

## Ford 5.4, 6.8L:G, 2008+, F-350, A/C, AA Pump, Rear Port

**Bolt Packages:**

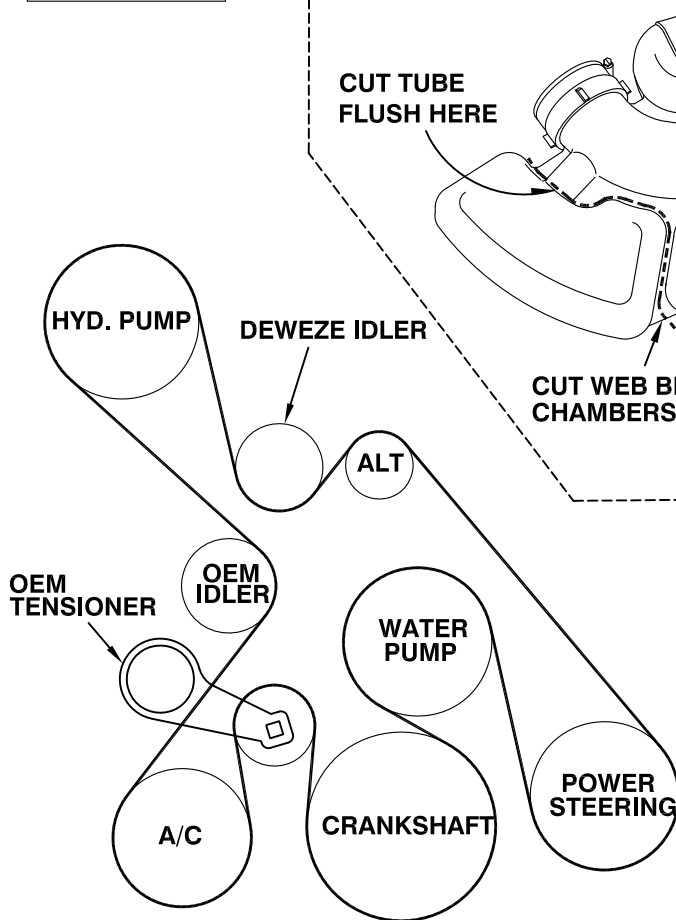
Bracket	None
Idler pulley	711650 (Inc. 2, 8)
Pulley	None
Tensioner	None

Bracket Assy.	None	(Inc. items)
Issue Date	3-20-07	Revision Date E 12-10-09

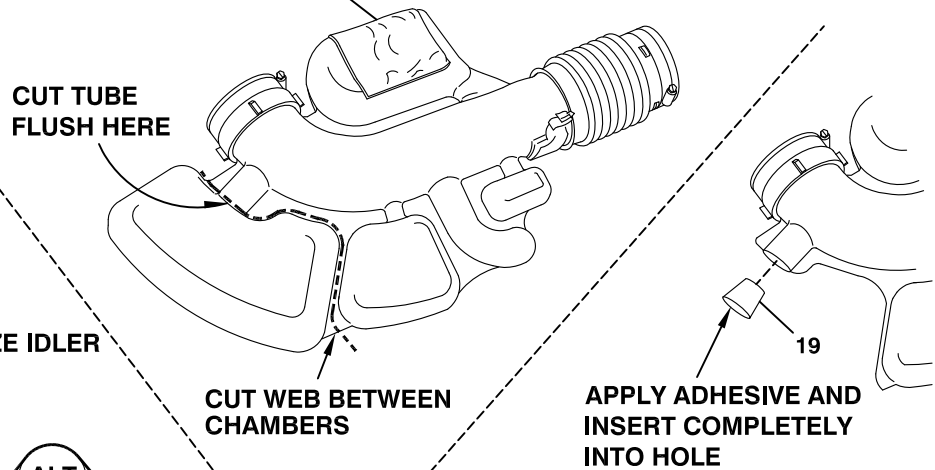
**Item Part No. Description**

1.	711639	Pump bracket	12.	OEM	Idler pulley
2.	711072	Idler bushing	13.	OEM	Nut
3.	*	Pump (rear port)	14.	OEM	Wire
4.	740162	Clutch	15.	740357	Belt, Gates 6K126.68
5.	740242	Idler pulley	16.	711822	Hose, crankcase vent
6.	OEM	Stud bolt	17.	520098	Hose clamp
7.	110775	M8 x 1.25 x 60 Bolt, low head	18.	OEM	Air tube
8.	110828	M10 x 1.5 x 30 L.H. Bolt	19.	110915	Plug, tapered silicone, 1 7/16"
9.	110465	3/8 x 1 1/4 Socket head bolt	20.	711944	Plate, alternator bridge
10.	110271	3/8 Lock washer, .55 O.D. x .13 thick	21.	OEM	Bolt
11.	110703	M8 Flat washer	22.	OEM	Bolt
			23.	702101	Plug, recessed button 1 5/16"

