SHERCO

MANUEL D'ATELIER I WORKSHOP MANUAL I MANUAL DE TALLER

125 SE-R

CONTENTS

The present manual is primarily intended for certified mechanics working in an appropriately equipped workshop.

Performing the various operations requires both a solid knowledge in mechanics and the set of SHERCO tools specific to the 125 SE-R engines.

This workshop manual serves as a complement to the SHERCO 125 SE-R user's manual.

SI 125 SE-R

Tooling reference	Designation
1814	Clutch drum block
1815	Ignition block
2067	Oscillating arm shaft tool
2072	Right-hand casing primary shaft bearing tool
2074	Secondary shaft bearing tool
R467	Out-of-gearbox shaft bearing tool
2069	Out-of-gearbox gasket tool
2071	Right-hand drum bearing selection tool
5398	Left-hand drum bearing selection tool
5399	Crankshaft bearing tool
2069	Crankshaft gasket tool
5402	HK0808 needle bearing cage tool (water pump, starter)
1968	Water pump gasket tool
1821	Engine support
1817	Primary pinion block tool
2073	Spring block (finger pointing device)
R462	Magnetic wheel wrench
R464	Crankshaft ring extractor
R453	Selected shaft bearing assembly tool
R444	Gasket selector tool

Engine

Type	Liquid cooled, 2-stroke single cylinder
Displacement	124.81 CC
Bore diameter / Stroke	54 / 54.5 mm
Gasoline	Unleaded with an octane index of at least 95 mixed with two-stroke oil (2%)
Coolant	with forced circulation
Ignition system	A DC-CDI without a contact breaker, digital advance
Spark plug	NGK BR9ECMIX
Distance between spark plug electrodes	0.7 mm
Piston	Forged aluminium
Motor oil	500 ml SAE 10W40
Main transmission	20 x 72
Gearbox: 1st 2nd 3rd 4th 5th 6th	6 speeds 15: 33 17: 30 19: 28 21: 26 23: 24 25: 22
Final transmission	13 x 51
Clutch	Multi-disc in an oil bath, hydraulic controls
Ignition	Electric starter
Battery	12 V 4 Ah
Alternator	220 W

Carburettor

Type of carburettor	KEIHIN PWK 36S AG
Needle position	3rd position from the top
Injector needle	N1EG
Main injector	KEA 168 (KEA 115)
Braking injector	KEP 42 (KEA 38)
Starter injector	85 (50)
Opening of the air regulator screws	1 T 1/4
Sliding gate section	5.5

❯I Cycle part

Frame	Semi-perimeter made of CrMo steel with an aluminium back clip
Yoke	WP suspension X Plor Ø48 mm
Rear suspension	WP suspension with a separate cylinder, oscillating aluminium arm
Front/back stroke	300/330 mm
Front brake	disc Ø 260 mm
Rear brake	Disc Ø 220 mm
Disc brakes	Wearing limit: 2.7 mm front and 3.6 mm rear
Front tyre	90/90-21''
Rear tyre	140/80-18''
Front/rear off-road pressure	0.9 bar
Gasoline tank capacity	10.4 l, including 1 litre in reserve
Steering column angle	25.9°
Wheelbase	1,465 mm

❯I Yoke

Original settings - WP yoke suspension X Plor Ø48 mm

Compression	Comfort	14 clicks backwards
	Standard	12 clicks backwards
	Sport setting	10 clicks backwards
Recreation	Comfort	14 clicks backwards
	Standard	12 clicks backwards
	Sport setting	10 clicks backwards
Prestressing	Comfort	0 Clicks
	Standard	1 Click (+3)
	Sport setting	2 Clicks (+6)
Spring stiffness	Rider's weight: 65-75 kg	3.8 N/mm
	Rider's weight: 75-85 kg	4.0 N/mm (origin)
	Rider's weight: 85-95 kg	4.2 N/mm
Type of oil	SAE 4	
Measured oil level (compressed yoke and without spring action) from the top of the upper tube	110 mm	

I Shock absorber

Original settings - WP suspension shock absorber

Low-speed compression	Comfort	20 clicks backwards
	Standard	12 clicks backwards
	Sport setting	6 clicks backwards
High-speed compression	Comfort	2 revolutions backwards
	Standard	1.5 revolutions backwards
	Sport setting	1 revolution backwards
Recreation	Comfort	15 clicks backwards
	Standard	12 clicks backwards
	Sport setting	6 clicks backwards
Spring stiffness	Rider's weight: 65-75 kg	42 N/mm
	Rider's weight: 75-85 kg	45 N/mm (original setting)
	Rider's weight: 85-95 kg	48 N/mm

OPERATIONS REQUIRING ENGINE REMOVAL OR NOT

	Operation requiring engine removal	Operation not requiring engine removal
Crankshaft (including the crank kit)	•	
Complete gearbox	•	
Crankshaft bearing	•	
Gearbox bearing	•	
Piston		•
Cylinder		•
Cylinder head		•
Ignition		•
Starter gear set		•
Complete clutch		•
Water pump		•
Speed selection assembly		•

I Engine removal

CAUTION

To remove the engine, you must first dismount the oscillating arm pivot shaft, which allows detaching the rear wheel/oscillating arm assembly. To prevent the motorcycle from tipping over, hold the chassis with a jack.

- Drainage (see User's Manual)
  - Motor oil
  - Coolant
- Remove the saddle.
- Disconnect the battery.
- Unhook the tank using its louvres.
- Disconnect the wire harness attached to the engine (starter lug, anti-parasitic device).
- Remove the exhaust (see User's Manual).
- Remove the carburettor.
- Remove the secondary transmission chain (quick fasteners).
- Remove the chain protection.
- Remove the clutch slave cylinder.

CAUTION

Once the clutch slave cylinder has been removed, the piston is no longer being maintained. Hold the piston pressed down using a plastic collar.

- Remove the water hoses connected to the engine.
- Remove the left side radiator.
- Unscrew the entire set of engine screws.
- Loosen the oscillating arm shaft.
- Remove the cylinder head-frame retaining brackets and corresponding electric engine.
- Remove the engine shafts.
- Remove the oscillating arm shaft.
- Unhook the valve cables from their pulley.
- Remove the engine.

I Reassembly of the engine into its frame

For the reassembly step, proceed in the opposite order from disassembly, in complying with the tightening torques of both screws and nuts: **Engine screws: 60 N-m**

Oscillating arm nut: 100 N-m

Clutch slave cylinder screws: 10 N-m

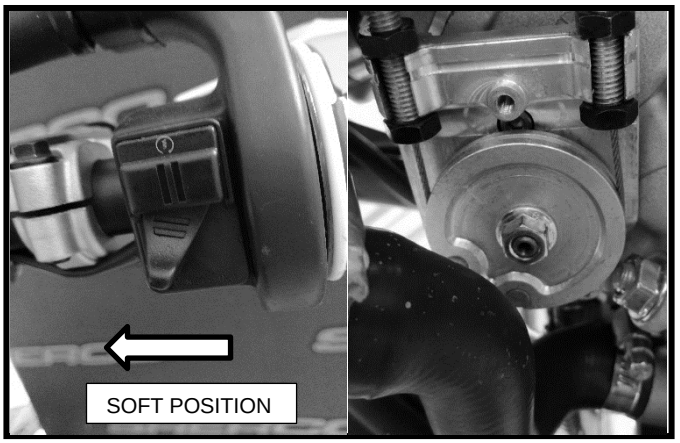
Cylinder head-frame screws: 23 N-m

CAUTION

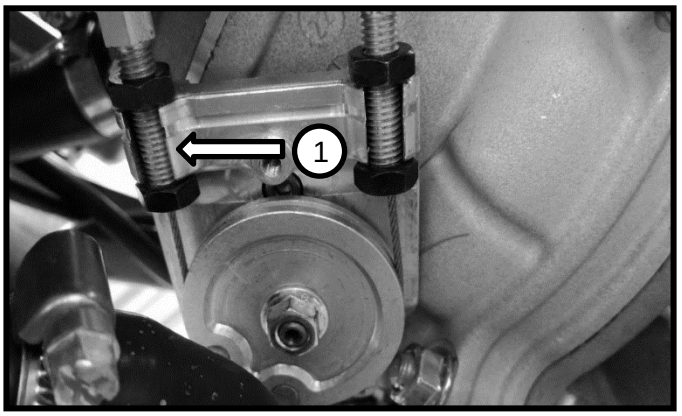
During engine reassembly in the frame, the valve cable tension is very high to ensure proper engine operations, with sufficient resistance in the valve drive cables and mechanism over time.
Follow the procedure indicated below in order to properly tension the cable.

- Remove the two M4 screws and withdraw the valve pulley cover plate.

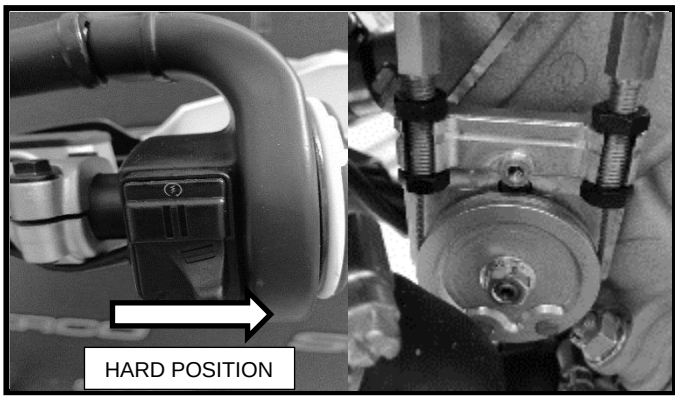
- Place the mapping contactor in the “Soft” position (toward the left) and place the motorcycle contact switch in the ON position.
  Wait for completion of the electric engine valve initialisation and its subsequent shut-off.
  Turn off the motorcycle contact switch and check that the pulley is correctly positioned facing left.



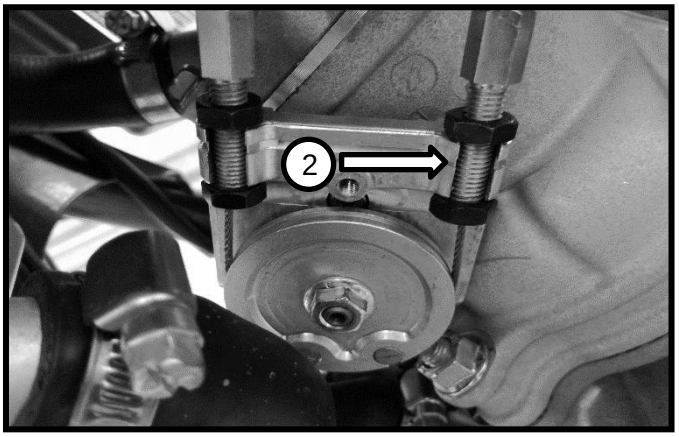
- Proceed with the left cable tension adjustment [1] so as to remove all slack from the pulley.



- Place the mapping contactor in the “Hard” position (toward the right) and turn on the motorcycle contact switch.
  Wait for completion of the electric engine valve initialisation and its subsequent shut-off.
  Turn off the motorcycle contact switch and check that the pulley is correctly positioned facing right.



- Proceed with the right cable tension adjustment [2] so as to remove all slack from the pulley.



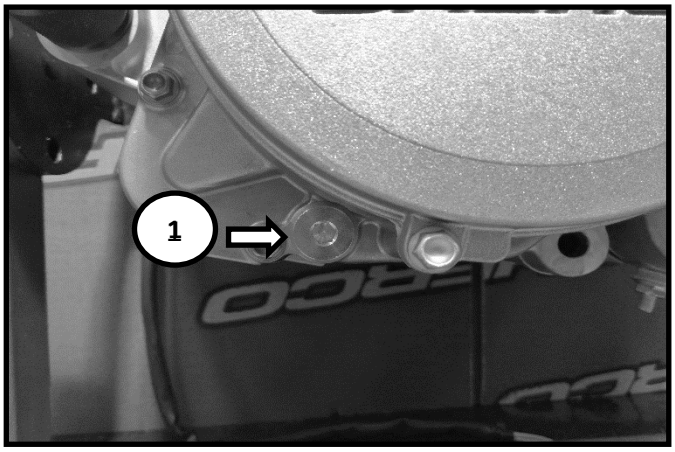
- Verify the effective operations of valves by placing the motorcycle contact switch in the ON position and transitioning from the “Hard” curve to the “Soft” curve.

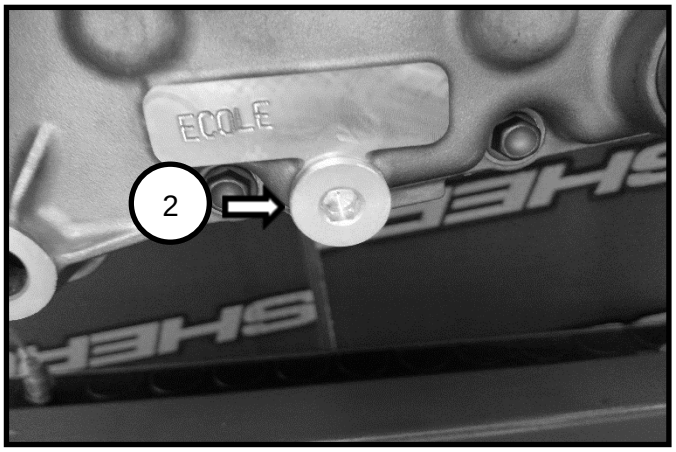
ENGINE DISASSEMBLY

For the blow-up drawings, please refer to the 125 SE-R spare parts catalogue

Gearbox drainage

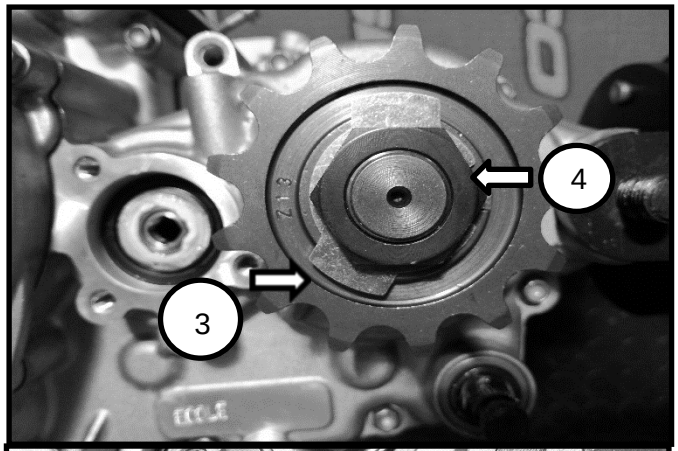
- Remove drainage plugs [1] and [2], let the oil flow out.

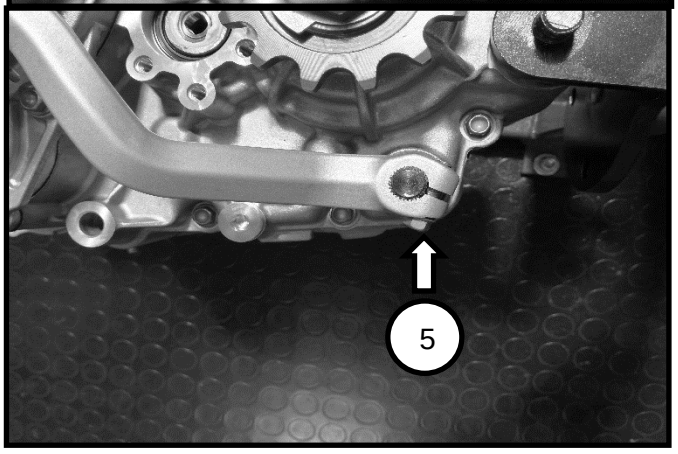




Removal of the pinion and selector

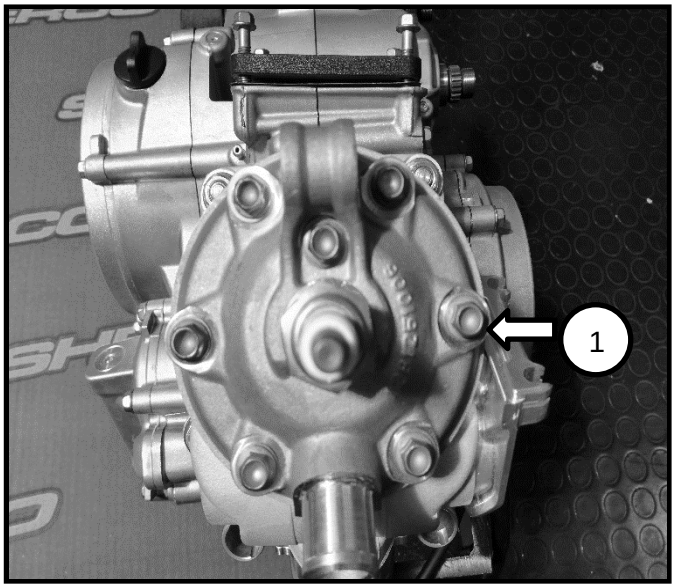
- Unfold the safety washer tab [3] using a pushing device.
- Remove the gearbox output pinion [4].
- Remove the screw first [5] first and then the selector.
- Release the clutch control rod.



