RECALL ACTION

Recall Action Number: P014

Subject:

Electric Booster Heater (PTC Heater) Operation

Publication No.:	412-P014
Model:	L359 Freelander 2 Diesels
Model Year:	2007 - 2009
VIN Range:	LF000100 – LF111695
Date of Issue:	10 December 2008

То:	All UK Dealer/Authorized Repairers	
For the Attention of:	The Managing Director	
Copies To:	The Service/Aftersales Director/Manager The Parts Director/Manager	
Related Information:	This Recall Action supersedes Recall Action P011, which is being closed with immediate effect. Please ensure that all claims are submitted for	

P011 payment prior to 31 December 2008.

RE: Electric Booster Heater (PTC Heater) Operation

Dear Colleagues,

Condensation from the air conditioning evaporator mounted in the HeVAC unit can come into contact with the control circuitry for the additional electric booster heater; a short circuit may result. This normally results in draining of the battery which eventually will go flat. This may lead to a non start situation. Additionally the short circuit may lead to a distinct smell from hot and/or melted components which in extreme circumstances may develop in to a fire in the interior of the vehicle. All of these symptoms can occur when the vehicle is in use or parked and unattended.

This issue is specific to 2007 to 2009MY Freelander 2 Diesel vehicles fitted with the electric booster heater.

Action to be taken

Land Rover has taken the decision to recall affected vehicles to replace the electric booster heater. Some vehicles may have had the fuse disconnected which relates to an earlier Recall P011 – the fuse for these vehicles will need to be reconnected.

This Recall Action affects **ALL** vehicles within the VIN range fitted with PTC heaters regardless if the prior interim recall (P011) to disconnect the fuse has been carried out.

The workshop procedure is attached as Appendix 1.

Land Rover will be writing to customers with vehicles affected by this Recall requesting them to contact their preferred Authorized Dealer as soon as possible to arrange for the rework action to be carried out at the earliest opportunity. A copy of the customer letter is attached as Appendix 2.

As this is a safety concern no vehicle may be handed over for retail sale without first having the rework action as detailed in this Recall Action successfully carried out.

Please check DDW to ensure that the vehicle is affected by this Recall Action prior to undertaking any rework action. DDW will be updated to reflect only those vehicles affected. Should you require a listing of the affected vehicles, please contact the Land Rover Field Actions team by e-mail at <u>ilrcamp@jaguarlandrover.com</u>.

At the time of confirming a booking for vehicle repair, please ensure you check DDW and 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.

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For information purposes, a Technical Question and Answer document is attached as Appendix 3.

Parts Information

The parts from Table 1 should be ordered from Land Rover Parts in the normal manner.

Table 1		
Part Number	Description	Qty
LR013409	PTC Heater Kit	1

Warranty Information

Warranty Claims should be submitted quoting the program code P014 together with the relevant option code from Table 2. 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 SRO information; these are repeated here for information only.

Table 2

Program code	Option	Description	SRO	Time	Parts	Qty
P014	В	Renew PTC heater, spacer & Drain tube and re-fit fuse (where applicable)	80.20.89/38	1.0	LR013409	1
P014	С	Renew PTC Heater, spacer & drain tube and re-fit fuse (where applicable) Drive In/out	80.20.89/38 02.02.02	1.0 0.2	LR013409	1

NOTE: The option that contains the drive in/drive out allowance may only be claimed when the vehicle has been brought back into the workshop for this action alone to be undertaken.

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

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K Phelps Director - Service Operations

Attached Appendix 1- Workshop procedure Appendix 2 – Sample Customer Letter Appendix 3 – Technical Q & A



Appendix 1 – Workshop Procedure

Item	Description	
1	Remove the Electric Boost Heater (see the proc Reference (GTR) 412-02).	edure outlined in the Global Technical
2	Remove the two fixings and remove the Module (see Fig. 1).	M866323
		Fig. 1
3	Remove the six fixings and remove the Electric Boost Heater spacer (see Fig. 2).	M866324
		Fig. 2

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4	Disconnect the drain tube from both ends and remove (see Fig. 3).	WB06322
		Fig. 3
5	Install the new drain tube.	
6	Install the new Electric Boost Heater spacer and install and tighten the six fixings (see Fig. 4).	M866324
		Fig. 4

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7 Install Module and install and tighten the two fixings (see Fig. 5). 9 Image: See Fig. 5).	
Fig. 5	
8 Note: Do not connect the battery ground cable until the fuse has been re Install the Electric Boost Heater (see the procedure outlined in the Global Technic (GTR) 412-02).	
9 Remove the under hood fuse box cover (see Fig. 6). 9 Image: Comparison of the second se	
Fig. 6	
10 Remove the side fuse box cover (see Fig. 7). Image: second	
Fig. 7	

