# LS Classic

BY LOKAR INC.

#### Accessory Drive Kit Installation Instructions with A/C and Power Steering

#### **General Installation Notes:**

Please read these instructions completely before beginning the installation. If you have any questions, please call.

Before beginning the installation, disconnect the negative battery cable and use wheel chocks to block the vehicle's wheels.

Make sure the engine, transmission, body and frame are properly grounded.

Refer to Fig. 1, Fig. 2, and Fig. 10 for the component names.

All parts shown in photos are from the F-Body Kit, except Fig. 2 & Fig. 3.

Truck Kits require an early F-Body water pump and two water pump gaskets (not included, application 1998-2002 V8 Camaro or Firebird). Lokar offers the early F-Body water pump with gaskets under part number GMLS5029.

#### Step 1: F-Body Kits, proceed to Step 2.

*Truck Kits Only:* Remove the existing truck water pump, if applicable. Discard the truck water pump and the original mounting bolts. Thoroughly clean the gasket surfaces on the engine.

Insert the provided M8 x 100mm hex head bolts into the new F-Body water pump (not included). Place the included new water pump gaskets onto the bolts. Install the water pump spacers onto the new water pump. Install additional water pump gaskets (not included) on the back side of the water pump spacers.

Install the new water pump onto the engine, and tighten each of the bolts to 11 lb.-ft. on the first pass. Then, tighten each of the bolts to 22 lb.-ft. on the second pass.

Step 2, ALL: See Fig. 3 to view the difference between F-Body Kit spacers and Truck Kit spacers that go behind the Rear Brackets. Only one set of spacers will come with the kit.

> Hold the A/C rear bracket in the position shown in *Fig. 4*. Install an M10 x 35mm (F-Body Kits) or 60mm (Truck Kits) hex head bolt with flat washer into each of the three bolt holes in the bracket that line up with the bolt holes in the passenger side cylinder head. Place a 1/4" (F-Body Kits) or 1" (Truck Kits) long spacer onto each of the bolts, using the spacer with the smaller outer diameter on the bolt that will be behind the water pump inlet.

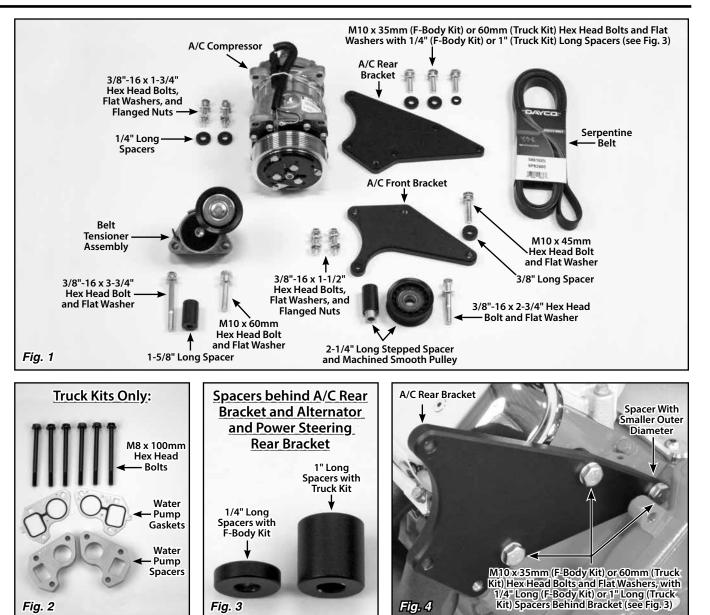
Install the A/C rear bracket onto the cylinder head, with the spacers between the bracket and the cylinder head.

## **Accessory Drive Kit Installation Instructions**

### with A/C and Power Steering

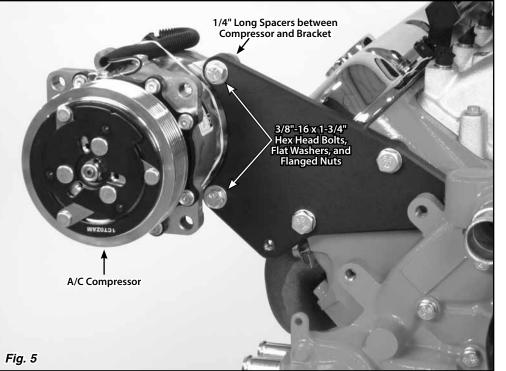
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Step 3: Install two 3/8"-16 x 1-3/4" hex head bolts with flat washers into the two remaining unthreaded bolt holes at the opposite end of the A/C rear bracket, from the front. Install a 1/4" long spacer onto each of those bolts, on the rear side of the bracket.

