



AVIATION UNIT TECHNICAL MANUAL

for the

UH-60A UTILITY HELICOPTER

(NSN 1520-01-035-0266) (EIC: RSA)

UH-60L UTILITY HELICOPTER

(NSN 1520-01-298-4532) (EIC: RSM)

UH-60Q MEDICAL EVACUATION HELICOPTER

(NSN 1520-01-459-9458) (EIC: N/A) and

HH-60L MEDICAL EVACUATION HELICOPTER

(NSN 1520-01-471-6743) (EIC: N/A)

Commercial Troubleshooting Supplement to WP 0089 00 of TM1-1520-237-23-2 for use with the UxValidator Instrument Display System Line Test Set PN 06-0125-65



Protection of Technical Information – This information is furnished upon the condition that (1) it will not be released to other parties without the specific authority of ULTRAX Inc.; (2) that individual or corporate rights originating in the information, whether patented or not, will be respected; (3) that the recipient will report promptly to ULTRAX Inc. any known or suspected compromise; and (4) that this information will be provided substantially the same degree of security afforded it by the Department of Defense of the United States. Also, regardless of any other markings on this document, it will not be downgraded or declassified without written approval ULTRAX Inc.

Distribution is authorized to U.S. Government Agencies and their contractors for use in support of the forwarding US Government Agency only. Other requests for this document must be referred to ULTRAX Aerospace Inc.

Destruction Information – When disposing of this document, destroy it by any method that will prevent disclosure of the contents or reconstruction of the document.

Export Control Warning – Export of the technical data in this document is restricted by the ARMS EXPORT CONTROL ACT (22 USC 2751 et seq.) and/or EXECUTIVE ORDER 12470. Violations of these export laws are subject to severe criminal penalties.



Rev 2, 22 Oct 2010



Direct All Inquiries To:

ULTRAX Aerospace, Inc.
4200 NE Sun Court
Lee's Summit, MO 64064

www.ultraxinc.com
Phone (816)-214-9999
Fax (816)-214-9998

Reporting Errors and Recommending Improvements

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know.

- Fill out and mail the Recommended Changes to Technical Publications form at the end of this manual.
- Send your recommended changes by email or by fax. Our fax number is 816-214-9998; our e-mail address is publications@ultraxinc.com.

Thank you for your recommendations. You will receive a reply.

Receiving Technical Support

If you need immediate assistance, please call 816-214-9999 and ask for technical support. Normal business hours are 8:30 am to 5:00 pm CST. Calls made during this time will be immediately directed to one of our Tech Support Personnel. Calls after normal business hours will be directed to our 24-7 hotline, and a representative will then contact you.

You can also request technical support through the ULTRAX website (www.ultraxinc.com). Find and click on ULTRAX TECHNICAL SUPPORT; an online form will open. Fill out and submit the form, and a representative will contact you within 24 hours.



Revision Status Page

This is Revision 2 of ULTRAX Technical Manual PN 07-0601-01, dated 22 Oct 2010:

**Commercial Troubleshooting Supplement to
WP 0089 00 of TM-1520-237-23-2
for use with the
UxValidator Instrument Display System Line Test Set, PN 06-0125-65**

MANUAL REVISIONS:

Dates of issue for the original manual and any revisions are:

Revision	Date of Issue
0 - Original Issue	01 Jun 2007
1	19 May 2009
2	22 Oct 2010

LIST OF EFFECTIVE PAGES:

The total number of pages is 72.

Page	Rev	Change Made
Cover, ii, vii iii 1, 2	1	Added the PN 06-0125-75 IDS set configuration. Added List of Effective Pages table. Clarified component use between -65 and -75 sets.
All 1-25 2, 3, 26, 29-41 42	2	COMPLETE REFORMAT – REPLACE MANUAL. Revised Artwork Updated work package callouts Updated Chart IDS-01 Addresses Series I and Series II UxValidator Sets.

For changes to text: The portion of the text affected by the latest change is indicated by a vertical line in the outer margin of the page.

For changes to illustrations: Changes are indicated by a vertical line in the outer margin of the page next to the title of the illustration, and a hand pointing to the changed area on the illustration.

Table 8-2-3-8 – With CDU PUSH TO TEST Switch Pressed, Two or More Adjacent Lamps on One Scale are Off, or One Lamp Between Green and Amber, Amber and Red, or Green and Red Ranges on a Scale is Off.....	51
Table 8-2-3-9 – With CDU PUSH TO TEST Switch Pressed, One or More RTR OVERSPEED Lights are Off	52
Table 8-2-3-10 – CDU DIM Control Varies PDU Display Lighting	53
Table 8-2-3-11 – Pilot's or Copilot's PDU % RPM Display is Inoperative	53
Table 8-2-3-12 – One or More RTR OVERSPEED Lights are Off.....	54
Table 8-2-3-13 – FUEL QTY 1, FUEL QTY 2, and/or TOTAL FUEL Display is Inoperative	55
Table 8-2-3-14 – ENG OIL PRESS 1 and/or ENG OIL PRESS 2 Display is Inoperative	56
Table 8-2-3-15 – ENG OIL TEMP 1 and/or ENG OIL TEMP 2 Display is Inoperative	57
Table 8-2-3-16 – NO. 1 HIGH OIL TEMP and/or NO. 2 HIGH OIL TEMP Light is Off.....	58
Table 8-2-3-17 – Ng SPEED 1 and/or Ng SPEED 2 Vertical Display is Inoperative	59
Table 8-2-3-18 – Ng SPEED 1 and/or Ng SPEED 2 Digital Display is Inoperative	60
Table 8-2-3-19 – % TRQ 1 and/or % TRQ 2 Vertical Display or % TRQ Digital Readout is Inoperative	61
Table 8-2-3-20 – XMSN PRESS Display is Inoperative	62
Table 8-2-3-21 – XMSN TEMP Display is Inoperative	62
Table 8-2-3-22 – PDU's % RPM 1 or % RPM 2 Display is Inoperative	63
Table 8-2-3-23 – TGT TEMP 1 or TGT TEMP 2 Vertical Display is Inoperative	64
Table 8-2-3-24 – TGT TEMP 1 and/or TGT TEMP 2 Digital Display is Inoperative	65
Table 8-2-3-25 – CDU Faceplate Lighting is Inoperative.....	66
Table 8-2-3-26 – PDU Faceplate Lighting is Inoperative	67
Table 8-2-3-27 – Copilot's PDU Faceplate Lighting is Inoperative.....	68

Charts

Chart IDS-0-1 – Airframe Component Troubleshoot/Replacement Reference	69
---	----



5

Safety steps to follow if someone is the victim of electrical shock

1

Do not try to pull or grab the person.

2

If possible, turn off the electrical power.

3

If you cannot turn off the electrical power, then pull, push, or lift the person to safety using a wooden pole, a rope, or some other insulating material.

4

Send for help as soon as possible.

5

When the injured person is no longer in contact with the source of electrical shock, move the person a short distance away and immediately start resuscitation.

FIRST AID

Refer to FM 21-11.

Warnings, Cautions, and Notes

WARNING

WARNING indicates a procedure, practice, condition, or statement that **must** be strictly observed. Failure to observe a WARNING could result in injury or death or cause an aborted mission.

CAUTION

CAUTION indicates a procedure, practice, condition, or statement that **must** be strictly observed. Failure to observe a CAUTION could result in damage to equipment, loss of mission effectiveness, or long-term health hazards.

NOTE

NOTE indicates additional related information that is helpful or otherwise significant.

WARNING
AC POWER

Before applying ac power to the helicopter, MAKE SURE that the area around the stabilator is clear of personnel and equipment. If the stabilator is in any position other than trailing edge fully down, it might reposition automatically to fully down when ac power is applied.

WARNING
CARBON MONOXIDE

During cold weather operations when preheating is necessary, all personnel must become acquainted with the various types of heaters and where they are to be used. Be careful of accumulations of carbon monoxide and damage to heat-sensitive equipment.

WARNING
CONSUMABLE MATERIALS

Observe all cautions and warnings on the containers when using consumables. When applicable, wear necessary protective gear during handling and use. If a consumable is flammable or explosive, MAKE SURE the consumable and its vapors are kept away from heat, spark, and flame. MAKE SURE the helicopter is properly grounded and firefighting equipment is readily available.

WARNING
ELECTRICAL GROUNDING OF THE HELICOPTER

Army regulation requires the grounding of the helicopter when doing all fueling and defueling operations. DO NOT operate helicopter electrical switches, except those essential for servicing during fueling and defueling. DO NOT smoke or use flame during fueling and defueling operations.

WARNING
HIGH VOLTAGE

There are dangerous voltages in the helicopter. Use extreme care when working with equipment having these voltages.

WARNING
HYDRAULIC SYSTEMS

There are dangerously high hydraulic system pressures in the helicopter. Use extreme care when working on systems having this pressure.

WARNING
USE OF FIRE EXTINGUISHER

When fire extinguishers are used in a confined area, ventilate immediately. Serious injury or death could result if the area is not ventilated or the user does not use a self-contained breathing device.

WARNING
MAIN ROTOR PYLON SLIDING COVER

When opening and closing the main pylon sliding cover, keep hands away from sharp edges near the track, the mating end, and especially the ventilation blower inlet hole.

CAUTION

Do not operate the rotor system while the main rotor pylon sliding cover is in the open position. Main rotor blades could contact the main rotor pylon sliding cover. If rotor system operation is required when the main rotor pylon sliding cover is open, remove the main rotor pylon sliding cover.

CAUTION

USING BATTERY POWER DURING MAINTENANCE

Use battery power as little as possible when maintaining the helicopter. If the battery charge gets too low, the APU will not start when only the battery electrical power is available. To prevent running down the battery:

- Make sure the BATT switch is at ON when ac power is supplied to the helicopter (either external power applied, or APU, or main generator operating). This allows the battery to charge if necessary.
- Make sure maintenance and cockpit utility lights are off when not in use.
- Make sure the BATT switch is OFF when ac power is not applied to the helicopter and the battery is not being used.
- If a BATT LOW CHARGE caution indication is displayed while using battery power, immediately set the BATT switch OFF.

CAUTION

COLD WEATHER - BATTERY MAINTENANCE

To prevent damage to the battery, refer to TM 11-6140-203-23&P.





Part 1 - Introductory Information

Test Equipment Required

1. UxValidator Instrument Display System Line Test Set, PN 06-0125-65
2. An UxValidator and the associated components. Use either of the following options:
 - Series II UxValidator Set, PN 10-0210-02
 - or
 - Series I UxValidator Chassis, PN 03-1217-02 (part of the UxValidator H60 Platform PN 05-0330-07) and Series I Pod Adapter Set, PN 10-0210-01
3. Multimeter, AN/PSM-45A

Tools Required

Electrical Repairer Toolkit, SC 5180-99-B06

Personnel Required

One MOS 68F Aircraft Electrician

Equipment Conditions

External electrical power available or APU operational

NOTE

Refer to Series II UxValidator Set Operation and Maintenance Manual PN 10-0210-17 for complete information on the Series II UxValidator Set.

Refer to Series I Pod Adapter Set Maintenance Manual PN 10-0210-19 for complete information on the Series I Pod Adapter Set.

Using the UxValidator

The following instructions apply to the UxValidator Instrument Display System Line Test Set.

System Menu Field

With this menu field selected, pressing down on the left Encoder knob will show the following menu:

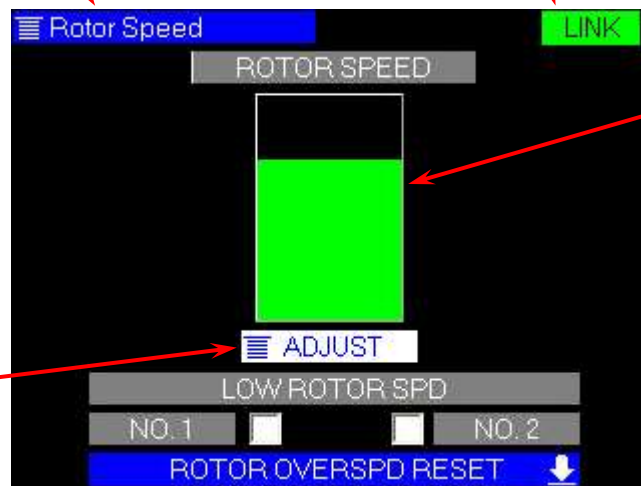
POD Link Status
Startup
Rotor Speed
Main Tank Fuel Qty
Engine Oil Pressure
Engine Oil Temp
Engine Gas Speed
Engine Torque
Xmsn Oil
Engine RPM
Engine TGT
Lamp Supply
Test Set Maintenance

Mode field

With the Mode field selected, pressing down on the left Encoder knob will show the following menu:

- ADJUST – allows adjustment of the Indication field.
- CAL LO – inputs a fixed low value into the CDU/PDU.
- CAL HI – inputs a fixed high value into the CDU/PDU.

LINK indicates both pods are communicating with the UxValidator.
NO LINK indicates one or both of the pods are not connected to the UxValidator
 or
 one or both of the pods are not communicating with the UxValidator.



Indication Field

When the Mode field is set to ADJUST, turning the right Encoder knob clockwise increases the value indicated, and turning the knob counter-clockwise decreases the value indicated. (Pressing and turning the knob will change the values faster.)

