



# RECALL ACTION

Recall Action Number: D156

<b>Subject</b>  <b>Fuel odor after filling fuel tank</b>	Publication No.	D156
	Model	Discovery Series I (LJ) - all petrol derivatives
	Model Year	1993 to 1998
	VIN Range	LJ053216 to LJ199999 LJ700000 to LJ799999 LJ500000 to LJ558898 LJ400000 to LJ400550 LJ560661 to LJ567426
	Model	Range Rover Classic (LH) - all petrol derivatives
	Model Year	1993 to 1996
	VIN Range	LH637653 to LH664120
	Date of Issue:	13 May 2005

<b>To:</b>	<b>All Land Rover NSCs and Importers (excluding Australia, Canada, Japan and USA)</b>
<b>For the Attention of:</b>	<b>The Managing Director</b>
<b>Copies to:</b>	<b>The Service/Aftersales Director/Manager The Parts Director/Manager</b>
<b>Related Information</b>	<b>This Recall Action supersedes Service Action AD173. Any claims submitted for AD173 after 1<sup>st</sup> May 2005 will be rejected. Version 2 of this Recall Action is issued to highlight changes to the workshop procedure for fitment of the fuel tank. The warranty information has also been updated to include additional repair times required.</b>

## RE: Fuel odor after filling fuel tank

Dear Colleagues

A concern has been identified with the fuel tanks on a number of petrol derivative vehicles within the above VIN range. Under certain circumstances the fuel tank weld joint for the vent rings could crack, this could possibly be related to fuel quality or environmental conditions.

### Action to be taken

Land Rover has taken the decision to recall all vehicles in the above VIN range to have a replacement fuel tank installed. The original primary fuel pump must be reused and sealed using a new sealing ring.

From Tuesday 3<sup>rd</sup> May 2005, Land Rover will be writing to all owners of affected vehicles in the UK requesting them to contact their nearest dealer as soon as possible to arrange for the necessary rework action to be undertaken at the earliest opportunity. You are requested to make similar arrangements to contact the affected customers in your market following procedures that are appropriate to your particular market and as required by local legislation. You are requested to base your letter to affected customers closely on the UK customer letter, but adapted to the requirements of your market. You are requested not release your customer letters on before Tuesday 3<sup>rd</sup> May 2005. A copy of the UK Customer Letter is attached as Appendix 2.

**Please ensure vehicles that already have a new fuel tank installed, as a result of the inspection completed within Service Action AD173, are not subject to customer mailing for this recall.**

**At the time of confirming a booking for vehicle repair, please ensure that all outstanding Field Service Actions are identified to ensure the correct parts are available and adequate workshop time is allocated for repairs to be completed at one visit.**

## Parts Information

The parts from Table 1 should be ordered through Land Rover Parts following the normal procedure.

**Table 1**

Part Number	Description	Quantity
WFE 500740K	Fuel tank	1
NTC 5859	Sealing ring	1

## Warranty Information

**Table 2 - Europe/Rest of World**

Campaign code D156

Description	SRO	Time	Parts	Qty
Fuel tank renew	19.55.01	1.5	WFE 500740K NTC 5859	1 1
Fuel tank renew – where towing equipment fitted	19.55.06	1.8	WFE 500740K NTC 5859	1 1
Fuel tank renew – where access is impeded by rear step	19.55.13	1.7	WFE 500740K NTC 5859	1 1
Drive in/drive out	02.02.02	0.2	N/A	N/A

Warranty claims should be submitted quoting the campaign code in place of the normal warranty complaint code from Table 2. The appropriate parts and labor operations should also be entered for the repair completed.

Drive in/drive out can only be claimed if the vehicle is brought back into the workshop for this action alone to be undertaken.

Some changes to the DDW claim submission system are to be introduced in the near future that will change the entry of some Service Action and Recall Action data. Upon introduction of the revised DDW claim submission system, the following warranty information will apply.

## Direct Dealer Warranty (DDW)

Warranty claims should be submitted quoting the program code A156 together with the relevant option code from Table 3. This will result in payment of the stated time and, where applicable, parts/miscellaneous expense codes. As option codes are used, there is no requirement for you to enter parts or labor, these are repeated here for information only.

**Table 3**

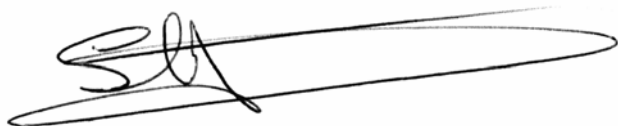
Program code	Option	Description	SRO	Time	Parts	Qty
A156	B	Fuel tank renew	19.55.01	1.5	WFE 500740K NTC 5859	1 1
A156	C	Fuel tank renew Drive in/drive out	19.55.01 02.02.02	1.5 0.2	WFE 500740K NTC 5859	1 1
A156	D	Fuel tank renew – where towing equipment fitted	19.55.06	1.8	WFE 500740K NTC 5859	1 1
A156	E	Fuel tank renew – where towing equipment fitted Drive in/drive out	19.55.06 02.02.02	1.8 0.2	WFE 500740K NTC 5859	1 1
A156	F	Fuel tank renew – where access is impeded by a rear step	19.55.13	1.7	WFE 500740K NTC 5859	1 1
A156	G	Fuel tank renew – where access is impeded by a rear step Drive in/drive out	19.55.13 02.02.02	1.7 0.2	WFE 500740K NTC 5859	1 1

Drive in/drive out can only be claimed if the vehicle is brought back into the workshop for this action alone to be undertaken.

