

Swapping in a Complete Classic Chevy 5-Speed Tremec TKO

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FOUR PLUS ONE



QUICK NOTES

WHAT IT IS

A total-package five-speed conversion

BOTTOM LINE

Forget scavenging the yards or piecing a kit together yourself; this swap has you covered from start to finish.

COST (APPROX)

'67-81 Chevelle: \$2,675

'64-67 Camaro: \$2,775

(auto-to-stick conversion \$820 extra)

If you've tried to exchange that slushbox for a stick, only to be told "No" by the better half, then you're doing it all wrong. Just be

sure to remind her of the extra coin you'll be saving with the increased gas mileage from lower-rpm cruising speeds. Of course, in reality, we're really just jonesing to bang the gears and scratch the tires at every opportunity.

Now if you're wondering why we

aren't keeping the four-speed, the short answer is that our projects are not "collectible" Z/28s, Yenkos, or other limited-production models. They're actually being built to be driven, so why not have the best of both worlds?

Of course, swapping over to a manual transmission isn't particularly difficult. In fact, the real challenge comes from gathering all the parts in the first place. Considering we had two projects tossing the factory four-speed Muncie—a '67 Chevelle and a '67 Camaro—in favor of a Tremec overdrive five-speed transmission, finding a complete swap kit was key for a trouble-free installation. Our choice was

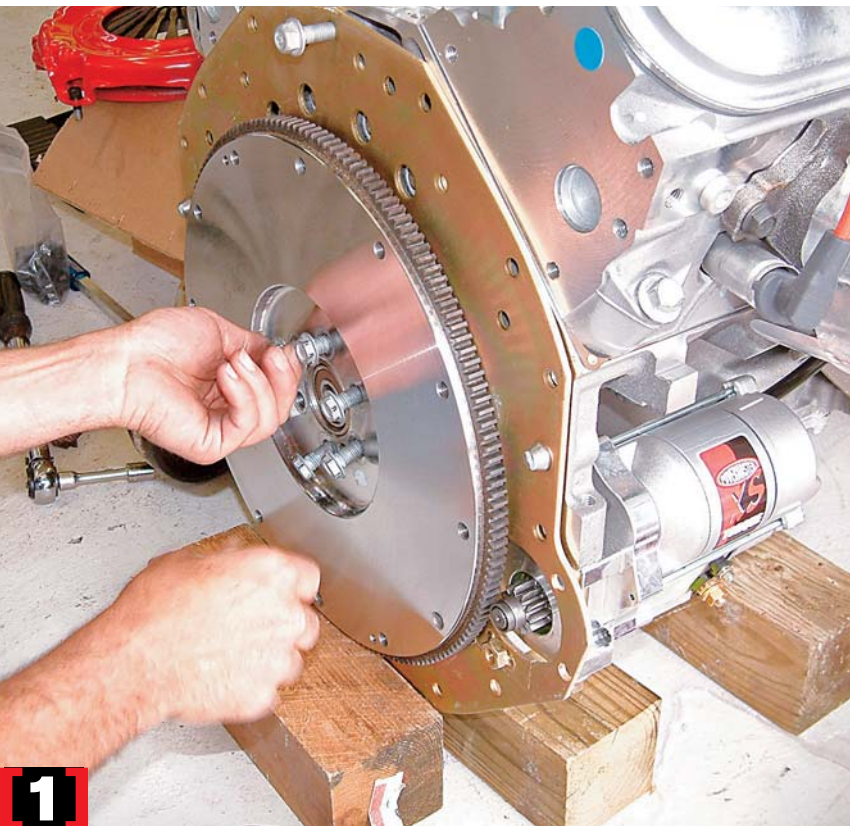
Classic Chevy 5-Speed's TKO-600, which is offered as one of the most complete conversion swaps on the market for both vehicles. The Classic 5-Speed kit features a McLeod flywheel, clutch, pressure plate, and scattershield for the LS2 mills we're using. The complete hardware package for the conversion includes a new crossmember for the Camaro. (The stock crossmember in the Chevelle works for the swap.) While stock mechanical linkages and pedal assemblies are offered, we opted for the hydraulic-clutch conversion kit. Follow along as we show you the ins and outs of a complete Classic Chevy 5-Speed conversion.

