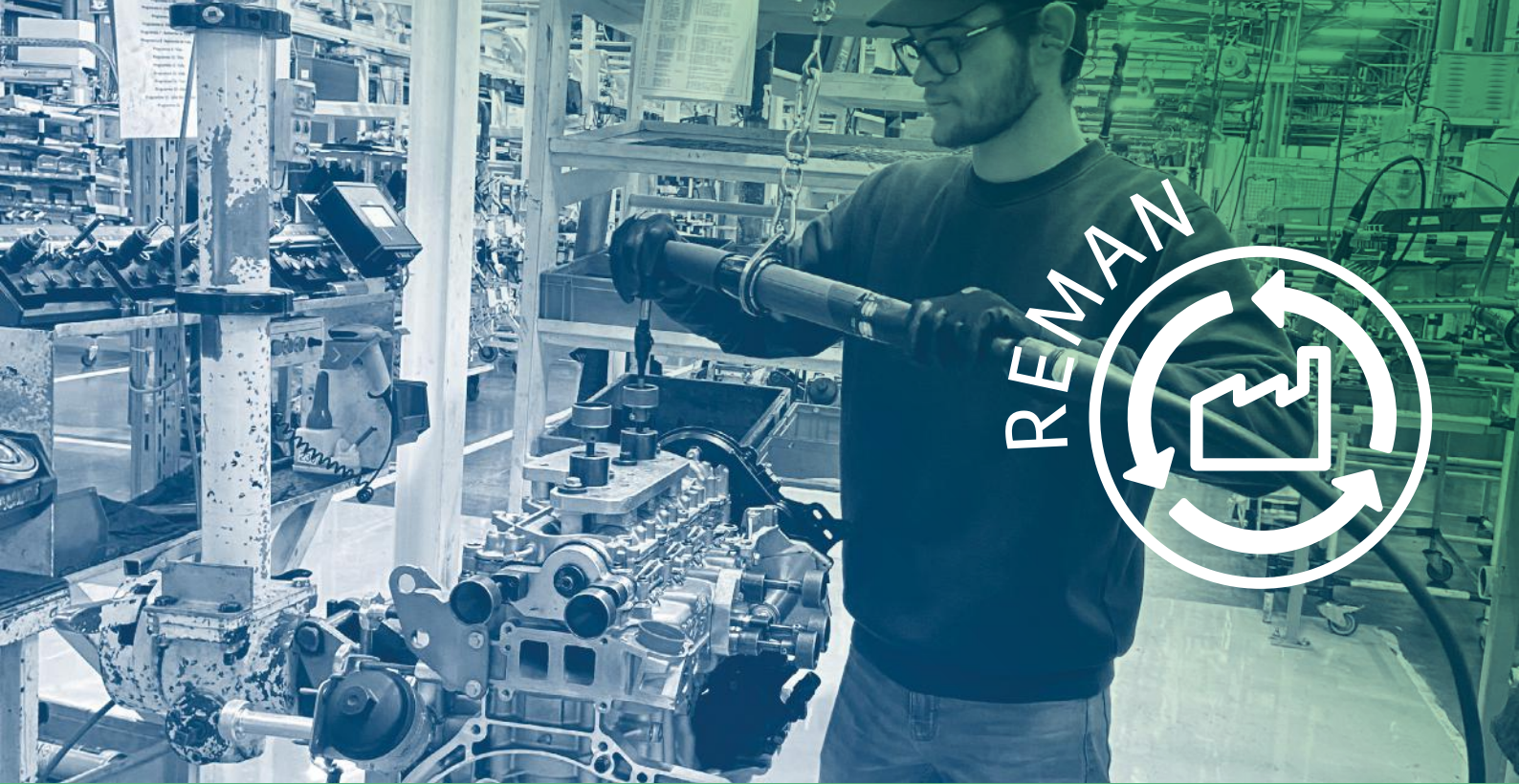


REMANUFACTURED PARTS

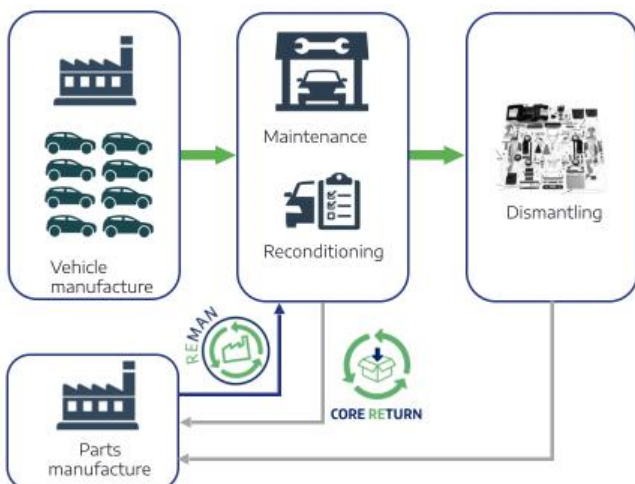




REMAN or remanufactured parts: Used, worn, and defective parts are recovered, dismantled, cleaned, and remanufactured to OEM specifications, with the same performance and warranty as MOPAR genuine parts.

Remanufacturing Process

- Return and sorting of worn and used parts
- Completely stripped and cleaned
- Components are identified for mandatory replacement
- End of Line Testing completed on all remanufactured parts
- Electronic parts are fully reconditioned



Customer benefits

- Value for money: more competitive than MOPAR genuine part
- Same performance specifications
- Customers can maintain the resale value of their vehicle

Repairer benefits

- Fitting as MOPAR genuine parts
- Wide range of product lines, including electric vehicle batteries for all Stellantis brands are available. Other makes offer to come in some Regions.

