DFW B707–20–001 rev 0 **APPLICATION OF ANTENNA GASKETS**

MAINT	RII/INSP

Execution / Start Date:	
End Date:	

Pos	Mat. Type	P/N	IDN	Description	Qty	Unit
1	TOOL	4585–9		ADAPTER POWER CABLE 400HZ	1.00	EA
1	TOOL	05AK80		EXTENSION CABLE	1.00	EA
1	TOOL	TC–149		HEADSET	1.00	EA
1	TOOL	204–92002–1		POWER CABLE ASSEMBLY 400HZ	1.00	EA
1	TOOL	BC–376		TEST OSCILLATOR	1.00	EA
1	TOOL	AN/UPM–138		TEST SET RADAR BEACON	1.00	EA
1	TOOL	MTS–100	AN/ARM188	TEST SET TACAN RAMP	1.00	EA
1	TOOL	TCAS–201		TEST SET TCAS–201	1.00	EA

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Nr.	Hardtime	Task	Spec.	Related Documents
1.			REI	DFW B707–20–001 rev 0

Check:

Zones:

Access:

NRC YES ❍ NO ❍ IF YES, NUMBER(S): . . . . . .

1. U/VHF antenna gasket installation

A) U/VHF antenna removal

The following procedure applies to the UHF/VHF antennas.

Note: Removal of an upper antenna requires a work stand high enough to reach the top of the fuselage.

1. Open circuit breakers U/VHF 1 & U/VHF 2 on the P5 overhead circuit breaker panel.
2. Remove six screws that attach the antenna to the fuselage.
3. Pull antenna out far enough to disconnect coaxial cable connector.

Note: If antenna is located on top of aircraft, secure cable so that it will not fall into aircraft.

4. Disconnect coaxial cable connector from antenna.

B) U/VHF antenna installation

1. Place the antenna gasket P/N GSC–21–99435–50 on the antenna.
2. Apply self levelling green P/N HT3326–5 as shown in figure 1. Allow sealant to cure for thirty minutes before mounting the antenna on the aircraft.
3. Remove any remaining aerodynamic smoother from mating surface on aircraft, using a plastic scraper.
4. Inspect aircraft skin for corrosion & repair per SRM 51–8–1.
5. Prime & paint all bare metal outside the original footprint & decrease the original footprint by 5mm per MM 51–90–00.

Note: Ensure all bare metal within antenna footprint is clean & corrosion free before installing the antenna gasket.

6. Clean antenna foot print & skin surfaces with aliphatic naphtha TT–N–95 or equivalent MM 13–1–3.
7. Remove the aliphatic naphtha with a clean cloth.
8. Place antenna near mounting location & connect coaxial cable to antenna,
9. Wind stretch seal tape P/N AD89503/01/36 on the connector until it is 1.5 inch above the connector covering the coax cable. See figure 1.

Note: Make sure that the adhesive side of the tape is on the coaxial cable & the connector. This provides a tight seal.

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CAUTION: DO NOT APPLY AERODYNAMIC SEALANT TO THE EDGES OF THE ANTENNA. AERODYNAMIC SEALANTS PREVENT MOISTURE REMOVAL BY THE GASKET WHICH CAN CAUSE CORROSION DAMAGE TO THE AIRPLANE & ANTENNA MATING SURFACES.

10. Place antenna in position ensuring the antenna gasket P/N GSC–21–99435–50 is positioned correctly.

11. Secure the antenna with six mounting screws; ensure that a Teflon washer P/N GSC–21–95400–1005 is placed under each screw.

12. Tighten antenna screws so that antenna gasket is compressed evenly.

13. Torque screws per Maintenance manual 13–9–21. Re–torque after 15 minutes.

14. Measure electrical bond resistance between the antenna & fuselage using a milliohm meter. Resistance must be less than 0.001 ohm.

15. Close circuit breakers U/VHF 1 & UVHF 2 on the P5 overhead circuit breaker panel.

16. Perform an operational test per MM 23–53–01 pg 501

– Prepose to test.

1. Provide ground power to the airplane & energize busses or circuit breaker panel P5.
2. Ensure all V/uHF circuit breakers & interphone audio selector panel circuit breakers are closed.
3. Ensure audio selector panels & interphone system are operable.

– Test V/uHF communication system.

1. At pilot's station, set microphone selector switch to V/uHF–1 on audio selector panel.
2. At co–pilots station, set microphone selector switch to V/uHF–2 on audio selector panel.
3. Set "ON/OFF" rotary switch or control panel in T/R position. Verify that equipment is operating.

NOTE: At the power–up the CP–9000/SH performs an automatic lamp test, then after the radio power–up test is completed it sends data to the radio.

4. Manual Freqeuncy SELECTOR/INDICATOR
   a) Set "FREQUENCY SELECTOR MOW' rotary switch on CP in "MAN" position.
   b) Select several frequencies on toggle switches & observe the change of indication on control panel display.
   c) On an authorized test frequency press PTT & estallish a two way communication.
5. STORE/PRESET Operation
   a) Set the "CHAN SEL" toggle switch in one of 99 channels;
   b) Set the "FREQUENCY SELECTOR MODE" in PRE & a frequency value by "MANUAL FREQUENCY SWITCH"; the selected frequency will be shown on the control panel display.
   c) Set "FREQUENCY SELECTOR MODE ' in LD ; (the frequency value selected at point 0 will be memorized on the system).
   d) Set "FREQUENCY SELECTOR MODE" in MAN; the control panel display shows the previous frequency value before store operation.
   e) Set the "FREQUENCY SELECTOR MODE" in PRE.
   f) Verify that frequency on the display is the memorized one.

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6. Squelch Toggle Switch
   a) Set in ”OFF’ position the ”SQL” toggle switch on CP.
   b) At Pilot’s station, set headset selector switch to V/UHF–1 on interphone audio selector panel; At Copilot’s station, set headset selector switch to V/UHF–2 on interphone AUDIO SELECTS PANEL.
   c) Verify on headphone the presence of noise.
   d) Set in ”ON” position the ”SQL” toggle switch on CP.
   e) Verify the disappearance of noise on headphone.

7. Transceiver Functional Test (Interruptive BIT)
   a) Set by frequency selector a frequency in the 30 to 469.375 MHz band.
   b) Set the ”FUNCTION SELECTOR SWITCH on ”TEST”’ position to activate IBIT function (the selector must be held in the TEST until the function has been performed).
   c) Verify that at the end of IBIT is displayed AØ AØ AØ. (During test ”FAIL” lamp is blinking & the frequency display shows the last selected frequency. At the end of the test routine, if no fail has been found, the fail lamp stops blinking).

NOTE:
1) If a FAILURE has been detected Fail lamp remains lit up fixed & frequency display shows the indication of failed module(s) (AXAXAX) in decreasing probability order.
2) In case of WARNING condition the fail lamp remains lit up fixed & on frequency display appears the indication of occured warning (PX) .
3) The following tables report the meaning of the various failure & warning codes.

FAILED MODE	AX
TEST OK	0
FP/CONTROLLER	1
ECCM	2
IF/AUDIO	3
Synthesizer	4
RF/IF Converter	5
Power Supply	6
Power Amplifier	7
Flex Cable	8

WARNING CONDITION	PX
High Temperature	1
High VSWR/Controller	2
Low Power Supply	3

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2. TACAN / IFF antenna gasket installation

A) TACAN /IFF antenna removal

The following procedure applies to any TACAN / IFF antenna.

Note: Removal of an upper antenna requires a work stand high enough to reach top of fuselage.

1. Open AC & DC TACAN 1 & TACAN 2 circuit breakers on the P5 overhead circuit breaker panel.
2. Open the ATC/IFF circuit breaker on the P5 overhead circuit breaker panel.
3. Locate the four TACAN antennas & two IFF antennas.
   TACAN #1 top Station 510
   TACAN #1 bottom Station 600L +5
   TACAN #2 top Station 600F +10
   TACAN #2 bottom Station 670
   IFF upper Station 590
   IFF lower Station 590
4. Remove four screws that attach the antenna to the fuselage.
5. Pull antenna out far enough to disconnect coaxial cable connector.

Note: If antenna is located on top of the aircraft, secure cable so that it will not fall into aircraft.

6. Disconnect coaxial cable connector from antenna.
7. Discard O–ring.

B) TACAN /IFF antenna installation

1. Place the antenna gasket P/N GSC–21–99404–50 on the antenna.
2. Apply self levelling green P/N HT3326–5 as shown in figure 1. Allow the sealant to cure for thirty minutes before mounting the antenna on the aircraft.
3. Remove any remaining aerodynamic smoother from mating surface on aircraft, using a plastic scraper.
4. Inspect aircraft skin for corrosion & repair per SRM 51–8–1.
5. Prime & paint all bare metal outside the original footprint & decrease the original footprint by 5mm per MM 51–90–00.

