

Communication Networks

The vehicle contains 3 multiplex systems, CAN, SCP and ISO-9141/2. These are used for the exchange of communication and diagnostic information between control modules, the major instrument cluster and the diagnostics connector.

Major Instrument Cluster

The major instrument cluster is connected to the SCP and the CAN networks, and provides the gateway for the transfer of messages between the two networks.

CAN

A CAN communications network is used on this vehicle which links the following systems: ECM, TCM, ABS, INSTRUMENTS and GEAR SELECTOR ILLUMINATION MODULE.

The network runs at 500Kbps over a twisted wire pair and allows the interchange of information between the modules on the network. This information comprises sensor data, switch data and real time control data. The object of the system is to allow the addition or omission of nodes in a modular open system fashion. The network is referred to as high speed to reflect the real-time nature of the information it carries and the bit rate required to meet the response times, such as traction control and gear shift management.

SCP

The SCP network links the control modules of the main body systems together. The network operates at 41.6 Kbauds over a separate twisted wire pair, giving a possible maximum of approximately 500 messages/second. It is an event driven system, where the control modules connected to the network only output messages when an event occurs (eg. a switch operates) or they receive an information request from another control module.

Zonal partitioning, instead of functional, means that individual control modules on the SCP network are not necessarily dedicated to one system, eg. the SLM operates the back-up lamps. Generally, the location of the control module dictates the functions it performs.

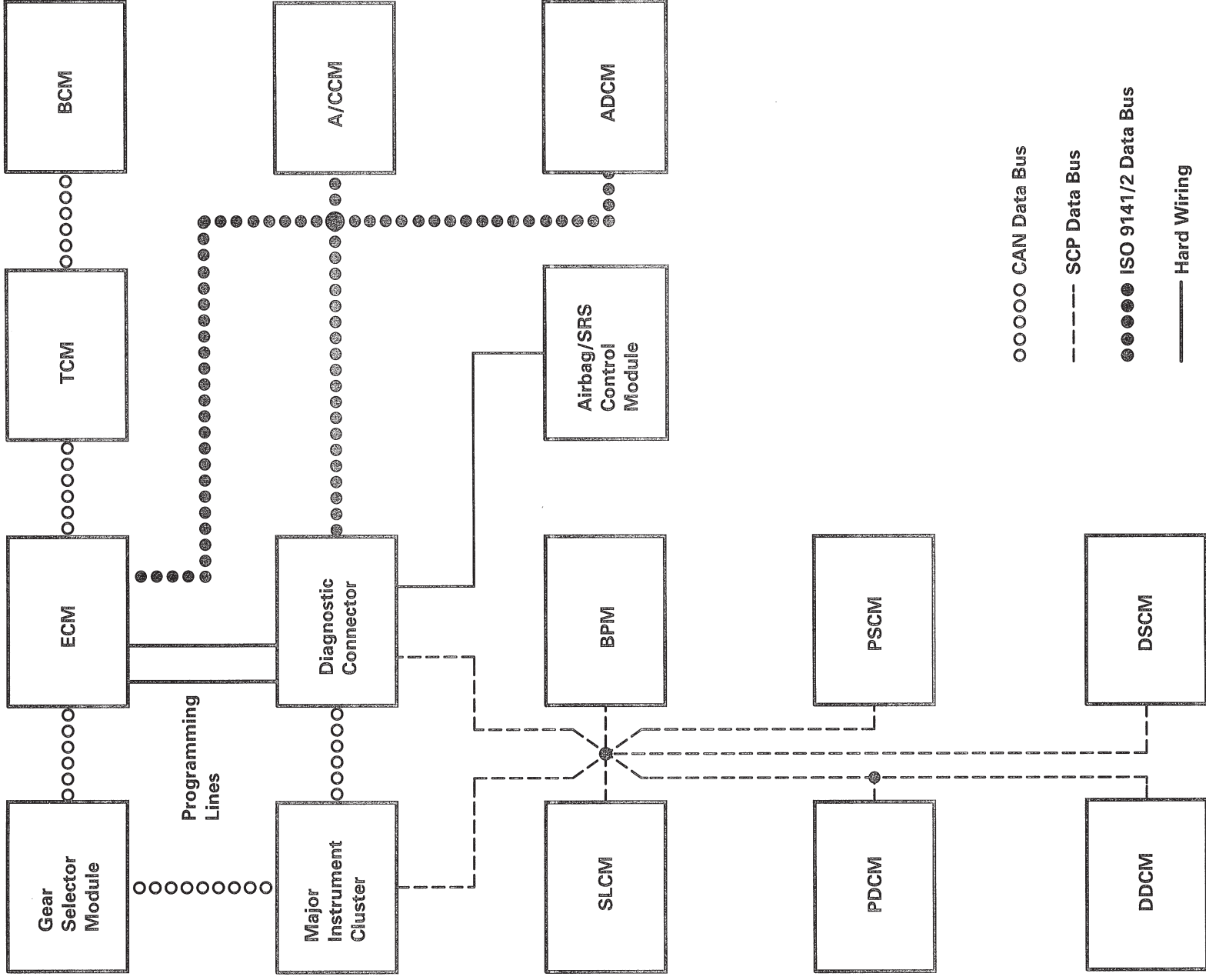
Control modules on the SCP network are "star" connected. If one of the wires in the twisted pair is broken or shorted, communication continues uninterrupted on the remaining wire using

chassis ground as the other conductor. If the continuity of both data buses is broken, only messages through the broken section are affected.

