

# LT250RJ ('88-MODEL)

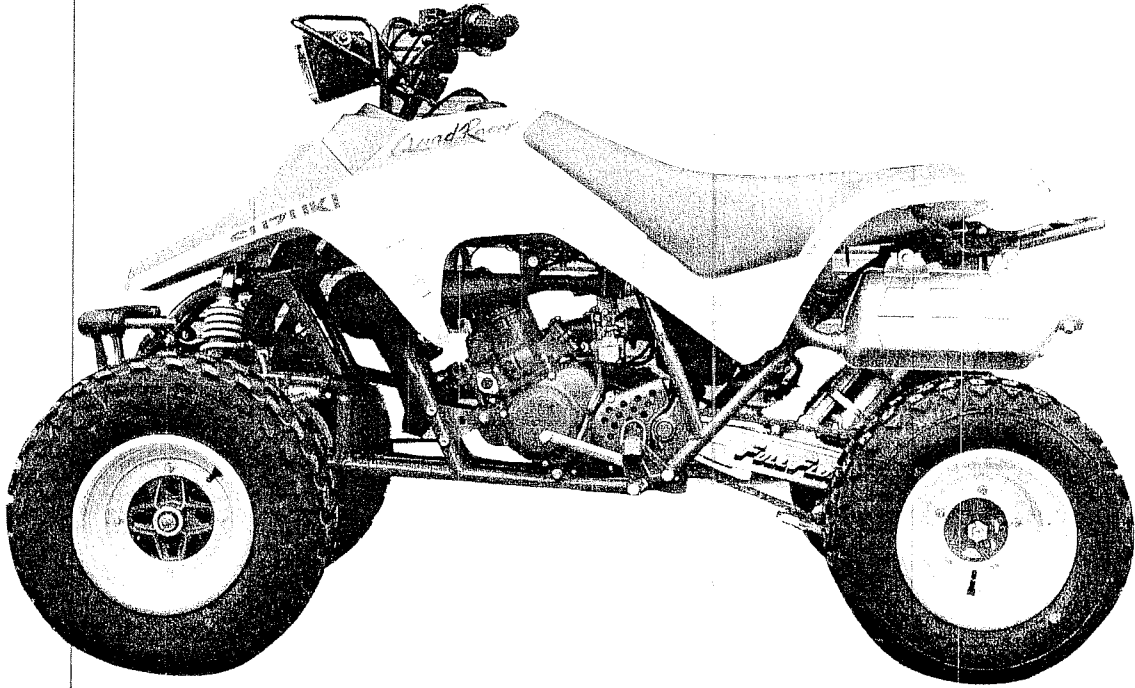
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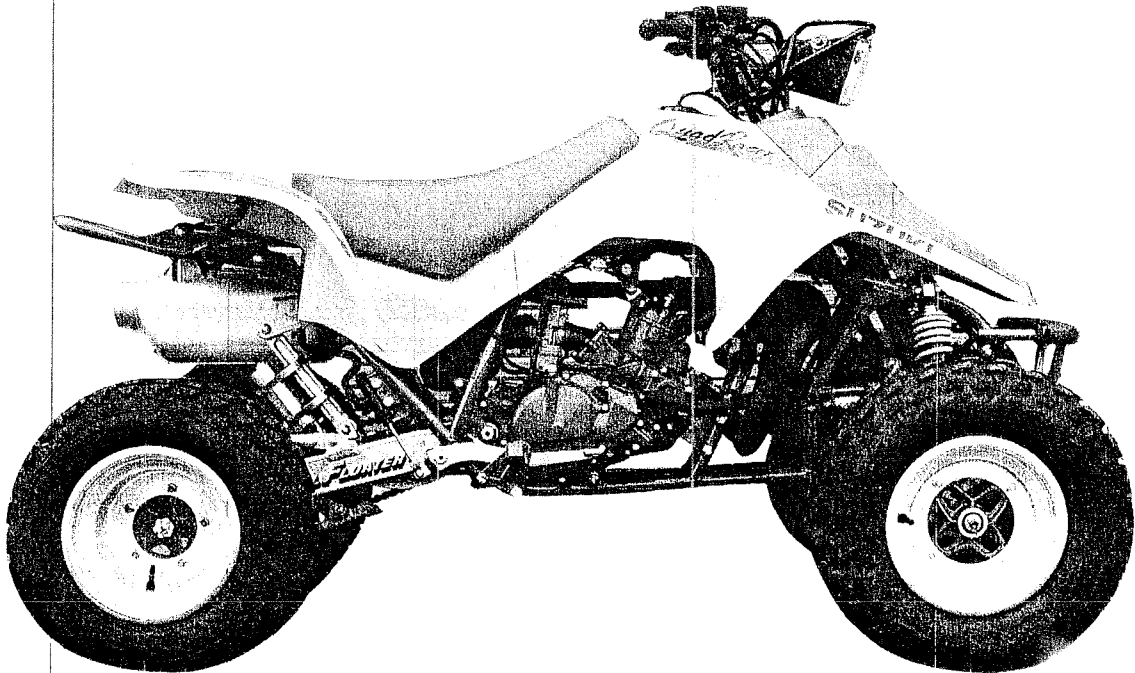
### NOTE:

- Any differences in service data and service specifications with those that apply to the LT250RH model are clearly indicated with an asterisk (\*).
- Please refer to the sections 1 through 8 for details which are not given in this section.

# MODEL LT250RJ



LEFT SIDE



RIGHT SIDE

# SPECIFICATIONS

## DIMENSIONS AND DRY MASS

Overall length	1 830 mm (72.0 in)
Overall width	1 135 mm (44.7 in)
Overall height	1 125 mm (44.3 in)
Wheelbase	1 280 mm (50.4 in)
Front track	960 mm (37.8 in)
Rear track	850 mm (33.5 in)
Seat height	780 mm (30.7 in)
Ground clearance	125 mm ( 4.9 in)
Dry mass	147 kg (324 lbs)

## ENGINE

Type	Two-stroke, water-cooled, SAEC
Number of cylinders	1
Bore	67.0 mm (2.638 in)
Stroke	70.0 mm (2.756 in)
Piston displacement	246 cm <sup>3</sup> (15.0 cu. in)
Compression ratio	8.0 : 1
Carburetor	MIKUNI TM34SS, Single
Air cleaner	Polyurethane foam element
Starter system	Primary kick
Lubrication system	Fuel and oil premixture of 20 : 1

## TRANSMISSION

Clutch	Wet multi-plate type
Transmission	6-speed constant mesh
Gearshift pattern	1-down, 5 up
Primary reduction	2.681 (59/22)
Final reduction	3.500 (42/12)
Gear ratios, Low	2.384 (31/13)
2nd	1.785 (25/14)
3rd	1.437 (23/16)
4th	1.166 (21/18)
5th	0.950 (19/20)
Top	0.818 (18/22)
*Drive chain	DAIDO D.I.D. 520VS2 or TAKASAGO RK520SMO-Z9, 102 links

