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General

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ALXAM

REPAIR MANUAL

General

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GENERAL TERMS OF WARRANTY

- 1. All new vehicles in the **AIXAM** range are guaranteed for a period of two years from their delivery to the client, against all defects or manufacturing flaw.
- All spare parts or accessories sold by **AIXAM** are guaranteed against any defect or manufacturing flaw for a period of one year from the date of delivery to the customer.
- 2. The following is required to benefit from the **AIXAM** guarantee:
- The user manual must be filled with the vehicle identification, name and address of the user customer, and the stamp of the approved dealer.
- The AIXAM approved distributor registers the guarantee on the Internet on the day of sale.
- 3. The guarantee may be requested from any approved dealer in the **AIXAM** network. The customer will present his user manual bearing the stamp of the vehicle seller, the date of delivery to the customer and stamp of the AIXAM approved dealer having performed servicing and check between 500 and 1 000 km, planned by the manufacturer.
- 4. Under pain of losing the benefit of the guarantee, the customer will present his vehicle between 500 and 1 000 km to his approved **AIXAM** dealer. The latter will perform free of charge (except consumables and small supplies) the labour operations required for checking, adjusting, tightening planned by the manufacturer at that mileage.

 After performing these operations, the **AIXAM** approved dealer will apply his stamp in the appropriate box, while indicating the
- 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:

date and exact mileage.

- Any part and equipment which is not an original **AIXAM** component.
- Servicing operations, including balancing and adjustment of parallelism of the wheels; engine and headlight tuning, changing glow plugs, ignition plugs, lamps, belts, transmission belts, parts required for maintenance of regulators, brake pads and linings, brake discs and drums, lubricants and fluids.
- · Damage, breakdowns and damage resulting from:
- -abuse, accidents, theft, fire, vandalism,
- -industrial fallout, acid, alkaline, chemical, resin, bird droppings, salt, hail, storms, lighting and others,
- -non-observance of servicing programs at the planned periods,
- -improper intervention,
- -interventions outside the AIXAM network,
- -use of non-original parts,
- -use of improper fuel or lubricant or containing foreign bodies or fuel other than recommended,
- -Overloading, even temporary.
- The entire vehicle if the latter was subject to modifications or transformations not planned by the manufacturer, particularly when the vehicle no longer matches the original homologation criteria.
- Normal wear of any element including the exhaust, belts and shock absorbers, as well as ageing of the trims, upholstery, paint and wheel covers.
- Any vehicle with an odometer which was changed or modified in such a way preventing to establish the actual mileage, with an altered serial number or engine number.
- Expenses resulting from the immobilisation of the vehicle including direct or indirect or commercial loss incurred by the owner or usual user of the vehicle.
- 9. Documentations relative to the warranty, servicing, and driving:
 - All benefactors of the AIXAM warranty receive a user manual delivered with the new vehicle.
 - The application of the terms of warranty is subject to the presentation of this user manual.
- 10. In any case, the **AIXAM** vehicle benefits from the legal warranty against hidden flaws, in compliance with the provisions of articles 1641 and following of the Civil Code.

REPAIR MANUAL

General

TECHNICAL CHARACTERISTICS Light quadricycle category L6e

GENERAL	CITY	CROSSLINE
Genre	Light quadricycle cate	gory L6e
Type and version	SV43AF	SV42AF
Steering wheels	Front	
Drive wheels	Front	
DIMENSIONS (mm)	<u>CITY</u>	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)	<u>CITY</u>	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	On rear axle 150	

<u>ENGINE</u>	<u>CITY</u>	CROSSLINE
Brand	KUBOTA	
Туре	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	

REPAIR MANUAL

General

TECHNICAL CHARACTERISTICS Heavy quadricycle category L7e

<u>GENERAL</u>	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
<u>WEIGHT</u> (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
Туре	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

REPAIR MANUAL

General

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TECHNICAL CHARACTERISTICS

MOVEMENT TRANSMISSION

- · Gear type: continuous variable transmission
- Clutch type: centrifugalControl mode: automatic
- · Transmission type:

Engine \rightarrow regulator \rightarrow reverser reducer axle \rightarrow 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
Туре	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/21Wbackup lights: 12V/21W
- Front fog lights:
- fog lights: 12V/35WDay lights:
- -LED lights: 12V/ 4W

REPAIR MANUAL

General

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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.



General

WORK TO BE PERFORMED AT SERVICING

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<u>CAUTION</u>: 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



General

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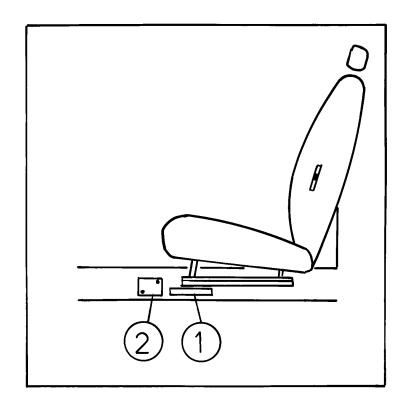
VEHICLE IDENTIFICATION

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.





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TIGHTENING TORQUES

FUNCTION DESIGNATION SCREW		SCDEM	COEF	Torque in Nm	
FUNCTION	DESIGNATION	SCREW	COEF	Mini	Maxi
	Column tensioner (upper screw)	M8*20	2	18,4	27,6
ڻ ن	Column tensioner (lower screw)	M8*35	2	18,4	27,6
STEERING	Flector column	M8*20+nylstop	2	18,4	27,6
EEI	Steering column	nylstop M8	3	18,4	27,6
ST	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
S	Handbrake	M8*20	2	18,4	27,6
BRAKES	Master Cylinder	M8*25+nylstop	2	18,4	27,6
RA	Banjo bolt limiter	Thin thread banjo bolt	4	20	30
ш	Brake pedal	M 6 x 16	1	8,8	13,2
T.	Safety belt (upper screw)	7/16' 20 UNF	2	25	40
BEI	Safety belt (lower screw)	7/16' 20 UNF	2	25	40
ls/I	Seat belt retractor	7/16' 20 UNF	2	25	40
SEATS/BELT	Belt buckle	7/16' 20 UNF	2	25	40
S	Seats front sliders	M6*30	8	8,8	13,2
	Front wheel hub nut	Nylstop M16*1,5	2	140	160
ш	Front suspension triangles	M10*50+Nylstop	4	38	54
& REAR AXLE	Front suspension ball joints	Nylstop M12*1,25	2	40	60
R A	t shock absorbers (upper so	Nylstop M10*1,00	2	16	24
(E.A	it shock absorbers (lower so	Nylstop M12	2	36	54
∞ŏ	Rear wheel hub axle	M12*180+Nylstop	2	64	96
F	ar shock absorber (upper sci	M10*65+Nylstop	2	38	54
FRO	Rear suspension arm	M10*65+nilstop	4	38	54
Щ	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



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KUBOTA Z402 and Z602 engines

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KUBOTA Z402 and Z602 engines

1

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

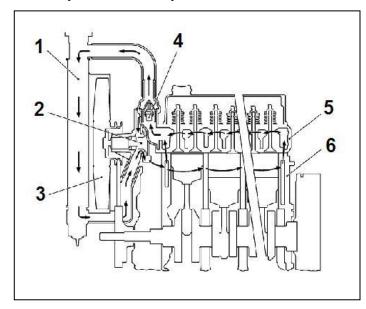
2: Water pump

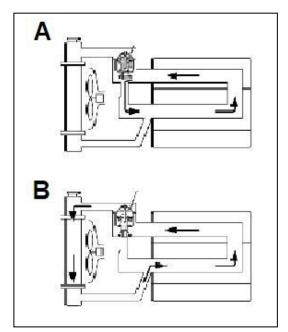
3 : Fan

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

REPAIR MANUAL

1

KUBOTA Z402 and Z602 engines

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

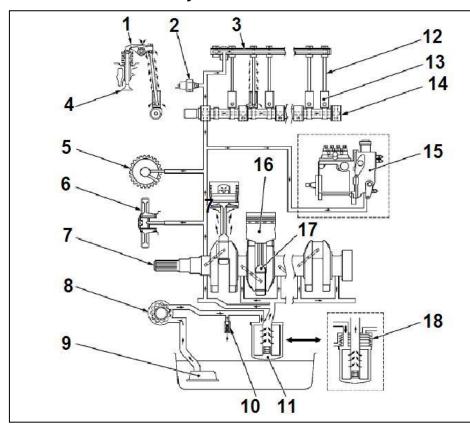
12: Push rod

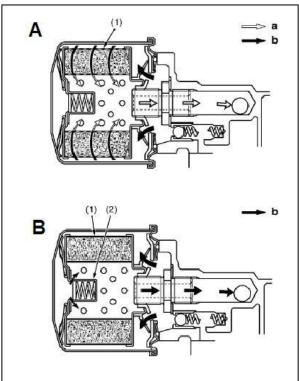
13 : Indexed push rod

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

1

KUBOTA Z402 and Z602 engines

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:

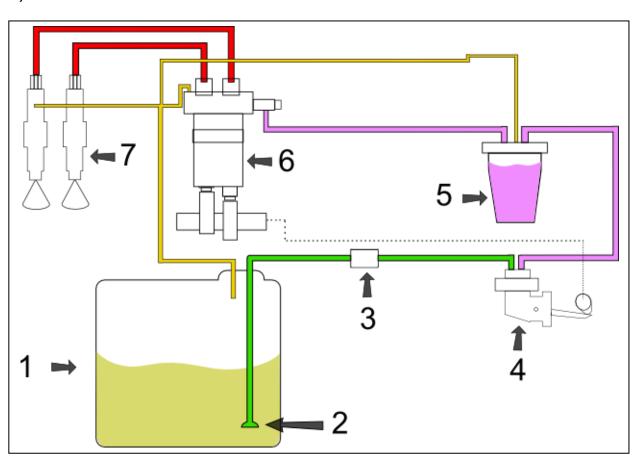
- Low pressure
- High pressure
- Regulation
- Control

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



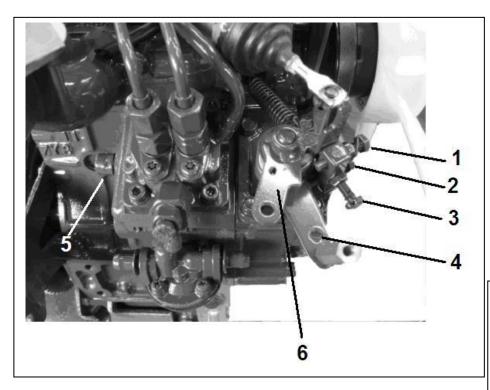
REPAIR MANUAL

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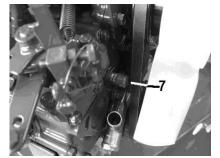
KUBOTA Z402 and Z602 engines

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.

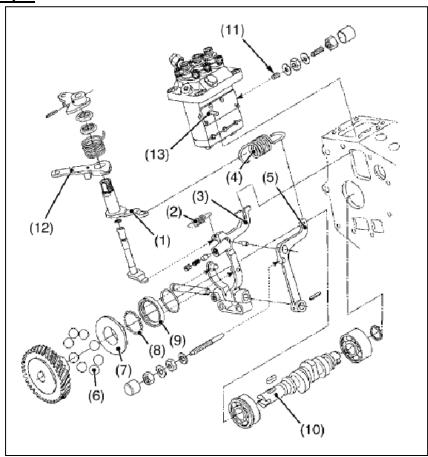
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REPAIR MANUAL

KUBOTA Z402 and Z602 engines

1

Regulation principle



- 1. Accelerator lever
- 2. Starting spring
- 3. Regulation lever
- 4. Regulation spring
- 5. Intermediate regulation lever

- 10. Pump camshaft
- 11. Idle spring
- 12. Accelerator control
- 13. Flow control rod

REPAIR MANUAL

KUBOTA Z402 and Z602 engines

1

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.

1

KUBOTA Z402 and Z602 engines

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. <u>Tightening torques for screws, bolts and nuts for general use</u>

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

	Grade	Standard s	screws and ts 4	Special screws and bolts 7			
	Unit	N-m	Kgf-m	N-m	Kgf-m		
	M6	7.9 to 9.3	0.80 to 0.95	9.8 to 11.3	1.00 to 1.15		
Nominal diameter	M8	17.7 to 20.6	1.8 to 2.1	23.5 to 27.5	2.4 to 2.8		
Nominal Glameter	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
	S43C, S48C special screw and bolt
7	(refined)



KUBOTA Z402 and Z602 engines

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TIGHTENING TORQUES Z602

<u>Tightening torques for screws, bolts and nuts for particular use</u>

- 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.

