

SUZUKI

GSX1000S

SUPPLEMENTARY SERVICE MANUAL

USE THIS MANUAL WITH:

*GSX1100 SERVICE MANUAL (99500-39011-01E)

99501-39050-01

(英)

KATANA

Prepared by

SUZUKI MOTOR CO., LTD.

Administration Department
Overseas Service Division

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FOREWORD

The GSX1000SD and GSX1100SD models were introduced as new model in 1983. Many innovative refinements were incorporated in the new models. This supplementary service manual has been produced to aid Suzuki mechanics in properly maintaining and repairing the 1983 "D" model.

This manual has been written primarily for the experienced Suzuki mechanic but will also be very useful even for the apprentice mechanic and do-it-yourself mechanic. The entire manual should be thoroughly reviewed before any servicing is performed.

Please also refer to the GSX1100 Service Manual and GSX-S MODEL ('82 MODEL) Supplementary Service Manual for all other areas of information not covered in this publication.

This Manual contains up-to-date information at the time of its issue. Later made modifications and changes will be explained to each Suzuki distributor in respective markets, to whom you are kindly requested to make query about updated information, if any.

NOTE:

1. How the manual is compiled.

- This supplementary service manual lists only the points relating to maintenance work which differ from those applying to the GSX1000SZ and GSX1100SZ models.
- However, in order to make this manual easier to use some parts have the same information as provided in the service manual (99500-39011-01E).
- Any differences in service data, service specifications and tightening torque tables with those that apply to the GSX1000SD and GSX1100SD models are clearly indicated with an asterisk (*).

2. How to use the manual.

- Give precedence to this supplementary service manual when using it as the service manual for the GSX1000SD and GSX1100SD models.
- Refer to the service manual and supplementary service manual for details which are not given in this supplementary service manual.

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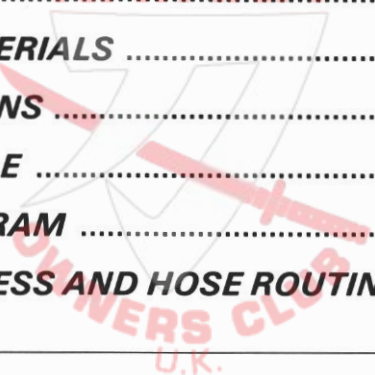
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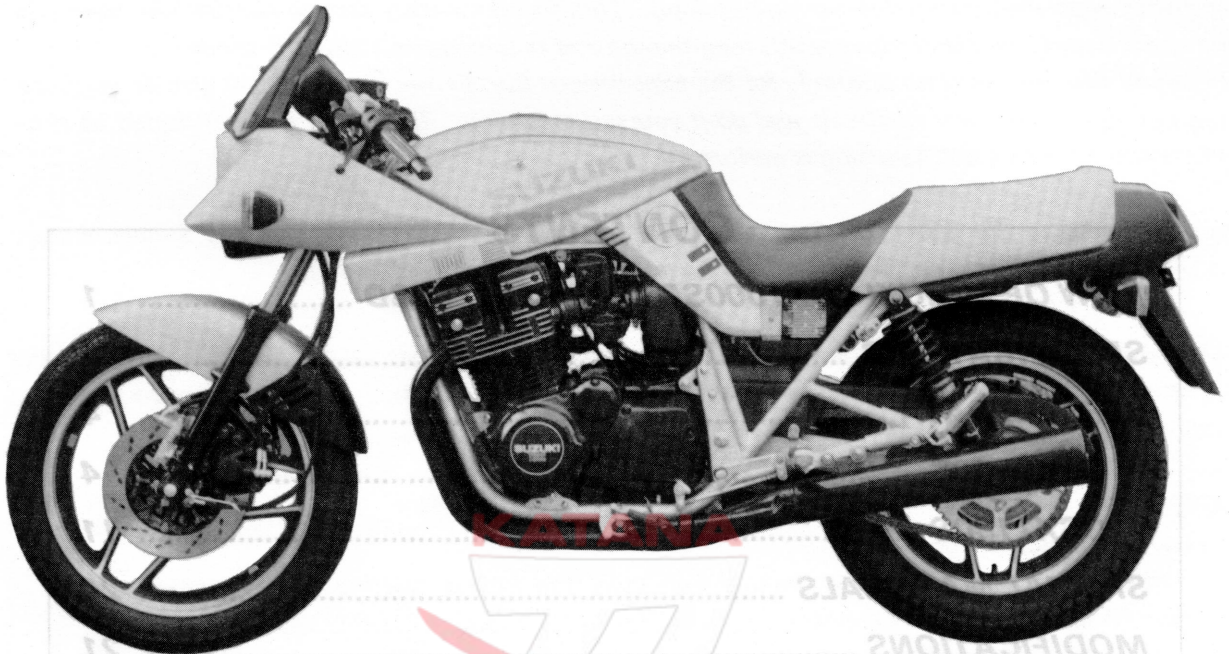
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KATANA



U.K.

VIEW OF SUZUKI GSX1000SD AND GSX1100SD



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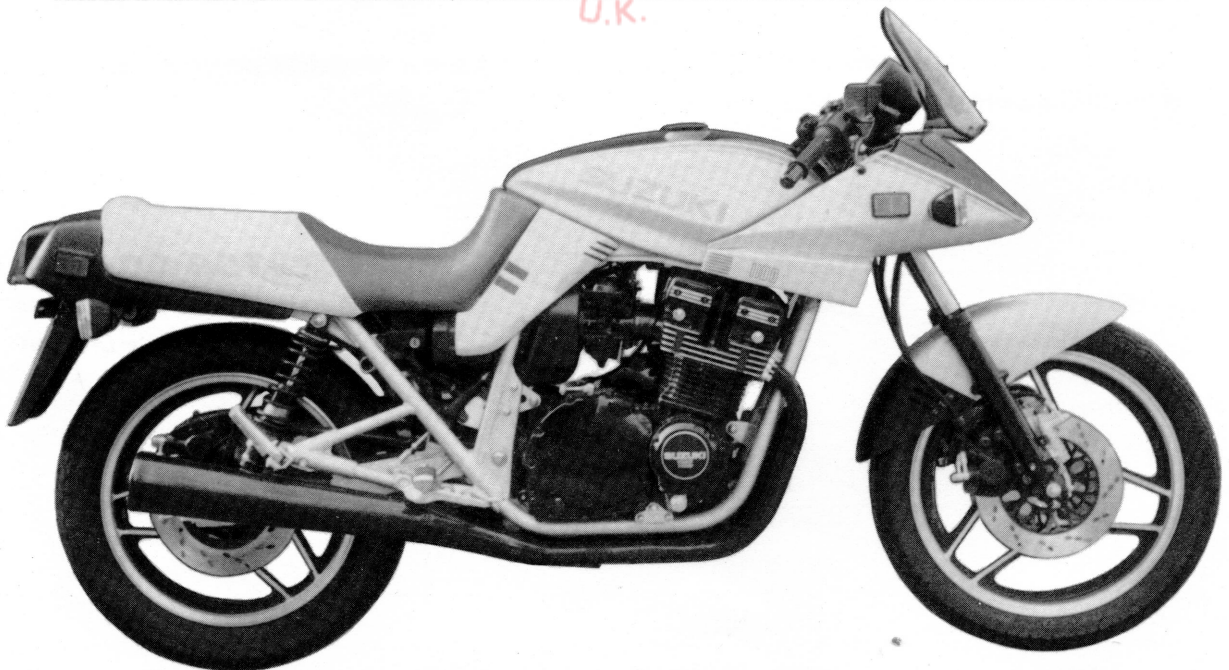
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GSX1000S

OWNERS CLUB
U.K.



GSX1100S

SPECIFICATIONS

	GSX1000S	GSX1100S
DIMENSION AND WEIGHT		
Overall length	2 260 mm (89.0 in)	←
Overall width	715 mm (28.1 in)	←
Overall height	1 205 mm (47.4 in)	←
Wheelbase	1 520 mm (59.8 in)	←
Ground clearance	175 mm (6.9 in)	←
Seat height	775 mm (30.5 in)	←
Dry mass	232 kg (511 lbs)	←
ENGINE		
Type	Four-stroke, air-cooled, DOHC	
Number of cylinders	4	←
Bore	69.4 mm (2.732 in)	72.0 mm (2.835 in)
Stroke	66.0 mm (2.598 in)	←
Piston displacement	998 cm ³ (60.9 cu. in)	1074 cm ³ (65.6 cu. in)
Compression ratio	9.5:1	←
Carburetor	MIKUNI VM32SS, four	MIKUNI BS34SS, four
Air cleaner	Dual element (Paper and Polyurethane)	
Starter system	Electric	
Lubrication system	Wet sump	
TRANSMISSION		
Clutch	Wet multi-plate type	
Transmission	5-speed constant mesh	
Gearshift pattern	1-down, 4-up	←
Primary reduction	1.775 (87/49)	←
Final reduction	2.800 (42/15)	←
Gear ratios, Low	2.500 (35/14)	←
2nd	1.777 (32/18)	←
3rd	1.380 (29/21)	←
4th	1.125 (27/24)	←
Top	0.961 (25/26)	←
Drive chain	DAIDO D.I.D. 630YL or TAKASAGO RK630GSV, 96 links	

	GSX1000S	GSX1100S
CHASSIS		
Front suspension	Telescopic, oil dampened, spring 4-way adjustable with ANTI-DIVE	
Rear suspension	Swinging arm, oil dampened, damper 4-way/spring 5-way adjustable	
Steering angle	30° (right & left)	←
Caster	61° 50'	←
Trail	118 mm (4.65 in)	←
Turning radius	3.5 m (11.5 ft)	←
Front brake	Disc brake, twin	
Rear brake	Disc brake	
Front tire size	3.50V19 4PR	←
Rear tire size	4.50V17 4PR	←
Front fork stroke	150 mm (5.91 in)	←
Rear wheel travel	109 mm (4.29 in)	←
ELECTRICAL		
Ignition type	Transistorized	
Ignition timing	12° B.T.D.C. below 1500 r/min and 32° B.T.D.C. above 2350 r/min	
Spark plug	NGK DR8ES-L or NIPPON DENSO-X24ESR-U NGK D8EA or NIPPON DENSO-X24ES-U	
Battery	12V 50.4 kC (14 Ah)/10HR	
Generator	Three-phase A.C. generator	
Fuse	10/10/10/10/15A	←
CAPACITIES		
Fuel tank including reserve	22 L (5.8/4.8 US/Imp gal)	←
reserve	5.0 L (5.3/4.4 US/Imp qt)	←
Engine oil	3.2 L (3.4/2.8 US/Imp qt)	←
Front fork oil	227 ml (7.67/7.99 US/Imp oz)	←

GSX1000S

VALVE + GUIDE

Unit: mm

ITEM	STANDARD	STANDARD	LIMIT
Valve diam.	IN.	27.0	—
	EX.	23.0	—
Valve lift	IN.	7.0	—
	EX.	*6.5	—
Valve clearance (when cold)	IN. & EX.	0.07–0.12	—
Valve guide to valve stem clearance	IN.	0.025–0.052	0.35
	EX.	0.040–0.067	0.35
Valve guide I.D.	IN. & EX.	5.500–5.512	—
Valve stem O.D.	IN.	5.460–5.475	—
	EX.	5.445–5.460	—
Valve stem runout	IN. & EX.	—	0.05
Valve head thickness	IN. & EX.	—	0.5
Valve stem end length	IN. & EX.	—	3.6
Valve seat width	IN. & EX.	0.9–1.1	—
Valve head radial runout	IN. & EX.	—	0.03
Valve spring free length (IN. & EX.)	INNER	—	31.9
	OUTER	—	35.6
Valve spring tension (IN. & EX.)	INNER	4.4–6.4 kg at length 28.5 mm	—
	OUTER	6.5–8.9 kg at length 32.0 mm	—

* Asterisk indicates the new GSX1000SD model.

CAMSHAFT + CYLINDER HEAD

Unit: mm

ITEM	STANDARD	STANDARD	LIMIT
Cam height	IN.	34.650–34.690	34.350
	EX.	34.360–34.400	34.060
Camshaft journal oil clearance	IN. & EX.	0.032–0.066	0.150
Camshaft journal holder I.D.	IN. & EX.	22.012–22.025	—
Camshaft journal O.D.	IN. & EX.	21.959–21.980	—
Camshaft runout	IN. & EX.	—	0.10
Cam chain 20-pitch length		—	157.80
Cam chain pin (at arrow "3")		20 th pin	—
Rocker arm I.D.	IN. & EX.	12.000–12.018	—
Rocker arm shaft O.D.	IN. & EX.	11.973–11.984	—
Cylinder head distortion		—	0.2

CYLINDER + PISTON + PISTON RING

Unit: mm

ITEM	STANDARD		LIMIT
Compression pressure	11–14 kg/cm ²		9 kg/cm ²
Compression pressure difference	—		2 kg/cm ²
Piston to cylinder clearance	0.050–0.060		0.120
Cylinder bore	69.400–69.415		69.480
Piston diam.	69.345–69.360 Measure at 15.0 from the skirt end.		69.280
Cylinder distortion	—		0.2
Piston ring free end gap	1st	N Approx. 8.5	6.8
	2nd	N Approx. 10.0	8.0
Piston ring end gap	1st	0.10–0.25	0.7
	2nd	0.10–0.30	0.7
Piston ring to groove clearance	1st	—	0.180
	2nd	—	0.150
Piston ring groove width	1st	1.01–1.03	—
	2nd	1.21–1.23	—
	Oil	2.51–2.53	—
Piston ring thickness	1st	0.975–0.990	—
	2nd	1.170–1.190	—
Piston pin bore	18.001–18.006		18.030
Piston pin O.D.	17.996–18.000		17.980

CONROD + CRANKSHAFT

Unit: mm

ITEM	STANDARD	LIMIT
Conrod small end I.D.	18.006–18.014	18.040
Conrod deflection	—	3.0
Conrod big end side clearance	0.10–0.65	1.00
Crankshaft runout	—	0.1

OIL PUMP

CARBURRETOR

ITEM	STANDARD	LIMIT
Oil pump reduction ratio	1.723 (87/49 x 33/34)	—
Oil pressure (at 60°C, 140°F)	* Above 0.2 kg/cm ² Below 0.4 kg/cm ² at 3 000 r/min.	—

* Asterisk indicates the new GSX1000SD model.

