

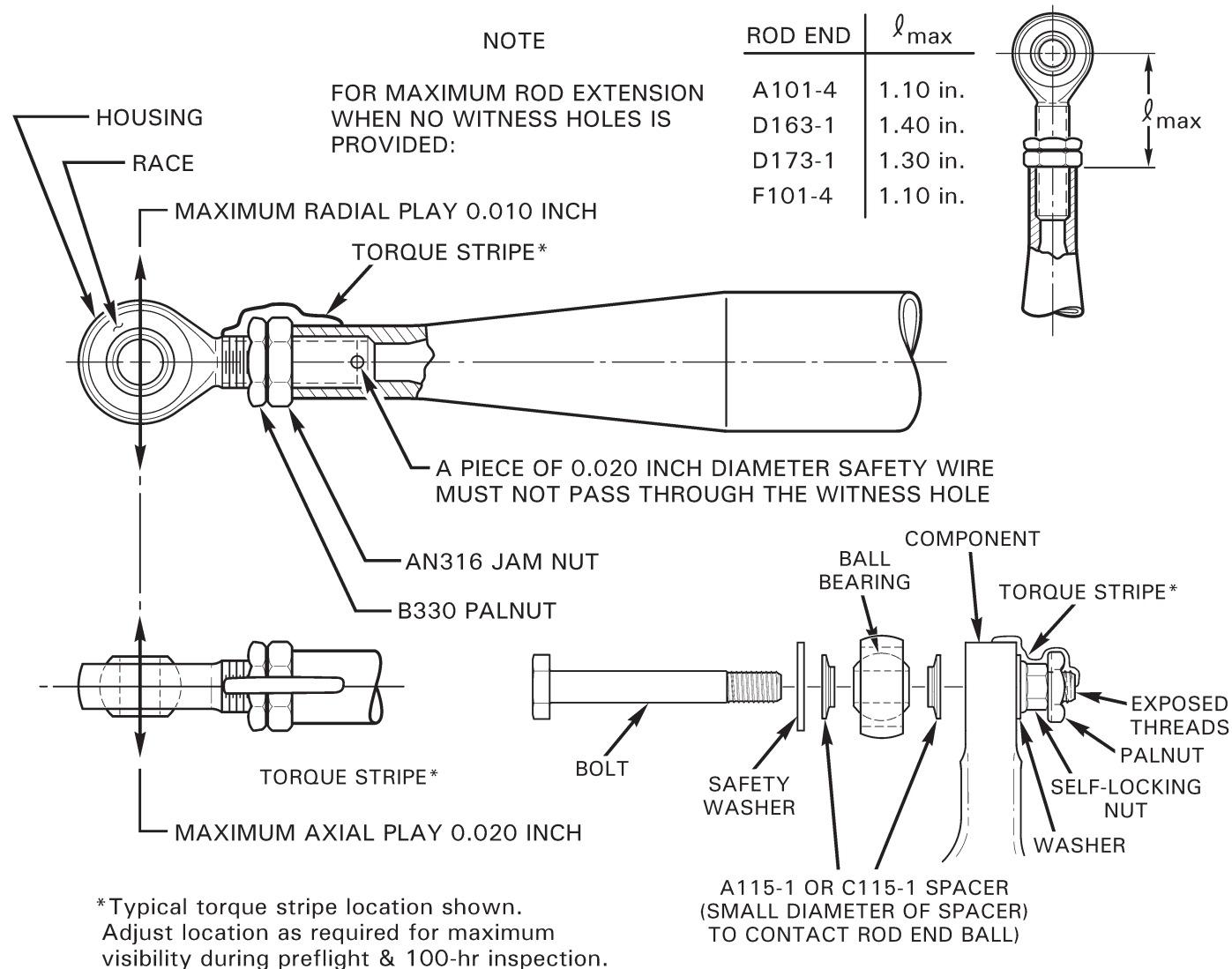
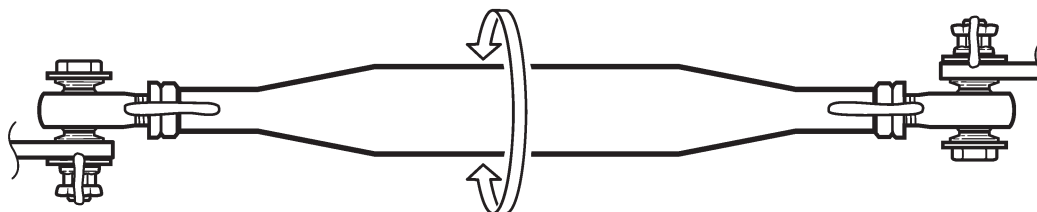


