

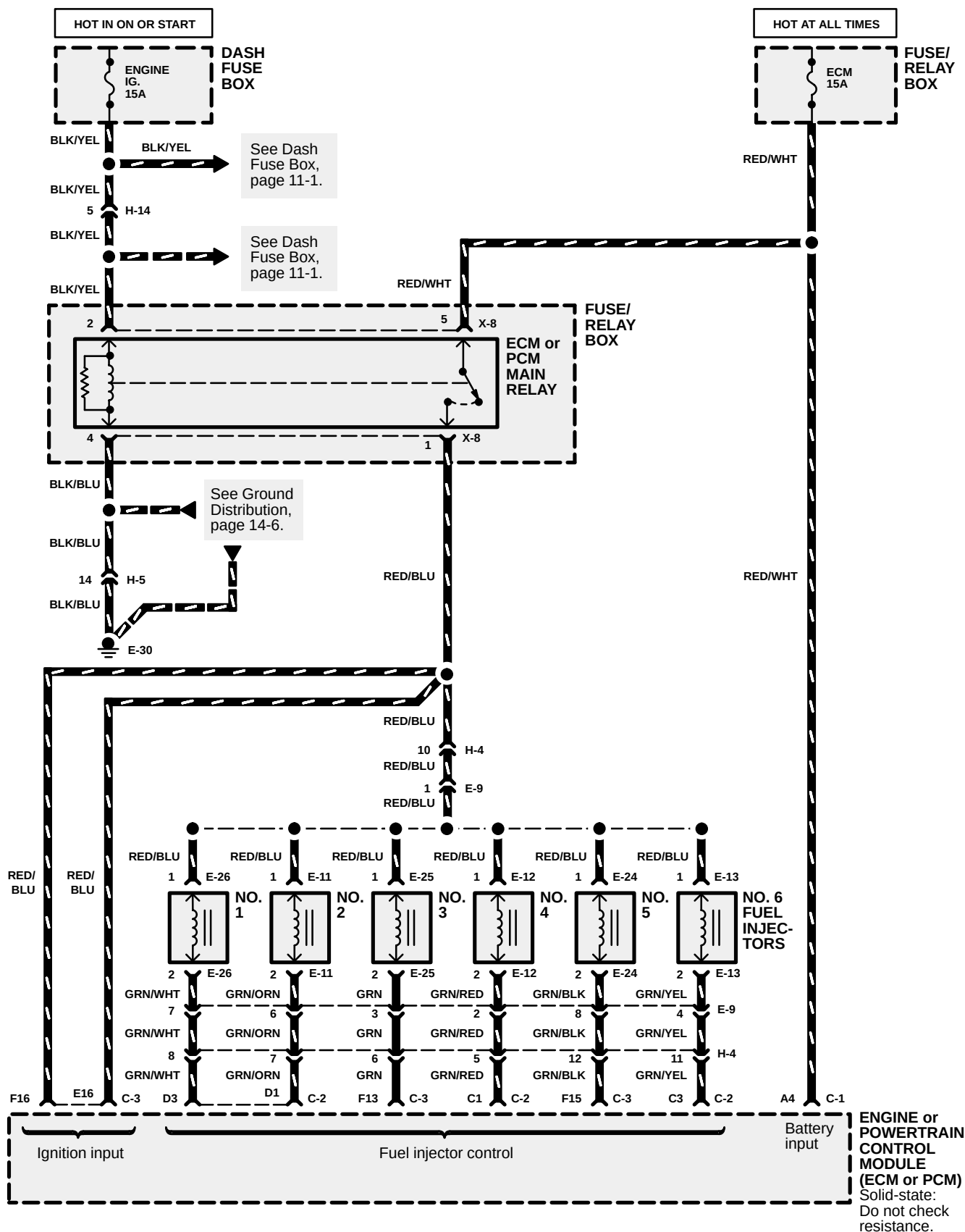
# ENGINE CONTROLS: 3.2L

## Component Location Index

- Camshaft Position (CMP) Sensor
- Clutch Switch
- Crankshaft Position (CKP) Sensor
- Dash Fuse Box
- Data Link Connector (DLC)
  - C-34 (16-BLK)
- ECM/PCM Main Relay
- Engine Coolant Temperature (ECT) Sensor
- Engine or Powertrain Control Module (ECM or PCM)
- Evaporative Emission (EVAP) Canister Cut Valve
- Evaporative Emission (EVAP) Canister Purge Valve
- Evaporative Emission (EVAP) Vacuum Switching Valve
- Exhaust Gas Recirculation (EGR) Solenoid Valve
- Fuel Pump Relay
- Fuel Tank Unit
- Fuel Vapor Pressure Sensor
- Fuse/Relay Box
- Heated Oxygen Sensor (Bank 1, Sensor 1)
- Heated Oxygen Sensor (Bank 2, Sensor 1)
- Heated Oxygen Sensor (Bank 1, Sensor 2)
- Heated Oxygen Sensor (Bank 2, Sensor 2)
- Idle Air Control (IAC) Valve
- Intake Air Temperature (IAT) Sensor
- Knock Sensor (KS)
- Manifold Absolute Pressure (MAP) Sensor
- Mass Air Flow (MAF) Sensor
- No. 1 Fuel Injector
- No. 2 Fuel Injector
- No. 3 Fuel Injector
- No. 4 Fuel Injector
- No. 5 Fuel Injector
- No. 6 Fuel Injector
- PCM Main Relay
- Power Steering Pressure (PSP) Switch
- Taillight Relay
- Throttle Position (TP) Sensor