Displaced parts should be returned to Land Rover following the normal warranty returns procedure.

Warranty claims should be submitted in accordance with the current Land Rover Warranty Policy and Procedures Manual and its amendments, unless stated otherwise in this Recall Action.

Yours faithfully



S C Clift  
Director - Service Operations

**Attached: Appendix 1 – Workshop Procedure**  
**Appendix 2 – Example Customer Letter**

## Appendix 1 - Workshop Procedure

**Note:** During validation of the fuel tank remove and install processes on Discovery and Classic Range Rover models the original process has been clarified using additional text and illustrations. Some steps have been removed e.g. use of Test-Book, others, including the fuel drain, were optimized for more effective fuel recovery and refill using a standard bowser with 12mm bore extraction pipe.

Warranty times have been re-calculated using the latest tools and equipment on aged and high mileage vehicles. In this re-calculation, additional labor allowances have been made for removal of some fixings that may be subject to corrosion. Overall, this has led to a reduction in the repair procedure time.

Please note that the relevant Workshop Manual Section, that these updated procedures relate to, will be updated at the next available opportunity.

### Tank - fuel - renew - with rear step fitted Discovery (LJ)

#### Remove Step

- 1 Support the step assembly.
- 2 Remove bolt securing step to chassis, collect the nut and washer.
- 3 Remove nut securing damper to the step assembly and collect washer.
- 4 Release damper.
- 5 With assistance, remove the step assembly.
- 6 Remove fuel tank.

### Tank - drain fuel Discovery (LJ)

#### Remove

- 1 Disconnect battery earth lead.
- 2 Open fuel filler flap and remove cap.
- 3 If fuel tank is between three quarters full and full, using a fuel recovery appliance, drain excess fuel from fuel filler neck until a level below height of fuel pump is obtained.
- 4 Open tailgate.
- 5 Remove six screws securing loadspace carpet retainer to floor and remove retainer. Fig. 1.

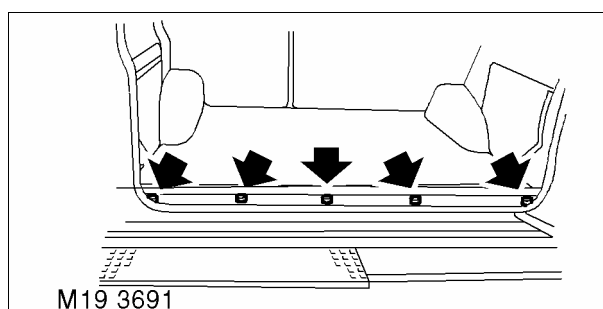


Fig. 1

- 6 Release and fold carpet back for access.
- 7 Fold back sound insulation to reveal fuel pump access panel.
- 8 Remove fuel pump access panel and discard gasket. Fig. 2.

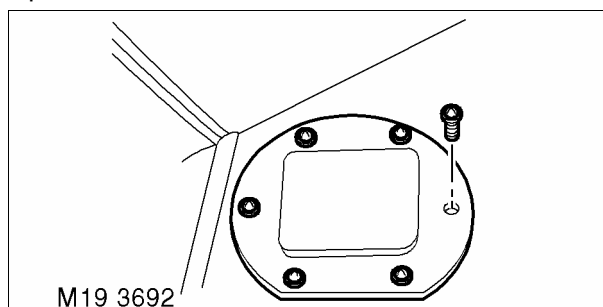


Fig. 2

- 9 Disconnect connector from fuel pump tank unit.  
Fig. 3.

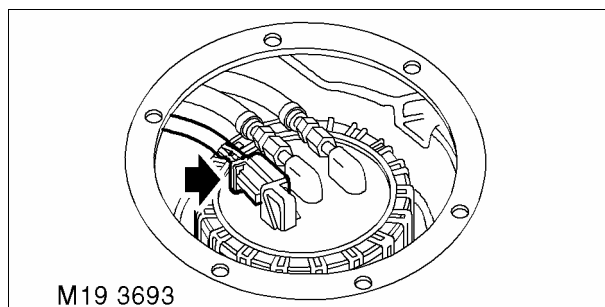


Fig. 3

- 10 Position absorbent cloth around fuel pump unions to protect against fuel spray.

- 11 **WARNING:** Fuel pressure of up to 2.5 bar will be present in the system, even if the engine has not been run for some time.

**WARNING:** The spilling of fuel is unavoidable during this operation. Ensure that all necessary precautions are taken to prevent fire and explosion.

