



September 9, 2002

**IN REPLY REFER TO:  
L-175-02-202**

Jason Ragogna  
Air Safety Investigator  
National Transportation Safety Board  
624 Six Flags Drive, Suite 150  
Arlington, TX 76011

**RE: 1964, S/N: 310I0145  
310I; N8145M  
DA: 07/04/02  
San Dimas, CA  
NTSB Report #: LAX02FA214**


Dear Mr. Ragogna,

As we discussed last week I am enclosing, a long with this letter, the information you requested. Please see the attached sheet for the list of documents I am enclosing.

If you have any questions or need additional documentation, feel free to contact me.

Sincerely,

A handwritten signature in black ink, which appears to be 'H. Soderlund', is written over a solid black rectangular redaction box.

Henry J. Soderlund  
Air Safety Investigator  
Cessna Aircraft Company – Dept. 175  
1780 Airport Rd.  
Wichita, KS 67209  
Email: 

Desk:  
Office:  
Mobile:  
Fax:



Documents enclosed with Cessna Letter # L-175-02-202

- A copy of MEB88-3 (Auxiliary Fuel Pump Wiring Modification) dated 08/12/88 – This is the original issue of the Service Bulletin
- A copy of MEB88-3 Revision 1 (Auxiliary Fuel Pump Wiring Modification) dated 03/03/89 – This is the first revision to the Service Bulletin. The main change for the 310 series of aircraft was flight manual and cockpit placard changes.
- A copy of MEB88-3 Revision 2 (Auxiliary Fuel Pump Wiring Modification) dated 01/18/91 – This is the second revision to the Service Bulletin. Revision 2 does not have any changes for the 310 series.
- A copy of SK310-104 (Auxiliary Fuel Pump Wiring Modification) dated 08/12/88 – This is the original issue of this Service Kit.
- A copy of SK310-104B (Auxiliary Fuel Pump Wiring Modification) dated 02/10/89 – this is the revised and current version of the Service Kit.
- Pages 6-52, 6-58, and 6-67 from the 310F - 310K Service Manual Change 4 showing the wiring schematics for the auxiliary fuel pump system.
- A 1964 310I Owner's Manual with the following items
  - Supplements D1634-13, D5317-1-13, D1626-1-13
  - Revised Emergency Procedures D1550-13
  - Procedures Modification Notices D1627-13

Supplement D1626-1-13 and the Procedures Modification Notices apply to the auxiliary fuel pump modification.



# Multi-engine

## Service Bulletin

August 12, 1988

MEB88-3

### TITLE

AUXILIARY FUEL PUMP WIRING MODIFICATION

### EFFECTIVITY

Model T303 thru 335, 340 thru 404 and 411 thru 421 Series Airplanes.  
Normally aspirated and turbocharged models.

Serial numbers . . .

T30300001	thru	T30300315	(1982 thru 1984)
310C-35772	thru	310R2140	(1959 thru 1981)
310M0001	thru	310M0036	(Converted U-3B's, 1960)
320-0001	thru	320F0045	(1962 thru 1968)
335-0001	thru	335-0065	(1980)
340-0001	thru	340A1817	(1972 thru 1984)
401-0001	thru	401B0221	(1967 thru 1972)
402-0001	thru	402C1020	(1967 thru 1985)
404-0001	thru	404-0859	(1977 thru 1981)
411-0001	thru	411A0300	(1965 thru 1968)
414-0001	thru	414A1212	(1970 thru 1985)
421-0001	thru	421C1807	(1967 thru 1985)

### PURPOSE

To improve the safety features of the auxiliary fuel pump systems, the automatic fuel pressure sensing switch and cockpit auxiliary fuel pump switch for each engine must be removed. The cockpit auxiliary fuel pump switches must be replaced with new three-position, lever lock type toggle switches. Along with electrical circuitry changes, these modifications are designed to provide direct pilot activation (via the new cockpit toggle switch) of the output pressure of the auxiliary fuel pumps, including the HIGH mode of auxiliary pump operation controlled by the automatic fuel pressure sensing switch prior to this modification.

Page 1 of 4

To obtain satisfactory results, procedures specified in this publication must be accomplished in accordance with accepted methods and prevailing government regulations. The Cessna Aircraft Company cannot be responsible for the quality of work performed in accomplishing the requirements of this publication.

The Cessna Aircraft Company, Customer Services, P.O. Box 7704, Wichita, Kansas 67277 U.S.A. (316) 946-7550, Telex: 4319022, Facsimile (316) 942-9006

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In the event an engine driven fuel pump failure should occur during takeoff or landing, the fuel pressure sensing switch (if properly maintained and armed) automatically switches the auxiliary fuel pump for the affected engine to the HIGH mode for continued engine operation. If the fuel pressure sensing switch is not maintained and armed, however, the automatic feature of the switch may not function, with the result that HIGH mode auxiliary fuel pump operation may not be available to the pilot at a time of need. Malfunction or non-operation of the automatic switch may not always be easily detectable by the pilot. And in the event of unwanted activation of the auxiliary fuel pump to the HIGH output mode (caused by improper maintenance, malfunction, etc.) while the engine driven pump is operating, under some limited circumstances the auxiliary fuel pump may provide too much fuel to the engine at certain power settings and an over-rich mixture and engine power loss may result.

The reliability and endurance of the engine driven fuel pump has now been demonstrated and relevant service experience now indicates the lack of a need at this time for control of the auxiliary fuel pump system to be automatic. Direct pilot activation of the auxiliary fuel pump in all modes is now considered by Cessna to be the most desirable and simplest mode of activation. The change to a pilot activation system will also allow the pilot to select the HIGH mode of auxiliary fuel pump operation in the event the engine driven fuel pump should fail. Thus, based on the relevant service experience of the engine driven fuel pump, Cessna now believes that incorporation of the modification to the auxiliary fuel pump systems as described herein and the corresponding changes to the described operational publications are mandatory.

#### COMPLIANCE

Mandatory: Shall be accomplished within the next 50 hours of operation, or no later than the next annual inspection, or during an equivalent inspection for airplanes utilizing the Cessna Progressive Care Inspection Program, whichever occurs first.

WARNING TO OWNERS AND OPERATORS: Continued operation of your airplane beyond the above specified compliance period without compliance with the modifications set forth in this Service Bulletin may diminish your level of flying safety compared to those who have made the modification. Failure to comply with the modification could endanger the safety of you and your passengers if a fuel pressure switch malfunction occurs or has occurred which prevents the switch from going to the HIGH fuel activation position, when needed, or causes an unwanted switch activation to the HIGH fuel position which might result in too much fuel going to the engine and a possible loss of engine power.

#### APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

MEB88-3  
August 12, 1988

MAN-HOURS

Estimated man-hours per airplane for installing each kit is as follows:

SK303-40	7.0	man-hours	SK421-82A	10.0	man-hours
SK310-104	8.0	man-hours	SK421-138	8.0	man-hours
SK340-18A	10.0	man-hours	SK421-139	10.0	man-hours
SK414-11	10.0	man-hours			

MATERIAL

Modification parts are available from the Cessna Supply Division thru an appropriate Multi Engine Service Station for the suggested list prices shown.

<u>Part Number</u>	<u>Description</u>	<u>Qty./Airplane</u>	<u>Price</u>
SK303-40	Aux. Fuel Pump Wiring Mod. Kit - T303	1 ea.	\$ 159.00 (A) ea.
SK310-104	Aux. Fuel Pump Wiring Mod. Kit - 310C thru 340A	1 ea.	\$ 97.30 (A) ea.
SK421-138	Aux. Fuel Pump Wiring Mod. Kit - 401 thru 421C	1 ea.	\$ 98.50 (A) ea.
SK340-18A	In Line Fuel Pump Wiring Mod. Kit - 340A	1 ea.	\$ 118.00 (S) ea.
SK414-11	In Line Fuel Pump Wiring Mod. Kit - 414	1 ea.	W/A
SK421-82A	In Line Fuel Pump Wiring Mod. Kit - 421B	1 ea.	\$ 98.90 (S) ea.
SK421-139	In Line Fuel Pump Wiring Mod. Kit - 421 & 421A	1 ea.	\$ 286.00 (A) ea.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

ACCOMPLISHMENT INSTRUCTIONS

Service Kits SK303-40, SK310-104, SK421-138, SK340-18A, SK414-11, SK421-82A and SK421-139 modification instructions are attached.

CREDIT

Parts credit will be provided to incorporate the modification on applicable airplanes provided the work is accomplished and a Quick Claim is submitted by a Multi Engine Service Station before September 1, 1989.

OWNER NOTIFICATION

On August 19, 1988 a copy of this Service Bulletin, excluding attachments, will be sent to affected owners of record as their Owner Advisory.

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## Revision Transmittal

March 3, 1989

TO: CESSNA DISTRIBUTORS AND MULTI-ENGINE SERVICE STATIONS

SUBJECT: Service Bulletin MEB88-3 Revision 1, Auxiliary Fuel Pump Wiring Modification

### REASON FOR REVISION

NOTE: Recombpliance and rework will be required by MEB88-3 Rev. 1 for airplanes that have complied with the original issue of MEB88-3. Refer to Revision 1 for detail requirements.

Revision 1 is being issued to incorporate the following changes:

1. Revise the compliance time requirement from 50 to 100 hours.
2. Extend the credit expiration date. Provide recombpliance labor allowance credit and parts credit to return new and unused fuel pressure switches in inventory.
3. Replace the previous Auxiliary Fuel Pump Switching System Operating Instructions. Two new FAA required supplements for the three auxiliary fuel pump switch wiring modification Service Kits have been developed as replacements.
4. Service Kits SK310-104 and SK421-138:

Auxiliary Fuel Pump Wiring Modification kits SK310-104 and SK421-138 are revised so each contains two separate hardware sub-kits. Pressure switch installation is different on the 340/340A and 414/414A and required these changes.

Replace the 2505059-1 or -5 placard with a 2505059-6 placard and correct information describing usage of the 2505059-4 placard.

Provide an ash tray receptacle cover to simplify installation of the 2505059-6 placard and improve switch access on airplanes with an ash tray located directly above the auxiliary fuel pump switches.

Page 1 of 2

REASON FOR REVISION (Continued)

Provide an elbow that replaces the "T" fitting and simplifies pressure switch removal for Model 340, 340A, 414 and 414A airplanes.

5. In-Line Auxiliary Fuel Pump Electrical Modification Service Kits SK421-82 and SK421-139:

Simplify the wiring changes and test procedure.

Provide brackets to simplify and improve installation of the in-line auxiliary fuel pump switch(s) that are mounted on the fuel selector valves.

REQUIRED ACTION

Please replace your copy of MEB88-3 with the attached copy of MEB88-3 Revision 1 and comply with this revision as required.

LOG OF EFFECTIVE PAGES

<u>Page No.</u>	<u>Date</u>
1	March 3, 1989
2	March 3, 1989
3	March 3, 1989
4	March 3, 1989
5	March 3, 1989
6	March 3, 1989
7	March 3, 1989
8	March 3, 1989
9	March 3, 1989
10	March 3, 1989
11	March 3, 1989
12	March 3, 1989
* * * * *	* * * *





**Service Bulletin**

R March 3, 1989  
R

MEB88-3  
Revision 1

TITLE

AUXILIARY FUEL PUMP WIRING MODIFICATION

EFFECTIVITY

Model T303 thru 335, 340 thru 404 and 411 thru 421 Series Airplanes.  
Normally aspirated and turbocharged models.

Serial numbers . . .

T30300001	thru	T30300315	(1982 thru 1984)
310C-35772	thru	310R2140	(1959 thru 1981)
310M0001	thru	310M0036	(Converted U-3B's, 1960)
320-0001	thru	320F0045	(1962 thru 1968)
335-0001	thru	335-0065	(1980)
340-0001	thru	340A1817	(1972 thru 1984)
401-0001	thru	401B0221	(1967 thru 1972)
402-0001	thru	402C1020	(1967 thru 1985)
404-0001	thru	404-0859	(1977 thru 1981)
411-0001	thru	411A0300	(1965 thru 1968)
414-0001	thru	414A1212	(1970 thru 1985)
421-0001	thru	421C1807	(1967 thru 1985)

PURPOSE

To improve the safety features of the auxiliary fuel pump systems, the automatic fuel pressure sensing switch and cockpit auxiliary fuel pump switch for each engine must be removed. The cockpit auxiliary fuel pump switches must be replaced with new three-position, lever lock type toggle switches. Along with electrical circuitry changes, these modifications are designed to provide direct pilot activation (via the new cockpit toggle switch) of the output pressure of the auxiliary fuel pumps, including the HIGH mode of auxiliary pump operation controlled by the automatic fuel pressure sensing switch prior to this modification.

R Orig. Issue: August 12, 1988

Page 1 of 12

To obtain satisfactory results, procedures specified in this publication must be accomplished in accordance with accepted methods and prevailing government regulations. The Cessna Aircraft Company cannot be responsible for the quality of work performed in accomplishing the requirements of this publication.

The Cessna Aircraft Company, Customer Services, P.O. Box 7704, Wichita, Kansas 67277 U.S.A. (316) 946-7550, Telex: 4319022, Facsimile (316) 942-9006

In the event an engine driven fuel pump failure should occur during takeoff or landing, the fuel pressure sensing switch (if properly maintained and armed) automatically switches the auxiliary fuel pump for the affected engine to the HIGH mode for continued engine operation. If the fuel pressure sensing switch is not maintained and armed, however, the automatic feature of the switch may not function, with the result that HIGH mode auxiliary fuel pump operation may not be available to the pilot at a time of need. Malfunction or non-operation of the automatic switch may not always be easily detectable by the pilot. And in the event of unwanted activation of the auxiliary fuel pump to the HIGH output mode (caused by improper maintenance, malfunction, etc.) while the engine driven pump is operating, under some limited circumstances the auxiliary fuel pump may provide too much fuel to the engine at certain power settings and an over-rich mixture and engine power reduction may result.

The reliability and endurance of the engine driven fuel pump has now been demonstrated and relevant service experience now indicates the lack of a need at this time for control of the auxiliary fuel pump system to be automatic. Direct pilot activation of the auxiliary fuel pump in all modes is now considered by Cessna to be the most desirable and simplest mode of activation. The change to a pilot activation system will also allow the pilot to select the HIGH mode of auxiliary fuel pump operation in the event the engine driven fuel pump should fail. Thus, based on the relevant service experience of the engine driven fuel pump, Cessna now believes that incorporation of the modification to the auxiliary fuel pump systems as described herein and the corresponding changes to the described operational publications are mandatory.

#### COMPLIANCE

##### R A. INITIAL COMPLIANCE

R Mandatory: Shall be accomplished within the next 100 hours of operation, or no later than the next annual inspection, or during an equivalent inspection for airplanes utilizing the Cessna Progressive Care Inspection Program, whichever occurs first.

##### R B. RECOMPLIANCE REQUIREMENTS

R Mandatory: Shall be accomplished within the next 100 hours of operation, or no later than the next annual inspection, or during an equivalent inspection for airplanes utilizing the Cessna Progressive Care Inspection Program, whichever occurs first.

R Airplanes which have been modified previously in accordance with the original issue of MEB88-3 must meet the following recompliance requirements. Reference PARTS REQUIRED FOR RECOMPLIANCE chart on pages 9 and 10.

- R 1. Airplanes which have previously incorporated SK303-40, 40A or 40B;  
R Auxiliary Fuel Pump Wiring Modification.
- R a. Airplanes which have previously incorporated SK303-40 or -40A;  
R replace the D1318-13 Auxiliary Fuel Pump Switching Operating  
R Instructions and Modification Notice stickers issued  
R previously with the new FAA Approved Supplement and Procedure  
R Modification Notice stickers, as described in SK303-40C.
- R (1) Install D1625-1-13 Airplane Flight Manual Supplement.
- R (2) Install D1627-13 Procedure Modification Notice stickers over  
R the previously installed stickers.
- R b. Replace the 2505059-1 or -5 placard with the new 2505059-6  
R placard as described in Service Kit SK303-40B or -40C.
- R c. Airplanes which have previously incorporated SK303-40B.
- R (1) Remove the D1625-13 Supplement and install the D1625-1-13  
R Airplane Flight Manual Supplement.
- R 2. Airplanes which have previously incorporated SK310-104/104A or  
R SK421-138/138A; Auxiliary Fuel Pump Wiring Modification.
- R a. Replace the D1318-13 Auxiliary Fuel Pump Switching  
R System Operating Instructions issued previously with the new  
R Supplements and Procedure Modification Notice stickers, per  
R SK310-104B or SK421-138B.
- R (1) Install D1625-1-13 Airplane Flight Manual Supplement for  
R airplanes which require a Pilot's Operating Handbook and/or  
R FAA Approved Airplane Flight Manual (all 400 Series, all  
R T303's, other 300 series airplanes beginning with 1979 models).
- R (2) Install D1626-1-13 Supplemental Airplane Flight Manual for  
R airplanes which do not require a FAA Approved Airplane Flight  
R Manual. These airplanes may have an Owners Manual or Pilot's  
R Operating Handbook (all 300 series airplanes prior to 1979  
R models).
- R (3) Install D1627-13 Procedures Modification Notice stickers  
R over the previously installed stickers.

R B. Recombpliance Requirements (2. continued)

R b. All airplanes must have the 2505059-1 or -5 placard replaced with  
R the new 2505059-6 placard as described in Service Kits SK310-104B  
R and SK421-138B.

R c. All 400 series airplanes may need to reinstall or replace the  
R 2505059-4 placard, depending on which fuel selector valve placard  
R is used, as described in Service Kit SK421-138B.

R d. 340, 340A, 414 and 414A airplanes must inspect for, and if  
R not installed, install a MS20822-4-4 elbow on the engine fuel  
R pressure regulator as described in Service Kits SK310-104B2 or  
R SK421-138B2.

R e. 400 series airplanes which have an ash tray directly above the  
R auxiliary fuel pump switches should have the ash tray removed.  
R In its place, a 5119671-1 cover is installed to facilitate  
R installation of the 2505059-6 placard as described in  
R Service Kit SK421-138B. These changes are designed to assist in  
R improving access to and for operation of the auxiliary fuel pump  
R switches.

R 3. Airplanes which have previously incorporated SK421-82/82A; In-Line  
R Auxiliary Fuel Pump Electrical Modification.

R a. All airplanes must have the NAS43DD0-21 spacers replaced with the  
R new 5126213-1 and 5126213-2 brackets and attaching hardware  
R as described in Service Kit SK421-82B.

R 4. Airplanes which have previously incorporated SK421-139; In-Line  
R Auxiliary Fuel Pump Electrical Modification

R a. 421A0092 thru 421A0158 must have the NAS43DD0-51 spacers replaced  
R with the new 5126213-3 and 5126213-4 brackets and attaching  
R hardware as described in Service Kit SK421-139A.

WARNING TO OWNERS AND OPERATORS: Continued operation of your airplane beyond the specified compliance period without compliance with the modifications set forth in this Service Bulletin may diminish your level of flying safety compared to those who have made the modification. Failure to comply with the modification could endanger the safety of you and your passengers if a fuel pressure switch malfunction occurs or has occurred which prevents the switch from going to the HIGH fuel activation position, when needed, or causes an unwanted switch activation to the HIGH fuel position which might result in too much fuel going to the engine and a possible reduction of engine power.

APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

MAN-HOURS

R A. Initial Kit Installation

Estimated man-hours per airplane for installing each kit is as follows:

R	SK303-40C.....	7.0 man-hours
R	SK310-104B1 or 2.....	8.0 man-hours
R	SK340-18B.....	10.0 man-hours
R	SK414-11A.....	10.0 man-hours
R	SK421-82B.....	10.0 man-hours
R	SK421-138B1 or 2.....	8.0 man-hours
R	SK421-139A.....	10.0 man-hours

R B. Recombpliance

R Supplement and Stickers replacement . . . negligible.

R Other requirements, refer to the CREDIT Section of this Service Bulletin.

MATERIAL

Modification parts are available from the Cessna Supply Division thru an appropriate Multi Engine Service Station for the suggested list prices shown.

R A. INITIAL INSTALLATION (Reference SERVICE KIT APPLICABILITY chart on page  
R 7 for Service Kit usage).

<u>Part Number</u>	<u>Description</u>	<u>Qty./Airplane</u>	<u>Price</u>
R ----- "MAIN" AUXILIARY FUEL PUMP KITS -----			
R SK303-40C	Aux. Fuel Pump Wiring Mod. Kit - T303	1 ea.	\$ 193.00 (A) ea.
R SK310-104B1	Aux. Fuel Pump Wiring Mod. Kit - 310 thru 335	1 ea.	\$ 224.00 (A) ea.
R SK310-104B2	Aux. Fuel Pump Wiring Mod. Kit - 340 & 340A only	1 ea.	\$ 210.00 (A) ea.
R SK421-138B1	Aux. Fuel Pump Wiring Mod. Kit - 401 thru 411 & 421	1 ea.	\$ 203.00 (A) ea.
R SK421-138B2	Aux. Fuel Pump Wiring Mod. Kit - 414 & 414A only	1 ea.	\$ 227.00 (A) ea.
R ----- IN-LINE AUXILIARY FUEL PUMP KITS -----			
R SK340-18B	In-Line Fuel Pump Wiring Mod. Kit - 340A Only	1 ea.	\$ 39.10 (A) ea.
R SK414-11A	In-Line Fuel Pump Wiring Mod. Kit - 414 Only	1 ea.	\$ 45.80 (A) ea.
R SK421-82B	In-Line Fuel Pump Wiring Mod. Kit - 421B Only	1 ea.	\$ 106.00 (A) ea.
R SK421-139A	In-Line Fuel Pump Wiring Mod. Kit - 421 & 421A Only	1 ea.	\$ 210.00 (A) ea.
R ----- MISCELLANEOUS -----			
R 2670067-1	Post Light - 310 thru 340 with optional EL panel	1 ea.	\$ 83.10 (S) ea.

R

## SERVICE KIT APPLICABILITY

(Initial Compliance)

This chart is for initial Service Kit(s) installation to comply with MEB88-3 Rev. 1. All airplanes will require a basic Auxiliary Fuel Pump Wiring Modification Kit. In addition, some 340A and 400 Series airplanes equipped with the optional In-Line Auxiliary Fuel Pumps may also require an In-Line Auxiliary Fuel Pump Electrical Modification Kit, depending on the airplane serial number.

<u>SERIALS AFFECTED</u>	<u>BASIC KIT</u>	<u>ADDITIONAL KIT REQUIRED</u>
T30300001 thru T30300315	SK303-40C	No additional kits required.
31035772 thru 310R2140	SK310-104B1	No additional kits required.
320-0001 thru 320F0045		
335-0001 thru 335-0065	SK310-104B2	No additional kits required.
340-0001 thru 340-0555		
340A0001 thru 340A0469	SK310-104B2	SK340-18B <u>may be required</u> if: Airplane has the optional In-Line Auxiliary Boost Pumps installed and SK340-18, -18A or -18B has not been previously installed per ME78-29.
340A0470 thru 340A1817	SK310-104B2	No additional kits required
401-0001 thru 401B0221	SK421-138B1	No additional kits required
402-0001 thru 402C1022		
404-0001 thru 404-0859		
411-0001 thru 411A0300		
414-0001 thru 414-0965	SK421-138B2	SK414-11A <u>may be required</u> if: Airplane has the optional In-Line Auxiliary Boost Pumps installed and SK414-11 or -11A has not been previously installed per ME78-29.
414A0001 thru 414A1212	SK421-138B2	No additional kits required.
421-0001 thru 421A0158	SK421-138B1	SK421-139A <u>will be required</u> if the airplane has optional In-Line Auxiliary Boost Pumps installed.
421B0001 thru 421B0970	SK421-138B1	SK421-82B <u>may be required</u> if: Airplane is equipped with the optional In-Line Auxiliary Tank Boost Pumps and SK421-82, -82A or -82B has not been previously installed per ME78-29.
421C0001 thru 421C1807	SK421-138B1	No additional kits required.

R MEB88-3 Rev. 1  
R March 3, 1989

Page 7

R B. RECOMPLIANCE PARTS (Reference PARTS REQUIRED FOR RECOMPLIANCE chart on  
R pages 9 and 10).  
R The following parts may be required for airplanes which have previously  
R been modified in accordance with the original issue of MEB88-3 and must  
R recomply as detailed in the COMPLIANCE Section.

R	<u>Part Number</u>	<u>Description</u>	<u>Qty./Airplane</u>	<u>Price</u>
R	D1625-1-13	Supplement, Airplanes requiring FAA Appvd. Flight Manual	1 ea.	N/C
R	D1626-1-13	Supplement, Non-apvd. Owner Manual or POH	1 ea.	N/C
R	D1627-13	Procedure Mod. Notice Stickers - Set of 3	1 ea.	N/C
R	MS35207-262	Screw	2 ea.	\$ .41 (PS)ea.(MQ50)
R	MS21044N3	Nut	2 ea.	\$ 9.00 (PS)/C
R	AN960-10L	Washer	2 ea.	\$ 1.00 (PS)/C
R	MS35206-222	Screw	4 ea.	\$ .07 (PS)ea.
R	MS35206-219	Screw	4 ea.	\$ .06 (PS)ea.
R	MS21044N04	Nut	4 ea.	\$ .09 (PS)ea.
R	2505059-4	Placard	1 ea.	\$ 2.47 (S) ea.
R	2505059-6	Placard	1 ea.	\$ 6.90 (S) ea.
R	5119671-1	Cover	1 ea.	\$ 21.60 (S) ea.
R	5126213-1	Bracket	1 ea.	\$ 14.90 (S) ea.
R	5126213-2	Bracket	1 ea.	\$ 14.90 (S) ea.
R	5126213-3	Bracket	1 ea.	\$ 87.20 (S) ea.
R	5126213-4	Bracket	1 ea.	\$ 87.20 (S) ea.
R	MS20822-4-4	Elbow	2 ea.	\$ 17.40 (PS)ea.
R	LOCTITE569	Sealant, 50 ml. bottle (Replaces LOCTITE 69)	As Req'd.	\$ 37.55 (PS)ea.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE



NEW PART REQUIRED (Below)	AFFECTED KIT PART NO. PREVIOUSLY INSTALLED				
	SK303 -40/40A/40B	SK310 -104/104A	SK421 -138/138A	SK421 -82/82A	SK421 -139
D1625-1-13 Supplement (FAA Apvd. Flt. Manuals Only)	X	X (Check Airplane S/N)	X		
D1626-1-13 Supplement (Non-FAA Apvd. Owners Manuals & POH's)		X (Check Airplane S/N)			
D1627-13 Mod. Notification Sticker.	X	X	X		
2505059-6 Placard	X	X	X		
2505059-4 Placard			X (If Appli- cable for Airplane S/N)		
5119671-1 Cover			X (400 Series as applicable)		
MS20822-4-4 Elbow (2 ea.) Note: Check if installed first		X (340/340A only)	X (414/414A only)		
LOCTITE569 Sealant		X (340/340A only)	X (414/414A only)		

## PARTS REQUIRED FOR RECOMPLIANCE (2 of 2 Sheets)

NEW PART REQUIRED (Below)	AFFECTED KIT PART NO. PREVIOUSLY INSTALLED				
	SK303 -40/40A/40B	SK310 -104/104A	SK421 -138/138A	SK421 -82/82A	SK421 -139
5126213-1 Brkt. 5126213-2 Brkt.				X X	
5126213-3 Brkt. 5126213-4 Brkt.					X X
MS35207-262 Screw (2 ea.)				X	X
MS21044N3 Nut (2 ea.)				X	X
AN960-10L Washer (2 ea.)				X	X
MS35206-222 Screw (4 ea.)				X	
MS35206-219 Screw (4 ea.)					X (Check Affected S/N's)
MS21044N04 Nut (4 ea.)				X	X (Check Affected S/N's)

ACCOMPLISHMENT INSTRUCTIONS

R Initial Modification Installation: Service Kits SK303-40C, SK310-104B,  
R SK421-138B, SK340-18B, SK414-11A, SK421-82B and SK421-139A modification  
instructions are attached.