## CHASSIS

Front suspension	Double wishbone, spring preload 5-way adjustable, damping force 4-way adjustable
Rear suspension	Full-floating suspension system, spring preload fully adjustable, damping force 4-way adjustable
Steering angle	41° 30' (right & left)
Caster	9° 00'
Trail	40 mm (1.6 in)
Turning radius	3.0 m (9.8 ft)
Front brake	Disc
Rear brake	Disc
Front tire size	AT21 x 7 - 10☆☆
Rear tire size	AT21 x 10 - 10☆

## ELECTRICAL

Ignition type	SUZUKI "PEI"
Ignition timing	6° B.T.D.C. at 1 000 r/min and 11° B.T.D.C. at 9 000 r/min
Spark plug	N.G.K.: B8EGV - E-03, 24 N.G.K.: BR8EV - E-28
Head light	12V 60/55W
Taillight	12V 5W

## CAPACITIES

Fuel tank including reserve	11.5 L (3.0/2.5 US/Imp gal)
reserve	1.1 L (1.2/1.0 US/Imp qt)
Transmission oil	900 ml (30.4/31.7 US/Imp oz)
Coolant	880 ml (0.93/0.77 US/Imp qt)

Specifications are subject to change without notice.

**SERVICE DATA****CYLINDER + PISTON + PISTON RING**

Unit: mm (in)

ITEM	STANDARD		LIMIT
Piston to cylinder clearance	0.080–0.090 ( 0.0031–0.0035 )		0.120 ( 0.0047 )
Cylinder bore	67.000–67.015 ( 2.6378–2.6384 ) Measure at 20 ( 0.8 ) from the top surface		67.050 ( 2.6398 )
Piston diam.	66.915–66.930 ( 2.6344–2.6350 ) Measure at 24 ( 0.9 ) from the skirt end		66.880 ( 2.6331 )
Cylinder distortion	—		0.05 ( 0.002 )
Cylinder head distortion	—		0.05 ( 0.002 )
Piston ring free end gap	1st & 2nd	R Approx. 5.5 ( 0.22 )	4.4 ( 0.17 )
Piston ring end gap	0.20–0.40 ( 0.008–0.016 )		0.85 ( 0.033 )
Piston pin bore	18.002–18.012 ( 0.7087–0.7091 )		18.030 ( 0.7098 )
Piston pin O.D.	17.994–18.000 ( 0.7084–0.7087 )		17.980 ( 0.7079 )

**CONROD + CRANKSHAFT**

Unit: mm (in)

ITEM	STANDARD	LIMIT
Conrod small end I.D.	23.003–23.011 ( 0.9056–0.9059 )	23.040 ( 0.9071 )
Crank web to web width	56.0 ± 0.1 ( 2.205 ± 0.004 )	—
Crankshaft runout	—	0.05 ( 0.002 )

**EXHAUST VALVE**

ITEM	STANDARD
Closing r/min.	Approx. 5 500 r/min.
Opening r/min.	Approx. 6 000 r/min.

**CLUTCH**

Unit: mm (in)

ITEM	STANDARD	LIMIT
Clutch cable play	2–3 ( 0.08–0.12 )	—
Drive plate thickness	2.45–2.75 ( 0.096–0.108 )	2.15 ( 0.085 )
Drive plate claw width	15.8–16.0 ( 0.62–0.63 )	15.0 ( 0.59 )
Driven plate distortion	—	0.10 ( 0.004 )
Clutch spring free length	—	29.8 ( 1.17 )

**RADIATOR**

ITEM	STANDARD	LIMIT
Radiator cap valve opening pressure	110 ± 15 kPa ( 1.1 ± 0.15 kg/cm <sup>2</sup> , 15.6 ± 2.1 psi )	—

**TRANSMISSION**

Unit: mm (in) Except ratio

ITEM	STANDARD	LIMIT
Primary reduction ratio	2.681 ( 59/22 )	—
Final reduction ratio	3.500 ( 42/12 )	—
Gear ratios	Low	2.384 ( 31/13 )
	2nd	1.785 ( 25/14 )
	3rd	1.437 ( 23/16 )
	4th	1.166 ( 21/18 )
	5th	0.950 ( 19/20 )
	Top	0.818 ( 18/22 )
Shift fork to groove clearance	0.1–0.3 ( 0.004–0.012 )	0.5 ( 0.020 )
Shift fork groove width	5.0–5.1 ( 0.19–0.20 )	—
Shift fork thickness	No.1, No.2 & No.3 4.8–4.9 ( 0.18–0.19 )	—

**DRIVE CHAIN**

Unit: mm (in)

ITEM	STANDARD	LIMIT
Drive chain	Type D.I.D.: 520VS2 TAKASAGO: RK520SMO-Z9	—
	Links 102	—
	20-pitch length	323.9 ( 12.75 )
Drive chain slack	35–40 * ( 1.4–1.6 )	—

**CARBURETOR**

ITEM	SPECIFICATION
Carburetor type	MIKUNI TM34SS
Bore size	34 mm ( 1.3 in )
I.D. No.	01C10
Idle r/min.	1 400 ± 50 r/min
Float height	11.9 ± 1.0 mm ( 0.47 ± 0.04 in )
Main jet (M.J.)	#240 [ SPARE MAIN JETS #200, #220 and #250 ]
Main air jet (M.A.J.)	2.5 mm
Jet needle (J.N.)	6FP63-3rd
Needle jet (N.J.)	R-0
Cut-away (C.A.)	4.0
Pilot jet (P.J.)	#30
By-pass (B.P.)	1.2 mm

ITEM	SPECIFICATION
Pilot outlet (P.O.)	0.8 mm
Air screw (A.S.)	2 turns back
Starter jet (G.S.)	#110
Throttle cable play	0.5–1.0 mm ( 0.02–0.04 in )

**ELECTRICAL**

Unit: mm (in)

ITEM	SPECIFICATION	NOTE
Ignition timing	4° B.T.D.C. at 1 000 r/min.	
	11° B.T.D.C. at 9 500 r/min.	
Spark plug	Type	E-03,24
	Gap	
	Type	E-28
	Gap	
Ignition coil resistance	Primary	Terminal—Ground
	Secondary	Plug cap—Ground
Magneto coil resistance	Lighting	Y/R—B/W
	Pick-up	BI—B/W
	Power source	B/R—B/W
Lighting coil output	Above 12 V at 3 000 r/min. Below 18 V at 8 000 r/min.	
Regulated voltage	13.0–14.0 V at 5 000 r/min.	SU236S-1

