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This article happened because we wanted to tell our readers about a method of solving problems with the Chrysler Motors Loadflite automatic transmission, and because we had a transmission that was worn out and needed repair. To correct the slippage and poor shifting, leaking of fluid and other problems, we checked around to find a transmission specialist with a reputation for expert work. One of the people who came highly recommended was Jim Alioto of Advanced Transmissions, 1156 W. Holt Ave., Ontario, CA 91761. Jim has created special modifications to stock Loadflite components that correct some of the weaker areas which show up under stress and extreme loading.

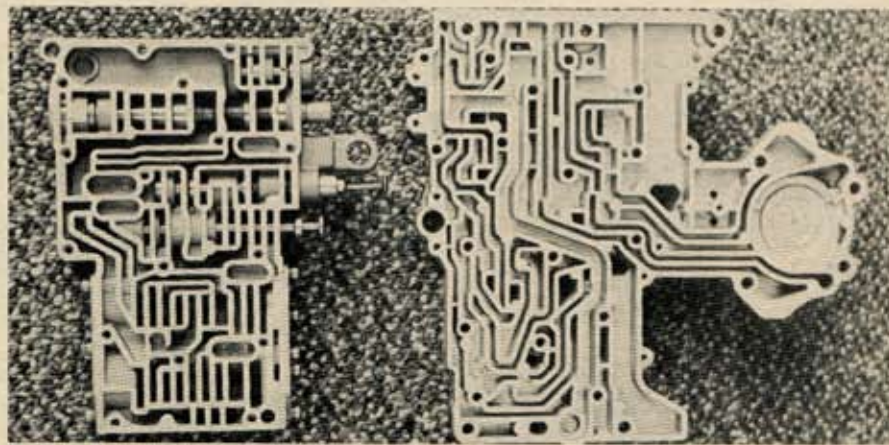
According to Jim, heat is one of the major problem areas, and vehicles such as RVs, pickups and vans are especially susceptible to overheating of transmission fluid due to the uses to which they are often put. One major area of concern is the rings and bushing support areas on the reaction shafts. Another hot spot that is given attention is the clutch drum oil passage flow to the second gear band. To reduce heat from friction, it is necessary to increase the oil flow to aid cooling, so Jim adds to the number of oil passages in these vital areas. As you can see in the accompanying photos, there are several new oil passages in the modified parts, which produce superior lubrication to the working areas. This is not merely a matter of just drilling holes at random, however. Jim has spent countless hours studying the inner workings of the Loadflite to determine just how much oil flow can be increased, what pressure is optimum under all conditions, and the exact number and diameter of flow orifices required to produce the best results. For example, he drills a specific number of flow holes in the high-gear clutch drum that feeds oil to the second gear band, and then adds extra insurance by swapping to a special band manufactured for him by an eastern firm. This band uses, of all materials, birch bark as an inner liner, which Jim assures us will withstand twice the heat and wear of ordinary lining.

For the clutches, he provides extra flow passages for the high gear clutch drive hub which feeds oil to the high gear clutches. This helps prevent friction, heat and premature wear of the clutches when pulling grades or hauling a load such as a trailer or boat on the highway. The bands in his transmissions are modified with special servo levers as well, providing superior leverage for extremely efficient shifts. The improved servo lever ratio eliminates slippage and slop and makes the shifts tight so wear and heat is reduced substantially—without causing uncomfortable “snapping” during shifts.

Other improvements in the Loadflite that add to its driveability as well as its

By Phil Carpenter

BEEFING YOUR MoPar AUTOMATIC

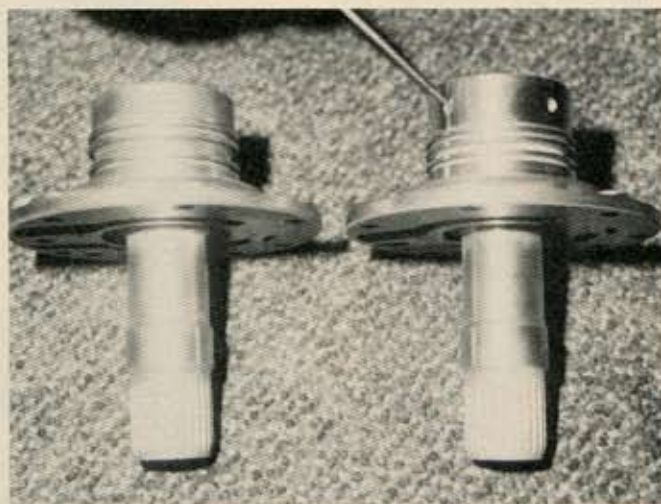


Here is the valve body for the Advanced Transmissions Super Heavy-Duty unit. The new manual reverse pattern valve body requires only the manual shift valve, converter valve and pressure regulator valve. The simplification of circuitry makes the automatic transmission more rugged and helps obtain more positive shifts.

