

# Transmission Type... AXOD-E/AX4S

## Rebuilder's Kwik Reference Guide



### Clutch Clearances

Forward Clutch.....	.055-.075"	.....	Snap Ring
Intermediate Clutch .....	.040-.059"	.....	Snap Ring
Direct Clutch .....	.031-.051"	.....	Snap Ring
<b>Low/Reverse Clutch</b>			
Reverse Clutch .....	.038-.064"	.....	Snap Ring
<b>Overrun Clutch</b>			
<b>Overdrive Clutch</b>			

### Adjusted By:

Forward Clutch.....	.055-.075"	.....	Snap Ring
Intermediate Clutch .....	.040-.059"	.....	Snap Ring
Direct Clutch .....	.031-.051"	.....	Snap Ring
<b>Low/Reverse Clutch</b>			
Reverse Clutch .....	.038-.064"	.....	Snap Ring
<b>Overrun Clutch</b>			
<b>Overdrive Clutch</b>			

### Band Adjustment

Intermediate Band			
2-4 Band			
<b>Low/Reverse Band</b>			
Overdrive Band.....	.070-.149"	.....	Rod
Low/Intermediate Band:			
Used.....	.216-.255"	.....	Rod
New.....	.196-.236"	.....	Rod

### Torque Specifications

Pump Halves .....	84-108 In. Lbs.
<b>Pump To Case</b>	
Valve Body Halves .....	84-108 In. Lbs.
Valve Body To Case .....	84-108 In. Lbs.
Chain Cover To Case (10 mm) .....	20-26 Ft. Lbs.
Chain Cover To Case (8 mm) .....	84-108 In. Lbs.
Chain Cover To Case (13 mm) .....	25-35 Ft. Lbs.
Pan .....	10-12 Ft. Lbs.
Center Support/Reverse Anchor Nut .....	7.5-9 Ft. Lbs.*
Reverse Anchor Bolt Lock Nut .....	25-35 Ft. Lbs.*
<b>Extension Housing</b>	
<b>Driven Sprocket Support</b>	
<b>Overdrive Support</b>	
<b>Chain Cover</b>	
<b>Transfer Gears</b>	
<b>Governor Bolts</b>	
Sidecover Bolts .....	10-12 Ft. Lbs.

\* Tighten after unit is completely assembled.

### Unit Endplays

Overdrive Unit (thickest washer that allows movement) ...	Driven Sprocket Support .....	Thrust Washer #5
Main Unit .005-.015"	Driven Sprocket Support .....	Thrust Washer #8
Rear Unit .004-.025"	Bottom Of Differential .....	Thrust Washer #18
<b>Differential</b>		
<b>Chain Sprocket</b>		

### Location

### Selective

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### Clutch & Band/Solenoid Application Charts

Gear	Low-Intermediate Band		Overdrive Band	Forward Clutch	Intermediate Clutch	Direct Clutch	Reverse Clutch	Low 1-Way Clutch	Direct 1-Way Clutch
	Reverse	1st	2nd	3rd	4th	1st			
Drive		Applied		Applied			Applied	Holding	
		Applied		Applied	Applied			Holding	
		Applied		Applied	Applied	Applied		Overrunning	
				Applied	Applied	Applied			Holding
Manual		Applied		Applied		Applied		Holding	Overrunning

(ON/OFF Lock-Up Solenoid) Solenoid Application Chart						
Gear	Shift Solenoid 2 Output 1 On = Green	Shift Solenoid 1 Output 2 On = Green	Shift Solenoid 3* Output 3 On = Green	Lock-Up Solenoid Output 4 On = Green	EPC Output 7 On = Green @ Max	
1st	On	Off	Off	Off	Changes to Control Line Pressure	
2nd	On	On	Off	Off	Changes to Control Line Pressure	
3rd	Off	Off	On*	Off	Changes to Control Line Pressure	
4th	Off	On	On	Off	Changes to Control Line Pressure	
Lock-Up	Off	On	On	On	Min-Max	

\* Comes on in 3rd to get reading for 4th. Does not come on in manual 3rd.

(PWM Lock-Up Solenoid) Solenoid Application Chart						
Gear	Shift Solenoid 2 Output 1 On = Green	Shift Solenoid 1 Output 2 On = Green	Shift Solenoid 3* Output 3 On = Green	Lock-Up Solenoid Output 4 On = Green	EPC Output 7 On = Green @ Max	
1st	On	Off	Off	Off	Changes to Control Line Pressure	
2nd	On	On	Off	Off	Changes to Control Line Pressure	
3rd	Off	Off	On*	Off	Changes to Control Line Pressure	
4th	Off	On	On	Off	Changes to Control Line Pressure	
Lock-Up	Off	On	On	On**	Min-Max	

\* Comes on in 3rd to get reading for 4th. Does not come on in manual 3rd.

