RVSM MODIFICATION
MAINTENANCE MANUAL SUPPLEMENT
FOR THE LEARJET 20 SERIES

Document No. AI 202057
Rev. F

APPLICABLE AIRCRAFT:

Learjet Models 25, 25B, 25C, 25D, 25F
Learjet Models 24, 24B, 24C, 24D, 24E, 24F
Learjet Models 28/29

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IS&S ALTIMETER/ADDU

1. DESCRIPTION

The IS&S (Innovative Solutions & Support) Altimeter/Air Data Display Unit (ADDU) combines the features of a standard static pressure altimeter with an air data computer. This unit is interfaced to the existing FC-110 autopilot and provides altitude hold, speed hold (optional), and altitude alert functions. The altimeter display can be set in feet or meters. The barometric pressure can be set in inches of mercury or millibars.

A TEST button on each unit initiates the Initial and Self-Test function. Refer to TEST Section of this document for details.

The ADDUs are interfaced to an Analog Interface Unit (AIU) via RS-422 data bus. The AIU is an adapter for the air data interface to the autopilot. The AIU is connected to an annunciator/switch panel. This installation provides an annunciator/switch panel that displays an AIU FAIL annunciator and ADC 1 and ADC 2 annunciator/switches that allow either ADDU to be selected as the active altimeter for autopilot inputs and altitude encoding data that interfaces to the transponders.

An ALT light on each unit illuminates and an altitude alert tone sounds in conjunction with the operation of the altitude alerter function of each ADDU.

The existing right-hand and left-hand Mach switches have been removed, modified and their functions changed to operate with appropriate values for the RVSM equipment.

A standby altimeter is installed to provide a backup altimeter when normal aircraft power is interrupted. Emergency lighting power is provided by the existing emergency battery(s).

2. LOCATION

CAUTIONARY NOTE:
It is imperative to prevent or significantly reduce potential contamination or debris from coming into contact with the wiring and components during all maintenance, repairs and modifications. This begins with always being aware of potential wiring contamination, and remembering to install appropriate protection (e.g. plastic sheeting), as necessary, to cover avionics/electrical wiring and components. Furthermore, a "clean-as-you-go" attitude helps maintain the integrity of the installation. In other words, care should be taken to protect wire bundles and connectors during work, and to insure that all shavings, debris and contamination are cleaned up after work is completed.

The ADDUs replace the existing pilot and copilot altimeters. The standby altimeter is installed in the center instrument panel. The ADDU annunciator/switch panel assembly replaces the altitude alerter and is installed in the instrument panel. The AIU is installed in the nose compartment. Table 1 lists the system circuit breakers related to the RVSM modification.

Circuit Breaker	Location	Unit Protected
ALT 1	LH Main Bus	ADDU #1 28VDC
ADC AIU	RH AC Bus	AIU 26VAC Reference
ADC AIU	RH Main Bus	AIU 28VDC
ALT 2	RH Main Bus	ADDU #2 28VDC
STATIC SOURCE	LH Main Bus	Isolation Valves
STBY ALT	RH Main Bus	Standby Altimeter Vibrator

SYSTEM CIRCUIT BREAKERS
TABLE 1

3. ADDU/AIU/STANDBY ALTIMETER/ISOLATION VALVE– REMOVAL

CAUTIONARY NOTE:	BEFORE ATTEMPTING TO REMOVE OR INSTALL ANY UNITS, TURN ELECTRICAL POWER TO THE AIRCRAFT OFF.

A. To remove the ADDU:

(1) Remove attaching hardware.

(2) Pull unit out of panel and disconnect wiring harness.

(3) Disconnect pitot-static lines.

(4) If unit requires repair or troubleshooting, proceed as follows:

- Return unit to Avcon Industries, Inc., component manufacturer, or an authorized repair facility.

B. To remove the AIU:

(1) Gain access to unit in the nose compartment.

(2) Loosen hold-down securing unit to rack.

(3) Disconnect wiring harness.

(4) Slide unit forward out of rack.

(5) If unit requires repair or trouble shooting, proceed as follows:

- Return unit to Avcon Industries, Inc., component manufacturer, or an authorized repair facility.

C. To remove the standby altimeter assembly:

(1) Remove attaching hardware.

(2) Pull unit out of panel and disconnect wiring harness.

(3) Disconnect static line.

(4) If unit requires repair or troubleshooting, proceed as follows:

- Return unit to Avcon Industries, Inc., component manufacturer, or an authorized repair facility.

D. To remove the isolation valve:

(1) Remove nose compartment access doors and remove equipment as required to gain access to the defective isolation valve.

(2) Disconnect tubing assemblies from the isolation valve.

(3) Disconnect electrical wiring from the isolation valve.

(4) Disconnect attach hardware securing isolation valve and remove it from the aircraft.

(5) Remove AN fittings from both ends of the valve and retain for reinstallation of replacement valve.

4. AIU/STANDBY ALTIMETER/ADDU/ISOLATION VALVE-INSTALLATION

Note:	**Installation of the AIU, ADDU and Isolation Valves must be accomplished with units that have the identical part number as listed in Table 2.1 of the Instructions for Initial and Continued Airworthiness, Avcon Industries Document No AI202045. Installation of the Standby Altimeter must be accomplished with a unit that meets or exceeds the requirements of TSO-C10b.**

A. To install the AIU:

(1) Gain access to nose compartment.

(2) Slide unit into rack and connect electrical connection.

(3) Tighten hold-down clamp to secure unit in rack.

(4) Perform applicable test per TEST procedure. Reference Sections 5, 6 and 7 of this document.

(5) Return aircraft to its initial condition.

B. To install the standby altimeter assembly:

(1) Connect wiring harness.

(2) Connect static line.

(3) Place unit in panel and secure with attaching hardware.

(4) Perform static system check as provided in Sections 8 and 9 below.

(5) Return aircraft to its initial condition.

C. To install the ADDU:

(1) Connect pitot-static lines.

(2) Connect wiring harness.

(3) Secure unit in panel with attaching hardware.

(4) Perform pitot/static plumbing check as provided in Sections 8 and 9.

(5) Perform applicable test per TEST procedure. Reference Sections 5, 6 and 7 in this document.

(6) Return aircraft to its initial condition.

Note:	**Air Data System accuracy check must also be complied with in accordance with Section 3.6 of the Instructions for Initial and Continued Airworthiness, Avcon Industries Document No AI202045.**

D. To install the isolation valve:

(1) Install retained AN fittings from removed valve using new o-rings.

(2) Torque AN fittings to 50-60 inch pounds.

(3) Install isolation valve using attach hardware.

(4) Reconnect electrical wiring.

(5) Reconnect tubing assemblies and hand tighten. Torque tube assemblies to 110-130 inch-pounds.