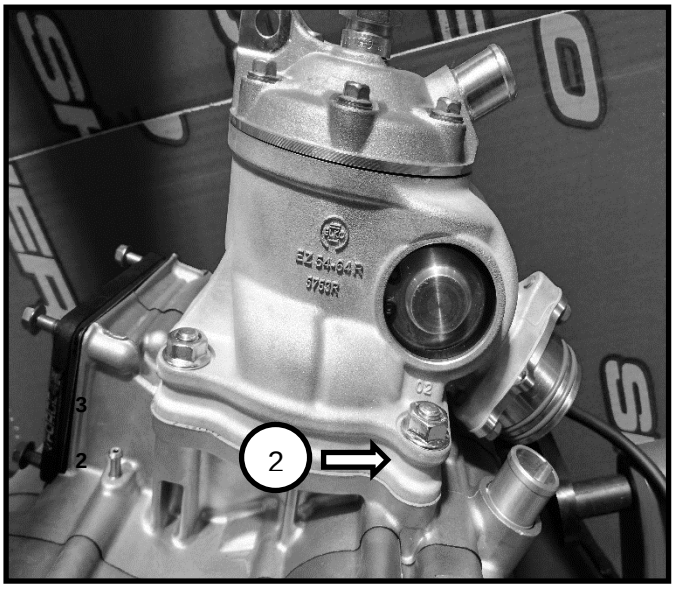


Removal of the cylinder head, the cylinder and the piston

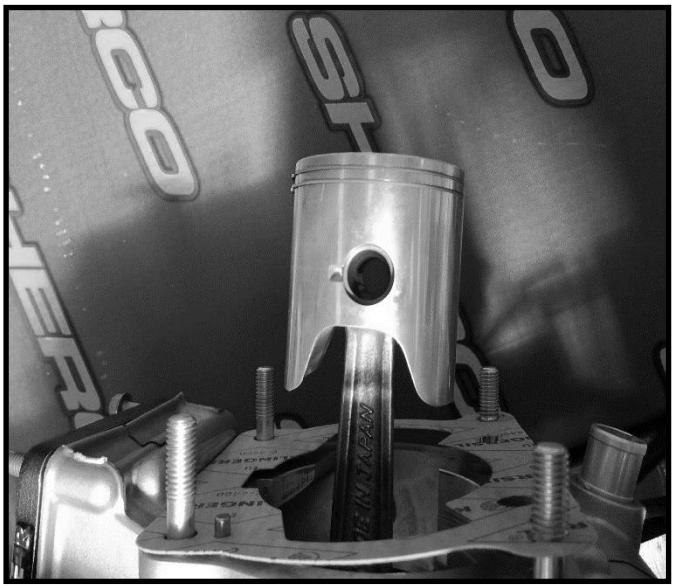
- Remove the shoulder screws [1] and release both the cylinder head and the two O-rings



- Remove all four nuts [2] and proceed with deinstallation.
- Conceal the casing.

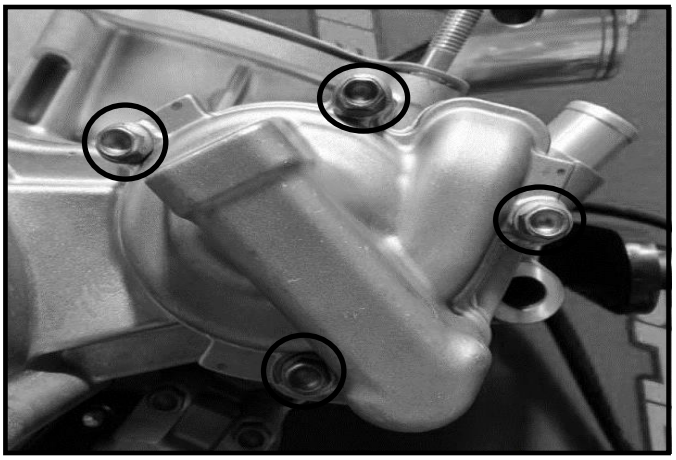


- Remove the piston shaft clips.
- Release the piston shaft.
- Remove the piston and extract the needle bearing from the connecting rod eye.
- Remove the base joint.



I Disassemble the clutch casing

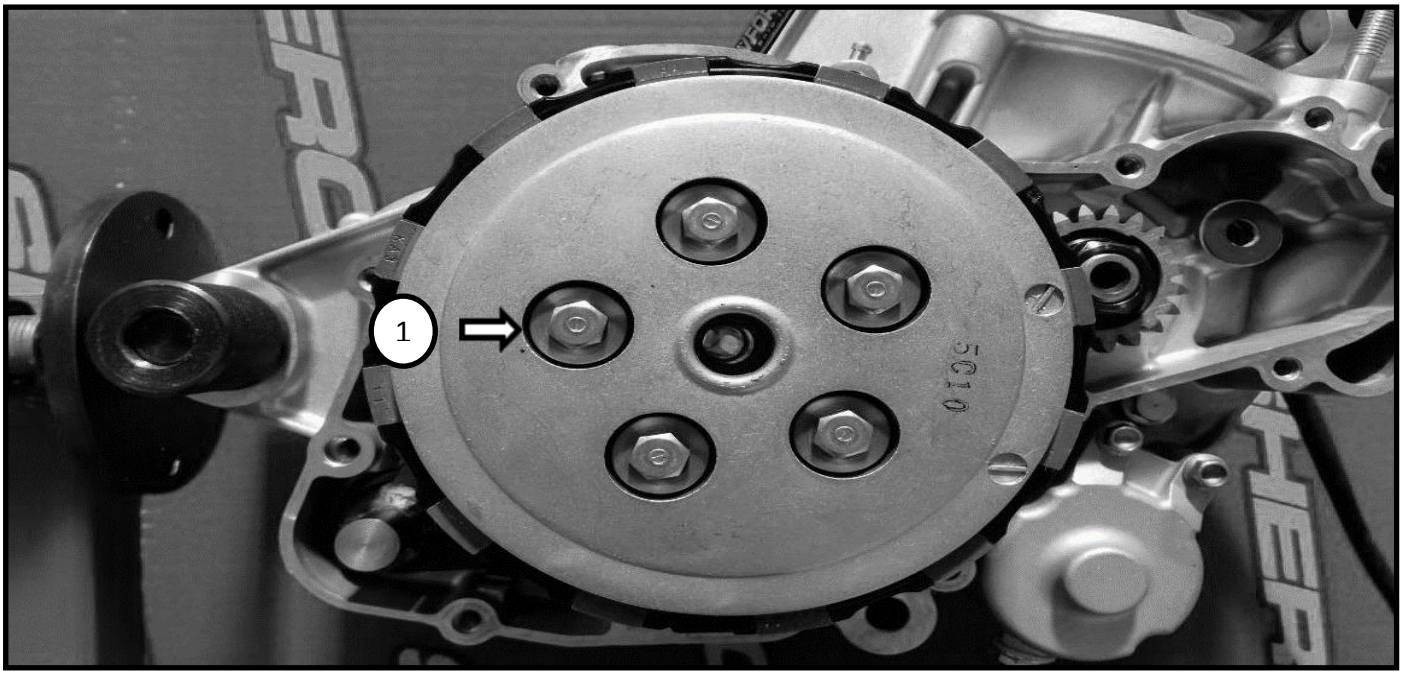
- Unscrew the water pump screws and cover. Remove the form joint.



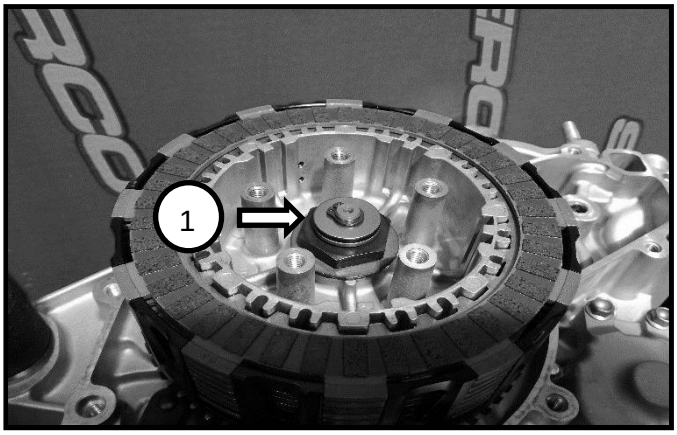
- Remove the screws first and then the clutch casing. Extract the joint.

I Removal of both the pressure tray and discs

- Loosen the screws of the clutch pressure plate [1].
- Remove the screws, springs and spring plates.

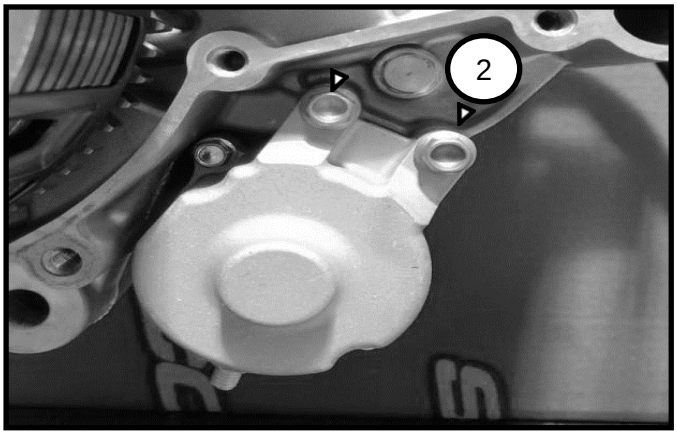


- Release both the pressure plate and discs from the housing.
- Remove the support part [1] positioned in the primary shaft.



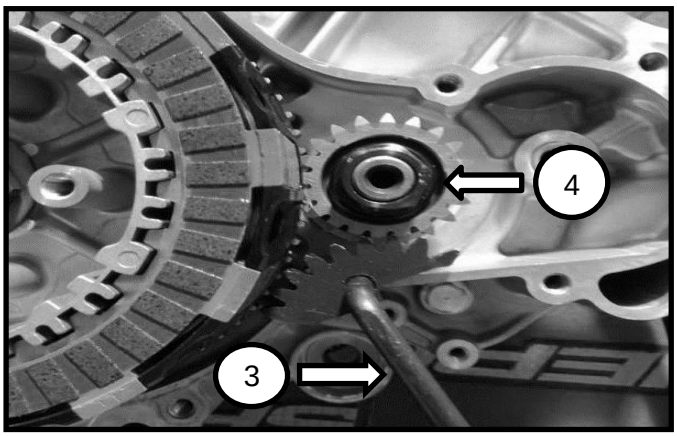
Removal of the electric starter

- Unscrew both screws [2]

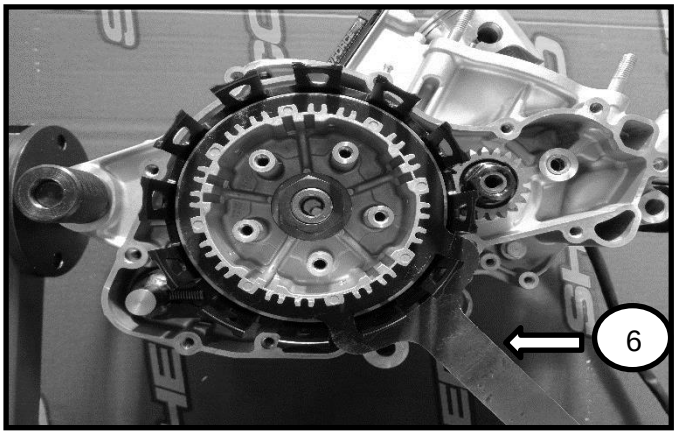


Removal of the main transmission

- Block the pinion at the end of the crankshaft using tool reference 1817 [3].
- Unscrew the main transmission nut [4] and then remove it with the tapered washer.



- Insert tool reference 1814 [6], which serves to hold the drum and loosen the nut.
- Remove the tool.
- Remove the drum, the toothed washer, the housing with the needle cage.

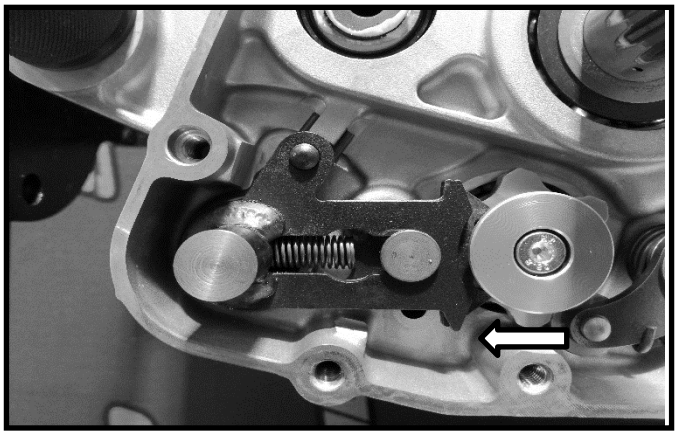


- Removal of the main transmission pinion

CAUTION at the wedge and O-ring.
The main transmission pinion and clutch housing crown match, which is why they cannot be changed separately. They must always be renewed as a pair.

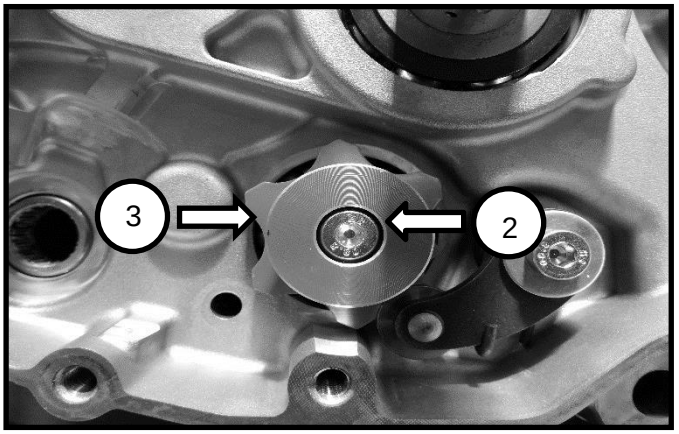
Removal of the locking mechanism

- With a screwdriver, push back on the scorpion so that it no longer makes contact with the selection star; next, remove the selection shaft.



CAUTION Be extremely careful with the washer left at the casing bottom.

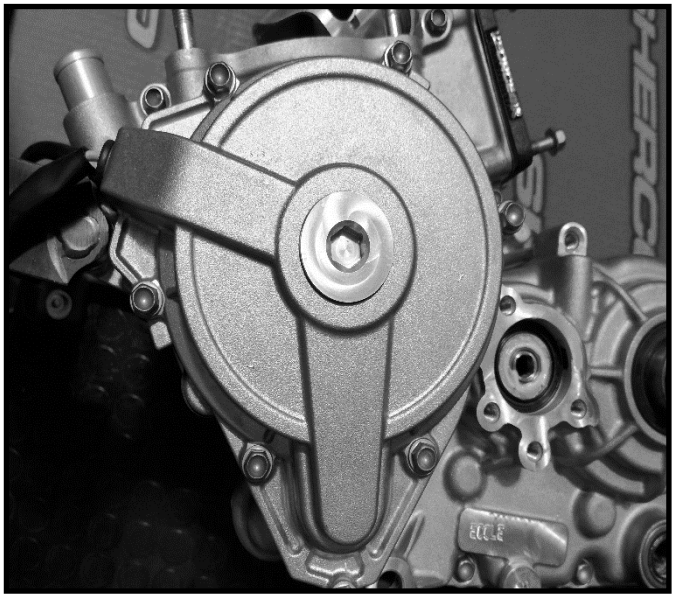
- Unscrew the hex socket screw [2] and remove the selection star [3].



CAUTION when handling the selection star indexation slug. The locking lever arm must only be retracted when changing the casing.

