SCHWEIZER 300C

SCHWEIZER SERVICE NOTICE

NOTICE NO. N-142.1
DATE 31 May 1977

*Supersedes Service Information Notice N-142, dated 24 Dec 1976

MANDATORY MANDATORY MANDATORY

SUBJECT: INITIAL INSTALLATION OF PN 269A5194 MAIN ROTOR DRIVE RING GEAR CARRIER ASSEMBLY; MODIFICATION OF PN 269A5182 MAIN GEAR DRIVE UPPER HOUSING ASSEMBLY

MODELS AFFECTED: All Model 269 Series Helicopters equipped with 269A5175 Basic, 269A5175-3 or 269A5175-5 Main Gear Drive Assembly

TIME OF COMPLIANCE: Shall be accomplished at INITIAL installation of 269A5194 Main Rotor Drive Ring Gear Carrier Assembly

PREFACE: The information given in this Service Information Notice lists a procedure for field rework of the subject main gear drive upper housing assembly that is to be accomplished when the 269A5194 main rotor drive ring gear carrier assembly is installed as replacement for an existing 269A5179 or 269A5179-3 drive shaft and coupling assembly, during overhaul of the main gear drive assembly.

The 269A5194 assembly is comprised of a 269A5193 carrier and 269A5112 coupling. Since the new carrier is designed with greater dimensional thickness, a modification of the upper housing is required to preclude interference between the new carrier and the forward roller bearing outer race seat in the upper housing. In addition, new and longer NAS1306-5H bolts are used as replacement for existing 269A5158 bolts when installing the 269A5194 ring gear carrier assembly.

It is to be noted that installation of the 269A5194 carrier assembly, and rework of the upper housing assembly, upgrades the existing main gear drive assembly to the new 269A5175-7 configuration for 269C helicopters and to the new 269A5175-9 configuration for 269A/A-1/B and TH-55A helicopters.

The 269A5193 carrier has a service life of 6000 hours and is not subject to the requirements of Hughes Service Information Notice No. N-114.2 and subsequent revisions.

(▌) Denotes portion of text added or revised.

PREFACE (Continued):

The information given in this Notice is to be considered a part of the HMI and will be incorporated where applicable in the next scheduled revisions to the below referenced manuals.

Reference

269 Series – Basic HMI, Issued 1 Apr 1973; Revision No. 4, 15 Dec 1976
269 Series – HMI Appendix B, Issued 1 Jul 1973; Rev No. 5, 1 Aug 1976
269 Series – HMI Appendix C, Issued 15 Mar 1976
Hughes Service Information Notice No. N-114.2, dated 23 Jun 1975 or subsequent revisions

PARTS LIST

Nomenclature	Part No.	Qty	Mfr
Bolt, Ring Gear Carrier	NAS1306-5H**	14	Commercial

MATERIALS

Dichromate treatment	Dow 19	Dow Chemical Co.
Zinc chromate paste or putty		Commercial

TOOLS AND EQUIPMENT

Machine mill or suitable tool (i.e., rotary file, commercial mill file and 400 grit aluminum oxide paper)