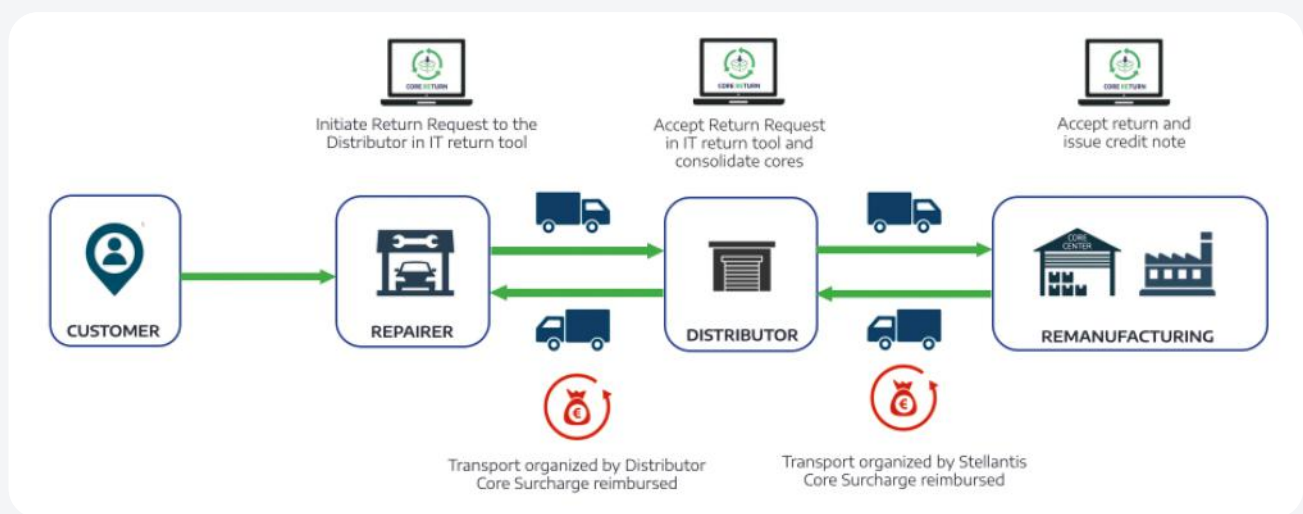
Environmental benefits

- Up to 80% of materials saved and 40% reduction in CO₂ emissions on average compared with new equivalent MOPAR genuine parts*.

*Source: Life-Cycle Assessment (LCA) Europe. Values are given for information only, corresponding to the main seller of the similar products, and determined according to a methodology approved by an independent company (Sphera)

Core Return

- The sale of a REMAN part involves the price of the part itself, as well as an additional core surcharge to encourage the return of the used part for remanufacturing purposes. A dealer has eligibility to return up to the allowed time limit and will lose their core deposit if not returned within the allotted time
- The core surcharge is a form of deposit you can recover when you return your used or core part to Stellantis
- It is key that all cores are sent back to Stellantis to maintain the raw material flow and Customer Satisfaction. If the cores are not returned to Stellantis, it can create Back Orders as cores are the raw material needed for the remanufacturing process
- Core Surcharges are applied on Reman and MOPAR genuine parts, and even for some private label product lines



Packaging

- Environmentally responsible packaging materials and management are paramount to our goal of sustainable business practices
- A secure label ensures the authenticity of the remanufactured parts

Good for the Customer, good for the Business, good for the Planet!
By buying **Remanufactured parts** you are part of the **Circular Economy**.

PRODUCT LINES | EUROPE



WARRANTY

Same as MOPAR
genuine parts

Mechanic & Electric Parts

		FAMILY CODE
Air conditioning & heating	Air conditioning compressor	30014
Driveline	Automatic transmission	30794
	Driveshaft	30814
	Gearbox hydraulic block	30874
	Manual transmission	30864
	Transmission transfer case	30804
Electric & Electronic	Engine ECU	30954
	Fuse box	31074
	Video Camera	31144
Engine	EGR valve	31434
	Engine cylinder block	31494
	Engine cylinder head	31274
	Intake manifold	31414
	Petrol & diesel engine	31344
	Throttle body	31404
	Turbochargers	31424
EV components	Electric reduction gear	30574
	EV & PHEV traction battery	30544
Fuel systems	Fuel injection pump	31574
	Fuel injector & injector holder	31584
	Fuel tank	31624
	SCR tank	31624
Ignition & Rotating	Alternator	31674
	Starter	31654
Mechanic & Electric Brakes	Abs block, pump & sensor	30694
	Brake caliper	30594
Mechanic & Electric Suspension	Suspension air compressor	30254
Steering	Power steering pump	30144
	Steering column & components	30114
	Steering rack	30124



Maintenance Parts

		FAMILY CODE
Clutch	Clutch kit	20184
	Clutch kit + dual mass flywheel	20204
	Flywheel	20194
Exhaust	Particle filter pipe (DPF)	20304

