

WORKSHOP MANUAL

TERRAIN DX4



DX4 / PRO / CAB

Read this guide carefully. It contains important safety information.

**CORVUS**

WORKSHOP MANUAL.
CRVS-WM-18-EN-TER-123-2.1

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Drivers of CORVUS vehicles must comply with all requirements demanded by current legislation in relation to driving licenses and security measures required for the proper use of such vehicles. Never perform acrobatics and avoid excessive speeds and abrupt turns. Never drive under the influence of alcohol or drugs.

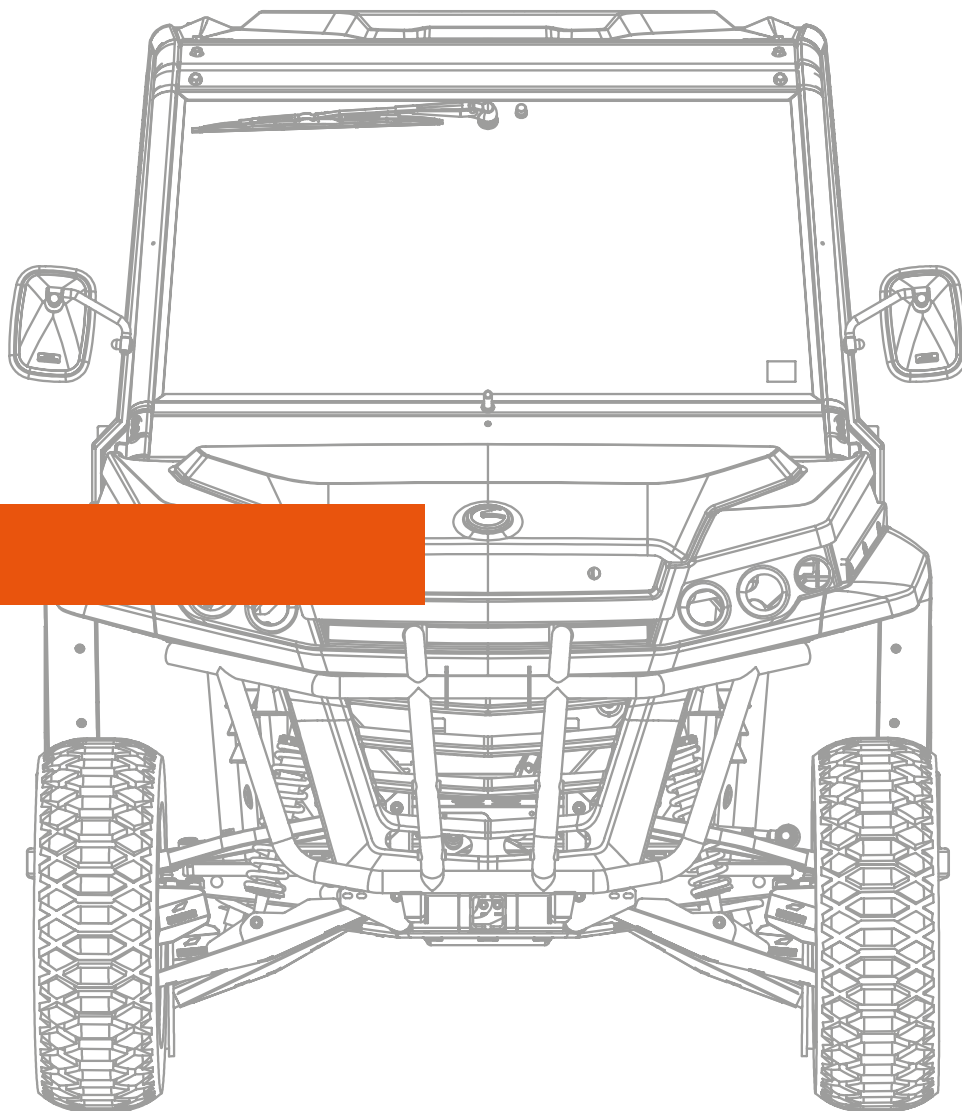
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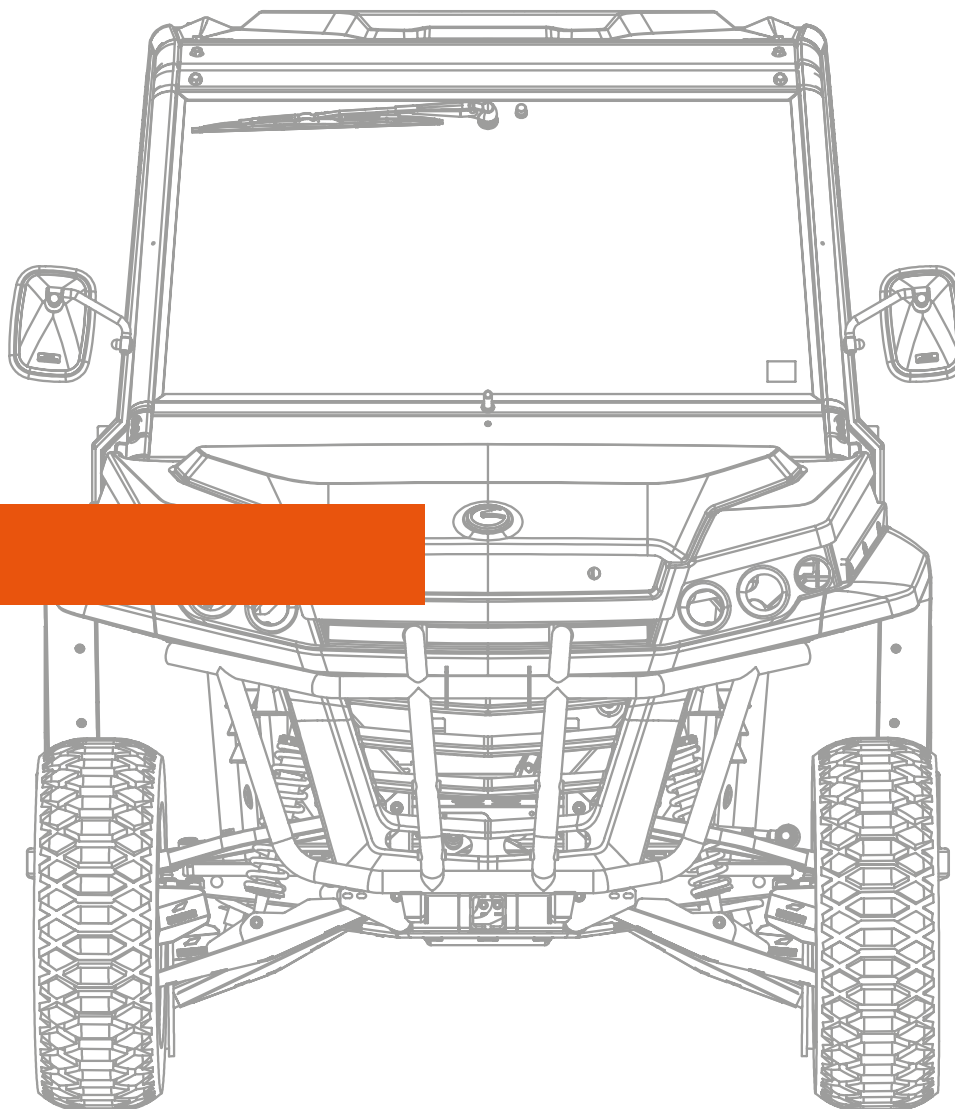
NOTES



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GENERAL INFORMATION



INTRODUCTION

We are delighted to be able to congratulate you on the purchase of your **CORVUS** vehicle and we would like to thank you for the confidence you have placed in us.

You are now the owner of a modern multi-purpose work vehicle that you will enjoy a lot if you care for it and maintain it adequately. Before you start it up for the first time, please read the instructions of use carefully to become familiar with the handling and the characteristics of your vehicle. Only in this way will you be able to understand how to best adapt your vehicle to your requirements and how to avoid accidents. For your safety we recommend that you use only spare parts and accessories authorized by **CORVUS**.

If you use any other products, **CORVUS** declines all liability for any damages that may arise from so doing. We recommend you follow the instructions on the driving-in period and maintenance intervals in order to prolong the life of your vehicle. For maintenance work, you should always consult an official **CORVUS** distributor or dealer.

Driving in the countryside is fascinating and we hope you will enjoy it to the full. Although **CORVUS** vehicles are environmentally friendly, environmental problems and conflict with other people may ensue in the countryside. Handling the vehicle in a responsible way ensures that these problems and conflicts do not arise. Be sure to use the vehicle within the bounds of the law, show that you are environmentally aware and respect the rights of others.

#ExploringYourWorld

LEGAL NOTICES

In the interest of technical development, **CORVUS INNOVA S.L.** reserves the right to modify the construction, equipment and accessories of its vehicles without notice. Size, weight and power data should be understood with the respective tolerances. Depending on the volume of your **CORVUS**' equipment and accessories, and on the versions that are approved in compliance with the different laws of each State, there may be variations with regard to descriptions and illustrations. The photographs in this manual may not therefore correspond to the model you have purchased. For this reason, no liability can be derived from any error, printing error or omission.

In the event of any discrepancy or question about the content of this manual, we recommend that you contact our After-sales Service.

CAUTIONS AND WARNINGS

YOU SHOULD READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE YOU ENJOY USING IT FOR THE FIRST TIME.

IT CONTAINS INFORMATION AND SUGGESTIONS THAT WILL FACILITATE THE USE AND HANDLING OF THE VEHICLE.

PAY PARTICULAR ATTENTION TO THE FOLLOWING WARNINGS THAT CAN BE FOUND IN THE MANUAL:



WARNING.

A warning concerning a hazard that can cause damage to the vehicle.



DANGER.

A warning concerning a hazard that can lead to personal and/or serious injury and even death.



TECHNICAL INFORMATION.

Technical information on any area of the vehicle.

SAFETY REGULATIONS



DANGER

- If in order to perform certain operations on the engine, it is necessary that it should be left in gear, make sure that the premises are adequately ventilated; if necessary, use a fume extractor. Never leave the engine running in a closed space. The exhaust gases that are produced contain CO (Carbon Monoxide) which can cause the loss of consciousness and **their inhalation can be fatal.**

- The battery electrolyte contains sulphuric acid. Protect your eyes, clothing and skin. Sulphuric acid is highly corrosive; in case of contact with eyes or skin, wash with plenty of water and go to a doctor immediately. If you have accidentally swallowed electrolyte, drink large quantities of water or milk and seek medical advice immediately.

- Batteries produce hydrogen, a gas that can be highly explosive. Do not smoke and avoid open flames or sparks near the battery, especially when you are charging it.

- Avoid prolonged contact of used engine oil on your skin, use gloves or else wash your hands when you stop using the used oil.

- Clean the brake pads in a ventilated area, DO NOT USE compressed air to clean the pads or the brake caliper. Although the dust does not contain asbestos inhalation may cause respiratory diseases.

- Brake fluid is extremely aggressive on painted surfaces. Protect paintwork with a clean cloth when you are going to perform any operation with brake fluid. Use gloves if possible, as it is not

PRELIMINARY WARNINGS

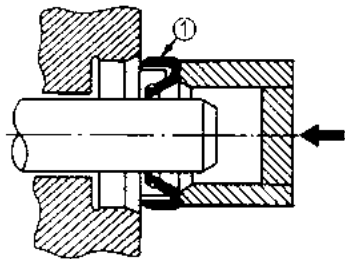
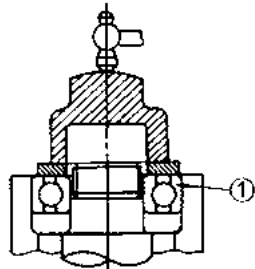
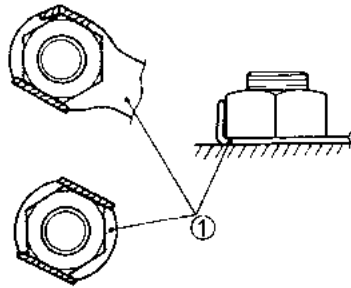
recommended that brake fluid should come into contact with the skin.

- Avoid coolant spilling onto hot parts as it produces an “invisible flame” which can burn you and you cannot see the flame.
- Do not remove the radiator cap when the engine is hot, as the coolant is under pressure and at a high temperature, which can cause serious burns.
- If coolant should get into your eyes, wash them immediately with cool water and seek medical service.
- During normal operation, the exhaust system and the engine are at a high temperature. If you have to perform any operations on them, wait until they have cooled down or use gloves to avoid burns.
- Avoid using loose clothing that could get caught up with parts of the vehicle or the environment. Although total security is impossible, the use of adequate equipment reduces the likelihood and/or severity of injuries.

“WORK METHODOLOGY” RECOMMENDATIONS

- Remove any dirt, mould, dust or any other foreign material prior to disassembly. Use appropriate tools and cleaning equipment.
- When dismantling parts always keep them paired up and together. This includes gears, cylinders, pistons and other parts subject to wear and tear in pairs. Paired parts must always be replaced as an entire assembly.
- As you disassemble the parts, clean them and put them in trays in the order you remove them in. That will speed up the installation and allow the correct installation of all parts.
- Use original **CORVUS** spare parts and lubricants recommended by **CORVUS**. Non-original or non-compliant spare parts can damage the vehicle. Other brands may seem similar in their function and appearance, but they are inferior in quality.
- Carefully inspect all elastic rings before installation. Always replace the rings of the piston pin after each use. Replace any deformed rubber rings. When you install an elastic ring (1), make sure that the sharp edge is on the side opposite to the one force is applied on.
- Replace all gaskets, seals and O-rings when you inspect the engine. All surfaces that support gaskets, lips, seals and O-rings must be cleaned.

"WORK METHODOLOGY" RECOMMENDATIONS



- After you have removed them, replace all sealing/adjusting shim washers (1) and counter dowels. Bend the locking edges, adjusting them to the flat surfaces of the screw or nut after tightening it to the specified torque.

- Install bearings and seals in such a way that the manufacturer's brands are visible. When assembling them, apply a thin layer of lightweight lithium soap-based grease to their lips. Apply oil in abundance when installing bearings.

- When you install bearings and seals make sure that you exert an even pressure on both tracks so as not to damage them.

- During the installation, always use new gaskets, seals, piston compression rings and latches.

- After disassembly, clean the components with non-flammable solvent or one with a low flammability point. Lubricate all working surfaces before installation, excluding the conical couplings.

- After assembly, check that all components have been installed correctly and that they work perfectly.

- For disassembly, inspection and installation operations, only use tools with metric measurements. Metric screws, nuts and bolts are not interchangeable with connecting parts with English measurements. The use of unsuitable tools and connecting parts may damage your vehicle.

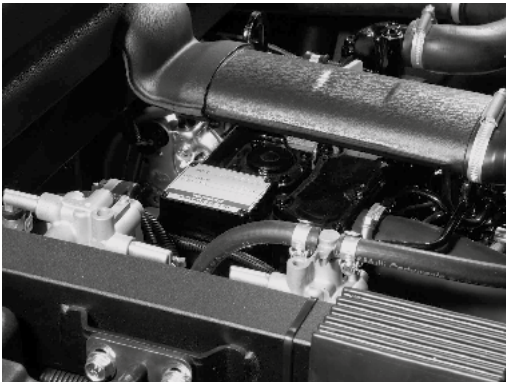
- In the case of interventions on the electrical installation of the vehicle, check that the electrical connections have been installed correctly, especially the ground connections.

VEHICLE IDENTIFICATION (CHASSIS - ENGINE)

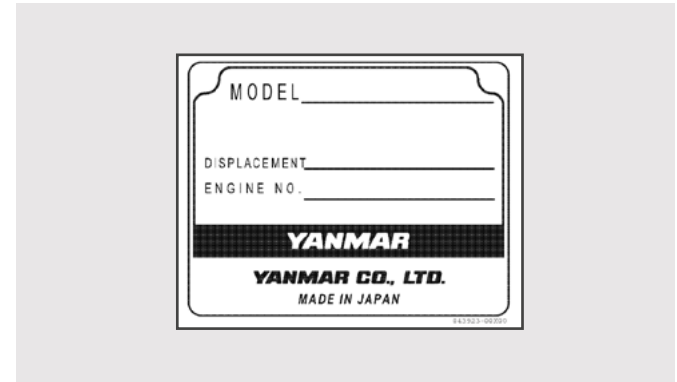


Your **CORVUS TERRAIN DX4** has an identification plate which details: manufacturer, type approval, VIN, mass of the vehicle, maximum mass per axle (A1-A2) and towable mass (depending on type of braking and towing).





The vehicle identification number is also stamped on the rear right-hand side of the chassis.







Your **CORVUS TERRAIN DX4** has an engine identification plate which details: manufacturer, model, displacement and serial number.



TOOLING TABLE

GROUP	DESCRIPTION	CODE	IMAGE
Steering and suspension	Steering and suspension ball joint puller	80990000000	
Chassis and protections	Spring hook	80990000001	
	Sealing rubber cutting scissors	80990000002	
CVT	Belt pulley installation / removal tool	03990000020	

TOOLING TABLE

GROUP	DESCRIPTION	CODE	IMAGE
CVT	Belt pulley plates separator tool	03990000021	
	Drive belt pulley removal tool	03990000022	
	Ball-joint puller	80990000000	
	Retaining key	03990000023	

GENERIC TABLE OF TIGHTENING TORQUES

THREAD	PITCH	TIGHTENING TORQUE
M 1.6	0.35	0.15 Nm
M 2	0.4	0.301 Nm
M 2.5	0.45	0.63 Nm
M 3	0.5	1.1 Nm
M 3.5	0.6	1.7 Nm
M 4	0.7	2.5 Nm
M 5	0.8	4.9 Nm
M 6	1	8.5 Nm
M 8	1.25	20 Nm
M 10	1.5	41 Nm
M 12	1.75	70 Nm
M 14	2	110 Nm
M 16	2	170 Nm
M 18	2.5	245 Nm
M 20	2.5	345 Nm
M 22	2.5	465 Nm
M 24	3	595 Nm

SPECIFIC TABLE OF TIGHTENING TORQUES

GROUP	ELEMENT	SCREW THREAD	TIGHTENING TORQUE
Transmission	Filling plug	G3/4	20 Nm
	Draining plug	M14x150	20 Nm
Front Diff	Filling plug	M14x150	20 Nm
	Draining plug	M14x150	20 Nm
CVT	Driven belt pulley clamping screw	M10	70 Nm
	Driving belt pulley clamping screw	M10	70 Nm
	Engine-DC plate screw	M8	20 Nm
Brakes	Brake caliper bleed screw	M8	7-9 Nm
	Brake caliper clamping screws	M8	30 Nm
	Brake disc clamping screws	M8	20 Nm
Transmission	Cardan coupling clamping screw	M8	30 Nm
	Cardan clamping screws	M6	12 Nm
	Axle shaft nut	M8x1.5	225 Nm
	Wheel clamp nuts	M10x1.25	60 Nm
	Tilting ball -joint nut	M14x1.5	80 Nm
Exhaust	Exhaust manifold clamping nuts	M8	20 Nm
Chassis	Rollbar screws	M10	45 Nm
	Central cross member screws	M8	20 Nm
	Seat cross member screws	M10	45 Nm
	Threshold plate screws	M8	20 Nm
	Light plate screws	M6	10 Nm
	Defence screws	M8	20 Nm
	Shock absorber clamping screws	M10	45 Nm
Engine	Engine chassis clamping screws	M10	45 Nm
Front D.C. Diff	D.C.-Front Diff. Chassis clamping screws	M10	45 Nm
Steering	Steering column screws	M10	45 Nm
	Brake hub nut + loctite	M18x1.5	
	Steering spider screws	M8	20 Nm
	Steering cardan screws	M8	20 Nm
	Steering ball joint nut	M10x1.25	50 Nm
	Steering rack and pinion screws	M10	40 Nm

SPECIFICATIONS

ENGINE

Cycle	Four-stroke
No. cylinders	3 cylinders in line
Cooling	Liquid
Displacement	993 cc
Diameter / stroke	74 mm x 77 mm
Compression relay	23.54:1
Layout	OHV - 6 Valves
Start-up system	Electric (12 V-1.2 KW)
Alternator	12 V - 55 A
Battery	12 V / 55 Ah
Maximum torque	52.1 Nm at 2400 rpm
Maximum power	17.8 kw (23.87 hp) 3600 rpm
Maximum speed	H-60 km/h / L-33 km/h

TRANSMISSION

Transmission	CVT automatic
Gearshift ratio	
High	2.77
Low	4.65
Reverse	6.29
Gear ratio	3.03-0.62
Transmission	2WD / 4WD with rear differential lock.

DIMENSIONS

Total height	1,973 mm
Total length	3,414 mm
Total width Distance between axles	1,656 mm
Ground clearance	2,238 mm
Track width	309 mm
Front	1,396 mm
Rear	1,370 mm
Cargo box	
Length	1,202 mm
Width	1,340 mm
Height	300 mm
Volume	0.48 m ³
Curb weight	764 kg
Dry	785 kg
With liquids	(With 10 L of fuel)
Payload displacement	630 kg
Fuel tank displacement	40 L
Load displacement rear box	450 kg
Towing displacement	907 kg

CHASSIS

Type	Round tubular, spine-shaped steel chassis.
Suspension	
Front	Independent with Anti-Dive system with overlapping trapeziums. Gas shock absorbers with adjustable settings.
Travel	280 mm
Rear	Independent with overlapping trapeziums. Gas shock absorbers with adjustable settings.
Travel	267 mm
Brakes	Parallel double circuit per independent axle.
Disks	
Front	256 mm with 2-piston callipers
Rear	220 mm with 1-piston callipers
Parking	Mechanical callipers on the rear discs.
Steering *	Electric assisted rack with 2 turns between ends.

* Depending on model

1.- Cold weather countries should adjust the antifreeze to suit the temperature.

SPECIFICATIONS

CABIN

Windshield	
Front *	Fixed laminate
Rear *	Fixed tempered
Seats	2, separated
Windshield wiper *	Control unit
Seat belt	2-point

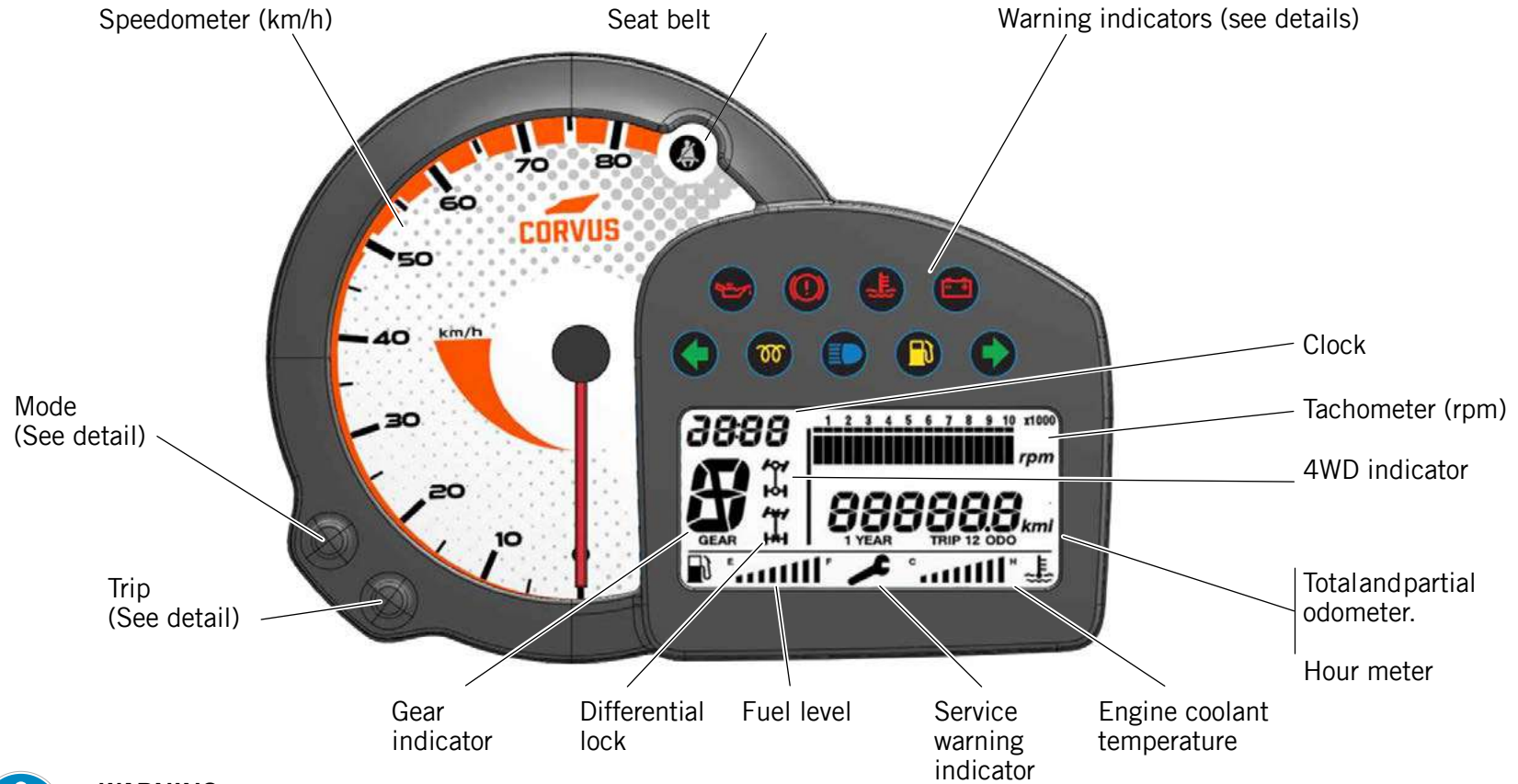
LIQUIDS

Fuel	Diesel B7 / B10
Coolant	50% ESPC. G12 Quantity: 7 L
Brake fluid ¹	DOT-4
Engine oil	SAE 15W40 - API CD, CF, CF-4 and CI-4 Quantity: 1.7 L
TRANSMISSION oil	SAE 80W-90 GL5 EP Quantity: 1.7 L
Differential oil	SAE 80W-90 GL5 EP Quantity: 0.5 L
4WD actuator oil	SAE 80W-90 GL5 EP Quantity: 0.05 L

APPROVAL

Type	EU T1B
Emission of gases	EC STAGE V (<19 kW)
	EPA FINAL TIER 4 (<19 kW)

MULTIFUNCTION PANEL



WARNING

The multifunction device is water resistant but not waterproof. Do not wash it with water under pressure. Do not leave the device in direct sunlight when the vehicle is not in use. Avoid contact with petrol, degreasers or other chemical cleaners as they may damage the device. Remember to always pay attention to the road while driving.

WARNING INDICATORS



Oil pressure

Warning indicator to show the correct oil pressure in the engine.

The warning indicator will illuminate for a few seconds when you switch on the vehicle using the ignition key.

Once the vehicle has started up, it will turn off.

More information in the maintenance section of this manual.

If the warning indicator illuminates when the engine has started or when you are driving, you must turn off the engine and contact your nearest CORVUS garage.



Parking brake and brake fluid level malfunction

Warning indicator to indicate that:

- The parking brake is activated;
- The driver is not seated in the seat;
- Or there is a malfunction in the braking system or a lack of brake fluid. If that is the case, park the vehicle and contact your nearest CORVUS technical service.

The warning indicator will illuminate for a few seconds when you switch on the vehicle using the ignition key.

More information in the maintenance section of this manual.



Engine coolant temperature

Warning indicator to indicate the correct temperature of the coolant in the radiator.

The warning indicator will illuminate for a few seconds when you switch on the vehicle using the ignition key.

More information in the maintenance section of this manual.

If the warning indicator illuminates when the engine has started or when you are driving, you must turn off the engine and contact your nearest CORVUS garage.

MULTIFUNCTION PANEL



Battery level

Warning indicator to indicate the battery is charging correctly.

The warning indicator will illuminate for a few seconds when you switch on the vehicle using the ignition key.

More information in the maintenance section of this manual.

If the warning indicator illuminates when the engine has started or when you are driving, you must turn off the engine and contact your nearest CORVUS garage.



Steering indicators

The warning indicator will illuminate when a change of direction is indicated by the indicator switch or the emergency button.



Diesel heaters

Warning indicator to indicate that the combustion chamber is warming up to make it easier to start the engine.

Start the engine when the warning indicator has turned off.

The warning indicator will illuminate for a few seconds when you switch on the vehicle using the ignition key.

If the warning indicator illuminates when the engine has started or when you are driving, you must turn off the engine and contact your nearest CORVUS garage.



Long-range lights

Warning indicator to indicate that the long-range lights are switched on to enable greater visibility.

Change to low beam when vehicles or people are in front of you.

MULTIFUNCTION PANEL



Fuel level

Fuel tank displacement of 40 L of diesel fuel.
The warning indicator will illuminate when there are 5 litres of fuel left.

Operating Conditions

Voltage supply: From 10 to 16 V DC
Minimum operating voltage supply without reset: 6.5 V dc
Operating temperature margin: -20 °C to 80 °C
Storage temperature margin: -30 °C to 90 °C





General specification

Rated voltage: 12 V dc
Test voltage: 13.5 ± 0.1 V dc
Maximum current consumption: < 300 mA @ 13.5 V (Indicators and back lights active)
Current consumption at rest: < 300 μ A (without turning on the ignition key)










MULTIFUNCTION PANEL

SUMMARY OF FEATURES


Definition of each feature and its dependence at the architecture and programming level.

	DIGITAL INPUT VIA THE CONNECTOR	ANALOGUE INPUT VIA THE CONNECTOR	OUTPUT VIA THE CONNECTOR	INDICATION BY STEP ENGINE	INDICATION BY LCD	INDICATION BY INDICATOR PILOT
SPEED PULSES	From open manifold		Hall Sensor	X	Odometer TRIP-A / TRIP-B Service	
SPEED SENSOR POWER SUPPLY			Hall Sensor			
SEAT BELT WARNING	Positive					
RPM PULSES	From open manifold				20 bars	
OIL PRESSURE	Ground					
BATTERY CHARGE ALARM		X				
RIGHT TURN SIGNAL	Positive					

MULTIFUNCTION PANEL

LEFT TURN SIGNAL	Positive		
FUEL LEVEL	Gauge R max. 338 ohms	8 bars	
FUEL RESERVE INDICATOR	224 ohms	1 bar	
LONG-RANGE LIGHTS	Positive		
DIESEL HEATER	Positive		
COMBINED BRAKE AND HAND BRAKE FLUID LEVEL	Positive	Icon	
ENGINE WATER TEMPERATURE	Variable resistor	8 bars	
ENGINE WATER TEMPERATURE ALARM	Variable resistor	Icon	
4WD MODE	Positive	Icon	

MULTIFUNCTION PANEL

	DIGITAL INPUT VIA THE CONNECTOR	ANALOGUE INPUT VIA THE CONNECTOR	OUTPUT VIA THE CONNECTOR	INDICATION BY STEP ENGINE	INDICATION BY LCD	INDICATION BY INDICATOR PILOT
REAR DIFFERENTIAL LOCK	Positive				Icon	
NEUTRAL		Common input for R-L-N-H			Icon	N
REVERSE		Common input for R-L-N-H			Icon	R
SHORT GEAR		Common input for R-L-N-H			Icon	L
LONG GEAR		Common input for R-L-N-H			Icon	H

MULTIFUNCTION PANEL

FUNCTIONALITIES

Speed sensor

- Pulse inputs coming from a Hall effect sensor.
- The sensor's output has to be of the open manifold type.
- The instrument has 3 connector pins dedicated to the speed sensor:
 - Pin-6 - "Speed_sensor_supply" to feed the Hall sensor.
 - Pin-7 - "Speed_sensor_input" for the input of pulses from the sensor.
 - This input has an internal pull-up resistor of 1 kOhm connected to Pin-6.
 - Detection of low level of input: $< 2\text{ V}$
 - Detection of high level of input: $> 6\text{ V}$
 - Pin-8 - "Speed_sensor_GND" to connect the sensor's ground.

Speedometer

- The speed will be indicated in analogue form using a needle backlit in red.
- The dial of the speedometer has a linear scale of 0 to 80 km/h.
- Relationship (pulses / return): 50
- By default, the size of the wheel perimeter is 2042 mm.
- The speed is displayed with a 10% advance (in respect of the actual speed).
- The minimum speed displayed will be 3 km/h.

MULTIFUNCTION PANEL

Odometer

- The indicator has 6 digits (without a decimal point) + the km symbol.
- The counter is displayed without zeros to the left.
- The value of the odometer is displayed with a 1% advance (with respect to the actual kilometrage).
- When the odometer reaches 999999 km, it will stop counting and will not restart.
- When the odometer is shown, it will display the ODO symbol.
- We can access TRIP-1 from the odometer by pressing MODE (<2 s).
- We can access the running hours from the odometer by pressing TRIP (>2 s).
- We can change the time from the odometer by pressing MODE (>2 s).

