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**SSB-17-500 & SSB-17-600** TR6060/TR3650 Shifter Support Kit V2, 2005-2010 Mustang GT & 2007-2014 GT500

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Congratulations on the purchase of your Blowfish Racing, LLC TR6060/TR3650 Shifter Support Kit! You have chosen a quality, American Made product that has been Engineered for the demands of the racing world with style you'll be proud to show off on the street.

Since 2005, Ford has used a semi-remote mounted shifter in their manual transmissions for the Mustang. While these shifters sell cars due to their superior NVH (Noise Vibration and Harshness) control, enthusiasts have found shift precision and accuracy have been spotty and frustrating. The design attaches the front half of the shifter assembly to the transmission and the other half to the body. Under full load engine torque, the engine and transmission rock to one side which attempts to bring the shifter with it, but since the shifter is also attached to the body, it can't move and ends up twisting. This directly effects shifting accuracy and produces gate lockout and gear grinding.

The Blowfish Racing TR6060/TR3650 Isolation Mount Shifter Support Kit has been designed to reconfigure the semi-remote shifter to a direct mount shifter by removing the body mount and attaching the back of the shifter to the transmission. This allows the shifter assembly to work in sync with the transmission. As the transmission rocks under torque, so does the shifter. This, by nature, is not necessarily NVH friendly. While it will not produce the noise and vibration associated with some stiffer rear shifter mount brackets and transmission mount inserts, it isn't free of NVH. The shifter becomes directly attached to the transmission, so the engine vibrations will transmit. This is normally only a vibration felt in the shift knob. In some rare cases, this may result in faint noise. Unfortunately, there are compromises in any attempt to give the driver a more precise shifting experience.

**NOTE:** This Kit will not correct a faulty clutch or repair a damaged transmission. If you have a sticking clutch pedal or gear grinding or inoperative gears, you should correct those issues to get the most out of this Shifter Support Kit.

This Kit is designed to work with stock V8 shifters and aftermarket shifters. It will not work with Driveshaft Safety Loops, but fear not because the bracket is an NHRA legal Driveshaft Safety Loop!

OK, lets install it and get you loving your manual transmission again!

**STEP 1:** Preparation

READ THESE DIRECTIONS PRIOR TO THE INSTALLATION!  
Installation Time Needed: about 1 hour (aftermarket shifters may require longer)

**WARNING!! INSTALLATION REQUIRES WORKING AROUND THE EXHAUST. ALLOW THE CAR TO COOL OFF PRIOR TO INSTALLATION TO PREVENT BURNS.**

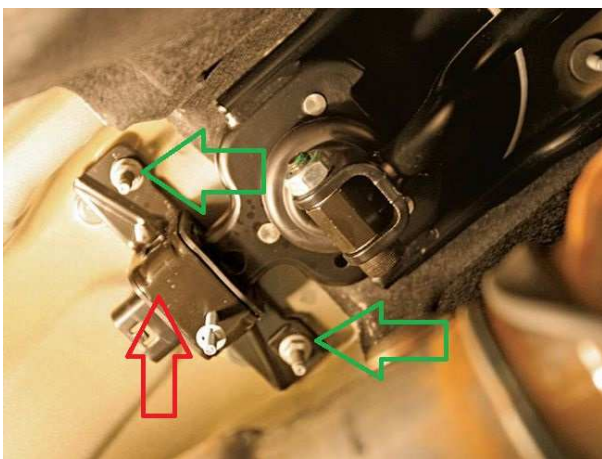
**STEP 2:** Jack Vehicle Up and Secure it

Jack the vehicle according to the manufacturer's recommended procedures and jacking points. Use wheel chocks to prevent the vehicle from moving.

**STEP 3:** Rear Shifter Bracket Removal

Locate the shifter rear bracket under the vehicle, just behind the shifter assembly and above the driveshaft. Using a 10mm DEEP Socket, 12" Extension and Ratchet, Remove the (2) Nuts from the Body Studs (FIG 2, GREEN ARROWS). Pull the shifter assembly down to release the bracket (FIG 2, RED ARROW) from the body studs. NOTE: Factory brackets use a thin metal retaining clip to keep it on the studs. It may take moderate force to pull the bracket off of the studs. This is normal.

FIG 1-Rear Shifter Mount Bracket (factory shown)



Aftermarket shifters require different procedures than the factory style. Note which shifter is in the vehicle and follow along as instructed for your shifter.

**FACTORY, FORD RACING AND HURST SHIFTERS:**

Remove and discard the bracket. Proceed to STEP 4a.

**DRAKE, STEEDA AND PRO 5.0 SHIFTERS:** These shifters use a puck assembly in place of a rear bracket.

Disassemble it from the shifter and reassemble it upside down. Proceed to STEP 4b.

