

BRIAN SUMMERS

# **VOLVO**

**AB 58**

**Air Bag  
Manual**

# Index

A special message to operators of vehicles equipped with the Air Bag restraint system

Use of this Manual

Important Owner Information

Child Restraint in an Air Bag equipped vehicle

Components of the Volvo Air Bag System

Readiness Indicator Light

Maintenance Schedule

Maintenance cost, Warranty, Collision Damage

Monthly Reports

Instructions for dealers servicing vehicle

1	1	12
2	2	13
3	3	14
4	4	15
6	6	16
8	8	18
9	9	19
10	10	20
10	10	21
11	11	22
		23
		24
		25
		26
		27
		28
		29
		30
		31
		32
		33
		34
		35
		36
		37
		38
		39
		40
		41
		42
		43
		44
		45
		46
		47
		48
		49
		50
		51
		52
		53
		54
		55
		56
		57
		58
		59
		60
		61
		62
		63
		64
		65
		66
		67
		68
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		70
		71
		72
		73
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		75
		76
		77
		78
		79
		80
		81
		82
		83
		84
		85
		86
		87
		88
		89
		90
		91
		92
		93
		94
		95
		96
		97
		98
		99
		100

## AIR BAG SYSTEM

SEE OWNERS MANUAL FOR OPERATIONAL DESCRIPTION OF SYSTEM. MAINTENANCE INSPECTION IS RECOMMENDED EVERY 7500 MILES.

**VOLVO**

GOTHENBURG SWEDEN

Window Label

## A special message to operators of vehicles equipped with the Air Bag restraint system

As you are probably already aware, the National Highway Traffic Safety Administration (NHTSA) is considering a safety standard requiring that all new cars manufactured in the late 1970's be equipped with passive occupant restraint systems. A passive restraint, unlike a conventional seat belt system which must be fastened in order to be effective, is one which will provide the occupant with protection throughout a range of frontal crash situations without action on his part.

An anticipation of such a federal standard and in the interest of providing Volvo owners of the future with the most effective form of crash protection, Volvo has in cooperation with Eaton Safety Systems Div. developed an air bag restraint system. This is an inflatable occupant crash protection system which is designed to protect the driver and front seat passenger in frontal crashes of sufficient force. The air bag system is intended primarily for the American public who prefer not to use 3-point safety belt systems.

The air bag system has been developed and extensively tested in laboratory crash tests. We believe that the system has the potential to prevent many deaths and injuries, particularly to occupants who would otherwise drive or ride in the car unrestrained. The next logical step in our development program, before possibly offering the system to Volvo owners on a larger scale, is to place a number of vehicles with air bag systems in actual use under actual driving conditions.

In order to gain real life experience, Volvo is leasing a number of air bag-equipped 1975 model 244's to certain cooperating companies for use as company cars as part of our field evaluation program. These vehicles, which will be in service for approximately two years, will be operated primarily within the mid-western part of the United States. This program has been designed to allow very close follow-up of the cars in use and multidisciplinary accident investigation should the need arise. The information gathered will be channeled back into Volvo's engineering effort and it should be invaluable for insuring that the passive protection system which we may ultimately offer to the general public provides the highest degree of performance and reliability.

As an operator of a Volvo vehicle equipped with air bags, you are a very active participant in Volvo's field evaluation program. You are encouraged to drive and enjoy the Volvo assigned to you just as you would any other Volvo car. As a participant in the field evaluation program, you will however be required to keep Volvo and your employer company closely advised about certain aspects of vehicle's operation throughout the period of time it is assigned to you. Every consideration has been given to making your involvement as convenient as possible.

On behalf of Volvo of America Corporation and your participating employer firm, we would like to thank you for cooperating in this very important phase of the program.

## Use of this Manual

All portions of the regular 1975 Volvo owner's manual for models 242/244/245 apply to this vehicle except those portions dealing with the use of the front 3-point belt system. Operators of air bag-equipped vehicles are requested to thoroughly review the regular owner's manual for complete information about those aspects of vehicle operation not covered in this special manual dealing primarily with the air bag system and the field evaluation program.

Except as specifically stated otherwise in this manual, all aspects of Volvo warranties, owner responsibilities and required maintenance and service as detailed in a provided publication entitled "Taking Care of Your 1975 Volvo - Warranty and Maintenance Records" fully apply to air bag-equipped vehicles. Please study this referenced booklet carefully.

One section of this manual contains detailed service instructions intended primarily for Specially Designated Volvo Dealers, and includes a spare parts list for the air bag system and special instructions for periodically reporting

the vehicle's service history to Volvo. Operators of air bag-equipped vehicles are invited to study this section if they desire to enhance their knowledge of the system, but only Specially Designated Volvo Dealers are authorized to carry out any of the inspections, checks and maintenance prescribed.

This manual is coded to just one particular air bag vehicle. Special report forms are included for dealer and operator use. The manual must be presented to a Volvo dealer when the vehicle is serviced. This manual also contains important information regarding use of the special telephone reporting system set up for reporting accidents and other emergencies involving an air bag-equipped vehicle. For these reasons it is imperative that this manual remains with the vehicle at all times. If the manual is lost, a replacement may be obtained by contacting the Volvo Action Line (201-768-7435) and providing full particulars. Cooperating companies in the air bag field evaluation program may obtain extra copies for administrative purposes only by contacting Volvo of America Corporation, Product Engineering Department.

# Important Owner Information

## Readiness Indicator Light

This Volvo is equipped with a readiness indicator light which is designed to illuminate the message "AIR BAG" for 5-10 seconds each time the engine is started. If the light does not come on, remains on longer than approximately 10 seconds or goes on and off while driving, the air bag may be inoperative and service is required immediately. See separate information.

## Use of Seat Belts

Always wear lap belts. The combination of the air bag and a properly worn lap belt provides front seat occupants with additional protection against injury in accidents in which the air bag is activated, and in such impacts and rollovers where the air bag is not designed to activate.

Adult rear seat passengers should also utilize the 3-point belts or lap belt provided in order to minimize the possibility of injury to themselves and other occupants.

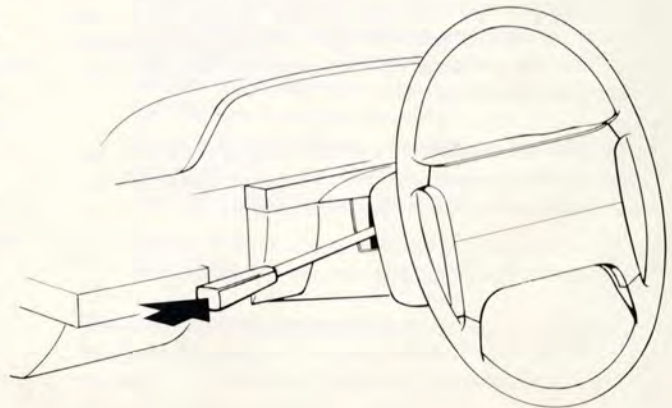
## Horn

The position of the horn switch has been revised on Air Bag equipped Volvos. To operate the horn, press in on the end of the turn signal knob.

## Child Restraint

Special care is required in restraining children in an automobile. There is a possibility that a small child could be injured in an accident if it sits on the edge of the front seat, stands in the front floor area or otherwise positions its body close to the dash so that it might be contacted by the air bag during the early stages of deployment.

For maximum safety, small children should only be transported in the rear seat area. The detailed information concerning child restraint, page 5, should be carefully observed.



## Maintenance

A special service network has been established to provide necessary periodic inspections and maintenance for this air bag-equipped vehicle. It is imperative for the proper operation of the air bag system and the success of the Volvo field evaluation program that the prescribed maintenance schedule be followed. Please see the label attached to the driver side sun visor and page 11 for information.

All regular maintenance and service as well as special problems must be promptly reported. See separate information.

## Self-Service or Tampering

The air bag system requires special training and equipment to service it. Only Specially Designated Volvo Dealers are permitted to perform work on the system itself. Any other authorized Volvo dealer may service the remainder of the vehicle provided that you present him with this manual beforehand.

Do not allow the reliability of the air bag system to be compromised by tampering with any system component or permitting anyone who is unqualified to do so.

## Monthly reports

As an operator of an air bag-equipped vehicle, you will receive a monthly test fleet report card which must be completed and returned to Volvo immediately. Your co-

operation in this respect is essential to the field evaluation program and part of Volvo's agreement with your employer firm. See complete instructions, page 10.

