

## RD350/350F'85

SUPPLEMENTARY SERVICE MANUAL

## **FOREWORD**

This Supplementary Service Manual has been prepared to introduce new service and new data for the RD350/350F. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manual:

RD250LC/350LC Service Manual 31L-28197-80

RD350/350F
SUPPLEMENTARY SERVICE MANUAL
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1st Edition, October 1984
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## 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 motor-cycles 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.

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

## HOW TO USE THIS MANUAL

## PARTICULARLY IMPORTANT INFORMATION

This material is distinguished by the following notation.

NOTE:

A NOTE provides key information to make procedures easier or clearer.

CAUTION:

A CAUTION indicates special procedures that must be followed to avoid damage to the motorcycle.

**WARNING:** 

A WARNING indicates special procedures that must be followed to avoid injury to a motorcycle operator or person inspecting or repairing the motorcycle.

## MANUAL FORMAT

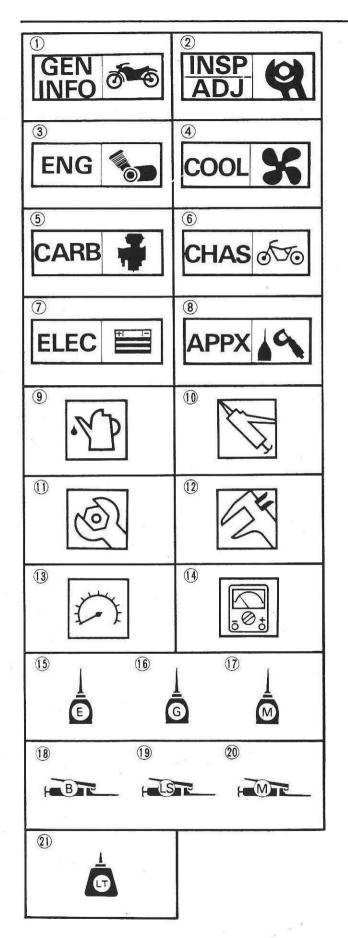
All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspection operations. In this revised format, the condition of a faulty component will precede an arrow symbol and the course of action required will follow the symbol, e.g.,

Bearings

Pitting/Damage→Replace.

## **EXPLODED DIAGRAM**

Each chapter provides exploded diagrams before each disassembly section for ease in identifying correct disassembly and assembly procedures.



## ILLUSTRATED SYMBOLS (Refer to the illustration)

Illustrated symbols 1 to 8 are designed as thumb tabs to indicate the chapter's number and content.

- 1 General information
- 2 Periodic 3 Engine Periodic inspection and adjustment
- 4 Cooling system
- (5) Carburetion
- 6 Chassis
- (7) Electrical
- (8) Appendices

Illustrated symbols (9) to (14) are used to identify the specifications appearing in the text.

- 9 Filling fluid
- 10 Lubricant
- 1 Tightening
- (12) Wear limit, clearance
- 13 Engine speed
- 14 Ω, V, A

Illustrated symbols (5) to (2) in the exploded diagram indicate grade of lubricant and location of lubrication point.

- (15) Apply engine oil
- 16 Apply gear oil
- (17) Apply molybdenum disulfide oil
- (18) Apply wheel bearing grease
- (19) Apply lightweight lithium-soap base grease
- 20 Apply molybdenum disulfide grease
- 21) Apply locking agent (LOCTITE®)

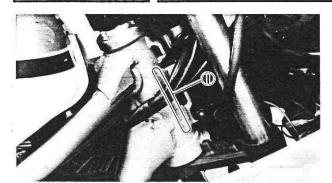
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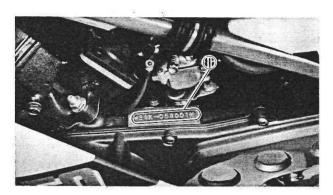


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## MOTORCYCLE IDENTIFICATION





## GENERAL INFORMATION

## MOTORCYCLE IDENTIFICATION

FRAME SERIAL NUMBER

The frame serial number ① is stamped into the right side of the steering head pipe.

## **ENGINE SERIAL NUMBER**

The engine serial number ① is stamped into the elevated part of the left rear section of the engine.

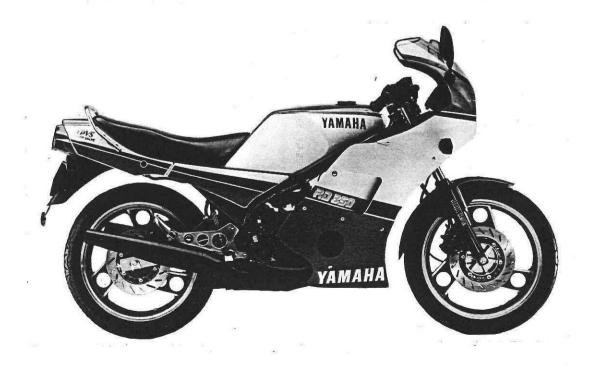
NOTE: \_

The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.

| Number: |                   |
|---------|-------------------|
| 1JF     | 31K-077101        |
| 1JG     | 31K-085101        |
| 57V     | 31K-053101        |
| 1AF     | 31K-072101        |
|         | 1JF<br>1JG<br>57V |

NOTE: \_\_\_

Designs and specifications are subject to change without notice.





## INTRODUCTION/MAINTENANCE INTERVALS CHARTS



## PERIODIC INSPECTIONS AND ADJUSTMENTS

## INTRODUCTION

This chapter includes all information necessary to perform recommended inspections and adjustments. These preventive maintenance procedures, if followed, will ensure more reliable vehicle operation and a longer service life. The need for costly overhaul work will be greatly reduced. This information applies to vehicles already in service as well as new vehicles that are being prepared for sale. All service technicians should be familiar with this entire chapter.

## MAINTENANCE INTERVALS CHARTS PERIODIC MAINTENANCE/LUBRICATION

Unit: km (mi)

|                              |   |                         | EVERY                           |                                   |  |
|------------------------------|---|-------------------------|---------------------------------|-----------------------------------|--|
| ITEM                         | REMARKS   | BREAK-IN<br>1,000 (600) | 6,000<br>(4,000) or<br>6 Months | 12,000<br>(8,000) or<br>12 Months |  |
| Spark plug(s)                | Check condition. Clean or replace if necessary.   | 0                       | 0                               | 0                                 |  |
| Air filter                   | Clean. Replace if necessary.  |                         | . 0                             | 0                                 |  |
| Carburetor*                  | Check idle speed (/synchronization)/<br>starter operation.<br>Adjust if necessary.  | 0                       | 0                               | 0                                 |  |
| Fuel line*                   | Check fuel hose (and vacuum pipe) for cracks or damage. Replace if necessary.   |                         | 0                               | 0                                 |  |
| Transmission oil*            | Check oil level/oil leakage. Correct if necessary. Replace every 24,000 (16,000) or 24 months. (Warm engine before draining.) | REPLACE                 | 0                               | 0                                 |  |
| Autolube pump*               | Check operation. Correct if necessary.  Air bleeding.   | 0                       | 0                               | 0                                 |  |
| Brake*                       | Check operation/fluid leakage/See NOTE. Correct if necessary.   |                         | 0                               | 0                                 |  |
| Clutch                       | Check operation. Adjust if necessary.   |                         | . 0                             | 0                                 |  |
| Rear arm pivot*              | Check rear arm assembly for looseness. Correct if necessary. Moderately repack every 24,000 (16,000) or 24 months.            | 1                       | ¥                               | 0.                                |  |
| Rear suspension link pivots* | Check operation. Apply grease lightly every 24,000 (16,000) or 24 months.   |                         |                                 | 0                                 |  |
| Wheels*                      | Check balance/damage/runout. Repair if necessary.   |                         | 0                               | 0                                 |  |
| Wheel bearings*              | Check bearings assembly for looseness/<br>damage.<br>Replace if damaged.  | 8                       | 0 -                             | 0                                 |  |
| Steering bearing*            | Check bearings assembly for looseness. Correct if necessaryModerately repack every 24,000 (16,000) or 24 months. **           | 0                       | H                               | 0                                 |  |
| Front forks*                 | Check operation/oil leakage. Repair if necessary.   |                         | 0                               | 0                                 |  |
| Rear shock<br>absorber*      | Check operation./oil leakage. Repair if necessary.  | 30                      | 0                               | 0                                 |  |



## MAINTENANCE INTERVALS CHARTS



Unit: km (mi)

|                       |   |                         | EVI                             | ERY                               |
|-----------------------|---|-------------------------|---------------------------------|-----------------------------------|
| ITEM                  | REMARKS   | BREAK-IN<br>1,000 (600) | 6,000<br>(4,000) or<br>6 Months | 12,000<br>(8,000) or<br>12 Months |
| Cooling system        | Check coolant leakage. Repair if necessary. Replace coolant every 24,000 (16,000) or 24 months. |                         | 0                               | 0                                 |
| Drive chain           | Check chain slack/alignment. Adjust if necessary. Clean and lube.                               | E                       | VERY 500 (30                    | 00)                               |
| Fittings/Fasteners*   | Check all chassis fittings and fasteners.<br>Correct if necessary.                              | 0                       | 0                               | 0                                 |
| Center and sidestand* | Check operation. Repair if necessary.   | 0                       | 10                              | 0                                 |
| Battery*              | Check specific gravity. Check breather pipe for proper operation. Correct if necessary.         |                         | 0                               | 0                                 |

<sup>\*:</sup> It is recommended that these items be serviced by a Yamaha dealer.

| 100.00 |   | -  | _ |  |
|--------|---|----|---|--|
| N      | n | ١Т |   |  |
|        |   |    |   |  |

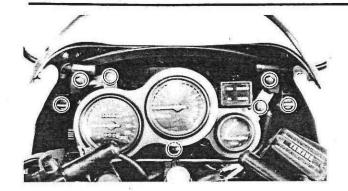
Brake fluid replacement:

- When disassembling the master cylinder or caliper cylinder, replace the brake fluid.
   Normally check the brake fluid level and add the fluid as required.
- 2. On the inner parts of the master cylinder and caliper cylinder, replace the oil seals every two years.
- 3. Replace the brake hoses every four years, or if cracked or damaged.

