

## Dimensions

Overall Length	85.4 in (2170 mm)
Overall Width	35.6 in ( 905 mm)
Overall Height	45.3 in (1150 mm)
Wheelbase	55.5 in (1410 mm)
Min. Ground Clearance	5.9 in ( 150 mm)
Weight (Net)	<b>XS1B-409 lbs. (XS1-439 lbs.)</b>
Weight Distribution	<b>XS1B-Front 182, Rear 227 lbs. (XS1-Front 195, Rear 244 lbs.)</b>

## Performance

Max. Speed	110 + mph
Fuel Consumption (on paved level road)	82.5 mpg at 37 mph (35 km/l at 60 km/h)
Climbing Ability	26 degrees
Minimum Turning Radius	98.4 in (2500 mm)
Braking Distance	46 ft. at 31 mph (14 m at 50 km/h)

## Engine:

Weight (Dry)	135 lbs.
Type	Twin cylinder Air cooled 4 stroke W/S O.H.C.
Lubrication System	Pressure lubricated, wet sump.
Bore and Stroke	75x74 mm (2.953x2.913 in.)
Displacement	39.8 cu.in. (653 cc)
Compression Ratio	8.7 : 1 (8.4:1 XS1B E/N 23129 --)
Compression Pressure	145 lbs/in <sup>2</sup> (AVE)
Maximum Power	53 BHP/7000 rpm
Maximum Torque	40.1 ft-lbs/6000 rpm (5.5 kg-m/6000 rpm)
Cylinder Description	Twin parallel cylinders, aluminum with cast iron sleeves.
Camshaft Timing	Intake BTDC 47° (Open) ABDC 67° (Close) Exhaust BBDC 60° (Open) ATDC 41° (Close)
Valve Clearance (cold)	IN: .076mm (.003 in.) EX: 0.15mm (.006 in.)
Sump Capacity	3.2 Qt. (3.0 L)
Ignition Timing (fully retarded)	13°- 17° B.T.D.C. (40° BTDC Fully advanced ±2°)
Piston Clearance	0.002-0.0022" (0.050-0.055 mm)
Starting System	Kick Starter

## Carburetor:

Type	BS38 x 2
Manufacturer	MIKUNI
Venturi Size	30.6 mm diameter
Main Jet	#130
Needle Jet	Z-6
Pilot Fuel Jet	42.6
Starter Jet	0.6
Jet Needle	4JN19 - 4th Stage
Fuel Valve Seat	2.5
Float Level	25mm
Air Screw	1 turn out
I. D. Mark	E3
Pilot Outlet	0.7 φ
Pilot Bypass #1	0.8 φ
Pilot Bypass #2	1.0 φ
Air Jet	1.2 φ
Cutaway	-
Air Vent	4.0 φ

# GENERAL SPECIFICATIONS

# X31 - X31B

Air Filter:	Dry, paper filter X2
Clutch: Type	Wet, multi-disc. (6 friction + 5 metal plates.)
Primary Drive: Type Reduction Ratio (gear and total)	Spur gear (straight cut) 72/27 (2.667 : 1)
Transmission: Type: 1st 2nd 3rd 4th 5th Oil	Constant mesh, five speed, wide-ratio 31/14 = 2.214 (5.904) 27/17 = 1.588 (4.235) 26/20 = 1.300 (3.466) 23/21 = 1.095 (2.920) 22/23 = 0.956 (2.550) SAE 20W/40
Secondary Reduction System Type	Single Row Chain
Secondary Reduction Ratio	34/17 = 2.0 : 1
Chassis:	
Frame Type	Tubular steel, double cradle type
Fuel Tank Capacity	3.3 U.S. gals. (12.5 L)
Suspension System, Rear	Swing Arm w/oil damped, adjustable shocks
Fork Travel	130 mm
Fork Oil Quantity (each)	223cc (7.5 oz.)
Caster	63°
Trail	98 mm (3.9 in.)
Front Rim Size	1.858 x 19
Spoke Diameter, Length & Number	Inner 3.5φ x 160.5 mm. Outer 3.5 x 160 mm.
Front Tire	
Size	3.25 - 19 4PR
Tread design	K70
Inflation pressure	23 - 25 lbs/in <sup>2</sup>
Rear Rim Size	2.158 x 18
Spoke Diameter, Length & Number	Inner 4φ x 152.0 mm. Outer 4φ x 151.5 mm.
Rear Tire	
Size	4.00 - 18 4PR
Tread design	K70
Inflation Pressure	28 - 30 lbs/in <sup>2</sup>
Front Brake Type	Internal expansion, double leading shoe
Diameter & width	200 mm x 35 mm (7.9 in. x 1.38 in.)
Rear Brake Type	Internal expansion, single leading shoe
Diameter & width	180 mm x 30 mm (7.1 in. x 1.18 in.)
Generator:	
Type	Alternator
Model	LD 115
Manufacturer	HITACHI