## Accidents

Any and all accidents, no matter how minor, involving this air bag-equipped vehicle must be promptly reported. Special instructions must be followed depending upon the severity of the accident and the accident reporting procedures must be followed per Volvo's agreement with your employer firm.

A special label is attached to the vehicle to alert police or bystanders to report an accident involving this vehicle should the operator be unable to comply with the reporting requirements.

## Crash Recorder

Each vehicle is equipped with a crash recorder which is positioned under the front passengers seat. This device is the property of the U.S. government and should be inspected, serviced and removed only in accordance with instructions.

## Air Bag Check Following Accident

If an air bag vehicle is involved in a minor crash below the deployment level of the air bag (approximately 15 mph) and subsequently repaired, the air bag system must be thoroughly inspected by a Specially Designated Volvo Dealer before the vehicle is returned to service. See information, page 12.

## Child Restraint in an Air Bag equipped vehicle

Children being transported in automobiles deserve special consideration in order to minimize the risk of injury in accidents, sudden stops and other hazardous situations.

Adult-type seat belt systems are designed to protect adult persons in a crash and it is usually not possible to position adult-type belts properly on small children (those less than 5 feet high) and if not properly positioned, the belts may cause injury under some circumstances.

Inflatable restraint systems such as the air bag have not yet been developed to the point where they will reliably provide crash protection for small children. There is a possibility that a small child could be injured if it sits on the edge of the front seat, stands in the front floor area or otherwise positions its body close to the dash so that it might be contacted by the air bag during the early stages of deployment.

No precautions can guarantee the safety of anyone, adults or children. For maximum safety, however, we believe that small children should only be transported in the rear seat area of the vehicle and that the following advice should be carefully considered:

1. Infants unable to sit by themselves should be restrained by placing them in a covered, well-padded bassinet which is placed crosswise in the vehicle (widthwise) on the rear seat. The bassinet should be securely restrained by the lap belt for rear center seating position. An alternative method is to position the bassinet crosswise in the vehicle but so that it rests against the back of the front seats and as low as possible.

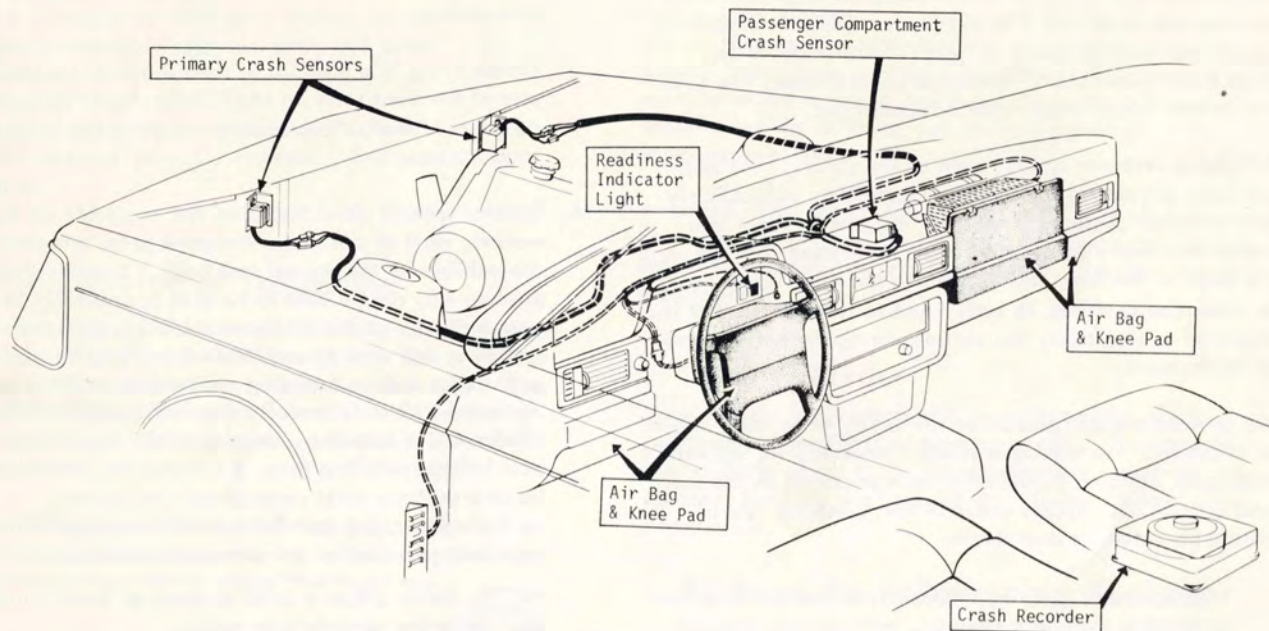
2. Small children who are able and want to stand should do so only on the floor directly behind one of the front seats. This will help minimize the possibility of injury from frontal impacts which are the most common occurrence.
3. Unless lying in a bassinet or standing directly behind one of the front seats, a small child should be seated on the rear seat, directly behind one of the front seats.
4. Several special child restraints are available on the market, most of which are designed to be attached to the vehicle by the normal seat belts. Some of these devices may not be able to be used successfully in conjunction with the emergency locking retractors (webbing and vehicle sensitive) 3-point belts provided at the rear outboard seating positions in an Air Bag equipped Volvo. Carefully check the compatibility of such child restraint systems with this type of seat belt before installing them in a Volvo or, alternately, be sure that the child restraint can be properly restrained by using just the manually adjustable lap-type belt provided at the center rear position.

NOTE: Never allow a child to stand or kneel on any seat while the vehicle is in motion.

Children more than 5 feet high can be restrained by the adult-type belts.

If any special problems arise concerning transporting children, please contact the Volvo Action Line (201-768-7435) for advice.

## Components of the Volvo Air Bag System





# Components of the Volvo Air Bag system

## The Volvo AIR BAG System

The Volvo air bag system is designed to reduce injuries to front seat occupants in frontal accident situations. If a crash of sufficient severity (approximately 15 mph) is indicated, inflation of the air bag is initiated. Within the next few hundredths of a second, gas inflates the air bags to full size, preventing the front seat occupant(s) from colliding with the instrument panel, steering wheel, windshield or other interior surfaces. The Air Bags deflate automatically following a collision.

The crash sensors simultaneously activate both the driver's steering wheel mounted air bag and the passenger's instrument panel mounted air bag. In addition to the two inflatable air bags, knee restraints are provided for both the driver and passenger.

This air bag-equipped Volvo 244 complies with the applicable Federal Motor Vehicle Safety Standard as in effect on the date of manufacture, which permits passive protection systems such as air bags in lieu of 3-point safety belts. However, a self-adjusting lap belt is installed and, if properly worn, it will provide front seat occupants with protection not afforded by air bags in those types of accidents (such as side impacts and rollovers) where the air bag is not designed to activate.

## Passenger Compartment Crash Sensor

The Passenger Compartment Crash Sensor and Diagnostic System is mounted out of sight behind the instrument panel. Its purpose is to verify the occurrence of a crash detected by either of the two Primary Crash Sensors.

## Primary Crash Sensors

There are two primary crash sensors in the air bag system, one mounted on either side of the radiator frame. Either of these sensors in conjunction with the passenger compartment crash sensor can activate both driver and passenger air bags if a frontal impact of more than a pre-determined deceleration level is detected. The air bags will neither be deployed in minor frontal crashes less severe than the equivalent of approximately 15 mph into a solid immovable object nor in some side impacts and rollovers.

## Driver and passenger side Air Bags

Once a crash has been detected by either one of the primary crash sensors and verified by the Passenger Compartment Crash Sensor, stored pressurized gas is released to rapidly inflate the Air Bags. The stored pressurized gas for the passenger side system is heated by a chemical energy source during inflation to increase inflation pressure.

The driver's side Inflator and Air Bag is located inside the steering wheel hub.

The passenger's side Inflator and Air Bag is located in the instrument panel.

The decorative, protective covers over the folded Air Bags will automatically break open upon deployment and should not be removed, cut or punctured.

# Maintenance cost Warranty Collision damage

The vehicle operator and/or his employer company must reimburse the servicing Volvo dealer directly for any and all normal maintenance service as prescribed in the provided booklet entitled "Taking Care of Your 1975 Volvo - Warranty and Maintenance Records" subject to whatever terms are established by the dealer. The Volvo warranties applicable to 1975 models as explained in the same booklet also fully apply to the air bag-equipped vehicles. Collision damage and any other unusual damage is also the responsibility of the cooperating company or leasee subject to the terms and conditions of the leasing agreement.

