

# WARN OVERDRIVE

*If you have a Jeep or Scout with low, low gears, this unit will save wear and tear on your rig and help you beat the high cost of gas.*

*Story and photos by Jim Brightly*

"Install an overdrive? What for, the damn things cost too much and you need a licensed mechanic to install 'em!" Or, "An overdrive? Don't I have to cut my driveshaft, or something?" Another response people answer is, "But you can't use an overdrive in 4WD."

My answer to all of the above is, "Not so!" With many of the overdrives on the market today the answer would be, "True." But not with the Warn Overdrive Model #33. Anyone, even yours truly, can install a Warn "All Range" Overdrive in a matter of minutes. The time involved depends on the vehicle involved. You don't even lose the chance to use a PTO unit.

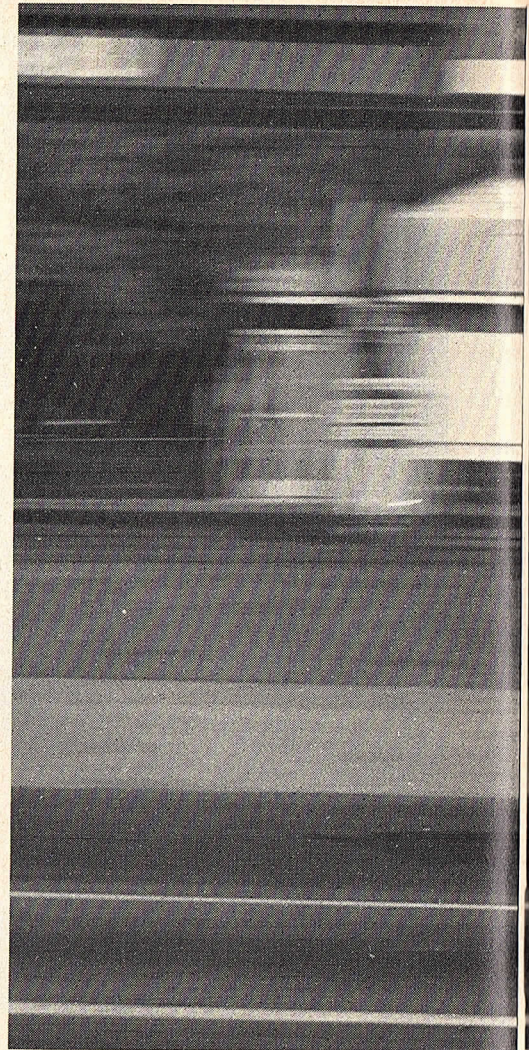
The Warn Overdrive (Warn Industries, Dept. FW, 19450 68th Avenue South, Kent, Wash. 98031) is strictly a bolt on item, super simple to install and even easier to use.

## INSTALLATION

With many of the items I've been asked to write installation articles for in the past, the instruction sheet reminded me of the one I used last Christmas Eve. You know the type, "Install part AB-3 into AB-4, but only after attaching A to B to form parts AB-1 and AB-2. . . ." And AB-2 is missing, right? Well, you needn't worry about the Warn instruction sheet, it is graphically well done and, more importantly, it is correct (and all the parts were there!).

The instruction sheet is a *complete* step-by-step directive including enough excellent photographs and line drawings to show the most inexperienced novice the correct way of installation. They even included a caution note about draining and flushing the transfer case before installation.

