

Torque Converter Rebuilders Association

Remembering the FIOD

With a decline in oil production and rising gas prices starting in the late 70s, Ford Motor Company broke into the overdrive campaign introducing the Ford Intermediate Overdrive (FIOD) in 1980 that later became known as the four-speed automatic AOD transmission. Rushing to beat GM and Chrysler in the overdrive race, the AOD did a great job filling the need for a transmission to improve fuel economy. GM would follow in 1982 with the introduction of the 2004r (MW9), also a four-speed automatic, based on their not-so-popular TH200 and the later TH200C equipped with a lockup torque converter. In 1981 GM following with another four-speed automatic, the 700R4 (MD8). Chrysler did not make it into the race until 1988 when it released its newest overdrive version transmission, the A500. This unit was a modified version of their successful TF-6, otherwise known as the 904.

Ford had limited success with the AOD transmission, which employed a direct drive damper assembly mounted to the torque converter front cover. After a few damper changes, Ford switched to a more familiar lockup clutch converter in 1992 along with a new name, the AODE. This was an electronic version of the original design. Continuously Ford improved its design along with a new name and model in 1996. The 4R70W was born. The 'w' designates wide ratio. With limited design change other than clutch piston size and damper improvements, and stall speed variations, the torque converter remains a popular, easy to rebuild, and profitable unit for rebuilders.

Now just to keep things interesting, Ford Motor Company has released another version of this converter call the 4R75. In 2006, Ford improved again the clutch assembly with the damper, seen in Photo A. This LUK manufactured clutch works well with the open two-piece impeller bearing, steel stator cap, and larger diameter locating journal on the end of the impeller hub. Note the newest design hub and bearing will not interchange without modifications. The steel stator caps will not interchange with the previous design at all due to a noticeable height difference (see Photo B). This latest complete converter will interchange with the earlier designs without any noticeable detrimental effects.

As far a rebuilding this converter the most common rules apply. Runout is to be kept to a minimum as is

the balancing. Aim for .005 runout and accept .008 to .009. Keep the balance under 10 grams. Clutch clearance should maintain .025 to .035. This will prevent the hammer effect between the clutch and turbine hub. Excessive hammering will increase the internal clearance over time, which is commonly found on many Ford designed converters.

Although these changes are minor, it does show Ford is constantly improving its products in a constantly changing industry.

Photo A

Note the 4R75 turbine hub requires a new solid teflon sealing ring

Taking A Closer Look... 4R75 - F60 late

Dacco Part Number
F60LS

Application:
2006 Ford RWD

Overall Height
6.675" to 6.725"

Degree of rebuild difficulty:
5

Internal Clearance
.025" to .035"

Largest area of concern:
Internal clearance

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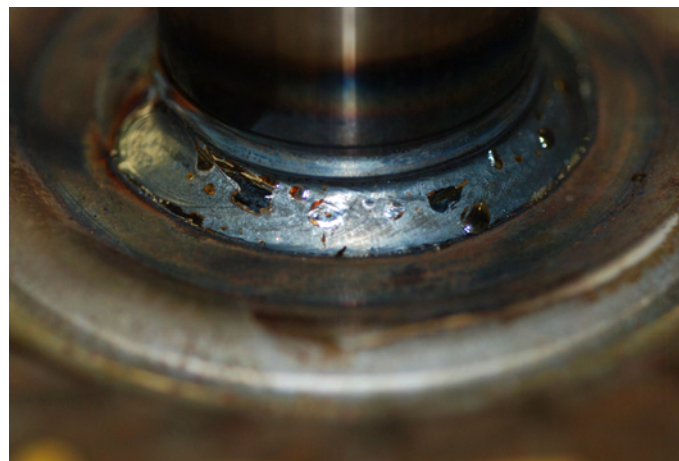
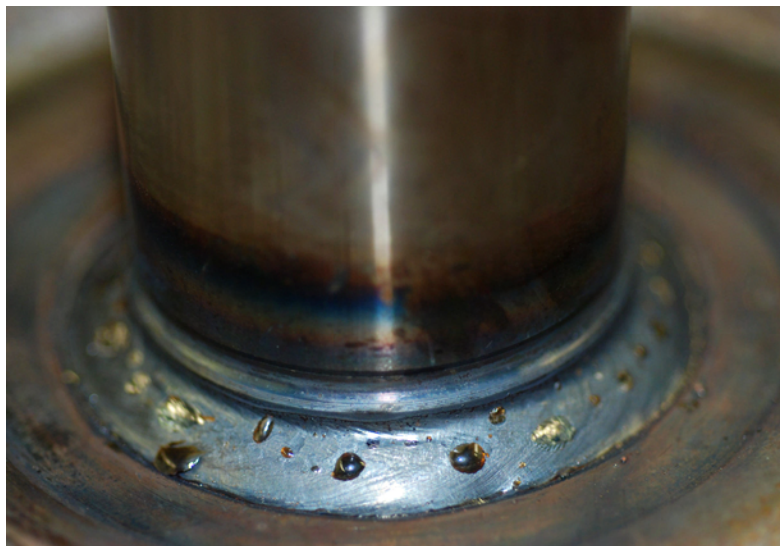


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Tech Tip

We recently started welding hubs with metal core wire. What is metal core wire? It's a tubular wire with a powdered metal inside. What's the difference you ask? One, virtually no spatter. Two, faster weld speed. Three, better run out due to less heat affected zone. Four, less gas usage due to faster weld speed. Five, less cost due to less time spent welding. Six, very nice appearing weld. On our machine we are using the following settings wire speed: 250 voltage: 23.0 and table speed : 32 and not pulse mode to weld we are still experimenting with machine settings so don't take these numbers as gospel. One other reason we like the metal core wire is if you have a pin hole you can see it and repair it immediately before assembly.



Justin Kill & The crew at Branting Ind

2008 Seminar Feedback; 2009 ahead

Check out next month's edition of the TCRA newsletter for pictures and coverage from this year's seminar.

Can't wait until next year?
Join us in June 2009 in
Cookeville, Tennessee and
tour Dacco, 2009 seminar host!

Sponsor looking to buy

Robert Shaw of Shaw Automotive & Core Supply is looking to purchase Dacco Part Numbers OP1/OP2/B13 8" converters. Price to pay is \$75 per unit, multiple quantities wanted.

Please contact Shaw Automotive & Core Supply at
(706) 216-6569.

Items For Sale



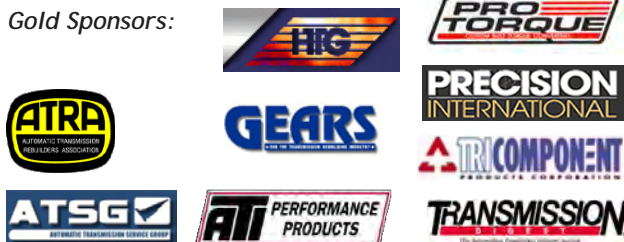
For Sale:
Toyota code 43A080 appear on the converter
\$20 per piece
Contact Robert Shaw of
Shaw Automotive & Core Supply

(706) 216-6569



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