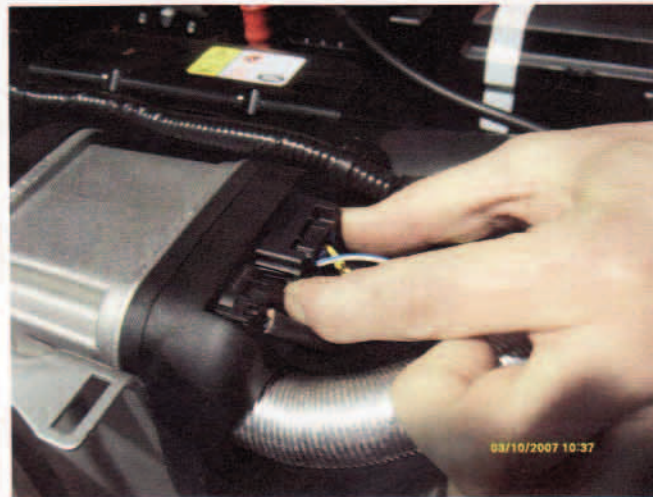


1. Remove the cover from the battery and disconnect the battery earth cable.
2. Locate the Webasto fuel fired booster heater, which is directly in front of the battery, and remove the eight way connector. (Photo 1 & 2)



Photo 1
Showing top of Webasto (FFBH)
directly in front of the battery
cover

Photo 2
Remove eight-way connector



3. Locate cavity number 2 on the eight-way connector. (Photo 3)

Photo 3
Showing the numbered
cavities on the connector



4. By inserting a small electrical flat blade screwdriver, or a similar tool, slide the cable locking bar to the release position. (Photo 4)



Photo 4

5. If cavity 2 is occupied press the terminal locking tab and remove the wire from the connector.
6. Secure the redundant wire, using suitable electrical tape, to the main FFBH harness.
7. If cavity two is not occupied remove the blanking plug from the cable entry side of the connector.
8. Identify the single orange cable on the Webasto Pre-heater Upgrade kit.
9. Insert the orange cable into cavity two on the eight-way connector. (Photo 5)

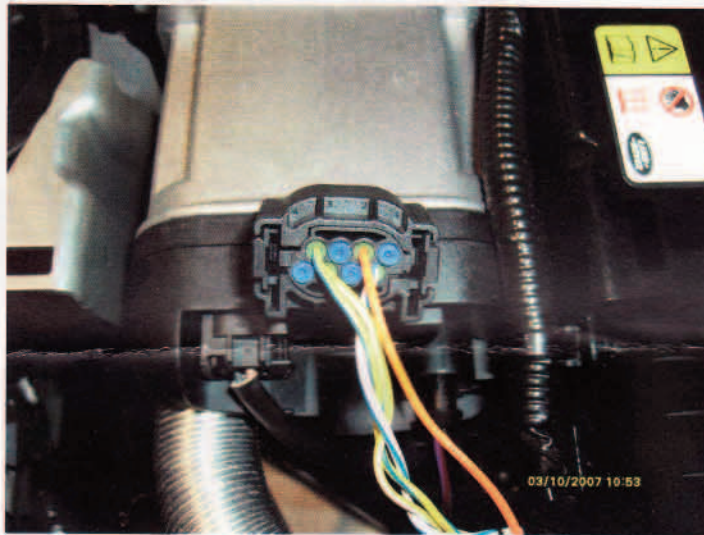


Photo 5

CAUTION: Ensure that the orange cable is correctly located and secure

10. Slide the locking bar on the eight-way connector to the closed position.
11. Insert the eight-way connector into the FFBH.
12. Secure the orange cable to the FFBH harness. (Photo 6)

CAUTION: Ensure that the orange cable is routed clear of the FFBH exhaust Pipe.



Photo 6

13. Route the orange cable alongside the battery to the bulkhead and across to the other side of the engine bay. (Photo 7)

14. Secure the orange cable at regular intervals.

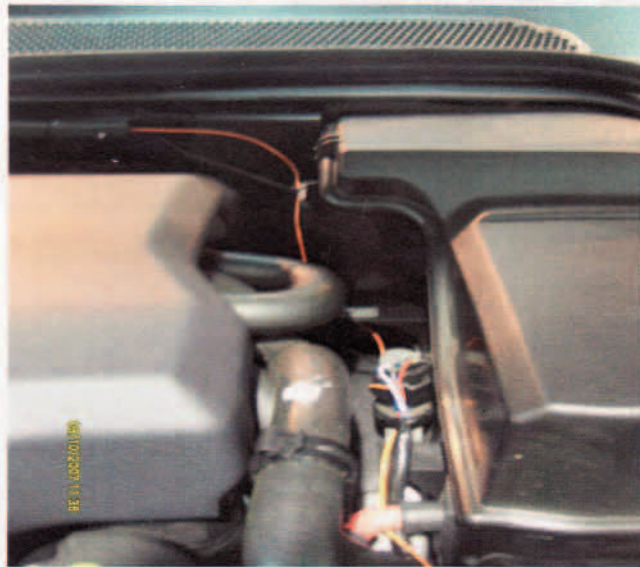


Photo 7

15. Remove the cover from the plenum chamber which is located on the opposite side, to the battery, of the engine bay. (Photo 8)