We were unable to follow Warn's instructions letter for letter, because our



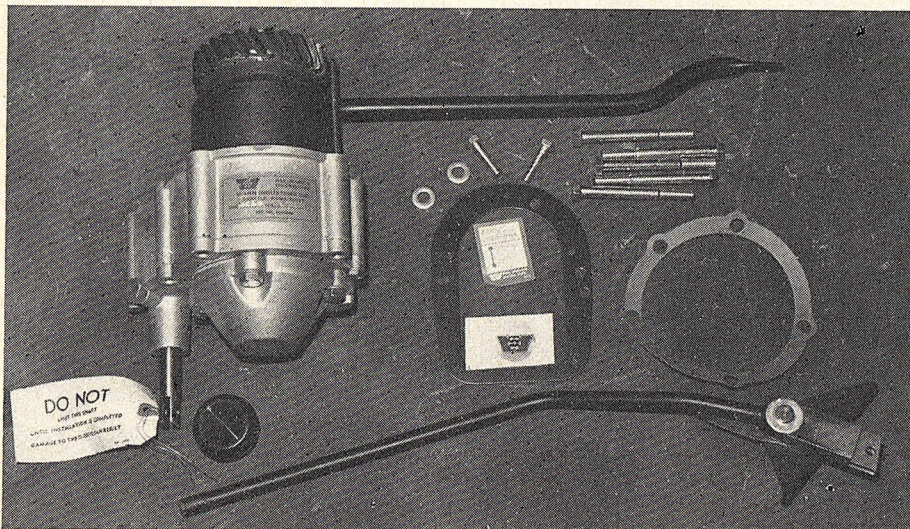
With a Warn Overdrive, passing gas stations is easy. The overdrive increases the vehicle's range by over 20% and saves wear and tear on the engine and transmission.

test vehicle was equipped with a Muncie 4-spd transmission. The shift lever mounting bracket location, the mounting bracket itself and the shift linkage must be changed when using a non-stock transmission. This is simply done, but must be fabricated for each individual rig. For Jeeps with the stock tranny, Warn includes all necessary hardware. As can be seen in the pictures, we used Warn's components to fabricate the needed parts; a little welding was all that was necessary.

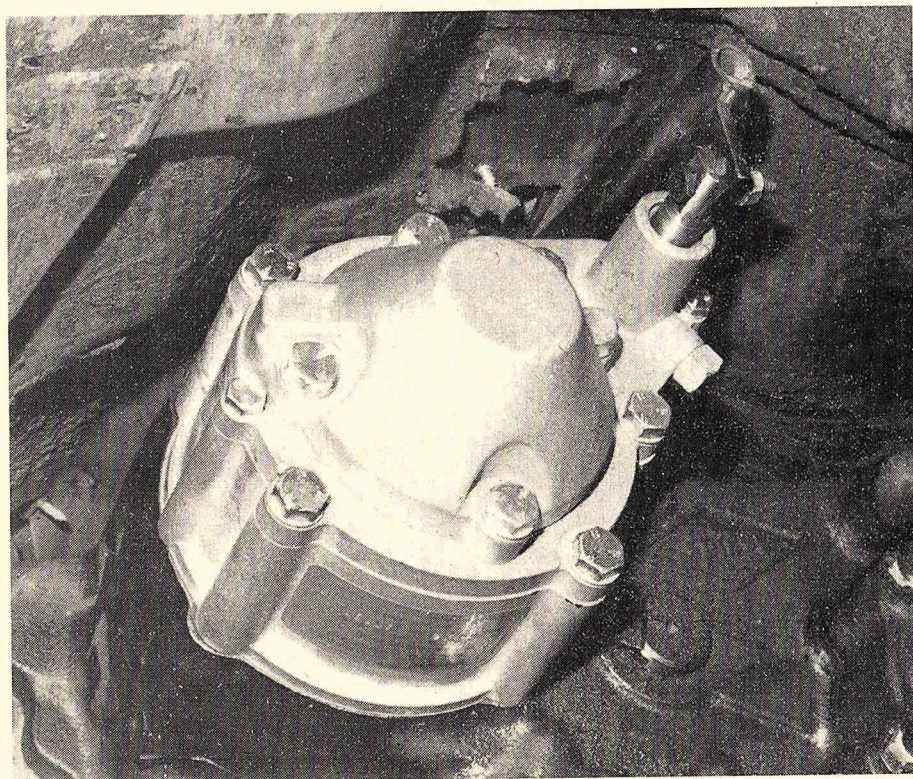
We found the instruction sheet to be complete and more than adequate to eliminate installation problems. In fact, we couldn't find one shortcut or anything needed saying left unsaid.

