighten and turn puller center bolt clockwise using a socket wrench until rotor pulley is free. (Ref. Figure 12-05)



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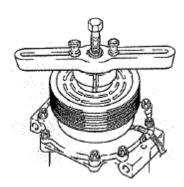


Figure 12 - 05

### c) Field Coil Assembly Removal

- (1) Loosen lead wire clamp screw with #2 Phillips screwdriver until wire(s) can be slipped out from under clamp.
- (2) Undo any wire connections on the compressor which would prevent removal of the field coil assembly.
- (3) Remove snap ring.
- (4) Remove the field coil assembly. (Ref. Figure 12-06)

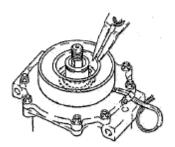


Figure 12 - 06

### d) Field Coil Assembly Installation

- (1) Reverse the steps of the field coil assembly removal. Protrusion on underside of coil ring must match hole in front housing to prevent movement and correctly locate lead wire(s).
- e) Rotor Assembly Installation



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- (1) Place compressor on support stand, supported at rear end of compressor. If the compressor must be clamped in a vice, clamp only on the mounting ears, never on the body of the compressor.
- (2) Set rotor squarely over the front housing boss.
- (3) Place the rotor installer ring into the bearing bore. Ensure that the edge rests only on the inner race of the bearing, not on the seal, pulley, or outer race of the bearing.
- (4) Place the driver into the ring and drive the rotor down onto the front housing with a hammer or arbor press. Drive the rotor against the front housing step. A distinct change of sound can be heard when using a hammer to install the rotor. (Ref. figure 12-07).

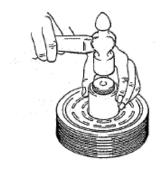


Figure 12 - 07

(5) Reinstall rotor bearing snap ring, if it has been removed, with internal snap ring pliers. (Ref. figure 12-08)



Figure 12 - 08



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- (6) Reinstall rotor retaining snap ring with external snap ring pliers. If a bevel is present in the snap ring, it should be face up (away from the body of the compressor).
- (7) Reinstall rotor bearing dust cover (if present) by gently tapping it into place.

#### f) Armature Assembly Installation

(1) Install shaft key with pliers. (Ref. figure 12-09)



Figure 12 - 09

- (2) Install clutch shims. NOTE: Clutch air gap is determined by shim thickness. When installing a clutch on a used compressor, try the original shims first. When installing a clutch on a compressor that has not had a clutch installed before, first try 0.04 in, 0.02 in and 0.004 in (1.0, 0.5, 0.1 mm) shims.
- (3) Align keyway in armature assembly to shaft key. Using driver and a hammer or arbor press, drive the armature assembly down over the shaft until it bottoms on the shims. A distinct sound change will be noted if driving with a hammer. (Ref. figure 12-10)

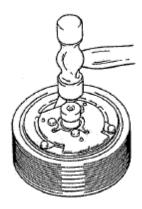


Figure 12 - 10



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(4) Replace retaining nut and torque to specification

1/2-20: 20-25 ft\*lb (27-34 N\*m)

**M8:** 11-15 ft\*lb (15-21 N\*m)

(5) Check air gap with a feeler gauge. Specification is 0.011-0.019 in (0.3-0.5mm). If gap is not even around the clutch, gently tap down at the high spots. If the overall gap is out of spec, remove the armature assembly and change shims as necessary.

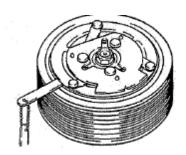


Figure 12 - 11

(6) Replace armature dust cover (if used) and torque 3 or 6 bolts to specification below.

**3-1/4-20 bolts**: 2-4 ft\*lb (2-5 N\*m)

**6-M5 bolts**: 5-8 ft\*lb (7-11 N\*m)

NOTE: Over torque of dust cover bolts will cause air gap to become out of spec.



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## Section 12-30-00 System Leak Check

#### 1. General

Identification and elimination of system fitting leaks is extremely important to the operation of this air conditioning system installation.

A system which contains a partial charge of refrigerant can be leak tested with the aid of an electronic leak detector and be recharged without evacuating the system.

A new or empty system can be pressurized with nitrogen 70-80 psi (5.1-5.6 kgcm) or R134a 50 psi to conduct a leak survey. Do not use compressed air, for it can introduce moisture into the system causing degradation to the operation of the system.

The preferred method is to use an electronic leak detector in conjunction with a small charge of R134a refrigerant. All checks done in this manner should be conducted with the air conditioner off. Since the refrigerant is heavier than air, leaks are most likely to be detected on the underside of the hoses and fittings. Refrigerants will collect in low areas and provide erroneous leak detection. A stream of compressed air from a nozzle may be useful in clearing the area just prior to conducting a leak test.

If the nitrogen method is used, it will be necessary to mix together a water and mild soap solution. Each fitting or suspected leak area should be brushed with this soap solution and watched for evidence of bubbles formed by the escaping nitrogen.

If a leak is detected at an O-ring fitting, check to ensure proper torque has been applied to the fitting. If the system continues to leak, evacuate the system of refrigerant and install a new O-ring. NOTE: be sure that the O-ring is lubricated with refrigerant oil prior to its installation.

A small amount of leakage (approximately one ounce per year) past the compressor shaft seal is normal. Most leak detectors are sensitive enough to show a leak a magnitude.



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# **Section 12-40-00 Fitting Torque Procedures**

1. Fitting Torque Procedures and Torque Values

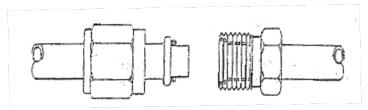


Figure 12 – 12: Insert O-Ring Fittings

- (1) Confirm there is no damage on fittings.
- (2) Apply a thin coating of refrigerant oil to O-ring and female side of fitting.
- (3) Slide B-nut back away from the end of the tube so the O-ring can be seen as the fitting is being slide together. Be careful not to pinch the O-ring during assembly.
- (4) Engage the male end into the female fitting being careful to maintain alignment.
- (5) The male flange should seat fully against the female fitting without the O-ring being pinched.
- (6) It is important to hold the fitting together while sliding the B-nut forward and engaging the threads. Tighten the B-nut by hand and torque per table 12-01. DO NOT OVER TORQUE.

Table 12-01 Fitting Torque Values

| Fitting # | Torque Value in/lbs (Nm) |  |
|-----------|--------------------------|--|
| #6        | 30-35 (3.4-4.0)          |  |
| #8        | 40-45 (4.6-5.1)          |  |
| #10       | 50-55 (5.7-6.3)          |  |



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## **Section 12-50-00 Normal Operation Functional Test**

- a. With the aircraft engine operating, electrical system on and functioning normally, move the air conditioner control switch to the "FAN" position.
- b. Move the cockpit fan switch from "LOW" to "HIGH" speed and ensure that air output is present in all the forward air outlets. Repeat the test using the aft cabin fan speed selector switch for the aft cabin air outlets.
- c. Reposition the air conditioner control switch to the "A/C" position and repeat Step 2 above. Cool air should be supplied to the cockpit and cabin vents after a time delay of 15 seconds.
- d. Turn air conditioner switch to "OFF" or the center position. Entire system should shut down.



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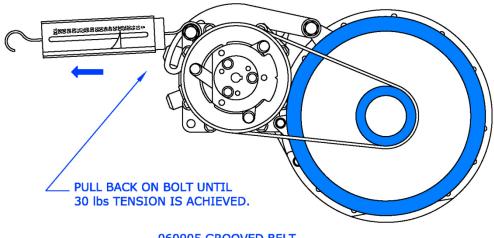
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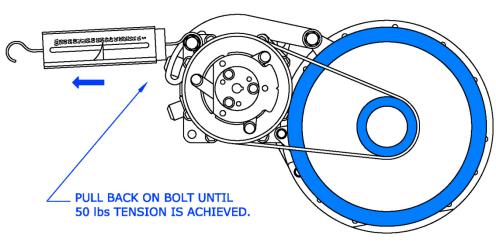
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### Section 12-60-00 Belt Tension Procedure

With the compressor drive belt on the drive pulley and the compressor clutch pulley. Tighten bolts at the adjustment arm assuring the belt proper amount of tension. Tighten the lower forward mounting bolt. Use a pull scale to measure the tension. (Ref. figure 12-13). Recommended belt tension values if using a grooved belt is 30 lbs and if using a flat belt is 50 lbs.



060005 GROOVED BELT



060018-1 FLAT BELT

Figure 12 – 13



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## Section 12-70-00 Drive Belt Change Procedure

- a. Access the compressor installation (ref. Section 6-00-00 Dimensions and Access). For compressor information reference Section 21-00-00 Air Conditioning.
- b. Place a support on the transmission deck to support the engine drive while the shaft is disconnected for belt installation.
- c. Remove the cotter pins from the four pins holding the "Gimble Ring" at the Thomas coupling.
- d. Slide the "Gimble Ring" aft to gain access to the Thomas coupling.
- e. Remove the 6 bolts and Thomas coupling connecting the drive shaft and shift slightly aft.
- f. Install two (2) Compressor Drive belts.
- g. Reassemble the Thomas coupling.
- h. Secure 1 belt to the outside of the drive shaft cover for a spare and slip one through the housing and over the drive pulley.
- i. Install the "Gimble Ring" pins and cotter pins. Remove supports.
- j. Install the compressor drive belt on the drive pulley and the compressor clutch pulley. Tighten bolts at the adjustment arm assuring the belt proper amount of tension. (Ref. Section 12-60-00 Belt Tension Procedure). Tighten the lower forward mounting bolt.



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# **Chapter 20**

### **Section 20-00-00 Standard Practices**

This chapter contains maintenance information and procedures that are common standard practices. Information contained in this chapter is standard torque charts and application procedures, corrosion prevention, painting, mechanical fastener sealing, and dye penetrant inspection techniques.



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## **Section 20-10-00 Torques Maintenance Practices**

#### 1. Torque Wrenches

a) Torque Wrench Accuracy

Torque wrenches must be of good quality and calibrated at least once a year. Any torque wrench that has been dropped or abused should be calibrated to ensure continued accuracy.

- b) Application of Torque Wrench Loads
  - (1) Be sure the bolt and nut and the surface they bear on are clean and dry, unless otherwise specified by the manufacturer.
  - (2) Run the nut down to near contact with the washer or bearing surface and check the friction drag torque required to turn the nut. Add the friction drag torque to the desired torque to arrive at the "final torque" to be registered on the torque wrench indicator.
  - (3) Whenever possible, apply the torque to the nut instead of the bolt. This will reduce rotation of the bolt in the hole and reduce wear.
  - (4) Apply a smooth even pull when applying torque pressure.
  - (5) If special adapters are used which will change the effective length of the torque wrench, the final torque indication or wrench setting must be adjusted accordingly. To determine the torque wrench setting or indication with adapter installed reference Figure 20-01.



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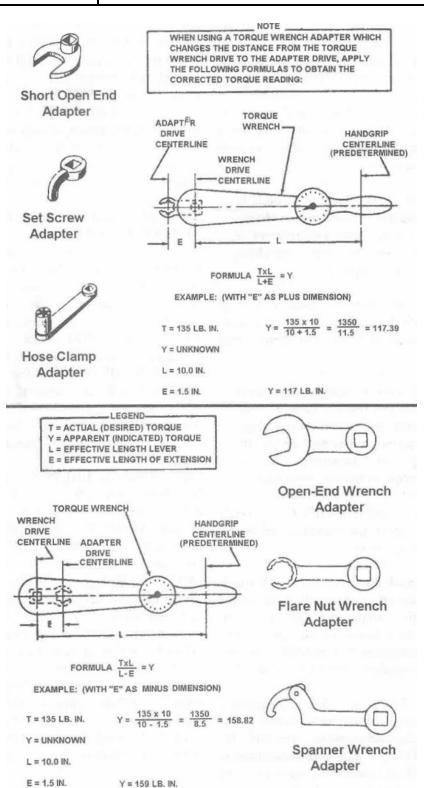


Figure 20 - 1: Torque Wrenches and Adapters



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### 2. Torque Values

Warning: Do not exceed maximum allowable torque value. Overstressing of fastener may result.

Standard hardware torque values are given in the following **Table 20 - 1** through **Table 20 - 3**. **Table 20 - 1** gives recommended torque values for fine thread fasteners, shear and tension applications. Table 20 - 2 gives recommended torque values for coarse thread fasteners, shear and tension applications. **Table 20 - 3** gives recommended torque values for Phillips-head screws.

Table 20 - 1: Recommended Torque Values for Fine-Thread Fasteners

|                                 | : Recommended To | rque values to | r Fine- i nread Fasten | ers         |
|---------------------------------|------------------|----------------|------------------------|-------------|
| Thread Size                     | Shear            |                | Tensio                 | <u> </u>    |
| Fractional (decimal)            | Recommended      | Maximum        | Recommended            | Maximum     |
|                                 | in-lb (N-m)      | in-lb (N-m)    | in-lb (N-m)            | in-lb (N-m) |
| 8-36                            | 7-9              | 12             | 12-15                  | 20          |
| (0.1640-36)                     | (0.79-1.02)      | (1.36)         | (1.36-1.69)            | (2.26)      |
| 10-32                           | 12-15            | 25             | 20-25                  | 40          |
| (0.1900-32)                     | (1.36-1.69)      | (2.82)         | (2.25-2.82)            | (4.51)      |
| 1/4-28                          | 30-40            | 60             | 50-70                  | 100         |
| (0.2500-28)                     | (3.38-4.51)      | (6.77)         | (5.64-7.90)            | (11.29)     |
| 5/16-24                         | 60-85            | 140            | 100-140                | 225         |
| (0.3125-24)                     | (6.77-9.60)      | (15.81)        | (11.29-15.81)          | (25.41)     |
| 3/8-24                          | 95-110           | 240            | 160-190                | 390         |
| (0.3750-24)                     | (10.73-12.42)    | (27.11)        | (18.07-21.46)          | (44.05)     |
| 7/16-20                         | 270-300          | 500            | 450-500                | 840         |
| (0.4375-20)                     | (30.49-33.88)    | (56.48)        | (50.83-56.48)          | (94.88)     |
| 1/2-20                          | 290-410          | 660            | 480-690                | 1,100       |
| (0.5000-20)                     | (32.75-46.31)    | (74.55)        | (54.22-77.94)          | (124.25)    |
| 9/16-18                         | 480-600          | 960            | 800-1,000              | 1,600       |
| (0.5625-18)                     | (54.22-67.77)    | (108.44)       | (90.36-112.96)         | (180.73)    |
| 5/8-18                          | 660-780          | 1,400          | 1,100-1,300            | 2,400       |
| (0.6250-18)                     | (74.55-88.10)    | (158.14)       | (124.25-146.84)        | (271.10)    |
| <sup>3</sup> / <sub>4</sub> -16 | 1,300-1,500      | 3,000          | 2,300-2,500            | 5,000       |
| (0.7500-16)                     | (146.84-169.44)  | (338.88)       | (259.80-282.40)        | (564.80)    |
| 7/8-14                          | 1,500-1,800      | 4,200          | 2,500-3,000            | 7,000       |
| (0.8750-14)                     | (169.44-203.32)  | (474.43)       | (282.40-338-88)        | (790.72)    |
| 1-12                            | 2,200-3,300      | 6,000          | 3,700-5,500            | 10,000      |
| (1.0000-12)                     | (248.51-372.76)  | (677.76)       | (417.95-621.28)        | (1129.6)    |
| 1-1/8-12                        | 3,000-4,200      | 9,000          | 5,000-7,000            | 15,000      |
| (1.1250-12)                     | (338.88-474.43)  | (1016.6)       | (564.80-790.72)        | (1694.4)    |
| 1-1/4-12                        | 5,400-6,600      | 15,000         | 9,000-11,000           | 25,000      |
| (1.2500-12)                     | (609.98-745.53)  | (1694.4)       | (1016.6-1242.6)        | (2824.0)    |