R Recombpliance: Refer to the COMPLIANCE Section, Paragraph B. Recombpliance  
R Requirements for specific requirements. After completing recombpliance  
R requirements, make appropriate logbook entries stating compliance and  
R method of compliance with this Service Bulletin.

CREDIT

R INITIAL MODIFICATION: Parts credit only will be provided to incorporate  
the modification on applicable airplanes provided the work is accomplished  
and a Quick Claim is submitted by a Multi Engine Service Station before  
R December 31, 1989.

R RECOMPLIANCE ONLY: Parts credit plus labor credit for the labor allowance  
R shown below will be provided to accomplish required recombpliance for  
R airplanes which have previously been modified in accordance with the  
R original issue of MEB88-3. To receive credit, a Quick Claim must be  
R submitted by a Multi Engine Service Station before December 31, 1989.

R NOTE: Quick Claims submitted for recombpliance must include the Quick  
R Claim number for the claim submitted previously for initial  
R modification kit parts credit.

R Remove 2505059-1 or -5 placard and install  
R 2505059-6 placard..... 0.5 man-hour per airplane

R Rework/replace 2505059-4 placard..... 0.5 man-hour per airplane

R Install 5126213-1,-2,-3 or -4 bracket..... 2.0 man-hours per airplane

R Install 5119671-1 cover..... 0.2 man-hour per airplane

R Inspect for installation of MS20822-4-4 elbow. 1.1 man-hours per airplane,  
R if not installed, add .7 man-hour per engine for elbow installation.

R FUEL PRESSURE SWITCHES: Parts credit will be provided for new and unused  
R fuel pressure switches in Distributor or Multi Engine Service Station  
R inventory. Affected fuel pressure switch part numbers are: 2570074-2,  
R 5198002-2, 9910287-2, 9910287-4 and 9910287-5. To receive credit, a Quick  
R Claim and switches must be submitted per standard procedures by December  
R 31, 1989.

OWNER NOTIFICATION

R On August 19, 1988 a copy of this Service Bulletin, excluding attachments,  
R was sent to affected owners of record as their Owner Advisory.

R On March 10, 1989 a copy of MEB88-3 Rev. 1, excluding Service Kit  
R attachments, will be sent to affected owners of record as their Owner  
R Advisory.

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## Revision Transmittal

January 18, 1991

TO: CESSNA DISTRIBUTORS, MULTI-ENGINE SERVICE STATIONS

SUBJECT: Service Bulletin MEB88-3 Revision 2 Auxiliary Fuel Pump Wiring Modification

### REASON FOR REVISION

To announce the availability of a photoluminescent placard for use on Model 421B and 421C airplanes that are equipped with the optional E1 panel located near the fuel valve selectors.

To extend all credit expiration dates and to provide a parts and labor credit to install the photoluminescent placard.

To provide the current Service Kit revision level, part numbers and prices.

NOTE: Compliance with Revision 2 is required for model 421B and 421C airplanes equipped with the optional EL panel located near the fuel valve selectors which have been modified by Service Kit SK421-138B or -138C.

Compliance with Revision 2 is not required for all other airplanes that are in compliance with Revision 1.

To revise other sections as required to accommodate the additional information and changes.

### REQUIRED ACTION

Please replace your copy of MEB88-3 Revision 1 with the attached copy of MEB88-3 Revision 2 and comply with this revision as required.

Page 1 of 2

LOG OF EFFECTIVE PAGES

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## Service Bulletin

R January 18, 1991  
R

MEB88-3  
Revision 2

TITLE

AUXILIARY FUEL PUMP WIRING MODIFICATION

EFFECTIVITY

Model T303 thru 335, 340 thru 404 and 411 thru 421 Series Airplanes.  
Normally aspirated and turbocharged models.

Serial numbers . . .

T30300001	thru	T30300315	(1982 thru 1984)
310C-35772	thru	310R2140	(1959 thru 1981)
310M0001	thru	310M0036	(Converted U-3B's, 1960)
320-0001	thru	320F0045	(1962 thru 1968)
335-0001	thru	335-0065	(1980)
340-0001	thru	340A1817	(1972 thru 1984)
401-0001	thru	401B0221	(1967 thru 1972)
402-0001	thru	402C1020	(1967 thru 1985)
404-0001	thru	404-0859	(1977 thru 1981)
411-0001	thru	411A0300	(1965 thru 1968)
414-0001	thru	414A1212	(1970 thru 1985)
421-0001	thru	421C1807	(1967 thru 1985)

PURPOSE

To improve the safety features of the auxiliary fuel pump systems, the automatic fuel pressure sensing switch and cockpit auxiliary fuel pump switch for each engine must be removed. The cockpit auxiliary fuel pump switches must be replaced with new three-position, lever lock type toggle switches. Along with electrical circuitry changes, these modifications are designed to provide direct pilot activation (via the new cockpit toggle switch) of the output pressure of the auxiliary fuel pumps, including the HIGH mode of auxiliary pump operation controlled by the automatic fuel pressure sensing switch prior to this modification.

R Orig. Issue: August 12, 1988  
R Revision 1: March 3, 1989

Page 1 of 12

To obtain satisfactory results, procedures specified in this publication must be accomplished in accordance with accepted methods and prevailing government regulations. The Cessna Aircraft Company cannot be responsible for the quality of work performed in accomplishing the requirements of this publication.

The Cessna Aircraft Company, Customer Services, P.O. Box 7704, Wichita, Kansas 67277 U.S.A. (316) 941-7550, Telex: 4319022, Facsimile (316) 942-9006

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In the event an engine driven fuel pump failure should occur during takeoff or landing, the fuel pressure sensing switch (if properly maintained and armed) automatically switches the auxiliary fuel pump for the affected engine to the HIGH mode for continued engine operation. If the fuel pressure sensing switch is not maintained and armed, however, the automatic feature of the switch may not function, with the result that HIGH mode auxiliary fuel pump operation may not be available to the pilot at a time of need. Malfunction or non-operation of the automatic switch may not always be easily detectable by the pilot. And in the event of unwanted activation of the auxiliary fuel pump to the HIGH output mode (caused by improper maintenance, malfunction, etc.) while the engine driven pump is operating, under some limited circumstances the auxiliary fuel pump may provide too much fuel to the engine at certain power settings and an over-rich mixture and engine power reduction may result.

The reliability and endurance of the engine driven fuel pump has now been demonstrated and relevant service experience now indicates the lack of a need at this time for control of the auxiliary fuel pump system to be automatic. Direct pilot activation of the auxiliary fuel pump in all modes is now considered by Cessna to be the most desirable and simplest mode of activation. The change to a pilot activation system will also allow the pilot to select the HIGH mode of auxiliary fuel pump operation in the event the engine driven fuel pump should fail. Thus, based on the relevant service experience of the engine driven fuel pump, Cessna now believes that incorporation of the modification to the auxiliary fuel pump systems as described herein and the corresponding changes to the described operational publications are mandatory.

#### COMPLIANCE

##### A. INITIAL COMPLIANCE

Mandatory: Shall be accomplished within the next 100 hours of operation, or no later than the next annual inspection, or during an equivalent inspection for airplanes utilizing the Cessna Progressive Care Inspection Program, whichever occurs first.

##### R B. RECOMPLIANCE REQUIREMENTS FOR REVISION 1

Mandatory: Shall be accomplished within the next 100 hours of operation, or no later than the next annual inspection, or during an equivalent inspection for airplanes utilizing the Cessna Progressive Care Inspection Program, whichever occurs first.

Airplanes which have been modified previously in accordance with the original issue of MEB88-3 must meet the following recompliance requirements. Reference PARTS REQUIRED FOR RECOMPLIANCE chart on pages 9 and 10.



1. Airplanes which have previously incorporated SK303-40, 40A or 40B; Auxiliary Fuel Pump Wiring Modification.
  - a. Airplanes which have previously incorporated SK303-40 or -40A; replace the D1318-13 Auxiliary Fuel Pump Switching Operating Instructions and Modification Notice stickers issued previously with the new FAA Approved Supplement and Procedure Modification Notice stickers, as described in SK303-40C.
    - (1) Install D1625-1-13 Airplane Flight Manual Supplement.
    - (2) Install D1627-13 Procedure Modification Notice stickers over the previously installed stickers.
  - b. Replace the 2505059-1 or -5 placard with the new 2505059-6 placard as described in Service Kit SK303-40B or -40C.
  - c. Airplanes which have previously incorporated SK303-40B.
    - (1) Remove the D1625-13 Supplement and install the D1625-1-13 Airplane Flight Manual Supplement.
2. Airplanes which have previously incorporated SK310-104/104A or SK421-138/138A; Auxiliary Fuel Pump Wiring Modification.
  - a. Replace the D1318-13 Auxiliary Fuel Pump Switching System Operating Instructions issued previously with the new Supplements and Procedure Modification Notice stickers, per SK310-104B or SK421-138B, -138C or -138D.
    - (1) Install D1625-1-13 Airplane Flight Manual Supplement for airplanes which require a Pilot's Operating Handbook and/or FAA Approved Airplane Flight Manual (all 400 Series, all T303's, other 300 series airplanes beginning with 1979 models).
    - (2) Install D1626-1-13 Supplemental Airplane Flight Manual for airplanes which do not require a FAA Approved Airplane Flight Manual. These airplanes may have an Owners Manual or Pilot's Operating Handbook (all 300 series airplanes prior to 1979 models).
    - (3) Install D1627-13 Procedures Modification Notice stickers over the previously installed stickers.

- R B. Recombpliance Requirements For Revision 1 (2. continued)
- R b. All airplanes must have the 2505059-1 or -5 placard replaced with the new 2505059-6 placard as described in Service Kits SK310-104B and SK421-138B, -138C or -138D.
- R c. All 400 series airplanes may need to reinstall or replace the 2505059-4 placard, depending on which fuel selector valve placard is used, as described in Service Kit SK421-138B, -138C or -138D.
- R d. 340, 340A, 414 and 414A airplanes must inspect for, and if not installed, install a MS20822-4-4 elbow on the engine fuel pressure regulator as described in Service Kits SK310-104B2 or SK421-138B2, -138C2 or -138D2.
- R e. 400 series airplanes which have an ash tray directly above the auxiliary fuel pump switches should have the ash tray removed. In its place, a 5119671-1 cover is installed to facilitate installation of the 2505059-6 placard as described in Service Kit SK421-138B, -138C or -138D. These changes are designed to assist in improving access to and for operation of the auxiliary fuel pump switches.
3. Airplanes which have previously incorporated SK421-82/82A; In-Line Auxiliary Fuel Pump Electrical Modification.
- a. All airplanes must have the NAS43DD0-21 spacers replaced with the new 5126213-1 and 5126213-2 brackets and attaching hardware as described in Service Kit SK421-82B.
4. Airplanes which have previously incorporated SK421-139; In-Line Auxiliary Fuel Pump Electrical Modification
- a. 421A0092 thru 421A0158 must have the NAS43DD0-51 spacers replaced with the new 5126213-3 and 5126213-4 brackets and attaching hardware as described in Service Kit SK421-139A or -139B.

R C. RECOMPLIANCE REQUIREMENTS FOR REVISION 2

R Mandatory: Shall be accomplished within the next 100 hours of  
R operation, or no later than the next annual inspection, or during an  
R equivalent inspection for airplanes utilizing the Cessna Progressive Care  
R Inspection Program, whichever occurs first.

- R 1. 421B & 421C Model airplanes which have previously been modified by  
R Service Kit SK421-138B or -138C and have the optional  
R electroluminescent panel (EL panel) installed near the fuel valve  
R selectors, are required to remove the 2505059-4 placard and install a  
R 5198528-1 photoluminescent placard per the instructions in  
R SK421-138D.

WARNING TO OWNERS AND OPERATORS: Continued operation of your airplane beyond the specified compliance period without compliance with the modifications set forth in this Service Bulletin may diminish your level of flying safety compared to those who have made the modification. Failure to comply with the modification could endanger the safety of you and your passengers if a fuel pressure switch malfunction occurs or has occurred which prevents the switch from going to the HIGH fuel activation position, when needed, or causes an unwanted switch activation to the HIGH fuel position which might result in too much fuel going to the engine and a possible reduction of engine power.

APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

MAN-HOURS

A. Initial Kit Installation

Estimated man-hours per airplane for installing each kit is as follows:

SK303-40C.....	7.0 man-hours
SK310-104B1 or 2.....	8.0 man-hours
SK340-18B.....	10.0 man-hours
SK414-11A.....	10.0 man-hours
SK421-82B.....	10.0 man-hours
SK421-138D1 or 2.....	8.0 man-hours
SK421-139B.....	10.0 man-hours

R  
R

R B. Recombliance With Revision 1

Supplement and Stickers replacement . . . negligible.

Other requirements, refer to the CREDIT Section of this Service Bulletin.

R C. Recombliance With Revision 2

R Placard installation: 0.5 man-hour.

R MEB88-3 Rev. 2  
R January 18, 1991

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MATERIAL

Modification parts are available from the Cessna Supply Division thru an appropriate Multi Engine Service Station for the suggested list prices shown.

A. INITIAL INSTALLATION (Reference SERVICE KIT APPLICABILITY chart on page 7 for Service Kit usage).

<u>Part Number</u>	<u>Description</u>	<u>Qty./Airplane</u>	<u>Price</u>
----- "MAIN" AUXILIARY FUEL PUMP KITS -----			
R SK303-40C	Aux. Fuel Pump Wiring Mod. Kit - T303	1 ea.	\$ 158.00 (A) ea.
R SK310-104B1	Aux. Fuel Pump Wiring Mod. Kit - 310 thru 335	1 ea.	\$ 259.00 (A) ea.
R SK310-104B2	Aux. Fuel Pump Wiring Mod. Kit - 340 & 340A only	1 ea.	\$ 243.00 (A) ea.
R SK421-138D1	Aux. Fuel Pump Wiring Mod. Kit - 401 thru 411 & 421	1 ea.	\$ 138.00 (A) ea.
R SK421-138D2	Aux. Fuel Pump Wiring Mod. Kit - 414 & 414A only	1 ea.	\$ 155.00 (A) ea.
----- IN-LINE AUXILIARY FUEL PUMP KITS -----			
R SK340-18B	In-Line Fuel Pump Wiring Mod. Kit - 340A Only	1 ea.	\$ 46.20 (A) ea.
R SK414-11A	In-Line Fuel Pump Wiring Mod. Kit - 414 Only	1 ea.	\$ 52.90 (A) ea.
R SK421-82B	In-Line Fuel Pump Wiring Mod. Kit - 421B Only	1 ea.	\$ 123.00 (A) ea.
R SK421-139B	In-Line Fuel Pump Wiring Mod. Kit - 421 & 421A Only	1 ea.	\$ 347.00 (A) ea.
----- MISCELLANEOUS -----			
R 2670067-1	Post Light - 310 thru 340 with optional EL panel	1 ea.	\$ 96.00 (S) ea.
R 9910060-14*	Control Arm	2 ea.	\$ 32.10 (A) ea.
R NAS561-4-12*	Roll Pin	2 ea.	\$ 0.07 (PS) ea.
R	* Required only for airplanes installing SK421-139B with Parker-Hannifin fuel selector valves installed.		
R			
R			

SERVICE KIT APPLICABILITY

(Initial Compliance)

This chart is for initial Service Kit(s) installation to comply with MEB88-3, Rev. 1 or Rev. 2. All airplanes will require a basic Auxiliary Fuel Pump Wiring Modification Kit. In addition, some 340A and 400 Series airplanes equipped with the optional In-Line Auxiliary Fuel Pumps may also require an In-Line Auxiliary Fuel Pump Electrical Modification Kit, depending on the airplane serial number.

<u>SERIALS AFFECTED</u>	<u>BASIC KIT</u>	<u>ADDITIONAL KIT REQUIRED</u>
T30300001 thru T30300315	SK303-40C	No additional kits required.
31035772 thru 310R2140	SK310-104B1	No additional kits required.
320-0001 thru 320F0045		
335-0001 thru 335-0065		
340-0001 thru 340-0555	SK310-104B2	No additional kits required.
340A0001 thru 340A0469	SK310-104B2	SK340-18B <u>may be required if:</u> Airplane has the optional In-Line Auxiliary Boost Pumps installed and SK340-18, -18A or -18B <u>has not been</u> previously installed per ME78-29.
340A0470 thru 340A1817	SK310-104B2	No additional kits required
R 401-0001 thru 401B0221	SK421-138D1	No additional kits required
R 402-0001 thru 402C1020		
404-0001 thru 404-0859		
411-0001 thru 411A0300		
R 414-0001 thru 414-0965	SK421-138D2	SK414-11A <u>may be required if:</u> Airplane has the optional In-Line Auxiliary Boost Pumps installed and SK414-11 or -11A <u>has not been</u> previously installed per ME78-29.
R 414A0001 thru 414A1212	SK421-138D2	No additional kits required.
R 421-0001 thru 421A0158	SK421-138D1	SK421-139B <u>will be required if the</u> airplane has optional In-Line Auxiliary Boost Pumps installed.
R 421B0001 thru 421B0970	SK421-138D1	SK421-82B <u>may be required if:</u> Airplane is equipped with the optional In-Line Auxiliary Tank Boost Pumps and SK421-82, -82A or -82B <u>has not been</u> previously installed per ME78-29.
R 421C0001 thru 421C1807	SK421-138D1	No additional kits required.

R MEB88-3 Rev. 2  
R January 18, 1991

R B. RECOMPLIANCE PARTS FOR REVISION 1 (Reference PARTS REQUIRED FOR RECOMPLIANCE chart on pages 9 and 10).  
 The following parts may be required for airplanes which have previously been modified in accordance with the original issue of MEB88-3 and must recomply as detailed in the COMPLIANCE Section.

	<u>Part Number</u>	<u>Description</u>	<u>Qty./Airplane</u>	<u>Price</u>
R	D1625-1-13	Supplement, Airplanes requiring FAA Appvd. Flight Manual	1 ea.	\$ 5.00 (F) ea.
R	D1626-1-13	Supplement, Non-apvd. Owner Manual or POH	1 ea.	\$ 5.00 (F) ea.
R	D1627-13	Procedure Mod. Notice Stickers - Set of 3	1 ea.	\$ 5.00 (F) ea.
R	MS35207-262	Screw	2 ea.	\$ .04 (PS)ea.(MQ50)
R	MS21044N3	Nut	2 ea.	\$ 12.70 (PS)/C
R	AN960-10L	Washer	2 ea.	\$ 1.30 (PS)/C
R	MS35206-222	Screw	4 ea.	\$ .08 (PS)ea.
	MS35206-219	Screw	4 ea.	\$ .06 (PS)ea.
R	MS21044N04	Nut	4 ea.	\$ .12 (PS)ea.(MQ100)
R	2505059-4	Placard	1 ea.	\$ 2.23 (S) ea.
R	2505059-6	Placard	1 ea.	\$ 7.98 (S) ea.
R	5119671-1	Cover	1 ea.	\$ 24.30 (S) ea.
R	5126213-1	Bracket	1 ea.	\$ 17.60 (S) ea.
R	5126213-2	Bracket	1 ea.	\$ 17.60 (S) ea.
R	5126213-3	Bracket	1 ea.	\$ 34.70 (S) ea.
R	5126213-4	Bracket	1 ea.	\$ 44.40 (S) ea.
R	MS20822-4-4	Elbow	2 ea.	\$ 18.50 (PS)ea.
R	LOCTITE569	Sealant, 50 ml. bottle (Replaces LOCTITE 69)	As Req'd.	\$ 56.60 (PS)ea.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

R

## PARTS REQUIRED FOR RECOMPLIANCE WITH REVISION 1 (1 of 2 Sheets)

NEW PART REQUIRED (Below)	AFFECTED KIT PART NO. PREVIOUSLY INSTALLED				
	SK303 -40/40A/40B	SK310 -104/104A	SK421 -138/138A	SK421 -82/82A	SK421 -139
D1625-1-13 Supplement (FAA Apvd. Flt. Manuals Only)	X	X (Check Airplane S/N)	X		
D1626-1-13 Supplement (Non-FAA Apvd. Owners Manuals & POH's)		X (Check Airplane S/N)			
D1627-13 Mod. Notification Sticker.	X	X	X		
2505059-6 Placard	X	X	X		
2505059-4 Placard			X (If Appli- cable for Airplane S/N)		
5119671-1 Cover			X (400 Series as applicable)		
MS20822-4-4 Elbow (2 ea.) Note: Check if installed first		X (340/340A only)	X (414/414A only)		
LOCTITE569 Sealant		X (340/340A only)	X (414/414A only)		

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R January 18, 1991

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## AFFECTED KIT PART NO. PREVIOUSLY INSTALLED

NEW PART REQUIRED (Below)	SK303 -40/40A/40B	SK310 -104/104A	SK421 -138/138A	SK421 -82/82A	SK421 -139
5126213-1 Brkt. 5126213-2 Brkt.				X X	
5126213-3 Brkt. 5126213-4 Brkt.					X X
MS35207-262 Screw (2 ea.)				X	X
MS21044N3 Nut (2 ea.)				X	X
AN960-10L Washer (2 ea.)				X	X
MS35206-222 Screw (4 ea.)				X	
MS35206-219 Screw (4 ea.)					X (Check Affected S/N's)
MS21044N04 Nut (4 ea.)				X	X (Check Affected S/N's)



R C. RECOMPLIANCE PARTS FOR REVISION 2

R The following part is required only for Model 421B and 421C airplanes  
R that are equipped with the optional EL panel near the fuel valve selectors  
R and have been modified by Service Kit SK421-138A, -138B, or -138C.

R	<u>Part Number</u>	<u>Description</u>	<u>Qty./Airplane</u>	<u>Price</u>
R	5198528-1	Placard (For airplanes equipped with the optional EL Panel only)	1 ea.	\$ 3.91 (PS) ea.

R ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

ACCOMPLISHMENT INSTRUCTIONS

R Initial Modification Installation: Service Kits SK303-40C, SK310-104B,  
SK421-138D, SK340-18B, SK414-11A, SK421-82B and SK421-139B modification  
instructions are attached.

R Recombliance for Revision 1: Refer to the COMPLIANCE Section, Paragraph B.  
Recompliance Requirements for specific requirements. After completing  
recompliance requirements, make appropriate logbook entries stating  
compliance and method of compliance with this Service Bulletin.

R Recombliance for Revision 2: Refer to the COMPLIANCE Section, Paragraph C.  
R Recombliance Requirements for specific requirements. After completing  
R recompliance requirements, make appropriate logbook entries stating  
R compliance and method of compliance with this Service Bulletin.

CREDIT

R INITIAL MODIFICATION: Parts credit only will be provided to incorporate  
the modification on applicable airplanes provided the work is accomplished  
and a Quick Claim is submitted by a Multi Engine Service Station before  
December 31, 1991.

R RECOMPLIANCE FOR REVISION 1 ONLY: Parts credit plus labor credit for the  
labor allowance shown below will be provided to accomplish required  
recompliance for airplanes which have previously been modified in  
accordance with the original issue of MEB88-3. To receive credit, a Quick  
Claim must be submitted by a Multi Engine Service Station before December  
R 31, 1991.

NOTE: Quick Claims submitted for recompliance must include the Quick  
Claim number for the claim submitted previously for initial  
modification kit parts credit.

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Remove 2505059-1 or -5 placard and install  
 2505059-6 placard..... 0.5 man-hour per airplane

Rework/replace 2505059-4 placard..... 0.5 man-hour per airplane

Install 5126213-1,-2,-3 or -4 bracket..... 2.0 man-hours per airplane

Install 5119671-1 cover..... 0.2 man-hour per airplane

Inspect for installation of MS20822-4-4 elbow. 1.1 man-hours per airplane,  
 if not installed, add .7 man-hour per engine for elbow installation.

FUEL PRESSURE SWITCHES: Parts credit will be provided for new and unused fuel pressure switches in Distributor or Multi Engine Service Station inventory. Affected fuel pressure switch part numbers are: 2570074-2, 5198002-2, 9910287-2, 9910287-4 and 9910287-5. To receive credit, a Quick Claim and switches must be submitted per standard procedures by:

R December 31, 1991

R RECOMPLIANCE WITH REVISION 2 ONLY: Part credit plus a labor allowance  
 R credit of 0.5 man-hour will be provided for model 421B and 421C airplanes  
 R that are equipped with the optional fuel valve selectors EL panel and have  
 R been modified by SK421-138B or -138C. To receive credit, a Quick Claim  
 R must be submitted by a Multi-Engine Service Station before:

R December 31, 1991

R NOTE: Quick Claims submitted for recompliance must include the Quick  
 R Claim number for the claim submitted previously for initial and/or  
 R Revision 1 modification parts credit.

OWNER NOTIFICATION

On August 19, 1988 a copy of this Service Bulletin, excluding attachments, was sent to affected owners of record as their Owner Advisory.

R On March 10, 1989 a copy of MEB88-3 Rev. 1, excluding Service Kit  
 R attachments, was sent to affected owners of record as their Owner Advisory.

R On February 1, 1991 a copy of MEB88-3 Rev. 2, excluding Service Kit  
 R attachments, will be sent to affected owners of record as their Owner  
 R Advisory.

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## Service Kit

AUGUST 12, 1988

SK310-104

TITLE: AUXILIARY FUEL PUMP WIRING MODIFICATION

The following procedures provide instructions to replace existing auxiliary fuel pump switches, remove existing fuel pressure switches and modify existing wiring as required.

EFFECTIVITY:

MODELS AFFECTED

310  
320  
335  
340

SERIALS AFFECTED

35772 thru 310R2140  
320-0001 thru 320F0045  
335-0001 thru 335-0065  
340-0001 thru 340A1817

NOTE

Aircraft equipped with the optional EL panel will be required to order 1 each 2670067-1 post light assembly in addition to the parts provided in this Kit.

340A aircraft with optional INLINE AUXILIARY tank boost pumps will require SK340-18A In-Line Auxiliary Fuel Pump Electrical Modification, if not already installed.

PARTS LIST:

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>NOMENCLATURE</u>
2	AN929-4J	Cap
2	MS24658-21N	Switch - Toggle, Lever Lock
4	S1021A6-8	Screw
4	S1367-1-6	Terminal
4	S1370-2	Splice
4	S1557-1	Cap - Insulated Wire
1	S1829-1	Terminal
4	S2209-2	Tie
6 Ft.	S2589-18-9	Wire
1	5198526-5	Placard
1	5198526-6	Placard

REF: MEB88-3  
1 of 21

FAA APPROVAL HAS BEEN OBTAINED ON TECHNICAL DATA IN THIS PUBLICATION THAT AFFECTS AIRPLANE TYPE DESIGN.

PARTS LIST (Continued):

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>NOMENCLATURE</u>
1	2505059-4	Placard
1	2505059-5	Placard
1	D1318-13	Auxiliary Fuel Pump Switching System Operating Instructions
1		Instructions

CHANGE IN WEIGHT AND BALANCE:

WEIGHT INCREASE            Negligible.

