



Technical Bulletin

KNOWING WHEN TO TAKE THE EZ WAY

Those of you who are familiar with repairing 4R44E/5R55E units know that a large number of problems and component damage commonly found in these units stem from valve body wear issues. Unlike some other valve bodies, where a handful of bores are the common suspects and found to be responsible for failures, the 4R/5R series is prone to a larger number of different valve and bore failures. Many builders routinely go through the expense of replacing these valve bodies rather than try to individually address the wide variety of valve and bore-related issues.

As an alternative to the high cost of new valve bodies and the unreliability of used valve bodies, Sonnax has developed a group of kits to allow worn bores to be serviced. Those kits are highlighted in the pages following this article. In each of the products highlighted, we have defined the complaints most commonly associated with problems in the circuit being addressed. For the most part, due to the nature of wear commonly found, these kits involve reaming the bore to allow for installation of an oversized valve or a sleeve. They are all carefully designed, long-term solutions that restore durable function of the circuit in question. In many cases, particularly in higher mileage units, inspection and repair of these frequently suspect bores is the only way to ensure a long-term fix. Sonnax Transmission Specialties™ Volume 6 catalog pages 105-115 provides

additional troubleshooting and inspection information to support these fixes. The Sonnax sleeves have been inspected after 200,000 miles in taxi and industrial applications, and have no visible wear. The OEM bores we repair during reaming are frequently worn beyond control in 50,000 miles. It cannot be expected to extend the life to last through a three- to five-year warranty without reaming.

So what is the 37947-EZ Kit?

This kit is a combination of service items used to improve valve control and reduce oil loss in either the 4R44E/55E or 5R44E/55E. None of the items included in this kit requires reaming, although some of the repairs point to inspection and suggest sleeves to be installed when worn beyond the scope of this kit. The combination of parts will give better performance for a limited time at a lower cost.

New for Sonnax:

Sonnax has always strived to provide the highest quality solution to the transmission industry by identifying the root cause of the failure. Often in low-mileage units, the complete oversized repair is not required, so Sonnax has developed this kit as a lower cost solution to use as a standalone or in conjunction with our oversized valve kits.

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What critical areas does the EZ Kit address?

It elevates line pressure to overcome some of the internal oil loss. It provides a quicker EPC rise for firmer shifts. It addresses leaks in the solenoid circuit, improves intermediate servo and direct clutch pressure and improves TCC apply.

Does this kit eliminate the need for sleeve kits?

No. Proper inspection is still needed to evaluate bore wear in critical circuits. While sleeves and oversized valves remain the only durable fix, the EZ kit offers an alternative method to temporarily enhance the performance of lower mileage valve bodies that do not show advanced wear.

4R44E/55E
5R44E/55E

37947-EZ Kit

- O-ringed end plugs correct loss of oil circuit pressure and flow control
- Elevated PR spring increases baseline pressure
- Increased ratio boost assembly provides increased line rise
- Forward engagement control valve corrects EPC signal pressure loss

O-Ringed End Plug and Spring

O-Ringed End Plug

O-Ringed End Plug

O-Ringed End Plug, Large

O-Ringed End Plugs, Small

Forward Engagement Control Valve with Teflon® Seal

Elevated PR Spring

Forward Engagement O-Ringed End Plug with Spring

Increased Ratio Boost Assembly