#### **) TECHNICAL A Shift For The Better**



# A Shift For The Better

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Ford's current Mustang platform, the S197, has proven superior to its predecessor, from an engineering standpoint, thanks to a more powerful motor, stiffer chassis, bigger brakes and more capable suspension. For all of the 2005-2007 Mustang's attributes, one detail that leaves room for improvement is the factory shifter in manual transmission-equipped cars. Spongy, rubbery, and imprecise are words that come to mind with a stock shifter. Under normal shifting conditions, the factory stock shifter is decent, at best. However, when rowing through the gears with vigor, the stock shifter rears its ugly head. Few things are as frustrating as narrowly losing a race because of a slow, overly long shift, or worse yet, missing a shift!

Mustang enthusiasts that read this publication are looking for ways to increase performance. Replacing the stock shifter with a performance short-throw shifter, such as that offered by STEEDA is a start. STEEDA earned much of its fame by building the TRI-AX Shifter for pre '04 Mustangs and Cobras. To follow up, they created their Sport Shifter Assembly (PN 555-7306) which carries a suggested retail price of \$189.99. This item fits '05-'07 Mustang GTs only, although STEEDA has a Sport Shifter kit specifically for '05-'07 V-6 Mustangs (PN 555-7310) which retails for \$129.95.

A nice feature of the STEEDA Sport

Shifter is the polyurethane shifter bushing kit, included for no extra charge. STEEDA's poly bushing kit (PN 555-7095) replaces the stock rubber shifter bushings with high durometer polyurethane for a tighter, more positive feel. The poly shifter bushing kit carries a retail price of \$14.95, making it a terrific value and fits any V-6 or V-8 Mustang. Furthermore, the poly shifter bushings can be purchased independently of the sport shifter and can be used with a stock shifter. STEEDA'S bushing kit makes for a very price-friendly method of improving shifter function on even the tightest budget.

The Sport Shifter offers noticeably shorter throws between gears, more positive engagement, and a more precise, tighter feel. The factory shifter feels sloppy because of the soft, rubber bushings that the bean counters at Ford used to reduce costs. To minimize NVH (noise, vibration, harshness), rubber bushings are used liberally in the shifter assembly. Conversely, the inherent sportier feel the STEEDA shifter provides does tend to transmit a tiny bit more drivetrain noise into the cabin. Any self-respecting gearbanger should consider this a very small and acceptable compromise that is typical



1 I'll bet you can't wait to get your hands on this one. It's the STEEDA Sport Shifter Assembly for the '05-up GT

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2 Remove the shift knob by twisting it off. Lift up on the leather shift boot to allow access to shifter.

**3** Pull out the inner rubber shifter boot, which will reveal the shifter assembly.

4 Working from under the vehicle unbolt the driveshaft from the back of the transmission and allow it to drop out of the way. This will yield more work space. Note: Mark the alignment of the driveshaft for easy re-installation.

5 Remove the nut that secures the shifter lever to the shift rod. Pull out the shift rod and allow it to hang out of the way.

6 Remove the bolt that attaches the shifter arm to the transmission. Using a 10mm ratcheting gear wrench simplifies this step.

7 Remove the two small nuts that support the rear shifter mount to the floorboard.

8 Remove the shifter, sneaking it past the driveshaft.

9 Remove the white stock plastic bushings from the factory shift lever and transfer them to the STEEDA Sport shifter lever.

10 Remove the metal sleeve at the front of the stock shifter arm and transfer it to the STEEDA shifter along with provided urethane bushings.

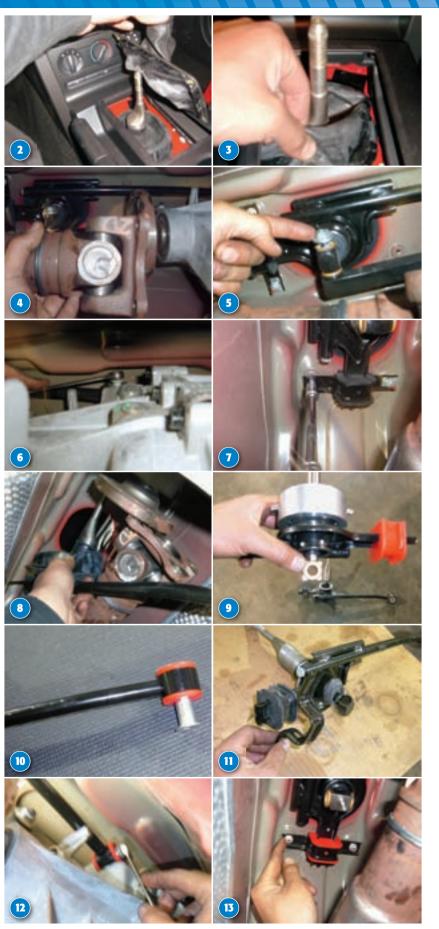
11 Pull out the U-shaped bracket at the rear of the shifter. It is necessary to transfer it to the STEEDA shifter while installing the new urethane bushing.