FIGURE 2-1 ROD END AND SPHERICAL BEARING PLAY LIMITS AND TORQUE STRIPE APPLICATION

FIGURE 2-1A ROD END CENTERING
(Position rod ends for maximum rotation)

2.120 Push-Pull Tubes, Rod Ends, and Spherical Bearings

2.121 Push-Pull Tubes

1. Nicks, cuts, or scratches in tube not more than 0.010 inch deep and not more than 1/4 of tube circumference may be polished out in lengthwise direction using 320-grit or finer wet-or-dry abrasive paper to 1-inch minimum blend radius. Replace push-pull tube if depth exceeds these limits.
2. Replace push-pull tube if tube is dented or flattened more than 5% of its diameter in unswaged area; dents or flattening is not permitted in swaged (tapered and threaded) ends of tubes.

2.122 Rod Ends and Spherical Bearings

Refer to Figures 2-1 & 2-1A.

1. Maximum axial play: 0.020 inch (for A104-4 bearing only: 0.035 inch axial play) | Maximum radial play: 0.010 inch
2. Looseness between bearing outer race and rod end housing is not permitted.
3. Rod ends not riveted in place must block passage of 0.020-inch diameter wire through witness hole. Refer to Figure 2-1 for maximum rod end extension when no witness hole is provided.
4. Rod end jam nuts and palnuts must be torqued per § 23-32 and torque striped per Figure 2-1 at the most visible position for pre-flight inspection. Torque stripe must extend across nuts to both rod end shank and push-pull tube (or pitch link barrel, yoke, support, strut, etc.). Torque stripes are subject to deterioration and must be periodically renewed.
5. Refer to Figure 2-1A. Rod ends must be positioned (centered) to allow as much push-pull tube or link rotational movement as possible without binding.

CAUTION

Teflon-lined bearings must not be lubricated or solvent cleaned.

WARNING

Assembly of flight controls is critical and requires inspection by a qualified person. If a second person is not available, RHC recommends the installer take a 5-minute break prior to inspecting flight control connections he has assembled.

2.300 Airframe Preparation for 100-Hour/Annual Inspection

The airframe must be thoroughly cleaned prior to inspection in accordance with U.S. 14 CFR Part 43, Appendix D, Paragraph (a). Cleaning should include a wipe down main and tail rotor blades, hubs, and airframe exterior with a mild soap (pH between 7 & 9) and water solution per Chapter 23.

CAUTION

Do not spray magnetos, main rotor hub, tail rotor gearbox vent, hydraulic reservoir vent, swashplate area, or bearing seals with high-pressure water or solvent as water or solvent may enter and cause corrosion and breakdown of lubricants.

2.400 100-Hour/Annual Airframe Inspection

CAUTION

If pop-out floats are installed, ensure safety on pilot's red inflation lever is in LOCKED position when working on helicopter.

WARNING

Pop-out float pressure cylinder contents are under extreme pressure. If pop-out floats are installed, install locking pin in pressure cylinder valve (see Figure 5-6) when working in forward left baggage compartment, during cylinder removal or installation, and when working on floats or inflation hoses. Remove locking pin when work is completed. Avoid excessive heat (> 200 degrees F) as thermal relief valve will activate.

Perform 100 hour or annual airframe inspections per § 2.410. RHC recommends keeping a copy of the most recently performed checklist with the aircraft's maintenance records.

2.410 Inspection Procedures and Checklist

R44 Serial No.:	_____	Technician name:	_____
Registration No.:	_____	Technician	_____
Hourmeter Indication:	_____	Certificate number:	_____
Aircraft Total Time:	_____		

Numbers in parentheses indicate access location per Figures 2-4 and 2-4A.

2.410 Inspection Procedures and Checklist (continued)**3. Remove Forward Tunnel Covers (3A & 3B), Cyclic Stop Cover (3C), Inboard Collective Cover (3D) and Forward Belly Panel (3E) (continued)**

Cyclic Friction: Check for excessive play or looseness in links and rod ends connected to cyclic stick. Verify no excessive flaring at either end of C130-2 spacer. _____

Cyclic Push-Pull Tube and Torque Tube: Inspect C319 torque tube paying special attention to area around blocks and end of torque tube for cracks. Inspect C121-1 push-pull tube rod end palnut and jam nut for tightness. Check witness holes on push-pull tubes. Check rod ends and bearings for excessive play and looseness. Check accessible portions of cyclic push-pull tube and torque tube for defects, including scratches. Pay particular attention to top of torque tube immediately below C348-1 anchor assembly. Inspect all nuts and bolts in cyclic controls for rotation and looseness. Verify operating clearance. _____ |

