

So, You Want to Build Your Own Torque Converters...

OR: How to Grow Your Business and Separate Yourself from the Competition

by Steve Jaussaud, TCRS

So, you've made it. You're over the hump. After lots of hard work to get your transmission shop up and running to your standards, you enjoy a good reputation in your market. You're not making millions, but you've built a good, solid, profitable business. Your shop stays busy, you've got a good crew that's working hard to keep up with technology, and your entire staff is dedicated to providing "top notch" customer service. What can you do now to further grow your business and separate yourself from the competition?

How about taking the plunge and deciding to rebuild your own torque converters? If your initial response is "that's way above our capability", you may want to rethink that position and analyze the possibilities. If you've been around the transmission business for awhile, or if you do any vintage work, you have probably worked on a cast iron Powerglide or an old 2 speed Fordomatic, so you know how simple a converter actually is. If you could take a late model converter apart as easily as you could unbolt one of the old antique units, would you send it out to have another shop rebuild it for you? Not likely.

Fifteen years ago, if you wanted to rebuild torque converters, you had to first make your own rebuilding equipment. Welders, bonders, balancers, air test equipment...you had to be part engineer and part inventor to produce the necessary fixtures and equipment so that you could properly rebuild a

unit. And the time and effort needed just to design and build the equipment! Forget about it. Let's just say that not too many transmission shop owners have had the luxury of enough spare time to sit down and eat lunch, let alone innovate and construct quality torque converter equipment.

Today, there are options for shops that don't have the man hours or resources available to construct their own converter equipment. Since 1987, there has been the introduction of equipment into the market place that can be used in your shop in a converter reman operation. And a number of shops, large and small, have taken advantage of this new equipment and have opted to take more control of their product by rebuilding their own torque converters. Those shops remembered how basic those old "bolt together" converters were, and they realized that they already have the basic transmission knowledge required to build a unit. They just didn't have a way of "unbolting" (cutting open) and "bolting" (welding) a converter back together again.

Think about it: just about any transmission shop out there today could rebuild a converter, and they probably even have the equipment (just not the correct equipment). Really, you could open a converter on a band saw, restack the unit, and weld it together with a little "buzz box" welder. Presto! A rebuilt torque converter! But...does it leak? Is it balanced? How did you keep the pilot on center with the impeller hub? How much clearance (end play) is inside the converter?

Notice that none of the above questions are concerned with how the converter was "stacked together". The majority of concerns encountered when rebuilding a converter are related to reassembly. When is the last time you heard of a converter failure due to, say, a converter component that was in upside down? Possible, but not very often. Usually, true converter failures are due to improper alignment or clearance issues. So, getting back to our comparison with the antique converter, it basically boils down to how you cut (unbolt) and weld (bolt) the converter back together.

Rebuilding a converter is a lot like rebuilding a transmission. First, you disassemble the unit and drain away the waste oil. Then, you put the pieces through your parts washer and identify the components that need to be replaced or reworked. Reassembly includes checking tolerances and making sure that there is the proper rotational clearance for all components. Many times, just like transmissions, there are upgrades that can be employed to fortify a converter to eliminate typical points of failure. The critical step in the converter reman process, however, is welding the unit back together. You could have done all the procedures correctly up to this point, but if your method for welding the unit back together doesn't keep tight enough tolerances, then you have just wasted your time and effort. And, as we all know, the quality of the torque converter is critical when it comes to the proper operation and life span of your rebuilt transmis-

sion. It doesn't matter how good of a job you did rebuilding that transmission, a good transmission can not fix a bad torque converter.

With the proper rebuilding equipment and techniques now available to the aftermarket, the next step to analyze is the financial aspects of building your own converters. Generally, the more converters that you are currently purchasing per month from a converter supplier, the more attractive the numbers become in favor of building your own units. Each situation is unique in some way, but a general rule of thumb seems to be this: if you are currently purchasing 50 or more converters per month from an outside supplier, you should seriously think about keeping your converter rebuilding "in house". Today, the average passenger car and light truck torque converter, from a THM 350 non lock up to a late model E4OD/4R100, sells for approximately \$72.00 at the wholesale level. That's \$3,600.per month (\$43,200.00 per year) that's permanently going out of your check book that possibly could be staying at home. Wouldn't it make more sense to use that \$40k plus per year and reinvest it into your own facility, especially in today's economy? In the world today, the more self reliant you can be, the better off you are. And, that \$43,000? That's only what YOUR shop is using. Almost certainly, you will pick up some additional work from other transmission shops and auto repair facilities in your immediate area. The convenience factor alone will draw additional wholesale and retail customers to your facility. And, as time

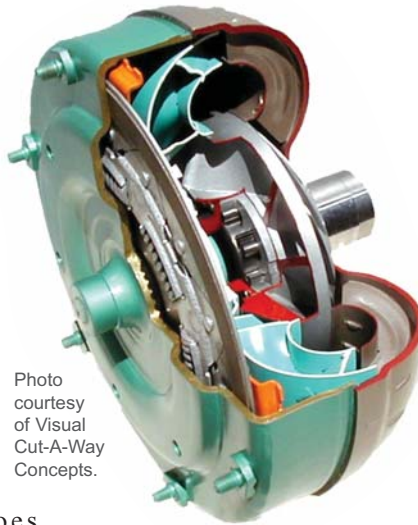


Photo courtesy of Visual Cut-A-Way Concepts.

goes on, if you decide to offer "heavy duty" and/or "street & strip" performance units, you can substantially grow your bottom line. And "stock" converter prices are not going down, either. As the last of the non lock ups start to completely phase out, the average price for a converter will only continue to rise.



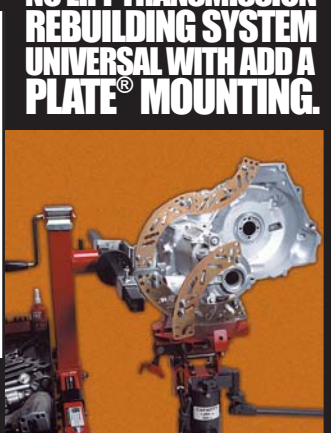
There are also some additional "hidden" benefits to rebuilding your own converters. With the converter equipment in place, you will have the capability of saving and refurbishing a wide variety of transmission hard parts. With a minimal amount of additional tooling, you will be able to turn clutch drums, polish scored shafts, and resurface pump bodies. Another benefit: you can build the converter that comes out of the unit. The engine and transmission management systems in today's late model vehicles are extremely sensitive to the stall speed of the converter. There have been reports of check engine lights coming on and transmission

codes being set because of the fact that the converter that went back in the vehicle was a slightly different core that came out of the vehicle. Don't build a problem into the unit just because the core was not properly identified somewhere in the supply chain; build it yourself so that you know you've got the correct unit. More hidden benefits: don't wait for converters, have them in house and ready for installation. Eliminate the frustration of not being able to clear your hoist because you are waiting for your converter shipment.

To be sure, torque converter rebuilding is not for every shop. Setting up a converter reman operation is not as simple as just throwing a switch and putting out units. You need a minimal amount of available space and the appropriate electrical capacity. And it takes dedication and hard work to get a converter rebuild facility up and running, just as it took lots of elbow grease to get your transmission shop where it is today.

However, if you are willing to put in the time and effort, a torque converter rebuilding operation can be a tremendous enhancement to an existing transmission rebuild center. If you analyze the possibilities and start to think of the potential, you can see that you may be able to take your current expense and turn it into an investment in the future of you and your shop. And, in the process, you will have an avenue to grow your business and immediately separate yourself from the competition.



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