



**1979-1995 Ford Mustang – Team Z and AJE K-member  
LS Engine Swap Mounting Brackets  
71221020HKR, 71221021HKR, 71221022HKR, & 71221023HKR  
Installation Instructions**



Thank you for choosing to use these HOOKER™ engine swap 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 brackets have been designed for use with current production **Team Z/TZM-KM-SWAP** or **AJE/MU40-UM** K-members only. Installation of the engine using these brackets will allow the use of any Holley or Weiand brand LS oil pan.

**BEFORE BEGINNING:**

Check that the hardware package includes the following:

Team Z Brackets		AJE Brackets	
Qty.	Description	Qty.	Description
2	1/2"-13 x 3-1/4" Bolts	2	M14 x 1.5 x 110mm Bolts
2	1/2"-13 Nuts	2	M14 x 1.5 Nuts
8	M10 x 1.5 x 25mm Bolts	8	M10 x 1.5 x 25mm Bolts

**INSTALLATION**

1. Disconnect the battery.
2. Discharge any residual pressure in the stock fuel system.
3. Remove the stock driveshaft, transmission, and engine from the vehicle.
4. Install the Team Z or AJE K-member into the vehicle per their included instructions.
5. Using the supplied M10 bolts, attach the Hooker engine brackets to the sides of the LS engine to be installed. Install the bracket with the "V" shaped notch along the outer profile of its base plate on the passenger's side of the engine and the bracket with the "semi-circle" shaped notch on the driver's side of the engine.
6. If you are using a Team Z K-member, chase through the holes in the engine mount stand tubes with a 1/2" drill bit to rid them of any burrs or welding slag that may be inside the tubes.
7. Lower the engine into the vehicle and down onto the K-member engine support stands. The M10 holes in the passenger's side bracket are slightly slotted to account for manufacturing tolerances of the K-member, adjust the bracket as needed to allow the engine the drop down over the mounting tubes of the K-member.
8. Couple the engine brackets to the K-member with the included M14 (AJE brackets) or 1/2" (Team Z brackets) bolts and nuts.

## **COMPATIBILITY INFORMATION**

These K-members require the use of an aftermarket steering shaft to accommodate the lower steering rack position they provide. The engine position provided by these Hooker engine brackets is compatible with the stock OE vacuum brake booster.

When used with the related Hooker™ transmission crossmembers for this application, the Hooker **71221020HKR** and **71221022HKR** engine brackets permit the engine to be installed at the stock installed 5.0L crankshaft centerline position (height, inclination angle and offset).

The Hooker **71221021HKR** and **71221023HKR** engine brackets provide a ½" dropped position at the location of the engine mounts, which will provide the user with increased under-hood clearance and the ability to achieved reduced U-joint operating angles on vehicles with greatly lowered rear suspension ride heights. The use of ½" drop engine brackets will result in a ¼" reduction of header collector ground clearance when using the Hooker LS swap long-tube headers for this application.

### **Accessory Drives:**

**Holley Corvette-style system** – compatible with battery relocation to trunk (use Holley low-mount or hi-mount compressor bracket); installation at Corvette offset will require modification/relocation of electrical power distribution box. Clears stock hood.

**Holley F-body-style system** – compatible; use of the Holley low-mount SD7B10 compressor/bracket *may* require front anti-sway bar to be spaced down with SN95 Mustang sway bar brackets (or use Holley hi-mount SD7B10 compressor bracket). Clears stock hood.

**OE Corvette** – compatible, **excluding** A/C compressor (use Holley low mount or high-mount A/C bracket/compressor); requires battery relocation to trunk and modification/relocation of electrical power distribution box. Clears stock hood.

**OE F-body** – compatible, **excluding** A/C compressor (use Holley low-mount or high-mount A/C bracket/compressor). Clears stock hood.

**OE GTO** – compatible, **excluding** A/C compressor (use Holley low-mount or high-mount A/C bracket/compressor). Clears stock hood.

**OE Vortec truck** – compatible, **excluding** A/C compressor (use Holley low-mount or high-mount A/C bracket/compressor). Large truck alternator clearance under stock hood with OE or Maximum Motorsports K-members will require use of 1/2" K-member shims.

### **Headers, Manifolds and Exhaust Systems:**

Hooker Blackheart 1979-1993 Mustang LS swap long-tube headers, 1994-2004 LS swap long-tube headers, 8501HKR exhaust manifolds, 8510HKR turbo manifolds and related crossover and turbine inlet tubes, full-length exhaust systems (2.5" and 3") and muffler/turn-down exhaust systems (3" only).

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](http://www.holley.com).

## **TRANSMISSION INSTALLATION GUIDELINES:**

These Hooker engine mounting brackets 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 **71222016HKR** transmission crossmember, and **71223003HKR** adapter bracket.
- Installation requires the use of a Prothane 7-1604 poly transmission mount or a stock GM rubber mount that it replaces.

### **Powerglide, TH350 and TKO 500/600 installations -**

- No floor cutting or floor modifications are required for Powerglide/TH350 applications. TKO 500/600 installations will require hammer clearancing of the tunnel sheet metal. Use of 1/2" K-member shims will greatly lessen the amount of clearancing needed.
- Install using a Hooker **71222015HKR** crossmember.
- Installation requires the use of a Prothane 7-1604 poly transmission mount or a stock GM rubber mount that it replaces.

### **TH400, 2004R installations -**

- Install using a Hooker **71222016HKR** crossmember and 12650HKR adapter block.
- Installation requires the use of a Prothane 7-1604 poly transmission mount or a stock GM rubber mount that it replaces.

### **Tremec 4<sup>th</sup>-gen F-body T56/T56 Magnum installations -**

- Cutting of the tunnel shifter opening will be required to clear the shifter/shifter housing.
- Install either transmission using a Hooker **71222016HKR** transmission crossmember.
- Installation requires the use of a Prothane 7-1604 poly transmission mount or a stock GM rubber mount that it replaces.

### **4L80/4L85 installations -**

- Cutting/clearancing 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 **71222016HKR** transmission crossmember and **71223013HKR** adapter.
- Installation requires the use of a Prothane 7-1604 poly transmission mount or a stock GM rubber mount that it replaces.

**LIMITATION OF LIABILITY – DISCLAIMER:**

HOOKER™ makes no warranties of merchantability, of fitness for particular purpose, or that its products are approved for general use, or that its products comply with laws, regulations, or ordinances in the state where they may be sold to the ultimate purchaser, the consumer.

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.

**Technical Support: 1-866-464-6553**

© 2017 Hooker Headers, Inc. All rights reserved

**199R11394**

**Revision Date: 8-25-17**