	Dimension x			
Elements	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 MANUAL

1

KUBOTA Z402 and Z602 engines

REPAIR

Anomaly	Possible cause	Solution				
	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				
The engine does not start	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				
	Battery discharged	Charge				
The state of the state of	Faulty starter operation	Repair or change				
The starter is inoperative	Faulty key switch	Repair or change				
	Wiring disconnected	Connect				

REPAIR MANUAL

1

KUBOTA Z402 and Z602 engines

REPAIR (cont'd)

Anomaly	Possible cause	Solution			
	Clogged or dirty fuel filter	Clean or change			
	Clogged air filter	Clean or change			
The engine does	Fuel leak due to bad tightening of a fastening nut on the injector duct	Retighten the nut			
The engine does not run regularly	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			
	Excess motor oil	Reduce to level specified			
	Wear or sticking of a piston ring and a jacket	Repair or change			
	Bad injection timing	Adjust			
Exhaust gases	Bad compression	Adjust neutral spaces			
black, or dark grey	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			
	Bad injection timing	Adjust			
	The engine moving parts seem to be seized	Repair or change			
Insufficient power	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			
	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			
Excessive oil consumption	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 MANUAL

1

KUBOTA Z402 and Z602 engines

REPAIR (cont'd)

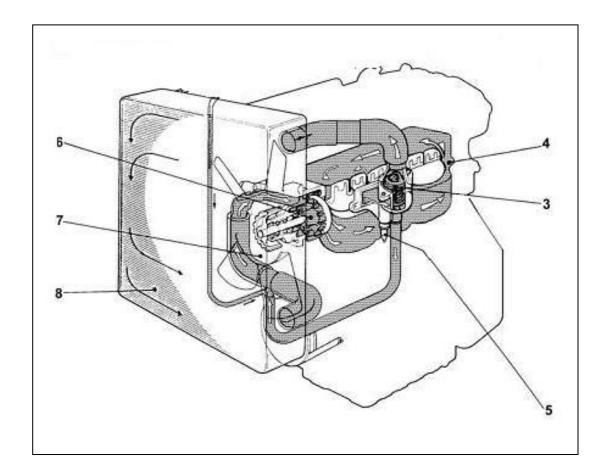
Anomaly	Possible cause	Solution				
Fuel mixed with	Worn injection pump plunger	Change the pump element or pump				
lubrication oil	Faulty injector	Repair or change the injector				
	Injection pump	Change				
Water mixed with	Faulty cylinder head gasket	Change				
lubrication oil	Flaky casing or cylinder head	Change				
	Low motor oil	Top up				
	Clogged strainer	Clean				
	Discharge valve stuck by dirt	Clean				
	Fatigue or broken discharge valve spring	Change				
Low oil pressure	Too much running gap of a crankshaft bearing	Change				
Low on pressure	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				
I light oil pressure	Faulty discharge valve	Change				
	Low motor oil	Top up				
	Fan belt broken or loose	Change or adjust				
	Low coolant	Top up				
	Radiator honeycomb or fins clogged	Clean				
Overally a atting a constitute	Corroded radiator interior	Clean or change				
Overheating engine	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				
	Low electrolyte	Fill distilled water and charge the battery				
Battery discharges	Slipping fan belt	Adjust belt tension or change it				
too fast	Wiring disconnected	Reconnect				
	Rectifier disconnected	Change				
	Faulty fan generator	Change				
	Faulty battery	Change				

REPAIR MANUAL

1

LOMBARDINI 523 MPI engine

COOLING SYSTEM



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

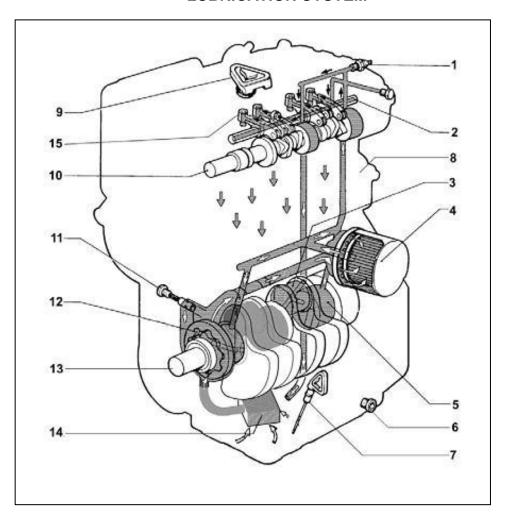
Quantity of coolant: 2 litres

REPAIR MANUAL

1

LOMBARDINI 523 MPI engine

LUBRICATION SYSTEM

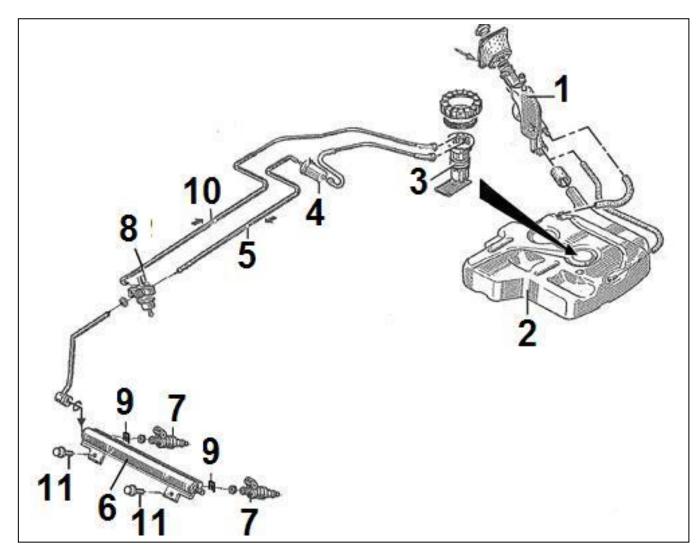


- 1. Pressure switch
- 2. Rocker stud
- 3. Connecting rod head stud
- 4. Oil filter cartridge
- 5. Main bearing stud
- 6. Oil change plug
- 7. Oil gauge
- 8. Vent
- 9. Oil fill plug
- 10. Camshaft
- 11. Oil pressure adjust valve
- 12. Oil pump
- 13. Crankshaft
- 14. Oil suction filter
- 15. Hydraulic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

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

LOMBARDINI 523 MPI engine

INJECTION SYSTEM



- Filling pipe
 Tank
- 3. Fuel pump / gauge plant
- 4. Filter
- 5. Supply duct6. Injector supply pipe
- 7. Injector
- 8. Pressure regulator
- 9. Injector holding spring10. Pressure regulator return pipe
- 11. Supply pipe fastening screw

REPAIR MANUAL

1

LOMBARDINI 523 MPI engine

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	4.6	4.8	\circ		6.8	8.8	10.9	12.9				
Diameter	R>40	0N/mm²	R>500	N/mm²	R>600N/mm ²	R>800N/mm ²	R>1000N/mm ²	R>1200N/mm ²				
Diameter	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)

I ADLL OI	I IGITI LIVIN	GIONQUE	OI STAIN	DAND SCIN	Ews (thin pit		ı	
Diameter	R>400	N/mm²	R>500	N/mm²	R>600N/mm ²	R>800N/mm ²	R>1000N/mm ²	R>1200N/mm ²
Diameter	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

REPAIR MANUAL

1

LOMBARDINI 523 MPI engine

TIGHTENING TORQUES

Table of tightening torques for the main components

	DIAMETER x PITCH	
DESCRIPTION	(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 MANUAL

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LOMBARDINI 523 MPI engine

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
												<u> </u>							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
							I		I										Electrical equipment
																			Low contact on fuel pump connector
																			Burnt fuse
																			Faulty relay
																			Faulty engine wiring
																			Faulty battery elements
																			Battery terminals sulphated



Reverser bridge

3

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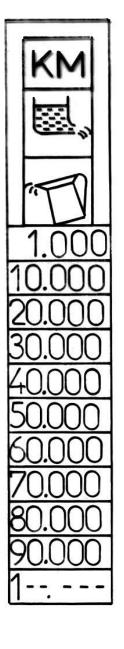
•	Reverser axle	2
	<u>Transmission</u>	
	Regulator set VSP 2000 LP2 version 2	

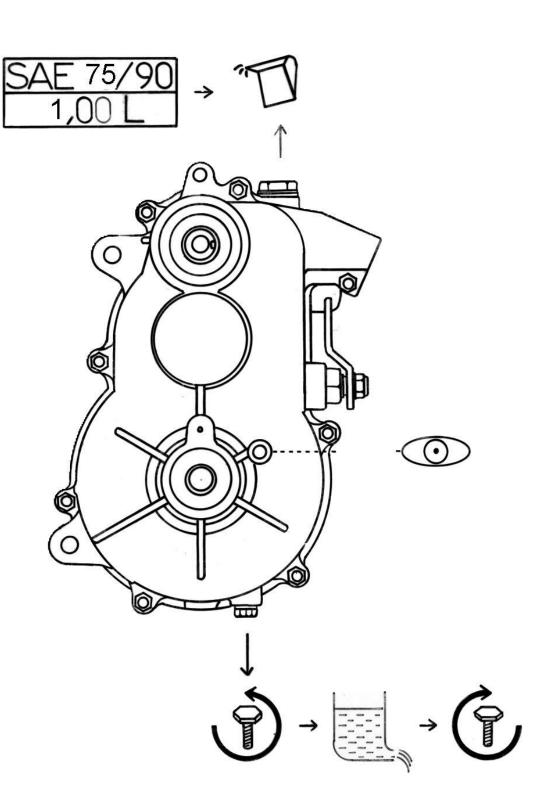


Reverser bridge

3

REVERSER BRIDGE

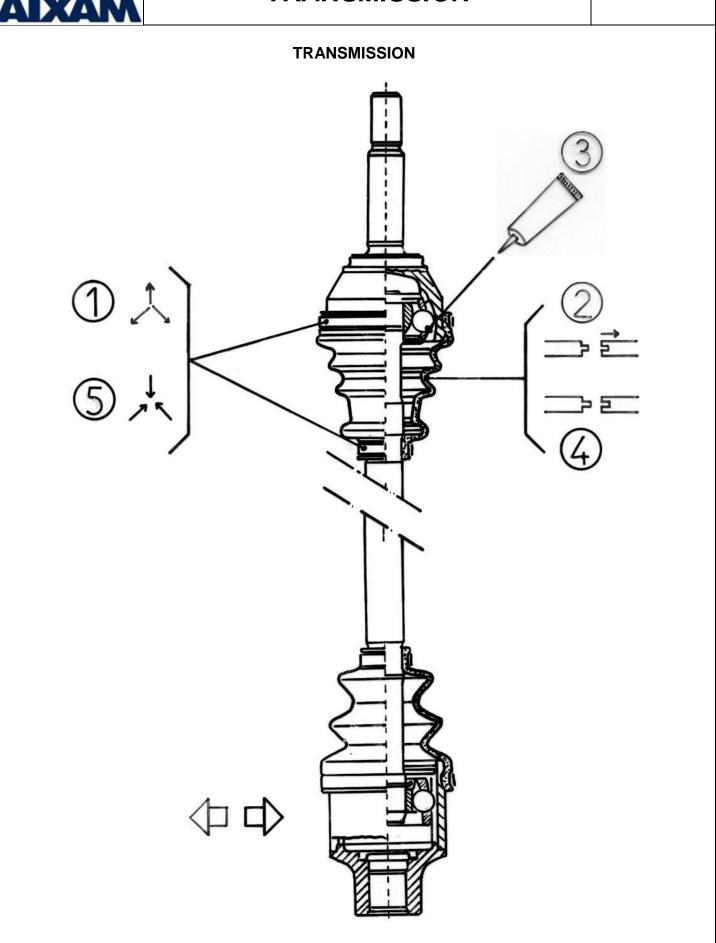






TRANSMISSION

3



REPAIR MANUAL

REGULATOR ASSEMBLY

3

REGULATOR ASSEMBLY VSP 2000 – LP2 – VERSION 2



INDEX

•	Important note	. 5
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	Tools required for handling	
	Parts of the regulator	
	Installing the pulleys on the venhicle	
	Tightening the screws	
•	Removing the pulleys from the vehicle	. 10, 11
	Inspecting the belt	,
	Removing and refitting the pulleys	

REGULATOR ASSEMBLY

3

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





* Pulley removal tool 0MDP17



*Led pulley puller OE17



* Leading pulley puller OE13



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

3



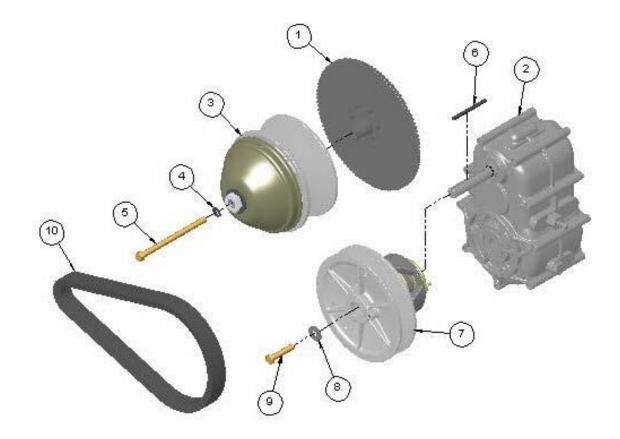
REPAIR MANUAL

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

REPAIR MANUAL

REGULATOR ASSEMBLY

3

INSTALLING PULLEYS ON THE VEHICLE

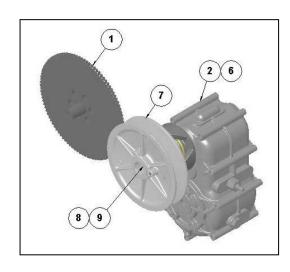


First of all:

- 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

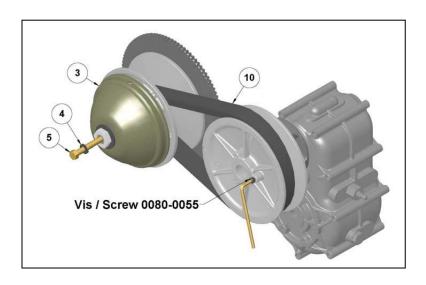
Fit the led pulley (7) onto the gearbox shaft (2) while adding the key (6).



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).





REGULATOR ASSEMBLY

3

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.



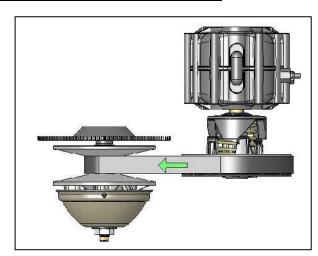
Do not forget to remove the opening screw from the led pulley flask. Otherwise, the pulley could be unbalanced.



