Automobiles and Light Commercial Vehicles

Turin, 9 March 2009

<u>CAMPAIGN 5338</u> - Service Campaign
Models: ALFA ROMEO 159, Brera and Spider (all types) with 3.2 engine and automatic transmission
- brake booster -

On 1281 Alfa Romeo 159 M.Y. (all types) with 3.2 engine and automatic transmission, the chassis numbers of which are included in the range from 7029869 to 7158997 and 781 Alfa Romeo Brera/Spider M.Y. (all types) with 3.2 engine and automatic transmission, the chassis numbers of which are included in the range from 5000021 to 5024089, the brake pedal could be stiff when pressed for the first few times after starting the cold engine at altitudes higher than 1000 metres above sea level.

Action must be take mandatorily during pre-delivery inspection for vehicles still in stock and by contacting the Customers whose vehicles have already been delivered by means of the attached registered mail letter (Attachment 1), according to the attached cycle (Attachment 2), in order to repair all vehicles.

Attachments

Attachment 1

Turin, mm/2009

Registered Mail 5338

DRAFT OF REGISTERED MAIL LETTER

RECALL CAMPAIGN 5338

Model: ALFA ROMEO 159, Brera and Spider (all types) with 3.2 engine and automatic transmission
- brake booster -

Dear Customer,

We are writing to inform you that on a limited number of Alfa Romeo 159 Model Year (all types) with 3.2 engine and automatic transmission Brera Model Year (all types) with 3.2 engine and automatic transmission and Spider Model Year (all types) with 3.2 engine and automatic transmission, including your own, the brake pedal could be stiff when pressed for the first few times after starting the cold engine at altitudes higher than 1000 metres above sea level.

Because this problem could affect the safety of your car, we should be grateful if you would have it checked by taking it back to the dealer you bought it from or, if more convenient, to any other Alfa Romeo dealership and show them this letter.

The inspection and intervention, if required to solve the problem, will be carried out as quickly as possible and free of charge.

For your convenience, you may make the appointment by telephone, directly contacting the Alfa Romeo Dealer most convenient for you.

If you need further clarifications or assistance, please call our freephone number.....

If you have already sold or loaned the vehicle to someone else, we should be grateful if you could provide us with their name and address using the enclosed prepaid card or give us with any information that could help us trace the current owner or user.

We thank you for your kind cooperation and we apologize for the inconvenience. Best regards,

Model: Alfa Romeo 159 / Brera / Spider Chassis No. .....

» Attachment 2

«

ORDER

Recall campaign

5338

COMPONENT:	**BRAKE BOOSTER**			
	Poor assistance when engine is cold			
VERSION:	**Alfa Romeo 159, Brera and Spider - 3.2 V6 left-hand drive and right-hand drive**			
CONCERNED VEHICLES:	All chassis numbers present in SIGI. (159 - Chassis numbers from 7029869 to7158997, Brera/Spider chassis numbers from 5000021 to 5024089)			
	Vehicles assigned to you: consult your PC for the chassis numbers involved in the campaign			
Technical cause:	Insufficient brake booster assistance caused by low vacuum at low engine speed at high altitude immediately after cranking.			
Release n.:	**0**			
MATERIAL:	Description:	Part N.:	Qty:	
	See attached list			
SPECIAL TOOLS:	-			
ePlus order uploading method:	-			
REMUNERATION:	Cost:	Order:	Intervention:	Time:
Manpower and material:	**A01**	**5338**	**A (left-hand drive)**	**1.20**
Manpower and material:	**A01**	**5338**	**B (right-hand drive)**	**1.80**
Miscellaneous (mail, etc.)	**A10**	**-**	**-**	**-**
PRODUCTION MEASURES:	Adoption of electric vacuum pump to integrate the engine vacuum system.			
NETWORK INTERVENTION IDENTIFICATION:	Inspection cycle. Fit the electric vacuum pipe, tubes and electric harness.			
	Campaign identification mark Presence of electric vacuum pump positioned near battery.			
	Intervene during pre-delivery inspections on vehicles still in stock and by contacting customers for the vehicles by means of the attached registered mail letter which have already been delivered in order to upgrade all vehicles.			

OPERATING CYCLE

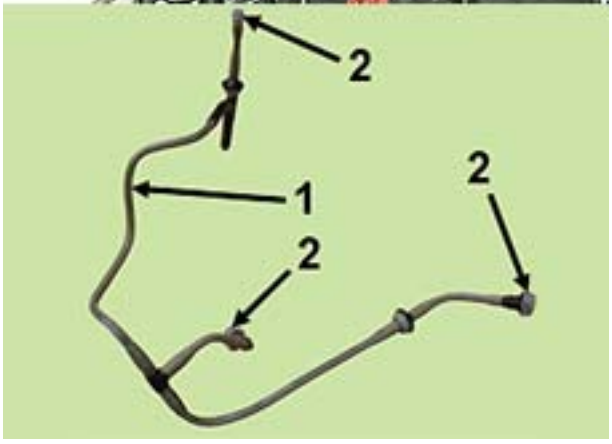
LEFT-HAND DRIVE VARIANT

- Remove the connection pipe from air mass meter to throttle body and the vacuum pipe with one-way valves, as described in Op. 1048A63 and Op. 3330D28 of the Technical Service Manual.
- Fit the new pipe part n. 51779362 (1) applying the previously removed and retrieved fastening clips, fasten the fastening screw (2) and then tighten the clips: on the air mass meter (3), on the resonator (4), on the throttle body (5) and on the oil vapour pipe (6).