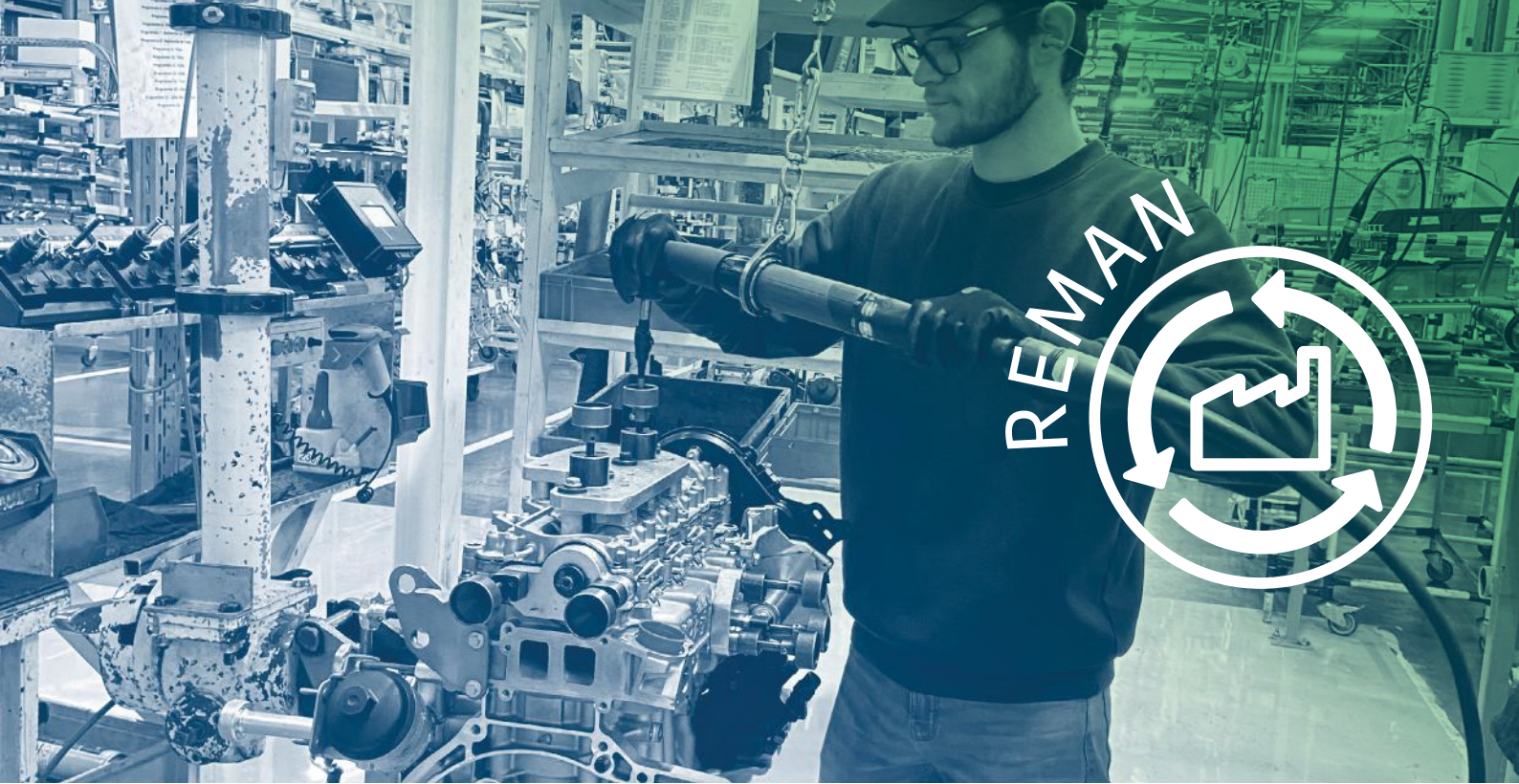
Entertainment & Connectivity Parts

		FAMILY CODE
Entertainment & Connectivity	Autoradio	85072
	CD changer	85162
	Navigation system	85032

Body Parts

		FAMILY CODE
Interior parts	Cluster	10294





Mechanic & Electric Parts

AIR CONDITIONING
& HEATING

DRIVELINE

ELECTRIC & ELECTRONIC

ENGINE

EV COMPONENTS

FUEL SYSTEM

IGNITION & ROTATING

MECHANIC
& ELECTRIC BRAKES

MECHANIC
& ELECTRIC SUSPENSION

STEERING



AIR CONDITIONING COMPRESSOR

FAMILY CODE: **30014**

The air conditioning compressor is an essential component of the air conditioning system. It enables the refrigerant to circulate by compressing it. It enables cold air to be produced in the passenger compartment.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full cleaning
- Systematic replacement of wear parts: pulley, clutch, pistons, bearings, etc.
- Check dimensional tolerance and measurement of all components
- Leak and performance test in accordance with greenhouse gas regulations



MAINTENANCE & REPAIR GUIDELINES

The air conditioning compressor must be replaced when:

- The air from the air conditioning system is not cold
- The volume of conditioned air is low
- The drive belt whistles
- There are leaks of fluid other than water
- There is a noise in the air conditioning compressor
- There is a whistling noise when starting



ADDITIONAL CHECKPOINTS

- Auxiliary drive belt
- Seals
- Tensioner roller
- Idler roller
- Fluid hoses
- Cooling gas

EE SA NA





AUTOMATIC TRANSMISSION

FAMILY CODE: **30794**

An automatic gearbox enables a vehicle to reach the desired speed, by using its hydraulic coupler which engages the gear.



NON-EMITTED CO₂*: **396,6 kg**



MATERIAL SAVINGS*: **65,41 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full dismantling of components
- Component checks (dimensions and functions)
- Clean and recondition all parts to their original condition
- Replace damaged or worn parts with new components



MAINTENANCE & REPAIR GUIDELINES

Must be replaced when:

- There is an oil leak
- The gearbox makes a noise in neutral
- It is difficult to engage the gears
- There is a dull noise or grinding noise during operation



ADDITIONAL CHECKPOINTS

- Driveshafts
- Oil cooler

EE SA NA





DRIVESHAFT

FAMILY CODE: **30814**

The driveshaft transfers the rotational movement from the gearbox to the wheels.



NON-EMITTED CO₂*: **29,4 kg**



MATERIAL SAVINGS*: **8,08 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full cleaning and paintwork
- Systematic replacement of moving parts: gaiters, bearings, etc.
- Reuse shafts after structural analysis



MAINTENANCE & REPAIR GUIDELINES

- The driveshaft must be replaced when there is:
- A sustained and continuous knocking noise while turning, that comes from play in the driveshaft joints
 - A slight knocking noise when accelerating and decelerating in a straight line



ADDITIONAL CHECKPOINTS

- Gearbox oil
- Fixing nut

EE SA NA





GEARBOX HYDRAULIC BLOCK

FAMILY CODE: **30874**

The gearbox hydraulic block is a central component of the automatic gearbox. It regulates the oil pressure and flow. This component allows the gears to be changed and engaged.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Dismantle, clean and change the valves



MAINTENANCE & REPAIR GUIDELINES

The gearbox hydraulic block must be replaced when:

- The gears no longer engage or do not engage correctly
- The gearbox temperature is abnormally high



ADDITIONAL CHECKPOINTS

- Gearbox oil
- Torque converter

EE SA NA





MANUAL TRANSMISSION

FAMILY CODE: **30864**

The manual gearbox increases the power between the engine and the wheels. More specifically, the gearbox coordinates the rotational speed of these two components, so that the wheels turn at the desired speed.



NON-EMITTED CO₂*: **69,2 kg**



MATERIAL SAVINGS*: **29,4 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full dismantling of components
- Component checks (dimensions and functions)
- Clean and recondition all parts to their original condition
- Replace damaged or worn parts with new components



MAINTENANCE & REPAIR GUIDELINES

Must be replaced when:

- There is an oil leak
- The gearbox makes a noise in neutral
- It is difficult to change gear or a gear does not engage
- The gear jumps while driving



ADDITIONAL CHECKPOINTS

- Driveshafts
- Clutch and engine flywheel
- Clutch control
- Clutch fluid

EE SA NA





TRANSMISSION TRANSFER CASE

FAMILY CODE: **30804**

The transmission transfer case will transfer the power to front and rear axles. It also synchronizes the difference between the rotation of the front and rear wheels.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full dismantling of components
- Component checks (dimensions and functions)
- Clean and recondition all parts to their original condition
- Replace damaged or worn parts with new components



MAINTENANCE & REPAIR GUIDELINES

Must be replaced when:

- There is an oil leak
- There is damage to the case
- Repair of internal worn or damaged
- There are noises due to speed variation



ADDITIONAL CHECKPOINTS

- Driveshafts

EE SA NA





ENGINE ECU

FAMILY CODE: **30954**

The engine ECU manages and optimizes all the engine parameters:

- Ignition
- Injection
- Turbocharger, etc.

