



# REPAIR MANUAL

## General

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### GENERAL TERMS OF WARRANTY

1. All new vehicles in the **AIXAM** range are guaranteed for a period of two years from their delivery to the client, against all defects or manufacturing flaw.  
All spare parts or accessories sold by **AIXAM** are guaranteed against any defect or manufacturing flaw for a period of one year from the date of delivery to the customer.
2. The following is required to benefit from the **AIXAM** guarantee:
  - The user manual must be filled with the vehicle identification, name and address of the user customer, and the stamp of the approved dealer.
  - The AIXAM approved distributor registers the guarantee on the Internet on the day of sale.
3. The guarantee may be requested from any approved dealer in the **AIXAM** network. The customer will present his user manual bearing the stamp of the vehicle seller, the date of delivery to the customer and stamp of the AIXAM approved dealer having performed servicing and check between 500 and 1 000 km, planned by the manufacturer.
4. Under pain of losing the benefit of the guarantee, the customer will present his vehicle between 500 and 1 000 km to his approved **AIXAM** dealer. The latter will perform free of charge (except consumables and small supplies) the labour operations required for checking, adjusting, tightening planned by the manufacturer at that mileage.  
After performing these operations, the **AIXAM** approved dealer will apply his stamp in the appropriate box, while indicating the date and exact mileage.
5. The guarantee includes replacement or repair, according to manufacturer instructions, of the part recognised faulty, with labour required by this replacement or repair free of charge. Repair on site or towing fees are not included.
6. Interventions within the warranty will not extend its period. However, the use of the warranty does extend its period for a time equal to that necessary for the performance only of the works under warranty, provided the said works require inevitably an immobilisation of the vehicle during at least 7 consecutive days (Act of 18 January 1992 – Art. 4)
7. The manufacturer is the rightful owner of the parts removed within the warranty.
8. Elements not covered by the warranty:
  - Any part and equipment which is not an original **AIXAM** component.
  - Servicing operations, including balancing and adjustment of parallelism of the wheels ; engine and headlight tuning, changing glow plugs, ignition plugs, lamps, belts, transmission belts, parts required for maintenance of regulators, brake pads and linings, brake discs and drums, lubricants and fluids.
  - Damage, breakdowns and damage resulting from:
    - abuse, accidents, theft, fire, vandalism,
    - industrial fallout, acid, alkaline, chemical, resin, bird droppings, salt, hail, storms, lighting and others,
    - non-observance of servicing programs at the planned periods,
    - improper intervention,
    - interventions outside the **AIXAM** network,
    - use of non-original parts,
    - use of improper fuel or lubricant or containing foreign bodies or fuel other than recommended,
    - Overloading, even temporary.
  - The entire vehicle if the latter was subject to modifications or transformations not planned by the manufacturer, particularly when the vehicle no longer matches the original homologation criteria.
  - Normal wear of any element including the exhaust, belts and shock absorbers, as well as ageing of the trims, upholstery, paint and wheel covers.
  - Any vehicle with an odometer which was changed or modified in such a way preventing to establish the actual mileage, with an altered serial number or engine number.
  - Expenses resulting from the immobilisation of the vehicle including direct or indirect or commercial loss incurred by the owner or usual user of the vehicle.
9. Documentations relative to the warranty, servicing, and driving:  
All benefactors of the **AIXAM** warranty receive a user manual delivered with the new vehicle.  
The application of the terms of warranty is subject to the presentation of this user manual.
10. In any case, the **AIXAM** vehicle benefits from the legal warranty against hidden flaws, in compliance with the provisions of articles 1641 and following of the Civil Code.



# REPAIR MANUAL

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## *General*

### CHECKS PERFORMED BEFORE VEHICLE DELIVERY:

- Check of closing and locking of all closing panels (doors, windows, hood, liftback, glove compartment,...)
- Check of the board tooling.
- Level check:
  - engine oil
  - reverser axle oil
  - washer fluid
  - brake fluid
  - coolant and antifreeze protection check
- Sealing check:
  - brake circuit
  - cooling circuit
- Tire pressure check, including the spare wheel.
- Check tightening of wheels, ball joints, engine, regulator, reverser bridge and screws in general.
- Check operation of electrical and lighting devices.
- Adjustment of idle.
- Check of parallelism.
- Vehicle test.
- Cleaning the vehicle interior and exterior
- Check of the starting battery charge level and tightening of the lugs.

### Cooling system

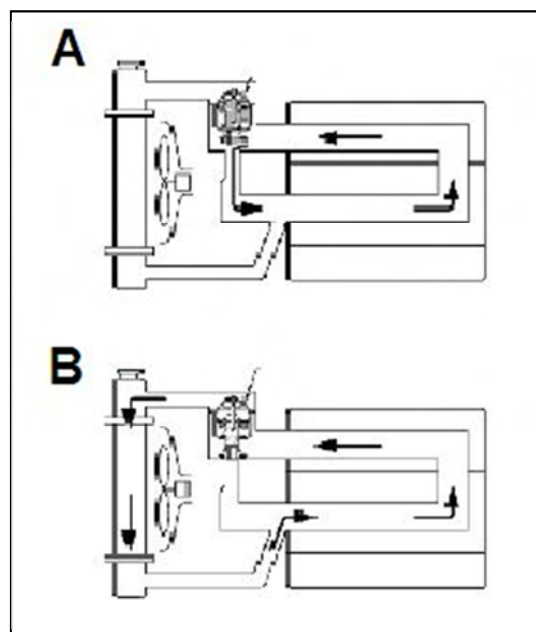
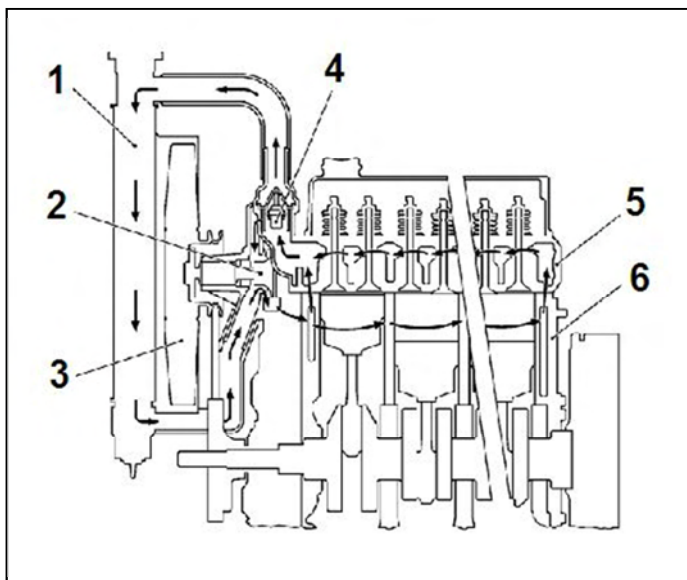
Forced circulation cooling system with water pump. Temperature regulation is ensured by a thermostat fastened on the upper water manifold of the cylinder head.

