Unlocking Some AW55-50 Valve Body Mysteries

Let's start with identifying the AW 55-50 valve body and the differences that matter when you're choosing a replacement valve body. There are four castings, which can be identified by either a letter cast into the valve body just to the right of the S4 solenoid or a blank spot.

The blank spot (no letter) and A castings are considered early because the electrical connectors on the SLS and SLT solenoids face up (figures 1 & 2). The B and C casting valve bodies are considered late because the SLS and SLT solenoids have the electrical connectors facing down (figures 3 & 4 on next page). The early vehicles (2000 to sometime in 2002-2003) had an internal wiring harness that was just long enough to connect to the SLS and SLT solenoids with the electrical connectors facing up.

When the B valve body was introduced with the SLS and SLT electrical connectors facing down, the internal harness was made longer to accommodate the change.

The next wrinkle in our identification is which S2 solenoid the valve body has. Nissan and Volvo use a normally closed S2 solenoid that has a flat top with four ribs radiating from the center hole on top to the outside corners (figures 1 and 4). GM, Saab and Saturn use a normally open S2 solenoid that has a domed top (figures 2 and 3).
Now we can look at an AW55-50 valve body and tell whether it is early or late and whether it is a GM style or a Nissan/Volvo style. That was all you needed to know until 2005. Beginning in the 2005 model year, Nissan, GM and some Volvos changed the way that they fire the solenoids and added a spring to the inboard side of the B5 control valve. If a valve body without the B5 spring is installed on a 2005 or newer vehicle, you will get a nasty 3-2 coast-down clunk. If you install a valve body with a B5 spring into a 2004 or older vehicle you will get a 2-3 flare that will not adapt out.

It is important that you verify the model year of the vehicle by looking at the 10th digit of the vehicle identification number (VIN). A 4 in the 10th position would mean 2004, a 5 would mean 2005 and so on. If the vehicle is a 2005 or later, most will have the B5 control-valve spring (Figure 5). An exception to the rule is that some early Saturns have a B5 control valve spring. It is best to order a replacement valve body by identifying the letter code and whether it has a B5 control-valve spring because of various updates by the manufacturers over the years.

Let’s talk about the linear solenoids and the correct way to install the SLT /SLS solenoid bracket. There are three design levels of the SLT and SLS solenoids. The first design is shorter than the later designs and requires the early SLT /SLS hold-down bracket (Figure 1). You can identify the early, short solenoids by the round hole in the slot where the bracket goes and the electrical connector that faces up (Figure 6). The first design SLT /SLS solenoids are used on the valve body casting with no letter.

The second design solenoids are longer and the electrical connector faces up. The second-design SLT /SLS solenoids are used on the A casting valve bodies (Figure 2).

The third design solenoids are the same length as the second design but the electrical connector faces down. The third design SLT /SLS solenoids are used on the B and C casting valve bodies. Both the second and third design SLT /SLS solenoids require the late hold down bracket with the backward L at the bottom (figures 3 and 4). Always install the hold down brackets with the narrow end of the bracket facing up.
A good way to verify that the SLT/SLS hold down bracket is installed correctly is to look into the exhaust slot for each solenoid to see whether the slot on the solenoid is aligned with the exhaust slot. If the solenoid is blocking the exhaust slot, the bracket is on upside down or the wrong bracket is being used (Figure 7). If the exhaust slots are blocked, line pressure will go to maximum and the engagements and shifts will be harsh.

**AW55-50 valve body identification quick reference:**

Determine early or late valve body by using the letter code to the right of the S4 solenoid:
No letter or A = early valve body, B or C = late valve body.

Determine Volvo/Nissan or GM/Saab/Saturn valve body by the shape of the S2 solenoid.

Determine 2005-up on B & C valve bodies by checking for a B5 control valve spring (Figure 5).

When installing the SLS and SLT solenoids, always install the hold down bracket with the narrow side up (figures 2, 3, 4 and 7).

Use the early SLS/SLT hold down bracket with only the first design solenoids that have the round hole in the snout (figures 1 and 6).

With this information you should be able to identify any AW55-50 valve body.