## Rectifier

Model	SD6D-9
Manufacturer	HITACHI

## Regulator

Model	TL1Z-49
Manufacturer	HITACHI
No load voltage rate	14,5 volt/2000 RPM

## Ignition System:

Type	Battery ignition
Ignition Timing (fully retarded)	13° - 17° BTDC (Fully retarded) (40° ± 2° BTDC Fully advanced)
Breaker Point Gap	0.30-0.40 mm (0.012--0.016 in.)
Spark Plug	Manufacturer: N.G.K. Heat Range: B 8ES
Ignition Coil	Manufacturer: HITACHI Voltage output: 10kV. @4,000 RPM

## Battery:

Model	12N 15 3B
Manufacturer	G.S
Capacity	12V 5.5 A.H.
Dimensions	5.36 x 2.36 x 5.16" (134 mm x 59 mm x 129 mm)

## Lighting System:

Headlight	12V / 50W/40W
Taillight	12V/8W
Stoplight	12V / 23W
Neutral Light	12V/3W
Flasher Indicator Light	12V/3W
Flasher Light	12V/27W
High Beam Indicator	12V/2W
Speedometer Light	12V/3W
Tachometer Light	12V/3W

1. MODEL	XS1
2. HORSEPOWER - RPM	53 @ 7000
3. TORQUE - RPM	40.1 @ 6000
4. BORE & STROKE (mm)	.5 x .74 (x 2)
5. CAPACITY	653cc 39.90 cu. in.
6. NET WEIGHT (Appx.)	406 lbs.
7. COMPRESSION RATIO	8.7:1
8. IGNITION TIMING B.T.D.C. (mm) Retarded	10° - 15°
Advanced	38° ± 2°
9. CONTACT BREAKER POINT GAP SETTING (mm) (inch)	.3 - .40mm .011-.016"
10. SPARK PLUG AND GAP (mm)	B-7E .5-.6mm
11. VOLT. REG. ADJ. (Volt @rpm-no load)	
12. CUTOFF RELAY ADJ. (Cut in voltage)	ALTERNATOR
13. CONDENSER CAPACITY (Microfarad)	.22µF
14. PISTON SKIRT CLEARANCE (mm) (inch)	.050-.055mm .0020-.0022"
15. CARBURETOR TYPE & MANUFACTURER	BS38 Mikuni
MAIN JET (M.J.)	# 130
AIR JET (A.J.)	-
NEEDLE JET (N.J.)	Z-6
JET NEEDLE - clip position (J.N.)	4JN19-4
CUTAWAY (C.A.)	-
PILOT JET (P.J.)	45
AIR SCREW (Turns out) (A.S.)	1
STARTER JET (S.J.)	.6
FLOAT LEVEL (mm) (F.L.)	25mm
16. AIR FILTER TYPE	Dry paper
17. PRIMARY REDUCTION RATIO & METHOD	72/27 2.666 gear
18. SECONDARY REDUCTION RATIO & METHOD	34/17 2.000 chain
19. TRANS. GEAR RATIOS 1st (Internal) (No. teeth) (Overall)	2.214 31/14 1.8
2nd	1.588 27/17 8.45
3rd	1.300 26/20 6.95
4th	1.095 23/21 5.83
5th	0.956 22/23 5.1
20. TRANS. OIL CAPACITY (Qt.)	-
21. OIL TANK OR ENGINE SUMP CAPACITY (Qt.)	3.2
22. FUEL TANK CAPACITY (Gal.)	3.3
23. FRONT FORK OIL CAPACITY	8.3 oz. 240cc
24. TIRE SIZE (Front)	3.25 x 19
(Rear)	4.00 x 18
25. TIRE PRE. SURE (Lbs.) (Front)	24
(Rear)	28
26. DRIVE CHAIN TENSION (Up & down freeplay)	20mm 25.32"
27. OIL PUMP STROKE ADJUSTMENT MIN. (mm)	-
MAX. (mm)	-
28. AUTOLUBE CABLE ADJUSTMENT (Throttle position)	-
29. VALVE CLEARANCE INTAKE	.006" (cold) .15mm
EXHAUST	.012" (cold) .30mm