Note: Ensure all bare metal within antenna footprint is clean & corrosion free before installing the antenna gasket.

6. Clean antenna foot print & skin surfaces with aliphatic naphtha TT–N–95 or equivalent MM 13–1–3.
7. Remove the aliphatic naphtha with a clean cloth.
8. Place antenna near mounting location & connect coaxial cable to antenna.
9. Wind stretch seal tape P/N AD89503/01–36 on the connector until it is 1.5 inch above the connector covering the coax cable. See figure 1.

Note: Make sure that the adhesive side of the tape is on the coaxial cable & connector. This provides a tight seal.

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CAUTION: DO NOT APPLY AERODYNAMIC SEALANT TO THE EDGES OF THE ANTENNA. AERODYNAMIC SEALANTS PREVENT MOISTURE REMOVAL BY THE GASKET WHICH CAN CAUSE CORROSION DAMAGE TO THE AIRPLANE & ANTENNA MATING SURFACES.

10. Place antenna in position ensuring the antenna gasket P/N GSC–21–99404–50 is positioned correctly.

11. Secure the antenna with four mounting screws. Ensure that a Teflon washer P/N GSC–21–95400–1005 is placed under each screw.

12. Tighten antenna screws so that antenna gasket is compressed evenly.

13. Torque screws per Maintenance manual 13–9–21. Re–torque after 15 minutes.

14. Measure electrical bond resistance between the antenna & fuselage using a milliohm meter. Resistance must be less than 0.001 ohm.

15. Close AC & DC TACAN 1 & TACAN 2 circuit breakers on the P5 overhead circuit breaker panel.

16. Close the ATC/IFF circuit breaker on the P5 overhead circuit breaker panel.

17. Perform TACAN operational test per MM 34–50–01 pg 501.

STEP	RESULT
1. Provide aircraft electrical power.	
2. Check that following circuit breakers are pushed in: a) P5 circuit breaker panel: TACAN NO 1 (or NO 2) AC TACAN NO 1 (or NO 2) DC FLIGHT INST NO 1 (or NO 2) BRG EXC ATT EXC HDG EXC XFRM NO 1 (or NO 2).	
3. On glare shield, set pilots & copilot's NAV MODE selector switch to TACAN.	
4. Set pilots & copilots RMI selector switch to TACAN/VOR.	
5. On No.1 compass controller (P13 overhead panel): a. Select aircraft hemisphere. b. Select aircraft latitude. c. Set mode selector to DG. **NOTE:** Some readjustment of compas card may be required throughout checkout procedure.	
d. Push in HDG set knob & slew compass card to 0° heading under lubberline.	RMI compass card at copilot position agrees with pilot HSI $\pm$ 2°.

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STEP	RESULT	MAINT	RII/INSP
6. On No.2 compass controller (P13 overheadpanel) a. Select aircraft hemisphere. b. Select aircraft latitude c. Set mode selector to DG d. Push in HDG set knob & slew compass card to 0° heading under lubber line. **NOTE:** The TEST indicator on control panel may come on when system is first turned on. If this occurs, momentarily press TEST pushbuttons switch & wait until indicator goes off (end of self test cycle).	RMI compass card at pilot's position agrees with copilots HSI ± 2°.		
7. Set mode switch on pilot's TACAN control panel to REC. **NOTE:** Allow 2 minute equipment warmup before proceeding.			
8. Select channel 1X on pilots TACAN control panel.	1. Bearing pointer No.1 (pink) on pilots & copilots HSI rotate clockwise. 2. On pilots HSI: Range flag covers TACAN distance indicator NAV warning flag is in view 3. Cooling fan of No. 1 TACAN RT is operating.		
9. Set mode switch on copilots TACAN control panel to REC. **NOTE:** Allow 2 minute warmup before proceeding.			
10. Select channel 1X on copilots TACAN control panel. **NOTE:** COURSE knob must be pulled out & remain out to select the course.	1. Bearing pointer No. 2 (green) on pilots & copilots HSI rotates clockwise. 2. On copilots HSI: Range flag covers TACAN distance indicator. NAV warning flag is in view. 3. Cooling fan of No.2 TACAN RT is operating.		
11. Pull out & set COURSE knob on pilots & copilots HSI to 180°.			
12. Set autopilot to MAN or HDG mode if energized			
13. Set mode switch to T/R & select channel 64X on pilots TACAN control panel.			

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14. Momentarily press TEST switch on pilots TACAN control panel.	1. TEST indicator on TACAN control panel momentarily flashes & then goes off. 2. Range flag & NAV warning flag on pilots HSI come into view (if not already in view) then pull out of view while MILES indicator on pilots HSI indicates 00.0 (±00.5) nmi for nominal 15 seconds). Then range flag comes back into view (until system locks onto a TACAN signal) 3. Bearing pointers (pilots & copilots No. 1 pointer – pink on HSI may slew to 270 degrees for a nominal 7 seconds but then will indicate 180 (±4) degrees for a nominal 15 seconds. 4. Course deviation bar on pilots HSI is centered within ± one–half dot & TO–FROM arrow indicates TO for nominal 15 seconds. 5. TEST indicator on TACAN control panels off.		
15. Set mode switch to T/R & select 64X on copilots TACAN control panel.			
16. Momentarily press TEST switch on copilotsTACAN control panel.	1. TEST indicator on TACAN controi panel momentarily flashes and then goes off 2. Range flag & NAV warning flag on copilots HSI comes into view (if not already in view) then pull out of view while MILES indicator on copilots HSI indicates 00.0 (±00.5) nmi (for nominal 15 seconds). Then range flag comes back into view (until system locks onto a TACAN signal). 3. Bearing pointers (copilots & pilot No. 2 pointer on HSI may slew to 270 degrees for a nominal 7 seconds but will then indicate 180 (±4) degrees for a nominal 15 seconds. 4. Course deviation bar on copilots HSI is centered within ± one–half dot & TO–FROM arrow indicates TO for nominal 15 seconds. 5. TEST indicator on TACAN control panel is off.		
17. Set mode switch to OFF on both TACAN control panels.			
18. Open following circuit breakers on P5 circuit breaker panel: TACAN No 1 (or No 2) AC TACAN No 1 (or No 2) DC FLIGHT INST No 1 (or No 2) BRG EXC ATT EXC HDG EXC XFRM No 1 (or No 2)			
19. Remove aircraft electrical power if no longer required for other maintenance.			

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18. Perform IFF operational test per MM 34–45–02 pg 203 par. C.

NOTE: Following installation of a new CADU it is necessary to set–up Mode S address & aircraft speed designation applicable to the aircraft.

– Select STBY at the CADU main rotary switch. The automatic selftest is started.

– Wait approx. 30 sec.

– On completion of selftest & if selftest is successful, FAIL LED on CADU should be extinguished.

1. Carry out the following parameter set–up:
   a) Program Mode S Address
   NOTE: Entry of the Mode S address requires prior entry of the Password 4711.
   The password will be displayed in the alphanumeric display window.
   – Press hotkey MENU, [MODE] [SEL:] appears in the alphanumeric display.
   – Press & hold softkey MENU for longer than 3 secs. [FLIT] [ID:] appears in alphanumeric display.
   – Press softkey MENU, [MODE] [LST:] appears in the alphanumeric display.
   – Press softkey MENU, [ENTR] [PIN:] appears in the alphanumeric display.
   – Press softkey 4, [ENTR] (___4 appears in the alphanumeric display.
   – Press softkey 7, in the alphanumeric display will show [ENTR] [__47]
   – Press softkey 1, in the alphanumeric display will show [ENTR] [_471)
   – Press softkey 1, in the alphanumeric display will show [ENTR] [4711]
   – Press softkey ENT. If the entry has been accomplished successfully alphanumeric display will briefly show [PIN] [OKAY] followed by [MODS] [ADD:].
   – Press softkey ENT. The display will show [****] [**__].
   LED'S LEFT & MSA beneath the display windows will be illuminated.

   NOTE: Each Mode S Address comprises an 6 digit hexadecimal address that can be entered with the softkeys 0 – 7 & is displayed in the alphanumeric windows.
   – Enter the mode S address code for the aircraft by pressing the numerical/scroll softkeys corresponding to the character position in the LH display. When the first four characters of the hexadecimal address have been entered satisfactorily, press ENT. The LED LEFT extinguishes & the LED RIGHT illuminates to indicate that the RH entry may now be performed.
   – Enter the remaining characters of the Mode S address into the RH display window using the numerical/scroll softkeys.
   – Press softkey ENT. The words [AC] & [CEPT] will appear briefly in the alphanumeric display signifying that the Mode S address has been stored. The address will remain valid for this aircraft until a further address change using this procedure is performed.
   Afterwards the display will automatically change to [AIRS] [COD:].
   – Press CLR to leave the submenu.

   b) Program Mode S Airspeed Settings
   NOTE: Entry of the Mode S Airspeed requires prior entry of the password 4711.
   The password will be displayed in the alpha–numeric display window.
   – Press softkey MENU, [MODE] [SEL:] appears in the alpha–numeric display.
   – Press & hold softkey MENU for longer than 3 secs.
   [FLIT] [ID:] appears in the alpha–numeric display.
   – Press softkey MENU. [CODE] [LST:] appears in the alpha–numeric display.
   – Press softkey MENU. [ENTR] [PIN:] appears in the alpha–numeric display.
   – Press softkey MENU. [ENTR] [___4] appears in the alpha–numeric display.
   – Press softkey 7, the alpha–numeric display will show [ENTR] [__47].
   – Press softkey 1, the alpha–numeric display will show [ENTR] [_471].
   – Press softkey 1, the alpha–numeric display will show [ENTR] [4711].

