



CW MILL EQUIPMENT CO., INC.  
P.O. Box 246 • Sabetha, Kansas 66534  
(785) 284-3454 • FAX (785) 284-3601

**FMK68SD508-8**

2003-2007 Ford Truck F-250-550  
6.0 Diesel 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 (2004 and newer models only use four bolts), 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 charge air cooler tube.
2. Remove the glow-plug module and module bracket located on top of the passenger side valve cover. Remove the three nuts that hold the M.A.P. sensor and bracket to the top of the heating housing (retain the three nuts). Remove the M.A.P. sensor from its bracket and install it onto the new bracket (24) according to the drawing with the O.E.M. screws. Replace the vacuum hose that runs from the engine to the M.A.P. sensor with the longer hose (40) provided in the kit. Reuse the hose clamps and protective cover. 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 (24) with bolts (25) and nuts (26). **CAUTION:** Make certain not to strain any wires or connectors, then secure them with tie straps.
3. Remove the O.E.M. serpentine belt and tensioner. Install bracket (15) onto the passenger side cylinder head at locations "A", "B", "C" & "D" with bolts (16) and lockwashers (3). Note: The wiring harness located on the front of the cylinder head must go behind the bracket. Torque bolts to 40 ft/Lbs. install the O.E.M. tensioner back to its original. Install Idler (18) onto bracket (15) with bolt (14), flatwasher (13) and spacer (17). Install the tensioner (19) onto bracket (15) with bolt (20). Remove the O.E.M. idler at location "F". Remove the bolt and washer from the idler. Install the idler back to its original location re-using O.E.M. washer (5) and stud (6). (Torque to 35 ft/Lbs.). Install the cooler tube rest bracket (27) onto the alternator with the O.E.M. bolt as shown in the illustration. Install the new accessory drive belt (38) onto the engine and route it the same as a vehicle with the dual alternator option. (*See belt diagram on the trucks radiator support*).
4. Install drive pulley (1) onto the balancer with bolts (2), torque to 40ft/Lbs. Install bracket (4) with bolts (9), lockwashers (3) and spacers (8) at locations (E & G) and spacer (7), lockwasher (3) and nut (10) at location (F). Torque bolts and nut to 40 ft/Lbs. Install idler (12) onto bracket (4) with bushing (11), flatwasher (13), and bolt (14).

(continued on back side)

