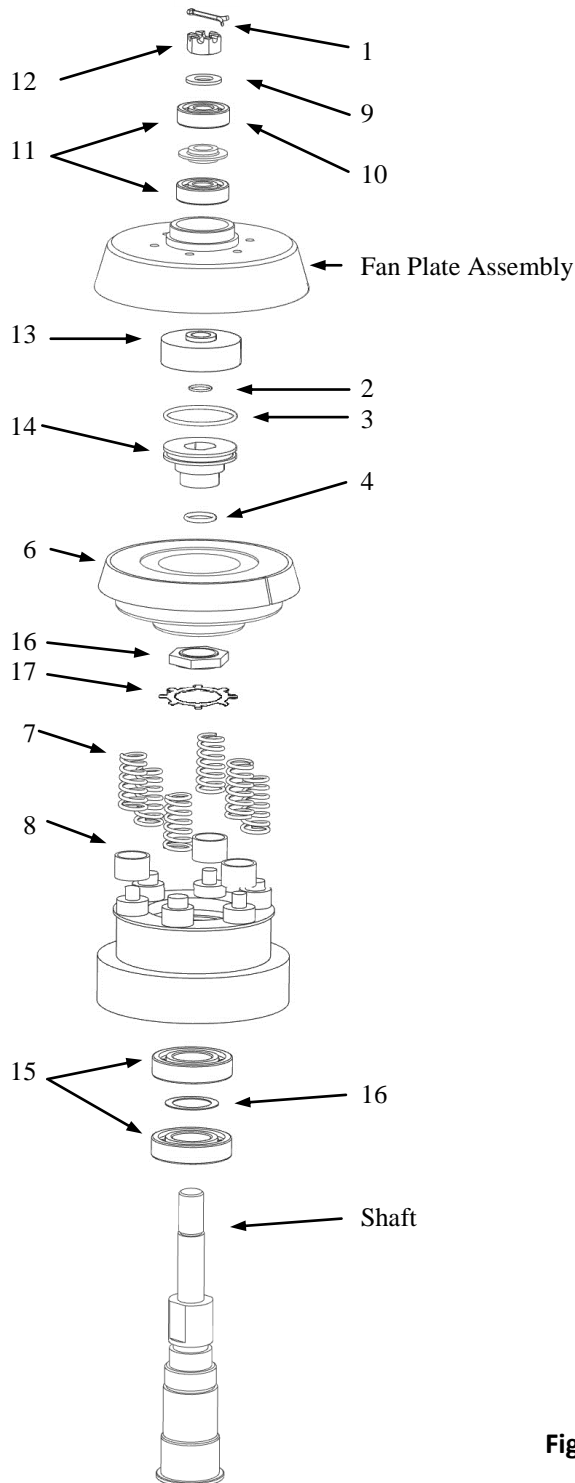


Installation Instructions



Minor Kit:

Kit No. 106733		
Key	Description	QTT
1	Cotter Pin	1
2	O-Ring	1
3	O-Ring	1
4	O-Ring	1

Reline Kit:

Kit No. 106732		
Key	Description	QTT
--	Minor Parts Kit	1
6	Pressure Plate	1
	Complete	
7	Spring	6
8	Isolator	3

Rebuild Kit:

Kit No. 106731		
Key	Description	QTT
--	Redline Kit	1
9	Washer	1
10	Spacer	1
11	Ball Bearing	2
12	Hex Nut	1
13	Piston Housing	1
14	Piston Complete	1
15	Bearing	2
16	Hex Nut	1
17	Lockwasher (re-use original)	1
18	Spacer	1

Figure 1

REMOVAL OF FAN CLUTCH

It is recommended that the FD-L Fan Clutch be removed from the vehicle for service even though it is possible on some installations to install kits 106733 and 106732 without clutch removal.

1. Secure the vehicle on a level surface by means other than the brakes.
2. Drain **ALL** reservoirs to 0 psi (0 kPA) air pressure.
3. Disconnect the air line from the fan clutch.
4. Remove the six cap screws and lockwashers that attached the vehicle's fan to the fan plate of the FD-L.
5. Remove the fan. **Note:** Remove and retain any spacers that may be installed between fan and fan plate assembly.
6. Loosen, remove and retain the vehicle's fan belts.
7. Remove the attaching hardware from the fan clutch mounting bracket and remove the fan clutch from the vehicle.

DISASSEMBLY

General

The following disassembly instructions cover the use of the Minor Parts Kit 106733, the Reline Kit 106732, and the Rebuild Kit 106731. Regardless of the kit being installed, begin disassembly with step 1 under the Minor Parts Kit heading. Continue disassembly until instructed otherwise.

Minor Parts Kit #106733

1. Remove and save dust cap(5). Remove and discard the cotter pin(1) from the hex nut(12).
2. Remove the hex nut(12) and the washer(9).
3. Remove the fan plate assembly.
4. Remove the piston housing(13) and piston(14).
5. Remove and discard the o-ring(3) from the piston(14).
6. Remove and discard the o-rings(2 & 4) from the shaft.

Note: No further disassembly is required when installing 106733. Proceed to the cleaning instructions. If other kits are being installed, continue with step 7 of disassembly.

Reline Kit #106732

7. Remove and discard the pressure plate(6) and the six springs(7).
8. Remove and discard the three isolators(8). They may require turning and at the same pulling, until they disengage from their seats.

Note: No further disassembly is required when installing kit #106732. Proceed to the cleaning instructions. If installing Rebuild Kit 106731, continue with Step 9 of disassembly.