For complete instructions on operating the UxValidator, refer to:


- Series II UxValidator Set Operation and Maintenance Manual PN 10-0210-17 for a Series II UxValidator.
- Series I Pod Adapter Set Maintenance Manual PN 10-0210-19 for a Series I UxValidator.

Part 2 - Troubleshooting Procedures

8-2-3.1 Setup

NOTE

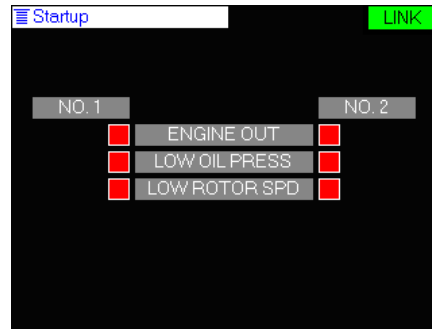
If a circuit breaker pops out during the operational/troubleshooting procedure, a short circuit is indicated (WP 0104 00).

- a. Set the Central Display Unit (CDU) DIGITS switch to ON.
- b. Set the DIM control to about mid-position.
- c. Install BrainPak PN 06-0105-85 into the UxValidator Chassis.
- d. Disconnect the cable assembly from J1 on the Co-Pilot's SDC.
- e. Install the removed J1 cable onto Instrument Display Pod PN 07-0210-02.
- f. Connect one end of Hi-Speed Data Cable PN 08-0412-04 to the data port on the Pod.
- g. Install the Pod onto J1 on the Co-Pilot's SDC by aligning the master key and pushing the pod into place until it is seated.
- h. Connect the other end of the Hi-Speed Data Cable to the A1 Data Port.
- i. Repeat Steps d through g for the Pilot's SDC using the second Pod.
- j. Connect the other end of the second Hi-Speed Data Cable to the A2 Data Port.
- k. Connect the Temperature Probe Harness PN 08-0707-01 to one of the B Data Ports.
- l. Position the other end of the harness near either SDC.
- m. Connect the 28Vdc power cable from the UxValidator set to utility receptacle J258 in the upper cabin area behind the pilot's seat. Connect the other end to the UxValidator's power port.
- n. Turn on electrical power. **UH-60Q HH-60L** Turn the pilot's or copilot's multifunction display (MFD) switch ON and press the T6 switch. This illuminates all MFD legends for 10 seconds, and then only the active caution and advisory legends are displayed.
- o. Turn each pod on; each pod's red power indicator light will turn on.
- p. If the  Startup menu does not appear on the UxValidator, select it from the system menu.

RESULT:

- 1) The pilot's and copilot's CDU and PDU vertical displays indicate zero and the digital readouts indicate about zero.
- 2) The following the UxValidator lights turn on:

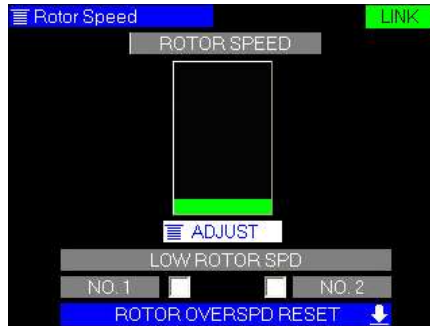
- LOW ROTOR SPD
- NO. 1 ENGINE OUT
- NO. 2 ENGINE OUT
- NO. 1 LOW OIL PRESS
- NO. 2 LOW OIL PRESS




- 3) Ng SPEED 1 or 2 vertical display or digital readout indicates between 0 and 0.5%.
- If the LOW ROTOR SPD light on the UxValidator is off, check the RTR SPD fuse.
 - (a) If the fuse is good, replace the CDU (Chart IDS-0-1).
 - (b) If the fuse is not good, replace the fuse (Chart IDS-0-1).
 - If the NO. 1 or NO. 2 ENGINE OUT light on the UxValidator is off, go to Table 8-2-3-2.
 - If the NO. 1 or NO. 2 LOW OIL PRESS light on the UxValidator is off, go to Table 8-2-3-3.
 - If the Ng SPEED readout is not as specified, do an Ng SPEED check as described in Section 8-2-3.6 on page 27.
 - (a) If the trouble remains, troubleshoot the No. 1 or No. 2 engine instruments and warning lights system, as applicable (WP 0073 00 or WP 0074 00).
 - If the ENG OIL PRESS 1 or 2 display does not indicate zero, do an ENG OIL PRESS check as described in Section 8-2-3.4 on page 22.
 - (a) If the trouble remains, troubleshoot the No. 1 or No. 2 engine instruments and warning lights system, as applicable (WP 0073 00 or WP 0074 00).
 - If the XMSN PRESS display does not indicate zero, do a XMSN PRESS check as described in Section 8-2-3.8 on page 32.
 - (a) If the trouble remains, troubleshoot transmission chip detector, instruments, and oil warning system (WP 0085 00).
 - If the % RPM 1 or 2 display does not indicate zero, do a % RPM 1-2 check as described in Section 8-2-3.10 on page 34.
 - (a) If the trouble remains, troubleshoot the No. 1 or No. 2 engine instruments and warning lights system, as applicable (WP 0073 00 or WP 0074 00).
 - If the % RPM R display does not indicate zero, do a % RPM R check as described in Section 8-2-3.2 on page 18.
 - (a) If the trouble remains, troubleshoot transmission chip detector, instruments, and oil warning system (WP 0085 00).

- If the % TRQ vertical displays or digital readouts do not indicate zero, do a % TRQ check as described in Section 8-2-3.7 on page 29.
 - (a) If the trouble remains, troubleshoot the No. 1 or No. 2 engine instruments and warning lights system, as applicable (WP 0073 00 or WP 0074 00).

q. From the system menu, select *Rotor Speed*.



r. Select **ROTOR OVERSPD RESET**  on the UxValidator. Press and release the right Encoder knob.

RESULT:

- 1) RTR OVERSPEED lights on the pilot's and copilot's PDUs are off.
- 2) CHAN 1 warning light on the CDU is off.
- 3) CHAN 2 warning light on the CDU is off.
- 4) ENG OIL PRESS, XMSN PRESS, and Ng SPEED vertical displays, plus the associated Ng digital displays on the CDU all indicate zero.
- 5) The % RPM and % TRQ vertical displays and the associated digital readouts on the pilot's and copilot's PDUs indicate zero.
 - If result (1) is not as specified, go to Table 8-2-3-5.
 - If result (2) is not as specified, go to Table 8-2-3-6.
 - If result (3) is not as specified, go to Table 8-2-3-7
 - If result (4) or (5) is not as specified, note trouble and continue operational/troubleshooting procedure.
 - If results (4) and (5) are not as specified, replace the CDU (Chart IDS-0-1).

s. On the aircraft, press and hold the CDU PUSH TO TEST switch until step t. Turn the DIM control fully counterclockwise and then fully clockwise. Adjust the DIM control for normal display.

RESULT:

- 1) All CDU vertical scale lamps turn on.
- 2) All CDU digital readouts indicate 888, except for TOTAL FUEL, which indicates 8888.

- 3) Three RTR OVERSPEED lights on the pilot's and copilot's PDUs turn on.
 - 4) CHAN 1 and CHAN 2 warning lights on the CDU turn on.
 - 5) CDU display lighting will vary with the CDU's DIM control setting, except CHAN 1 and CHAN 2 warning lights.
 - If any two or more adjacent lamps on one vertical scale are off, or if one lamp between the green and amber, amber and red, or green and red ranges on a scale is off, go to Table 8-2-3-8.
 - If alternate vertical scale lamps are off, note the trouble and continue with steps t and u below.
 - **EMEP** If result (2) is not as specified, replace the direct view filament (DVF) module (Chart IDS-0-1). **END**
 - If the trouble remains, replace the CDU (Chart IDS-0-1).
 - **W/O EMEP** If result (2) is not as specified, replace the CDU (Chart IDS-0-1). **END**
 - If result (3) is not as specified, go to Table 8-2-3-9.
 - If result (4) or (5) is not as specified, replace the CDU (Chart IDS-0-1).
 - If the DIM control varies alternate display lamps only, go to Table 8-2-3-10.
- t. Release the CDU PUSH TO TEST switch.
- u. Press and hold the pilot's PDU LT switch.
- RESULT:**
- 1) All the pilot's PDU vertical scale lamps, except the top segments (130% RPM), turn on.
 - 2) All the pilot's PDU digital readouts indicate 188.
 - If result (1) is not as specified and alternate CDU scale lamps were off in steps, replace the No. 2 SDC (Chart IDS-0-1).
 - **EMEP** If any two or more adjacent lamps on one vertical scale are off, or if one lamp between the green and amber, amber and red, or green and red ranges on a scale is off, replace the bar graph filaments (BGF) lamp (PARA 8-4-18). **END**
 - (a) If the trouble remains, replace the pilot's PDU (Chart IDS-0-1).
 - **W/O EMEP** If any two or more adjacent lamps on one vertical scale are off, or if one lamp between the green and amber, amber and red, or green and red ranges on a scale is off, replace the pilot's PDU (Chart IDS-0-1). **END**
 - **EMEP** If result (2) is not as specified, replace the direct view filament (DVF) module (Chart IDS-0-1). **END**
 - (a) If the trouble remains, replace the pilot's PDU (Chart IDS-0-1).
 - **W/O EMEP** If result (2) is not as specified, replace the pilot's PDU (Chart IDS-0-1). **END**
- v. Release the pilot's PDU LT switch.

- w. Press and hold the copilot's PDU LT switch.

RESULT:

- 1) All copilot's PDU vertical scale lamps, except the top segments (130% RPM), turn on.
 - 2) All the copilot's PDU digital readouts indicate 188.
 - If all vertical scale lamps are off and alternate CDU scale lamps were off in step s, replace the No. 1 SDC (Chart IDS-0-1).
 - **EMEP** If any two or more adjacent lamps on one vertical scale are off, or if one lamp between the green and amber, amber and red, or green and red ranges on a scale is off, replace the BGF lamp. **END**
 - (a) If the trouble remains, replace the copilot's PDU (Chart IDS-0-1).
 - **W/O EMEP** If any two or more adjacent lamps on one vertical scale are off, or if one lamp between the green and amber, amber and red, or green and red ranges on a scale is off, replace the copilot's PDU (Chart IDS-0-1). **END**
 - **EMEP** If result (2) is not as specified, replace the DVF module. **END**
 - (a) If the trouble remains, replace the copilot's PDU (Chart IDS-0-1).
 - **W/O EMEP** If result (2) is not as specified, replace the copilot's PDU (Chart IDS-0-1). **END**
- x. Release the copilot's PDU LT switch.

NOTE

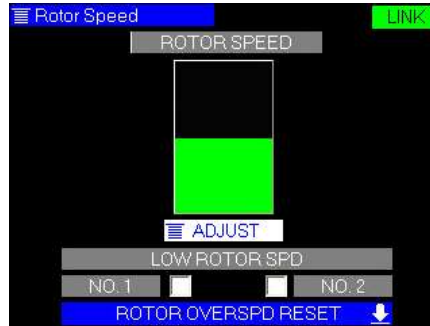
Make sure the CDU DIM control is at mid-position.

- y. Using a flashlight, position a light beam on the pilot's and copilot's PDU and CDU faceplates, one at a time.

RESULT:

- 1) All displays increases in brightness as the light beam is positioned on each unit.
 - If the result is not as specified for the pilot's and copilot's PDUs, exchange the PDUs.
 - (a) If the trouble remains on the same PDU, replace the display unit (Chart IDS-0-1).
 - (b) If trouble does not remain on the same PDU, repair and or replace the wiring between P153-4 and P157-30, or between P156-4 and P158-30 as required (WP 1747 00).
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).
- z. Press the CDU PUSH TO TEST switch and adjust the DIM control to get a normal viewing brightness.

8-2-3.2 % RPM Rotor.




- a. If not already done, do 8-2-3.1 Setup on page 13. Set the UxValidator Mode field to **ADJUST**.

NOTE

When the UxValidator is connected, reset the RTR OVERSPEED lamps on the pilot's and copilot's PDUs using the ROTOR OVERSPD RESET switch on the UxValidator.


- b. Slowly turn the right Encoder knob clockwise until the Indication field is all green.


RESULT:

- 1) % RPM R vertical scale indications on the pilot's and copilot's PDUs advance smoothly to full scale.
- 2) At 96% indication, the lower red and amber scale segments turn off.
- 3) The LOW ROTOR SPD lights on the UxValidator turn off. 
- 4) Left RTR OVERSPEED light (indicating about 127%) on the pilot's and copilot's PDUs turns on.
- 5) Center RTR OVERSPEED light (indicating about 137%) turns on.
- 6) Right RTR OVERSPEED light (indicating about 142%) turns on.
 - If result (1) is not as specified, go to Table 8-2-3-11.
 - If result (2) is not as specified, replace the malfunctioning PDU (Chart IDS-0-1).
 - If result (3) is not as specified, replace the CDU (Chart IDS-0-1).
 - If results (4), (5), and (6) are not as specified, go to Table 8-2-3-12

- c. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

RESULT:

- 1) % RPM R vertical scale indications on the pilot's and copilot's PDUs decrease smoothly.
- 2) At 95% indication, the lower red and amber scale segments turn on.
- 3) The LOW ROTOR SPD lights on the UxValidator turn on. 