(6) Perform pitot/static plumbing check as provided in Sections 8 and 9.

(7) Comply with Isolation Valve Functional Test Section 13.

(8) Return aircraft to its initial condition.

5. AIU/ADDU – ADJUSTMENT/TEST INTRODUCTION

A. Purpose

The following procedure provides instructions for verifying proper operation of ADDU with FC-110 autopilot.

NOTE:	The following test procedure requires qualified operators using approved aircraft operational procedures.

B. Test Equipment Required

(1) Pitot-static ramp tester
(2) Transponder ramp tester
(3) Precision resistance unit

C. Reference Documents

Aircraft Flight Manual Supplement

6. ADDU/AIU TEST SET-UP

A. Verify that all equipment necessary for the test (all cockpit avionics & electrical equipment, circuit breaker panels and remotely mounted nose, tail, and equipment bay equipment) is installed in the aircraft before proceeding.

B. Apply external power to the aircraft.

C. Verify that the ADDU and all optional systems supplying information to the ADDU are powered and properly functioning.

D. Verify that all circuit breakers are in on all circuit breaker panels, except those necessary for ground safety (pitot heat, sensor heat).

7. ADDU BUILT-IN TEST

A. Initial Built-In-Test/Self-test (BIT)

(1) Press the bezel-mounted TEST button on an ADDU (lower right of ALT SEL knob; a pencil may be needed to press the button).
- The ADDU and AIU will begin their BIT tests.

(2) Verify the following:

a. AIU FAIL annunciator illuminates.

b. Altitude counter displays for 2.5 seconds the number of hours the altimeter has been in operation.

c. Display is blanked for one second.

d. Display test starts.

(3) Verify the following:

a. Pointer is sequenced Zero through nine (0 to 9) concurrent with the Altitude Counter and Baro Counter displaying digits corresponding to the pointer position.

b. The right digit of the digital altitude display will display 0 for digits 0 through 9.

c. The right digit is in the selected altitude display will display the digit 0 for digits 0 through 9.

d. The Baro Counter's left digit displays digits 1, 2 and 3 only, and digit 3 for 3 through 9 and 0.

e. The display legends and flags (STBY, M, ft., In.Hg, Hpa, PWR, COM, and A) will be illuminated for the duration of this sequence (approximately ten seconds).

f. During the test the aural altitude alert will be momentarily activated.

NOTE: The ADDU under test must be the selected ADC on the ADC1/ADC2 switch panel for altitude alert tone to occur.

NOTE: When troubleshooting the ADDU, depressing the TEST switch before the end of the display test will display any fault codes stored as a result of the continuous automatic BIT for 2.5 seconds. These fault codes should be recorded and Avcon Industries, Inc. or the component manufacturer should be contacted.

(4) Upon completion of the display test/fault code display, the ADDU will display the aircraft type (L245-) in the center (altitude) display, the autopilot designation (A105) in the lower left (ALT SEL) display, the position installation (1 for pilot's ADDU and 2 copilot's ADDU) in the left-most digit of lower right (Baro setting) display, and the system installation (Yes, for SSEC configuration module installed) in the 3 right-most digits of lower right (Baro setting) display.

NOTE: SSEC applied or not applied will be indicated respectively by the absence or presence of STBY.

- BIT should not exceed 45 seconds. If it does or if any fault codes are displayed, the ADDU is faulty and should be returned to the manufacturer for repair.

(5) Move the pilot's and copilot's instrument panel dimmer control and verify that the pilot's, copilot's, and standby altimeter's lighting adjusts properly.

B. Altitude Response Test

(1) Adjust the altitude preselect on each altimeter. Verify that when one preselect is changed, the other preselect altitude changes and the selected altitudes are identical.

(2) Select the ADC 1/ADC 2 select switch to ADC 1 position and verify that an "A" is displayed in the center of the display just above the altitude pointer pivot point on the pilot's ADDU and not on the copilot's ADDU. This indicates that the selected ADDU is the active master ADDU for autopilot and AIU outputs and is also the active altimeter is providing encoding information to the transponders.

a. Perform an automatic Pressure Altitude Reporting Equipment and ATC Transponder System Integration Test in accordance with FAR 43.

b. Verify that the difference between the automatic altitude reporting output and the pilot's ADDU displayed altitude does not exceed 125 ft.

(3) Select the ADC 1/ADC 2 select switch to ADC 2 position and verify that an "A" is displayed in the center of the display just above the altitude pointer pivot point on the copilot's ADDU and not on the pilot's ADDU.

a. Repeat Step 7.B.(2) a. and b. (immediately above) for the copilot's ADDU.

(4) With the ADDU's Baro setting set to a non-standard barometric setting, press the BARO set knob for less than two seconds and verify that 29.92 is automatically selected. Verify that each ADDU may be set independently from each other.

(5) Press and hold the BARO set knob in for longer than four (4) seconds but less than eight (8) seconds while in the In Hg mode. Verify that the system toggles from In.Hg to Hpa. Press and hold the BARO set knob again for longer than four (4) seconds but less than eight (8) seconds. Verify that the system toggles from Hpa to In.Hg. Verify that this can be done on each ADDU independently.

(6) Press and hold the BARO set knob in for longer than eight (8) seconds while in feet mode. Verify that the system toggles from feet to meters. Check again going from meters to feet. Verify that this can be done on each ADDU independently.

8. PITOT AND STATIC SYSTEM MAINTENANCE PRACTICES

Maintenance Practices

NOTE: The installation of or the removal/installation of the pitot-static probe(s) requires that the Tasks presented in Section 3.4 of the Instructions for Initial and Continued Airworthiness, Avcon Industries Document No AI202045 be accomplished.

Pitot and static system leak checks shall be performed at the intervals specified in Chapter 5 of the applicable Learjet Maintenance Manual plus every 12 months as specified in Section 3.3.1 of the Instructions for Initial and Continued Airworthiness, Avcon Industries Document No AI202045 as well as anytime an ADDU or the Standby altimeter is removed and/or replaced. When a pitot/static line connection is loosened, perform a pitot/static leak test, only.

A. When performing static system leak check, it will be necessary to apply vacuum to both the pitot and static systems simultaneously. This will prevent severe pressure differential, which could cause instrument damage. Pressure in the pitot system shall always be equal to or slightly greater than that in the static system.

WARNING: PULL L PITOT HEAT CIRCUIT BREAKER ON PILOT'S C/B PANEL AND R PITOT HEAT CIRCUIT BREAKER ON COPILOT'S C/B PANEL BEFORE PERFORMING THE FOLLOWING PROCEDURES TO PREVENT DAMAGE TO EQUIPMENT AND POSSIBLE INJURY.

(1) Whenever a pitot or static line is disconnected, all exposed fittings must be capped or plugged.

