

Item	Unit	Data	
		DT40W	DT40WE/40WR

POWERHEAD

Recommended operating range		r/min	5000 – 5600
Idle speed		r/min	900 ± 50 (in-gear: approx. 750)
* Cylinder compression		kPa (kg/cm ² , psi)	650 (6.5, 92)
** Crankshaft runout	STD	mm (in)	0.00 – 0.05 (0.000–0.002)
	Limit	mm (in)	0.10 (0.004)
Conrod deflection	Limit	mm (in)	5.0 (0.20)
Cylinder head distortion	Limit	mm (in)	0.10 (0.004)
Cylinder distortion	Limit	mm (in)	0.10 (0.004)
Piston diameter	STD	mm (in)	78.893 – 78.908 (3.1060 – 3.1066)
Cylinder bore	STD	mm (in)	79.000 – 79.015 (3.1102 – 3.1108)
Piston to cylinder clearance	STD	mm (in)	0.099 – 0.114 (0.0039 – 0.0045)
	Limit	mm (in)	0.194 (0.0076)
Piston measuring position		mm (in)	28.0 (1.10) from piston skirt end
Cylinder measuring position		mm (in)	35.0 (1.38) from cylinder top surface
Wear on cylinder bore	Limit	mm (in)	0.10 (0.004)
Piston pin diameter	STD	mm (in)	19.995 – 20.000 (0.7872 – 0.7874)
	Limit	mm (in)	19.980 (0.7866)
Piston pin hole diameter	STD	mm (in)	20.002 – 20.010 (0.7875 – 0.7878)
	Limit	mm (in)	20.032 (0.7887)
Piston ring end gap	STD	mm (in)	0.20 – 0.40 (0.008 – 0.016)
	Limit	mm (in)	0.80 (0.031)
Maximum reed stop opening		mm (in)	8.9 – 9.3 (0.35 – 0.36)
Reed to seat clearance	Limit	mm (in)	0.20 (0.008)
Thermostat operating temperature		°C (°F)	48 – 52 (118 – 126)

* Figures shown are guidelines only, not absolute service limits.

** Total indicator reading.

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LOWER UNIT

Gearcase oil amounts	ml (US/lmp.oz)	610 (20.6/21.5)
Gear ratio		2.091 (23/11)
Preliminary gear shim & thrust washer		
Pinion back up shim	mm (in)	1.0 (0.04)
Forward back up shim	mm (in)	1.0 (0.04)
Reverse back up shim	mm (in)	1.0 (0.04)
Forward thrust washer	mm (in)	2.2 (0.09)
Reverse thrust washer	mm (in)	1.8 (0.07)

Initial selection-shim adjustment may be required.

CARBURETOR

Type	MIKUNI	B401-32
I.D. mark		944J0
Main jet	#	190
Pilot jet	#	67.5
Air screw	Turns open	1-1/8 ± 1/4
Float height	mm	17 ± 2
NOTE: Hold carburetor vertically (bore up) and slowly rotate to an inverted horizontal position until float adjustment tab contacts inlet needle valve. Holding carburetor in this position, measure with vernier calipers from the float to the top of the main jet, at 180° from the needle valve.		

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ELECTRICAL

Ignition timing	Degrees at r/min	TDC $0^{\circ} \pm 1.7^{\circ}$ at 800, BTDC $25^{\circ} \pm 1.5^{\circ}$ at 5000	
Over revolution limiter	r/min	5900	
Condenser charge coil resistance	Ω at 20 °C	200 – 300 [G–B]	
Pulser coil resistance	Ω at 20 °C	160 – 230 [W/R– B]	
Ignition coil resistance (Without spark plug cap)	Primary	Ω at 20 °C	0.08 – 0.11 [O–B/W]
	Secondary	k Ω at 20 °C	3.5 – 4.7 [H.T. cord–H.T. cord]
Spark plug cap resistance	k Ω at 20 °C	No resistor type	
Battery charge coil resistance	Ω at 20 °C	0.3 – 0.6 [R–Y]	
Battery charge coil output (12 V)	Watt	80	
Standard spark plug	Type	NGK	B8HS-10
	Gap	mm (in)	0.9 – 1.0 (0.035 – 0.039)
Fuse amp rating	A	—	20
Recommended battery capacity (12 V)	Ah (kC)	—	35 (126) or over
Starter motor relay coil resistance	Ω at 20 °C	—	3.5 – 5.1 [Y/G–B]
Choke solenoid coil resistance	Ω at 20 °C	DT40WR: 3.5 – 5.1 [O–B]	

STARTER MOTOR

Max. continuous time of use	Sec	—	30
Motor output	kW	—	0.6
Starter motor brush length	STD	mm (in)	12.5 (0.49)
	Limit	mm (in)	9.0 (0.35)
Commutator undercut	STD	mm (in)	0.50 – 0.80 (0.002 – 0.003)
	Limit	mm (in)	0.2 (0.008)
Commutator outside diameter	STD	mm (in)	30.0 (1.18)
	Limit	mm (in)	29.0 (1.14)
Allowable commutator taper	STD	mm (in)	0.05 (0.002)
	Limit	mm (in)	0.40 (0.016)
Pinion to ring gear gap	mm (in)	—	3.0 – 5.0 (0.12 – 0.20)

PEAK VOLTAGE

- Remove all spark plugs to eliminate the variables at cranking speed.
- Use a STEVENS peak voltage tester, Model CD-77.
- Crank with recoil starter.

Testing sequence	Tester probe connection		Peak voltage	Tester range	Remarks
	⊕ (Red)	⊖ (Black)			
CDI output	Orange	Black/ White	88 V or over	NEG 500	With ignition coil connected
Condenser charge coil output	Green	Black	96 V or over	POS 500	With CDI unit disconnected
Pulser coil output	White/Red	Black	3.3 V or over	SEN 50	With CDI unit disconnected
Battery charge coil output	Red	Yellow	3 V or over	POS 50	With rectifier disconnected