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**FMK 68LSP-8**  
2003-07 Ford Truck F-250-550  
6.0 Diesel  
W-WO/AC, WO/Dual Alt.

## INSTALLATION NOTES

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1. Disconnect the negative battery cables. Drain the engine coolant. Remove the upper radiator hose and overflow tube from the radiator. Disconnect the fan clutch wire. Remove the two bolts from the fan shroud. Using a flat bar against the top of the radiator, pry up on the fan shroud to free it from the diffuser. Raise the fan shroud approximately one foot. With the fan shroud raised, remove the fan clutch wire harness from the fan diffuser so the fan shroud can be removed completely without breaking the plastic wire support. Remove the five bolts from the fan diffuser, remove the fan from the water pump (*fan clutch has right hand threads*), then remove the diffuser and fan together from the engine compartment. Remove the passenger side air to air charge air cooler tube.
2. Remove the OEM serpentine belt and tensioner. Install bracket (15) onto the passenger side cylinder head at locations "A", "B", "C" & "D" with bolts (16) and lockwasher (3). Note: The wiring harness located on the front of the cylinder head must go behind the bracket. Torque bolts to 40 ft/lbs.. Reinstall the OEM tensioner. Install idler (18) onto bracket (15) with bushing (17), flatwasher (13) and bolt (14). Remove the OEM idler at location "F". Remove the bolt and washer from the idler. Install the idler back to its original location re-using OEM washer (5) and stud (6). (Torque to 35 ft/lbs.). Install the new accessory drive belt onto the engine and route it the same as a vehicle with the dual alternator option. (*See belt diagram on the trucks radiator support*).
3. Install drive pulley (1) onto the balancer with bolts (2) and lockwashers (3), torque to 40ft/lbs.. Install bracket (4) with bushings (7 & 8), lockwashers (3), bolts (9) and nut (10). Torque bolts and nut to 40 ft/lbs.. Install idler (12) onto bracket (4) with bushing (11), flatwasher (13), and bolt (14).
4. Remove the glow-plug module and module bracket located on top of the passenger side valve cover. Remove the three nuts that hold the sensor and bracket to the top of the heating housing (retain the three nuts). Remove the sensor from its' bracket and install it onto the new bracket (26) according to the drawing with the O.E.M. screws. Mount the new bracket back onto the heater housing with the O.E.M. nuts. Remove some of the tape from the wiring harness where the wires from the sensor located in the valve cover enter the harness. Mount the module onto bracket (26) with bolts (27) and nuts (28). **CAUTION:** Make certain not to strain any wires or wire connectors, then secure them with tie straps. Remove the nut holding the transmission dipstick tube to the valve cover bolt. Install the dipstick tube brace (33) onto the stud with the OEM nut. Install the dipstick onto the brace with nut (28). This should allow enough clearance to run the hydraulic hoses between the transmission dipstick tube and the engine oil fill spout.

(continued on back side)