(2) Pitot system leak check shall be performed and all leaks repaired prior to performing static leak check.

(3) All maintenance inspections shall be completed prior to performing leak checks.

(4) Use of the system schematic is recommended to prevent application of reverse pressure and to help determine the location of leaks.

(5) Test equipment must be calibrated and checked for leaks prior to use.

(6) The rate of pressure change or the pressure applied shall not exceed the design limits of the instruments.

9. PITOT AND STATIC PLUMBING AND INSTRUMENT TEST

CAUTION:	VERIFY THAT BOTH PILOT AND COPILOT PITOT HEAT CIRCUIT BREAKERS ARE PULLED. APPLY PITOT PRESSURE VERY SLOWLY UNTIL 80 KNOTS IS REACHED.

A. Necessary Test Equipment – A calibrated Digital Air Data Test unit with a combined accuracy/repeatability of less than ±20 ft for altitudes up to 41,000 ft.

B. Pitot System Test

(1) After the aircraft instruments have been connected to the pitot plumbing, pressure shall be applied to each pitot tube inlet to give an airspeed instrument reading of 300 knots. Rate of pressure application shall not increase the airspeed indicator more than 20 knots per second after 80 knots is reached.

(2) Turn off pressure, seal the system, and verify that the system pressure drop in five minutes is not enough to cause an airspeed indicator drop of 5 knots.

(3) If the leakage of pitot system exceeds the requirements of 9.B.(2), make necessary corrections and recheck until the system meets the requirements of 9.B.(2).

C. Static Plumbing and Instrument Test

Note:	After the aircraft instruments have been connected to the pitot plumbing and the static plumbing, verify that the Static Port Switch is in the normal position, then accomplish the following:

(1) Set airspeed to 200 knots on test set and apply vacuum to the static system until the air data test set altimeter indicates 30,000 feet altitude.

(2) Shut off the vacuum source, seal the pitot-static system, and verify that the system leakage in one minute does not cause the air data test set altimeter to indicate any more than a 300 ft loss.

(3) Open valves and release the vacuum on the system slowly to ambient altitude, at a rate within the range of the rate-of-climb indicator.

(4) If the leakage of static system exceeds the requirements of 9.C.(2), make necessary corrections and recheck until system meets the requirements of 9.C.(2).

D. Autopilot Air Data Functions

(1) Altitude hold

a. With ADC 1 selected, simulate an altitude of 10,000 ft. with the air data test set. Engage autopilot then press ALT to engage altitude hold; there should be no more than a 1/8” of control column movement when ALT is engaged.

b. Increase the simulated altitude to 10,050 ft.; the control column should move fwd.

c. Decrease the simulated altitude to 9,950 ft.; the control column shall move aft.

d. Disengage autopilot.

e. Repeat 9.D.(1)(a) through 9.D.(1)(d) with ADC 2 selected.

(2) Speed Hold

a. For aircraft with optional Speed Hold mode, test Speed Hold at a simulated altitude at 10,000 ft.

b. With ADC 1 selected, establish an airspeed of 200 KIAS with the air data test set, engage autopilot, and then engage Speed Hold.

c. Increase the simulated airspeed to 220 KIAS; the control column should move aft.

d. Decrease the simulated airspeed to 180 KIAS; the control column should move forward.

e. Disengage Speed Hold.

f. Repeat 9.D.(2)(a) through 9.D.(2)(e) with ADDU 2 selected.

E. Altitude Alerter

(1) Altitude Alarms

a. Establish a simulated altitude to 6,500 ft.

b. Select 5,000 ft on the pilot's ADDU ALT SEL.

c. Decrease altitude to 5,000 ft. Verify that ALT lamp illuminates and an aural warning sounds at 6,000 ft. Verify that ALT lamp extinguishes at 5,200 ft.

d. Increase altitude to 5,300 ft and verify that ALT lamp illuminates and an aural alert sounds at 5,200 ± 50 ft.

e. Return altitude to 5,000 ft. Verify that ALT lamp extinguishes at 5,200 ± 50 ft.

f. Decrease altitude to 4,700 ft. Verify that ALT lamp illuminates and the aural alert sounds at 4,800 ± 50 ft.

g. Return altitude to 5,000 ft. Verify that ALT lamp extinguishes at 4,800 ± 50 ft.

h. Select 5,900 ft. on the pilot's ADDU ALT SEL. Verify that ALT lamp is illuminated.

i. Increase altitude and verify that the ALT lamp remains illuminated until reaching 200 ± 50 ft. below the selected altitude, at which time ALT lamp extinguishes.

j. Increase altitude to 200 ± 50 ft. above selected altitude and verify that the aural alert sounds and ALT lamp illuminates.

k. With ALT lamp illuminated, rotate ALT SEL knob to cancel current selected altitude and set new altitude approximately

3,000 ft. above current simulated altitude. While increasing altitude, switch ADDU's and verify that at 1,000 ft. from selected altitude the aural alert sounds while ALT lamp illuminates and remains illuminated until reaching 200 ± 50 ft. from selected altitude.

l. Repeat 9.E.(1)(a) through 9.E.(1)(k) with ADC 2 selected.

10. PROBE ALIGNMENT ADJUSTMENT/VERIFICATION OF POSITION

A. Rosemount Pitot-Static Probe Alignment (See Figure 1, Rosemount Probe Alignment Tool).

NOTE:	Perform Rosemount Probe Alignment Check in accordance with any required inspection interval. The Rosemount Probe is aligned 5 degrees nose down in reference to aircraft level. The Avcon Probe alignment tool incorporates a wedge so that when used the probe tool references level when the Probe is properly aligned (5 degrees nose down).

(1) Acquire necessary tools and equipment.

NAME	PART NUMBER	MANUFACTURER	USE
Digital Inclinometer		Commercially Available	Measure pitch and roll angles.
Probe Alignment Tool Kit	T24251110-2	Avcon Industries, Inc.	Rosemount Probe alignment tool.

(2) Jack aircraft.

(3) Level aircraft. (Refer to the applicable Learjet Maintenance Manual).

(4) Clean mating surfaces of probe barrel tool and Part 3 attachment. Verify that there is no visual damage to the Rosemount Probe and the orifices are free from obstruction.

CAUTION:	**DO NOT APPLY EXCESSIVE TORQUE WHEN ATTACHING THE PART 3 ATTACHMENT TO AVOID BENDING THE PROBE.**

(5) Secure Part 3 attachment to the probe barrel tool using an Allen wrench.

(6) Carefully slide probe barrel tool forward to aft onto pilot's Rosemount Probe. Verify that the guide is flush against the probe.

(7) Set the inclinometer on the Part 3 attachment along the scribe line that runs fore and aft. Verify that the probe is level within +/- 0.25 degree.