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– Press softkey ENT. If the entry has been accomplished successfully the alpha–numeric display will briefly show [PIN] [OKAY] followed by [MODS] [ADD:].
– Press softkey MENU. The display will show [AIRS] [COD:].
– Press softkey ENT & verify the airspeed is shown as 4.
– If the displayed airspeed is correct, press softkey ENT. The words [AC] & [CEPT] will appear briefly in the alpha–numeric display. Then press CLR.
– If the airspeed needs to be altered, press softkey CLR .
– Press softkey 4 followed by softkey ENT. The words [AC] & [CEPT] will appear briefly in the alpha–numeric display.
– Press CLR to leave the submenu.

2. Activate self–test again by selecting TEST on the DIAG–OFF–TEST toggle switch. After the selftest routine has completed the CADU FAIL should be extinguished.

3. Rendezvous radar antenna gasket installation

A) Rendezvous radar antenna removal

Note: Removal of an upper antenna requires a work stand high enough to reach top of fuselage.

1. Open the Rendezvous radar circuit breaker on the P5 overhead circuit breaker panel.
2. Locate the Rendezvous radar antenna Station 550 (bottom).
3. Remove eight screws that attach the antenna to the fuselage.
4. Pull antenna out far enough to disconnect coaxial cable connector.
5. Disconnect coaxial cable connector from antenna.
6. Discard O–ring.

B) Rendezvous radar antenna installation

1. Place the antenna gasket P/N GSC–21–99403–50 on the antenna.
2. Apply self levelling green P/N HT3326–5 as shown in figure 1. Allow the sealant to cure for thirty minutes before mounting the antenna on the aircraft.
3. Remove any remaining aerodynamic smoother from mating surface on aircraft, using a plastic scraper.
4. Inspect aircraft skin for corrosion & repair per SRM 51–8–1.
5. Prime & paint all bare metal outside the original footprint & decrease the original footprint by 5mm per MM 51–90–00.

Note: Ensure all bare metal within antenna footprint is clean & corrosion free before installing the antenna gasket.

6. Clean the antenna foot print & skin surfaces with aliphatic naphtha TT–N–95 or equivalent MM 13–1–3.
7. Remove the aliphatic naphtha with a clean cloth.
8. Place antenna near mounting location & connect coaxial cable to antenna.
9. Wind stretch seal tape P/N AD89503/01–36 on the connector until it is 1.5 inch above the connector covering the coax cable. See figure 1.

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Note: Make sure that the adhesive side of the tape is on the coaxial cable & the connector. This provides a tight seal.

CAUTION: DO NOT APPLY AERODYNAMIC SEALANT TO THE EDGES OF THE ANTENNA. AERODYNAMIC SEALANTS PREVENT MOISTURE REMOVAL BY THE GASKET WHICH CAN CAUSE CORROSION DAMAGE TO THE AIRPLANE & ANTENNA MATING SURFACES.

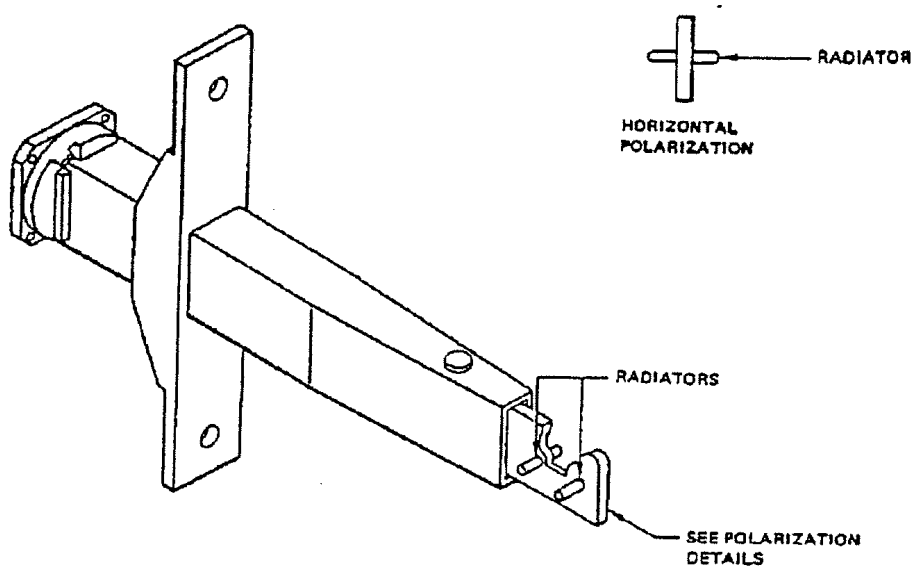
10. Place antenna in position ensuring the antenna gasket P/N GSC–21–99403–50 is positioned correctly.
11. Secure the antenna with four mounting screws. Ensure that a Teflon washer P/N GSC–21–95400–1005 is placed under each screw.
12. Tighten antenna screws so that antenna gasket is compressed evenly.
13. Torque screws per Maintenance manual 13–9–21. Re–torque after 15 minutes.
14. Measure electrical bond resistance between the antenna & fuselage using a milliohm meter. Resistance must be less than 0.001 ohm.
15. Close the Rendezvous Radar circuit breaker on the P5 overhead circuit breaker panel.

16. Perform an operational test per MM 34–41–01.

STEP	RESULT
1. Apply aircraft electrical power. Check that the RENDEZ VOUS BEACON circuit breaker in the P5 circuit breaker panel is closed.	
2. Establish interphone communications.	
3. Position radar transponder control panel POWER switch to STBY for 3 minutes & then to OPR.	
4. Place radar beacon test set 50 (± 5) feet from radar transponder antenna to be tested.	
5. Remove antenna & mast from cover of test set case. Assemble & secure antenna assembly to mounting base on control panel of test set.	
6. Point test set antenna directly at radar transponder antenna, ensuring there are no obstructions between the test set & transponder antenna. **NOTE:** Polarization of test set antenna must be horizontal to match transponder antenna polarization. See figure 501 for proper orientation of test set antenna. **CAUTION:** DO NOT MAKE DIRECT CONNECTION BETWEEN TEST SET & TRANSPONDER. RF POWER OUTPUTOF TRANSPONDER IS SUFFICIENT TO DAMAGE TEST SET.	

STEP	RESULT	MAINT	RII/INSP
7. Connect antenna cable assembly from antenna to ANT connector on test set control panel.			
8. Connect test set power cable to primary power source. if 400 Hz primary power is available, use the 60/400–Hz adapter provided with test set.			
9. Connect headset to radar beacon test set.			
10. Set test set AC POWER ON/OFF switch to ON position & allow a 5 minute warmup period before operating test set. (Under extreme cold conditions, allow 15 minute warmup period.)			
11. Set test set BEACON INTERROG CODE to 3, BEACON REPLY CODE to 5, aircraft RADAR XPDR control panel ENCODE & DECODE switches to 4, POWER to OPR.			
12. Set test set TEST FUNCTION selector switch to CAL FREQ. **NOTE:** When the TEST FUNCTION selector switch is in the CAL FREQ, OPR FREQ, or MON position & the pointer of the RF POWER meter is off scale, use the METER OFFSET control to position pointer on scale.			
13. Initially set METER OFFSET to PWR SET LINE. Adjust FREQUENCY (MHz) dial to obtain a dip indication on RF POWER meter to determine interrogation frequency of test set. Adjust METER OFFSET control so that dip indication occurs at approximately one–third scale.	FREQUENCY (MHz) dial indicates 9375 (±5) MHz at dip. If indication on FREQUENCY (MHz) dial is not 9375 (±5) MHz, proceed to step 14. If indication is 9375 (±5)MHz, proceed to step 15.		
14. Observe test set INCR (increase) arrow over FREQ ADJ INTERROGATION control ; rotate controls lightly in the proper direction to increase or decrease interrogation frequency toward setting desired. Repeat steps 13 & 14 until interrogation frequency is 9375 (±5) MHz.			
15. Detune FREQUENCY (MHz) dial 10 MHz off frequency.			
16. Set TEST FUNCTION switch to CAL POWER. Adjust INTERROGATION POWER SET control to position pointer of RF POWER meter to PWR SET.			
17. Set TEST FUNCTION selector switch to OPR POWER. Point antenna toward transponder antenna to obtain signal in headphones of test set & a maximum indication on RF POWER meter.	Pointer of RF POWER meter indicates in green sector of meter scale. CODE CORRECT indicator is on. Tone is heard in headset.		

