



**1979-1993 Ford Mustang - AJE and Team Z K-member  
Coyote Engine Swap Mounting Brackets  
71221026HKR & 71221027HKR  
Installation Instructions**



**71221026HKR**



**71221027HKR**

Thank you for choosing to use these Hooker Blackheart engine swap mounting brackets as part of your Coyote swap project. These mounting brackets are part of the most comprehensively engineered system of mounting components, headers and exhaust systems available for this Coyote 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 has been validated to allow the use of the stock 2011-2017 Mustang Coyote or Holley **302-50** Coyote oil pans with these K-members. Other aftermarket oil pans may also be compatible for installation with these engine brackets.

**BEFORE BEGINNING:**

Check that the hardware package includes the following:

<b>AJE brackets - 71221026HKR</b>		<b>Team Z brackets - 71221027HKR</b>	
<b>Qty.</b>	<b>Description</b>	<b>Qty.</b>	<b>Description</b>
2	M14 x 1.5 x 110mm Bolts	2	1/2"-13 x 3-1/4" Bolts
2	M14 x 1.5 Nuts	2	1/2"-13 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 side of the engine and the bracket with the "semi-circle" shaped notch on the driver 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 driver'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 Blackheart engine brackets requires removal of the stock OE vacuum brake booster. An SN95 Mustang Hydroboost master cylinder, or manual master cylinder conversion is typically employed in this swap application.

When used with the related Hooker Blackheart transmission crossmembers for this application, the Hooker Blackheart **71221026HKR** and **71221027HKR** engine brackets install the Coyote engine crankshaft centerline just slightly higher than the OE 5.0L crankshaft centerline position and easily provides for optimized transmission fitment and U-joint operating angles.

This engine/transmission positioning ensures compatibility with the following Hooker Blackheart headers and exhaust systems-

**70103317-RHKR** (1-3/4") **70103318-RHKR** (1-7/8") and **70103319-RHKR** (2") Coyote swap headers

**705014143RHKR** and **705013143RHKR** 3" stainless steel muffler/turn-down exhaust systems

**705014141RHKR** and **705013141RHKR** 2.5" full-length exhaust systems

**705014142RHKR** and **705013142RHKR** 3" full-length exhaust systems

**NOTE:** The above referenced engine position will not provide enough clearance at the firewall to clear the CMCV actuators present at the rear of Gen 2 and 3 Coyote engines. An intake manifold swap, or deletion of the CMCV actuators from the stock intake manifold will be required to install a Gen 2 or 3 Coyote engine without having to clearance/modify the firewall.

## **TRANSMISSION INSTALLATION GUIDELINES:**

These Hooker Blackheart engine mounting brackets provide the user with unique fitment/compatibility advantages that determine the amount of effort required to install a particular transmission in the swap vehicle. 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.

### **Powerglide (with JW Performance 92462-46P Ultra-bell) installation -**

Install using a Hooker Blackheart **71222015HKR** transmission crossmember and Prothane™ **7-1604** transmission mount. Tunnel clearancing may be needed for transmission case servo bore/cover on right side of transmission.

### **T45 (exc. Cobra, 1996-98 GT spec only) and 4R70W/4R75E installations -**

Install using a Hooker Blackheart **71222016HKR** crossmember, **71223018HKR** adapter bracket and Prothane™ **6-1608** transmission mount. Slight trimming of the shifter opening around the rear of the shifter housing is to be expected for T45 installations. 4R70W installations should require no floor modifications other than possibly for the transmission electrical harness connector and shift linkage.

### **6R80 or MT82 installations -**

Install using a Hooker Blackheart **71222016HKR** crossmember, **71223019HKR** adapter bracket and a Prothane™ **7-1604** transmission mount. 6R80 installations may require slight hammer clearancing of the transmission tunnel just above the rear end of the transmission case only. MT82 installations should be expected to require extensive transmission tunnel modifications/rebuilding to clear the top side of the transmission and the shifter assembly.

### **TKO 500/600 (with Quicktime RM-6081 bellhousing) installations -**

Install using a Hooker **71222016HKR** crossmember, **71223025HKR** adapter bracket and Prothane™ **6-1604** transmission mount. Due to the top-side height of these transmissions, considerable clearancing/modification of the transmission tunnel will be required to install them in this application. Low-profile versions of these transmissions are available in the aftermarket to minimize the work required to install them.

### **T56 Magnum (Ford spec, with Quicktime RM-8080 bellhousing) installations -**

Install using a Hooker Blackheart **71222016HKR** crossmember and Prothane™ **7-1604** transmission mount. Hammer clearancing of the tunnel sheet metal above the shifter housing will be required as well as possible cutting/trimming of the tunnel sheet metal to clear the shifter/shifter housing.