ISO 9141/2

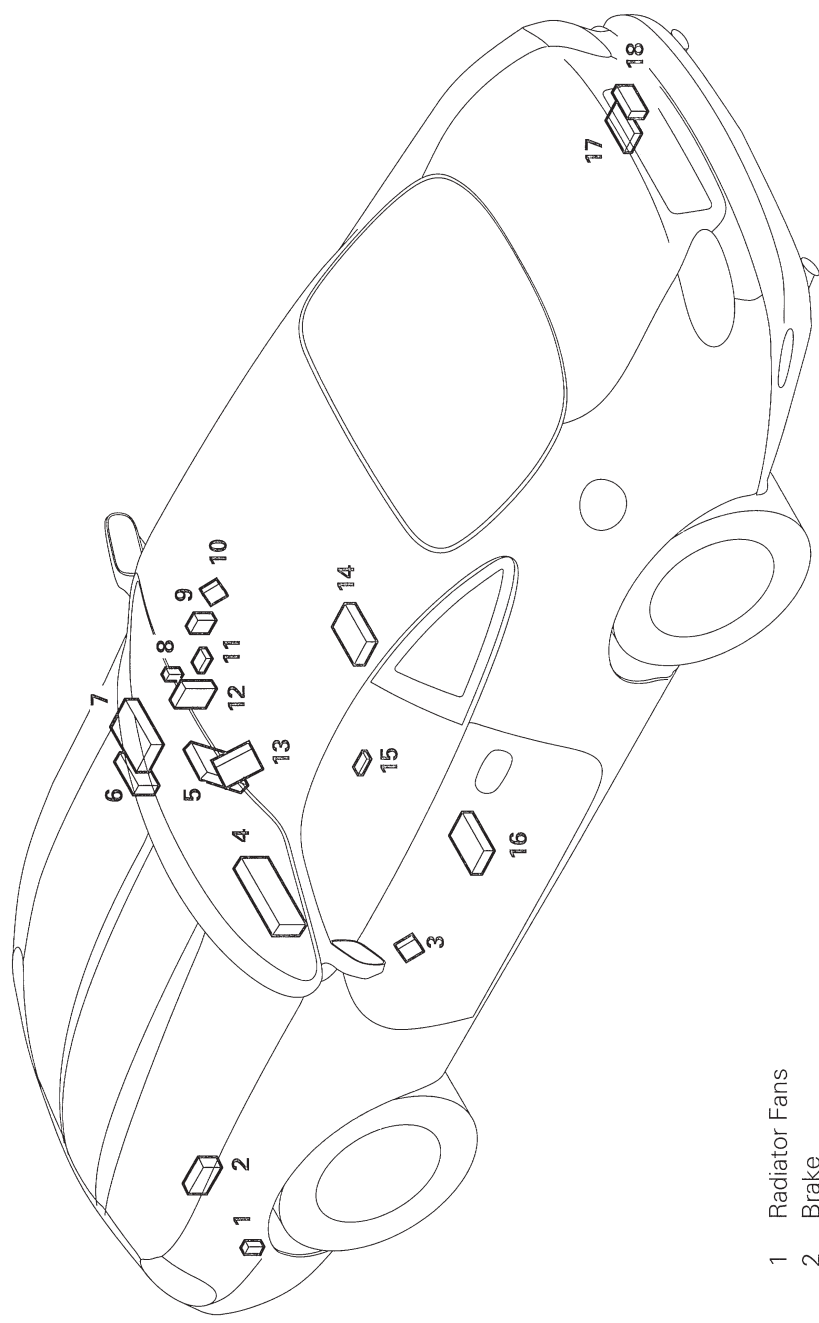
The ISO 9141/2 network links the diagnostic connector to the ECM, and to those control modules with a self-diagnostic capability that are not connected to the CAN or SCP network. The network operates at 10.4 Kbauds.

COMMUNICATION NETWORKS



Control Modules

CONTROL MODULE LOCATIONS



- 1 Radiator Fans
- 2 Brake
- 3 Driver Door
- 4 Major Instrument Cluster
- 5 Body Processor
- 6 Transmission
- 7 Engine
- 8 Steering
- 9 Dimmer
- 10 Passenger Door
- 11 Garage Door Opener
- 12 Airbag/SRS
- 13 Air Conditioning
- 14 Passenger Seat
- 15 Gear Selector Illumination
- 16 Driver Seat
- 17 Security and Locking
- 18 Lamp

BODY PROCESSOR MODULE

Body Processor Module

The Body Control System consists of six modules:

- Body Processor Module (BPM)
- Security and Locking Control Module (SLCM)
- Driver Door Control Module (DDCM)
- Passenger Door Control Module (PDCM)
- Driver Seat Control Module (DSCM)
- Passenger Seat Control Module (PSCM)

Except for the BPM, the modules are described within the relevant sections of this guide.

The BPM is located in the fascia, mounted on the passenger airbag/SRS bracket, behind and above the glovebox.

The BPM functions are (where fitted):

- Interior and exterior lighting, except for the door puddle lamps and the rear lamp bulb failure
- Windshield wash/wipe and headlamp power wash
- Steering column memory
- Action alarm lights and sounders and inhibits engine crank
- Gearshift and ignition key interlocks
- Various switches, for example: convertible top, trunk release, fuel filler flap release
- Various audible and visual alarms, for example: sidelight on warning, convertible top operating, seat belt status.