Hours of operation

- The indicator has 6 digits, including a decimal point indicating the number of 10-minute fractions that have elapsed. It also shows the letter "h" for the hours of operation.
- The counter only increases in value when the engine is started using the ignition key.
- The counter is displayed without zeros to the left.
- When the counter reaches 9999.5 hours, it will remain fixed at this value.
- We can access the odometer from the hour meter by pressing TRIP (>2 s).
- We can access TRIP-1 from the hour meter by pressing MODE (<2 s).
- We can change the time from the hour meter by pressing MODE (>2 s).

TRIP-1 (partial counter 1)

- The indicator has 4 digits (with a decimal point) + the KM symbol.
- The counter is displayed without zeros to the left.
- The value of the partial counter is displayed with a 1% advance (with respect to the actual kilometrage).
- When the partial counter reaches 999.9 km, the counter returns to 0.
- Pressing on the TRIP button (for >2 s) resets the counter to 0.
- When the partial counter is shown, the TRIP 1 symbol is shown.
- We can access TRIP-2 from TRIP-1 by pressing MODE (<2 s).

MULTIFUNCTION PANEL

TRIP-2 (Partial counter 2)

- The indicator has 4 digits (with a decimal point) + the KM symbol.
- The counter is displayed without zeros to the left.
- The value of the partial counter is displayed with a 1% advance (with respect to the actual kilometrage).
- When the partial counter reaches 999.9 km, the counter returns to 0.
- Pressing on the TRIP button (for >2 s) resets the counter to 0.
- When the partial counter is shown, the TRIP 2 symbol is shown.
- We can access the ODOMETER from TRIP-2 by pressing MODE (<2 s).
- If we press MODE for 10 seconds, we can configure the wheel size setting.
- We have a 10-second time-out if no button is pushed.

Maintenance service

- Maintenance intervals have been established for every 1500 km, each year "1 YEAR" or every 100 hours of operation.
- When you have travelled 1300 km, the service symbol will flash on the screen.
- When you have travelled 1500 km, the service symbol will remain lit.
- When there are 30 days left before the service is due, the service sign will flash with the "1 Year" symbol.
- If 1 year goes by before you have travelled the kilometres at which maintenance is due, the service symbol will activate with the text "1 YEAR".
- The operating hours indicator will begin at 100 and will decrease until you reach 0 h. When you reach this value, the service icon will remain on as will the zero indication.
- The hours remaining before maintenance is due will appear for 5 seconds when we put the key in.
- During these 5 seconds, if we press the MODE button for less than two seconds, the remaining km before the service is due will appear, with a "-" sign or the km that have been exceeded, preceded by a letter "E".
- During these 5 seconds, if we press the TRIP button for less than two seconds, the remaining days before the "1 YEAR" service is due will appear, with a "-" sign or the days that have been exceeded, preceded by a letter "E".
- When the days of use are 365 or more, both icons will remain turned on.
- The update of the days of use for the service is done with the key cycle.

MULTIFUNCTION PANEL

- The counter associated with maintenance-by-time will not activate until the vehicle has covered a distance of at least 10 km.
- To do the “reset” the speed must be 0 km/h.
- To reset the service values, we have to press the MODE button while we turn the engine on. After 10 seconds, the service icon will remain fixed. If we stop pressing MODE, we will have a 10-second time-out to press the TRIP button, which we have to keep pressed for 5 seconds until the reset is accomplished. At that time, the display will show the value of 100 h.
- The service reset will establish the next revision at 1,500 km, 1 year and 100 hours, without taking into account the values prior to the time of the reset.
- The maintenance time in hours is updated every 30 minutes. If the user disables the battery, he or she can lose up to 29 minutes. This will happen as long as the vehicle's battery is switched off.

24H clock

The clock is displayed in the 24H format (HH:MM). How to set the time:

- Select the function odometer using the MODE button. Or press the MODE button for more than 2 seconds (until the two hour digits flash).
- Repeatedly press the TRIP button to increase the hour digits, or leave the TRIP button pressed to increase the hours.
- Press the MODE button to accept the hours and change the field to the minute units.
- Repeatedly press the TRIP button to increase the minute units, or leave the TRIP button pressed to increase the minutes, or press the MODE button to confirm the minutes and exit the clock setting function.
- If you do nothing for more than 10 seconds, and if you have not pressed any button, the clock setting function is exited automatically.
- If you have changed the hour or minutes, but you do not save them, the time-out will be 20 seconds.
- You can only change the time if the vehicle is completely stopped, without any speed pulses being received.

MULTIFUNCTION PANEL

Gear

The vehicle is automatic.

The gear will be indicated on the screen by an alphanumeric digit that can display:

- N to indicate that you are in NEUTRAL.
- R to indicate that you are in REVERSE GEAR.
- L to indicate that you are in SHORT GEAR.
- H to indicate that you are in LONG GEAR.

GEAR SENSOR	INDICATION DISPLAY	RESISTANCE (OHM)
2	R	470
3	N	820
4	H	1500
5	L	2700

The change of gear indication will have a delay of 300 ms.

If a problem with the sensor is detected persistently, such as open circuit or short circuit, the gear indication will disappear after 1 second. In the event of a system reset, the indication will reappear after 1 second.

Revolution counter (RPM)

The instrument displays the engine revolutions via a bar indicator.

It has a total of 20 bars that will serve to indicate the range of 0 to 10000 rpm (one bar is equivalent to 500 rpm).

Only 10 bars are used for this instrument (up to 5000 rpm), since this vehicle's the maximum revolutions will be 4000 rpm.

The RPM indication increases from left to right.

The ratio to obtain the revolutions is $RPM = 6 \times \text{Hz alternator}$.

MULTIFUNCTION PANEL

Fuel

The fuel level gauge is resistive. The display bars will be indicated as per the attached table.

- There are 8 bars on the display, with the letters E (Empty) and F (Full) plus the fuel icon.
- The fuel reserve alarm LED light will come on when 1/8 of the tank remains.

FUEL BARS	OHMS	TOLERANCE
8	48	±2.5 ohm
7	78	±3.0 ohm
6	109	±3.5 ohm
5	139	±3.5 ohm
4	154	±3.5 ohm
3	174	±3.5 ohm
2	195	±4.5 ohm
1	276	±4.5 ohm Reserve
0	338	±5.5 ohm Reserve

FUEL LEVEL GAUGE	Variable resistor
RESISTANCE RANGE	3 – 338 ohm
UPDATE TIME	30 seconds
OPEN CIRCUIT DETECTION	>500 ohm
SHORT CIRCUIT DETECTION	2 ohm

- When a short circuit is detected, all the bars and the fuel LED will flash.
- When an open circuit is detected, bars 1 and 8 and the fuel LED will flash.

MULTIFUNCTION PANEL

Temperature

The engine temperature sensor is resistive. The display bars will be indicated as per the attached table.

- 8 bars appear on the display, with the letters C (Cold) and H (Hot) plus the temperature icon.
- The high temperature indicator light will illuminate when it reaches 110 °C and will turn off when it returns to 100 °C.
- It will indicate an open circuit when resistance values exceed 900 OHM.
- It will indicate a short circuit when resistance values fall below 2 OHM.
- When an open circuit or a short circuit is detected, bars 1 and 8 plus the LED alarm will flash.

SCALES	0	1		2		3		4		5		6		7		8
TEMP. (°C)	0	30	45		60		75		98		102		106		110	140
RES (Ω)	3030	837	432		235		139		68		60		53		47	22

Oil pressure

The low oil pressure indicator will activate when the engine's internal pressure gauge detects a pressure lower than the alarm value.

Safety belt - Seat

When input 13 (belt/seat input) goes from active (12 V) to inactive (open circuit) and input 15 (handbrake) is inactive at that time (open circuit), the brake warning beeper and marker light will flash until either input returns to active (12 V) status. It will have to run for 1 minute after removing the key from the vehicle.

MULTIFUNCTION PANEL

MODE - TRIP buttons

INDICATORS	PUSH-BUTTONS				NEXT CONDITION
	Short MODE	Short TRIP	Long MODE	Long TRIP	
ODO	X				TRIP 1
				X	Hours of operation
			X		Add time
HOURS OF OPERATION	X				TRIP 1
				X	ODO
			X		Add time
TRIP 1	X				TRIP 2
				X	Reset TRIP 1
TRIP 2	X				ODO
				X	Reset TRIP 2
INCREASE HOUR			X*		Wheel size
		X			Add time
	X				Add minute
INCREASE MINUTE		X			Add minute
	X				Save time

MULTIFUNCTION PANEL

INDICATORS	PUSH-BUTTONS				NEXT CONDITION
	Short MODE	Short TRIP	Long MODE	Long TRIP	
SERVICE		X			"1 YEAR" service
	X				"Km" service
			X*	X*	Reset Service
WHEEL SIZE		X		X*	Decrease
	X		X*		Increase
			X	X	Store size

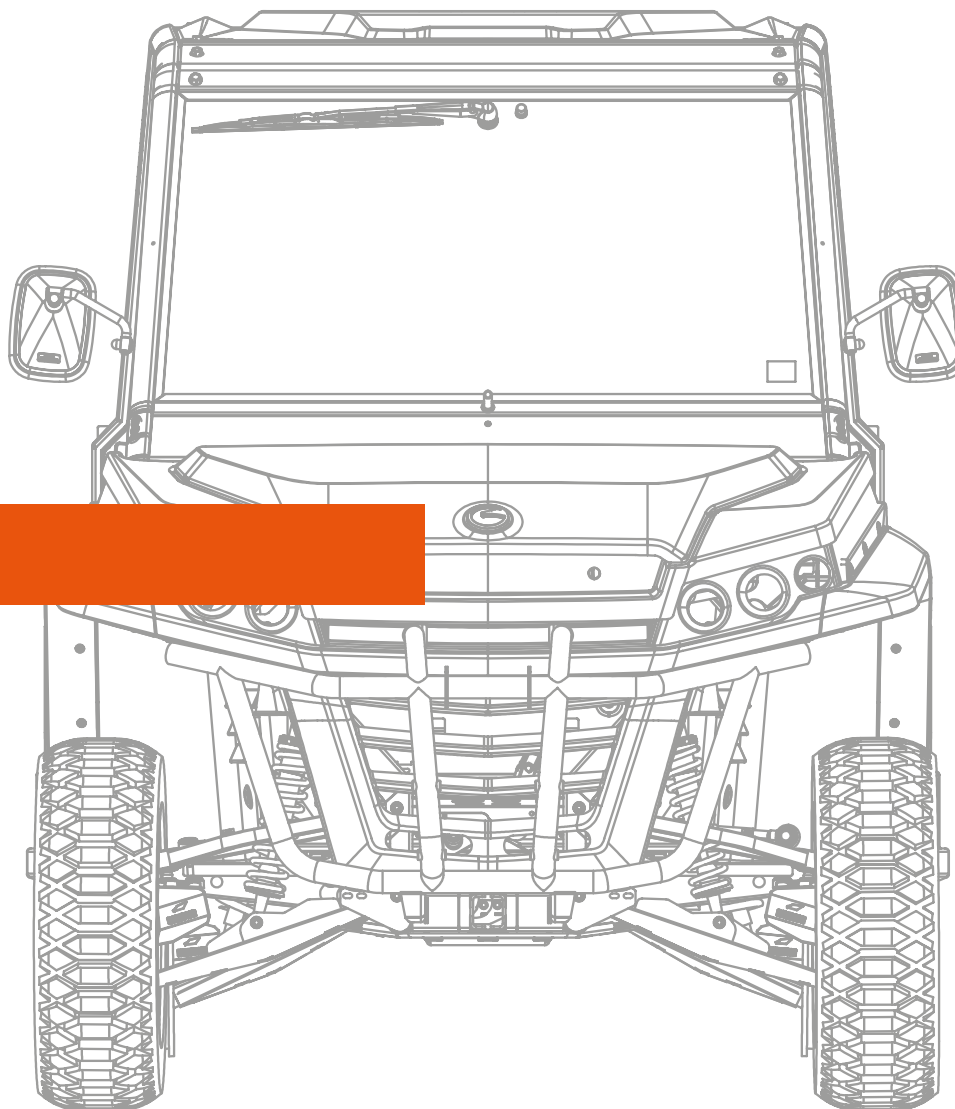
There are 2 push-buttons, MODE and TRIP, and two types of presses, Short (< 2 secs) or long (> 2 secs).

To change the size of the wheel, we access from TRIP 2 mode, pressing MODE for 10 seconds. Once inside the size configuration, pressing the push-buttons (see table above), increases or decreases the size of the wheel in mm. Keeping the button pressed will make it increase and decrease rapidly.

To accept the selected value, press MODE and TRIP at the same time, until the screen returns to its normal appearance.

* : The "X" marked with an asterisk are special and are explained in the sections on the indicators.

MAINTENANCE



SAFETY REGULATIONS



DANGER

- Were it to be necessary to keep the engine running to carry out an intervention on the vehicle, make sure that the work environment is well ventilated and, if necessary, use adequate air extractors; never run an engine in closed premises. The exhaust gases that are produced are toxic.
- The battery electrolyte contains sulphuric acid. Protect your eyes, clothing and skin. Sulphuric acid is highly corrosive; in case of contact with eyes or skin, wash with plenty of water and go to a doctor immediately.
- Batteries produce hydrogen, a gas that can be highly explosive. Do not smoke and avoid open flames or sparks near the battery, especially when you are charging it.
- Gasoline is extremely flammable and can explode under certain conditions. Do not smoke and do not allow any open flames or sparks in the work area.
- Clean the brake pads in a ventilated place, directing the jet of compressed air in such a way that you do not breathe in the dust produced by the wear and tear of the friction material. Although such dust does not contain asbestos, inhalation is nevertheless harmful.

MAINTENANCE STANDARDS



DANGER

- Use original **CORVUS** spare parts and lubricants recommended by **CORVUS**. Non-original or non-compliant spare parts can damage the vehicle.
- Only use tools designed specifically for this vehicle.
- Always use new gaskets, sealing rings and pins during assembly.
- After disassembly, clean the components with non-flammable solvent or one with a low flammability point. Lubricate all working surfaces before assembly, excluding the conical couplings.
- After assembly, check that all components have been installed correctly and that they work perfectly.
- For disassembly, inspection and assembly operations, only use tools with metric measurements. Metric screws, nuts and bolts are not interchangeable with connecting parts with English measurements. The use of unsuitable tools and connecting parts may damage your vehicle.

SERVICE CHART

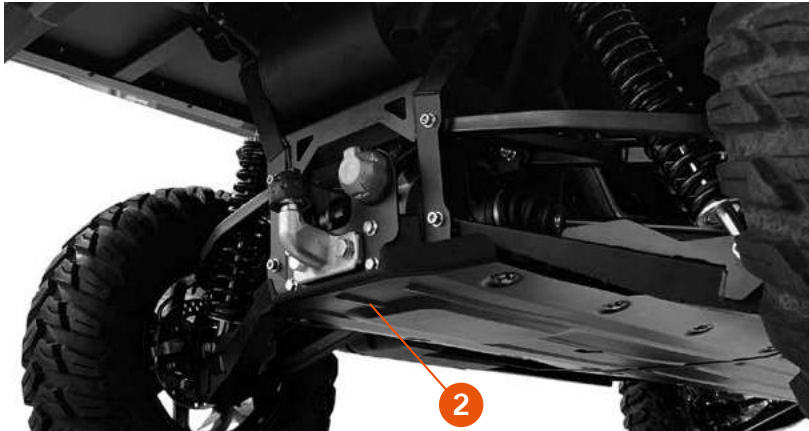
The maintenance requirements set out in this chart are simple and necessary for a good maintenance of your vehicle.

A: ADJUST / C: CHECK / L: LUBRICATE / R: REPLACE

ELEMENT		Interval							
		Daily	50 h	100 h	250 h	500 h	1,000 h	1,500 h	2,000 h
Cooling	Check and refill coolant	C			C				
	Check and clean radiator fins				C (4)				
	Check and adjust cooling belt		C (3)						
	Drain, clean and refill system with new coolant						R (5)		
Cylinder Head	Adjust intake/exhaust valve settings						A		
	Secure intake/exhaust valves (if necessary)								A
Electrical Equipment	Check indicators	C							
	Check battery		C						
Engine oil	Check engine oil level	C							
	Replace engine oil		R	R (4)					
	Replace engine oil filter		R	R (4)					
Emission control warranty	Inspect, clean and check fuel injectors (if necessary)							A	
	Inspect the crankcase breather system							A	
Fuel	Check and fill the fuel tank	C							
	Drain the fuel tank				C				
	Drain fuel filter water separator		C						
	Check fuel filter water separator	C							
	Clean fuel filter water separator					C			
	Replace fuel filter					R			
Sleeves	Replace fuel system and cooling sleeves								R (6)
Adm. and exhaust	Clean or replace air filter element				C	R			
Engine (complete)	General visual engine check	C							
CVT	CVT transmission belt (1) (2)		C (3)		C (4)				
	CVT pulleys				C				
	CVT air ingress								
Transmission, differentials and transmissions	Check gearshift and front/rear differential oil level			C					
	Replace gearshift and front/rear differential oil		R (3)	C	R (4)				
	Check transmission joint boots	C							
	Cardan gaskets	L							
Wheels and shock absorbers	Wheel bearings		C						
	Nuts and studs of the wheel bolts		C						
	Suspension ball joints and mounting points		C						
	Tire pressure and wear	C							
General check	Absence of leaks and state of seals (1)	C							R (6)
	Check brake fluid level	C							
	Replace brake fluid								
	Lubricate the wheel spindles, cardan gaskets and ball joints		L						

(1) Perform more often if the vehicle is used intensively, in areas with a lot of dust, sand, snow, wet or muddy conditions. (2): Replace if necessary. (3): The first time.

(4): 2nd time and from then on. (5): Or 1 year, whichever comes first. (6): Or 2 years, whichever comes first.



RAISING THE VEHICLE

The vehicle is equipped with an area at the front (1) and another at the rear (2) to facilitate its elevation.

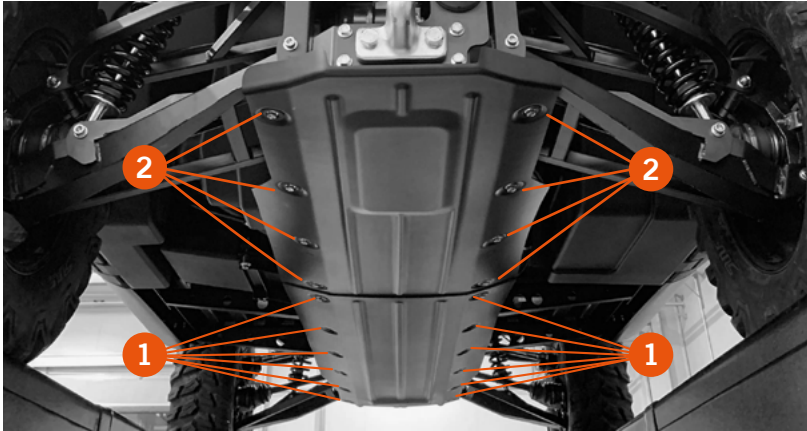


WARNING

BEFORE RAISING THE VEHICLE, MAKE SURE THE BRAKE IS FULLY ON AND THAT THE SURFACE IS FLAT AND COMPLETELY HORIZONTAL.

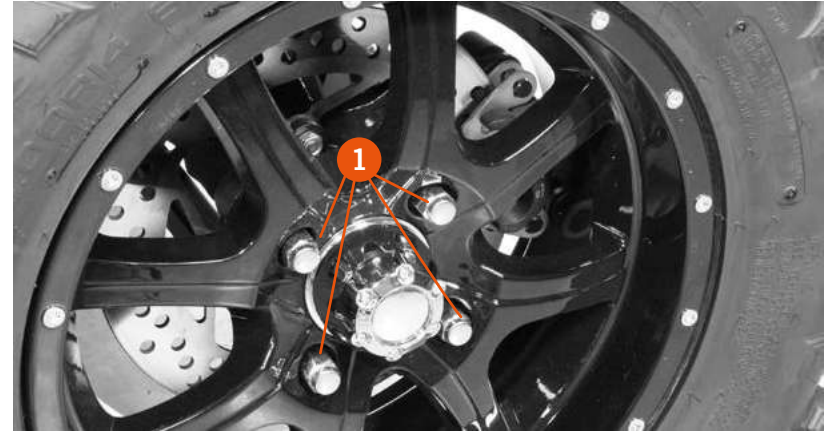
1. Place the base of the jack in the area indicated in the vehicle.
2. Raise the vehicle slowly, checking that it is stable.

MAINTENANCE



UNDERBODY PROTECTOR (REMOVAL)

1. Remove the 12 screws (1) from the front underbody protector.
2. Uncouple the protector.
3. Remove the 8 screws (2) from the rear underbody protector.
4. Uncouple the protector.



MOUNTING THE WHEEL

1. Put the vehicle in a horizontal position.
2. Engage the parking brake.
3. Raise the area of the vehicle (front or rear) where the wheel you are removing is located (see page 40).
4. Remove the four screws (1) holding the wheel rim.
5. Remove the wheel.

INSTALLING THE WHEEL

Perform the above process in reverse for the installation.



TECHNICAL INFORMATION:

Wheel nut tightening torque: 60 Nm

MAINTENANCE



ENGINE IDLE SPEED (ADJUSTMENT)

The vehicle's idle speed is a factory setting. If you need to adjust it, proceed as follows:

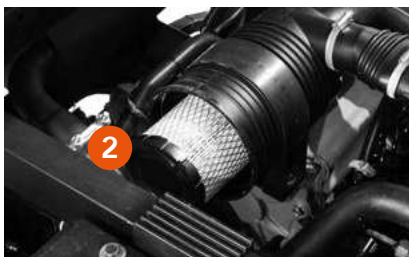
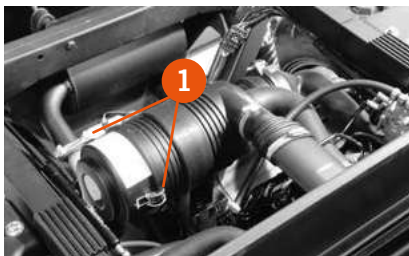
1. Warm the engine up to operating temperature.
2. Stop the engine.
3. Connect a tachometer (see manufacturer's instructions).
4. Start the engine and make the adjustment using the regulation screw (1).



WARNING

THE IDLE SPEED **SHOULD NEVER** BE GREATER THAN 1250 RPM.

MAINTENANCE



AIR CLEANER (CLEANING THE AIR CLEANER)

When cleaning the air cleaner, take care to make sure it does not become obstructed and that no dirt gets into the engine, especially when using the vehicle in dusty areas.

Without fail, inspect the air cleaner before and after each use, as indicated in the service chart (see page 39).

Cleaning the air cleaner

1. Release the latches (1) that hold the air cleaner cover.
2. Remove the air cleaner cartridge (2).
3. Clean with compressed air, from the inside toward the outside.

RECOMMENDATION:

Do not apply air at an excessive pressure, to avoid tearing the air cleaner paper which could result in severe engine damage.

Recommended air pressure between 42 - 71 PSI / 0.29 - 0.49 MPA / 3 - 5 KGF/cm²



DANGER

THESE OPERATIONS MUST BE CARRIED OUT WITH THE APPROPRIATE PRECAUTION, USING A MASK AND GOGGLES.

4. Clean the inside of the air cleaner housing (3), with a damp cloth.
5. Replace the air cleaner cartridge if it is very dirty, wet or deteriorated.



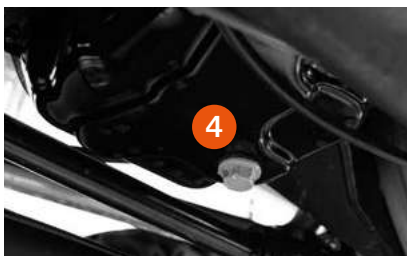
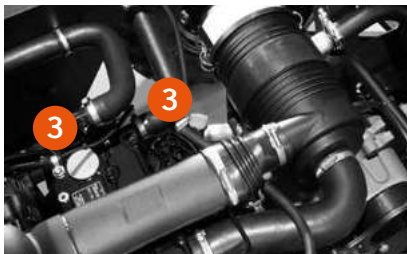
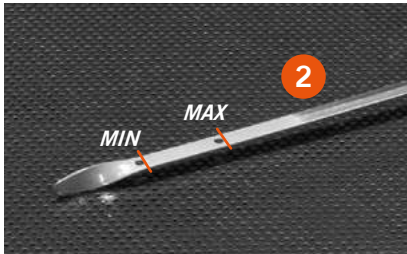
WARNING

A CLOGGED AIR CLEANER ALLOWS DIRT INTO THE ENGINE, CAUSING EXCESSIVE WEAR AND DAMAGING IT. A CLOGGED OR DAMAGED AIR FILTER CAN CAUSE SEVERE ENGINE DAMAGE.



TECHNICAL INFORMATION

Air cleaner cartridge: 02012260000



ENGINE OIL (LEVEL CHECK)

The smooth operation and durability of the transmission and the engine essentially depend on the oil being kept at the optimum level and being changed periodically, as indicated in the Service Chart (see page 39).

Checking the oil level

1. Put the vehicle in a horizontal position.
2. Run the engine for a few minutes and turn it off.
3. Check the oil level using the plug/dipstick (1).
 - 3.1. Remove the plug/dipstick (1) and clean the dipstick with a clean cloth.
 - 3.2. Put it in again to smear it in oil.
 - 3.3. Remove the plug/dipstick (1) and observe the impregnated oil level.
 - 3.4. Put the plug/dipstick in again (1).
4. The oil level should be between the maximum and minimum marks (2) of the plug/dipstick.
5. **If the oil level is too high:**
 - 5.1. Place a container under the engine to collect the used oil and avoid any spillage.
 - 5.2. Remove the excess using the drain plug/screw (4).
 - 5.3. Tighten the plug/screw (4) replacing its washer.
6. **If the oil level is too low:**
 - 6.1. Fill it up with the required amount of oil, removing either of the two filler plugs (3).
 - 6.2. Make sure to tighten these plugs afterwards (3), maintaining their O-ring.



WARNING

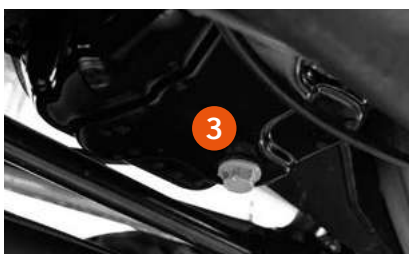
WHEN FILLING THE TANK BY ADDING NEW OIL, YOU MUST USE THE SAME TYPE OF OIL ALREADY IN THE ENGINE. PERFORM SEVERAL CHECKS DURING REFILLING, AVOIDING EXCEEDING THE MAXIMUM LEVEL.

7. Run the engine for a few minutes.
8. Stop the engine and after about 5 minutes, check the oil level again.



TECHNICAL INFORMATION:

Recommended oil: SAE 15W40 - API CD, CF, CF-4 and CI-4 / ACEA E-5. 1.7 L
Tighten the drain plug/screw to 58 Nm.



ENGINE OIL AND FILTER (CHANGE)

You should keep the oil at the optimum level and change it periodically, as indicated in the Service Chart (see page 39).

Oil and oil filter change

1. Put the vehicle in a horizontal position.
2. Run the engine so that once the oil is warm it can make any sediment rise up. Then turn it off after a few minutes.
3. Place a container under the engine to collect the used oil and avoid any spillage.
4. Remove the plug/dipstick level (1) and the two filler plugs (2), to make it easier to drain the oil.
5. Remove the drain plug/screw (3) and wait until all the content has drained out.
6. Remove the filter (4) and discard.
7. Put the new filter in place, lubricate the O-ring seal (5) and tighten manually, without using any tools.
8. Tighten the plug/screw (3) replacing its washer.
9. Fill with new oil.
10. Check the plug/dipstick level (1) and the tightness of the filler plugs (2), with their O-ring.
11. Run the engine for a few minutes.
12. Stop the engine and after about 5 minutes, check the oil level again, according to the indications of the oil level check.



WARNING

FOR THE TRANSMISSION AND ENGINE TO FUNCTION PROPERLY, KEEP THE OIL AT THE OPTIMUM LEVEL AND CHANGE IT PERIODICALLY, AS INDICATED IN THE SERVICE CHART (SEE PAGE 39).

INSUFFICIENT, DEGRADED OR CONTAMINATED OIL CAN ACCELERATE THE WEAR AND TEAR OF A VEHICLE AND CAUSE SERIOUS ENGINE DAMAGE.

REGULATIONS OBLIGE GARAGES TO COLLECT AND STORE, WITHOUT MIXING, HAZARDOUS OR TOXIC WASTE, CONTAMINATED WASTE AND INERT NON-HAZARDOUS WASTE. SUCH WASTE MAY NOT BE DUMPED AND MUST RATHER BE PROCESSED BY ACCREDITED ORGANIZATIONS.



TECHNICAL INFORMATION:

Recommended oil: SAE 15W40 - API CD, CF, CF-4 and CI-4 / ACEA E-5. 1.7 L

Tighten the drain plug/screw to 58 Nm.

Air cleaner cartridge: 02990000052.

MAINTENANCE

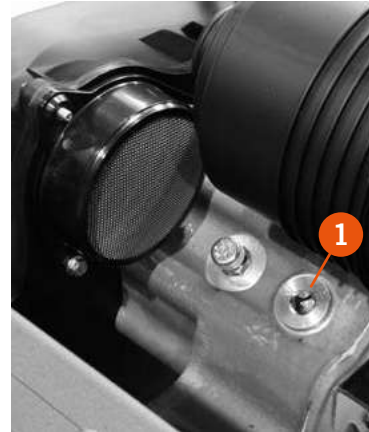


TRANSMISSION OIL (LEVEL CHECK)

The smooth operation and durability of the transmission essentially depend on the oil being kept at the optimum level and being changed periodically, as indicated in the Service Chart (see page 39).

Checking the oil level

1. Put the vehicle in a horizontal position.
2. Run the engine for a few minutes and turn it off.
3. Remove the level screw (1).
4. If a slight amount of oil oozes from the hole, the level will be correct. If, on the contrary, no liquid oozes from the hole, you should continue to add more oil.
5. If you need to add more oil, you must do so through the filler cap (2).



TRANSMISSION OIL (CHANGE)

Changing the transmission oil.

1. Put the vehicle in horizontal position and lift the load box.
2. Remove the rear protector (see page 41).
3. Place a container under the transmission to collect the used oil and avoid any spillage.
4. Remove the filler plug (1), to facilitate a better drainage of the transmission oil.
5. Remove the transmission oil drain screw (2).
6. Once all the oil has drained from the transmission, replace the washer and make sure the drain screw is tightened (2) to 24 Nm.
7. Fill the transmission with new oil.
8. Attach the filler cap (1).

MAINTENANCE



FRONT DIFFERENTIAL OIL (CHECK)

To check the front differential oil level, you have to drain the oil into a calibrated container and measure the amount that has been extracted. The correct volume is 0.5 L.

FRONT DIFFERENTIAL OIL (CHANGE)

The oil must be changed periodically, to ensure the life of the differential, as indicated in the service chart (see page 39).

1. Park the vehicle in a totally horizontal position.
2. Remove the battery (see page 75).
3. Remove the front underbody protector before starting the operation (see page 41).
4. Place a container under the differential to collect the used oil and avoid any spillage.
5. Remove the filler plug/screw (1), to facilitate better oil drainage.
6. Remove the drain plug/screw (2) and wait until all the content has drained out.
7. Screw on the drain plug/screw (2) and tighten the drain plug, replacing the washer, securing it at 24 Nm.
8. Fill the front differential with the new oil.
9. Screw on and make sure the corresponding filler plug/screw (1) is tight, replacing its washer, securing it at 24 Nm.
10. Check that there are no leaks and that the seals are in good condition.



TECHNICAL INFORMATION:

Recommended oil: SAE 80W-90, API GL5
Capacity: 0.5 L

MAINTENANCE

4WD LOCKING SYSTEM OIL (CHECK)

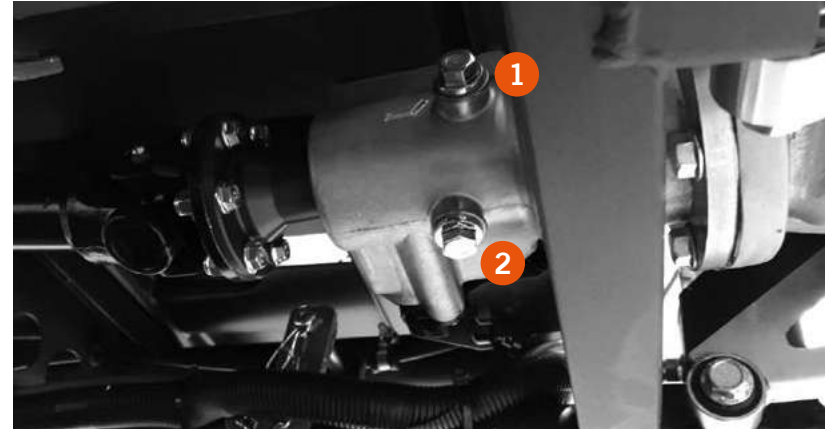
To check the front differential oil level, you have to drain the oil into a calibrated container and measure the amount that has been extracted. The correct volume is 0.05 L.

