

Transmission Report

Volume 4, No. 1

March 2013

A Performance Rebuild Goes Beyond the Transmission Case

Make sure that your customers get everything out of a tranny that you put into it. Ask your torque converter rebuilder to use Sonnax parts!

Spring has sprung in many parts of the country, and motorsports enthusiasts of all types are getting their rides ready for warmer weather. For many transmission rebuilders, this means a wave of performance work could be heading to your shop. Whether they want a hard-working diesel unit, an overdrive street performer or an all-out racing Powerglide®, customers are anxious to get their rides refreshed and updated with the latest and greatest components.

Don't overlook the importance of asking for quality parts in the rebuilt converters you install. Just like all Sonnax transmission products, our torque converter parts combine the latest in automotive technology with outstanding reliability, performance and durability. It's a win-win situation for you AND your customers!

Continued on page 2...



sonnax® ROADSHOW 2013

FREE SEMINAR Valve Body Diagnostics & Reaming

The Sonnax Roadshow is a unique training opportunity that's earned rave reviews from transmission rebuilders of all backgrounds. Now in its third year, the seminar is still going strong thanks to the support of our distributor partners and enthusiastic attendees.

Join Sonnax at an upcoming Roadshow to learn:

- Valve body evaluation
- Vacuum testing
- The ins & outs of valve body reaming
- The "magic" of Sonnax repairs



See page 7 for the 2013 Roadshow schedule.

April 26 & 27 in Manchester, Vermont

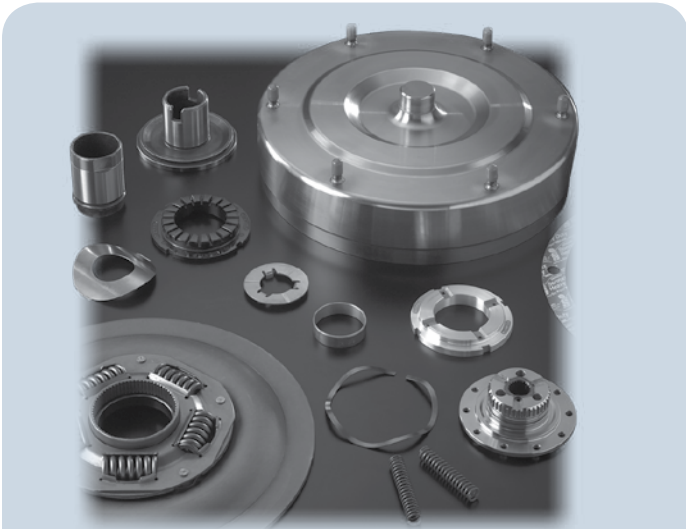


Sonnax is proud to host this year's annual Torque Converter Rebuilders Association seminar. Open to both TCRA members and non-members, the event brings together rebuilders and suppliers for a two-day summit on all things torque converter.

- Learn from Top Industry Experts
- Tour Sonnax World Headquarters
- Talk with Rebuilders, Suppliers & OE Manufacturers

The TCRA meeting will be held at the luxurious Equinox Resort & Spa.

Visit www.tcraonline.com for details!



As a transmission professional, you likely have several variations of recipes that you can use to tune, match and build the perfect transmission for your customer's vehicle. Of course, Sonnax is right there with you, offering a wide variety of upgrade components that will help your transmission get the horsepower to the pavement. Depending on the type of transmission, Sonnax has everything from upgraded input shafts to custom servos to ultimate gear sets, and all sorts of components in between. As a pro builder, you invest a lot of time, money and effort in making sure your transmission will take the punishment that your customer plans on dishing out.

But what about the torque converter? If you don't build your own torque converters, are you sure that the converter you are pairing up to your transmission is ready to handle the abuse? Sonnax can help here too! The Sonnax methodology of identifying and solving the root cause of problems extends outside the transmission case and into the torque converter.

As the world's premier full-line component supplier to the torque converter aftermarket, Sonnax can help your converter builder go stock with top-quality replacement parts OR install upgrades to greatly improve converter function in performance and heavy duty vehicles.

Billet Front Covers

A common component of just about all upgraded converters, from diesel to drag racing, is often a forged billet front cover.