CLUTCH

Unit: mm

ITEM	STANDARD	LIMIT
Clutch cable play	2–3	—
Drive plate thickness	2.9–3.1	2.6
Drive plate claw width	15.6–15.8	14.8
Driven plate thickness	2.00 ± 0.06	—
Driven plate distortion	—	0.1
Clutch spring free length	—	38.5

TRANSMISSION + DRIVE CHAIN

Unit: mm Except ratio

ITEM	STANDARD	LIMIT	
Primary reduction ratio	1.775 (87/49)	—	
Final reduction ratio	2.800 (42/15)	—	
Gear ratios	Low	2.500 (35/14)	—
	2nd	1.777 (32/18)	—
	3rd	1.380 (29/21)	—
	4th	1.125 (27/24)	—
	Top	0.961 (25/26)	—
Shift fork to groove clearance	0.40–0.60	0.80	
Shift fork groove width	5.45–5.55	—	
Shift fork thickness	4.95–5.05	—	
Countershaft length (Low to 2nd)	111.4–111.5	—	
Drive chain	Type	D.I.D.: 630YL TAKASAGO: RK630GSV	—
	Links	96	—
	20-pitch length	—	383.0
Drive chain slack	20–30	—	

CARBURETOR

ITEM	STANDARD	SPECIFICATION
Carburetor type		MIKUNI VM32SS
Bore size		32
I.D. No.		* 49520
Idle r/min.		1 050 ± 100 r/min.
Fuel level		5.0 ± 0.5 mm
Float height		22.4 ± 1.0 mm
Main jet (M.J.)		# 95
Main air jet (M.A.J.)		1.5
Jet needle (J.N.)		5DL82-3rd
Needle jet (N.J.)		0-6
Pilot jet (P.J.)		# 20
By pass (B.P.)		0.8
Pilot outlet (P.O.)		0.8
Valve seat (V.S.)		2.3
Starter jet (G.S.)		# 45
Pilot screw (P.S.)		PRE-SET (1 1/4)
Cut-away (C.A.)		1.5
Throttle cable play		0.5—1.0 mm
Choke cable play		0.5—1.0 mm

* Asterisk indicates the new GSX1000SD model.

ELECTRICAL

Unit: mm

ITEM	SPECIFICATION			NOTE
Ignition timing	12° B.T.D.C. Below 1 500 ± 150 r/min and 32° B.T.D.C. Above 2 350 ± 150 r/min.			
Firing order	1, 2, 4, 3			
Spark plug	Type	NGK: D8EA N.D.: X24ESU		E-01, 24
	Gap	0.6–0.7		
	Type	NGK: DR8ES-L N.D.: X24ESR-U		E-02, 17
	Gap	0.6–0.7		
Spark performance	Over 8 at 1 atm.			
Signal coil resistance	290–360 Ω			BI-G
Ignition coil resistance	Primary	O/W–W or B/Y 3–5 Ω		
	Secondary	Plug cap – Plug cap 31–33 kΩ		
Generator no-load voltage	More than 80 V (AC) at 5 000 r/min.			
Regulated voltage	14.0–15.5 V at 5 000 r/min.			
Starter motor	Brush length	N.D.	Limit: 9	
	Commutator under cut		Limit: 0.2	
Starter relay resistance	3–4 Ω			
Battery	Type designation	YB14L-A2		
	Capacity	12V50.4kC(14Ah)/10HR		
	Standard electrolyte S.G.	1.28 at 20°C (68°F)		
Fuse size	Headlight	10 A		
	Signal	10 A		
	Ignition	10 A		
	Main	15 A		
	Output terminal	10 A		

BRAKE + WHEEL

Unit: mm

ITEM		STANDARD	LIMIT
Rear brake pedal height		50–60	—
Brake disc thickness	Front	5.0 ± 0.2	4.5
	Rear	6.7 ± 0.2	6.0
Brake disc runout		—	0.30
Master cylinder bore	Front	15.870–15.913	—
	Rear	14.000–14.043	—
Master cylinder piston diam.	Front	15.811–15.838	—
	Rear	13.957–13.984	—
Brake caliper cylinder bore	Front	38.180–38.219	—
	Rear	38.180–38.256	—
Brake caliper piston diam.	Front	38.025–38.050	—
	Rear	38.098–38.148	—
Wheel rim runout	Axial	—	2.0
	Radial	—	2.0
Wheel axle runout	Front	—	0.25
	Rear	—	0.25
Tire size	Front	3.50V19 4PR	—
	Rear	4.50V17 4PR	—
Tire tread depth	Front	—	1.6
	Rear	—	2.0

SUSPENSION

Unit: mm

ITEM	STANDARD	LIMIT
Front fork stroke	150	—
Front fork spring free length	—	463
Front fork oil level	221	—
Rear wheel travel	109	—
Swing arm pivot shaft runout	—	0.3

FUEL + OIL

ITEM	SPECIFICATION	NOTE
Fuel type	Gasoline used should be graded 85-95 octane or higher. An unleaded or low-lead gasoline type is recommended.	
Fuel tank including reserve	22 L	
reserve	5.0 L	
Engine oil type	SAE 10W/40, API SE or SF	
Engine oil capacity	Change	3 200 ml
	Filter change	3 600 ml
	Overhaul	4 000 ml
Front fork oil type	Fork oil #15	
Front fork oil capacity (each leg)	227 ml	
Brake fluid type	SAE J1703, DOT3 or DOT4	

TIRE PRESSURE

COLD INFLATION TIRE PRESSURE	NORMAL RIDING						CONTINUOUS HIGH SPEED RIDING					
	SOLO RIDING			DUAL RIDING			SOLO RIDING			DUAL RIDING		
	kPa	kg/cm ²	psi	kPa	kg/cm ²	psi	kPa	kg/cm ²	psi	kPa	kg/cm ²	psi
FRONT	175	1.75	24	200	2.00	28	200	2.00	28	225	2.25	32
REAR	200	2.00	28	250	2.50	36	250	2.50	36	280	2.80	40

WATTAGE

Unit: W

ITEM	SPECIFICATION		
	E-01	E-24	E-02,17
Headlight	HI	60	←
	LO	55	←
Parking or position light			4
Tail/Brake light	8/23	←	5/21
License light	8	5	←
Turn signal light	23	←	21
Combination meter light	3.4	←	←
Turn signal indicator light	3.4	←	←
High beam indicator light	3.4	←	←
Neutral indicator light	3.4	←	←
Oil pressure indicator light	3.4	←	←

GSX1100S

VALVE + GUIDE

Unit: mm

ITEM		STANDARD	LIMIT
Valve diam.	IN.	27.0	—
	EX.	23.0	—
Valve lift	E-02,04,15,16,17,18, 21,22,25,26,34,39	IN.	7.0
	E-01,06,24,28,30	IN.	* 7.5
	E-02,04,15,16,17,18, 21,22,25,26,34,39	EX.	6.5
	E-01,06,24,28,30	EX.	* 7.0
Valve clearance (when cold)	IN. & EX.	0.07—0.12	—
Valve guide to valve stem clearance	IN.	0.025—0.052	0.35
	EX.	0.040—0.067	0.35
Valve guide I.D.	IN. & EX.	5.500—5.512	—
Valve stem O.D.	IN.	5.460—5.475	—
	EX.	5.445—5.460	—
Valve stem runout	IN. & EX.	—	0.05
Valve head thickness	IN. & EX.	—	0.5
Valve stem end length	IN. & EX.	—	3.6
Valve seat width	IN. & EX.	0.9—1.1	—
Valve head radial runout	IN. & EX.	—	0.03
Valve spring free length (IN. & EX.)	INNER	—	31.9
	OUTER	—	35.6
Valve spring tension (IN. & EX.)	INNER	4.4—6.4 kg at length 28.5 mm	—
	OUTER	6.5—8.9 kg at length 32.0 mm	—

* Asterisk indicates the new GSX1100SD model.

CAMSHAFT + CYLINDER HEAD

Unit: mm

ITEM		STANDARD	LIMIT
Cam height	E-02,04,15,16,17,18, 21,22,25,26,34,39	IN. 34.650—34.690	34.350
	E-01,06,24,28,30	IN. * 34.940—34.980	34.640
	E-02,04,15,16,17,18, 21,22,25,26,34,39	EX. 34.360—34.400	34.060
	E-01,06,24,28,30	EX. * 34.650—34.690	34.350
Camshaft journal oil clearance	IN. & EX.	0.032—0.066	0.150
Camshaft journal holder I.D.	IN. & EX.	22.012—22.025	—
Camshaft journal O.D.	IN. & EX.	21.959—21.980	—
Camshaft runout	IN. & EX.	—	0.10
Cam chain 20-pitch length		—	157.80
Cam chain pin (at arrow "3")		20 th pin	—
Rocker arm I.D.	IN. & EX.	12.000—12.018	—
Rocker arm shaft O.D.	IN. & EX.	11.973—11.984	—
Cylinder head distortion		—	0.2

* Asterisk indicates the new GSX1100SD model.

CYLINDER + PISTON + PISTON RING

Unit: mm

ITEM	STANDARD	LIMIT
Compression pressure	9—12 kg/cm ²	7 kg/cm ²
Compression pressure difference	—	2 kg/cm ²
Piston to cylinder clearance	0.050—0.060	0.120
Cylinder bore	72.000—72.015	72.080
Piston diam.	71.945—71.960 Measure at 15.0 from the skirt end.	71.880
Cylinder distortion	—	0.2

Unit: mm

ITEM	STANDARD		LIMIT	
	1st	N		
Piston ring free end gap	1st	N	Approx. 9.5	7.6
	2nd	N	Approx. 11.0	8.8
Piston ring end gap	1st		0.10—0.30	0.7
	2nd		0.10—0.30	0.7
Piston ring to groove clearance	1st		—	0.180
	2nd		—	0.150
Piston ring groove width	1st		* 1.01—1.03	—
	2nd		1.21—1.23	—
	Oil		2.51—2.53	—
Piston ring thickness	1st		0.975—0.990	—
	2nd		1.170—1.190	—
Piston pin bore			18.001—18.006	18.030
Piston pin O.D.			17.996—18.000	17.980

* Asterisk indicates the new GSX1100SD model.

CONROD + CRANKSHAFT + BALANCER

Unit: mm

ITEM	STANDARD	LIMIT
Conrod small end I.D.	18.006—18.014	18.040
Conrod deflection	—	3.0
Conrod big end side clearance	0.10—0.65	1.00
Crankshaft runout	—	0.1

OIL PUMP

ITEM	STANDARD	LIMIT
Oil pump reduction ratio	1.723 (87/49 x 33/34)	—
Oil pressure (at 60°C, 140°F)	* Above 0.2 kg/cm ² Below 0.4 kg/cm ² at 3 000 r/min.	—

* Asterisk indicates the new GSX1100SD model.

CLUTCH

Unit: mm

ITEM	STANDARD	LIMIT
Clutch cable play	2-3	—
Drive plate thickness	* 2.15-2.35	* 1.85
Drive plate claw width	15.6-15.8	14.8
Driven plate thickness	2.00 ± 0.06	—
Driven plate distortion	—	0.1
Clutch spring free length	—	38.5

* Asterisk indicates the new GSX1100SD model.

TRANSMISSION + DRIVE CHAIN

Unit: mm Except ratio

ITEM	STANDARD	LIMIT
Primary reduction ratio	1.775 (87/49)	—
Final reduction ratio	2.800 (42/15)	—
Gear ratios	Low	2.500 (35/14)
	2nd	1.777 (32/18)
	3rd	1.380 (29/21)
	4th	1.125 (27/24)
	Top	0.961 (25/26)
Shift fork to groove clearance	0.40-0.60	0.80
Shift fork groove width	5.45-5.55	—
Shift fork thickness	4.95-5.05	—
Countershaft length (Low to 2nd)	111.4-111.5	—
Drive chain	Type	D.I.D.: 630YL TAKASAGO: RK630GSV
	Links	96
	20-pitch length	—
Drive chain slack	20-30	—

CARBURETOR

ITEM	SPECIFICATION			
	E-01,06,24, 28,30	E-02,04,21,22, 25,26,34	E-15,16,17,39	E-18
Carburetor type	MIKUNI BS34SS	←	←	←
Bore size	34	←	←	←
I.D. No.	* 49330	* 49340	* 49390	* 49510
Idle r/min.	1 050 ± 100 r/min	←	←	←
Fuel level	5.0 ± 0.5 mm	←	←	←
Float height	22.4 ± 1.0 mm	←	←	←
Main jet (M.J.)	* # 112.5	* ←	* # 107.5	* ←
Main air jet (M.A.J.)	1.2	←	←	←
Jet needle (J.N.)	5D59-3rd	←	←	←
Needle jet (N.J.)	X-2	←	←	←
Throttle valve (Th.V.)	# 135	←	←	←
Pilot jet (P.J.)	# 47.5	←	←	←
By pass (B.P.)	0.8, 0.8, 0.8	←	←	←
Pilot outlet (P.O.)	* 1.0	* ←	* ←	0.9
Valve seat (V.S.)	2.0	←	←	←
Starter jet (G.S.)	# 32.5	←	←	←
Pilot screw (P.S.)	PRE-SET (2 1/2)	←	←	PRE-SET (3 1/2)
Pilot air jet (P.A.J.)	# 160	←	←	←
Throttle cable play	0.5—1.0 mm	←	←	←
Choke cable play	0.5—1.0 mm	←	←	←

* Asterisk indicates the new GSX1100SD model.