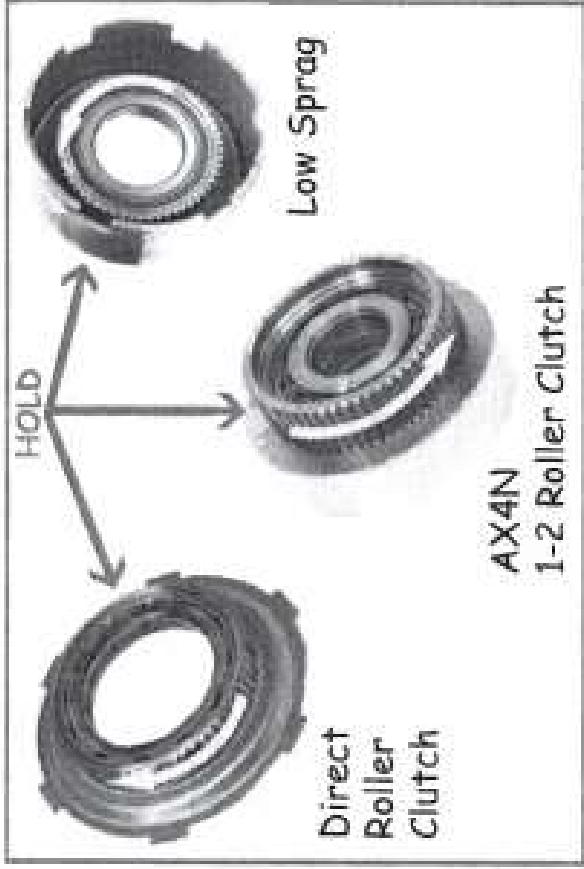
\*\* Function Duty Cycle % changes to control lock-up feel. Higher number means softer apply. Lower number means firmer apply.

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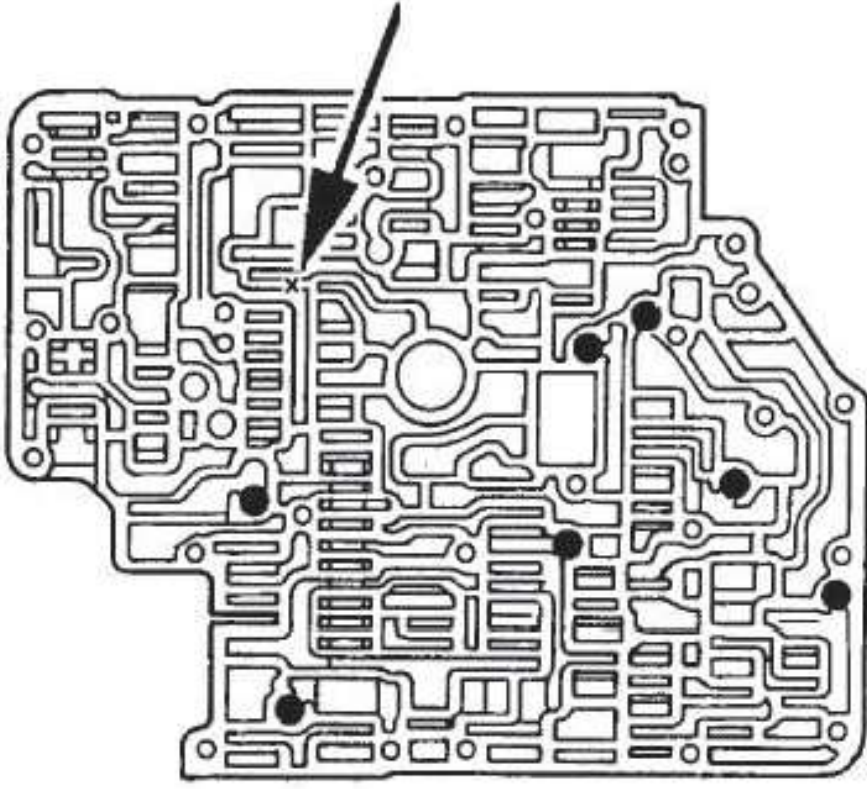
## Technical Tips For Rebuilding This Unit