**Now your Dodge or Plymouth van or RV
can have a transmission that outlives
the engine!**



The stock high gear clutch drive hub at left as compared with the modified version treated by Jim Alioto at Advanced Transmissions. As you can see, the modified part has enlarged oil passages in several locations, which aid lubrication to high gear clutches, a potential weak spot due to heat and friction.



The reaction shaft support areas also get the Advanced oil flow treatment. Here is another comparison of a stock reaction shaft support with the high gear clutch and drum bushing drilled for improved oil flow.

longevity include Advanced Transmission's special low-stall, high-torque converter. In the search for better gas mileage and efficiency, Jim has produced a special automatic transmission converter that lowers stall speed, produces more engine torque per rpm, and has less slippage. Changing the angle of the vanes in the turbine and furnace-brazing all the seams for strength is one major modification of the converter; the other is adding roller bearing washers for distribution of loading thrust across a broader area, evening out the wear and reducing friction.

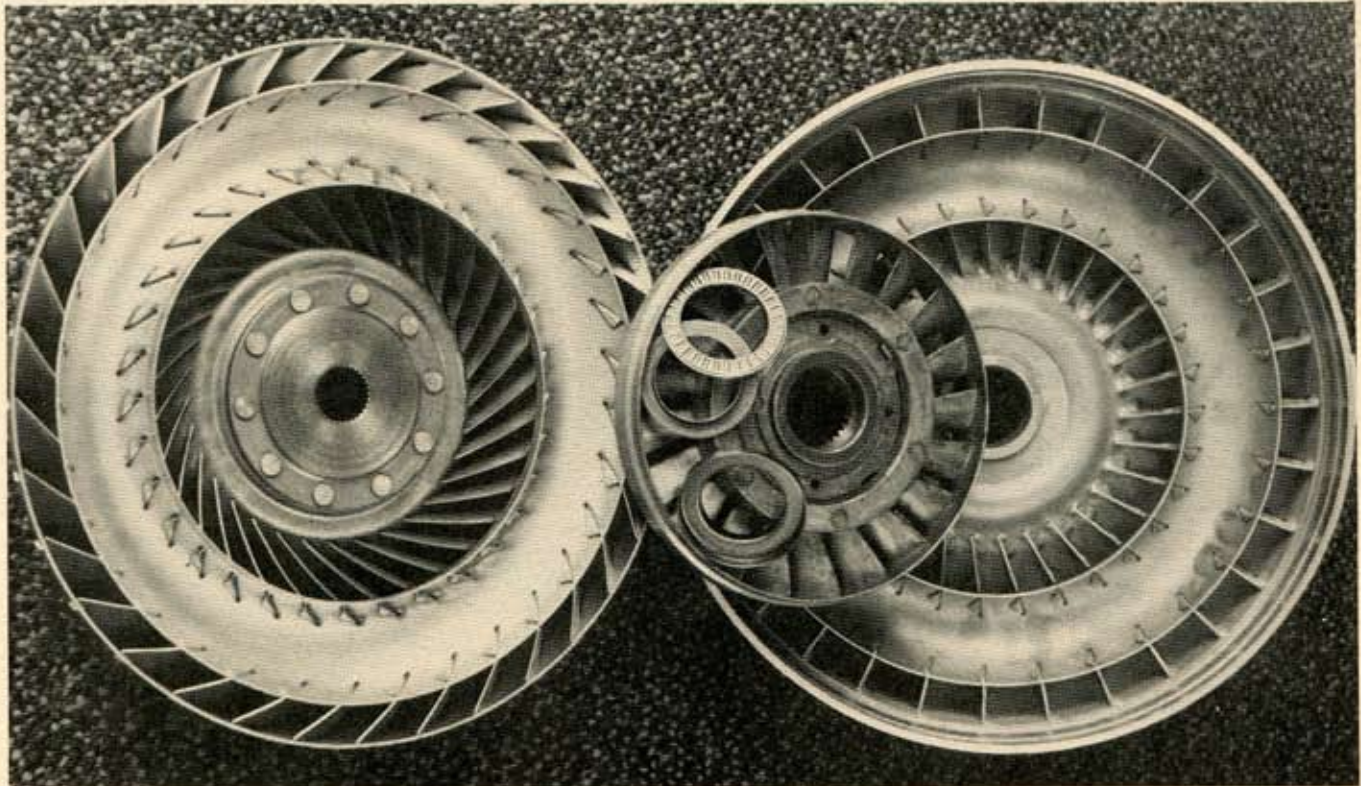
Another modification in what Alioto