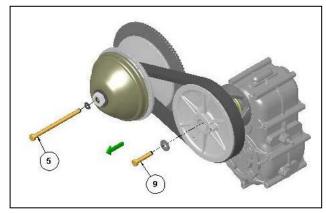
REGULATOR ASSEMBLY

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.

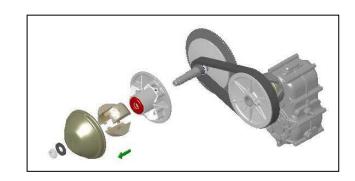


Remove the screw (5) from the leading pulley and the screw (9) from the led pulley.



Unscrew the nut holding the leading pulley in the closed position.

(Use a 30mm socket)



W.

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

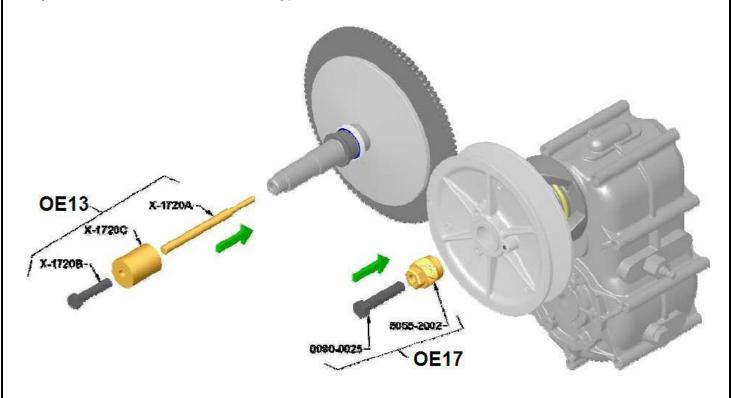
3



REPAIR MANUAL

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).



For the leading pulley:

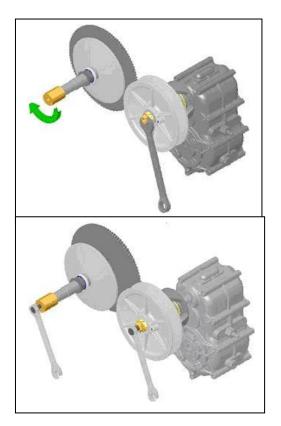
Insert the rod of the X-1720A puller inside the shaft and screw the X-1720C adapter at the end of the shaft. (pressurize it by a half-turn)

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

For the led pulley:

Screw the OE17 adapter inside the shaft.

Screw the puller screws until the pulleys leave their location.





REGULATOR ASSEMBLY

3

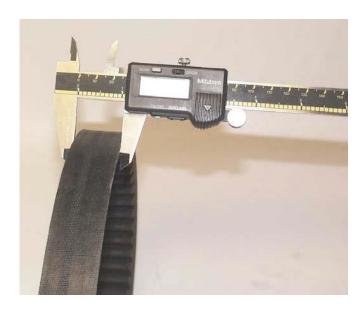
INSPECTING THE BELT

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.



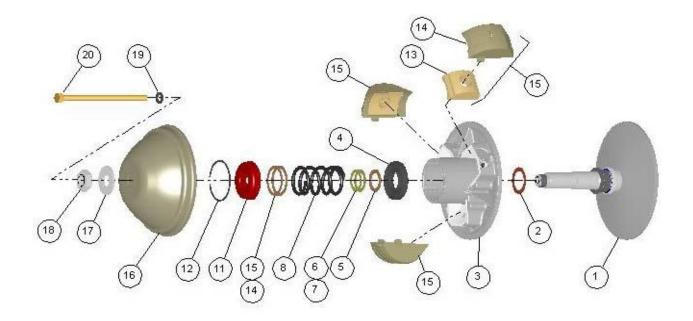
REPAIR MANUAL

REGULATOR ASSEMBLY

3

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



REGULATOR ASSEMBLY

3

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.

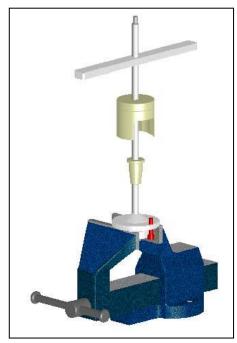
Inspection recommended

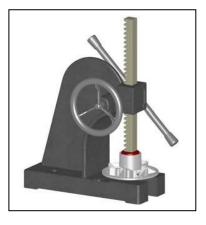
- Damage to centrifugal blocks
- Wear of flanges (by belt friction)



Removing the sliding flask

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



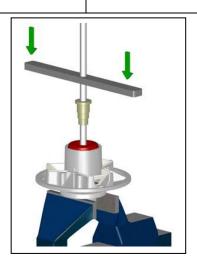


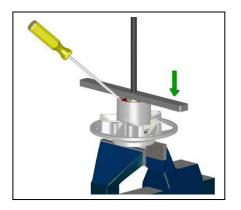
Although less securing, a table press (see illustration) or a drill press may be used.



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).

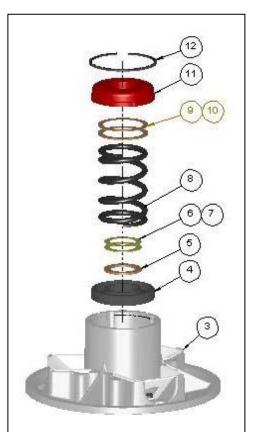




Lower the upper main bearing (11) to be able to remove the retaining ring (12) with a flat blade screwdriver.



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

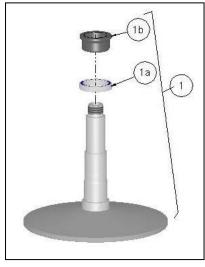
- Damage to the main bearings 4 and 11
- Wear of the flange (by belt friction)
- Damage to the spring (8)



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 bearing (1a)



Inspection

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

REPAIR MANUAL

REGULATOR ASSEMBLY

3

Refitting the leading pulley

Refitting the sliding flange

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

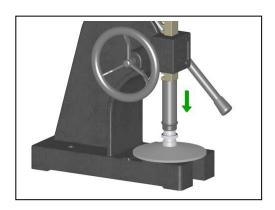
Please note to return the spacing washers to their original position.

Refitting the fixed flange

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

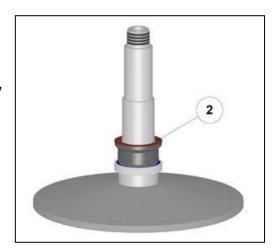


As per the illustration:
-Insert the bearing (1a).
Insert the tightening ring (1b)



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).



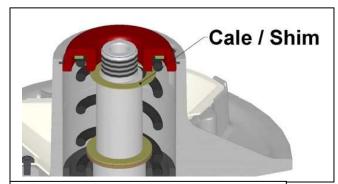
REPAIR MANUAL

REGULATOR ASSEMBLY

3

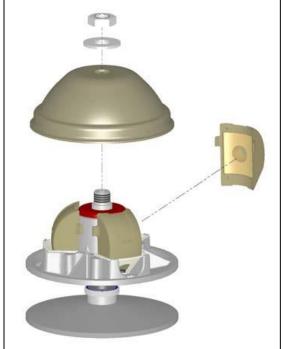
Fitting the sliding flange onto the fixed flange shaft

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



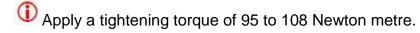
Fitting the cover and centrifugal blocks

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.



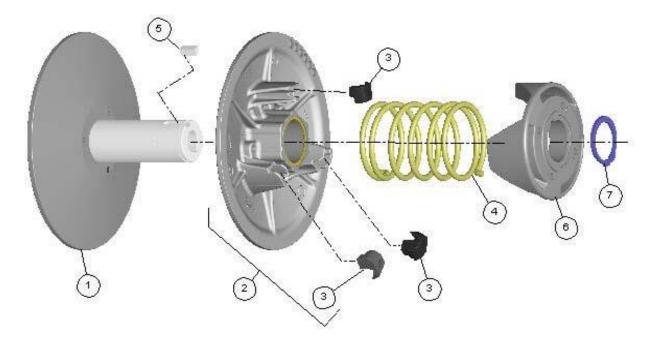


REPAIR MANUAL

REGULATOR ASSEMBLY

3

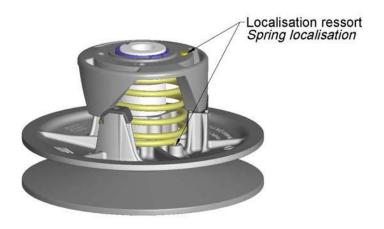
Led pulley



- 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.

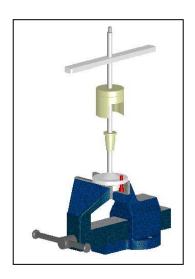


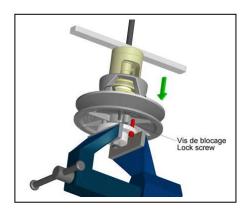
REGULATOR ASSEMBLY

3

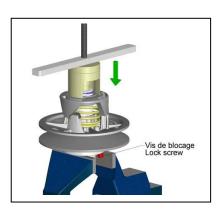
Removing the cam

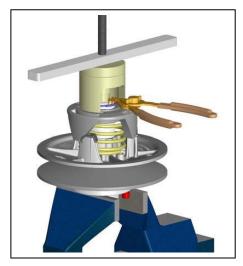
Using the 0MDP17 removing tool is indispensable to avoid sudden removal of the sliding flange (spring effect).





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.



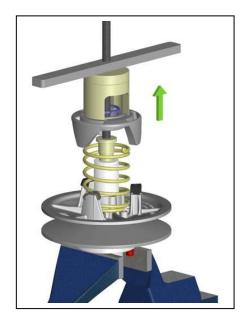
REGULATOR ASSEMBLY

3

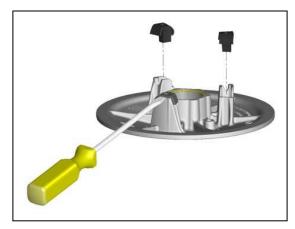
Carefully refit the cam to release the shaft.

Inspection

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



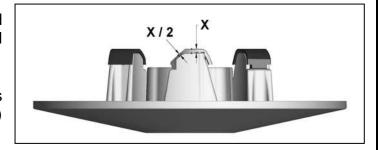
Removing the sliding flask



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

3

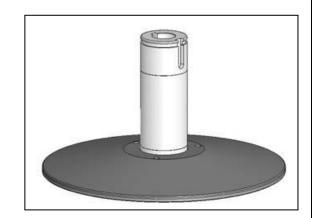
Fixed flange

The fixed flange (1) is not removable without damaging the parts.

Just perform an inspection.

Inspection

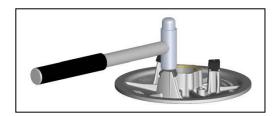
- Shaft deterioration (internal and external)
- Wear of the flange (by belt friction)
- Visual inspection.



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).

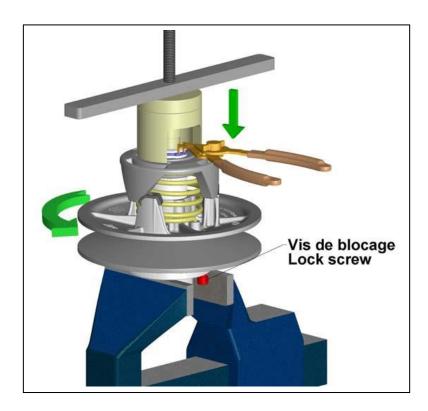
REPAIR MANUAL

REGULATOR ASSEMBLY

3

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).



FRONT AXLE

4

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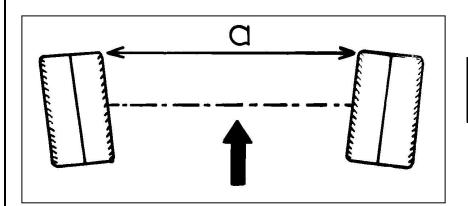
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-				-			_			



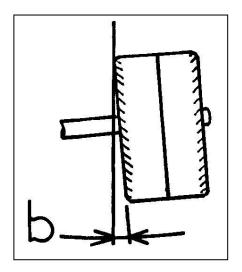
FRONT AXLE

4

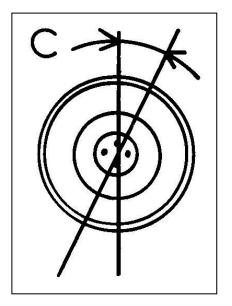
Front axle adjustment dimensions



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°



REAR AXLE

5

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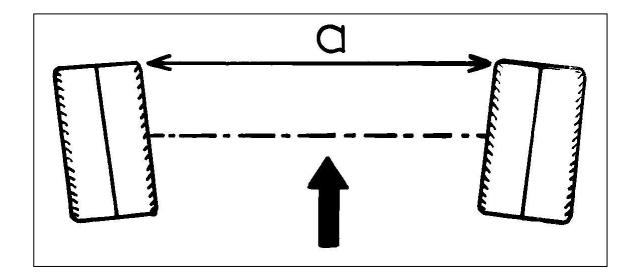
Rear axle adjustment dimensions	2
---------------------------------	---



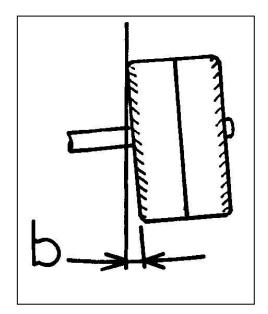
REAR AXLE

5

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°



WHEELS-BRAKE

6

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•	lire pressure	2	
•	Renewing brake fluid	3	
	Brakes.		5
	Hand brake	,	
	Summary of aluminum wheels 2008	7	

