YAMAHA

XV1100S/SC

Supplementary Service Manual

LIT-11616-04-99

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and new data for the XV1100S/SC. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manual:

XV700L/XV1000L Service Manual (LIT-11616-04-13)

TECHNICAL PUBLICATIONS
SERVICE DIVISION
MOTORCYCLE OPERATIONS
YAMAHA MOTOR CO., LTD.

NOTICE

This manual was written by the Yamaha Motor Company primarily for use by Yamaha dealers and their qualified mechanics. It is not possible to put an entire mechanic's education into one manual, so it is assumed that persons using this book to perform maintenance and repairs on Yamaha motorcycles have a basic understanding of the mechanical concepts and procedures inherent in motorcycle repair technology. Without such knowledge, attempted repairs or service to this model may render it unfit to use and/or unsafe.

Yamaha Motor Company, Ltd. is continually striving to improve all models manufactured by Yamaha. Modifications and significant changes in specifications or procedures will be forwarded to all Authorized Yamaha dealers and will, where applicable, appear in future editions of this manual.

XV1100S/SC
SUPPLEMENTARY SERVICE MANUAL
© 1986 by Yamaha Motor Corporation, U.S.A.
1st edition, January 1986
All rights reserved. Any reprinting or unauthorized use without the written permission of Yamaha Motor Corporation, U.S.A., is expressly prohibited.
Printed in U.S.A.
P/N LIT-11616-04-99

CONTENTS

ENGINE 1
PRIMARY GEARS AND CLUTCH 1

CARBURETION 4
CARBURETOR 4

ELECTRICAL 7
XV1100S/SC CIRCUIT DIAGRAM 7

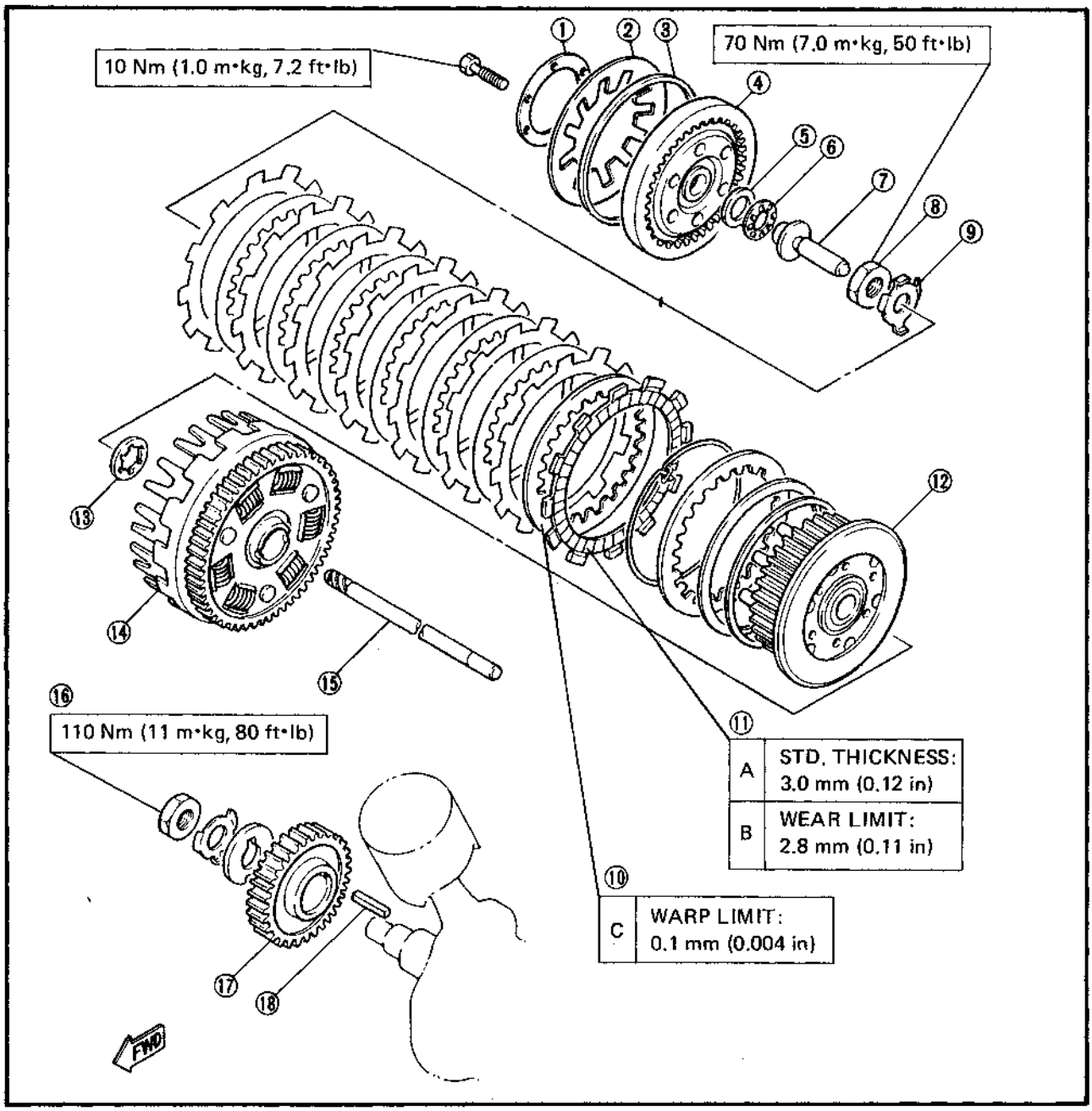
SPECIFICATIONS 10
GENERAL SPECIFICATIONS 10
MAINTENANCE SPECIFICATIONS 13

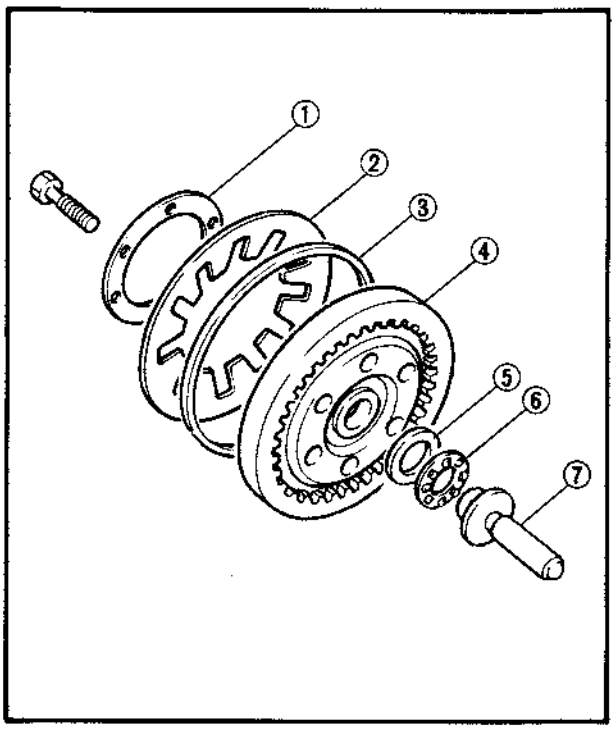
WIRING DIAGRAM

ENGINE

PRIMARY GEARS AND CLUTCH

① Plate washer
② Clutch spring
③ Spring seat
④ Clutch pressure plate
⑤ Washer
⑥ Thrust bearing
⑦ Push rod No. 1
⑧ Clutch boss securing nut
⑨ Lock washer
⑩ Clutch plate
⑪ Friction plate
⑫ Clutch boss
⑬ Thrust washer
⑭ Clutch housing
⑮ Push rod No. 2
⑯ Primary drive gear securing nut
⑰ Primary drive gear
⑱ Key