It converts the vehicle's mechanical actions into electronic signals to inform the driver.



NON-EMITTED CO₂*: **57 kg**



MATERIAL SAVINGS*: **0,65 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Clean the unit and connectors
- Read the list of faults to identify failures
- Preventive replacement of all worn and fragile components to ensure long-term durability
- Full operational test of each BSI/ECU on a simulation bench
- Fitting on the vehicle, identical to the MOPAR genuine part, including the calibration download process



MAINTENANCE & REPAIR GUIDELINES

The engine ECU must be replaced when:

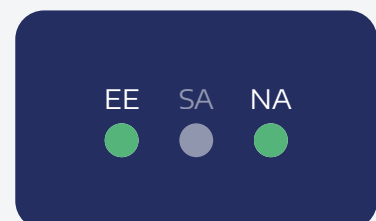
- Your vehicle cannot be started
- The fuel consumption increases exponentially
- The ABS or ESP is no longer working properly
- There is a lack of engine power
- The vehicle is unstable when accelerating
- Several indicator lamps are lit on the dashboard at the same time



ADDITIONAL CHECKPOINTS

- Depending on the nature of the fault

EE SA NA





FUSE BOX

FAMILY CODE: **31074**

The “BSI” unit, or Built-in Systems Interface, is an electronic management unit. It manages the electronic information of your vehicle and thus enables it to function correctly. The BSI unit is the reason why there aren't numerous electrical wires crossing over your passenger compartment.



NON-EMITTED CO₂*: **1,4 kg**



MATERIAL SAVINGS*: **0,55 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Clean the unit and connectors
- Read the list of faults to identify failures
- Preventive replacement of all worn and fragile components to ensure long-term durability
- Full operational test on a simulation bench
- Fitting on the vehicle, identical to the MOPAR genuine part including the calibration download process



MAINTENANCE & REPAIR GUIDELINES

The built-in systems interface must be replaced when:

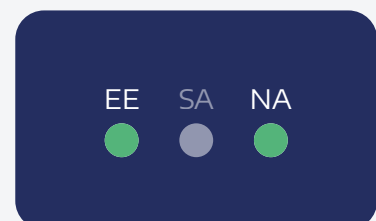
- The engine starts when cold and not hot
- Functions can no longer be activated



ADDITIONAL CHECKPOINTS

- Fuses
- Relays

EE SA NA





VIDEO CAMERA

FAMILY CODE: **31144**

The windshield-mounted video camera is an advanced driver assistance system (ADAS) and electronic device that assists the driver while driving.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: **0,114 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Cleaning of the unit
- Reading of the list of faults to identify failures
- Preventive replacement of all worn and fragile components to ensure long-term durability
- Full operational test on a simulation bench
- Fitting on the vehicle, identical to the genuine part, including the calibration download process



MAINTENANCE & REPAIR GUIDELINES

The video camera must be replaced or recalibrated:

- When the windshield is replaced
- When an ADAS is not working properly



ADDITIONAL CHECKPOINTS

- Windshield
- Camera Calibration

EE SA NA





EGR VALVE

FAMILY CODE: **31434**

The exhaust gas recirculation (EGR) valve reduces exhaust emissions by returning them to the combustion cycle.



NON-EMITTED CO₂*: **6,3 kg**



MATERIAL SAVINGS*: **0,77 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full reconditioning of the EGR valve
- Systematic replacement of wear parts: seals, valve, seat, etc.



MAINTENANCE & REPAIR GUIDELINES

The exhaust gas recirculation valve must be replaced when:

- The engine warning lamp or “pollution” indicator lamp lights up
- The engine has trouble starting and its power is limited
- The engine is running in safety mode



ADDITIONAL CHECKPOINTS

- Catalytic converter
- Particle filter

EE



SA



NA





ENGINE CYLINDER BLOCK

FAMILY CODE: **31494**

The cylinder block is an integral part of the engine. The trio of pistons, rods and crankshafts enables the energy produced by the fuel (explosion) to be converted from translational movements into rotational movements, with the latter driving the wheels.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Systematic replacement of moving parts: piston assemblies, rings, etc., guaranteeing a compression ratio and oil and fuel consumption that is identical to a MOPAR genuine parts engine
- Check noise level (must be identical to a MOPAR genuine part)
- Ensure conformity with electronics, the injection and the exhaust system



MAINTENANCE & REPAIR GUIDELINES

The cylinder block must be replaced when:

- The engine makes a knocking noise when accelerating
- The engine consumes oil
- The timing belt is broken
- There is a loss of power and less compression

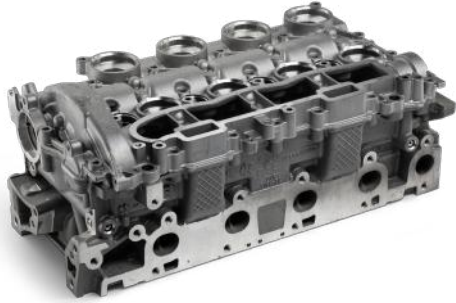


ADDITIONAL CHECKPOINTS

- Cooling radiator
- Turbo, if fitted
- Timing kit
- Coolant pump
- Accessories kit (tensioner rollers + alternator belt)
- Clutch
- Exhaust line
- Cylinder head

EE SA NA





ENGINE CYLINDER HEAD

FAMILY CODE: **31274**

The cylinder head is located on the upper section of the engine and contains the combustion chamber. Its role is to allow the air-fuel mixture to enter on one side and release exhaust gases on the other side.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Systematic replacement of moving parts: camshaft assembly, valves, etc.
- Check the compression ratio, oil and fuel consumption, identical to that of a MOPAR genuine parts engine, ensuring that the noise level is identical to a MOPAR genuine part
- Check of conformity with electronics, the injection, and the exhaust system



MAINTENANCE & REPAIR GUIDELINES

The cylinder head must be replaced when there is:

- A knocking noise when accelerating
- Engine oil consumption
- A timing belt breakage
- A loss of power and less compression



ADDITIONAL CHECKPOINTS

- Cooling radiator
- Turbo, if fitted
- Timing kit
- Coolant pump
- Accessories kit (tensioner rollers + alternator belt)
- Clutch
- Exhaust line
- Pistons or rings
- Cylinder blocks

EE SA NA





INTAKE MANIFOLD

FAMILY CODE: **31414**

The intake manifold brings the air-petrol mixture into the engine cylinders.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Dismantle, clean, and scour the part



MAINTENANCE & REPAIR GUIDELINES

The intake manifold must be replaced when:

- The engine misfires



ADDITIONAL CHECKPOINTS

- Air filter
- Spark plugs

EE SA NA





PETROL & DIESEL ENGINE

FAMILY CODE: **31344**

The function of the engine is to convert energy into movement.



