

# SHOP MANUAL

HONDA GENERAL PURPOSE ENGINE

## G35





## **FOREWORD**

The G35 shop manual employs a new approach to servicing and repair instruction. You will find it much different from other conventional Honda shop manuals, that is, instead of employing step-by-step descriptions of procedures, this make use of the intuitive understanding of illustrations in setting forth procedures. Obvious or commonly known information is excluded as much as possible from the manual and written instructions are made as concise as possible.

With this approach, illustrations and explanations are closely interrelated and reader can grasp meaning rapidly and clearly.

We invite from you any questions or comments concerning this new approach to shop manual preparation.

**HONDA MOTOR CO., LTD.**  
**Service Publications Office**

ALL INFORMATION, ILLUSTRATIONS AND SPECIFICATIONS CONTAINED IN THIS SHOP MANUAL ARE BASED ON THE LATEST PRODUCT INFORMATION AVAILABLE AT THE TIME OF PUBLICATION. THE RIGHT IS RESERVED TO MAKE CHANGES AT ANY TIME WITHOUT NOTICE.

NO PART OF THIS PUBLICATION MAY BE REPRODUCED WITHOUT WRITTEN PERMISSION.



## **CONTENTS**

|  |           |
|--|-----------|
| <b>A. SPECIFICATIONS .....</b>                       | <b>3</b>  |
| 1. Specifications .....                              | 5         |
| 2. Performance Curves .....                          | 6         |
| 3. Three-Dimensional Drawings .....                  | 7         |
| <b>B. PERIODIC MAINTENANCE .....</b>                 | <b>10</b> |
| <b>C. TROUBLE DIAGNOSIS CHART .....</b>              | <b>11</b> |
| <b>D. FIXING METHOD .....</b>                        | <b>13</b> |
| ☆ Service Precautions .....                          | 14        |
| ☆ Engine Disassembly Chart .....                     | 15        |
| 1. Fuel Tank / Muffler / Air Cleaner .....           | 16        |
| 2. Carburetor / Governor .....                       | 19        |
| 3. Recoil Starter / Covers .....                     | 23        |
| 4. Fly Wheel / Ignition Coil / Breaker Points .....  | 27        |
| 5. Cylinder Head / Valves .....                      | 30        |
| 6. Crankcase / Piston / Connecting Rod .....         | 37        |
| 7. Crankshaft / Camshaft .....                       | 42        |
| <b>E. SERVICE INFORMATION AND TORQUE TABLE .....</b> | <b>47</b> |
| 1. Service Information .....                         | 49        |
| 2. Torque Table .....                                | 51        |
| <b>F. SPECIAL TOOLS .....</b>                        | <b>52</b> |



**1. SPECIFICATIONS**

**2. PERFORMANCE CURVES**

**3. THREE-DIMENSIONAL DRAWINGS**

easymotoculture

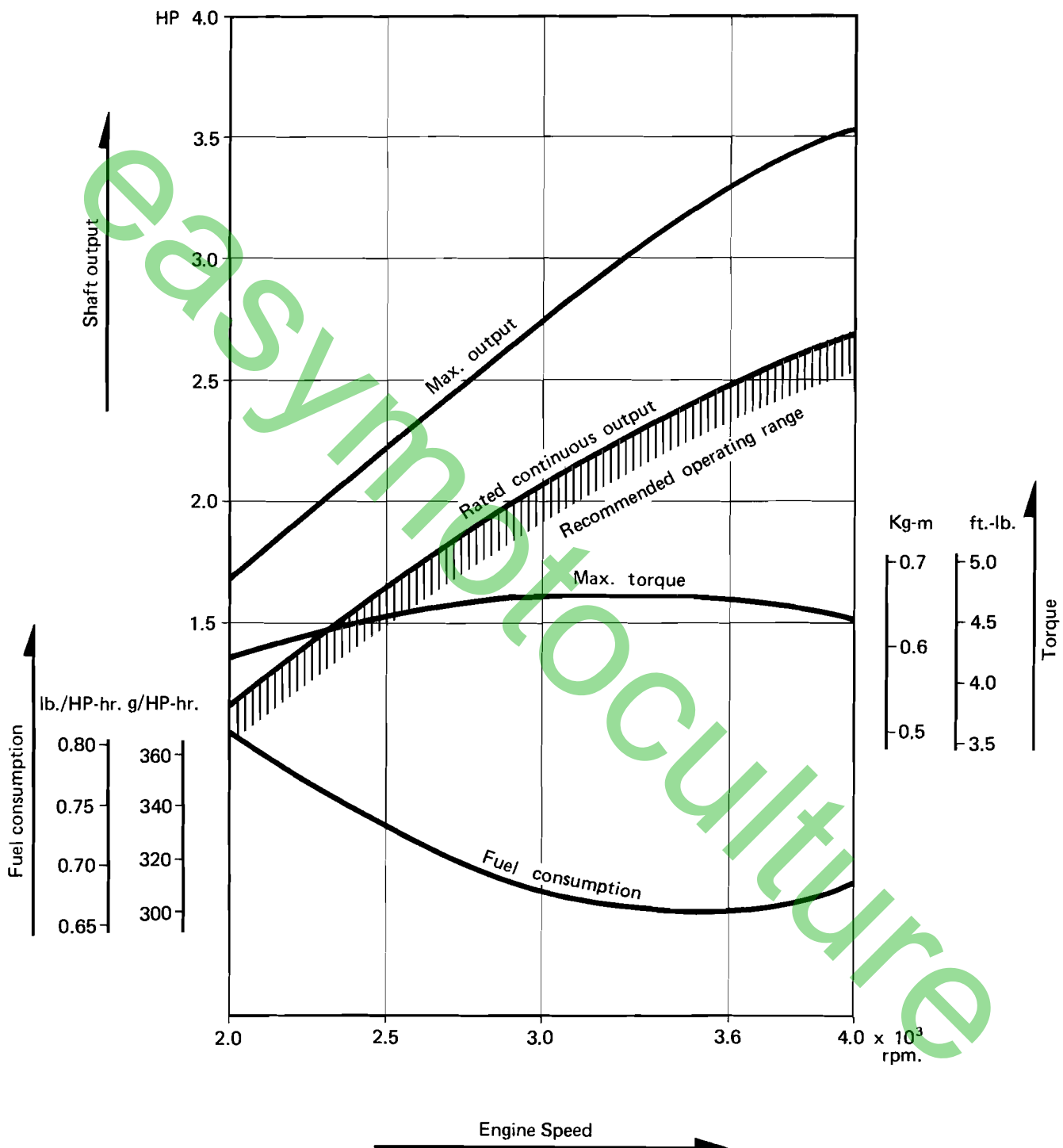


| Item                        | Specifications                              |
|-----------------------------|---|
| Model                       | HONDA gasoline engine G35                   |
| Type                        | Single cylinder                             |
| Cycles, valve arrangement   | 4-cycle, side valve type                    |
| Total displacement          | 144 cc (8.79 cu.in.)                        |
| Bore and stroke             | 64 x 45 mm (2.52 x 1.77 in.)                |
| Compression ratio           | 6.4 : 1                                     |
| Rated continuous horsepower | 2.5 HP/3,600 rpm                            |
| Rated maximum horsepower    | 3.5 HP/4,000 rpm                            |
| Maximum torque              | 0.66 kg-m/3,000 rpm (4.77 ft-lbs/3,000 rpm) |
| Fuel consumption            | 310 g/HP-hr (0.68 lb/HP-hr)                 |
| Combustion chamber type     | L-head Ricardo type                         |
| Cooling system              | Forced air cooling                          |
| Ignition system             | High voltage ignition                       |
| Ignition timing             | 20° BTDC, Fixed                             |
| Spark plug                  | BR6HS or B6HS (NGK)                         |
| Carburetor                  | Horizontal butterfly valve                  |
| Governor                    | Centrifugal weight                          |
| Air cleaner                 | Semi-dry type                               |
| Lubrication system          | Splash system                               |
| Oil capacity                | 0.6ℓ (1.27 US. pt., 1.06 Imp. pt.)          |
| Starting system             | Recoil starter or rope starting             |
| Stopping system             | Ground switch                               |
| Fuel                        | Automobile gasoline                         |
| Fuel tank capacity          | 2.5ℓ (0.66 US. gal., 0.55 Imp. gal.)        |
| Dry weight                  | 14.0 Kg (30.87 lbs.)                        |

\* These specifications may be changed without notice.

## 2. PERFORMANCE CURVES

**HONDA**  
G35



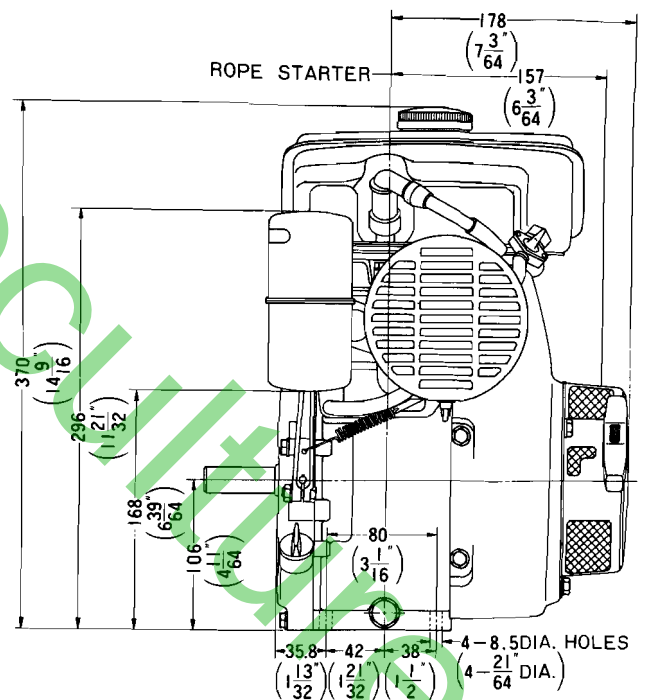
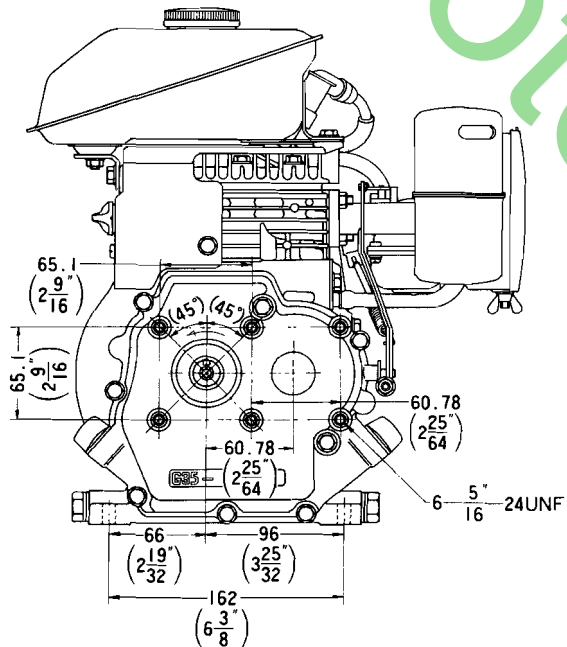
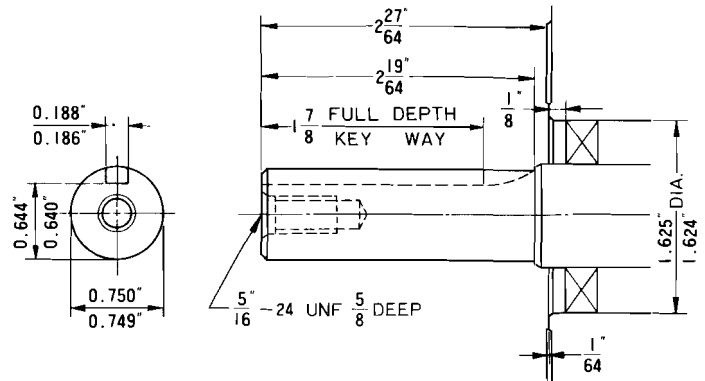
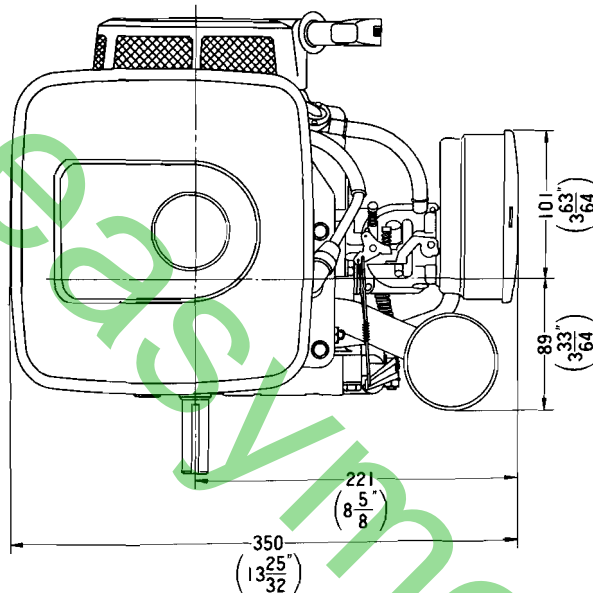


**HONDA**  
**G35**

## 3. THREE-DIMENSIONAL DRAWINGS

CRANKSHAFT PTO TYPE (Q TYPE)

Unit: mm



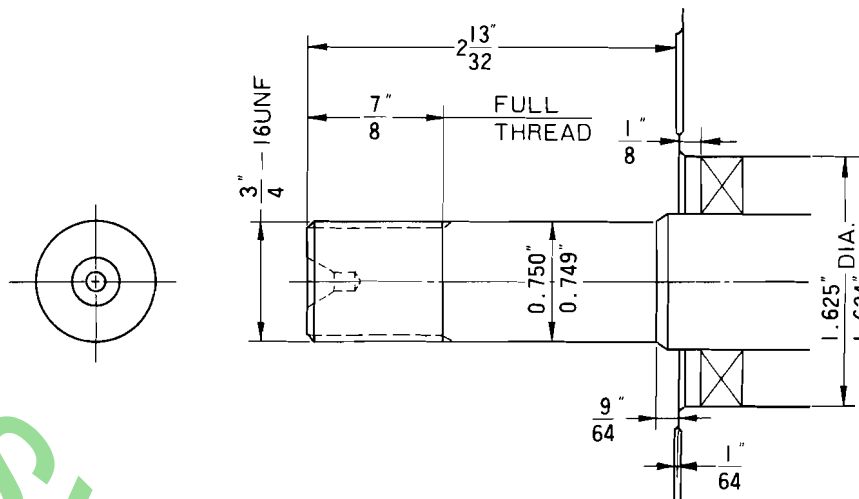
PTO shaft

rpm: 3600 rpm.

