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^2	cm^2	6.45
in^3	cm^3	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^2)	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.

	VEHICLE MODEL			MX Z 600 HO /E/R X/SPORT/007 SPECIAL EDITION (CAN./U.S.)	MX Z 800 /E/R X/SPORT (CAN./U.S.)
	ENGINE TYPE			**593**	**793**
	Number of Cylinders			2	2
	Bore		mm (in)	72.00 (2.835)	82.00 (32.228)
	Stroke		mm (in)	73.0 (2.874)	75.70 (2.980)
	Displacement		cm^3 (in^3)	594.40 (36.27)	799.20 (48.77)
	Compression Ratio		± 0.5	12.25	12.0
	Maximum Power Engine Speed ①		± 100 RPM	8000	7850
	Piston Ring Type		$1^{st}/2^{nd}$	ST/N.A.	ST/N.A.
	Ring End Gap	New Wear Limit	mm (in) mm (in)	0.4 (.016) 1.0 (.039)	0.4 (.016) 1.0 (.039)
	Ring/Piston Groove Clearance	New Wear Limit	mm (in) mm (in)	0.045 (.0018) 0.2 (.0079)	0.05 (.0020) 0.2 (.0079)
	Piston/Cylinder Wall Clearance	New Wear Limit	mm ± (in) mm (in)	0.105 ± 0.023 (.0041 ± .0009) 0.20 (.0079)	0.125 ± 0.023 (.0049 ± .0009) 0.20 (.0079)
	Connecting Rod Big End Axial Play	New Wear Limit	mm (in) mm (in)	0.39 (.0154) 1.2 (.0472)	0.39 (.0154) 1.2 (.0472)
	Maximum Crankshaft End-play ②		mm (in)	0.3 (.012)	0.3 (.012)
	Maximum Crankshaft Deflection at PTO		mm (in)	0.06 (.0024)	0.06 (.0024)
	Magneto Generator Output		W	360	360
	Ignition Type			CDI	CDI
	Spark Plug Make and Type			NGK BR9ECS	NGK BR9ECS
	Spark Plug Gap ⑧		± 0.05 mm (± .002 in)	N.A.⑧	N.A.⑧
	Ignition Timing BTDC ③		mm (in)	2.79 (.110)	2.92 (.115)
	Trigger Coil ④		Ω	190 – 300	190 – 300
	Generating Coil ④	Low Speed	Ω	N.A.	N.A.
		High Speed	Ω	N.A.	N.A.
	Lighting Coil ④		Ω	0.1 – 1.0	0.1 – 1.0
	High Tension Coil ④	Primary	Ω	N.A.	N.A.
		Secondary	kΩ	N.A.	N.A.
	Carburetor Type		PTO/MAG	TM 40-B238	TM 40-B250
	Main Jet		PTO/MAG	380/380	380/380
	Needle Jet			P-0 ⑤	P-0 ⑤
	Pilot Jet			17.5	17.5
	Needle Identification — Clip Position		PTO MAG	9DHI13-58 ⑥	9DG17-58 ⑥
	Slide Cut-Away			1.5	2.0
	Float Adjustment		± 1 mm (± .040 in)	N.A.	N.A.
	Air or Pilot Screw Adjustment		± 1/16 Turn	1-1/2	1.5
	Idle Speed		± 200 RPM	1600	1500
	Gas Type/Pump Octane Number			Unleaded/87	Unleaded/87
	Gas/Oil Ratio			Injection	Injection
	Type			Liquid	Liquid
	Axial Fan Belt Adjustment	Deflection	mm (in)	N.A.	N.A.
		Force	kg (lbf)	N.A.	N.A.
	Thermostat Opening Temperature		°C (°F)	42 (108)	42 (108)
	Radiator Cap Opening Pressure		kPa (PSI)	90 (13)	90 (13)
	ENGINE COLD N•m (lb•ft)	Drive Pulley Retaining Screw		⑦	⑦
		Exhaust Manifold Nuts or Bolts		22 (16)	22 (16)
		Magneto Ring Nut		125 (92)	125 (92)
		Crankcase Nuts or Screws	M6 M8	9 (7) 29 (21)	9 (7) 29 (21)
		Crankcase/Engine Support Nuts or Screws		35 (26)	9 (7) 29 (21)
		Cylinder Head Screws		29 (21)	29 (21)
		Crankcase/Cylinder Nuts or Screws		29 (21)	40 (29)
		Axial Fan Shaft Nut		N.A.	N.A.