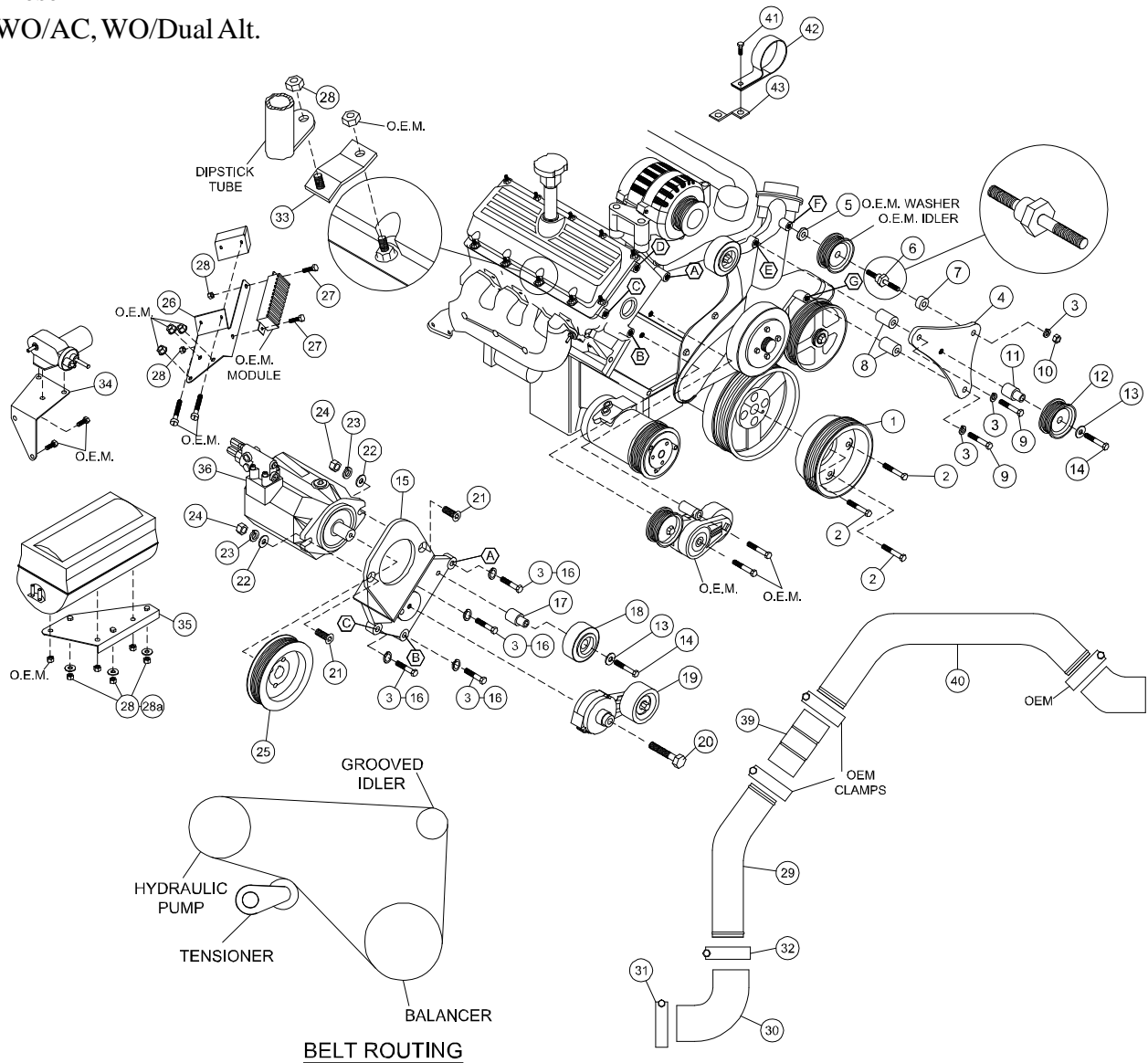
5. *(On 2003-04 trucks only, remove the passenger side battery. With a suitable tool, cut the flange with the two holes in it from the battery tray. Remove any sharp edges).*  
Remove the vacuum valve from the passenger side fender and reinstall it with bracket (34). Remove the vacuum canister and install it onto the bracket (35) using the O.E.M. nuts. Install bracket (35) to the wheel well with nuts (28) & flatwashers (28a). Reinstall the battery, and move it as close to the fender as possible. If equipped A/C: the A/C line coming from the receiver dryer will need to be bent outward to run down along side the battery. It is easiest to bend the line by standing on the passenger side of the vehicle, place your left hand on the A/C line right where it comes out of the receiver dryer, and your right hand where the rubber hose is crimped onto the aluminum tube. Pull the A/C line towards you with your right hand until the rubber hose just comes in contact with the battery cables. Secure the A/C line to the battery cables with tie straps. The A/C line coming from the condenser will need to be bent outward and to clear the new cooler tube.
6. Install the pump onto the bracket with bolts (21), flatwasher (22), lockwashers (23), & nuts (24). Align the pump pulley with the drive pulley then tighten the taper lock. Install tensioner (19) onto the bracket with bolt (20). Install pump drive belt according to belt diagram.
7. Cut the fan diffuser as necessary to clear the drive pulley, idler and clutch pump. Use the diagram supplied with this kit for diffuser cut out lines. If cutting the diffuser is not desirable, a diffuser for a 6.0 liter with the dual alternator option is available from Ford Motor Co. as a replacement. The part# is 3C3Z-8B614-BD.  
Install the diffuser and fan. Install the fan shroud, upper radiator hose and overflow tube. Install the 90° rubber elbow onto the air to air charge air cooler with the opening pointing straight up. Install cooler tube (29) with the long end down, the OEM coupler and clamps, and the 2-1/2" steel tube (40). Rotate OEM elbow on the turbo until it aligns with tube (40). Install tube rest (43) onto the inside alternator bolt and point it towards the front. Install the Adel clamp (42) around the turbo tube and hold it into place with bolt (41). Once the turbo tube is aligned, tighten all clamps securely.  
**IMPORTANT:** Wipe any oil from the turbo tube elbow with brake cleaner, ether, or other suitable cleaner. Failure to do this may result in the cooler tube blowing out of the coupler under high pressure situations.
8. Replace the antifreeze and connect the battery cables. Run the engine and check for proper belt tracking and clearances.