(8) Set the inclinometer on the Part 3 attachment along the scribe line that runs inboard and outboard. Verify that the probe is level within +/- 1.5 degrees.

(9) Note any discrepancies and remedy, as applicable.

CAUTION: USE CARE WHEN REMOVING TOOL FROM PITOT-STATIC PROBE. GENTLY SLIDE TOOL TO AVOID DAMAGING AIRCRAFT SKIN.

(10) Remove probe barrel tool from pilot's Rosemount Probe.

(11) Install probe barrel tool onto copilot's Rosemount Probe.

NOTE: Probe barrel tool will mount in reverse on the co-pilot's Rosemount Probe.

(12) Secure Part 3 attachment to the probe barrel Do not apply excessive torque when attaching the Part 3 attachment to avoid bending the probe.

(13) Set the inclinometer on the Part 3 attachment along the scribe line that runs fore and aft. Verify that the probe is level within ±0.25 degree.

(14) Set the inclinometer on the Part 3 attachment along the scribe line that runs inboard and outboard. Verify that the probe is level within ±1.5 degrees.

(15) Maximum allowable misalignment between the L/H and R/H Rosemont probe is +/- .25 degrees.

CAUTION:	**USE CARE WHEN REMOVING TOOL FROM PITOT-STATIC PROBE. GENTLY SLIDE TOOL TO AVOID DAMAGING AIRCRAFT SKIN.**

(16) Note any discrepancies and remedy, as applicable.

(17) Remove probe barrel tool from Rosemount Probe.

(18) Remove aircraft from jacks. (Refer to the applicable Learjet Maintenance Manual.)

NOTE:	Items 19, 20 and 21 shall be performed every 300 hours or 12 months, whichever occurs first. Rosemount Probes shall be replaced every 10,000 flight hours.

(19) Inspect the Rosemount Probes paying close attention to the static holes along the barrel of the probe. Verify that holes are clear of debris or any other obstructions.

a. Check the static pressure ports to ensure their edges remain perpendicular to the unit's machined contoured surface. Rounded or raised static port edges should not exceed 0.003".
b. Check for scratches, nicks or surface irregularities deeper than 0.015" located within 0.50" of the static port orifices.

c. Check for defects exceeding 0.025" over the rest of the head, and exceeding 0.125" on the strut section of the unit.

(20) Inspect the area around the Rosemount Probe. There are markings at the corners of the Probe Critical Regions to make sure that the aircraft surface is free of paint, debris, or other contamination. Verify that the Probe Critical Region is free from damage or deformation. Deformation could include dents, cracks, skin stretch, creases, scratches, repairs, doublers, sealant, primer or paint, among other contaminants to airflow.

(21) Inspect the Rosemount Probe for damage or deformation. Use a sensitive measuring tool to check for small deformation to the probe. The Rosemount Probe must be overhauled or inspected by the manufacturer if:

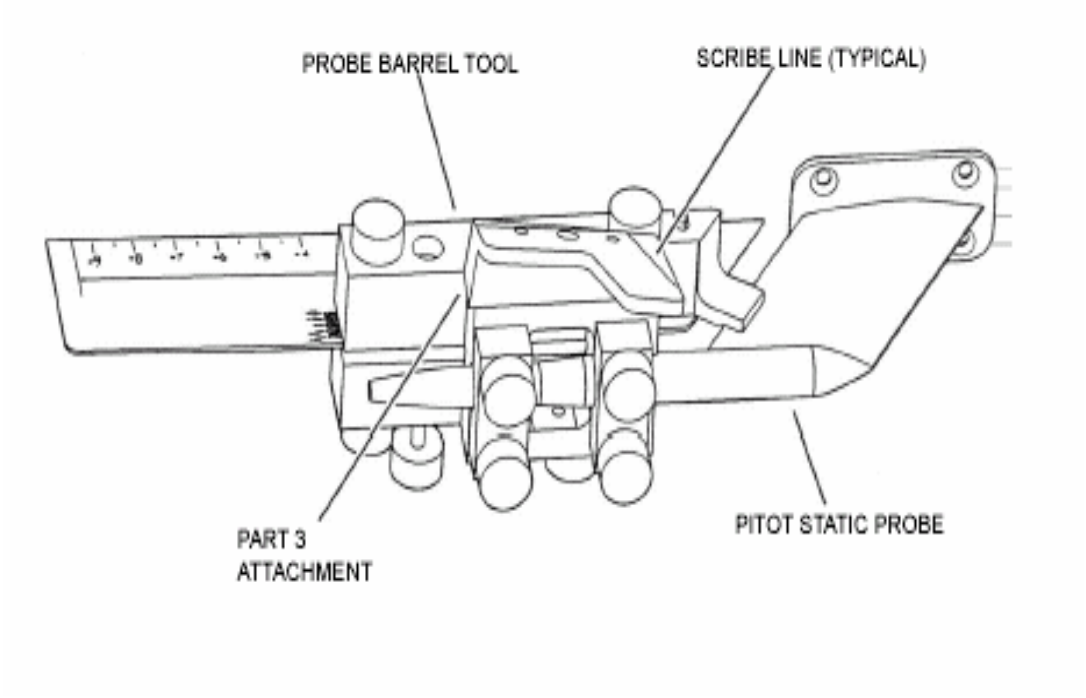
a. There is tip erosion or damage with a flatness that exceeds 0.022 +/-0.005 inches.

b. The lip edge is curled or lipped outward.

c. The tip is damaged by deformities of greater than 0.030 +/-0.005" on the tip lip. Small deformities around the tip that do not effect the roundness of the lip do not require replacement. Any indentation must not effect more than twenty percent of the circumference.

d. The leading edge lip may have small nicks or chips. If deformations exceed 0.035" deep, the tube must be replaced or repaired.

(22) After reapplying power to the aircraft, check probe heat operation.



Rosemount Pitot-Static Probe Alignment Tool
Figure 1

11. PITOT-STATIC PROBE REMOVAL

WARNING: THE FOLLOWING PROCEDURES ARE ONLY APPLICABLE TO REPLACING A PITOT-STATIC PROBE DUE TO HEATER ELEMENT FAILURE.

IN CASE OF A DAMAGED PROBE, SUPPORT STRUCTURE ALIGNMENT MAY HAVE BEEN ALTERED. CONTACT AVCON CUSTOMER SERVICE FOR DISPOSITION.

NOTE:	The Avcon Rosemount pitot-static probe base mount incorporates an eccentric nut which is safety wired to the base mount. If the eccentric nut safety wire is missing verify the probe alignment per Section 10.

