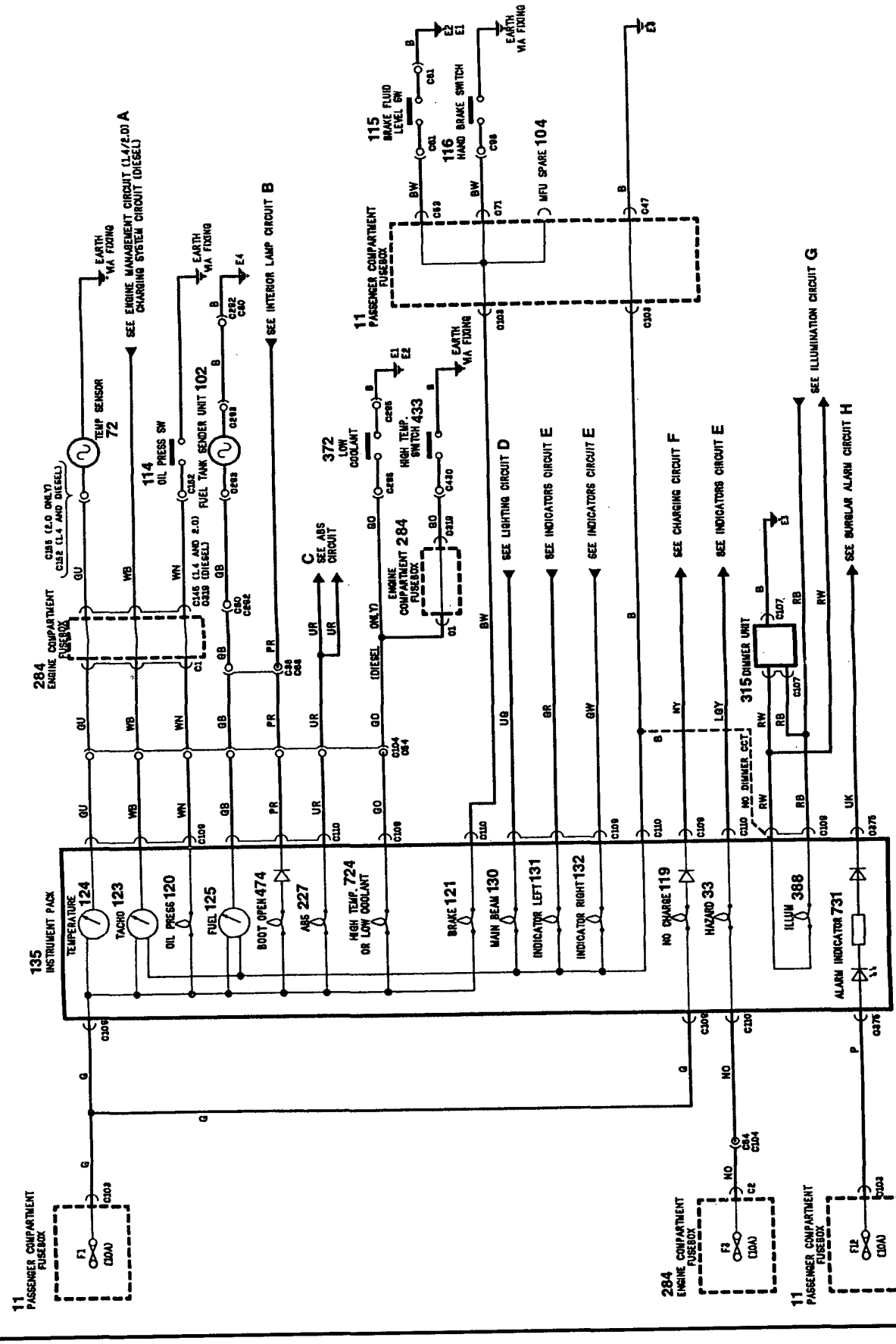
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SEE ENGINE MANAGEMENT CIRCUIT (1.4/2.0) A
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EARTH VIA FIXING

HOW THE INSTRUMENT PACK OPERATES

The instrument pack is an electro-mechanical device. It receives electrical signals from various sensors which it the transposes into an analogue gauge readout. All the instrument pack gauges and warning lights (except hazard and anti-theft alarm LED) receive a 12 volt supply on a G wire from fuse 1 in the passenger's compartment fusebox. The hazard warning light receives its feed from fuse 3 (1.4, 2.0 and Diesel models) or fuse 4 (1.6 models) in the engine compartment fusebox. The anti-theft alarm LED receives its feed from fuse 12 in the passenger compartment fusebox.

