



**Late Model Engine Conversion Installation Guide**  
 1964-1972 A-Body



**Hardware and Parts List**

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

<u>Quantity</u>	<u>Item</u>
2	Frame Brackets
2	Motor Mounts
1	Transmission Crossmember
1	Polyurethane Transmission Mount
4	3/8"-16 x 1" Transmission Crossmember to Frame Bolts
4	3/8" Flat Washers
4	3/8"-16 Nylon Lock Nuts
1	7/16"-13 x 1" Transmission Mount Bolt
1	7/16" Flat Washer
4	3/8"-16 x 1" Frame Bracket to Frame Bolts
6	3/8" Flat Washers
6	3/8"-16 Nylon Lock Nuts
2	1/2"-13 x 4" Motor Mount to Frame Bracket Bolts
2	1/2"-13 Nylon Lock Nuts
8	10mm-1.5 x 25mm (Allen Head) Engine Mount to Block Bolts

## Installation Notes:

Mid-length headers have ball and socket type collectors; long tube headers have slip fit collectors.

All headers clear the A-body's OEM A/C box, power steering box and power brakes. High-mount AC and alternator are required.

Transmission tunnel modifications are required with all transmissions. Minor with 4L60E/4L65E and more extensive with 4L80E/T56/6L80E/6L90E.

Headers work with the following transmissions: T-56, 4L60E, 4L65E, 6L80, 6L90

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

The LH8 pan hangs 1.25" below the crossmember. Our high-clearance 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.

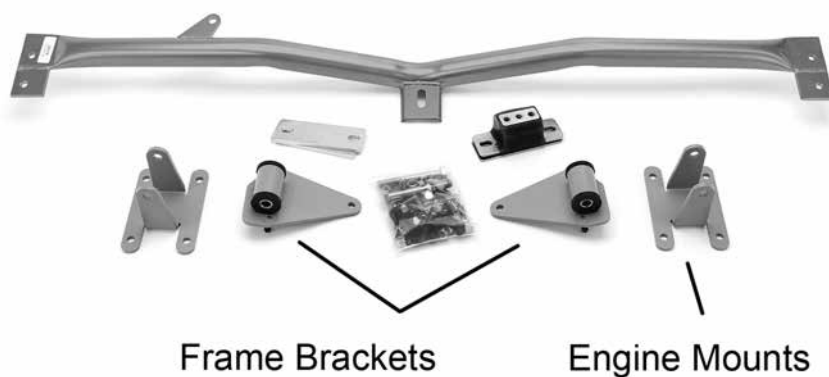
Frame mounts bolt into existing holes in the frame. On 1964-72 coupes and 1968-72 convertibles the transmission crossmember requires drilling of new mounting holes.

Headers are designed around a floor shifter linkage. Column shift applications will require linkage modifications.

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

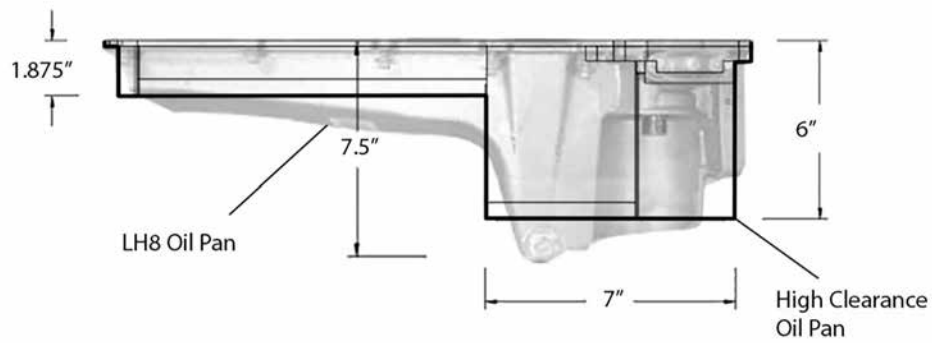
All kits are designed around factory suspension and steering components for clearance lock-to-lock.

Black bushings are standard; contact us for red bushings.



68-72 Coupe mount and crossmember kit

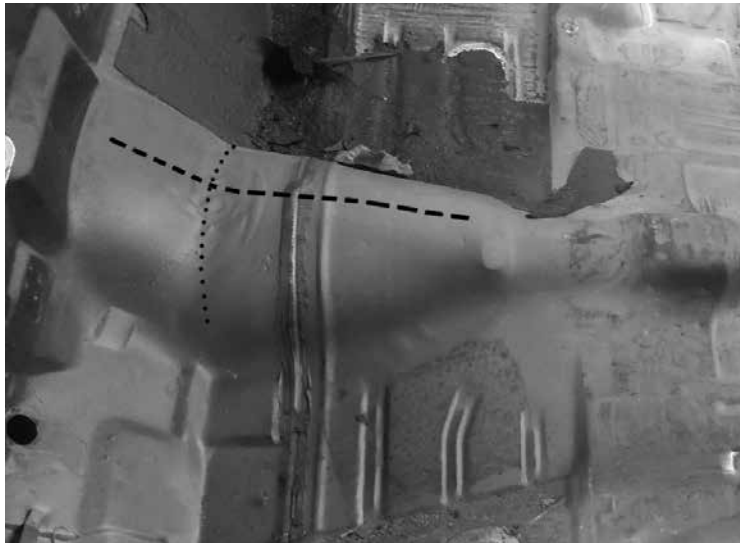
64-67 Convertible kits will also include crossmember brackets shown above.