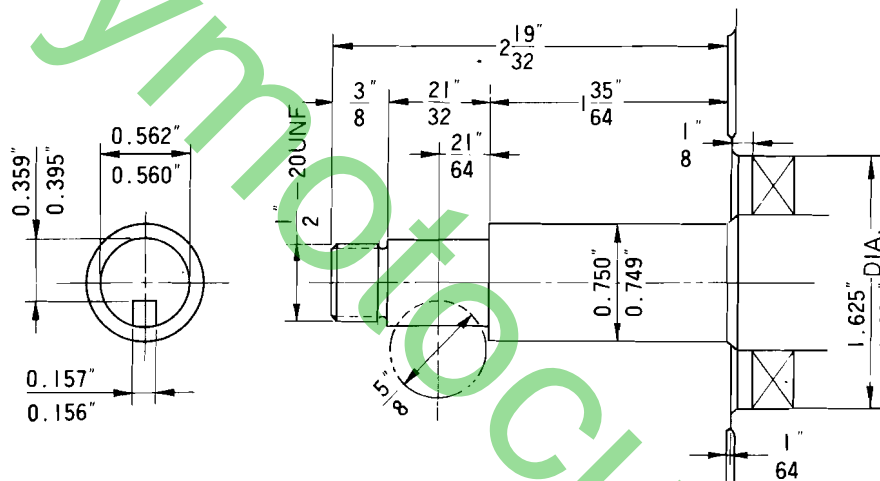
Rotating direction: counterclockwise



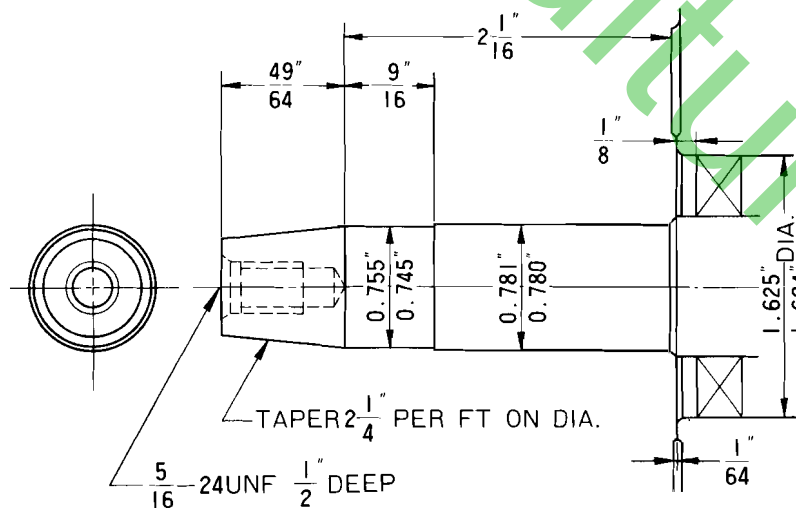
P type



U type



V type

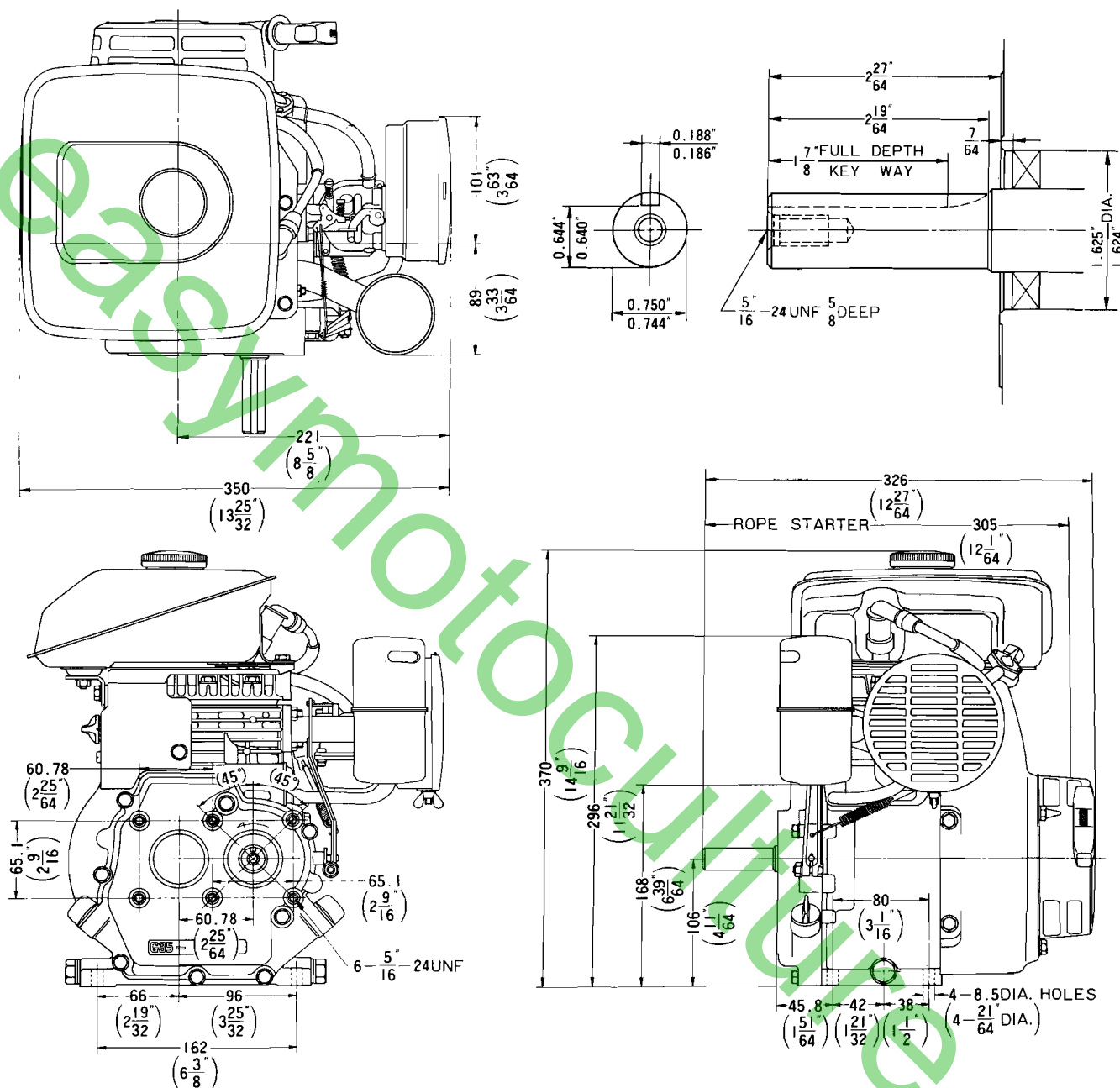






**HONDA**  
**G35**

CAMSHAFT PTO TYPE (LD TYPE)



PTO shaft

rpm: 1800 rpm

Rotating direction: counterclockwise

# B. PERIODIC MAINTENANCE

**HONDA**  
G35

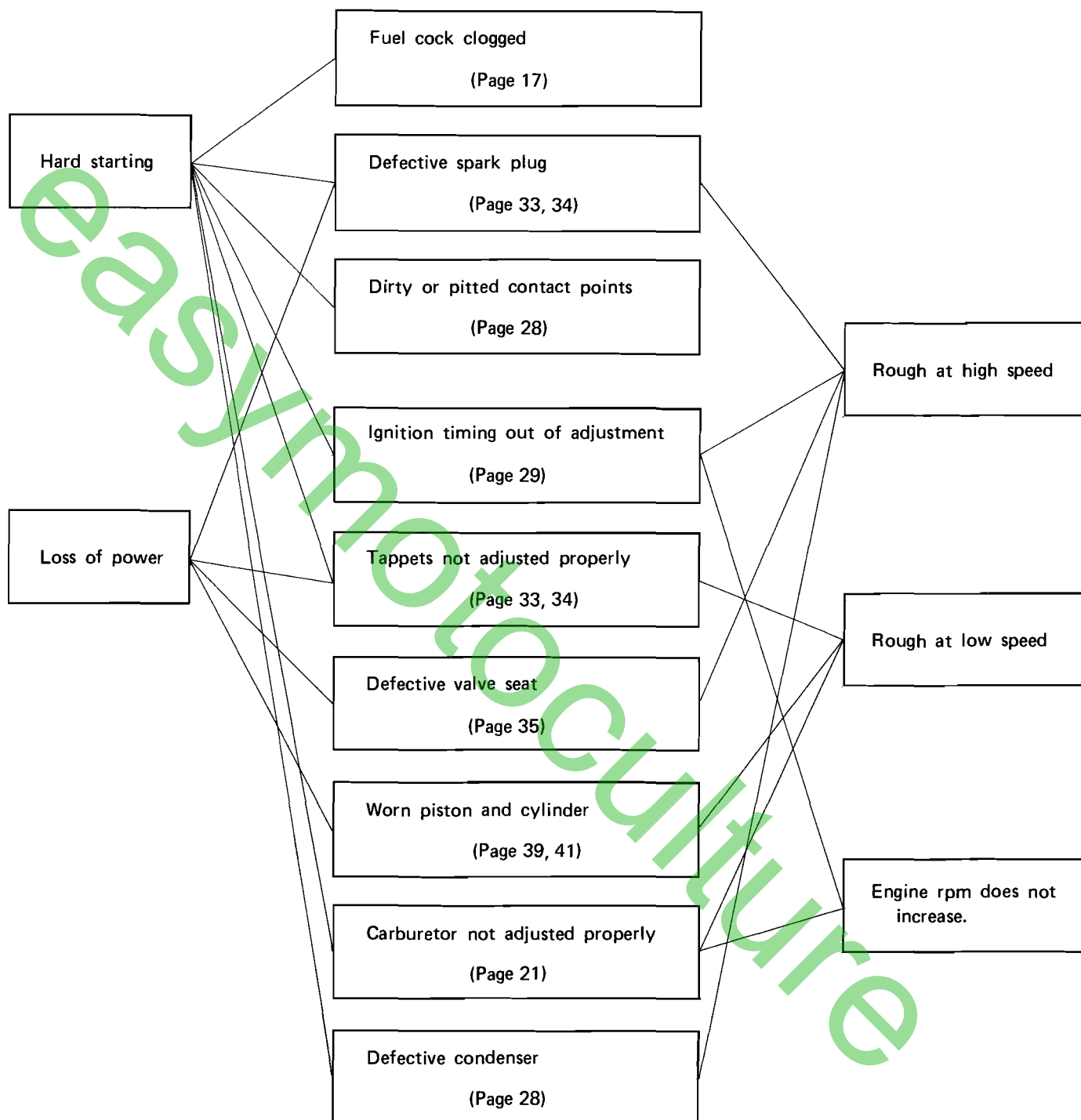


| Item \ Inspection interval (hours)        | Daily Inspection              | First 20 hrs. | Every 50 hrs. | Every 100 hrs. | Every 300 hrs. or Once a year |
|---|-------------------------------|---------------|---------------|----------------|-------------------------------|
| Check and replenish engine oil            | ○                             |               |               |                |                               |
| Change engine oil                         |                               | ○             |               | ○              |                               |
| Check air cleaner element                 | ○                             |               |               |                |                               |
| Clean air cleaner                         |                               |               | ○ *           |                |                               |
| Clean fuel strainer                       |                               |               |               | ○              |                               |
| Clean and adjust spark plug               |                               |               |               | ○              |                               |
| Inspect and adjust ignition timing        |                               |               |               |                | ○                             |
| Inspect and adjust tappet clearance       |                               |               |               |                | ○                             |
| Decarbonize combustion chamber and valves |                               |               |               |                | ○                             |
| Clean inside of fuel tank                 |                               |               |               |                | ○                             |
| Replace fuel tube                         | Check and renew if necessary. |               |               |                |                               |

\* Clean every 10 hrs. or daily when operating under dusty conditions such as threshing, cutting, etc.



# C. TROUBLE DIAGNOSIS CHART





☆ **Service Precautions**

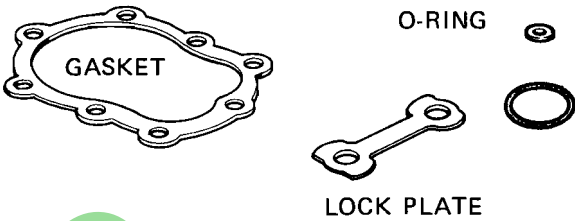
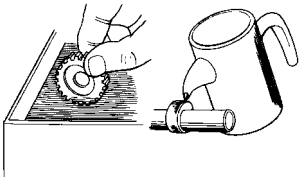
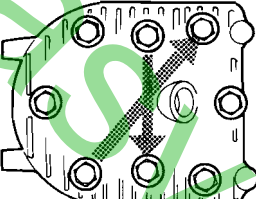
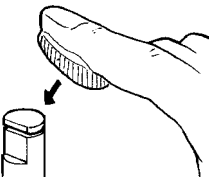
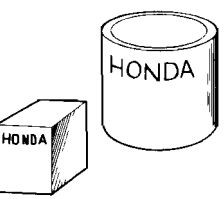
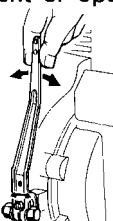
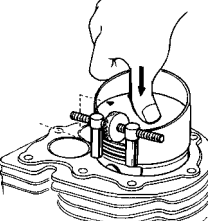
☆ **Engine Disassembly Chart**

- 1. Fuel Tank, Muffler and Air Cleaner**
- 2. Carburetor and Governor**
- 3. Recoil Starter and Covers**
- 4. Flywheel and Electrical System**
- 5. Cylinder Head and Valves**
- 6. Crankcase, Piston and Connecting Rod**
- 7. Crankshaft and Camshaft**

# ★ SERVICE PRECAUTIONS

**HONDA**  
**G35**



|  |  |
|--|--|
| <p><input type="checkbox"/> Always replace whenever reassembled.</p>  <p>GASKET<br/>O-RING<br/>LOCK PLATE</p>   | <p><input type="checkbox"/> Wash clean parts in/with solvent. Lubricate their sliding surfaces whenever assembled.</p>           |
| <p><input type="checkbox"/> Tighten fasteners, beginning on center or larger dia. bolts to specs, where sequence is not specified, in a X pattern.</p>  | <p><input type="checkbox"/> Grease by coating or filling where specified as such.</p>    |
| <p><input type="checkbox"/> Use HONDA or HONDA recommended parts and lubricants.</p>   | <p><input type="checkbox"/> After reassembling, check every possible part for proper installation, movement or operation.</p>  |
| <p><input type="checkbox"/> Use special tool where so specified.</p>    | <p><input type="checkbox"/> Always check mutual safety when working with partner.</p>  |

## SYMBOLS

These symbols are used throughout the manual to show specific kinds of operation, sequence of service procedures, etc.



: Indicates items to be performed carefully for safety service or to be read for extended information.



: Indicates warning or important items.

①, ②, ③ .... : Indicates sequence of service operations.



: Apply oil.

**GREASE**

: Apply grease.

**S. TOOL**

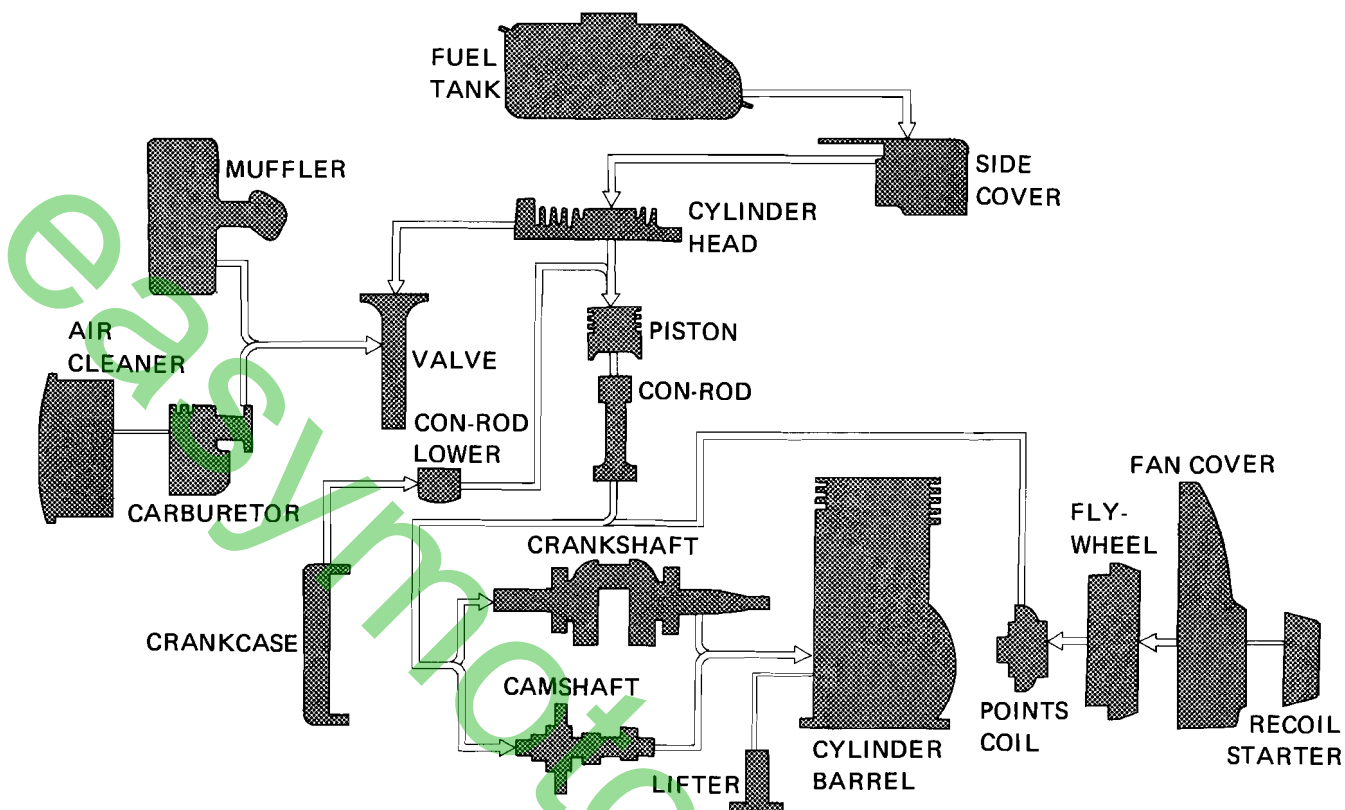
: Use special tool.



**HONDA**  
**G35**

# ★ ENGINE DISASSEMBLY CHART

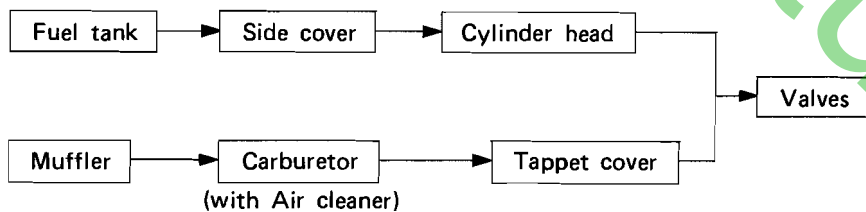
ARROW LINE INDICATES SEQUENCE OF DISASSEMBLY.



## < HOW TO USE ABOVE SEQUENCE >

You can disassemble the next parts without disassembling parts each which are connected together by narrow line.

For example: When the valves are replaced.

