YAMAHA

XV700CS/SS

Supplementary Service Manual

LIT-11616-05-02

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and new data for the XV700CS/SS. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manual:

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

TECHNICAL PUBLICATIONS
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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.

XV700CS/SS
SUPPLEMENTARY
SERVICE MANUAL
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ENGINE

ENGINE DISASSEMBLY

CRANKCASE COVER, STARTER DRIVE, AND STARTER MOTOR:
Refer to XV1000 procedures of XV700L/LC, XV1000L/LC SERVICE MANUAL

INSPECTION AND REPAIR

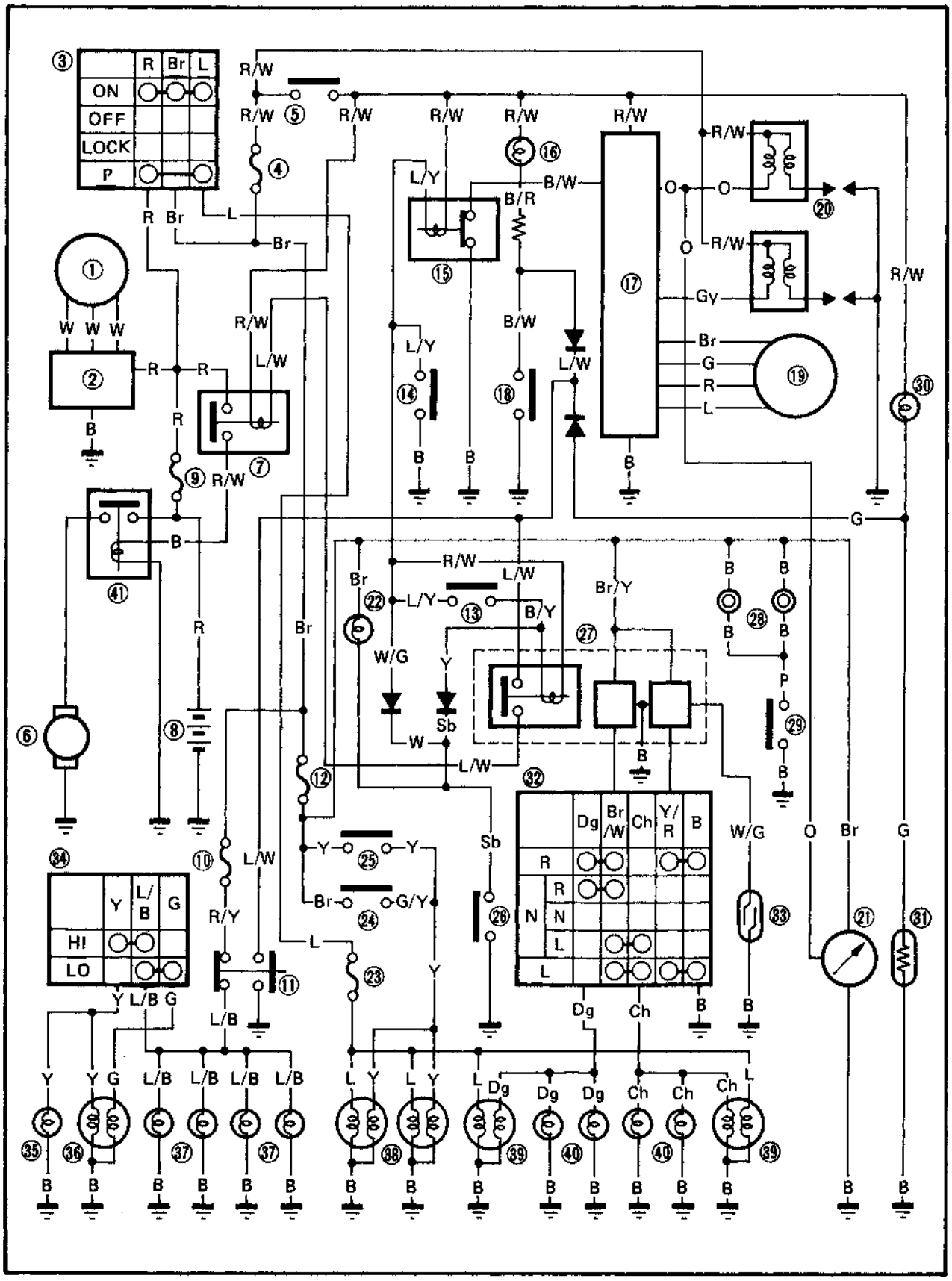
STARTER DRIVE:
Refer to XV1000 inspection and repair of XV700L/LC, XV1000L/LC SERVICE MANUAL

