WHAT IS YOUR MUSTANG REALLY WORTH?

FABULOUS MUSTANGS AND EXOTIC FORDS

A-1

WPS

SEPTEMBER 1984
38417

WILD PRO STOCK PULL-OUT POSTER

GIGANTIC ALL-FORD STREET-MACHINE SPECIAL

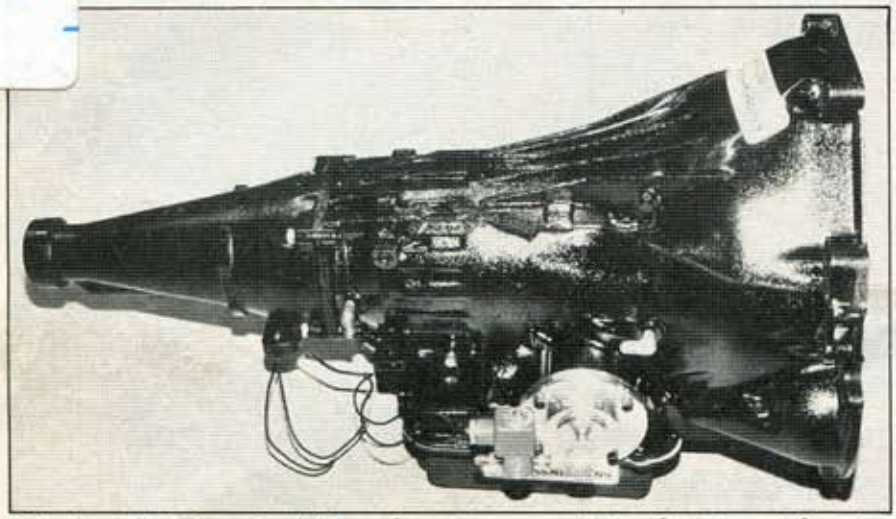
TECH:

- [illegible]'S NEW ROLLER CAM (for the street)
- STEP BY STEP RESTORATION TIPS
- Easy 30 HORSEPOWER CARB TRICKS

VINTAGE SPECIAL
THE FASTEST FORDS

TRANNY TRICKS PAGE 52

0 70989 38417 09



A-2

By C. Van Tune

One of the most innovative high performance automatic transmission shops in the nation, Advanced Transmissions of Rancho Cordova, California, has just announced the availability of their newly developed trans-brake system for the Ford C-6 automatic.

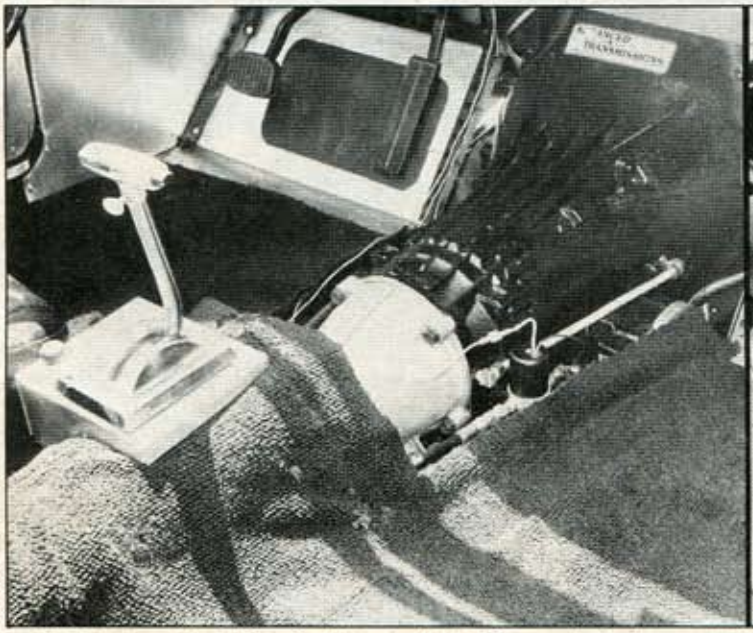
Designed by Advance's owner, Jim Galatioto, the trans-brake system utilizes compressed nitrogen (or air) to set and release the servo piston. The two-part servo consists of a dual-stage piston; one side of the servo is used only to activate the servo piston when triggered by the compressed nitrogen, while the other piston is used primarily for the second gear band application.

