

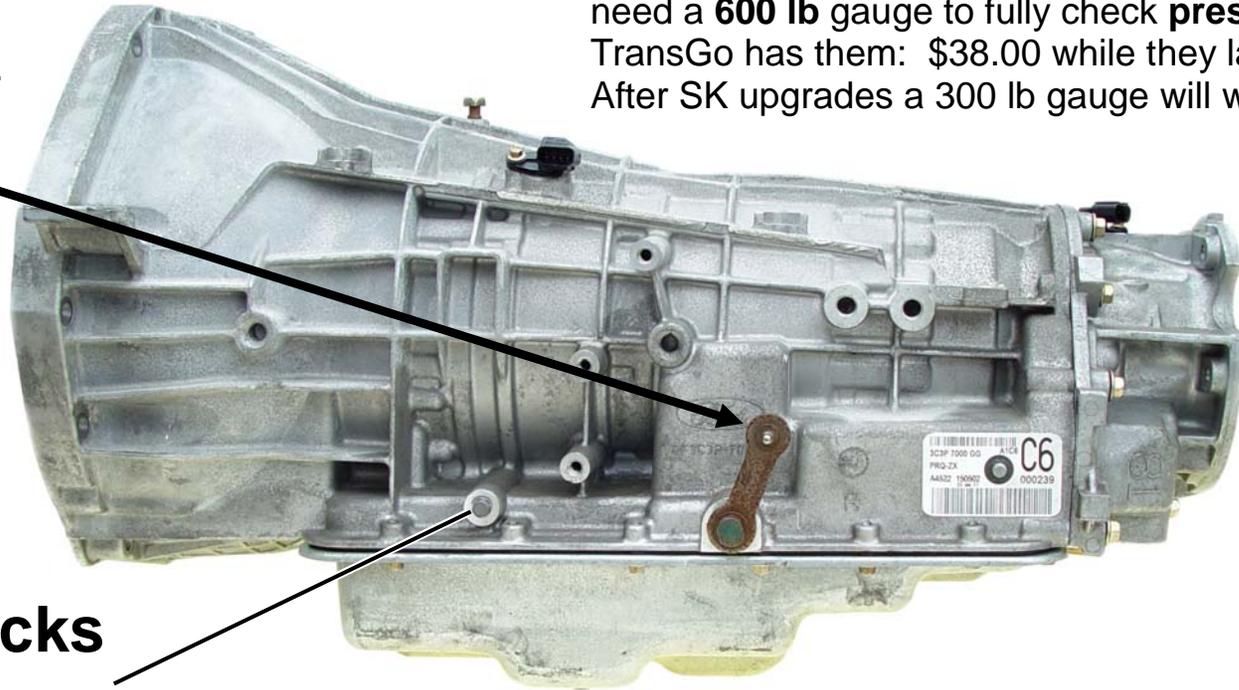
Identification

5R110W

LOOK:

Has shifter arm here.
No electrical switch.

Watch it! Before installing SK® upgrades you will need a 600 lb gauge to fully check pressures. TransGo has them: \$38.00 while they last. After SK upgrades a 300 lb gauge will work OK



Pressure Checks

Line pressure tap

Pressures are adaptive and may vary a little from base specifications shown.

Selector	Min psi	Max
Park	50	
Neutral	50	
Reverse	100	320
Drive	70	220
3	80	220
2	80	215
1	80	220

Very common for this trans to have high line pressure error, of around 450 lbs, especially in reverse with throttle on.

Sooner or later this will blow off Low reverse snap ring lugs.

The Shift Kit® has upgrades that brings pressure to safe Specs.

“Thanks for listening.”

Tech Team

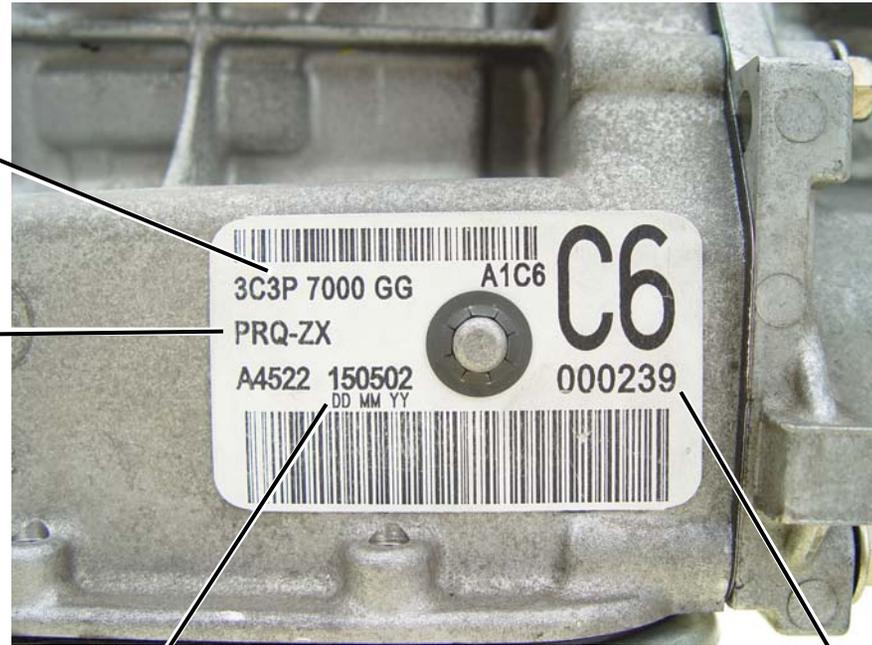
Trans Identification and Gear Ratios

Identification

Assembly part number prefix and suffix.

Transmission model

Build date



Serial number

Gear Ratios

1st	3.09 to 1
2nd	2.2 to 1
3rd	1.538 to 1
4th	1.096 to 1
5th	1 to 1
6th	.712 to 1
Reverse	2.88 to 1

Note: 4th is used only in cold shift strategy.

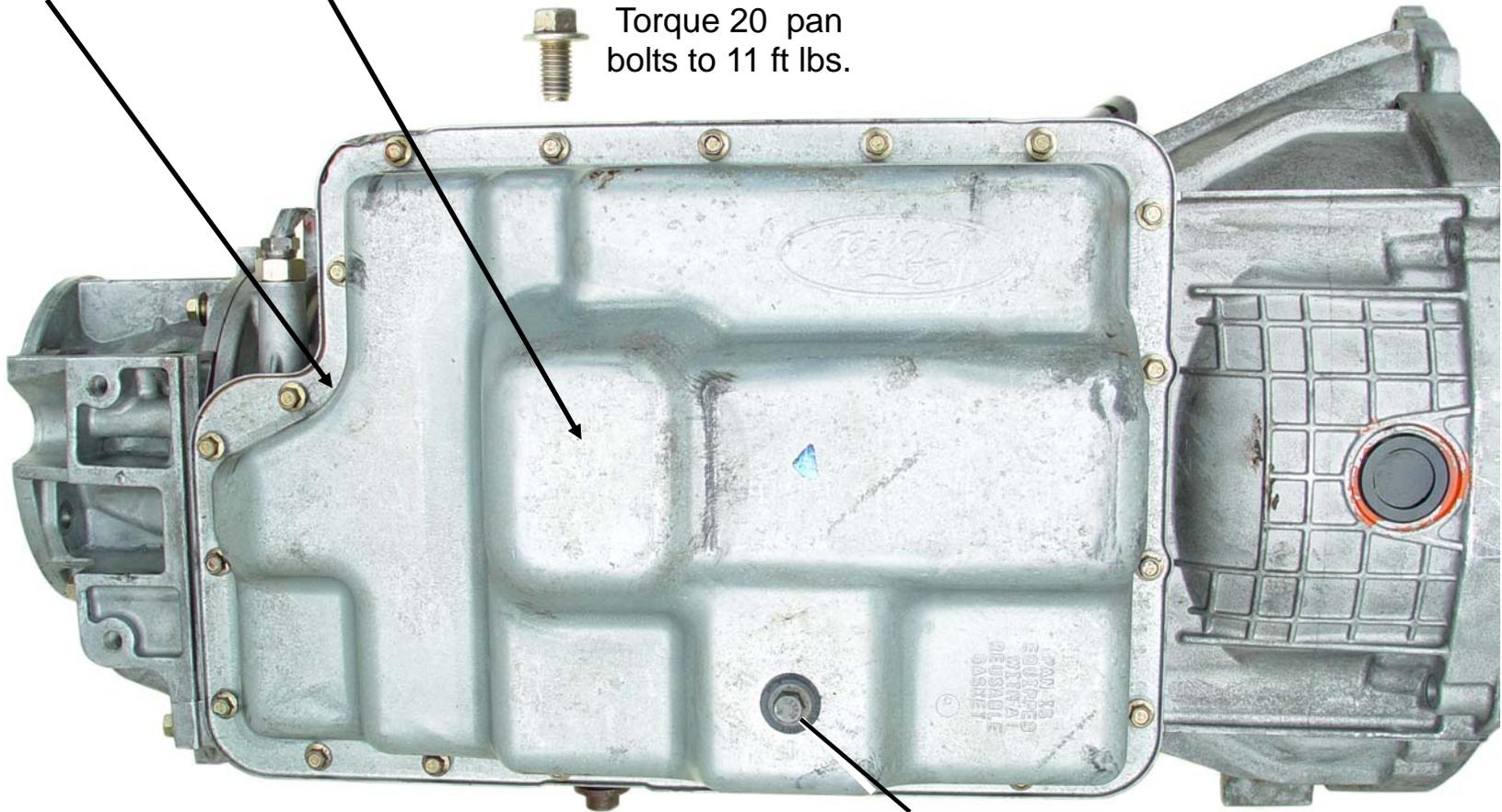
Identification

Oil Pan & Filter

Bump for deep pickup.

Corner notch in pan.

Torque 20 pan bolts to 11 ft lbs.



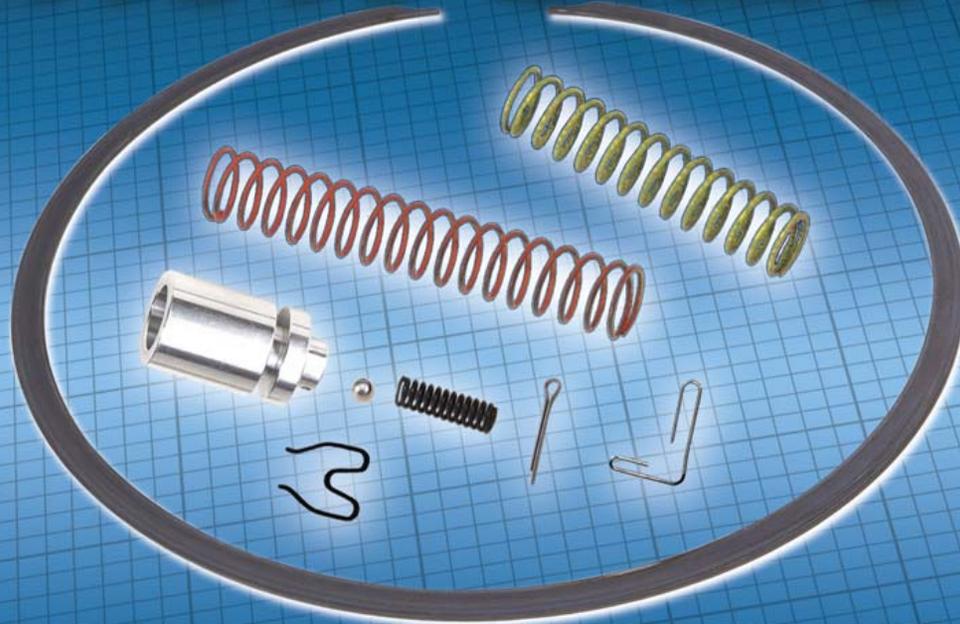
Torque drain plug to 18 lb ft

Identification

Upgrade Kit

5R110W Shift Kit®

Fits 2003-05
5R110W
TORQSHIFT:
Trucks, Vans,
SUVs, Gas &
Diesel.



REDUCES

Case Lug
Blow Out

STOPS

Runaway
Pressure

Hi-Tech Snap Ring: Stays In Position - 400% Stronger
You'll just Love it

NOW: YOU Can Fix 5 Speed Fords: "Let Us Hear From You."

Product Support: [626] 443-7451

Fast Reference

Parts and Labor?

If parts and labor fixed trans's the corner gas station would have all the business.

P&L can replace the worn or broken parts, but does not fix the causes of the wear or breakage.

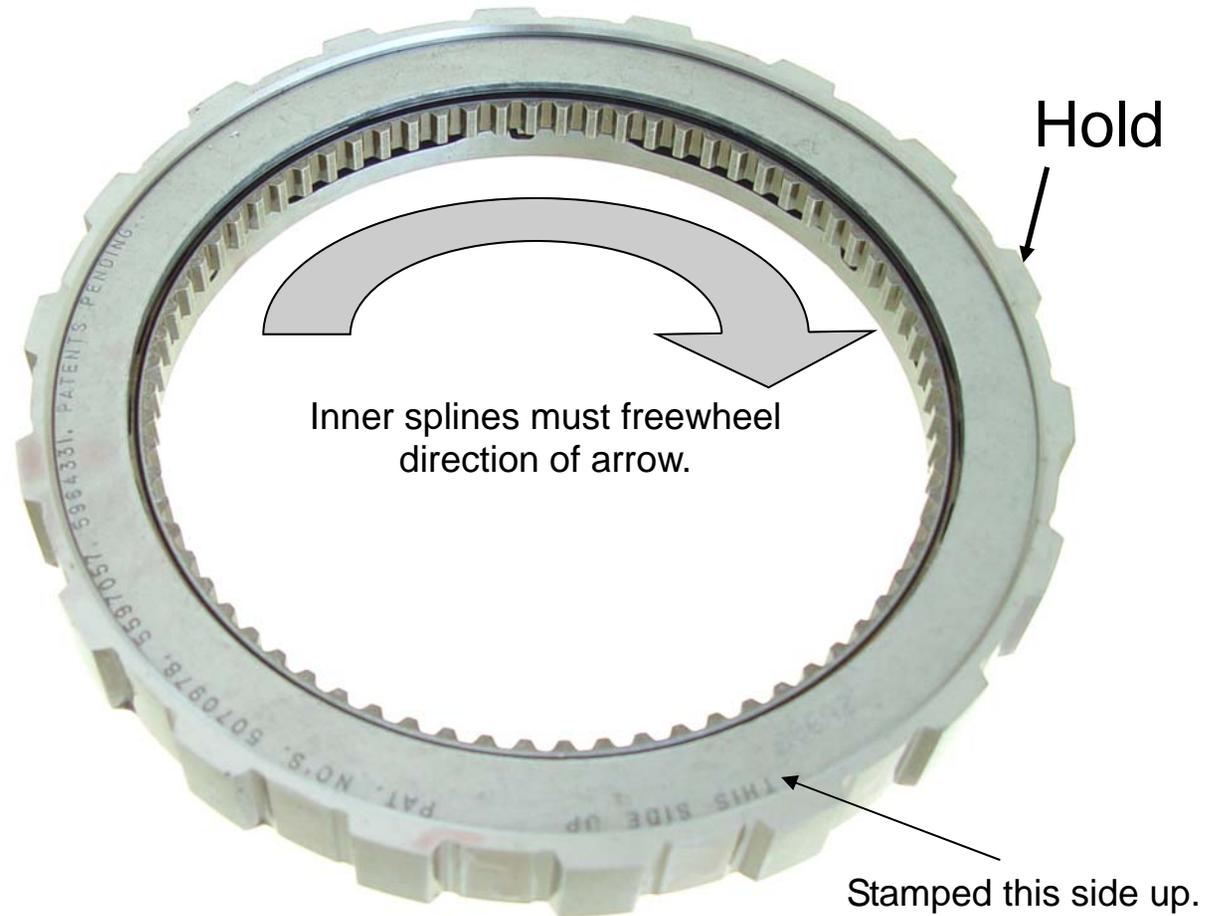
Consciousness fixes things: and that is Attention, Knowledge and Experience and Caringness.

While you are learning the knowledge and experience can be borrowed from persons who care about you, but you have to furnish the caringness for the trans and the customer from the get go.

Have a great day,

Gil Younger

Low one-way Clutch



Fast Reference

Case Lug Blow Out Low Reverse Snap Ring



Please install the snap ring exactly as shown.

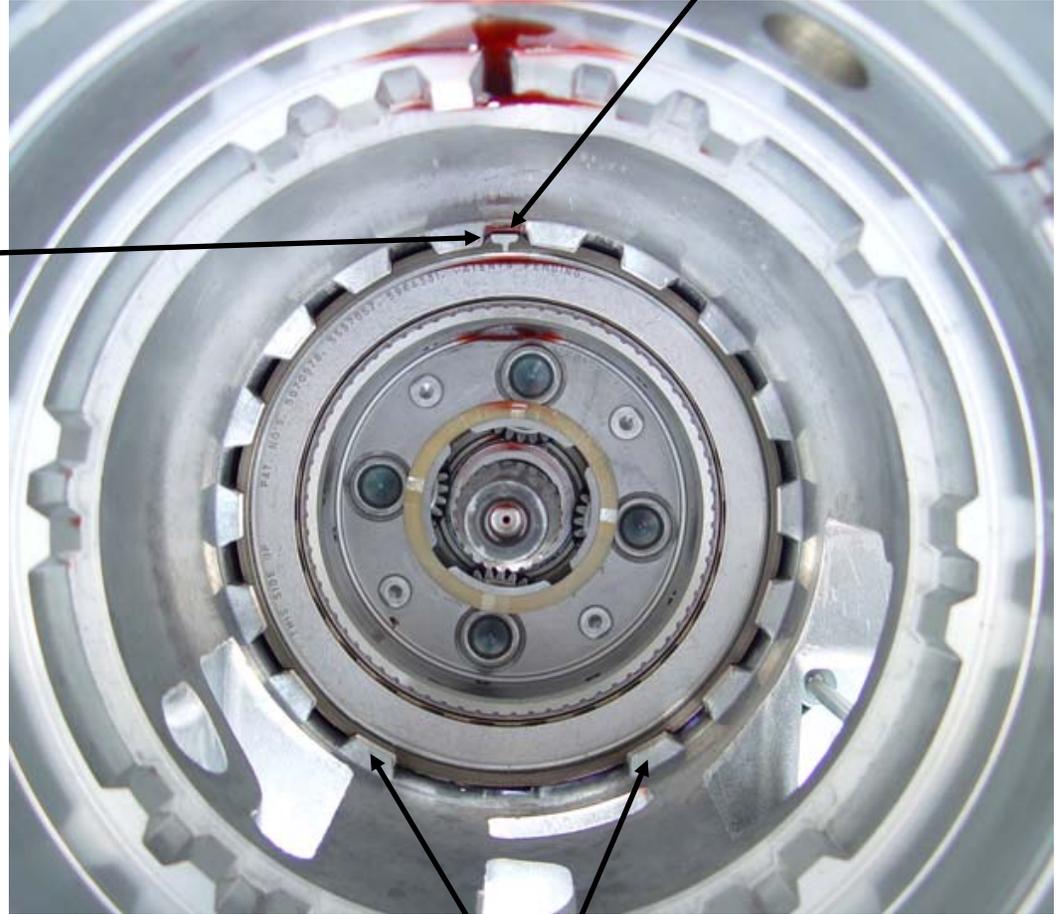


Install the Hi-Tension Low Reverse **Snap Ring** with the ends toward top of the case-opposite the pan.

Snap Ring Upgrade

If the trans came in with no Reverse or Slip in Reverse, this is the first thing to look at. Because it will probably need a new case.

Snap Ring Ends



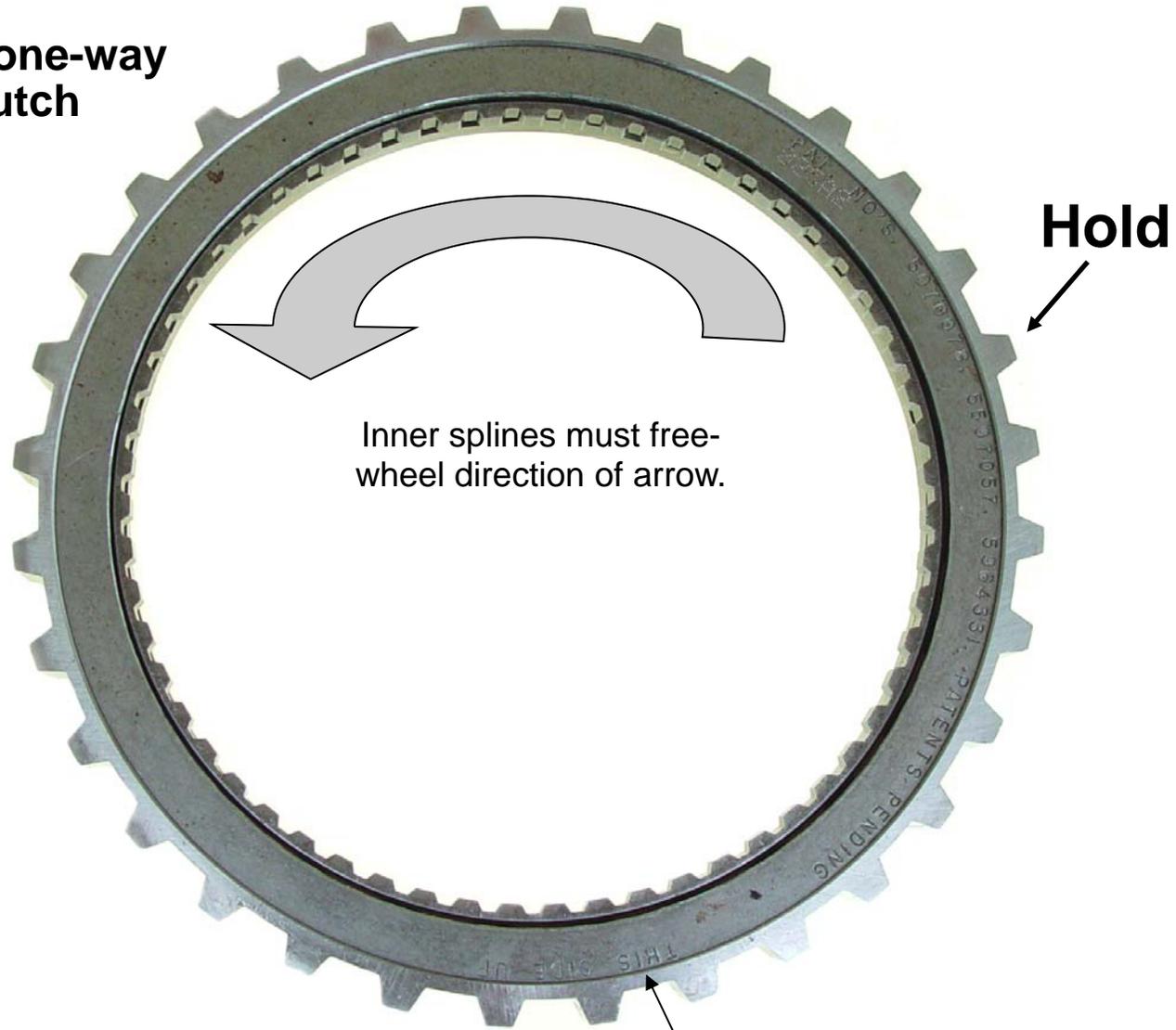
Pan side.

“A” These are the two lugs that break off. If they're broken off a new case is needed. If they are angle worn but still there the tougher snap ring will save the case.

Fast Reference

Diode One Way Clutch Rotations

**Coast one-way
Clutch**



Inner splines must free-wheel direction of arrow.

Hold

Stamped this side up.

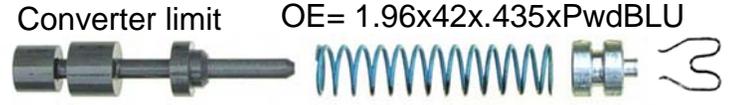
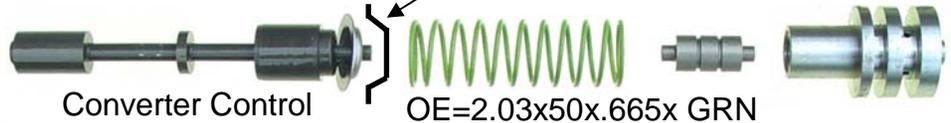
Fast Reference

Stator Body-Support

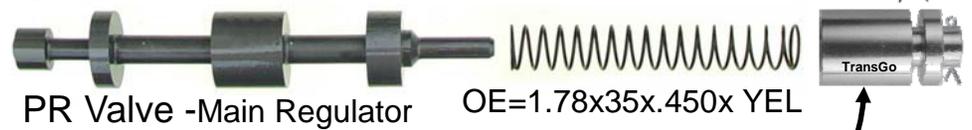
Stator Support - Valve and Spring Assembly Pressure Control and Limit Upgrades.

Upgrades: Stops RunAway pressure in Reverse that blows out case lugs. Goes neutral at a stop sign.

Spring seat faces as shown.



