TECHNICAL INFORMATION

Remote Handset Function/Alarm Module Troubleshooting and Upgrade

No: 86/10/01/NAS
Ref: Replaces 86/01/01/NAS
Issue: 1
Date: 10/19/01

AFFECTED VEHICLE RANGE:

Discovery Series II (LT)	**YA260032 to 1A703319**	**BCU Intro**
	1A729415	**RF Receiver Intro**

SITUATION:

INCONSISTENT OPERATION OF HANDSET OR FAILURE TO UNLOCK VEHICLE

Vehicle Remote Handsets (plips) occasionally stop working. The problem may have a range of causes and may even occur after a vehicle has been standing overnight, or for an extended period. Causes include:

All vehicles

1. Remote handsets not in synchronization with the Body Control Unit (BCU).

△ **NOTE: The earth eyelet in the harness is redundant on most vehicles. Do not assume that grounding this eyelet will fix a problem.**

2. Poor ground connection on the alarm receiver.
3. Lack of continuity between the alarm receiver and the BCU, possibly due to a trapped or chafed harness in the 'A' post area.

To 1A729415

4. The lock/unlock range at certain locations around the vehicle can be very limited, resulting in intermittent operation

YA260032 to 1A703319

5. The alarm receiver has detected interference over an extended period, resulting in the BCU going into 'sleep' mode.

   A vehicle parked in a radio-signal-rich environment with RF noise at or around the same frequency as remote plips – 315MHz – such as garage door openers, house alarms, gates in gated communities, or radio transmitters may exhibit the symptoms. Not all vehicles exhibit this condition. Low ambient temperatures can make the condition worse.

RESOLUTION:

VERIFY COMPLAINT AND INSTALL NEW ALARM RECEIVER

All vehicles can be unlocked with the mechanical key in the driver's door should the remote not work. This includes those vehicles affected by the BCU "sleep mode" where the key unlock process will reset the BCU and return all functions to normal. Use TestBook/T4 to troubleshoot the alarm system:

- Verify that the handset is synchronized and operating correctly (TIB 86/03/00/NAS),
- Verify alarm module ground is clean and tightened to 7 Nm (62 lbf.in.).
- Verify wiring continuity between the BCU and the alarm module.

If the alarm system consistently enters "sleep mode," replace the alarm receiver with the revised receiver detailed in PARTS INFORMATION using the procedure outlined below.

PARTS INFORMATION:

YWY000090 .....Receiver – alarm system – 315 MHz

TIB	CIRCULATE:	Service Mgr	Warranty	Workshop	Body Shop	Parts
86/10/01/NAS	TO	X	X	X	X	X

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WARRANTY CLAIMS:

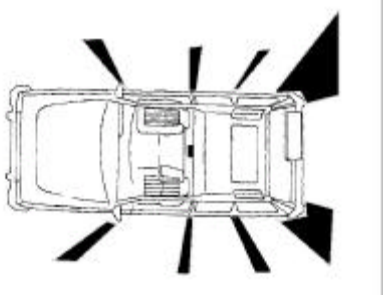
86.90.43/01 .....Time 0.40
TestBook/T4 alarm diagnostic time
86.77.31 .....Time 0.35 hrs. Vehicles with sunroof
Time 0.75 Vehicles without sunroof
Replace Alarm receiver unit.
FAULT CODE: Y

Normal warranty policy and procedures apply

REPAIR PROCEDURE

INVESTIGATE ALARM PLIP FUNCTION

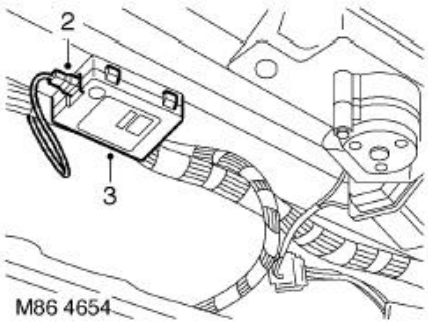
Figure 1



1. Interrogate the alarm system using TestBook to determine if plips are synchronized and/or recognized.
2. Verify alarm module ground is clean and tightened to 7 Nm (62 lbf.in.).
3. Verify wiring continuity between the BCU and the alarm module.
4. Where a customer complaint of intermittent activation of the alarm/lock function perform the following checks:
   - Consult with owner to determine if intermittent problem occurs only after extended inactive vehicle ("sleeping BCU").
   - If "sleeping"BCU" is not the likely cause, unlock the vehicle with the remote and observe the alarm indicator light for rapid flashing after the unlock action.
   - If the instrument pack alarm LED flashes rapidly for **ten seconds** after unlocking, the plip battery is low. Install a new battery in the remote/plip.
   - Verify correct operation of the plip by walking around the vehicle in expanding circles periodically depressing the remote lock/unlock buttons to identify effective range and blind spots.
5. If intermittent operation is experienced in any areas other than known weak reception areas (Figure 1) or if the range is poor, the fault lies in the alarm receiver.
6. If the above checks do not reveal a cause, or if the alarms system consistently enters sleep mode, replace the receiver.

REPLACE ALARM RECEIVER - VEHICLES <u>WITH</u> SUNROOFS.

Figure 2



1. Remove trim seal from rear sunroof opening.
2. Release sunroof switch and remove screw securing headlining.

CAUTION: In the following steps exercise care not to crease the headliner.

3. Carefully lower headlining for access.
4. Remove fasteners and release alarm receiver from roof panel.
5. Disconnect multi-plug and remove receiver. (Figure 2)
6. Connect multi-plug to new receiver and secure to roof panel.
7. Install and tighten screw securing headlining.
8. Install sunroof switch.
9. Install sunroof opening trim seal.

REPLACE ALARM RECEIVER - VEHICLES WITHOUT SUNROOFS.

CAUTION: In the following steps exercise care not to crease the headliner.

1. Release rear door upper trim finisher.
2. If equipped, remove three Torx bolts securing each rear headrest and remove headrests.
3. Refer to Workshop Manual repair number 76.13.73 and remove left hand and right hand 'D' post trim casings.
4. Release rear interior light lens, remove two nuts to release light.
5. Release two studs securing rear of headlining and carefully lower lining.
6. Release alarm receiver from roof panel.
7. Disconnect multi-plug and remove receiver.
8. Connect multi-plug to new receiver and secure to roof panel.
9. Position rear of headlining and secure with studs.
10. Position interior light and secure with nuts.
11. Install interior light lens.
12. Refer to Workshop Manual repair number 76.13.73 and install left hand and right hand 'D' post trim casings.
13. If equipped, install Torx bolts to secure each rear headrest and tighten to 25 Nm (18.5 lbf.ft.).
14. Install rear door upper trim finisher.