



**LS Engine Conversion Installation Guide**  
 1964-1967 A-Body



**Hardware and Parts List**

All motor mounts come with a lifetime warranty and free replacement upon return of any mount or bracket.

<b>Quantity</b>	<b>Item</b>
2	Frame Brackets
2	Motor Mounts
1	Transmission Crossmember
2	Crossmember Outer Brackets
1	Polyurethane Transmission Mount and Spacers
1	Hardware Pack

## Installation Notes:

High-mount AC and alternator accessory brackets are required to clear the frame

Transmission tunnel modifications are required on the 64-67 A bodies (small trans tunnels) T56, TR6060, 6L80E and 6L90E, 8L90E, 4L60E, 4L65E, 4L70E, 4L75E and 4L80E.

When ordering, you must specify year, make, model, body style (convertible or hardtop), and which transmission is being used. The cross members vary by type.

Our high-clearance Moroso or cast aluminum oil pan will be flush with the bottom of the front crossmember and provides improved clearance for lowered cars.

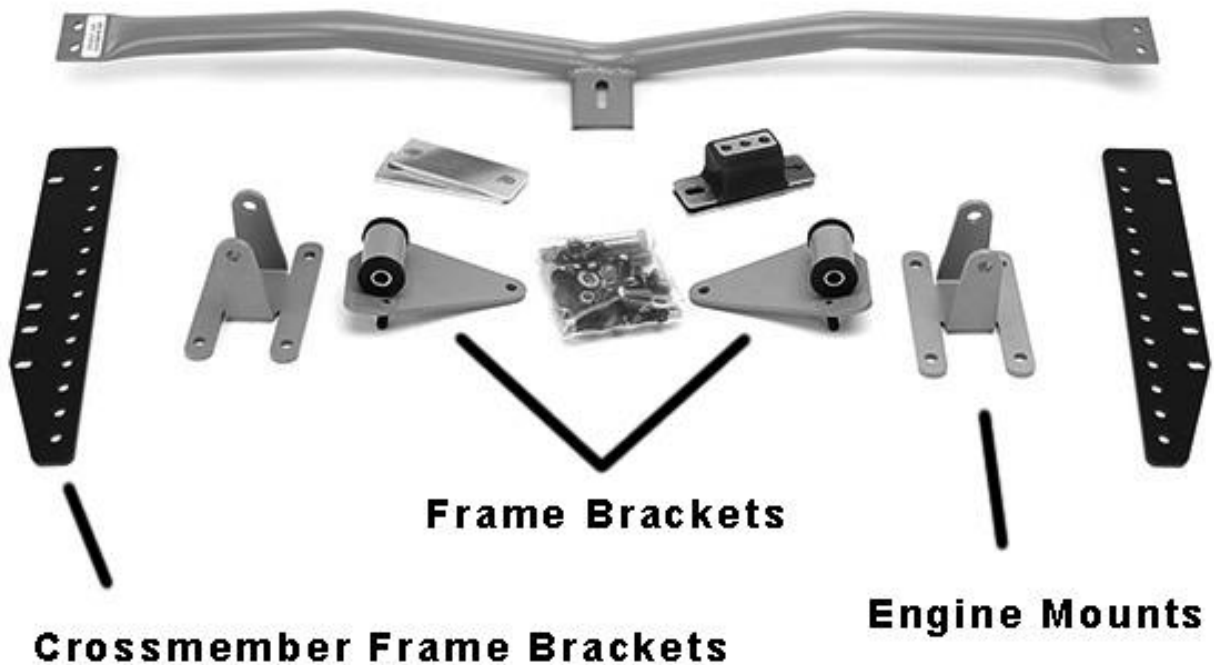
In some cases, the starter, valve covers, and/or spark plugs may need to be removed for header installation.