# ENGINE CONTROLS: 3.2L

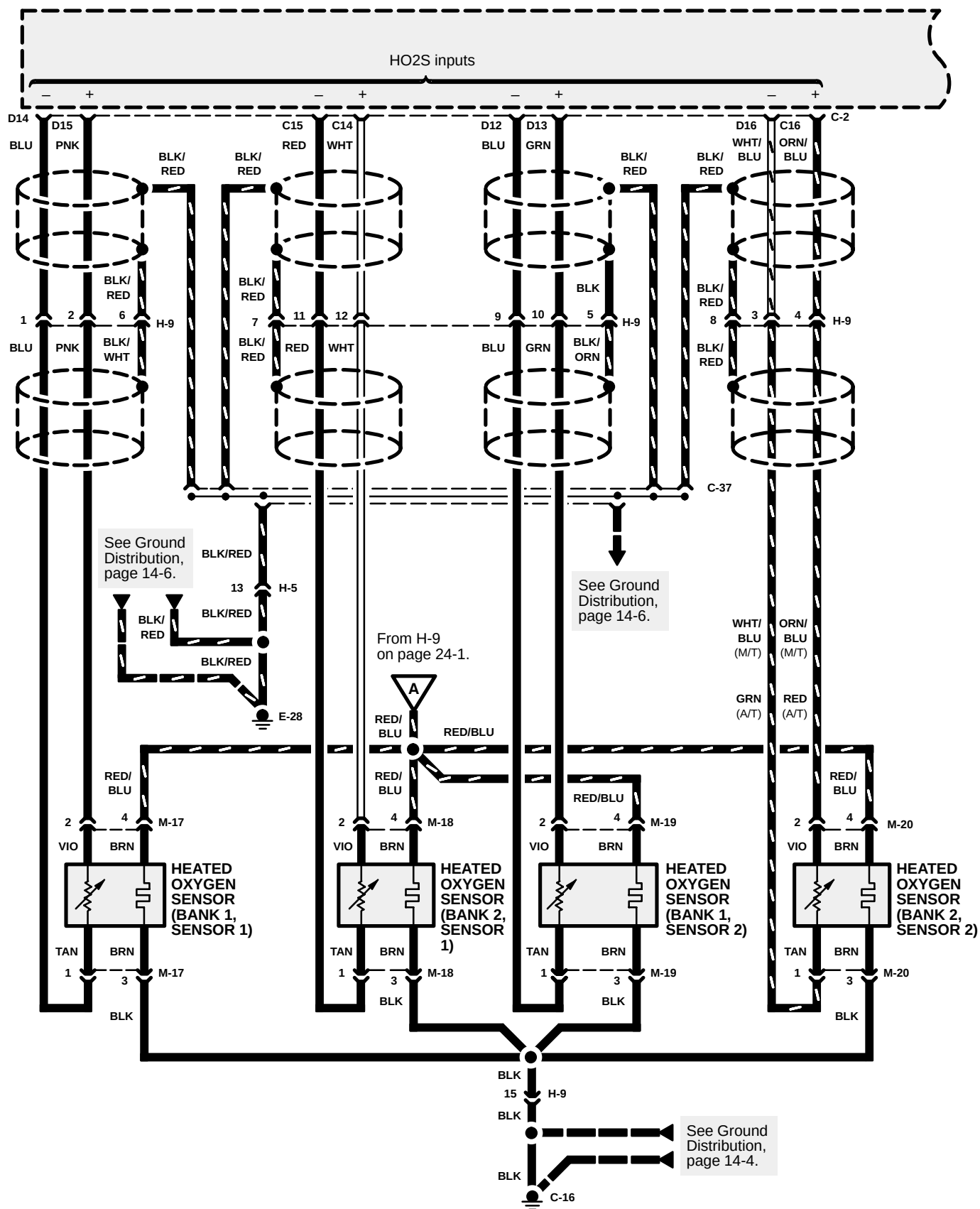
## Circuit Schematic





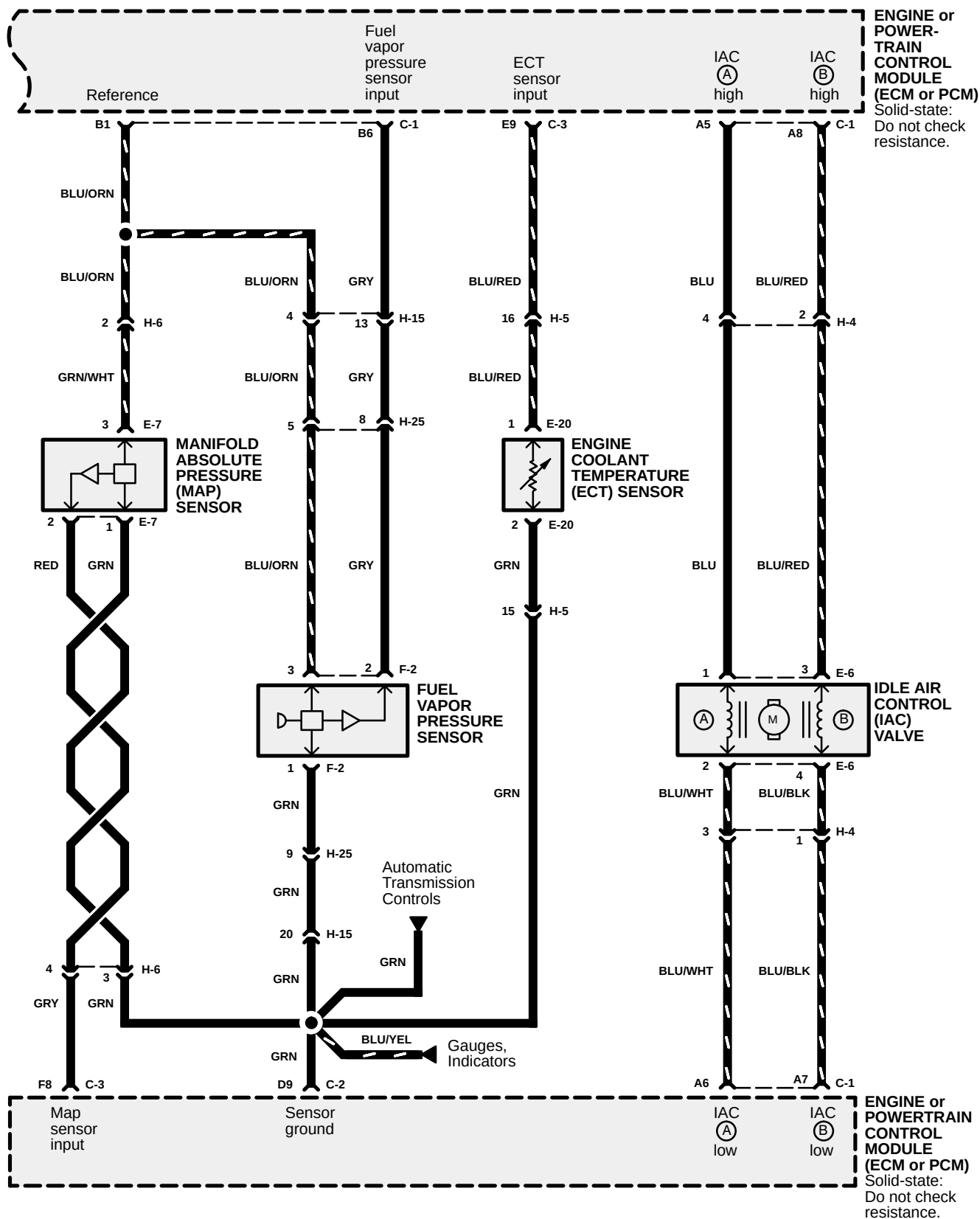
# ENGINE CONTROLS: 3.2L

## Circuit Schematic



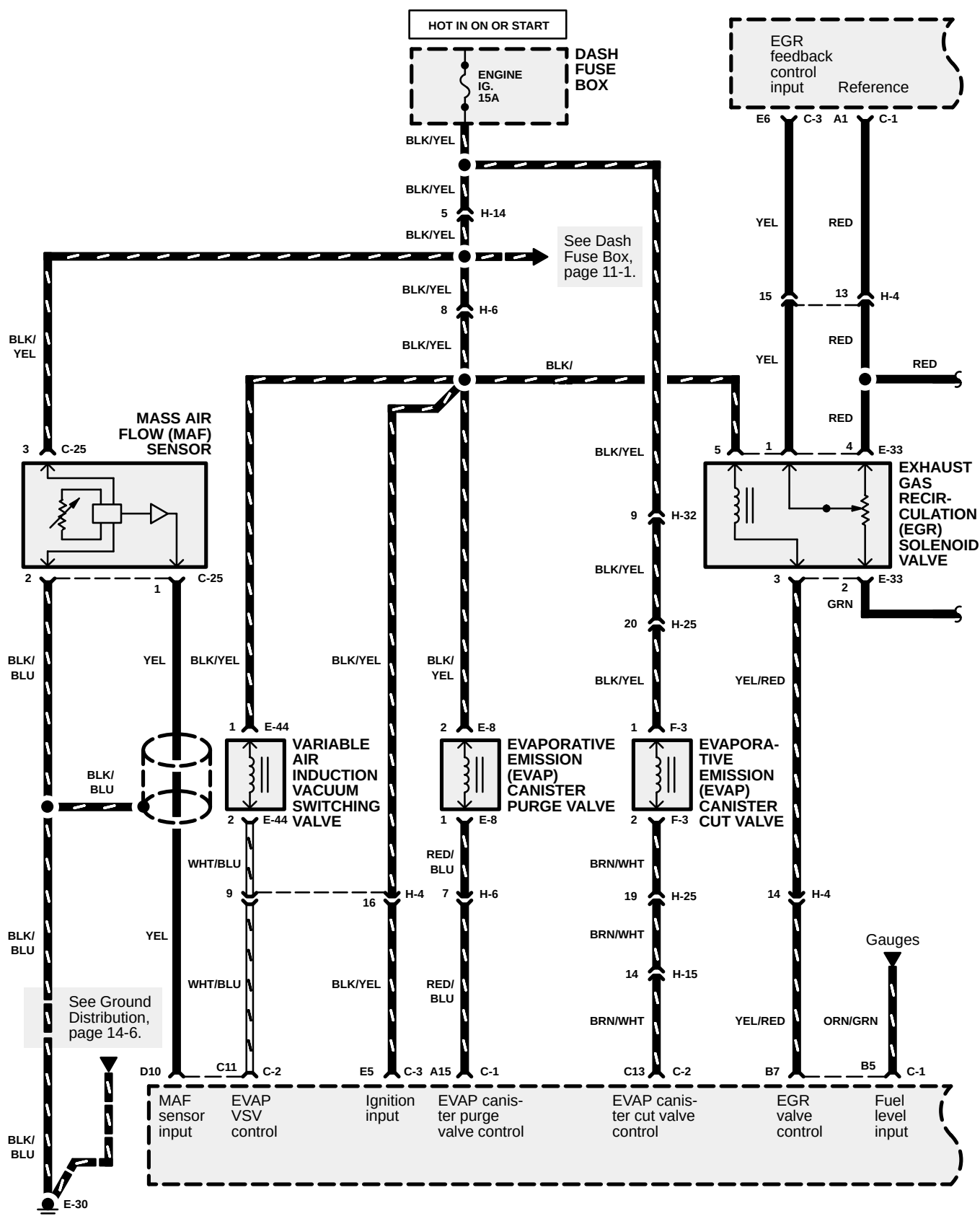
# ENGINE CONTROLS: 3.2L

## Circuit Schematic



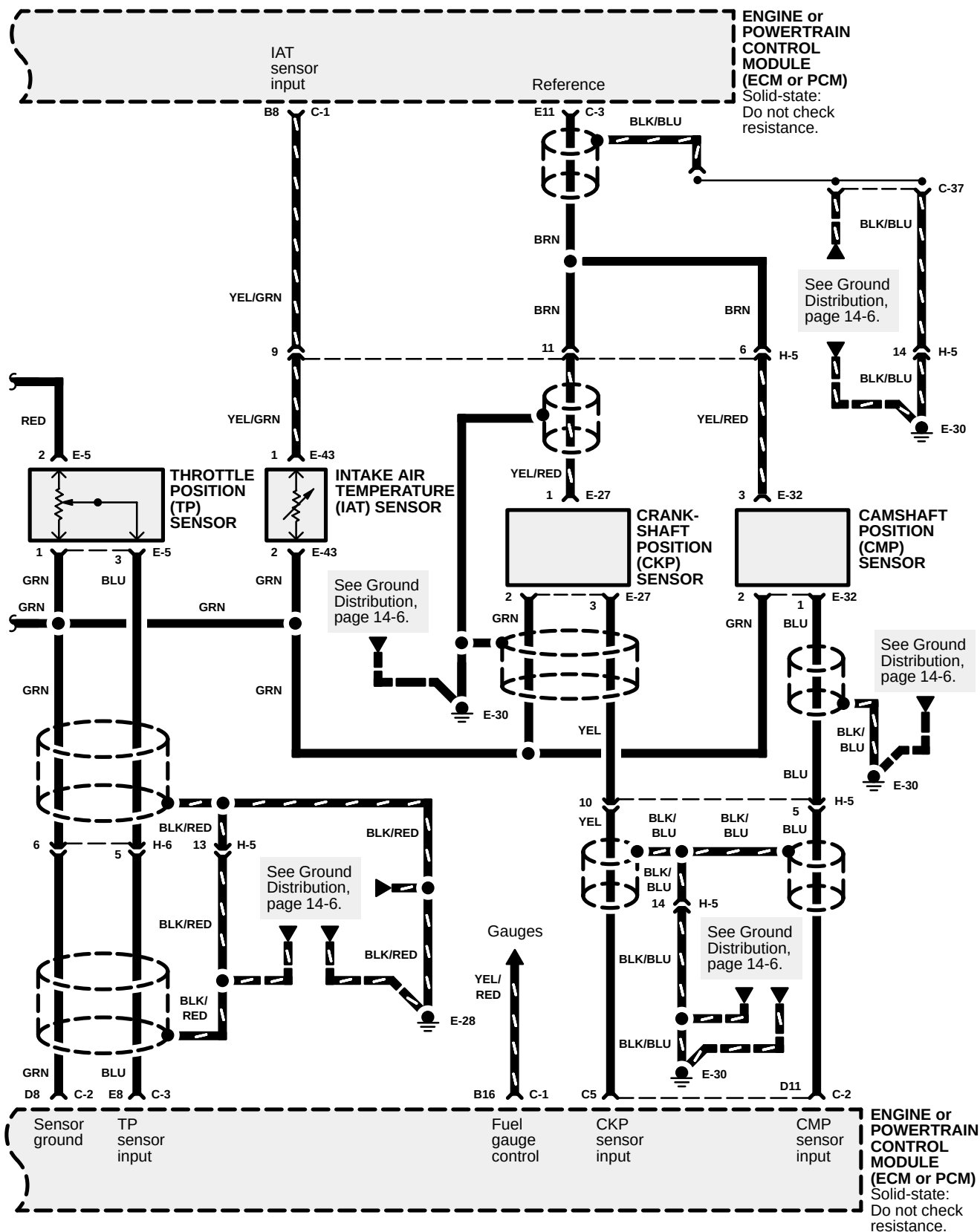
# ENGINE CONTROLS: 3.2L

## Circuit Schematic

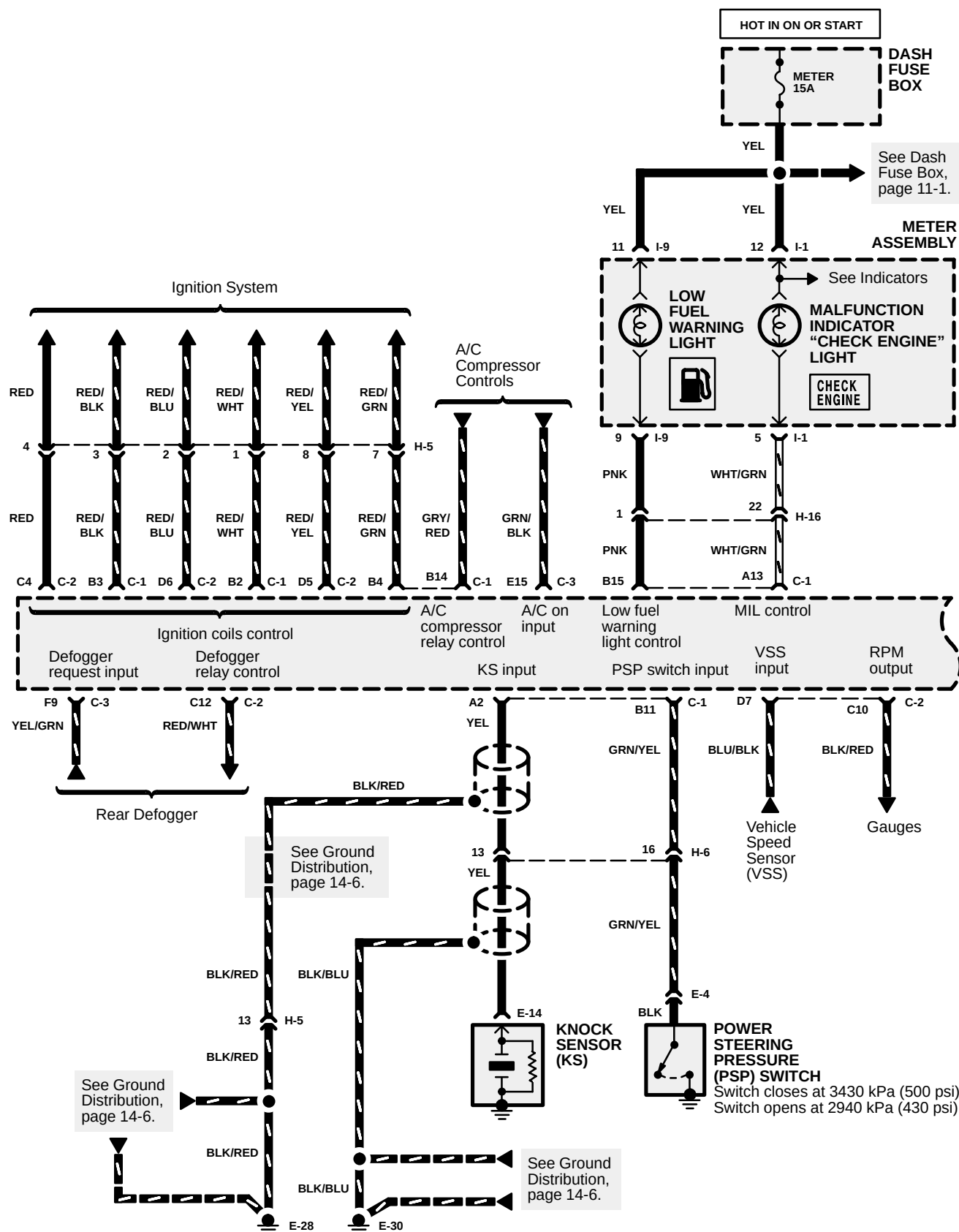


# ENGINE CONTROLS: 3.2L

## Circuit Schematic



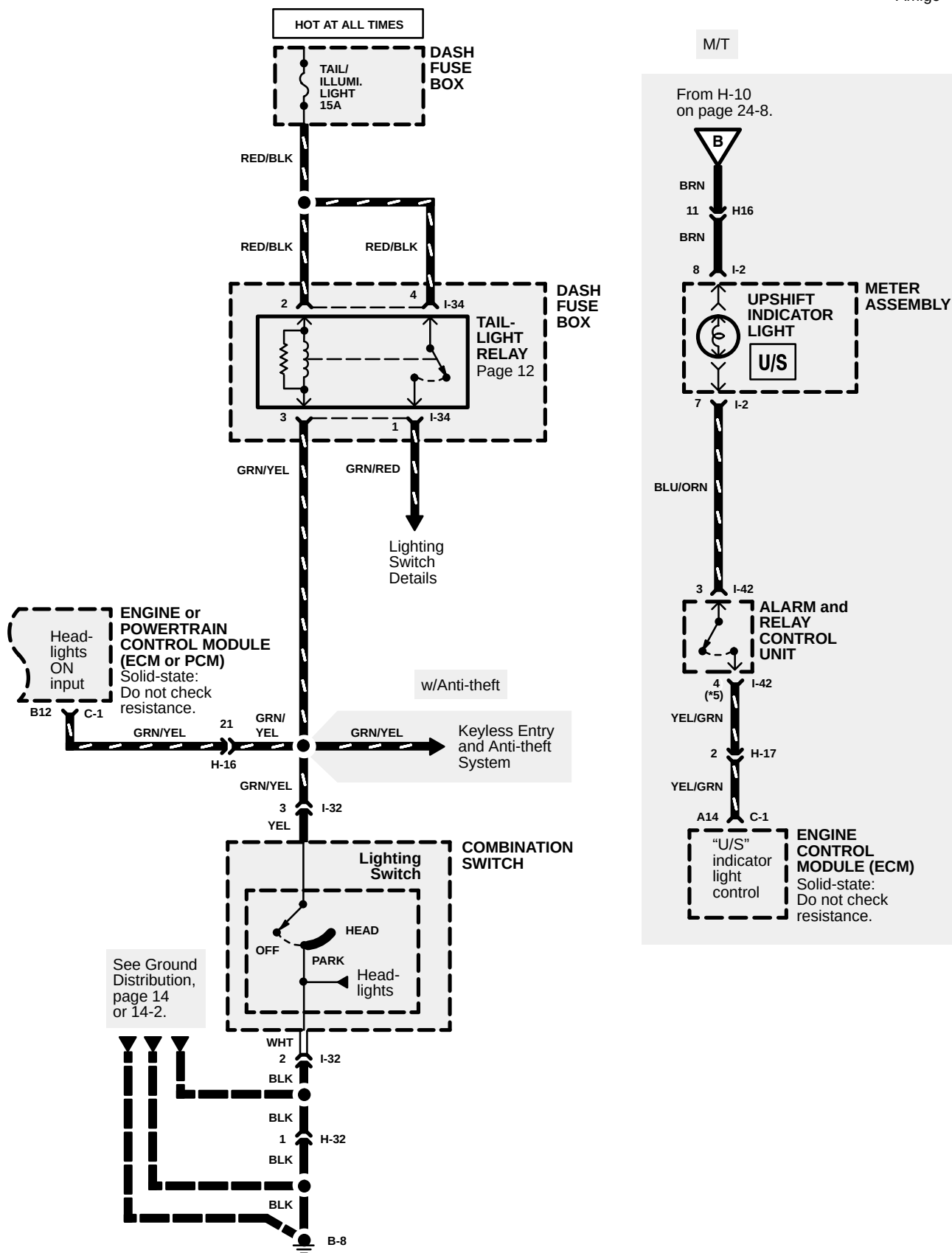
### Circuit Schematic



# ENGINE CONTROLS: 3.2L

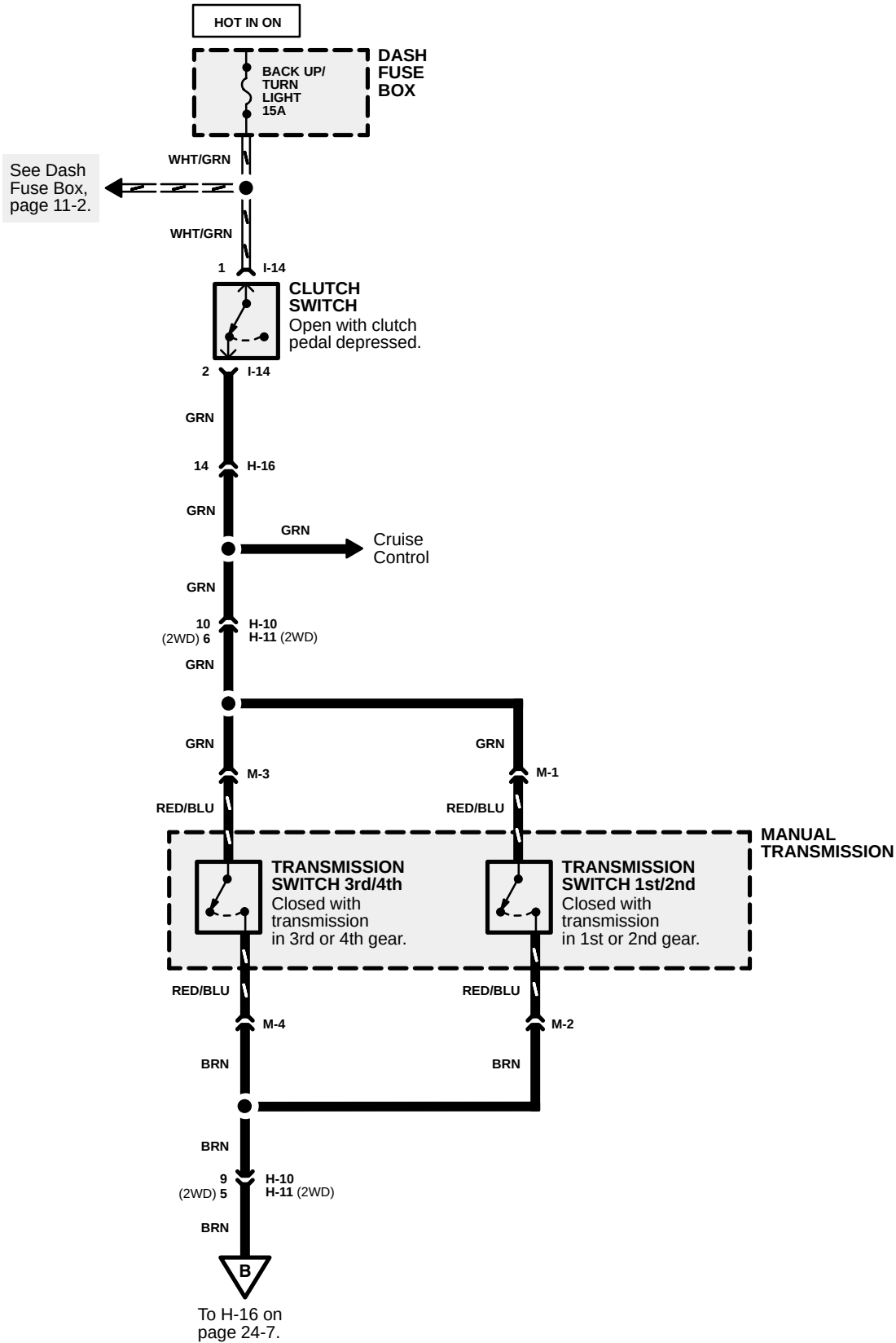
## Circuit Schematic

\*= Amigo



# ENGINE CONTROLS: 3.2L MANUAL TRANSMISSION

## Circuit Schematic



# ENGINE CONTROLS: 3.2L MANUAL TRANSMISSION

## Circuit Schematic

(Refer to Section 201 for photographs.)

| <b>Component</b>                       | <b>Photo No.</b>                                                     |
|----------------------------------------|----------------------------------------------------------------------|