calls the Super Heavy-Duty automatic is the special valve bodywork. The reworking of the passages for the oil flow was the result of more extensive study by Alioto, who did away with some of the superfluous valving and beefed up the remaining components such as shift valves, pressure regulator and converter valve. The result is a positive-shifting, rugged unit that works extremely well with the other modifications.

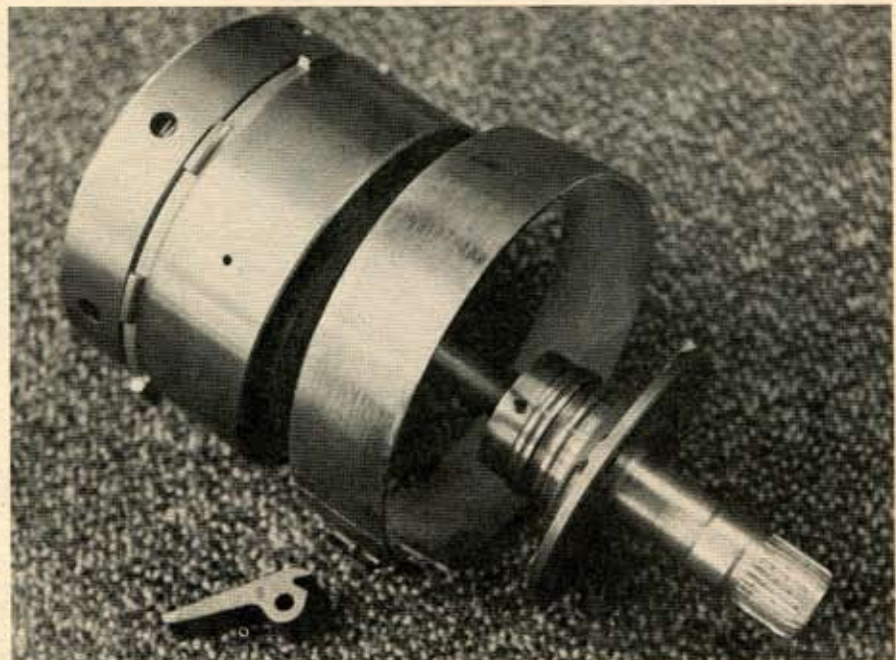
Our old transmission was just tired after many miles of hard use, and it had always leaked fluid. We found, upon disassembly, that one of the small O-ring seals had been installed backward—

a mystery, since no work had ever been done on the transmission since new. The main seals were gone away and there was extreme wear on the "hot spot" areas we mentioned. As a result, our transmission had several ills, such as not going into reverse for about 30 seconds after you engaged the lever, requiring more rpm to get the vehicle moving and a bad slippage problem from second to high gear. The overall shifting of the transmission was sloppy and we felt as though the engine was wasting gobs of power. Mileage also was down from where it once had been.

Jim Alioto and his crew spent just one



Improved gas mileage and less slippage result from modification of the torque converter. Advanced re-angles the vanes, furnace-brazes the turbines, and adds roller-bearing washers to reduce friction, lower stall speed and improve converter efficiency.