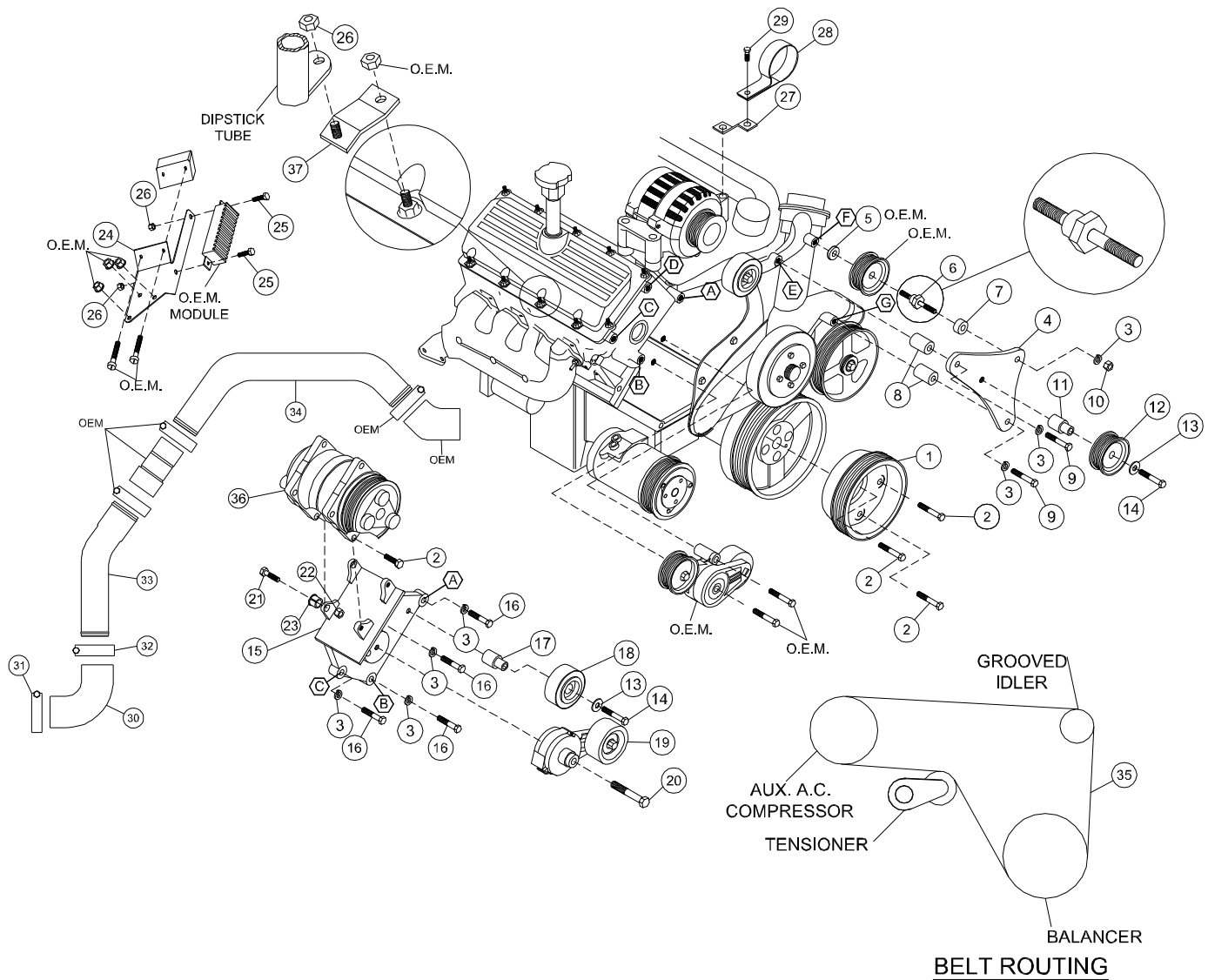
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5. On '03-'04 models only, remove the passenger side battery. With a suitable tool, cut the flange with the two holes in it from the battery tray. Remove any sharp edges. Replace the battery, and move it as close to the fender as possible.
6. On 2003 models equipped with 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.
7. Install the auxiliary AC compressor onto bracket (15) using bolts (2) on the front of the compressor, and bolts (21), nuts (22) and slide bushings (23) on the back of the compressor. Check alignment and install shims provided in mounting hardware between the front ears of the compressor and the front ears of the bracket (15) if needed. Alignment is very important and is the installer's responsibility. Tighten bolts securely. Install the AC compressor drive belt (35) according to the belt diagram.
8. Cut the fan diffuser as necessary to clear the drive pulley, idler and compressor. 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 7C3Z-8B614-BB.  
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 the 3" steel tube with the small end down into the rubber elbow. Install the O.E.M. rubber adapter and the 2 1/2" steel tube (the long end goes on the turbo). Install the Adel clamp to the cooler tube bracket (27) installing it around tube (34) using bolt (29) Align the cooler tube then tighten the clamps securely.
9. Replace the antifreeze and connect the battery cables. Run the engine and check for proper belt tracking and clearances.