**MGW, BARTON AND ROUSH SHIFTERS:** These shifters use a slip on rear bracket. Slide the bracket off, rotate it 180 degrees and then slide it back on upside down. Proceed to STEP 4b.

**STEP 4a:** Clamp Installation

Pre-assemble the clamp halves with (2) two long M6 Hex Flange Head Screws. Leave them very loose...just a few threads need to be engaged. Slide the Clamp Assembly over the end of the Shifter, with the pins facing rearward. Position the clamp to be directly underneath the body studs (see FIG 2). Torque M6 Hex Flange Head Screws to 6ft/lbs. Go to STEP 5a.

FIG 2- Clamp Assembly

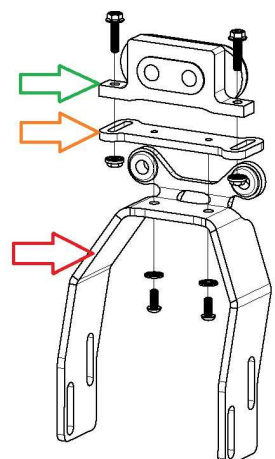


**STEP 4b:** Adapter Installation

Attach Adapter Plate (FIG 3 – ORANGE ARROW) to Upper Bracket (FIG 3 – RED ARROW) with supplied M6 Button Head Screws and Conical Washers.

Go to STEP 5b.

FIG 3- Aftermarket Shifter Adapter Plate Assembly



**STEP 5a:** Upper Bracket Installation

The Upper Bracket (FIG 3 – RED ARROW) needs to be located over the driveshaft prior to the installation of any other components. It fits best by turning it sideways (see FIG 4) and going up alongside the driveshaft, then turning it over the driveshaft. It should be positioned such that it rests over the driveshaft, with the slotted ears going on the left and right of the driveshaft and the rubber isolator grommet ears on top and rearward. Push the Upper Bracket Grommets over the Clamp Pins such that the Grommets are in the center of the pin’s exposed length.

**STEP 5b:** The Upper Bracket Assembly (FIG 3 – RED & ORANGE ARROWS) needs to be located over the driveshaft prior to the installation of any other components. It fits best by turning it sideways (see FIG 4) and going up alongside the driveshaft, then turning it over the driveshaft. It should be positioned such that it rests over the driveshaft, with the slotted ears going on the left and right of the driveshaft and the rubber isolator grommet ears on top and rearward.

Now attach the Adapter Plate to the aftermarket shifter’s flipped body mount with the supplied M6 Bolt and Nut pairs. Reference FIG 3, which shows an MGW mount for an example. Yes, this part of the installation sucks. Sorry. Lower the shifter as much as possible to give the most hand clearance for installing the hardware. For those with slip on body mounts, you can attach them prior to installing the Upper Bracket Assembly. It takes more effort to snake it up over the driveshaft, but once its in place, just slide the mount over the shifter’s pins.

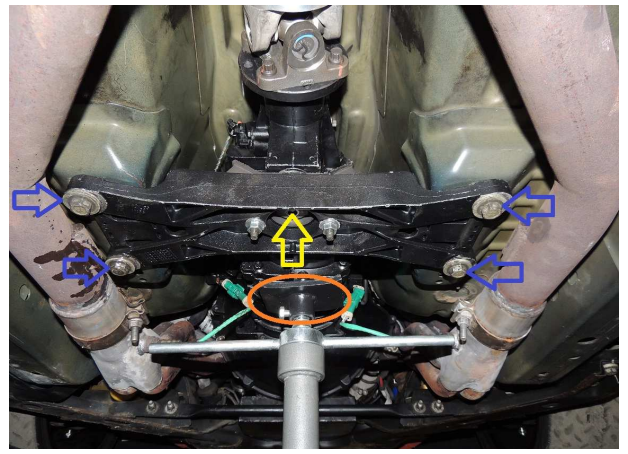
FIG 4 – Upper Bracket installed sideways



**STEP 6:** Trans Crossmember and Isolator Removal

Place Jack under the Transmission, just ahead of the Crossmember (FIG 5, ORANGE OVAL) to support the end of the transmission. Remove the (1) Bolt (FIG 5, YELLOW ARROW) holding the Isolator to the Transmission and save for reinstallation later. DO NOT remove the (2) nuts holding the isolator to the Crossmember. Remove the (4) Bolts holding the Crossmember to the Chassis (FIG 5, LIGHT BLUE ARROWS) and save them for reinstallation later. Remove the Crossmember and Isolator together while noting its current installed orientation. It will need to go back in exactly the same.

