

# Sonnax Technical Bulletin

## Making the For Saving the CASE

How many times have you torn apart a transmission and discovered that an otherwise sound case can't be used due to wear in just one area, such as a worn case bore by the manual shaft linkage?

There's an easier – and cheaper – fix than buying and installing a new case. You can salvage those worn cases and solve a host of transmission-related problems in the process with the right part and one simple tool kit.

The **56361-TL** tool kit designed by Sonnax will allow you to salvage cases with wear in the shift linkage area for many different applications. This one kit will allow you to service

a wide variety of Chrysler rear-wheel-drive units and many Ford RWD units including A4LD, 4R44E/4R55E, AOD, AODE and 4R70W.

*Sonnax offers multiple case saver solutions for various applications. Many Sonnax solutions can be installed with standard shop tools and procedures and will not require special tooling or machine capability.*

The tool kit consists of a reamer guide, plate, reamer, reamer alignment bushing, hex head cap screws, a sleeve installation tool and clamp bracket. You can correct the

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| <b>The Cutting Edge</b><br>Accumulator Piston & Sleeve Kits, 41TE, 42LE<br>Part Nos.: 92834-03K, 92834-05K<br><br>Pinless Accumulator Piston Kit, 4L60 & E<br>Part No.: 77998-03K | <b>7</b> |

## PRODUCT SPOTLIGHT

The 4-3 pre-stroke valve spring in Ford 5R55N units controls the apply and release rate of the intermediate servo and direct clutch, which should be applied in 4th and 5th gears. A broken spring prevents proper valve function and can cause no 4th or 5th gear, Codes 734 and/or 735, or a Solenoid C Code.

The Sonnax 4-3 Pre-Stroke Valve Spring **56947J-S1** is

### FORD 5R55N 4-3 PRE-STROKE VALVE SPRING PART NO.: 56947J-S1

#### FIX THESE COMMON COMPLAINTS

- No 4th or 5th gear
- Code 734 and/ or Code 735
- Solenoid C Code



made from chrome-silicon alloy, which allows for higher working stresses than typical spring material. The spring has been configured to reduce operating stresses by 8% at the critical regulating positions of the valve. This valve spring can save you hundreds in valve body replacement costs.

**56947J-S1**  
4-3 Pre-Stroke Valve Spring

## Some general guidelines for using a reamer in these applications are:

- Clean the bore thoroughly first.
- Clamp the housing horizontally and securely to a workbench.
- Use plenty of cutting fluid.
- Prior to reamer rotation, gently push the reamer forward until the cutting chamfer contacts the first bore to be cut. Take particular care in the first few rotations not to wobble, push or side load the reamer.
- Use a speed handle (not a T-handle, wrench or ratchet) for rotating the reamer, at about 1 to 1½ revolutions per second.
- Ream the bore from start to finish in one fluid and continuous motion, without pushing on the reamer.
- Blow as many chips out of the bore before removing the reamer as possible.

**Note:** *Regrinding/sharpening of a reamer is a highly skilled process. The reamer should be taken to a cutter/grinder shop familiar in the technique of sharpening multi-stepped reamers. Only the chamfer reliefs should be sharpened, and should match the existing relief angle and width. On multi-stepped reamers, critical axial lengths need to be maintained and some face grinding may be necessary. On no account should freehand grinding be performed.*

excessive movement of the manual shaft that allows oil to leak past the shaft seal by oversizing the manual shaft bore with the tool kit and installing Sonnax case repair bushing **22179-02** in your Chrysler rear-wheel-drive or, for the Ford A4LD, 4R44E/55E, AOD & E and 4R70W units, Sonnax part **56361-01K**.

Many Sonnax case saver solutions can be installed with standard shop tools and procedures and will not require special tooling or machine capability. Where machining is required, detailed machine set-up and specifications are included in the

The Sonnax 56361-TL tool kit includes everything you need to salvage worn cases in a wide variety of Chrysler units and Ford rear-wheel-drive units, including the A4LD, 4R44E/4R55E, AOD, AODE and 4R70W.



instructions packaged with the part. Sonnax tools are designed to ease installation or ensure proper position and alignment.

Catalog and product advertising easily identify which parts will require machining or special tooling.



Indicates lathe or milling requirements.



Indicates the need for a special installation tool or specially designed reamer kit.

Parts may require specially designed reaming tools that will modify the case to allow for installation of the repair kit. There's a definite technique to using reamers, but Sonnax tries to make it easy by providing step-by-step instructions for our case-saving products. You can also access interactive drilling and reaming instructions online at [www.sonnax.com](http://www.sonnax.com).

## We welcome your feedback!

We hope you find the technical and product information in this bulletin to be useful. Please e-mail your comments or suggestions for future technical articles to us at [info@sonnax.com](mailto:info@sonnax.com).