Volvo will reimburse the servicing dealer via normal procedures for normal warranty repairs on a vehicle provided a normal warranty claim is filed with his Volvo distributor and that a photocopy of the warranty claim is sent to Volvo of America Corporation along with a properly filled-out Inspection and Service Report form. Volvo will also reimburse a servicing dealer separately for any special inspections or service to the vehicle or air bag system which may be carried out in conjunction with the normal 7500 mile interval maintenance program. The cost associated with all service to the air bag system itself shall be Volvo's responsibility throughout the entire 24 months that the field evaluation program is in operation.

The cost for all parts and labor associated with special inspections or service or service to the air bag system will be kept separate from those associated with normal main-

tenance service and the dealer will be reimbursed if an invoice (work order with details) plus a properly filled-out Inspection and Service Report form is sent to Volvo of America Corporation.

## Monthly reports (Forms in back)

In addition to the Inspection and Service Report form to be filled out by the servicing dealer at each regular or emergency service interval, a simple report card will be mailed to each air bag-equipped vehicle operator each month. This report card is intended for computer processing, so please fill in the required information carefully and return the self-addressed, postage-paid card to Volvo immediately (within 10 days of receipt).

An operator can make special reports at any time on the monthly report card by checking a box marked "special report" and entering his comments under the appropriate heading (14). Extra monthly report cards are provided in this manual.

A special monthly report should be made (in addition to any contacts via the Action Line) if any of the following occurs:

1. A minor impact.
2. Any malfunction of the air bag system or readiness indicator light (follow-up to telephone contact via the Action Line).
3. Any emergency service to the vehicle other than the air bag system.

## ACCIDENT REPORTING PROCEDURES AIR BAG FIELD EVALUATION PROGRAM

Volvo sincerely hopes that no one will ever have to utilize any of the information contained in this section, but if an air bag equipped Volvo is involved in an accident or if the system malfunctions, it is of utmost importance that the procedures contained herein be followed very carefully. Because the air bag is a pre-production system under evaluation, Volvo and the U.S. Federal Government are both anxious to investigate any such incidents very carefully.

Special toll free, 24-hour-7 day a week telephone coverage has been provided for reporting both accidents and air bag system malfunctions immediately. Severe accidents will be thoroughly investigated by a special multidisciplinary accident investigation team sponsored by the U.S. Department of Transportation. This team will usually be on the scene within 48-72 hours of an occurrence to cover all aspects of the accident. The team members will properly identify themselves and everyone's cooperation will be required.

Less severe, property damage accidents will also be investigated but in somewhat less detail.

All air bag equipped Volvos are also equipped with an electronic crash recorder which is located under the passenger's side front seat. These recorders have been provided by the U.S. Department of Transportation for the purpose of collecting acceleration data during collision.

The crash recorder is the property of the U.S. Government and should not be inspected (except visually), serviced or removed except by Specially Designated Volvo Dealers, representatives of Volvo or the U.S. Department of Transportation. Upon the occurrence of an accident, the crash recorder will be removed as part of the accident investigation effort.

Different reporting procedures are to be followed depending upon the severity of the accident or type of malfunction. A special label has been affixed to the dash panel of each air bag equipped Volvo outlining the reporting procedures. This label is also intended to alert police and bystanders of the reporting procedures, should the operator be incapacitated in any way. Full details on all reporting procedures are provided on the reverse side of this page.

**NO DAMAGE COLLISIONS** — All minor collisions (including those involving the energy absorbing bumper system) which result in no damage to the air bag equipped vehicle must be noted and reported to Volvo on the next regular monthly report card.

**MINOR SHEET METAL DAMAGE** — All accidents involving less than \$100.00 damage to the air bag equipped vehicle must be reported to Volvo via the air bag Action Line — 201/768-7435 (collect).

**PROPERTY DAMAGE ACCIDENT** — All accidents involving \$100.00 or more in damage to the air bag equipped vehicle must also be reported to the National Response Center — 800/424-8802 (toll free) even if they do not involve injury or safety cushion deployment.

**SEVERE ACCIDENT** — All accidents involving: injury, air bag deployment or damage to the vehicle sufficient to require that the vehicle be towed away, must be reported to the National Response Center — 800/424-8802 (toll free).

**AIR BAG MALFUNCTION** — Any malfunction of the air bag system or readiness indicator light must be reported to Volvo immediately via the air bag Action Line — 201/768-7435 (collect). Depending on the circumstances, you will usually be advised to take the vehicle to the nearest Specially Designated Volvo Dealer for emergency service. Follow up an Action Line report of this nature by submitting a special report card.

**VEHICLE MALFUNCTION** — Any malfunction of the vehicle other than the air bag system should be handled by the nearest authorized Volvo dealer. Present the servicing Volvo dealer with this manual. Report any emergency service to the vehicle other than the air bag system to Volvo by submitting a special monthly report card.

**Note:** Following the prescribed Volvo procedures for reporting an accident does not relieve the vehicle operator of any responsibility for making accident reports that may be required by state or local law or for making any report required by an employer company.

## Instructions for dealers servicing vehicle

This car is equipped with an Air Bag System and participates in a field evaluation program. All servicing of components of the Air Bag System must only be made by a specially designated and trained dealer.

The wires connecting the Air Bag components are routed in red insulation hoses.

### Service not permitted

Following items may not be removed or serviced by any un-authorized person:

- steering wheel
- steering column
- ignition switch (not standard unit)
- passenger Air Bag System
- passenger compartment crash sensor
- primary crash sensors

### Service permitted

The connectors at the sensors may be disconnected if necessary. Before reconnecting:

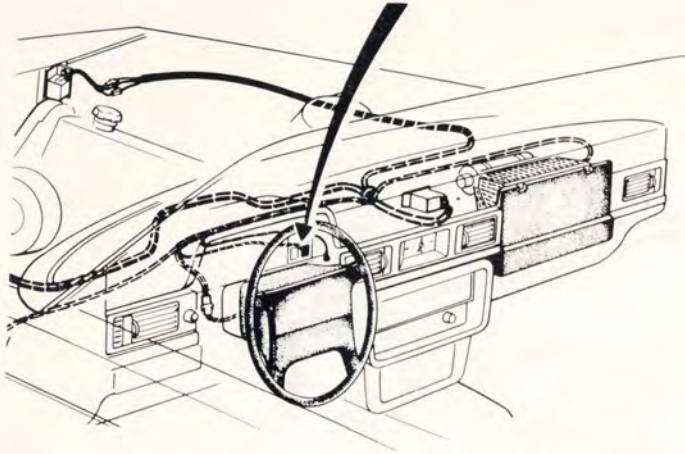
- disconnect battery ground cable
- switch on ignition
- reconnect the sensor(s)
- reconnect battery ground cable and
- observe the "AIR BAG" light from the outside.

## Servicing Air Bag System

The air bag system requires special training and equipment to service it. Only Specially Designated Volvo Dealers are permitted to perform work on the system itself. Any other authorized Volvo dealer may service the remainder of the vehicle provided that you present him with this manual beforehand.

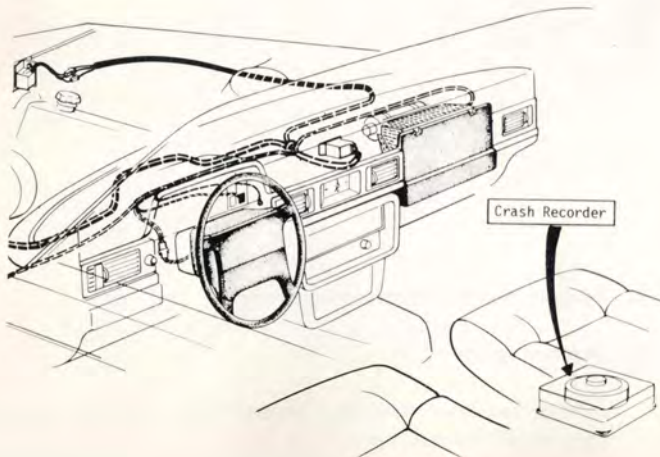
Do not allow the reliability of the air bag system to be compromised by tampering with any system component or permitting anyone who is unqualified to do so.

## Check of Air Bag System



### Check of Readiness Indicator

Check that the Readiness Indicator Light (indicator light "AIR BAG") comes on for approx. 7 seconds after that the ignition has been switched on.