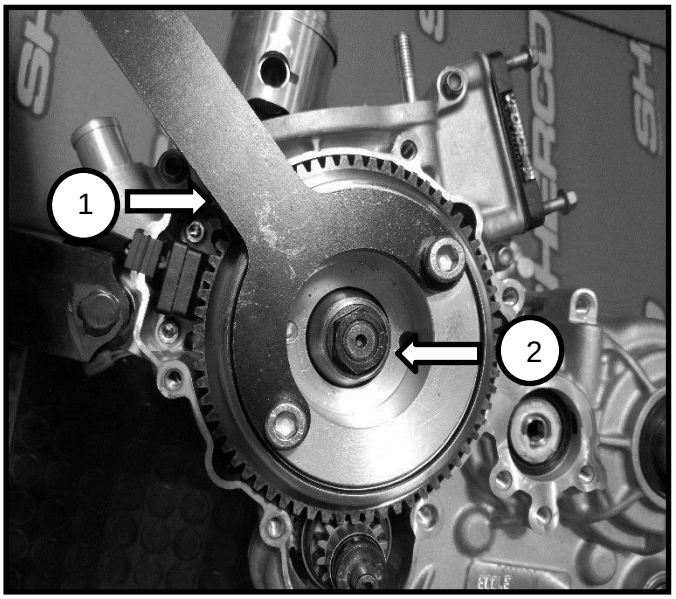
Removal of the ignition casing

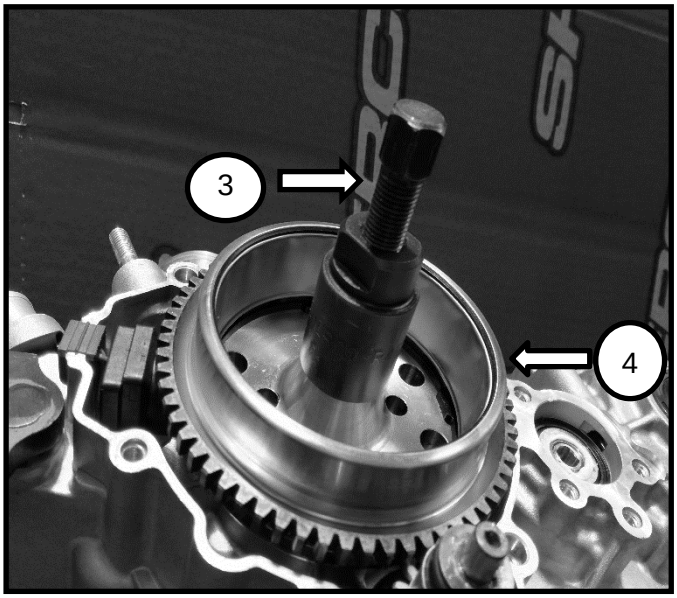
- Remove the screws first and then the ignition casing with its gasket.



Removal of the ignition

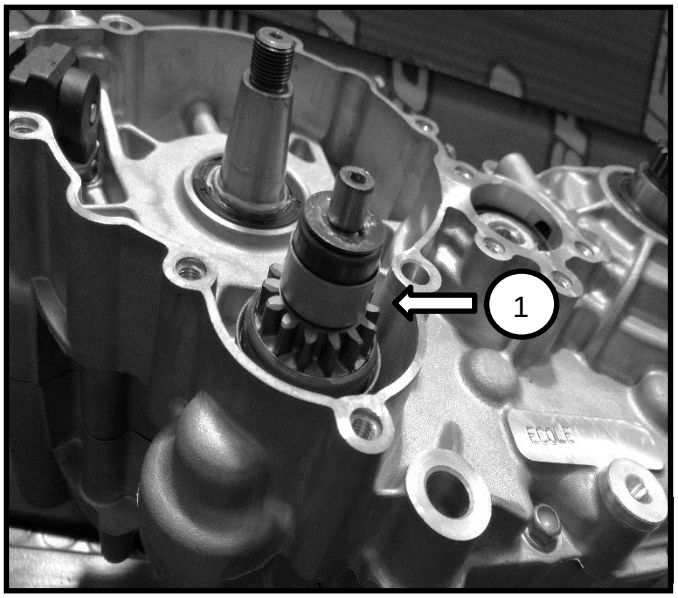
- Hold the steering wheel with tool 1815 [1] and unscrew the shoulder nut [2].
- Introduce extractor R462 [3] and tear out the magnetic wheel [4].





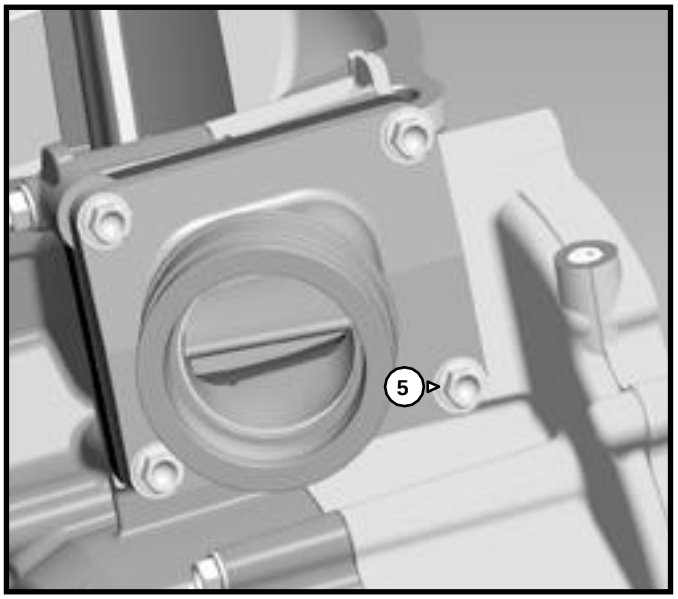
Removal of the starter

- Take out the starter [1]

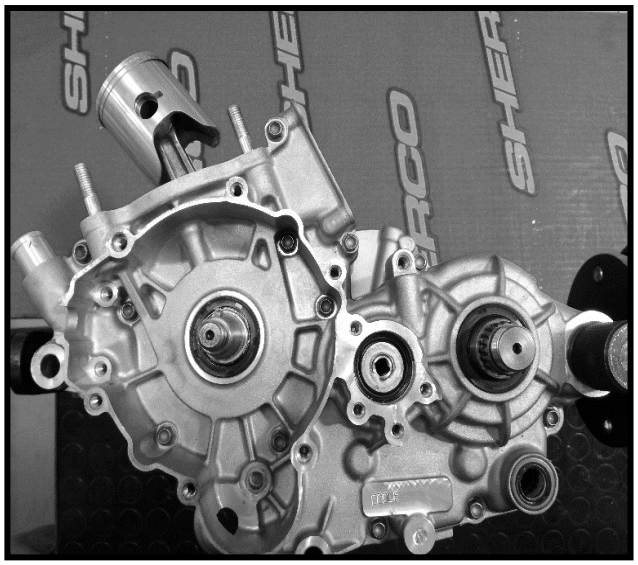


Intake pipe and clapper box

- Remove all 4 plastic hex sprocket screws [5].
- Remove the pipe, clapper box and corresponding joint.



Separate out the half-casings



- Reposition the engine so that the ignition side is facing you.
- Remove all the fastening screws.
- Now lift the left half-casing by gently striking the gearbox output shaft with a plastic mallet in order to dislodge the other half-casing.
- Remove both the half-casing and the central joint.

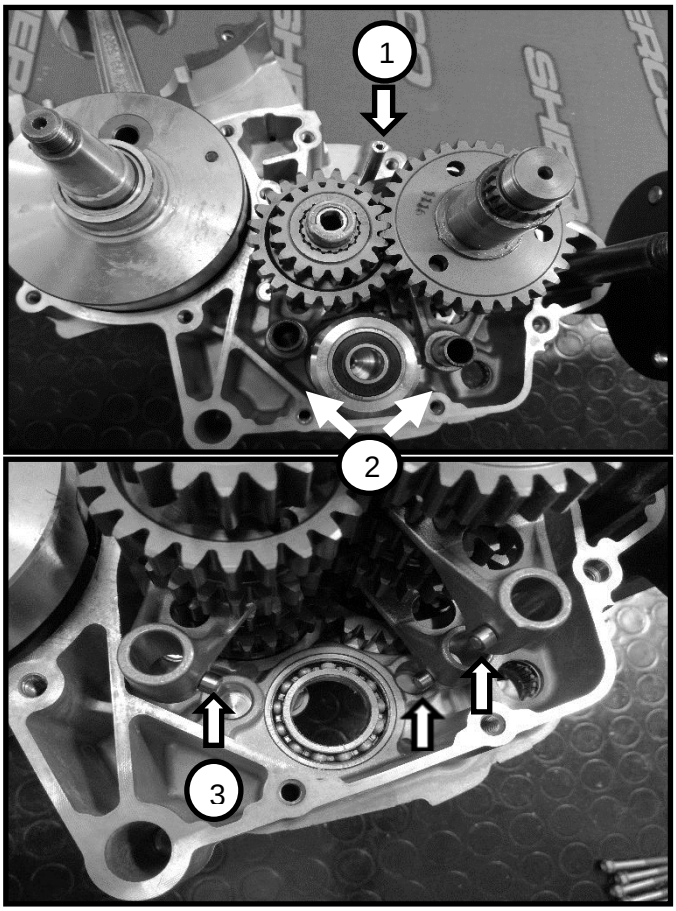
CAUTION

Avoid to the greatest extent possible introducing a screwdriver or any tool between the half-casings for the purpose of separating them. You might damage the parting surface.

CAUTION

Be careful when working with the set rings of gearbox shafts. They might stay stuck inside the casing.

Removal of the speed selection



- Remove the transmission gearbox lubrication tube [1].
- Remove the two selector fork shafts [2] and push them to the side to free the drum.
- Now disengage the selection drum from its bearing.
- Remove the selector forks.

CAUTION

During this removal step, be sure not to lose the small rollers [3] on the fork caps.
Indicate the association of these rollers with the corresponding forks for purposes of reassembly.

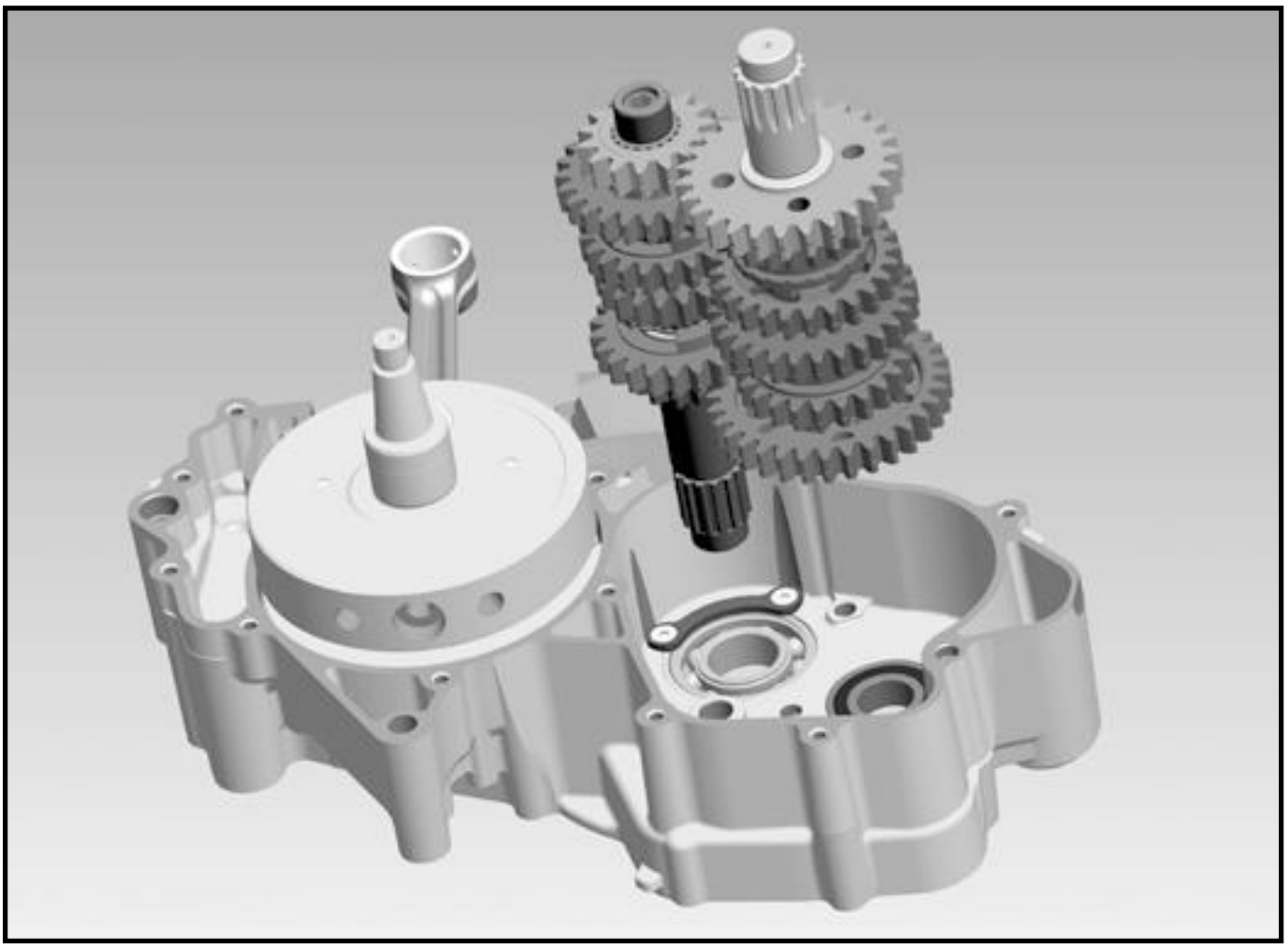
- Remove both the primary and secondary shafts from their bearing.

I Removal of the rod assembly

- Disengage the connecting rod assembly from its bearing (ultimately by lightly striking at the end of the crankshaft with a plastic mallet).
- Clean all the parts and check whether they exhibit wear. Replace them as needed.

CAUTION

During a complete engine disassembly step, it is preferable to replace all joints, gaskets and O-rings along with the bearings.

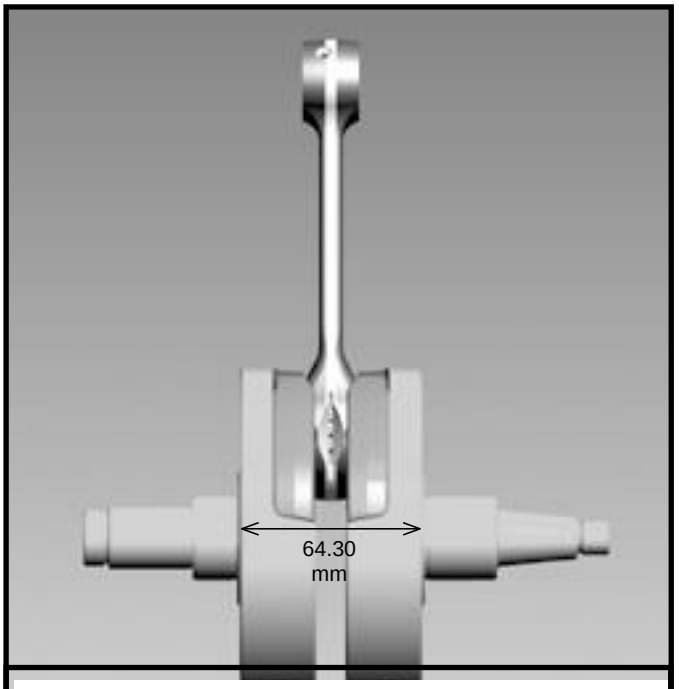


Connecting rod assembly

- If the roller bearings have been changed, then the internal ring that sits against the balance weight must also be changed.
- Heat the R464 tool to roughly 150°C, then immediately insert it onto the internal ring. Ensure that the tool sits squarely on the ring in order to more effectively transmit the heat and extract the ring.
- To install the new ring, heat the tool once again to approx. 150°C. Next, insert the new ring and immediately position it on the reach of the connecting rod assembly.

Balance masses, verification of the exterior side

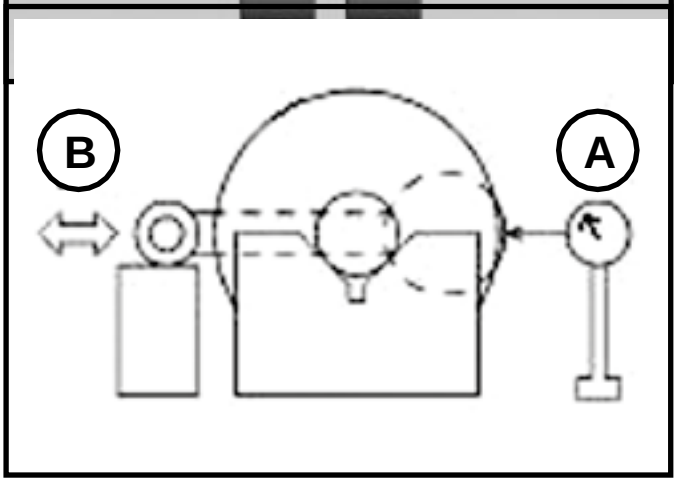
- Using a calliper, measure the outer distance of the balance masses.
  Exterior value: 57.0 +/- 0.1 mm



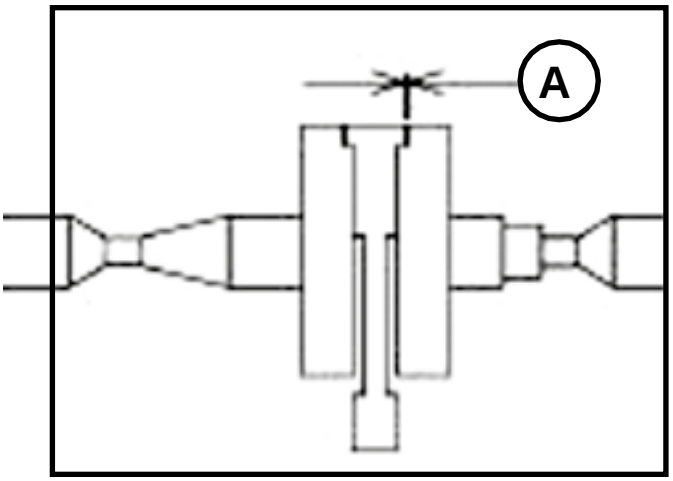
Radial clearance of the crank head

- Install the crankshaft on the V and place a dial gauge [A] against the crank head.
- Push [B] the crank head first toward the gauge and then in the opposite direction. The difference between these two measurements corresponds to the radial clearance.
  Crank head radial clearance:
  Standard: 0.015 mm - 0.025 mm
  Tolerance limit: 0.06 mm

If the radial clearance exceeds the tolerance limit, the crankshaft must be replaced.