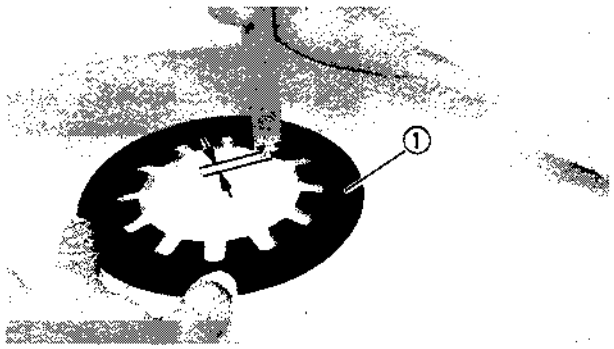


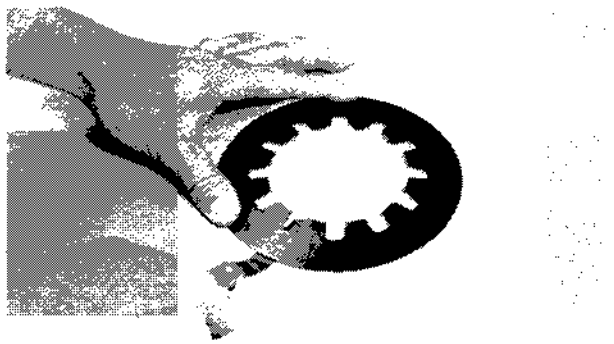
DISASSEMBLY

Follow the CLUTCH AND PRIMARY GEAR disassembly step 1 and 2 of the XV1000L Service Manual.

1. Remove:
   - Bolt
   - Plate washer ①
   - Clutch spring ②
   - Spring seat ③
   - Clutch pressure plate ④
   - Washer ⑤
   - Thrust bearing ⑥
   - Push rod No. 1 ⑦
   - Push rod No. 2

   Follow the CLUTCH AND PRIMARY GEAR disassembly step 5 to 9.





INSPECTION AND REPAIR

Clutch Spring

1. Inspect:
   - Clutch spring ①

   Wear/Bends/Cracks → Replace.
2. Measure:
   - Clutch spring free height

   Out of specification → Replace springs as a set.

Clutch Spring Minimum Height:
6.5 mm (0.256 in)

3. Measure:
   - Clutch spring warpage

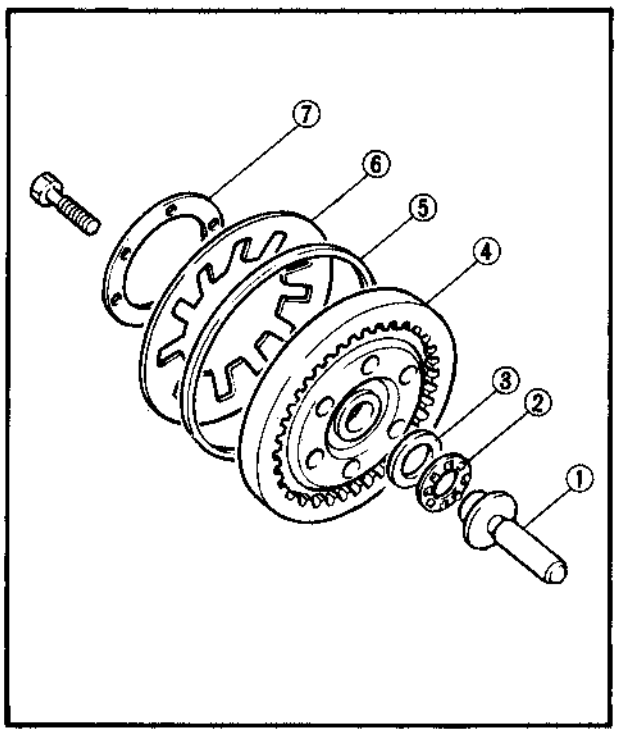
   Use a surface plate and Feeler Gauge.
   Out of specification → Replace.

Warp Limit:
0.1 mm (0.004 in)

Spring Seat

1. Inspect:
   - Spring seat

   Wear/Bends/Damage → Replace.



ASSEMBLY

1. Follow the PRIMARY GEAR AND CLUTCH assembly and adjustment step 1 to 11.
2. Install:
   - Push rod No. 2
   - Push rod No. 1 ①
   - Thrust bearing ②
   - Washer ③
   - Clutch pressure plate ④
   - Spring seat ⑤
   - Clutch spring ⑥
   - Plate washer ⑦
   - Bolt

Bolt:
10 Nm (1.0 m·kg, 7.2 ft·lb)

NOTE:
Mesh the pressure plate spline with the clutch boss spline.

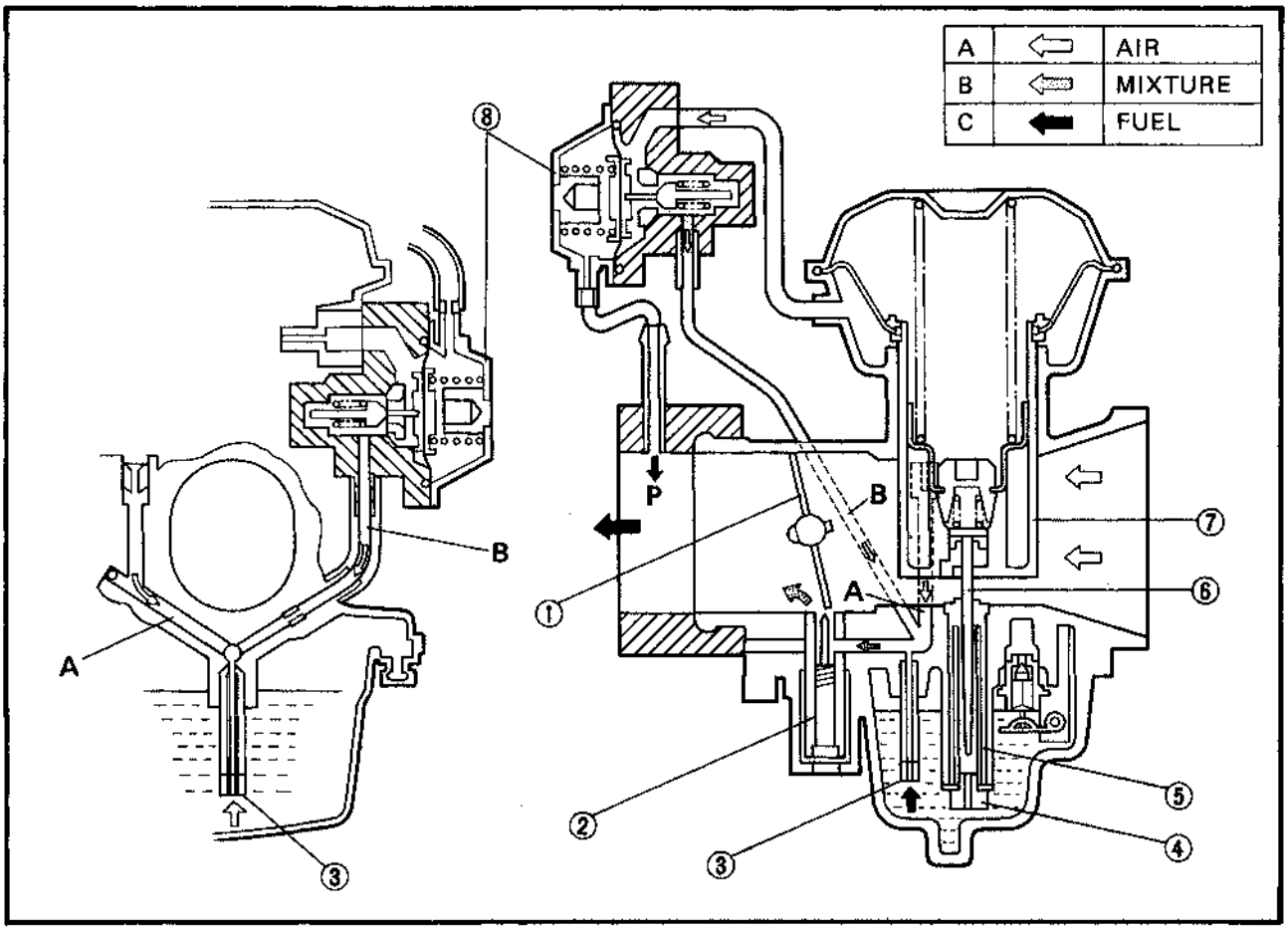
3. Follow the PRIMARY GEAR AND CLUTCH assembly and adjustment step 14.