- Loosen the fastening nuts (1) and move the engine coolant vessel (2) aside to insert the new pipe into the vacuum pump easily.

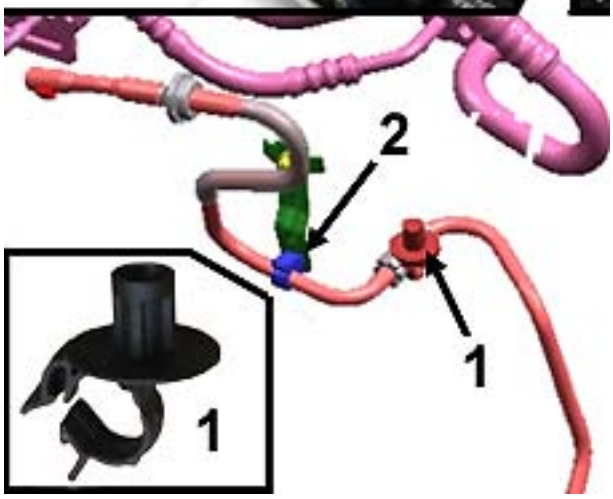
- Insert the vacuum pipe part n. 50513246 (1) positioning it in the engine compartment.

IMPORTANT ***Do not remove the protective caps (2) to prevent dirt from getting into the pipe. Remove them just before connecting.***

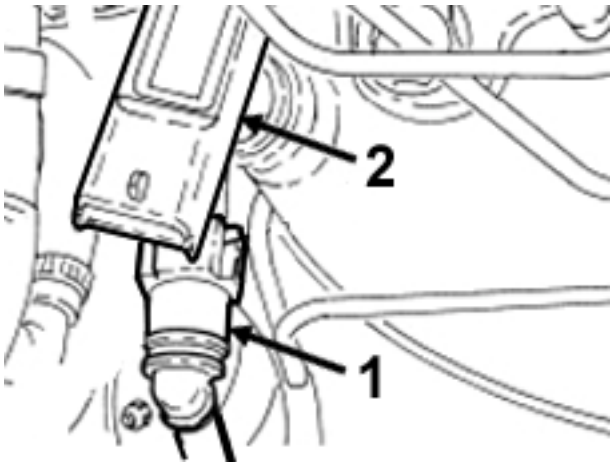


- Remove the cap from the bulkhead and insert retaining clip (1) part n. 7636291.

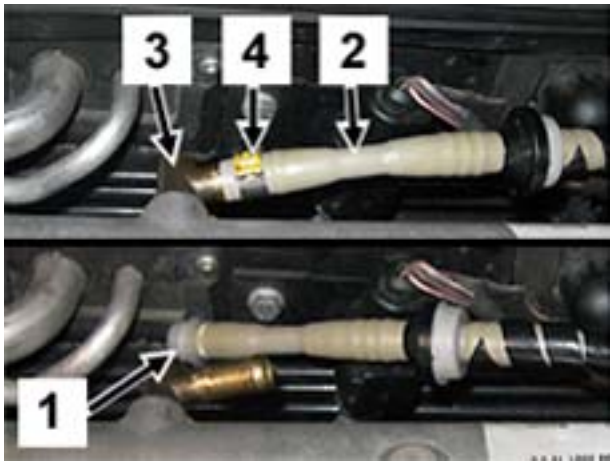
- Secure the vacuum pipe to the retaining clip (1) and to the previously fitted retaining clip (2).



- Remove the protective cap and connect the quick coupling (1) to the brake booster and (if previously disconnected) connect the brake booster vacuum sensor (2).



- Remove the protective cap (1) and connect the vacuum pipe (2) to the pipe (3), fixing it with the clip (4) previously removed from the old pipes.



- Put the engine coolant vessel (1) back in place and fasten the nuts (2).

RIGHT-DRIVE VARIANT

- Remove the connection pipe from air mass meter to throttle body, as described in Op. 1048A63 del of the Technical Service Manual.

- Disconnect the throttle body connector (arrow).

- Loosen the screws (arrows) and remove the throttle body.

- Remove the seal and clean the surfaces of the air mass meter and of the box from residues.

- Loosen the screw fastening the water pipe bracket to the air box.

- Disconnect the brake booster pipe from the air box.

- Disconnect the vapour solenoid valve connector and the pipe with quick coupling connected to it (arrows).
- Disconnect the pressure sensor connector (arrow).

- Disconnect the quick coupling pipe (arrow).

