Title  CESSNA ADF 300 INSTALLATION KIT (14-VOLT, GONIO TYPE)

MODELS AFFECTED       SERIALS AFFECTED

*  150, F150          ALL
*  172, F172 & P172    ALL
  175                ALL
  180                ALL
*  182, A182          ALL
*  185 Series         ALL
*  205-206 Series     ALL
*  210 Series         ALL

NOTES

1. This kit is used to install Basic Electronics Kit, AK265-64 for a complete radio installation.

2. The following additional kits and parts are not included and are listed here for reference. They may be ordered separately if needed. Refer to Accessory Kits Catalog and/or Electronics Installations Manual to determine applicability or need:
   a. BFO CONVERSION KIT
   b. RADIO COOLING KIT
   c. AUDIO SELECTOR SWITCH
   d. ALTERNATOR AND/OR MAGNETO NOISE FILTERS

*  3. If this kit is to be installed in a Model 182 having a Scenerson spray tank installed, a 20' loop cable (P/N 32803) must be ordered in addition to this kit. The 9' loop cable supplied in this kit may be returned for credit.

PARTS LIST:

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>PART NUMBER</th>
<th>NOMENCLATURE</th>
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<tbody>
<tr>
<td>1</td>
<td>S1360-5</td>
<td>Circuit Breaker</td>
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<td>1</td>
<td>1511005-1</td>
<td>Shield</td>
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<td>1</td>
<td>135-40</td>
<td>Insulator</td>
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<tr>
<td>1</td>
<td>MS21919DG2</td>
<td>Clamp</td>
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<tr>
<td>1</td>
<td>AN515-8R8</td>
<td>Screw</td>
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<tr>
<td>1</td>
<td>NASE79A08</td>
<td>Nut</td>
</tr>
<tr>
<td>1</td>
<td>33827</td>
<td>Cable Assembly (Loop - 9')</td>
</tr>
<tr>
<td>1</td>
<td>32802-1014</td>
<td>Cable Assembly (14-volt)</td>
</tr>
<tr>
<td>2</td>
<td>S1367-1-12</td>
<td>Terminal</td>
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<tr>
<td>2</td>
<td>S1367-2-8</td>
<td>Terminal</td>
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<td>1</td>
<td>S1370-1</td>
<td>Splice</td>
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<tr>
<td>1</td>
<td>A263</td>
<td>Choke</td>
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<tr>
<td></td>
<td>S1592-2A</td>
<td>Harness Band</td>
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<td>4</td>
<td>S1648-06-75</td>
<td>Rivnut</td>
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<td>S-1021 Z6-6</td>
<td>Screw</td>
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<td>6</td>
<td>AN515-6R12</td>
<td>Screw</td>
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<td>6</td>
<td>AN936A6</td>
<td>Washer</td>
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<td>1</td>
<td>S-1091-5</td>
<td>Fuse - 5A</td>
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<td>1</td>
<td>S-1090-11</td>
<td>Cap - Fuseholder 5A</td>
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<tr>
<td>1</td>
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<td>Installation Instructions</td>
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CHANGE IN WEIGHT AND BALANCE:

<table>
<thead>
<tr>
<th>MODEL</th>
<th>150 F150</th>
<th>172, 175 F172</th>
<th>180 185 Series</th>
<th>182 A182</th>
<th>205-206 Series 210 Series</th>
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<tbody>
<tr>
<td>WEIGHT INCREASE (pounds)</td>
<td>10.5</td>
<td>10.5</td>
<td>10.9</td>
<td>10.9</td>
<td>10.9</td>
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<tr>
<td>ARM (inches)</td>
<td>19.0</td>
<td>20.2</td>
<td>19.9</td>
<td>20.2</td>
<td>21.3</td>
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<tr>
<td>RESULTANT MOMENT (lb.-ins.)</td>
<td>199</td>
<td>212</td>
<td>217</td>
<td>220</td>
<td>232</td>
</tr>
<tr>
<td>INDEX</td>
<td>.199</td>
<td>.212</td>
<td>.217</td>
<td>.220</td>
<td>.232</td>
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1. DESCRIPTION OF INSTALLATION.

