










INDEX

GENERAL INFORMATION	
	GEN INFO 1
SPECIFICATIONS	
	SPEC 2
PERIODIC INSPECTION AND ADJUSTMENT	
	INSP ADJ 3
ENGINE OVERHAUL	
	ENG 4
COOLING SYSTEM	
	COOL 5
CARBURETION	
	CARB 6
CHASSIS	
	CHAS 7
ELECTRICAL	
	ELEC 8
TROUBLESHOOTING	
	TRBL SHTG 9

CONTENTS

CHAPTER 1.

GENERAL INFORMATION

MOTORCYCLE IDENTIFICATION	1-1
FRAME SERIAL NUMBER	1-1
ENGINE SERIAL NUMBER	1-1
IMPORTANT INFORMATION	1-3
PREPARATION FOR REMOVAL AND DISASSEMBLY	1-3
ALL REPLACEMENT PARTS	1-5
GASKETS, OIL SEALS, AND O-RINGS	1-5
LOCK WASHERS/PLATES AND COTTER PINS	1-5
BEARINGS AND OIL SEALS	1-5
CIRCLIPS	1-7
SPECIAL TOOLS	1-7
FOR TUNE UP	1-7
FOR ENGINE SERVICE	1-9
FOR CHASSIS SERVICE	1-11
FOR ELECTRICAL COMPONENTS	1-11

CHAPTER 2.

SPECIFICATIONS

GENERAL SPECIFICATIONS	2-1
MAINTENANCE SPECIFICATIONS	2-4
ENGINE	2-4
CHASSIS	2-10
ELECTRICAL	2-13
GENERAL TORQUE SPECIFICATIONS	2-16
DEFINITION OF UNITS	2-16
LUBRICATION POINTS AND LUBRICANT TYPE	2-17
ENGINE	2-17
CHASSIS	2-18
LUBRICATION DIAGRAM	2-55
COOLANT FLOW CHART	2-57
CABLE ROUTING	2-59

CHAPTER 3. PERIODIC INSPECTION AND ADJUSTMENT

INTRODUCTION	3-1
PERIODIC MAINTENANCE/LUBRICATION INTERVALS	3-1
COWLINGS	3-7
REMOVAL	3-7
INSTALLATION	3-9
SIDE COVERS	3-11
REMOVAL	3-11
INSTALLATION	3-13
ENGINE	3-13
Y.P.V.S. CABLE ADJUSTMENT	3-13
CARBURETOR SYNCHRONIZATION	3-17
IDLE SPEED ADJUSTMENT	3-23
THROTTLE CABLE FREE PLAY ADJUSTMENT	3-25
AUTOLUBE PUMP CABLE ADJUSTMENT	3-27
AUTOLUBE PUMP STROKE ADJUSTMENT	3-29
AUTOLUBE PUMP AIR BLEEDING	3-31
SPARK PLUG INSPECTION	3-35
IGNITION TIMING CHECK	3-37
ENGINE OIL LEVEL CHECK	3-41
TRANSMISSION OIL LEVEL INSPECTION	3-45
TRANSMISSION OIL REPLACEMENT	3-45
CLUTCH ADJUSTMENT	3-49
AIR FILTER CLEANING	3-51
CARBURETOR JOINT INSPECTION	3-55
FUEL LINE INSPECTION	3-59
EXHAUST SYSTEM INSPECTION	3-61
COOLANT LEVEL INSPECTION	3-63
COOLANT REPLACEMENT	3-67
COOLING SYSTEM INSPECTION	3-75
CHASSIS	3-79
FRONT BRAKE ADJUSTMENT	3-79
REAR BRAKE ADJUSTMENT	3-79
BRAKE FLUID INSPECTION	3-81
BRAKE PAD INSPECTION	3-83
BRAKE LIGHT SWITCH ADJUSTMENT	3-83
DRIVE CHAIN SLACK ADJUSTMENT	3-85
DRIVE CHAIN LUBRICATION	3-89
STEERING HEAD ADJUSTMENT	3-89
FRONT FORK OIL REPLACEMENT	3-95
FRONT FORK ADJUSTMENT	3-99
REAR SHOCK ABSORBER ADJUSTMENT	3-101



**GEN
INFO 1**



SPEC 2



**INSP
ADJ 3**



ENG 4



COOL 5



CARB 6



CHAS 7



ELEC 8

?