Install the A/C compressor onto the A/C rear bracket, and secure with the 3/8"-16 flanged nuts. Fig. 5

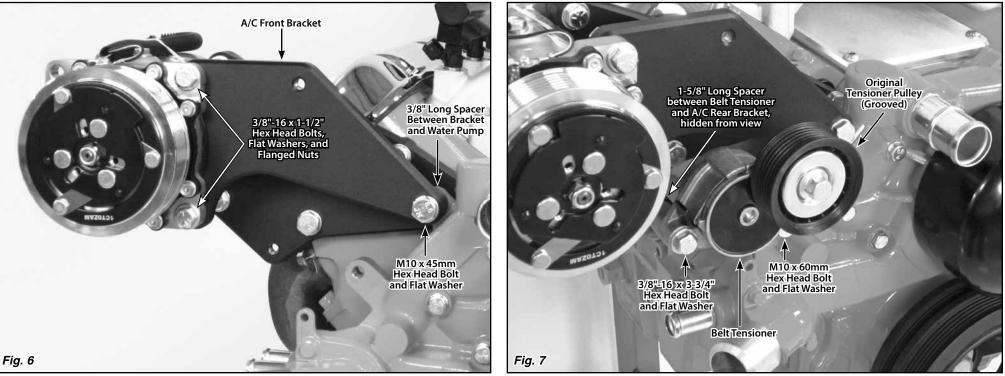
- Step 4: Loosely bolt the front A/C bracket to the rear side of the front ears of the compressor, using the 3/8"-16 x 1-1/2" hex head bolts with flat washers and flanged nuts.
- Step 5: Place the 3/8" long spacer between the A/C front bracket and the water pump. Install an M10-45mm hex head bolt with flat washer through the bracket and spacer, and into the water pump.

Tighten the 3/8"-16 x 1-1/2" bolts and flanged nuts at the front of the compressor. Fig. 6

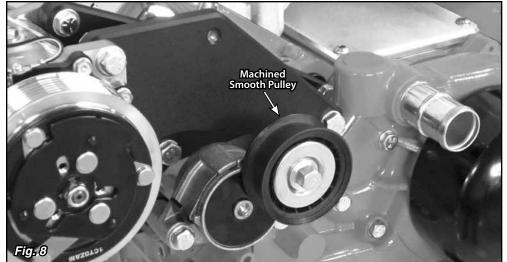
Step 6: Position the belt tensioner on the water pump, and loosely install the M10 x 60mm hex head bolt with flat washer. Position the 1-5/8" long spacer between the tensioner and the A/C rear bracket. Insert the 3/8"-16 x 3-3/4" hex head bolt with flat washer through the tensioner and spacer and thread it into the A/C rear bracket.

Tighten both of the tensioner mounting bolts. Fig. 7

- Step 7: Remove the pulley bolt from the tensioner, and remove the original tensioner pulley. Set the pulley aside. Install the supplied machined smooth tensioner pulley onto the tensioner using the original bolt. Fig. 8
- Step 8: Position the original tensioner pulley you removed in Step 7 on the 2-1/4" long stepped spacer. Use the 3/8"-16 x 2-3/4" hex head bolt and flat washer to bolt the original tensioner pulley onto the A/C front bracket. Fig. 9