FIG 5-Transmission Crossmember Removal

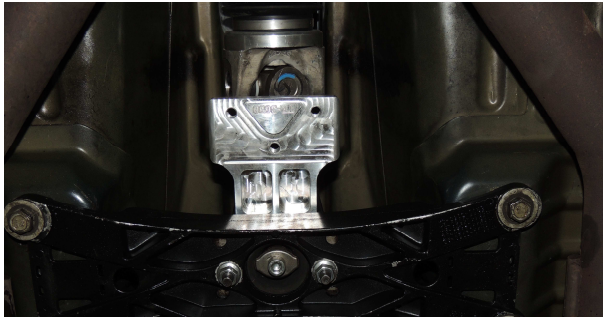


**STEP 7:** Mounting Plate and Crossmember Installation

The Mounting Plate will sandwich between the transmission and the isolator. Place the Rectangular pocket of the Mounting Plate over the bottom of the transmission case’s Isolator bolt boss. Because the transmission case castings are not consistent, it may slide over or be too tight to engage completely. If this happens, use a rubber mallet to tap it up enough to seat it. Place the isolator under the Mounting Plate and reattach with the original bolt removed. Do not tighten at this time. The finished assembly will look like FIG 6. Reinstall the (4) Crossmember bolts and torque to 85ft/lbs. Now tighten the (1) isolator bolt to 25ft/lbs.



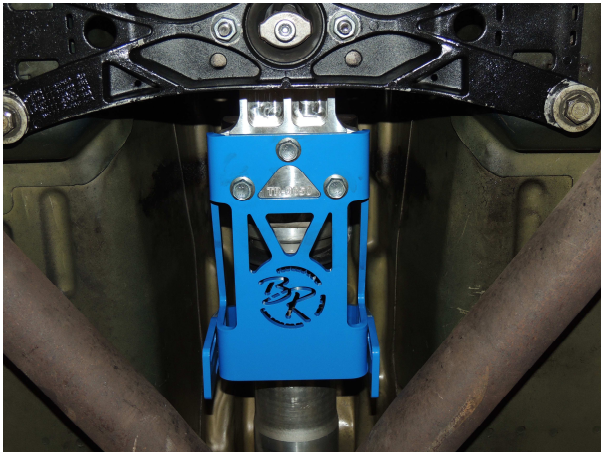
FIG 6 – Mounting Plate and Crossmember Assembly



**STEP 8:** Lower Bracket Installation

Install the Lower Bracket onto the Mounting Plate, such that the triangular protrusion in the Plate engages with the triangular hole in the Bracket (see FIG 7). The Bracket may not seat entirely because of the inconsistencies in the bent Bracket. This is fine. NOTE: Make sure the Lower Bracket nests between the Upper Bracket's slotted ears as shown. Using the supplied (3) M10x25 Flanged Hex Bolts, secure the Bracket to the Mounting Plate. Tighten the bolts up evenly to draw the Bracket to the Plate to seat it completely. Torque the bolts to 25ft/lbs.

FIG 7 – Mounting Plate and Crossmember Assembly

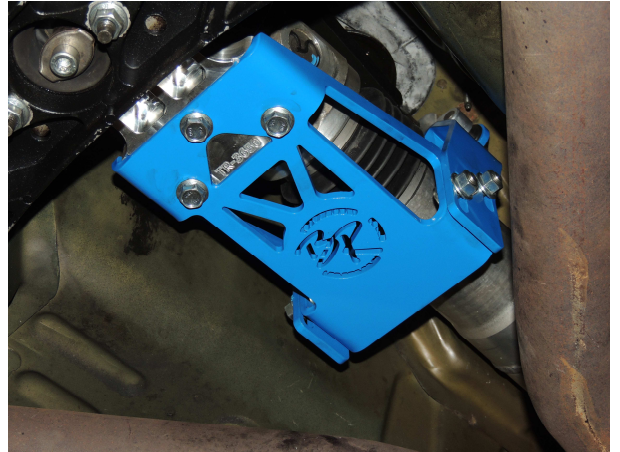


**STEP 8:** Upper Bracket to Lower Bracket Attachment

Align the slots of the Upper Bracket with the square holes of the Lower Bracket and Install the (4) four M10x25 Carriage Bolts and Serrated Flange Nuts with the heads facing towards the driveshaft. Leave Nuts finger tight. Square up the Upper and Lower Brackets

together and raise the Upper Bracket until the Shifter contacts the transmission tunnel. Then lower the shifter down about 1/8". Tighten the (4) four M10 Serrated Flange Nuts. Torque to 25ft/lbs.

FIG 8 – Completed Assembly



**STEP 9:** ENJOY YOUR BLOWFISH RACING PRODUCTS  
TR6060/TR3650 SHIFTER SUPPORT KIT!