



**HUGHES
SERVICE INFORMATION
NOTICE**

NOTICE NO. N-136

DATE 1 March 1976

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SUBJECT: LONGITUDINAL CYCLIC TRIM ASSEMBLY - INSTALLATION
OF LIMIT SWITCH

MODELS AFFECTED: 269A (TH-55A) Helicopter Serial No. 0315 thru 0339
269C Helicopter Serial No. 0120 thru 0409
269C Helicopter Serial No. 0004 thru 0119 equipped
with Modification Kit M10068 (Conversion to 24V
Electrical System)

TIME OF COMPLIANCE: At owners and operators discretion

PREFACE: The information given in this Service Information Notice lists a procedure for installation of a limit switch and actuator assembly, to provide automatic electric stop control for the longitudinal trim assembly and eliminate the possibility of overriding and jamming the unit. Installation of the limit switch and actuator is applicable to the above referenced helicopters equipped with a 24V electrical system.

Reference

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

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PARTS LISTS

<u>Nomenclature</u>	<u>Part No.</u>	<u>Qty</u>	<u>Mfr</u>
Switch, limit	V3-1	1	MicroSwitch Co. Freeport, Ill.
Actuator	JV-7	1	MicroSwitch Co. Freeport, Ill.
Spacer	269A7192-7	1	HH
Screw	AN515-4R16	2	Commercial
Nut	MS21042-04	2	Commercial
Washer	AN960PD4L	2	Commercial
Splice	32445	AR	Commercial
Terminal	MS25036-102	AR	Commercial
Wire, 20GA	M/5086/2-20, (MIL-W-5086 Type II)	AR	Commercial
Lacing, Tying (Koroseal)		AR	B. F. Goodrich

PROCEDURE

NOTE

Refer to Basic HMI and applicable HMI Configuration Supplement.

- a. Remove pilot seat assembly, upholstery, etc to gain access to work area.
- b. Using trim control switch on cyclic stick grip, rotate longitudinal cyclic trim arm stop away from angle on mounting plate.
- c. Check that all electrical switches for OFF condition; pay particular attention to MAG switch.
- d. Remove longitudinal trim assembly from helicopter, per basic HMI.
- e. Remove existing angle from mounting plate; discard angle and attaching hardware.
- f. Install new spacer, limit switch and actuator on mounting plate, as shown in Figure 1.
- g. Connect limit switch wiring as follows (Refer to Wiring Diagram, Figure 2, and applicable HMI Configuration Supplement):

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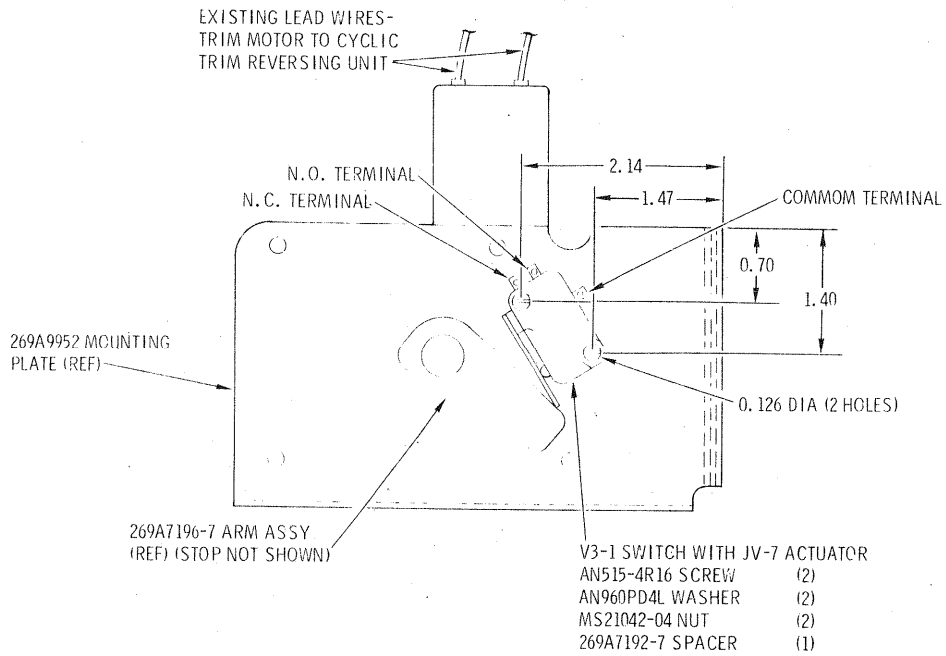
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1. Disconnect red wire from trim motor at existing splice under pilot seat structure; connect red wire from trim motor to limit switch common terminal. (See Figure 1.)
 2. Connect new 20GA wire to limit switch N. C. terminal; connect other end of wire (length as required) to splice at existing wire lead (C14A20 or C43A20, as applicable) to cyclic trim reversing unit.
 3. Connect new 20GA ground wire to limit switch N. O. terminal; cut and splice ground wire at same location as splices for wiring for 1. and 2. above. Connect end of wire (length as required) at ground stud on helicopter structure (ground stud just below TB-1 between seat assemblies is recommended).
- h. With electrical power on, check clockwise and counterclockwise operation of longitudinal cyclic trim arm and stop; ensure that limit switch is positioned so that contact with arm stop and actuator will stop the trim motor and limit travel of the arm stop.
- i. Reinstall longitudinal trim assembly, per basic HMI.
- j. Reinstall pilot seat assembly and other removed components, as applicable.
- k. Record incorporation of limit switch in longitudinal cyclic trim assembly, per this Notice, in Component Record of helicopter Log Book.