ELECTRICAL

Unit: mm

ITEM	SPECIFICATION			NOTE
Ignition timing	12° B.T.D.C. Below 1 500 ± 150 r/min and 32° B.T.D.C. Above 2 350 ± 150 r/min.			
Firing order	1, 2, 4, 3			
Spark plug	Type	NGK: D8EA N.D.: X24ES-U		E-01,24,25,30,34
	Gap	0.6–0.7		
	Type	NGK: DR8ES-L N.D.: X24ESR-U		The others
	Gap	0.6–0.7		
Spark performance	Over 8 at 1 atm.			
Signal coil resistance	Approx.	290–360 Ω		BI-G
Ignition coil resistance	Primary	O/W–W or B/Y 3–5 Ω		
	Secondary	Plug cap – Plug cap 31–33 kΩ		
Generator no-load voltage	More than 80 V (AC) at 5 000 r/min.			
Regulated voltage	14.0–15.5 V at 5 000 r/min.			
Starter motor	Brush length	N.D.	Limit: 9	
	Commutator under cut		Limit: 0.2	
Starter relay resistance	3–4 Ω			
Battery	Type designation	YB14L-A2		
	Capacity	12V50.4kC(14Ah)/10HR		
	Standard electrolyte S.G.	1.28 at 20°C (68°F)		
Fuse size	Headlight	10 A		
	Signal	10 A		
	Ignition	10 A		
	Main	15 A		
	Output terminal	10 A		

BRAKE + WHEEL

Unit: mm

ITEM		STANDARD	LIMIT	
Rear brake pedal height		50—60	—	
Brake disc thickness	Front	5.0 ± 0.2	4.5	
	Rear	6.7 ± 0.2	6.0	
Brake disc runout		—	0.30	
Master cylinder bore	Front	15.870—15.913	—	
	Rear	14.000—14.043	—	
Master cylinder piston diam.	Front	15.811—15.838	—	
	Rear	13.957—13.984	—	
Brake caliper cylinder bore	Front	38.180—38.219	—	
	Rear	38.180—38.256	—	
Brake caliper piston diam.	Front	38.025—38.050	—	
	Rear	38.098—38.148	—	
Wheel rim runout	Axial	—	2.0	
	Radial	—	2.0	
Wheel axle runout	Front	—	0.25	
	Rear	—	0.25	
Tire size	Cast wheel models	Front	3.50V19 4PR	—
	Spoke wheel models		3.25V19 4PR	—
	Cast wheel models	Rear	4.50V17 4PR	—
	Spoke wheel models		4.00V18 4PR	—
Tire tread depth	Front	—	1.6	
	Rear	—	2.0	

SUSPENSION

Unit: mm

ITEM	STANDARD	LIMIT	NOTE
Front fork stroke	150	—	
Front fork spring free length	—	463	
Front fork oil level	221	—	
Rear wheel travel	109	—	
Swing arm pivot shaft runout	—	0.3	

FUEL + OIL

ITEM	SPECIFICATION		NOTE
Fuel type	Gasoline used should be graded 85-95 octane or higher. An unleaded or low-lead gasoline type is recommended.		
Fuel tank including reserve	22 L		
reserve	5.0 L		
Engine oil type	SAE 10W/40, API SE or SF		
Engine oil capacity	Change	3 200 ml	
	Filter change	3 600 ml	
	Overhaul	4 000 ml	
Front fork oil type	Fork oil # 15		
Front fork oil capacity (each leg)	227 ml		
Brake fluid type	SAE J1703, DOT3 or DOT4		

TIRE PRESSURE

COLD INFLATION TIRE PRESSURE	NORMAL RIDING						CONTINUOUS HIGH SPEED RIDING					
	SOLO RIDING			DUAL RIDING			SOLO RIDING			DUAL RIDING		
	kPa	kg/cm ²	psi	kPa	kg/cm ²	psi	kPa	kg/cm ²	psi	kPa	kg/cm ²	psi
FRONT	175	1.75	24	200	2.00	28	200	2.00	28	225	2.25	32
REAR	200	2.00	28	250	2.50	36	250	2.50	36	280	2.80	40

WATTAGE

Unit: W

ITEM	SPECIFICATION		
	E-01,06,24,28,30	E-02,04,15,16,17, 18,21,26,34,39	E-22,25
Headlight	HI	60	←
	LO	55	←
Parking or position light		4	←
Tail/Brake light	8/23	5/21	←
License light	8	5	10
Turn signal light	23	21	←
Combination meter light	3.4	←	←
Turn signal indicator light	3.4	←	←
High beam indicator light	3.4	←	←
Neutral indicator light	3.4	←	←
Oil pressure indicator light	3.4	←	←

SPECIAL MATERIALS

SUZUKI BOND No. 1207B

As the engine has become to be painted black, the bonding agent should be changed accordingly. That is, Bond No. 1207B (P/No. 99000-31140) which is black should be used instead of Bond No. 4 (P/No. 99000-31030) which has hitherto been used.

Bond No. 1207B is silicone-based type of bonding agent. The heat resistance of Bond No. 1207B is approximately 250°C while that of Bond No. 4 is 180°C. The hardening time of Bond No. 1207B is approximately 7 minutes while that of Bond No. 4 is 60 minutes. Therefore, the upper and lower crankcases should be mated within several minutes after application of this new type of bonding agent.

NOTE:

For the Z-model, instead of Bond No. 4, use Bond No. 1215 (P/No. 99000-31110) which also is of a silicone-based type but is grey in color.

THREAD LOCK SUPER 1305

The locking agent used for the generator rotor nuts should be changed from Thread Lock Super 1332B (P/No. 99000-32090) to Thread Lock Super 1305 (P/No. 99000-32100) which has a stronger locking force than the 1332B does.

NOTE:

Apply Thread Lock Super 1305 to the generator rotor bolts and nuts of all models of the GS and GSX Series.

RETURNING TORQUE

1332B	150 - 250 %
1305	250 - 350 %



Necessary part

- Cylinder head cover gasket
- Mating surface of upper and lower crankcase
- Mating surface of crankcase and clutch cover, generator cover
- Front fork damper rod bolt



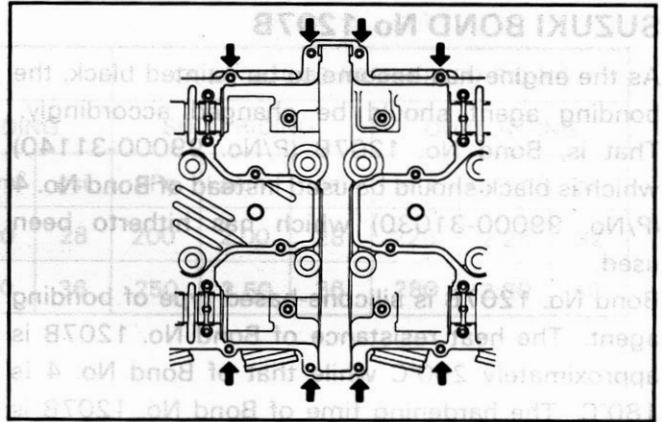
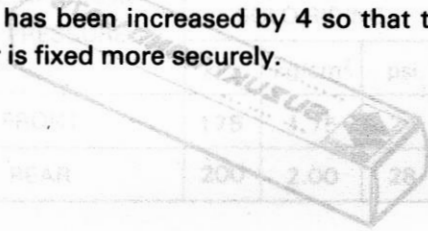
Necessary part

- Generator rotor nut

MODIFICATIONS

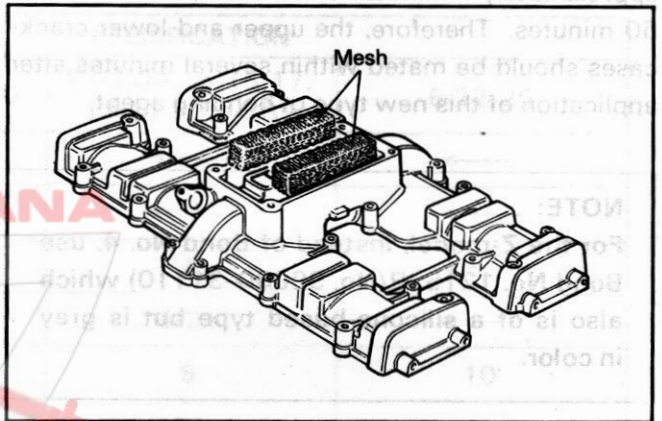
1. CYLINDER HEAD COVER

The cylinder head cover and cylinder head have been modified, and the number of the securing-bolts has been increased by 4 so that the head cover is fixed more securely.



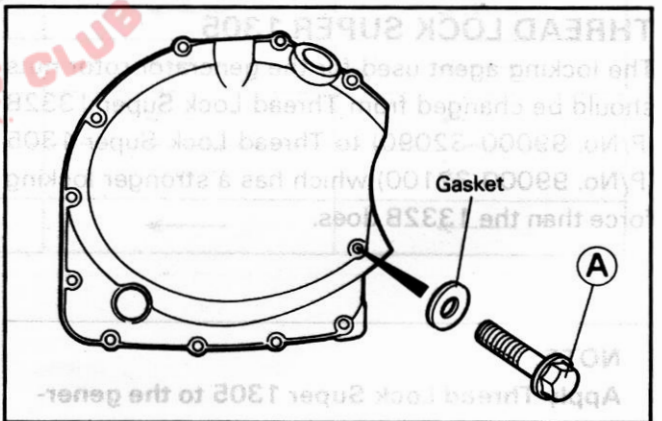
2. OIL SEPARATOR MESH

Iron wire meshes have been added to the two pockets of the cylinder head cover so that the oil component of the oil/air vapour in the crankcase is separated and returned to the crankcase.



3. CLUTCH COVER SCREW GASKET

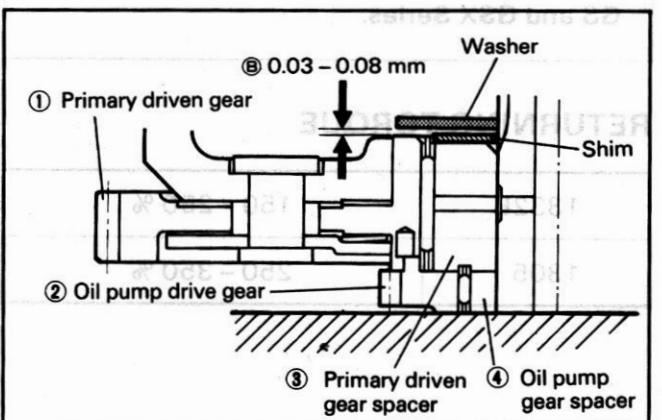
A gasket has been added to the clutch cover securing-bolt (A).



4. PRIMARY DRIVEN GEAR SPACER AND SHIM

A primary driven gear spacer shim has been added and consequently the primary driven gear spacer has become shorter.

As shown in the illustration, put the oil pump drive gear, its spacer, primary driven gear, and its spacer and washer on a flat surface plate. Select an appropriate shim referring to the shim size chart, measure the clearance (B) between the primary driven gear and the washer, and check that the clearance is 0.03 – 0.08 mm.



Standard thrust clearance

0.03 – 0.08 mm

When any one of the above parts ① - ④ is replaced, be sure to adjust and check the shim to confirm that the clearance is normal.

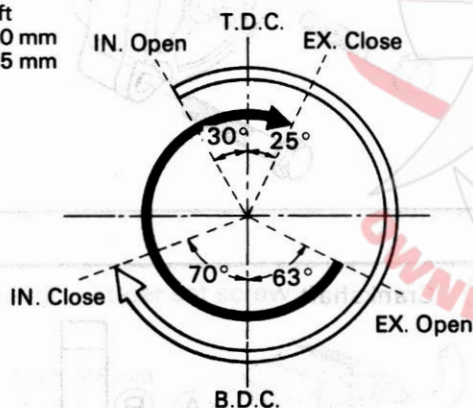
Shim size chart

P/No.	Thickness
21262 - 09300	1.05 mm
21263 - 09300	1.10 mm
21264 - 09300	1.15 mm
21265 - 09300	1.20 mm

5. CAMSHAFT AND VALVE TIMING

GSX1000S and GSX1100S employ two types of camshafts. Their specifications differ by destinations as follows.

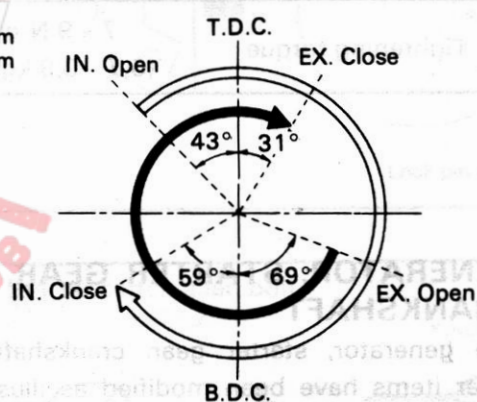
Valve lift
IN.: 7.0 mm
EX.: 6.5 mm



GSX1000SD: E2, 17
GSX1100SD: E2, 4, 15, 16, 17, 18, 21, 22, 25, 26, 34, 39

Cam height
IN.: 34.650 - 34.690 mm
EX.: 34.360 - 34.400 mm

Valve lift
IN.: 7.5 mm
EX.: 7.0 mm



GSX1100SD: E1, 24
GSX1100SD: E1, 6, 24, 28, 30

Cam height
IN.: 34.940 - 34.980 mm
EX.: 34.650 - 34.690 mm

6. CLUTCH PLATES (only for GSX1100SD)

The number of the clutch drive plates and driven plates have been increased to increase the clutch capacity. (for GSX1100SD only)

To cope with the above, the drive plate thickness also has been changed.