ENGINE ASSEMBLY AND ADJUSTMENT

STARTER MOTOR, STARTER DRIVE, AND CRANKCASE COVER:
Refer to XV1000 procedures of XV700L/LC, XV1000L/LC SERVICE MANUAL

ELECTRICAL

XV700CS/SS CIRCUIT DIAGRAM



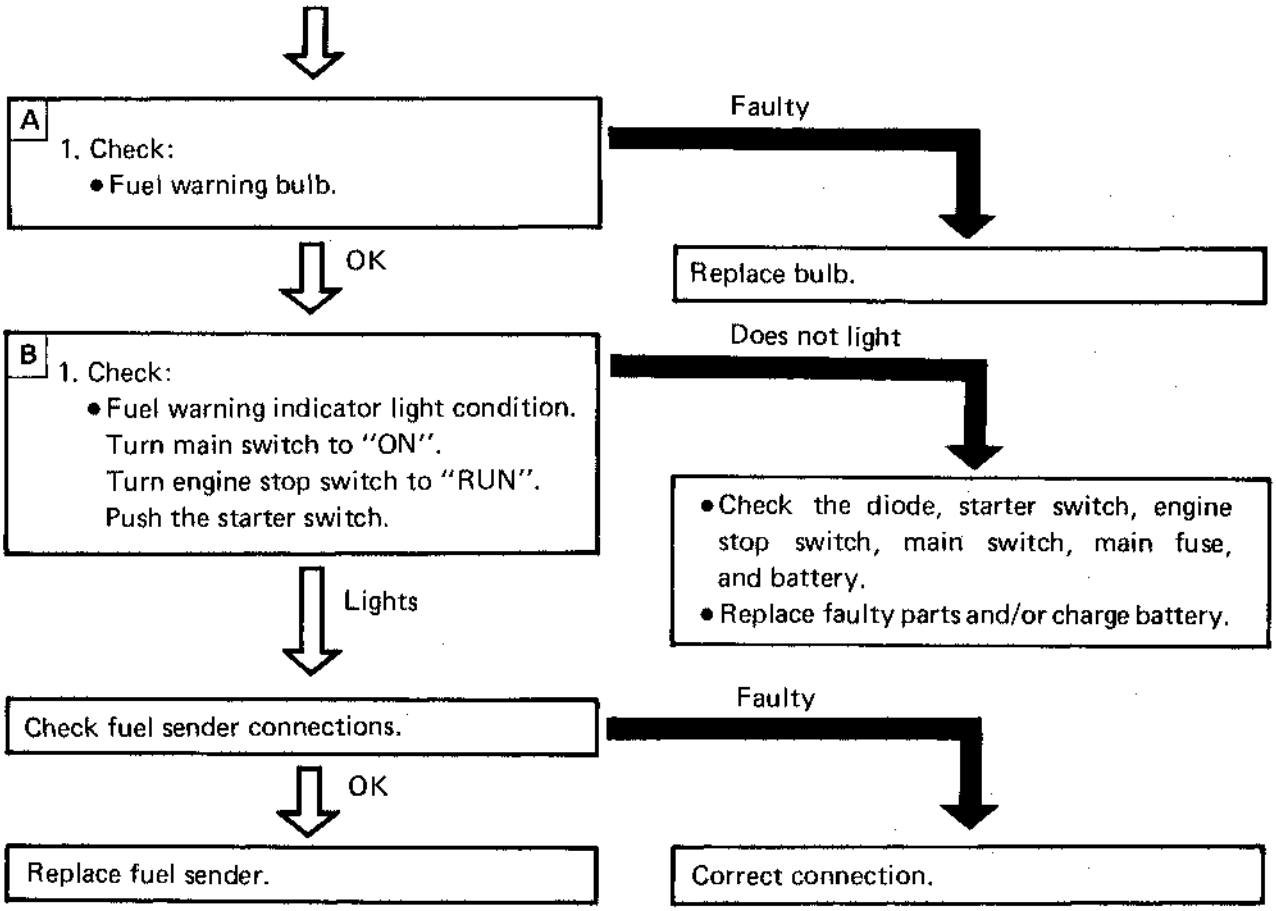
① AC Magneto
② Rectifier/Regulator
③ Main switch
④ Ignition fuse
⑤ Engine stop switch
⑥ Starter motor
⑦ Starter relay
⑧ Battery
⑨ Main fuse
⑩ Head fuse
⑪ Starter switch
⑫ Signal fuse
⑬ Clutch switch
⑭ Sidestand switch
⑮ Sidestand relay
⑯ Oil level indicator light
⑰ Ignitor unit
⑱ Oil level switch
⑲ Pick 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