CARBURETION

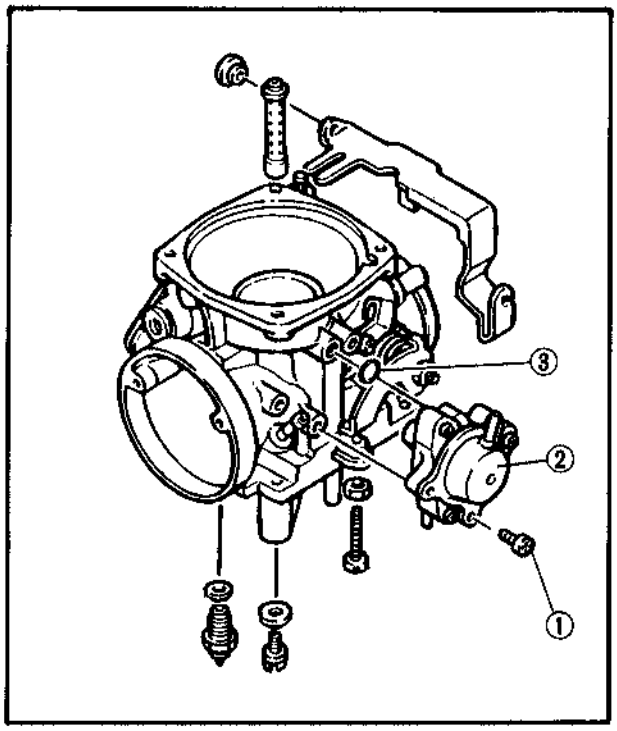
CARBURETOR

COASTING ENRICHER SYSTEM SECTION VIEW

① Throttle valve
② Pilot screw
③ Pilot jet
④ Main jet
⑤ Main nozzle
⑥ Jet needle
⑦ Vacuum piston
⑧ Coasting enricher



- When the throttle is open, air is supplied to the pilot jet through route A and B.
- When the throttle is closed, carb. joint vacuum (P) is increased, thereby pulling the enricher diaphragm and shutting off the air in route B. Hence, the mixture at the pilot outlet becomes richer and reduces afterburning.



DISASSEMBLY

1. Remove:
   - Screws ①
   - Coasting enricher assembly ②
   - O-ring ③

INSPECTION

1. Check:
   - Coasting enricher diaphragm
   - O-ring
     Tears/Damage → Replace.

ASSEMBLY

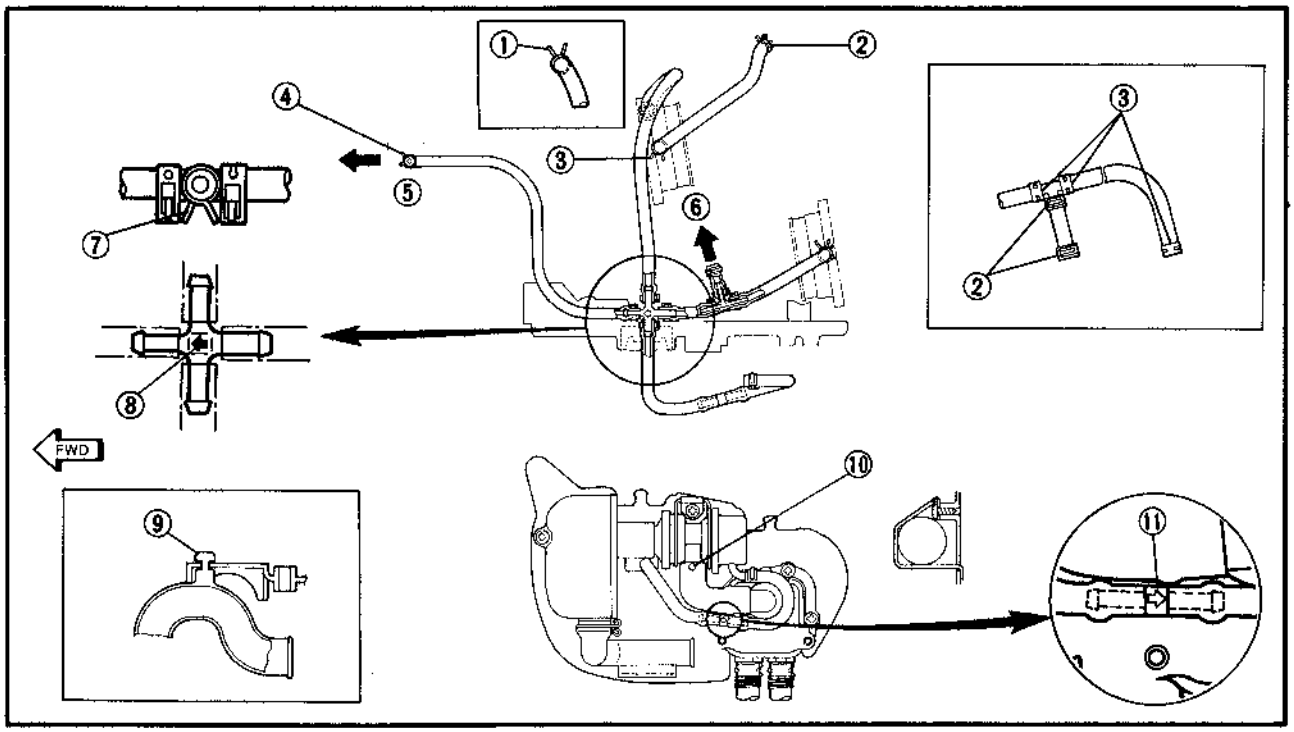
1. Install:
   - O-ring ③
   - Coasting enricher assembly ②
   - Screws ①

AIR INDUCTION SYSTEM

Vacuum Line Routing

① Make the clamping claws face downward
② Make the clamping claws face the out side
③ Make the clamping claws face inside
④ Make the clamping claws face the direction of the motorcycle's direction
⑤ To pressure sensor
⑥ To coasting enricher