OE= 1.39x41x.511x OR

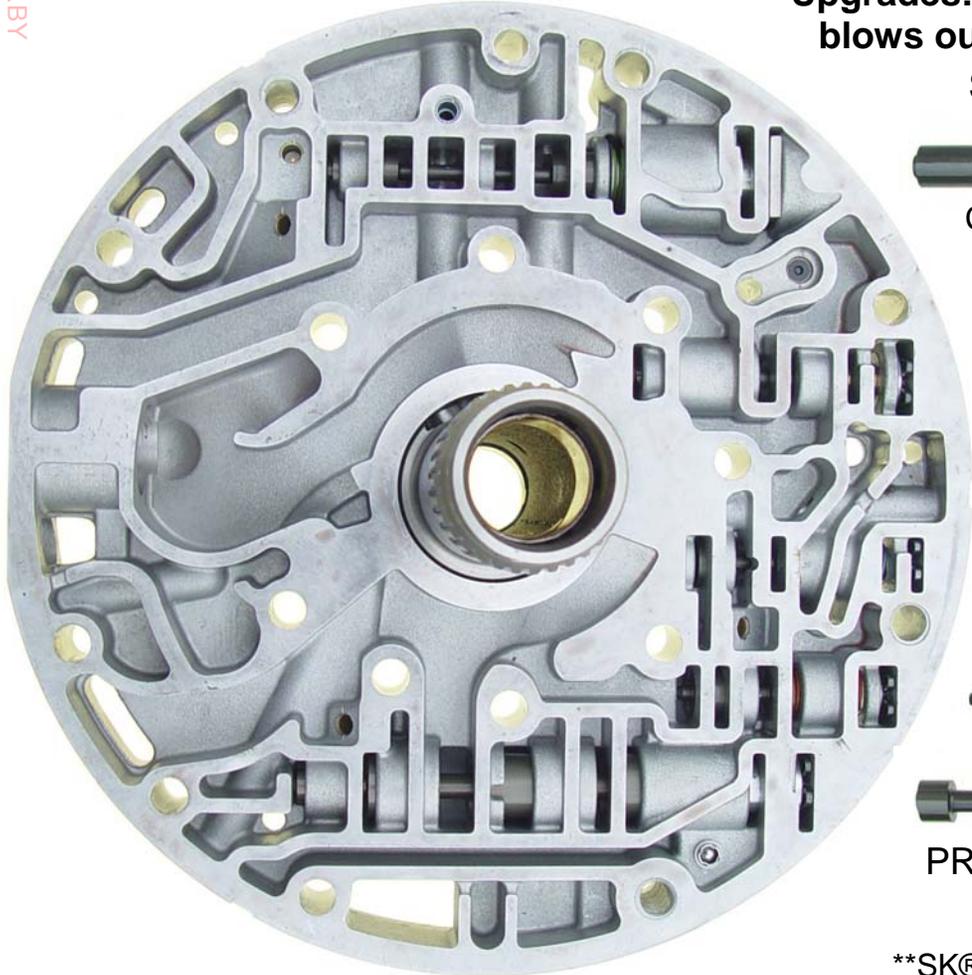


**SK® =2.2x55x.485x WHT



When using this spring must install plain spring in the Pressure Control solenoid.

Stops Case lug blow out.



**SK® Converter Limit =1.85x45x.440x YEL
Slightly firmer lockup with high throttle.

Fast Reference

Solenoid and Pressure Switch Identification

Manifold Body

Coast clutch
SSPC-A

Coast clutch pressure
switch PS-A

Manual valve

Overdrive
clutch
SSPC-B

Low/reverse

*How long has it been
since you told a valve
body how pretty it is?*

OD pressure
switch PS-B

Converter clutch

Low/reverse
clutch pres-
sure switch
PS-E

**Pressure Con-
trol in SK® Kit.**

Fluid
Temp

Direct
clutch
SSPC-D

Direct clutch
pressure
switch PS-D



Listen: Pressure Control.
Special regulating spring
in the 5R110 Shift Kit®.
Part of RunAway line **FIX.**

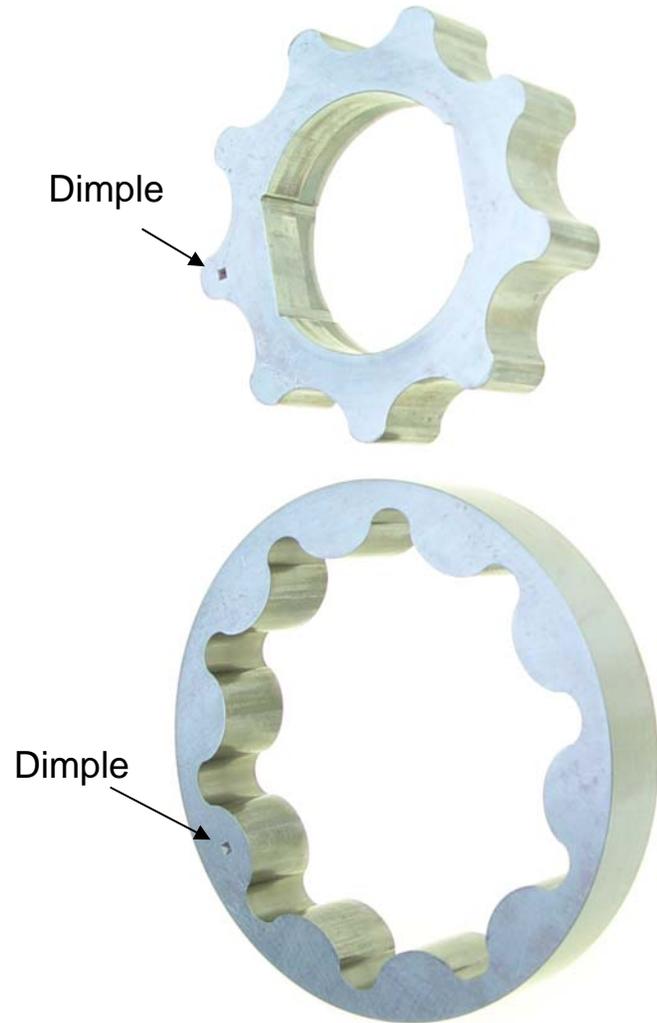
Pressure
control PC-A

Intermediate
clutch SSPC-C

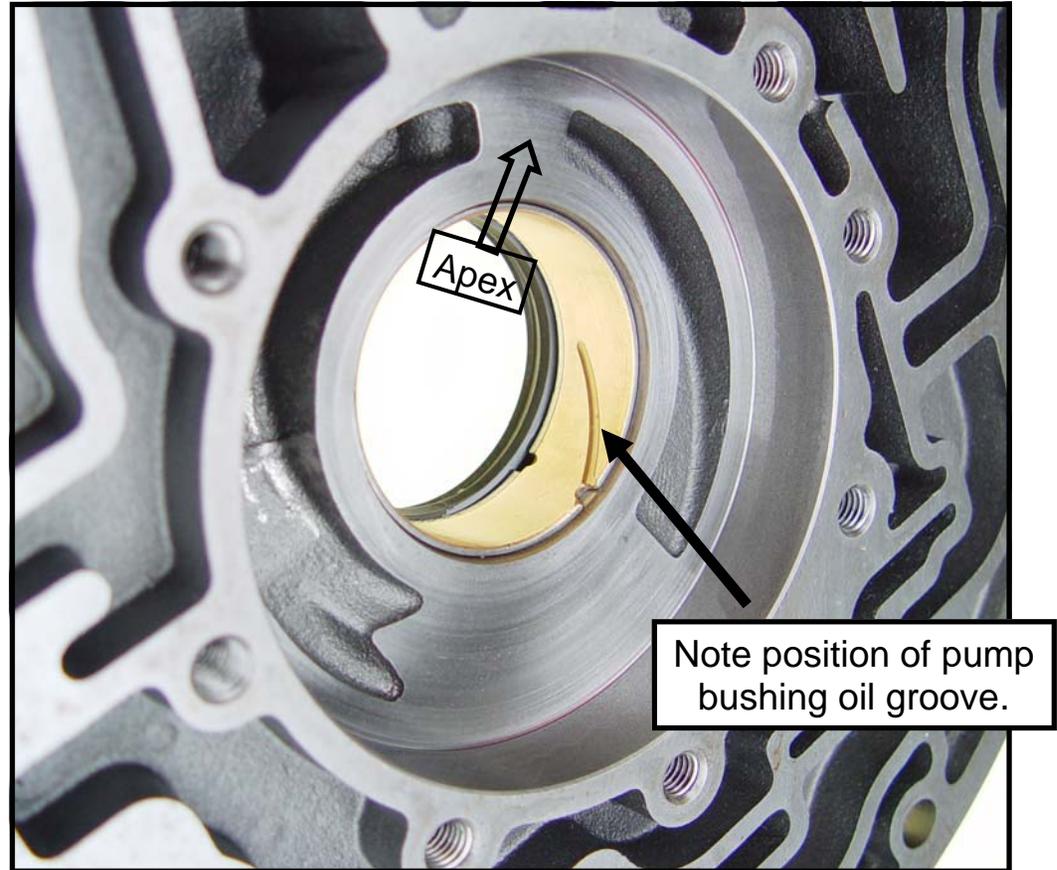
Intermediate clutch
pressure switch PS-C

Some Models: Don't have pressure switches.

Fast Reference



Pump pocket should have no deep scratches and not over .004 clearance at the apex. See next page.

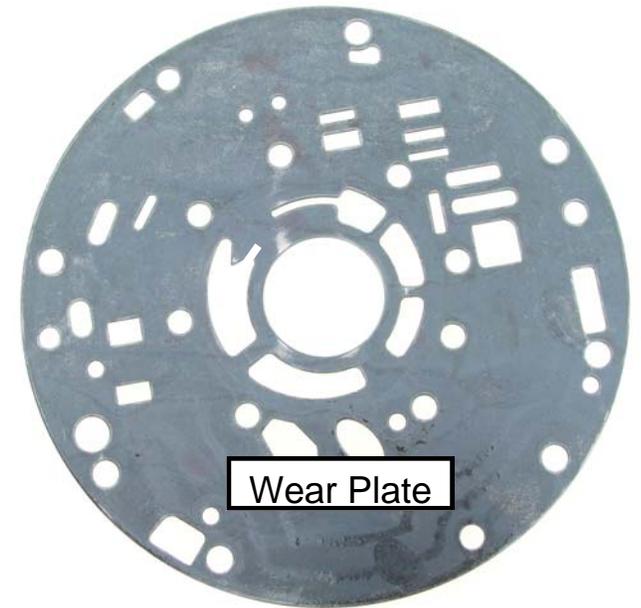


Fast Reference

Pump Quality Inspection

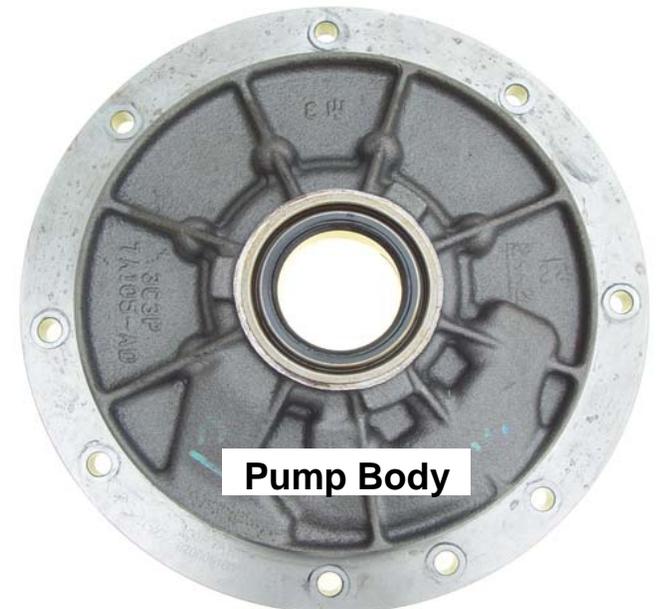
Place outer gear in pump with a tooth centered at the apex. [[page 10]

Press Firmly on the gear at "A" and "B". If a .003 feeler will start under the gear replace the pump.



Wear Plate

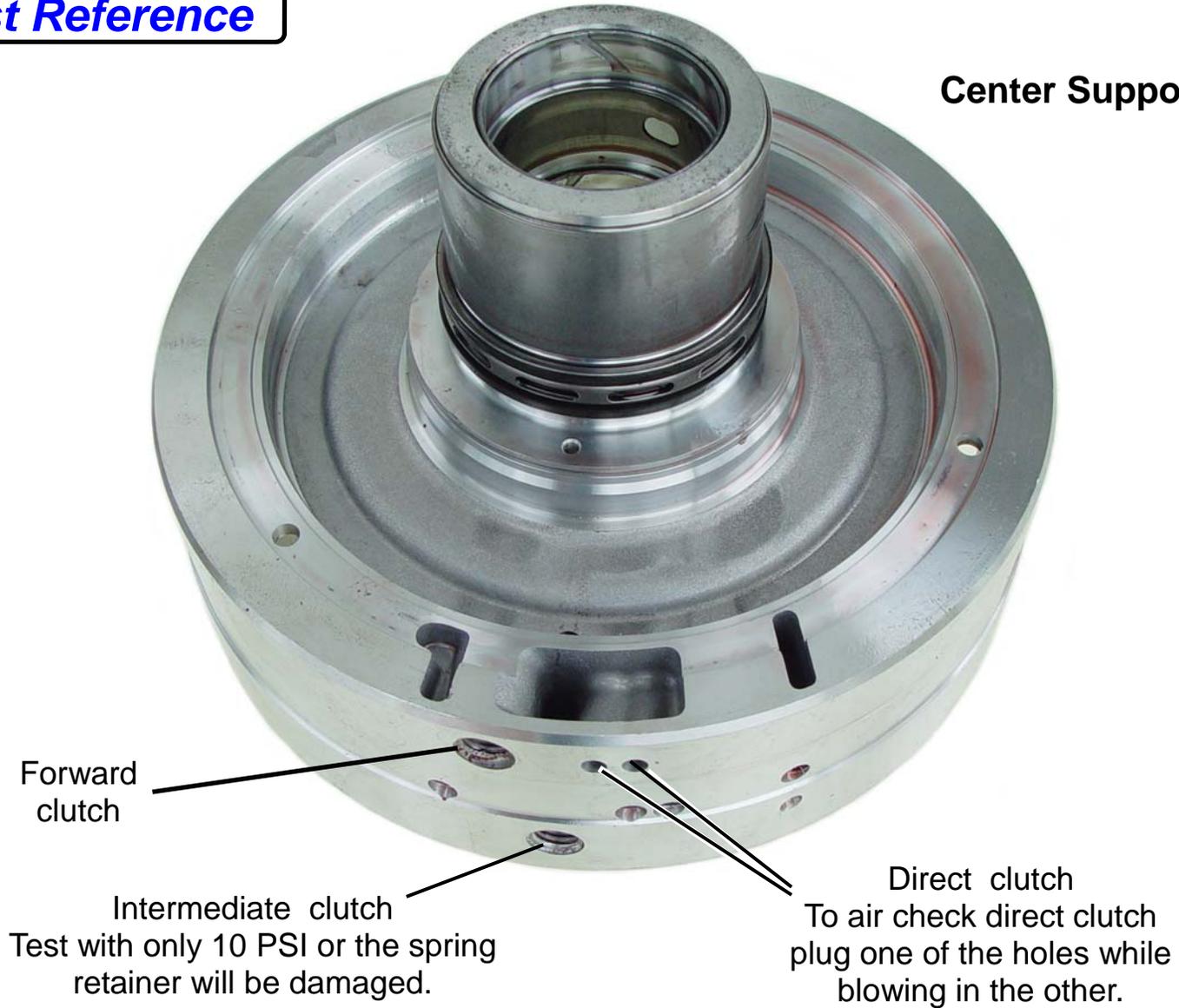
The front edge of E4OD separator plate makes a good straight edge.



Pump Body

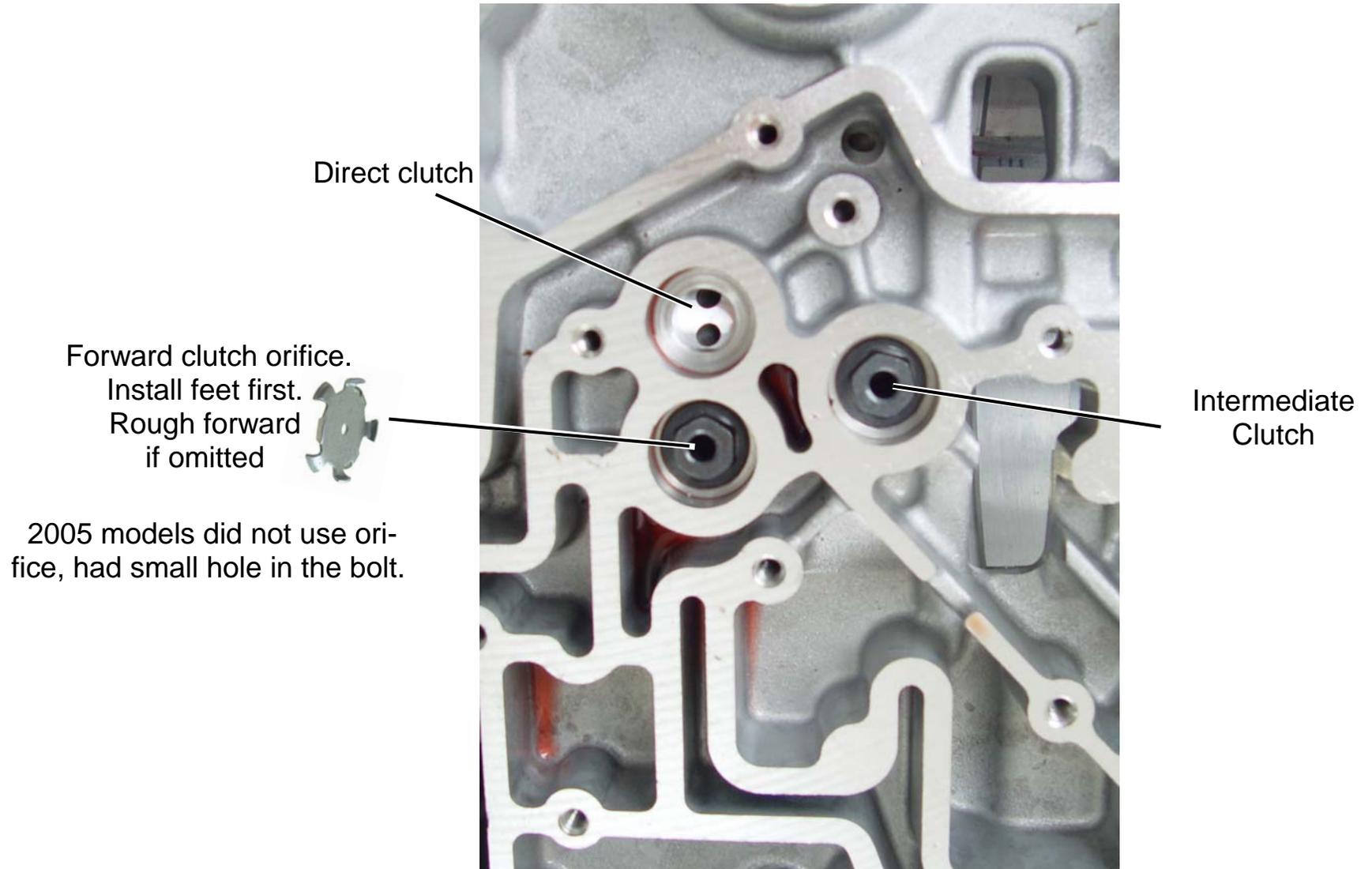
Fast Reference

Center Support



Fast Reference

Tighten 2 center support bolts: 24 ft lbs.



Fast Reference

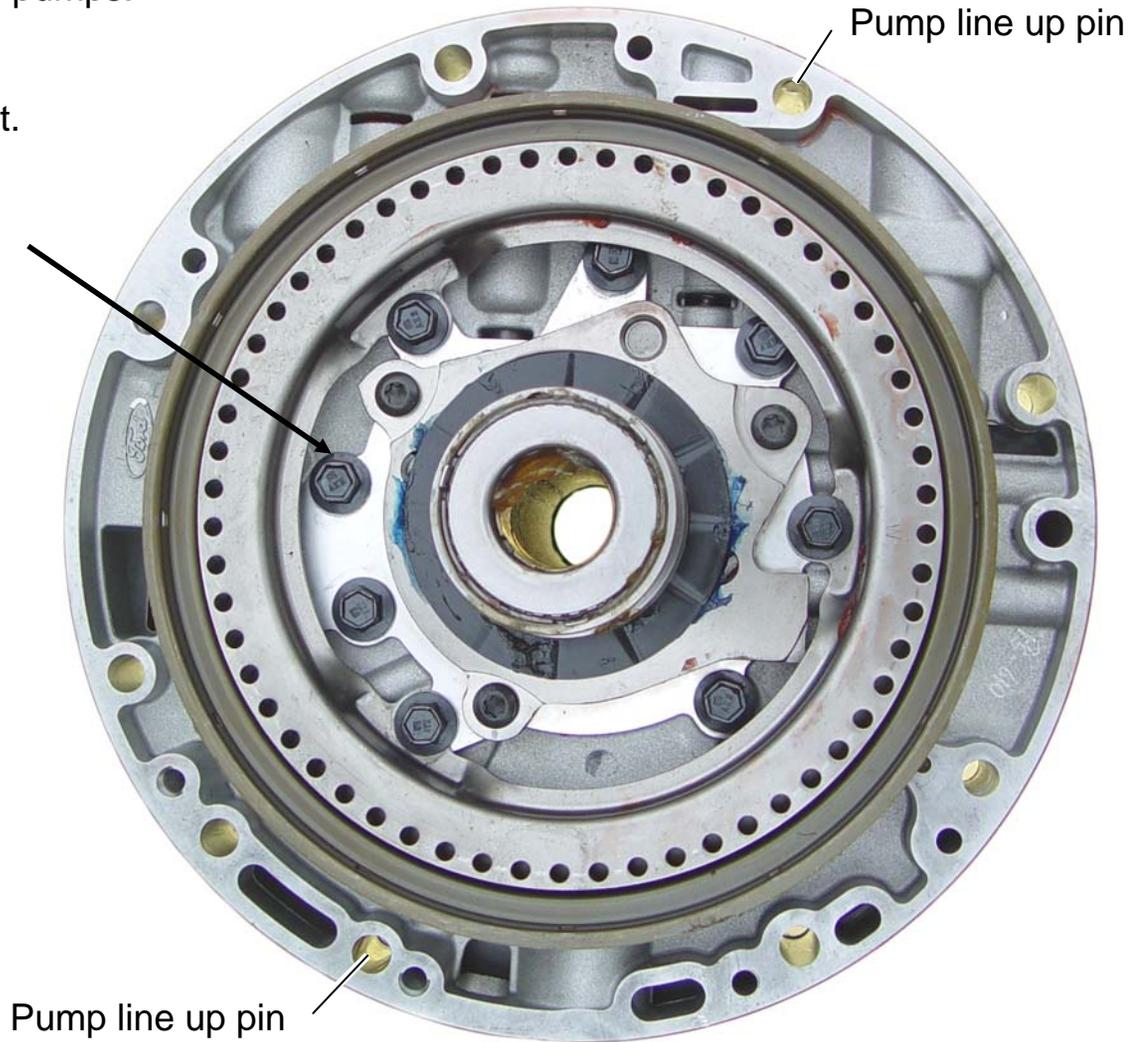
Pump Alignment

Nissan Bell Housing Bolts have a shoulder that will align this pump and E4OD pumps.

Torque 8 bolts to 23 lb. ft.



Ford line up pins #307-466 locations shown. Then use the Ford band strap # 307-D004 on the outside to align pump and stator bodies.



Fast Reference

The Technology IS the Ethic

If the sign on the building or any advertising says, "Transmissions" that is declaration to the whole Universe that you know how to fix them.

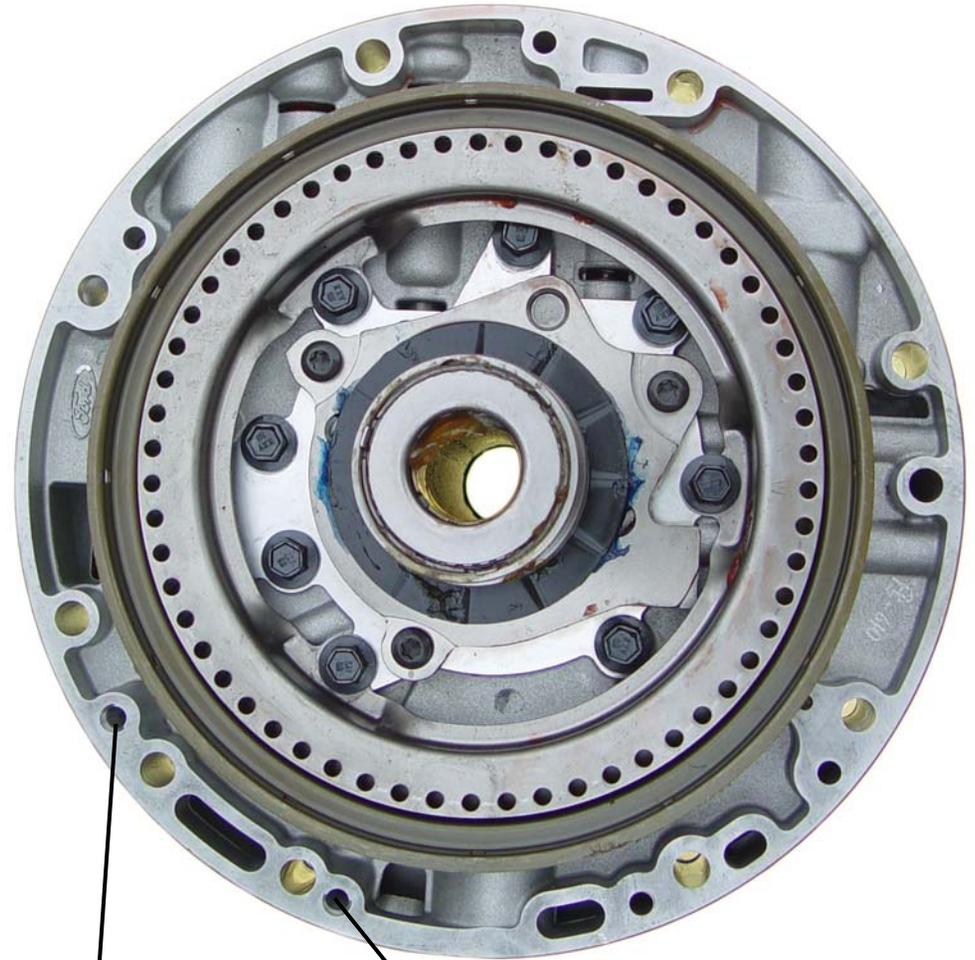
When a product or service is offered, the offer itself is a specific claim by the seller that he is accepting the MORAL and TECHNICAL responsibility for correct function, for a reasonable length of time, in exchange for money.