The thermostat is controlled as defined below:

Start of thermostat valve opening	69.5 to 72.5 °C
Full opening of the thermostat valve	85 °C

The water pump is centrifugal and driven by the accessory belt.

- 1 : Radiator
- 2 : Water pump
- 3 : Fan
- 4 : Thermostat
- 5 : Cylinder head
- 6 : Engine block



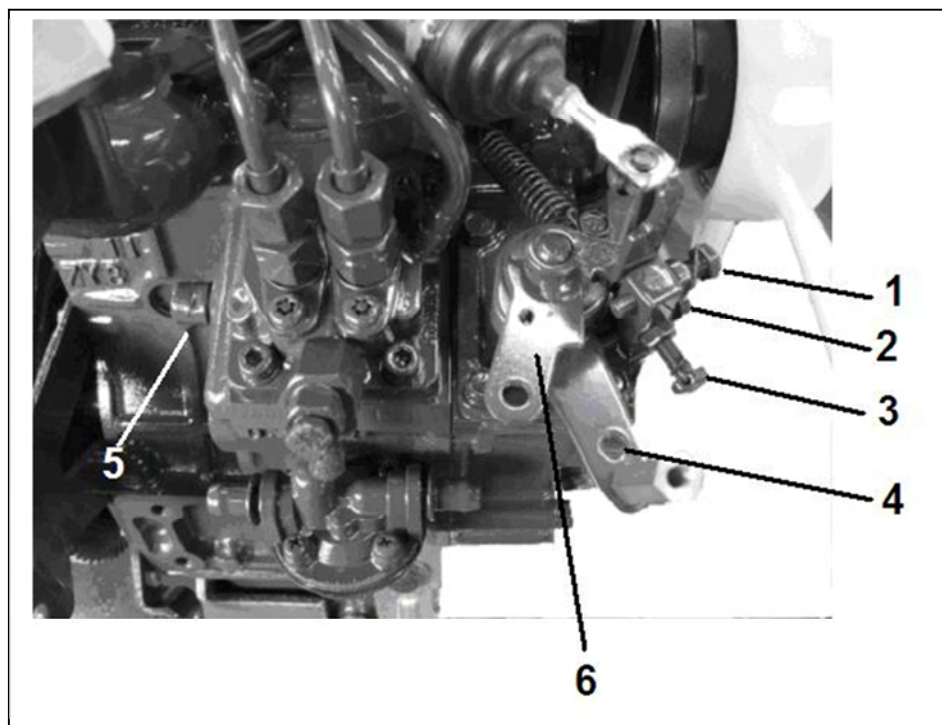
A: Thermostat closed, short circulation enhancing engine temperature build-up

B: Thermostat open, long circulation to cool the engine.

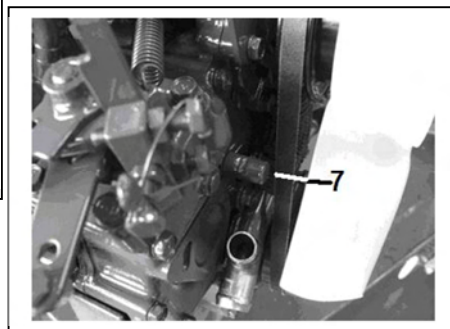
Quantity of coolant: 2 litres

### Adjusting and tuning

The basic adjustments are located on the injection pump or injection pump housing.



1. Engine Stop
2. Min acc. stop
3. Max acc. stop
4. Acceleration lever
5. Idle adjust screw
6. Engine stop lever
7. Max load adjust screw



### Idle adjust

Idle adjustment is made from screw 5.

However, idle speed must be reduced by 50 rpm by the min acceleration stop (2) and compensated with the idle adjust screw (5) to avoid untimely engine stalling.

### Load adjust

Max load adjustment is done with screw 7.

However, modifying this adjustment is not authorized. Adjustment of this screw is highly sensitive and may cause excessive smoke or lack of power. In case of problem linked with this adjustment, and once all other causes have been eliminated, call after-sales.

### TIGHTENING TORQUES Z402

The screws, bolts and nuts must be tightened at the torque specified using a torque wrench.

Several screws, bolts and nuts, such as those on the cylinder head, must be tightened in a specific sequence and torque.

#### 1. Tightening torques for screws, bolts and nuts for particular use

- For screws, bolts and nuts marked « \* » in the table, smear the threading and seats with motor oil before tightening.
- The letter « M » of dimension x pitch means that the dimension of the screw, bolt or nut relies on the metric system.
- The dimension is the nominal outer diameter of the threadings in mm.
- The pitch is the nominal distance in mm between two threads.

Element	Dimension x pitch	N-m	Kgf-m
* Cylinder head cover nuts	M6 x 1.0	3.9 to 5.9	0.4 to 0.6
* Cylinder head screws	M8 x 1.25	37.2 to 42.1	3.8 to 4.3
* Main bearing fastening screw 1	M6 x 1.0	12.7 to 15.7	1.3 to 1.6
* Main bearing fastening screw 1 (flywheel side)	M8 x 1.25	23.5 to 27.4	2.4 to 2.8
* Main bearing fastening screw 2	M7 x 1.0	26.5 to 30.4	2.7 to 3.1
* Flywheel screws	M10 x 1.25	53.9 to 58.8	5.5 to 6
* Piston rod screws	M7 x 0.75	26.5 to 30.4	2.7 to 3.1
* Rocker arm support nuts	M6 x 1.0	9.8 to 11.3	1.00 to 1.15
* Gear shaft screw	M6 x 1.0	9.8 to 11.3	1.00 to 1.15
* Crankshaft end bolt	M12 x 1.5	117.6 to 127.4	12.0 to 13.0
* Bearing box cover screws	M6 x 1.0	9.8 to 11.3	1.00 to 1.15
Glow plugs	M8 x 1.0	7.8 to 14.7	0.8 to 1.5
Injector holder assembly	M20 x 1.5	49.0 to 68.6	5.0 to 7.0
Oil pressure switch tapered screw	PT 1/8	14.7 to 19.6	1.5 to 2.0
Injection duct fastening nuts	M12 x 1.5	24.5 to 34.3	2.5 to 3.5
Overflow pipe assembly fastening nuts	M12 x 1.5	19.6 to 24.5	2.0 to 2.5
Starter nut B terminal fitting nut	M8	8.8 to 11.8	0.9 to 1.2

