



HUGHES SERVICE INFORMATION NOTICE

NOTICE NO. N-112.1*

DATE 26 April 1976

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*Supersedes and Cancels Service
Information Notice No. N-112
dated 3 March 1974

SUBJECT: WIRING MODIFICATION - AUXILIARY FUEL PUMP, PN 269A8311-1
AND 269A8303-5

MODELS AFFECTED: Model 269A (TH-55A) Helicopter Serial No. 0315 thru 1110
Model 269C Helicopter Serial No. 0120 thru 0487
Model 269C Helicopter Serial No. 0004 thru 0119 equipped
with 24 vdc Electrical System, Kit M10068-1

TIME OF COMPLIANCE: At owners and operators discretion

PREFACE: The information given in this Service Information Notice lists a procedure for field modification of the subject auxiliary fuel pumps installed on the above affected helicopters. The modification consists primarily of replacing the existing two radio noise filters (and diode if installed) on the pump bell housing with a single capacitor of increased voltage rating to improve filter life. The modification is recommended if malfunction occurs with the dual-capacitor type pump.

REFERENCES

- 269 Series - Basic HMI, Issued 1 April 1973; Revision No. 3, 15 March 1975
- 269 Series - HMI Appendix A, Issued 1 April 1973
- 269 Series - HMI Supplement C, Issued 1 March 1973; Revision No. 2,
1 October 1974
- 269 Series - HMI Supplement TH-55A, Issued 1 September 1970; Revised
1 February 1972

CUSTOMER SERVICE DEPARTMENT • HUGHES TOOL COMPANY • AIRCRAFT DIVISION • CULVER CITY, CALIFORNIA

Hughes Helicopters

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PARTS LIST

<u>Nomenclature</u>	<u>Part No. or Description</u>	<u>Quantity</u>	<u>Manufacturer</u>
Capacitor	7JX2105	1	Sprague Electric No. Adams, Mass or HH
Tube	Vinyl Sleeving 0.375 ID x 0.025 x 0.750 (MIL-I-631)	1	Commercial or HH
Wire, 20 AWG, White	MIL-W-5086, Type II or MIL-W-16878, Type EE	AR	Commercial
Wire, 20 AWG, Black	MIL-W-5086, Type II or MIL-W-16878, Type EE	AR	Commercial
Grommet	MS35489-4 or equivalent	1	Commercial
Tubing, Heat Shrink	Kynar, Clear, 3/16 x 1.00	1	Rayclad Tubes
Knife Splice	32447	2	Commercial
Cord, Tying	MIL-C-572	1	Commercial
Strap, Cable	MS17821-2 0-4	1	Commercial

TOOLS AND EQUIPMENT

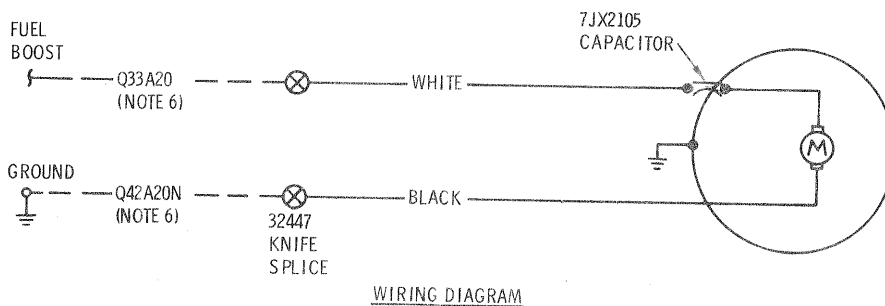
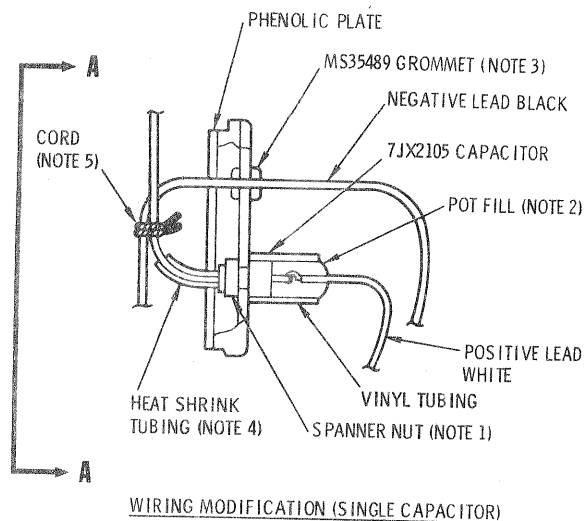
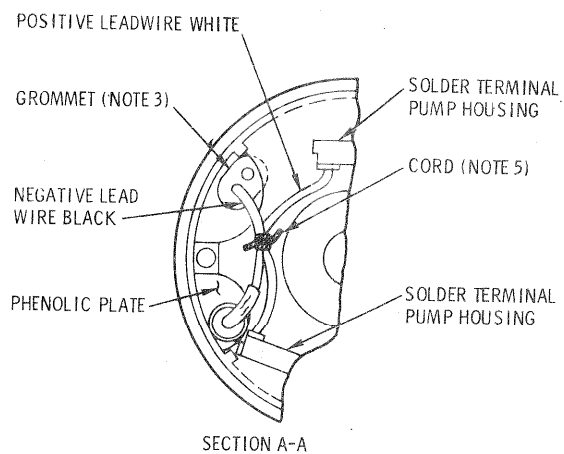
Soldering Iron	Commercial
Heat Sink (2)	Commercial