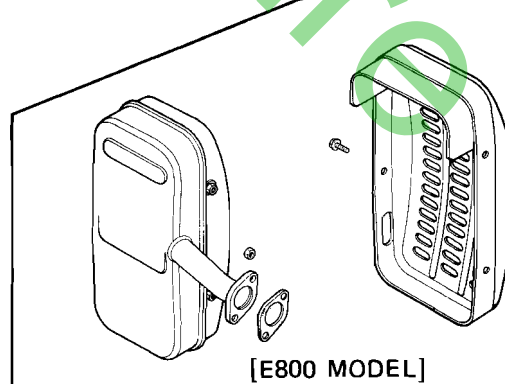
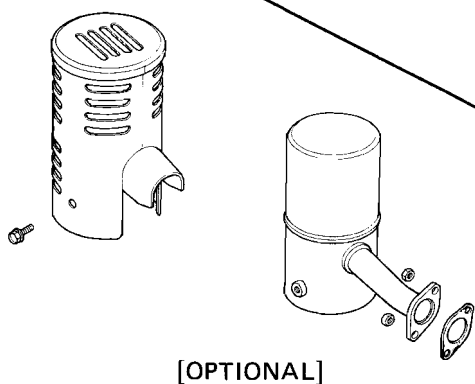
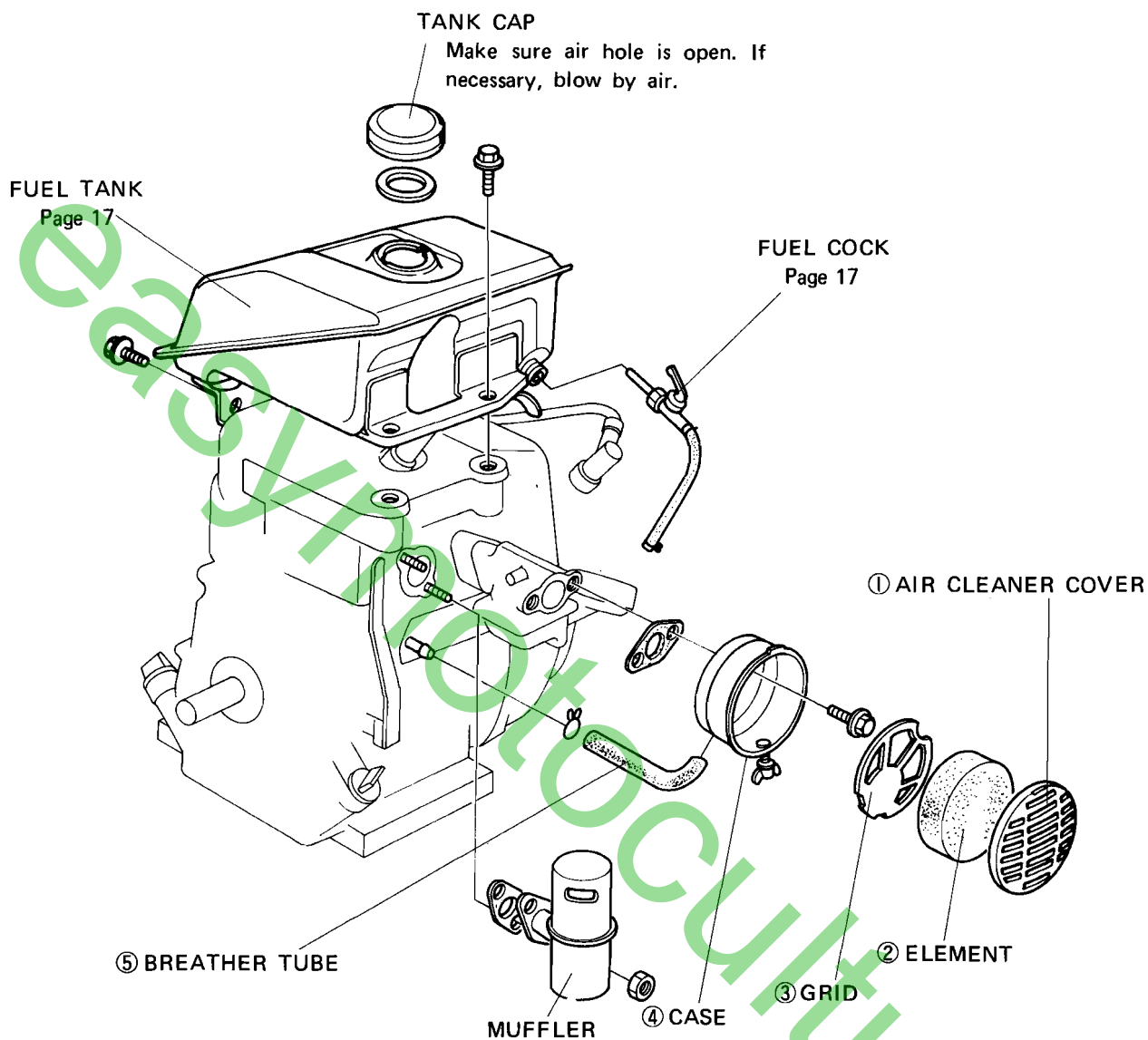


# 1. FUEL TANK, MUFFLER AIR CLEANER

**HONDA**  
G35



## a. DISASSEMBLY / ASSEMBLY

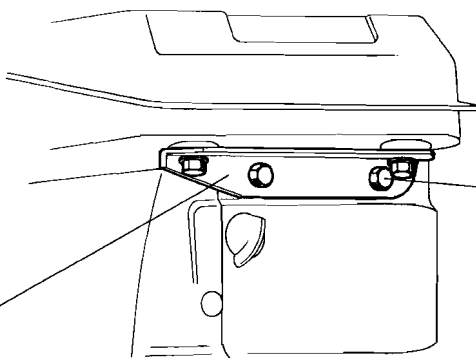




### <FUEL TANK>

#### NOTE:

Inspect tank frequently for debris,  
flush with gasoline if necessary.



During assembly install four tank mounting bolts loosely, when proper alignment is assured, tighten securely.

Remove with tank.

\* Do not forget the clamp for the high tension wire.

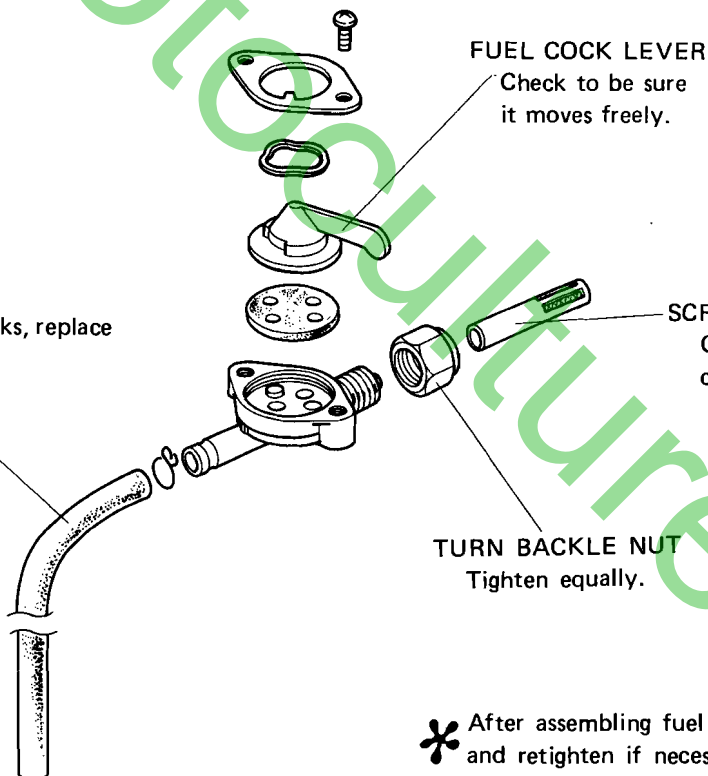
### <FUEL COCK>



Before disassembling, be sure to drain the tank.

#### FUEL TUBE

Check for kinks and cracks, replace if necessary.



#### FUEL COCK LEVER

Check to be sure it moves freely.

#### SCREEN

Check for breakage or clogging.

#### TURN BACK NUT

Tighten equally.

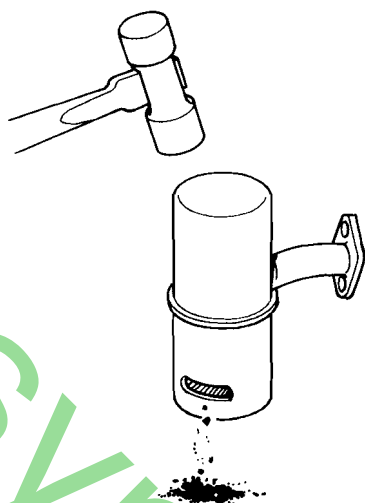
\* After assembling fuel cock, check for leak, and retighten if necessary.





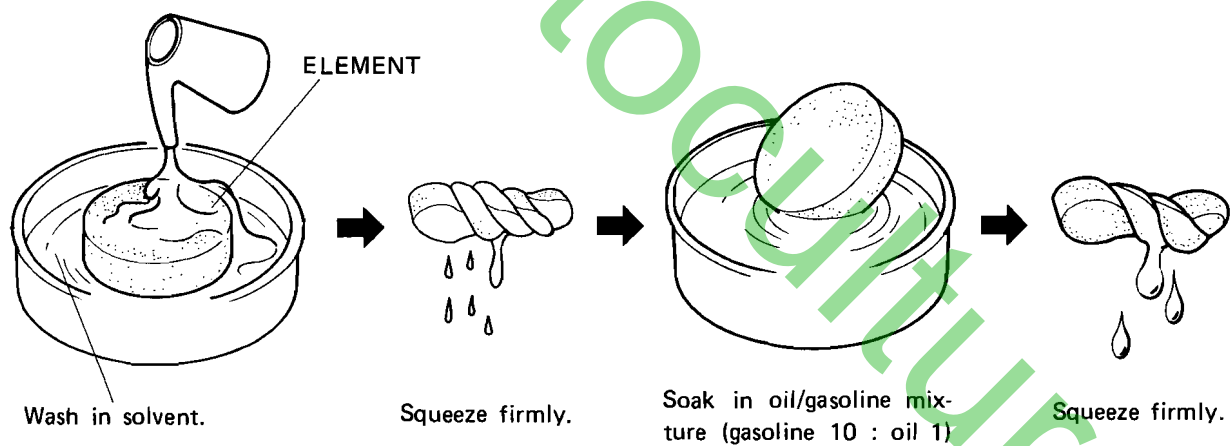
(b) **CLEANING**

< MUFFLER >



Lightly tap it around with soft hammer to decarbonize.

< AIR CLEANER >

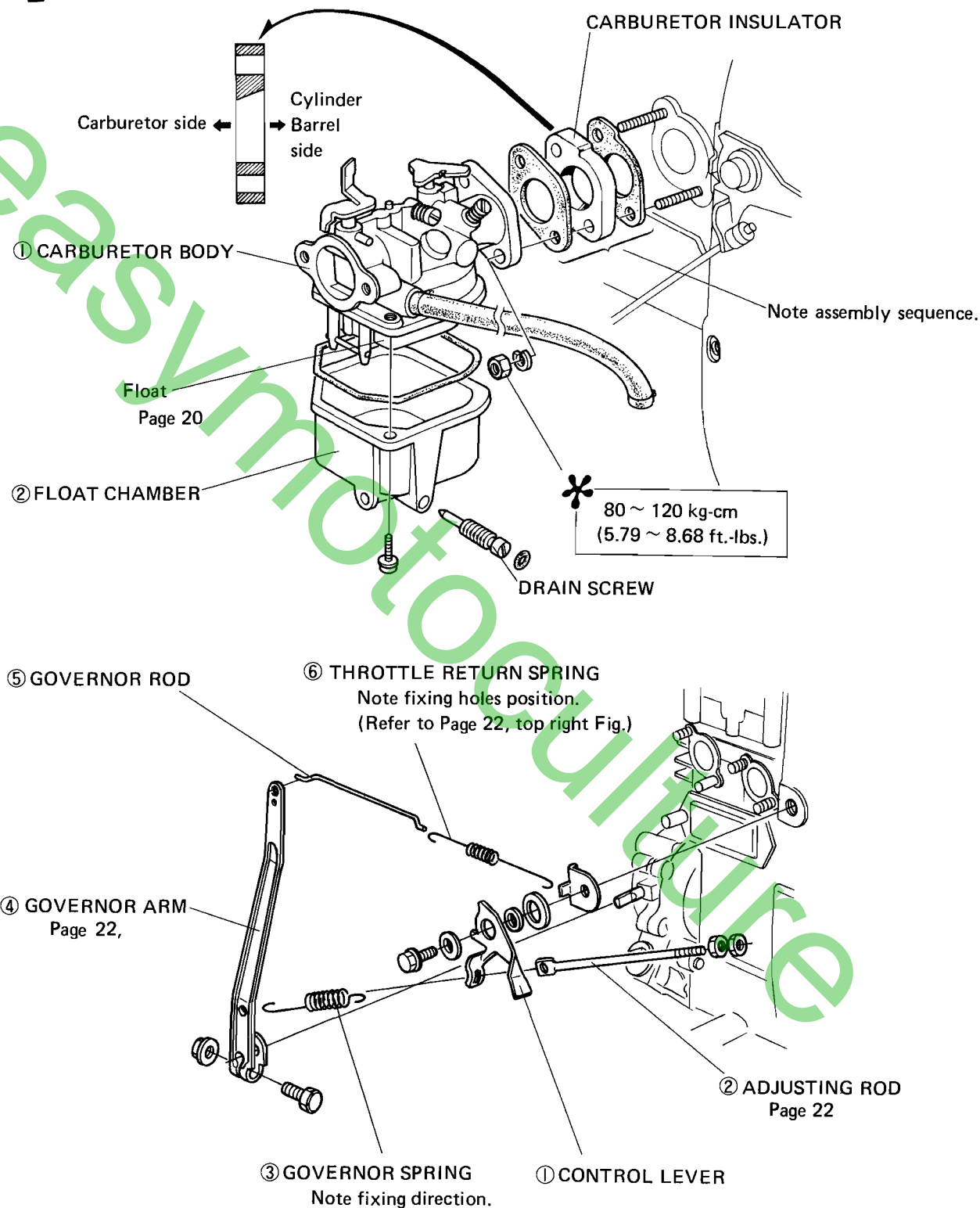




### (a) DISASSEMBLY / ASSEMBLY

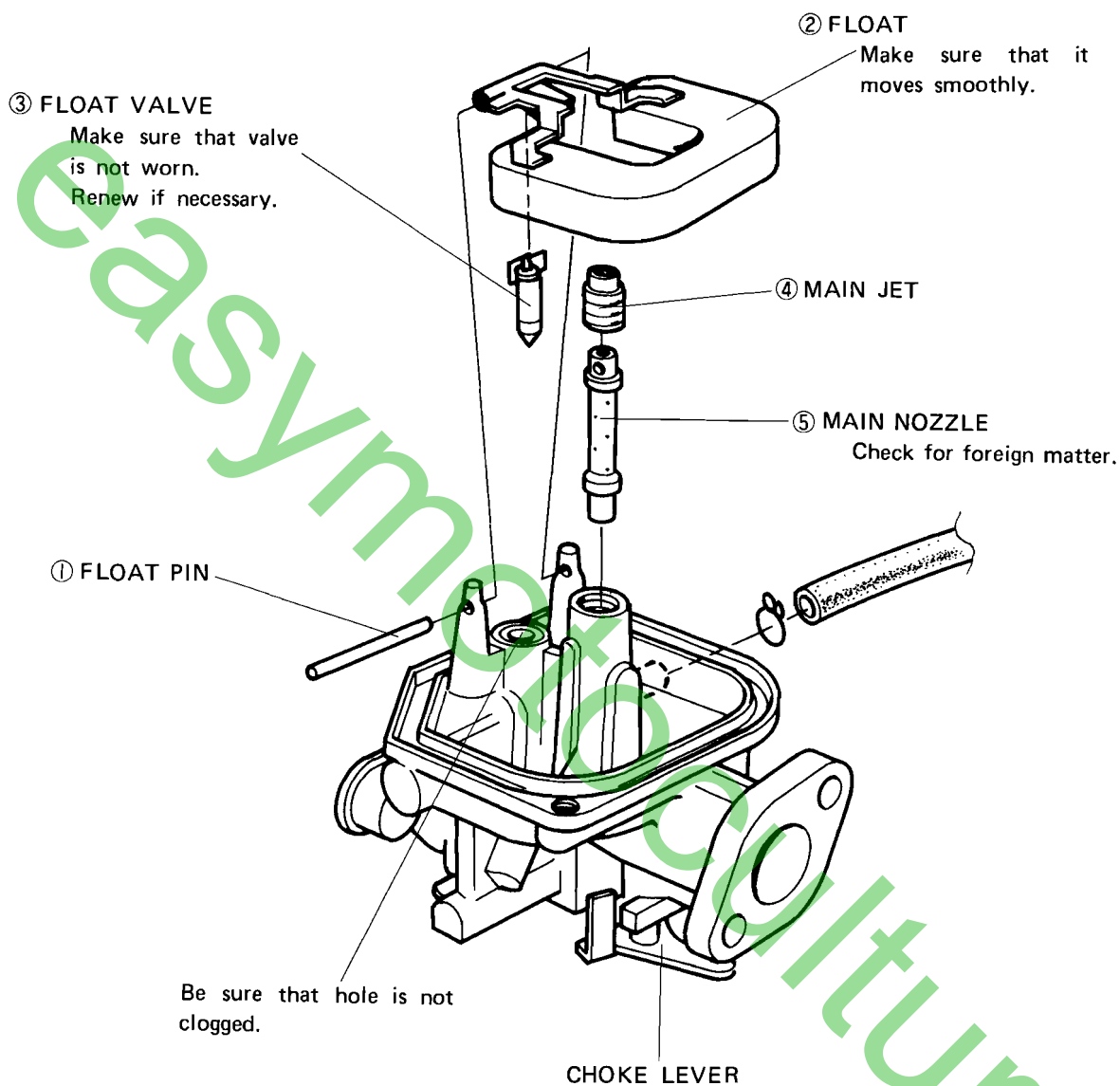


Before disassembly, be sure to drain carburetor.





