REPAIR MANUAL

AIXAM

CONTENTS

INDEX

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.

TECHNICAL CHARACTERISTICS
Light quadricycle category L6e

GENERAL	CITY	CROSSLINE
Genre	Light quadricycle category L6e	
Type and version	SV43AF	SV42AF
Steering wheels	Front	
Drive wheels	Front	
DIMENSIONS (mm)	**CITY**	**CROSSLINE**
Front track width	1345	1345
Rear track width	1345	1345
Wheelbase	1795	2000
Front overhang	524	524
Rear overhang	401	466
Overall length	2720	2990
Overall width	1500	1500
Height	1470	1540
WEIGHT (kilograms)	**CITY**	**CROSSLINE**
Gross vehicle weight rating	640	
Gross driving weight rating	none	
Maximum load:		
On front axle	350	
On rear axle	400	
Empty vehicle curb weight:		
Total	380	
On front axle	230	
On rear axle	150	

ENGINE	CITY	CROSSLINE
Brand	KUBOTA	
Type	Z402	
Cycle	DIESEL	
Number of strokes	4	
Number and position of the cylinders	2 INLINE	
Bore (mm)	64	
Stroke (mm)	62,2	
Compression ratio	23	
Maximum power (kW CE)	4	
Maximum power engine speed (rpm)	3200	
Maximum torque (N/M CEE)	14	
Maximum torque engine speed (rpm)	2400	
Maximum rotation engine speed (rpm)	3200	
Fuel used	GASOIL	
Fuel tank (litres)	16	
Ignition	By compression	
Engine cooling	Liquid	
Sound level at the fixed point:		
Sound level value (dba)	79	
Maximum corresponding engine speed (rpm)	2400	

TECHNICAL CHARACTERISTICS
Heavy quadricycle category L7e

GENERAL	**CROSSLINE**
Genre	Heavy quadricycle category L7e
Type and version	ST62AF / ST92AF
Steering wheels	Front
Drive wheels	Front
DIMENSIONS (mm)	
Front track width	1345
Rear track width	1345
Wheelbase	2000
Front overhang	524
Rear overhang	466
Overall length	2990
Overall width	1500
Height	1540
WEIGHT (kilograms)	
Gross vehicle weight rating	675
Gross driving weight rating	none
Maximum load:	
On front axle	350
On rear axle	500
Empty vehicle curb weight:	
Total	400
On front axle	240
On rear axle	160

ENGINE	**Heavy quadricycle category L7e**	
Brand	KUBOTA	LOMBARDINI
Type	Z602	LGW 523MPI
Cycle	DIESEL	GASOLINE
Number of strokes	4	4
Number and position of the cylinders	2 INLINE	2 INLINE
Bore (mm)	72	72
Stroke (mm)	73,6	62
Compression ratio	24	8,7
Maximum power (kW CE)	11,2	15
Maximum power engine speed (rpm)	3600	5000
Maximum torque (N/M CEE)	34	37
Maximum torque engine speed (rpm)	2200	3000
Maximum rotation engine speed (rpm)	3600	5000
Fuel used	GASOIL	LEAD-FREE GASOLINE 95,98
Fuel tank (litres)	16	16
Ignition	BY COMPRESSION	ELECTRONIC
Engine cooling	LIQUID	LIQUID

TECHNICAL CHARACTERISTICS

MOVEMENT TRANSMISSION

- Gear type: continuous variable transmission
- Clutch type: centrifugal
- Control mode: automatic
- Transmission type:

  Engine → regulator → reverser reducer axle → wheels.
- Maximum speed: 45km/h light quadricycle category L6e
- Maximum speed: 75km/h heavy quadricycle category L7e.

SUSPENSION

• Front: independent wheels, pseudo Mac Pherson type, double effect hydraulic telescopic shock absorbers and helical springs.
• Rear: independent wheels with pulled arms, double effect hydraulic telescopic shock absorbers and helical springs.

STEERING

• Steering type: rack

BRAKING

CHARACTERISTICS	FRONT	REAR
Type	Discs	Drums
Diameter	210 mm	160 mm

• Service brake

The front and rear linings are driven by hydraulic pistons controlled by a double circuit master cylinder. This master cylinder, which includes a brake fluid tank in its upper section, is controlled from inside the vehicle by a pedal within reach of the driver's right foot. A limiter allows automatic reduction of braking effectiveness on the rear axle.

• Emergency brake

A lever located near the driver's right hand, between both vehicle seats, actuates the rear brakes, by means of a cross-bar with two cables. This brake is adjusted mechanically by a screw on the level of each rear wheel or the cross-bar. A pawl allows to hold this brake in the applied position.

BODY:

• Body: light engine-powered quadricycle (L6e), heavy engine-powered quadricycle intended for transporting persons (L7e)
• Materials making up the body:
thermoformed ABS
• Number of seats: 2 light quadricycle category L6e, 4 heavy quadricycle category L7e
• Seats: 2 and bench seat Heavy quadricycle category L7e
• Number of doors: 2
• Nature of materials used for windows:
  - Windshield: laminated glass
  - Side windows: tempered glass
  - Rear window: tempered glass

LIGHTING AND SIGNALING

• Headlights:
- indicators: 12V/21W
- position lights: 12V/21W
- low and high beam 12V/50W/60W
• Rear lights:
- rear and stop lights: 12V/21W/5W
- fog lights: 12V/21W
- backup lights: 12V/21W
• Front fog lights:
- fog lights: 12V/35W
• Day lights:
-LED lights: 12V/ 4W

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.

WORK TO BE PERFORMED AT SERVICING

INTERVENTIONS AND CHECKS TO PERFORMED UPON SERVICING	First servicing at 1000 km or 1 year	Servicing at 5000 km or 1 year and every 5000 km	Additional works at 10000 km and every 10000 km
engine oil draining and renewal with oil filter change	o	o	
draining the reverser axle and oil change	o		o
oil level check on the reverser axle (top up if necessary)		o	
check of the level of coolant (top up if necessary)	o	o	
check sealing of the cooling circuit	o	o	
check of the level of brake fluid (top up if necessary)	o	o	
check sealing of the brake circuit	o	o	
check operation of the brakes including the handbrake	o	o	
cleaning and dust removal of the brakes, change the linings if required			o
check of the level of battery electrolyte (top up with demineralised water if required)			o
Adjustment of the reverser lever		0	
grease the battery terminals			o
check the condition of the belts and change if necessary		o	
removing dust on entire regulator		o	
check of regulator gap and replacement of main bearings if required		o	
check screw tightening (wheels, engine,.....)	o	o	
change or clean the air filter		o cleaning	o
change fuel filter		o	
tire pressure check, including the spare wheel	o	o	
Check sealing of shock absorbers		0	
Check the condition of suspension pins (engine, exhaust)		0	
Check the condition of the bellows (joints and steering rack)		0	
Reprogram the maintenance indicator	0	0	0
check the charging circuit		o	
check proper operation of the lighting and electrical instrumentation	o	o	
Cleaning the fins of the cooling radiator			0
check and adjust parallelism	o		
vehicle test	o	o	

CAUTION: Maintenance work to perform regularly (in addition to servicing recommended)
Annually: renew the brake circuit fluid.
Every two years: renew the coolant.

Never use super fuel as antifreeze in diesel fuel.
Use the products recommended in stores

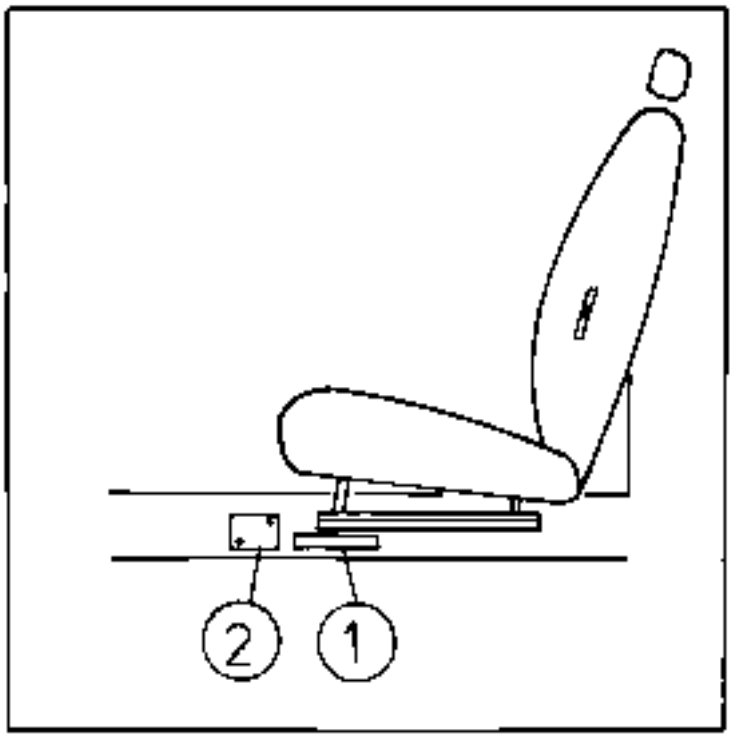
VEHICLE IDENTIFICATION

1-SERIAL NUMBER COLD PUNCH

The serial number is punched on the right-hand cross-member, inner side of the car, under the right-hand seat slider.

2-MANUFACTURER PLATE

The manufacturer plate is riveted to the right-hand stringer on the inner side of the car, next to the engraved serial number.



TIGHTENING TORQUES

FUNCTION	DESIGNATION	SCREW	COEF	Torque in Nm	
				Mini	Maxi
STEERING	Column tensioner (upper screw)	M8*20	2	18,4	27,6
	Column tensioner (lower screw)	M8*35	2	18,4	27,6
	Flector column	M8*20+nylstop	2	18,4	27,6
	Steering column	nylstop M8	3	18,4	27,6
	Steering joint (cardan)	M8*35+nylstop	1	18,4	27,6
	Steering rack	M10*60	2	36	54
	Tie rod	Nylstop M10*1,25	2	32	48
	Steering wheel	M12 torx	1	40	60
BRAKES	Handbrake	M8*20	2	18,4	27,6
	Master Cylinder	M8*25+nylstop	2	18,4	27,6
	Banjo bolt limiter	Thin thread banjo bolt	4	20	30
	Brake pedal	M 6 x 16	1	8,8	13,2
SEATS/BELT	Safety belt (upper screw)	7/16' 20 UNF	2	25	40
	Safety belt (lower screw)	7/16' 20 UNF	2	25	40
	Seat belt retractor	7/16' 20 UNF	2	25	40
	Belt buckle	7/16' 20 UNF	2	25	40
	Seats front sliders	M6*30	8	8,8	13,2
FRONT & REAR AXLE	Front wheel hub nut	Nylstop M16*1,5	2	140	160
	Front suspension triangles	M10*50+Nylstop	4	38	54
	Front suspension ball joints	Nylstop M12*1,25	2	40	60
	t shock absorbers (upper sc	Nylstop M10*1,00	2	16	24
	t shock absorbers (lower sc	Nylstop M12	2	36	54
	Rear wheel hub axle	M12*180+Nylstop	2	64	96
	r shock absorber (upper scr	M10*65+Nylstop	2	38	54
	Rear suspension arm	M10*65+nilstop	4	38	54
	Front wheel	M10*1,25	16	40	60
	Rear wheel	M10*1,25	16	40	60
TRANSMISSION	Receiver inverter	Spiralock nut M12	1	90	110

INDEX

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

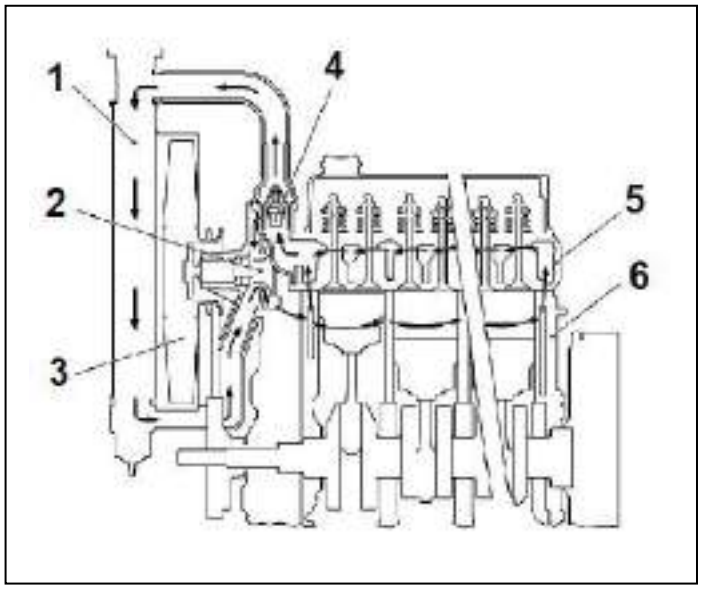
2 : Water pump

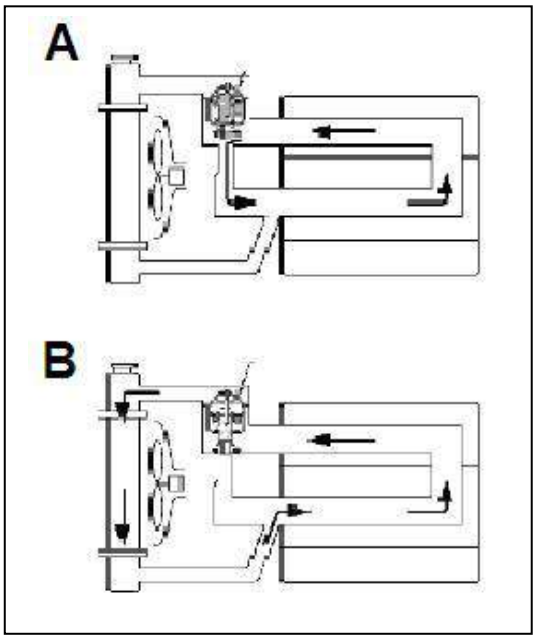
3 : Fan

4 : Thermostat

5 : Cylinder head

6 : Engine block





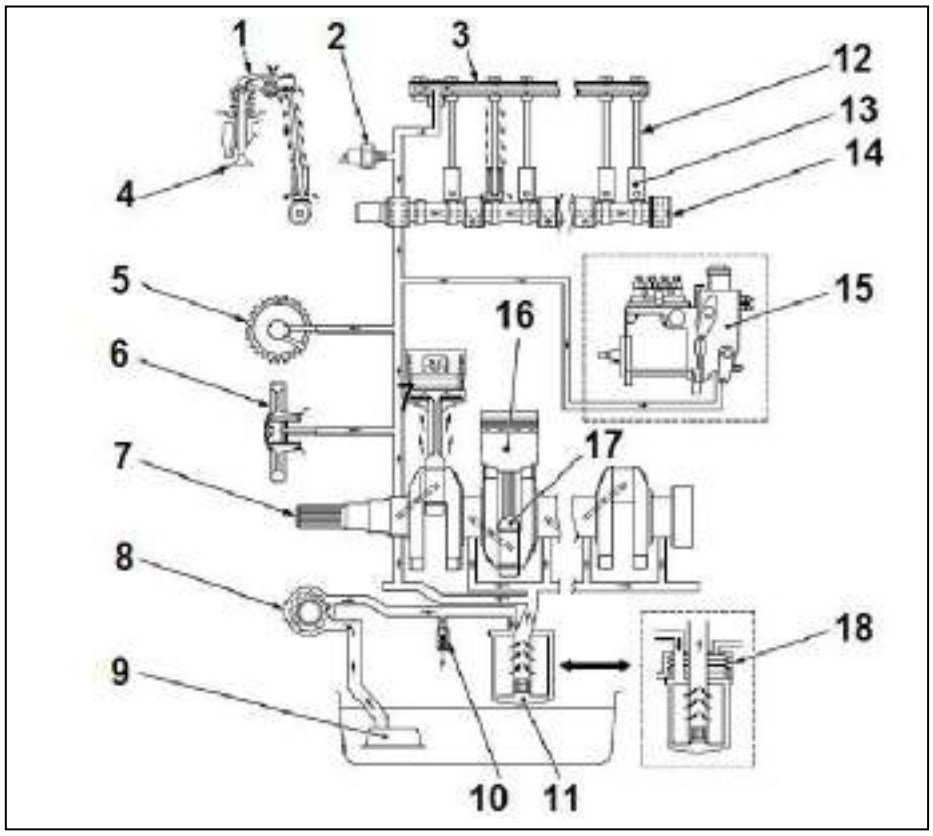
A: Thermostat closed, short circulation enhancing engine temperature build-up

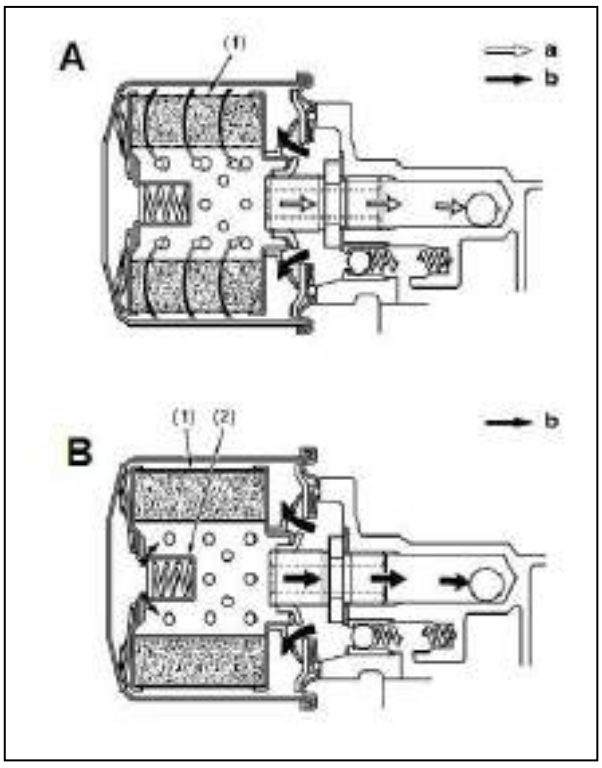
B: Thermostat open, long circulation to cool the engine.

Quantity of coolant: 2 litres

Lubrication system

1 : Rocker
2 : Pressure switch
3 : Rocker ramp
4 : Valve
5 : NA on 400
6 : Distribution
7 : Crankshaft
8 : Oil pump
9 : Strainer
10 : Overpressure valve
11 : Oil filter
12 : Push rod
13 : Indexed push rod
14 : Camshaft
15 : Injection pump
16 : Piston





A: Filter OK
B: Clogged filter

Quantity of Z402 oil: 1.80 litres
Quantity of Z602 oil: 2.50 litres

Injection system

The injection pump delivers the quantity of fuel required to meet the driver's demand.
The injection pump preserves the engine of any overspeeding and ensures idle running stability.
The injection pump controls engine stopping when requested.

It is divided into four separate parts:

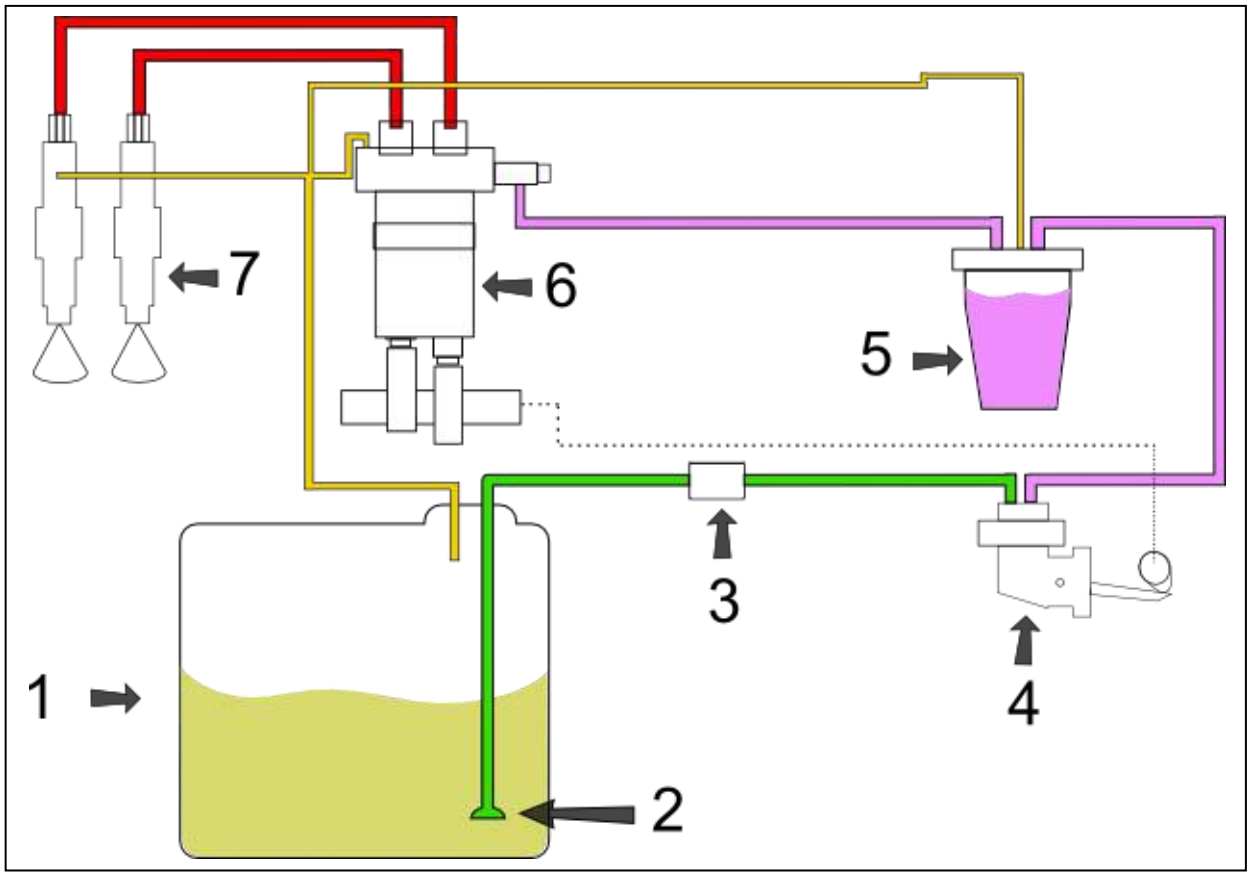
- Low pressure
- High pressure
- Regulation
- Control

The low pressure circuit comprises the:

1. Fuel tank
2. Strainer
3. Fuel pre-filter
4. Supply pump
5. Main filter

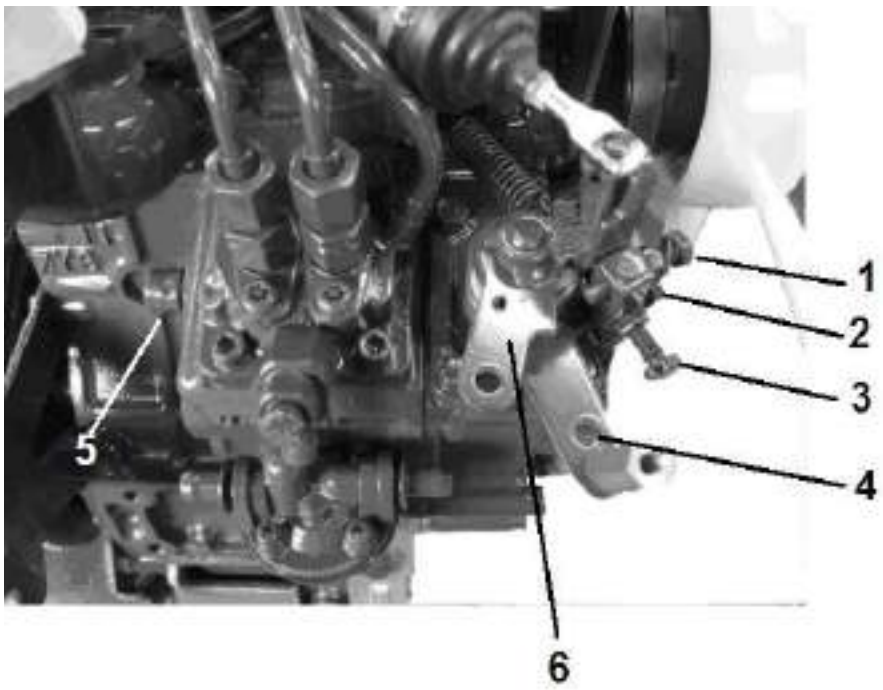
The high pressure circuit comprises the:

6. Injection pump
7. Injectors



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

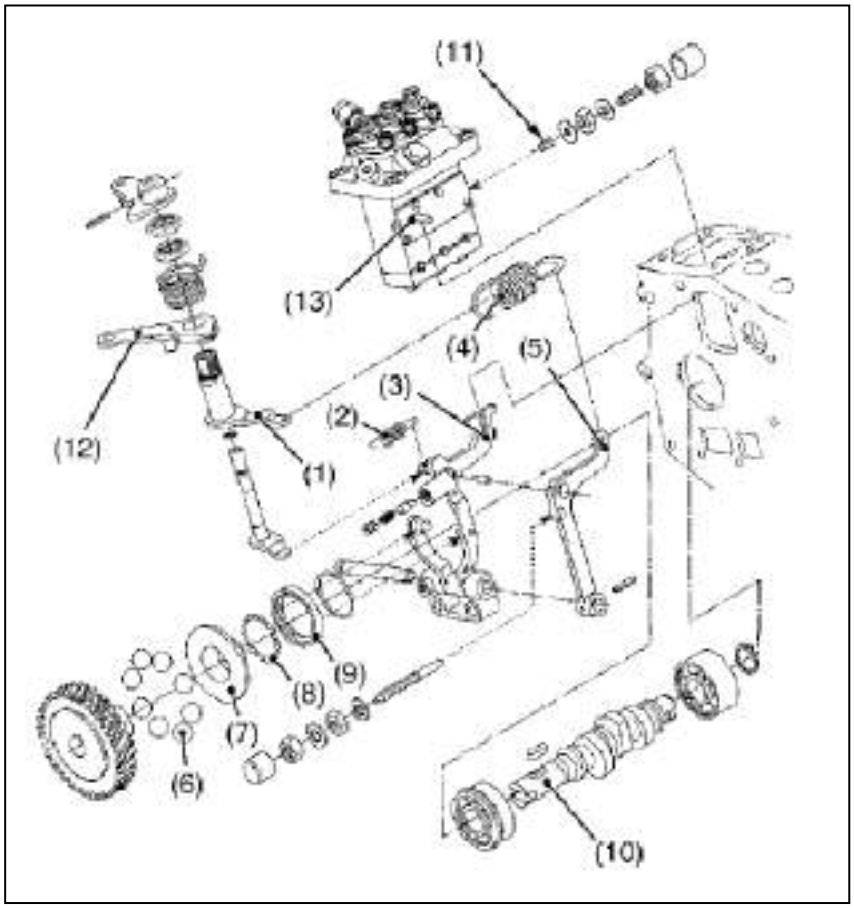
Idle adjust

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.

Regulation principle



1. Accelerator lever
2. Starting spring
3. Regulation lever
4. Regulation spring
5. Intermediate regulation lever
6. – } Centrifugal regulator
7. –
8. –
9. –
10. Pump camshaft
11. Idle spring
12. Accelerator control
13. Flow control rod

Upon starting:

Spring 2 drives lever 3 to the maximum flow position, the control rod is in the maximum flow position. When the engine starts, the centrifugal force applied to the regulator is stronger that the cold start spring, hence lever 3 is pushed to the minimum flow position, and the control rod pushes the idle spring 11.

At idle:

Centrifugal force applied to the regulator is sufficient to maintain lever 3 and the control rod on idle spring 11. The spring 11 ensures idle running stability.

At full load:

Upon acceleration request, lever 1 applies a tension on spring 2, which drives lever 5. Lever 5 drives lever 3, and moves the flow control rod in max load position. When speed reaches the maximum, the centrifugal force applied to the regulator becomes higher than that applied by spring 4, the control rod moves to a flow reduction.

Upon engine stop:

The engine stop lever pushes lever 3 in min flow position, the force applied to the lever is important enough to completely compact the idle spring, hence cutting engine injection.

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)

TIGHTENING TORQUES Z602

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.

Elements	Dimension x pitch	N-m	Kgf-m	Pounds-feet
* Rocker cover bolts	M6 x 1	6.86 to 11.3	0.7 to 1.15	5.1 to 8.3
Injection duct fastening nut	M12 x 1.5	24.5 to 34.3	2.5 to 3.5	18.1 to 25.3
Overflow duct fastening nut	M12 x 1.5	19.6 to 24.5	2.0 to 2.5	14.5 to 18.1
Injector unit	M20 x 15	49.0 to 68.6	5.0 to 7.0	36.2 to 50.6
Glow plug	M8 x 1	7.8 to 14.7	0.8 to 1.5	5.8 to 10.8
* Rocker ramp nut	M6 x 1	9.8 to 11.3	1.00 to 1.15	7.2 to 8.3
* Cylinder head bolt	M8 x 1.25	37.3 to 42.2	3.8 to 4.3	27.5 to 31.1
* Fan drive pulley screw	M12 x 1.5	117.7 to 127.5	12.0 to 13.0	86.8 to 94.0
* Intermediate gear shaft fastening screws	M6 x 1	9.8 to 11.3	1.00 to 1.15	7.2 to 8.3
Injection pump fastening screws	M8 x 1.25	17.7 to 21.6	1.80 to 2.20	13.0 to 15.9
* Connecting rod head bolt	M7 x 0.75	26.5 to 30.4	2.7 to 3.1	19.5 to 22.4
* Flywheel bolt	M10 x 1.25	53.9 to 58.8	5.5 to 6.0	39.8 to 43.4
Main bearing cap cover fastening bolt	M6 x 1	9.8 to 11.3	1.00 to 1.15	7.2 to 8.3
* Main crankshaft bearing bolt 2	M7 x 1	26.5 to 30.4	2.7 to 3.1	19.5 to 22.4
* Main crankshaft bearing bolt 1	M6 x 1	12.7 to 15.7	1.3 to 1.6	9.4 to 11.6
Oil pressure switch	PT 1/8	14.7 to 19.6	1.5 to 2.0	10.8 to 14.5
Injector nose support		34.3 to 39.2	3.5 to 4.0	25.3 to 28.9
Starter B terminal fastening nut (electromagnetic drive type)	M8	7.8 to 9.8	0.8 to 1.0	5.8 to 7.2
Starter B terminal fastening nut (planetary gear reduction type)	M8	5.9 to 11.8	0.6 to 1.2	4.3 to 8.7
Generator pulley nut	M10 x 1.25	39.2 to 44.1	4.0 to 4.5	28.9 to 32.5
Alternator pulley nut		58.3 to 78.9	5.95 to 8.05	43.0 to 58.2
Drain plug with copper gasket	M12 x 1.25	32.4 to 37.3	3.3 to 3.8	23.9 to 27.5
Drain plug with copper gasket	M22 x 1.5	63.7 to 73.5	6.5 to 7.5	47.0 to 54.2
Drain plug with rubber coating gasket	M22 x 1.5	44.1 to 53.9	4.5 to 5.5	32.5 to 39.8

REPAIR

Anomaly	Possible cause	Solution
The engine does not start	No fuel	Fill up
	Air in the supply circuit	Purge the air
	Water in the supply circuit	Change the fuel and repair or change the supply system
	Clogged supply duct	Clean
	Clogged fuel filter	Clean or change
	Fuel or oil viscosity too high	Use the fuel or motor oil specified
	Low hexadecane index fuel	Use the fuel specified
	Fuel leak due to bad tightening of a fastening nut on the injection duct	Tighten the nut
	Bad injection timing	Adjust
	Camshaft wear	Change
	Clogged injector	Clean
	Bad operation of the injection pump	Repair or change
	Seized crankshaft, camshaft, piston, cylinder jacket or main bearing	Repair or change
	No compression in the cylinder	Change the cylinder head gasket, tighten the cylinder head screw, change the glow plug and injector holder
	Bad timing	Readjust or change the timing gear
	Worn piston rings and jacket	Change
	Excess play in timing	Adjust
The starter is inoperative	Battery discharged	Charge
	Faulty starter operation	Repair or change
	Faulty key switch	Repair or change
	Wiring disconnected	Connect

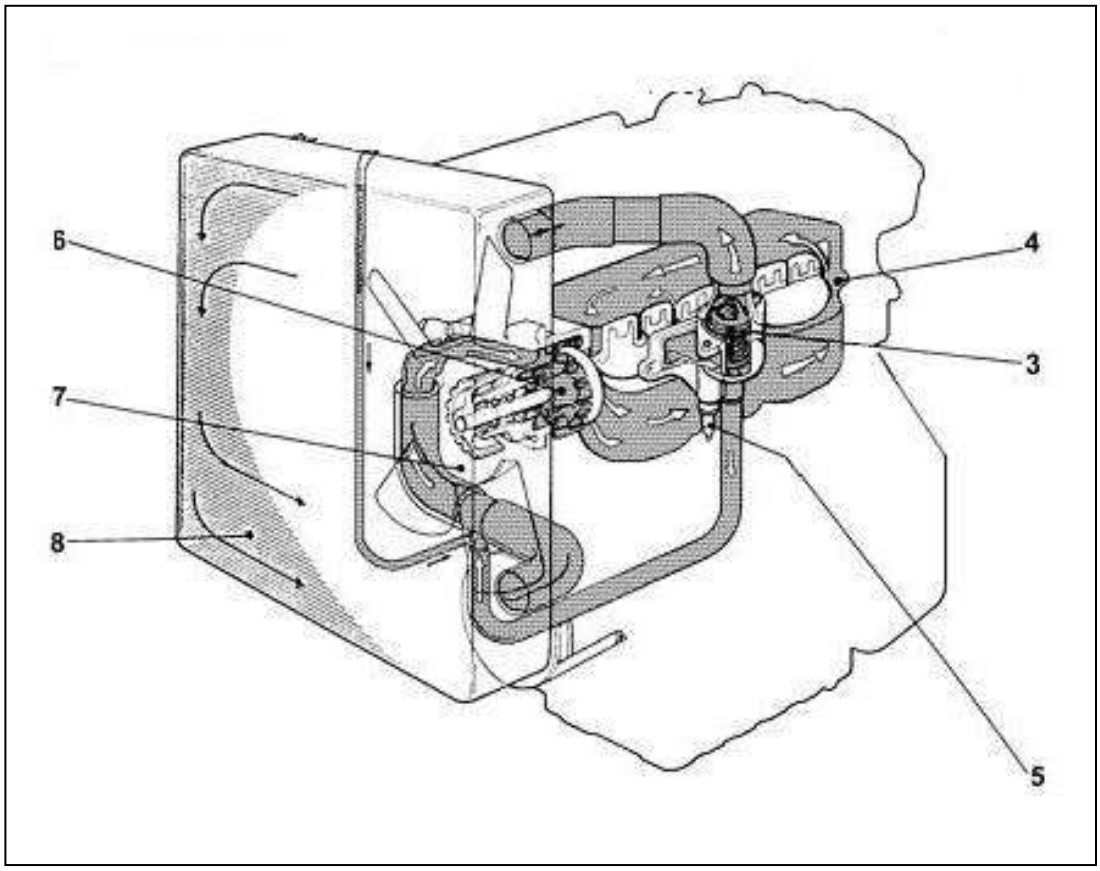
REPAIR (cont'd)

Anomaly	Possible cause	Solution
The engine does not run regularly	Clogged or dirty fuel filter	Clean or change
	Clogged air filter	Clean or change
	Fuel leak due to bad tightening of a fastening nut on the injector duct	Retighten the nut
	Bad operation of the injection pump	Repair or change
	Bad injector opening pressure	Adjust
	Stuck or clogged injector	Repair or change
	Faulty regulator operation	Repair
Exhaust gases black, or dark grey	Excess motor oil	Reduce to level specified
	Wear or sticking of a piston ring and a jacket	Repair or change
	Bad injection timing	Adjust
	Bad compression	Adjust neutral spaces
	Overload	Reduce the load
	Bad quality fuel	Use the fuel specified
	Clogged fuel filter	Clean or change
	Clogged air filter	Clean or change
	Faulty injector	Repair or change the injector
Insufficient power	Bad injection timing	Adjust
	The engine moving parts seem to be seized	Repair or change
	Irregular fuel injection	Repair or change the injection pump
	Faulty injector	Repair or change the injector
	Lack of compression	Change the cylinder head gasket, tighten the cylinder head screw, the glow plug and injector holder
Excessive oil consumption	The cutting gap is set in the same direction for all piston rings	Modify the location of the cutting gap
	Worn or stuck oil control ring	Change
	Worn piston ring groove	Change the piston
	Worn valve stem and guide	Change
	Worn crankshaft main bearings or trunnion bearings	Change
	Oil leaked caused by a faulty lining or sealing	Change

REPAIR (cont'd)

Anomaly	Possible cause	Solution
Fuel mixed with lubrication oil	Worn injection pump plunger	Change the pump element or pump
	Faulty injector	Repair or change the injector
	Injection pump	Change
Water mixed with lubrication oil	Faulty cylinder head gasket	Change
	Flaky casing or cylinder head	Change
Low oil pressure	Low motor oil	Top up
	Clogged strainer	Clean
	Discharge valve stuck by dirt	Clean
	Fatigue or broken discharge valve spring	Change
	Too much running gap of a crankshaft bearing	Change
	Too much running gap of a connecting rod head bearing	Change
	Too much running gap of a push rod bushing	Change
	Clogged oil passage	Clean
	Inappropriate type of oil	Use the type of oil specified
	Faulty oil pump	Repair or change
High oil pressure	Inappropriate type of oil	Use the type of oil specified
	Faulty discharge valve	Change
Overheating engine	Low motor oil	Top up
	Fan belt broken or loose	Change or adjust
	Low coolant	Top up
	Radiator honeycomb or fins clogged	Clean
	Corroded radiator interior	Clean or change
	Corroded coolant circuit	Clean or change
	Faulty radiator plug	Change
	Run with overload	Reduce the load
	Faulty cylinder head gasket	Change
	Bad injection timing	Adjust
	Inappropriate fuel type	Use the fuel specified
Battery discharges too fast	Low electrolyte	Fill distilled water and charge the battery
	Slipping fan belt	Adjust belt tension or change it
	Wiring disconnected	Reconnect
	Rectifier disconnected	Change
	Faulty fan generator	Change
	Faulty battery	Change