Regardless what you may call your repair, the job is in your shop to have the complaints and failures corrected. It doesn't matter how honest you are, as a person, if you do not fix the causes of the complaints and failures where is the ethic?

Each transmission develops 3 to 5 complaints and failures you see over and over again and again.

A service is ethical and deserving to the exact extent that your service corrects the causes of those complaints and failures; and does not include a whole bunch of parts that were not needed.

No more and no less, Gil



Coast Clutch

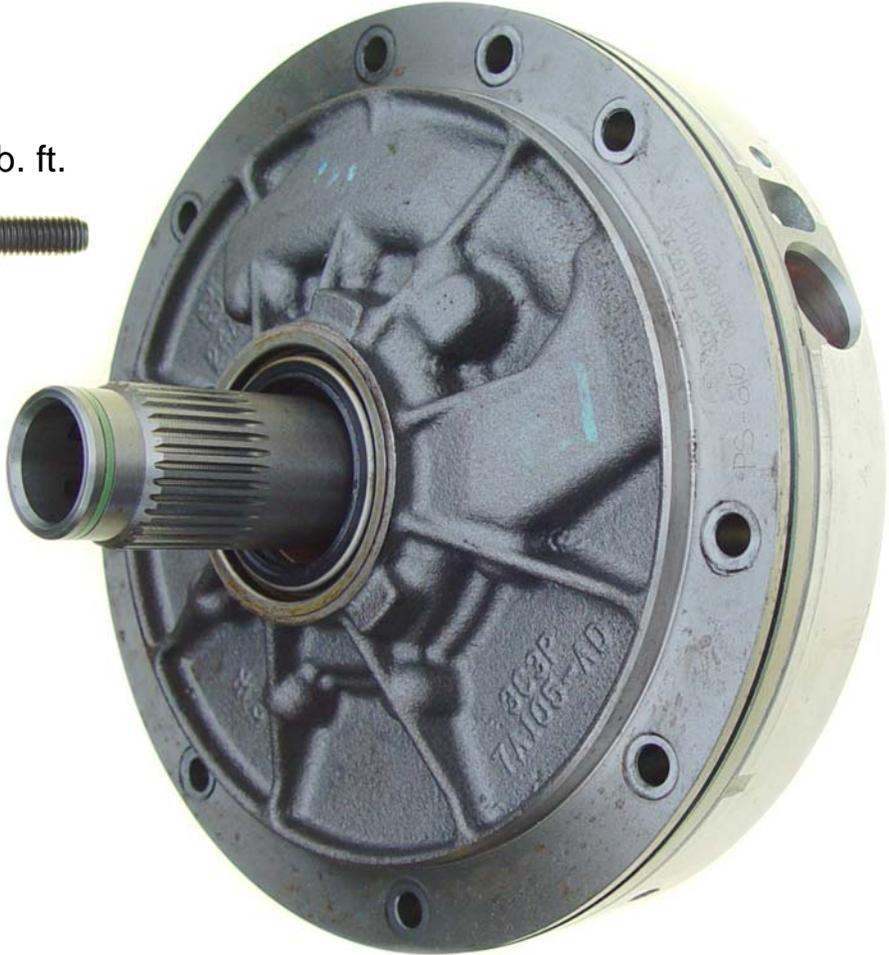
Overdrive Clutch

Air test with mouth or 10 PSI.
More can damage the spring retainer.

Fast Reference

Pump Install

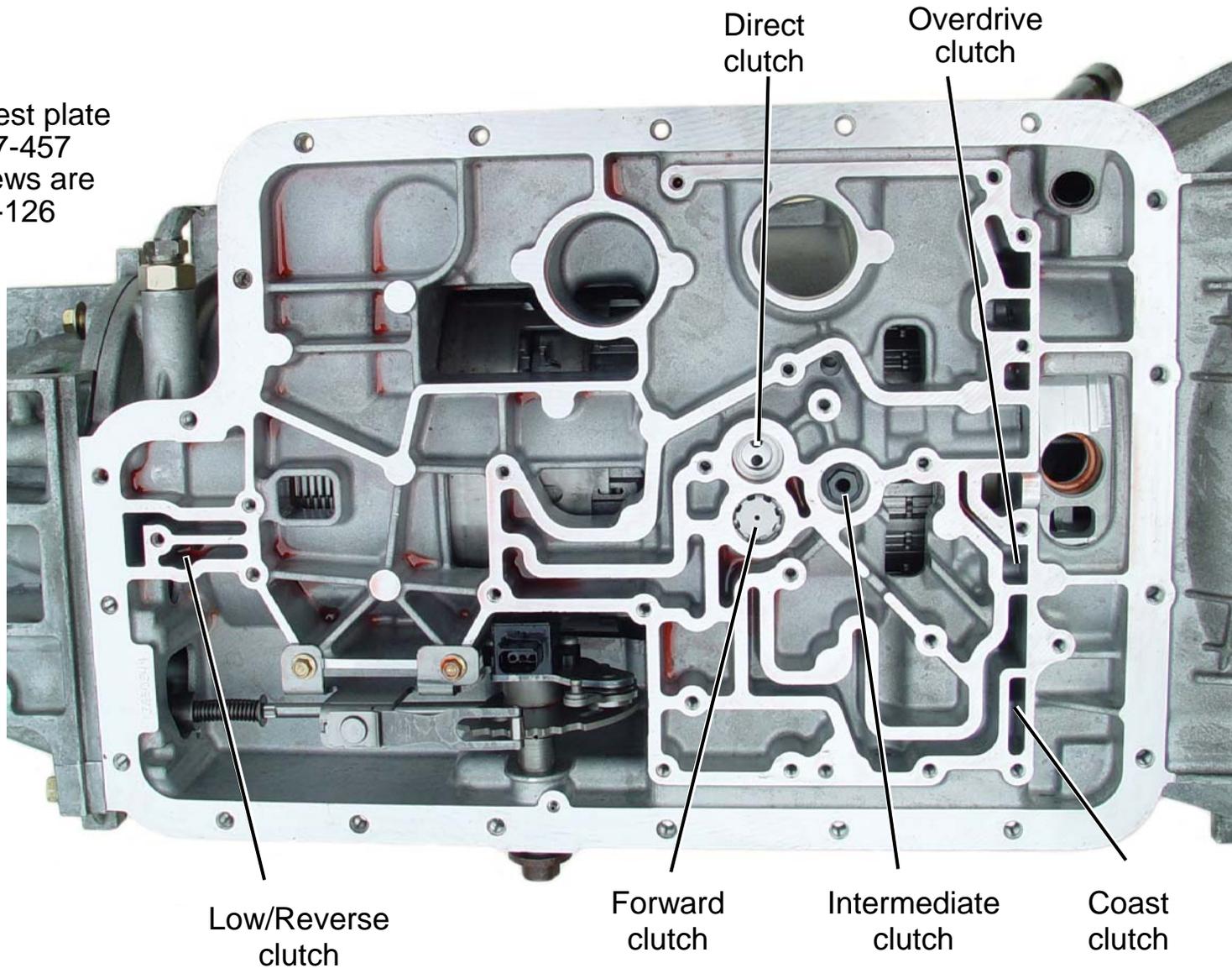
Torque bolts to 20 lb. ft.



Fast Reference

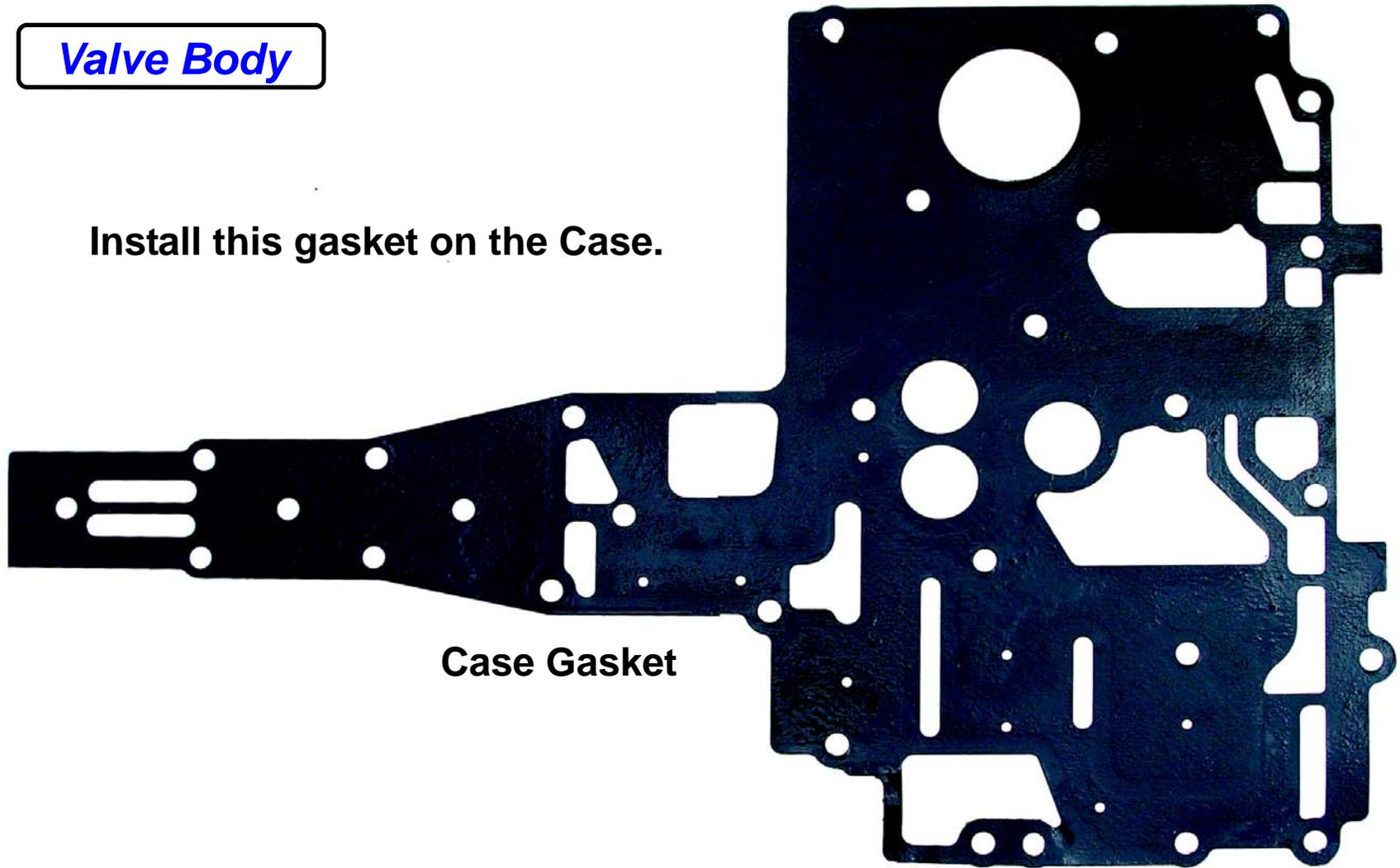
Air Pressure Checks

Ford air test plate is #307-457 and screws are #307-126



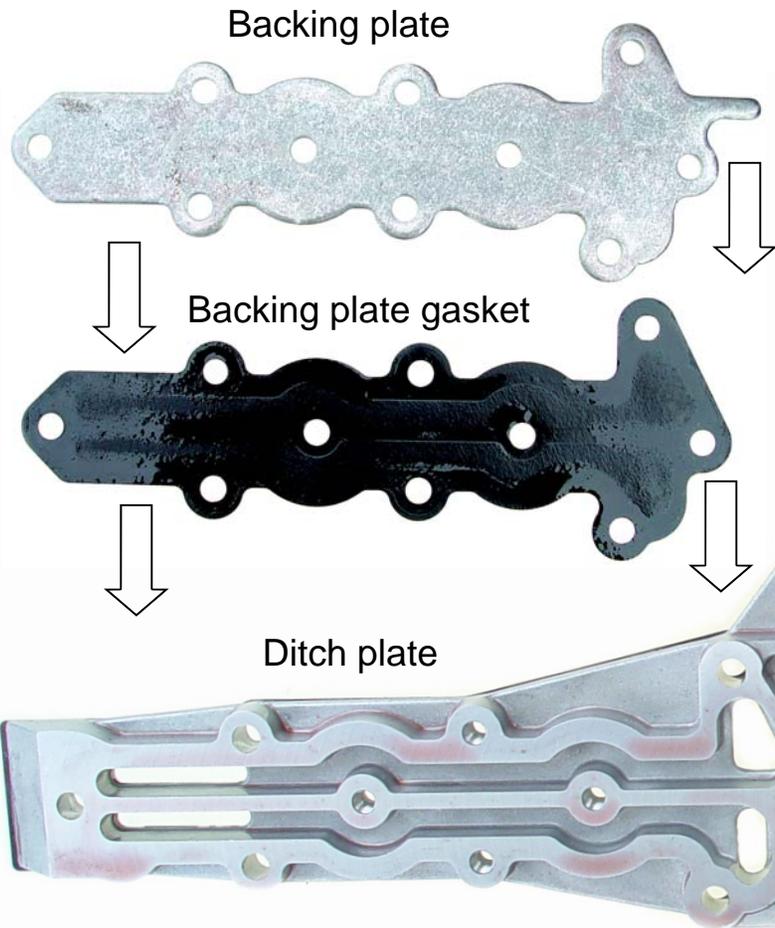
Valve Body

Install this gasket on the Case.

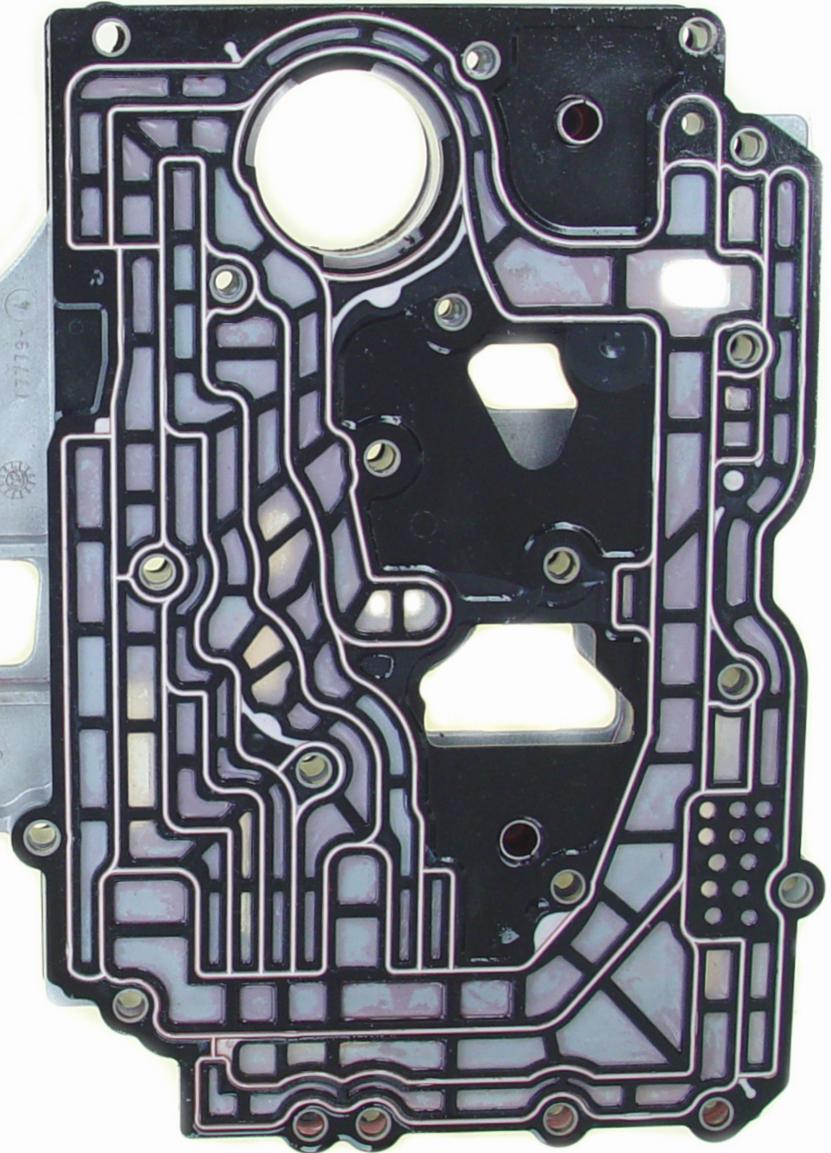


Case Gasket

Valve Body



Filter Screen Gasket

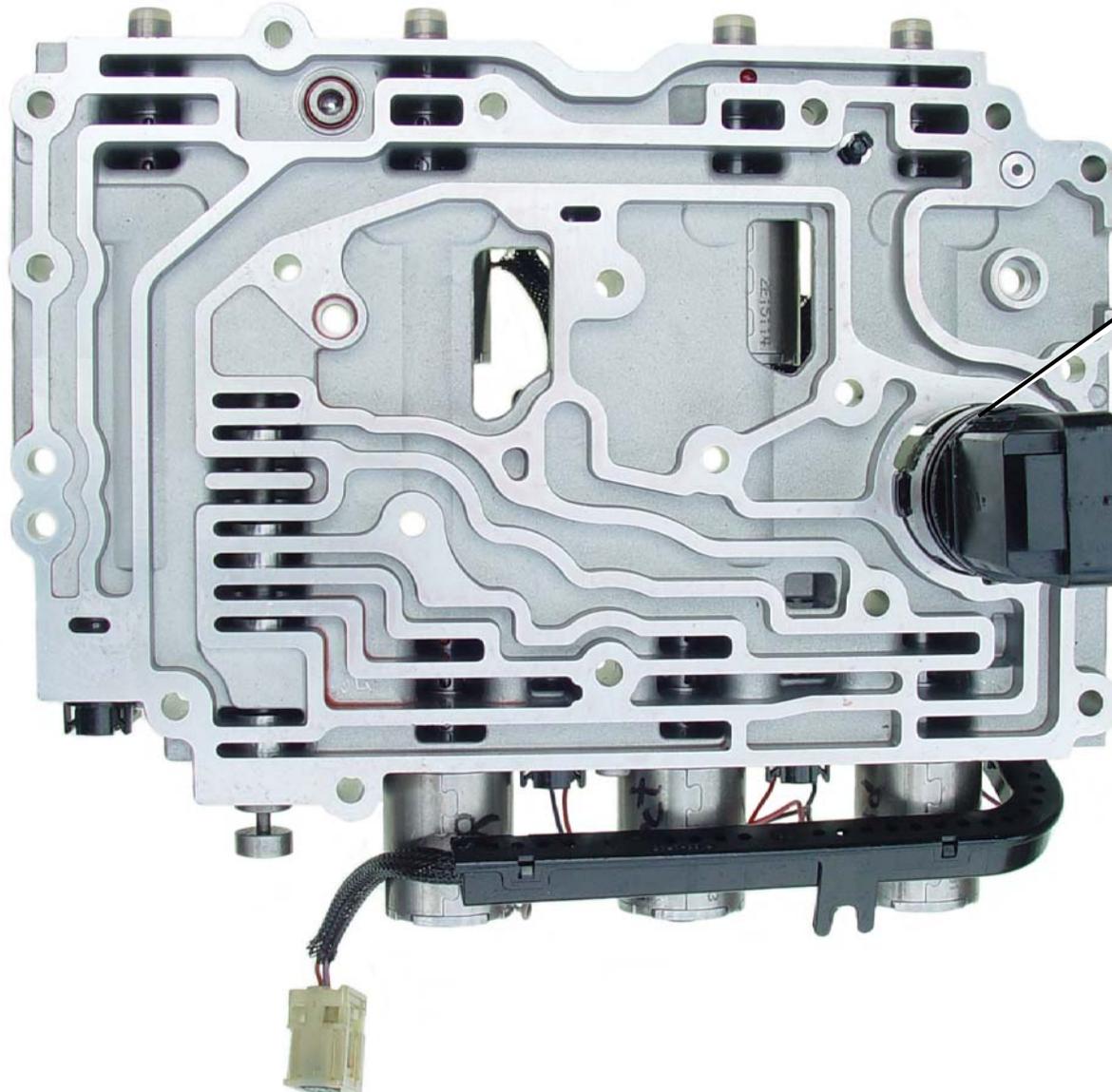


Install this Channel casting onto the case gasket.

Valve Body

Manifold body

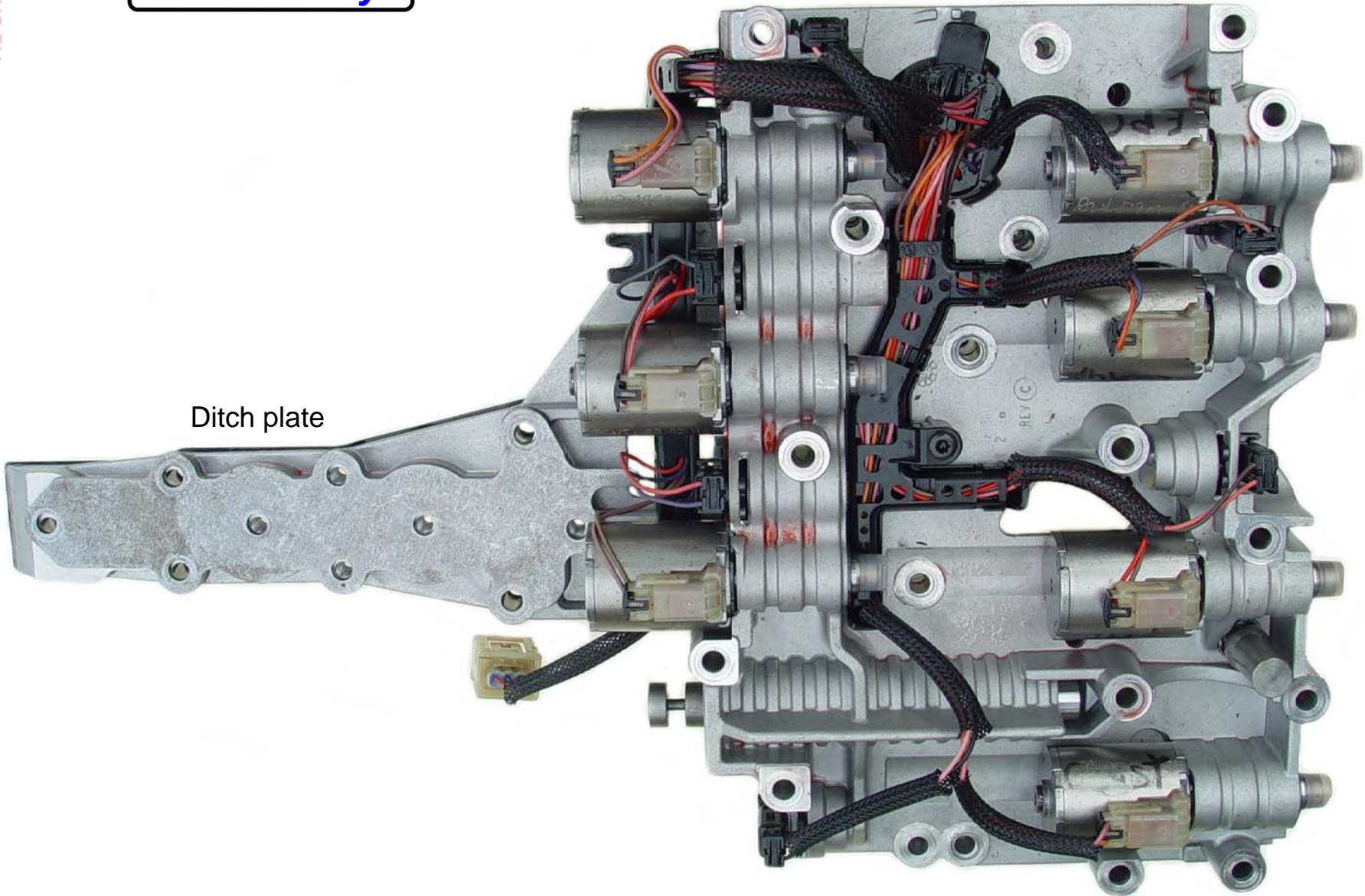
LISTEN UP:
O'ring must be installed
prevent leak..



