To our workshops

Field Action 10-107

Level 3 customer notification

Introduction

Think has decided to implement a Field action on the AC mains inlet assembly.
The reason for this field action is to secure against water ingress into the electrical circuit board inside the BMI.
This applies to 115 vehicles in the range from YYCFT26B2AU005372 to YYCFT26B9AU005630

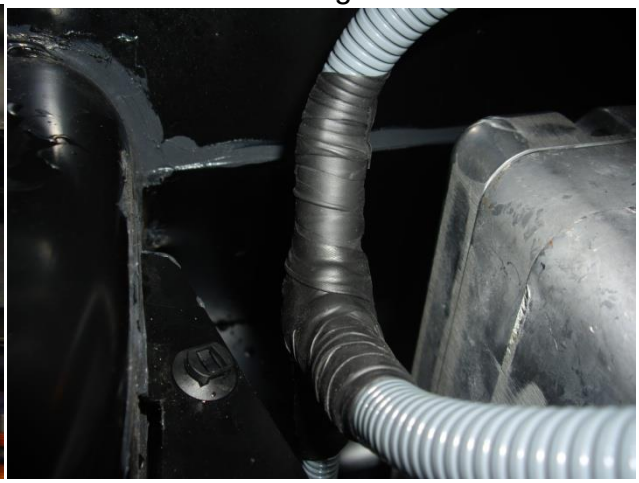
Repair procedure:

1. Seal T-piece between the three cable branches with vulcanizing tape
2. Make a drain slit in the corrugated tube
3. Analyze if it is necessary replace BMI by checking for water traces in connector and performing isolation test
4. Seal the connector with 5ml sealant Araldite 2045

NB ! PCS should be removed from vehicle charge inlet, and 12V battery should be disconnected before commencing rework.

1. Seal T-piece between the three cable branches with vulcanizing tape

Start by taking off the hood and dismount the air duct to access the “T- piece” on the AC main inlet. Tape the T-piece with vulcanizing tape with overlap to create a complete seal around the T-piece. The tape should also cover the heat shrink tubing.



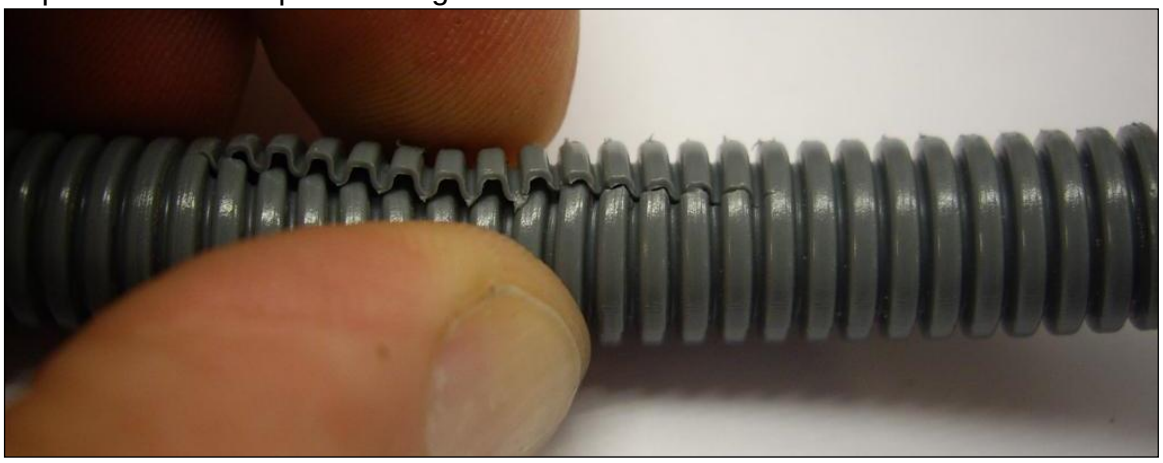
Make the underside of the car accessible using car lift or similar.
WARNING; the operator is to follow all local and regional safety regulations during lifting and working underneath vehicles.

Remove front skid plate.

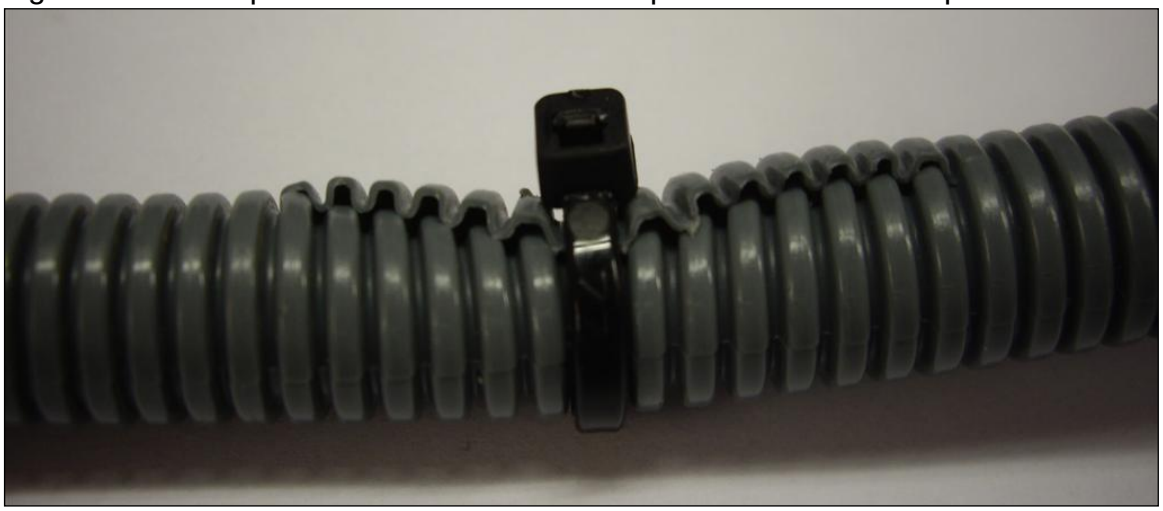
2. Make drain slit in the corrugated tube

Using a short blade (max 2 mm blade protruding) X-acto knife or similar, make a 35 mm long cut in the grey corrugated sleeve

NB ! BEWARE **OF DAMAGES TO WIRES INSIDE THE TUBE WHEN PERFORMING THIS STEP**.
Depress and overlap the corrugated tube.