WEIGHT AND BALANCE DATA

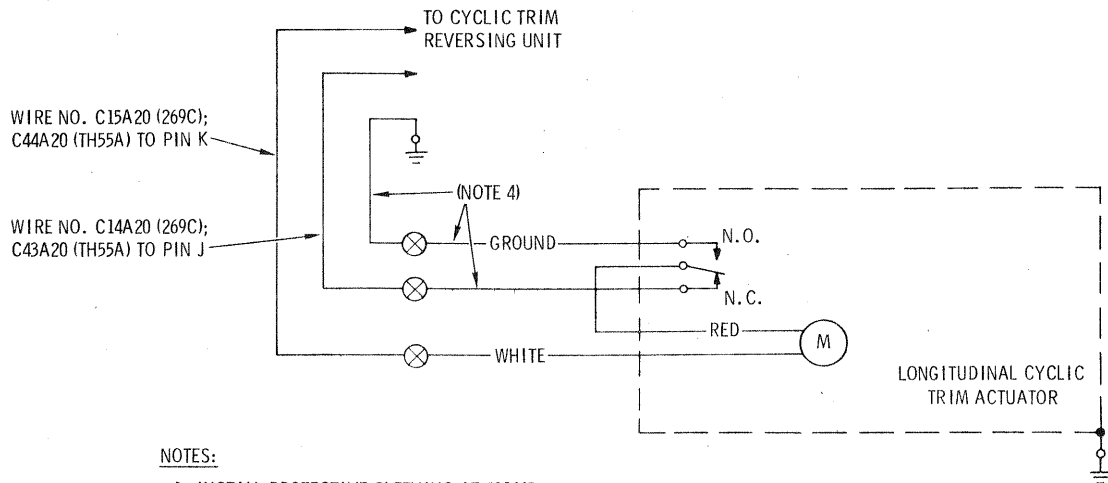
Weight and balance not affected.



NOTE:
 ALL DIMENSIONS IN INCHES.

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Figure 1. Installation of Longitudinal Cyclic Trim Limit Switch



- NOTES:
1. INSTALL PROTECTIVE SLEEVING AT #32445 SPLICE, THREE PLACES.
 2. INSTALL MS25036-102 WIRE TERMINALS AT LIMIT SWITCH AND GROUND STUD.
 3. ROUTE AND TIE THE NEW WIRING TO EXISTING WIRING HARNESS.
 4. NEW 20GA WIRING.

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Figure 2. Wiring Diagram - Limit Switch Installation,
 Longitudinal Cyclic Trim Assembly