The front cover is the component that bolts to the engine via the flexplate, and the torque output from a modified motor is typically enough to distort an "OE" stamped front cover.

In lock-up applications, this is particularly critical, because the inside surface of the front cover serves as the reaction surface for the torque converter clutch. Sonnax has you well covered here (no pun intended). We have manufactured forged front covers for many years and are widely recognized as an innovator in this product segment.

Billet Front Covers

Aisin AW

450-43LE

Allison

1000/2000/2400

BorgWarner

310mm LU (A618)

Chrysler

- 10" LU
- 10-3/4" LU
- 68RFE
- 727*
- 45RFE/545RFE

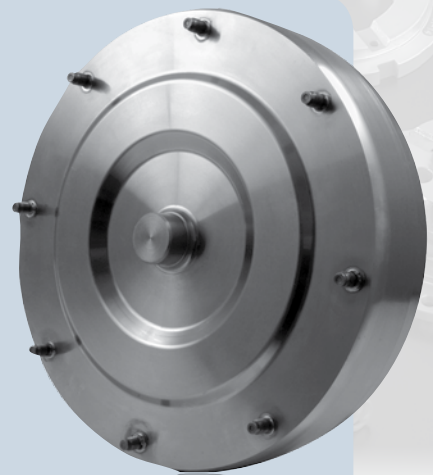
Ford

- AODE, 4R70W
- AOD*
- E40D
- 4R100
- 5R110W
- C4 10", 11" & 12"*

GM

- 4L80-E
- 4L60-E, 298mm*
- 200-4R, 700-R4 (4L60)*
- Powerglide 350, 400
- Powerglide 350, 400*

*10" Racekit



**A quality rebuild demands the BEST PARTS
in both your transmission & torque converter.
Good thing Sonnax makes both!**

Racekits & Multi-Plate Converter Clutch Kits

For the convenience of torque converter builders, Sonnax offers many parts prepackaged into exclusive racekits.

We offer more flavors and options here than you can imagine, and Sonnax racekits have been a converter industry staple for years. Chances are, if you've ever purchased a performance converter, Sonnax kits and components were an integral part.

If you build Allison or Chrysler units which will live behind serious diesels, you need to check out Sonnax multiplate clutch kits.

Recent torque increases to both stock and "chipped" diesel powered vehicles have proven to be more than standard converter can handle, especially the lock-up clutch. Enter our multi-plate clutch kits: stronger covers, improved thrust load potential, strengthened hubs and an innovative lock-up clutch system that stands up to serious loads, all designed to work together to expertly handle the toughest jobs.

Torrington®-Style Bearings



Another area of the converter where component choice matters: needle roller thrust bearings.

Replacing OE thrust washers with Torrington-style needle roller bearings will increase efficiency and reduce heat in a converter. These upgrades are very important when you are trying to transmit as much power as possible to the drive wheels. Sonnax has a long-standing partnership with Koyo, the company that purchased, upgraded and now operates the U.S. manufacturing plants which manufacture Torrington bearings; the Koyo brand name represents the legacy and quality of the Torrington bearing brand. Sonnax offers a complete line of needle roller thrust bearings which can be adapted to many locations within performance torque converters. Tell your converter rebuilder that you want Sonnax bearings in the converter!

10" Racekits

Allison

- 1000/2000/2400, Early
- 1000/2000/2400 & 2006-later

Ford

- AOD • AODE 4R70W LU
- C4 10" & 12" • C4 11"
- C6

Chrysler

- 727 • 904

GM

- 200-4R 4L60-E, 298mm LU*
- 200-4R 700-R4 (4L60)
- 4L60-E 298mm
- 4L60-E 300mm & 300mm*
- 4L80-E
- 6L80, 300mm
- Powerglide 350, 400
- 350 & 400 (8" Racekit)

*With mounting ring.

Multi-Plate Clutch Kits

- No machining required
- Utilizes three high thermal, high torque capacity friction elements
- Improved oil flow across clutch plates
- Improved spring end caps prevent over-compression
- Reduced overall weight
- Kits come pre-assembled or with tunable damper to 1,250 ft-lb torque capacity

Allison

1000/2000/2400

Chrysler

68RFE

BorgWarner

310MM LU (Chrysler A618),
47RE, 48RE

Mechanical Diodes®

Sonnax is the industry leader in adapting mechanical diodes into racing torque converters with one-way clutches.



