



Technical Service Information

ALLISON 1000/2000 RESETTING SHIFT ADAPTS

COMPLAINT: After transmission repairs, replacement or TCM replacement the vehicle exhibits shift quality concerns such as bind-ups, flared shifts or coast down clunks.

CAUSE: The transmission shift adapts have not been reset.

CORRECTION: When any of the above mentioned repairs or replacements have been made the TCM must be informed that the vehicle has been repaired. If it is not informed, the TCM Adaptive Controls will attempt to shift the rebuilt transmission as it did with the damaged transmission. The shift data under these conditions will not match the target shift profiles that were programmed into the TCM. ***Do not confuse the shift adapt reset with reflash, they have completely different functions.***

Using a capable scan tool, choose from the menu “Reset Shift Adapts”. After you choose the scan tool will ask if you want to perform a “Fast Adaptive Relearn”. This mode will cause the TCM to make large changes in initial shift conditions to adjust for major system tolerances such as solenoid to solenoid operations, main pressure and clutch to clutch variations.

Once the initial reset has been performed, the TCM will enter a “Slow Adaptive Mode” which will fine tune shift logic as the vehicle is driven. The TCM has the ability to switch back and forth between fast and slow modes when necessary to compensate for shift profile changes.

An example of shift adaptives can be seen in the screen capture in Figure 1. In order to understand what the adaptive information means, the following categories as displayed on the scan tool is as follows:

VALUE - The amount of units that is being provided for a particular shift.

UNITS - The type of measurement for a given value.

ONCOMING CLUTCH VOLUME - Indicates the total amount of fluid being used to apply the shift's oncoming clutch.

MINIMUM ONCOMING CLUTCH - Indicates the minimum amount of fluid being used to apply an oncoming clutch.

ONCOMING PRESSURE - Indicates the hydraulic pressure being applied to the shift's oncoming clutch.

OFF GOING PRESSURE - Indicates the hydraulic pressure remaining in the shift's off going clutch apply circuit.

ONCOMING FILL DELAY - Indicates the lag time between when the clutch is commanded ON by the TCM vs. actual clutch apply time.

ADAPTIVE PATTERN - Indicates the current adaptive logic used by the TCM, fast or slow.

RESETTING SHIFT ADAPTS

Reset Fast Adapt

Garage

All

1-2

2-1

2-3

3-2

3-4

4-3

4-5

5-4

Item Name	Value	Units
► N-R Oncoming Clutch Volume	4 cc	4 cc
N-R Minimum Oncoming Clutch Volume	0 cc	0 cc
N-R On Coming Pressure	41.77 psi	41.77 psi
R-N Off Going Pressure	58.02 psi	58.02 psi
N-1 On Coming Clutch Volume	24 cc	24 cc
N-1 Minimum On Coming Clutch Volume	23 cc	23 cc
N-1 On Coming Pressure	26.69 psi	26.69 psi
R-1 Oncoming Clutch Volume	20 cc	20 cc
R-1 Minimum Oncoming Clutch Volume	19 cc	19 cc
R-1 On Coming Fill Delay	0 Seconds	0 Seconds
R-1 On Coming Pressure	24.37 psi	24.37 psi
D-R Oncoming Clutch Volume	4 cc	4 cc
D-R Minimum Oncoming Clutch Volume	0 cc	0 cc
D-R On Coming Fill Delay	0 Seconds	0 Seconds
D-R On Coming Pressure	39.45 psi	39.45 psi
R-1 Adaptive Pattern 0	Fast Adapt	Fast Adapt
R-2 Adaptive Pattern 0	Fast Adapt	Fast Adapt
D-R Adaptive Pattern 0	Fast Adapt	Fast Adapt

Reset Fast Adapt Garage

Close

Figure 1