#### 2. Tightening torques for screws, bolts and nuts for general use

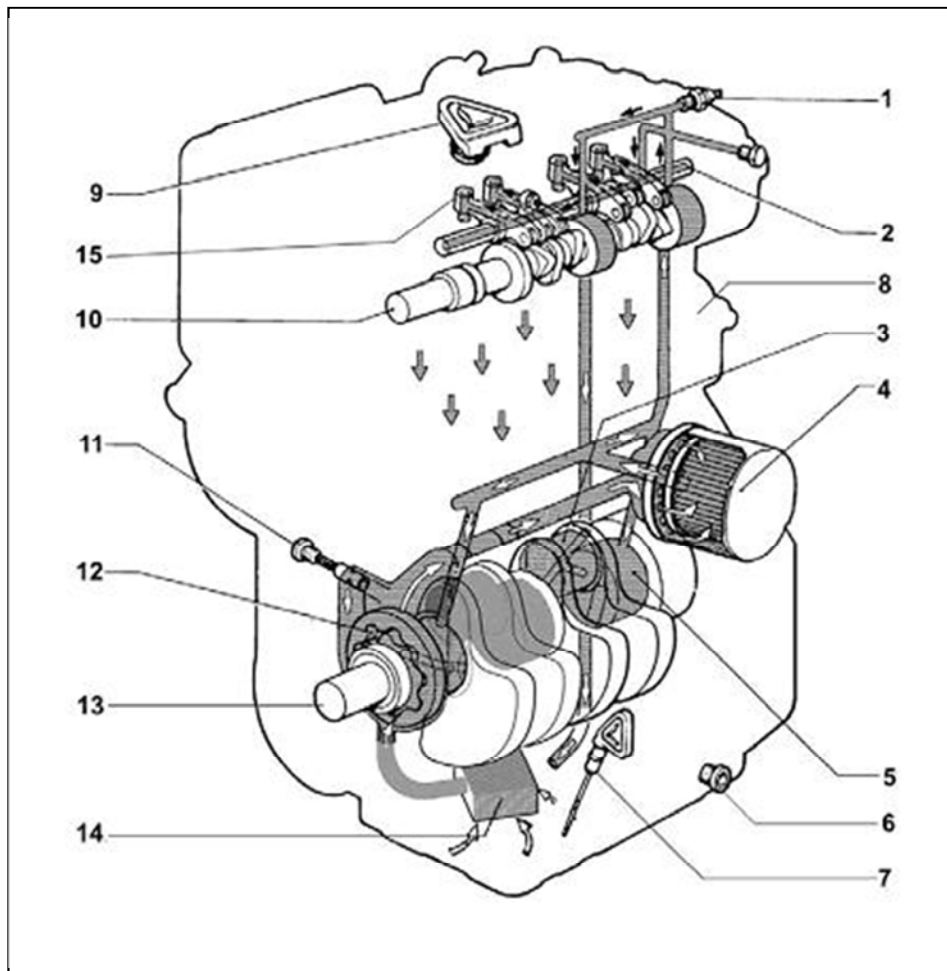
When tightening torque values are not specified, tighten the screws, bolts, and nuts at the values specified in the following table.

	Grade	Standard screws and bolts 4		Special screws and bolts 7	
	Unit	N-m	Kgf-m	N-m	Kgf-m
Nominal diameter	M6	7.9 to 9.3	0.80 to 0.95	9.8 to 11.3	1.00 to 1.15
	M8	17.7 to 20.6	1.8 to 2.1	23.5 to 27.5	2.4 to 2.8
	M10	39.2 to 45.1	4.0 to 4.6	48.1 to 55.9	4.9 to 5.7
	M12	62.8 to 72.6	6.4 to 7.4	77.5 to 90.2	7.9 to 9.2

The material grade is indicated by numbers engraved on the heads of screws and bolts. Always check the numbers indicated below before tightening.

Number engraved	Material grade of the screw or bolt
None or 4	SS41, S20C screw and bolt
7	S43C, S48C special screw and bolt (refined)

## LUBRICATION SYSTEM



1. Pressure switch
2. Rocker stud
3. Connecting rod head stud
4. Oil filter cartridge
5. Main bearing stud
6. Oil change plug
7. Oil gauge
8. Vent
9. Oil fill plug
10. Camshaft
11. Oil pressure adjust valve
12. Oil pump
13. Crankshaft
14. Oil suction filter
15. Hydraulic push rod

Oil quantity (with filter) = 1.3 litres  
Oil quantity (without filter) = 1.2 litres



### Warning !

When working on air conditioning systems containing refrigerant and requires emptying or opening the circuit, the emptying or opening of the system, it is mandatory that the engineer is qualified and holds the relevant license and that the business premises has also achieved a "Certificate of compliance".

