BODY CONTROL UNIT

Interior courtesy lamps

To determine when to provide an interior courtesy lamps enable output, the BCU checks the following input conditions:

- Ignition state.
- Transit mode.
- Driver's door open.
- Passenger or rear door open.

The courtesy lamps operate at full brightness when they are first switched on. The BCU then gradually dims the lamps (fade-out) before completely switching them off. Fade-out occurs over a period of two seconds following the logical control signal to turn off the lights. When a door is opened, the BCU provides earth paths from the interior lamps, the load space lamp and the ignition switch illumination. The following table lists the courtesy lamps operation and duration for holding the lamps on that occurs after the BCU has detected a condition that signals the courtesy lamps should be switched on:

Control signal	Additional conditions	Duration
Door open	-	10 minutes
Unlock signal from remote transmitter	All doors closed and ignition switch not in position III	1 minute
Unlock signal from the driver's door lock	All doors closed and ignition switch not in position III	1 minute
Ignition switch turned from position II or III to position 0	All doors closed	1 minute
Door changed from open to closed	All other doors closed and ignition switch not in position III	15 seconds
Ignition switch in position III	-	Timer cancelled
BCU receives a lock command	-	Timer cancelled
Vehicle has transit mode enabled	-	15 seconds on all occasions

Instrument pack

The BCU communicates with the instrument pack to provide a range of functions.

Odometer update

The BCU can be programmed for one of two options:

- Option 1 – no odometer error warning.
- Option 2 – odometer error warning.

In order to provide an LCD flash request to the instrument pack via the communications link, the following inputs are checked:

- Ignition state.
- Instrument pack odometer value (via the communications link).
- BCU odometer value.

The function is only active when the ignition state is on. The maximum allowed value is 999,999 miles (1,608,999 km).If the instrument pack odometer value is greater than the maximum allowed value, the maximum value is assumed. The BCU odometer value is stored in EEPROM. If 16 identical values of the instrument pack odometer reading is received consecutively, the instrument pack odometer value is compared with the BCU odometer value. If the consecutive readings from the instrument pack differ, the BCU odometer value is incremented accordingly. If the BCU odometer value is less than the instrument pack odometer value by up to 10 km, the BCU odometer value is set equal to the instrument pack odometer value.

If the odometer warning option is enabled, and the contents of the instrument pack odometer value buffer is identical to, or greater than BCU odometer value ± 10 km, the BCU sends an LED flash request to the instrument pack.

In the event of a communications link failure, this function will be unable to operate.