



Technical Service Information

SATURN NEW ACTUATORS FOR 1998

CHANGE: During the 1998 model year, a running change was made by Saturn to the control actuators used for the 2nd/Rev Clutch, the 3rd Clutch and the 4th Clutch. This change involves added screens on the new actuator, and now creates three different actuators depending on the model year that you are working on, as illustrated in Figure 1. 1st Design actuators, identified with the Black/Blue Tops are to be used in 1991-1992 model vehicles only. 2nd Design actuators identified with the Red Tops, are to be used in 1993-1996 model vehicles, and in 1997-1999 model vehicles in the Torque Converter Clutch (TCC) and Transaxle Fluid Pressure (TFP) positions only. The 3rd Design actuators identified with the White Tops, are to be used in 1997-1999 model vehicles in the 2nd/Rev Clutch, the 3rd Clutch and the 4th Clutch positions only in the valve body, as illustrated in Figure 2.

REASON: Reduces the possibility for debris to stick a control actuator valve.

PARTS AFFECTED:

- (1) ACTUATORS - 3rd Design now has screens added to the control pressure side of the actuators as illustrated in Figure 1, has the same resistance values as the 2nd Design actuators, and is identified with the White Plastic Tops. The 2nd Design actuator is identified by the Red Tops as shown in Figure 1. The 1st Design actuator is identified by the Black/Blue Tops as shown in Figure 1.

INTERCHANGEABILITY:

Since there is now three different actuators that will not all interchange and are model dependent, we have provided you with a chart in Figure 2 that shows which actuators fit in the various model years.

SERVICE INFORMATION:

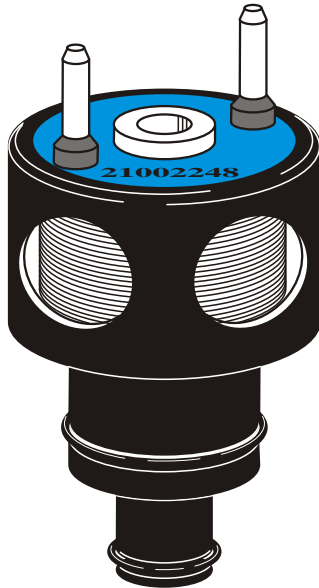
Actuator, 91-92 Model Only (Black/Blue Tops)	21002248
Actuator, 93-96 All and 97-99 Model TCC & TFP (Red Tops)	21002509
Actuator, 97-99 Model 2nd/Rev, 3rd, and 4th Clutch (White Tops)	21003289

SPECIAL NOTE:

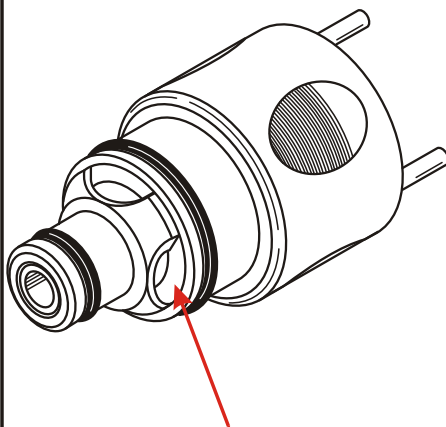
3rd Design actuators (White Top) should be used only in the 2nd/Rev Clutch, 3rd Clutch and 4th Clutch positions in the valve body. Poor shifts may occur if the 3rd Design actuator is used in the TCC and/or TFP positions in the valve body (See Figure 2).

