

Table of Contents

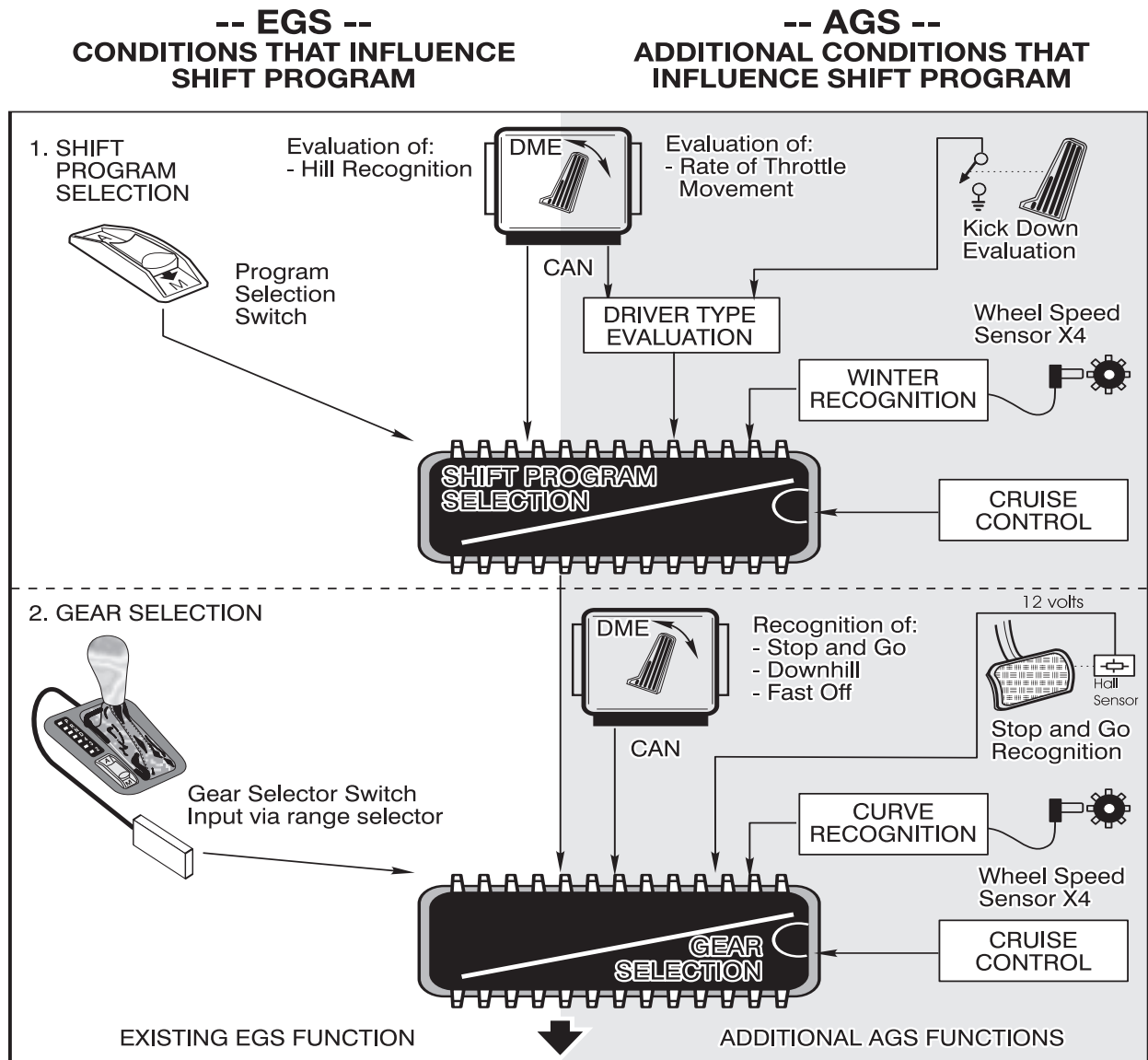
Electronic Transmission Control

Subject	Page
Adaptive Features	38
Driver Influenced Features	39
Environmentally Influenced Features	40
CAN Bus Communication	42
Diagnosis and Troubleshooting	46
Establishing a Diagnostic Plan	47
Fault Codes	48
Identification Page	49
Diagnostic Program	50
Test Modules	51
Diagnostic Tips	52
Information Resources	53
TCM Coding and Programming	54
Transmission Fluid Information	56
Transmission Fluid Checking Procedures	57
Transmission Fluid Application	58
Transmission Service	59
Transmission Tools	60
Review Questions	66

Adaptive Features (AGS)

AGS features were introduced in 1994 with the A5S560Z transmission. AGS control consists of adaptive features that will modify transmission operation according to various factors. AGS operation can be influenced by two major functional groups:

- Driver influenced features (influenced by throttle and kickdown input)
- Environmental influences (such as road conditions - icy, traffic etc.)



The driving program selection is not adapted on a long term basis - nor is it stored in the control module memory when the ignition is switched off. It continually changes as the driver of the vehicle changes driving habits.

Driver influenced features of AGS

The adaptive drive program is based primarily on throttle input. The throttle information comes from the ECM (DME) via the CAN bus. The TCM continuously monitors the throttle input for:

- The current throttle position
- The rate of change in pedal movement
- The number of acceleration requests
- The number of kickdown requests

Drive away Evaluation

The AGS system selects the appropriate shift program based on the amount of acceleration that occurs during takeoff. When driving away under full throttle the transmission will shift from XE to E.

Kick Fast Feature

Based on these inputs, the AGS will select one three different driving programs as follows:

- Extreme Economy - Shift points are a low speeds for maximum comfort and economy
- Economy - The shift points are raised for more performance with economy as priority
- Sport - The shift points are higher to take advantage of full engine performance.

Under full throttle acceleration at high speed, single gear downshifts are possible. A two gear downshift is possible if the accelerator pedal is moved quickly to kick-down. The Extreme Sport program was eliminated as part of the kick-fast feature.