A. Remove nose compartment access doors and remove equipment as required to gain access to the pitot-static probe.

B. Disconnect electrical connector from the pitot-static probe.

C. Loosen and disconnect pitot and static lines from pitot-static probe.

D. Remove attaching parts and pitot-static probe from aircraft. Clean old sealant from base mount.

12. INSTALLATION OF PITOT-STATIC PROBE

A. Apply fay seal to surface of base mount. Position pitot-static probe on base mount assuring that probe pin is fully engaged in eccentric nut and install attaching parts. Torque nuts to 30 to 40 inch-pounds.

B. Remove caps from pitot and static lines and connect lines to pitot-static probe.

C. Connect electrical connector to pitot-static probe.

D. Perform pitot and static probe alignment check per Section 10 above.

E. Perform pitot and static plumbing leak check. (Refer to Sections 8 and 9 of this Supplement for instructions)

F. Check pitot-static probe for proper heating as follows:

(1) Set applicable Pitot Heat Switch on.

(2) Check pitot-static probe starts to warm up.

(3) Set applicable Pitot Heat Switch off.

G. Install and functionally test previously removed equipment.

H. Install nose compartment access doors.

NOTE:	The installation of or the removal/installation of the pitot-static probe(s) requires that the Tasks presented in Section 3.4 of the Instructions for Initial and Continued Airworthiness, Avcon Industries Document No AI202045 be accomplished.

13. ISOLATION VALVE FUNCTIONAL TEST

A. Pitot-Static Isolation Valve Functional Test

NOTE:	Perform Pitot-Static Isolation Valve Functional Test every 600 hours or 24 months, whichever occurs first.

(1) Install Pitot-Static test adapter to pilot's pitot-static mast and connect pitot-static tester to pilot's static port 1.

(2) Set STATIC SOURCE Switch to BOTH.

CAUTION: WHEN APPLYING VACUUM TO THE PITOT-STATIC SYSTEM, ENSURE THAT THE TESTER CROSS-BLEED VALVE IS OPEN.

TO AVOID DAMAGE TO AIRCRAFT INSTRUMENTS, DO NOT EXCEED 5000 FEET PER MINUTE RATE OF CLIMB OR DESCENT. DO NOT ALLOW AIRSPEED TO DECREASE BELOW ZERO.

(3) Seal off static ports on copilot's mast.

(4) With tester cross-bleed valve open, apply a vacuum to the pilot's pitot-static port 1 until tester altimeter indicates 1,500 feet above field elevation. Do not exceed a rate-of-climb of 2,000 feet per minute.

(5) Slowly remove seal on copilot's static port 2 and verify air flow at static port 2.

(6) Seal copilot's static port 2.

(7) Disconnect pitot-static tester vacuum source from pilot's pitot-static port 1 and connect to pilot's pitot-static port 2.

(8) With tester cross-bleed valve open, apply a vacuum to the pilot's pitot-static port 2 until tester altimeter indicates 1,500 feet above field elevation. Do not exceed a rate-of-climb of 2,000 feet per minute.

(9) Slowly remove seal on copilot's static port 1 and verify air flow at static port 1.

(10) Seal off static ports on copilot's mast.

(11) Set STATIC SOURCE Switch to LEFT.

(12) With tester cross-bleed valve open, apply a vacuum to the pilot's pitot-static port 2 until tester altimeter indicates 1,500 feet above field elevation. Do not exceed a rate-of-climb of 2,000 feet per minute.

(13) Slowly remove seals from copilot's mast, and verify no air flow at copilot's static ports 1 and 2.

(14) Set STATIC SOURCE to BOTH. Verify air flow at copilot's static ports 1 and 2.

(15) Install Pitot-Static test adapter to copilot's pitot-static mast and connect pitot-static tester to copilot's static port 1.

(16) Seal off static ports on pilot's mast.

(17) Set STATIC SOURCE to RIGHT.

(18) With tester cross-bleed valve open, apply a vacuum to the copilot's pitot-static port 2 until tester altimeter indicates 1,500 feet above field elevation. Do not exceed a rate-of-climb of 2,000 feet per minute.

(19) Slowly remove seals from pilot's mast, and verify no air flow at pilot's static ports 1 and 2.

(20) Set STATIC SOURCE to BOTH. Verify air flow at pilot's static ports 1 and 2.

CAUTION: TO AVOID DAMAGE TO AIRCRAFT INSTRUMENTS, DO NOT EXCEED 5000 FEET PER MINUTE RATE OF CLIMB OR DESCENT. DO NOT ALLOW AIRSPEED TO DECREASE BELOW ZERO.

(21) Release vacuum from the pitot-static system.

(22) Remove Pitot-static tester from pitot-static test adapter. Remove pitot-static test adapter from aircraft.

(23) Inspect pitot-static probes to ensure that seals have been removed.

14. STANDBY ALTIMETER – EMERGENCY LIGHTING

A. Purpose

The following procedure gives instructions for checking the illumination of the standby altimeter with the emergency power supply.

B. Equipment and Facilities Required – None

C. Perform a check of the standby altimeter emergency lighting as follows:

(1) Ensure that all aircraft power is off.

(2) Place the emergency battery switch in the "ON" position.

(3) Verify that the STANDBY ALTIMETER is illuminated and that the altimeter vibrator flag is in view.

(4) Verify that with the INSTR panel dimmer control in the ON (out-of-detent) position and that movement of the dimmer control has no control of the lighting illumination.

(5) Place the emergency battery switch in the "OFF" position.

15. AUTOPILOT MAINTENANCE/FLIGHT CONTROL RIGGING

NOTE:	Perform the Flight Control Checks provided in the aircraft checklist and aircraft flight manual supplement. For checking the autopilot operation with the STC components installed, refer to Section 9.D of this document and test the autopilot with a pitot-static system tester connected to the aircraft. Also Refer to Section 22 of the applicable Learjet Maintenance Manual.

A. Follow the maintenance practices described in Section 22 for Servo and capstan maintenance practices and adjustments.

B. The Avcon Industries, Inc. RVSM modification does not change the rigging of the flight controls in the airplane. It is very important to achieve the required performance and have the aircraft controls in proper rig according to Section 27 (Adjustment/Test) of the applicable Learjet Maintenance Manual.

16. MACH/OVERSPEED WARNING – MAINTENANCE PRACTICES

16.1 Learjet 24/25 Aircraft Equipped with the 9B-81040-32 AIU

A. General

1. Maintenance procedures for the Mach/Overspeed warning system consist of a functional check of the mach switch and replacement of defective components.

2. During normal aircraft flight, the Mach/Overspeed Switch is seldom actuated; therefore, it is recommended that the Mach/Overspeed Switch be functionally checked in accordance with current inspection requirements found in Chapter 5 of the appropriate Learjet Maintenance Manual.

3. Refer to applicable removal and installation procedures of the individual components in the appropriate Learjet Maintenance Manual.