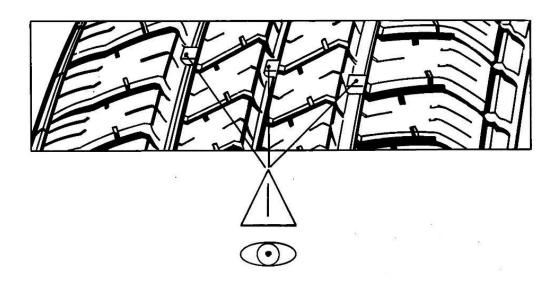


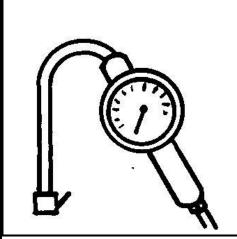
WHEELS-BRAKE

6

Tires

145 /70 R13 155 /65 R14





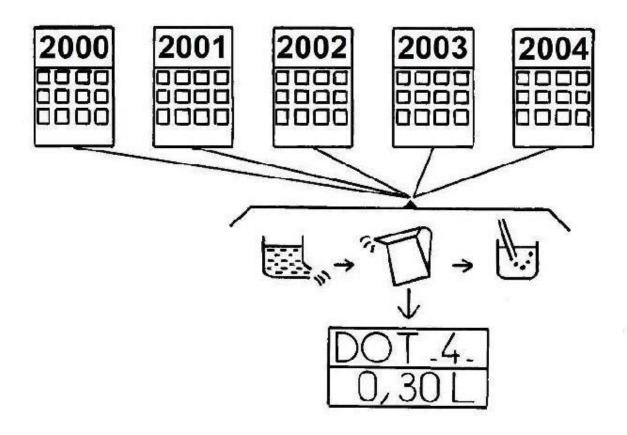
AIXAM		
CITY	1,6	1,6
CROSSLINE L6e	1,6	1,6
CROSSLINE L7e	1,6	1,6

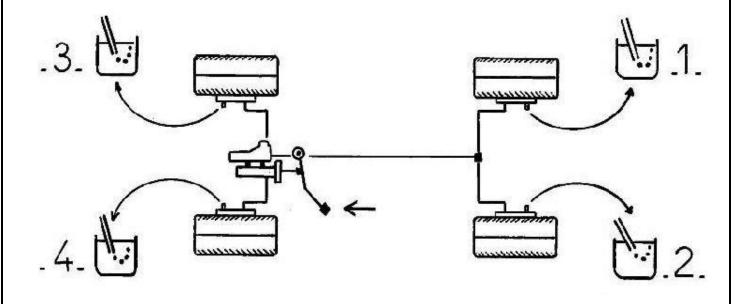


WHEELS-BRAKE

6

Brake fluid





WHEELS-BRAKE

6

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.

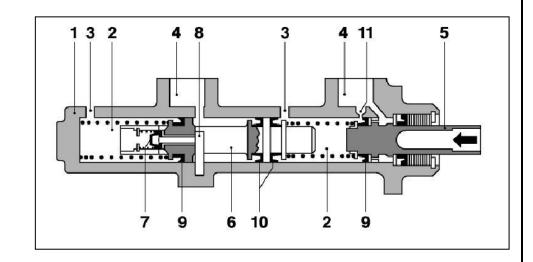
Service brake

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



REPAIR MANUAL

WHEELS-BRAKE

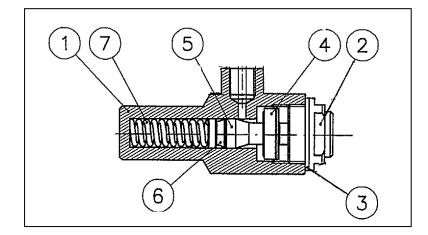
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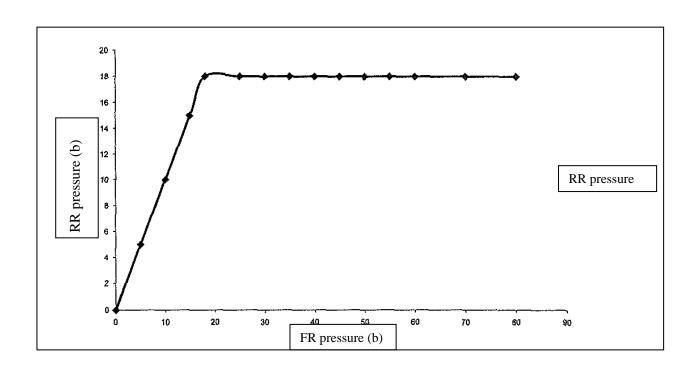
Rear braking pressure corrector:

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



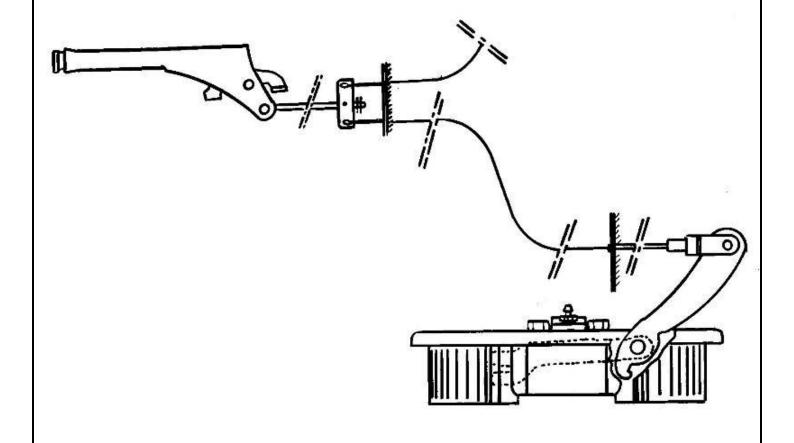




WHEELS-BRAKE

6

Hand brake





WHEELS-BRAKE

6

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
[CROSSLINE IQM 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.



BODY

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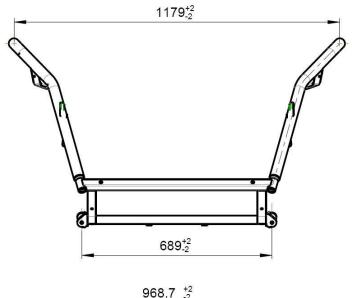
•	Front frame dimensions CITY	. 2
	Aluminum cell dimensions CITY	
•	Front frame dimensions CROSSLINE	. 10
•	Aluminum cell dimensions CROSSLINE	_11 to 13
•	Aluminium cell dimensions COUPE	. 11 to 13
•	Body maintenance	. 18
•	Gluing	. 19

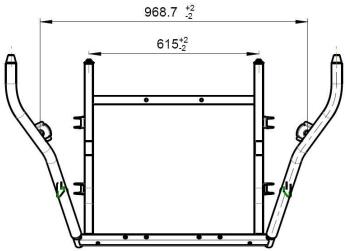


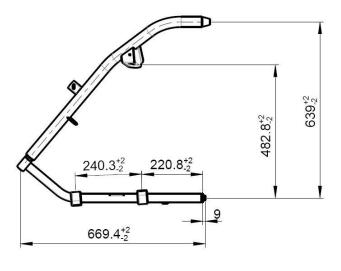
BODY

7

Front frame dimensions CITY





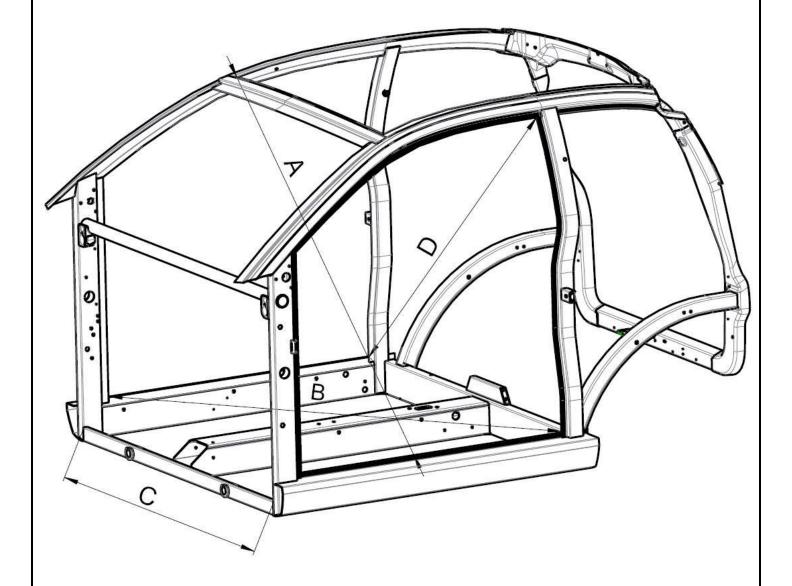




BODY

7

Aluminium cell dimensions CITY

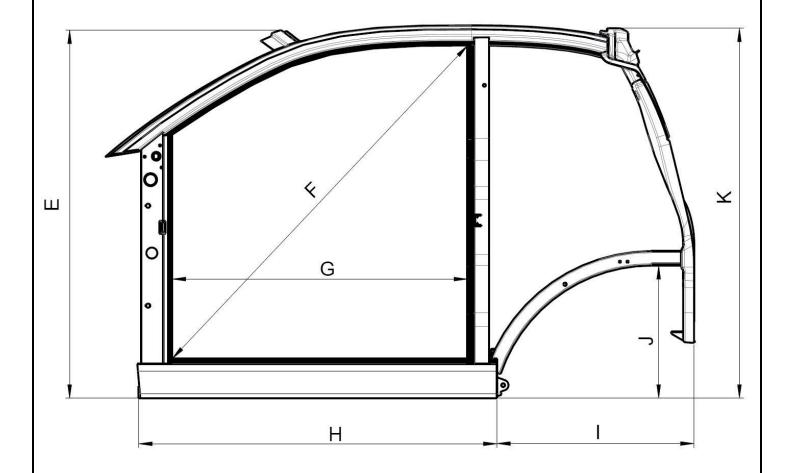


	CITY	+/- mm
Α	1492	2
В	1561,2	2
C	1225	2
D	1510,6	2



BODY

Aluminium cell dimensions CITY

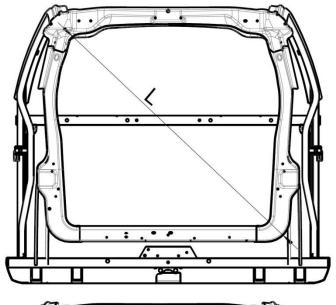


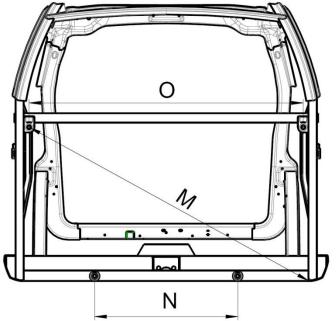
	CITY	+/- mm
E	1178,8	2
F	1383,3	2
G	946	2
Н	1147	2
	631,3	2
J	425	2
K	1185	2

BODY

7

Aluminium cell dimensions CITY





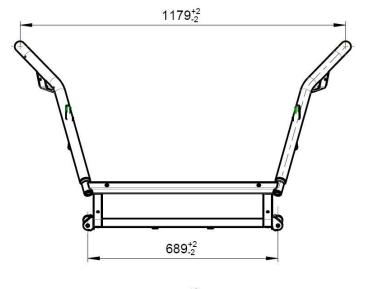
	CITY	+/- mm
L	1257	2
M	1371,3	2
N	615	2
0	1179	2

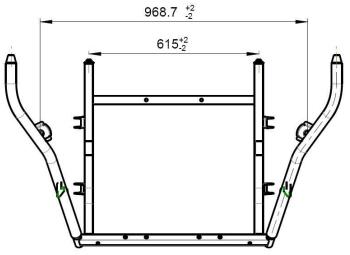


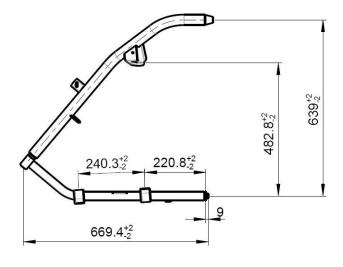
BODY

7

Front frame dimensions CROSSLINE





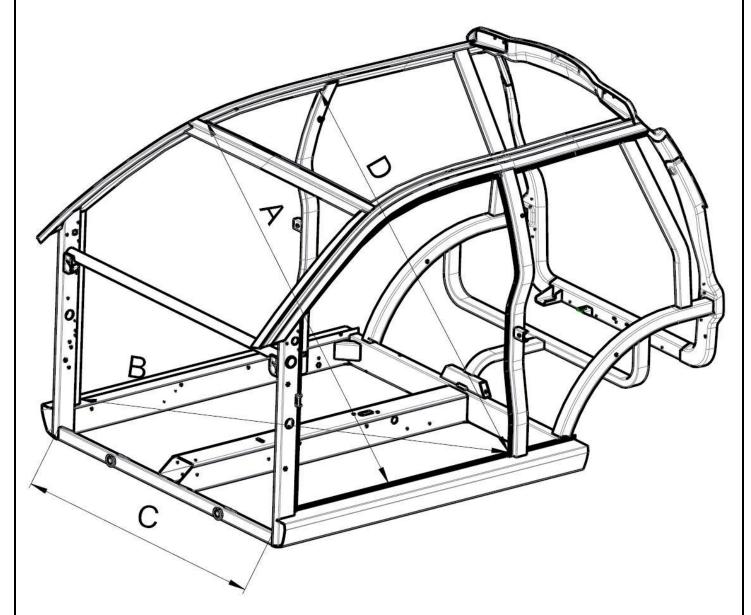




BODY

7

Aluminium cell dimensions CROSSLINE



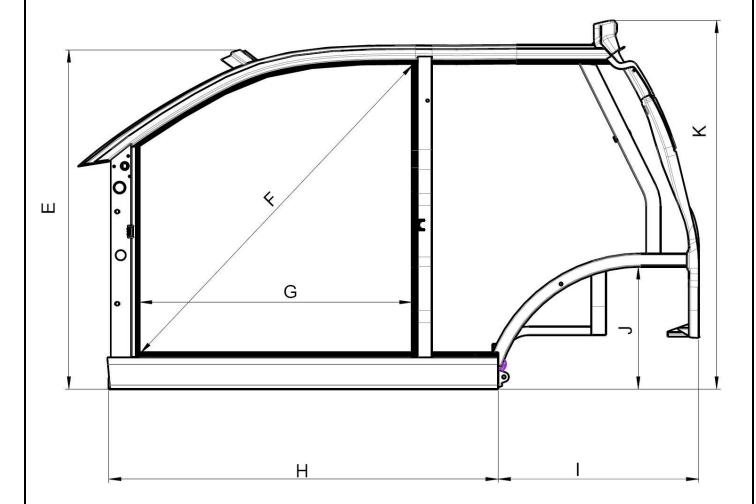
	CROSSLINE	+/- mm
Α	1492	2
В	1561,2	2
C	1225	2
D	1510,6	2



