



HUGHES SERVICE INFORMATION NOTICE

NOTICE NO. HN-145, 2*

DATE 4 May 1981

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*Supersedes Service Information Notice
No. HN-145, 1, dated 12 October 1979

MANDATORY

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SUBJECT: 100-HOUR PERIODIC INSPECTION - FUEL TANK SENDING UNIT AND
FUEL LOW WARNING LIGHT INDICATING SYSTEM

MODELS AFFECTED: All 500 Model 369H Series Helicopters

TIME OF COMPLIANCE: Shall be accomplished at each 100-Hour Periodic
Inspection interval

PREFACE: Part I of this Service Information Notice lists instructions for a periodic
inspection to check for security and condition of the fuel tank sending unit,
and for proper operation of the fuel low warning light indicating system.

Part II of this Notice provides instructions for bench testing as well
as rework of the fuel tank sending unit if inspection reveals voids
between potting compound and unit mounting plate, or dimness/
erroneous actuation of the fuel low level warning light.

Part III of this Notice provides instructions for resealing the fuel tank
sending unit on 369HE and 369HS commercial helicopters, if potting
compound RTV732 was applied to the fuel tank sending unit per instructions
in the original issue of this Notice.

It is to be noted that early Model 369HE and 369HS helicopters may not
have potting compound applied over terminals of the fuel tank sending unit.
Instructions for potting these units are provided in this Notice.

Reference

- 500 Series - Basic HMI, Issued 1 October 1972; Revision No. 8, 1 December 1980
- 500 Series - HMI Appendix B, Issued 1 October 1972; Revision No. 6, 1 August 1976

() Denotes portion of text added or revised.

Customer Service Department



MATERIALS

*Potting compound	MIL-S-8802	PR1422	Product Research
**Potting compound	MIL-S-7502	PR1221	Product Research
***Potting compound		RTV730	Dow Corning
Solvent		M114M	John B. Moore Inc.
Naptha, Aliphatic, Type II	TT-N-95		Commercial
Alcohol, Isopropyl	TT-I-735A		Commercial

TOOLS AND EQUIPMENT

Heat Gun or Oven
 Probe, pointed - wood or plastic

PART I - 100-HOUR PERIODIC INSPECTION

- a. Remove left side fuel cell access door (Section 2, Basic HMI).
- b. Check fuel tank sending unit, electrical terminals and wiring for security and condition; check wiring harness between tank unit and instrument cluster.
- c. If potting compound has not been applied on sending unit mounting plate around terminals, pot tank unit as follows:

1. PR1422 potting compound:

- (a) Clean area by wiping with clean cloth moistened with solvent.

NOTE

PR1422 is available in a plastic cartridge or a two component kit. Mix kit components per steps (b) and (c) below.

- (b) Measure desired amount of base component into container and add required amount of curing agent.
- (c) Mix with spatula for 3 to 5 minutes.

*For 369HE and 369HS Helicopters (PR1221 may be used as an alternate in Part I and Part II only)

**For 369HM Helicopters

***Part III only



- (d) Apply potting compound to tank unit as shown in Figure 1, Detail A.
 - (e) Cure until tack-free to touch.
2. PR1221 potting compound:

WARNING

Naptha is a moderate fire hazard when exposed to heat or flame. Flash point 100° F (37.7° C).

- (a) Clean area by wiping with Kimwipe moistened with Aliphatic Naptha.
- (b) Mix by weight, 10 parts white base compound and 1 part red-brown accelerator to uniform light brown color.
- (c) Apply mixed compound to tank unit as shown in Figure 1, Detail A or Detail C.
- (d) Cure for 36 hours minimum before being handled and 72 hours minimum before applying load.

d. Using flashlight and pointed probe (wood or plastic), inspect interface of potting compound and sending unit mounting plate for voids. Pay particular attention to area around terminal screws (see Detail A, Figure 1). If any voids are noted, perform Part II of this Notice.