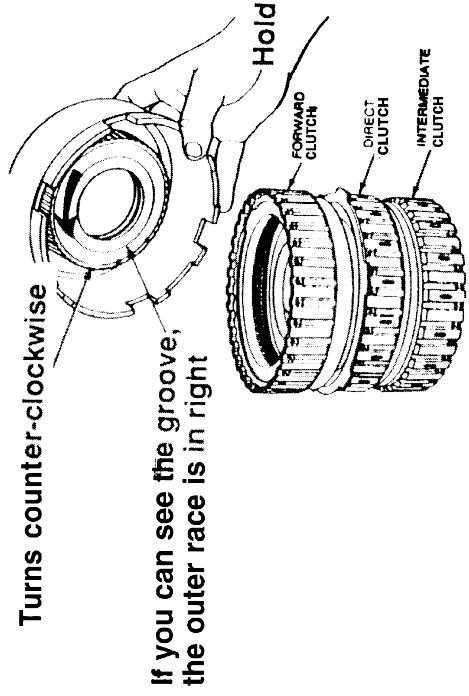
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### Line to Lube Modification



For full time lube, drill through  
this partition with a .050" drill bit.



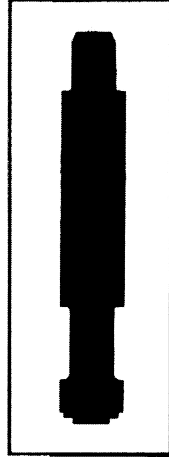
Input Sprag Installation

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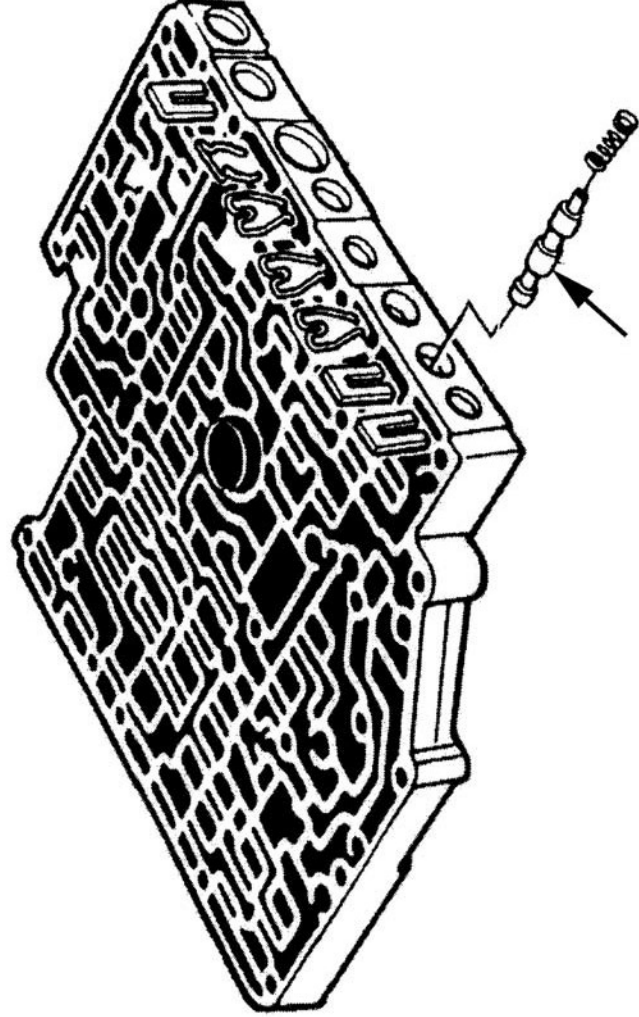
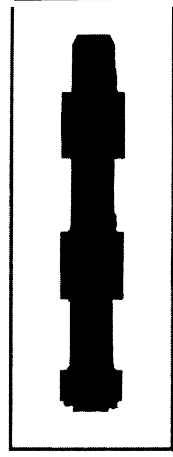
### **Early:**

The early valve body uses a backout valve with one long and one short land.