	Number of Plates	
	Old	New
Drive plate (Cork)	9	10
Driven plate (Iron)	9	11

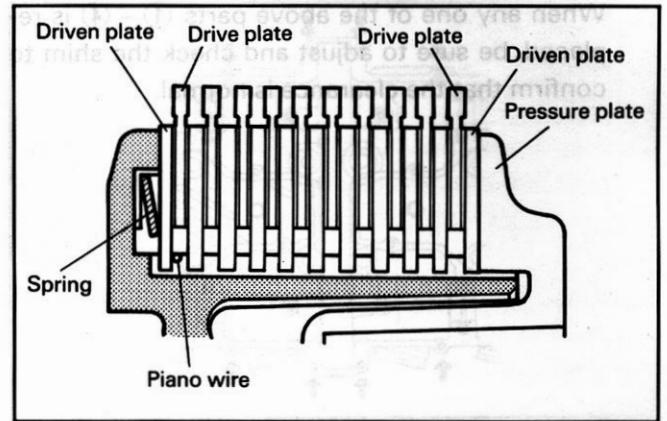
Drive plate thickness service limit	OLD	NEW
	2.6 mm	1.85 mm

MODIFICATIONS

As shown in the illustration, assemble the parts in the due order of the driven plate and drive plate. Finally, install the driven plate and then install the pressure plate.

NOTE:

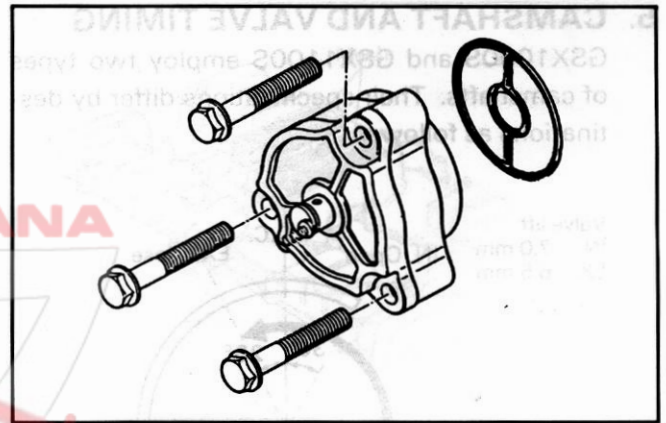
The clutch spring is made of a premium-quality material for long durability. To discriminate it from those used for other models, it is identified with white paint.



7. OIL PUMP

The mounting methods of the oil pump has been changed from with three screws to with three bolts. The tightening torque of the bolts is as follows:

Tightening torque	7 – 9 N·m (0,7 – 0,9 kg-m)
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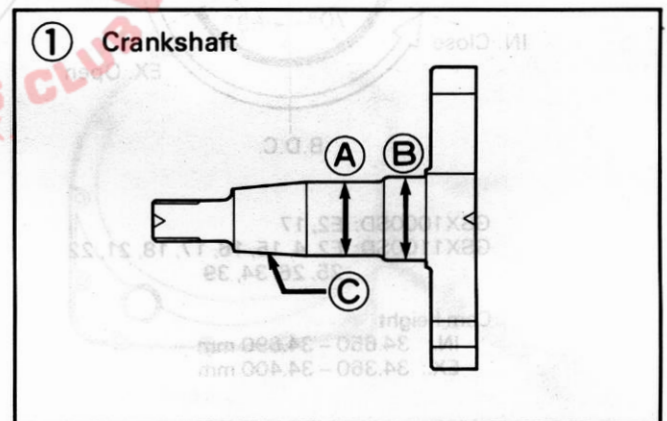


8. GENERATOR, STARTER GEAR AND CRANKSHAFT

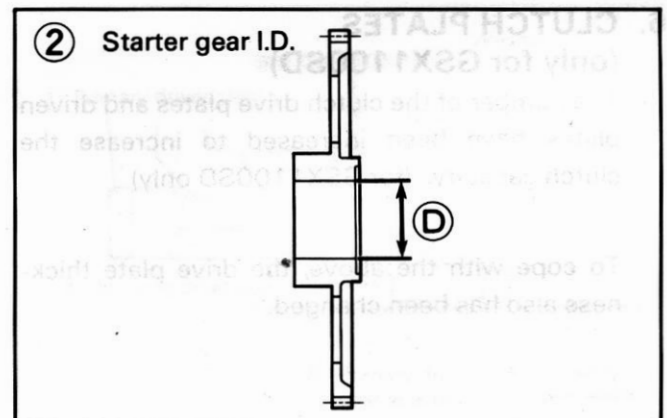
The generator, starter gear, crankshaft, and other items have been modified as illustrated below. The engine numbers which have been subjected to these modifications are as follows:

GSX1100S: E. No. on and after 170134 ~

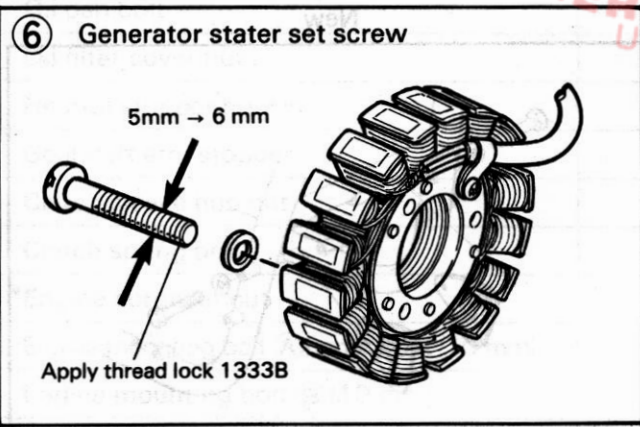
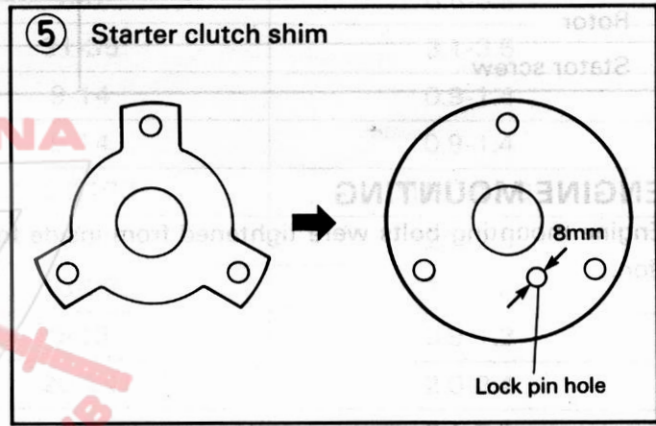
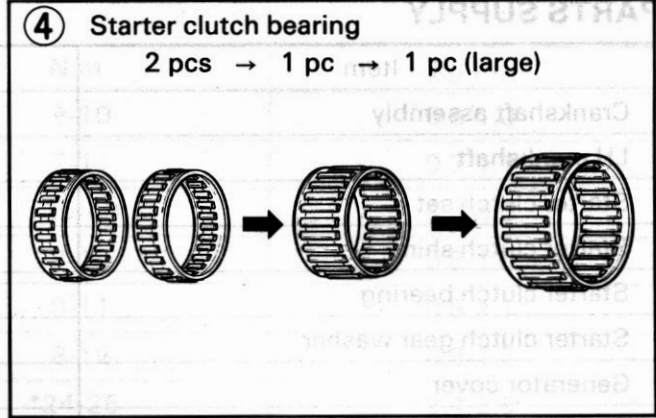
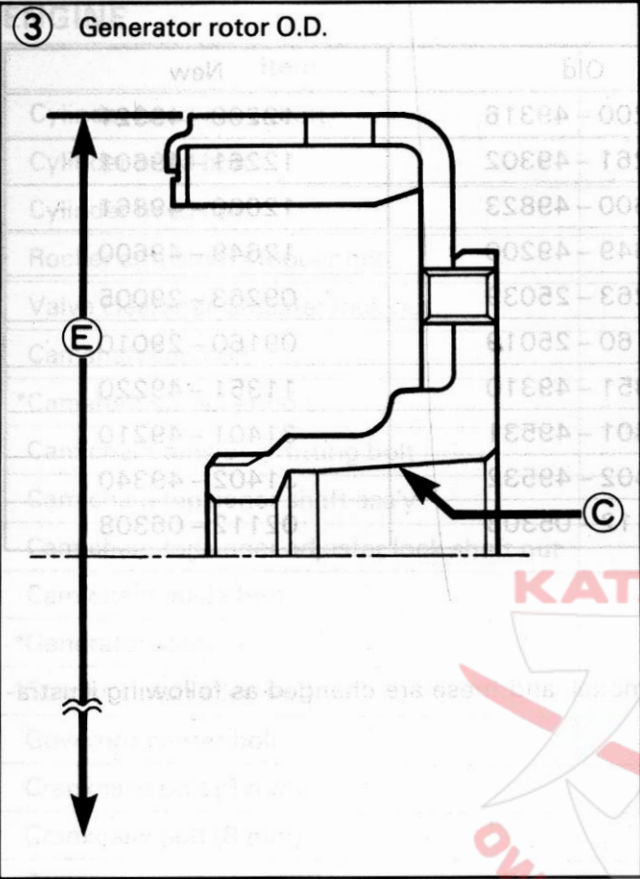
GSX1000S: E. No. on and after 102893 ~



Item	Old	New
Ⓐ	25 mm	29 mm
Ⓑ (Unchanged)	32 mm	32 mm
Ⓒ (Taper)	1/5	1/7
Ⓓ	31 mm	35 mm
Ⓔ	118 mm	128 mm



TORQUE TABLE



⑦ Starter clutch allen bolt

	Old	New
Tightening torque	15 – 20 N·m (1.5 – 2.0 kg-m)	23 – 28 N·m (2.3 – 2.8 kg-m)
Thread lock	1333B	1303B

⑧ Generator capacity has been increased as shown in the table.

GSX1000/1100SZ	GSX1000S/1100SD
220 W	250 W

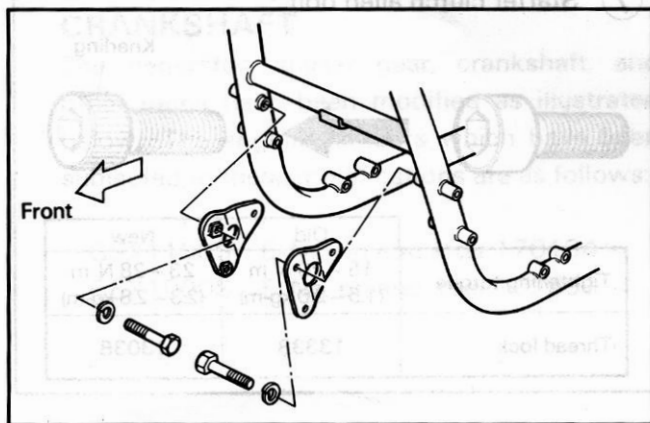
PARTS SUPPLY

Item	Old	New
Crankshaft assembly	12200 - 49316	12200 - 49321
LH crankshaft	12261 - 49302	12261 - 49601
Starter clutch set	12600 - 49823	12600 - 49861
Starter clutch shim	12649 - 49200	12649 - 49600
Starter clutch bearing	09263 - 25039	09263 - 29005
Starter clutch gear washer	09160 - 25019	09160 - 29010
Generator cover	11351 - 49310	11351 - 49220
Stator assembly	31401 - 49531	31401 - 49210
Rotor	31402 - 49532	31402 - 49340
Stator screw	02112 - 05308	02112 - 06308

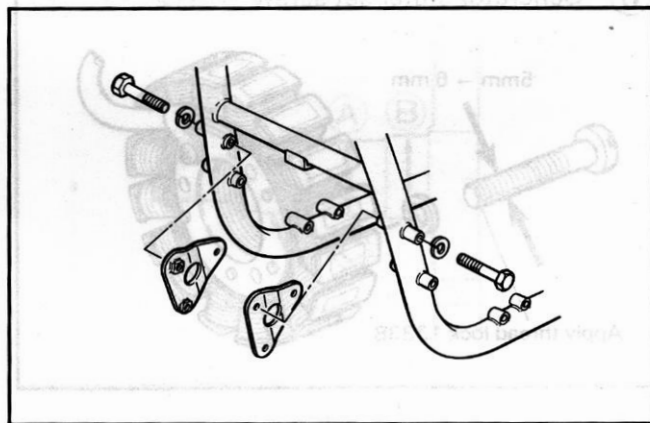
ENGINE MOUNTING

Engine mounting bolts were tightened from inside for Z-model, and these are changed as following illustration.

