



Vol. 4, Issue 1  
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# Allisons gain popularity among converter rebuilders

With the growing popularity of the Allison converter found in many popular General Motors medium and heavy duty trucks, we decided to report on different phases of the inevitable Allison rebuild.

In phase one, we will help identify the differences between the Allison models, like the three highlighted in this article. With the number of potential component combinations, the number of Allison models seems to be growing.

For this article, we will focus on what we will refer to as the Allison Black Tag, Orange Tag and Green Tag, although other colors exist.

If you look closely you can notice the differences found in the angle of the primary pump fins of each unit. The black tag ap-

pears to be a much lower stall than the other two models.

Also, the combination of this impeller, and possibly other stators, indicates numerous incorrect combinations and rebuilder errors that may result in poor vehicle performance. In future articles, we hope to inform our readers of part numbers and relationship to individual vehicles. Until then it is suggested to replace each customer's converter with an identical unit.

We are aware and will continue to research the existence of a past TCRA booklet, which was distributed to members who attended the past TCRA seminar.

We are hoping to have access to the original document, which will enable us to share more valuable information on this topic.



Located above is the impeller with a green tag. The impeller to the far left is designated by an orange tag and located directly left an impeller with a black tag. Note the number and angle of the primary fins and stator fins.

Photos provided by Mark Mustard

# Heat prevention extends torque converter life

Conversations with Sam Memmolo, spokesperson for Lubegard and International Lubricants, proved to be quite enlightening at this year's ATRA Expo. Together with Pat Burrow and Phillip Landis, information was provided on fluid equivalencies.

Memmolo, a well-known automotive mechanic and television host, led a well-informed discussion about using the wrong fluid in a transmission.

Dennis Sneath, board member of the TCRA, was able to have a private discussion with Memmolo and representatives of Hylomar Mid-America regarding transmission fluids and conversions by using selected Lubegard products. The Hylomar representatives present were noted lubricant and sealant experts and distribute Hylomar Midco products in North America. All agreed an extremely high quality semisynthetic transmission fluid is required for protection of the new Allison

1000 transmission and torque converter.

General Motors recommends Dexron III-type transmission fluid to be used with the Allison 1000 for light-duty use only. The semisynthetic blend fluid, which General Motors refers to as TranSynd™, must be used for any medium- to heavy-duty use. TranSynd™ is a blend of high quality synthetic and paraffinic base oils, which provides longer effective fluid life when subjected to strenuous conditions.

If TranSynd™ fluid is not available, Lubegard can supply an additive package that will deliver similar performance to that of TranSynd™. General Motors nor the TCRA endorse the use of additives for friction modification and the use of such additives should be researched prior to each application.

It is noted that any additive which can safely reduce operating temperatures of any transmission is certainly a plus. The largest cause of transmission and converter failure

is heat.

For more information or for a printed fluid specification guideline, contact Lubegard at 1-800-333-5823 or e-mail the TCRA.



Sam Memmolo, center, with Hylomar Mid-America representatives Howard and Mike, enjoy a candid conversation after breakfast at this year's ATRA Expo.

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# TCRA

## Upcoming Events

### What?

TCRA's 2006 Annual Seminar

### When?

May of 2006 - no exact date set

### Where?

Indianapolis, IN

### Contact?

Any board member for more information or e-mail the TCRA

## Items For Sale

### Complete TCRS system for Sale!!

Approx. 3yrs. old

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# Flashback from New York part Two

As promised in September's issue, we are continuing to report on the proper disassembly of the ZFHP5 torque converter. Mark Mustard, of Branting Industries, has provided the TRCA newsletter with excellent photos displaying the proper tooling and technique used to machine the captive clutch for disassembly.

Using a grooving or parting tool with a .060-.090 wide insert, plunge directly into the surface of the retainer creating close to a 2.950 diameter groove. Slowly, feel your way approximately .080-.100 deep or until separation has occurred. (see Photo)

Mustard assures members this procedure is simpler than it may appear. After cutting a few of these retainers, the rebuilding of these converters should become quite routine.

In the photos, the clean and accurate separation is quite visible. No further machining is necessary. Thank you to Mark Mustard and Joe Rivera for their extensive re-



search required to educate members about this procedure.

Now, this converter can be easily cleaned and new O-rings and clutch disks can be installed before welding the retainer together. Using a simple pair of welder's vice grips or making your own assembly tool, you may lightly compress the retainer to its original height before tack welding

four to five spots for temporary alignment. At this time, the clutch release may be simulated with the use of an air nozzle inserted into the oil release hole.

If you are satisfied with the proper clutch release and apply, you may permanently weld the retainer entirely, which will ensure integrity. Let it be noted some rebuilders feel only a few tack welds are necessary to prevent damaging the O-ring beneath the retainer. If you choose to use either method, be sure to weld in small steps to avoid overheating.



Notice the machining accomplished using a .060 grooving tool.



Using the grooving tool, plunge approx. .080 deep to accomplish separation.

# Powertrain Expo leaves no rebuilder behind

As the ATRA Powertrain Expo came to a close, members of the TCRA and ATRA agreed the wealth of knowledge available at this year's expo exceeded previous events. Friday, Saturday and Sunday were scheduled extensively with seminars showcasing numerous industry-related leaders. Old faces, such as Bob Warnke of Sonnax Industries, mingled with newly found friends, such as John Parmenter of Precision International. As members may recall, Parmenter hosted a segment of last year's annual TCRA convention in New York. His presentation in Las Vegas paralleled his previous demonstration by educating his audience once again with valuable new facts and findings.

Once again, this year's event had numerous showcases and displays of products available through national and international vendors. While this year lured many attendees to the event, the high cost of fuel and air travel left many to hear stories from fellow colleagues about the weekend's activities.

Among those who were able to attend, finding entertainment, relaxation and education in one

central location was not difficult. The Hilton Hotel and Convention Center offered educational seminars throughout the day as well as nightlife and socialization for all attendees to partake in.



Joe Rivera hosted a technical seminar covering converter manufacturing. Below, photos of attendees from near and far; Dynamic Manufacturing of Stone Park, IL and Kate, L.L.C. of Moscow, Russia.



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