Introduction

The patented TA Taper® removal tool offers a positive method for removing a TA Taper equipped Quadrive from the driven shaft. This method uses the torque multiplying characteristic of the drive to separate the drive from the bushing and driven shaft.

The removal tool is available in kit form suitable for use with Sizes 5107 thru 5315. The kit can be ordered from your Rexnord distributor by specifying "TA Removal Kit - Part 0769406". NOTE: Use of this tool requires a minimum axial clearance "M" shown in Figure 1 and Table 1.

CAUTION: DO NOT modify the tool in any way OR use it in another manner except to loosen the bushing nut as instructed herein.

Figure 1

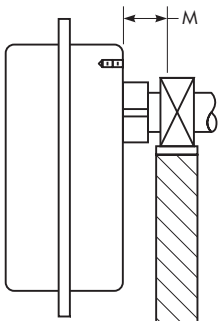


TABLE 1 — Minimum Tool Clearance – Inches (mm)

DRIVE SIZE	M Dimension
5107	2.62 (67)
5115	2.62 (67)
5203	2.62 (67)
5207	2.62 (67)
5215	3.18 (81)
5307	3.18 (81)
5315	3.18 (81)

Preparation For Removal

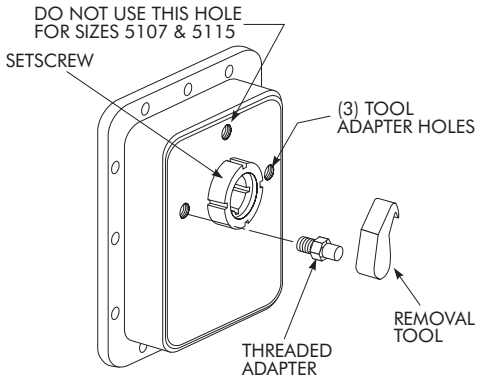
WARNING: Always "lock out" prime mover before working on the Quadrive.

1. Quadrive shafts, input and output, must be free to rotate.
   a) Remove any external load on the driven shaft.
   b) Remove belts from input shaft sheave.
   c) Remove the backstop (if so equipped). Refer to Owners Manual 378-200, Section II — Step 10, for backstop removal instructions.

   CAUTION: DO NOT disconnect the drive from its torque arm until the removal process is completed. In addition, the drive must be supported during removal process. Use a sling around the motor mount or as recommended in Owners Manual 378-200, Section I, Step 7. Be sure to take up the slack in the sling before proceeding.

2. Loosen the setscrew on the O.D. of the bushing nut and select the most convenient of the tapped holes in the housing face for the threaded adapter. Figure 2.

Figure 2



3. Select the proper adapter from the tool kit. (Adapters are marked with the Quadrive Size and part number.) Make sure the tapped hole in the housing face is clean before inserting the adapter. Apply tightening torque from Table 2.

TABLE 2 —Adapter Tightening Torque

DRIVE SIZE	Adapter Part Number	Torque lb-ft (Nm)
5107	2111955	35 (47)
5115	2111956	70 (95)
5203	9111957	108 (146)
5207	2111958	120 (163)
5215	2111959	180 (244)
5307	2111959	180 (244)
5315	2111959	180 (244)

4. Mount the removal tool as illustrated in Figure 3 or 4. It is generally preferable to install the tool in a position where its weight will tend to keep it engaged into the nut. Then rotate the input shaft until the tool hook engages one of the slots in the nut.

Figure 3

SIZES 5107, 5115, 5203, & 5207

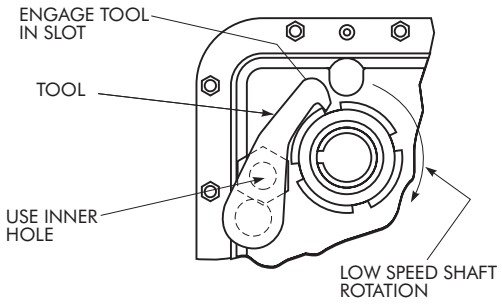
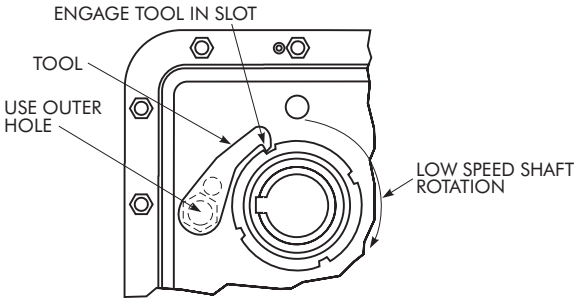


Figure 4

SIZES 5215, 5307, & 5315



Removal of Quadrive

5. Use a spanner wrench to apply torque through the input shaft keyway (Type J05 clockwise; Types J09, J14, or J25 counter-clockwise) to loosen the bushing nut.

   CAUTION: Never use the prime mover to produce the torque needed. This could result in severe personal injury or damage to the equipment.

   To avoid damage to the drive or the removal tool, DO NOT exceed the H.S. shaft torque values listed in Table 3. NOTE: The nut will rotate freely for approximately 180° as it moves from the locked to the removal position. Resistance will indicate that unseating is occurring. Turn until the nut and bushing are completely free. Now, prepare the drive for lifting by disconnecting the torque arm at the drive end.

6. ALTERNATE METHOD — Torque may be applied to the sheave or sprocket mounted on the input shaft.

TABLE 3 —Maximum Torque – H.S. Shaft lb-ft (Nm)

DRIVE SIZE	Drive Reduction			
	J05	J09	J14	J25
5107	164 (223)	88 (120)	58 (78)	33 (44)
5115	248 (336)	133 (181)	90 (121)	50 (68)
5203	406 (550)	224 (304)	143 (193)	79 (107)
5207	493 (668)	263 (357)	173 (234)	100 (136)
5215	677 (917)	371(503)	245 (332)	133 (181)
5307	762 (1 033)	405 (549)	278 (377)	150 (203)
5315	813 (1 102)	432 (585)	283 (384)	160 (217)

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