## VEHICLE IMPROVEMENTS

The gained improvement in reduced engine RPM is immediately apparent to the driver. While in use the Warn Overdrive reduces engine and transmission RPM by 25%, with a corresponding reduction in fuel consumption. If your



The kit is complete, including gaskets, bolts, shift linkage and, of course, the overdrive.

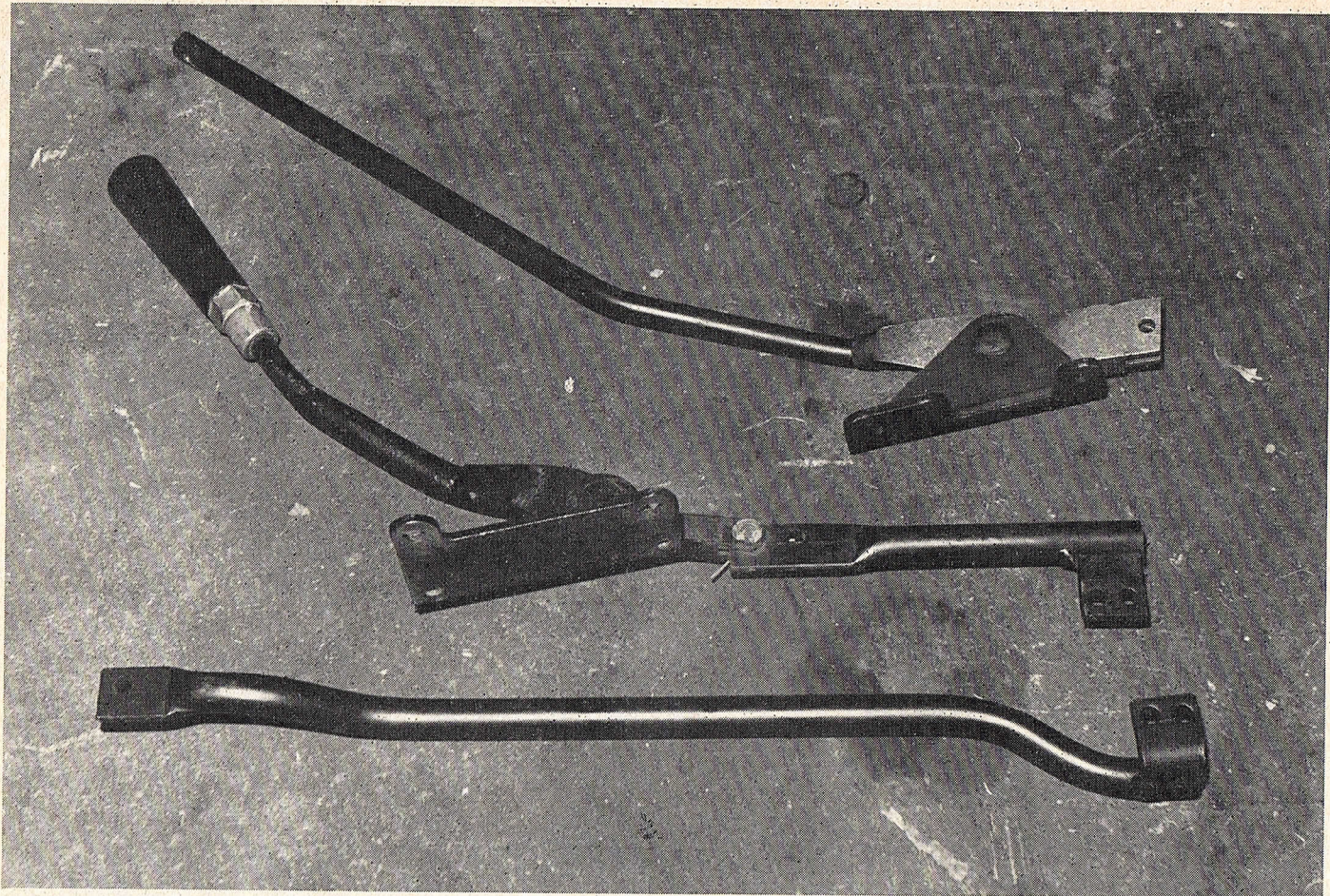


The brand new overdrive in place. No adaption is necessary, just unbolt the transfer case inspection cover and bolt on the Warn Overdrive.