STEP	RESULT	MAINT	RII/INSP
18. Repeat steps 11 through 17 with test BEACON INTERROG CODE to 5, BEACON REPLY CODE to 7, aircraft RADAR XPDR control panel ENCODE to 5, DECODE to 6. **NOTE:** If test set CODE CORRECT indicator flickers on & off & a steady 1200 Hz (approximately) tone is not audible in the headset, other interrogating radars may be operating on that code.			
19. Set TEST FUNCTION selector switch to OPR FREQ. While observing RF POWER meter, adjust FREQUENCY (MHz) dial to obtain dip.	FREQUENCY MHz dial indicates 9310 (±5) MHz		
20. Set POWER switch on control panel to OFF.			
21. Turn off & repack test set.			
22. Remove aircraft electrical power if no longer required for other maintenance.			



Rendez-Vous Radar Transponder Test Set Antenna Polarization
Figure 501

MAINT	RII/INSP

4. GPS antenna gasket installation

A) GPS antenna removal

The following procedure applies to the GPS antenna.

1. Open the GPS circuit breaker on the P5 overhead circuit breaker panel.
2. Locate the GPS Antenna at Station 338 (top)
3. Remove four screws that attach the antenna to the fuselage
4. Pull antenna out far enough to disconnect coaxial cable connector
5. Disconnect coaxial cable connector from antenna
6. Discard O–ring

B) GPS antenna installation

1. Place the antenna gasket P/N /N AG477000–01 on the antenna.
2. Apply self levelling green P/N HT3326–5 as shown in figure 1. Allow the sealant to cure for thirty minutes before mounting the antenna on the aircraft.
3. Remove any remaining aerodynamic smoother from mating surface on aircraft, using a plastic scraper.
4. Inspect aircraft skin for corrosion and repair per SRM 51–8–1.
5. Prime & paint all bare metal outside the original footprint & decrease the original footprint by 5mm per MM 51–90–00.

Note: Ensure all bare metal within antenna footprint is clean & corrosion free before installing the antenna gasket.

6. Clean the antenna foot print & skin surfaces with aliphatic naphtha TT–N–95 or equivalent MM 13–1–3.
7. Remove the aliphatic naphtha with a clean cloth.
8. Place antenna near mounting location & connect coaxial cable to antenna.
9. Wind stretch seal tape P/N AD89503/01–36 on the connector until it is 1.5 inch above the connector covering the coax cable. See figure 1.

Note: Make sure that the adhesive side of the tape is on the coaxial cable & the connector. This provides a tight seal.

CAUTION: DO NOT APPLY AERODYNAMIC SEALANT TO THE EDGES OF THE ANTENNA. AERODYNAMIC SEALANTS PREVENT MOISTURE REMOVAL BY THE GASKET WHICH CAN CAUSE CORROSION DAMAGE TO THE AIRPLANE & ANTENNA MATING SURFACES.

10. Place antenna in position ensuring the antenna gasket P/N AG477000–01 is positioned correctly.
11. Secure the antenna with four mounting screws. Ensure that a Teflon washer P/N GSC–21–95400–1005 is placed under each screw.
12. Tighten antenna screws so that antenna gasket is compressed evenly.
13. Torque screws per Maintenance manual 13–9–21. Re–torque after 15 minutes.

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14. Measure electrical bond resistance between the antenna & fuselage using a milliohm meter. Resistance must be less than 0.001 ohm.

15. Close the GPS circuit breaker on the P5 overhead circuit breaker panel.

16. Perform an operational test per MM 34–53–01 pg 501 par. 4.

1. TNL8100 Checkout Procedures

A. Ensure all circuit breakers are set.

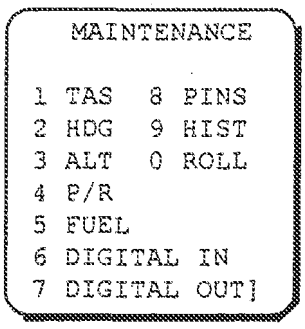
B. Apply power to the aircraft & the aircraft radio busses.

C. Press the ON/OFF key on the CDU. The Initialization page is displayed in approximately three seconds.

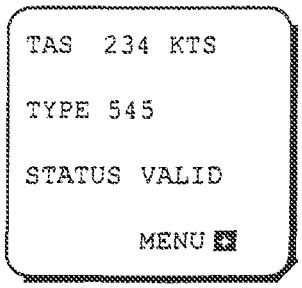
D. Press & hold the BRT key & the DIM key on the CDU. Verify that the CDU brightness changes.

E. Press the ENTER function key on the CDU. The Flight Plan page is now displayed.

F. Press the AUX, ALPHA, M keys on the ARINC CDU. Maintenance Menu Page is displayed.



G. Press the DOWN ARROW key to display the TAS Maintenance Page. If the TNL8100 is interfaced to the TAS system, perform the following tests:



KIFA, KIFB, 56SAC HI, 56BAC LO,
565DC, 419, 429
NO DATA, FAIL

1. Verify TYPE displays correct True Airspeed Type Selection. The correct type is "545". See table below for TAS select pin out information or the NPU.

TAS Type	TP–49 TAS Sel 1	TP–37 TAS Sel 2	TP–36 TAS Sel 3
Synchro 545	Open	Open	GND

MAINT	RII/INSP

Note: If TAS selection pinout is in error, installation – checkout may continue by manually selecting correct TAS,TYPE.

(Press CLEAR, then EDIT until correct type is displayed, then ENTER).

Program pins must be corrected prior to completing installation – checkout.

2. Using pitot / static test increase pilot pressure until IAS (Indicated Airspeed displayed on aircraft flight instruments) reads 200 knots.

Using Table below verify TAS reading displayed on the TNL8100 is correct to within ±10 knots. Repeat test for IAS of 300 knots.

3. Pull circuit breaker for the TAS system. Verify TAS status displays FAIL.

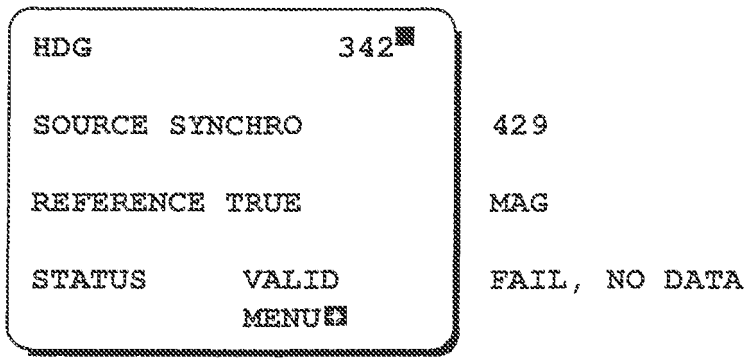
200K IAS

Pressure Attitude	Outside Air Temperature (C/F)				
	0/32	10/50	20/68	30/86	40/104
0	195	198	202	205	208
1000	198	202	205	209	212
2000	202	205	209	213	216
3000	205	209	213	216	220
4000	209	213	217	220	224
5000	213	217	221	224	228

300K IAS

Pressure Attitude	Outside Air Temperature (C/F)				
	0/32	10/50	20/68	30/86	40/104
0	292	297	303	308	313
1000	297	303	308	313	318
2000	302	308	313	319	324
3000	308	313	319	324	329
4000	313	319	324	330	335
5000	319	324	330	336	341

H. Press the DOWN ARROW key to display the HDG Maintenance Page. If the TNL8100 is interfaced to the Heading system, perform following tests.

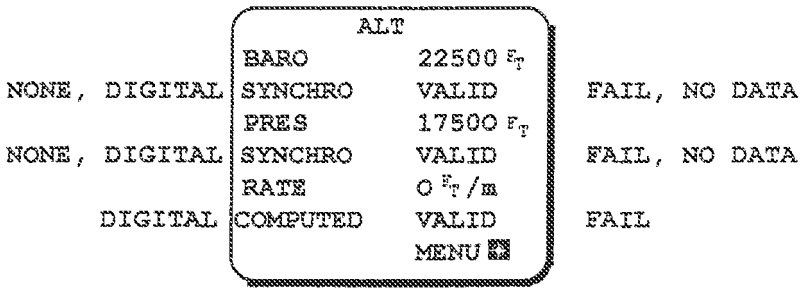


MAINT	RII/INSP

1. Verify TYPE displays correct HDG Input Type. The correct type is s ynchro MAG.
2. If HDG input source is SYNCHRO, verify North REFERENCE (MAG or TRUE) selection is correct. The correct reference is MAG.