**CAUTION:** To prevent damage to components, use two spanners to loosening or tightening unions.

**CAUTION:** ALWAYS INSTALL PLUGS TO OPEN CONNECTIONS TO PREVENT CONTAMINATION.

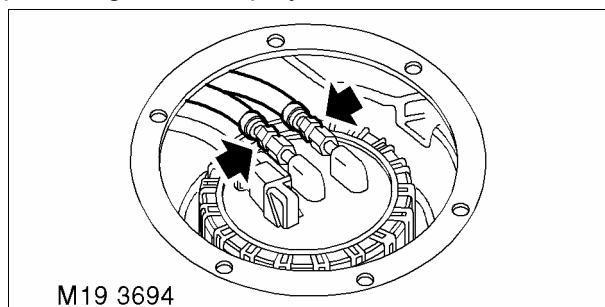


Fig. 4

Disconnect fuel line unions from fuel pump. See Fig. 4.

- 12 Remove absorbent cloth.
- 13 Using **LRT-19-001** remove locking ring securing fuel pump tank unit assembly to fuel tank. Fig. 5.

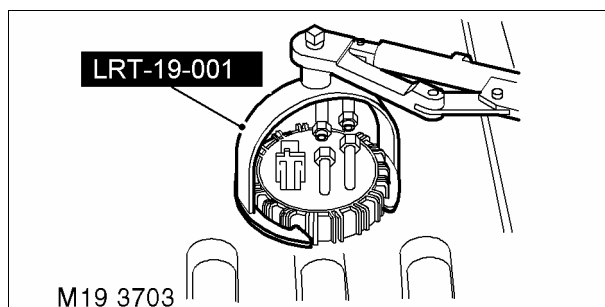


Fig. 5

- 14 Carefully release fuel pump tank unit assembly. Remove and discard seal.
- 15 Using a fuel recovery appliance, drain the fuel from the tank into a sealed container. Follow the manufacturer's instructions for the connection and safe use of the appliance.

## Install

- 1 Clean area surrounding fuel tank access.
- 2 Install new fuel pump tank unit assembly seal to fuel tank.
- 3 Install fuel pump tank unit assembly to fuel tank and use **LRT-19-001** to tighten locking ring to 47Nm (34.7lbf.ft).
- 4 **Note:** Remove plugs from open connections.  
Connect fuel line unions to fuel pump.
- 5 Re-connect connector to fuel pump tank unit.
- 6 **Note:** Install new gasket.  
Install fuel pump access panel and secure with screws.
- 7 Reposition sound insulation.
- 8 Reposition carpet.
- 9 Install loadspace carpet retainer and secure with screws.
- 10 Close tailgate.
- 11 Refill fuel tank with extracted fuel.

- 12 Install fuel filler cap and check for correct seating. Close fuel filler flap.

## Tank – renew Discovery (LJ)

### Remove

- 1 Disconnect battery earth lead.
- 2 Drain fuel tank.
- 3 Raise vehicle on lift.
- 4 Remove and discard tie strap securing evaporative control pipe to fuel tank filler hose.
- 5 **Note:** To disconnect 'speedfit' connector, insert forked end of LRT-19-002 into slots of connector, see illustration. Press down on collet and simultaneously pull pipe from connector.

Disconnect evaporative control pipe at green end of speedfit connector. Fig. 1.

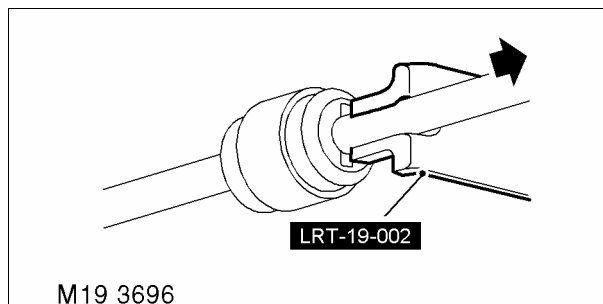


Fig. 1

- 6 Remove fuel tank vent hose retaining bracket securing nut and bolt. Fig. 2.

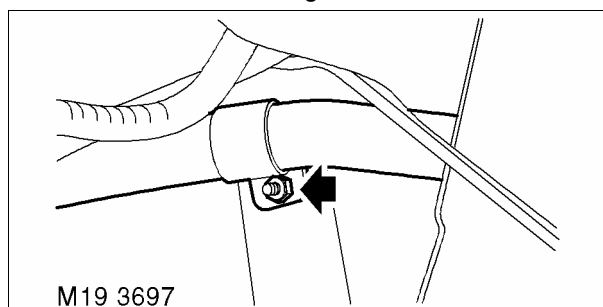


Fig. 2

- 7 Disconnect fuel tank vent hose. Fig. 3.