NOTE

Troubleshooting is accomplished with electrical power ON, circuit breaker in (reset) and CAUTION and WARNING lights set at BRT.

e. IF FUEL LOW warning light is ON or GLOWS when fuel level is above the low level mark, perform Part II test of this notice.

f. Apply fault (ground) input to terminal No. 2 on sending unit (see Figure 1). Check that lamp illuminates properly when fault input is applied. If lamp does not come on or does not illuminate properly, check wiring between terminal No. 2 and CB104-2 circuit breaker and make corrections.

g. Reinstall fuel cell access door (if Part II of this Notice is not to be accomplished).

h. Record compliance with Part I of this Notice in Compliance Record of helicopter Log Book.

PART II - BENCH TEST AND REWORK OF FUEL
TANK SENDING UNIT

WARNING

When performing maintenance of fuel system components, comply with all applicable safety precautions to avoid possibility of fuel vapor ignition and fire. Prior to maintenance always turn OFF all electrical power; make sure helicopter is grounded (Section 2, Basic HMI); disconnect external power source and disconnect battery (Section 17, Basic HMI).

a. Remove fuel tank sending unit (Section 17, Basic HMI); refer to safety precautions noted above.

b. Dry top of sending unit with heat gun or oven for one hour at 100° F.

c. Bench test sending unit per Section 17, Basic HMI; replace unit as required.

d. For 369HE and 369HS commercial helicopters only, perform the following (see Figure 1, Detail D and Detail E):

1. Tighten NAS671-6 nut to hold 369A4245-3 bracket firmly in position.
2. Disconnect and lift No. 46 ground terminal lug away from mounting plate flange; hold float arm at full position.
3. Resistance measured from -3 bracket to flange shall be greater than 2 megohms.

e. Apply potting compound to seal voids, as applicable (refer to Part I, Step c for mixing and application of potting compound).

f. Reinstall fuel tank sending unit; torque screws to 12 to 15 inch-pounds. Do not overtighten screws as this may warp mounting plate flange.



- g. Recheck electrical circuitry, per Part I of this Notice.
- h. Reinstall fuel cell access door.
- i. Record compliance with Part II of this Notice in Compliance Record of helicopter Log Book.

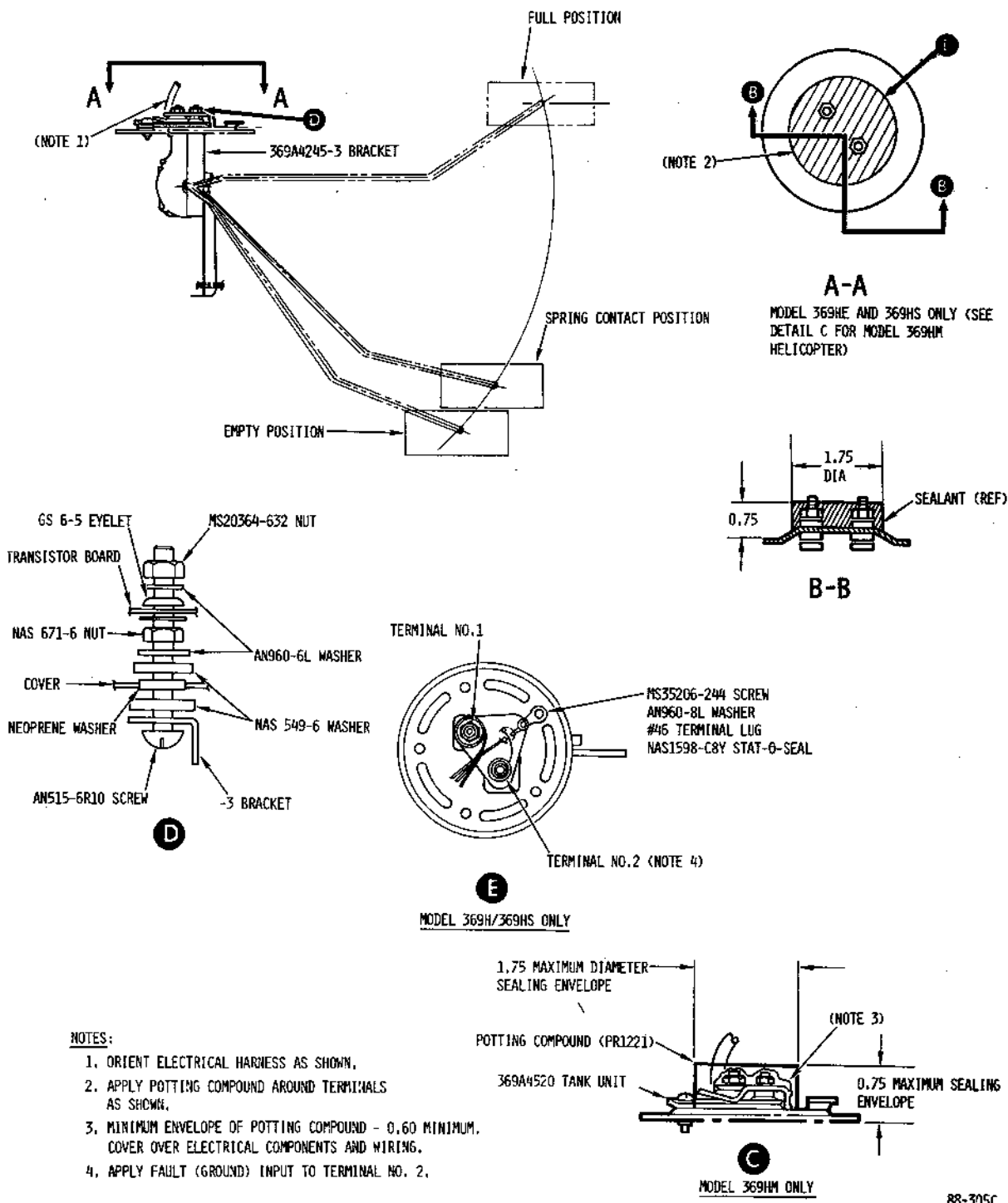
PART III - RESEAL OF FUEL TANK SENDING UNIT

