

TECHNICAL BULLETIN



MODEL/DERIVATIVE:
Freelander (LN)

Bulletin N°: 0112
CDS. ref: L8776bu
Issue: 2
Date: 15.05.03

AFFECTED RANGE:
All derivatives

RE - ISSUE INFORMATION:
ACTION, PARTS INFORMATION and WARRANTY INFORMATION amended.
Please destroy your existing copy and replace with this Issue 2.

PROBLEM:

CLICKING / CREAKING NOISE FROM THE REAR UNDERSIDE OF THE VEHICLE
Apparent at slow speed when moving off in either 'forward' or 'reverse', and most noticeable when using maximum steering lock.

CAUSE:

There are two possible causes for the above problem:

1. Movement between the tubular cross member and the jacking bracket on the rear sub-frame.

NOTE: The new specification rear sub-frame has been fitted to vehicles from VIN number 3A 243741.

2. The RH rear longitudinal may be cracked / fractured, and is most likely to occur on vehicles that are subjected to a high number of stop / start journeys, engine over-runs and hard acceleration in the following categories:
 - Fleet operators
 - Local authorities
 - Police

NOTE: The new specification RH rear longitudinal has been fitted to vehicles from VIN number 2A 219766.

ACTION:

Where a complaint of the above is confirmed, follow procedure 1 to weld the tubular cross member to the jacking bracket. If the clicking / creaking noise is still apparent after carrying out procedure 1, then refer to procedure 2.

Procedure 1 - weld the rear sub-frame

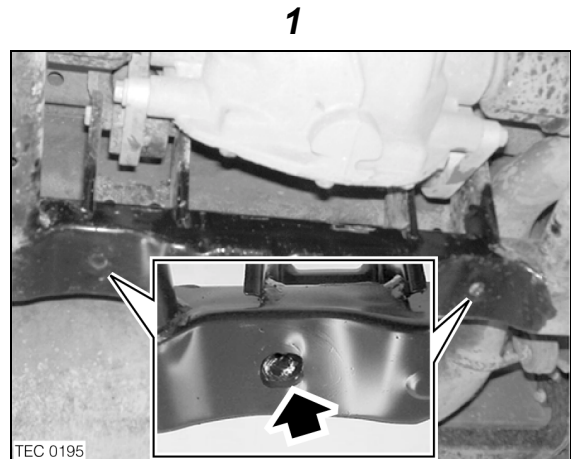
1. Slowly drive the vehicle forward or reverse on full lock and listen for a clicking / creaking noise coming from the rear underside of the vehicle. If a clicking / creaking noise is evident, refer to the following steps.

2. Raise the vehicle.
3. Clean off existing paint to expose bare metal in preparation for welding (see illustration 1).
4. Puddle weld both holes (inset in illustration 1) to fix the tubular cross member to the jacking bracket.



WARNING: Prepare for welding. Protect the surrounding area such as fuel lines and the petrol tank to prevent the possible risk of fire or explosion.

Health and Safety guidelines in accordance with local market requirements MUST be followed.



5. Etch prime bare metal, repair paint finish as required.
6. Slowly drive the vehicle forward or reverse on full lock and listen for a clicking / creaking noise coming from the rear underside of the vehicle. If the clicking / creaking noise is still evident, follow procedure 2 to check the longitudinals.

Procedure 2 - Check the RH rear longitudinal for cracks / fractures

1. Raise the vehicle on a lift.
2. Chock the front wheels.
3. Raise the rear of the vehicle and support on axle stands.
4. Using a transmission jack support the rear sub-frame.
5. Remove one rear sub-frame fixing bolt, re-fit and tighten bolt approximately 5 turns to secure the rear sub-frame.
6. Repeat step 5. for the remaining rear sub-frame fixing bolts.
7. Lower the rear sub-frame until it is supported on the fixing bolts.
8. Ensure that the mating surfaces of the rear sub-frame and the body longitudinals are clean.
9. Inspect the rear longitudinals for cracks / fractures around the sub-frame mounting points, if found follow rectification procedure 3.