NON-EMITTED CO₂*: **0 kg**



MATERIAL SAVINGS*: **116,44 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Systematic replacement of moving parts: piston assemblies, valves, etc. to maintain performance, consumption, reliability and durability, identical to the MOPAR genuine part
- Check conformity with electronics, injection, and exhaust system



MAINTENANCE & REPAIR GUIDELINES

Must be replaced when:

- It makes a knocking noise when accelerating
- It consumes oil
- A loss of power and compression is noticed
- The timing belt is broken



ADDITIONAL CHECKPOINTS

- Turbocharger, if fitted
- Clutch
- Exhaust line
- Injection system cooling radiator
- Pre-heat glow plugs
- EGR valve

EE SA NA





THROTTLE BODY

FAMILY CODE: **31404**

A throttle body is a tube-shaped housing that contains a flat valve (butterfly) that rotates to vary the amount of air entering an engine.



NON-EMITTED CO₂*: **6,3 kg**



MATERIAL SAVINGS*: **0,77 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Dismantle, clean, and scour the part



MAINTENANCE & REPAIR GUIDELINES

The throttle body must be replaced when:

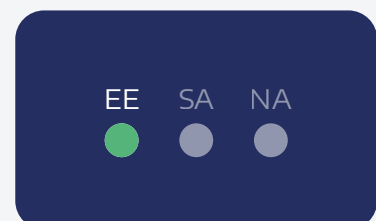
- There is a lack of power
- The engine has lost power



ADDITIONAL CHECKPOINTS

- ECU
- Plugs
- Air filter

EE SA NA





TURBOCHARGERS

FAMILY CODE: **31424**

The turbocharger increases the volume of air in the air-petrol mixture. This has the effect of increasing the engine power.



NON-EMITTED CO₂*: **26,9 kg**



MATERIAL SAVINGS*: **4,83 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full reconditioning of the turbo
- Check compression mapping, ensuring that the fuel consumption and emissions are identical to a MOPAR genuine part
- Check for no whistling and compatibility with the electronics, injection, and exhaust system



MAINTENANCE & REPAIR GUIDELINES

The turbocharger must be replaced when:

- There is a lack of power
- It consumes oil
- It makes a metallic noise



ADDITIONAL CHECKPOINTS

- Engine oil
- Oil filter
- Exhaust

EE SA NA





ELECTRIC REDUCTION GEAR

FAMILY CODE: **30574**

The electric reduction gear acts as a gearbox for electrical vehicles.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full dismantling of components
- Component checks (dimensions and functions)
- Clean and recondition all parts to their original condition
- Replace damaged or worn parts with new components



MAINTENANCE & REPAIR GUIDELINES

The reduction gear must be replaced when:

- There is noise during acceleration and deceleration



ADDITIONAL CHECKPOINTS

- Driveshaft

EE SA NA





ELECTRICAL VEHICLE TRACTION BATTERY & PLUG-IN-HYBRID ELECTRIC VEHICLE BATTERY

FAMILY CODE: **30544**

The traction battery stores the electrical energy required for the vehicle to work. This energy will be used as “fuel” for the vehicle.

 **NON-EMITTED CO₂***: *under investigation*

 **MATERIAL SAVINGS***: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Intensive electrical and electronic tests following the safety standards, identical to the original battery
- Check the power to reach the minimum specification threshold
- Implement the latest software version, ensuring the best performance



MAINTENANCE & REPAIR GUIDELINES

The traction battery must be replaced when:

- It is beyond its useful life or when deemed defective by diagnostics from a certified technician



ADDITIONAL CHECKPOINTS

- Charging cable

EE SA NA





FUEL INJECTION PUMP

FAMILY CODE: **31574**

The injection pump increases the fuel pressure, so that the fuel is injected into the cylinders via the injector holder.



NON-EMITTED CO₂*: **7,6 kg**



MATERIAL SAVINGS*: **2,78 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full cleaning
- Systematic replacement of wear parts: pistons, bearings, etc.
- Check the dimensional tolerance and measurement of all components
- Leak and performance test



MAINTENANCE & REPAIR GUIDELINES

The injection pump must be replaced when:

- Starting is difficult
- The engine misfires and cuts out unexpectedly



ADDITIONAL CHECKPOINTS

- Supply network
- High pressure pipe unions on the pump
- Diesel filter
- Injectors

EE SA NA





FUEL INJECTOR & INJECTOR HOLDER

FAMILY CODE: **31584**

The injector holder sends fuel into the cylinders.



NON-EMITTED CO₂*: **2,2 kg**



MATERIAL SAVINGS*: **0,27 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full cleaning
- Systematic replacement of wear parts: needle, inlet butterfly valve, solenoid valve
- Check dimensional tolerance and measurement of all components
- Leak and performance test



MAINTENANCE & REPAIR GUIDELINES

The injector holder must be replaced when the vehicle has difficulty starting:

- Unstable idling
- A smell of diesel
- A loss of power



ADDITIONAL CHECKPOINTS

- Supply network
- Other injectors (if the unit is changed)
- Injection pump
- Diesel filter

EE SA NA





FUEL TANK

FAMILY CODE: **31624**

The function of the tank is to store fuel.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Clean, check, and repair the sealing



MAINTENANCE & REPAIR GUIDELINES

The tank must be replaced:

- In the event of a leak
- If there is a problem with filling



ADDITIONAL CHECKPOINTS

- Fuel filter
- Supply pipes

EE SA NA





SCR TANK

FAMILY CODE: **31624**

The function of the SCR Tank or DEF is to store DEF Fluid (also known as Ad Blue or Urea fluid) in order to reduce NOx emitted by the engine. The tank assembly includes a pump to push the fluid to the exhaust system.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- The AdBlue Delivery Module is disassembled from the tank, components are tested, cleaned and reassembled to a new envelope



MAINTENANCE & REPAIR GUIDELINES

The SCR tank must be replaced when:

- The pump is defective which triggers a dashboard warning light even when the tank is full.
- The tank is leaking or otherwise determined defective by a certified technician.



