



# HUGHES SERVICE INFORMATION NOTICE

NOTICE NO. N-137.1\*

DATE 18 June 1976

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FAA APPROVED

Supersedes Service Information Notice  
No. N-137, dated 22 April, 1976

MANDATORY

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**SUBJECT:** WIRING MODIFICATION - WET/DRY AG KIT, PN 269A4153,  
269A4153-3, 269A4153-5

**MODELS AFFECTED:** All Model 269 Series Helicopters equipped with subject  
Wet/Dry Ag Kit

**TIME OF COMPLIANCE:** Shall be accomplished within next 100 hours of helicopter  
operation with subject Wet/Dry Ag Kit installed

**PREFACE:** The information given in this Service Information Notice lists a procedure  
to incorporate improved applicator relays and provide improved circuit  
protection for the actuator power supply and dump control circuits.

The modification consists primarily of (1) installing two single applicator  
relays in place of the double relay, (2) replacing all existing No. 12 wir-  
ing with No. 10 wiring, and (3) relocating the No. 20 dump valve control  
wire to the 7.5 ampere clutch circuit breaker.

A precautionary note is also included to ensure proper utilization of the  
AG Applicator ON-OFF switch and obtain optimum service life for the  
relays and/or the valve motors.

The information provided in this Notice is to be considered a part of the  
HMI, and will be incorporated in the next scheduled revision to the below  
referenced HMI Appendix A, applicable Owners Manual Supplements, and  
Ag Kit Installation Instructions.

▮) Denotes portion of text added or revised

Customer Service Department

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### REFERENCES

269 Series - Basic HMI, issued 1 October 1972; Revision No. 3,  
15 March 1975

269 Series - HMI Appendix A, issued 1 April 1973

Flight Manual Supplement (269A, 269A-1, 269B, 269C, as applicable)  
Rotorcraft Combination Dispersal Ag Kit, PN 269A4153, 269A4153-3,  
269A4153-5

Installation Instructions - Combination Wet/Dry Ag Kit, PN 269A4153-  
(Basic) -3 and -5, Reissued 1 September 1975; Revised 15 April 1976

### TOOLS AND EQUIPMENT

Iron, soldering

Commercial

### MATERIALS

Insulation varnish  
(Staking compound)

Glyptal,  
blue

General Electric  
Insulation Department  
Schenectady, NY

Solder, tin alloy

QQ-S-571

Commercial

Cord, tying

Koroseal

B. F. Goodrich or  
equivalent

### PARTS LIST

<u>Nomenclature</u>	<u>Part Number</u>	<u>Quantity</u>	<u>Manufacturer</u>
*Relay, Single (SPST)	SAW4406	2	Delco
**Relay, Single (SPST)	269A4837	2	HH
Wire, 10GA, red	M/5086/2-10 (MIL-W-5086)	AR	Commercial
Wire, 10GA, blue	M/5086/2-10 (MIL-W-5086)	AR	Commercial
Wire, 10GA, green	M/5086/2-10 (MIL-W-5086)	AR	Commercial

\*For 24 vdc electrical system only

\*\*For 12 vdc electrical system only

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### PARTS LIST

<u>Nomenclature</u>	<u>Part Number</u>	<u>Quantity</u>	<u>Manufacturer</u>
Wire, 10GA, black	M/5086/2-10 (MIL-W-5086)	AR	Commercial
Clamp	MS21104-12	1	Commercial
Bolt	AN3-5A	1	Commercial
Washer	AN960-10	1	Commercial
Nut	MS21042-3	1	Commercial

### PROCEDURE - WIRING MODIFICATION

- a. Check all cockpit electrical switches for OFF condition.

#### CAUTION

Pay particular attention to MAG switch.