Buyers beware: all mechanical diodes are not created equal! Manufacturing a quality mechanical diode requires a unique blend of design and precision, and Sonnax has the knowledge and experience to execute these critical components - accept no substitute.

Sonnax also offers many other parts which will significantly upgrade torque converter durability and performance. Our innovations for turbine hubs, stator castings and a variety of stator one-way clutch options offer converter builders a wide variety of choices.

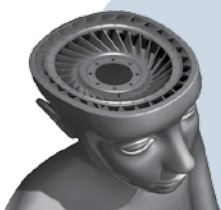
As you build transmissions for your enthusiast customers, your reputation is on the line.

Built a great unit for your customer? Make sure that he gets everything out of it that you put into it.

Ask your torque converter rebuilder if they use Sonnax parts when building your converters.

Visit www.sonnax.com for more information on all our torque converter offerings.

Nobody knows torque converters like Sonnax.™



The parts shown here fit various Honda 4/5 speed models. Use the chart to verify application.



This chart also is available online for easy reference! Scan code with a smartphone or select one of these Honda units from the transmission parts area at www.sonnax.com to view the chart.

Make	Model	Year From / To		Trans. Code	4 or 5 Speed	Sonnax Parts												
		10	11			5	6	9	7	8	10	2	3	4	12			
Acura	3.0 CL	'96	'00	B7ZA	4	•	•	•			*	*	•	•	•	•		
		'96	'00	M7ZA	4	•	•	•			*	*	•	•	•	•		
	3.2CL	'01	'06	BGFA	5	•	•	•	•	•	*	*	•	•	•	•		
		'01	'06	MGFA	5	•	•	•	•	•	*	*	•	•	•	•		
	3.2TL	'99	'99	B7VA	4	•	•	•			*	*	•	•	•	•		
		'00	'03	M7WA	5	•	•	•	•	•	*	*	•	•	•	•		•
	MDX		'01	'02	BGHA	5	•	•	•	•	*	*	•	•	•	•		•
			'01	'02	MGHA	5	•	•	•	•	*	*	•	•	•	•		•
		'03	'04	MDKA	5	•	•	•					•	•	•	•		•
		'05	'06	BDKA	5	•	•	•					•	•	•	•		•
		'07	'11	BYFA	5	•	•	•					•	•	•	•		•
		'07	'11	BWEA	5	•	•	•					•	•	•	•		•
	RL		'05	'11	MJBA	5	•	•	•				•	•	•		•	
TL		'04	'08	BDGA	5	•	•	•	•	*	*	•	•	•	•		•	
TL Type S		'07	'08	BDHA	5	•	•	•				•	•	•	•		•	
		'09	'11	BK3A	5	•	•	•				•	•	•	•		•	
TSX		'10	'11	MM2A	5	•	•	•				•	•	•		•		

1 98892-04K

Converter Charge Regulated PR Valve



2 98892-13K

Oversized Converter Charge Regulated PR Valve

Help cure:

- Overheated converters
- Code P0740

Note: 98892-13K Requires tool kit F-98892-TL13 & the VB-FIX reaming fixture.

3 98892-06K

4 98892-10K

TC Check Valve Kits

Helps cure:

- Overheated converters
- TCC codes
- Poor cooler flow

5 98892-17K 4-Speed



6 98892-27K 5-Speed

Oversized Lockup Control Valve Kits

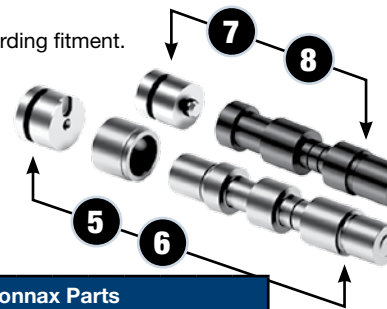
Helps cure:

- TCC slip code P0740
- Low cooler flow
- TCC apply pressure in full lockup

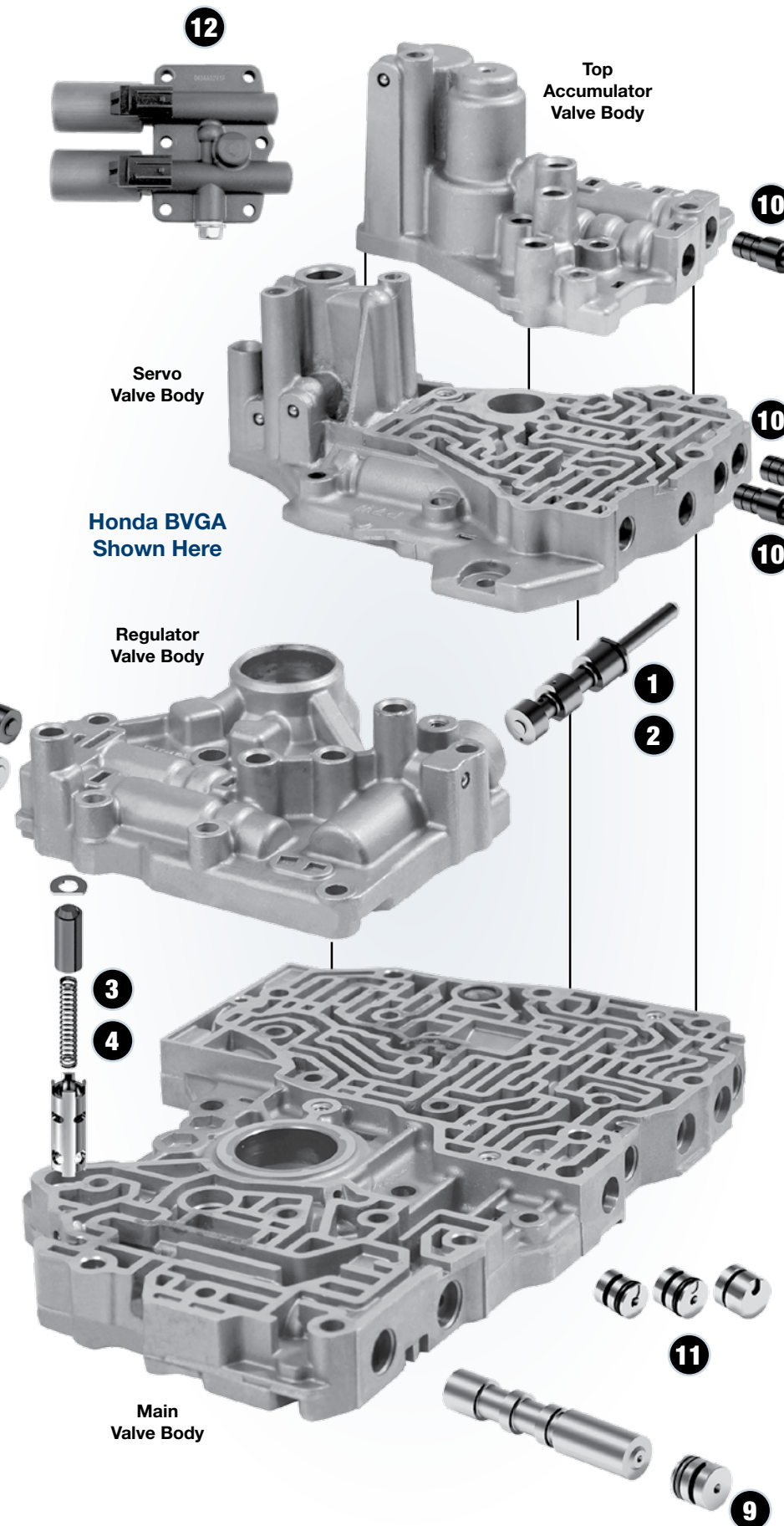
Note: 98892-17K requires tool kit F-98892-TL17, F-98892-27K requires tool kit F-98892-TL27 & both require the VB-FIX reaming fixture.

*Spool diameters should be measured prior to installation. Visit www.sonnax.com for part details and instructions regarding fitment.

DISCLAIMER: Sonnax recommends confirming all measurements before reaming. This listing represents known data on these vehicles; the most up-to-date list available can be found online at www.sonnax.com.