   On the NPU pin BP–26 which selects no ith reference is left open.
3. Pull the circuit breaker for the HDG system. Verify HDG system displays FAIL.

I. Press the DOWN ARROW key to display the ALT Maintenance Page.

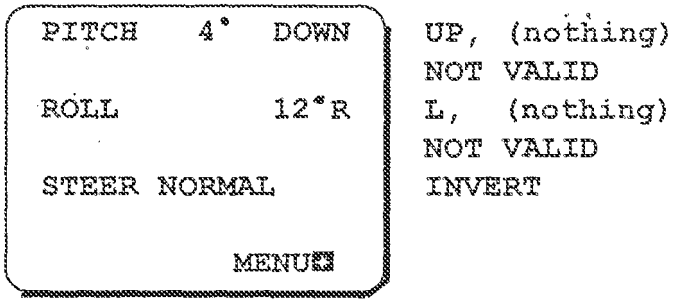


1. Verify correct altitude input type selection (SYNCHRO, DIGITAL or NONE). The correct pin selection is given in the table below.

Type	BP–21 ALT Sel 1	BP–22 ALT Sel 2
Synchro (Coarse/Ftne) Press	Open	GNO

2. Verify altitude input is VALID & reading correctly for the current altitude (field elevation).
3. Pull the circuit breaker for the ALT input system. Verify ALT status displays FAIL.

J. Press the DOWN ARROW key to display the Pitch/Roll Maintenance Page.



Note: The vertical gyro (Pitch/Roll) interface capability of the TNL8100 is designed to support additional system functions available in future software releases.

MAINT	RII/INSP

N. Press the DOWN ARROW key to display the Program PINS Maintenance Page.

```
PINS
OLEO          GND     AIR

GO-AROUND     INOP
ANT           40DB    26DB
HSI   1  BRG(S/C)     B-H+180        HDG        BRG
HSI   2  DTK          DTK            DA         DTK
HSI   3  DTK-HDG      BRG+180        DTK-HDG    TKE
```

1. If interfaced, verify OLEO input reads on ground (GND).
2. Verity Antenna select indicates 40DB antenna selected. If 26 DB is indicated, remove ground wire from NPU connector pin TP–99.

Note: Currently, only the high gain antenna is certified for use with the TNL8100

3. Verify desired synchro output selection is indicated. See table below for the pin selector on the NPU.

INSTALLATION	A
SYNCHRO #1	BRG
SYNCHRO #2	DTK
SYNCHRO #3	TKE
PROGRAM PIN	Jumper to
BP–23 HSI Sel 1	OPEN
BP–24 HSI Sel 2	OPEN

Note: If HSI output select pinout is in error, checkout may continue by manually selecting correct synchro outputs.

Note: If HSI output select pinout is in error, checkout may continue by manually selecting correct synchro outputs.

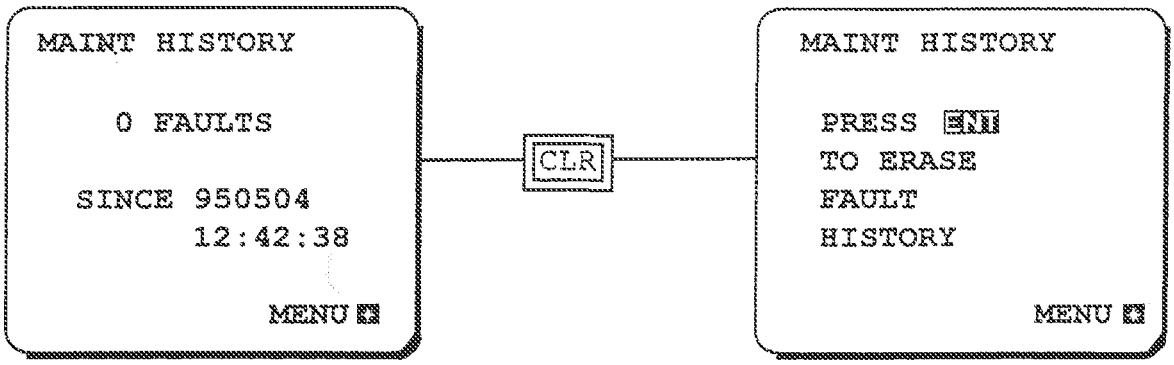
(press CLEAR twice, then EDIT until correct output selection is displayed, then ENTER).

Program pins must be corrected prior to completing installation – checkout.

Note: Color coding of the ”HSI” labels is used to indicate the North reference used for synchro & CDU outputs. If ’HSI” is displayed in cyan, reference used is Magnetic North; if True North is the selected reference, then ”HSI” is displayed in white. In this installation the reference is the magnetic north.

MAINT	RII/INSP

O. Press the UP ARROW key to display the Maintenance History Page.



Q. Press the AUX, 1 keys on the ARINC CDU. interface Check Page 1. If the TNL8100 is not interfaced to A/P, HSI, or any of the flight instruments proceed to step R.

Note: In to Interface Check Procedures below, CDI left means the CDI needle moves to the left of center, CDI right means the CDI needle moves to the right of center, GSLOPE up means the glide slope needle moves up & GSLOPE down means the glide slope needle moves down.

1. Select flight instruments to display TNL8100 Nav data.

   Verify: CDI = 1/2 scale left

2. Press the * key to display Interface Check Page 2/6.

   Verify: CDI = full scale left

3. Press the * key to display Interface Check Page 3/6.

   Verify: CDI = 1/2 scale right

4. Press the * key to display Interface Check Page 4/6.

   Verify: CDI = full scale right

5. Press the * key to display Interface Check Page 5/6.

   Verify: CD1 = Centered

6. Press the * key to display Interface Check Page 6/6.

   Verify: CDI = Centered

Note: Selection of Interface Check Page 6 will normally disconnect flight instruments from the TNL8100 system as the flags from the TNL8100 are invalid.

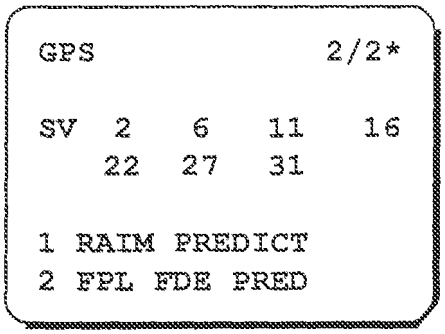
Note: The Approach Mode flag will be ON for Interface Pages 1,3 & 5 & OFF for Pages 2,4 & 6.

Note: When Interface Check is initiated, the TNL8100 will turn on the output flags in sequence, checking each for possible shorts to ground. Because of this, some flags may take up to 4 seconds to be turned on.

MAINT	RII/INSP

2. GPS Sensor Checkout

To check the GPS Sensor status, press the DATA, 4 keys, then the * key;



This displays information about the tracked satellites. In the lines under the SV label, the first three lines of the display show the Space Vehicle (SV) number. The white numbers indicate selected satellites & green numbers indicate tracked satellites. One tracked satellite is required for GPS time & three selected satellites are required for 2–D navigation; four selected satellites are required for 3–D navigation.

5. Crash Position locator antenna gasket installation

A) Crash Position locator antenna removal

The following procedure applies to the Crash Position locator antenna.

1. Open the CPL/CVR/FDR circuit breaker on the P5 overhead circuit breaker panel.
2. Inspect aircraft skin for corrosion & repair per SRM 51–8–1.
3. Locate the Crash Position Locator Antenna at Station 1230 (top).
4. Remove eight screws that attach the antenna to the fuselage.
5. Pull antenna out far enough to disconnect coaxial cable connector.

Note: If antenna is located on top of the aircraft, secure cable so that it will not fall into aircraft.

6. Disconnect coaxial cable connector from antenna.
7. Discard O–ring.

B) Crash Position locator antenna installation

1. Place the antenna gasket P/N GSC–21–99400–50 on the antenna.
2. Apply self levelling green P/N HT3326–5 as shown in figure 1. Allow the sealant to cure for thirty minutes before mounting the antenna on the aircraft.
3. Remove any remaining aerodynamic smoother from mating surface on aircraft, using a plastic scraper.
4. Inspect aircraft skin for corrosion & repair per SRM 51–8–1.
5. Prime & paint all bare metal outside the original footprint & decrease the original footprint by 5mm per MM 51–90–00.

DFW B707–20–001 rev 0 APPLICATION OF ANTENNA GASKETS

	MAINT	RII/INSP

Note: Ensure all bare metal within antenna footprint is clean & corrosion free before installing the antenna gasket.

6. Clean the antenna foot print & skin surfaces with aliphatic naphtha TT–N–95 or equivalent MM 13–1–3.

7. Remove the aliphatic naphtha with a clean cloth.

8. Place antenna near mounting location & connect coaxial cable to antenna.

9. Wind stretch seal tape P/N AD89503/01–36 on the connector until it is 1.5 inch above the connector covering the coax cable. See figure 1.