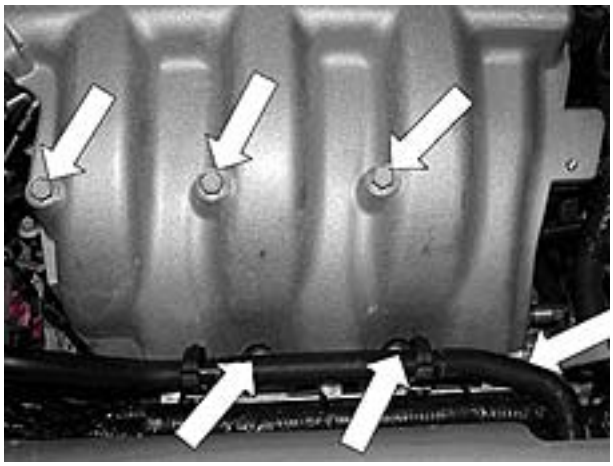
- Remove the pipe from the clips which secure it to the expansion reservoir vapour breather.

- Open the clips and release the blow-by pipe.

- Loosen the screws fastening the harness to the box.

- Loosen the fastening screws (arrow) and remove the air box.

NOTE: Obstruct the intake pipes on the cylinder heads with workshop paper to prevent foreign objects from getting inside.



- Remove the tubes/valves from the brake booster vacuum system and remove the quick coupling from the brake booster releasing it from the clips fastening it to the conditioner pipes (arrows).

- Remove the clips (arrows) from the conditioner pipes.

- Fit pipe part n. 50513258 as shown in the figure by connecting one end with quick coupling to the brake booster and the other on one-way valve side running between the dashboard wall and the expansion vessel filling pipe.

IMPORTANT ***Do not remove the protective caps to prevent dirt from getting into the pipe. Remove them just before connecting.***

- Fix the pipe into the free part of the clip (arrow) as shown in the figure.

- Remove the pieces of workshop paper arranged to close the intake pipes.

- Make sure that the pipe seals are centred with respect to the pipes.

- Fit the air box by reversing the removal sequence and being careful to disconnect all the previously removed pipes and connectors.

- Fix the water pipe bracket to the box.

- Fit the throttle body and replace the seal with part n. 71741126.

- Fit the connection pipe from air mass meter to throttle body part n. 51779362 by reversing the removal sequence.

OPERATIONS IN COMMON TO LEFT-HAND DRIVE AND RIGHT-HAND DRIVE MODELS

- Remove the battery as shown in Op. 5530B10 of the Technical Service Manual.

- Release the gearbox vapour breather pipe and the positive battery wires from the bracket (arrow).

- Loosen the fastening screw and remove the bracket (arrow).

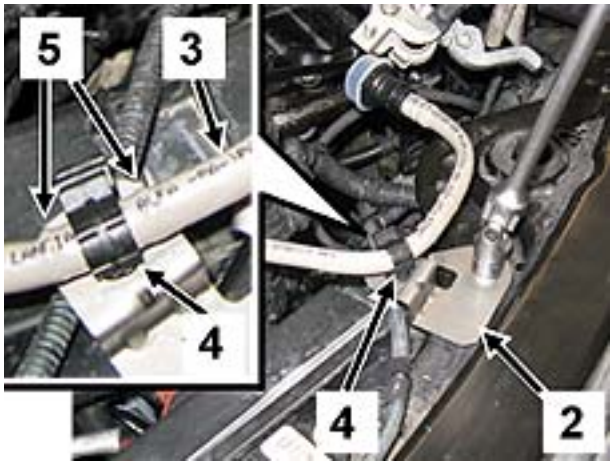
- Fit the new bracket part n. 50513251 and fix the gearbox vapour breather pipe, the positive battery wires and the new vacuum pipe with quick coupling as shown in the figure.

- Position the vacuum pipe (1) part n. 50513245, by connect the quick coupling of the first pipe and after having removed the protective cap.

- Using a riveting machine, apply the threaded hexagonal rivet (arrow) part n. 15624411.

- Fit the pipe supporting bracket (2) part n. 50513247 and fasten the screw part n. 11568024.

- Secure the vacuum pipe (3) to the clip (4) being careful to fix between the two swellings (5) on the pipe.



- Remove the lambda sensor and multiple sensor connectors from the bracket (arrow), then loosen the corresponding fastening head and remove the bracket itself from the battery frame.

- Fit the new bracket part n. 50513249 fixing it to the battery frame with a screw retrieved from the previous assembly and with screw part n. 16285924.