### **late:**

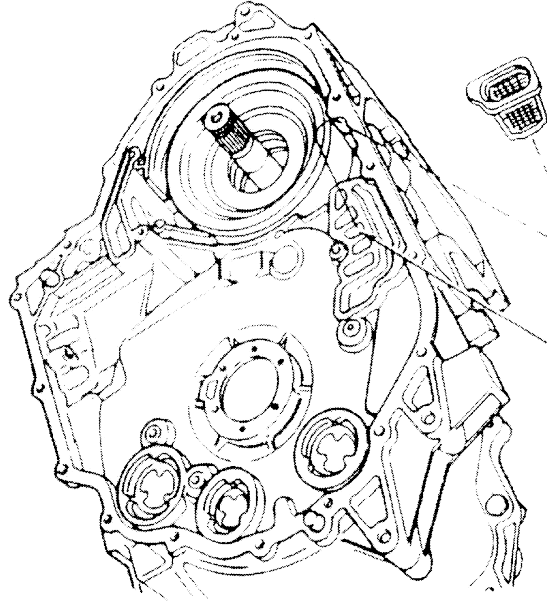
The late valve body uses a backout valve with three lands.



How to ID valve body & separator plate: Backout valve



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REMOVE SCREEN AND CLEAN WITH  
MOISTURE FREE COMPRESSED AIR

### **AXOD filter — E9DZ-7H1 62A**

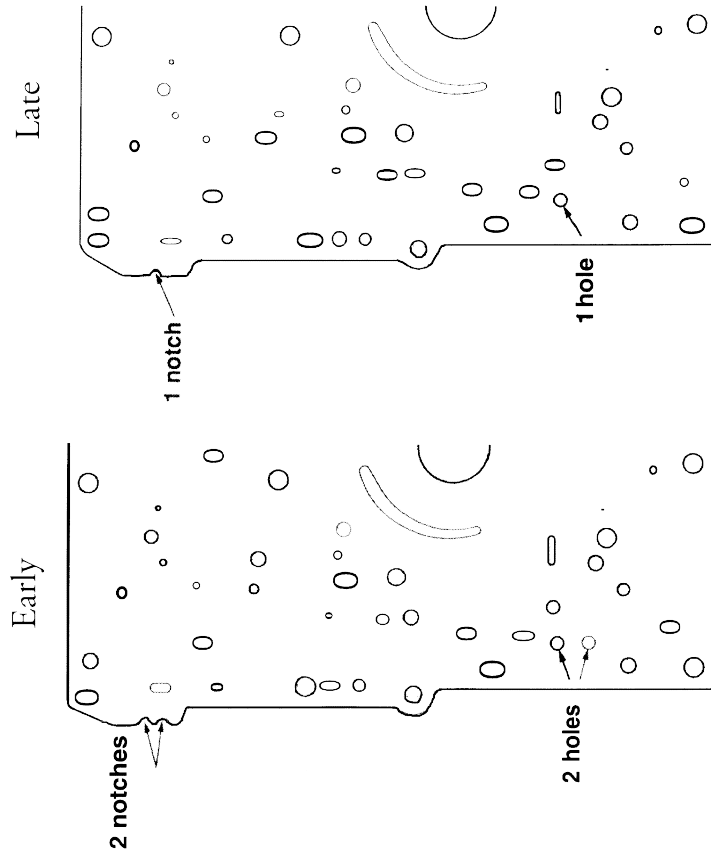
This filter was added to 1989 AXOD-E to keep metal  
out of valve body

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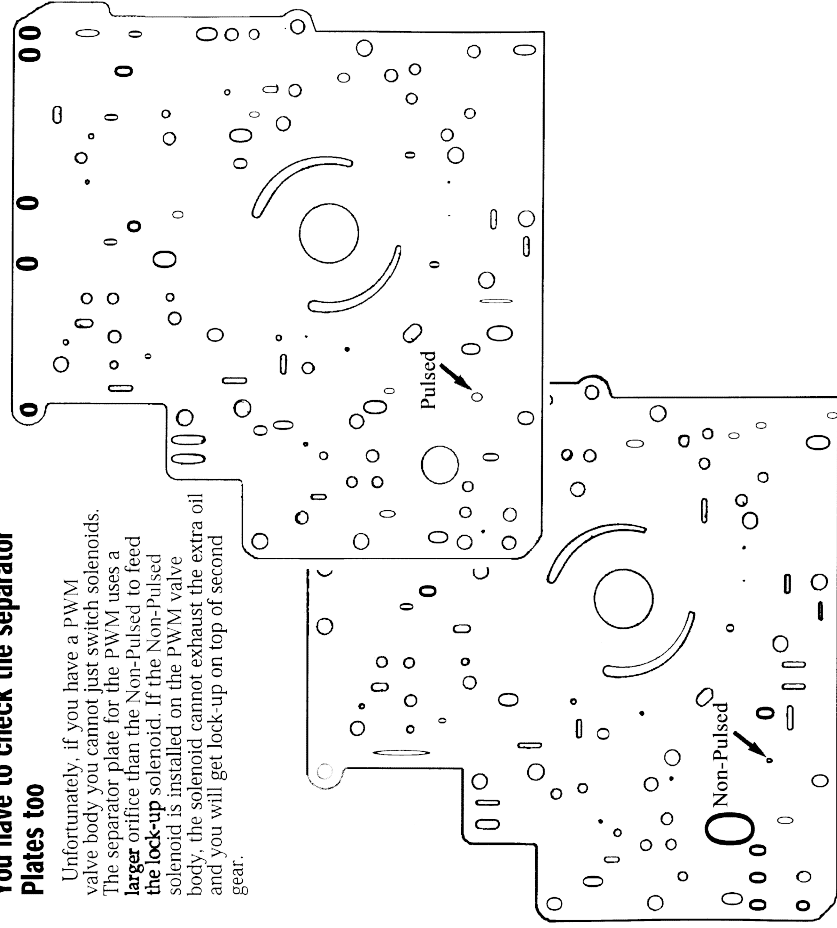
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### Technical Tips For Rebuilding This Unit