COLOR CODE

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

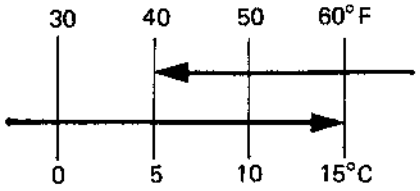
TROUBLESHOOTING CHART

THE FUEL WARNING INDICATOR LIGHT DOES NOT COME ON.



SPECIFICATIONS

GENERAL SPECIFICATIONS

Item \ Model	XV700CS/SS	
Model:	XV700CS	XV700SS
IBM Number	1RM	1RR
Engine Starting Number	1RM-000101	1RR-000101
Vehicle I.D. Number	JYA1RM00*GA000101	JYA1RR00*GA000101
Dimensions:		
Overall length	2,235 mm (88.0 in)	
Overall width	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	229 kg (505 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	699 cm^3	
Bore x Stroke	80.2 x 69.2 mm (3.16 x 2.72 in)	
Compression ratio	9.0 : 1	
Compression pressure	1,079 kPa (11 kg/cm^2, 156 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	
Fuel:		
Type	Regular gasoline	
Tank capacity	14.7 (3.2 Imp gal, 3.9 US gal)	
Reserve amount	2.5 L (0.5 Imp gal, 0.6 US gal)	
Carburetor:		
Type	HSC40 x 2	
Manufacturer	HITACHI	

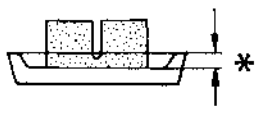
Item \ Model	XV700CS/SS	
Spark plug:		
Type	BP7ES	W22EP-U
Manufacturer	NGK	ND
Gap	0.7 ~ 0.8 mm (0.028 ~ 0.031 in)	
Clutch type:	Wet, multiple-disc	
Transmission:		
Primary reduction system	Spar gear	
Primary reduction ratio	78/47 (1.659)	
Secondary reduction system	Shaft drive	
Secondary reduction ratio	49/44 x 19/18 x 32/11 (3.420)	
Transmission type	Constant-mesh, 5-speed	
Operation	Left foot operation	
Gear ratio:		
1st	40/17 (2.352)	
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:	1RM	1RR
Type	Tubeless	With tube
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	225 kg (496 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 * (Maximum load)	196 kPa (2.0 kg/cm², 28 psi)	226 kPa (2.3 kg/cm², 32 psi)
160 kg (353 lb) load ~ 245 kg (540 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, an accessories.		
Brake:		
Front brake type	Dual disc brake	
Operation	Right hand operation	
Rear brake type	Drum brake	
Operation	Right foot operation	

Item \ Model	XV700CS/SS
Suspension:	
Front suspension	Telescopic fork
Rear suspension	Swingarm (Conventional)
Shock absorber:	
Front shock absorber	Coil 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	YB16AL
Battery capacity	12V 16AH
Headlight type:	Quartz bulb
Bulb wattage x Quantity:	
Headlight	60W/55W x 1
Tail/Brake light	8W/27W x 2
Flasher/Running 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