4WD LOCKING SYSTEM OIL (CHANGE)

It is convenient to frequently check that there are no leaks and the maintenance of the oil level, for correct operation.

Changing the locking system oil.

1. Put the vehicle in the horizontal position and remove the front underbody protector (see page 41).
2. Place a container under the 4WD locking system to collect the used oil and avoid any spillage.
3. Remove the filler plug (1), to facilitate a better drainage of the 4WD oil.
4. Remove the drain screw (2) the 4WD locking system oil.
5. Once all the oil has drained out, replace the washer and make sure the drain screw (2) is tightened at 24 Nm.
6. Fill with 0.05 L of new oil.
7. Replace the plug washer and tighten the oil filler plug (1) at 24 Nm.



TECHNICAL INFORMATION:

Recommended oil: SAE 80W-90, API GL5

Capacity: 0.05 L

Tighten the filler plug/screw to 24 Nm.

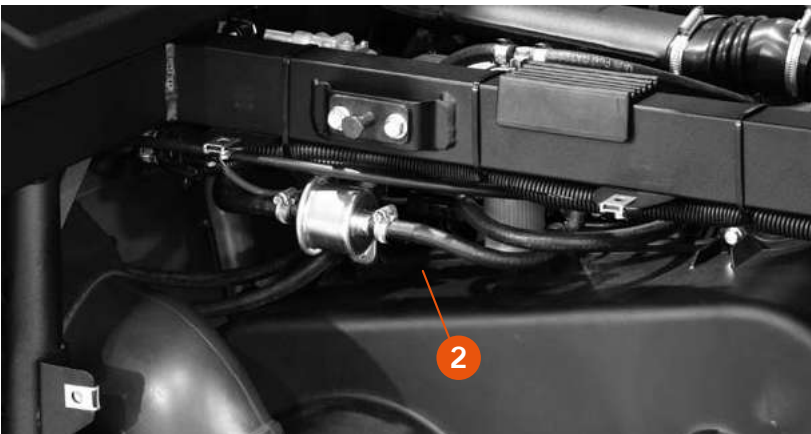
Tighten the drain plug/screw to 24 Nm.

MAINTENANCE



WATER PRE-FILTER/SEPARATOR (CLEANING - REPLACEMENT)

1. Put the vehicle in a totally horizontal position and raise the cargo box.
2. Remove the left-hand side drawer*.
3. Close the fuel stopcock (1), to the C position.
4. Place a container under the filters (2), to collect any liquid that may spill out over the variator box (CVT).



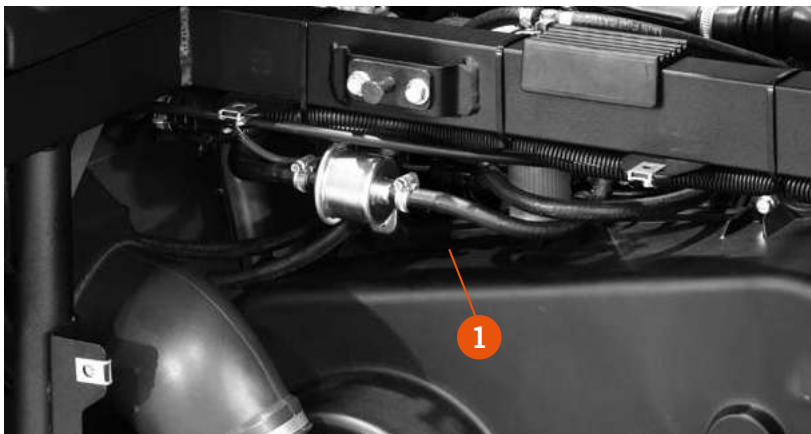
MAINTENANCE



5. Turn the nut of the socket (3) counterclockwise to loosen it.
6. Remove the socket very carefully, and empty its contents into a container used to collect pollutants.
7. Clean the inside of the socket with clean fuel.
8. Inspect and clean the mesh of the filter (5). If it is worn out, replace it with a new one.
9. Check the condition of the O-ring (4) and replace it if it is worn out.
10. Reinstall the socket, introducing the O-ring (4) and tightening the fastening nut manually (3).
11. Open the fuel stopcock (6) to the O position.
12. Check the tightness of the installation.



MAINTENANCE

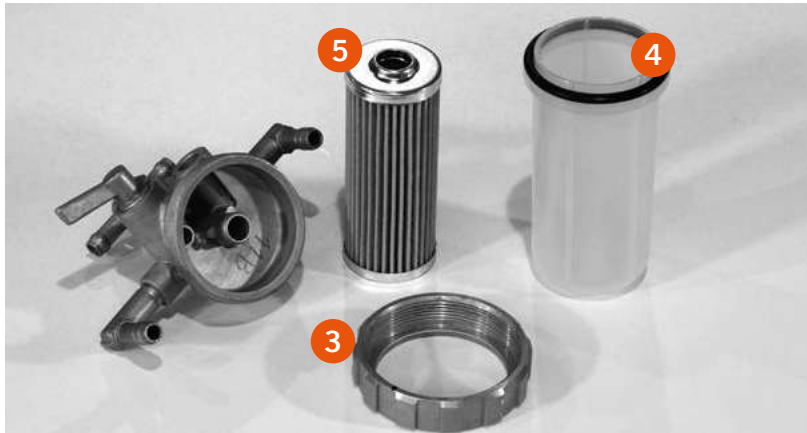


WATER FILTER / SEPARATOR (CLEANING - REPLACEMENT)

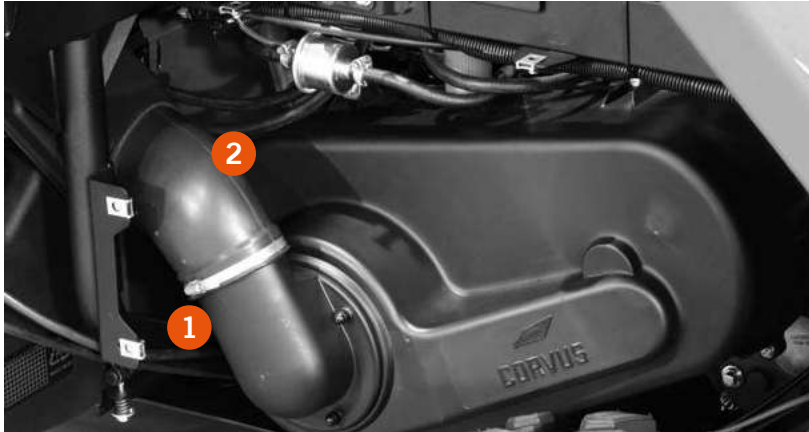
1. Put the vehicle in horizontal position and lift the load box.
2. Remove the left-hand side drawer*.
3. Close the fuel stopcock (2), to the C position.
4. Place a container under the filters (1), to collect any liquid that may spill out over the variator box (CVT).



MAINTENANCE



5. Turn the nut of the socket (3) counterclockwise to loosen it.
6. Remove the socket very carefully, and empty its contents into a container used to collect pollutants.
7. Clean the inside of the socket with clean fuel.
8. Replace the fuel filter (5) if it is worn out.
9. Check the condition of the O-ring (4) and replace it if it is worn out.
10. Reinstall the socket, introducing the O-ring (4) and tightening the fastening nut manually (3).
11. Open the fuel stopcock (6) to the O position.
12. Check the tightness of the installation.



CVT ASSEMBLY REVIEW

Cleaning CVT air ducts



WARNING

THE AIR INTAKE DUCT TO THE CVT MUST BE KEPT CLEAN TO PREVENT SERIOUS DAMAGE TO THE TRANSMISSION SYSTEM. IF THE VEHICLE IS USED IN DUSTY CONDITIONS, IT IS ADVISABLE TO CARRY OUT THIS PROCESS REGULARLY.

First of all, you must remove the left-hand side drawer*.

1. Remove the clamp (1) from the elbow connection (2) between the manifold and the (CVT) transmission cover.
2. Pull the elbow (2) downwards to release it from the housing of the duct.
3. Remove the four screws (3) from the left upper grid and remove it.
4. Clean the intake duct.

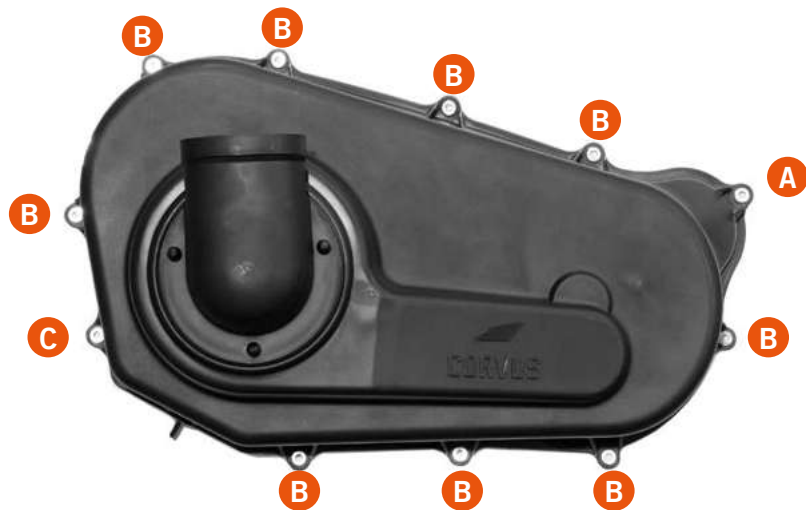


WARNING

PLUG THE AIR INTAKE TO THE TRANSMISSION WHILE CLEANING THE DUCT, IN ORDER TO AVOID THE POSSIBLE ENTRY OF PARTICLES THAT CAN DAMAGE THE TRANSMISSION.

Removing the CVT cover

1. Remove the eleven screws (A, B, and C) from the CVT cover.
2. Uncouple the CVT cover.



WARNING

PAY SPECIAL ATTENTION TO THE POSITION OF THE SCREWS OF THE **CVT COVER DURING THE ASSEMBLY.**

SEE POSITIONS INDICATED IN THE PHOTOGRAPH OF THE DIFFERENT LENGTHS OF THE COVER SCREWS.



A

M6x25 screw



B

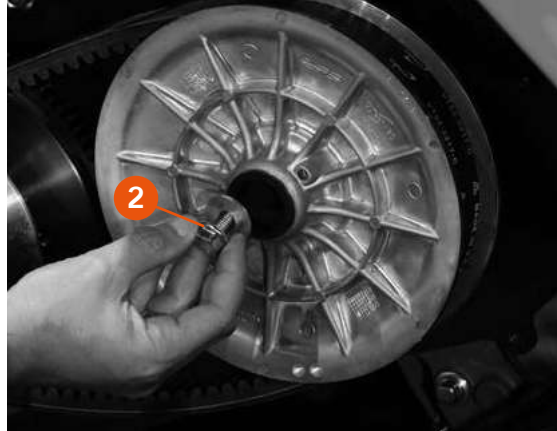
M6x20 screw



C

M6x16 screw

MAINTENANCE



Removing the driven belt pulley and the CVT transmission belt

1. Insert the ramp adjusting shim (1) into the threaded hole of the driven pulley.
2. Screw the tool (1) to open the two ramps of the pulley.
3. Check the condition of the belt and change if it is worn out or needs to be replaced according to the service chart (see page 39).
4. Loosen the front screw and remove and its washer (2).
5. Remove the driven belt pulley (3) together with the transmission belt.
6. Remove the shaft key for later assembly.



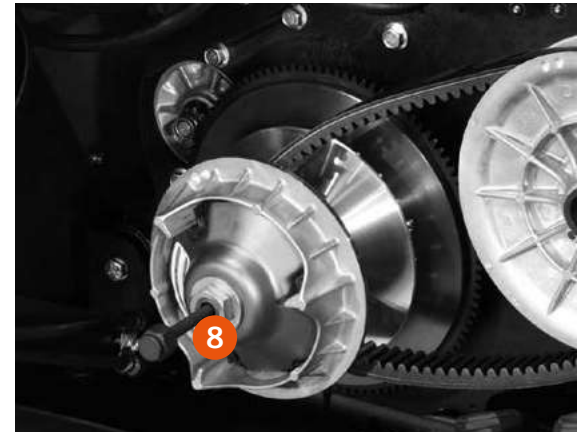
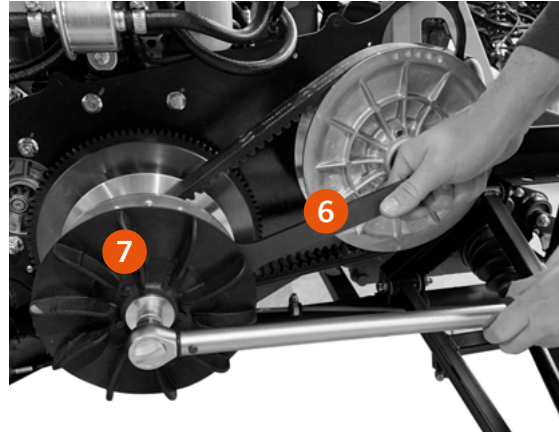
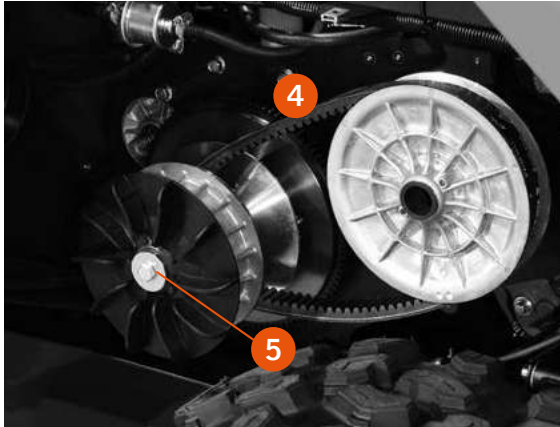
TECHNICAL INFORMATION:

Plate spacer tool: 03990000021

Transmission belt: 03190010021

Tighten the driven pulley retaining screw to 70 Nm.

MAINTENANCE



Removing the CVT drive belt pulley

1. Once you have removed the CVT belt (4) (see page 55).
2. remove the bolt and retaining washer (5), using the tool to lock the pulley (6).
3. Remove the CVT fan (7).
4. Insert the tool (8) to remove the drive pulley until you have uncoupled it from the engine cone.



TECHNICAL INFORMATION:

Drive belt pulley removal tool: 03990000022

Drive belt pulley locking tool: 03990000023

Pulley retaining bolt torque: 70 Nm

MAINTENANCE

MAINTENANCE INTERVALS

DESCRIPTION	MAINTENANCE INTERVALS	
	Every 5,000 kms or 250 h	Every 10,000 kms or 500 h
Drive pulley	General control	Removing and cleaning
Fixed pulley	Visual inspection	Cleaning
Sliding pole	Visual inspection	Cleaning
Installation of centrifugal weights	Visual inspection	Replacement recommended
Friction bushing	Visual inspection	Replacement recommended
Driven pulley	General control	Removing and cleaning
Fixed pulley	Visual inspection	Cleaning
Sliding pulley	Visual inspection	Cleaning
Cam	Visual inspection	Cleaning
Cam shoe	Dimension / Visual	Replacement recommended
Transmission belt	Dimension / Visual	Dimension / Visual

MAINTENANCE

Transmission belt inspection



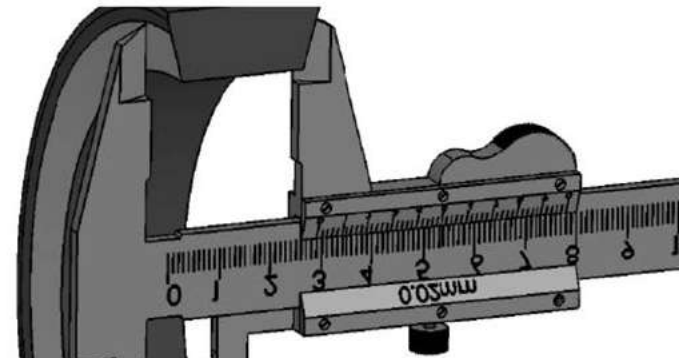
WARNING

THE TRANSMISSION BELT MUST BE INSPECTED TO AVOID THE RISK OF PERSONAL INJURY AND/OR MECHANICAL BREAKAGE.

The transmission belt should be replaced if cracks appear on the rear of the belt.

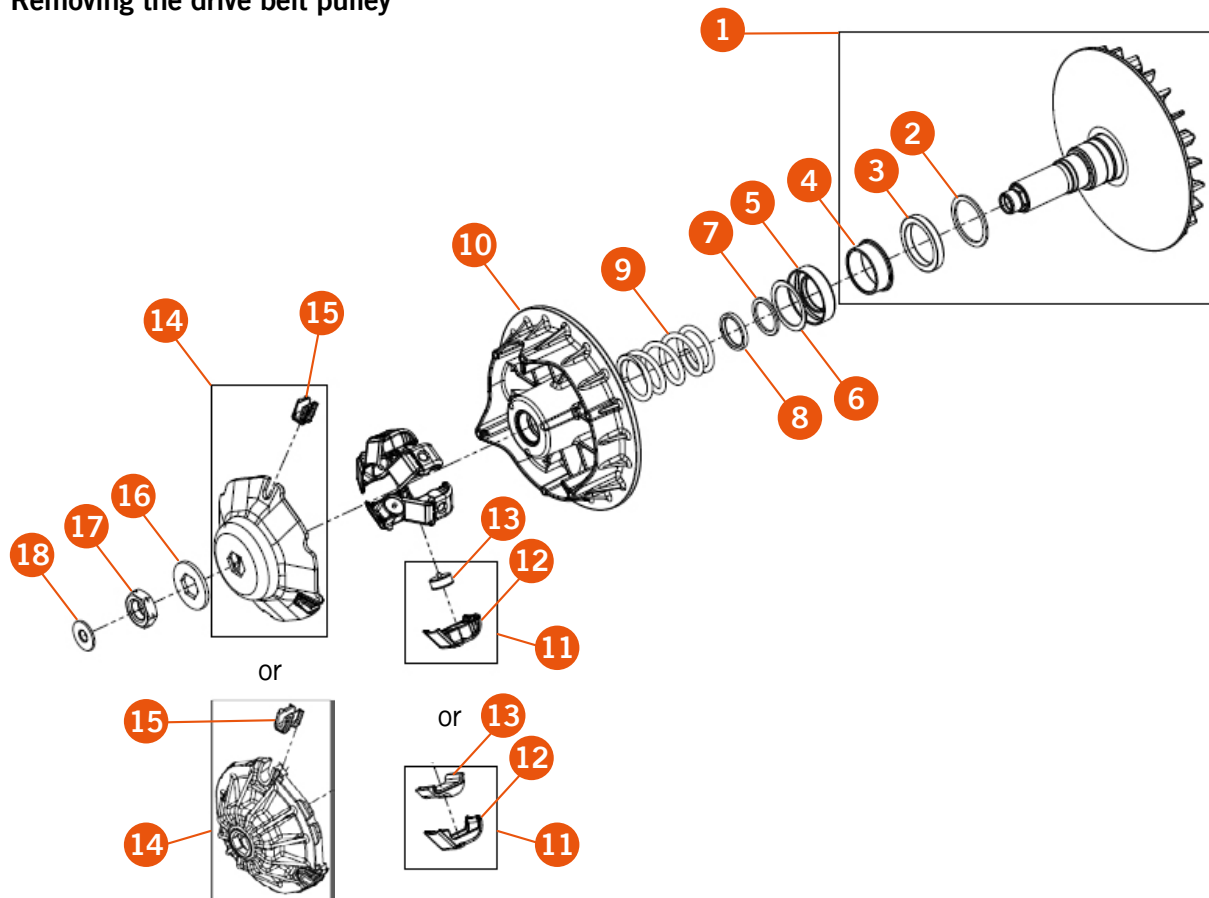
The drive belt should be replaced when its maximum width decreases by from 2 to 3 mm of its original width.

Be sure to measure the belt at its widest point.



MAINTENANCE

Removing the drive belt pulley



1. Fixed pulley
2. Adjusting washer (if applicable) Floating bearing
3. Adjusting shim
4. Spring seat
5. Adjusting washer (if applicable)
6. Adjusting washer (if applicable)
7. Opening limiter
8. Spring
9. Sliding pulley
10. Assembly of centrifugal weights
11. Housing
12. Weight
13. Cover
14. Friction bushing
15. Washer (if applicable)
16. Nut
17. Washer (if applicable)



WARNING / DANGER

THE SLIDING PULLEY IS SPRING-LOADED. WHEN YOU UNSCREW THE NUT (17), THE SPRING WILL PUSH THE COVER (14) AND IT WILL SPRING UPWARDS.

MAINTENANCE



WARNING

REMOVE EACH COMPONENT AS SHOWN IN THE EXPLODED VIEW ON THE PREVIOUS PAGE.

Recommended checks

- Check if the centrifugal weights have been damaged.
- Check if there are any signs of wear on the housing (see image).
- Check if there are any signs of wear on the housing friction bushing (see image).
- Check if there are any signs of wear on the pulley (due to the friction of the transmission belt).
- Check the free wheel or the idle speed bearing.

Replacement conditions

- Housing (12):
Change whenever the wear marks displayed in the image exceed the wear limit. The allowable wear limit of the housing is less than 14 mm.
- Friction bushing (15):
Replace the cover bushings whenever there is too much noise at idling speed between these and the sliding tower of the pulley. Use a gauge to measure wear as shown.
The maximum space of wear allowed is: 1 mm



WARNING

ALWAYS CHANGE THE THREE RINGS (15) AT THE SAME TIME.

- Floating bearing (3):
Change when you manually detect irregular rotation or you hear a squeaking noise as the bearing rotates.

New weight



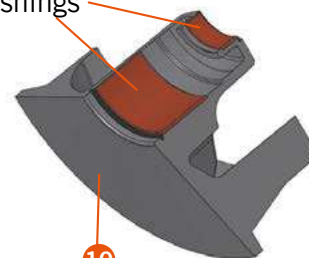
Sliding bushing



Worn weight



Bushings



Sliding pulley



WARNING

TO MAINTAIN THE PERFORMANCE OF THE PULLEY, BE SURE TO CLEAN THE BUSHINGS OF THE PULLEY WITH A MICROFIBRE TOWEL OR A DRY CLOTH.

CAUTION: DONOTUSEACETONE TO CLEAN THE BUSHING.

MAINTENANCE

Aligning the fixed pulley, sliding pulley and cover

Align the 2 alignment marks on the pulleys and also the square shaped notch, or make a mark on the cover to ensure that the pulley is balanced (see images).

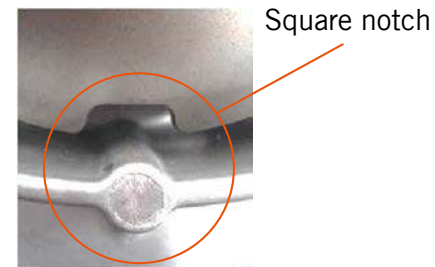
Tightening the pulley

Use a torque wrench with a 30mm adapter to tighten the pulley.

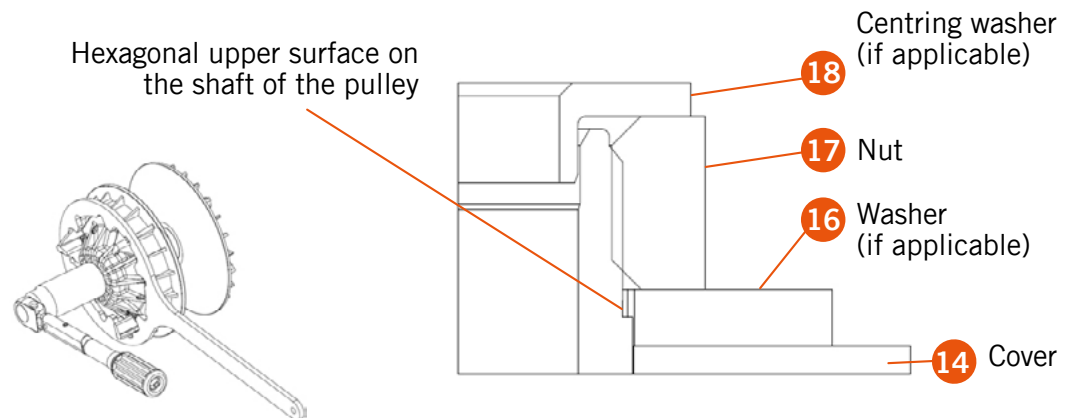
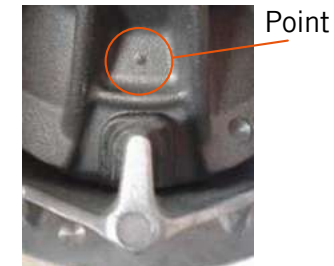


WARNING

MAKE SURE THAT THE ALIGNMENT OF THE HEXAGONAL SHAPE OF THE COVER (14) AND THE WASHER (16) ARE FULLY ENGAGED IN THE HEXAGONAL SHAPE OF THE SHAFT BEFORE APPLYING TORQUE TO THE NUT (17).

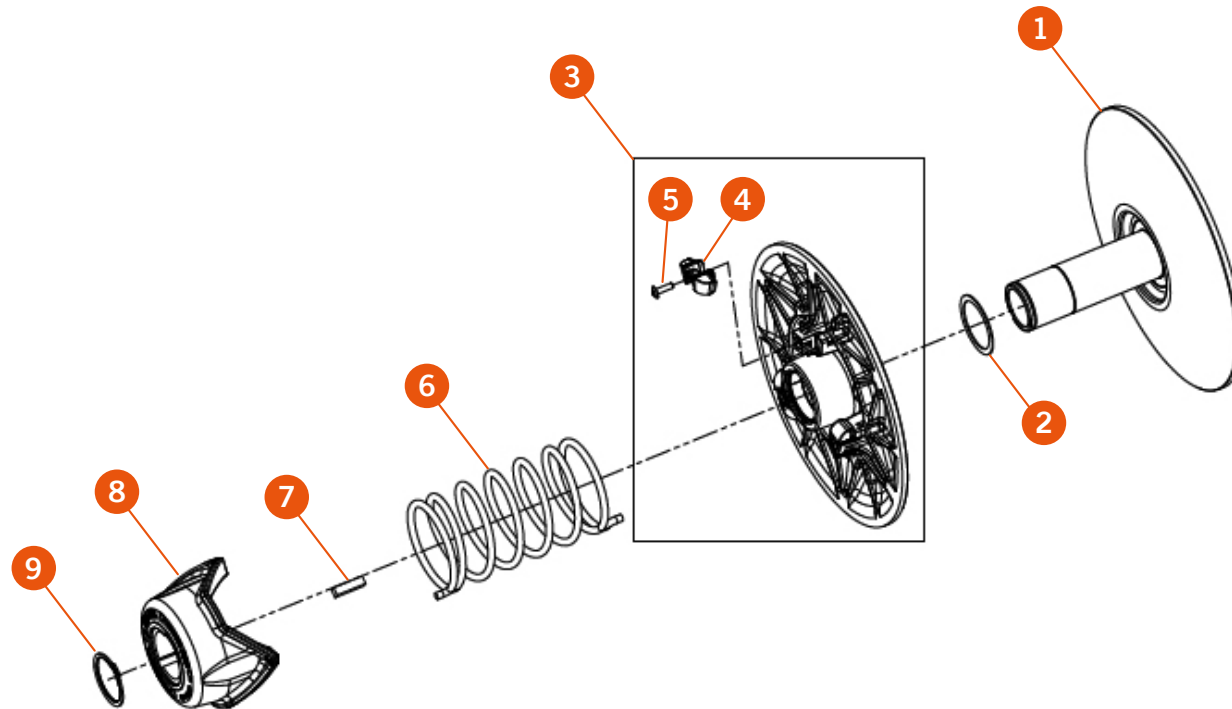


or



MAINTENANCE

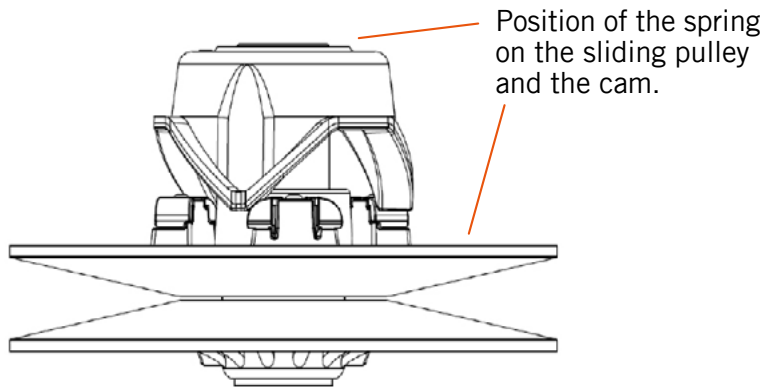
Removing the driven pulley



1. Fixed pulley
2. Washer (if applicable)
3. Sliding pulley
4. Friction bushing
5. Friction bushing screw
6. Spring
7. Synchronizer block
8. Cam
9. Elastic ring

MAINTENANCE

The correct installation of the driven pulley



WARNING

BE SURE TO NOTE THE POSITION OF THE SPRING ON THE SLIDING PULLEY AND THE CAM, AS WELL AS THE ALIGNMENT OF THE CAM WITH RESPECT TO THE FRICTION BUSHING.

WHEN REINSTALLING THE PULLEY, THE POSITIONS MUST BE THE SAME AS BEFORE REMOVAL. THIS ENSURES THAT THE PERFORMANCE OF THE PULLEY IS NOT AFFECTED.

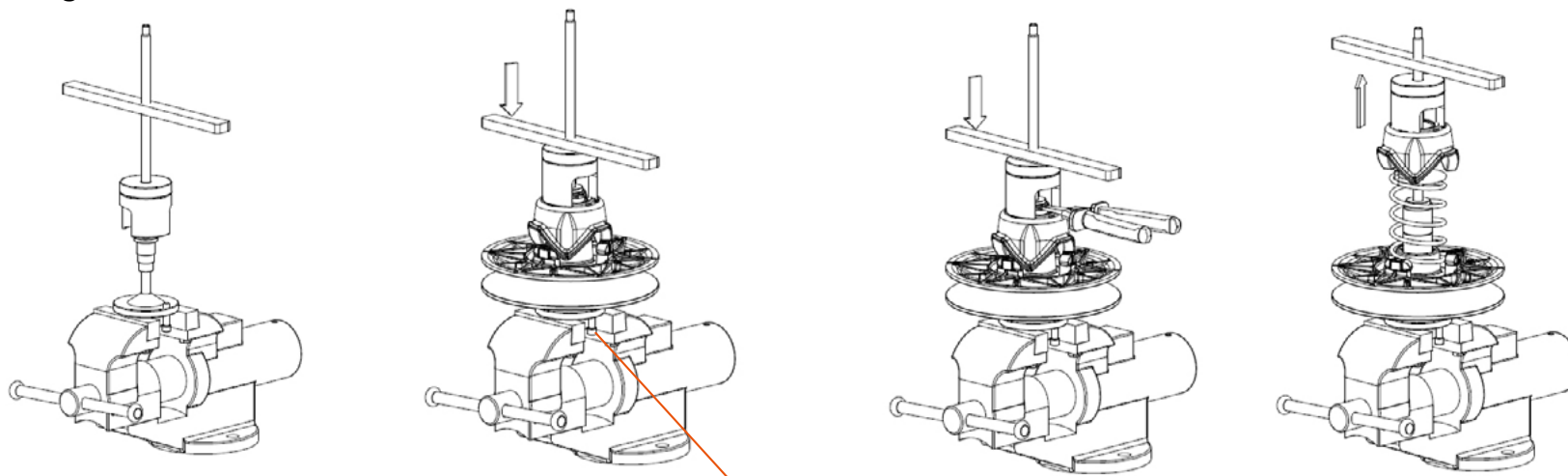


DANGER

USE THE REMOVAL TOOL TO REMOVE THE CAM FROM THE PULLEY. THE PULLEY IS SPRING-LOADED WITH A SIGNIFICANT AMOUNT OF FORCE; USING THE REMOVAL TOOL WILL KEEP THE PULLEY COMPRESSED.

MAINTENANCE

Removing the cam



Rotation lock

- Using a vise, position the dismantling tool (Ref: 3990000020) and tighten it to prevent the dismantling tool from turning.
- Press down on the cam (3 to 4 mm maximum) to release the circlip by screwing the bar into the threaded rod.