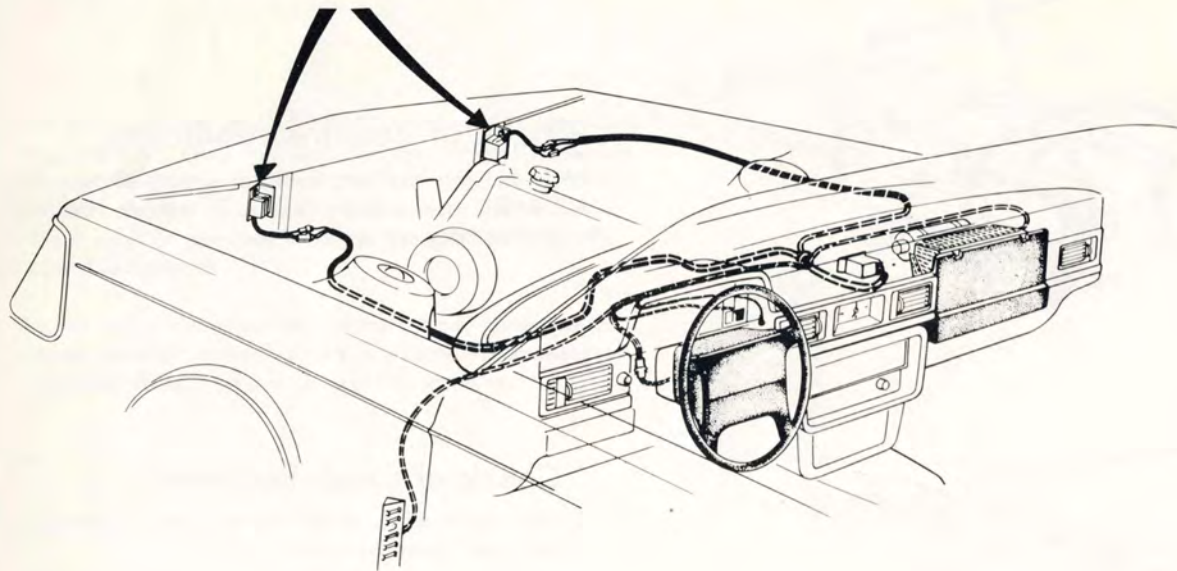


### Check of Crash Recorder

1. With ignition on, check that the disc is rotating. If not, see "Crash Recorder".
2. Check that the recorder is firmly attached to the mount.
3. Examine the recorder unit for damage, for example case fracture.

In case of damages, or in doubt, call Volvo Action Line for instructions (201-768-7435, collect).

## Primary Crash Sensors



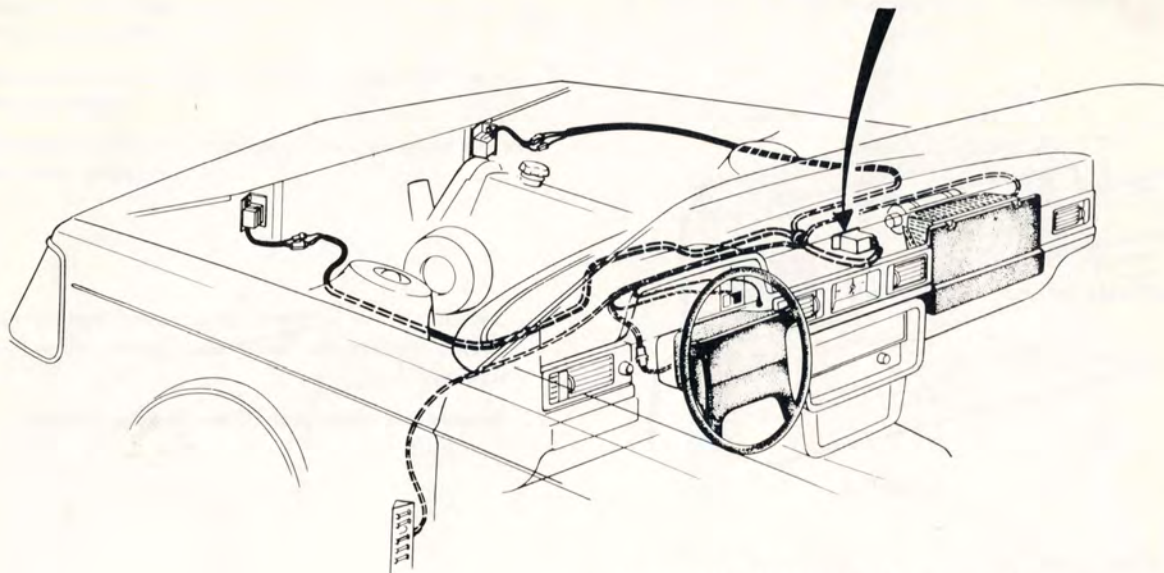
1. Switch off ignition. Open hood. Disconnect battery ground cable. Remove grill.
2. Disconnect the Sensor terminal block.
3. Remove the Sensor bracket. Use 10 mm socket.

4. Remove the Sensor retaining clamps.
5. Replace sensor.

At first test after servicing, do not allow anybody to stay inside the vehicle.



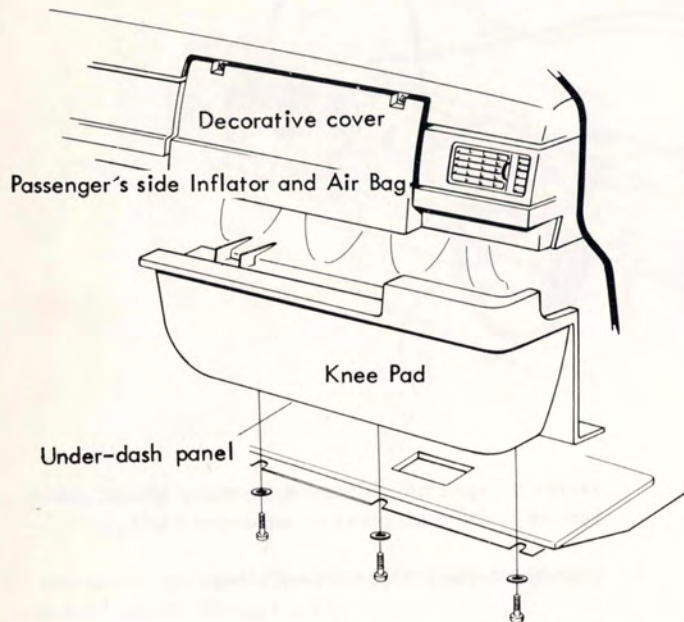
## Passenger Compartment Crash Sensor



1. Switch off ignition. Disconnect battery ground cable. Remove under-dash panel on passenger's side.
2. Disconnect the Sensor terminal block.
3. Remove the Sensor.

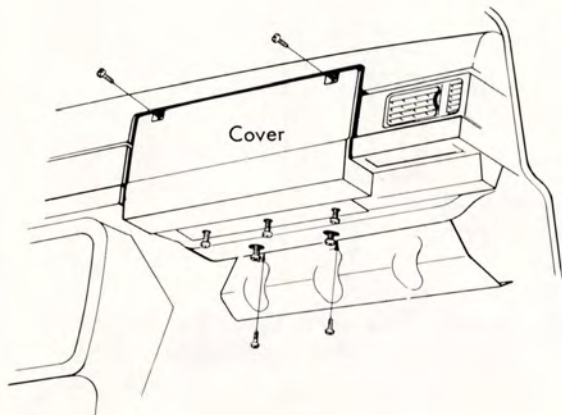
At first test after servicing, do not allow anybody to stay inside the vehicle.

## Passenger's side Inflator and Air Bag

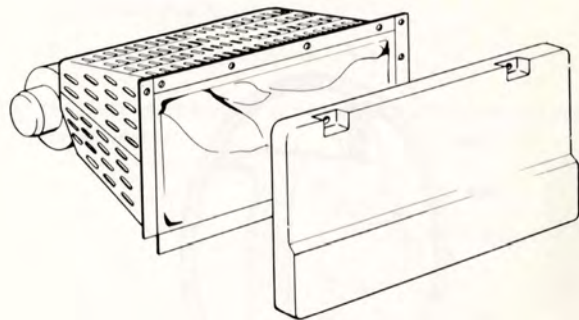


1. Switch off the ignition. Disconnect battery ground cable. Remove the under-dash panel (three Phillips screws).
2. Remove the knee pad (three Phillips screws).

