

REFERENCE INFORMATION
SERVICE SPECIFICATIONS

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40 – 65 HP E-TEC Models		
ENGINE	Full Throttle Operating Range RPM	40 HP – 5000 to 6000 RPM 50 HP – 5500 to 6000 RPM 60 HP – 5500 to 6000 RPM 65 HP – 5500 to 6000 RPM
	Power	40 HP (30 kw) @ 5500 RPM 50 HP (37 kw) @ 5750 RPM 60 HP (45 kw) @ 5750 RPM 65 HP (45 kw) @ 5750 RPM
	Idle RPM in Gear	800 ± 50 <i>EMM</i> Controlled
	Idle RPM in Neutral	750 ± 50 <i>EMM</i> Controlled
	Test Propeller	P/N 382861
	Weight (may vary depending on model)	(RL) Models: 232 lbs. (105 kg) (PL) Models: 240 lbs. (109 kg)
	Lubrication	<i>Evinrude/Johnson XD100, XD50, XD30</i> ; or NMMA TC-W3 certified
	Engine Type	In-line, 2 Cylinder, Two-Cycle
	Displacement	52.7 cu. in. (864 cc)
	Bore	3.601 in. (91.47 mm)
	Stroke	2.588 in. (65.74 mm)
	Standard Bore	3.6005 to 3.6015 in. (91.45 to 91.48 mm) To bore oversize, add piston oversize dimension to standard bore
	Top Crankshaft Journal	2.1870 to 2.1875 in. (55.55 to 55.56 mm)
	Center Crankshaft Journal	2.1870 to 2.1875 in. (55.55 to 55.56 mm)
	FUEL	Bottom Crankshaft Journal
Rod Crankpin		1.3757 to 1.3762 in. (34.94 to 34.96 mm)
Piston Ring End Gap, Both		0.011 to 0.023 in. (0.28 to 0.58 mm)
Fuel/Oil Control		<i>EMM</i> Controlled
Starting Enrichment		<i>EMM</i> Controlled
Minimum (High) Fuel Pressure		24 to 28 psi (165 to 193 kPa)
Minimum Fuel Lift Pump Pressure		3 psi (21 kPa)
Maximum Fuel Inlet Vacuum		4 in. Hg.
Minimum Octane	87 AKI (R+M)/2 or 90 RON	
Additives	2+4 [®] <i>Fuel Conditioner, Fuel System Cleaner</i> Use of other additives may result in engine damage.	
	See Fuel Requirements on p. 131 for additional information	

40 – 65 HP E-TEC Models		
ELECTRICAL	Minimum Battery Requirements	640 CCA (800 MCA) or 800 CCA (1000 MCA) below 32° F (0° C)
	Alternator	25-Amp fully regulated. Refer to Predelivery and Installation Guide for multiple battery applications.
	Tachometer Setting	6 pulse (12 pole)
	Engine Fuse	P/N 967545 – 10 A
COOLING	Thermostat	143°F (62°C)
	Maximum Temperature	212°F (100°C)
	Water pressure	12 to 14 psi @ 5000 RPM
IGNITION	Type	Capacitor Discharge
	Firing Order	1-2
	Ignition Timing	<i>EMM</i> Controlled
	RPM Limit in Gear	6250
	RPM Limit in Neutral	1800
	Crankshaft Position Sensor Air Gap	Fixed
	Spark Plug	Refer to Emission Control Information Label <i>Champion</i> [†] QC10WEP @ 0.028 ± .003 in. (0.71 mm)
GEARCASE	Gear Ratio	12:32 (.375)
	Lubricant	<i>HPF XR Gearcase Lube</i> <i>HPF Pro</i> in high performance or commercial applications
	Capacity	22 fl. oz. (650 ml)
	Shift Rod Height	20 in. (L) Models: 21.38 (543 mm) ± one-half turn
	Shift Cable Stroke	1.125 to 1.330 in. (28.6 to 33.8 mm) measured between NEUTRAL and FORWARD
POWER TRIM/TILT	Lubrication	<i>Evinrude/Johnson</i> Biodegradable TNT Fluid
	Fluid Capacity	15.2 fl. oz. (450 ml)
	Trim Range	0° to 15°
	Tilt Range	16° to 65°