### < FLOAT CHAMBER >



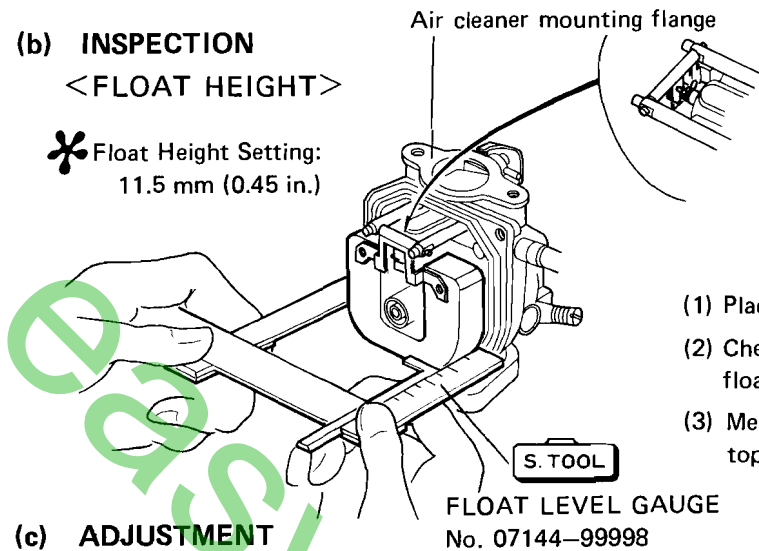


# HONDA G35

## (b) INSPECTION

### <FLOAT HEIGHT>

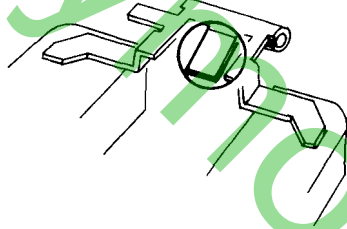
\* Float Height Setting:  
11.5 mm (0.45 in.)



- (1) Place carburetor on a level work surface as shown.
- (2) Check that float valve is just beginning to contact float arm tab.
- (3) Measure distance between carburetor body and top of float.

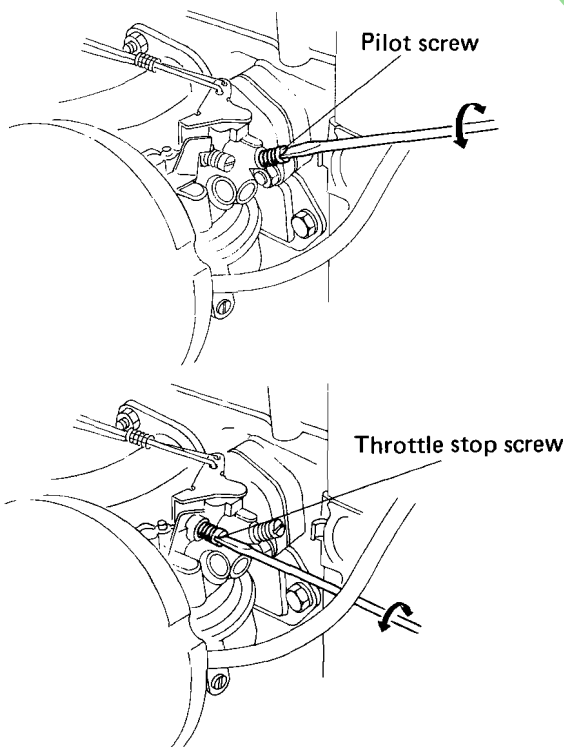
## (c) ADJUSTMENT

### <FLOAT HEIGHT>



\* Bend float arm tab to adjust height.

### <CARBURETOR ADJUSTMENT>



#### NOTE:

All adjustments must be made at normal operating temperature.

- (1) Turn in pilot screw all the way until it bottoms.
- (2) Turn out pilot screw 1-3/8 turns.
- (3) Start the engine.
- (4) Turn throttle stop screw either in or out as necessary until engine idles at 1,400 RPM. Adjust pilot screw for maximum RPM and re-adjust throttle stop screw for 1,400 RPM.



## <GOVERNOR AND THROTTLE>

### GOVERNOR ADJUSTMENT

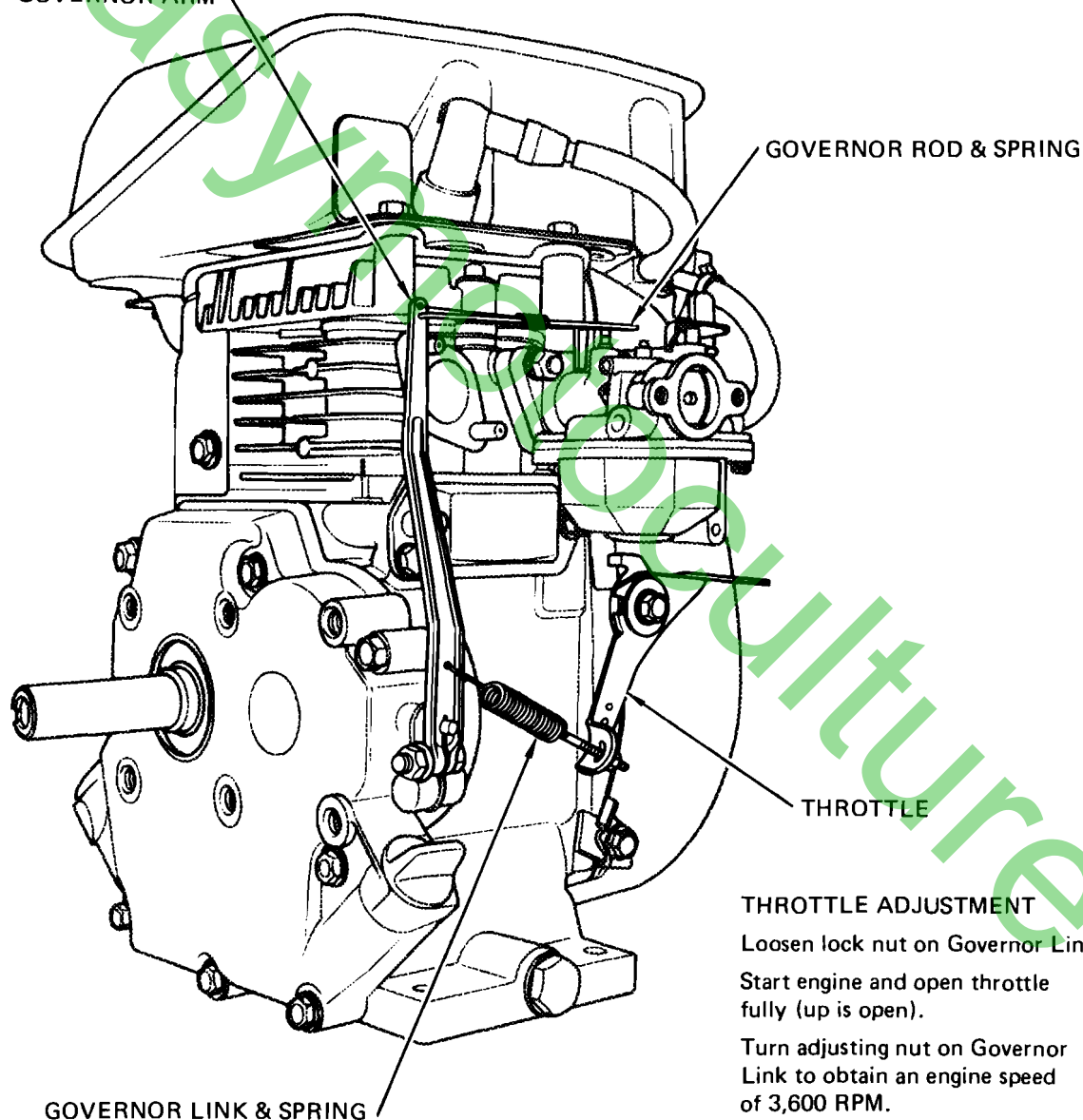
Open throttle fully.

Loosen Governor Arm Set Bolt and push Governor Arm towards carburetor until it stops.

Turn Governor Arm Pivot clockwise until it stops.

Tighten Governor Arm Set Bolt.

### GOVERNOR ARM



### THROTTLE ADJUSTMENT

Loosen lock nut on Governor Link.

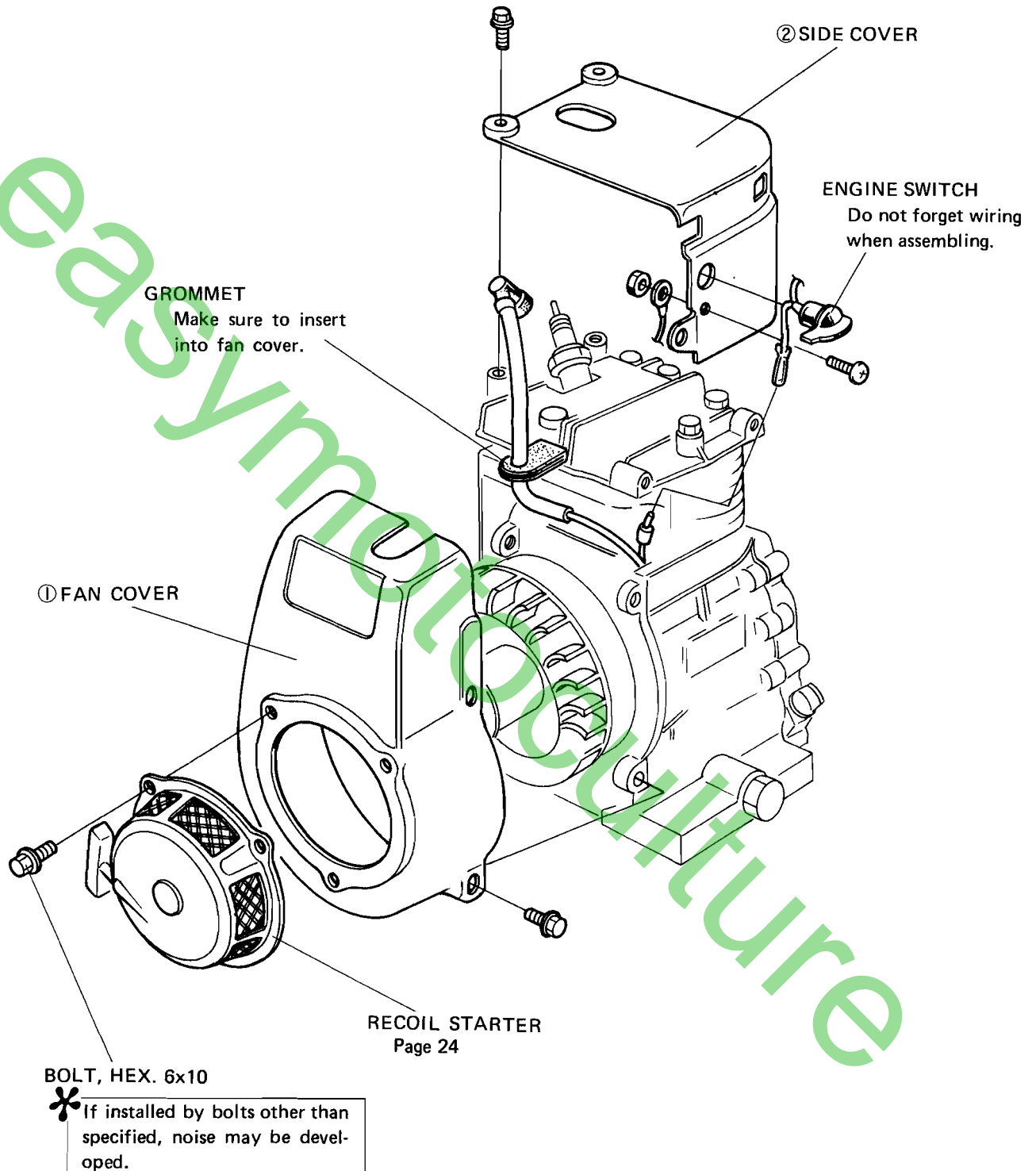
Start engine and open throttle fully (up is open).

Turn adjusting nut on Governor Link to obtain an engine speed of 3,600 RPM.

Tighten lock nut, being careful to not disturb adjustment.

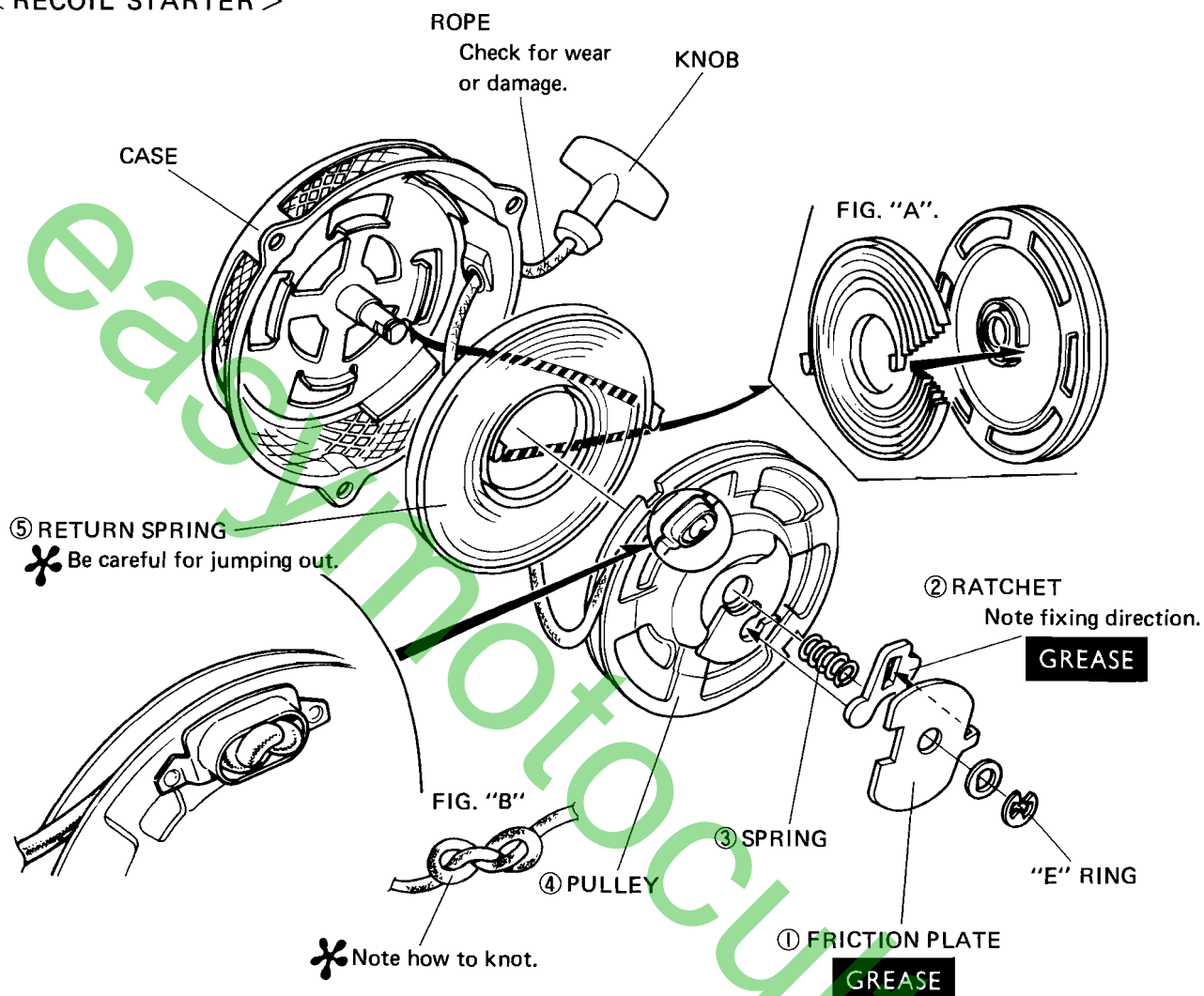


(a) DISASSEMBLY / ASSEMBLY





### < RECOIL STARTER >







### < ASSEMBLY OF RECOIL STARTER >

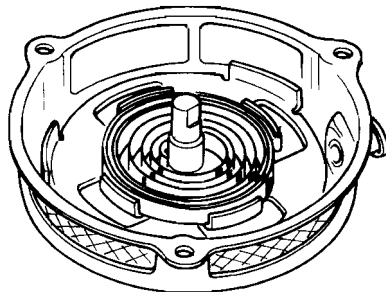
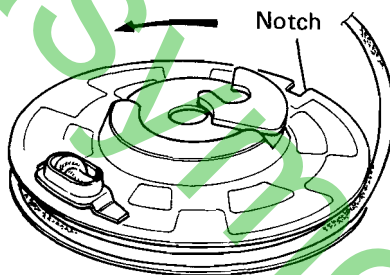


#### CAUTION:

Protect hand holding spring with a heavy glove.