**TRBL
SHTG 9**

RECOMMENDED COMBINATIONS OF FRONT FORK AND REAR	
SHOCK ABSORBER SETTINGS	3-103
TIRE INSPECTION	3-105
WHEEL INSPECTION	3-107
CABLE INSPECTION AND LUBRICATION	3-109
LEVER AND PEDAL LUBRICATION	3-109
SIDESTAND LUBRICATION	3-109
SWINGARM AND RELAY ARM LUBRICATION	3-109

ELECTRICAL	3-111
BATTERY INSPECTION	3-111
FUSE INSPECTION	3-115
HEADLIGHT BEAM ADJUSTMENT	3-119
HEADLIGHT BULB REPLACEMENT	3-119

CHAPTER 4. ENGINE OVERHAUL

ENGINE REMOVAL	4-1
COWLINGS	4-1
TRANSMISSION OIL	4-1
COOLANT	4-1
MUFFLER ASSEMBLY	4-3
SEAT	4-3
FUEL TANK	4-3
CARBURETOR	4-5
AUTOLUBE PUMP CABLE AND HOSE	4-5
CLUTCH CABLE	4-7
Y.P.V.S. CABLES	4-9
RADIATOR	4-9
LEADS	4-11
DRIVE CHAIN	4-11
ENGINE REMOVAL	4-13
ENGINE DISASSEMBLY	4-15
CYLINDER HEAD, CYLINDERS AND PISTONS	4-15
CLUTCH AND PRIMARY DRIVE GEAR	4-19
KICK AXLE AND KICK IDLE GEAR	4-23
SHIFT SHAFT	4-25
C.D.I. MAGNETO	4-27
CRANKCASE (UPPER)	4-29
TRANSMISSION, SHIFTER AND CRANKSHAFT	4-31
POWER VALVES	4-33
OIL PUMP AND STRAINER	4-35
INSPECTION AND REPAIR	4-37
CYLINDER HEAD	4-37
CYLINDER AND PISTON	4-39
PISTON RINGS	4-43
PISTON PIN AND BEARING	4-45

CLUTCH	4-47
PRIMARY DRIVE	4-51
TRANSMISSION AND SHIFTER	4-51
KICK STARTER	4-55
SHIFT SHAFT	4-55
OIL PUMP	4-55
AUTOLUBE PUMP	4-57
CRANKSHAFT	4-57
CRANKCASE	4-59
OIL PIPE AND STRAINER	4-61
POWER VALVE	4-61
ENGINE ASSEMBLY AND ADJUSTMENT	4-63
OIL PUMP AND STRAINER	4-63
POWER VALVES	4-67
TRANSMISSION, SHIFTER AND CRANKSHAFT	4-71
CRANKCASE (UPPER)	4-83
C.D.I. MAGNETO	4-85
SHIFT SHAFT	4-91
KICK AXLE AND KICK IDLE GEAR	4-95
CLUTCH AND PRIMARY DRIVE GEAR	4-99
CYLINDER HEAD, CYLINDERS AND PISTONS	4-107
REMountING ENGINE	4-115

CHAPTER 5. COOLING SYSTEM

WATER PUMP	5-1
REMOVAL	5-3
INSPECTION	5-7
INSTALLATION	5-9
THERMOSTATIC VALVE AND RADIATOR	5-13
REMOVAL	5-15
INSPECTION	5-19
INSTALLATION	5-23

CHAPTER 6. CARBURETION

CARBURETOR	6-1
SECTION VIEW	6-3
REMOVAL	6-5
DISASSEMBLY	6-9
INSPECTION	6-11
ASSEMBLY	6-15
INSTALLATION	6-19
FUEL LEVEL ADJUSTMENT	6-21



GEN INFO 1



SPEC 2



INSP ADJ 3



ENG 4



COOL 5



CARB 6



CHAS 7



ELEC 8

?

TRBL SHTG 9

REED VALVE	6-23
REMOVAL	6-25
DISASSEMBLY	6-25
INSPECTION	6-25
ASSEMBLY	6-27
INSTALLATION	6-29

CHAPTER 7. CHASSIS

FRONT WHEEL	7-1
REMOVAL	7-3
INSPECTION	7-5
INSTALLATION	7-7
REAR WHEEL	7-11
REMOVAL	7-13
INSPECTION	7-15
INSTALLATION	7-15
FRONT AND REAR BRAKE	7-19
BRAKE PAD REPLACEMENT	7-23
CALIPER DISASSEMBLY	7-31
MASTER CYLINDER DISASSEMBLY	7-35
INSPECTION AND REPAIR	7-41
ASSEMBLY	7-43
AIR BLEEDING	7-55
FRONT FORK	7-59
REMOVAL	7-61
DISASSEMBLY	7-63
INSPECTION	7-67
ASSEMBLY	7-69
INSTALLATION	7-73
STEERING HEAD AND HANDLEBARS	7-77
REMOVAL	7-79
INSPECTION	7-85
INSTALLATION	7-87
REAR SHOCK ABSORBER AND SWINGARM	7-97
HANDLING NOTES	7-99
NOTES ON DISPOSAL	7-99
REMOVAL	7-101
INSPECTION	7-107
INSTALLATION	7-109

