XS850H
1981 SERVICE DATA

MODEL - IBM I.D. NUMBER	XS850H 4R3
Initial Engine Number / Frame Number	4R3-000101 / 4R3-000101
Basic Color(s)	Star Silver
Fuel Type / Fuel Tank Capacity / Reserve Capacity	Regular / 17 Lit. (4.5 Gal.) / 3.0 Lit. (0.8 Gal.)
Dry Vehicle Weight	274 kg (604 lbs.)
ENGINE TYPE	4-Stroke, DOHC, Air-Cooled, Transverse Triple
Bore / Stroke, Number Cylinders, Displacement (cc)	71.5mm / 66.6mm / 3 / 826cc
Compression Ratio / Compression Pressure Min~Max	9.2:1 / 9 ~ 11 kg/cm²
Piston Skirt Clearance New / Max	0.050 ~ 0.066mm / 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	0.11mm ~ 0.15mm / 0.21mm ~ 0.25mm
Oil Pressure Hot / rpm	2.0 kg/cm² @ 80°C / 1100 rpm @ Oil Pressure Switch
Oiling System	Wet Sump
Capacity: Dry	[illegible]00cc
Oil and Filter Change	3100cc
Oil Change	2800cc
Lubricant: Temp. Above 5°C (40°F)	Yamalube 4* or SAE 20W40 SE
Temp. Below 15°C (60°F)	Yamalube 4* or SAE 10W30 SE
AUTOLUBE - Min Stroke / Color Code	ø
Minimum Output @ 200 Cycles	ø
Maximum Output @ 200 Cycles	ø
CARBURETOR - Mfr. / Type / I.D. Number	Hitachi / HSC34-10 / 3J3-00
Main Jet / Pilot Jet	142 / 40
Needle Jet / Jet Needle Clip Position	2.6 / Y-01 Fixed
Slide Cutaway or Throttle Valve	13* (#130)
Float Level / Fuel Level	12.5 ± 1.0mm / NA
Idle rpm	1100 ± 50 rpm
Max CO* / Max HC* / Set CO	5.0 % / 500 ppm / 3.0 % (All Settings @ Idle)
SUSPENSION	
Front Forks: Oil Type / Level / Qty	10 Wt. Fork Oil* or Equivalent / ø / 195cc
Gas Pressure	0.4 kg/cm² (5.7 psi)
Spring Length Std	508.5mm
Monoshock: Oil Type / Qty	ø
Gas Pressure	ø
Minimum Brake Lining Thickness	Front: 6.0mm Rear: 6.0mm
Tire Size (Nominal Pressure)	F:3.25H19 [illegible] kg/cm²/40 psi R:4.50H17 2.8 kg/cm²/40 psi
TRANSMISSION - Oil Type/Qty Chg/Qty Reassemble	See ENGINE Above
Primary Drive Type / Teeth / Ratio	Spur Gear - Silent Chain / 45-27 / 1.666
Secondary Drive Type / Teeth / Chain	Shaft / 35-31 x 19-18 x 32-11 / ø
Clutch Friction Plate Thickness Std ~ Min	2.8 ~ 2.6mm
Clutch Spring Length Std ~ Min	42.8 ~ 41.5mm
Middle Gear Case Capacity	375cc
Final Gear Case Capacity	300cc
Gear Case Lubricant: Temp. Above 5°C (40°F)	SAE 90 Hypoid Gear Oil GL-4
Temp. Below 15°C (60°F)	SAE 80 Hypoid Gear Oil GL-4
All Weather Conditions	SAE 80W90 Hypoid Gear Oil GL-4

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CHARGING SYSTEM	AC Generator / 3 Phase / Full Wave
Battery: Model / Specific Gravity / Charge Rate	Yuasa YB14L (12V 14AH) / 1.28 / 1.4A
Maximum Output	14V 20A @ 5000 rpm
TROUBLESHOOTING	
Field Coil Color Code / Ω	Rotor: Grn ~ Blk / 2.5 Ω ± 10% Stator: Wht ~ Wht / 0.48 Ω ±
Charge Coil Color Code / Ω	ø
IGNITION SYSTEM	Transistor-Controlled Ignition
Ignition Timing	10° Mark
	Std: 10° @ 1100 rpm Adv: 34° @ 4000 rpm
Spark Plug Type	NGK BP7ES or Champion N7Y
Spark Plug Gap / Torque / Cap Ω	0.7 ~ 0.8mm / 2.0 m-kg / 5K Ω ± 20%
Point Gap / Condenser Capacitance	ø / ø
TROUBLESHOOTING	
Ignition Coil Test Gap / Primary Ω / Secondary Ω	6mm / 2.75 Ω ± 10% / 7.9K Ω ± 20%
Pulser Coil or Pickup Coil Color Code / Ω	Org ~ Blk / Yel ~ Blk / Gry ~ Blk / 660 Ω ± 15%
Source Coil Color Code / Ω	ø
LIGHTING SYSTEM	
Headlight / Taillight / Signal Rating	12V60-55W / 12V27-8W / 12V27W
TROUBLESHOOTING	
Lighting Coil Color Code / Ω	ø
TORQUE VALUES	
Front Axle Nut	14 x 1.5: 10.0 m-kg
Front Axle Holder Nut	8 x 1.25: 2.0 m-kg
Rear Axle Nut	18 x 1.5: 16.0 m-kg
Rear Axle Pinch Bolt	8 x 1.25: 0.6 m-kg
Clutch Nut	24 x 1.5: 11.0 m-kg
Drain Plug	14 x 1.5: 4.3 m-kg
Cylinder Head Cover	6 x 1.0: 1.0 m-kg
Cylinder Head:	10 x 1.25: 3.5 m-kg (Use Oil)
	8 x 1.25: 2.3 m-kg (Use Oil)
Engine Mounting Bolts: Front	10 x 1.25: 5.5 m-kg
Rear	12 x 1.25: 2.6 m-kg

ø = Does Not Apply To This Model
NA = Information Not Available

*Available From Yamaha Parts Distributors Inc.
*For Diagnostic Use Only