

XS650-2F

1979 SERVICE DATA

M79-006

MODEL - IBM I.D. NUMBER	XS650-2F	3N0
Initial Engine Number/Frame Number	2F0-250101 / 2F0-250101	
Basic Color(s)	New Yamaha Black	
Fuel Type/Fuel Tank Capacity/Reserve Capacity	Regular / 11.0 Lit. (2.9 Gal.) / 2.3 Lit. (0.6 Gal.)	
Dry Vehicle Weight	205 kg (452 lb.)	
ENGINE TYPE	4-Stroke, Air-Cooled, SOHC	
Bore/Stroke/Number Cylinders/Displacement (cc)	75mm / 74mm / 2 / 654cc	
Compression Ratio/Compression Pressure min~max	8.5:1 / 9.5 ~ 11.5 kg/cm ²	
Piston Skirt Clearance new/max.	0.050 ~ 0.055mm / 0.10mm	
Ring End Gap Top/2nd/3rd	0.2 ~ 0.4mm / 0.2 ~ 0.4mm / 0.3 ~ 0.9mm	
Valve Clearance (cold) Intake/Exhaust	0.06mm / 0.15mm	
Oil Pressure Hot/rpm	φ	
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	
Below 15°C (60°F)	Yamalube 4* or SAE 20W-40 SE	
AUTOLUBE - Min. Stroke/Color Code	φ	
Minimum Output @ 200 cycles	φ	
Maximum Output @ 200 cycles	φ	
CARBURETOR - Mfr./Type/I.D. Number	Mikuni / BS38 / 2F000	
Main Jet/Pilot Jet	135 / 27.5	
Needle Jet/Jet Needle-Clip Position	Z-2 / 502-3	
Slide Cutaway or Throttle Valve	120	
Float Level	24 ± 1mm	
Idle rpm	1200 rpm	
CO % @ Idle (Diagnostic Use Only)	3 ± 2%	
SUSPENSION		
Front Forks: Oil Type/Level/Qty.	10 wt. Fork Oil* / φ / 164 ~ 172cc	
Gas Pressure	φ	
Spring Length Std.	482mm	
Monoshock: Oil Type/Qty.	φ	
Gas Pressure	φ	
Minimum Brake Lining Thickness	Front: 6mm Rear: 2mm	
Tire Size (Nominal Pressure)	F:3.50S19 (1.6kg/cm ² /23 psi) R:130/90S16 (2.0kg/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 Drive / 34-17 / DID530HDS-104L	
Clutch Friction Plate Thickness Std ~ Min.	3.0 ~ 2.7mm	
Clutch Spring Length Std ~ Min.	34.6 ~ 33.6mm	
Middle Gear Case Capacity	φ	
Final Gear Case Capacity	φ	
Gear Case Lubricant: Temp above 5°C (40°F)	φ	
Temp below 15°C (60°F)	φ	
All Weather Conditions	φ	

CHARGING SYSTEM	AC Generator / 3 Phase / Full Wave
Battery: Model / Spec. Grav. / Chg. Rate	Yuasa YB14L-A2 (12V 14AH) / 1.28 / 1.4A
Maximum Output	14V 11A @ 2000 rpm
TROUBLESHOOTING	
Field Coil Color Code / Ω	Rotor: Grn ~ Blk / $5.25 \Omega \pm 10\%$ Stator: Wht ~ Wht / $0.46 \Omega \pm 10\%$
Charge Coil Color Code / Ω	ϕ
IGNITION SYSTEM	Battery and Coil
Ignition Timing	15° Mark
	Std: 15° @ 1200 rpm Adv: 40° @ 3000 rpm
Spark Plug Type	NGK-BP7ES or Champion-N-7Y
Spark Plug Gap / Torque / Cap Ω	0.7 ~ 0.8mm / 2.0 m·kg / 10K Ω
Point Gap / Condenser Capacitance	0.3 ~ 0.4mm / 0.22 $\mu F \pm 10\%$
TROUBLESHOOTING	
Ignition Coil Test Gap / Primary Ω / Secondary Ω	6mm / 3.9 $\Omega \pm 10\%$ / 8.0K $\Omega \pm 20\%$
Pulse Coil or Pick-up Coil Color Code / Ω	ϕ
Source Coil Color Code / Ω	ϕ
LIGHTING SYSTEM	
Headlight / Taillight / Signal Rating	12V 50-40W / 12V 27-8W / 12V 27W
TROUBLESHOOTING	
Lighting Coil Color Code / Ω	ϕ
TORQUE VALUES	
Front Axle Nut	14 x 1.5: 10.7 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	ϕ
Clutch Nut	18 x 1.0: 8.0 m·kg
Drain Plug	30 x 1.5: 4.2 m·kg
Cylinder Head Cover	ϕ
Cylinder Head:	6 x 1.0: 0.9 m·kg 8 x 1.25: 2.1 m·kg
	Cap Nut 10 x 1.25: 3.7 m·kg
Engine Mounting Bolts: Engine, Upper	1 x 1.25: 1.8 m·kg 10 x 1.25: 3.0 m·kg
Engine, Front	1 x 1.25: 4.6 m·kg
Engine, Rear	1 x 1.25: 4.0 m·kg
Rear, Lower	10 x 1.25: 4.6 m·kg
Engine, Lower	10 x 1.25: 4.6 m·kg

ϕ Does Not Apply to This Model

* Available From Yamaha Parts Distributors, Inc.