#### **You have to check the separator Plates too**

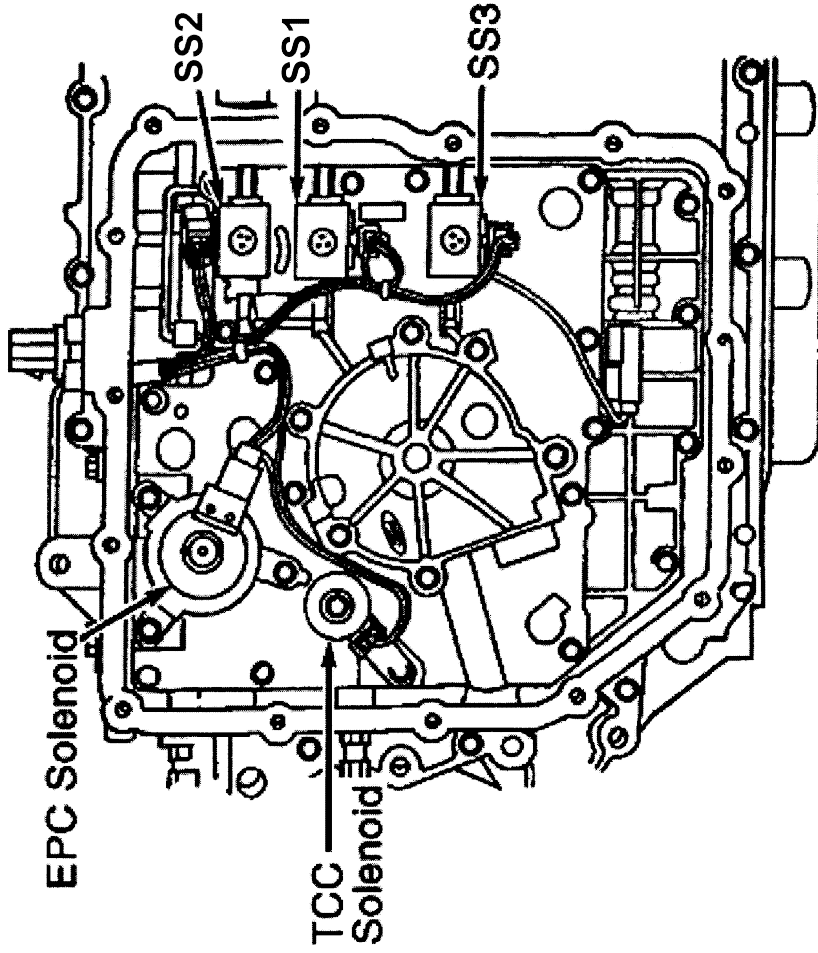
Unfortunately, if you have a PWM valve body you cannot just switch solenoids. The separator plate for the PWM uses a larger orifice than the Non-Pulsed to feed the lock-up solenoid. If the Non-Pulsed solenoid is installed on the PWM valve body, the solenoid cannot exhaust the extra oil and you will get lock-up on top of second gear.