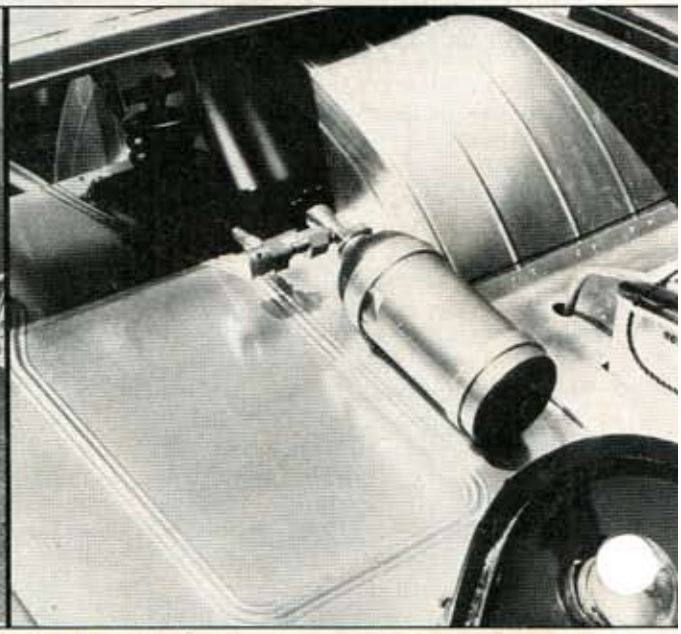
We found the solenoid switch used is of very high quality, and is used with a high flow, fast reacting solenoid to assure instantaneous release of the brake when the switch is activated—allowing quick off-line reaction times.

Hot ticket for Ford-powered drag cars: a fully prepped C-6 replete with trans-brake. Advanced Transmissions of Rancho Cordova, California has just come out with this slick operating setup.

State-Of-The-Art Performance Mods For The Ford C-6 Automatic

FORD TRANNY





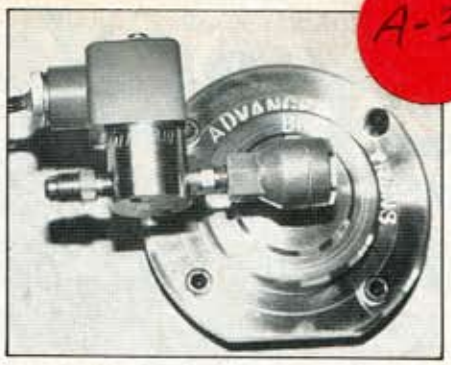
Installed in Lynn Morris' Pro Gas Thunderbird, C-6 trans-brake is operated by button mounted on shifter plate, utilizing compressed nitrogen (stored in bottle at rear of car) to activate brake system. Car sports 500-inch Boss Hemi Ford with dual Dominators, runs Pro Gas 8.95 index.

The trans-brake necessitates use of Advance's fully manual reverse pattern valve body, and for ease of ordering the entire trans-brake system (including the reverse pattern valve body, servo assembly, solenoid, quick-release valve, nitrogen bottle, lines and regulator) is available through Advanced Transmissions as a kit.

Advanced also modifies automatic transmissions (all makes) for use in hi-po street or drag applications, and has developed a couple of simple refinements that add efficiency and reduce wear in any automatic.

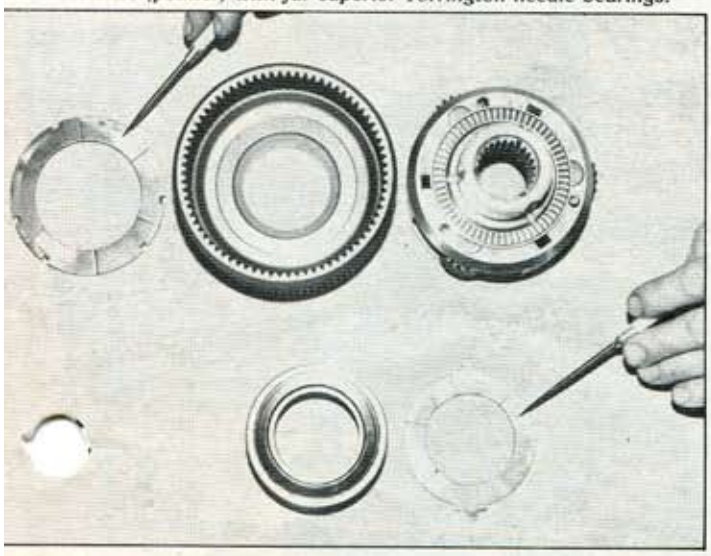
The first is the complete use of Torrington needle bearings in place of factory installed thrust washers. Advance's extensive testing involving a Pro Modified drag car running 10.80s proves the point: The standard C-6-equipped car made 74 quarter-mile passes, after which the trans was removed and disassembled. A look at the parts revealed that every thrust washer showed signs of severe wear due to friction, a fact corroborated by the high content of metal filings in the trans fluid. The same transmission was then fitted with Advanced's Torrington