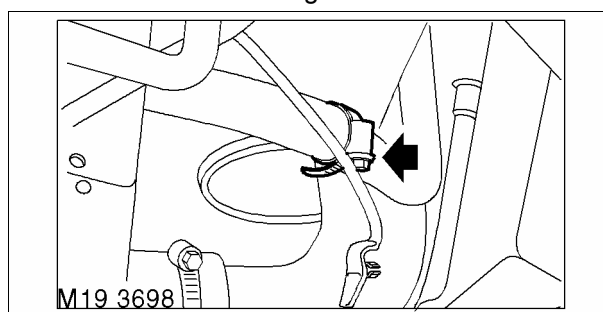


Fig. 3

- 8 Disconnect fuel tank filler hose from fuel tank filler neck. Fig. 4.

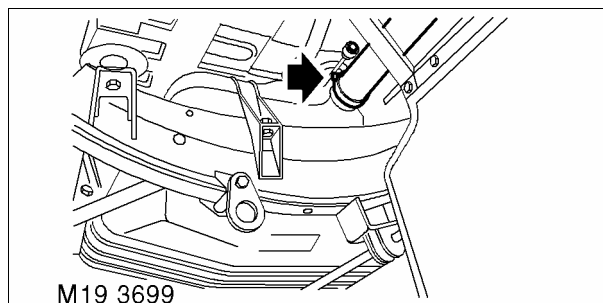


Fig. 4

- 9 Remove nut and bolt securing right-hand side fuel tank strap. Fig. 5.

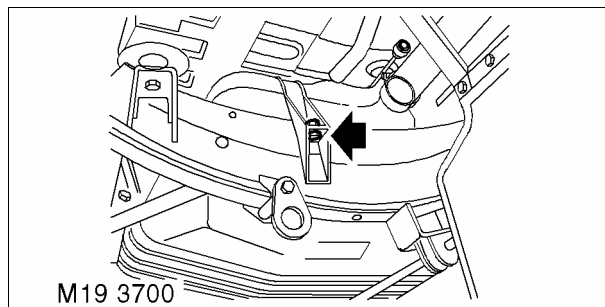


Fig. 5

- 10 Remove rear towing eyes. Fig. 6.

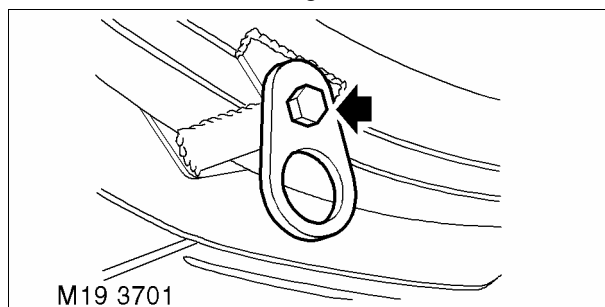


Fig. 6

- 11 Remove rear anti-roll bar bracket securing nuts and bolts. Allow bar to swing down clear of fuel tank. Fig. 7.

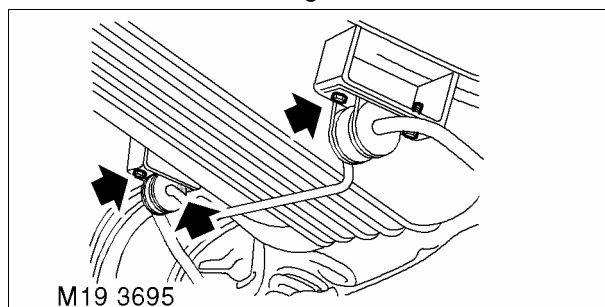


Fig. 7

- 12 Remove back two bolts and nut plates securing fuel tank cradle. Fig. 8.

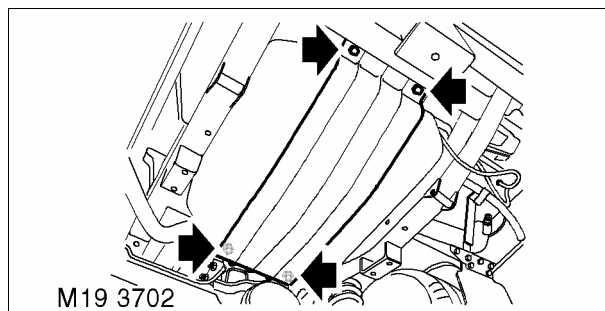


Fig. 8

- 13 **Note:** With assistance, support fuel tank.  
Remove front nuts, bolts and washers. Remove the fuel tank cradle.
- 14 With assistance lower and remove fuel tank assembly from vehicle.

## Install

- 1 **Note:** Connect the fuel filler hose while fitting the fuel tank.  
With assistance install the fuel tank.
- 2 With assistance, position fuel tank cradle to vehicle, install bolts and tighten to 45Nm (33 lbf.ft).
- 3 Install back two bolts and nut plates securing fuel tank cradle and tighten to 45Nm (33 lbf.ft).
- 4 Position rear anti-roll bar brackets and install securing nuts and bolts.
- 5 Install rear towing eyes.
- 6 Install nut and bolt securing right-hand side fuel tank strap.
- 7 Connect fuel tank filler hose to fuel tank filler neck.
- 8 **CAUTION: ENSURE FUEL VENT HOSES/PIPES ARE ROUTED CORRECTLY AND ARE NOT RESTRICTED.**  
Connect fuel tank vent hose.
- 9 Install fuel tank vent hose retaining bracket securing nut and bolt.

