

SERVICING INFORMATION

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TROUBLESHOOTING

ENGINE

Complaint	Symptom and possible causes	Remedy
<p>Engine does not start, or is hard to start.</p>	<p>Compression too low</p> <ol style="list-style-type: none"> 1. Excessively worn cylinder or piston rings. 2. Stiff piston ring in place. 3. Gas leaks from the joint in crankcase, cylinder or cylinder head. 4. Damaged reed valve. 5. Spark plug too loose. 6. Broken, cracked or otherwise failed piston. <p>Plug not sparking</p> <ol style="list-style-type: none"> 1. Damaged spark plug or spark plug cap. 2. Dirty or wet spark plug. 3. Defective CDI & Ignition coil unit or stator coil. 4. Open or short in high-tension cord. 5. Defective ignition switch. <p>No fuel reaching the carburetor</p> <ol style="list-style-type: none"> 1. Clogged hole in the fuel tank cap. 2. Clogged or defective fuel cock. 3. Defective carburetor float valve. 4. Clogged fuel hose or defective vacuum hose. 	<p>Replace. Repair or replace. Repair or replace. Replace. Tighten. Replace.</p> <p>Replace. Clean and dry. Replace. Replace. Replace.</p> <p>Clean. Clean or replace. Replace. Clean or replace.</p>
<p>Engine stalls easily.</p>	<ol style="list-style-type: none"> 1. Carbon deposited on the spark plug. 2. Defective CDI & Ignition coil unit. 3. Clogged fuel hose. 4. Clogged jets in carburetor. 5. Clogged exhaust pipe. 	<p>Clean. Replace. Clean. Clean. Clean.</p>
<p>Noisy engine.</p>	<p>Noise appears to come from piston</p> <ol style="list-style-type: none"> 1. Piston or cylinder worn down. 2. Combustion chamber fouled with carbon. 3. Piston pin, bearing or piston pin bore worn. 4. Piston rings or ring grooves worn. <p>Noise seems to come from crankshaft</p> <ol style="list-style-type: none"> 1. Worn or brunt crankshaft bearings. 2. Worn or brunt conrod big-end bearings. <p>Noise seems to come from final gear box</p> <ol style="list-style-type: none"> 1. Gears worn or rubbing. 2. Badly worn splines. 3. Worn or damaged bearings of drive shaft for rear axle shaft. 	<p>Replace. Clean. Replace. Replace.</p> <p>Replace. Replace.</p> <p>Replace. Replace. Replace.</p>
<p>Slipping clutch</p>	<ol style="list-style-type: none"> 1. Worn or damaged clutch shoes. 2. Worn clutch drum. 	<p>Replace. Replace.</p>
<p>Engine idles poorly.</p>	<ol style="list-style-type: none"> 1. Excessively worn cylinder or piston rings. 2. Stiff piston ring in place. 3. Gas leaks from crankshaft oil seal. 4. Spark plug gaps too wide. 5. Defective CDI & Ignition coil unit. 6. Defective magneto stator coil. 7. Float-chamber fuel level out of adjustment in carburetor. 8. Clogged jets in carburetor. 9. Broken or damaged reed valve. 	<p>Replace. Replace. Replace. Adjust or replace. Replace. Replace. Replace. Clean or adjust. Replace.</p>

Complaint	Symptom and possible causes	Remedy
Engine runs poorly in high-speed range.	<ol style="list-style-type: none"> 1. Excessively worn cylinder or piston rings. 2. Stiff piston ring in place. 3. Spark plug gaps too narrow. 4. Ignition not advanced sufficiently due to poorly working CDI & Ignition coil unit. 5. Defective magneto stator coil. 6. Float-chamber fuel level too low. 7. Clogged air cleaner element. 8. Clogged fuel hose, resulting in inadequate fuel supply to carburetor. 9. Clogged fuel cock vacuum pipe. 	Replace. Replace. Adjust. Replace. Replace. Adjust or replace. Clean Clean, and replace. Clean.
Dirty or heavy exhaust smoke.	<ol style="list-style-type: none"> 1. Too much engine oil to the engine. 2. Use of incorrect engine oil. 	Check oil pump. Change.
Engine lacks power.	<ol style="list-style-type: none"> 1. Excessively worn cylinder or piston rings. 2. Stiff piston ring in place. 3. Gas leaks from crankshaft oil seal. 4. Spark plug gaps incorrect. 5. Clogged jets in carburetor. 6. Float-chamber fuel level out of adjustment. 7. Clogged air cleaner element. 8. Fouled spark plug. 9. Sucking air from intake pipe. 10. Slipping or worn V-belt. 11. Damaged/worn rollers in the movable drive face. 12. Weakened movable driven face spring. 13. Too rich fuel/air mixture due to defective starter system. 	Replace. Replace. Replace. Adjust or replace. Clean. Adjust or replace. Clean. Clean or replace. Retighten or replace. Replace. Replace. Replace. Replace.
Engine overheats.	<ol style="list-style-type: none"> 1. Heavy carbon deposit on piston crown. 2. Defective oil pump or clogged oil circuit. 3. Fuel level too low in float chamber. 4. Air leakage from intake pipe. 5. Use of incorrect engine oil. 6. Use of improper spark plug. 7. Clogged exhaust pipe/muffler. 	Clean. Replace or clean. Adjust or replace. Retighten or replace. Change. Change. Clean or replace.

CARBURETOR

Complaint	Symptom and possible causes	Remedy
Trouble with starting.	<ol style="list-style-type: none"> 1. Starter jet is clogged. 2. Air leaking from a joint between starter body and carburetor. 3. Air leaking from carburetor's joint or vacuum hose joint. 4. Starter plunger is not operating properly. 	Clean. Check starter body and carburetor for tightness, and replace gasket. Check and replace. Check and replace.
Idling or low-speed trouble.	<ol style="list-style-type: none"> 1. Pilot jet, pilot air jet are clogged or loose. 2. Air leaking from carburetor's joint, vacuum pipe joint, or starter. 3. Pilot outlet is clogged. 4. Starter plunger is not fully closed. 	Check and clean. Clean and replace. Check and clean. Check and replace.
Medium or high-speed trouble.	<ol style="list-style-type: none"> 1. Main jet or main air jet is clogged. 2. Needle jet is clogged. 3. Fuel level is improperly set. 4. Throttle valve is not operating properly. 5. Fuel filter is clogged. 	Check and clean. Check and clean. Check and replace. Check throttle valve for operation. Check and clean.
Overflow and fuel level fluctuations.	<ol style="list-style-type: none"> 1. Needle valve is worn or damaged. 2. Spring in deedle valve is broken. 3. Float is not working properly. 4. Foreign matter has adhered to needle valve. 5. Fuel level is too high or low. 	Replace. Replace. Check and adjust. Clean. Adjust or replace.

