

ENGINE REASSEMBLY

CRANKCASE PREASSEMBLY




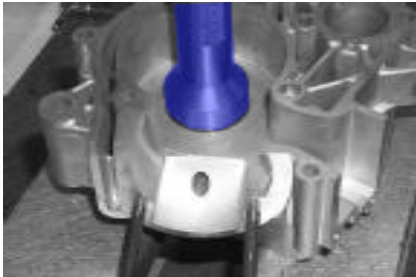


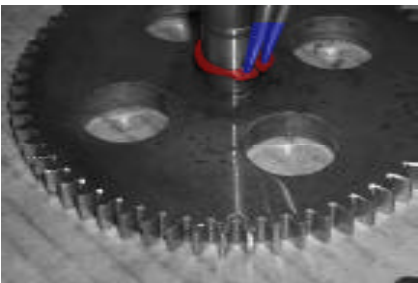
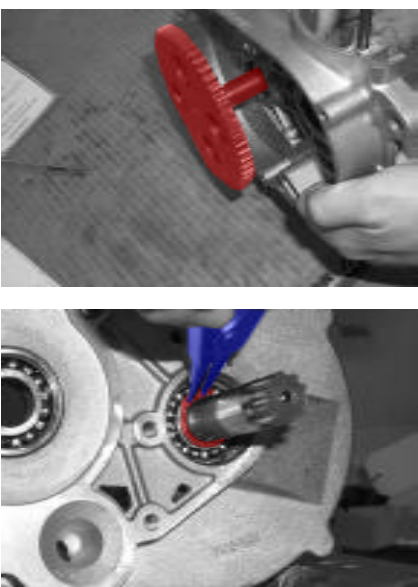
DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
 	Drive the OUTPUT SHAFT BEARING into the half crankcase clutch side and secure with the snap ring	143176	LUBRICATE THE HOUSING LEAVE THE PRINT ON THE BEARING VISIBLE
 	Drive the CRANKSHAFT BEARINGS into the half crankcase clutch side and into the half crankcase flywheel side.	143154	LUBRICATE THE HOUSING LEAVE THE PRINT ON THE BEARING VISIBLE
	Drive the ROLLER CAGE OUTPUT SHAFT into the half crankcase flywheel side.	143156	LUBRICATE THE HOUSING LEAVE THE PRINT ON THE BEARING VISIBLE

DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	Insert the DRIVE SHAFT in the half crankcase clutch side		
	Insert the SNAP RING onto the second output shaft slot (near transmission gear)		
	Insert the OUTPUT SHAFT into the half crankcase clutch side and secure with SNAP RING		

CRANKCASE "CLOSING"

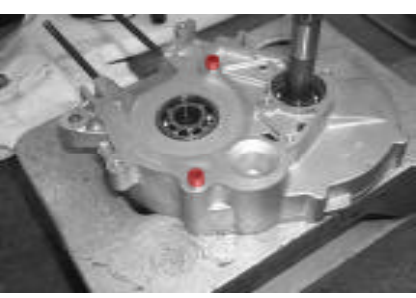
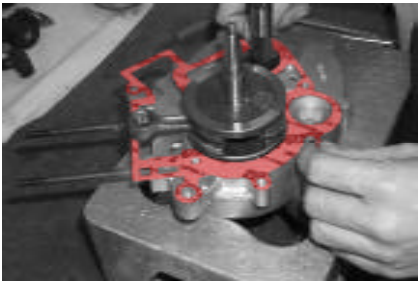