INSTALLATION INSTRUCTIONS:

- A. Removal of fuel pressure switch and components (Refer to Detail A - Figure 1.).
1. Disconnect battery cable from aircraft and turn fuel selector switch OFF.
  2. Remove RH & LH cowling from airplane to gain access to fuel pressure switches (2).
  3. Locate the fuel pressure switches (2) which are secured to a bracket on the upper aft portion of each engine.
  4. Remove existing sta-straps and clamps as required to unplug the wire connector housing to the switch. Disconnect the fuel line (1) from the fuel pressure switch (2).
  5. Remove the hardware, retaining the switch to the bracket, and discard the switch and hardware. Tie the disconnected connector to the engine mount using S2209-2 tie.
  6. Disconnect the other end of the fuel line (1) from the fitting on the fuel metering unit and discard hose or line. Install a AN929-4J cap on the metering unit fitting.
  7. Repeat the procedure for the opposite engine.
- B. Removal of the existing RH and LH auxiliary fuel pump switches (refer to Figure 2 - Sheet 1 thru 7).
1. Remove Pilot's seat from airplane.
  2. Remove existing auxiliary fuel pump switches in location (3) from the lower LH instrument panel.

3. Remove wires from switches and discard switches.

NOTE

Be sure to identify each wire in reference to each switch terminal for new switch replacement.

- C. Postlight installation for aircraft with optional EL panel (refer to Figure 2 - Sheet 7).
  1. Layout and drill hole (5) thru instrument panel.
  2. Install S1829-1 terminal to the wire attached to 2670067-1 post-light assembly.
  3. Install the postlight (5) in the panel and fasten the S1829-1 terminal to the terminal block located on the forward side of the instrument panel.
- D. Installation of new RH & LH auxiliary fuel pump switches (refer to Figure 2 - Sheet 1 thru 7).
  1. Install wires on the switches (3) per appropriate wiring diagrams (refer to Figure 3).
  2. Install switches - lever lock (3) in instrument panel using nuts and washers furnished with switches (3).

NOTE

The switches (3) mount with the keyway down adjacent to the index hole. The switches lockout of the side opposite the keyway which is the up (high) position.

3. Install placards (2 & 4) on instrument panel over the silkscreen ON as shown in Figure 2, refer to appropriate figure sheet to match model and serial of aircraft.
- E. Modify existing wiring per appropriate wiring diagrams (refer to Figure 3 - Sheets 1 thru 5).
  1. This modification bypasses boost relay.
  2. Low boost circuit is unchanged.
  3. High boost is accomplished by:
    - (a) Jumper across boost relay (310).
    - (b) Adding wire from high switch terminal to primer switch.

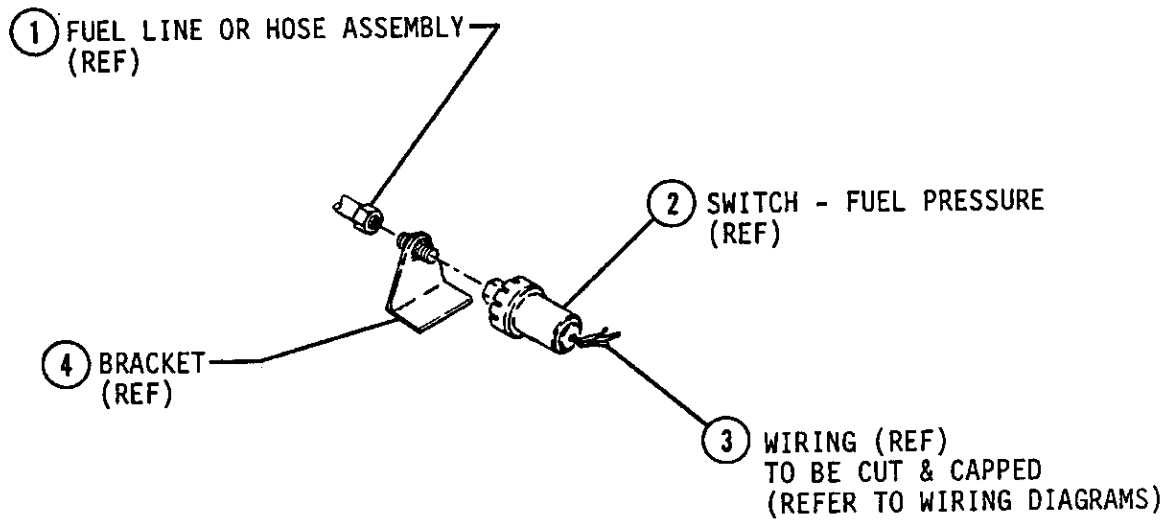
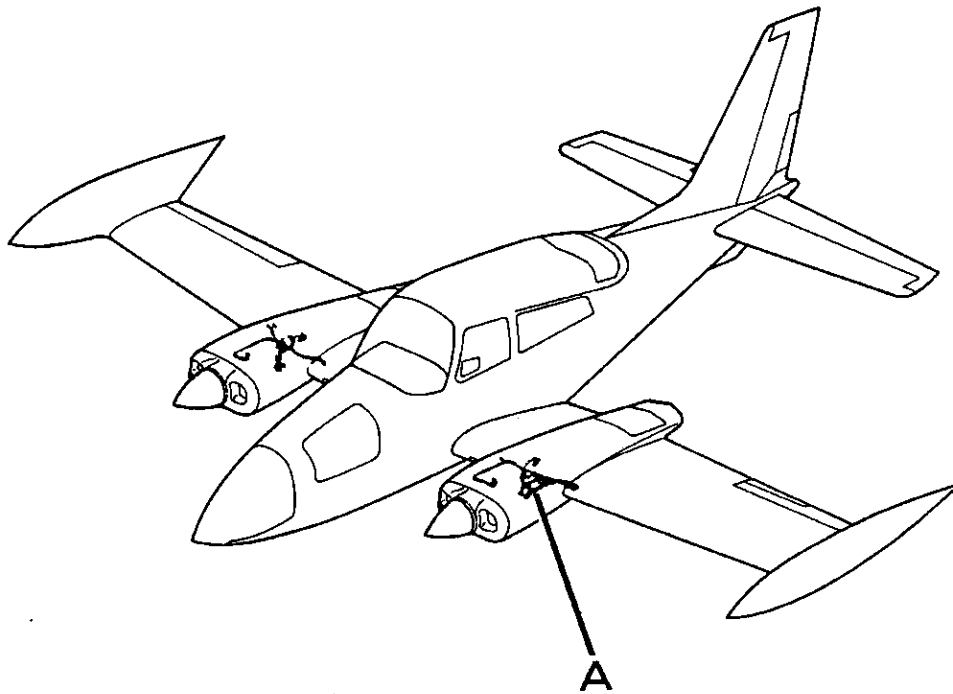
4. Pressure switch wires are spliced on early 310s, capped and stowed on all others.
  5. On 340A0001 & On the second section of the boost pump switch controlled the auxiliary inline pumps. Wires to this section are spliced together and the switches installed on the auxiliary tank fuel selector valves by Service Kit SK340-18A (340A0001 thru 340A0469) or standard (3400470 & On) control pumps.
  6. Refer to the appropriate aircraft Maintenance Manual if questions arise since some items such as wire numbers may be different even though the circuit function is the same.
- F. Run a functional switch and pump test as follows:

1. Reconnect battery cables and turn master switch ON, fuel selector valves ON and auxiliary fuel pump switches in the OFF position.

## NOTE

The oil pressure switch must be bypassed to perform this test on all models 310I thru 310Q and Models 310C, D, F, G & H that have SK310-53 Oil Pressure Switch Installation Kit installed.

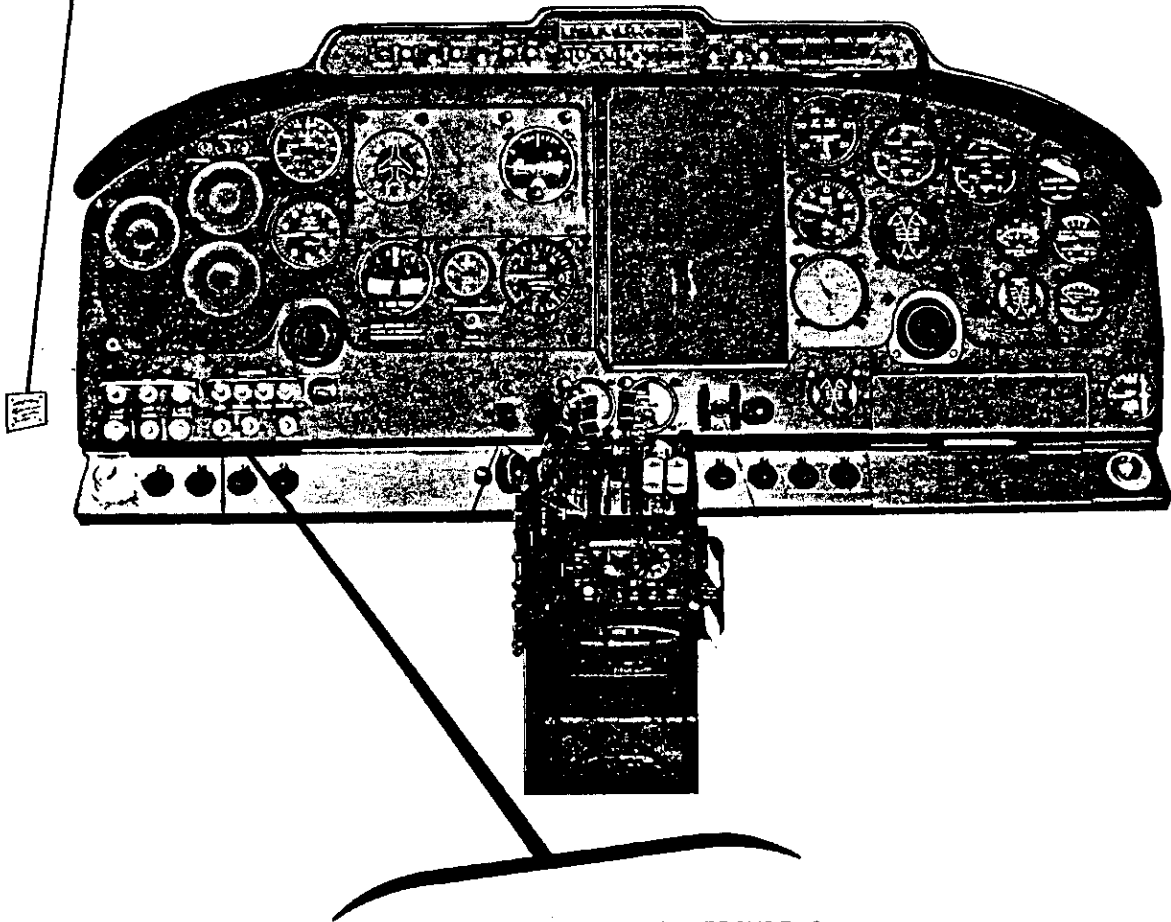
2. Move RH auxiliary pump switch down to LOW position and check RH pump for operation at low speed. Pull switch toggle back and up over OFF position to HIGH position and check pump for operation at high speed, then move switch to OFF position.
  3. Repeat the same procedures for the LH auxiliary fuel pump switch as described in the previous paragraph.
  4. Verify that the left and right auxiliary inline pumps (340A) operate when the auxiliary tanks are selected.
  5. Turn master switch OFF and fuel selector valves OFF.
- G. Reinstall all items removed for this installation.
- H. Install placard (1) as close to switches as possible and secure with screws (1) as shown (refer to Figure 2).
- I. Locate existing placard (6) near fuel selector valves on floorboard. Install placard (7) over existing lettering as shown (refer to figure 2 - sheet 8).
- J. Insert Auxiliary Fuel Pump Switching Operating Instructions D1318-13 in applicable operational manual. Note that an owner signature is required on procedure modification notices contained within operational instructions.
- K. Make an entry in the airplane logbook stating this service kit has been installed.



DETAIL A  
(LH SHOWN RH OPPOSITE)

Figure 1. Auxiliary Fuel Pump System Modification

- ① 2505059-1 PLACARD
- 1 REQD
- 0.109 HOLE
- 4 REQD TO MATCH PLACARD  
(THRU VINYL COVER AND BACKING ONLY)
- S1021A6-8 SCREW
- 4 REQD

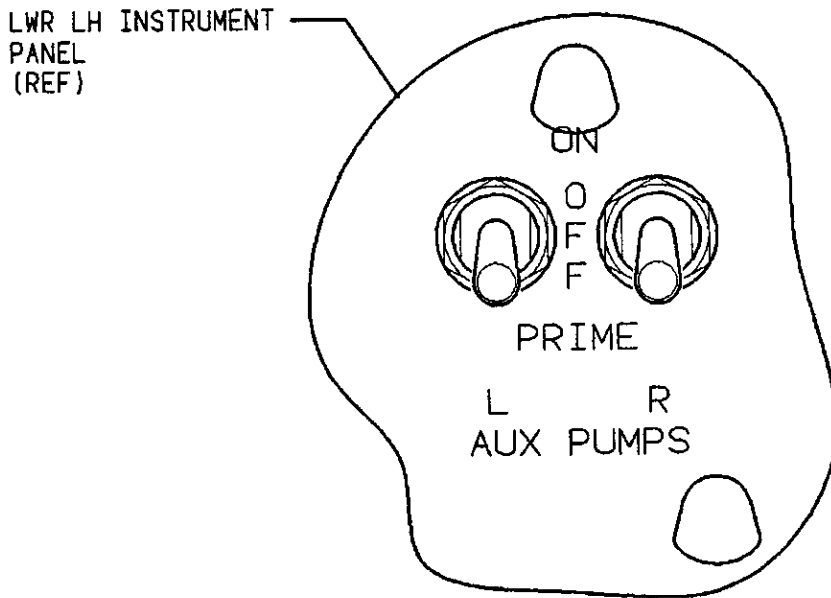


THE NEXT FIVE PAGES OF FIGURE 2.  
WILL CALL OUT THE SWITCHES AND  
PLACARDS IN THE APPROXIMATE POSITION  
SHOWN FOR THE MODELS AND SERIALS  
LISTED ON EACH PAGE.

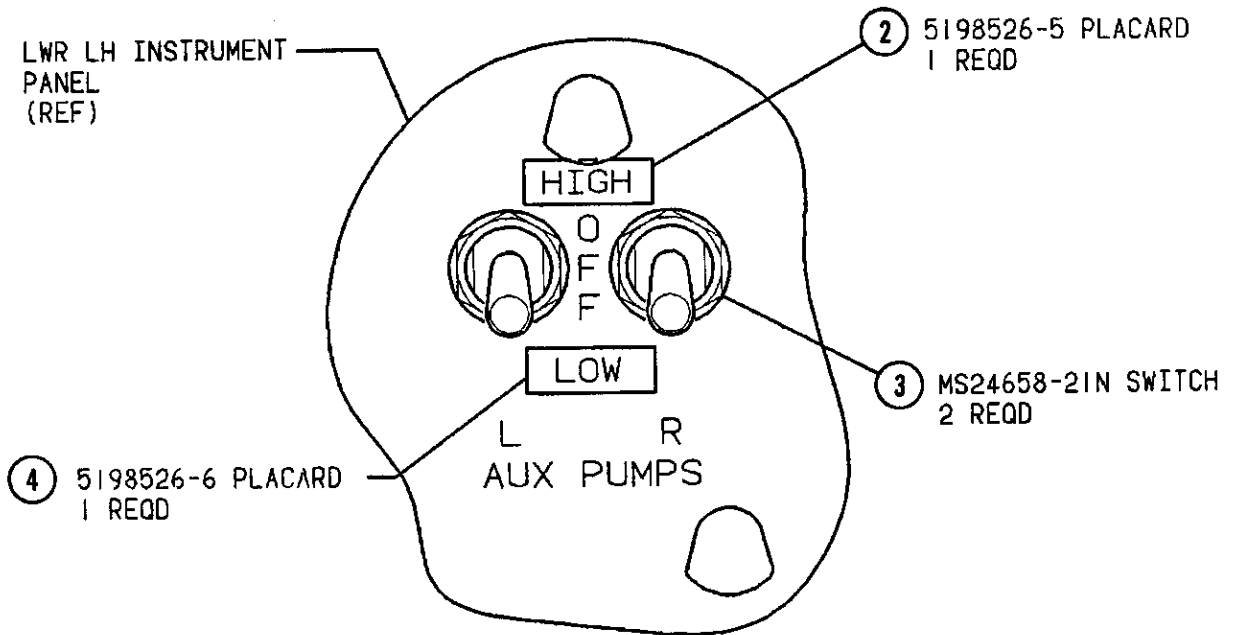
Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 1



ORIGINAL



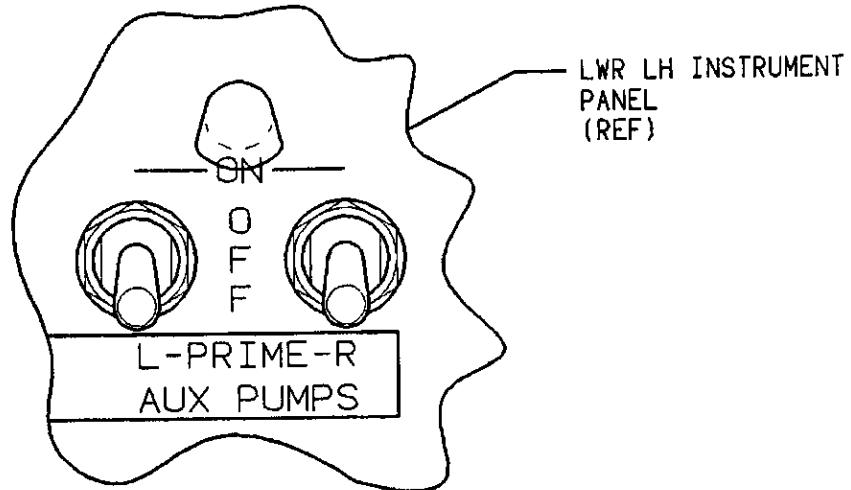
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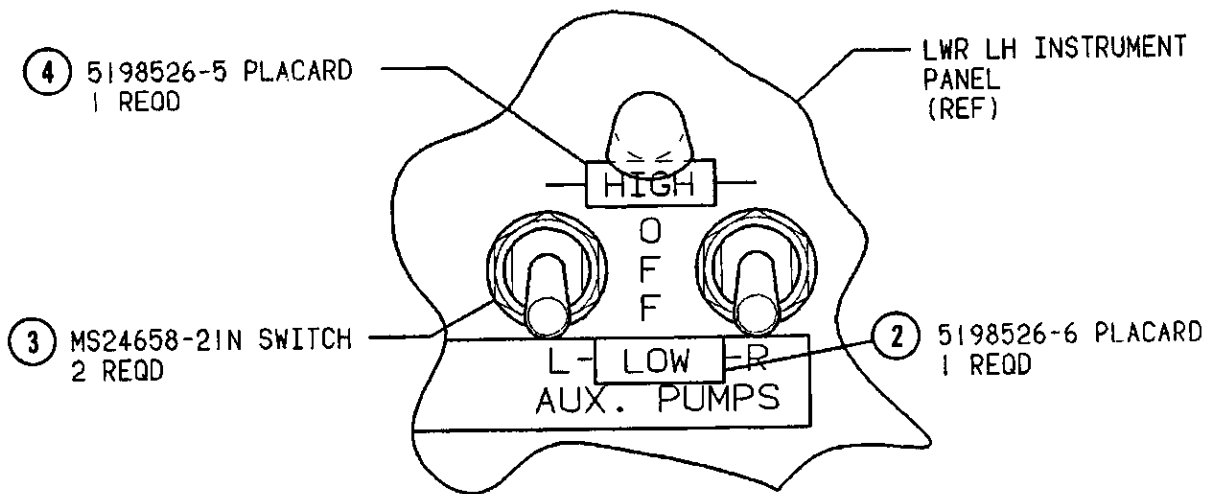
MODELS AFFECTED: 310C35772 THRU 310D39299

Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 2

ORIGINAL



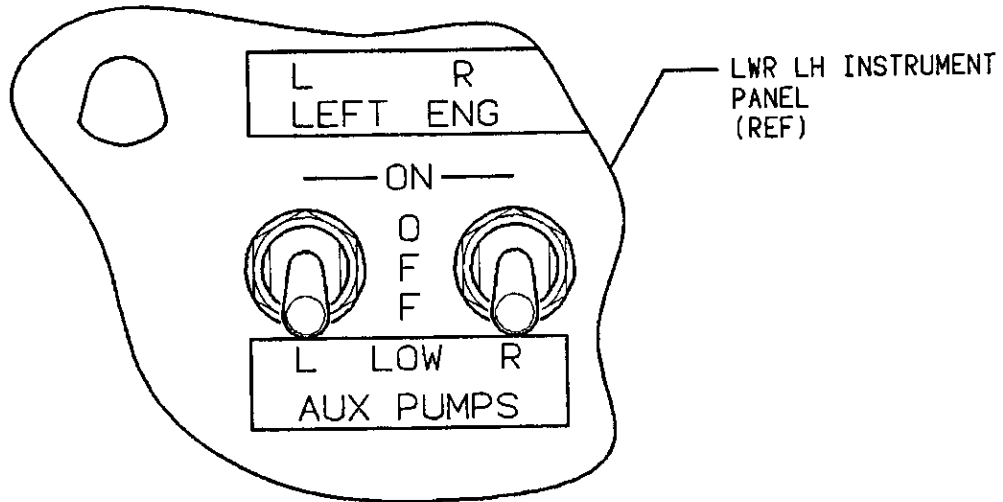
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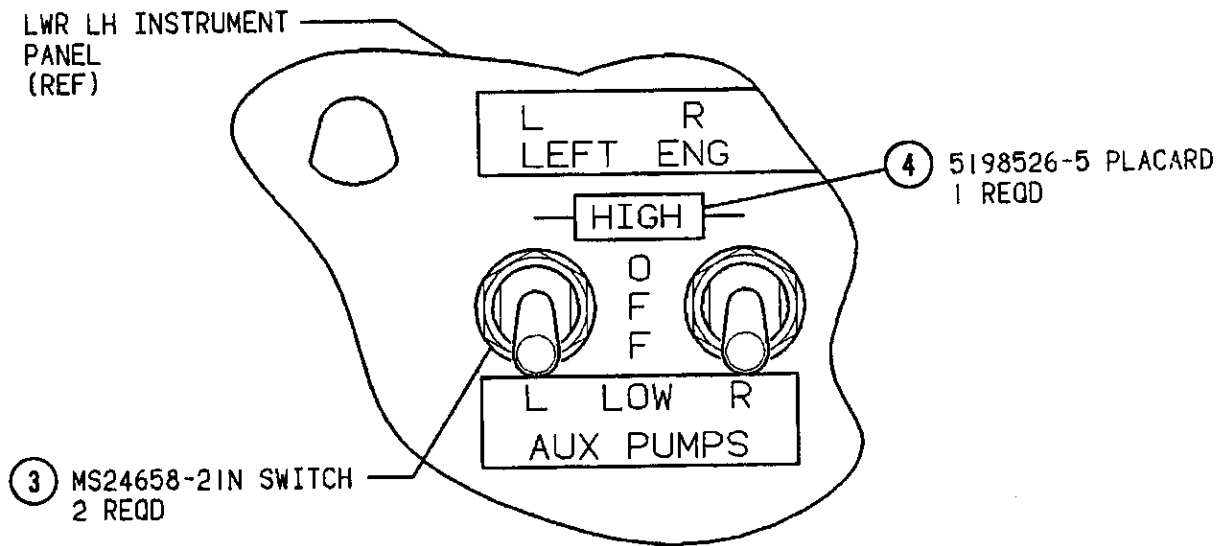
MODELS AFFECTED: 310-0001 THRU 310H0148  
320-0001 THRU 320A0047

Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 3.

