



**1996-2004 Ford Mustang LS Engine Swap Mounting Plates
71221011HKR
Installation Instructions**



Thank you for choosing to use these Hooker Blackheart engine mounting plates as part of your LS swap project. These mounting plates are part of the most comprehensively engineered system of mounting components, headers and exhaust systems available for this LS swap application. Please read these instructions thoroughly before attempting installation.

PRE-INSTALLATION CONSIDERATIONS:

These engine mounting plates have been designed for use with stock 1996-2004 or Maximum Motorsports **MMKM-2** K-members. Compatibility with aftermarket tubular K-members has not been validated.

Installation of these engine mounting plates requires the use of Prothane™ 6-504 (polyurethane) or Anchor Industries 3001 & 3002 (rubber) motor mounts.

Depending on the engine oil dipstick tube you are using, it may need to be re-bent slightly, or replaced with an aftermarket tube, to clear the passenger side engine adapter plate/mount.

COMPATIBILITY INFORMATION:

When used with the related Hooker Blackheart transmission crossmembers for this application, these engine mounting plates will provide the most geometrically optimized LS engine/transmission mounting solution available for this vehicle platform.

These engine mounting plates have been designed for use with a Holley® **302-1**, **302-2**, or **302-3** oil pan and have been validated to be compatible with the following engine accessory drive systems and exhaust headers/manifolds:

Accessory Drives-

Vortec truck (alternator and P/S pump must be reconfigured with Holley **20-135** alternator/PS pump bracket, or similar; use of the Holley bracket requires the battery to be relocated or swapped for a narrower battery), 4th-gen Camaro/Firebird, GTO and Corvette (battery must be relocated or swapped for narrower battery; stock power distribution center may need to be modified/relocated to run Corvette FEAD system).

Exhaust headers/manifolds-

Hooker Blackheart 1994-2004 Mustang long-tube LS engine swap headers and 8501HKR series cast iron LS swap exhaust manifolds.

Additional LS engine swap/performance components, such as accessory drive brackets, EFI fuel control systems, fuel filters, fuel pumps, plumbing hose/fittings, and valve covers can be found at www.holley.com.

BEFORE BEGINNING...

Check that the hardware package includes the following:

Qty.	Description	Qty.	Description
8	M10 Bolts	6	3/8 Nuts
6	3/8 Carriage Bolts		

INSTALLATION:

1. Disconnect the battery.
2. Discharge any residual pressure in the stock fuel system.
3. Remove the stock driveshaft, transmission, and 4.6L modular engine from the vehicle.
4. Using the supplied M10 bolts (x4 for each plate), attach the Hooker LS engine mounting plates onto the LS engine to be installed. Before attachment, load the included 3/8" carriage bolts (x3 for each plate) into the plates from the backside of each. Refer to **Figure 1** below for correct orientation of the plate/bolts on the right (passenger's side) of the engine. Install the remaining plate onto the left side of the engine in a similar fashion.

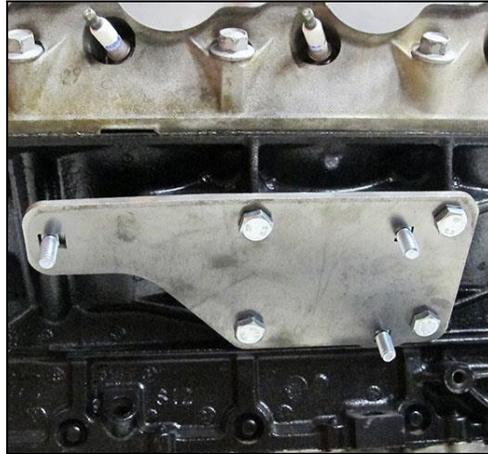


Figure 1

5. Using the supplied 3/8 nuts, attach a stock replacement rubber, or aftermarket polyurethane Ford 4.6L modular engine mount to the right (passenger's side) engine plate as shown below in **Figure 2**. Install the remaining engine mount onto the left side of the engine in a similar fashion.