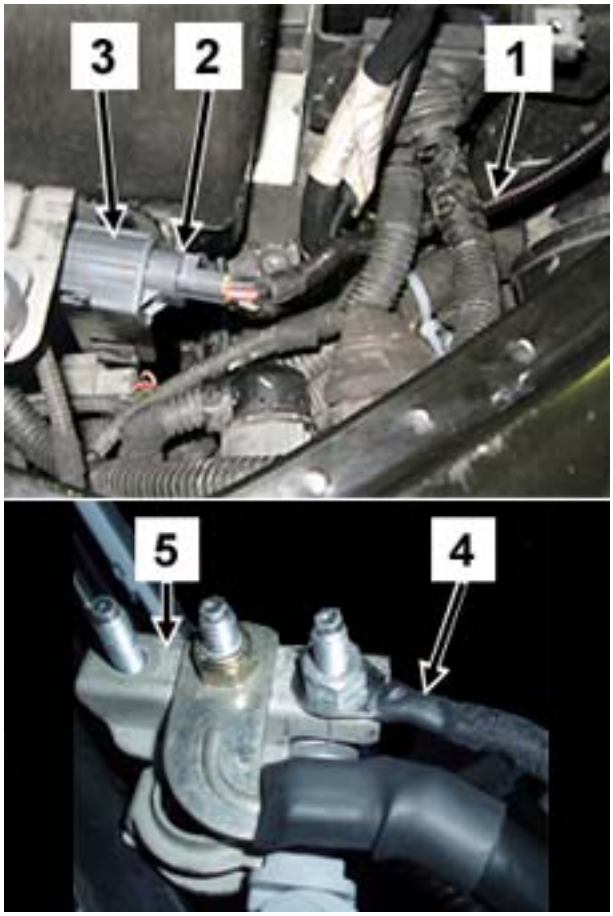
- Fix the multiple connector and the lambda sensor connector by reversing the removal sequence.

- Fit electric pump part n. 50513244 on the supporting bracket using screws part n. 55192177, making sure that the harness passes behind the electric motor and fitting the connector onto the bracket as shown in the figure.

- Remove the protective cap and connect the quick coupling of the vacuum pipe to the electric pump.

- Pass harness part n. 50514519 for operating the electric vacuum pump (1) under the existing harness and connect connector (2) to connector (3) of the electric pump.

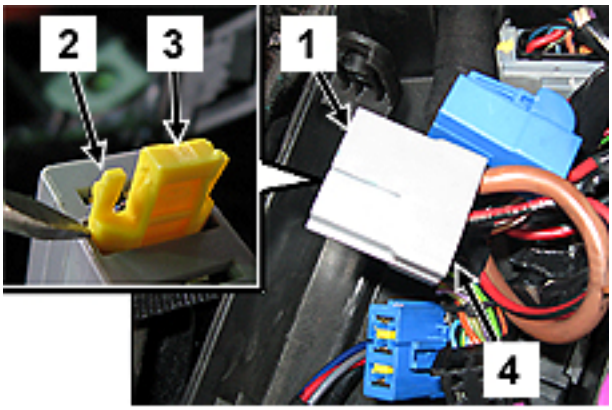
- Connect the ground terminal (4) of the harness itself to the negative battery terminal (5) and tighten the fastening nut part n. 12575411 at a torque of 0.5 daNm.

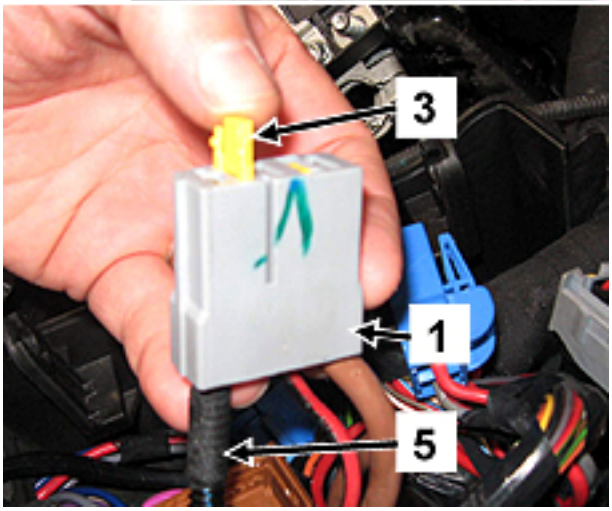


- Loosen the fastening screws, lift the lid (1) and then remove the fusebox as described in Op. 5505A13 of the Technical Service Manual.

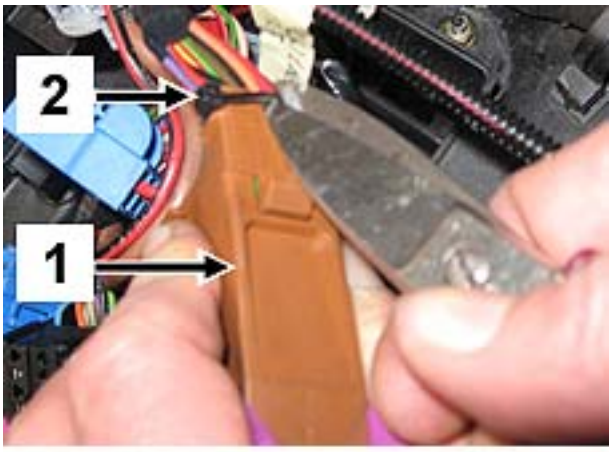
NOTE: *The removed fusebox will not be reused. It will be replaced by a new fusebox supplied by Ricambi.*