DRIVE CHAIN AND SPROCKETS	7-115
REMOVAL	7-115
INSPECTION	7-117
INSTALLATION	7-121
METER ASSEMBLY	7-125
REMOVAL	7-127
INSTALLATION	7-129

CHAPTER 8. ELECTRICAL

TZR250 CIRCUIT DIAGRAM	8-1
COLOR CODE	8-2
ELECTRICAL COMPONENTS	8-7
IGNITION AND STARTING SYSTEM	8-11
CIRCUIT DIAGRAM	8-11
IGNITION CONTROL CIRCUIT OPERATION	8-15
TROUBLESHOOTING (1)	8-17
TROUBLESHOOTING (2)	8-31
CHARGING SYSTEM	8-37
CIRCUIT DIAGRAM	8-37
TROUBLESHOOTING	8-41
LIGHTING SYSTEM	8-47
CIRCUIT DIAGRAM	8-47
TROUBLESHOOTING	8-51
LIGHTING SYSTEM TESTS AND CHECKS	8-59
SIGNAL SYSTEM	8-69
CIRCUIT DIAGRAM	8-69
TROUBLESHOOTING	8-73
SIGNAL SYSTEM TESTS AND CHECKS	8-81
REED SWITCH TEST	8-91
DISPLAY SYSTEM	8-93
CIRCUIT DIAGRAM	8-93
TROUBLESHOOTING	8-97
DISPLAY SYSTEM TESTS AND CHECKS	8-103
OIL LEVEL GAUGE OPERATION CHECK	8-113
COOLING SYSTEM	8-115
CIRCUIT DIAGRAM	8-115
TROUBLESHOOTING	8-119
YAMAHA POWER VALVE SYSTEM	8-127
CIRCUIT DIAGRAM	8-127
TROUBLESHOOTING	8-131



GEN
INFO 1



SPEC 2



INSP
ADJ 3



ENG 4



COOL 5



CARB 6



CHAS 7



ELEC 8



TRBL
SHTG 9

CHAPTER 9. TROUBLESHOOTING

STARTING FAILURE/HARD STARTING	9-1
FUEL SYSTEM	9-1
ELECTRICAL SYSTEM	9-2
COMPRESSION SYSTEM	9-3
POOR IDLE SPEED PERFORMANCE	9-3
POOR IDLE SPEED PERFORMANCE	9-3
POOR MEDIUM AND HIGH SPEED PERFORMANCE	9-4
FUEL SYSTEM	9-4
ELECTRICAL SYSTEM	9-4
COMPRESSION SYSTEM	9-5
Y.P.V.S.	9-5
FAULTY GEAR SHIFTING	9-6
HARD SHIFTING	9-6
CHANGE PEDAL DOES NOT MOVE	9-6
JUMP-OUT GEAR	9-6
CLUTCH SLIPPING/Dragging	9-7
CLUTCH SLIPPING	9-7
CLUTCH DRAGGING	9-7
IMPROPER KICKING	9-8
SLIPPING	9-8
HARD KICKING	9-8
KICK CRANK NOT RETURNING	9-8
FAULTY BRAKE	9-9
POOR BRAKING EFFECT	9-9
FRONT FORK OIL LEAKAGE AND FRONT FORK MALFUNCTION ..	9-9
OIL LEAKAGE	9-9
MALFUNCTION	9-9
INSTABLE HANDLING	9-10
INSTABLE HANDLING	9-10
FAULTY SIGNAL AND LIGHTING SYSTEM	9-11
HEADLIGHT DARK	9-11
BULB BURNT OUT	9-11
FLASHER DOES NOT LIGHT	9-11
FLASHER KEEPS ON	9-11
FLASHER WINKS SLOWER	9-12
FLASHER WINKS QUICKER	9-12
HORN IS INOPERATIVE	9-12

FAULTY Y.P.V.S.....	9-12
FAULTY Y.P.V.S.....	9-12

OVERHEATING OR OVER-COOLING	9-13
OVERHEATING	9-13
OVER-COOLING	9-13

TZR250 WIRING DIAGRAM



GEN INFO 1



SPEC 2



INSP ADJ 3



ENG 4



COOL 5



CARB 6



CHAS 7



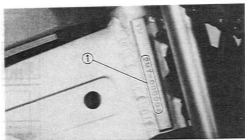
ELEC 8



TRBL SHTG 9



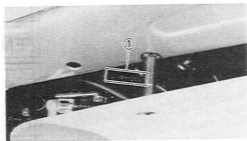
GENERAL INFORMATION

**MOTORCYCLE IDENTIFICATION
FRAME SERIAL NUMBER**

The frame serial number ① is stamped into the right side of the steering head pipe.

