



## 1983-93 Ford Mustang Engine Swap Transmission Crossmember 71222015HKR Installation Instructions



Thank you for choosing to use this Hooker Blackheart transmission crossmember as part of your engine swap project. This crossmember is part of the most comprehensively engineered system of mounting components, headers and exhaust systems available for this vehicle application. The entire Hooker Blackheart swap system is designed to decrease your total swap installation effort and cost while increasing the engineered quality of your vehicle and compatibility of these components with other popular aftermarket components. Please read these instructions in their entirety before attempting installation.

### **PRE-INSTALLATION CONSIDERATIONS:**

This crossmember is designed as part of the Hooker Blackheart fully-engineered engine swap mounting systems for 1983-93 Ford Mustang vehicles. It has been CAD designed to provide an optimized balance of weight, stiffness and strength. The dual-arch exhaust passages are provided for installation of available Hooker 2.5" and 3" exhaust systems for this application, or any custom system of your choice.

Installation of this crossmember requires the use of a Hooker Blackheart 71223029HKR (black)/71223030HKR (red) poly transmission mount, or an Anchor™ 2268 rubber transmission mount for all LS/Coyote swap applications listed for this crossmember.

Due to the unique design geometry of this transmission crossmember, attempts to install it with headers and/or engine mounting plates/brackets other than those developed by HOOKER™ for this vehicle application will most likely be unsuccessful. When used with any of the Hooker Blackheart engine mounting brackets/adaptor plates developed for this application, this CAD designed transmission crossmember will provide the ability to obtain desirable U-joint operating angles and component clearances.

A suitable lifting jack will be required to install this crossmember with the appropriate transmissions for which it is intended. An automotive lift or a jack and jack stands will be required to safely raise and support the vehicle.

**CAUTION! WORK ONLY ON A LEVEL SURFACE. USE JACKS /JACK STANDS OF SUFFICIENT CAPACITY TO LIFT AND SUPPORT YOUR VEHICLE. NEVER WORK UNDER A VEHICLE SUPPORTED BY A FLOOR OR BUMPER JACK.**

### **INSTALLATION:**

1. Check that the hardware package includes the following:

Qty.	Description
1	Crossmember Assembly
2	Mount Spacer (flat, 3/16" thick)
2	Crossmember Spacers (round, 1.5" long)

If any are missing, please contact Technical Service at 1-866-464-6553 or 270-781-9741.

**NOTE:** These instructions have been written with the assumption that you have already installed an engine into your vehicle using the Hooker Blackheart LS or Coyote engine mounting brackets/methods listed for this application.

**NOTE:** Some hammer clearancing to the trans tunnel should be expected in the following areas: **Powerglide** (LS/Coyote) and **TH350** (LS only) - around the servo bore/cover on the right side of the case, **TKO 500/600** (LS swap only, Coyote TKO swap uses the Hooker Blackheart 71222016HKR crossmember) - around the shifter housing and the front and middle top covers of the transmission (or use one of the available TKO transmissions with low-profile top covers).

1. Raise vehicle to comfortable working height and support it by proper means.
2. If in place, remove the factory transmission crossmember from the vehicle.
3. Attach the transmission to the engine and then raise the tailshaft of the transmission as high as possible with a floor jack or screw jack.
4. Attach your chosen transmission mount to the rear of the transmission (bolts for this purpose are user-supplied).

5. Install the Hooker Blackheart crossmember, with included round spacers, into the car in the stock receiver brackets. Install the included round spacers in front of the crossmember for LS swap TKO installations, or behind the crossmember for LS swap TH350/Powerglide, or Coyote swap Powerglide installations. Be sure to orient the crossmember so that the slight tilt of the crossbeam is angled up towards the front of the vehicle and not up towards the rear of the vehicle.
6. Attach the transmission mount to the transmission and attach them to the crossmember in the following fashion:

### **LS swap applications -**

**Powerglide or TH350 transmissions** – place one supplied 3/16" thick spacer between the transmission mount and crossmember and then lower the transmission/mount onto the crossmember crossmember and attach the mount to the crossmember using user-supplied hardware.

**TKO 500/600 transmission with Quicktime bellhousing** – place both supplied 3/16" thick spacers between the transmission mount and crossmember. Lower the transmission/mount onto the crossmember and attach the mount to the crossmember using user-supplied hardware.

### **Coyote swap applications -**

**Powerglide transmission with JW Performance Ultra-bell (P/N 92462-46P)** – place one supplied 3/16" thick spacer between the transmission mount and crossmember. Lower the transmission/mount onto the crossmember and attach the mount to the crossmember using user-supplied hardware.

**NOTE:** The 3/16" spacers included in the design/packaging of this crossmember are present to permit minor lowering of the transmission tailshaft (if needed) to assist adjustment of U-joint operating angles on vehicles with rearends featuring low pinion heights (i.e. Ford 9" rearends) and to accommodate the specific trans mount height geometry of the TKO transmission in LS swap applications. Install each spacer as directed and deviate from that configuration only if you determine your application requires it.

Any questions? Please contact Technical Service: 1-866-464-6553 or 270-781-9741. For online help, please refer to: [www.holley.com](http://www.holley.com).

### **COMPATIBILITY INFORMATION:**

This transmission crossmember was specifically designed for use with Hooker Blackheart LS/Coyote swap engine brackets, headers, and exhaust systems also developed for this vehicle application. Various other Holley® components have been designed and/or validated for use in this vehicle application, as follows:

**LS engine swap** – Using this crossmember to perform an LS engine swap on the **stock OE**, or **Maximum Motorsports 5.0L** Fox Body Mustang K-members requires the use of a Holley® **302-3** LS oil pan and specific Hooker Blackheart engine mounting brackets designed for this purpose. Holley **302-1/ 302-2**, and Weiland **5026, 5027, 5028**, and **5029** LS oil pans are also suitable for use with this transmission crossmember, when used with specific **AJE** or **Team Z Motorsports** K-members and specific Hooker Blackheart engine mounting brackets developed for them. The applicable Hooker Blackheart engine mounting brackets for these K-members can be found at [www.holley.com](http://www.holley.com). Compatibility with any other brand/type of K-member is not implied or expected due to the proprietary design geometry of the Hooker Blackheart/Holley components.

**Coyote engine swap** – Using this crossmember to perform a Coyote engine swap on the stock OE Fox Body Mustang K-member requires the use of the Holley **302-50** Coyote oil pan and specific Hooker Blackheart engine mounting brackets developed for this purpose. The stock OE 2011-14 Mustang Coyote and Holley **302-50** Coyote oil pans are both suitable for use with this transmission crossmember, when used with specific **AJE** or **Team Z Motorsports** K-members and specific Hooker Blackheart engine mounting brackets developed for them. Other aftermarket oil pans may also be compatible but have not been validated by Holley Engineering. The applicable Hooker Blackheart engine mounting brackets for these K-members can be found at [www.holley.com](http://www.holley.com). Compatibility with any other brand/type of K-member is not implied or expected due to the proprietary design geometry of the Hooker Blackheart/Holley components.

More engine swap/engine performance components, such as 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).

### **LIMITATION OF LIABILITY – DISCLAIMER:**

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