	VEHICLE MODEL				MX Z 600 HO R X/SPORT (CAN./U.S.)	MX Z 600 HO ER X/SPORT/007 SPECIAL EDITION (CAN./U.S.)
	ENGINE TYPE				**593**	**593**
	Chain Drive Ratio				24/43	24/43
	Chain	Pitch		in	3/8	3/8
		Type/Links Qty/Plates Qty			Silent 72/13	Silent 72/13
	Drive Pulley	Type of Drive Pulley			TRA III	TRA III
		Ramp Identification and Roller Pin Type			410 ④	410 ④
		Calibration Screw Position or Calibration Part			3	3
		Spring Color			Violet/Violet	Violet/Violet
		Spring Length		mm (in)	107 (4.212)	107 (4.212)
		Clutch Engagement		± 100 RPM	3800	3800
	Driven Pulley	Type			HPV27 VSA	HPV27 VSA
		Spring Preload		± 0.7 kg (± 1.5 lb)	N.A.	N.A.
		Cam Angle		Degree	47/44	47/44
	Pulley Distance	Z		± 0.5 mm (± .020 in)	20 (.787)	20 (.787)
	Offset	X		± 0.5 mm (± .020 in)	37 (1.457)	37 (1.457)
		Y – X	MIN. – MAX.	mm (in)	1.5 ± 0.75 (.059 ± .030)	1.5 ± 0.75 (.059 ± .030)
	Drive Belt Part Number (P/N)				417 300 197	417 300 197
	Drive Belt Width (wear limit)			mm (in)	33.4 (1.31)	33.4 (1.31)
	Drive Belt Adjustment		Deflection	± 5 mm (± .197 in)	32 (1.260)	32 (1.260)
			Force ②	kg (lbf)	11.3 (25)	11.3 (25)
	Track	Width		mm (in)	381 (15.0)	381 (15.0)
		Length		mm (in)	3074 (121)	3074 (121)
		Profile Height		mm (in)	STD: 25.4 (1.000) OPT: 31.8 (1.25)	STD: 25.4 (1.000) OPT: 31.8 (1.25)
		Adjustment	Deflection	mm (in)	30 – 35 (1-3/16 – 1-3/8)	30 – 35 (1-3/16 – 1-3/8)
			Force ③	kg (lbf)	7.3 (16)	7.3 (16)
	Suspension Type		Track		SC-10 III	SC-10 III
			Ski		RAS A-Arm	RAS A-Arm
	Length			mm (in)	2787 (109.7)	2787 (109.7)
	Width			mm (in)	1217 (47.9)	1217 (47.9)
	Height			mm (in)	1280 (50.4)	1280 (50.4)
	Ski Stance (carbide to carbide)			mm (in)	1195 (47.0)	1195 (47.0)
	Mass (dry)			kg (lb)	208 (457)	220 (483)
	Ground Contact Area			cm^2 (in^2)	6836 (1060)	6836 (1060)
	Ground Contact Pressure			kPa (PSI)	2.98 (.432)	3.16 (.458)
	Frame Material				Aluminum	Aluminum
	Bottom Pan Material				Impact copolymer	Impact copolymer
	Hood Material				Surlyn	Surlyn
	Battery			V/A•h	N.A.	12/18
	Headlight			W	H4 60/55	H4 60/55
	Taillight and Stoplight			W	8/27	8/27
	Tachometer and Speedometer Bulbs			W	2 x 3	2 x 3
	Fuel and Temperature Gauge Bulbs			W	N.A.	N.A.
	Fuse	Starter Solenoid		A	N.A.	30
		Fuel Level Sensor		A	N.A.	.25
	Fuel Tank			L (U.S. gal)	41 (10.8)	41 (10.8)
	Chaincase/Gearbox			mL (U.S. oz)	250 (8.5)	250 (8.5)
	Cooling System ①			L (U.S. oz)	4.3 (145.4)	4.3 (145.4)
	Injection Oil Reservoir			L (U.S. oz)	3.5 (118.4)	3.5 (118.4)