ORIGINAL

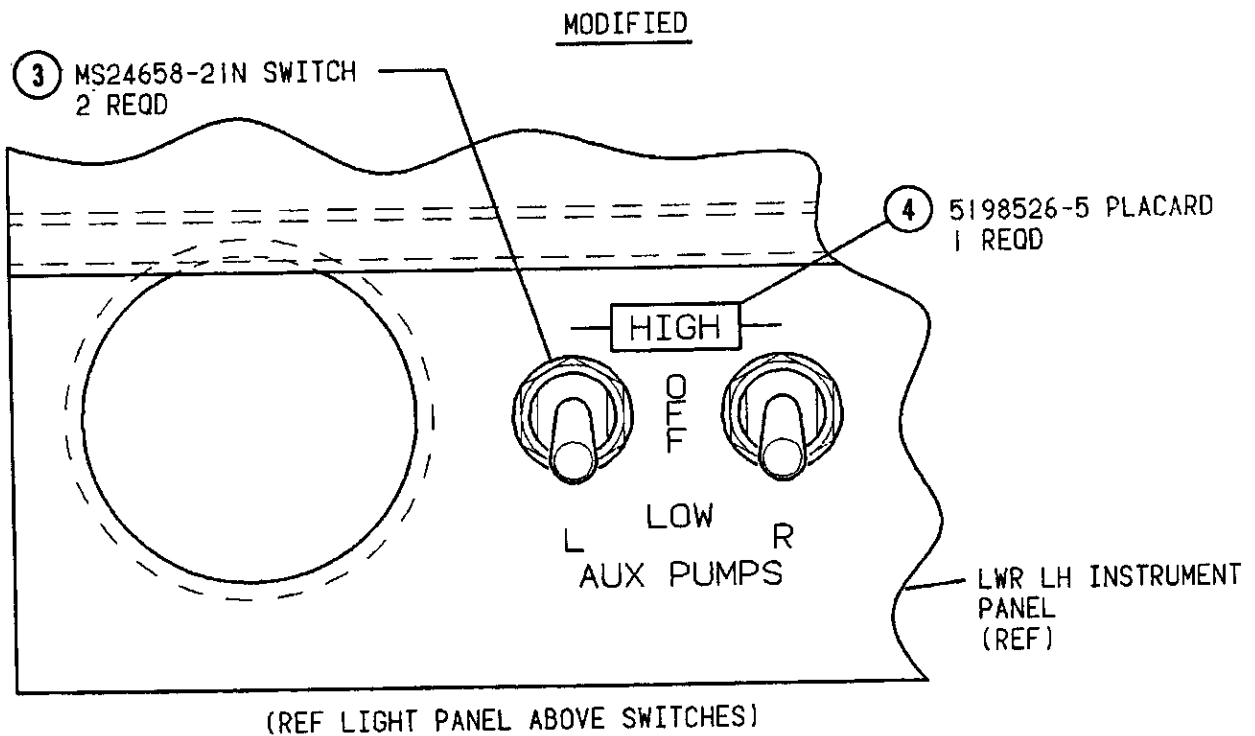
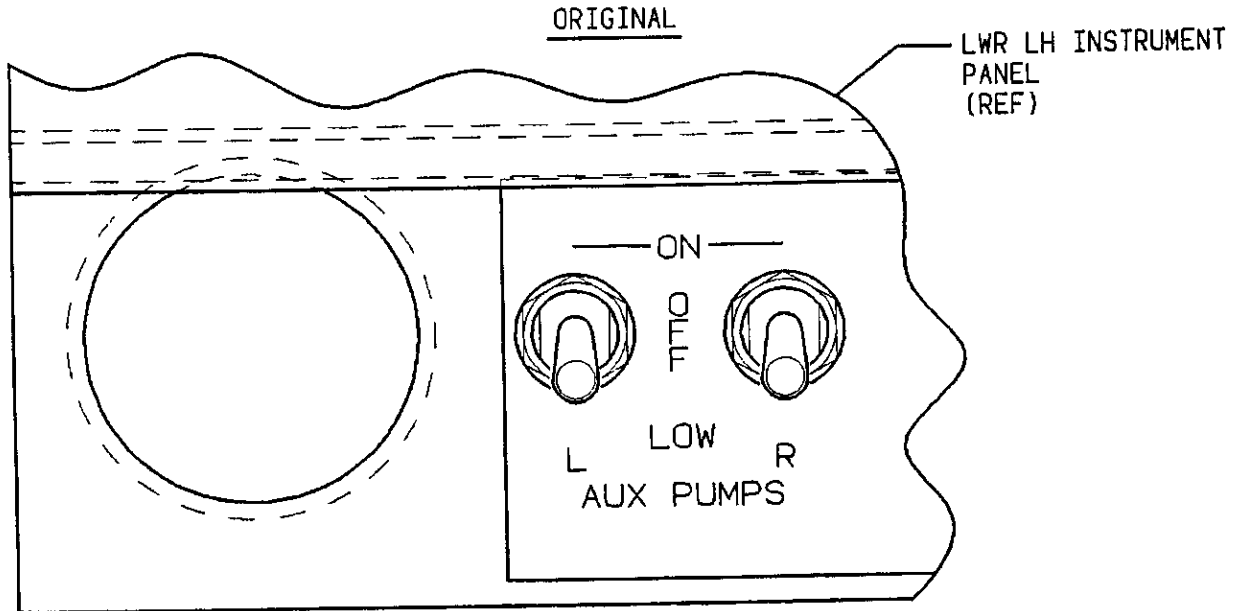


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MODELS AFFECTED: 310I0001 THRU 310L0207  
320B0001 THRU 320D0130

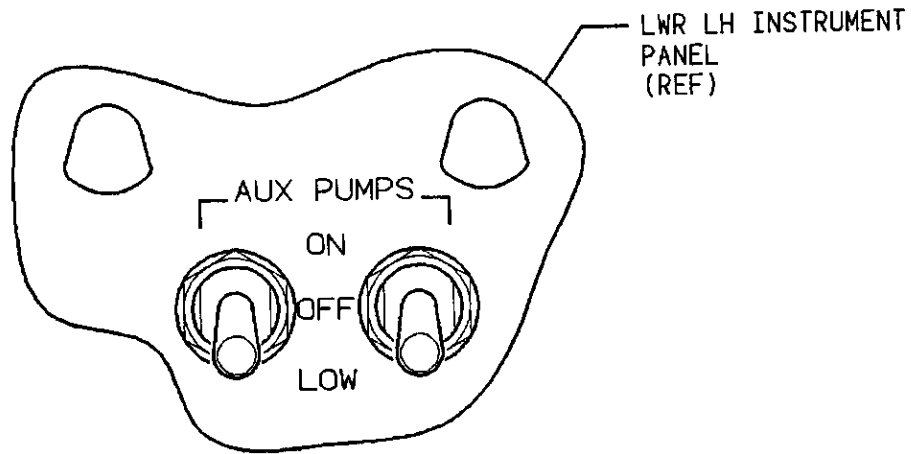
Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 4



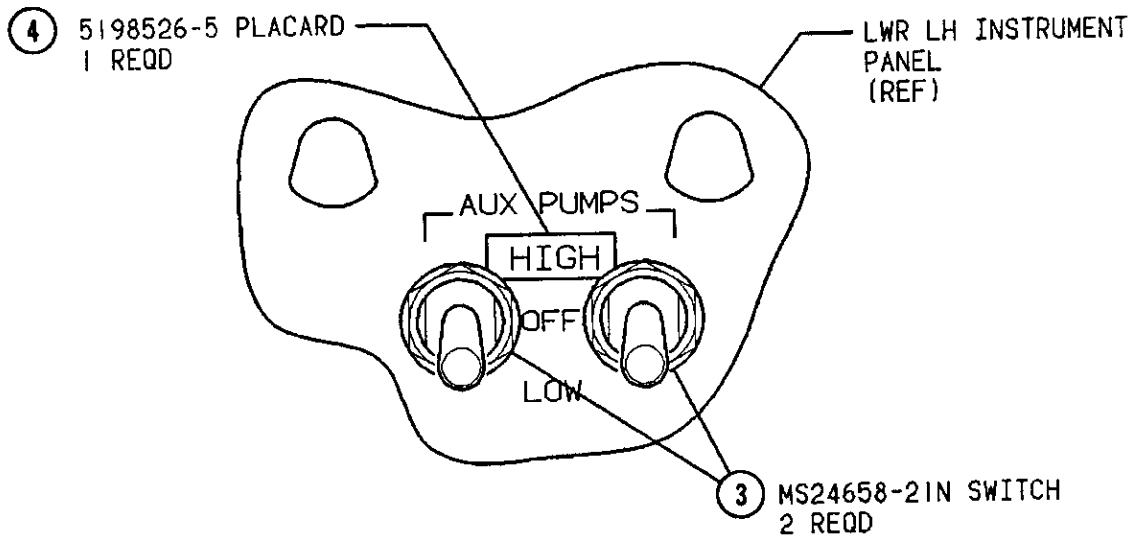
MODELS AFFECTED: 310Q0601 THRU 310R2140 (STD)  
320F0001 THRU 320F0045 (STD)

Figure 2. Auxiliary Fuel Pump Switch & Placard Installation - Sheet 5.

ORIGINAL



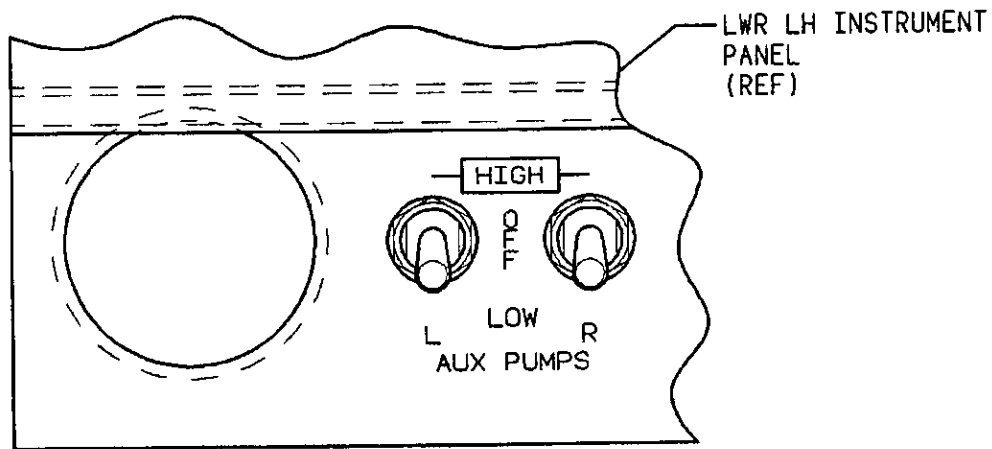
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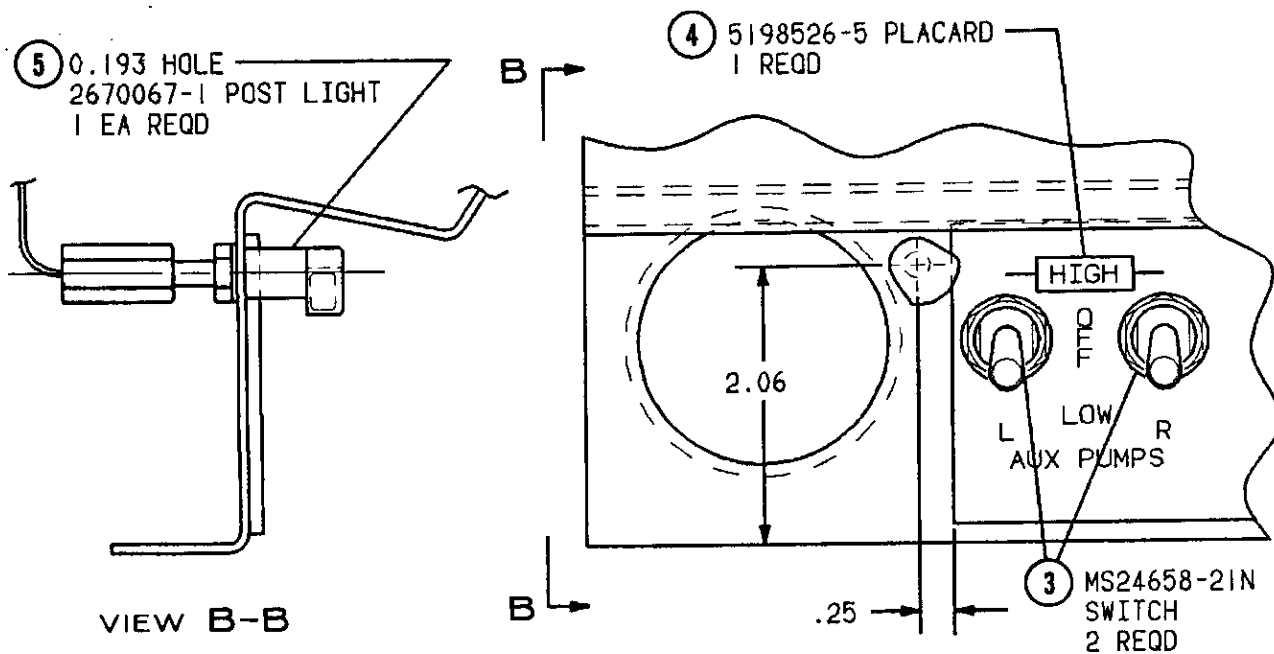
MODELS AFFECTED: 335-0001 THRU 335-0065  
340-0001 THRU 340A1817

Figure 2. Auxiliary Fuel Pump Switches & Placard Installation - Sheet 6.

ORIGINAL



MODIFIED



MODELS AFFECTED: 310N0001 THRU 310Q0600 (STD)  
 310Q0601 THRU 310R2140 (OPT)  
 320F0001 THRU 320F0045 (OPT)

Figure 2. Auxiliary Fuel Pump Switches & Placard Installation - Sheet 7.

ORIGINAL

SET FUEL SELECTOR VALVES TO LEFT MAIN FOR LEFT ENGINE AND RIGHT MAIN FOR RIGHT ENGINE FOR TAKEOFF, DESCENT, LANDING, AND ALL NORMAL OPERATIONS.

TAKEOFF AND LAND WITH AUXILIARY FUEL PUMPS ON.

EMERGENCY CROSSFEED SHUTOFF VALVE MUST BE OPEN FOR ALL NORMAL OPERATIONS.

100 GRADE AVIATION FUEL MINIMUM.

⑥ EXISTING PLACARD LOCATED NEAR FUEL SELECTOR VALVES.

MODIFIED

SET FUEL SELECTOR VALVES TO LEFT MAIN FOR LEFT ENGINE AND RIGHT MAIN FOR RIGHT ENGINE FOR TAKEOFF, DESCENT, LANDING, AND ALL NORMAL OPERATIONS.

TAKEOFF AND LAND WITH AUXILIARY FUEL PUMPS LOW.

EMERGENCY CROSSFEED SHUTOFF VALVE MUST BE OPEN FOR ALL NORMAL OPERATIONS.

100 GRADE AVIATION FUEL MINIMUM.

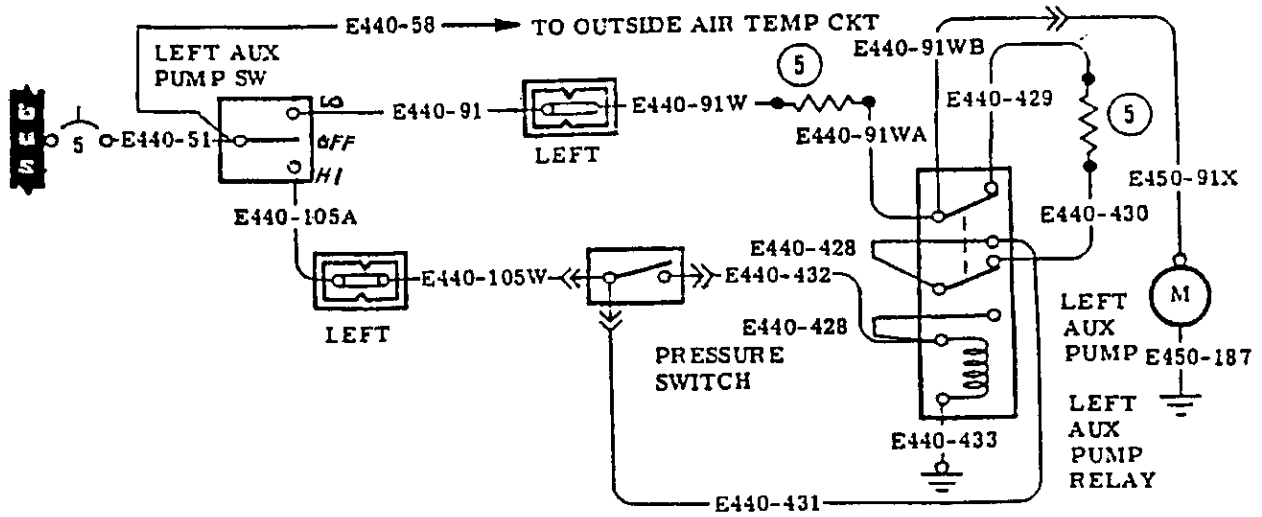
⑥ EXISTING PLACARD LOCATED NEAR FUEL SELECTOR VALVES.

⑦ 2505059-4 PLACARD 1 REQD (INSTALL OVER EXISTING LETTERING)

Figure 2. Auxiliary Fuel Pump Switches & Placard Installation - Sheet 8.

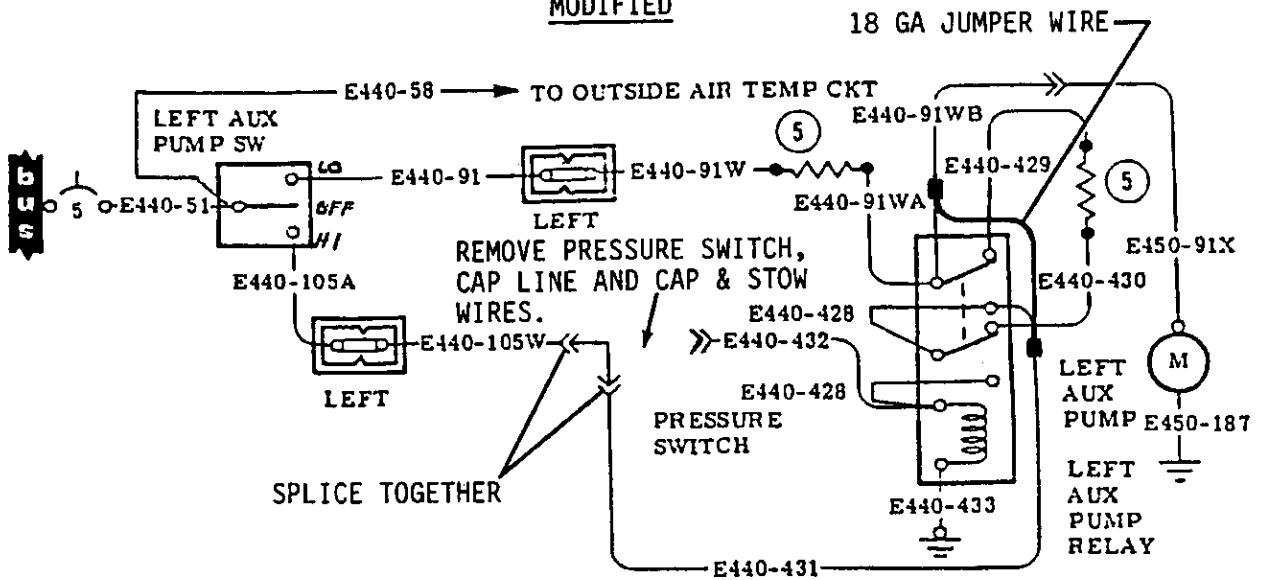
MODELS AFFECTED: 310C, 310D, 310F

ORIGINAL



⑤ FIXED RESISTORS SN35772 THRU 35842  
ADJ. RESISTORS SN35843 & ON

MODIFIED



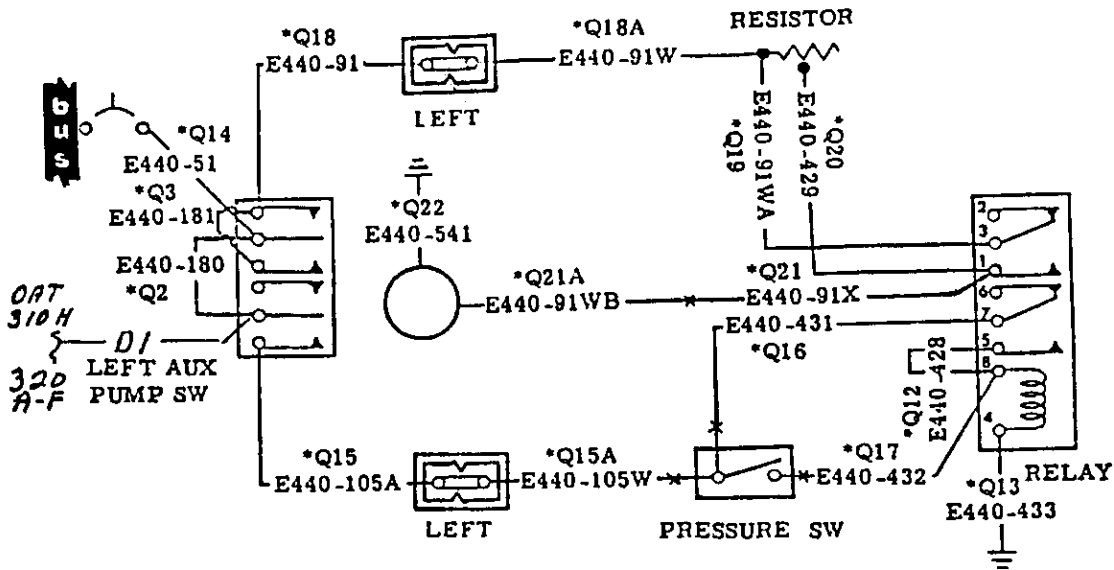
LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 1 of 8.

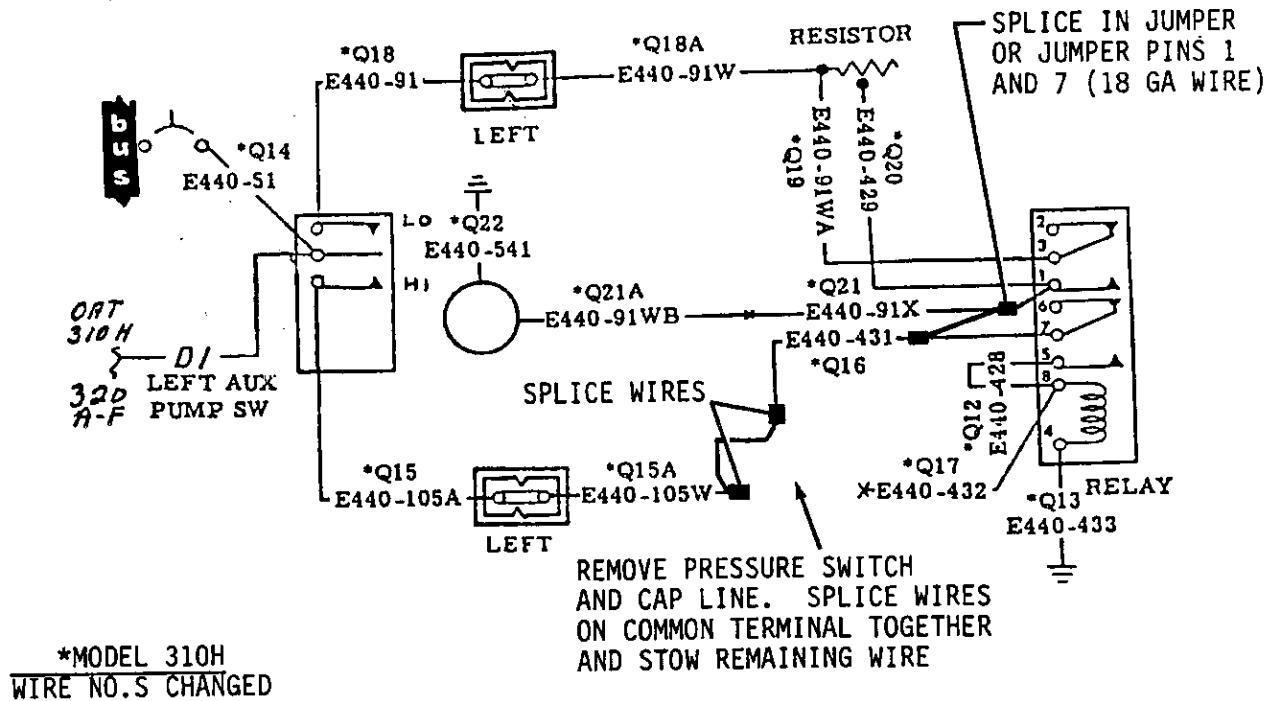


MODELS AFFECTED: 310G, 310H, 320, 320A

ORIGINAL



MODIFIED



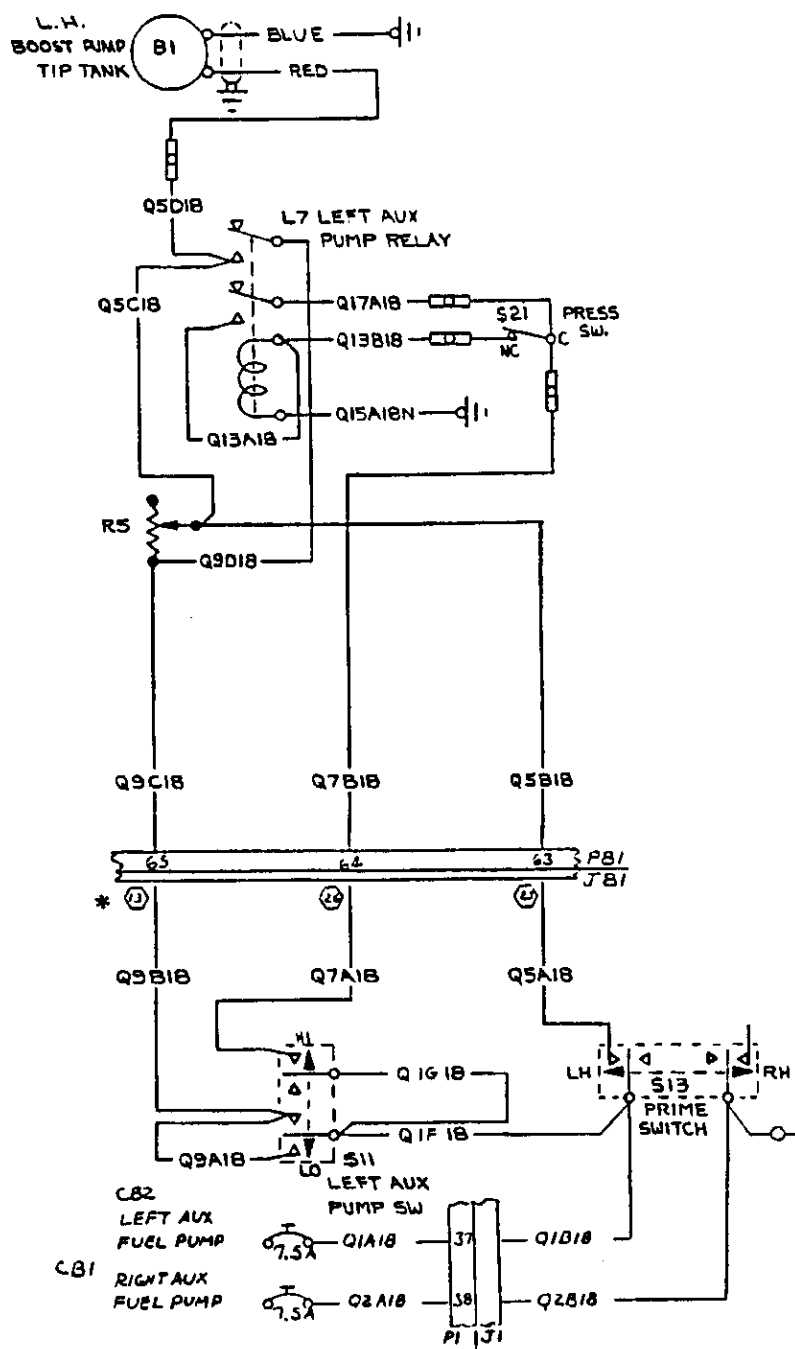
\*MODEL 310H  
WIRE NO.S CHANGED

310G and H W/O SK310-52  
320 and 320A  
LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 2 of 8.

MODELS AFFECTED: 310I AND ON, 320B AND ON.

ORIGINAL

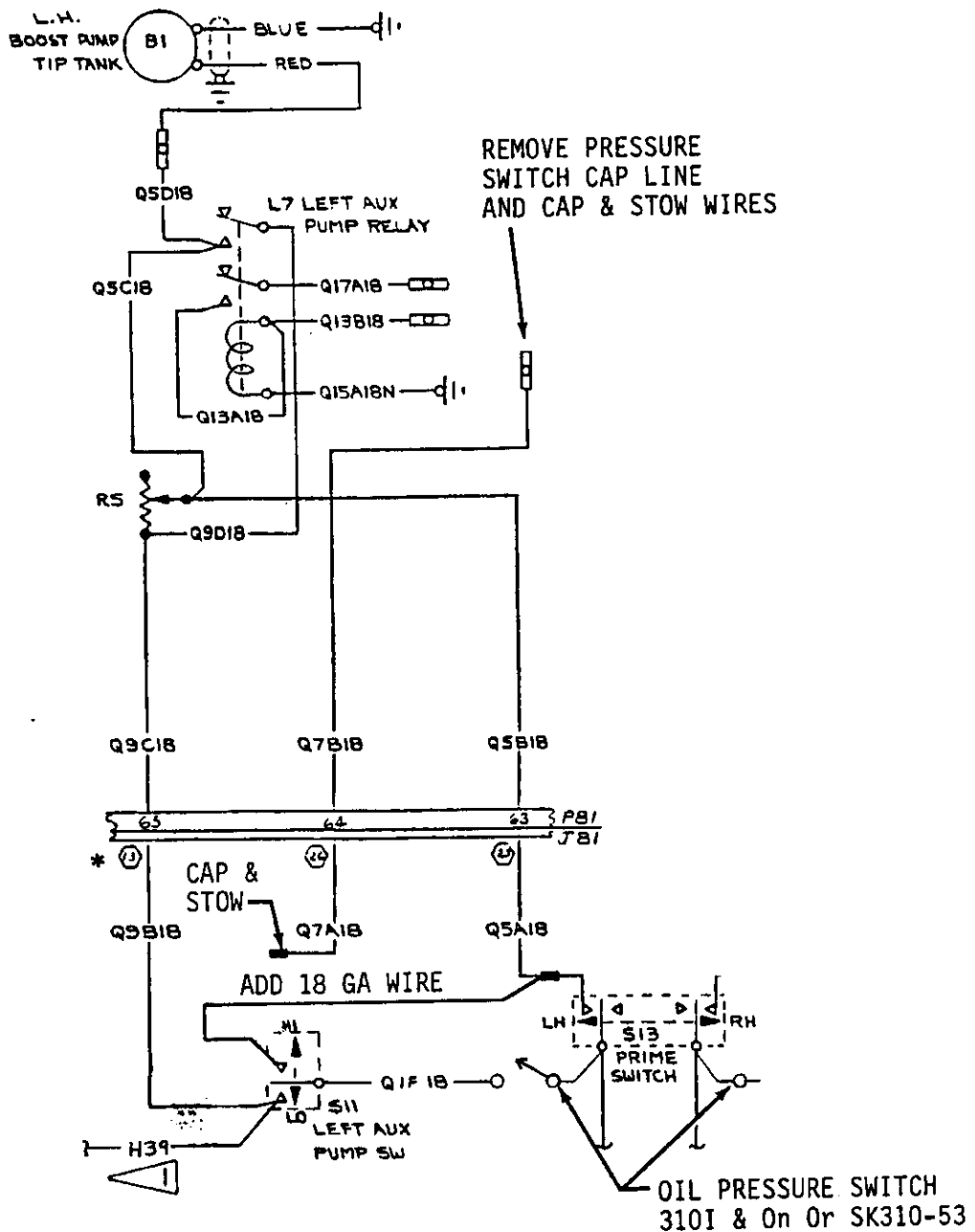


TYPICAL 310I AND ON  
 TYPICAL 320B AND ON (WITHOUT OIL PRESS. SWITCH)  
 LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 3 of 8.