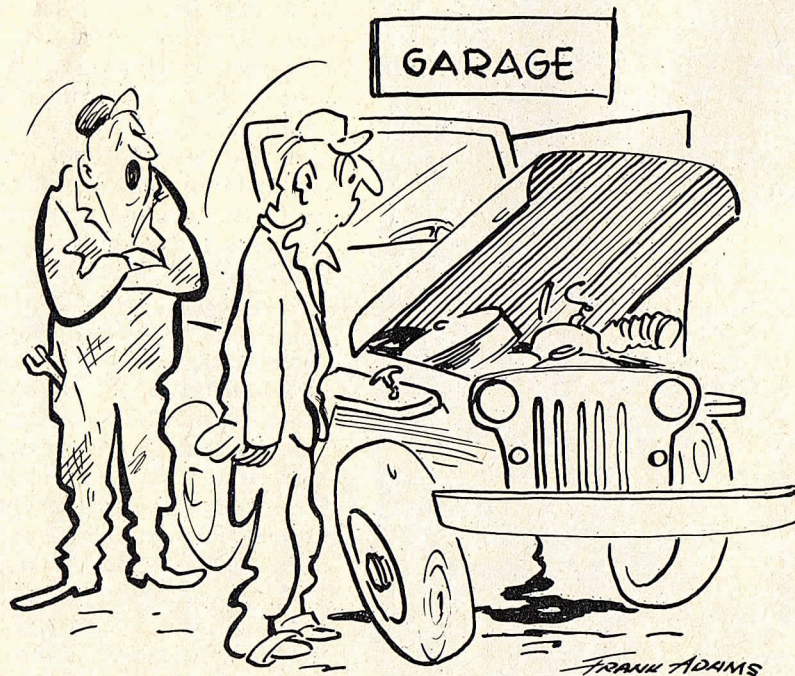
rig, like the test vehicle, has 5.38:1 differential gears you can leave the overdrive engaged while tooling around town and take advantage of the approximate 4:1 gearing you'd then have.

With the Warn Overdrive I feel you have the best of both worlds, low gearing for off-road use and (depending on present gearing) a reasonable final gear ratio for the highway. Bolting up an overdrive is also cheaper and easier than changing gears in both differentials. The Warn Overdrive retails for \$325 and changing the gears in *one* differential would cost about \$100 to \$150 for ring and pinion, \$65 to \$100 for labor, miscellaneous bearings and gaskets would cost "X" amount of dollars, and a carrier if it was needed. These are the charges here in Southern California; elsewhere in the country the cost would probably be higher due to shipping charges. And your rear end may never be the same again. As you can see, I don't think changing gears is the way to go.

Let's postulate a possible scenario involving the overdrive. That's politician for: "This is what happens when you



If a non-stock transmission is used (in this case a Muncie 4-spd), minor adapting is necessary to the shift lever and linkage. In this case each vehicle is unique.

