

RANGE ROVER BeCM (BODY (electrical) CONTROL MODULE) FAILURES

Please read caution at bottom of this page

There are many problems with the BeCM (Body Electrical Control Module) fitted to late model (from 1995) Range Rover and Discovery. Click [here](#) to see photographs of this unit.

The BeCM controls virtually EVERY electrical function on the vehicle and problems within the BeCM (or its associated fuse box) will cause mis-operation of vehicle electrical functions. When diagnosing electrical problems on vehicles fitted with BeCM, it is vital to appreciate the relationship between the BeCM and its associated electrical fuse box which is **located in the engine compartment**. The BeCM relies on this fuse box for nearly all its live feeds whilst the BeCM also controls the fuse box! **ANY PROBLEMS WITH THIS FUSEBOX WILL LOOK LIKE BECM FAILURE!** This fuse box suffers from internal corrosion problems probably due to its location which seem to manifest themselves at about 5 years (less in hot climates). Because it is almost impossible to diagnose faults caused by these fuseboxes we **STRONGLY** recommend that the fusebox is changed every 5 years or whenever there are vehicle electrical problems. This fusebox costs UK81.00 in UK and can be fitted in minutes. **Please do not confuse this fusebox with the small fuse panel fitted to side of BeCM.**

SYMPTOMS

- 1) SPECIFIC BeCM fault symptoms include mis-operation of headlights, door locks, electric windows, fuel filler flap, indicators, sun roof and **especially rear wash/wipe**. These faults may be intermittent.
- 2) Erroneous fuse failure codes are also symptoms of BeCM failure (if fusebox has been changed).
- 3) Intermittent engine non-crank can a BeCM failure symptom (if security system faults are eliminated - but click [here](#) for late Discovery starting problems).

DIAGNOSTIC CHECKLIST

1. Carefully check battery ground cable where it connects to vehicle body. If there is corrosion it is recommended to renew cable and thoroughly clean area before reconnecting new cable. Earth point check and clean should be part of diagnostic procedure whenever there are electrical/electronic problems. **With petrol engined models, we recommend upgrading to Range Rover diesel battery when renewing battery. It will fit existing battery tray and will help overcome erroneous fault codes (eg SRS) caused by low battery voltages when cranking or when heavy electrical loads are placed on system.**
2. The BeCM fuse box located in the engine compartment should be second suspect. This fusebox suffers internal corrosion problems due to close proximity of engine coolant pipes resulting in microscopic (you can't see it) engine coolant contamination. Whatever the cause, the fuse box is known to cause many different electrical problems and is a relatively low cost item (UK81.00) which is not specific to vehicle - it can be swapped out quickly and cheaply and may well save the costs of unnecessary BeCMs. **WE RECOMMEND CHANGING THIS FUSE BOX EVERY 5 YEARS OR WHENEVER THERE ARE ELECTRICAL PROBLEMS.**

3. Battery discharge problems due to mis-operation of the front screen heater can be due to faulty screen heater relays.

4. Low battery voltage due to defective battery cell can cause a wide range of electrical and electronic problems including setting the SRS light. Confirm battery voltage recovers rapidly to over 12.5V following short drain (eg run all electrical loads and accessories for 30 seconds with engine NOT running). Replace battery as above if any doubt.

CAUTION!

Odometer mileage readings are electronically stored in 2 locations on the vehicle - the instrument cluster AND the BECM. System programming ensures that in the event of any mismatch between the 2 locations, the odometer will permanently display the highest mileage!!! Merely switching on the ignition with another BECM (with higher recorded mileage) connected can cause the odometer to permanently display the higher mileage. The system CANNOT be changed back to the lower recorded mileage by reversing this procedure.

BeCMs are also matched to door lock codes. Please ensure (with dealer) lock set bar and EKA codes are written down before parting with your BeCM for exchange. If you can't establish these codes, be ready to spend UK400.00 on a new lock set if you change the BeCM.

Components within the BeCM are CMOS technology which are extremely vulnerable to ESD (Electro Static Discharge) damage. Merely opening the BeCM can cause multiple component failures and result in the BeCM becoming unrepairable. Please, please resist the temptation to remove cover and poke around inside - it could cost you a new BeCM.