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**Table 20 - 2: Recommended Torque Values for Coarse-Thread Fasteners** 

| Thread Size          | Shear           |             | Tensio          | n            |
|----------------------|-----------------|-------------|-----------------|--------------|
| Fractional (decimal) | Recommended     | Maximum     | Recommended     | Maximum      |
|                      | in-lb (N-m)     | in-lb (N-m) | in-lb (N-m)     | in-lb (N-m)  |
| 8-32                 | 7-9             | 12          | 12-15           | 20           |
| (0.1640-32)          | (0.79-1.02)     | (1.36)      | (1.36-1.69)     | (2.26)       |
| 10-24                | 12-15           | 21          | 20-25           | 35           |
| (0.1900-24)          | (1.36-1.69)     | (2.37)      | (2.25-2.82)     | (3.95)       |
| 1/4-20               | 25-30           | 45          | 40-50           | 75           |
| (0.2500-20)          | (2.82-3.38)     | (5.08)      | (4.51-5.64)     | (8.47)       |
| 5/16-18              | 48-55           | 100         | 80-90           | 160          |
| (0.3125-18)          | (5.42-6.21)     | (11.29)     | (9.03-10.16)    | (18.07)      |
| 3/8-16               | 95-100          | 170         | 160-185         | 275          |
| (0.3750-16)          | (10.73-11.29)   | (19.20)     | (18.07-20.89)   | (31.06)      |
| 7/16-14              | 140-155         | 280         | 235-255         | 475          |
| (0.4375-14)          | (15.81-17.50)   | (31.62)     | (26.54-28.8)    | (53.65)      |
| 1/2-13               | 240-290         | 520         | 400-480         | 880          |
| (0.5000-13)          | (27.11-32.75)   | (58.73)     | (45.18-54.22)   | (99.40)      |
| 9/16-12              | 300-420         | 650         | 500-700         | 1,100        |
| (0.5625-12)          | (33.88-47.44)   | (73.42)     | (56.48-79.07)   | (124.25)     |
| 5/8-11               | 420-540         | 900         | 700-900         | 1,500        |
| (0.6250-11)          | (47.44-60.99)   | (101.66)    | (79.07-101.66)  | (169.44)     |
| 3⁄4-10               | 700-950         | 1,500       | 1,150-1,600     | 2,500        |
| (0.7500-10)          | (79.07-107.31)  | (169.44)    | (129.90-180.73) | (282.40)     |
| 7/8-9                | 1,300-1,800     | 2,700       | 2,200-3,000     | 4,600        |
| (0.8750-9)           | (146.84-203.32) | (474.43)    | (248.51-338-88) | (519.61)     |
| 1-8                  | 2,200-3,000     | 4,500       | 3,700-5,000     | 7,600        |
| (1.0000-8)           | (248.51-338.88) | (508.32)    | (417.95-564.80) | (858.49)     |
| 1-1/8-8              | 3,300-4,000     | 7,200       | 5,500-6,500     | 12,000       |
| (1.1250-8)           | (372.76-451.84) | (813.31)    | (621.28-734.24) | (1355.5      |
| 1-1/4-8              | 4,000-5,000     | 10,000      | 6,500-8,000     | 16,000       |
| (1.2500-8)           | (451.84-564.80) | (1129.6)    | (734.24-903.68) | (1807.4 N m) |



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**Table 20 - 3: Recommended Torque Values for Phillips-Head Fasteners** 

| Thread Size<br>Fractional | Recommended in-lb (N-m)     | Maximum in-lb (N-m) |
|---------------------------|-----------------------------|---------------------|
| (decimal)                 |                             |                     |
| 8-32 (0.1640-32           | 12-15 (1.36-1.69)           | 23 (2.59)           |
| 10-32 (0.1900-32)         | 20-25 (2.25-2.82)           | 35 (3.95)           |
| 1/4-28 (0.2500-28)        | 60-70 (6.77-7.90)           | 90 (10.16)          |
| 5/16-24 (0.3125-24)       | 110-125 (12.42-14.12)       | 150 (16.94)         |
| 3/8-24 (0.3750-24)        | 150-175 (16.94-19.76)       | 225 (25.41)         |
| 7/16-20 (0.4375-20)       | 230-280 (25.98-31.62)       | 450 (50.83)         |
| 1/2-20 (0.5000-20)        | 550-650 (62.12-73.42)       | 850 (96.01)         |
| 9/16-18 (0.5625-18)       | 750-900 (84.72-101.66)      | 1,200 (135.55)      |
| 5/8-18 (0.6250-18)        | 1,100-1,300 (124.25-146.84) | 1,600 (180.73)      |



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## **Section 20-30-00 Painting Maintenance Practices**

The following procedures should be used to touch-up paint flaking, scratches, nicks, and gouges in system components.

Warning: Cleaning solvents and epoxy primer are flammable. Cleaning solvents, epoxy primer, and alodine can cause burns and irritation when skin is contacted. Vapors are harmful and caustic to eyes; goggles must be worn for eye protection. Cleaning solvents and alodine are poisonous. Vapors are harmful to life or health; work should be performed with proper ventilation and / or respirators should be worn while working with cleaning solvents, epoxy primer and alodine.

### 1. Paint Touch-Up of Small Areas

Use the following procedures to touch-up paint of small sanded areas and nicks, scratches, gouges, etc., that do not go through paint and primer to bare metal.

- a. Wipe surface clean with trichloroethane, MIL-T-81533, or equivalent cleaning solvent, and wipe dry immediately.
- b. Apply coat of epoxy polyamide primer, MIL-P-23377F or equivalent, to match original. Feather primer coating onto surrounding color coat. Allow primer to air dry for 30 minutes.
- c. Apply topcoat to match original finish.



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### Section 20-40-00 Corrosion Control Maintenance Practices

#### 1. Corrosion Control

The system components are fabricated primarily of steel and aluminum, and should be inspected regularly for any signs of corrosion. The following procedures should be used for removing corrosion and treating affected areas.

#### 2. Corrosion Removal

Remove corrosion by either chemical or mechanical means.

a) Paint Removal, Chemical

Caution: Do not use chemical paint stripper on composite materials. Chemical paint strippers can cause composite components to de-bond and / or lose adhesion of the epoxy matrix.

(1) Mask all non-metallic surfaces in area to be stripped as well as areas where solution may get entrapped.

Warning: Paint stripper can cause burns and irritation when it contacts skin; proper gloves should be worn. Vapors are harmful and caustic to eyes; goggles must be worn for eye protection. Paint stripper is poisonous. Vapors are harmful to life or health; work should be performed with proper ventilation and / or respirators should be worn while working with paint stripper.

(2) Using a fiber brush, apply sufficient paint stripper (Turco 5873) to cover area of removal.

**Note:** If paint stripper evaporates quickly or works slowly, cover area with plastic sheet.

- (3) Allow paint remover to remain on surface for a time sufficient to cause wrinkling and lifting of paint (about 10-30 minutes).
- (4) Using non-metallic scraper or abrasive pads (3M Scotchbrite 63) scrub area to further loosen paint.
- (5) Reapply paint stripper (Turco 5873) as necessary in areas where paint remains tightly adherent.



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- (6) Wash and scrub surface with demineralized water and alkaline cleaner to neutralize paint stripper.
- (7) Remove masking materials and any residual paint or stripper
- (8) Rinse with demineralized water.
- b) Paint Removal, Mechanical

Caution: Do not sand into or expose composite fibers. Do not remove more material than necessary. Do not use aluminum oxide abrasive materials on epoxy/graphite materials.

Use abrasive flap wheel, abrasive disk, abrasive paper, or plastic media blast to remove paint.

c) Corrosion Removal

**Note:** Aircraft shall be electrically grounded during corrosion removal operations. When removing exterior corrosion from electronic boxes, the unit case shall be electrically grounded during the complete operation.

- (1) Corrosion shall be removed by the mildest method possible.
  - (a) Hand scrub with dry non-metallic brush/pad (3M pad).
  - (b) Use abrasive cloth (Aluminum oxide 240 grit). Caution: Do not use on epoxy/graphite materials.
  - (c) Use 320-grit sandpaper.
  - (d) Glass bead blast.
  - (e) Use 240-grit abrasive wheel.

**Note:** On high-strength steel, do not use power tools other than a flap brush or mandrel with abrasive material; overheating and notching may occur.

- (2) Ensure all active corrosion and corrosion products have been removed.
- (3) Using 320-grit sandpaper, blend edges of paint (if applicable) surrounding repair area to create a smooth transition. Vacuum the area thoroughly to remove all contaminants.



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- (4) Apply aluminum surface treatment if applicable. (Ref. Section 4 of 20-40-00, Aluminum Alloy Surface Touch-Up Treatment).
- (5) Touch-up primer and paint to match original.

#### 3. Mechanical Defects (Nicks, Scratches, Gouges, Etc.)

- a) Section 20-30-00 Painting Maintenance Practices).
- If damage is through the paint surface, prepare area for paint touch-up using the following methods.

**Note:** On high-strength steel, do not use power tools other than a flap brush or mandrel with abrasive material; overheating and notching may occur.

- (1) Remove defect using flap wheel, abrasive disk, abrasive paper, or plastic media blast.
- (2) Using 320-grit sandpaper, blend edges of paint surrounding repair area to create a smooth transition.
- (3) Apply aluminum surface treatment if applicable. (Ref. Section 4 of 20-40-00, Aluminum Alloy Surface Touch-Up Treatment).
- (4) Touch-up primer and paint to match original.

#### 4. Aluminum Alloy Surface Touch-Up Treatment

**Note:** If there is any question as to whether or not the protective coating is removed, surface treatment shall be applied.

Warning: Alodine and solvents can cause burns and irritation when it contacts skin; proper gloves should be worn. Vapors are harmful and caustic to eyes; goggles must be worn for eye protection. Alodine is poisonous. Vapors are harmful to life or health; work should be performed with proper ventilation and / or respirators should be worn while working with solvents and alodine. Solvent cleaners are flammable.

- a) Scuff surface using 3M Scotchbrite 63 cellulose/nylon scouring pad.
- b) Wipe exposed surface with isopropyl alcohol or aliphatic naphtha. Allow area to air dry for 10 minutes. Do not touch or otherwise contaminate surface after solvent wipe.



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- Apply Alodine 1200 or equivalent with cotton swab, non-metallic brush, or by dipping. Maintain moist surface for 1-3 minutes with repeated application.
   Surface will become amber or brown in color.
- d) Irrigate surface with demineralized or distilled water to remove surface treatment chemical. Allow to air dry for approximately 1 hour.
- e) If there is any surface without color change, repeat procedure.
- f) Apply paint touch-up as required (Ref Section 20-30-00 Painting Maintenance Practices).



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# **Section 20-50-00 Mechanical Fastener Sealing Methods**

Remove existing cracked, chipped or broken existing sealing compound and thoroughly clean with solvent. Reseal using MIL-S-8802, sealing compound, mixing per manufacturer's instructions.

Seal mechanical fasteners as shown:

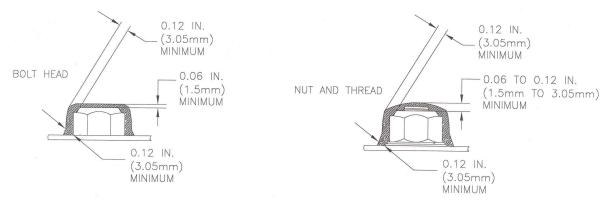


Figure 20 - 02: Mechanical Fastener Sealing



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## **Section 20-90-00 Dye-Penetrant Inspection Methods**

Warning: solvents can cause burns and irritation when it contacts skin; proper gloves should be worn. Vapors are harmful and caustic to eyes; goggles must be worn for eye protection. Vapors are harmful to life or health; work should be performed with proper ventilation and / or respirators should be worn while working with solvents. Solvent cleaners are flammable.

Use the following steps to perform dye-penetrant inspection:

1. Using cleaning solvent trichloroethane, MIL-T-81533, clean area to be inspected.

**Note:** Parts to be inspected must be dry and heated to at least 70° F (21.1° C), but not over 130° F (54.4° C).

**Note:** Manufacturer's instructions on Dye-Penetrant Kit take precedence over the following instructions.

- 2. Apply penetrant from dye-penetrant kit (ASTM E1417) by brushing, spraying, or by dipping. Allow to stand for a minimum of 2 minutes.
- 3. Remove excess penetrant with remover (available with dye-penetrant kit), or by cleaning with plain water. Allow part to dry.
- 4. Apply a light, even layer of developer from dye-penetrant kit by brushing, spraying, or by dipping. When dipping, avoid excess quantity.
- 5. Penetrant which has penetrated into cracks (or other openings) in the surface of the part will be drawn out by the developer, resulting in a bright red indication.
- 6. If part is serviceable or repairable, clean part free of penetrant and developer with trichloroethane (MIL-T-81533) cleaning solvent.



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# Chapter 21

## Section 21-00-00 Air Conditioning

### 1. Description and Operation

The Air Conditioning System Installation consists of a belt driven vapor cycle air-conditioning system using R-134a as the refrigerant. The air conditioning system provides for cabin comfort during all operations, both in the ground and in flight. During ground operations when the engines are running, cooling may be provided.

This system consists of 4 major components:

- Condenser- The condenser is located in one of two positions depending on kit part number (Ref. table 21.1). The aft mounted condenser (Ref. figure 21-01) is mounted in the tail boom mounted 5 in. above the baggage floor. The side mounted condenser is located in the right baggage compartment (Ref. figure 21-02). The EC-130 condenser is only located in the aft mounted configuration. The aft mounted condenser assembly has two blower motors, whereas the side mounted condenser assembly only has one blower motor.
- Compressor- The compressor is located aft and to the left side on main transmission deck. The belt is secured to the outside of the drive shaft, in all configurations. If designated by the kit part number (Ref. tables 21-01 & 21-02), either a smooth pulley compressor or a grooved double V-belt pulley compressor is installed.
- **Aft Evaporator** The aft evaporator is located on the right-hand upper transmission deck in all configurations.
- **Forward Evaporator** In the AS-350 series, the forward evaporator is located on the cockpit floor forward of the pilots' controls. In the EC-130 kits, it is located forward of the pedestal and mounted to the pedestal.

Controls for the air conditioning system are located around or in the instrument panel, the specific location depending on the Kit number part as described in tables 21-01 and 21-02. All kits contain a Master Control Selector, which consists of a rocker type switch labeled, "A/C", "OFF" and "FAN." Selecting the "A/C" turns on the system's dual evaporator fans, compressor and condenser blower. The second rocker switch, also included with every kit, is for "HIGH," "MED" and "LOW" evaporator fan speed selection for the forward cockpit. An additional 2 position switch for the aft evaporator fan speed "HI/LOW" is present depending on the kit part numbers and the switch is located per that kit.