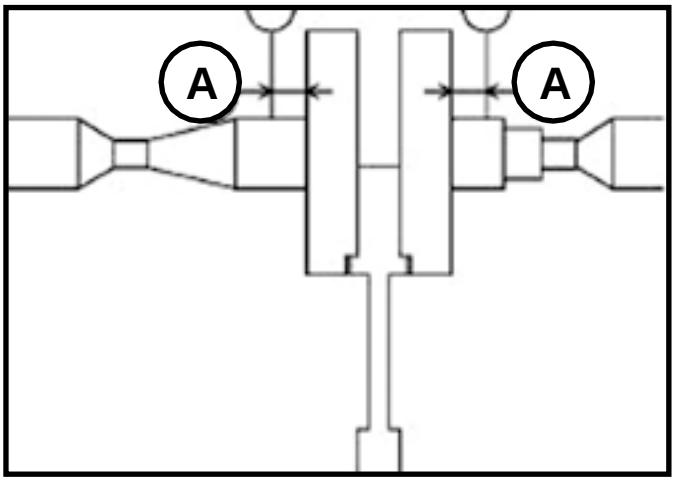
Crank head lateral clearance



- Measuring the lateral clearance of the crank head [A].
  Crank head lateral clearance:
  Standard: 0.7 mm - 0.9 mm
  Tolerance limit: 1.15 mm

If the clearance exceeds the tolerance limit, replace the crankshaft.

Control of the crankshaft radial runout



- Set the crankshaft on an alignment device or on shims laid out in a “V” pattern, and place a gauge as shown on the image.
- Now slowly turn the crankshaft. The maximum difference between the measurements corresponds to the level of crankshaft eccentricity.
  Out-of-roundness:
  Standard: 0.03 mm maximum
  Tolerance limit: 0.05 mm

If the eccentricity is incorrect, replace the crankshaft or else align it to ensure lying within the tolerance limits.

Piston

If you introduce a piston that has already been in use, the following points would need to be verified:

Apron: search for possible smears (clamping). Slight smears may be removed with a soft stone.

Segment grooves: The segments must not snag in their groove. To clean in this spot, an older segment or emery cloth (400-grain).

The segment retainers must be snugly fastened and not be worn parts.

Segments: Verify the condition and clearance at the cross-section.

Cross-sectional clearance

- Insert the segment into the cylinder and install it with the piston (at approx. 10 mm from the upper

edge of the cylinder).

- With a shim, it is possible to measure the cross-sectional clearance.
  Cross-sectional clearance: max. 0.40 mm

CAUTION

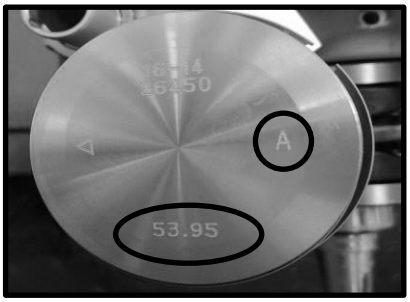
Should the clearance be greater than indicated, it would be necessary to check the condition of both the cylinder and piston. If these measurements lie within the tolerance dimensions, replace the segment.

Verification of the state of cylinder wear / Piston

- To detect cylinder wear, the bore diameter is measured using a micrometer located approx. 10 mm from the upper edge of the cylinder. Take readings at several spots to identify the potential presence of ovalness.

Cylinder	Cylinder bore diameter	Piston
125	54.000 - 54.015 54.010 - 54.025	A B

Cylinder	Piston Diameter	Piston
125	53.95 53.96	A B



CAUTION: The piston dimension must be measured 10 mm above the apron.

Standard exchange cylinder / Squish control

CAUTION

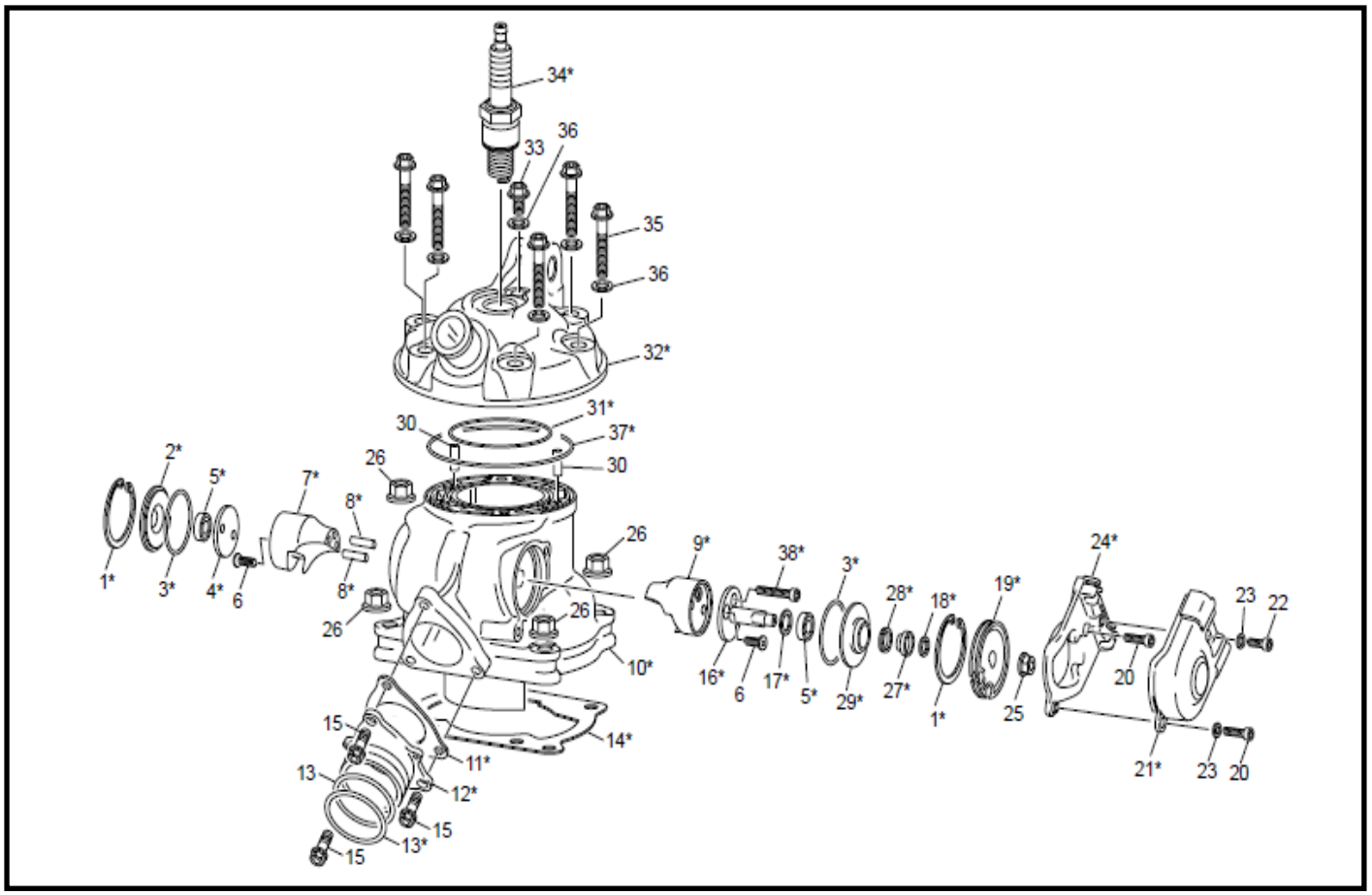
If the cylinder diameter exceeds for example 54.025 mm, the interior would need to be relined (with Nikasil coating) or the cylinder replaced.

Before relining the cylinder, all exhaust valve parts would need to be disassembled.

The piston size is engraved on the top of the piston, and the cylinder dimension is engraved on the right side cylinder.

Using a gauge, measure the height difference between the piston and the cylinder.
The clearance must be 0; otherwise, use another head gasket in order to obtain th

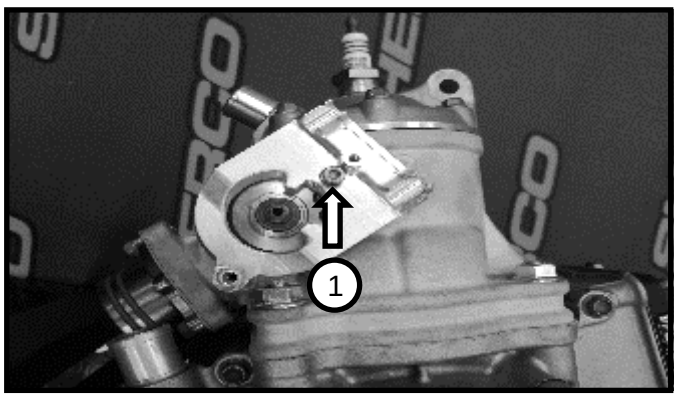
❱| Disassemble the exhaust valve system



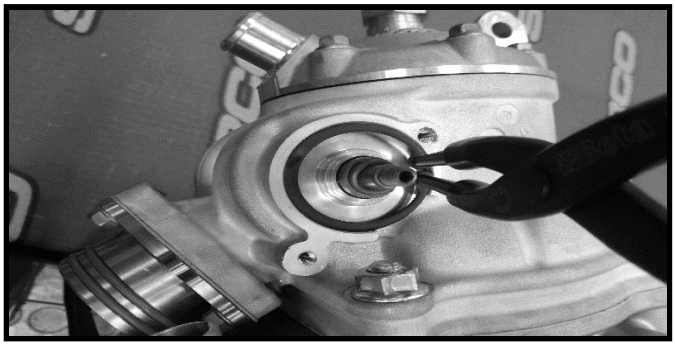
Disassemble all parts, clean them, verify their condition and state of wear. For this step, follow the disassembly and control procedure.

- Remove the valve control protective cover.
- Loosen the control cables and remove them from the pulley.

- Take off the nut and withdraw the pulley.
- Remove first the M4 screw [1] and then then the cable support and pulley stop assembly.



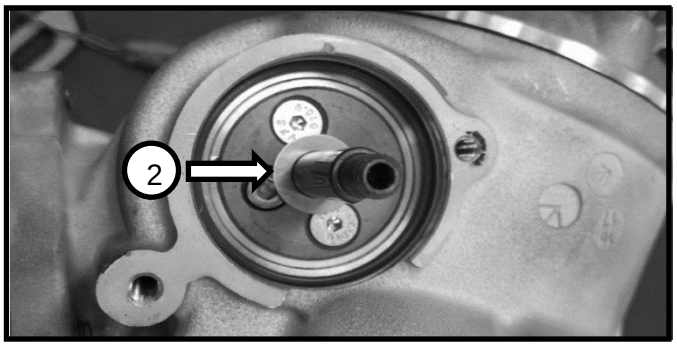
- Remove the retaining rings on both sides of the valve.



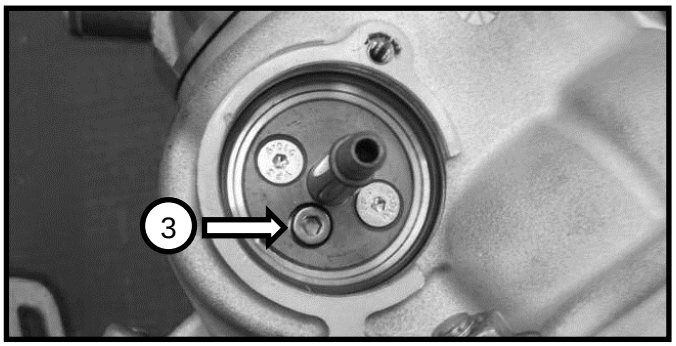
- Remove the O-ring and pulley spacer.

- Remove the lids from each side of the valve.

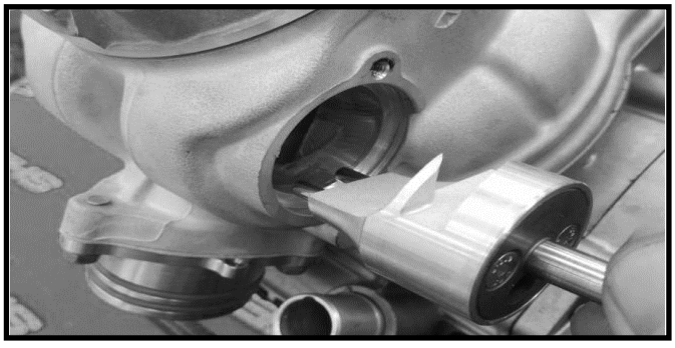
CAUTION: During the reassembly step, reposition the O-rings with precision in back of each lid along with the set ring on the left side [2].



- Remove the M4 connecting screw [3].

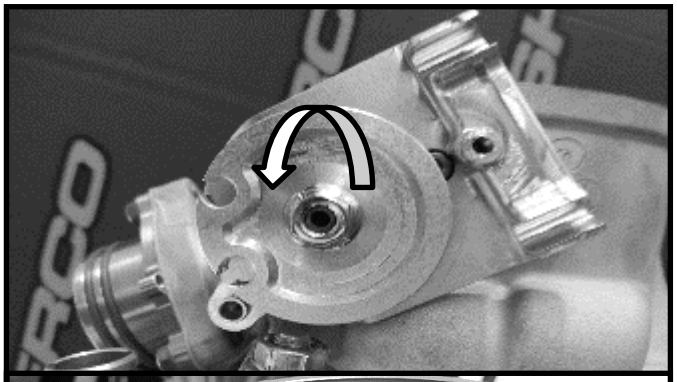


- Remove the valve by disassembling both parts.

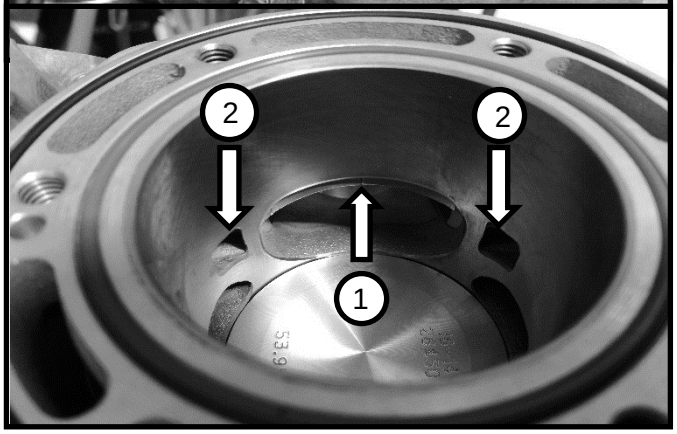


Control of valve operations

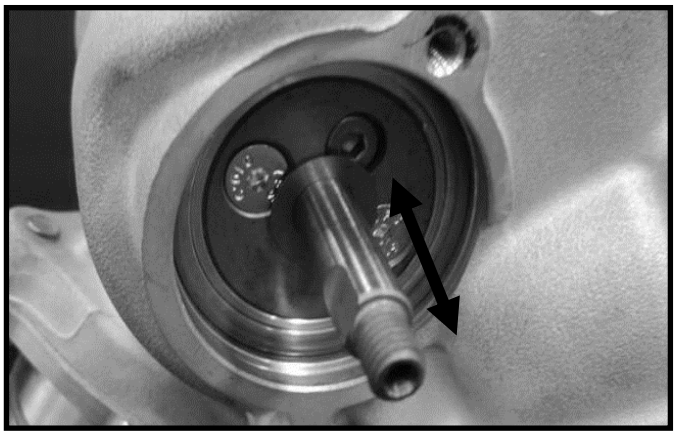
- Turn the control as far as possible in the counter-clockwise direction.