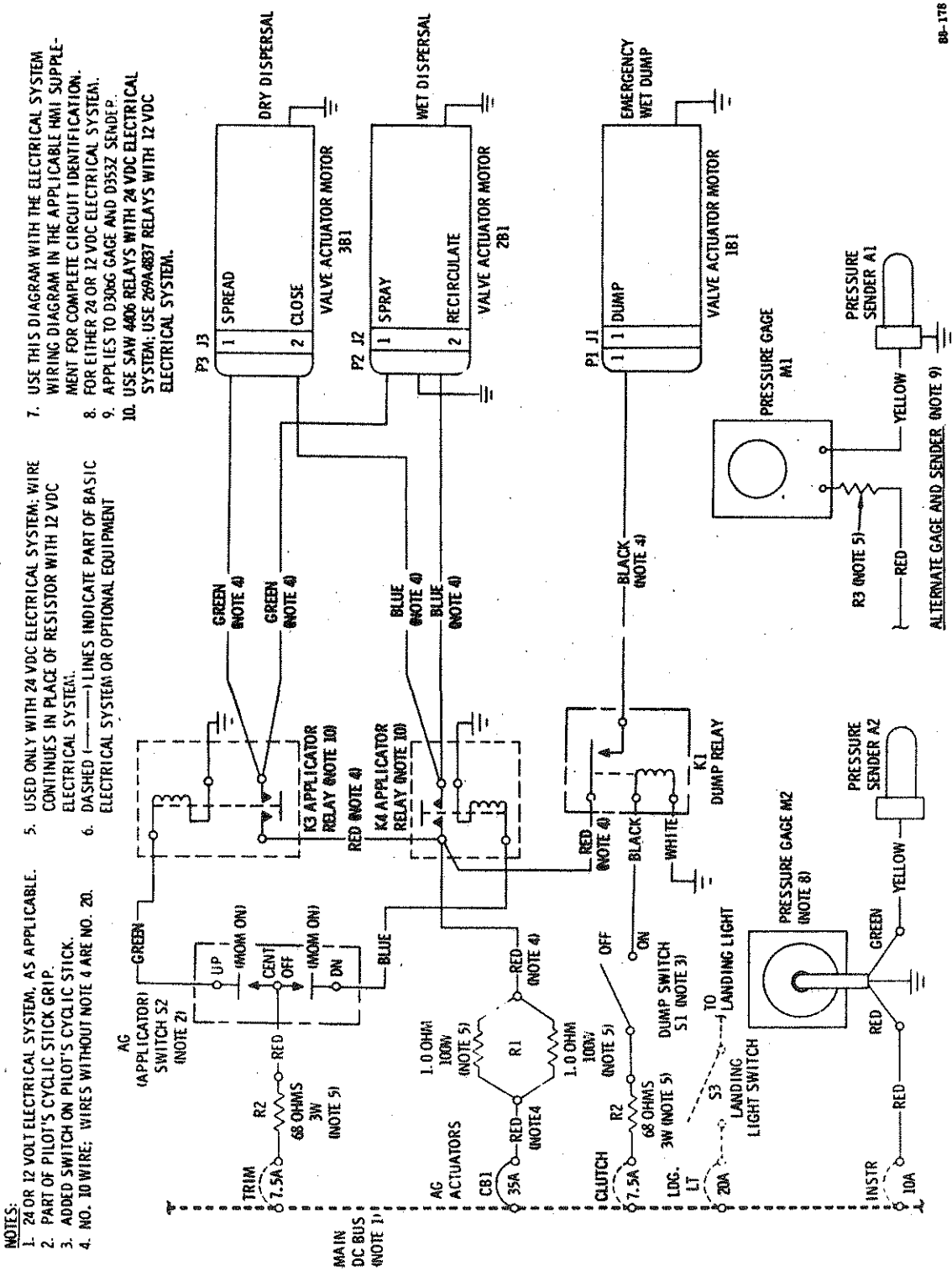
- b. Disconnect battery from battery posts; identify cables for reinstallation purposes.
- c. Remove lower forward fairing; cover engine air intake opening.
- d. Remove hardware securing existing HR301 double relay (applicator relay K2) to helicopter center frame tube. Retain attaching hardware.
- e. Disconnect all electrical wiring at removed relay K2.
- f. Install two new single relays (applicator relays K3 and K4) at same location on helicopter frame tube in tandem below existing dump relay K1, using clamps, bolts, washers and nuts, as shown in Figure 2.

#### NOTE

Relocate existing dump relay K1 upwards on frame tube, as required, to accommodate installation of two new relays. Ensure that relays are electrically bonded (grounded) and firmly secured to center frame by attaching hardware.