ADDITIONAL CHECKPOINTS

- Check the CO₂ emission rate
- Diesel Particulate Filter (DPF)
- DEF Fluid
- Exhaust leaks from rust or gaskets

EE SA NA





ALTERNATOR

FAMILY CODE: **31674**

The alternator's purpose is to provide the electrical energy required for the engine and its accessories to work correctly. In addition, it charges the battery during each trip.



NON-EMITTED CO₂*: **16,2 kg**



MATERIAL SAVINGS*: **3,98 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
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REMANUFACTURING STEPS

- Full cleaning
- Systematic replacement of moving parts: bearings, contact brushes, etc.
- Recondition the pulley with the free wheel component
- Durability and output power test for the starter alternator



MAINTENANCE & REPAIR GUIDELINES

- The alternator must be replaced when:
- The "battery" warning lamp brightness is low
- The light power of the headlamps decreases



ADDITIONAL CHECKPOINTS

- Ancillary drive belt
- Tensioner roller
- Idler roller

EE SA NA





STARTER

FAMILY CODE: **31654**

The starter is an essential component in starting the vehicle. It starts the engine combustion.



NON-EMITTED CO₂*: **12,1 kg**



MATERIAL SAVINGS*: **3,49 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full cleaning
- Systematic replacement of moving parts: drive sprockets, bearings, seals, rings, etc.
- Durability and output power test, for Stop and Start starters (STT)



MAINTENANCE & REPAIR GUIDELINES

The starter must be replaced when:

- The control indicator lamps are on and there is no response to turning the ignition key

EE SA NA





ABS BLOCK, PUMP & SENSOR

FAMILY CODE: **30694**

During an emergency braking, the ABS block will manage the correct fluid pressure to be sent to the braking system. Main goal is to avoid wheel lock, maintain path control and traction control, and detect under-inflation of tyres.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
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REMANUFACTURING STEPS

- Full cleaning
- Systematic control & replacement of wear parts components: seals, electrical valves
- Inspect the unit and connectors
- Read the list of faults to identify failures
- Test of the part



MAINTENANCE & REPAIR GUIDELINES

ABS Block must be replaced when:

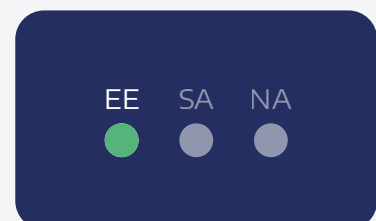
- ABS lamp lights up on the dashboard when it shouldn't
- ABS assembly is leaking / damaged
- Determined as defective after diagnostics by a certified technician



ADDITIONAL CHECKPOINTS

- Brake fluid level
- Flexibles
- ABS sensors
- Pads & discs

EE SA NA





BRAKE CALIPER

FAMILY CODE: **30594**

The brake caliper supports the brake pads. Its hydraulic piston applies the brake pads to the disc to ensure that braking occurs.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
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REMANUFACTURING STEPS

- Full cleaning, galvanized and/or repainted.
- Systematic replacement of moving parts: seals, dust cover, bleed screws, etc.
- Reuse the majority of parts after structural analysis
- Recondition the caliper
- Check dimensional tolerance and measurement of all components
- Pre-fill the brake caliper (brake fluid)



MAINTENANCE & REPAIR GUIDELINES

The brake caliper must be replaced when:

- The caliper piston has seized
- The brake fluid leaks



ADDITIONAL CHECKPOINTS

- Opposite caliper
- Brake hoses
- Discs
- Pads
- Brake fluid

EE SA NA





SUSPENSION AIR COMPRESSOR

FAMILY CODE: **30254**

The suspension air compressor works in a similar way to a bicycle pump. It sends pressurized air to the shock absorbers.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full cleaning
- Systematic replacement of moving parts: pistons, bearing axis, seals, etc.



MAINTENANCE & REPAIR GUIDELINES

The suspension air compressor must be replaced when the vehicle:

- No longer has rear suspension
- Is pressed onto its rear shock absorbers during a prolonged stop



ADDITIONAL CHECKPOINTS

- Rear pneumatic springs
- Electrical harness connectors

EE SA NA





POWER STEERING PUMP

FAMILY CODE: **30144**

The electropump assembly enables the power steering. It makes maneuvering easier for the driver by reducing the amount of effort required.



NON-EMITTED CO₂*: **20,2 kg**



MATERIAL SAVINGS*: **4,73 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
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REMANUFACTURING STEPS

- Full dismantling of components
- Component checks (dimensions and functions)
- Clean and recondition all parts to their original condition
- Replace damaged or worn parts with new components
- Test the part



MAINTENANCE & REPAIR GUIDELINES

The electropump assembly must be replaced when:

- The power steering is not working, leading to difficulty with turning the steering wheel



ADDITIONAL CHECKPOINTS

- Power steering fluid
- Steering rack
- Steering rods

EE SA NA





STEERING COLUMN & COMPONENTS

FAMILY CODE: **30114**

The steering column steers the vehicle. It is the intermediary part between the steering wheel and the steering rack. It also houses the controls related to the steering wheel, such as the direction indicator stalks, cruise control, radio controls, telephone and airbag.



NON-EMITTED CO₂*: **76 kg**



MATERIAL SAVINGS*: **8,11 kg**

*Source: Life-Cycle Assessment (LCA) Europe.
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REMANUFACTURING STEPS

- Full cleaning
- Systematic replacement of moving parts: seals, circlip, bearing, etc.
- Check the dimensional tolerance and measurement of all components
- Leak and performance tests carried out



MAINTENANCE & REPAIR GUIDELINES

The steering column must be replaced when:

- Its universal joint is worn (dangerous play and steering imprecision)
- Jolts are felt through the steering wheel when turning



ADDITIONAL CHECKPOINTS

- Steering lock

EE SA NA





STEERING RACK

FAMILY CODE: **30124**

The steering rack steers the vehicle. It is the intermediary part between the front wheels and the steering column.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe. Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full cleaning
- Systematic replacement of moving parts: such as pinions, seals, sockets, dust protection, etc.
- Reuse the majority of parts after analysis of the structure
- Check dimensional tolerance and measurement of all components
- Adaptation for each part number in the reconditioning process, to ensure performance and driving comfort equivalent to the new part
- Fitting on the vehicle, identical to the MOPAR genuine part including the calibration download process