**10 CAUTION: ENSURE FUEL VENT HOSES/PIPES ARE ROUTED CORRECTLY AND ARE NOT RESTRICTED.**

Connect evaporative control pipe at green end of speedfit connector.

- 11 Install tie strap securing evaporative control pipe to fuel tank filler hose.
- 12 Lower vehicle.
- 13 Refill fuel tank.
- 14 Connect the battery earth lead.

**Install step**

- 1 With assistance, position the step assembly to chassis.
- 2 Support the step assembly.
- 3 Install nut, bolt, and washer securing step to chassis and tighten to 40Nm (30 lbf.ft).
- 4 Connect damper.
- 5 Install nut and washer securing damper to the step assembly.
- 6 Install fuel tank



## Tank - fuel - renew - with rear step fitted Range Rover Classic (LH)

### Remove Step

- 1 Support the step assembly.
- 2 Remove bolt securing step to chassis, collect the nut and washer.
- 3 Remove nut securing damper to the step assembly and collect washer.
- 4 Remove damper.
- 5 With assistance, remove the step assembly.
- 6 Remove fuel tank.

## Tank - drain fuel Range Rover Classic (LH)

### Remove

- 1 Disconnect battery earth lead.
- 2 Open fuel filler flap and remove cap.
- 3 If fuel tank is between three quarters full and full, using a fuel recovery appliance, drain excess fuel from fuel filler neck until a level below the height of the fuel pump is obtained.
- 4 Open tailgate.
- 5 Remove lower tailgate release handle finisher.  
Fig. 1.

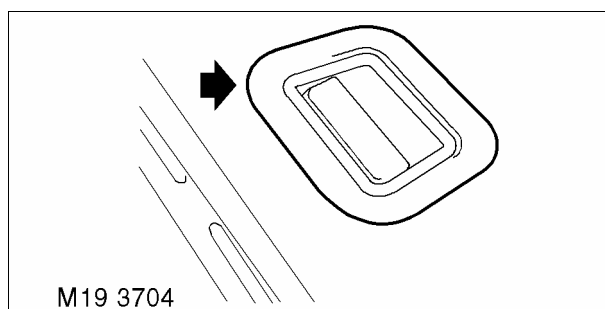


Fig. 1

- 6 Remove four fasteners securing loadspace carpet to lower tailgate. Fig. 2.

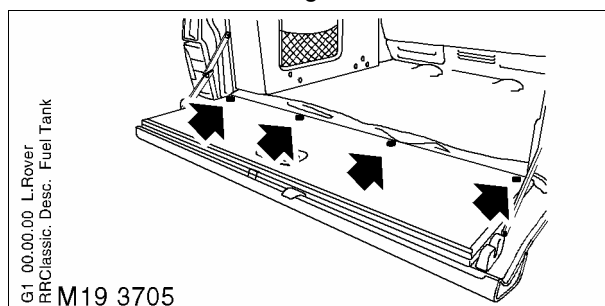


Fig. 2

- 7 Release and fold loadspace carpet back for access.
- 8 Remove sound insulation to reveal fuel pump access panel.
- 9 Remove fuel pump access panel and discard gasket. Fig. 3.

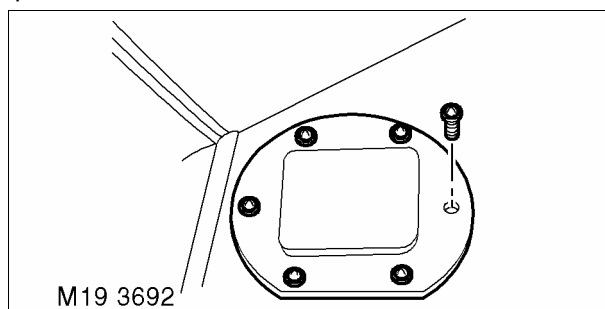


Fig. 3

- 10 Disconnect connector from fuel pump tank unit. Fig. 4.

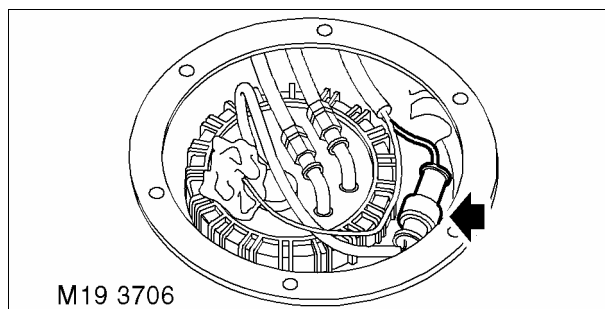


Fig. 4

- 11 Remove sealant and disconnect earth lead from fuel pump tank unit. Fig. 5

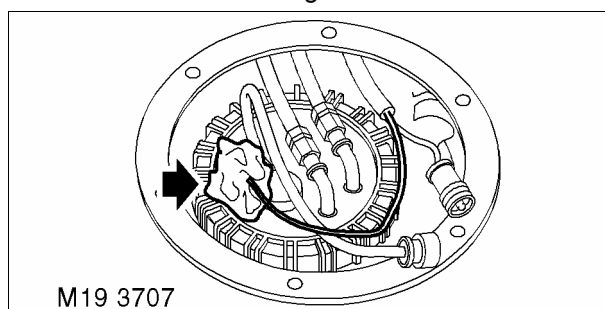


Fig. 5

- 12 Position absorbent cloth around fuel pump unions to protect against fuel spray.

