

# 8-1027 PINION SHAFT INSTALLATION GUIDE FOR MODELS: 8-M-1® AND 8-M-2®



PLACE YOUR ORDER TODAY PHONE ORDERS 1-800-569-1264 FAX ORDERS 1-860-627-9060

WWW.DARCYSAW.COM

**Step 1** POWER OFF - SHUT-OFF THE MAIN POWER TO THE SAW.

**Step 2** Tilt Column - While looking at the saw from the front to the back, tilt the column so the bottom swings 30 to 40 degrees to the left, then lock the column. Tilting allows for easier removal of 8-1027 pinion assembly.

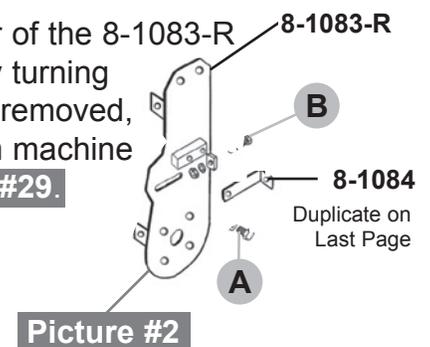
Picture #1

**Step 3** Remove 8-1085 Guard Plate Cover - Remove the 4 bolts located on the sides of the 8-1085 guard plate cover and pull-off the cover, refer to **Picture #1**.

8-1085



**Step 4** Release Belt Tension - Loosen the 5/8" x 11" bolt **A** on rear of the 8-1083-R guard plate assembly and release the 8-1187 belt tension by turning the 8-1084A adjustment bolt **B** until the 8-1187 belt can be removed, **Picture #2**. 8-1187 belt can not be removed completely from machine until 8-1012 is unbolted from 8-1016 Pulley, refer to **Picture #29**.



**Step 5** 8-1034 Pulley Off - If possible, remove the 8-1034 pulley from the 8-1027 pinion shaft. Remove the 2 set screws first. If there is difficulty in removal, leave the pulley on and it will be done later, refer to **Picture #3**.

Picture #3

8-1034



**Step 6** 8-1179 Cover Off - Remove the 8-1179 cover via the 2 bolts covering the 8-1027 pinion (gear end), refer to **Picture #4**.

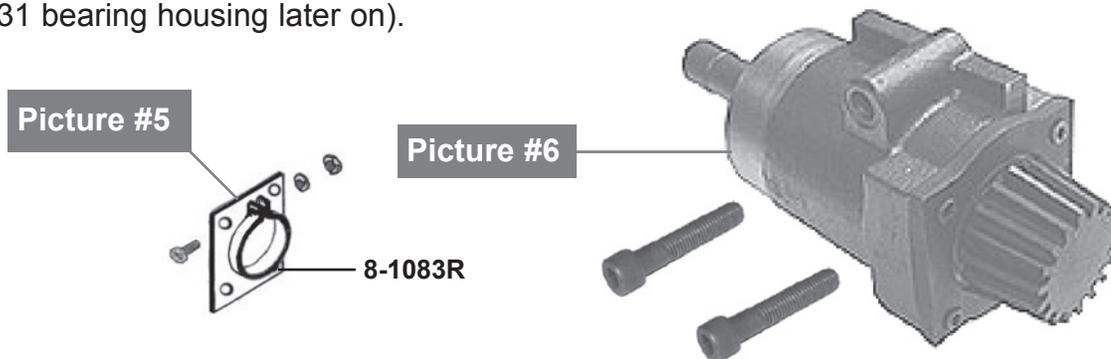
Picture #4

8-1179



## INSTALLATION GUIDE

**Step 7** 8-1086-R Unbolt - Remove the four ¼" x 20 bolts 'A' and locking bolt 'B' from the 8-1086-R clamp plate, as in **Picture #5**, so it can be removed from the 8-1083-R (along with the 8-1031 bearing housing later on).