Make	Model	Year From / To		Trans. Code	4 or 5 Speed	Sonnax Parts												
		10	11			5	6	9	7	8	10	2	3	4	12			
Honda	Accord	'98	'02	B7XA	4	•	•	•			*	*	•	•	•	•		
		'03	'07	BAYA	5	•	•	•	•	•	*	*	•	•	•	•		•
		'03	'07	MAYA	5	•	•	•	•	•	*	*	•	•	•	•		•
		'08	'11	B97A	5	•	•	•					•	•	•	•		•
		'10	'10	P79A	5	•	•	•					•	•	•		•	
	Accord Hybrid		'05	'07	MURA	5	•	•					•	•	•		•	
	Crosstour		'10	'11	BBSA	5	•	•					•	•	•		•	
			'10	'11	BBTA	5	•	•					•	•	•		•	
	Odyssey		'99	'01	B7TA	4	•	•	•			*	*	•	•	•		
			'99	'01	B7YA	4	•	•	•			*	*	•	•	•		
		'02	'04	BYBA	5	•	•	•	•	•	*	*	•	•	•	•		•
		'05	'07	BGRA	5	•	•	•	•	•	*	*	•	•	•	•		•
		'05	'07	PGRA	5	•	•	•	•	•	*	*	•	•	•	•		•
		'07	'11	B36A	5	•	•	•					•	•	•	•		•
		'07	'11	P36A	5	•	•	•					•	•	•		•	
	Pilot		'03	'07	BVGA	5	•	•	•	•	•	*	*	•	•	•		•
			'03	'07	BVLA	5	•	•	•	•	•	*	*	•	•	•		•
			'03	'07	PVGA	5	•	•	•	•	•	*	*	•	•	•		•
			'03	'07	PVLA	5	•	•	•	•	•	*	*	•	•	•		•
			'08	'08	P34A	5	•	•	•					•	•	•		•
'08			'08	P35A	5	•	•	•					•	•	•		•	
'09			'11	PN3A	5	•	•	•					•	•	•		•	
'09			'11	PN4A	5	•	•	•					•	•	•		•	
Ridgeline		'06	'08	BJFA	5	•	•	•				•	•	•		•		
		'06	'08	MJFA	5	•	•	•				•	•	•		•		
	'09	'11	PSFA	5	•	•	•					•	•	•		•		
Saturn Vue		'04	'07	MDPA	5	•	•	•					•	•	•		•	
		'04	'07	MDRA	5	•	•	•					•	•	•		•	



7 98892-22K



8 98892-24K

Oversized Lockup Timing Valve Kits

Help cure:

- Overheated converters
- TC lining failure
- Code P0740

Note: Both these kits require tool kit F-98892-TL22 & the VB-FIX reaming fixture.

9 98892-16K

5-Speed

Lockup Shift Valve Kit

Helps cure:

- Overheated converters
- 740 TCC slip codes
- Gear/Clutch overheat

10 98892-23K



Oversized CPC Valve Kit

Fits any of 3 BVGA locations

Helps cure:

- Flare/bumpy on up/downshift
- Harsh reverse engagement
- TCC slippage or cycling RPM

Note: Requires tool kit F-98892-TL23 & the VB-FIX reaming fixture.

11 98892-01K

Fits several locations

O-Ringed End Plug Kit

Helps cure:

- Soft & inconsistent shift feel
- Low CPC pressure
- Various symptoms depending on wear

12 98990-A

Remanufactured Dual Linear Solenoid Block

Helps cure:

- Soft & inconsistent shift feel
- Low CPC pressure
- Various symptoms depending on wear

Chrysler 45/545RFE & 68RFE Bearing Kits

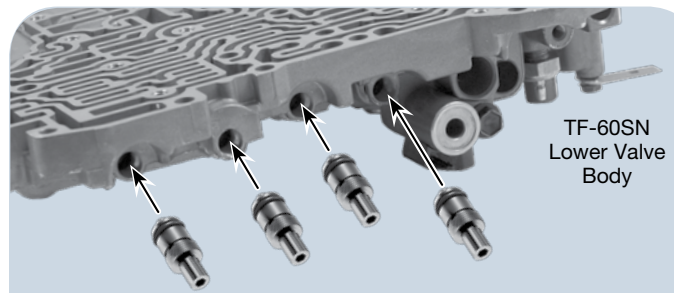
Never before available from Sonnax, we now offer these OE-quality bearing kits for your Chrysler rebuilds! Each kit comes with transmission bearing locations clearly marked for easy installation.