| Alarm and Relay Control Unit . . . . . | Behind right side of I/P, above kick panel . . . . . 78              |
| Camshaft Position (CMP)                |                                                                      |
| Sensor . . . . .                       | Rear of engine, under common chamber                                 |
| Clutch Switch . . . . .                | Behind left side of I/P, on clutch pedal support . . . . . 65        |
| Crankshaft Position (CKP)              |                                                                      |
| Sensor . . . . .                       | Lower right side of engine . . . . . 56                              |
| Dash Fuse Box . . . . .                | Left side of I/P, behind panel . . . . . 58                          |
| Data Link Connector (DLC)              |                                                                      |
| C-34 (16-BLK) . . . . .                | Below left side of I/P, near engine hood release . . . . . 61        |
| ECM/PCM Main Relay . . . . .           | Right side of engine compartment, in fuse/relay box . . . . . 21     |
| Engine Coolant Temperature             |                                                                      |
| (ECT) Sensor . . . . .                 | Front of engine, in engine coolant manifold . . . . . 44             |
| Engine or Powertrain Control           |                                                                      |
| Module (ECM or PCM) . . . . .          | Below center of I/P . . . . . 73                                     |
| Evaporative Emission (EVAP)            |                                                                      |
| Canister Cut Valve . . . . .           | Underneath vehicle, above rear axle . . . . . 116                    |
| Evaporative Emission (EVAP)            |                                                                      |
| Canister Purge Valve . . . . .         | Top front of engine . . . . . 46                                     |
| Evaporative Emission (EVAP)            |                                                                      |