Bulkhead
connector

Valve Body

Valve Body



Ditch plate

Valve Body

Solenoid and Pressure Switch Identification

Manifold Body

Coast clutch
SSPC-A

Coast clutch pressure
switch PS-A

Manual valve

Overdrive
clutch
SSPC-B

Low/reverse

*How long has it been
since you told a valve
body how pretty it is?*

OD pressure
switch PS-B

Low/reverse
clutch pres-
sure switch
PS-E

Converter clutch

Direct
clutch
SSPC-D

Fluid
Temp

Direct clutch
pressure
switch PS-D



Intermediate
clutch SSPC-C

Pressure
control PC-A

Intermediate clutch
pressure switch PS-C

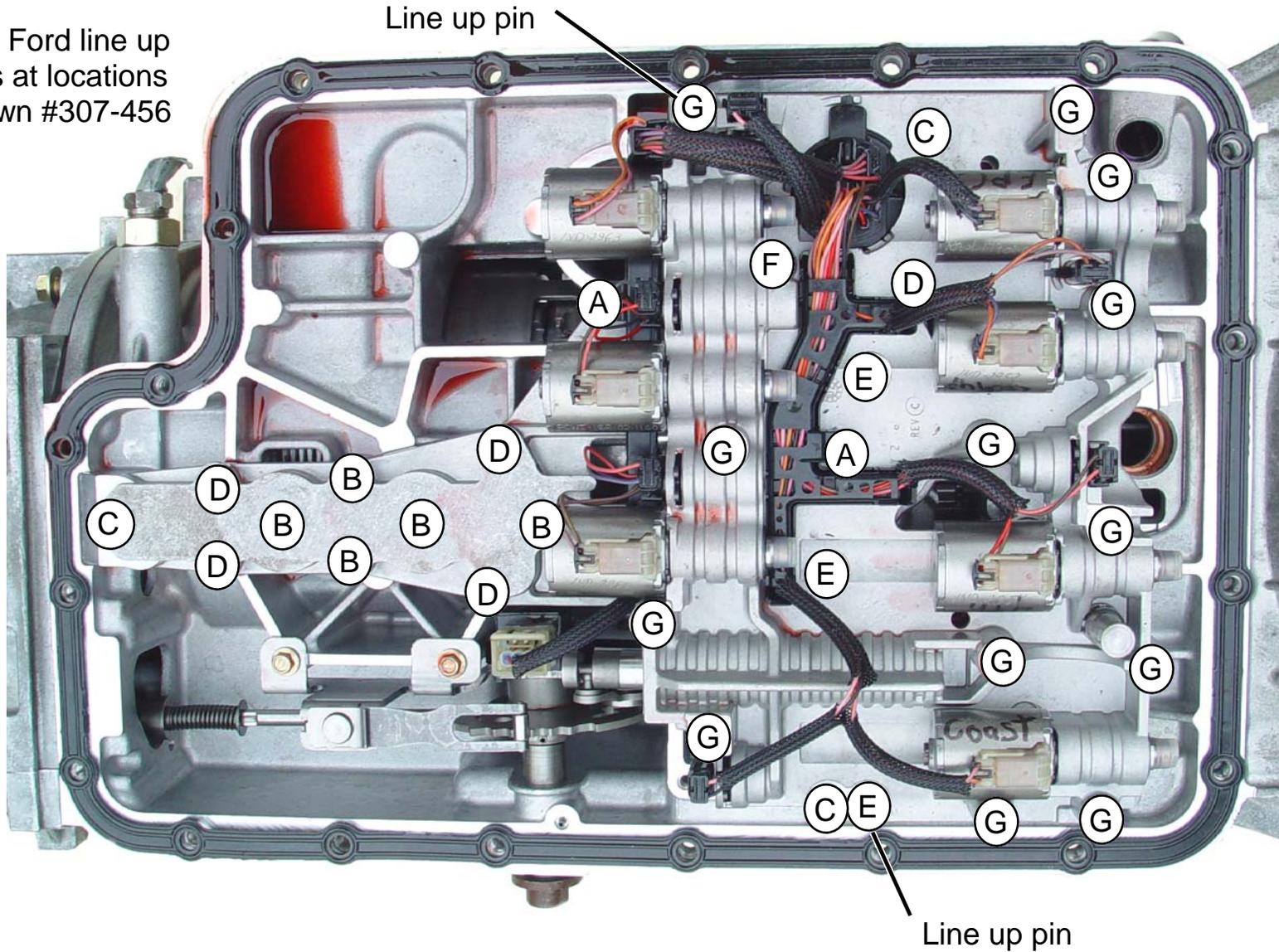
Listen: Pressure Control.
Special regulating spring
comes in the Shift Kit®.
Part of RunAway line **FIX.**

Some models don't have pressure switches.

Valve Body

Valve Body Bolt Locations

Use Ford line up pins at locations shown #307-456



Valve Body

Bolts shown are actual size when printed.

Two A  Torx #25 x .720" long Wiring Harness Bolts

Torque bolts B thru G to 89 in. lb.

Five B 

.830" x 10MM

Three C 

Five D 

1.440"x 8MM

1.300" x 10MM

Three E 

1.920"x 8MM

One F 

2.420"x 10MM

Thirteen G 

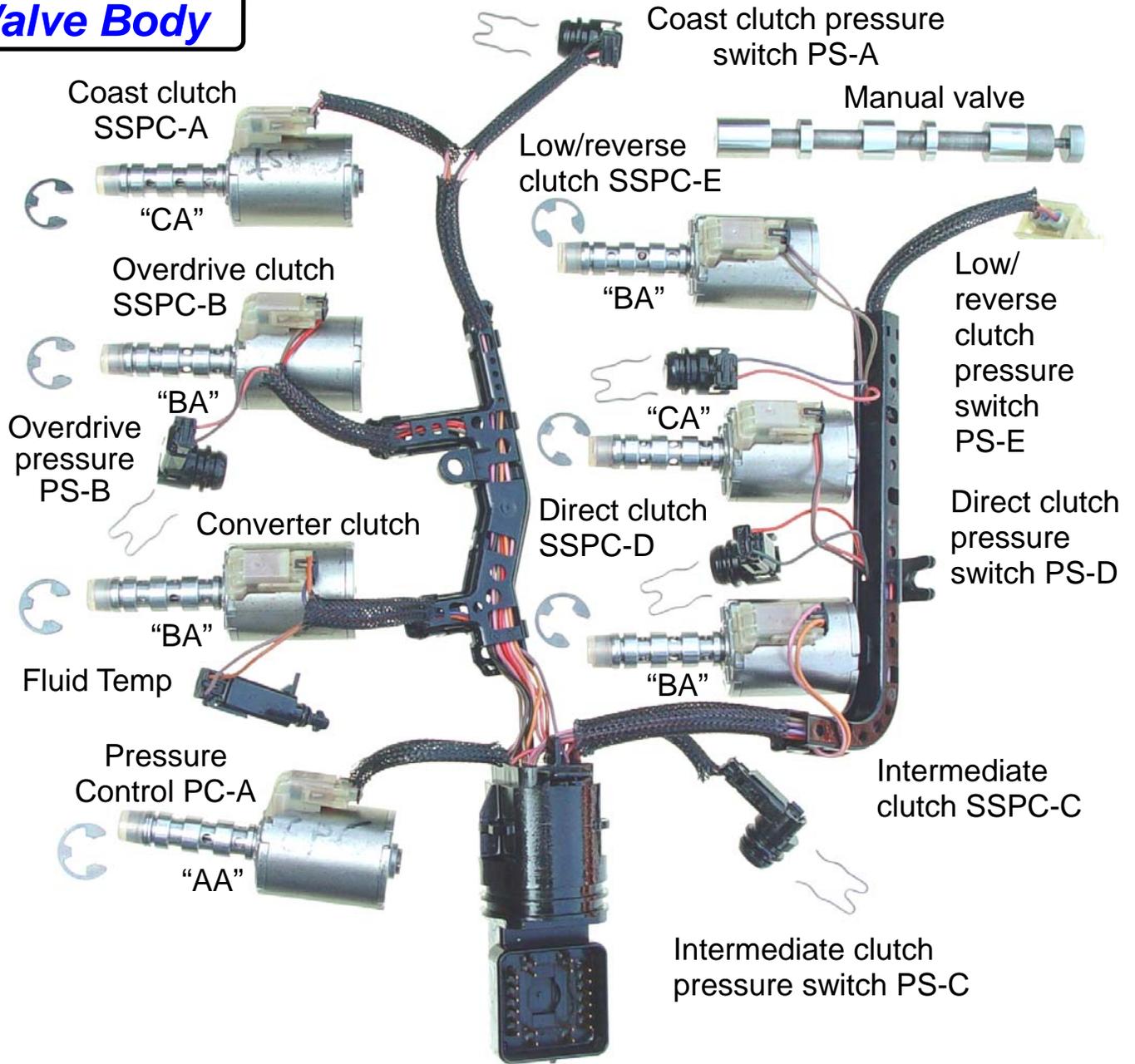
2.920" x 8MM

Valve Body

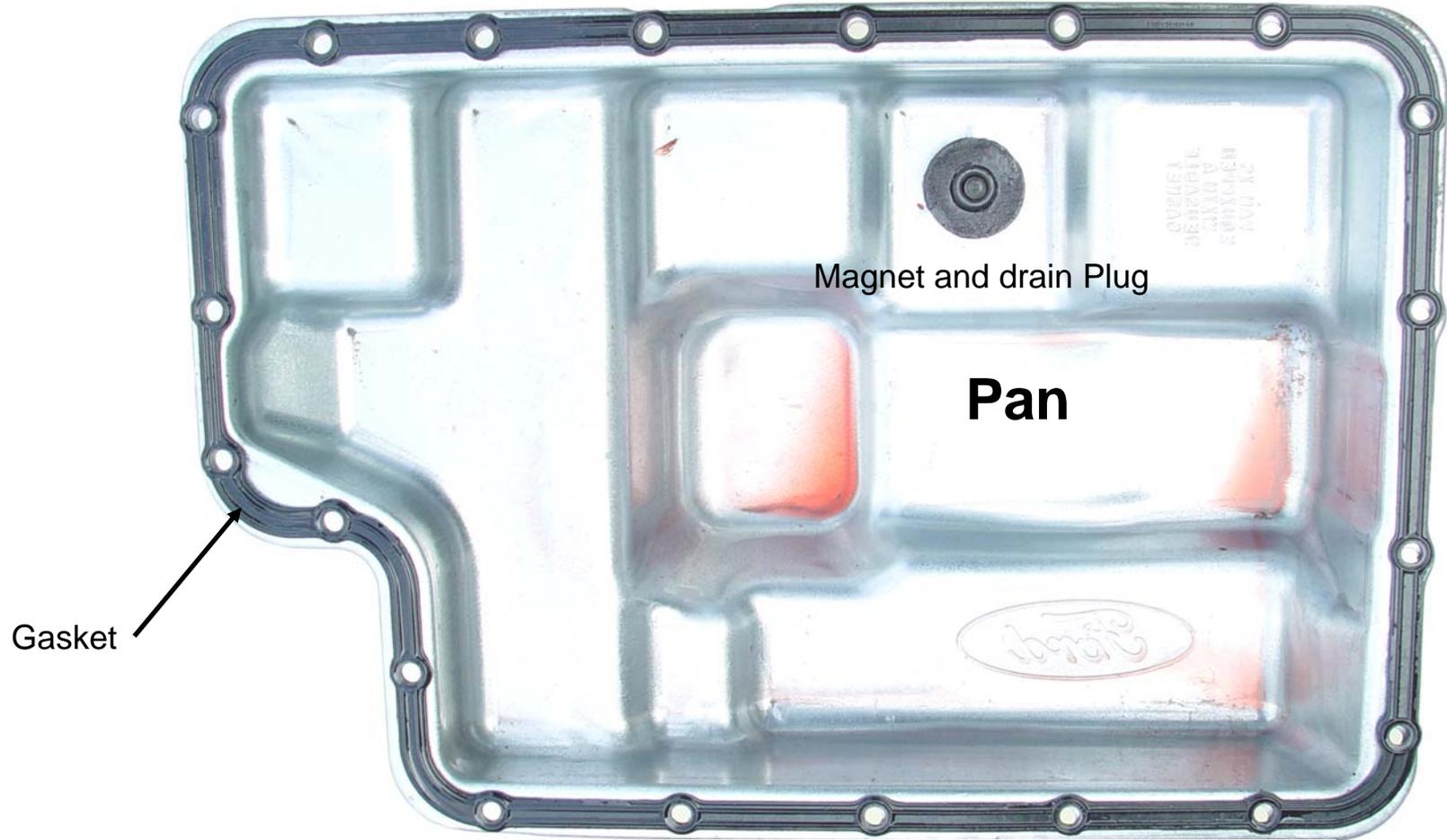


Each solenoid is identified, do not mix! "AA" = Line Pressure Control Solenoid.

To look at solenoids installed on the valve Body - See page 4.



Oil Pan-Gasket-Filter

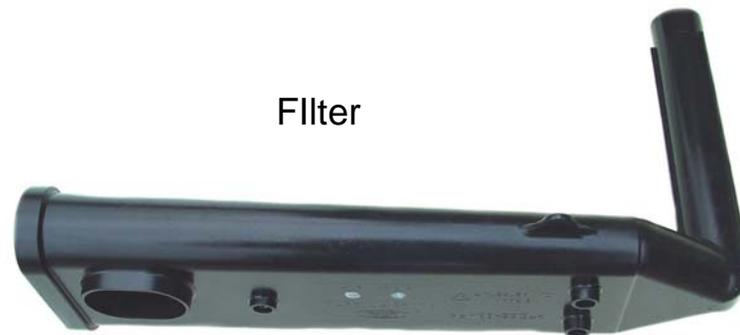


Magnet and drain Plug

Pan

Gasket

Use Mercon SP fluid only. Clutch plate friction material, computer strategy and this oil are all tuned to go together.



Filter

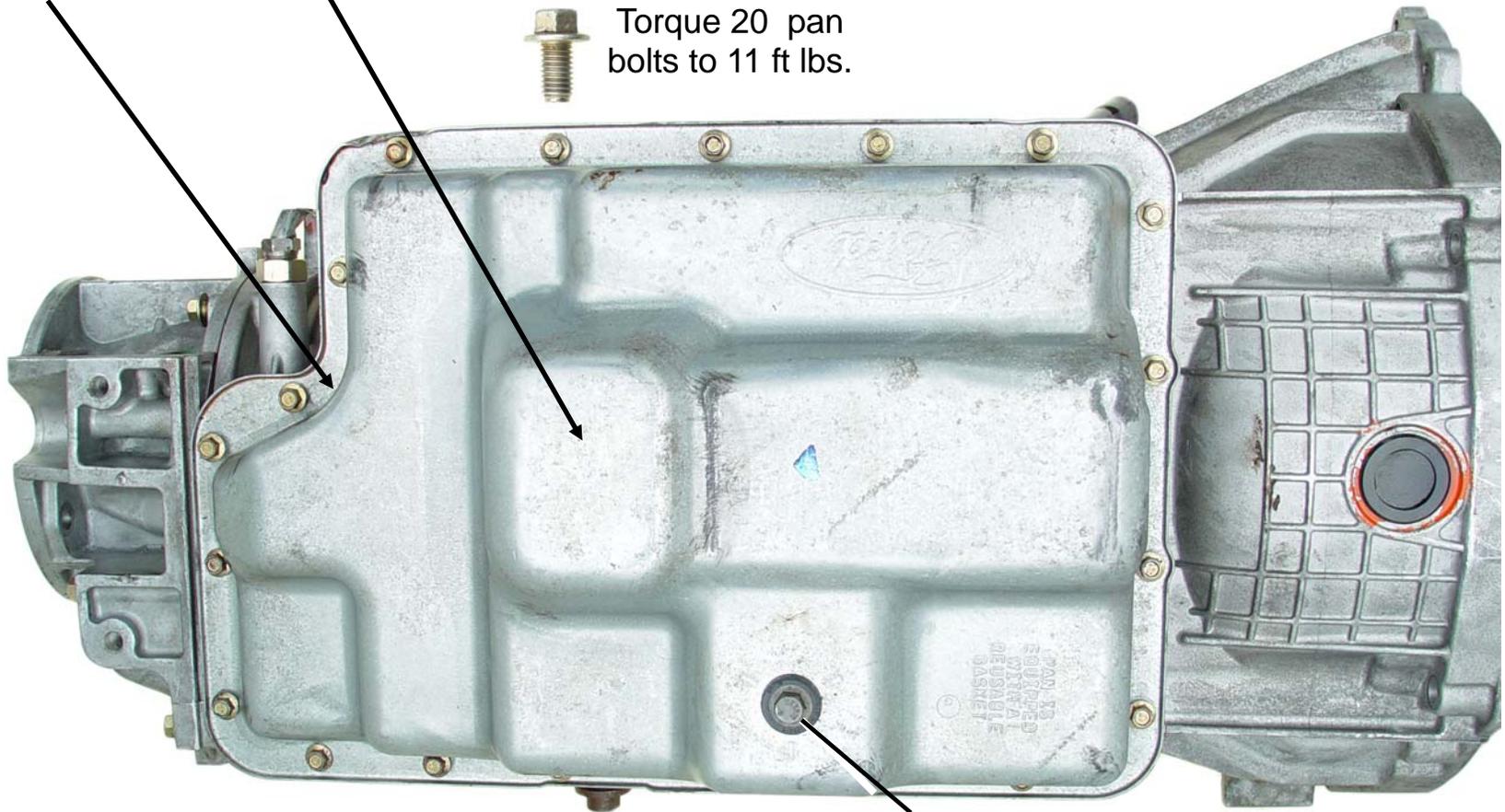
Oil Pan & Filter

Bump for deep pickup.

Corner notch in pan.



Torque 20 pan bolts to 11 ft lbs.



Torque drain plug to 18 lb ft

Internal Components

Internal Parts

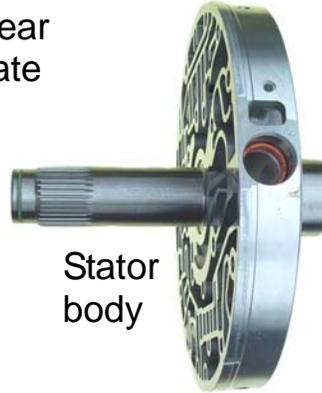
Pump body



Pump gears



Wear plate



Stator body

Tabs face



Coast drum



Pump gasket

Overdrive Piston



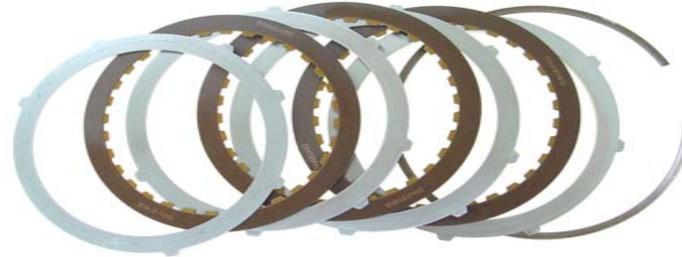
Return Springs



Selective Plastic washer



Overdrive clutches



Coast clutch drum



Overdrive planet



Bearing faces as shown



Overdrive ring gear

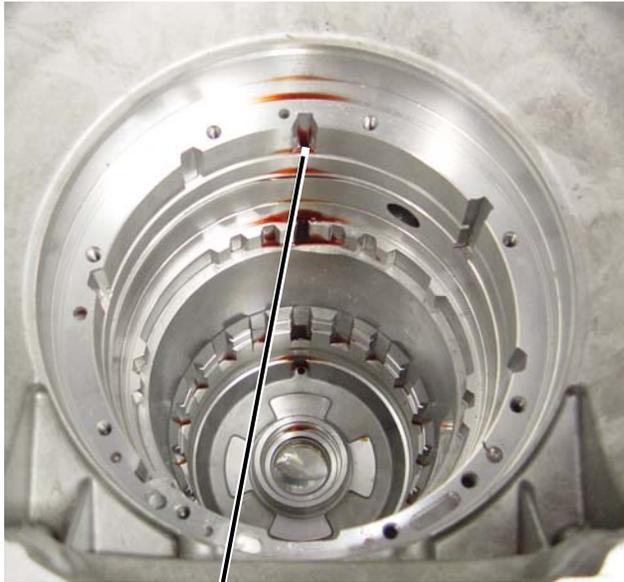


Bearing faces as shown

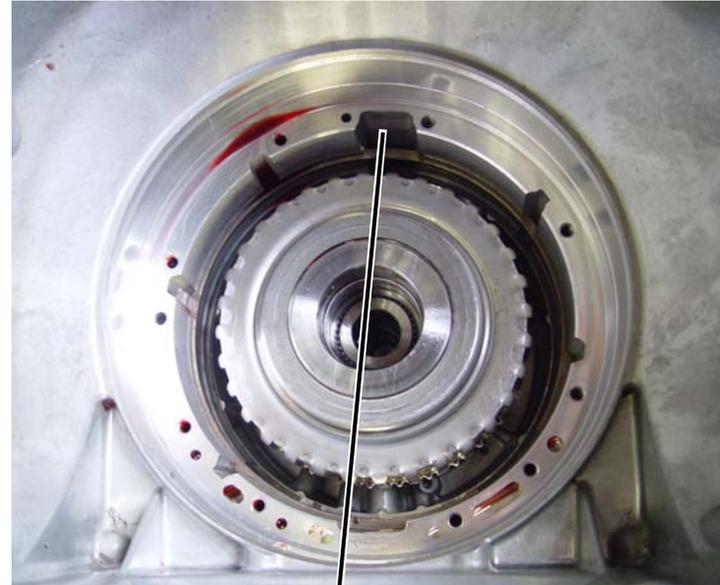


Internal Parts

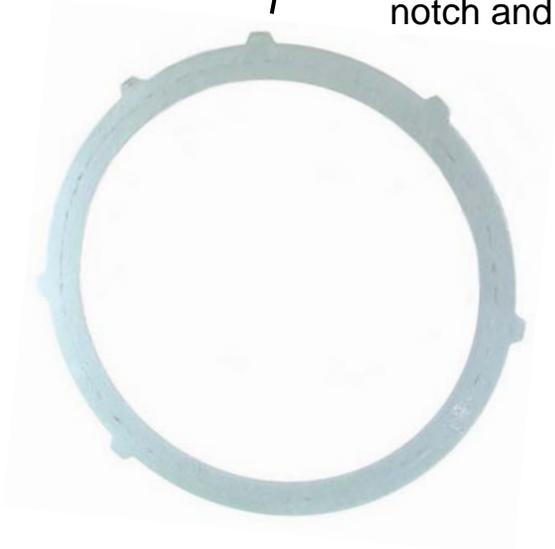
Overdrive Steel: 1st and 2nd Design



1st design. Narrow case notch and apex tooth



2nd design: Wider case notch and apex tooth.



Correct plates only.
They will not swap.



Internal Parts



.108" snap ring
Beveled side
faces up

Center
Support



Selective
Plastic
Washer

Intermediate
Clutches



Direct clutch drum



NEEDLE BEARING TALK

Faces Up means:
Towards Converter

Faces Down means:
Towards extension housing

Inner lip
faces up



Plastic
washer



Tabs face down



Fast Reference

Snap Ring Upgrade

Case Lug Blow Out Low Reverse Snap Ring

If the trans came in with no Reverse or Slip in Reverse, this is the first thing to look at. Because it will probably need a new case.

Snap Ring Ends

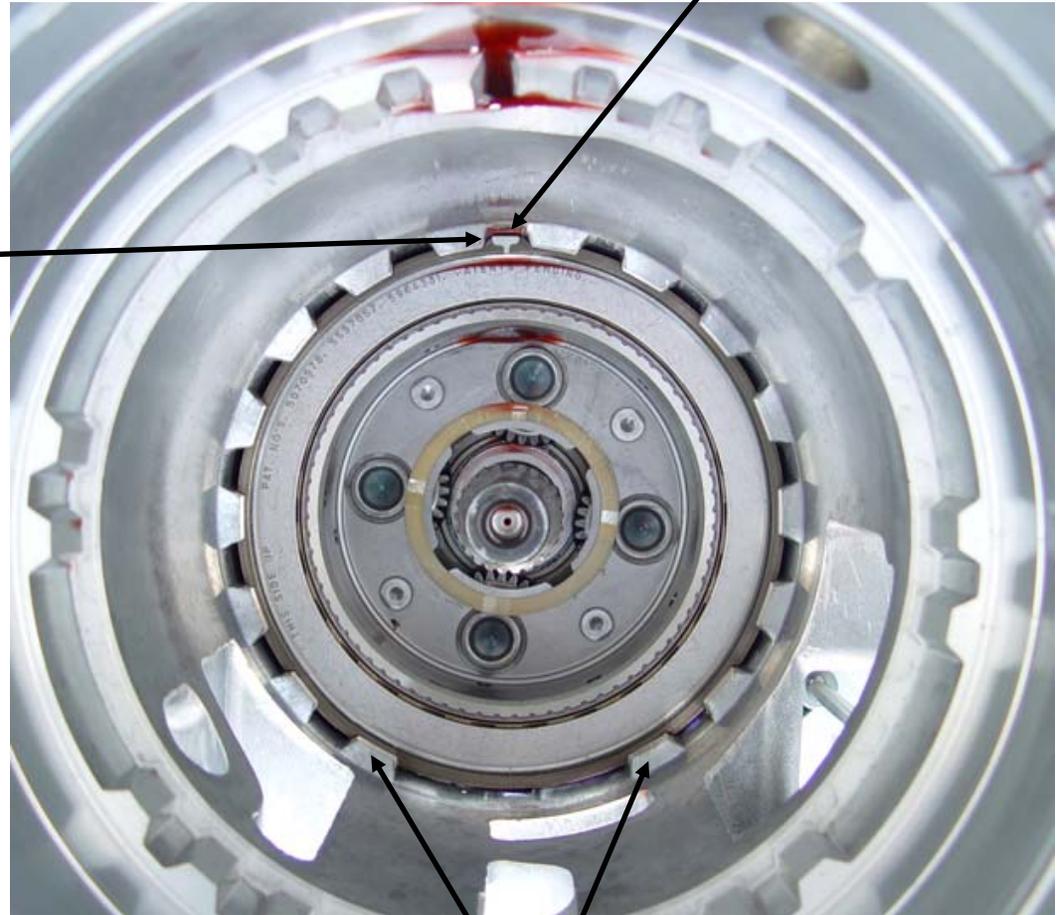


Please install the snap ring exactly as shown.