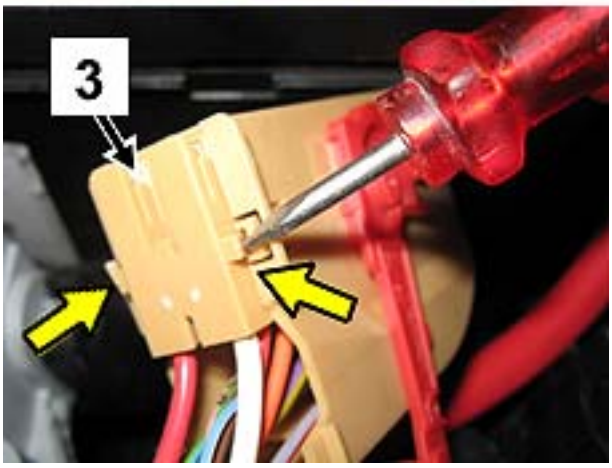
- By operating on the three-way grey connector (1) of the newly removed fusebox, use the specific tool on the retaining tabs (2) and remove the secondary lock (3) located near the free cavity (4).
- Insert the terminal of the wire with cross section-area of 2.5 mm (5) of the electric vacuum pump harness into the cavity (4) and then fully insert the secondary lock (3) making sure that it is fastened correctly.





- Operating on the brown 32 pin connector (1) cut the clip (2), using the specific tool and the operating on both sides as shown in the points indicated by the arrows, extract the inner part (3) of the connector itself.

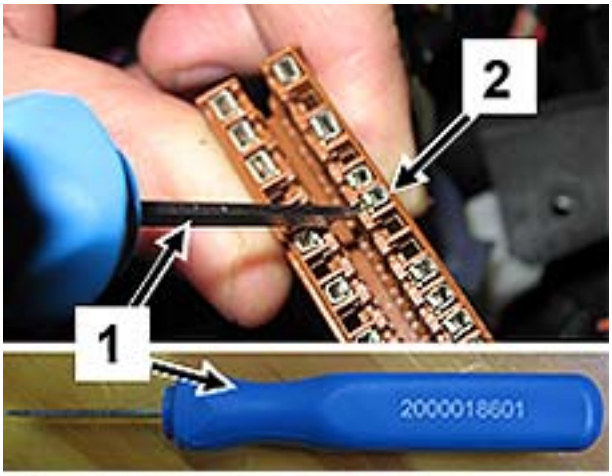


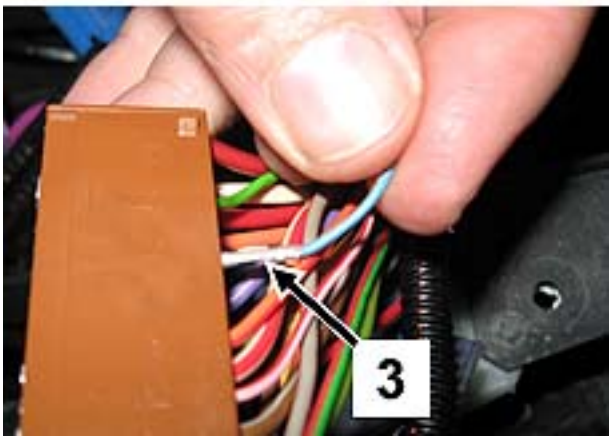


- With extractor tool part n. 2000018601 (1), release the retaining tab of pin 11 (2), and then extract the terminal of the blue/white wire (3) from the brown 32 pin connector.

NOTE: *The tool used for extracting the terminal belongs to a set contained in kit part n. 2000018600.*

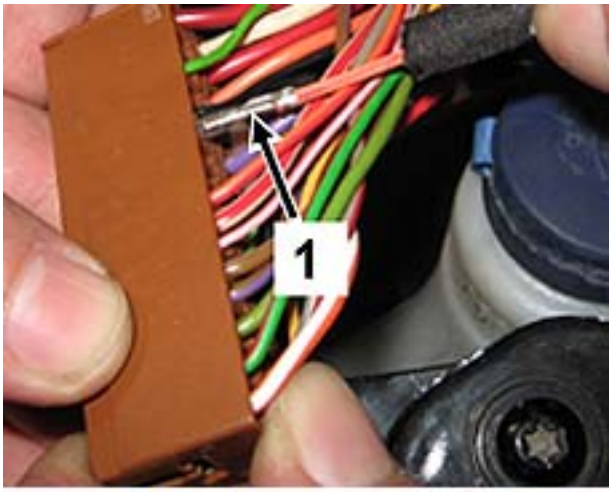
NOTE: *Cut and insulate the newly extracted terminal wire as appropriate.*