1. MODEL	XS1-B
2. HORSEPOWER @ RPM	53 7,000
3. TORQUE @ RPM	40.1 6,000
4. BORE & STROKE (mm)	75 x 74 (x 2)
5. ENGINE DISPLACEMENT	653cc 39.85 cu. in.
6. NET WEIGHT (Appx.)	409 lbs.
7. COMPRESSION RATIO	8.1:1
8. IGNITION TIMING B.T.D.C. (mm) Retarded	13-17
Advanced	40 ± 2
9. CONTACT BREAKER POINT GAP SETTING (mm) (Inch)	30-40mm .012-.015"
10. SPARK PLUG AND GAP (mm)	B-8ES .5-.6mm
11. VOLT. REG. ADJ. (Volts @ rpm - no load)	ALTERNATOR
12. CUTOUT RELAY ADJ. (Cut in voltage)	
13. CONDENSER CAPACITY (Microfarad)	.22uF
14. PISTON SKIRT CLEARANCE (mm) (Inch)	.50-.055mm .0020-.0022"
15. CARBURETOR TYPE & MANUFACTURER	BS38 Mikuni
MAIN JET (M.J.)	130
AIR JET (A.J.)	12
NEEDLE JET (N.J.)	Z-6
JET NEEDLE - clip position (J.N.)	4JN19-4
CUTAWAY (C.A.)	-
PILOT JET (P.J.)	42.6
AIR SCREW (Turns out) (A.S.)	One turn out
STARTER JET (S.J.)	.6
FLOAT LEVEL (mm) (F.L.)	25mm
16. AIR FILTER TYPE	Dry paper
17. PRIMARY REDUCTION RATIO & METHOD	72/27 2.666 gear
18. SECONDARY REDUCTION RATIO & METHOD	34/17 2.000 chain
19. TRANS. GEAR RATIOS 1st (Internal) (No. teeth) (Overall)	2.214 11/14 11/80
2nd	1.588 27/17 8.45
3rd	1.300 26/20 6.95
4th	1.05 21 5.83
5th	.956 23 5.10
20. TRANS. OIL CAPACITY (Qt.)	-
21. OIL TANK OR ENGINE SUMP CAPACITY (Qt.)	3.2
22. FUEL TANK CAPACITY (U.S. Gal.)	3.3
23. FRONT FORK OIL CAPACITY	8.3 oz. 240cc
24. TIRE SIZE (Front)	3.25-19
(Rear)	4.00-18
25. TIRE PRESSURE (Lbs.) (Front)	23
(Rear)	28
26. DRIVE CHAIN TENSION (Up & down freeplay)	20mm 25/32"
27. OIL PUMP STROKE ADJUSTMENT MIN. (mm)	-
MAX. (mm)	-
28. AUTOLUBE CABLE ADJUSTMENT (Throttle position)	-
29. VALVE CLEARANCE INTAKE	.003" (cold)
EXHAUST	.006" (cold)