3. Remove the three front bottom Phillips screws for the Air Bag assembly.
4. Remove the two front top Phillips screws for the Air Bag assembly.
5. Remove the four bottom rear Phillips screws for the Air Bag assembly.



6. Pull out the Air Bag assembly. Disconnect the connector.

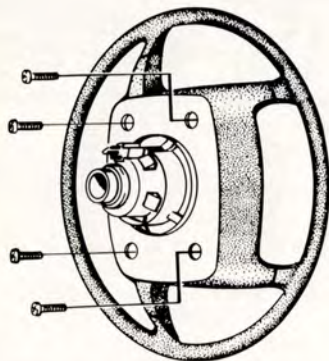


Do not place the Air Bag with the padding down.

At first test after servicing, do not allow anybody to stay inside the car.

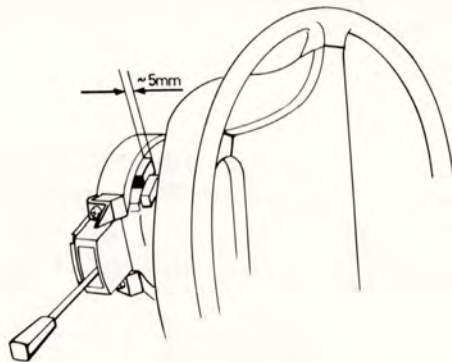
## Driver's side Inflator and Air Bag

1. Disconnect battery ground cable.
2. Remove the 4 retaining nuts through the holes on back of the steering wheel. 10 mm wrench.



3. Lift out the air bag and disconnect the wires.  
Note: do not place the air bag with the padding down.
4. Remove the steering wheel. Be careful not to damage the sliding brush contacts.

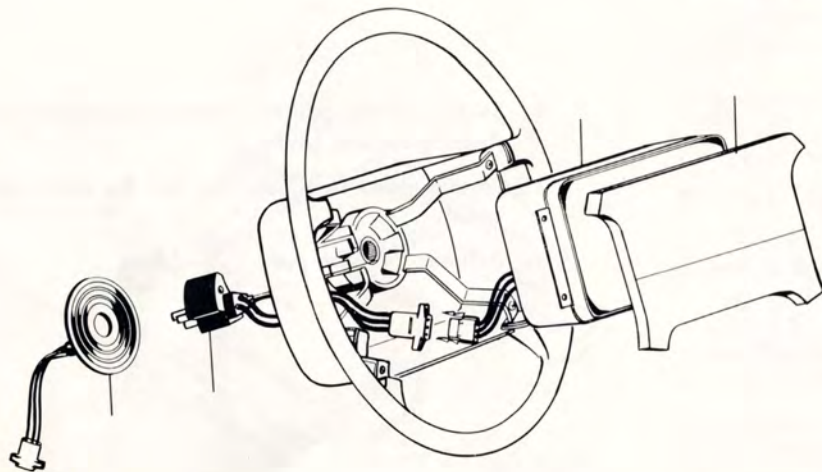
5. Perform service required. Re-install steering wheel. Check that the distance between the switch bracket and the brush holder is approx. 5 mm (0.2").



6. Connect the air bag. Check that the contact brushes do not stick in the holder.
7. Re-install the air bag.
8. Switch on the ignition.
9. Reconnect the battery ground cable and observe the indicator light from the outside.  
At the first test after air bag servicing do not allow anybody to stay inside the car.

## Brush Holder

1. Remove the steering wheel. See "Driver side Inflator and Air Bag".
2. Remove the screw. Pull the connector up to separate.
3. Push the brushholder down.
4. Press in the new brushholder until it snaps into place.

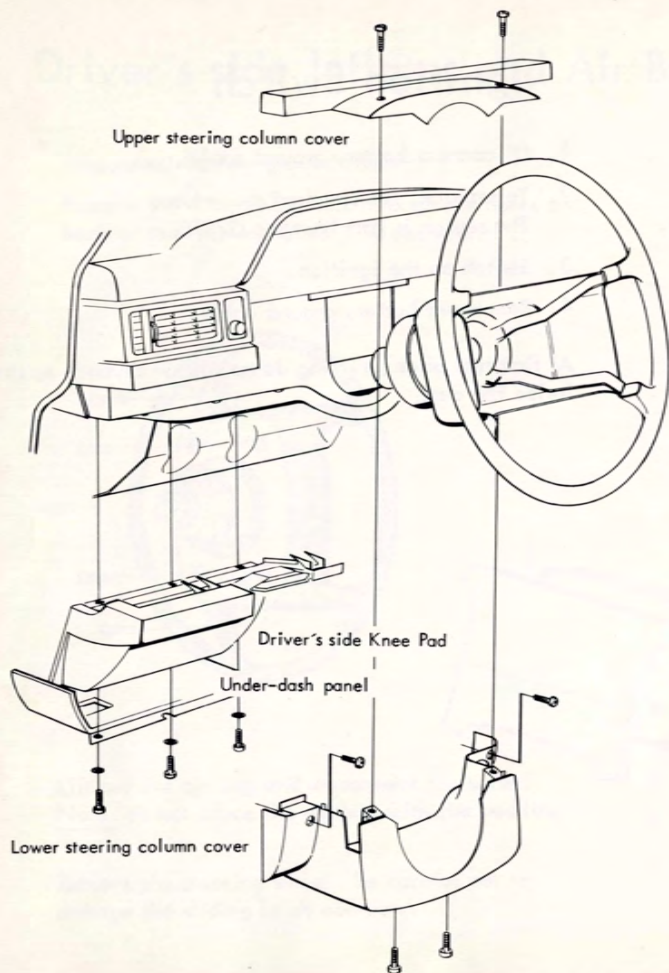


## Ignition Switch

1. Disconnect battery ground cable .
2. To replace, use standard procedure. The switch is Part Number I228707 .
3. Switch on the ignition.
4. Reconnect battery ground cable .

At first test after servicing do not allow anybody to stay inside the car.

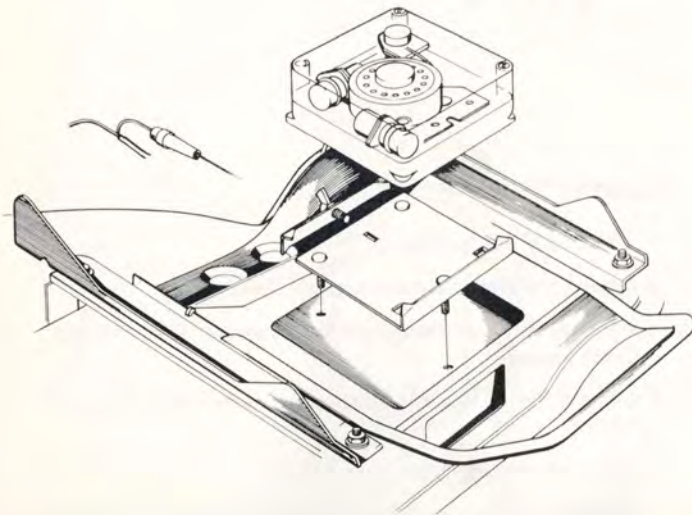
## Driver's side Knee Pad



1. Switch off the ignition. Remove upper and lower steering column covers.
2. Remove three Phillips screws and the under-dash panel.
3. Pull out the knee pad.

# Crash Recorder

The vehicle is equipped with a Crash Recorder, positioned under the front passenger's seat. This device is the property of the U.S. government and should be inspected, serviced and removed only in accordance with instructions.



## Crash Recorder

### Removal

1. Remove the passenger seat.
2. Disconnect power lead by holding both ends of the in-wire fuse holder, push in, twist, pull and separate.
3. Turn wing nut counter-clockwise almost to end of the threaded stud.
4. Slide recorder out of mount. Handle carefully, do not jar or bump.  
WARNING: do not place the recorder next to any electrical motors and do not attempt to remove the plastic cover.