**WATTAGE**

Unit: W

ITEM	SPECIFICATION
Headlight	HI
	LO
Taillight	

**BRAKE + WHEEL**

Unit: mm (in)

ITEM	STANDARD	LIMIT
Rear brake pedal height	0–10 ( 0–0.4 )	—
Brake disc thickness	Front	3.0 ( 0.12 )
	Rear	3.5 ( 0.14 )
Brake disc runout	—	0.30 ( 0.012 )
Master cylinder bore	Front	—
	Rear	—

ITEM	STANDARD		LIMIT
Master cylinder piston diam.	Front	12.657–12.684 ( 0.4983–0.4994 )	—
	Rear	12.657–12.684 ( 0.4983–0.4994 )	—
Brake caliper cylinder bore	Front	30.230–30.280 ( 1.1902–1.1921 )	—
	Rear	33.960–34.010 ( 1.3370–1.3390 )	—
Brake caliper piston diam.	Front	30.167–30.200 ( 1.1877–1.1890 )	—
	Rear	33.923–33.928 ( 1.3355–1.3357 )	—
Steering angle	Inside	37°–43°	—
	Outside	24°–30°	—
Turning radius	3.0 m ( 9.8 ft )		—
Toe-in (with 75 kg, 165 lbs)	11–19 ( 0.43–0.75 )		—
Caster	9°00'		—
Tire size	Front	AT21 × 7-10 ☆ ☆	—
	Rear	AT21 × 10-10 ☆	—
Tire tread depth	Front	—	4.0 ( 0.16 )
	Rear	—	4.0 ( 0.16 )
Trail	37.4 ( 1.47 )		—
Wheel axle runout	Rear	—	8.0 ( 0.31 )

## SUSPENSION

Unit: mm (in)

ITEM	STANDARD	LIMIT	NOTE
Front shock absorber spring setting position	3rd position	—	
Rear shock absorber spring pre-set length	232.5 ( 9.2 )	—	
Rear shock absorber damping force adjuster setting position, compression side	2nd position	—	
Rear shock absorber damping force adjuster setting position, extension side	3rd position	—	
Rear shock absorber gas pressure	1 000 kPa, ( 10 kg/cm <sup>2</sup> , 142 psi )		
Front wheel travel	218 ( 8.6 )	—	
Rear wheel travel	211 ( 8.3 )	—	
Swingarm pivot shaft runout	—	0.3 ( 0.01 )	

**TIRE PRESSURE**

LOAD CAPACITY	COLD INFLATION TIRE PRESSURE	FRONT			REAR		
		kPa	kg/cm <sup>2</sup>	psi	kPa	kg/cm <sup>2</sup>	psi
	UP TO 80 kg ( UP TO 175 lbs )	25	0.25	3.6	20	0.20	2.9
	80—120 kg ( 175—265 lbs )	30	0.30	4.4	25	0.35	3.6

**FUEL + OIL + COOLANT**

ITEM	SPECIFICATION	NOTE
Fuel type	Use only unleaded or low-lead type gasoline of at least 85-95 pump octane ( $\frac{R+M}{2}$ method) or 89 octane or higher rated by the Research Method.	E-03, 28
	Gasoline used should be graded 85-95 octane or higher. An unleaded or low-lead type gasoline is recommended.	E-24
Fuel tank including reserve	11.5 L ( 3.0/2.5 US/Imp gal )	
reserve	1.1 L ( 1.2/1.0 US/Imp qt )	
Engine oil type	SUZUKI CCI oil or CCI super	
Fuel and engine oil mixture ratio	20 : 1	
Transmission oil type	SAE 20W/40	
Transmission oil capacity	Change 900 ml ( 30.4/31.7 US/Imp oz )	
	Overhaul 950 ml ( 32.1/33.4 US/Imp oz )	
Coolant type	Use an anti-freeze/coolant compatible with aluminum radiator, mixed with distilled water only, at the ratio of 50 : 50.	
Coolant capacity	880 ml ( 0.93/0.77 US/Imp qt )	
Brake fluid type	SAE J1703, DOT 3 or DOT 4	E-24,28
	DOT 3 or DOT 4	E-03

*NOTE: Symbols described on above "NOTE" space stand for each country as the following.*

*E-03..... USA*

*E-24..... Australia*

*E-28..... Canada*

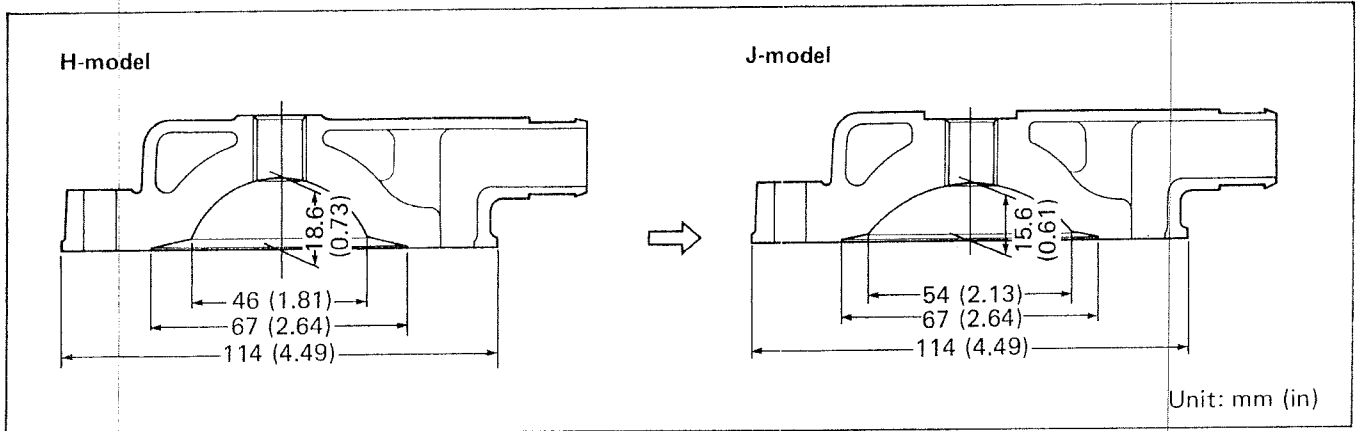


## CHANGES

The following changes have been made with the first production of model: LT250RJ.