Installation of this kit consists of the following:

a. Installation of Loop.
b. Interconnection of Wiring.
c. Installation of Panel Units.
d. Installation of Sense Antenna.

2. INSTALLATION INSTRUCTIONS.

a. Installation of Loop. (See Figure 1.)

(1) Remove seats, carpet and access panels on cabin floor as required to gain access to loop location on aircraft bottom skin.

(2) Locate and cut holes (5) and install shield with rivets specified.

(3) Using loop (3) as a pattern, locate and drill holes (2). Install rivnuts.

(4) Attach cable assembly (6) to loop and install loop with screws and washers (4).

CAUTION

Loop must be installed with embossed arrowhead pointing forward.

(5) Route cable (6) forward under floorboards and up under trim to indicator location. Avoid routing with standard wiring as much as is practical. Secure in bulkhead lightening holes with harness bands and screws noted. Coil and secure excess cable under floorboards. Do not shorten cable as its length is critical.

b. Interconnection of Wiring. (See Figure 2.)

(1) Remove existing radios as required to gain access to audio wiring over radio stack panel. Wire cable assembly (1) as follows:
NOTES

1. When installing on a Model 182 with a Sorensen spray tank installed, the loop is centered 2.70" left of 0 and 8.50" aft of Station 124.00 bulkhead. A 32803 loop cable (20') replaces the 33827 loop cable (9').

2. Support cable in lightening holes under floorboard with S1592-2A harness bands and S1022Z6-8 screws as req'd.

<table>
<thead>
<tr>
<th>MODELS</th>
<th>DIMENSION A FROM CENTERLINE OF AIRCRAFT TO CENTER OF LOOP</th>
<th>DIMENSION B FROM RIVET LINE OF AFT BULKHEAD TO CENTER OF LOOP</th>
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<tbody>
<tr>
<td>150 F150</td>
<td>0.00</td>
<td>4.00</td>
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<td>172 F172</td>
<td>4.25</td>
<td>4.44</td>
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<td>180 185 Series</td>
<td>6.31</td>
<td>4.44</td>
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<tr>
<td>182 (Note 1) A182</td>
<td>3.60</td>
<td>3.90</td>
</tr>
<tr>
<td>205 206 Series</td>
<td>4.08</td>
<td>4.00</td>
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<tr>
<td>210 Series</td>
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Figure 1. Loop Installation
Figure 2. Wiring Diagram, Cessna ADF 300

(2) If audio selector switches are used, install an additional switch of like kind and connect "TEL" wire per figure 2 of this kit and the audio wiring diagrams in the back of the Cessna Electronics Installations Manual.

(3) Cut +LV lead between fuse holder and connector and splice in the choke (2).

(4) MODEL 150 ONLY - Install fuse and fuse cap (4) in unused fuse holder. Solder "+LV" wire to free terminal of fuseholder.

(5) ALL MODELS EXCEPT 150 - Install circuit breaker (4) unused "RADIO" circuit breaker space. Terminate "+LV" wire and connect to circuit breaker as shown.

(6) Attach terminal (3) to "GND" wire and mount under convenient grounding screw.
1. 32630 INDICATOR
   1 REQD*
   ATTACH WITH:
   AN515B6R.2 SCREWS
   3 REQD*

2. #26 (.147) HOLE
   4 REQD

3. NAS446-2-3 NUT
   4 REQD*

4. 51021Z6-6 SCREW
   4 REQD*

5. 28340-1500 RECEIVER
   1 REQD*

6. 29277 CABINET
   ASSEMBLY -1 REQD*

7. 32802-1014 CABLE ASSEMBLY
   ASSEMBLY (REF)