- Remove the circlip with suitable pliers.
- Gently unscrew the bar from the threaded rod to slowly release the spring.



DANGER

SLOWLY RAISE THE CAM TO RELEASE IT FROM THE SHAFT BY UNSCREWING THE REMOVAL TOOL.

MAINTENANCE

Recommended inspections

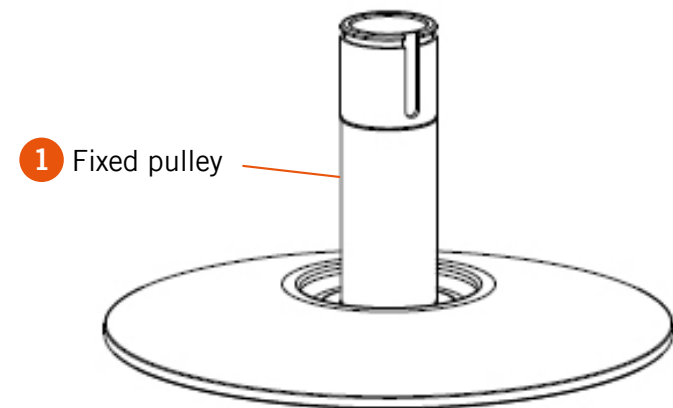
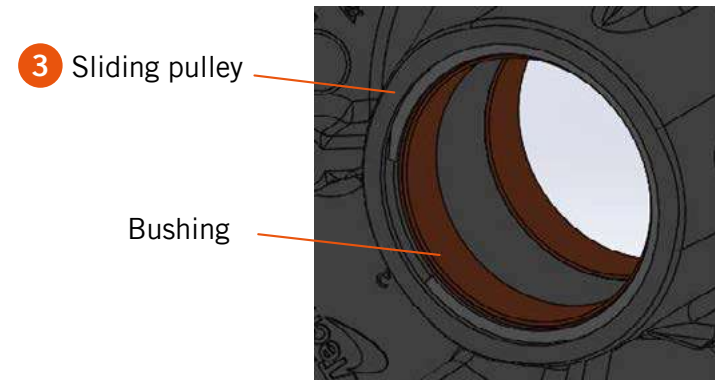
- Check if there are signs of wear on the cam.
- Check if there are signs of wear on the spring.
- Perform a visual inspection of the components.
- Look for wear on the pulleys due to the friction of the transmission belt - (visual inspection only; fixed and sliding pulley).
- Check the wear of the bushings of the sliding pulley (visual inspection only). If there is excessive wear, you must replace the entire pulley assembly.
- Check the wear of the shaft both inside and out (visual inspection only).



WARNING

TO MAINTAIN THE PERFORMANCE OF THE PULLEY, BE SURE TO CLEAN THE BUSHINGS OF THE PULLEY WITH A MICROFIBRE TOWEL OR A DRY CLOTH. CAUTION: DO NOT USE ACETONE TO CLEAN THE BUSHING.

THE STAINLESS STEEL SHAFT CANNOT BE REMOVED FROM THE ALUMINIUM FIXED PULLEY WITHOUT DAMAGING THE PARTS.

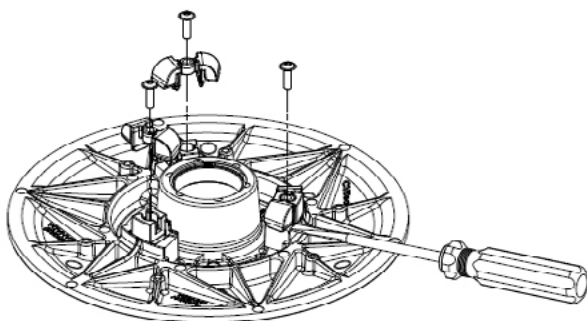


MAINTENANCE

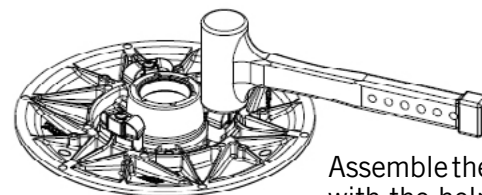
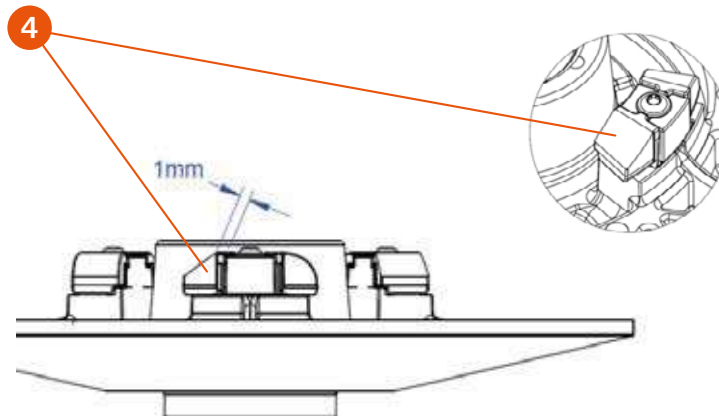
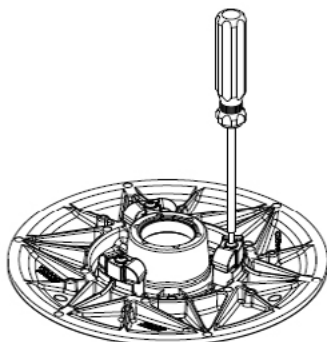
SLIDING PULLEY - MAINTENANCE

Recommended inspections

The cam shoes must be replaced if they show wear of up to approximately 1 mm before making contact with the aluminium flange.



After you remove the screws with a Torx No. 20 screwdriver, the cam shoes can be removed with a flat-ended screwdriver.



Assemble the friction bushing with the help of a hammer



WARNING

TAP THE FRICTION BUSHINGS GENTLY (4) SO AS NOT TO DAMAGE THEM.
ALWAYS CHANGE THE THREE FRICTION BUSHINGS (4) AT THE SAME TIME.
APPLY A FASTENING TORQUE OF 2.5 TO 4.5 NM.

MAINTENANCE

INSTALLING THE DRIVEN PULLEY

Installing the spring in the sliding pulley

Place the spring (6) on the sliding pulley (3) in the same position noted during the removal steps.

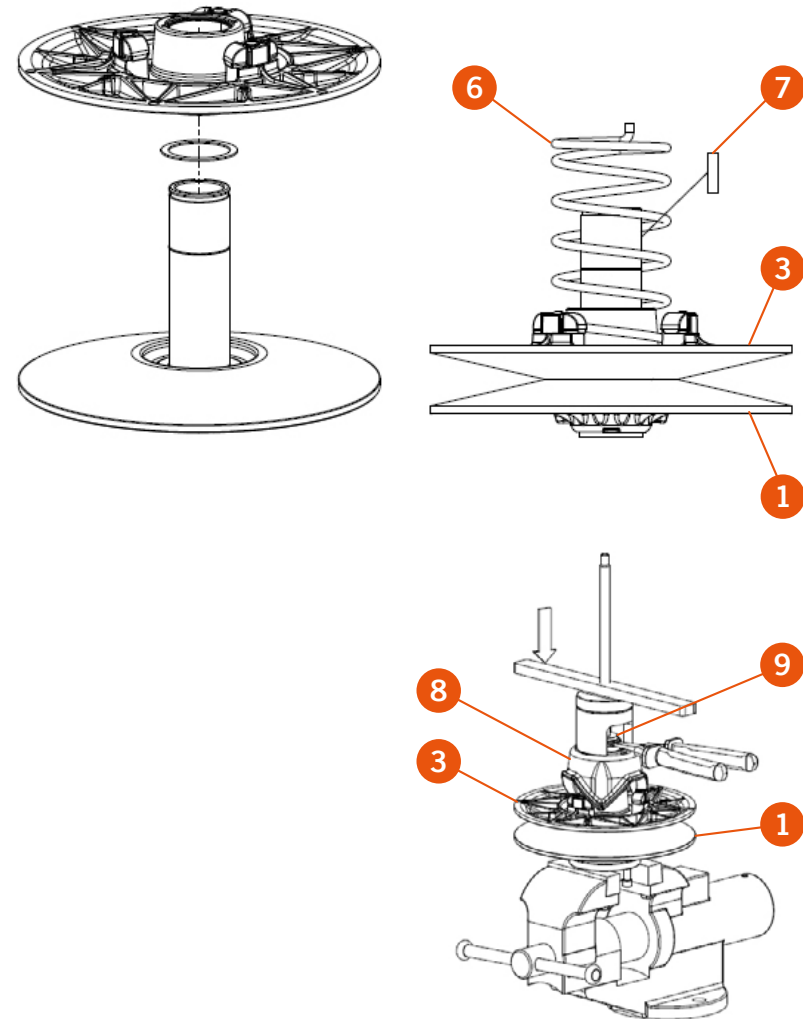


DANGER

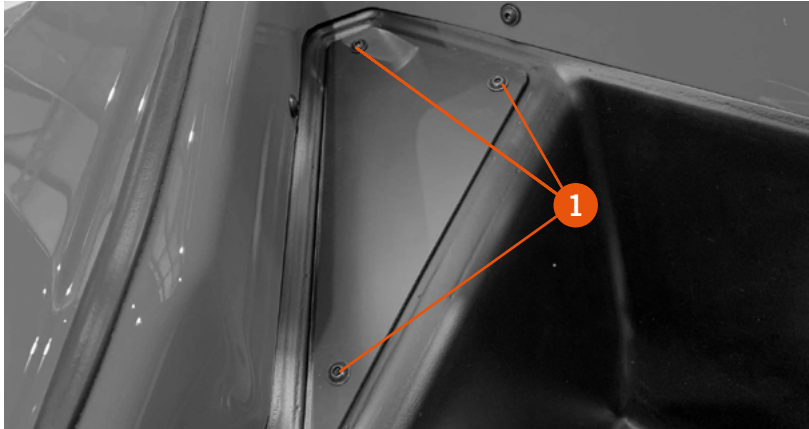
THIS REQUIRES THE USE OF THE REMOVAL TOOL TO ASSEMBLE THE SLIDING PULLEY.

Installing the cam

- Install the pulley on the removal tool.
- Place the spring on the orifice of the cam (8) in the same position as before removal.
- Press the cam (8) down onto the fixed shaft of the pulley (1) using the removal tool. Place the synchronizer block (7) on the groove on the fixed pulley (1).
- Make sure that the fixed pulley (1) is locked, rotate the sliding pulley (3) to the left or to the right to place the friction bushing on the correct side of the sliding surface of the cam as it was before disassembly.
- Screw the bar of the dismantling tool until the cam (8) is low enough to install the external circlip (9).



MAINTENANCE



COOLANT (CHECK AND CHANGE)

The coolant reservoir is located under the front hood. The coolant absorbs excess heat from the engine and transfers it to the air through the radiator. If the fluid level decreases, the engine overheats and can be severely damaged. Check the fluid level **every day**.



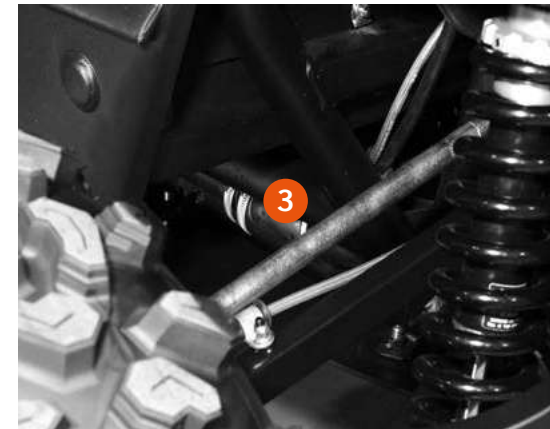
TECHNICAL INFORMATION

Recommended fluid: 50% Long time. (-35 °C).



Checking the coolant level

1. Place the vehicle in a completely horizontal position.
2. Remove the three screws (1) from the cover.
3. Unscrew the cap from the reservoir (2) in an anticlockwise direction and wait a few seconds until the vapours disperse.
4. Check the coolant level. The liquid must not exceed the line marked (MAX).
5. If the fluid level is low, add the required amount through the filling aperture.



Replacing the coolant

1. Unscrew the cap from the reservoir (1) in an anticlockwise direction and wait a few seconds until the vapours disperse.
2. Place a container beneath the radiator.
3. Unscrew the radiator cap (2) anticlockwise and drain the coolant.
4. Place a container underneath the connecting (3) and release it to drain the fluid.
7. Tighten the radiator cap (2) and the sleeve (3).
8. Add coolant up to 50 mm below the mouth of the cap closure (1).
9. Close the reservoir cap (1) and start the engine.
10. Check that the coolant level is correct.
11. If the fluid level is low, add the required amount through the filler cap and repeat the operation.

MAINTENANCE



DANGER

TO AVOID BURNS DO NOT REMOVE THE RADIATOR CAP OR TRY TO CHANGE THE FLUID WHEN THE ENGINE IS STILL HOT. WAIT UNTIL IT COOLS DOWN.



WARNING

REPLACE THE GASKETS WITH NEW ONES. CHECK FOR ANY POTENTIAL DAMAGE, LEAKS OR LACK OF GASKETS IN THE COOLING SYSTEM.

IN COUNTRIES WITH COLD WEATHER YOU SHOULD ADJUST THE ANTIFREEZE CAPACITY TO YOUR MINIMUM TEMPERATURE, ADDING A MARGIN OF -5 °C.



DANGER

LIQUID CHEMICALS ARE HARMFUL TO THE HUMAN BODY. FOLLOW THE MANUFACTURER'S INSTRUCTIONS.



WARNING

THE USE OF INCORRECT LIQUID SOLUTIONS MAY CAUSE DAMAGE TO THE ENGINE AND THE COOLING SYSTEM. USE COOLANT WITH A SPECIFIC CORROSION INHIBITOR FOR ALUMINIUM ENGINES AND RADIATORS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.



RADIATOR PIPES AND CONNECTIONS (CHECK)

Radiator hosepipes

Check that the radiator hosepipes do not have cuts or are damaged and that the connections do not have leaks.

Radiator

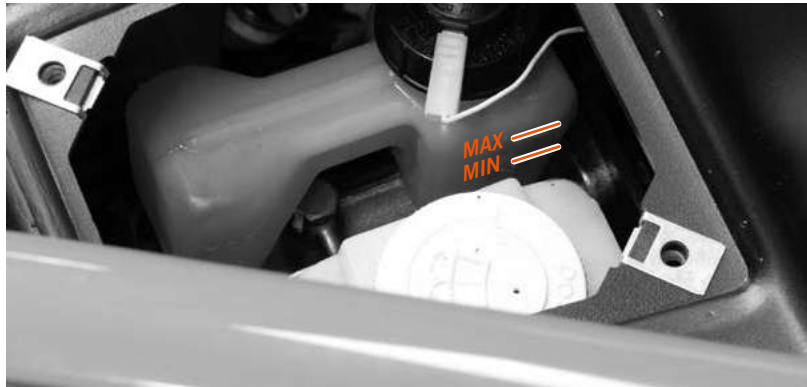
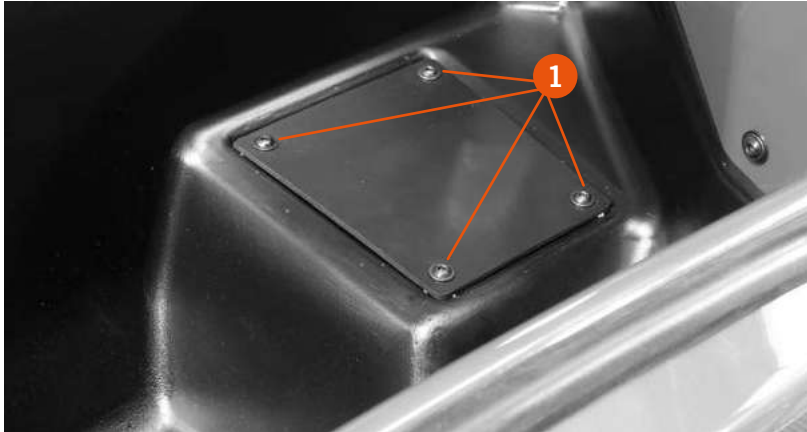
Check that the radiator fins are not obstructed (insects or mud). Clean any such obstructions with a jet of water at low pressure.



WARNING

USING HIGH PRESSURE WATER CAN DAMAGE THE RADIATOR FINS AND DIMINISH THE EFFECTIVENESS. DO NOT OBSTRUCT OR DIVERT THE AIR INLET TO THE RADIATOR BY INSTALLING ANY UNAUTHORIZED ACCESSORIES. INTERFERING WITH THE RADIATOR MAY CAUSE IT TO OVERHEAT AND DAMAGE THE ENGINE.

MAINTENANCE



BRAKE FLUID (CHECK)

Inspect the brake fluid and change it regularly. You must also change it if it is contaminated by water or dirt. The brake fluid reservoir is located under the front hood; for access, remove the cover by loosening the four screws (1).



DANGER

DO NOT SPILL BRAKE FLUID ON PAINTWORK.

DO NOT MIX DIFFERENT TYPES OF BRAKE FLUID. THE FLUID USED TO FILL OR RENEW YOUR CIRCUIT MUST RESPOND TO THE SPECIFIED STANDARD IN THE FLUID RESERVOIR OF EACH CIRCUIT. YOU MUST USE DOT-4.

YOU SHOULD NEVER CHANGE THE SPECIFICATION, ALWAYS RESPECT THE DOT-4 SPECIFICATION. WHAT IS IMPORTANT IS NOT THAT THE BRAKE FLUID SHOULD BE THE SAME BRAND, RATHER THAT IT MUST HAVE THE SAME SPECIFICATION. NEVER USE FLUID FROM A CONTAINER THAT IS NOT SEALED (UNOPENED) AT SOURCE. NEVER, UNDER ANY CIRCUMSTANCES, USE BRAKE FLUID FROM AN UNSEALED CONTAINER NOR, OBVIOUSLY, ALREADY USED BRAKE FLUID.



WARNING

CHECK THAT THERE IS NO LOSS OF LIQUID THROUGH THE GASKETS. CHECK FOR POSSIBLE DAMAGE TO THE BRAKE SLEEVES.



BRAKE FLUID (CHANGE)

The brake fluid reservoir is located under the front hood.

1. Place the vehicle in a completely horizontal position.
2. Loosen the four screws to remove the cover.
3. Unscrew the cap from the reservoir (1) in an anticlockwise direction and wait a few seconds until the vapours disperse.
4. Remove the rubber cap from the bleed screw (2) and attach a rubber tube to collect the liquid.
5. Keeping your foot on the brake pedal, loosen the bleed screw (3) so that the air in the installation can get out.
6. Repeat the operation until only new brake fluid oozes from the rubber tube, beforehand, gradually fill the brake fluid reservoir with new fluid.
7. Tighten the bleed screw.
8. Restore the brake fluid level in the reservoir.
9. Perform this operation for the four brake callipers.
10. If necessary, purging is also possible using a specific vacuum pump. Contact your Corvus Technical Service.



TECHNICAL INFORMATION

Recommended fluid: DOT-4 brake fluid.

Tightening torque of the brake caliper bleed screws. 7-9 Nm.

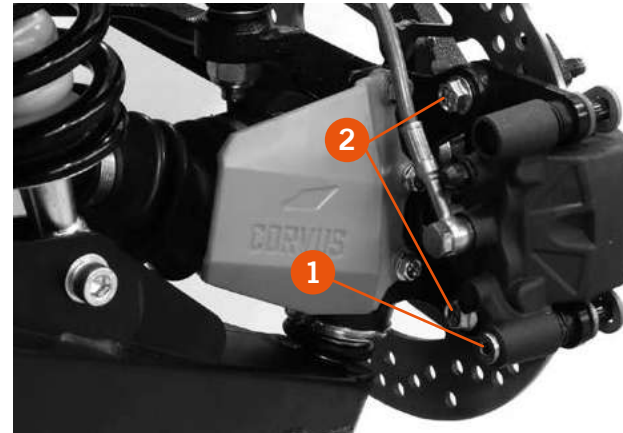
MAINTENANCE



DANGER

TO PREVENT DAMAGE TO THE CANOPY, DO NOT ALLOW BRAKE FLUID TO COME INTO CONTACT WITH IT DURING BLEED OPERATIONS.

IN ADDITION, WHEN BLEEDING THE BRAKE CALLIPERS, DO NOT ALLOW THE FLUID TO COME INTO CONTACT WITH THE BRAKE DISCS OR WITH THE BRAKE PADS. FAILURE TO COMPLY WITH THIS RULE IS DETRIMENTAL TO THE FUNCTIONING AND EFFICIENCY OF THE BRAKING SYSTEM.



BRAKE PADS (CHANGE)

1. Remove the screw (1).
2. Remove the two screws (2) holding the clamp and remove it from its housing.
3. Push the clamp piston to facilitate the removal of the pads.
4. Remove the pads.
5. Install the new brake pads.
6. For installation. follow these steps in reverse order.



WARNING

ONCE YOU HAVE INSTALLED THE NEW PADS, IT IS PROBABLE THAT THE BRAKE FLUID LEVEL WILL HAVE RISEN; CHECK THE LEVEL.



TECHNICAL INFORMATION

Wear limit: 1.5 mm.

Wheel nuts tightening torque: 60 Nm

Clamp screws tightening torque: 30 Nm



BRAKE PADS (CHECK)

If the thickness of any of the front or rear disc brake pads is less than 1.5 mm, completely change the set of affected pads.



DANGER

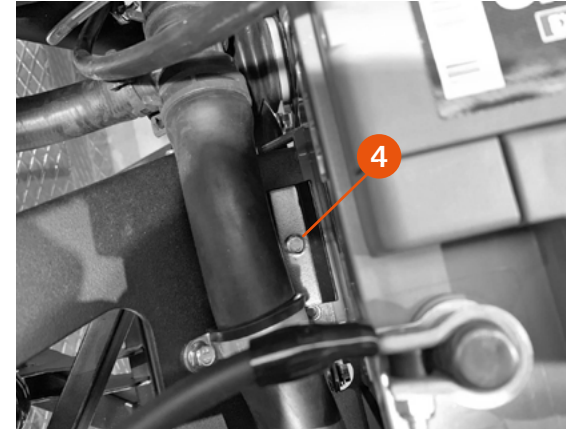
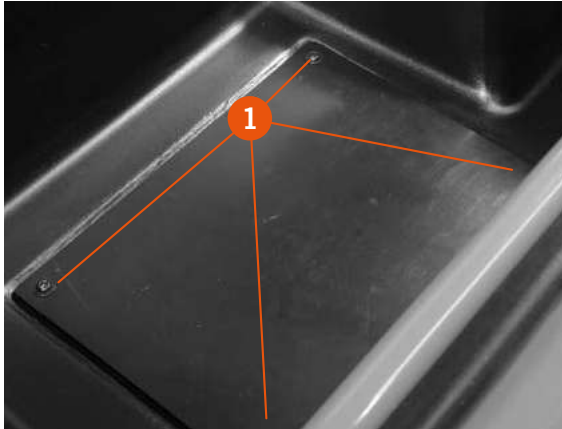
VERIFY THAT THE DISC THICKNESS IS AT LEAST 3.5 MM IN THE FRONT AXLE AND 3.5 MM IN THE REAR AXLE.



WARNING

WE RECOMMEND THAT YOU GO TO YOUR **CORVUS** DEALER TO CHANGE THE BRAKE PADS. THEY WILL ALSO CHECK FOR ANY POSSIBLE WEAR OF THE BRAKE DISCS.

MAINTENANCE



BATTERY (REPLACEMENT)

The battery does not require maintenance.

The battery is located under the front hood.

To change it, perform the following steps:

1. Loosen the four screws of the battery cover (1) and remove it.
2. First of all, loosen the negative battery terminal (2).
3. Then loosen the positive battery terminal (3) and remove it.
4. Loosen the mounting bolt from the battery (4) and remove it.

Replace the battery with a new one and follow the steps in reverse order to reassemble it.

Maintenance is limited to checking the charge status and if necessary to recharging it.

These operations should be carried out every 6 months when in storage, with the circuit open. Therefore, it is necessary to control the charge and if necessary, to recharge it prior to storage of the vehicle and then every 6 months.

Charging current of 1/10th of the rated capacity of the battery.

It is recommended to always keep the battery clean, especially at the top, and to protect the terminals with a protective agent. If the vehicle is not used for a certain length of time (**1 month or longer**) the battery must be recharged periodically.

MAINTENANCE



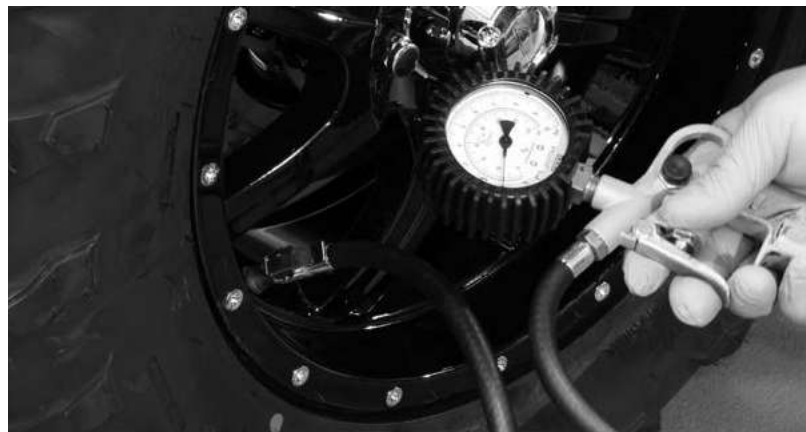
WARNING

BATTERY IS FULLY CHARGED TO ENSURE ITS MAXIMUM PERFORMANCE. IF THE BATTERY IS NOT CHARGED PROPERLY PRIOR TO OPERATION, IT MAY SUFFER PREMATURE DAMAGE.



DANGER

DO NOT HANDLE OR TRY TO OPEN THE BATTERY, THE ELECTROLYTE AND GASES ARE TOXIC AND CAN CAUSE SERIOUS INJURY. KEEP THE BATTERY OUT OF THE REACH OF CHILDREN. KEEP THE BATTERY AWAY FROM SOURCES OF HEAT, OPEN FLAMES AND SPARKS. ALWAYS STORE AND CHARGE THE BATTERY IN WELL-VENTILATED AREAS. USE PROTECTIVE CLOTHING AND GOGGLES.



TIRES(CHECK)

Check that the tires are not worn, cracked or damaged. Also check that they are at the correct pressure.



TECHNICAL INFORMATION

Recommended front/rear pressure:
1.0 bar (empty vehicle)
1.5 bar (vehicle at full load)

BOLTS, NUTS AND FASTENINGS

Every day before you collect your vehicle you should check that all the nuts and bolts are tight. You should also check that the other fastenings are in place and in good condition.

MAINTENANCE



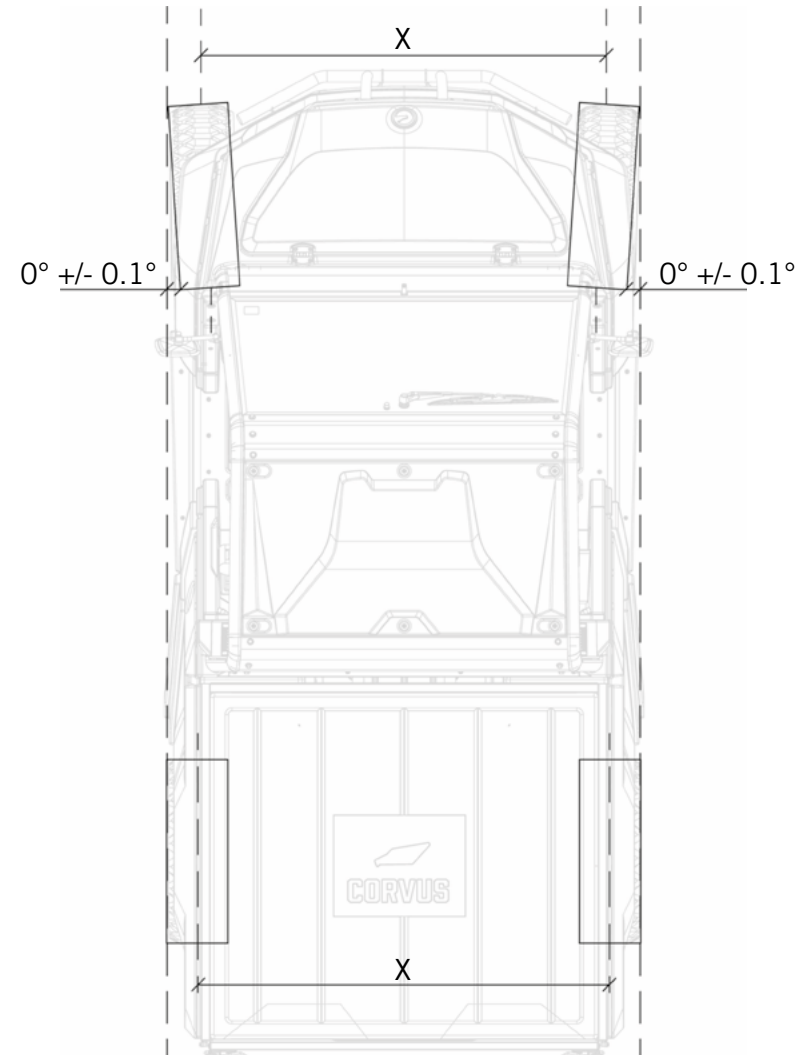
STEERING (ALIGNMENT)

To align the vehicle properly, the measurements indicated in the graph must be respected.



WARNING

MEASUREMENTS AND ADJUSTMENTS MUST BE MADE WHEN THE VEHICLE IS EMPTY.



MAINTENANCE

Checking the alignment:

1. Run a bar or a rope from the rear wheel to the front.



WARNING

THIS BAR OR ROPE MUST REMAIN PARALLEL BETWEEN THE TWO POINTS ON THE REAR WHEEL RIM.

This process will project the ideal point for the front of the steering wheel.

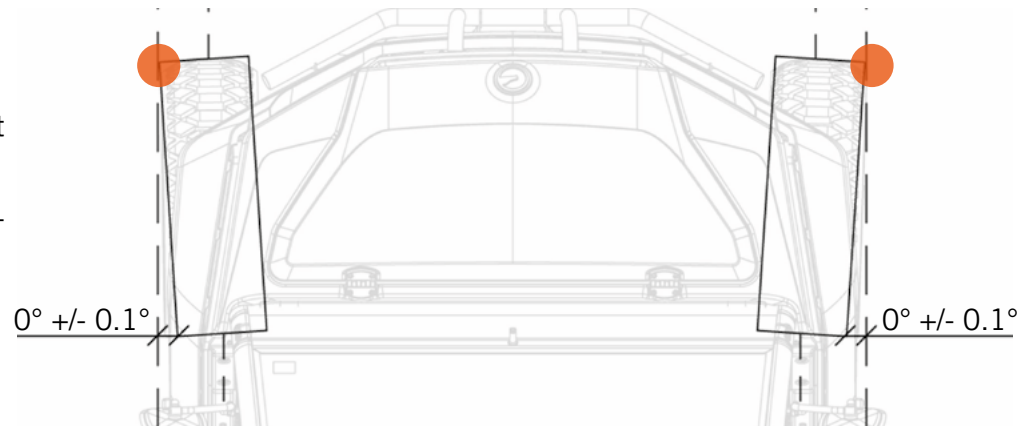
2. Check if the steering respects the indications in the chart. If not, you must perform the corresponding alignment.



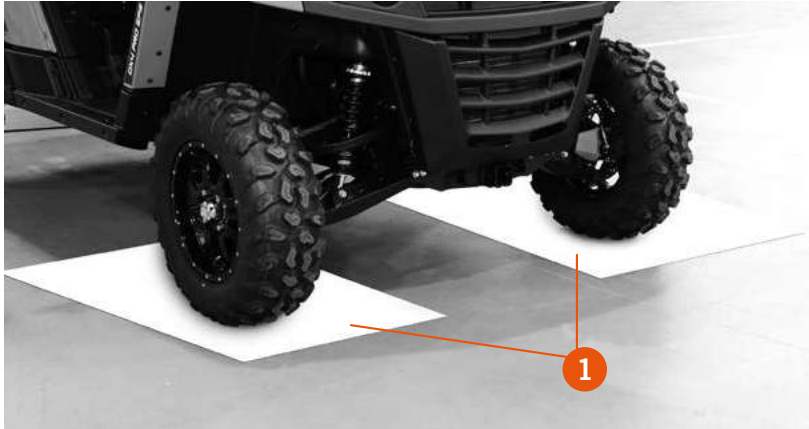
TECHNICAL INFORMATION

If you have the necessary machinery to do this, do it mechanically and adjust $0^\circ \pm 0.1^\circ$.