**It is prohibited to discharge refrigerant into the atmosphere.**

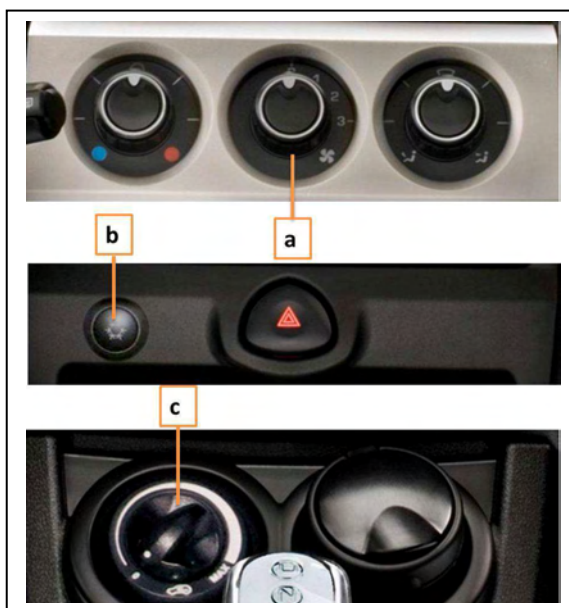
### HOW TO OPERATE THE AIR CONDITIONING: (document Philippe Morel)

#### How to operate the Air Conditioning

Switch fan to position 1 (a). Then press button (b) to operate the air conditioning. Adjust the air recirculation to maximize the air conditioning effectiveness (c). Recirculation (c) can also be used to improve cabin heating efficiency or to reduce external pollution entering the cabin e.g. before entering a tunnel.

Attention! Adjusting the recirculation to MAX can lead to condensation inside the vehicle, mainly on the windscreen.

The air conditioning must be serviced every two years.



### CHARACTERISTICS:

Type of Gas: R134A

Gas Qty.: 400g

Oil type: ZXL 200 PG

Oil Qty.:

Compressor coil resistance: 3.5  $\Omega$

Compressor belt tension: 90 Hz

### MAINTENANCE:

Every 2 years check the charge of the gas.

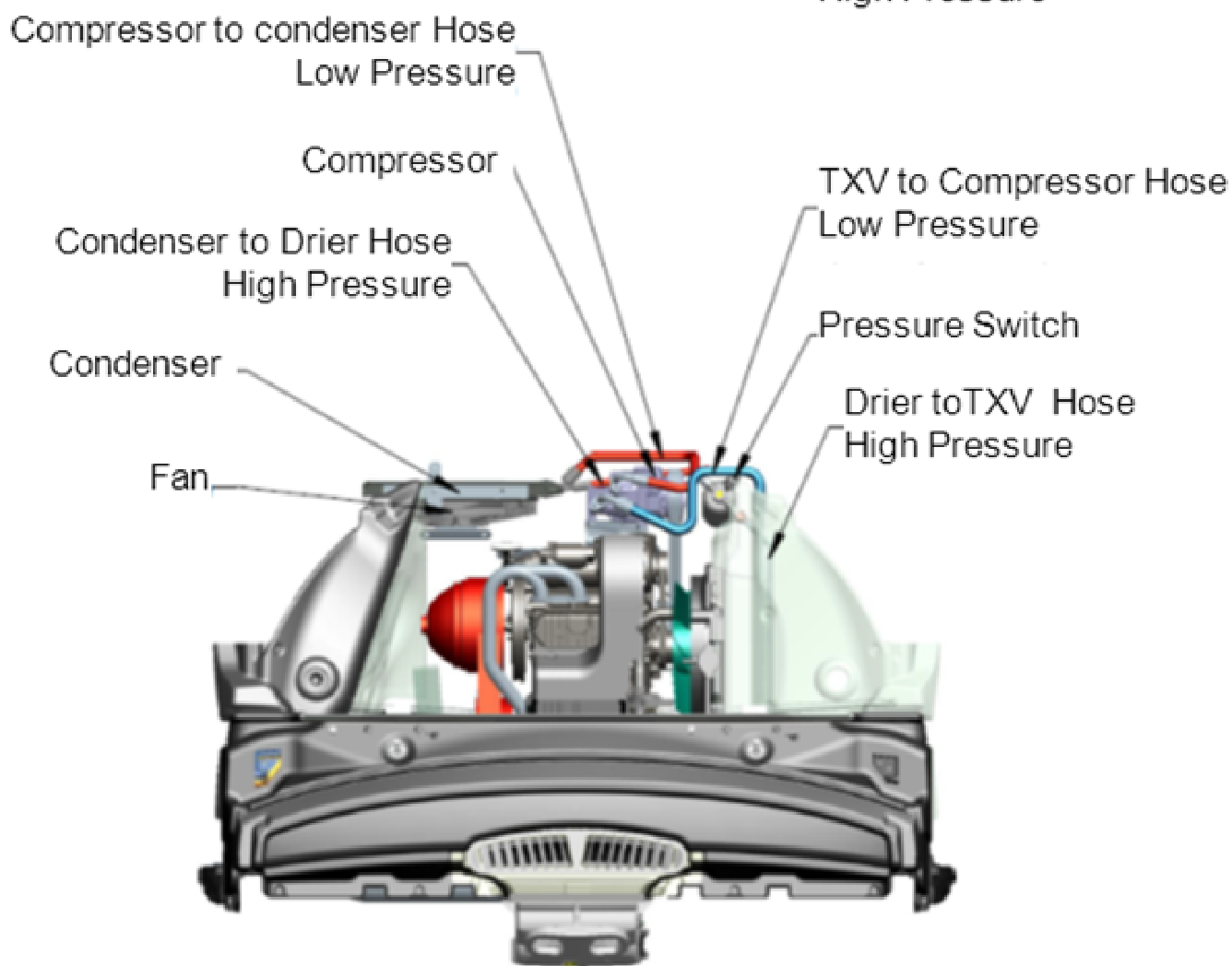
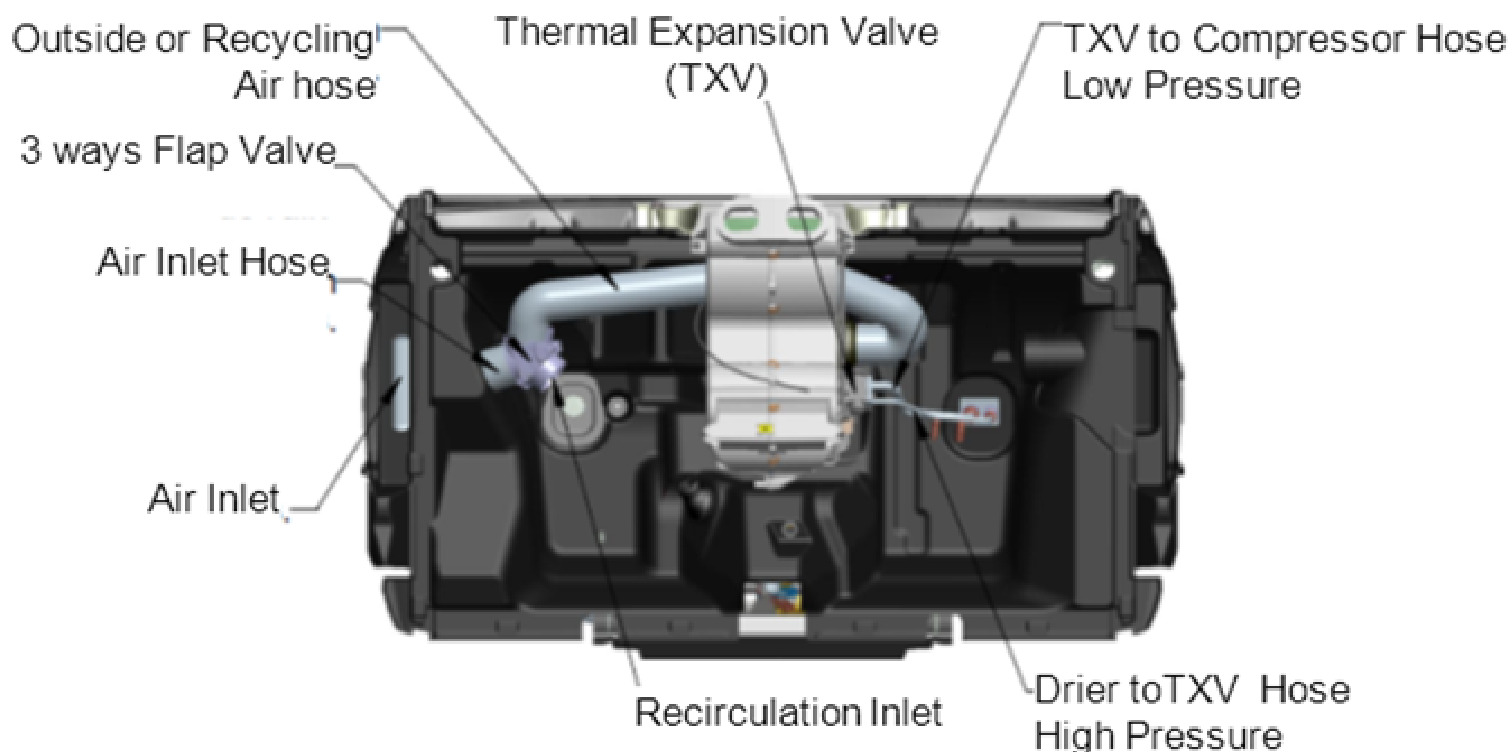
Every 4 years replace the Filter/Drier

