

TECHNICAL DATA – ENGINE 640 LC4 ADVENTURE 2003

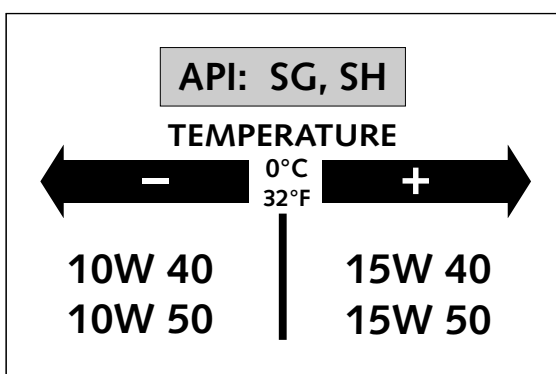
Type	640 LC4	
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft and electric starter	
Displacement	625 ccm	
Bore / Stroke	101 / 78 mm	
Ratio	11,5 : 1	
Fuel	unleaded premium gasoline with a least RON 95	
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain	
Camshaft	584-V03/1	
Valve diameter	Intake: 36 mm	Exhaust: 30 mm
Valve clearance cold	Intake: 0.15 mm	Exhaust: 0.15 mm
Crank shaft bearing	2 cylinder roller bearing	
Connecting rod bearing	needle bearing	
Top end bearing	bronze bushing	
Piston	forged/cast aluminium alloy	
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring	
Engine lubrication	2 Eaton-Oilpumps	
Quantity of engine oil	see table	
Engine oil	2.1 liters including frame	
Primary ratio	straight geared spur wheels 31 : 79 teeth	
Clutch	multi disc clutch in oil bath, hydraulically operated	
Transmission	5-speed claw shifted	
Ignition system	contactless DC- CDI ignition with digital advanced system type KOKUSAN	
Ignition timing	adjustment to max. 38° BTDC at 6000 rpm	
Generator	12V 200W	
Spark plug	NGK DCPR 8 E	
Spark plug gap	0.9 mm	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump	
Cooling liquid	at least -25° C (-13° F)	
Starting equipment	electric starter, kick starter	

BASIC CARBURETOR SETTING

	640 LC4 Adventure
Type	BST40-266
Main jet	152,5
Needle jet	X-6 689
Idling jet	45
Jet needle	6G5
Needle clip pos. f. top	3. from top
Mixt. adj. screw open	2,25

GEAR RATIOS

Primary ratio	Transmission	Original final drive ratio	Available chain drive sprockets	Available final drive sprockets
31:79	1st gear 14:35	15:45	15 t	38 t
	2nd gear 15:24			40 t for chain
	3rd gear 18:21	16:42	16 t for chain	42 t ⁵ / ₈ x ¹ / ₄ "
	4th gear 20:19	17:38	17 t ⁵ / ₈ x ¹ / ₄ "	45 t
	5th gear 22:18	17:42		48 t



Engine oil

Use only synthetic oil brands, which meet quality requirements (Motorex Powers Synt 4T) of API-classes SG or SH (informations on bottles) or higher.

! CAUTION !

POOR OIL QUALITY OR MINOR QUANTITY EFFECT EARLY ENGINE-WEAR.

TIGHTENING TORQUES - ENGINE 640 LC4

Hexagon nut at primary gear	M20x1,5	Loctite 243 + 170 Nm	(125 ft.lb)
Collar nut flywheel	M16x1,25 left	80° C + 150 Nm	(110 ft.lb)
Hexagon nut for inner clutch hub	M18x1,5	Loctite 243 + 80 Nm	(59ft.lb)
Kickstarter stop screw	M12x1,5	50 Nm	(37ft.lb)
Allan head screw freewheel hub	M6x12/M6x12,5	Loctite 648 + 12 Nm	(9ft.lb)
Allan head screw oil pumps	M6	Loctite 243 + 8 Nm	(6ft.lb)
Hexagon screw camshaft gear	M10	Loctite 243 + 35 Nm	(25ft.lb)
Allan head screw cylinder head top sect.	M6x25/m6x35/M6x65/M6x70 (8.8)	8 Nm	(6ft.lb)
Allan head screw cylinder head top sect.	M6x50/M6x55 (12.9)	15 Nm	(11ft.lb)
Cylinder head screws	M10	50 Nm	(37ft.lb)
Collar nuts at cylinder base	M10	40 Nm	(30ft.lb)
Hexagon screw chain sprocket	M10 (10.9)	Loctite 243 + 60 Nm	(44ft.lb)
Oil drain plug	M22x1,5	30 Nm	(22ft.lb)
Magnetic plug	M12x1,5	20 Nm	(15ft.lb)
Plug bypass valve	M12x1,5	20 Nm	(15ft.lb)
Hollow screws oil lines	M8x1	10 Nm	(7ft.lb)
Hollow screws oil lines	M10x1	15 Nm	(11ft.lb)
Jet screw clutch cover	M8	10 Nm	(7ft.lb)
Screw plug timing-chain tensioner	M12x1,5	20 Nm	(15ft.lb)
Counternuts valve adjusting screws	M7x0,75	16 Nm	(12ft.lb)
Crankshaft locking bolt	M8	20 Nm	(15ft.lb)
Spark plug	M12x1,25	20 Nm	(15ft.lb)
Engine mounting bolt	M8	40 Nm	(30ft.lb)
Engine mounting bolt	M10	70 Nm	(52ft.lb)