



**HUGHES
SERVICE INFORMATION
NOTICE**

NOTICE NO. N-25
DATE November 1, 1967
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SUBJECT: BRACKET INSTALLATION - SCROLL ASSEMBLY

MODELS AFFECTED: All 269A, 269A-1, 269A-2 & 269B Helicopters.

TIME OF COMPLIANCE: At owners and operators discretion.

PREFACE:

The information given in this Service Information Notice lists a procedure to provide shock mounting of the scroll to the engine. Shock mounting the engine scroll materially reduces engine induced vibrations in the aircraft by isolating the weight of the scroll and oil cooler from that of the engine. In addition, the possibility of vibration induced cracks in the scroll and oil cooler mounting flanges is minimized.

It is noted that Scroll Assembly Bracket Kit Part No. M10016 includes installation hardware required for all 269 Series Helicopters. A parts breakdown is provided to identify hardware required, according to individual aircraft model and serial number, engine model and serial number, and electrical source installed. Use parts specified per installation number; remaining parts may be discarded.

Reference

269A/A-1 Handbook of Maintenance Instructions, Revised 1 March 1967
TH-55A HMI Addendum, Revised 1 October 1967
269B Handbook of Maintenance Instructions, Revised 15 August 1967

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

PARTS INSTALLATION BREAKDOWN FOR
 BRACKET KIT PART NUMBER M10016

INSTALLATION NO. AND QTY. REQ'D.			PART NUMBER	NOMENCLATURE
No. 1	No. 2	No. 3		
-	1	1	HS13D435-388-185	Bushing
3	3	3	HS626-4-313	Bushing
1	-	-	HS13D625-377-400	Bushing
-	1	1	HS13D625-315-212	Bushing
AR	AR	AR	AN960-616L	Washer
2	2	2	AN960-616	Washer
1	3	3	AN960-516	Washer
3	3	3	AN960PD416	Washer
1	-	-	AN381-3-14	Pin
-	1	1	AN381-2-12	Pin
1	-	-	AN310-6	Nut
-	1	1	AN310-5	Nut
1	-	-	AN6-35	Bolt
-	1	1	AN6-10A	Bolt
-	1	1	AN5-14	Bolt
3	3	3	AN4-16A	Bolt
-	1	1	AN3-7A	Bolt
-	2	2	AN960PD10	Washer
-	1	1	MS21042-6	Nut
3	3	3	MS21042-4	Nut
AR	AR	AR	MS20095N32	Lockwire
1	1	1	MS20074-05-06	Bolt
-	1	1	MS21042-3	Nut
1	1	1	269A8583	Bracket Ass'y.
2	2	2	269A8581	Bracket Ass'y.
1	1	1	269A8586	Bracket
1	1	1	269A8585-5	Bracket
1	1	1	269A8585-3	Bracket
-	-	1	M10016-7	Bracket
-	1	-	M10016-5	Bracket

Installation No. Vs. Aircraft Model Effectivity As
Controlled By Engine & Electrical Source Installed

Installation No. 1

<u>Acft. Model & Serial No.</u>	<u>Engine Model & Serial No.</u>	<u>Electrical Source</u>
269A, 0315 & subs.	Not applicable	Alternator
269A-1, 0040 & 0041.	Not applicable	Alternator
269A-2, 0001 and subs.	Not applicable	Alternator
269B, 0001 and subs.	Not applicable	Alternator

Installation No. 2

269A, 0011 thru 0314.	HO360 Series, all.	Generator
269A-1, 0001 thru 0039.	HIO360B1A or B1B with serial no. prior to L-1068-51A	Generator

Installation No. 3

269A*	HIO360B1A or B1B S/N L-1068-51A and subs.	Generator
269A-1*	HIO360B1A or B1B S/N L-1068-51A and subs.	Generator

*Model Serial No. replaced by an asterisk, cover 269A or A-1 aircraft with late serial numbered engine installed. When a 269A, S/N 0011 -- 0314 or 269A-1 have been converted to use an alternator, use Installation No. 1.

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- a. Remove, clean and inspect scroll assembly, per HMI.

NOTE

Removal and installation of scroll assembly are best accomplished with the power plant assembly removed from the aircraft.

- b. Remove and discard existing scroll brackets.
- c. Assemble 8581 and 8585-3 brackets, per Section A-A, Figure 1.
- d. Assemble 8581 and 8585-5 brackets, per Section B-B.
- e. Assemble 8583 and 8586 brackets, per Detail D, Figure 2.
- f. Install 8583 bracket assembly to lower scroll mounting.
- g. Install 8581 bracket assemblies to upper right and upper left scroll mountings.
- h. Position scroll assembly on drive shaft end of engine.
- i. Attach 8585-3 and 8585-5 brackets to studs on engine hanger assembly. (Timing bracket also installed on inboard studs).
- j. For Installation No. 1, install 8586 bracket assembly to alternator and lower engine mounting, per View C-C.
- k. For Installation Nos. 2 and 3, assemble applicable -5 or -7 bracket to 8586 bracket and install -5 or -7 bracket assembly to generator and lower engine mounting, per Views D and E-E.