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### AW55-50SN

#### OVERHAUL KITS
- AW55-50SN Kit-Overhaul (Vauxhall) | 79.KO.52
- AW55-50SN Kit-Overhaul (Volvo Saab Opel Renault) | 79.KO.70

#### GASKETS & SEALS
- AW55-50SN Gasket-Sump Pan (Steel) | 79.GK.02
- AW55-50SN Kit-Gasket Valvebody | 79.KX.05
- AW55-50SN,AW55-40 Kit-Seals (1st,2nd & Rev.) | 79.KZ.21

#### CLUTCH PLATES
- AW55-50SN Kit-Module Friction | 79.KC.60
- AW55-50SN 2nd (160.0mm OD 1.7mm 40T) | 79.PF.82
- AW55-50SN Rear (141.0mm OD 1.7mm 47T) | 79.PF.88
- AW55-50SN Forward (136.5mm OD 1.7mm 49T) | 79.PF.90
- AW55-50SN Direct (108.0mm OD 1.50mm 34T) | 79.PF.01
- AW55-50SN Coast (116mm OD 1.8mm 8T) | 79.PS.04
- AW55-50SN/50-40 Direct (116.2mm 1.8mm 12T) | 79.PS.09
- AW55-50SN Rear (150.0mm OD 1.8mm 12T) | 79.PS.09
- AW55-50SN Low/Rev. ( 160.0mm OD 1.7mm 34T) | 79.PF.20

#### FILTERS
- AW55-50SN Filter Assembly (Late) | 79.FL.08A
- AW55-50SN Filter Assembly Volvo S80 (W/Webb) | 79.FL.50A

#### ELECTRICAL
- AW55-50SN Solenoid S1 Vauxhall (Black) | 79.SW.21A
- AW55-50SN Solenoid S1 (Black) 02E-up | 79.SW.21B
- AW55-50SN Solenoid S2 (Grey)-02E | 79.SW.22
- AW55-50SN Solenoid S3 (Grey)-02E | 79.SW.23
- AW55-50SN Solenoid S4 (Blue)-02E | 79.SW.24
- AW55-50SN Solenoid S5 (Brown) Upgraded | 79.SW.25
- AW55-50SN Solenoid S5 Vaux/Saab (Brown) | 79.SW.25A
- AW55-50SN Solenoid SLU (Black)-02E | 79.SW.27
- AW55-50SN Solenoid SLT (Blue) 02E-up | 79.SW.28A
- AW55-50SN Solenoid SLT (Blue) 02E-up | 79.SW.28B
- AW55-50SN Solenoid SLS (Green) 02E-up | 79.SW.29A
- AW55-50SN Solenoid SLU (Aftermarket) 01-Up | 79.SW.30
- AW55-50SN Sensor-Input | 79.SW.50
- AW55-50SN Wiring Harness Volvo V70 (OEM) | 79.MP.60
- AW55-50SN Modified Harness E57 | 79.MP.65
- AW55-50SN Wiring Harness (Modified ) | 79.MP.66

#### VALVE BODY REPAIR
- AW55-50SN Valve Body Plate | 79.MP.80
- AW55-50SN Valve Body Plate 6A Modified | 79.MP.81
- AW55-50SN Valve Body Upper J73 Modified | 79.VB.01
- AW55-50SN Valve Body Upper J5 Modified | 79.VB.02
- AW55-50SN Bracket-Solenoid Retainer | 79.MP.10
- AW55-50SN Kit-Valvebody Check Ball | 79.MP.23

#### Sonnax
- AW55-50SN Secondary Valve & Spring Kit | 79.MP.02
- AW55-50SN Lock-Up Relay Control Valve & Sleeve Kit | 79.MP.30A
- AW55-50SN Lock-Up Control Valve & Sleeve Kit | 79.MP.30B
- AW55-50SN Solenoid Relay Control Valve & Sleeve Kit | 79.MP.30C
- AW55-50SN Main Boost Valve & Sleeve Kit | 79.MP.30D
- AW55-50SN Solenoid Mod Valve Capsule | 79.MP.30E
- AW55-50SN Press Reg Valve & Boost Valve Kit | 79.MP.30F
- AW55-50SN LPC Accumulator Piston Kit | 79.MP.30G
- AW55-50SN B4 Release Valve Kit | 79.MP.32
- AW55-50SN End Plug Kit | 79.MP.51

#### HARD PARTS
- AW55-50SN Drum-Input | 79.HP.60
- AW55-50SN Adaptor Shaft-Transfer Case (4x4) | 79.HP.91