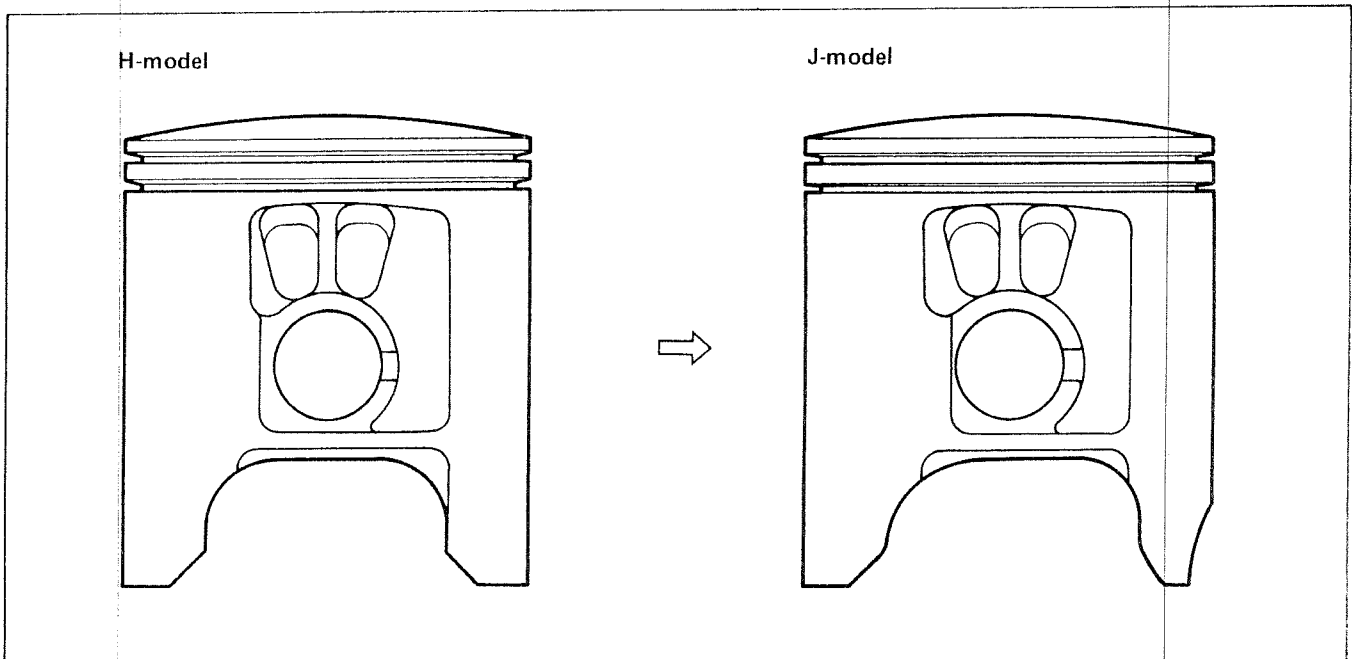
### CYLINDER HEAD

Internal shape of combustion chamber is modified as follows.



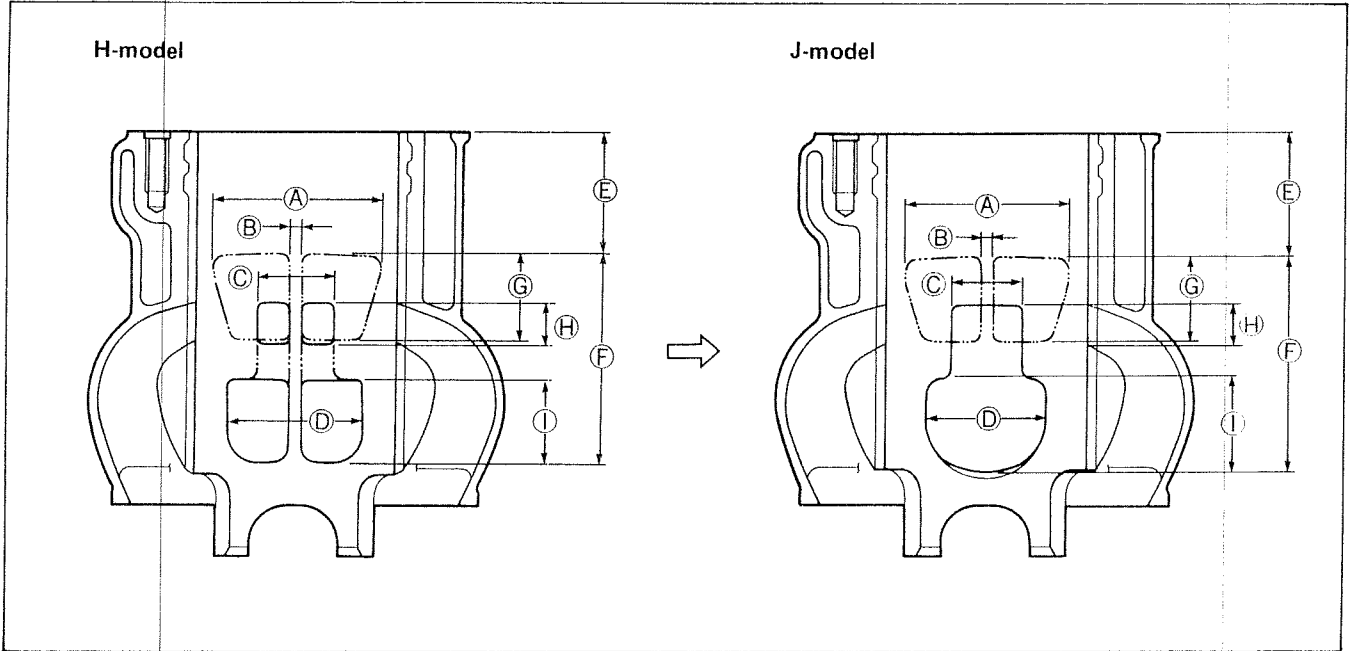
### PISTON

Several parts of shape is modified as follows.



### CYLINDER

Port shape and port timing are modified as follows.