NOTE

If necessary, shim between bracket and bushing, per View C-C or E-E, using AN960PD616 or AN960PD616L washers.

- l. With MAG switch at "OFF", disconnect four lower spark plug leads; remove spark plugs. Rotate impeller assembly by hand as required to obtain clearance.

- m. Check clearance 360 degrees between inner lip of scroll assembly and aft edge of impeller blades (+ 0.010 to + 0.080 inches). See Figure 3-16, 269A/A-1 HMI or Figure 3-14, 269B HMI.
- n. Check clearance 360 degrees between forward lip of scroll and flywheel weight assembly (+ 0.010 inch minimum).
- o. Slowly rotate impeller assembly by hand a minimum of 720 degrees; listen for audible evidence of chafing.

NOTE

Mounting bracket holes are elongated, providing adjustment of scroll assembly to obtain proper clearance.

- p. Torque upper and lower mounting bracket bolts.
- q. Repeat steps m. through o.
- r. Install and connect four lower spark plugs.
- s. Position two flexible connectors (left-and right-hand sides) between engine shroud and scroll flange.
- t. Install two band clamps, bolts, nuts and washers (left-and right-hand sides) securing shroud to scroll connector.
- u. Make thorough visual inspection of scroll assembly installation.

Weight & Balance Data

Weight and arm changes are not affected.