The loss of gas:

The system is supposed to be tight, but to limit the risk of loss of air conditioning gas must rotate at least every 15 days (especially in winter, at least for 1/4 hours) to improve the flow of oil ( pending with the fluid) to lubricate the joints.

The water problem:

PAG oils are very hygroscopic, i.e. they have a strong tendency to absorb moisture from the air. The drier the moisture but retains its capacity is limited: 3 grams of water max. The circuit is supposed to be sealed and pressurized water can come from an insufficient degree of vacuum before the refrigerant charge



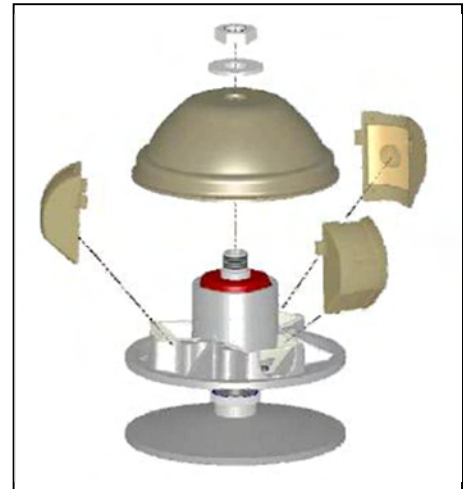


**Removing the leading pulley**

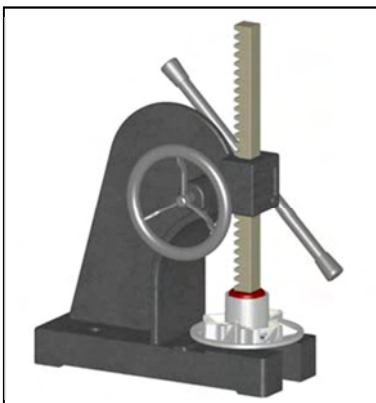
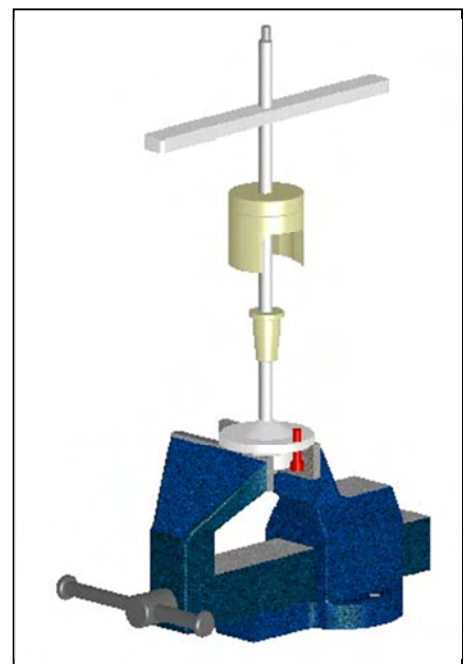
Removing the cover and centrifugal blocks  
Remove the nut (18) and washer (17). The cover and centrifugal blocks are now released.

***Inspection recommended***

- Damage to centrifugal blocks
- Wear of flanges (by belt friction)

**Removing the sliding flask**

Using the 0MDP17 removing tool is indispensable to avoid sudden removal of the sliding flange (spring effect).



