



## **Addendum to Installation Instructions**

**When installing the air clutch, do not tighten the lock nut. This can cause the actuator to bind in the bore and prevent proper actuation. The pin and end housing bore fully constrain the air clutch assembly so the lock nut is not needed.**



## INSTALLATION INSTRUCTIONS

### For The Remote Air Clutch Kit

#### Items Included In Air Clutch Kit

1. Remote air clutch assembly / parts
2. Replacement parts list
3. Instructions
4. Adapters(#10-32 to 6mm tube fitting). See instruction #10.

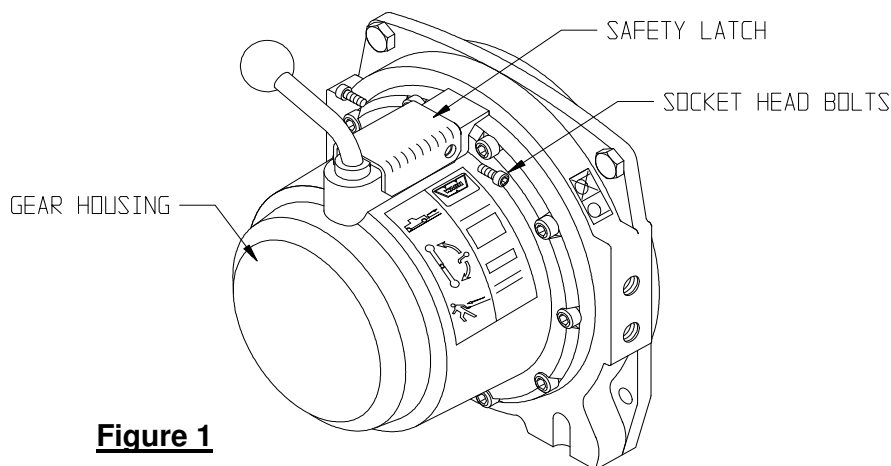
#### Items not Included in Kit

1. Air lines
2. Control valve

#### Installation Instructions

**NOTE:** It is easier to install the kit with the winch removed from the vehicle. These instructions are applicable for installing the Remote Air Clutch on the Warn Series 8, 9, 10, and 12 winches. Unless otherwise noted, installation procedures are the same for all of these winches.

1. If the winch is equipped with a safety latch, remove the socket head bolts (or screws) holding the latch onto the gear housing. (**NOTE:** Although the safety latch will not be used with this kit you must re-install the two bolts to fill the tapped holes in the gear housing.) See Figure 1.