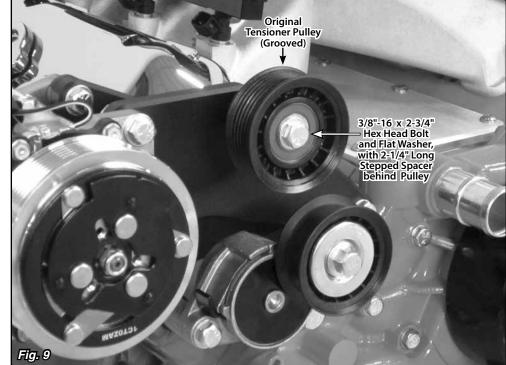


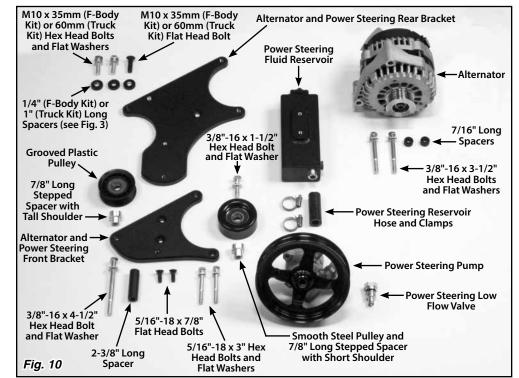
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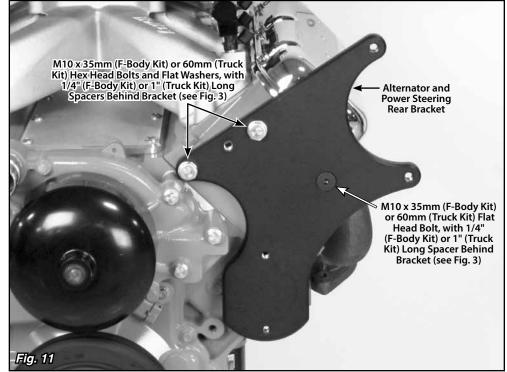


Step 9: See Fig. 10 for the names of the components. Hold the alternator and power steering rear bracket in the position shown in Fig. 11 in front of the driver side cylinder head. Locate the two bolt holes in the cylinder head that are closest to the intake manifold. Install an M10 x 35mm (F-Body Kit) or 60mm (Truck Kit) hex head bolt with flat washer into each of the corresponding two bolt holes in the bracket. Install the M10 x 35mm (F-Body Kit) or 60mm (Truck Kit) flat head bolt into the bolt hole in the bracket that lines up with the bolt hole in the cylinder head that is closest to the exhaust manifold.

Place a 1/4" (F-Body Kit) or 1" (Truck Kit) long spacer onto each of the three bolts (see *Fig. 3*). Install the alternator and power steering rear bracket onto the cylinder head, with the spacers between the bracket and the cylinder head.









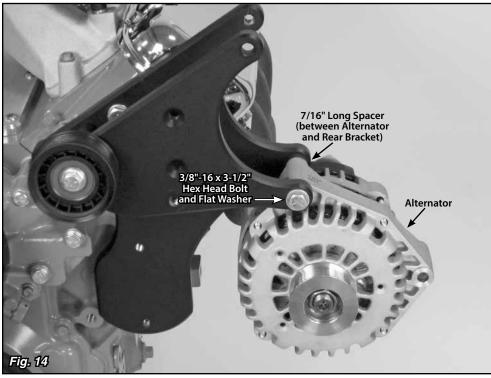
Step 10: The 7/8" long stepped spacers have different shoulder heights. The spacer with the taller shoulder height fits the grooved plastic pulley, and the spacer with the shorter shoulder height fits the smooth steel pulley. Fig. 12

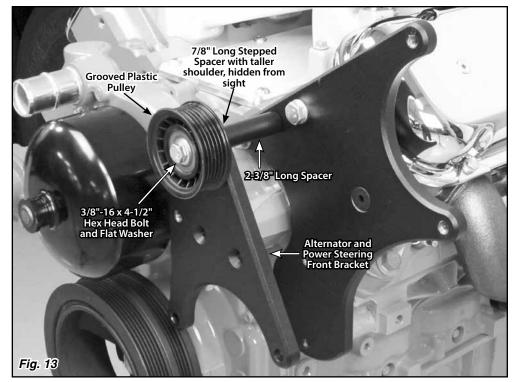
Place the grooved plastic pulley onto the 7/8" long stepped spacer with the taller shoulder height. Insert the  $3/8"-16 \times 4-1/2"$  hex head bolt with flat washer into the spacer from the pulley side. Pass the bolt through the hole in the corner of the alternator and power steering front bracket. Make sure that the countersunk holes in the bracket are on the same side of the bracket as the pulley.