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11 Remove the cable tie and remove 100 amp fuse from the positive lead (see Fig. 8). Fig. 8 12 Remove the two nuts and reinstall the 100 amp fuse and tighten the two nuts (situated on the left-hand side behind the removed side fuse box cover) (see Fig. 9). Fig. 9 13 Install the side fuse box cover (see Fig. 10). Fig 9 14 Install the side fuse box cover (see Fig. 11). Fig 10 14 Install the fuse box cover (see Fig. 11). Fig 10 14 Install the fuse box cover (see Fig. 11). Fig. 11 15 Connect the battery ground cable (see Giobal Technical Reference GTR Workshop Manual, section 414-01). Fig. 11			1 014
12 Remove the two nuts and reinstall the 100 amp fuse and tighten the two nuts (situated on the left-hand side behind the removed side fuse box cover) (see Fig. 9). Image: Fig 9 13 Install the side fuse box cover (see Fig. 10). Fig 9 14 Install the fuse box cover (see Fig. 11). Fig 10 14 Install the fuse box cover (see Fig. 11). Fig 10 14 Install the fuse box cover (see Fig. 11). Fig 11 15 Connect the battery ground cable (see Global Technical Reference GTR Workshop Manual,	11	Remove the cable tie and remove 100 amp fuse from the positive lead (see Fig. 8).	501-2816
amp fuse and tighten the two nuts (situated on the left-hand side behind the removed side fuse box cover) (see Fig. 9). Image: side fuse box cover) (see Fig. 9). 13 Install the side fuse box cover (see Fig. 10). Fig 9 13 Install the side fuse box cover (see Fig. 10). Image: side fuse box cover (see Fig. 10). 14 Install the fuse box cover (see Fig. 11). Fig 10 14 Install the fuse box cover (see Fig. 11). Fig. 11 15 Connect the battery ground cable (see Global Technical Reference GTR Workshop Manual,	10		Fig. 8
13 Install the side fuse box cover (see Fig. 10). Install the side fuse box cover (see Fig. 10). Fig 10 14 Install the fuse box cover (see Fig. 11). 14 Install the fuse box cover (see Fig. 11). Fig 10 Fig 10 Image: Sec	12	amp fuse and tighten the two nuts (situated on the left-hand side behind the removed	M06G318
Image: 1 <td< th=""><th></th><th></th><th>Fig 9</th></td<>			Fig 9
14 Install the fuse box cover (see Fig. 11). 14 Install the fuse box cover (see Fig. 11). 15 Connect the battery ground cable (see Global Technical Reference GTR Workshop Manual,	13	Install the side fuse box cover (see Fig. 10).	Me6017
15 Connect the battery ground cable (see Global Technical Reference GTR Workshop Manual,	14	Install the fuse box cover (see Fig. 11).	3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	15	Connect the battery ground cable (see Global 7 section 414-01).	Fechnical Reference GTR Workshop Manual,



Appendix 2 – Sample Customer Letter

Name Address line 1 Address line 2 Address line 3 Post Code

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

Date: Month/Year

IMPORTANT 2007-2009 Model Year Freelander 2 Diesel Vehicles SAFETY RELATED RECALL

Dear Sir/Madam

Subject: Electric Booster Heater (PTC) Heater Operation

<u>Please Note:</u> This recall supersedes the previously communicated recall where the electric booster heater was disconnected.

Reason for this program

Land Rover has identified a concern with the operation of the electric booster heater (also known as the PTC heater) fitted to your vehicle.

Condensation from the air conditioning evaporator mounted in the air conditioning unit can come into contact with the control circuitry for the additional electric booster heater; a short circuit may result. This normally results in draining of the battery which eventually will go flat, leading to a non start situation. Additionally the short circuit may lead to a distinct smell from hot and/or melted components which in extreme circumstances may develop in to a fire in the interior of the vehicle. All of these symptoms can occur when the vehicle is in use or parked and unattended.

Parts are now available to replace the PTC heater. If your vehicle had the PTC heater disconnected under recall reference P011, we would like you to contact your dealer to have PTC heater replaced and reconnected at your earliest convenience. If your PTC heater has not been disconnected previously, please urgently contact your dealer to have the PTC heater replaced.

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 PTC Heater with a revised PTC Heater.

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 1 hour 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 Land Rover 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 Recall Programme P014. If you do not have a servicing dealer, please access www.landrover.com for dealer addresses, maps and driving instructions.

When you bring your vehicle in to the dealer, please show this letter to the dealer. 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 Relationship Centre 0870 850 8447 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 Action.

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

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Steve Cafearo Land Rover Customer Care Manager



Appendix 3 – Technical Q & A

Technical Q&A	LAND= =ROVER
FOR USE ON INQUIRY	
Land Rover Recall P014	
Freelander 2 Diesel Vehicles	
Electric Booster Heater (PTC) Operation	

Main Message: The controller circuit of the Electric Booster Heater (PTC Heater) fitted to certain 2007 and 2008 MY diesel variant Freelander 2 vehicles built between 1st February 2007 and 28 May 2008 (VIN range LF000100 – LF111695) may short circuit.