- 4) All three RTR OVERSPEED lights on the pilot's and copilot's PDUs remain ON.
 - If result (1) or (2) is not as specified, replace the malfunctioning display unit (Chart IDS-0-1).
 - If result (3) is not as specified, check the RTR SPD fuse.
 - (a) If the fuse is good, replace the CDU (Chart IDS-0-1).
 - (b) If the fuse is not good, replace the fuse (Chart IDS-0-1).
 - If result (4) is not as specified, replace the CDU (Chart IDS-0-1).
- d. Select **ROTOR OVERSPD RESET**  on the UxValidator. Press and release the right Encoder knob.

RESULT:

 - 1) Three RTR OVERSPEED lights on the pilot's and copilot's PDUs turn off.
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).
- e. Set the Mode field to **CAL HI**.

RESULT:

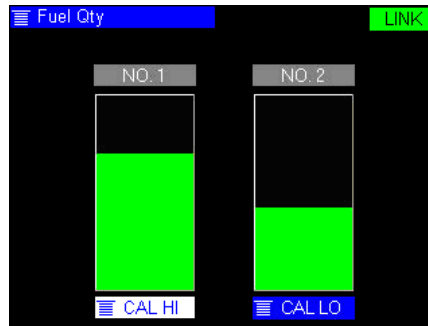
 - 1) % RPM R scale on the pilot's PDU indicates 101% or 102%.
 - 2) % RPM R scale on the co-pilot's PDU indicates 101% or 102%.
 - If result (1) is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - If result (2) is not as specified, replace the No. 1 SDC (Chart IDS-0-1).
- f. Set the Mode field to **CAL LO**.
- g. The UxValidator LOW ROTOR SPD lamps turn on.

LOW ROTOR SPD		
NO. 1		
NO. 2		

RESULT:

 - 1) % RPM R scale on the pilot's PDU is completely blank (0%).
 - 2) % RPM R scale on the co-pilot's PDU is completely blank (0%).
 - If result (1) is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - If result (2) is not as specified, replace the No. 1 SDC (Chart IDS-0-1).
- h. Set the Mode field back to **ADJUST**.
- i. If no other check is to be done, go to 8-2-3.14 Shutdown on page 42.

8-2-3.3 Fuel Quantity.



a. If not already done, do 8-2-3.1 Setup on page 13. From the system menu, select *Fuel Qty*. Set the No. 1 Mode field to **ADJUST**.

b. Slowly turn the right Encoder knob clockwise until the No. 1 Indication field is all green.

RESULT:

- 1) FUEL QTY 1 vertical scale indication on the CDU advances smoothly to full scale.
- 2) TOTAL FUEL digital readout on the CDU advances to about 1500.
- 3) At about 250 pounds indication, the amber scale segment turns off.
 - If results (1) and (2) are not as specified, go to Table 8-2-3-13
 - If result (3) is not as specified, replace the CDU (Chart IDS-0-1).

c. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

RESULT:

- 1) FUEL QTY 1 vertical scale indication on the CDU decreases smoothly to zero.
- 2) TOTAL FUEL digital readout on the CDU decreases to zero.
- 3) At about 200 pounds indication, the amber scale segment turns on.
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).

d. Set the NO. 1 Mode field to **CAL HI**.

RESULT:

- 1) FUEL QTY 1 vertical scale on the CDU indicates 1200 pounds.
- 2) TOTAL FUEL digital readout on the CDU indicates between 1210 and 1230 pounds.
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).

e. Set the No. 1 Mode field back to **ADJUST**.



f. Set the No. 2 Mode field to **ADJUST**. Slowly turn the right Encoder knob clockwise until the No. 2 Indication field is all green.

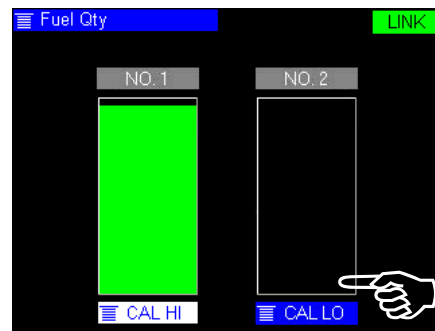
RESULT:

- 1) FUEL QTY 2 vertical scale indication on the CDU advances smoothly to full scale.


- 2) TOTAL FUEL digital readout on the CDU advances to about 1500.
 - 3) At about 250 pounds indication, amber scale segment turns off.
 - If results (1) and (2) are not as specified, go to Table 8-2-3-13
 - If result (3) is not as specified, replace the CDU (Chart IDS-0-1).
- g. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

RESULT:


- 1) FUEL QTY 2 scale on the CDU decreases smoothly to zero.
 - 2) TOTAL FUEL digital readout on the CDU decreases to zero.
 - 3) At about 200 pounds indication, amber scale segment turns on.
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).
- h. Set the NO. 1 Mode field to , and the NO. 2 Mode field to .



RESULT:

- 1) FUEL QTY 2 vertical scale on the CDU is completely blank.
 - 2) TOTAL FUEL digital readout on the CDU indicates between 1210 and 1230 pounds.
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).
- i. Set the NO. 1 Mode field to .

RESULT:

- 1) FUEL QTY 1 vertical scale on the CDU is completely blank.
 - 2) TOTAL FUEL digital readout on the CDU indicates between 0 and 10 pounds.
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).
- j. Set the NO. 2 Mode field to .

RESULT:

- 1) FUEL QTY 2 vertical scale on the CDU indicates 1200 pounds.
- 2) TOTAL FUEL digital readout on the CDU indicates between 1210 and 1230 pounds.
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).

- k. Set the NO. 1 Mode field to .

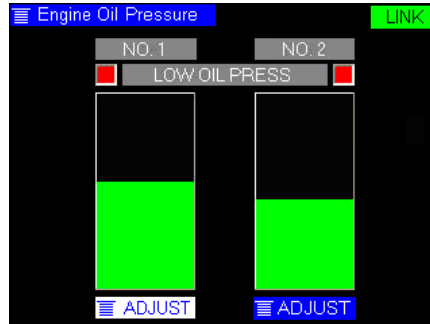
RESULT:

- 1) TOTAL FUEL digital readout on the CDU indicates between 2420 and 2460 pounds.
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).

- l. Set both Mode fields back to .

- m. If no other check is to be done, go to 8-2-3.14 Shutdown on page 42.

8-2-3.4 Engine Oil Pressure.



- a. If not already done, do 8-2-3.1 Setup on page 13. From the system menu, select *Engine Oil Pressure*. Set the No. 1 Mode field to **ADJUST**.
- b. Slowly turn the right Encoder knob clockwise until the No. 1 Indication field is all green.

RESULT:

- 1) ENG OIL PRESS 1 vertical scale indication on the CDU advances smoothly to full scale.
- 2) **UH-60L HH-60L** At 22 psi indication, the NO. 1 LOW OIL PRESS light on the UxValidator turns off.
- 3) **EH-60A UH-60A UH-60Q** At 25 psi indication, the NO. 1 LOW OIL PRESS light on the UxValidator turns off.
- 4) **UH-60L HH-60L** At 26 psi indication, the lower red and amber scale segments turn off.
- 5) **EH-60A UH-60A UH-60Q** At 47.5 psi indication, the lower red and amber scale segments turn off.
 - If result (1) is not as specified, go to Table 8-2-3-14.
 - If result (2), (3), (4), or (5) is not as specified, replace the CDU (Chart IDS-0-1).



- c. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

RESULT:

- 1) ENG OIL PRESS 1 vertical scale indication decreases smoothly.
- 2) **UH-60L HH-60L** At 26 psi indication, the lower red and amber scale segments turn on.
- 3) **EH-60A UH-60A UH-60Q** At 45 psi indication, the lower red and amber scale segments turn on.

- 4) **UH-60L HH-60L** At 22 psi indication, the NO. 1 LOW OIL PRESS light on the UxValidator turns on.
- 5) **EH-60A UH-60A UH-60Q** At 20 psi indication, the NO. 1 LOW OIL PRESS light on the UxValidator turns on.



- If result (1), (2), or (3) is not as specified, replace the CDU (Chart IDS-0-1).
- If result (4) or (5) is not as specified, go to Table 8-2-3-9.

- d. Set the NO. 1 Mode field to **CAL HI**.

RESULT:

- 1) ENG OIL PRESS 1 scale on the CDU indicates 110 psi or 120 psi.
 - If the result is not as specified, replace the No. 1 SDC (Chart IDS-0-1).

- e. Set the NO. 1 Mode field to **CAL LO**.

RESULT:

- 1) ENG OIL PRESS 1 scale on the CDU are completely blank.
 - If the result is not as specified, replace the No. 1 SDC (Chart IDS-0-1).

- f. Set the No. 1 Mode field back to **ADJUST**.

- g. Set the No. 2 Mode field to **ADJUST**. Slowly turn the right Encoder knob clockwise until the No. 2 Indication field is all green.

RESULT:

- 1) ENG OIL PRESS 2 vertical scale indications on the CDU advances smoothly to full scale.

- 2) **UH-60L HH-60L** At 22 psi indication, the NO. 2 LOW OIL PRESS light on the UxValidator turns off.

- 3) **EH-60A UH-60A UH-60Q** At 25 psi indication, the NO. 2 LOW OIL PRESS light on the UxValidator turns off.



- 4) **UH-60L HH-60L** At 26 psi indication, the lower red and amber scale segments turn off.

- 5) **EH-60A UH-60A UH-60Q** At 47.5 psi indication, the lower red and amber scale segments turn off.

- If result (1) is not as specified, go to Table 8-2-3-14.
- If result (2), (3), (4), or (5) is not as specified, replace the CDU (Chart IDS-0-1).

- h.** Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

RESULT:

- 1) ENG OIL PRESS 2 vertical scale indication on the CDU decreases smoothly.
- 2) **UH-60L HH-60L** At 26 psi indication, the lower red and amber scale segments turn on.
- 3) **EH-60A UH-60A UH-60Q** At 45 psi indication, the lower red and amber scale segments turn on.
- 4) **UH-60L HH-60L** At 22 psi indication, NO. the 2 LOW OIL PRESS light on the UxValidator turns on.
- 5) **EH-60A UH-60A UH-60Q** At 20 psi indication, the NO. 2 LOW OIL PRESS light on the UxValidator turns on.



- If result (1), (2), or (3) is not as specified, replace the CDU (Chart IDS-0-1).
- If result (4) or (5) is not as specified, go to Table 8-2-3-9.

- i.** Set the NO. 2 Mode field to **CAL HI**.

- 1) ENG OIL PRESS 2 scale on the CDU indicates 110 or 120 psi.
 - If the result is not as specified, replace the No. 2 SDC (Chart IDS-0-1).

- j.** Set the NO. 2 Mode field to **CAL LO**.

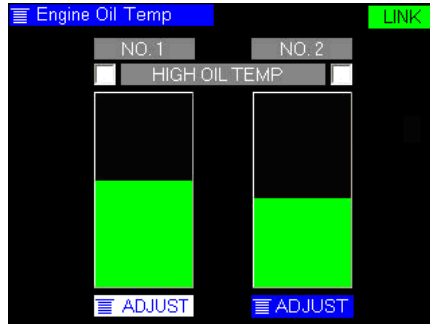
RESULT:

- 1) ENG OIL PRESS 2 scale on the CDU are completely blank.
 - If the result is not as specified, replace the No. 2 SDC (Chart IDS-0-1).

- k.** Set the No. 2 Mode field back to **ADJUST**.

- l.** If no other check is to be done, go to 8-2-3.14 Shutdown on page 42.

8-2-3.5 Engine Oil Temperature.



- a. If not already done, do 8-2-3.1 Setup on page 13. From the system menu, select *Engine Oil Temp*. Set the UxValidator No. 1 Mode field to **ADJUST**.
- b. Slowly turn the right Encoder knob clockwise until the No. 1 Indication field is all green.

RESULT:

- 1) ENG OIL TEMP 1 vertical scale indication on the CDU advances smoothly to full scale.
- 2) At 302°F (150°C) indication, the NO. 1 HIGH OIL TEMP light on the UxValidator turns on.
 - If result (1) is not as specified, go to Table 8-2-3-15.
 - If result (2) is not as specified, go to Table 8-2-3-16.



- c. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

RESULT:

- 1) ENG OIL TEMP 1 vertical scale indication on the CDU decreases smoothly.
- 2) At 284 ° F (140 ° C) indication, NO. 1 HIGH OIL TEMP light on the UxValidator turns off.
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).



- d. Set the NO. 1 Mode field to **CAL HI**.

RESULT:

- 1) ENG OIL TEMP 1 scale on the CDU indicates 284°F (140°C).
 - If the result is not as specified, replace the No. 1 SDC (Chart IDS-0-1).

- e. Set the NO. 1 Mode field to **CAL LO**.

RESULT:

- 1) **UH-60L HH-60L** ENG OIL TEMP 1 scale on the CDU is completely blank.
- 2) **EH-60A UH-60A UH-60Q** ENG OIL TEMP 1 scale on the CDU is completely blank.
 - If result (1) or (2) is not as specified, replace the No. 1 SDC (Chart IDS-0-1).

- f. Set the No. 1 Mode field back to **ADJUST**.

- g. Set the No. 2 Mode field to **ADJUST**. Slowly turn the right Encoder knob clockwise until the No. 2 Indication field is all green.

RESULT:

- 1) ENG OIL TEMP 2 vertical scale indication on the CDU advances smoothly to full scale.