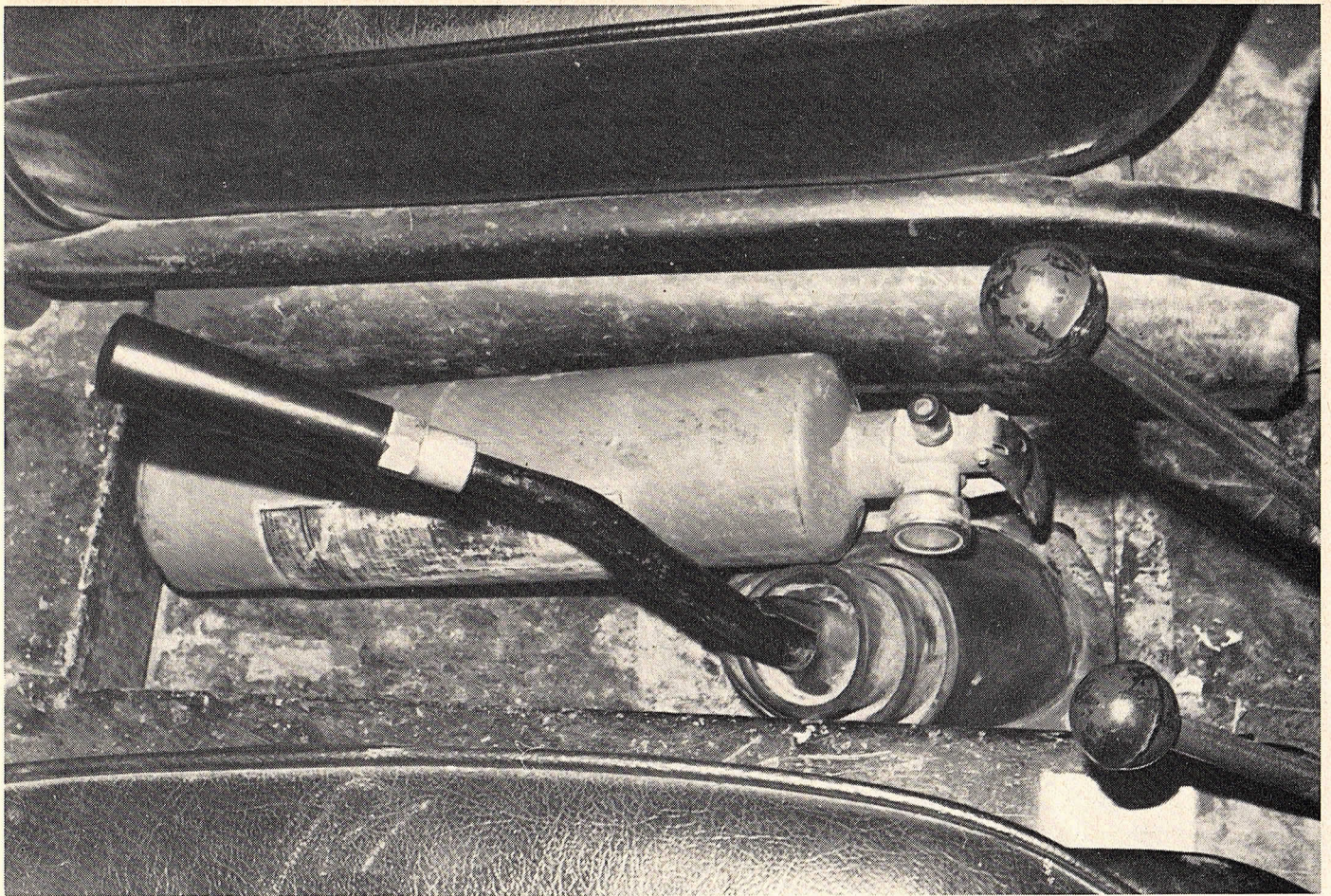


" IT CAN'T BE REPAIRED ..... WOULD YOU CONSIDER HAVING IT RECYCLED ? "