Tail Rotor Push-Pull Tube: Inspect accessible portions of C121-9 tail rotor push-pull tube. Look for defects such as cracks, bends, scratches, or chafing. Check rod ends for excessive play and looseness. _____

Collective Friction and Stop: Inspect collective stop condition; no nicks, cuts or scratches are allowed. Check collective friction lever for security and operation. Move collective up and down and verify no bending or binding of stop. Verify collective boot's lace cannot entangle stop. _____

Throttle Overtravel Spring: Inspect operation of overtravel spring while operating throttle. It should move freely without any binding or jerkiness. Check play in upper and lower rod ends. Check rod ends for binding. _____

HeliSAS Autopilot (if installed): Perform scheduled maintenance per § 24-61. _____ |

Wiring Harness: Inspect for chafing and clearance from controls. _____

Pitot and Static Lines: Inspect pitot and static lines for security and any evidence of cracking, chafing, pinching or kinking from sharp bends. Open drains and check for moisture; close drains. _____

Elastic Trim Cords – Cyclic: With cyclic forward-right, feel forward elastic trim cords for voids which may indicate broken strands. _____ |

Heater Hose: Check heater hose for collapsed areas and chafing. _____

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1. _____

2.410 Inspection Procedures and Checklist (cont'd)**7. Open Cowling Doors (7A), Remove Tailcone Cowling (7B) & Mast Fairing (9)**
(cont'd)

Forward Flex Plate: Inspect condition, particularly edges. Verify security. Verify bonded washers are securely bonded to both sides of each flex plate arm. Verify operating clearance.

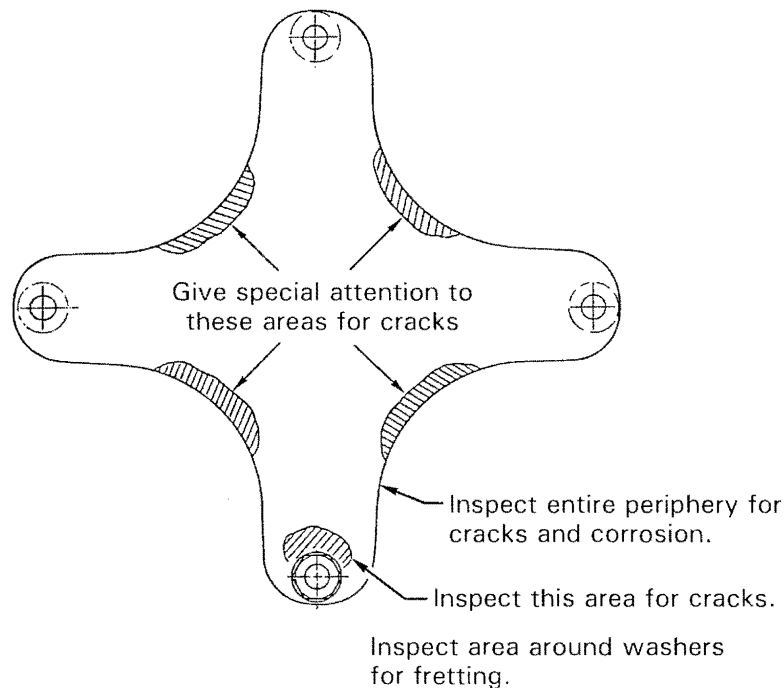


FIGURE 2-5 FLEX PLATE INSPECTION

Clutch Shaft Forward Yoke: Inspect condition. Verify no cracks, corrosion, or fretting. Verify security and operating clearance.

Rotor Brake: Inspect condition, including activating cable & pulleys and microswitch. Verify integrity of brake pads and 0.030 inch minimum pad thickness. Verify brake pad clearance to input yoke when brake is off. Verify security and operating clearance.

Jackshaft: Inspect entire welded assembly for cracks and corrosion. Inspect jackshaft supporting strut and tube weldments for security, cracks and corrosion.

Main Rotor Push-Pull Tubes: Inspect condition of viewable portions. Verify no cracks at ends. Inspect rod ends per Section 2.120. Verify no tears in sleeves (manual controls only). Verify security and operating clearances.

Main Rotor Push-Pull Tube Rollers & Bushings: (manual controls only): Inspect condition. Verify cleanliness, no wear into metal, and free movement of rollers.