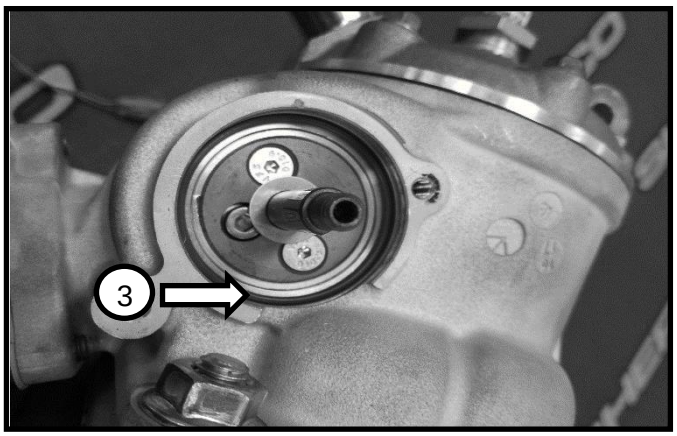
- Ensure that the central valve [1] and 2nd-stage boosters [2] are fully open.



- Control the lateral clearance of the valve in ensuring the absence of any hard points when rotating.



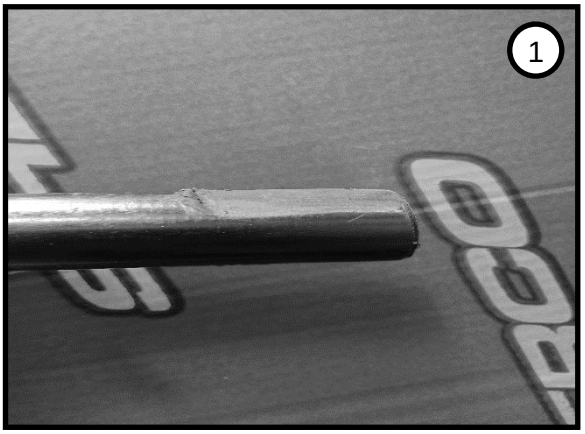
- Should you observe an abnormal clearance or a hard point at the level of rotation, replace the set ring [3] in order to obtain optimal operations.



Adjustment of the exhaust valve pulley clearance

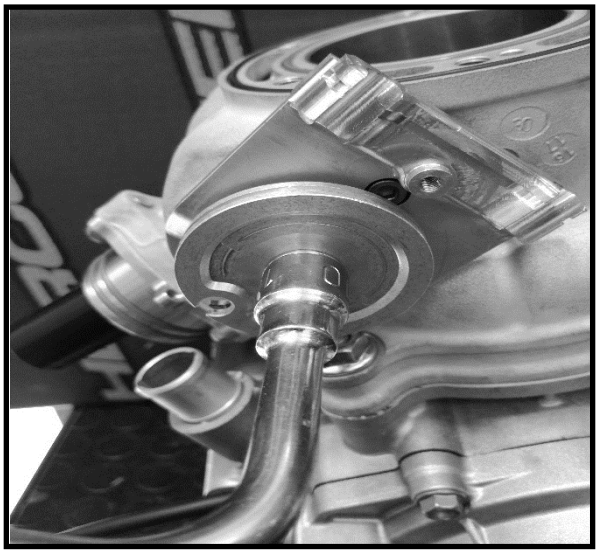
CAUTION: To guarantee optimal motorcycle operations, it is essential to proceed with the exhaust pulley clearance adjustment by following the procedure detailed below:

- For this purpose, be sure to use a shim so as to be able to
- Insert it via the exhaust and maintain the valve in the upper position at the time of clamping.



- Insert the shim into the exhaust light and exert pressure toward the bottom in a way that keeps the valve in the maximum open position

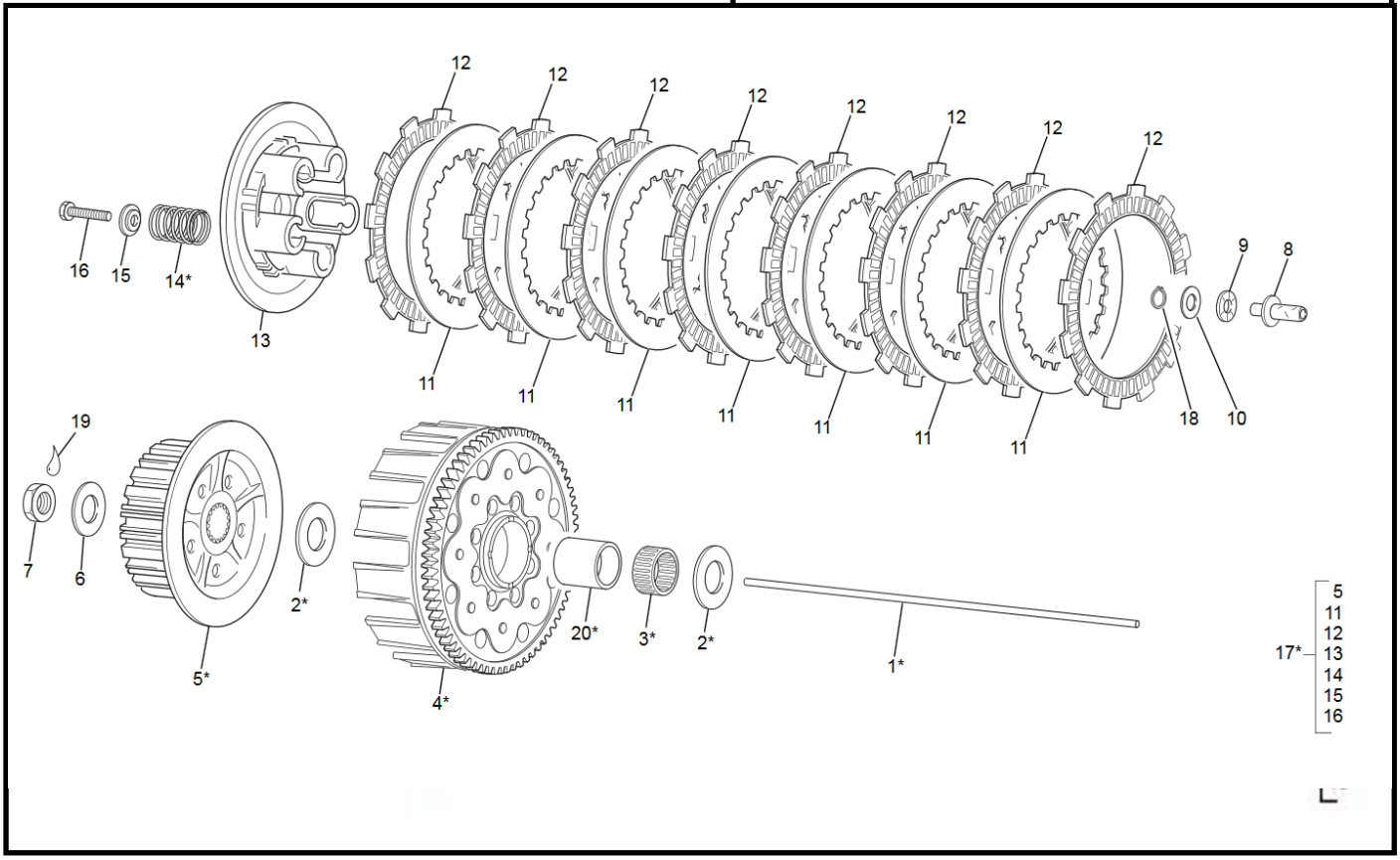
- Tighten the pulley nut [2] while maintaining pressure on the shim.



Clapper box, pipe intake sleeve

- Over time, the carbon tabs gradually lose their elasticity, which in turn causes a loss in power.
- Replace the worn or damaged gearbox.
- Verifier the condition of the intake sleeve, especially if it is not split.

Clutch



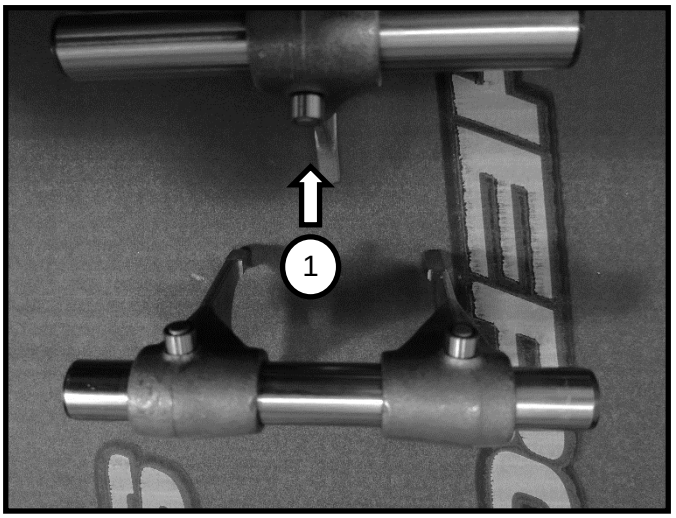
- Stop [8]: Verify the state of wear
- Rod [1]: Verify its state of wear Minimum length: 162.5 mm
- Springs [14]: Verify their length. Minimum spring length 37.5 mm. Replace the 6 springs as needed.
- 8 lined discs [12]: Standard thickness: 2.95 mm / threshold thickness: 2.7 mm / deformation threshold: 0.3 mm
- 7 smooth discs [11]: Standard thickness: 1.4 mm / threshold thickness: 1.3 mm / deformation threshold: 0.3 mm

For the blow-up drawings, please refer to the 250 SE-R / 300 SE-R spare parts catalogue.

Connecting rod assembly

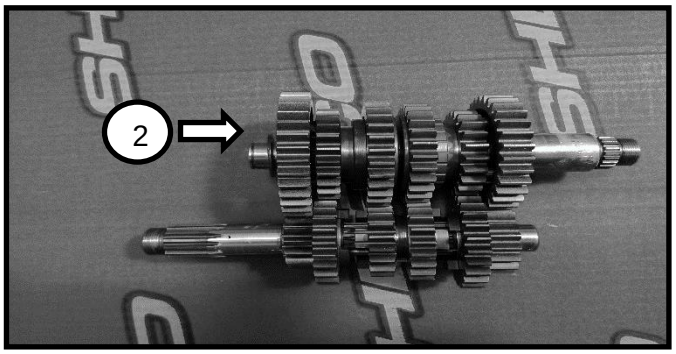
- Insert the connecting rod assembly into the ball bearing by the top, in exercising precaution, until reaching the stop.

CAUTION
The crank must be positioned on the cylinder side.



Transmission gearbox

- Coat lubricant on the fork guiding tips and insert the rings [1] from the top.
- Fasten the supporting washer [2] onto the secondary shaft.
- Present the primary and secondary shafts together, then drive them into their respective bearings until reaching the stop.



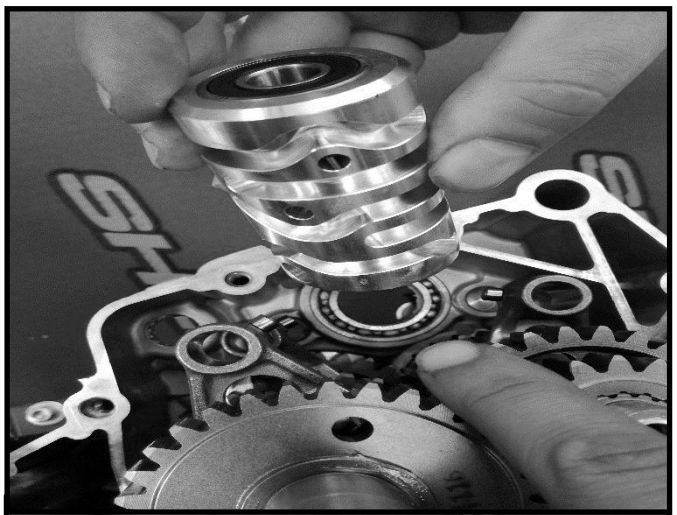
CAUTION
Any fork used must be paired with its original pinion as well as its roller.

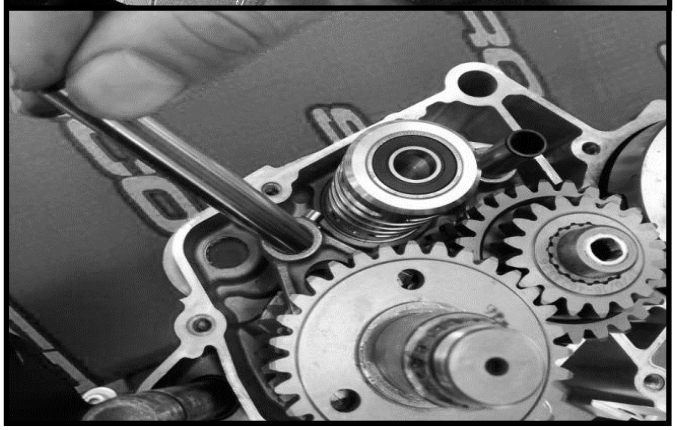
- Hook the forks into the grooves of the moving pinions and insert the drum into its ball bearing.

CAUTION
When hooking the forks into the drum, pay special attention to prevent the rollers from falling off of the tips.

- Lubricate the fork axes and insert them into the forks. Drive the forks into their housing in the casing until reaching the stop.

CAUTION
The gearbox shafts must now turn without hitting any hard points.