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## Table 21-1 Air Condition System Installation Kit Part Number Description AS-350 Series

|                   | AS-350 Series   |
|-------------------|---|
| BASE KIT NUMBERS: |   |
| 350-00-011-HP     | AEC Basic Configuration Side Mounted Condenser (Ref Figure 21-01) |
| 350-00-031-HP     | AEC Basic Configuration Aft Mounted Condenser (Ref Figure 21-02)  |

# Table 21-2 Air Condition System Installation Kit Part Number Description EC-130 Series

| EC-130B4                                   |  |  |
|--|--|--|
| BASE KIT NUMBER:                           |  |  |
| 130-00-031-HP*                             | Aft Mounted Condenser (Ref Figure 21-02) |  |
| CUSTOM CONFIGURATIONS:                     |  |  |
| Corporate Configuration (Ref Figure 21-05) |  |  |
|  |  |  |



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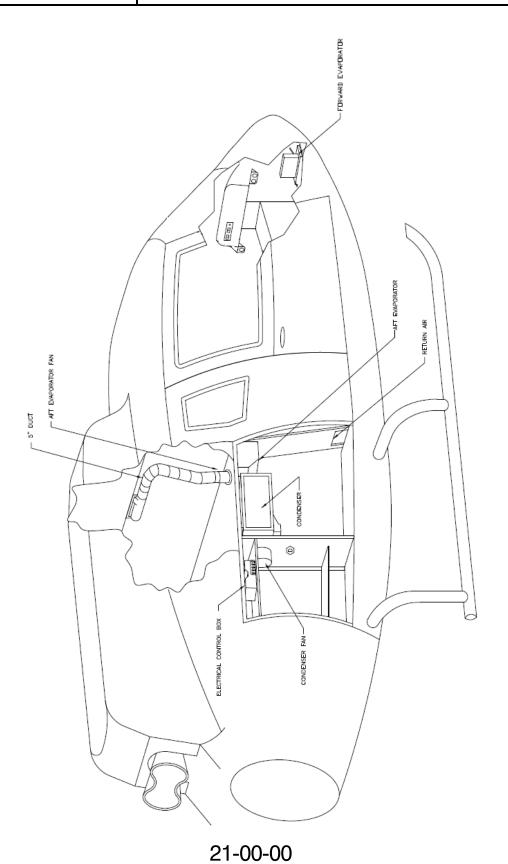


Figure 21-01: Equipment Locations for Air Conditioning System with the -011 Configuration (Side Mounted Condenser)



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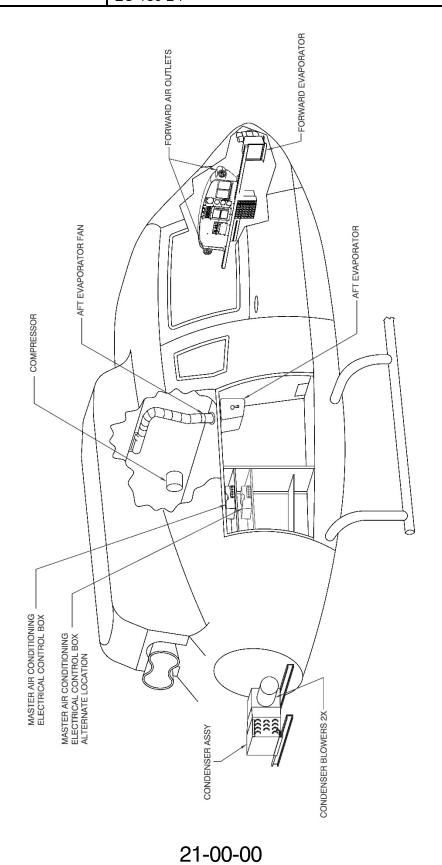


Figure 21-02: Equipment Locations for Air Conditioning System with the -031 Configuration (Aft Mounted Condenser)



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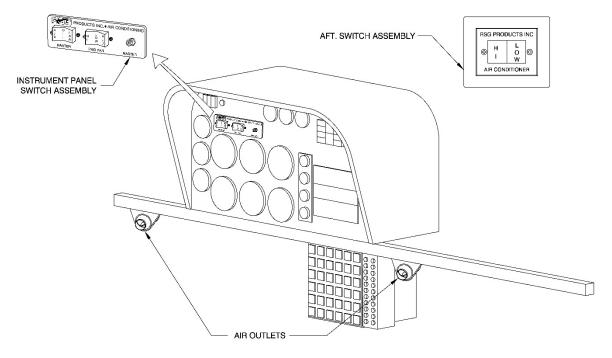
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(AS350 Old configuration)

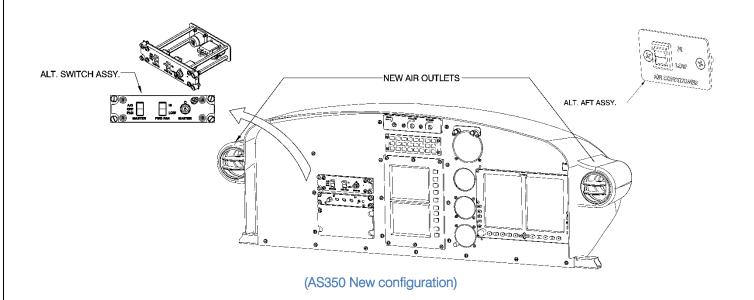


Figure 21 - 03: AEC Basic Configuration (Top - Old config. / Bottom - New config.)



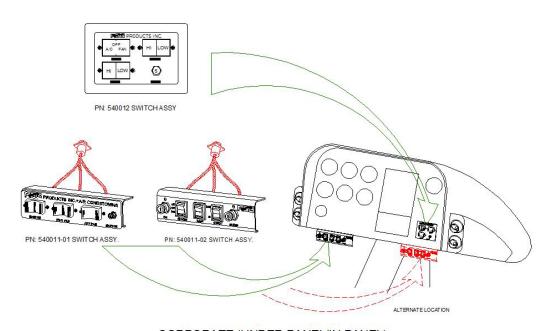
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CORPORATE (UNDER PANEL/IN PANEL)

Figure 21 - 05: Corporate Configuration (EC130)



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#### 2. Removal/ Installation Forward Evaporator

(Ref. figures 21-06 and 21-07)

#### a) Removal

- 1) Access forward evaporator per Section 6-00-00 Dimensions and Access.
- Connect refrigerant reclaimer to system in accordance with Section 21-00-00 and remove coolant from system. Comply with all Federal, State, and Local rules governing refrigerant handling.
- 3) Remove bolts securing evaporator.
- 4) Remove evaporator assembly.
- 5) Support evaporator while removing lines and other duct work.
- 6) Remove evaporator from aircraft.
- 7) Cap all open lines on unit and aircraft.
- 8) Disconnect electrical connections and remove evaporator fan.

#### b) Installation

- 1) Reinstall fan in aircraft and connect electrical connections.
- 2) Position evaporator against fan assembly and loosely install with securing hardware. Secure mounting hardware.
- 3) Reinstall drain line.
- 4) Connect duct work.
- 5) Ensure refrigerant O-rings are installed and in good condition. Replace as necessary. Oil all O-rings and fittings with refrigerant oil of the same type listed on the compressor. Torque refrigerant lines: #6 11-13 ft./lbs.; #8 15-20 ft./lbs.; #10 21-27 ft./lbs.
- 6) After completing other system functions and maintenance, charge system in accordance with Section 12-10-00.
- 7) Check for leaks per section 12-30-00



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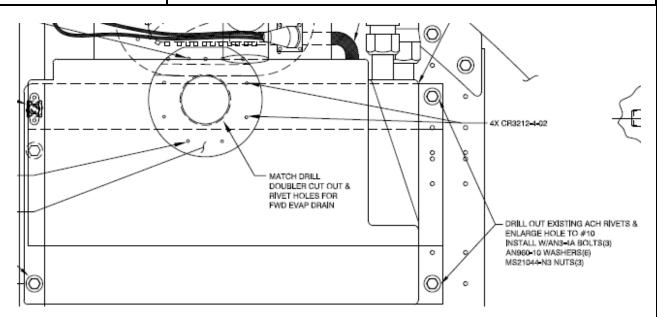


Figure 21 - 06: Forward Evaporator (AS-350)

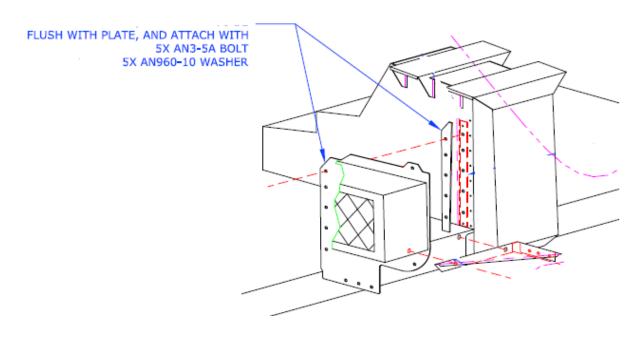


Figure 21 - 07: Forward Evaporator (EC-130)



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#### 3. Removal/ Installation Aft Evaporator

(Ref Figure 21-08)

#### a) Removal

- 1) Access aft evaporator (Ref. Section 6-00-00 Dimensions and access) and remove electrical connections.
- 2) Reclaim refrigerant in system in accordance with Section 12-10-00, to remove coolant from system.
- 3) Support evaporator while removing lines and duct work.
- 4) Cap all open lines on unit and aircraft.

#### b) Installation

- 1) Reinstall fan/evaporator and connect electrical connections.
- 2) Position evaporator and loosely install with securing hardware. Secure mounting hardware.
- 3) Reinstall drain line.
- 4) Connect duct work.
- 5) Ensure refrigerant O-rings are installed and in good condition. Replace as necessary. Oil all O-rings and fittings with refrigerant oil of the same type listed on the compressor. Torque refrigerant lines: #6 11-13 ft./lbs.; #8 15-20 ft./lbs.; #10 21-27 ft./lbs.
- 6) After completing other system functions and maintenance, charge system in accordance with Section 12-10-00.
- 7) Check for leaks per section 12-30-00.



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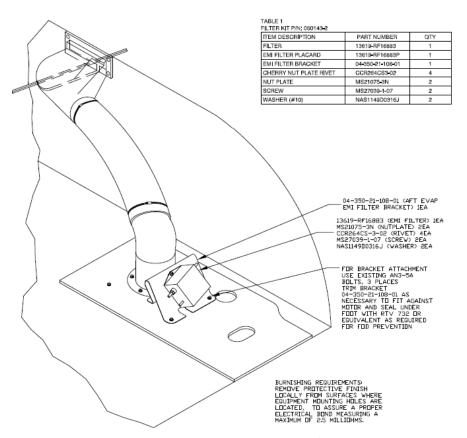


Figure 21 - 08: Aft Evaporator

#### 4. Removal / Installation - Condenser

(Ref figures 21-09 and 21-10)

- a) Removal
  - 1) Access the condenser (Ref Section 6-00-00 Dimensions and Access)
  - 2) Reclaim refrigerant in system in accordance with Section 12-10-00, to remove coolant from system.
  - 3) Remove hardware securing condenser assembly. Disconnect blower wires and refrigerant hoses.
  - 4) Remove condenser and cap all open lines on condenser and airframe.



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#### b) Installation

- 1) Place condenser back in location.
- 2) Loosely install all hardware securing condenser assembly. Tighten mounting hardware only after all other hardware is installed.
- Remove protective caps from refrigerant lines. Inspect that O-rings are installed and in good condition. Oil all O-rings and fittings with refrigerant oil of the same type listed on the compressor.
- 4) Install refrigerant lines. Torque refrigerant lines as follows: #6 11-13 ft./lbs.; #8 15-20 ft./lbs.; #10 21-27 ft./lbs. Do not over tighten.
- 5) Charge system in accordance with Section 12-10-00
- 6) Install 5" duct P/N: 060004



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BURNISHING REQUIREMENTS: REMOVE PROTECTIVE FINISH LOCALLY FROM SURFACES WHERE EQUIPMENT MOUNTING HOLES ARE LOCATED, TO ASSURE A PROPER ELECTRICAL BOND MEASURING A MAXIMUM OF 2.5 MILLIOHMS.

OPTIONAL INSTALL FOR NOISE REDUCTION WHEN BRUSHLESS MOTORS ARE INSTALLED; P/Ns: IFSS 050143 DCB, -1 DCB, -2 DCB, AND -3 DCB.
INSTALL THE FOLLOWING, MAINTAINING BURNISHING REQ: 13619-RF16883 (EMI FILTER) 2EA
MS27039-0807 (SCREW) 4EA
NAS620-8L (WASHER) 4EA

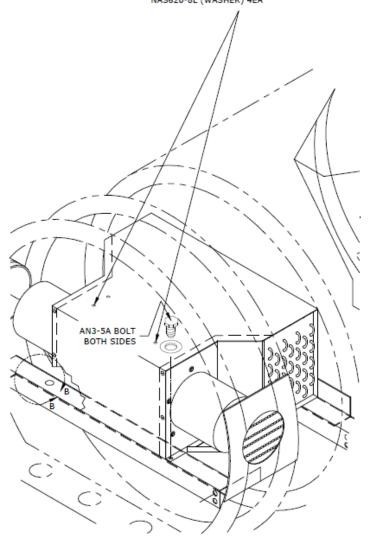


Figure 21 - 09: Aft Mounted Condenser (AS-350, EC-130)



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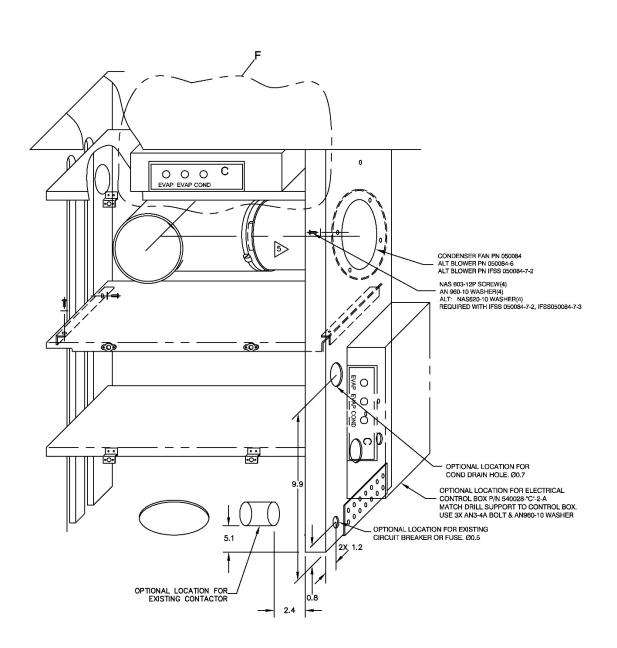


Figure 21 - 10: Side Mounted Condenser (AS-350)



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#### 5. Removal / Installation - Compressor

(Ref figure 21-11)

#### a) Removal

- 1) Access the compressor (Ref Section 6-00-00 Dimensions and Access)
- 2) Reclaim refrigerant in system in accordance with Section 12-10-00, to remove coolant from system.
- 3) Remove refrigerant lines from compressor and install protective caps to protect from foreign material entering system and compressor.
- 4) Disconnect drive belt to compressor.
- 5) Remove bolts securing compressor to mount and remove compressor.

