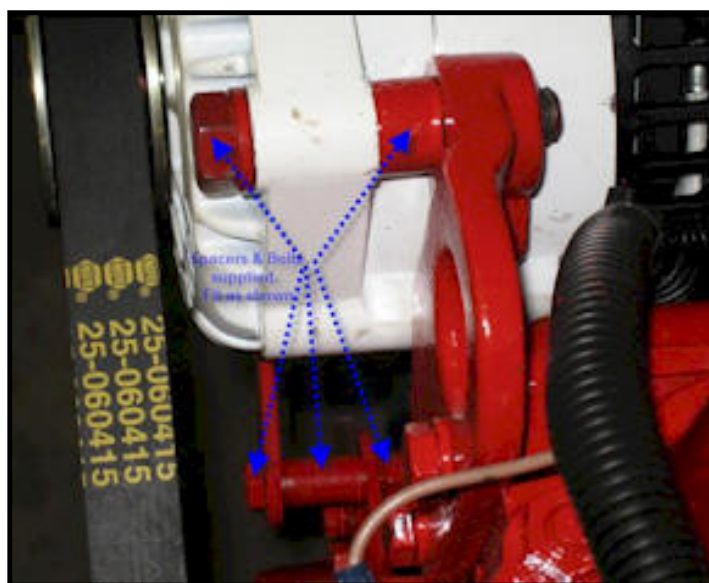


TRANS ATLANTIC DIESELS, INC.

Serpentine Pulley Kit Installation Procedure

1. Crankshaft Pulley. Remove positive battery leads from starter motor and isolate positive lead from battery. It will be necessary to stop the engine from rotating when removing and re-torquing the crankshaft bolt. This can be done by removing the starter motor and placing a pry bar in the ring gear teeth on the flywheel. An impact wrench can be used for removal but will not ensure the correct torque when re fitting. Remove the original crank shaft pulley retaining bolt with a 1½" standard socket for the 4.107 & 4.108. For the Westerbeke 40 use a 1 1/8".socket. With the bolt removed the pulley should pull off quite easily by using two hands and pulling evenly on both sides. Do not pry against timing cover. This is a good opportunity to inspect front seal for leaks and replace if necessary, as the seal is now fully exposed. One is included in the kit. Re fit the crank pulley applying a smear of grease to the polished area on which the seal rides. 4.107 & 4.108 tighten the retaining bolt to 230 ft lbs if you have a phosphate bolt (dull finish most popular) or 190 ft lbs if you have a cadmium coated bolt (shiny).

Westerbeke 40 Only. Owners can purchase from us the necessary replacement larger phosphate bolt (part# 32162316) and washer (part# 33124119) to fit in place of the original one. Tighten with 1 ½ in socket to 230 ft lbs.



Westerbeke 40 requires some additional bolts and spacers to re-align alternator to be placed as shown above.

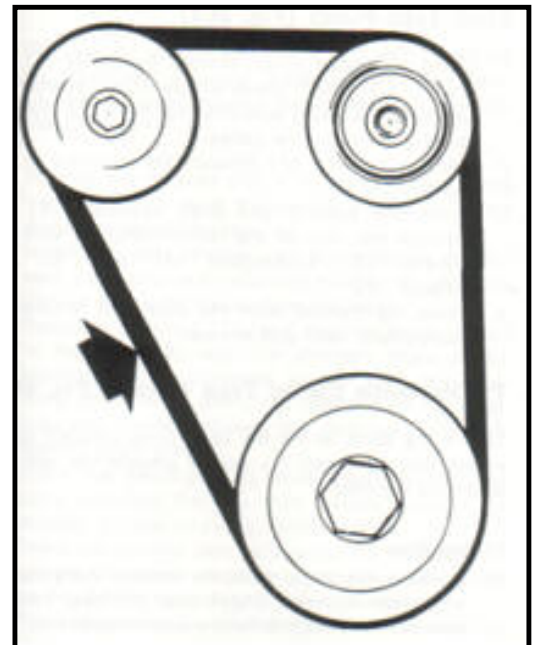


Westerbeke 40 with Balmar 2" foot mount.

2. Water Pump with Pulley. Drain anti freeze coolant. Remove the old fresh water circulating pump. Clean the gasket surfaces, and fit the new water pump which will have the serpentine pulley already installed. (new gasket supplied). 4.108 Owners with the Bowman manifold. (as configured in the above picture) will be required to fit the short supplied hose to bring the fresh water cross over pipe forward slightly to avoid contact with the new serpentine belt. This will replace the existing hose. This does not apply to others not using the Bowman manifold.

3. Alternator Pulley. Replace the V pulley on the alternator with the serpentine pulley. An impact wrench works well for this. Some alternators have a provision in the end of the armature shaft for an allen wrench to hold armature from turning while tightening with an open wrench. Torque may vary according to your alternator manufacturer.

4. Serpentine Belt & Tension Fit the new serpentine belt. Tension should be adjusted using the original alternator adjusting arm so that, with normal thumb pressure, the belt can be depressed $\frac{3}{8}$ of an inch at the center of the longest span. (per fig 2) NOTE. The new belt will require re tightening after a few hours of operation. This check should be done while the engine and belt is warm. Continue to check tension until the new belt no longer stretches. Following this procedure, periodic checks should be made checking condition and tension. Carry a spare!



5. Replacing coolant. If you have not changed your coolant within the recommended period, this is a good time to do so. We suggest a good quality extended life ethylene glycol anti freeze with corrosion protection and rust inhibitor. Once coolant is filled with a 50% 50% mix, approx. 6.6 qts., not including hot water heater, check for leaks. Be sure to vent the air, and monitor the fluid level and temperature carefully before and after engine comes up to working temperature. Caution: Do not remove cap to check level until engine has cooled down as the system will be under pressure and could cause burns.

Later Replacement of a Worn out Pump with the Serpentine Pulley Already Fitted.

All original pumps are supplied by the manufacturer less pulleys. When fitting a replacement pump avoid damaging pulley by following instructions on the correct pulley removal procedure as shown in your manual. Be careful, the pulley is cast iron and will easily break. They are expensive! If you prefer, play safe and ship us your old pump and pulley, we will be happy to change your pulley and supply a replacement pump, (no charge for removal and fitting the pulley)

Do you have a Perkins 4.236?

If you have a Perkins 4.236 and would be interested in fitting a serpentine belt system please call us at the toll free number below. If we get enough requests we will produce a serpentine system for the 4.236 engine. We will keep your contact information in the event we do proceed.

If you have any questions or require technical assistance email us at tadinc@earthlink.net or call us at 804 642 9296.