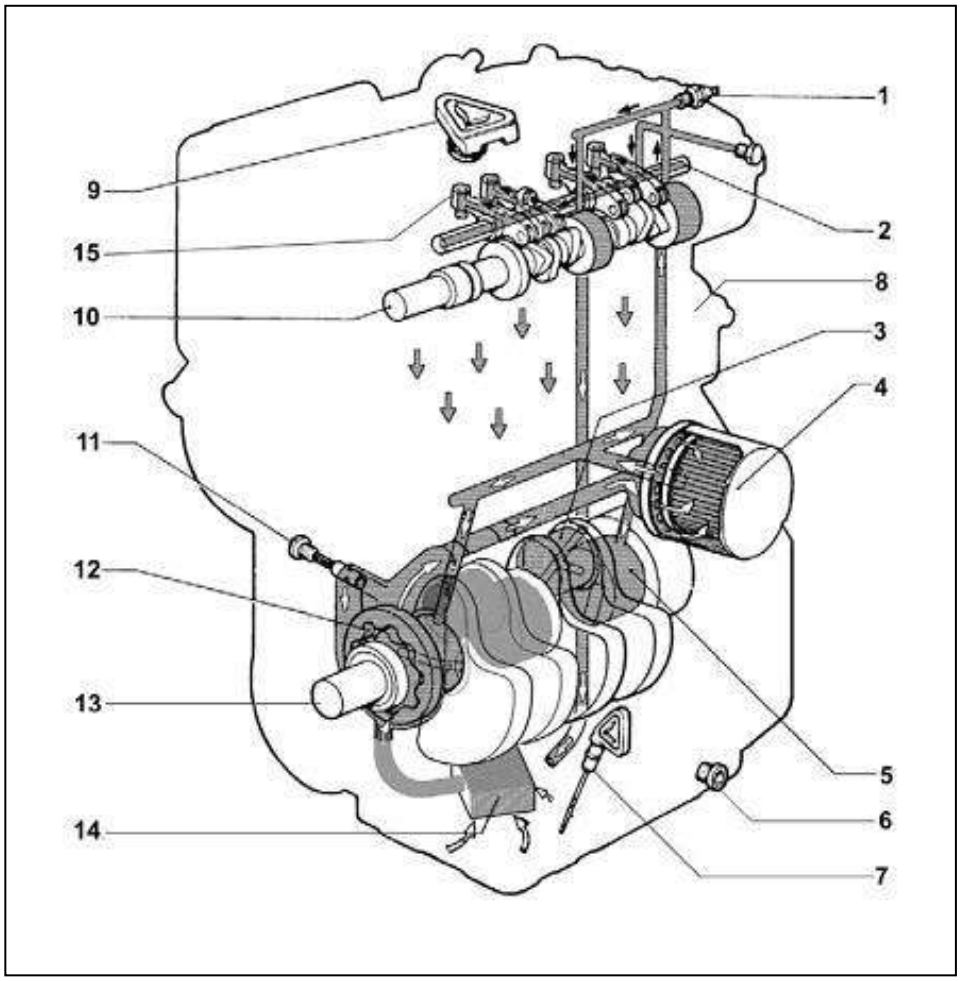
COOLING SYSTEM



3. Thermostatic valve
4. Cylinder block
5. Coolant temperature indicator thermostat
6. Circulation pump
7. Ventilation helix
8. Radiator

Quantity of coolant: 2 litres

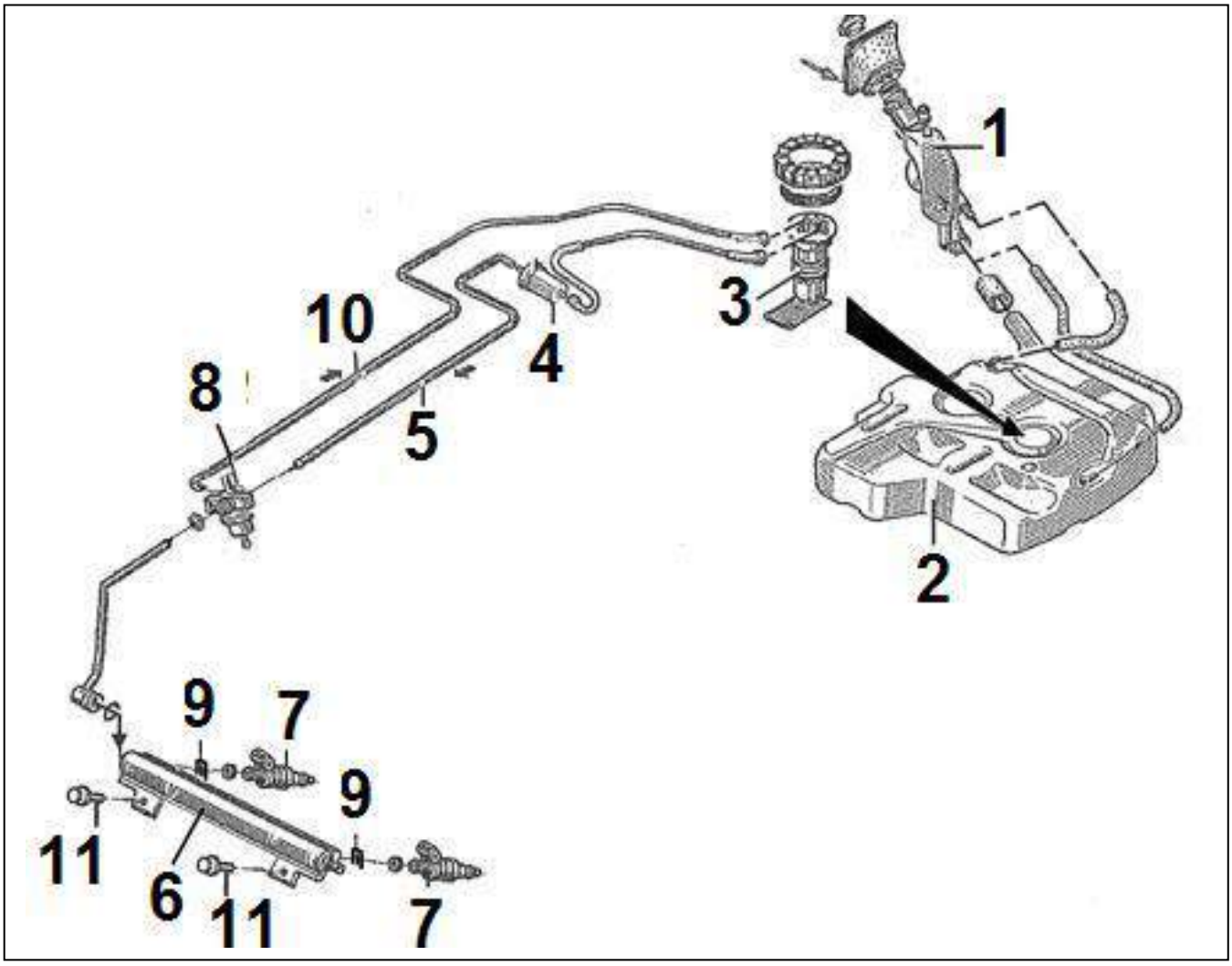
LUBRICATION SYSTEM



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

INJECTION SYSTEM



1. Filling pipe
2. Tank
3. Fuel pump / gauge plant
4. Filter
5. Supply duct
6. Injector supply pipe
7. Injector
8. Pressure regulator
9. Injector holding spring
10. Pressure regulator return pipe
11. Supply pipe fastening screw

TIGHTENING TORQUES

The following tables indicate the tightening torques for standard screws and main components.
The tightening torques are also indicated with the tightening methods and sequences, in the indications of fitting of components and/or the plant.

TABLE OF TIGHTENING TORQUES OF STANDARD SCREWS (wide pitch)

Resistance class (R)								
Grade / Dimensions								
Diameter	R>400N/mm²		R>500N/mm²		R>600N/mm²	R>800N/mm²	R>1000N/mm²	R>1200N/mm²
	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm
M3	0,5	0,7	0,6	0,9	1	1,4	1,9	2,3
M4	1,1	1,5	1,4	1,8	2,2	2,9	4,1	4,9
M5	2,3	3	2,8	3,8	4,5	6	8,5	10
M6	3,8	5	4,7	6,3	7,5	10	14	17
M8	9,4	13	12	16	19	25	35	41
M10	18	25	23	31	37	49	69	83
M12	32	43	40	54	65	86	120	145
M14	51	68	63	84	101	135	190	230
M16	79	105	98	131	158	210	295	355
M18	109	145	135	181	218	290	405	485
M20	154	205	193	256	308	410	580	690
M22	206	275	260	344	413	550	780	930
M24	266	355	333	444	533	710	1000	1200
M27	394	525	500	656	788	1050	1500	1800
M30	544	725	680	906	1088	1450	2000	2400

TABLE OF TIGHTENING TORQUES OF STANDARD SCREWS (thin pitch)

Diameter	R>400N/mm²		R>500N/mm²		R>600N/mm²	R>800N/mm²	R>1000N/mm²	R>1200N/mm²
	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm
M 8x1	10	14	23	17	20	27	38	45
M 10x1	21	28	26	35	42	56	79	95
M 10x1.25	20	26	24	33	39	52	73	88
M 12x1.25	36	48	45	59	71	95	135	160
M 12x1.5	38	45	42	56	68	90	125	150
M 14x1.5	56	75	70	94	113	150	210	250
M 16x1.5	84	113	105	141	169	225	315	380
M 18x1.5	122	163	153	203	244	325	460	550
M 18x2	117	157	147	196	235	313	440	530
M 20x1,5	173	230	213	288	345	460	640	770
M 20x2	164	218	204	273	327	436	615	740
M 22x1.5	229	305	287	381	458	610	860	1050
M 24x2	293	390	367	488	585	780	1100	1300
M 27x2	431	575	533	719	863	1150	1600	1950
M 30x2	600	800	750	1000	1200	1600	2250	2700

TIGHTENING TORQUES

Table of tightening torques for the main components

DESCRIPTION	DIAMETER x PITCH (mm)	TIGHTENING TORQUE (Nm)
Connecting rod	8x1	40
Rocker cover	6x1	9
Casing (crankshaft fastening screws)	M 10	50
Casing (one-piece fastening screws)	M 6	10
Timing belt roller nut	M 10	40
Rocker stud holder nut	10x1.5	40
Oil sealing ring flange screw (flywheel side)	M 6	12
Crankshaft pulley screw (timing side)	16x1.5 sin	180(1)*
Camshaft pulley screw	10x1.25	50
Timing shaft bearing panel	M 6x1	10
Camshaft holder flange	M 6x1	10
Small closing flange	M 6x1	10
Suction manifold fastening screw	M 6x1	10
Revolution sensor holder fastening screw	M 6x1	10
Revolution sensor fastening screw	M 8x1.25	10
Oil pressure switch		25
Oil plug	12x1.5	40
Engine cylinder head screw	12x1.5	(2)*
Flywheel screw		80
Coolant thermostat	10x1.5	30

(1)* Lubricate the lower part of the screw and pulley centre with some « Molysilp »
(2)* For more precise information see « Fitting the cylinder head »

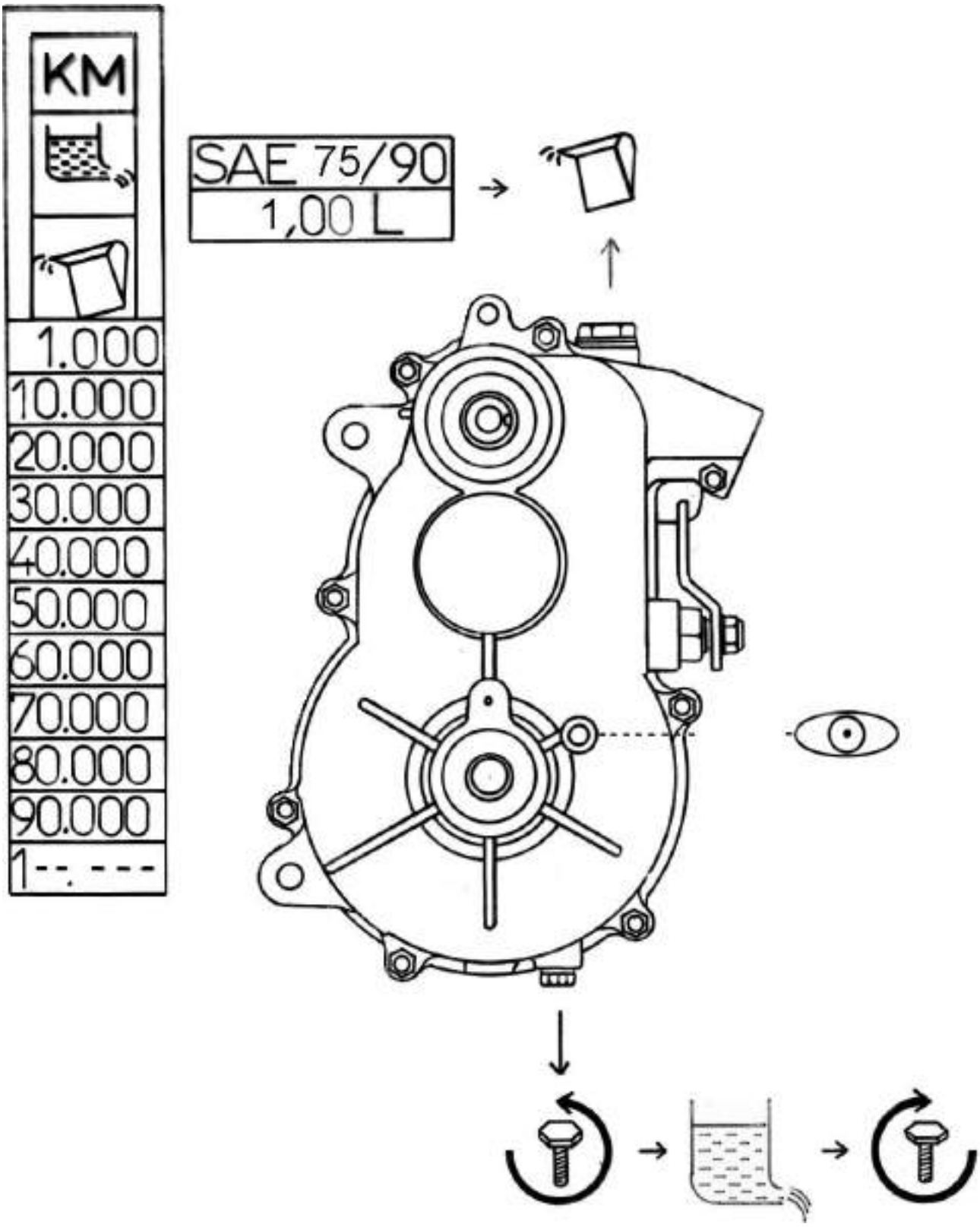
REPAIR

Table of probable anomalies according to symptoms

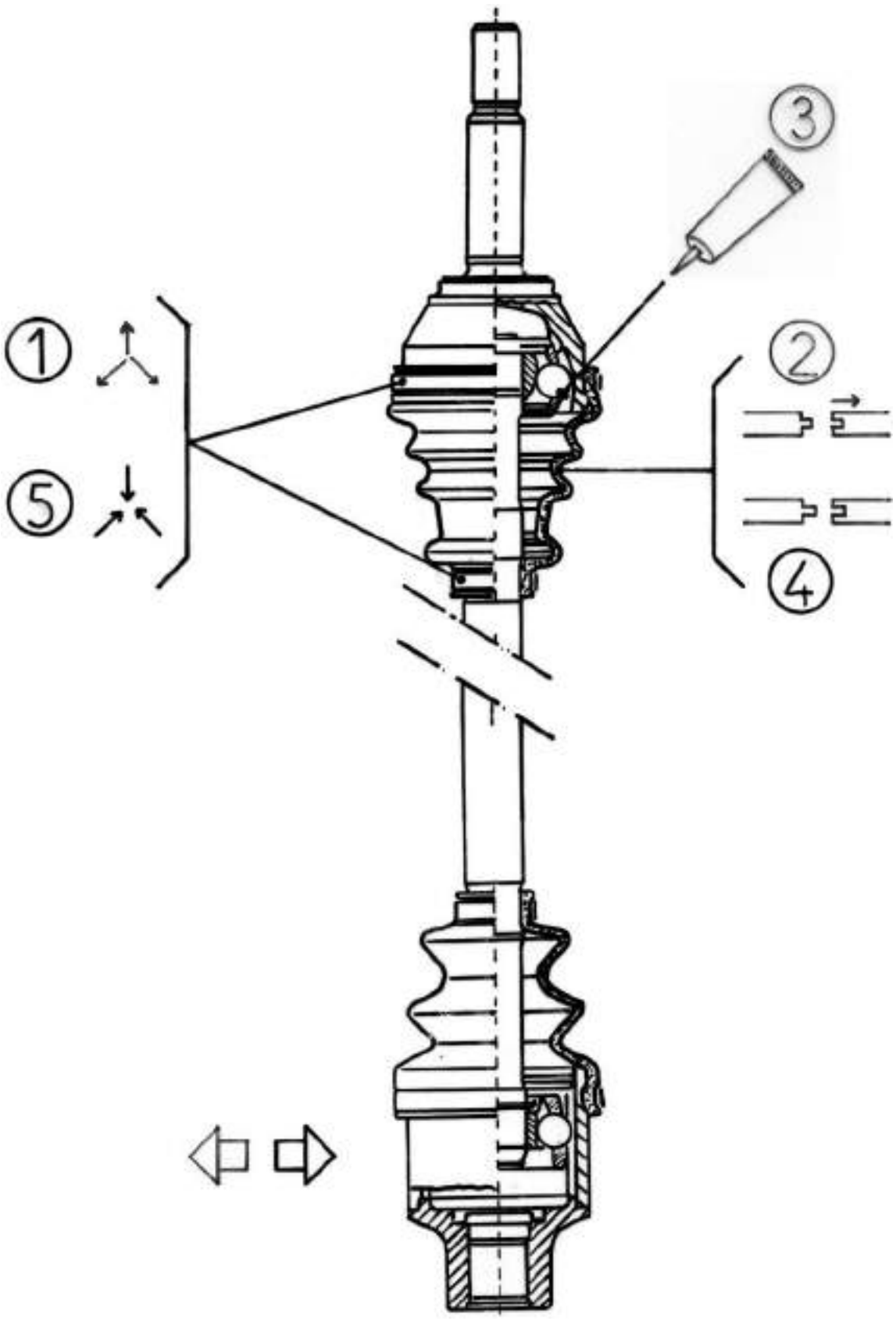
The engine does not start	Difficult starting with cold engine	Difficult starting with warm engine	Overheating motor	Unstable idle running	Idle running too high	Idle running too low	The engine stops at idle	The engine stops sometimes	Jolting upon reacceleration	Jolting once idle running stabilized	Jolting acceleration	Low performance	High consumption	Noise (beating or rattling)	Crackling	Blue smoke	White smoke	Damaged catalyst	
																			Air supply
												■	■	■		■		■	Air filter
					■				■			■							Leak on the manifold
					■	■	■					■							Butterfly body
																			Fuel supply
	■	■												■					The pressure regulator stays open
	■	■		■		■	■						■						The pressure regulator stays closed
■	■	■				■	■		■				■						Clogged pipes
■													■						No pump flow
				■						■				■					Running injector
■				■		■							■						Poor fuel quality
																			Ignition
■								■	■									■	Coil (coil short-circuit)
■	■	■		■				■	■	■		■			■			■	Faulty spark plug cable
	■			■					■		■	■			■			■	Worn spark plugs
■	■			■					■									■	Spark plugs too cold
																		■	Spark plugs too warm
																			Exhaust
				■									■					■	Leaks on the manifold
				■					■										Oxygen probe
																			Engine and mechanical
	■			■										■				■	Leaky valve
				■										■				■	Valve stuck
																■		■	Bad valve sealing guide
■	■		■	■								■	■			■		■	Jacket / piston wear
									■					■					Embedded combustion chamber
			■											■					Insufficient cooling
■	■		■													■	■	■	Damaged cylinder head gasket
■				■					■		■	■		■	■				Damaged revolution sensor phonic wheel
												■		■					Faulty hydraulic push rods
						■						■	■			■		■	Oil level too high
																			Electrical equipment
■								■										■	Low contact on fuel pump connector
■																			Burnt fuse
■																			Faulty relay
				■				■	■									■	Faulty engine wiring
	■							■										■	Faulty battery elements
■								■										■	Battery terminals sulphated

INDEX

REVERSER BRIDGE



TRANSMISSION



REGULATOR ASSEMBLY
VSP 2000 – LP2 – VERSION 2

INDEX

REGULATOR ASSEMBLY

IMPORTANT NOTE

All installation, servicing and repair operations must be performed only by skilled personnel.

- This symbol identifies operations with a risk of severe injury if the instructions are not observed.
- This symbol identifies a step with a risk of damaging parts or malfunction of the components.
- CVTech waives any liability for any damage or injury resulting from bad comprehension of the text, inappropriate use of the regulator or the tools recommended.
- The tightening torques indicated must be observed rigorously.

SERVICING FREQUENCY

The regulator requires no lubrication. It is designed to run dry. Hence, certain cleanliness rules are applicable upon handling to prevent contact of any products with the regulator components.

To increase the lifetime of the regulator, we recommend performing the following checks:

Description	Check	Periodicity
Leading pulley	Visual / General condition	10,000 km
Fixed flange	Visual	10,000 km
Sliding flask	Visual	10,000 km
Assembled centrifugal block	Visual	10,000 km
Lower main bearing	Visual	10,000 km, change
Spring	Visual	10,000 km
Upper main bearing	Visual	10,000 km, change
Led pulley	Visual / General condition	10,000 km
Fixed flange	Visual	10,000 km
Sliding flask	Visual	10,000 km
Cam slider	Visual / Dimensional	10,000 km
Spring	Visual	10,000 km
Belt	Visual / Dimensional	10,000 km

REGULATOR ASSEMBLY

TOOLS REQUIRED FOR HANDLING

Flat blade screwdriver

Retaining ring pliers

Torque wrench

Socket 17mm and 30mm

Three legged puller

Press or press drill

Hammer

Vise

* Pulley removal tool 0MDP17

*Led pulley puller OE17

* Leading pulley puller OE13

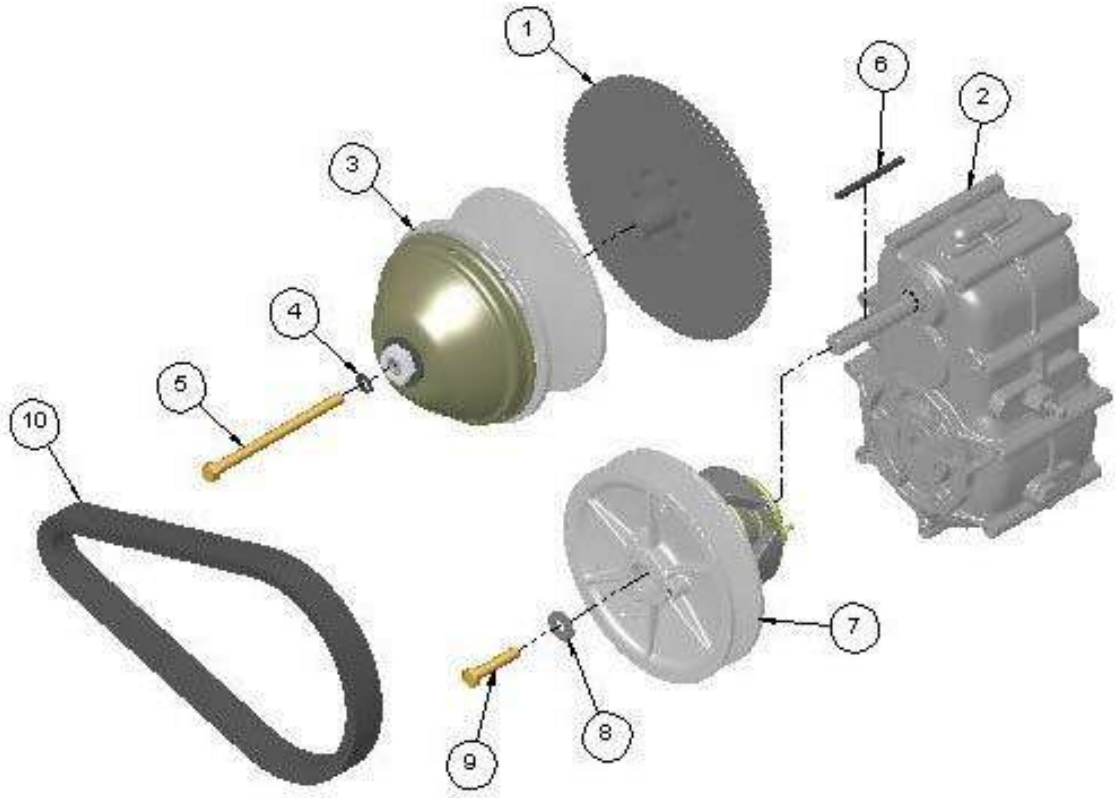
Please note that the use of impact tools is not recommended.

REGULATOR ASSEMBLY

REGULATOR PARTS

The regulator is composed of three main elements:

- Leading pulley (3)
- Led pulley (7)
- Belt (10)



1. Flywheel
2. Gearbox
3. Leading pulley
4. Lock washer
5. Hex head screw (fastening)
6. Key
7. Led pulley
8. Lock washer
9. Hex head screw (fastening)
10. Belt

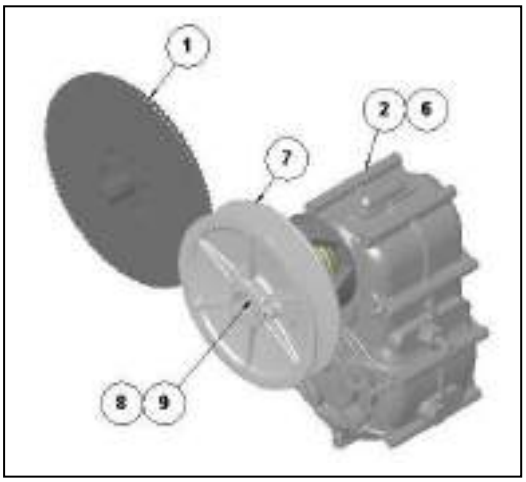
INSTALLING PULLEYS ON THE VEHICLE

First of all:

- For a initial fitting on the vehicle, the installer must have the **layout drawing**. This drawing includes all specifications of the vehicle, the numbers of the pulleys and belt, as well as the dimensional geometry of the complete assembly.
- Cleanliness is required on all components.
- No lubrication product must be used.

Installing the led pulley

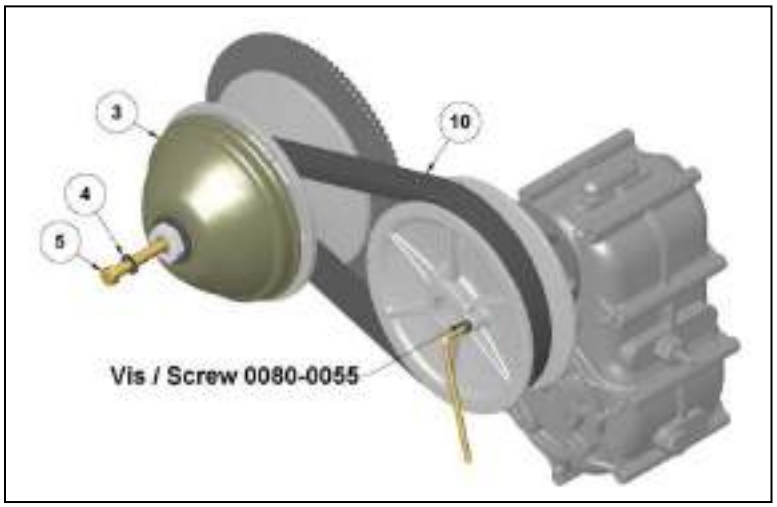
Fit the led pulley (7) onto the gearbox shaft (2) while adding the key (6).



Installing the leading pulley and the belt

To ensure easier fitting of the leading pulley and belt, an opening screw no. 0080-0055 (M6x1.0) may be used to open the flasks of the led pulley, and hence loosen the belt.

Fit the leading pulley (3) by passing it in the belt (10) and then onto the flywheel shaft (1).



TIGHTENING THE SCREWS

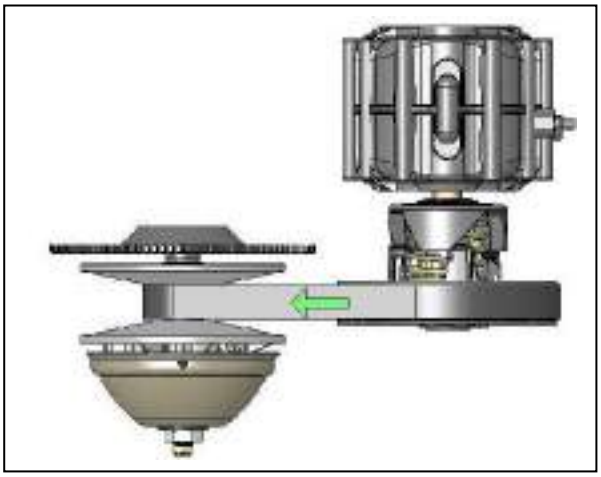
Once the leading and led pulleys, as well as the belt, installed, screw the two screws of the pulleys using a torque wrench to apply standardized torque.

Nominal screw diameter	Grade	Standardized torque (Newton metre)
8 mm	8,8	21 to 28
10 mm	8,8	42 to 54

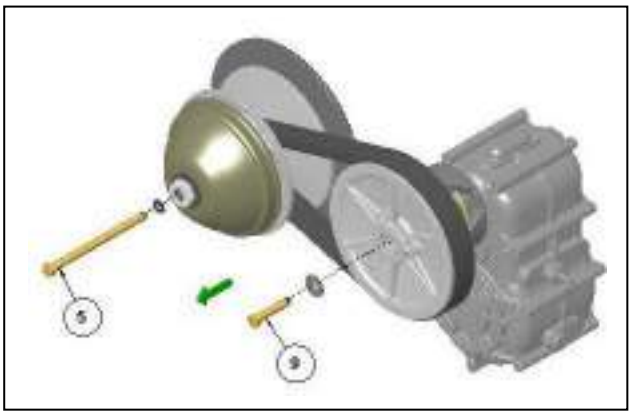
To tighten the leading pulley, lock the engine rotation with a screwdriver or any other tool while ensuring you do not damage the parts.

Do not forget to remove the opening screw from the led pulley flask. Otherwise, the pulley could be unbalanced.

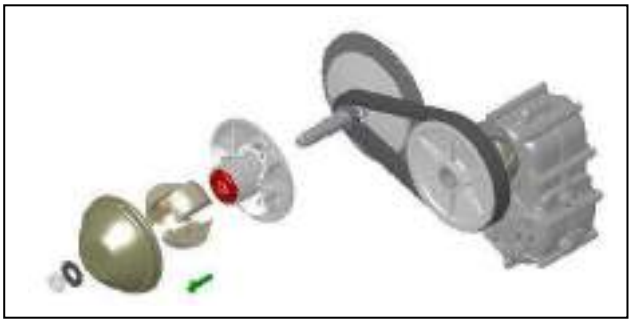
REMOVING THE PULLEYS FROM THE VEHICLE



Before removal, identify the rotation direction of the belt so that it turns in the same direction again upon refitting.



Remove the screw (5) from the leading pulley and the screw (9) from the led pulley.

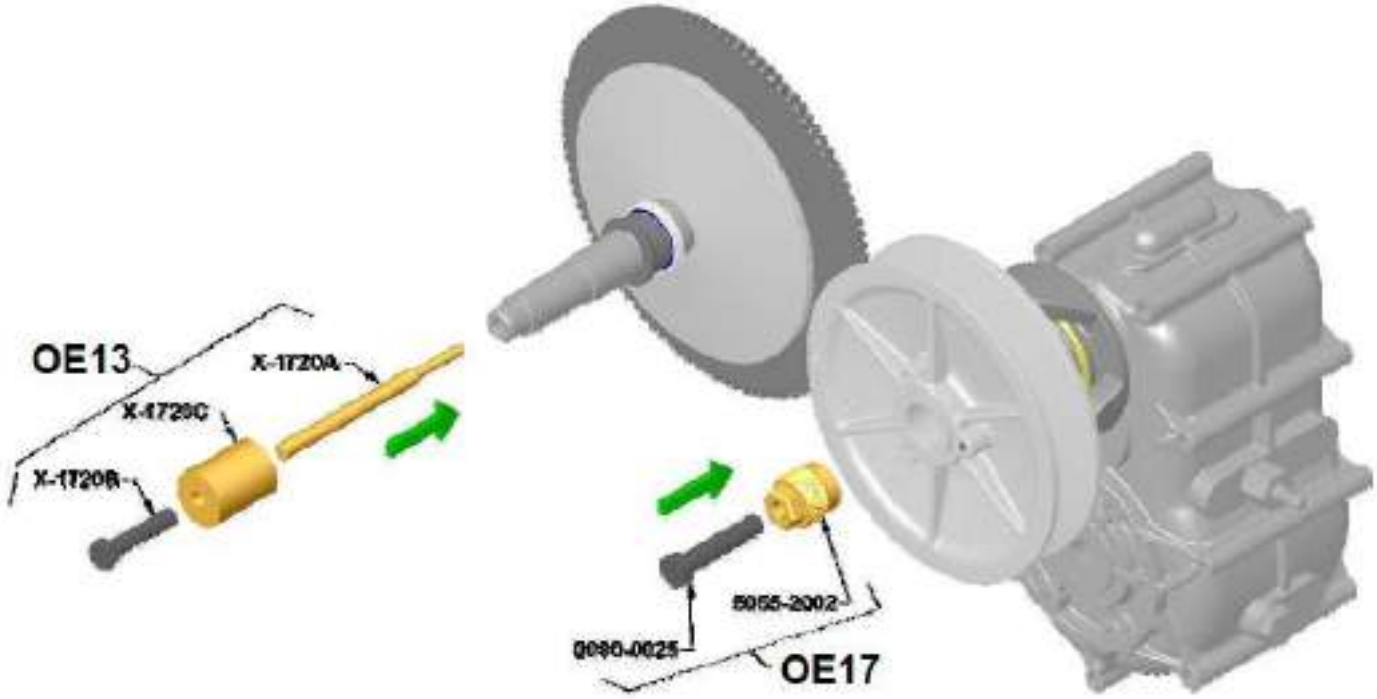


Unscrew the nut holding the leading pulley in the closed position.
(Use a 30mm socket)

Avoid dropping the cap and blocks.
(Removing free parts is preferable.)

REGULATOR ASSEMBLY

Use the OE13 leading pulley puller, and if necessary use the EO17 led pulley puller (the led pulley may sometimes be removed manually).

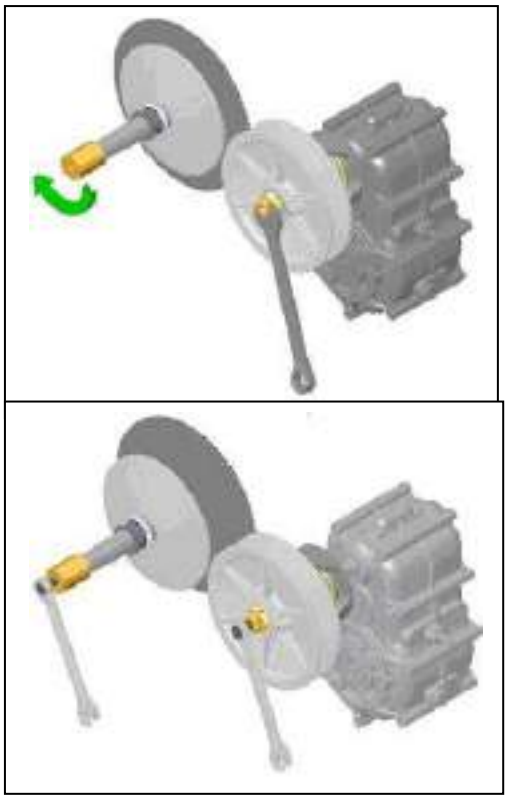


<u>For the leading pulley</u>:
Insert the rod of the X-1720A puller inside the shaft and screw the X-1720C adapter at the end of the shaft. (pressurize it by a half-turn)

Although not recommended by CVTech, a few slight hammer strokes on the puller may help to separate the leading pulley shaft from the flywheel.

<u>For the led pulley</u>:
Screw the OE17 adapter inside the shaft.

Screw the puller screws until the pulleys leave their location.

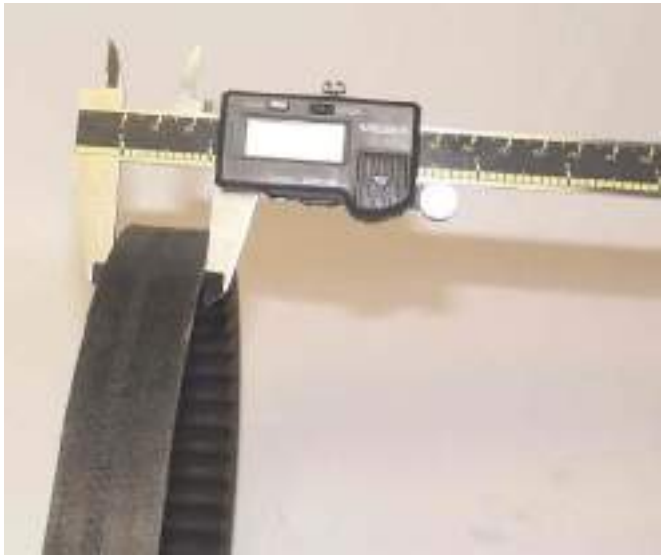


INSPECTING THE BELT

The belt must be inspected to avoid breakage, likely to cause personal and/or material damage.

- Change the belt when cracks appear when turning the belt inside out.

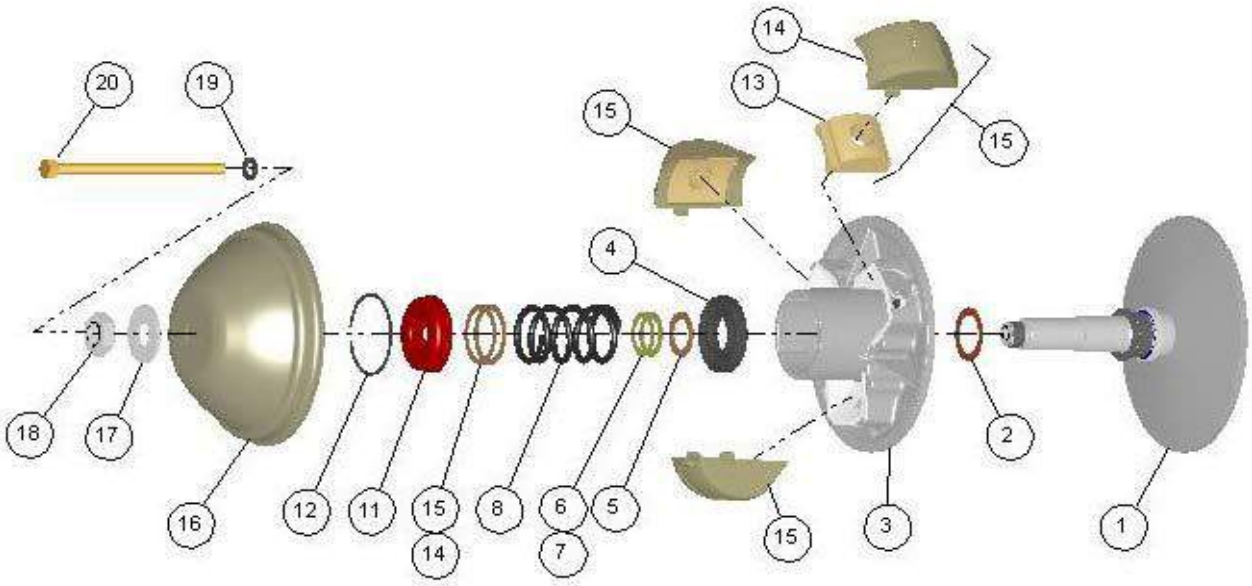
- Change the belt when it reaches a width of 28.5 mm, i.e. about 2 mm narrower than the new belt.