Part No. **SBK-C17** Fits 45/545RFE, '99-Later

- 2.372" O.D. x 1.616" I.D. x .150" Thick (9)
- 3.826" O.D. x 2.939" I.D. x .136" Thick (1)
- 2.666" O.D. x 1.940" I.D. x .153" Thick (2)

Part No. **SBK-C18** Fits 68RFE, '07-Later

- 2.372" O.D. x 1.616" I.D. x .150" Thick (5)
- 3.826" O.D. x 2.939" I.D. x .136" Thick (1)
- 2.666" O.D. x 1.940" I.D. x .153" Thick (1)
- 2.705" O.D. x 1.934" I.D. x .208" Thick (2)
- 2.481" O.D. x 1.534" I.D. x .224" Thick (1)



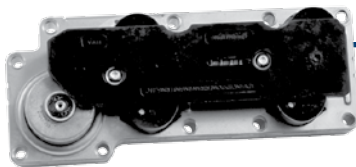
TF-60SN
Lower Valve
Body

Aisin AW Spring Adjuster Kit

In TF-60SN, TF-80SC and TF-81SC applications, the oil circuit between the clutch control valve and the adjuster is clutch apply oil. When the adjuster leaks, both clutch oil and fill rate are affected. These spring adjusters with O-rings eliminate the clutch oil loss, improving clutch application and shift quality. No special tools are required for installation.

Part No. **15741-48K** Fits **TF-60SN** BMW 6F21WA, VW/Audi 09G, 09K, 09M; **TF-80SC** Volvo (AM6), Opel (AF40), Peugeot (TF-80), Saab (AF40/6) Land Rover (TF-80); **TF-81SC** Ford (AF21), Mazda (AW6A-EL)

No-Hassle, Direct Replacement Remanufactured Solenoid Blocks



Ford E4OD, 4R100 Blocks

- Improved design over OE
- New integrated circuit board
- New Viton® O-rings
- 100% Rebuilt EPC solenoid
- 100% tested

Part No. **36424A**
Fits early E4OD '89-'94

Part No. **36424B** Fits late E4OD '95-'98
& non-PWM 4R100 '98-later

Part No. **36424D**
Fits 4R100 PWM TCC '98-later.



Chrysler 42RLE Block

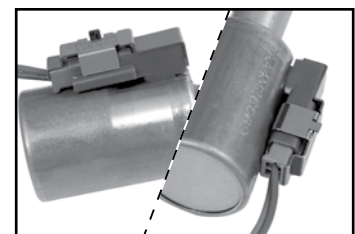
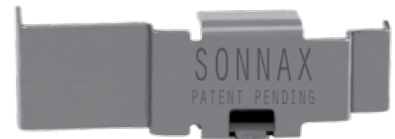
- New Viton® O-rings
- New springs, seals & pressure switches
- 100% Tested for electrical & performance functions

Part No. **162420-A** Fits 42RLE '03-'09

Aisin AW Solenoid Wire Connector Retainer

Aisin AW 55-50SN and 6-speed valve bodies have a solenoid connector which breaks during wire harness removal. Once the bridge lock is broken, the wiring will not remain engaged. This solenoid wire connector retainer snaps over the solenoid connection holding the wire terminals in place. The retainer can be installed without removing or rotating the linear solenoids.

Part No. **59947-60** Fits AW55-51SN, AF 23/33, RE5F22A, Volvo (AM6), Opel (AF40), Peugeot (TF-80), Saab (AF40/6), Land Rover (TF-80), Ford (AF21), Mazda (AW6A-EL), BMW (6F21WA) & VW/Audi (09G, 09K, 09M, 09D).



sonnax®

ROADSHOW

2013

FREE SEMINAR Valve Body Diagnostics & Reaming

Nobody knows transmissions like Sonnax.™

Showpower Expo & Powertrain Expo Seminars

Sonnax will be presenting a Roadshow seminar at Showpower Expo later this month and again at Powertrain Expo in the fall. In addition, Sonnax will be conducting live vacuum testing and reaming during regular exhibit hours on the show floor. Just stop by the Roadshow booth in the exhibit hall!