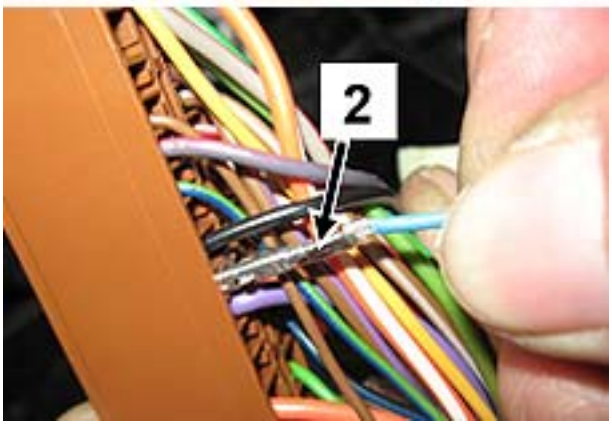




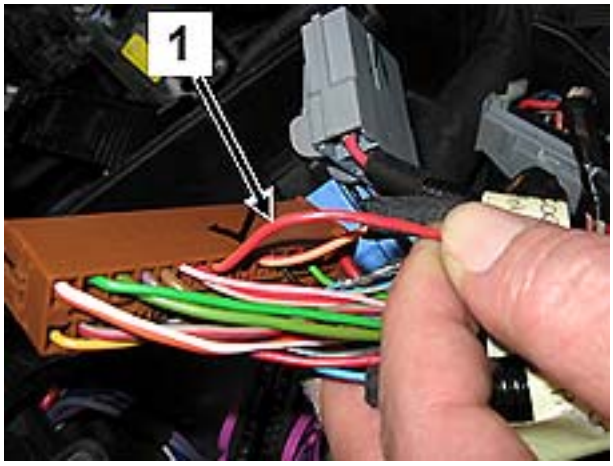
- Insert the terminal of the orange/red wire (1) of the electric vacuum pump harness into the previously cleared cavity pin 11 of the brown 32 pin connector.

- Insert the terminal of the blue/grey wire (2) of the electric vacuum pump harness empty cavity pin 26 of the brown 32 pin connector.



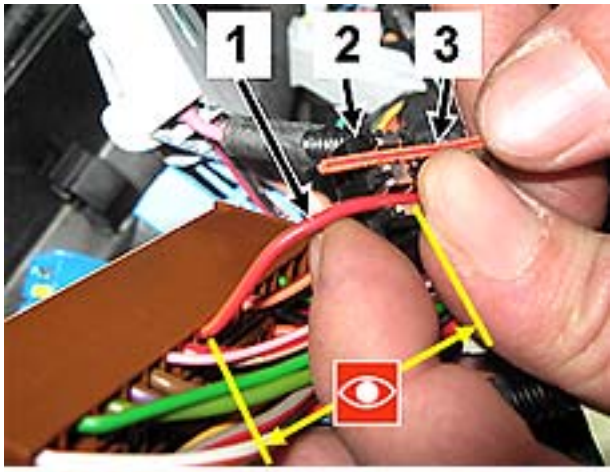


- Located the orange/red wire corresponding to pin 8 (1) of the brown 32 pin connector.



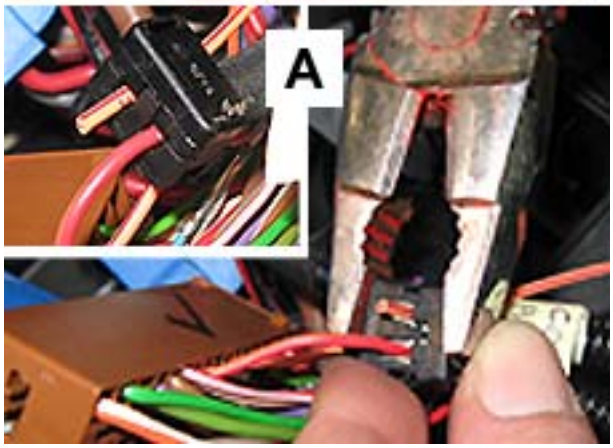
- Connect the orange/red wire without terminal (3) of the electric vacuum pump harness to the identified orange/red wire (1) by means of a current connector clamp.

IMPORTANT *The figure is an example only: the current connector clamp must be applied as far away from the brown 32 pin connector as possible.*

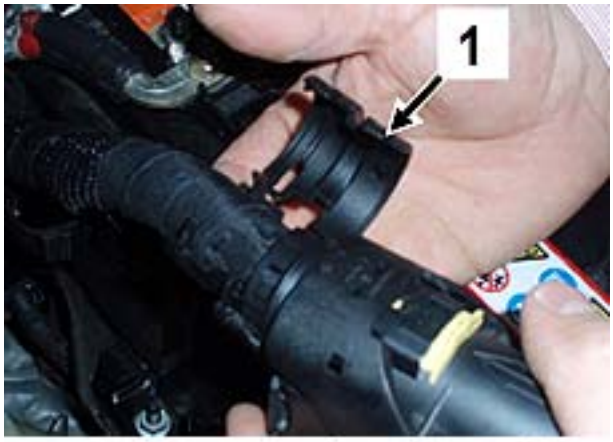


- With the clamp, fully close the current connector clamp as shown in detail **A** in the figure.