Old



New



TORQUE TABLE

ENGINE

Item	N.m	kg-m
Cylinder head cover bolt	9-10	0.9-1.0
Cylinder head bolt	7-11	0.7-1.1
Cylinder head nut	35-40	3.5-4.0
Rocker arm shaft stopper bolt	8-10	0.8-1.0
Valve clearance adjuster lock nut	9-11	0.9-1.1
Camshaft cap bolt	8-12	0.8-1.2
*Camshaft sprocket bolt	*24-26	*2.4-2.6
Cam chain tensioner fitting bolt	6-8	0.6-0.8
Cam chain tensioner shaft ass'y	31-35	3.1-3.5
Cam chain tensioner adjuster lock shaft nut	9-14	0.9-1.4
Cam chain guide bolt	9-14	0.9-1.4
*Generator rotor nut	*160-170	*16.0-17.0
*Starter clutch allen bolt	*23-28	*2.3-2.8
Governor center bolt	13-23	1.3-2.3
Crankcase bolt (6 mm)	9-13	0.9-1.3
Crankcase bolt (8 mm)	20-24	2.0-2.4
Starter motor bolt	4-7	0.4-0.7
Oil pan bolt	10	1.0
Oil filter cover nut	6-8	0.6-0.8
Neutral stopper housing	18-28	1.8-2.8
Gearshift arm stopper	15-23	1.5-2.3
Clutch sleeve hub nut	50-70	5.0-7.0
Clutch spring bolt	11-13	1.1-1.3
*Engine sprocket nut	*100-150	*10.0-15.0
Engine mounting bolt (A) upper front (10 mm)	45-55	4.5-5.5
Engine mounting bolt (B) (10 mm)	30-37	3.0-3.7
Engine mounting bolt (C) (8 mm)	20-30	2.0-3.0
Gearshift lever bolt	13-23	1.3-2.3
Clutch release arm bolt	6-10	0.6-1.0

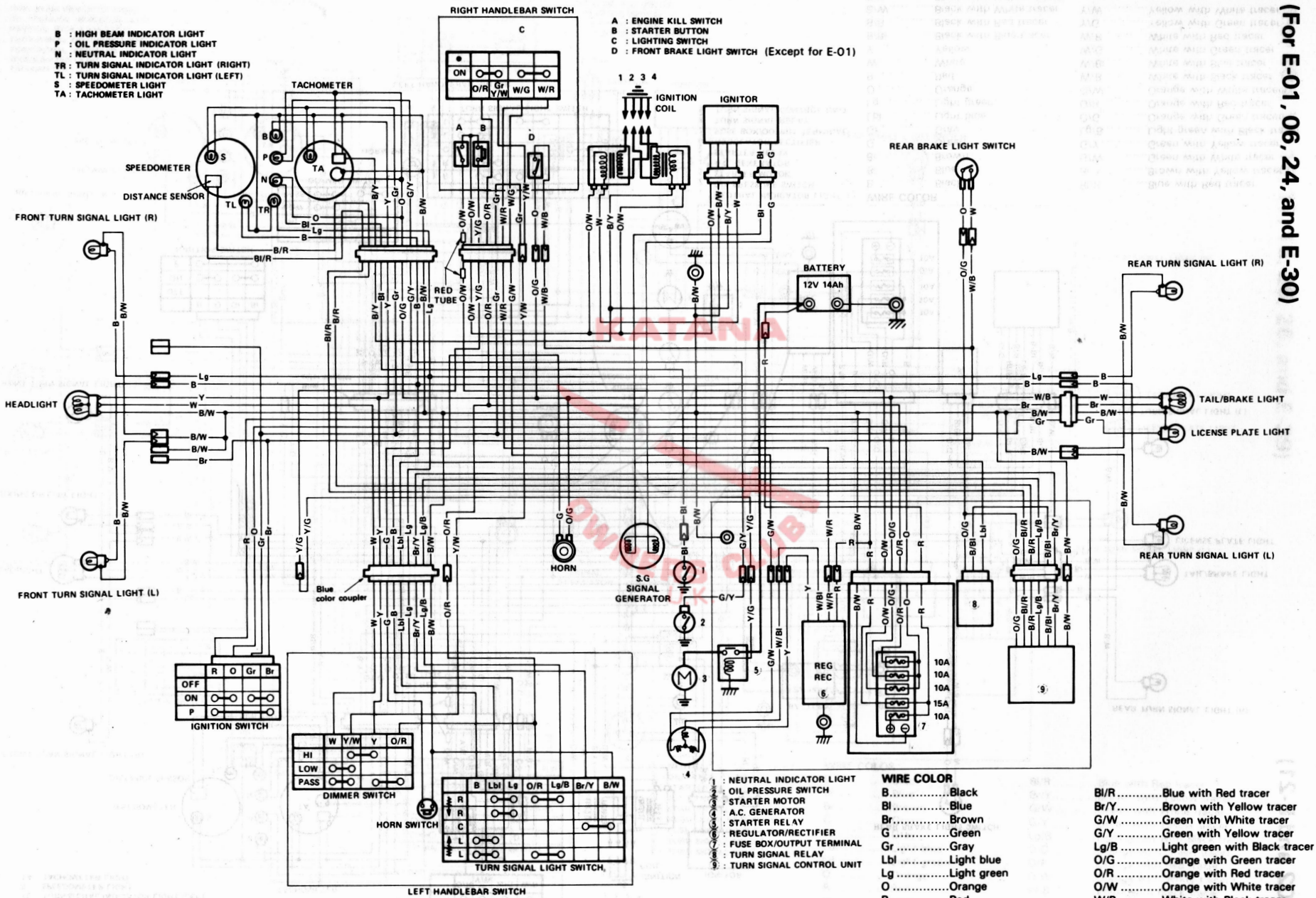
CHASSIS

Item	N·m	kg-m
Disc bolt	15-25	1.5-2.5
Front axle nut	36-52	3.6-5.2
*Front axle holder nut	*15-25	*1.5-2.5
Front caliper mounting bolt	25-40	2.5-4.0
Front caliper axle bolt	15-20	1.5-2.0
Brake hose union bolt	20-25	2.0-2.5
Caliper air bleeder	6-9	0.6-0.9
*Front fork damper rod bolt	*20-26	*2.0-2.6
Front fork lower clamp bolt	15-25	1.5-2.5
Front fork upper clamp bolt	20-30	2.0-3.0
Front fork cap bolt	15-30	1.5-3.0
*Modulator air bleeder	*6-9	*0.6-0.9
*Brake hose union bolt (modulator side)	*20-25	*2.0-2.5
*Modulator plunger mounting bolt	*4-5	*0.4-0.5
*Modulator valve mounting bolt	*6-8	*0.6-0.8
Steering stem nut	40-50	4.0-5.0
Steering stem clamp bolt	15-25	1.5-2.5
*Steering stem head bolt	*20-30	*2.0-3.0
Handlebar clamp bolt	8-12	0.8-1.2
Front master cylinder clamp bolt	5-8	0.5-0.8
Front footrest bolt	27-43	2.7-4.3
Swing arm pivot nut	55-85	5.5-8.5
Brake pedal arm bolt	10-15	1.0-1.5
Rear master cylinder mounting bolt	15-25	1.5-2.5
Rear torque link nut	20-30	2.0-3.0
Rear caliper mounting bolt	25-40	2.5-4.0
Rear caliper bolt	20-30	2.0-3.0
Muffler bracket nut	15-20	1.5-2.0
Rear shock absorber fitting bolt or nut	20-30	2.0-3.0
Rear footrest bolt	27-43	2.7-4.3
Rear sprocket nut	25-40	2.5-4.0
Rear axle nut	85-115	8.5-11.5
Chain adjuster support bolt	18-28	1.8-2.8

*Asterisk indicates the new D model specifications:

WIRING DIAGRAM

(For E-01, 06, 24, and E-30)



B : HIGH BEAM INDICATOR LIGHT
P : OIL PRESSURE INDICATOR LIGHT
N : NEUTRAL INDICATOR LIGHT
TR : TURN SIGNAL INDICATOR LIGHT (RIGHT)
TL : TURN SIGNAL INDICATOR LIGHT (LEFT)
S : SPEEDOMETER LIGHT
TA : TACHOMETER LIGHT

A : ENGINE KILL SWITCH
B : STARTER BUTTON
C : LIGHTING SWITCH
D : FRONT BRAKE LIGHT SWITCH (Except for E-01)

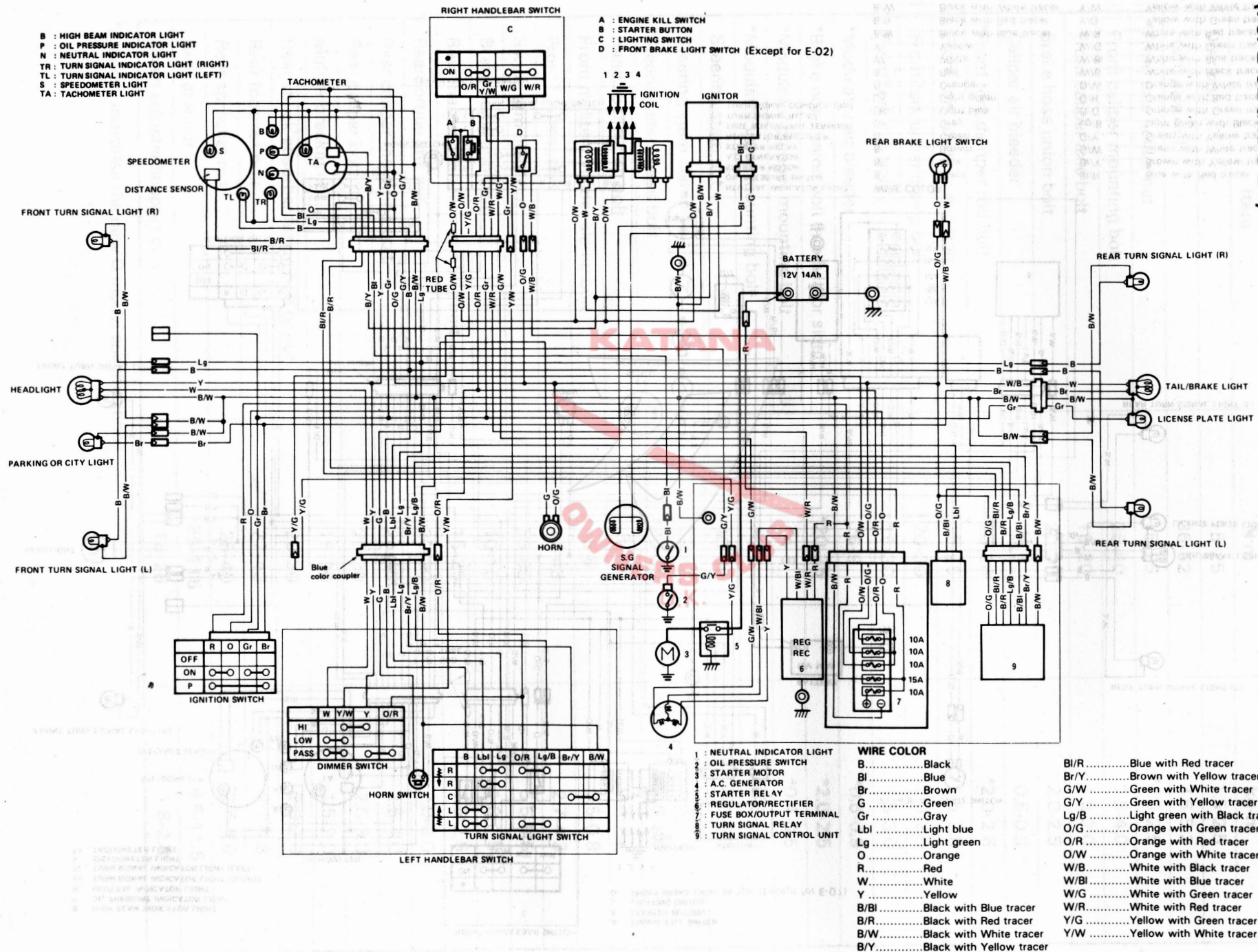
1 : NEUTRAL INDICATOR LIGHT
2 : OIL PRESSURE SWITCH
3 : STARTER MOTOR
4 : A.C. GENERATOR
5 : STARTER RELAY
6 : REGULATOR/RECTIFIER
7 : FUSE BOX/OUTPUT TERMINAL
8 : TURN SIGNAL RELAY
9 : TURN SIGNAL CONTROL UNIT

WIRE COLOR

B.....Black
Bl.....Blue
Br.....Brown
G.....Green
Gr.....Gray
Lbl.....Light blue
Lg.....Light green
O.....Orange
O/W.....Orange with White tracer
W.....White
W/B.....White with Black tracer
W/Bl.....White with Blue tracer
Y.....Yellow
B/Bl.....Black with Blue tracer
B/W.....Black with Red tracer
G/W.....Green with White tracer
G/Y.....Green with Yellow tracer
Lg/B.....Light green with Black tracer
O/G.....Orange with Green tracer
O/R.....Orange with Red tracer
O/W.....Orange with White tracer
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W/G.....White with Green tracer
W/R.....Whits with Red tracer
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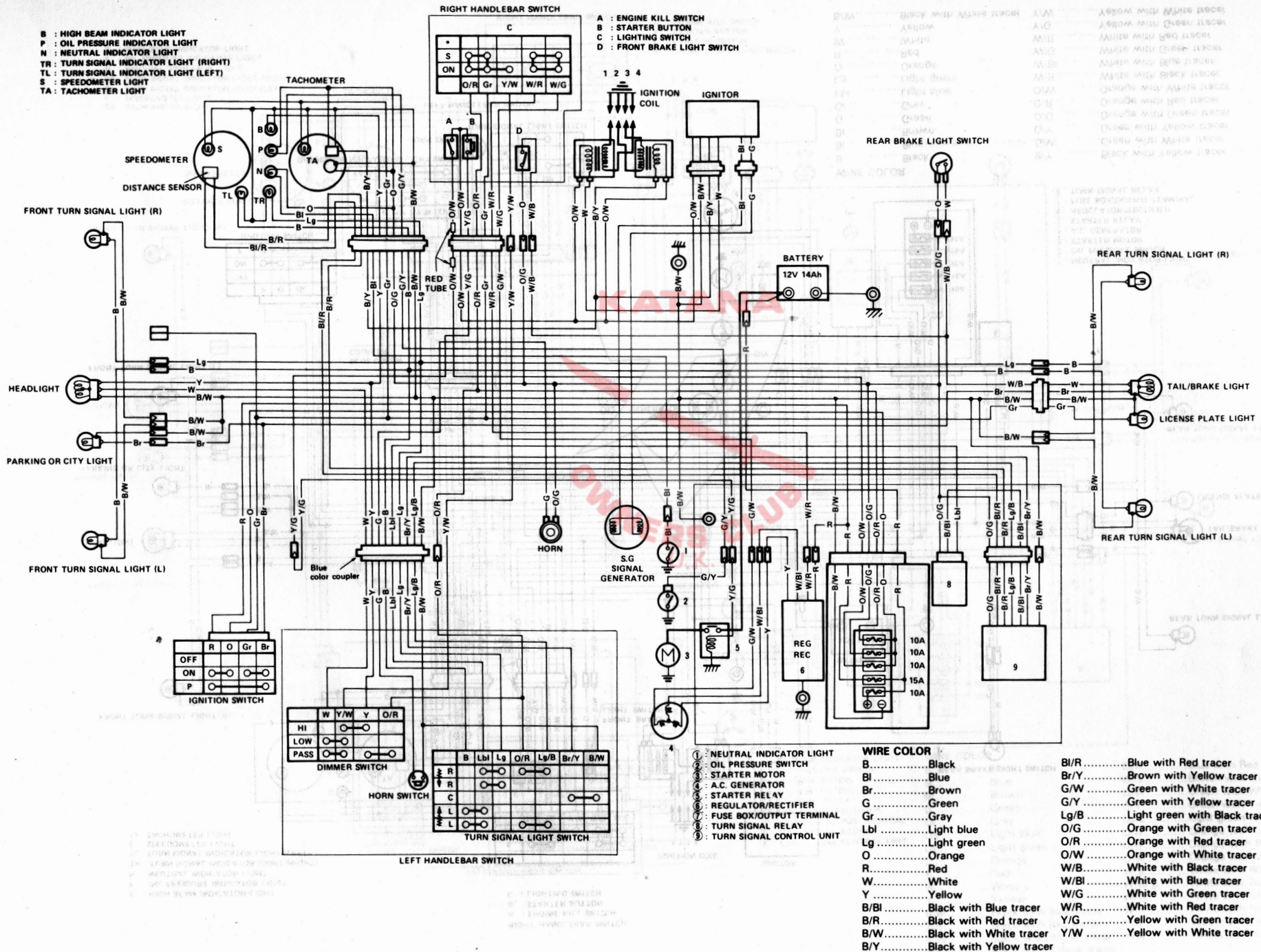
B/R.....Blue with Red tracer
Br/Y.....Brown with Yellow tracer
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(For E-02 and E-21)