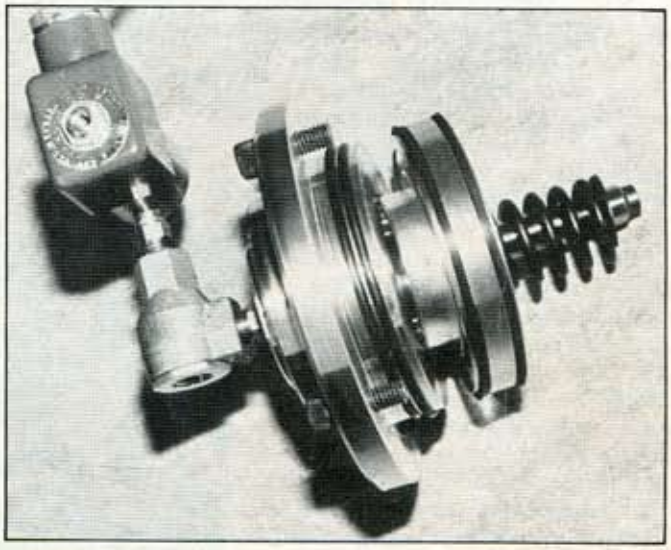
Continued on page 84



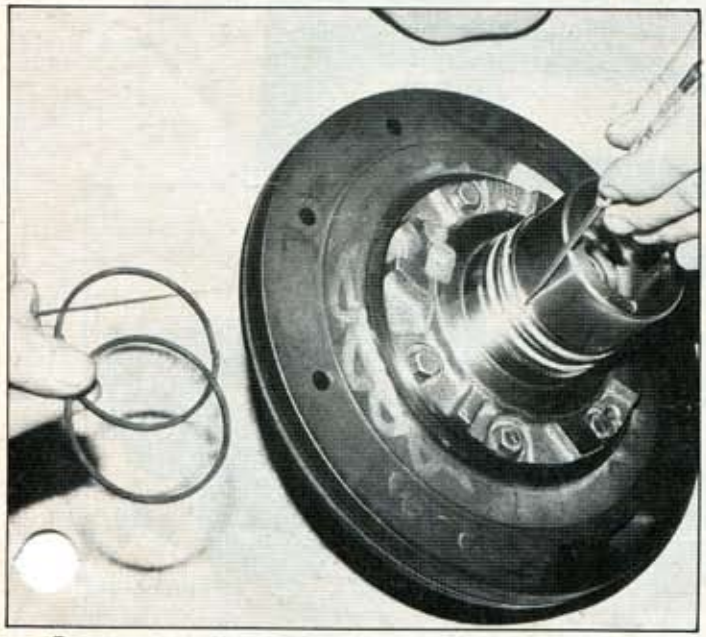
Two views of trans-brake show close-up of solenoid, quick-release valve, C-6 servo housing (top photo) and another angle of above assembly plus servo piston and spring (bottom photo).

Friction is major enemy of any piece of machinery, resulting in heat and parts wear. Advanced replaces factory-installed thrust washers (pointer) with far superior Torrington needle bearings.

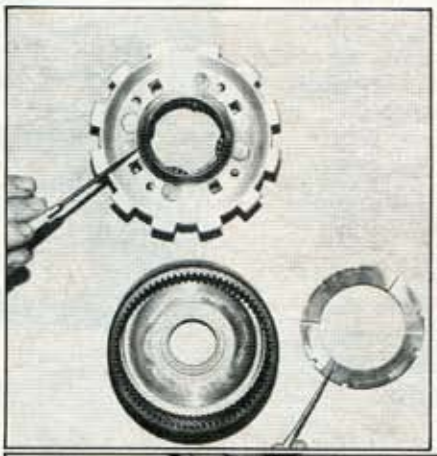




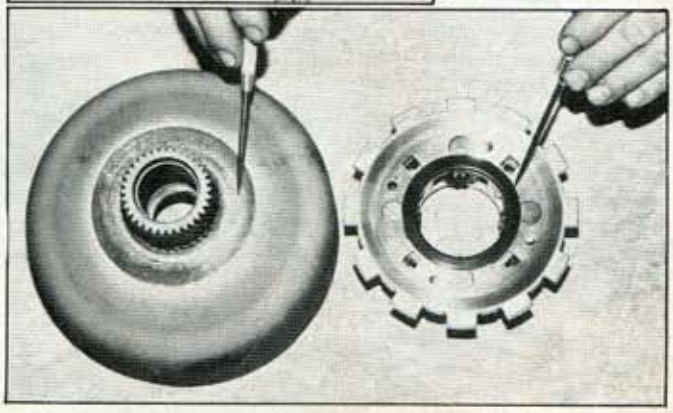
TRICKS



Pump assembly fitted with Teflon rings designed by Advanced eliminates need for inefficient standard cast-metal rings shown on left. Result is less fluid leak-by, higher line pressure, longer clutch life.