REGULATOR ASSEMBLY

REMOVING AND REFITTING THE PULLEYS

Leading pulley



1. Fixed flange
2. Spacing washer
3. Sliding flask
4. Lower main bearing
5. Spacing washer (2mm)
6. Spacing washer (1mm)
7. Spacing washer (0.5mm)
8. Spring
9. Spacing washer (1.21mm)
10. Spacing washer (0.68mm)
11. Upper main bearing
12. Retaining washer
13. Counterweight
14. Centrifugal block
15. Assembled centrifugal block
16. Cap
17. Flat washer
18. Nut
19. Lock washer
20. Fastening screw

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)

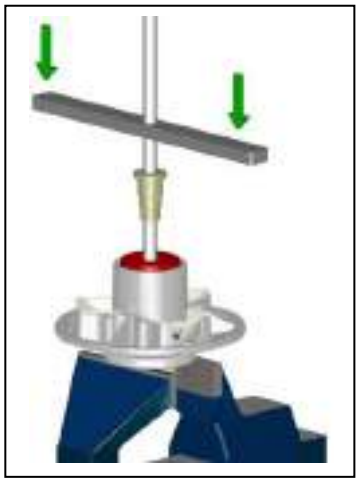
Removing the sliding flask

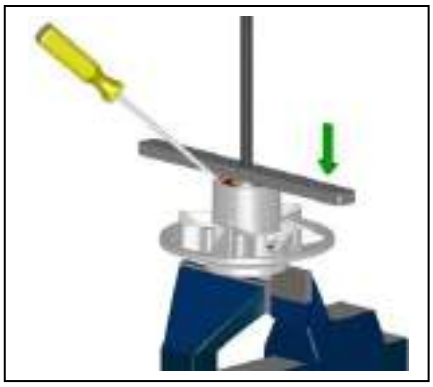
Using the 0MDP17 removing tool is indispensable to avoid sudden removal of the sliding flange (spring effect).

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

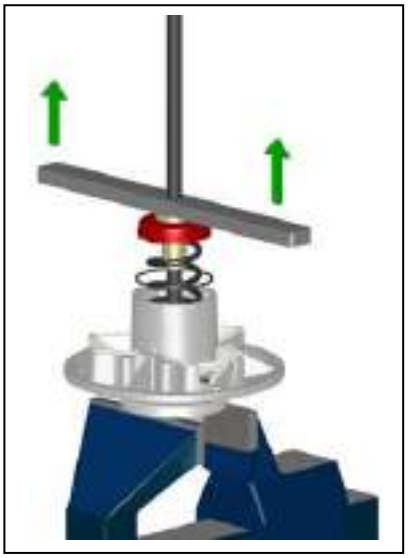
REGULATOR ASSEMBLY

After removing the sliding flange from the fixed flange shaft, position the latter on the removal tool in order to lower the upper main bearing (11).

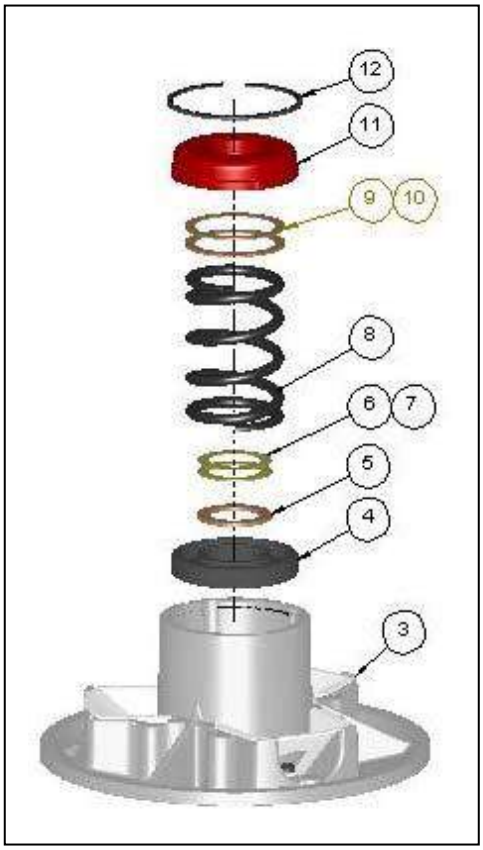




Lower the upper main bearing (11) to be able to remove the retaining ring (12) with a flat blade screwdriver.



Rise the sliding flange slowly to remove it. Avoid dropping parts if removing is performed with a table press.



According to the pulley's adjustment, please note that you must carefully observe the quantity and position of the spacer washers (5-6-7) and (9-10) to avoid modifying the initial yield of the pulley.

Cleaning the sliding parts with a degreaser is indispensable to maintain optimum performance.

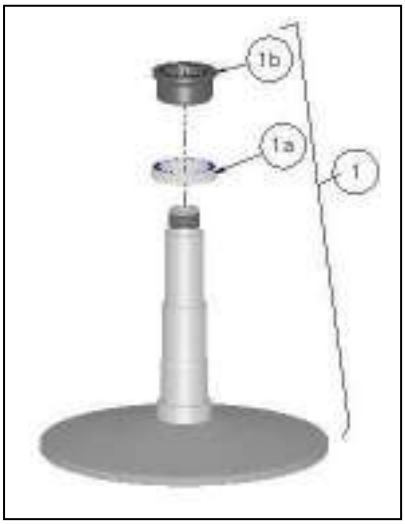
Inspection

- Damage to the main bearings 4 and 11
- Wear of the flange (by belt friction)
- Damage to the spring (8)

REGULATOR ASSEMBLY

Removing the fixed flange (if required)

1 Fixed flange
1a Bearing
1b Tightening ring

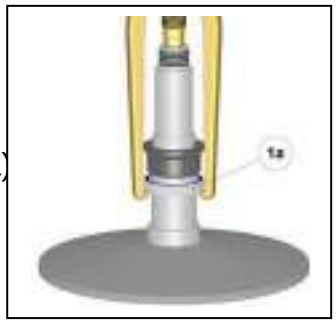


Before each part removing step, clean the shaft carefully.

Using a puller is required to prevent damaging the parts which do not require changing.

Removing the tightening ring (1b)

Removing the bearing (1a)



Inspection

- Shaft damage. (inside and outside)
- Wear of the flange (by belt friction)
- Change the bearing (1a), if required

Refitting the leading pulley

Refitting the sliding flange

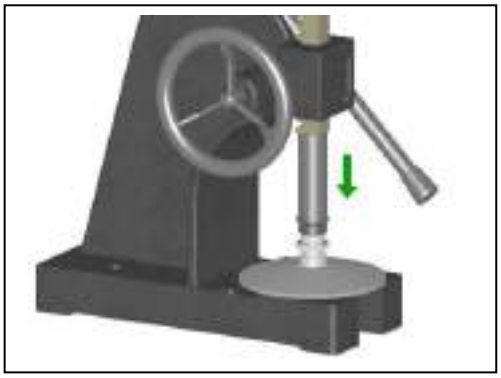
Refitting the sliding flange is performed by reversing the removal sequence (see removing the sliding flange).

Please note to return the spacing washers to their original position.

Refitting the fixed flange

To refit the flange, we recommend using a press and a tube 32 mm inner diameter and length 125 mm.

As per the illustration:
-Insert the bearing (1a).
Insert the tightening ring (1b)



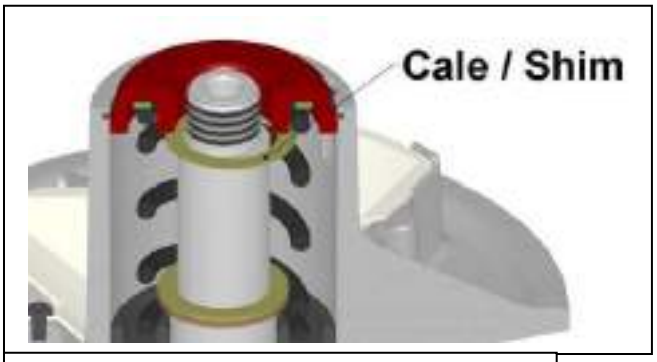
Ensure you have perfect contact between the shaft shoulder, bearing and tightening ring without applying pressure with the press to prevent damaging the components.

Before fitting the sliding flange (3) onto the fixed flange (1), it is important to fit the spacing washer (2).

REGULATOR ASSEMBLY

Fitting the sliding flange onto the fixed flange shaft

Ensure you properly centre the spacing washers (5-6 and 7) on the shaft upon assembly.



Fitting the cover and centrifugal blocks

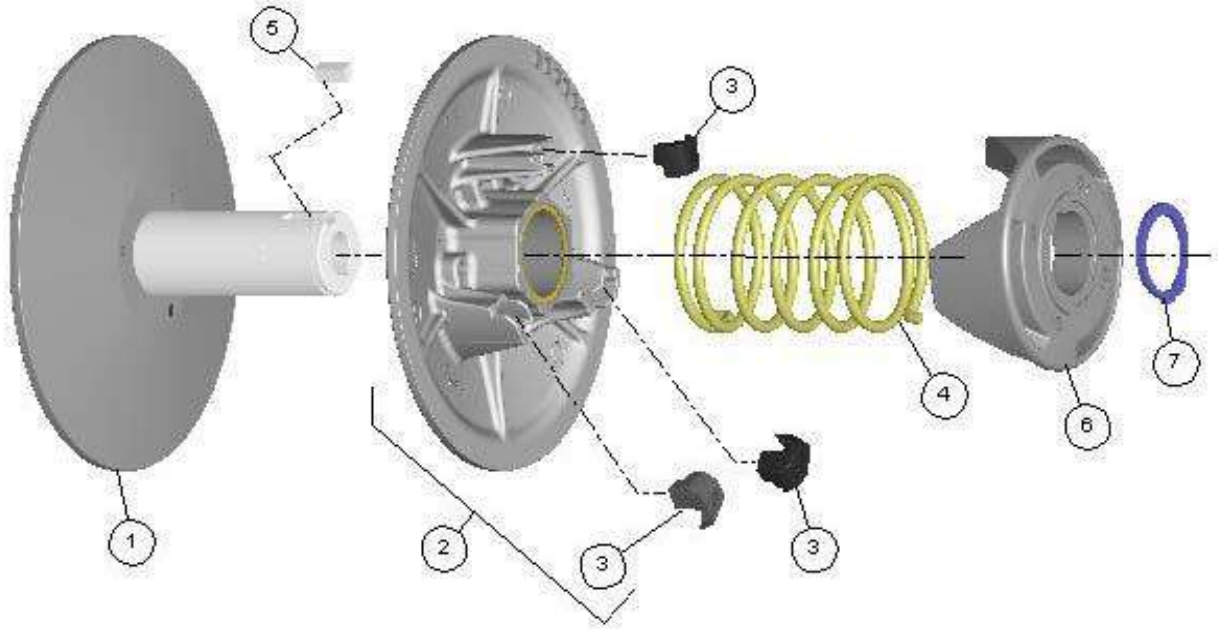
Fit the three blocks as shown in the illustration.

Tightening the pulley

To tighten the pulley, use a torque wrench with a 30 mm socket.

Apply a tightening torque of 95 to 108 Newton metre.

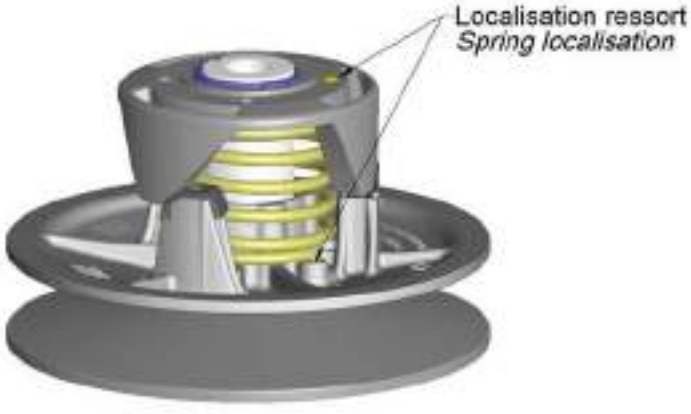
Led pulley



1. Fixed flange
2. Sliding flask
3. Cam pad
4. Spring
5. Key
6. Cam
7. Retaining washer

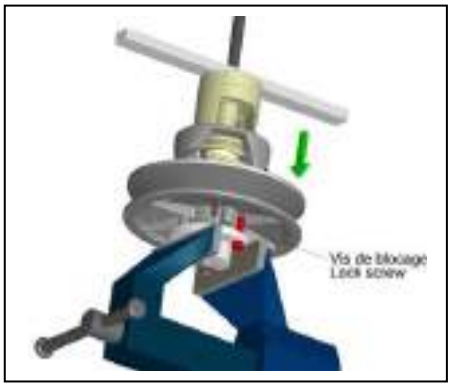
Removing the led pulley

Please note that the spring position must be observed carefully in the sliding flange and cam. When refitting the pulley, the positions must be the same as upon removal to avoid impacting the performance of the pulley.

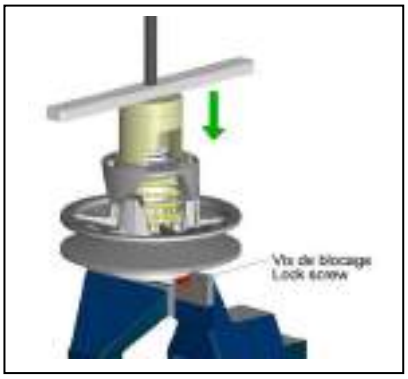


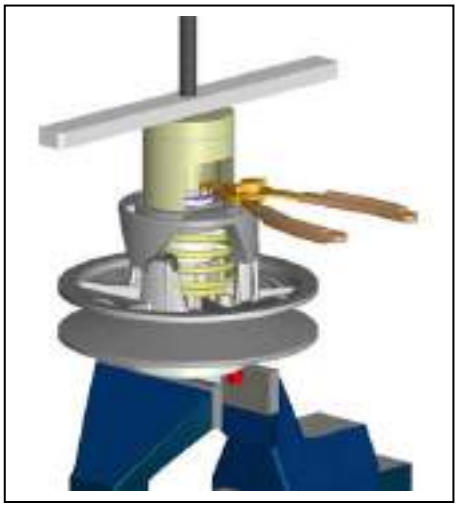
Removing the cam

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



Adjust the locking screw to prevent the pulley from turning.



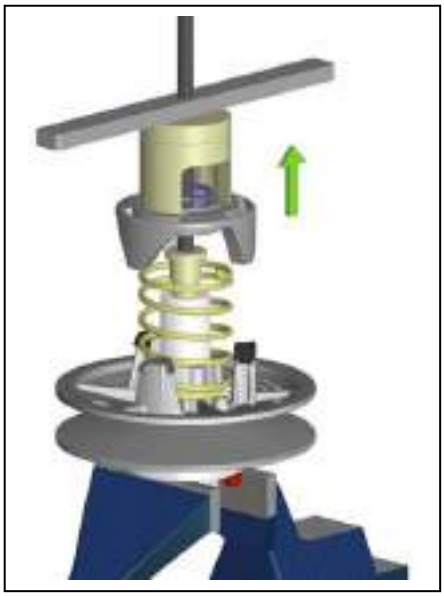


Lower the cam (3 to 4 mm maximum) to release the retaining washer.

Remove the retaining ring using appropriate pliers.

REGULATOR ASSEMBLY

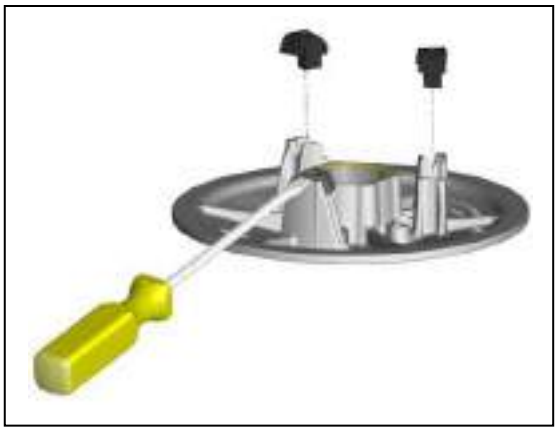
Carefully refit the cam to release the shaft.



Inspection

- Cam deterioration.
- Spring deterioration.
- Visual inspection of the components.

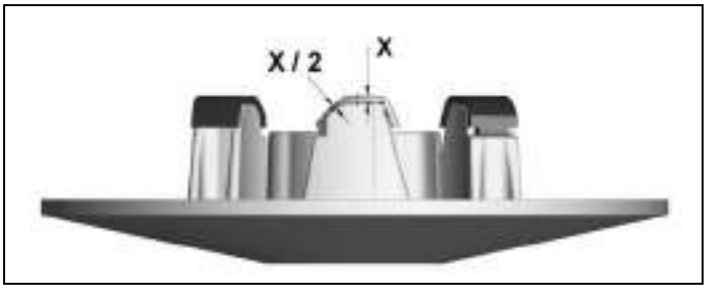
Removing the sliding flask



The cam sliders can be removed using a flat blade screwdriver.

Inspection

- Changing the cam sliders (3) is required following the wearing of half the initial thickness X.
- Wear of the flange (by belt friction)
- Wear of inner bushings of the flange (Parts non replaceable without damaging the flange)

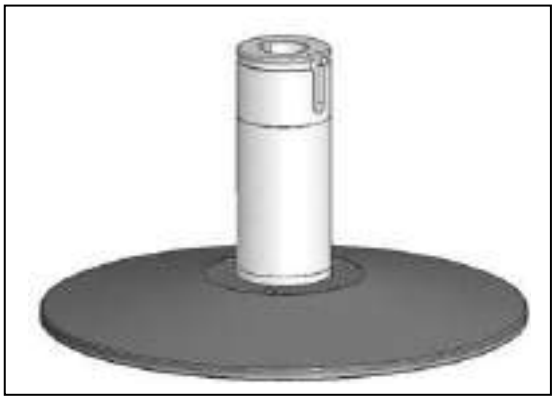


Cleaning the inner bushings with a degreaser is indispensable to maintain optimum performance.

REGULATOR ASSEMBLY

Fixed flange

The fixed flange (1) is not removable without damaging the parts.
Just perform an inspection.



Inspection

- Shaft deterioration (internal and external)
- Wear of the flange (by belt friction)
- Visual inspection.

Refitting the led pulley

Fitting the cam sliders on the sliding flask

Fitting cam sliders (3) can be performed using a hammer.

Ensure you do not damage the sliders by excessive use of the hammer.

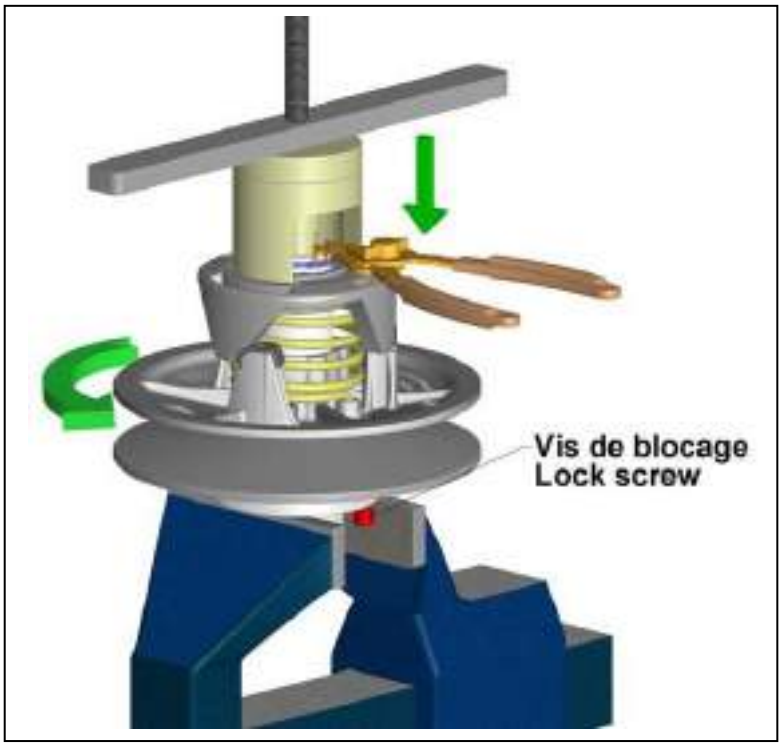
Fitting the spring onto the sliding flange

Position the spring (4) in the sliding flange (2) at the position noted during removal.

Position the key (5) on the shaft of the fixed flange (1).

Fitting the cam

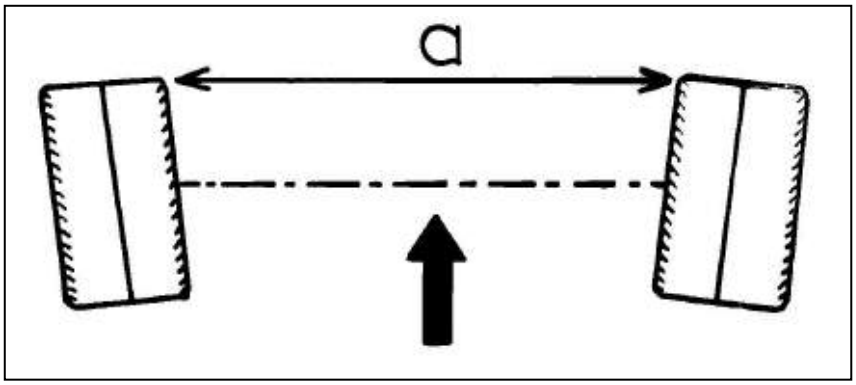
Fitting the cam (6) is performed in the reverse sequence of removal.



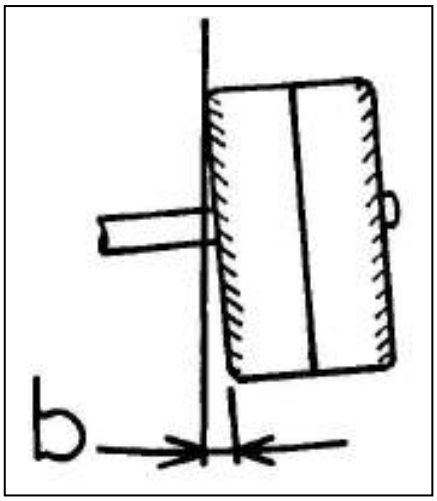
- Position the spring in the cam at the position noted upon removal.
- Engage the cam (6) onto the shaft of the fixed flange (1) and onto the key at the same time
- With the fixed flange (1) locked in rotation, turn the sliding flange (2) by one third (1/3) turn counter clockwise.
- Lower the cam (6) to engage it onto the cam sliders (3).
- Fit the retaining washer (7).

INDEX

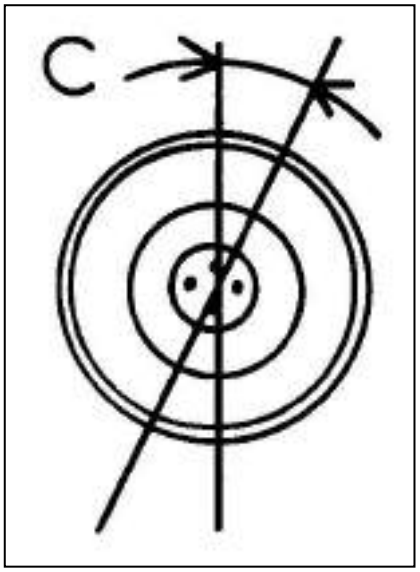
Front axle adjustment dimensions



City	a=0° , -0,5°
Crossline	a=0° , -0,5°



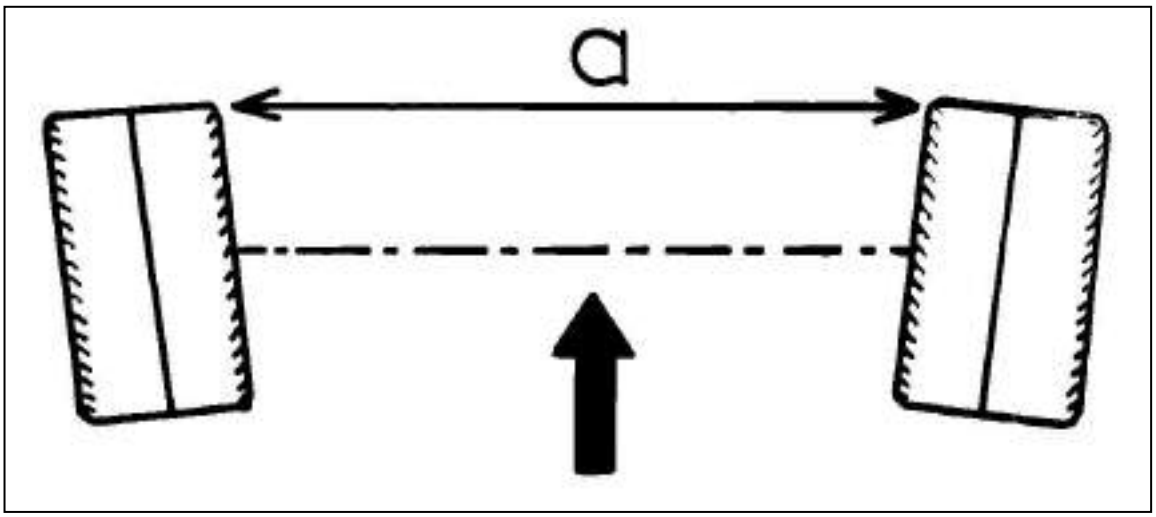
City	b=-0,5° +/-1°
Crossline	b=-0,5° +/-1°



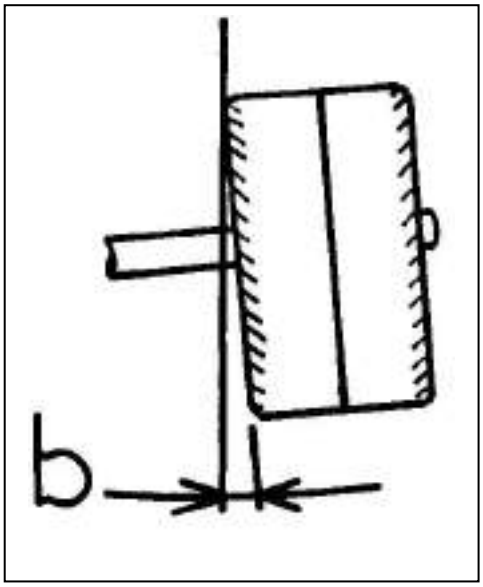
City	c=5,8° +/-1°
Crossline	c=5,8° +/-1°

INDEX

Rear axle adjustment dimensions



City	a=0° , +0,5°
Crossline	a=0° , +0,5°

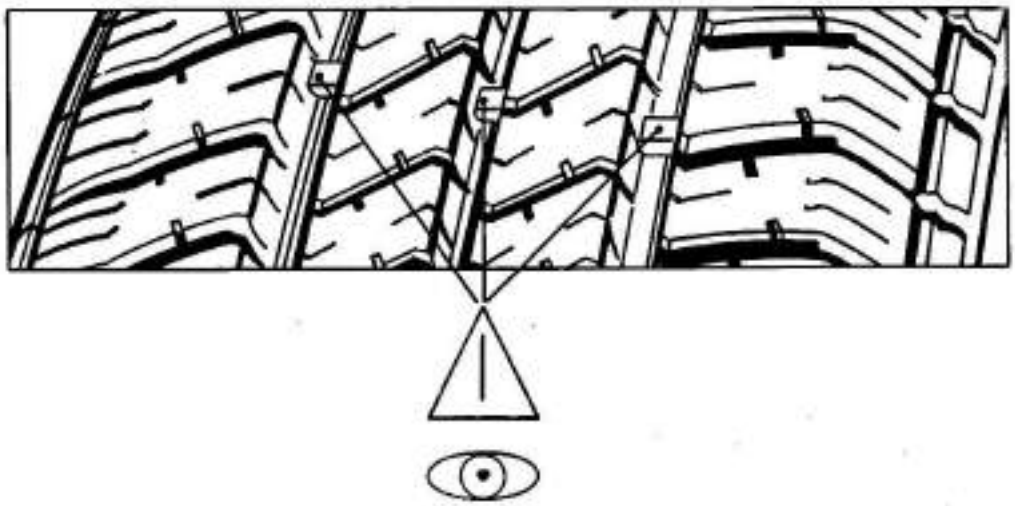


City	b=0° , +0,5° , -1°
Crossline	b=0° , +0,5° , -1°

INDEX

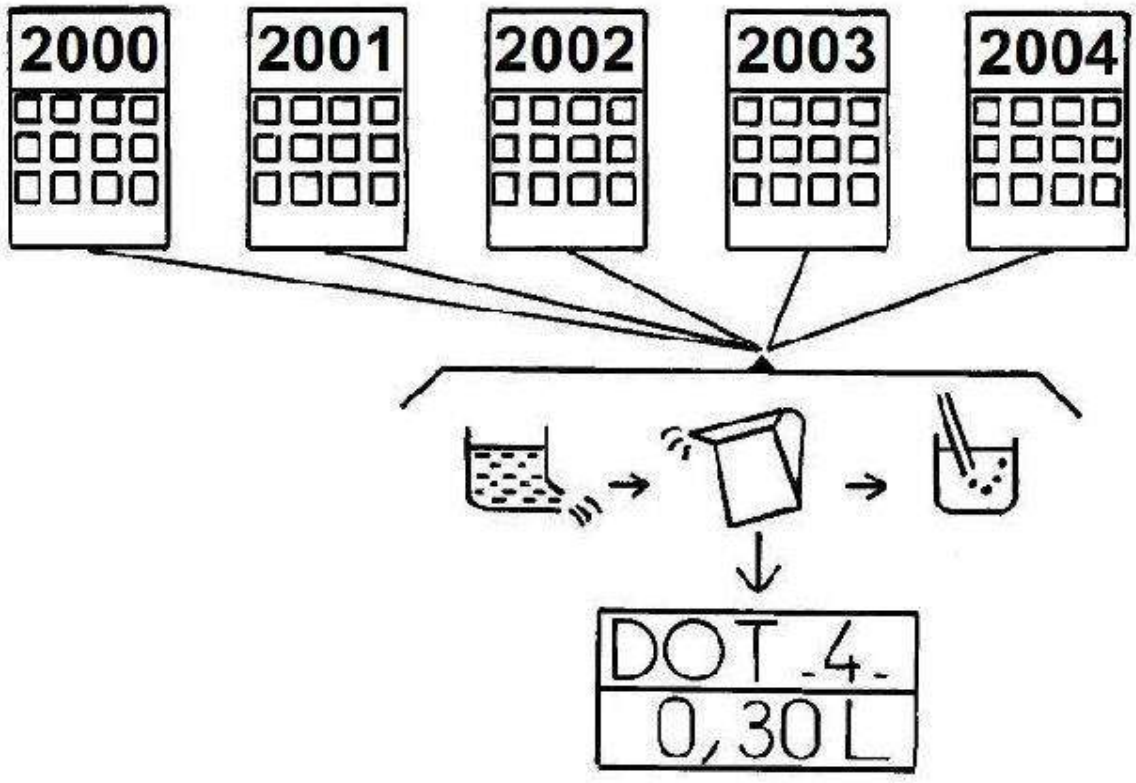
Tires

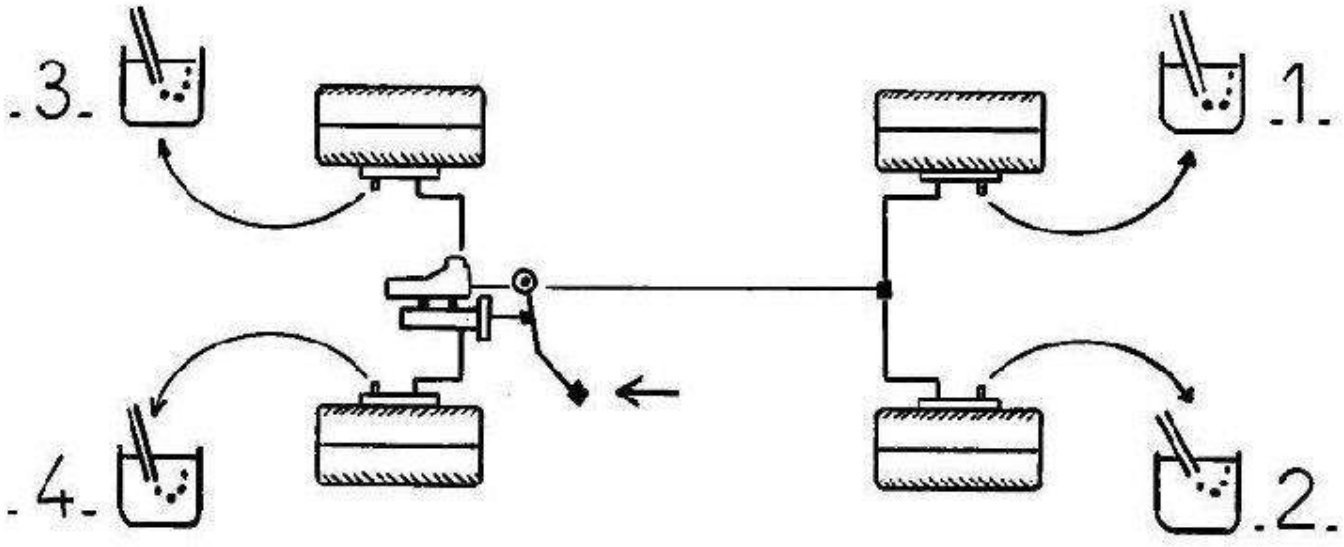
145 /70 R13
155 /65 R14



AIXAM		
CITY	1,6	1,6
CROSSLINE L6e	1,6	1,6
CROSSLINE L7e	1,6	1,6

Brake fluid





Brakes

Brakes

The braking system is of the hydraulic non powered type. The circuit is in X.
This means the front right wheel circuit is the same as the rear left wheel.
This type of circuit ensures optimum safety in case of failure.

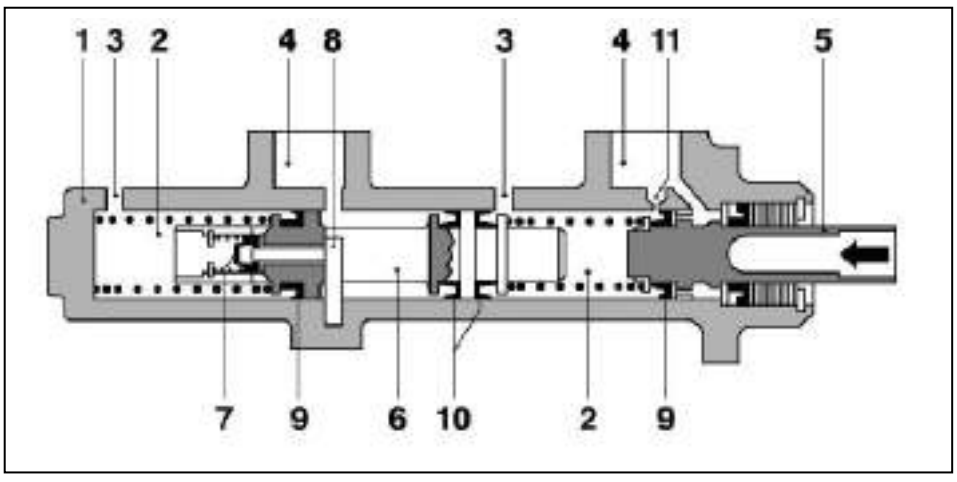
Service brake

The system is composed of:

- Master cylinder
- Piping
- Rear braking pressure corrector
- Calliper
- Drum brake

Tandem master cylinder:

1. Body
2. Pressure chamber
3. Outlet to circuits
4. Fluid tank
5. Thrust rod
6. Intermediate piston
7. Central valve
8. Central valve stop
9. Intermediate cup
10. Main cup
11. Compensation hole

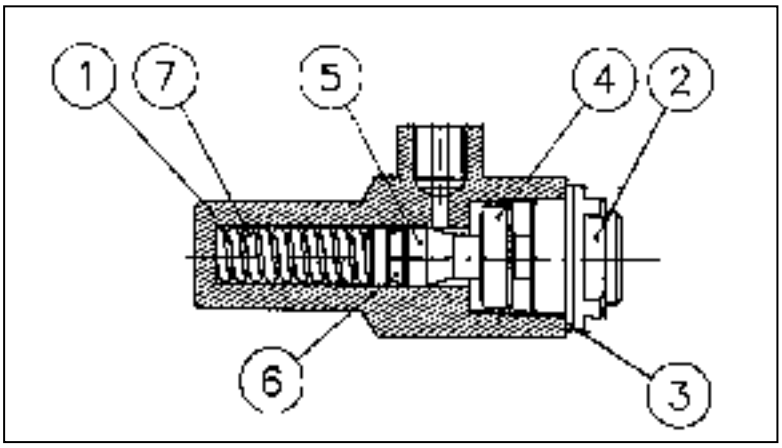


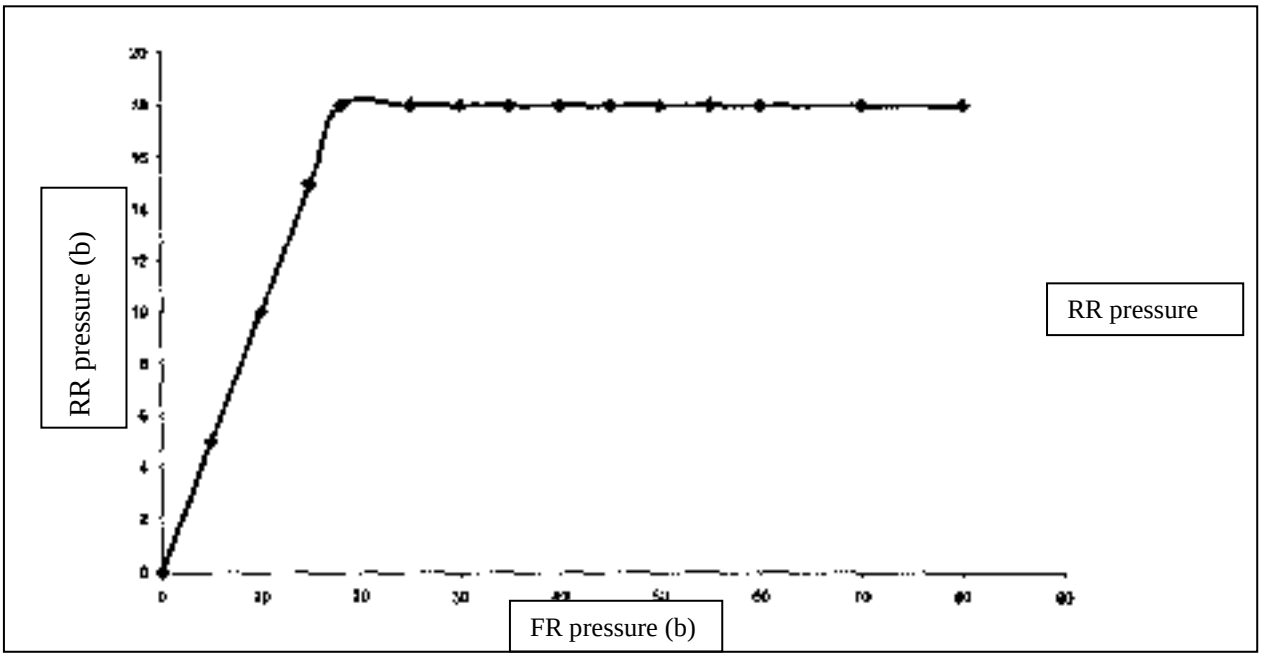
Rear braking pressure corrector:

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

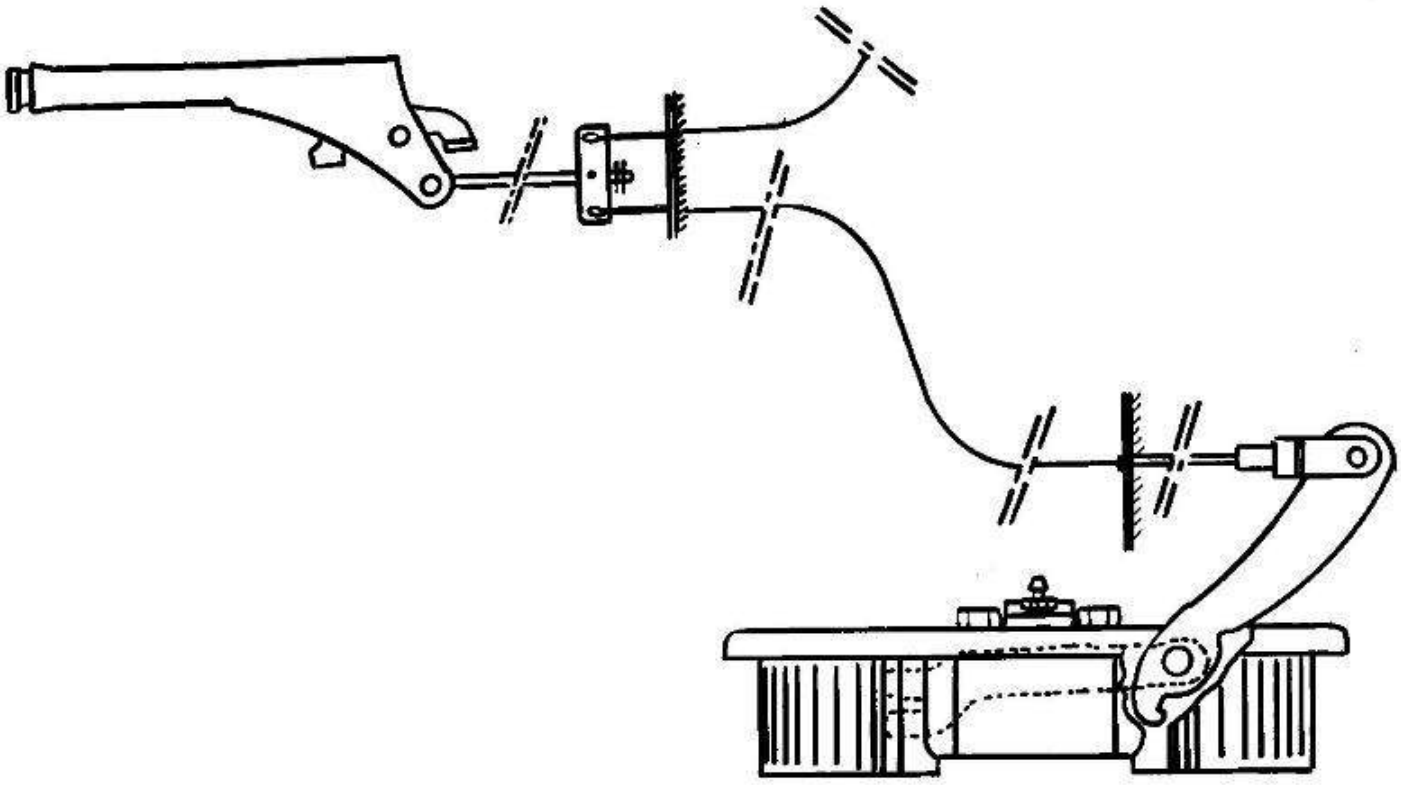
The latter is designed to restrict braking pressure to 18 bars maximum.