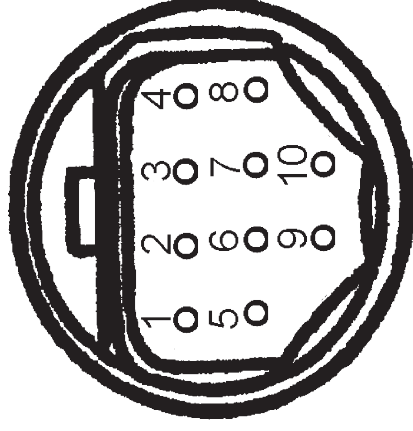
**How to ID early & late valve bodies and separator plates**

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## Solenoid & Harness Information



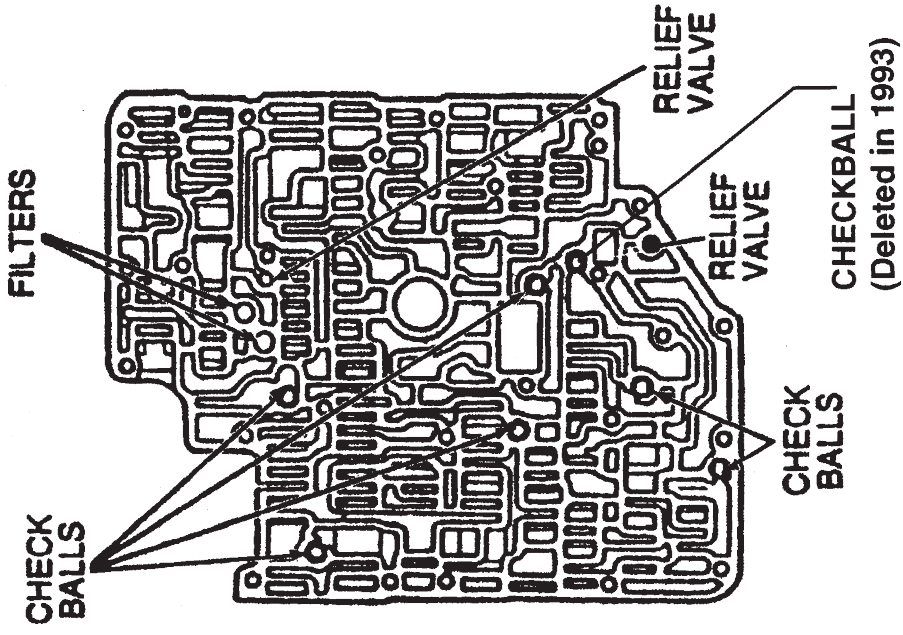
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Terminal	Description	Resistance OHMS
1	Not Used	-
2	TCC Solenoid (PWM) (before 9/97)	.75 - 3.0
2	TCC Solenoid (PWM) (after 9/97)	10-15
3	Shift Solenoid Power	-
4	Shift Solenoid #1 (SS1)	15-25
5	Shift Solenoid #3 (SS3)	15 - 25 Ohms
6	EPC/TCC Power	-
7	Shift Solenoid #2 (SS2)	15 - 25 Ohms
8	TFT Input	-
9	EPC	3.23 - 5.5 Ohms
10	Signal Return	-

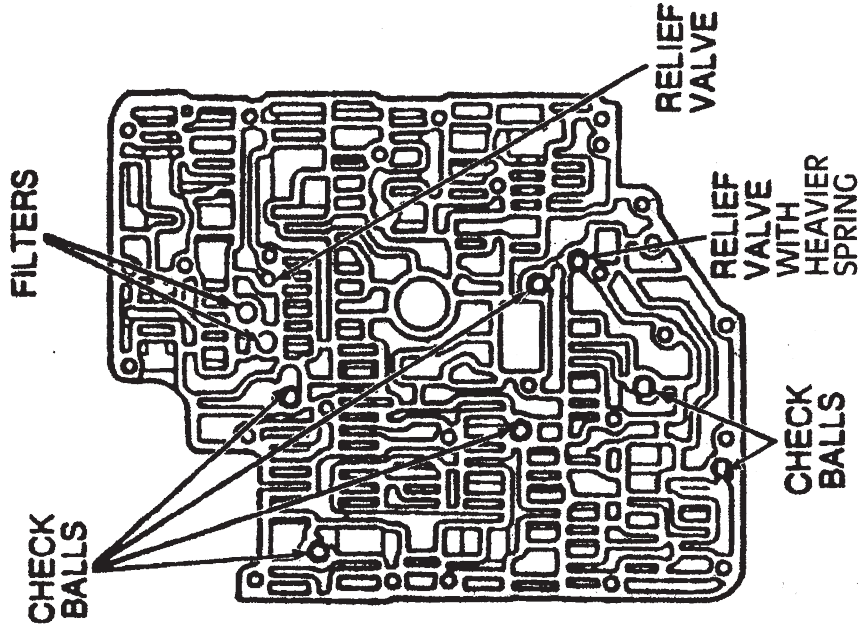
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## Checkball Locations Valve Body