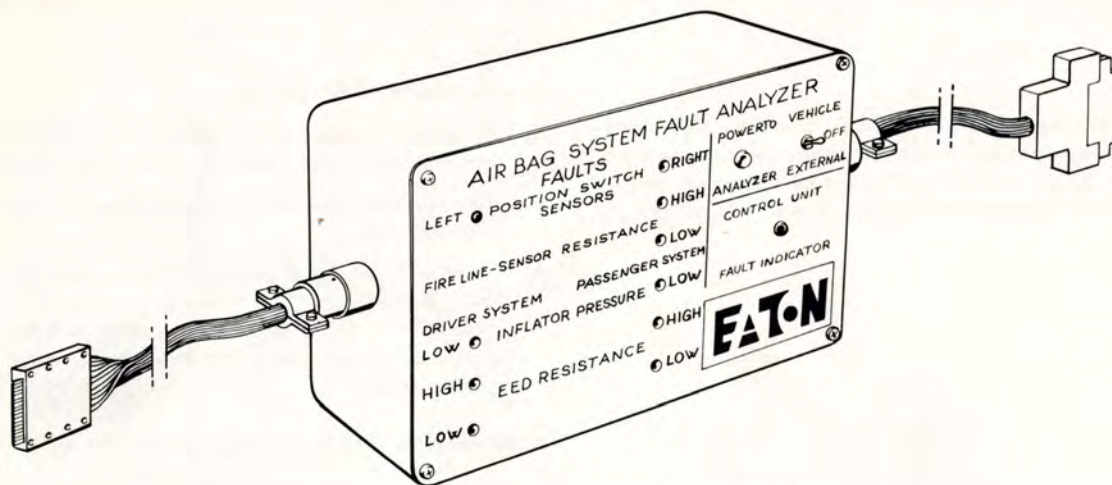
If the Recorder disc is not rotating when the ignition is on:

1. Check the in-wire fuse.
2. Check that the fuse circuit is live. Correct if necessary.
3. If the Recorder disc still does not rotate, call Volvo Action Line for instructions (201-768-7435).

In the event of an accident, the Crash Recorder must not be replaced without prior consent.

When order to replace has been received, state serial number of old and new unit. Also assure that anti-tamper seals (band and wire) are not broken, and data card present.

# Fault Analyzing the Air Bag System



The "Air Bag System Fault Analyzer" should be connected when a fault is indicated, that means:

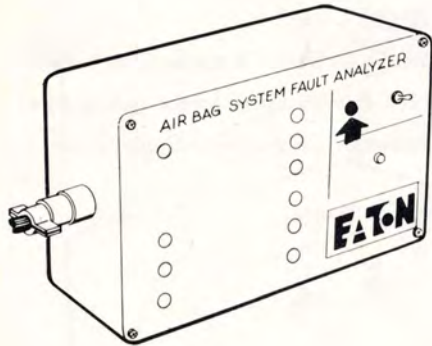
- the AIR BAG light does not illuminate when the ignition is switched on
- the AIR BAG light is illuminated more than approx. 10 seconds after that the ignition is switched on
- the AIR BAG light is illuminated when driving

To connect the instrument:

- switch off the ignition
- remove the right side under-dash panel
- disconnect the connector at the Passenger Compartment Crash Sensor
- connect the instrument, instrument switch position "OFF"
- switch on the ignition
- standing outside the car, switch instrument to "VEHICLE"

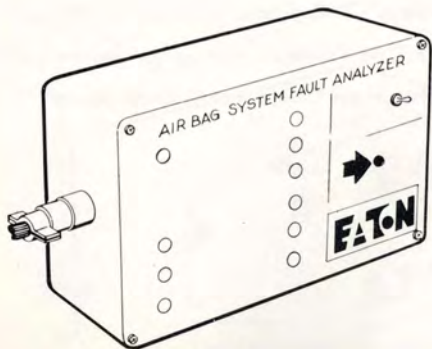


(Standing outside the car, instrument switch on "VEHICLE"):



NORMAL = green light illuminated

- If not:
- check connections of fuse No 5 (in fuse box)
  - check grounding of Passenger Compartment Crash Sensor
  - check wires in the wiring harness, red/blue and black



NORMAL = red light illuminated approx. 7 seconds

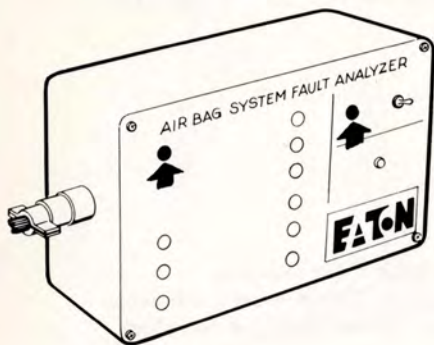
- If not:
- replace Passenger Compartment Crash Sensor

NORMAL = AIR BAG Light on the instrument panel illuminated steadily

- If not
- check light and connections

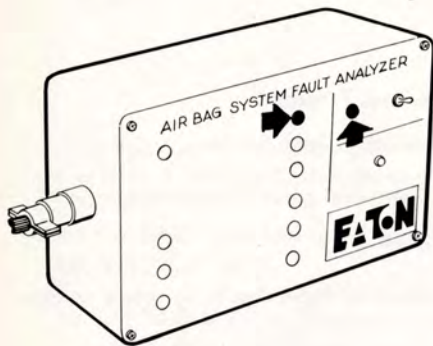
NORMAL = The instrument fault indication lights should not come on this test.

(if lights come on, see following pages for fault indication)



**Illuminated:** POSITION SWITCH SENSOR. LEFT

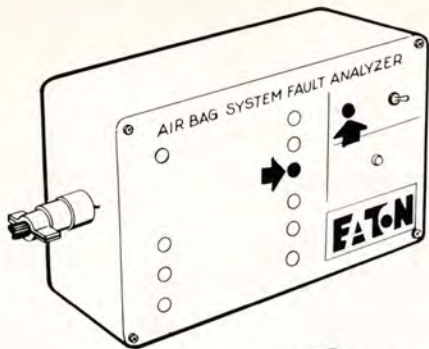
- Action:**
- Check that LEFT Primary Crash Sensor is correctly attached.
  - Check connection at LEFT Primary Crash Sensor (white wire).
  - Check connection at Passenger Compartment Crash Sensor (white wire).
  - Replace LEFT Primary Crash Sensor.



**Illuminated:** POSITION SWITCH SENSOR. RIGHT

- Action:**
- Check that RIGHT Primary Crash Sensor is correctly attached.
  - Check connection at RIGHT Primary Crash Sensor (white wire).
  - Check connection at Passenger Compartment Crash Sensor (white wire).
  - Replace RIGHT Primary Crash Sensor.

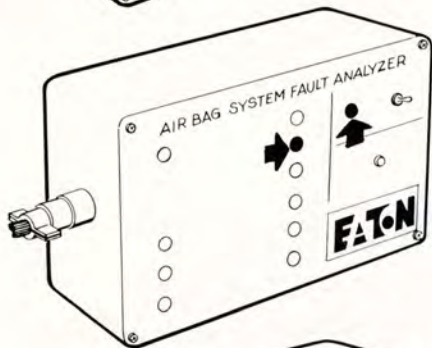
**NOTE:** faults may occur single or in combinations



**Illuminated:** FIRE LINE - SENSOR RESISTANCE. LOW

**Action:**

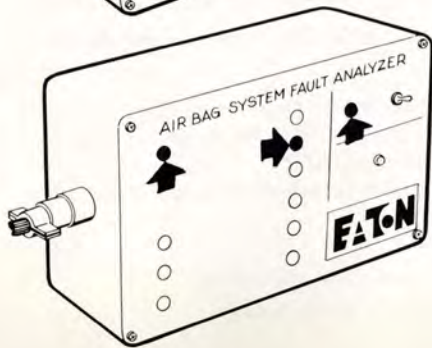
- Disconnect Primary Crash Sensor on one side and connect a correct sensor. If the light goes out: the original sensor is defective and should be replaced.
- If the indicator light still is illuminated: check at the other side the same way.



**Illuminated:** FIRE LINE - SENSOR RESISTANCE. HIGH

**Action:**

- Check connections at both Primary Crash Sensors (green wires).
- Disconnect Primary Crash Sensor on one side and connect a correct sensor. If the light goes out: the original sensor is defective and should be replaced.
- If the indicator light still is illuminated: check at the other side the same way.
- Check that green wires not are squeezed or otherwise improperly grounded.

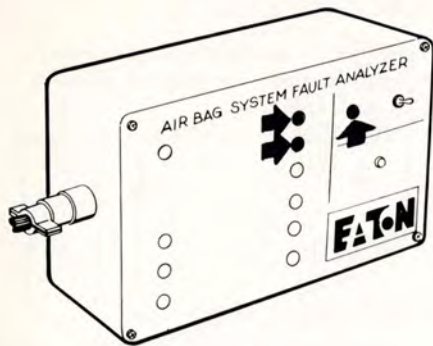


**Illuminated:** FIRE LINE - SENSOR RESISTANCE. HIGH  
and  
POSITION SWITCH SENSORS. LEFT

**Action:**

- Check connection at LEFT Primary Crash Sensor.
- Check connection at RIGHT Primary Crash Sensor (red wire).
- Replace left Primary Crash Sensor.