Note: Make sure that the adhesive side of the tape is on the coaxial cable & the connector. This provides a tight seal.

CAUTION: DO NOT APPLY AERODYNAMIC SEALANT TO THE EDGES OF THE ANTENNA. AERODYNAMIC SEALANTS PREVENT MOISTURE REMOVAL BY THE GASKET WHICH CAN CAUSE CORROSION DAMAGE TO THE AIRPLANE & ANTENNA MATING SURFACES.

10. Place antenna in position ensuring the antenna gasket P/N GSC–21–99400–50 is positioned correctly.

11. Secure the antenna with four mounting screws. Ensure that a Teflon washer is placed under each screw.

12. Tighten antenna screws so that antenna gasket is compressed evenly.

13. Torque screws per Maintenance manual 13–9–21. Re–torque after 15 minutes.

14. Measure electrical bond resistance between the antenna & fuselage using a milliohm meter. Resistance must be less than 0.001 ohm.

15. Close the CPL/CVR/FDR circuit breaker on the P5 overhead circuit breaker panel.

16. Perform an operational test per MM 31–30–01 par. 2B.

CPL System Test

1. Verify that CPL wiring continuity checks have been performed & wiring is in accordance with the CPL System Wiring Diagram

2. Verify that the CPL system installation has passed Quality Control Inspection.

3. Verify that the CPL unit is in place & the ON/OFF/ARM switch is locked in the ARM position & that G switch reset button is depressed.

4. Apply power to the aircraft.

5. Apply power to & tune UHF transceiver to 243.0 MHz for utilization as test monitor.

6. Notify control tower, via telephone, of a CPL test occurence & specify time that test is to occur CPL SYSTEM TEST

7. Request they monitor signal for verification.

8. Lift CPL Switch Cover located on DFDR/CVR/CPL Control Unit i n cockpit. Monitor UHF radio.

9. Place CPL switch into ON position activating the CPL for no more than 3 audible cycles of CPL.

10. Return the CPL switch to the center ARM position.

11. Verify that CPL has been deactivated using UHF Radio monitor (transmission stopped).

	MAINT	RII/INSP

12. Close CPL switch cover.
13. Remove power from UHF transceiver.
14. Remove power from aircraft.
15. Verify CPL transmission received by control tower.

6. ACAS antenna gasket installation

A) ACAS antenna removal

1. Open the ACAS circuit breaker on the P5 overhead circuit breaker panel.
2. Locate the two ACAS Antennas:
   ACAS top Station 408
   ACAS bottom Station 411
3. Remove four screws that attach the antenna to the fuselage
4. Pull antenna out far enough to disconnect coaxial cable connector

Note: If antenna is located on top of the aircraft, secure cable so that it will not fall into aircraft

5. Disconnect coaxial cable connector from antenna
6. Discard O–ring.

B ACAS antenna installation

1. Place the antenna gasket P/N GSC–21–99448–50 on the antenna.
2. Apply self levelling green P/N HT3326–5 as shown in figure 1. Allow the sealant to cure for thirty minutes before mounting the antenna on the aircraft.
3. Remove any remaining aerodynamic smoother from mating surface on aircraft, using a plastic scraper.
4. Inspect aircraft skin for corrosion & repair per SRM 51–8–1.
5. Prime & paint all bare metal outside the original footprint & decrease the original footprint by 5mm per MM 51–90–00.

Note: Ensure all bare metal within antenna footprint is clean & corrosion free before installing the antenna gasket.

6. Clean the antenna foot print & skin surfaces with aliphatic naphtha TT–N–95 or equivalent MM 13–1–3.
7. Remove the aliphatic naphtha with a clean cloth.
8. Place antenna near mounting location & connect coaxial cable to antenna.
9. Wind stretch seal tape P/N AD89503/01–36 on the connector until it is 1.5 inch above the connector covering the coax cable. See figure 1.

Note: Check adhesive side of tape is on coaxial cable & connector. This provides a tight seal.

CAUTION: DO NOT APPLY AERODYNAMIC SEALANT TO THE EDGES OF THE ANTENNA. AERODYNAMIC SEALANTS PREVENT MOISTURE REMOVAL BY THE GASKET WHICH CAN CAUSE CORROSION DAMAGE TO THE AIRPLANE & ANTENNA MATING SURFACES.

MAINT	RII/INSP

10. Place antenna in position ensuring the antenna gasket P/N GSC–21–99448–50 is positioned correctly.

11. Secure the antenna with four mounting screws. Ensure that a Teflon washer P/N GSC–21–95400–1005 is placed under each screw.

12. Tighten antenna screws so that antenna gasket is compressed evenly.

13. Torque screws per Maintenance manual 13–9–21. Re–torque after 15 minutes.

14. Measure electrical bond resistance between the antenna & fuselage using a milliohm meter. Resistance must be less than 0.001 ohm.

15. Close the ACAS circuit breaker on the P5 overhead circuit breaker panel.

16. Perform an operational test per MM 34–45–04 par. 1C using test–set TCAS–201

Antenna Bearing Accuracy Measurement:

1. Close P5 circuit breakers ACAS & ATC / IFF.

2. Ensure Low Range Altmtr No.1 & Compass No.1 are turned on.

3. Set the CADU main rotary switch to.STBY & then to NORM (Selecting STBY automatically initializes an internal self test of the transponder prime functions). The self test completes after approx. 10 seconds, after which the CADU self test (CBIT) routine is started.
On completion, the alpha–numeric displays will show the last selected code for Mode 1 & Mode 3/A.

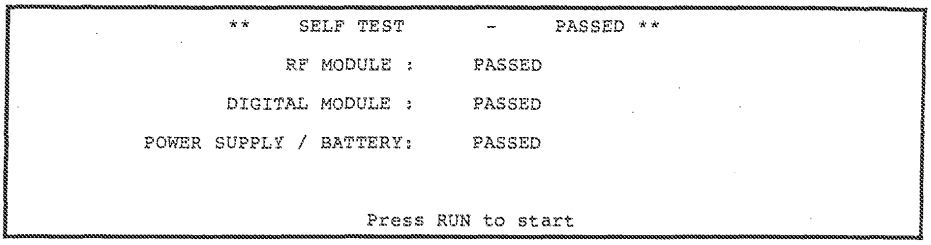
   Ensure on completion that the LED FAIL is neither flashing nor permanently illuminated.

   If LED'S TA & RA are not illuminated, perform the following to activate ACAS:
   – Press softkey MENU, [MODE] & [SEL :] appears in the LH & RH alpha–numerical display windows respectively.
   – Press softkey ACAS, [MODE] & [INP] appears in the LH & RH alpha–numerical display windows respectively. Press softkey ACAS once more. Ensure both LED'S TA & RA are on.
   – Press softkey ENT, [AC] [CEPT] will be briefly displayed.

4. Using the CADU toggle switch DIAG–OFF–TEST, momentarily select the TEST position, then release the switch. Verify the cockpit loudspeaker announces "TCAS System Test OK".

5. Prepare test set TCAS–201 as follows:
Press Power & activate the test set self–test function per IFR Operation Manual, Chap.3.

   At completion, the test set display should indicate a PASS for all tests performed as illustrated below:



MAINT	RII/INSP

Press SET/CONT twice to access Screen Setup #2.

– Set the display parameters to suit current visual conditions using SELECT & SLEW keys.

– Set range & altitude parameters as shown below:

```
                    **          SETUP    # 2  **

                  CONTRAST:  +0       BACKLIGHT:        +0

   RANGE MAX:   10 nm                        MIN:        0 nm

   ALT  MAX:    20000 ft                     MIN:        0 ft
```

Press SCEN

– Programme the test screen scenario as shown below:

```
              **          SCENARIO  TEST      **

  INTRUDER TYPE : ATCRBS             TIME : --------

      RANGE:      5.00 nm                    RATE :      0 kt

      ALT:        airfield elevation (ft)    RATE :      0 FPM

      STATUS:     NON THREAT

                  PRESS RUN TO START
```

Press SET/CONT

– SETUP #1 Menu will be called–up

– Set parameters accordingly using the SELECT & SLEW keys.
Select a storage location from the numbers 0 – 9, then store the programmed scenario under the chosen location number.

– Move the cursor to RECALL, select the stored location number & press RUN.

```
                    **          SETUP    # 1       **

   INTRUDER TYPE :          ATCRBS

   UUT  DIST:          HORIZ =    *** ft     VERT = *** ft

   ALT REPORTING:      ON

   STORE:      0       RECALL:     0

   GAIN _ 1030 = ****dB     LOSS  =  **** dB
```

Press the RPLY TEST key. The following test screen will be displayed.