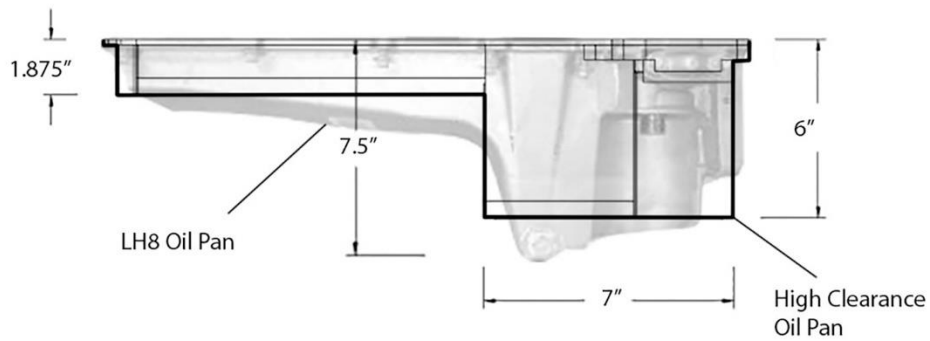
Our Frame mounts and the Outer Crossmember brackets bolt into existing holes in the frame.

Headers are designed around a floor shifter linkage. Column shift applications will require linkage modifications, or a cable actuated linkage.

Kits will not work with factory clutch z-bar and driveshaft length may change from original.

All kits are designed around factory suspension and steering components for steering clearance lock-to-lock.





## Oil Pan

Our new design was designed around our High Clearance oil pan. The old LH8 pan will extend below the front crossmember approximately 1.5", while the High Clearance will be flush with the front crossmember.

## 6-Speed Manual (example)

Tunnel modifications are necessary with T-56, TR6060, 6L80E, 6L90E or 8L90E, 4L60E, 4L75E transmissions. A panel should be fabricated and welded or riveted in place and finished with seam sealer. OEM-type carpet will still cover this modification.

First a cut will need to be made down the top and center of the transmission tunnel approximately 30-32 inches long. This cut will start from the firewall and run all the way down to the front of the floor support.

Next a "T" cut about 18-20 inches total length will need to be made perpendicular to the first cut. Locate this cut in the crease where the bellhousing meets the tunnel. Make sure it is centered on the previous cut.

A cut also needs to be made at the rear of the first cut made. This cut will be approximately 10 to 12 inches total and centered on the first cut. At this point you should be able to use your hands (with gloves), pliers, hammers, or whatever is necessary to open the Trans tunnel enough to allow the Transmission to fit.

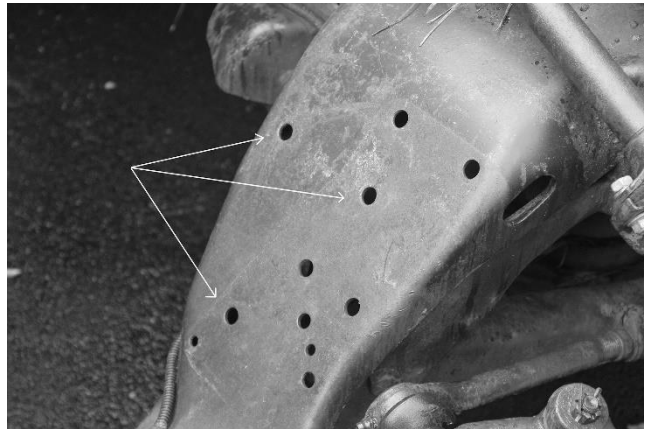
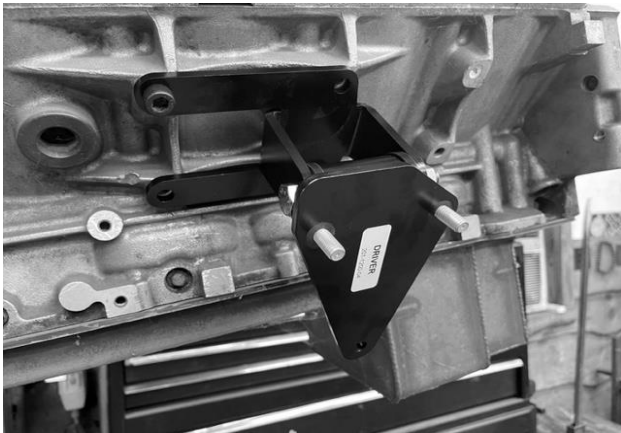
You will need to make a filler panel to fill the remaining gap. After you are satisfied with the fitment of your filler panel tack weld or rivet both sides to the floor, then fished with seam sealer. You should end up with a filler panel similar to the one at right.