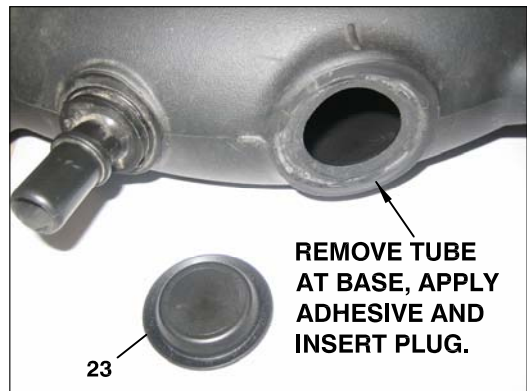
**FIG. 1**  
**BELT DIAGRAM**



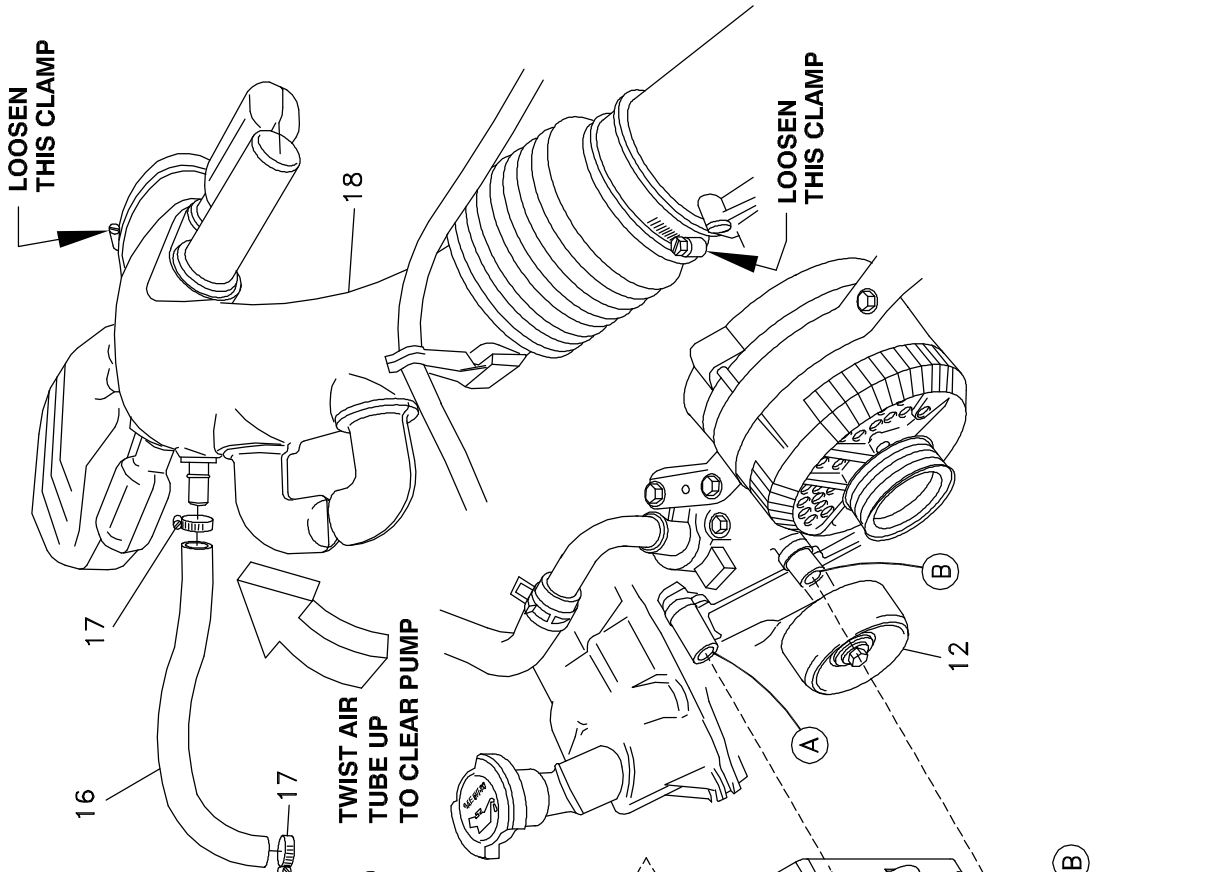
**FIG. 3** 5.4L AIRBOX MODIFICATION



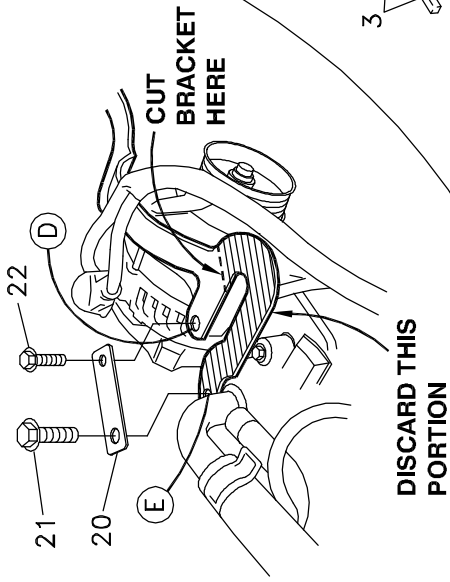
**6.8L AIRBOX MODIFICATION - OPTIONAL**



**FIG. 2**



**FIG. 4**  
**MODIFY ALTERNATOR BRACKET 2009**



# DewEze Clutch Pump Kit 700464

Ford 5.4L, 6.8L, with A/C, AA, 2008+

## INSTALLATION INSTRUCTIONS

1. The installation of this kit requires trained decision-making concerning clearances, tying components together, rerouting, or relocating OEM components, etc. It is impossible to describe all of the clearance and vibration points, etc. in the installation instructions. Therefore, the technician must exercise professional judgment to achieve the best quality installation.
2. Disconnect the battery.
3. Loosen the clamps at the end of the large plastic air box and remove air box. See Fig. 2.
4. Remove the OEM belt.
5. On 2009 and later trucks, remove the OEM bracket over the top of the alternator. Cut the bracket along the dotted line and discard the shaded portion as in Fig. 4. Reinstall this bracket. Place the bridge plate (20) on top of the alternator bracket (Location D) and over to where the removed portion of the OEM bracket was attached (Location E), using the OEM bolts (21, 22).
6. Remove the OEM crankcase vent hose. Replace it with the DewEze hose (16) with two hose clamps (17).
7. Remove OEM idler pulley (12) to gain access to mounting bolt at location B. Keep the pulley and bolt.
8. Remove nut (13) holding wire at location A. Remove stud bolt (6) at location A. Remove OEM bolt at location B.