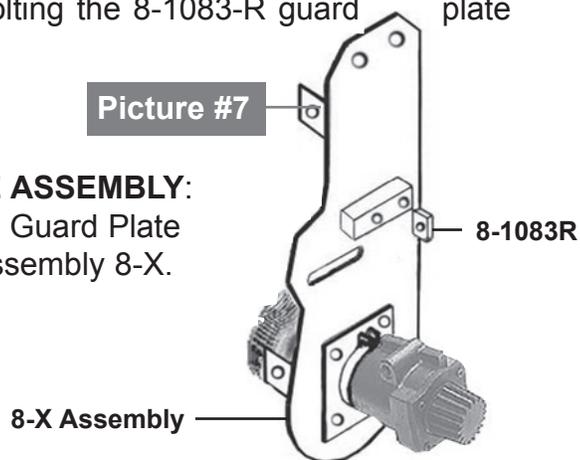


**Step 8** 8-1031 Housing Off - Remove the two ½" x 13 socket-head cap-screws from the 8-1031 housing, refer to **Picture #6**. Pry the housing off of the column held by the 2 pressed roll pins. If the 8-1034 pulley is off, try to remove the 8-1031 housing from the machine.

**NOTE:** If the 8-1031 housing does not come off readily of the 8-1034 pulley and is still on the pinion shaft, remedy the situation by unbolting the 8-1083-R guard plate assembly, refer to **Picture #7**.

**REMOVE ALL PARTS FROM THE SAW AS ONE ASSEMBLY:**  
8-1031 Housing, 8-1086-R Clamp Plate, 8-1083-R Guard Plate Assembly, and 8-1034 Pulley as one unit called assembly 8-X.