5R110 Shift Kit® has 400% stronger Snap Ring. "You are going to love it."

Install the Hi-Tension Low Reverse Snap Ring with the ends toward top of the case-opposite the pan.



Pan side.

"A"

"A" These are the two lugs that break off. If they're broken off a new case is needed. If they are angle worn but still there the tougher snap ring will save the case.

Internal Parts



Forward Hub



Bearing inner lip faces up



Forward Planet



Bearing tabs faces down

Input shell



Plastic washer



Reverse Planet



Plastic washer



Low / reverse clutch



Internal Parts

Reverse ring gear

Bearing tabs
faces up



Bearing tabs
faces up



Low / Reverse Clutch Piston

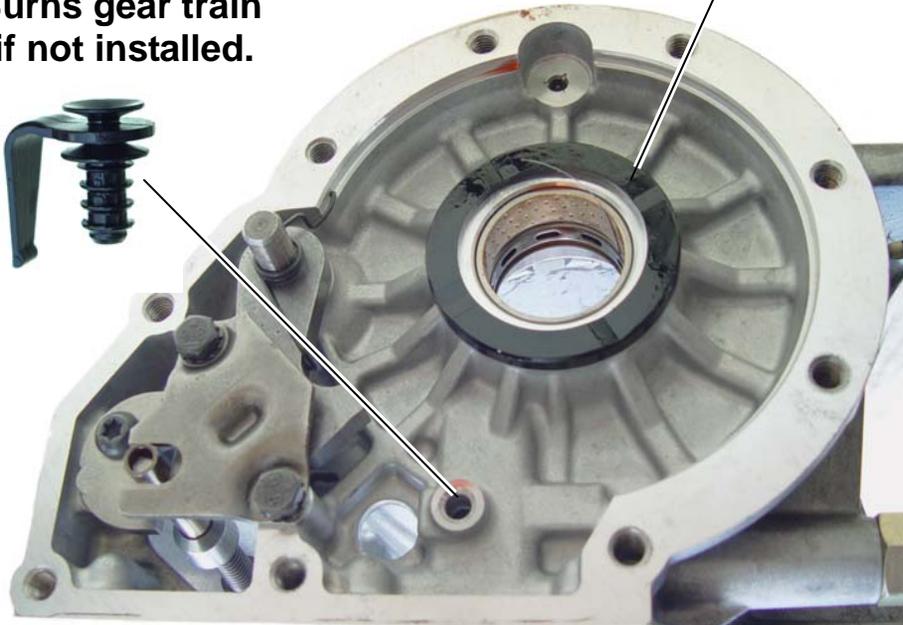
Return Springs



Internal Parts

Extension Housing

Lube orifice plug
**Burns gear train
if not installed.**



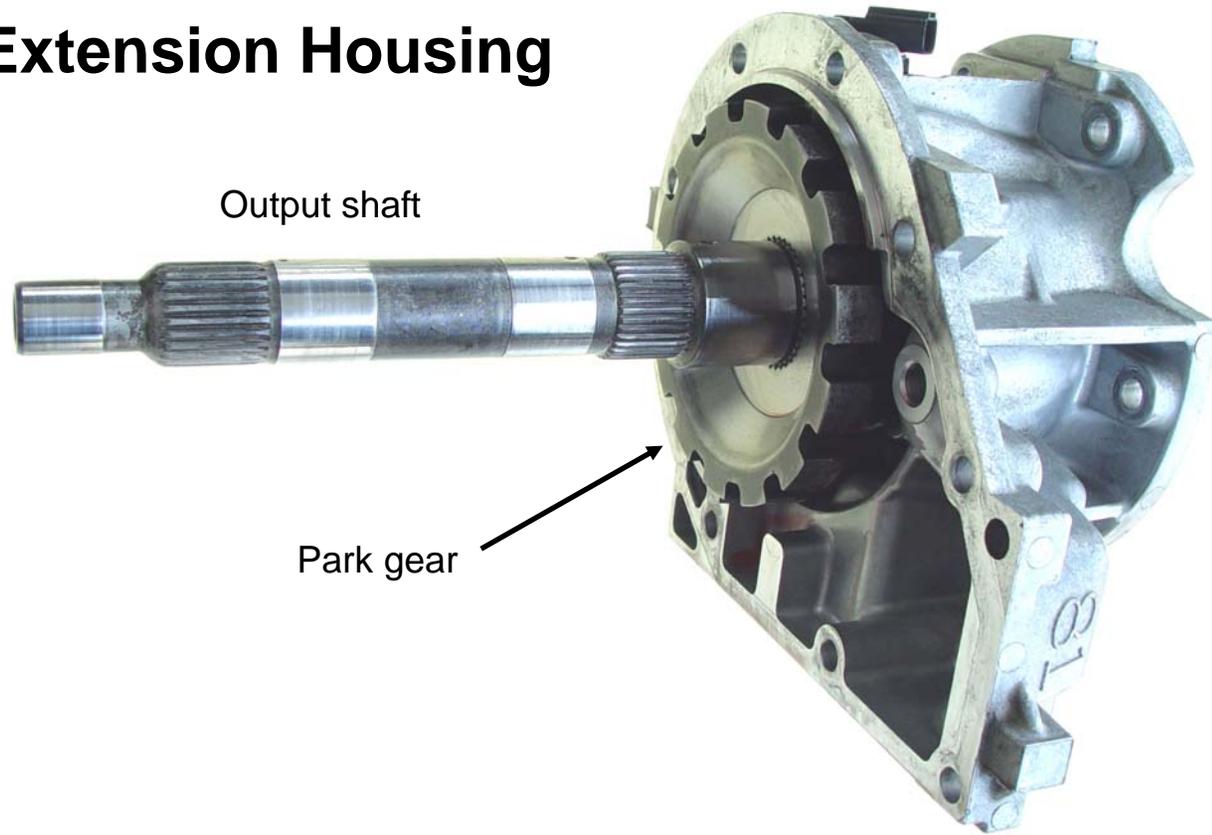
Plastic washer

Extension housing gasket



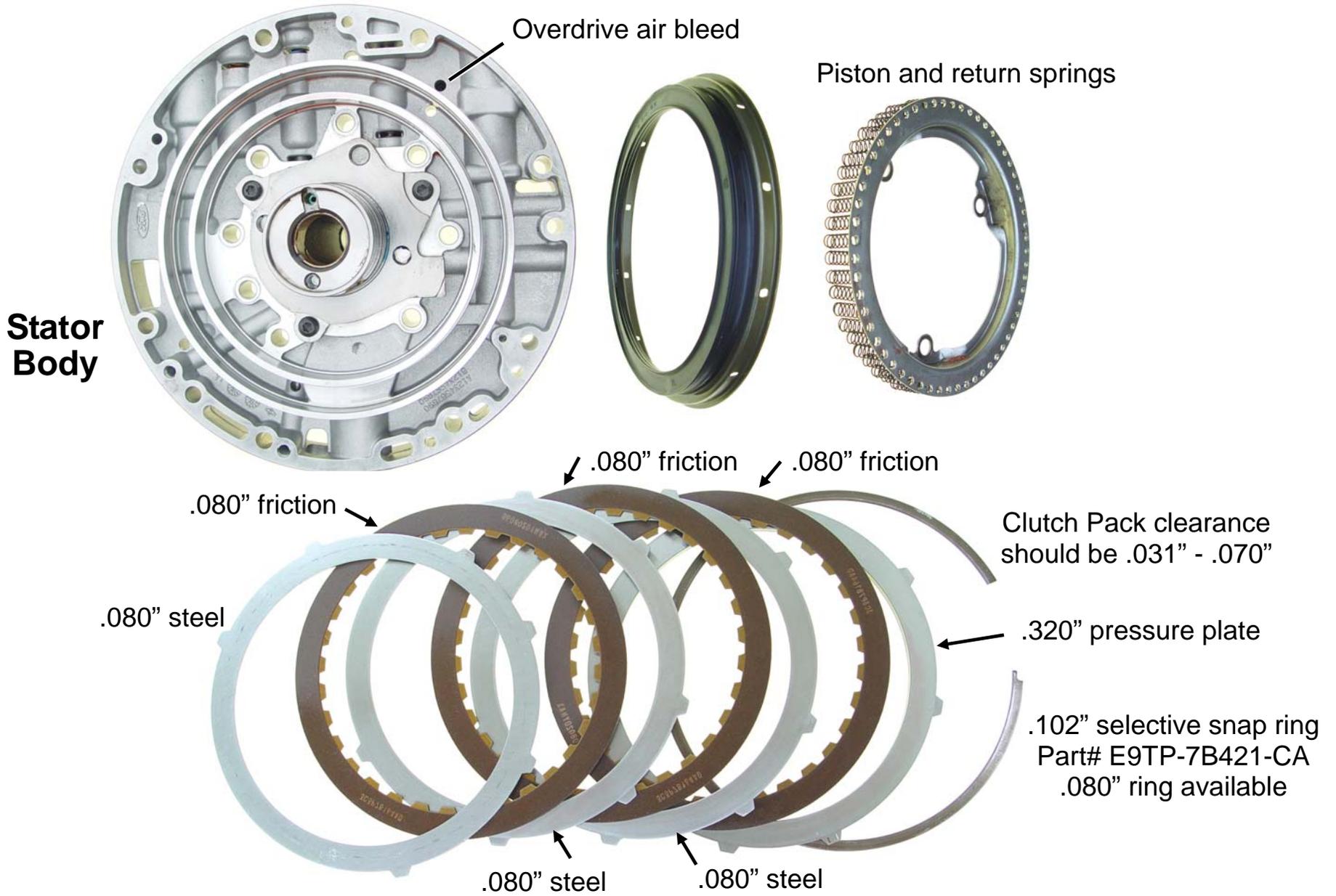
Internal Parts

Extension Housing



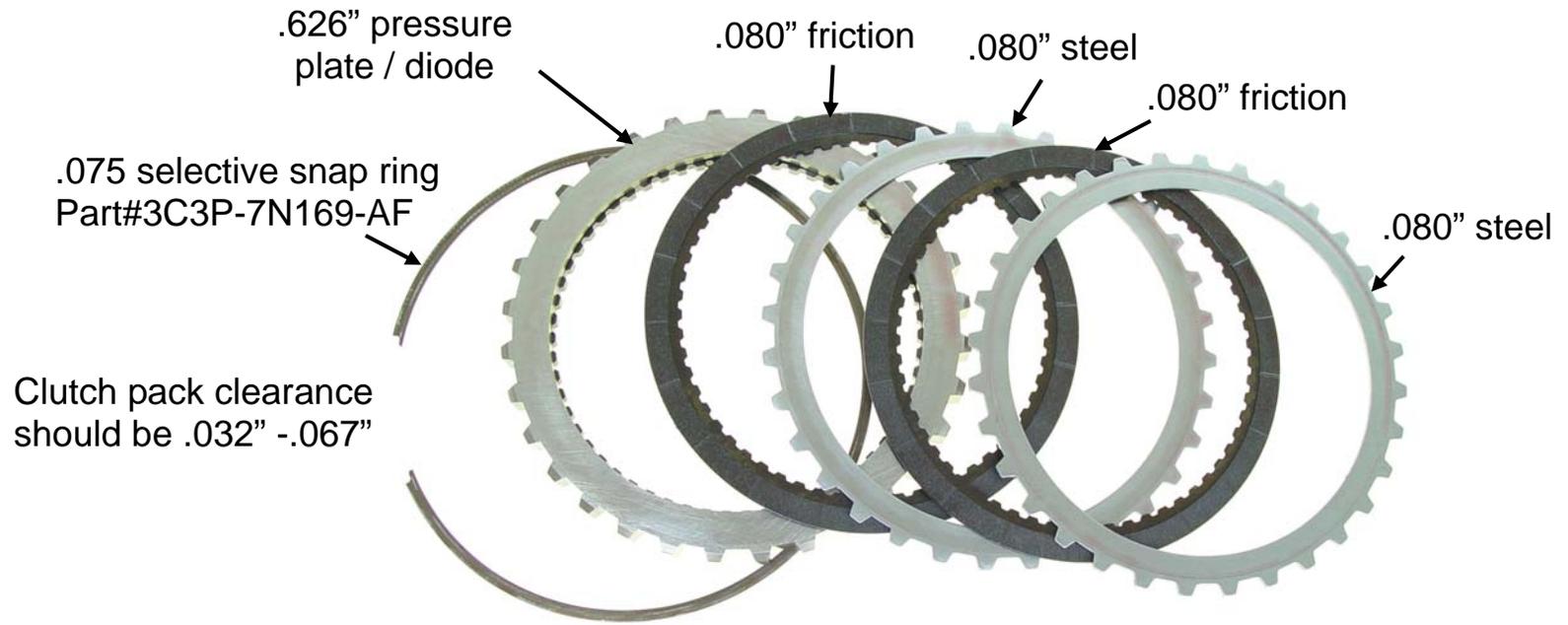
Clutch Packs

Overdrive clutch



Clutch Packs

Coast Clutch



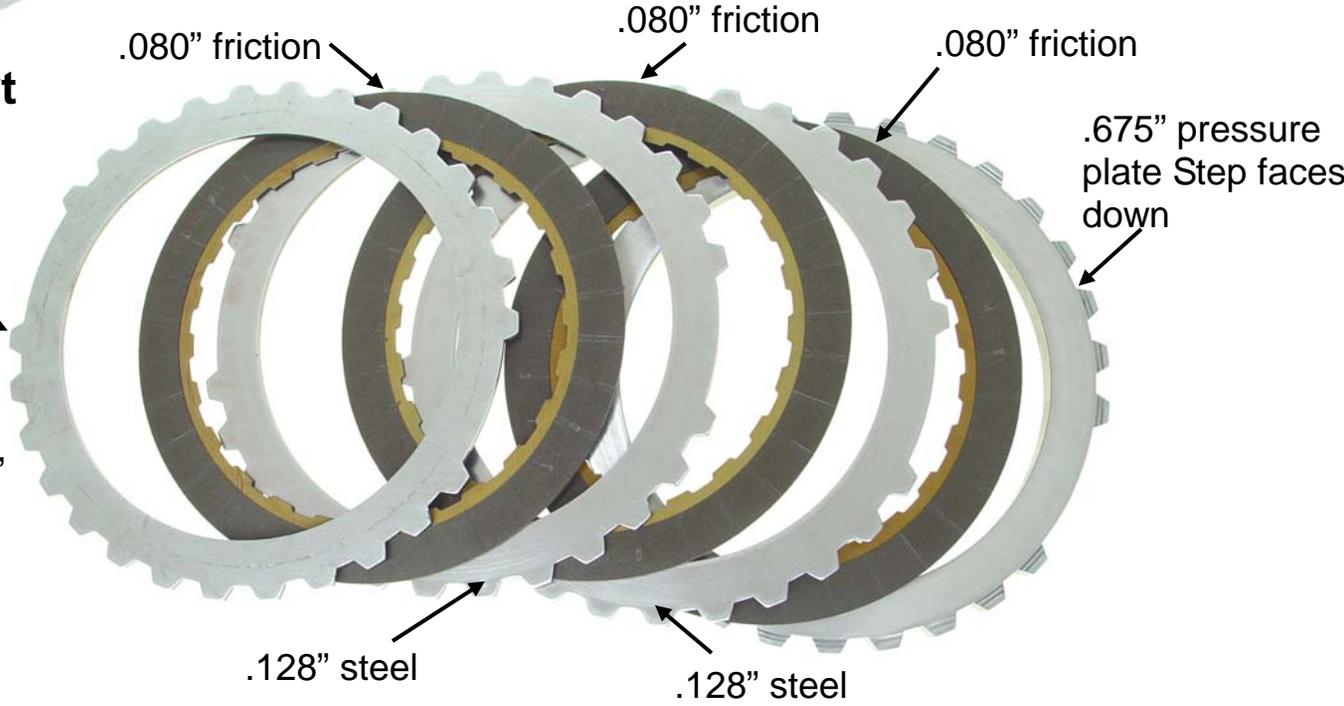
Clutch Packs



Center support

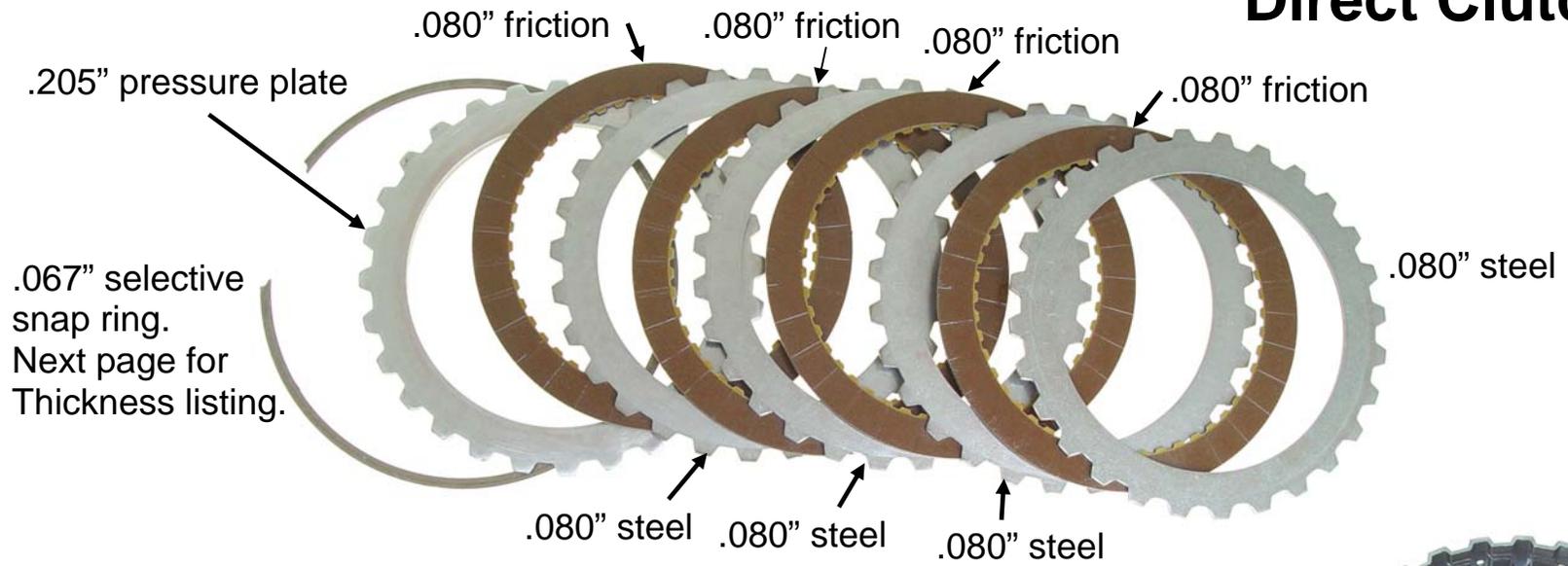
Intermediate clutch

Clutch piston and return springs



Clutch clearance should be .035" - .071"

Direct Clutch



Snap Ring



Balance piston



Beveled spring faces as shown.



Piston

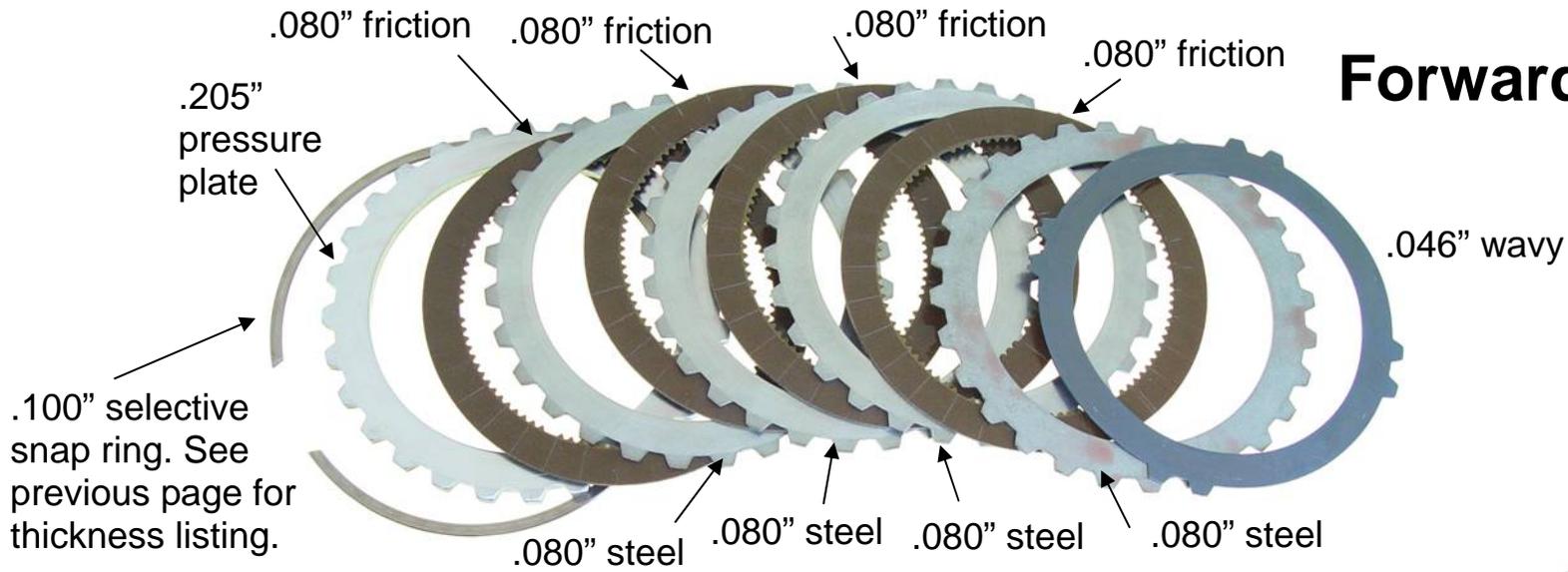


Drum

Clutch Packs

Clutch clearance
.050" to .068"





Forward clutch

Snap Ring



Balance piston



Release spring faces as shown.