| Vacuum Switching Valve . . . . .       | Left rear of engine . . . . . 51                                     |
| Exhaust Gas Recirculation              |                                                                      |
| (EGR) Solenoid Valve . . . . .         | Top right rear of engine . . . . . 55                                |
| Fuel Pump Relay . . . . .              | Right side of engine compartment, in fuse/relay box . . . . . 22     |
| Fuel Tank Unit . . . . .               | Beneath vehicle, in top of fuel tank                                 |
| Fuel Vapor Pressure Sensor . . . . .   | Top of fuel tank                                                     |
| Fuse/Relay Box . . . . .               | Right side of engine compartment, on inner fender panel . . . . . 20 |
| Heated Oxygen Sensor                   |                                                                      |
| (Bank 1, Sensor 1) . . . . .           | On right exhaust down pipe . . . . . 100                             |
| Heated Oxygen Sensor                   |                                                                      |
| (Bank 2, Sensor 1) . . . . .           | On left exhaust down pipe . . . . . 98                               |
| Heated Oxygen Sensor                   |                                                                      |
| (Bank 1, Sensor 2) . . . . .           | Underneath vehicle, rear of right catalytic converter . . . . . 101  |
| Heated Oxygen Sensor                   |                                                                      |
| (Bank 2, Sensor 2) . . . . .           | Underneath vehicle, rear of left catalytic converter . . . . . 99    |
| Idle Air Control (IAC) Valve . . . . . | Center front of engine . . . . . 43                                  |
| Intake Air Temperature                 |                                                                      |
| (IAT) Sensor . . . . .                 | Top left of engine, on air flow assembly . . . . . 47                |
| Knock Sensor (KS) . . . . .            | Rear of engine block, under common chamber                           |
| Manifold Absolute Pressure             |                                                                      |
| (MAP) Sensor . . . . .                 | Top rear of engine, on intake manifold . . . . . 55                  |
| Mass Air Flow (MAF) Sensor . . . . .   | Left front of engine compartment, on air flow assembly . . . . . 48  |
| No. 1 Fuel Injector . . . . .          | Top of cylinder . . . . . 54                                         |
| No. 2 Fuel Injector . . . . .          | Top of cylinder . . . . . 50                                         |
| No. 3 Fuel Injector . . . . .          | Top of cylinder . . . . . 54                                         |
| No. 4 Fuel Injector . . . . .          | Top of cylinder . . . . . 50                                         |
| No. 5 Fuel Injector . . . . .          | Top of cylinder . . . . . 54                                         |
| No. 6 Fuel Injector . . . . .          | Top of cylinder . . . . . 50                                         |