8-X Number Created  
for Assembly  
Purposes Only

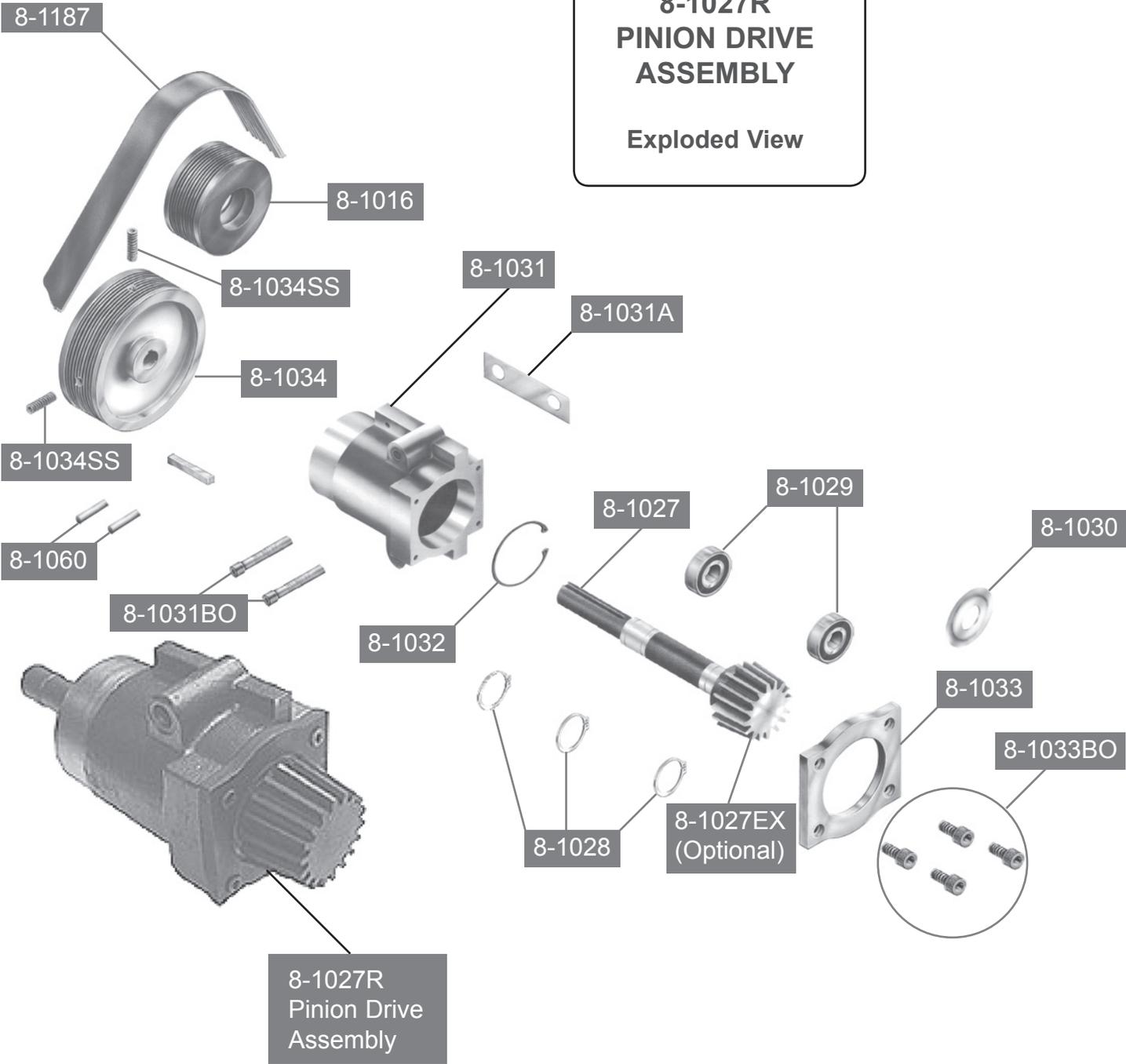


## INSTALLATION GUIDE

**8-M-1 & 8-M-2**

**8-1027R  
PINION DRIVE  
ASSEMBLY**

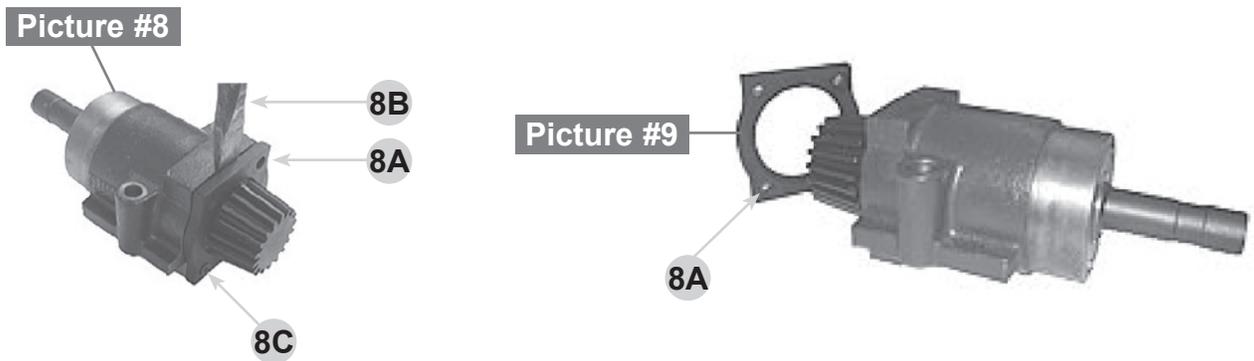
**Exploded View**



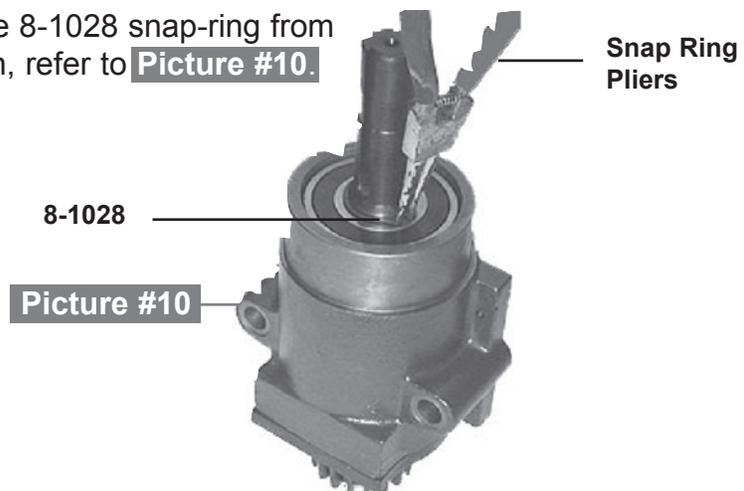
**INSTALLATION GUIDE**

**Step 9** 8-1034 Pulley Off- If the 8-1034 Pulley is still on the 8-1027 pinion then lay assembly 8-X on flat surface with the 8-1031 housing face down. Remove Set Screws. Then press the shaft end of 8-1027 pinion so that the 8-1037 pulley comes off.

**Step 10** 8-1033 Cap Off - Lay the 8-1031 bearing on the table. Remove the four 1/4" x 20 socket head cap-screws from the 8-1033 cap **8A**. There will be a gap between the 8-1031 and 8-1033 parts with sealant in the gap. Insert a chisel **8B** in the gap **8C** and gently tap so that the cap comes off, refer to **Picture #8**. Be careful not to break the cap during prying, refer to **Picture #9**.