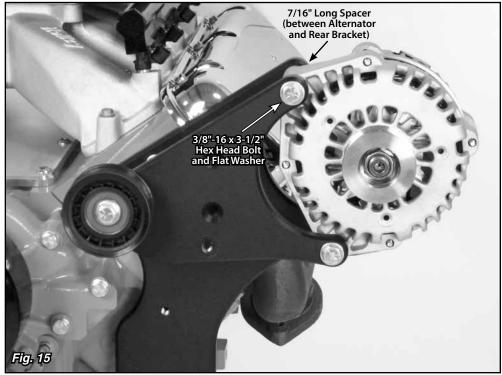
Then, place the 2-3/8" long spacer onto the bolt. Finally, thread the bolt into the hole in the rear bracket that is between the hex head bolts, and tighten. *Fig. 13* 

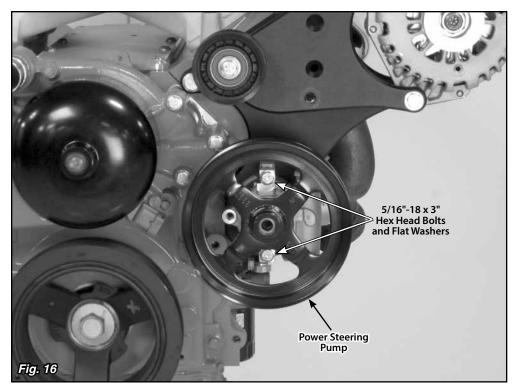
- Step 11: Insert one of the 3/8"-16 x 3-1/2" bolts though the lower alternator bolt hole in the alternator and power steering front bracket. Place a 7/16" long spacer on the bolt behind the alternator. Raise the alternator and front bracket up and thread the bolt into the lower alternator bolt hole in the alternator and power steering rear bracket, but do not tighten yet. Fig. 14
- Step 12: Swing the alternator up into place. Install the other 3/8"-16 x 3-1/2" bolt through the front bracket and alternator. Position the other 7/16" long spacer behind the alternator and slide the bolt through it, and thread the bolt into the rear bracket.

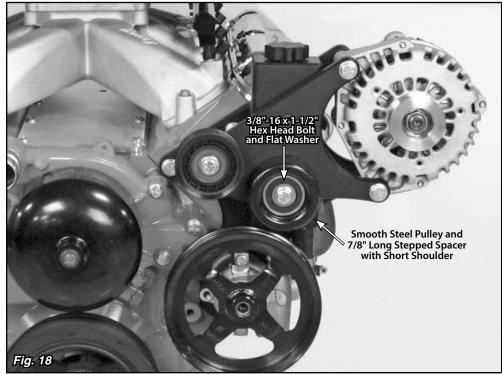
Tighten both 3/8"-16 x 3-1/2" bolts. Fig. 15

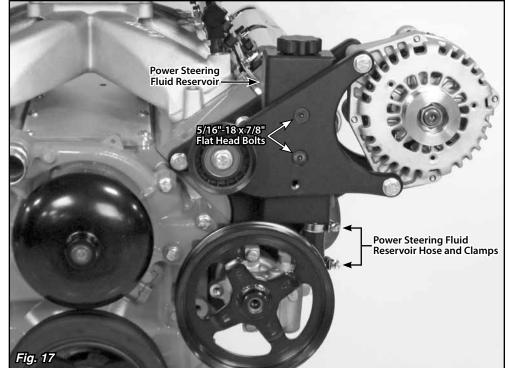












- Step 13: Position the power steering pump underneath the grooved plastic pulley so that the bolt holes in the pump are aligned with the holes in the rear bracket, and the reservoir connection port is on the top. Install two 5/16"-18 x 3" bolts to attach the pump to the rear bracket. Fig. 16
- Step 14: Remove the cap from the power steering fluid reservoir connection port. Install the power steering reservoir hose onto the pump and slide the clamps onto the hose.

Slide the power steering fluid reservoir down in between the front and rear brackets, with the bolt holes towards the front and the reservoir outlet on your right, while guiding the reservoir outlet into the hose. Install two 5/16"-18 x 7/8" flat head bolts through the upper two holes in the front bracket and into the reservoir. Position and tighten the hose clamps. *Fig. 17* 

- Step 15: Place the smooth steel pulley on the 7/8" long stepped spacer with the shorter shoulder height. Insert the 3/8"-16 x 1-1/2" hex head bolt with flat washer into the spacer from the pulley side. Thread the bolt with the pulley and spacer into the remaining bolt hole in the alternator and power steering front bracket, and tighten. *Fig. 18.*
- Step 16: Route the serpentine belt as shown in *Fig. 19*. If the engine is out of the vehicle, it will be easiest to leave the water pump pulley for last. Place a wrench on the tensioner pulley bolt, and apply clockwise pressure to move the tensioner pulley downward as you slide the belt around the final pulley.
- Step 17 (optional): A low flow power steering pump valve has been provided for customers that need it. It can be installed in the power steering pump outlet now, if desired.