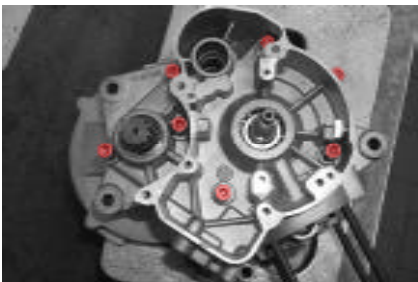

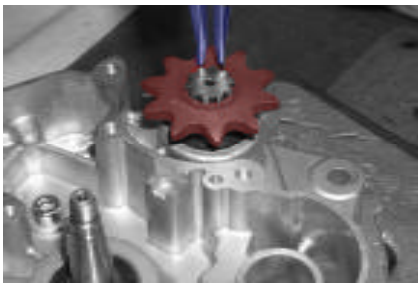


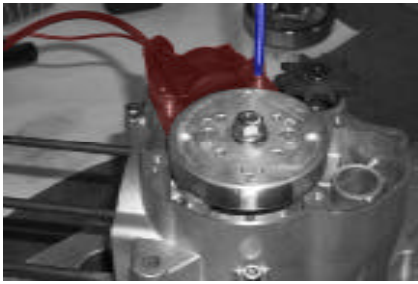



DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	Insert the DOWEL PINS		

DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	<p>Lubricate the CRANKCASE GASKET on both sides.</p> <p>Apply the CRANKCASE GASKET on the half crankcase clutch side using the 2 dowel pins for centering.</p>		
	<p>Assembly the HALF CRANKCASES</p>		
	<p>Fix 1 x BOLT M6X60 in the position between the stud bolts and the reed valve zone.</p>		<p>DO NOT TIGHTEN</p>
	<p>Fix the remaining 7 X BOLTS M6X50. <u>Cross-tighten the bolts using a tightening torque of 10-12 Nm. Check to make sure that the crankshaft and output shaft rotate smoothly.</u></p>		
	<p><u>Grease the oil seal housing and the oil seal lip carefully.</u></p> <p>Install the CRANKSHAFT OIL SEAL RINGS and the OUTPUT SHAFT OIL SEAL RING.</p> <p><u>Trim the crankcase gasket (cylinder zone and carburetor zone.)</u></p>	<p>143179 143180 143181</p>	<p>GREASE TYPE GR/SM2</p>

FLYWHEEL SIDE

DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	Mount the SPROCKET and secure with the SNAP RING		
	Caulk the key seat on the crankshaft and insert the FLYWHEEL KEY .		
	Clean and remove all traces of grease from the rotor cone and the drive shaft cone. Assemble the flywheel rotor using the key as reference. Assemble the FLYWHEEL NUT and tighten.	Compass tool	Tightening torque 25 - 30 Nm
	Assemble the IGNITION COIL and fit the 2 BOLTS without tightening them. Check the clearance between the ignition coil and the flywheel rotor using a thickness gauge: CLEARANCE = 0.35 - 0.45 mm. Tighten the bolts.		DO NOT TIGHTEN Tightening torque 6 - 8 Nm

FLYWHEEL COVER

DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	<p>Drive in the 2 elastic dowel pins in the cover, and make sure that they do NOT INTERFERE with the bracket mounting face.</p> <p>Assemble the BRACKET on the flywheel cover.</p>		
	<p>Assemble the FLYWHEEL COVER placing the rubber fairleads in their seats on the cover.</p>		
	<p>Secure the FLYWHEEL COVER using: 3 SCREWS M5X50 + WASHER. <u>Tightening torque 3-4 N.m.</u> 1 SCREW M5X20 + WASHER. <u>Tightening torque 3-4 N.m.</u></p>		

CYLINDER - PISTON - CYLINDER HEAD










DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	Insert the CYLINDER BASE GASKET		
	Assemble the ROLLER CAGE, PISTON and PISTON PIN and secure with CIRCLIPS . ALWAYS ASSEMBLE ROLLER CAGE SIZE - 2 - 4 <u>OIL THE PISTON.</u>		WHEN INSTALLING THE PISTON TURN THE ARROW MARK ON THE HEAD OF THE PISTON TO THE EXHAUST SIDE
	Assemble the CYLINDER		BEFORE ASSEMBLY CHECK THE SIZE CODE OF THE CYLINDER AND THE PISTON
	Insert the CYLINDER HEAD GASKET		

DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	Fit the 4 CYLINDER HEAD NUTS and cross tighten .		Tightening torque 12 - 14 Nm
	Install the SPARK PLUG and tighten		Tightening torque 20 - 25 Nm

CARBURETOR UNIT

DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	Insert the CARBURETOR MANIFOLD BASE including the REED VALVE .		
	Assemble the CARBURETOR MANIFOLD on the base and secure with 4 BOLTS M6X20 .		Tightening torque 7 - 8 Nm.
	Assemble the CARBURETOR and tighten the CLAMP SCREW .		Tightening torque 3 - 4 Nm.