9. Hold pump (3) onto back of bracket (1) and clutch hub (4i) onto front of bracket, making sure anti-rotation pin (D) on front of hub is on top. Place two 3/8 x 1 1/4 socket head bolts (9) and 3/8 high collar lock washers (10) through pump, through mounting plate and thread into hub. Torque to 20 lb-ft.
10. Slide coil (4a) over hub, aligning hole in the back plate of coil with the anti-rotation pin (D) in the hub. The wires from the coil should be on the same side as the pin (D). Install large snap ring (4b) to hold coil in place.

**NOTE: THE BEVEL ON BOTH SNAP RINGS MUST FACE AWAY FROM THE PUMP. REFER TO INSTRUCTION SHEET FOR THE CLUTCH FOR CORRECT INSTALLATION OF SNAP RINGS.**

11. Slide clutch pulley (4c) onto hub. Install small snap ring (4d) to hold pulley in place.
12. Place the key (3) onto the pump shaft. Slide the hub/armature (4f) onto the pump shaft aligning the keyways.  
**NOTE: SET THE AIR GAP BETWEEN THE HUB/ARMATURE AND THE PULLEY USING SHIMS (4e) ACCORDING TO INSTRUCTION SHEET FOR CLUTCH.**
13. Thread bolt (4g) and lock washer (4h) into pump shaft. Torque to value in clutch instruction sheet.
14. Install the fittings on the pump.
15. Insert the idler bushing (2) into the idler pulley (5) and attach the other side to the boss on the front of the pump mount bracket (1) at Location C with the M10 x 30 shoulder bolt (8). Torque to 19-25 ft-lb.
16. See Fig. 5. Disconnect the wiring from the alternator, pull it from the attachment points on the valve cover and push it back on top of the valve cover. Make sure the alternator wiring will not be pinched between the engine and the pump bracket when it is installed.