Rebuild Kit #106731

9. Discard the following parts that were retained during previous disassembly: Hex nut(12), washer(9), piston housing(13) and piston(14).
10. Disengage the lock tabs of the lockwasher(17) from the flats of the hex nut(16). Remove the hex nut(16). Remove and save the lockwasher(17).

Pulley Disassembly

11. Support the backside of the pulley so that the shaft/bracket assembly can be pressed down far enough to remove the pulley assembly. The bearings will be damaged after this point of disassembly and must be replaced.
12. Use a pressing tool of adequate diameter to engage the outer race of the ball bearing(15). Press out both ball bearings(15) and the spacer(18). Again, the bearings must be replaced with new bearings.

Fan Plate Disassembly

13. Support the fan mounting surface of the fan plate assembly making certain sufficient space is left beneath to permit the ball bearings(11) to be pressed out. Use a pressing tool of adequate diameter to contact the outer race of the ball bearing(11), press out both ball bearings(11) and the spacer(10). The bearings must be replaced once removed.

CLEAN & INSPECT

1. Prior to assembly, wash all metal parts thoroughly using a quality commercial solvent (such as mineral spirits).
2. Inspect all component parts for wear or damage and replace any parts that fail this visual inspection.
3. All parts that have replacements in the kits being used are to be discarded.

ASSEMBLY

Note: If using Rebuild Kit 106731, start with Step 1 of assembly instructions. If using Reline Kit 106732, start with Step 11. If using Minor Kit 106733, start with Step 13.

Pulley Assembly

1. Support the pulley drive end down and using the same pressing tool as used in Step 12 of disassembly, press one of the two ball bearings(15) into the pulley until it contacts the lip on the pulley.
2. Install the spacer(18) into the housing making it as concentric as possible to the inner race of the bearing installed in Step 1.

3. Install the second ball bearing(15) into the pulley and using the pressing tool, press until contact has been made between the lip of the pulley, the two ball bearings(15) and the spacer(18). Do not continue pressing the bearing once the inner race has touched the spacer or severe damage to the bearings may result. As a check after assembly, the bearing spacer should be in contact with the inner races of each ball bearing but able to be moved by a finger load.

Assembly of Pulley onto the Bracket and Shaft

4. Install the three isolators(8) onto their seats on the pulley by turning and pushing until fully seated.
5. Support the bracket with the shaft pointing up. Apply one band of Loctite 609 or equivalent around the shaft at the location of inner races of the bearings(15) in the pulley. Also put a band of the Loctite on the inner races of the bearings(15). **Note:** Parts MUST BE free of oil and grease for Loctite to properly bond.
6. Slide the pulley onto the shaft, making sure the bottom bearings inner race contacts the bracket.
7. Place lockwasher(17) on the shaft engaging the I.D. tab in the slot in the shaft and install hexnut(16) using the same tool as Step 7 of "Disassembly." Torque locknut to 80-120 ft. lbs. until two of the tangs of the lockwasher(17) can be bent up against the flats of the hexnut(17). Never back the torque off to align parts. Allow 24 hours for complete curing of the Loctite to take affect.
8. Place the fan plate face up on a level surface and with the pressing tool used in Step 13 of disassembly sequence, press one of the ball bearings(11) into the housing until it contacts the lip of the bore.
9. Install spacer(10) into the bore of the fan plate (as illustrated in Figure 1 - **Note:** Flanged end of the spacer should be toward the forward nose of the face plate.) concentric with the inner race of the ball bearing installed in Step 5.
10. Install the second ball bearing(11) into the bore of the fan plate and utilizing the pressing tool used in Step 5, press the ball bearing into the fan plate until it contacts the spacer(10). Do not continue pressing the bearing once the inner race has touched the spacer or severe damage to the bearings may result. As a check after assembly, the bearing spacer should be in contact with the inner races of each ball bearing but able to be moved by a finger load.

Final Assembly

11. Support the bracket, shaft and pulley assembly with the shaft pointing up.
12. Install the six springs(7) on the pulley. Three into the isolators(8) and three onto the bosses provided. **Note:** The isolators must be equally spaced around the circumference of the pulley (every other spring).
13. Apply a thin film of silicone lubricant (provided) to the three o-rings(2-3-4). Install o-ring(2 & 4) onto the shaft and o-ring(3) into the groove of the piston(14).
14. Install the pressure plate(6) on the pulley assembly making sure the bosses on the underside of the plate mate with the O.D. of the six springs(7) previously installed on the pulley assembly.
15. Lubricate the I. D. of the piston housing(13) with the same lubricant used on the o-rings in Step 3. Install the piston(14) (with o-ring(3) in place) into the piston housing. Install the piston and housing assembly onto the shaft, making sure the flats on the I.D. of the piston mate with the flats on the shaft.

WARNING: FAILURE TO PROPERLY MATCH THE FLATS OF THE PISTON TO THE FLATS OF THE SHAFT WILL RESULT IN SEVERE DAMAGE TO THE UNIT.

16. Place the fan plate assembly onto the shaft, then the washer(9) and retain with locknut(12). Torque to 90-100 ft. lbs.
17. Install cotter pin(1) and bend to hold in place. Install dust cap(5). **Note:** Never back torque off to align the cotter pin. If necessary, increase torque slightly until slots in locknut and hole in shaft are in line.

INSTALLATION

18. Attach fan clutch unit to vehicle by installing cap nuts and lockwashers through mounting bracket holes into mating holes in engine bracket.
19. Reconnect air line to unit.
20. Adjust fan belts per vehicle manufacturer's recommendation.
21. Replace fan on fan plate with six cap screws and lockwashers. Torque to 300-360 inch pounds. (Be sure to install any spacers that were removed during disassembly.)