Tighten a small zip-tie around the tube. The zip-tie should now keep the tube overlapped.



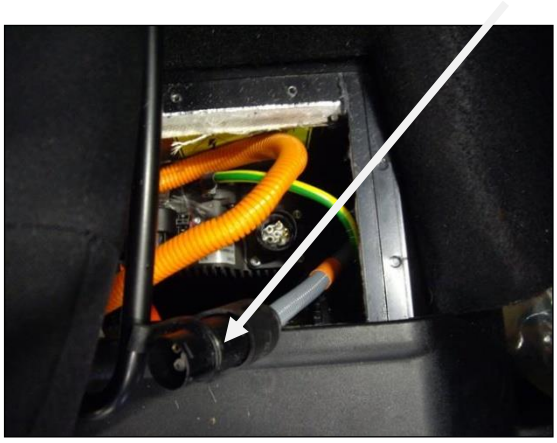
Replace skid plate.

Lower the car back down to the ground.

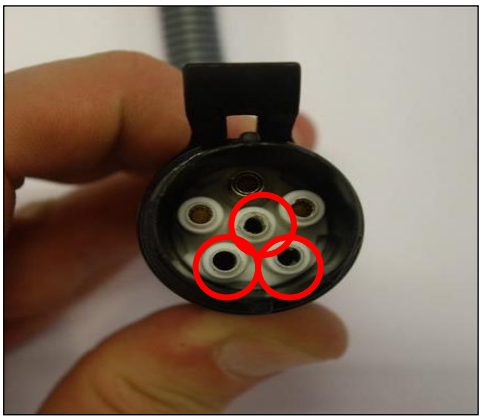
3. Analyze if it is necessary replace BMI by checking for water traces in connector and performing isolation test

Locate and remove the traction battery inspection cover in front of the passenger seat inside the vehicle cabin.


Locate the AC-heater connector, and carefully unplug this.



Using dry compressed air and a nozzle gun, dry out possible humidity in the connector by pressing the nozzle gun into each unpopulated terminal position and releasing air for approx. 20 seconds.

NB!

If there is trace of water in the tube or connector, there has potentially been water ingress in the BMI. The BMI must be replaced. If there is no trace of water, perform an isolation test using Zebra Monitor

Isolation test procedure with Zebra monitor

a. Connect the 12V battery
b. Make sure AC voltage is disconnected.
c. In order to make an isolation test the battery has to be hot. This is indicated by that the disconnection relay is closed. (Key on) The status can be found on the Input/Output page. (I/O Testing)
d. Turn ignition on.
e. Check that contacts s2 and s3 (+ and – 380V) are closed.
f. Perform the isolation test by clicking on the “black I” icon
g. Check in “monitoring” page the “iso res measured” line:
    i. **If** > 75 kOhm **NO PROBLEM IS SUPPOSED PRESENT INSIDE THE BMI**
    ii. **If** < 75 kOhm, the isolation test has to be repeated with the BMI HV connectors disconnected in order to know if the iso error is on the battery side or not. **If the Result is <75 kOhm then the BMI must be replaced.**
h. Check if “diagnostic faults” is clear

4 Seal the connector with 5ml sealant Araldite 2045

Disconnect the 12v battery

1: Use pliers wire cutter for making a small notch in the corrugated tube approx. 20 mm behind the connector

2: Prepare sealant and applying gun as shown below, with mixing tube and needle tip.

3: Insert sealant applicator needle through the hole in the tube, and insert Araldite 2045 while rotating the tip gently in a circular motion, trying to apply sealant in all directions to create a complete seal. Keep applying pressure while removing the needle from the tube, to also fill the hole created in the tube.

4: Total amount to be inserted is one complete cycle of the lever on the sealant applying gun.

5: Repeat steps 3 and 4, 20 mm further away from the connector on the tube.
Reconnect the AC heater and 12 volt battery to the vehicle.
Leave the harness to cure for minimum 8 hours before movement is applied.

Spare Part
THINK will ship out parts in the second half of September

Time
Handling and labour time per vehicle. : 1 hour for rework
Handling and labour time per vehicle. : 3 hours for BMI replacement

Administration

The workshop fills out a regular claim report (AS&S process manual Z8 Warranty Report and application form) referring to this Field Action, and sends this to THINK with the invoice for the elapsed working hours and the completed feedback form.

Time plan

The field action is valid from September 20, 2010

Feedback Form for Field action

Field action no **10-107** performed:

Work performed	**Yes/No**
Rework on ac mains inlet	
Replace BMI	

Reg. no:	VIN:	Workshop:
Km:	Date:	Responsible:

A copy of this sent with the invoice and claim reporting.

Please contact us if you have any questions.

E-post: service@thinkev.com

Regards
THINK