#### b) Installation

- 1) Install compressor loosely on support frame with attaching hardware.
- 2) Install drive belt.
- 3) Tighten compressor bolts allowing compressor to "Seek" its own natural position on the frame. Tighten compressor belt tensioning bolt to 50 lbs. belt tension for PN 060018-1 Flat Belt, or 30 lbs. tension for PN 060005 Grooved Belt.
- 4) Tighten and safety all compressor mounting bolts.
- 5) Remove protective caps from refrigerant lines and compressor. Inspect the O-rings from installation and condition. Replace as necessary.
- 6) Oil all fittings and O-rings.
- 7) Install refrigerant lines.
- 8) Torque refrigerant lines: #6 11-13 ft./lbs.; #8 15-20 ft./lbs.; #10 21-27 ft./lbs. Do not over tighten.
- 9) Charge system in accordance with Section 12-00-00.
- 10) Install previously removed cowlings.



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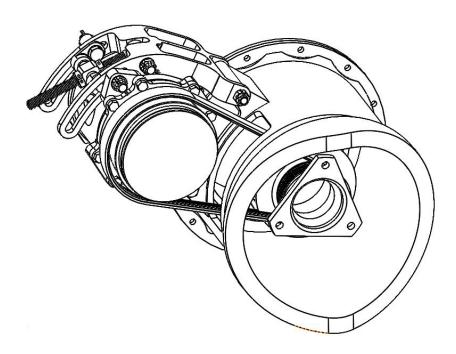


Figure 21 - 11: Compressor



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#### 6. Troubleshooting guide

| Symptoms   | Trouble   | Cause   | Correction  |
|--|---|---|---|
| -Insufficient cooling -Low-side pressure too low -High -side pressure too low -Air in ducts only slightly cool   | Low or partial refrigerant charge                   | Leak  | Find and fix the leak. If there was a loss of oil, be sure to check to compressor oil level. Evacuate and recharge per section 12.10.00   |
| - Insufficient cooling during hottest part of the day or during extended flying Low-side pressure normal, though it may be too low or even a vacuum - High-side pressure normal, though it may be low-at the same time low side is low - Air in the ducts is usually cold, but becomes warm when pressure reading drop | Excessive<br>moisture in<br>the system              | The desiccant in the drier/receiver is saturated                          | Replace or rebuild the receiver/drier. Evacuate and recharge per section 12.10.00   |
| - Insufficient cooling - Low-side pressure normal, but does not drop when the clutch cycles - High-side pressure high - Air in ducts only slight cool  | Air in the<br>System                                | Refrigerant contains<br>non-condensable in<br>the form of air<br>moisture | Leak test, watch for bad compressor seals. Drain the system. Repair leaks as needed. Replace or rebuild the receiver-drier. Check the compressor oil. Evacuate and recharge per section 12.10.00. |
| <ul><li>No cooling</li><li>Low-side pressure too high</li><li>High-side pressure too high</li><li>Liquid line very hot</li><li>Air in ducts is warm</li></ul>  | Condenser<br>malfunction<br>or system<br>overcharge | Condenser<br>malfunction or system<br>overcharge                          | Evacuate and recharge per section 12.10.00 or replace condenser.  |



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#### Section 21-10-00 Illustrated Parts List

#### 1. General

This section contains information on parts for the Air Conditioning System Installation, for use in ordering replacements if necessary.

## **Air Outlets**



RSG PN: 520071-1
Condenser Air Intake
Assembly Low Profile
(Sliding Door)

AS350

RSG PN: 500001 Left Side Air Outlet

EC130

RSG PN: 500002
Right Side Air Outlet



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### **Air Outlets**



RSG PN: 510259-3 **Air Outlet Assembly** 

AS350 4



EC130 <



**RSG PN: 520156HP-01** Air Outlet L.H.

AS350 4



EC130



**RSG PN: 520157HP-01** Air Outlet R.H.





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# **Blower Motors**





#### RSG PN:IFSS 050143-2 DCB -3 DCB

5" Vane Axial Blower Assembly

AS350



EC130 4



RSG PN: 050052-1
Blower Motor,
Modified Right Half

AS350 4



RSG PN: 490017-1-02
Aft Evaporator Fan
Assembly

AS350 4





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## **Blower Motor Part**



RSG PN: 040004-8 Fan Wheel CW

AS350 4





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### **Compressors**



RSG PN: 590008 Compressor Assembly

AS350



EC130



RSG PN: 590008-1
Compressor
Assembly

AS350



EC130

## **Compressor Parts**



RSG PN: 050033 Coil, 24 VDC

AS350





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### **Compressor Parts**



RSG PN: 060005 24.3" 4 Groove Serpentine Belt

AS350



EC130



RSG PN: 060018 25-1/4" RSG PN: 060018-1 25" Flat Belt

AS350 4





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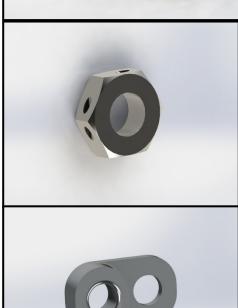
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### **Compressor Bracket/Parts**







RSG PN: 04-130-21-101-01
Compressor Mount
Bracket

RSG PN: 04-130-21-102-01
Compressor Mount
Tension Bolt

AS350 EC130

RSG PN: 04-130-21-104-01

Jam Nut Drilled

AS350 EC130

RSG PN: 04-130-21-105-01 Compressor Clamp

AS350 EC130



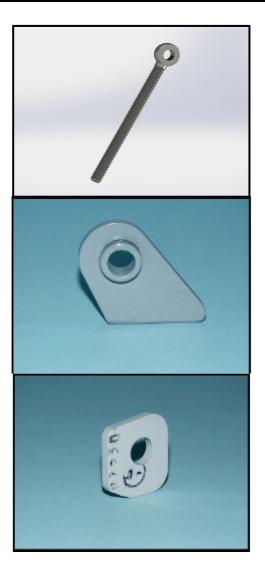
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### **Compressor Bracket/Parts**



**RSG PN: 2434K39 Threaded Rod End** 

AS350

EC130 4

RSG PN: 530100-1 Strap, Housing Mod **Assembly** 

AS350



EC130

RSG PN: 300363-2 **Compressor Shim, Upper** (Alt: 261155 not shown)

AS350 4





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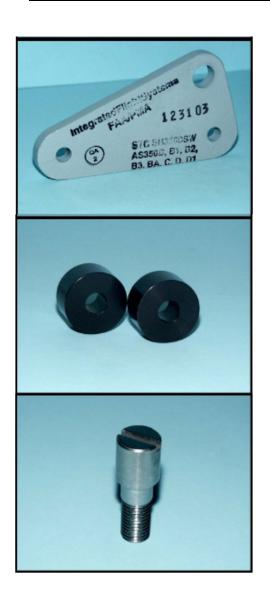
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## **Compressor Bracket/Parts**



RSG PN: 300067-1
Compressor Standoff

AS350



EC130

RSG PN: 261007 Bushings, SD507

AS350



EC130

RSG PN: 300095

**Compressor Pin** 

AS350





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## **Condenser/Evaporator**



RSG PN: 090002-O Expansion Valve

AS350

EC130

RSG PN: 090016-5
Receiver/Drier

AS350



EC130

RSG PN: 550003-O
Aft Condenser
Assembly

EC130 <



RSG PN: 550007-1
Side Condenser
Assembly

AS350 4





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# **Condenser/Evaporator**

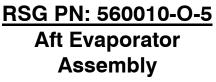


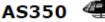
















RSG PN: 560016-O-1
Aft Evaporator
Assembly



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# **Condenser/Evaporator**



RSG PN: 560025-O-01

<u>-02</u>

Fwd Evaporator Assembly

AS350 4





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# **Electrical Parts**









RSG PN: 540009
Electrical Box
Assembly

EC130

RSG PN: 540028-C-1-A

-C-2-A

Electrical Box Assembly

AS350 🖛

RSG PN: 540011-01

<u>-02</u>

Instrument Panel Switch

EC130

RSG PN: 540044-5 Harness Assembly

AS350 🕰



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### **Electrical Parts**



RSG PN: 540044-8-01

Instrument Panel Switch

AS350

RSG PN: 540044-9 5 amp Breaker Assembly

RSG PN: 540089-01

<u>-02</u>

Aft Evaporator Switch Assembly



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### **Electrical Parts**



RSG PN: 050000 **Switch with Button** 

AS350 4



EC130 4

**RSG PN: 050001 Switch without Button** 

AS350



EC130 4

**RSG PN: 050006** 

AS350 4



RSG PN: 050006-2 **Switch with Button** 

**Switch without Button** 

AS350 4







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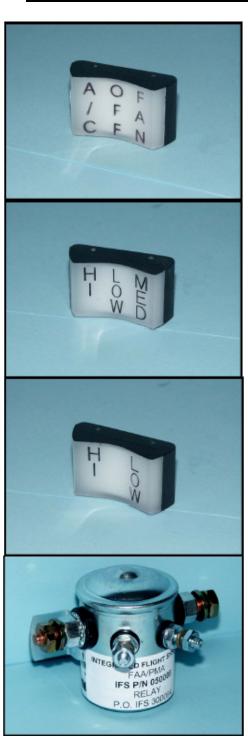
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### **Electrical Parts**



RSG PN: 050007-1 Button

AS350 4

EC130

RSG PN: 050007-3 Button

AS350

RSG PN: 050007-4 Button

AS350

EC130

RSG PN: 050008 Relay

AS350



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### **Electrical Parts**



RSG PN: 050015-2 50 Amp Limiter

AS350 4



EC130 🥰

RSG PN: 050026 Timer

AS350



EC130 4

RSG PN: 050107 Low Pressure Switch

AS350



EC130

RSG PN: 090004 High Pressure Switch

AS350





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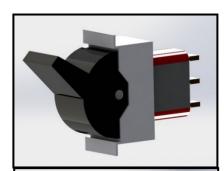
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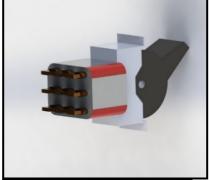
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## **Electrical Parts**

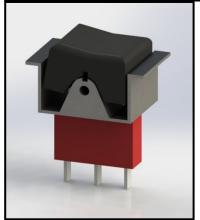






RSG PN: 7301J21ZGE22 Switch, 3PDT, 3 POS.





RSG PN: 7301J11ZQE22 Switch, SPST, 2 POS.



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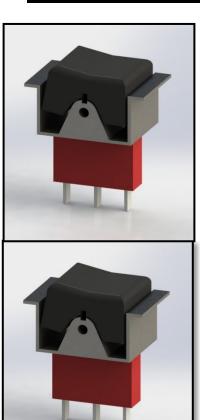
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## **Electrical Parts**



RSG PN: 7101J51ZQE22
Switch, SPST, 2 POS.
EC130

RSG PN: 7203J51ZQE22 Switch, DPDT, 2 POS. EC130



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### EC130 Hoses



RSG PN: 570103
High Pressure Hose #6
Assembly

EC130 👄

RSG PN: 570104
Condenser to
Receiver/Drier Hose #6
Assembly

EC130

RSG PN: 570105
Return Hose #10
Assembly



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### **AS350 Hoses**



RSG PN: 570067-O-A
Hose Assembly #6
Condenser to Drier

AS350

RSG PN: 570070-O-A-01
Hose Assembly #8
Compressor Discharge

AS350

RSG PN: 570070-O-A-02
Hose Assembly #8
Compressor Discharge

AS350

RSG PN: 570020-O-A
Hose Assembly #6
Condenser to Drier



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### **AS350 Hoses**



RSG PN: 570024-O-A-01
Hose Assembly #8
Compressor Discharge

AS350 🐲

RSG PN: 570024-O-A-02
Hose Assembly #8
Compressor Discharge

AS350

RSG PN: 570072-O-A
Hose Assembly #6 Fwd
Evaporator to Receiver/Drier



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#### **AS350 Hoses**



RSG PN: 570087-O-A-01
Hose Assembly Fwd
Evaporator to Aft Evaporator
to Compressor

AS350

RSG PN: 570087-O-A-02
Hose Assembly Fwd
Evaporator to Aft Evaporator
to Compressor



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#### **BRUSHLESS BLOWER MOTORS**



RSG PN: IFSS 050084-7-2
7" DC Brushless Blower
Assembly Short



RSG PN: IFSS 050084-7-3
7" DC Brushless Blower
Assembly Long

AS350 EC130



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#### LIST OF CONSUMABLE MATERIALS

| DESCRIPTION                         | P/N                 | VENDOR/SPECIFICATION                |
|-------------------------------------|---------------------|-------------------------------------|
| THREAD LOCK                         | 242                 | LOCTITE                             |
| ADHESIVE                            | 1300L               | 3M                                  |
| Cleaning cloth, Low-Lint            |                     | Commercial                          |
| Mineral Spirits, Cleaning Solvent   |                     | MIL-PRF-680, TYP II<br>OR ASTM-D235 |
| Alodine                             | Alodine 1200        |                                     |
| Alodine                             | Iridite 14-2        |                                     |
| Paint Stripper                      | Turco 5873          |                                     |
| Polyamide Paint Primer              |                     |                                     |
| Dye Penetrant Kit                   |                     |                                     |
| Acetone                             |                     | ASTM-D329                           |
| Isopropyl Alcohol                   |                     | TT-I-735                            |
| Trichloroethane                     |                     | MIL-T-81533                         |
| Nylon Scouring Pad                  | (3M) Scotchbrite 63 | 3M                                  |
| 240 Grit Sandpaper                  |                     | Commercial                          |
| 320 Grit Sandpaper                  |                     | Commercial                          |
| 240 Grit Aluminum Oxide<br>Abrasive |                     | Commercial                          |
| Cloth                               |                     | Commercial                          |
| Sealant                             |                     | MIL-S-8802                          |
| Adhesive transfer tape 950 (2")     | 70-0060-3057-4      | 3M                                  |
| Refrigerant                         | R134a               |                                     |

#### **Chapter 98**

#### **Section 98-00-00 Wiring Diagrams and Plumbing Schematics**

This section contains all applicable wiring diagrams and plumbing schematics.