- 2) At 302°F (150°C) indication, the NO. 2 HIGH OIL TEMP light on the UxValidator turns on.



- If result (1) is not as specified, go to Table 8-2-3-15.
- If result (2) is not as specified, go to Table 8-2-3-16.

- h. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

RESULT:

- 1) ENG OIL TEMP 2 vertical scale indication on the CDU decreases smoothly.

- 2) At 284°F (140°C) indication, the NO. 2 HIGH OIL TEMP light on UxValidator turns off.



- If the results are not as specified, replace the CDU (Chart IDS-0-1).

- i. Set the NO. 2 Mode field to **CAL HI**.

RESULT:

- 1) ENG OIL TEMP 2 scale on the CDU indicates 284°F (140°C).

- If the result is not as specified, replace the No. 2 SDC (Chart IDS-0-1).

- j. Set the NO. 2 Mode field to **CAL LO**.

RESULT:

- 1) **UH-60L HH-60L** ENG OIL TEMP 2 scale on the CDU is blank.

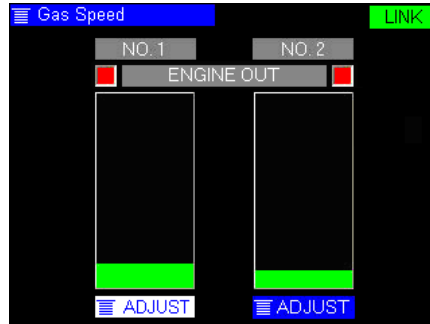
- 2) **EH-60A UH-60A UH-60Q** ENG OIL TEMP 2 scale on the CDU is completely blank.

- If result (1) or (2) is not as specified, replace the No. 2 SDC (Chart IDS-0-1).

- k. Set the No. 2 Mode field back to **ADJUST**.

- l. If no other check is to be done, go to 8-2-3.14 Shutdown on page 42.

8-2-3.6 Ng Speed.



- a. If not already done, do 8-2-3.1 Setup on page 13. From the system menu, select *Engine Gas Speed*. Set the No. 1 Mode field to **ADJUST**.
- b. Slowly turn the right Encoder knob clockwise until the No. 1 Indication field is all green.

RESULT:

- 1) Ng SPEED 1 vertical scale on the CDU advances smoothly to full scale.
- 2) Ng SPEED digital readout indications on the CDU advances smoothly to full scale.
- 3) At about 55% indication, the NO. 1 ENGINE OUT light on the UxValidator turns off.



- If result (1) is not as specified, go to Table 8-2-3-17.
- If result (2) is not as specified, go to Table 8-2-3-18.
- If result (3) is not as specified, replace the CDU (Chart IDS-0-1).

- c. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

RESULT:

- 1) Ng SPEED 1 vertical scale and digital readout indications on the CDU decrease smoothly.
- 2) At about 55% indication, the NO. 1 ENGINE OUT light on UxValidator turns on.



- If result (1) is not as specified, replace the CDU (Chart IDS-0-1).
- If result (2) is not as specified, go to Table 8-2-3-8.

- d. Set the NO. 1 Mode field to **CAL HI**.

RESULT:

- 1) Ng SPEED 1 vertical scale indicates 98% or 100%.
- 2) Ng SPEED 1 digital readout indicates between 99.5% and 100.5%.
 - If the results are not as specified, replace the No. 1 SDC (Chart IDS-0-1).

- e. Set the NO. 1 Mode field to **CAL LO**.

RESULT:

- 1) Ng SPEED 1 vertical scale on the CDU are completely blank.
- 2) Ng SPEED 1 digital readout on the CDU indicates between 0 and 0.5%.

- If the results are not as specified, replace the No. 1 SDC (Chart IDS-0-1).
- f. Set the No. 1 Mode field back to **ADJUST**.
- g. Set the No. 2 Mode field to **ADJUST**. Slowly turn the right Encoder knob clockwise until the No. 2 Indication field is all green.

RESULT:

- 1) Ng SPEED 2 vertical scale indication on the CDU advances smoothly to full scale.
- 2) Ng SPEED 2 digital readout indication on the CDU advances smoothly to full scale.
- 3) At about 55% indication, the NO. 2 ENGINE OUT light on UxValidator turns off.
 - If result (1) is not as specified, go to Table 8-2-3-17.
 - If result (2) is not as specified, go to Table 8-2-3-18.
 - If result (3) is not as specified, replace the CDU (Chart IDS-0-1).



- h. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

RESULT:

- 1) Ng SPEED 2 vertical scale and digital readout indications on the CDU decreases smoothly.
- 2) At about 55% indication, the NO. 2 ENGINE OUT light on the UxValidator turns on.
 - If result (1) is not as specified, replace the CDU (Chart IDS-0-1).
 - If result (2) is not as specified, go to Table 8-2-3-8.



- i. Set the NO. 2 Mode field to **CAL HI**.

RESULT:

- 1) Ng SPEED 2 vertical scale on the CDU indicates 98% or 100%.
- 2) Ng SPEED 2 digital readout on the CDU indicates between 99.5% and 100.5%.
 - If the results are not as specified, replace the No. 2 SDC (Chart IDS-0-1).

- j. Set the NO. 2 Mode field to **CAL LO**.

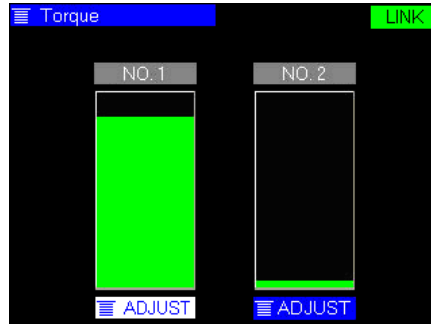
RESULT:

- 1) Ng SPEED 2 vertical scale on the CDU is completely blank.
- 2) Ng SPEED 2 digital readout on the CDU indicates between 0 and 0.5%.
 - If the results are not as specified, replace the No. 2 SDC (Chart IDS-0-1).

- k. Set the No. 2 Mode field back to **ADJUST**.

- l. If no other check is to be done, go to 8-2-3.14 Shutdown on page 42.

8-2-3.7 % Engine Torque.



- a. If not already done, do 8-2-3.1 Setup on page 13. From the system menu, select *Engine Torque*. Set the No. 1 Mode field to **ADJUST**.
- b. Slowly turn the right Encoder knob clockwise until the No. 1 Indication field is all green.
RESULT:
 - 1) On the pilot's and copilot's PDUs, the % TRQ 1 vertical scale and digital readout indications advance smoothly to full scale.
 - If the result is not as specified, go to Table 8-2-3-19.
- c. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.
RESULT:
 - 1) On the pilot's PDU, the % TRQ 1 vertical scale and digital readout indications decrease smoothly.
 - If result (1) is not as specified, replace the pilot's PDU (Chart IDS-0-1).
 - 2) On the copilot's PDU, the % TRQ 1 vertical scale and digital readout indications decrease smoothly.
 - If result (2) is not as specified, replace the copilot's PDU (Chart IDS-0-1).
- d. Set the NO. 1 Mode field to **CAL HI**.
RESULT:
 - 1) On the pilot's PDU, the % TRQ 1 vertical scales indicate 100% or 105%.
 - 2) On the pilot's PDU, the % TRQ 1:
 - UH-60A UH-60Q** digital readouts (T-700 engine) indicate between 104% and 106%
 - UH-60L HH-60L** digital readouts (T-701C engine) indicate between 103% and 105%
 - 3) On the copilot's PDU, the % TRQ 1 vertical scales indicate 100% or 105%.

- 4) On the copilot's PDU, the % TRQ 1:
UH-60A UH-60Q digital readouts (T-700 engine) indicate between 104% and 106%.
UH-60L HH-60L digital readouts (T-701C engine) indicate between 103% and 105%.
- If result (1) or (2) is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - If result (3) or (4) is not as specified, replace the No. 1 SDC (Chart IDS-0-1).
- e. Set the NO. 1 Mode field to **CALLO**.
- RESULT:**
- 1) % TRQ 1 (pilot's PDU) digital readouts indicate 0 or 1%.
 - 2) % TRQ 1 (pilot's PDU) vertical scales are completely blank.
 - 3) % TRQ 1 (copilot's PDU) digital readouts indicate 0 or 1%.
 - 4) % TRQ 1 (copilot's PDU) vertical scales are completely blank.
 - If result (1) or (2) is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - If result (3) or (4) is not as specified, replace the No. 1 SDC (Chart IDS-0-1).
- f. Set the No. 1 Mode field back to **ADJUST**.
- g. Set the No. 2 Mode field to **ADJUST**. Slowly turn the right Encoder knob clockwise until the No. 2 Indication field is all green.
- 1) On the pilot's and copilot's PDUs, the % TRQ 2 vertical scale and digital readout indications advance smoothly to full scale.
 - If the result is not as specified, go to Table 8-2-3-19.
- h. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.
- RESULT:**
- 1) On the pilot's PDU, the % TRQ 2 vertical scale and digital readout indications decrease smoothly.
 - If the result is not as specified, replace the pilot's PDU (Chart IDS-0-1).
 - 2) On the copilot's PDU, the % TRQ 2 vertical scale and digital readout indications decrease smoothly.
 - If the result is not as specified, replace the copilot's PDU (Chart IDS-0-1).

- i. Set the NO. 2 Mode field to **CAL HI**.

RESULT:

- 1) On the pilot's PDU, the % TRQ 2 vertical scales indicate 100% or 105%.
- 2) On the pilot's PDU, the % TRQ 2:
UH-60A UH-60Q digital readouts (T-700 engine) indicate between 104% and 106%.
UH-60L HH-60L digital readouts (T-701C engine) indicate between 103% and 105%.
- 3) On the copilot's PDU, the % TRQ 2 vertical scales indicate 100% or 105%.
- 4) On the copilot's PDU, the % TRQ 2:
UH-60A UH-60Q digital readouts (T-700 engine) indicate between 104% and 106%.
UH-60L HH-60L digital readouts (T-701C engine) indicate between 103% and 105%.
 - If result (1) or (2) is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - If result (3) or (4) is not as specified, replace the No. 1 SDC (Chart IDS-0-1).

- j. Set the NO. 2 Mode field to **CAL LO**.

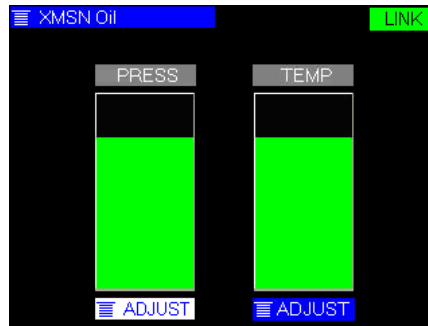
RESULT:

- 1) % TRQ 2 (pilot's PDU) digital readouts indicate 0 or 1%.
- 2) % TRQ 2 (pilot's PDU) vertical scales are completely blank.
- 3) % TRQ 2 (copilot's PDU) digital readouts indicate 0 or 1%.
- 4) % TRQ 2 (copilot's PDU) vertical scales are completely blank.
 - If result (1) or (2) is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - If result (3) or (4) is not as specified, replace the No. 1 SDC (Chart IDS-0-1).

- k. Set the No. 2 Mode field back to **ADJUST**.

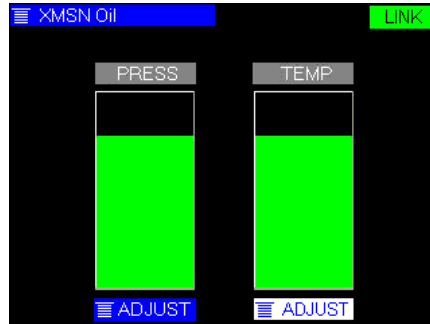
- l. If no other check is to be done, go to 8-2-3.14 Shutdown on page 42.

8-2-3.8 Transmission Oil Pressure.



- a. If not already done, do 8-2-3.1 Setup on page 13. From the system menu, select *Xmsn Oil*. Set the PRESS Mode field to **ADJUST**.
- b. Slowly turn the right Encoder knob clockwise until the PRESS Indication field is all green.
RESULT:
 - 1) XMSN PRESS vertical scale indication on the CDU advances smoothly to full scale.
 - If the result is not as specified, go to Table 8-2-3-20.
 - 2) At 32.5 psi indication, the lower red and amber scale segments turn off.
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).
- c. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.
RESULT:
 - 1) XMSN PRESS vertical scale indication on the CDU decreases smoothly.
 - 2) At 30 psi indication, the lower red and amber scale segments turn on.
 - If the results are not as specified, replace the CDU.
- d. Set the PRESS Mode field to **CAL HI**.
RESULT:
 - 1) XMSN PRESS vertical scale indicates 130 psi.
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).
- e. Set the PRESS Mode field to **CAL LO**.
RESULT:
 - 1) XMSN PRESS vertical scale is completely blank.
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).
- f. Set the PRESS Mode field back to **ADJUST**.
- g. If no other check is to be done, go to 8-2-3.14 Shutdown on page 42.

8-2-3.9 Transmission Oil Temperature.



- a. If not already done, do 8-2-3.1 Setup on page 13. From the system menu, select *Xmsn Oil*. Set the TEMP Mode field to **ADJUST**.
- b. Slowly turn the right Encoder knob clockwise until the TEMP Indication field is all green.