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6.0 Diesel

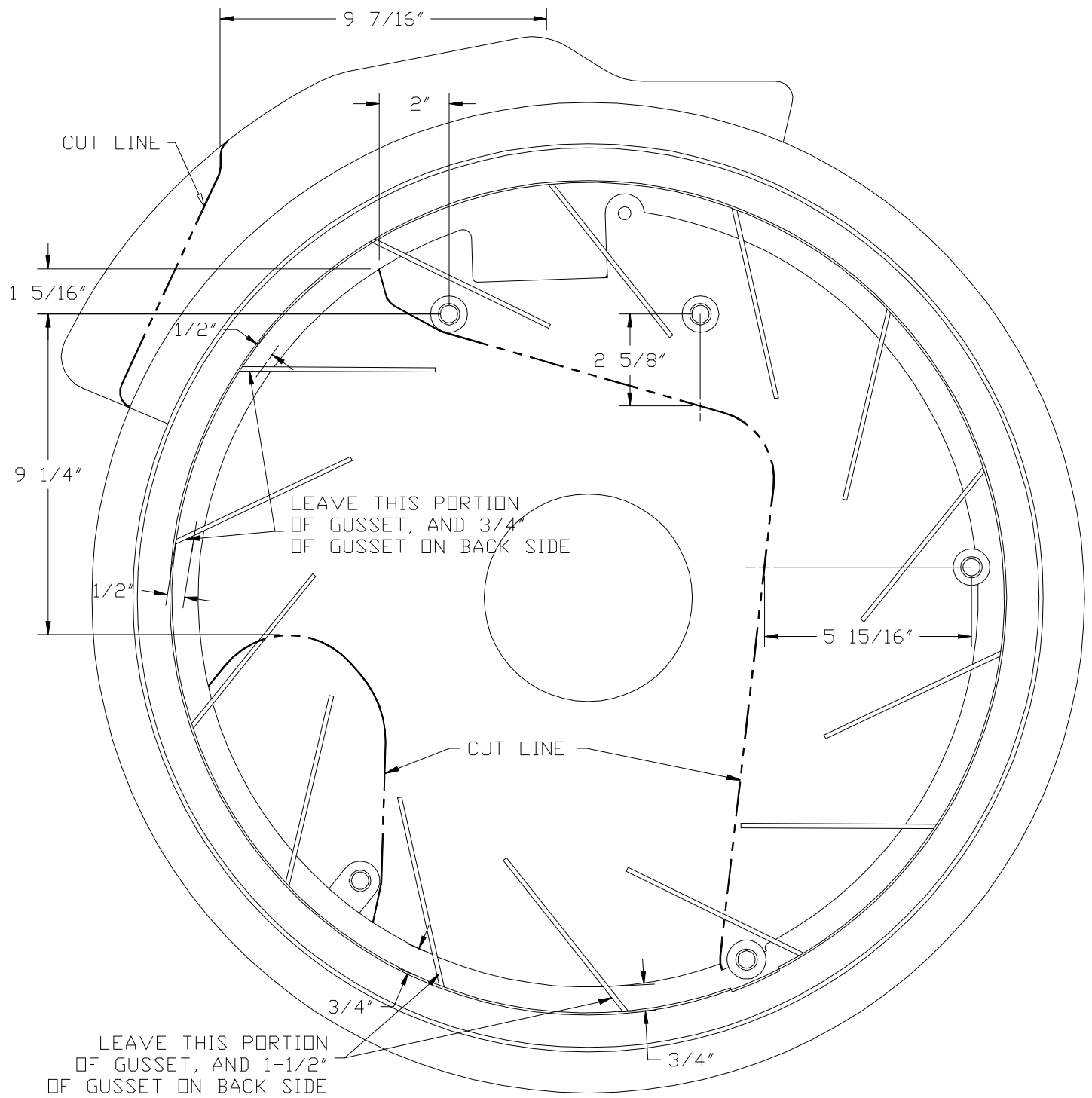
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## PARTS LIST