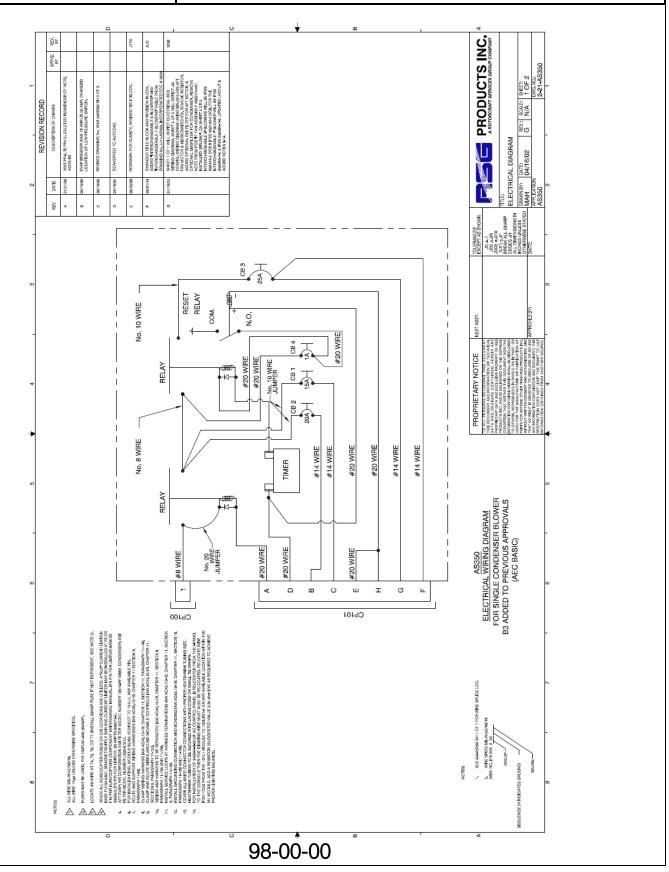


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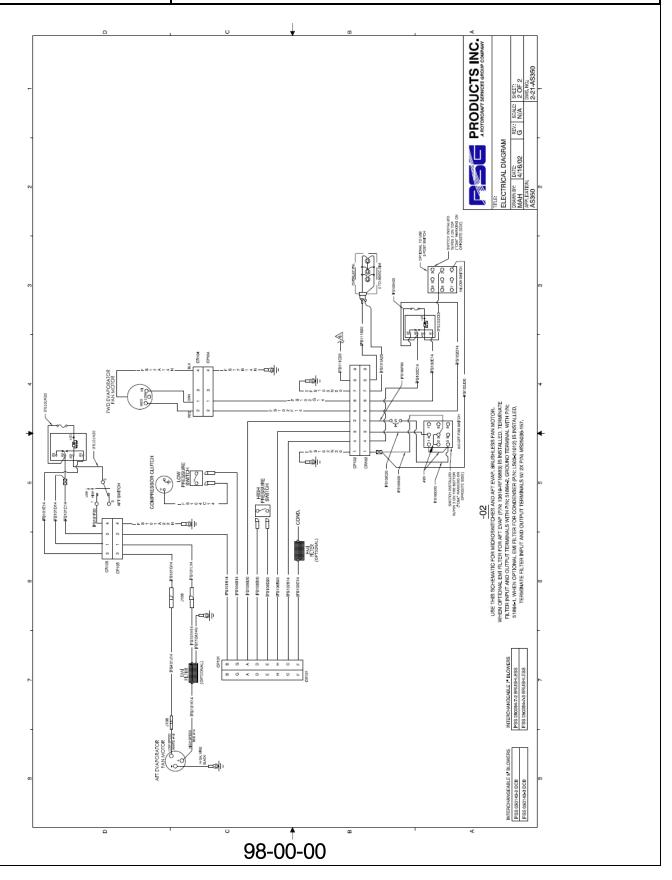




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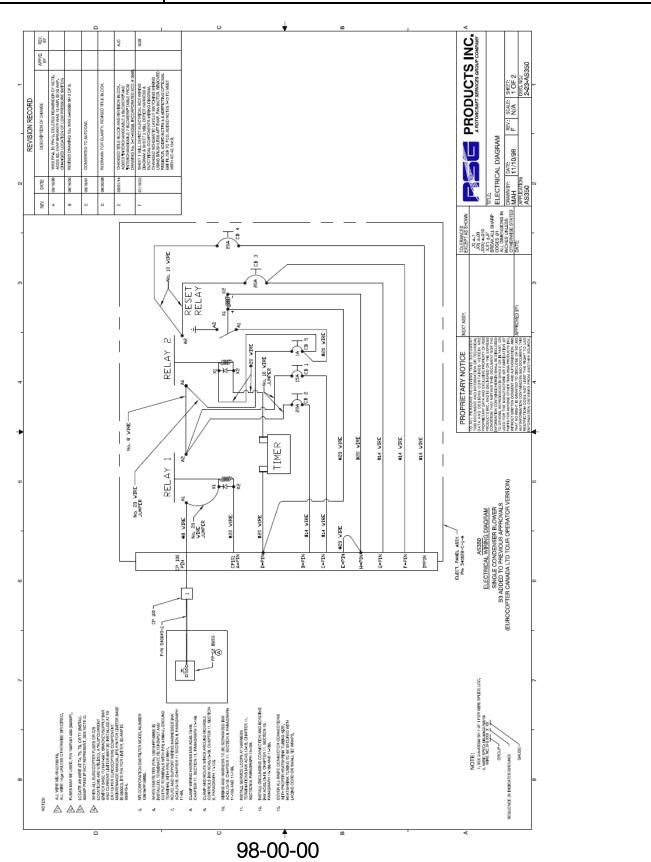




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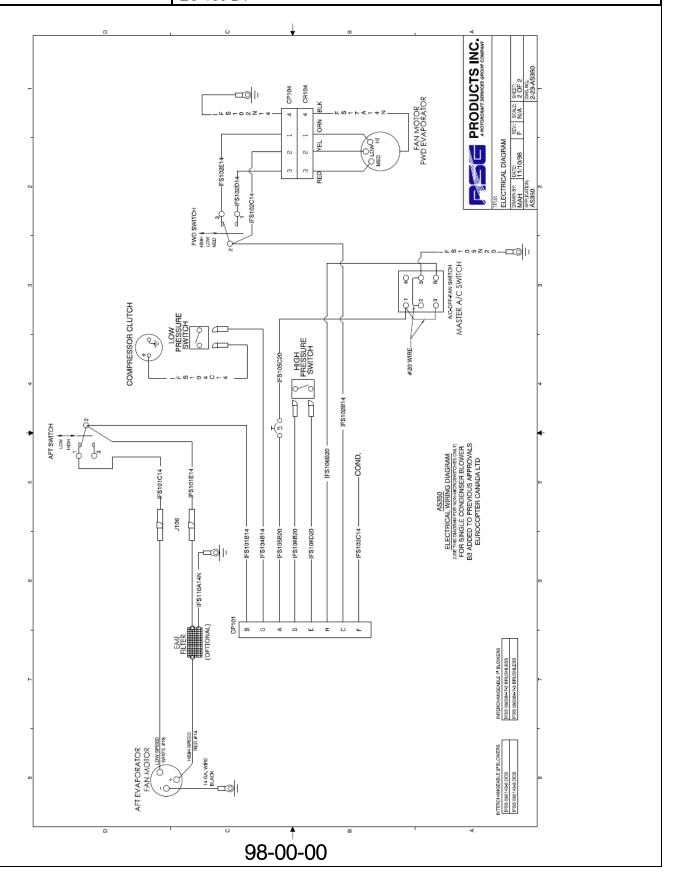


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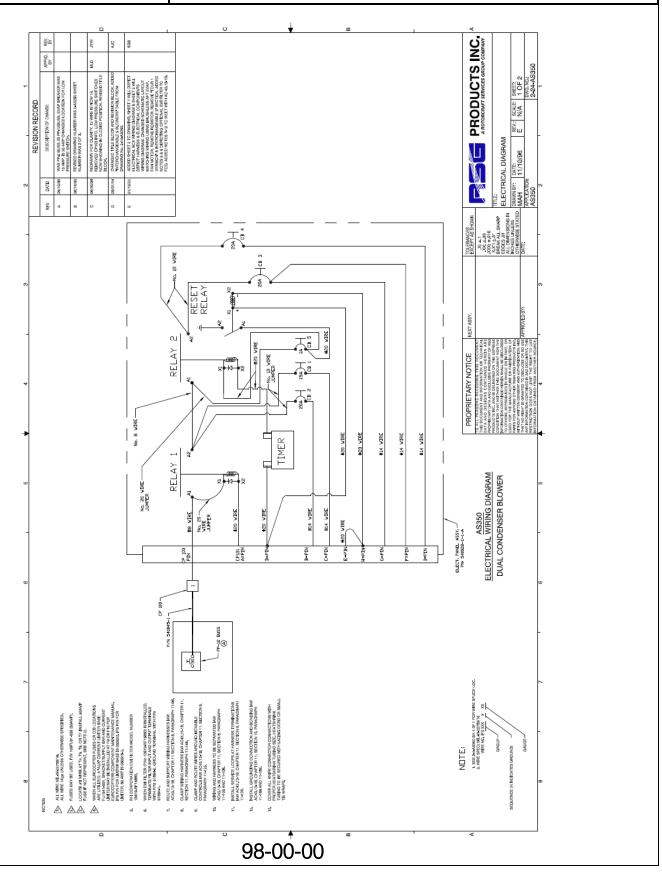




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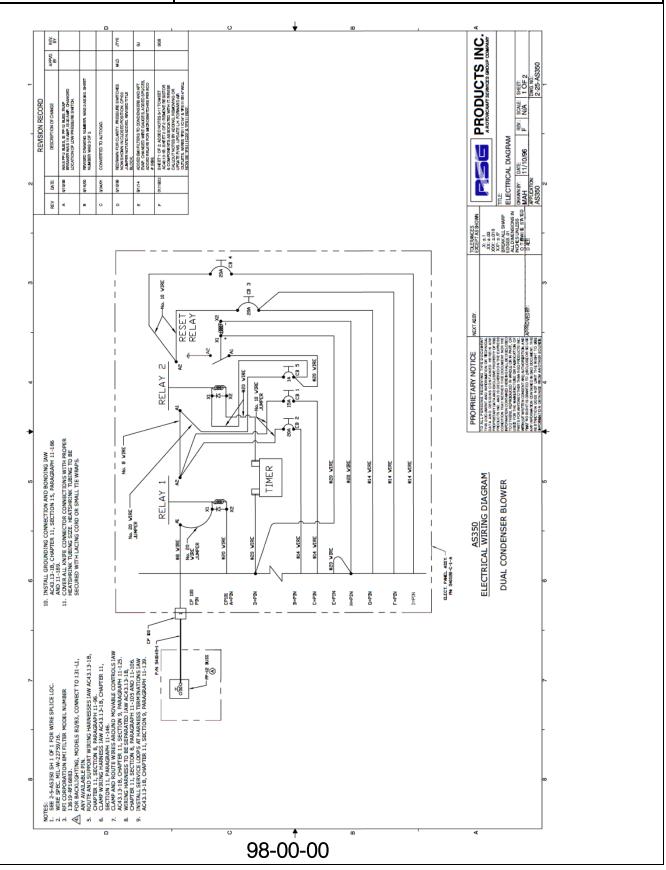
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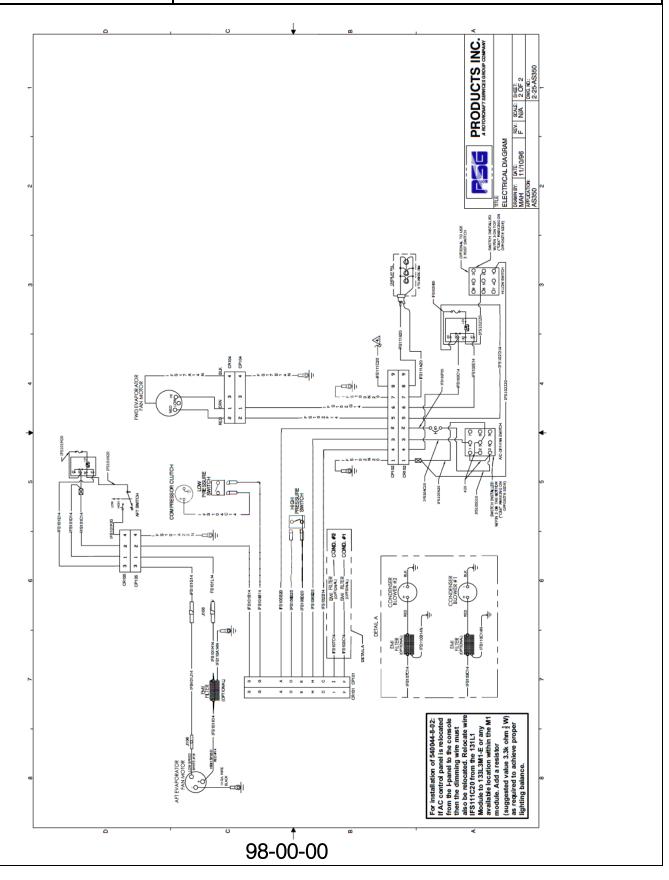


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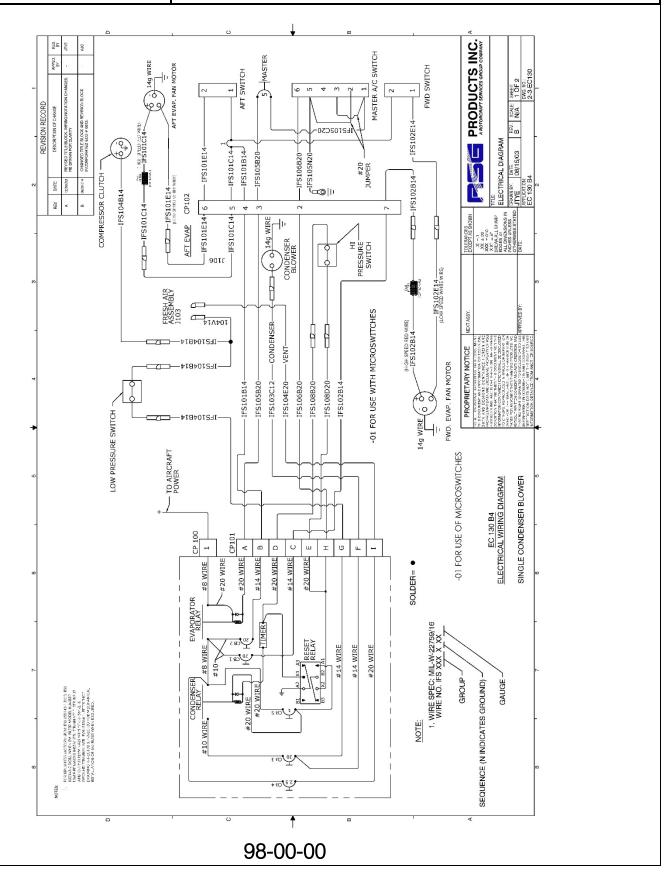
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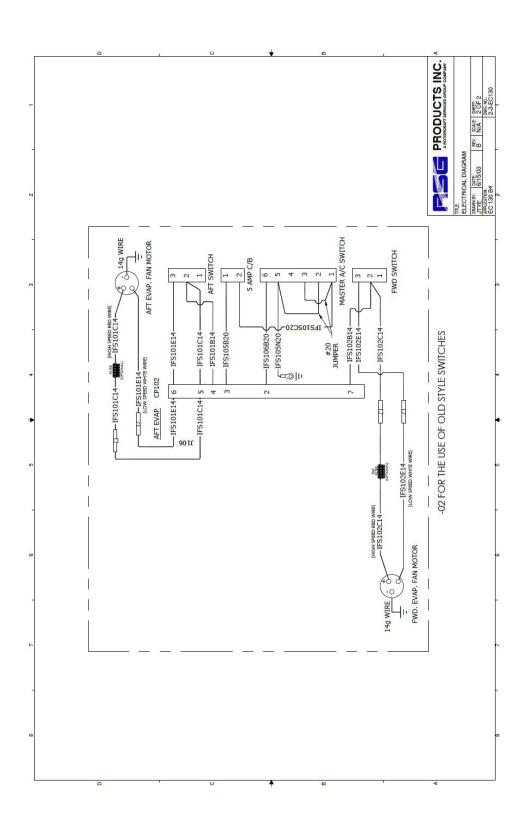




