

How to Use this Manual

This manual applies to standard Falk Type NRT backstops. This manual provides detailed instructions on oil seal replacement. Use the following Table of Contents to locate required information.

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CAREFULLY FOLLOW THE INSTRUCTIONS IN THIS MANUAL FOR OPTIMUM PERFORMANCE AND TROUBLE FREE SERVICE.

Introduction

This manual covers oil seal replacement for both new model cast iron and fabricated steel end covers. See Page 2.

CAUTION: Remove all external loads from drive before servicing drive or accessories. Do not damage inner cam hub face: new seals will leak if seal contacting surface is marred. Do not use abrasive material on seal contacting surface.

Required Equipment

In addition to standard mechanic's tools, the following equipment is required: hoist, sling, torque wrench, dial indicator with stand or depth micrometer and puller.

CAUTION: Do not attempt to service or remove backstop before removing load. When removing backstop from shaft, do not apply heat to the backstop. Apply axial force to the inner cam hub face of the backstop only.

Backstop Removal

1. Drain and discard lubricant in an environmentally safe method.
2. Remove oil sight gauge and breather assembly and insert pipe plugs in cover holes.
3. Remove torque arm. Refer to Figure 1 for proper method of supporting and lifting.
4. Reassemble torque arm pins in backstop and lock in place with cotter pins for lifting.
5. If the backstop is furnished with an axial retaining collar(s), loosen set screws and mounting bolts and remove collar. Remove burrs on shaft caused by set screws.
6. Remove backstop from shaft. Apply force to the inner cam hub face of the backstop only. (Figure 1)
7. Thoroughly clean exterior of backstop with clean solvent to prevent dirt from falling into the backstop when disassembling.
8. Position backstop on clean work surface with bore vertical.

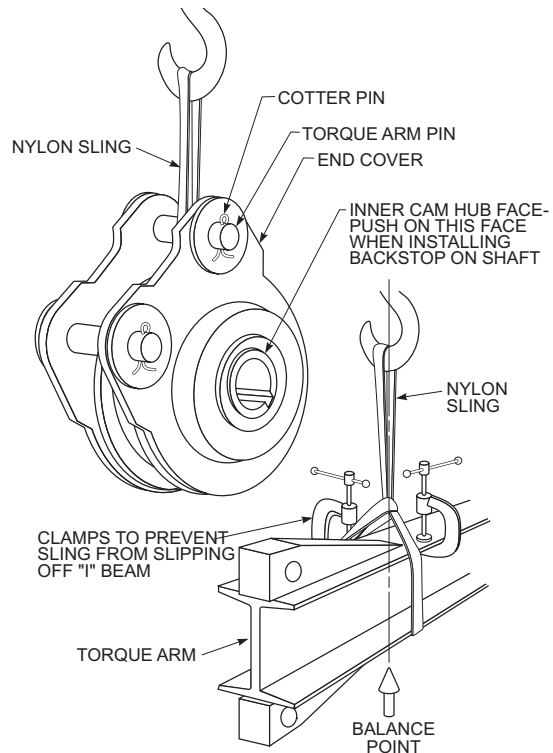


Figure 1

BACKSTOP SEAL REPLACEMENT

Removal

CAUTION: Remove all external loads from drive before servicing drive or accessories. Do not damage cam hub face: new seals will leak if seal contacting surface is marred. Do not use abrasive material on seal contacting surface.

1. To prevent dirt from falling into the backstop, thoroughly clean the exterior of backstop with clean non-flammable solvent.
2. Remove labyrinth cover (See Figure 4) from backstop. Clean cam and hub face with solvent and remove all sharp edges.
3. **Outer Seal** — With a hook shaped tool reach over the outer seal and pull outward moving around the opening, (see Figure 2).

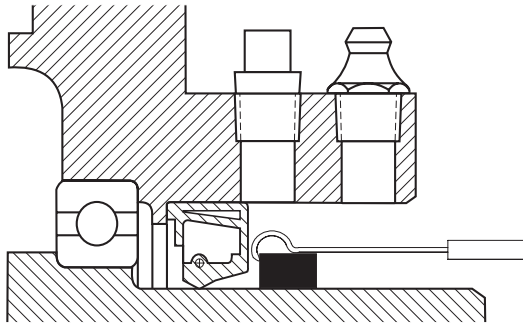


Figure 2

4. **Inner Seal** — Use a sharp center punch to lightly punch the seal case as a guide for the drill.
5. Wrap several turns of tape around the drill approximately .250" (6mm) from the drill point to prevent the drill from entering too deeply into the housing and damaging the bearing (inner seal only). Grease or magnetize the drill to help retain the chips. Drill two .125" (3mm) diameter holes in the seal case 180° apart. Control the angle of the drill as illustrated in Figure 6 to prevent damage to the cam.
6. Insert two #10 sheet metal screws of sufficient length into the seal. DO NOT drive the screw more than .250" (6mm) beyond seal face or bearing damage may occur. Use a claw type pry bar under the screw head as shown in Figure 6, and pry the seal out. Remove all chips. Use a magnet to remove the chips that fall into the bore. Remove Permatex sealant from housing bore. Inspect the seal cavity and remove any debris or metal chips. Thoroughly clean the seal cavity with clean non-flammable solvent.

Installation

1. Check seal surface for any damage prior to installing new seals. Install one seal at a time. Coat the outside diameter of the inner seal housing bore with Permatex #3 or equivalent sealant.