MODELS AFFECTED: 310I AND ON, 320B AND ON.

MODIFIED



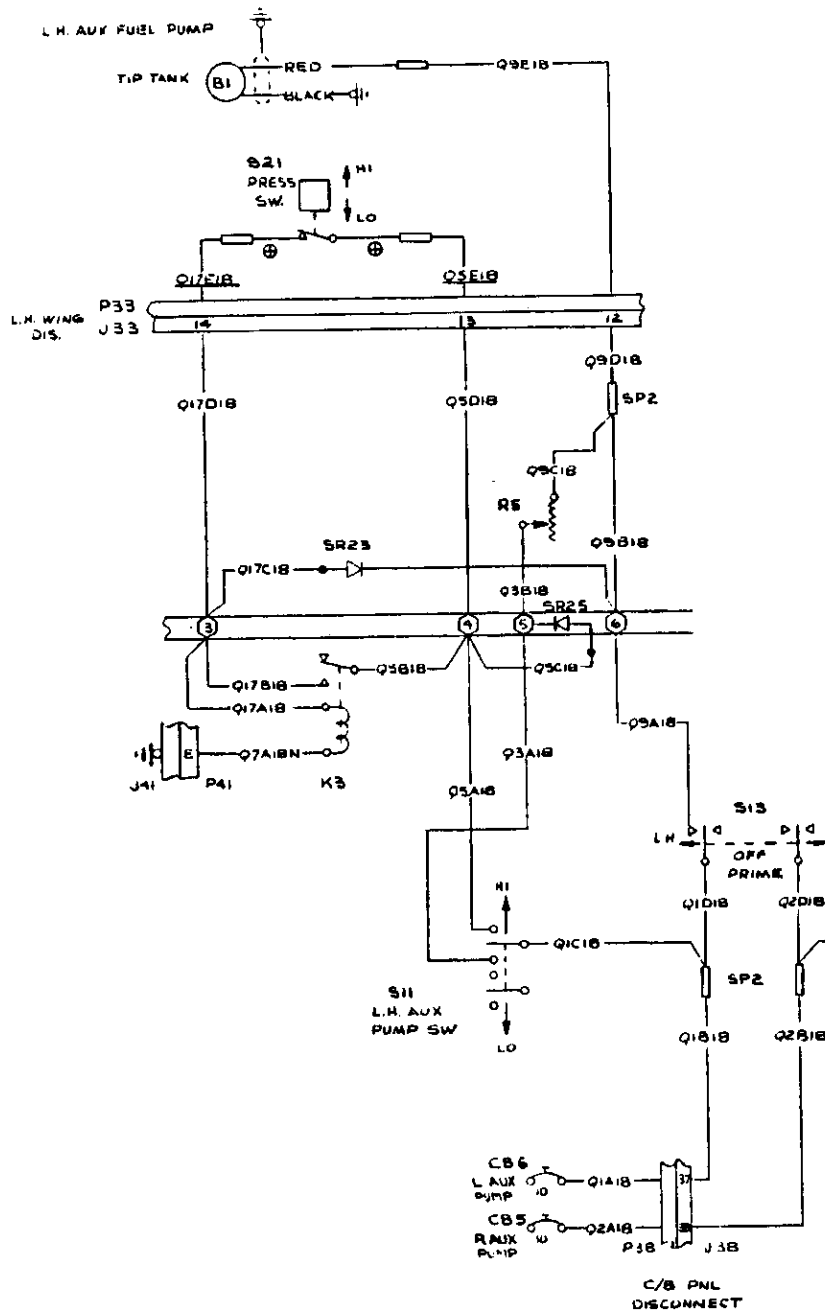
TO HEATER FUEL PUMP RELAY 310I AND 320B, RIGHT SIDE ONLY, RELAY OPERATES THROUGH R5 ON HI POSITION.

TYPICAL 310I AND ON  
 TYPICAL 320B AND ON (WITHOUT OIL PRESS. SWITCH)  
 LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 4 of 8.

MODELS AFFECTED: 335

ORIGINAL

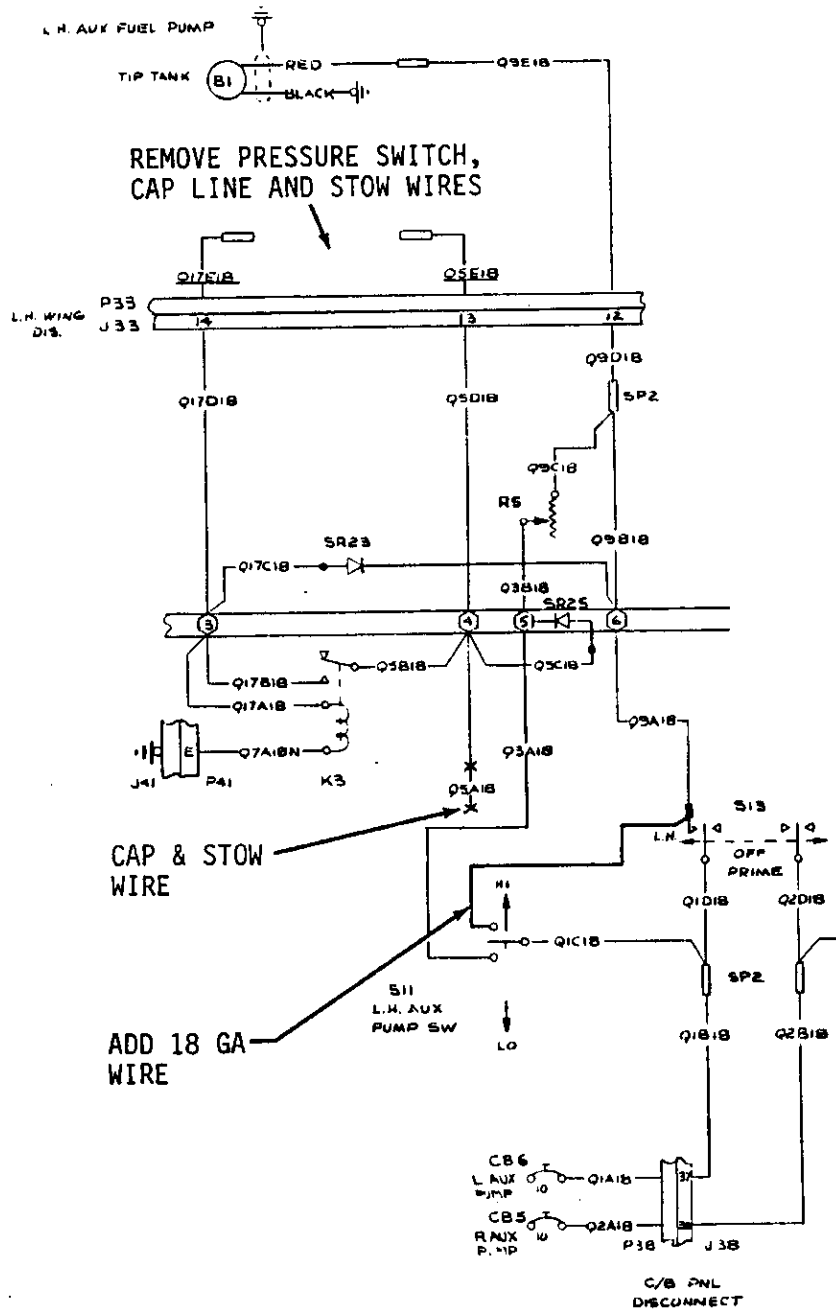


LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 5 of 8.

MODELS AFFECTED: 335

MODIFIED

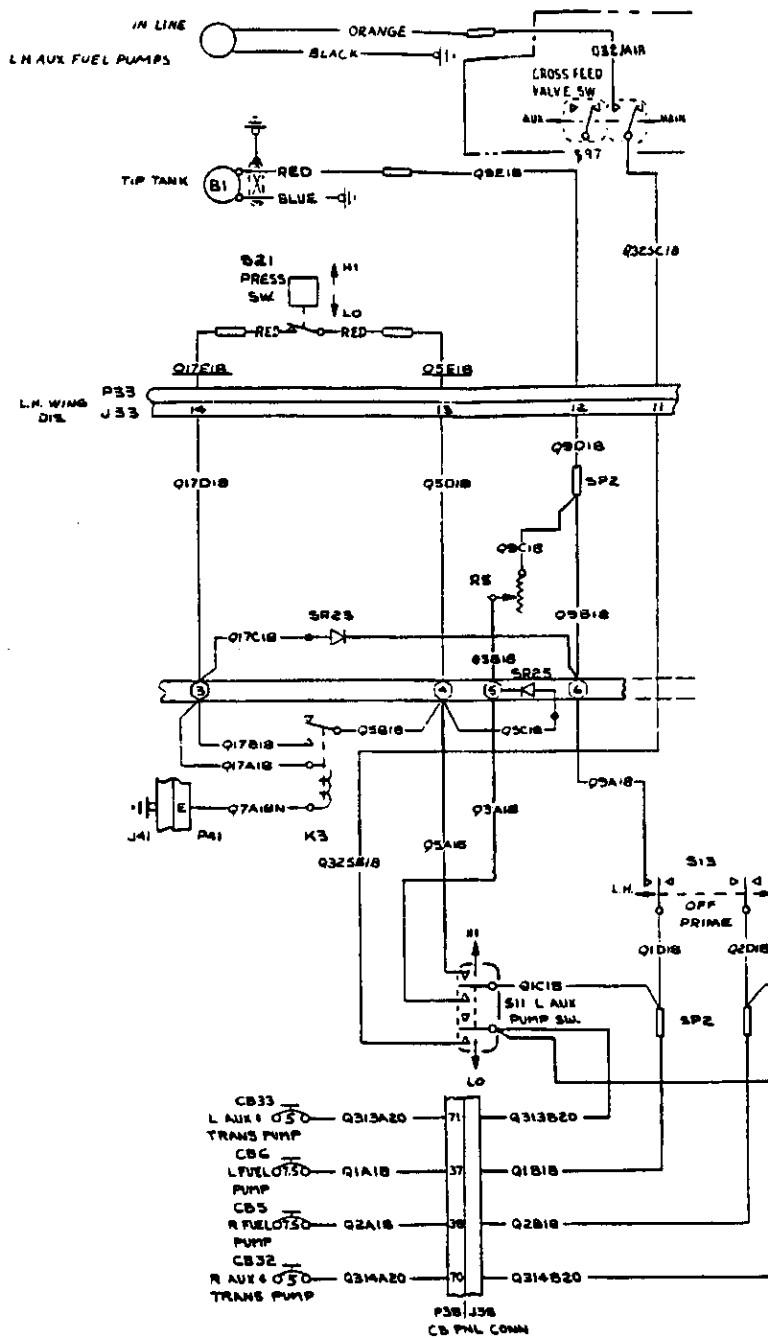


LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram 6 of 8.

MODELS AFFECTED: 340, 340A

ORIGINAL



LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 7 of 8.

SK310-104

MODELS AFFECTED: 340, 340A

MODIFIED

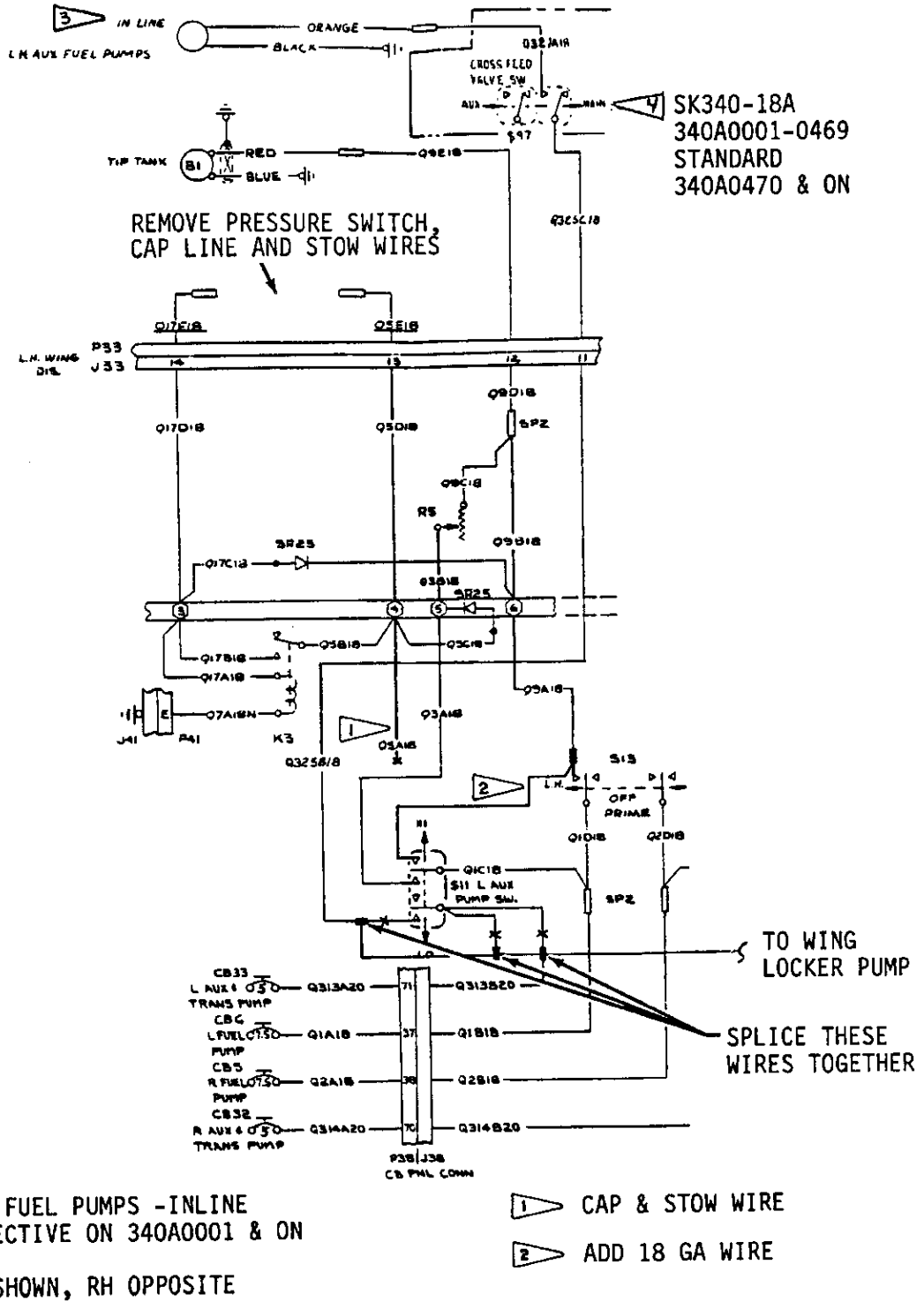


Figure 3. Wiring Diagram - Sheet 8 of 8.



# Service Kit

SK310-1048  
Revised February 10, 1989

TITLE: AUXILIARY FUEL PUMP WIRING MODIFICATION

The following procedures provide instructions to replace existing auxiliary fuel pump switches, remove existing fuel pressure switches and modify existing wiring as required.

EFFECTIVITY:

<u>MODELS AFFECTED</u>	<u>SERIALS AFFECTED</u>	<u>SUB KIT</u>
310	35772 thru 310R2140	B1
320	320-0001 thru 320F0045	B1
335	335-0001 thru 335-0065	B1
340	340-0001 thru 340A1817	B2

NOTE

Aircraft equipped with the optional EL panel will be required to order 1 each 2670067-1 post light assembly in addition to the parts provided in this Kit.

340A aircraft with optional INLINE AUXILIARY tank boost pumps will require SK340-18A In-Line Auxiliary Fuel Pump Electrical Modification, if not already installed.

PARTS LIST:

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>NOMENCLATURE</u>
SK310-104B1		
2	AN929-4J	Cap
1	D1625-1-13	Airplane Flight Manual Supplement
1	D1626-1-13	Supplemental Airplane Flight Manual

REF: MEB88-3  
1 of 24

FAA APPROVAL HAS BEEN OBTAINED ON TECHNICAL DATA IN THIS PUBLICATION THAT AFFECTS AIRPLANE TYPE DESIGN.



PARTS LIST (Continued):

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>NOMENCLATURE</u>
SK310-104B1 (Continued)		
1	D1627-13	Procedure Modification Notices
2	MS24658-21N	Switch - Toggle, Lever Lock
4	MS3367-1-9	Tie
4	S1021A6-8	Screw
4	S1367-1-6	Terminal
4	S1370-2	Splice
4	S1557-1	Cap - Insulated Wire
1	S1829-1	Terminal
6 Ft.	S2589-18-9	Wire
1	2505059-4	Placard
1	2505059-6	Placard
1	5198526-5	Placard
1	5198526-6	Placard
1	Instructions	

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>NOMENCLATURE</u>
SK310-104B2		
1	D1625-1-13	Airplane Flight Manual Supplement
1	D1626-1-13	Supplemental Airplane Flight Manual
1	D1627-13	Procedure Modification Notices
2	MS20822-4-4	Elbow
2	MS24658-21N	Switch - Toggle, Lever Lock
4	MS3367-1-9	Tie
4	S1021A6-8	Screw
4	S1367-1-6	Terminal
4	S1370-2	Splice
4	S1557-1	Cap - Insulated Wire
6 Ft.	S2589-18-9	Wire
1	2505059-4	Placard
1	2505059-6	Placard
1	5198526-5	Placard
1	Instructions	

CHANGE IN WEIGHT AND BALANCE:

WEIGHT INCREASE	Negligible.
-----------------	-------------

INSTALLATION INSTRUCTIONS:

- A. Removal of fuel pressure switch and components, models 310, 320 and 335, (refer to Detail A - Figure 1).
1. Disconnect battery cable from airplane and turn fuel selector switch OFF.
  2. Remove RH and LH cowling from airplane to gain access to fuel pressure switches (2).
  3. Locate the fuel pressure switches (2) which are secured to a bracket on the upper aft portion of each engine.
  4. Remove existing sta-straps and clamps as required to unplug the wire connector housing to the switch. Disconnect the fuel line (1) from the fuel pressure switch (2).
  5. Remove the hardware, retaining the switch to the bracket, and discard the switch, bracket and hardware. Tie the disconnected connector to the engine mount using MS3367-1-9 Tie.
  6. Disconnect the other end of the fuel line (1) from the fitting on the fuel metering unit and discard line. Install a AN929-4J cap on the metering unit fitting.
  7. Repeat the procedure for the opposite engine.
- B. Removal of fuel pressure switch and components, model 340 (refer to Detail A - Figure 1 - Sheet 2).
1. Disconnect battery cable from airplane and turn fuel selector switch OFF.
  2. Remove RH and LH cowling from airplane to gain access to fuel pressure switches (2).
  3. Locate the fuel pressure switches (2) which are mounted on the fuel pressure regulator (5).
  4. Remove existing sta-straps and clamps as required to unplug the wire connector housing to the switch.
  5. Remove fuel pressure switch (2) from tee (7). Disconnect fuel line (6) from tee (7).

6. Remove tee (7) from fuel pressure regulator (5).

NOTE

Apply Loctite Series 69 "Hydraulic Sealant" sparingly to the male threads of the MS20822-4-4 Elbow. Sealant is to be applied to only 3/4 of a thread turn and must not be applied to the first thread. Allow 30 minutes curing time before pressure testing.

7. Install MS20822-4-4 Elbow (8) in fuel pressure regulator (5) and connect fuel line (6) to elbow (8), (refer to Detail B-Figure 1-Sheet 2).
  8. Repeat the procedure for the opposite engine.
- C. Removal of the existing RH and LH auxiliary fuel pump switches (refer to Figure 2 - Sheets 1 thru 7).
1. Remove Pilot's seat from airplane.
  2. Remove existing auxiliary fuel pump switches in location (3) from the lower LH instrument panel.
  3. Remove wires from switches and discard switches.

NOTE

Be sure to identify each wire in reference to each switch terminal for new switch replacement.

- D. Postlight installation for aircraft with optional EL panel (refer to Figure 2 - Sheet 7).
1. Layout and drill hole (5) thru instrument panel.
  2. Install S1829-1 terminal to the wire attached to 2670067-1 postlight assembly.
  3. Install the postlight (5) in the panel and fasten the S1829-1 terminal to the terminal block located on the forward side of the instrument panel.
- E. Installation of new RH and LH auxiliary fuel pump switches (refer to Figure 2 - Sheets 1 thru 8).
1. Install wires on the switches (3) per appropriate wiring diagrams (refer to Figure 3).

SK310-104

2. Install switches - lever lock (3) in instrument panel using nuts and washers furnished with switches (3).

NOTE

The switches (3) mount with the keyway down adjacent to the index hole. The switches lockout of the side opposite the keyway which is the up (high) position.

3. Install placards (2 and 4) on instrument panel over the silkscreen ON as shown in Figure 2, refer to appropriate figure sheet to match model and serial of aircraft.
- F. Modify existing wiring per appropriate wiring diagrams (refer to Figure 3 - Sheets 1 thru 8).
1. This modification bypasses boost relay.
  2. Low boost circuit is unchanged.
  3. High boost is accomplished by:
    - (a) Jumper across boost relay (310).
    - (b) Adding wire from high switch terminal to primer switch.
  4. Pressure switch wires are spliced on early 310s, capped and stowed on all others.
  5. On 340A0001 & On the second section of the boost pump switch controlled the auxiliary inline pumps. Wires to this section are spliced together and the switches installed on the auxiliary tank fuel selector valves by Service Kit SK340-18A (340A0001 thru 340A0469) or standard (3400470 & On) control pumps.
  6. Refer to the appropriate airplane Maintenance Manual if questions arise since some items such as wire numbers may be different even though the circuit function is the same.
- G. Run a functional switch and pump test as follows:
1. Reconnect battery cables and turn master switch ON, fuel selector valves ON and auxiliary fuel pump switches in the OFF position.

NOTE

The oil pressure switch must be bypassed to perform this test on all models 310I thru 310Q and Models 310C, D, F, G and H that have SK310-53 Oil Pressure Switch Installation Kit installed.

2. Move RH auxiliary pump switch down to LOW position and check RH pump for operation at low speed. Pull switch toggle back and up over OFF position to HIGH position and check pump for operation at high speed, then move switch to OFF position.
  3. Repeat the same procedures for the LH auxiliary fuel pump switch as described in the previous paragraph.
  4. Verify that the left and right auxiliary inline pumps (340A) operate when the auxiliary tanks are selected.
  5. Turn master switch OFF and fuel selector valves OFF.
- H. Reinstall all items removed for access to accomplish this modification.
- I. Install placard (1) as close to switches as possible and secure with screws (1) as shown (refer to Figure 2).
- J. Auxiliary Fuel Pump Switching System Supplements:
1. Select the appropriate operating information supplement (D1625-1-13 or D1626-1-13) per serial effectivity of airplane and the adhesive-backed sheet containing the procedure modification notices (D1627-13).
  2. Place the appropriate operating information supplement at the front of the manual or handbook used to operate the airplane.
  3. The D1627-13 adhesive-backed modification notices should be completed by the owner, then trimmed out and attached to the manual, handbook and checklist for the airplane. This will alert all operators that the auxiliary fuel pump switching system in the airplane has undergone a modification and that operating procedures in the manual/handbook and checklist have been superseded by information in the supplement. For airplanes provided with a Flight Manual, Owner's Manual and Checklist all three notices will be needed; if an Owner's Manual and Checklist or a Pilot's Operating Handbook and Checklist were furnished with the airplane, only two of the notices must be used. Attach the notices to the back of the title page of the Flight Manual or Pilot's Operating Handbook and/or to the cover of the Owner's Manual. An additional notice should be attached to an appropriate location on the Checklist.
- K. Make an entry in the airplane logbook stating this service kit has been installed.