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WHAT'S THE DIFFERENCE?

Classic Chevy 5-Speed offers you a choice of the TKO-500 or the TKO-600. While the TKO-600 makes for an excellent heavy-duty track piece for dragstrip applications, you also need to note the First gear ratios. Depending on your rearend gearing, many people like to take advantage of the 2.87 First in the TKO-600. Again, it's all in what you want and need.

Model	PN	1st	2nd	3rd	4th	5th	Torque Rating
TKO-500	4616	3.27	1.98	1.34	1.00	0.68	500 lb-ft
TKO-600	5009	2.87	1.89	1.28	1.00	0.64	600 lb-ft



1

The LS2 going in the Chevelle is the new GMPP LS 364/440 crate engine (PN 17802134) rated at 440 hp. It was obvious that a great First gear and an economical Overdrive gear were necessary to provide quick launches plus pleasant cruising. Since the LS2 comes with an automatic-transmission flexplate, the first task was to remove the flexplate and mount the McLeod scattershield and flywheel. Bobby Livengood of Livengood Fabrication in Landis, North Carolina, attached the scattershield mounting plate and was in the process of mounting the flywheel when we discovered that the oil pan was interfering, precluding proper attachment.



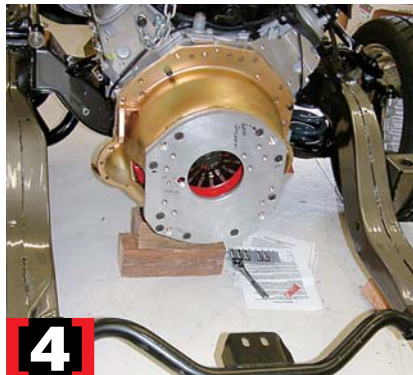
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Measurements were taken, and a little assistance from the plasma cutter and grinder took care of the fitment issue. McLeod is working to ensure that its scattershield will fit most LS-series engines and original or modified oil pans.



3

Our experience with the Chevelle paid big dividends when we unwrapped the Turn Key Engine Supply LS2 that'll end up in the '67 Camaro. Livengood quickly removed the flexplate and set up the scattershield for the proper cutout. Since this oil pan is different, additional material had to be removed to allow the mounting plate to sit flush with the block.



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The McLeod flywheel, pressure plate, scatter shield, and transmission adapter plate were quickly installed, and all bolts were torqued to the specs in the easy-to-follow instructions. A clutch-alignment tool, included in the kit, ensures that the trans will slip into the pilot bearing properly.



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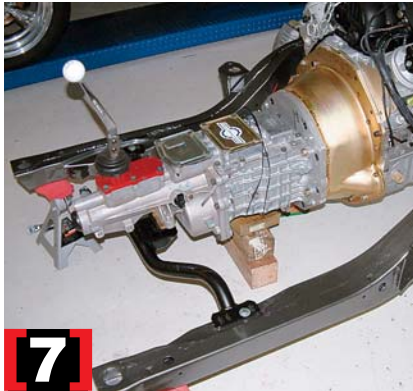
The next step in the instructions (you know, that sheaf of papers you tossed in the box!) guides you through the simple process of attaching the hydraulic throwout bearing and determining the proper length for the throwout-bearing piston. We removed the stock input-shaft support sleeve and prepared the surface of the slave cylinder for mounting. It is important to ensure the bleeder line is on top of the slave cylinder.



6

At this point, the instructions direct you to take two measurements: one from the face of the clutch fingers to the aft surface of the transmission/adaptor plate and one from the face of the transmission to the surface of the throwout bearing. (Make sure the bearing and sleeve are fully seated.) The tolerance for the slave cylinder to work properly is 0.100-0.300 inch. CC5S will send the proper-length sleeve if your measurements are outside this range. The sleeves are supplied in 0.200-inch increments and we were able to achieve 0.125 inch clearance on both transmissions, well within our window.