B. Description

The Mach/Overspeed Warning System provides the crew with an aural warning when the aircraft exceeds a predetermined limit. The puller control

system commands an aircraft nose-up attitude as a corrective action. The system consists of a mach/overspeed warning switch, a pitot and static source, and a stick puller adjustment potentiometer. The system utilizes the autopilot pitch servo for stick puller activation. A mach test switch on the pedestal is used to check system operation. The system is powered through the LH stall warning switch. The pilot may override the stick puller force at any time.

C. Mach/Overspeed System Functional Check (Aircraft not equipped with Reduced Approach Speed System)

(1) Connect Pitot Static Test Set to R/H (Co-Pilot's) Pitot System and R/H Forward (Co-Pilot's) Static System. Ensure that L/H Pitot and Static Ports are capped. Select ADC 2 on the ADC Selector Switch located on the aircraft instrument panel.

(2) Ensure that the Autopilot System is off. Set Battery Switch(es) and Left Stall Warning Switch to ON.

(3) Turn Pitot Static Test Set on, follow manufacture's operating instructions for the test set being used.

CAUTION: DO NOT EXCEED 5000 FEET PER MINUTE RATE OF CLIMB WHILE APPLYING VACUUM TO THE PITOT AND STATIC SYSTEM. EXCEEDING 5000 FEET PER MINUTE RATE OF CLIMB MAY CAUSE DAMAGE TO THE INSTRUMENT.

(4) Set Pitot Static Test Set altitude to 10,000 feet and airspeed to 250 knots. Verify that Altimeter and Airspeed indicator agree with Test Set.

CAUTION: DO NOT EXCEED 20 KNOTS PER SECOND WHEN VENTING ATMOSPHERIC PRESSURE INTO PITOT SYSTEM. EXCEEDING 20 KNOTS PER SECOND MAY CAUSE DAMAGE TO THE INSTRUMENT.

(5) Slowly increase Pitot Static Test Set airspeed, record airspeed at which aural warning sounds. Aural warning will sound at 300 (±3) knots at 10,000 feet.

(6) Reduce Pitot Static Test Set Airspeed to 250 knots.

(7) Set Pitot Static Test Set altitude to 41,000 feet.

NOTE: Aircraft equipped with the Automatic Flight Control/Stability System (AFC/SS), follow Steps (8A) through (10A) and continue with Step (11). Aircraft not equipped with the AFC/SS, follow Step (8B) and continue with Step (11).

(8A) Slowly increase Pitot Static Test Set airspeed and record Mach number at which aural warning sounds. Aural warning will sound at 0.77 (±0.01) Mach at 41,000 feet.

(8B) Slowly increase Pitot Static Test Set airspeed and record Mach number at which aural warning sounds and stick puller activates. Mach number should correspond to maximum operating Mach number (M_{MO}) within ±0.01 at 41,000 feet found in the appropriate Avcon RVSM Airplane Flight Manual Supplement (AFMS).

(9A) Engage Autopilot System. Aural warning horn will stop.

(10A) Slowly increase Pitot Static Test Set airspeed and record Mach number at which aural warning sounds and stick puller activates. Mach number should correspond to maximum operating Mach number (M_{MO}) within ±0.01 at 41,000 feet found in the appropriate Avcon RVSM Airplane Flight Manual Supplement (AFMS).

(11) Return Pitot Static Test Set to field elevation.

(12) Disconnect Pitot/Static Tester from the static and pitot systems. Set Battery Switch(es) and Left Stall Warning Switch to OFF.

D. Mach/Overspeed System Functional Check (Aircraft equipped with Reduced Approach Speed System)

(1) Connect Pitot Static Test Set to R/H (Co-Pilot's) Pitot System and R/H Forward (Co-Pilot's) Static System. Ensure that the L/H Pitot and Static Ports are capped. Select ADC 2 on the ADC Selector Switch located on the aircraft instrument panel.

(2) Ensure that the Autopilot System is off.

(3) Set Battery Switch(es) and Left Stall Warning Switch to ON.

(4) Turn Pitot Static Test Set on, follow manufacture's instructions for the operation of the test set being used.

CAUTION: DO NOT EXCEED 5000 FEET PER MINUTE RATE OF CLIMB WHILE APPLYING VACUUM TO THE PITOT AND STATIC SYSTEM. EXCEEDING 5000 FEET PER MINUTE RATE OF CLIMB MAY CAUSE DAMAGE TO THE INSTRUMENT.

(5) Set Pitot Static Test Set altitude to 12,500 feet and airspeed to 250 knots. Verify that Altimeter and Airspeed Indicator agree with Test Set.

CAUTION: DO NOT EXCEED 20 KNOTS PER SECOND WHEN VENTING ATMOSPHERIC PRESSURE INTO PITOT SYSTEM. EXCEEDING 20 KNOTS PER SECOND MAY CAUSE DAMAGE TO THE INSTRUMENT.

(6) Slowly increase Pitot Static Test Set airspeed and record airspeed at which aural warning sounds. Aural warning will sound at 300 (±3) knots at 12,500 feet.

(7) Reduce Pitot Static Test Set airspeed to 250 knots.

(8) Increase Pitot Static Test Set altitude to 16,500 feet.

(9) Slowly increase Pitot Static Test Set airspeed and record airspeed at which aural warning sounds. The aural warning will sound at 350 (±4) knots indicated airspeed at 16,500 feet.

(10) Slowly reduce Pitot Static Test Set airspeed until the aural warning stops. Set Pitot Static Test Set airspeed to 340 kts.

(11) Slowly reduce Pitot Static Test Set altitude. The aural overspeed warning shall again sound at a minimum of 12,200 feet.

NOTE: The mach switch (MT37) must reset within 1,800 feet of the ascending actuation point (14,500 ±500 feet). The 12,200 feet altitude is the minimum allowable reset altitude.

(12) Reduce Pitot Static Test Set airspeed to 200 knots.

(13) Increase Pitot Static Test Set altitude to 41,000 feet.

NOTE: Aircraft equipped with the Automatic Flight Control/Stability System (AFC/SS), follow Steps (14A) through (16A) and continue with Step (17). Aircraft not equipped with the AFC/SS, follow Step (14B) and continue with Step (17).

(14A) Slowly increase Pitot Static Test Set airspeed and record the Mach number at which aural warning sounds. Aural warning will sound at 0.77 (±0.01) Mach at 41,000 feet.

(14B) Slowly increase Pitot Static Test Set airspeed and record the Mach number at which aural warning sounds and stick puller activates. Airspeed should correspond to maximum operating Mach number (M_{MO}) within ±0.01 at 41,000 feet found in the appropriate Avcon RVSM Airplane Flight Manual Supplement (AFMS).

(15A) Engage Autopilot System. Aural warning horn will stop.