7-3 SERVICING INFORMATION

ELECTRICAL

Complaint	Symptom and possible causes	Remedy
No sparking or poor sparking.	<ol style="list-style-type: none"> 1. Defective CDI & Ignition coil unit. 2. Defective spark plug. 3. Defective magneto stator coil. 4. Loose connection of lead wire. 	Replace. Replace. Replace. Connect/tighten.
Spark plug soon becomes fouled with carbon.	<ol style="list-style-type: none"> 1. Mixture too rich. 2. Idling speed set too high. 3. Incorrect gasoline. 4. Dirty element in air cleaner. 5. Spark plug too cold. 6. Incorrect engine oil. 	Adjust carburetor. Adjust carburetor. Change. Clean. Replace by hot type plug. Replace.
Spark plug electrodes overheat or burn.	<ol style="list-style-type: none"> 1. Spark plug too hot. 2. The engine overheats. 3. Spark plug loose. 4. Mixture too lean. 5. Not enough engine oil. 	Replace by hot type plug. Turn up. Retighten. Adjust carburetor. Check oil pump.
Magneto does not charge.	<ol style="list-style-type: none"> 1. Open or short in lead wires, or loose lead connections. 2. Shorted, grounded or open magneto coil. 3. Shorted or open regulator/rectifier. 	Repair, replace or retighten. Replace. Replace.
Magneto charge, but charging rate is below the specifications.	<ol style="list-style-type: none"> 1. Lead wires tend to get shorted or open-circuited or loosely connected at terminal. 2. Grounded or open-circuited stator coils of magneto. 3. Defective regulator/rectifier. 4. Defective cell plates in the battery. 	Repair, or retighten. Replace. Replace. Replace the battery.
Magneto overcharges	<ol style="list-style-type: none"> 1. Internal short-circuit in the battery. 2. Resistor element in the regulator/rectifier damaged or defective. 3. Regulator/rectifier unit poorly grounded. 	Replace the battery. Replace. Clean and tighten ground connection.
Unstable charging.	<ol style="list-style-type: none"> 1. Lead wire insulation frayed due to vibration, resulting in intermittent shorting. 2. Magneto coil internally shorted. 3. Defective regulator/rectifier. 	Repair or replace. Replace. Replace.
Starter switch is not effective.	<ol style="list-style-type: none"> 1. Battery run down. 2. Defective switch contacts. 3. Brushes not seating properly on commutator in starter motor. 4. Defective starter relay. 5. Defective starter pinion gears. 6. Defective front or rear brake light switch circuit. 	Recharge or replace. Replace. Repair or replace. Replace. Replace. Replace or repair.

BATTERY

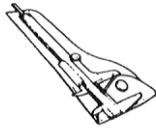

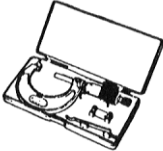




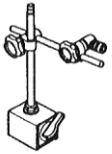
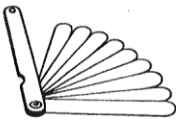
Complaint	Symptom and possible causes	Remedy
Battery runs down quickly.	<ol style="list-style-type: none"> 1. The charging method is not correct. 2. Cell plates have lost much of their active material as a result of over-charging. 3. A short-circuit condition exists within the battery due to excessive accumulation of sediments caused by the incorrect electrolyte. 4. Battery is too old. 	Check the magneto and regulator/rectifier circuit connections, and make necessary adjustments to obtain specified charging operation. Replace the battery, and correct the charging system. Replace the battery. Replace the battery.
Reversed battery polarity.	<ol style="list-style-type: none"> 1. The battery has been connected the wrong way round in the system, so that it is being charged in the reverse direction. 	Replace the battery and be sure to connect the battery properly.
Battery discharges too rapidly.	<ol style="list-style-type: none"> 1. Dirty container top and sides. 2. Battery is too old. 	Clean. Replace.


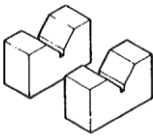
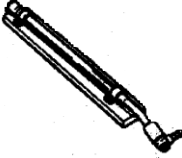





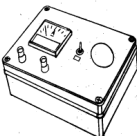
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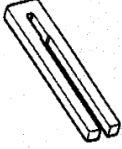
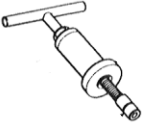
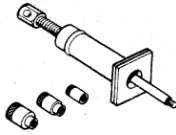
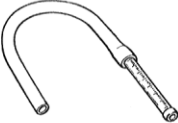
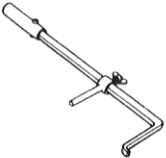
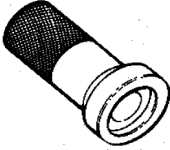