BODY

7

Aluminium cell dimensions CROSSLINE



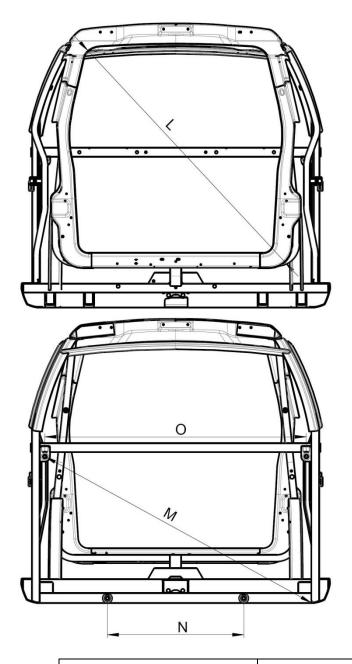
	CROSSLINE	+/- mm
E	1178,8	2
F	1383,3	2
G	946	2
Н	1352	2
I	696,3	2
J	425	2
K	1281	2



BODY

7

Aluminium cell dimensions CROSSLINE

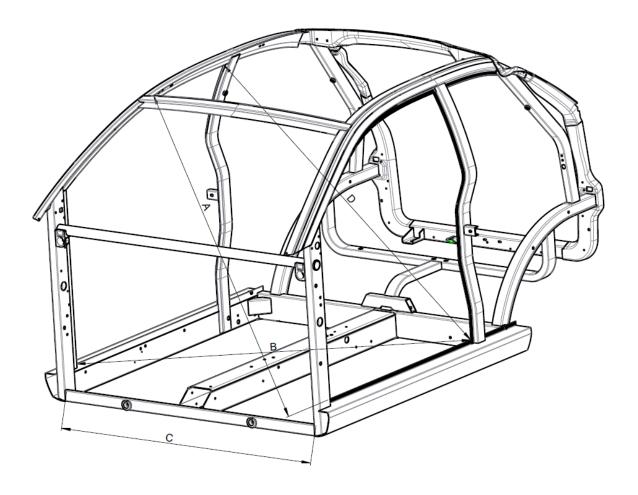


	CROSSLINE	+/- mm
L	1331,3	2
M	1371,3	2
N	615	2
0	1179	2



BODY

Aluminium cell dimensions COUPE

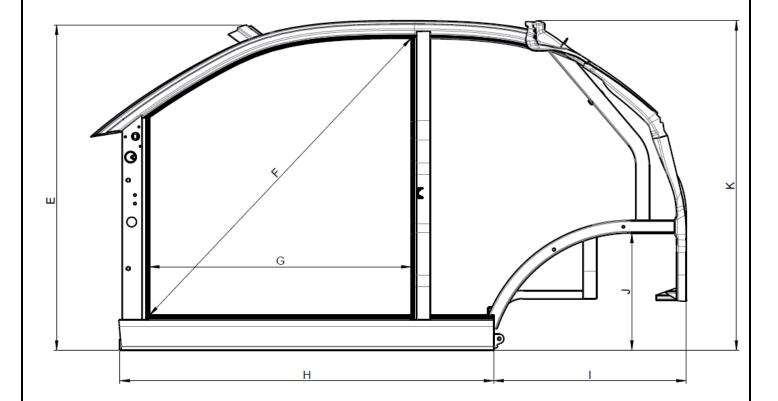


COTE	COUPE	± mm
Α	1492	3
В	1561	3
С	1225	3
D	1511	3



BODY

Aluminium cell dimensions COUPE



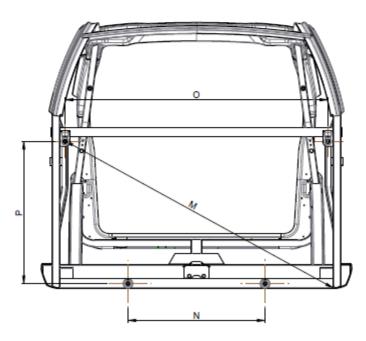
COTE	COUPE	± mm
E	1179	3
F	1383	3
G	946	3
Н	1352	3
-	696	3
J	425	3
K	1194	3



BODY

Aluminium cell dimensions COUPE





COTE	COUPE	± mm
L	1259	10
M	1371	3
N	615	3
0	1179	3
Р	639	3

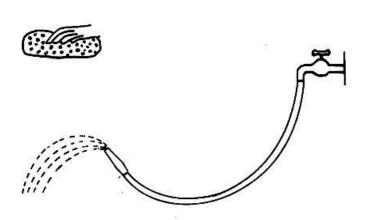


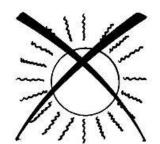
BODY

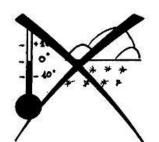
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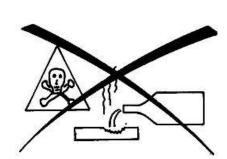
Bodywork servicing

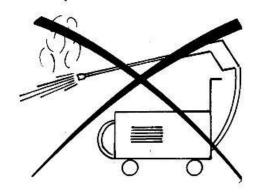


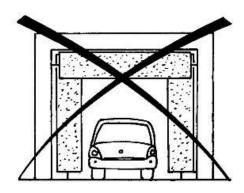










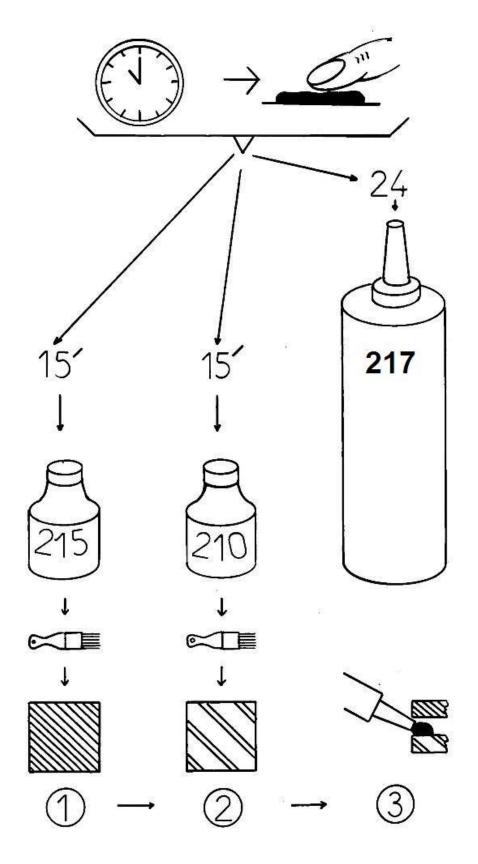




7

BODY

Gluing



REPAIR MANUAL

BODY

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Frame tailgate 7AR080 mounting process

Materials needed:

Tools Components

1 glue gun 7AR460 1 City TAILGATE DOOR INNER PANEL

Primer machine 7K102A 2 UPPER JOINT HEAD

1 riveting machine 4 Rivets 4,8X16

2 nitrile washers

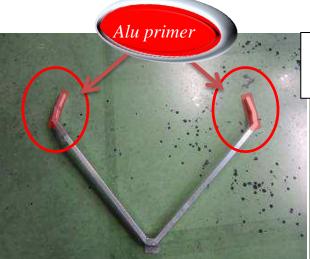
7AG358: BODY GLUING KIT

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.

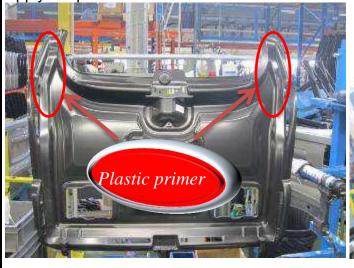


Apply the primer on the side of the joint attachment screw and on the faces in contact with the liner and the window.





Apply the primer on the liner.



Left side

Right side







BODY

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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.



BODY

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





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Instrument cluster

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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.

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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).

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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.



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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.



Additional function:

After ignition, to see the time remaining before the next maintenance, press the two buttons on the display simultaneously.

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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 = $5K \pm 1\%$ and a constant B25/50 = $3470K \pm 1\%$.



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 (°C).

The display on the right-hand LCD has the negative sign + 2 digits + the °C symbol.

Display accuracy is ±1°C.

Warning when outer lower temperature below +3°C. 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.

REPAIR MANUAL

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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.

REPAIR MANUAL

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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.



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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.



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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
	-30	9052	39	46
	-20	4651	22	29
	-10	2865	15	22
	0	1600	10	16
	10	1044	7	12
	20	646,9	5	8
	30	419,8	3	6
	40	300	2	4
Short-circuit	""	100	10	16

If R > 990
Si 9800 > R > 9052
Si 9052 > R > 4651
Si 4651 > R > 2865
Si 2865 > R > 1600
Si 1600 > R > 1044
Si 1044 > R > 646
Si 646 > R > 419
Si 419 > R > 300
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.

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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.

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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:

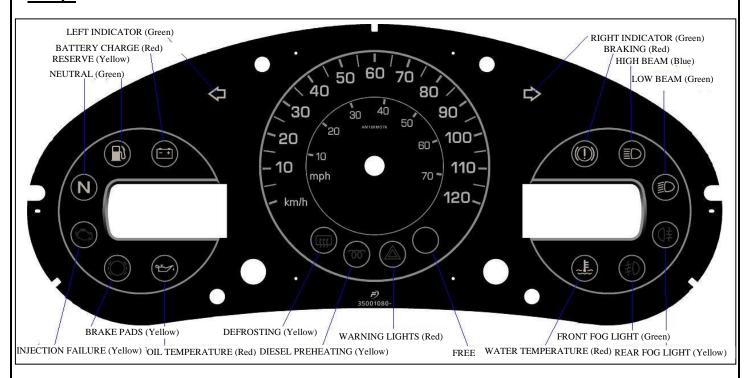
The buzzer is inhibited if the battery voltage exceeds 16 Volts. It is restored when the voltage drops below 15.7 Volts.

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Lamp:



Indicators not activated:

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

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

HIGH	batoro for finoacio ch		ON TOOODD AND ONLE	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>
-	Left indicator	(Green)	Brake pads	(Yellow)
-	Battery charge	(Red)	Oil temperature	(Red)
-	Fuel reserve (Yello	w)	Defrosting	(Yellow)
-	Neutral	(Green)	Diesel preheating	(Yellow)
-	Warning lights	(Red)	High beam (Blue)	,
-	Water temperature	(Red)	Braking	(Red)
-	Rear fog (Yello	w)	Right indicator	(Green)
-	Low beam (Gree	n)	-	,

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

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

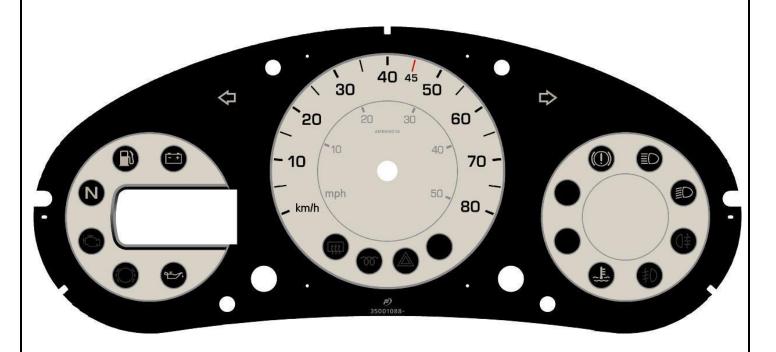


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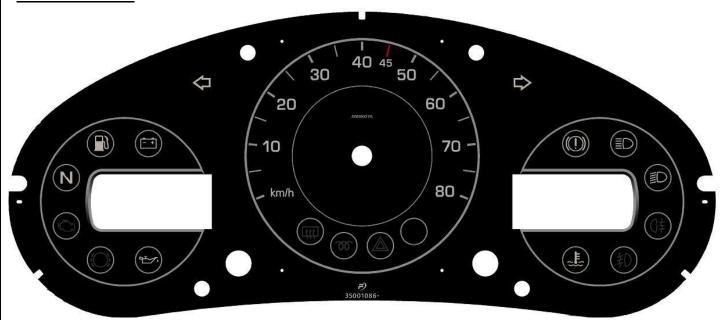
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Serigraphy on each model:

Models 8AG033 (single LCD)