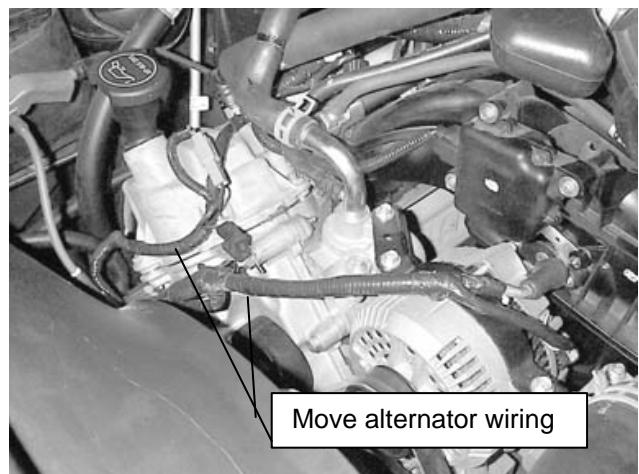


Fig. 5

17. Attach the pump mount bracket (1) to the engine with the OEM stud bolt (6) at Location A and the M8 x 60 bolt at Location B. Torque these bolts to 19-25 ft-lb.
18. Replace the wire (14) on the stud bolt (9) rotating it 180 degrees from the OEM position so it points away from the pump bracket so it is not in the belt line. See Fig. 6. Reconnect wires to the alternator.



Fig. 6

19. Reinstall OEM idler (12) using the OEM bolt in its original location. Torque to 19-25 ft-lb.
20. Install the serpentine pump drive belt (15) per diagram.
21. Set the airbox in place and check to see if it contacts the pump or bracket. If it does, it is necessary to remove part of the airbox for clearance.

On the 5.4L engine airbox, the large chamber on the passenger end that interferes with the pump must be removed. Cut the web between the chamber and the main tube. Cut the connecting tube flush with the chamber leaving about one inch of tube. Apply a heat-resistant adhesive to the tapered silicone plug (19) and insert completely into hole.

On the 6.8L engine, there should be no interference between the pump and the airbox. Removal of the small chamber may only be required if there is interference with hydraulic hoses supplied by customer. If necessary, remove tube at base where it connects to main tube. Apply a heat-resistant adhesive to the recessed button plug (23) and insert firmly into hole.

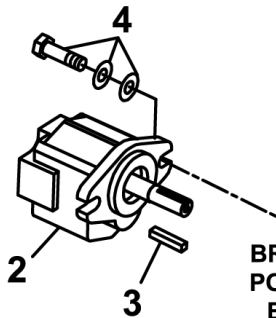
22. Replace the air box (18) and re-tighten the two clamps.
23. Connect the battery.
24. Run the engine and check for any clearance or alignment problems. Adjust as needed.

# INSTALLATION INSTRUCTIONS

## AA PUMP WITH WARNER HUB-CLUTCH

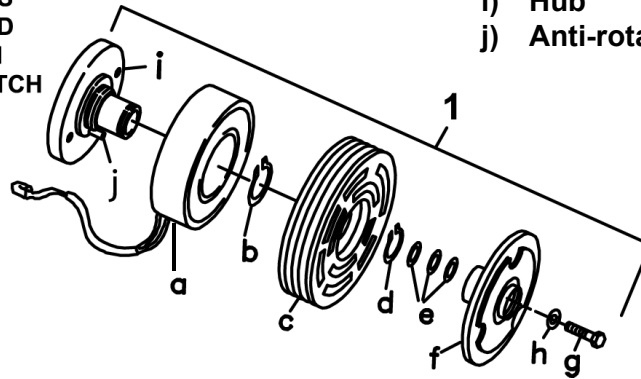


Instruction Sheet 740162 and 740183



BRACKET IS  
POSITIONED  
BETWEEN  
PUMP & CLUTCH

- 2) Pump (AA-mount)
- 3) Key (attached)
- 4) Bolt kit



### 1) HUB CLUTCH ASSEMBLY

- a) Field coil
- b) Field coil snap ring
- c) Pulley
- d) Pulley snap ring
- e) Shims
- f) Armature
- g) Shaft bolt
- h) Lock washer
- i) Hub
- j) Anti-rotation pin