The steering wheels should have a divergence of $0^\circ \pm 0.1^\circ$.



MAINTENANCE



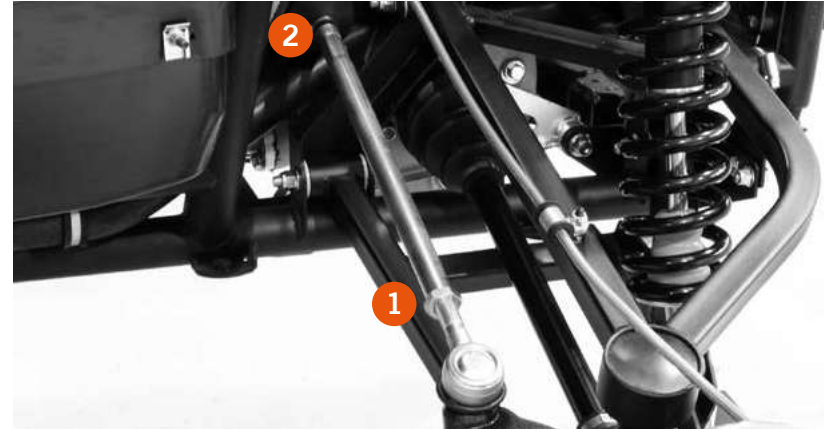
Alignment of the steering wheels.



WARNING

TO FACILITATE THE ALIGNMENT PROCESS, IT IS ADVISABLE TO FIT METAL SHEETS UNDER EACH OF THE FRONT WHEELS (1) TO ENSURE MINIMUM SLIPPAGE.

BEFORE YOU DO THIS, YOU MUST PERFORM STEPS 1 AND 2 OF THE PREVIOUS PARAGRAPH (CHECKING ALIGNMENT).



Then,

1. Centre the steering wheel.
2. Fix the position of the steering wheel to prevent movement during the alignment process.
3. Use a wrench to loosen the nut (1) of the two steering braces.
4. From point (2), adjust both sides until they are correctly aligned.
5. Then fix the position by using the nuts (1) on both sides.

MAINTENANCE



DANGER

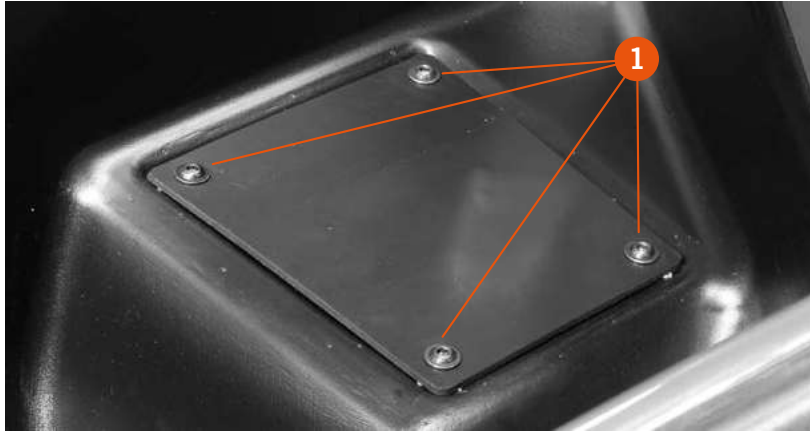
ALWAYS USE A WRENCH TO HOLD THE ENDS OF THE BRACE WHEN LOOSENING OR TIGHTENING THE COUNTER-NUTS OR YOU MAY DAMAGE THEM.



TECHNICAL INFORMATION

The front measurement should be $0^\circ \pm 0.1^\circ$ greater than the rear measurement.

MAINTENANCE



WINDSHIELD WASHER FLUID

The windshield wiper fluid reservoir must contain the volume required to clean the windshield properly.

The reservoir is located under the front hood.

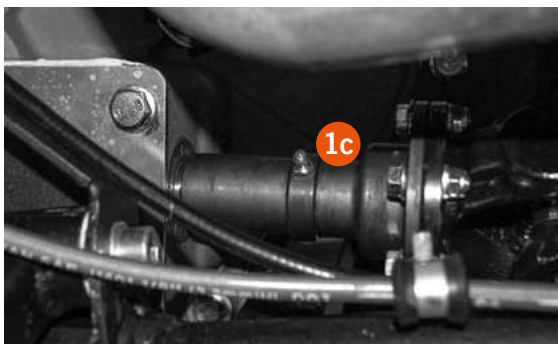
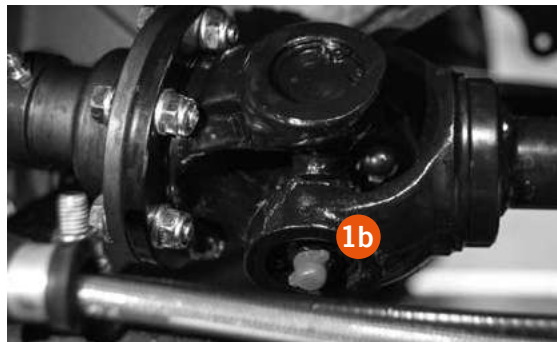
1. Loosen the 4 screws holding the cover (1) and remove it.
2. Remove the cap (2) and check the level.
3. If there isn't enough liquid, fill it up to the top of the tank.



TECHNICAL INFORMATION

The standard volume is 1 L.
Recommended fluid: standard windshield wiper fluid.

MAINTENANCE



LUBRICATION

Your vehicle is equipped with grease nipples to facilitate the lubrication of certain parts (two in each rear wheel spindle, two in each cardan joint and one in the transmission cardan/output coupling joint).

Daubing the cardan

To perform this process and to access the cardan, it is necessary to disassemble the underbody protector (see page 41).

To daub the cardan, follow the procedure.

1. Use the three grease nipples (1a, 1b, 1c).
2. Check the play of the crossarms. If there is play, replace the full bar.

Daubing the stub shafts

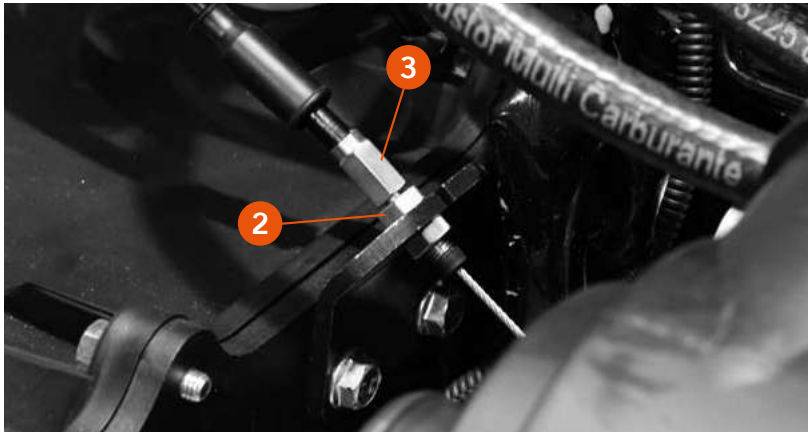
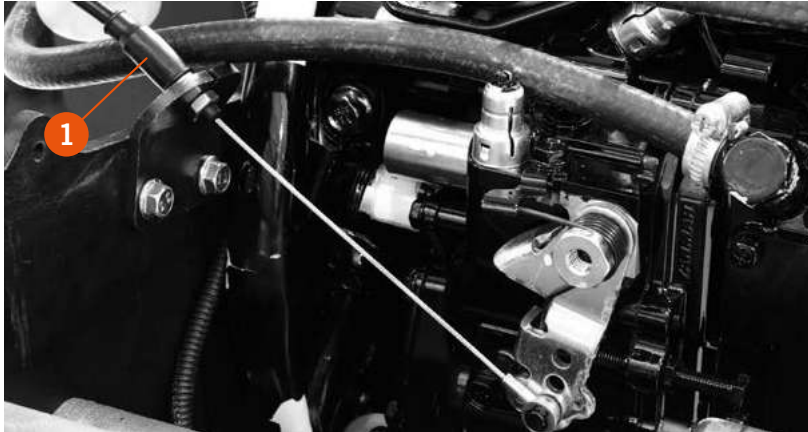
- 1- Lower rear wheel spindle grease nipple (2).
- 2- Upper rear wheel spindle grease nipple (3).



TECHNICAL INFORMATION

Grease type:
Refer to manufacturer.
Cardan anchor screws tightening
torque: 12 Nm.

MAINTENANCE



ADJUSTING THE CABLES

Accelerator cable

To adjust the play of the accelerator cable, follow this procedure.

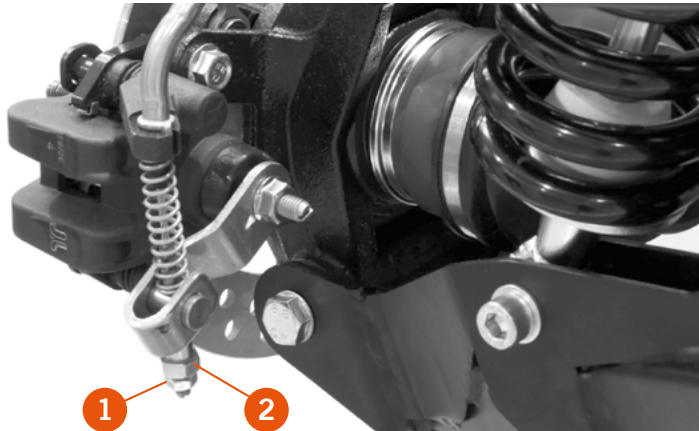
1. Remove the cable sheath (1).
2. Use a wrench to loosen the nut (2).
3. Adjust from point (3) until the required play value is reached.
4. Then put the sheath back on.



TECHNICAL INFORMATION

Recommended play: 2-3 mm on the accelerator pedal.
Nut tightening torque: 12 Nm

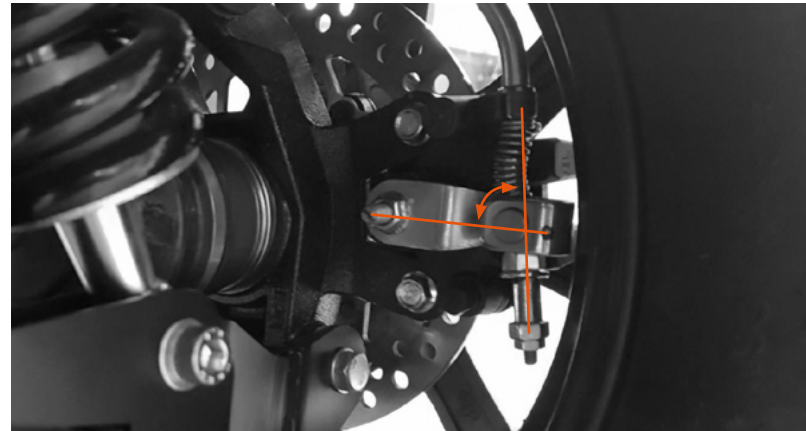
MAINTENANCE



Hand brake cable

To adjust the tension of the handbrake cable, follow this procedure.

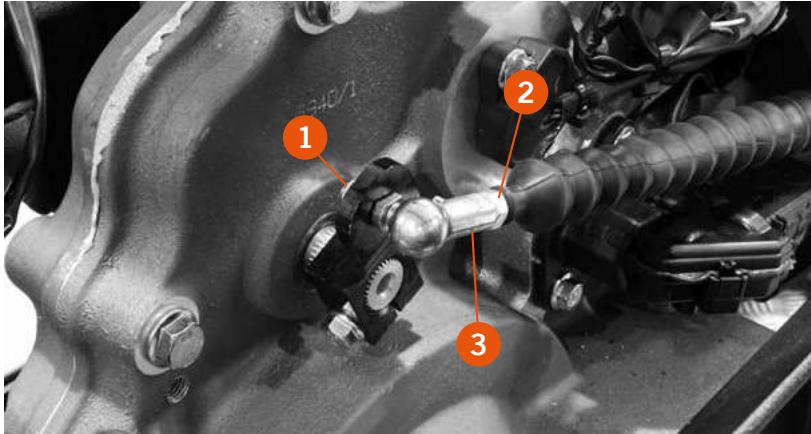
1. Loosen the nut (1).
2. Adjust by tensing the nut clockwise (2).
3. Check to see if the hand brake has a correct tension.
4. Follow this process for the two brake callipers, the left hand one and the rear right hand one.



TECHNICAL INFORMATION

The cam must be adjusted in such a way that when the parking brake is applied to its maximum extent, the angle of the cam with reference to the cable has to be $85^\circ \pm 0.5$.

MAINTENANCE



Gear cable

To adjust the play in the gear cable, follow this procedure.

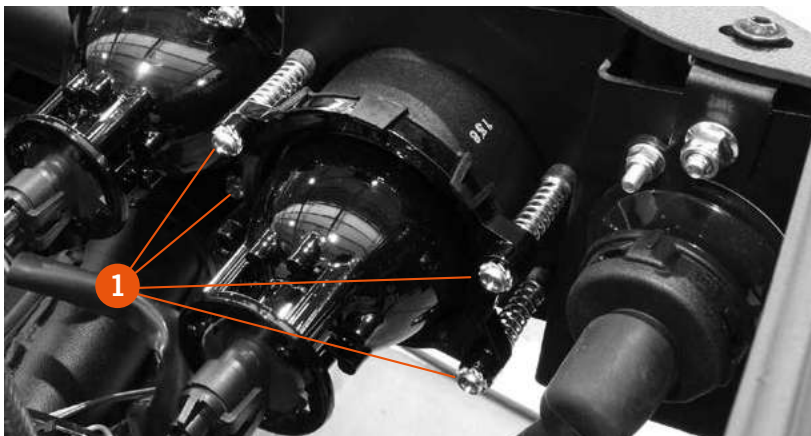
1. Use a wrench to loosen the nut (1).
2. Use a wrench to loosen the nut (2).
3. Adjust from point (3) by turning right or left, until you reach the required play value.
4. Then tighten the nuts.



TECHNICAL INFORMATION

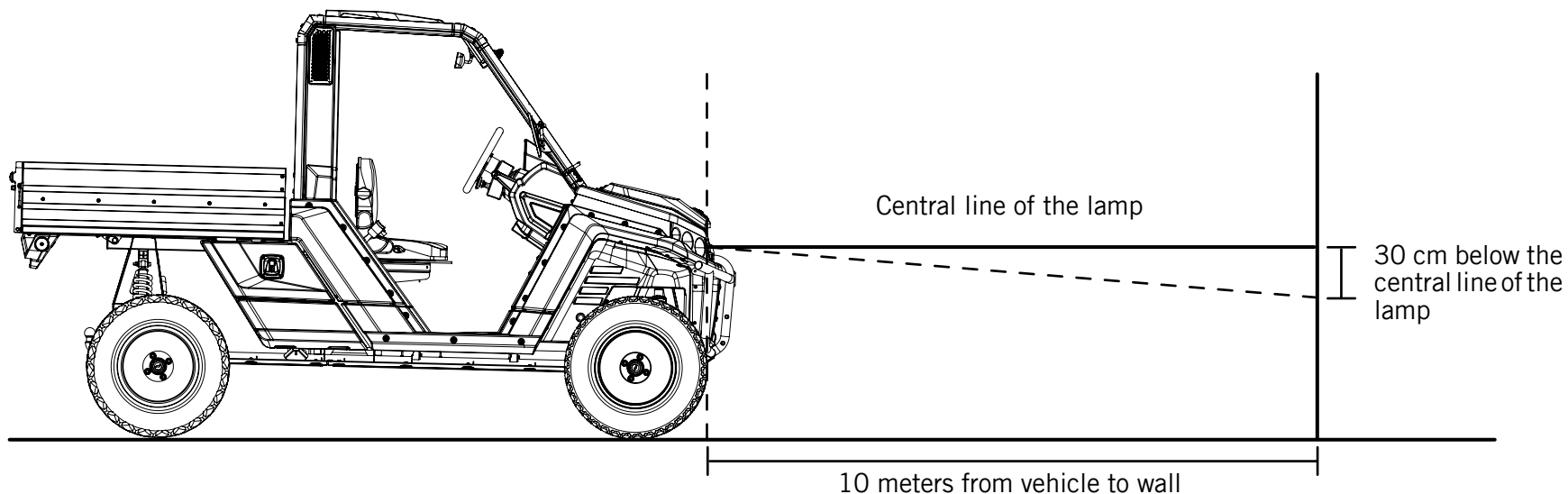
Nut tightening torque: 12-15 Nm

MAINTENANCE

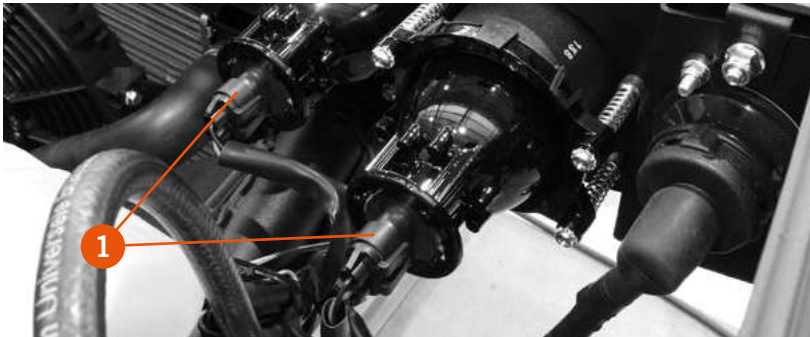


LIGHTS (ADJUSTING THE HEIGHT)

1. Position the vehicle 10 meters from a wall and use the parking brake to immobilize it.
 2. Open the front hood.
 3. Unscrew the eleven screws from the base of the hood and remove it (see page 94).
 4. Use the screws to adjust the headlights (1).
3. The light beam must be 30 cm below the horizontal line projected onto the wall from the centre of the lamp.



MAINTENANCE



FRONT LOW AND HIGH BEAM LIGHTS AND INDICATORS (REPLACEMENT)

1. Switch the vehicle off.
2. Open the front hood.
3. Remove the base of the hood (see page 94)

Replacing the low / high beam lamps:

1. Unplug the electrical connector (1) of the lamp you are replacing.
2. Turn the bulb counterclockwise to remove it from its housing.

Replacing the indicator lamps:

1. To replace the indicator lamps, turn the bulb holder bushing (2) counterclockwise to disconnect it from its housing.
2. Turn the lamp and separate it from the bushing.

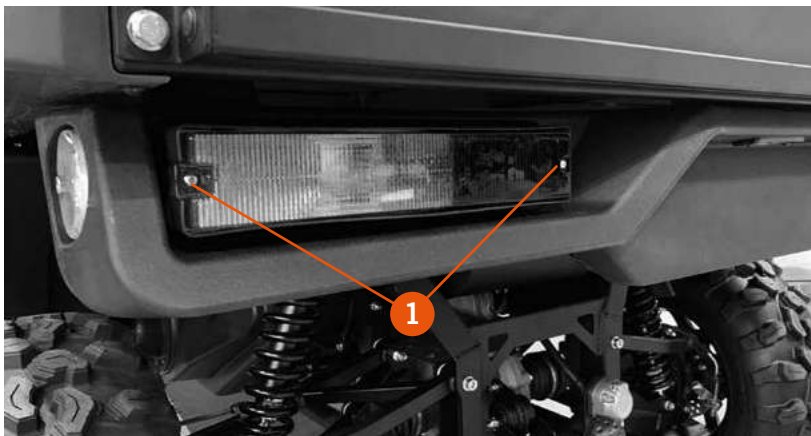


TECHNICAL INFORMATION

Low and high beam headlamps:
HB3 12V 60W, Ref. 09180040003.

Indicator lamp 12V 21W, Ref. 08000960000

MAINTENANCE

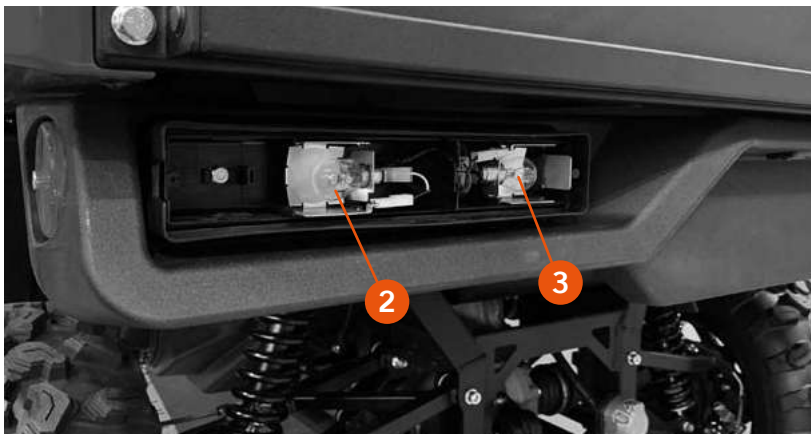


REAR INDICATOR, BRAKE AND SIDELIGHT LAMPS (REPLACEMENT)

1. To access the rear lamps, you will have to remove the light cover that is anchored with the two screws indicated in the image (1).

2. You will then be able to see the two lamps:

- Indicator (2)
- Brake and sidelight (3)

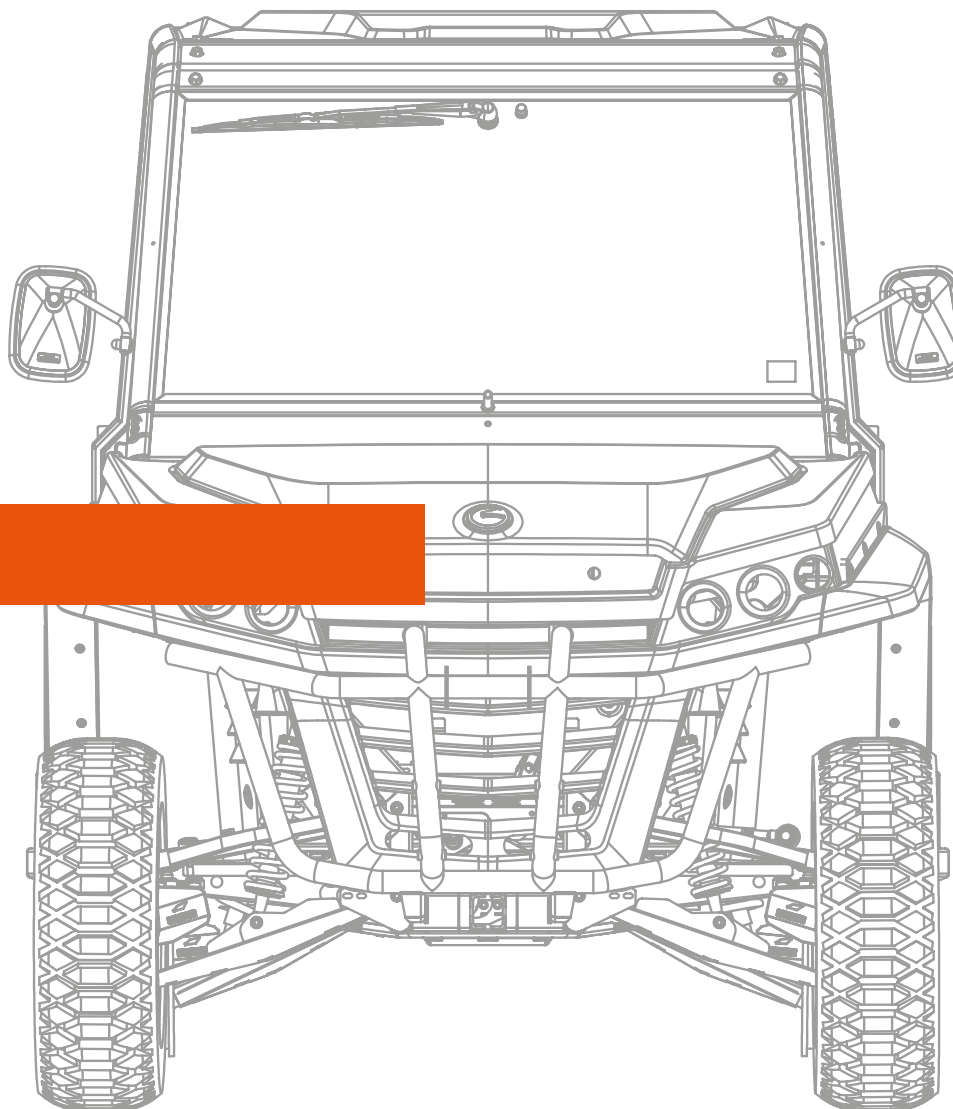


TECHNICAL INFORMATION

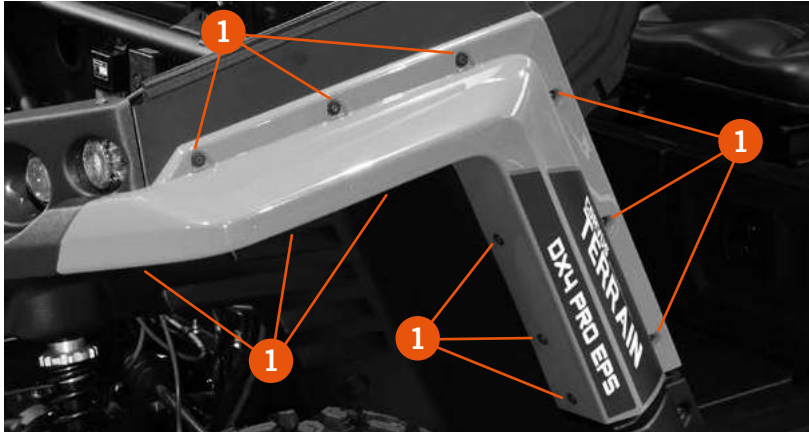
Indicator lamp:
12V, 21W, Ref. 09180040001

Brake and sidelight lamp:
12V, 21W/5W, Ref. 09180040002

CANOPY

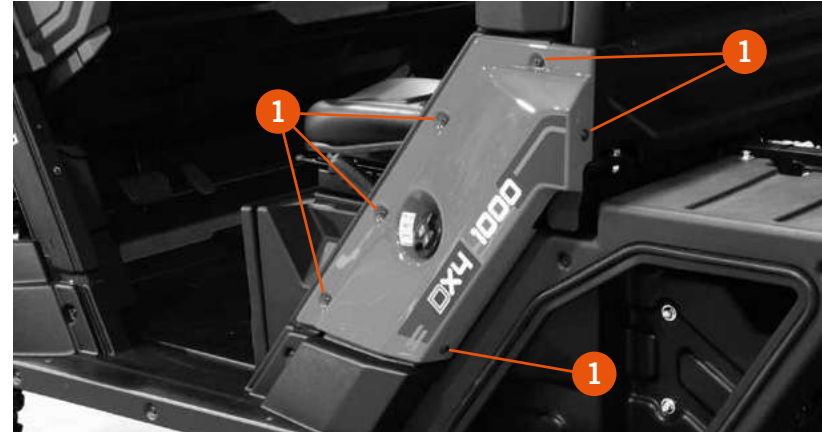


CANOPY



FRONT FENDER (REMOVAL)

1. Loosen the twelve screws (1) holding the fender and remove it.



REAR FENDER (REMOVAL)

Before you do this, you must lift out the cargo box.

1. Loosen the six screws (1) holding the fender and remove it.

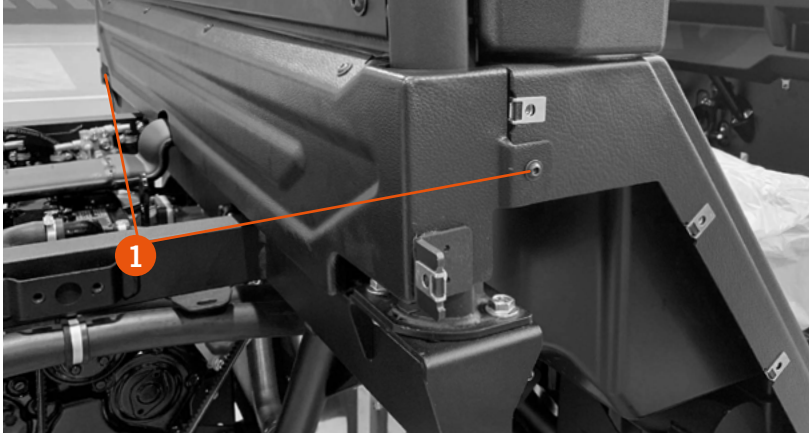
To remove the left fender you will need to remove the cap from the fuel tank.



WARNING

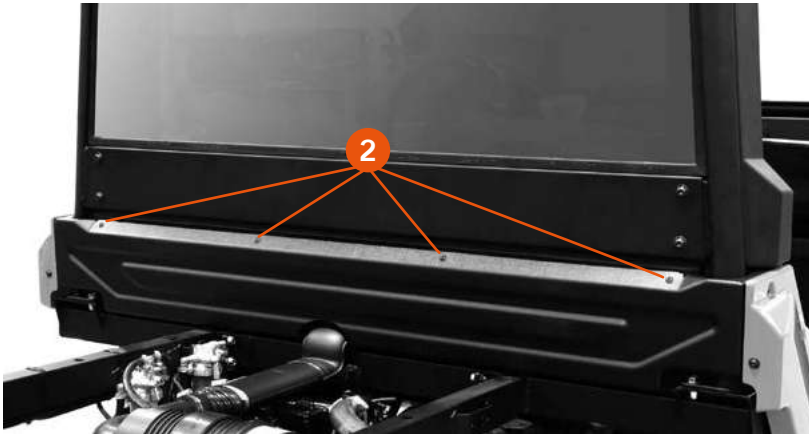
COVER THE ORIFICE OF THE FUEL TANK TO PREVENT ANY OBJECT FROM FALLING INTO IT.

CANOPY



CROSS MEMBER ROLLBAR COVER (REMOVAL)

1. Remove the rear side fenders (see page 90).
2. Loosen the two screws (1) located on the sides of the vehicle.
3. Loosen the four screws (2) and remove the cover of the cross member rollbar.



CANOPY



SIDE DRAWERS (REMOVAL)*

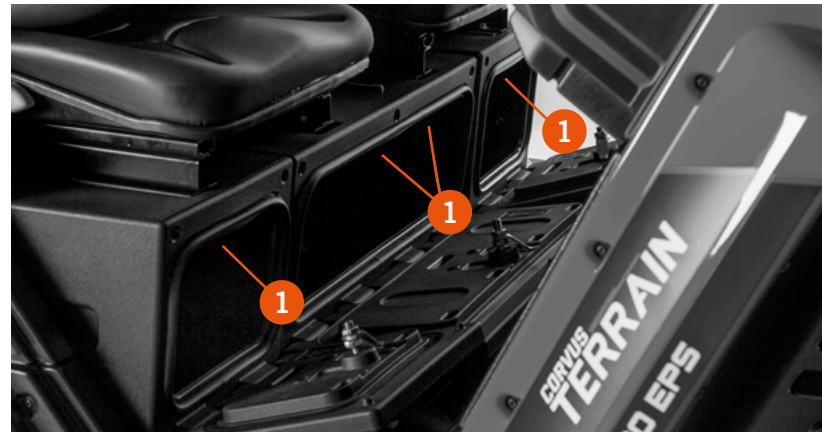
To remove the drawers, you have to lift up the cargo box.

1. Use the corresponding key to open the door of the side drawer.
2. Remove the two screws (1) located on the inside of the compartment.
3. Remove the two top screws (2).
4. Remove the drawer.



TECHNICAL INFORMATION

Screw tightening torque: 24 Nm



INNER DRAWERS (REMOVAL)*

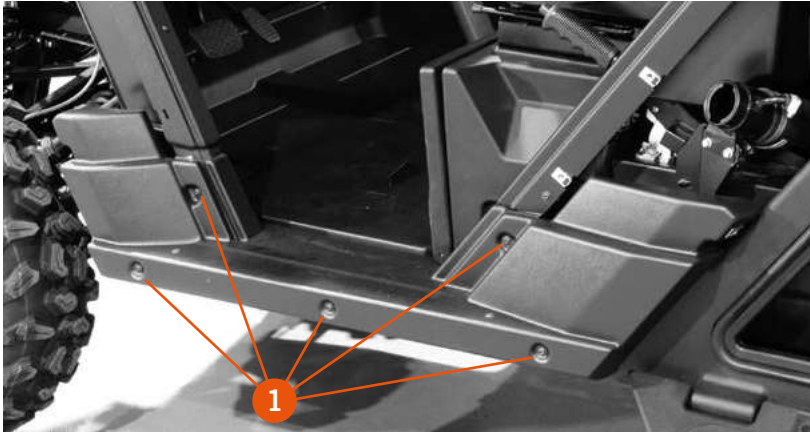
1. Open the door to the interior drawer you want to remove.
2. Remove the screws (1) from the drawer you want to remove, located inside at the top of each drawer.