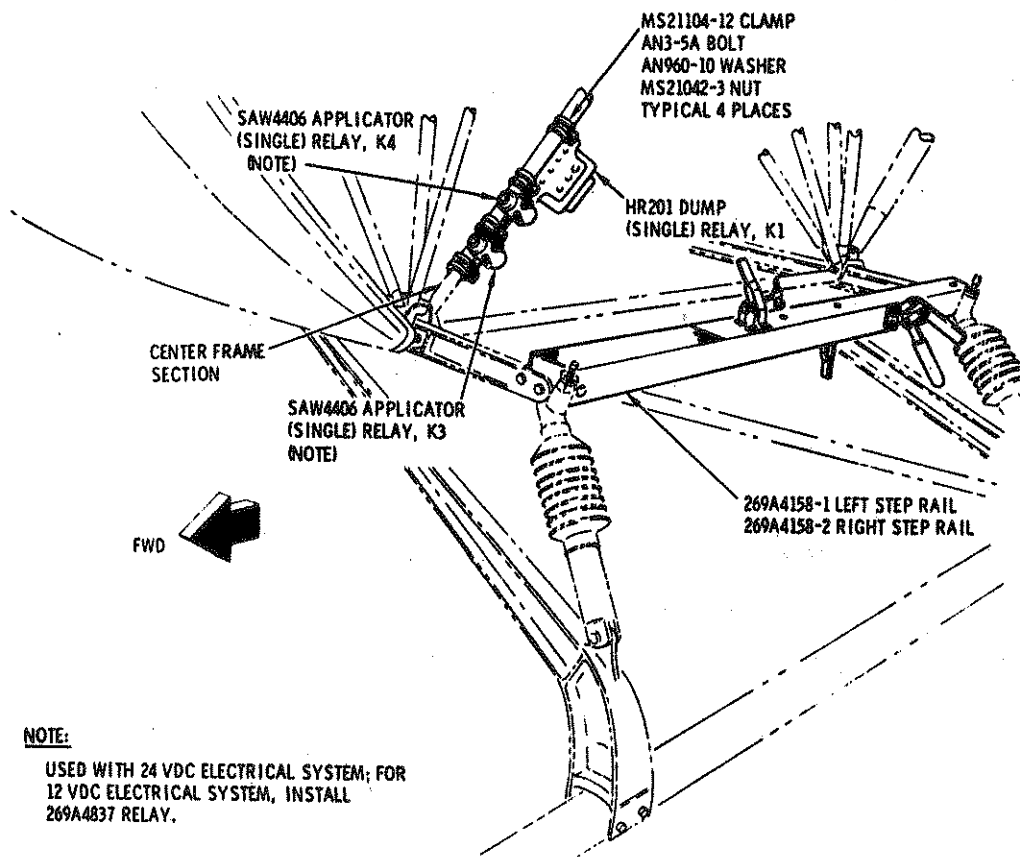
- g. Connect applicator relays K3 and K4 to valve motor receptacles P2 and P3 with new 10GA green and blue wiring. (See Figure 1.)

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Figure 1. Combination wet/dry Ag dispersal system - wiring modification



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Figure 2. Installation of Ag applicator single relays K3 and K4

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- h. Connect K4 relay to Ag actuator circuit breaker CBI with new 10GA red wiring (install resistor R1 for 24 vdc electrical system).
- i. Connect K4 relay to dump relay K1 with new 10GA red wire.
- j. Replace existing 12GA black wire from dump relay K1 to valve motor receptacle P1 with new 10 GA black wire.
- k. Connect K3 relay to K4 relay with 10GA red wire; connect existing 20GA wires from Ag switch S2 to new applicator relays K3 and K4, as shown.
- l. Disconnect black control wire (or resistor R2, as applicable) from landing light circuit breaker; reconnect black control wire or resistor R2, as applicable, to clutch circuit breaker.
- m. Check wiring modification for discrepancies and completeness.
- n. Reconnect helicopter battery; remove cover from engine air intake opening; reinstall lower forward fairing.

NOTE

When operating AG Applicator ON-OFF switch, hold toggle switch in UP position (or DOWN position) only long enough to obtain full throw of valve by actuator motor. Normal valve actuation time is approximately 3 to 4 seconds. Holding toggle switch in UP or DOWN position in excess of normal actuation time will shorten life of actuator relays and/or valve actuator motors.

- o. Perform operational check of Ag kit electrical system.
- p. Record modification of Ag kit electrical system per this Notice in Components Records of helicopter Log Book.

----- (Tear Along Dotted Line)-----

TO: Hughes Helicopters . Centinella & Teale Streets . Culver City, Ca 90230

Attention: Customer Service Department Date \_\_\_\_\_  
Bldg 15, T206

This is to certify that compliance with Hughes Service Information Notice No. N-137 (or subsequent revision) has been completed on Model (circle Model) 269A/269A-1/269B/269C Helicopter Serial No. \_\_\_\_\_  
(circle Model) 269A/269A-1/269B/269C Helicopter Serial No. \_\_\_\_\_  
(circle Model) 269A/269A-1/269B/269C Helicopter Serial No. \_\_\_\_\_

(Signature) \_\_\_\_\_ (Owner/Operator) \_\_\_\_\_

(City/State) \_\_\_\_\_ (Country) \_\_\_\_\_