CLUTCH COVER

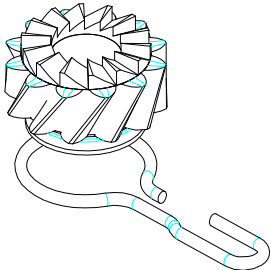







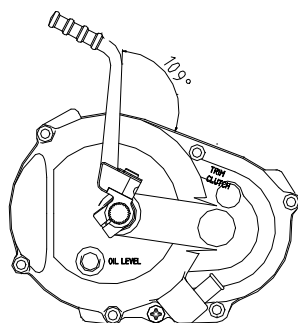
DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	<p>Assemble the SPRING on the sliding gear as shown on the figure.</p> <p>Lubricate the inside of the spring using GR MU/3 grease.</p>	143167	
	<p>Assemble the SLIDING GEAR on the cover and secure the SPRING between the two stops.</p>		
	<p>Assemble the SPACER RING and O-RING on the KICK STARTER SHAFT.</p> <p>Lubricate the O-ring area using GR MU/3 grease.</p>		
	<p>Lubricate the KICK STARTER SHAFT in the clutch cover operating zone using grease type MOLYCOTE. Install KICK STARTER SHAFT in the clutch cover and make sure that the gear section is engaged properly with the sliding gear.</p> <p>After assembly check that the spring of the sliding gear is correctly</p>		

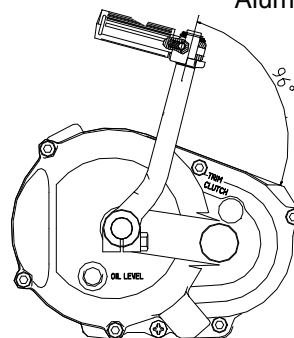
DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	<p>Install and load the RETURN SPRING on the kick starter shaft.</p> <p>Secure the spring on the backstop in the clutch cover.</p>		
	<p>Assemble the SPRING WASHER and secure with the SNAP RING.</p>		
	<p>Place the SPACER on the kick starter shaft and secure with the snap ring.</p>		
	<p>Assemble the KICK STARTER LEVER and fasten by using the bolt M7x25.</p> <p>KICK STARTER LEVER POSITION <u>*Steel lever = 109°</u> <u>*Aluminium lever = 96°</u></p> <p><u>Check axial clearance: 0.1 - 0.3 mm</u></p>		<p>Tightening torque 8-10 N.m.</p>

