

XS650SH

1981 SERVICE DATA

FILE MOTORCYCLE -

DATE 10/10/80

BUI M80-060

MODEL - ISM I.D. NUMBER	XS650SH-B XS650SH-S 4M4
Initial Engine Number / Frame Number	4M4-000101 / 4M4-000101
Basic Color(s)	New Yamaha Black (B) Frost Silver (S)
Fuel Type / Fuel Tank Capacity / Reserve Capacity	Regular / 11.5 Ltr. (3.0 Gal.) / 2.3 Ltr. (0.5 Gal.)
Dry Vehicle Weight	208 kg (459 lbs.)
ENGINE TYPE	4-Stroke, SOHC, Air-Cooled
Bore/Stroke/Number Cylinders/Displacement (cc)	75mm / 74mm / 2 / 654cc
Compression Ratio/Compression Pressure Min~Max	8.7:1 / 9.5 ~ 11.5 kg/cm ²
Piston Skirt Clearance New / Max	0.050 ~ 0.055mm / 0.1mm
Ring End Gap Top / 2nd / 3rd	0.2 ~ 0.4mm / 0.2 ~ 0.4mm / 0.3 ~ 0.9mm
Valve Clearance (Cold) Intake / Exhaust	0.08mm / 0.15mm
Oil Pressure Hot / rpm	ø
Oiling System	Wet Sump
Capacity: Dry	2500cc
Oil and Filter Change	2000cc
Oil Change	2000cc
Lubricant: Temp. Above 5°C (40°F)	Yamalube 4* or SAE 20W/40 SE
Temp. Below 15°C (60°F)	Yamalube 4* or SAE 20W/40 SE
AUTOLUBE - Min Stroke / Color Code	ø
Minimum Output @ 200 Cycles	ø
Maximum Output @ 200 Cycles	ø
CARBURETOR - Mfr. / Type / I.D. Number	Mikuni / BS34 / 3G1-00
Main Jet / Pilot Jet	132.5 / 42.5
Needle Jet / Jet Needle-Clip Position	Y-O / 5HX12 Fixed
Slide Cutaway or Throttle Valve	136
Floater Level / Fuel Level	27.3 ± 0.5mm / NA
Idle rpm	1200
Max CO* / Max HC* / Set CO	5.0 % / 500 ppm / 2.0 % (All settings @ Idle)
SUSPENSION	
Front Forks: Oil Type / Level / Qty	10 Wt. Fork Oil* / ø / 168cc
Gas Pressure	ø
Spring Length Std	482mm
Monoshock: Oil Type / Qty	ø
Gas Pressure	ø
Minimum Brake Lining Thickness	Front: 8.0mm Rear: 8.0mm
Tire Size (Nominal Pressure)	F:150S10 (1.8 kg/cm ² /22 psi) R:130/80-18 87S (2.0 kg/cm ² /28 psi)
TRANSMISSION - Oil Type/Qty Chg./Qty Reassemble	See ENGINE Above
Primary Drive Type / Teeth / Ratio	Spur Gear / 72-27 / 2.666
Secondary Drive Type / Teeth / Chain	Chain / 34-17 / DID50HDS-194L
Clutch Friction Plate Thickness Std ~ Min	3.0 ~ 2.7mm
Clutch Spring Length Std ~ Min	34.6 ~ 33.6mm
Middle Gear Case Capacity	ø
Final Gear Case Capacity	ø
Gear Case Lubricant: Temp. Above 5°C (40°F)	ø
Temp. Below 15°C (60°F)	ø
All Weather Conditions	ø

CHARGING SYSTEM	AC Generator / 3-Phase / Full Wave
Battery: Model / Specific Gravity / Charge Rate	Yussa YB14L-A2 (12V 14AH) / 1.28 / 1.4A
Maximum Output	14V 16A @ 5000 rpm
TROUBLESHOOTING	
Field Coil Color Code / Ω	Rear: Gr ~ Bn / 5.3 Ω ± 10% Stator: Wht ~ Wht / 8.45 Ω ± 10%
Charge Coil Color Code / Ω	ø
IGNITION SYSTEM	Transistor-Controlled Ignition
Ignition Timing	15° Mark
	Std: 15° @ 1200 rpm Adv: 40° @ Approx. 3200 rpm
Spark Plug Type	NGK BP7ES or Champion N7Y
Spark Plug Gap / Torque / Cap Ω	0.7 ~ 0.8mm / 2.0 m·kg / 10K Ω
Point Gap / Condenser Capacitance	ø / ø
TROUBLESHOOTING	
Ignition Coil Test: Gap / Primary Ω / Secondary Ω	6mm / 2.5 Ω ± 10% / 11K Ω ± 20%
Pulser Coil or Pickup Coil Color Code / Ω	Org ~ Bk / Gry ~ Bk / 700 Ω ± 20%
Source Coil Color Code / Ω	ø
LIGHTING SYSTEM	
Headlight / Taillight / Signal Rating	12V/50-40W / 12V/27-8W / 12V/27W
TROUBLESHOOTING	
Lighting Coil Color Code / Ω	ø
TORQUE VALUES	
Front Axle Nut	14 x 1.5: 10.8 m·kg
Front Axle Holder Nut	8 x 1.25: 1.4 m·kg
Rear Axle Nut	18 x 1.5: 15.0 m·kg
Rear Axle Pinch Bolt	ø
Clutch Nut	18 x 1.0: 8.0 m·kg
Drain Plug	30 x 1.5: 4.2 m·kg
Cylinder Head Cover	8 x 1.25: 2.1 m·kg
Cylinder Head:	10 x 1.25: 3.7 m·kg
	6 x 1.0: 0.9 m·kg
Engine Mounting Bolts: Front	10 x 1.25: 4.6 m·kg
Engine, Lower	10 x 1.25: 9.0 m·kg
Rear	10 x 1.25: 4.0 m·kg
Rear, Lower	10 x 1.25: 4.6 m·kg
Engine, Upper	8 x 1.25: 1.8 m·kg 10 x 1.25: 3.0 m·kg

ø = Does Not Apply To This Model

NA = Information Not Available

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