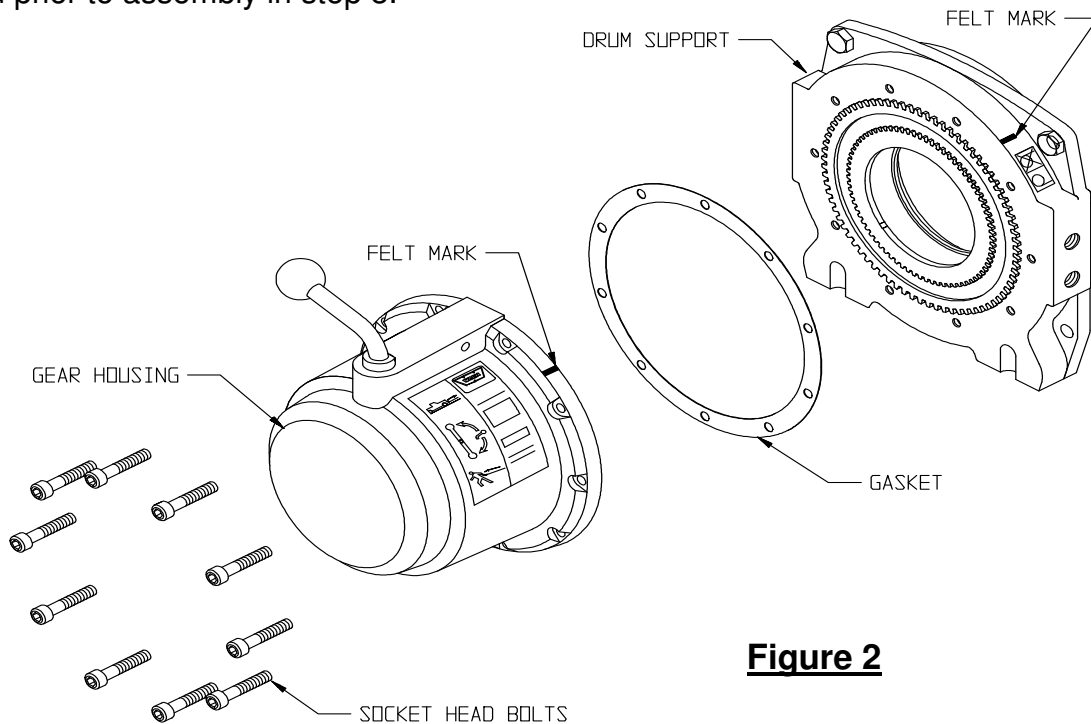


**Figure 1**

2. With the winch lying horizontal, remove the ten socket head bolts holding the gear housing to the drum support. (**NOTE:** Before removing the gear housing, mark the placement of the housing on the drum support with a felt pen. This will make installation easier.) See Figure 2.

3. Carefully pull the gear housing away from the drum support. Remove the old gasket from the drum support. See Figure 2.

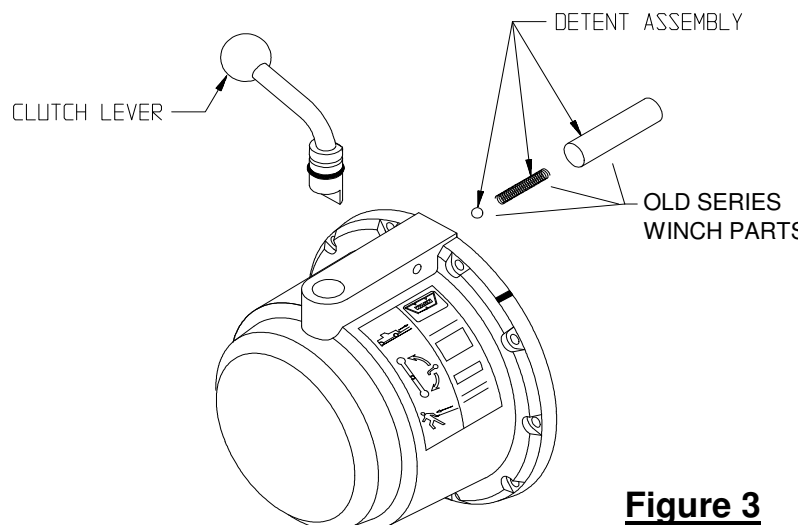
**NOTE:** On 10,000 lb. (4,500 kg) and 12,000 lb. (5,400 kg) models there is a ring gear gasket between the gear housing and the drum support. This should be removed with the gear housing and should not be separated if possible. If it does separate, the gasket should be replaced prior to assembly in step 8.



**Figure 2**

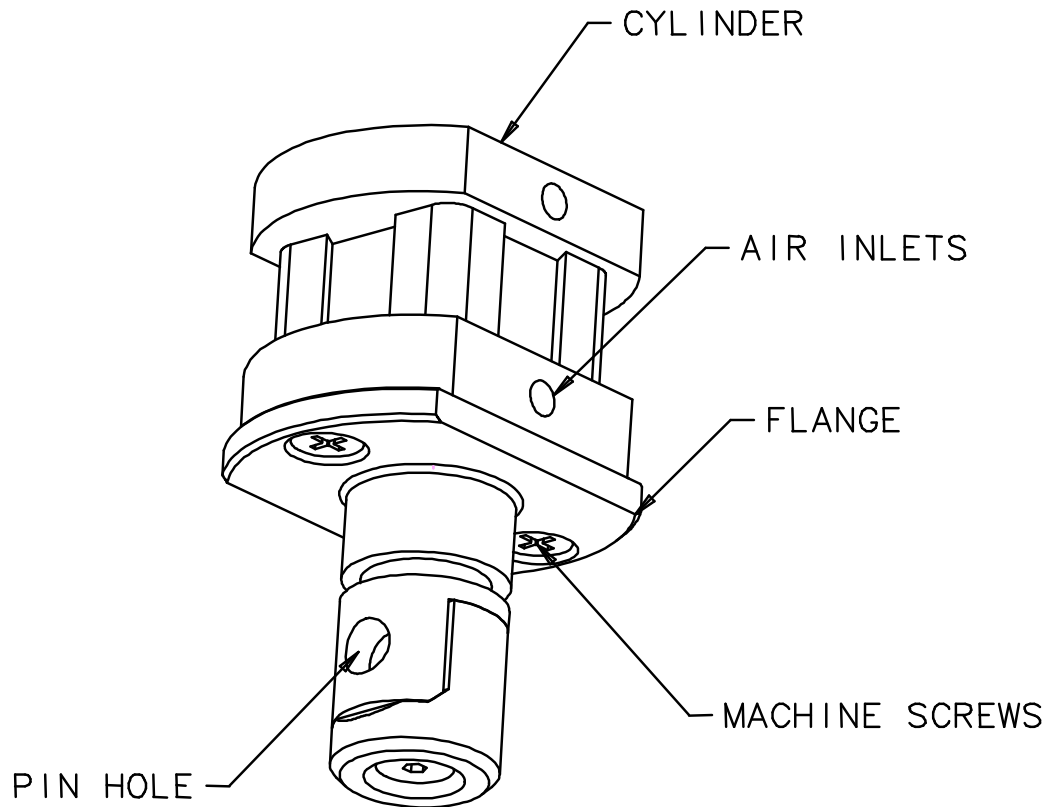
4. For old series winches, remove the ball and spring, the detent assembly, from the gear housing. (**NOTE:** be sure that the steel ball from the detent assembly is taken out, so it will not fall into the gear train.) The detent assembly will not be used with the new air clutch. See Figure 3. In the new series winches there is a retaining pin rather than a detent ball and spring. You may use this pin or use the pin supplied with the kit.