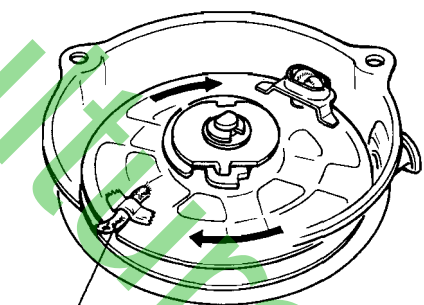
- (2) Tie a knot in one end of starter rope and thread free end of rope through the hole on top of the pulley until the knot is pulled up against the hole.

Wind rope counterclockwise around pulley and temporarily secure free end in notch with tape.

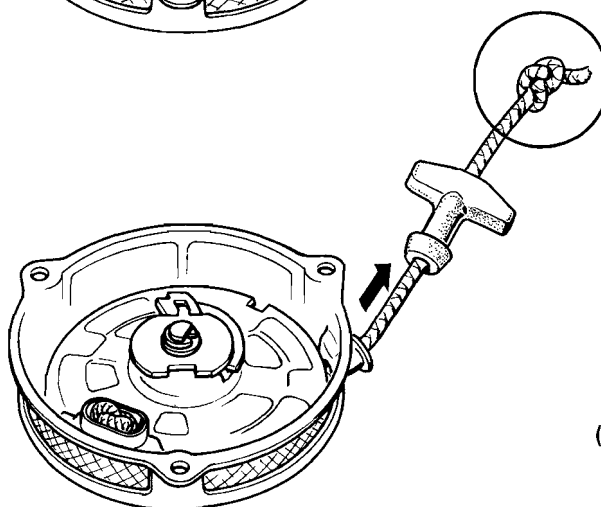


- (3) Position pulley inside case, taking care to engage hook on inner end of spring with hook near the center of pulley. (Pulley will not seat fully until the spring is properly engaged with pulley).

- (4) Wind spring by turning pulley counterclockwise three turns.



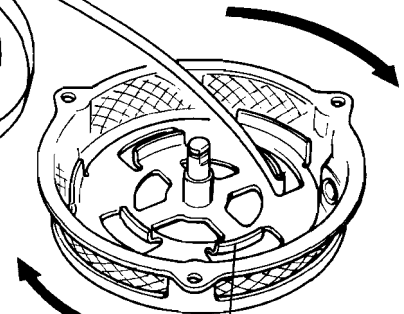
Rope secured in notch.



- (5) Feed free end of rope through hole in case and through handle. Tie a knot at the end of the rope and seat knot against end of handle.

- (1) Engage hook on outer end of spring on one of the four retaining tabs inside case.

Turn case clockwise to wind spring inside retaining tabs.



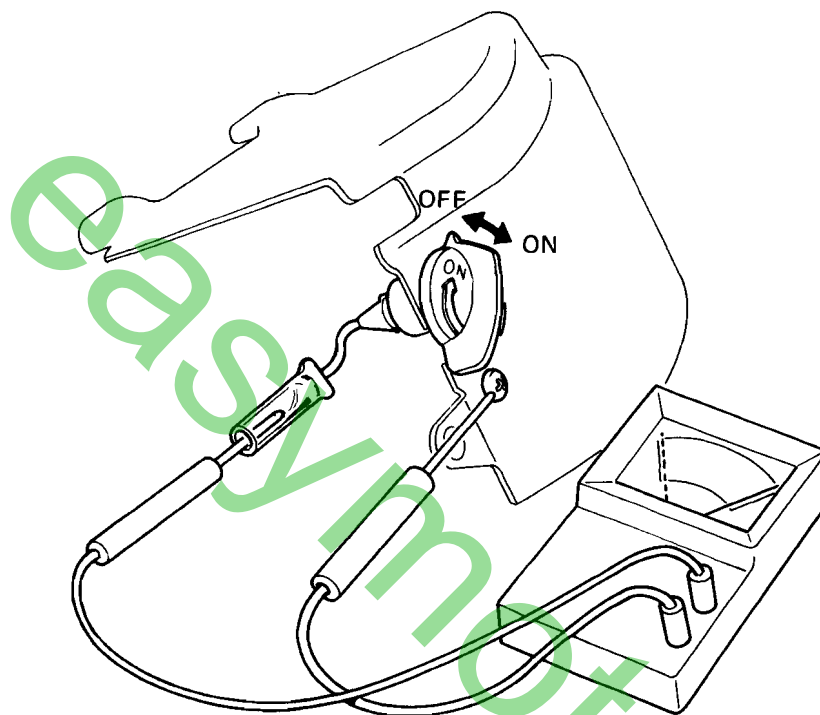
Spring retaining tabs.





(b) INSPECTION

< ENGINE SWITCH >



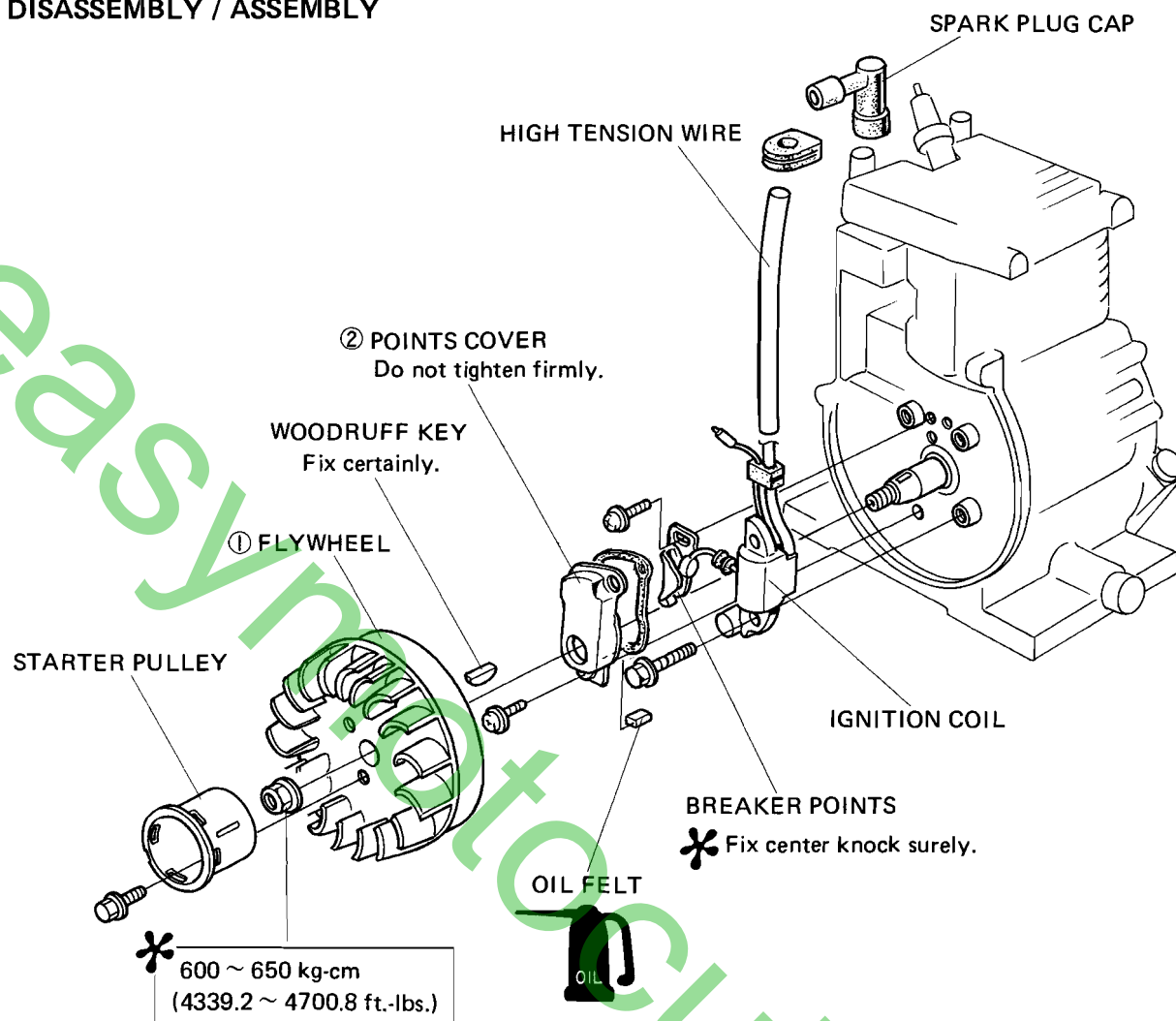
Switch is NORMAL if pointer of tester SWINGS when it is turned ON.



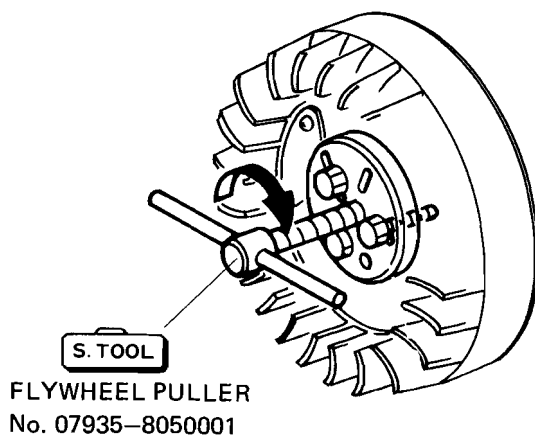
**HONDA**  
**G35**

## 4. FLYWHEEL, IGNITION COIL, BREAKER POINTS

(a) DISASSEMBLY / ASSEMBLY



< FLYWHEEL >



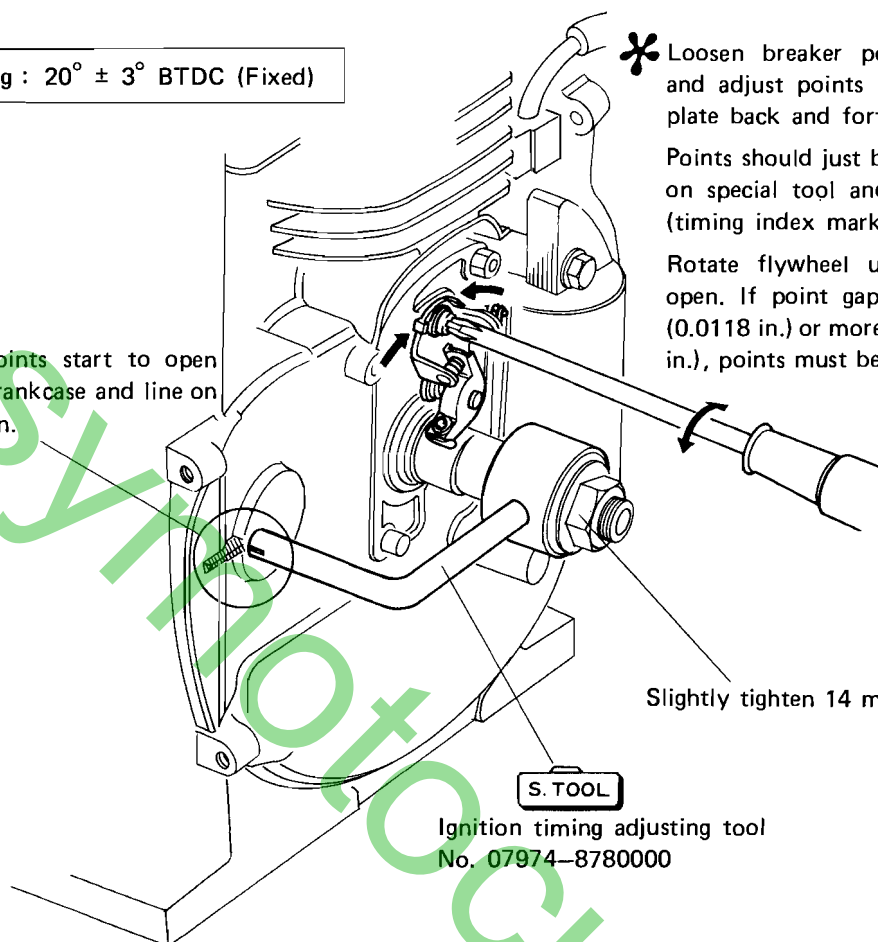


### (c) ADJUSTMENT

#### < IGNITION TIMING >

Ignition timing :  $20^{\circ} \pm 3^{\circ}$  BTDC (Fixed)

\* Ensure that points start to open when line on crankcase and line on special tool align.



\* Loosen breaker point mounting screw and adjust points by shifting their base plate back and forth with a screwdriver. Points should just break open when mark on special tool and mark on crankcase (timing index mark) are aligned.

Rotate flywheel until points are fully open. If point gap is less than 0.3 mm (0.0118 in.) or more than 0.4 mm (0.0157 in.), points must be replaced.

Slightly tighten 14 mm nut.

S. TOOL

Ignition timing adjusting tool  
No. 07974-8780000

#### WHEN SPECIAL TOOL IS UNAVAILABLE:

\* Make sure that points start to open when "F" mark on flywheel and line on crankcase align.