TECHNICAL INFORMATION

Screw tightening torque: 24 Nm

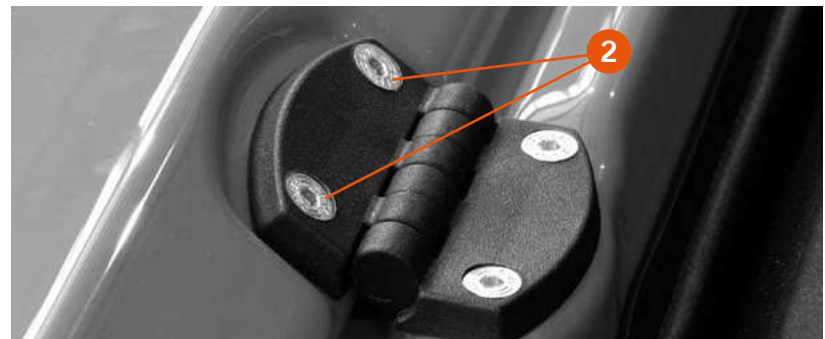
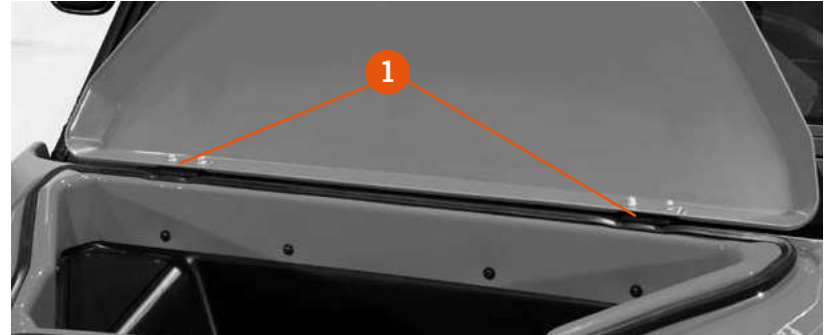
CANOPY



THRESHOLD PLATES (REMOVAL)

Before you remove the threshold plates you must previously withdraw the front and rear fenders (see page 90).

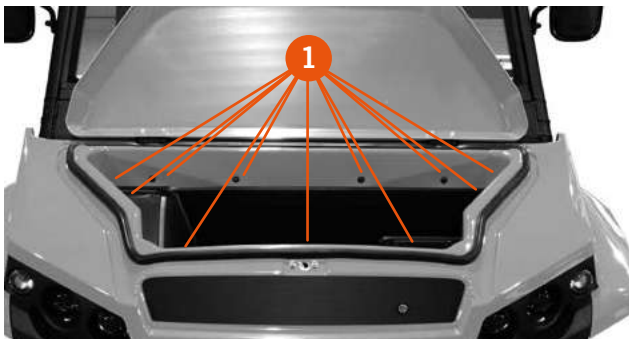
1. Remove the five screws (1) and remove the part.



FRONT HOOD (REMOVAL)

1. Open the hood with the corresponding key.
2. Slightly raise the hood.
3. Loosen the screws (2) of the hinges (1) while holding the nuts on the inside.

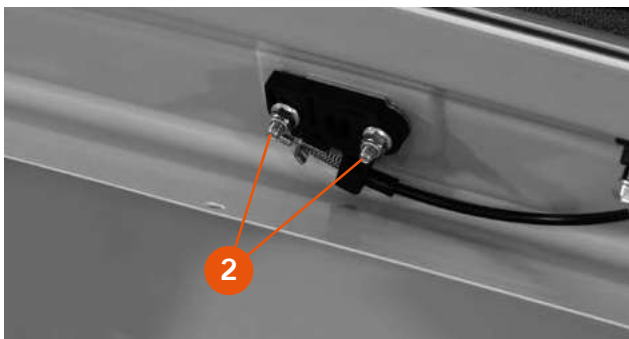
CANOPY



FRONT HOOD BASE (REMOVAL)

Previously, you need to remove the front hood.

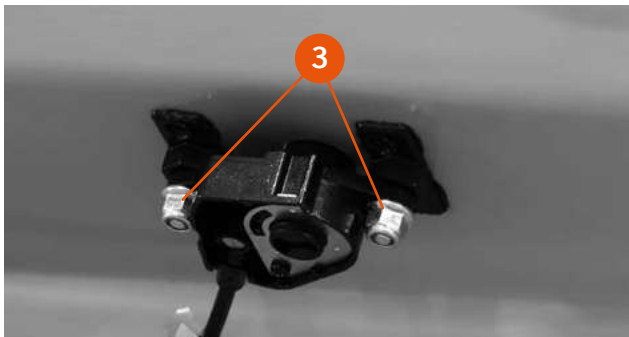
1. Loosen the eleven screws (1) holding the hood base and remove it.
2. Remove the hood safety lock (2).
3. Remove the cylinder from the lock (3).



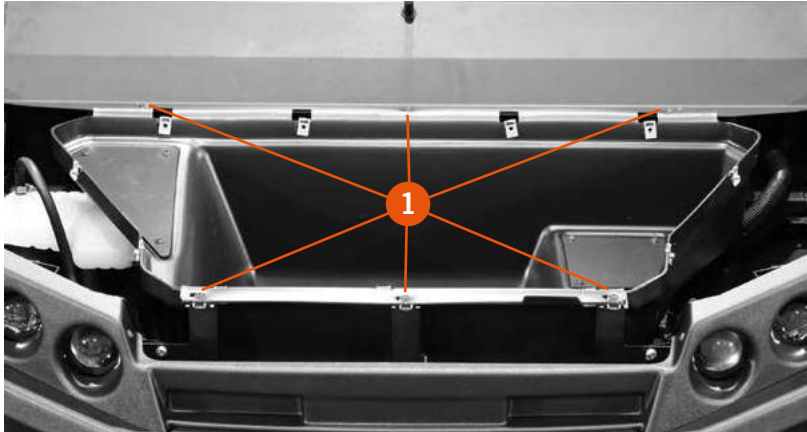
TECHNICAL INFORMATION

Lock screws tightening torque: 12 Nm

Locking screws tightening torque: 12 Nm



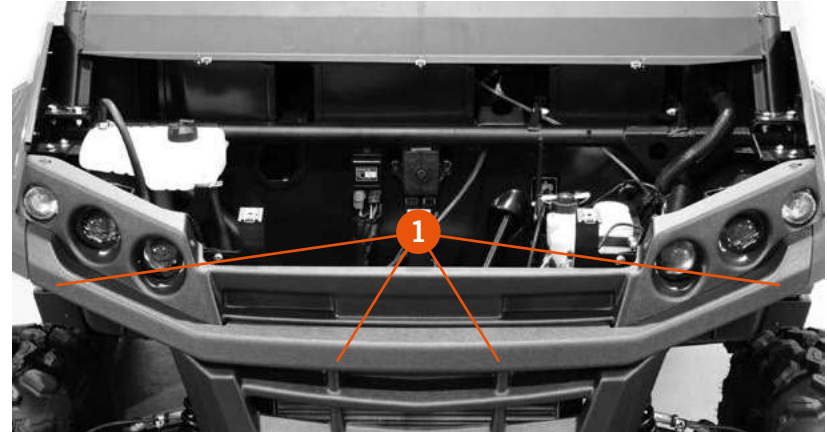
CANOPY



FRONT LUGGAGE COMPARTMENT (REMOVAL)

To remove the luggage compartment you must previously remove the front hood base (see page 94).

1. Loosen the six screws (1) that hold the front luggage compartment and remove it.

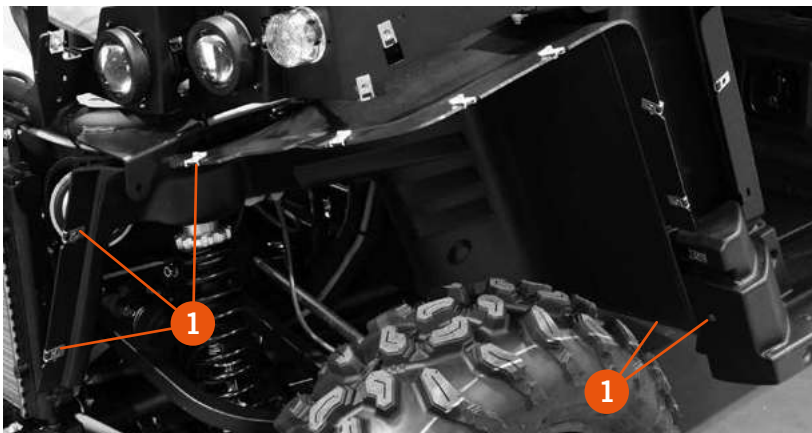


FRONT LIP (REMOVAL)

To remove the front lip you must previously remove the front fenders (see page 90).

1. Loosen the four screws (1) that hold the front lip and remove it.

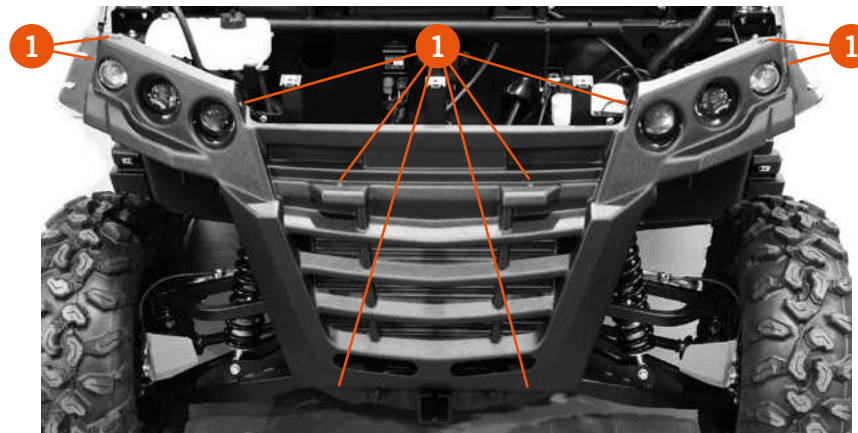
CANOPY



WHEEL ARCH (REMOVAL)

To remove the wheel arch you must previously remove the front fenders (see page 90).

1. Loosen the five screws (1) holding the wheel arch and remove it.



FRONT MASK (REMOVAL)

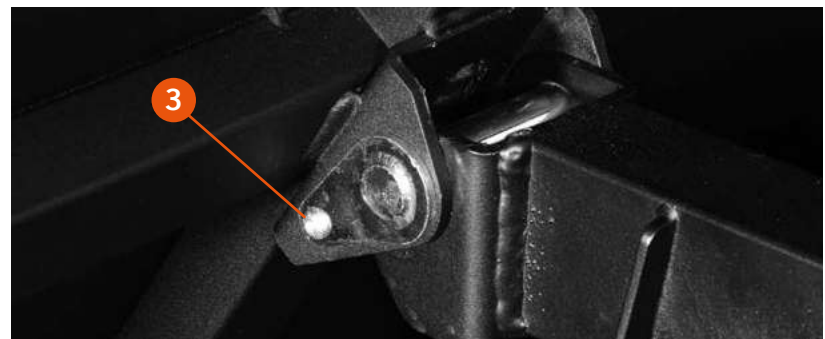
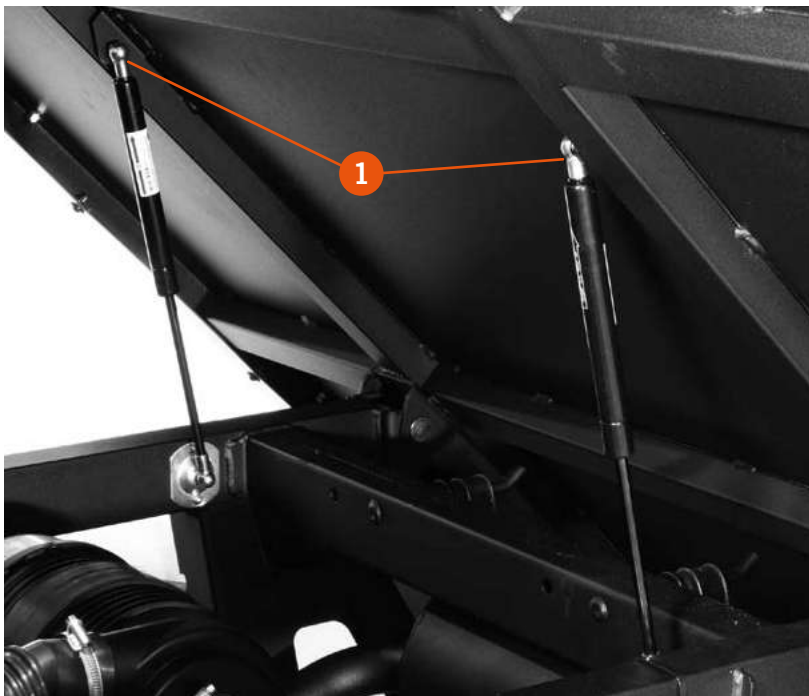
To remove the luggage compartment you must previously remove the front fenders (see page 90) and the wheel arches.

1. Loosen the ten screws (1) holding the mask and remove it.

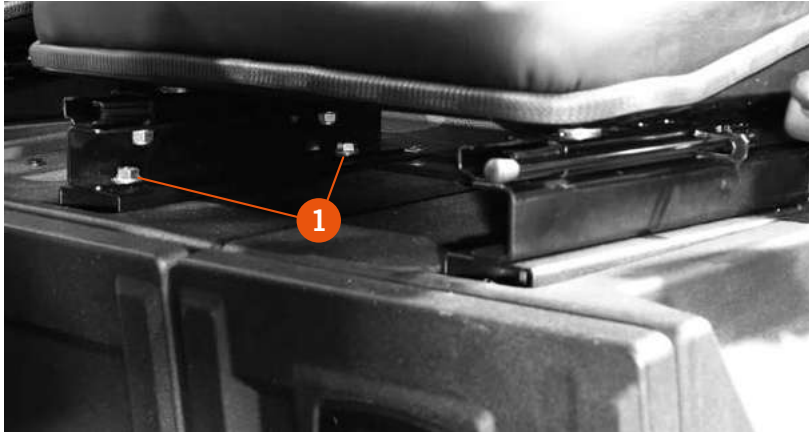
CANOPY

CARGO BOX (REMOVAL)

1. Raise the cargo box.
2. Secure the cargo box by means of load slings.
3. Loosen the upper clips (1) of the shock absorbers.
4. Disconnect the wiring of the rear lights (2).
5. Remove the screws from the latches (3) of the cargo box.
6. Remove the latches.
7. Raise the cargo box with the help of a crane.



CANOPY



SEATS (REMOVAL)

1. Remove the two screws (1) located in each of the two brackets underneath the seat.
2. Remove the seat.



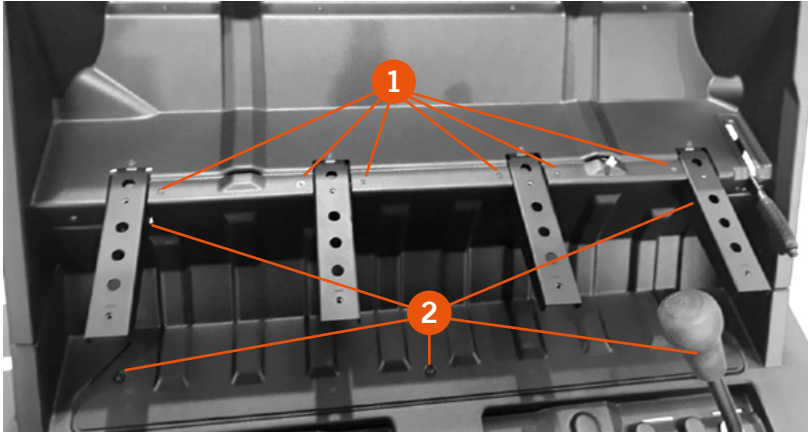
TECHNICAL INFORMATION

Screw tightening torque: 24 Nm



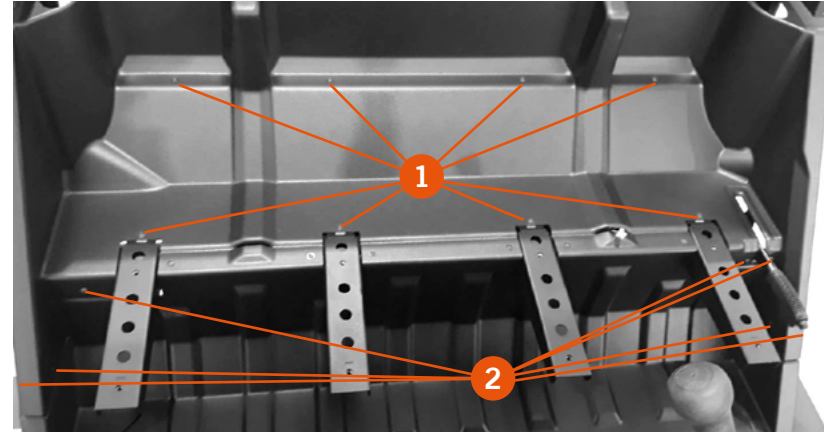
ROOF (REMOVAL)

1. Remove the plugs on the inside.
2. Remove the six screws (1).
3. Remove the roof upwards.



ENGINE FRAME COVER (REMOVAL)

1. Remove the seats (see page 98).
2. Remove the six top screws (1).
3. Remove the five bottom screws (2).
4. Remove the engine frame cover.



FRAME UNDER SEAT (REMOVAL)

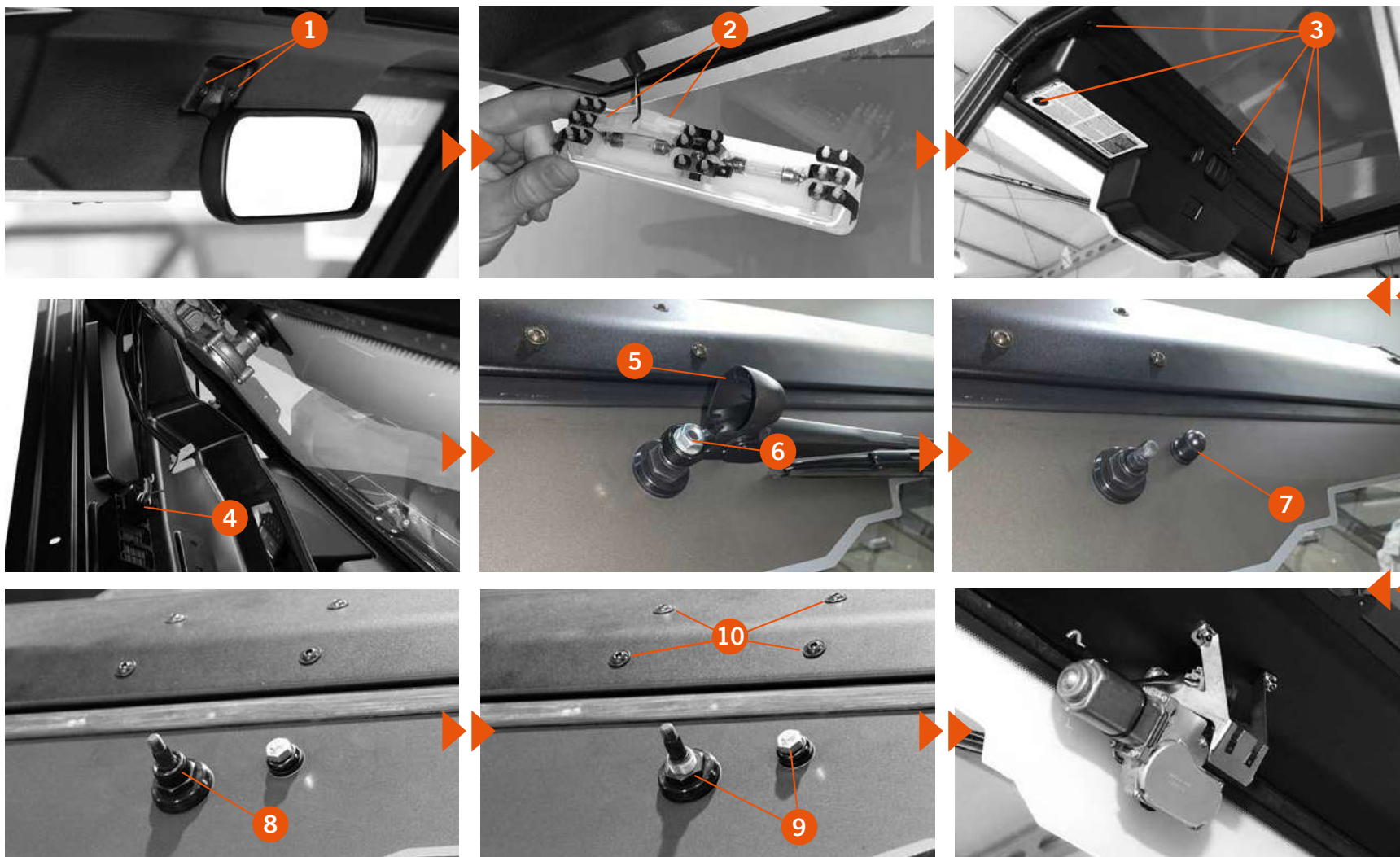
1. Remove the seats (see page 98).
2. Remove the engine frame cover.
3. Remove the eight top screws of the frame (1).
4. Remove the seven bottom screws (2).

WINDSHIELD WIPER ENGINE (REMOVAL)

1. Remove the interior rear-view mirror (1) by unscrewing the two screws.
2. Remove and disconnect the interior courtesy light (2).
3. Remove the five screws (3) from the windshield wiper cover.
4. Disable the windshield wiper button (4).
5. Remove the windshield wiper cover.
6. Lift up the cover of the windshield wiper arm (5).
7. Remove the nut (6).
8. Remove the plug (7) from the engine retaining screw.
9. Remove the plastic nut (8).
10. Remove the nuts (9).
11. Remove the four screws (10) of the interior rear view mirror bracket, holding the four nuts from the inside.

(This procedure is illustrated on the next page).

CANOPY



CANOPY



WINDSHIELD (Removal)

Front

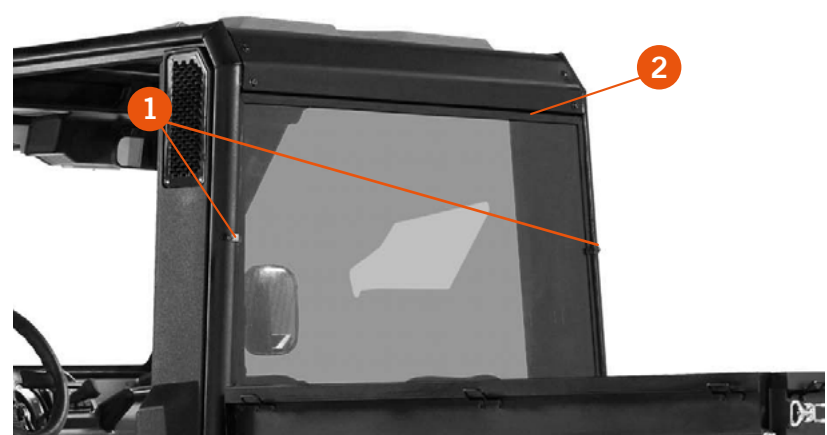
Previously remove the windshield wiper assembly.

1. Remove the two outer screws (1).
2. Release the peripheral (2) rubber from the inside.



WARNING

IT IS ADVISABLE THAT SOMEONE ELSE SHOULD HOLD THE WINDSHIELD LIGHTLY FROM THE OUTSIDE TO PREVENT IT FROM BEING EJECTED WHILE YOU ARE PUSHING THE RUBBER FROM THE INSIDE.



Rear

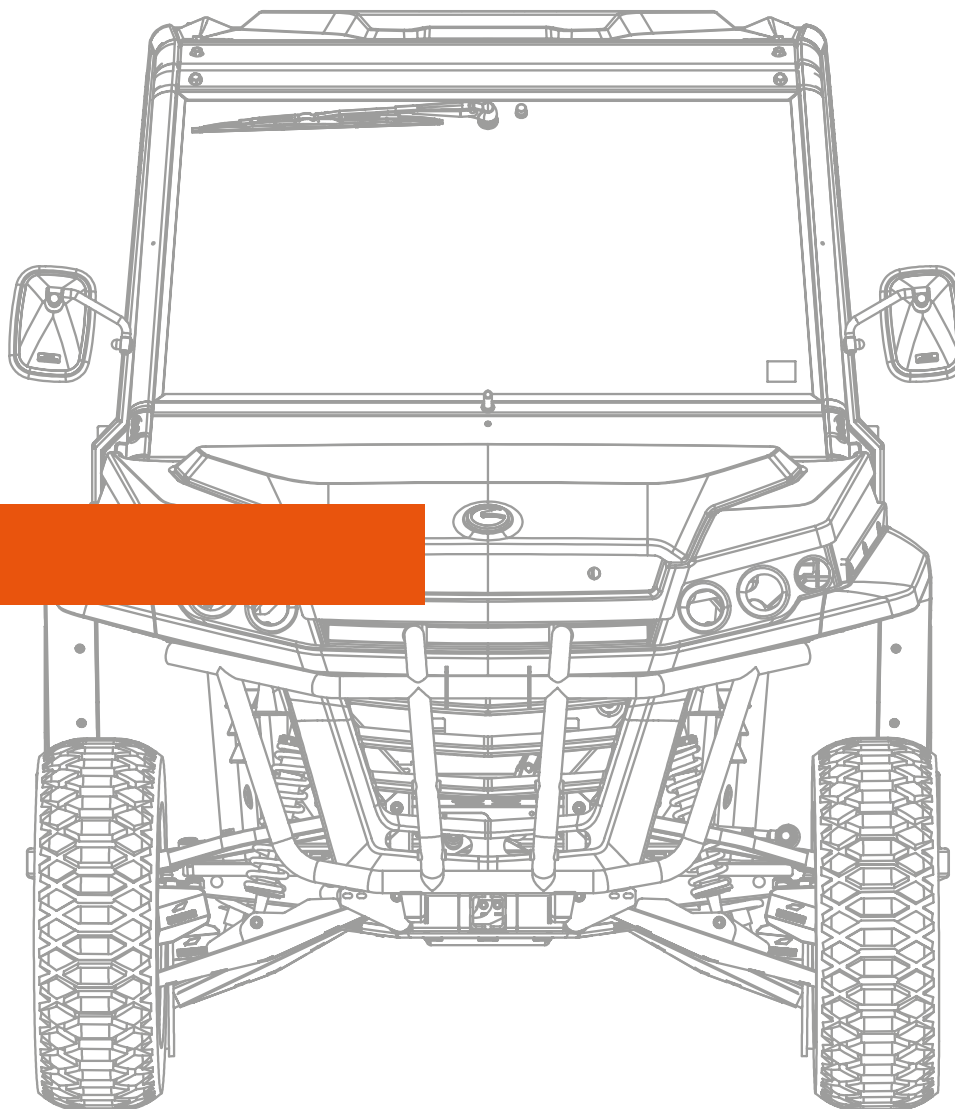
1. Remove the two outer screws (1).
2. Release the peripheral (2) rubber from the inside.



TECHNICAL INFORMATION

Flange screws tightening torque: 12 Nm

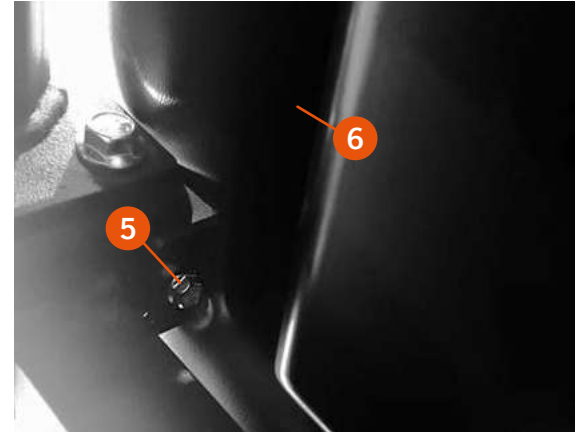
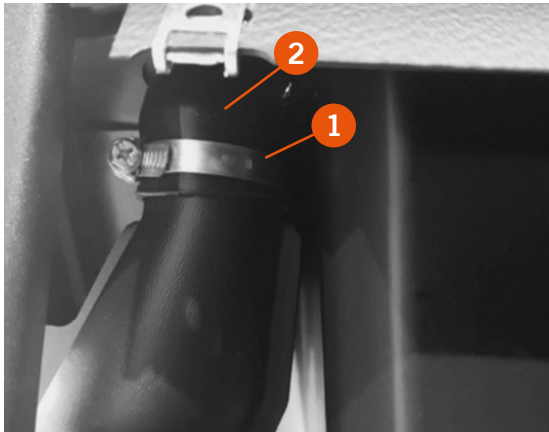
ENGINE





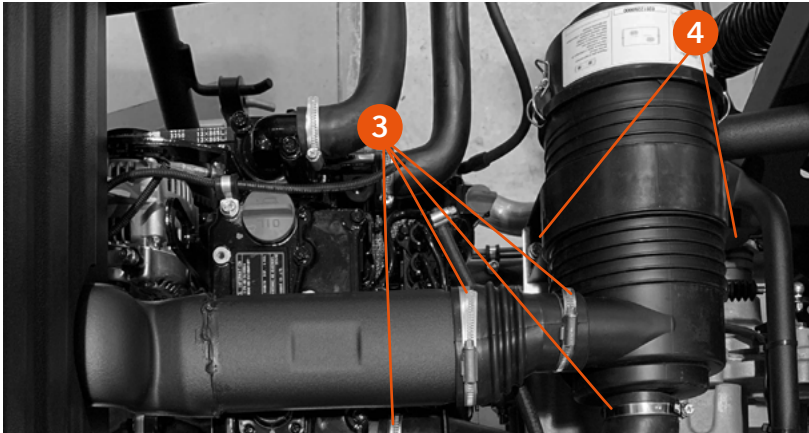
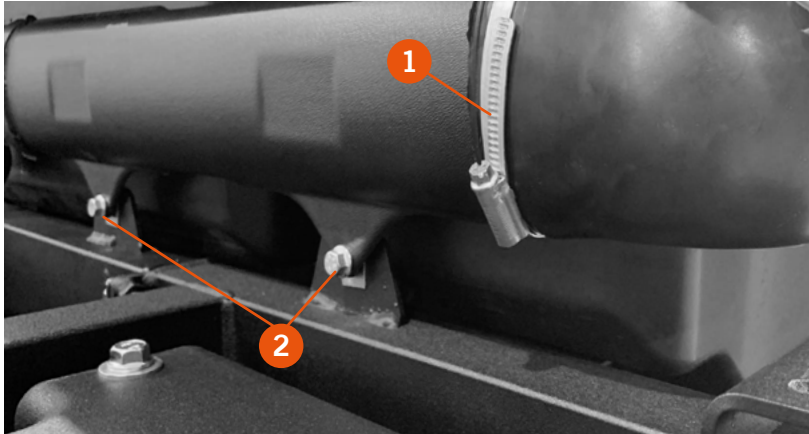
SNORKEL DUCTS AND CVT DUCTS (REMOVAL)

1. Remove the four screws (1) securing the snorkel grid and remove it.
2. Remove the two inner screws (2).
3. Remove the plastic plug (3) and the screw inside (4).
4. Remove the two screws (5) and loosen the snorkel.



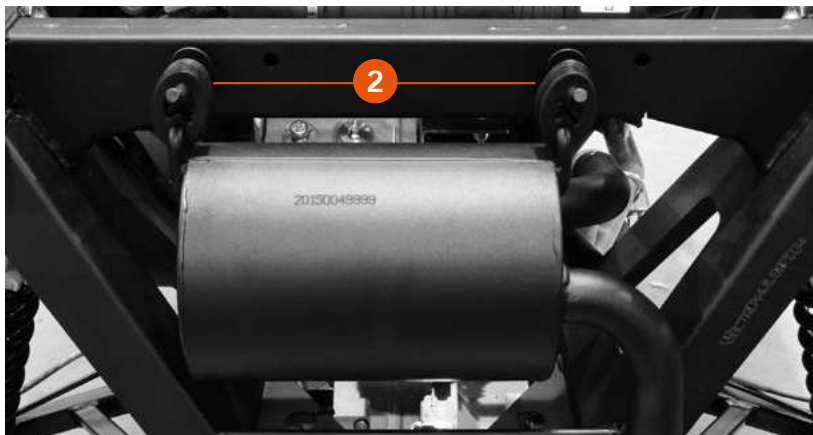
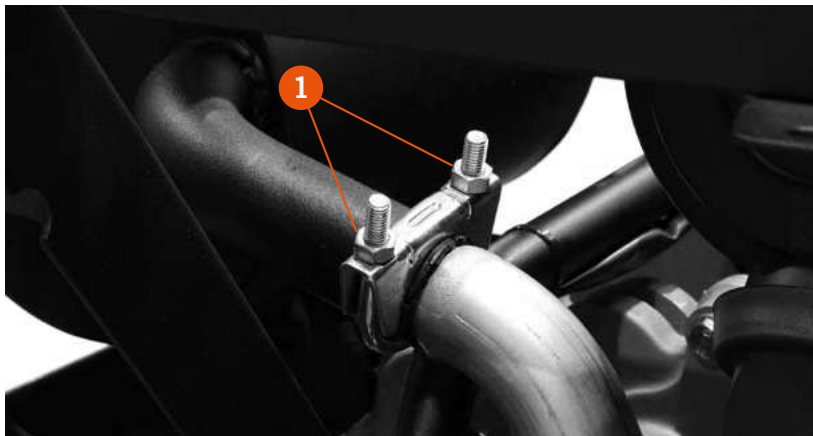
CVT VENTILATION DUCTS (REMOVAL)

1. Loosen the metal flange (1) and remove the joint boot (2).
2. Remove the clamp (3) from the elbow connection (2) between the manifold DUCT and the CVT transmission cover.
3. Pull the elbow (4) downwards to release it from the housing of the duct.
4. Loosen the screw (5) and remove the CVT duct (6).