5. Pull the clutch lever out of the gear housing. This lever will also not be needed with the new air clutch.



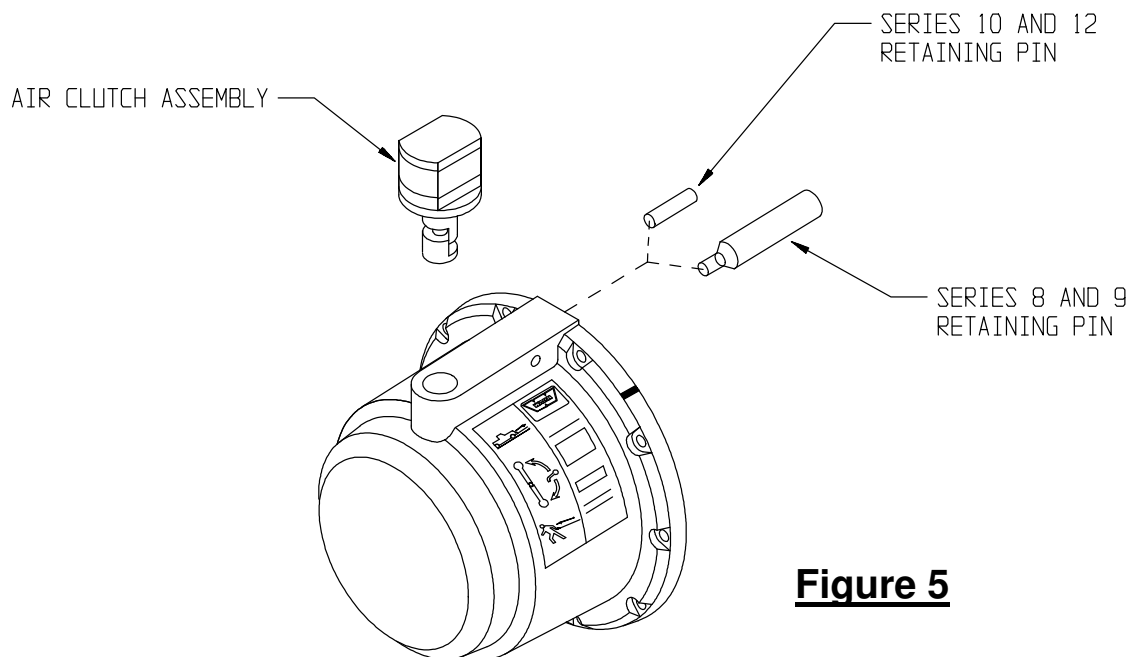
**Figure 3**

6. Inspect the air cylinder assembly and identify the air inlet port. See figure 4. This port will be the lower of the two holes as shown in the figure. Since the pin hole will be facing toward the winch drum, determine if the inlet port is facing a desirable direction. If you wish to change the inlet port direction, remove the machine screws, rotate the flange 180 degrees, and replace the screws.