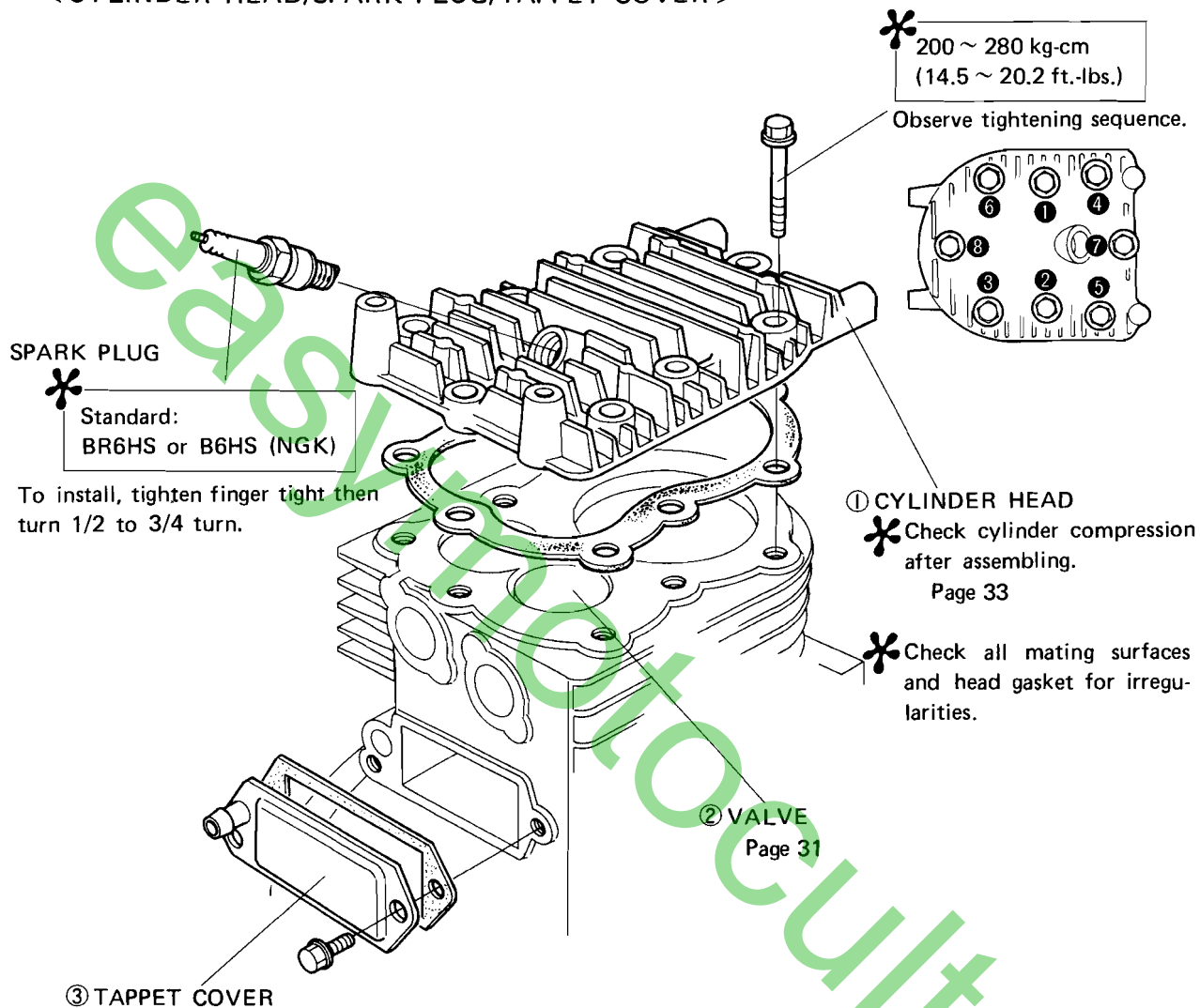
### 3. CYLINDER HEAD VALVES

**HONDA**  
G35



#### (a) DISASSEMBLY / ASSEMBLY

##### < CYLINDER HEAD/SPARK PLUG/TAPPET COVER >

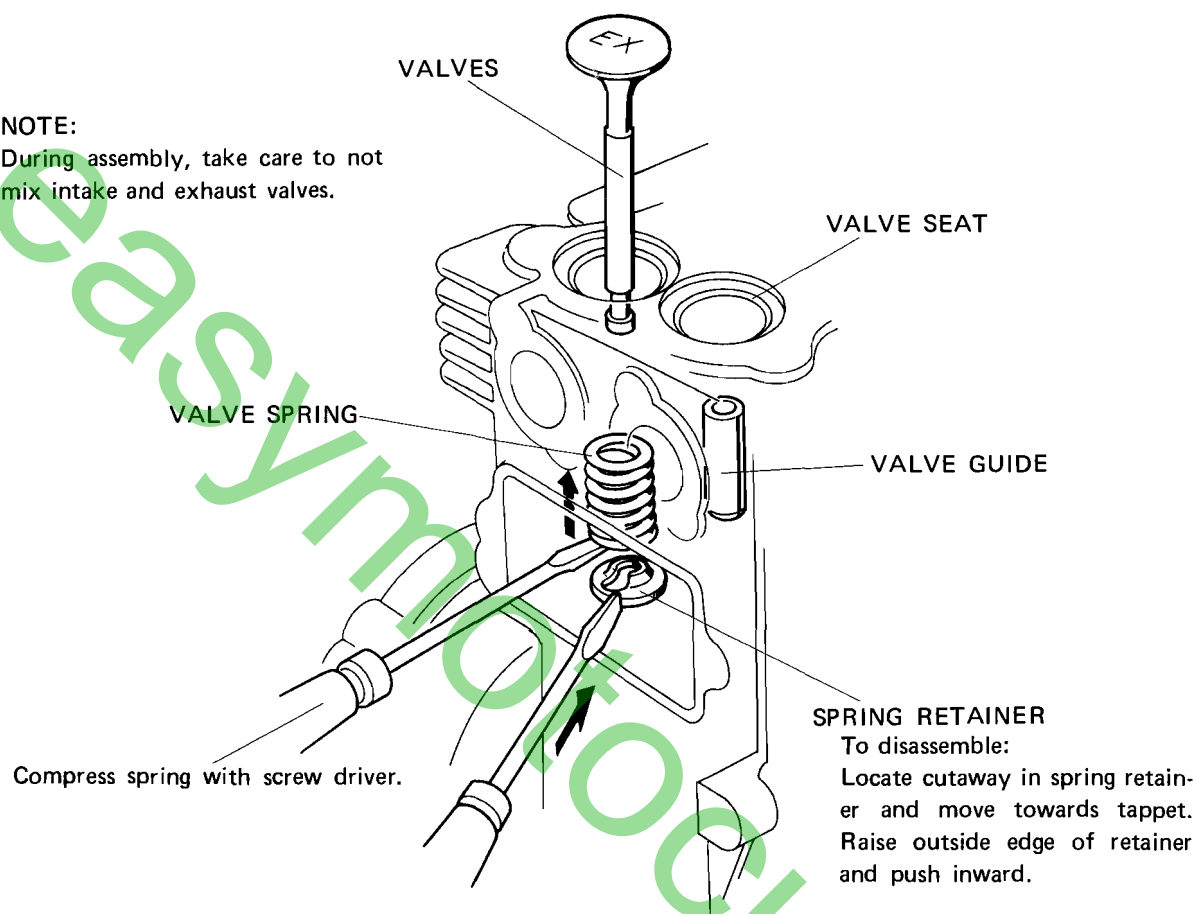




< VALVES >

**NOTE:**

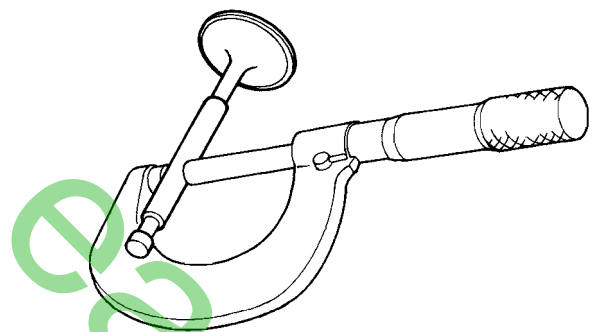
During assembly, take care to not mix intake and exhaust valves.





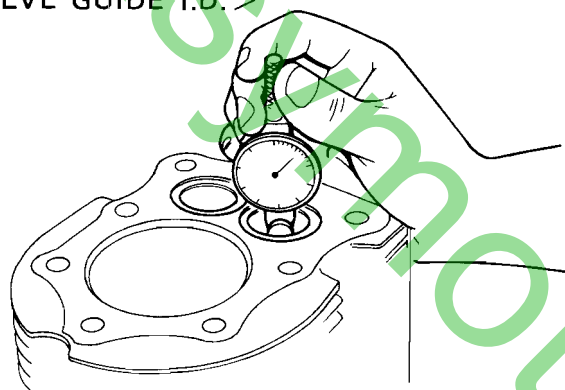
### (b) INSPECTION

#### < VALVE STEM O.D. >



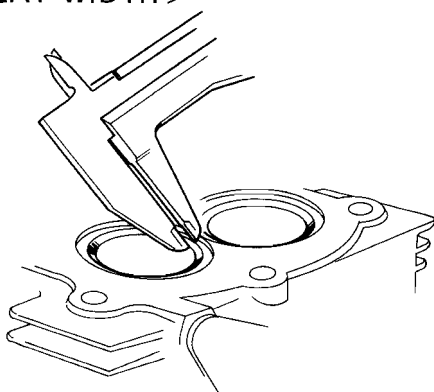
|    | Standard                | Service limit                           |
|----|-------------------------|---|
| IN | 6.955 mm<br>(0.274 in.) | Replace if under 6.91 mm<br>(0.272 in.) |
| EX | 6.910 mm<br>(0.272 in.) | Replace if under 6.89 mm<br>(0.271 in.) |

#### < VALVE GUIDE I.D. >



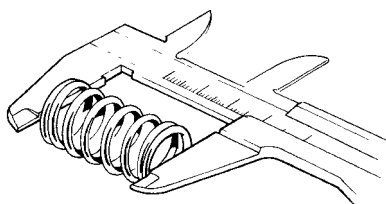
|  | Standard                | Service limit                            |
|--|-------------------------|--|
|  | 7.015 mm<br>(0.276 in.) | Replace if above 7.065 mm<br>(0.278 in.) |

#### < VALVE SEAT WIDTH >



|  | Standard              | Service limit                          |
|--|-----------------------|--|
|  | 0.7 mm<br>(0.028 in.) | Replace if above 1.5 mm<br>(0.059 in.) |

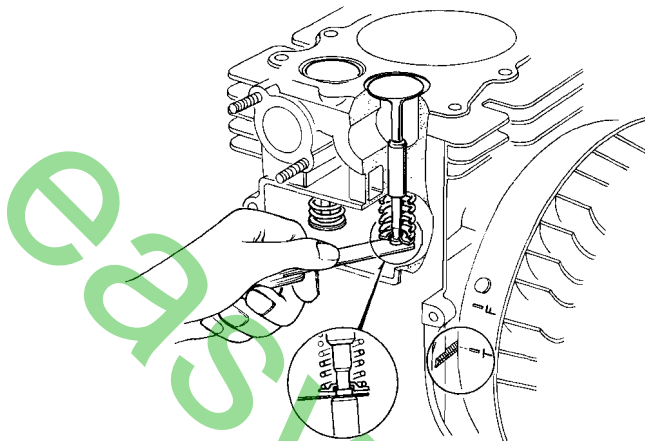
#### < VALVE SPRING FREE LENGTH >



|  | Standard               | Service limit                           |
|--|------------------------|---|
|  | 27.9 mm<br>(1.098 in.) | Replace if under 26.0 mm<br>(1.024 in.) |



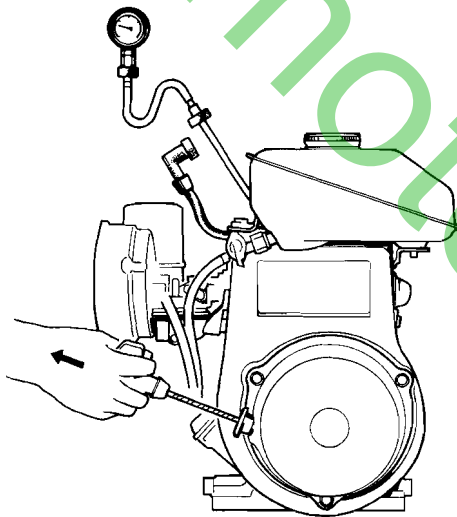
### < TAPPET CLEARANCE >



Standard: 0.05 ~ 0.10 mm  
(0.002 ~ 0.004 in.)

- \* Adjust if out of standard.
- \* Measure at TDC on compression when cold.

### < CYLINDER COMPRESSION >

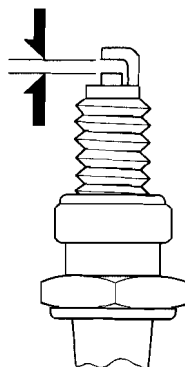


- \* To obtain compression reading, pull vigorously on starter cord 4 to 6 times with throttle and choke fully open.  
COMPRESSION: 5.3 kg-cm<sup>2</sup> (75 PSI)  $\pm$ 20%

If compression is low:  
Check head gasket, valve seating and rings.

If compression is high:  
Check for excessive intake valve clearance or large carbon deposits in combustion chamber.

### < SPARK PLUG GAP >



| Standard              | Service limit                         |
|-----------------------|---------------------------------------|
| 0.7 mm<br>(0.028 in.) | Adjust if above 0.8 mm<br>(0.031 in.) |



## (c) ADJUSTMENT / REPAIR

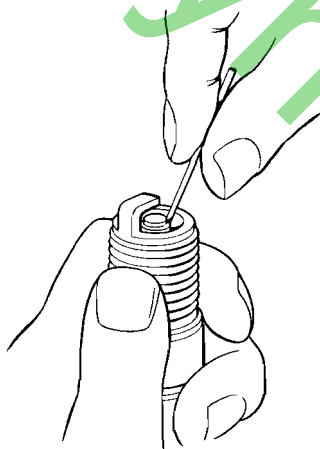
### < CYLINDER HEAD CLEANING >



\* Do not scratch the surface.

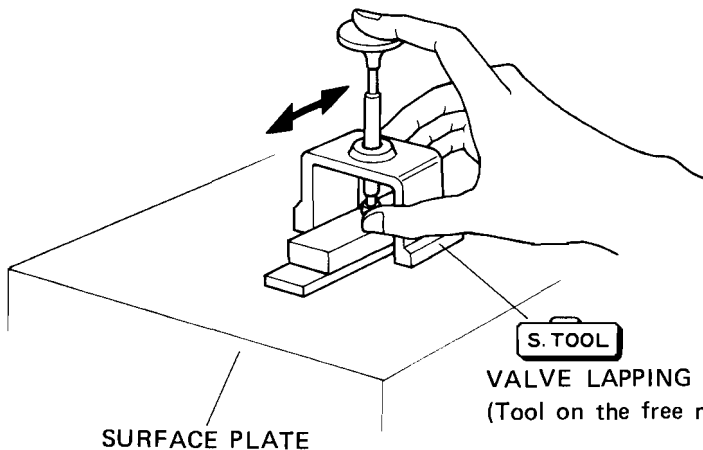
Remove carbon deposits.

### < SPARK PLUG CLEANING >



Remove carbon deposits with plug cleaner or wire brush.

### < TAPPET CLEARANCE ADJUSTMENT >

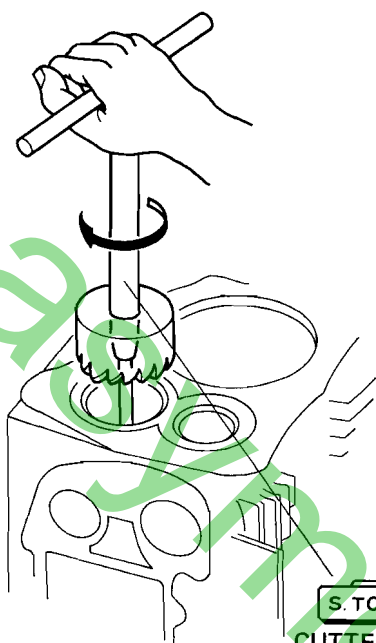


\* Grind stem end until proper tappet clearance is obtained.  
Place valve in GUIDE and slide end over oil stone back and forth.



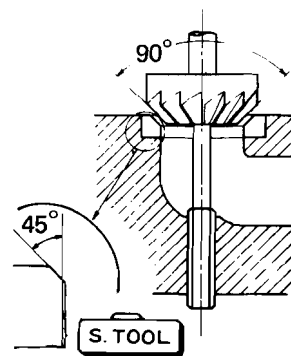


### < VALVE SEAT RESEATING >

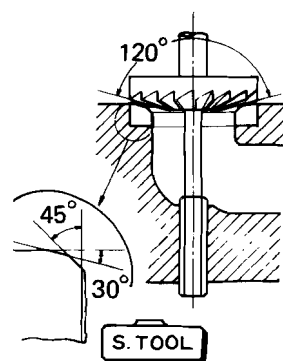


S. TOOL  
CUTTER HOLDER  
No. 07981-8050000

- (1) Cut off valve seat with 90° cutter.
- (2) Check valve seat by contacting with a coat of red lead.
- (3) Cut off valve seat width and its position with 120° cutter.
- (4) Finish with 90° cutter.
- (5) Check valve seat width by contacting with a coat of red lead applied to surface.
- (6) Recheck tappet clearance after reseating.



90° CUTTER  
No. 07980-8050100

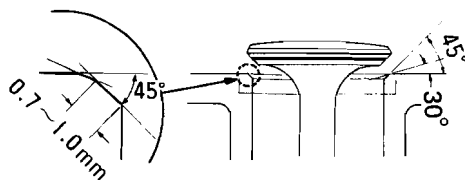


120° CUTTER  
No. 07980-0980300

### < VALVE LAPPING >



- \* Place valve grinding compound and oil between valve and seat and rotate hand valve lapper against seat until two surfaces are lapped together. Do not use excessive compound and remove all traces of compound after lapping.



PROPER VALVE SEAT



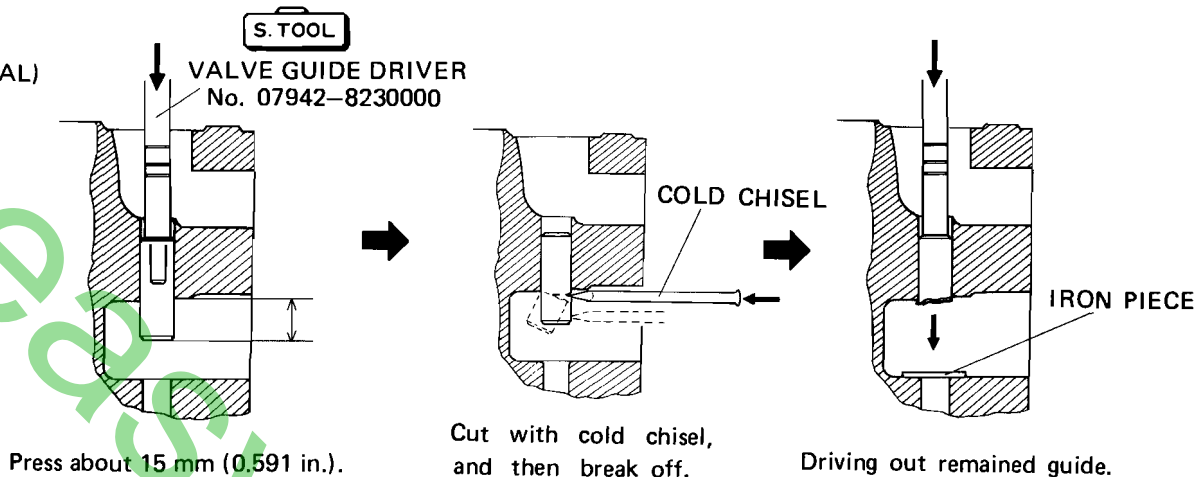
ABNORMAL VALVE SEAT

- \* Recheck tappet clearance after lapping.