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75 – 90 HP E-TEC Models		
ENGINE	Full Throttle Operating Range RPM	4500 to 5500 RPM
	Power	75 HP (56 kw) @ 5000 RPM 90 HP (67.1 kw) @ 5000 RPM
	Idle RPM in Gear	700 ± 50 <i>EMM</i> Controlled
	Idle RPM in Neutral	600 ± 50 <i>EMM</i> Controlled
	Test Propeller	(L) Models: P/N 386246 (X) Models: P/N 387388
	Weight (may vary depending on model)	(L) Models: 320 lbs. (145 kg) (X) Models: 335 lbs. (152 kg)
	Lubrication	<i>Evinrude/Johnson XD100, XD50, XD30</i> ; or NMMA TC-W3 certified
	Engine Type	In-line, 3 Cylinder, Two-Cycle
	Displacement	79.1 cu. in. (1296 cc)
	Bore	3.601 in (91.47 mm)
	Stroke	2.588 in. (65.74 mm)
	Standard Bore	3.6005 to 3.6015 in. (91.45 to 91.48 mm) To bore oversize, add piston oversize dimension to standard bore
	Top Crankshaft Journal	2.1870 to 2.1875 in. (55.55 to 55.56 mm)
	Center Crankshaft Journals	2.1870 to 2.1875 in. (55.55 to 55.56 mm)
	Bottom Crankshaft Journal	1.5747 to 1.5752 in. (40.0 to 40.01 mm)
	Rod Crankpin	1.3757 to 1.3762 in. (34.94 to 34.96 mm)
	Piston Ring End Gap, Both	0.011 to 0.023 in. (0.28 to 0.58 mm)
FUEL	Fuel/Oil Control	<i>EMM</i> Controlled
	Starting Enrichment	<i>EMM</i> Controlled
	Minimum (High) Fuel Pressure	24 to 28 psi (165 to 193 kPa)
	Minimum Fuel Lift Pump Pressure	3 psi (21 kPa)
	Maximum Fuel Inlet Vacuum	4 in. Hg.
	Minimum Octane	87 AKI (R+M)/2 or 90 RON
	Additives	<i>2+4® Fuel Conditioner, Fuel System Cleaner</i> Use of other additives may result in engine damage. See Fuel Requirements on p. 131 for additional information

75 – 90 HP E-TEC Models		
ELECTRICAL	Minimum Battery Requirements	640 CCA (800 MCA) or 800 CCA (1000 MCA) below 32° F (0° C)
	Alternator	25-Amp fully regulated. Refer to Predelivery and Installation Guide for multiple battery applications.
	Tachometer Setting	6 pulse (12 pole)
	Engine Fuse	P/N 967545 – 10 A
COOLING	Maximum Temperature	212°F (100°C)
	Thermostat	143°F (62°C)
	Water pressure	19 to 21 psi @ 5000 RPM
IGNITION	Type	Capacitor Discharge
	Firing Order	1-2-3
	Ignition Timing	<i>EMM</i> Controlled
	RPM Limit in Gear	6250
	RPM Limit in Neutral	1800
	Crankshaft Position Sensor Air Gap	Fixed
	Spark Plug	Refer to Emission Control Information Label <i>Champion</i> [†] QC10WEP @ 0.028 ±.003 in. (0.71 mm)
GEARCASE	Gear Ratio	20 in. (L) Models: 13:26 (.500) 2:1 25 in. (X) Models: 12:27 (.444) 2.25:1
	Lubricant	<i>HPF XR Gearcase Lube</i>
	Capacity	20 in. (L) Models: 31.6 fl. oz. (935 ml) 25 in. (X) Models: 32.8 fl. oz. (970 ml)
	Shift Rod Height	20 in. (L) Models: 21.25 (539.75 mm) ± one-half turn 25 in. (X) Models: 26.25 (666.75 mm) ± one-half turn
	Shift Cable Stroke	1.125 to 1.330 in. (28.6 to 33.8 mm) measured between NEUTRAL and FORWARD
POWER TRIM/TILT	Lubrication	Single Piston System — <i>Evinrude/Johnson</i> Biodegradable TNT Fluid
	Fluid Capacity	21 fl. oz. (620 ml)
	Trim Range	0° to 15°
	Tilt Range	16° to 65°