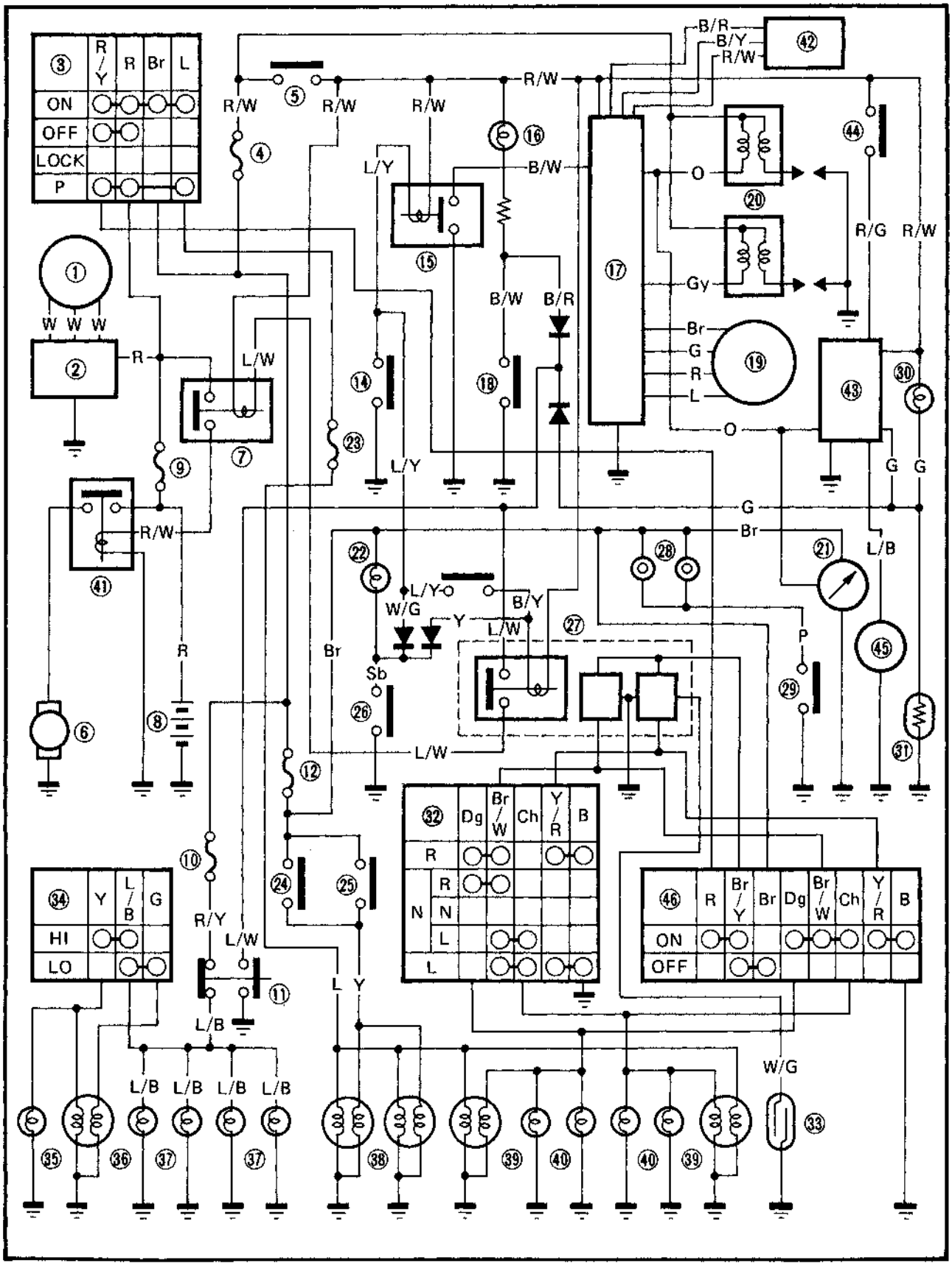
⑦ Make the clamping claws face downward
⑧ Make the arrow mark face the pressure sensor
⑨ Insert the projection of the hose bend into the square hole
⑩ Make the white point mark face the air-cut valve side
⑪ Make the arrow mark face the air-cut valve side



— MEMO —

ELECTRICAL

XV1100S/SC CIRCUIT DIAGRAM



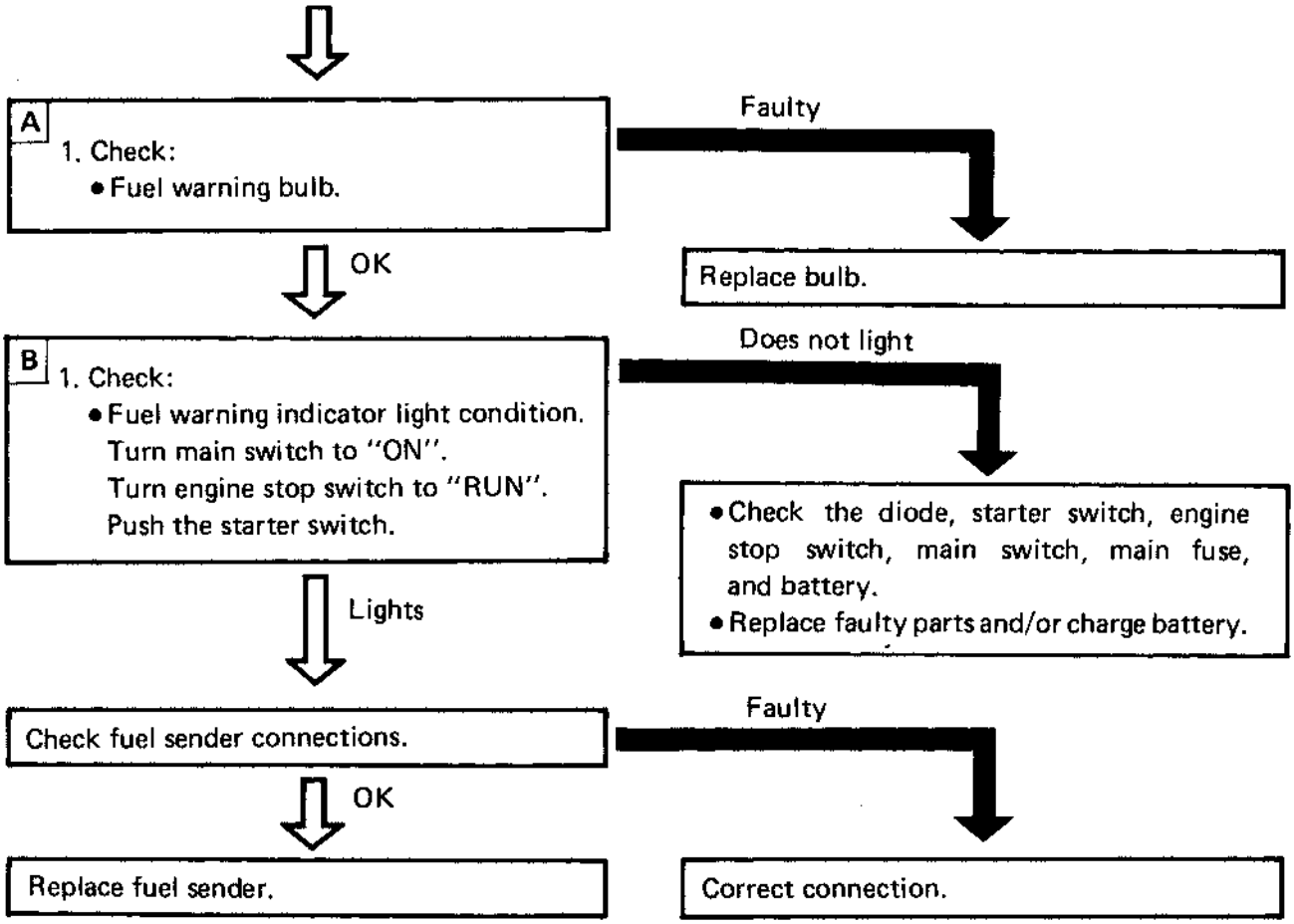
① AC Magneto
② Rectifier/Regulator
③ Main switch
④ Ignition fuse
⑤ Engine stop switch
⑥ Starter motor
⑦ Starter relay
⑧ Battery
⑨ Main fuse
⑩ Head fuse
⑪ Starter switch
⑫ Signal fuse
⑬ Clutch switch
⑭ Sidestand switch
⑮ Sidestand relay
⑯ Oil level indicator light
⑰ Ignitor unit
⑱ Oil level switch
⑲ Pick up coil
⑳ Ignition coil
㉑ Tachometer
㉒ Neutral indicator light
㉓ Tail fuse
㉔ Front brake switch
㉕ Rear brake switch
㉖ Neutral switch
㉗ Relay assembly
㉘ Horn
㉙ Horn switch
㉚ Fuel warning indicator light
㉛ Fuel sender
㉜ Flasher switch
㉝ Reed switch
㉞ Dimmer switch
㉟ High beam indicator light
㊱ Headlight
㊲ Meter illumination light
㊳ Tail/Brake light
㊴ Flasher indicator light
㊵ Flasher light
㊶ Solenoid switch
㊷ Pressure sensor
㊸ Fuel pump controller
㊹ Reserve switch
㊺ Fuel pump
㊻ Hazard switch

COLOR CODE

Gy . . . . .Gray
L . . . . . .Blue
R . . . . . .Red
G . . . . . .Green
Br. . . . . .Brown
B . . . . . .Black
Ch . . . . .Chocolate
Y . . . . .Yellow
P . . . . . .Pink
W . . . . . .White
O . . . . . .Orange
R/W . . . .Red/White
L/R . . . .Blue/Red
R/Y . . . .Red/Yellow
Br/W. . . .Brown/White
W/G . . . .White/Green
Y/R . . . .Yellow/Red
L/W . . . .Blue/White
B/R . . . .Black/Red
L/B. . . . .Blue/Black
Y/G . . . .Yellow/Green
W/Y . . . .White/Yellow

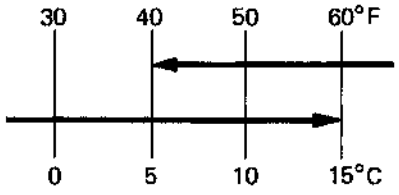
TROUBLESHOOTING CHART

THE FUEL WARNING INDICATOR LIGHT DOES NOT COME ON.