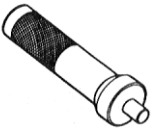
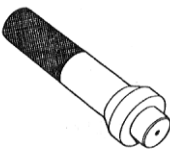
Complaint	Symptom and possible causes	Remedy
Handling feels too heavy or stiff.	<ol style="list-style-type: none"> 1. Disturbed front wheel alignment. 2. Poorly lubricated. 3. Not enough pressure in tires. 4. Tie-rod ends tending to seize. 5. Linkage connections tending to seize. 	Adjust. Lubricate. Adjust. Replace. Replace or replace.
Steering oscillation	<ol style="list-style-type: none"> 1. Wheel tires inflated unequally. 2. Wobbly wheels. 3. Loose nut on wheel hub. 4. Damaged or worn wheel hub bearing. 5. Worn or loose tie-rod ends. 6. Defective or incorrect tires. 7. Damaged wishbone arm bushing. 8. Loosen bolts and nuts on chassis. 	Adjust tire pressure. Replace. Retighten. Replace. Replace or retighten. Replace. Replace. Retighten.
Steering pulling to one side.	<ol style="list-style-type: none"> 1. Wheel tires unequally inflated. 2. Disturbed front wheel alignment. 3. Worn or broken wheel hub bearing. 4. Distorted frame. 5. Defective shock absorber. 	Adjust tire pressure. Adjust. Replace. Repair or replace. Replace.
Shocks coming to steering	<ol style="list-style-type: none"> 1. Tire inflating pressure too high. 2. Worn steering linkage connections. 3. Loose bolts on suspension system. 	Adjust. Replace. Retighten.
Rapid wear or uneven wear of tires.	<ol style="list-style-type: none"> 1. Worn or loosen wheel hub bearing. 2. Desturbed front wheel alignment. 	Replace. Adjust.
Steering noise.	<ol style="list-style-type: none"> 1. Loose bolt and nut. 2. Broken or otherwise damaged wheel hub bearing. 3. Poorly lubricated. 	Retighten. Replace. Lubricate.
Front suspension too soft.	<ol style="list-style-type: none"> 1. Weakened spring. 2. Oil leakage of shock absorber. 	Replace. Replace.
Front suspension too shift.	<ol style="list-style-type: none"> 1. Worn wishbone arm related bushing. 	Replace.
Noisy suspension.	<ol style="list-style-type: none"> 1. Loose bolt on suspension system. 2. Worn wishbone arm related bushing. 	Retighten. Replace.
Rear wheel oscillation.	<ol style="list-style-type: none"> 1. Worn or loose rear axle housing bearing. 2. Defective or incorrect tire. 3. Distorted wheel rim. 4. Loose nut on wheel hub. 5. Loose nut on axle shaft. 	Replace. Replace. Replace. Retighten. Retighten.
Rear suspension too soft.	<ol style="list-style-type: none"> 1. Weakened spring. 2. Rear shock absorber spring improperly set. 3. Oil leakage of rear shock absorber. 	Replace. Reset. Replace.
Rear suspension too stiff.	<ol style="list-style-type: none"> 1. Rear shock absorber spring improperly set. 2. Shock absorber shaft bent. 3. Swingarm bent. 4. Worn swingarm related bearing. 	Adjust. Replace. Replace. Replace.
Poor braking	<ol style="list-style-type: none"> 1. Lining worn down. 2. Too much play on brake lever and pedal. 	Replace. Adjust.

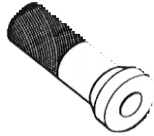

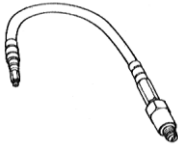






7-5 SERVICING INFORMATION

SPECIAL TOOLS



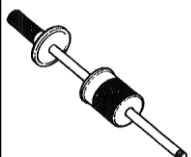
Special tools	Part Number · Part Name · Description
	09900-20101 Vernier Caliper Used to conveniently measure various dimensions.
	09900-20201 Micrometer(0~25mm) Used for precise measurement (00~25mm measure ranges).
	09900-20202 Micrometer(25~50mm) Used for precise measurement (25~50mm measure ranges).
	09900-20203 Micrometer(50~75mm) Used for precise measurement (50~75mm measure ranges).
	09900-20508 Cylinder gauge set Measure inside diameter of cylinder.
	09900-20605 Dial calipers Measure width of conrod big-end.
	09900-20606 Dial gauge Measure oscillation of wheel with using magnetic stand.
	09900-20701 Magnetic stand With using dial gauge.
	09900-20806 Thickness gauge Measure clearance of piston ring.

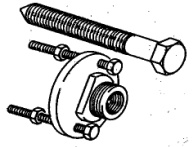
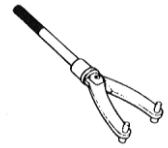
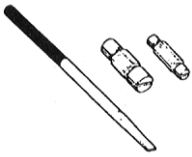
Special tools	Part Number · Part Name · Description
	09900-21109 Torque wrench Measure torque of tightening.
	09900-21304 V-block With using magnetic stand.
	09900-21602 CCI oil gauge A gauge to inspect performance of oil pump.
	09900-22301 Plastigauge Measure clearance of crankshaft thrust.
	09900-22401 Small bore gauge Measure inside diameter of conrod small-end.
	09900-25002 Pocket tester Measure voltage, electric current, resistance.
	09900-26006 Engine tachometer Measure rotational frequency of engine.
	09900-28107 Electro tester Inspect ignition coil.
	09900-28500 Battery charger Used to charge the discharged battery.

Special tools	Part Number · Part Name · Description
	09910-20115 Conrod holder
	Used to lock the crankshaft.
	09910-32812 Crankshaft installer
	Used to install the crankshaft in the crankcase.
	09910-34510 Piston pin puller
	Use to remove the piston pin.
	09913-10760 Fuel level gauge
	Measure height of carburetor.
	09913-50121 Oil seal remover
	Used to remove the oil seal.
	09913-70122 Bearing installer
	Used to drive bearing in.
	09913-75520 Bearing installer
	Used to drive bearing in.
	09913-75820 Bearing installer
	Used to drive bearing in.
	09913-75830 Bearing installer
	Used to install rear axle shaft oil seal.

Special tools	Part Number · Part Name · Description
	09913-76010 Bearing installer
	Used to drive crankshaft bearing in.
	09913-80112 Bearing installer
	Used to drive bearing in.
	09915-63310 Compression gauge adapter
	Used with compression gauge.
	09915-64510 Compression gauge
	Measure cylinder compression.
	09920-13120 Crankcase separator
	Separate to crankcase.
	09921-20200 Bearing remover(10mm)
	Used to remove oil seal or bearing.
	09921-20210 Bearing remover(12mm)
	Used to remove oil seal or bearing.
	09923-73210 Bearing remover(17mm)
	Used to remove bearing with the rotor remove sliding shaft.
	09923-74510 Bearing remover(20~35mm)
	Used to remove bearing with the rotor remove sliding shaft.