Piston



Drum

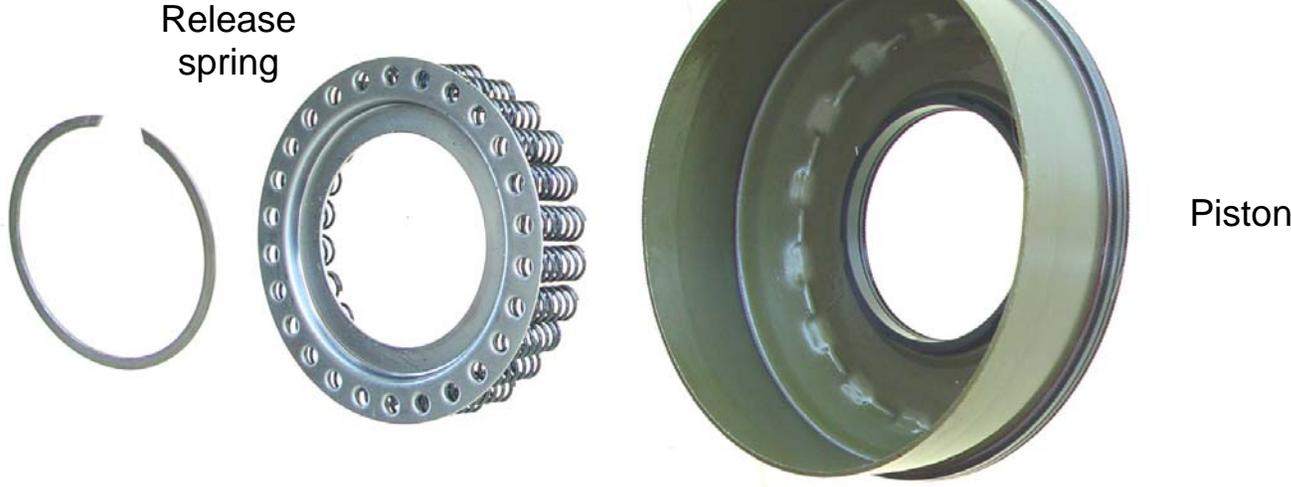
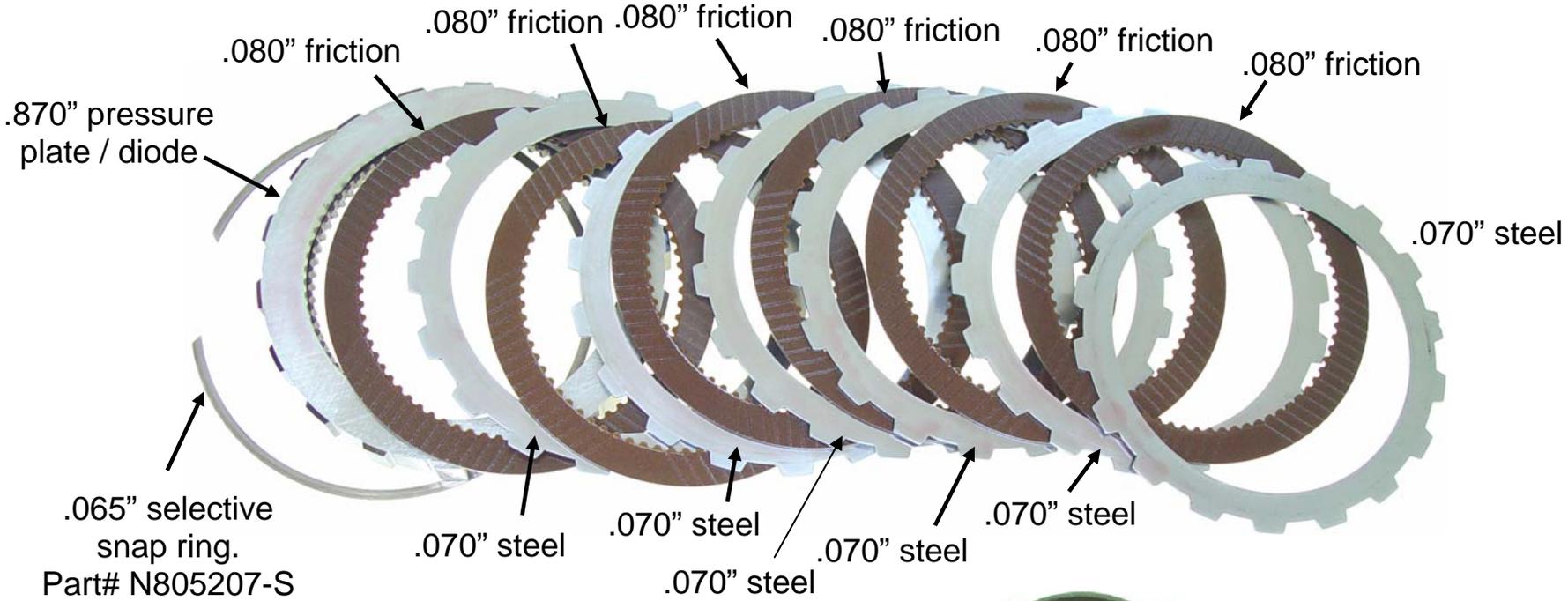
Clutch Packs

Clutch pack clearance should be .045" - .065"



Clutch Packs

Low / Reverse clutch



Clutch Packs

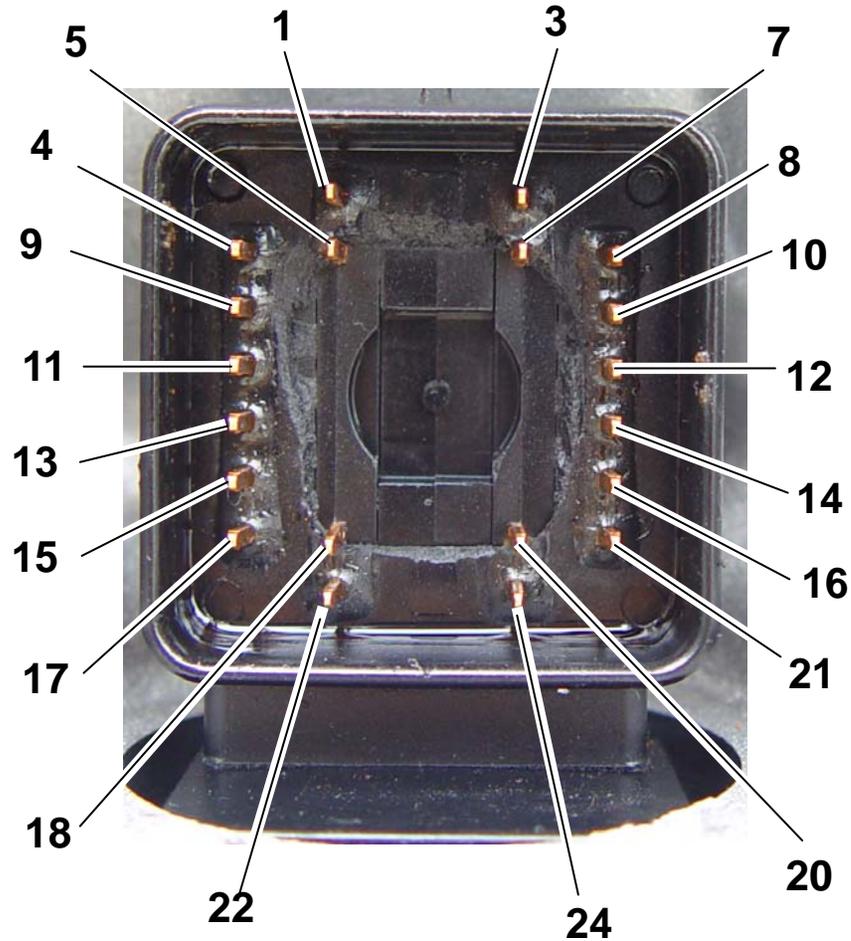
Direct clutch drum selective snap rings

Thickness	Part#
.056"	377437-S
.065"	377126-S
.074"	377127-S
.083"	377128-S
.092"	377444-S

Forward clutch drum selective snap rings

Thickness	Part#
.075"	3C3P-7G367-KA
.087"	3C3P-7G367-JA
.099"	3C3P-7G367-HA
.111"	3C3P-7G367-GA
.123"	3C3P-7G367-FA

Case Connector and Electronics



Internal Harness Connector

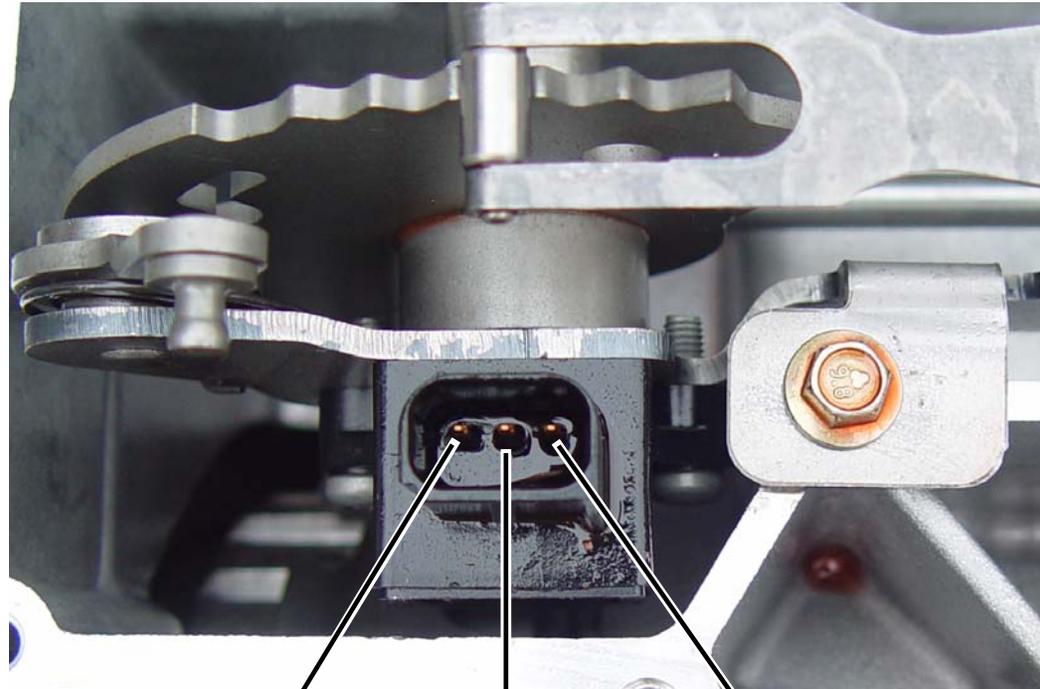
Note: Not all pins are present.

Pin chart and descriptions on the next page.

Internal Harness to PCM Connector

Harness Pin	Description	Pin Number at PCM
1	SSPC-E	13
2	None	
3	SSPC-B	10
4	SSPC-D	12
5	SSPC-C	11
6	None	
7	Sol. VPWR	7
8	TCC	14
9	PS-C	19
10	PC-A	17
11	PS-D	20
12	SSPC-A	9
13	PS-E	21
14	PS-A	17
15	TR-P signal	25
16	PS-B	18
17	TR-P ground	22
18	TFT signal	26
19	None	
20	Sol. VPWR	7
21	VPWR for TR-P only	1
22	Signal return	30
23	None	
24	Sol VPWR	7

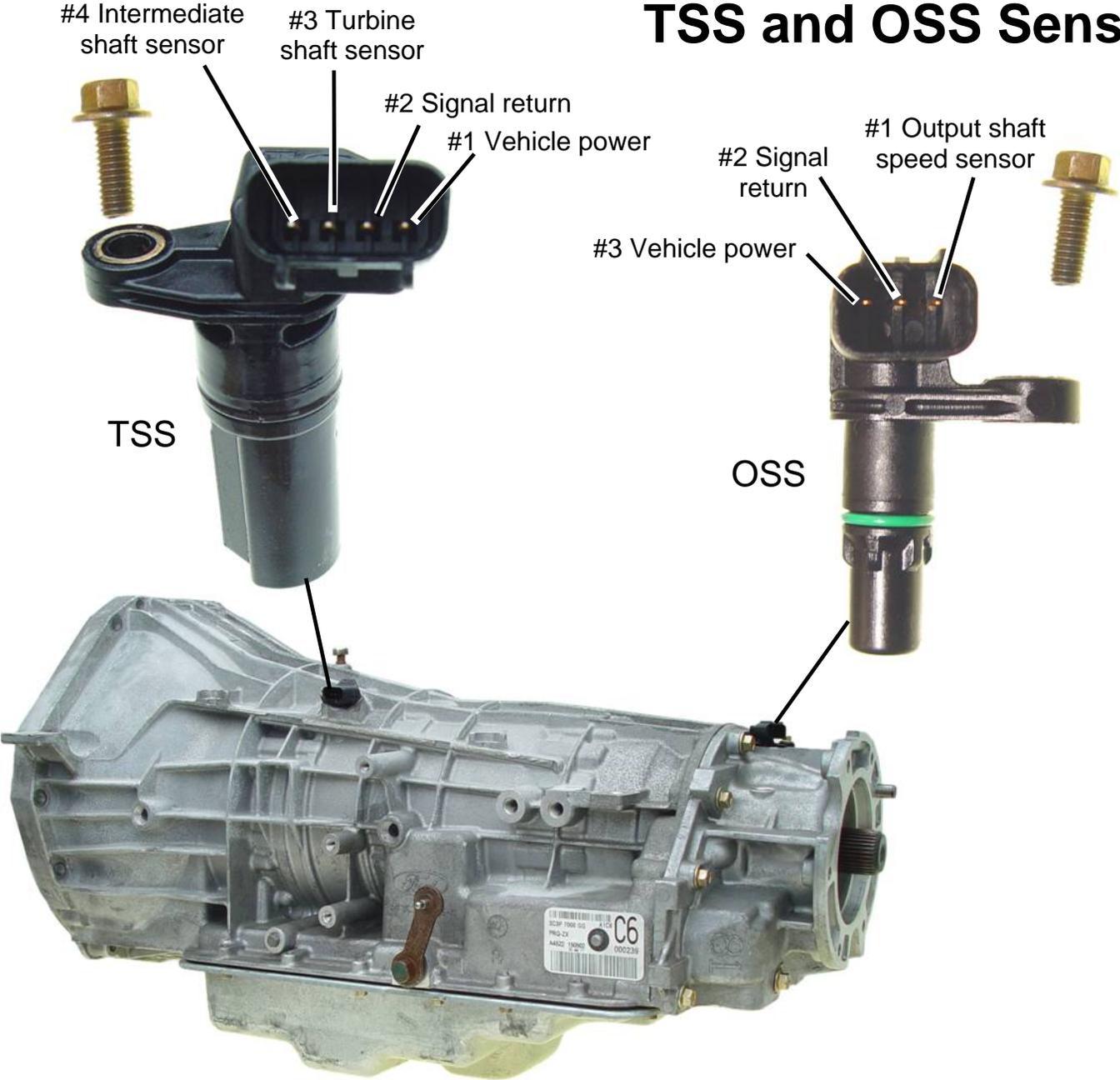
TR-P Sensor



3 2 1

Pin Number	Circuit Function
1	Power
2	Sensor Ground
3	Ground

TSS and OSS Sensors



Clutch Application & Gear Ratios

Clutch Application Chart

Gear	Applied Units
1st	Forward, OD one way, Low & reverse
2nd	Forward, Overdrive
3rd	Forward, Intermediate
4th	Forward, Overdrive & intermediate
5th	Forward, Direct
6th	Forward, Direct & Overdrive
Reverse	Coast, Direct, Low & reverse

Gear Ratios

1st	3.09 to 1
2nd	2.2 to 1
3rd	1.538 to 1
4th	1.096 to 1
5th	1 to 1
6th	.712 to 1
Rev	2.88 to 1

Note: 4th is used only in cold shift strategy.

Technology and Ethics

The Technology IS the Ethic

If the sign on the building or any advertising says, "Transmissions" that is declaration to the Universe that you know how to fix them.

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Regardless what you may call your repair, the job is in your shop to have the complaints and failures corrected. It doesn't matter how honest you are, as a person, if you do not fix the causes of the complaints and failures where is the ethic?

Each transmission develops 3 to 5 complaints and failures you see over and over again and again.

A service is ethical and deserving to the exact extent that your service corrects the causes of those complaints and failures; and does not include a whole bunch of parts that were not needed.

No more and no less, Gil

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Abbreviations

A	Ampere(s)/Amp(s)	Btu	British Thermal Units	DEC	Digital Electronic Controller
ABS	Antilock Brake System	C	Degrees Celsius	DERM	Diagnostic Energy Reserve Module
A/C	Air Conditioning	CAC	Charge Air Cooler	DI	Distributor Ignition
AC	Alternating Current	CAFÉ	Corporate Average Fuel Economy	dia	diameter
ACC	Automatic Climate Control	Cal	Calibration	DIC	Driver Information Center
ACL	Air Cleaner	Cam	Camshaft	Diff	Differential
ACR4	Air Conditioning Refrigerant, Recovery, Recycling, Recharging	CARB	Calif Air Resources Board	DK	Dark
A/D	Analog to Digital	cc	cubic centimeters	DLC	Data Link Connector
ADL	Automatic Door Lock	CCM	Central Control Module	DMM	Digital Multimeter
A/F	Air/Fuel Ratio	CCOT	Cycling Clutch Orifice Tube	DOHC	Dual Overhead Camshafts
AIR	Secondary Air Injection	CCP	Climate Control Panel	DR	Driver
ALC	Automatic Level Control	CD	Compact Disc	DRL	Daytime Running Lamps
AM/FM	Amplitude Modulation/Frequency Modulation	CE	Commutator End	DTC	Diagnostic Trouble Code
Ant	Antenna	CEAB	Cold Engine Air Bleed	DTM	Diagnostic test mode
AP	Accelerator Pedal	CEMF	Counter Electromotive Force	EBCM	Electronic Brake Control Module
API	American Protection Institute	cfm	cubic feet per minute	EBTCM	Electronic Brake & Traction Control Module
APP	Accelerator Pedal Position	cg	center of gravity	EC	Electrical Center
APT	Adjustable Part Throttle	CID	Cubic Inch Displacement	ECC	Electronic Climate Control
ARS	Automatic Restraint System	CKP	Crankshaft Position sensor	ECI	Extended Compressor at Idle
A/T	Automatic Transmission/ Transaxle	CKT	Circuit	ECL	Engine Coolant Level
ATC	Automatic Temperature Control	CL	Closed Loop	ECM	Engine Control Module
ATDC	After Top Dead Center	C/Ltr	Cigar Lighter	ECS	Emission Control System
Auto	Automatic	CMP	Camshaft Position sensor	ECT	Engine Coolant Temperature
avg	Average	CNG	Compressed Natural Gas	EEPROM	Electrically Erasable Programmable Read Only Memory
AWD	All Wheel Drive	CO	Carbon Monoxide	EEVIR	Evaporator Equalized Values in Receiver
AWG	American Wire Gage	CO ₂	Carbon Dioxide	EFE	Early Fuel Evaporation
B+	Battery Positive Voltage	Coax	Coaxial	EGR	Exhaust Gas Recirculation
B	Battery Negative Voltage	COMM	Communication	EGRTVV	Exhaust Gas Recirculation Thermal Vacuum Valve
BARO	Barometric Pressure sensor	Conn	Connector	EI	Electronic Ignition
batt	Battery	CPA	Connector Position Assurance	ELAP	Elapsed
BBV	Brake Booster Vacuum	CPP	Clutch Pedal Position	ELC	Electronic Level Control
BCM	Body Control Module	CPS	Central Power Supply	E/M	English/Metric
BHP	Brake Horsepower	CPU	Central Processing Unit	EMF	Electromotive Force
BLK	Black	CRT	Cathode Ray Tube	Eng	Engine
BLU	Blue	CRTC	Cathode Ray Tube Controller	EOP	Engine Oil Pressure
BOO	Brake on / off switch	CS	Charging System	EOT	Engine Oil Temperature
BP	Back Pressure	CTP	Closed Throttle Position	EPA	Environmental Protection Agency
BPM	Brake Pressure Modulator	cu ft	Cubic foot/feet	EPR	Exhaust Pressure Regulator
BPMV	Brake Pressure Modulator Valve	cu in	Cubic inch/inches	EPRM	Erasable Programmable Read Only Mem- ory
BPP	Brake Pedal Position	CV	Constant Velocity (Joint)	ESC	Electronic Suspension Control
BRN	Brown	Cyl	Cylinder(s)	ESD	Electrostatic Discharge
BTDC	Before Top Dead Center	DAB	Delayed Accessory Bus	ETC	Electronic Throttle Control or Electronic Temperature Control
BTSI	Brake Transmission Shift Interlock	DB	Decibels on A-weighted Scale		
		DC	Direct Current		
		DCM	Door Control Module		
		DE	Drive End		

ETR	Electronically Tuned Receiver	HPV	High Pressure Vapor	lt	left
EVAP	Evaporative Emission	Htd	Heated	LT	Light
EVO	Electronic Variable Orifice	HTR	Heater	MAF	Mass Air Flow
Exh	Exhaust	HUD	Head-up Display	Man	Manual
F	Degrees Fahrenheit	HVAC	Heater-Vent-Air Conditioning	MAP	Manifold Absolute Pressure
FC	Fan Control	HVACM	Heater-Vent-Air Conditioning Module	MAT	Manifold Absolute Temperature
FDC	Fuel Data Center	HVM	Heater Vent Module	max	maximum
FED	Federal (all United States except Calif)	Hz	Hertz	M/C	Mixture Control
FEDS	Fuel Enable Data Stream	IAC	Idle Air Control	MDP	Manifold Differential Pressure
FF	Flexible Fuel	IAT	Intake Air Temperature	MFI	Multiport Fuel Injection
FI	Fuel Injection	IC	Integrated Circuit or Ignition Control	mi	mile(s)
FMEM	Failure management effects mode	ICM	Ignition Control Module	MIL	Malfunction Indicator Lamp
FMVSS	Federal Motor Vehicle Safety Standards	ID	Identification or Inside Diameter	min	minimum
F/P	Fuel Pump	IDI	Integrated Direct Ignition	ml	milliliter
Ft	foot/feet	ign	ignition	MLP	Manual lever position sensor
FT	Fuel Trim	ILC	Idle Load Compensator	mm	millimeter
F4WD	Full Time Four Wheel Drive	in	inch(es)	mpg	miles per gallon
4WAL	Four Wheel Antilock	INJ	Injection	mph	miles per hour
4WD	Four Wheel Drive	inst	instantaneous	ms	millisecond
FW	Flat Wire	I/P	Instrument Panel	MST	Manifold Surface Temperature
FWD	Front Wheel Drive	IPC	Instrument Panel Cluster	M/T	Manual Transmission/Transaxle
g	gram(s) or Gravitational Acceleration	I/PEC	Instrument Panel Electrical Center	MV	Megavolt
GA	Gage	ISC	Idle Speed Control	mV	millivolt
gal	gallon(s)	ISO	International Standards Organization	NAES	North American Export Sales
gas	gasoline	ISS	Input Speed Shaft	NC	Normally Closed
GCW	Gross Combination Weight	KAM	Keep Alive Memory	NEG	Negative
Gen	Generator	KDD	Keyboard Display Driver	Neu	Neutral
GL	Gear Lubricant	kg	kilogram	NLGI	National Lubricating Grease Institute
GM	General Motors	kHZ	kilohertz	N-m	Newton-meter (torque)
GM SPO	General Motors Service Parts Operations	km	kilometer	NO	Normally Open
gnd	ground	km/h	kilometers per hour	NOx	Nitrogen Oxides
gpm	gallons per minute	km/l	kilometers per liter	NPTC	National Pipe Thread-Course
GRN	Green	kPA	kilopascals	NPTF	National Pipe Thread-Fine
GRY	Gray	KS	Knock Sensor	NVRAM	Non-volatile Random Access Memory
GVWR	Gross Vehicle Weight Rating	kV	kilovolts	O2	Oxygen
H	Hydrogen	L	Liter	O2S	Oxygen Sensor
H2O	Water	L4	In-Line Four Cylinder Engine	OBD II	On-board Diagnostics II
Harn	Harness	L6	In-Line Six Cylinder Engine	OC	Oxidation Converter (Catalytic)
HC	Hydrocarbons	lb	pound	OD	Outside Diameter
H/CMPR	High Compression	lb ft	pound feet (torque)	ODO	Odometer
HD	Heavy Duty	lb in	pound inch (torque)	OE	Original Equipment
HDC	Heavy Duty Cooling	LCD	Liquid Crystal Display	OEM	Original Equipment Manufacturer
hex	hexagon	LDCL	Left Door Closed Locking	OHC	Overhead Camshaft
Hg	Mercury	LDCM	Left Door Control Module	OL	Open Loop
Hi Alt	High Altitude	LED	Light Emitting Diode	ORN	Orange
HO2S	Heated Oxygen Sensor	LF	Left Front	OSS	Output Shaft Speed
hp	horsepower	LH	Left Hand	oz	ounce(s)
HPL	High Pressure Liquid	Lm	lumens	PAG	Polyalkylene Glycol
HPS	High Performance System	LR	Left Rear	PASS	Passenger

P/B	Power Brakes	RTD	Real Time Damping	TWC	Three-way Converter (Catalytic)
PC	Pressure Control	RTV	Room Temperature Vulcanizing (Sealer)	TWC+OC	Three-way + Oxidation Converter (Catalytic)
PCB	Printed Circuit Board	RWAL	Rear Wheel Antilock	TXV	Thermal Expansion Valve
PCM	Powertrain Control Module	RWD	Rear Wheel Drive	UART	Universal Asynchronous Receive & Transmit
PCS	Pressure Control Solenoid	s	second(s)	U/H	Under Hood
PCV	Positive Crankcase Ventilation	SAE	Society of Automotive Engineers	U/HEC	Under Hood Electrical Center
PM	Permanent Magnet (Generator)	SC	Supercharger	U-Joint	Universal Joint
P/N	Part Number	SCB	Supercharger Bypass	UTD	Universal Theft Deterrent
PNK	Pink	SCM	Seat Control Module	UV	Ultraviolet
PNP	Park/Neutral Position	SDM	Sensing & Diagnostic Module	V	Volt(s) or Voltage
PRNDL	Park, Reverse, Neutral, Drive, Low	SEO	Special Equipment Option	V6	V-type 6 Cylinder Engine
POA	Pilot Operated Absolute (Valve)	SFI	Sequential Multiport Fuel Injection	V8	V-type 8 Cylinder Engine
POS	Positive	SI	System International (modern version of metric system)	Vac	Vacuum
POT	Potentiometer (Variable Resistor)	SIR	Supplemental Inflatable Restraint	VAC	Vehicle Access Code
PPL	Purple	SLA	Short/Long Arm	VATS	Vehicle Anti-theft System
ppm	parts per million	sol	solenoid	VCM	Vehicle Control Module
PROM	Programmable Read Only Memory	SO2	Sulfur Dioxide	VDOT	Variable Displacement Orifice Tube
P/S	Power Steering	SP	Splice Pack	VDV	Vacuum Delay Valve
PSD	Power Sliding Door	SPO	Service Parts Operations	vel	velocity
PSP	Power Steering Pressure	sq ft	square foot/feet	VES	Variable Effort Steering
psi	pounds per square inch	sq in	square inch(es)	VF	Vacuum Fluorescent
psia	pounds per square inch absolute	SRC	Service Ride Control	VIO	Violet
psig	pounds per square inch gauge	SRI	Service Reminder Indicator	VIN	Vehicle Identification Number
pt	pint	ST	Scan Tool	VMV	Vacuum Modulator Valve
PWM	Pulse Width Modulated	S4WD	Selectable Four Wheel Drive	VR	Voltage Regulator
qt	quart(s)	sw	Switch	V ref	Voltage reference
R-12	Refrigerant-12	syn	synchronizer	VSS	Vehicle Speed Sensor – also called OSS sensor
R-134a	Refrigerant-134a	Tach	Tachometer	W/	with
RAM	Random Access Memory (impermanant memory device; memory contents lost when power removed)	TB	Throttle body	W/B	Wheel Base
RAP	Retained Accessory Power	TBI	Throttle Body Fuel Injection	WHL	Wheel
RAV	Remote Activation Verification	TC	Turbocharger	WHT	White
RCDLR	Remote Control Door Lock Receiver	TCC	Torque Converter Clutch	W/o	without
RDCM	Right Door Control Module	TCIL	Transmission control indicator lamp	WOT	Wide Open Throttle
Ref	Reference	TCS	Transmission control switch	W/P	Water Pump
Rev	Reverse	TDC	Top Dead Center	W/S	Windshield
RF	Right Front or Radio Frequency	TEMP	Temperature	WSS	Wheel Speed Sensor
RFA	Remote Function Actuation	Term	Terminal	WU-OC	Warm-up Oxidation Converter (Catalytic)
RFI	Radio Frequency Interference	TFP	Transmission Fluid Pressure	WU-TWC	Warm-up Three-way Converter (Catalytic)
RH	Right Hand	TFT	Transmission Fluid Temperature	X-valve	Expansion Valve
Rly	relay	TOC	Transmission Oil Cooler	yd	yard(s)
RM	Relay module	TP	Throttle Position	YEL	Yellow
ROM	Read Only Memory (permanent memory device)	TPA	Terminal Positive Assurance		
RPM	Revolutions Per Minute—Engine Speed	TPM	Tire Pressure Monitoring		
RPO	Regular Production Option	TR	Transmission Range / Sensor		
RR	Right Rear	TRANS	Transmission/Transaxle		
rt	right	TSS	Turbine shaft sensor		
		TVRS	Television & Radio Suppression		
		TVV	Thermal Vacuum Valve		