## Oil Pan

Two options are available: The LH8 oil pan and our High Clearance oil pan. The LH8 will extend below the front crossmember approximately 1.25", while the High Clearance will be flush with the front crossmember. The High Clearance pan is recommended for cars that have been lowered.

## Tunnel modifications



### 4L60 (example)

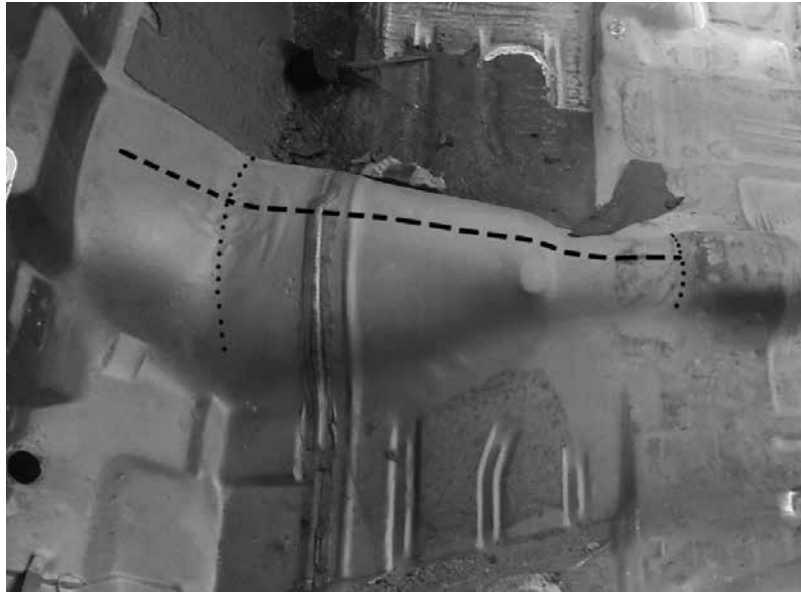
Some transmission tunnel modifications are necessary before trying to install your engine and transmission.

Minor tunnel modifications are necessary with the 4L60E transmission. The tunnel needs to be raised roughly 3/8" at the cross section of the two dashed lines above. This can be persuaded with a hammer and dolly, a floor jack and dolly, or cut and sectioned as in the photo at right.

If sectioned a filler panel can then be welded or riveted in and finished with seam sealer.

Factory carpet and console can be used with these modifications.





### **6-Speed Manual (example)**

More extensive tunnel modifications are necessary with T-56, TR6060, 6L80E, 6L90E or 8L90E transmissions. The tunnel needs to be widened at the rear also. 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 (shown in dashed line). 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 (dotted line at left). Locate this cut in the crease where the bellhousing meets the tunnel. Make sure it is centered on the previous cut (10 inches on either side of it).

A cut also needs to be made at the rear of the first cut made (dotted line at right). 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 up the Trans tunnel enough to allow the T-56 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 in the engine mounts 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 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 plate between the mount and the transmission (this preloads the polyurethane mount). Slide the transmission crossmember into the chassis and bolt the mount loosely to the crossmember using the 7/16"-13 x 1" bolt and the 7/16" flat washer. Mark the crossmember mounting holes on the frame and drill them with a 25/64" drill bit. Install the 3/8"-16 x 1" bolts, flat washers and the 3/8"-16 nylon lock nuts.



### 64-72 Coupe and 68-72 Convertible Cars

The cross member will usually be all the way at the back of the frame rails for the T-56. The 4L60E automatic transmission is about 2½ inches shorter. Both transmissions will require shortening of the original/existing driveshaft, or a new shaft will need to be built.



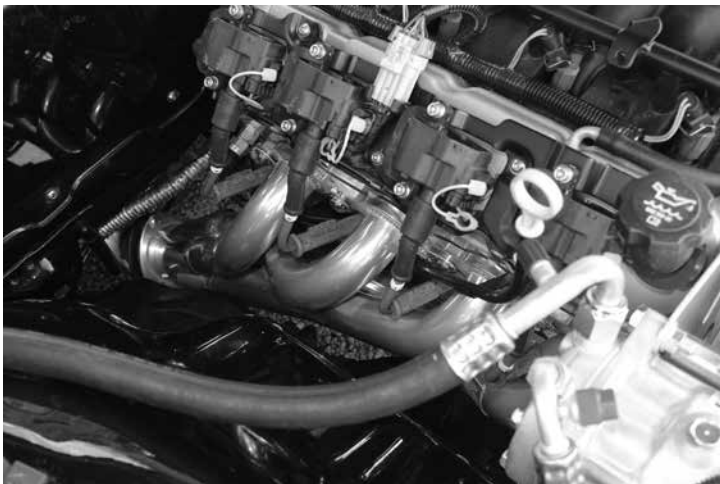
### 64-67 Convertible Cars

Install the crossmember frame brackets in the original bolt holes then mount the crossmember.



## 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.



Mid length and long tube headers can now be installed with the engine in place.

## 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**