MAINT	RII/INSP

```
                    **      ATCRBS  REPLY  TEST     **


RANGE :     5.00 nm                 ALTITUDE : airfield elevation (ft)
% REPLY :       100


                            PRESS RUN TO START
```

Position the test antenna at the selected horizontal & vertical distances from the antenna under test:

– Press RUN to initiate the intruder reply (bearing) test.

The reply test will display the stationary traffic symbol at an antenna bearing relevant to the azimuth of the interrogation source, in this case the test set flat antenna. Verify on both VSI/TA /RA indicators:

– PROXIMATE TRAFFIC symbols (solid blue diamond) are positioned at a bearing of 0˚ (+/–15˚).

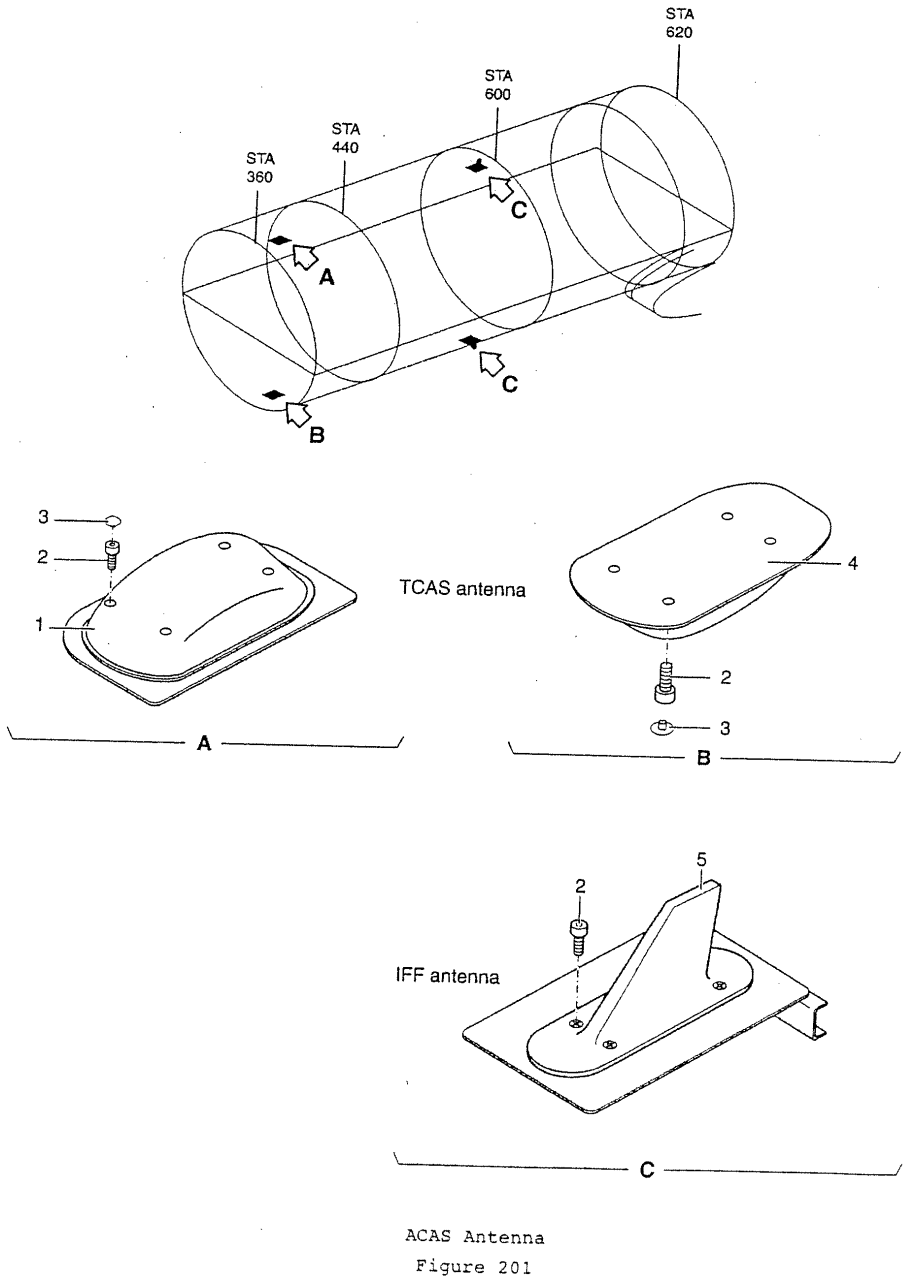
– A data tag, the relative altitude of simulated intruder w.r.t. airfield elevation, is shown beneath the PROXIMATE TRAFFIC symbol.

NOTE: The altitude data tag is not a feature of antenna replacement, if required, however, a TTU–205 testset may be connected to the aircraft static pressure system to verify the system relative altitude reporting function.

Terminate the test by pressing STOP on TCAS–201.

6. Sequentially reposition the test set flat antenna relative to the antenna under test & repeat the bearing test for bearing angles of 45˚, 90˚, 135˚, 180˚, 225˚, 270˚ & 315˚.

MAINT | RII/INSP



ACAS Antenna
Figure 201

7. Marker Beacon antenna gasket installation

A) Marker Beacon removal antenna removal

1. Open the Marker Beacon circuit breaker on the P5 overhead circuit breaker panel.
2. Locate the Marker Beacon antenna Station 650 (bottom) :
3. Remove the antenna per MM 34–24–21 page 401.
4. Pull antenna out far enough to disconnect coaxial cable connector
5. Disconnect coaxial cable connector from antenna

MAINT	RII/INSP

B) Marker Beacon antenna installation

1. Place the antenna gasket P/N AG627000–01 on the antenna.
2. Apply self levelling green P/N HT3326–5 as shown in figure 1. Allow the sealant to cure for thirty minutes before mounting the antenna on the aircraft.
3. Remove any remaining aerodynamic smoother from mating surface on aircraft, using a plastic scraper.
4. Inspect aircraft skin for corrosion & repair per SRM 51–8–1.
5. Prime & paint all bare metal outside the original footprint & decrease the original footprint by 5mm using paint per MM 51–90–00.

Note: Ensure all bare metal within antenna footprint is clean & corrosion free before installing the antenna gasket.

6. Clean the antenna foot print & skin surfaces with aliphatic naphtha TT–N–95 or equivalent MM 13–1–3.
7. Remove the aliphatic naphtha with a clean cloth.
8. Place antenna near mounting location & connect coaxial cable to antenna.
9. Wind stretch seal tape P/N AD89503/01–36 on the connector until it is 1.5 inch above the connector covering the coax cable. See figure 1.

Note: Make sure that the adhesive side of the tape is on the coaxial cable & the connector. This provides a tight seal.

CAUTION: DO NOT APPLY AERODYNAMIC SEALANT TO THE EDGES OF THE ANTENNA. AERODYNAMIC SEALANTS PREVENT MOISTURE REMOVAL BY THE GASKET WHICH CAN CAUSE CORROSION DAMAGE TO THE AIRPLANE & ANTENNA MATING SURFACES.

10. Place antenna in position ensuring the antenna gasket P/N AG627000–01 is positioned correctly.
11. Secure the antenna with six mounting screws. Ensure that a Teflon washer P/N GSC–21–95400–1005 is placed under each screw.
12. Tighten antenna screws so that antenna gasket is compressed evenly.
13. Torque screws per Maintenance manual 13–9–21. Re–torque after 15 minutes.
14. Measure electrical bond resistance between the antenna & fuselage using a milliohm meter. Resistance must be less than 0.001 ohm.
15. Close the Marker Beacon circuit breaker on the P5 overhead circuit breaker panel.

	MAINT	RII/INSP

16. Perform an operational test per MM 34–24–0 page 201.

a) Supply external power to airplane & energize circuit breaker panel P–5.
Close marker beacon circuit breakers.

b) Set the sensitivity switch for maximum sensitivity & allow system to warm up.

c) Place the test oscillator on the ground approximately 15 feet from the marker beacon antenna.
Extend the test oscillator antenna to its full length & place parallel to the fore & aft axis of aircraft.

d) Turn the testoscillator ON & set the modulation to 400 cps. The carrier frequency should be 75 mc. The blue lights on the instrument panel should be on.

e) Connect a headphone to the interphone system & energize the system. A 400 cps note should be heard.

f) Repeat steps (d) & (e) with the modulation set at 1300 cps & 3000 cps. The amber & white lights respectively should go on & the respective tones should be audible.

g) Repeat steps (d) thru (f) with the sensitivity switch set for minimum sensitivity.
If necessary, move test oscillator closer to marker beacon antenna to obtain sufficient coupling.

h) Determine if there is further need for external power. I f not, remove power from airplane.