# FMK68SD508-8

2003-2007 F250-F550

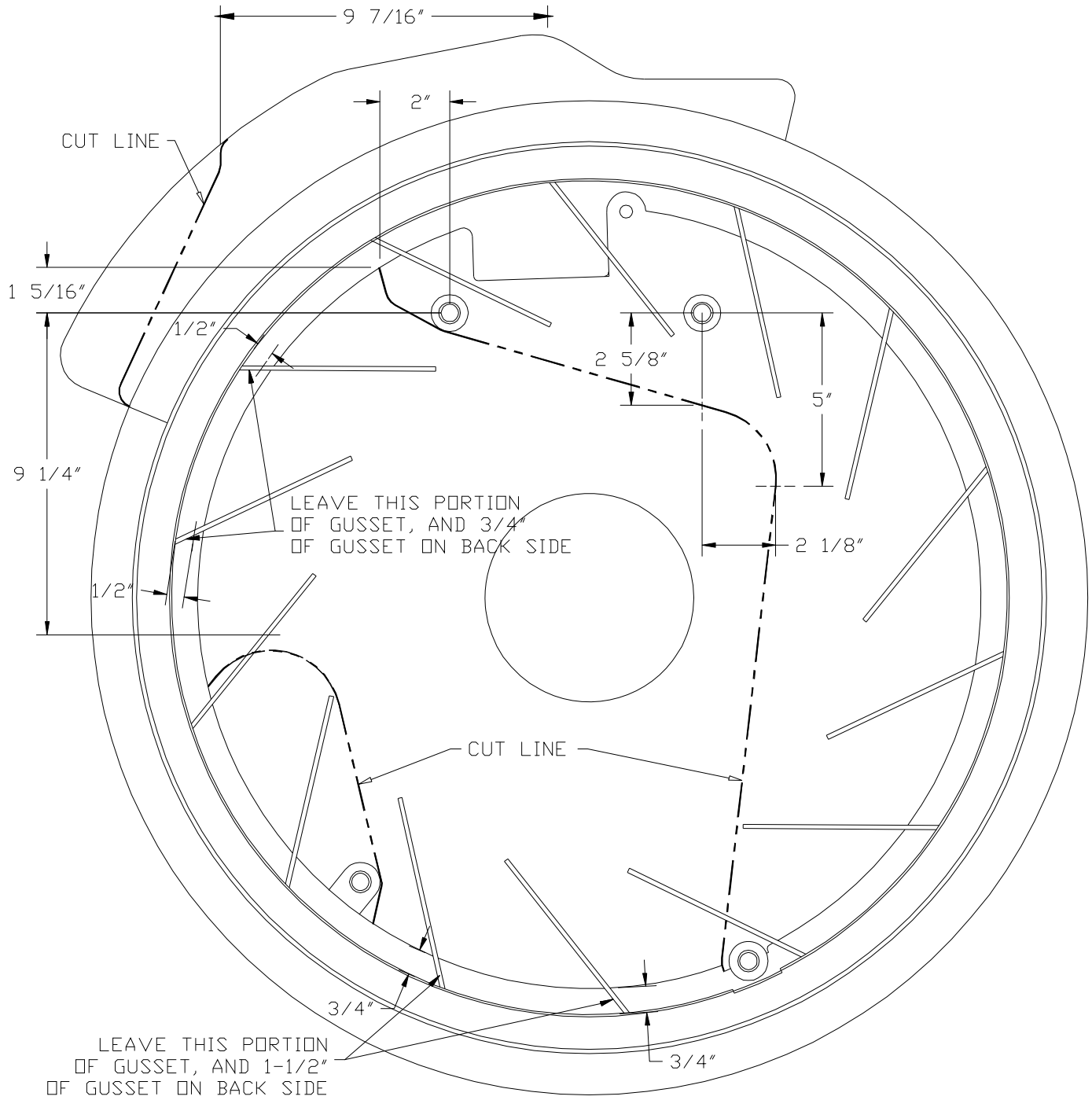
6.0 Diesel, WO/Dual Alt.



## PARTS LIST

- |                           |                                  |                                       |
|---------------------------|----------------------------------|---------------------------------------|
| 1. FPC 688 (1)            | 15. FMP 68SD508-8 (1)            | 29. 8mm x 25mm Flange (1)             |
| 2. 10mm x 30mm Flange (5) | 16. 10mm x 40mm (4)              | 30. TP140 Rubber Elbow (1)            |
| 3. 10mm LW (7)            | 17. FMB 685 (1)                  | 31. 2.5-87 "T" Bolt Clamp (1)         |
| 4. FMB 680 (1)            | 18. 89016 Dayco (1)              | 32. 2.5-84 "T" Bolt Clamp (1)         |
| 5. OEM Washer             | 19. 8920236 (1)                  | 33. ST30-325-55 3" Steel Tube (1)     |
| 6. 1080ST (1)             | 20. 12mm x 80mm (1)              | 34. ST256030 2 1/2" Steel Tube (1)    |
| 7. FMB 682 (1)            | 21. 10mm x 40mm Flange (2)       | 35. Dayco 5080720 (1)                 |
| 8. FMB 683 (2)            | 22. 10mm Flange Nut (2)          | 36. A.C. Compressor (sold separately) |
| 9. 10mm x 65mm (2)        | 23. 1255-0090 Slide Bushing (2)  | 37. FMB 688 (1)                       |
| 10. 10mm Nut (1)          | 24. FMB 689 (1)                  | 38. 5081325 Dayco (1)                 |
| 11. FMB 684 (1)           | 25. 1/4" x 3/4" (2)              | 39. Plastic Tie Straps (3)            |
| 12. GPCD8 (1)             | 26. 1/4" NC Nut (3)              | 40. 1/4" x 20" Vacuum Hose (1)        |
| 13. 12mm FW (2)           | 27. FMB6812 Cooler Tube Rest (1) |                                       |
| 14. 12mm x 65mm (2)       | 28. 2 1/2" Adel Clamp (1)        |                                       |

# '03-07 Ford 6.0L Diesel Diffuser Cut-Out



**VIEW FROM FRONT**