Rear planetary, drive shell and sun gear benefit from Torrington bearings as well. Extensive testing has proven Torrington bearings far outlast thrust washers while also greatly reducing friction.



HOLLEY CARB TRICKS

with the "Saturday Nite Special," and overall driveability was good, but when the secondaries were brought into play, the acceleration characteristics went from good with the stock carb to great with the Fuel Curve Engineering version. Reports from users of the "Saturday Nite Special" indicate anywhere from a tenth to two-tenths of a second drop in quarter-mile times and some even reported an improvement in gas mileage also.

Fuel Curve Engineering will modify any Holley carburetor to "Saturday Nite Special" status, whether it be vacuum secondaries or a double pumper. The costs for these modifications vary depending on what type of carb you have and what has to be replaced. For a price quote call them and also ask for their spec and modification sheet. If you want street performance that is as hot as a pistol, get the Fuel Curve Engineering "Saturday Nite Special."

Performance Improvements At A Glance

Ken Swanson at Rancho Suspension was not getting all the performance he thought he should from his 1982 Z/28 Camaro. Ken had installed an Edelbrock Performer intake manifold along with a Holley carburetor (list number 1850, 600 cfm and vacuum secondaries), plus headers and a dual exhaust system on the otherwise stock 305-cid engine. He took the car to Bob Jennings Dyno Service in Sepulveda, California, to check the rear wheel horsepower. The following are the results from the first series of runs on the chassis dyno.

RPM	HP
3000	140
4000	180
5000	204

Then Ken got himself a "Saturday Nite Special" from Fuel Curve Engineering with a list number of 4777 (650 cfm and mechanical secondaries), and proceeded to bolt it on with no other modifications. The following are the results from the second series of runs on the chassis dyno with the "Saturday Nite Special."

RPM	HP
3000	205
4000	220
5000	240

The improvements speak for themselves. The almost unbelievable part of this is that this is an improvement in rear wheel horsepower, not engine horsepower.

FORD TRANNY TRICKS

bearings, reinstalled in the car, and taken to the track for another 75 passes. Disassembly after the sess showed no visible wear to the ne Torrington bearings (and the fluid was very clean as well) so the entire componentry was bolted back into the car for another 75 runs. Amazingly enough, disassembly and study of the parts after the second set of 75 runs also showed no discernible wear. In fact, after an incredible 575 total passes (yes, 575!) close parts scrutiny still showed no visible wear to the Torrington bearings.

The factories use thrust washers because they're inexpensive, even though they do take their toll on transmission life. For any drag, hi-po street or towing use, we'd strongly recommend utilizing Torrington bearings . . . the testing results speak for themselves.

Another modificaton beneficial for racing automatics is the installation of Teflon sealing rings (in place of the standard cast metal rings) on the pump assembly. The high temperatures and pressures generated inside a performance transmission (as high as 8500 rpm and 195-lbs. of main line pressure) tend to force the metal rings into ring-lands. In order for the metal sealing rings to be effective at all, they must fit snugly in the bore of the clutch drum (the same way an engine piston ring needs to fit in the cylinder to seal off compression). When the metal sealing ring has worn as little as 0.005-inch, it will begin to allow a line pressure loss; wear from this point on becomes much accelerated. Once that begins, the high gear clutches are doomed.

The Teflon sealing rings Advanced has designed can withstand the high internal rpm and heat with ease. At operating temperatures of 250-degrees Fahrenheit, the standard metal sealing ring will suffer breakdown quite rapidly, whereas the Teflon ring will perform very successfully even at 425-degrees. In addition, the Teflon rings seem to last almost indefinitely. As any racer knows, to have a combination that works, performs, and (most importantly) lives, is of the utmost importance.

Keep in mind that to eliminate transmission friction is to increase usable engine horsepower. The less drag behind the engine, the better it's going to perform.

Advanced Transmissions
11235 Coloma Road, Space G
Rancho Cordova, CA 95670
(916) 635-2525