7-7 SERVICING INFORMATION

Special tools	Part Number · Part Name · Description
	09924-84521 Bearing installer
	Used to drive small bearing in.
	09930-10121 Spark plug socket wrench set
	Used to remove or remounting spark plug.
	09930-30102 Rotor remove sliding shaft
	Used to with bearing remover or rotor remover.

Special tools	Part Number · Part Name · Description
	09930-30163 Rotor remover
	Attached to the top of sliding shaft when removing rotor.
	09930-40113 Rotor holder
	Widely used to lock rotary parts such as a clutch shoe.
	09941-50111 Wheel bearing remover
	Used to remove wheel bearing.

TIGHTENING TORQUE

ENGINE

ITEM	N · m	kg · m
Magneto rotor nut	35 ~ 45	3.5 ~ 4.5
Muffler mounting bolt	18 ~ 28	1.8 ~ 2.8
Exhaust pipe bolt	8 ~ 12	0.8 ~ 1.2
Spark plug	25 ~ 30	2.5 ~ 3.0
Cylinder head nut	8 ~ 12	0.8 ~ 1.2
Engine mounting bolt	40 ~ 60	4.0 ~ 6.0
Engine mounting bracket bolt	48 ~ 72	4.8 ~ 7.2
Transmission oil drain plug	9 ~ 15	0.9 ~ 1.5
Transmission oil level bolt	9 ~ 15	0.9 ~ 1.5
Oil pump bolt	3 ~ 5	0.3 ~ 0.5
Clutch shoe nut	40 ~ 60	4.0 ~ 6.0
Clutch housing nut	40 ~ 60	4.0 ~ 6.0
Fixed drive face nut	40 ~ 60	4.0 ~ 6.0

7-9 SERVICING INFORMATION

CHASSIS

ITEM	N · m	kg · m
Front brake cam lever nut	6 ~ 8	0.6 ~ 0.8
Front shock absorber blot & nut	40 ~ 50	4.0 ~ 5.0
Rear sprocket nut	22 ~ 35	2.2 ~ 3.5
Rear shock absorber bolt	40 ~ 50	4.0 ~ 5.0
Rear axle nut (M28)	120 ~ 150	12.0 ~ 15.0
Rear brake lever blot	6 ~ 8	0.6 ~ 0.8
Rear brake disc bolt	22 ~ 35	2.2 ~ 3.5
Rear brake caliper mounting bolt	5 ~ 7	0.5 ~ 0.7
Front axle nut (M14)	50 ~ 80	5.0 ~ 8.0
Handlebar holder bolt	18.4 ~ 28.6	1.84 ~ 2.86
Tie-rod lock nut	22.4 ~ 35.7	2.24 ~ 3.57
Steering shaft bolt (M8)	18 ~ 28	1.8 ~ 2.8
Steering shaft lower nut	22.4 ~ 35.7	2.24 ~ 3.57

TIGHTENING TORQUE CHART

For other bolts and nuts who's torque is not listed, refer to this chart :

Bolt Diameter (mm)	Conventional or "4" marked bolt		"7" marked bolt	
	N · m	kg · m	N · m	kg · m
4	1.0 ~ 2.0	0.1 ~ 0.2	1.5 ~ 3.0	0.15 ~ 0.3
5	2.0 ~ 4.0	0.2 ~ 0.4	3.0 ~ 6.0	0.3 ~ 0.6
6	4.0 ~ 7.0	0.4 ~ 0.7	8.0 ~ 12.0	0.8 ~ 1.2
8	10.0 ~ 16.0	1.0 ~ 1.6	18.0 ~ 28.0	1.8 ~ 2.8
10	22.0 ~ 35.0	2.2 ~ 3.5	40.0 ~ 60.0	4.0 ~ 6.0
12	35.0 ~ 55.0	3.5 ~ 5.5	70.0 ~ 100.0	7.0 ~ 10.0
14	50.0 ~ 80.0	5.0 ~ 8.0	110.0 ~ 160.0	11.0 ~ 16.0
16	80.0 ~ 130.0	8.0 ~ 13.0	170.0 ~ 250.0	17.0 ~ 25.0
18	130.0 ~ 190.0	13.0 ~ 19.0	200.0 ~ 280.0	20.0 ~ 28.0

SERVICE DATA

CYLINDER + PISTON + PISTON RING

Unit : mm (in)

ITEM	STANDARD		LIMIT
Cylinder to piston clearance	0.065 ~0.075 (0.0026 ~ 0.0030)		0.120 (0.0047)
Cylinder bore	41.005 ~ 41.020 (1.6144 ~1.6150) Measure at 20mm from the top surface		41.070 (1.6169)
Piston diam.	40.935 ~ 40.950 (1.6116 ~1.6122) Measure at 15mm from the skirt end		40.885 (1.6097)
Cylinder distortion	—		0.1 (0.004)
Cylinder head distortion	—		0.1 (0.004)
Piston ring clearance (Free condition)	1st	Approx. 4.5 (0.177)	3.2 (0.126)
	2nd	Approx. 4.3 (0.169)	3.1 (0.122)
Piston ring clearance (Assembling condition)	1st	0.10 ~ 0.25 (0.004 ~ 0.010)	0.75 (0.030)
	2nd	0.10 ~ 0.25 (0.004 ~ 0.010)	0.75 (0.030)
Piston ring - ring groove clearance	1st	0.02 ~ 0.06 (0.0008 ~ 0.0024)	—
	2nd	0.02 ~ 0.06 (0.0008 ~ 0.0024)	—
Piston pin bore I.D	10.002 ~ 10.010 (0.3938 ~ 0.3941)		10.030 (0.3949)
Piston pin O.D	9.995 ~ 10.000 (0.3935 ~ 0.3937)		9.980 (0.3929)

CONROD + CRANKSHAFT

Unit : mm (in)

ITEM	STANDARD	LIMIT
Conrod small end bore I.D.	14.003 ~ 14.011 (0.5513 ~0.5516)	14.047 (0.5530)
Conrod big end runout	—	3.0 (0.12)
Crank web to wed width	35 ± 0.1 (1.378 ± 0.004)	—
Crankshaft runout	—	0.08 (0.003)