MARDAID DIVISION

100-3 Bns-A3-PO-E-30



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A : ENGINE KILL SWITCH
 B : STARTER BUTTON
 C : LIGHTING SWITCH
 D : FRONT BRAKE LIGHT SWITCH

1 2 3 4
 IGNITION COIL
 IGNITOR

REAR BRAKE LIGHT SWITCH

BATTERY
 12V 14Ah

REAR TURN SIGNAL LIGHT (R)

TAIL/BRAKE LIGHT

LICENSE PLATE LIGHT

REAR TURN SIGNAL LIGHT (L)

HORN
 S.G. SIGNAL GENERATOR

REG REC
 10A
 10A
 10A
 15A
 10A

IGNITION SWITCH
 OFF R O Gr Br
 ON
 P

DIMMER SWITCH
 HI W Y/W Y O/R
 LOW
 PASS

HORN SWITCH

TURN SIGNAL LIGHT SWITCH
 B B/Lh Lg O/R Lg/B Br/Y B/W
 R
 L

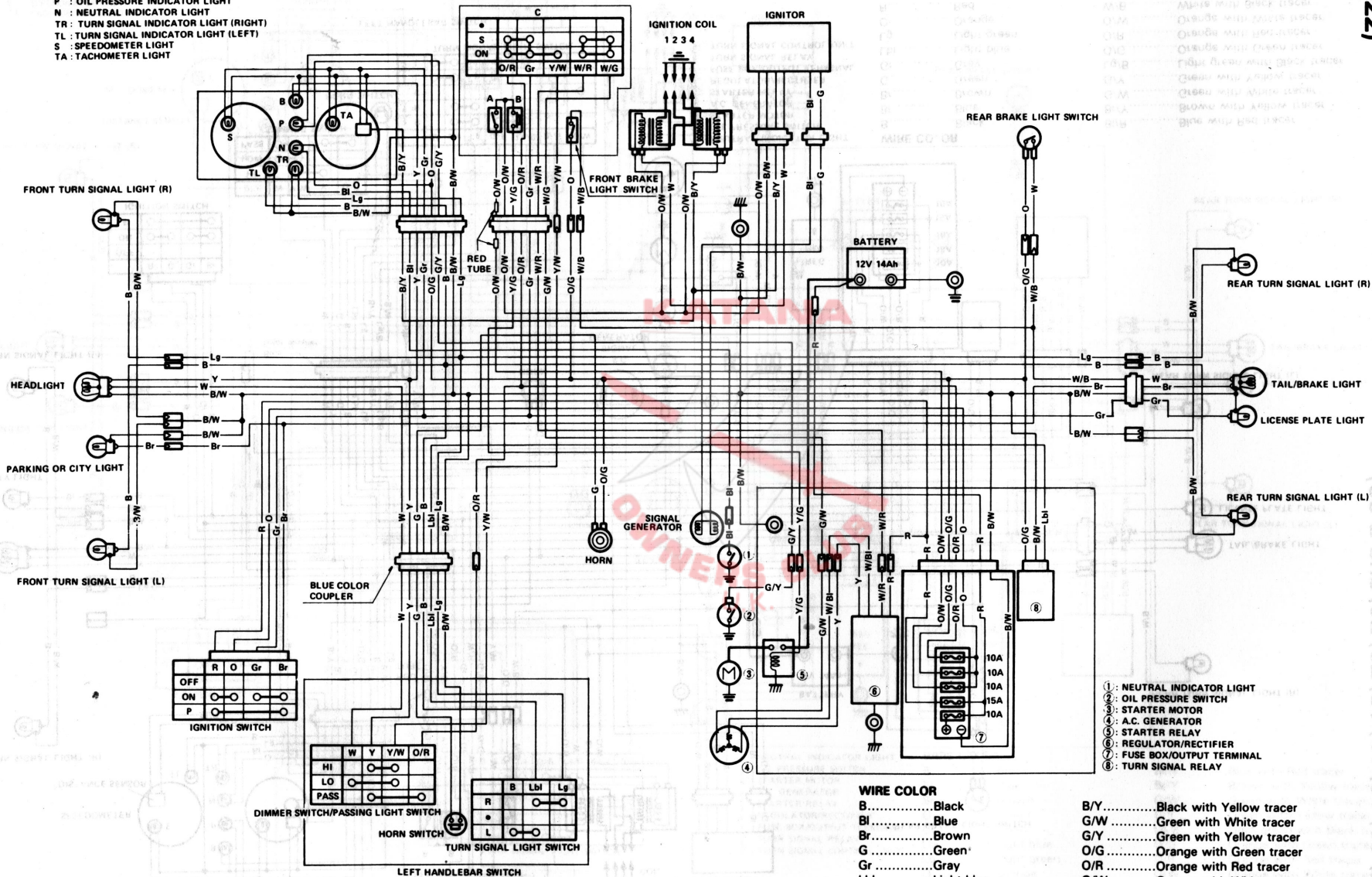
① : NEUTRAL INDICATOR LIGHT
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 ④ : A.C. GENERATOR
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 O/G.....Orange with Green tracer
 O/R.....Orange with Red tracer
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 W/G.....White with Green tracer
 W/R.....White with Red tracer
 Y/G.....Yellow with Green tracer
 Y/W.....Yellow with White tracer

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- N : NEUTRAL INDICATOR LIGHT
- TR : TURN SIGNAL INDICATOR LIGHT (RIGHT)
- TL : TURN SIGNAL INDICATOR LIGHT (LEFT)
- S : SPEEDOMETER LIGHT
- TA : TACHOMETER LIGHT

- RIGHT HANDLEBAR SWITCH**
- A : ENGINE KILL SWITCH
 - B : STARTER BUTTON
 - C : LIGHTING SWITCH



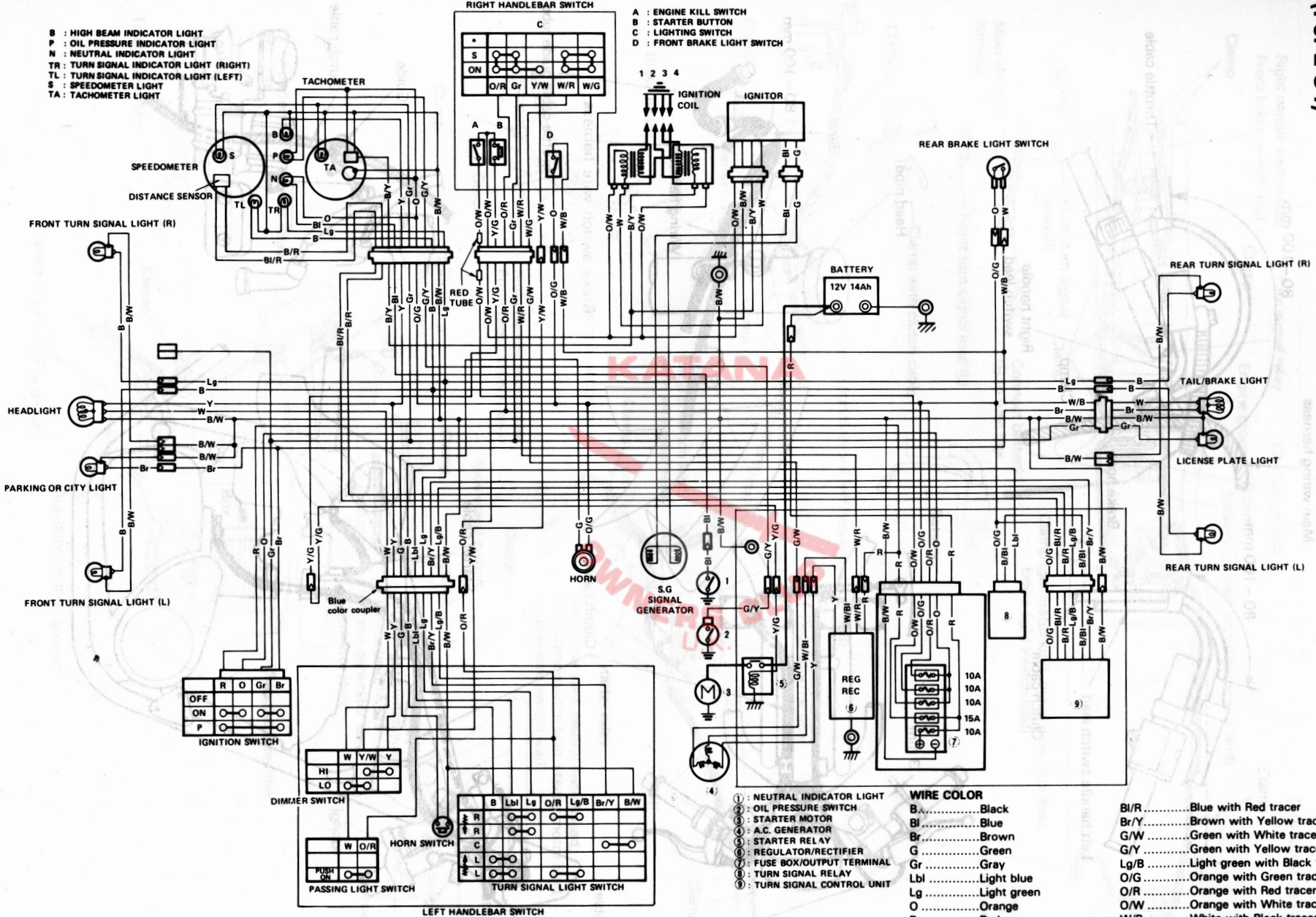
- ① : NEUTRAL INDICATOR LIGHT
- ② : OIL PRESSURE SWITCH
- ③ : STARTER MOTOR
- ④ : A.C. GENERATOR
- ⑤ : STARTER RELAY
- ⑥ : REGULATOR/RECTIFIER
- ⑦ : FUSE BOX/OUTPUT TERMINAL
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A : ENGINE KILL SWITCH
 B : STARTER BUTTON
 C : LIGHTING SWITCH
 D : FRONT BRAKE LIGHT SWITCH



- ① : NEUTRAL INDICATOR LIGHT
- ② : OIL PRESSURE SWITCH
- ③ : STARTER MOTOR
- ④ : A.C. GENERATOR
- ⑤ : STARTER RELAY
- ⑥ : REGULATOR/RECTIFIER
- ⑦ : FUSE BOX/OUTPUT TERMINAL
- ⑧ : TURN SIGNAL RELAY
- ⑨ : TURN SIGNAL CONTROL UNIT