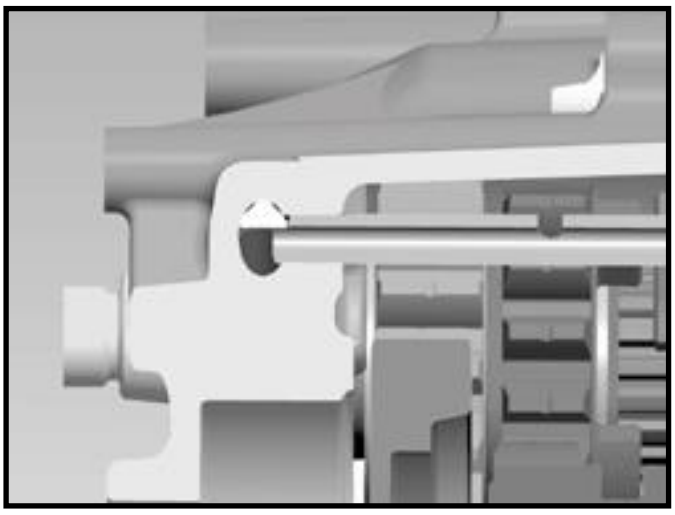




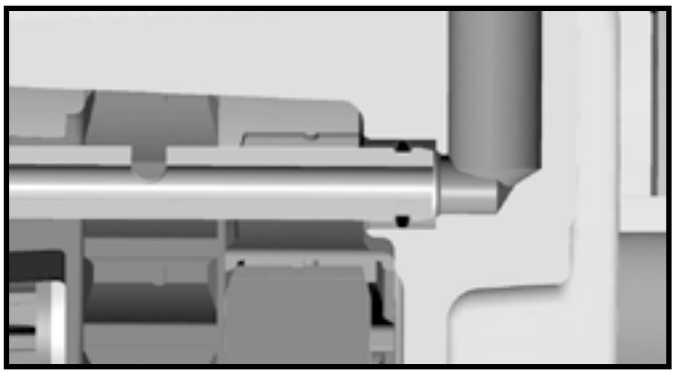
Assembly of the half-casings

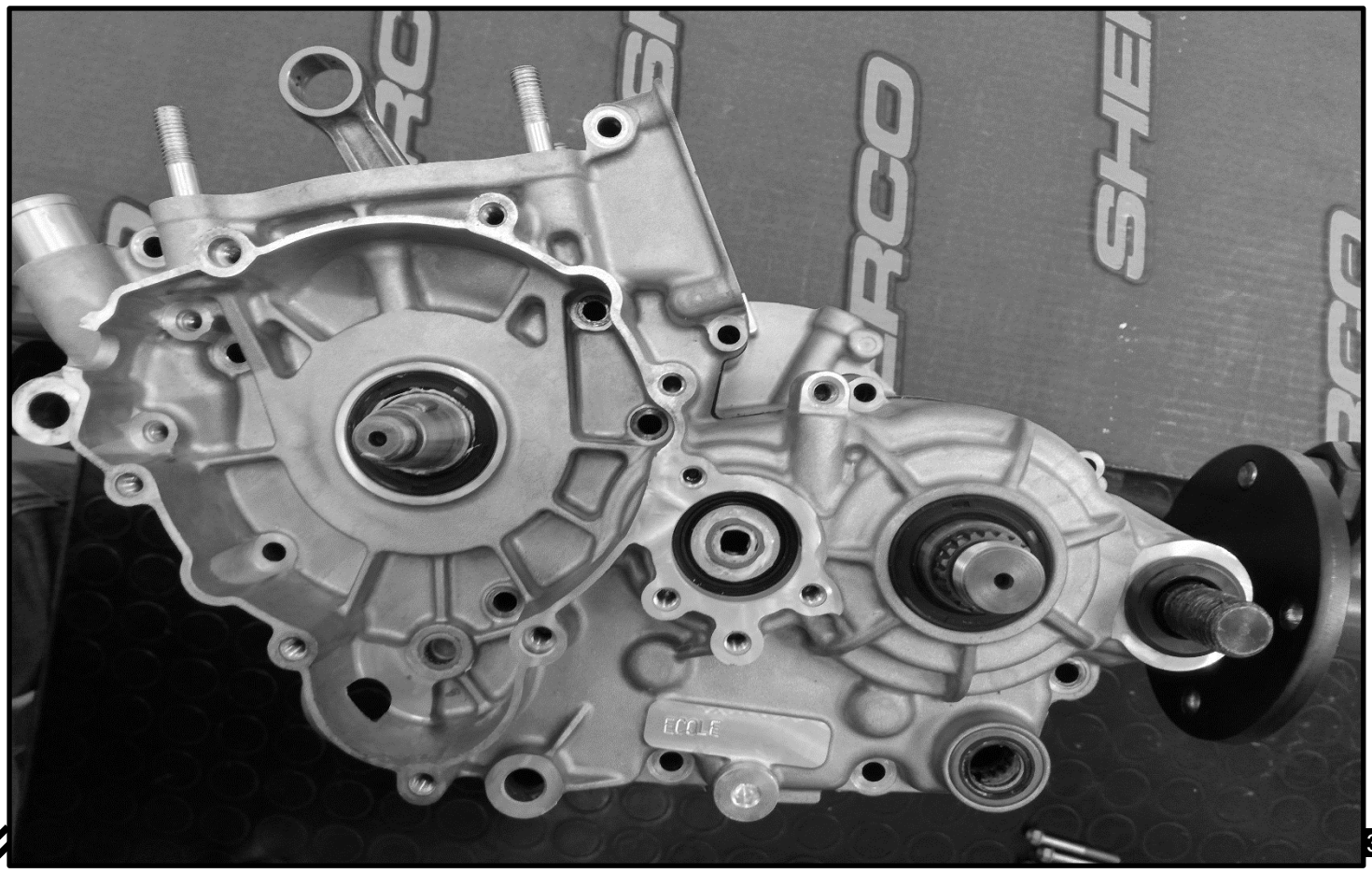
- Install the transmission gearbox lubrication tube on the right-hand half-casing.

CAUTION
Beware of the tube indexation, flat spot on the oil plug rivet side.



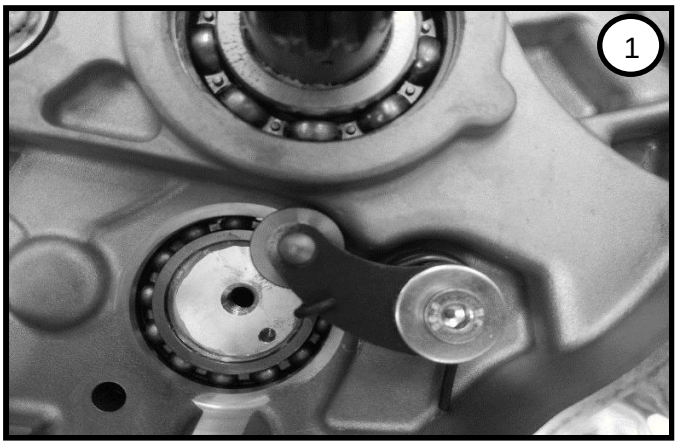
- Install the O-ring on the gearbox lubrication tube.
- Ensure that the centring rings are in place on the right half-casing and moreover that the gearbox shaft washers are in their appropriate place.
- Lubricate the gaskets of the left half-casing and proceed with installation of this half-casing.
- Introduce the screws and tighten them to 10 N-m.
- Next, use a plastic mallet to lightly strike the connecting rod assembly and verify that the shafts are turning without any hard point.



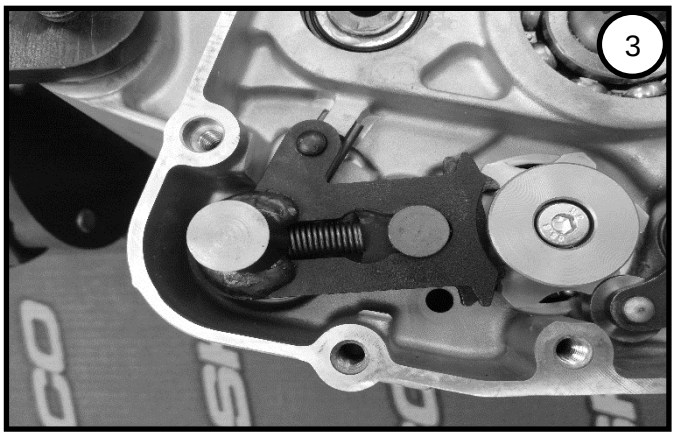


Selection mechanism

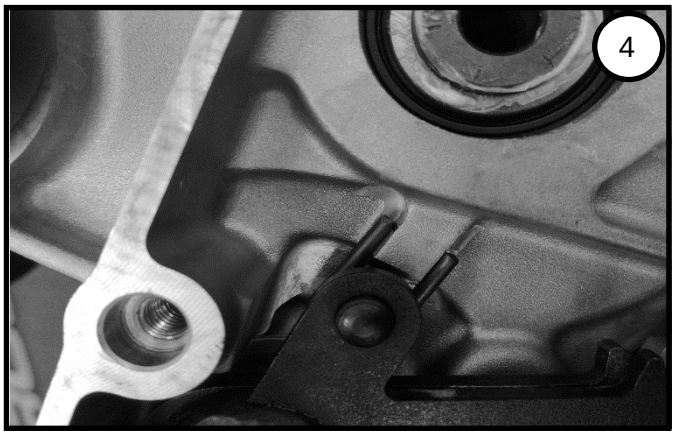
- Place the spring into the casing with the curved strand pointing upwards.
- Insert the spacer, the locking finger and the washer, then coat the CHC M6 x 20 screw with blue brake fluid and assemble all the parts.
- Hook the spring to the lever arm. The other end of the spring must lean against the casing [1].
- Install the selection star indexation slug on the drum.
- Pull the locking lever arm backward in order to install the selection star.
- Coat the screw with blue brake fluid and then assemble the selection star on the drum [2].



- Lubricate the axis of the now assembled selection and insert it into the needle bearings without neglecting the set ring.
- When the prong abuts the selection star, push it so that the shaft drops all the way to the bottom [3].

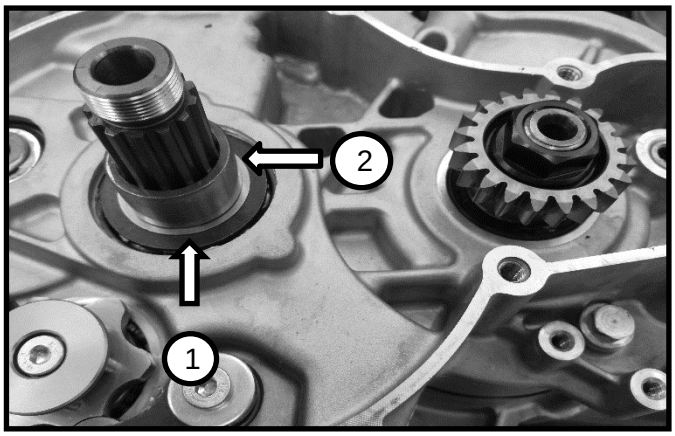


- Verify whether the return spring strands are positioned against the finger in the casing on both sides [4].
- Install the selector and shift through all the speeds. Upon shifting through the entire range of speeds, the transmission gearbox shaft output needs to be rotated. Remove the selector once again.

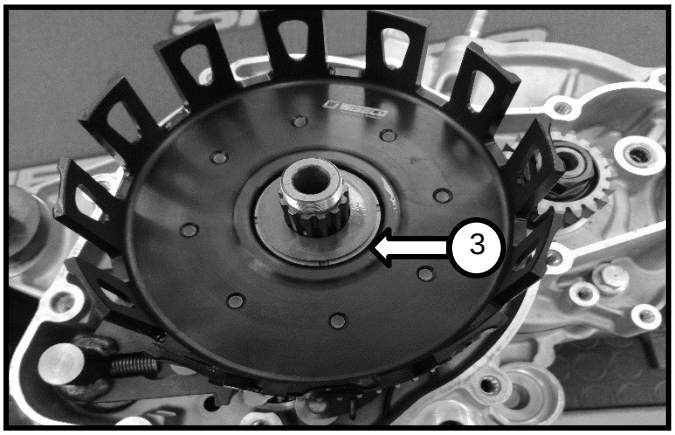


Main transmission and clutch

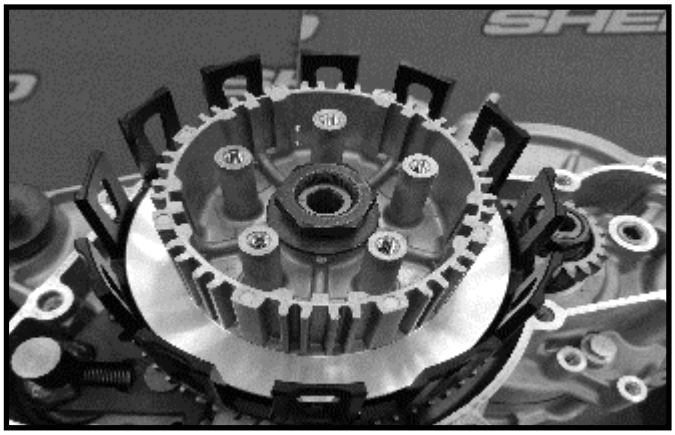
- Lubricate the connecting rod assembly gasket.
- Install the half-moon wedge in its housing.
-
- Insert the pinion with the shoulder in a downward position onto the crankshaft shank.
-
- Insert the washer [1], housing spacer and pre-lubricated needle cage [2] on the main shaft.
-
- Raise the clutch housing and its washer [3].



- Place the blue brake fluid on the main shaft threading.

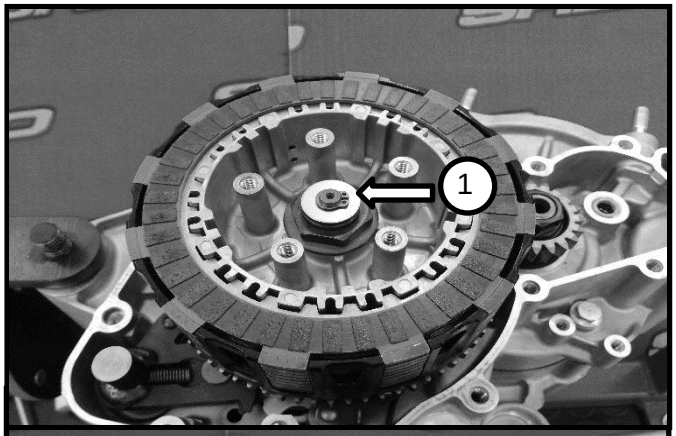


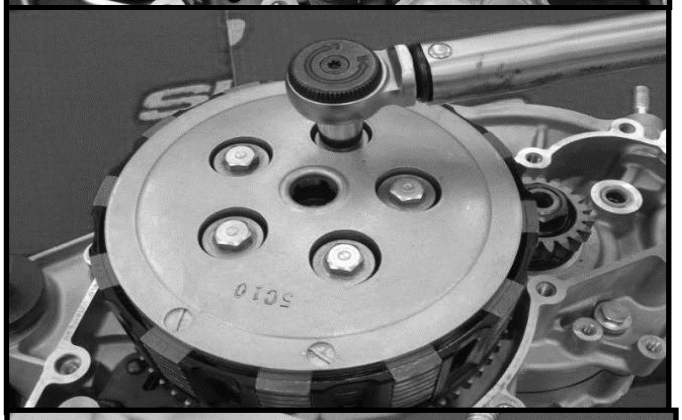
- Assemble the clutch drum and its nut on the main shaft in applying red brake fluid and a new safety washer.
- Introduce tool reference 1814 and tighten the nut to 100 N-m.
- Apply blue brake fluid on the crankshaft threading.
- Raise both the tapered washer and the nut.
- Block the main transmission using tool 1814 and then tighten the pinion nut at the end of the crankshaft to 100 N-m in adding red brake fluid.
- Remove tool 1814 and verify the absence of any hard point in the main transmission by turning the connecting rod assembly.



Clutch discs, pressure plate

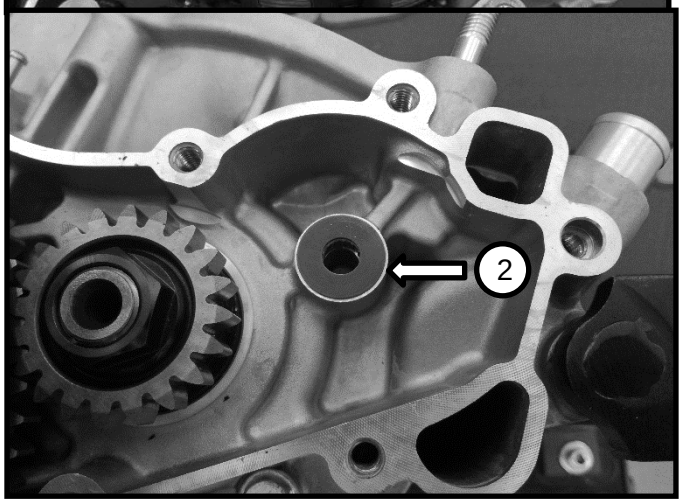
- Oil the push finger [1] and insert it onto the main shaft.
- Prior to the assembly step, oil the lined discs.
- Begin with a lined disc. The 8 lined discs and the 7 smooth discs are positioned in an alternating pattern.
- Install the pressure plate along with the springs, the spring plates and the screws.
- Tighten the screws to 10 N-m in a cross pattern.
-





Clutch casing

- Verify whether the two centring bushings are indeed well installed.
- Introduce the casing joint and hold it in place with a bit of lubricant.
- Stick the water pump set ring [2] with a bit of lubricant.
- Present the clutch casing while ensuring that the water pump assembly has been properly installed. The connecting rod assembly needs to be rotated so that the water pump can mesh at the end of the crankshaft.
- Install the M6 hex sprocket screws and tighten to 10 N-m.

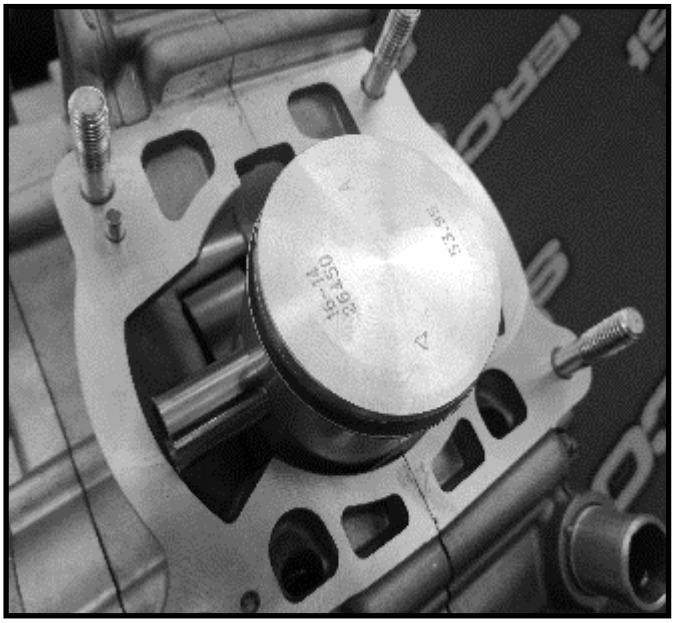


CAUTION

Install a new joint on the M6 x 40 screw and on the coolant drainage screw.

Verify that all shafts rotate without encountering any hard point.