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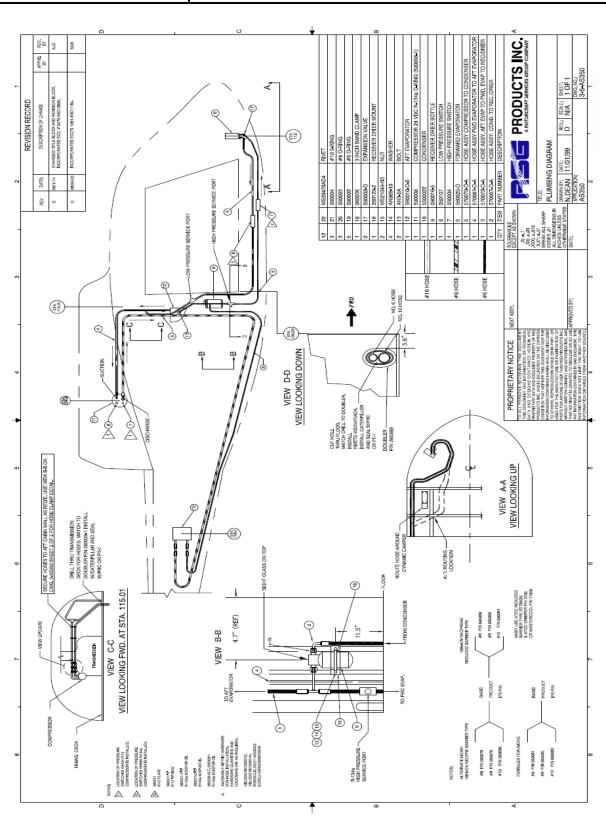
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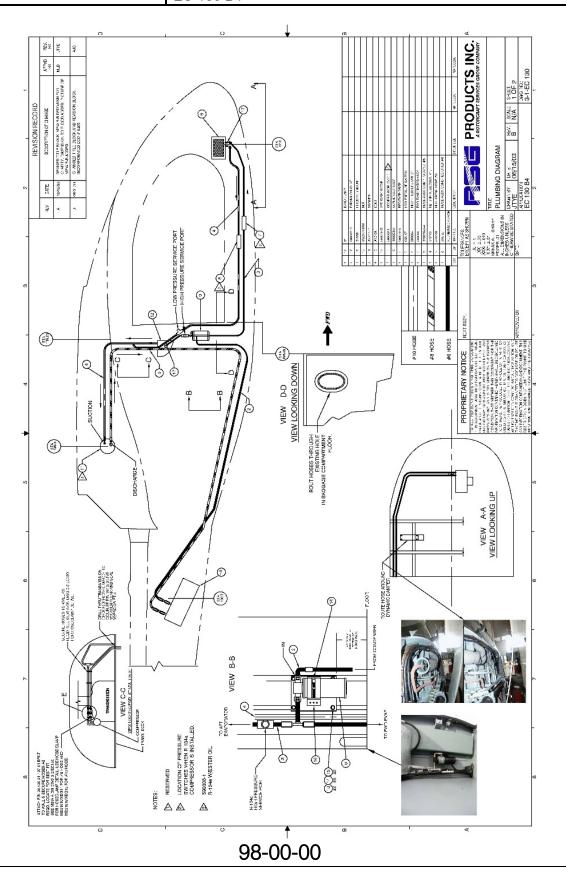


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### **APPENDIX A** Weight and Balance

#### PERTAINS TO KIT #350-00-011 Weight (#) X Arm (") = Moment ("#)

| ITEM                            | WEIGHT (#) | ARM (") | MOMENT ("#) |
|---------------------------------|------------|---------|-------------|
| Forward Evaporator Assembly     | 13.50      | 19.00   | 256.50      |
| Forward Air Outlets             | .50        | 31.32   | 15.66       |
| Aft Evaporator and Return Air   | 11.50      | 120.00  | 1380.00     |
| Aft Evaporator Blower           | 5.00       | 120.85  | 604.25      |
| Condenser Coil and Mount        | 19.50      | 133.80  | 2609.10     |
| Condenser Blower and Mount      | 14.00      | 148.60  | 2080.40     |
| Compressor and Mount            | 17.00      | 147.80  | 2512.60     |
| Electrical Relay Panes          | 4.0        | 153.70  | 614.80      |
| Refrigerant, Hoses and Fittings | 7.50       | 76.90   | 576.75      |
| Sub Total:<br>(Air Conditioner) | 92.5       |         | 10650.06    |



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#### PERTAINS TO KIT #350-00-031 Weight (#) X Arm (") = Moment ("#)

| ITEM   | WEIGHT (#) | ARM (") | MOMENT ("#) |
|--|------------|---------|-------------|
| Forward Evaporator Assembly  | 13.50      | 19.00   | 256.50      |
| Forward Air Outlets  | .50        | 31.32   | 15.66       |
| Aft Evaporator and Return Air  | 11.50      | 120.00  | 1380.00     |
| Aft Evaporator Blower  | 5.00       | 120.85  | 604.25      |
| Condenser Assy. & Mount w/<br>Dual condenser blowers and closeout<br>panel | 40.00      | 201.80  | 8072.00     |
| Compressor and Mount   | 17.00      | 147.80  | 2512.60     |
| Electrical Relay Panes   | 4.0        | 153.70  | 614.80      |
| Refrigerant, Hoses and Fittings  | 7.50       | 76.90   | 576.75      |
| Sub Total:<br>(Air Conditioner)  | 99.00      |         | 14032.56    |



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#### PERTAINS TO KIT # 130-00-031 Weight (#) X Arm (") = Moment ("#)

| ITEM                                    | WEIGHT (#) | ARM (") | MOMENT ("#) |
|---|------------|---------|-------------|
| FWD. EVAP ASSY W/ MOTOR                 | 14.0       | 24.0    | 336         |
| FWD AIR OUTLETS (x2) W/ DUCTING         | 3.0        | 33.29   | 99.87       |
| AFT EVAP W/ MOTOR & DUCTS               | 16.0       | 120.5   | 1928        |
| CONDENSER ASSY W/ MOTOR & AIR DISCHARGE | 33.0       | 223.3   | 7368.9      |
| COMPRESSOR W/ MOUNTING KIT              | 17.5       | 147.8   | 2586.5      |
| ELECTRICAL CONTROL BOX                  | 4.0        | 153.7   | 614.8       |
| REFRIGERANT HOSES                       | 5.0        | 76.9    | 384.5       |
| ELECTRICAL HARNESS                      | 3.5        | 70.0    | 245         |
| INSTALLATION TOTALS                     | 96.0       |         | 13563.57    |

# Step 13

# **Parts Break Down**

Date: 08/13/22

Section 13: Parts Break Down Page 1 of 6

# PARTS LIST (PARTIAL)

IN

**ALL AS350 SERIES** 

**FOR** 

KIT # 350-00-011-HP

#### with

(SINGLE CONDENSER BLOWER)

"ESTER OIL EQUIPPED COMPRESSOR" Model: SD-507

Revised: August 13, 2022

June 1, 2015 January 28, 2011 November 4, 2009 August 28, 2006 February 1, 2002 March 1, 2001 August 6, 2001

Date: 08/13/22

Section 13: Parts Break Down Page 2 of 6

### **MASTER PARTS LIST**

**AS350 SERIES** 

08/13/22

KIT #350-00-011HP

SINGLE CONDENSER BLOWER

| <u>ITEM</u> | <u>DESCRIPTION</u>   | PART#                    |
|-------------|--|--------------------------|
| 1.          | BELT - FLAT  | 060018-1<br>060018 (Alt) |
|             | BELT - GROOVED   | 060005                   |
| 2.          | SD-507 COMPRESSOR ASSEMBLY<br>COMPLETE W/ FLAT PULLEY,<br>24 VDC COIL<br>(FOR USE WITH R-134a ONLY,<br>"ESTER oil equipped)    | 590008                   |
|             | SD-507 COMPRESSOR ASSEMBLY<br>COMPLETE W/ GROOVED PULLEY,<br>24 VDC COIL<br>(FOR USE WITH R-134a ONLY,<br>"ESTER oil equipped) | 590008-1                 |

#### **COMPRESSOR PARTS**

FOR: SD-507 W/ 5.0" CLUTCH

3. **24 VDC COIL (GREEN WIRE)** 050033

Date: 08/13/22

Section 13: Parts Break Down Page 3 of 6

### **EVAPORATOR BLOWER PARTS**

| <u>ITEM</u> | DESCRIPTION   | PART#             |
|-------------|---|-------------------|
| 4.          | <b>5" VANE AXIAL BLOWER ASSY.</b> (SINGLE FLANGE W/NYLON BLADE) For: AFT EVAPORATOR BLOWER ASSY P/N 490017-1-02 | IFSS 050143-2 DCB |
| 5.          | MOTOR, FORWARD EVAPORATOR 24VDC, single shaft, right hand   | 050052-1          |
| 6.          | <b>WHEEL,</b> FORWARD EVAPORATOR, fan, metal, CC rotation, 5/16" bore   | 040004-8          |
|             | CONDENSER BLOWER PARTS  |                   |
| 7.          | 7" DC BRUSHLESS BLOWER ASSY. (Short Housing)  | IFSS 050084-7-2   |
| 8.          | <b>7" DC BRUSHLESS BLOWER ASSY.</b> (Long Housing)  | IFSS 050084-7-3   |

Date: 08/13/22

Section 13: Parts Break Down Page 4 of 6

| <u>ITEM</u> | <u>DESCRIPTION</u>   | PART#      |
|-------------|--|------------|
| 9.          | RECEIVER/DRIER<br>1991 & ON – "O" RING TYPE                        | 090016-5   |
| 10.         | EXPANSION VALVE<br>1991 & ON – FWD. AND AFT EVAP.<br>"O" RING TYPE | 090002-"O" |
| 11.         | HIGH PRESSURE SAGERY SWITCH (ALL YEARS)                            | 090004     |
| 12.         | LOW PRESSURE SAFETY SWITCH   | 050107     |

# Reference Illustrated Parts List section 21-10-00 in ICA for additional replacement parts

Date: 08/13/22

Section 13: Parts Break Down Page 5 of 6

# RSG Products Inc.

# Pressure Switch Identification

for all

# vapor cycle air conditioning kits

using R-134a

Low Pressure Switch: P/N 050107

Leads are: **BLUE** in color

Mfg. P/N on switch: 20PS003MA022C007C

Opens: 7PSI Closes: 22 PSI

### **High Pressure Switch: P/N 090004**

Leads are: **BLACK** in color

Mfg. P/N on switch: 20PS002MB375K265K

Opens: 375 PSI Closes: 265 PSI

ALT. Mfg. P/N on switch: 20PS104MB350K250K

Opens: 350 PSI Closes: 250

PSI P/N 090004 (Both Types)

Date: 08/13/22

Section 13: Parts Break Down Page 6 of 6

# Step 14

# T&C/Warranty/RMA

Date: 04/22/24

Section 14: & WARRANTY/R (EFFECTIVE DATE 05/09/22) Page 1 of 7



#### Standard Terms and Conditions of Sale

- 1. Terms of Payment: Unless prior arrangements are made to establish credit terms RSG Products Inc., all sales are prepaid in full prior to shipment. Payment may be made via cash, check or electronic transfer to RSG Products Inc. prior to delivery.
- **2. Buyer's Deposit:** A 50% deposit is required to process an order for an air conditioning kit. The deposit is non-refundable and will be applied to the final price of the kit.
- **3. Taxes / Other Charges:** Prices of the specified products are exclusive of all city, state, federal and international taxes, duties, levies or charges of any kind, including, without limitation, taxes on manufacture, sales, receipts, gross income, occupation, use and similar taxes or other charges. Whenever applicable, any taxes or other charges shall be added to the invoice as a separate charge to be paid by Buyer.
- **4. Shipment and Packaging:** All products will be suitably packed, marked and shipped F.O.B. RSG Products Inc. Fort Worth Texas, in accordance with standard packaging procedures.
- **5. Delays:** RSG Products Inc. will not be liable for any delay in the performance of orders or contracts, or in the delivery or shipment of goods, or for any damages suffered by Buyer by reason of such delays.
- **6. Technical Advice:** RSG Products Inc. technical support staff is available for telephone consultation concerning the products it manufactures; however, RSG Products does not warrant or guarantee such advice.
- **7. Aircraft Variation:** Due to aircraft manufacturing variations, alterations and other factors, there are differences between aircraft of a certain make and model. Because of these variations, RSG Products Inc. does not guarantee that Buyer has purchased the correct product or that a specified product will fit the intended aircraft. Further, RSG Products does not guarantee the number of labor hours required to install its products.
- 8. Returns: All sales are final unless a return is approved at the sole discretion of RSG Products Inc. If RSG Products Inc. does agree to accept a return, 25% restocking fee will be charged for all parts returned. If RSG Products Inc. does agree to accept a return, 50% restocking fee will be charged for all AC Kits returned. All items returned to RSG Products Inc. must be sent freight prepaid and must have a return material authorization (RMA) number clearly marked on the shipping container.
- **9. No Fault Found:** If items are sent to RSG Products Inc. for evaluation and no problem is found, or if Buyer elects not to make the required repairs, then Buyer shall be responsible for the payment of \$300 evaluation fee.
- **10. Certificate of Conformity:** RSG Products Inc. will provide a Certificate of Conformity with each product assuring that the product has been manufactured according to its approved design drawings. Any additional assurances or certifications shall be at the expense of Buyer and shall be added to the invoice as a separate charge to be paid by Buyer.
- 11. Failed Products: Should any product prove defective, RSG Products Inc. will either replace the item or adjust the matter fairly and promptly, but under no circumstances shall RSG Products be liable for consequential or other damages, losses, or expenses in connections with or by reason of the use or liability to use products purchased for any purpose.
- 12. Patents: Buyer shall hold RSG Products Inc. harmless from, and release and not make claim or suit against RSG Products because of any suits, claims, losses, or other liability made against, or suffered by, Buyer arising from any claim of, or infringement of, patent, copyright, trademark, or other proprietary right, at common law, or claim of unfair trade or of unfair competition, resulting from, or occasioned by Buyer's use, possession, sale, or delivery of the products sold to Buyer by RSG Products Inc.
- 13. Warranty Registration and Claims: The terms RSG Products Inc. Limited Warranty is written on the Warranty Registration Card and published on the Rotorcraft Service Group, website <a href="www.rotorcraftservices.com">www.rotorcraftservices.com</a>. The registration form must be completed and returned to RSG Products Inc. within 1 month of receipt of a product. Failure to complete the Warranty Registration Card may result in denial of a claim. In order to process a warranty claim, complete the Warranty Claim Form found under Customer Support on our website and e-mail to <a href="mailto:info@rotorcraftservices.com">info@rotorcraftservices.com</a> or fax to +1 817 624 6603, or call RSG Products Inc. at +1 817-624 6600. A Warranty Claim without a Return Material Authorization (RMA) Number will cause delays and a possible denial of the claim.



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### **Warranty Policy**

RSG Products Inc., warrants that each of its Air Conditioning Systems (the "Equipment") shall be free from defects in material and workmanship under normal use and service until one year after its date of invoice if, and only if, installation, maintenance and operation of the Equipment is in accordance with the specifications and instructions provided by RSG Products Inc. and no substitute parts are installed in accordance with the specifications and instructions provided by RSG Products Inc. and no substitute parts are installed in the equipment without the prior written authorization from RSG Products Inc.. For the complete kit and its components, the warranty period is 12 months or 1,000 hours, whichever comes first, from the date of invoice. If the Warranty Registration Form is completed and returned within 1 month of receipt of product, warranty terms will be extended from 12 months to 18 months. In the case of new spare parts, this warranty is limited to a period of 6 months from the date of invoice. In the case of rebuilt products, this warranty is limited to a period of 3 months from the date of invoice. Any claims under this warranty shall be made to RSG Products Inc., 440 West Lane, Suite 100, Saginaw, Texas 76131, USA. Warranty is not valid unless the Warranty Registration Form is completed and returned to RSG Products Inc. prior to any claim. The Warranty Claim Request Form must be completed to receive an RMA Number and the required documentation to be returned with the Equipment. A Warranty Claim without a Return Material Authorization (RMA) Number or a completed Warranty Registration Form will cause delays and a possible denial of the claim. All claims shall be handled according to standard warranty repair procedures.