<sup>\*\*:</sup> Medium weight wheel bearing grease.

<sup>\*\*\*:</sup> Lithium soap base grease.



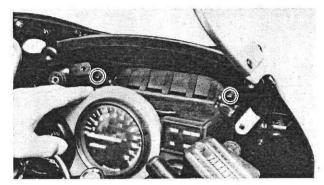


## UPPER COWLING

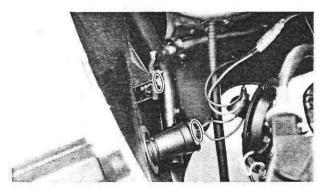
- 1. Remove:
  - Rear view mirrors

**COWLING REMOVAL** 

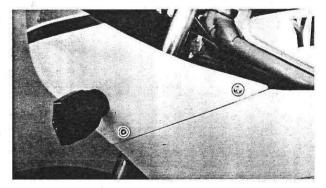
- Mounting bolts
- Speedometer



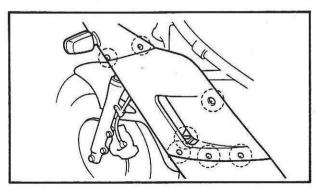
- 2. Remove:
  - Mounting bolts



- 3. Remove:
  - Flasher lights
  - Mounting bolts



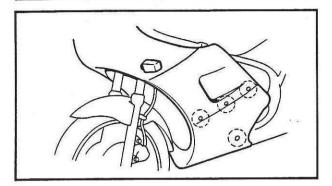
- 4. Remove:
  - Mounting bolts
  - Upper cowling



## CENTER COWLING

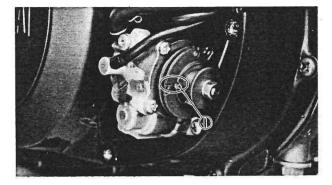
- 1. Remove:
  - Mounting bolts
  - Center cowling

## OIL PUMP



## LOWER COWLING

- 1. Remove:
  - Mounting bolts
  - Lower cowling

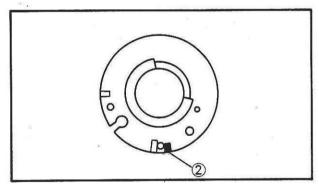


## **ENGINE**

## OIL PUMP

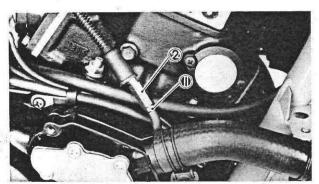
## Oil Pump Cable Adjustment

- 1. Remove:
  - Lower cowling
  - Pump cover
- 2. Check:
  - Oil pump control position
     Not aligned → Adjust.



## Oil pump cable adjustment steps:

- Rotate the throttle grip slightly until all slack is removed from all cables. Hold this position.
- Check to see that Autolube pump plunger pin
   is aligned with the mark
   on the Autolube pump pulley.
- •If the mark and pin are not in alignment, loosen cable length adjuster locknut ① and adjust cable length until alignment is achieved.



2 Adjuster

## OIL PUMP



## Minimum Pump Stroke Adjustment

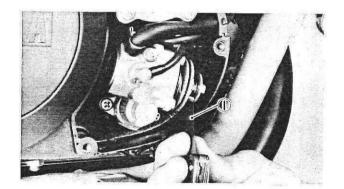
 While running the engine at idle, observe the pump adjust plate carefully. Stop the engine moment that the adjust plate moves out to its limit.

## 2. Measure:

 Gap (Between the raised boss on the pump adjust pulley and adjust plate)



Minimum Pump Stroke: 0.10~0.15 mm (0.004~0.006 in)

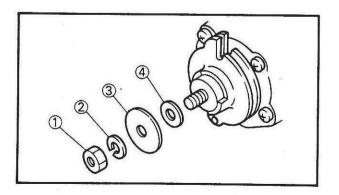


NOTE: .

When inserting the thickness gauge between the adjust plate and the adjust pulley, be careful so that neither the plate nor the pulley is moved. In other words, do not force the thickness gauge into the gap.

## 1 Thickness gauge

- Repeat steps "2" and "3" above a few times.
   When the gap measured is the largest, the pump stroke is considered to be at a minimum.
- 4. If clearance is not correct, adjust as follows:



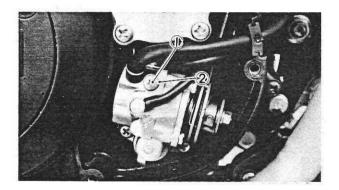
- a. Remove:
  - Locknut (1)
  - Spring Washer (2)
  - Adjust plate (3)
- b. Remove or add:
  - Adjust shim (4)
- c. Install:
  - Components in above list (step "a")
- d. Measure:
  - Gap

## D

## Autolube Pump Air Bleeding

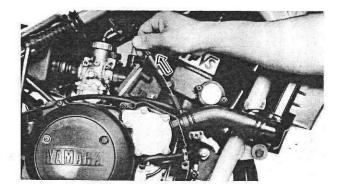
The Autolube pump and delivery line must be bled on the following occasions:

- •Setting up a new motorcycle out of the crate.
- •Whenever the Autolube tank has run dry.
- •Whenever any portion of the Autolube system is disconnected.



[Bleeding the pump case and/or oil pipe]

- 1. Remove:
  - Pump cover
  - Bleed screw (1)
- 2. Keep the oil running out until air bubbles disappear.
- 3. Inspect:
  - Bleed screw gasket ②
     Damage→Replace.
- 4. Install:
  - Components in above list



[Bleeding the pump distributor and/or delivery pipe]

- 1. Start the engine.
- 2. Pull the pump cable all the way out to set the pump stroke to a maximum.

## OIL PUMP



| 114 | NOTE:   |
|-----|---|
|     | It is difficult to bleed the distributor completely |
|     | with the pump stroke at a minimum, and therefore    |
|     | the pump stroke should be set to a maximum.         |

3. Keep the engine running at about 2,000 r/min for two minutes or so, and both distributor and delivery pipe can be completely bled.

## FRONT FORK OIL CHANGE

## CHASSIS

## FRONT FORK OIL CHANGE

## WARNING:

- Fork oil leakage can cause loss of stability and safe handling. Have any problem corrected before operating the motorcycle.
- 2. Securely support the motorcycle so there is no danger of it falling over.
- 1. Place a suitable stand under the engine to raise the front wheel off the ground.

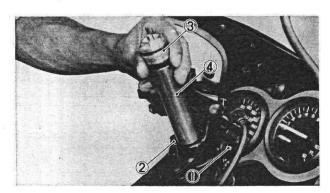


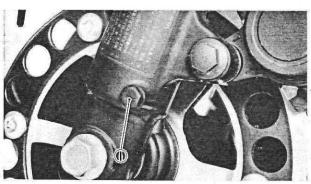
• Air valve cap (1)

NOTE:

Keep the valve open by pressing it for several seconds so that the air can be let out of the inner tube.

2 Push





- 3. Loosen:
  - Pinch bolts (Handle crown 1) and handlebar (2))
- 4. Remove:
  - Cap bolt (3)
  - •Spacer (4)
- 5. Remove:
  - Drain bolt ①
     Drain the fork oil.

## **WARNING:**

Do not allow any oil to contact the disc brake components. If oil is discovered, be sure to remove it, otherwise diminished braking capacity and damage to the rubber components of the brake assembly will occur.

## FRONT FORK OIL CHANGE/ FRONT FORK ADJUSTMENT





- 6. Inspect:
  - •O-ring ① (Cap bolt)
    Wear/Damage→Replace.
- 7. Install:
  - Drain bolt
- 8. Fill:
  - Front fork



Each Fork:

297 cm<sup>3</sup>(10.48 Imp oz, 10.04 US oz)

Fork Oil 10 wt or equivalent After filling pump the forks slowly up and down to distribute the oil.

- 9. Install:
  - · Cap bolt
  - Pinch bolts (Handle crown and handlebar)



Cap Bolt:

23 Nm (2.3 m·kg, 17 ft·lb) Pinch Bolt (Steering Crown): 20 Nm (2.0 m·kg, 14 ft·lb)

- 10. Adjust:
  - Front fork air pressure Refer to "Front fork and rear shock absorber setting" section.

## FRONT FORK ADJUSTMENT

## **WARNING:**

Always adjust each air pressure to the same setting. Uneven adjustment can cause poor handling and loss of stability.

1. Elevate the front wheel by placing the motorcycle on the centerstand.



## FRONT FORK ADJUSTMENT

|   |     |   | _          | ı. |
|---|-----|---|------------|----|
|   |     |   | F          | Н  |
|   |     |   |            | П  |
| 3 | - 1 | 9 | <b>S</b> . | и  |
|   | 1   |   |            | Į  |

| NOTE: |  |  | _ |
|-------|--|--|---|

When checking and adjusting the air pressure, there should be no weight on the front end of the motorcycle.

- 2. Adjust:
  - Air pressure

## Air pressure adjustment steps:

- 1. Remove the valve caps.
- 2. Using the air check gauge ①, check and adjust the air pressure.