(16A) Slowly increase Pitot Static Test Set airspeed and record the Mach number at which the aural warning sounds and the puller activates. Airspeed should correspond to maximum operating Mach number (M_{MO}) within ±0.01 at 41,000 feet found in the appropriate Avcon RVSM Airplane Flight Manual Supplement (AFMS).

(17) Return Pitot Static Test Set to field elevation.

(18) Disconnect Pitot/Static Tester from the static and pitot systems. Set Autopilot System to off, and Battery Switch(es) and Left Stall Warning Switch to OFF.

16.2 Learjet 24/25 Aircraft Equipped with the 9B-81040-38 AIU

A. General

1. Maintenance procedures for the Mach/Overspeed warning system consist of a functional check of the AIU and replacement of defective components.

2. During normal aircraft flight, the Mach/Overspeed System is seldom actuated; therefore, it is recommended that the system be functionally checked in accordance with current inspection requirements found in Chapter 5 of the appropriate Learjet Maintenance Manual.

3. Refer to Sections 3B and 4A of this document for removal and installation procedures of the AIU.

B. Description

The Mach/Overspeed Warning System provides the crew with an aural warning when the aircraft exceeds a predetermined limit. The puller control system commands an aircraft nose-up attitude as a corrective action. The system consists of the IS&S 9B-81040-38 AIU, a pitot and static source, and a stick puller adjustment potentiometer. The system utilizes the autopilot pitch servo for stick puller activation. A mach test switch on the pedestal is used to check system operation. The system is powered through the LH stall warning switch. The pilot may override the stick puller force at any time.

C. Mach/Overspeed System Functional Check (Aircraft not equipped with Reduced Approach Speed System)

(1) Connect Pitot Static Test Set to L/H (Pilot's) Pitot System and L/H Forward (Pilot's) Static System. Ensure that R/H Pitot and Static Ports are capped. Select ADC 1 on the ADC Selector Switch located on the aircraft instrument panel.

(2) Ensure that the Autopilot System is off. Set Battery Switch(es) and Left Stall Warning Switch to ON.

(3) Turn Pitot Static Test Set on, follow manufacture's operating instructions for the test set being used.

CAUTION: DO NOT EXCEED 5000 FEET PER MINUTE RATE OF CLIMB WHILE APPLYING VACUUM TO THE PITOT AND STATIC SYSTEM. EXCEEDING 5000 FEET PER MINUTE RATE OF CLIMB MAY CAUSE DAMAGE TO THE INSTRUMENT.

(4) Set Pitot Static Test Set altitude to 10,000 feet and airspeed to 250 knots. Verify that Altimeter and Airspeed indicator agree with Test Set.

CAUTION: DO NOT EXCEED 20 KNOTS PER SECOND WHEN VENTING ATMOSPHERIC PRESSURE INTO PITOT SYSTEM. EXCEEDING 20 KNOTS PER SECOND MAY CAUSE DAMAGE TO THE INSTRUMENT.

(5) Slowly increase Pitot Static Test Set airspeed, record airspeed at which aural warning sounds. Aural warning will sound at 300 (+6, -0) knots at 10,000 feet.

(6) Reduce Pitot Static Test Set Airspeed to 250 knots.

(7) Set Pitot Static Test Set altitude to 41,000 feet.

NOTE: Aircraft equipped with the Automatic Flight Control/Stability System (AFC/SS), follow Steps (8A) through (10A) and continue with Step (11). Aircraft not equipped with the AFC/SS, follow Step (8B) and continue with Step (11).

(8A) Slowly increase Pitot Static Test Set airspeed and record Mach number at which aural warning sounds. Aural warning will sound at 0.77 (+.009, -0) Mach at 41,000 feet.

(8B) Slowly increase Pitot Static Test Set airspeed and record Mach number at which aural warning sounds and stick puller activates. Mach number should correspond to maximum operating Mach number (M_{MO}) within (+.009, -0) at 41,000 feet found in the appropriate Avcon RVSM Airplane Flight Manual Supplement (AFMS).

(9A) Engage Autopilot System. Aural warning horn will stop.

(10A) Slowly increase Pitot Static Test Set airspeed and record Mach number at which aural warning sounds and stick puller activates. Mach number should correspond to maximum operating Mach number (M_{MO}) within (+.009, -0) at 41,000 feet found in the appropriate Avcon RVSM Airplane Flight Manual Supplement (AFMS).

(11) Return Pitot Static Test Set to field elevation.

(12) Disconnect Pitot/Static Tester from the static and pitot systems. Set Battery Switch(es) and Left Stall Warning Switch to OFF.

(13) Repeat steps 2 through 12 with Pitot Static Test Set connected to R/H (Co-pilot's) Pitot System and R/H Forward (Co-pilot's) Static System. Ensure that the L/H Pitot and Static Ports are capped. Select ADC 2 on the ADC Selector located on the aircraft instrument panel.

D. Mach/Overspeed System Functional Check (Aircraft equipped with Reduced Approach Speed System)

(1) Connect Pitot Static Test Set to L/H (Pilot's) Pitot System and L/H Forward (Pilot's) Static System. Ensure that the R/H Pitot and Static Ports are capped. Select ADC 1 on the ADC Selector Switch located on the aircraft instrument panel.

(2) Ensure that the Autopilot System is off.

(3) Set Battery Switch(es) and Left Stall Warning Switch to ON.

(4) Turn Pitot Static Test Set on, follow manufacture's instructions for the operation of the test set being used.

CAUTION: DO NOT EXCEED 5000 FEET PER MINUTE RATE OF CLIMB WHILE APPLYING VACUUM TO THE PITOT AND STATIC SYSTEM. EXCEEDING 5000 FEET PER MINUTE RATE OF CLIMB MAY CAUSE DAMAGE TO THE INSTRUMENT.

(5) Set Pitot Static Test Set altitude to 12,500 feet and airspeed to 250 knots. Verify that Altimeter and Airspeed Indicator agree with Test Set.

CAUTION: DO NOT EXCEED 20 KNOTS PER SECOND WHEN VENTING ATMOSPHERIC PRESSURE INTO PITOT SYSTEM. EXCEEDING 20 KNOTS PER SECOND MAY CAUSE DAMAGE TO THE INSTRUMENT.

(6) Slowly increase Pitot Static Test Set airspeed and record airspeed at which aural warning sounds. Aural warning will sound at 300 (+6, -0) knots at 12,500 feet.

(7) Reduce Pitot Static Test Set airspeed to 250 knots.

(8) Increase Pitot Static Test Set altitude to 16,500 feet.

(9) Slowly increase Pitot Static Test Set airspeed and record airspeed at which aural warning sounds. The aural warning will sound at 350 (+6, -0) knots indicated airspeed at 16,500 feet.

