



## LS Conversion Installation Guide 1977-90 B-Body Impala



### Hardware and Parts List

<u>Quantity</u>	<u>Item</u>
2	Frame Brackets
2	Engine Mounts
1	Transmission Crossmember
2	Crossmember Brackets
1	Driver-side Secondary Z Bracket
1	Polyurethane Transmission Mount and Spacers
1	Hardware Pack

**77-90 B-body Installation Notes:**

98-02 F-body alternator clears the frame with plenty of room.

98-02 F-body AC does not clear the frame, MuscleRods high-mount AC bracket is required.

MR AC and Alt/PS brackets clear everything in short, medium, and long spacing.

LH8 oil pan works on cars at OEM ride height. BRP Moroso High Clearance pan is recommended for lowered cars. Other pans that fit: Mast Motorsports and Holley.

4L60E/4L80E trans fit with no tunnel mods required. 6L80E and 6L90E will require tunnel mods at the tail shaft housing area. T-56 will require tunnel mods around shifter.

Stock column shift linkage clears mid length headers, and lines up with the 4L60E shift shaft. Headers will clear long shift shaft on the 4L60E trans.

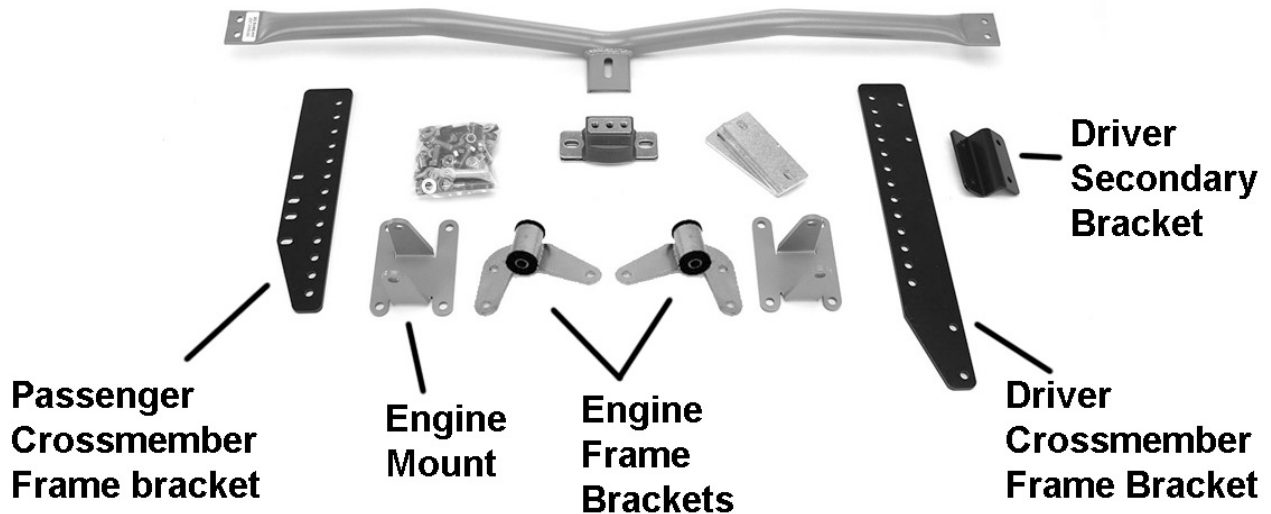
Long-tube headers can be used, but the front crossmember frame brace must be removed. No need to remove frame brace to fit mid-length headers.

Starter must be removed to install headers.

Ignition coils clear factory AC box and power brake booster in their OE location.

All our kits are designed around factory suspension and steering components.

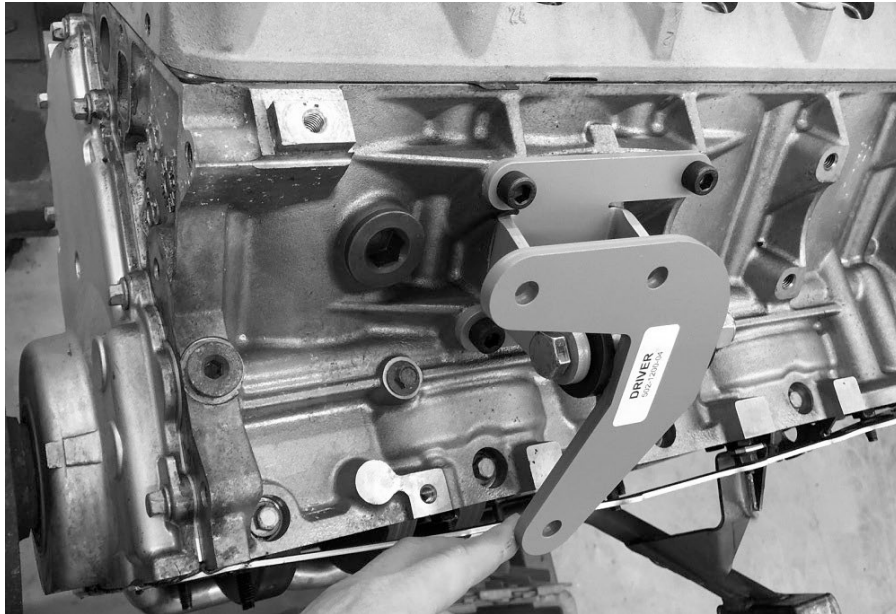
Black bushings are standard; red bushings are available upon request.