Stiffer→Increase the air pressure
(Use an air pump or pressurized air supply)

Softer→Decrease the air pressure (Release the air by pushing the valve)

Standard Air Presure:

39.2 kPa (0.4 kg/cm<sup>2</sup>, 5.7 psi)

Maximum air Pressure:

78.5 kPa (0.8 kg/cm<sup>2</sup>, 11 psi)

Minimum Air Pressure:

Zero-

## **CAUTION:**

Never exceed the maximum pressure, or oil seal damage may occur.

## **WARNING:**

The difference between both the left and right tubes should be 9.81 kPa (0.1 kg/cm, 1.4 psi) or less.

3. Install the valve caps securely.



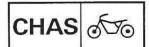
## FRONT FORK AND REAR SHOCK ABSORBER SETTINGS



## FRONT FORK AND REAR SHOCK ABSORBER SETTINGS

Use this table as a guide for specific riding and motorcycle load conditions.

|    | Front fork                         | Front fork Rear shock absorber |            |                          | Loading condition |  |
|----|------------------------------------|--------------------------------|------------|--------------------------|-------------------|--|
|    | Air pressure                       | Spring seat                    | Solo rider | With accessory equipment | With passenger    | With accessory equipment and passenger |
| 1. | 39.2 kPa<br>(0.4 kg/cm², 5.7 psi)  | 2                              | 0          |                          |                   |  |
| 2. | 58.8 kPa<br>(0.6 kg/cm², 8.5 psi)  | 3                              |            | 0                        |                   |  |
| 3. | 78.5 kPa<br>(0.8 kg/cm², 11.4 psi) | 4                              |            |                          | 0                 |  |
| 4. | 98.1 kPa<br>(1.0 kg/cm², 14.2 psi) | 5                              | *          |                          | W                 | 0                                      |



## CHAS TO FRONT AND REAR BRAKE

## CHASSIS

## FRONT AND REAR BRAKE CALIPER PAD REPLACEMENT

- Rubber cap
   Bleed screw
- Bleed screw
- 3 Retaining b
  4 Pad spring
  5 Pad
  6 Shim
  7 Dust seal Retaining bolt

- 8 Piston seal
- 9 Piston

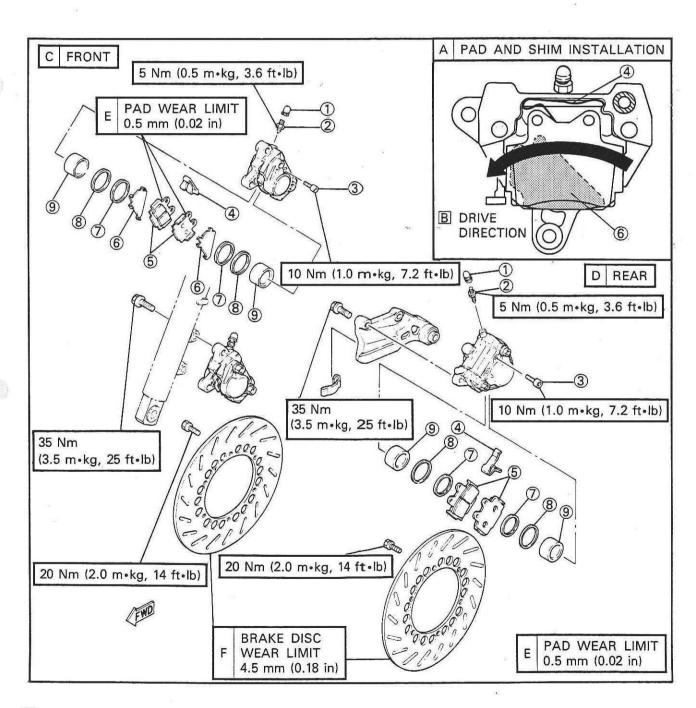
NOTE: \_\_\_\_

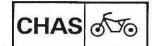
FRONT BRAKE:

Install the pad spring with its longer tangs \* facing towards the disk rotation direction.

FRONT AND REAR BRAKE:

Be sure to position the shim so that its arrow mark points in the direction of the disk plate rotation.



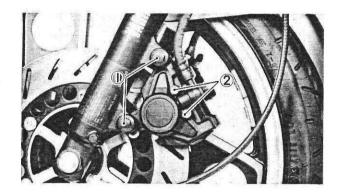


## Brake Inspection and Repair

| Recommended Brake<br>Replacement Schedule |   |
|---|---|
| Brake pads                                | As required                                     |
| Piston seal, dust seal                    | Every two years                                 |
| Brake hoses                               | Every four years                                |
| Brake fluid                               | Replace only when<br>brakes are<br>disassembled |

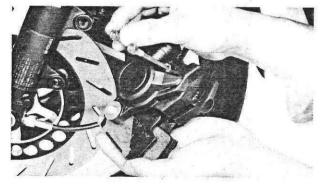
## CALIPER PAD REPLACEMENT (FRONT AND REAR)

| NOTE:  |   |
|--|---|
| It is not necessary to disassemble the brake calip | e |
| and brake hose to replace the brake pads.          |   |



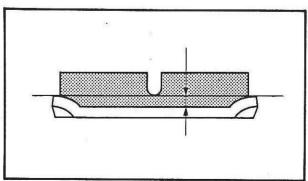
## 1. Remove:

- Caliper bolts (1)
- •Retaining bolts ②



## 2. Remove:

Pads



NOTE: \_

Replace the pads as a set if either is found to be worn to the wear limit.

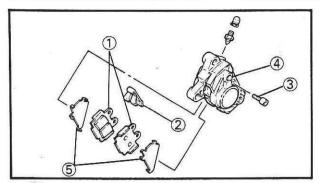


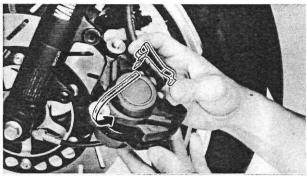
Pad Wear Limit: 0.5 mm (0.02 in)

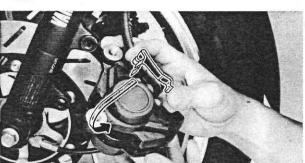
## CHAS 65

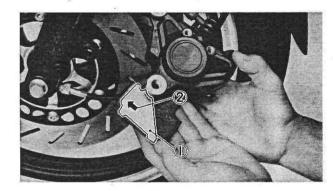
## FRONT AND REAR BRAKE

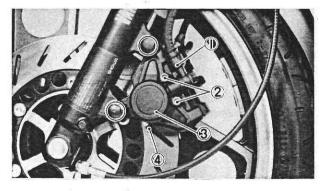












## 3. Install:

- Pads (New) (1)
- Pad spring (2)
- Retaining bolts ③
- Caliper (4)
- •Shim (5)



## Caliper:

35 Nm (3.5 m·kg, 25 ft·lb) Retaining Bolt:

10 Nm (1.0 m·kg, 7.2 ft·lb)

NOTE: \_\_

Install the pad spring indirection shown in the phote.

NOTE: \_

## FRONT BRAKE ONLY

Insert the pads with their shims (1) in direction of the arrow (2).

## CALIPER DISASSEMBLY (FRONT AND REAR)

## Disassembly

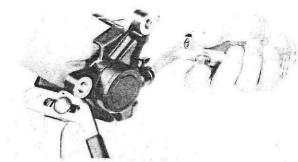
- 1. Remove:
  - Brake hose (1)

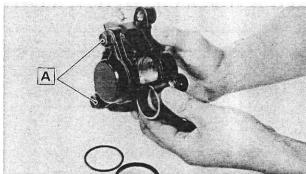
Place the open hose end into a container and pump the old fluid out carefully.

- Retaining bolts (2)
- Caliper (3)
- Pads (4)
- 2. Repeat previous step to remove the other calipers.

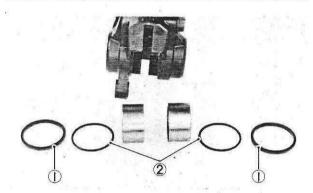




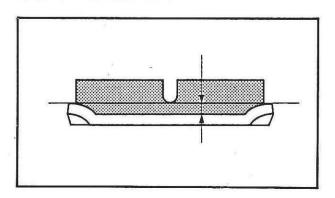












## Caliper piston removal steps:

- •Using a rag, lock the right side piston.
- · Blow compressed air into the hose joint opening to force out the left side piston from the caliper body.
- Remove the dust and piston seals and reinstall the piston.
- •Repeat previous step to force out the right side piston from the caliper body.

A DO NOT LOOSEN

- 3. Remove:
  - Piston seal (1)
  - Dust seal (2)

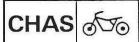
## Inspection

- 1. Inspect:
  - Caliper piston Rust/Wear→Replace.
  - Caliper cylinder body Wear/Scratches→Replace.

Brake pads Out of specification → Replace.



Pad Wear Limit: 0.5 mm (0.0197 in)







### Installation

- 1. Assemble:
  - Brake caliper(s)Reverse disassembly steps

## **WARNING:**

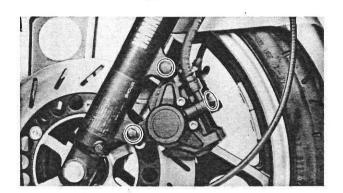
- All internal parts should be cleaned in new brake fluid only.
- •Internal parts should be lubricated with brake fluid when installed.



## Brake Fluid:

**DOT #3** 

• Replace the dust and piston seals whenever a caliper is disassembled.



