

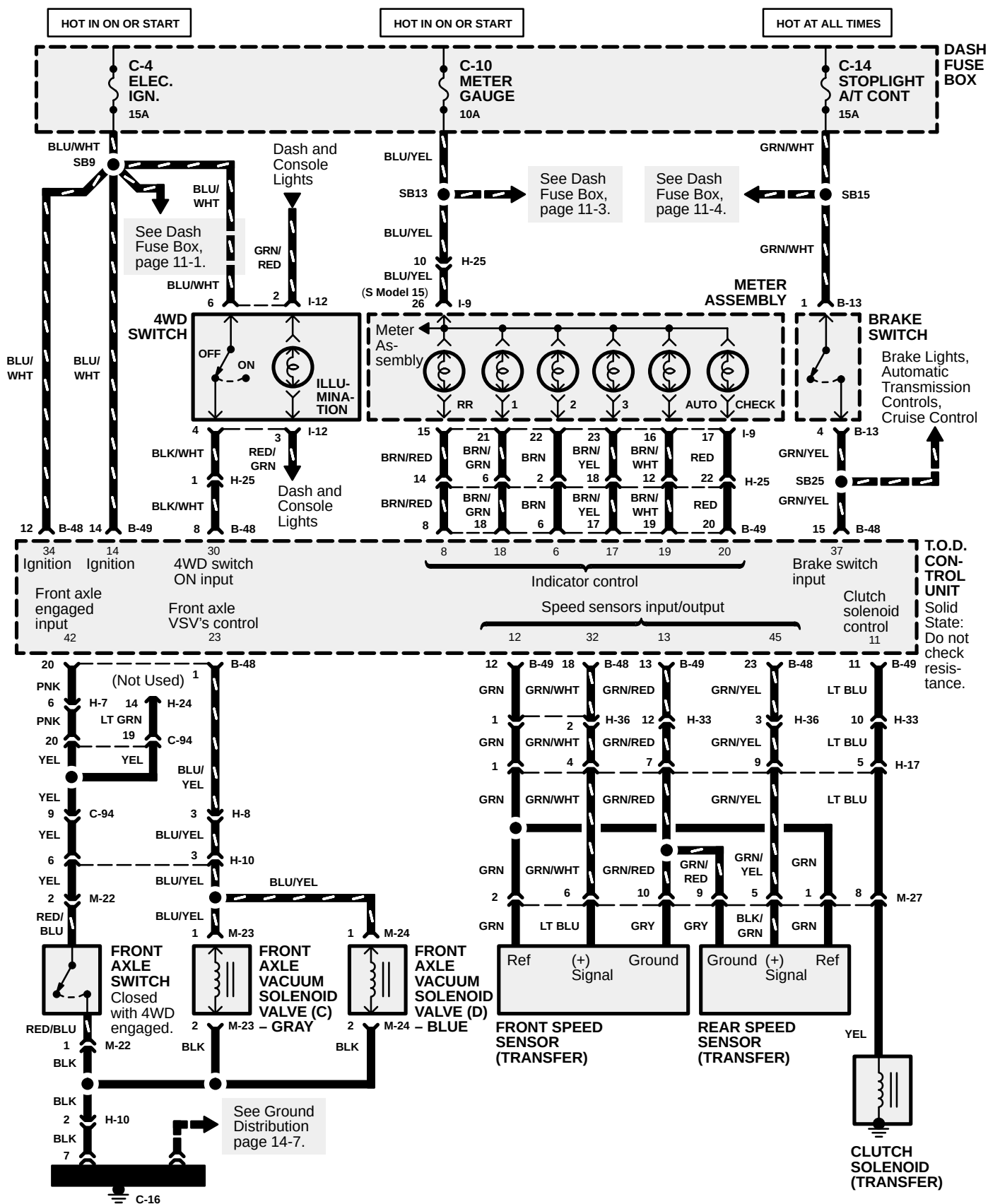
TORQUE ON DEMAND (T.O.D.) SYSTEM

Component Location Index

- 4H/L Transfer Switch Assembly
- Brake Switch
- Clutch Solenoid (Transfer)
- Dash Fuse Box
- Data Link Connector (DLC)
 - C63 (16-BLK)
- Engine or Powertrain Control
 - Module (ECM or PCM)
- Front Axle Switch
- Front Axle Vacuum Solenoid
 - Valve (D) - Blue
- Front Axle Vacuum Solenoid
 - Valve (C) - Gray
- Front Speed Sensor
 - (Transfer)
- Rear Speed Sensor
 - (Transfer)
- T.O.D. Control Unit

TORQUE ON DEMAND (T.O.D.) SYSTEM

Circuit Schematic



TORQUE ON DEMAND (T.O.D.) SYSTEM

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
4H/L Transfer Switch Assembly	On bottom of transfer case 127
Brake Switch	Below I/P, on brake pedal support 74
Clutch Solenoid (Transfer)	In transfer case (see page 4B2-5 of Service Manual)
Dash Fuse Box	Behind left dash side trim panel 55
Data Link Connector (DLC)	
C63 (16-BLK)	Left I/P lower cover, behind access cover 47
Engine or Powertrain Control	
Module (ECM or PCM)	Right side of engine compartment 60
Front Axle Switch	Left center of front axle 17
Front Axle Vacuum Solenoid	
Valve (D) - Blue	Center of front axle 9
Front Axle Vacuum Solenoid	
Valve (C) - Gray	Center of front axle 9
Front Speed Sensor	
(Transfer)	On rear of transfer case 129
Rear Speed Sensor	
(Transfer)	On rear of transfer case 129
T.O.D. Control Unit	Below right front seat 125
Connector	
C-94 (22-GRN)	Behind front console 62
H-7 (20-BRN/WHT)	Below I/P, above left dash side trim panel, on bracket 69
H-8 (16-WHT)	Below I/P, above left dash side trim panel, on bracket 70
H-10 (16-BLU)	Left front of engine compartment 27
H-12 (20-WHT)	Below I/P, above right dash side trim panel, on bracket 100
H-17 (9-WHT)	Underside of vehicle, beneath right front seat 50
H-24 (18-YEL)	Below I/P, above left dash side trim panel, on bracket 70
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 71
H-33 (20-WHT)	In floor, below right front seat 110
H-36 (3-GRY/BLK)	Below right front seat 110
H-55 (16-BLU)	Right side of engine compartment 59
H-57 (16-BLK)	Right side of engine compartment 59
I-9 (30-GRN)	On left top of meter assembly 53
M-22 (2-BRN)	Center of front axle 17
M-27 (12-BLK)	On top of transfer case 128
Ground	
C-16	Left rear corner of engine compartment, on inner fender panel 39
E-30	Top right rear of engine 16
P-15	On top of transfer case, on shift lever bracket 19

Circuit Operation

Voltage is applied with the starter switch in ON or START, through the ELEC. IGN. fuse CB-4. The T.O.D. control unit receives input from the front speed sensor (transfer) and the rear speed sensor (transfer) and determines if there is any variation. In the event of a variation in speeds, voltage is applied to the clutch solenoid (transfer) to apply torque to the front wheels. While voltage is being applied to the clutch solenoid (transfer),

the T.O.D. control unit is providing ground to the corresponding indicators in the meter assembly. The T.O.D. control unit receives input from the throttle position sensor (TPS) in order to determine acceleration and deceleration conditions. The T.O.D. control unit receives an input from the ABS system, when active, to apply voltage to the clutch solenoid (transfer).