**Step 1:**

Locate the Driver's Side (LEFT) and Passenger's Side (RIGHT) motor mounts and loosely bolt them to the engine using the supplied 10mm Allen head bolts. Next, loosely bolt the frame brackets to the engine mounts using the

supplied ½"-13 x 4" long bolts and nylon lock nuts. The bolts will be tightened after the engine is in place and everything is correctly fitted.



Detailed view of driver's side motor mount and frame bracket on engine.



Loosely mount the engine mounts and frame mounts on the engine prior to installation.

### **Step 2:**

Loosely mount the crossmember frame brackets to the sides of the frame through the original crossmember mounting holes. The driver side has a secondary bracket to support the back of the frame bracket.



The passenger side bracket mounts in the original holes. Then put the crossmember on top of the bracket.

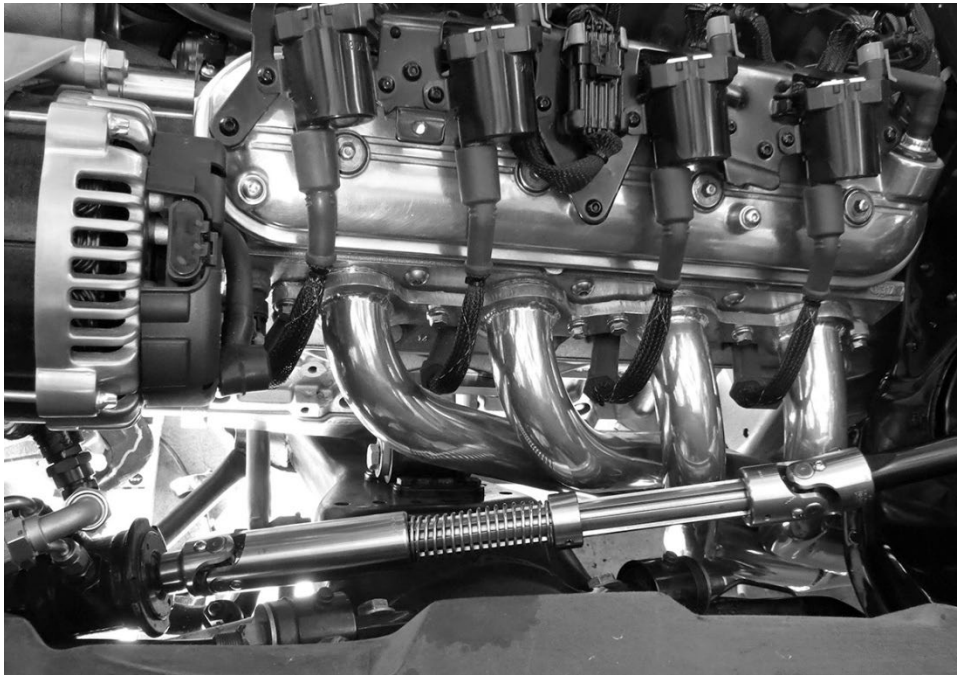




**Step 3:**

Lift the rear of the transmission using a floor jack. Install the polyurethane transmission mount on the transmission, making sure that you install any spacer plates and the provided preload plate between the mount and the transmission (this preloads the polyurethane mount). Slide the transmission crossmember onto the crossmember brackets and bolt the mount loosely to the crossmember using the 7/16"-13 x 1" bolt and the 7/16" flat washer.





**Step 4:**

After making sure everything is properly aligned and installed correctly, tighten the engine mount to block bolts, engine mount to frame bracket bolts, frame bracket to frame bolts, transmission mount to transmission bolts, transmission mount to crossmember bolts, transmission crossmember to bracket bolts and brackets to frame bolts.

**Finished -**

Road test your vehicle and familiarize yourself with the new LS power. After the first test drive recheck all bolts to make sure they are tight. Contact us if you have any questions or need assistance during the installation.

**Thank you for using MuscleRods products - proudly made in the USA!**

**770-751-0687**