Common tightening torques Rotax 912 / 914 for repairs

The following tightening torques apply to standard bolts and nuts on Rotax engines:

Gewinde	Nm
M 4	4
M 5	6
M 6	10
M 8	24
M 10	35

The part numbers and size of the copper sealing rings used can be found here:
part numbers of the copper sealing rings

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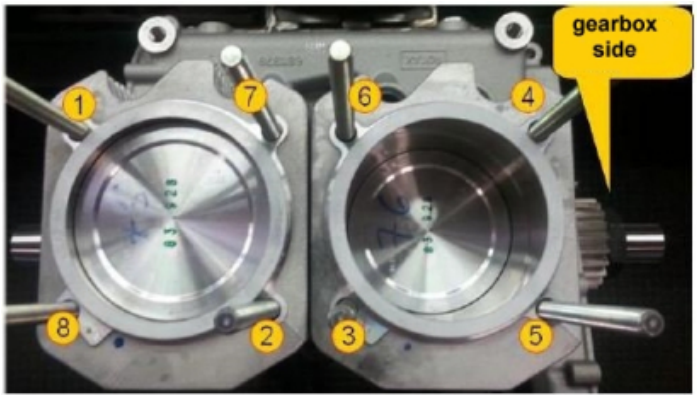
test

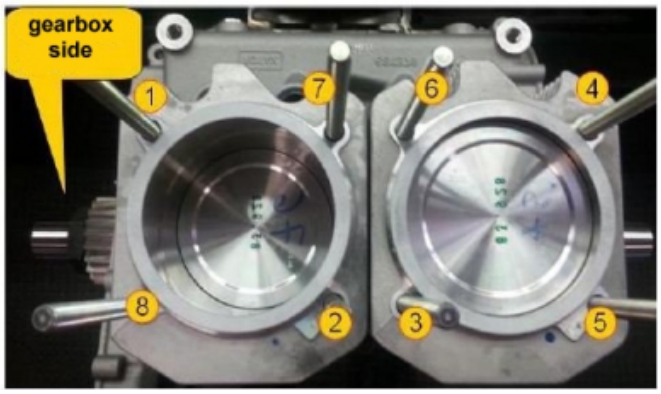
Mounting location	Designation	Tightening torque Nm	Loctite	Comment
Cylinder head Tightening sequence See image below	M8 nut	**1.** - Degrease all threads **2.** - Grease only the contact surfaces of the cap nuts **3.** - Tighten in a screwing sequence with 10 Nm **4.** - Tighten in a screwing sequence with 30 Nm **5.** - Loosen nuts individually by 360° **6.** - finally tighten with 10 Nm + 150° The installation and tightening of a single cylinder head or a single cylinder head nut is not permitted. The entire procedure for tightening the cylinder heads must be carried out in the torque sequence.		New tightening instructions for all engines. ** Replaces all previous tightening instructions !** See: SI-912-025 SI-914-026 SI-912 i-010„
~~cylinder head~~	nut M8	22		up to housing S/N: 27811
~~cylinder head~~	nut M8	10 Nm + 120°		from housing S/N: 06.0010
cylinder head	spark plugs	20 (NGK / ND) 16 (BRP)	insert with silicone thermal paste	see: SI-912-027 SI-912 i-013 SI-914-028
motor housing	CONNECTING SCREW M16X1.5	35	243	
motor housing	banjo bolt M16 X 1.5	30		oil pressure line
Motor housing	screw connection 3/4-16 UNF/ M16 X 1.5	25	243	oil pressure line
motor housing	MAGNETIC SCREW M12X1.5	25		
motor housing	locking screw blocking pin CYL.SCREW M8X20	15		with copper sealing ring
freewheel housing	SK-NUT M34X1.5 HEIGHT 8	150	603	

Mounting location	Designation	Tightening torque Nm	Loctite	Comment
drive wheel	SK-NUT M30X1.5 HOEHE 12	200	648	
Intake manifold	SK-BOLT M8X30	15	243	
Exhaust stud bolt	SK SCREW M8X23/20	6	648	
Water pump	WHEEL	15	243	
Solenoid wheel	SK SCREW M16X1.5×40	originally 150 Nm 45 Nm + 180°	Fit the cone of the solenoid hub with Loctite 603 !	
Ignition cover	SK SCREW M6X16	5	243	
Ignition coil holder front	CYL.SCREW M8X16	25	243	with bracket
Fuel pump cap	SK SCREW M8	15	243	914 / 912 iS
Oil pump screw plug M12X1	25	Oil pressure control valve		
oil pump	HOSE NIP 13.2/9.5	15	243	
oil pump	screw gland	25	648	
oil pump	oil pressure sensor	15	243	cellar sensor
oil pump	banjo bolt M10 x 1 x 19 / 30	12		pressure oil lines (also on regulator flange)
oil pump	CONNECTING SCREW M10X1	10	243	connection for pressure oil line
oil pump	oil filter nipple	60	screw on oil filter	
oil reservoir	drain plug SK-SCREW M12X12	25		with sealing ring P/N 250010
oil reservoir	pipe bend / hose connection union nut	25		hold against with open-end wrench on\\oil reservoir cover
oil reservoir	banjo bolt M10X1X19	17		oil return 914 from\\oil pump
oil pump/cylinder head	TEMPERATURE SENSOR	10	243	
propeller shaft bearing	SK-SCREW M7X16	15	243	in the gearbox housing
fuel lines	banjo bolt M8X1	10		on carburetor
fuel lines	banjo bolt M10X1	15		914
Airbox	TEMPERATURE SENSOR	15	243	
fuel pump	SK-NUT M8	15	243	
float chamber cover	CONNECTION SCREW	5.5		only 914
Fuel line on the carburetor	SREWED-IN SCREW	10	243	
turbo oil line	valve housing	25		
turbo oil line	banjo bolt M8X1X17	10		marked with „OIL“
oil sump tank only 914	locking screw with strainer	20		also 915 and 916

Mounting location	Designation	Tightening torque Nm	Loctite	Comment
carbon brush holder starter motor	COMBINUT M6	4		
Magnetic hub	Prerotator drive	140	648	AutoGyro

Fit the cylinder head and bumpers. To do this, lift the cylinder into the centering of the head,
Grease the contact surface of the flanged cap nuts.
Screw on the collar nuts and collar cap nuts.
Tighten the collar nuts evenly and lightly (do not exceed 10 Nm!) until the cylinder head rests on the cylinder.
Align the cylinder heads with the fixture provided and tighten the nuts to 10 Nm according to the screw sequence and then to 30 Nm according to the screw sequence.
Loosen each screw point individually by 360°, retighten with 10 Nm and a rotation angle of 150°.





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