Photo 8

16. Remove the upper off side A-pillar trim. Fixing is located behind "Airbag" cover. (Photo 9)

17. Remove the lower off side A-Pillar trim panel.

18. Remove lower dash panel trim held by two screw fixings plus clips. (Photo 10 & 11)



Photo 9



Photo 10



Photo 11

19. Identify/locate grommet in engine bay bulkhead, which is now visible following the removal of the plenum chamber cover. (Photo 12)

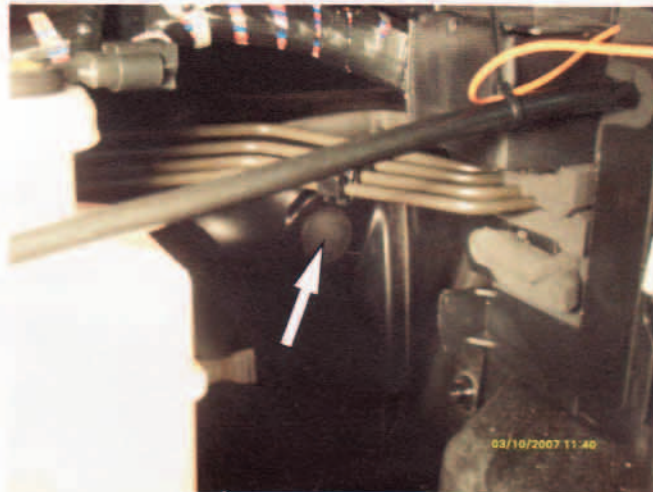


Photo 12

20. Puncture the grommet and puncture the material behind the bulkhead.

21. Thread the orange cable through the grommet into the drivers footwell area.

22. Remove the front interior light unit from the headlining.

23. Remove the master headlamp connector block from the rear of the headlamp switch. (Photo 13)



Photo 13

24. Identify the timer harness in the Webasto Pre-Heater kit (3 cables/connector/fuse holder)

25. Bring the harness into the headlamp switch trim cavity and route the end with the small black connector block through the hole in the fascia toward the door aperture.

26. Pull the harness through the hole and route it up the A-pillar. Secure it to the existing harness.

WARNING: Ensure that the cables do not interfere with the airbag.

27. Feed the harness between the headlining and windscreen and pull it through into the interior light aperture. (Photo 14)

NOTE: Ensure that the cable is not visible when viewed from the front of the vehicle.



Photo 14

28. Place the interior light unit on a clean firm surface with the lamps uppermost.

29. Identify a position on the front of the light unit where the timer can be installed without any interference with any plastic ribs or fittings on the reverse.

Due to location of these ribs it is difficult to mount the timer in a central position. It may therefore be advisable to have the timer located deliberately off centre. (Photo 15 & 16)

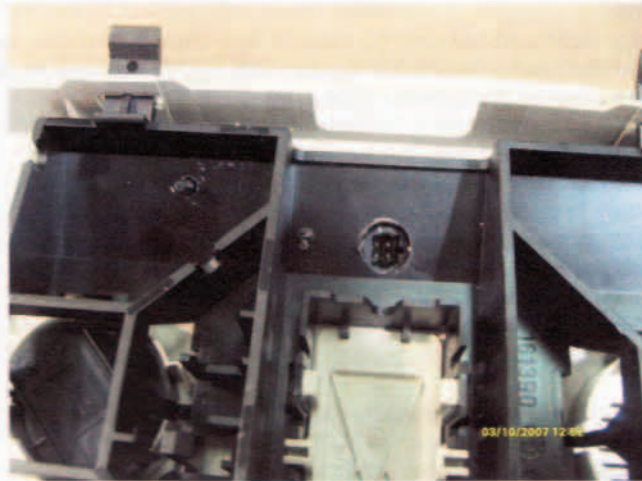


Photo 15



Photo 16

30. Using the timer drilling template drill 2 holes as indicated into the light unit
31. Using the timer plinth mark and drill the light unit to accommodate the plinth locating peg.
32. Insert the mounting plinth into the hole drilled and insert the timer into the mounting plinth. Secure the timer to the light unit using the fixings provided and tighten to 0.8Nm.