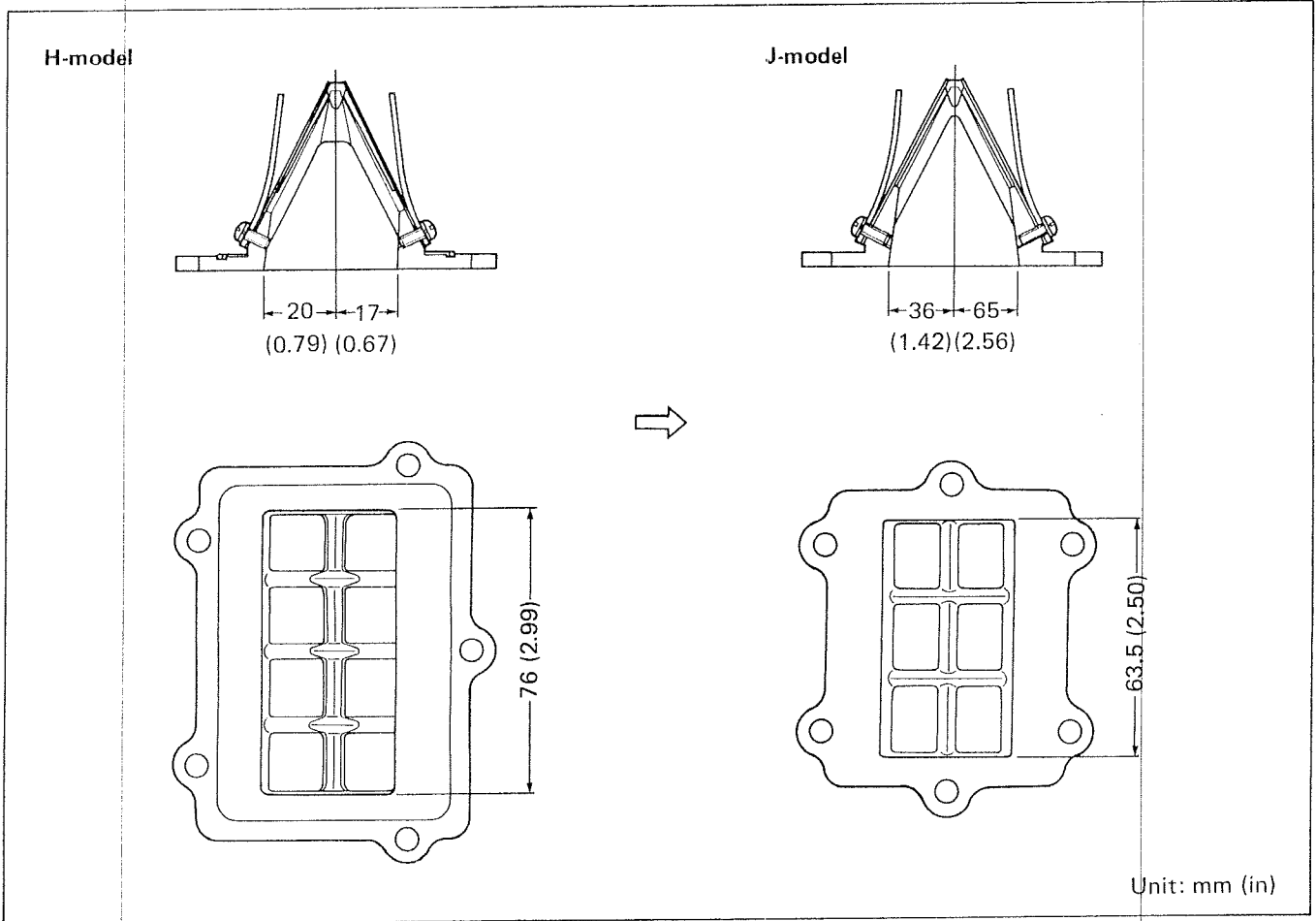


Unit: mm (in)

DIMENSION		
ITEM	H-model	J-model
Ⓐ	56.0 (2.20)	54.0 (2.13)
Ⓑ	4.0 (0.16)	←
Ⓒ	26.0 (1.02)	24.0 (0.94)
Ⓓ	45.0 (1.77)	40.0 (1.57)
Ⓔ	41.5 (1.63)	41.0 (1.61)
Ⓕ	68.5 (2.70)	72.0 (2.83)
Ⓖ	28.5 (1.12)	29.0 (1.14)
Ⓗ	13.5 (0.53)	13.5 (0.53)
Ⓘ	27.0 (1.06)	31.0 (1.22)

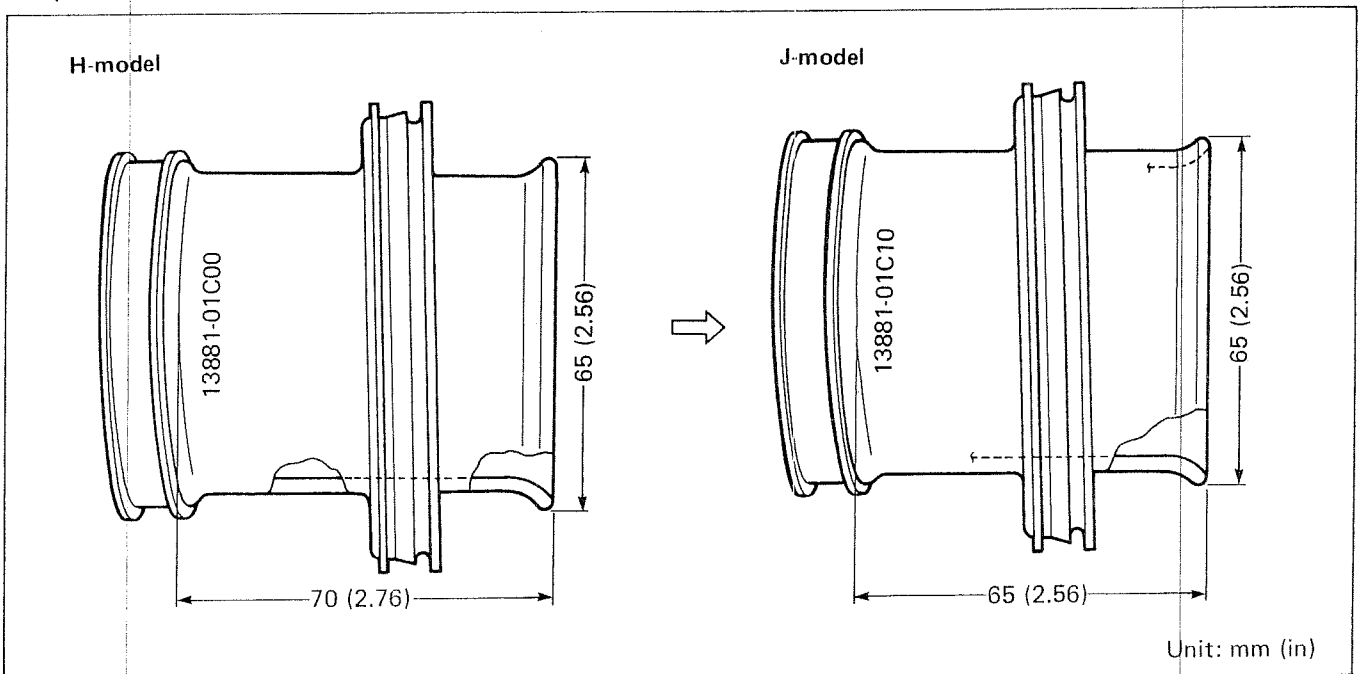
### REED VALVE

Dimension and shape are modified as follows.