ENGINE INLET DUCTS AND AIR FILTER (REMOVAL)

1. Loosen the metal flange (1) and remove the joint boot.
2. Remove the two screws (2) securing the air inlet duct.
3. Loosen the four metal flanges (3).
4. Remove the two screws (4) securing the air filter.
5. Remove the entire assembly.



SILENCER (REMOVAL)

To remove the silencer you must first lift up the cargo box.



WARNING

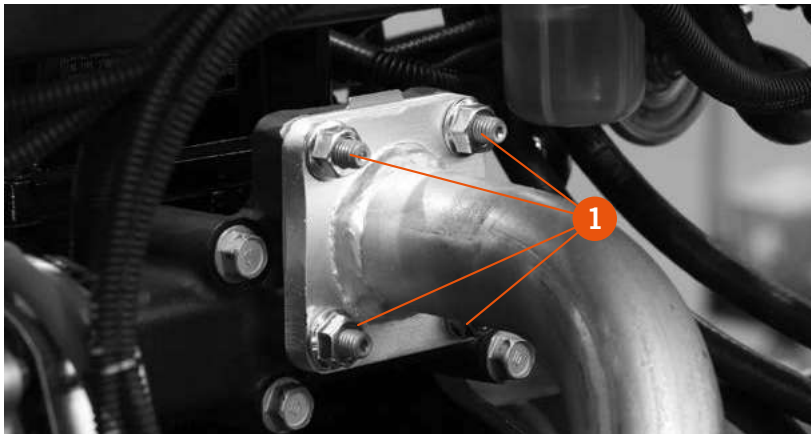
MAKE SURE THAT THE SILENCER IS COMPLETELY COLD BEFORE YOU REMOVE IT.

1. Release the two nuts (1) from the clamp between the silencer and the exhaust manifold.
2. Lift the silencer with the two silentblocks (2) of the brackets onto the chassis.



WARNING

CHECK THE CONDITION OF THE SILENTBLOCKS AND REPLACE THEM WITH NEW ONES IF THEY ARE FAULTY.



EXHAUST MANIFOLD (REMOVAL)

To remove the exhaust manifold you must first lift up the cargo box and remove the right side drawer*.



WARNING

MAKE SURE THAT THE EXHAUST IS COMPLETELY COLD BEFORE YOU REMOVE IT.

1. Release the exhaust silencer (see page 107).
2. Release the four nuts (1) of the engine outlet to the exhaust.
3. Remove the silentblock (2) from the bracket to the chassis, and then the exhaust manifold.



WARNING

CHECK THE CONDITION OF THE SILENTBLOCK AND REPLACE IT WITH A NEW ONE IF IT IS FAULTY.

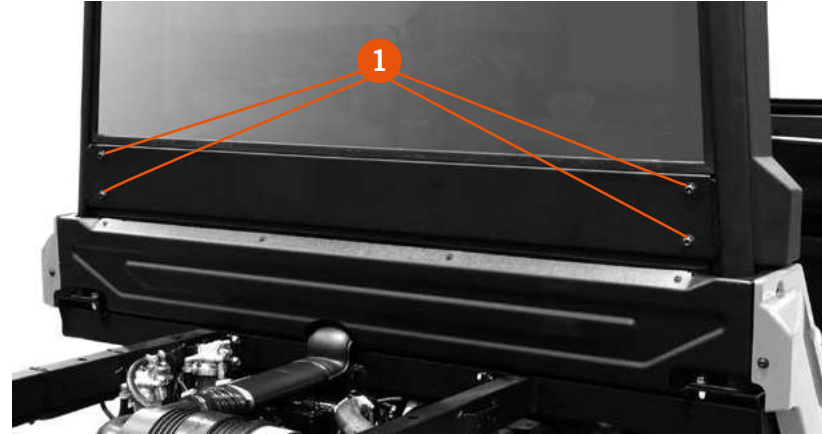
ENGINE



ENGINE - TRANSMISSION ASSEMBLY (REMOVAL)

To remove the engine, you must previously perform the following operations:

1. Remove the cargo box (see page 97).
2. Remove the side drawers* (see page 92).
3. Remove the rear fenders (see page 90).
4. Remove the cover of the rear cross member rollbar (see page 91).
5. Remove the side snorkels (see page 104), the CVT ventilation system (see page 105) and the inlet connections (see page 106).
6. Remove the rear windshield (see page 102).
7. Loosen the four screws (1) and remove the lower cross member rollbar.



8. Remove the seats (see page 98).
9. Remove the lower inner drawers* (see page 92).
10. Remove the engine frame cover (see page 99) and the interior frame under the seats (see page 99).
11. Remove the air filter (see page 106).
12. Remove the CVT system (see page 54).
13. Remove the 4WD cardan (see page 125).
14. Remove the rear transmission (see page 128)
15. Remove the exhaust system (see page 107).

ENGINE



WARNING

BEFORE REMOVING THE ENGINE-TRANSMISSION ASSEMBLY, MAKE SURE THAT ALL PERIPHERAL SYSTEMS, DRIVES, ELECTRICAL SYSTEMS, COOLING, POWER SUPPLY AND IGNITION ARE SWITCHED OFF.



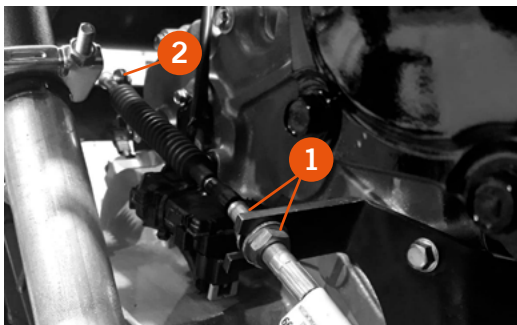
DANGER

BEFORE PERFORMING ANY OPERATION, MAKE SURE THE VEHICLE'S BRAKE IS ON, AND APPLY CHOCKS TO THE WHEELS.

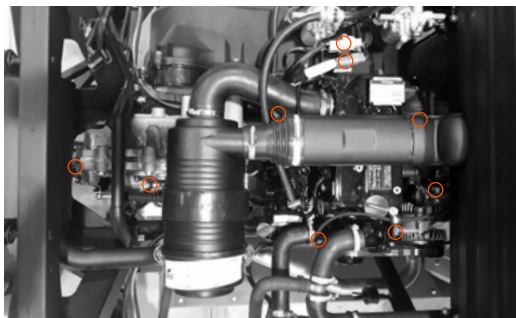
THE ENGINE AND TRANSMISSION ARE REMOVED UPWARDS, AND GIVEN THAT THIS IS A COMPLEX MANOEUVRE INVOLVING THE REMOVAL OF THE UPPER PARTS OF THE VEHICLE AND YOU MUST HAVE ELEMENTS TO CHOCK IT AND TO HANDLE IT.

ENGINE

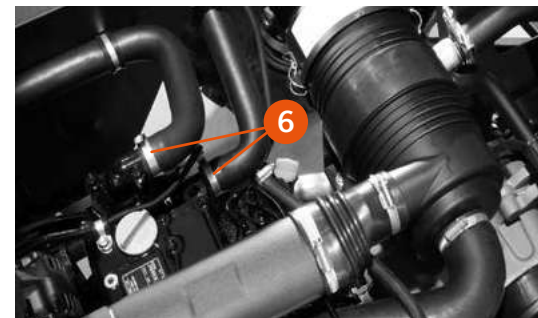
Engine removal operations:



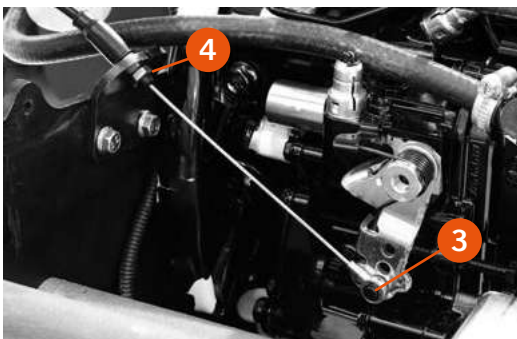
1. Remove the gear shift cable by loosening the nut and the counternut (1), and the ball joint nut (2).



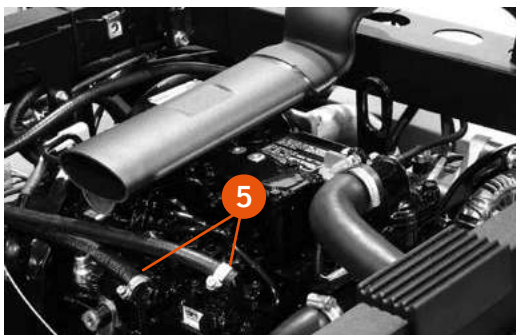
3. Remove the connectors of the electrical system (identified in the image).



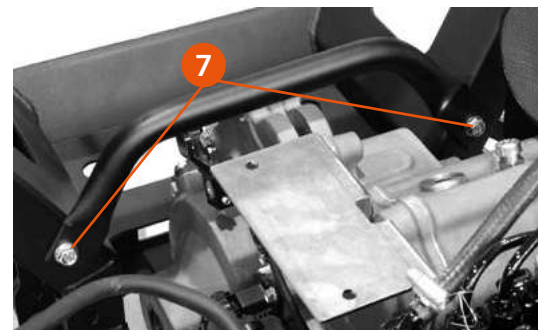
5. Loosen the metal flanges (6) and remove the pipes of the cooling system.



2. Remove the accelerator cable by removing the elastic ring (3) and the fastening nut (4).

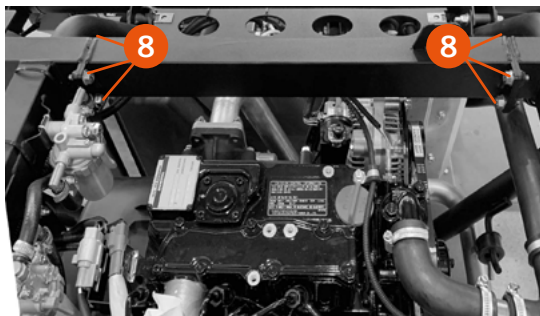


4. Remove the fuel supply system connections (5).



6. Remove the chassis reinforcement brace by removing the two screws (7) attaching it.

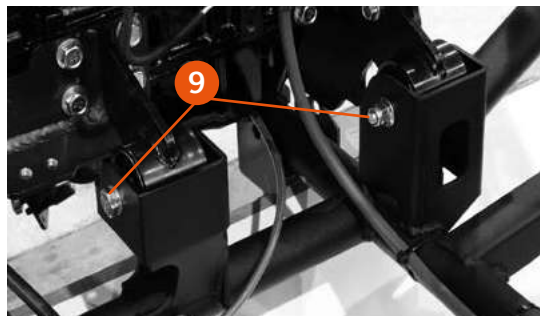
ENGINE



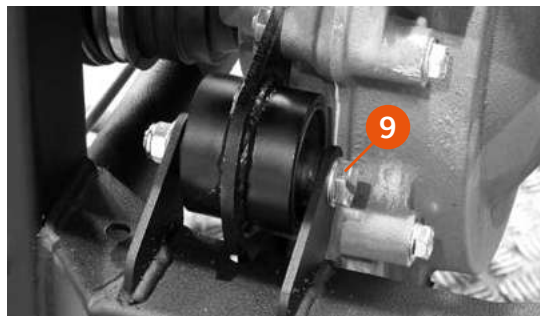
7. Loosen the six screws (8) and remove the upper engine chassis cross brace.



8. Secure the engine and the transmission, to keep them suspended.



9. Remove the three retaining screws (9) of the chassis assembly.



10. Remove the engine - transmission upwards, at a slight angle.



WARNING

CHECK THE CONDITION OF THE SILENTBLOCKS AND CHANGE THEM IF THEY ARE FAULTY.

THE ECCENTRIC SILENTBLOCK HAS TO BE MOUNTED BY MAKING ITS SYMMETRICAL CENTRE COINCIDE, AT ITS HIGH POSITION, WITH THE MARK ON THE BRACKET.



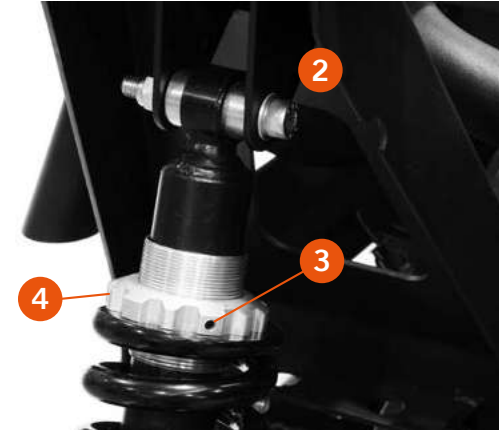
TECHNICAL INFORMATION

Engine screws tightening torque: 45 Nm.

SUSPENSION, BRAKES AND STEERING



SUSPENSION, BRAKES AND STEERING



SUSPENSION (REMOVAL / REGULATION)

The vehicle is equipped with a suspension system consisting of four shock absorbers; it is possible to adjust their preload.

To remove them, follow this procedure:

1. Raise the vehicle at its lifting points (see page 40) until the tires are no longer in contact with the ground.
2. Loosen the screw and nut (1) on the bottom.
3. Loosen the screw and nut (2) at the top.
4. Remove the shock absorber.



WARNING

PAY SPECIAL ATTENTION TO THE POSITION OF THE SCREWS, WASHERS AND BUSHING FOR REASSEMBLY.

For regulation, follow this procedure:



WARNING

FIRST OF ALL LOOSEN THE LOCKING SCREW (3) WHICH IS LOCATED ON THE ACTUAL PRE-LOAD NUT (4).

- To regulate the preload, manipulate the nut (4). Turning it clockwise will increase the spring preload and counterclockwise will decrease it.



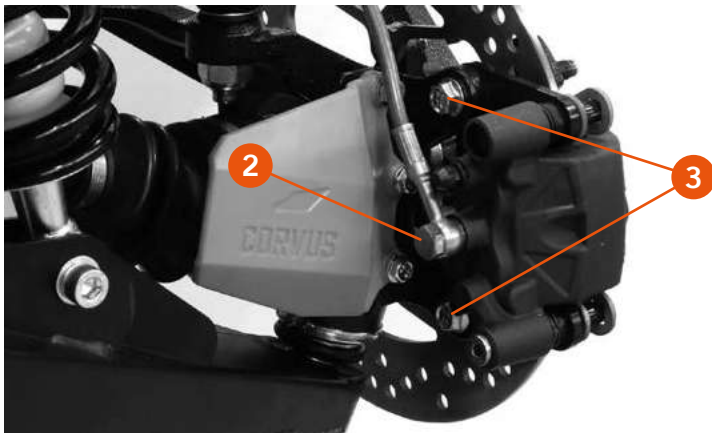
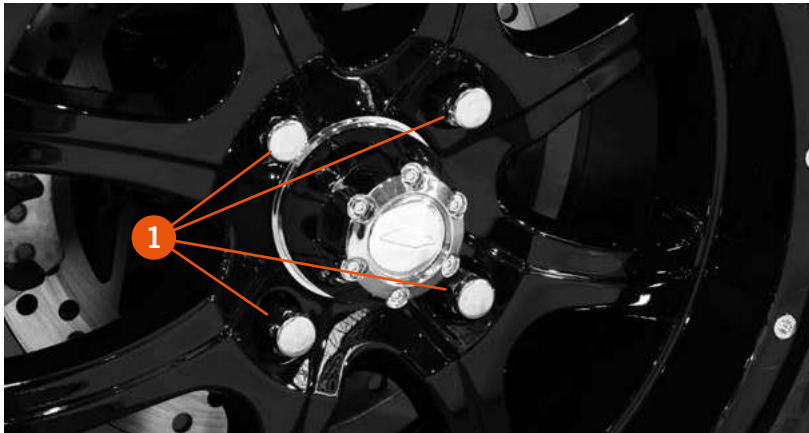
DANGER

IF HYDRAULIC OIL LEAKS, THE SHOCK ABSORBER MUST BE REPLACED.



TECHNICAL INFORMATION

Suspension screws tightening torque: 45 Nm.



FRONT BRAKE CALLIPERS (REMOVAL)

1. Raise the vehicle at its lifting points (see page 40) until the tires are no longer in contact with the ground.
2. Remove the four nuts (1) of the corresponding wheel.
3. Place a container underneath to collect the brake fluid.
4. Remove the banjo screw (2).
5. Drain the brake system.
6. Remove the two screws (3) securing the clamp.



WARNING

DO NOT ALLOW THE BRAKE FLUID TO COME INTO CONTACT WITH PAINTED, PLASTIC OR RUBBER PARTS.

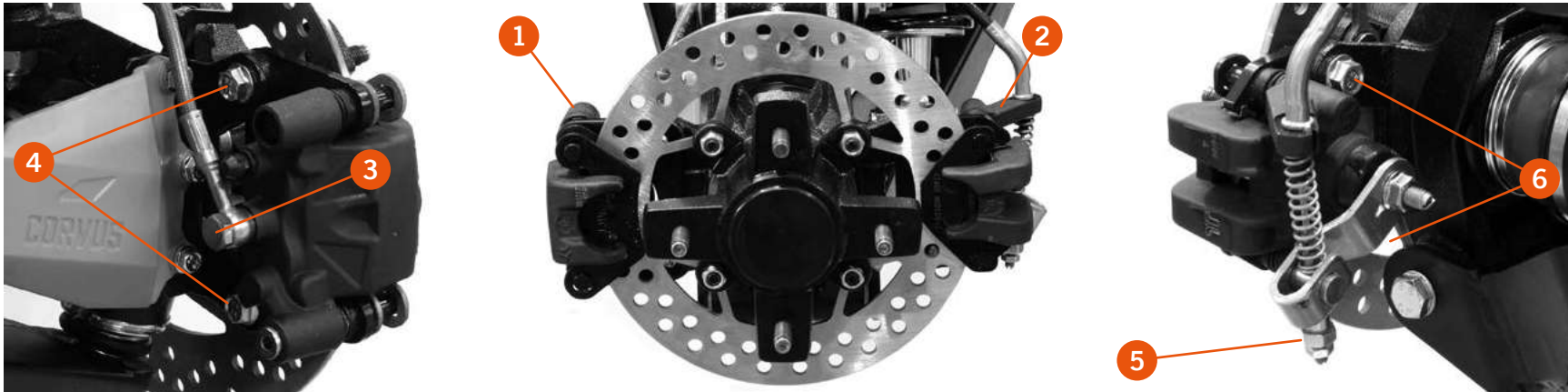
REPLACE THE WASHERS OF THE BANJO SCREW DURING THE ASSEMBLY PROCESS.



TECHNICAL INFORMATION

Wheel nuts tightening torque: 60 Nm

Clamp screws tightening torque: 30 Nm



REAR BRAKE CALLIPERS (REMOVAL)

The rear wheels incorporate two brake clamps, one for the general brake (1) and the other for the parking brake (2).

General brake clamp

1. Raise the vehicle at its lifting points (see page 40) until the tires are no longer in contact with the ground.
2. Remove the four nuts of the corresponding wheel.
3. Place a container underneath to collect the brake fluid.
4. Remove the banjo screw (3).
5. Drain the brake system.
6. Remove the two screws (4) securing the clamp.



WARNING

DO NOT ALLOW THE BRAKE FLUID TO COME INTO CONTACT WITH PAINTED, PLASTIC OR RUBBER PARTS. REPLACE THE WASHERS OF THE BANJO SCREW DURING THE ASSEMBLY PROCESS.

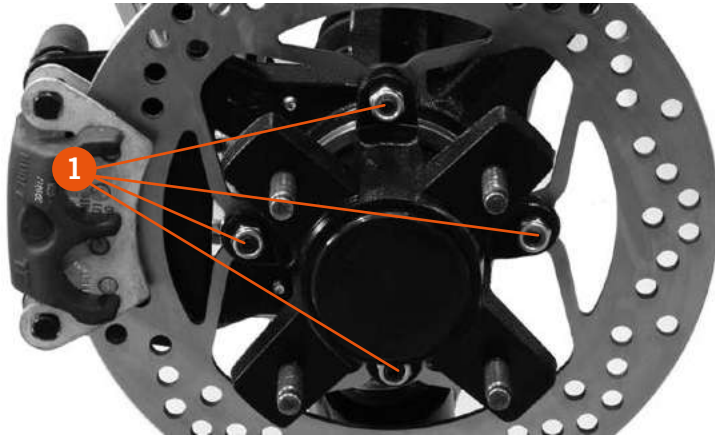
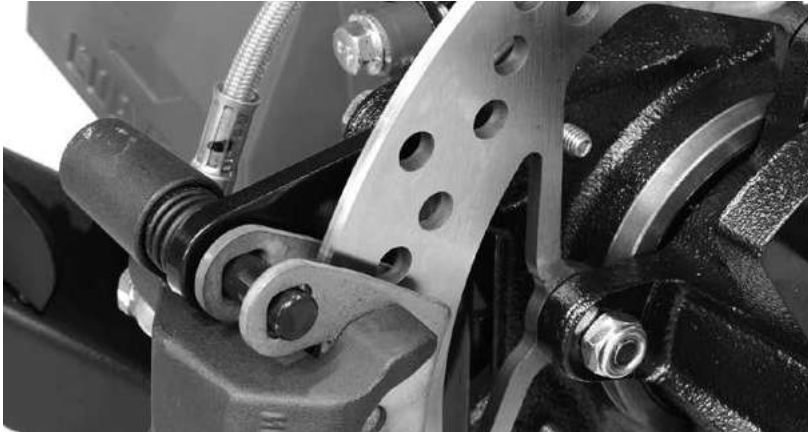
Parking brake clamp

1. Remove the two nuts (5) of the cable and remove it from the clamp.
2. Remove the two screws (6) securing the clamp.



TECHNICAL INFORMATION

Wheel nuts tightening torque: 60 Nm.
Clamp screws tightening torque: 30 Nm.



BRAKE DISCS (REMOVAL / CHECK)

It is important to monitor the discs. They must be perfectly clean, with no rust, greasy oil or any other impurities, and they must not have any deep splines.

1. Measure the disc thickness.

The disks must have a minimum thickness of 3.5mm.

If they need to be replaced, you should previously remove the four nuts of the corresponding wheel and the brake clamp/s (see page 73).

1. Remove the four nuts of the disc together with the screws (1).
2. Gently rotate the disk to release it from the orifices in the bushing.
3. Remove the worn or defective disc.



TECHNICAL INFORMATION

Wear limit: 3.5 mm.

Wheel nuts tightening torque: 60 Nm.

Clamp screws tightening torque: 30 Nm.

SUSPENSION, BRAKES AND STEERING

STEERING (REMOVAL)

Steering column

1. Remove the central plug (1) on the steering wheel.
2. Loosen the central nut (2).
3. Remove the steering wheel by pulling it forcefully.
4. Remove the four screws from the lights and indicators trim (3).
5. Remove the two screws (4) from the control retainer clamp.
6. Remove the screws (5) and disconnect the speedometer by pulling it downwards.
7. Disconnect the electrical connector from the speedometer (6).
8. Disconnect the electrical connector (7) from the lights control.
9. Loosen the upper screw (8) of the cardan gasket of the lower anchorage of the steering rod.
10. Loosen and remove the four screws (9) and nuts that hold the steering column to the spider.

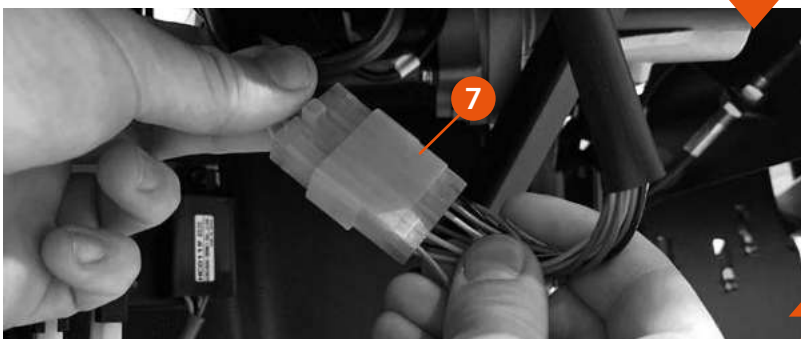
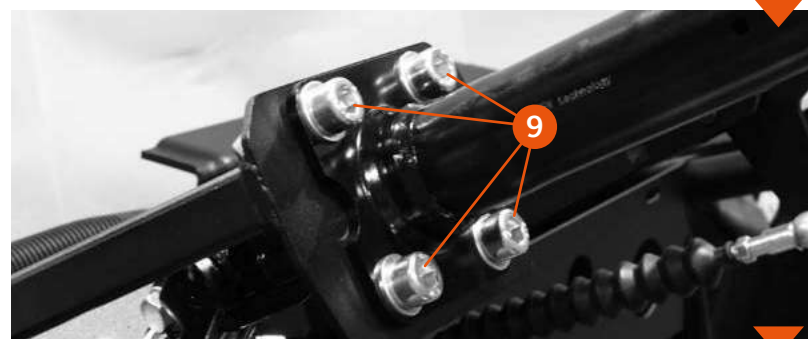
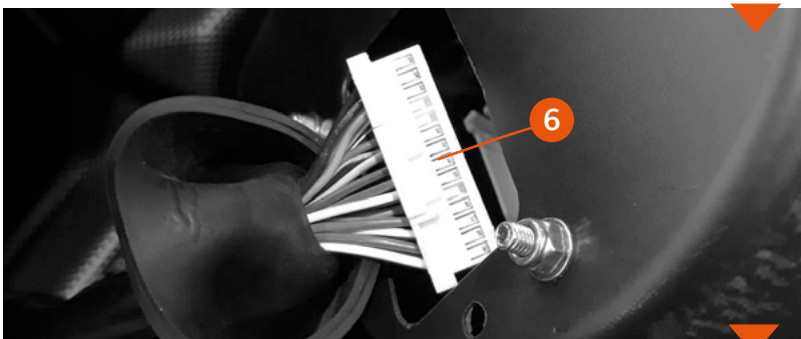
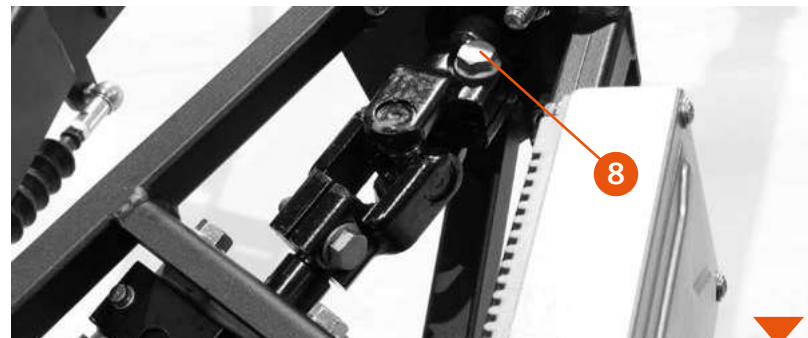
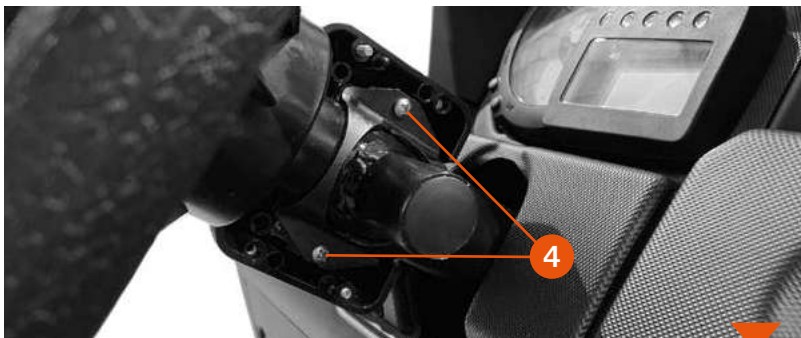


WARNING

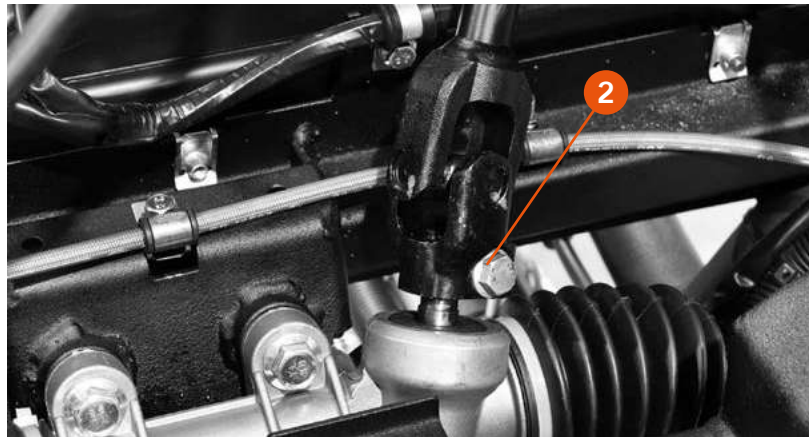
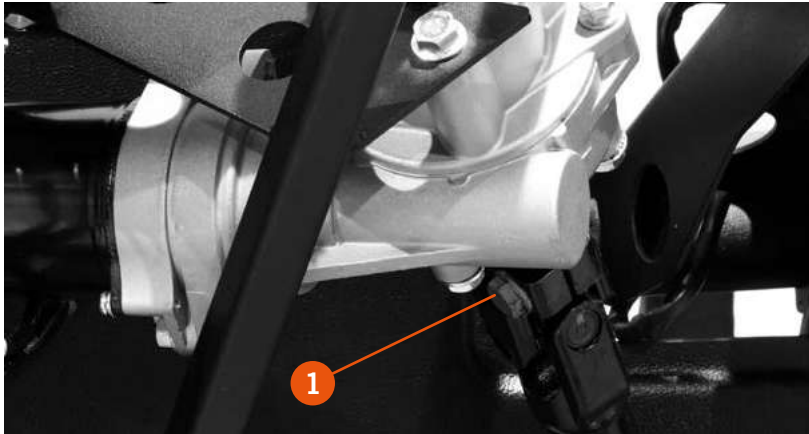
APPLY GREASE DURING THE ASSEMBLY PROCESS.



SUSPENSION, BRAKES AND STEERING



SUSPENSION, BRAKES AND STEERING



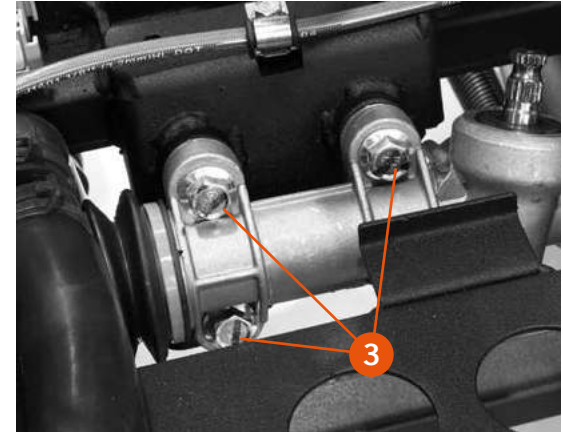
Steering cardan

To access the steering cardan you must previously remove the dashboard.

Then follow these steps:

1. Loosen the upper screw (1) holding the steering cardan to the EPS engine or to the steering column.
2. Loosen the lower screw (2) holding the steering cardan to the steering box.
3. Remove the cardan.

SUSPENSION, BRAKES AND STEERING



Steering arms and box

To access the steering box you will need to have previously removed the front wheels (see page 41).

1. Loosen the nut on the bottom of the steering ball joint (1).
2. Using the tool (2), release the ball joint from the wheel spindle.
3. Loosen the three screws (3) securing the steering rack to the chassis.
4. Remove the steering arms and box assembly.