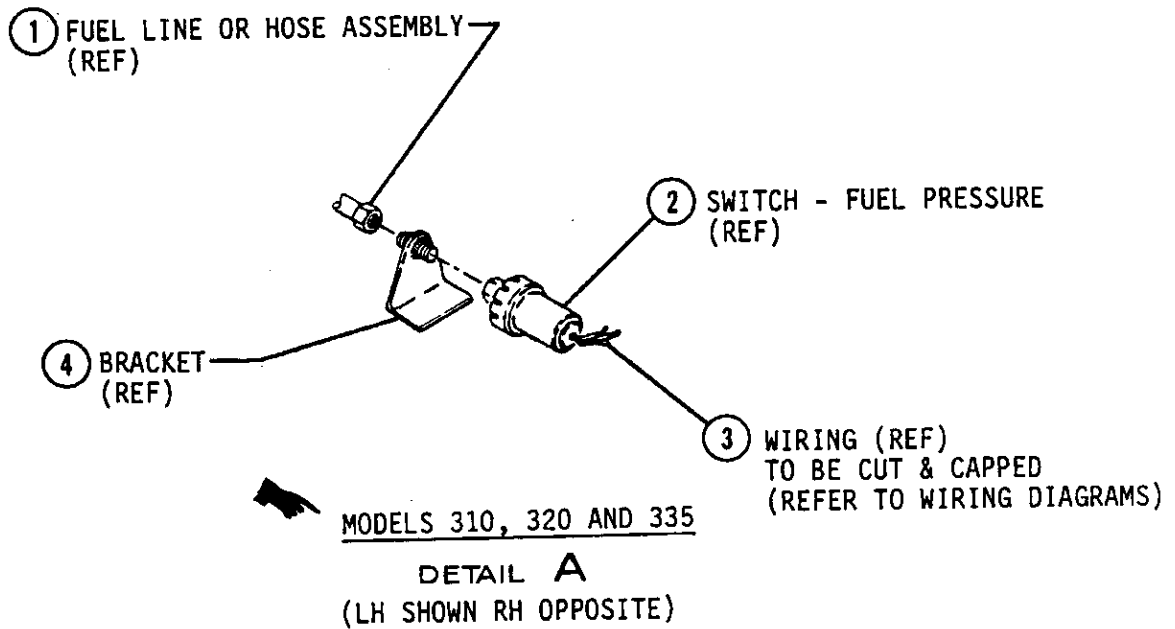
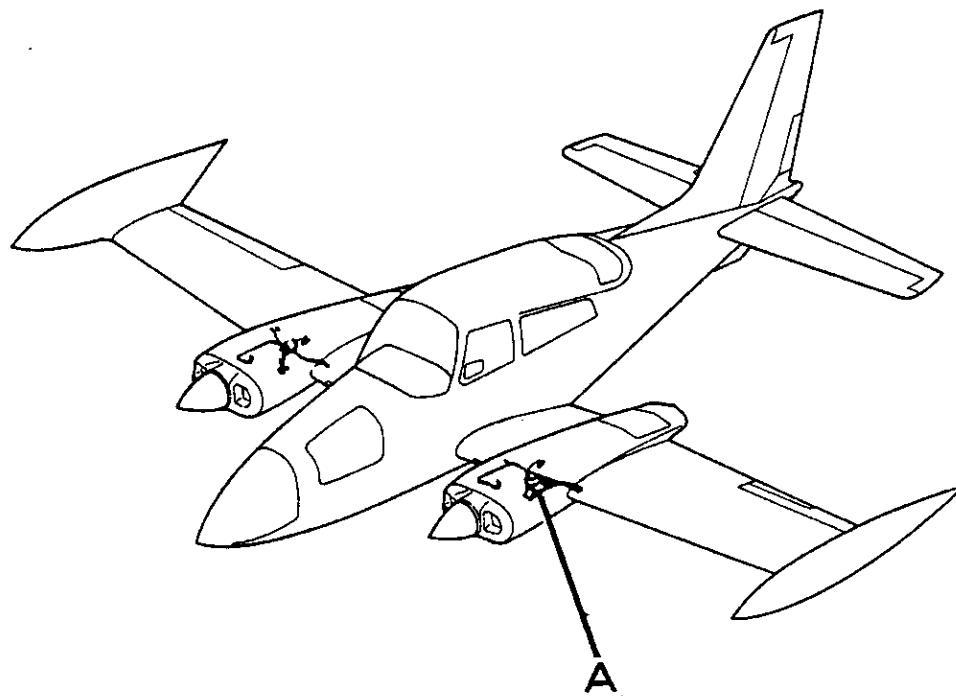
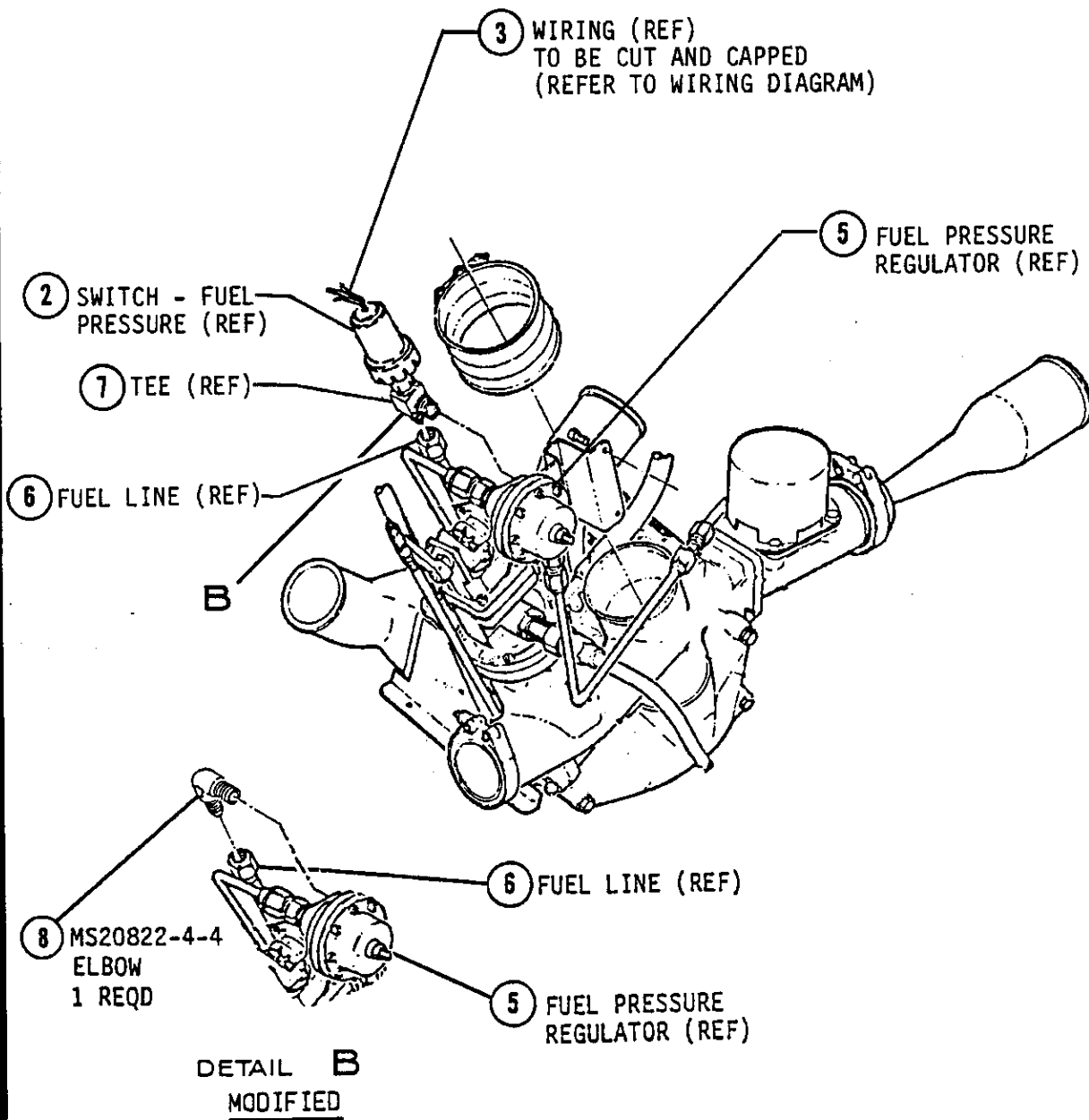


Figure 1. Auxiliary Fuel Pump System Modification - Sheet 1 of 2

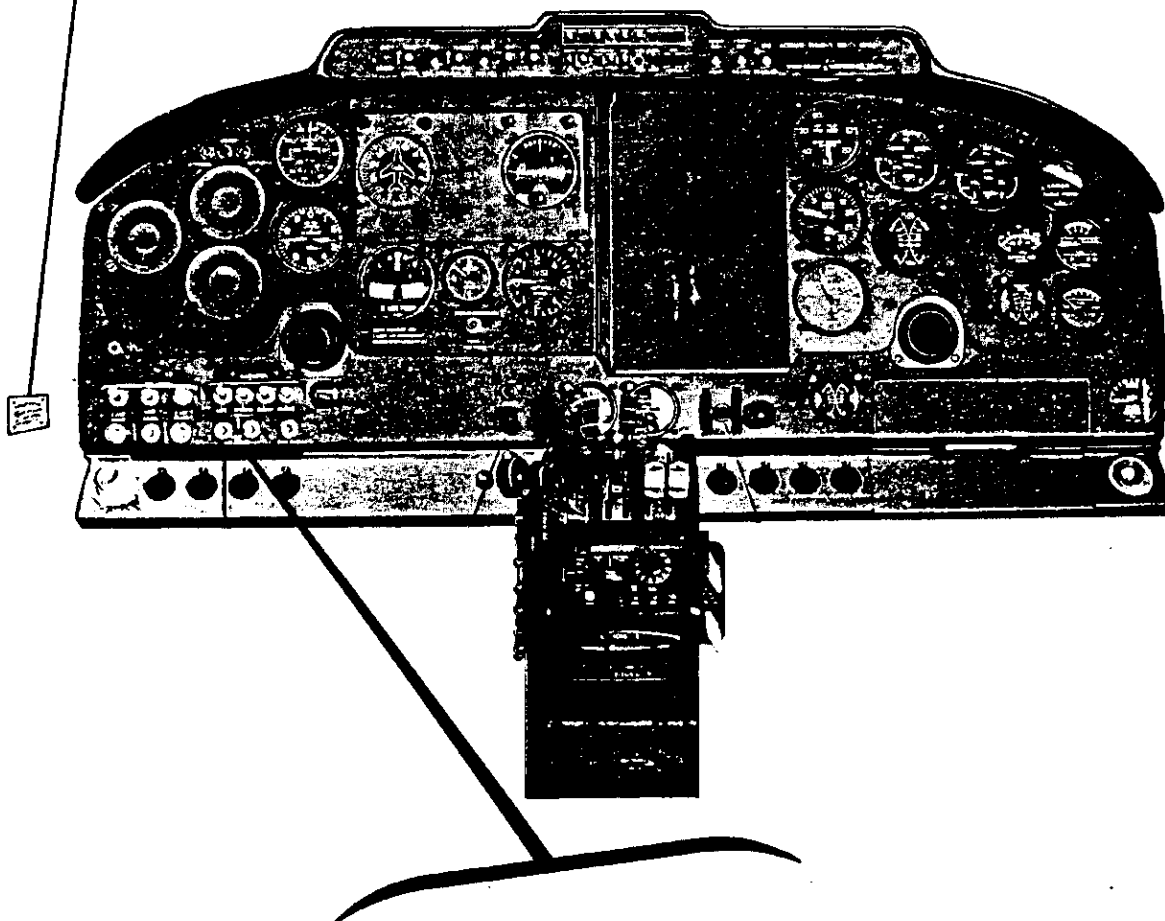


MODELS 340 ONLY

DETAIL A  
(LH SHOWN RH OPPOSITE)

Figure 1. Auxiliary Fuel Pump System Modification - Sheet 2

- ① 2505059-6 PLACARD
- 1 REQD
- 0.109 HOLE
- 4 REQD TO MATCH PLACARD  
(THRU VINYL COVER AND BACKING ONLY)
- S1021A6-8 SCREW
- 4 REQD

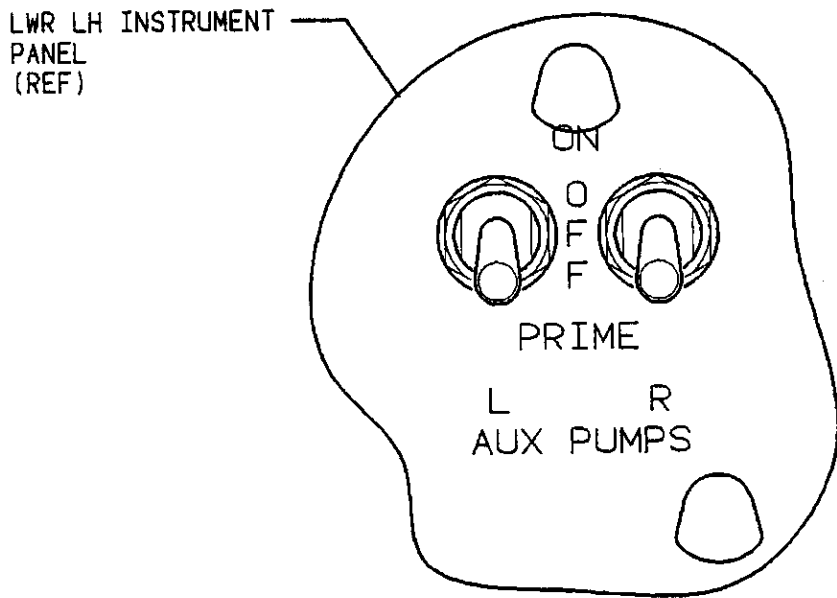


THE NEXT FIVE PAGES OF FIGURE 2.  
WILL CALL OUT THE SWITCHES AND  
PLACARDS IN THE APPROXIMATE POSITION  
SHOWN FOR THE MODELS AND SERIALS  
LISTED ON EACH PAGE.

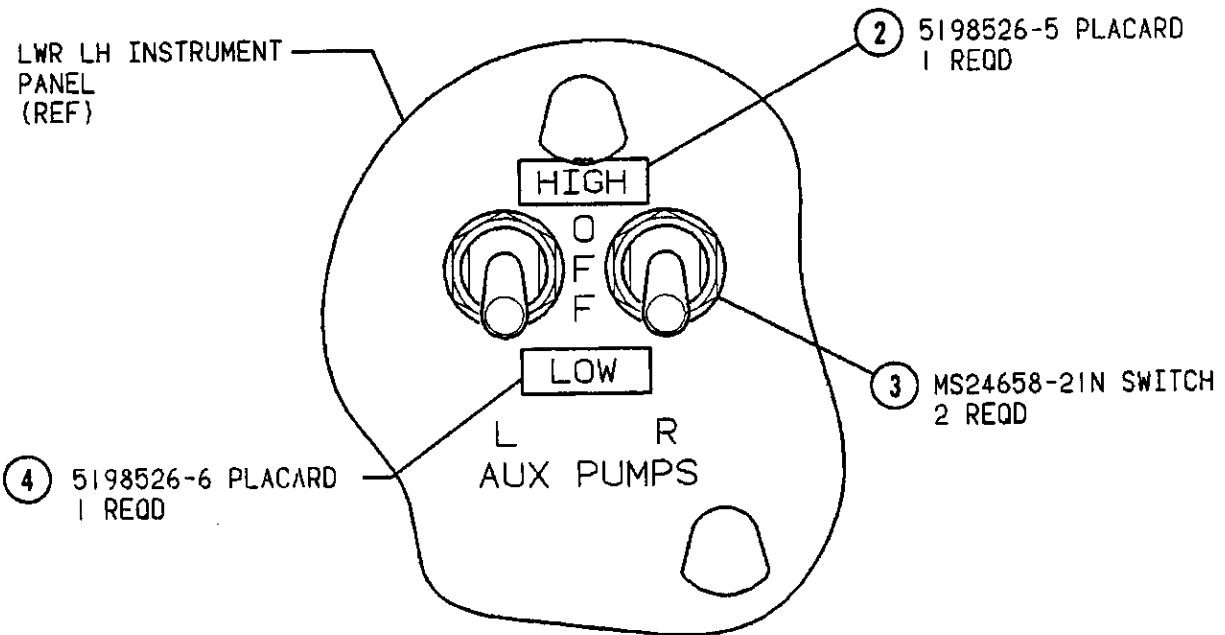
Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 1 of 8



ORIGINAL



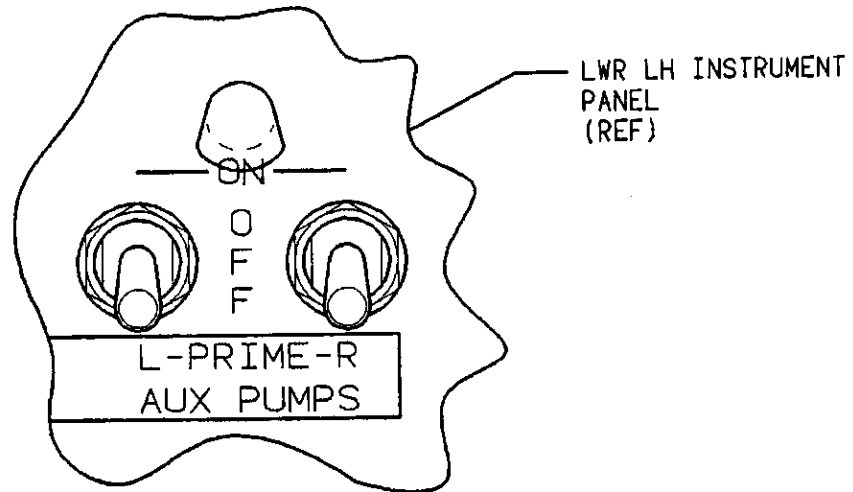
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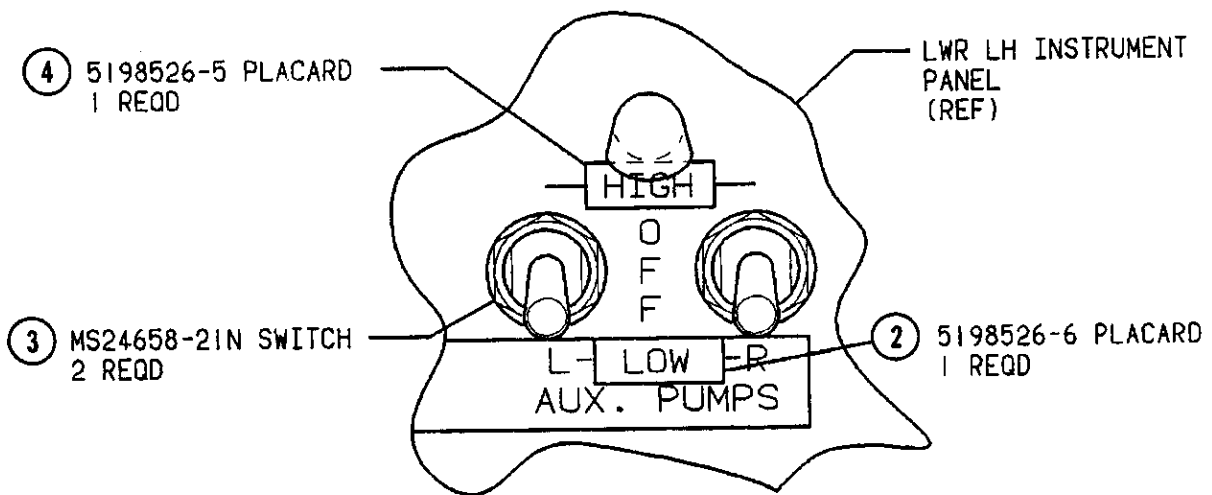
MODELS AFFECTED: 310C35772 THRU 310D39299

Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 2

ORIGINAL



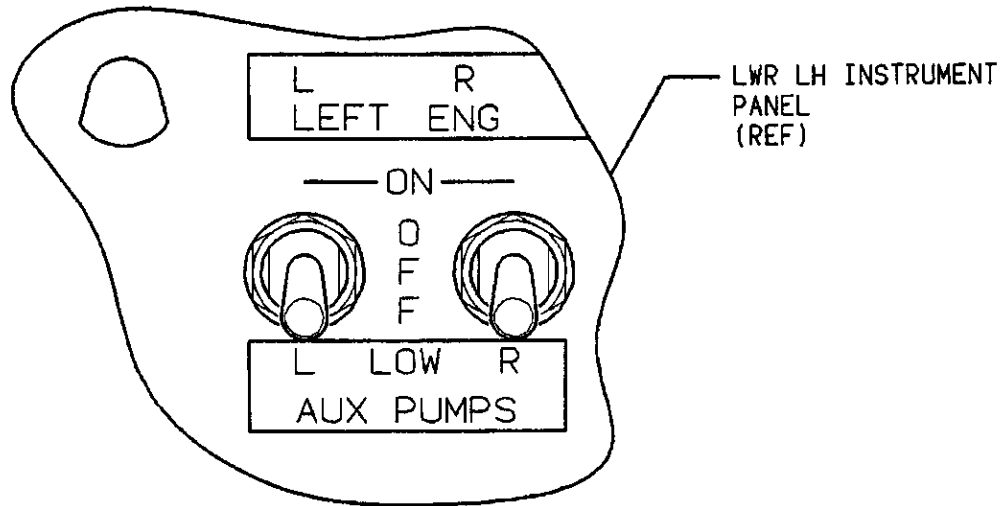
MODIFIED



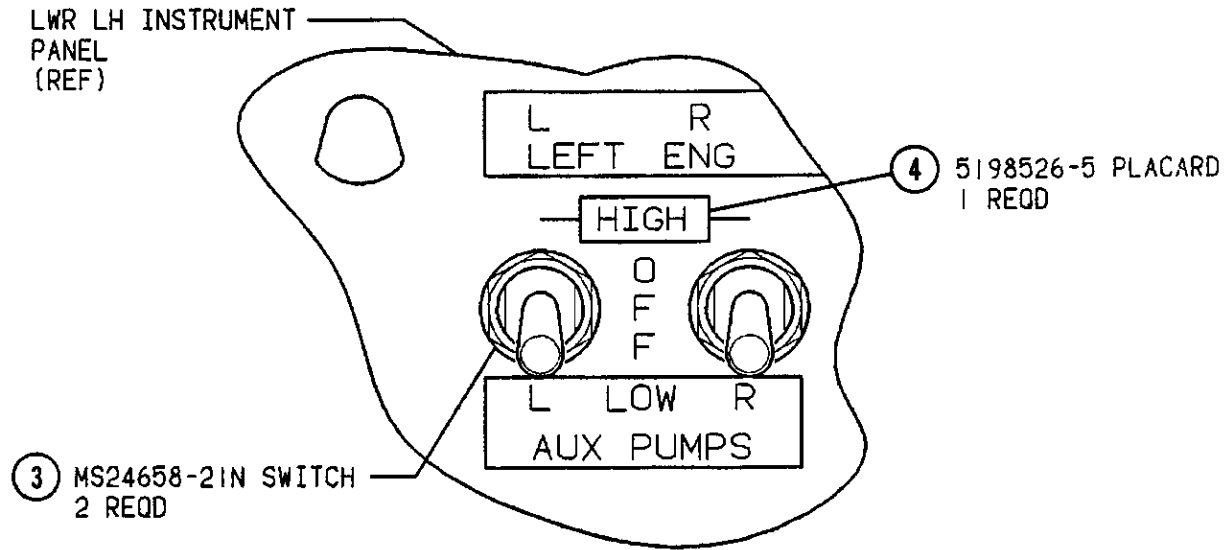
MODELS AFFECTED: 310-0001 THRU 310H0148  
320-0001 THRU 320A0047

Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 3

ORIGINAL

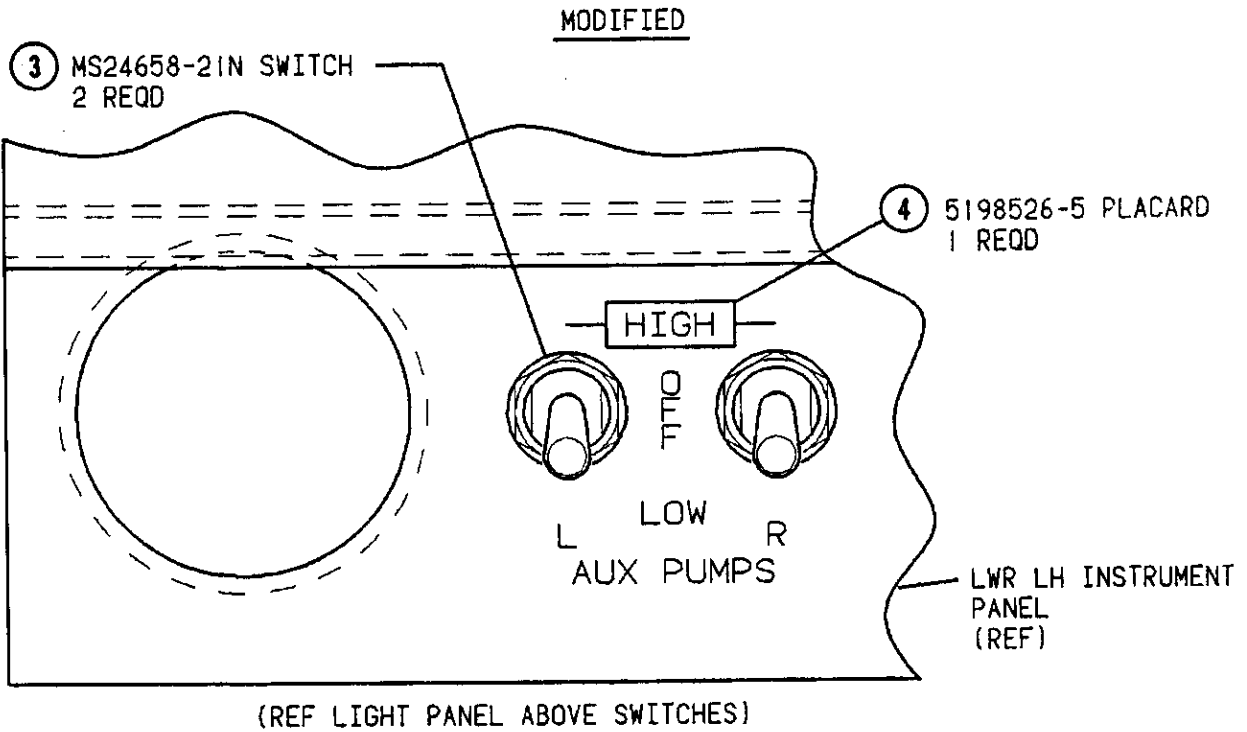
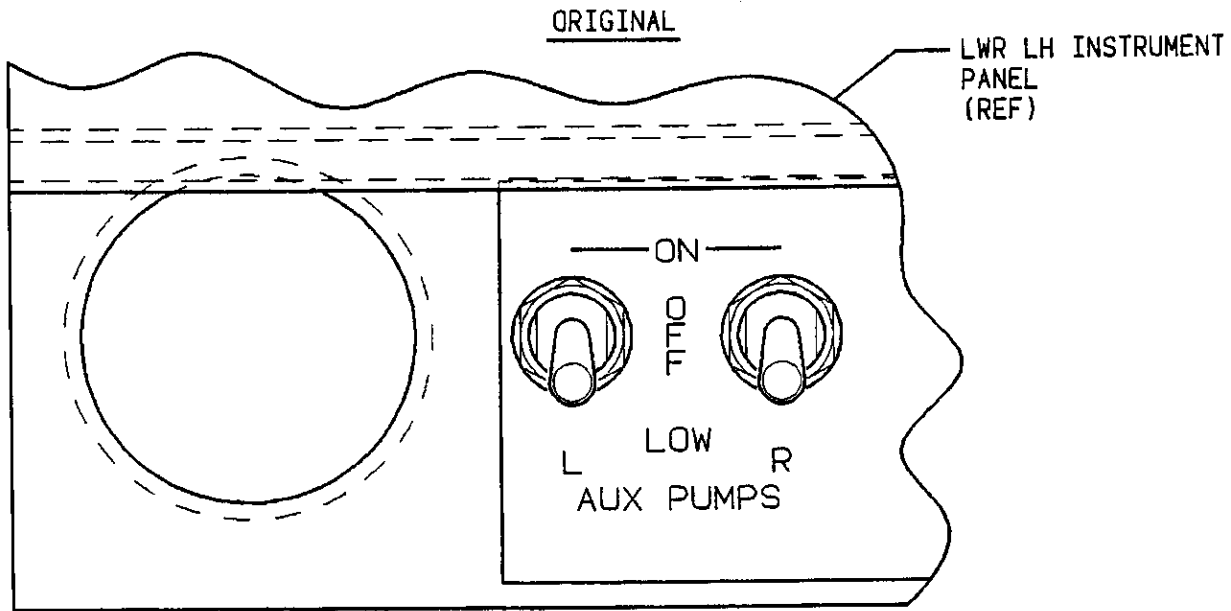


MODIFIED



MODELS AFFECTED: 310I0001 THRU 310L0207  
320B0001 THRU 320D0130

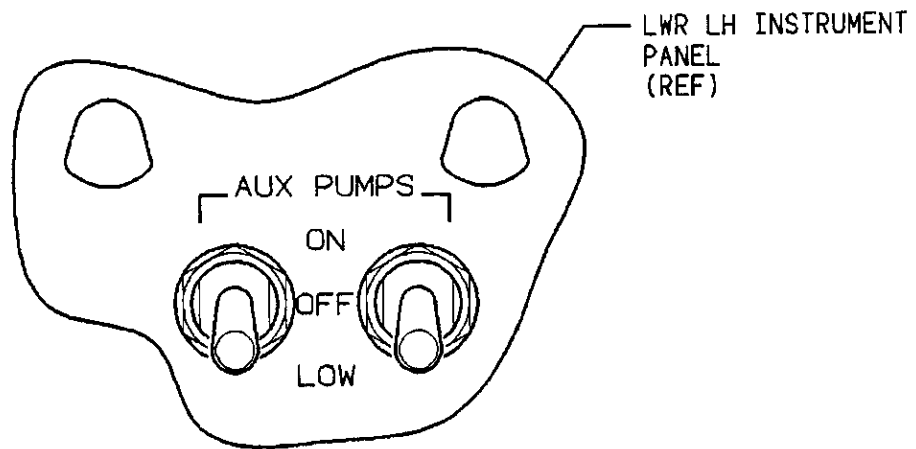
Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 4