P0100 Mass or Volume Air Flow Circuit Malfunction
P0101 Mass or Volume Air Flow Circuit Range/Performance Problem
P0102 Mass or Volume Air Flow Circuit Low Input
P0103 Mass or Volume Air Flow Circuit High Input
P0104 Mass or Volume Air Flow Circuit Intermittent
P0105 Manifold Absolute Pressure/Barometric Pressure Circuit Malfunction
P0106 Manifold Absolute Pressure/Barometric Pressure Circuit Range/Performance
P0107 Manifold Absolute Pressure/Barometric Pressure Circuit Low Input
P0108 Manifold Absolute Pressure/Barometric Pressure Circuit High Input
P0109 Manifold Absolute Pressure/Barometric Pressure Circuit Intermittent
P0109 Intake Air Temperature Circuit Malfunction
P0111 Intake Air Temperature Circuit Range/Performance Problem
P0112 Intake Air Temperature Circuit Low Input
P0113 Intake Air Temperature Circuit High Input
P0114 Intake Air Temperature Circuit Intermittent
P0115 Engine Coolant Temperature Circuit Malfunction
P0116 Engine Coolant Temperature Circuit Range/Performance Problem
P0117 Engine Coolant Temperature Circuit Low Input
P0118 Engine Coolant Temperature Circuit High Input
P0119 Engine Coolant Temperature Circuit Intermittent
P0120 Throttle/Petal Position Sensor/Switch A Circuit Malfunction
P0121 Throttle/Petal Position Sensor/Switch A Circuit Range/Performance Problem
P0122 Throttle/Petal Position Sensor/Switch A Circuit Low Input
P0123 Throttle/Petal Position Sensor/Switch A Circuit High Input
P0124 Throttle/Petal Position Sensor/Switch A Circuit Intermittent
P0125 Insufficient Coolant Temperature for Closed Loop Fuel Control
P0126 Insufficient Coolant Temperature for Stable Operation
P0130 02 Sensor Circuit Malfunction (Bank 1 Sensor 1)
P0131 02 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132 02 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133 02 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134 02 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135 02 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1)
P0136 02 Sensor Circuit Malfunction (Bank 1 Sensor 2)
P0137 02 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138 02 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139 02 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140 02 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141 02 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)
P0142 02 Sensor Circuit Malfunction (Bank 1 Sensor 3)
P0143 02 Sensor Circuit Low Voltage (Bank 1 Sensor 3)
P0144 02 Sensor Circuit High Voltage (Bank 1 Sensor 3)
P0145 02 Sensor Circuit Slow Response (Bank 1 Sensor 3)
P0146 02 Sensor Circuit No Activity Detected (Bank 1 Sensor 3)
P0147 02 Sensor Heater Circuit Malfunction (Bank 1 Sensor 3)
P0150 02 Sensor Circuit Malfunction (Bank 2 Sensor 1)
P0151 02 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152 02 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153 02 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154 02 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155 02 Sensor Heater Circuit Malfunction (Bank 2 Sensor 1)

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P0156 02 Sensor Circuit Malfunction (Bank 2 Sensor 2)
P0157 02 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158 02 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159 02 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160 02 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161 02 Sensor Heater Circuit Malfunction (Bank 2 Sensor 2)
P0162 02 Sensor Circuit Malfunction (Bank 2 Sensor 3)
P0163 02 Sensor Circuit Low Voltage (Bank 2 Sensor 3)
P0164 02 Sensor Circuit High Voltage (Bank 2 Sensor 3)
P0165 02 Sensor Circuit Slow Response (Bank 2 Sensor 3)
P0166 02 Sensor Circuit No Activity Detected (Bank 2 Sensor 3)
P0167 02 Sensor Heater Circuit Malfunction (Bank 2 Sensor 3)
P0170 Fuel Trim Malfunction (Bank 1)
P0171 System too Lean (Bank 1)
P0172 System too Rich (Bank 1)
P0173 Fuel Trim Malfunction (Bank 2)
P0174 System too Lean (Bank 2)
P0175 System too Rich (Bank 2)
P0176 Fuel Composition Sensor Circuit Malfunction
P0177 Fuel Composition Sensor Circuit Range/Performance
P0178 Fuel Composition Sensor Circuit Low Input
P0179 Fuel Composition Sensor Circuit High Input
P0180 Fuel Temperature Sensor A Circuit Malfunction
P0181 Fuel Temperature Sensor A Circuit Range/Performance
P0182 Fuel Temperature Sensor A Circuit Low Input
P0183 Fuel Temperature Sensor A Circuit High Input
P0184 Fuel Temperature Sensor A Circuit Intermittent
P0185 Fuel Temperature Sensor B Circuit Malfunction
P0186 Fuel Temperature Sensor B Circuit Range/Performance
P0187 Fuel Temperature Sensor B Circuit Low Input
P0188 Fuel Temperature Sensor B Circuit High Input
P0189 Fuel Temperature Sensor B Circuit Intermittent
P0190 Fuel Rail Pressure Sensor Circuit Malfunction
P0191 Fuel Rail Pressure Sensor Circuit Range/Performance
P0192 Fuel Rail Pressure Sensor Circuit Low Input
P0193 Fuel Rail Pressure Sensor Circuit High Input
P0194 Fuel Rail Pressure Sensor Circuit Intermittent
P0195 Engine Oil Temperature Sensor Malfunction
P0196 Engine Oil Temperature Sensor Range/Performance
P0197 Engine Oil Temperature Sensor Low
P0198 Engine Oil Temperature Sensor High
P0199 Engine Oil Temperature Sensor Intermittent
P0200 Injector Circuit Malfunction
P0201 Injector Circuit Malfunction - Cylinder 1
P0202 Injector Circuit Malfunction - Cylinder 2
P0203 Injector Circuit Malfunction - Cylinder 3
P0204 Injector Circuit Malfunction - Cylinder 4
P0205 Injector Circuit Malfunction - Cylinder 5
P0206 Injector Circuit Malfunction - Cylinder 6
P0207 Injector Circuit Malfunction - Cylinder 7
P0208 Injector Circuit Malfunction - Cylinder 8
P0209 Injector Circuit Malfunction - Cylinder 9
P0210 Injector Circuit Malfunction - Cylinder 10

P0211 Injector Circuit Malfunction - Cylinder 11
P0212 Injector Circuit Malfunction - Cylinder 12
P0213 Cold Start Injector 1 Malfunction
P0214 Cold Start Injector 2 Malfunction
P0215 Engine Shutoff Solenoid Malfunction
P0216 Injection Timing Control Circuit Malfunction
P0217 Engine Overtemp Condition
P0218 Transmission Over Temperature Condition
P0219 Engine Overspeed Condition
P0220 Throttle/Petal Position Sensor/Switch B Circuit Malfunction
P0221 Throttle/Petal Position Sensor/Switch B Circuit Range/Performance Problem
P0222 Throttle/Petal Position Sensor/Switch B Circuit Low Input
P0223 Throttle/Petal Position Sensor/Switch B Circuit High Input
P0224 Throttle/Petal Position Sensor/Switch B Circuit Intermittent
P0225 Throttle/Petal Position Sensor/Switch C Circuit Malfunction
P0226 Throttle/Petal Position Sensor/Switch C Circuit Range/Performance Problem
P0227 Throttle/Petal Position Sensor/Switch C Circuit Low Input
P0228 Throttle/Petal Position Sensor/Switch C Circuit High Input
P0229 Throttle/Petal Position Sensor/Switch C Circuit Intermittent
P0230 Fuel Pump Primary Circuit Malfunction
P0231 Fuel Pump Secondary Circuit Low
P0232 Fuel Pump Secondary Circuit High
P0233 Fuel Pump Secondary Circuit Intermittent
P0234 Engine Overboost Condition
P0235 Turbocharger Boost Sensor A Circuit Malfunction
P0236 Turbocharger Boost Sensor A Circuit Range/Performance
P0237 Turbocharger Boost Sensor A Circuit Low
P0238 Turbocharger Boost Sensor A Circuit High
P0239 Turbocharger Boost Sensor B Malfunction
P0240 Turbocharger Boost Sensor B Circuit Range/Performance
P0241 Turbocharger Boost Sensor B Circuit Low
P0242 Turbocharger Boost Sensor B Circuit High
P0243 Turbocharger Wastegate Solenoid A Malfunction
P0244 Turbocharger Wastegate Solenoid A Range/Performance
P0245 Turbocharger Wastegate Solenoid A Low
P0246 Turbocharger Wastegate Solenoid A High
P0247 Turbocharger Wastegate Solenoid B Malfunction
P0248 Turbocharger Wastegate Solenoid B Range/Performance
P0249 Turbocharger Wastegate Solenoid B Low
P0250 Turbocharger Wastegate Solenoid B High
P0251 Injection Pump Fuel Metering Control "A" Malfunction (Cam/Rotor/Injector)
P0252 Injection Pump Fuel Metering Control "A" Range/Performance (Cam/Rotor/Injector)
P0253 Injection Pump Fuel Metering Control "A" Low (Cam/Rotor/Injector)
P0254 Injection Pump Fuel Metering Control "A" High (Cam/Rotor/Injector)
P0255 Injection Pump Fuel Metering Control "A" Intermittent (Cam/Rotor/Injector)
P0256 Injection Pump Fuel Metering Control "B" Malfunction (Cam/Rotor/Injector)
P0257 Injection Pump Fuel Metering Control "B" Range/Performance (Cam/Rotor/Injector)
P0258 Injection Pump Fuel Metering Control "B" Low (Cam/Rotor/Injector)
P0259 Injection Pump Fuel Metering Control "B" High (Cam/Rotor/Injector)
P0260 Injection Pump Fuel Metering Control "B" Intermittent (Cam/Rotor/Injector)
P0261 Cylinder 1 Injector Circuit Low
P0262 Cylinder 1 Injector Circuit High
P0263 Cylinder 1 Contribution/Balance Fault

P0264	Cylinder 2 Injector Circuit Low
P0265	Cylinder 2 Injector Circuit High
P0266	Cylinder 2 Contribution/Balance Fault
P0267	Cylinder 3 Injector Circuit Low
P0268	Cylinder 3 Injector Circuit High
P0269	Cylinder 3 Contribution/Balance Fault
P0270	Cylinder 4 Injector Circuit Low
P0271	Cylinder 4 Injector Circuit High
P0272	Cylinder 4 Contribution/Balance Fault
P0273	Cylinder 5 Injector Circuit Low
P0274	Cylinder 5 Injector Circuit High
P0275	Cylinder 5 Contribution/Balance Fault
P0276	Cylinder 6 Injector Circuit Low
P0277	Cylinder 6 Injector Circuit High
P0278	Cylinder 6 Contribution/Balance Fault
P0279	Cylinder 7 Injector Circuit Low
P0280	Cylinder 7 Injector Circuit High
P0281	Cylinder 7 Contribution/Balance Fault
P0282	Cylinder 8 Injector Circuit Low
P0283	Cylinder 8 Injector Circuit High
P0284	Cylinder 8 Contribution/Balance Fault
P0285	Cylinder 9 Injector Circuit Low
P0286	Cylinder 9 Injector Circuit High
P0287	Cylinder 9 Contribution/Balance Fault
P0288	Cylinder 10 Injector Circuit Low
P0289	Cylinder 10 Injector Circuit High
P0290	Cylinder 10 Contribution/Balance Fault
P0291	Cylinder 11 Injector Circuit Low
P0292	Cylinder 11 Injector Circuit High
P0293	Cylinder 11 Contribution/Balance Fault
P0294	Cylinder 12 Injector Circuit Low
P0295	Cylinder 12 Injector Circuit High
P0296	Cylinder 12 Contribution/Range Fault
P0300	Random/Multiple Cylinder Misfire Detected
P0301	Cylinder 1 Misfire Detected
P0302	Cylinder 2 Misfire Detected
P0303	Cylinder 3 Misfire Detected
P0304	Cylinder 4 Misfire Detected
P0305	Cylinder 5 Misfire Detected
P0306	Cylinder 6 Misfire Detected
P0307	Cylinder 7 Misfire Detected
P0308	Cylinder 8 Misfire Detected
P0309	Cylinder 9 Misfire Detected
P0311	Cylinder 11 Misfire Detected
P0312	Cylinder 12 Misfire Detected
P0320	Ignition/Distributor Engine Speed Input Circuit Malfunction
P0321	Ignition/Distributor Engine Speed Input Circuit Range/Performance
P0322	Ignition/Distributor Engine Speed Input Circuit No Signal
P0323	Ignition/Distributor Engine Speed Input Circuit Intermittent
P0325	Knock Sensor 1 Circuit Malfunction (Bank 1 or Single Sensor)
P0326	Knock Sensor 1 Circuit Range/Performance (Bank 1 or Single Sensor)
P0327	Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor)
P0328	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)

P0329 Knock Sensor 1 Circuit Intermittent (Bank 1 or Single Sensor)
P0330 Knock Sensor 2 Circuit Malfunction (Bank 2)
P0331 Knock Sensor 2 Circuit Range/Performance (Bank 2)
P0332 Knock Sensor 2 Circuit Low Input (Bank 2)
P0333 Knock Sensor 2 Circuit High Input (Bank 2)
P0334 Knock Sensor 2 Circuit Intermittent (Bank 2)
P0335 Crankshaft Position Sensor A Circuit Malfunction
P0336 Crankshaft Position Sensor A Circuit Range/Performance
P0337 Crankshaft Position Sensor A Circuit Low Input
P0338 Crankshaft Position Sensor A Circuit High Input
P0339 Crankshaft Position Sensor A Circuit Intermittent
P0340 Camshaft Position Sensor Circuit Malfunction
P0341 Camshaft Position Sensor Circuit Range/Performance
P0342 Camshaft Position Sensor Circuit Low Input
P0343 Camshaft Position Sensor Circuit High Input
P0344 Camshaft Position Sensor Circuit Intermittent
P0350 Ignition Coil Primary/Secondary Circuit Malfunction
P0351 Ignition Coil A Primary/Secondary Circuit Malfunction
P0352 Ignition Coil B Primary/Secondary Circuit Malfunction
P0353 Ignition Coil C Primary/Secondary Circuit Malfunction
P0354 Ignition Coil D Primary/Secondary Circuit Malfunction
P0355 Ignition Coil E Primary/Secondary Circuit Malfunction
P0356 Ignition Coil F Primary/Secondary Circuit Malfunction
P0357 Ignition Coil G Primary/Secondary Circuit Malfunction
P0358 Ignition Coil H Primary/Secondary Circuit Malfunction
P0359 Ignition Coil I Primary/Secondary Circuit Malfunction
P0360 Ignition Coil J Primary/Secondary Circuit Malfunction
P0361 Ignition Coil K Primary/Secondary Circuit Malfunction
P0362 Ignition Coil L Primary/Secondary Circuit Malfunction
P0370 Timing Reference High Resolution Signal A Malfunction
P0371 Timing Reference High Resolution Signal A Too Many Pulses
P0372 Timing Reference High Resolution Signal A Too Few Pulses
P0373 Timing Reference High Resolution Signal A Intermittent/Erratic Pulses
P0374 Timing Reference High Resolution Signal A No Pulses
P0375 Timing Reference High Resolution Signal B Malfunction
P0376 Timing Reference High Resolution Signal B Too Many Pulses
P0377 Timing Reference High Resolution Signal B Too Few Pulses
P0378 Timing Reference High Resolution Signal B Intermittent/Erratic Pulses
P0379 Timing Reference High Resolution Signal B No Pulses
P0380 Glow Plug/Heater Circuit "A" Malfunction
P0381 Glow Plug/Heater Indicator Circuit Malfunction
P0382 Exhaust Gas Recirculation Flow Malfunction
P0385 Crankshaft Position Sensor B Circuit Malfunction
P0386 Crankshaft Position Sensor B Circuit Range/Performance
P0387 Crankshaft Position Sensor B Circuit Low Input
P0388 Crankshaft Position Sensor B Circuit High Input
P0389 Crankshaft Position Sensor B Circuit Intermittent
P0400 Exhaust Gas Recirculation Flow Malfunction
P0401 Exhaust Gas Recirculation Flow Insufficient Detected
P0402 Exhaust Gas Recirculation Flow Excessive Detected
P0403 Exhaust Gas Recirculation Circuit Malfunction
P0404 Exhaust Gas Recirculation Circuit Range/Performance
P0405 Exhaust Gas Recirculation Sensor A Circuit Low

P0406 Exhaust Gas Recirculation Sensor A Circuit High
P0407 Exhaust Gas Recirculation Sensor B Circuit Low
P0408 Exhaust Gas Recirculation Sensor B Circuit High
P0410 Secondary Air Injection System Malfunction
P0411 Secondary Air Injection System Incorrect Flow Detected
P0412 Secondary Air Injection System Switching Valve A Circuit Malfunction
P0413 Secondary Air Injection System Switching Valve A Circuit Open
P0414 Secondary Air Injection System Switching Valve A Circuit Shorted
P0415 Secondary Air Injection System Switching Valve B Circuit Malfunction
P0416 Secondary Air Injection System Switching Valve B Circuit Open
P0417 Secondary Air Injection System Switching Valve B Circuit Shorted
P0418 Secondary Air Injection System Relay "A" Circuit Malfunction
P0419 Secondary Air Injection System Relay "B" Circuit Malfunction
P0420 Catalyst System Efficiency Below Threshold (Bank 1)
P0421 Warm Up Catalyst Efficiency Below Threshold (Bank 1)
P0422 Main Catalyst Efficiency Below Threshold (Bank 1)
P0423 Heated Catalyst Efficiency Below Threshold (Bank 1)
P0424 Heated Catalyst Temperature Below Threshold (Bank 1)
P0430 Catalyst System Efficiency Below Threshold (Bank 2)
P0431 Warm Up Catalyst Efficiency Below Threshold (Bank 2)
P0432 Main Catalyst Efficiency Below Threshold (Bank 2)
P0433 Heated Catalyst Efficiency Below Threshold (Bank 2)
P0434 Heated Catalyst Temperature Below Threshold (Bank 2)
P0440 Evaporative Emission Control System Malfunction
P0441 Evaporative Emission Control System Incorrect Purge Flow
P0442 Evaporative Emission Control System Leak Detected (small leak)
P0443 Evaporative Emission Control System Purge Control Valve Circuit Malfunction
P0444 Evaporative Emission Control System Purge Control Valve Circuit Open
P0445 Evaporative Emission Control System Purge Control Valve Circuit Shorted
P0446 Evaporative Emission Control System Vent Control Circuit Malfunction
P0447 Evaporative Emission Control System Vent Control Circuit Open
P0448 Evaporative Emission Control System Vent Control Circuit Shorted
P0449 Evaporative Emission Control System Vent Valve/Solenoid Circuit Malfunction
P0450 Evaporative Emission Control System Pressure Sensor Malfunction
P0451 Evaporative Emission Control System Pressure Sensor Range/Performance
P0452 Evaporative Emission Control System Pressure Sensor Low Input
P0453 Evaporative Emission Control System Pressure Sensor High Input
P0454 Evaporative Emission Control System Pressure Sensor Intermittent
P0455 Evaporative Emission Control System Leak Detected (gross leak)
P0460 Fuel Level Sensor Circuit Malfunction
P0461 Fuel Level Sensor Circuit Range/Performance
P0462 Fuel Level Sensor Circuit Low Input
P0463 Fuel Level Sensor Circuit High Input
P0464 Fuel Level Sensor Circuit Intermittent
P0465 Purge Flow Sensor Circuit Malfunction
P0466 Purge Flow Sensor Circuit Range/Performance
P0467 Purge Flow Sensor Circuit Low Input
P0468 Purge Flow Sensor Circuit High Input
P0469 Purge Flow Sensor Circuit Intermittent
P0470 Exhaust Pressure Sensor Malfunction
P0471 Exhaust Pressure Sensor Range/Performance
P0472 Exhaust Pressure Sensor Low
P0473 Exhaust Pressure Sensor High

P0474 Exhaust Pressure Sensor Intermittent
P0475 Exhaust Pressure Control Valve Malfunction
P0476 Exhaust Pressure Control Valve Range/Performance
P0477 Exhaust Pressure Control Valve Low
P0478 Exhaust Pressure Control Valve High
P0479 Exhaust Pressure Control Valve Intermittent
P0480 Cooling Fan 1 Control Circuit Malfunction
P0481 Cooling Fan 2 Control Circuit Malfunction
P0482 Cooling Fan 3 Control Circuit Malfunction
P0483 Cooling Fan Rationality Check Malfunction
P0484 Cooling Fan Circuit Over Current
P0485 Cooling Fan Power/Ground Circuit Malfunction
P0500 Vehicle Speed Sensor Malfunction
P0501 Vehicle Speed Sensor Range/Performance
P0502 Vehicle Speed Sensor Low Input
P0503 Vehicle Speed Sensor Intermittent/Erratic/High
P0505 Idle Control System Malfunction
P0506 Idle Control System RPM Lower Than Expected
P0507 Idle Control System RPM Higher Than Expected
P0510 Closed Throttle Position Switch Malfunction
P0520 Engine Oil Pressure Sensor/Switch Circuit Malfunction
P0521 Engine Oil Pressure Sensor/Switch Circuit Range/Performance
P0522 Engine Oil Pressure Sensor/Switch Circuit Low Voltage
P0523 Engine Oil Pressure Sensor/Switch Circuit High Voltage
P0530 A/C Refrigerant Pressure Sensor Circuit Malfunction
P0531 A/C Refrigerant Pressure Sensor Circuit Range/Performance
P0532 A/C Refrigerant Pressure Sensor Circuit Low Input
P0533 A/C Refrigerant Pressure Sensor Circuit High Input
P0534 Air Conditioner Refrigerant Charge Loss
P0550 Power Steering Pressure Sensor Circuit Malfunction
P0551 Power Steering Pressure Sensor Circuit Range/Performance
P0552 Power Steering Pressure Sensor Circuit Low Input
P0553 Power Steering Pressure Sensor Circuit High Input
P0554 Power Steering Pressure Sensor Circuit Intermittent
P0560 System Voltage Malfunction
P0561 System Voltage Unstable
P0562 System Voltage Low
P0563 System Voltage High
P0565 Cruise Control On Signal Malfunction
P0566 Cruise Control Off Signal Malfunction
P0567 Cruise Control Resume Signal Malfunction
P0568 Cruise Control Set Signal Malfunction
P0569 Cruise Control Coast Signal Malfunction
P0570 Cruise Control Accel Signal Malfunction
P0571 Cruise Control/Brake Switch A Circuit Malfunction
P0572 Cruise Control/Brake Switch A Circuit Low
P0573 Cruise Control/Brake Switch A Circuit High
P0574 Cruise Control Related Malfunction
P0575 Cruise Control Related Malfunction
P0576 Cruise Control Related Malfunction
P0576 Cruise Control Related Malfunction
P0578 Cruise Control Related Malfunction
P0579 Cruise Control Related Malfunction