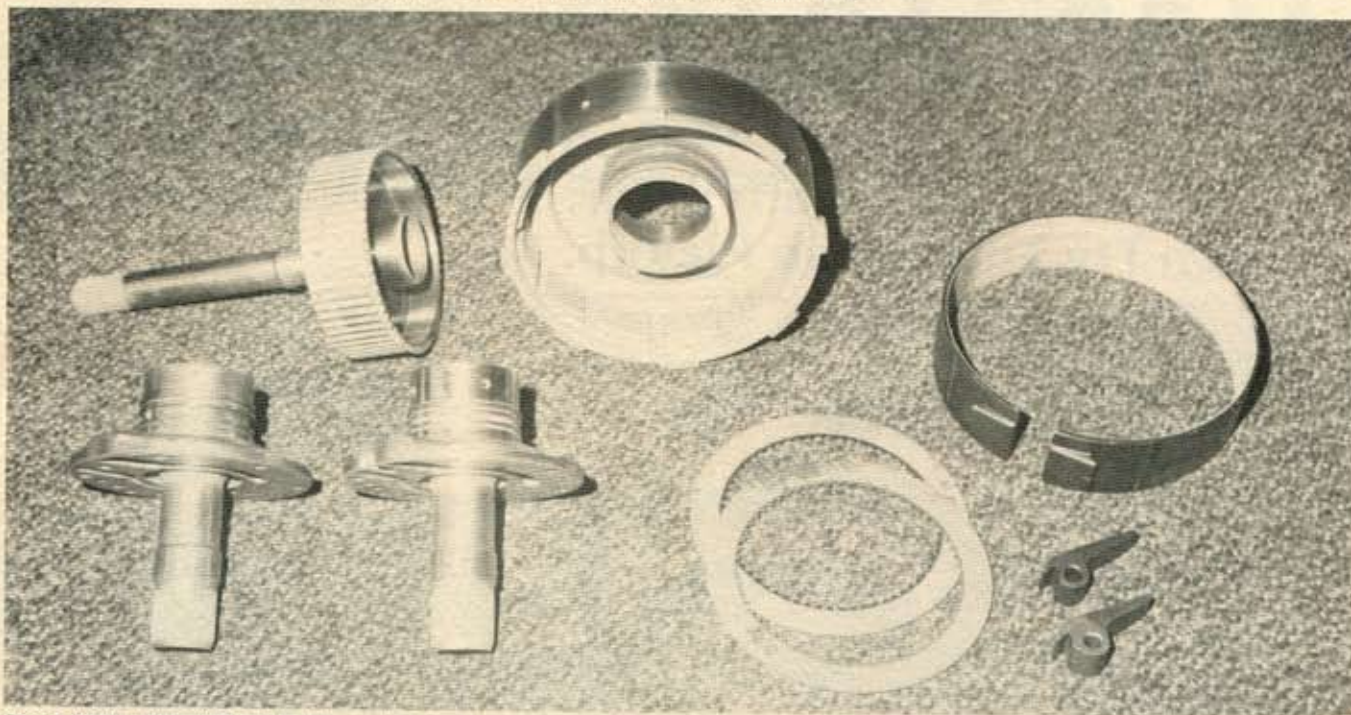
Loosely assembled, the super-duty parts that make the Advanced automatic so tough in MoPar vehicles. Left to right: forward and high gear clutch drums, bands, servo lever with improved ratio tighter shifts and the drilled reaction shaft.

morning dropping the old Loadlite out from under the vehicle and installing the special parts, rebuilding the unit completely. Once it was back in place, we went out for a test drive. The difference was amazing! It felt as though we had added a new engine under the hood. The off-the-line performance was quite impressive, due to the new converter, which moves the vehicle out very crisply with no time lag to "get into gear." The shifts were very crisp, with no neck-snapping jerks of any kind. Upon depressing the accelerator to the floor, we were pleasantly surprised to note the immediate kickdown and surge of acceleration

that we thought had gone forever. The engine obviously still has a lot of life left in it, but required a good no-slipage transmission to bring it back to optimum performance. The vehicle is now eminently streetable and a pleasure to drive. No more fluid leaks on the driveway, either. We suspect that we will see an increase in gas mileage as well, since the power needed to move the vehicle down the road is far less, requiring a lighter foot on the throttle.

Advanced Transmissions can provide these Super Heavy-Duty units for less than the cost of a replacement automatic and we feel they are well worth it. Jim

Alioto carries a full line of all makes of transmission parts, including Turbo 400 and 350 automatics for normal, heavy-duty RV and even racing uses. These 350 Turbos, which in stock condition are not an especially strong automatic, are another of Jim's specialties, and one of his Bulldog 350s successfully ran the recent Baja 500 in a race car. If you're having problems with a worn-out automatic, perhaps you should check with Advanced Transmission to see if they have the answer you need. ●



Some of the parts laid out to show what you buy in the Advanced tranny include the special birch-bark-lined clutch band at upper right, heat-treated heavy-duty clutch plates and prepped clutch hubs and reaction shafts.



For the competition-minded off-roader or the hard-driving vanner or trucker, Advanced makes this competition model Super Heavy Duty automatic with modified tailshaft housing and beefed parts.



Installed, the Advanced transmission eliminated all the slippage and leakage problems we had experienced in our Dodge. An auxiliary cooler is the next recommended step for maximum transmission longevity.