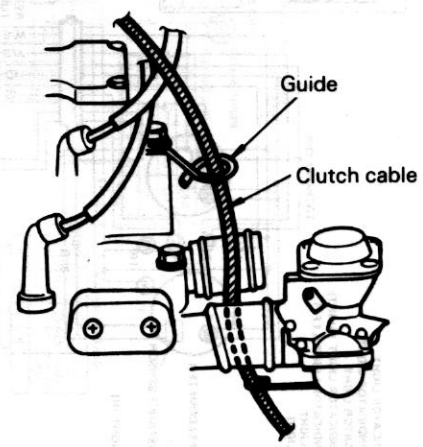
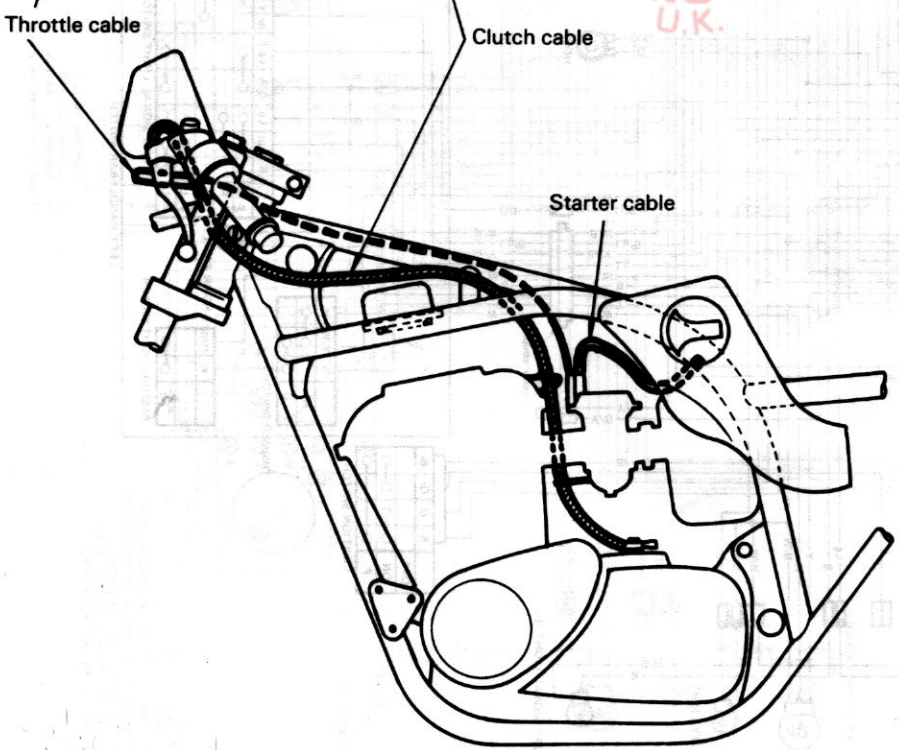
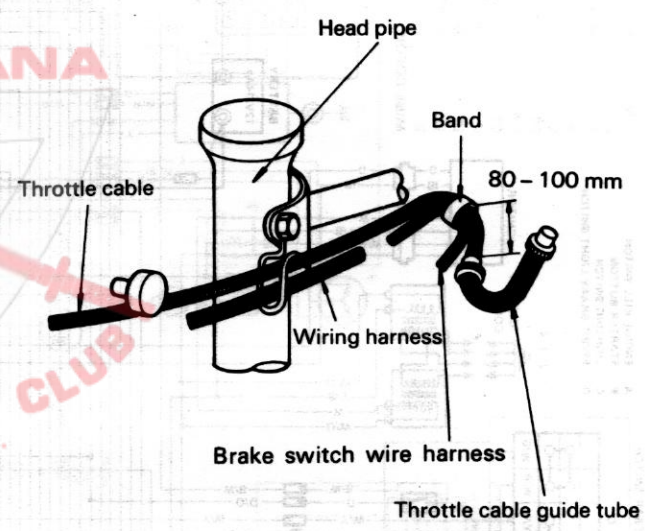
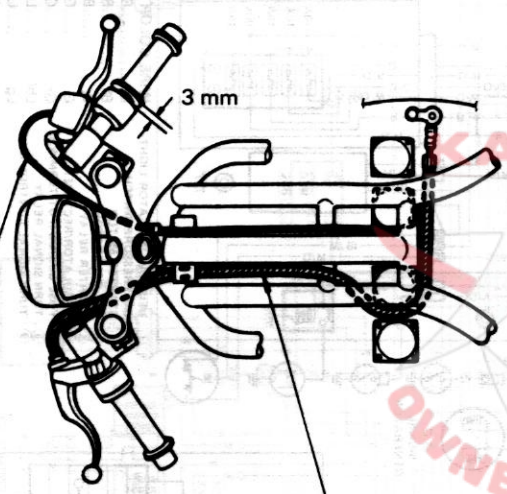
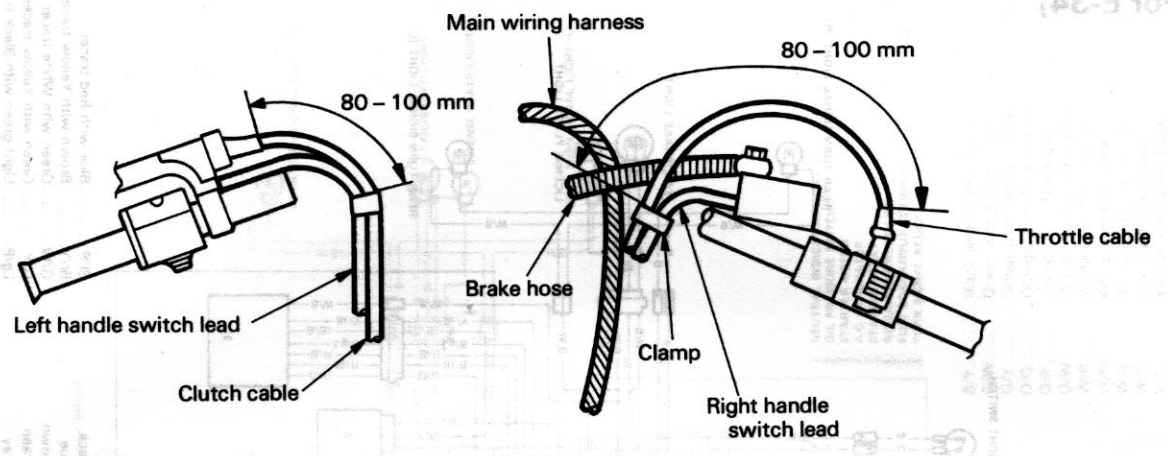
WIRE COLOR

B.....	Black
Bl.....	Blue
Br.....	Brown
Br/Y.....	Brown with Yellow tracer
G.....	Green
G/Y.....	Green with Yellow tracer
Lg/B.....	Light green with Black tracer
O/G.....	Orange with Green tracer
O/R.....	Orange with Red tracer
O/W.....	Orange with White tracer
R.....	Red
W.....	White
W/B.....	White with Black tracer
W/Bl.....	White with Blue tracer
W/G.....	White with Green tracer
W/R.....	White with Red tracer
Y.....	Yellow
B/Bl.....	Black with Blue tracer
B/R.....	Black with Red tracer
B/W.....	Black with White tracer
B/Y.....	Black with Yellow tracer

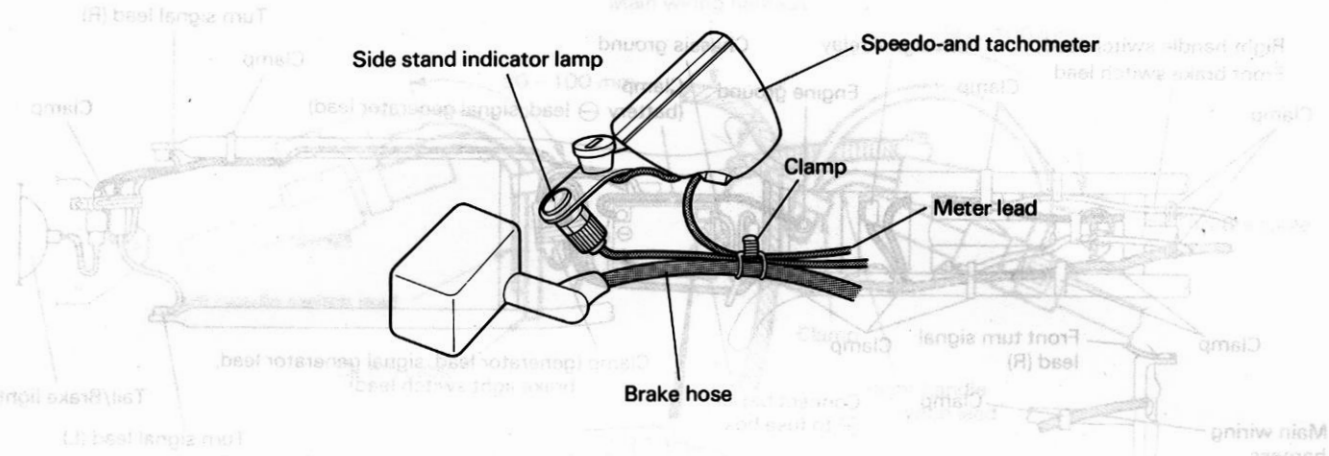
Bl/R.....	Blue with Red tracer
Br/Y.....	Brown with Yellow tracer
G/Y.....	Green with Yellow tracer
Lg/B.....	Light green with Black tracer
O/G.....	Orange with Green tracer
O/R.....	Orange with Red tracer
O/W.....	Orange with White tracer
W/B.....	White with Black tracer
W/Bl.....	White with Blue tracer
W/G.....	White with Green tracer
W/R.....	White with Red tracer
Y/G.....	Yellow with Green tracer
Y/W.....	Yellow with White tracer

CABLE ROUTING

(For E-34)

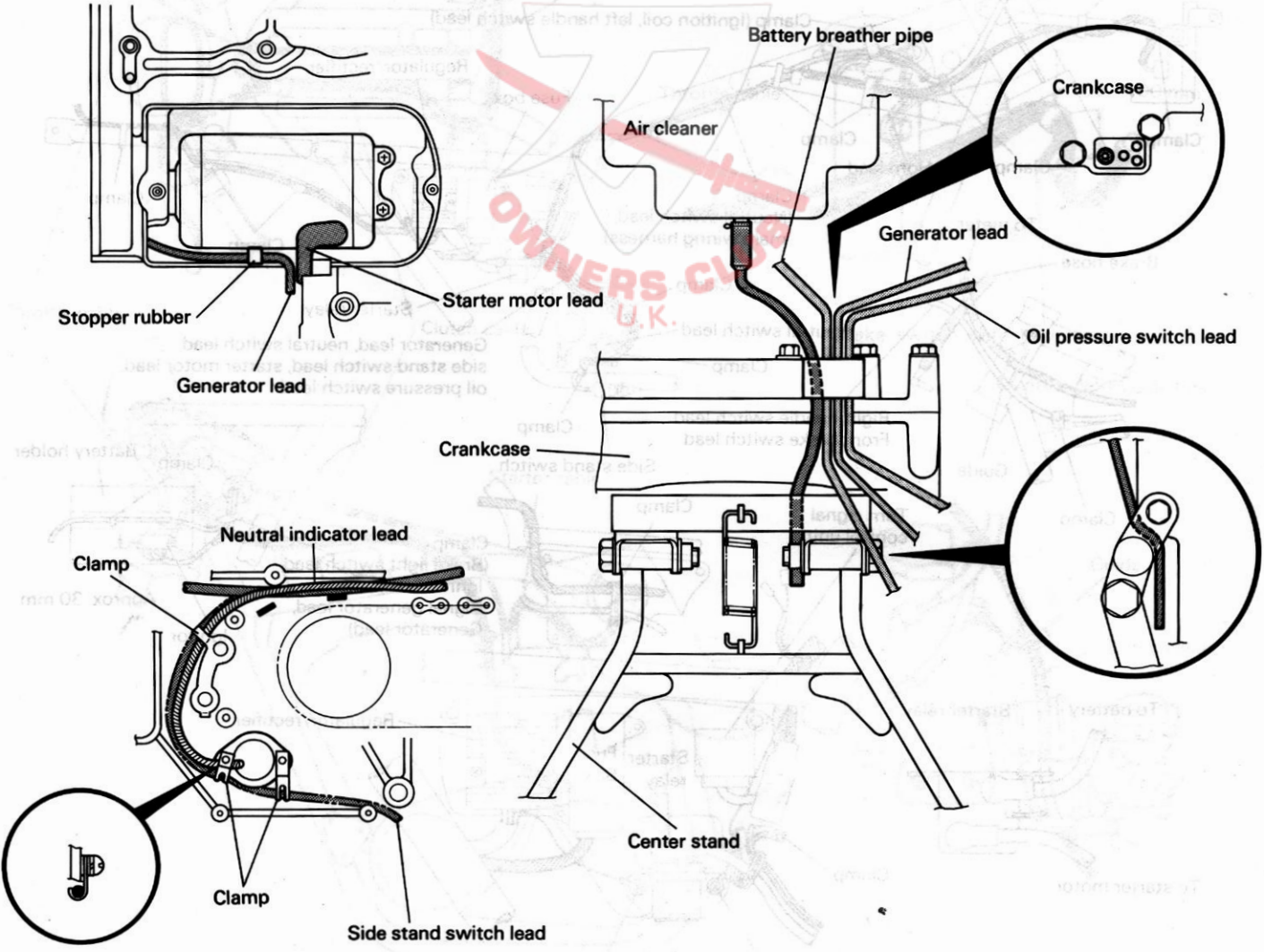


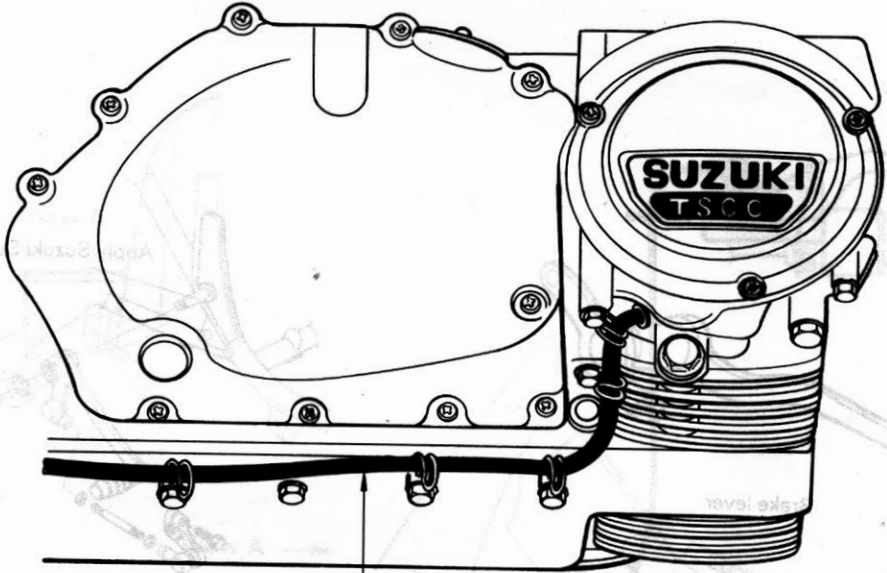
KATANA
OWNERS CLUB
U.K.



KATANA

OWNERS CLUB U.K.