RESULT:

 - 1) XMSN TEMP vertical scale indication on the CDU advances smoothly to full scale.
 - If the result is not as specified, go to Table 8-2-3-21.
- c. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

RESULT:

 - 1) XMSN TEMP vertical scale indication on the CDU decreases smoothly.
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).
- d. Set the TEMP Mode field to **CAL HI**.

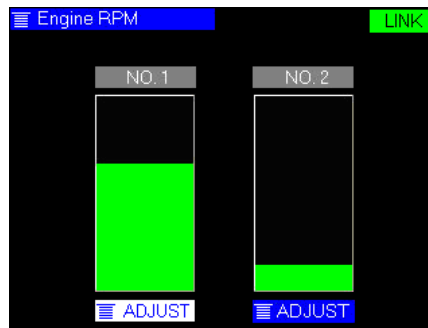
RESULT:

 - 1) XMSN TEMP vertical scale on the CDU indicates 266°F (130°C).
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).
- e. Set the TEMP Mode field to **CAL LO**.

RESULT:

 - 1) **UH-60L HH-60L** XMSN TEMP vertical scale on the CDU is completely blank.
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).
 - 2) **EH-60A UH-60A UH-60Q** XMSN TEMP vertical scale on the CDU is completely blank.
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).
- f. Set the TEMP Mode field back to **ADJUST**.
- g. If no other check is to be done, go to 8-2-3.14 Shutdown on page 42.

8-2-3.10 % Engine RPM 1-2.



- a. If not already done, do 8-2-3.1 Setup on page 13. From the system menu, select *Xmsn Oil*. Set the No. 1 Mode field to **ADJUST**.
- b. Slowly turn the right Encoder knob clockwise until the No. 1 Indication field is all green.

RESULT:

- 1) On the pilot's and copilot's PDUs, the % RPM 1 vertical scale indications advance smoothly to full scale (128%)
 - If result (1) is not as specified, go to Table 8-2-3-22.
 - 2) **UH-60L HH-60L** At 96% indication, the pilot's PDU lower red and amber scale segments turn off.
 - If the result is not as specified, replace the pilot's PDU (Chart IDS-0-1).
 - 3) **EH-60A UH-60A UH-60Q** At 96% indication, the pilot's PDU lower red and amber scale segments turn off.
 - If the result is not as specified, replace the pilot's PDU (Chart IDS-0-1).
 - 4) **UH-60L HH-60L** At 96% indication, the copilot's PDU lower red and amber scale segments turn off.
 - If the result is not as specified, replace the copilot's PDU (Chart IDS-0-1).
 - 5) **EH-60A UH-60A UH-60Q** At 96% indication, the copilot's PDU lower red and amber scale segments turn off.
 - If the result is not as specified, replace the copilot's PDU (Chart IDS-0-1).
- c. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.

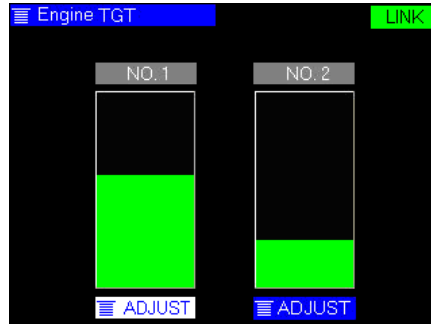
RESULT:

- 1) On the pilot's PDU, the % RPM 1 vertical scale indications decrease smoothly.
 - If the result is not as specified, replace the pilot's PDU (Chart IDS-0-1).
- 2) **UH-60L HH-60L** At 95% indication, the pilot's PDU lower red and amber scale segments turn on.
 - If the result is not as specified, replace the pilot's PDU (Chart IDS-0-1).
- 3) **EH-60A UH-60A UH-60Q** At 95% indication, the pilot's PDU lower red and amber scale segments turn on.
 - If the result is not as specified, replace the pilot's PDU (Chart IDS-0-1).

- 4) On the copilot's PDU, the % RPM 1 vertical scale indications decrease smoothly.
 - If the result is not as specified, replace the copilot's PDU (Chart IDS-0-1).
 - 5) **UH-60L HH-60L** At 95% indication, the copilot's PDU lower red and amber scale segments turn on.
 - If the result is not as specified, replace the copilot's PDU (Chart IDS-0-1).
 - 6) **EH-60A UH-60A UH-60Q** At 95% indication, the copilot's PDU lower red and amber scale segments turn on.
 - If the result is not as specified, replace the copilot's PDU (Chart IDS-0-1).
- d. Set the NO. 1 Mode field to **CAL HI**.
- RESULT:**
- 1) On the pilot's PDU, the % RPM 1 vertical scales indicate 95% or 96%.
 - If the result is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - 2) On the copilot's PDU, the % RPM 1 vertical scales indicate 95% or 96%.
 - If the result is not as specified, replace the No. 1 SDC (Chart IDS-0-1).
- e. Set the NO. 1 Mode field to **CAL LO**.
- RESULT:**
- 1) On the pilot's PDU, the % RPM 1 vertical scales are completely blank.
 - If the result is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - 2) On the copilot's PDU, the % RPM 1 vertical scales are completely blank.
 - If the result is not as specified, replace the No. 1 SDC ((Chart IDS-0-1).
- f. Set the No. 1 Mode field back to **ADJUST**.
- g. Set the No. 2 Mode field to **ADJUST**. Slowly turn the right Encoder knob clockwise until the No. 2 Indication field is all green.
- RESULT:**
- 1) On the pilot's and copilot's PDUs, the % RPM 2 vertical scale indications advance smoothly to full scale (128%).
 - If result (1) is not as specified, go to Table 8-2-3-22.
 - 2) **UH-60L HH-60L** At 96% indication, the pilot's PDU lower red and amber scale segments turn off
 - If result (2) or (3) is not as specified, replace the pilot's PDU (Chart IDS-0-1).
 - 3) **EH-60A UH-60A UH-60Q** At 96% indication, the pilot's PDU lower red and amber scale segments turn off.
 - If result (2) or (3) is not as specified, replace the pilot's PDU (Chart IDS-0-1).
 - 4) **UH-60L HH-60L** At 96% indication, the copilot's PDU lower red and amber scale segments turn off.
 - If result (4) or (5) is not as specified, replace the copilot's PDU (Chart IDS-0-1).
 - 5) **EH-60A UH-60A UH-60Q** At 96% indication, the copilot's PDU lower red and amber scale segments turn off.
 - If result (4) or (5) is not as specified, replace the copilot's PDU (Chart IDS-0-1).

- h.** Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.
- i.** **RESULT:**
- 1) On the pilot's PDU, the % RPM 2 (pilot's PDU) vertical scale indications decreases smoothly.
 - If the result is not as specified, replace the pilot's PDU (Chart IDS-0-1).
 - 2) **UH-60L** At 95% indication, the pilot's PDU lower red and amber scale segments turn on.
 - If the result is not as specified, replace the pilot's PDU (Chart IDS-0-1).
 - 3) **EH-60A UH-60A UH-60Q** At 95% indication, the pilot's PDU lower red and amber scale segments turn on.
 - If the result is not as specified, replace the pilot's PDU (Chart IDS-0-1).
 - 4) On the copilot's PDU, the % RPM 2 vertical scale indications decreases smoothly.
 - If the result is not as specified, replace the copilot's PDU (Chart IDS-0-1).
 - 5) **UH-60L HH-60L** At 95% indication, the copilot's PDU lower red and amber scale segments turn on.
 - If the result is not as specified, replace the copilot's PDU (Chart IDS-0-1).
 - 6) **EH-60A UH-60A UH-60Q** At 95% indication, the copilot's PDU lower red and amber scale segments turn on.
 - If the result is not as specified, replace the copilot's PDU (Chart IDS-0-1).
- j.** Set the NO. 2 Mode field to **CAL HI**.
- RESULT:**
- 1) On the pilot's PDU, the % RPM 2 vertical scales indicate 95% or 96%.
 - If the result is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - 2) On the copilot's PDU, the % RPM 2 vertical scales indicate 95% or 96%.
 - If the result is not as specified, replace the No. 1 SDC (Chart IDS-0-1).
- k.** Set the NO. 2 Mode field to **CAL LO**.
- RESULT:**
- 1) On the pilot's PDU, the % RPM 2 vertical scales are completely blank.
 - If the result is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - 2) On the copilot's PDU, the % RPM 2 vertical scales are completely blank.
 - If the result is not as specified, replace the No. 1 SDC (Chart IDS-0-1).
- l.** Set the NO. 2 Mode field to **ADJUST**.
- m.** If no other check is to be done, go to 8-2-3.14 Shutdown on page 42.

8-2-3.11 TGT Temperature.



- a. If not already done, do 8-2-3.1 Setup on page 13. From the system menu, select *Engine TGT*. Set the No. 1 Mode field to **ADJUST**.
- b. Slowly turn the right Encoder knob clockwise until the No. 1 Indication field is all green.
RESULT:
 - 1) TGT TEMP 1 vertical scale indication on the CDU advances smoothly to full scale.
 - If the result is not as specified, go to Table 8-2-3-23.
 - 2) TGT TEMP 1 digital readout indication on the CDU advances smoothly.
 - If the result is not as specified, go to Table 8-2-3-24.
- c. Slowly turn the right Encoder knob counterclockwise until the Indication field shows all black.
RESULT:
 - 1) TGT TEMP 1 vertical scale and digital readout indications on the CDU decrease smoothly.
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).
- d. Set the NO. 1 Mode field to **CAL HI**.
RESULT:
 - 1) TGT TEMP 1 vertical scale on the CDU indicates 1472°F (800°C).
 - If the results are not as specified, replace the No. 1 SDC (Chart IDS-0-1).
 - 2) TGT TEMP 1 digital readout on the CDU indicates between 1482° and 1504°F (806° and 818°C).
 - If the results are not as specified, replace the No. 1 SDC (Chart IDS-0-1).
- e. Set the NO. 1 Mode field to **CAL LO**.
RESULT:
 - 1) TGT TEMP 1 vertical scale on the CDU is completely blank.
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).
 - 2) TGT TEMP 1 digital readout on the CDU indicates 32° to 46°F (0° to 8°C).
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).
- f. Set the No. 1 Mode field back to **ADJUST**.

- g. Set the No. 2 Mode field to **ADJUST**. Slowly turn the right Encoder knob clockwise until the No. 2 Indication field is all green.

RESULT:

- 1) TGT TEMP 2 vertical scale indication on the CDU advances smoothly to full scale.
 - If the result is not as specified, go to Table 8-2-3-23.
- 2) TGT TEMP 2 digital readout indication on the CDU advances smoothly.
 - If the result is not as specified, go to Table 8-2-3-24.

- h. Slowly turn the right Encoder knob counterclockwise until the No. 2 Indication field shows all black.

RESULT:

- 1) TGT TEMP 2 vertical scale and digital readout indications on the CDU decrease smoothly.
 - If the result is not as specified, replace the CDU (Chart IDS-0-1).

- i. Set the NO. 2 Mode field to **CAL HI**.

RESULT:

- 1) TGT TEMP 2 vertical scale on the CDU indicates 1472°F (800°C).
 - If the results are not as specified, replace the No. 2 SDC (Chart IDS-0-1).
- 2) TGT TEMP 2 digital readout on the CDU indicates between 1482° and 1504°F (806° and 818°C).
 - If the results are not as specified, replace the No. 2 SDC (Chart IDS-0-1).

- j. Set the NO. 2 Mode field to **CAL LO**.

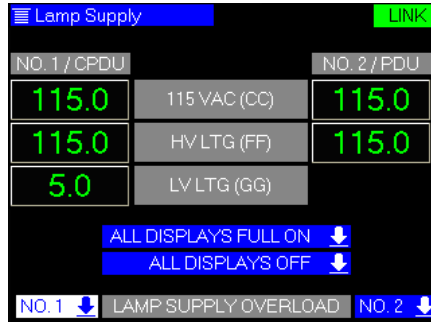
RESULT:

- 1) TGT TEMP 2 vertical scale on the CDU is completely blank.
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).
- 2) TGT TEMP 2 digital readout on the CDU indicates 32° to 46° F (0° to 8°C).
 - If the results are not as specified, replace the CDU (Chart IDS-0-1).

- k. Set the NO. 2 Mode field to **ADJUST**.

- l. If no other check is to be done, go to 8-2-3.14 Shutdown on page 42.

8-2-3.12 Lamp Power Supply.



- a. If not already done, do 8-2-3.1 Setup on page 13.
- b. Select No. 1 LAMP SUPPLY OVERLOAD NO. 1 ↓ LAMP SUPPLY OVERLOAD. Press and hold down the right Encoder knob.
RESULT:
 - 1) All lamps on the copilot's PDU are off, except RTR OVERSPEED lamps.
 - 2) Alternate lamps on the CDU are off.
 - If results (1) and (2) are not as specified, replace the No. 1 SDC (Chart IDS-0-1).
 - If result (1) is not as specified, replace the copilot's PDU (Chart IDS-0-1).
 - If result (2) is not as specified, replace the CDU (Chart IDS-0-1).
- c. Release the right Encoder knob.
RESULT:
 - 1) All pilot's and copilot's PDU and CDU lamps turn on.
 - If the result is not as specified, replace the No. 1 SDC (Chart IDS-0-1).
- d. Select No. 2 LAMP SUPPLY OVERLOAD LAMP SUPPLY OVERLOAD NO. 2 ↓. Press and hold down the right Encoder knob.
RESULT:
 - 1) All lamps on the pilot's PDU are off, except RTR OVERSPEED lamps.
 - 2) Alternate lamps on the CDU are off.
 - If results (1) and (2) are not as specified, replace the No. 2 SDC (Chart IDS-0-1).
 - If result (1) is not as specified, replace the pilot's PDU (Chart IDS-0-1).
 - If result (2) is not as specified, replace the CDU (Chart IDS-0-1).
- e. Release the right Encoder knob.
RESULT:
 - 1) All pilot's and copilot's PDU and CDU lamps turn on.
 - If the result is not as specified, replace the No. 2 SDC (Chart IDS-0-1).
- f. If the lights remain lit, reset the RTR OVERSPEED lights by pressing the ROTOR OVERSPD RESET switch (located in the helicopter's nose).
- g. Turn off electrical power, and disconnect the UxValidator setup from the helicopter.

