

# 4L30E: 4th Accumulator Problems And More...



by Larry Frash

**W**elcome back to *Q&A*: We've gathered some of the more frequent questions that come through the ATRA Technical Department and wanted to share the answers with our readers. Once again, the names and towns have been changed to protect the innocent.

## 4L30E: 4th Accumulator Problems

*My name is Bob, and I'm from Thousand Oaks, CA. I have a 91 Isuzu Trooper with a 4L30E that keeps coming back with the overdrive clutches burned. Each time it comes back, the 4th accumulator piston seal is cut. Is there a problem with the seals or do I have a bore problem?*

That's a great question Bob. We haven't seen any seal problems in that area, and as long as the bore looks good, that shouldn't be an issue. You should always Scotchbrite the bore to make sure the surface retains oil to lubricate the seal. With that said, let's move on to the real cause.

The 4th accumulator piston will fit into the bore either way; only one way is correct (figure 1). The raised step in the center of the accumulator piston must face toward the cover. If the accumulator piston faces the wrong way (figure 2), it will travel too far in the bore. When this happens, the seal pops out of the bore, and then gets cut on the way back in.

## 4L60E: High Line Pressure

*This is Stuart from New Jersey. I've been working on a 1994 Chevy 1500 with a 5.7L engine and a 4L60E*

*transmission. It has high line pressure and hard shifts. In drive, line pressure is 150 PSI at idle and 180 PSI at full stall. There are no codes in memory and scan data shows that the desired and actual force motor current is 1.05 amps at idle and 0.110 amps at full throttle. I've changed the pump, valve body and I've installed three new force motors. I've also installed a known good used force motor. I've checked the outside wiring and installed a brand new inter-*

*nal wire harness. I'm out of ideas! Can you think of anything I've overlooked?*

If you'd asked me this question over a year ago, I'd have to say no. That was before I first fought through this problem myself. You've checked everything that can cause high line pressure except one: the computer. Bad computers can cause almost any kind of weird problem. In this case, I believe your computer is sending little if any current to the force motor. It's also



4th Accumulator Piston Installed Correctly

Figure 1



4th Accumulator Piston Installed Wrong

Figure 2

reporting incorrect data to the scan tool and isn't setting a code for it.

The test is simple: check the actual current through the force motor circuit with an ammeter. Grab a wire diagram, cut one of the force motor wires and run it in series through an ammeter. Or, better still, use a current clamp; that way you won't have to cut the wire. Either way, the *desired* and *actual* amperage reading on the scan tool must match the reading on the meter. If the difference is more than about 0.100 amps, the computer or the EPROM (re-programmable chip located inside of the computer) is at fault.

With most of these problems I've dealt with, the scan tool indicated both amperage readings were 1.05 amps; the meter revealed amperage was around 0.100 amps or less. In every case it turned out to be a bad computer.

### 1993 Chevrolet Camaro: Code 83

*Hi, I'm Brad from Minnesota. I have a customer who just bought a 1993 Camaro with a 5.7L engine and a 4L60E. The computer has a code 83, indicating a PWM circuit fault. The trouble is, this vehicle wasn't supposed to come with a PWM solenoid. I thought about replacing the computer but I wanted a second opinion.*

Hey Brad, thanks for writing. Someone has probably change the computer or the EPROM in the past (figure 3). If they installed an EPROM that was designed for a vehicle that used a PWM solenoid, it will look for the feedback voltage on the PWM circuit. On many of these early computers, the only difference is the EPROM. So, if it has the wrong EPROM, many times the only problem you'll experience is a code 83. Go to the GM dealer and order a new EPROM using the vehicle's VIN number.

That's all the space we have for this issue's *Q&A*. If you or anyone in your shop has a technical question or a fix of your own that you'd like to share with the industry, send them in... we'd love to hear from you!



If they installed an EPROM that was designed for a vehicle that used a PWM solenoid, it will look for the feedback voltage on the PWM circuit.



Figure 3

## Get Ready to Shift Gears!

**P** REMIUMS THAT WILL

**R** EDUCE YOUR INSURANCE COSTS, FROM A

**N** EWLY ENDORSED BROKER, READY TO

**D** ELIVER PRICE & SERVICE

**2** YOUR TRANSMISSION BUSINESS.

**L** IABILITY, PROPERTY, AUTO COVERAGES & MORE!

HEFFERNAN



For more information and a quote call Brant Watson, Rachel Lavin or Erin Trevethan, Toll Free at 1-800-234-6787.

