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BATTERY CABLES

⚠️ It is a good rule to disconnect the battery cables before removing components from the motorcycle.

After having removed the tail unit as described in chapter C “Bodywork”, remove the fixing screws (1) of the seat support on both sides and remove it.

Remove the screw (2) indicated in the figure.
Disconnect the negative pole of the battery.

⚠️ When removing the battery, it is necessary to remove the negative pole cable first and then the positive pole cable. When reassembling, proceed in the reverse order.

Disconnect the positive pole of the battery.
Remove the battery from its compartment.
SIDE STAND REMOVAL

Check that the side stand closes on its own without blocking.
If it is necessary to substitute it, proceed as follows:
Place the motorcycle on the rear stand (special tool).

Special tool no. 800092642

Remove the under-engine fairing and the left fairing side panel as described in chapter C “Bodywork”.
Disconnect the electrical connector of the safety switch.
Remove the side stand safety switch by unscrewing two screws (1) indicated in the figure.

Remove the three screws (2) of the side stand fixing plate.
For reassembly, proceed in the reverse order of removal.
Apply the recommended thread-locking liquid to the three plate fixing screws.
Tighten to the prescribed torque pressure.

Recommended thread-locking liquid: Loctite 243

Torque pressure: 25 N·m

FOOTREST REMOVAL

Unscrew the two screws (1) of both footrest supports and remove them.
SILENCERS AND EXHAUST GROUP REMOVAL

Right passenger footrest removal
This is necessary only when working on two-seat motorcycles. Remove the right passenger footrest by unscrewing the two relative screws.

Silencer anti-heat protection removal
Remove the two fixing screws (1) of the protection.

Silencer removal
Unhook the two connecting springs between the exhaust group and the silencers.

⚠️ This operation must be carried out utilising an adequate tool to avoid the springs bouncing away in a dangerous way.
Remove the silencer union plate by unscrewing the two screws (1).

Remove the two lateral fixing screws (see figure) and remove the four silencers.

**Exhaust group removal**

Unhook the two connecting springs between the primary exhaust tubes and the exhaust group.

⚠️ This operation must be carried out utilising an adequate tool to avoid the springs bouncing away in a dangerous way.

Remove the two screws (1) indicated in the figure and slide out the exhaust group (2).
EXHAUST TUBE REMOVAL

First remove the radiator assembly complete with cooling fan as described in chapter L “Cooling system”. Proceed for each tube as follows:

Unscrew the two nuts of each exhaust tube, supporting the tube from underneath.

Remove the two flanges for each tube.

Remove the exhaust tubes and the seal gaskets at the cylinder head.

Apply sufficiently adequate wadding to the exhaust ports to stop the entry of dirt and dust into the cylinders.
If the engine has to be removed from the frame, it will be necessary to remove the chain as described in chapter F “Suspension and wheels”.
FRAME REMOVAL PRELIMINARY OPERATIONS
Utilising the lift no. 800095807, lift up the motorcycle.

Mount under the motorcycle the support no. 800097867 and lower the motorcycle onto it.
Remove the lift no. 800095807.

Remove in the following sequence:
- Front mudguard
- Front brake calipers.
- Front wheel
Proceed as described in chapter F “Suspension and wheels” and H “Brakes”.

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Remove the two fixing screws of the accelerator cable support.

Disconnect the cables from their support by removing the nuts of the support.
RIGHT CLIP-ON HANDLEBAR REMOVAL
Remove the screw indicated in the figure.
Open the clamp.
Remove the complete assembly including caliper and brake fluid chamber.

CLUTCH CONTROL HOSE REMOVAL
Free the clutch control hose (1) from the relative rubber bands on the frame.

Protect the area around the fluid chamber with a cloth or paper.
Remove the union as indicated in the figure.
Discharge the clutch fluid from the system into an appropriate container.
Disconnect the connector (2) of the left commutator and proceed with the removal of the left clip-on handlebar, operating as previously for the right clip-on handlebar.

Remove the wiring (3) of the electrical system.