Model 8AG033A

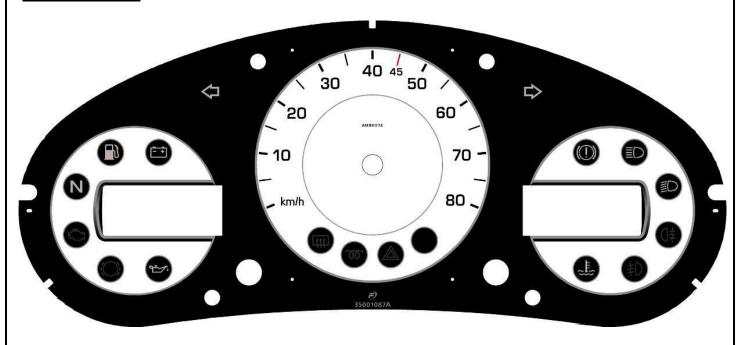




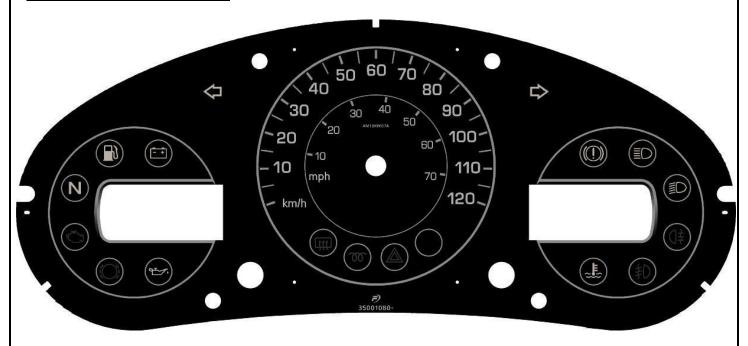
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Model 8AG033B



Model 8AJ033 and 8AJ033A



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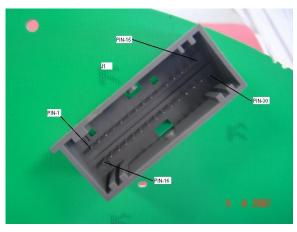
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REPAIR MANUAL

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)

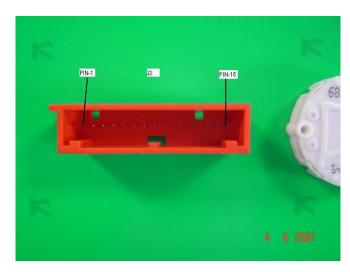
PIN-30: Free – Not used on this model

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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-12: DIESEL PREHEATING RELAY output

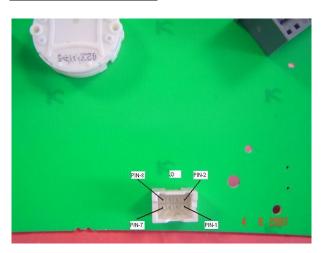
PIN-13: ENGINE STOP RELAY output

PIN-11: DEFROSTING RELAY output

PIN-14: WATER TEMPERATURE Input (Activated by ground connection)

PIN-15: Free

J3 8-pin connector:



Do not use this connector.

REPAIR MANUAL

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Summary of the different models:

Reference	Вох	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			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		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

REPAIR MANUAL

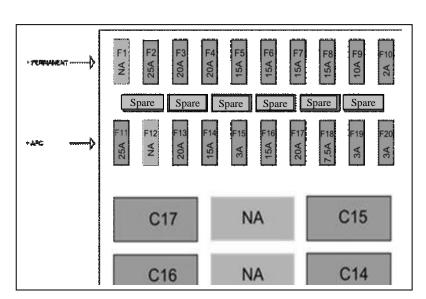
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FUSES

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)

ALXAM

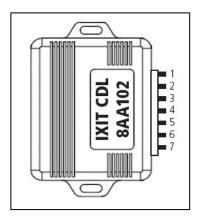
REPAIR MANUAL

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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. $$_{\rm BUTTON\,1}$$

BUTTON 2

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:

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

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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



ELECTRICITY-INSTRUMENTS

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Form





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 EXCHA	NGE	RETURN FOR REPAIR				
1. <u>Information on requester</u>						
Point of sales						
Contact						
Phone no.		Fax No.				
Email address (if exists)						
Exact address						
Postal code		Town				
2. <u>Information on client (end consumer)</u>						
Name						
Address						
Postal code		Town				
3. <u>Information on product</u>						
Exact reference						
Serial no. (14 characters)						
Date of 1 st registration						
Antitheft code (if exists)						
Fitted by	private individ	dual reseller				



ELECTRICITY-INSTRUMENTS

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<u>Form</u>

Clarie	
4. <u>Conditions of occurre</u>	ence of the problem
Description	
Status	Failure upon Under guarantee Out of guarantee Intermittent
Frequency	Permanent
Engine condition	Running Stopped
Other	On certain radio stations Upon connecting
	When starting the vehicle Vehicle electronic consumption
5. <u>Information on the ve</u>	<u>ehicle</u>
Make	
Model	
validated by our services. Nevorder to provide us with maxim	appearing in bold characters must be filled for the prior exchange request to be ertheless, we also prompt you to fill in the optional fields (non bold characters) in num information, allowing us to improve our service constantly. In addition, we that entering your email address allows virtually instant issuance of the exchange
nereby to pay the invoice issue non return of the faulty produc	certify having read the terms of prior exchange of Clarion products and commit ed by Clarion France (invoicing in usual condition plus a penalty of 48€) in case of et within 10 days after receiving the product overhauled or excluded from the 6 days) due to improper installation, abnormal use or non compliant maintenance
Date:	Signature and company stamp
E O	······································

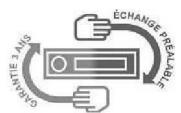
Fax Clarion France After-sales: (0033) (0)3 83 49 57 24



ELECTRICITY-INSTRUMENTS

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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, <u>the product must always be</u> <u>returned bare, without accessory.</u>

- 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 1 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.

on:

For AIXAM,

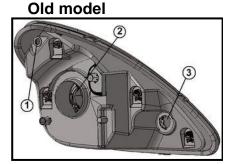
REPAIR MANUAL

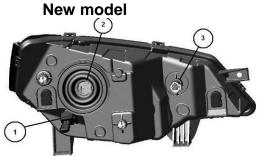
ELECTRICITY-INSTRUMENTS

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CHANGING A LAMP

Changing a lamp on a light





1. Position light lamp

- Swivel the lamp holder by a guarter 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



ELECTRICITY-INSTRUMENTS

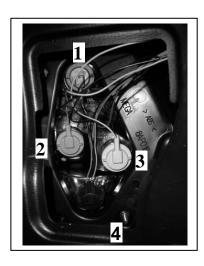
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Changing a lamp on a fog light



- 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



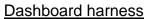
Unclip the interior lighting from the dome light to change the lamp.

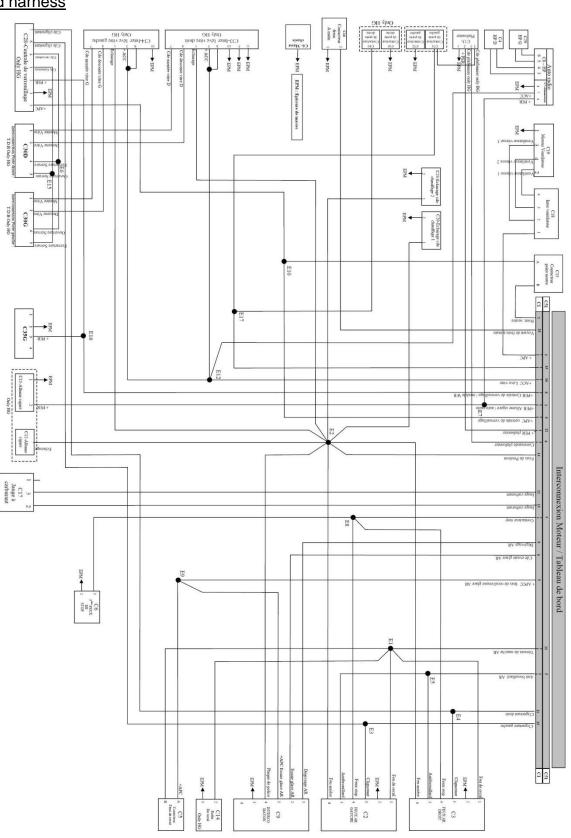
REPAIR MANUAL

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ELECTRICITY-INSTRUMENTS

ELECTRIC DIAGRAMS

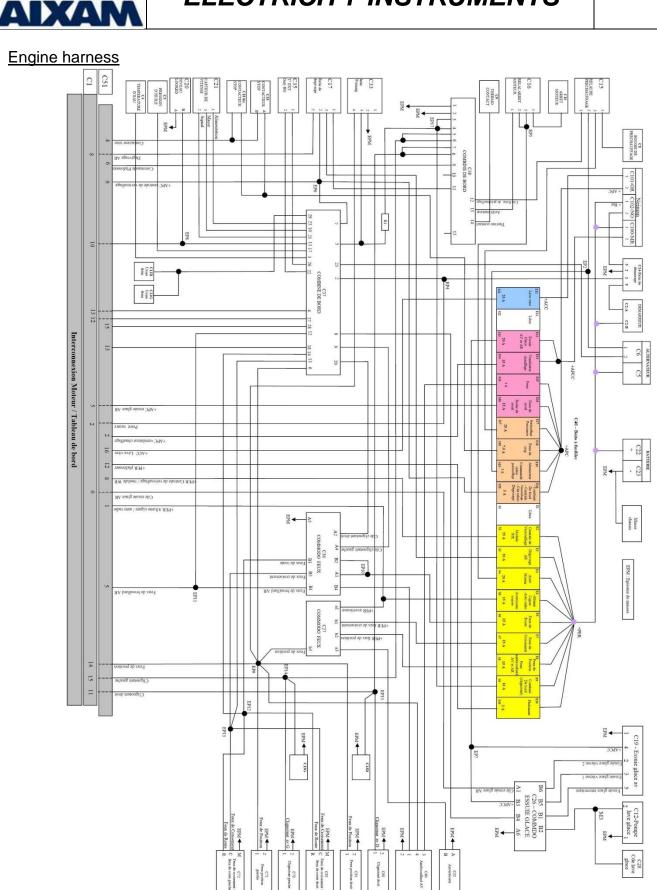




REPAIR MANUAL

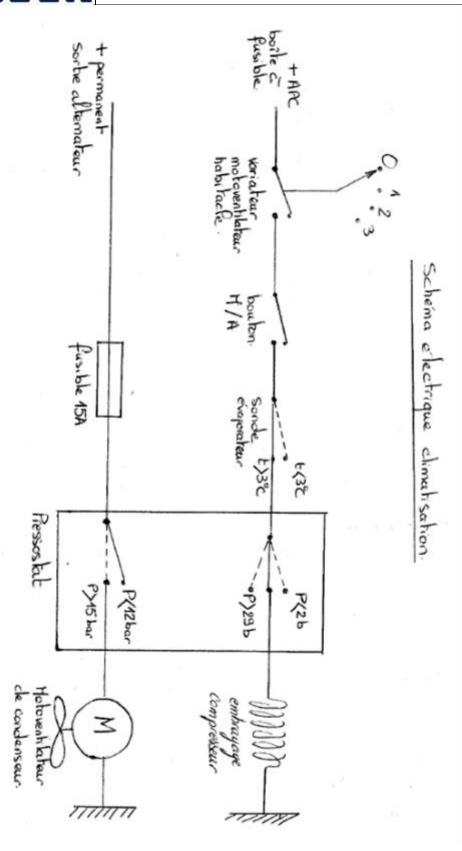
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ELECTRICITY-INSTRUMENTS





ELECTRICITY-INSTRUMENTS



REPAIR MANUAL

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AIR CONDITIONING

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 controlerb/ A/C commutatorc/ 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.

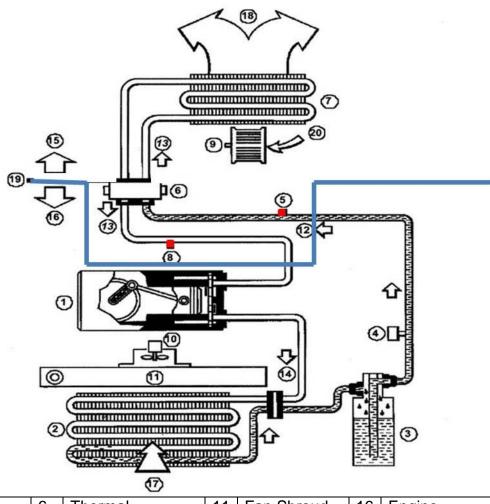
The water problem:

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



AIR CONDITIONING

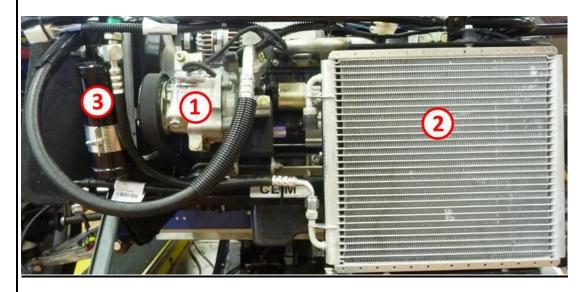
SCHEMATIC AND COMPONENTS



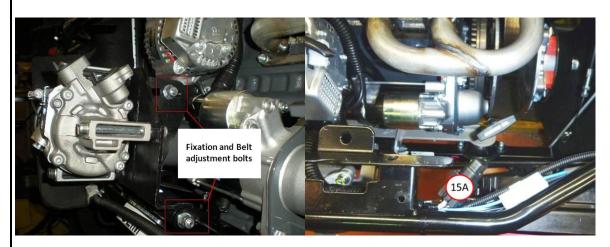
	5							
1	Compressor 6 Thermal		11	Fan Shroud	16	Engine		
			Expansion Valve				compartment	
			(TXV)					
2	Condenser	7	Evaporator	12	HP Liquid	17	Outside Air	
3	Filter/Drier	8	LP Service Port	13	LP Gas	18	Cooled Air	
4	Pressure Switch	9	Passenger	14	HP Gas	19	Dash Panel	
			Compartment fan					
5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

COMPONENTS LOCALISATION:

<u>Passenger Compartment</u> <u>1 Compressor - 2 Condenser - 3 Filter/ Drier</u>



Belt Adjustment Bolts and 15A Motor Fan Fuse



3 Filter/Drier – 4 Pressure Switch:



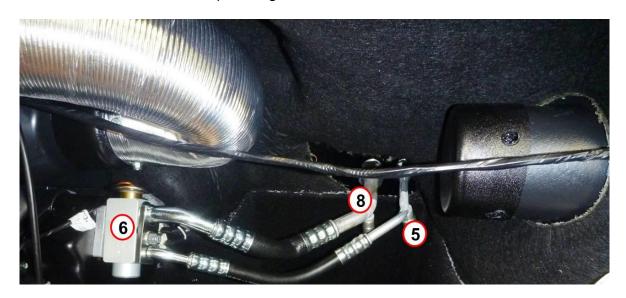
Passenger compartment

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.