KICK STARTER LEVER POSITION

*Steel lever = 109°



*Aluminium lever = 96°



CLUTCH SIDE




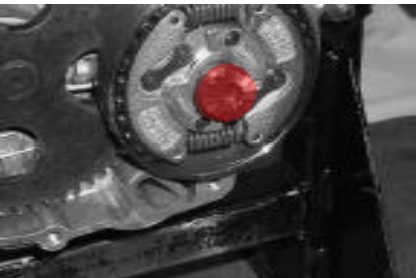



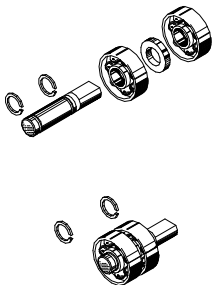
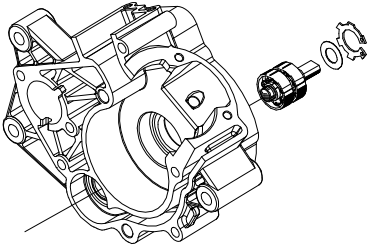
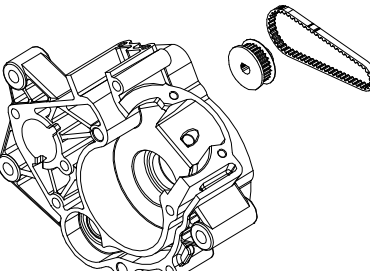
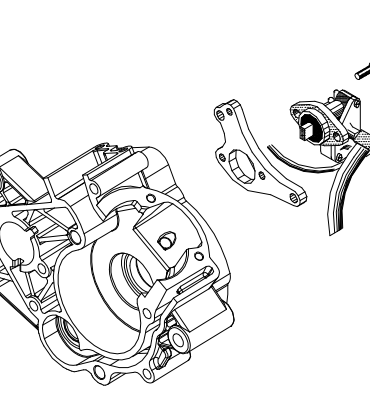
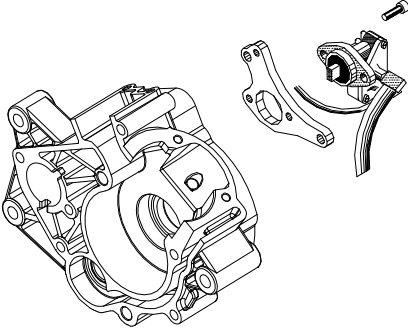
DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	<p><u>Insert the 0.8mm SPACER RING on the crankshaft clutch side.</u></p> <p>Lubricate the clutch bell operating zone of the crankshaft using the grease type ROCOL ASP MOLYCOTE.</p> <p>Install the CLUTCH BELL</p>		
	<p>Insert the 2.5 mm SPACER RING</p>		
	<p>Install the CLUTCH on the crankshaft</p>		<p>CAUTION</p> <p>THE PRINT ON THE CLUTCH SHOE AND THE REFERENCE MARK ON THE HUB MUST BE ON THE SAME SIDE AND LEFT VISIBLE</p>
	<p>Insert the BELLEVILLE WASHER and clamp the clutch using the SPECIAL FRONT CLUTCH NUT. (LEFT HAND THREAD)</p> <p><u>Add LOXEAL 83-54 to the clutch nut and tighten</u></p> <p><u>Tightening torque 50-55 N.m.</u></p> <p><u>Check the axial clearance of the clutch bell: 0.3 - 0.5 mm</u></p> <p>Assemble the clutch cover gasket.</p>	<p>Compass tool</p>	<p>CAUTION</p> <p>In order to avoid any clutch hub jamming on the spline shaft and to ensure any future disassembly operation of the clutch unit, make sure to apply LOXEAL 83-54 exclusively on the clutch nut and NOT on shaft end.</p>

DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	Mount the clutch cover and secure with 6 BOLTS M6 x 30 .		Tightening torque 10-12 N.m.
	Insert the OIL DRAIN PLUG + WASHER and tighten.		Tightening torque 8 - 10 N.m.
	Pour 200 cc of oil type AGIP RADULA 68 SAE 20W and fit the OIL FILLER CAP + GASKET . AFTER COMPLETED ASSEMBLY CHECK THAT THE ENGINE ROTATES SMOOTHLY		Recommended Oil type: AGIP RADULA 68 SAE 20W

S6 OIL MIXER PUMP

DIAGRAM	DESCRIPTION	TOOL CODE	NOTES
	<p>Preassemble the 2 BEARINGS and SPACER on the OIL MIXER PUMP DRIVE SHAFT and secure with 2 SNAP RINGS.</p> <p>The print on the bearings should face the drive end of the shaft.</p>		
	<p>Lubricate the bearing housing. Drive the OIL MIXER PUMP DRIVE SHAFT UNIT into the half crankcase flywheel side.</p>	143155	
	<p>Insert the CLEARANCE SPACER. Assemble the BEARING SNAP RING.</p>	143342	
	<p>Insert the DRIVE BELT onto the DRIVEN PULLEY.</p> <p>Install the pulley on the oil mixer pump shaft and the drive belt onto the splined part of the crankshaft.</p>		<p>Tightening torque 5 - 6 Nm</p>
	<p>Assemble the oil mixer pump on the support bracket and tighten the screw M5x12.</p> <p>In order to simplify the assembly operation of the oil mixer pump, make sure that the timing of the driven pulley and the oil mixer pump shaft do match.</p> <p>Install the BRACKET with OIL MIXER PUMP into the housing of the half crankcase flywheel side.</p>		