### AIR CLEANER OUTLET TUBE

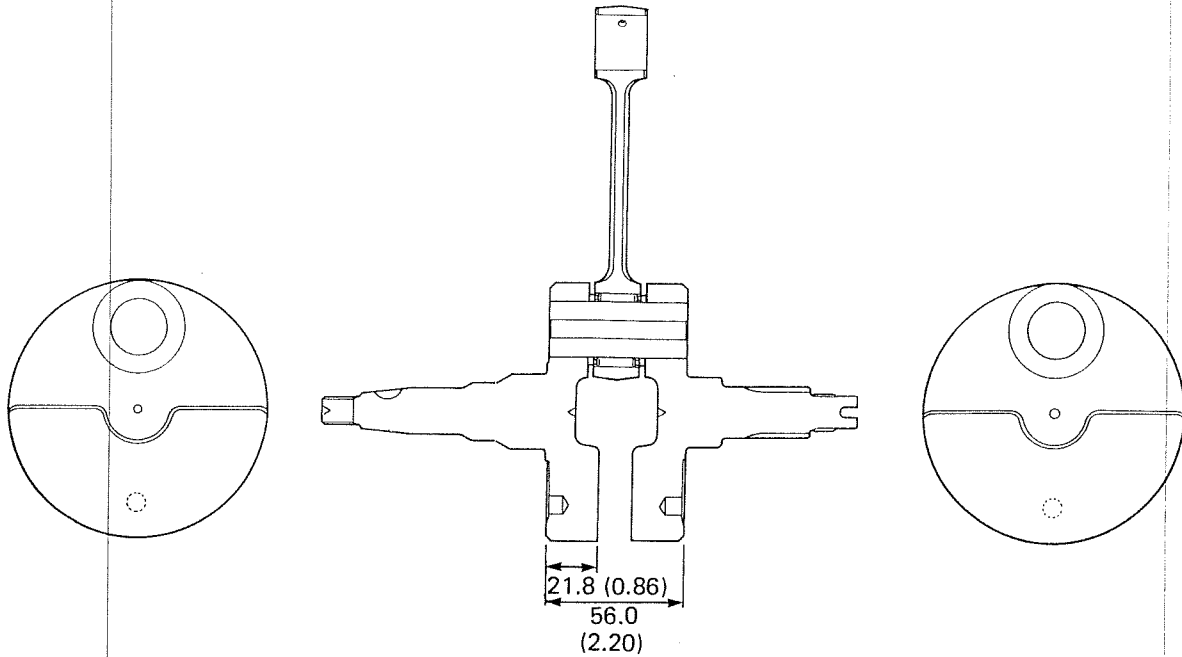
Shape is modified as follows.



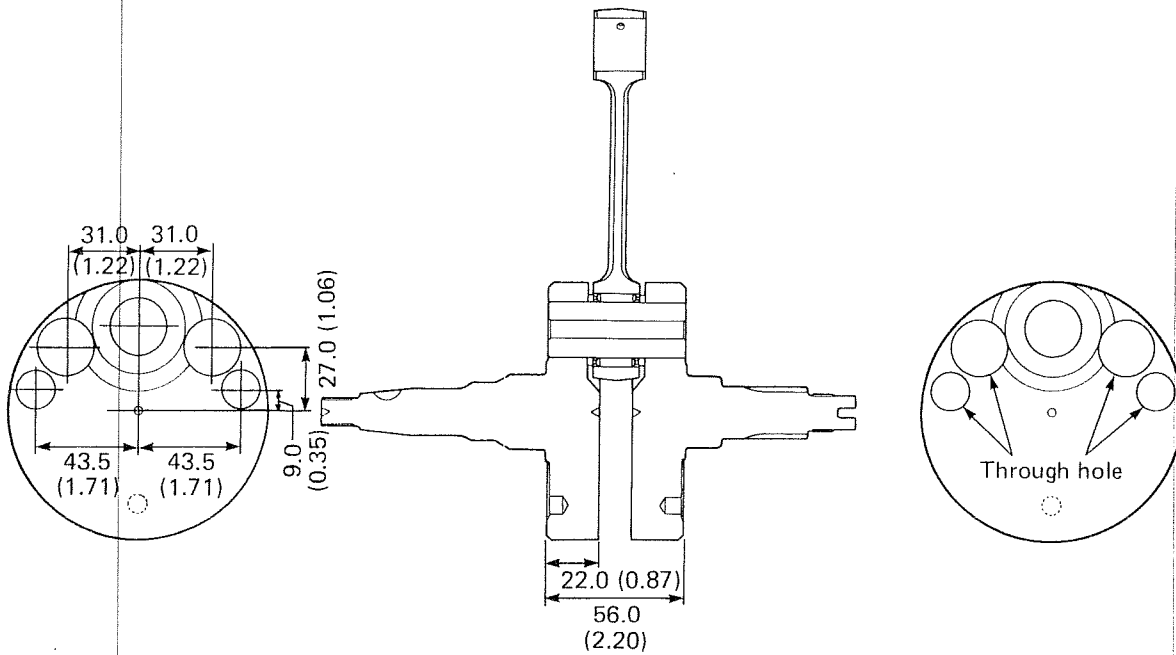
### CRANKSHAFT

Several parts of shape is modified as follows.

H-model



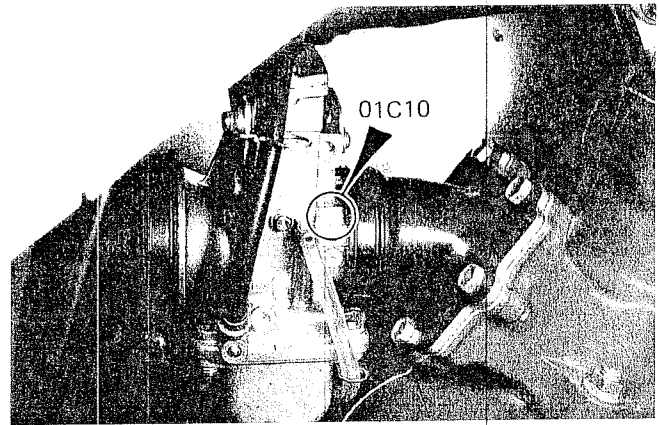
J-model



Unit: mm (in)