SPECIFICATIONS

GENERAL SPECIFICATIONS

Item \ Model	XV1100S/SC	
Model:	XV1100SC	XV1100S
IBM Number	1TA	1TE
Engine Starting Number	1TA-000101	1TE-000101
Frame Starting Number	JYA1TA00 * GA000101	JYA1TE00 * GA000101
Dimensions:		
Overall Length	2,235 mm (88.0 in)	
Overall Wdith	840 mm (33.1 in)	
Overall Height	1,170 mm (46.1 in)	
Seat Height	715 mm (28.1 in)	
Wheelbase	1,525 mm (60.0 in)	
Minimum Ground Clearance	145 mm (5.7 in)	
Basic Weight:		
With Oil and Full Fuel Tank	239 kg (527 lb)	
Minimum Turning Radius:	2,740 mm (107.9 in)	
Engine:		
Engine Type	Air cooled 4-stroke, gasoline, SOHC	
Cylinder Arrangement	V-2 cylinder	
Displacement	1,063 cm^3	
Bore x Stroke	95.0 x 75.0 mm (3.74 x 2.95 in)	
Compression Ratio	8.3 : 1	
Compression Pressure	980 kPa (10 kg/cm^2, 142 psi) at 300 r/min	
Starting System	Electric starter	
Lubrication System:	Wet sump	
Oil Type or Grade:		
Engine Oil	 Yamalube 4-cycle oil or SAE 20W40 type SE motor oil (If temperature does not go below 5°C (40°F).) SAE 10W30 type SE motor oil (If temperature does not go above 15°C (60°F).)	
Final Gear Oil	SAE 80 API "GL-4" Hypoid gear oil	
Oil Capacity:		
Engine Oil:		
Periodic Oil Change	3.0 L (2.6 Imp qt, 3.2 US qt)	
With Oil Filter Replacement	3.1 L (2.7 Imp qt, 3.3 US qt)	
Total Amount	3.6 L (3.2 Imp qt, 3.8 US qt)	
Final Gear Case Oil Amount	0.2 L (0.18 Imp qt, 0.21 US qt)	
Air Filter:	Dry type element	

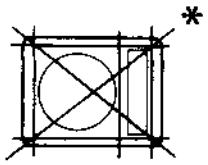
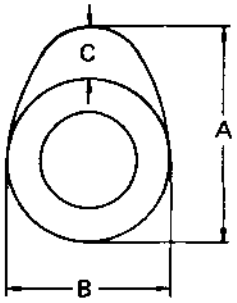
GENERAL SPECIFICATIONS

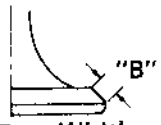
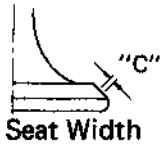
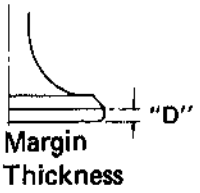
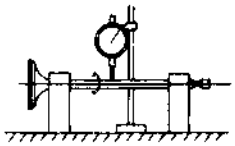
Item \ Model	XV1100S/SC	
Fuel:		
Type	Regular gasoline	
Tank Capacity	16.8 L (3.69 Imp gal, 4.43 US gal)	
Reserve Amount	3.0 L (0.66 Imp gal, 0.79 US gal)	
Carburetor:		
Type	HSC40 x 2	
Manufacturer	HITACHI	
Spark Plug:		
Type/Manufacturer	BP7ES/NGK	W22EP-U/ND
Gap	0.7 ~ 0.8 mm (0.028 ~ 0.031 in)	
Clutch Type:	Wet, multiple-disc	
Transmission:		
Primary Reduction System	Spur gear	
Primary Reduction Ratio	78/47 (1.659)	
Secondary Reduction System	Shaft drive	
Secondary Reduction Ratio	45/46 x 19/18 x 32/11 (3.003)	
Transmission Type	Constant-mesh, 5-speed	
Operation	Left foot operation	
Gear Ratio		
1st	39/17 (2.294)	
2nd	40/24 (1.666)	
3rd	36/28 (1.285)	
4th	32/31 (1.032)	
5th	29/34 (0.852)	
Chassis:		
Frame Type	Pressed backbone	
Caster Angle	32°	
Trail	129 mm (5.1 in)	
Tire:		
Type	Tubeless	
Size (F)	100/90-19 57H	
Size (R)	140/90-15 70H	
Tire Pressure (Cold tire):	FRONT	REAR
WEIGHT with Oil and Full Fuel Tank	239 kg (527 lb)	
Standard Tire	Bridgestone/Dunlop 100/90-19 57H	Bridgestone/Dunlop 140/90-15 70H
Cold Tire Pressure:		
Up to 90 kg (198 lb) Load*	177 kPa (1.8 kg/cm², 26 psi)	196 kPa (2.0 kg/cm², 28 psi)
90 kg (198 lb) Load ~ 160 kg (353 lb) Load*	196 kPa (2.0 kg/cm², 28 psi)	226 kPa (2.3 kg/cm², 32 psi)
160 kg (353 lb) Load* ~ 231 kg (509 lb) Load*	196 kPa (2.0 kg/cm², 28 psi)	275 kPa (2.8 kg/cm², 40 psi)
High Speed Riding	226 kPa (2.3 kg/cm², 32 psi)	245 kPa (2.5 kg/cm², 36 psi)
Minimum Tire Tread Depth	1.0 mm (0.04 in)	1.0 mm (0.04 in)
	* Load is the total weight of cargo, rider, passenger, and accessories.	

Item \ Model	XV1100S/SC
Brake:	
Front Brake Type	Dual disc brake
Operation	Right hand operation
Rear Brake Type	Drum brake
Operation	Right foot operation
Suspention:	
Front Suspension	Telescopic fork
Rear Suspension	Swingarm (Conventional)
Shock Absorber:	
Front Shock Absorber	Coil-Air spring, oil damper
Rear Shock Absorber	Coil spring, oil damper
Wheel Travel:	
Front Wheel Travel	150 mm (5.9 in)
Rear Wheel Travel	97 mm (3.8 in)
Electrical:	
Ignition System	T.C.I.
Generator System	A.C. Generator
Battery Type or Model	GM18Z-3A
Battery Capacity	12V 20AH
Headlight Type:	Quartz bulb
Bulb Wattage x Quantity:	
Headlight	60W/55W x 1
Tail/Brake Light	8W/27W x 2
Flasher Light	27W x 4
Indicator Light:	
Meter Light	3W x 4
Wattage x Quantity:	
"NEUTRAL"	3W x 1
"HIGH BEAM"	3W x 1
"TURN"	3W x 2
"FUEL"	3W x 1
"OIL LEVEL"	3W x 1