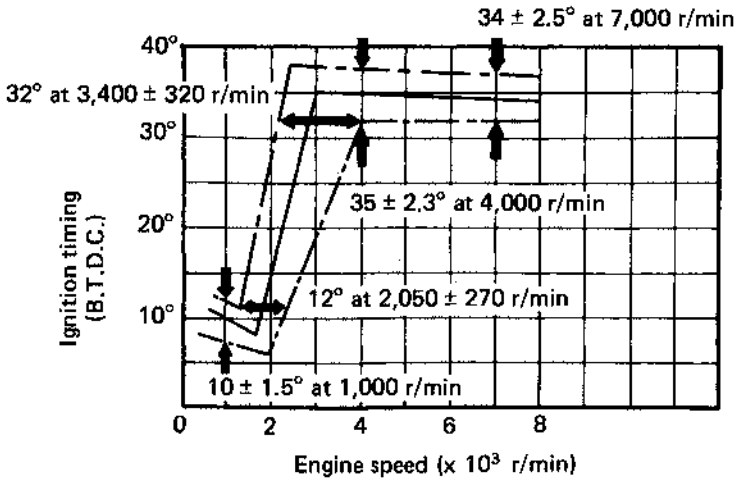
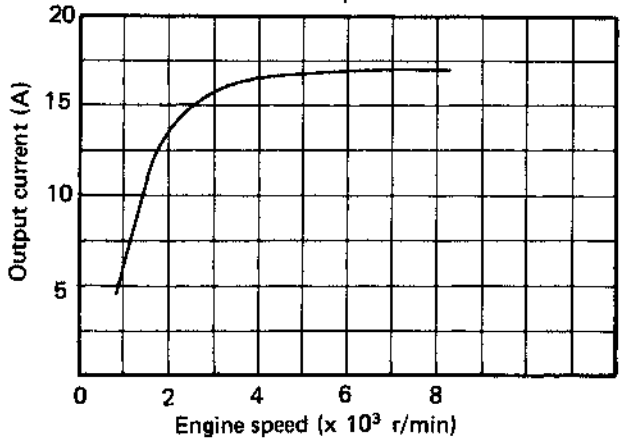
CHASSIS

Item \ Model	XV700CS/SS	
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	396 cm³ (13.9 Imp oz, 13.4 US oz) 155 mm (6.1 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	—	
Rear suspension:		
Shock absorber travel	70 mm (2.8 in)	
Spring free length	224.5 mm (8.8 in)	
Spring rate/Stroke	K_1 = 43.1 N/mm (4.4 kg/mm, 246 lb/in) 0 ~ 45 mm (0 ~ 1.8 in) K_2 = 62.7 N/mm (6.4 kg/mm, 358 lb/in) 45 ~ 70 mm (1.8 ~ 2.8 in)	
Optional spring	No	
Rear arm:		
Swingarm free play limit:		
End	1.0 mm (0.04 in)	
Side	1.0 mm (0.04 in)	
Wheel:	1RM	1RR
Front wheel type	Cast wheel	Spoke wheel
Rear wheel type	Cast wheel	Spoke wheel
Front rim size/Material	MT2.15 x 19/Aluminum	2.15 x 19/Steel
Rear rim size/Material	MT3.00 x 15/Aluminum	MT3.00 x 15/Steel
Rim runout limit:		
Radial	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)	
Pad 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	XV700CS/SS
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)

ELECTRICAL

Item \ Model	XV700CS/SS
Voltage:	12V
Ignition system: Ignition timing (B.T.D.C.) Advanced timing (B.T.D.C.) Advancer type	 10° at 1,000 r/min 35° at 3,600 r/min Electrical
	
T.C.I.: Pickup coil resistance (Color) T.C.I. nuit – Model/Manufacturer	 155Ω ± 20% at 20°C (68°F) (Brown – Green), (Blue – Red) J4T00871/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	 F3T432/MITSUBISHI 14V, 20A at 5,000 r/min
	