### CARBURETOR

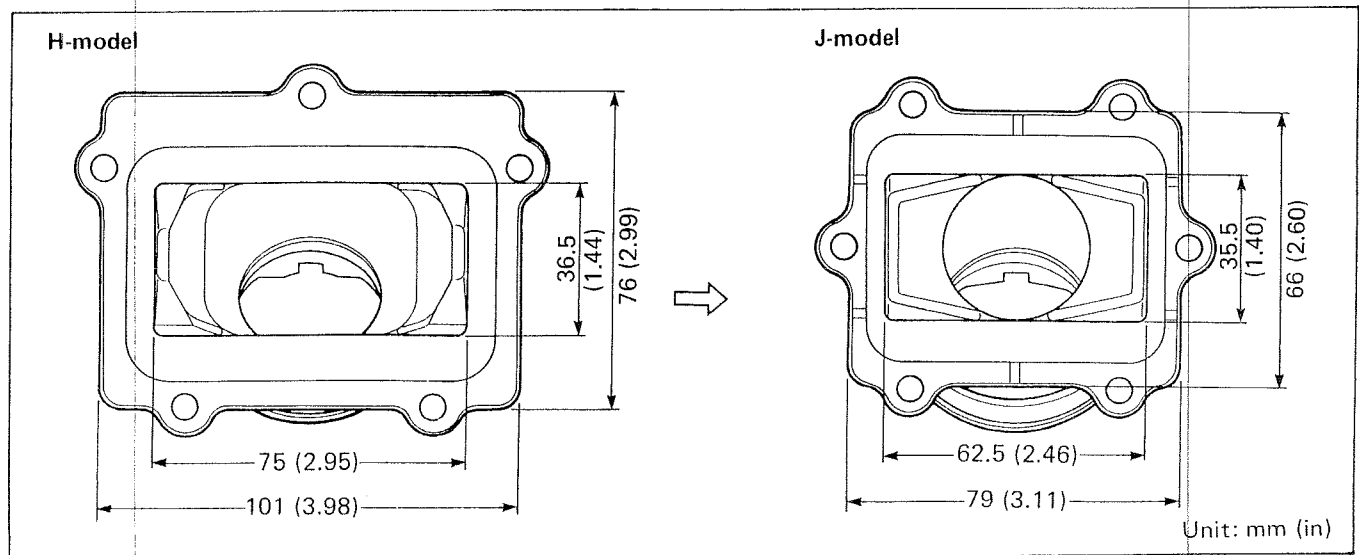
Carburetor jettings are modified as follows.



SPECIFICATION		
ITEM	H-model	J-model
Carburetor type	MIKUNI TM34SS	←
Bore size	34 mm (1.3 in)	←
I.D. No.	01C00	01C10
Idle r/min.	1 400 ± 50 r/min.	←
Float height	11.9 ± 1.0 mm (0.47 ± 0.04 in)	←
Main jet (M.J.)	# 240	←
Main air jet (M.A.J.)	2.5 mm (0.10 in)	←
Jet needle (J.N.)	6FP60-3	6FP63-3
Needle jet (N.J.)	Q - 8	R - 0
Cut-away (C.A.)	4.0	←
Pilot jet (P.J.)	# 37.5	# 30
By-pass (B.P.)	1.2 mm (0.05 in)	←
Pilot outlet (P.O.)	0.8 mm (0.03 in)	←
Air screw (A.S.)	1-½ turns back	2 turns back
Starter jet (G.S.)	# 110	←

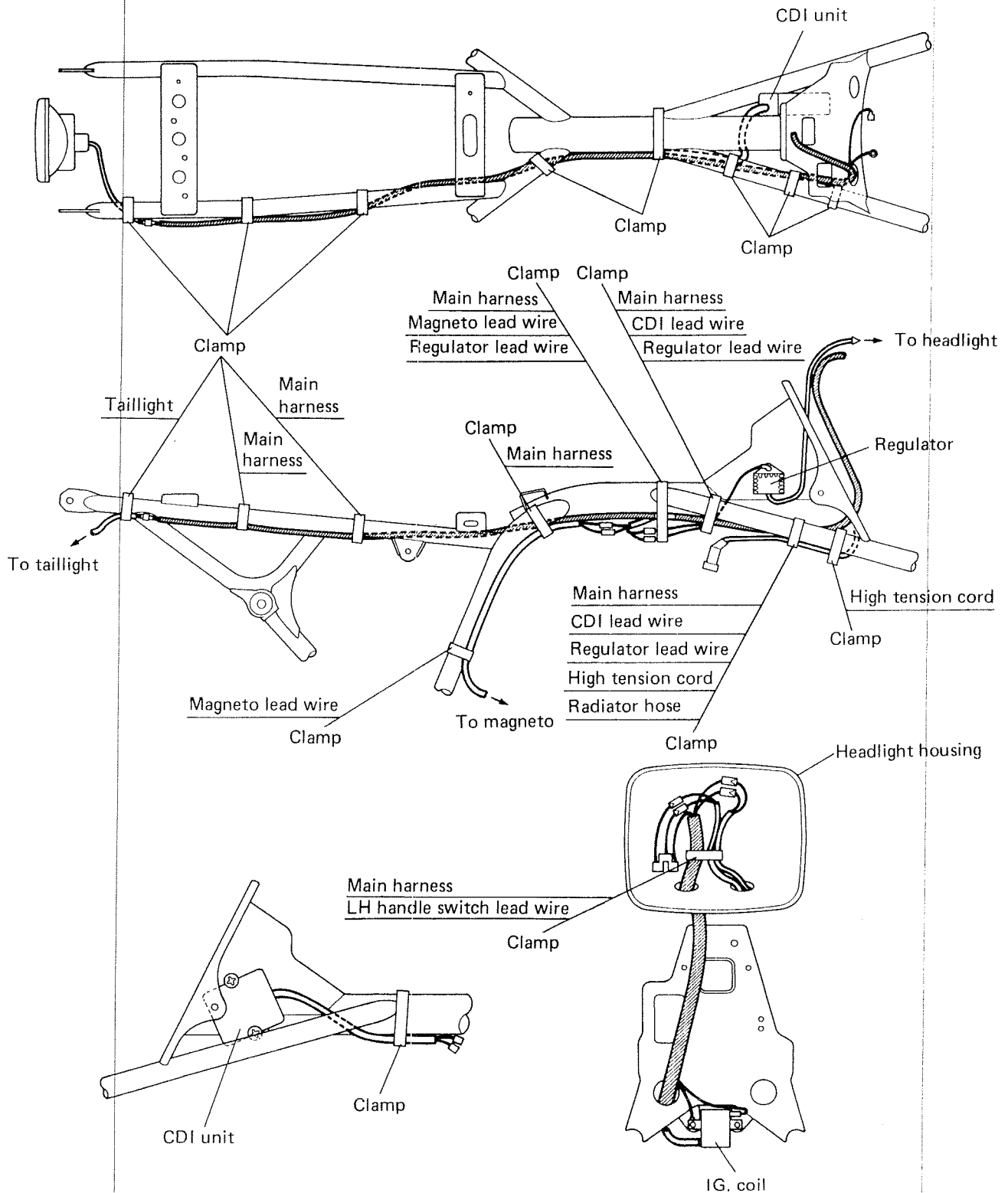
### CARBURETOR INTAKE PIPE

Dimension and shape are modified as follows.

