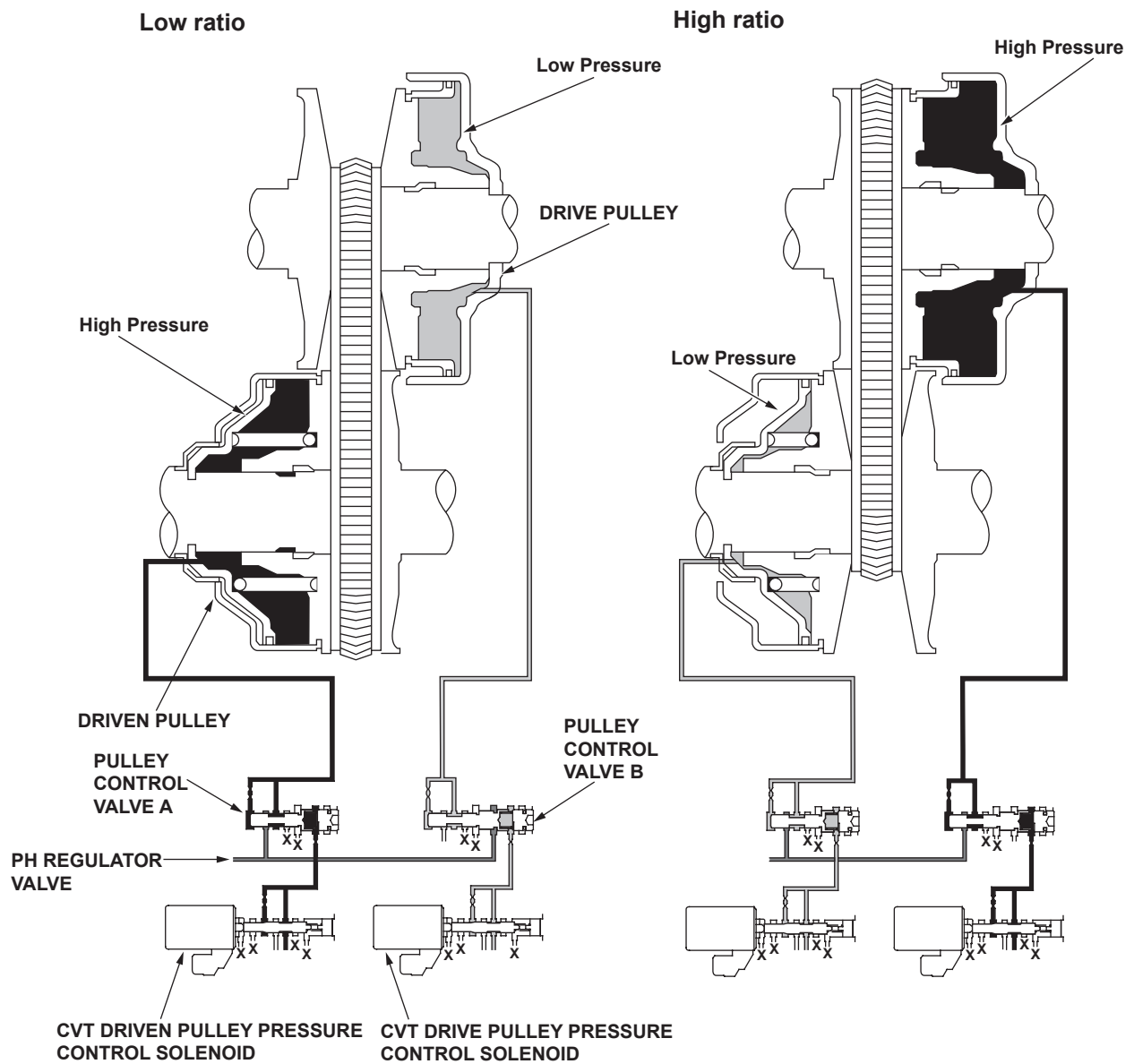


# Advanced Diagnostics

## DTC P1890: Problem in Shift Control System



## General Description

The shift control system is used for the shift control based on the each gear position on the map previously stored in the transmission control module (TCM) memory. The shift control system controls the CVT drive pulley pressure control solenoid and the CVT driven pulley pressure control solenoid according to the vehicle speed and the throttle position so the engine speed becomes equal to the target value, i.e., it varies the hydraulic pressure applied to the drive and driven pulley and provides feedback on the difference between the target engine speed and the actual engine speed during a drive.

It supplies high hydraulic pressure to the driven pulley and enlarges the driven pulley belt diameter when shifting to a lower ratio. It supplies high hydraulic pressure to the drive pulley and enlarges the drive pulley belt diameter when shifting to a higher ratio.

If an abnormal shifting is determined from the result of the operation in the TCM when in D, L, or R position, a malfunction in the CVT shift function is detected and a DTC is stored.

## Monitor Execution, Sequence, Duration, DTC Type

Execution	Under the Enable Conditions
Sequence	None
Duration	13 seconds
DTC Type	One drive cycle, MIL ON, D indicator blinks

## Enable Conditions

Condition	Minimum	Maximum
Engine speed	600 rpm	—
Throttle position	6.3%	—
Vehicle speed measured by CVT speed sensor	8 mph (13 km/h)	—
Shift lever position	D, L, or R	
Other	The engine speed is equal to the drive pulley speed	

## **Malfunction Threshold**

The result obtained from the operation in the TCM is more than a threshold for abnormal shifting for at least 13 seconds.

## **Driving Pattern**

Start the engine. Drive the vehicle at a speed of 8 mph (13 km/h) or more in D position with a constant throttle position for at least 13 seconds.

- If you have difficulty duplicating the DTC, retest after turning off electrical components such as the audio system and the A/C.
- Drive the vehicle in this manner only if the traffic regulations and ambient conditions allow.

## **Diagnosis Details**

### **Conditions for illuminating the MIL**

When a malfunction is detected, the MIL comes on and the DTC and the freeze frame data are stored.

### **Conditions for clearing the MIL**

The MIL, the DTC, and the freeze frame data can be cleared by using the scan tool Clear command or by disconnecting the battery.