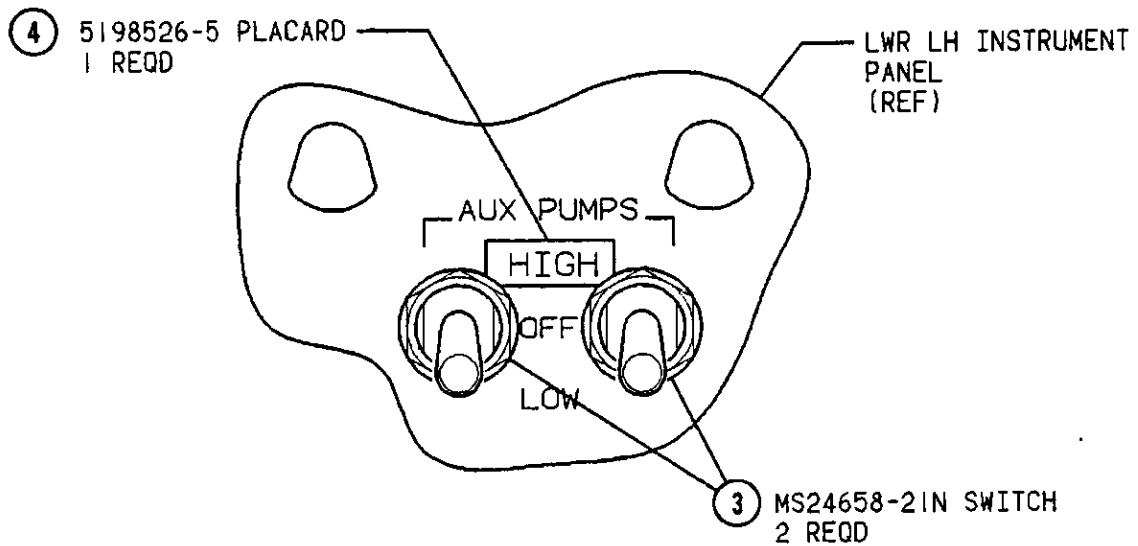
MODELS AFFECTED: 310Q0601 THRU 310R2140 (STD)  
320F0001 THRU 320F0045 (STD)

Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 5

ORIGINAL



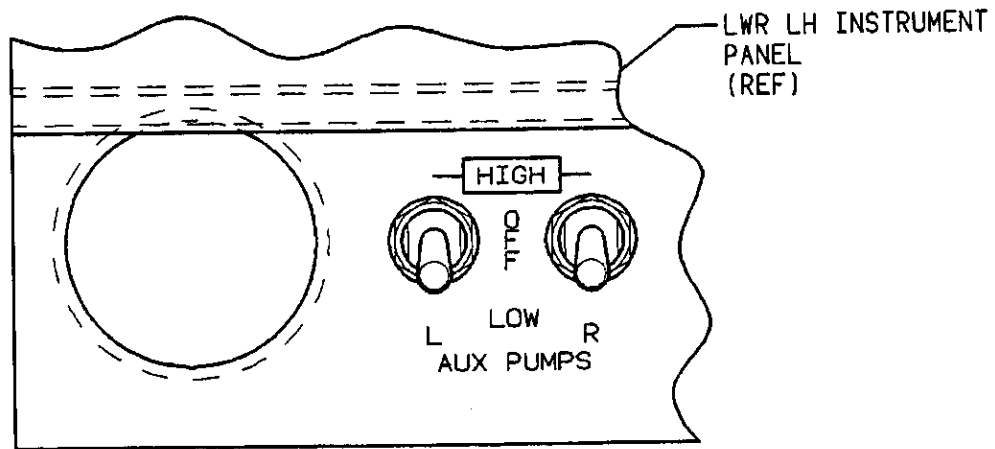
MODIFIED



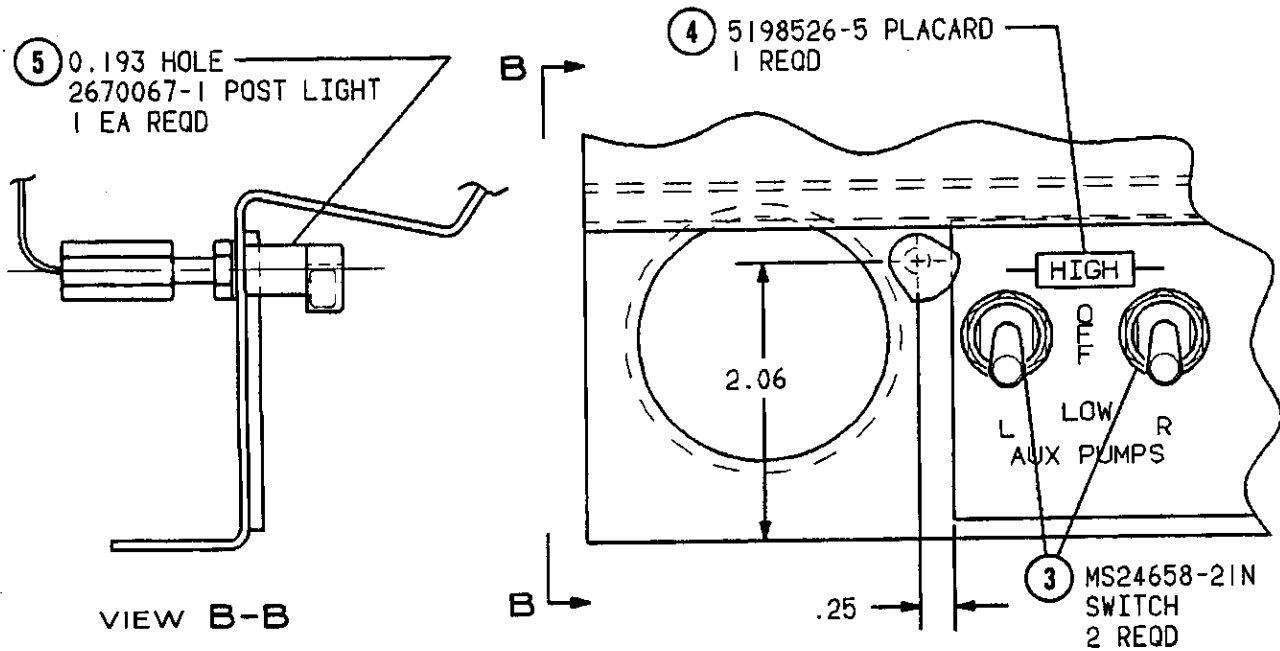
MODELS AFFECTED: 335-0001 THRU 335-0065  
340-0001 THRU 340A1817

Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 6

ORIGINAL



MODIFIED



MODELS AFFECTED: 310N0001 THRU 310Q0600 (STD)  
 310Q0601 THRU 310R2140 (OPT)  
 320F0001 THRU 320F0045 (OPT)

Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 7

ORIGINAL

SET FUEL SELECTOR VALVES TO LEFT MAIN FOR LEFT ENGINE AND RIGHT MAIN FOR RIGHT ENGINE FOR TAKEOFF, DESCENT, LANDING, AND ALL NORMAL OPERATIONS.

TAKEOFF AND LAND WITH AUXILIARY FUEL PUMPS ON.

EMERGENCY CROSSFEED SHUTOFF VALVE MUST BE OPEN FOR ALL NORMAL OPERATIONS.

100 GRADE AVIATION FUEL MINIMUM.

6 EXISTING PLACARD LOCATED NEAR FUEL SELECTOR VALVES.

MODIFIED

7 2505059-4 PLACARD 1 REQD (INSTALL OVER EXISTING LETTERING)

SET FUEL SELECTOR VALVES TO LEFT MAIN FOR LEFT ENGINE AND RIGHT MAIN FOR RIGHT ENGINE FOR TAKEOFF, DESCENT, LANDING, AND ALL NORMAL OPERATIONS.

TAKEOFF AND LAND WITH AUXILIARY FUEL PUMPS LOW.

EMERGENCY CROSSFEED SHUTOFF VALVE MUST BE OPEN FOR ALL NORMAL OPERATIONS.

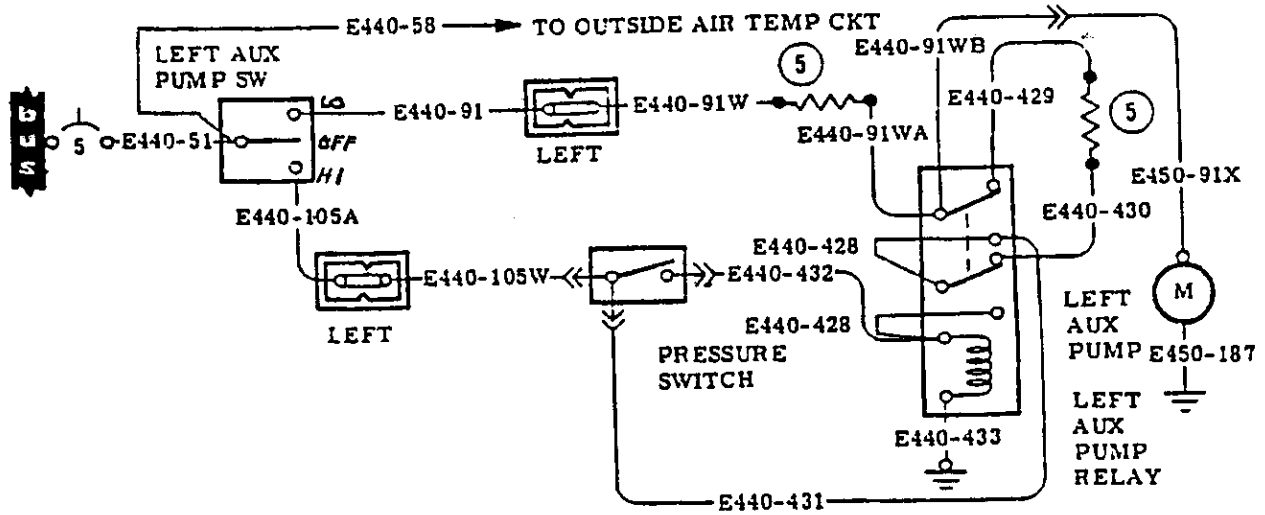
100 GRADE AVIATION FUEL MINIMUM.

6 EXISTING PLACARD LOCATED NEAR FUEL SELECTOR VALVES.

Figure 2. Auxiliary Fuel Pump Switches & Placards Installation - Sheet 8

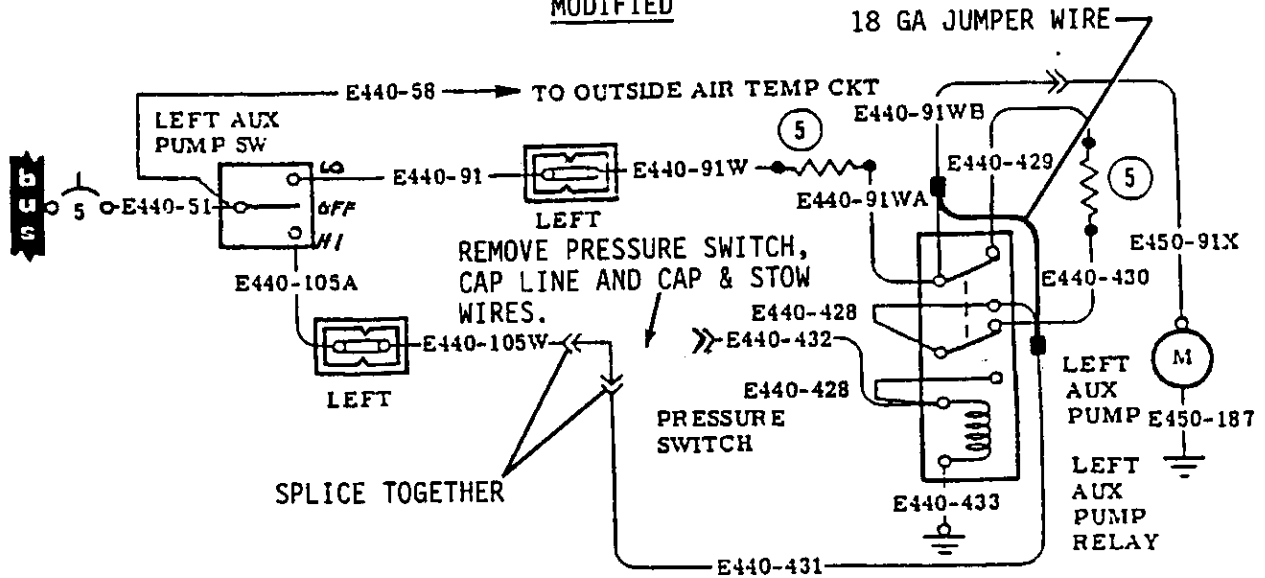
MODELS AFFECTED: 310C, 310D, 310F

ORIGINAL



⑤ FIXED RESISTORS SN35772 THRU 35842  
 ADJ. RESISTORS SN35843 & ON

MODIFIED



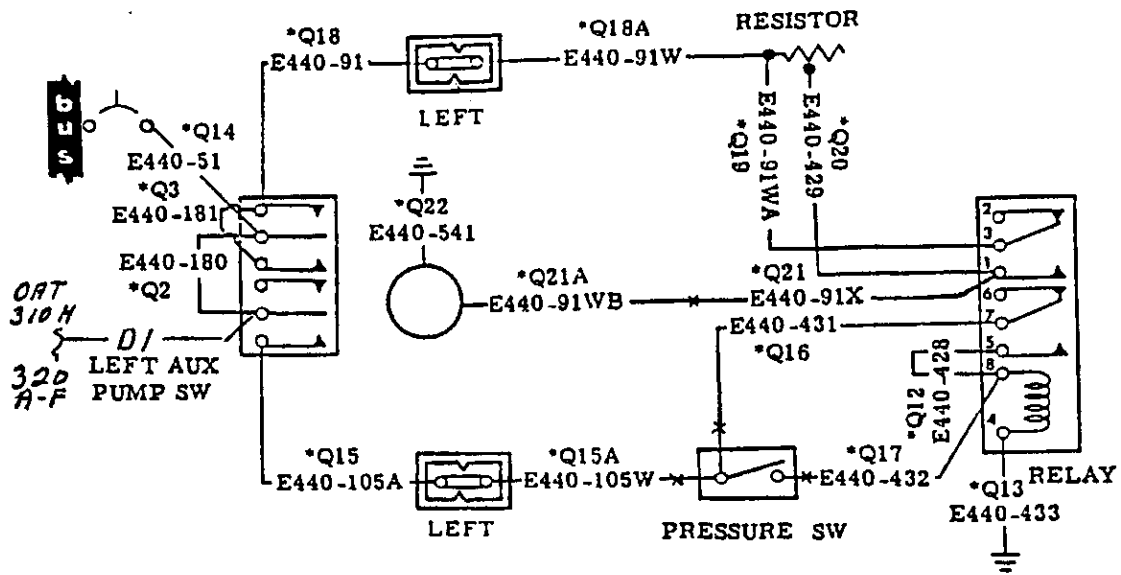
LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 1 of 8

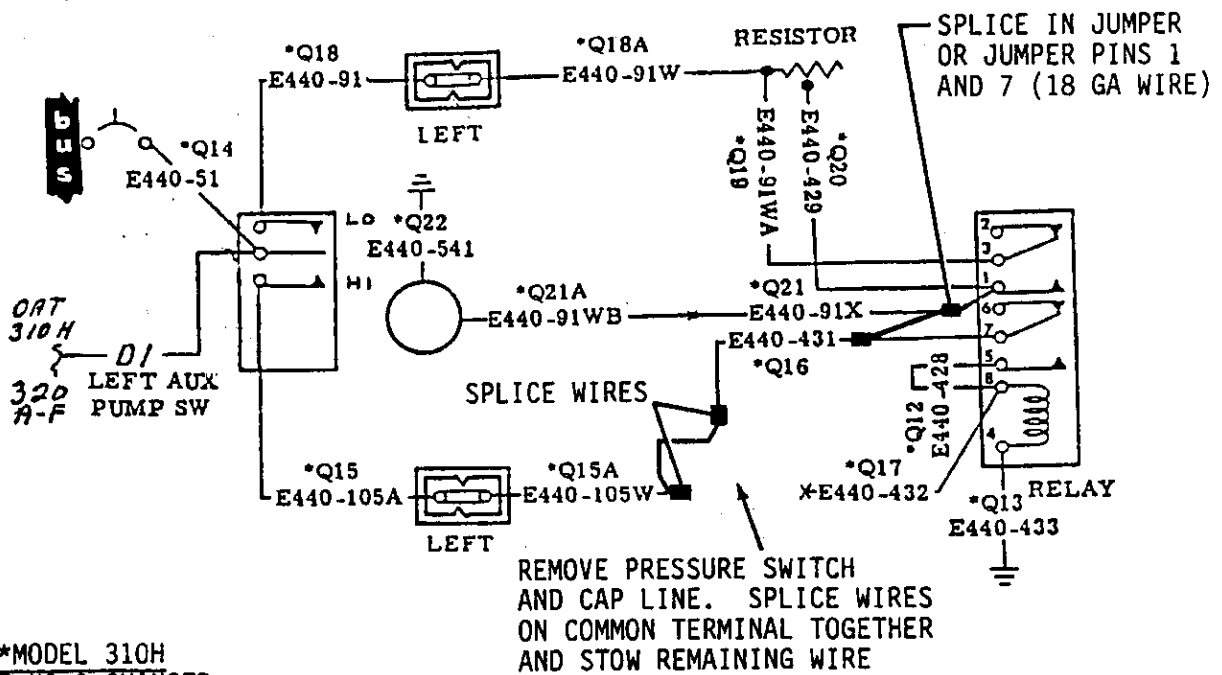


MODELS AFFECTED: 310G, 310H, 320, 320A

ORIGINAL



MODIFIED



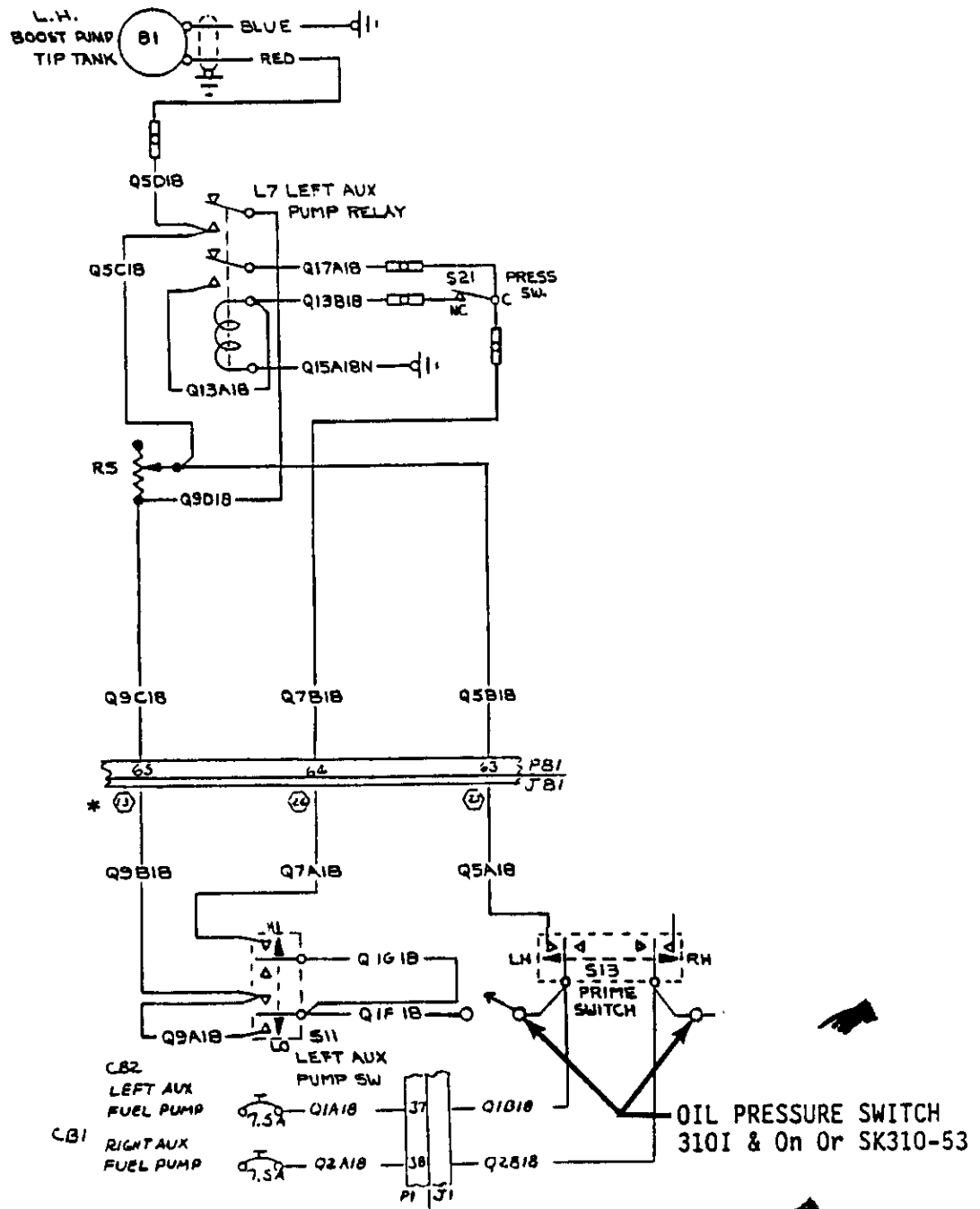
\*MODEL 310H  
WIRE NO.S CHANGED

310G and H W/O SK310-52  
320 and 320A  
LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 2

MODELS AFFECTED: 310I AND ON, 320B AND ON.

ORIGINAL

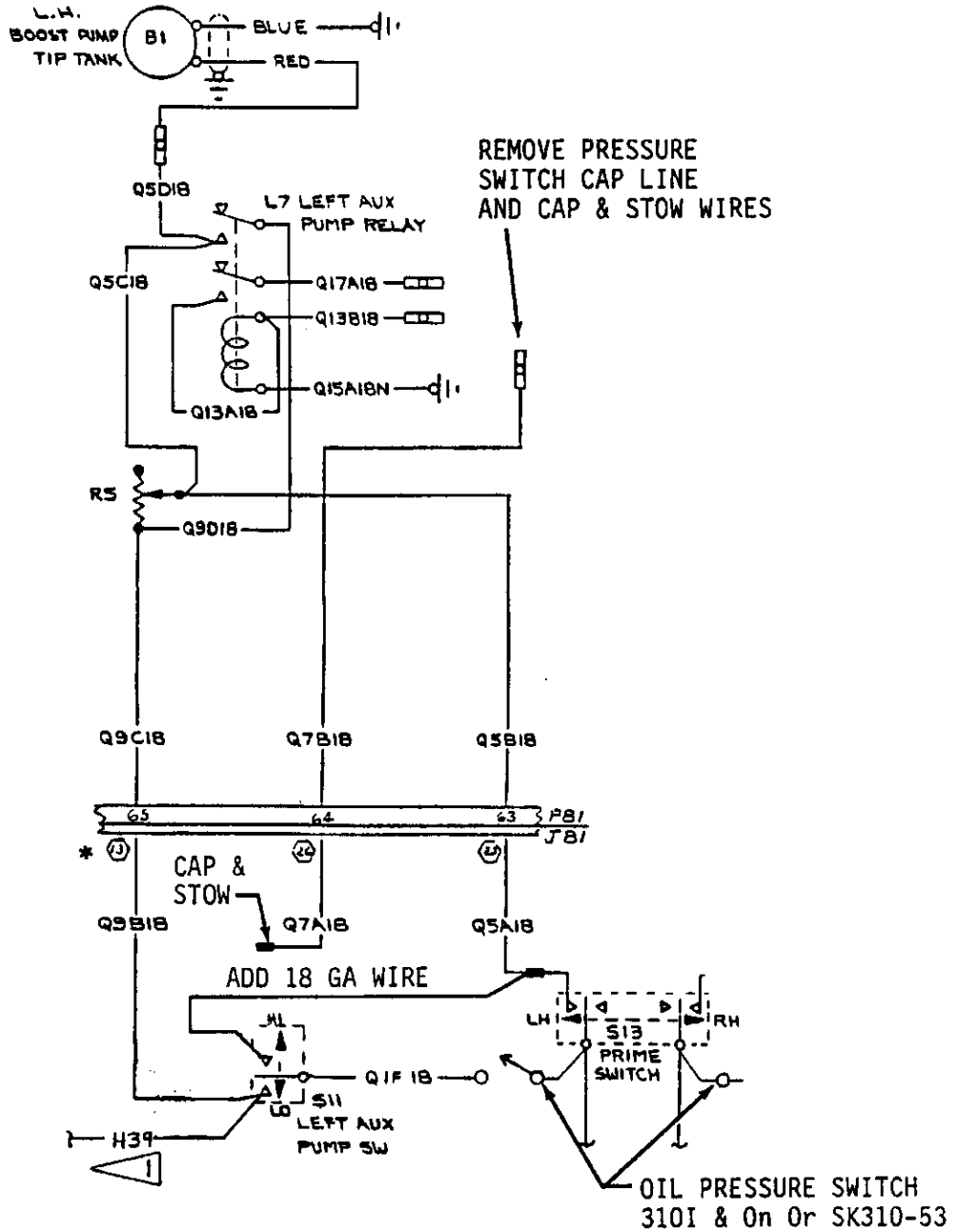


TYPICAL 310I AND ON (WITH OIL PRESS SWITCH)  
 TYPICAL 320B AND ON (DOES NOT HAVE OIL PRESS SWITCH)  
 LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 3

MODELS AFFECTED: 310I AND ON, 320B AND ON.