8-2-3.13 Faceplate Lighting.

NOTE

Section 8-2-3.14 - Shutdown must be done before proceeding to Step a.

- a. Turn on electrical power.
- b. **UH-60Q HH-60L** Turn the pilot's or copilot's multifunction display (MFD) switch ON and press the T6 switch. This illuminates all MFD legends for 10 seconds, and then only the active caution and advisory legends are displayed.
- c. Set the upper console INST LT NON FLT control to BRT.
RESULT:
 - 1) The CDU faceplate lights turn on bright.
 - If the result is not as specified, go to Table 8-2-3-25.
- d. Set the upper console INST LT PLT FLT control to BRT.
RESULT:
 - 1) The pilot's PDU faceplate lights turn on bright.
 - If the result is not as specified, go to Table 8-2-3-26
- e. Set the upper console CPLT FLT INST LTS control to BRT.
RESULT:
 - 1) The copilot's PDU faceplate lights turn on bright.
 - If the result is not as specified, go to Table 8-2-3-27
- f. Set the upper console INST LT NON FLT, INST LT PLT FLT, and CPLT FLT INST LTS controls for a comfortable viewing level.
RESULT:
 - 1) TGT TEMP vertical displays and associated TGT digital readouts on the CDU indicate approximately the ambient temperature around the helicopter (assuming cool down has occurred).
 - If the result is not as specified, do a TGT TEMP check as described in Section 8-2-3.11 on page 37.
 - (a) If the trouble remains, troubleshoot the No. 1 or No. 2 engine instruments and warning lights system, as required (WP 0073 00 or WP 0074 00).
 - 2) ENG OIL TEMP vertical displays on the CDU indicate approximate ambient temperature of helicopter (assuming cool down has occurred).
 - If the result is not as specified, do an ENG OIL TEMP check as described in Section 8-2-3.5 on page 25.
 - (a) If the trouble remains, troubleshoot the No. 1 or No. 2 engine instruments and warning lights system, as required (WP 0073 00 or WP 0074 00).
 - 3) XMSN TEMP vertical displays on the CDU indicate approximate ambient temperature of helicopter (assuming cool down has occurred).
 - If the result is not as specified, do a XMSN TEMP check as described in Section 8-2-3.9 on page 33.

- 4) FUEL QTY vertical displays on the CDU indicate actual fuel on helicopter and associated TOTAL FUEL digital readout indicates the sum of the two vertical scale readings.
 - If result (4) is not as specified, do a FUEL QTY as described in Section 8-2-3.3 on page 20.
 - If the trouble remains, troubleshoot fuel quantity system (WP 0132 00).
 - 5) #1 ENG OUT, #2 ENG OUT, and LOW ROTOR RPM capsules on the pilot's and copilot's master warning panels turn on (LOW ROTOR RPM capsule flashes, others are on steady).
 - If the result is not as specified, go to Table 8-2-3-1.
 - 6) #1 ENGINE OIL PRESS and #2 ENGINE OIL PRESS capsules or legends turn on.
 - If result (6) is not as specified, go to Table 8-2-3-4.
- g.** UH-60Q HH-60L Turn the pilot's or copilot's multifunction display (MFD) switch OFF.
- h.** Turn off electrical power.

8-2-3.14 Shutdown

- a.** Turn off each pod.
- b.** Turn off electrical power.
- c.** Disconnect all ULTRAX components from the helicopter and return it to its previous configuration.

Part 3 - Troubleshooting Tables

**Table 8-2-3-1 –
Master Warning Panel Low Rotor RPM,
#1 Eng Out, or #2 Eng Out Capsule is Off**

TEST OR INSPECTION	CORRECTIVE ACTION
1.	Check helicopter configuration. Step 1. EMEP , go to 2. Step 2. W/O EMEP , go to 10.
EMEP 2.	Remove and check pin filtered adapters P117 or UH-60Q HH-60L P1019R or P1020R END , P137 , and P138 (WP 0925 00). Step 1. If pin filtered adapters are good, go to 3. Step 2. If pin filtered adapters are no good, replace as required (WP 0925 00). Go to 13.
EMEP 3.	Install pin filtered adapters (WP 0925 00). Go to 4.
EMEP 4.	Disconnect P130, P131, P137, P138, P242, and P902. Go to 5.
EMEP 5.	Check continuity between: <ul style="list-style-type: none"> • P130-3 and P138- n • P130-3 and P242- a • P130-3 and P902- u • P130-9 and P137- u • P130-9 and P138- u • P130-9 and P243- h • P130-10 and P137- n • P130-10 and P243- a • P130-10 and P243-J Step 1. If continuity is present, go to 6. Step 2. If continuity is not present, replace pin filtered connector P130 (WP 0925 00). Go to 13.
EMEP 6.	Check continuity between each pin of P130 and shell. Step 1. If continuity is present, replace pin filtered connector P130 (WP 0925 00). Go to 13. Step 2. If continuity is not present, go to 7.
EMEP 7.	Check continuity between: <ul style="list-style-type: none"> • P130-3 and P131-3 • P130-9 and P131-9 • P130-10 and P131-10 Step 1. If continuity is present, go to 8. Step 2. If continuity is not present, replace pin filtered connector P131 (WP 0925 00). Go to 13.

Table continued on next page.

Table, continued

TEST OR INSPECTION CORRECTIVE ACTION

EMEP 8.	<p>Check continuity between each pin of P131 and shell.</p> <p>Step 1. If continuity is present, replace pin filtered connector P131 (WP 0925 00). Go to 13.</p> <p>Step 2. If continuity is not present, go to 9.</p>
EMEP 9.	<p>Connect P130, P131, P137, P138, P242, and P902 to their respective units. Go to 10.</p>
10.	<p>Hold caution/advisory panel BRT/DIM-TEST UH-60Q HH-60L instrument panel INDICATOR END switch to TEST. Go to 11.</p>
11.	<p>Check that all master warning panel capsules go on.</p> <p>Step 1. If capsules go on, repair/replace wiring, as required, between (WP 1747 00), then go to 13 :</p> <ul style="list-style-type: none"> • P130-3 and P138- n • P130-9 and P137- u • P130-9 and P138- u • P130-10 and P137- n • P131-3 and P138- n • P131-9 and P137- u • P131-9 and P138- u • P131-10 and P137- n <p>Step 2. If capsules do not go on, go to 12.</p>
12.	<p>Check capsule lamps.</p> <p>Step 1. If lamps are good, replace master warning panel (Chart IDS-0-1). Go to 13.</p> <p>Step 2. If lamps are not good, replace lamps as required (Chart IDS-0-1). Go to 13.</p>
13.	<p>Procedure completed.</p>

**Table 8-2-3-2 –
NO. 1 ENGINE OUT and/or NO. 2 ENGINES OUT Lights are Off**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Are both lights off? Step 1. If both lights are off, replace CDU (Chart IDS-0-1). Go to 7. Step 2. If both lights are not off, go to 2.</p>
2.	<p>Is NO. 1 ENGINE OUT light off? Step 1. If light is off, go to 3. Step 2. If light is on, go to 5.</p>
3.	<p>Check if Ng 1 fuse is good. Step 1. If fuse is good, go to 4. Step 2. If fuse is not good, replace fuse (Chart IDS-0-1). Go to 7.</p>
4.	<p>Check continuity between P151-31 and P154-31. Step 1. If continuity is present, replace No. 1 SDC (Chart IDS-0-1). Go to 7. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7.</p>
5.	<p>Check if Ng 2 fuse is good. Step 1. If fuse is good, go to 6. Step 2. If fuse is not good, replace fuse (Chart IDS-0-1). Go to 7.</p>
6.	<p>Check continuity between P152-31 and P155-31. Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 7. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7.</p>
7.	<p>Procedure completed.</p>

**Table 8-2-3-3 –
NO. 1 LOW OIL PRESS and/or
NO. 2 LOW OIL PRESS Lights are Off**

TEST OR INSPECTION	CORRECTIVE ACTION
1.	Are both lights off? Step 1. If both lights are off, replace CDU (Chart IDS-0-1). Go to 7. Step 2. If both lights are not off, go to 2.
2.	Check if NO. 1 LOW OIL PRESS light is off. Step 1. If light is off, go to 3. Step 2. If light is on, go to 5.
3.	Check if NO. 1 OIL PRESS fuse is good. Step 1. If fuse is good, go to 4. Step 2. If fuse is not good, replace fuse (Chart IDS-0-1). Go to 7.
4.	Check continuity between P151-30 and P154-30. Step 1. If continuity is present, replace No. 1 SDC (Chart IDS-0-1). Go to 7. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7.
5.	Check if No. 2 OIL PRESS fuse is good. Step 1. If fuse is good, go to 6. Step 2. If fuse is not good, replace fuse (Chart IDS-0-1). Go to 7.
6.	Check continuity between P152-30 and P155-30. Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 7. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7
7.	Procedure completed.



**Table 8-2-3-4 –
#1 ENGINE OIL PRESS or #2 ENGINE OIL PRESS
Capsule or Legends Do Not Go On**

TEST OR INSPECTION	CORRECTIVE ACTION
1.	Hold caution/advisory panel BRT/DIM-TEST or UH-60Q HH-60L instrument panel INDICATOR UxValidator END switch to TEST. Go to 2.
2.	Check that capsules or legends go on. Step 1. If capsules or legends go on, go to 3. Step 2. If capsules or legends do not go on, go to 7.
3.	Check helicopter configuration. Step 1. EMEP Go to 4. Step 2. W/O EMEP Go to 6.
EMEP 4.	Remove and check pin filtered adapters P117 or UH-60Q HH-60L P1019R or P1020R END , P137, and P138 (WP 0925 00). Step 1. If pin filtered adapters are good, go to 5. Step 2. If pin filtered adapters are not good, replace pin filtered adapter (WP 0925 00). Go to 8.
EMEP 5.	Install pin filtered adapters (WP 0925 00). Go to 6.
6.	Check continuity between: <ul style="list-style-type: none"> • P117-3 and P138-X • P117-51 and P137-X • UH-60Q HH-60L P1019R-56 and P138-X END • UH-60Q HH-60L P1020R-56 and P138-X END • UH-60Q HH-60L P1019R-73 and P137-X END • UH-60Q HH-60L P1020R-73 and P137-X END Step 1. If continuity is present, system is operational. Go to 8. Step 2. If continuity is not present, repair/replace wiring as required (WP 1747 00). Go to 8.
7.	Check capsule for burnt out lamps. Step 1. If lamps are burnt out, replace lamps (Chart IDS-0-1). Go to 8. Step 2. If lamps are not burnt out, replace caution/advisory panel (Chart IDS-0-1). Go to 8.
8.	Procedure completed.

**Table 8-2-3-5 –
Rotor Overspeed Light is On**

TEST OR INSPECTION CORRECTIVE ACTION

1.	Place and hold rotor overspeed reset switch to RESET. Go to 2.
2.	Check that lights go off. Step 1. If lights go off, system is operational. Go to 9. Step 2. If lights do not go off, go to 3.
3.	With switch held in RESET position, check continuity between rotor overspeed reset switch terminals 1 and 2. Step 1. If continuity is present, go to 4. Step 2. If continuity is not present, replace switch (Chart IDS-0-1). Go to 9.
4.	Check continuity between rotor overspeed reset switch terminal 1 and ground. Step 1. If continuity is present, go to 5. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 9.
5.	Check helicopter configuration. Step 1. EMEP , go to 6. Step 2. W/O EMEP , go to 8.
EMEP 6.	Remove and check pin filtered adapters P137 and P138 (WP 0925 00). Step 1. If pin filtered adapters are good, go to 7. Step 2. If pin filtered adapters are not good, replace as required (WP 0925 00). Go to 9.
EMEP 7.	Install pin filtered adapters (WP 0925 00). Go to 8.
8.	Check continuity between rotor overspeed reset switch terminal 2 and P137- p and P138- p. Step 1. If continuity is present, replace CDU (Chart IDS-0-1). Go to 9. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 9.
9.	Procedure completed.