Remove the cable support plate (4) mounted underneath the headlight.
Free the electrical wiring on the right side of the motorcycle and wiring of the instrumentation.

Remove the two fixing screws (5) of the headlight, supporting it during the operation.
IGNITION SWITCH REMOVAL
Disconnect the electrical wiring (1) of the ignition switch.

Remove the two fixing screws of the ignition switch. Remove the switch from the motorcycle along with the expansion tank.

REAR SUSPENSION REMOVAL
To remove the front suspension, proceed as described in chapter F “Suspension and wheels” under the headings FRONT FORK REMOVAL and STEERING ASSEMBLY.
THROTTLE BODY REMOVAL

Remove the electrical connectors on the injectors (1) and the potentiometer.
Slacken the screws of the upper bands on the air intakes as shown in the figure.

Remove the complete throttle body assembly.

Protect the air intake conduits by utilising caps to avoid the ingress of dirt and dust into the cylinders.
Remove from the frame the sockets (2) for the vacuum-meter on both sides of the motorcycle.

H.T. COILS REMOVAL
Disconnect the spark plug insulated covers.

Disconnect the relative electrical connections to the coils.
Remove the fixing screw of the coil support.

Remove the entire coil assembly and the H.T. leads from the motorcycle.

Free the frame from the electrical group (1) mounted on the left side.
Remove the screw as shown in the figure.
Insert the group inside the frame.
Free the electrical wiring from the frame by removing the relative rubber bands.

Remove the fuse box (2) from its anti-vibration support on the frame.

Place the wiring inside the frame as shown in the figure, to allow the disassembly of the frame.
FRAME DISASSEMBLY
Remove the screw (1) and the relative plate.
Remove the same screw on the opposite side.

Remove the nut (2) indicated in the figure.

Remove the screw pin (3) from the opposite side.
Remove the two screws (4) on both sides of the motorcycle.

Remove the frame from the motorcycle rotating the steering head housing upwards as shown in the figure.
Frame check
Accurately clean the conical seats of the steering head housing.

Check that there are no marks or signs on all surfaces. Check that the area shown in the figure is not deformed (as a consequence of accident damage).

Check that there are marks of evident breakages along the frame tubes.
If damage is found, substitute the frame.
Clean and examine the contacts between the frame and the engine and also between the frame and the rear suspension plates.
FRAME CONTROL REFERENCE MEASUREMENTS

To carry out a detailed check of the frame, herewith below are the reference measurements that are of fundamental importance for the correct condition of the frame.
Steering head housing check
Check the diameter and eventual ovalisation of the steering head housing, 5 mm from the lip of the beveling as shown in the figure.

Measure the ovalisation in diverse points as shown in the figure.
ASSEMBLY FRAME TO THE MOTORCYCLE

If it is necessary to substitute the frame, it is possible to recuperate various components from the old frame, such as the chain attachment plates, anti-vibration rubbers, the rubber protection and the threaded seal caps. These components can be mounted onto the new frame after having effectuated a thorough check on their condition.

For the stamping and the homologation label of the new frame, contact the MV Agusta service centre.

Thoroughly clean the matching surfaces of the frame and the engine and the frame/rear suspension plates.
Before proceeding with the assembly of the frame to the motorcycle, be careful to correctly position the wiring (see figure).

With regards to the positioning of the cables, fasteners and various wiring consult the various tables shown in the F4 Spare Parts Catalogue (MY 2000 - code 800092873 or MY 2002 – code 800098957).
Carry out the sequence of operations of assembly in reverse order to removal for the correct assembly of the frame to the motorcycle. Tighten the various fixings to the torque pressure shown in the following diagram.