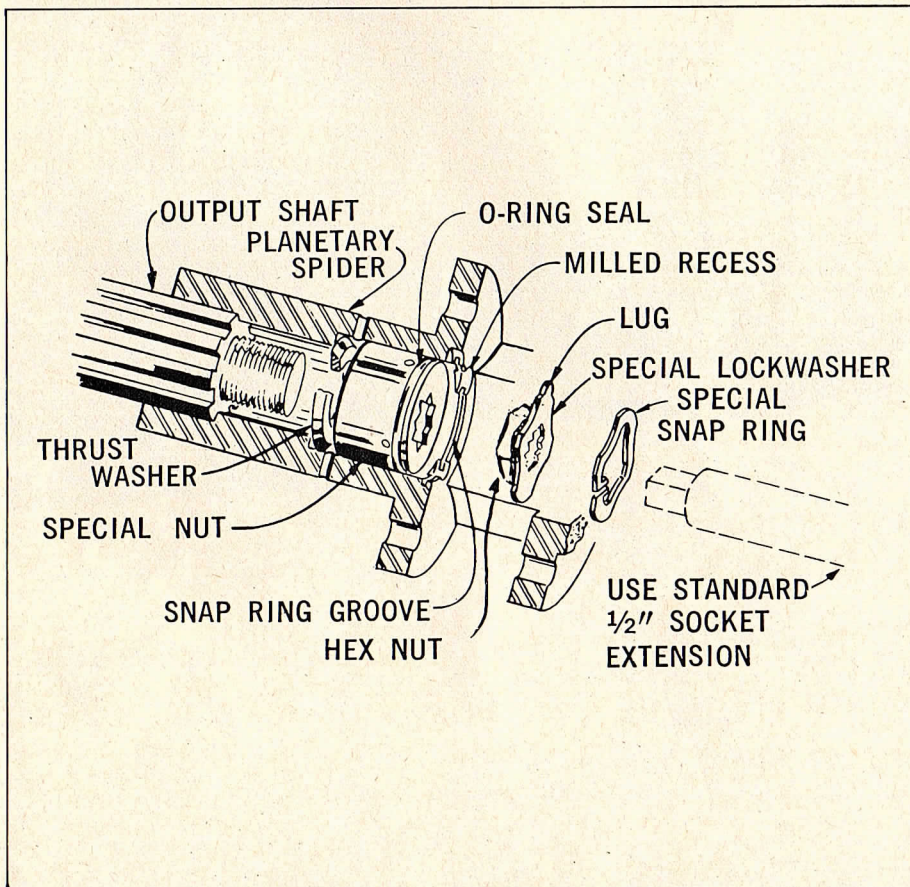
got a Warn." You and your vehicle are in a ravine, trying to climb out. The climb is very steep, with loose dirt and gravel covering a slick hardpan. You've already tried the hill twice, once in low range and one time in high range. In low range the tires spin too fast to get a bite, and in high range the engine bogs down and dies. What to do? You can't let anymore air out and you can't get a run at the hill so momentum can help carry you over the top. What to do? Ahh-haa, you now have an edge! Remember that thing you slung on the backside of the transfer case the other day to get better gas mileage? Well, it can work here also. Shift into low range again, only this time engage the Warn Overdrive and select the proper transmission gear to climb the hill without bogging the engine or slipping the tires. Over the top you go!

With a Warn this can be done since you've reduced your low range gearing by 25%. By the way, with a Warn Overdrive you have either 12 or 16 forward gears and four in reverse, depending on whether you have a 3-spd or a 4-spd.

Our test Jeep, a CJ5, was equipped with a high performance Chevy 350 V-8 (4-bbl, high rise manifold, high perform-



An ideal location for the shift lever if a Muncie trans is used: in the well between the seats.



This diagram shows the planetary locking of the Warn overdrive unit.

ance factory cam, and headers), a Muncie 4-spd, 5.38:1 gears and L78 Norsemen tires. The gas mileage improvement on the vehicle varied around 20-23%, depending on who was driving and whether it was highway or city driving.

The vehicle, while towing a small military trailer, averaged 15.45 mpg traveling over and through low mountain passes and nearly 100 miles on a relatively level desert highway.

I wouldn't recommend an overdrive to someone whose gearing is taller than 4.11's (lower numerically), and even with 4.11's you'd need a pretty good engine to overcome the huge wind wave that most flat fronted 4x4's push. But as I've indicated, a Warn Overdrive can do much more than just supply better gas mileage. Unfortunately they don't make a unit that will fit my Jeep, or I'd be saving my sheckles right now.

For those of you who have a Jeep (1971 or earlier) or a Scout (1970 or earlier), I have some good news. The Warn Overdrive will fit these vehicles and Warn has many new dealers. Write directly to Warn Industries, Dept. FW, 19450 68th Ave. South, Kent, Wash. 98031, and they'll be happy to send you their new dealer listings. □