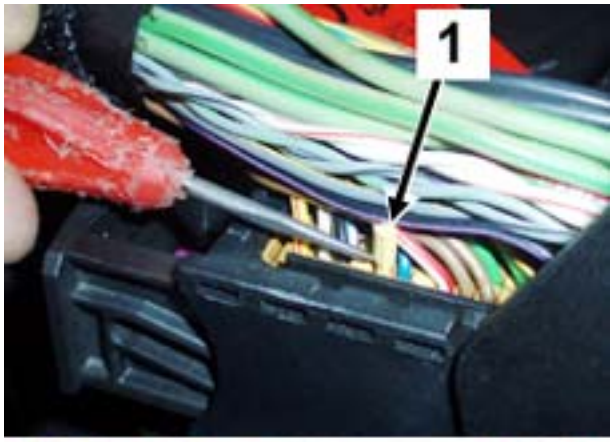
- Refit the brown 32 way connector by reversing the removal sequence and apply and new clip instead of the previously cut one.

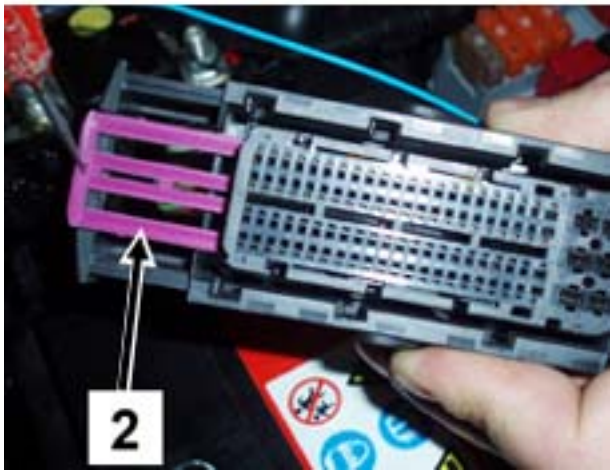


- Operating on the 94 pin connector, remove the wire guide (1), using extractor 2000018601 (2) lift the retaining tab in the point shown (3), and then lift the lid (4) to access the wires underneath.

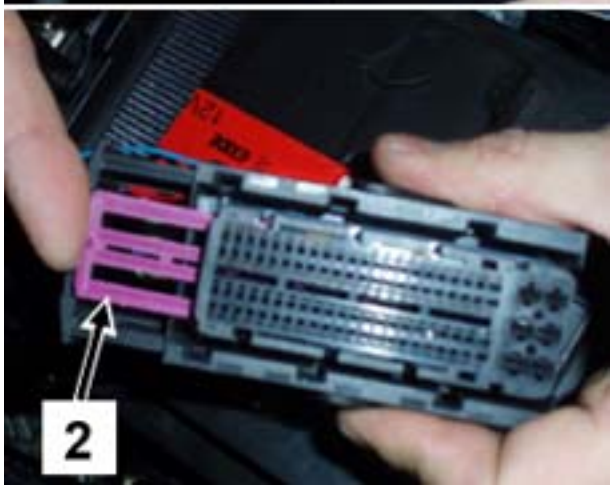


- Using the specific tool, remove the cap (1) from the seat of pin 90, then remove the secondary lock (2).



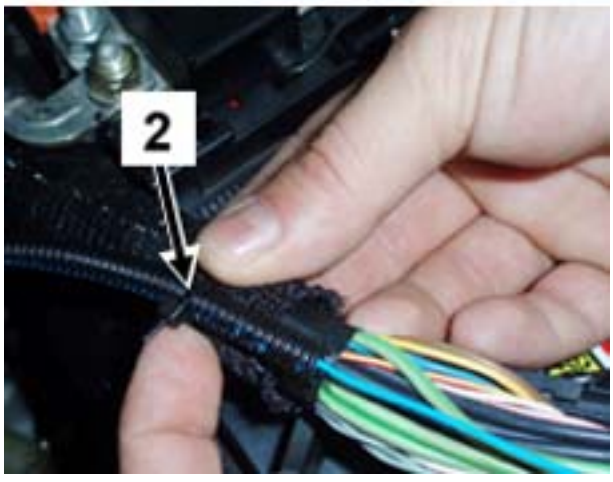


- Insert the terminal of the blue/grey wire (1), of the electric vacuum pump harness in the seat of pin 90 and then fit the secondary lock (2).



- Position the harness (1) as shown in the figure, apply a clip (2) part n. 14560087 and then fit the lid by reversing the removal sequence and check that the retaining tab is fastened correctly.

- Fit the wire guide by reversing the removal sequence.



- Connect the 94 pin connector (1) to the engine ECU.

- Connect the 60 pin connector (1) to the engine ECU.

- Refit the battery as shown in Op. 5530B10 of the Technical Service Manual without disconnecting the negative terminal.

- Arrange the harness (2) along the existing harness as shown in the figure and then apply clips part n. 14560087 in the points shown (3).

- Fit fusebox part n. 50514261 (with fuses and relays) as described in Op. 5505A13 of the Technical Service Manual.

