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*In 5th gear the Skyhawk's V-6 was turning only 1600 rpm at 55 mph!*

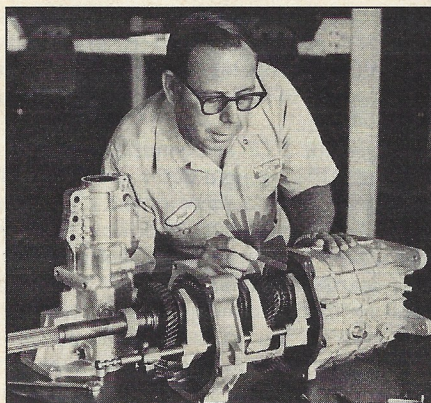
## Driving Impressions: NEW 5-SPEED GEARBOX FOR AMERICAN CARS

BY GARY WITZENBURG

ONE HESITATES TO use clichés like “the gearshift falls readily to hand,” but it does. It also shifts “like a hot knife through butter.” There may be no better words to describe the slick new 5-speed gearbox Warner Gear Division of Borg-Warner Corporation has developed for smaller domestic cars.

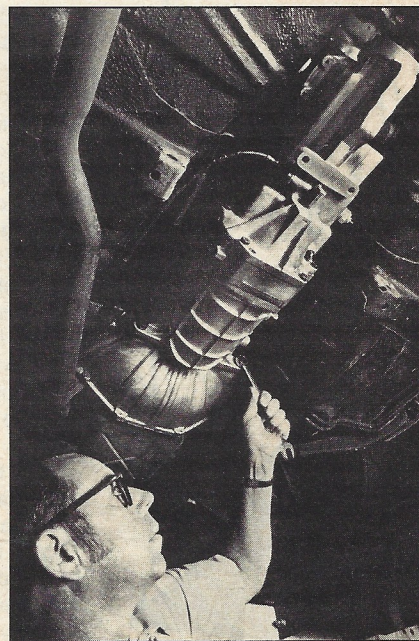
Treated to a brief test drive on streets and freeways around Detroit by B-W's Jim Swedeen on a cold and blustery Motor City day, I came away wondering only why we hadn't been blessed with this significant event some years ago.

The answer, of course, is that until recently Detroit's product planners have had fair reason to believe that the manual box was a thing of the past. Oh, they kept a few creaky old 3-speeds around for those price leader-models with burlap seats and blackwalls. And there were still a few venerable 4-speeds collecting dust on the “heavy duty” shelf, grudgingly made available to the Woodward Avenue Tea



*The end-loaded, oval case is strong by virtue of having no side or top opening and allows low weight (65 lb) through use of diecast aluminum.*

Club and Street Racer set. But aside from some sporty-minded buyers of 4-cylinder Vegas and Pintos, almost no one wanted to be bothered any more with shifting his or her own gears. So Detroit in its way





gave us what we deserved, and good manual transmissions became about as easy to find as honest politicians.

Try to find a stickshift rental car some day, if you don't believe us, or take your 4-speed Camaro to the local Chevy garage and watch the certified mechanic look for your transmission-fluid dipstick. Or ask a salesperson why you can't get a 4-speed Gremlin or Granada: "Well, sir, maybe we can get you the 3-speed on the floor for a slight extra charge."

Of the more than 10.2 million 1973-model cars built in North America for the U.S. market, fewer than 700,000 had manual transmissions. The automatic installation rate was 93.4 percent, compared to only 4.1 percent for 4-speeds and 2.5 percent for 3-speed boxes. Economy-conscious 1974 saw the beginning of a stickshift comeback, with 6.7 percent 4-

formance" ratios will (reportedly) be optionally available for some applications. Much attention has been paid to both light weight and serviceability, according to B-W engineers: for instance the shift forks are die-cast aluminum and the linkage is enclosed to protect it from the elements. Potential leak points have also been reduced and the sealing improved.