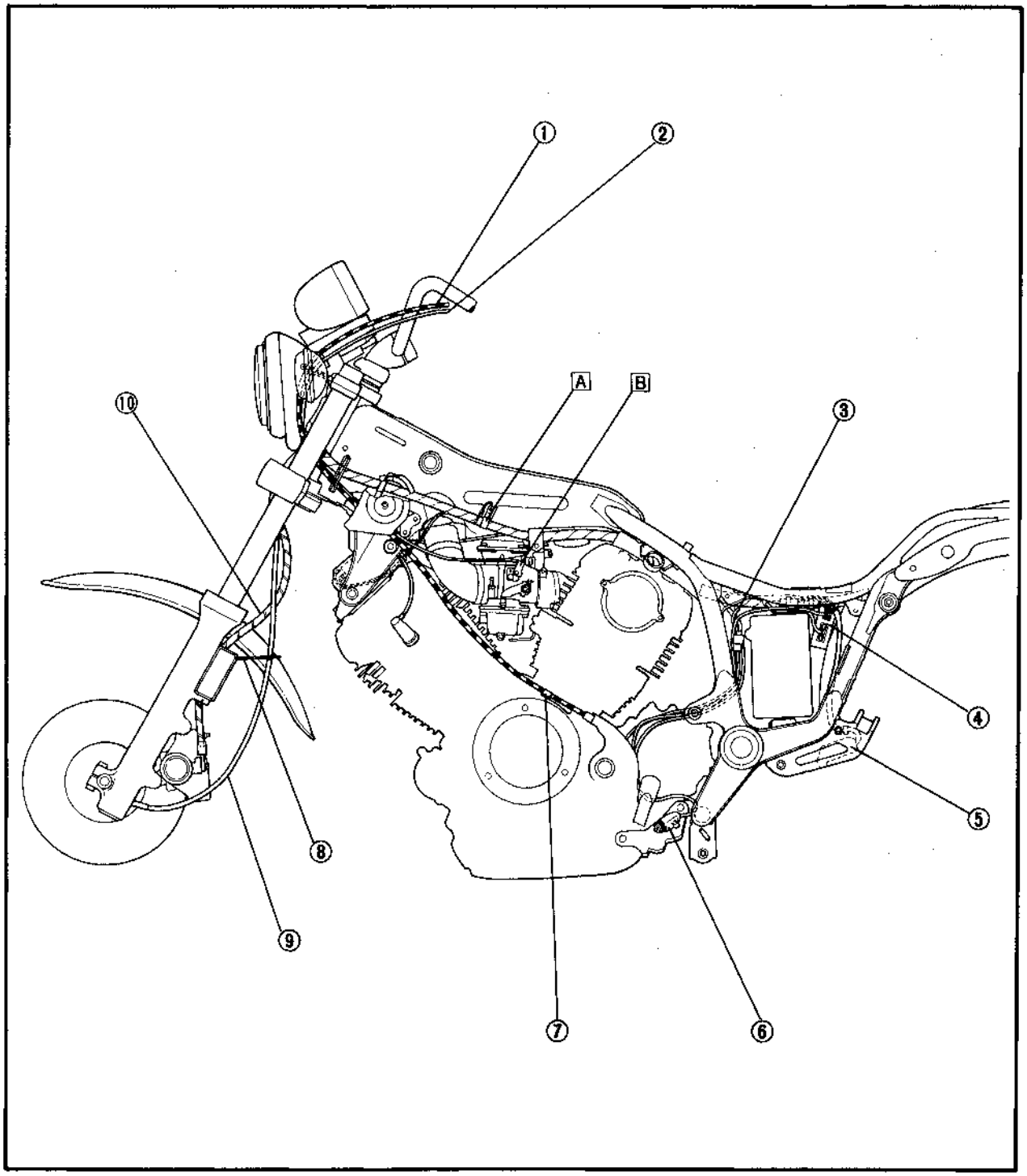
Item \ Model	XV700CS/SS
Stator coil resistance	0.5Ω ± 10% at 20°C (68°F)
Voltage regulator:	
Type	I.C. type, short control
Model/Manufacturer	SH569/SHINDENGEN
No load regulated voltage	14.8 ± 0.5V
Rectifier:	
Model/Manufacturer	SH569/SHINDENGEN
Capacity	16A
Battery:	
Capacity	12V 16AH
Specific gravity	1.280
Electric starter system:	
Type	Constant-mesh type
Starter motor:	
Model/Manufacturer	SM-224/MITSUBA
Output	0.6 kW
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	A104-133/HITACHI
Amperage rating	100A
Horn:	
Type x Quantity	Eddy type x 2
Model/Manufacturer	56F-20, 56F-30/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 2 pcs + 3.4W
Self cancelling unit:	
Model/Manufacturer	FX257N/N.D.
Starter relay:	Yes
Model/Manufacturer	FX257N/N.D.