	VEHICLE MODEL				MX Z 800 R X/SPORT (CAN./U.S.)	MX Z 800 ER X/SPORT (CAN./U.S.)
	ENGINE TYPE				**793**	**793**
	Chain Drive Ratio				26/43	26/43
	Chain	Pitch		in	3/8	3/8
		Type/Links Qty/Plates Qty			Silent 72/13	Silent 72/13
	Drive Pulley	Type of Drive Pulley			TRA III	TRA III
		Ramp Identification and Roller Pin Type			414 ④	414 ④
		Calibration Screw Position or Calibration Part			3	3
		Spring Color			Violet/Yellow	Violet/Yellow
		Spring Length		mm (in)	157.9 (6.217)	157.9 (6.217)
		Clutch Engagement		± 100 RPM	3800	3800
	Driven Pulley	Type			HPV27 VSA	HPV27 VSA
		Spring Preload		± 0.7 kg (± 1.5 lb)	N.A.	N.A.
		Cam Angle		Degree	47/44	47/44
	Pulley Distance	Z		± 0.5 mm (± .020 in)	20 (.787)	20 (.787)
	Offset	X		± 0.5 mm (± .020 in)	37 (1.457)	37 (1.457)
		Y – X	MIN. – MAX.	mm (in)	1.5 ± 0.75 (.059 ± .030)	1.5 ± 0.75 (.059 ± .030)
	Drive Belt Part Number (P/N)				417 300 166	417 300 166
	Drive Belt Width (wear limit)			mm (in)	34.7 (1.366)	34.7 (1.366)
	Drive Belt Adjustment		Deflection	± 5 mm (± .197 in)	32 (1.260)	32 (1.260)
			Force ②	kg (lbf)	11.3 (25)	11.3 (25)
	Track	Width		mm (in)	381 (15.0)	381 (15.0)
		Length		mm (in)	3074 (121)	3074 (121)
		Profile Height		mm (in)	STD: 25.4 (1.000) OPT: 31.8 (1.25)	STD: 25.4 (1.000) OPT: 31.8 (1.25)
		Adjustment	Deflection	mm (in)	30 – 35 (1-3/16 – 1-3/8)	30 – 35 (1-3/16 – 1-3/8)
			Force ③	kg (lbf)	7.3 (16)	7.3 (16)
	Suspension Type		Track		SC-10 III	SC-10 III
			Ski		RAS A-Arm	RAS A-Arm
	Length			mm (in)	2787 (109.7)	2787 (109.7)
	Width			mm (in)	1217 (47.9)	1217 (47.9)
	Height			mm (in)	1280 (50.4)	1280 (50.4)
	Ski Stance (carbide to carbide)			mm (in)	1195 (47.0)	1195 (47.0)
	Mass (dry)			kg (lb)	208 (457)	220 (483)
	Ground Contact Area			cm^2 (in^2)	6836 (1060)	6836 (1060)
	Ground Contact Pressure			kPa (PSI)	2.98 (.432)	3.16 (.458)
	Frame Material				Aluminum	Aluminum
	Bottom Pan Material				Impact copolymer	Impact copolymer
	Hood Material				Surlyn	Surlyn
	Battery			V/A•h	N.A.	12/18
	Headlight			W	H4 60/55	H4 60/55
	Taillight and Stoplight			W	8/27	8/27
	Tachometer and Speedometer Bulbs			W	2 x 3	2 x 3
	Fuel and Temperature Gauge Bulbs			W	N.A.	N.A.
	Fuse	Starter Solenoid		A	N.A.	30
		Fuel Level Sensor		A	N.A.	.25
	Fuel Tank			L (U.S. gal)	41 (10.8)	41 (10.8)
	Chaincase/Gearbox			mL (U.S. oz)	250 (8.5)	250 (8.5)
	Cooling System ①			L (U.S. oz)	4.3 (145.4)	4.3 (145.4)
	Injection Oil Reservoir			L (U.S. oz)	3.5 (118.4)	3.5 (118.4)

ENGINE LEGEND

BTDC: Before Top Dead Center

CDI: Capacitor Discharge Ignition

K: Kilo (x 1000)

ST: Semi-Trapezoidal

MAG: Magneto Side

N.A.: Not Applicable

PTO: Power Take Off Side

① The maximum horsepower RPM applicable on the vehicle. It may be different under certain circumstances and BOMBARDIER INC. reserves the right to modify it without obligation.

② Crankshaft end-play is not adjustable on these models. Specification is given for verification purposes only.

③ At 3500 RPM with headlamp turned on.

④ All resistance measurements must be performed with parts at room temperature (approx. 20°C (68°F)). Temperature greatly affects resistance measurements.

⑤ Press fit type, not replaceable.

⑥ Needle with one groove, not adjustable.

⑦ Drive pulley retaining screw: torque to 80 to 100 N•m (59 to 74 lbf•ft), install drive belt, accelerate the vehicle at low speed (maximum 30 km/h (20 MPH)) and apply the brake; repeat 5 times. Retorque screw to 90 to 100 N•m (66 to 74 lbf•ft).

⑧ **CAUTION:** Do not attempt to adjust gap on spark plug BR 9 ECS.

VEHICLE LEGEND

RAS: Response Angle Suspension

TRA: Total Range Adjustable

RER: Rotax Electronic Reverse

VSA: Variable Sheave Angle

N.A.: Not Applicable

① Coolant mixture: 60% antifreeze/40% water.

② Force applied midway between pulleys to obtain specified tension deflection.

③ Force or downward pull applied to track to obtain specified tension deflection.

④ Lever with roller pin (P/N 417 004 308) (solid).