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





Hand brake



Summary for aluminium wheels 2010

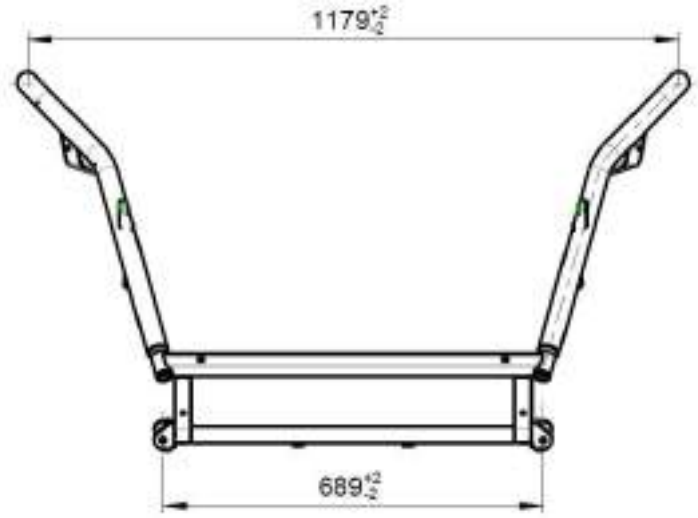
	DIAL 14"	MONTUPET 14"
	4.5Jx14"ET17	4.5Jx14**ET17**
Reference	6AG080	6AA080
Static load	200 kg	300 kg

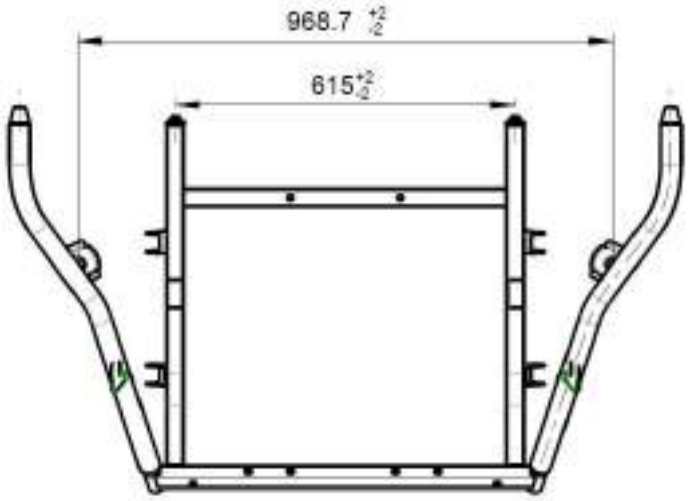
Vehicle		
CITY SL	X	
CROSSLINE VSP SL		X
CROSSLINE TQM SL		X

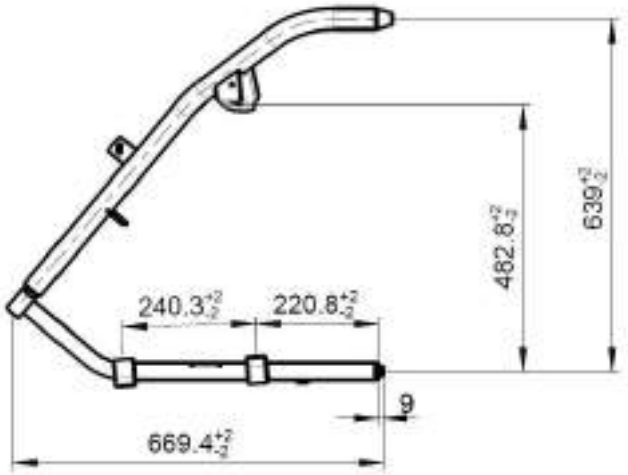
WE DRAW YOUR ATTENTION TO THE FACT THAT THE «6AG080» WHEEL CANNOT BE FITTED ON THE CROSSLINE VSP AND TQM BECAUSE OF THE STATIC LOAD INDEX.

INDEX

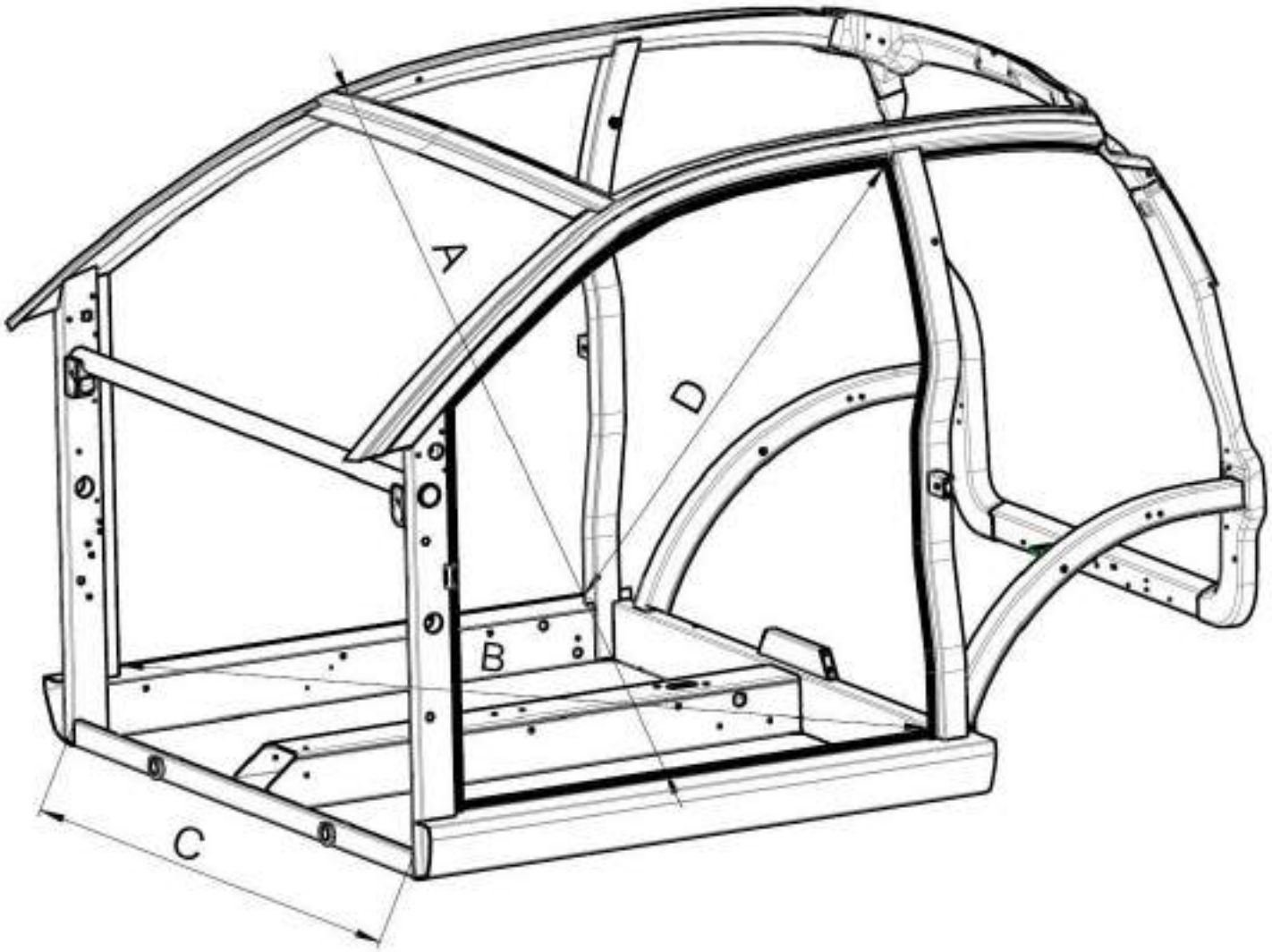
Front frame dimensions CITY





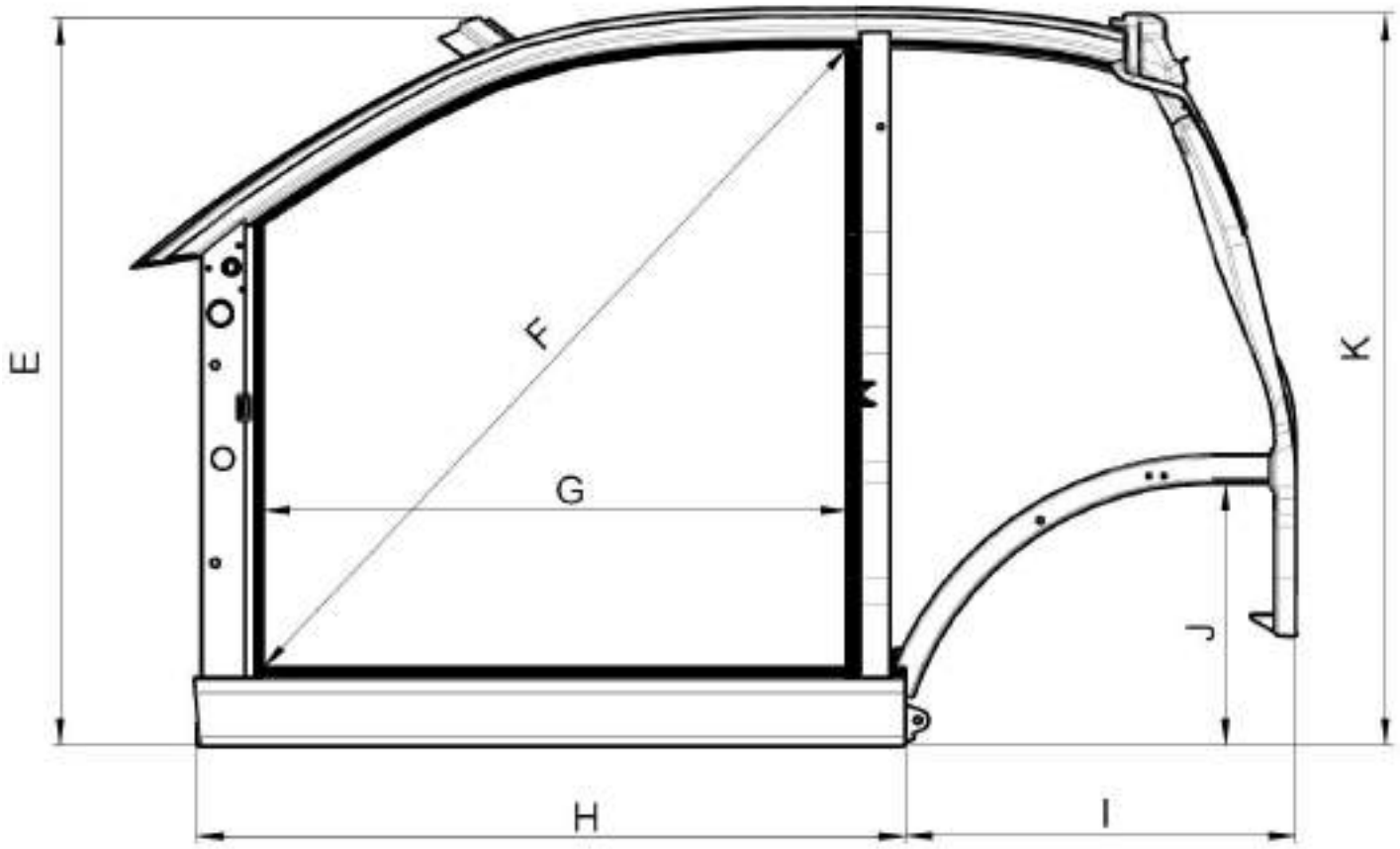


Aluminium cell dimensions CITY



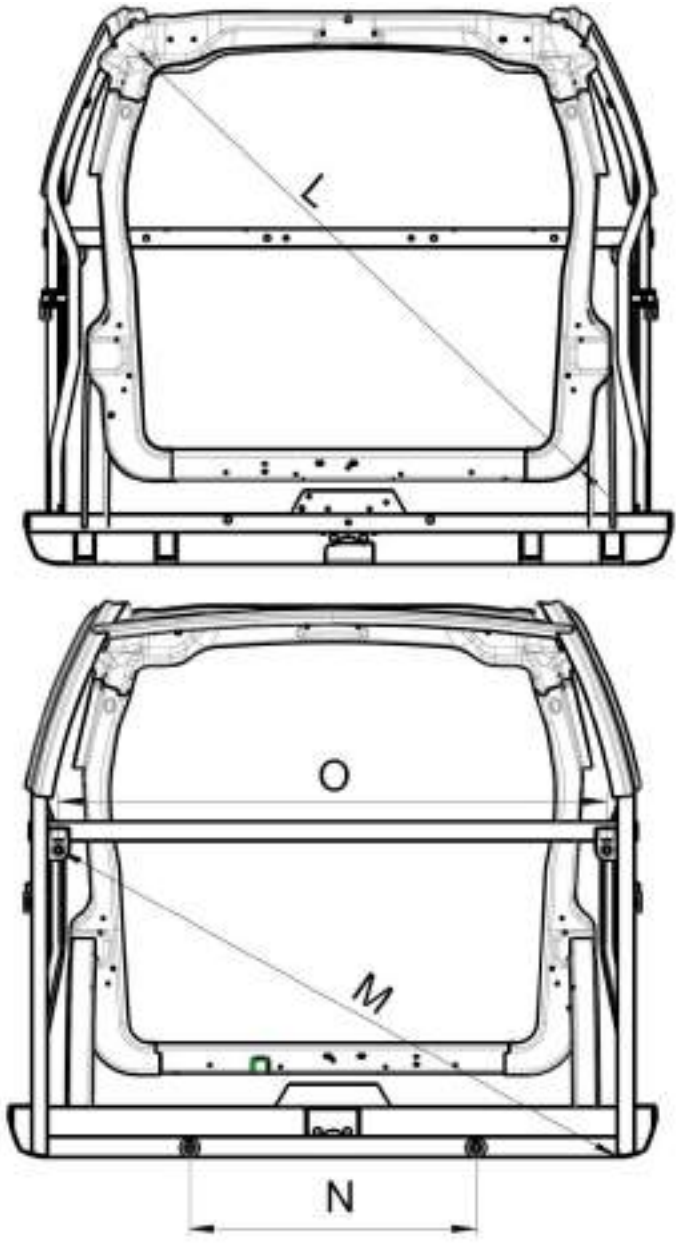
	CITY	+/- mm
A	1492	2
B	1561,2	2
C	1225	2
D	1510,6	2

Aluminium cell dimensions CITY



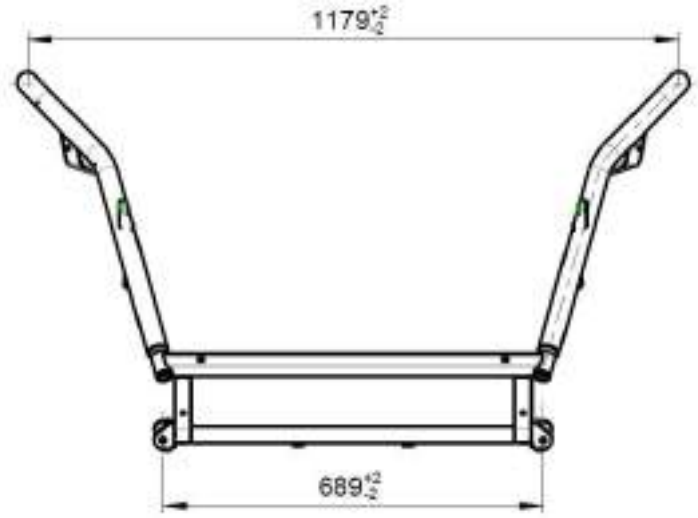
	CITY	+/- mm
E	1178,8	2
F	1383,3	2
G	946	2
H	1147	2
I	631,3	2
J	425	2
K	1185	2

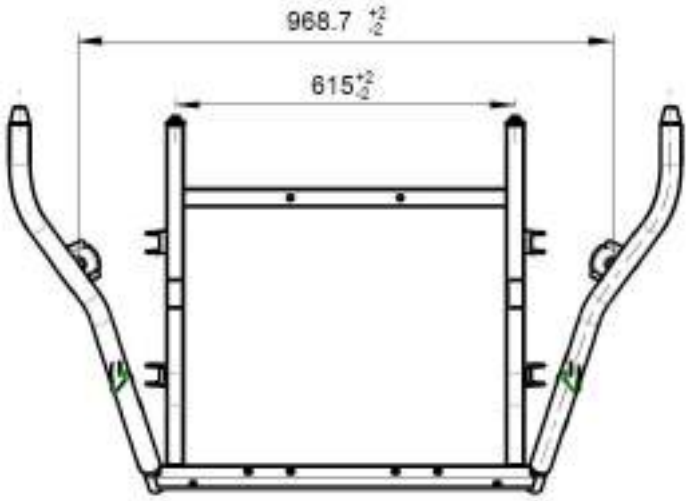
Aluminium cell dimensions CITY

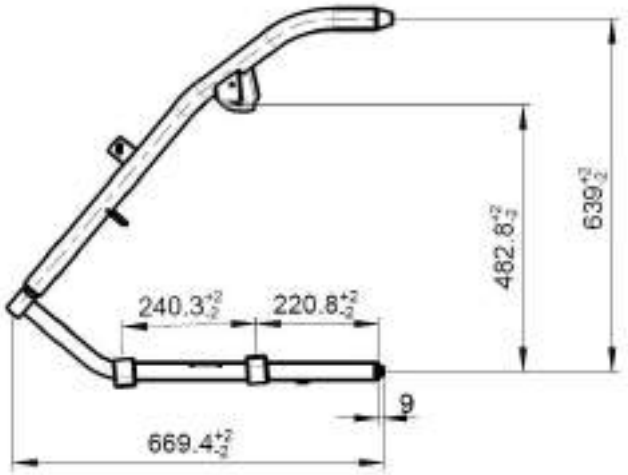


	CITY	+/- mm
L	1257	2
M	1371,3	2
N	615	2
O	1179	2

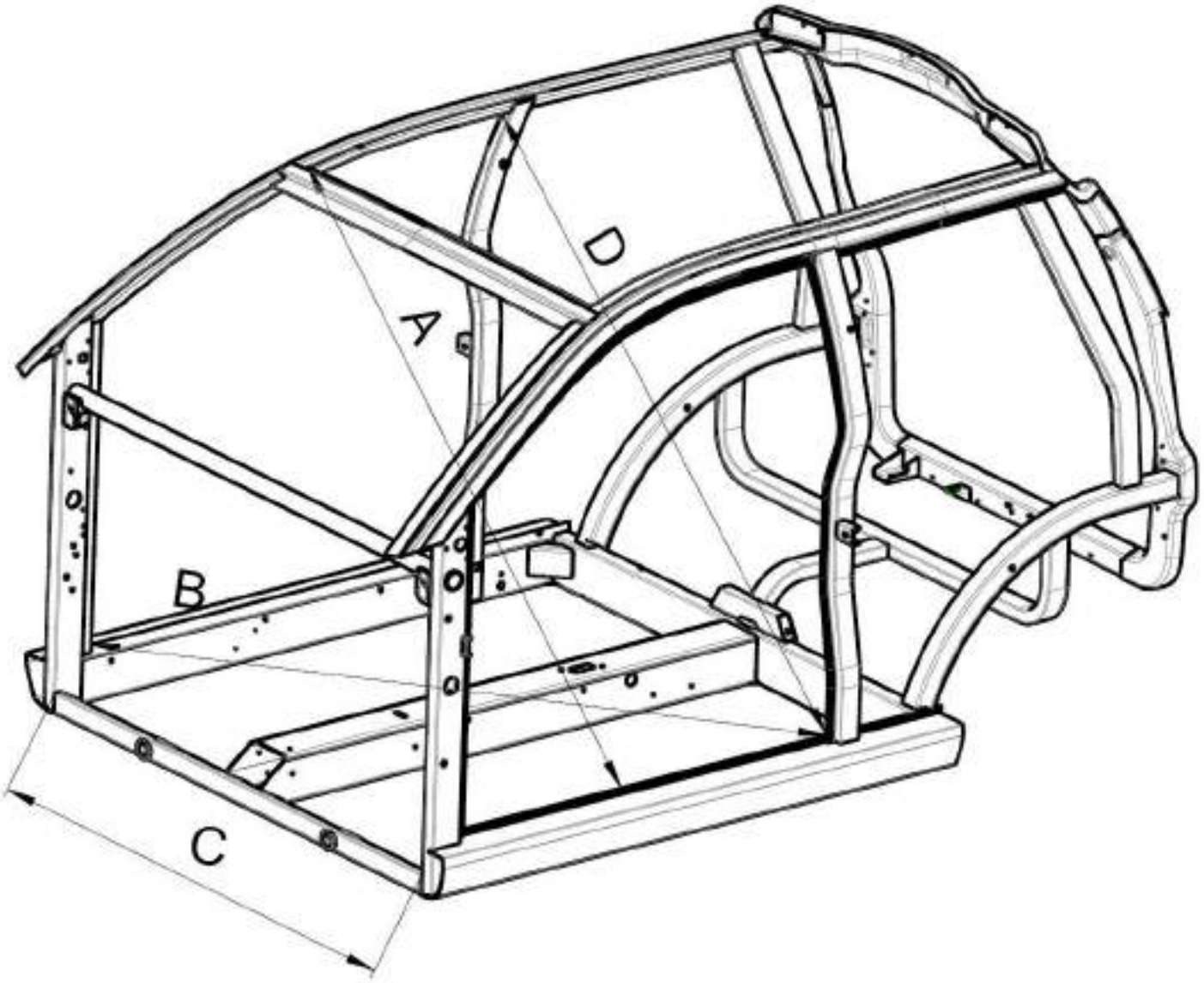
Front frame dimensions CROSSLINE





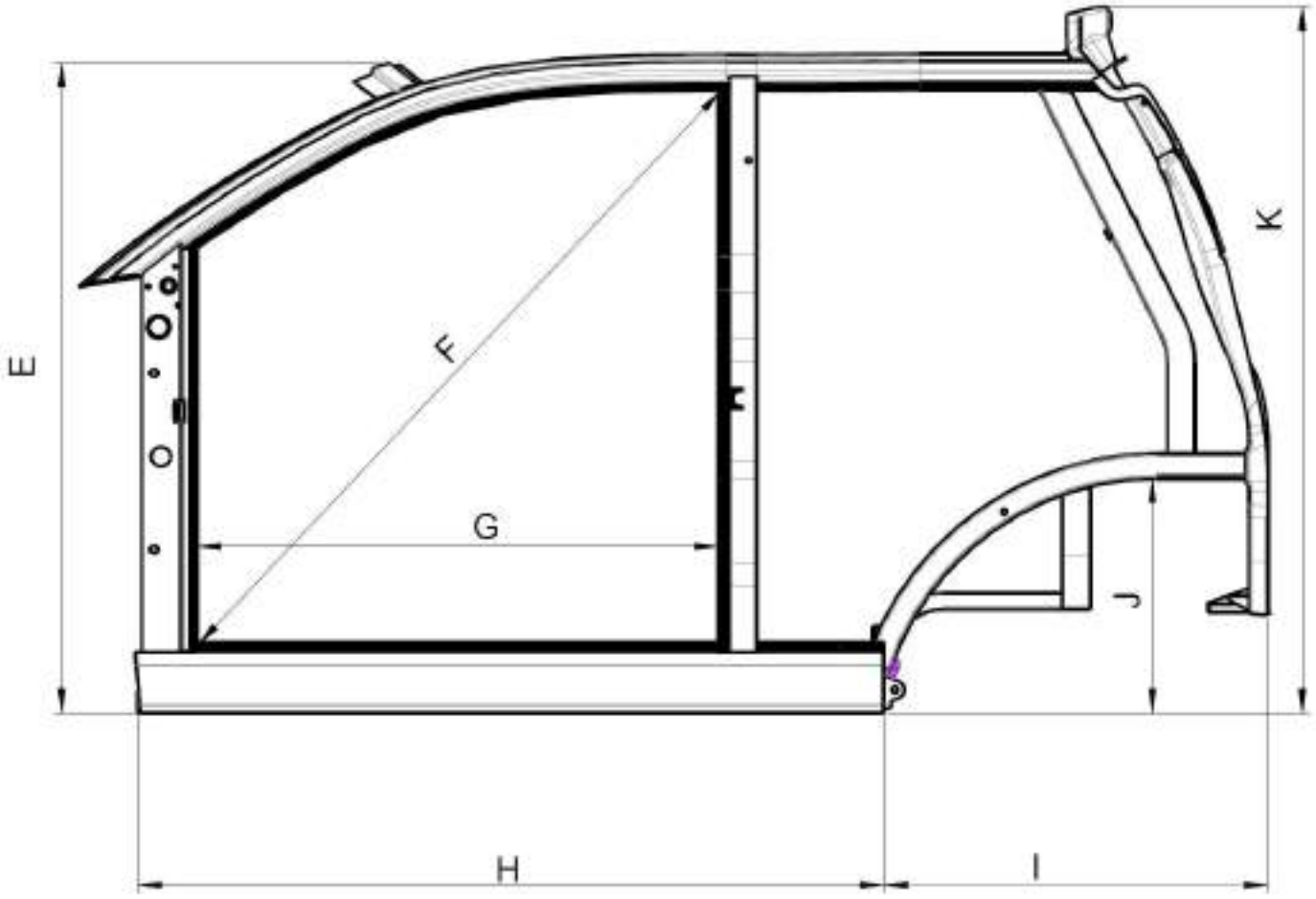


Aluminium cell dimensions CROSSLINE



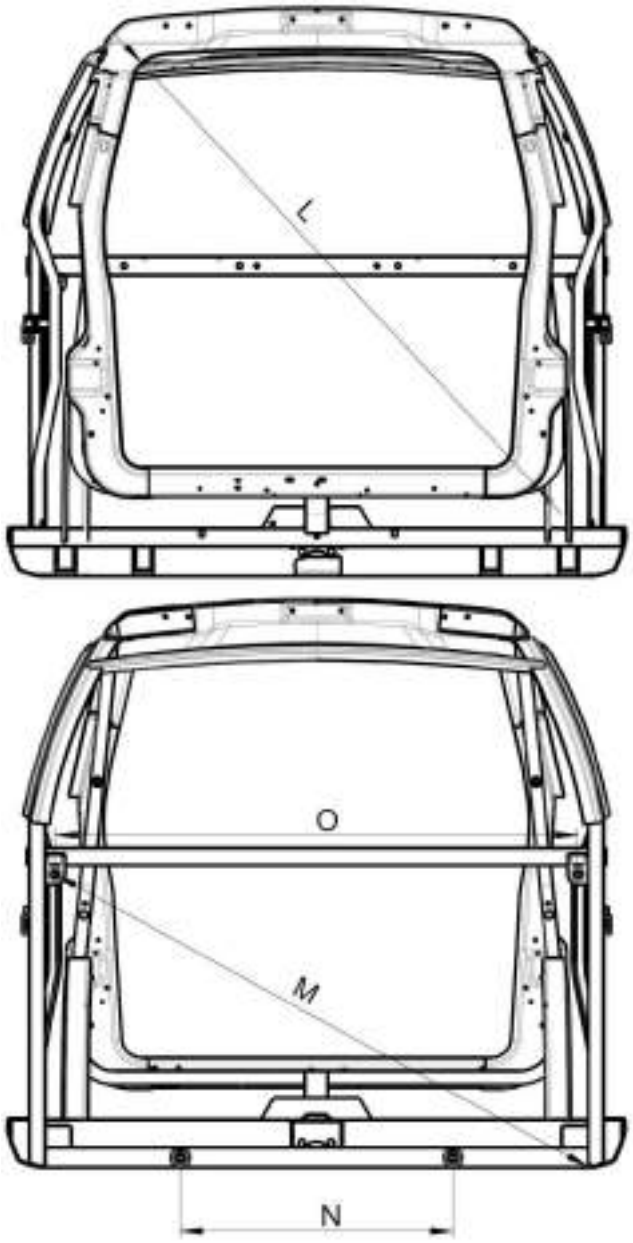
	CROSSLINE	+/- mm
A	1492	2
B	1561,2	2
C	1225	2
D	1510,6	2

Aluminium cell dimensions CROSSLINE



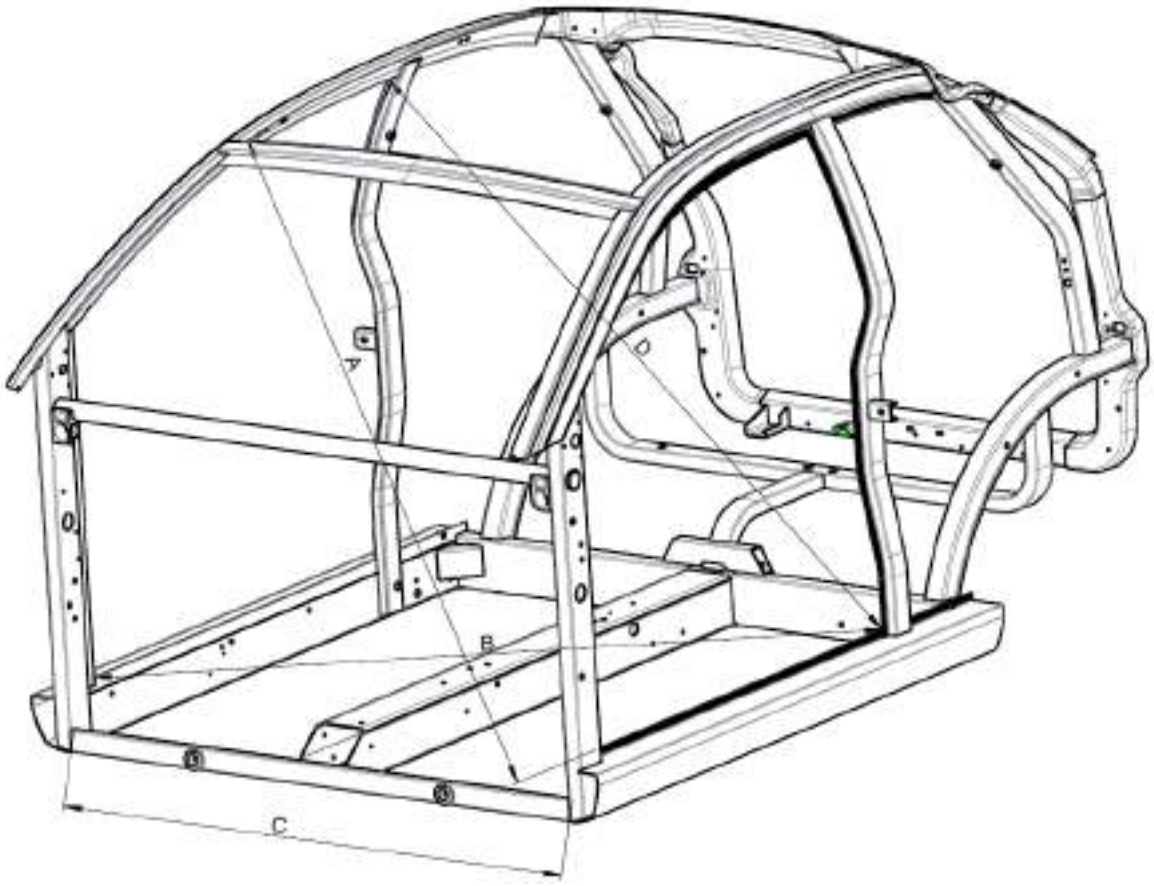
	CROSSLINE	+/- mm
E	1178,8	2
F	1383,3	2
G	946	2
H	1352	2
I	696,3	2
J	425	2
K	1281	2

Aluminium cell dimensions CROSSLINE



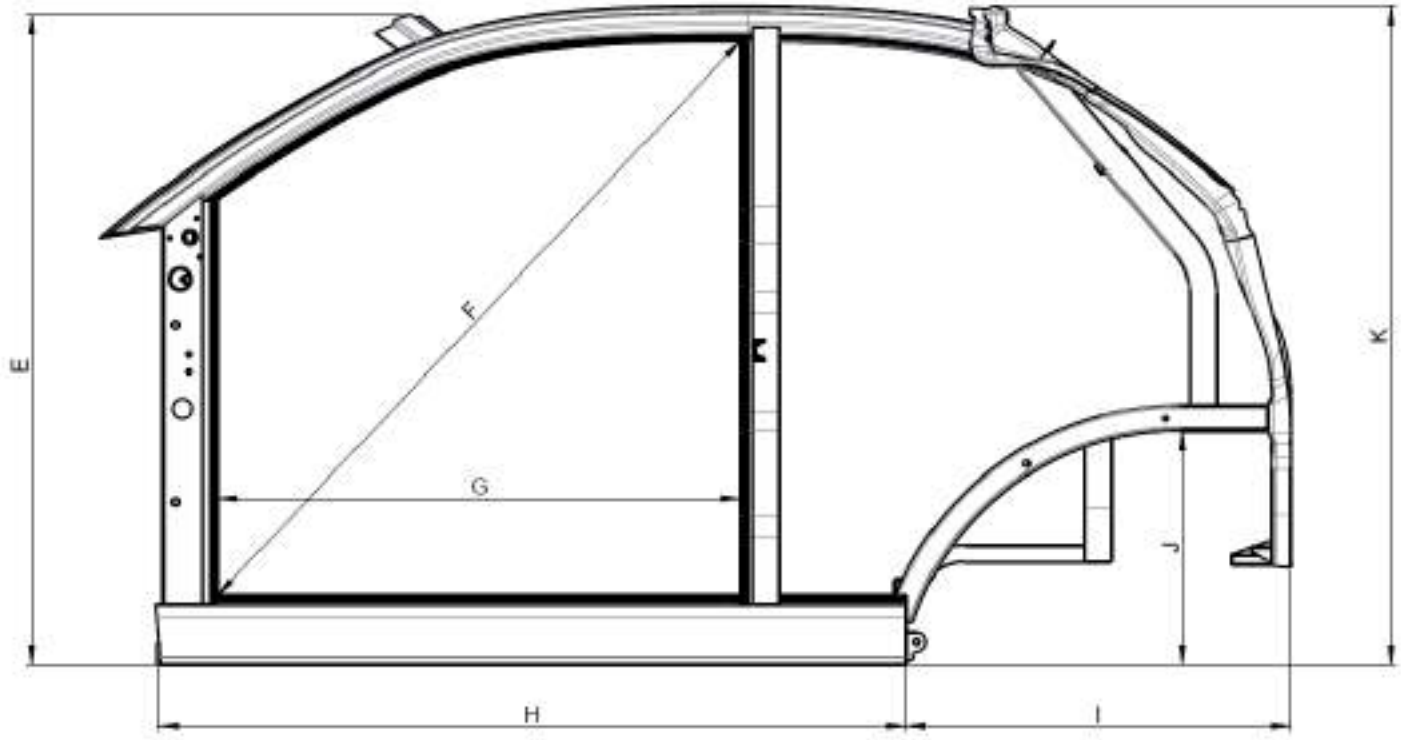
	CROSSLINE	+/- mm
L	1331,3	2
M	1371,3	2
N	615	2
O	1179	2