MAINTENANCE & REPAIR GUIDELINES

The steering rack must be replaced when there is:

- A noise in the steering pump
- A noise at the front suspension bar during steering wheel movements
- Play in the steering rack felt through the steering wheel

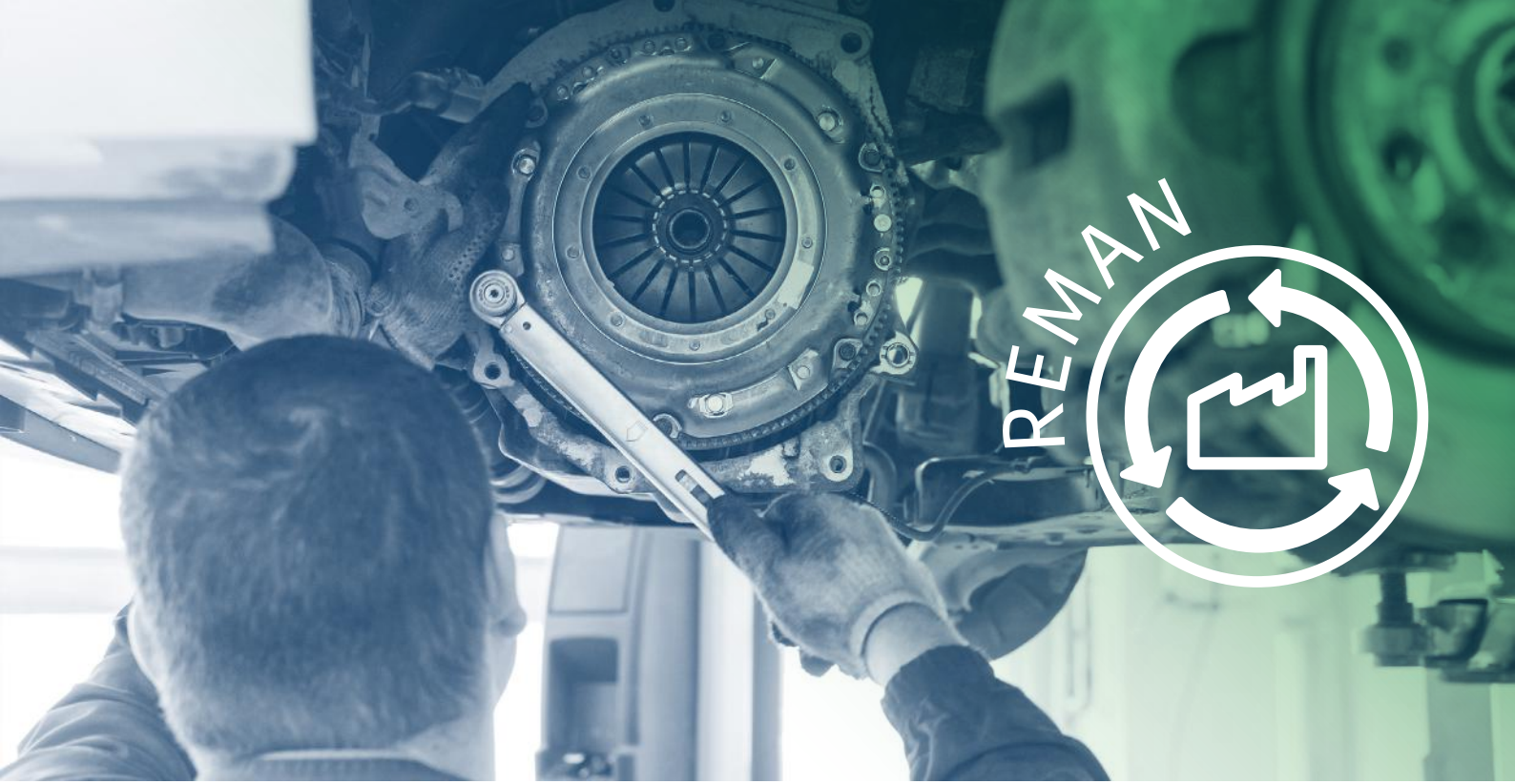


ADDITIONAL CHECKPOINTS

- Power steering fluid
- Steering rods

EE SA NA





Maintenance Parts

CLUTCH

EXHAUST



CLUTCH KIT

FAMILY CODE: **20184**

The clutch kit is used to engage gears. It is the intermediary part between the engine and the gearbox.

 **NON-EMITTED CO₂*: 14,8 kg**

 **MATERIAL SAVINGS*: 5,34 kg**

*Source: Life-Cycle Assessment (LCA) Europe. Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full cleaning and paintwork for perfect protection against rust
- Systematic replacement of moving parts: friction disc, bearings, etc.
- Check dimensional tolerance and measurement of all components



MAINTENANCE & REPAIR GUIDELINES

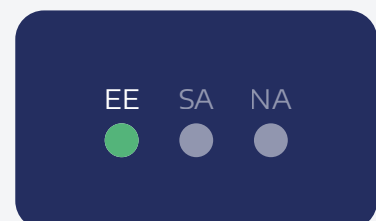
The clutch kit must be replaced when:

- The clutch pedal is stiff
- There is hesitation when starting
- The clutch slips
- Changing gear is difficult



ADDITIONAL CHECKPOINTS

- Gearbox oil
- Clutch master and slave cylinders
- Steering rods
- Driveshafts





CLUTCH KIT + DUAL MASS FLYWHEEL

FAMILY CODE: **20204**

In addition to the double engine flywheel, the clutch is used to engage gears. It is the intermediary part between the engine and the gearbox.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe. Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Resurface the engine flywheel contact area
- Change the clutch friction system
- Change the clutch bearing
- Full dismantling of components
- Component checks (dimensions and functions)
- Clean and recondition all parts to their original condition
- Replace damaged or worn parts with new components



MAINTENANCE & REPAIR GUIDELINES

Must be replaced when:

- The clutch pedal is stiff
- Changing gear is difficult
- The clutch slips



ADDITIONAL CHECKPOINTS

- Gearbox oil
- Clutch master and slave cylinders
- Steering rods
- Driveshaft

EE SA NA





FLYWHEEL

FAMILY CODE: **20194**

The engine flywheel is an integral part of the engine. It is used by the starter when the engine is started. Due to its size and weight, it acts as a balancer (prevents engine hesitation). It is also used to transmit the rotational movement to the clutch and the gearbox. Springs enable it to filter vibrations and acyclisms from the engine, in order to limit their effects on other engine parts (ensuring additional comfort for passengers).