7-11 SERVICING INFORMATION

OIL PUMP

ITEM	STANDARD
Oil pump reduction ratio	30 : 1

CLUTCH

Unit : mm (in)

ITEM	STANDARD	LIMIT
Clutch housing I.D.	110.00 ~ 110.15 (4.3307 ~ 4.3366)	110.35 (4.3444)
Clutch shoe thickness	3.0 (0.118)	2.0 (0.079)
Clutch in rpm	3,600 ± 200 rpm	————
Clutch tight rpm	4,500 ± 200 rpm	————

TRANSMISSION+DRIVE CHAIN

Unit : mm (in) Except ratio

ITEM	STANDARD	LIMIT
Final reduction ratio	1.33	————
Gear ratio	2.818 ~ 0.870	————
Drive V-belt width	16.5 ± 0.6 (0.6496 ± 0.024)	15.3 (0.6023)
Drive V-belt thickness	8.0 ± 0.6 (0.3149 ± 0.024)	————
Movable drive face spring free length	110.0 (4.331)	————
Drive chain	Type	SLC 428H
	Links	50
	20 - pitch length	————
Drive chain slack	5 ~ 15 (0.197 ~ 0.591)	over 15 (over 0.591)

CARBURETOR

Unit : mm (in)

ITEM	SPECIFICATION
Carburetor type	PISTON VALVE
Bore size	φ 14
I.D. No.	HK31
Idle rpm	1,800 ± 50 rpm
Fuel level	16
Main jet (M.J.)	# 75
Main air jet (M.A.J.)	φ 2.0
Jet needle (J.N.)	J68A - 2
Needle jet (J.N.)	φ 2.1
Pilot air jet (P.A.J.)	φ 3.0
Pilot jet (P.J.)	# 35
Throttle valve (T.V.)	# 3.5
By-pass (B.P.)	φ 0.8
Valve seat (V.S.)	φ 1.4
Starter jet (G.S.)	# 45
Pilot screw (P.S.)	φ 2.0
Pilot outlet (P.O.)	φ 0.8
Throttle cable play	0.5 ~ 1.0 (0.020 ~ 0.039)

7-13 SERVICING INFORMATION

ELECTRICAL

Unit : mm (in)

ITEM		SPECIFICATION	NOTE
Ignition timing		B.T.D.C. 23° at 4,000 rpm	
Spark plug	Type	BPR6HS	
	Gap	0.6 ~ 0.7 (0.024 ~ 0.028)	
	Hot type	BPR5HS	
	Standard type	BPR6HS	
	Cold type	BPR7HS	
Spark performance		Over 8 (0.3) at 1 atm	
Ignition coil resistance	Primary	0.19 ~ 0.24 Ω	
	Secondary	5.4 ~ 6.6 kΩ	
Magneto coil resistance	Charging	0.69 ~ 1.03 Ω	
	Exciting	220 ~ 260 Ω	B/R-Ground
Regulated voltage		14.0 ~ 15.0 V at 5,000 rpm	
Starter motor carbon brush length		—————	4.0 (0.158)
Starter motor commutator under-cut		—————	0.2 (0.008)
Starter relay resistance		0 ~ 70 Ω	
Battery	Type designation	STX5L-BS (MF)	
	Capacity	12V 4Ah/10HR	
	Standard electrolyte S.G.	1.32 at 20°C (68°F)	
Fuse size		10A	
No-load performance of A.C. generator		More than 17.0V (at 5,000 rpm)	

BRAKE + WHEEL

Unit : mm (in)

ITEM	STANDARD		LIMIT
Brake lever play	Front	5 ~15 (0.197 ~ 0.591)	—————
	Rear	5 ~15 (0.197 ~ 0.591)	—————
Brake drum I.D.	Front	110.0 (4.330)	110.7 (4.358)
Brake shoe lining O.D.	Front	109.2 (4.299)	106.0 (4.173)
Brake shoe thickness	Front	—————	2 (0.079)
Brake disc thickness	Rear	3.0 (0.118)	2.5 (0.098)
Brake disc runout	Rear	—————	0.3 (0.012)
Turning radius		2,450 (96.457)	—————
Camber		1°	—————
Toe-in		6.0 (0.236)	
Trail		8.5 (0.335)	—————
Caster		3°	—————
Wheel rim runout	Axial	—————	0.5 (0.020)
	Radial	—————	0.9 (0.035)
Wheel axle shaft runout	Rear	—————	8.0 (0.315)
Tire size	Front	145 / 70 - 6 × 2	—————
	Rear	145 / 70 - 6 × 2	—————
Tire tread depth	Front	—————	4 (0.16)
	Rear	—————	4 (0.16)

7-15 SERVICING INFORMATION

SUSPENSION

Unit: mm (in)

ITEM	SPECIFICATION	LIMIT
Front wheel travel	55 (2.165)	_____
Rear wheel travel	60 (2.362)	_____