- a. Remove left side fuel cell access door (Section 2, Basic HMI).
- b. Remove existing RTV732 potting compound by scraping with dull knife or plastic spatula and then wipe with alcohol.
- c. Mix and apply RTV730 potting compound per manufacturer's instructions to fuel tank sending unit. (See Figure 1, Detail A)
- d. Cure at ambient temperature for 48 hours.
- e. Reinstall fuel cell access door.
- f. Record compliance with Part III of this Notice in Compliance Record of helicopter Log Book.

WEIGHT AND BALANCE DATA

Weight and balance not affected.

FAA/DER APPROVED 13 May 1981



- NOTES:**
1. ORIENT ELECTRICAL HARNESS AS SHOWN.
 2. APPLY POTTING COMPOUND AROUND TERMINALS AS SHOWN.
 3. MINIMUM ENVELOPE OF POTTING COMPOUND - 0.60 MINIMUM. COVER OVER ELECTRICAL COMPONENTS AND WIRING.
 4. APPLY FAULT (GROUND) INPUT TO TERMINAL NO. 2.

88-305C

Figure 1. Bench Test and Potting of Fuel Tank Sending Unit

REFERENCE SHEET

SERVICE INFORMATION NOTICES AND LETTERS

Action Reference: When performing maintenance or inspection of fuel tank sending unit or fuel low warning light indicating system, refer to Service Information Notice No. HN-145.2.

HMI Reference: Insert this sheet in Basic HMI, Section 17, page 17-25.

This reference sheet shall be kept as a part of the manual until the data is incorporated at the next revision of the Basic HMI. (Refer to Service Information Summary, Basic HMI, page i.)



REFERENCE SHEET

SERVICE INFORMATION NOTICES AND LETTERS

Action Reference: When performing inspection or maintenance of fuel tank sending unit or fuel low warning light indicating system, refer to Service Information Notice No. HN-145. 2.

HMI Reference: Insert this sheet in HMI Appendix B, Table B-3, Page 2-18.

This reference sheet shall be kept as a part of the manual until the data is incorporated at the next revision of HMI Appendix B. (Refer to Service Information Summary, HMI Appendix B, page i.)