Piston and cylinder



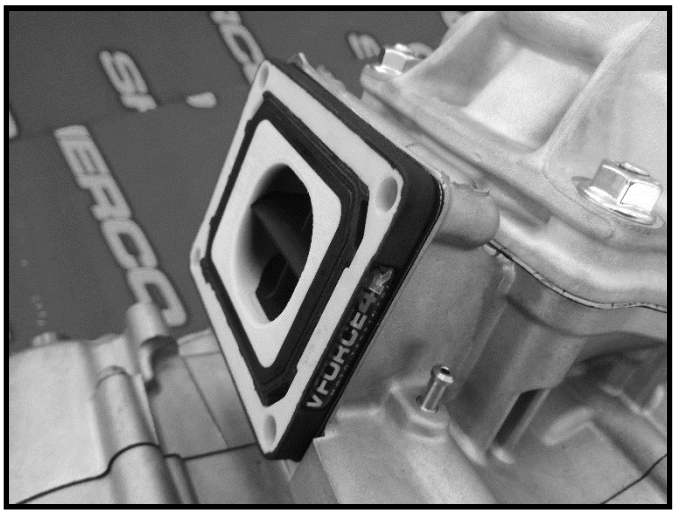
- Oil the parts well before lifting.
- Insert the needle bearing into the foot crank, position the piston (the arrow on top of the piston is pointed toward the exhaust).
- Place the shaft and clips with the open side downward.
- Install the base joint.
- Properly position the segments, with the reference pointing upward.
- Insert the pre-fitted cylinder, fasten the cylinder with 2 nuts on opposite sides.
- Raise the other two screws and washers, then tighten to 20 N-m.

Cylinder head

- Clean the parting surfaces of the cylinder as well as the cylinder head.
- Position the 2 centring slugs on the cylinder.
- Install the cylinder head.
- Place the M8 shoulder screws with new copper washers.
- Tighten three times and in a cross to 10 N-m.

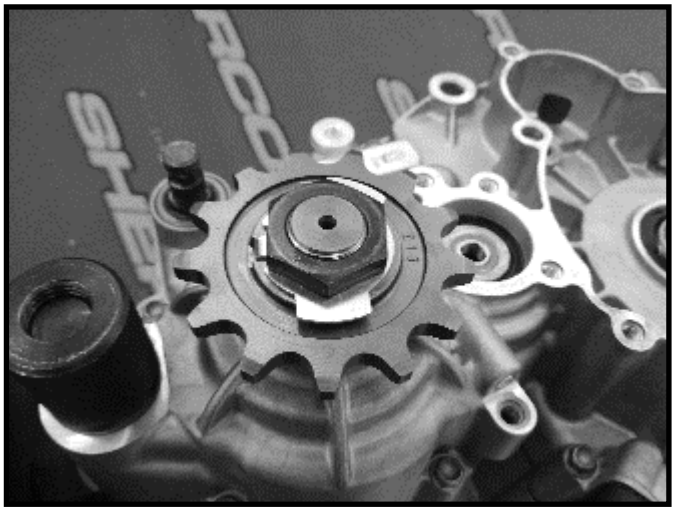
Clapper box and pipe intake

- Install a gearbox joint with new clappers.
- Place the complete clapper box into the intake pipe.
- Assemble the intake pipe with the four M6 screws and its metal collar.



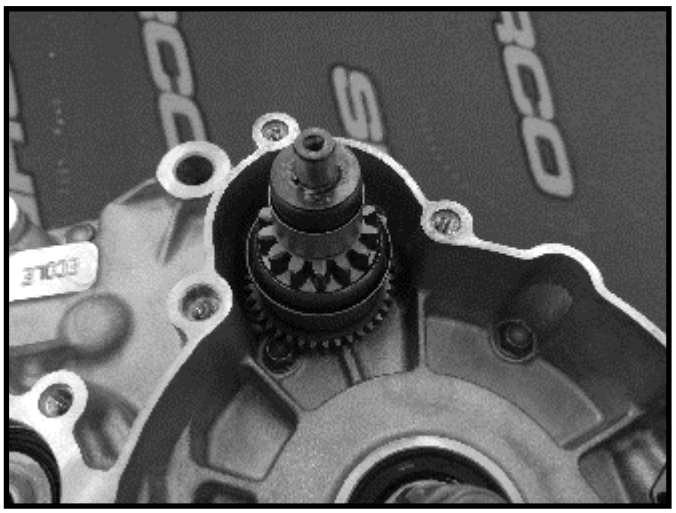
Gearbox output pinion

- Place the gearbox output pinion on the secondary shaft.
- Apply blue brake fluid on the threading.
- Insert the safety washer.
- Install the nut and tighten to 100 N-m.
- Re-bend the safety washer release finger on the nut.



Assembly of the ignition starter

- Install the ignition starter.
- Lubricate the pinions using spray-on grease.



Ignition assembly and its lid

- Place the half-moon wedge in its housing on the connecting rod assembly.
- Insert the rotor on the connecting rod assembly.
- Apply blue brake fluid on the threading.
- Insert tool 1815, install the nut and tighten to 80 N-m.
- Set up the 2 centring bushings.
- Introduce a new joint and fasten the ignition cover.

Assembly of the electric starter

- Replace the O-ring on the starter by a new joint.
- Apply a bit of lubricant on the O-ring.
- Insert the starter into the right-hand casing.
- Fasten the starter with the 2 hex sprocket screws.
- Finish the step by oiling and then inserting the clutch control rod into the main shaft [1].
- Assemble the speed selector with its screw and washer.
- Assemble the two drainage plugs with a new joint.

CAUTION

The transmission gearbox needs to be filled when the engine is returned to its frame; otherwise, a portion of the oil will leak from the main shaft.

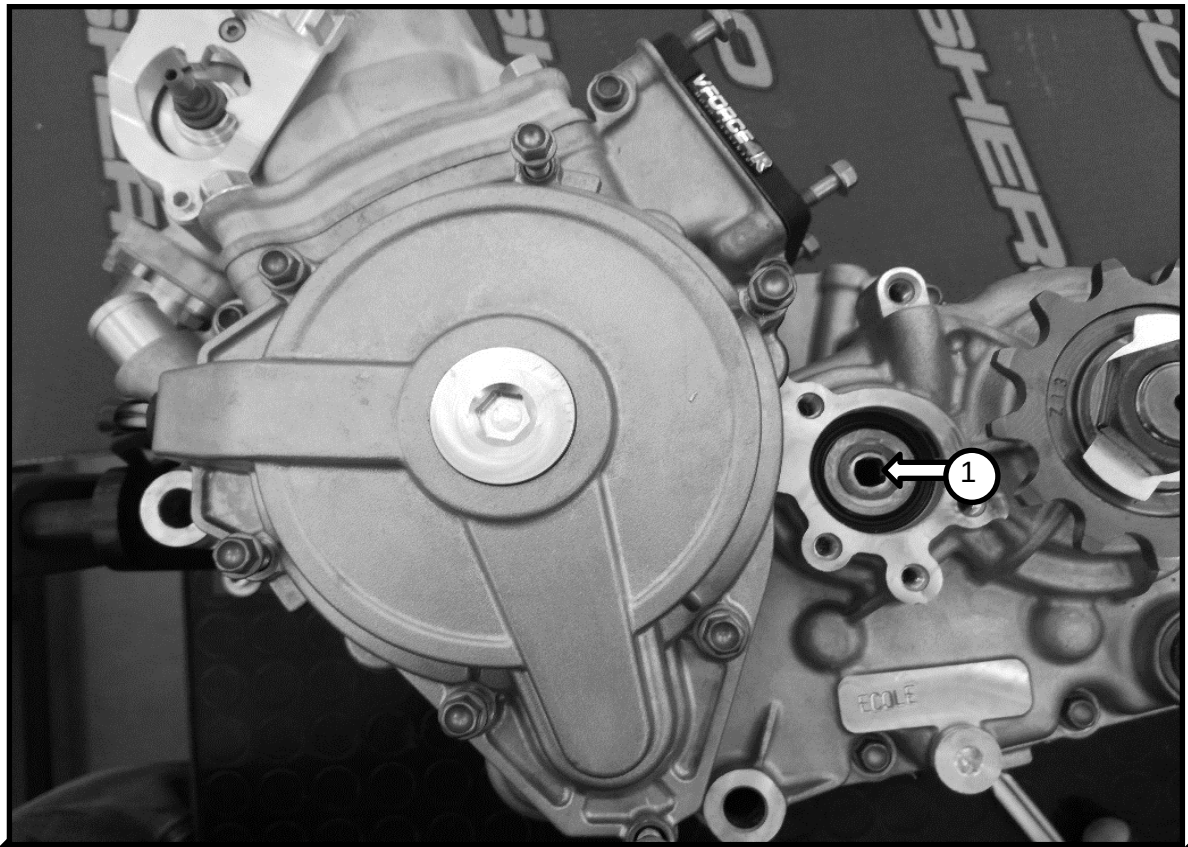


TABLE OF TIGHTENING TORQUES

Standard tightening torque	Brake fluid	
M5	6 N-m	
M6	10 N-m	
M8	24 N-m	
Chassis tightening torque	**Brake fluid**	
Rear wheel nut	100 N-m	
Rear cradle fastening screw	24 N-m	•
Front wheel nut	40 N-m	
Yoke foot clamping screw	15 N-m	
Brake pad axis screw	8 N-m	•
Lower yoke tee clamping screw	12 N-m	
Upper yoke tee clamping screw	17 N-m	
Engine screw	60 N-m	
Oscillating arm nut	100 N-m	
Cylinder head - frame screw	24 N-m	

TABLE OF TIGHTENING TORQUES

Engine tightening torque	Brake fluid	
Revolution sensor screw	8 N-m	•
Coolant drainage screw	10 N-m	
Clutch slave cylinder screw	10 N-m	
Cylinder head, cross-patterned tightening	10 N-m	
Crankshaft inspection plug	8 N-m	
Clutch pressure plate screw	10 N-m	
Water pump casing screw	10 N-m	
Ignition wheel nut	80 N-m	•
Clutch drum nut	100 N-m	•
Main transmission pinion nut	100 N-m	•
Ignition casing screw	10 N-m	
Central casing screw	10 N-m	
Drum screw	10 N-m	•
Starter screw	10 N-m	
Cylinder screw	20 N-m	
Gearbox output pinion nut	100 N-m	•

TABLE OF CARBURETTOR SETTINGS

❱I Table of settings for the SE-R 125 carburettor:

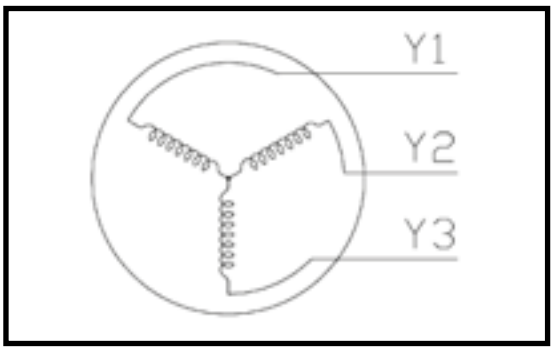
Sea level	Temperature	-20°C ... -7°C	-6°C ... 5°C	6°C ... 15°C	16°C ... 24°C	25°C ... 36°C	37°C ... 49°C
3,000 m to 2,301 m	**Air screw**	1T1/4	1T3/4	1T3/4	2T1/4	2T1/4	
	Slow injector	42	42	40	38	36	
	Needle	N1EG	N1EG	N1EH	N1EH	N1EI	
	Needle position	3	2	2	2	2	
	Main injector	168	165	162	160	158	
2,300 m to 1,501 m	**Air screw**	1T1/4	1T1/4	1T3/4	1T3/4	2T1/4	2T1/4
	Slow injector	45	42	42	40	38	36
	Needle	N1EG	N1EG	N1EG	N1EH	N1EH	N1EI
	Needle position	3	3	2	2	2	2
	Main injector	168	168	165	162	160	158
1,500 m to 751 m	**Air screw**	1T	1T1/4	1T1/4	1T3/4	1T3/4	2T1/4
	Slow injector	45	45	42	42	40	38
	Needle	N1EF	N1EG	N1EG	N1EG	N1EH	N1EH
	Needle position	3	3	3	2	2	2
	Main injector	170	168	168	165	162	160
750 m to 301 m	**Air screw**	1T	1T	1T1/4	1T1/4	1T3/4	1T3/4
	Slow injector	48	45	45	42	42	40
	Needle	N1EF	N1EF	N1EG	N1EG	N1EG	N1EH
	Needle position	4	3	3	3	2	2
	Main injector	172	170	168	168	165	162
300 m to 0 m	**Air screw**	1T	1T	1T	1T1/4	1T1/4	1T3/4
	Slow injector	50	48	45	45	42	42
	Needle	N1EE	N1EF	N1EF	N1EG	N1EG	N1EG
	Needle position	4	4	3	3	3	2
	Main injector	175	172	170	168	168	165

Static control values (engine turned off) 125 SE-R

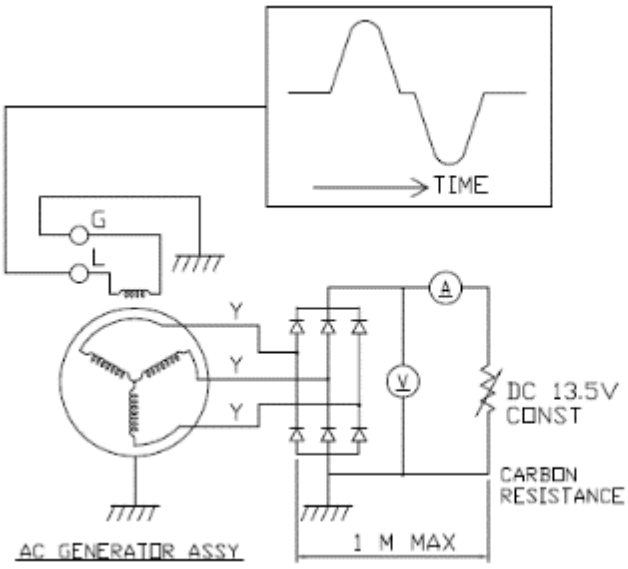
Battery voltage > 12.5 V

Stator winding resistance values: Measurement of the resistance between each winding

Y1-	0.39 Ω ± 20% (at 20°C)
Y2-	
Y1-	



Verify the absence of continuity between the windings and the motorcycle mass



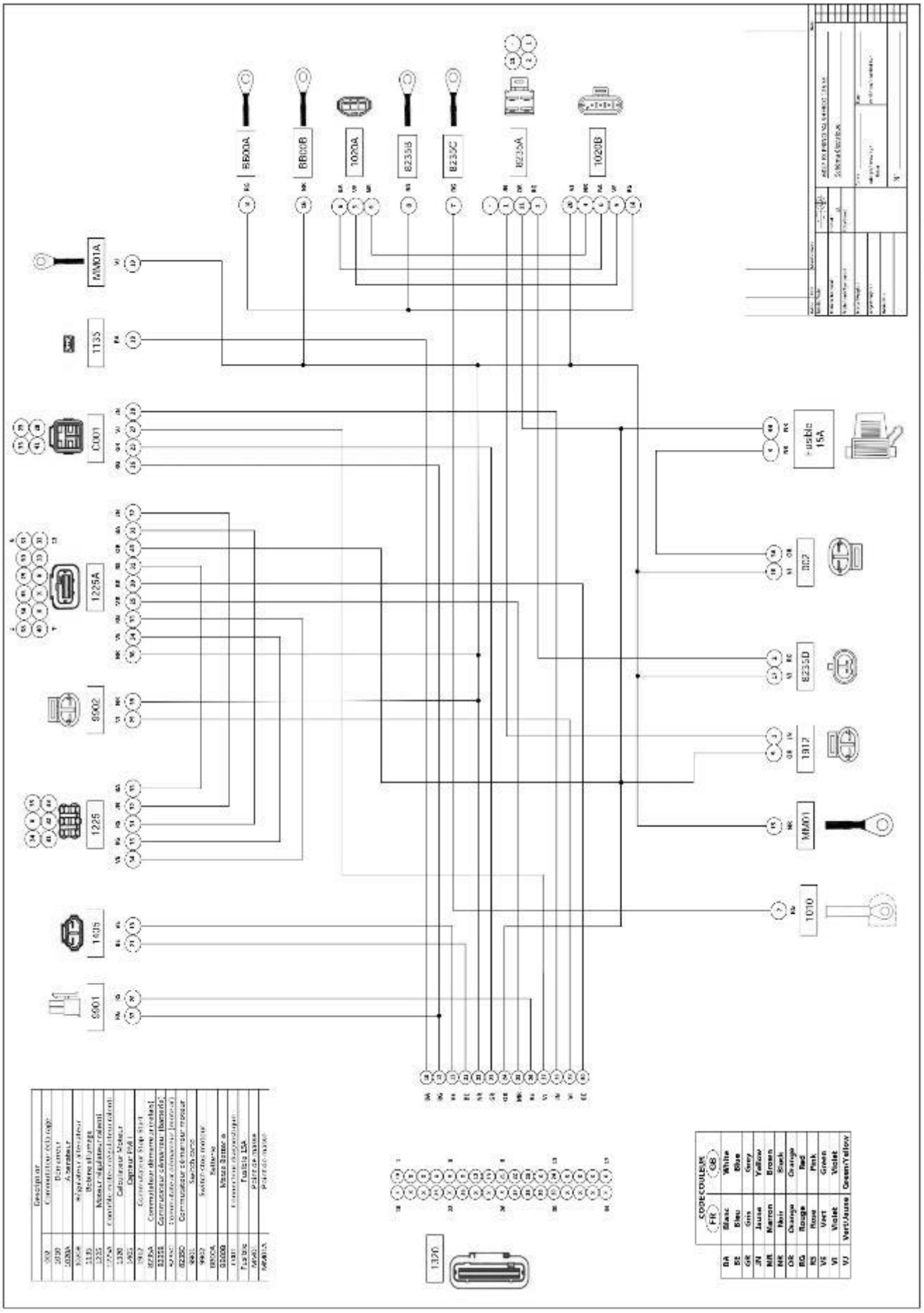
COLOR CODE	
Y	YELLOW
L	BLUE
G	GREEN

- Resistance of the “Pick UP” (regime) sensor:
  Red ~ Greens 120 Ω ± 20% (at 20°C)
- High-voltage coil
  Primary coil 0.30 Ω ± 15% (at 20°C)
  Secondary coil 6.3 kΩ ± 20% (at 20°C)