(10) Slowly reduce Pitot Static Test Set airspeed until the aural warning stops. Set Pitot Static Test Set airspeed to 340kts.

(11) Slowly reduce Pitot Static Test Set altitude. The aural overspeed warning shall again sound at a minimum of 12,200 feet.

NOTE: The mach switch (MT37) must reset within 1,800 feet of the ascending actuation point (14,500 ±500 feet). The 12,200 feet altitude is the minimum allowable reset altitude.

(12) Reduce Pitot Static Test Set airspeed to 200 knots.

(13) Increase Pitot Static Test Set altitude to 41,000 feet.

NOTE: Aircraft equipped with the Automatic Flight Control/Stability System (AFC/SS), follow Steps (14A) through (16A) and continue with Step (17). Aircraft not equipped with the AFC/SS, follow Step (14B) and continue with Step (17).

(14A) Slowly increase Pitot Static Test Set airspeed and record the Mach number at which aural warning sounds. Aural warning will sound at 0.77 (+.009, -0) Mach at 41,000 feet.

(14B) Slowly increase Pitot Static Test Set airspeed and record the Mach number at which aural warning sounds and stick puller activates. Airspeed should correspond to maximum operating Mach number (M_{MO}) within (+.009, -0) at 41,000 feet found in the appropriate Avcon RVSM Airplane Flight Manual Supplement (AFMS).

(15A) Engage Autopilot System. Aural warning horn will stop.

(16A) Slowly increase Pitot Static Test Set airspeed and record the Mach number at which the aural warning sounds and the puller activates. Airspeed should correspond to maximum operating Mach number (M_{MO}) within (+.009, -0) at 41,000 feet found in the appropriate Avcon RVSM Airplane Flight Manual Supplement (AFMS).

(17) Return Pitot Static Test Set to field elevation.

(18) Disconnect Pitot/Static Tester from the static and pitot systems. Set Autopilot System to off, and Battery Switch(es) and Left Stall Warning Switch to OFF.

(19) Repeat steps 2 through 18 with the Pitot Static Test Set connected to the R/H (Co-pilot's) Pitot System and the R/H Forward (Co-pilot's) Static System. Ensure that the L/H Pitot and Static Ports are capped. Select ADC 2 on the ADC Selector Switch an the aircraft instrument panel.

16.3 Learjet 28/29 Aircraft

A. General

1. Maintenance procedures for the Mach/Overspeed warning system consist of a functional check of the mach switch and replacement of defective components.

2. During normal aircraft flight, the Mach/Overspeed Switch is seldom actuated; therefore, it is recommended that the Mach/Overspeed Switch be functionally checked in accordance with current inspection requirements found in Chapter 5 of the appropriate Learjet Maintenance Manual.

3. Refer to applicable removal and installation procedures of the individual components in the appropriate Learjet Maintenance Manual.

B. Description

The Mach/Overspeed Warning System provides the crew with an aural warning when the aircraft exceeds a predetermined limit. The puller control system commands an aircraft nose-up attitude as a corrective action. The system consists of a mach/overspeed warning switch, a pitot and static source, and a stick puller adjustment potentiometer. The system utilizes the autopilot pitch servo for stick puller activation. A mach test switch on the pedestal is used to check system operation. The system is powered through the LH stall warning switch. The pilot may override the stick puller force at any time.

C Mach/Overspeed Switch Functional Check

(1) Assure that the Autopilot and Mach Trim Systems are “off”.

NOTE: The MACH TRIM circuit breaker must be pulled to disengage the Mach Trim System.

(2) Connect Pitot Static Test Set to the R/H (Co-Pilot’s) Pitot System and the R/H Forward (Co-Pilot’s) Static System. Ensure that L/H Pitot and Static ports are capped. Select ADC 2 on the ADC Selector Switch located on the aircraft instrument panel.

(3) Set Battery Switches and Left Stall Warning Switches to ON. Ensure that Static Source Switch is set to BOTH position.

NOTE: Follow the manufacturer’s instructions when using pitot/static tester.

(4) Turn Pitot Static Test Set on.

CAUTION: DO NOT EXCEED 5000 FEET PER MINUTE RATE OF CLIMB WHILE APPLYING VACUUM TO THE PITOT AND STATIC SYSTEM. EXCEEDING 5000 FEET PER MINUTE RATE OF CLIMB MAY CAUSE DAMAGE TO THE INSTRUMENT.

(5) Set Pitot Static Test Set altitude to 10,000 feet and airspeed to 250 knots. Verify that Altimeter and Airpeed indicator agree with Test Set.

CAUTION: DO NOT EXCEED 20 KNOTS PER SECOND WHEN VENTING ATMOSPHERIC PRESSURE INTO PITOT SYSTEM. EXCEEDING 20 KNOTS PER SECOND MAY CAUSE DAMAGE TO THE INSTRUMENT.

(6) Slowly increase Pitot Static Test Set airspeed.

(7) Record airspeed at which the aural warning sounds. Aural warning should sound at 300 (±3) KIAS at 10,000 feet.

(8) Reduce Pitot Static Test Set airspeed to 200 knots and increase Pitot Static Test Set altitude to 20,000 feet.

(9) Slowly increase Pitot Static Test Set airspeed.

(10) Record airspeed at which the aural warning sounds. Aural warning should sound at 350 (±4) KIAS.

(11) Reduce Pitot Static Test Set airspeed to 150 knots and increase Pitot Static Test Set altitude to 41,000 feet.

(12) Slowly increase Pitot Static Test Set airspeed.

(13) Record airspeed at which aural warning sounds. Aural warning should sound at 0.74 (±0.01) M_I.

(14) Set Primary and Secondary Inverter Switches to ON. Engage Autopilot and reset MACH TRIM circuit breaker. Aural warning horn will stop.

(15) Slowly increase Pitot Static Test Set airspeed.

(16) Record airspeed at which the aural warning sounds and stick puller actuates. Aural warning and stick puller should actuate at 0.81 (±0.01) M_I.

CAUTION: DO NOT EXCEED 5000 FEET PER MINUTE RATE OF CLIMB WHILE APPLYING VACUUM TO THE PITOT AND STATIC SYSTEM. EXCEEDING 5000 FEET PER MINUTE RATE OF CLIMB MAY CAUSE DAMAGE TO THE INSTRUMENT.

CAUTION: DO NOT EXCEED 20 KNOTS PER SECOND WHEN VENTING ATMOSPHERIC PRESSURE INTO PITOT SYSTEM. EXCEEDING 20 KNOTS PER SECOND MAY CAUSE DAMAGE TO THE INSTRUMENT.

(17) Return Pitot Static Test Set to field elevation.

(18) Disengage autopilot and set inverter, Left Stall Warning and Battery Switches to “off”.

(19) Disconnect Pitot Static Test Set from pitot and static systems.