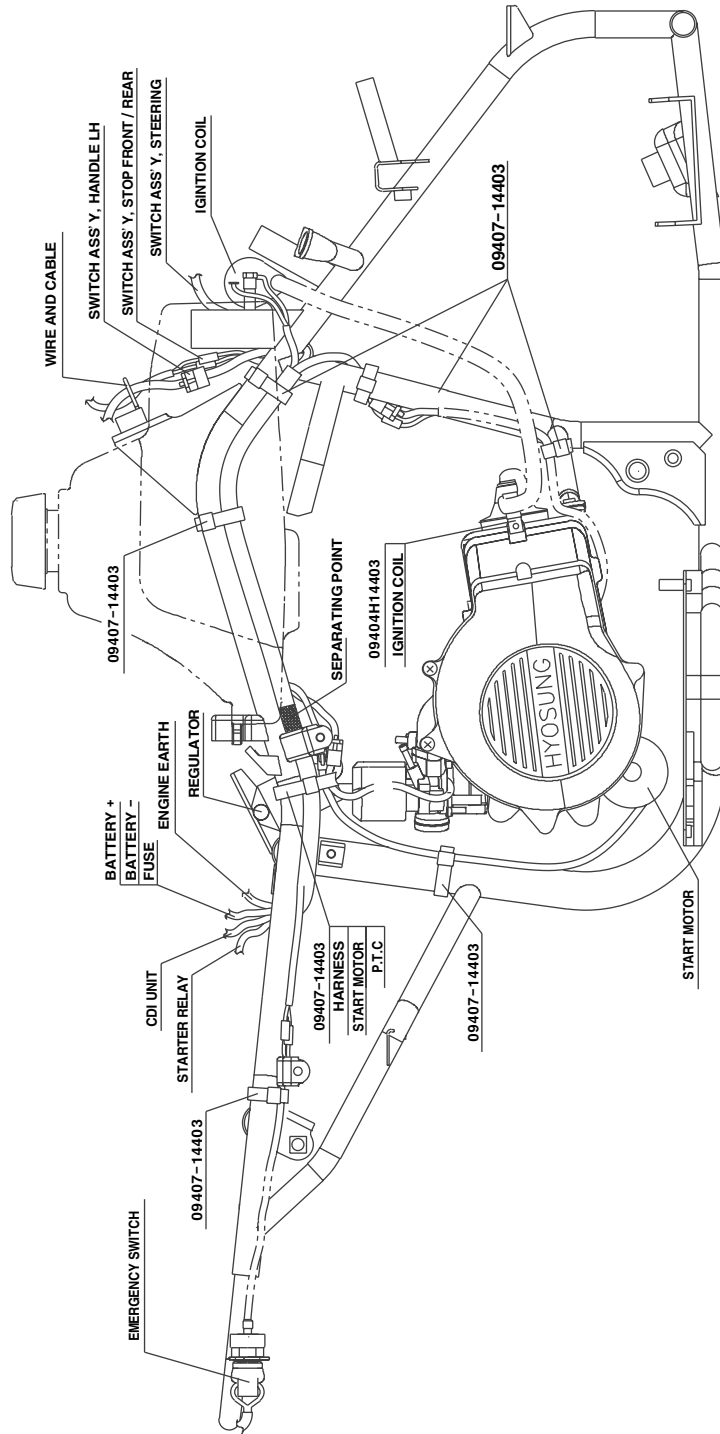
TIRE PRESSURE

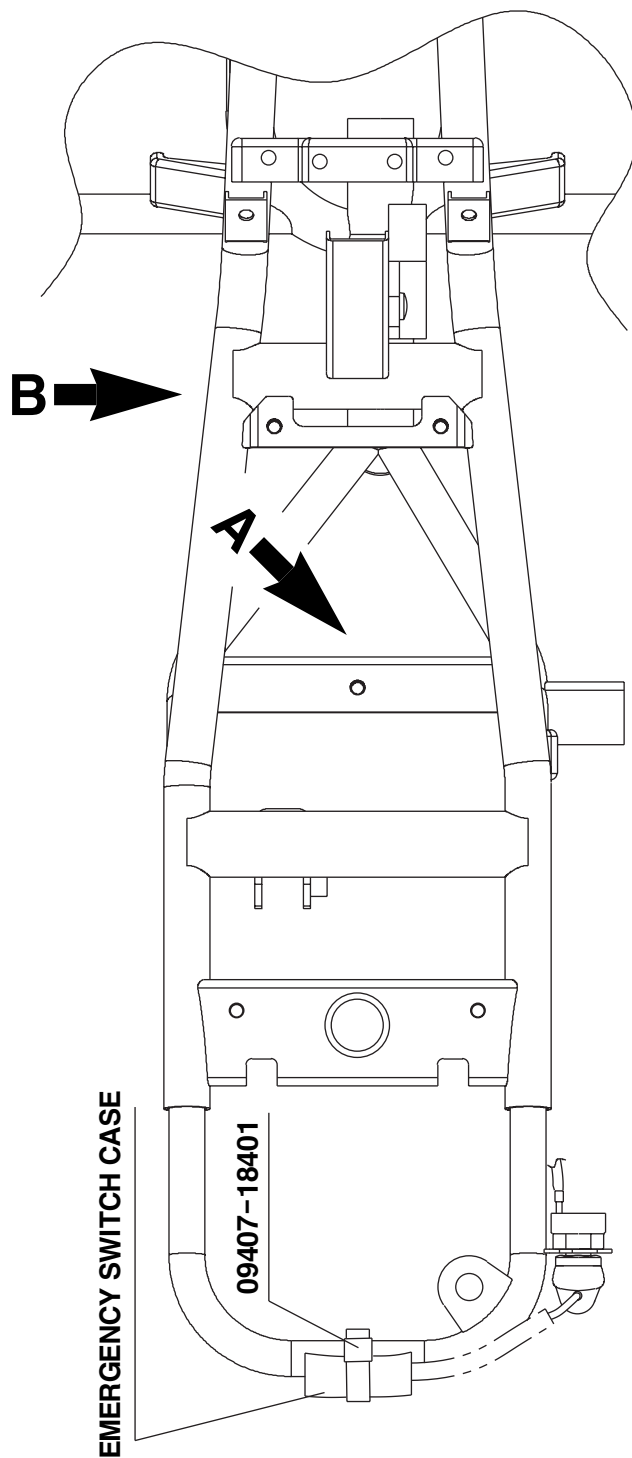
COLD INFLATION TIRE PRESSURE	kPa	kgf/cm ²	psi
FRONT	25	0.25	3.6
REAR	25	0.25	3.6