**Table 8-2-3-6 –
CHAN 1 Light is On**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Check helicopter configuration. Step 1. EMEP, go to 2. Step 2. W/O EMEP, go to 4.</p>
EMEP 2.	<p>Remove and check pin filtered adapter P138 (WP 0925 00). Step 1. If pin filtered adapter is good, go to 3. Step 2. If pin filtered adapter is not good, replace pin filtered adapter (WP 0925 00). Go to 9.</p>
EMEP 3.	<p>Install pin filtered adapter (WP 0925 00). Go to 4.</p>
4.	<p>Check for 115Vac between P138-CC and P138-DD. Step 1. If voltage is as specified, go to 5. Step 2. If voltage is not as specified, go to 7.</p>
5.	<p>Check for 28Vdc between P138-AA and P138-DD. Step 1. If voltage is as specified, replace No. 1 SDC (Chart IDS-0-1). Go to 9. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 9. Step 3. If trouble still remains, replace PDU (Chart IDS-0-1). Go to 9. Step 4. If voltage is not as specified, go to 6.</p>
6.	<p>Check for 28Vdc between NO. 1 DC INST circuit breaker terminal 1 and ground. Step 1. If voltage is as specified, repair/replace wiring between circuit breaker terminal 1 and P138-AA (WP 1747 00). Go to 9. Step 2. If voltage is not as specified, replace circuit breaker (WP 0824 00). Go to 9.</p>
7.	<p>Check continuity between P138-DD and ground. Step 1. If continuity is present, go to 8. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 9.</p>
8.	<p>Check for 115Vac between NO. 1 AC INST circuit breaker terminal 1 and ground. Step 1. If voltage is as specified, repair/replace wiring between circuit breaker terminal 1 and P138-AA (WP 1747 00). Go to 9. Step 2. If voltage is not as specified, replace circuit breaker (WP 0824 00). Go to 9</p>
9.	<p>Procedure completed.</p>

**Table 8-2-3-7 –
CHAN 2 Light is On**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Check helicopter configuration. Step 1. EMEP, go to 2. Step 2. W/O EMEP, go to 4.</p>
EMEP 2.	<p>Remove and check pin filtered adapter P138 (WP 0925 00). Step 1. If pin filtered adapter is good, go to 3. Step 2. If pin filtered adapter is not good, replace pin filtered adapter (WP 0925 00). Go to 9.</p>
EMEP 3.	<p>Install pin filtered adapter (WP 0925 00). Go to 4.</p>
4.	<p>Check for 115Vac between P137-CC and P137-DD. Step 1. If voltage is as specified, go to 5. Step 2. If voltage is not as specified, go to 7.</p>
5.	<p>Check for 28Vdc between P137-AA and P137-DD. Step 1. If voltage is as specified, replace No. 2 SDC (Chart IDS-0-1). Go to 9. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 9. Step 3. If trouble still remains, replace PDU (Chart IDS-0-1). Go to 9. Step 4. If voltage is not as specified, go to 6.</p>
6.	<p>Check for 28Vdc between NO. 1 DC INST circuit breaker terminal 1 and ground. Step 1. If voltage is as specified, repair/replace wiring between circuit breaker terminal 1 and P137-AA (WP 1747 00). Go to 9. Step 2. If voltage is not as specified, replace circuit breaker (WP 0824 00). Go to 9.</p>
7.	<p>Check continuity between P137-DD and ground. Step 1. If continuity is present, go to 8. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 9.</p>
8.	<p>Check for 115Vac between NO.2 AC INST circuit breaker terminal 1 and ground. Step 1. If voltage is as specified, repair/replace wiring between circuit breaker terminal 1 and P137-CC (WP 1747 00). Go to 9. Step 2. If voltage is not as specified, replace circuit breaker (WP 0824 00). Go to 9.</p>
9.	<p>Procedure completed.</p>

**Table 8-2-3-8 –
With CDU PUSH TO TEST Switch Pressed,
Two or More Adjacent Lamps on One Scale are Off,
or One Lamp Between Green and Amber, Amber and Red,
or Green and Red Ranges on a Scale is Off**

NOTE

The following modules are interchangeable:

- Transmission Oil Temp (A5)
- No. 1 Engine Oil Temp (A7)
- No. 2 Engine Oil Temp (A8)
- No. 1 TGT (A11)
- No. 2 TGT (A12)
- No. 1 Ng Speed (A13)
- No. 2 Ng Speed (A14)
- No. 1 Fuel Quantity (A3)
- No. 2 Fuel Quantity (A4)
- No. 1 Engine Oil Press (A9)
- No. 2 Engine Oil Press (A10)

TEST OR INSPECTION CORRECTIVE ACTION

1.	Exchange modules according to the above note. Does the problem follow the module? Step 1. If problem follows module, go to 2. Step 2. If problem does not follow module, replace CDU (Chart IDS-0-1). Go to 5.
2.	Check helicopter configuration. Step 1. EMEP , go to 3. Step 2. W/O EMEP , go to 4.
EMEP	3. Replace malfunctioning BGF lamp (Chart IDS-0-1). Step 1. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 5.
W/O EMEP	4. Replace display lamp assembly (Chart IDS-0-1). Step 1. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 5
5.	Procedure completed.

**Table 8-2-3-9 –
With CDU PUSH TO TEST Switch Pressed,
One or More RTR OVERSPEED Lights are Off**

TEST OR INSPECTION	CORRECTIVE ACTION
1.	Is same light off on both PDU's? Step 1. If the same light is off, replace CDU (Chart IDS-0-1). Go to 4. Step 2. If different lights are off, go to 2.
2.	Interchange PDU's. Go to 3.
3.	Is trouble on the same PDU? Step 1. If trouble is on the same display unit, replace malfunctioning PDU or CDU (Chart IDS-0-1). Go to 4. Step 2. If trouble is on different display unit, repair/replace wiring, as required, between (WP 1747 00), then go to 4: <ul style="list-style-type: none"> • P153-5 and P157-31 • P153-6 and P157-32 • P153-7 and P157-33 • P156-5 and P158-31 • P156-6 and P158-32 • P156-7 and P158-33
4.	Procedure completed.

**Table 8-2-3-10 –
CDU DIM Control Varies PDU Display Lighting**

TEST OR INSPECTION CORRECTIVE ACTION

1.	Check that CDU DIM control varies PDU display lighting. Step 1. If PDU display lighting varies, go to 2. Step 2. If PDU display lighting does not vary, go to 3.
2.	Check continuity between P151-19 and P154-19. Step 1. If continuity is present, replace No 1. SDC (Chart IDS-0-1). Go to 4. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 4.
3.	Check continuity between P152-19 and P155-19. Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 4. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 4.
4.	Procedure completed.

**Table 8-2-3-11 –
Pilot's or Copilot's PDU % RPM Display is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	Interchange PDU's. Go to 2.
2.	Is trouble on the same PDU? Step 1. If trouble is on the same PDU, replace malfunctioning PDU (Chart IDS-0-1). Go to 4. Step 2. If trouble is on different PDU, go to 3.
3.	Check continuity between P149-18 and P157-18 (copilot's PDU), or between P150-18 and P158-18 (pilot's PDU). Step 1. If continuity is present, replace No. 1 SDC or No. 2 SDC as required (Chart IDS-0-1). Go to 4. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 4.
4.	Procedure completed.

**Table 8-2-3-12 –
One or More RTR OVERSPEED Lights are Off**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Is same light off on pilot's and copilot's PDU? Step 1. If the same light is off, replace CDU (Chart IDS-0-1). Go to 4. Step 2. If a different light is off, go to 2.</p>
2.	Interchange PDU's. Go to 3.
3.	<p>Is trouble on the same PDU? Step 1. If trouble is still on the same display unit, replace malfunctioning PDU (Chart IDS-0-1). Go to 4. Step 2. If trouble is on different display unit, repair/replace wiring, as required, between (WP 1747 00), then go to 4 :</p> <ul style="list-style-type: none"> • P153-5 and P157-31 • P153-6 and P157-32 • P153-7 and P157-33 • P156-5 and P158-31 • P156-6 and P158-32 • P156-7 and P158-33
4.	Procedure completed.

**Table 8-2-3-13 –
FUEL QTY 1, FUEL QTY 2, and/or TOTAL FUEL Display is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Are all three displays inoperative? Step 1. If all three displays are inoperative, replace CDU (Chart IDS-0-1). Go to 7. Step 2. If only 1 or 2 displays are inoperative, go to 2.</p>
2.	<p>Is FUEL QTY 1 inoperative? Step 1. If FUEL QTY 1 is inoperative, go to 3. Step 2. If FUEL QTY 1 is operating, go to 4.</p>
3.	<p>Check continuity between P151-41 and P154-41. Step 1. If continuity is present, replace No. 1 SDC (Chart IDS-0-1). Go to 7. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7.</p>
4.	<p>Is FUEL QTY 2 inoperative? Step 1. If FUEL QTY 2 is inoperative, go to 5. Step 2. If FUEL QTY 2 is operative, go to 6.</p>
5.	<p>Check continuity between P152-41 and P155-41. Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 7. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7. Step 3. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7.</p>
6.	<p>Check continuity between P151-43 and P154-43. Step 1. If continuity is present, replace No. 1 SDC (Chart IDS-0-1). Go to 7. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7.</p>
7.	<p>Procedure completed.</p>

**Table 8-2-3-14 –
ENG OIL PRESS 1 and/or ENG OIL PRESS 2 Display is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Are both displays inoperative? Step 1. If both displays are inoperative, replace CDU (Chart IDS-0-1). Go to 5. Step 2. If only one display is inoperative, go to 2.</p>
2.	<p>.Is ENG OIL PRESS 1 inoperative? Step 1. If ENG OIL PRESS 1 is inoperative, go to 3. Step 2. If ENG OIL PRESS 1 is operative, go to 4.</p>
3.	<p>Check continuity between P151-45 and P154-45. Step 1. If continuity is present, replace No. 1 SDC (Chart IDS-0-1). Go to 5. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 5. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 5.</p>
4.	<p>Check continuity between P152-45 and P155-45. Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 5. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 5. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 5.</p>
5.	<p>Procedure completed.</p>

**Table 8-2-3-15 –
ENG OIL TEMP 1 and/or ENG OIL TEMP 2 Display is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Are both displays inoperative? Step 1. If both displays are inoperative, replace CDU (Chart IDS-0-1). Go to 5. Step 2. If only one display is inoperative, go to 2.</p>
2.	<p>Is ENG OIL PRESS 1 inoperative? Step 1. If ENG OIL PRESS 1 is inoperative, go to 3. Step 2. If ENG OIL PRESS 1 is operative, go to 4.</p>
3.	<p>Check continuity between P151-44 and P154-44. Step 1. If continuity is present, replace No. 1 SDC (Chart IDS-0-1). Go to 5. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 5. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 5.</p>
4.	<p>Check continuity between P152-44 and P155-44. Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 5. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 5. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 5.</p>
5.	<p>Procedure completed.</p>

**Table 8-2-3-16 –
NO. 1 HIGH OIL TEMP and/or NO. 2 HIGH OIL TEMP Light is Off**

TEST OR INSPECTION CORRECTIVE ACTION

1.	Are both lights off? Step 1. If both lights are off, replace CDU (Chart IDS-0-1). Go to 7. Step 2. If only one light is off, go to 2.
2.	.Is NO. 1 HIGH OIL TEMP light off? Step 1. If NO. 1 HIGH OIL TEMP light is off, go to 3. Step 2. If NO. 1 HIGH OIL TEMP light is on, go to 5.
3.	Check if OIL TEMP 1 fuse is good. Step 1. If fuse is good, go to 4. Step 2. If fuse is not good, replace fuse (Chart IDS-0-1). Go to 7.
4.	Check continuity between P151-32 and P154-32. Step 1. If continuity is present, replace No. 1 SDC (Chart IDS-0-1). Go to 7. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7.
5.	Check if OIL TEMP 2 fuse is good. Step 1. If fuse is good, go to 6. Step 2. If fuse is not good, replace fuse (Chart IDS-0-1). Go to 7.
6.	Check continuity between P152-32 and P155-32. Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 7. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7.
7.	Procedure completed.

**Table 8-2-3-17 –
Ng SPEED 1 and/or Ng SPEED 2 Vertical Display is Inoperative**

TEST OR INSPECTION	CORRECTIVE ACTION
1.	<p>Are both displays inoperative? Step 1. If both displays are inoperative, replace CDU (Chart IDS-0-1). Go to 5. Step 2. If only 1 display is inoperative, go to 2.</p>
2.	<p>Is Ng SPEED 1 vertical display inoperative? Step 1. If Ng SPEED 1 vertical display is inoperative, go to 3. Step 2. If Ng SPEED 1 display is operative, go to 4.</p>
3.	<p>Check continuity between P151-47 and P154-47. Step 1. If continuity is present, replace No. 1 SDC (Chart IDS-0-1). Go to 5. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 5. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 5.</p>
4.	<p>Check continuity between P152-47 and P155-47. Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 5. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 5. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 5.</p>
5.	<p>Procedure completed.</p>

**Table 8-2-3-18 –
Ng SPEED 1 and/or Ng SPEED 2 Digital Display is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Are both digital displays inoperative? Step 1. If both displays are inoperative, replace CDU (Chart IDS-0-1). Go to 5. Step 2. If only one display is inoperative, go to 2.</p>
2.	<p>Is Ng SPEED 1 digital display inoperative? Step 1. If Ng SPEED 1 display is inoperative, go to 3. Step 2. If Ng SPEED 1 display is operating, go to 4.</p>
3.	<p>Check continuity between P151-49 and P154-49 . Step 1. If continuity is present, replace No. 1 SDC (Chart IDS-0-1). Go to 5. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 5. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 5.</p>
4.	<p>Check continuity between P152-49 and P155-49. Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 5. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 5. Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 5.</p>
5.	<p>Procedure completed.</p>

**Table 8-2-3-19 –
% TRQ 1 and/or % TRQ 2 Vertical Display
or % TRQ Digital Readout is Inoperative**

TEST OR INSPECTION	CORRECTIVE ACTION
1.	Are both vertical displays inoperative? Step 1. If both displays are inoperative, replace PDU (Chart IDS-0-1). Go to 6. Step 2. If only one display is inoperative, go to 2.
2.	Is CHAN 1 light on? Step 1. If CHAN 1 light is on, replace No. 2 SDC (Chart IDS-0-1). Go to 6. Step 2. If CHAN 1 light is off, go to 3.
3.	Is CHAN 2 light on? Step 1. If CHAN 2 light is on, replace No. 2 SDC (Chart IDS-0-1). Go to 6. Step 2. If CHAN 2 light is off, go to 4.
4.	Interchange PDU's. Go to 5.
5.	Is trouble on the same PDU? Step 1. If trouble is on the same PDU, replace PDU (Chart IDS-0-1). Go to 6. Step 2. If trouble is on different PDU, repair/replace wiring, as required, between (WP 1747 00), then go to 6. <ul style="list-style-type: none"> • P149-20 and P157-20 • P149-21 and P157-21 • P149-22 and P157-22 • P149-23 and P157-23 • P150-20 and P158-20 • P150-21 and P158-21 • P150-22 and P158-22 • P150-23 and P158-23
6.	Procedure completed.