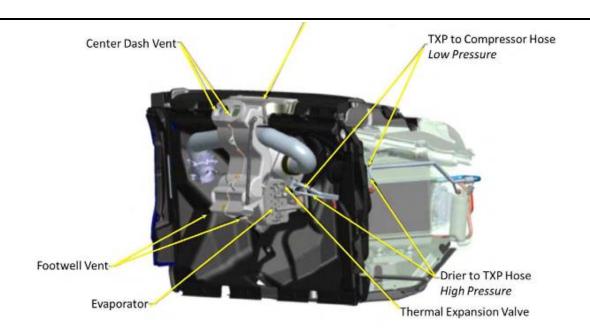
OPERATION CHECK-UP:

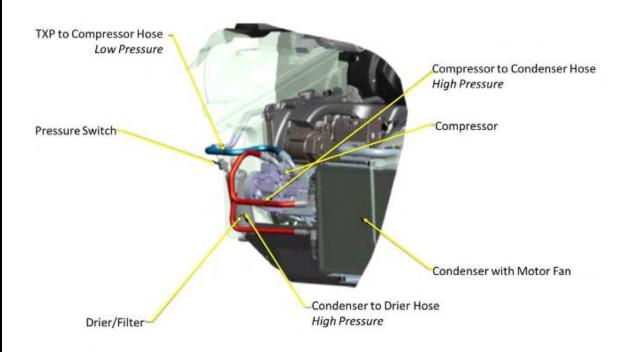
Control that the compressor clutch sticks when air conditioning is turned on otherwise check the resistance of the coil and the power supply. If the pressure in the circuit is less than 2 bars, this means that lack of the gas in the installation thus the pressure switch cuts off power.

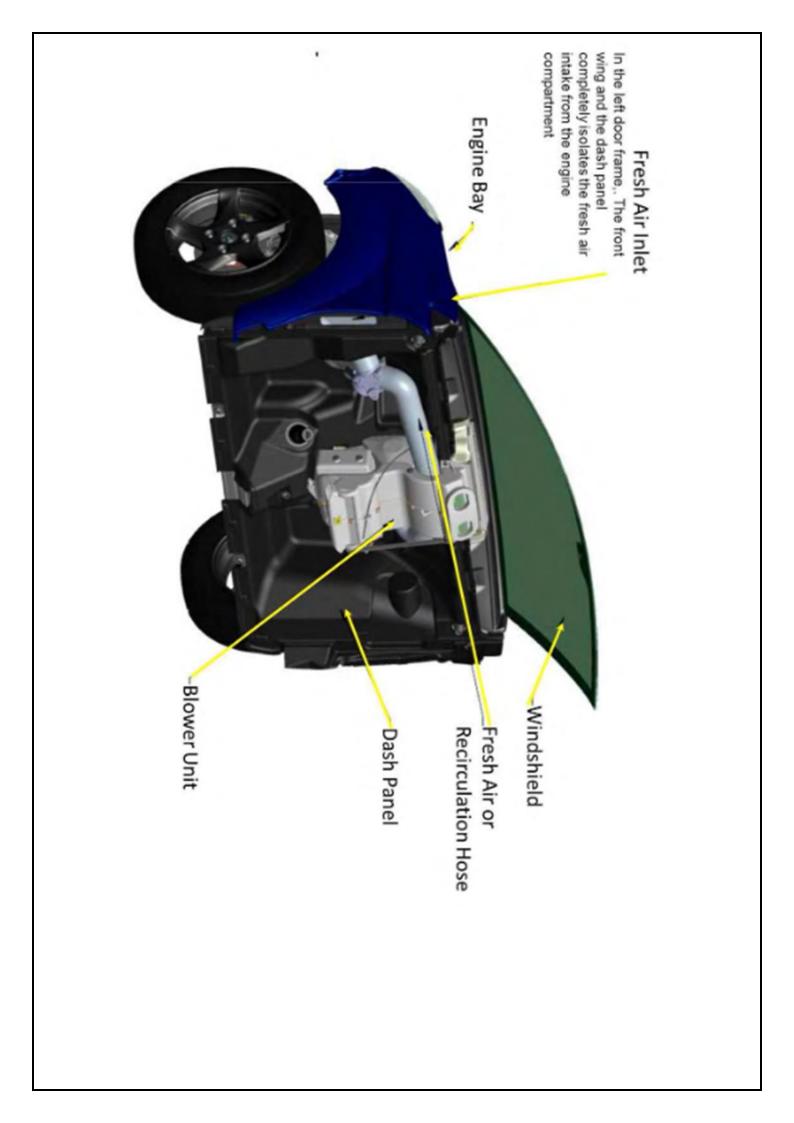
DIRECTIONS:

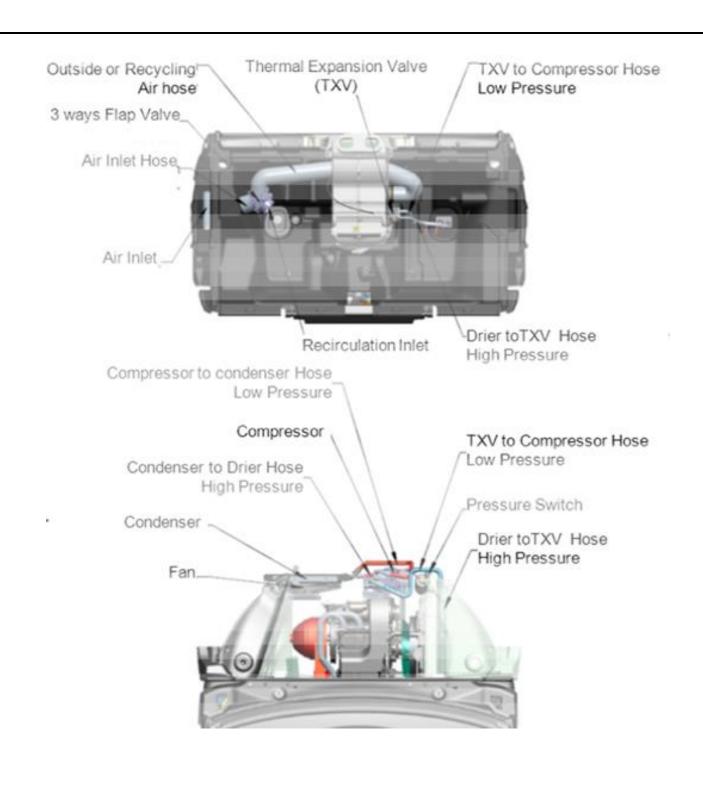
Try parking in the shade to reduce the need for air conditioning to help cool the interior. Open the windows, before engaging the air conditioning system, to remove the maximum amount of heat and then close them as soon as you switch the air conditioning on. In order to prevent sore throats do not aim 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.











ABS

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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
- ▶ <u>If ABS light only is on:</u>



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.

REPAIR MANUAL

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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.





<u>Identification:</u>

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





(ABS) IDENTIFICATION	
01/01/2013	00:12
Identification	
ABS MK70	
N° de série	0469
Hardware	

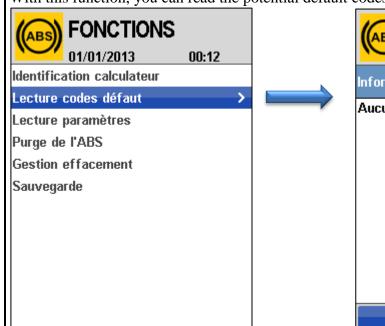


ABS

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Display of the default codes:

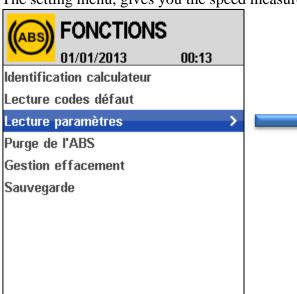
With this function, you can read the potential default codes listed on the calculator.





Settings:

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



((ABS)) PARAMETRES							
01/01/2013	00:13						
Roue avant gauche	0 Km/h						
Roue avant droite	0 Km/h						
Roue arrière gauche	0 Km/h						
Roue arrière droite	0 Km/h						

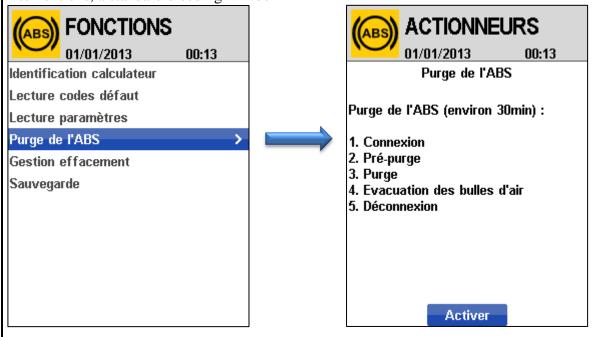
REPAIR MANUAL

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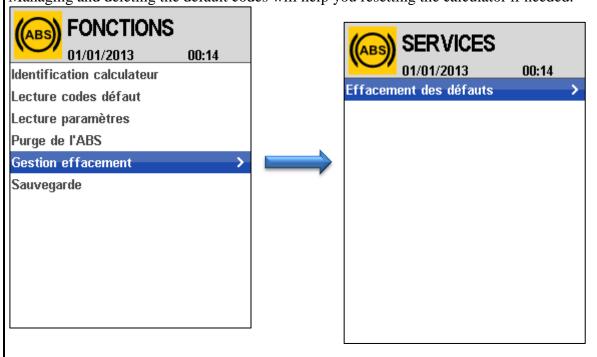
Bleeding the circuit with the DTAM tool:

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.

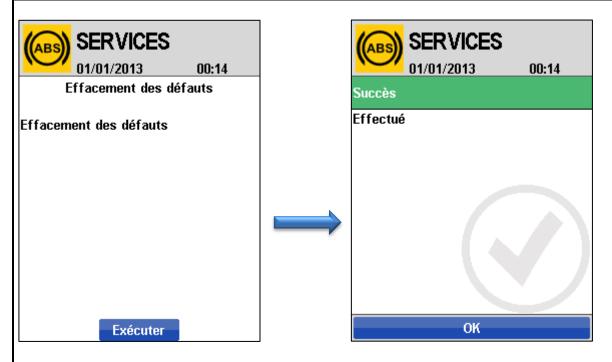


ALXAM

REPAIR MANUAL

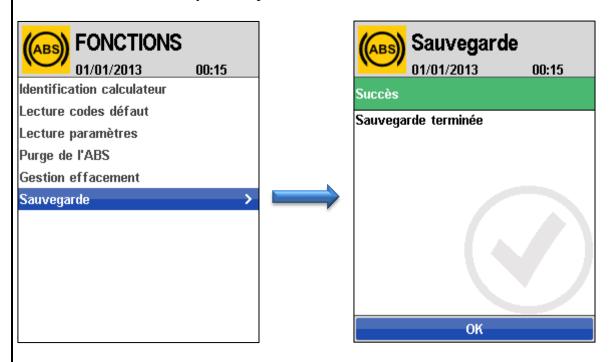
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ABS



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.



REPAIR MANUAL

ABS

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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 \rightarrow 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.

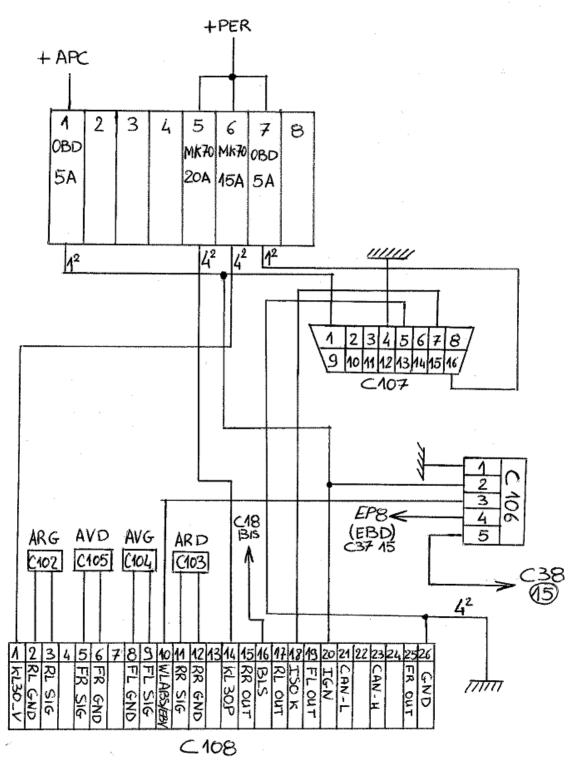
Check the information displayed by the brake light switch, positive supply.