MATERIALS

Solder - QQ-S-571		Commercial
Isopropyl Alcohol		Commercial
Epoxy Adhesive	EC1838	3M Company
Sealer	PR1221	PRC Co., L.A.
Lockwire	MS20995N32	Commercial
Sealing Compound	Loctite #35	Loctite, Inc.
Methyl-ethyl-ketone	MEK	Commercial

MODIFICATION PROCEDURE

- a. Check that all electrical switches are OFF; be sure that MAGNETO switch is in OFF position.
- b. Close FUEL SHUTOFF valve.
- c. Disconnect electrical leads from pump at knife splices.
- d. Loosen and disconnect main fuel inlet and outlet lines from pump.
- e. Remove hardware securing pump to clamp on helicopter frame structure.
- f. Open the auxiliary pump motor and housing by removing two screws.
- g. Remove existing internal lead wires from solder terminals in pump housing.
- h. Saw or split potted tubing on end cover and remove existing two capacitors; discard capacitors, diode (if installed) and lead wiring.
- i. Clean end cover with alcohol and install new capacitor (see Figure 1); secure capacitor with spanner nut and seal in place with Loctite sealing compound.
- j. Solder 20 AWG white wire (8.0 ± 0.25 inches long) to outer terminal of capacitor for external lead. Avoid excessive heat when soldering. Solder 20 AWG white wire (1.63 ± 0.13 inches long) to other capacitor terminal for internal lead. Heat shrinkable tubing at solder connection, as shown.
- k. Clean capacitor and terminal with MEK to remove dirt, grease, etc; position vinyl tubing as potting mold in place over capacitor and pot fill with epoxy EC1838.
- l. Install grommet in hole in end cover as shown; insert end of new 20 AWG black ground wire (approximately 12.0 inches long) through grommet and connect at solder terminal in pump housing, as shown.
- m. Attach 20 AWG white internal lead wire from capacitor to other solder terminal in pump housing.
- n. Tie internal lead wires with cord as shown.



NOTES:

1. SEAL IN PLACE WITH LOCTITE SEALING COMPOUND.
2. POT FILL WITH EPOXY EC1838.
3. SEAL GROMMET AND GROUND WIRE IN PLACE WITH PRI221 SEALANT.
4. HEAT SHRINKABLE TUBING AT LOCATION SHOWN.
5. SECURE INTERNAL LEADS WITH CORD.
6. HELICOPTER WIRING.

Figure 1. Wiring modification — auxiliary fuel pump

- o. Seal grommet and black ground wire in place on end cover with PR1221 sealant.
- p. Check wiring modification and capacitor installation for discrepancies and completeness.
- q. Reinstall pump housing end cover with existing screws.
- r. Perform an operational check of the pump, with black ground wire connected to negative side of 24 vdc power source.

CAUTION

Do not operate pump longer than a few seconds, or damage to pump can occur.

- s. Reinstall pump on helicopter; reconnect fuel lines; connect external lead wiring to helicopter wiring, using knife splices.
- t. As applicable, install jumper cable at housing end cover; lockwire attaching screws.
- u. Record wiring modification of auxiliary fuel pump per this Notice in Components Record of helicopter Log Book.

WEIGHT AND BALANCE DATA

Weight and balance not affected.