12 Once fully assembled, maneuver the shifter into place and attach the front of the shifter arm to the transmission with the factory bolt.

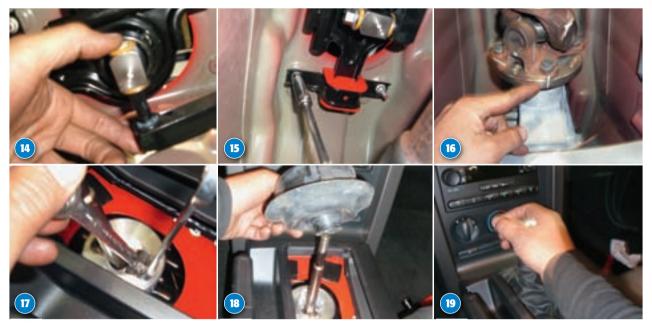
13 Attach the rear of the shifter to the chassis using factory hardware.

of any performance shifter upgrade.

A pleasant surprise of the STEEDA Sport Shifter is the more comfortable reach that the shifter lever offers. By virtue of having a shorter handle versus stock, the shifter knobs rests in a more natural and comfortable position, which makes flying through the gears a smooth, flick-ofthe-wrist motion. This is clearly the case when attempting a second-to-third gear speed shift. The motion becomes more of a forward thrust with the Sport Shifter



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14 Re-connect the shifter lever to the shift rod. Make certain the stock shifter rod bushings are in place.

15 Tighten all mounting points of the shifter.

16 Re-connect the driveshaft, making sure to align the reference marks made earlier.

17 Working from inside the car, we can now set the shifter stops. Move the stop bolt so that it contacts the shift lever when in gear. Once there, back off the bolt ½ turn. This will leave a small gap between shifter lever and bolt. Do this for all gears. Tighten down the stop bolt and jam nuts using two wrenches.

18 Install inner rubber shift boot by stretching it over shifter base. It is a tight

compared to the "up-over-up" movement that must be done with the factory shifter to avoid missing third gear. Constructed from billet aluminum, the STEEDA shifter also features adjustable shifter lever stops to prevent internal transmission damage, as might occur with a hard or missed shift with the stock shifter.

We contacted the Mustang experts at GTR High Performance to provide us with an inside look of what is required to ditch the stock shifter and substitute the STEEDA Sport Shifter in its place. Our 2006 Mustang GT was placed in the care of GTR High Performance and GTR's talented technician demonstrated this to be a relatively straightforward affair that is well within the scope of most doit-yourselfers. A variety of basic hand tools are necessary, along with access to the transmission from the bottom of the vehicle and inside the cabin. GTR performed the installation on a vehicle lift for simplicity, but it can be done on iackstands (albeit with much greater effort) since it is necessary to temporarily remove the driveshaft during installation. squeeze, so be patient. Otherwise, you can completely remove the shifter assembly, then install the rubber shifter boot and then re-install the shifter. We chose to wrestle with the boot.

19 As the final step, re-install the shifter knob along with the leather boot by snapping into place. Enjoy the quicker, more precise STEEDA shifter.

If you prefer to spend your free time shifting gears rather than spinning wrenches, any qualified shop should be able to complete this swap in a couple of hours.

Replacing the stock shifter doesn't add a lick of horsepower or torque, but it can help reduce quarter-mile times and lower lap times. Since the throws are shorter, you will spend less time "between" gears, allowing you to engage the next gear quicker and get on the gas sooner. Considering the sporty feel and accuracy that the STEEDA shifter offers, along with a budget-friendly price, we suspect many gear-bangers will be making a shift for the better.

#### **) SOURCES**

**GTR HIGH PERFORMANCE** 

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