- 2. Install:
  - Brake calipers
  - Hoses

- 3. Tighten:
  - Caliper bolts
  - Hose union bolts (With copper washers)



## FRONT AND REAR

Brake Caliper:

35 Nm (3.5 m·kg, 25 ft·lb)

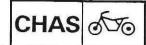
Retaining Bolt:

10 Nm (1.0 m·kg, 7.2 ft·lb)

Brake Hose:

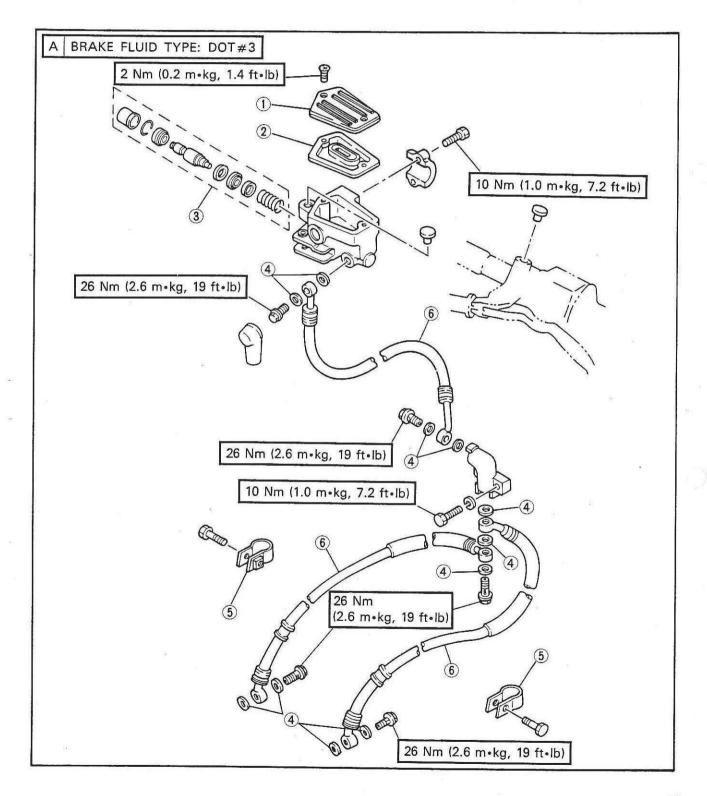
26 Nm (2.6 m·kg, 19 ft·lb)

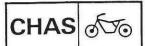
4. Bleed the air completely from the brake system.



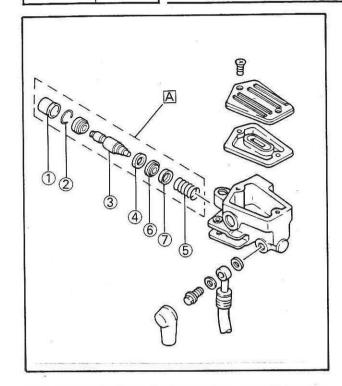
## BRAKE MASTER CYLINDER (FRONT)

- 1 Master cylinder cap
- 2 Rubber seal
- 3 Master cylinder kit
- 4 Copper washer
- (5) Brake hose holder
- 6 Brake hose









## Disassembly

NOTE: \_

Drain the brake fluid before removing master cylinder.

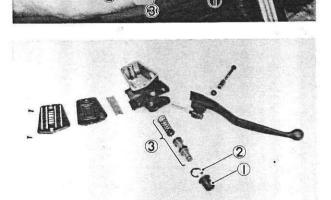
- CirclipPiston
- 4 Piston cups
- ⑤ Return spring

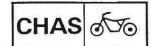
Dust boot

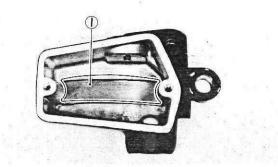
- 6 Washer
- (7) Seat
- A MASTER CYLINDER KIT (Replace as a set)
- 1. Remove:
  - •Brake light switch leads 1
  - •Brake lever 2
  - •Lever spring (3)
- 2. Disconnect:
  - Brake hose 4
     Drain the fluid



- Master cylinder
- Master cylinder cap
   Drain the excess fluid
- Dust boot 1
- Circlip (2)
- Master cylinder kit 3





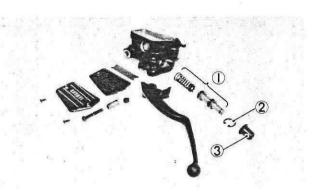


## Inspection

- 1. Inspect:
  - Master cylinder body Scratches/Wear→Replace.

| NOTE:              |      |     |       |        |  |
|--------------------|------|-----|-------|--------|--|
| Clean all passages | with | new | brake | fluid. |  |

- Brake hoses
   Cracks/Wear/Damage→Replace.
- Master cylinder kit Scratches/Wear→Replace.
- 1 Oil baffle plate



## Installation

- 1. Install:
  - Master cylinder kit (1)

## **WARNING:**

Internal ports should be lubricated with brake fluid when installed.

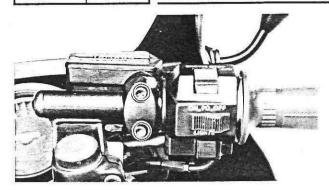
- Circlip 2
- Dust boot (3)
- 2. Install:
  - Master cylinder
  - Brake hose (With copper washers)
  - Brake lever

| NOTE:  |     |       |        | <br> |  |  |
|--------|-----|-------|--------|------|--|--|
| Grease | the | pivot | point. |      |  |  |
|        |     |       |        |      |  |  |

· Brake switch leads.







- 3. Tighten:
  - Master cylinder bolts
  - Brake hose



Master Cylinder: 10 Nm (1.0 m•kg, 7.2 ft•lb) Brake Hose:

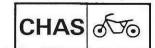
26 Nm (2.6 m·kg, 19 ft·lb)

- 4. Bleed the air completely from the brake system
- 5. Tighten:
  - •Master cylinder cap



2 Nm (0.2 m·kg, 1.4 ft·lb)

## FRONT FORK



## FRONT FORK

- 1) Air valve
- ② Cap bo ③ O-ring Cap bolt
- 4 Dust seal
- Spacer
- 6 Spring seat
- 7 Fork spring
- 8 Piston ring
- Damper rod
- 10 Rebound spring

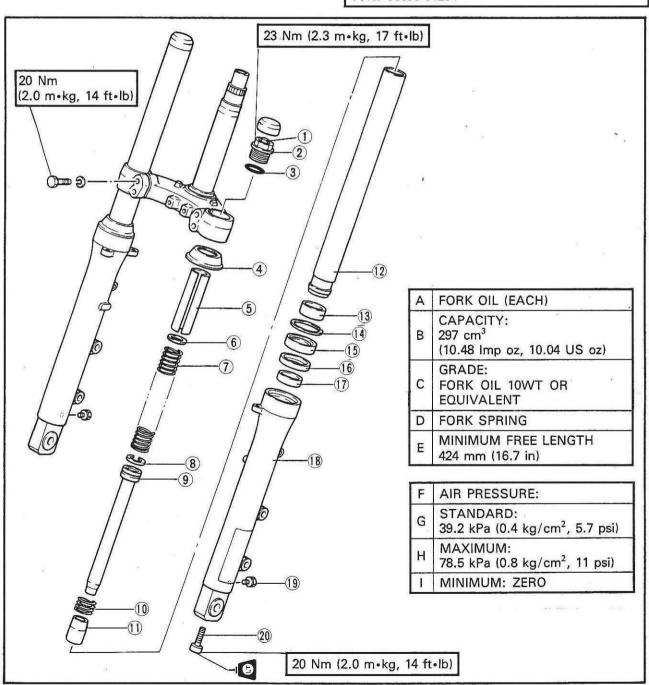
- 11) Oil lock piece
- 12 Inner fork tube
- (13) Slide metal
- (14) Retaining clip
- (15) Oil seal
- 16 Plain washer
- T Slide metal
- (18) Outer fork tube
- (19) Drain screw
- 20 Cylinder securing bolt

T-HANDLE:

P/N. 90890-01326

DAMPER ROD HOLDER:

P/N. 90890-01294



## D-

### REMOVAL

## WARNING:

Securely support the motorcycle so it won't fall over when the front wheel and front forks are removed.

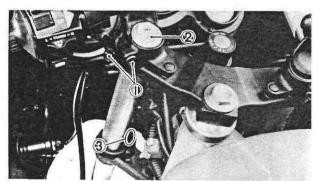


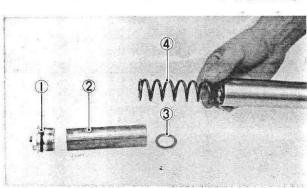
- Brake caliper
- Front wheel
- Front fender
- Front fork brace
- 2. Remove:
  - Air valve cap (1)

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|---|-------|---|---|---|---|
|   | 05000 |   |   |   |   |

Keep the valve open by pressing it for several seconds so that the air can be let out of the inner tube.

2 Push



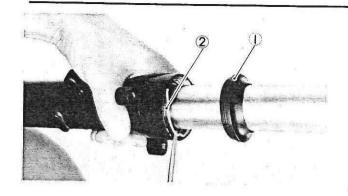


- 3. Loosen:
  - Pinch bolts (Handle crown and handlebar)
    - 1
  - Cap bolt (2)
  - Pinch bolts (Under bracket) (3)
- 4. Remove:
  - Front fork

## DISASSEMBLY

- 1. Remove:
  - Cap bolt 1
  - •Spacer ②
  - •Spring seat ③
  - Fork spring (4)
- 2. Drain:
  - Fork oil







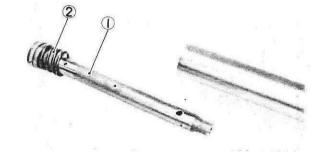
- Dust seal (1)
- Retaining clip (2)



 Cylinder securing bolt Use the Damper Rod Holder (90890-01294) (1) and T-Handle (90890-01326) (2) to lock the damper rod (3).