Instrument panel

Temperature gauge

The temperature gauge receives an ignition supply from fuse 1 on a G wire. The earth path for the gauge is on the G/U wire to the temperature sensor unit, then to earth through the sensor body to the engine block. When the coolant temperature is low, the resistance of the temperature sensor is high. This will cause the gauge to move to the cool side. When the coolant temperature is high, the resistance of the temperature sensor is low causing the gauge to rise to the Hot position.

Fuel Gauge

The fuel gauge receives an ignition supply from fuse 1 on the G wire. The earth path for the fuel gauge is on the G/B wire to the tank sensor unit then on the B wire to earth.

When the gauge unit float is at its lowest point, indicating an empty fuel tank, the resistance to earth is at its greatest value. The resistance value to fuel gauge position is:

Sender resistance	Fuel gauge position
105 ohms	Empty
32.5 ohms	Half full
5 ohms	Full

Tachometer

The tachometer receives a 12 volt ignition supply from fuse 1 on the G wire. An earth path is provided for the tachometer on the B wire.
1.4, 1.6 and 2.0 models: The tachometer receives engine speed pulses from the ignition on the W/B wire.
Diesel models: The tachometer receives engine speed pulses from the alternator on the W/B wire.
Using an extended scale moving coil voltmeter which has integral speed pulse voltage circuitry built in it is able to display engine speed using a moving pointer.

Automatic gear shift position illumination - 1.6 models

The light cluster consists of 6 bulbs which indicate the gear position currently being used either Park(P), Reverse(R), Neutral(N), Drive to 4th gear(D4), Drive to 3rd gear(D3) or 2nd gear(2). All the bulbs are fed on the G wire from fuse 1. The earth path for each position is supplied through the automatic gearshift inhibitor switch.

Warning lights

Oil pressure warning light

When oil drops below a set level, the contacts in the oil pressure switch are closed. This supplies the warning light with an earth path through the W/N, Y/R and B wires.

Anti-Lock warning light

The anti-lock warning light is used to give a visual indication that the anti-lock system is functioning correctly.
The warning light used for the anti-lock braking system receives an ignition supply on the G wire from fuse 1. The warning light is triggered by the anti-lock braking ECU.

Boot warning light

Indicates that the boot/taildoor is not fully closed.
The boot/taildoor open warning light receives an ignition supply from fuse 1 on the G wire. The earth path for the warning light is on the P/R wire to the boot/taildoor light switch. When the switch contacts close (the boot opened) the warning light is illuminated.

Brake system warning light

Indicates handbrake on or off and also gives a low fluid level indication. The brake warning light receives an ignition supply from fuse 1 on the G wire. The earth path for the warning light is on the B/W wire to the handbrake switch and the fluid level switch located in the top of the brake fluid level reservoir. The earth path will be broken until the handbrake is applied or the fluid level drops to a abnormal level illuminating the warning light.

Indicator warning lights

This warning light gives a visual indication when the direction indicators are operated, either left or right.

Main beam warning light

Gives an indication that the headlamps are being operated on main beam.

Panel illumination

To ensure an even spread of light for panel illumination eight 1.4 W bulbs are used, two in the top of the panel and six on the rear.

Glow plug warning light - Diesel models only

Gives an indication that the glow plugs are operating in the pre-heat mode. When the glow plugs are operating in the pre-heat period, the warning light receives a 12 volt supply from the glow plug control unit on a U/O wire to the engine compartment fusebox and on a U/O wire to the instrument pack. The earth is through the B wire, refer to **Earth Distribution.**

Low coolant/high temperature warning light - Diesel models only

Gives an indication that the coolant level is low or the engine is overheating. The low coolant switch in the expansion tank and the high temperature switch in the thermostat housing receive a 12 volt supply from fuse 1 on the G/O wires. The earth path for the low coolant switch, activated by the float, is through the B wire and the high temperature switch earth path is through the engine block.

Anti-theft alarm indicator light

See **Anti-theft Alarm.**