NON-EMITTED CO₂*: 49,3 kg



MATERIAL SAVINGS*: 14,52 kg

*Source: Life-Cycle Assessment (LCA) Europe.
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REMANUFACTURING STEPS

- Resurface the engine flywheel contact area
- Change the clutch friction system
- Change the clutch bearing
- Systematic replacement of moving parts: springs, damping system, etc.
- Check the dimensional tolerance and measurement of all components



MAINTENANCE & REPAIR GUIDELINES

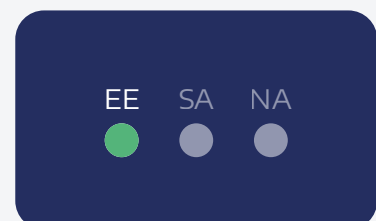
Must be replaced when:

- The clutch pedal is stiff
- Changing gear is difficult
- There is hesitation when starting



ADDITIONAL CHECKPOINTS

- Gearbox oil
- Clutch master and slave cylinders
- Steering rods
- Driveshaft
- Clutch kit





PARTICLE FILTER PIPE (DPF)

FAMILY CODE: **20304**

The particle filter is an emission control device that retains fine exhaust particles.



NON-EMITTED CO₂*: **15,3 kg**



MATERIAL SAVINGS*: **8,31 kg**

*Source: Life-Cycle Assessment (LCA) Europe. Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Full cleaning at high temperature ensuring the same CO₂ performance as the genuine part



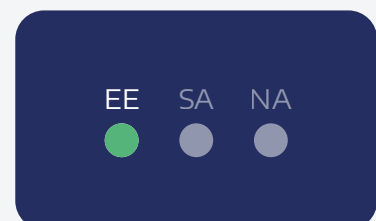
MAINTENANCE & REPAIR GUIDELINES

- The particle filter must be replaced when:
- The exhaust pipe is hanging low
 - The noise from the exhaust is abnormally intensified during acceleration
 - A message is displayed on the dashboard indicating an emission control fault



ADDITIONAL CHECKPOINTS

- Exhaust line rubber bushing
- Exhaust silencer and pipe
- Particle filter regeneration fluid





Entertainment & Connectivity Parts

ENTERTAINMENT
& CONNECTIVITY



AUTORADIO

FAMILY CODE: **85072**

An audio system is the central component of a sound reproduction system installed in a vehicle.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe. Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Clean the unit and connectors
- Read the list of faults to identify failures
- Preventive replacement of all worn and fragile components
- Full operational test on a test bench
- Fitting on the vehicle, identical to the genuine part including the calibration download process if required



MAINTENANCE & REPAIR GUIDELINES

The autoradio system must be replaced when:

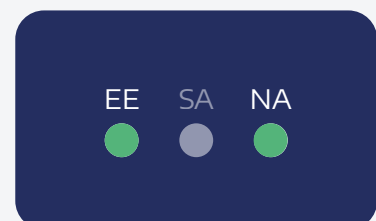
- The memory function can no longer be activated
- The audio system is silent
- A CD is stuck inside the player
- The sound level is not gradual
- The navigation no longer works



ADDITIONAL CHECKPOINTS

- The SIM card or navigation CD
- The speakers
- The aerial cable

EE SA NA





CD CHANGER

FAMILY CODE: **85162**

The CD changer stores and plays multiple discs.



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe. Based on a European study Material savings and non-emitted CO₂ on average compared with the new equivalent MOPAR genuine part. Values are given for information only, corresponding to the main seller of the similar products and determined according to a methodology approved by an independent company (Sphera methodology).



REMANUFACTURING STEPS

- Clean the unit and connectors
- Read the list of faults to identify failures
- Preventive replacement of all worn and fragile components to ensure long-term durability
- Full operational test on a simulation bench
- Fitting on the vehicle, identical to the genuine part



MAINTENANCE & REPAIR GUIDELINES

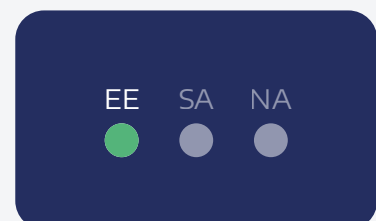
The CD changer must be replaced when:

- The CD function does not start up
- The CD rack is jammed inside the reader



ADDITIONAL CHECKPOINTS

- Speakers





NAVIGATION SYSTEM

FAMILY CODE: **85032**

The navigation system is an onboard device paired to the audio system. It provides a route from point A to point B that you can follow.

 **NON-EMITTED CO₂***: *under investigation*

 **MATERIAL SAVINGS***: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
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REMANUFACTURING STEPS

- Dismantle and replace faulty components



MAINTENANCE & REPAIR GUIDELINES

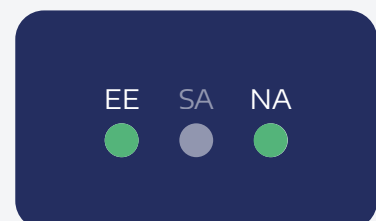
The navigation system must be replaced when:

- The GPS function no longer works



ADDITIONAL CHECKPOINTS

- CD ROM
- Or memory card





Body Parts

INTERIOR PARTS



CLUSTER

FAMILY CODE: **10294**

The cluster is a control panel that displays various vehicle and engine information such as: speedometer, tachometer, engine coolant, fuel gauge...



NON-EMITTED CO₂*: *under investigation*



MATERIAL SAVINGS*: *under investigation*

*Source: Life-Cycle Assessment (LCA) Europe.
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REMANUFACTURING STEPS

- Clean the unit and connectors
- Read the list of faults to identify failures
- Preventive replacement of all worn and fragile components to ensure long-term durability
- Full operational test of the dashboard



MAINTENANCE & REPAIR GUIDELINES

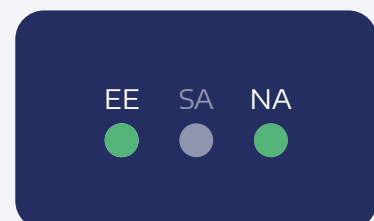
The cluster must be replaced when:

- You start the engine and bulbs don't work as they should
- One or several instrumentations do not work (speedometer, tachometer...)
- Determined as defective after diagnostics by a certified technician



ADDITIONAL CHECKPOINTS

- Wire components
- Fuse & fuseboxes
- All bulbs if necessary



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