

# TECHNICAL DATA

## SI\* METRIC INFORMATION GUIDE

BASE UNITS			
DESCRIPTION	UNIT	SYMBOL	
length .....	meter .....	m	
mass .....	kilogram .....	kg	
force .....	newton .....	N	
liquid .....	liter .....	L	
temperature .....	Celsius .....	°C	
pressure .....	kilopascal .....	kPa	
torque .....	newton•meter .....	N•m	
speed .....	kilometer per hour .....	km/h	

PREFIXES			
PREFIX	SYMBOL	MEANING	VALUE
kilo .....	k .....	one thousand .....	1 000
centi .....	c .....	one hundredth .....	0.01
milli .....	m .....	one thousandth .....	0.001
micro .....	μ .....	one millionth .....	0.000001

CONVERSION FACTORS			
TO CONVERT	TO †	MULTIPLY BY	
in .....	mm .....	25.4	
in .....	cm .....	2.54	
in <sup>2</sup> .....	cm <sup>2</sup> .....	6.45	
in <sup>3</sup> .....	cm <sup>3</sup> .....	16.39	
ft .....	m .....	0.3	
oz .....	g .....	28.35	
lb .....	kg .....	0.45	
lbf .....	N .....	4.4	
lbf•in .....	N•m .....	0.11	
lbf•ft .....	N•m .....	1.36	
lbf•ft .....	lbf•in .....	12	
PSI (lbf/in <sup>2</sup> ) .....	kPa .....	6.89	
imp. oz .....	U.S. oz .....	0.96	
imp. oz .....	mL .....	28.41	
imp. gal .....	U.S. gal .....	1.2	
imp. gal .....	L .....	4.55	
U.S. oz .....	mL .....	29.57	
U.S. gal .....	L .....	3.79	
MPH .....	km/h .....	1.61	
Fahrenheit .....	Celsius .....	(°F - 32) ÷ 1.8	
Celsius .....	Fahrenheit .....	(°C × 1.8) + 32	



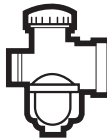


\* The international system of units abbreviates SI in all languages.

† To obtain the inverse sequence, divide by the given factor. To convert "mm" to "in", divide by 25.4.

**NOTE:** Conversion factors are rounded off to 2 decimals for easier use.





## Section 10 TECHNICAL DATA

### Subsection 02 (ENGINE)

	VEHICLE MODEL	MINI Z						
	ENGINE TYPE	4 Stroke Overhead Valves						
	Number of Cylinders	1						
	Bore	mm (in) 60.00 (2.362)						
	Stroke	mm (in) 42.00 (1.654)						
	Displacement	cm <sup>3</sup> (in <sup>3</sup> ) 118.00 (7.20)						
	Compression Ratio (corrected)	8.5: 1						
	Maximum Power Engine Speed	± 100 RPM 4000						
	Ring End Gap	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Top/Second Oil (wear limit)</td> <td style="width: 10%; text-align: center;">mm (in)</td> <td style="width: 40%;">0.2 - 0.4 (.008 - .016) 0.15 - 0.35 (.006 - .014) 1.0 (.04)</td> </tr> </table>	Top/Second Oil (wear limit)	mm (in)	0.2 - 0.4 (.008 - .016) 0.15 - 0.35 (.006 - .014) 1.0 (.04)			
	Top/Second Oil (wear limit)	mm (in)	0.2 - 0.4 (.008 - .016) 0.15 - 0.35 (.006 - .014) 1.0 (.04)					
	Ring/Piston Groove Clearance	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">(standard)</td> <td style="width: 10%; text-align: center;">mm (in)</td> <td style="width: 40%;">.015 - .045 (.0006 - .0018)</td> </tr> <tr> <td style="width: 50%;">(wear limit)</td> <td style="width: 10%; text-align: center;">mm (in)</td> <td style="width: 40%;">.15 (.006)</td> </tr> </table>	(standard)	mm (in)	.015 - .045 (.0006 - .0018)	(wear limit)	mm (in)	.15 (.006)
	(standard)	mm (in)	.015 - .045 (.0006 - .0018)					
(wear limit)	mm (in)	.15 (.006)						
Piston/Cylinder Wall Clearance	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">(standard)</td> <td style="width: 10%; text-align: center;">mm (in)</td> <td style="width: 40%;">.015 - .05 (.0006 - .002)</td> </tr> <tr> <td style="width: 50%;">(wear limit)</td> <td style="width: 10%; text-align: center;">mm (in)</td> <td style="width: 40%;">.12 (.005)</td> </tr> </table>	(standard)	mm (in)	.015 - .05 (.0006 - .002)	(wear limit)	mm (in)	.12 (.005)	
(standard)	mm (in)	.015 - .05 (.0006 - .002)						
(wear limit)	mm (in)	.12 (.005)						
Connecting Rod Big End Side Clearance	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">(standard)</td> <td style="width: 10%; text-align: center;">mm (in)</td> <td style="width: 40%;">0.1 - 0.7 (.004 - .028)</td> </tr> <tr> <td style="width: 50%;">(wear limit)</td> <td style="width: 10%; text-align: center;">mm (in)</td> <td style="width: 40%;">1.1 (.043)</td> </tr> </table>	(standard)	mm (in)	0.1 - 0.7 (.004 - .028)	(wear limit)	mm (in)	1.1 (.043)	
(standard)	mm (in)	0.1 - 0.7 (.004 - .028)						
(wear limit)	mm (in)	1.1 (.043)						
	Ignition Type	Transistorized						
	Spark Plug Make and Type	NGK BPR6 ES						
	Spark Plug Gap	mm (in) 0.7 - 0.8 (.028 - .031)						
	Ignition Timing BTDC	mm (in) 25° (fixed)						
	Lamp Coil ①	0.18 - 0.23						
	Ignition Coil ①	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Primary</td> <td style="width: 10%; text-align: center;">Ω</td> <td style="width: 40%;">0.8 - 1.0</td> </tr> <tr> <td style="width: 50%;">Secondary</td> <td style="width: 10%; text-align: center;">Ω</td> <td style="width: 40%;">5.9 - 7.1</td> </tr> </table>	Primary	Ω	0.8 - 1.0	Secondary	Ω	5.9 - 7.1
Primary	Ω	0.8 - 1.0						
Secondary	Ω	5.9 - 7.1						
	Carburetor Type	Horizontal Butterfly Valve						
	Main Jet	60						
	Float Height Adjustment	± 1 mm (± .040 in) 13.7 (.54)						
	Pilot Screw Opening	± 1/16 turn 2 Turns Out						
	Idle Speed RPM	± 200 RPM 1400						
	Gas Type/Pump Octane Number	Unleaded/86						
	Oil	SAE 5W/30						
	Type	Radial Fan						
	<b>ENGINE COLD</b> Nom (lb•ft)	Drive Sprocket Retaining Screw	25 (19)					
		Exhaust Nuts	24 (18)					
		Crankcase Screws	M6 12 (9)					
		Cylinder Head Screws	24 (18)					
		Axial Fan/Flywheel Nut	75 (55)					