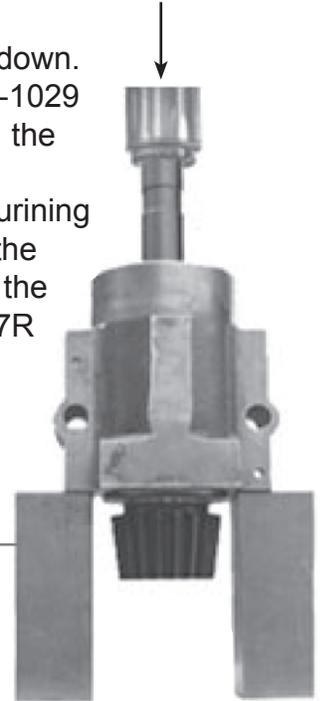


**Step 11** Snap Ring Off - Remove the 8-1028 snap-ring from the end of the 8-1027 pinion, refer to **Picture #10**.

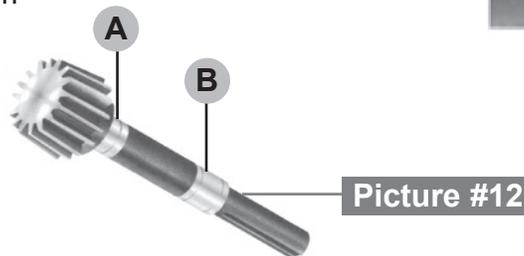


## INSTALLATION GUIDE

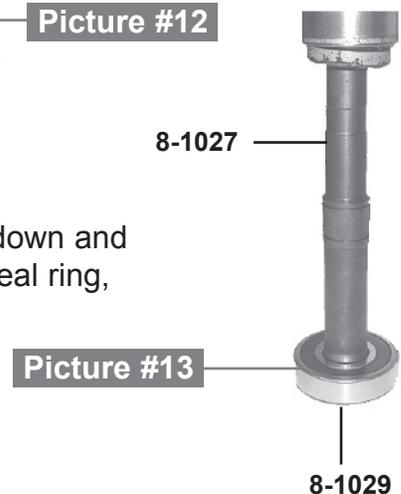
**Step 12** 8-1027 Pinion Out - Lay the 8-1031 housing with gear teeth facing down. Support the bottom side of the housing so that the pinion and the 8-1029 bearing can exit down and out, Rest 8-1031 on Blocks A. Press on the shaft end of the 8-1027 pinion shaft so pinion and bearing exit from housing, refer to **Picture #11**. The upper bearing may drift along during press. If it does remove the internal 8-1032 can continue to press the 2nd bearing through. Otherwise, press it back out the other end of the 8-1031 housing after pinion is out. Blocks A used to support 8-1027R during press.



**Step 13** 2 Snap Rings Off - Remove the two 8-1028 snap rings **A** and **B** from the pinion shaft, refer to **Picture #12**.



**Step 14** Bearing and Seal Off - Lay the 8-1027 pinion gear-side down and press off the old 8-1029 bearing along with the 8-1030 seal ring, refer to **Picture #13**.



## INSTALLATION GUIDE

**Step 15:** Seal Ring and Bearing On - Grease the end of the 8-1030 seal ring and position it on the pinion behind the gear teeth. Grease will hold it to the pinion, refer to **Picture #14**. Press the new 8-1029 bearing on to the 8-1027 pinion, refer to **Picture #15**. The 8-1030 should turn freely around the pinion. If the used 8-1027 pinion is being reused, make sure there is a heavy press fit with both bearings. If not, order a new 8-1027 pinion.



