

## Installation Instructions

1. Loosen the alternator tensioning bolt to loosen the old vee drive belt. Remove belt.
2. Using a strap wrench or chain grips, secure the crankshaft pulley in place. Once the pulley is secure, remove the center bolt from the front of the pulley. A thin-walled socket will be required to remove the bolt.
3. Once the bolt is removed, loosen and remove the four small surrounding bolts.
4. Remove the crankshaft pulley. A puller may be required to remove the pulley.
5. Once the pulley is removed, re-install the center bolt, and use your puller to remove the crankshaft adapter plate.
6. Clean the installation location thoroughly to eliminate grime, then grease the crankshaft, lip seal and inner bore of serpentine crank pulley. Install new crank pulley.
7. Remove the pulley washer from the old crank pulley and insert on the center crankshaft bolt.
8. Thread the center bolt into the crankshaft and tighten to 45-50 ft-lb. Use padding to protect pulley threads when using chain or strap wrench to keep pulley from turning.
9. Completed serpentine crank shaft pulley.
10. When crank pulley installation is complete, remove water pump pulley from engine.
11. Using new mounting bolt and spacer bushing supplied.
12. Belt alignment is why the spacer bushing is necessary.
13. After installing the alternator with the mounting spacer, you will need to use the other tensioning bracket spacer an bolt provided to tighten the belt.
14. Finished Assembled Unit.

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### Installing Alternator Pulley

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1. If the alternator to be used is already installed on the engine, disconnect and mark all wiring attached to the alternator. Remove the front and rear mounting bolts as well as the tensioning arm bolt and remove the alternator from the engine block. Remove standard pulley from alternator. The AltMount<sup>®</sup> alternator pulley can be used on any alternator with a 17 mm rotor shaft. While the pulley can be removed without one, the use of an impact wrench (as shown) is strongly recommended.
2. Place AltMount<sup>®</sup> pulley on rotor shaft. Insert lockwasher and hex nut.
3. With impact wrench, tighten hex to 45-50 ft. lb. The pulley can be supported with your free hand to prevent the pulley from spinning as you tighten the nut.
4. With the new pulley installed, return the alternator to its original position on the engine. Replace the front and rear mounting bolts and tensioning arm bolt and tighten until the alternator is supported, let loose enough to allow alternator to move freely to allow belt installation and tensioning.
5. Re-attach wiring to alternator.



### Installing Serpentine Belt

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1. Once the three serpentine pulleys are installed and in place, the serpentine belt can be installed. Your serpentine conversion kit includes two belts; one for immediate installation and one as a spare. Both are the same size, it won't matter which one you choose to install. Note: Some installations require different belt lengths than what Balmar supplies in the standard AltMount<sup>®</sup> Kit. Contact Balmar Tech Service if you require a different belt length.
2. With the alternator pushed as close to the engine as possible, place the belt around the three new serpentine pulleys. The belt will need to go around the crank pulley first, then around the water pump pulley, and last around the alternator pulley.
3. Once the belt is around all three pulleys, the alternator can be moved away from the engine block to add tension to the belt. The recommended tension for the serpentine belt can be measured by the deflection over a given span. In a 6-groove, K-type belt, that deflection is 1/64" per one inch of belt span between pulleys under 25 pounds of deflection pressure. For example, the deflection of a 32" span is 1/64" X 32 or 1/2".
4. There are a number of tensioner gauges available for determining serpentine belt tension. While thumb pressure and straight edge will give you a good, rough guide, the use of a tensioning tool is far more accurate - and far more likely to provide you with optimal belt life.
5. Once you have properly tensioned your belt, tighten the alternator's mounting and tensioning arm bolts. Replace the cowl.
6. While serpentine belts are far less susceptible to stretching than traditional vee belts, re-tensioning is recommended after the first few run cycles, and should be part of routine engine maintenance thereafter.

### Troubleshooting

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The serpentine drive belt system is far less prone to dusting or belt wear issues than traditional vee belts. If under belt wear or premature belt failure is noted, start with the following steps:

1. Ensure that crankshaft, water pump and alternator pulleys are in proper alignment. Using a straight edge, sight along the run of the belt and ensure that the pulleys are parallel to each other. Often, the alternator can be moved slightly forward or aft to improve pulley alignment.
2. Ensure that none of the bolts supporting the crank or water pump pulleys has loosened. Using a torque gauge, ensure that all bolts are tensioned to the engine manufacturer's torque specifications.
3. Verify that the belt tension meets specified valued. See page 2 for recommended tension.

If none of the steps above corrects the belt dusting issue, contact Balmar Customer Service or Technical Support departments for additional recommendations.

### Notes

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AltMount® Kit Includes:

AltMount® Pulleys and (2) Serpentine Belts

(1) Threadlocker

(1) General Purpose Lubricant / Anti-corrosion Gel

Fasteners as Required

\* Pulley Bolts: The bolts supplied with AltMount® Kits are typically representative of the particular engine the kit was designed to fit. Engine manufacturers often change the bore depths without notification, therefore the bolts supplied might be too long or too short for your particular engine. Make sure the bolt lengths are appropriate to properly seat the AltMount® pulley. If different bolt lengths are required, the fastest solution is to request longer or shorter bolts of the same diameter and thread pitch from your local hardware store.

\* Since these are after market kits, some shimming may be necessary for proper belt alignment.

\* Some kits will require the installer to use the original hardware installed on the engine.

\* AltMount® Pulley Conversion Kits are designed to be used with Balmar High Output Alternators and may not fit the alternator currently installed on your engine. If you choose to utilize an alternator other than a Balmar Alternator, please contact our technical service department to verify correct fitment for your application.