**1ST DESIGN CONTROL
ACTUATOR SOLENOIDS
FITS 1991-1992 ONLY**

*Black or Blue Plastic Tops
For Identification*



*Measures 2.5 to 4.5
Ohms Resistance*



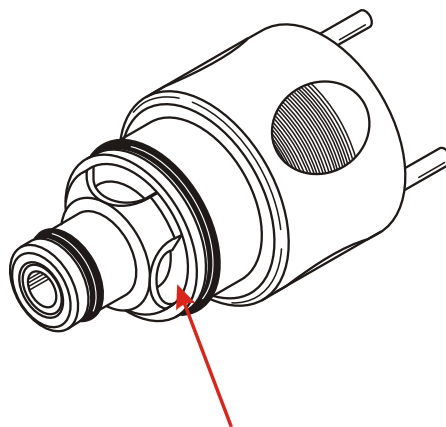
*"No Screens"
Part Number
21002248*

**2ND DESIGN CONTROL
ACTUATOR SOLENOIDS
FITS ALL 1993-1996 AND
1997-1999 TCC AND TFP**

*Red Plastic Tops
For Identification*



*Measures 4.0 to 6.0
Ohms Resistance*



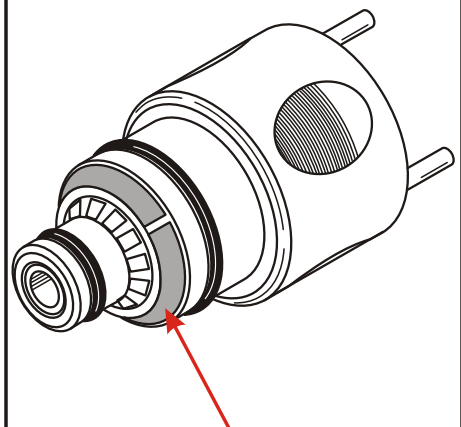
*"No Screens"
Part Number
21002509*

**3RD DESIGN CONTROL
ACTUATOR SOLENOIDS
FITS 1997-1999 2ND/REV, 3RD
AND 4TH POSITIONS ONLY**

*White Plastic Tops
For Identification*



*Measures 4.0 to 6.0
Ohms Resistance*



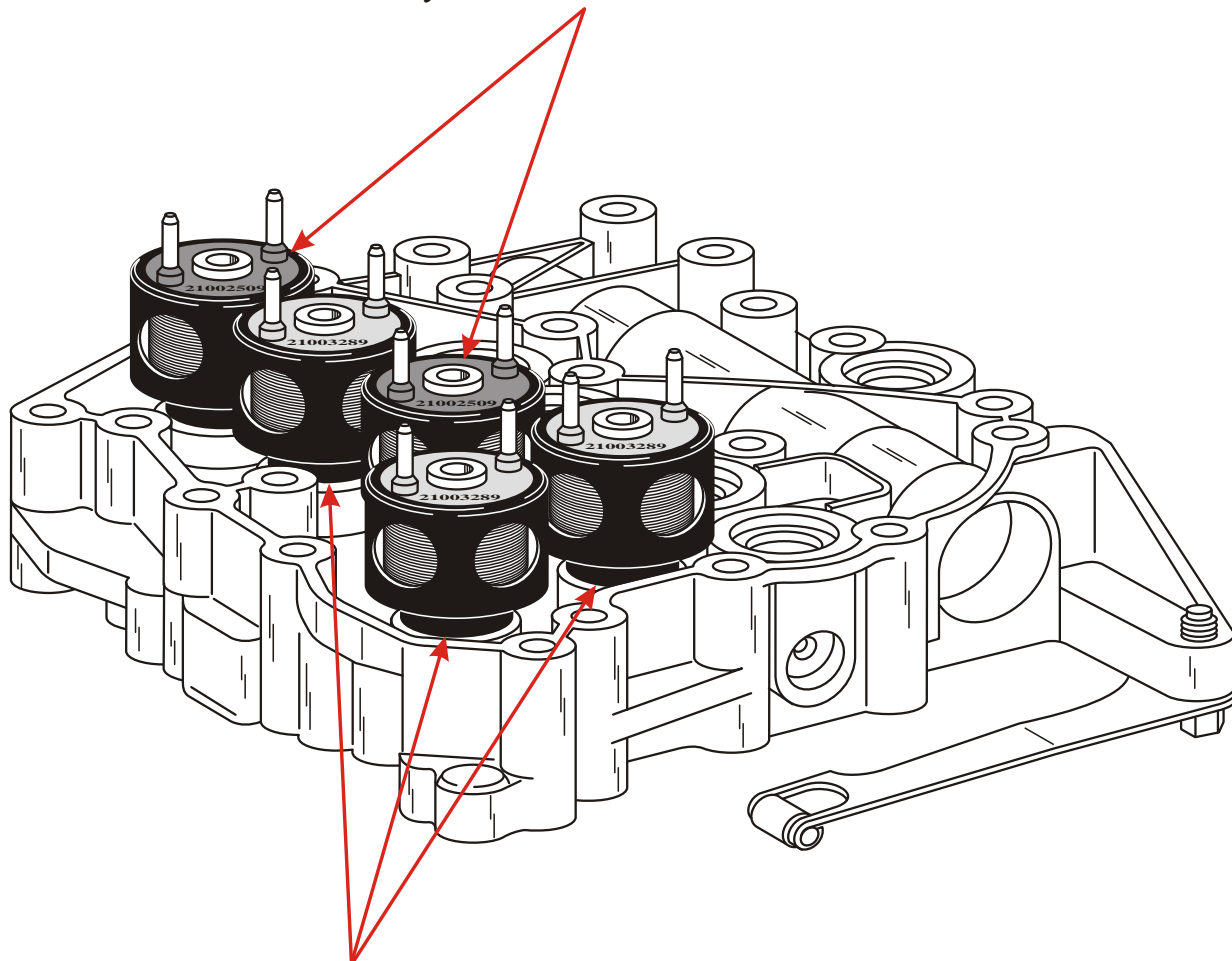
*"Screens Added"
Part Number
21003289*

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Figure 1

1997-1999 SATURN VALVE BODY

2nd Design control actuators (Red Tops) should be used in the Torque Converter Clutch (TCC) and the Transaxle Fluid Pressure (TFP) positions in the valve body as illustrated below.



3rd Design control actuators (White Tops) should be used "Only" in the 2nd/Reverse, 3rd and 4th Clutch positions in the valve body as illustrated.

SOLENOID CHART BY MODEL YEAR

YEAR	TCC	TFP	2ND/REV	3RD	4TH
1991-1992	21002248	21002248	21002248	21002248	21002248
1993-1996	21002509	21002509	21002509	21002509	21002509
1997-1999	21002509	21002509	21003289	21003289	21003289

Refer To Figure One For Identification Of Each Part Number Actuator.

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Figure 2