Starting Serial Number:

TZR2502MA-000101

**ENGINE SERIAL NUMBER**

The engine serial number ① is stamped into the elevated part of the right rear section of the engine.

Starting Serial Number:

TZR2502MA-000101

NOTE:

- The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.
- Designs and specifications are subject to change without notice.



SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	TZR250
Model Code Number:	2MA
Frame Starting Number:	2MA-000101
Engine Starting Number:	2MA-000101
Dimensions:	
Overall Length	2,055 mm (80.9 in) (Except for France) 2,005 mm (78.9 in) (For France)
Overall Width	660 mm (26.0 in)
Overall Height	1,135 mm (44.7 in)
Seat Height	760 mm (29.9 in)
Wheelbase	1,375 mm (54.1 in)
Minimum Ground Clearance	135 mm (5.3 in)
Basic Weight:	
With Oil and Full Fuel Tank	144 kg (317 lb)
Minimum Turning Radius:	2,800 mm (110.2 in)
Engine:	
Engine Type	Liquid cooled 2-stroke
Induction System	Reed valve
Cylinder Arrangement	Forward inclined parallel 2-cylinder
Displacement	249 cm ³
Bore x Stroke	56.4 x 50.0 mm (2.22 x 1.97 in)
Compression Ratio	5.9 : 1
Starting System	Kick starter
Lubrication System:	
Type	Separate lubrication (Yamaha Autolube)
Engine Oil Type	Yamaha Oil 2T or air cooled 2 stroke engine oil
Transmission Oil Type	SAE 10W30 type SE motor oil
Oil Capacity:	
Engine Oil (Oil Tank)	1.4 L (1.23 Imp qt, 1.48 US qt)
Transmission Oil	
Periodic Oil Change	1.0 L (0.9 Imp qt, 1.1 US qt)
Total Amount	1.0 L (0.9 Imp qt, 1.1 US qt)
Coolant Capacity:	
Including All Routes	1.35 L (1.19 Imp qt, 1.43 US qt)
Air Filter:	
Type	Wet element

GENERAL SPECIFICATIONS

SPEC


Model	TZR250	
Fuel:		
Type	Premium gasoline	
Fuel Tank Capacity		
Full Amount	16.0 L (3.52 Imp gal, 4.23 US gal)	
Reserve Amount	4.0 L (0.88 Imp gal, 1.06 US gal)	
Carburetor:		
Type/Quantity	TM28SS/2 pcs.	
Manufacturer	MIKUNI	
Spark Plug:		
Type/Quantity	BR9ES/2 pcs.	
Manufacturer	NGK	
Plug Gap	0.7 – 0.8 mm (0.028 – 0.032 in)	
Clutch:		
Type	Wet, multiple disc	
Transmission:		
Type	Constant mesh 6-speed	
Primary Reduction System	Helical gear	
Primary Reduction Ratio	56/22 (2.545)	
Secondary Reduction System	Chain drive	
Secondary Reduction Ratio	41/14 (2.929)	
Operation	Left foot operation	
Gear Ratio		
1st	32/13 (2.462)	
2nd	28/16 (1.750)	
3rd	25/19 (1.316)	
4th	26/24 (1.083)	
5th	25/26 (0.962)	
6th	23/27 (0.852)	
Chassis:		
Frame Type	Semi double cradle	
Caster Angle	26°	
Trail	96 mm (3.78 in)	
Tire:		
Type	Tubeless	
Size		
Front	100/80 – 17 52H	
Rear	120/80 – 17 61H	
Tire Pressure (Cold tire):	Front	Rear
Up to 90 kg (198 lb) load*	180 kPa (1.8 kg/cm ² , 26 psi)	200 kPa (2.0 kg/cm ² , 28 psi)
90 kg (198 lb) ~ Maximum (196 kg (432 lb)) load*	200 kPa (2.0 kg/cm ² , 28 psi)	230 kPa (2.3 kg/cm ² , 32 psi)
High speed riding	200 kPa (2.0 kg/cm ² , 28 psi)	230 kPa (2.3 kg/cm ² , 32 psi)

*Load is total weight of cargo, rider, passenger, and accessories.