1991-1998 Valve Body

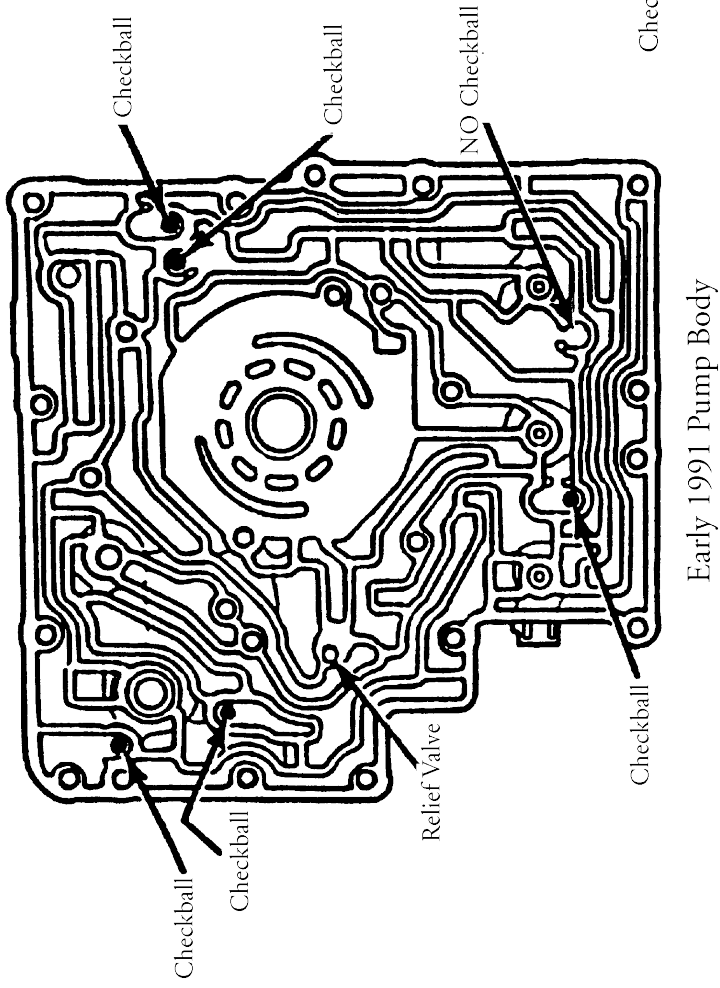
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1999 Valve Body

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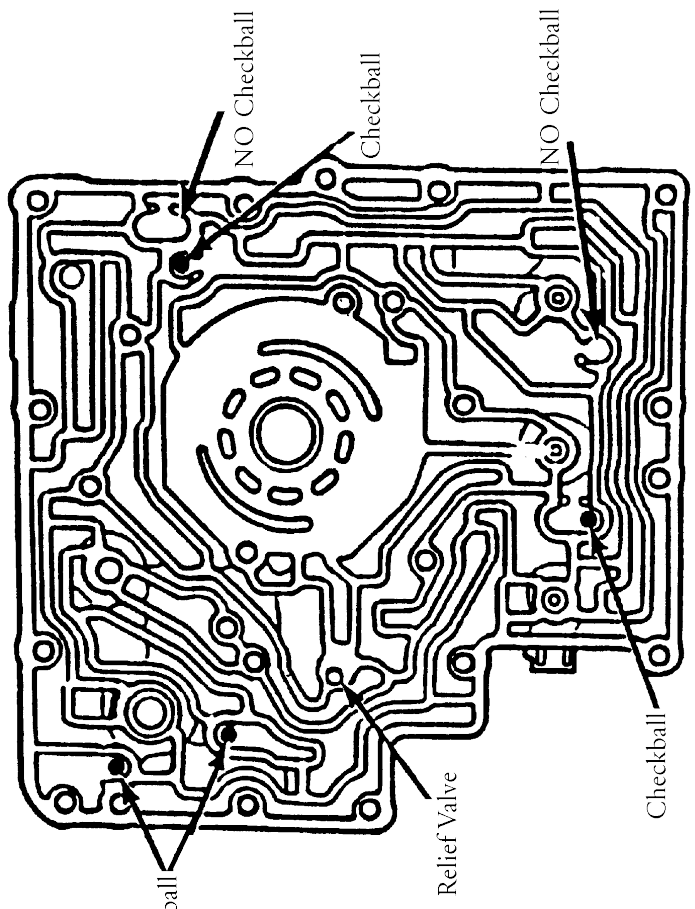
## Checkball Locations 1991 Pump Body