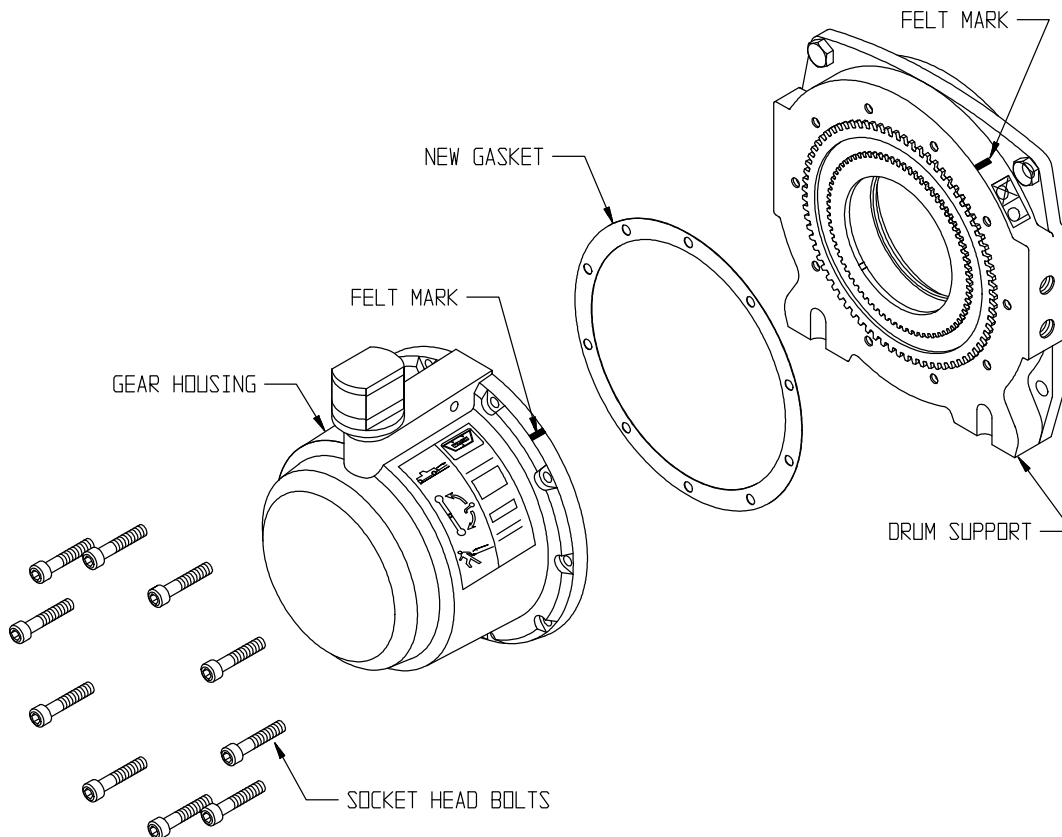
**Figure 4**

7. Apply a small amount of all purpose grease to the O-Rings on the Air Clutch Assembly. Orient the clutch so that the retaining pin hole in the clutch's shaft is facing toward the drum support. Install the Air Clutch Assembly into the hole in the gear housing that previously held the clutch lever. See Figure 5.