- Damper rod (1)
- Rebound spring (2)





## 7. Remove:

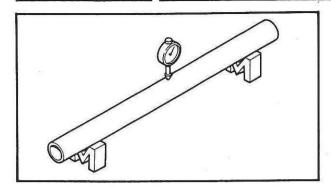
•Inner fork tube

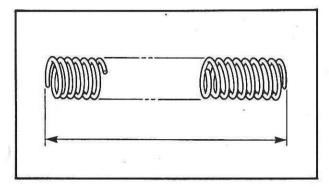
## Inner fork tube removal steps:

- · Hold the fork leg horizontally.
- Pull out the inner fork tube from the outer tube by forcefully, but carefully, withdrawing the inner fork tube.

### NOTE: \_

- Excessive force will damage the oil seal, plain washer and/or bushings. The oil seal and bushings must be replaced.
- Avoid bottoming the inner tube in the outer tube during the above procedure, as the oil lock piece will be damaged.





## **IN SPECTION**

- 1. Inspect:
  - •Inner fork tube Scratches/Bends→Replace.

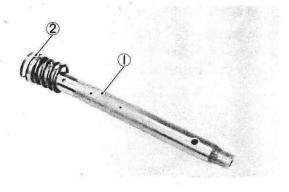
## **WARNING:**

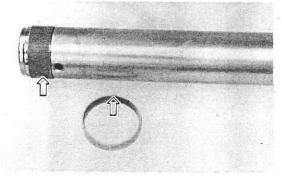
Do not attempt to straighten a bent inner fork tube as this may dangerously weaken the tube.

- 2. Inspect:
  - Outer fork tube Scratches/Bends/Damage→Replace.
  - · Fork spring Out of specification→Replace.



Fork Spring Free Length: 429.6 mm (16.9 in) Minimum Free Length: 424 mm (16.7 in)





- 3. Inspect:
  - Damper rod (1)
  - •Ring (2)

Wear/Damage→Replace.

Blow out all oil passages with compressed air.

- 4. Inspect:
  - •Slide metals

Wear/Damage→Replace

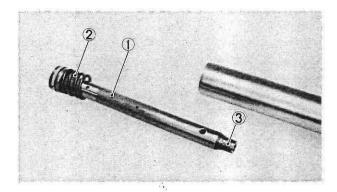
## FRONT FORK

| CHAS | alto |
|------|------|
| CHAS | 000  |

### REASSEMBLY

| M | 0 | T | F. |
|---|---|---|----|

Make sure all components are clean before assembly. Always install the new oil seal and the dust seal.



## 1. Install:

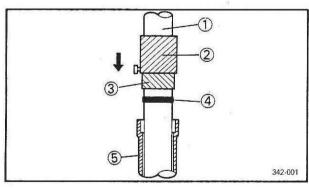
- Rebound spring (1)
- Damper rod ②
   Slide the damper rod into the inner fork tube from its top.
- •Oil lock piece ③
  Fit the oil lock piece over the damper rod sticking out of the inner fork tube.

## 2. Install:

Cylinder securing bolt
 Use the Damper Rod Holder (90890-01294)
 and T-Handle (90890-01326) to lock the damper rod.



20 Nm (2.0 m·kg, 14 ft·lb) LOCTITE®



# 342-000

## 3. Install:

- Slide metal 4 Use the Fork Seal Driver Weight (90890-01367) 2 and Adapter (90890-01370) 3.
- Inner tube
   Outer tube

## 4. Install:

- Plain washer (4)
- •Oil seal ③ (New)
  Use the Fork Seal Driver Weight (90890-01367) ① and Adapter (90890-01370) ②.
- Retaining clip
- Dust seal



## 5. Fill:

• Front fork



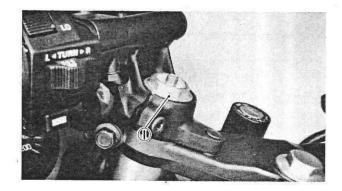
## Each Fork:

297 cm<sup>3</sup> (10.48 lmp oz, 10.04 US oz) Fork Oil 10 wt or equivalent 'After filling, slowly pump the fork up and down to distribute



## 6. Install:

- Fork spring (with smaller pitch side up)
- Spring seat
- Spacer
- Cap bolt (Temporarily)



## INSTALLATION

- 1. Install:
  - Front fork(s) Temporarily tighten the pinch bolts.

| NOTE:                                  |            |
|--|------------|
| Level the top of the cap bolt with the | top of the |
| handlebar.                             |            |

- 1 Flush
- 2. Tighten:
  - Pinch bolts (Underbracket)

|     |   | - |   |   |
|-----|---|---|---|---|
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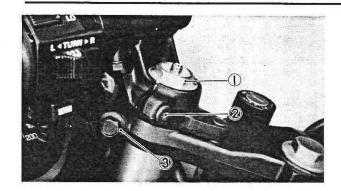
Pinch Bolt (Underbracket): 20 Nm (2.0 m·kg, 14 ft·lb)

| NOTE:  |         |     |          |       |       |       |
|--------|---------|-----|----------|-------|-------|-------|
| Do not | tighten | the | steering | crown | pinch | bolt. |

## FRONT FORK







- 3. Tighten:
  - Cap bolt 1
  - Pinch bolts (Handle crown 2) and handlebar (3)



Cap Bolt:

23 Nm (2.3 m·kg, 17 ft·lb) Pinch Bolt (Handle Crown): 20 Nm (2.0 m·kg, 14 ft·lb) (Handlebar) 20 Nm (2.0 m·kg, 14 ft·lb)

- 4. Adjust:
  - Front fork air pressure Refer to "Front fork and rear shock absorber setting" section.
- 5. Install:
  - · Air valve cap
  - Front fork brace
  - Front fender
  - · Front wheel
  - Brake caliper



Front Fork Brace:

10 Nm (1.0 m·kg, 7.2 ft·lb) Front Fender:

10 Nm (1.0 m·kg, 7.2 ft·lb) Front Wheel Axel:

75 Nm (7.5 m·kg, 54 ft·lb) Brake Caliper:

35 Nm (3.5 m·kg, 25 ft·lb)



# E-

# **APPENDICES**

## **SPECIFICATIONS**

**GENERAL SPECIFICATIONS** 

(DK): For Denmark (S): For Sweden

(FL): For Finland
(G): For Germany

|  |                                     |   | (G): I         | For Germany |
|--|-------------------------------------|---|----------------|-------------|
| Model  | RD350/350F                          |   |                |             |
| Model Code Number  | 57 <b>∨</b>                         | 1JF   | 1AF(G)         | 1JG(G)      |
| Frame Starting Number  | 31K-053101                          | 31K-077101  | 31K-072101     | 31K-085101  |
| Engine Starting Number   | 31K-053101                          | 31K-077101  | 31K-072101     | 31K-085101  |
| Dimensions: Overall Length  Overall Width Overall Height Seat Height Wheelbase Minimum Ground Clearance  Weight: | 2,160 mm (8                         | 27.2 in) [350] (<br>6.9 in)<br>1.5 in)<br>4.5 in) |                |             |
| With Oil and Full Fuel Tank  | 161 kg (355                         | lb) [350] 165                                     | kg (364 lb) [3 | 50F]        |
| Minimum Turning Radius   | 2,700 mm (1                         | 06 in)  |                |             |
| Engine: Type Cylinder Arrangement Displacement Bore × Stroke Compression Ratio Starting System                   | Twin, forwar<br>347 cm <sup>3</sup> | nm (2.520×2.                                      |                | nduction    |
| Lubrication System   | Separate lub                        | rication (Yama                                    | aha Autolube)  |             |
| Engine Oil:<br>Type<br>Tank Capacity   | Air cooled 2-                       | T or equivalen<br>stroke engine<br>np qt, 1.69 Us | oil            | T.          |
| Transmission Oil: Type Oil Capacity Total Exchange   | 1.7 L (1.50 In                      | type SE motor<br>np qt, 1.80 US<br>np qt, 1.59 US | qt)            |             |
| Radiator Capacity (Including All Routes)   | 1.5 L (1.32 In                      | np qt, 1.59 US                                    | qt)            |             |
| Spark Plug:<br>Type<br>Gap   | BR8ES<br>0.7~0.8 mm                 | n (0.02 ~ 0.03 i                                  | n)             | ***         |
| Carburetor × Quantity/ Manufacturer  | VM26SS×2                            | MIKUNI  |                | 3           |
| Air Cleaner  | Wet foam ru                         | bber  |                | *****       |
|  |                                     |   |                |             |



| Model  | RD350/350F  |  |  |
|--|---|--|--|
| Clutch Type  | Wet, multiple-disc  |  |  |
| Transmission: Primary Reduction System Primary Reduction Ratio Secondary Reduction System Secondary Reduction Ratio Transmission Type Operation System | Helical gear<br>66/23 (2.870)<br>Chain<br>39/17 (2.294) 40/17 (2.352) (G)<br>Constant mesh 6-speed<br>Left foot operation |  |  |
| Gear Ratio 1st 2nd 3rd 4th 5th 6th   | 36/14 (2.571)<br>32/18 (1.778)<br>29/22 (1.318)<br>26/24 (1.083)<br>25/26 (0.962)<br>24/27 (0.889)                        |  |  |
| Chassis:<br>Frame Type<br>Caster<br>Trail  | Double cradle 26° 96 mm (3.78 in)   |  |  |
| Fuel:<br>Tank Capacity, Total<br>Reserve   | 20.0 L (4.4 Imp gal, 5.28 US gal)<br>2.0 L (0.44 Imp gal 0.53 US gal)   |  |  |
| Tire<br>Front<br>Rear  | 90/90-18 51H<br>110/80-18 58H   |  |  |
| Braking System:<br>Front<br>Rear   | Double disc brake/Right hand operation Single disk brake/Right foot operation   |  |  |
| Suspension:<br>Front<br>Rear   | Telescopic fork Swing arm (New monocross suspension)  |  |  |
| Shock Absorber:<br>Front<br>Rear   | Air, coil spring/oil damper Gas, coil spring/oil damper   |  |  |
| Wheel Travel:<br>Front<br>Rear   | 140 mm (5.51 in)<br>100 mm (3.94 in)  |  |  |
| Electrical:<br>Ignition System<br>Generator System   | CDI<br>A.C. generator   |  |  |
| Battery:<br>Type/ Capacity   | 12N5.5-3B/12V, 5.5AH  |  |  |





| Model   | RD350/350F  |
|---|---|
| Bulb Wattage × Quantity: Headlight Tail/ Brake Light Turn Light Meter Light Auxiliary Light | 60W/55W (Quartz bulb) 12V, 5W/21W×2 12V, 21W×4 12V, 3.4W×5 12V, 4W 3.4W (England) |
| Indicator Light: "NEUTRAL" "HIGH BEAM" "OIL" "TURN"   | 12V, 3.4W<br>12V, 3.4W<br>12V, 3.4W<br>12V, 3.4W                                  |