# ENGINE CONTROLS: 3.2L

## Component Location Index

(Refer to Section 201 for photographs.)

| Component (cont'd)                   |                                                               | Photo No. |
|--------------------------------------|---------------------------------------------------------------|-----------|
| PCM Main Relay                       | Right side of engine compartment, in fuse/relay box           | 21        |
| Power Steering Pressure (PSP) Switch | Lower left front corner of engine compartment                 | 7         |
| Taillight Relay                      | Left side of I/P, in dash fuse box                            | 60        |
| Throttle Position (TP) Sensor        | Top front of engine, on intake assembly                       | 43        |
| <b>Connector</b>                     |                                                               |           |
| C-37 (22-WHT)                        | Below center of dash, below PCM                               | 123       |
| E-4 (1-GRY)                          | Left side of engine compartment                               | 6         |
| E-9 (7-GRY)                          | Left side of engine, on bracket                               | 47        |
| F-1 (4-BLK)                          | Under vehicle, on top of gas tank                             |           |
| H-4 (16-BLK)                         | Left side of engine compartment, below brake fluid reservoir  | 11        |
| H-5 (16-GRN)                         | Left side of engine compartment, below brake fluid reservoir  | 11        |
| H-6 (16-BLU)                         | Left side of engine compartment, below brake fluid reservoir  | 11        |
| H-9 (16-BLU)                         | Lower left front of engine compartment                        | 9         |
| H-10 (12-GRN)                        | Lower left front of engine compartment                        | 9         |
| H-11 (6-BLK)                         | Lower left front of engine compartment                        | 9         |
| H-14 (19-BLK)                        | Below right side of I/P, behind kick panel                    | 75        |
| H-15 (20-BLU)                        | Behind left kick panel                                        | 63        |
| H-16 (22-BLK)                        | Behind left kick panel                                        | 62        |
| H-17 (10-BLK)                        | Behind left kick panel                                        | 62        |
| H-25 (20-WHT)                        | Under driver's seat, below carpet                             | 86        |
| H-32 (20-WHT)                        | Behind left kick panel                                        | 62        |
| I-1 (16-WHT)                         | Behind left side of I/P, on rear of meter assembly            | 70        |
| I-2 (14-BLK)                         | Behind left side of I/P, on rear of meter assembly            | 70        |
| I-9 (12-BLK)                         | Behind left side of I/P, on rear of meter assembly            | 70        |
| I-32 (13-BLK)                        | Behind left side of I/P, on connector bracket                 | 66        |
| M-1 (1-CLR)                          | On left side of transmission                                  | 112       |
| M-2 (1-CLR)                          | On left side of transmission                                  | 112       |
| M-3 (1-CLR)                          | On left side of transmission                                  | 112       |
| M-4 (1-CLR)                          | On left side of transmission                                  | 112       |
| M-17 (4-BLK)                         | Right front side of transmission                              | 100       |
| M-18 (4-BLK)                         | Left front side of transmission                               | 98        |
| M-19 (4-BLK)                         | Right rear side of transmission                               | 101       |
| M-20 (4-BLK)                         | Left rear side of transmission                                | 99        |
| <b>Ground</b>                        |                                                               |           |
| B-8                                  | Below center console                                          | 81        |
| C-16                                 | Left rear corner of engine compartment, on inner fender panel | 14        |
| E-28                                 | Left side of engine                                           | 51        |
| E-30                                 | Top right rear of engine                                      | 55        |

## Circuit Operation

The engine or powertrain control module (ECM or PCM) receives inputs from the engine sensors and switches, controlling the functions of the engine. It also turns on the malfunction indicator “check engine” light whenever a malfunction or abnormal engine perfor-

mance is detected, and allows for diagnostic testing through the data link connector (DLC).

Refer to Section 6 of the Workshop Manual for further engine diagnosis.