Visit www.sonnax.com for details.

Date	Location	Seminar Host/Venue	Call to Register
March 21	Memphis, TN	Showpower Expo 2013	Free event at the tradeshow; register with Showpower.
April 9	Durham, NC	DACCO	919-596-0153
April 11	Lexington, NC	Transtar	800-633-3340
April 30	Kansas City, MO	Transtar	800-741-3676
May 2	Wichita, KS	A & Reds Transmission Parts	866-780-7337
May 21	Duryea, PA	Whatever It Takes	570-655-4200
May 23	Edison, NJ	Transtar	800-446-9888
June 11	Kettering, OH	Whatever It Takes & CVC	937-443-0408
June 13	Columbus, OH	DACCO	614-237-2322
June 25	Pontiac, MI	DACCO	800-589-8868
June 27	Hazel Park, MI	Transtar	800-245-9754
July 16	Calgary, ON, Canada	King-O-Matic	800-665-2196
July 18	Seattle, WA	Natpro	888-962-8776
Aug. 8	Portland, OR	Portland Transmission Warehouse	800-444-4556
Aug. 27	Walton Hills, OH	Transtar	800-321-8830
Aug. 29	Buffalo, NY	DACCO	716-668-5800
Sept. 19	Washington, DC	ATRA Powertrain Expo 2013	Free event at the tradeshow; register with ATRA.
Oct. 8	Pine Brook, NJ	Fatsco Transmission Parts	800-524-0485
Oct. 10	Wyandanch, NY	Bruce & Bill Enterprise	631-491-8400
Oct. 29	San Bruno, CA	Transtar	800-275-2588
Oct. 31	San Jose, CA	PDQ Automatic Transmission Parts	800-852-3351
Nov. 19	Orange, CA	Transtar	888-477-6727
Nov. 21	Los Angeles, CA	Natpro	800-333-2330
Nov. 22	Toronto, ON, Canada	King-O-Matic	800-268-2368

Transmission Report

Volume 4, No. 1

March 2013

Featured in this issue

Performance Rebuilds & Converters
Honda/Acura 4/5-Speed Solutions
New Transmission Parts
2013 Roadshow Schedule



Become a Sonnax Insider!

E-mail is the fastest way to get all the latest news from Sonnax. Sign up today at www.sonnax.com.

Is this newsletter getting into the right hands?

To update an address or request we stop this mailing to you, please call (800) 843-2600, 8:30 a.m. to 5 p.m. ET, or send an e-mail to news@sonnax.com.

New! Complete Vacuum Testing & Repair Guides

Due to overwhelming demand, complete vacuum testing location guides are now available online at www.sonnax.com!

Each guide identifies valve body areas most prone to wear which should be tested before and after repairs, plus common symptoms of valve problems and recommended Sonnax parts.

Aisin AW

- 60-40LE
- 60-41SN

GM

- 4L60-E
- 4L80-E

Ford

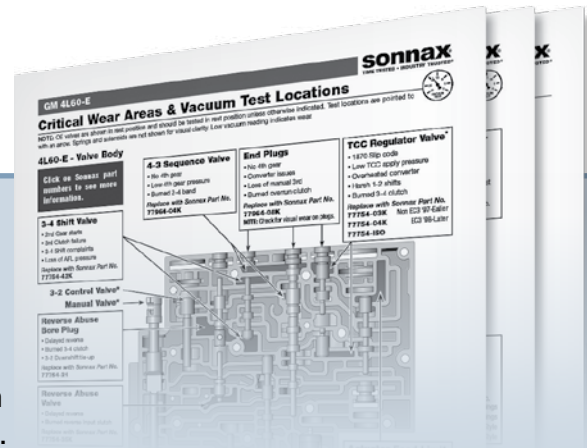
- 4/5R44E, 4/5R55E
- 5R55W/S

Toyota

- U140E/F, U240E, U241E
- U151E/F, U250E

ZF

- ZF6HP19/26/32 (Gen. 1) /Ford 6R60, 6R80
- ZF6HP21/28/34 (Gen. 2)



More guides coming soon!

View, print & download guides at www.sonnax.com

Scan code with smartphone.