WARNING

CHECK FOR ANY POSSIBLE PLAY IN THE STEERING BALL JOINTS OR BAR CROSSHEADS. IF THERE IS ANY PLAY OR A MALFUNCTION, REPLACE THEM AND THEN READJUST THE STEERING ALIGNMENT.



TECHNICAL INFORMATION

Ball joint extractor tool: 80990000000
Steering box screws tightening torque: 40 Nm.
Apply Loctite 270 sealant.

SUSPENSION, BRAKES AND STEERING



EPS engine*

To access the EPS engine you must previously remove the dashboard.

Then follow these steps:

1. Disconnect the ECU from the general wiring (1).

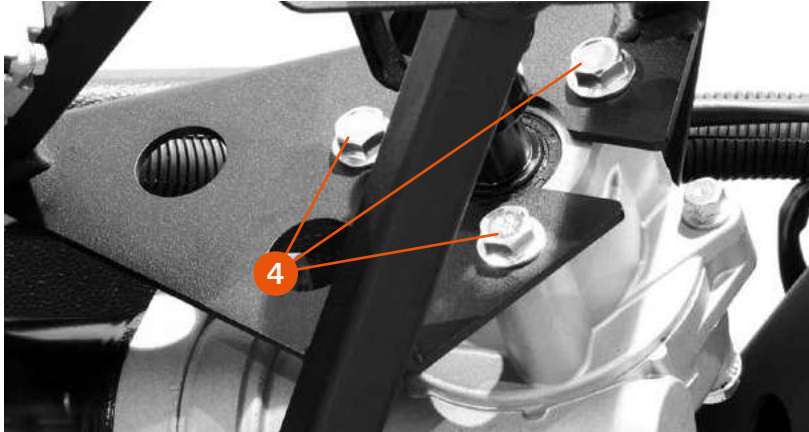


2. Loosen the lower screw (2) of the cardan gasket.



3. Loosen the upper screw of the steering cardan (3).

SUSPENSION, BRAKES AND STEERING



4. Loosen the three screws (4) that hold the EPS engine to the spider.
5. Remove the EPS engine from its housing.

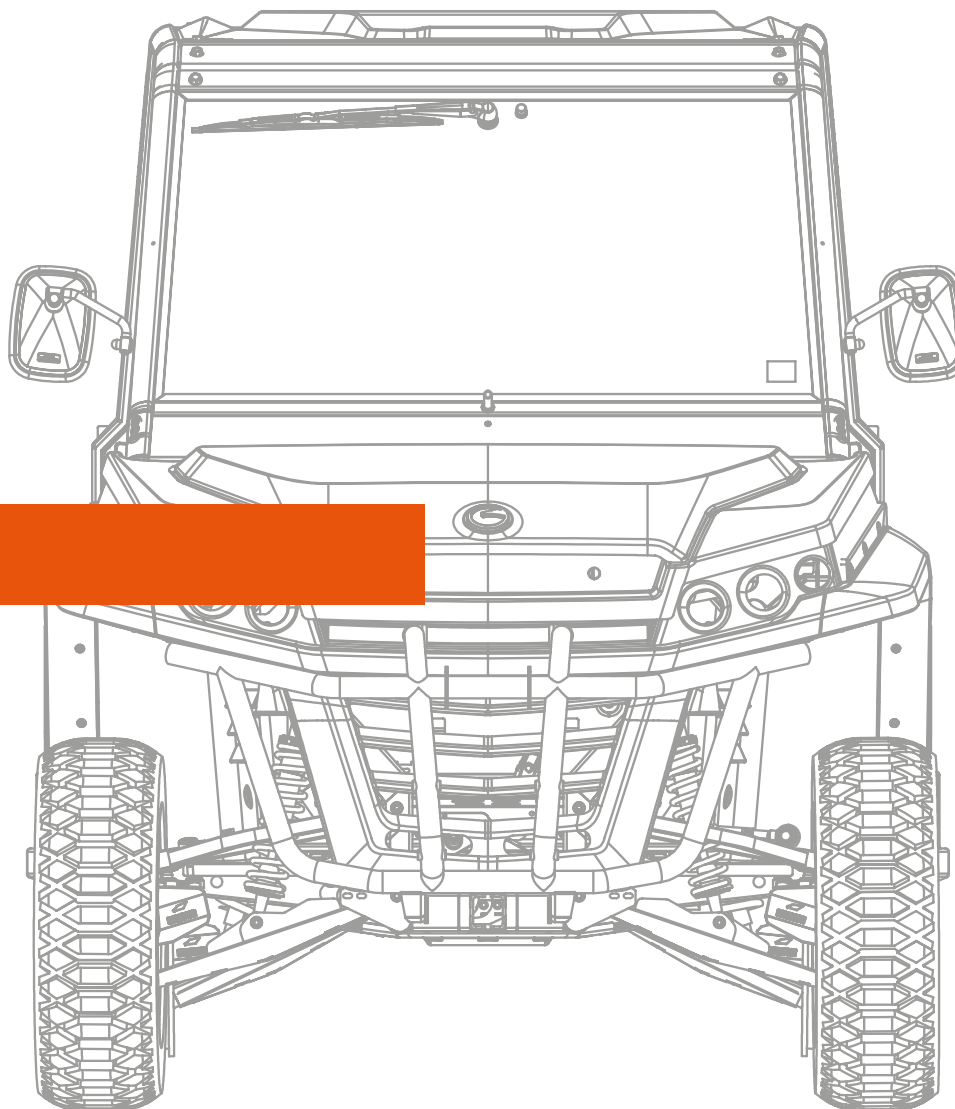


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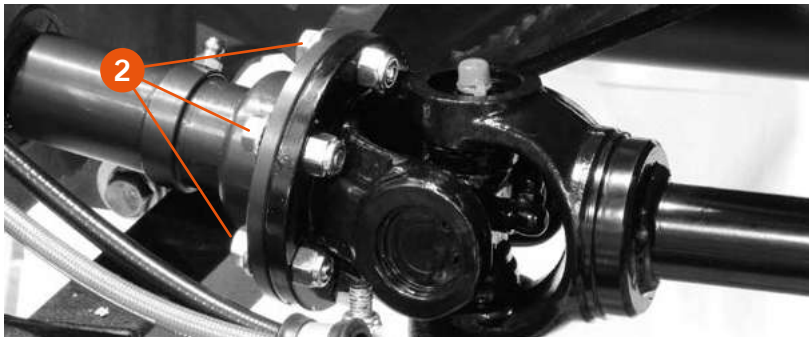
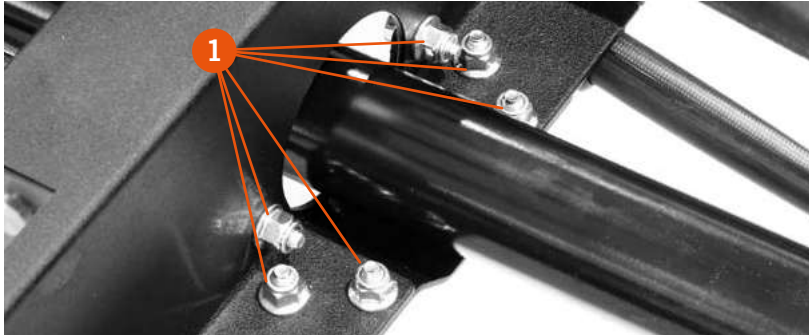
CHECK FOR ANY POSSIBLE PLAY IN THE STEERING BALL JOINTS OR BAR CROSSHEADS.

IF THERE IS ANY PLAY OR A MALFUNCTION, REPLACE THEM AND THEN READJUST THE STEERING ALIGNMENT.

TRANSMISSION



TRANSMISSION



CARDAN AND COUPLING (REMOVAL)

1. Remove the two reinforcement panels located in the middle of the chassis by removing the six nuts and screws (1) securing each of them.
2. Loosen and remove the six nuts and screws (2) on either end of the cardan.
3. Loosen the nut (3) of the coupling and remove it.



WARNING

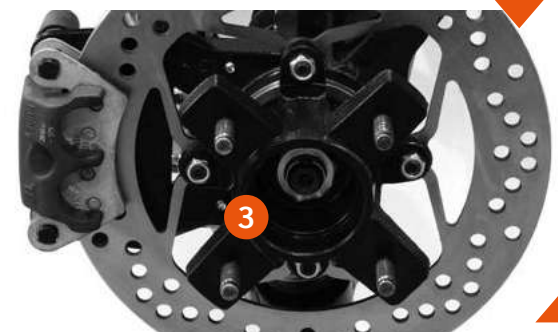
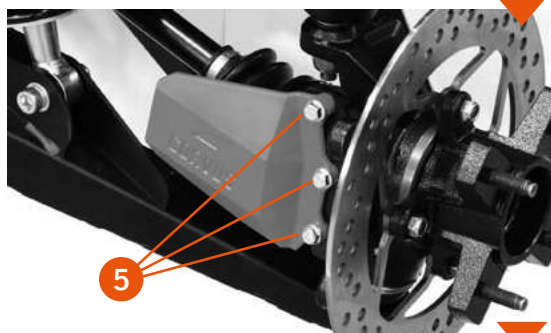
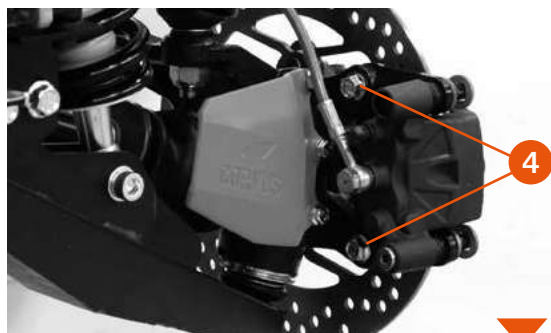
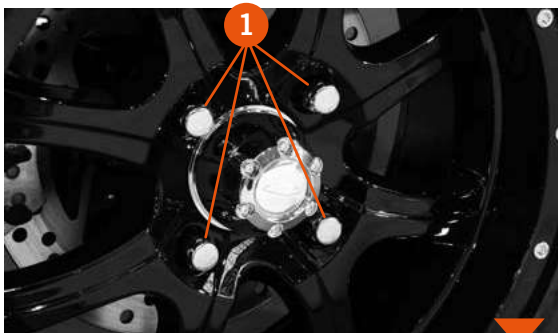
CHECK ANY POSSIBLE PLAY OF THE CARDAN CROSS MEMBERS AND REPLACE THEM IF NECESSARY.



TECHNICAL INFORMATION

Central screw tightening torque: 30 Nm.
Coupling nuts tightening torque: 12 Nm.

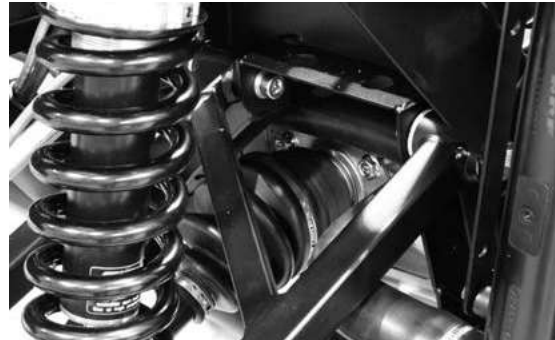
TRANSMISSION



FRONT AXLE SHAFT (REMOVAL)

1. Loosen the four nuts (1) from the front wheel.
2. Raise the front of the vehicle to facilitate the removal of the front wheel.
3. Remove the four nuts (1) from the front wheel.
4. Remove the front wheel.
5. Remove the cover of the bushing (2).
6. Loosen and remove the nut (3) from the bushing to the axle shaft.
7. Loosen the two screws of the front brake caliper (4) and remove it.
8. In order to access the axle shaft, you will need to remove the three screws (5) and the guard.
9. Remove the lower nut (6) from the swingarm.
10. Use the tool (7) to remove the stub shaft from the swingarm.
11. Then release the stub shaft from the swingarm.
12. Extract the stub shaft from the axle shaft.
13. Remove the axle shaft from the differential.

TRANSMISSION



14. Check for any possible bearing play, the condition of the constant velocity joints and the suspension ball joints.

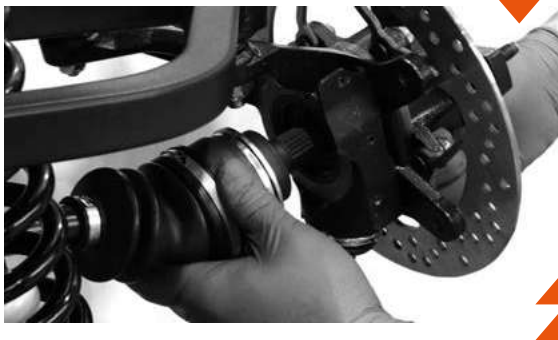


WARNING

WHEN REMOVING THE STUB SHAFT, TAKE CARE NOT TO DAMAGE THE SPLINES OF THE AXLE SHAFT.

THE NUT (3) MUST BE REPLACED IN THE ASSEMBLY.

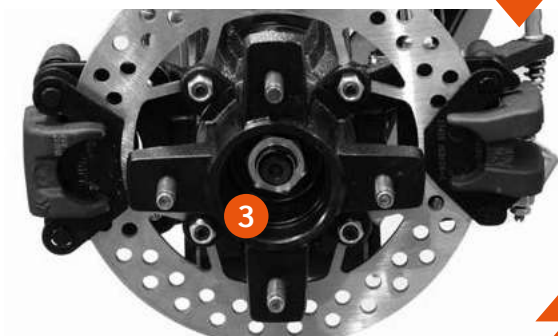
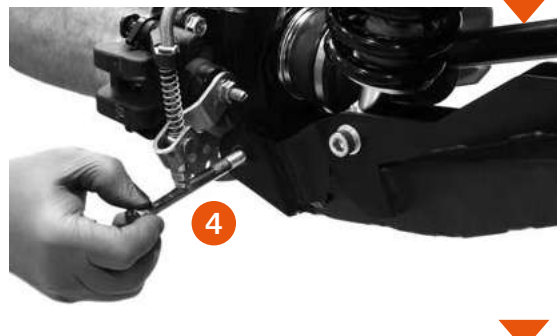
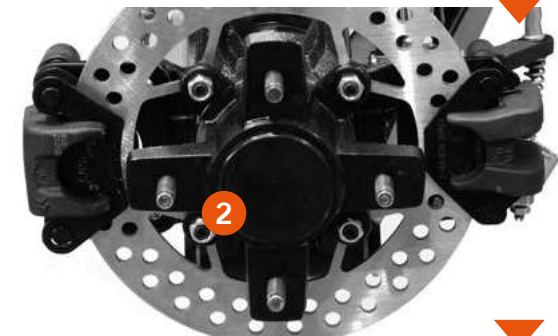
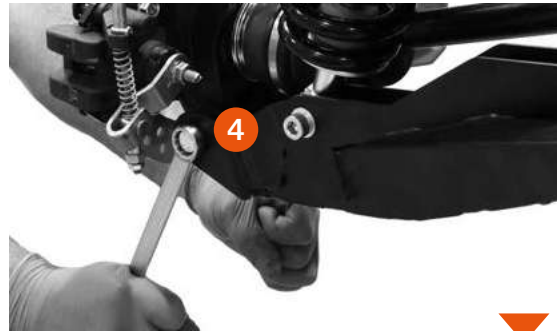
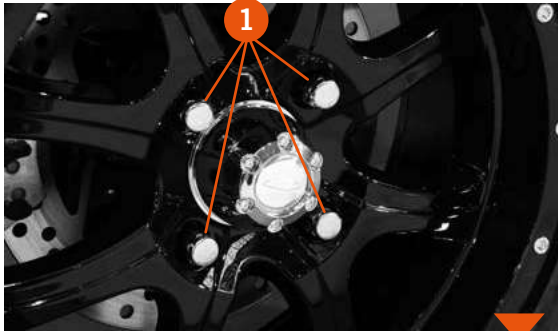
DO NOT PRESS ON THE BRAKE, OTHERWISE YOU WILL NEED TO BLEED THE CIRCUIT. YOU ARE ADVISED TO PUT A PIECE OF PLASTIC IN PLACE, THE SAME THICKNESS AS THE DISC, TO AVOID THE BRAKE PADS FROM CLOSING.



TECHNICAL INFORMATION

Ball joint extractor tool: 80990000000
Axle shaft nut tightening torque: 225 Nm.
Calliper screws tightening torque: 30 Nm.
Wheel nuts tightening torque: 60 Nm.

TRANSMISSION



REAR AXLE SHAFT (REMOVAL)

1. Loosen the four nuts (1) from the rear wheel.
2. Raise the front of the vehicle to facilitate the removal of the rear wheel.
3. Remove the four nuts (1) from the rear wheel.
4. Remove the front wheel.
5. Remove the cover of the bushing (2).
6. Loosen and remove the nut (3) from the bushing to the axle shaft.
7. Remove the screw and nut (4) holding the stub shaft to the swingarm.
8. Then release the stub shaft from the swingarm by pulling it up.
9. Extract the stub shaft from the axle shaft.
10. Remove the axle shaft from the transmission.
11. Check for any possible bearing play, the condition of the constant velocity joints and the suspension ball joints.

TRANSMISSION



WARNING

THE NUT (3) MUST BE REPLACED IN THE ASSEMBLY.

WHEN REMOVING THE STUB SHAFT, TAKE CARE NOT TO DAMAGE THE SPLINES OF THE AXLE SHAFT.



TECHNICAL INFORMATION

Axel shaft nut tightening torque: 225 Nm.

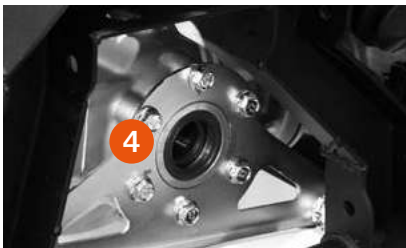
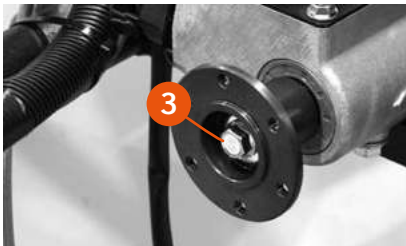
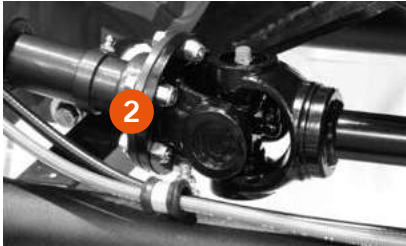
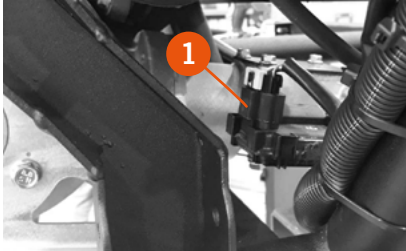
Screw tightening torque/axle stub shaft to swingarm: 47 Nm.

Calliper screws tightening torque: 30 Nm.

Wheel nuts tightening torque: 60 Nm.



TRANSMISSION



FRONT DIFFERENTIAL (REMOVAL)

Before you disassemble the front unit, remove the axle shafts, the cardan and the oil, as well as all peripherals that may interfere with the removal.

To remove it, follow this procedure:

1. Disconnect the electrical connector of the 4WD locking actuator (1).
2. Loosen the six screws (2) of the cardan.
3. Loosen the coupling screw (3).
4. Loosen the six screws from each of the differential brackets (4).
5. Remove the differential downwards.

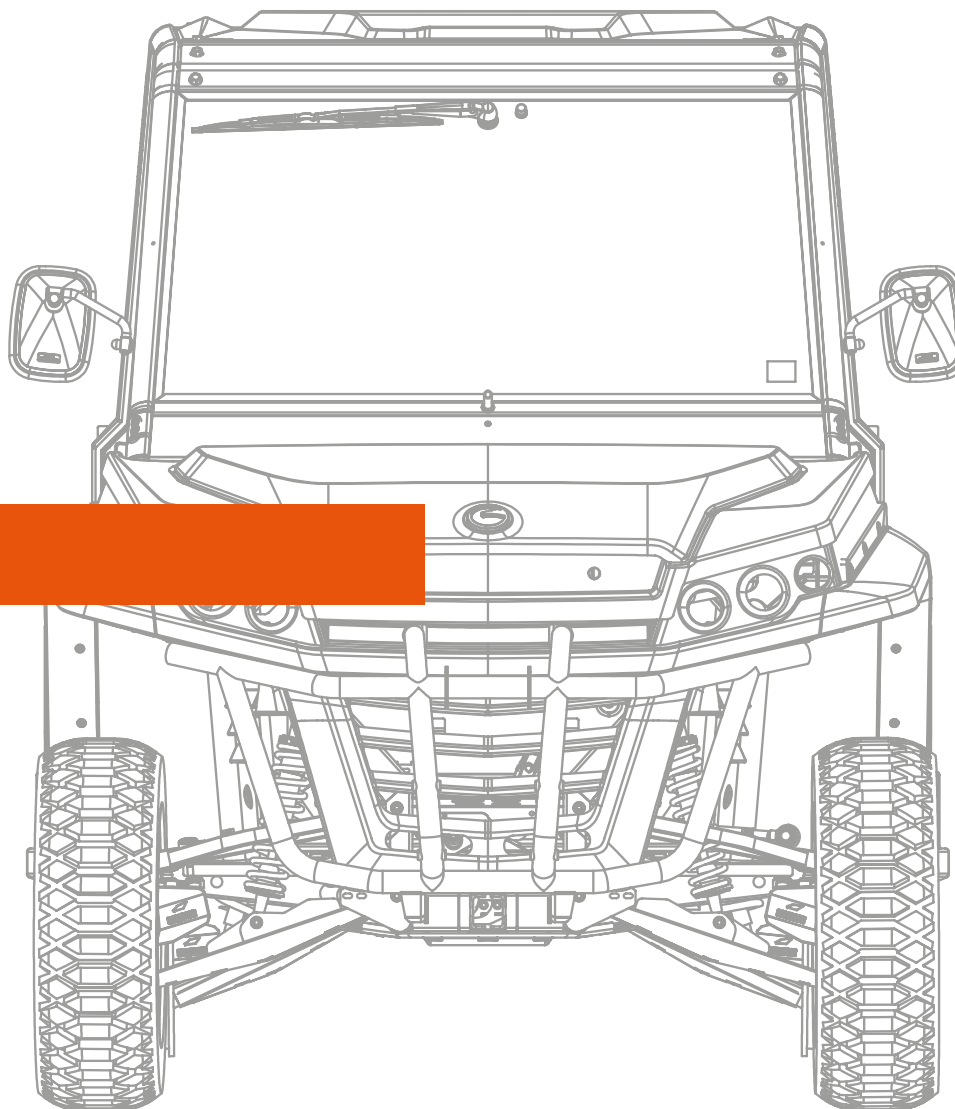


TECHNICAL INFORMATION

Differential-cardan locking screws & nuts tightening torque: 12 Nm.

Differential bracket screws tightening torque: 24 Nm.

ELECTRICAL SYSTEM



ELECTRICAL SYSTEM

FUSES

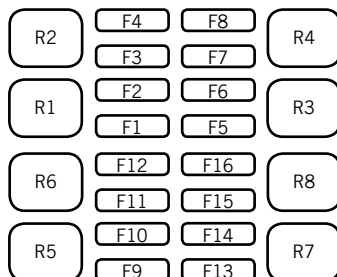
To access the fuse box you will need to remove the 2 screws on the cover located to the left of the driver's seat.

LOT 1

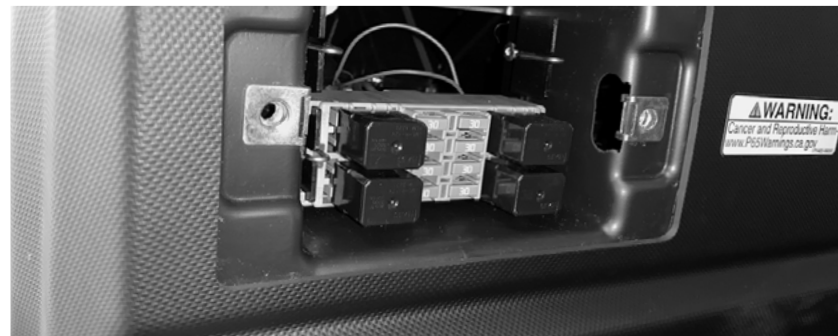


Element

F1 - Heaters	30A
F2 - GPS supply	15A
F3 - Radiator blower	30A
F4 - Key / Low beam / Horn	30A
F5 - Starter relay	30A
F6 - Fuel pump / High beam / Windshield wipers	30A
F7 - EPS	30A
F8 - KL30 power control	30A
F9 - Heating / AC	30A
F10 - Trailer power supply	15A
F11 - Stop coil	30A
F12 - KL15 power control	30A
F13 - 4WD / Differential lock	30A
F14 - 12V Accessory socket	15A
R2 - Heaters	
R3 - Safety start-up	
R4 - Radiator blower	
R5, R6, R7, R8 - General power	

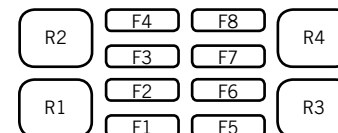


LOT 2

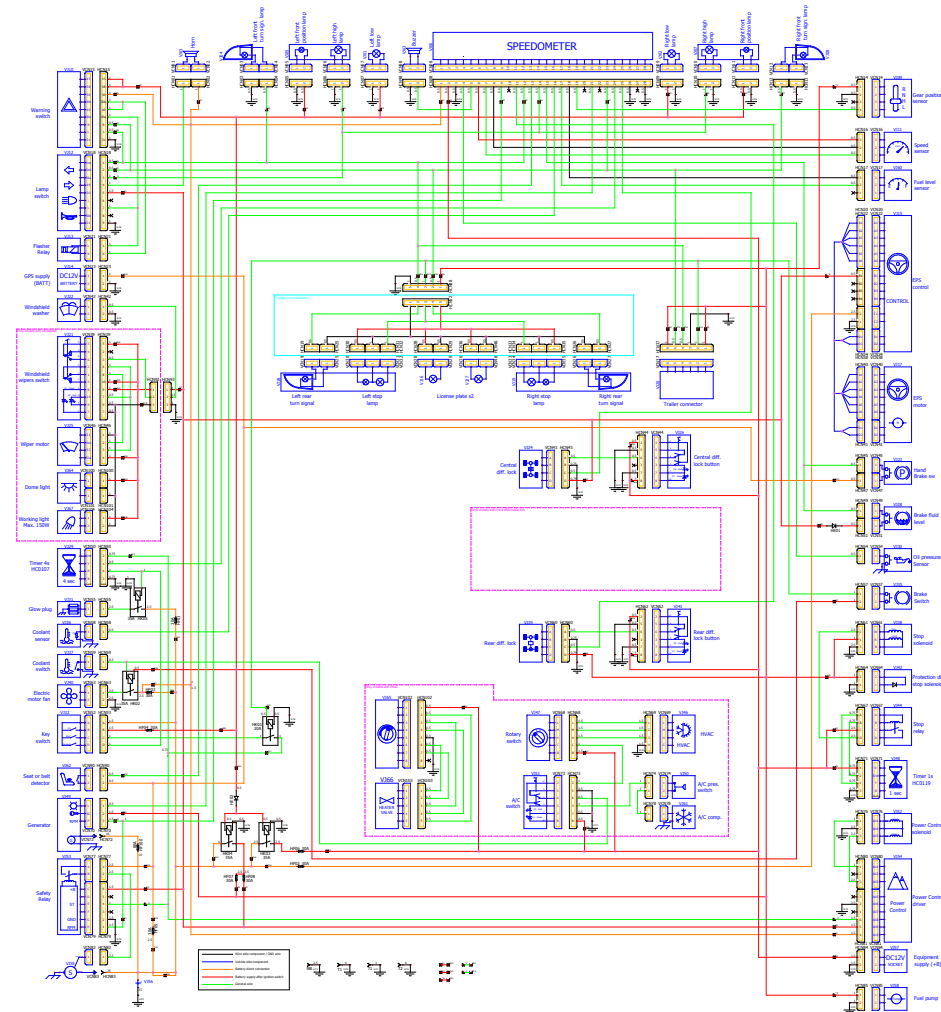


Element

F1 - Glow Plug	30A
F2 - EPS	30A
F3 - Radiator fan / Horn	30A
F4 - Key switch / Low beam	30A
F5 - Starter relay / GPS supply	30A
F6 - Heating / 12V Accessory socket	30A
F7 - Fuel pump / Stop solenoid / Differential lock	30A
F8 - Safety relay / High beam / Wipers / 4WD	30A
R1 - Start interlock	
R2 - Radiator blower	
R3 - General supply 1	
R4 - General supply 2	



ELECTRICAL SYSTEM



ELECTRICAL SYSTEM

IDENT.	DESCRIPCIÓN	DESCRIPTION
VJ01	Luz corta izq.	Left low lamp
VJ02	Luz corta der.	Right low lamp
VJ03	Bocina	Horn
VJ04	Luz intermitente del. izq.	Left front turn sign Lamp
VJ05	Luz posición del. izq.	Left front position lamp
	Luz larga del. izq.	Left high lamp
VJ06	Velocímetro	Speedometer
VJ07	Luz posición delantero der.	Right front position lamp
	Luz larga delantero der.	Right high lamp
VJ08	Luz intermitente delantero der.	Right front turn sign Lamp
VJ09	Sensor posición marcha	Gear position sensor
VJ10	Interrupor Warning	Warning switch
VJ11	Sensor velocidad	Speed sensor
VJ12	Indicador luces	Lamp Switch
VJ13	Relé intermitencia	Flasher Relay
VJ14	Suministro batería 12 V	Supply battery 12 V
VJ15	Control EPS	EPS control
VJ16	Luz matrícula	License plate
VJ17	Motor EPS	EPS motor
VJ18	Luz posición trasera izq.	Left rear position lamp
	Luz freno izq.	Left stop lamp
	Luz intermitente trasero izq.	Left rear turn sign. Lamp
VJ19	Luz posición trasera der.	Right rear position lamp
	Luz freno derecha	Right stop lamp
	Luz intermitente trasera der.	Right rear turn sign Lamp
VJ20	Conector remolque	Trailer connector
VJ21	Interrupor limpiaparabrisas	Windshield wipers switch
VJ22	Motor líquido limpiaparabrisas	Windshield washer
VJ23	Interrupor freno de mano	Hand Brake switch
VJ24	Actuador bloqueo 4x4	4x4 Lock
VJ25	Motor limpiaparabrisas	Wiper motor
VJ26	Botón bloqueo 4x4	4x4 Lock button
VJ28	Sensor nivel líquido frenos	Brake fluid level
VJ29	Temporizador 4s	Timer 4s
VJ30	Sensor presión aceite	Oil pressure sensor
VJ31	Conector calentadores	Glow plug
VJ35	Interrupor freno	Brake switch
VJ36	Sensor temperatura refrigerante	Coolant sensor
VJ37	Termocontacto electroventilador	Coolant switch
VJ38	Solenoido paro	Stop solenoid

IDENT.	DESCRIPCIÓN	DESCRIPTION
VJ39	Actuador bloqueo diferencial	Rear diff. lock
VJ40	Electroventilador	Electric motor fan
VJ41	Botón bloqueo diferencial trasero	Rear diff. lock button
VJ42	Diodo protección solenoide paro	Protection diode - stop solenoid
VJ44	Relé paro	Stop relay
VJ45	Llave contacto	Key switch
VJ46	HVAC	HVAC
VJ47	Rueda selectora	Rotatory switch
VJ48	Temporizador 1s	Timer 1s
VJ49	Alternador	Generator
VJ50	Actuador A/C	A/C pres. switch
VJ51	Interrupor A/C	A/C switch
VJ52	Control potencia solenoide	Power control solenoid
VJ53	Relé seguridad	Safety relay
VJ54	Unidad control potencia	Power control drive
VJ55	Starter	Starter
VJ56	Batería	Battery
VJ57	Conector equipamiento 12 V	Equipment supply 12 V
VJ58	Bomba de combustible	Fuel pump
VJ59	Luz matrícula	License plate
VJ60	Sensor nivel combustible	Fuel level sensor
VJ61	Compresor A/C	A/C Comp.
VJ62	Detector asiento	Seat detector
VJ63	Zumbador	Buzzer
VJ64	Luz de techo	Dome light
VJ65	Selector temperatura clima	Clima temp. Switch
VJ66	Electroválvula calefacción	Heater valve
VJ67	Luz de trabajo	Working light



HEADQUARTERS

C/ Paraje la Loma-parcela 1
Polígono Industrial Cabecicos Blancos
30892 Librilla
(Murcia) Spain
T. (+34) 968 785 201

CENTRO DE INGENIERÍA Y DESARROLLO

C/ Energía, 50
Polígono Industrial Pla dels Vinyats II
08250 St. Joan de Vilatorrada
(Barcelona) Spain
T. (+34) 938 726 703

www.corvus-utv.com