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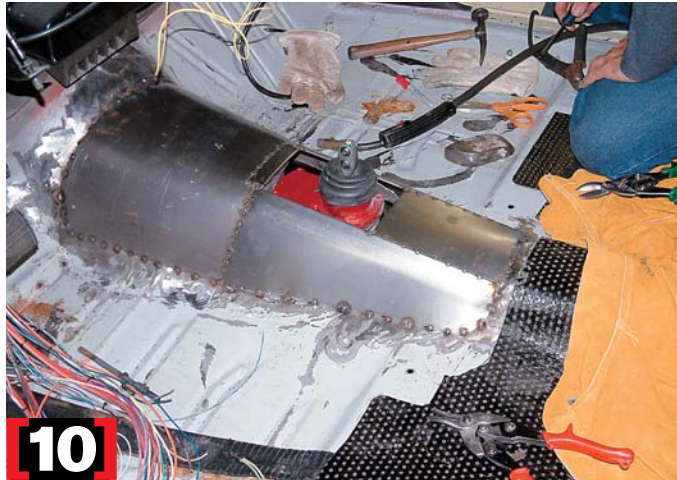
7 Next, we attached the crossmember for the final evaluation. The setup sure looks good here and the backup light pigtail is ready to be connected. This transmission comes with either a manual or an electronic speedo pick-up, so the instrument selection is easy.



8 The crossmember would have fit perfectly for a stock engine swap, but the custom LS2 installation with Street & Performance engine mounts will line up slightly forward. Livengood carefully slotted the crossmember to fit the framerail beautifully without drilling new holes. The stock framerail holes on the Camaro have large access holes below them, so you want to adjust the crossmember to the framerail. The Chevelle, however, already has multiple holes in the framerail, and it was easy to find a set of holes to use. Remember, all cars are different, and you may have to make small changes in this area with any project.



9 Installing the Tremec five-speed in the Chevelle was simply a matter of dropping the engine/scattershield assembly in the engine bay and working the transmission from the bottom, and it went in surprisingly well, with little fuss or strain.



Since the Tremec transmission is larger than the factory trans tunnel, Classic Chevy 5-speed provides a metal replacement panel. While the provided panel will work fine for most projects, we decided to cut out more of the tunnel than necessary, to provide a better support for the custom console being built.



11 The master cylinder supplied by CC5S is modified for the additional pressure required by the McLeod clutch. As you can see, it is tucked nicely behind the brake booster on the Chevelle and will fit in a similar manner on the Camaro firewall. All lines will be secured during final assembly with rubber-cushioned Adel clamps that will prevent chafing of the braided lines.



12 Since the CC5S Tremec conversion kit is complete, explicit instructions are included for measuring for driveshaft length. CC5S then coordinates with the folks at Inland Empire Driveline Service to send you the correct driveshaft that will fit your new five-speed tailshaft and whatever rearend you are using. **CHP**

WHAT'S INSIDE

The Classic Chevy 5-Speed Deluxe TKO kits include the following components:

- All-new TKO-500 or TKO-600 transmission, w/a billet-aluminum Tremec shifter*
- Custom mandrel-bent tubular crossmember, a direct bolt-in
- Energy Suspension polyurethane transmission mount
- Custom mechanical speedometer cable w/integrated adapter and gear (electric speedo kits available)
- Custom-built steel driveshaft w/premium Spicer U-joints and Spicer C6 slip yoke (aluminum optional)
- Roller bearings
- Hurst shift knob in black or white
- Reverse light-switch connector in a pigtail connector
- Complete specialty hardware kit
- Step-by-step instructions
- Optional offset shifter
- Six-month warranty from CC5S on all kit components

* Using the Tremec shifter requires minor modifications to your tunnel. For a no-mod installation, the optional offset shifter is required.

GET THE HOOKUP

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