Tip 1: The plunger-type fuel transfer pump used on ‘89-’98 12-valve engines has an arm that moves as a lobe on the camshaft rotates round-and-round. You’ll want to install the transfer pump when the cam lobe is away from the pump’s arm. You can be sure the cam is not acting on the arm by rotating the engine to where the crankshaft alignment marks line up at Top Dead Center (TDC).

Tip 2: How do you rotate the engine to TDC? While you could purchase the Cummins Engine Barring Tool (3824591), the tool is not necessary. You can turn the engine over using a 22mm socket that you put onto the 22mm nut on the alternator.

Turn the socket/ratchet in the counter-clockwise direction and you’ll find the serpentine belt provides enough grip to turn the engine over. Granted, you are going in reverse of the engine’s normal engine rotation, but it does not matter as all you are trying to do is get the engine to TDC.