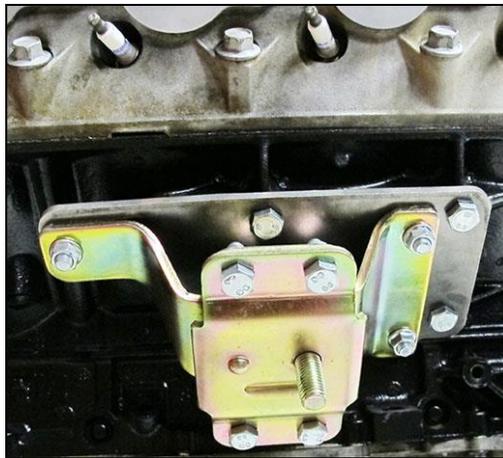


Figure 2

6. Lower the engine into the engine bay and onto the K-member. Verify that the anti-rotation lugs on the bottom of the engine mounts are protruding down into the corresponding holes in the K-member. Due to production tolerances between manufacturers, you may discover that the index lugs of your mounts do not engage fully with the holes in the K-member. In these instances, you will have to remove the engine and enlarge the top edge of the K-member holes to make them taller by 1/8" and then re-install the engine. The Energy Suspension 4.6L poly engines mounts presented no such issues during development testing.
7. With the engine resting fully on the K-member, thread the factory engine mount retaining nuts onto the ends of the studs protruding through the K-member engine mount supports. Do not fully tighten nuts at this time.
8. Install transmission of your choice with the appropriate Hooker Blackheart transmission crossmember following the basic guidelines given for each on the following page. Level the engine left to right in the engine bay and fully tighten the large nuts on the main studs of the engine mounts.

9. Your LS swap engine and transmission are now mounted and ready to be outfitted with headers and an exhaust system. Hooker Blackheart 1996-2004 Mustang LS swap headers and exhaust systems are specifically designed for use with these engine mounting plates.

Transmission Installation Guidelines:

These Hooker Blackheart engine mounting plates provide the user with unique fitment/compatibility advantages that determine the amount of effort required to install a particular transmission and/ or engine accessory drive system in the swap vehicle. The amount of work to be expected when installing either set of engine brackets with a particular transmission is listed below. You may need to install the transmission multiple times (depending on the transmission) to obtain proper clearance with the floor, so be sure to use suitable lifting equipment to avoid injury.

4L60-4L70 installations -

- No floor cutting required, but moderate impact clearancing (hammering) of the transmission tunnel will be required around the location of the 2-4 servo piston bore/cap on the right side of the transmission case.
- Install using a Hooker Blackheart **71222012HKR** transmission crossmember, per the instructions included in its packaging.
- Installation requires the use of a Prothane 7-1604 poly transmission mount, or an Anchor Industries 2268 rubber mount.

Powerglide, TH350, TH400 and 2004R installations -

- No floor cutting or floor modifications are required to install these transmissions.
- Install using a Hooker Blackheart **71222012HKR** (Powerglide or TH350 transmissions) or **71222013HKR** (TH400 or 2004R transmissions) crossmember per the instructions included in their packaging.
- Installation requires the use of a Prothane 7-1604 poly transmission mount, or an Anchor Industries 2268 rubber mount.

Tremec TKO 500/600 installations -

- Cutting/impact clearancing (hammering) of the tunnel, just forward of the shifter opening, will be required to clear the rear top cover of these transmissions. However, no welding should be required to achieve suitable clearances.
- Install using a Hooker Blackheart **71222012HKR** crossmember per the instructions included with its packaging.
- Installation requires the use of a Prothane 7-1604 poly transmission mount, or an Anchor Industries 2268 rubber mount.

Tremec 4th-gen F-body T56/T56 Magnum installations -

- Cutting to the rear edge of the tunnel shifter opening is required to clear the 4th-gen F-body T56 shifter housing. T56 Magnum installations will require trimming of the front edge of the shifter opening to clear the shifter.
- Install either transmission using a Hooker Blackheart **71222013HKR** transmission crossmember, per the instructions included in its packaging.
- Installation requires the use of a Prothane 7-1604 poly transmission mount, or an Anchor Industries 2268 rubber mount.

4L80/4L85 installations -

- No floor cutting required, but slight heating (oxy/acetylene torch) and/or focused impact clearancing (hammering) of the floor will be required around the output speed sensor and electrical plug on the left side of the transmission, the cooler fittings/lines on the right side of the transmission, and the two rear band anchor lugs that protrude from the top right side of the case near the rear of the transmission.
- Install using the Hooker Blackheart **71222013HKR** transmission crossmember, per the instructions included in its packaging.
- Installation requires the use of a Prothane 7-1604 poly transmission mount, or an Anchor Industries 2268 rubber mount.

LIMITATION OF LIABILITY – DISCLAIMER:

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Unless expressly stated to the contrary in the catalog, instruction sheet; or price list, the entire risk as to the conformity of any company product in any such state and as to repair should the product prove to be defective or non-conforming, is on the retail purchaser, the buyer, the ultimate consumer, of such product and it is not upon the seller, distributor, or manufacturer.

In this connection, the retail purchaser, the buyer, the ultimate consumer assumes the burden of the entire cost of any and all necessary service, alterations, or repair.

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