- 13 **WARNING: FUEL PRESSURE OF UP TO 2.5 BAR WILL BE PRESENT IN THE SYSTEM, EVEN IF THE ENGINE HAS NOT BEEN RUN FOR SOME TIME.**

**WARNING: THE SPILLING OF FUEL IS UNAVOIDABLE DURING THIS OPERATION. ENSURE THAT ALL NECESSARY PRECAUTIONS ARE TAKEN TO PREVENT FIRE AND EXPLOSION.**

**CAUTION: TO PREVENT DAMAGE TO COMPONENTS, USE TWO SPANNERS TO LOOSENING OR TIGHTENING UNIONS.**

**CAUTION: ALWAYS INSTALL PLUGS TO OPEN CONNECTIONS TO PREVENT CONTAMINATION.**

Disconnect fuel line unions from fuel pump. See Fig. 6.

- 14 Remove absorbent cloth.
- 15 Using **LRT-19-001** remove locking ring securing fuel pump tank unit assembly to fuel tank. Fig. 7.

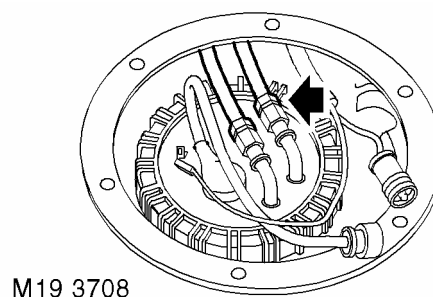


Fig. 6

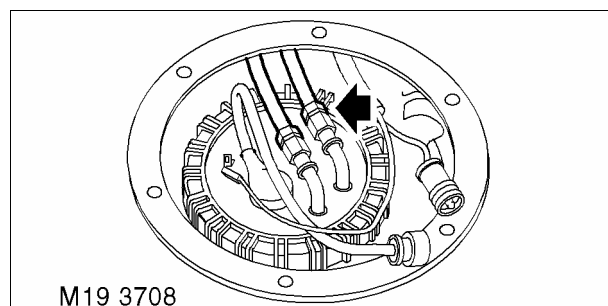


Fig. 7

- 16 Carefully release fuel pump tank unit assembly. Remove and discard seal.
- 17 Using a fuel recovery appliance, drain the fuel from the tank into a sealed container. Follow the manufacturer's instructions for the connection and safe use of the appliance.

## Install

- 1 Clean area surrounding fuel tank access.
- 2 Install new fuel pump tank unit assembly seal to fuel tank.
- 3 Install fuel pump tank unit assembly to fuel tank and use **LRT-19-001** to tighten locking ring to 47Nm (34.7lbf.ft).
- 4 **Note: Remove plugs from open connections.**  
Connect fuel line unions to fuel pump.
- 5 Connect earth lead to fuel pump tank unit and apply sealant.
- 6 Re-connect connector to fuel pump tank unit.
- 7 **Note: Use a new gasket.**  
Install fuel pump access panel and secure with screws.
- 8 Install sound insulation.
- 9 Reposition loadspace carpet.
- 10 Install four fasteners securing loadspace carpet to lower tailgate.
- 11 Install lower tailgate release handle finisher.
- 12 Close tailgate.
- 13 Refill fuel tank with extracted fuel.
- 14 Install fuel filler cap and check for correct seating. Close fuel filler flap.

## Tank – renew Range Rover Classic (LH)

### Remove

- 1 Disconnect battery earth lead.
- 2 Drain fuel tank.
- 3 Raise vehicle on lift.
- 4 Remove and discard tie strap securing evaporative control pipe to fuel tank filler hose.
- 5 **Note: To disconnect 'speedfit' connector, insert forked end of LRT-19-002 into slots of connector, see illustration. Press down on collet and simultaneously pull pipe from connector.**

Disconnect evaporative control pipe at green end of speedfit connector. See Fig. 1.

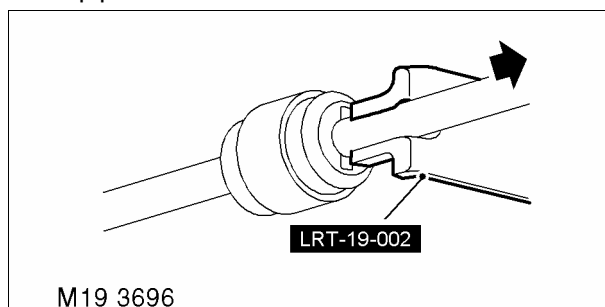


Fig. 1

- 6 Disconnect fuel tank vent hose. See Fig. 2.