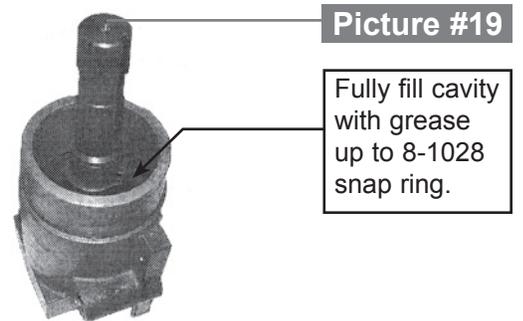
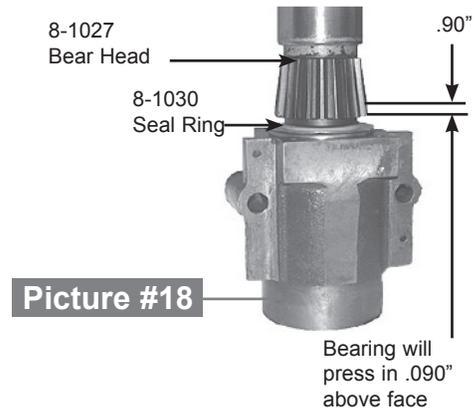
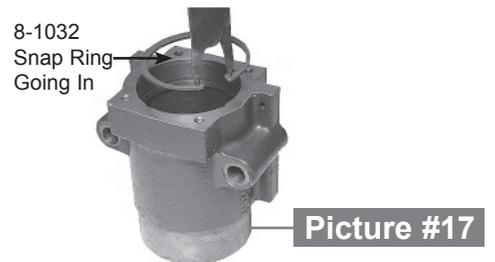
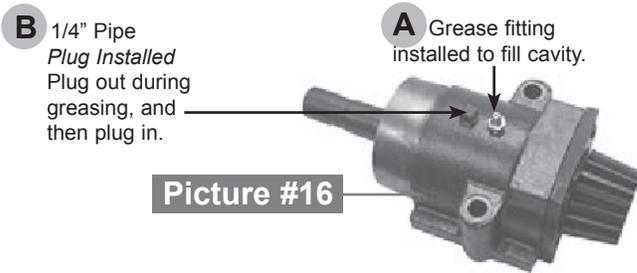
**Step 16** 8-1027, 8-1030, 8-1029 press into 8-1031 - NOTE: It is highly recommended that the internal cavity of the 8-1031 bearing housing be totally packed with grease in order to protect the bearings from coolant penetration.

**Step 17:** Methods of packing the bearing with grease are as follows:

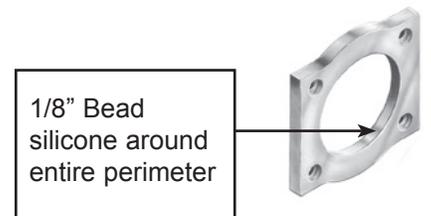
Drill and tap the 8-1031 housing so that a grease fitting **A** and a plug **B** can be installed in the housing, refer to **Picture #16**. After step 21 when the 8-1031 assembly is complete, remove the plug **B** and fill the cavity with grease through fitting **A** until it comes out of the plug **B** hole, then reinsert the plug **B**.

Clean the 8-1031 housing and install the new internal 8-1032 snap ring if necessary, refer to **Picture #17**. Press the 8-1027, 8-1030, 8-1029 assembly into the housing so that the 8-1029 seats against the 8-1032 snap ring. The bearing will not press in flush with the housing face but instead it will protrude approximately .090" above the face, refer to **Picture #18**. The bearing must press in with a heavy press fit. If the press is light or there is up to .002" clearance, clean the parts and use LOCKTITE® 609 to secure the bearing.

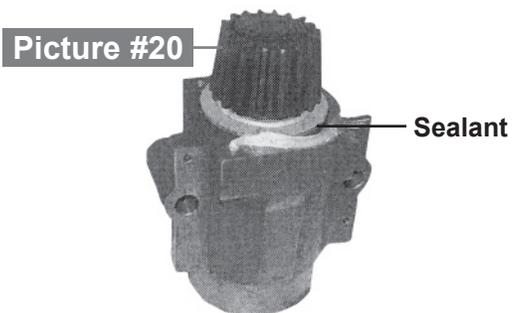
## INSTALLATION GUIDE



**Step 18** Secondary Grease Method - Now that the pinion and bearing are pressed into the 8-1031 housing place unit on the table, shaft side up as shown, refer to **Picture #19** and fully fill the cavity with grease level with the 8-1028 snap ring.