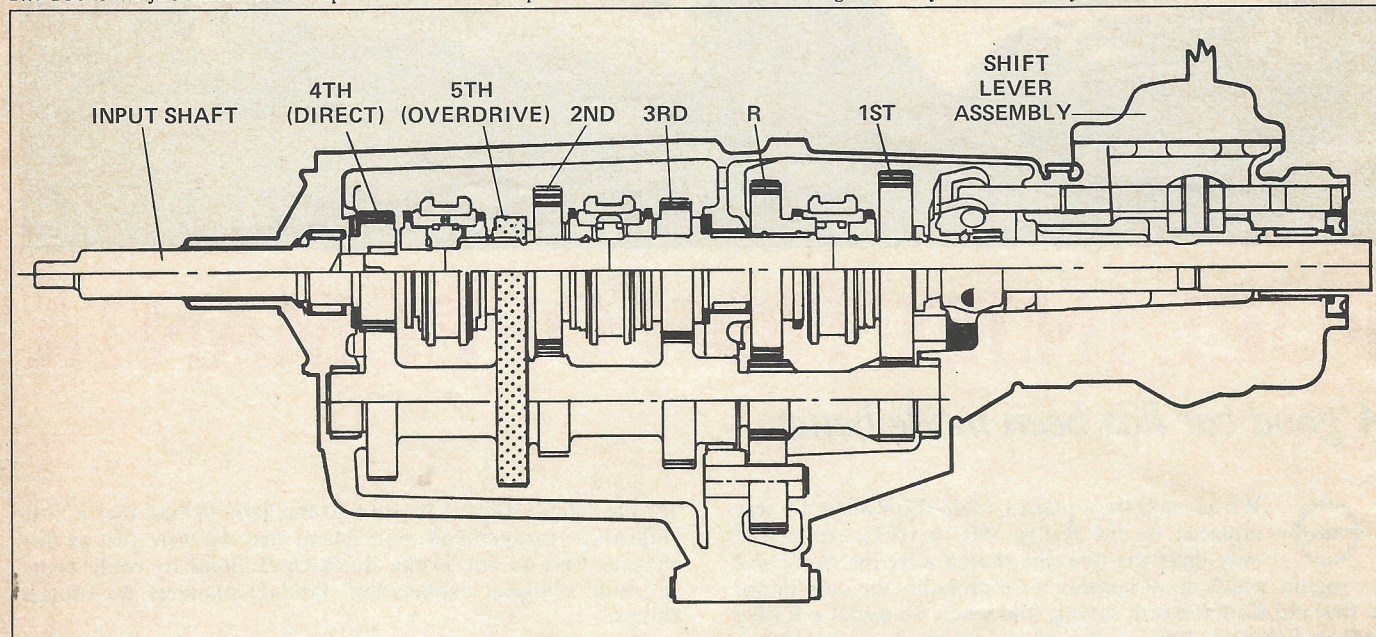
The car we drove was a Buick Skyhawk 2+2 with the standard 3.8-liter V-6 and a 2.56:1 rear axle, with which the T50's 0.84:1 5th gear gives an astoundingly low final drive ratio of 2.15:1 and a just off-idle speed of 1600 rpm at 55 mph! But the car accelerated with reasonable haste even with three aboard, and jogging through the ratios was pure pleasure. One habit I had to forget was that of shifting forward for 1st gear: the B-W box has 1st and reverse in the left gate, with 1st

by the small-engine Nova/Omega/Ventura/Apollo group, plus Camaro and Firebird. And of course the Cosworth is included in the Vega availability.

The list of potential applications covers the industry board from Ford's 2.3-liter four to Chevy's 4.2 V-8, the limiting factor being a maximum of 205 lb-ft of torque. Although Chrysler Corporation and AMC already offer overdrives of sorts (the former a modified 4-speed, the latter the hydraulic Laycock unit attached to a standard 3-speed), both are presently evaluating the B-W T50. Ford Motor, with no overdrive at all and 4-speeds only in 4-cylinder small cars, has (curiously) decided against the 5-speed.

But the immediate question really is: "Does anyone out there really care?" Will the great, unwashed, spoiled-rotten consuming public respond to vast improve-

*The T50 is the first automobile 5-speed box to be mass-produced in the U.S. It has a single-rail shifter and its shift mechanism is totally enclosed.*



speeds and 3.5 percent 3-speeds; but rates might have been higher had availability been better. For instance, only Nova, Ventura, Valiant and Dart among U.S. "compacts" even offered a 4-speed gearbox. In the next few years the increasing cost of gasoline is certain to bring a further resurgence in demand for manual shifting, however, even though the carmakers are developing more efficient automatics. And Borg-Warner figures to grab a strong share of that business with the new 5-speed, which it calls the T50.

There was already a small but loyal market for 5-speed Fiats, Alfas, Porsches and, more recently, Toyotas, which justified the beginning of its development. One of a family of new gearboxes sharing the same end-loaded aluminum case and many interchangeable parts, the T50 was originally a "performance" box with a 1:1 top gear. The Big Crisis merely brought about some ratio-shuffling to get 5th into the overdrive range, although the "per-

formance" ratios will (reportedly) be optionally available for some applications. Much attention has been paid to both light weight and serviceability, according to B-W engineers: for instance the shift forks are die-cast aluminum and the linkage is enclosed to protect it from the elements. Potential leak points have also been reduced and the sealing improved.

Our benevolent Environmental Protection Agency says the V-6 Skyhawk gets 19 mpg in town and 25 on the highway. With the 10-percent overall improvement claimed by B-W for the 5-speed, which seems optimistic, the Skyhawk should be capable of mileage in the high 20s for those who care to drive the speed limit on the freeway. That would put the Skyhawk into some pretty respectable company.

Availability of the T50 will probably be limited to 4-cylinder Chevy Vegas and Monzas for the rest of the 1975 model year, however, although the Buick people are reported to be on the verge of deciding to offer it in the Skyhawk. It would be a very smart move, judging from the one we tried. The logical progression at GM would then bring it to the Olds Starfire and the V-8 Monza, followed (we hope)

to the rear as with a 3-speed. That aligns 2nd and 3rd in the center and the two top gears on the right.

Obviously B-W thinks there are enough of us left who like to row our own boats to make the expenditure worthwhile, but one company official let on that too much public acceptance of the 5-speed would actually hurt their cause—because the automakers traditionally decide to build their own components whenever enough of them are sold to justify the effort. Whatever happens, we do care. And we think the new 5-speed may be one of the best things to happen to the U.S. industry and its customers in the last few years. ♣