## Section 10 TECHNICAL DATA

### Subsection 03 (VEHICLE)

	<b>VEHICLE MODEL</b>		<b>MINI Z</b>		
	<b>ENGINE TYPE</b>		<b>4 Stroke Overhead Valve</b>		
	Drive Chain Ratio		10/48		
	Drive Chain	Pitch	mm (in)	12.7 (.500)	
		Type/Links	Qty	Single 40/78	
	Drive Sprocket	Clutch Engagement		N.A.	
	Driven Sprocket	Outside Diameter	mm (in)	201.37 (7.93)	
		Pitch Diameter	mm (in)	194.18 (7.65)	
	Drive Chain Part Number (P/N)			412 107 500	
	Drive Chain Adjustment		Deflection	Automatic Tensioner	
	Track	Width		mm (in)	254.0 (10)
		Length		mm (in)	1748.8 (68.85)
		Profile Height		mm (in)	15.97 (.63)
Adjustment		Deflection	mm (in)	35 (1-3/8)	
	Force ①	kg (lbf)	7.3 (16)		
Suspension Type		Track	Mini Z		
		Ski	Mini Z		
	Length		mm (in)	1860.0 (73.2)	
	Width		mm (in)	885.0 (34.8)	
	Height		mm (in)	750.0 (29.5)	
	Ski Stance		mm (in)	685.0 (27.0)	
	Mass (dry)		kg (lb)	70 (154)	
	Ground Contact Area		cm <sup>2</sup> (in <sup>2</sup> )	2754.5 (426.9)	
	Ground Contact Pressure		kPa (PSI)	2.49 (.361)	
	Frame Material			Steel	
	Bottom Pan Material			Polyethylene	
	Hood Material			Polyethylene	
	Battery		V (A•h)	N.A.	
	Headlight		W	35	
	Taillight		W	4.5	
	Fuel Tank		L (U.S. gal)	1.8 (.5)	
	Oil Capacity		L (U.S. oz)	0.6 (20.3)	

## ENGINE TECHNICAL DATA LEGEND

BTDC: Before Top Dead Center

K: Kilo (x 1000)

MAG: Magneto Side

N.A.: Not Applicable

PTO: Power Take Off Side

R: Rectangular

① All resistance measurements must be performed with parts at room temperature (approx. 20°C (68°F)). Temperature greatly affects resistance measurements.

## VEHICLE TECHNICAL DATA LEGEND

N.A.: Not Applicable

① Force or downward pull applied to track to obtain specified tension deflection.