## PROCEDURE

**Warning:** Failure to install snap rings per these instructions can be verified and will void the clutch warranty.

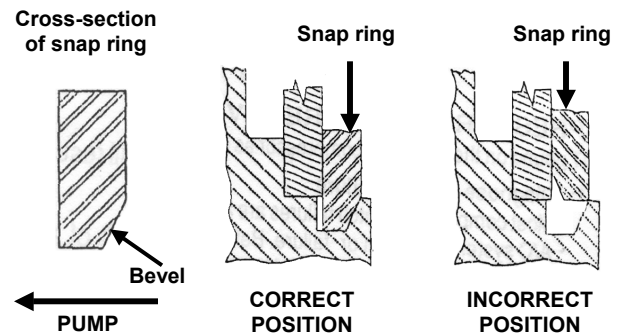
### Step 1: Preparation of field coil (1a)

- a. Align the hole in the back plate of the field coil with the anti-rotation pin (1j) in the hub (1i). Place the field coil into position.
- b. With a snap ring pliers, spread the field coil snap ring (1b) and insert it into the groove on the hub nose.
- c. Verify that the snap ring is fully seated in the groove around its circumference to assure assembly retention.

### USE THE CORRECT SNAP RING:

Field coil snap ring (1b) – largest  
Pulley snap ring (1d) – smallest

To assure assembly retention, the ring bevel must face away from the pump. See figure below.



### Step 2: Preparation of pump (2)

- a. Clean pump shaft of all dirt, grease or debris.
- b. Check mounting surface for nicks, burrs or scratches. Smooth with a file or emery cloth, if necessary.

### Step 3: Installation of clutch (1)

- a. Position pump and hub with field coil on both sides of bracket and secure with bolts from bolt kit (4).
- b. Connect one wire to the engine as a ground and the other to the hot wire coming from the switch. Rotate field coil COUNTER-CLOCKWISE to remove slack from wires. Be sure that wires are not pinched or rubbing.
- c. Slide pulley (1c) onto the pump shaft until it butts against the field coil. If the pulley does not slide on easily, check the mounting surface on the hub nose for nicks or burrs and remove them.
- d. With a snap ring pliers, spread the pulley snap ring (1d) and insert it into the groove on the hub nose.
- e. Verify that the snap ring is fully seated in the groove around its circumference. To assure assembly retention, the ring bevel must face away from the pump.

### Step 4: Installation of armature (1f)

- a. Align the armature keyway with pump shaft key (3) and slide the armature onto the shaft.
- b. Set the pulley to armature air gap at 0.020 to 0.040 inches by adding or removing shims (1e). Measure using a feeler gauge at three locations 120° apart.
- c. Install the lock washer (1h) and shaft bolt (1g). Torque bolt to 95 - 100 inch-pounds.

### Step 5: Clutch assembly check

- a. Rotate clutch and check for rubbing or interference.
- b. The shims (1e) may compress when the shaft bolt is tightened; therefore, re-check the air gap at three locations 120° apart.
- c. Cycle clutch using the switch inside the vehicle or electrical damage may result.
- d. Burnish clutch as follows: Run the engine at 1250 RPM, and cycle the clutch ON and OFF 10 to 12 times over one minute.

### TROUBLESHOOTING:

SYMPTOM	CAUSE	CORRECTION
Clutch will not disengage.	Improper pulley to armature air gap (too small). Current is always on. Pulley snap ring not installed correctly.	Reset air gap per instructions. Check electrical system. Install per instructions.
Clutch will not engage.	Improper pulley to armature air gap (too big). Field coil electrical wiring is not connected. Faulty field coil. Less than 10.8 volts supplied to field coil (all accessories on).	Reset air gap per instructions. Connect field coil wiring. Check field coil for continuity. Check electrical system.
Clutch is noisy.	Field coil or pulley snap rings are not installed correctly. Belts too loose. Bearings noisy (new clutch only). Clutch not burnished.	Check for correct installation. Tighten or replace tensioner. Return to manufacturer. Burnish per instructions.
Clutch slips.	Belts too loose. Voltage to field coil less than 10.8 volts (all accessories on). Improper wiring or connections. Oil or grease on friction surfaces. Clutch not burnished.	Tighten or replace tensioner. Check electrical system. Check electrical system. Replace clutch. Burnish per instructions.

Ref.: Warner Electric – South Beloit, IL