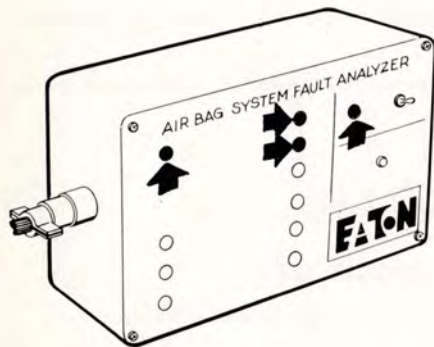
**NOTE:** faults may occur single or in combinations



**Illuminated:** FIRE LINE - SENSOR RESISTANCE. HIGH  
and  
POSITION SWITCH SENSORS. RIGHT

**Action:**

- Check connection at RIGHT Primary Crash Sensor.
- Replace right Primary Crash Sensor.

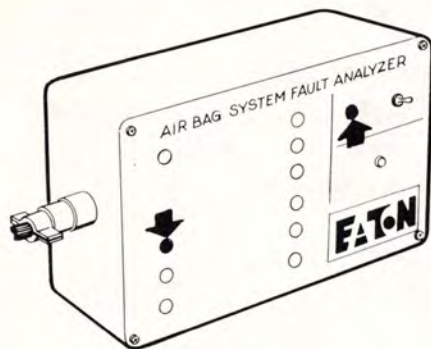


**Illuminated:** FIRE LINE - SENSOR RESISTANCE. HIGH  
and  
POSITION SWITCH SENSORS. LEFT and RIGHT

**Action:**

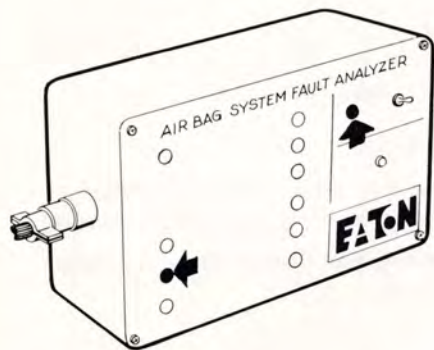
- Check connection at right Primary Crash Sensor (red wire).
- Check connection at Passenger Compartment Crash Sensor (red wire).
- Disconnect Primary Crash Sensor on one side and connect a correct sensor. If the light goes out: the original sensor is defective and should be replaced.  
If the indicator light still is illuminated: check at the other side the same way.

**NOTE:** faults may occur single or in combinations



**Illuminated:** DRIVER SYSTEM INFLATOR PRESSURE . LOW

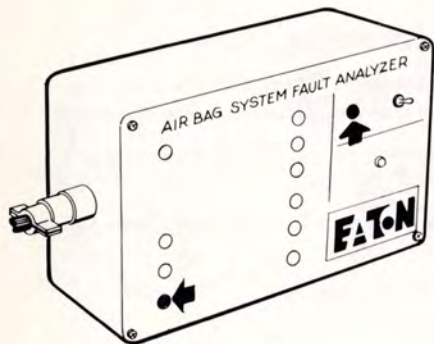
- Action:**
- Remove steering wheel assembly . Check that the slip ring contacts do not stick and that the wires are correctly attached .
  - Remove upper steering column cover . Check connections coming from the slip rings .
  - Check connection at the Passenger Compartment Crash Sensor (brown wire)
  - Replace steering wheel Air Bag assembly .



**Illuminated:** DRIVER SYSTEM EED RESISTANCE . HIGH

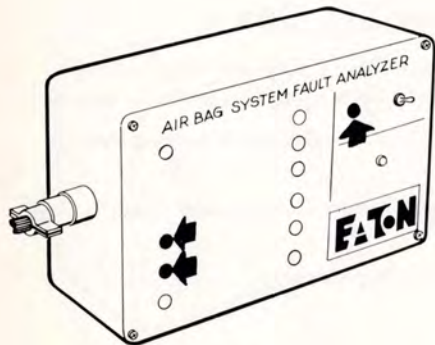
- Action:**
- Remove steering wheel assembly . Check that the slip ring contacts do not stick and that the wires are correctly attached .
  - Remove upper steering column cover . Check connections coming from the slip rings .
  - Check connection at the Passenger Compartment Crash Sensor (red/green wire)
  - Replace steering wheel Air Bag assembly .

**NOTE:** faults may occur single or in combinations



Illuminated: DRIVER SYSTEM EED RESISTANCE . LOW

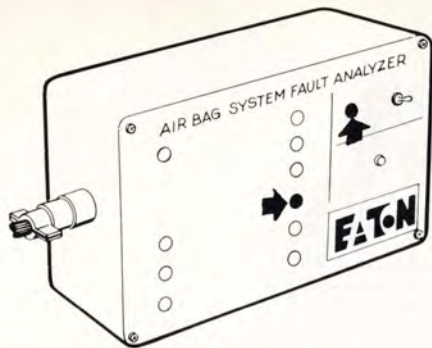
- Action:
- Remove steering wheel Air Bag assembly. Check that wires are not squeezed.
  - Replace steering wheel Air Bag Assembly .



Illuminated: DRIVER SYSTEM INFLATOR PRESSURE . LOW  
and  
DRIVER SYSTEM EED RESISTANCE . HIGH

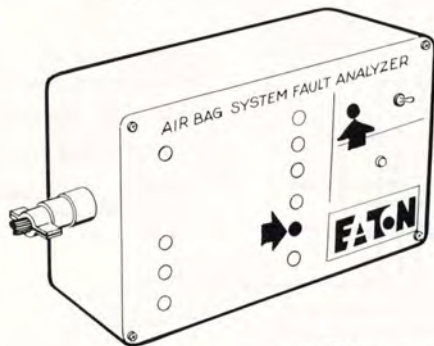
- Action:
- Remove steering wheel assembly. Check that the slip ring contacts do not stick and that the wires are correctly attached.
  - Check connections at the Passenger Compartment Crash Sensor (yellow wire)

**NOTE:** faults may occur single or in combinations



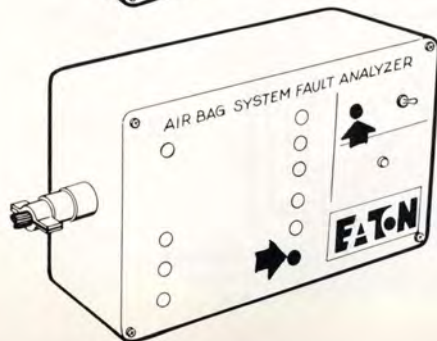
Illuminated: PASSENGER SYSTEM INFLATOR PRESSURE. LOW

- Action:
- Remove the passenger side Air Bag assembly. Check that the connections are secure and wires correctly attached.
  - Check connections at the Passenger Compartment Crash Sensor (blue wire and gray wire)
  - Replace passenger side Air Bag assembly.



Illuminated: PASSENGER SYSTEM EED RESISTANCE. HIGH

- Action:
- Remove the passenger side Air Bag assembly. Check that the connections are secure and wires correctly attached.
  - Check connections at the Passenger Compartment Crash Sensor (blue/yellow wire and white/red wire).
  - Replace passenger side Air Bag assembly.