2. **Inner Seal** — Position the inner seal squarely in the end cover with the garter spring positioned per Figure 7.
3. Place a square ended cylindrical tool against the seal and press or lightly tap the tool (not the seal) until the seal is seated against the shoulder. (Figure 3)
4. Check inner seal backface runout with a depth micrometer, dial indicator, or bar micrometer as shown in Figure 3, must be performed prior to outer seal installation. Runout must not exceed .010" (0.25mm) TIR.

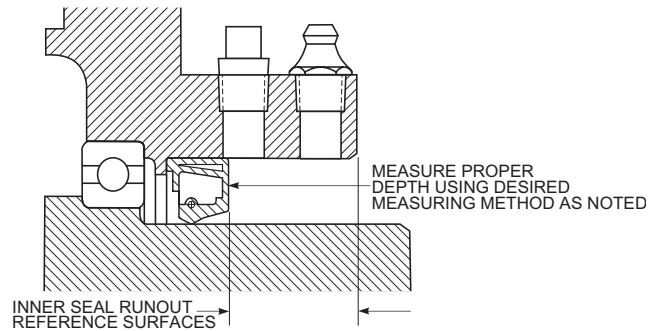


Figure 3

5. **Outer Seal** — Apply a thin layer of NLGI#2 grease to the outward face of the inner seal. Position the new outer seal on the inner cam with the lip facing inward (See Figure 4). Stretch the seal around the inner cam moving around the diameter evenly until the outer seal is installed to the depth as found in Table 1.
6. Check seal runout with a depth micrometer, dial indicator or bar micrometer as shown in Figure 3. Runout must not exceed .010" (0.25mm) TIR.

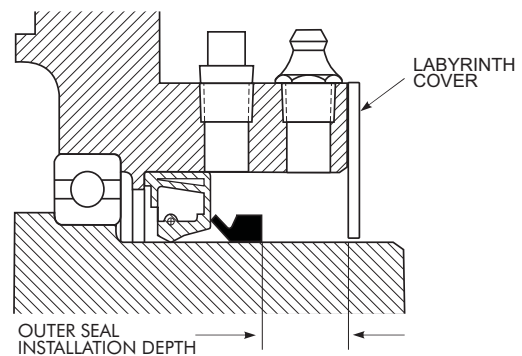


Figure 4

7. Replace the labyrinth cover and screws. Ensure the gap between the inner cam and labyrinth cover is even all the way around. (See Figure 7.) Torque the bolts to 14-17 lb-ft (18-23 Nm).

TABLE 1 — Outer Seal Installation Depth

NRT Size	Outer Seal			
	Inch		mm	
1075	0.614	±0.009	15.60	±0.23
1085	0.672	±0.020	17.07	±0.51
1095	0.768	±0.020	19.51	±0.51
1105	0.511	±0.107	12.98	±2.72
1115	0.669	±0.051	16.99	±1.30
1125	0.629	±0.044	15.98	±1.10
1135	0.444	±0.022	11.28	±0.55
1145	0.571	±0.044	14.50	±1.10
1155	0.484	±0.044	12.29	±1.10
1165	0.784	±0.044	19.91	±1.10
1175	0.884	±0.044	22.45	±1.10
1185	0.914	±0.044	23.22	±1.10

CAUTION: An important part of the Falk NRT backstop manufacturing process is the full load and overrunning testing with specially instrumented equipment. Consequently, return NRT backstops to Rexnord for repair and full load testing.

Except for replacement of shaft seals, NRT backstops should not be dismantled or repaired in the field. If seals are to be replaced, it is important that the cam and roller assemblies not be removed from the outer race. Removal will void applicable warranties.

When contacting Rexnord concerning required service, state the nature of problem and give complete data from backstop nameplate; order number, size, date, etc.

Backstop Installation

Refer to Manual 568-111 for backstop installation, oil sight gauge assembly, and lubrication recommendations.

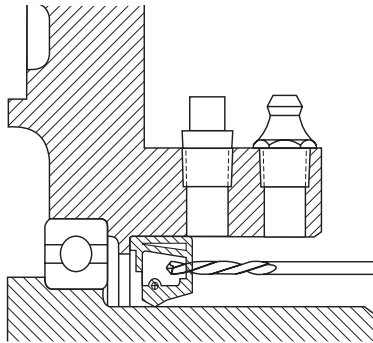


Figure 5

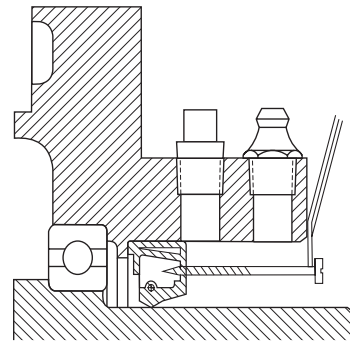


Figure 6

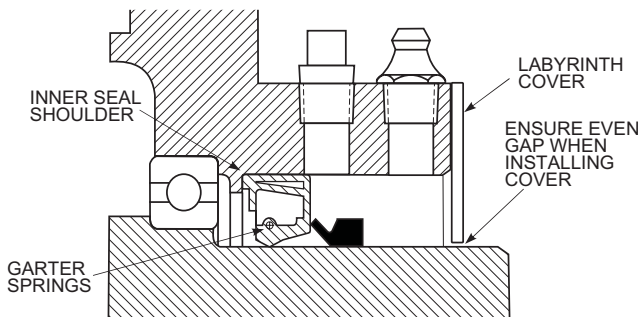


Figure 7