8. Low Range Radio Altimeter antenna gasket installation

A) Low Range Radio Altimeter removal antenna removal

1. Open the Low range altm no 1. circuit breaker on the P5 overhead circuit breaker panel.

2. Locate the two Low Range Radio Altimeter antennas
Station 1010 (bottom)
Station 1029 (bottom)

3. Remove eight screws that attach the antenna to the fuselage.

4. Pull antenna out far enough to disconnect coaxial cable connector

5. Disconnect coaxial cable connector from antenna

B) Radio altimeter antenna installation

1. Place the antenna gasket P/N AG723000–01 on the antenna.

2. Apply self levelling green P/N HT3326–5 as shown in figure 1. Allow the sealant to cure for thirty minutes before mounting the antenna on the aircraft.

3. Remove any remaining aerodynamic smoother from mating surface on aircraft, using a plastic scraper.

4. Inspect aircraft skin for corrosion & repair per SRM 51–8–1.

5. Prime & paint all bare metal outside the original footprint & decrease the original footprint by 5mm using per MM 51–90–00.

Note: Ensure all bare metal within antenna footprint is clean & corrosion free before installing the antenna gasket.

6. Clean the antenna foot print & skin surfaces with aliphatic naphtha TT–N–95 or equivalent MM 13–1–3.

	MAINT	RII/INSP

7. Remove the aliphatic naphtha with a clean cloth.

8. Place antenna near mounting location & connect coaxial cable to antenna.

9. Wind stretch seal tape P/N AD89503/01–36 on the connector until it is 1.5 inch above the connector covering the coax cable. See figure 1.

Note: Make sure that the adhesive side of the tape is on the coaxial cable & the connector. This provides a tight seal.

CAUTION: DO NOT APPLY AERODYNAMIC SEALANT TO THE EDGES OF THE ANTENNA. AERODYNAMIC SEALANTS PREVENT MOISTURE REMOVAL BY THE GASKET WHICH CAN CAUSE CORROSION DAMAGE TO THE AIRPLANE & ANTENNA MATING SURFACES.

10. Place antenna in position ensuring the antenna gasket P/N AG723000–01 is positioned correctly.

11. Secure the antenna with eight mounting screws. Ensure that a Teflon washer P/N GSC–21–95400–1005 is placed under each screw.

12. Tighten antenna screws so that antenna gasket is compressed evenly.

13. Torque screws per Maintenance manual 13–9–21. Re–torque after 15 minutes.

14. Measure electrical bond resistance between the antenna & fuselage using a milliohm meter. Resistance must be less than 0.001 ohm.

15. Close the Low range altm no 1 circuit breaker on the P5 overhead circuit breaker panel.

16. Perform an operational test per MM 34–48–0 page 501.

Test Low Range Radio Altimeter

1. Connect external power to the airplane.

2. Close low range radio altimeter No. 1 & No. 2 (when installed) system circuit breakers an P5 circuit breaker panel.

3. Allow a warmup time of 15 minutes.

4. Set the adjustable trip on the No. 1 indicator to –20 feet.

5. After warmup, check that warning flag is out of view, pointer indicates 0 (±3) feet, & MDA light is off .

6. Slowly move MDA adjustable trip clockwise past pointer. Check that flag & pointer remain as in step 5 & MDA lights illuminate when cursor is within + 6 feet of pointer.
   NOTE: The Low Range Radio Altimeter System is factory adjusted to the following trip settings. However, the settings can be readjusted as found necessary.

TRIP NO.	TRIP SETTING (feet)
6	30
2	50
5	60
1	200
8	500
7	1500

MAINT	RII/INSP

7. Set adjustable trip to –20 feet. Press & hold No. 1 indicator test button. Check that No. 1 indicator flag comes into view, pointer indicates 30 (±4) feet, & MDA light is off.

8. Release test button. Cheek that flag retracts, pointer indicates 0 (±3) feet & MDA light remains off.

9. Set adjustable trip to 200 feet. Check that flag, pointer & MDA light indicate as in step 6.

10. Repeat steps 4 through 9 for No. 2 indicator.

11. Open the No. 1 circuit breaker. Check that flags come into view, MDA lights go off & pointers continue to indicate 0 (±3) feet.

12. If no longer required remove electrical power from airplane.

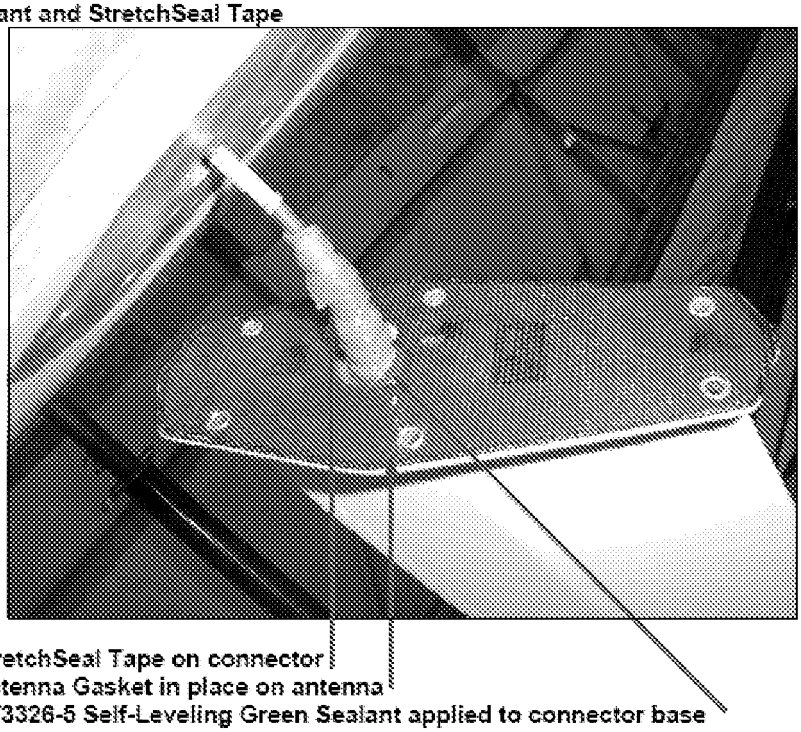
13. Place the altimeter power switch in OFF position. Check that flags to out of view, pointers are masked & MDA lights are off.

14. Place power switch to ON position. Check that flags remain out of view, pointers indicate 0 (± 3) feet, & MDA lights illuminate.

15.. Open the No. 1 circuit breaker. Check that flags come into view, MDA lights go off, & pointers continue to indicate 0 (± 3) feet.

16. If no longer required remove electrical power from airplane.

Figure 1 Typical Antenna Gasket Installation with HT3326-5 Self-Leveling Green Sealant and StretchSeal Tape



MAINT	RII/INSP

	ENGINEERING INSTRUCTION	Ref.: B707-20-001 Revision: 0 ATA chap.: 20 Date: Page: 23 of 26

Modification/Inspection Order			
From ESEC To: organisation implementing this E.I. Name organisation: Cc: LIBRARY DFW	File: B707-20-001		
	Aircraft/Component: 19997		
	Subject: Installation of antenna gaskets		
Accepted:	Ref.:		
Schedule:	Annex:		
Responsible System Engineer: C. de Jong			
Remarks from Performing Dept:	Remarks from Q.A. Dept:		
	Inspection	Yes ☐	No ☒
	Modification	Yes ☒	No ☐
	Repair	Yes ☐	No ☒
	Revision of SB C/W: Not applicable		
Date: / Signature:	Date:	Signature:	

MAINT	RII/INSP

	ENGINEERING INSTRUCTION	Ref.: B707-20-001 Revision: 0 ATA chap.: 20 Date: Page: 24 of 26

Modification/Inspection Order			
From ESEC To: organisation implementing this E.I. Name organisation: Cc: LIBRARY DFW	File: B707-20-001		
	Aircraft/Component: 20000		
	Subject: Installation of antenna gaskets		
Accepted:	Ref.:		
Schedule:	Annex:		
Responsible System Engineer: C. de Jong			
Remarks from Performing Dept:	Remarks from Q.A. Dept:		
	Inspection	Yes ☐	No ☒
	Modification	Yes ☒	No ☐
	Repair	Yes ☐	No ☒
	Revision of SB C/W: Not applicable		
Date: / Signature:	Date:	Signature:	

MAINT	RII/INSP

	ENGINEERING INSTRUCTION	Ref.: B707-20-001 Revision: 0 ATA chap.: 20 Date: Page: 25 of 26

Modification/Inspection Order			
From ESEC To: organisation implementing this E.I. Name organisation: Cc: LIBRARY DFW	File: B707-20-001		
	Aircraft/Component: 20199		
	Subject: Installation of antenna gaskets		
Accepted:	Ref.:		
Schedule:	Annex:		
Responsible System Engineer: C. de Jong			
Remarks from Performing Dept:	Remarks from Q.A. Dept:		
	Inspection	Yes ☐	No ☒
	Modification	Yes ☒	No ☐
	Repair	Yes ☐	No ☒
	Revision of SB C/W: Not applicable		
Date: / Signature:	Date:	Signature:	