Heffernan Insurance Brokers License # 0564249

# Wrong Dipstick Causes Transmission Overfill

**C**ertain 2005-2006 Chevrolet W4500/W5500 Crewcab, GMC W4500/W5500 Crewcab and Isuzu NPR-HD/NQR Crewcab vehicles equipped with a 4HK1T diesel engine and Aisin automatic transmission may have the wrong transmission dipstick. If you adjust the ATF level based on this dipstick, you'll overfill the transmission.

To determine whether the vehicle you're working on has the wrong transmission dipstick, compare the measurements to the correct one shown (figure 1). If they don't match, order the correct dipstick GM P/N 98020252 or Isuzu P/N 8-98020252-0.

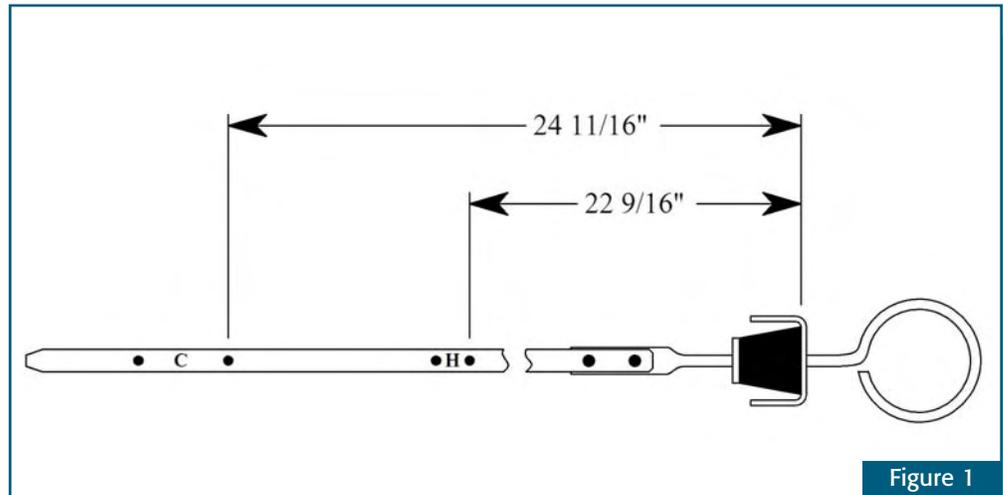


Figure 1

## Bonded Separator Plates

5R55W/S/N transmissions use separator plates with bonded valve body gaskets. To prevent leaks and provide a good seal, you should replace these separator plates during every rebuild. Use the application chart to order the correct separator plates from Ford.

Year	Model	Transmission	Engine	Separator Plate Part Number
2002	T-Bird	5R55N	V-8-3.9L	XW4Z-7Z490-AA
2003		5R55S		3W4Z-7Z490-AA (11/18/02-07/14/03)
2004-2005				4W4Z-7Z490-AA (After 07/14/03)
2005	Mustang	5R55S	V6-4.0L/ V8-4.6L	4W4Z-7Z490-AA (After 07/14/03)
2002-2003	Explorer/ Mountaineer	5R55W/S	V6-4.0L/ V8-4.6L	1L2Z-7Z490-AB
2004-2005		5R55S		4L2Z-7Z490-AA
2003-2005	Aviator	5R55S (1)	V6-4.6L	1L2Z-7Z490-AB
2003-2005		5R55S (2)		4L2Z-7Z490-AA
2000		5R55N (3)		XW4Z-7Z490-AA (4)
2000-2002	Lincoln LS	5R55N	V6-4.0L/ V8-4.6L	XW4Z-7Z490-AB
2003-2005		5R55S		3W4Z-7Z490-AA

- 1 — Transmission ID 3L2P-E or 3L2P-F
- 2 — Transmission ID 4L2P-E or 4L2P-F
- 3 — Transmission ID XW4P-A or XW4P-B
- 4 — Replaced with new valve body per Ford part # 2W4Z-7A100-AA



# When Experience Counts



*We are specialists in only one product...*

## REMANUFACTURED TRANSMISSIONS

### PROVEN QUALITY

*Authorized remanufacturer for 3 OEMS -  
Quality you can count on!*

### UNMATCHED AVAILABILITY

*Over 5,000 transmissions in stock ready to ship*

## DOMESTIC • IMPORT • MANUALS ALLISONS AND "BULLETPROOF" TRANSMISSIONS

### NATIONWIDE WARRANTY

*3 yr/75,000 nationwide warranty - parts & labor*

### EXCEPTIONAL SERVICE

*Experienced customer service staff available  
6 days a week. Six warehouses nationwide  
providing FAST delivery*



# 800-428-7726

[WWW.ACCURATETRANS.COM](http://WWW.ACCURATETRANS.COM)