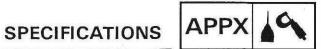


# MAINTENANCE SPECIFICATIONS Engine

| Model  | RD350/350F   |
|--|--|
| Cylinder Head: Combustion Chamber Volume Distortion Limit  | 21.3 ~ 21.9 cm <sup>3</sup> 0.03 mm (0.0012 in)  |
| Cylinder: Material Bore Size /< Limit> Taper Limit Out of Round Limit  | Aluminum alloy with cast iron sleeve (Cast in) 64 <sup>+0.02</sup> <sub>-0.02</sub> mm (2.52 <sup>+0.0008</sup> <sub>-0.05</sub> in)/64.1 mm (2.524 in) 0.05 mm (0.0020 in) 0.01 mm (0.0004 in)  |
| Piston: Piston Size/Measuring Point* Piston Clearance <limit> Piston Oversize Piston Offset</limit>  | 64.0 mm (2.520 in)/10 mm (0.39 in)<br>0.060 ~ 0.065 mm (0.0024 ~ 0.0026 in)<br>0.1 mm (0.004 in)<br>64.25, 64.50 mm (2.53, 2.54 in)<br>0 mm (0 in)   |
| Piston Ring:  Piston Ring Design/B×T (Top)  (2nd)  Ring End Gap (Installed) (Top)  (2nd)  Ring Groove Side Clearance (Top)   | Keystone/1.2×2.6 mm (0.047×0.102 in) Plain (With expander)/ 1.5×2.15 mm (0.059×0.085 in) 0.30 ~ 0.45 mm (0.012 ~ 0.018 in) 0.35 ~ 0.50 mm (0.014 ~ 0.020 in) 0.02 ~ 0.06 mm (0.0008 ~ 0.0024 in)   |
| Crankshaft: Crakshaft Assembly Width (F) (A) Crankshaft Deflection Limit (S) Connecting Rod Big End Side Clearance (D) Connecting Rod Small End Deflection (P) < Limit > P | $0.03 \sim 0.07 \text{mm}  (0.0012 \sim 0.0028 \text{in})$ $54.00^{+0.05}_{-0.05} \text{mm}  (2.13^{+0.002}_{-0.002} \text{in})$ $156^{+0.05}_{-0.05} \text{mm}  (6.14^{+0.002}_{-0.004} \text{in})$ $0.05 \text{mm}  (0.002 \text{in})$ $0.25 \sim 0.75 \text{mm}  (0.01 \sim 0.03 \text{in})$ $0.36 \sim 0.98 \text{mm}  (0.0142 \sim 0.0386 \text{in})$ $2.0 \text{mm}  (0.08 \text{in})$ |
| Clutch: Friction Plate Thickness/Quantity <wear limit=""></wear>   | 3.0 mm (0.12 in) × 7<br>2.7 mm (0.106 in)  |



| Model   | RD350/350F   |
|---|--|
| Clutch Plate Thickness/Quantity <warpage limit=""> Clutch Spring Free Length/Quantity Clutch Housing Thrust Clearance Radial Clearance Clutch Release Method Push Rod Bending Limit Primary Reduction Gear Back Lash Tolerance Primary Drive Gear Back Lash Number Primary Driven Gear Back Lash Number</warpage> | 1.2 mm (0.047 in) × 6<br>0.05 mm (0.002 in)<br>36.4 mm (1.43 in) × 6<br>0.07 ~ 0.12 mm (0.003 ~ 0.005 in)<br>0.011 ~ 0.048 mm (0.0004 ~ 0.0019 in)<br>Inner push, Cam push<br>0.2 mm (0.008 in)<br>154 ~ 156<br>90 ~ 98<br>57 ~ 65 |
| Transmission:  Main Axle Deflection Limit  Drive Axle Deflection Limit  | 0.08 mm (0.0031 in)<br>0.08 mm (0.0031 in)   |
| Shifter: Type Guide Bar Bending Limit  Kick Starter: Type Kick Clip Friction Force  | Cam drum 0.025 mm (0.001 in)  Kick and mesh type P = 0.8 ~ 1.3 kg (1.8 ~ 2.9 lb)   |
| Air Filter — Oil Grade  | Foam-Air-Filter Oil or SAE 10W30 SE motor oil  |
| Reed Valve:  Material  Bending Limit  Valve Stopper Height  | SUS<br>0.5 mm (0.02 in)<br>10.3 ± 0.2 mm (0.41 ± 0.008 in)   |
| Carburetor:  Type/ Manufacturer/ Quantity I.D. Mark Main Jet (M.J.) Air Jet (A.J.) Jet Needle - Clip Position (J.N.) Needle Jet (N.J.) Cutaway (C.A.) Pilot Jet (P.J.) Air Screw (Turns Out)(A.S.) Starter Jet (G.S.) Float Height (F.H.) Engine Idling Speed   | VM26S S/MIKUNI/2<br>31K00<br>#240<br>Ø0.7<br>5K1-4<br>P-0 (345)<br>2.0<br>#22.5<br>1 and 1/4<br>#80<br>21 ± 0.5 mm (0.83 ± 0.02 in)<br>1,200 ± 50 r/min  |



| Model  | RD350/350F   |
|--|--|
| Lubrication:   |  |
| Autolube Pump  |  |
| Color Code   | Yellow   |
| Minimum Stroke   | 0.10 ~ 0.15 mm (0.004 ~ 0.006 in)  |
| Maximum Stroke   | 2.05 ~ 2.27 mm (0.08 ~ 0.09 in)  |
| Minimum Output/200 Stroke  | 0.12 ~ 0.19 cm <sup>3</sup>  |
| the second secon | $(0.004 \sim 0.007 \text{ Imp oz}, 0.004 \sim 0.006 \text{ US oz})$                      |
| Maximum Output   | 2.58 ~ 2.85 cm <sup>3</sup>  |
|  | (0.091 ~ 0.101 lmp oz, 0.087 ~ 0.096 US oz)  |
| Pulley Adjusting Position (Adjusting Mark)   | At idle  |
|  | a see succession   |
|  |  |
| 15° -  |  |
|  |  |
|  |  |
| Cooling:   |  |
| Radiator Core Size   |  |
| Width  | 290.6 mm (11.44 in)  |
| Height   | 180 mm (7.08 in)   |
| Thickness  | 16 mm (0.63 in)  |
| Radiator Cap Opening Pressure  | $89.3 \pm 14.7 \mathrm{kPa} (0.9 \pm 0.15 \mathrm{kg/cm^2}, 12.8 \pm 2.13 \mathrm{psi})$ |
| Coolant Capacity (Total)   | 1.5 L (1.32 Imp qt, 1.59 US qt)  |
| Water Pump   | 7 C  |
| Туре   | Single-suction centrifugal pump  |
| Reduction Ratio  | 32/20 (1.60)   |
| Thermostat:  |  |
| Opening Temperature  | 71° ± 2°C (156 ± 35.6°F)   |
| Full Open Temperature/Lift   | 85°C (185°F)/7 mm (0.28 in)  |



## Tightening torque

| Part                             | Thread size | Nm | m • kg | ft•lb | Remarks                               |
|----------------------------------|-------------|----|--------|-------|---------------------------------------|
| Cylinder head                    | M 8×1.25    | 28 | 2.8    | 20    | 165                                   |
| Cylinder                         | M 8×1.25    | 25 | 2.5    | 18    |                                       |
| Spark plug                       | M14×1.25    | 20 | 2.0    | 14    |                                       |
| Y.P.V.S. Valve                   | M 5×0.8     | 6  | 0.6    | 4.3   |                                       |
| Pulley                           | M 6×1.0     | 10 | 1.0    | 7.2   | 3                                     |
| Shift pedal                      | M 6×1.0     | 16 | 1.6    | 11    |                                       |
| Reed valve                       | M 3×0.5     | 1  | 0.1    | 0.7   | -                                     |
| Joint cover (Thermostatic valve) | M 6×1.0     | 12 | 1.2    | 8     |                                       |
| Housing cover                    | M 6×1.0     | 8  | 0.8    | 5.8   |                                       |
| Radiator cover                   | M 5×0.8     | 3  | 0.3    | 2     |                                       |
| Joint (Cylinder head)            | M 6×1.0     | 12 | 1.2    | 8     | No. 177                               |
| Thermosenser                     | M10         | 14 | 1.4    | 10    |                                       |
| Oil pump                         | M 5×0.8     | 5  | 0.5    | 3.6   | - <b>0</b>                            |
| Reed valve assembly              | M 6×1.0     | 15 | 1.5    | 11    | A1995                                 |
| Primary drive gear               | M16×1.0     | 65 | 6.5    | 47    |                                       |
| Clutch boss                      | M20 × 1.0   | 90 | 9.0    | 65    |                                       |
| Clutch spring                    | M 6×1.0     | 10 | 1.0    | 7.2   | 81                                    |
| Drive sprocket                   | M18×1.0     | 80 | 8.0    | 58    |                                       |
| Kick crank                       | M 8×1.25    | 25 | 2.5    | 18    |                                       |
| Shift pedal                      | M 6×1.0     | 16 | 1.6    | 11    | ===================================== |
| Flywheel magneto                 | M12×1.25    | 85 | 8.5    | 61    |                                       |
| Exhaust pipe                     | M 8×1.25    | 18 | 1.8    | 13    | -                                     |
| Drain plug (Transmission)        | M14×1.5     | 20 | 2.0    | 14    | l.                                    |
| (Coolant)                        | M 6×1.0     | 14 | 1.4    | 10    |                                       |
| Crankcase cover (R)              | M 6×1.0     | 10 | 1.0    | 7.2   |                                       |
| (L)                              | M 6×1.0     | 7  | 0.7    | 5.1   | H -                                   |
| Crankcase (Lower)                | M 8×1.25    | 15 | 1.5    | 10    |                                       |
| (Upper)                          | M 8×1.25    | 10 | 1.0    | 7.2   |                                       |
| Bearing cover plate              | M 6×1.8     | 10 | 1.0    | 7.2   | - <b>1</b> 9                          |
| Tachometer stopper plate         | M 5×0.8     | 5  | 0.5    | 3.6   | - <b>(</b> 6)                         |
| Shift cam stopper plate          | M 6×1.0     | 10 | 1.0    | 7     | - <b>(6</b> )                         |
| Stopper lever                    | M 6×1.0     | 14 | 1.4    | 10    | <b>⊣ ⑤</b>                            |
| Neutral switch                   | M 5×0.8     | 4  | 0.4    | 2.9   |                                       |
| Shift lever adjust screw         | M 8×1.25    | 30 | 3.0    | 22    | - (B)                                 |