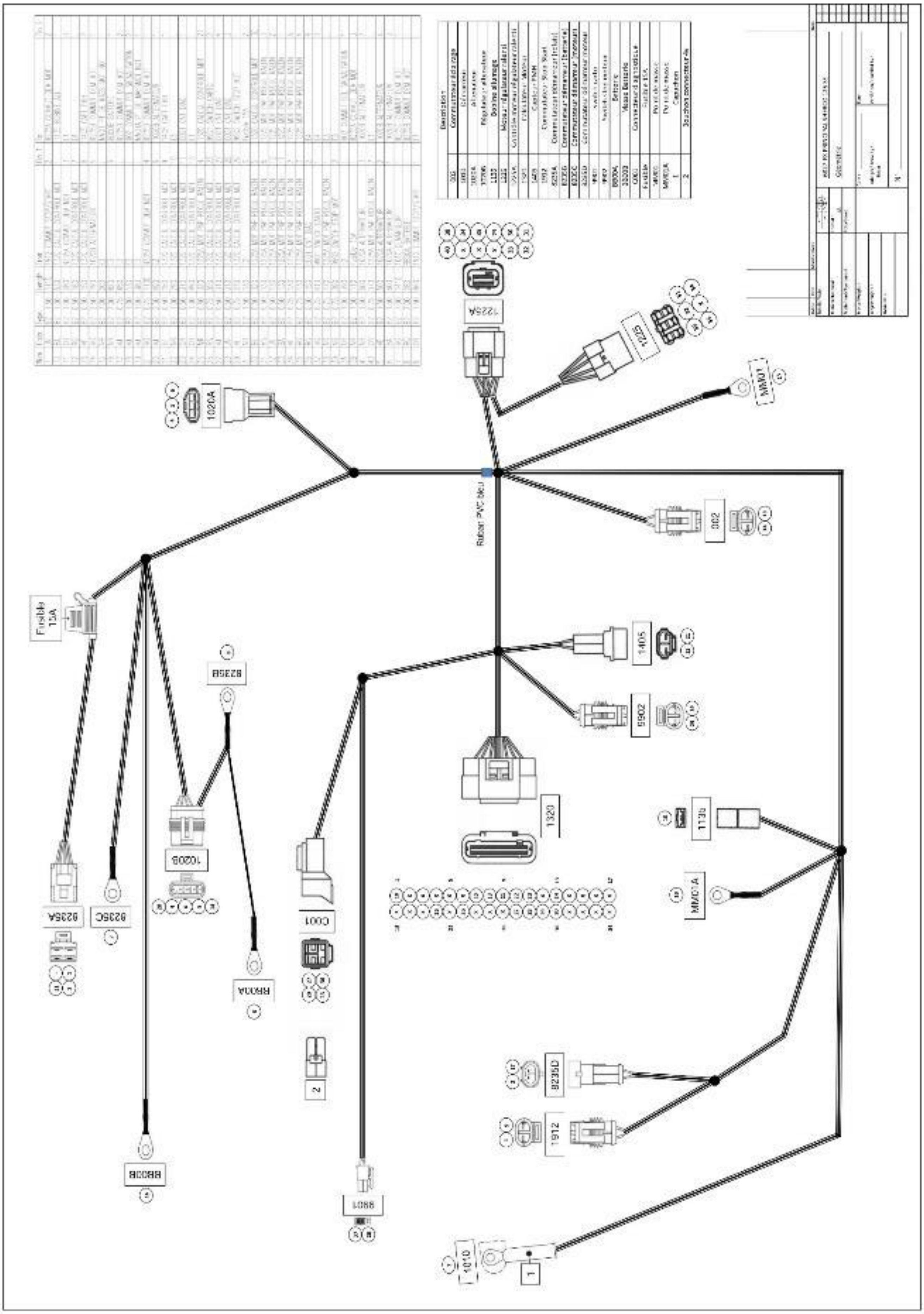
Dynamic control values

- Voltage regulator:
  Alternating current (alternating 200-V rating)
  In slowdown mode 22 ± 2 V
  At 6,000 rev/min: 77 V ± 3 V
  Continuous current
  On the regulator outlet (continuous 20-V rating)
  At 4,000 rev/min: 14.6 V + Red/White, - Green

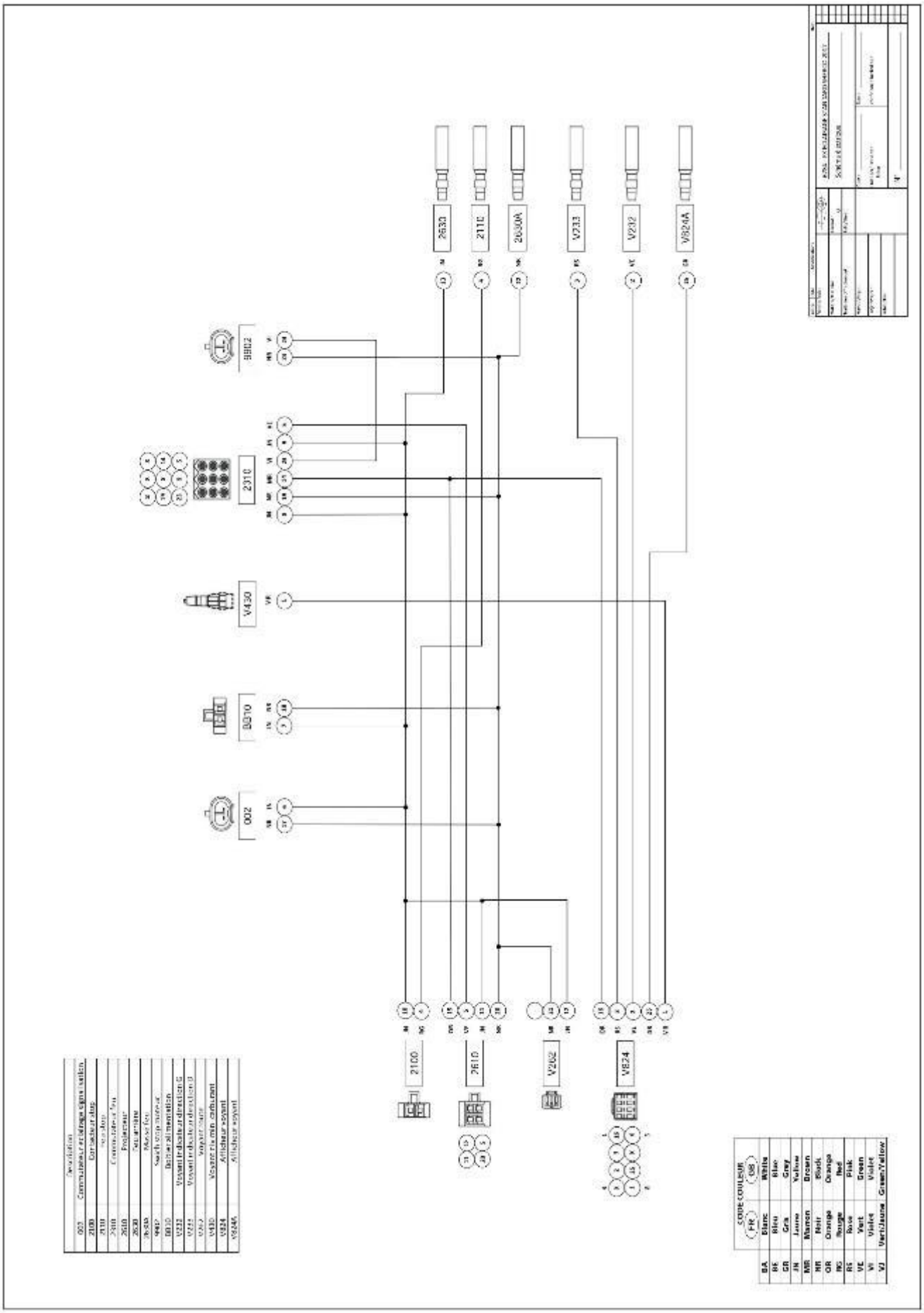
Main bundle 6827



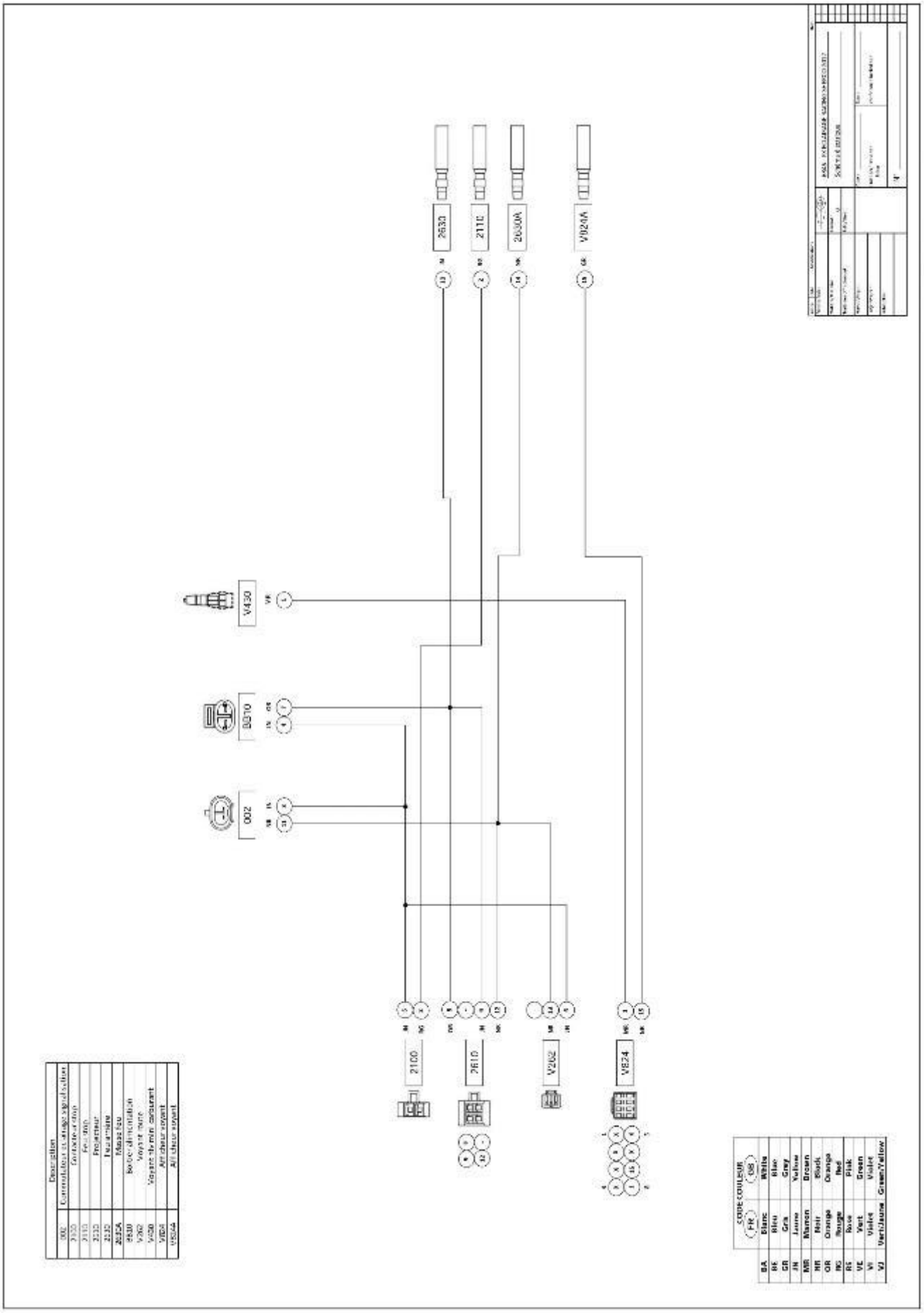
WIRE MAP


1020A
1225A
1225
MM01
982
1405
9902
1320
1130
MM01A
9235D
1912
1010
8801
C001
R800A
1020B
9235B
9235A
9235C
B800B
Fusible 15A
Ruban PVC bleu

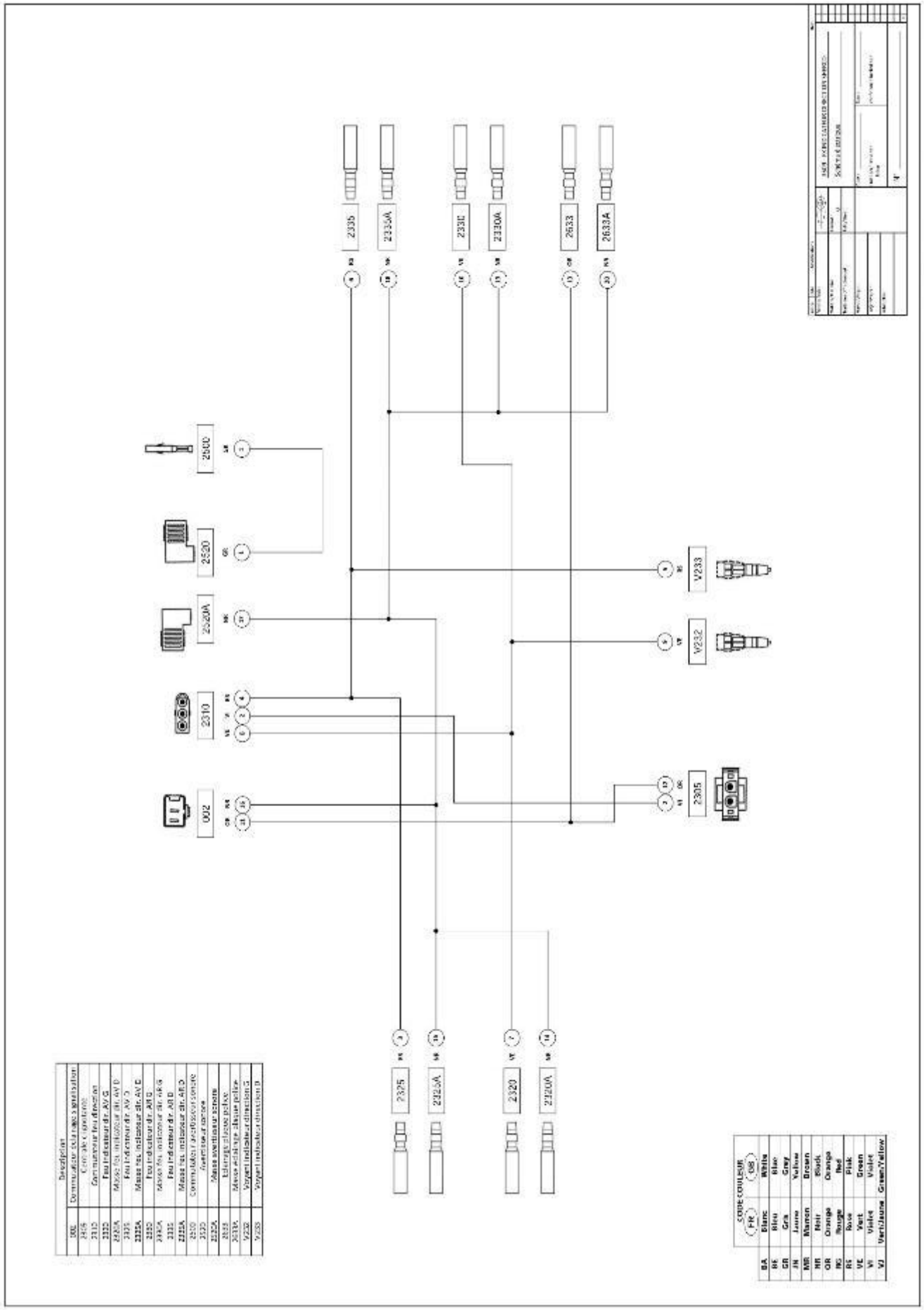
I Light beam 125 SE-R



Racing light beam 125 SE-R



Accessory bundle



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