P0580 Cruise Control Related Malfunction
P0600 Serial Communication Link Malfunction
P0601 Internal Control Module Memory Check Sum Error
P0602 Control Module Programming Error
P0603 Internal Control Module Keep Alive Memory (KAM) Error
P0604 Internal Control Module Random Access Memory (RAM) Error
P0605 Internal Control Module Read Only Memory (ROM) Error
P0606 PCM Processor Fault
P0608 Control Module VSS Output "A" Malfunction
P0609 Control Module VSS Output "B" Malfunction
P0620 Generator Control Circuit Malfunction
P0621 Generator Lamp "L" Control Circuit Malfunction
P0622 Generator Field "F" Control Circuit Malfunction
P0650 Malfunction Indicator Lamp (MIL) Control Circuit Malfunction
P0654 Engine RPM Output Circuit Malfunction
P0655 Engine Hot Lamp Output Control Circuit Malfunction
P0656 Fuel Level Output Circuit Malfunction
P0700 Transmission Control System Malfunction
P0701 Transmission Control System Range/Performance
P0702 Transmission Control System Electrical
P0703 Torque Converter/Brake Switch B Circuit Malfunction
P0704 Clutch Switch Input Circuit Malfunction
P0705 Transmission Range Sensor Circuit malfunction (PRNDL Input)
P0706 Transmission Range Sensor Circuit Range/Performance
P0707 Transmission Range Sensor Circuit Low Input
P0708 Transmission Range Sensor Circuit High Input
P0709 Transmission Range Sensor Circuit Intermittent
P0710 Transmission Fluid Temperature Sensor Circuit Malfunction
P0711 Transmission Fluid Temperature Sensor Circuit Range/Performance
P0712 Transmission Fluid Temperature Sensor Circuit Low Input
P0713 Transmission Fluid Temperature Sensor Circuit High Input
P0714 Transmission Fluid Temperature Sensor Circuit Intermittent
P0715 Input/Turbine Speed Sensor Circuit Malfunction
P0716 Input/Turbine Speed Sensor Circuit Range/Performance
P0717 Input/Turbine Speed Sensor Circuit No Signal
P0718 Input/Turbine Speed Sensor Circuit Intermittent
P0719 Torque Converter/Brake Switch B Circuit Low
P0720 Output Speed Sensor Circuit Malfunction
P0721 Output Speed Sensor Range/Performance
P0722 Output Speed Sensor No Signal
P0723 Output Speed Sensor Intermittent
P0724 Torque Converter/Brake Switch B Circuit High
P0725 Engine Speed input Circuit Malfunction
P0726 Engine Speed Input Circuit Range/Performance
P0727 Engine Speed Input Circuit No Signal
P0728 Engine Speed Input Circuit Intermittent
P0730 Incorrect Gear Ratio
P0731 Gear 1 Incorrect ratio
P0732 Gear 2 Incorrect ratio
P0733 Gear 3 Incorrect ratio
P0734 Gear 4 Incorrect ratio
P0735 Gear 5 Incorrect ratio
P0736 Reverse incorrect gear ratio

P0740 Torque Converter Clutch Circuit Malfunction
P0741 Torque Converter Clutch Circuit Performance or Stuck Off
P0742 Torque Converter Clutch Circuit Stuck On
P0743 Torque Converter Clutch Circuit Electrical
P0744 Torque Converter Clutch Circuit Intermittent
P0745 Pressure Control Solenoid Malfunction
P0746 Pressure Control Solenoid Performance or Stuck Off
P0747 Pressure Control Solenoid Stuck On
P0748 Pressure Control Solenoid Electrical
P0749 Pressure Control Solenoid Intermittent
P0750 Shift Solenoid A Malfunction
P0751 Shift Solenoid A Performance or Stuck Off
P0752 Shift Solenoid A Stuck On
P0753 Shift Solenoid A Electrical
P0754 Shift Solenoid A Intermittent
P0755 Shift Solenoid B Malfunction
P0756 Shift Solenoid B Performance or Stuck Off
P0757 Shift Solenoid B Stuck On
P0758 Shift Solenoid B Electrical
P0759 Shift Solenoid B Intermittent
P0760 Shift Solenoid C Malfunction
P0761 Shift Solenoid C Performance or Stuck Off
P0762 Shift Solenoid C Stuck On
P0763 Shift Solenoid C Electrical
P0764 Shift Solenoid C Intermittent
P0765 Shift Solenoid D Malfunction
P0766 Shift Solenoid D Performance or Stuck Off
P0767 Shift Solenoid D Stuck On
P0768 Shift Solenoid D Electrical
P0769 Shift Solenoid D Intermittent
P0770 Shift Solenoid E Malfunction
P0771 Shift Solenoid E Performance or Stuck Off
P0772 Shift Solenoid E Stuck On
P0773 Shift Solenoid E Electrical
P0774 Shift Solenoid E Intermittent
P0780 Shift Malfunction
P0781 1-2 Shift Malfunction
P0782 2-3 Shift Malfunction
P0783 3-4 Shift Malfunction
P0784 4-5 Shift Malfunction
P0785 Shift/Timing Solenoid Malfunction
P0786 Shift/Timing Solenoid Range/Performance
P0787 Shift/Timing Solenoid Low
P0788 Shift/Timing Solenoid High
P0789 Shift/Timing Solenoid Intermittent
P0790 Normal/Performance Switch Circuit Malfunction
P0801 Reverse Inhibit Control Circuit Malfunction
P0803 1-4 Upshift (Skip Shift) Solenoid Control Circuit Malfunction
P0804 1-4 Upshift (Skip Shift) Lamp Control Circuit Malfunction

Ford OBDII Code Listing

B1231	Longitudinal acceleration threshold exceeded	C1165	Wheel speed RR input circuit failure
B1318	Battery voltage low	C1175	Wheel speed LR input circuit failure
B1342	ECU internal failure	C1230	Rear wheel speed sensor input circuit fault
B1342B	ECU is defective	C1233	LF wheel speed signal comparison fault
B1485	Stop lamp switch input circuit battery short	C1234	RF wheel speed signal comparison fault
B1676	Battery voltage out of range	C1235	Speed wheel RR input signal missing
B1869	Lamp air bag warning indicator circuit open	C1236	Speed wheel RR input signal missing
B1870	Lamp air bag warning indicator circuit short to battery	C1237	Rear wheel speed signal comparison fault
B1871	Passenger air bag disable module fault	C1414	Incorrect module design level
B1877	Seatbelt driver pretensioner circuit open	P1000	OBDII drive cycle not complete
B1878	Seatbelt driver pretensioner circuit short to battery	P1001	KOER not able to complete, KOER aborted
B1879	Seatbelt driver pretensioner circuit short to ground	P1039	Vehicle speed signal missing or improper
B1881	Seatbelt passenger pretensioner circuit open	P1051	Brake switch signal missing or improper
B1882	Seatbelt passenger pretensioner circuit short to battery	P1100	Mass air flow sensor intermittent
B1883	Seatbelt passenger pretensioner circuit short to ground	P1101	Mass air flow (MAF) sensor out of self test range
B1884	PAD warning lamp inoperative	P1105	Dual alternator upper fault
B1885	Seatbelt driver pretensioner circuit resistance low on squib	P1106	Dual alternator lower fault
B1886	Seatbelt passenger pretensioner circuit resistance low on squib	P1107	Dual alternator lower circuit
B1887	Air bag driver circuit short to ground	P1108	Dual alternator Battery lamp circuit
B1888	Air bag passenger circuit short to ground	P1111	System pass
B1889	Passenger air bag disable module sensor obstructed	P1112	Intake air temperature sensor intermittent
B1890	PAD warning lamp circuit short to battery	P1116	Engine coolant temperature (ECT) sensor out of self test range
B1891	Air bag tone warning indicator circuit short to battery	P1117	Engine coolant temperature (ECT) sensor intermittent
B1892	Air bag tone warning indicator circuit failure	P1118	Manifold air temperature sensor (MAT) (ACT)
B1900	Driver side air bag fault	P1119	Manifold air temperature sensor (MAT) (ACT)
B1901	Air bag crash sensor #1 feed/return circuit short to ground	P1120	Throttle position circuit out of range low
B1916	Air bag driver circuit short to battery	P1121	Throttle position sensor inconsistent with MAF sensor
B1921	Air bag diagnostic monitor ground circuit open	P1124	Throttle position sensor out of self test range
B1925	Air bag passenger circuit short to battery	P1125	Throttle position sensor intermittent
B1927	Passenger side air bag fault	P1127	Exhaust not warm enough downstream oxygen sensor not tested
B1932	Air bag driver circuit open	P1128	Upstream oxygen sensors swapped from bank to bank
B1933	Air bag passenger circuit open	P1129	Downstream oxygen sensors swapped from bank to bank
B1934	Air bag driver inflator circuit resistance low on squib	P1130	Lack of HO2S11 switch adaptive fuel at limit (bank 1 upstream)
B1935	Air bag passenger inflator circuit resistance low on squib	P1131	Lack of HO2S11 switch sensor indicates lean (Bank 1 upstream)
B1941	Air bag crash sensor #1 feed/return circuit open	P1132	Lack of HO2S11 switch sensor indicates rich (Bank 1 upstream)
B2141	NVM configuration failure	P1133	HO2S11 fuel control shifted lean (Bank 1upstream)
C1095	Hydraulic pump motor circuit failure	P1134	HO2S11 fuel control shifted rich (Bank 1upstream)
C1102	Acceleration switch circuit failure	P1135	Ignition switch signal missing or improper
C1145	Wheel speed RF input circuit failure	P1137	Lack of HO2S12 switch sensor indicates lean (Bank 1 downstream)
C1155	Wheel speed LF input circuit failure	P1138	Lack of HO2S12 switch sensor indicates rich (Bank 1 downstream)
		P1139	Water in fuel circuit malfunction
		P1140	Water in fuel condition fail

P1141	Fuel restriction indicator circuit malfunction	P1210	Injector control pressure higher than desired (engine off)
P1142	Fuel restriction switch condition fault	P1211	Injector control pressure higher than desired (engine crank or run)
P1148	Generator 2 control circuit	P1212	Injection control pressure fail minimum pressure test at crank
P1149	Generator 2 monitor circuit high	P1218	CID high
P1150	Lack of HO2S12 switch adaptive fuel at limit (Bank 2 upstream)	P1219	CID low
P1151	Lack of HO2S21 switch sensor indicates lean (Bank 2 upstream)	P1220	Throttle position sensor B out of range
P1152	Lack of HO2S21 switch sensor indicates rich (Bank 2 upstream)	P1224	Throttle position sensor B out of self test range
P1153	HO2S21 fuel control shifted lean (Bank 2 upstream)	P1227	Waste gate failed closed (Over pressure)
P1154	HO2S21 fuel control shifted rich (Bank 2 upstream)	P1228	Waste gate failed open (Under pressure)
P1157	Lack of HO2S21 switch sensor indicates lean (Bank 2 downstream)	P1229	Intercooler pump driver fault
P1158	Lack of HO2S21 switch sensor indicates rich (Bank 2 downstream)	P1230	Fuel pump low speed malfunction (VLCM)
P1170	Engine shutoff solenoid	P1231	Fuel pump secondary circuit low high speed (VLCM)
P1171	Rotor sensor	P1232	Fuel pump secondary circuit high high speed (VLCM)
P1172	Rotor control	P1233	Fuel system disabled or offline
P1173	Rotor calibration	P1234	Fuel system failed or offline
P1174	Cam sensor	P1235	Fuel pump control out of range (VLCM)
P1175	Cam control	P1236	Fuel pump control out of range (VLCM)
P1176	Cam calibration	P1237	Fuel pump secondary circuit malfunction
P1177	Synchronization	P1238	Fuel pump secondary circuit malfunction
P1178	Boltup limits	P1244	Alternator load input failed high
P1184	KOER fail engine oil temperature out of self test range	P1245	Alternator load input failed low
P1185	Fuel pump temperature sensor high	P1247	Turbo boost pressure low
P1186	Fuel pump temperature sensor low	P1248	Turbo boost pressure not detected
P1187	Variant selection	P1249	Waste-gate control valve performance
P1188	Calibration memory	P1250	Lack of power to FPRC solenoid
P1189	Pump speed signal	P1252	Pedal correlation PDS1 and LPDS high
P1190	Calibration sensor out of range	P1253	Pedal correlation PDS1 and LPDS low
P1191	Key line voltage	P1254	Pedal correlation PDS2 and LPDS high
P1192	V external	P1255	Pedal correlation PDS2 and LPDS low
P1193	EGR driver over current	P1256	Pedal correlation PDS2 and LPDS
P1194	ECM/PCM A/D converter	P1257	Pedal correlation PDS2 and LPDS
P1195	SCP HBCC chip failed to initialize	P1258	Pedal correlation PDS1 and PDS2
P1196	Key off voltage high		
P1197	Key off voltage low		
P1198	Pump rotor control underfueling		
P1209	Injector control pressure peak delta test fault		

P1260	Theft detected – engine disabled	P1303	Exhaust gas recirculation calibration fault
P1261	Cylinder #1 high to low side short	P1304	Exhaust gas recirculation calibration high
P1262	Cylinder #2 high to low side short	P1305	Exhaust gas recirculation calibration low
P1263	Cylinder #3 high to low side short	P1306	Kickdown relay pull-in circuit
P1264	Cylinder #4 high to low side short	P1307	Kickdown relay hold circuit
P1265	Cylinder #5 high to low side short	P1309	Misfire monitor failure
P1266	Cylinder #6 high to low side short	P1316	Injection Driver Module codes detected
P1267	Cylinder #7 high to low side short	P1317	Injection Driver Module codes not retrieved
P1268	Cylinder #8 high to low side short	P1331	Turbo/Super charger boost high side circuit / open
P1270	Engine RPM or vehicle speed limiter reach	P1334	EGR throttle position sensor minimum stop performance
P1271	Cylinder #1 high to low side open	P1335	EGR position sensor minimum stop performance
P1272	Cylinder #2 high to low side open	P1337	Throttle position output circuit
P1273	Cylinder #3 high to low side open	P1351	Ignition diagnostic monitor (IDM) circuit malfunction
P1274	Cylinder #4 high to low side open	P1352	Ignition coil A primary malfunction
P1275	Cylinder #5 high to low side open	P1353	Ignition coil B primary malfunction
P1276	Cylinder #6 high to low side open	P1354	Ignition coil C primary malfunction
P1277	Cylinder #7 high to low side open	P1355	Ignition coil D primary malfunction
P1278	Cylinder #8 high to low side open	P1356	PIP's occurred while IDM pulse width indicates engine not turning
P1280	Injection control pressure sensor out of range low	P1357	Ignition diagnostic monitor pulse width not detected
P1281	Injection control pressure sensor out of range high	P1358	IDM signal out of self test range
P1282	Injection control pressure higher than desired	P1359	Spark output circuit malfunction
P1283	Injection pressure regulator control circuit	P1364	Ignition coil circuit malfunction
P1284	Aborted KOER - injection control pressure failure	P1369	Engine temperature light monitor failure
P1285	Cylinder head over temperature sensed	P1378	Fuel injection control module system voltage low
P1288	Cylinder head temperature sensor out of self test range	P1379	Fuel injection control module system voltage high
P1289	Cylinder head temperature sensor high input	P1380	Variable cam timing solenoid A malfunction
P1290	Cylinder head temperature sensor low input	P1381	Variable cam timing over advanced (Bank A)
P1291	Injector high side short to ground or VBATT—bank 1	P1383	Variable cam timing over retarded (Bank A)
P1292	Injector high side short to ground or VBATT—bank 2	P1385	Variable cam timing solenoid B malfunction
P1293	Injector high side open—bank 1	P1386	Variable cam timing over advanced (Bank B)
P1294	Injector high side open—bank 2	P1388	Variable cam timing over retarded (Bank B)
P1295	Injector multiple faults—bank 1	P1389	Glow plug circuit high side, low input
P1296	Injector multiple faults—bank 2	P1390	Octane adjust service pin out of self test range
P1297	Injector high side switches shorted together	P1391	Glow plug circuit low input (bank 1)
P1298	Injector driver module failure	P1392	Glow plug circuit high input (bank 1)
P1299	Cylinder head over temperature protection active	P1393	Glow plug circuit low input (bank 2)
P1300	Boost calibration fault	P1394	Glow plug circuit high input (bank 2)
P1301	Boost calibration high	P1395	Glow plug monitor fault bank #1
P1302	Boost calibration low	P1396	Glow plug monitor fault bank #2

- P1397 System voltage out of self test range
P1399 Glow plug circuit high side, high input
P1400 DPFE sensor circuit low voltage detected
P1401 DPFE sensor circuit high voltage detected
P1403 DPFE sensor hoses reversed
P1405 DPFE sensor upstream hose off or plugged
P1406 DPFE sensor downstream hose off or plugged
P1407 Exhaust gas recirculation no flow detected
P1408 EGR flow out of self test range
P1409 EGR control circuit malfunction
P1410 EGR barometric pressure sensor VREF voltage
P1411 Secondary air injection system incorrect downstream flow detected
P1412 Exhaust gas recirculation valve frozen
P1413 Secondary air injection system monitor circuit low voltage
P1414 Secondary air injection system monitor circuit high voltage
P1442 Evaporative emission control system leak detected (small leak)
P1443 Evaporative emission control system purge control valve malfunction
P1444 Purge flow sensor circuit low input
P1445 Purge flow sensor circuit high input
P1450 Unable to bleed up fuel tank vacuum
P1451 Evaporative emission control system vent control valve circuit malfunction
P1452 Unable to bleed up vacuum in tank
P1455 Evaporative emission control system purge control leak detected (gross leak)
P1457 Unable to pull vacuum in tank
P1460 Wide open throttle A/C cutout circuit malfunction
P1461 A/C pressure sensor circuit high input
P1462 A/C pressure sensor circuit low input
P1463 A/C pressure sensor insufficient pressure change
P1464 A/C demand out of self test range
P1469 Low A/C cycling period
P1473 Fan secondary high with fan(s) off (VLCM)
P1474 Low fan control primary circuit malfunction
P1479 High fan control primary circuit malfunction
P1480 Fan secondary low with low fan on
P1481 Fan secondary low with high fan on
P1484 Open power ground to VLCM (VLCM)
P1500 VSS intermittent
P1501 Vehicle speed sensor out of self test range
P1502 Vehicle speed sensor intermittent
P1503 Invalid test—auxiliary power control module functioning
P1504 Idle air control circuit malfunction
P1505 Idle air control system at adaptive clip
P1506 Idle air control overspeed error
P1507 Idle air control underspeed error
P1512 Inlet manifold runner control malfunction (Bank #1 stuck closed)
P1513 Inlet manifold runner control malfunction (Bank #2 stuck closed)
P1516 Inlet manifold runner control input error (Bank #1)
P1517 Inlet manifold runner control input error (Bank #2)
P1518 Inlet manifold runner control malfunction (stuck open)
P1519 Inlet manifold runner control malfunction (stuck closed)
P1520 Inlet manifold runner control circuit malfunction
P1525 KOER or cont. mon. fail charge air bypass valve
P1527 AWS solenoid circuit malfunction
P1528 PONLY solenoid circuit malfunction
P1529 SCAIR solenoid circuit malfunction
P1530 A/C clutch circuit malfunction
P1531 Invalid test—accelerator pedal movement
P1536 Park brake switch circuit
P1537 Inlet manifold runner control malfunction (bank 2 stuck open)
P1538 Inlet manifold runner control malfunction (bank 1 stuck open)
P1539 Power to A/C clutch circuit overcurrent (VLCM)
P1540 Air bypass valve circuit malfunction
P1549 Intake manifold communication control circuit malfunction
P1550 Power steering pressure switch out of self test range
P1600 Loss of KAM power, circuit open
P1601 ECM/TCM serial communication error
P1602 Imm/TCM serial communication error
P1605 Keep alive memory test fail
P1608 Internal control module malfunction
P1610 Interactive reprogramming code—replace module (used with P1615/17/19/20)
P1611 Interactive reprogramming code—replace module (used with P1616/18)

P1612	Flash EPROM reprogramming error	P1686	MOP stepping motor circuit malfunction
P1613	Flash EPROM reprogramming error	P1687	MOP stepping motor circuit malfunction
P1614	Flash EPROM reprogramming error	P1688	MOP stepping motor circuit malfunction
P1615	Interactive reprogramming code—erase error	P1689	MOP stepping motor circuit malfunction
P1616	Interactive reprogramming code—erase error, low voltage	P1690	Wastegate solenoid circuit
P1617	Interactive reprogramming code—block program error	P1691	SPCNT solenoid circuit malfunction
P1618	Interactive reprogramming code—block program error, low voltage	P1692	SEXEC solenoid circuit malfunction
P1619	Flash EPROM reprogramming error	P1693	SINEC solenoid circuit malfunction
P1620	Flash EPROM reprogramming error	P1694	SINLF solenoid circuit malfunction
P1621	Immobilizer code word / ID write failure	P1700	Transmission indeterminate failure (failed to neutral)
P1622	Immobilizer ID unmatched	P1701	Reverse engagement error
P1623	Immobilizer code word / ID write failure	P1702	Transmission range sensor circuit intermittent
P1625	B+ supply to VLCM fan circuit malfunction (VLCM)	P1703	Brake switch out of range
P1625	B+ supply to VLCM A/C circuit malfunction (VLCM)	P1704	Transmission range circuit not indicating Park/Neutral during self test
P1630	Alternator #1 circuit malfunction	P1705	Transmission range circuit not indicating Park/Neutral during self test
P1631	Alternator #2 circuit malfunction	P1706	High vehicle speed observed in park
P1634	Data output link circuit	P1707	Transfer case neutral indicator hard fault present
P1636	Inductive signature chip communication error	P1708	Clutch switch circuit malfunction
P1639	Vehicle ID block corrupted, not programmed	P1709	Park neutral position switch out of self test range
P1645	F/P resistor switch circuit malfunction	P1710	Transmission concern
P1650	Power steering pressure switch out of self test range	P1711	Transmission fluid temperature sensor out of self test range
P1651	Power steering pressure switch input malfunction	P1713	Transmission fluid temperature sensor in range failure –50 deg F
P1660	Output circuit check circuit high output	P1714	Shift solenoid A inductive signature
P1661	Output circuit check circuit low output	P1715	Shift solenoid B inductive signature
P1662	UDU_EN output circuit	P1716	Shift solenoid C inductive signature
P1663	Fuel demand command signal output circuit	P1718	Transmission fluid temperature sensor in range failure +250 deg F
P1667	Cylinder ID circuit	P1720	VSS (meter) circuit malfunction
P1668	PCM/IDM communications error	P1725	Insufficient engine speed increase during self test
P1670	Electronic feedback signal not detected	P1726	Insufficient engine speed decrease during self test
P1680	Metering oil pump malfunction	P1727	Coast clutch solenoid inductive signature
P1681	Metering oil pump malfunction	P1728	Transmission slip
P1682	Metering oil pump malfunction	P1729	4x4 low switch fail
P1683	MOP thermosensor circuit malfunction	P1730	4x4 low switch
P1684	MOP position sensor circuit malfunction	P1731	1-2 shift malfunction
P1685	MOP stepping motor circuit malfunction	P1732	2-3 shift malfunction
		P1733	3-4 shift malfunction

P1735	1 st gear switch circuit malfunction	P1790	TPS (mechanical) circuit malfunction
P1736	2 nd gear switch circuit malfunction	P1791	TPS (electrical) circuit malfunction
P1738	Shift time error	P1792	Atmospheric pressure circuit malfunction
P1740	Torque converter clutch inductive signature	P1793	Intake air volume circuit malfunction
P1741	Torque converter clutch solenoid control error	P1794	Battery voltage circuit malfunction
P1742	Torque converter clutch solenoid circuit failed on	P1795	Idle switch circuit malfunction
P1743	LOOP solenoid circuit malfunction	P1796	Kick down switch circuit malfunction
P1744	Torque converter clutch solenoid circuit performance	P1797	Neutral switch circuit malfunction
P1745	Transmission concern	P1798	Water thermosensor circuit malfunction
P1746	Pressure control solenoid A open circuit	P1799	Hold switch circuit malfunction
P1747	Pressure control solenoid A short circuit	P1900	Transmission concern
P1748	Pressure control solenoid A	P1902	Kick down solenoid relay control circuit
P1749	EPC solenoid failed low	P1903	Kick down solenoid circuit low voltage
P1751	Shift solenoid A performance	P1904	Kick down solenoid circuit high voltage
P1754	Coast clutch solenoid circuit	P2029	Fuel fired heater disabled
P1756	Shift solenoid B performance	P2030	Fuel fired heater performance
P1760	Pressure control solenoid short circuit intermittent	P2121	Throttle/pedal position sensor/switch D circuit range/circuit
P1761	Shift solenoid C performance	P2122	Throttle/pedal position sensor/switch D circuit low input
P1762	Transmission concern	P2123	Throttle/pedal position sensor/switch D circuit high input
P1765	Solenoid 5 circuit malfunction	P2124	Throttle/pedal position sensor/switch D circuit intermittent
P1766	Shift solenoid D performance	P2125	Throttle/pedal position sensor/switch E circuit
P1767	Transmission concern	P2126	Throttle/pedal position sensor/switch E circuit range/performance
P1770	Clutch solenoid circuit malfunction	P2127	Throttle/pedal position sensor/switch E circuit low input
P1773	Can link PCM/fuel fired heater malfunction	P2128	Throttle/pedal position sensor/switch E circuit high input
P1775	Shift 1 circuit malfunction	P2700	Coast clutch system error
P1776	Shift 2 circuit malfunction	P2701	Overdrive clutch system error
P1779	Transmission control indicator light circuit	P2702	Intermediate clutch system error
P1780	Transmission control switch (9OD cancel) circuit out of self test range	P2703	Direct clutch system error
P1781	4x4 circuit out of self test range	P2704	Low / reverse clutch system error
P1783	Transmission overtemperature condition	U1020	Module communications network concern
P1784	Transmission 1 st and Reverse mechanical fail	U1021	SCP indicates lack of A/C clutch status input
P1785	Transmission 1 st and 2 nd mechanical failure	U1039	SCP indicates VSS signal missing or incorrect
P1887	Transmission 3 rd or 4 th gear electrical fault	U1051	SCP indicates brake switch signal missing
P1788	VFS #2 open circuit	U1073	SCP indicates lack of engine coolant fan status
P1788b	Transmission 2-3 timing or CCS circuit open	U1131	SCP indicates lack of fuel pump status response
P1789	VFS #2 short circuit	U1135	SCP indicates ignition switch signal missing
P1789b	Transmission 2-3 timing or CCS circuit shorted	U1256	SCP indicates A communications error
		U1451	Lack of response at PATS module engine off
		U1850	Invalid or missing fuel system data