We used a 1967 Chevelle boot/ring from Year One as a guide to cut the shifter hole. (Boot #3115N; Ring #7A13).

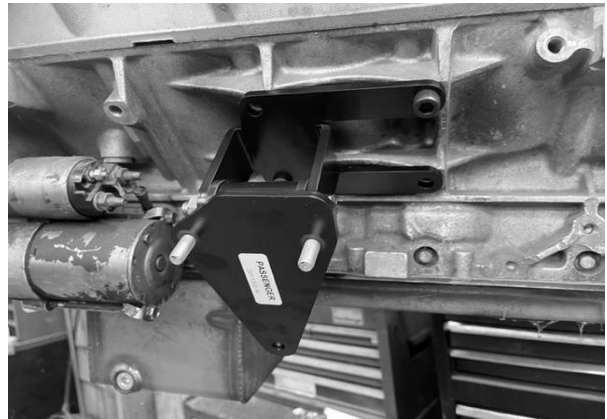


## Engine Installation:

With the engine and trans mated together, the best way to install the assembly is to loosely bolt the frame mounts to your frame, lower the engine/trans assembly into the engine bay, raise the rear of the trans, then slide the engine mounts in from each side.



The frame brackets and engine mounts are marked for orientation. The frame bracket studs will be inserted into the top two of these holes in your frame.



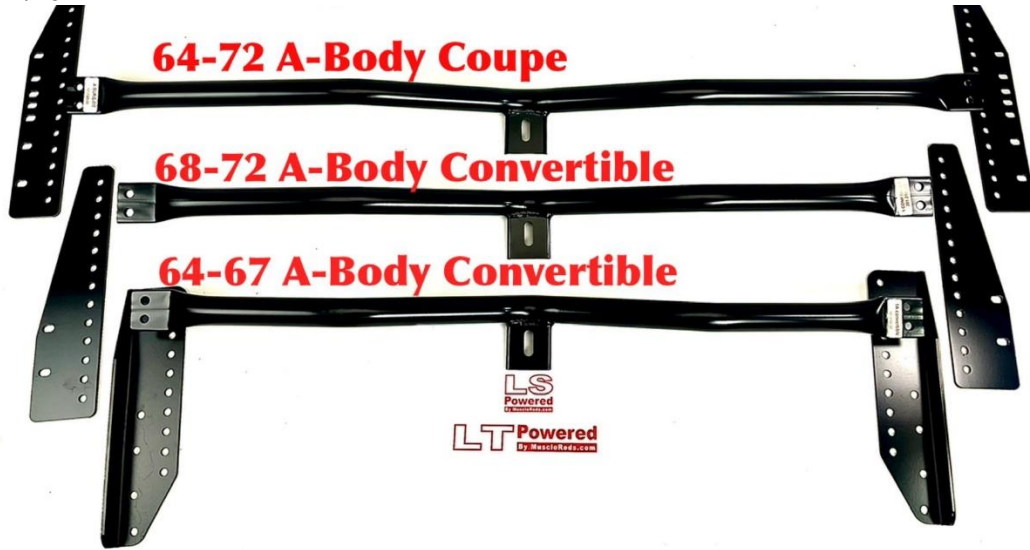
Start the 3/8"-16 nylon lock nuts and flat washers on the two studs that are attached to the frame brackets and through the frame but leave them loose at this time. After the assembly is in place slide the mounts into position.



After the Crossmember is installed the frame and engine mount bolts and nuts can be tightened.

## Crossmember:

With the engine/trans lowered into the chassis, lift the rear of the trans using a floor jack. Install the polyurethane transmission mount on the transmission, making sure to include the provided gold plate and spacers between the mount and the transmission (this preloads the polyurethane mount). Mount frame brackets to frame Slide the transmission Crossmember onto brackets and bolt the mount loosely to the crossmember using the 7/16"-13 x 1" bolt and the 7/16" flat washer.



Install the crossmember frame brackets in the original factory bolt holes then mount the Crossmember. (64-67 convertible chassis shown here)

## Final Tightening

Once you have ensured everything is lined up 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 and transmission crossmember to frame bolts.



## **Finished**

Road test your vehicle and familiarize yourself with the new LS power. After the first test drive re-check all bolts to make sure they are tight. Contact us if you have questions on the installation.

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

**770-751-0687**