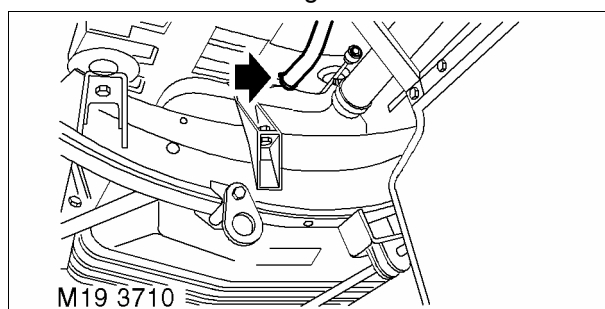


Fig. 2

- 7 Disconnect fuel tank filler hose from fuel tank filler neck. See Fig. 3.

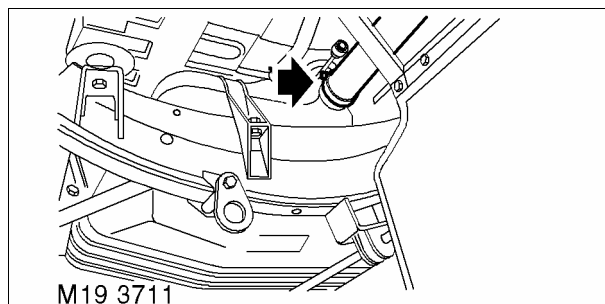


Fig. 3

- 8 Remove nut and bolt securing right-hand side fuel tank strap. See Fig. 4.

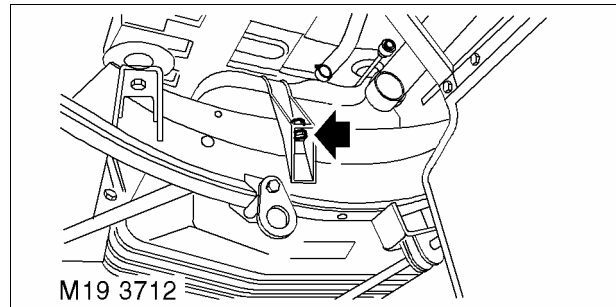


Fig. 4

- 9 Remove rear towing eyes. See Fig. 5.

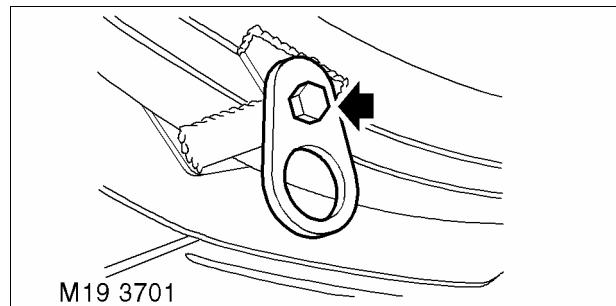


Fig. 5

- 10 Remove rear anti-roll bar bracket securing nuts and bolts. Allow bar to swing down clear of fuel tank. See Fig. 6.

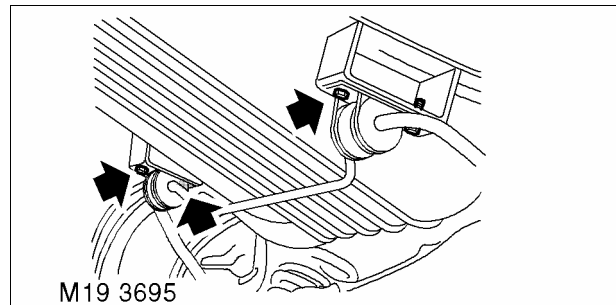


Fig. 6

- 11 Remove back two bolts and nut plates securing fuel tank cradle. See Fig. 7.

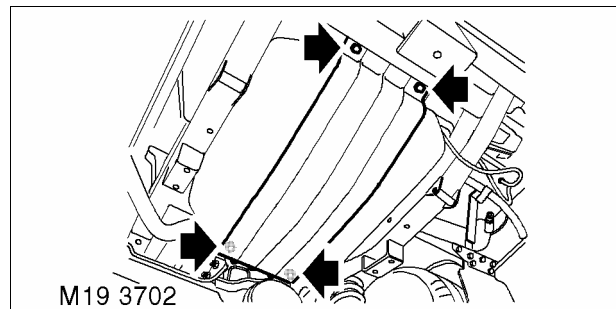


Fig. 7

- 12 **Note:** With assistance, support fuel tank.  
Remove front nuts, bolts, and washers. Remove the fuel tank cradle.
- 13 With assistance, lower and remove fuel tank assembly from vehicle.