<table>
<thead>
<tr>
<th>PART.</th>
<th>DESIGN NO.</th>
<th>DESCRIPTION</th>
<th>DIM.</th>
<th>TORQUE PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>800084869</td>
<td>Front engine mounting screw</td>
<td>M12x1.25</td>
<td>55/60</td>
</tr>
<tr>
<td>2</td>
<td>800084866</td>
<td>Upper engine mounting screw</td>
<td>M12x1.25</td>
<td>55/60</td>
</tr>
<tr>
<td>3</td>
<td>800084865</td>
<td>Lower engine mounting screw</td>
<td>M12x1.25</td>
<td>55/60</td>
</tr>
<tr>
<td>4</td>
<td>800084867</td>
<td>Plate – frame screw</td>
<td>M12x1.25</td>
<td>55/60</td>
</tr>
<tr>
<td>5</td>
<td>800090426</td>
<td>Plate – lower sub-frame fixing screw</td>
<td>M8x1.25</td>
<td>24/28</td>
</tr>
<tr>
<td>6</td>
<td>800086395</td>
<td>Front fork pin screw</td>
<td>M15x1.25</td>
<td>70/75</td>
</tr>
<tr>
<td>7</td>
<td>8K0090426</td>
<td>Rear suspension compensator screw</td>
<td>M10x1.25</td>
<td>50/55</td>
</tr>
<tr>
<td>8</td>
<td>8J0090426</td>
<td>Plate – lower sub-frame fixing screw</td>
<td>M8x1.25</td>
<td>24/28</td>
</tr>
</tbody>
</table>

The tightening of the engine mounting screws and the plates 1, 2, 3, 4, 5 and 6 is effectuated with the motorcycle resting on its wheels and the engine hanging from the frame.

The tightening of the rear sub-frame screws 7 and 8 is carried out by letting the sub-frame drop into position by its own weight.

Utilise AGIP GREASE 30 for the screws.
Rear sub-frame removal

After having removed the battery as described previously, remove the earth cable from the engine.

Disconnect the wiring of the pick-up sensor.

Disconnect the electrical connections of the neutral gear sensor (1) and the stop light switch (2).
Disconnect the connections of the generator.

Remove the fixing nut of the generator cable.

Remove the feed cable-fixing nut on the starter motor.
Place the entire electrical wiring on the tail unit as shown in the figure.

Remove on both sides the two lower fixing screws (3) of the rear sub-frame unit.
Support the nuts during the operation.

Remove the two upper screws (4) on both sides of the rear sub-frame unit, taking care to support the rear frame unit.
Remove the battery compartment (5) and the special nut (6).

Remove the rear sub-frame unit from the motorcycle.

REAR FRAME UNIT ASSEMBLY
To assemble the rear sub-frame unit to the motorcycle, proceed in the reverse order of removal. Tighten the four fixing screws (1) to the prescribed torque pressure.

Torque pressure: 24 - 28 N·m
(See page 27).
ENGINE REMOVAL FROM FRAME
Gearchange lever removal
Remove the screws (1).
Remove the gearchange lever (2) by pulling outwards.

Remove the three screws (3) from the pinion wheel cover.

Remove the front screw (4) from the hydraulic cylinder.
Remove the complete pinion cover.

Remove the chain as described in chapter F "Suspension and wheels" by utilising the special tool no. 800095389.
Slide the chain out from the pinion wheel.

Slacken the fixing screw (5) of the front fork pin by one turn.
Slacken the nut on the rear suspension compensator pin.

Remove the rear brake pump unit as described in chapter H “Brakes”.

Remove the nut (6) of the lower engine pin.
Support the front fork from below utilising the appropriate lift.

Extract the engine fixing pin (7) from the left side of the engine.

Extract the two bushes shown in the figure from the frame plates.
The engine is now free from the frame plates. Separate the engine from the frame by dragging the engine support in the direction indicated in the figure.

Rear suspension removal
Having removed the engine from the frame plates, proceed with the removal of the rear brake fluid chamber by removing the screws (1).

Remove the screw (2) with the relative washer.
Remove the right frame plate.

Remove the pin (3) from the left side of the motorcycle.

Remove the pin (4).
Remove the left rear suspension plate.
To reassemble, proceed in the reverse order of removal, lubricating the various fixings and tightening to the prescribed torque pressure as shown in page 27.