ABS

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Wiring diagram:





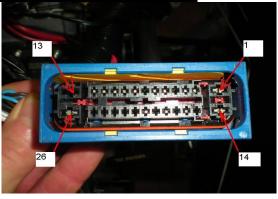
ABS

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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)





PAINT

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PAINT

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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.

REPAIR MANUAL

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PAINT

BODY COLORS

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

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PAINT

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

Quantity To Mix	1.0LTR (100% Fill)	Display Uni	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	

REPAIR MANUAL

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PAINT

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

Quantity To Mix	1.0LTR (100% Fill)	Display Uı	nits 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		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

REPAIR MANUAL

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PAINT

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

Quantity To Mix	1.0LTR (100% Fill)	Display U	nits 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		

REPAIR MANUAL

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PAINT

METAL ORANGE A 202 AKZO NOBEL SIKKENS

	SIKKENS reference							
	AIX 202							
	Comp	ositions						
	Autow	ave MM						
L	ayer 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					
	Autob	ase plus						
L	ayer 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					

REPAIR MANUAL

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PAINT

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

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

ALXAM

REPAIR MANUAL

9

PAINT

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

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

REPAIR MANUAL

9

PAINT

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

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

9

PAINT

METAL BLACK A 409 AKZO NOBEL SIKKENS

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

REPAIR MANUAL

9

PAINT

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

Quantity To Mix	1.0LTR (100% Fill)	Display Units GRAMS	
Ingredient	Description	Description Amount Accum. Amo	
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	

REPAIR MANUAL

9

PAINT

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

Quantity To Mix	1.0LTR (100% Fill)	Display Uni	its GRAMS
Ingredient	Ingredient Description A		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

REPAIR MANUAL

9

PAINT

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

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



PAINT

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	



PAINT

9

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 #

 $\label{eq:hiding matter} \mbox{Hiding (μ)} \qquad \qquad \mbox{16} \qquad \qquad \mbox{Formulation Date} \qquad \qquad \mbox{Mar 24, 2009}$

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

REPAIR MANUAL

9

PAINT

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

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

REPAIR MANUAL

9

PAINT

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

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

REPAIR MANUAL

9

PAINT

METAL GREY A 707 AKZO NOBEL SIKKENS

SIKKENS reference				
AIX 70)7			
Composit	tions			
Autoba	Autobase			
334WA	633,6			
533	639,3			
550	644,9			
400	654,4			
0	673,9			
333DF	986			

REPAIR MANUAL

9

PAINT

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

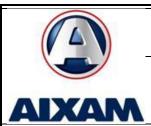
Coat BASECOAT Paint Code A707

EU Alt Color Change Overall Repair

Color Owner AIXAM

Asia Color Variance

Quantity To Mix	1.0LTR (100	1.0LTR (100% Fill)		its 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



9

PAINT

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

Quantity To Mix	1.0LTR (100%	1.0LTR (100% Fill)		its 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

REPAIR MANUAL

9

PAINT

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

Quantity To Mix	1.0LTR (100%	1.0LTR (100% Fill)		nits 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

9



REPAIR MANUAL

PAINT

STEEL GREY A 708 AKZO NOBEL SIKKENS

SIKKENS reference			
AIX 708			
Comp	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		

REPAIR MANUAL

9

PAINT

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 GRAM	S
Ingredient	Ingr Quality	Descr	iption	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		941.9	
1401W		WHITE H.S. 23.7 96		965.6	
1418W		BRIGHTNESS ADJUSTER 19.6		985.2	
1420W		VIOLET 14.7 99		999.9	
1424W		ORGANIC BLUE 11.3 1011.		1011.2	

REPAIR MANUAL

9

PAINT

RED M 306 AKZO NOBEL SIKKENS

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

ALXAM

REPAIR MANUAL

9

PAINT

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		

ALXAM

REPAIR MANUAL

9

PAINT

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

Quantity To Mix	lix 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

REPAIR MANUAL

9

PAINT

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

Quantity To Mix	1.0LTR (100% Fill)	Displa	y 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

REPAIR MANUAL

9

PAINT

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

Quantity To Mix	1.0LTR (100% Fill)	Displ	ay 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

REPAIR MANUAL

9

PAINT

ALUMINUM STRUCTURE BLACK A 410 AKZO NOBEL SIKKENS

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

REPAIR MANUAL

9

PAINT

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

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

REPAIR MANUAL

9

PAINT

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

Quantity To Mix	1.0LTR (100% Fill) Displ		lay 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	

REPAIR MANUAL

9

PAINT

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

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



9

PAINT

Rouge nacré A308 AKZO NOBEL SIKKENS

Référence SIKKENS				
AIX 30	AIX 308			
Compositions Autoway	e 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 f	finition			
666	82.50			
350	4.50			
527	13.00			
+CBP040				



9

PAINT

Rouge nacre A308 LECHLER

Référence LECHLER AIX308				
AIX 30	AIX 308			
Compositions s	ur 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			



9

PAINT

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



PAINT

Noir Brillant A412 DUPONT

Color Owner

AIXAM

From/To Years

2013 - 2013

Paint Code

A412

Brand Panel #

Color Name

NOIR BRILLANT

Lead Free

Quality

CROMAX

Color Variance

Formulation Date

Oct 09, 2012

Coat S-M-P Ind 2 COAT: BASECOAT

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



9

PAINT

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

v

Quality

280 - PERMAHYD BASISLACK 2 COAT: BASECOAT

Color Variance Formulation Date

Oct 09, 2012

Coat S-M-P Ind

8

Ingredients

Quantity To Mix 1.0LTR (100% Fill)

Display Units GRAMS

 Ingredient
 Description
 Amount
 Accum. Amount

 WB802
 TIEFSCHWARZ
 1011.0
 1011.0



PAINT

Noir Brillant A412 STANDOX

Color Owner

MAXIA

From/To Years

2013 - 2013

Paint Code

A412

Brand Panel #

886970

Color Name

NOIR BRILLANT

Lead Free

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

9

AIXAM

REPAIR MANUAL

PAINT

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

REPAIR MANUAL

9

PAINT

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 Formulation Date Oct 19, 2012

UNDERCOAT

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

9

PAINT

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 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	Υ
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

REPAIR MANUAL PAINT

Jaune métal A103 STANDOX TEINTE DE FOND

AIXAM Color Owner From/To Years 2013 - 2013 Paint Code A103 Brand Panel # 892470 Color Name JAUNE Lead Free

Quality STANDOHYD BASECOAT Color Variance

3 COAT - EUROPE: 3-COAT Coat Formulation Date Oct 19, 2012

UNDERCOAT

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	Υ
Quality	STANDOHYD BASECOAT	Color Variance	
Coat	3 COAT - EUROPE: 3-COAT BASECOAT	Formulation Date	Oct 19, 2012

Ingredients

S-M-P Ind

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

REPAIR MANUAL

9

PAINT

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

Quantity To Mix	1.0LTR (100% Fill)	Display Uni	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		



9

PAINT

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

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		



9

PAINT



The Chemical Company 11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM Modell-Jahr: 2004-2004

 Colorcode:
 M306
 Variante:
 00

 Name:
 ROUGE VIF
 Auxcode:

 Std.-Number:
 Glasurit Fab. Nr.:

Color ID: CL718544

Lösungs-Information

Reihe: 90 EUR Erstellt: 31-JUL-00

Solution ID: MS982263 Geändert:

Anw.: Alle Anwendungen

Kommentar:

Formel

Schicht: 1	Preisgruppe:	9	SDB-Nummer: 99				
Pos.	Basisfarbe	200 g	0,51	11	21	31	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	



9

PAINT



The Chemical Company 11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM Modell-Jahr: 2012-2013

 Colorcode:
 A710
 Variante: 00

 Name:
 GRIS ACIER MET
 Auxcode:

 Std.-Number:
 Glasurit Fab. Nr.:

Color ID: CL903696

Lösungs-Information

Reihe: 90 EUR Erstellt: 25-JAN-13

Solution ID: CL6571684 Geändert:

Anw.: Nur Ganzlacklerung

Kommentar:

Formel

Schicht: 1	Preisgruppe:	uppe: SDB-Nummer: 99					
Pos.	Basisfarbe	200 g	0,51	11	21	31	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



9

PAINT



The Chemical Company 11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM Modell-Jahr: 2004-2008

Colorcode: A708 Variante: 00
Name: GRIS ACIER MET Auxcode:
Std.-Number: Glasurit Fab. Nr.:

Color ID: CL713862

Lösungs-Information

Reihe: 90 EUR Erstellt: 08-OCT-04

Solution ID: CL1959985 Geändert:

Anw.: Bellacklerung

Kommentar:

Formel

Schicht: 1	Preisgruppe:		SDB-Numr	mer: 99			
P06.	Basisfarbe	200 g	0,51	11	21	31	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

REPAIR MANUAL

9

PAINT



The Chemical Company 11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM Modell-Jahr: 2000-2008

Colorcode: A707 Variante: 00
Name: GRIS MET Auxcode:
Std.-Number: Glasurit Fab. Nr.:

Color ID: CL596546

Lösungs-Information

Reihe: 90 EUR Erstellt: 12-JUL-01

Solution ID: CL1217148 Geändert:

Anw.: Alle Anwendungen

Kommentar:

Formel

Schicht: 1	Preisgruppe:		SDB-Numr	ner: 99			
P06.	Basisfarbe	200 g	0,51	11	21	31	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



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PAINT



The Chemical Company 11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM Modell-Jahr: 2010-2011

Colorcode: A507 Variante: 00
Name: BLEU MARINE NACRE MET Auxcode:
Std.-Number: Glasurit Fab. Nr.:

Color ID: CL885809

Lösungs-Information

Reihe: 90 EUR Erstellt: 28-JUL-11

Solution ID: CL4934483 Geändert:

Anw.: Bellacklerung

Kommentar:

Formel

Schicht: 1	Preisgruppe:		SDB-Numr	ner: 99			
P06.	Basisfarbe	200 g	0,51	11	21	31	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



9

PAINT



The Chemical Company 11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM Modell-Jahr: 2012-2013

 Colorcode:
 A412
 Variante:
 00

 Name:
 NOIR
 Auxcode:

 Std.-Number:
 Glasurit Fab. Nr.:

Color ID: CL903695

Lösungs-Information

Reihe: 90 EUR Erstellt: 24-JAN-13

Solution ID: CL6571080 Geändert:

Anw.: Bellacklerung

Kommentar:

Formel

Schicht: 1	Preisgruppe:		SDB-Numr	ner: 99			
Pos.	Basisfarbe	200 g	0,51	11	21	31	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



9

PAINT



11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM Modell-Jahr: 2010-2010

Colorcode: A409 Variante: 00
Name: NOIR NACRE Auxcode:
Std.-Number: Glasurit Fab. Nr.:

Color ID: CL867417

Lösungs-Information

Reihe: 90 EUR Erstellt: 28-MAY-10

Solution ID: CL4088547 Geändert:

Anw.: Bellacklerung

Kommentar:

Formel

Schicht: 1	Preisgruppe:		SDB-Numr	ner: 99			
Pos.	Basisfarbe	200 g	0,51	11	21	31	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

REPAIR MANUAL

9

PAINT



11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM Modell-Jahr: 2008-2008

Colorcode: A408 Variante: 00
Name: BLANC NACRE Auxcode:
Std.-Number: Glasurit Fab. Nr.:

Color ID: CL842474

Lösungs-Information

Reihe: 90 EUR Erstellt: 17-MAR-09 Solution ID: CL3332240 Geändert: 28-APR-11

Anw.: Alle Anwendungen

Kommentar:

Formel

Schicht: 1	Preisgruppe:		SDB-Nummer: 99				
Pos.	Basisfarbe	200 g	0,51	11	21	31	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-Numr	mer: 99			
Pos.	Basisfarbe	200 g	0,51	11	21	31	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

REPAIR MANUAL

9

PAINT



The Chemical Company 11-OCT-13

Farbton-Information

Hersteller: AIX AIXAM Modell-Jahr: 2012-2013

Colorcode: A308 Variante: 00
Name: ROUGE CANDY NACRE Auxcode:
Std.-Number: Glasurit Fab. Nr.:

Color ID: CL903691

Lösungs-Information

Reihe: 90 EUR Erstellt: 03-FEB-10 Solution ID: CL6570517 Geändert: 23-JAN-13

Anw.: Nur Ganzlackierung

Kommentar:

Formel

Schicht: 1	Preisgruppe:	SDB-Nummer: 99					
Pos.	Basisfarbe	200 g	0,51	11	21	31	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-Numr	ner: 99			
Pos.	Basisfarbe	200 g	0,51	11	21	31	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

PAINT



11-OCT-13 The Chemical Company

Farbton-Information

Hersteller: AIX AIXAM Modell-Jahr: 2012-2013

Colorcode: A103 Variante: 00 Name: OR NACRE Auxcode: Std.-Number: Glasurit Fab. Nr.:

Color ID: CL903686

Lösungs-Information

Erstellt: 23-JAN-13 Reihe: 90 EUR Geändert: 23-JAN-13 Solution ID: CL6570503

Nur Ganzlacklerung

Kommentar:

Formel							
Schicht: 1	Preisgruppe:	SDB-Nummer: 99					
P06.	Basisfarbe	200 g	0,51	11	21	31	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					
P06.	Basisfarbe	200 q	0,51	11	21	31	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					
P06.	Basisfarbe	200 q	0,51	11	21	31	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.