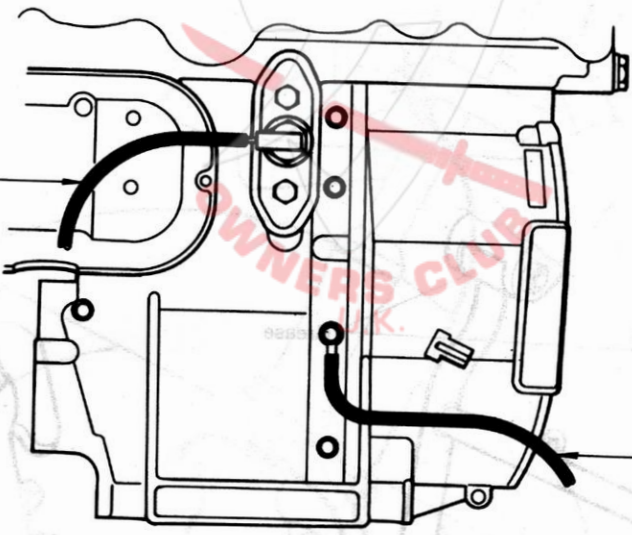




Signal generator lead wire

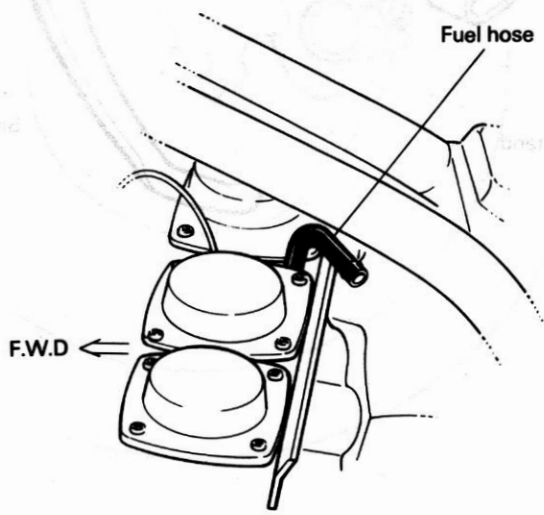
KATANA

Oil pressure switch lead wire



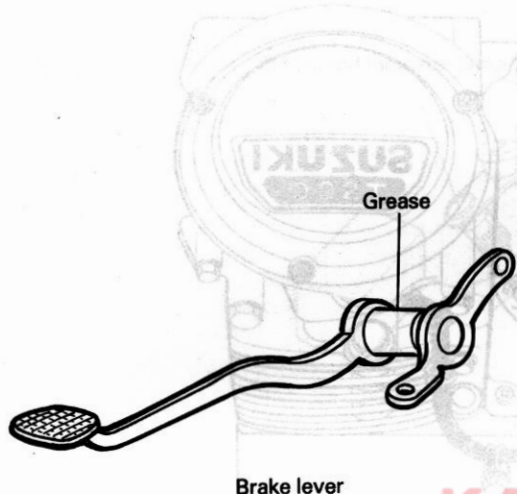
Battery ground

Fuel hose

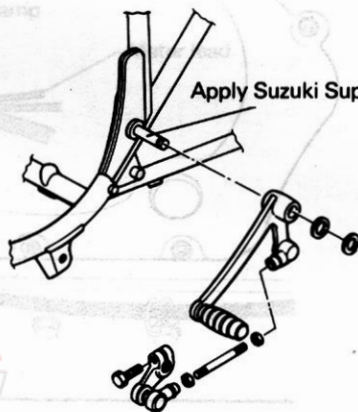


F.W.D

GREASING POINT

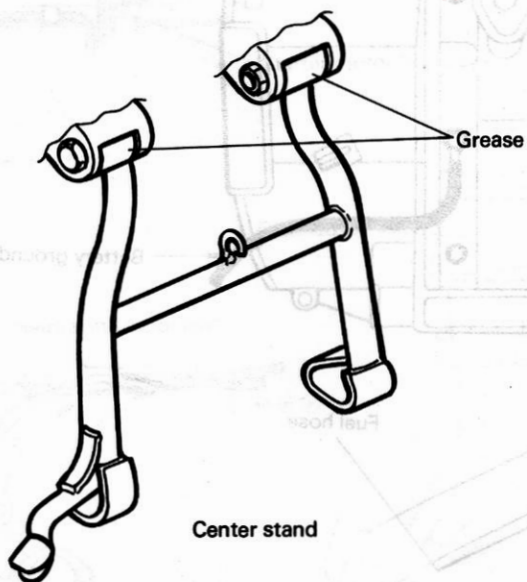


Brake lever



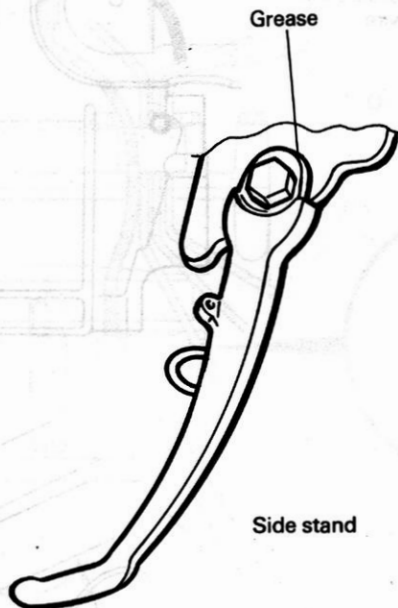
Apply Suzuki Super Grease "A"

Gearshift lever



Grease

Center stand



Grease

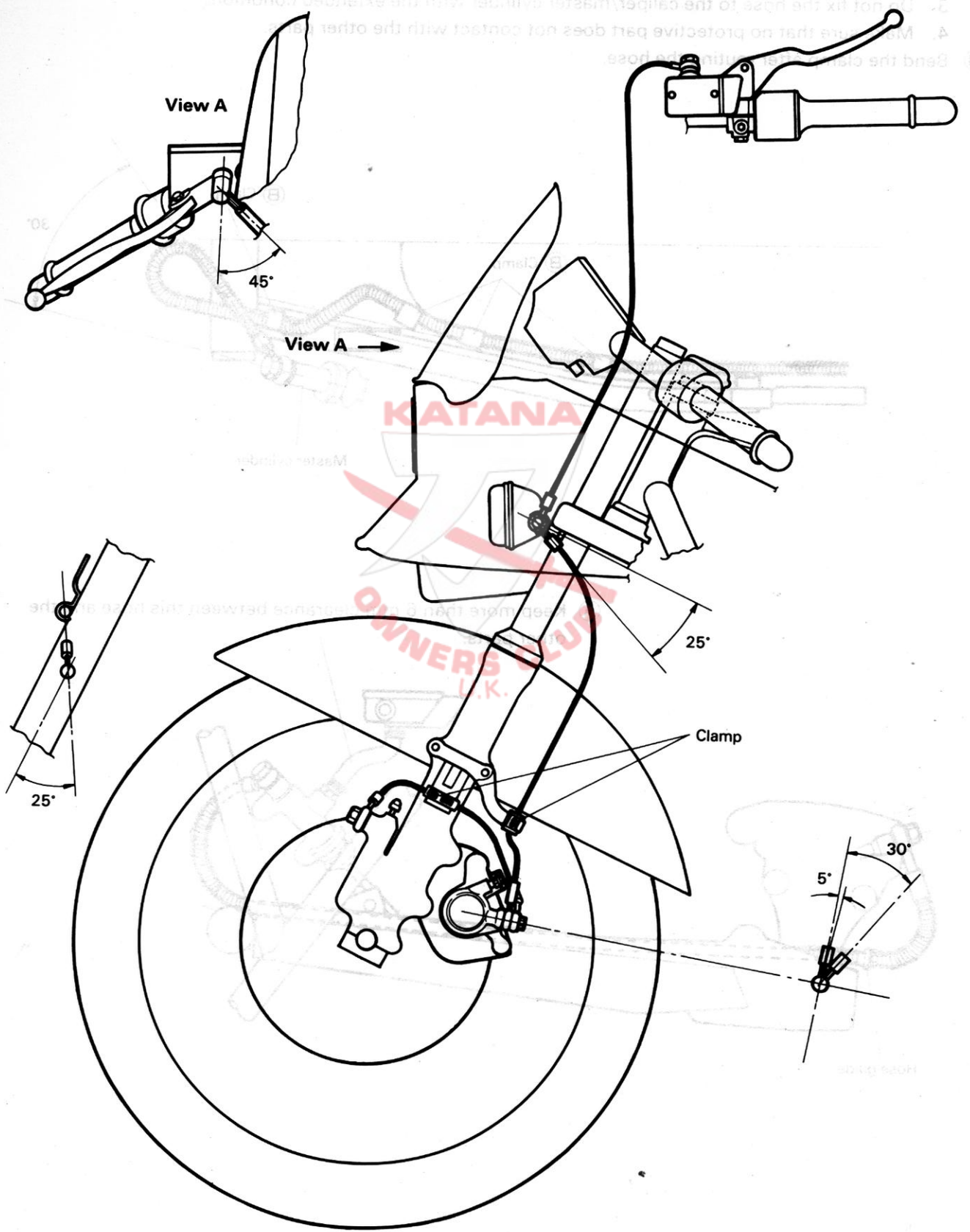
Side stand

KATANA

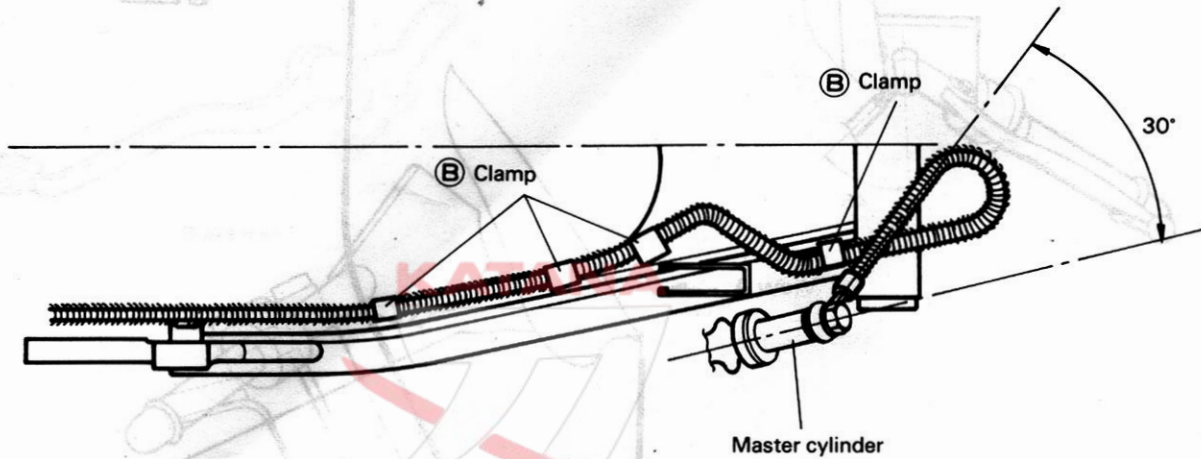
OWNERS CLUB
U.K.

BRAKE HOSE ROUTING

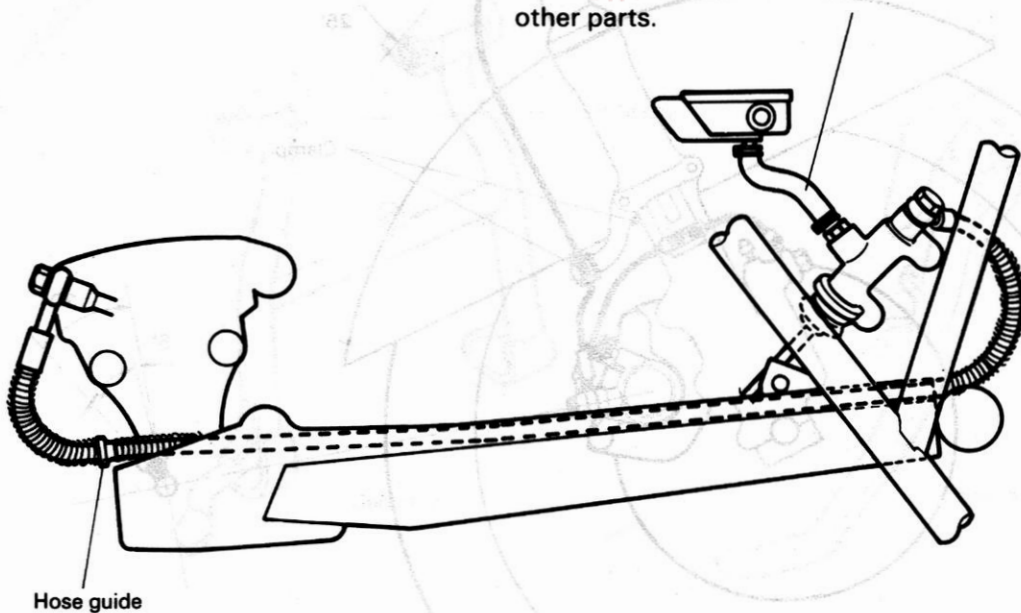
- A. Turning radius of the brake hose should be more than 30 mm at the center of brake hose.
- B. Hose winding should be less than 18" at the length of 300 mm.
- C. Do not fix the hose to the caliper/master cylinder with the extended condition.
- D. Make sure that no protective part does not contact with the other part of the brake hose.
- E. Bend the clear plastic hose.



- Ⓐ 1. Turning radius of the brake hose should be more than 30 mm at the center of brake hose.
 2. Hose winding should be less than 15° at the length of 300 mm.
 3. Do not fix the hose to the caliper/master cylinder with the extended condition.
 4. Make sure that no protective part does not contact with the other parts.
- Ⓑ Bend the clamp after routing the hose.



- Ⓐ Keep more than 6 mm clearance between this hose and the other parts.



SUZUKI MOTOR CO., LTD.



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