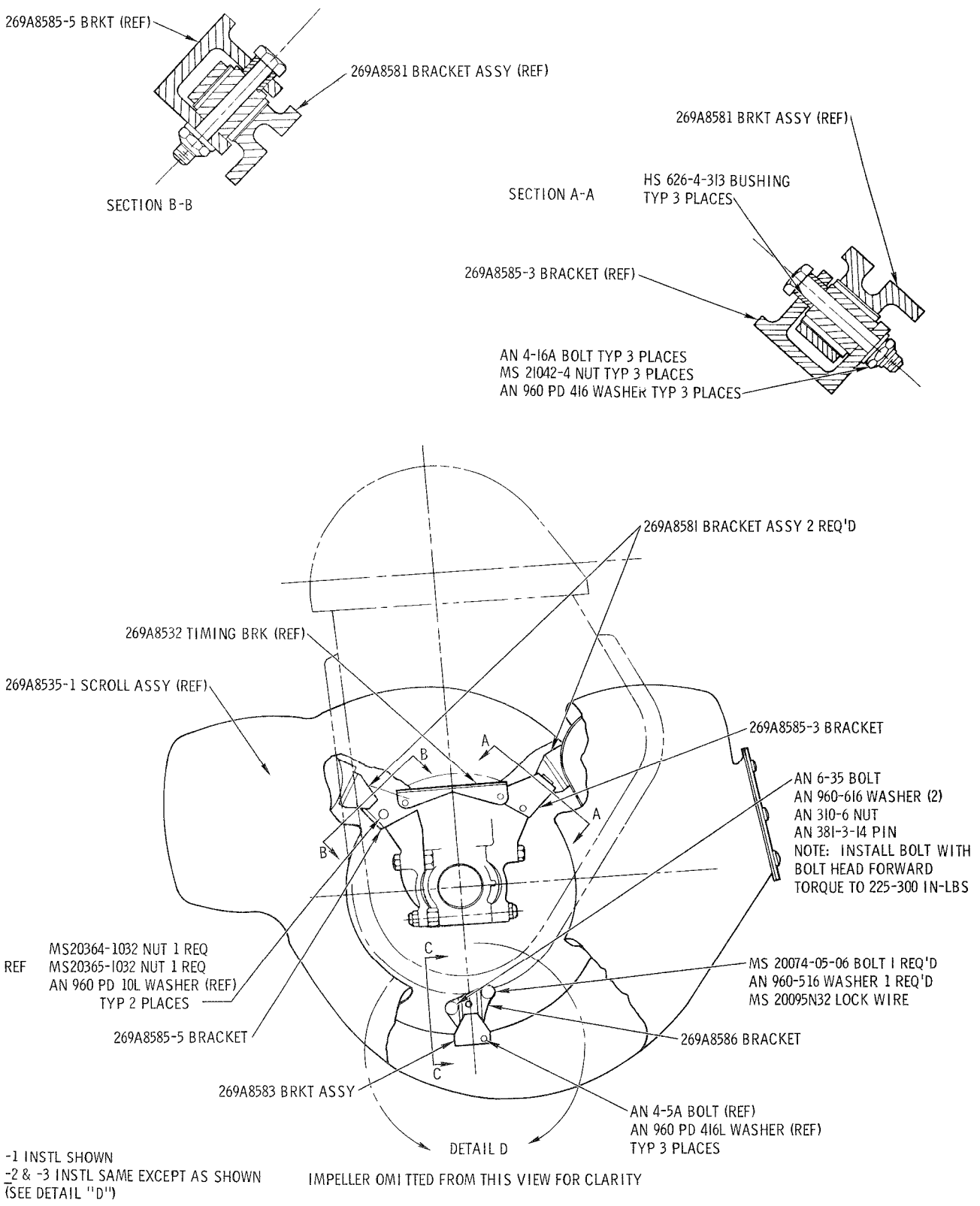


Figure 1. Scroll Assembly-Bracket Installation

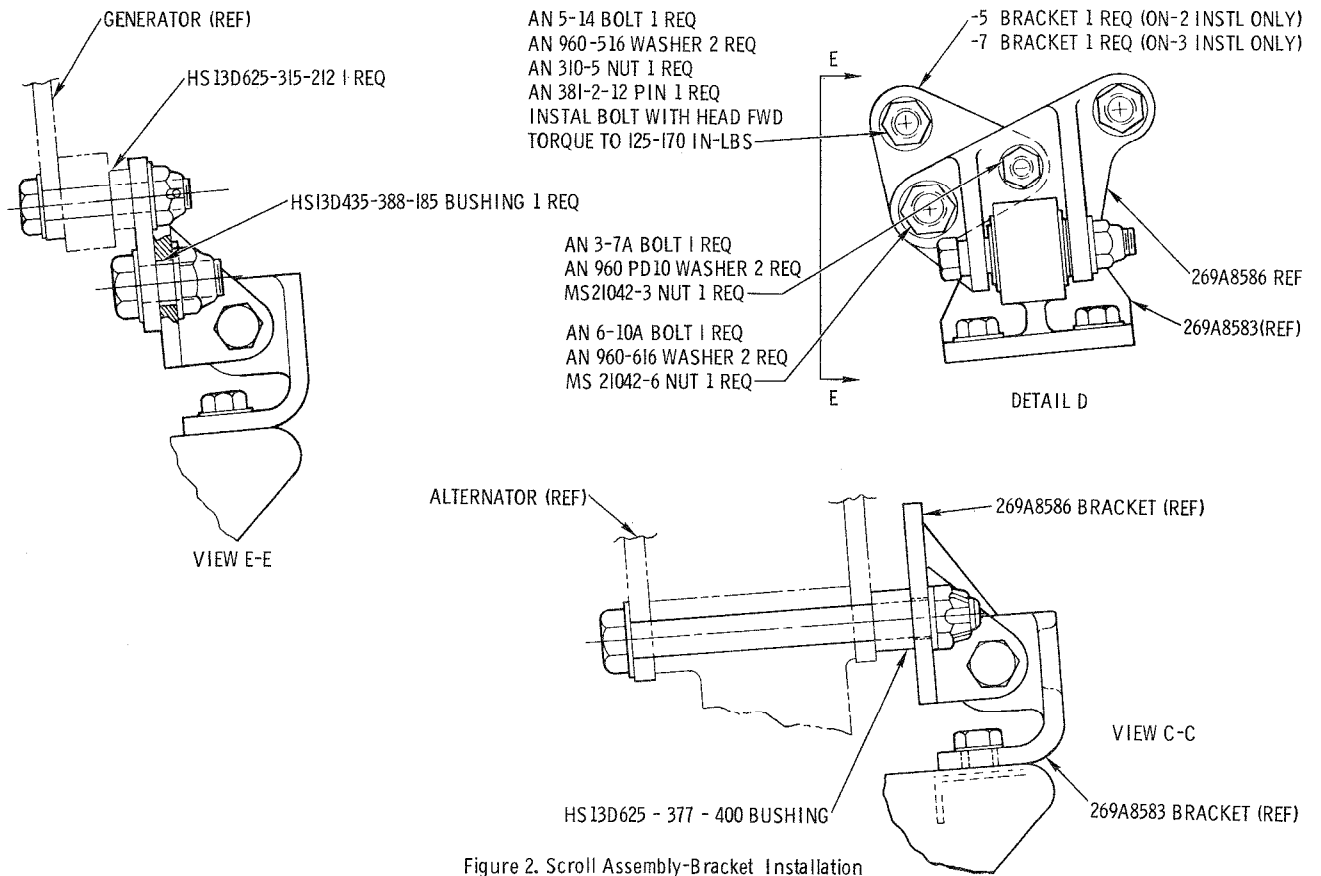


Figure 2. Scroll Assembly-Bracket Installation