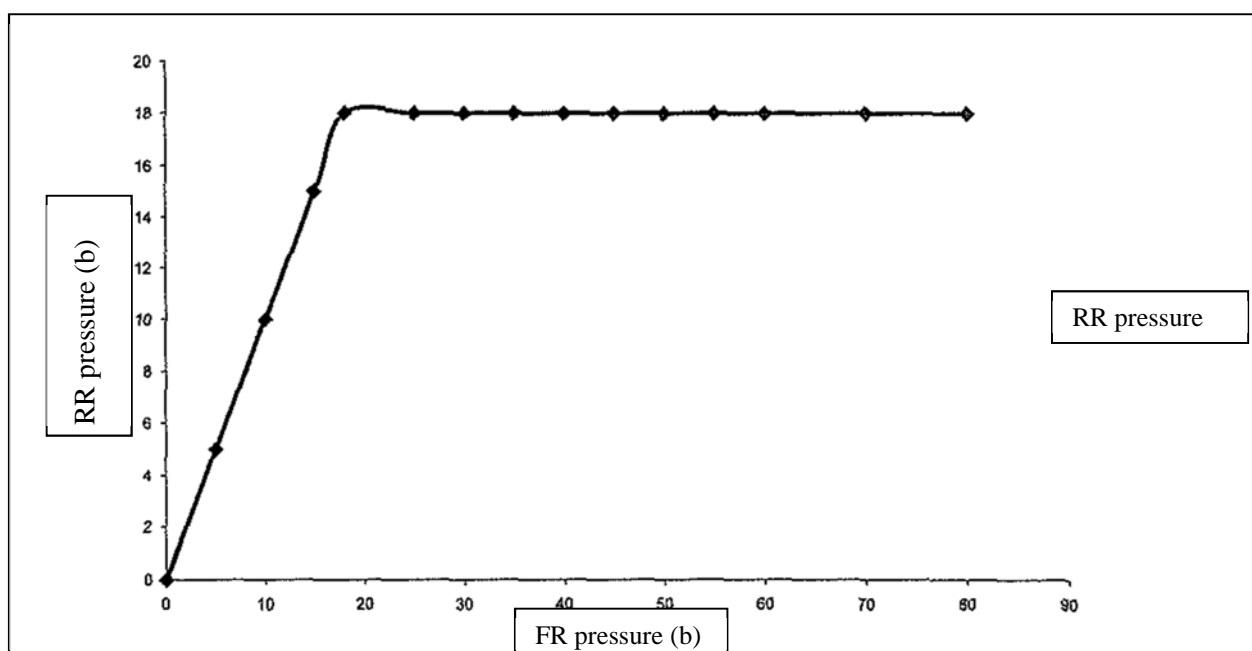
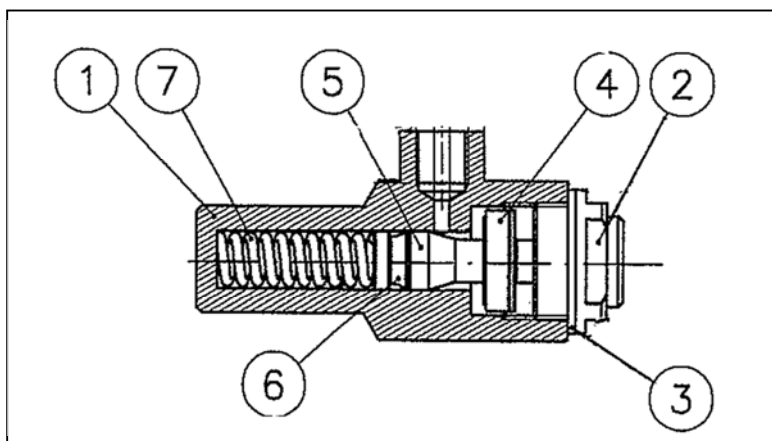
Although less securing, a table press (see illustration) or a drill press may be used.

### Rear braking pressure corrector:

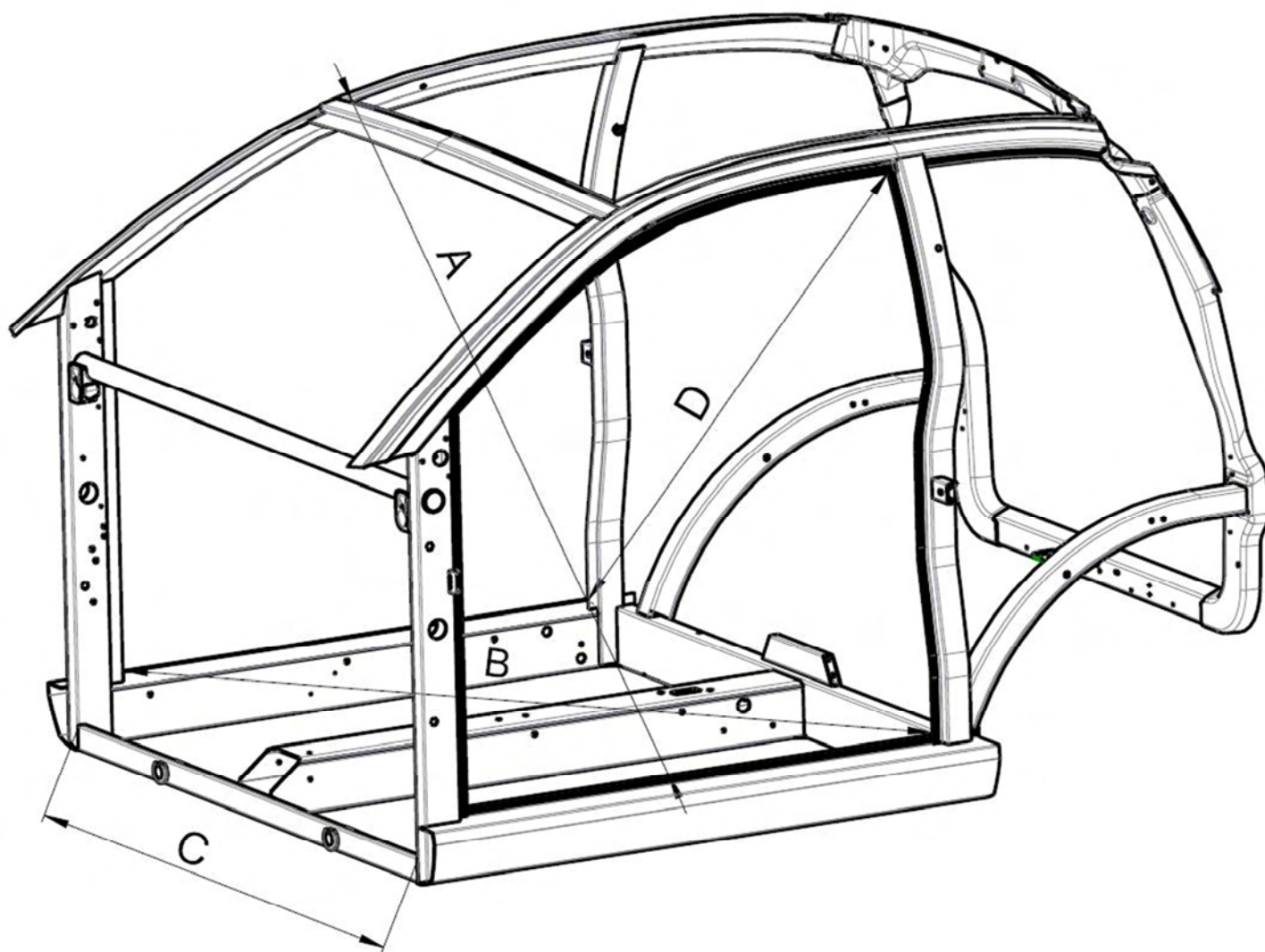
The corrector is divided into two separate parts to ensure the braking circuit is safe.