#### Chassis

| Model  | RD350/350F   |
|--|--|
| Steering System: Steering Bearing Type No. / Size of Balls | Ball bearing   |
| Upper  | 19 pcs. 1/4 in   |
| Lower<br>Lock to Lock Angle                                | 19 pcs. 1/4 in<br>80°  |
| Front Suspension: Front Fork Travel                        | 140 mm (5.51 in)   |
| Front Fork Spring  | 140 mm (5.51 m)  |
| Free Length  | 429.6 mm (16.9 in)   |
| Spring Rate  | $K_1 = 3.33 \text{ N/mm} (0.34 \text{ kg/mm}, 19.0 \text{ lb/in})$   |
|  | 0 ~ 140 mm (0 ~ 5.51 in)   |
| Oil Capacity   | 297 cm <sup>3</sup> (10.48 lmp oz, 10.04 US oz)  |
| Oil Level  | 106.1 mm (4.18 in)   |
| Oil Grade  | Fork oil 10wt or equivalent  |
| Air Pressure (STD)   | 39 kPa (0.4 kg/cm², 5.7 psi)   |
| (Min. ~ Max.)  | 0 ~ 118 kPa (0 ~ 1.2 kg/cm², 0 ~ 17 psi)   |
| Rear Suspension:   | P. Control of the con |
| Shock Absorber Travel                                      | 40 mm (1.57 in)  |
| Rear Wheel Travel  | 100 mm (3.94 in)   |
| Rear Absorber Spring                                       |  |
| Free Length  | 186 mm (7.32 in)   |
| Spring Rate  | $K_1 = 103.0 \text{ N/mm}$   |
| Cooperation  | (10.5 kg/mm, 588 lb/in) 0 ~ 40 mm (0 ~ 1.57 in)  |
| Gas Properties<br>Gas Pressure                             | Nitrogen gas   |
|  | 1,177 kPa (12 kg/cm², 171 psi)   |
| Rear Arm:  |  |
| Swing Arm Free Play  | 4  |
| End<br>Side  | 1 mm (0.04 in)   |
|  | 0.1 ~ 0.3 mm (0.004 ~ 0.012 in)  |
| Wheel:   |  |
| Туре   | Cast wheel   |
| Rim Size/Material (Front)                                  | MT2.15 × 18/ Aluminum  |
| Rim Size/Material (Rear)                                   | MT2.50 × 18/ Aluminum  |
| Rim Run Out Limit Vertical                                 | 1 (0.04 :-)  |
| Lateral  | 1 mm (0.04 in)<br>0.5 mm (0.02 in)   |
|  | 0.5 (fill)   |
| Drive Chain:   |  |
| Type/Manufacturer  | 520V-SR/DAIDO  |
| Number of Links  | 106  |
| Chain Slack  | 30 ~ 40 mm (1.18 ~ 1.57 in)  |



| Model                            |       | RD350/350F                  |  |
|----------------------------------|-------|-----------------------------|--|
| Disc Brake:                      |       |                             |  |
| Type                             |       |                             |  |
| Front                            |       | Dual                        |  |
| Rear                             |       | Single                      |  |
| Disc Size-Outside Dia × Thicknes | S     | 267 × 5 mm (10.5 × 0.19 in) |  |
| Disc Wear Limit                  |       | 4.5 mm (0.18 in)            |  |
| Pad Thickness                    |       | 5.5 mm (0.22 in)            |  |
| Pad Wear Limit                   |       | 0.5 mm (0.02 in)            |  |
| Master Cylinder Inside Diameter  | Front | 15.87 mm (0.62 in)          |  |
|                                  | Rear  | 12.70 mm (0.51 in)          |  |
| Caliper Cylinder Inside Diameter | Front | 38.18 mm (1.5 in)           |  |
|                                  | Rear  | 38.18 mm (1.5 in)           |  |
| Brake Fluid Type                 |       | DOT#3                       |  |

## Tightening torque

| Part                         | Thread size | Nm  | m•kg | ft•lb |
|------------------------------|-------------|-----|------|-------|
| Engine mounting bolt         | M10×1.25    | 64  | 6.4  | 46    |
| Engine mount stay            | M 8×1.25    | 23  | 2.3  | 17    |
| Tension rod                  | M 8×1.25    | 25  | 2.5  | 18    |
| Handle crown -Steering shaft | M14×1.25    | 85  | 8.5  | 61    |
| -Inner tube                  | M 8×1.25    | 20  | 2.0  | 14    |
| Handle bar -Inner tube       | M 8×1.25    | 20  | 2.0  | 14    |
| Handle bar -Handle crown     | M 6×1.0     | 9   | 0.9  | 6.5   |
| Under bracket -Inner tube    | M 8×1.25    | 20  | 2.0  | 14    |
| Fork brace                   | M 6×1.0     | 10  | 1.0  | 7.2   |
| Front wheel axle             | M12×1.25    | 75  | 7.5  | 54    |
| Pivot shaft                  | M14×1.5     | 90  | 9.0  | 65    |
| Rear wheel axle              | M14×1.5     | 105 | 10.5 | 75    |
| Sprocket wheel               | M 8×1.25    | 32  | 3.2  | 23    |
| Rear shock -Frame            | M10×1.25    | 40  | 4.0  | 29    |
| Relay arm -Frame             | M10×1.25    | 40  | 4.0  | 29    |
| Relay arm -Arm 1, 2          | M14×1.5     | 65  | 6.5  | 47    |
| Arm 1, 2 -Swing arm          | M12×1.25    | 40  | 4.0  | 29    |
| Brake disc - Hub             | M 8×1.25    | 20  | 2.0  | 14    |
| Master cylinder              | M10×1.25    | 10  | 1.0  | 7.2   |
| Brake hose                   | M10×1.25    | 26  | 2.6  | 19    |
| Retaining bolt               | M 6×1.0     | 20  | 2.0  | 14    |
| Caliper - Bracket            | M10×1.25    | 35  | 3.5  | 25    |
| -Bleed screw                 | M 7×1.0     | 5   | 0.5  | 3.6   |
| Frame - Muffler bracket      | M10×1.25    | 64  | 6.4  | 46    |
| Muffler bracket -Footrest    | M10×1.25    | 64  | 6.4  | 46    |



### Electrical

| Model   | RD350/350F  |
|---|---|
| Ignition System: Ignition Timing: (B.T.D.C.) Advanced Timing: (B.T.D.C.)  | 17° at 1,200 r/min<br>27° at 3,500 r/min  |
| 0 25°<br>20°<br>20°<br>20°<br>15°<br>10°<br>10°<br>Engine Speed (×10³ r/min)                                    |   |
| CDI: CDI Unit-Model/Manufacturer Pickup Coil Resistance (Color) Source Coil Resistance (Color)                  | 51L/NIPPONDENSO<br>$117\Omega \pm 20\%$ (White/Red — White/Green)<br>$113\Omega \pm 20\%$ (Brown — Green)<br>$4.1\Omega \pm 20\%$ (Brown — Red) |
| Ignition Coil:  Model/Manufacturer  Minimum Spark Gap  Primary Winding Resistance  Secondary Winding Resistance | 12900-027/NIPPONDENSO<br>6 mm (0.24 in)<br>$0.33\Omega \pm 10\%$ at 20°C (68°F)<br>$3.5k\Omega \pm 20\%$ at 20°C (68°F)                         |
| Spark Plug:<br>Type/Manufacturer  | BR8ES/N.G.K.  |
| C.D.I. Unit:<br>Type/Manufacturer   | 52Y/NIPPONDENSO   |
| A.C. Generator:  Model/Manufacturer  Charging Output  | 51L/NIPPONDENSO<br>14V14A/5,000 r/min   |
| (Y) the 10 0 10 10 10 10 10 10 10 10 10 10 10 1   |   |
| Charging Coil Resistance (Color)  | $0.5\Omega \pm 20\%$ at 20°C (68°F) (White — White)   |



| Model  | RD350/350F  |
|--|---|
| Voltage Regulator:<br>Type<br>Model/Manufacturer<br>Regulating Voltage | Short circuit SH235-12C/SHINDENGEN KOUGYOU 14.5 ± 0.5V                    |
| Rectifier: Type Model/Manufacturer Capacity Withstand Voltage          | Three phase, Full wave SH235-12C/SHINDENGEN KOUGYOU 15A 200V              |
| Battery: Model/Manufacturer Charging Rate Specific Gravity             | 12N5.5-3B/NIPPONDENSO<br>0.55A × 10 hours<br>1,280                        |
| Horn:<br>Model<br>Maximum Amperage                                     | CF-12/ NIKKO<br>2.5A or less  |
| Flasher Relay: Type Model/Manufacturer Flasher Frequency Capacity      | Semi transistor type FJ245ED/NIPPONDENSO 85 cycle/min 12V, 21W × 2 + 3.4W |
| Thermo-unit: Model/Manufacturer  | YA55901NO/NISSEI  |
| Circuit Breaker: Type Amperage for Individual Circuit/Quantity         | Fuse  |
| Main<br>Headlight<br>Signal<br>Y.P.V.S.                                | 20A × 1<br>15A × 1<br>15A × 1<br>5A × 1                                   |
| Reserve  | 20A×1, 15A×1, 5A×1  |