Limitations & Exclusions. This warranty shall not apply to any Equipment repaired or altered outside the Rotorcraft Services Inc. Service Department unless express prior written authorization is granted: nor shall this warranty apply to any Equipment that has been subjected to misuse or accident, as determined solely by Rotorcraft Services Inc. The sole responsibility and liability of RSG Products Inc. and your exclusive remedy under any claim arising out of, connected with, or resulting fromthis sale or the performance or breach or any condition of warranty there under, or from the manufacture, delivery, or use of the Equipment shall be the repair or replacement of defective equipment upon return of the defective equipment to RSG Products Inc. with transportation, customs and any applicable import duties prepaid and provided that an inspection by RSG Products Inc. discloses that the equipment is defective and covered by this warranty. RSG Products Inc. shall not be liable for any labor or other charges necessary to remove or reinstall the Equipment. In no event, whether as a result of a breach of contract, warranty, tort (including negligence) or otherwise, shall RSG Products Inc. be liable for any special, consequential, incidental or penal damages or expenses including but not limited to loss of profit, goodwill or revenues, loss of use of the Equipment or any associated equipment, damage to associated equipment, cost of capital, cost of substitute products, facilities or services, down time, or costs or claims of third parties for such damages or expenses.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OR REMEDIES WHETHER WRITTEN, ORAL, IMPLIED OR STATUTORY, ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, COURSE OF DEALING OR USAGE OF TRADE ARE HEREBY EXPRESSLY DISCLAIMED AND EXCLUDED. Acceptance of the Equipment by you shall constitute your acknowledgement and acceptance of the terms, provisions, limitations and exclusions set forth herein. Such term, provisions, limitations and exclusions shall not be modified, deleted or supplemented. In a case where the purchaser has negotiated warranty terms by express written agreement with RSG Products Inc. as to certain equipment, the terms of that agreement shall supersede the warranty.

**Extended Warranty.** The extended warranty that is available for a fee at time of original purchase of the new product applies an 18 month period to the foregoing warranty.



### WARRANTY REGISTRATION FORM

| DATE:                         |                     |        |
|-------------------------------|---------------------|--------|
| CUSTOMER NAME:                |                     |        |
| ADDRESS:                      |                     |        |
| CITY:                         | STATE:              | _ ZIP: |
| PHONE NUMBER: ()              | FAX NUMBER:         | ()     |
| COMPONENT NAME:               |                     |        |
| PART NUMBER:                  | SERIAL NUMBER: _    |        |
| TYPE AIRCRAFT:                | N#:                 | _S/N:  |
| AIR CONDITIONING INSTALLATION | ON DATE:            |        |
| AIR CONDITIONING INSTALLATION | ON COMPANY:         |        |
| DATE INSTALLED:               | T.T AT INSTALLA     | TION:  |
| COPY OF T.T. LOG BOOK ENTRY   | OF A/C INSTALL SIGN | N OFF. |

This Form Must be received from the Owner of the Aircraft for the warranty to be active. Warranty period extends from Date of Purchase for a period of one year or 1000 hours Subject to the limitations identified in the attached Warranty Policy; effective 1 July 2013. If warranty registration form is completed and returned within 1 month of receipt of product, warranty terms will be extended from 1 year to 1 year and 6 months.

PLEASE REVIEW RSG PRODUCTS, INC. WARRANTY POLICY PRIOR TO SUBMITTING THIS REGISTRATION FORM.

# **Return Material Authorization (RMA) Form**

|               | RMA<br>Number: |
|---------------|----------------|
|               | Date Issued:   |
| PRODUCTS INC. | Issued by:     |

| RMA Instructions: Products purchased through RSG may be returned by following                                 | Company<br>Name          |                    |                            |
|---|--------------------------|--------------------|----------------------------|
| these steps:  | Address                  |                    |                            |
| 1. Contact RSG at 817-624-6600  |                          |                    |                            |
| or info@rotorcraftservices.com to notify Customer Support of needed RMA.                                      | City                     |                    |                            |
| 2. Completely fill out this form, and email it to Customer Support,   | State                    | Zip/Postal<br>Code |                            |
| who will provide an RMA number. Print completed RMA form & place in the box with the item(s)                  | Country                  |                    |                            |
| peing returned.   | Phone                    |                    |                            |
| 3. Clearly mark the outside of the box with the RMA number.   | Number                   |                    |                            |
| 4. Ship the item(s) to:   | Contact<br>Name          |                    |                            |
| RSG Products, Inc.<br>440 West Ln., Suite 100<br>Saginaw, TX 76131  | Email                    |                    |                            |
| Please refer to RSG's Warranty<br>Policy and RMA Policy for<br>complete details regarding<br>product returns. | Return<br>Ship<br>Method | Ad                 | nipping<br>ecount<br>umber |

| product returns.                           |  |                    |                      |   |               |                                      |
|--|--|--------------------|----------------------|---|---------------|--------------------------------------|
|  |  | _                  |                      |   |               |                                      |
|  |  | F                  | Returned Ite         | n(s)  |               |                                      |
| Part Number / Serial<br>Number             | Quantity   | Purchase<br>Date   | Invoice #<br>or PO # | Reason  | for Return    | Aircraft Tail # and<br>Serial Number |
|  |  |                    |                      |   |               |                                      |
|  |  |                    |                      |   |               |                                      |
|  |  |                    |                      |   |               |                                      |
| Additional Comments:                       |  |                    |                      |   |               |                                      |
| ***You must submi                          | t a copy o   | f the logbo        | ook page w           | hen items bei   | ng returne    | d were installed***                  |
|  | Disp   | osition (To        | be complete          | ed by RSG)  |               |                                      |
| Returned to customer, fee applies)         | no problem   | found <i>(eval</i> |                      | Non-Warranty  | replacemen    | t (from stock-quote issued)          |
| Warranty rebuild (rebu                     | ilt and returne  | ed to custome      | er)                  | BER, Not rebuild-able, informed customer (eval fee applies, scrap?, RTC?) |               |                                      |
| Non-Warranty rebuild returned to customer) | Non-Warranty rebuild (quote issued - rebuilt and returned to customer) |                    |                      | Warranty Rep  | lacement (fro | om stock-no fee applies)             |
| Other:                                     |  |                    | '                    | <u>'</u>  |               |                                      |

RSG Products, Inc.

440 West Ln, Suite 100 Saginaw, TX 76131

www.rotorcraftservices.com

# RSG Products, Inc. RMA (Return Material Authorization) Policy

All returns require an RMA number. Contact RSG Products (RSG) via telephone at 817-624-6600 or email at info@rotorcraftservices.com to obtain an RMA number. Returns will be authorized in accordance with the following policy: If it is deemed that the part should be returned, a representative from RSG will send you an RMA form. Completely fill out the RMA form and email it to Customer Support to obtain an RMA number. Once RMA is issued, place copy of RMA form, and copy of logbook entries, in the box with the item(s) being returned. Clearly mark the outside of the box with the RMA number. Products will not be accepted by RSG for return if not accompanied by a valid RMA number. Return shipping for all RMA items will be at the expense of the customer.

#### **Stock Returns**

Stock returns must be made within thirty (30) days of the invoice date. Authorization of stock returns is at the sole discretion of RSG. If a stock part is authorized for return and is a customer error, 25% of the purchase price will be applied as a standard restocking charge. Parts must be new, unused, and contain all the original packaging and paperwork (certs, 8130-3, packing slip...etc). There is no restocking fee due to errors by RSG if correct order information was furnished with the original order.

#### **Warranty Returns**

Products to be returned for warranty coverage must be within the applicable warranty period. If the customer requests that a replacement be sent immediately, a rebuilt-to-new unit (if available) will be shipped to the customer. If evaluation of the returned item shows damage or misuse, or if it is found in good working order, the replacement product will be billed to the customer's account in accordance with RSG's standard payment terms. Then, once a final decision of the return is made, a credit will be issued if the warranty claim is allowed.

#### **Non-Warranty Returns**

If the customer wishes to return a part for evaluation that is no longer within the warranty period or for damage not covered by the warranty, RSG will advise the customer of the estimated cost to rebuild-to-new. Return of the product, with a purchase order noting the quoted cost to rebuild will be considered authorization to proceed, and agreement to pay for the cost to rebuild, whether or not it exceeds the original estimate. A \$300 evaluation fee will apply to all non-warranty returns. This fee will be deducted from the total quoted to rebuild the part to new.

#### **Transportation Charges**

The customer is responsible for all transportation, insurance, duties and other similar charges for all returned items, and the customer must ensure that the product is appropriately packaged. Products shipped to RSG freight collect will be refused. Shipping damages resulting from improper packaging will be the customer's responsibility. After evaluation and/or rebuild, RSG will return the product using the method stated on the front of this form. Products will not be accepted by RSG for return if not accompanied by a valid RMA number, which must be clearly marked on the outside of the package.

#### **RMA Closing Procedure**

The RMA will be closed if RSG has not received the RMA requested items from the customer within (60) days of RMA assignment date.

Once returned parts are evaluated, if deemed non-rebuildable or BER, customer will be invoiced the \$300 evaluation fee. If customer does not respond within (60) days, RMA returned part will be scrapped on site by RSG or shipped back to the customer.

By choosing to request an RMA number from RSG, it is implied that the customer has agreed to the terms of this RSG RMA Policy.

| Rev. | Desc.                           | Reviewed     | Approved    | Date       |
|------|---------------------------------|--------------|-------------|------------|
| IR   | Initial Release of New Document | K. Musgraves | G. Thompson | 05/21/2022 |
|      |                                 |              |             |            |

RSG Products Inc.

440 West Ln, Suite 100, Saginaw, TX 76131

www.rotorcraftservices.com

# Step 15

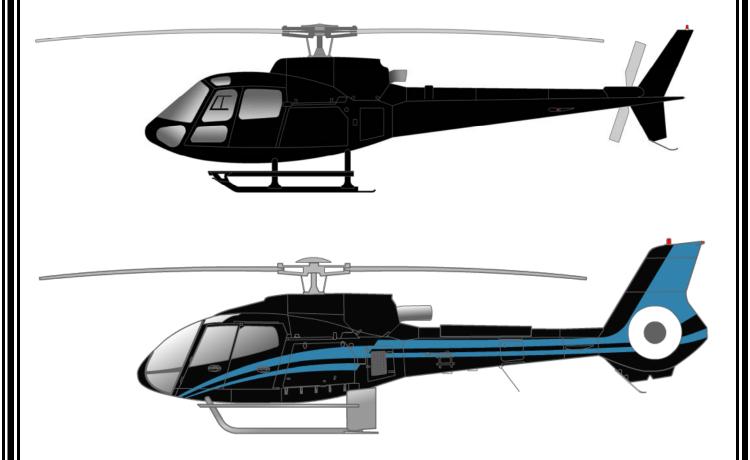
# **Trouble Shooting**

Guide

Date: 08/13/22

Section 15: TROUBLE SHOOTING GUIDE





Servicing and Trouble Shooting Guide
AS350 (Series) and EC130 B4
Air Conditioning System



# TROUBLESHOOTING YOUR AIR CONDITIONING SYSTEM

The following consists of some basic information on Freon System Operation.

We should probably define "cold". Actually, for our purpose, "cold" is a relative term. Your air conditioner should produce air (measured at the duct) that is:

- • 36° to 50° F at 70° ambient temperature.
- 40° to 52° F at 80° ambient temperature.
- 46° to 60° F at 90° ambient temperature.
- • 50° to 75° F at 100° ambient temperature.

#### **An Empty System**

If the system is empty, the search for leaks should begin with a good visual check. Is it a fast leak or a slow leak? When was the system last charged? If it's a newly installed and filled system, then look for obvious leaks like a chaffed, punctured or ruptured hose, or a loose fitting. (See the recharge and leak testing section for hints on charging new systems.)

Freon leaks can be very tough to find. Freon is colorless, odorless, heavier than air, and it evaporates as soon as it hits the atmosphere. The only helpful thing about it is the fact that the oil carried with the refrigerant, so any sizable leak will leave a trail of oil at the offending hose or fitting. It will often just be a dark area, and the amount of oil might be slight. But if you find and air conditioning fitting with an oily residue and the area around it is dry, you've probably found you leak. A good electron detector can verify your visual diagnosis.

Because the system carries the oil in suspension with the refrigerant, any sizable leak will leak oil as well as refrigerant. Very slow leaks will usually only vent refrigerant and not oil, but a fast leak like a ruptured hose or a very lose fitting, will leak the refrigerant so fast that the oil is carried out of the system as well. If your system has suffered a major leak, be sure to check the oil level in the compressor before refilling the system.



#### **Troubleshooting**

**Trouble: Low or partial refrigerant charge** 

#### **Symptoms:**

- Insufficient cooling
- Low-side pressure too low
- High-side pressure too low
- Receiver/drier sight glass shows a stream of bubbles
- Air in ducts only slightly cool

Cause: The system is low on refrigerant, probably cause by a leak.

**Correction:** Find and fix the leak. If there was a loss of oil, be sure to check the compressor oil level. Evacuate and recharge.

#### **A System Full of Refrigerant**

First, you should double-check all the obvious things (i.e. the compressor clutch, the belt tension, and the operation of the evaporator blower). Next, establish some baseline conditions for your testing: run aircraft, high blower and coldest thermostat setting, doors and windows closed, ambient temperature of 70° F or above.

Situations do occur where the system is full of refrigerant, yet the sight glass remains cloudy. The first thing to consider is whether the receiver/drier is install backwards. Be sure the line from the condenser goes to the port marked "in" on the receiver/drier. The other condition that might give you a cloudy glass (on a full system) is a restriction in the liquid line from the condenser to the receiver/drier. On some new receiver/driers the filter screen could be pushed up so the bottom of the screen is blocking the liquid pickup tube. You will have to cut open the receiver-drier to confirm your diagnosis.

You should test next for a system that is overcharged. If the sight glass is clear, but the highand low pressure gauge readings are high (300 or more on the high side, 50 or more on the low side), disconnect the compressor clutch. (Note that on HFC-134A systems, milky is the normal look for a correctly charge system.) The refrigerant should foam and then settle away from the glass in less than forty-five seconds. If the sight glass remains clear foe more that forty-five seconds you have an overcharged condition and will have to remove Freon.



**Trouble: Excessive moisture in the system** 

#### **Symptoms:**

- Insufficient cooling during hottest part of the day or during extended flying.
- Low-side pressure normal, though it may be too low or even a vacuum
- High-side pressure normal, though it may be low-at the same time low side is low
- Receiver-drier sight glass may show tiny bubbles (*Note*: This could be a tough call with HFC-134A since the sight glass is always milky).
- Air in the ducts is usually cold, but becomes warm when pressure reading drop

**Cause:** Excessive moisture in the system. The drying agent in the receiver-drier is saturated with moisture, which is released to the system when outside temperature increased. Moisture in the system collects and freezes on the expansion valve, stopping the flow or refrigerant.