NOTE: It has been established that only the RH rear longitudinal cracks / fractures. This is due to the positioning of the differential in the sub-frame, where more load is placed on the RH rear longitudinal.

10. Raise the rear sub-frame assembly.
11. Tighten the rear sub-frame bolts to 190 Nm (140 lbf.ft).

NOTE: If any of the rear sub-frame bolts are damaged or no resistance is felt when tightening the bolts, then the bolts must be replaced.

12. Lower and remove the transmission jack.
13. Lower the vehicle and remove chocks from the wheels.

Procedure 3 - Replace the RH rear longitudinal

1. Disconnect the battery earth lead.
2. Disconnect the alternator multiplug.
3. Remove the exhaust system. Refer to Workshop Manual, part number LRL0350 (6th edition), Manifolds and exhausts, Exhaust pipe - rear, repair number 30.10.22.
4. Remove the rear bumper valance. Refer to Workshop Manual, part number LRL0350 (6th edition), Exterior Fittings, Bumper Valance - rear, repair number 76.22.74.
5. Remove four nuts securing the bumper armature to the body and remove the armature.
6. Remove the tail door. Refer to Workshop Manual, part number LRL0350 (6th edition), Doors, Door - tail assembly - remove for access and refit, repair number 76.28.19/99.
7. Release the tail door aperture seal from lower part of the vehicle.
8. Remove both rear quarter lower trim casings. Refer to Workshop Manual, part number LRL0350 (6th edition), Interior trim components, Trim Casing - rear quarter - lower, repair number 76.13.12.
9. Remove the luggage compartment carpet. Refer to Workshop Manual, part number LRL0350 (6th edition), Interior trim components, Carpet - luggage compartment, repair number 76.49.04.
10. Remove the rear sub-frame for access. Refer to Workshop Manual, part number LRL0350 (6th edition), Rear Suspension, Sub frame, repair number 64.35.78.
11. Remove the fuel tank. Refer to Workshop Manual, part number LRL0350 (6th edition), Fuel system, Tank, repair number 19.55.01.
12. Remove 6 bolts securing the towing eye to the RH rear longitudinal and remove the towing eye.
13. Release the wiring harness from the luggage compartment floor and position aside.
14. Remove the RH rear damper assembly for access. Refer to Workshop Manual, part number LRL0350 (6th edition), Rear suspension, Damper, repair number 64.30.02.
15. Remove 3 nuts securing the charcoal canister assembly to the body. Disconnect 3 multiplugs and 3 pipe connections, remove the charcoal canister from the vehicle.

CAUTION: *Before disconnecting or removing components, ensure the immediate area around joint faces and connections are clean. Plug open connections to prevent contamination.*

16. Locate and drill out 18 spot welds on the new RH rear longitudinal (see attachment 1, inset '1' illustration 1). Separate the front part of the RH longitudinal ('A' in illustration 1) from the rear part of the RH rear longitudinal ('B' in illustration 1) and discard the front part of the RH rear longitudinal ('A' in illustration 1).



WARNING: *Protect the surrounding area such as fuel lines and the petrol tank to prevent the possible risk of fire or explosion.*

Health and Safety guidelines in accordance with local market requirements MUST be followed.

17. Straighten the flange faces as required on the new rear longitudinal.
18. Position bracket assembly, ALR7720 ('C' in illustration 1), inside the rear longitudinal and mark its fitted position. Remove the bracket assembly from the rear longitudinal.
19. Using an abrasive disk, remove the primer to expose bare metal on relevant mating faces of the bracket assembly and the rear longitudinal.
20. Apply weld through primer to the bracket assembly and the longitudinal.
21. Position bracket assembly inside the rear longitudinal and weld into position (see inset '2' in illustration 1).

NOTE: *Align the fixing hole in the bracket with the fixing hole in the longitudinal prior to welding.*

22. Locate and drill out all spot welds securing the RH rear longitudinal to the floor and the rear crossmember (see attachment 2, illustration 2).
23. Locate and remove with an abrasive disk, 10 MIG welds securing the rear longitudinal to the inner and outer quarter reinforcement panels.
24. Carefully remove the rear longitudinal, avoid damaging the quarter inner assembly when releasing the damaged longitudinal.