Early 1991 Pump Body



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Late 1991 Pump Body

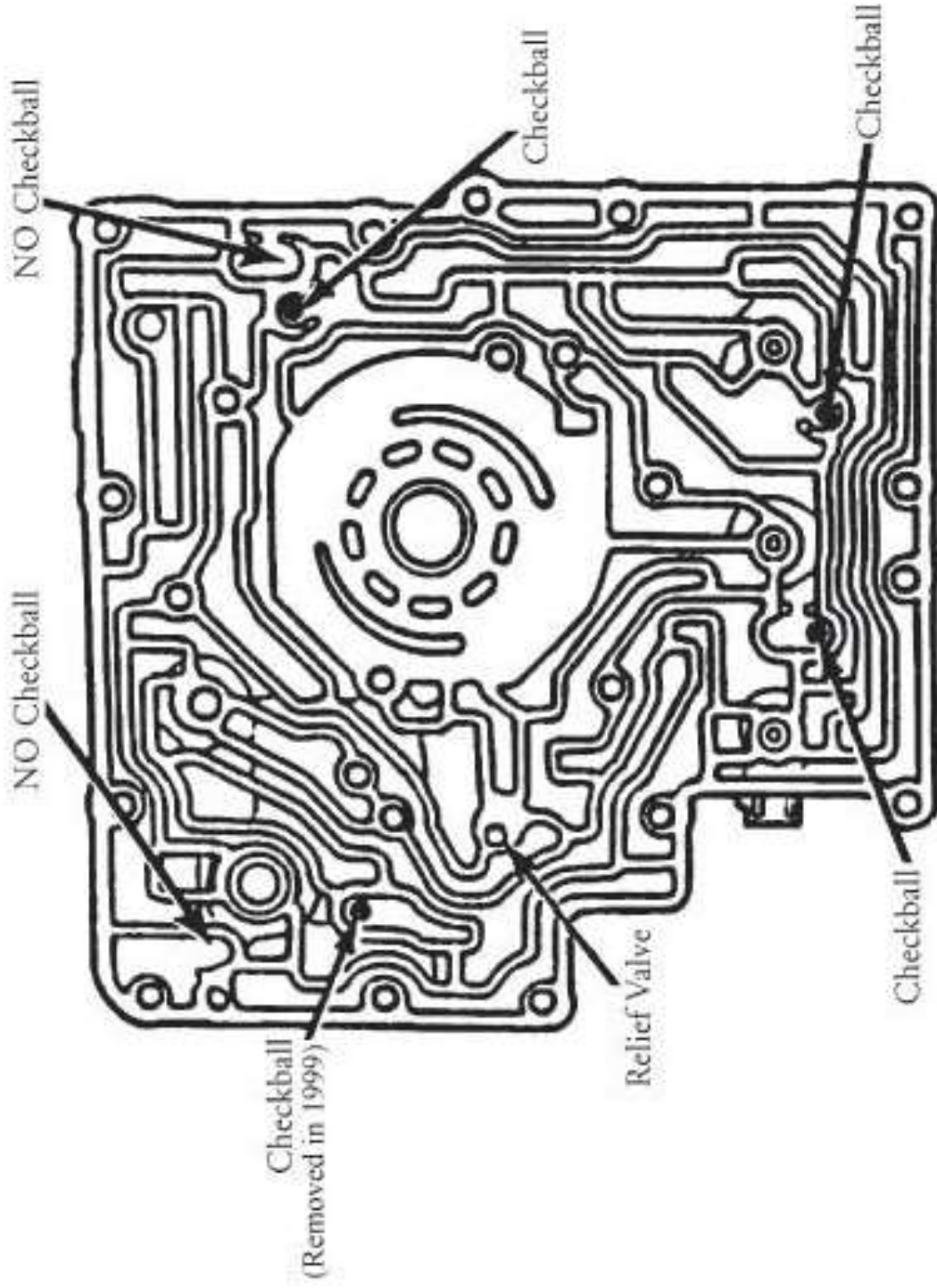


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### Checkball Locations 1992-99 Pump Body



1992-99 Pump Body