Aluminium cell dimensions COUPE



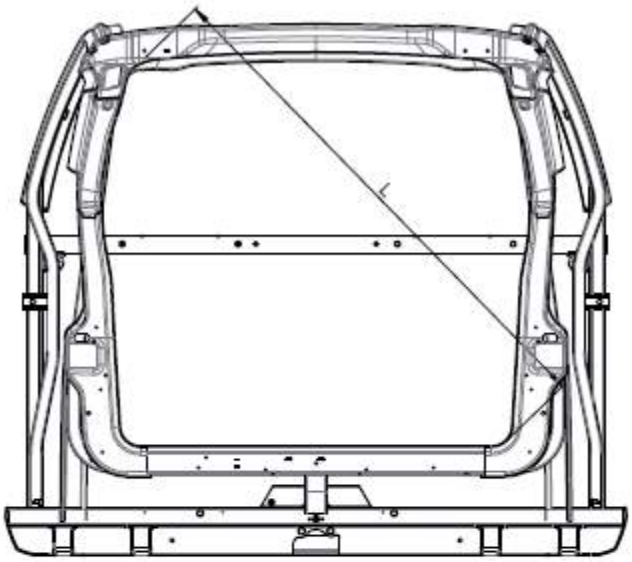
COTE	COUPE	± mm
A	1492	3
B	1561	3
C	1225	3
D	1511	3

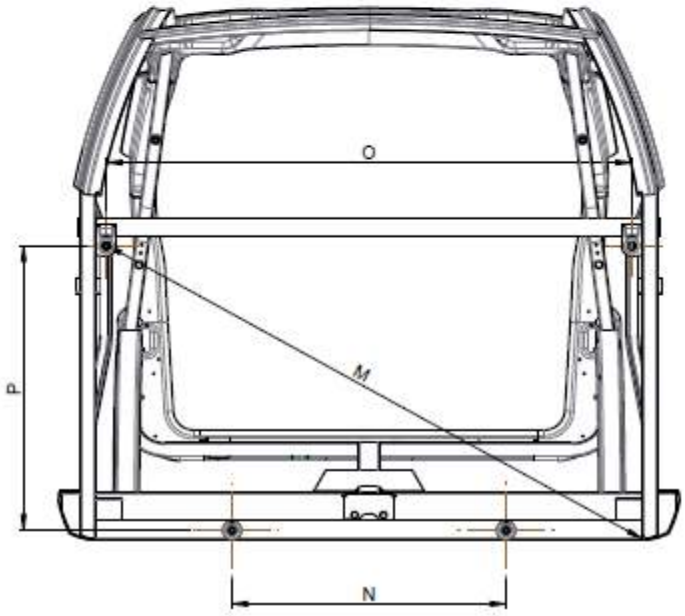
Aluminium cell dimensions COUPE



COTE	COUPE	± mm
E	1179	3
F	1383	3
G	946	3
H	1352	3
I	696	3
J	425	3
K	1194	3

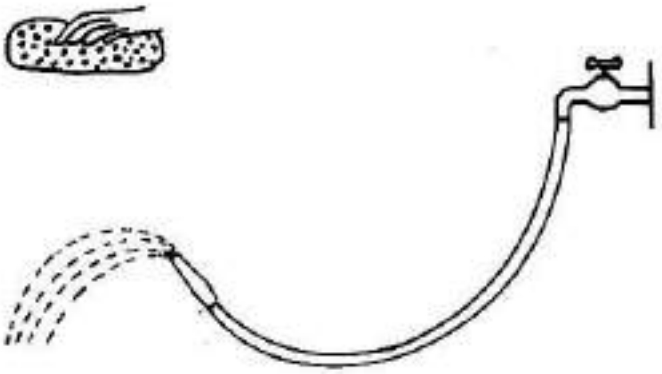
Aluminium cell dimensions COUPE

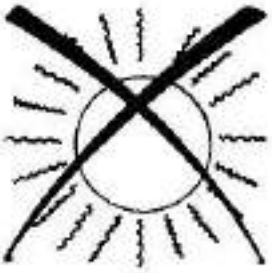


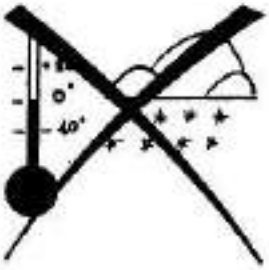


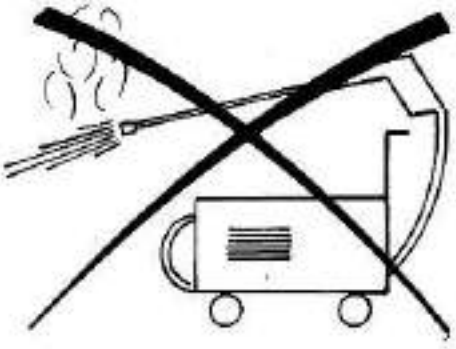
COTE	COUPE	± mm
L	1259	10
M	1371	3
N	615	3
O	1179	3
P	639	3

Bodywork servicing

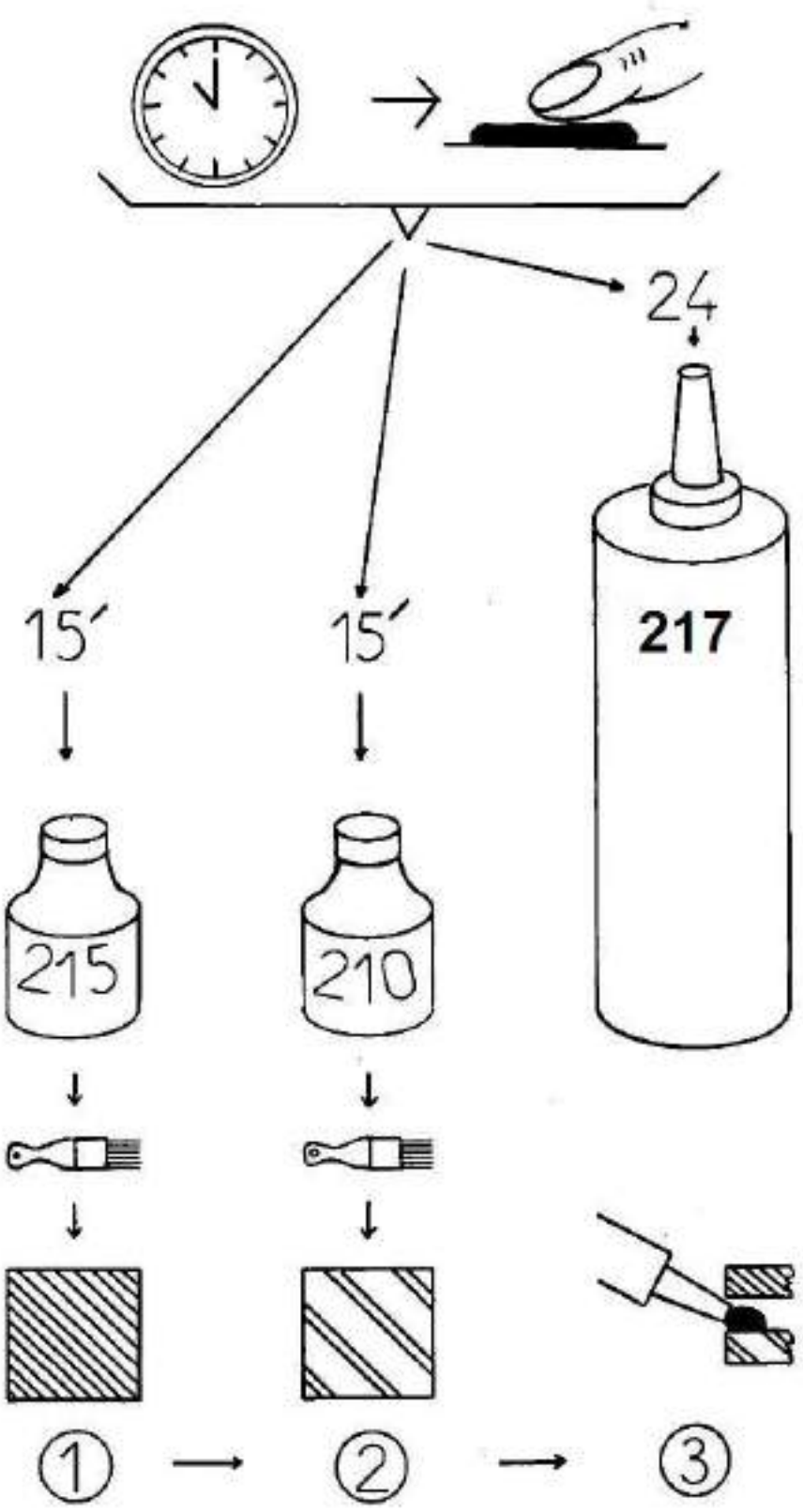








Gluing



Frame tailgate 7AR080 mounting process
Materials needed:

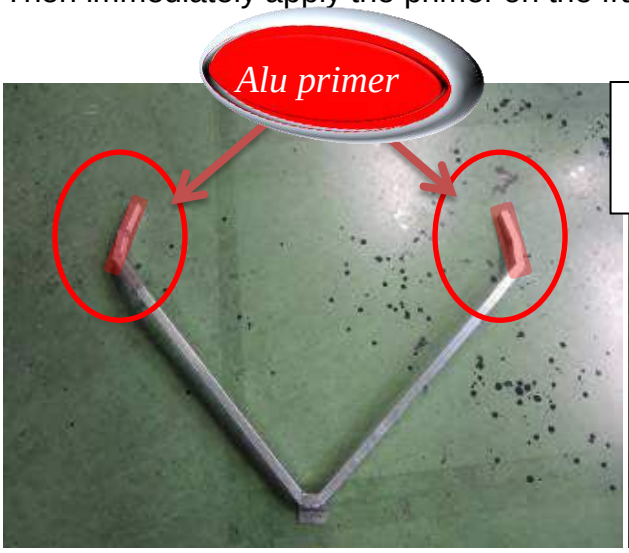
Tools
1 glue gun
Primer machine
1 riveting machine

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

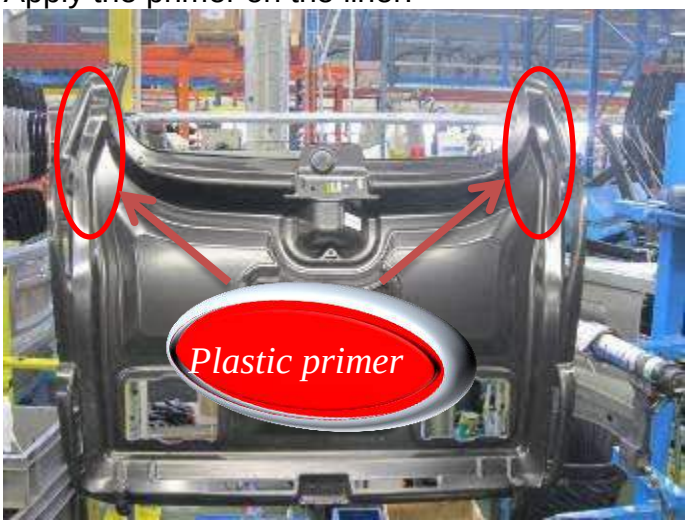
Sand the part and clean it with degreasing agent on the area that will receive the primer.

Then immediately apply the primer on the frame.



Apply the primer on the side of the joint attachment screw and on the faces in contact with the liner and the window.

Apply the primer on the liner.



Left side

Right side

Step 2: Gluing elements
Apply glue to the liner and to the aluminum frame being careful not to spill over the primer

Step 3: Setting up the frame
Set the armature in the liner making sure that the elements are in contact at the gluing points.

Rivet the tailgate hook with the frame

Step 4: Assemble joints head 7K102A

Apply glue on the frame for gluing the tailgate glass

Rivet the frame adding a washer nitrile with lining at the joints

INDEX

Instrument cluster

INDEX

Tachometer:

- Analog display with needle and stepper motor.
- Pulse sensor of the Hall type (by COMEX), assembled on the intermediate shaft of the reducing gearbox, with 8 pulses per shaft revolution.
- The pulse sensor is supplied by the dashboard.
- If the dashboard receives no pulse for 1 second, the needle returns to the indication 0.
- If the pulse frequency is excessive, the needle maintains a maximum indication.
- It the car is reversing, the speed indicated is 0 km/h.

Odometer and tripmaster:

- Pulse sensor of the Hall type. Same sensor as that used by the tachometer.
- Odometer with 6 digits and maximum display of 999,999 km or miles. When it reaches 999,999, it is blocked.
- The odometer value displayed is preceded with the non-used zeroes, e.g. 000234.
- Tripmaster with 4 digits, 3 plus 1 decimal place. Maximum value 999.9 km or miles.
- The tripmaster value is not preceded with zeroes, e.g. 31.2 km.
- When the tripmaster reaches 999.9 km or miles, it returns to 0.
- The work unit km or miles is displayed next to the odometer value.
- The odometer and tripmaster are saved when the ignition is cut to preserve the EEPROM. Memorization is guaranteed in case of sudden battery cut.

Display on LCD cluster 1:

- The odometer and tripmaster are displayed on the left-hand LCD.
- Selection between the odometer and tripmaster is performed by a short press (<3 sec.) on the left-hand button.
- Resetting the tripmaster is performed only when it is displayed, by a long press (>3 sec.) on the left-hand button.

Display on LCD cluster 2:

- The general odometer is displayed on the right-hand LCD.
- The tripmaster is displayed on the left-hand LCD.

Resetting the tripmaster is performed by a long press (>3 sec.) on the left-hand button.

Changing from km to miles or vice-versa:

With the left button pressed, and then turn the ignition on.
The dashboard changes from km to miles or vice-versa.

Fuel level indicator and reserve indicator:

- LCD bar-graph display. 6 bars + fuel pump symbol.
- When 1 bar remains lit, the bar flashes (2 Hz) and the reserve indicator lights up.
- When a circuit is open, all bars are lit, one after the other in a cycle, at a frequency of 2 Hz.

Clock:

- The clock function is still present. The dashboard maintains maintenance counting by time.
- The clock is displayed on the right-hand LCD.
- The clock can be of two types, 12 hours (am-pm) or 24 hours.

If the work unit is km, then the clock works with the 24 hour style.
If the work unit is miles, then the clock works with the 12 hour style (am-pm).

- The two points between the hours and minutes are fixed.
- Clock precision: ±1 second per day.
- The clock maintains time counting for maintenance (1 year).
- After connecting the battery, the clock displays 12 :00, am – pm if the dashboard is in miles.

Setting the clock:

- Setting the clock is possible only when the vehicle is stopped.
- If the clock is being set with the vehicle running, the setting is cancelled.
- To enter the hour setting, hold the right-hand button pressed (>3 seconds): the hours flash.
- Set the hours by short pressing on the right-hand button.
- Hold the right-hand button pressed (>3 seconds) to enter the tens of minutes setting: the tens of minutes flash.
- Set the tens of minutes by short pressing on the right-hand button.
- Hold the right-hand button pressed (>3 seconds) to enter the minutes setting: the minutes flash.
- Set the minutes by short pressing on the right-hand button.
- Exit the setting mode by long pressing on the right-hand button (>3 seconds).

Maintenance indicator function:

Maintenance indication can be performed in two ways, per mileage or per time.

Maintenance calibration for all models:
- 1st maintenance: 1000 km (621 mi) or 1 year.
- 2nd and subsequent maintenance: Every 5000 km (3107 mi) or 1 year.

Days counter for maintenance per time:

The time counter is activated after the first 10 km.

Viewing the maintenance state:

After ignition, the maintenance symbol (key) appears for 5 seconds on the left-hand display.
Viewing the mileage has priority over viewing the time remaining.

If the mileage exceeds 200 km before maintenance, the LCD displays the mileage remaining + the « key » symbol for 5 seconds.
If the mileage is less than 200 km before maintenance, the LCD displays the mileage remaining flashing + the « key » symbol for 5 seconds.

If the total mileage before maintenance has been exceeded, the LCD displays the mileage in negative flashing + the « key » symbol for 5 seconds.

If the mileage remaining before maintenance exceeds 200 km and the time remaining is less than 20 days, the LCD displays the number of days flashing + the « key » symbol + the « 1 year » symbol for 5 seconds.

If the total time (days) before maintenance has been exceeded, the LCD displays the mileage in negative flashing + the « key » symbol and « 1 year » for 5 seconds.

If the mileage for maintenance is exceeded, the LCD displays the « key » symbol on the left-hand display, permanently.

If the time before maintenance is exceeded, the LCD displays the « key » + the "1 year" symbol on the left-hand display, permanently.

<u>Additional function:</u>
After ignition, to see the time remaining before the next maintenance, press the two buttons on the display simultaneously.

Maintenance «Reset»:
Maintenance can be reset at any time, except when the maintenance mileage or time has been exceeded.

To perform a reset: Turn the ignition and wait for the dashboard to be in normal operation (do not exceed 15 sec.) Right after, hold the two buttons pressed (right and left) for 6 seconds.

The « rESEt » message appears on the left-hand display.

Outside temperature indication function:
The outside temperature operates from a resistive sensor (CTN) with a nominal resistor R25 = 5K ±1% and a constant B25/50 = 3470K ±1%.

Displaying the outside temperature is possible only on models with two LCD. It appears in the right-hand LCD.
The display unit is always degrees Celsius (ºC).
The display on the right-hand LCD has the negative sign + 2 digits + the ºC symbol.
Display accuracy is ±1ºC.
Warning when outer lower temperature below +3ºC. In this condition, the display flashes.

If the sensor is not connected (circuit open) or if the sensor is in short-circuit, there is no display.

AGB indication function:

This function determines whether the car is in reverse « R », forward « D », neutral « N ».
The display is made on the left-hand LCD.

Brightness setting function:

There are two backlighting modes: day mode and night mode.

Day mode:
- The car has its lights off. Only the LCD is lit. In this mode, no setting is possible and light intensity is set to maximum.

Night mode:
- The car has its lights on. The LCD and tachometer are lit. This mode allows to select 8 levels of light brightness.

Light intensity setting:

By a short press on the right-hand button. Intensity increases by one step whenever the button is pressed and, after the eighth time, it loops back to the lowest intensity.
This setting is possible only if the clock setting is not activated.

Protection function:

If battery voltage exceeds 16 Volts, the lighting switches off and is restored when the voltage drops below 15.7 Volts.

Indicators and warning lights function:

Right indicator: two 21W lamps + 1 5W lamp, with detection of one or two burnt 21W lamps. The indicator is accompanied with a beep.

Left indicator: two 21W lamps + 1 5W lamp, with detection of one or two burnt 21W lamps. The indicator is accompanied with a beep.

Warning lights: four 21W lamps + two 5W lamps without burnt lamp detection, plus a beep
The dashboard lamp flashes with the warning lights.

Indicator in normal operation:

- 100 strokes per minute with a 50% cyclic ratio. 300 ms on and 300 ms off. The dashboard lamp flashes with the indicator.
- When the indicator is lit, a beep is emitted with a frequency of 2857 Hz and lasting 7 ms. TICK sound simulation.
- When the indicator switches off, a beep is emitted with a frequency of 2,581 Hz and lasting 4 ms. TACK sound simulation.

Indicator in burnt lamp operating mode:

- 200 strokes per minute with a 50% cyclic ratio. 150 ms on and 150 ms off. The dashboard lamp flashes with the indicator.
- When the indicator is lit, a beep is emitted with a frequency of 2857 Hz and lasting 7 ms. TICK sound simulation.
- When the indicator switches off, a beep is emitted with a frequency of 2,581 Hz and lasting 4 ms. TACK sound simulation.

Warning lights:

- 100 strokes per minute with a 50% cyclic ratio. 300 ms on and 300 ms off. The dashboard lamp flashes with the three dashboard lamps: right indicator, left indicator and warning.
- When the warning is lit, a beep is emitted with a frequency of 2857 Hz and lasting 7 ms. TICK sound simulation.

When the warning switches off, a beep is emitted with a frequency of 2,581 Hz and lasting 4 ms. TACK sound simulation.

Automatic warning lights activation function:

This function controls the warning lights automatically according to sudden speed variations.

This function can be activated or inhibited using the buttons on the dashboard:

To change the state of this function, ON-OFF or OFF-ON:

- Turn the ignition on and wait for the dashboard to switch to normal operation.
- Then, hold the right-hand button pressed for 10 seconds. The message « A On » or « A OFF » is displayed in the left-hand LCD.

This message means the automatic warning lights function is activated.

This message means the automatic warning lights function is inhibited.

Diesel engine preheating function:
The temperature sensor sends the signal to the thermostat unit.

Whenever the ignition is activated, the preheating relay and preheating lamp are controlled as per the following calibration tables:

	Engine temperature °C	Ohms	Lamp timeout (Seconds)	Plug timeout (Seconds)	
Open-circuit	"----"	9900	10	16	If R > 990
	-30	9052	39	46	Si 9800 > R > 9052
	-20	4651	22	29	Si 9052 > R > 4651
	-10	2865	15	22	Si 4651 > R > 2865
	0	1600	10	16	Si 2865 > R > 1600
	10	1044	7	12	Si 1600 > R > 1044
	20	646,9	5	8	Si 1044 > R > 646
	30	419,8	3	6	Si 646 > R > 419
	40	300	2	4	Si 419 > R > 300
Short-circuit	"----"	100	10	16	Si R < 100

If the dashboard detects an open circuit or short-circuit, it takes the default value of 10 seconds for the lamp and 16 seconds for the glow plugs.

This function can be activated or inhibited using the buttons on the dashboard: (only on 8AJ033A models)

To change the state of this function, ON-OFF or OFF-ON: Turn the ignition on and wait for the dashboard to switch to normal operation. Then, hold the left-hand button pressed for 10 seconds. The message « d On » or « d OFF » is displayed in the left-hand LCD.

This message means the diesel preheating function is activated.

This message means the diesel preheating function is inhibited.

Interior lighting control function (dome light):
This function is available only on models with 2 LCD: 8AJ033, 8AJ033A, 8AG033A, 8AG033B and 8ME033B.

This function controls interior lighting (on 5W lamp)
Switching on and off is progressive.

This function can be controlled differently:
State no.1:
If the dome light is off with the door closed. When the door is opened:
- The dome light lights up progressively over 5 seconds.
- It switches off after 30 seconds.

State no.2:
State no.1 + ignition:
- Progressive extinction of the dome light over 5 seconds, with the door open.

State no.3:
State no.1 + door closed:
- The dome light switches off after 10 seconds.

State no.4:
State no.2 + door open:
- The dome light lights up progressively over 5 seconds.
- It switches off after 30 seconds.

State no.5:
State no.3 + ignition:
- Progressive extinction of the dome light over 5 seconds, with the door closed.

This function can be activated or inhibited using the buttons on the dashboard:
To change the state of this function, ON-OFF or OFF-ON: hold the right-hand button pressed and then, turn ignition on. The message « P On » or « P OFF » is displayed in the left-hand LCD.

This message means the dome light control function is activated.

This message means the dome light control function is inhibited.

Protection function:
The dome light lamp is protected. If battery voltage exceeds 16 Volts, the function is inhibited, and is restored when the voltage drops below 15.7 Volts.

Defrosting control function:
This function is available only on models with 2 LCD: 8AJ033, 8AJ033A, 8AG033A, 8AG033B and 8ME033B.

Operates by short presses (pulses) on the defrosting control.

Ignition on and pulse on the defrosting command: control of the defrosting relay starts for 12 minutes (720 seconds) with the associated lamp lit, except for the electric model which has a timeout of 4 minutes (240 seconds).
If an additional pulse is produced or if ignition is switched off, control is cancelled and the lamp switches off.

Protection function:
The defrosting output is protected. If battery voltage exceeds 16 Volts, the function is inhibited, and is restored when the voltage drops below 15.7 Volts.

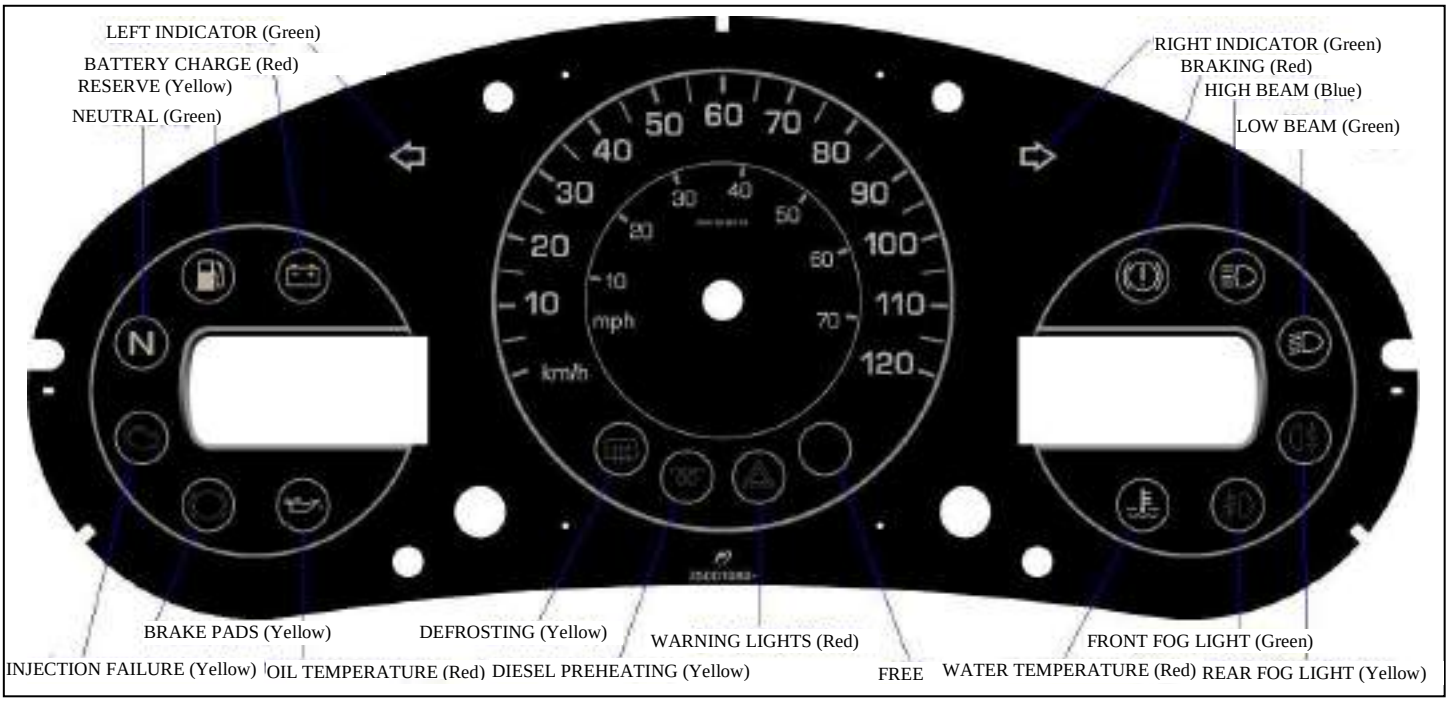
Engine off control:
When the ignition is off, the dashboard activates the engine off relay for 8 seconds. Then the dashboard "falls asleep".
The engine off relay is controlled by ignition off.

Lights on alarm:
If ignition is off, the car lights are lit: when opening the door the dashboard emits a signal at a frequency of 2581 Hz.
This sound signal overrides the warning lights beep.

Buzzer function:
See indicator function page 9
See warning light function page 10

Protection function:
The buzzer is inhibited if the battery voltage exceeds 16 Volts. It is restored when the voltage drops below 15.7 Volts.

Lamp:



Indicators not activated:

- Injection failure (Yellow)
- Front fog (Green)
- Free

Indicators for models 8AJ033, 8AJ033A, 8AG033A, 8AG033B and 8ME033B:

- Left indicator (Green)
- Battery charge (Red)
- Fuel reserve (Yellow)
- Neutral (Green)
- Warning lights (Red)
- Water temperature (Red)
- Rear fog (Yellow)
- Low beam (Green)
- Brake pads (Yellow)
- Oil temperature (Red)
- Defrosting (Yellow)
- Diesel preheating (Yellow)
- High beam (Blue)
- Braking (Red)
- Right indicator (Green)

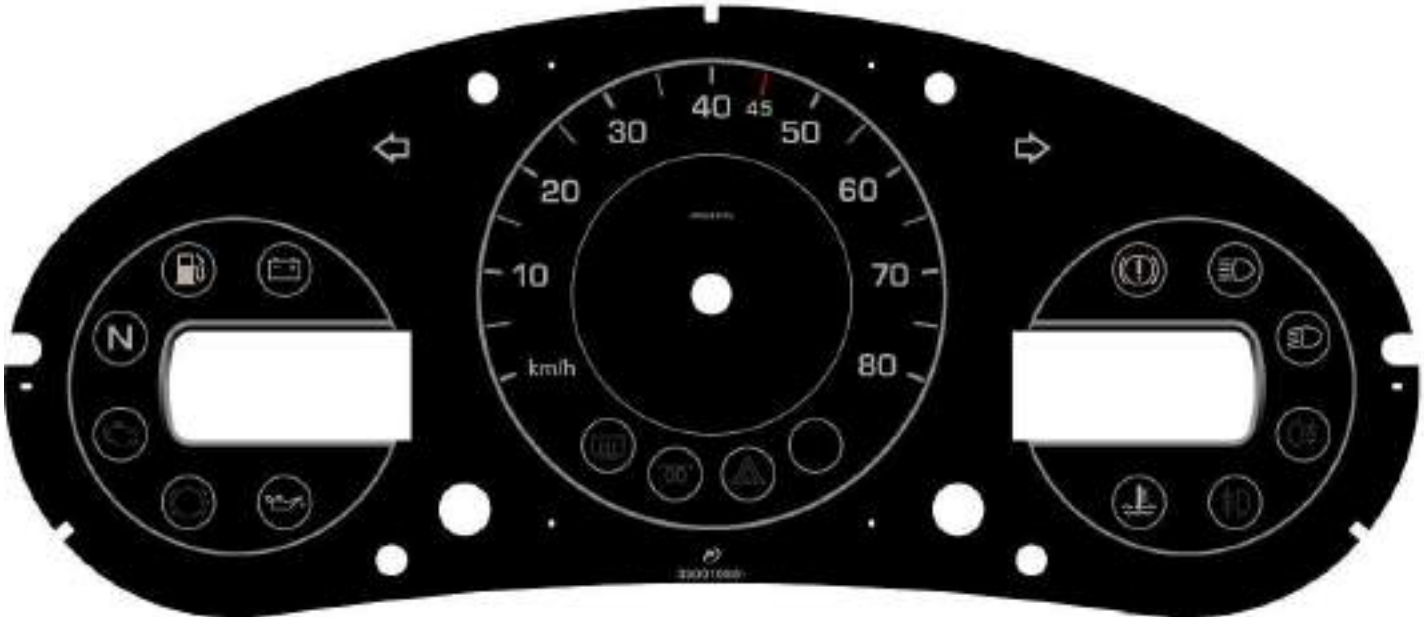
Indicators for models 8AG033, 8MD033CA and 8MD033BA:

- Left indicator (Green)
- Battery charge (Red)
- Fuel reserve (Yellow)
- Neutral (Green)
- Warning lights (Red)
- Water temperature (Red)
- Rear fog (Yellow)
- Low beam (Green)
- Brake pads (Yellow)
- Oil temperature (Red)
- Diesel preheating (Yellow)
- High beam (Blue)
- Braking (Red)
- Right indicator (Green)

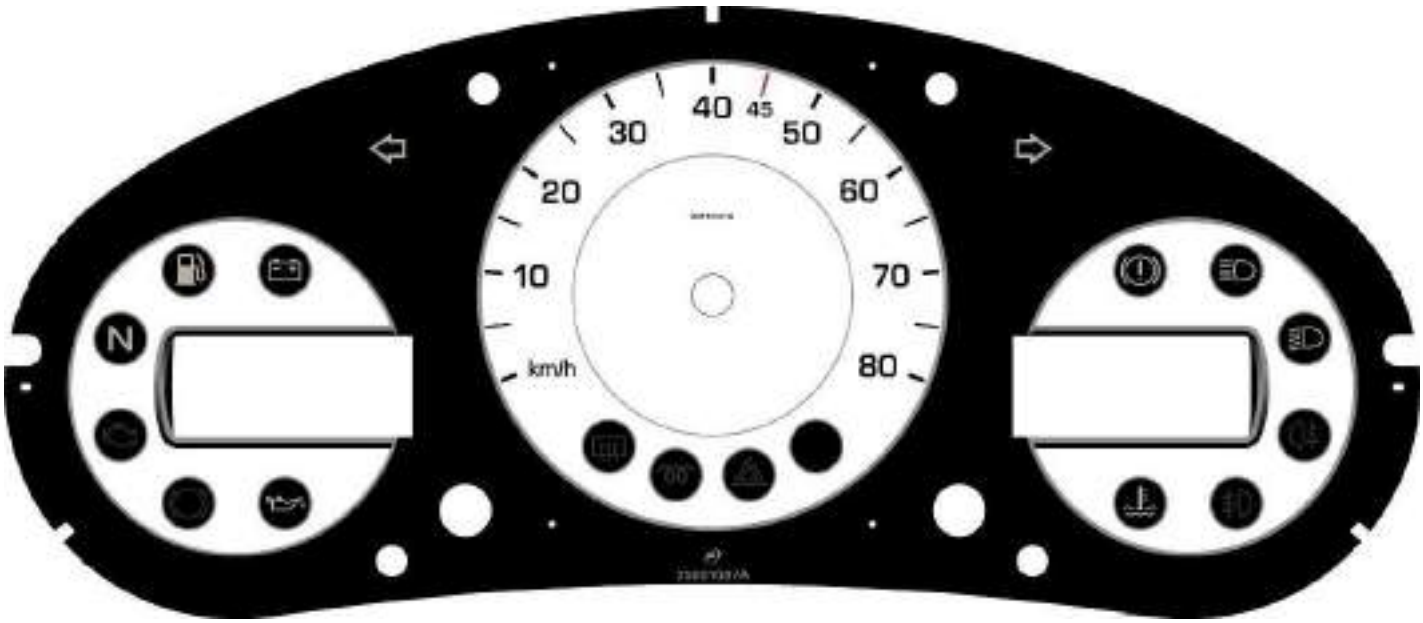
Serigraphy on each model:

Models 8AG033 (single LCD)

Model 8AG033A



Model 8AG033B

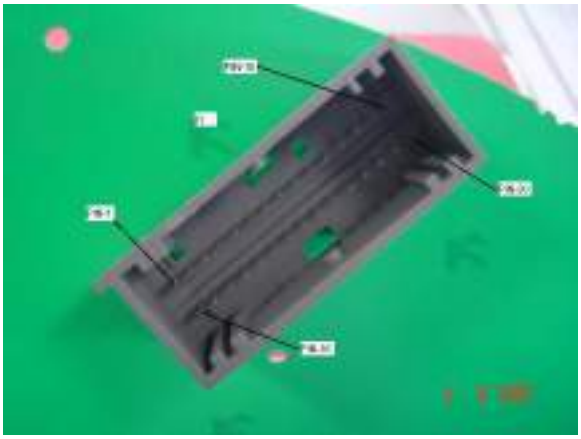


Model 8AJ033 and 8AJ033A

Description of input and output connectors and signals:

There are three connectors, J1, J2 and J3.

J1 30-pin connector:



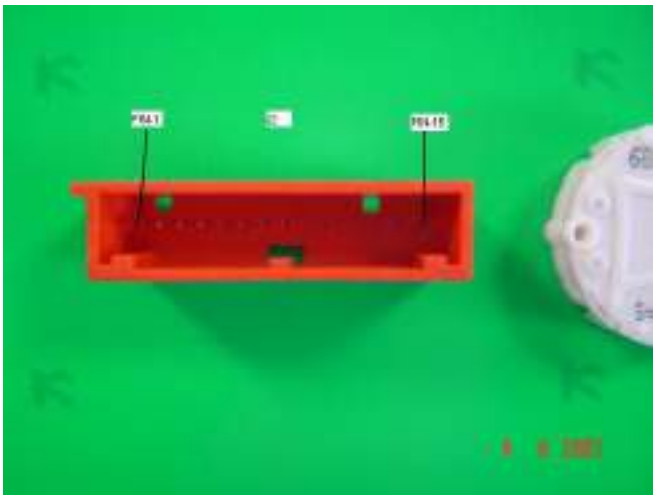
MOLEX connector

Or

FRAMATOME connector

PIN-1: Free
PIN-2: NEUTRAL input (see AGB function)
PIN-3: ENGINE TEMPERATURE CTN gauge input (Diesel preheating)
PIN-4: FUEL gauge input
PIN-5: WARNING switch input (Activated by ground connection)
PIN-6: POSITION LIGHTS input (Activated by connection to positive)
PIN-7: Positive input of the KEY
PIN-8: DEFROSTING switch input (Activated by ground connection)
PIN-9: LEFT INDICATOR input (Activated by ground connection)
PIN-10: Ground (-) for SPEED SENSOR
PIN-11: Free – Not used on this model
PIN-12: REAR FOG input (Activated by connection to positive)
PIN-13: LOW BEAM input (Activated by connection to positive)
PIN-14: HIGH BEAM input (Activated by connection to positive)
PIN-15: BRAKING input (Activated by ground connection)
PIN-16: Free
PIN-17: OIL TEMPERATURE input (Activated by ground connection)
PIN-18: AGB_REVERSE input (see AGB function)
PIN-19: **Do not use – Do not connect cable – Private use of FACOMSA**
PIN-20: RIGHT INDICATOR input (Activated by ground connection)
PIN-21: SPEED SENSOR pulse input (Input of open manifold type)
PIN-22: Ground (-) for OUTSIDE TEMPERATURE CTN gauge
PIN-23: Supply (+) for SPEED SENSOR.
PIN-24: Free
PIN-25: BATTERY CHARGE input (Activated by ground connection)
PIN-26: Input (+) OUTSIDE TEMPERATURE CTN gauge
PIN-27: Ground (-) for FUEL gauge
PIN-28: DOOR input (Activated by ground connection)
PIN-29: BRAKE PADS input (Activated by ground connection)
PIN-30: Free – Not used on this model

J2 15-pin connector:



MOLEX connector

Or

FRAMATOME connector

PIN-1: GROUND (GND)
PIN-2: GROUND (GND)
PIN-3: BATTERY POSITIVE (+12V)
PIN-4: BATTERY POSITIVE (+12V)
PIN-5: LEFT INDICATOR output
PIN-6: LEFT INDICATOR output
PIN-7: RIGHT INDICATOR output
PIN-8: RIGHT INDICATOR output
PIN-9: DOME LIGHT control output
PIN-10: DOME LIGHT control output
PIN-11: DEFROSTING RELAY output
PIN-12: DIESEL PREHEATING RELAY output
PIN-13: ENGINE STOP RELAY output
PIN-14: WATER TEMPERATURE Input (Activated by ground connection)
PIN-15: Free

J3 8-pin connector:

Do not use this connector.