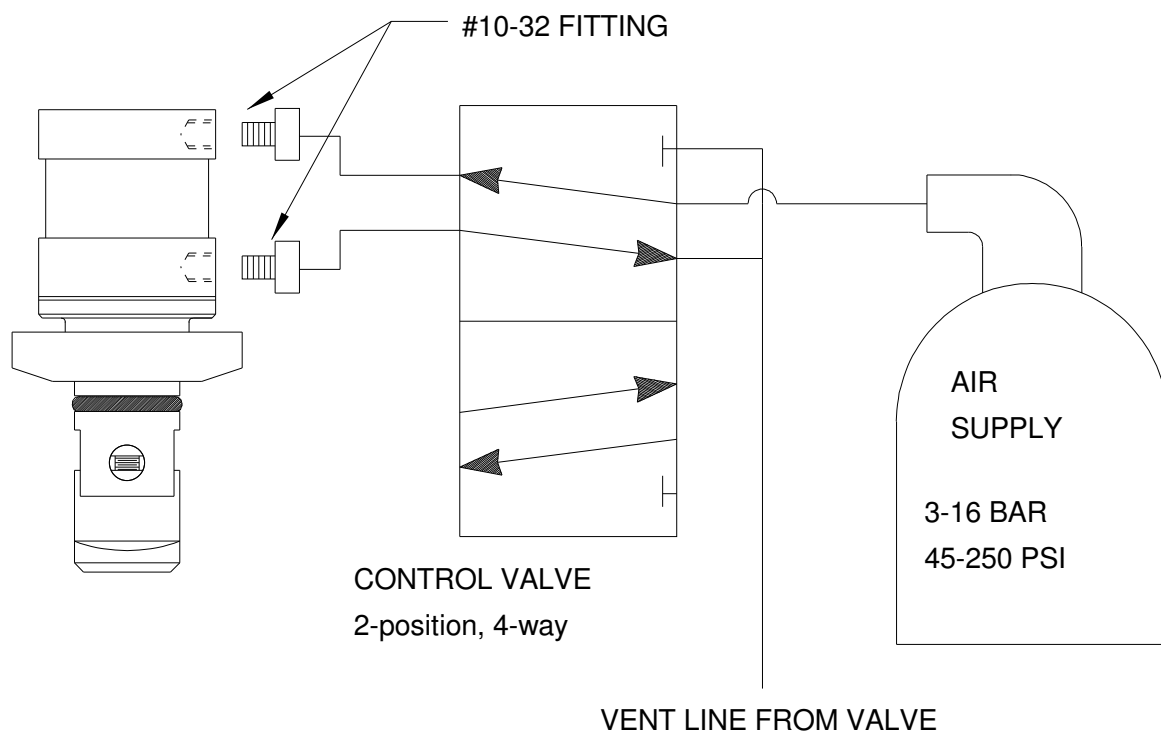
**NOTE:** For the Warn Series 8 or 9 winch use the 1/2 inch (13 mm) diameter retaining pin in step 9. For the Warn Series 10 or 12 winch use the 1/4 inch (6.4 mm) diameter retaining pin in step 9.

8. Slip the retaining pin into the hole in the gear housing that held the detent assembly. The pin should slide all the way in until it is almost flush with the gear housing surface. If it will not slide all the way in make sure that the air clutch assembly was properly installed in step 6. The air clutch should now be pinned and can not be removed from the gear housing.
9. If you are using the metric adapters supplied in the kit, screw the #10-32 to 6 mm adapters with the black plastic washer into the air inlet holes. These are quick connect fittings for 6mm nylon tube. The inside diameter of the fitting is hexagonal so that a hex wrench should be used to tighten the fitting.
10. Install a new gasket onto the drum support, being sure to line up the holes of the gasket with the holes in the drum support. It may be easier to hold the gasket in place if you apply a light coat of grease to the gasket face. If the ring gear gasket was separated during step 3 it should be replaced at this time. See Figure 6.
11. While keeping the felt marks lined up, bolt the gear housing back onto the drum support. Torque the socket head bolts to 100-120 Lb.-in (11-14 N-m). (**NOTE:** the gear housing may need to be lined up before bolting it down. To line it up properly slightly rotate the ring gear inside of the gear housing until the gear teeth line up.)



**FIGURE 6**

12. When installing the air clutch, **DO NOT** tighten the locknut. This can cause the actuator to bind in the bore and prevent proper actuation. The retaining pin and end housing bore fully constrain the air clutch assembly so the locknut is not needed.
13. We recommend that the air supply line be connected and the user verify that the winch drum will free spool when air pressure is supplied to the air cylinder. See figure 8 for plumbing schematic. Note that the cylinder requires #10-32 female fittings. **RECOMMENDATION:** The air supply should always be clean and dry.
14. Installation of the Air Clutch Assembly is now complete.



**FIGURE 8**

## REPLACEMENT PARTS LIST

### **ORDERING INFORMATION**

When ordering, please give part number and description. Parts may be obtained through local dealer or distributor.

ITEM	PART NO.	QTY	DESCRIPTION
1	31256	1	CLUTCH KIT, REMOTE AIR
2	30323	1	CLUTCH RETAINER, CIM SERIES 10 & 12
3	30324	1	CLUTCH RETAINER, CIM SERIES 8 & 9
4	31283	1	INSTRUCTIONS, INSTALL AND OPERATE
5	14964	1	GASKET, 7" DIAMETER
6	31298	2	ADAPTER, #10-32 to 6mm NYLON TUBE