NOTES

1. VERTICAL POSITION OF THE RADIO
   IN THE STACK WILL BE DETERMINED
   BY THE FACEPLATES OF EXISTING
   RADIOS

2. MOUNT ADF RECEIVER AT THE BOTTOM
   OF THE RADIO STACK IF AT ALL POSSIBLE

* SUPPLIED IN BASIC
  ELECTRONICS KIT
  (SEE NOTE 1, PAGE 1)
NOTE

WHEN TIGHTENING ANTENNA WIRE, APPLY ENOUGH TENSION TO COMPRESS THE SPRING TO APPROXIMATELY 1/2 ITS NORMAL TRAVEL

1. 463 INSULATOR - 1 REQD
2. AN100-3 THIMBLE - 1 REQD
3. S1262-4 SPRING - 1 REQD
4. 0411686 CLIP - 1 REQD
5. #40 (.098) HOLE - 1 REQD
6. W106A WIRE AS REQD
7. W106A WIRE 10 FEET REQD
8. S1367-1-10 TERMINAL - 1 REQD - SEE TEXT
   SOLDER (ROsin CORE) AS REQUIRED
9. 135-40 INSULATOR - 1 REQD
10. #10 (.196) HOLE
    MS2185DG3 CLAMP
    AN515-5R8 SCREW
    NAS079A08 NUT
    1 EACH REQD - SEE NOTE 2
11. 7/16 (.438) HOLE - 1 REQD - SEE NOTE 1
12. S1367-2-8 TERMINAL - 1 REQD
13. S1367-1-12 TERMINAL - 1 REQD

* SUPPLIED IN BASIC ELECTRONICS KIT
(SEE NOTE 1, PAGE 1)

CANCELLLED

NOTES:

1. HOLE (11) IS LOCATED ON ACFT Q, AND 4.5" BEHIND AFT RIVET LINE ON THE FORWARD CARRY-THRU SPAR ON ALL MODELS EXCEPT THE 172, F172, P172 AND 175 ON WHICH THE DIMENSION IS 8.0".

2. HOLE (10) IS LOCATED 2, 0" TO THE RIGHT OF HOLE (11). CLEAN NOISE DEADENING MATERIAL FROM UNDER- SIDE OF SKIN TO INSURE A GOOD COAX SHIELD GROUND.

Figure 4. Sense Antenna Installation
(7) Locate output terminal of radio lights dimming rheostat and solder "DIM" wire to it.

(8) Route "ANT" wire up RH doorpost to center of cabin top skin for later connection.

c. Installation of Panel Units. (See Figure 3.)

(1) Locate and drill holes (2) to match cabinet assembly (6).

(2) Install indicator (1) in a convenient radio instrument hole with screws indicated.

(3) Attach cable assembly (7) to cabinet with hardware provided on cabinet. Orient connector so that pin 20 is near top of cabinet.

(4) Install cabinet with screws (4) and nuts (3). Replace existing radios and install receiver (5) in cabinet.

(5) Replace all access plates, carpets, setas, trim etc. removed to make the installation. Be sure that all wiring is secure and clear of controls.

d. Installation of Sense Antenna (See Figure 4).

(1) Locate and drill holes (10) and (11) in cabin top skin.

(2) Disassemble insulator (9) and install in hole (11) in the order shown.

(3) Prepare end of "ANT" wire by stripping back 2" of outside cover and pulling center conductor through braid near end of cover. Install terminal (13) on center conductor and terminal (12) on braid. Attach to insulator and clamp as shown.

(4) Cut a 10' length of wire (7) and attach to insulator (1). Remove insulating sleeve from terminal (3) by gently twisting and pulling with needle-nosed pliers. Slip terminal over end of wire, double wire back and wrap. Solder. Attach to insulator as shown.

(5) Locate and drill hole (5). Assemble remainder of wire (6), thimble (2), spring (3) and clip (4) as shown. Draw wire tight enough to compress spring by 1/2 its travel.

3. ADJUSTMENT PROCEDURE.

(1) Refer to Cessna 300 Series Electronics Service/Parts Manual for adjustment procedures.