Item \ Model	XV700CS/SS
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	20A x 1
Headlight	15A x 1
Signal	15A x 1
Ignition	10A x 1
Tail	10A x 1
Reserve	20A x 1
	15A x 1
	10A x 1

CABLE ROUTING (1)

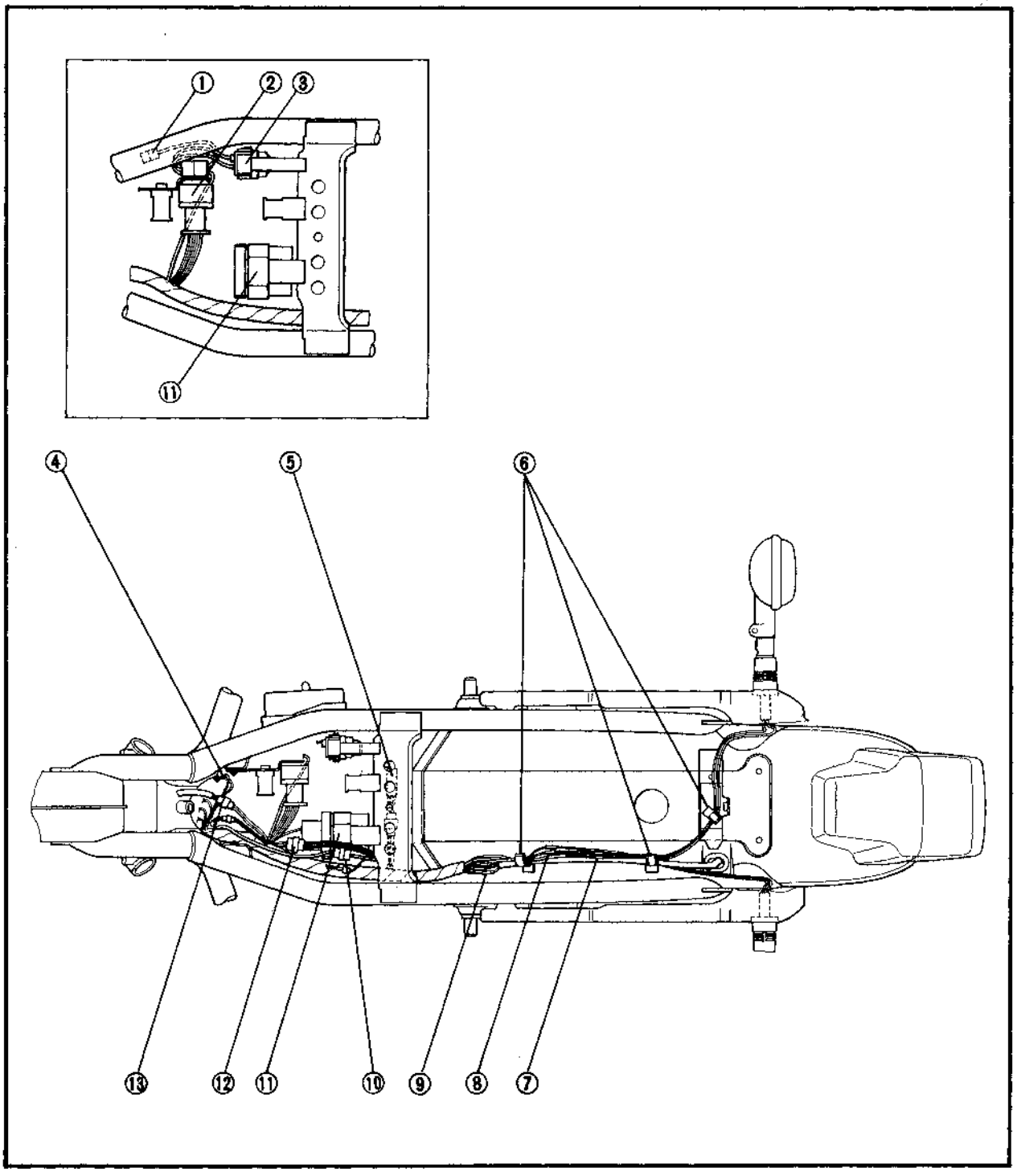
① Clutch cable
② Starter wire
③ Sidestand switch lead
④ Ignitor unit
⑤ Rectifier with regulator
⑥ Sidestand switch
⑦ Clutch cable holder
⑧ Wire guide
⑨ Speedometer cable
⑩ Brake hose

[A] Clamp the wireharness at the white tape wound around it.
[B] Connect the outer cable end with the cable stopper.