The latter is designed to restrict braking pressure to 18 bars maximum.

- 1 : Body of the limiter
- 2 : Cap of the limiter
- 3 : Copper gasket
- 4 : Main gasket
- 5 : Piston
- 6 : Secondary gasket
- 7 : Rating spring



### Aluminium cell dimensions CITY



	<b>CITY</b>	<b>+/- mm</b>
<b>A</b>	1492	2
<b>B</b>	1561,2	2
<b>C</b>	1225	2
<b>D</b>	1510,6	2

## Frame tailgate 7AR080 mounting process

Materials needed:

### Tools

1 glue gun  
Primer machine  
1 riveting machine

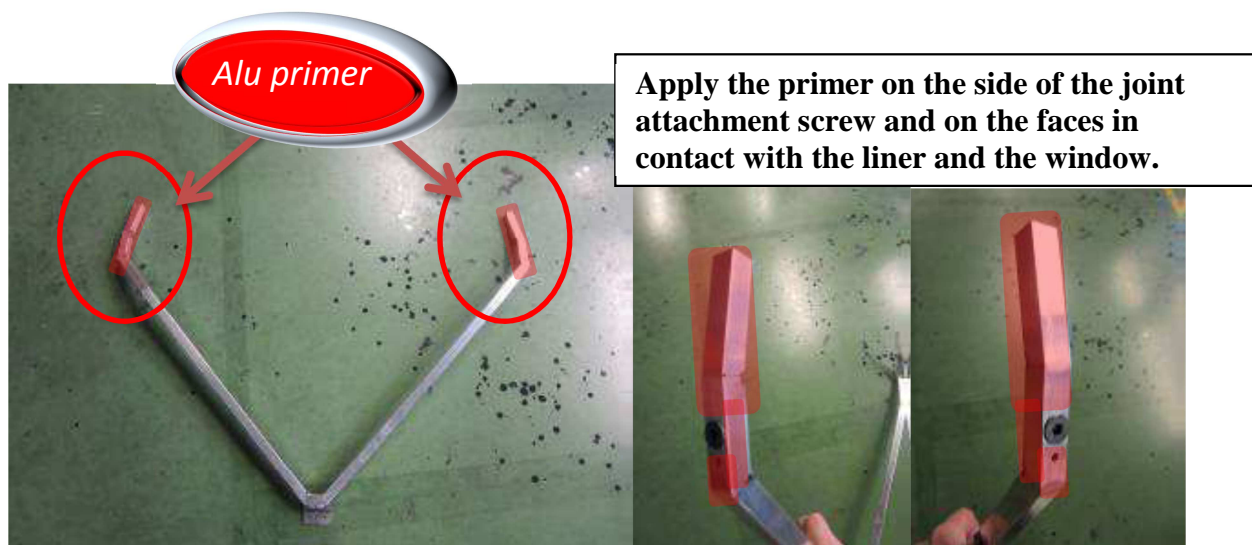
### Components

7AR460 1 City TAILGATE DOOR INNER PANEL  
7K102A 2 UPPER JOINT HEAD  
4 Rivets 4,8X16  
2 nitrile washers  
7AG358: BODY GLUING KIT  
7AG359: WINDSHIELD GLUING KIT

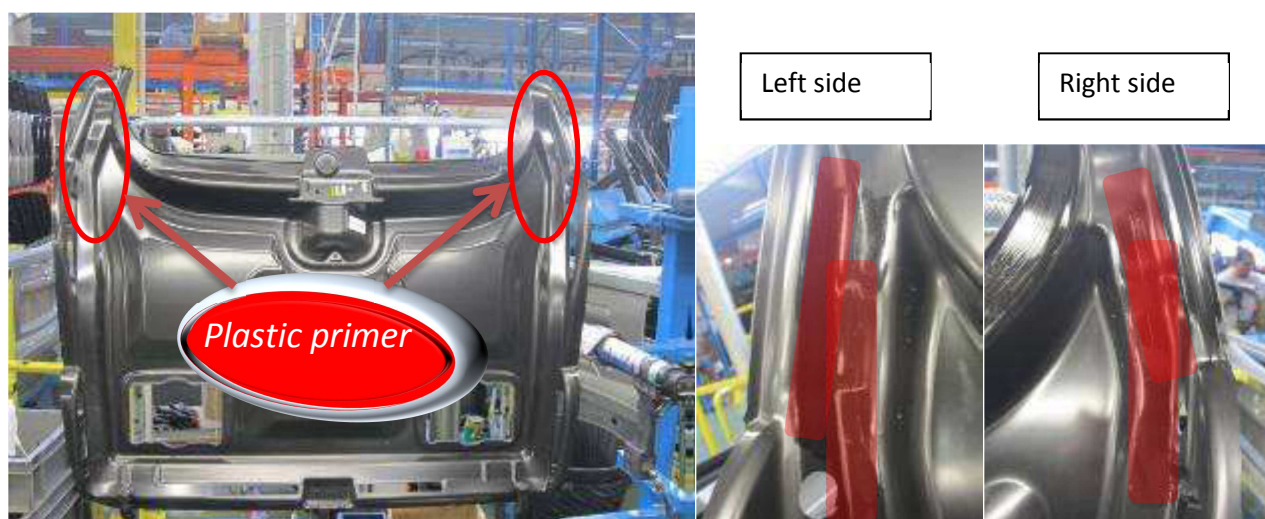
Step 1: preparation of the parts to be glued

Sand the part and clean it with degreasing agent on the area that will receive the primer.