NOTE: *Part of the RH rear longitudinal is secured using metal to metal adhesive.*

25. Using an abrasive disk, clean the spot weld sites and remove primer.
26. Mark the weld positions on the replacement panel. Punch or drill 8 mm diameter spot holes at the weld sites.
27. Apply weld through primer and metal to metal adhesive to relevant surfaces.
28. Align and support the rear longitudinal in its fitted position to the body.



WARNING: *Prepare for welding. Protect the surrounding area such as fuel lines and the petrol tank to prevent the possible risk of fire or explosion.*

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29. Weld the replacement RH rear longitudinal to the body, stagger welds to keep distortion to a minimum.
30. MIG weld the inner and outer quarter reinforcement panels to the rear longitudinal in 10 places 20 mm long.
31. Clean the weld site, remove all traces of weld spatter.
32. Etch prime bare metal, repair paint finish as required.
33. Prepare the panel and seal against corrosion.
34. Inject cavity wax into the RH rear longitudinal to prevent corrosion.
35. Fit the fuel tank. Refer to Workshop Manual, part number LRL0350 (6th edition), Fuel system, Tank, repair number 19.55.01.
36. Fit the rear sub-frame. Refer to Workshop Manual, part number LRL0350 (6th edition), Rear Suspension, Sub frame, repair number 64.35.78.

NOTE: *Do not refit wheel arch liner at this stage.*

37. Fit the charcoal canister assembly and secure with nuts.
38. Connect multiplugs and pipes to the charcoal canister assembly.
39. Fit the RH rear damper assembly. Refer to Workshop Manual, part number LRL0350 (6th edition), Rear suspension, Damper, repair number 64.30.02.

40. Fit the RH rear wheel arch liner. Refer to Workshop Manual, part number LRL0350 (6th edition), Exterior fittings, Liner - rear wheel arch, repair number 76.10.49.
41. Fit the exhaust system. Refer to Workshop Manual, part number LRL0350 (6th edition), Manifolds and exhausts, Exhaust pipe - rear, repair number 30.10.22
42. Fit the towing eye to the RH rear longitudinal fit bolts and tighten to 45 Nm (33 lbf.ft).
43. Etch prime bare metal, repair paint finish on the luggage compartment floor as required.
44. Position the wiring harness to the luggage floor.
45. Fit the luggage compartment carpet. Refer to Workshop Manual, part number LRL0350 (6th edition), Interior trim components, Carpet - luggage compartment, repair number 76.49.04.
46. Fit the rear quarter lower trim casings. Refer to Workshop Manual, part number LRL0350 (6th edition), Interior trim components, Trim Casing - rear quarter - lower, repair number 76.13.12.
47. Fit the tail door aperture seal.
48. Fit the tail door. Refer to Workshop Manual, part number LRL0350 (6th edition), Doors, Door - tail assembly - remove for access and refit, repair number 76.28.19/99.
49. Position bumper armature to body, fit nuts and tighten to 30 Nm (22 lbf.ft).
50. Fit the rear bumper valance. Refer to Workshop Manual, part number LRL0350 (6th edition), Exterior Fittings, Bumper Valance - rear, repair number 76.22.74.
51. Connect the alternator multiplug.
52. Connect the battery earth lead.

PARTS INFORMATION:

AFE490500 - RH rear longitudinal

ANR5335 - Sub-frame fixing bolts (as required) - 4 off

ALR7720 - Bracket assembly - rear sub-frame - mounting rear - RH

WARRANTY CLAIMS:

Procedure 1

Use Complaint Code: 5A0K

Use S.R.O.: 51.25.89/27 - weld rear sub-frame

Time allowance: 0.40 Hrs

Procedure 2

Use Complaint Code: 9K1K

Use S.R.O.: 64.35.89/33 - Check chassis longitudinal for cracks

Time allowance: 0.40 Hrs

Procedure 3

Use Complaint Code: 9K1E

Use S.R.O.: 77.70.89/26 - replace RH chassis longitudinal

Time allowance: 18.80 Hrs

Attachment 1

1

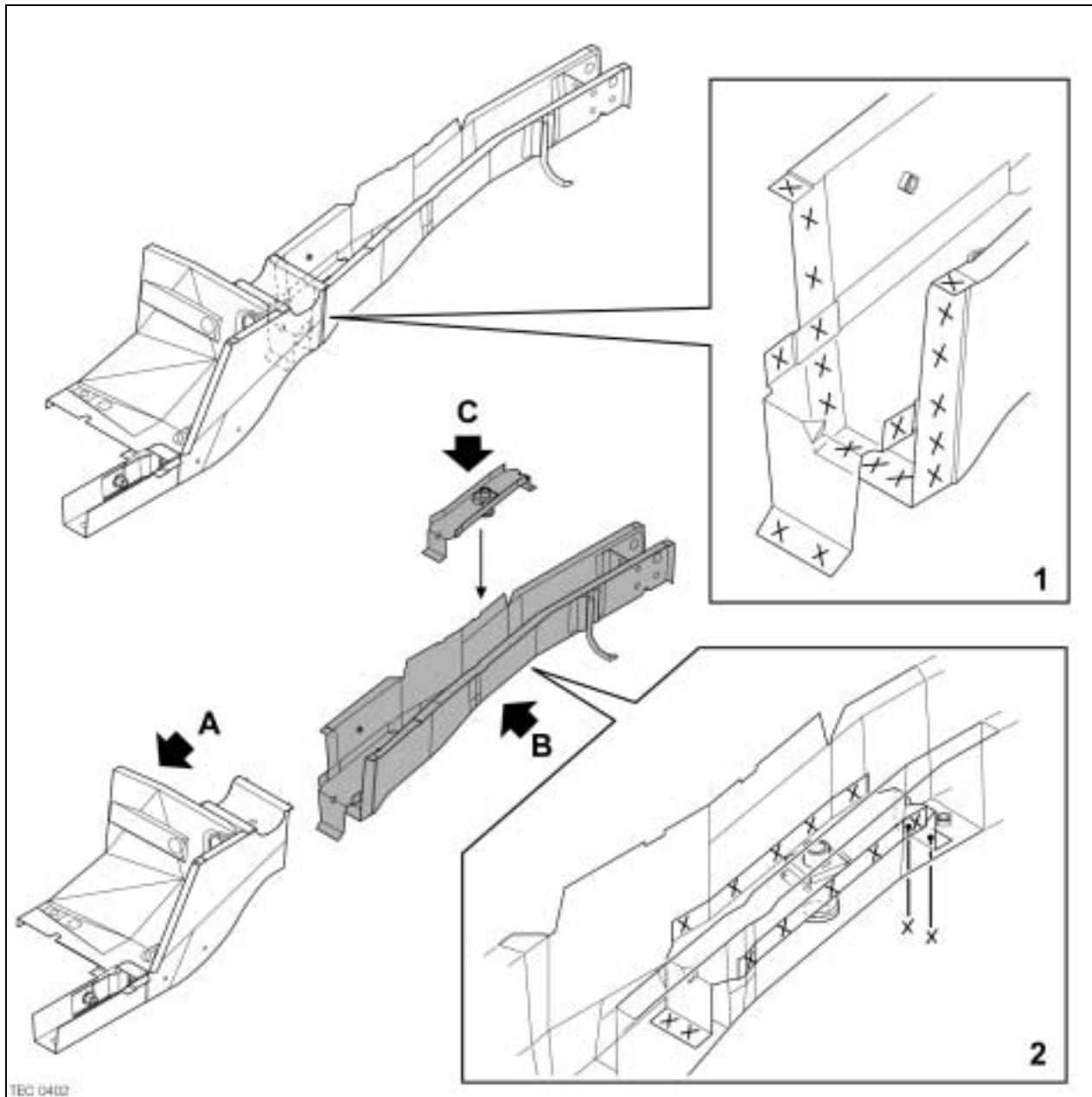


Illustration shows:

- Supplied condition of the RH rear longitudinal
- Position of spot welds to be removed
- Final panel condition
- Position of the rear mounting bracket assembly (supplied separately)

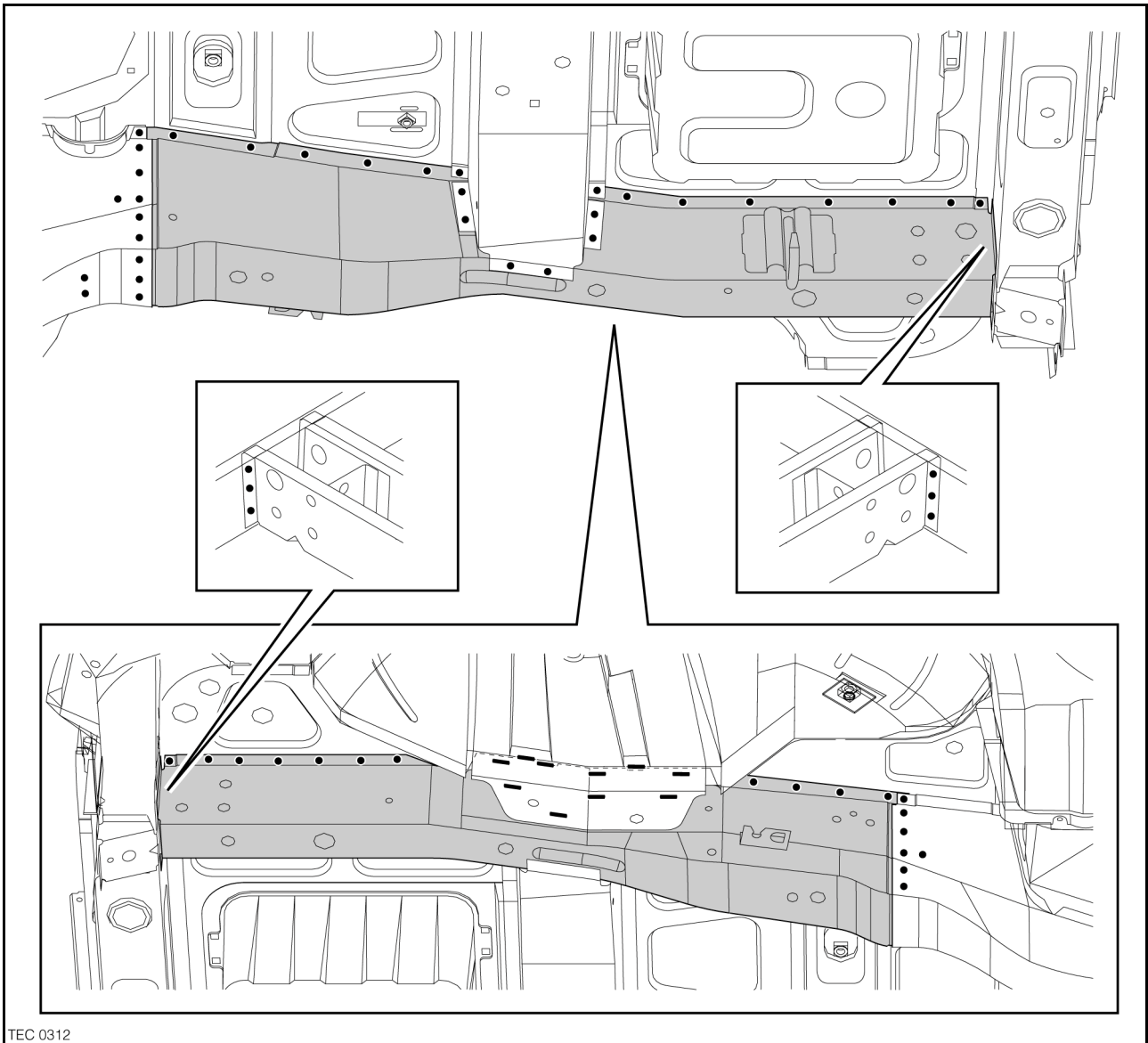


Illustration shows the position of welds securing the RH rear longitudinal