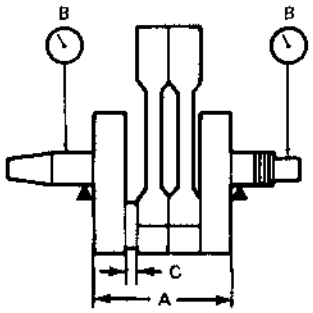
MAINTENANCE SPECIFICATIONS

ENGINE

Item \ Model	XV1100S/SC
Cylinder Head: Warp Limit 	0.03 mm (0.001 in) * Lines indicate straightedge measurement.
Cylinder: Bore Size Taper Limit Out-of-round Limit	 95.0 mm (3.74 in) 0.05 mm (0.002 in) 0.01 mm (0.0004 in)
Camshaft: Drive Method Cam Cap Inside Diameter Camshaft Outside Diameter Shaft-to-cap Clearance Cam Dimensions: Intake "A" "B" "C" Exhaust "A" "B" "C"  Camshaft Runout Limit: Cam Chain Type/Number of Links Cam Chain Adjustment Method	 Chain drive (left, right) $25^{+0.021}_{0}$ mm ($0.9843^{+0.0008}_{0}$ in) $25^{-0.020}_{-0.040}$ mm ($0.9843^{-0.0008}_{-0.0016}$ in) 0.020 ~ 0.061 mm (0.0008 ~ 0.0024 in) 39.17 mm (1.5421 in) 32.17 mm (1.2665 in) 7.00 mm (0.2756 in) 39.20 mm (1.5433 in) 32.27 mm (1.2705 in) 6.93 mm (0.2728 in) 0.03 mm (0.001 in) SILENT CHAIN/98 Automatic
Rocker Arm/Rocker Arm Shaft: Bearing Inside Diameter Shaft Outside Diameter Arm-to-shaft Clearance	 $14^{+0.018}_{0}$ mm ($0.551^{+0.0007}_{0}$ in) $14^{-0.009}_{-0.015}$ mm ($0.551^{-0.00035}_{-0.00059}$ in) 0.009 ~ 0.033 mm (0.00035 ~ 0.00130 in)

Item	Model	XV1100S/SC
Valve, Valve Seat, Valve Guide:		
Valve Clearance (Cold):	IN.	0.07 ~ 0.12 mm (0.00276 ~ 0.00472 in)
	EX.	0.12 ~ 0.17 mm (0.00472 ~ 0.00669 in)
Valve Dimensions:		
   		
"A" Head Dia.	IN.	$47^{+0.2}_{0}$ mm ($1.85^{+0.008}_{0}$ in)
	EX.	$39^{+0.2}_{0}$ mm ($1.54^{+0.008}_{0}$ in)
"B" Face Width	IN.	2.1 mm (0.083 in)
	EX.	2.1 mm (0.083 in)
"C" Seat Limit Width	IN.	1.3 ± 0.1 mm (0.051 ± 0.004 in)
	EX.	1.3 ± 0.1 mm (0.051 ± 0.004 in)
"D" Margin Thickness Limit	IN.	1.3 ± 0.2 mm (0.051 ± 0.008 in)
	EX.	1.3 ± 0.2 mm (0.051 ± 0.008 in)
Stem Outside Diameter	IN.	$8^{-0.010}_{-0.025}$ mm ($0.315^{-0.0004}_{-0.0010}$ in)
	EX.	$8^{-0.025}_{-0.040}$ mm ($0.315^{-0.0010}_{-0.0016}$ in)
Guide Inside Diameter	IN.	$8^{+0.012}_{0}$ mm ($0.315^{+0.0005}_{0}$ in)
	EX.	$8^{+0.012}_{0}$ mm ($0.315^{+0.0005}_{0}$ in)
Stem-to-guide Clearance	IN.	0.010 ~ 0.037 mm (0.0004 ~ 0.0015 in)
	EX.	0.025 ~ 0.052 mm (0.0010 ~ 0.0020 in)
Stem Runout Limit 		0.03 mm (0.001 in)
Valve Spring:		
Free Length:		
Innser Spring	IN.	43.39 mm (1.708 in)
	EX.	43.39 mm (1.708 in)
Outer Spring	IN.	45.33 mm (1.785 in)
	EX.	45.33 mm (1.785 in)
Installed Length (Valve clossed):		
Inner Spring	IN.	38.0 mm (1.496 in)
	EX.	38.0 mm (1.496 in)
Outer Spring	IN.	40.0 mm (1.575 in)
	EX.	40.0 mm (1.575 in)
Installed Force:		
Inner Spring	IN.	6.9 kg (15.2 lb)
	EX.	6.9 kg (15.2 lb)
Outer Spring	IN.	13.1 kg (28.9 lb)
	EX.	13.1 kg (28.9 lb)

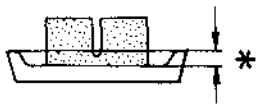
Item \ Model	XV1100S/SC
Tilt Limit:	
Inner Spring IN. & EX.	2.5°/1.9 mm (0.0748 in)
Outer Spring IN. & EX.	2.5°/1.9 mm (0.0748 in)
Direction of Winding (Top view)	Inner spring: IN — Left; EX — Left. Outer spring: IN — Right; EX — Right
Piston:	
Piston Size/ Measuring Point*	94.930 ~ 94.980 mm (3.737 ~ 3.739 in)/ 14.6 mm (0.575 in) (From bottom line of piston skirt)
Clearance between Piston & Cylinder	0.045 ~ 0.065 mm (0.0018 ~ 0.0026 in)
Oversize:	
2nd	95.50 mm (3.76 in)
4th	96.00 mm (3.78 in)
Piston Ring:	
Sectional Sketch	
Top Ring	Plain
B	1.5 mm (0.06 in)
T	3.8 mm (0.15 in)
2nd Ring	Taper
B	1.2 mm (0.0472 in)
T	3.8 mm (0.15 in)
Oil Ring	
B	2.5 mm (0.0984 in)
T	3.4 mm (0.13 in)
End Gap (Installed):	
Top Ring	0.3 ~ 0.5 mm (0.012 ~ 0.020 in)
2nd Ring	0.3 ~ 0.45 mm (0.012 ~ 0.018 in)
Oil Ring	0.2 ~ 0.7 mm (0.008 ~ 0.0276 in)
Side Clearance:	
Top Ring	0.04 ~ 0.08 mm (0.0016 ~ 0.0031 in)
2nd Ring	0.03 ~ 0.07 mm (0.0012 ~ 0.0028 in)

Item \ Model	XV1100S/SC
Connecting Rod Oil Clearance Color Code (Corresponding size)	0.030 ~ 0.054 mm (0.0012 ~ 0.0021 in) 1. Blue ($1.5^{+0.001}_{-0.003}$) 2. Black ($1.5^{-0.003}_{-0.007}$) 3. Brown ($1.5^{-0.007}_{-0.007}$) 4. Green ($1.5^{-0.011}_{-0.015}$) 5. Yellow ($1.5^{-0.015}_{-0.019}$)
Crankshaft:  Crank Width "A" Runout Limit "B" Big End Side Clearance "C"	 $102^{0}_{-0.05}$ mm ($4.02^{0}_{-0.002}$ in) 0.02 mm (0.0008 in) 0.370 ~ 0.474 mm (0.0146 ~ 0.0187 in)
Clutch: Friction Plate Thickness x Quantity Wear Limit Clutch Plate Thickness x Quantity Warp Limit Clutch Spring Free Length x Quantity Clutch Release Method Push Rod Bending Limit	 3.0 ± 0.1 mm (0.12 ± 0.004 in) x 8 2.8 mm (0.11 in) 2.0 ± 0.1 mm (0.079 ± 0.004 in) x 7 0.1 mm (0.004 in) 7.2 mm (0.283 in) x 1 Inner push, screw push 0.5 mm (0.02 in)
Transmission: Main Axle Deflection Limit Drive Axle Deflection Limit	 0.08 mm (0.0031 in) 0.08 mm (0.0031 in)
Shifter: Shifter Type	 Guide bar