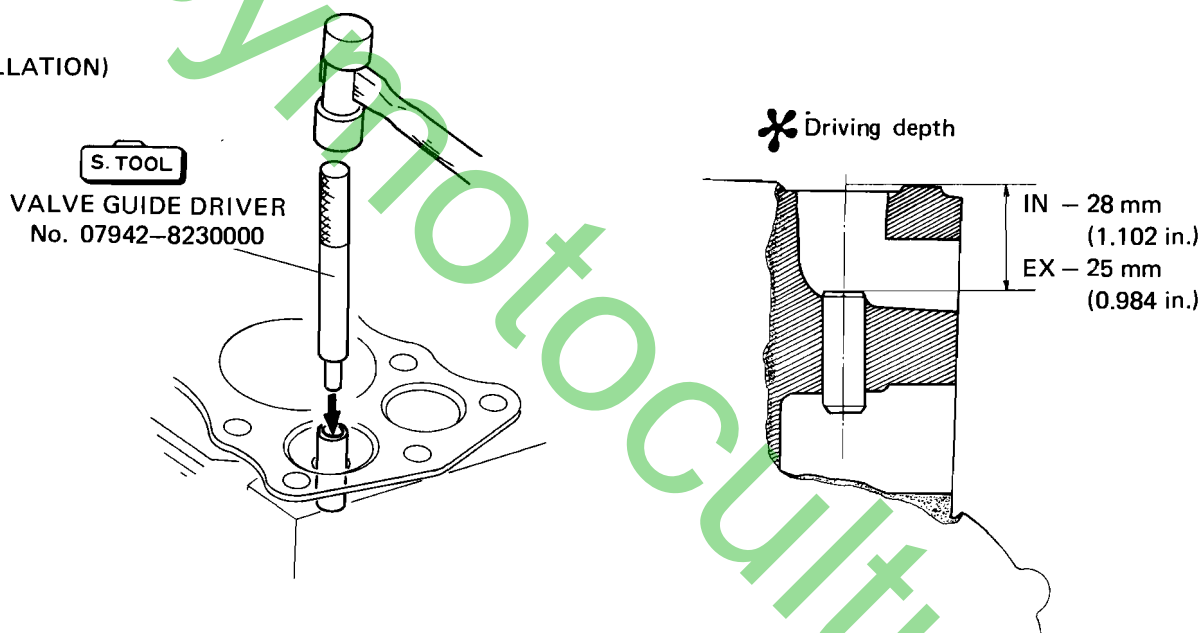


### < VALVE GUIDE REPLACEMENT >

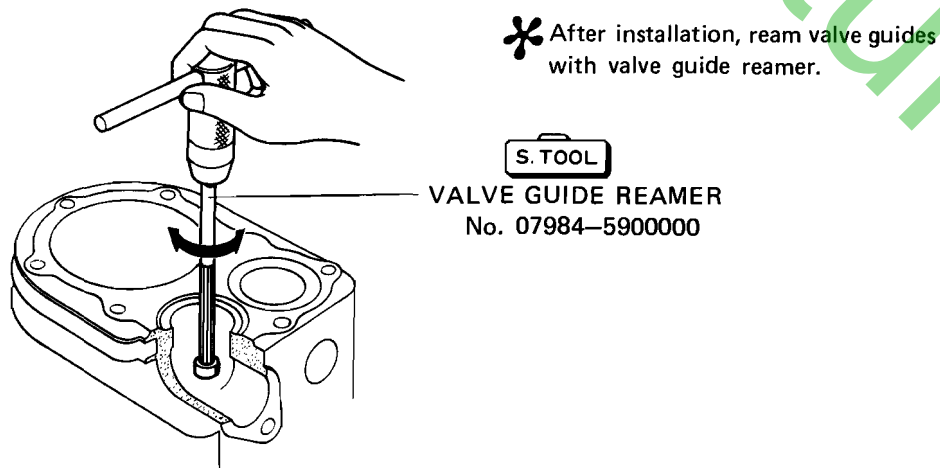
(REMOVAL)



(INSTALLATION)



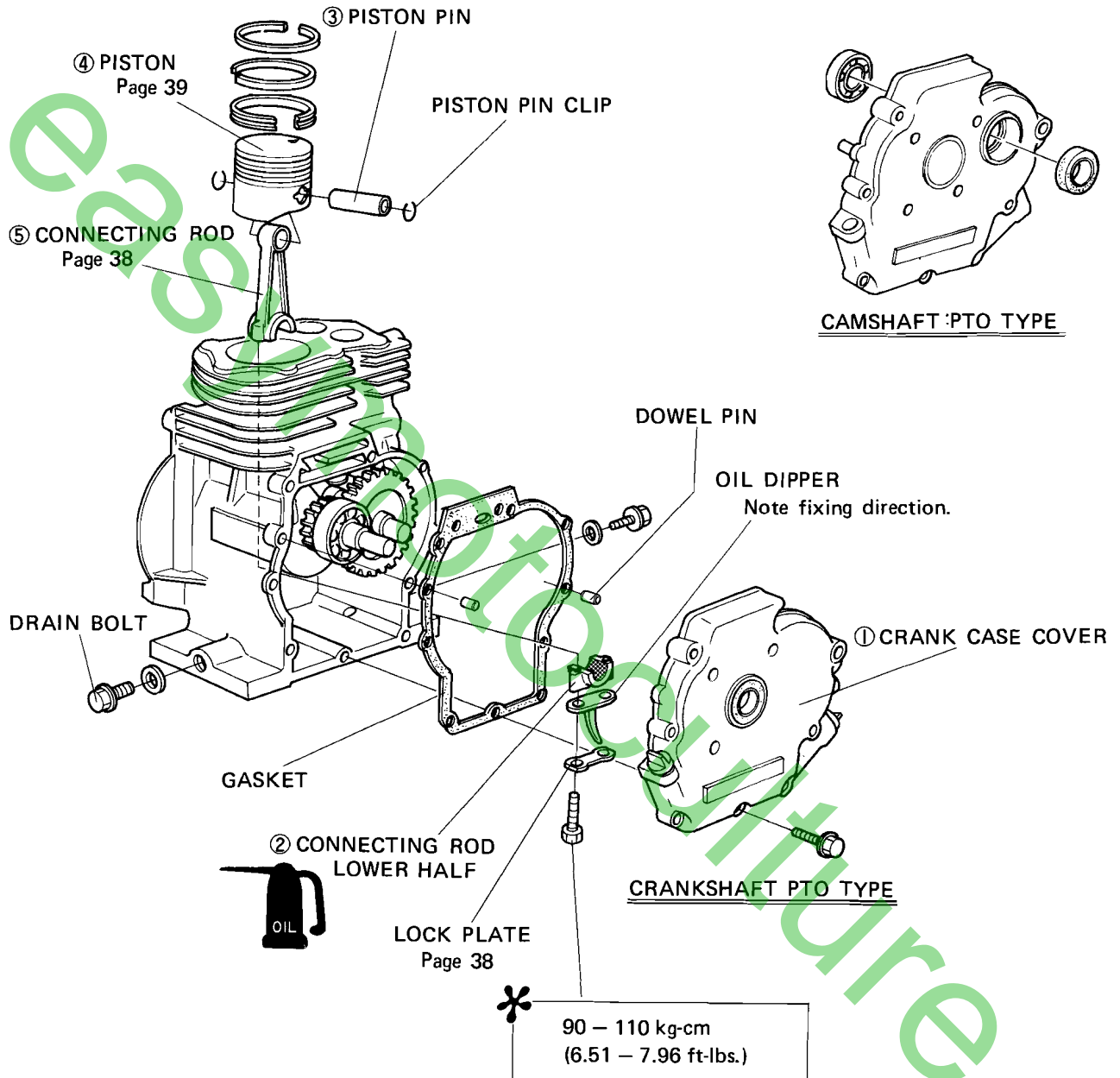
(REAMING)





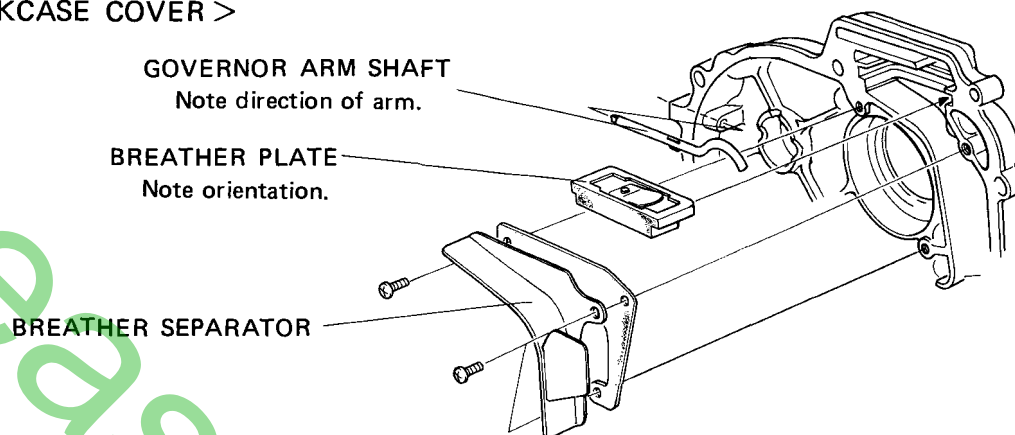
## 6. CRANKCASE, PISTON CONNECTING ROD

(a) DISASSEMBLY / ASSEMBLY

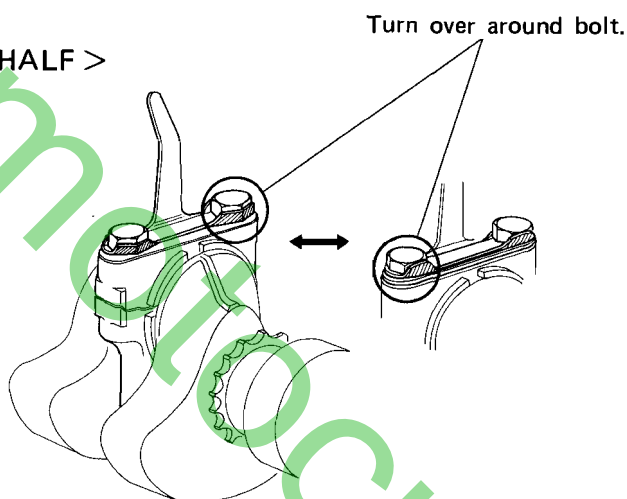




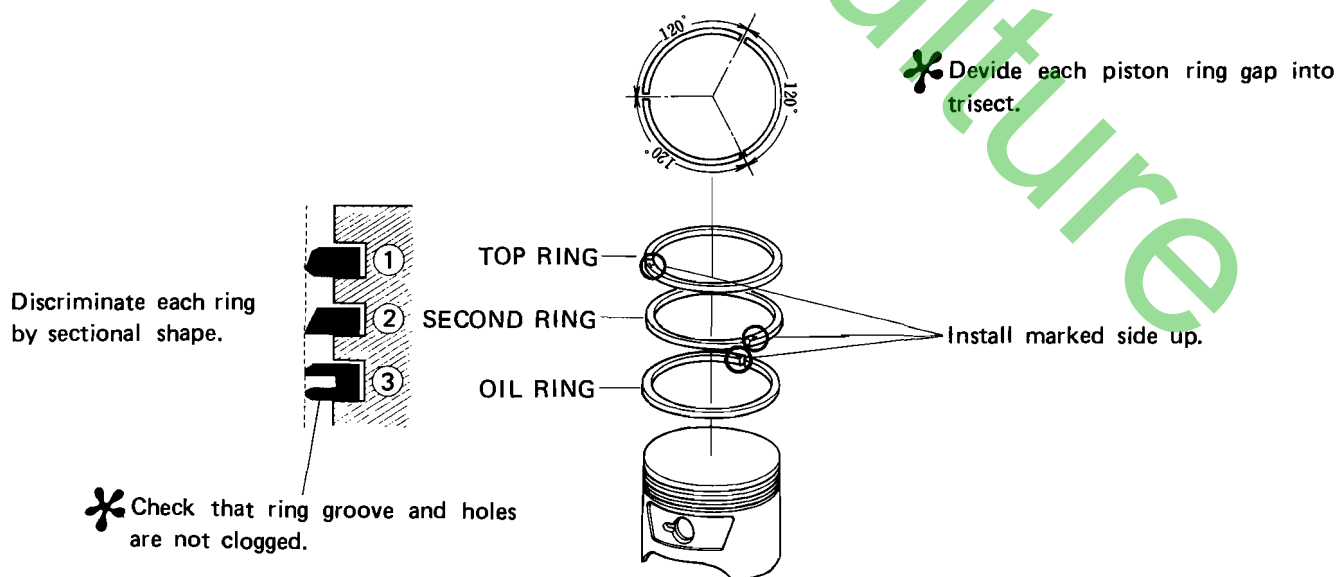
### < CRANKCASE COVER >



### < CONNECTING ROD LOWER HALF >



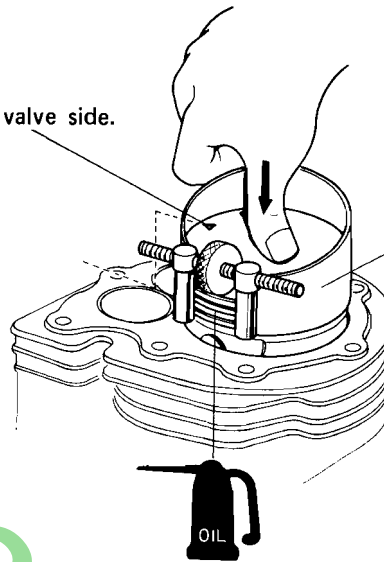
### < PISTON RING >





### < PISTON >

\* Face this mark toward valve side.

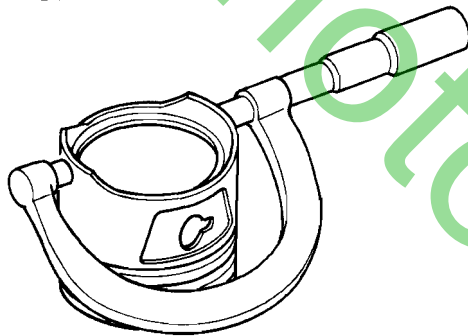


S. TOOL

PISTON RING COMPRESSOR  
No. 07755-0010000

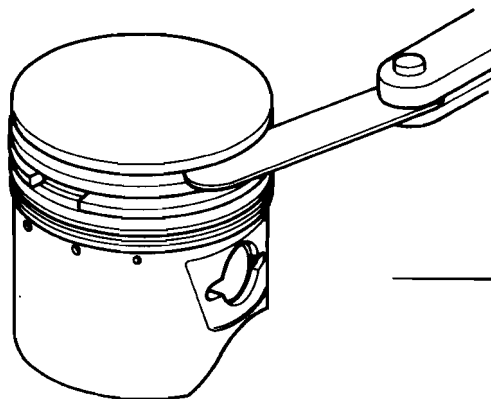
### (b) INSPECTION

#### < PISTON O.D. AT SKIRT >

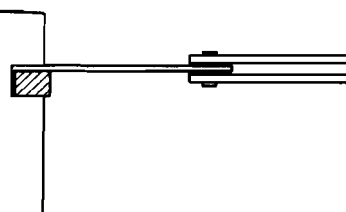


| Standard                | Service limit                           |
|-------------------------|---|
| 63.96 mm<br>(2.518 in.) | Replace if under 63.7 mm<br>(2.508 in.) |

#### < PISTON O.D. AT SKIRT >



| Standard               | Service limit                          |
|------------------------|--|
| 0.03 mm<br>(0.001 in.) | Replace if above 0.1 mm<br>(0.004 in.) |

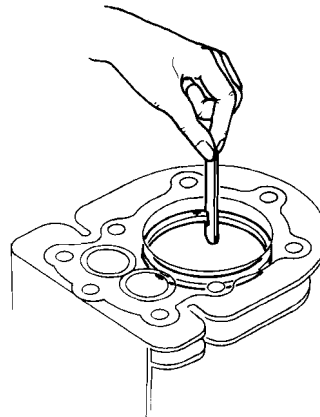
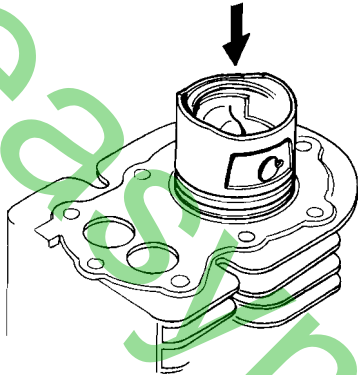




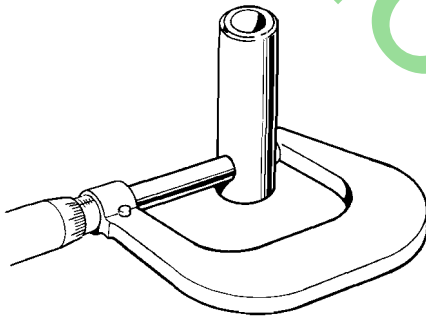
### < PISTON RING GAP >

\* Make use of piston top to press in piston ring.

| Standard              | Service limit                          |
|-----------------------|--|
| 0.3 mm<br>(0.012 in.) | Replace if above 0.6 mm<br>(0.024 in.) |

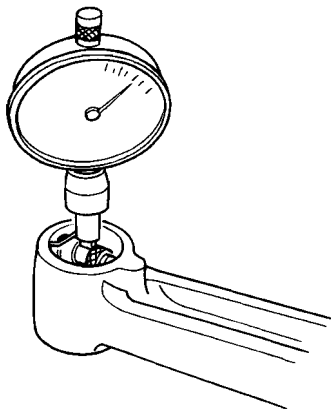


### < PISTON PIN O.D. >



| Standard                | Service limit                            |
|-------------------------|--|
| 15.00 mm<br>(0.591 in.) | Replace if under 14.97 mm<br>(0.589 in.) |