Then immediately apply the primer on the frame.



Apply the primer on the liner.





#### 4. Conditions of occurrence of the problem

<b>Description</b>	<input type="text"/>		
<b>Status</b>	Failure upon unpacking <input type="checkbox"/>	Under guarantee <input type="checkbox"/>	Out of guarantee <input type="checkbox"/>
<b>Frequency</b>	Permanent <input type="checkbox"/>	Intermittent <input type="checkbox"/>	
Engine condition	Stopped <input type="checkbox"/>	Running <input type="checkbox"/>	
<b>Other</b>	On certain radio stations <input type="checkbox"/>	Upon connecting <input type="checkbox"/>	
	When starting the vehicle <input type="checkbox"/>	Vehicle electronic consumption <input type="checkbox"/>	

#### 5. Information on the vehicle

Make	<input type="text"/>
Model	<input type="text"/>

**IMPORTANT:** All the fields appearing in bold characters must be filled for the prior exchange request to be validated by our services. Nevertheless, we also prompt you to fill in the optional fields (non bold characters) in order to provide us with maximum information, allowing us to improve our service constantly. In addition, we draw your attention to the fact that entering your email address allows virtually instant issuance of the exchange approval.

I the undersigned \_\_\_\_\_ certify having read the terms of prior exchange of Clarion products and commit hereby to pay the invoice issued by Clarion France (invoicing in usual condition plus a penalty of 48€) in case of non return of the faulty product within 10 days after receiving the product overhauled or excluded from the guarantee (invoicing within 45 days) due to improper installation, abnormal use or non compliant maintenance by the end consumer.

Date:

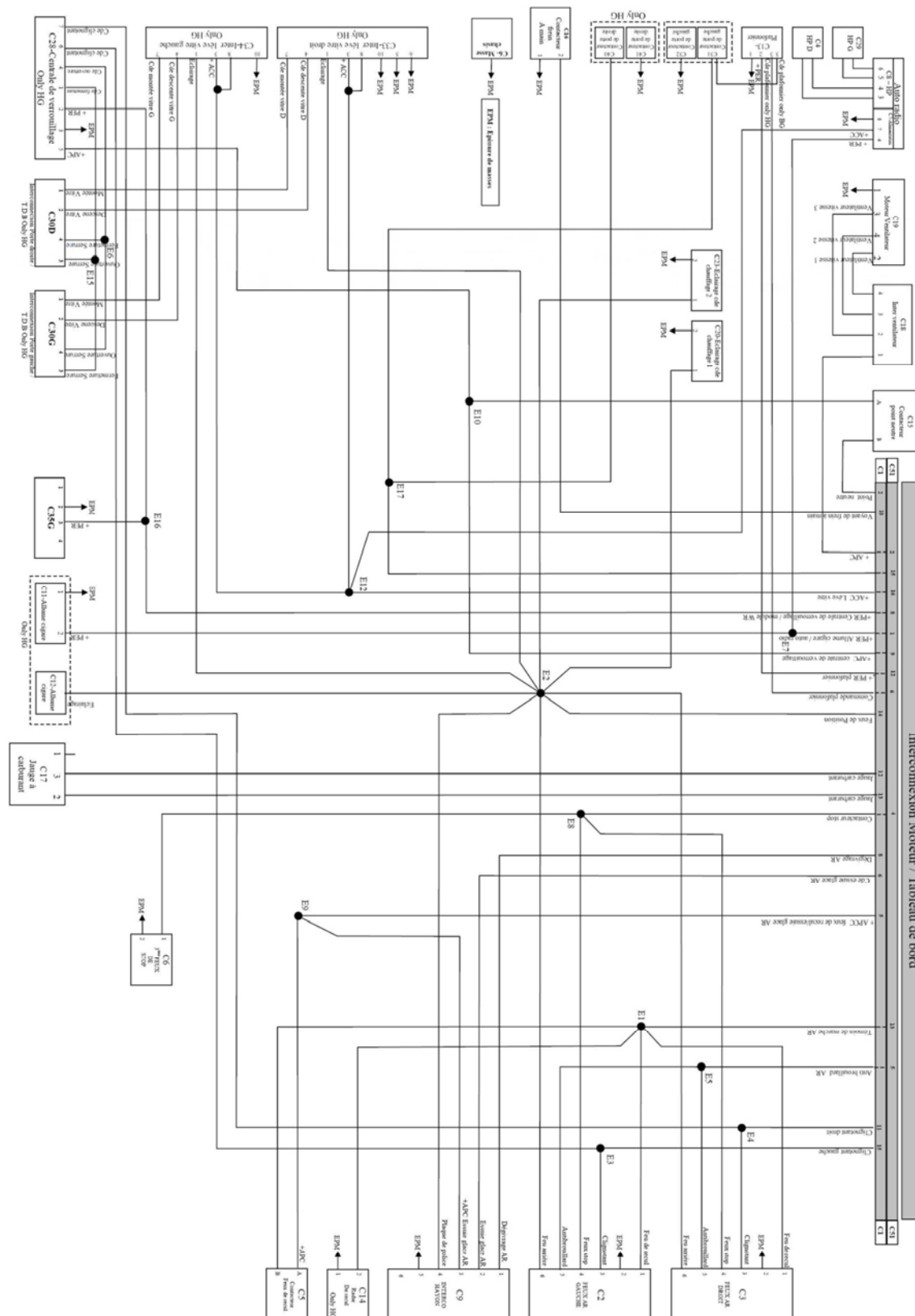
Signature and company stamp

**Fax Clarion France After-sales: (0033) (0)3 83 49 57 24**



## ELECTRIC DIAGRAMS

## Dashboard harness





**AIXAM**

# REPAIR MANUAL

## *PAINT*

# 9

PURE WHITE A 407 AKZO NOBEL SIKKENS

### SIKKENS reference

AIX 306

Compositions

Autowave MM

98

1161,4

342

1161,6

360

1162,1

744

1162,6

558

1165,5