FUEL + OIL

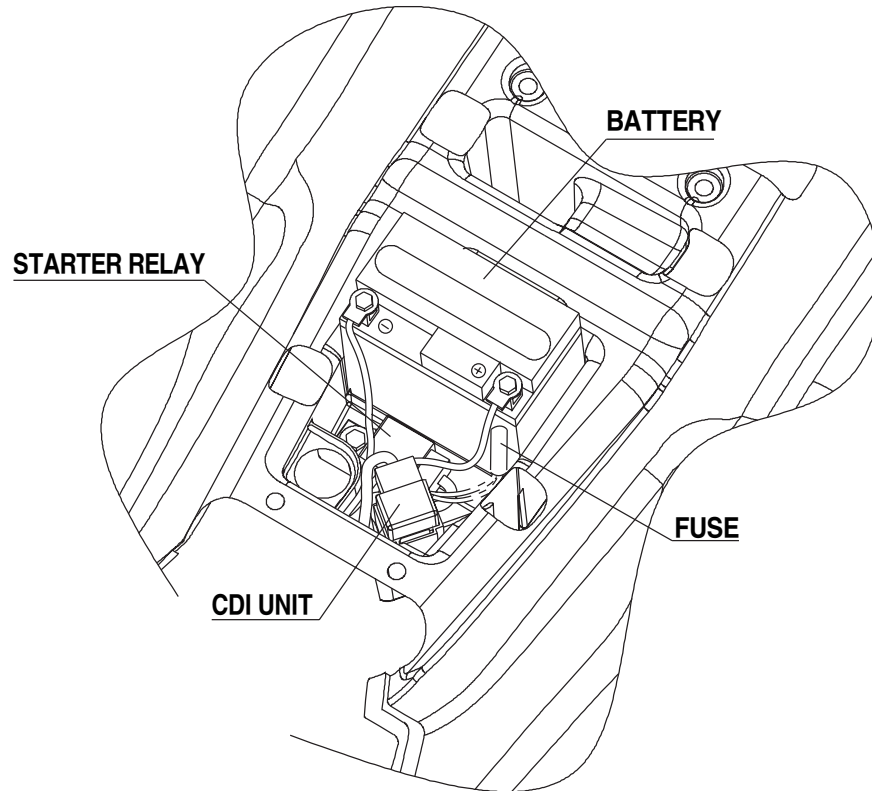
ITEM	SPECIFICATION		NOTE
Fuel type	Gasoline used should be graded 85 ~ 95 octane or higher. An unleaded gasoline is recommended.		
Fuel tank capacity	4.0 ℓ		
Engine oil type	Use HYOSUNG HYPOL HS OIL or an equivalent good quality synthetic based 2-stroke engine oil.		
Engine oil tank capacity	1.0 ℓ		
Engine oil discharge amount	0.9 ~ 1.1ml (at 3,000rpm for 5 minutes)		
Transmission oil type	SAE 10W/40 multi - grade motor oil		
Transmission oil capacity	Change	80 ml	
	Overhaul	90 ml	