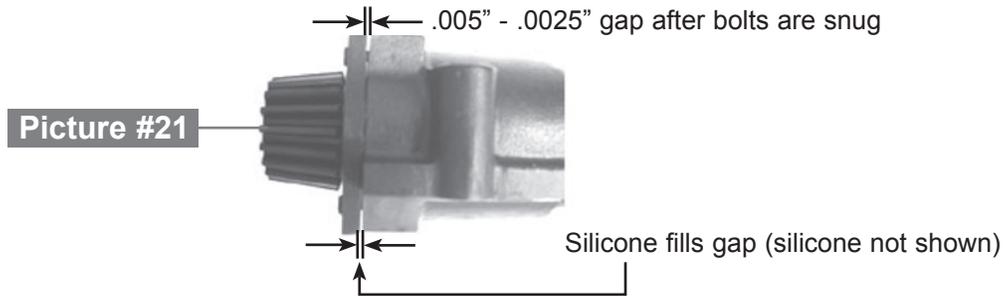


**Step 19** Sealant On - Clean the end face on the housing and the 8-1033 bearing cap. Apply a 1/8" bead of interior/exterior silicone sealant on the entire face of the housing, refer to **Picture #20**.

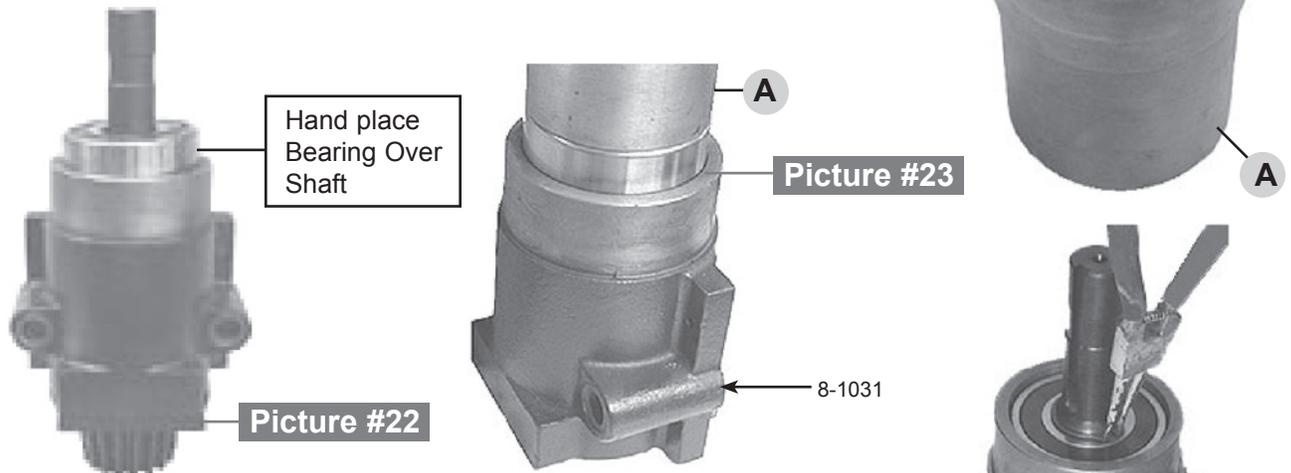


## INSTALLATION GUIDE

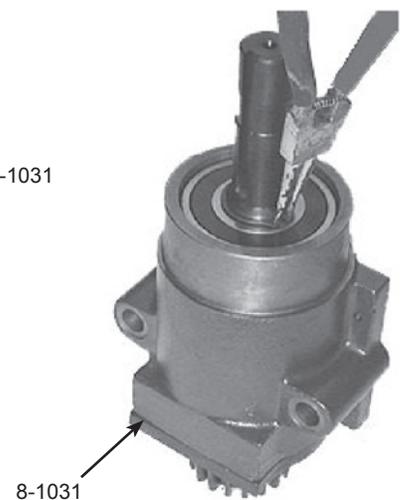
**Step 20** Bearing Cap On - Insert the 8-1033 bearing cap on housing with the counter bore end facing the bearing and seal ring. Gently secure the cap with four 1/4" bolts. Apply an equivalent load to each of the four bolts and do not over tighten or the cap may break, refer to **Picture #21**. The cap does not usually seat against the housing face. There will normally be a .005" - .025" gap and the silicone will create a seal in the gap.



**Step 21** Second 8-1029 Press-On Pinion - Place 8-1031 housing with the gear head facing down on the table. Grease the bore of the housing and journal of the shaft. Place the 2nd 8-1029 bearing over the pinion shaft and slide it down to the housing, refer to **Picture #22**. Press the bearing down into the housing until it seats against the 8-1028 snap ring, refer to **Picture #23**. See sample of custom press tool **A** **Picture #24**.



**Step 22** 8-1028 Snap Ring On - Install the last 8-1028 over the pinion shaft and into the exposed groove. A slight gap between the bearing face and the snap ring is normal, refer to **Picture # 25**.