Item \ Model			XV1100S/SC	
Carburetor:				
Model			XV1100S	XV1100SC
Type/Manufacturer/Quantity			HSC40/HITACHI/2	←
I.D. Mark			1TE	1TF
Main jet	(M.J.)	Left (#1) carburetor	#122	←
		Right (#2) carburetor	#128	←
Main air jet	(M.A.J.)		#50	←
Jet needle-clip position				
	(J.N.)	Left (#1) carburetor	Y-33	←
		Right (#2) carburetor	Y-33	←
Needle jet		(N.J.)	φ3.2	←
Throttle valve		(Th.V.)	13.0°	←
Pilot jet		(P.J.)	#40	←
Pilot air jet		(P.A.J.)	#100	←
Pilot screw		(P.S.)	Preset	←
Valve seat size		(V.S.)	φ1.4	←
Starter jet		(G.S.)	#40	←
Fuel level		(F.L.)	0 ± 1.0 mm (0 ± 0.04 in)	←
Engine idling speed			1,000 ± 50 tr/min	
Vacuum pressure at idling speed			24 ± 1.3 kPa (180 ± 10 mmHg, 7.09 ± 0.4 inHg)	←
Vacuum synchronous difference			Below 10 kPa (10 mmHg, 0.4 inHg)	←
Lubrication System:				
Oil Filter Type			Paper	
Oil Pump Type			Trochoid pump	
Tip Clearance		< Limit >	0.03 ~ 0.09 mm (0.001 ~ 0.004 in)	
Side Clearance		< Limit >	0.03 ~ 0.08 mm (0.001 ~ 0.003 in)	
Bypass Valve Setting Pressure			980 ± 20 kPa (1.0 ± 0.2 kg/cm², 14.2 ± 2.8 psi)	
Relief Valve Operating Pressure			490 ± 49 kPa (5.0 ± 0.5 kg/cm², 71 ± 7.1 psi)	

CHASSIS

Item \ Model		XV1100S/SC
Steering System:		
Steering Bearing Type		Taper roller bearing
Front Suspension:		
Front Fork Travel		150 mm (5.9 in)
Fork Spring Free Length		513 mm (20.2 in)
Spring Rate/Stroke		K_1 =6.3 N/mm (0.64 kg/mm, 35.8 lb/in) 0 ~ 150 mm (0 ~ 5.9 in)
Optional Spring		No
Oil Capacity or Oil Level		372 cm³ (13.1 Imp oz, 12.6 US oz) 179 mm (7.0 in) (From top of inner tube fully compressed without spring.)
Oil Grade		Yamaha fork oil 10wt or SAE 10W30 Type SE motor oil
Enclosed Air Pressure:	Standard	39.2 kPa (0.4 kg/cm², 5.7 psi)
	Minimum	39.2 kPa (0.4 kg/cm², 5.7 psi)
	Maximum	117.7 kPa (1.2 kg/cm², 17.1 psi)
Rear Suspension:		
Shock Absorber Travel		70 mm (2.8 in)
Spring Free Length		216.5 mm (8.5 in)
Spring Rate/Stroke		K_1 =43.1 N/mm (4.4 kg/mm, 246 lb/in) 0 ~ 40 mm (0 ~ 1.57 in) K_2 =62.7 N/mm (6.4 kg/mm, 358 lb/in) 40 ~ 70 mm (1.57 ~ 2.8 in)
Optional Spring		No
Rear Damping Adjustment		Rebound
Rear Arm:		
Swingarm Free Play Limit:		
End		1.0 mm (0.04 in)
Side		1.0 mm (0.04 in)
Wheel:		
Front Wheel Type		Cast wheel
Rear Wheel Type		Cast wheel
Front Rim Size/Material		MT2.15 x 19/Aluminum
Rear Rim Size/Material		MT3.00 x 15/Aluminum
Rim Runout Limit:		
Vertical		2.0 mm (0.08 in)
Lateral		2.0 mm (0.08 in)
Disc Brake:		
Type		
Front		Dual disc
Outside Dia. x Thickness		267 x 5 mm (10.7 x 0.2 in)
Rad Thickness:		
Inner		5.5 mm (0.217 in)
< Limit > *		0.5 mm (0.0197 in)
Outer		5.5 mm (0.217 in)
< Limit > *		0.5 mm (0.0197 in)
Master Cylinder Inside Dia.		15.87 mm (0.625 in)
Caliper Cylinder Inside Dia.		38.18 mm (1.50 in)
Brake Fluid Type		DOT #3



Item \ Model	XV1100S/SC
Drum Brake:	
Type	
Rear	Leading trailing
Drum Inside Dia.	200 mm (7.87 in)
< Limit >	201 mm (7.91 in)
Lining Thickness	4 mm (0.16 in)
< Limit >	2 mm (0.08 in)
Shoe Spring Free Length	68 mm (2.7 in)
Brake Lever & Brake Pedal:	
Brake Lever Free Play	5 ~ 8 mm (0.2 ~ 0.3 in)
Brake Pedal Position	20 mm (0.8 in) upper from footrest top end
Brake Pedal Free Play	20 ~ 30 mm (0.8 ~ 1.2 in)
Clutch Lever Free Play:	2 ~ 3 mm (0.08 ~ 0.12 in)

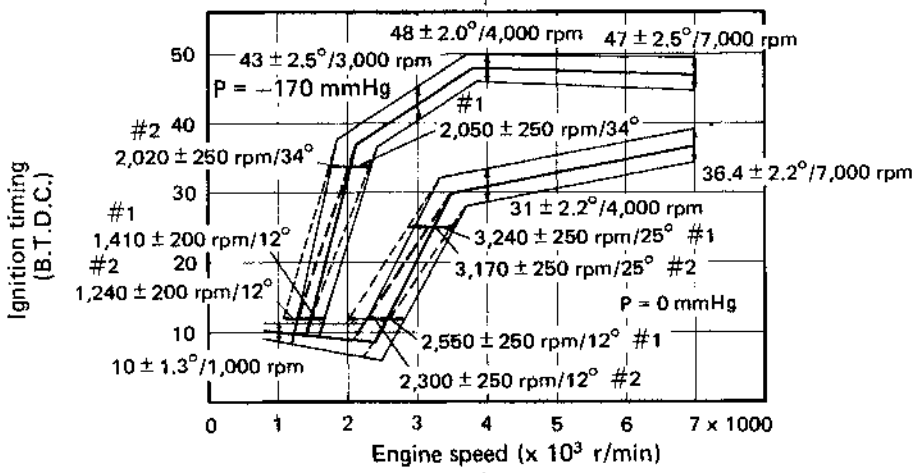
Recommended combinations of the front fork and the rear shock absorber settings.
Use this table as a guide for specific riding and motorcycle load conditions.

Front fork		Rear shock absorber		Loading condition			
	Air pressure	Spring seat	Damping adjuster	Solo rider	With passenger	With accessories and equipment	With accessories, equipment, and passenger
1	39.2 ~ 78.5 kPa (0.4 ~ 0.8 kg/cm^2, 5.7 ~ 11.4 psi)	1 ~ 2	1 ~ 2	○			
2	39.2 ~ 78.5 kPa (0.4 ~ 0.8 kg/cm^2, 5.7 ~ 11.4 psi)	3 ~ 5	2 ~ 3		○		
3	58.8 ~ 98.1 kPa (0.6 ~ 1.0 kg/cm^2, 8.5 ~ 14.2 psi)	3 ~ 5	3 ~ 4			○	
4	78.5 ~ 117.7 kPa (0.8 ~ 1.2 kg/cm^2, 11.4 ~ 17.1 psi)	5	4				○