- |                           |                                      |  |
|---------------------------|--------------------------------------|--|
| 1. FPC 688 (1)            | 16. 10mm x 40mm 10.9 (4)             | 29. ST30-325-55 3" Steel Elbow (1)               |
| 2. 10mm x 30mm Flange (3) | 17. FMB 685 (1)                      | 30. TP 140 Rubber Elbow (1)                      |
| 3. 10mm LW (7)            | 18. TIPCS (1)                        | 31. 250-87 Hose Clamp (1)                        |
| 4. FMB 680 (1)            | 19. 8920236 Tensioner (1)            | 32. 250-84 Hose Clamp (1)                        |
| 5. OEM Washer             | 20. 12mm x 80mm 10.9 (1)             | 33. FMB 688 (1)                                  |
| 6. 1080ST (1)             | 21. 1/2 x 1-3/4 Flat Socket Bolt (2) | 34. FMB 6811 (1)                                 |
| 7. FMB 682 (1)            | 22. 7/16 FW (2)                      | 35. FMB 6810 (1)                                 |
| 8. FMB 683 (2)            | 23. 1/2 LW (2)                       | 36. Pump ( <i>Sold Separately</i> )              |
| 9. 10mm x 65mm 10.9 (2)   | 24. 1/2 NC Nut (2)                   | 37. 5080750 Dayco (1) ( <i>Pump drive belt</i> ) |
| 10. 10mm Nut (1)          | 25. TLP 598                          | 38. 5081325 Dayco (1) ( <i>Main drive belt</i> ) |
| 11. FMB 684 (1)           | 26. FMB 689 (1)                      | 39. O.E.M. Coupler (1)                           |
| 12. GPCD8 (1)             | 27. 1/4 x 3/4 NC (2)                 | 40. ST256030 2-1/2 Steel Tube (1)                |
| 13. 12mm FW (2)           | 28. 1/4 NC Nut (6)                   | 41. 8mm x 25mm Flange Bolt (1)                   |
| 14. 12mm x 65mm 10.9 (2)  | 28a. 1/4 FW (3)                      | 42. 2-1/2 Adel Clamp (1)                         |
| 15. FMP 681B (1)          |                                      | 43. FMB 6812 Cooler Tube Rest (1)                |

# 2003-07 Ford 6.0L Diesel Diffuser Cut-Out



**VIEW FROM FRONT**