Summary of the different models:

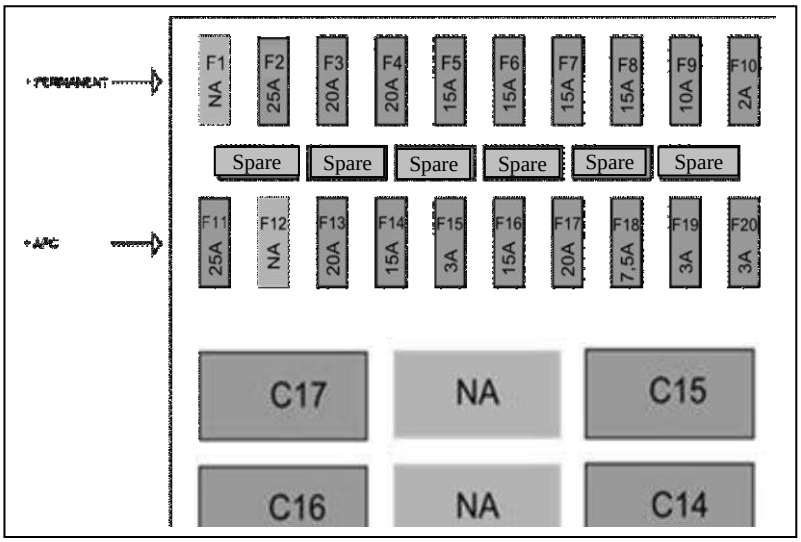
Reference	Box	Designation	Marking on cluster	Marking on tachometer	Scale	Electronics non mounted
8AG033 model 1	1/12	VSP AIXAM MEGA 80km/h+mi BG 400D AIXAM Pack Diesel engine	Make: FACOMSA Type: LCD 1	AM8KM07A	80 km/h & 50 mph	Right LCD Dome light control Defrosting control Front fog light lamp Injection failure lamp
8AG033A model 2	1/12	VSP AIXAM 80km/h HG 400D AIXAM Luxe-SL Diesel engine	Make: FACOMSA Type: LCD 2	AM8K07A	80 km/h	Front fog light lamp Injection failure lamp
8AG033B model 3	1/12	VSP AIXAM 80km/h HG 400D AIXAM Sport+R Diesel engine	Make: FACOMSA Type: LCD 2	AM8K07A	80 km/h	Front fog light lamp Injection failure lamp
8AJ033A model 4	1/8	TQM AIXAM 120km/h +mini HG AIXAM 600D + 523 MPI gasoline	Make: FACOMSA Type: LCD 2	AM12KM07A	120 km/h & 70 mph	Front fog light lamp Injection failure lamp

Lamps present on all models:

- Right indicator
- Left indicator
- High beam
- Low beam
- Water temperature
- Braking
- Battery charge
- Reserve
- Neutral
- Brake pad
- Oil temperature
- Defrosting (top range)
- Warning
- Rear fog
- Diesel preheating

FUSES

FUSES BOXE



ALLOCATION OF THE FUSES:

position	Calibre	Color	Allocation
F1	NA	NA	Non allocated
F2	25A	WHITE	Centralised locking – power windows system
F3	20A	YELLOW	Rear window defrosting
F4	20A	YELLOW	Engine stop
F5	15A	BLUE	Horn – car radio – cigarette lighter
F6	15A	BLUE	High beam
F7	15A	BLUE	Low beam
F8	15A	BLUE	Position lights – rear fog lights
F9	10A	RED	Warning lights – control panel
F10	2A	GREY	Dome light
F11	25A	WHITE	Power windows
F12	NA	NA	Non allocated
F13	20A	YELLOW	Front wiper/washer
F14	15A	BLUE	Cab fan
F15	3A	BLUE	Daylight road lights (DRL)
F16	15A	PINK	Reversing radar – reversing light
F17	20A	YELLOW	Glow plug supply
F18	7.5A	BROWN	Stop lights
F19	3A	PINK	Alternator – preheating relay
F20	3A	PINK	Control panel – centralised locking – defrosting relay

RELAY ALLOCATION:

Position	Allocation
C14	Starting safety relay
C15	Preheating relay
C16	Engine stop relay
C17	Rear window defrosting relay

CAUTION: When you change a fuse, always use the same amperage (risk of fire)

CENTRALIZED LOCKING

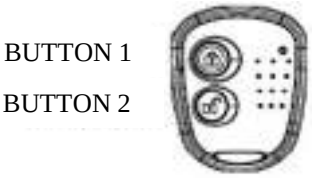
CONNECTION

1. +12V locking output
2. +12V power supply input
3. Ground input
4. +12V unlocking output
5. +12V after-contact input
6. +12V indicator output
7. +12V indicator 2 output

USING A REMOTE CONTROL

BUTTON 1
LOCKING: Press this button once: the doors are locked, the indicators flash once.

BUTTON 2
DOOR UNLOCKING: 1 short pulse (< 1.5 s), the doors are unlocked, the indicators flash twice.



Ref: 8AG101

REMOTE CONTROL PROGRAMMING TABLE

Please apply the procedure below to enter the programming mode:

• A • Insert the key into the Neiman
• B • Turn the key 5 times from the OFF position to the Contact (Ignition) position. Switching from OFF to contact must be performed in less than 3 s. At the last key turn, stay in the Contact position for 3 s.
• C • The indicators will then be lit for 2 s.: programming a remote control

Please refer to the table below to program a remote control:

N Number of key turns	Programmable function	After the N key turns, the indicators flash:
		3 TIMES
5	Coding a remote control	1 • After the 5th key turn (key on ACC) the indicators are lit steady for 2 s. 2 • Before 10 s., press the remote control you wish to code on the vehicle. 3 • The indicators flash twice to validate this new remote control. 4 • Restart the operation for the other remote controls before 10 s. 5 • After 10 s. (or key set to OFF), you quit the programming mode, the indicators flash 3 times.

GUARANTEE OF «CLARION» RADIO UNITS

We inform you that due to a new Clarion Policy, the warranty procedure for the car radio (8AA060A) has been modified.

Warning, this new warranty procedure concerns the **car radio only** (the multimedia station is still covered with the procedure you will find in Appendix *below down this page*)

As from now on, in the case a car radio is defective, we kindly ask you to proceed like for any other standard warranty claim.

- You perform the diagnosis and confirm the defect
- If the defect requires replacement, then you order the part to AIXAM MEGA aftersales (part # 8AA060A)
- You replace the part and then submit the warranty claim on the website and indicate in the comment zone your diagnosis.

Warning: do not throw the car radio away as it is subject to part return

Form

clarion

PRIOR EXCHANGE OR RETURN REQUEST FORM FOR PREPARATION OF A PRODUCT (UNDER & OUT OF GUARANTEE)

Please return to Clarion France by fax at: (0033) (0)3 83 49 57 24

PRIOR EXCHANGE ☐ RETURN FOR REPAIR ☐

1. Information on requester

Point of sales

Contact

Phone no. Fax No.

Email address (if exists)

Exact address

Postal code Town

2. Information on client (end consumer)

Name

Address

Postal code Town

3. Information on product

Exact reference

Serial no. (14 characters)

Date of 1st registration

Antitheft code (if exists)

Fitted by private individual ☐ reseller ☐

Form

clarion

4. Conditions of occurrence of the problem

Description ☐

Status	Failure upon unpacking ☐	Under guarantee ☐	Out of guarantee ☐
Frequency	Permanent ☐	Intermittent ☐	
Engine condition	Stopped ☐	Running ☐	
Other	On certain radio stations ☐	Upon connecting ☐	
	When starting the vehicle ☐	Vehicle electronic consumption ☐	

5. Information on the vehicle

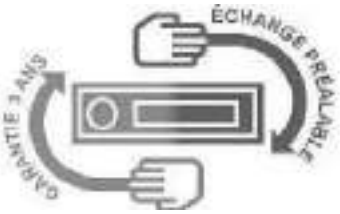
Make ☐

Model ☐

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



SUMMARY OF THE PROCEDURE APPLICABLE BEFORE EXCHANGING A PRODUCT (UNDER & OUT OF GUARANTEE).

To offer a high quality service, please follow systematically the procedure below in the presence of a faulty Clarion product.

1 After having observed the symptom described by the consumer, fill in the appropriate form while ensuring all fields in bold characters are filled.

2 Send this duly filled form to the Clarion national operator (fax no. 00 33 3 83 49 57 24) or by Email: service24@clarion.fr

3 If your request is accepted, you then receive in the shortest times a form with the authorization no., as well as the details related to the product exchange (reference, serial no….)

4 You receive within 48 H an overhauled product, with the same reference, packaged in a specific packing.

5. You repackage the faulty product in this specific package while sticking the pre-printed label supplied onto the said package (shipping costs paid by Clarion).

CAUTION: when sending several products, the authorization no. must match the product concerned. Also, **the product must always be returned bare, without accessory.**

6. From then, you are given 10 days to return the faulty product under guarantee. This shipping is performed thanks to the shipping bill you received with the exchanged product. A phone number will allow you to call the carrier to organize collection of the said product. Reshipping the faulty product must be performed **within a maximum time of 10 days**, otherwise, the product will be billed to you in the following conditions:

- Product returned out of time: billing with 60% discount in respect of usual conditions (by credit note) plus 48 € penalties.
- Product not returned: billing in usual conditions plus 48 € penalty.

Period and coverage of the guarantee

Products distributed by Clarion Europe S.A.S are covered by a legal two-year guarantee on parts and labour applicable from the date of purchase by the end user for all products sold after 1 January 2002. Products marketed and installed in pre-equipment by AIXAM in the vehicles of its make are covered by this same guarantee for a time of three years. The application of this legal guarantee will be effective only in the presence of the date of 1st registration.

Therefore, this date must always be filled upon the exchange request. This legal guarantee excludes products damaged following improper installation, abnormal use or maintenance not conforming with the instructions of use supplied by Clarion Europe S.A.S (e.g. products faulty following improper connection, intervention by a non-approved technician)

Return for repair

To provide a high quality consumer service, Clarion Europe S.A.S reserves the right to resort to a product return for repair when various conditions do not allow prior exchange within the lead time allocated. The point of sales is then informed of this situation in the shortest possible times and may in no event dispute this decision.

All included costs for exchanging products out of guarantee.

Preliminary exchange also applies to products out of guarantee within the limit of the stocks available and in all inclusive conditions available upon your request. The lump sum – variable according to the type of device – includes the return shipping costs.

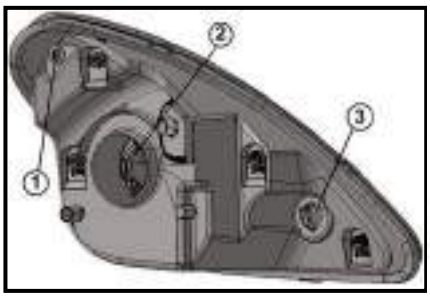
Established in: **on:**

For AIXAM,

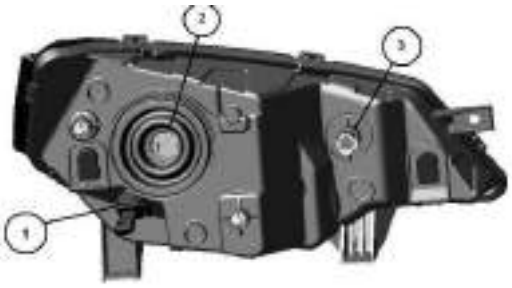
CHANGING A LAMP

Changing a lamp on a light

Old model



New model



1. Position light lamp

- Swivel the lamp holder by a quarter turn to the left and pull it out.
- Remove the lamp by pulling to change it.
- Refit the lamp holder while ensuring the locating pins (one large, one small) is opposite the corresponding notches on the back of the projector.
- Turn it by a quarter turn to the right while pressing it to push the seal.

2. Low beam, high beam lamp

- Remove the headlight cover. To unlock, press the upper clip and remove it.
- Remove the sealing lens on the rear face of the headlight and pull on it to remove it from the lamp socket.
- Press the lamp locking wire by sliding it to the right and lowering it.
- Pull out the lamp.
- Refit the new lamp while ensuring its spigots enter their housings (do not touch the glass part of the lamp with your fingers).
- Fold its locking wire and press it by sliding it to the left.
- Reposition the sealing lens onto the lamp socket.
- Engage the lens on the rear face of the headlight.
- **CAUTION:** do not omit the two previous operations, otherwise water may enter the headlight and damage it.
- Engage the protection cover on the seal while ensuring the cut for passing the electric harness is vertical, otherwise the clip cannot be engaged and you may lose the cover.

3. Indicator light lamp

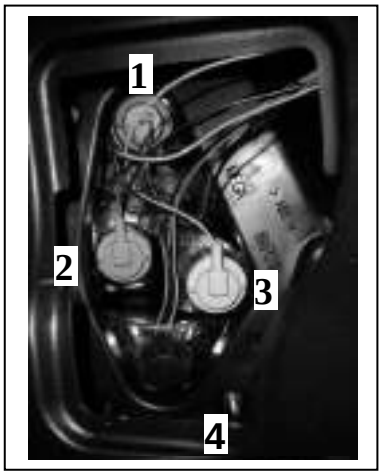
- Swivel the lamp holder by a quarter turn to the left and pull it out.
- Press the lamp by pivoting it to the left and pull it out.
- Fit the new lamp onto the holder by aligning the spigots facing the cuts in the holder, press the latter while turning it to the right.
- Refit the lamp holder onto the headlight while positioning its spigots (one large, one medium, one small) opposite the appropriate cuts in the headlight.
- Press the lamp holder and turn it by a quarter turn to the right

Changing a lamp on a fog light

- Remove the lamp holder by turning it to the left. The lamp is fully part of the holder.

- Refit the lamp holder while ensuring the fastening spigots match those on the rear face of the headlight and turn it to the right.

Changing a lamp on a rear light



- Open the rear window
- Push the custode lining away
- Release the connector
- Pull it out and change the lamp

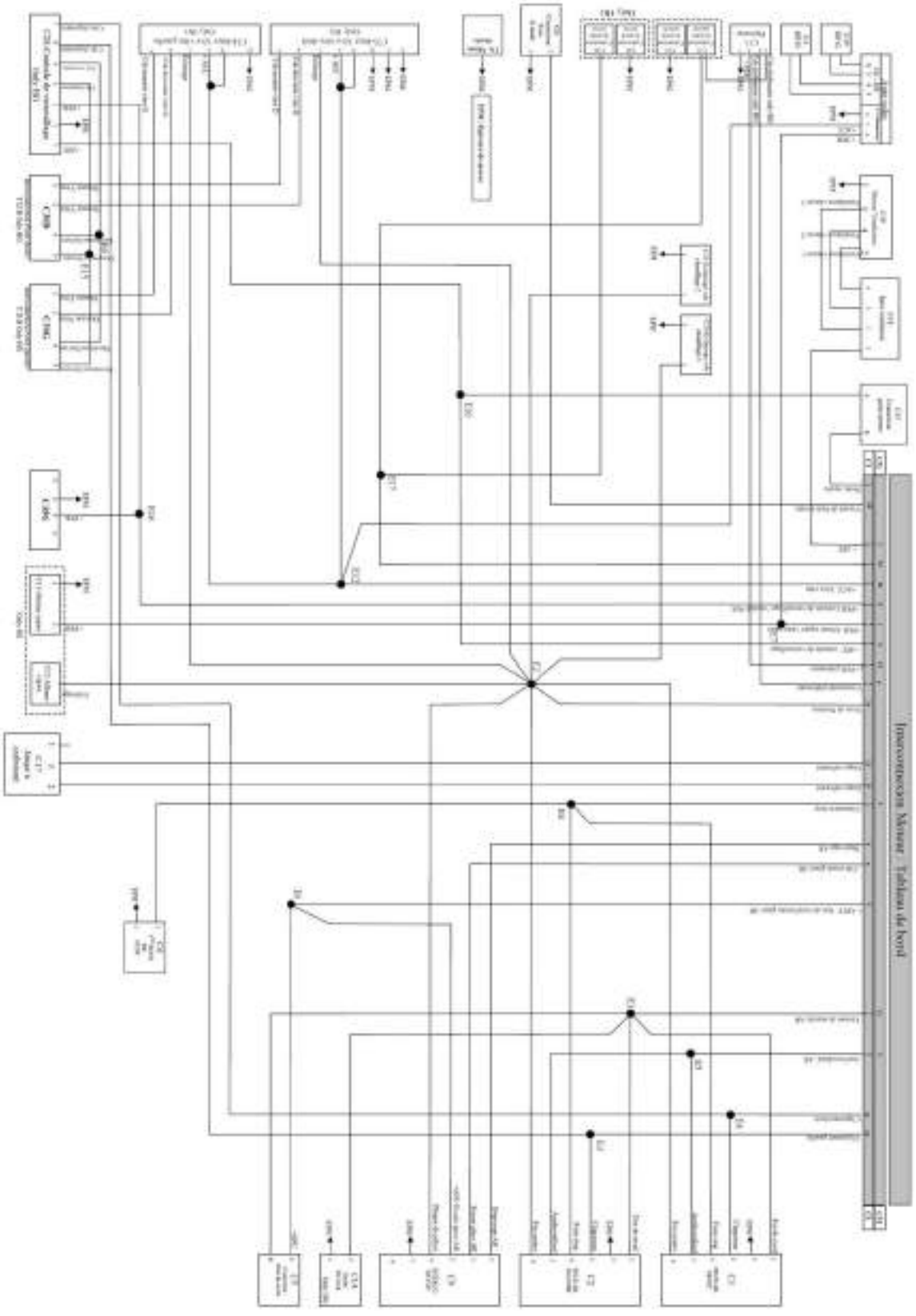
1. Rear light and stop light lamp
2. Indicator light lamp
3. Backup light lamp
4. Rear fog light lamp

Changing the interior lighting lamp

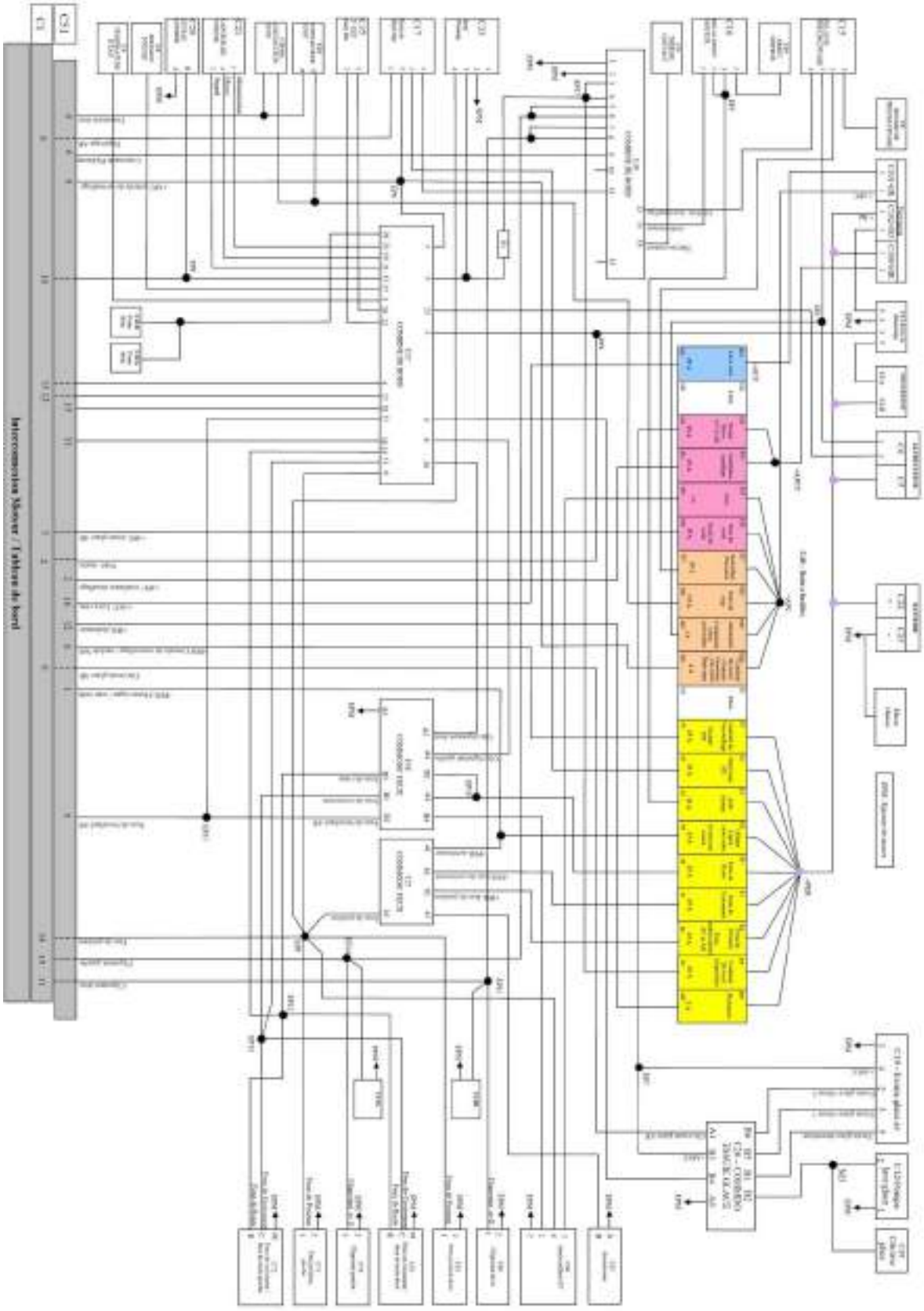
Unclip the interior lighting from the dome light to change the lamp.

ELECTRIC DIAGRAMS

Dashboard harness



Engine harness



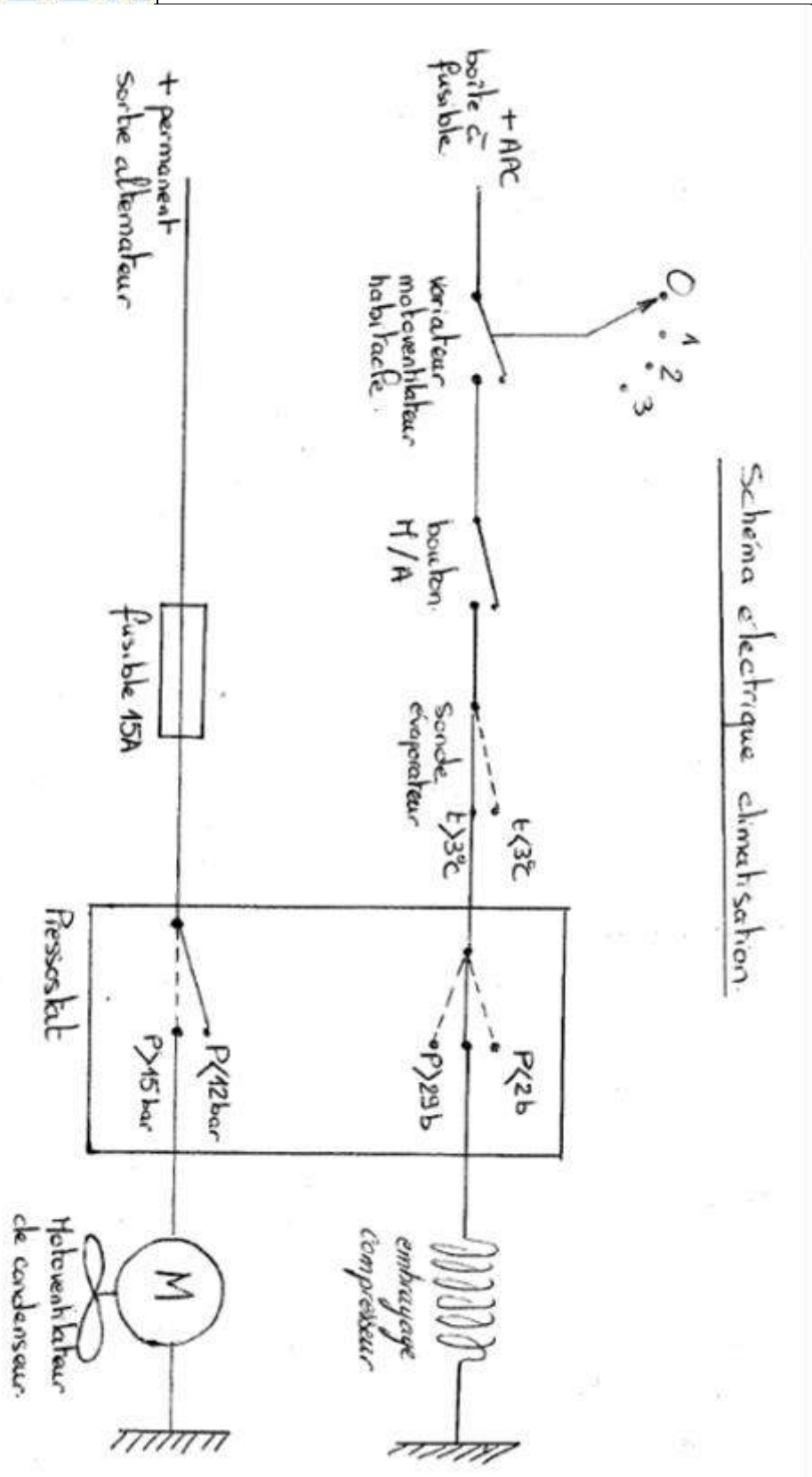


Schéma électrique climatisation
+ permanent
Sortie alternateur
+ APC
boîte à fusible
variateur motoventilateur habitacle
1
2
3
bouton H/A
fusible 15A
sonde évaporateur
t>3°C
t<3°C
Pressostat
P<12 bar
P>15 bar
P>29 b
P<2 b
M
Motoventilateur de condenseur
embrayage compresseur

REPAIR MANUAL

AIR CONDITIONING

8

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:

a/ Fan speed controler
b/ A/C commutator
c/ Air recirculation speed

CHARACTERISTICS:

Type of Gas: R134A
Gas Qty.: 400g
Oil type: ZXL 200 PG
Oil Qty.:
Compressor coil resistance: 3.5 Ω
Compressor belt tension:

MAINTENANCE:

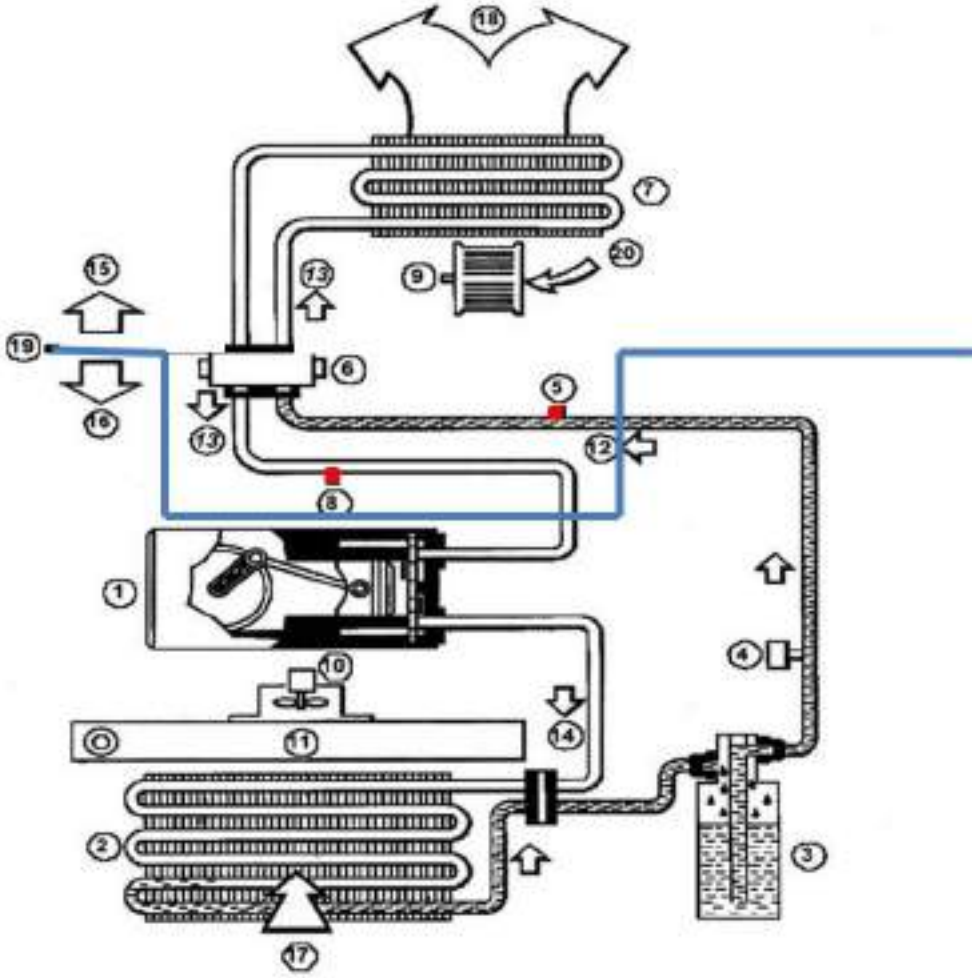
Every 2 years check the charge of the gas.
Every 4 years replace the Filter/Drier

Main factors of risks:

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

SCHEMATIC AND COMPONENTS

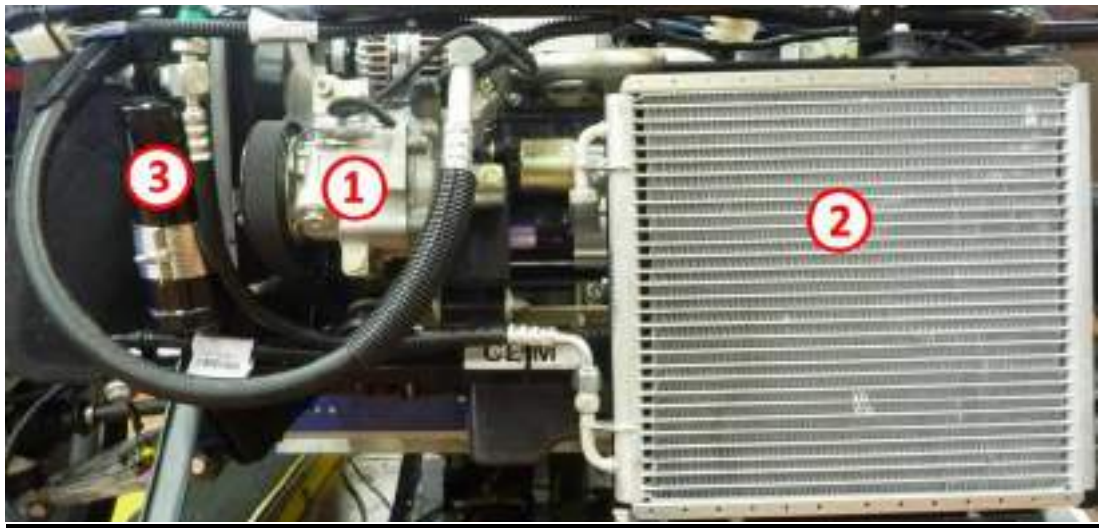


1	Compressor	6	Thermal Expansion Valve (TXV)	11	Fan Shroud	16	Engine compartment
2	Condenser	7	Evaporator	12	HP Liquid	17	Outside Air
3	Filter/Drier	8	LP Service Port	13	LP Gas	18	Cooled Air
4	Pressure Switch	9	Passenger Compartment fan	14	HP Gas	19	Dash Panel
5	HP Service Port	10	Motor fan unit	15	Passenger Compartment	20	Outside or recycled air

COMPONENTS LOCALISATION :

Passenger Compartment

1 Compressor - 2 Condenser - 3 Filter/ Drier



Belt Adjustment Bolts and 15A Motor Fan Fuse

3 Filter/Drier – 4 Pressure Switch:

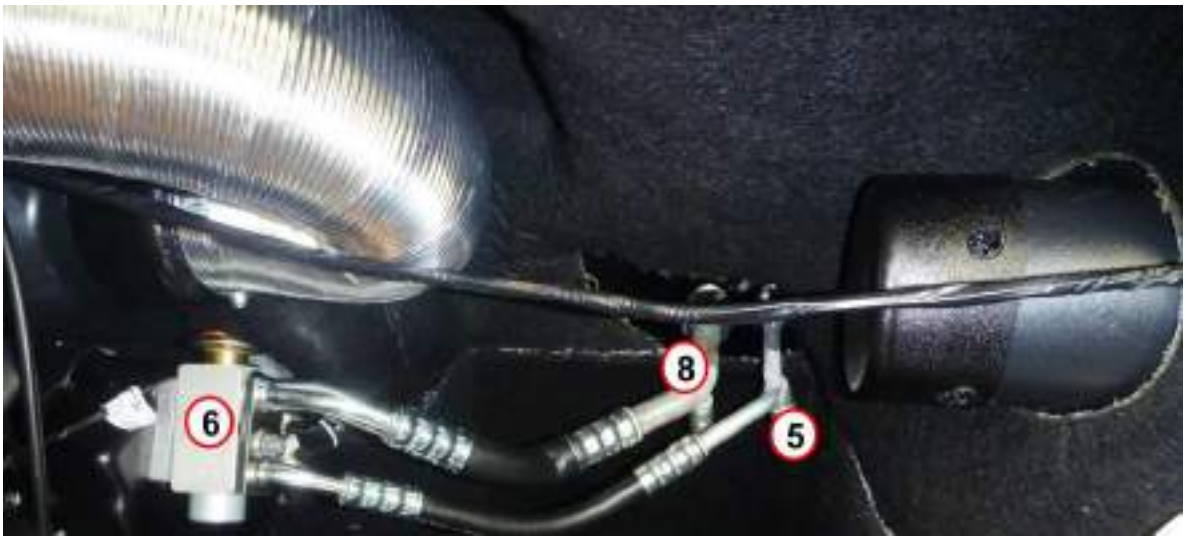
Passenger compartment

7 Evaporator/Radiator - 6 TXV - 21 Evaporator probe:

Evaporator/Radiator is one assembly.

6 TXV - 5 HP Service Port - 8 LP Service Port:

The ports are behind the dashboard, passenger side.



20 Three Ways Flap Valve :

OPERATION:

The compressor increase the gas pressure from low (about 2 bars), to high pressure (about 7-15 bars), thereby the temperature of the gas increases. When the gas passes into the condenser, as it is warmer than outdoor air, it lost heat (J) and becomes liquid. The liquid passes into the bottle desiccant that the filter, removes moisture serves as a buffer reservoir.

The high pressure liquid passes through the thermal expansion valve, its pressure and temperature fall quickly to reach about 2 bars and 0 ° C. In passing through the evaporator, the fluid picks up heat to the air entering the passenger compartment and vaporizes. The air entering the cabin is well cooled and dried by condensation of moisture it contained. The gas then goes back to the compressor inlet.

For the compressor to engage requires that the driver presses the air-conditioning, the interior fan motor is at least on the first speed, the pressure switch gives a high pressure value between 2 and 29 bars and that the probe evaporator gives a temperature greater than 3 ° C.

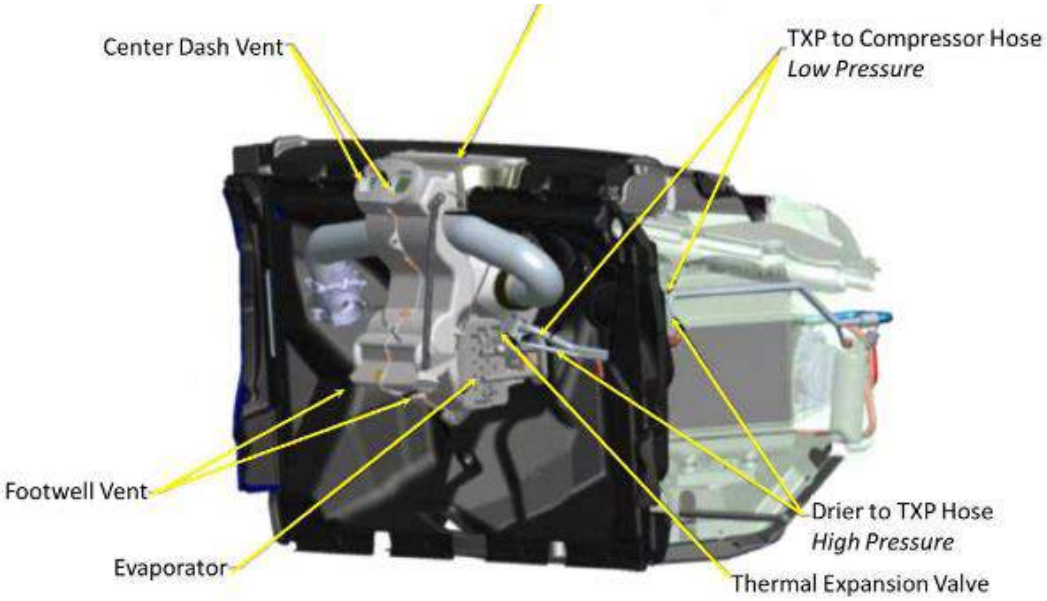
When the pressure switch detects a high pressure of at least 15 bar, it switch on the condenser cooling fan motor and stop it when the pressure drops to 12 bars.