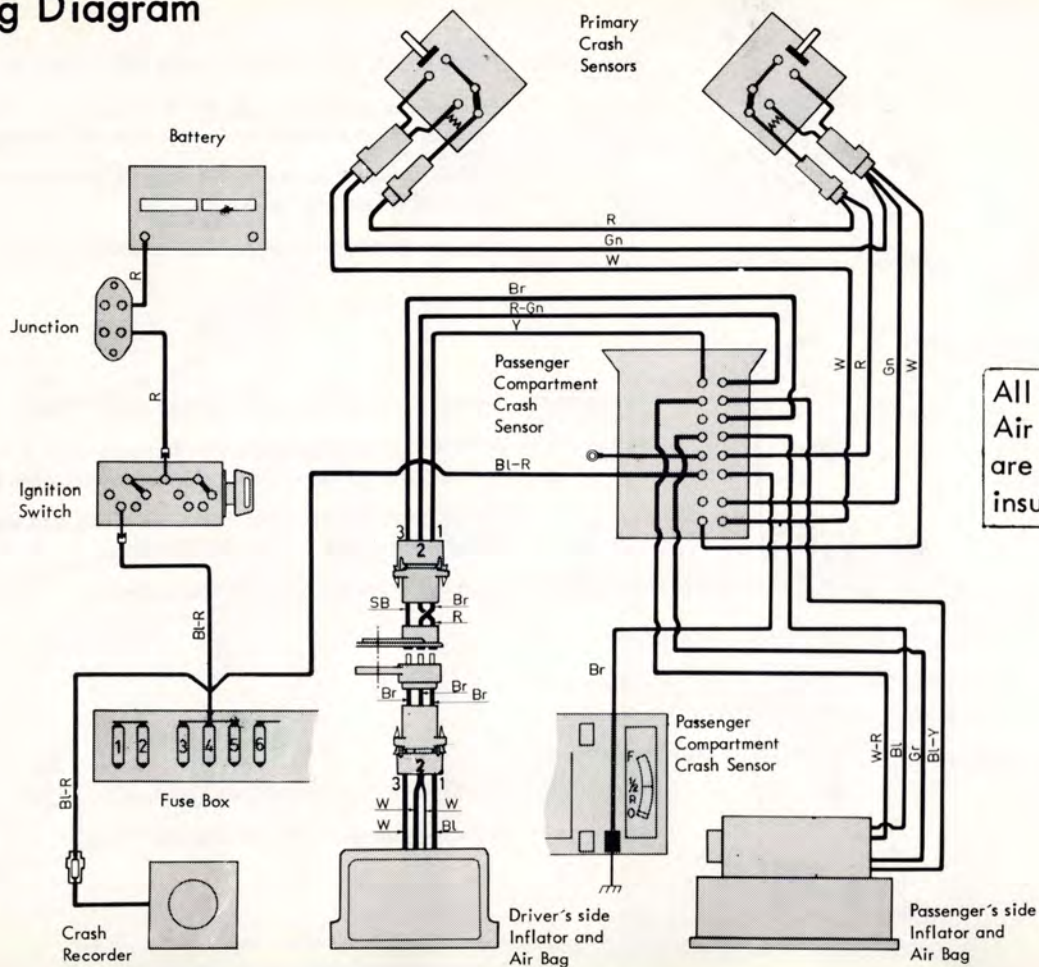


Illuminated: PASSENGER SYSTEM EED RESISTANCE. LOW

- Action:
- Replace passenger side Air Bag assembly.

**NOTE:** faults may occur single or in combinations

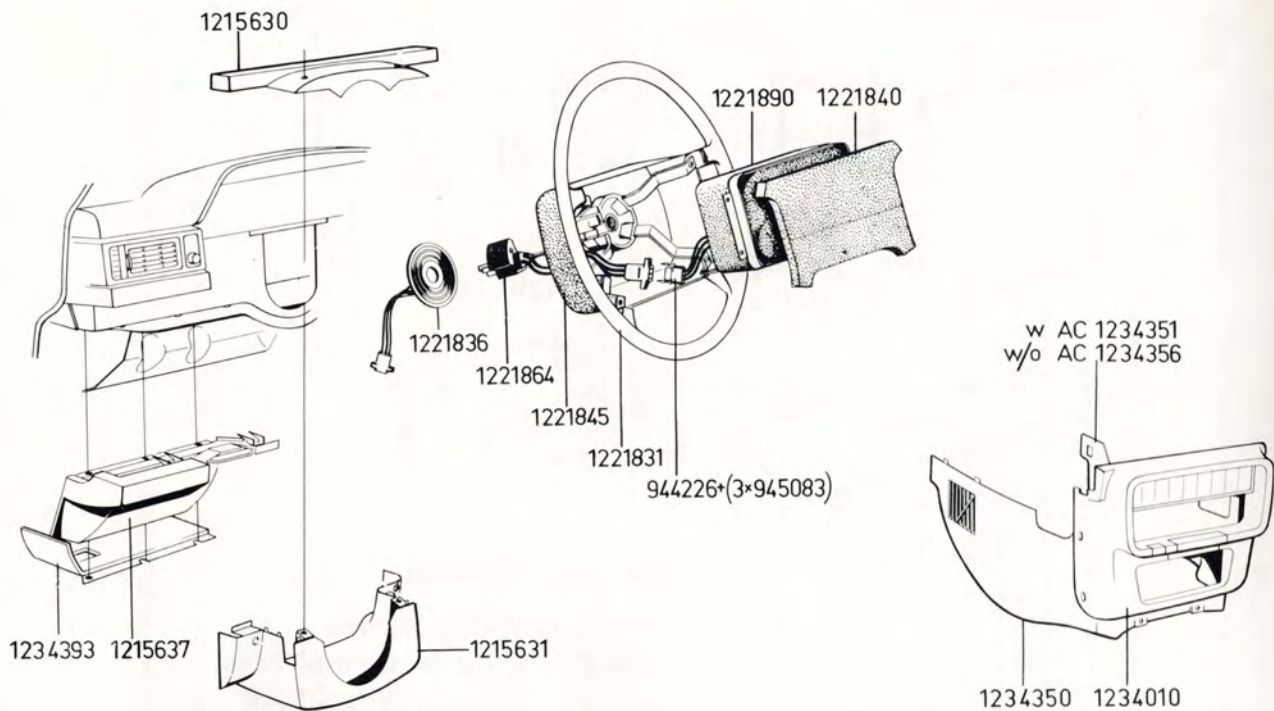
# Wiring Diagram



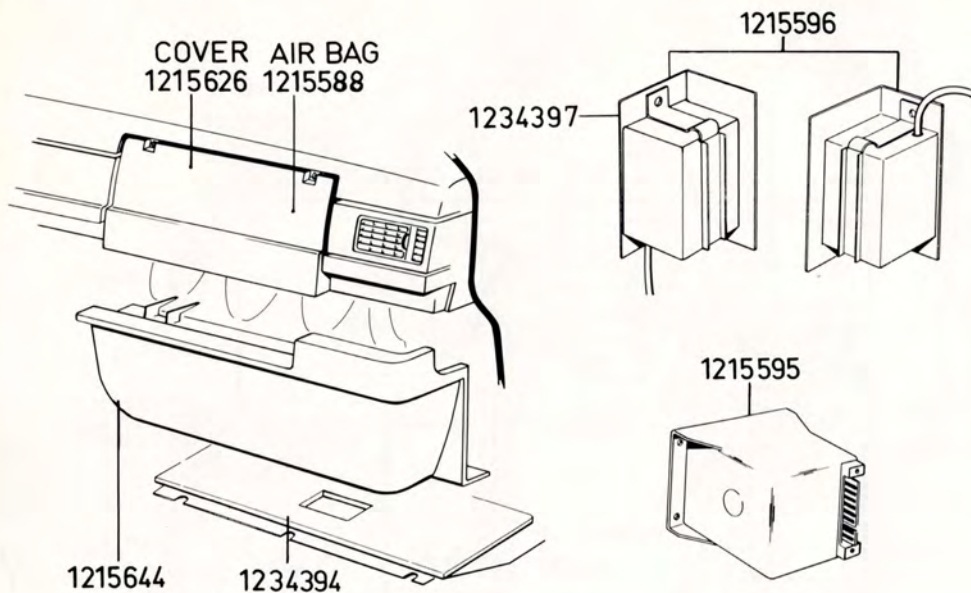
All wires for the Air Bag System are routed in red insulation hoses



# Spare Parts



# Spare Parts



## Parts not illustrated:

- 1215594 Wiring Harness
- 1234135 Clips for Control Panel
- 1228707 Steering Wheel Lock
- 1224835 Left side Seat Belt
- 1224837 Right side Seat Belt

# Index

A special message to operators of vehicles equipped with the Air Bag restraint system	
Use of this Manual	
Important Owner Information	
Child Restraint in an Air Bag equipped vehicle	
Components of the Volvo Air Bag System	
Readiness Indicator Light	
Maintenance Schedule	
Maintenance cost, Warranty, Collision Damage	
Monthly Reports	
Instructions for dealers servicing vehicle	

1	12
2	13
3	14
4	15
6	16
8	18
9	19
10	19
10	20
11	21
	22
	22
	30
	31
	31

## AIR BAG SYSTEM

SEE OWNERS MANUAL FOR OPERATIONAL  
DESCRIPTION OF SYSTEM. MAINTENANCE  
INSPECTION IS RECOMMENDED EVERY  
7500 MILES.

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