### Install

- 1 With assistance, install the fuel tank.
- 2 With assistance, position fuel tank cradle to vehicle, install bolts and tighten to 45Nm (33 lbf.ft).
- 3 Install back two bolts and nut plates securing fuel tank cradle and tighten to 45Nm (33 lbf.ft).
- 4 Position rear anti-roll bar brackets and install securing nuts and bolts.
- 5 Install rear towing eyes.
- 6 Install nut and bolt securing right-hand side fuel tank strap.
- 7 Connect fuel tank filler hose to fuel tank filler neck.
- 8 **CAUTION: ENSURE FUEL VENT HOSES/PIPES ARE ROUTED CORRECTLY AND ARE NOT RESTRICTED.**  
Connect fuel tank vent hose.
- 9 **CAUTION: ENSURE FUEL VENT HOSES/PIPES ARE ROUTED CORRECTLY AND ARE NOT RESTRICTED.**  
Connect evaporative control pipe at green end of speedfit connector.

- 10 Install tie strap securing evaporative control pipe to fuel tank filler hose.
- 11 Lower vehicle.
- 12 Refill fuel tank.
- 13 Connect the battery earth lead.

**Install Step**

- 1 With assistance, position the step assembly to chassis.
- 2 Support the step assembly.
- 3 Install nut, bolt, and washer securing step to chassis and tighten to 40Nm (30 lbf.ft).
- 4 Install damper.
- 5 Install nut and washer securing damper to the step assembly.
- 6 Install fuel tank.

**Appendix 2 – Example UK Customer Letter**

Mr. John Sample  
123 Main Street  
Anywhere  
Any Town  
Post Code

Vehicle Identification Number (VIN) ??????  
Registration Number ???????

Date: Month/Year

**IMPORTANT****DISCOVERY SERIES 1 1993MY TO 1998MY and RANGE ROVER CLASSIC  
1993MY TO 1996MY - SAFETY RELATED RECALL.****Subject: Petrol Fuel Tanks - A156**

Dear Sir/Madam

Land Rover is undertaking a no-charge Safety Recall (Program Number A156) to owners of 1993 to 1998 Model Year Discovery Series 1 and 1993 to 1996 Model Year Range Rover Classic vehicles.

**Reason for this program**

Investigations have determined that there is a possibility of cracks appearing in the fuel tank in certain Discovery Series 1 and Range Rover Classic models. You may experience a fuel odor from the vehicle and/or signs of a fuel leak underneath the vehicle when filling with fuel.

**What Land Rover and your dealer will do**

Land Rover is carrying out a voluntary recall of the vehicles mentioned above. Land Rover Dealerships will replace the fuel tank with one of an improved design on vehicles within the affected VIN range.

**How long will it take?**

The work will be carried out as quickly and efficiently as possible in order to minimize inconvenience to customers and is expected to take approximately two hours, although your dealer may need your vehicle for a longer time due to service scheduling requirements.

**What we are asking you to do**

Contact your preferred dealer without delay. Provide the dealer with your Vehicle Identification Number (VIN) (located at the beginning of this letter) and vehicle registration number. Ask for a service date for Safety Recall Program A156. If you do not have a servicing dealer, please access [www.landrover.com](http://www.landrover.com) for dealer addresses, maps, and driving instructions.

When you bring your vehicle in, show the dealer this letter. If you misplace this letter, your dealer will still do the work, free of charge.

If you no longer own the vehicle we would be grateful if you will complete the 'Change of Ownership' slip attached to this letter, returning the slip to Land Rover **immediately** in the enclosed 'Freepost' envelope. This will enable us to make contact with the new owner.

**If you have concerns**

If you experience any problems getting your vehicle repaired promptly and without charge, please contact your dealership's Service Manager for assistance.

If you have any queries or concerns that your local dealer cannot address, please contact Land Rover Customer Care on 08705 000500, and one of our representatives will be happy to assist you. This recall action is being undertaken in accordance with the legislative or industry requirements concerning vehicle defects. The authorities will closely monitor the response rate of this recall.



We ask that you please treat this matter with the urgency it requires. Land Rover regrets any inconvenience this recall may cause and thanks you for your co-operation.

Yours sincerely

A handwritten signature in black ink, appearing to read "M Mulholland", followed by a period.

M Mulholland  
Customer Care Manager  
Land Rover UK



**Subject: Petrol Fuel Tanks - A156**

## CHANGE OF ADDRESS OR OWNERSHIP

Registration Number  
(Where Known)

Please tick the appropriate box:

I no longer own/operate this vehicle. The vehicle has been:

- Stolen
- Scrapped
- Sold/transferred to a new owner
- Part exchanged at a Land Rover dealer
- Part exchanged at a non-Land Rover Dealer
- Declared an insurance write-off
- Permanently exported to another country
- Returned to the lease company
- Sold via Auction

(1)	
(2)	
(3)	
(4)	
(5)	
(6)	
(7)	
(8)	
(9)	
(10)	

The address you have used is incorrect.

If you have ticked any boxes from (3) to (10), please complete the following latest known keeper information:

[illegible]

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**THANK YOU FOR YOUR CO-OPERATION**

BRI/eng

Please return this form in the pre-paid envelope enclosed