**Correction:** Suck all the CFC-12 from the system. Replace of rebuild the receiver-drier. Evacuate and recharge.

**Trouble: Air in the system** 

#### **Symptoms:**

- Insufficient cooling
- Low-side pressure normal, but does not drop when the clutch cycles
- High-side pressure high
- Receiver/drier sight glass shows occasional bubbles (Note again that with HFC-134A the sight glass should be milky when the system is fully charged.)
- Air in ducts only slight cool

Cause: Refrigerant contains non-condensable in the form of air and moisture.

**Correction:** Leak test, watch for bad compressor seals. Drain the system. Repair leaks as needed. Replace or rebuild the receiver-drier. Check the compressor oil. Evacuate and recharge.



**Trouble: Condenser malfunction or system overcharge** 

#### **Symptoms:**

- No cooling
- Low-side pressure too high
- High-side pressure too high
- Receiver/drier sight glass may show occasional bubbles
- Liquid line very hot
- Air in ducts is warm

**Cause:** The condenser is not function properly because of high head pressure. System may be overcharged.

(*Note*: Technicians will have to be especially careful to avoid overcharging HFC-134A systems. Because the sight glass is hard to read and the volume given is slightly lower with HFC-134A).

# **NOTE:**

### **Cloudy Sight Glass**

A cloudy sight glass indicates a system that is only partially full of refrigerant (with a few exceptions). A perfectly clear sight glass (use a light to get a good look) means the system is either full or empty. Note, with HFC-134A the glass appears milky when properly charged, and may show occasional bubbles.



- 1. System has no electrical power to air conditioner master control box:
  - A) Check 50 amp circuit breaker or fuse in aircraft electrical bus.
- 2. System has power but will not turn on:
  - A) Check 5 amp circuit breaker on switch assembly.
  - B) Check ground lead on cannon plug 102 wire IFS105N20.
  - C) Check evaporator fan relay in air conditioner master control box.
- 3. Forward evaporator fan will not turn on, but aft fan runs:
  - A) Check 20 amp circuit breaker in master electrical box.
  - B) Check ground wire from evaporator motor.
  - C) AS350 disconnect CP104 and check for power on pin 2. On AS350 or EC130 B4 by checking ground lead from master switch.
    - 1) If you have power, your motor is bad.
    - 2) If no power, disconnect CP101 cannon plug and check continuity from pin 6/c on CP101 to cannon plug CP104 pin 2. If no power, check cannon plugs and switch.
- 4. Aft evaporator fan will not run, but forward evaporator runs:
  - A) Check 20 amp circuit breaker on master electrical box.
  - B) Check ground wire from fan.



- 5. Condenser fan/fans do not operate:
  - A) Check 20 amp circuit breaker.
  - B) Check 1 amp circuit breaker.
    - 1) If popped, reset.
      - a) Check brushes.
      - b) Check power.
      - c) Check ground.
      - d) Check fins for blockage in air condenser assembly.
    - 2) Run air conditioning system.
      - a) Check pressures, If pressure is running higher than normal, then continue with b), ect...
      - b) System may be overserviced.
      - c) System may be contaminated by improper Freon or a mix of Freon's.
    - 1) **NOTE:** This has happened more than once. The service carts are great for servicing systems, but there is a danger in its misuse. Untrained operators or an individual who wants to service his car, truck, motor home or even his room A/C can pump down their system into your tank. It can have any number of different Freon's. It could also be contaminated by a failed compressor, dryer bottle, wrong oil or any number of things. This has happened to a company with brand new equipment just 3 weeks old. There were large warning signs on this service cart, designated HELICOPTER SERVICE ONLY. They had one for ground equipment. All of the mechanics were well trained except for the management, janitors and their family members of the company. It can happen to any operator.
- 6. Compressor clutch does not engage, but air conditioner fans work.
  - A) Check clutch for power.
    - 1) If power, clutch coil may be bad or air gap in clutch face may be too excessive.
    - 2) If NO power check system for total Freon loss.
    - 3) If system is serviced and still no Power and you have an optional temperature controller, you can bypass by jumping pins 3 and 4 on CP102 to check if faulty.



- 7. System not cooling:
  - A) Check that air condenser fan/fans are blowing.
  - B) Check clutch engagement. Is clutch staying engaged or cycling? Check belt tension.
  - C) Check to see if air condenser coil is free from debris and fins are clean and not rolled over blocking air flow.
  - D) Check evaporator return air inlets, that they are not blocked and fins are clean and not rolled over blocking airflow.
  - E) Put gauges on system. Run system and check pressures also measure Delta temperature from both evaporators. (Measure inlet temperature and outlet temperature to get Delta. This is a must, do not rely on just using your hand and guessing).
  - F) Check sight glass.

(**NOTE:** There are several ways to service Freon systems:

- Service system to a clear sight glass R12.
   Note: On 134a systems the sight glass appears milky when properly charged, though there may be occasional bubbles in the sight glass.
- 2) Service system by weight. If you have a service station or scale, you can add the proper amount by weight.

82° F or higher service with 2.0 lbs max Freon.

Below 82° F service with 2.5 lbs max Freon.

- 3) The optimum method for best performance is to use at least two mechanical thermometers and place them near the return air and the discharge air of each evaporator. R-134a can then be added or deleted as required, until the highest T.D. is noted per the paragraph below. At that time, the correct amount of refrigerant is installed. At any time the high pressure gauge reaches 280 psi, stop servicing. Do not exceed 3.0 lbs of refrigerant..
- 4) Service according to a standard pressure temperature chart.)
- 8. One evaporator is cooling, one is not.
  - A) One expansion valve may be blocked form contamination.
  - B) One expansion valve may be locked full open.
    - (**NOTE:** The one valve that is full open is causing the problem. It may make it seem like the other valve is bad and not working.)
  - C) One of the sensing bulbs on expansion valves may become loose from suction side of coil. Also check to see if sensing bulb is mounted to the correct evaporator tube. The bulb should be mounted at 9 or 3 o'clock position.
  - D) Hose may be crimped, kinked or have a fitting bent over blocking flow.
  - E) (**NOTE:** The recommended fix is to pump down system. Change BOTH expansion valves and dryer bottle. Make sure to mount sensing bulb on suction side of coil and when possible at 9 or 3 o'clock position on tube. Re-service system.)



- 9. Compressor clutch failure:
  - A) Low Freon in system. This causes the system to low pressure out through the low pressure switch. It will cycle the clutch on and off until it heats up causing the coil to overheat and fail, or heat up the bearing to the point the grease will liquefy and run out. This will add to the heat and help fail coil or bearing.
  - B) Air gap on clutch may have changed.
  - C) Coil may have weakened.
  - D) Bearing may have failed, causing clutch to slip and fail coil.

**NOTE:** If ongoing maintenance is not maintained on compressor clutch bearing as prescribed in IFS maintenance manual, bearing may fail.

#### 10. Compressor failed:

- A) Loss of oil or insufficient oil.
- B) Low Freon in system, causing insufficient flow of oil lubricant.
- C) Contamination in system.
- D) Compressor bearing failed.
- E) Over servicing of system to the point of liquid lock.

(**NOTE:** This has happened.)

#### 11. Compressor belt failure:

- A) Low Freon in system. Cause: low pressure switch to cycle the clutch on and off excessively.
- B) Insufficient belt tension.
- C) Clutch bearing dragging of failing. This causes excessive belt slipping.
- D) Over service of system.
- E) Air gap excessive, causes clutch to slip heating pulley. This will stretch belt making it slip.

#### 12. Air conditioner runs, but pops 1 amp circuit breaker:

- A) Check condenser fan or fans for operation.
- B) Check blockage of air flow in and out of condenser.
- C) Check coil to see if fins are clean or rolled over.
- D) Check for over service of Freon.
- E) Put gauges on and run system.
  - 1) Is system popping 1 amp circuit breaker at 350 or higher?
    - a. If not change high pressure switch.
- F) Check expansion valves and make sure sensing bulbs are mounted to suction lines.
  - 1) Measure Delta of both evaporators.
    - a. If Delta is over 32° F expansion valve may not be working. If expansion valve is not throttling it will dump too much Freon. This can add excessive heat to condenser and can also freeze up coil.
  - 2) If Delta is below 14° F. Change valves, they may be blocked internally.



- 13. Fresh air supply valve inoperable. EC130 B4 only
  - A) If valve fails to open.
    - 1) Check 2 ½ amp CB
    - 2) Check for power at wire IFS 104V20
      - a. If power, check for power on wire IFS 104E20
        - 1. If no power motor/controller is bad
        - 2. If power trace back to source
      - b. If no power check continuity to Pin 1 on cannon plug CP101.
      - c. If no continuity check low pressure switch for ON.
  - B) If valve fails to close
    - 1) Check for power on wires at valve IFS 104V20 and IFS 104E20
      - a. If power, both motor /controller is bad.
      - b. If no power on wire IFS 104V20.
        - a. Check 2 ½ amp CB.
        - b. Check to see if low pressure switch is open.
        - c. Check continuity from valve wire IFS 104V20 to Pin 1 on cannon plug CP101.

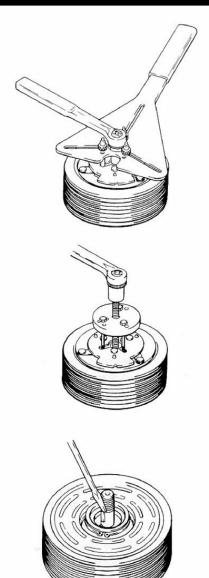
When running in "A/C" mode and you switch straight to "OFF" the Fresh Air Valve will stay in the closed position. You will need to switch to the "Fan" position to reset the Fresh Air valve to the open position.



### SERVICE OPERATIONS CLUTCH

#### 14.1 Armature Assembly Removal

- 1. If armature dust cover is present, remove the 3 or 6 bolts holding it in place and remove cover. If auxiliary sheet metal pulley is present, remove the screws holding it in place. Then remove pulley.
- 2. Insert pins of armature plate spanner into threaded holes of armature assembly.
- 3. Hold armature assembly stationary while removing retaining nut with 3/4", 19mm, or 14mm socket wrench, as appropriate.
- 4. Remove armature assembly using puller. Thread 3 puller bolts into the threaded holes in the armature assembly. Turn center screw clockwise until armature assembly comes loose.
- If shims are above shaft key, remove them now. If shims are below shaft key, the key and bearing dust cover (if present) must be removed before the shims can be removed.
- Remove bearing dust cover (if present). Use caution to prevent distorting cover when removing it
- Remove shaft key by tapping loose with a flat blade screwdriver and hammer.
- Remove shims. Use a pointed tool and a small screwdriver to prevent the shims from binding on the shaft.





#### SERVICE OPERATIONS - CLUTCH

#### 14.2. Rotor Assembly Removal

- If bearing dust cover has not been removed, remove it now. See step 6 of Section 14.1, for Armature Assembly Removal.
- If internal snap ring for bearing is visible above the bearing, remove it with internal snap ring pliers.
- 3. Remove rotor snap ring.
- Remove shaft key.
- Remove rotor pulley assembly:
  - Insert the lip of the jaws into the snap ring groove
  - Place rotor puller shaft protector (Puller set) over the exposed shaft.
  - Align thumb screws to puller jaws and finger tighten.
  - Turn puller center bolt clockwise using a socket wrench until rotor pulley is free.

#### 14.3 Field Coil Assembly Removal

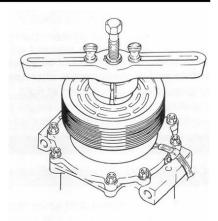
- Loosen lead wire clamp screw with #2 Phillips screwdriver until wire(s) can be slipped out from under clamp.
- Undo any wire connections on the compressor which would prevent removal of the field coil assembly.
- 3. Remove snap ring.
- Remove the field coil assembly.

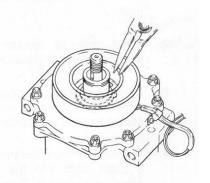
#### 14.4 Field Coil Assembly Installation

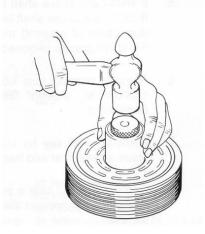
Reverse the steps of Section 14.3. Protrusion on underside of coil ring must match hole in front housing to prevent movement and correctly locate lead wire(s).

#### 14.5 Rotor Assembly Installation

- Place compressor on support stand, supported at rear end of compressor. If the compressor must be clamped in a vice, clamp only on the mounting ears, never on the body of the compressor.
- 2. Set rotor squarely over the front housing boss.
- 3. Place the rotor installer ring into the bearing bore. Ensure that the edge rests only on the inner race of the bearing, not on the seal, pulley, or outer race of the bearing.







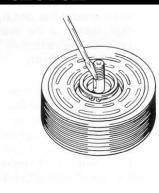


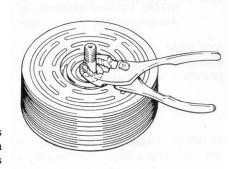
#### **SERVICE OPERATIONS - CLUTCH**

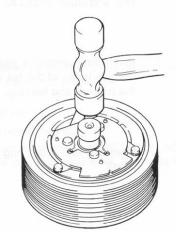
- 4. Place the driver into the ring and drive the rotor down onto the front housing with a hammer or arbor press. Drive the rotor against the front housing step. A distinct change of sound can be heard when using a hammer to install the rotor.
- Reinstall rotor bearing snap ring, if it has been removed, with internal snap ring pliers.
- Reinstall rotor retaining snap ring with external snap ring pliers. If a bevel is present on the snap ring, it should face up (away from the body of the compressor).
- Reinstall rotor bearing dust cover (if present) by gently tapping it into place.



- 1. Install shaft key with pliers.
- Install clutch shims. NOTE: Clutch air gap is determined by shim thickness. When installing a clutch on a used compressor, try the original shims first. When installing a clutch on a compressor that has not had a clutch installed before, first try 0.04", 0.02", and 0.004" (1.0, 0.5, 0.1 mm) shims.
- Align keyway in armature assembly to shaft key.
  Using driver and a hammer or arbor press, drive the
  armature assembly down over the shaft until it
  bottoms on the shims. A distinct sound change will
  be noted if driving with a hammer.
- Replace retaining nut and torque to specification.
   1/2-20: 20-25 ft•lb (27-34 N•m, 270-350 kg•cm)
   M8: 11-15 ft•lb (15-21N•m, 150-210kgf•cm)









#### **SERVICE OPERATIONS - CLUTCH**

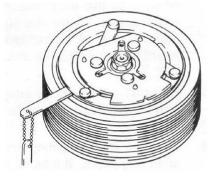
- 5. Check air gap with a feeler gauge. Specification is 0.011" 0.019" (0.3 0.5mm). If gap is not even around the clutch, gently tap down at the high spots. If the overall gap is out of spec., remove the armature assembly and change shims as necessary.
- 6. Replace armature dust cover (if used) and torque 3 or 6 bolts to specification below.

3 - 1/4-20 bolts (SD-5): 2-4 ft•lb

(2-5 N·m, 25-50 kgf·cm)

6 - M5 bolts (SD-7): 5-8 ft•lb

(7-11 N•m, 70-110 kgf•cm)



Note: Over torque of SD508/5H14 dust cover bolts will cause air gap to become out of spec.