**Table 8-2-3-20 –
XMSN PRESS Display is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Check continuity between P152-28 and P155-28.</p> <p>Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 2.</p> <p>Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 2.</p> <p>Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 2.</p>
2.	Procedure completed.

**Table 8-2-3-21 –
XMSN TEMP Display is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Check continuity between:</p> <ul style="list-style-type: none"> • P152-22 and P155-22 • P152-23 and P155-23 <p>Step 1. If continuity is present, replace No. 2 SDC (Chart IDS-0-1). Go to 2.</p> <p>Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 2.</p> <p>Step 3. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 2.</p>
2.	Procedure completed.

**Table 8-2-3-22 –
PDU's % RPM 1 or % RPM 2 Display is Inoperative**

TEST OR INSPECTION	CORRECTIVE ACTION
1.	<p>Is CHAN 1 light on?</p> <p>Step 1. If CHAN 1 light is on, replace No. 1 SDC (Chart IDS-0-1). Go to 5.</p> <p>Step 2. If CHAN 1 light is not on, go to 2.</p>
2.	<p>Is CHAN 2 light on?</p> <p>Step 1. If CHAN 2 light is on, replace No. 2 SDC (Chart IDS-0-1). Go to 5.</p> <p>Step 2. If CHAN 2 light is off, go to 3.</p>
3.	Interchange PDU's. Go to 4.
4.	<p>Is trouble on the same PDU?</p> <p>Step 1. If trouble is on the same display unit, replace malfunctioning display unit (Chart IDS-0-1). Go to 5.</p> <p>Step 2. If trouble is on different display unit, repair/replace wiring, as required, between (WP 1747 00), then go to 5:</p> <ul style="list-style-type: none"> • P149-17 and P157-17 • P149-19 and P157-19 • P150-17 and P158-17 • P150-19 and P158-19
5.	Procedure completed.

**Table 8-2-3-23 –
TGT TEMP 1 or TGT TEMP 2 Vertical Display is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Is CHAN 1 light on?</p> <p>Step 1. If CHAN 1 light is on, replace No. 1 SDC (Chart IDS-0-1). Go to 4.</p> <p>Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 4.</p> <p>Step 3. If CHAN 1 light is not on, go to 2.</p>
2.	<p>Is CHAN 2 light on?</p> <p>Step 1. If CHAN 2 light is on, replace No. 2 SDC (Chart IDS-0-1). Go to 4.</p> <p>Step 2. If CHAN 2 light is off, go to 3.</p>
3.	<p>Check continuity between:</p> <ul style="list-style-type: none"> • P151-46 and P154-46 • P152-46 and P155-46 <p>Step 1. If continuity is present, replace CDU (Chart IDS-0-1). Go to 4.</p> <p>Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 4.</p>
4.	Procedure completed.

**Table 8-2-3-24 –
TGT TEMP 1 and/or TGT TEMP 2 Digital Display is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Are both digital displays inoperative? Step 1. If both displays are inoperative, replace CDU (Chart IDS-0-1). Go to 7. Step 2. If only one display is inoperative, go to 2.</p>
2.	<p>Is CHAN 1 light on? Step 1. If CHAN 1 light is on, replace No. 1 or No. 2 SDC as applicable (Chart IDS-0-1). Go to 7. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7. Step 3. If CHAN 1 light is off, go to 3.</p>
3.	<p>Is CHAN 2 light on? Step 1. If CHAN 2 light is on, replace No. 2 SDC (Chart IDS-0-1). Go to 7. Step 2. If the trouble remains, replace CDU (Chart IDS-0-1). Go to 7. Step 3. If CHAN 2 light is off, go to 4.</p>
4.	<p>Is TGT TEMP 1 digital display inoperative? Step 1. If display is inoperative, go to 5. Step 2. If display is operating, go to 6.</p>
5.	<p>Check continuity between P151-48 and P154-48. Step 1. If continuity is present, replace CDU (Chart IDS-0-1). Go to 7. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7.</p>
6.	<p>Check continuity between P152-48 and P155-48. Step 1. If continuity is present, replace CDU (Chart IDS-0-1). Go to 7. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 7.</p>
7.	<p>Procedure completed.</p>

**Table 8-2-3-25 –
CDU Faceplate Lighting is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	Turn upper console INST UxValidator NON FLT control to BRT. Go to 2.
2.	Remove CDU faceplate and check for 115Vac at faceplate lighting connector. Step 1. If voltage is as specified, replace CDU faceplate (Chart IDS-0-1). Go to 9. Step 2. If voltage is not as specified, go to 3.
3	Check for 115Vac between P154-128 and ground. Step 1. If voltage is as specified, replace CDU (Chart IDS-0-1). Go to 9. Step 2. If voltage is not as specified, go to 4.
4.	Check continuity between P151-128 and P154-128. Step 1. If continuity is present, go to 5. Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 9.
5.	Check helicopter configuration. Step 1. EMEP , go to 6. Step 2. W/O EMEP , go to 8.
EMEP 6.	Remove and check pin filtered adapter P138 (WP 0925 00). Step 1. If pin filtered adapter is good, go to 7. Step 2. If pin filtered adapter is not good, replace pin filtered adapter (WP 0925 00). Go to 9.
EMEP 7.	Install pin filtered adapter (WP 0925 00). Go to 8.
8.	Check for 5Vac between P138-GG and ground. Step 1. If voltage is as specified, replace No. 1 SDC (Chart IDS-0-1). Go to 9. Step 2. If voltage is not as specified, repair/replace wiring between P280-L and P138-GG (WP 1747 00). Step 3. If the trouble remains, troubleshoot instrument panel lights (WP 0105 00). Go to 9.
9.	Procedure completed.

**Table 8-2-3-26 –
PDU Faceplate Lighting is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Exchange the pilot's and copilot's PDUs, and check that the faceplate on the PDU lights.</p> <p>Step 1. If faceplate lights, replace malfunctioning PDU faceplate (Chart IDS-0-1). Go to 10.</p> <p>Step 2. If faceplate does not light, go to 2.</p>
2.	<p>Check for 115Vac between P158-99 and P158-100.</p> <p>Step 1. If voltage is as specified, replace PDU (Chart IDS-0-1). Go to 10.</p> <p>Step 2. If voltage is not as specified, go to 3.</p>
3.	<p>Check continuity between P150-99 and P158-99.</p> <p>Step 1. If continuity is present, go to 4.</p> <p>Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 10.</p>
4.	<p>Check for 115Vac between P386-C and ground.</p> <p>Step 1. If voltage is as specified, replace No. 2 SDC (Chart IDS-0-1). Go to 10.</p> <p>Step 2. If voltage is not as specified, go to 5.</p>
5.	<p>Check for 5Vac between P386-A and ground.</p> <p>Step 1. If voltage is as specified, go to 6.</p> <p>Step 2. If voltage is not as specified, repair/replace wiring between P246- a & P386-A (WP 1747 00). Go to 10.</p> <p>Step 3. If the trouble remains, troubleshoot instrument panel lights (WP 0105 00). Go to 10.</p>
6.	<p>Check helicopter configuration.</p> <p>Step 1. EMEP, go to 7.</p> <p>Step 2. W/O EMEP, go to 9.</p>
EMEP 7.	<p>Remove and check pin filtered adapter P137 (WP 0925 00).</p> <p>Step 1. If pin filtered adapter is good, go to 8.</p> <p>Step 2. If pin filtered adapter is not good, replace pin filtered adapter (WP 0925 00). Go to 10.</p>
EMEP 8.	<p>Install pin filtered adapter (WP 0925 00). Go to 9.</p>
9.	<p>Repair/replace wiring between P137-FF and P386-C (WP 1747 00).</p> <p>Step 1. If the trouble remains, replace the pilot's flight instruments 5v/115v transformer (WP 0881 00). Go to 10.</p>
10.	<p>Procedure completed.</p>

**Table 8-2-3-27 –
Copilot's PDU Faceplate Lighting is Inoperative**

TEST OR INSPECTION CORRECTIVE ACTION

1.	<p>Exchange the copilot's and pilot's PDU, and check that the faceplate on the copilot's PDU lights.</p> <p>Step 1. If faceplate lights, replace malfunctioning PDU faceplate (Chart IDS-0-1). Go to 9.</p> <p>Step 2. If faceplate does not light, go to 2.</p>
2.	<p>Check for 115Vac between P157-99 and P157-100.</p> <p>Step 1. If voltage is as specified, replace PDU (Chart IDS-0-1). Go to 9.</p> <p>Step 2. If voltage is not as specified, go to 3.</p>
3.	<p>Check continuity between:</p> <ul style="list-style-type: none"> • P149-99 and P157-99 • P149-100 and P157-100 <p>Step 1. If continuity is present, go to 4.</p> <p>Step 2. If continuity is not present, repair/replace wiring (WP 1747 00). Go to 9.</p>
4.	<p>Check helicopter configuration.</p> <p>Step 1. EMEP, go to 5.</p> <p>Step 2. W/O EMEP, go to 7.</p>
EMEP 5.	<p>Remove and check pin filtered adapter P138 (WP 0925 00).</p> <p>Step 1. If pin filtered adapter is good, go to 6.</p> <p>Step 2. If pin filtered adapter is not good, replace pin filtered adapter (WP 0925 00). Go to 9.</p>
EMEP 6.	<p>Install pin filtered adapter (WP 0925 00). Go to 7.</p>
7.	<p>Check for 115Vac between P138-FF and ground.</p> <p>Step 1. If voltage is as specified, replace No. 1 SDC (Chart IDS-0-1). Go to 9.</p> <p>Step 2. If voltage is not as specified, go to 8.</p>
8.	<p>Check for 5Vac between P387-A and ground.</p> <p>Step 1. If voltage is as specified, repair/replace wiring between P138-FF and P387-C (WP 1747 00). Go to 9.</p> <p>Step 2. If the trouble remains, replace pilots flight instrument 5v/115v transformer (WP 0881 00). Go to 9.</p> <p>Step 3. If voltage is not as specified, repair/replace wiring between P246-g and P387-A (WP 1747 00). Go to 9.</p>
9.	<p>Procedure completed.</p>



**Chart IDS-0-1 –
Airframe Component Troubleshoot/Replacement Reference**

This chart lists the work packages in TM-1-1520-237-23 that tell how to remove, replace, check, and/or adjust components as needed when troubleshooting the Instrument Display System (described in Paragraph 8.2.3).

Maintenance Action	TM 1-1520-237-23
Replace CDU	WP 0776 00
Replace DVF	WP 0778 00
Replace Fuse	WP 0779 00
Replace CDU Lamp Assy	WP 0780 00
Replace #1 or #2 SDC	WP 0781 00
Replace PDU	WP 0782 00
Replace CDU/PDU Faceplate	WP 0783 00
Replace BGF	WP 0784 00
Replace Caution Advisory Panel	WP 0785 00
Replace Caution Advisory Panel Lamps	WP 0786 00
Replace Master Warning Panel	WP 0790 00
Replace Master Warning Panel Lamps	WP 0791 00
Replace Rotor Overspeed Switch	WP 0797 00

This page intentionally left blank.

Recommended Changes to Technical Publications

From		Date		
Publication Number		Publication Date		Publication Title
PLEASE be exact; pin-point where it is.				
Page Number	Para-graph	Figure Number	Table Number	Tell us what is wrong and how to fix it, or describe your recommended change.
Printed Name, Grade, or Title, Telephone Number, and Email Address				SIGN HERE
<hr style="border: 0; border-top: 1px solid black; margin-bottom: 10px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 10px;"/> <hr style="border: 0; border-top: 1px solid black;"/>				

Thank you for your recommendations.

FOLD HERE

FILL IN YOUR UNIT'S ADDRESS

OFFICIAL BUSINESS

PLACE
STAMP
HERE

PUBLICATIONS DEPARTMENT
ULTRAX AEROSPACE, INC
4200 NE SUN COURT
LEE'S SUMMIT, MO 64064