CAUTION: Do not exceed the specified torque as this may damage the timer unit display.

33. Fit the timer screw cover plate.

34. Offer up the interior light unit toward the vehicle headlining and connect the small 4 pin black connector to the rear of the timer. Secure the wiring harness to the rear of the light unit ensuring it is clear of the interior lights.

35. Re-install the interior light unit into the headlining.

36. Route the previously installed single orange cable from the footwell area, towards the headlamp switch block to meet the timer harness. Cut the cable to a suitable length so that it can be joined to the matching cable in the timer harness.

37. Remove 6mm of insulation from the single orange cable and the matching cable in the timer harness. Join the two cables using the connector provided.

38. Identify the body earth nut in the lower A-pillar/door aperture area. (Photo 17)

39. Route the black earth cable in the timer harness to the body nut and cut to length. The timer harness insulation cover may be split to draw out the black cable, if necessary.

40. Remove 6mm of insulation from the black cable and attach the ring terminal provided.

41. Remove the nut and secure the ring terminal to it. Re-install the nut.

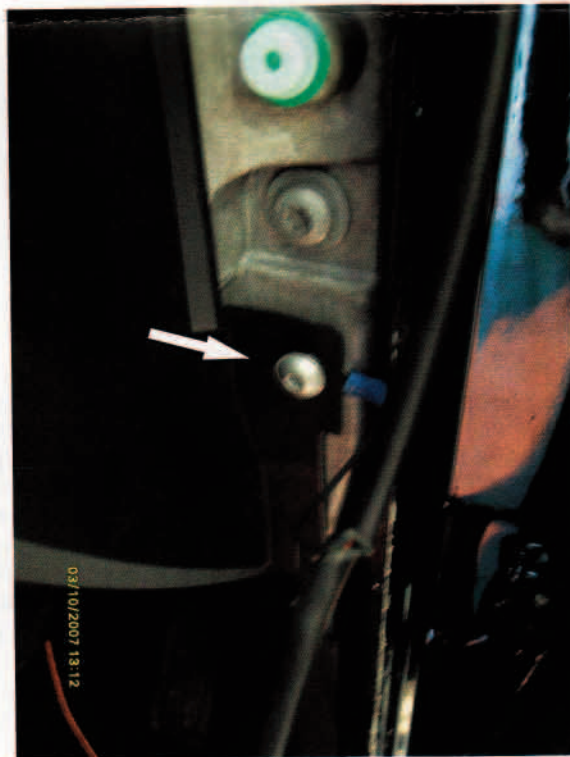


Photo 17

42. Identify the green/violet cable in the timer harness.
43. Route the cable to the head lamp harness connector block and cut to length.
44. Identify the brown/green cable from the head lamp connector block.
45. Cut through the brown/green cable approximately 60mm from the connector and remove 6mm of insulation from the cut ends.
46. Remove 6mm of insulation from the green/violet timer harness cable and using the connector supplied insert it with the short brown/green cable into the connector and crimp.
47. Insert the other brown/green and the green/violet cable into the other end of the connector and crimp.

NOTE: Ensure that all cables are secured within the headlamp switch cavity to avoid trapping/rattles etc.

48. Re-install all interior trims etc.
49. Refit the plenum chamber cover.
50. Reconnect the battery earth cable and re-fit the cover.
51. Set the real time on the timer unit by following the instructions provided.

52. THE TIMER CONNECTIONS CAN NOW BE VALIDATED:

1. Press the flame signal on the timer unit.
2. The Webasto FFBH combustion fan will turn on (this will be audible)
3. The timer/FFBH fan can then be switched off using the flame button (refer to operating instructions sheet BMA780030 in the Upgrade kit)

NOTE: The heater will not fire up unless the vehicle has been locked (inactive) for approximately 15 minutes. The timer should therefore not be programmed to operate the heater until 15 minutes have elapsed after locking the vehicle.

53. Leave the timer operating booklet and operating card in the vehicle for the owner.

**TWO SERVICE ACTIONS INVOLVING VEHICLE SOFTWARE CHANGES ARE
REQUIRED ON EARLIER MODELS:**

**LA 303-04 DIFFICULT COLD STARTING
LA303-009 COLD START THROTTLE RESPONSE**

**IF THE VEHICLE IS SERVICED REGULARLY THESE ACTIONS WILL HAVE BEEN
CARRIED OUT. FAILING THIS THE CUSTOMER SHOULD BE AWARE THAT THESE
ACTIONS WILL BE REQUIRED IF THIS KIT IS INSTALLED**