Condensation from the air conditioning evaporator mounted in the HeVAC unit can come in to contact with the control circuitry for the additional electrical booster heater, a short circuit may result. This normally results in draining of the battery which eventually will go flat. This may lead to a non start situation. Additionally the short circuit may lead to a distinct smell from hot and/or melted components which in extreme circumstances may develop in to a fire in the interior of the vehicle. All of these symptoms can occur when the vehicle is in use or parked and unattended.

A previous recall action (P011) has been in place to temporarily disable the electric booster heater pending the availability of known good quality replacement parts. Replacement parts fitted with an improved controller circuit board are now available, such that all vehicles within the affected VIN range can now be returned to a fully-functioning condition.

Q1 Why is Land Rover recalling certain Freelander models?

It is possible that the electric booster heater may short circuit. This may lead to a non start situation. Additionally the short circuit may lead to a distinct smell from hot and/or melted components which in extreme circumstances may develop in to a fire in the interior of the vehicle.

In some vehicles the power supply to the electric booster heater has been disconnected in order to prevent this failure mode. This recall will cover both the replacement of the affected parts and the restoration to full functionality of the electric booster heater.

Q2 Can you tell me more about what is wrong with the vehicles?

The electric booster heater controller circuit board may have been subjected to water ingress. This in turn can cause corrosion on certain electrical components on the controller circuit board leading to the heater being permanently "live" and one heater element active. The system is fed through a permanent battery feed and so may not be switched off in the event of a short circuit. The continued operation of the controlling electronic components in the controller circuit can cause localized heating with the potential of melting and in exceptional circumstances, a fire.

If the electric booster heater has already been disconnected then there is no risk of a short circuit or any subsequent related concerns.

Α



Q3 How would the customer become aware of potentially having this concern?

A Customers have experienced inability to crank due to excessive quiescent battery drain; in certain cases customers have reported a smell of hot/melted plastic and in isolated cases, signs of smoke and flames.

Q4 Does this recall affect vehicle safety?

A Land Rover has determined that this condition may pose a safety risk to vehicle occupants and related property. In vehicles where the electric booster heater has already been disconnected then there is no safety risk.

Q5 Has Land Rover received many complaints?

A To date, there have been 53 reports of melted components and fire.

Q6 Have there been any accidents or injuries?

A Land Rover is unaware of any accidents or injuries associated with this issue.

Q7 How was the condition discovered?

A This condition was first reported to Land Rover by the receipt of a dealer field report.

Q8 How long has Land Rover known about this problem?

- A Confirmed reports of this condition were first received in May 2008 through dealer field reports.
- Q9 Is the problem connected with the electric booster heater leading you to any concerns regarding the reliability of a system, which is supposed to be designed and engineered for the passengers' safety? What type of measures are you planning to take?
- A The electric booster heater is an aid to the heater system to provide a supplemental source of heat for the heating and ventilation system and speed up the heating of the vehicle cabin through the hot air system. The supplementary heating system is designed as a customer convenience.

Q10 What has Land Rover done in production?

A An improved design of electric booster heater controller circuit board has been fitted to vehicles manufactured from the 29th May 2008.

Q11 What will authorized repairers do to the vehicles?

A Authorized Repairers will replace the electric booster heater assembly and associated housing plus re-fit the 100 Amp fuse on those vehicles where it has previously been disabled, thus re-enabling the electric booster heater function.

Q12 Which vehicles are affected by this recall?

- A Only Diesel Freelander 2 vehicles within the VIN range above, fitted with an electric booster heater, are affected by this recall.
- Q13 Are other Land Rover models affected by these actions?
- A No, Freelander 2 Diesel vehicles are the only Land Rover product that uses this system.

Q14 Are parts available to rework vehicles?

A Yes, replacement parts are now available to rework all affected vehicles

Q15 How much will the recall cost Land Rover?

A Cost was not a factor in deciding to recall these vehicles.

Q16 How do I know if my Freelander 2 Diesel vehicle is affected?

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A All Freelander 2 Diesel vehicles built up to VIN LF111695 and fitted with an electric booster heater are included in this campaign. This campaign is to install the latest design of PTC heater in all affected vehicles including those vehicles already campaigned under P011. Customers will be contacted if they have a vehicle affected by this recall action.

Q17 How long does it take for the car to be inspected and repaired?

A Fitment of the replacement PTC heater, reinstalling the 100 Amp fuse and reenabling of the heater function takes approximately 1 hour. The work will be carried out as quickly and efficiently as possible in order to minimize inconvenience to customers. Naturally, due to dealer schedules, vehicles may be required for longer.

Q18 Can I continue to drive my Freelander 2 Diesel vehicle safely until it has been recalled?

A Vehicles which have not already had the electric booster heater disabled: -Whilst the vehicle remains safe to drive, we would ask customers to be aware of a possible slower cranking rate and any unusual smells in the vehicle. If any of these warnings are thought to be present, customers should seek immediate dealer attention to have the electric booster heater disabled and then replaced. <u>Vehicles which have had the electric booster heater disabled</u>: - The vehicle remains safe to drive, although customers may experience slower warming of the cabin in colder ambient temperatures.

Note: Please ensure that any Press enquiries are referred to the Land Rover Public Affairs office.