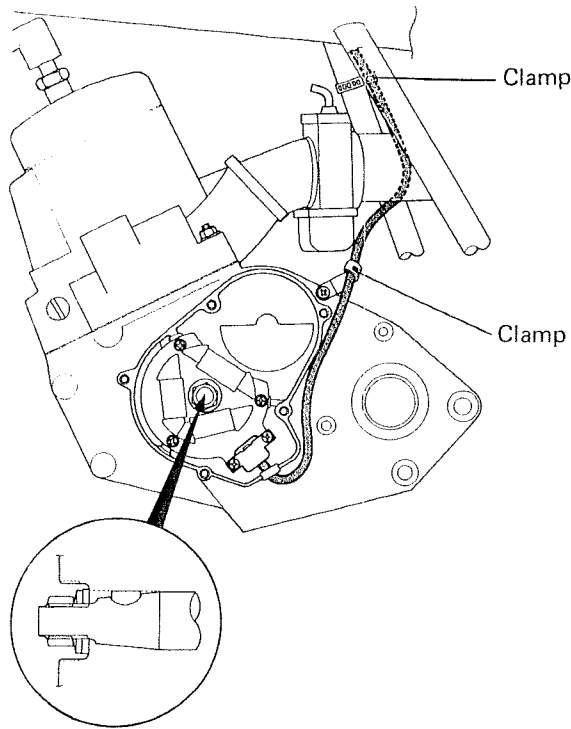


# WIRE, CABLE AND HOSE ROUTING

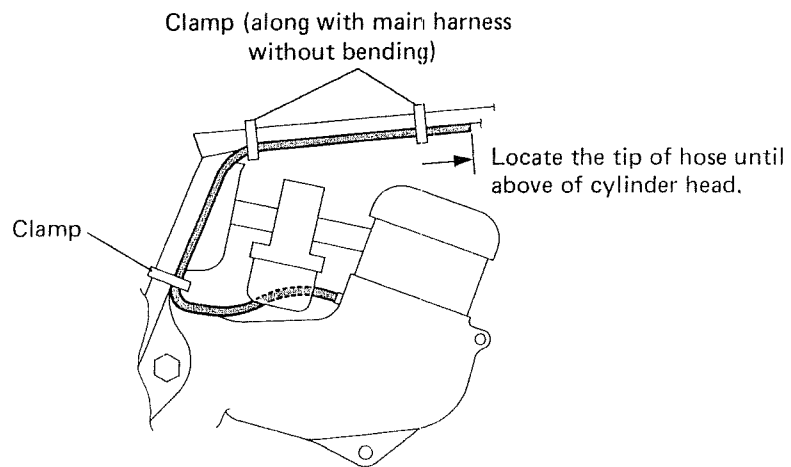
## WIRE HARNESS



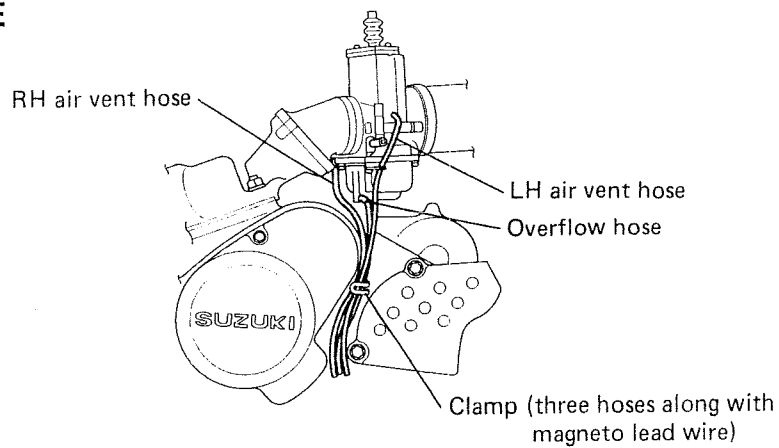
### MAGNETO LEAD WIRE



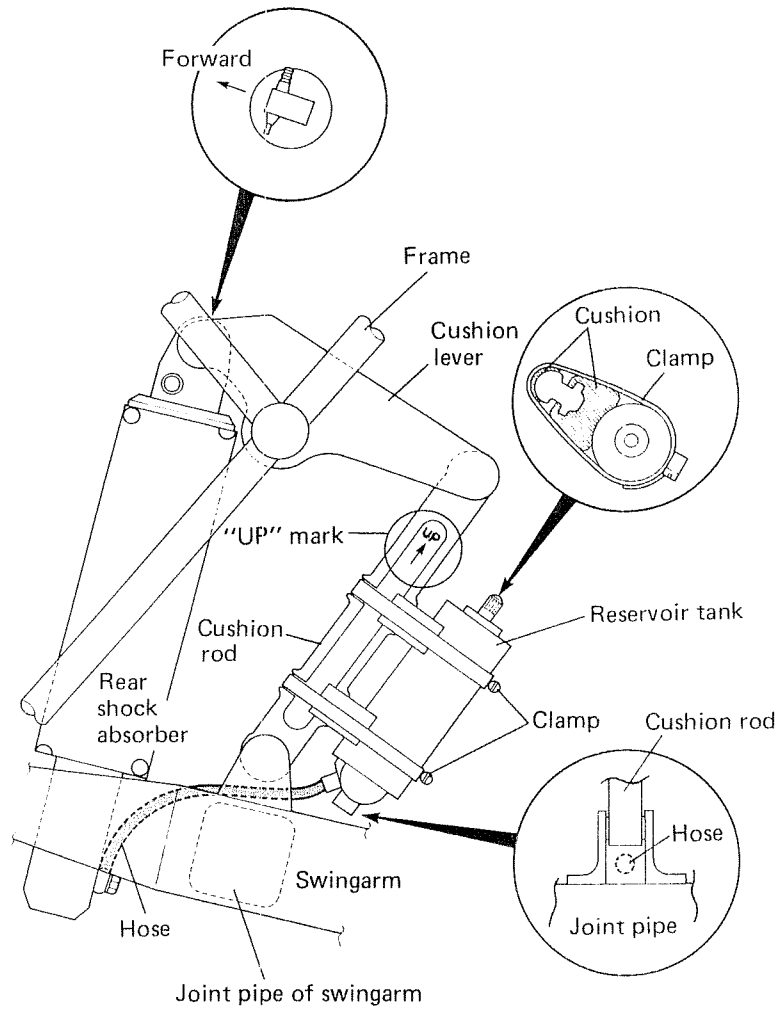
### OIL BREATHER HOSE



### CARBURETOR HOSE



### REAR SHOCK ABSORBER RESERVOIR TANK HOSE



\* Pass the reservoir tank hose through between cushion rod and joint pipe of swingarm.

### REAR BRAKE RESERVOIR TANK HOSE