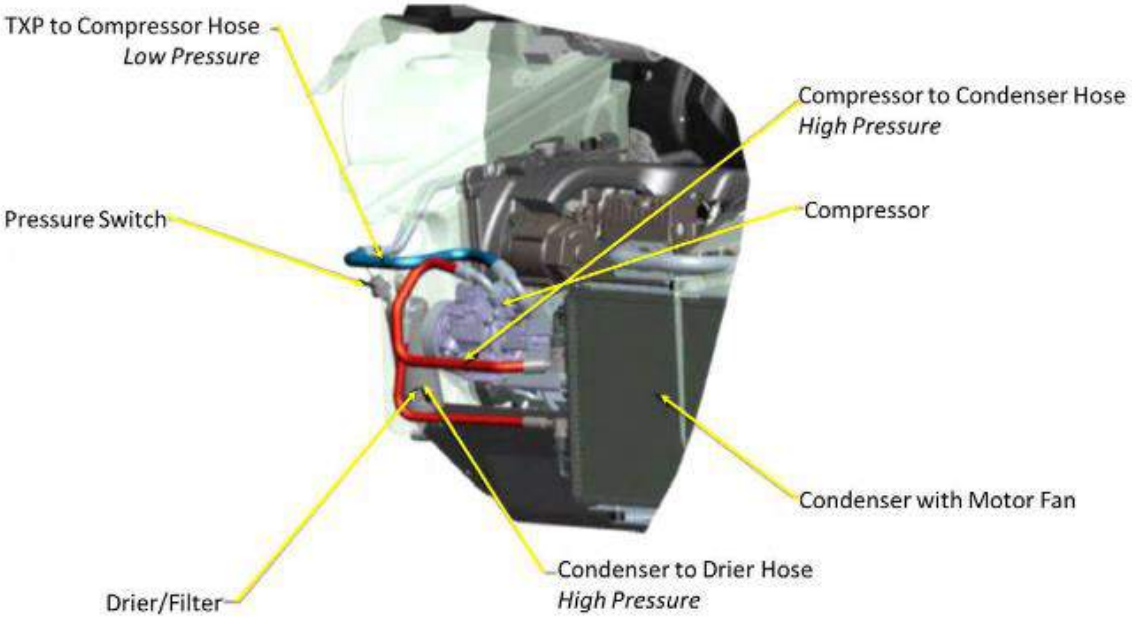
OPERATION CHECK-UP:

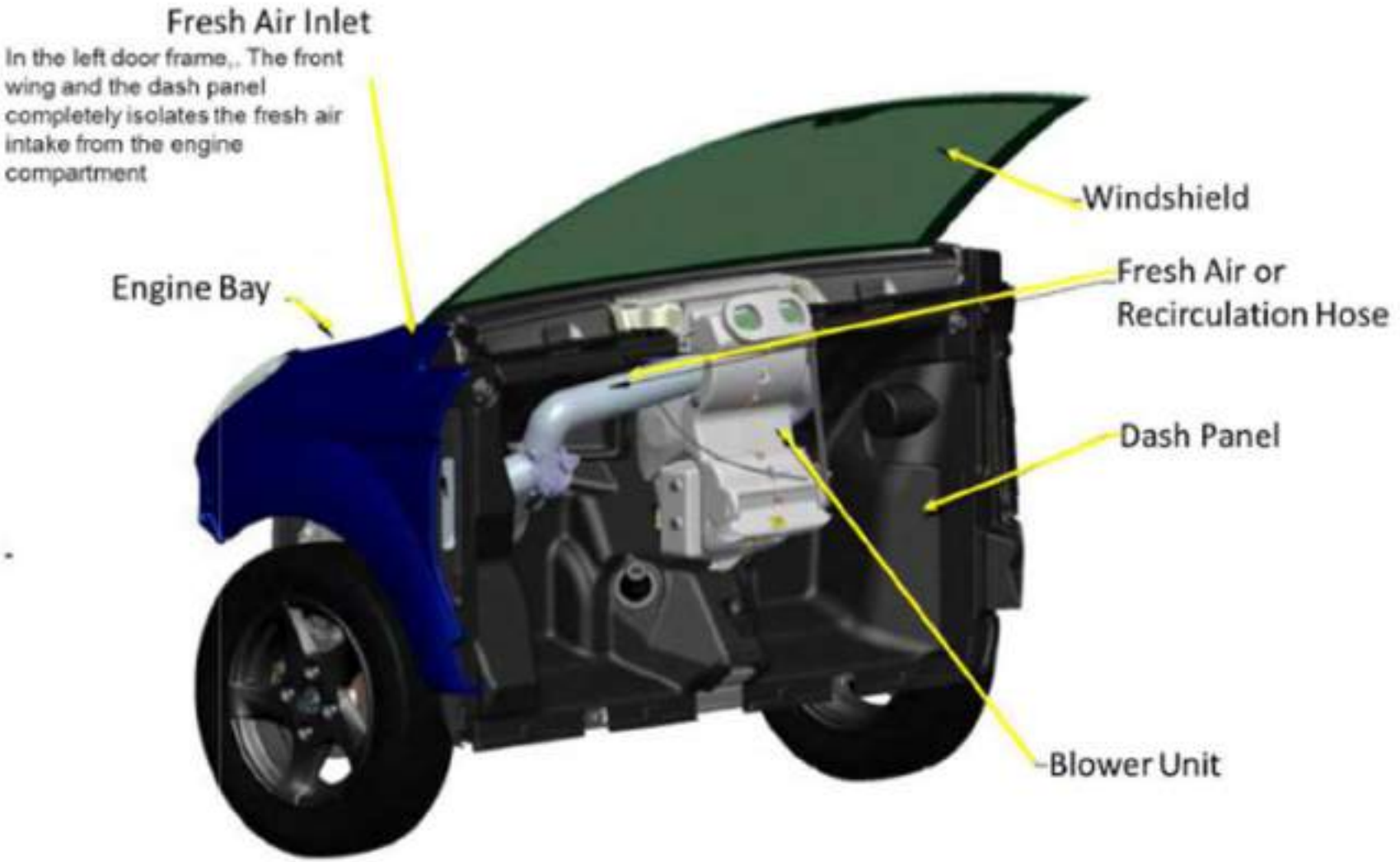
Control that the compressor clutch sticks when air conditioning is turned on otherwise check the resistance of the coil and the power supply. If the pressure in the circuit is less than 2 bars, this means that lack of the gas in the installation thus the pressure switch cuts off power.

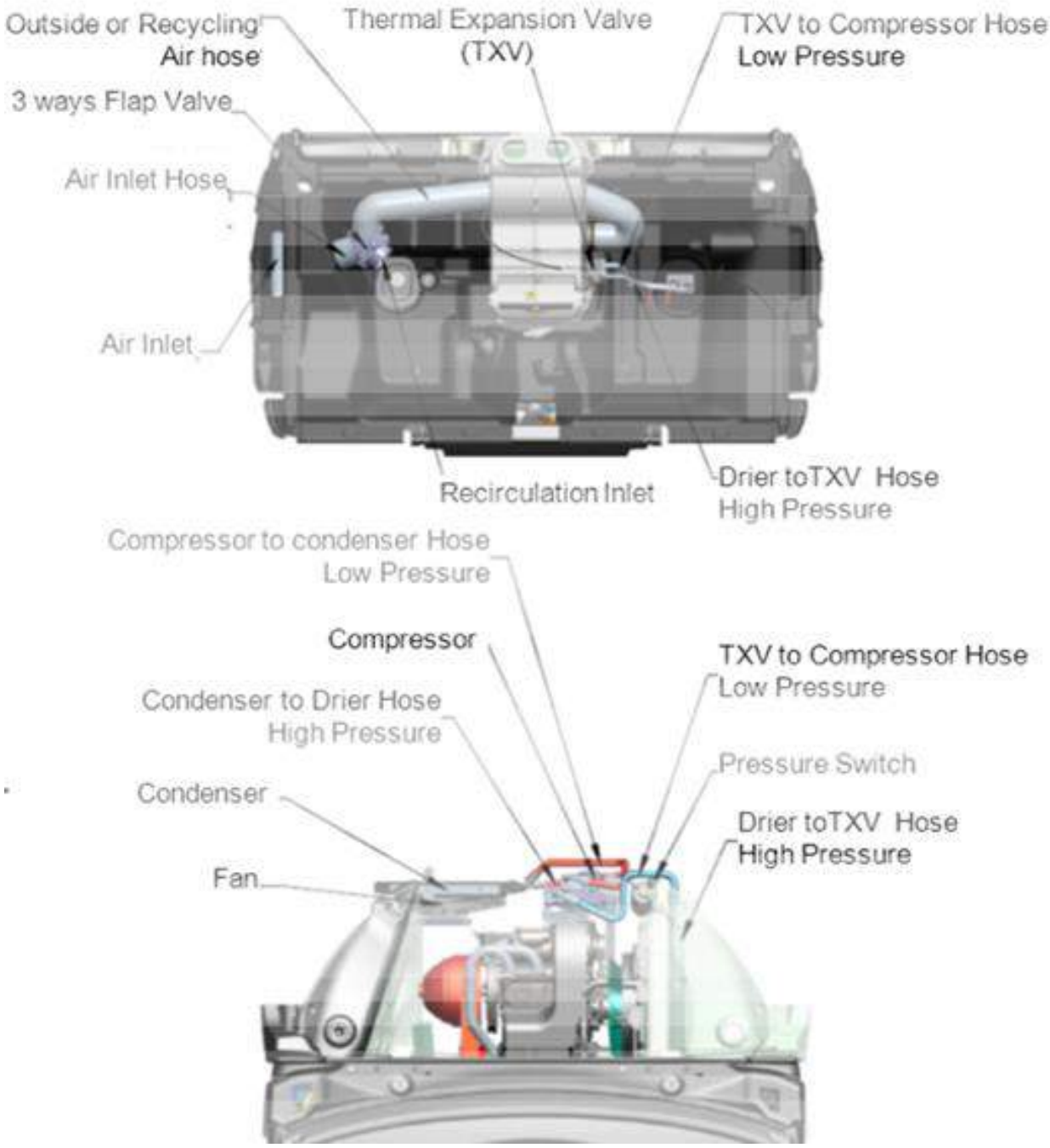
DIRECTIONS:

Try parking in the shade to reduce the need for air conditioning to help cool the interior.
Open the windows, before engaging the air conditioning system, to remove the maximum amount of heat and then close them as soon as you switch the air conditioning on.
In order to prevent sore throats do not aim the vents directly at the face.
To ensure correct performance of the system is maintained, reduce refrigerant leaks and ensure the air conditioning system is well maintained, run the air conditioning system for at least 15 minutes each week regardless of external temperatures.


Center Dash Vent
TXP to Compressor Hose
Low Pressure
Footwell Vent
Evaporator
Drier to TXP Hose
High Pressure
Thermal Expansion Valve


TXP to Compressor Hose
Low Pressure
Compressor to Condenser Hose
High Pressure
Pressure Switch
Compressor
Condenser with Motor Fan
Drier/Filter
Condenser to Drier Hose
High Pressure


Fresh Air Inlet
In the left door frame,. The front wing and the dash panel completely isolates the fresh air intake from the engine compartment
Engine Bay
Windshield
Fresh Air or Recirculation Hose
Dash Panel
Blower Unit


Outside or Recycling
Air hose
Thermal Expansion Valve
(TXV)
TXV to Compressor Hose
Low Pressure
3 ways Flap Valve
Air Inlet Hose
Air Inlet
Recirculation Inlet
Drier toTXV Hose
High Pressure

Compressor to condenser Hose
Low Pressure
Compressor
TXV to Compressor Hose
Low Pressure
Condenser to Drier Hose
High Pressure
Pressure Switch
Condenser
Drier toTXV Hose
High Pressure
Fan

ABS

Operating mode:

- Role of ABS (Anti-lock Braking System):
  - Prevent blockages of any wheel to keep control of the vehicle whatever the external conditions are, either by limiting the braking pressure or reducing it if necessary.
  - Optimize braking distances by avoiding wheel lockup.
- Role of the EBD (Electronic Brake-force Distribution):
  - Ensure the distribution between front/rear braking
  - Optimize the rear braking power in real time
- If ABS light only is on: 

  The ABS is deactivated as a major failure as occurred on the system:
  - EBD is still working so the vehicle will remain stable under braking
- If ABS light and braking light are on at a time:  
  - The ABS and EBD functions are deactivated as a major failure has occurred on the system.
  - The vehicle must be stopped as the stability of the vehicle is no longer guaranteed and the rear brakes will be in full capacity = risk of blockage.

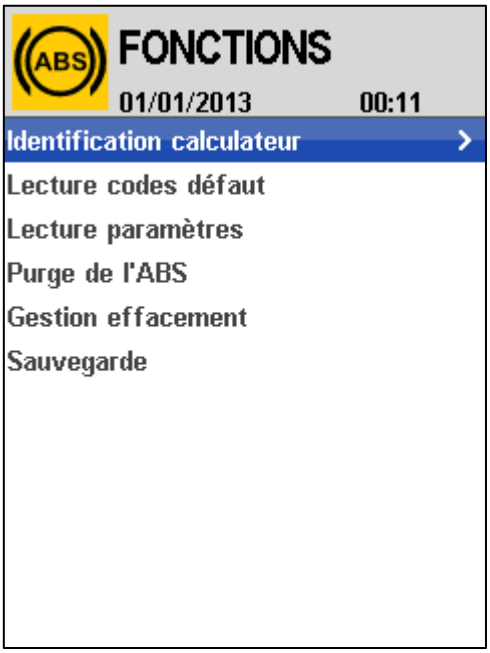
DTAM Diagnostic tool:

Connection:

Connect the diagnostic tool to the OBD socket of the vehicle, switch on the ignition key in the vehicle.
Once contact is established, select the vehicle and the function you want to use.

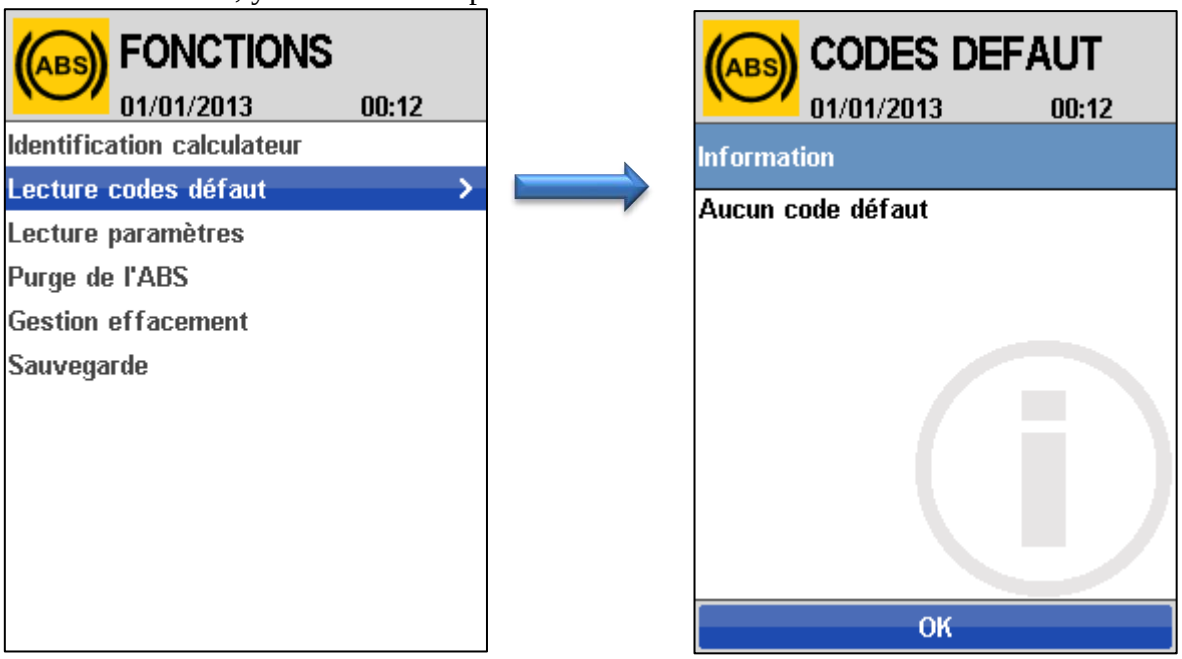
Identification:

With the identification, you can control the version and the serial number of the ABS calculator mounted on the vehicle.



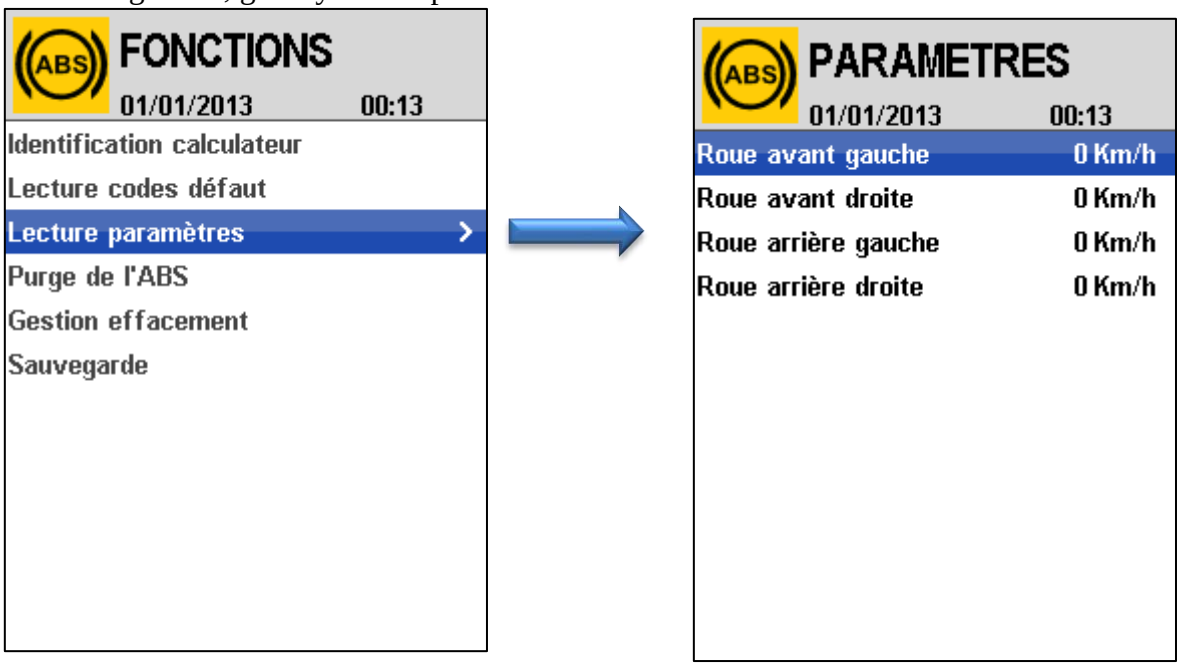
Display of the default codes:

With this function, you can read the potential default codes listed on the calculator.



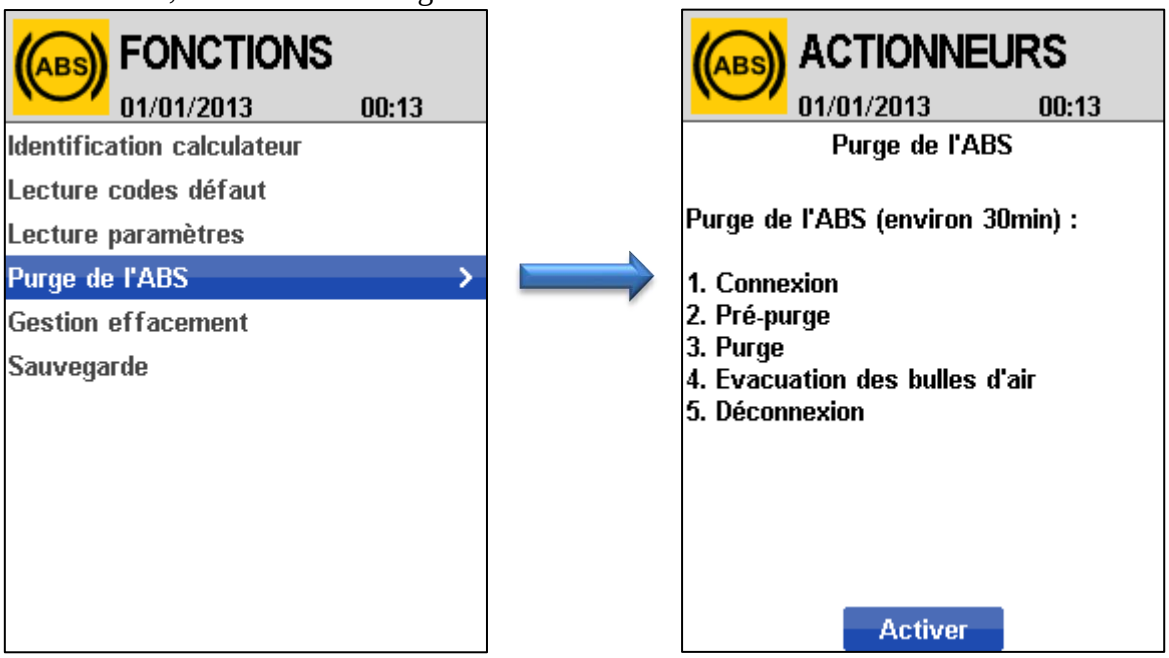
Settings:

The setting menu, gives you the speed measured on each of the wheels of the vehicle.



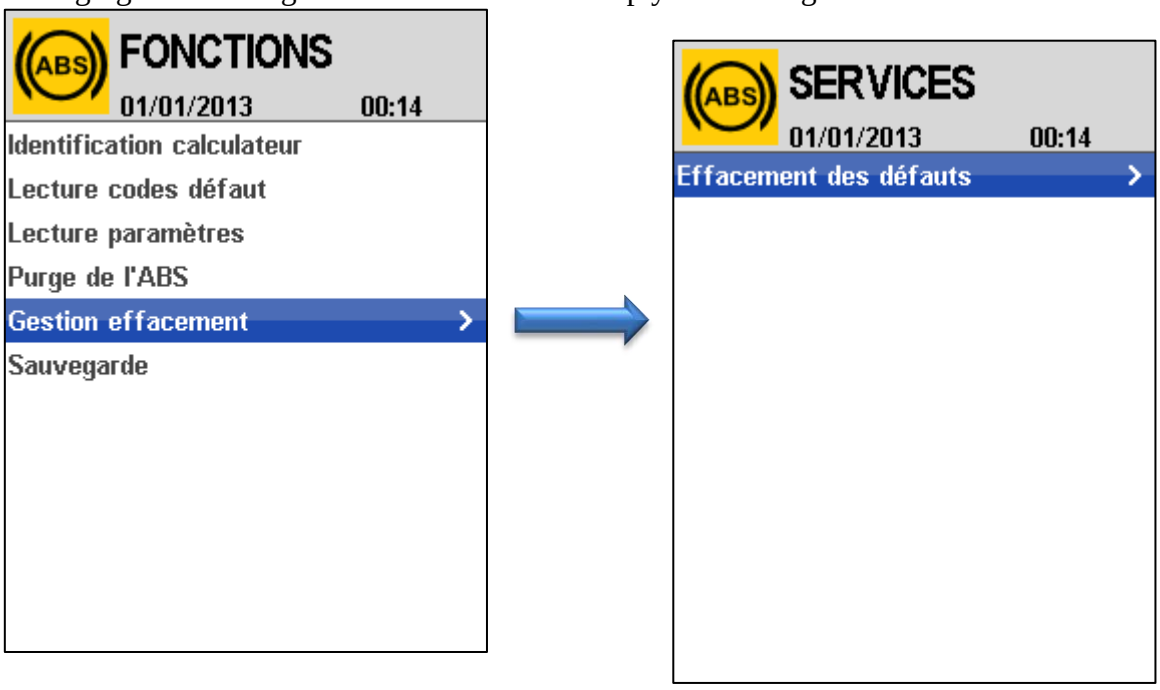
Bleeding the circuit with the DTAM tool:

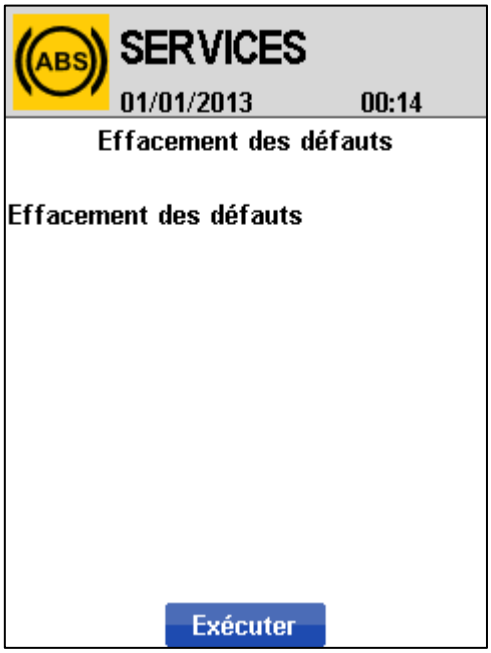
The bleeding of the ABS must be done with the DTAM tool, whenever the hydraulic unit is replaced. For other interventions, a standard bleeding will be sufficient.

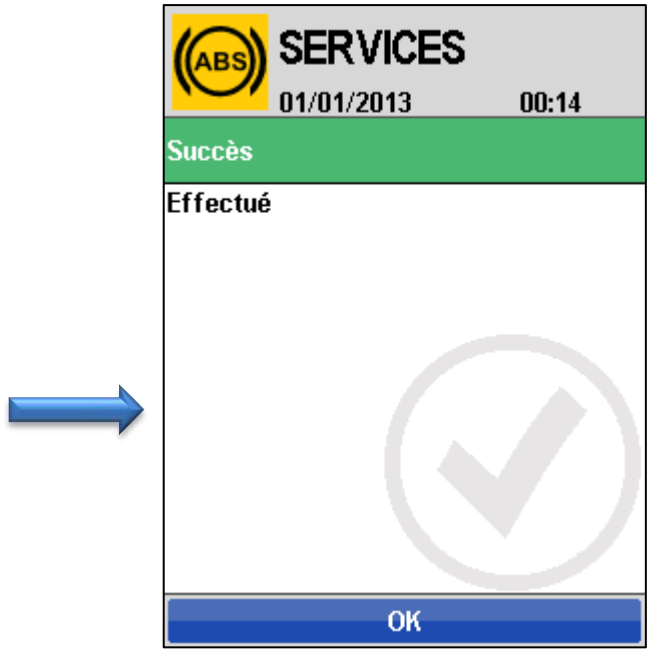


Deleting the defaults codes:

Managing and deleting the default codes will help you resetting the calculator if needed.







Save the data:

Saving the data will help you retrieving the information from the calculator to the DTAM tool so that you can download them later on, on your computer.

Diagnosis:

Several problems may occur:

Caution: the ABS sensors cannot be diagnosed with a standard ohmmeter, you must use the DTAM tool.

-Faulty ABS sensor ➔ replace the ABS sensor

-Ring (annular gear) dirty or unsealed

➔front wheel : place the vehicle on a lift and check the status (cleanliness/sealing) of the ring on the transmission.

➔on a rear wheel : remove the drum and check any discrepancy

-Electric problem within the beam, between the sensor and the master cylinder ➔ check with the ohmmeter the continuity of the circuit between:

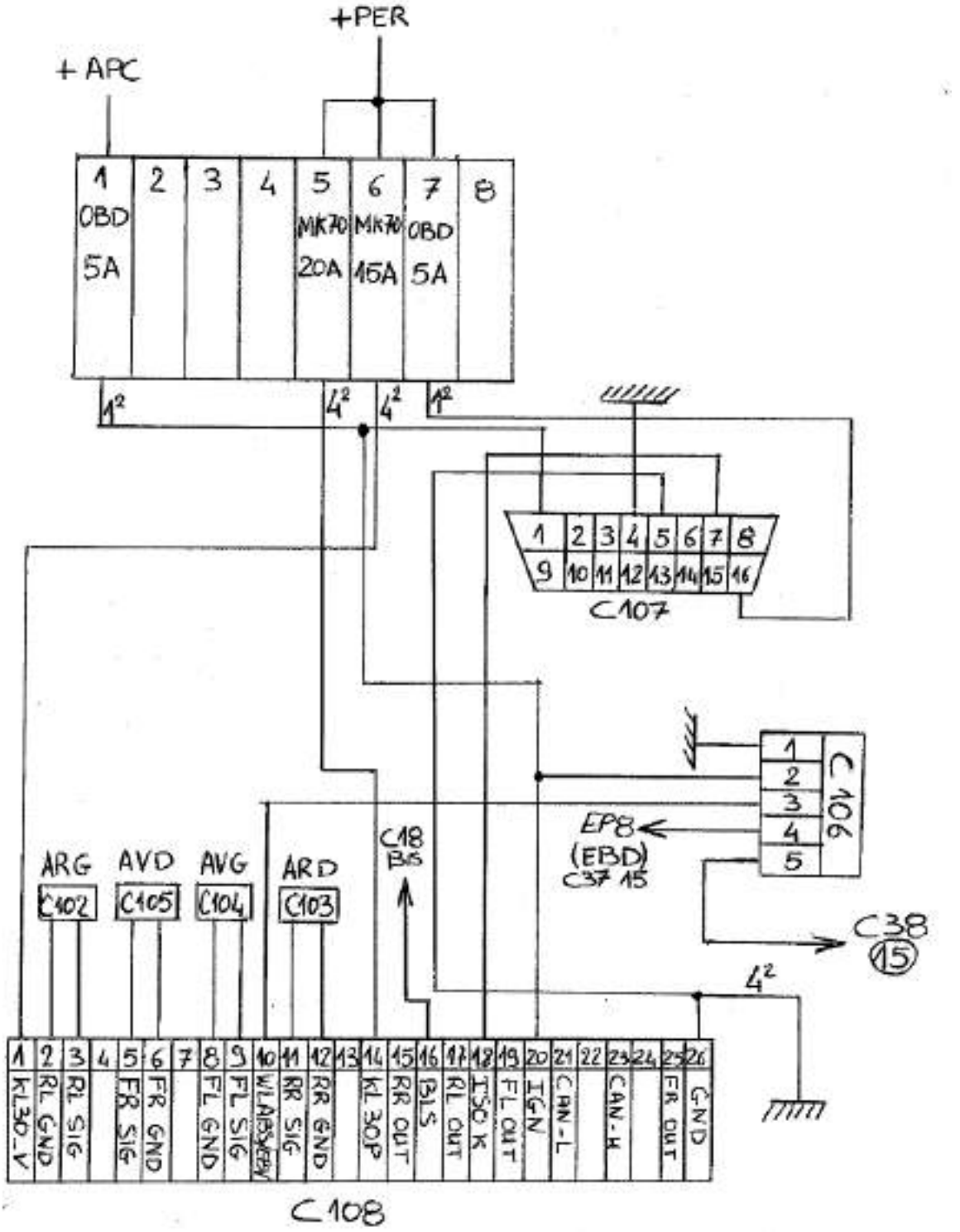
- the sensor socket (to unplug)
- The blue socket next to the master cylinder (make sure to connect to the correct wire)

Need two persons to detect the origin of the failure, one to shake the harness at various points and the other one to detect potential failures of the harness with the ohmmeter.

Check electric power supply: permanent +; after ignition+ and masses.

Check the information displayed by the brake light switch, positive supply.

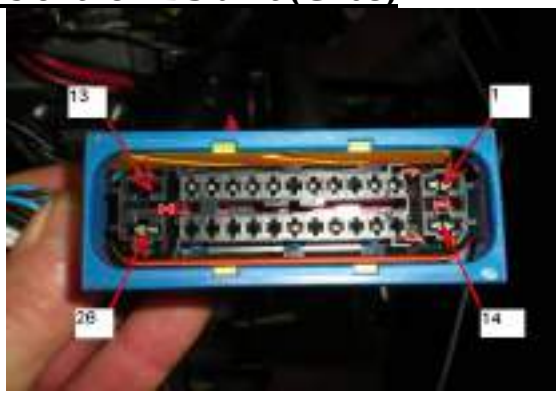
Wiring diagram:



DESIGNATION

MARK	DESIGNATION
EP8	Splice Number 8
C18	Brake light switch
C37	Gray connector 30 channels instrument panel
C38	Red connector 16 channels instrument panel
C102	Rear left ABS sensor
C103	Rear right ABS sensor
C104	Front left ABS sensor
C105	Rear right ABS sensor
C106	Demultiplexer for ABS light activation on instrument panel
C107	EOBD diagnostic socket
C108	ABS unit connector

Locating connector terminals of the ABS unit (C108)



Fuse location (C40)

INDEX

PAINT

Preparation of parts to be painted

Recommendations of use of parts to be painted:

Do not use solvent or diluent it would permanently damage the body part

Step 1: Sanding:

Lightly sand the item to paint with an abrasive nylon hand pad (1200) to improve the adherence and "break the surface of PMMA"

Step 2: Smooth cleaning of the surface to paint:

Use only isopropyl alcohol to clean the whole surface to be painted

Step 3: Priming:

Apply a primer coating adhesion layer preferably a special plastic hydro (sand if necessary)

Step 4: Paint the element:

Apply a layer of paint preferably hydro (base + varnish, or 2 layers lacquer)

Paint line up to 80°C max.

BODY COLORS

		AIXAM reference	AKZO NOBEL SIKKENS reference	DUPONT reference	SPIES HECKER reference	STANDOX reference
	Navy blue	A 507		Page 132	Page 133	Page 134
	Metal orange	A 202	Page 135	Page 136	Page 137	Page 138
	Metal black	A 409	Page 139	Page 140	Page 141	Page 142
	Pearl white	A 408	Page 143	Page 144	Page 145	Page 146
	Silver grey	A 707	Page 147	Page 148	Page 149	Page 150
	Steel grey	A 708	Page 151	Page 152		
	Satin black (roof)	A 411				
	Red	M 306	Page 153			
	Pure white	A 407	Page 154	Page 155	Page 156	Page 157
	Aluminum structure black	A 410	Page 158	Page 159	Page 160	Page 161

NAVY BLUE A 507 DUPONT

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A507	Brand Panel #	
Color Name	NAVY BLUE	Lead Free	Y
Quality	CROMAX CROMAX	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Oct 14, 2010
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
1640WB	LOW VISCOSITY BINDER	493.9	493.9
1650WB	HIGH VISCOSITY BINDER	164.6	658.5
1430W	BLUE SHADE GREEN H.S.	97.7	756.2
1427W	GREEN SHADE BLUE H.S.	76.4	832.6
1507W	LILAC PEARL	68.8	901.4
1418W	BRIGHTNESS ADJUSTER	57.9	959.3
1405W	JET BLACK - BLUE SHADE	40.1	999.4
1541W	VERY COARSE ALUMINUM	20.3	1019.7

NAVY BLUE A 507 SPIES HECKER

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A507	Brand Panel #	850338
Color Name	BLEU MARINE	Lead Free	Y
Quality	280 280 - PERMAHYD BASISLACK	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Oct 14, 2010
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB854	LASURTIEFBLAU	334.2	334.2
WB803	SPEZIALSCHWARZ	253.5	587.7
WB815	LEUCHTSILBER	220.9	808.6
WB871	PERLROSA	154.1	962.7
WB800	EFFEKT	57.3	1020.0
WB856	DUNKELVIOLETT	7.3	1027.3

Language ALL			Region
Code	**Region**	**Language**	**Text**
858-SH	EUROPE	CZECH	ODSTIN NENI PRESNE DOSAZITELNY
858-SH	EUROPE	DANISH	KUN TIL HELLAKERING
858-SH	EUROPE	DUTCH	KLEUR NIET EXACT TE BEREIKEN
858-SH	EUROPE	ENGLISH	APROXIMATE MATCH ONLY
858-SH	EUROPE	ESTONIAN	UELEVAERVIMISEKS AINULT
858-SH	EUROPE	FRENCH	FORMULE APPROCHANTE

NAVY BLUE A 507 STANDOX

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A507	Brand Panel #	833850
Color Name	BLEU MARINE	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Oct 14, 2010
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB372	SPEZIALSCHWARZ	254.5	254.5
WB359	BLAU	335.6	590.1
WB331	ROT	154.7	744.8
WB398	BRILLANTSILBER	221.8	966.6
WB009	METALLIC-ADDITIV	57.5	1024.1
WB355	VIOLETT	7.3	1031.4

Language ALL			Region
Code	**Region**	**Language**	**Text**
858-SX	EUROPE	CROATIAN	PRIBLIZNA RECEPTURA
858-SX	EUROPE	CZECH	JEN VE VERZI S OBSAHEM PB - OZNACTE SYMB
858-SX	EUROPE	DUTCH	FORM. SLECHTS BIJ BENADERING BEREIKBAAR
858-SX	EUROPE	ENGLISH	APPROXIMATE MATCH ONLY
858-SX	EUROPE	FINNISH	LYIYLLINEN: T-VAADITTU
858-SX	EUROPE	FRENCH	FORMULE APPROCHANTE

METAL ORANGE A 202 AKZO NOBEL SIKKENS

SIKKENS reference			
AIX 202			
Compositions			
Autowave MM			
Layer 1		Layer 2	
361	959,3	267	4
744	962,6	568	6
527	980,6	333PG	55,9
568	1009,3	666	998,6
Autobase plus			
Layer 1		Layer 2	
Q065	227,2	Q235	2,9
Q326	683,4	Q431	9,3
Q160	687,7	Q941M	36,7
Q271	715,9	Q943M	100,7
Q348	987,8	Q065	311
		Q070	914,5

METAL ORANGE A 202 DUPONT

UNDERCOAT

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A202	Brand Panel #	
Color Name	ORANGE	Lead Free	Y
Quality	CROMAX CROMAX	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT UNDERCOAT	Formulation Date	Dec 04, 2009
S-M-P Ind	S		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
1640WB	LOW VISCOSITY BINDER	692.3	692.3
1650WB	HIGH VISCOSITY BINDER	122.1	814.4
1445W	TRANSPARENT YELLOW	147.2	961.6
1453W	ORANGE	41.8	1003.4
1443W	BRIGHT YELLOW	4.1	1007.5
1407W	BLACK L.S.	3.8	1011.3

SHADE

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A202	Brand Panel #	
Color Name	ORANGE	Lead Free	Y
Quality	CROMAX CROMAX	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT BASECOAT	Formulation Date	Dec 04, 2009
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
1640WB	LOW VISCOSITY BINDER	932.2	932.2
1650WB	HIGH VISCOSITY BINDER	49.1	981.3
1505W	GOLD PEARL	20.5	1001.8

METAL ORANGE A 202 SPIES HECKER

UNDERCOAT

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A202	Brand Panel #	881136
Color Name	ORANGE	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT UNDERCOAT	Formulation Date	Nov 30, 2009
S-M-P Ind	S		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB379	ORANGE	521.4	521.4
WB380	GELB	284.7	806.1
WB370	WEISS	141.0	947.1
WB367	OXIDROT	99.6	1046.7
WB364	SCHWARZTONER	6.9	1053.6

SHADE

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A202	Brand Panel #	881136
Color Name	ORANGE	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT BASECOAT	Formulation Date	Nov 30, 2009
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB302	GELB	443.1	443.1
WB380	GELB	443.0	886.1
WB379	ORANGE	86.1	972.2
WB367	OXIDROT	37.5	1009.7
WB376	BRILLANTROT	29.8	1039.5
WB383	MARON	11.7	1051.2

METAL ORANGE A 202 STANDOX

UNDERCOAT

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A202	Brand Panel #	881136
Color Name	ORANGE	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT UNDERCOAT	Formulation Date	Nov 30, 2009
S-M-P Ind	S		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB379	ORANGE	521.4	521.4
WB380	GELB	284.7	806.1
WB370	WEISS	141.0	947.1
WB367	OXIDROT	99.6	1046.7
WB364	SCHWARZTONER	6.9	1053.6

SHADE

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A202	Brand Panel #	881136
Color Name	ORANGE	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT BASECOAT	Formulation Date	Nov 30, 2009
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB302	GELB	443.1	443.1
WB380	GELB	443.0	886.1
WB379	ORANGE	86.1	972.2
WB367	OXIDROT	37.5	1009.7
WB376	BRILLANTROT	29.8	1039.5
WB383	MARON	11.7	1051.2

METAL BLACK A 409 AKZO NOBEL SIKKENS

SIKKENS reference	
AIX 409	
Compositions	
Autowave MM	
245	486
888EC	494,3
666	527,5
971	588,9
342	773,3
974	1012,6
Autobase plus	
Q766	327,3
Q160	351,5
Q811U	380,6
Q140	540,3
Q550	745,8
Q065	968,6

