

VALVEBODY AND PRESSURE RECOMMENDATIONS

DSM Automatic Transmission

The valvebody is the central nervous system of the transmission. It determines what pressures are fed to what clutches and when. The pressure to each clutch pack determines its pressure plate clamping force. Increasing holding capacity is as easy as increasing the pressure to the clutches. The OEM line pressure spec is 118-128psi and reducing pressure is 51-68psi. In general, a Translab shift kit does a great job. It increases pressures and also improves a lot of the shift timing. I recommend this in all applications.

The valvebody is the oil feed up to the pump and it can have terrible problems restricting flow and causing the pump to starve and cavitate. First in line is the filter, **only an OEM style all-metal filter with the dual inlets top and bottom should be used.** Anything else I've seen pressure starvation. The valvebody oil passages should also be ported as shown below.



Here is the gotcha on pressures - feed pressure to any of the clutches that are switched on during the forward gear shifts are additionally limited by reducing pressure. These clutches will be chopped down and regulated to about 2.35x line pressure. Base line pressure with a translab shift kit is in the 180psi range, but if you have your reducing pressure dropped to the minimum you will see this to the rear clutch (which never burns up) and only about 140psi to the front clutch, the transmission's weakest link. **Any increase in line pressure should be accompanied by an increase in reducing pressure.** Besides limiting max pressure to the clutches when modified, reducing pressure only influences the OEM pressure control that softens shifts. If you're running a manual shift setup without a TCU, low reducing pressure does not do anything useful and reducing pressure should be set as high as possible.

Line pressure adjustment is on the top side of the valvebody. I recommend maxing it out (counterclockwise) for either a stock regulator spring (~140psi) or a translab shift kit spring (~200psi) in a high performance environment. Special applications can get different springs or add shims to these springs.



Reducing pressure adjustment is on the bottom side of the valvebody. It should be set to a minimum of line pressure divided by 2.35.