2.410 Inspection Procedures and Checklist (continued)**11. Rotor Hub Area (continued)**

Install Swashplate Boot Lower Ty-rap: Verify correct boot position and security and no boot damage. _____

Hub: Inspect condition. Verify no nicks, scratches, gouges, or corrosion. If main rotor imbalance is suspected, check teeter and coning hinge friction per § 28-32. Verify no brown or black residue (indicates bearing wear). _____

Hinge Bolts: Inspect condition. Verify cotter pins are in place and secure. Verify bolt heads and nuts are torque striped to thrust washers. _____

Pitch Links and Rod Ends: Inspect condition. Inspect rod ends per § 2.122, including centering. Verify security, including jamnut tightness and proper safety wiring. _____

Fasteners and Torque Stripes: Inspect condition and verify security of all fasteners. Renew deteriorated torque stripes per Figure 2-1. _____

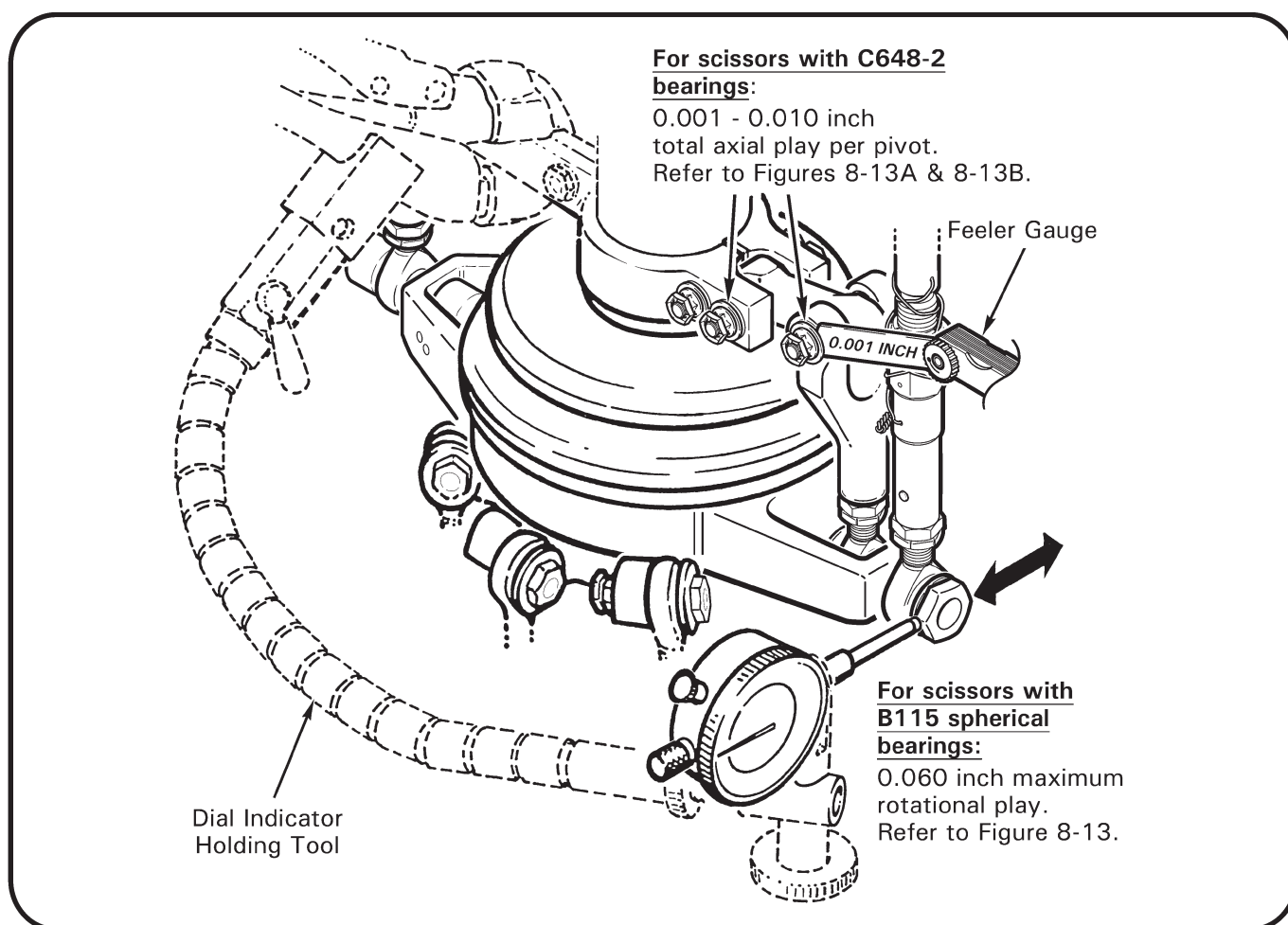


FIGURE 2-9 MEASURING UPPER SWASHPLATE ROTATIONAL PLAY
(Identify scissors bearing type and measure as shown)