METAL BLACK A 409 DUPONT

Color Owner	AIXAM	From/To Years	2009 - 2009
Paint Code	A409	Brand Panel #	
Color Name	NOIR	Lead Free	Y
Quality	CROMAX CROMAX	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Feb 01, 2010
S-M-P Ind	M		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
1640WB	LOW VISCOSITY BINDER	795.8	795.8
1405W	JET BLACK - BLUE SHADE	88.7	884.5
1427W	GREEN SHADE BLUE H.S.	45.6	930.1
1432W	YELLOW SHADE GREEN	23.5	953.6
1420W	VIOLET	19.0	972.6
1418W	BRIGHTNESS ADJUSTER	18.3	990.9
1402W	WHITE L.S.	11.5	1002.4
1535W	COARSE BRIGHT ALUMINUM	4.1	1006.5

METAL BLACK A 409 SPIES HECKER

Color Owner	AIXAM	From/To Years	2009 - 2009
Paint Code	A409	Brand Panel #	837273
Color Name	NOIR	Lead Free	Y
Quality	280 280 - PERMAHYD BASISLACK	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Dec 16, 2009
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB803	SPEZIALSCHWARZ	729.3	729.3
WB815	LEUCHTSILBER	60.0	789.3
WB854	LASURTIEFBLAU	100.0	889.3
WB868	PERLLILA	42.2	931.5
WB823	LASURROETLICHGELB	53.2	984.7
WB893	PERLBLAU	28.1	1012.8
WB871	PERLROSA	10.2	1023.0

METAL BLACK A 409 STANDOX

Color Owner	AIXAM	From/To Years	2009 - 2009
Paint Code	A409	Brand Panel #	827337
Color Name	NOIR	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Dec 16, 2009
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB372	SPEZIALSCHWARZ	726.4	726.4
WB359	BLAU	99.6	826.0
WB398	BRILLANTSILBER	59.8	885.8
WB380	GELB	53.0	938.8
WB321	AMETHYST	42.0	980.8
WB303	BLAU	28.0	1008.8
WB331	ROT	10.1	1018.9

PEARL WHITE A 408 AKZO NOBEL SIKKENS

SIKKENS reference			
AIX 408			
Compositions			
Layer 1		Layer 2	
98	93	0	0,5
971	0,2	332YA	2,5
744	0,5	334WB	10,5
558	8,6	666	86,5

PEARL WHITE A 408 DUPONT

UNDERCOAT

Color Owner	AIXAM	Quality	CROMAX CROMAX
Paint Code	A408	Lead (Pb) Free	Y
Color Name	BLANC	Owner Region	EUROPE
		Coat	3-COAT UNDERCOAT
EU Stock # / Alt #	X7216 / 0	Formula Standard #	
Hiding (µ)	16	Formulation Date	Mar 24, 2009
Value Shade	2		NEW FORMULA

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
1640WB		LOW VISCOSITY BINDER	275.4	275.4
1650WB		HIGH VISCOSITY BINDER	275.4	550.8
1401W		WHITE H.S.	522.7	1073.5
1482W		YELLOW OXIDE	14.9	1088.4
1407W		BLACK L.S.	10.0	1098.4
1453W		ORANGE	0.5	1098.9

SHADE

Color Owner	AIXAM	Quality	CROMAX CROMAX
Paint Code	A408	Lead (Pb) Free	Y
Color Name	BLANC	Owner Region	EUROPE
		Coat	3-COAT BASECOAT
EU Stock # / Alt #	X7216 / 0	Formula Standard #	
Hiding (µ)	0	Formulation Date	Mar 24, 2009
Value Shade	0		NEW FORMULA

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
1640WB		LOW VISCOSITY BINDER	765.1	765.1
1650WB		HIGH VISCOSITY BINDER	135.1	900.2
1511W		SATIN WHITE PEARL	69.9	970.1
1514W		RUTILE RED PEARL	19.6	989.7
1501W		WHITE PEARL	15.9	1005.6
1505W		GOLD PEARL	6.2	1011.8
1403W		CRYSTALLINE FROST	1.8	1013.6

PEARL WHITE A 408 SPIES HECKER

UNDERCOAT

Color Owner	AIXAM	From/To Years	2008 - 2009
Paint Code	A408	Brand Panel #	823901
Color Name	BLANC	Lead Free	Y
Quality	280 280 - PERMAHYD BASISLACK	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT UNDERCOAT	Formulation Date	Feb 17, 2009
S-M-P Ind	S		

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
WB801	H017	WEISS	1102.8	1102.8
WB825	H017	SCHWARZLASUR	46.8	1149.6
WB835	H017	BLUTORANGE	6.1	1155.7
WB851	H017	GELB	5.4	1161.1

SHADE

Color Owner	AIXAM	From/To Years	2008 - 2009
Paint Code	A408	Brand Panel #	823901
Color Name	BLANC	Lead Free	Y
Quality	280 280 - PERMAHYD BASISLACK	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT BASECOAT	Formulation Date	Feb 17, 2009
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
WB888	H017	TRANSPARENT	827.3	827.3
WB870	H017	PERLFEINWEISS	168.7	996.0
WB801	H017	WEISS	8.6	1004.6
WB821	H017	OCKERGELB	8.7	1013.3
WB825	H017	SCHWARZLASUR	8.6	1021.9
WB811	H017	ROT	7.1	1029.0

PEARL WHITE A 408 STANDOX

UNDERCOAT

Color Owner	AIXAM	From/To Years	2008 - 2009
Paint Code	A408	Brand Panel #	890123
Color Name	BLANC	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT UNDERCOAT	Formulation Date	Feb 17, 2009
S-M-P Ind	S		

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
WB370	S017	WEISS	1098.4	1098.4
WB364	S017	SCHWARZTONER	46.6	1145.0
WB379	S017	ORANGE	6.1	1151.1
WB378	S017	SONNENGELB	5.4	1156.5

SHADE

Color Owner	AIXAM	From/To Years	2008 - 2009
Paint Code	A408	Brand Panel #	890123
Color Name	BLANC	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT BASECOAT	Formulation Date	Feb 17, 2009
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
WB399	S017	TRANSPARENT	824.0	824.0
WB329	S017	WEISS	168.0	992.0
WB368	S017	OCKERTONER	8.7	1000.7
WB370	S017	WEISS	8.6	1009.3
WB364	S017	SCHWARZTONER	8.5	1017.8
WB384	S017	OXIDROTTONER	7.0	1024.8

METAL GREY A 707 AKZO NOBEL SIKKENS

SIKKENS reference	
AIX 707	
Compositions	
Autobase	
334WA	633,6
533	639,3
550	644,9
400	654,4
0	673,9
333DF	986

METAL GREY A 707 DUPONT

Formula Standard #	253428	Years Used	1999 - 2000
EU Stock # / Alt #	M6081 / 0	Lead (Pb) Free	Y
Color Name	GRIS	PCP	N
Formula Owner Region	EUROPE	Quality	CROMAX CROMAX
Formulation Date	Nov 06, 2001	Value Shade	4
Coat	BASECOAT	Paint Code	A707
EU Alt Color Change			Overall Repair
Color Owner	AIXAM		
Asia Color Variance			

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
1640WB		LOW VISCOSITY BINDER	616.8	616.8
1650WB		HIGH VISCOSITY BINDER	108.8	725.6
1531W		MEDIUM FINE ALUMINUM	216.6	942.2
1401W		WHITE H.S.	43.8	986.0
1501W		WHITE PEARL	13.6	999.6
1405W		JET BLACK - BLUE SHADE	8.5	1008.1
1464W		MAGENTA	2.7	1010.8
1427W		GREEN SHADE BLUE H.S.	2.6	1013.4

METAL GREY A 707 SPIES HECKER

Color Owner	AIXAM	From/To Years	1999 - 2000
Paint Code	A707	Brand Panel #	78704
Color Name	GRIS	Lead Free	Y
Quality	285 285 - PERMAHYD PERLMUTT BASISLACK	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Oct 03, 2001
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
WB891	H018	PERLWEISS	746.0	746.0
WB817	H018	MICROSILBER EXTRA	248.7	994.7
WB801	H018	WEISS	49.7	1044.4
WB827	H018	LASURSCHWARZ	24.9	1069.3

METAL GREY A 707 STANDOX

Color Owner	AIXAM	From/To Years	1999 - 2000
Paint Code	A707	Brand Panel #	839110
Color Name	GRIS	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	S!H+
Coat	2 COAT: BASECOAT	Formulation Date	Jun 03, 2008
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
WB339	S017	SAPHIRBLAU	371.7	371.7
WB302	S017	GELB	265.0	636.7
WB313	S017	MONDSILBER	182.8	819.5
WB329	S017	WEISS	100.0	919.5
WB370	S017	WEISS	54.6	974.1
WB384	S017	OXIDROTTONER	52.6	1026.7
WB324	S017	HELLGRUEN	43.6	1070.3
WB388	S017	AZURBLAU	1.2	1071.5

STEEL GREY A 708 AKZO NOBEL SIKKENS

SIKKENS reference	
AIX 708	
Compositions	
Autowave MM	
666	645
971	663,5
0	685,1
335	712,5
379	759,7
744	864,3
888CC	913,6
888EC	1025,6

STEEL GREY A 708 DUPONT

Formula Standard #	757844	Years Used	2005 - 2005
EU Stock # / Alt #	X2066 / 0	Lead (Pb) Free	Y
Color Name	GRIS	PCP	N
Formula Owner Region	EUROPE	Quality	CROMAX CROMAX
Formulation Date	Nov 25, 2004	Value Shade	5
Coat	BASECOAT	Paint Code	A708
EU Alt Color Change			
Color Owner	AIXAM		
Asia Color Variance			

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
1640WB		LOW VISCOSITY BINDER	385.8	385.8
1650WB		HIGH VISCOSITY BINDER	256.8	642.6
1535W		COARSE BRIGHT ALUMINUM	252.2	894.8
1405W		JET BLACK - BLUE SHADE	47.1	941.9
1401W		WHITE H.S.	23.7	965.6
1418W		BRIGHTNESS ADJUSTER	19.6	985.2
1420W		VIOLET	14.7	999.9
1424W		ORGANIC BLUE	11.3	1011.2

RED M 306 AKZO NOBEL SIKKENS

SIKKENS reference	
AIX 306	
Compositions	
First layer	
358	534,4
744	535
955	1014,2
Autobase	
359	636,5
956	964,4
00	987,2
744	988

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

PURE WHITE A 407 DUPONT

Color Owner	AIXAM	From/To Years	2009 - 2009
Paint Code	A407	Brand Panel #	
Color Name	BLANC PUR	Lead Free	Y
Quality	CROMAX CROMAX	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Mar 30, 2009
S-M-P Ind	S		

Quantity To Mix	1.0LTR (100% Fill)		Display Units GRAMS	
Ingredient	**Ingr Quality**	**Description**	**Amount**	**Accum. Amount**
1640WB		LOW VISCOSITY BINDER	386.4	386.4
1650WB		HIGH VISCOSITY BINDER	165.6	552.0
1401W		WHITE H.S.	548.4	1100.4
1407W		BLACK L.S.	1.3	1101.7
1482W		YELLOW OXIDE	0.7	1102.4
1431W		BLUE SHADE GREEN L.S.	0.1	1102.5

PURE WHITE A 407 SPIES HECKER

Color Owner	AIXAM	From/To Years	2009 - 2009
Paint Code	A407	Brand Panel #	827838
Color Name	BLANC PUR	Lead Free	Y
Quality	280 280 - PERMAHYD BASISLACK	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Jun 17, 2009
S-M-P Ind	S		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB801	WEISS	1148.5	1148.5
WB825	SCHWARZLASUR	7.5	1156.0
WB811	ROT	6.0	1162.0
WB851	GELB	0.4	1162.4

PURE WHITE A 407 STANDOX

Color Owner	AIXAM	From/To Years	2009 - 2009
Paint Code	A407	Brand Panel #	883827
Color Name	BLANC PUR	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Jun 17, 2009
S-M-P Ind	S		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB370	WEISS	1153.1	1153.1
WB384	OXIDROTTONER	6.0	1159.1
WB364	SCHWARZTONER	7.5	1166.6
WB378	SONNENGELB	0.4	1167.0

ALUMINUM STRUCTURE BLACK A 410 AKZO NOBEL SIKKENS

SIKKENS reference	
AIX 410	
Compositions	
Autowave MM	
245	1014
Autobase plus	
Q140	726,6
Q326	738,7
Q065	959,4

ALUMINUM STRUCTURE BLACK A 410 DUPONT

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A410	Brand Panel #	
Color Name	NOIR	Lead Free	Y
Quality	CROMAX CROMAX	Color Variance	
Coat	2 COAT TINTED CLEAR: BASECOAT TC	Formulation Date	Mar 31, 2010
S-M-P Ind	P		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
1640WB	LOW VISCOSITY BINDER	831.5	831.5
1405W	JET BLACK - BLUE SHADE	142.6	974.1
1484W	RED OXIDE	12.2	986.3
1401W	WHITE H.S.	10.9	997.2
1512W	SATIN BLUE PEARL	5.4	1002.6
1533W	FINE ALUMINUM	4.0	1006.6

Language ALL Region

Code	Region	Language	Text
858-DRE	EUROPE	ENGLISH	OVERALL REPAIR
955-DRE	EUROPE	ENGLISH	COLOR NEEDS FLAT CLEARCOAT

ALUMINUM STRUCTURE BLACK A 410 SPIES HECKER

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A410	Brand Panel #	839666
Color Name	NOIR	Lead Free	Y
Quality	280 280 - PERMAHYD BASISLACK	Color Variance	
Coat	2 COAT TINTED CLEAR: BASECOAT TC	Formulation Date	Apr 08, 2010
S-M-P Ind	S		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB803	SPEZIALSCHWARZ	710.5	710.5
WB859	BRILLANTBLAU	157.7	868.2
WB823	LASURROETLICHGELB	93.1	961.3
WB843	GRANADAROT	51.5	1012.8
WB801	WEISS	4.9	1017.7

Language ALL Region

Code	Region	Language	Text
955-SH	EUROPE	ENGLISH	APPLY FLAT CLEARCOAT
955-SH	EUROPE	GERMAN	MATTKLARLACK EINSETZEN
955-SH	EUROPE	POLISH	NANIESC MATOWY LAKIER BEZBARWNY

ALUMINUM STRUCTURE BLACK A 410 STANDOX

Color Owner	AIXAM	From/To Years	2010 - 2010
Paint Code	A410	Brand Panel #	866639
Color Name	NOIR	Lead Free	Y
Quality	STHYD STANDOHYD BASECOAT	Color Variance	
Coat	2 COAT TINTED CLEAR: BASECOAT TC	Formulation Date	Apr 08, 2010
S-M-P Ind	S		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB372	SPEZIALSCHWARZ	713.4	713.4
WB380	GELB	93.4	806.8
WB358	VELOURSBLAU	158.4	965.2
WB361	RUBINROT	51.7	1016.9
WB370	WEISS	4.9	1021.8

Language ALL Region			
Code	**Region**	**Language**	**Text**
955-SX	EUROPE	CROATIAN	UPOTRJEBITE 2K SUPERMATT BEZBOJNI LAK
955-SX	EUROPE	ENGLISH	APPLY STANDOCRYL 2K CLEAR SUPER MAT
955-SX	EUROPE	GERMAN	MATTKLARLACK EINSETZEN
955-SX	EUROPE	SERBIAN	UPOTREBITE 2K KLARLACK SUPERMATT
955-SX	EUROPE	SLOVENIAN	UPORABITE 2K KLARLACK SUPERMATT

Rouge nacré A308 AKZO NOBEL SIKKENS

Référence SIKKENS	
AIX 308	
Compositions Autowave MM sur 100grs	
Couche de fond	
527	9.00
400	4.00
666	64.00
355	6.00
888DF	16.00
335	6.00
Couche de finition	
666	82.50
350	4.50
527	13.00
	+CBP040

Rouge nacre A308 LECHLER

Référence LECHLER AIX308	
AIX 308	
Compositions sur 100 Gr	
Couche de fond	
485	26,45
256	8,4
48	3,6
186	1,32
390	4,2
221	7,93
689	2,43
487	45,67
Base	
HF582	43,86
143	3,51
221	2,63

Noir Brillant A412 NOBEL SIKKENS

Manufacturer	Aixam-Mega
Akzo Code	AIX412
Description	Noir Brillant
Car Code	412, A412
Color Type	Solid
Product	Autocoat BT LV351

Layer 1		
Colorant	Amount (1 Liter)	Cumulative (1 Liter)
B315	1033,0	1033,0

Advised minimum amount: 0,1 Liter
Advised primer:

Message:
Must be verified by spray out.
NEEDS DEEP BLACK. (BGE).

ColorMap Location	Grade of Match
500H2	Good

Noir Brillant A412 DUPONT

Color Owner	AIXAM	**From/To Years**	2013 - 2013
Paint Code	A412	**Brand Panel #**	
Color Name	NOIR BRILLANT	**Lead Free**	Y
Quality	CROMAX	**Color Variance**	
Coat	2 COAT: BASECOAT	**Formulation Date**	Oct 09, 2012
S-M-P Ind	S		

Ingredients

Quantity To Mix 1.0LTR (100% Fill) **Display Units** GRAMS

Ingredient	Description	Amount	Accum. Amount
1640WB	LOW VISCOSITY BINDER	325.3	325.3
1650WB	HIGH VISCOSITY BINDER	325.3	650.6
1405W	JET BLACK - BLUE SHADE	356.0	1006.6

Messages

Language ALL **Region**

Code	Region	Language	Text
858-DRE	EUROPE	ENGLISH	OVERALL REPAIR

Noir Brillant A412 SPIES HECKER

Color Owner	AIXAM	**From/To Years**	2013 - 2013
Paint Code	A412	**Brand Panel #**	870869
Color Name	NOIR BRILLANT	**Lead Free**	Y
Quality	280 - PERMAHYD BASISLACK	**Color Variance**	
Coat	2 COAT: BASECOAT	**Formulation Date**	Oct 09, 2012
S-M-P Ind	S		

Ingredients

Quantity To Mix 1.0LTR (100% Fill) **Display Units** GRAMS

Ingredient	Description	Amount	Accum. Amount
WB802	TIEFSCHWARZ	1011.0	1011.0

Noir Brillant A412 STANDOX

Color Owner	AIXAM	**From/To Years**	2013 - 2013
Paint Code	A412	**Brand Panel #**	886970
Color Name	NOIR BRILLANT	**Lead Free**	Y
Quality	STANDOHYD BASECOAT	**Color Variance**	
Coat	2 COAT: BASECOAT	**Formulation Date**	Oct 09, 2012
S-M-P Ind	S		

Ingredients

Quantity To Mix 1.0LTR (100% Fill) **Display Units** GRAMS

Ingredient	Description	Amount	Accum. Amount
WB362	JET BLACK	1006.9	1006.9

Jaune métal A103 NOBEL SIKKENS

Manufacturer	Aixam-Mega
Akzo Code	AIX103
Description	Jaune Metal
Car Code	103, A103
Color Type	Pearl Twocoat
Product	Autowave MM

Layer 1		
Colorant	Amount (1 Liter)	Cumulative (1 Liter)
296	884,2	884,2
360	2,9	887,1
744	3,9	891,0
568	12,9	903,9
361	129,9	1033,8

Layer 2		
Colorant	Amount (1 Liter)	Cumulative (1 Liter)
666	929,5	929,5
333P	5,0	934,5
332GB	15,0	949,5
333PG	50,0	999,5

Advised minimum amount: 0,12 Liter
Advised primer: CBP025
Message:
Must be verified by spray out.
AWMM not aligned to ABP because PIGMENT MOLDED IN PLASITIC. (BEC).

ColorMap Location	Grade of Match
606B1	Bad

Nelly Delubriat

Jaune métal A103 DUPONT

TEINTE DE FOND

Color Owner	AIXAM	**From/To Years**	2013 - 2013
Paint Code	A103	**Brand Panel #**	
Color Name	JAUNE	**Lead Free**	Y
Quality	CROMAX	**Color Variance**	
Coat	3 COAT - EUROPE: 3-COAT UNDERCOAT	**Formulation Date**	Oct 19, 2012
S-M-P Ind	S		

Ingredients

Quantity To Mix 1.0LTR (100% Fill) **Display Units** GRAMS

Ingredient	Description	Amount	Accum. Amount
1640WB	LOW VISCOSITY BINDER	645.7	645.7
1650WB	HIGH VISCOSITY BINDER	161.4	807.1
1441W	OPAQUE YELLOW	130.5	937.6
1482W	YELLOW OXIDE	76.5	1014.1
1484W	RED OXIDE	10.6	1024.7

TEINTE

Color Owner	AIXAM	**From/To Years**	2013 - 2013
Paint Code	A103	**Brand Panel #**	
Color Name	JAUNE	**Lead Free**	Y
Quality	CROMAX	**Color Variance**	
Coat	3 COAT - EUROPE: 3-COAT BASECOAT	**Formulation Date**	Oct 19, 2012
S-M-P Ind	P		

Ingredients

Quantity To Mix 1.0LTR (100% Fill) **Display Units** GRAMS

Ingredient	Description	Amount	Accum. Amount
1640WB	LOW VISCOSITY BINDER	856.3	856.3
1650WB	HIGH VISCOSITY BINDER	95.1	951.4
1606W	GOLD PEARL	29.9	981.3
1617W	SATIN GREEN PEARL	22.1	1003.4
1445W	TRANSPARENT YELLOW	1.9	1005.3

Jaune métal A103 SPIES HECKER
TEINTE DE FOND

Color Owner	AIXAM	**From/To Years**	2013 - 2013
Paint Code	A103	**Brand Panel #**	870924
Color Name	JAUNE	**Lead Free**	Y
Quality	280 - PERMAHYD BASISLACK	**Color Variance**	
Coat	3 COAT - EUROPE: 3-COAT UNDERCOAT	**Formulation Date**	Oct 19, 2012
S-M-P Ind	S		

Ingredients

Quantity To Mix 1.0LTR (100% Fill) **Display Units** GRAMS

Ingredient	Description	Amount	Accum. Amount
WB851	GELB	787.8	787.8
WB823	LASURROETLICHGELB	260.1	1047.9
WB831	LASUROXID	46.7	1094.6
WB825	SCHWARZLASUR	46.3	1140.9

TEINTE

Color Owner	AIXAM	**From/To Years**	2013 - 2013
Paint Code	A103	**Brand Panel #**	870924
Color Name	JAUNE	**Lead Free**	Y
Quality	280 - PERMAHYD BASISLACK	**Color Variance**	
Coat	3 COAT - EUROPE: 3-COAT BASECOAT	**Formulation Date**	Oct 19, 2012
S-M-P Ind	P		

Ingredients

Quantity To Mix 1.0LTR (100% Fill) **Display Units** GRAMS

Ingredient	Description	Amount	Accum. Amount
WB888	TRANSPARENT	932.9	932.9
WB892	PERLGOLD	56.6	989.5
WB872	PERLGRUEN	34.8	1024.3
WB823	LASURROETLICHGELB	3.0	1027.3

Jaune métal A103 STANDOX
TEINTE DE FOND

Color Owner	AIXAM	**From/To Years**	2013 - 2013
Paint Code	A103	**Brand Panel #**	892470
Color Name	JAUNE	**Lead Free**	Y
Quality	STANDOHYD BASECOAT	**Color Variance**	
Coat	3 COAT - EUROPE: 3-COAT UNDERCOAT	**Formulation Date**	Oct 19, 2012
S-M-P Ind	S		

Ingredients

Quantity To Mix 1.0LTR (100% Fill) **Display Units** GRAMS

Ingredient	Description	Amount	Accum. Amount
WB378	SONNENGELB	791.0	791.0
WB380	GELB	261.1	1052.1
WB382	KUPFER	46.8	1098.9
WB364	SCHWARZTONER	46.5	1145.4

TEINTE

Color Owner	AIXAM	**From/To Years**	2013 - 2013
Paint Code	A103	**Brand Panel #**	892470
Color Name	JAUNE	**Lead Free**	Y
Quality	STANDOHYD BASECOAT	**Color Variance**	
Coat	3 COAT - EUROPE: 3-COAT BASECOAT	**Formulation Date**	Oct 19, 2012
S-M-P Ind	P		

Ingredients

Quantity To Mix 1.0LTR (100% Fill) **Display Units** GRAMS

Ingredient	Description	Amount	Accum. Amount
WB399	TRANSPARENT	936.6	936.6
WB324	HELLGRUEN	35.0	971.6
WB302	GELB	56.8	1028.4
WB380	GELB	3.0	1031.4

GRIS TITANE A710 DUPONT

Color Owner	AIXAM	From/To Years	2012 - 2013
Paint Code	A710	Brand Panel #	
Color Name	GRIS TITANE	Lead Free	Y
Quality	CROMAX	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Aug 23, 2012
S-M-P Ind	M		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
1640WB	LOW VISCOSITY BINDER	518.5	518.5
1650WB	HIGH VISCOSITY BINDER	222.3	740.8
1535W	COARSE BRIGNT ALUMINUM	117.4	858.2
1405W	JET BLACK BLUE SHADE	39.5	897.7
1401W	WHITE H.S	38.1	935.8
1532W	FINE BRIGHT ALUMINIUM	27.7	963.5
1427W	GREEN SHADE BLUE H.S	14.6	978.1
1418W	BRIGHTNESS ADJUSTER	13.2	991.3
1420W	VIOLET	12.6	1003.9
1484W	RED OXIDE	5.0	1008.9

GRIS TITANE A710 STANDOX

Color Owner	AIXAM	From/To Years	2012 - 2013
Paint Code	A710	Brand Panel #	806670
Color Name	GRIS TITANE	Lead Free	Y
Quality	STANDOHYD BASECOAT	Color Variance	
Coat	2 COAT: BASECOAT	Formulation Date	Aug 23, 2012
S-M-P Ind	M		

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	**Description**	**Amount**	**Accum. Amount**
WB311	SATINSILBER	519.7	519.7
WB372	SPEZIALSCHWARZ	103.1	622.8
WB393	GROBSILBER	161.1	783.9
WB370	WEISS	66.6	850.5
WB382	KUPFER	100.7	951.2
WB359	BLAU	54.4	1005.6
WB355	VIOLETT	17.2	1022.8
WB009	METALLIC-ADDITIV	13.3	1036.1

Language ALL			Region
Code	**Region**	**Language**	**Text**
858-SX	EUROPE	CROATIAN	PRIBLIZNA RECEPTURA
858-SX	EUROPE	CZECH	JEN VE VERZI S OBSAHEM PB - OZNACTE SYMB
858-SX	EUROPE	DUTCH	FORM. SLECHTS BIJ BENADERING BEREIKBAAR
858-SX	EUROPE	ENGLISH	APPROXIMATE MATCH ONLY
858-SX	EUROPE	FINNISH	LYIYLLINEN: T-VAADITTU
858-SX	EUROPE	FRENCH	FORMULE APPROCHANTE

BASF
The Chemical Company

11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM
Colorcode: M306
Name: ROUGE VIF
Std.-Number:
Color ID: CL718544

Modell-Jahr: 2004–2004
Variante: 00
Auxcode:
Glasurit Fab. Nr.:

Lösungs-Information

Reihe: 90 EUR
Solution ID: MS982263
Anw.: Alle Anwendungen

Erstellt: 31-JUL-00
Geändert:

Kommentar:

Formel

Schicht: 1 Preisgruppe: SDB-Nummer: 99

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	M4	118.7		601.7	1203.4	1805.0	
2	A201	40.3		806.0	1611.9	2417.9	
3	A352	39.6		1006.7	2013.4	3020.0	
4	A148	1.3		1013.3	2026.5	3039.8	
5	A031	.1		1013.8	2027.6	3041.3	

Kommentar:

BASF
The Chemical Company

11-OCT-13

Farbton-Information

Hersteller: **AIX AIXAM**
Colorcode: **A710**
Name: **GRIS ACIER MET**
Std.-Number:
Color ID: **CL903696**

Modell-Jahr: **2012–2013**
Variante: **00**
Auxcode:
Glasurit Fab. Nr.:

Lösungs-Information

Reihe: **90 EUR**
Solution ID: **CL6571684**
Anw.: **Nur Ganzlackierung**

Erstellt: **25-JAN-13**
Geändert:

Kommentar:

Formel

Schicht: **1** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	**M4**	126.6	322.0	644.0	1287.9	1931.9	637
2	**M99/01**	8.2	342.8	685.6	1371.1	2056.7	675
3	**M99/00**	6.5	359.2	718.4	1436.9	2155.3	707
4	**A997**	24.8	422.3	844.6	1689.2	2533.8	826
5	**A097**	5.0	434.9	869.8	1739.6	2609.5	846
6	**A032**	5.0	447.5	895.1	1790.1	2685.2	870
7	**A589**	4.5	459.0	918.0	1836.1	2754.1	893
8	**A149**	1.1	461.9	923.8	1847.7	2771.5	899
9	**M1**	18.4	508.7	1017.4	2034.9	3052.3	1000

Kommentar:

BASF
The Chemical Company

11-OCT-13

Farbton-Information

Hersteller: **AIX AIXAM**
Colorcode: **A708**
Name: **GRIS ACIER MET**
Std.-Number:
Color ID: **CL713862**

Modell-Jahr: **2004–2008**
Variante: **00**
Auxcode:
Glasurit Fab. Nr.:

Lösungs-Information

Reihe: **90 EUR**
Solution ID: **CL1959985**
Anw.: **Beilackierung**

Erstellt: **08-OCT-04**
Geändert:

Kommentar:

Formel

Schicht: **1** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	**M4**	138.4	355.7	711.3	1422.7	2134.0	704
2	**M99/03**	28.0	427.6	855.2	1710.4	2565.7	840
3	**A105**	8.5	449.5	898.9	1797.8	2696.7	876
4	**A503**	8.5	471.3	942.6	1885.2	2827.7	917
5	**A926**	7.1	489.5	979.0	1957.9	2936.9	955
6	**A427**	5.8	504.4	1008.8	2017.6	3026.5	986
7	**A031**	2.6	511.0	1021.9	2043.8	3065.8	995
8	**A306**	1.1	513.9	1027.7	2055.5	3083.2	1000

Kommentar:

BASF
The Chemical Company

11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM
Colorcode: A707
Name: GRIS MET
Std.-Number:
Color ID: CL596546

Modell-Jahr: 2000–2008
Variante: 00
Auxcode:
Glasurit Fab. Nr.:

Lösungs-Information

Reihe: 90 EUR
Solution ID: CL1217148
Anw.: Alle Anwendungen

Erstellt: 12-JUL-01
Geändert:

Kommentar:

Formel

Schicht: 1 Preisgruppe: SDB-Nummer: 99

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	M4	132.3	337.8	675.6	1351.1	2026.7	668
2	M99/01	13.3	371.6	743.2	1486.5	2229.7	730
3	M506	9.6	396.2	792.3	1584.6	2376.9	773
4	M99/00	8.4	417.5	834.9	1669.9	2504.8	815
5	A032	17.1	461.2	922.3	1844.6	2767.0	897
6	A532	7.6	480.6	961.2	1922.4	2883.7	937
7	A927	5.1	493.7	987.4	1974.7	2962.1	964
8	M1	6.6	510.5	1020.9	2041.9	3062.8	1000

Kommentar:

BASF
The Chemical Company

11-OCT-13

Farbton-Information

Hersteller: **AIX AIXAM**
Colorcode: **A507**
Name: **BLEU MARINE NACRE MET**
Std.-Number:
Color ID: **CL885809**

Modell-Jahr: **2010–2011**
Variante: **00**
Auxcode:
Glasurit Fab. Nr.:

Lösungs-Information

Reihe: **90 EUR**
Solution ID: **CL4934483**
Anw.: **Bellackierung**

Erstellt: **28-JUL-11**
Geändert:

Kommentar:

Formel

Schicht: **1** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	M4	127.4	323.5	647.0	1294.0	1941.0	640
2	E440	8.0	343.8	687.5	1375.1	2062.6	674
3	M99/21	2.7	350.5	701.0	1402.1	2103.1	685
4	A503	34.6	438.3	876.7	1753.4	2630.1	853
5	A926	12.5	470.1	940.2	1880.4	2820.5	920
6	A640	4.3	480.9	961.8	1923.6	2885.5	942
7	M1	10.6	507.9	1015.9	2031.7	3047.6	1000

Kommentar:

BASF
The Chemical Company

11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM
Colorcode: A412
Name: NOIR
Std.-Number:
Color ID: CL903695

Modell-Jahr: 2012–2013
Variante: 00
Auxcode:
Glasurit Fab. Nr.:

Lösungs-Information

Reihe: 90 EUR
Solution ID: CL6571080
Anw.: Bellackierung

Erstellt: 24-JAN-13
Geändert:

Kommentar:

Formel

Schicht: 1 Preisgruppe: SDB-Nummer: 99

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	M4	142.9	358.1	716.1	1432.2	2148.3	708
2	90-1250	57.1	501.3	1002.5	2005.1	3007.6	1000

Kommentar:

BASF
The Chemical Company

11-OCT-13

Farbton-Information

Hersteller: **AIX AIXAM**
Colorcode: **A409**
Name: **NOIR NACRE**
Std.-Number:
Color ID: **CL867417**

Modell-Jahr: **2010–2010**
Variante: **00**
Auxcode:
Glasurit Fab. Nr.:

Lösungs-Information

Reihe: **90 EUR**
Solution ID: **CL4088547**
Anw.: **Bellackierung**

Erstellt: **28-MAY-10**
Geändert:

Kommentar:

Formel

Schicht: **1** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	M4	138.3	348.6	697.2	1394.3	2091.5	690
2	M506	3.4	357.2	714.4	1428.8	2143.2	705
3	M99/21	.7	359.1	718.1	1436.3	2154.4	708
4	A924	42.8	467.0	934.1	1868.1	2802.2	929
5	A503	14.7	504.0	1008.1	2016.1	3024.2	1000

Kommentar:

BASF
The Chemical Company

11-OCT-13

Farbton-Information

Hersteller: **AIX AIXAM**
Colorcode: **A408**
Name: **BLANC NACRE**
Std.-Number:
Color ID: **CL842474**

Modell-Jahr: **2008–2008**
Variante: **00**
Auxcode:
Glasurit Fab. Nr.:

Lösungs-Information

Reihe: **90 EUR**
Solution ID: **CL3332240**
Anw.: **Alle Anwendungen**

Erstellt: **17-MAR-09**
Geändert: **28-APR-11**

Kommentar:

Formel

Schicht: **1** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	**M4**	**82.7**	**263.6**	**527.2**	**1054.5**	**1581.7**	**521**
2	**A031**	**115.4**	**631.4**	**1262.8**	**2525.6**	**3788.4**	**989**
3	**A105**	**1.1**	**634.9**	**1269.8**	**2539.6**	**3809.5**	**995**
4	**A926**	**.8**	**637.5**	**1275.1**	**2550.1**	**3825.2**	**1000**

Schicht: **2** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	**M4**	**56.9**	**144.2**	**288.4**	**576.8**	**865.3**	**285**
2	**M5**	**115.0**	**435.5**	**870.9**	**1741.9**	**2612.8**	**868**
3	**M010**	**16.1**	**476.2**	**952.5**	**1905.0**	**2857.5**	**941**
4	**M176**	**4.6**	**487.9**	**975.8**	**1951.6**	**2927.4**	**962**
5	**A032**	**2.8**	**494.9**	**989.8**	**1979.5**	**2969.3**	**975**
6	**M1**	**4.6**	**506.5**	**1013.1**	**2026.1**	**3039.2**	**1000**

Kommentar: Step 1 basecoat - use prior to midcoat application
Step 2 midcoat - must clearcoat

BASF
The Chemical Company

11-OCT-13

Farbton-Information

Hersteller: **AIX AIXAM**
Colorcode: **A308**
Name: **ROUGE CANDY NACRE**
Std.-Number:
Color ID: **CL903691**

Modell-Jahr: **2012–2013**
Variante: **00**
Auxcode:
Glasurit Fab. Nr.:

Lösungs-Information

Reihe: **90 EUR**
Solution ID: **CL6570517**
Anw.: **Nur Ganzlackierung**

Erstellt: **03-FEB-10**
Geändert: **23-JAN-13**

Kommentar:

Formel

Schicht: **1** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	**M4**	**142.9**	**369.6**	**739.2**	**1478.5**	**2217.7**	**731**
2	**M99/01**	**57.1**	**517.5**	**1034.9**	**2069.8**	**3104.8**	**1000**

Schicht: **2** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	**M4**	**65.0**	**163.4**	**326.8**	**653.6**	**980.4**	**323**
2	**M5**	**103.6**	**423.8**	**847.7**	**1695.3**	**2543.0**	**844**
3	**M319**	**7.7**	**443.1**	**886.3**	**1772.6**	**2658.9**	**878**
4	**A347**	**13.2**	**476.3**	**952.6**	**1905.2**	**2857.7**	**945**
5	**A378**	**8.3**	**497.1**	**994.1**	**1988.2**	**2982.4**	**988**
6	**A323**	**.6**	**498.6**	**997.2**	**1994.5**	**2991.7**	**991**
7	**A177**	**.4**	**499.6**	**999.2**	**1998.3**	**2997.5**	**993**
8	**M1**	**1.3**	**502.9**	**1005.9**	**2011.8**	**3017.7**	**1000**

Kommentar: Step 1 basecoat - use prior to midcoat application
Step 2 midcoat - must clearcoat

BASF
The Chemical Company

11-OCT-13

Farbton-Information

Hersteller: **AIX AIXAM**
Colorcode: **A103**
Name: **OR NACRE**
Std.-Number:
Color ID: **CL903686**

Modell-Jahr: **2012–2013**
Variante: **00**
Auxcode:
Glasurit Fab. Nr.:

Lösungs-Information

Reihe: **90 EUR**
Solution ID: **CL6570503**
Anw.: **Nur Ganzlackierung**

Erstellt: **23-JAN-13**
Geändert: **23-JAN-13**

Kommentar:

Formel

Schicht: **1** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	M4	83.9	266.1	532.2	1064.4	1596.6	526
2	A031	113.8	626.7	1253.4	2506.9	3760.3	985
3	A926	2.3	634.0	1268.1	2536.2	3804.2	1000

Schicht: **2** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	M4	108.1	293.6	587.1	1174.2	1761.4	581
2	A143	54.2	440.8	881.5	1763.1	2644.6	865
3	A148	30.4	523.2	1046.4	2092.8	3139.3	973
4	A031	6.5	540.9	1081.7	2163.5	3245.2	995
5	A926	.9	543.2	1086.5	2172.9	3259.4	1000

Schicht: **3** Preisgruppe: SDB-Nummer: **99**

Pos.	Basisfarbe	200 g	0,5 l	1 l	2 l	3 l	1000-Vol
1	M4	9.0	22.6	45.1	90.2	135.3	
2	M5	185.2	487.6	975.3	1950.5	2925.8	
3	E910	1.9	492.3	984.6	1969.1	2953.7	
4	E620	1.3	495.6	991.2	1982.4	2973.5	
5	M011	.5	496.9	993.8	1987.7	2981.5	
6	A143	1.3	500.2	1000.5	2000.9	3001.4	
7	A115	.8	502.2	1004.4	2008.9	3013.3	

Kommentar: ALTERNATIVE 285-__/05
Groundcoat
Step 2 - Basecoat - apply prior to midcoat application
Step 3 - Midcoat - must clearcoat
Use groundcoat or tinted primer before applying basecoat.