MODIFIED



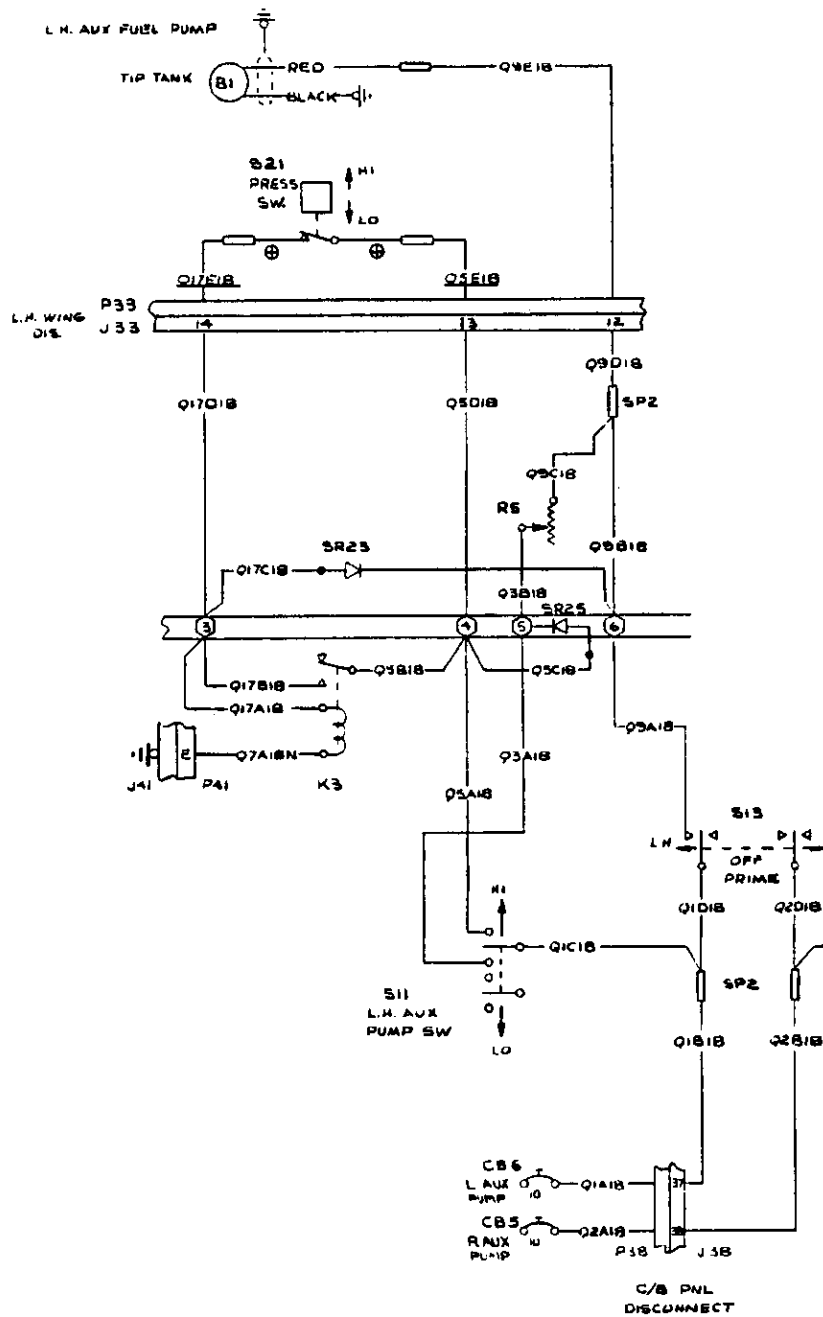
TO HEATER FUEL PUMP RELAY 310I AND 320B, RIGHT SIDE ONLY, RELAY OPERATES THROUGH R5 ON HI POSITION.

TYPICAL 310I AND ON (WITH OIL PRESS SWITCH)  
 TYPICAL 320B AND ON (DOES NOT HAVE OIL PRESS SWITCH)  
 LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 4

MODELS AFFECTED: 335

ORIGINAL



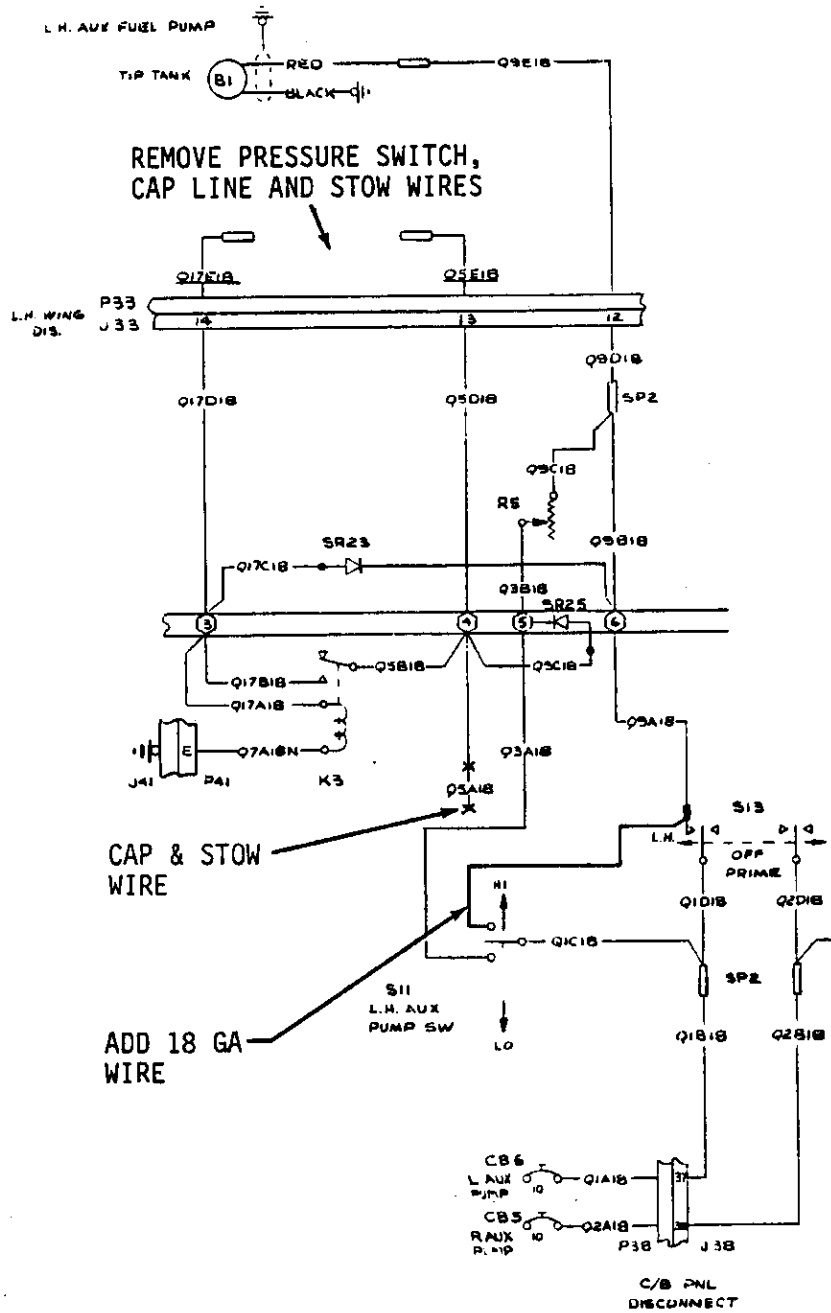
LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 5



MODELS AFFECTED: 335

MODIFIED

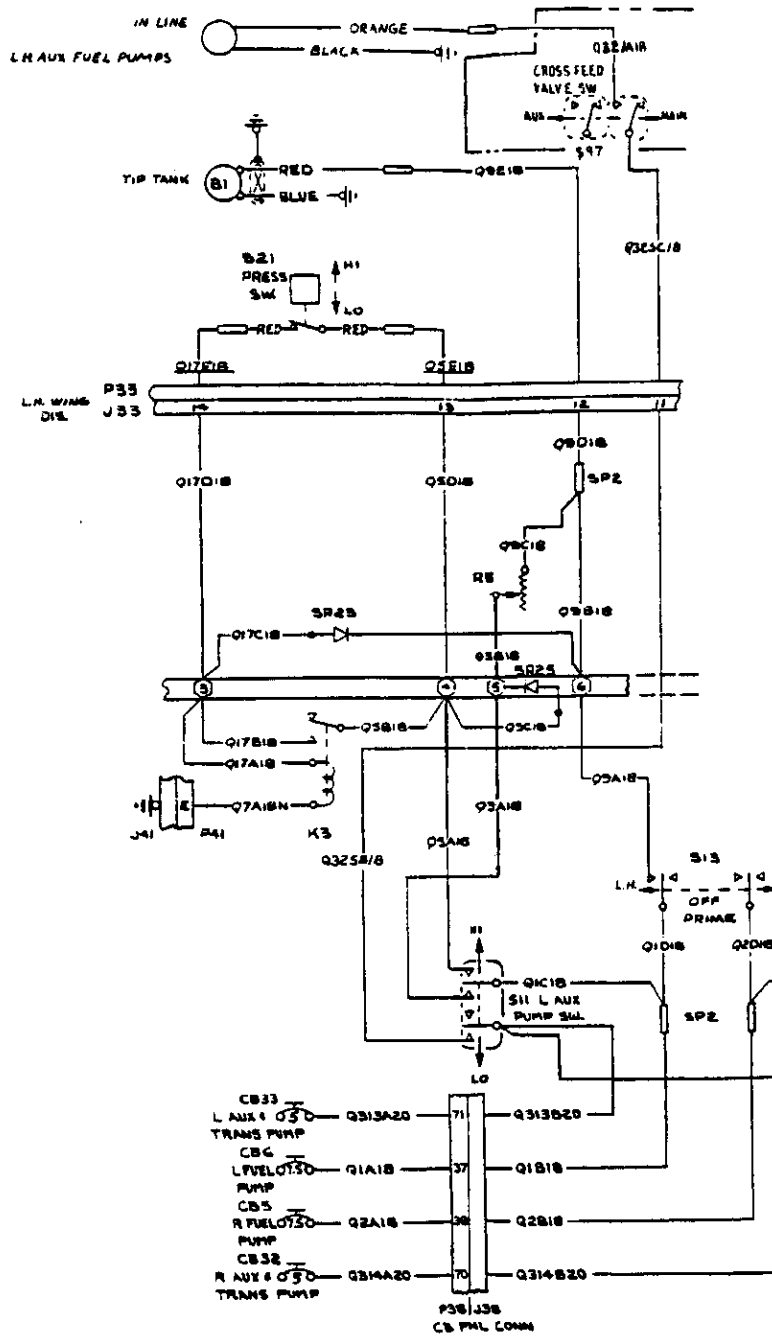


LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 6

MODELS AFFECTED: 340, 340A

ORIGINAL

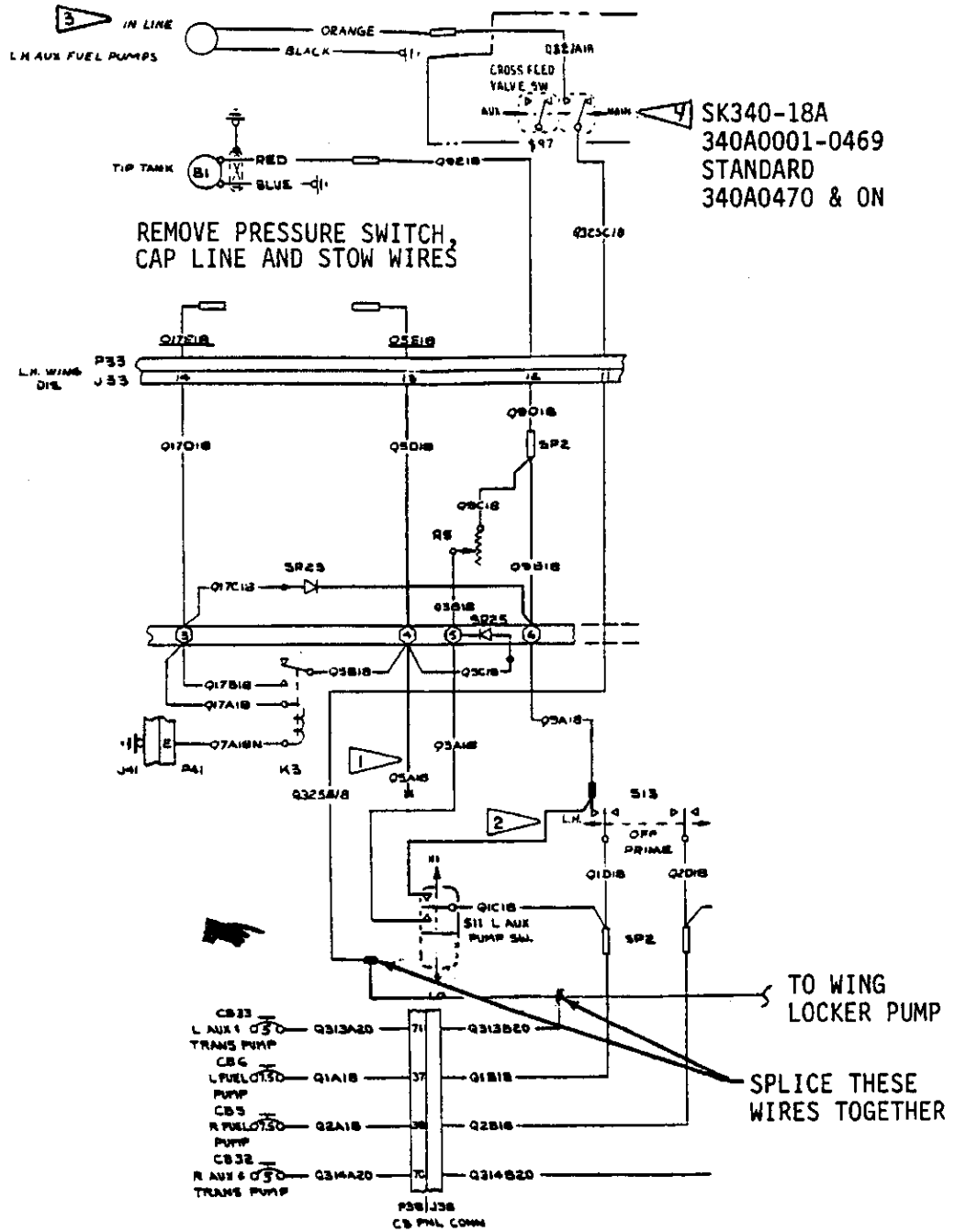


LH SHOWN, RH OPPOSITE

Figure 3. Wiring Diagram - Sheet 7

MODELS AFFECTED: 340, 340A

**MODIFIED**

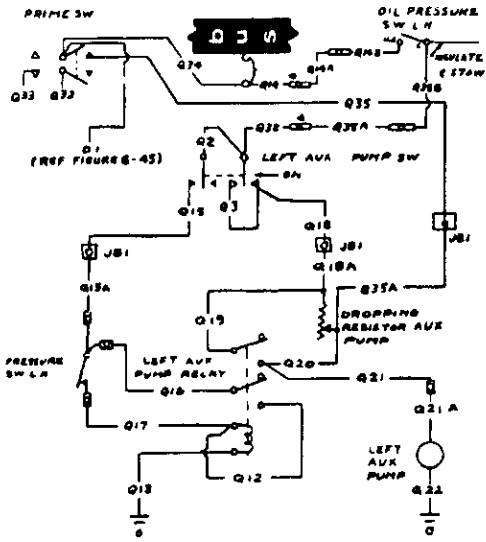


3 AUX FUEL PUMPS - IN LINE  
EFFECTIVE ON 340A0001 & ON  
LH SHOWN, RH OPPOSITE

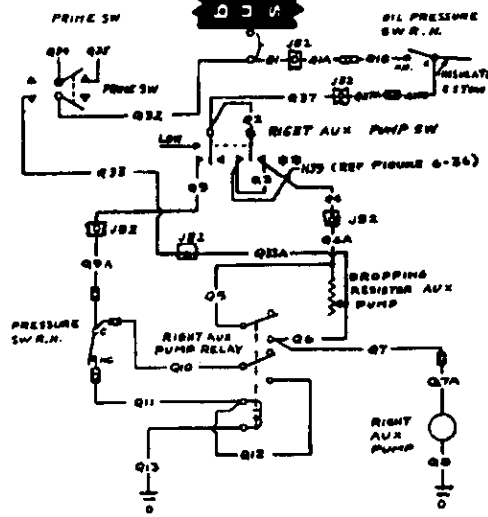
1 CAP & STOW WIRE  
2 ADD 18 GA WIRE

Figure 8. Wiring Diagram - Sheet 8

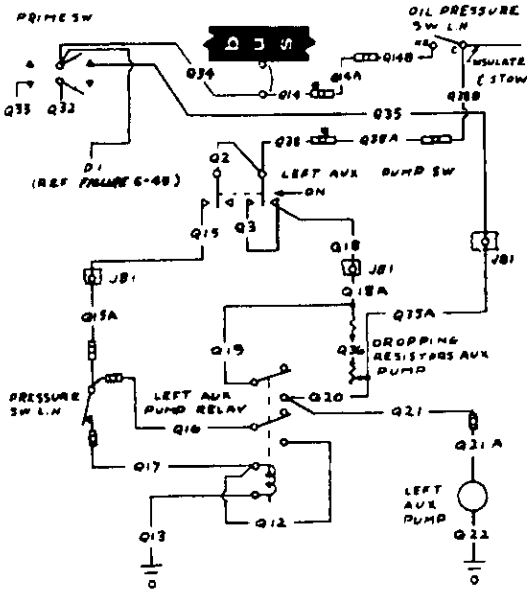




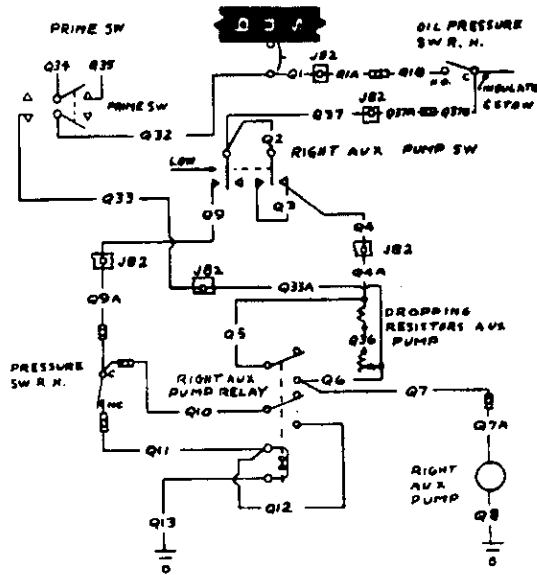
Left Hand  
310I0001 TO 310K0001



Right Hand  
310I0001 TO 310K0001



Left Hand  
310K0001 AND ON



Right Hand  
310K0001 AND ON

\*DISCONNECTS IN LEFT JUNCTION BOX  
\*\*MODEL 310I0001 TO 310J0001

Figure 6-33. Auxiliary Fuel Pump Circuit (Sheet 3 of 3)

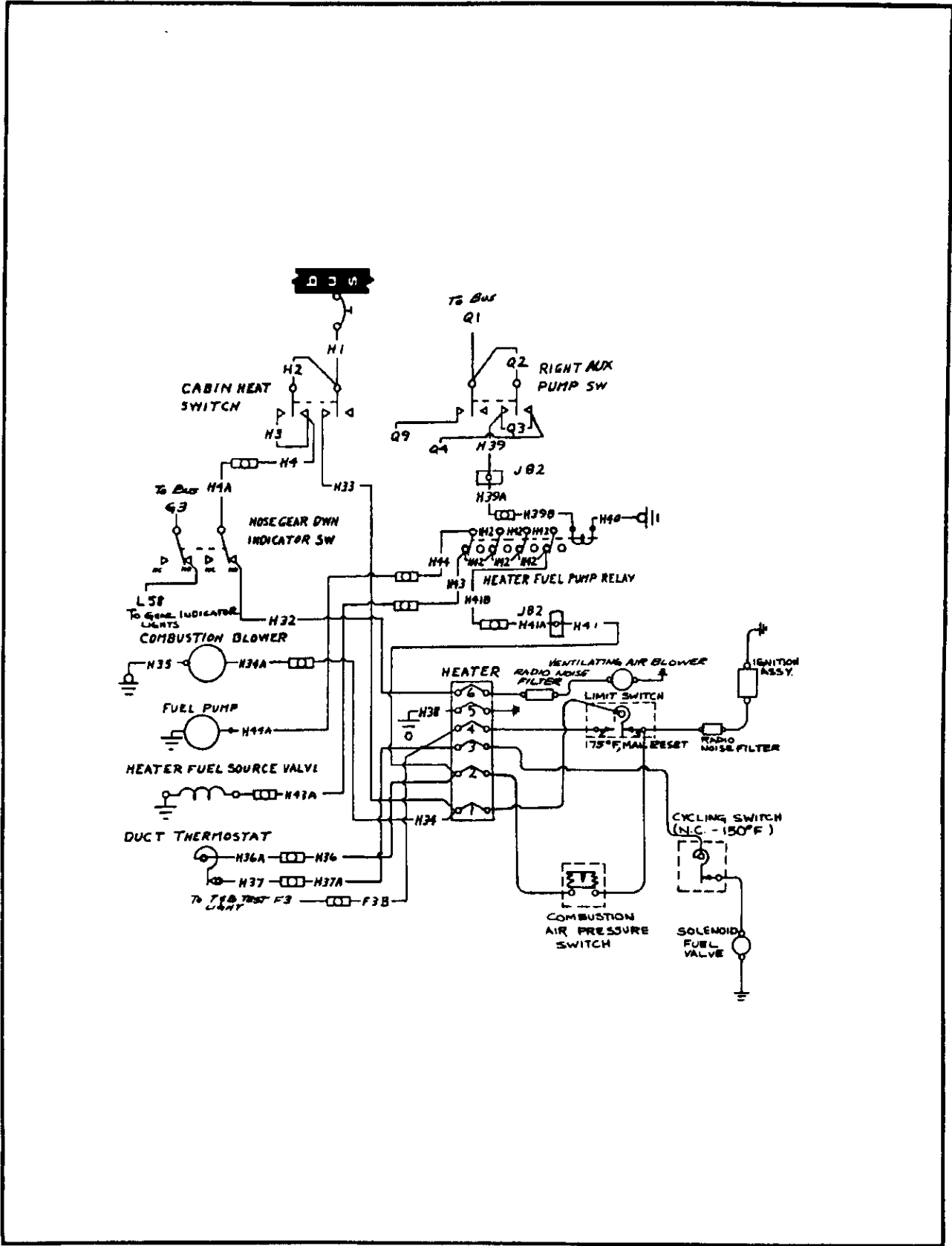


Figure 6-36. Heater Circuit (Sheet 2 of 3)

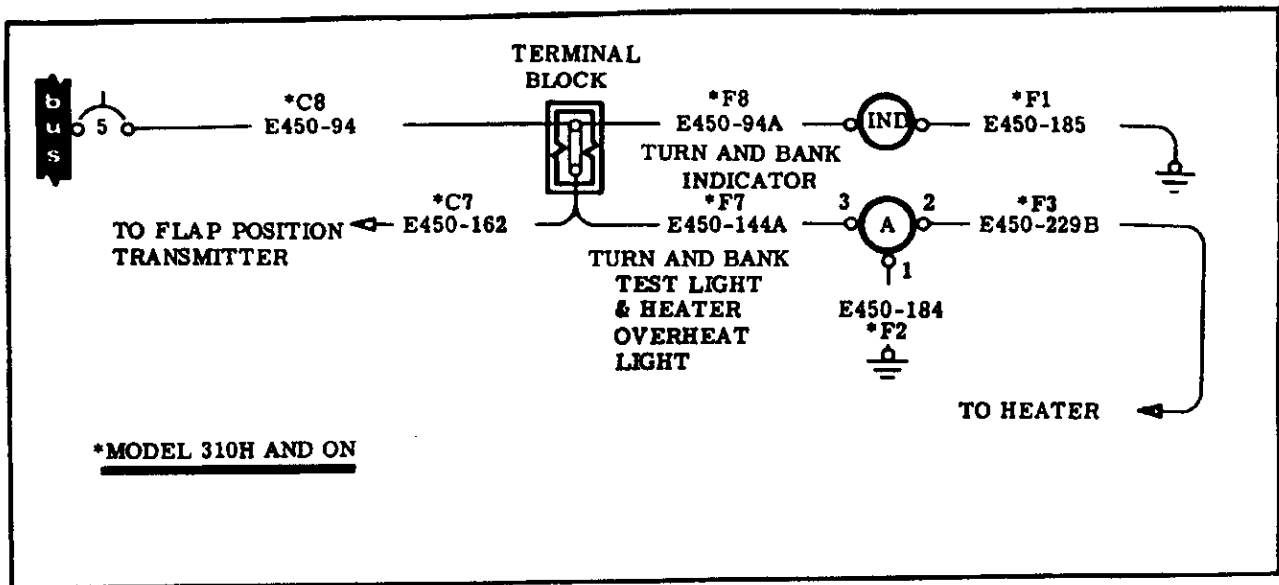


Figure 6-44. Turn and Bank Circuit

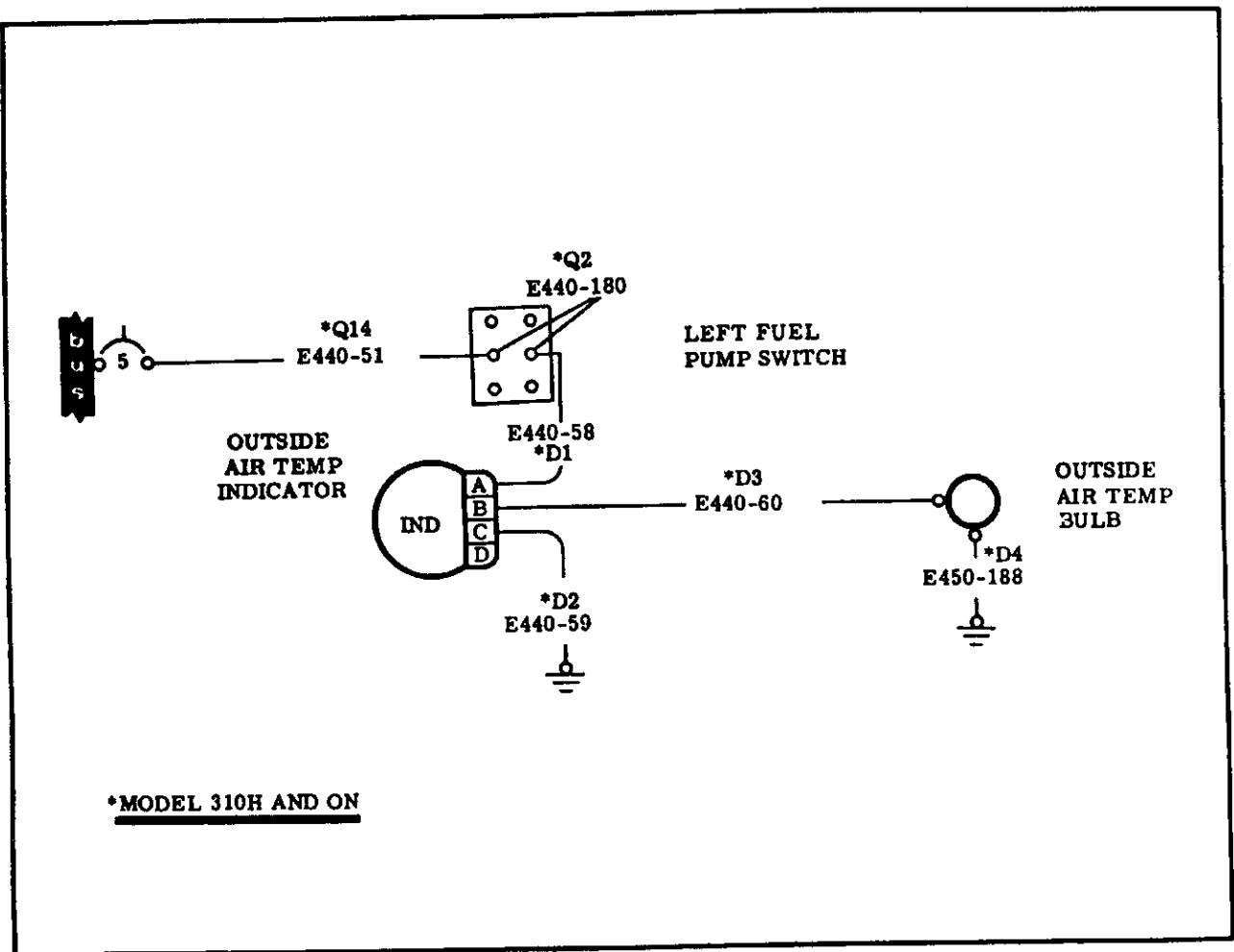


Figure 6-45. Outside Air Temperature Circuit