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 Cylingers/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 Ω ± 10% Stator: Wht ~ Wht / 0.46 Ω ± 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 μF ± 10%
TROUBLESHOOTING	
Ignition Coil Test Gap / Primary Ω / Secondary Ω	6mm / 3.9 Ω ± 10% / 8.0K Ω ± 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	.25: 1.8 m-kg 10 x 1.25: 3.0 m-kg
Engine, Front	1 1.25: 4.6 m-kg
Engine, Rear	1 . 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.