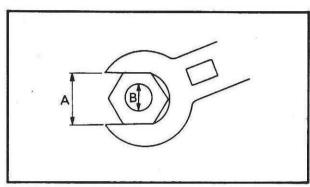
# GENERAL TORQUE SPECIFICATIONS /DEFINITION OF UNITS



# GENERAL TORQUE SPECIFICATIONS

This chart specifies torque for standard fasteners with standard I.S.O. pitch threads. Torque specifications for special components or assemblies are included in the applicable sections of this book. To avoid warpage, tighten multifastener assemblies in a crisscross fashion, in progressive stages, until full torque is reached. Unless otherwise specified, torque specifications call for clean, dry threads. Components should be at room temperature.

| A<br>(Nut) | B<br>(Bolt) | General torque specifications |      |       |
|------------|-------------|-------------------------------|------|-------|
|            |             | Nm                            | m•kg | ft•lb |
| 10 mm      | 6 mm        | 6                             | 0.6  | 4.3   |
| 12 mm      | 8mm         | 15                            | 1.5  | 11    |
| 14 mm      | 10 mm       | 30                            | 3.0  | 22    |
| 17 mm      | 12 mm       | 55                            | 5.5  | 40    |
| 19 mm      | 14 mm       | 85                            | 8.5  | 61    |
| 22 mm      | 16mm        | 130                           | 13.0 | 94    |



A: Distance cross flats
B: Outside thread diameter

### **DEFINITION OF UNITS**

| Unit       | Read                            | Definition                                       | Measure                 |
|------------|---------------------------------|--|-------------------------|
| mm<br>cm   | millimeter<br>centimeter        | 10 <sup>-3</sup> meter<br>10 <sup>-2</sup> meter | Length<br>Length        |
| kg         | kilogram                        | 10³ gram   | Weight                  |
| N          | Newton                          | 1 kg × m/sec <sup>2</sup>                        | Force                   |
| Nm<br>m·kg | Newton meter<br>Meter kilogram  | N×m<br>m×kg                                      | Torque<br>Torque        |
| Pa<br>N/mm | Pascal<br>Newton per millimeter | N/m²<br>N/mm                                     | Pressure<br>Spring rate |
| L<br>cm³   | Liter<br>Cubic centimeter       | _  | Volume or Capacity      |
| r/min      | Rotation per minute             | -  | Engine Speed            |

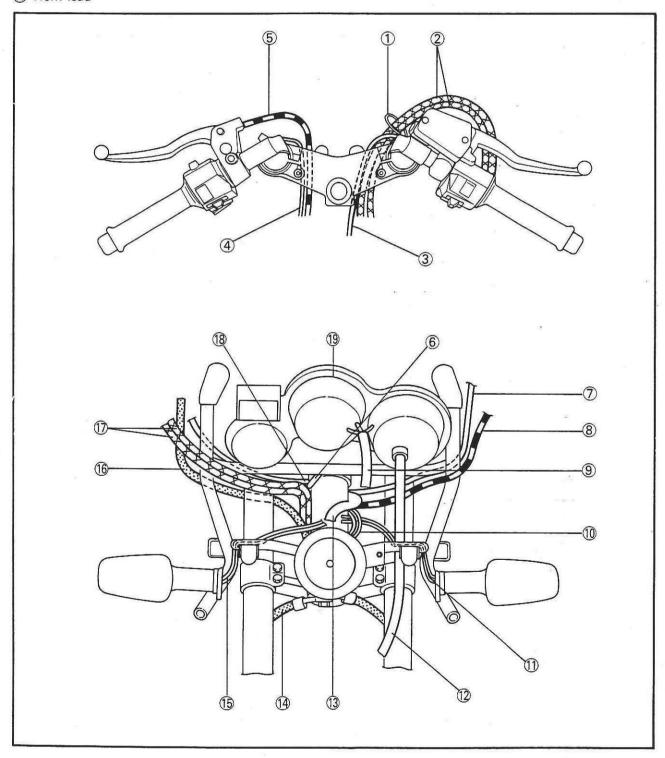
## CABLE ROUTING

#### CABLE ROUTING

- Cable holder
   Throttle cable 1, 2
   Handlebar switch lead (Right)
   Handlebar switch lead (Left)
   Clutch cable
   Main switch lead

- (Right)
- 8 Clutch cable
- Meter leadHorn lead

- 1 Front flasher light lead (Left)
- Speedometer cable Wire harness
- (14) Brake hose 2
- (15) Front flasher light lead (Right)
- 16 Brake hose 1
- Throttle cable 1, 2
- (18) Handlebar switch lead (Right) (19) Meter ass'y





#### CABLE ROUTING

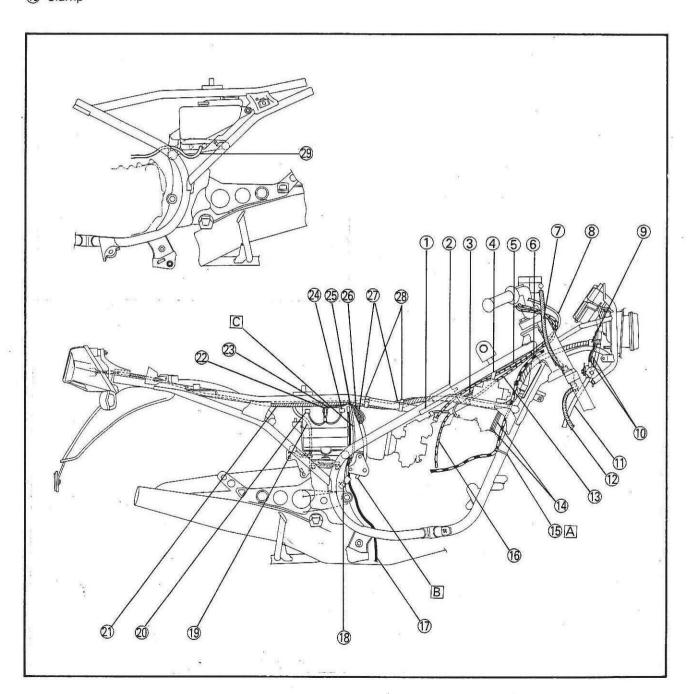
- Rectifier/regulator
   C.D.I. unit
   Thermo-unit lead
   Servomoter

- (5) Throttle cable 2
- 6 Clutch cable
- 7 Brake hose 18 Handlebar switch lead (Right)
- 9 Clamp
- (10) Horn lead (Left)
- (1) Speedometer cable
- (12) Brake hose 2
- (13) Throttle cable 1
- (14) Y.P.V.S. cable
- (15) Clamp

- Pump cable
- Battery breather hose
- (18) Brake switch Ass'y
- 19 Oil tank breather hose
- (9) Oil tank breather hose
  (2) Battery negative terminal
  (2) Wire harness
  (2) Battery negative lead
  (3) Battery positive lead
  (4) Battery positive terminal
  (5) Earth terminal
  (6) C.D.I. magneto lead
  (7) C.D.I. unit lead

- 28 Band 29 Oil ho Oil hose

- A HOLD THE CLUTCH CABLE WITH THE CLAMP.
- B ROUTE THE CDI MAGNETO LEADS BEHIND THE ENGINE BRACKET, AND CONNECT THEM.
- C ROUTE THE STOP SWITCH LEADS BEHIND THE ENGINE BRACKET.





#### CABLE ROUTING

#### CABLE ROUTING

1 Handlebar switch lead (Right)
2 Main switch lead
3 Servomotor
4 Thermo unit lead
5 Servomotor lead
6 Rectifier/regulator lead
7 Frame earth lead
8 C.D.I. unit lead
9 Flasher relay lead

9 Flasher relay lead

(10) Brake switch lead

(1) Earth terminal

(12) C.D.I. magneto lead

(13) Battery positive lead

14 Battery negative lead

15 Oil level gauge lead

17) Flasher lead (Right)

Flasher lead (Left)

Wire harness

Tail/Brake light lead

21) Clamp

2 Y.P.V.S. 2 Fuse box Y.P.V.S. control unit

(4) Oil tank breather hose

25 Flasher relay

C.D.I. unit

Rectifier/regulator lead

Plug cord

29 Ignition coil 30 Ignition coil lead

3) Handlebar switch lead (Left)

A SECURE THE LEADS WITH THE CLAMP.

**B** CONNECT THE GROUND LEAD TO THE SCREW ON THE REAR OF THE IGNI-TION COIL AND TIGHTEN THE SCREW.