WIRE AND CABLE ROUTING

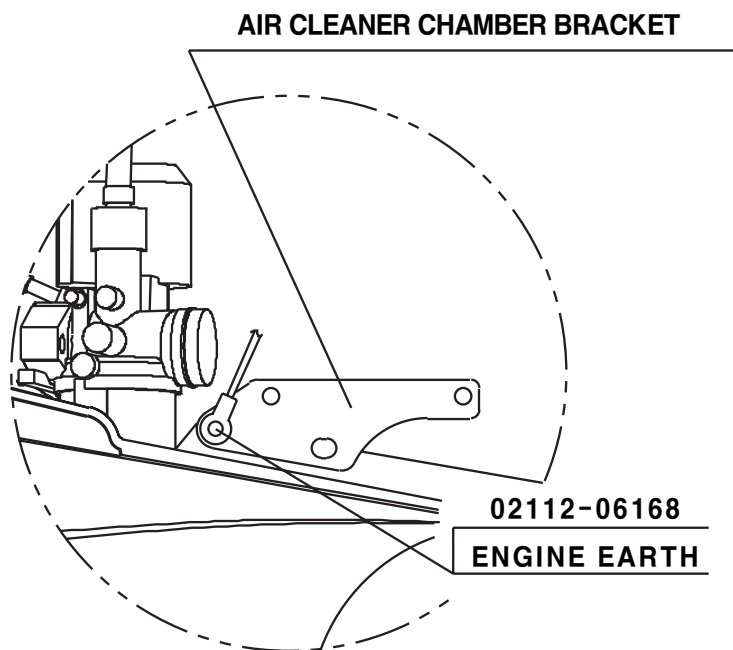


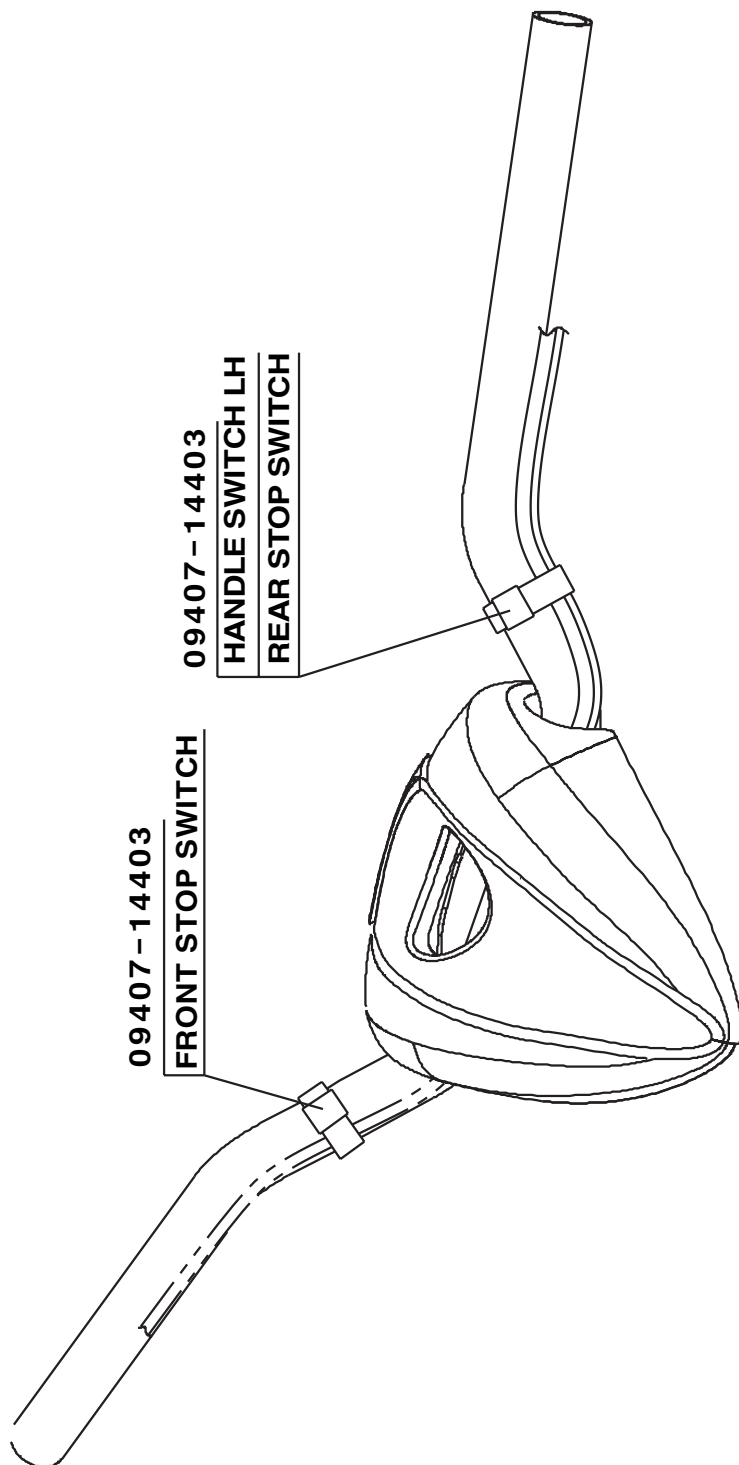


VIEW A



VIEW B



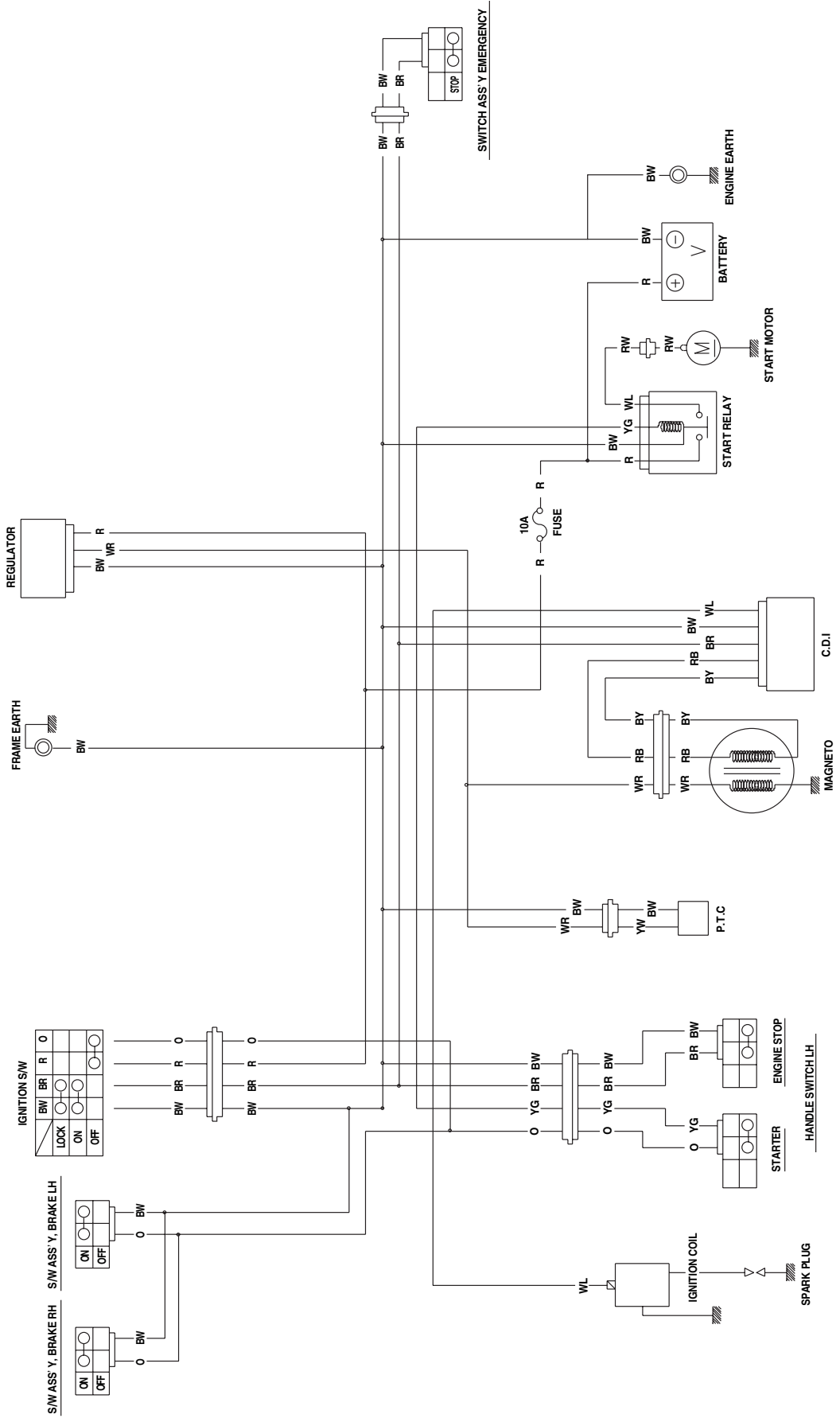


09407 - 14403
FRONT STOP SWITCH

09407 - 14403
HANDLE SWITCH LH
REAR STOP SWITCH

HANDLE SWITCH LH / STOP SWITCH

WIRING DIAGRAM



WIRE COLOR

- B : Black
- Br : Brown
- G : Green
- Gr : Gray
- L : Blue
- Lg : Light green
- O : Orange
- R : Red
- Sb : Light blue
- W : White
- Y : Yellow
- BG : Black with Green tracer
- BW : Black with White tracer
- BR : Black with Red tracer
- LW : Blue with White tracer
- Y : Yellow
- BG : Black with Green tracer
- BW : Black with White tracer
- BR : Black with Red tracer
- LW : Blue with White tracer
- RB : Red with Black tracer
- RW : Red with White tracer
- WB : White with Black tracer
- WR : White with Red tracer
- YB : Yellow with Black tracer
- YG : Yellow with Green tracer



Prepared by

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