A&A Secondary Drive Instructions

*If vehicle is already equipped with 8-rib alternator and power steering pulleys, you can re-use them if you don't mind 2 ribs being unused by the 6-rib belt. Otherwise, install OEM 6-rib alternator and power steering pulleys.

If plastic C5 power steering pulley is damaged it can be replaced using optional new style metal pulley with access holes #12568997

Please read through instructions before beginning the install.

Disconnect battery since you will be removing hot wire from alternator.

Loosen tension of belt from supercharger if vehicle is already equipped with one. Remove main belt and a/c belt from vehicle.

Remove alternator: Disconnect 4 pin connector on top of case. Remove the 13mm nut and wire from rear terminal on case. Remove (2) 15mm bolts and then remove alternator from vehicle. (Pic 1 & 2)
Remove electric fan(s) from radiator.
Remove ABS mounting bracket: This will allow you room to use a power steering pulley removal tool and reach power steering lines better.

There are instructions below how to use p/s pulley removal tool and how to do it if the tool is not available.

*If a power steering pulley removal tool is available.

Remove power steering pulley with removal tool. (Pic 3)

Drain the power steering reservoir. Remove (2) 15mm bolts holding reservoir bracket to engine. (Pic 3.1 & 3.2)
Remove the clamp on larger diameter 5/8" hose from bottom of reservoir. This will allow you to remove the reservoir and bracket as one. (Pic 3.3)

Remove clamp from smaller diameter 3/8" hose on bottom of reservoir. Remove it at the metal hose that connects to rubber 90° on C6's.
On C5's remove from clamp at bottom of reservoir.

Remove high pressure line that goes from bottom of pump (16mm line wrench) to steering rack. (18mm line wrench) This hose will not be re-used.
Now remove power steering pump from alternator bracket. Remove the (3) specific 13mm bolts going through pump brace that hold the pump to the alternator bracket. Do not remove the bolt with X in the picture. (Pic 4)

Remove the last (2) 15mm bolts holding the alternator bracket to the engine. Pay attention to these bolt lengths and location upon removal. (Pic 5 & 5.1)
*If a power steering pulley removal tool is not available.*

Remove alternator: Disconnect 4 pin connector on top of case. Remove the 13mm nut and wire from rear terminal on case. Remove (2) 15mm bolts and then remove alternator from vehicle.

Disconnect reservoir bracket bolts and unclamp 5/8" and 3/8" lines to reservoir. Remove reservoir from vehicle.

Remove high pressure line from bottom of pump (16mm line wrench) and at steering rack. (18mm line wrench) Remove high pressure line from vehicle, it will not be re-used. Remove last (2) 15mm bolts holding the alternator bracket to engine by using a 15mm open end wrench. Loosen each bolt a few turns at a time until they are free from engine. Remove entire assembly from vehicle.

Put bracket and pump on a work bench area. Do not remove the bolt with X on it in picture. (Pic 4)

Loosen only the (3) specific 13mm bolts holding the pump to the alternator bracket. Use the same method of a few turns at a time with an open end wrench until the pump is removed from the alternator bracket. (Pic 6-6.2)
Install -6 adapter fitting into pump with o-ring side into the pump. Dab some power steering fluid on o-ring before installing it. (Pic 7)
Counter hold and tighten using a 7/8" and 3/4" wrench. (Pic 7.1)

Now install new high pressure line as shown. Counter hold and tighten using 3/4" and 11/16" wrenches. (Pic 8.1)
You will reinstall pump to alternator bracket using method of a few turns at a time, after you modify the alternator bracket below.

**Modify Alternator Bracket**

You will need to cut off the idler pulley leg and grind smooth to make clearance for the new jack-shaft idler bracket. (Pics 9-9.4)
On C6’s: Remove 15mm bolt holding the ground wire to lower front of engine block. On LS2 and LS3 engines the cam sensor harness will need to be modified also. Disconnect harness at cam sensor next to crank pulley on the timing cover. Remove (2) 10mm bolts holding cam sensor harness bracket to timing cover. Remove the harness and bracket from vehicle. Carefully cut electrical tape holding the harness to bracket. Remove harness from bracket. The bracket will not be re-used. (Pic 10-10.1)
The cam sensor harness now runs through the opening in jack-shaft bracket near the block and connects to the engine harness behind the new bracket. (Pic 11-11.2)
Install jack-shaft bracket using (2) countersunk allen bolts at top using blue Loctite. Install with lower idler bolt in place, but not tight (for thread alignment purposes). Tighten (2) allen bolts. Remove the idler bolt once the allen bolts are tight. (Pic 12-12.1)
Install 4/6 rib jack-shaft pulley with spacer and bolt (3/4 socket). (Pic 13-13.1)
Install 4-rib belt on all pulleys. You can pull a/c tensioner down using 15mm wrench. Install new lower 4-rib smooth idler pulley and spacer. *On C6 a/c belt only: The belt fits very snug. In order to install the belt, you must leave off the new 4-rib smooth idler pulley for last part of install. Route belt onto all the 4-rib pulleys. Then pull down on a/c tensioner (15mm) and slide the smooth idler with spacer and bolt into place, tighten bolt and release a/c tensioner. (Pic 14-14.2)
*Vehicles with oil cooler lines running across here need to be pried down towards the ground just enough to clear the new idler pulley. Use safety wire and or zip ties to secure lines and harness away from idler pulley.

Reinstall power steering pump to alternator bracket using blue Loctite on bolts.

Reinstall trimmed alternator bracket using the 3 OEM bolts. (2) bolts next to power steering pump and (1) bolt at corner closest to water pump.

Install new O-ring to -6 fitting at top of power steering rack. Install new high pressure hose. The end that is bent slightly more than 90° goes on the power steering rack. Make sure the hose faces slightly away from power steering pulley. Tighten hose ends and reinstall power steering pulley using install tool. (Pic 15-15.1)
Reinstall alternator using (1) OEM bolt on the lower mount. Install new short 6-rib belt.

Install the A&A automatic tensioner bracket with supplied longer bolt and 2.160” long spacer into the middle bolt hole of alternator bracket. Only snug the bolt for now. Pull bracket down using 9/16 wrench on the bolt at front of bracket. Hold upper spacer in place and insert upper alternator bolt and tighten both bolts down completely. (Pic 17-17.2)
Modify power steering reservoir mounting bracket. Cut off short leg and drill hole as shown.
Install large hose extension using 5/8” male barb, hose, and clamps. Install bracket and reservoir onto the tensioner bracket using (2) 9/16” bolts and connect extended hose to reservoir. Remove twisted metal OEM 3/8” hose and install barb/clamps and 3/8” rubber hose in place. *On C6 only this connects to the low pressure side of steering rack. Bottom side of power steering cooler. If you are installing a S/C kit the power steering cooler is no longer used and removed from the vehicle.
Trim 1” off the upper radiator hose where it goes into radiator on driver side. This will give you more clearance for the power steering reservoir.

Reinstall ABS mounting bracket.

Reinstall supercharger short belt and adjust tension.

Reinstall electric fan(s).

Refill power steering fluid.

Double check that all oil lines, harnesses, etc are clear of all moving parts.