

6T70/75

Control System Changes and Updates

The 6T70 (RPO M7W or M7U) and 6T75 (RPO M7V and M7X) received a major control system update for the 2013 model year. As with updates on other applications this major change was NOT implemented in all 6T70/75 applications. Because of parts availability issues, 6T70/75 applications with RPO codes other than M7W, M7U, M7V or M7X will not receive the update until 2014 production. This means that two versions of the 6T70/75 transmission will be available in 2013, Generation I and Generation II. Generation II changes were made to improve shift feel and durability of the unit.

GEN I:

Units that do not contain the controls update package.

GEN II:

Units that contain the controls update package.

The most reliable way to determine if your vehicle is equipped with a GEN I or a GEN II control system is to look at the RPO code located on the service parts ID label. The label is typically located in the glove box, center console or on the spare tire/jack storage area.

NOTE: For the most part, GEN I and GEN II components are NOT INTERCHANGEABLE.

Clutch Pulse Learn

The TEHCM used with the Gen II controls system does not use pressure switches. Instead the TEHCM (TCM) utilizes a new process known as “Clutch Pulse Learning”. The TCM momentarily commands a clutch on at low pressure. The pressure pulse commands are increased until an interruption in transmission input speed is detected. The return spring force is the first characteristic to be learned. After the spring force is learned, the TCM uses different pulse commands to determine the volume of transmission fluid required to move the clutch piston to the point of clutch apply.

The TCM calculates fill time based on the learned volume. The CP Learn is conducted during steady conditions in 3rd, 5th and 6th gear. The CP Learn for the 4-5-6 clutch is enabled in 3rd gear. CP Learn for the 1-2-3-4 clutch and 2-6 clutch is enabled in 5th gear. CP Learn for the 3-5-Reverse clutch is enabled in 6th gear. A rough road condition could give a false reading for transmission input speed interruption. When rough road conditions are detected, CP Learn is aborted until road conditions improve.

When a CP Learn is occurring, a slight bump or drag may be detected momentarily. The CP Learn will occur on the average vehicle every 1250 miles (2012km). This is a normal condition and no repair attempts should be performed. The frequency of CP Learn is normally determined by the number of clutch apply cycles. The TCM will also initiate a CP Learn in advance of the clutch apply counter if shifts are detected which indicate an improper clutch fill time.