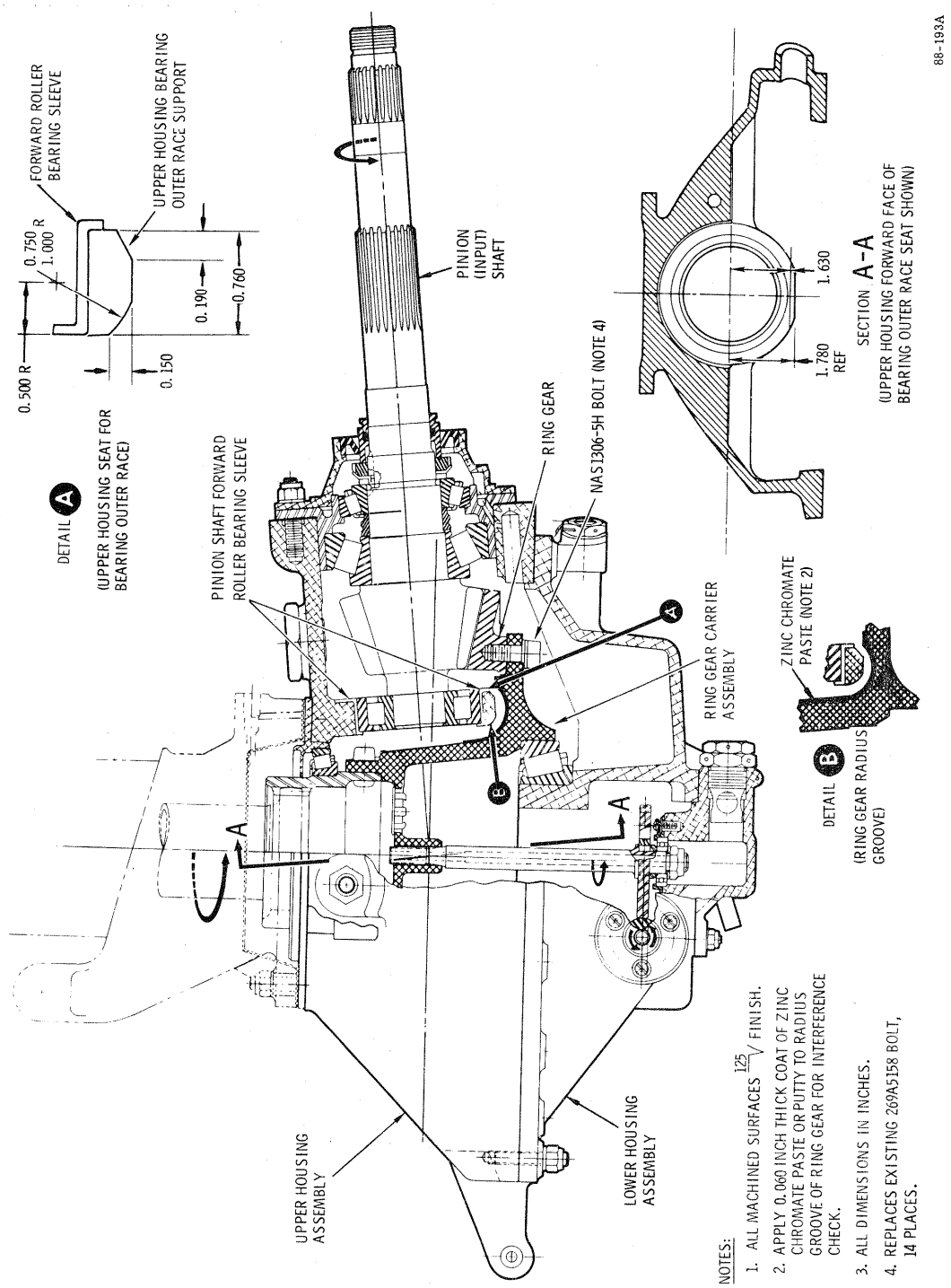
REWORK PROCEDURE

NOTE

Rework the 269A5182 upper housing assembly during overhaul of the main transmission, after disassembly, cleaning, inspection and repair of transmission components, as outlined in HMI Appendix C.

a. Locate rework area on the lower front face of the upper housing seat for the pinion forward roller bearing outer race. (See Figure 1.) Mill housing bearing support per dimensions shown; dichromate treat the reworked area of housing, per Basic HMI, Section 2.

**Replaces existing 269A5158 bolt.



NOTES:

1. ALL MACHINED SURFACES 125 FINISH.
2. APPLY 0.060 INCH THICK COAT OF ZINC CHROMATE PASTE OR PUTTY TO RADIUS GROOVE OF RING GEAR FOR INTERFERENCE CHECK.
3. ALL DIMENSIONS IN INCHES.
4. REPLACES EXISTING 269A5158 BOLT, 14 PLACES.

Figure 1. Rework of Main Gear Drive Upper Housing Assembly, PN 269A5182

b. Check for interference between the radius of the 269A5194 carrier and the reworked area of the upper housing assembly as follows:

1. With 269A5105 lower housing right side up on bench, position 269A5194 ring gear and carrier in place in lower housing.

2. Apply a 0.060 inch thick coat of zinc chromate paste (or putty) to cover full circumference of radius groove in ring gear, as shown in Figure 1.

3. Position reworked 269A5182 upper housing in place on lower housing; position 269A5114 cover (without 269A5102 shim) in place on upper housing.

4. While applying hand pressure on cover to preload bearings, rotate ring gear 360° several times; separate upper and lower housings and remove ring gear and carrier assembly.

5. Check coat of zinc chromate paste (or putty) for evidence of contact or interference between the upper housing and carrier assemblies.

NOTE

If less than 0.030 clearance exists, repeat step a and step b.2 through step b.5 above.

c. Perform HMI Appendix C procedures for Reassembly and Testing of main transmission assembly; recheck for contact or interference, per steps b.2 through b.5 above, when performing backlash and contact pattern (wipe) tests with backlash shims installed.

NOTE

At reassembly of main transmission assembly, replace existing 269A5158 ring gear carrier bolts (14 places) with longer NAS1306-5H bolts. Install with existing MS20002C6 washers. Torque NAS1306-5H bolts 250-275 inch-pounds and lockwire bolt heads.

d. Using electric pencil, add -7 to part number on upper housing to reidentify reworked upper housing as 269A5182-7. DO NOT IMPRESSION STAMP

e. Revise part number on main gear drive ID plate to reidentify assembly as follows:

1. For 269C Helicopters, reidentify main gear drive assembly as 269A5175-7.
2. For 269A/A-1/B and TH-55A Helicopters, reidentify main gear drive assembly as 269A5175-9.

f. Record installation of 269A5194 carrier assembly, and 269A5193 carrier with its Serial Number, in Components Record of helicopter Log Book.

g. Record installation of 269A5175-7 or 269A5175-9 main gear drive assembly, as applicable, in Components Record of helicopter Log Book.

h. Record initial installation of 269A5194 carrier assembly, Serial Number of 269A5193 carrier, and rework of upper housing to 269A5182-7 configuration, per this Notice in Compliance Record of helicopter Log Book.

NOTE

The 269A5193 carrier is a limited life item and shall be retired at no more than 6000 hours time in service.

The component overhaul schedule (TBO) for the 269A5175-7 main gear drive assembly (269C helicopters) is 3000 hours for major overhaul and no minor overhaul is required, provided requirements are met per HMI Appendix B. The TBO for the 269A5175-9 main gear drive assembly (269A/A-1/B and TH-55A helicopters) is 4800 hours for major overhaul.

WEIGHT AND BALANCE DATA

Weight and balance not affected.

FAA APPROVED