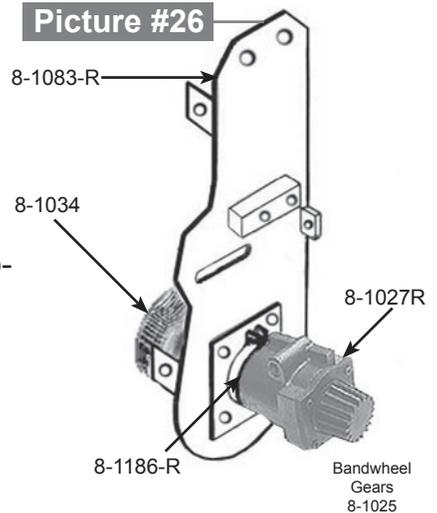


## INSTALLATION GUIDE

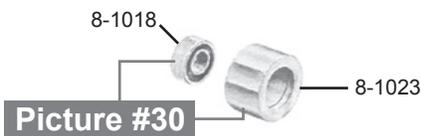
**Step 23** Install the 8-1031 Housing and Sheet Metal Parts - These parts can be assembled in any order, whichever works for you, refer to **Picture #26**. Installing the 8-X Assembly as one unit may work the best or install in separate pieces.

Installation List:

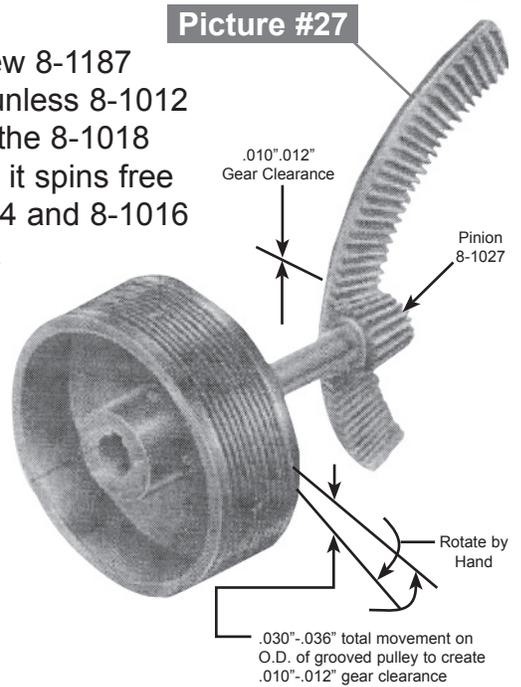
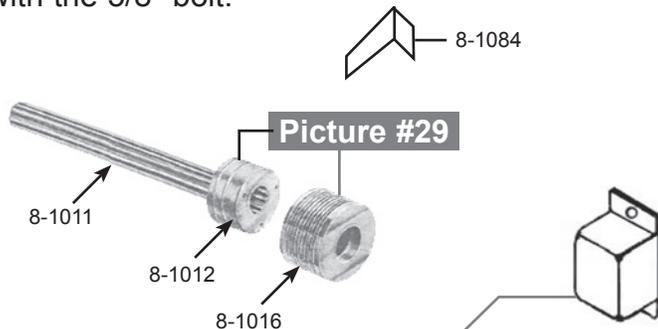
8-1027R	Pinion Assembly
8-1086-R	Clap Plate
8-1034	Pulley
8-1083-R	Guard Plate Assembly



**Step 24** Gear Clearance Adjustment - If the gear clearance between the pinion and the bandwheel teeth have not yet been established and can now be done, use the exposed 8-1034 bevel gear pulley to create the .010" gear clearance. Do this before installing the 8-1187 belt, refer to **Picture #27**.



**Step 25** 8-1187 Belt On - This is an optimal time to install a new 8-1187 belt. The 8-1187 Belt can not be removed from saw unless 8-1012 is unbolted from 8-1016, refer to **Picture #29**. Check the 8-1018 bearing located inside the 8-1023 idler to be sure that it spins free and smooth without any excess play. Clean the 8-1034 and 8-1016 pulleys before installing the 8-1187 belt. With the belt installed, apply tension by turning the 8-1084A adjustment bolt and lock the 8-1084 bracket with the 5/8" bolt.



**Step 26** Install the 8-1179 Cover, **Picture #30** and the 8-1085 Guard, **Picture #31**.



## INSTALLATION GUIDE