Tightening Torque

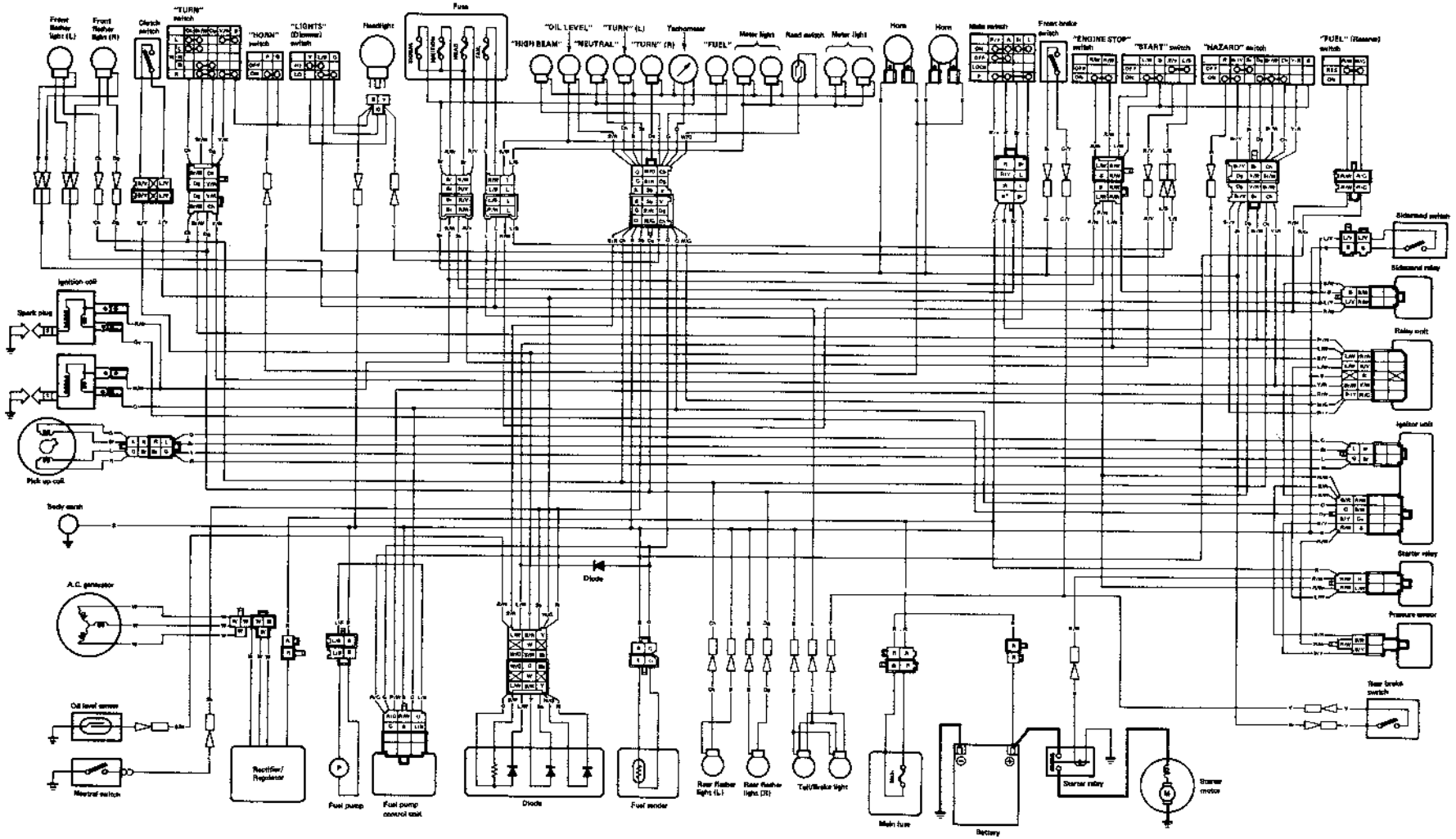
Part to be tightened	Part name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m·kg	ft·lb	
Stay 1, 2 & Stay 3, 4	Bolt	M6 x P1.0	4	7.0	0.7	5.1	
Stay 1, 2 & Frame	Bolt	M10 x P1.25	2	27	2.7	19	
Stay 3, 4 & Frame	Screw	M8 x P1.25	2	20	2.0	14	

ELECTRICAL

Item \ Model	XV1100S/SC
Voltage:	12V
Ignition System: Ignition Timing (B.T.D.C.) Advanced Timing (B.T.D.C.) Advancer Type	 10° at 1,000 r/min 48° at 4,000 r/min Vacuum and electrical
	
T.C.I.: Pickup Coil Resistance (Color) T.C.I. unit — Model/Manufacturer	 155Ω ± 20% at 20°C (68°F) (Brown — Green), (Blue — Red) J4T016/MITSUBISHI
Ignition Coil: Model/Manufacturer Minimum Spark Gap Primary Winding Resistance Secondary Winding Resistance	 F6T507/MITSUBISHI 6 mm (0.236 in) 4.2Ω ± 15% at 20°C (68°F) 13.2 kΩ ± 15% at 20°C (68°F)
Charging System: Type	 A.C. Magneto
A.C. Generator: Model/Manufacturer Nominal Output Startor Coil Resistance	 F3T431/MITSUBISHI 14V, 20A at 5,000 r/min 0.5Ω ± 10% at 20°C (68°F)
Voltage Regulator: Type Model/Manufacturer No Load Regulated Voltage	 I.C. type, short control SH569/SHINDENGEN 14.8 ± 0.5V
Rectifier: Model/Manufacturer Capacity	 SH569/SHINDENGEN 16A
Battery: Capacity Specific Gravity	 12V 20AH 1.280

Item \ Model	XV1100S/SC
Electric Starter System:	
Type	Electro magnetic shift type
Starter Motor:	
Model/Manufacturer	SM-224I-1/MITSUBA
Output	0.6kW
Armature Coil Resistance	0.006Ω ± 10% at 20°C (68°F)
Field Coil Resistance	0.003Ω ± 10% at 20°C (68°F)
Brush:	
Overall Length	12.5 ± 0.5 mm (0.492 ± 0.020 in)
< Limit >	5.5 mm (0.217 in)
Spring Pressure	620 ± 60 g (21.82 ± 2 oz)
Commutator Dia.	28 mm (1.10 in)
Wear Limit	27 mm (1.06 in)
Mica Undercut	0.5 mm (0.02 in)
Starter Switch:	
Model/Manufacturer	1NL/OMRON
Amperage Rating	15A
Horn:	
Type x Quantity	Eddy type x 2
Model/Manufacturer	1RM-00, 1RM-10/NIKKO
Maximum Amperage	2A
Flasher Relay:	
Type	Semi transistor
Model/Manufacturer	FX257N/N.D.
Self cancelling device	Yes
Flasher Frequency	85 ± 10 cycle/min
Wattage	27W x 4 pcs + 3.4W
Self Cancelling Unit:	
Model/Manufacturer	FX257N/N.D.
Starter Relay:	Yes
Model/Manufacturer	FX257N/N.D.
Side Stand Relay:	Yes
Model/Manufacturer	4U8/OMRON
Coil Winding Resistance	100Ω ± 10% at 20°C (68°F)
Color Code	Blue
Circuit Breaker:	
Type	Fuse
Amperage for Individual Circuit x Quantity	
Main	30A x 1
Headlight	15A x 1
Signal	15A x 1
Ignition	10A x 1
Tail	10A x 1
Reserve	30A x 1
	15A x 1
	10A x 1

XV1100S/SC WIRING DIAGRAM



COLOR CODE

B . . . . . .Black
L . . . . . .Blue
Dg. . . . . .Dark green
Br. . . . . .Brown
Sb. . . . . .Sky blue
Y . . . . . .Yellow
R . . . . . .Red
Gy . . . . . .Gray
G . . . . . .Green
P . . . . . .Pink
W . . . . . .White
O . . . . . .Orange
B/Y . . . . . .Black/Yellow
B/R . . . . . .Black/Red
B/W . . . . . .Black/White
L/B . . . . . .Blue/Black
L/Y . . . . . .Blue/Yellow
Y/R . . . . . .Yellow/Red
R/W . . . . . .Red/White
R/Y . . . . . .Red/Yellow
G/Y . . . . . .Green/Yellow
W/G . . . . . .White/Green
Br/W . . . . . .Brown/White
Br/Y . . . . . .Brown/Yellow

YAMAHA MOTOR CO.,LTD.
IWATA, JAPAN
PRINTED IN U.S.A.