- Fasten the electric vacuum pump harness exiting from the fusebox to the retaining clip (1) along the existing harness as shown in the figure, then apply clips part n. 14560087 in the points shown (2).

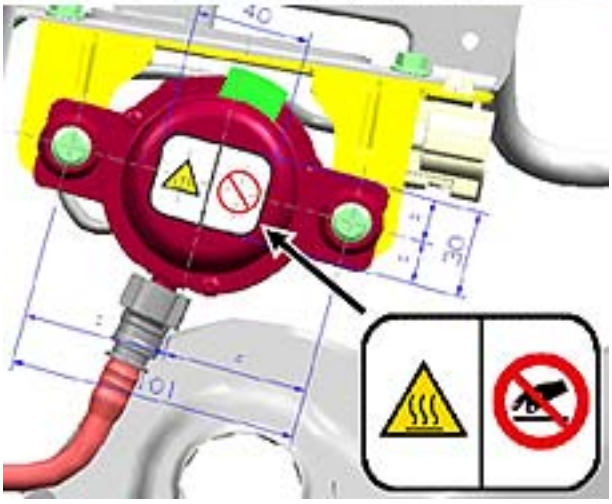
- Apply the CAUTION label part n. 50514918 on the vacuum pump as shown in the figure.

- Connect the negative battery terminal.

- Initialise components effected to battery disconnection

    - Reflash the engine ECU with CD FLASH 5.50.4 downloaded from ExaminerWeb site at

    http://aftersales.fiat.com/



WARNING *Cut out and give the new page to the customer to replace the one already present in the Owner's Handbook.*

IF AN EXTERIOR LIGHT BURNS OUT

For the type of bulb and power rating, see "When needing to change a bulb".

FRONT LIGHT UNITS

The front light units contain main beam, sidelights, direction indicator and dipped beam bulbs.

To change the bulbs, turn cap counter-clockwise and then remove it.

The bulbs are arranged inside the light unit **fig. 25/a** as follows:

A Main beam headlights

B Sidelights/direction indicators

C Dipped beam headlights

WARNING

After replacement, refit the covers correctly checking that they are properly secured.

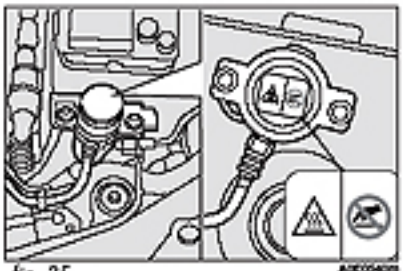


fig. 25

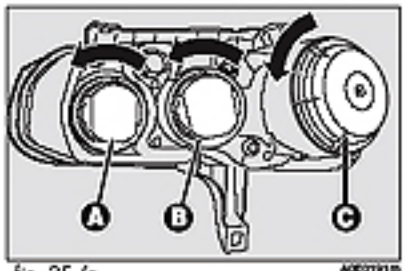


fig. 25/a

Main beam headlights (halogen bulbs)

On some versions a special brake servo vacuum unit is fitted which has to be removed in order to be able to replace the left main beam headlamp halogen bulb. The vacuum unit is located next to the battery drip tray (**fig. 25**).

WARNING

It should be remembered that the vacuum unit operates at high temperatures: avoid touching it with your hands, danger of scalding! Any operations not carried out following the rules could adversely affect the operation of the braking system and therefore the safety of the vehicle.

On versions with a brake servo vacuum unit, the description is given purely as an example; this operation must be carried out by Alfa Romeo Authorized Services.

To change the bulb, proceed as follows:

- ❒ remove cover **A-fig. 25/a** by turning it counter-clockwise;
- ❒ disconnect the electric connector **A-fig. 26**;
- ❒ release the bulb holder catch **B**;

SPARE PART AVAILABILITY

Description	Part	- Quantity .
Brake booster vacuum pipe (left-hand drive)	50513246	1
Brake booster vacuum pipe (right-hand drive)	50513258	1
Throttle body seal (right-hand drive)	71741126	1
Vacuum pipe clip (all types)	7636291	1
Brake booster vacuum tube pump side (all types)	50513245	1
Vacuum pipe support bracket on crossmember (all types)	50513247	1
Screw fixing vacuum pipe support bracket on crossmember (all types)	11568024	1
Rivet vacuum pipe support bracket on crossmember (all types)	15624411	1
Pump support bracket (all types)	50513249	1
Screw fastening electric pump support bracket (all types)	16285924	1
Electric pump (all types)	50513244	1
Electric pump fastening screw (all types)	55192177	2
CAUTION label (all types)	50514918	1
Recharge wire support bracket (all types)	50513251	1
Complete rigid pipe between air mass meter and throttle body (all types)	51779362	1
Electric pump wiring harness (all types)	50514519	1
CVM unit (all types)	50514261	1
M6 nut ground on battery negative terminal (all types)	12575411	1
Strip clip (all types)	14560087	7

Disposal of removed parts

Removed part return required? **NO**