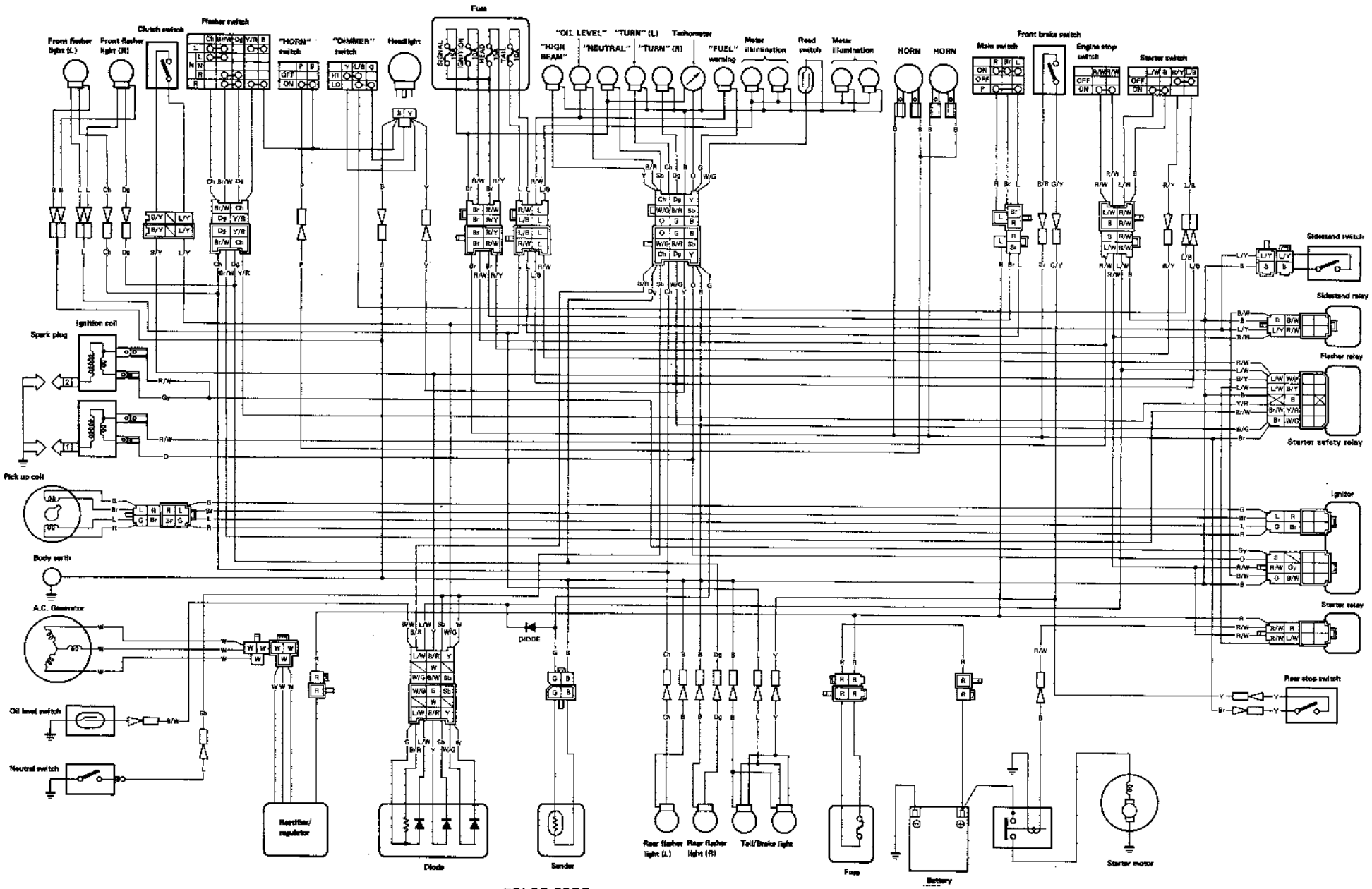


CABLE ROUTING (2)

① Battery positive lead
② Sidestand relay
③ Main fuse
④ Rear brake switch lead
⑤ Diode
⑥ Clamp
⑦ Rear flasher light lead (Right)
⑧ Rear flasher light lead (Left)
⑨ Taillight lead
⑩ AC magneto/rectifier coupler
⑪ Relay assembly
⑫ Rectifier lead coupler
⑬ Fuel sender coupler



XV700CS/SS WIRING DIAGRAM



COLOR CODE

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

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