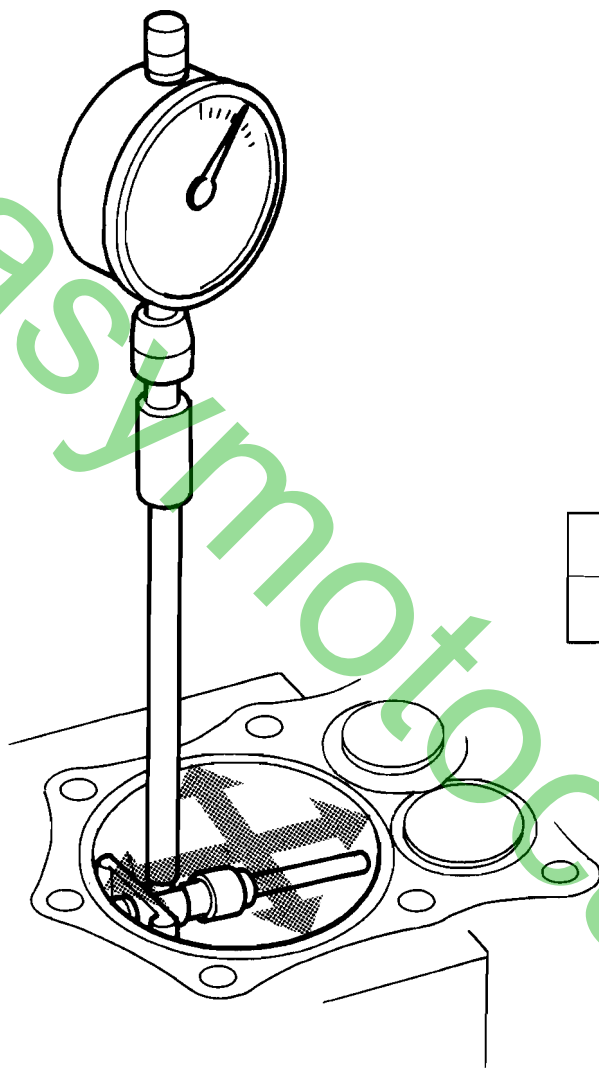
### < CONNECTING ROD SMALL END I.D. >



| Standard                 | Service limit                            |
|--------------------------|--|
| 15.005 mm<br>(0.591 in.) | Replace if above 15.05 mm<br>(0.593 in.) |



< CYLINDER I.D. >



| Standard               | Service limit                           |
|------------------------|---|
| 64.0 mm<br>(2.520 in.) | Replace if above 64.1 mm<br>(2.524 in.) |

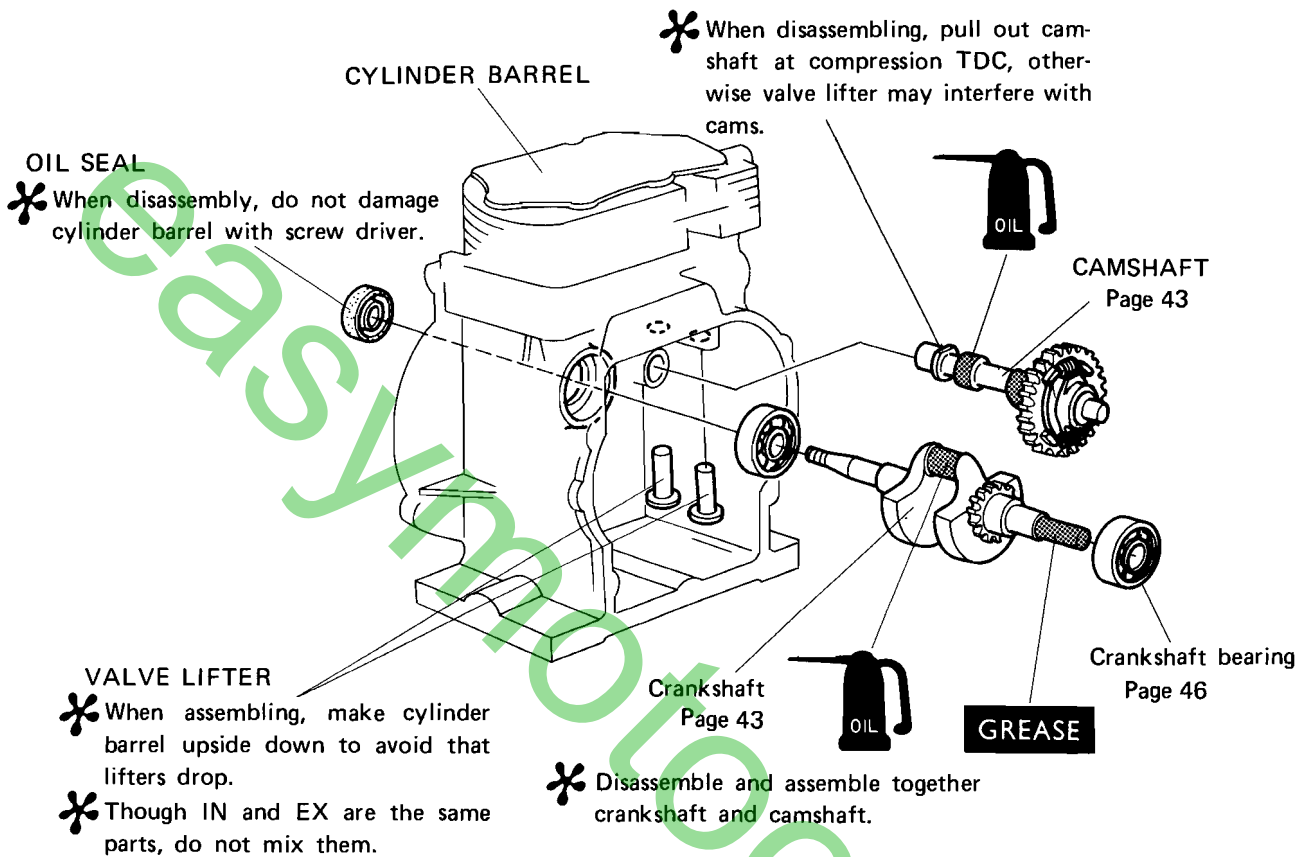
# 8. CAMSHAFT CRANKSHAFT

**HONDA**  
**G35**

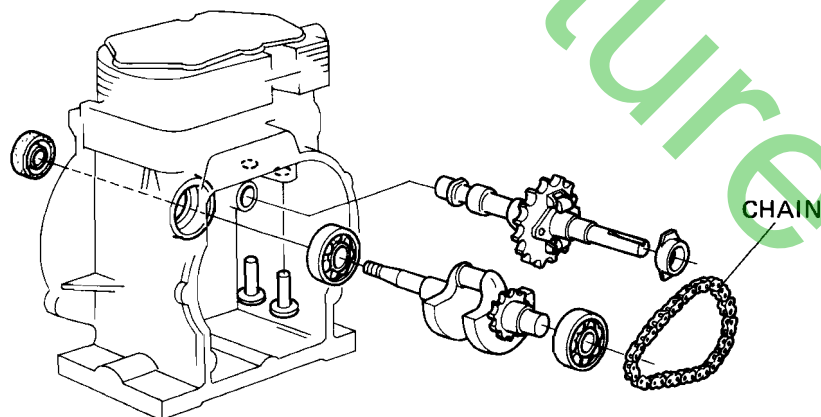


## (a) DISASSEMBLY / ASSEMBLY

### CRANKSHAFT PTO TYPE



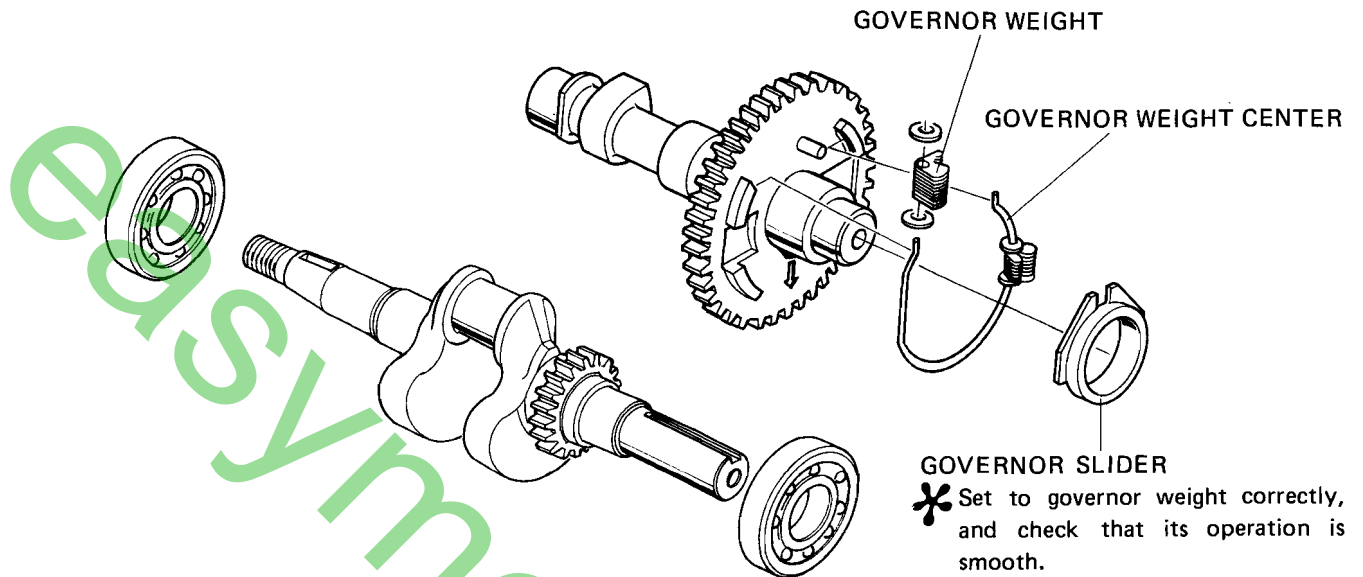
### CAMSHAFT PTO TYPE



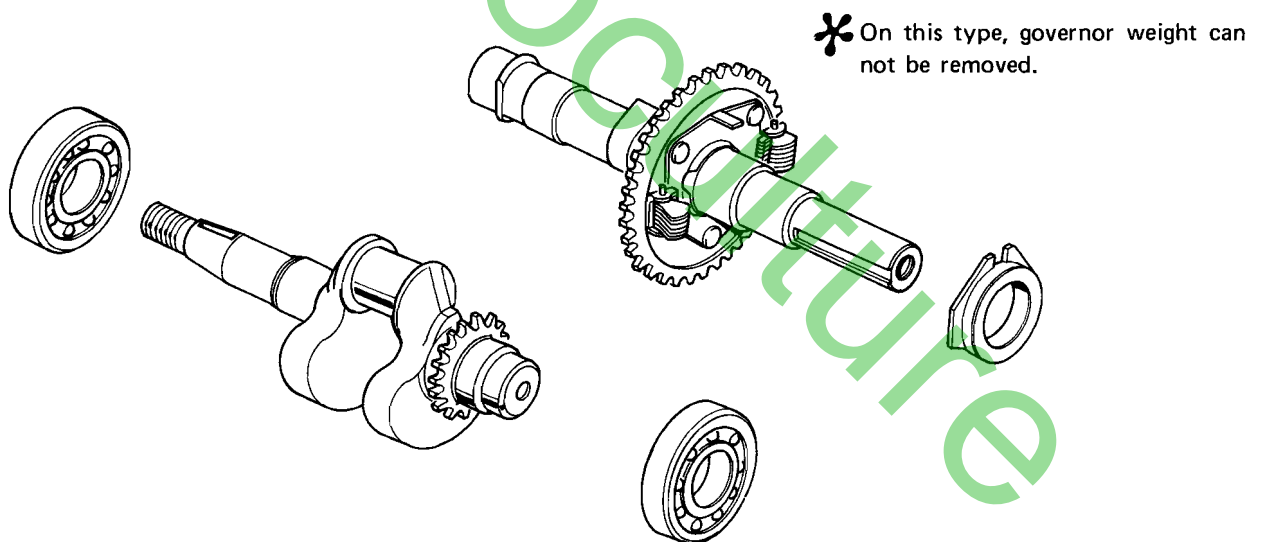




< CRANKSHAFT PTO TYPE >



< CAMSHAFT PTO TYPE >

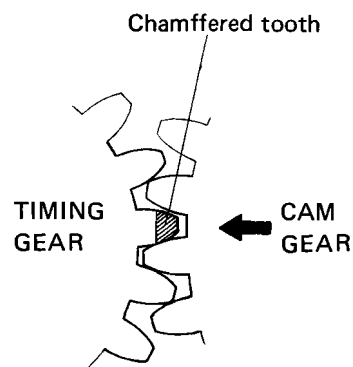
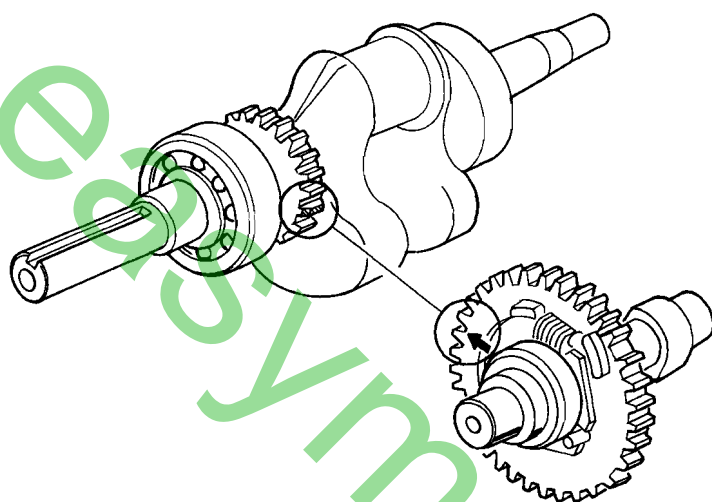


\* Though "R" type is camshaft PTO type, it is gear driven type and rotating direction is clockwise.



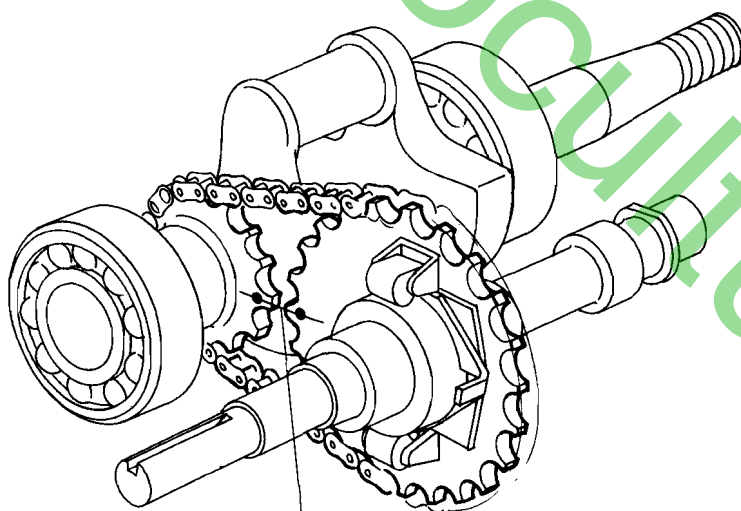
### < VALVE TIMING ALIGNMENT >

#### CRANKSHAFT PTO TYPE



\* Align chamffered tooth to arrow.

#### CAMSHAFT PTO TYPE

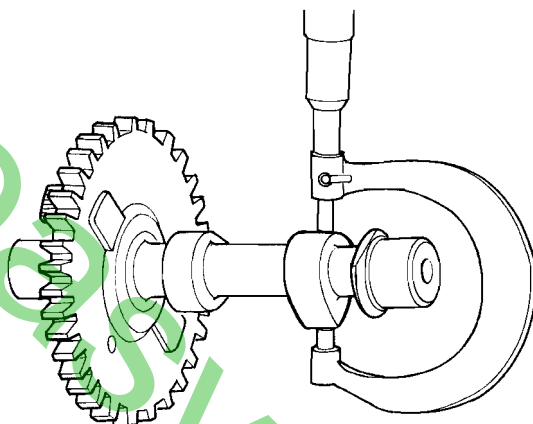


\* Align pounched marks to each other.



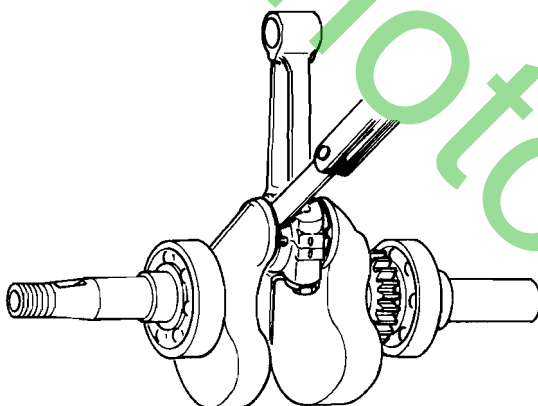
(b) MEASUREMENT

< CAM HEIGHT >



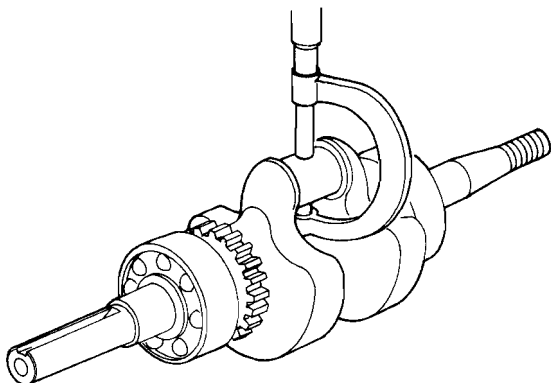
| Standard               | Service limit    |                        |
|------------------------|------------------|------------------------|
| 28.1 mm<br>(1.106 in.) | Replace if under | 27.6 mm<br>(1.087 in.) |

< CONNECTING ROD BIG END AXIAL CLEARANCE >



| Standard              | Service limit   |  |
|-----------------------|---|--|
| 0.1 mm<br>(0.004 in.) | Replace connecting rod if<br>above 1.0 mm (0.039 in.) |  |

< CRANK PIN O.D. >



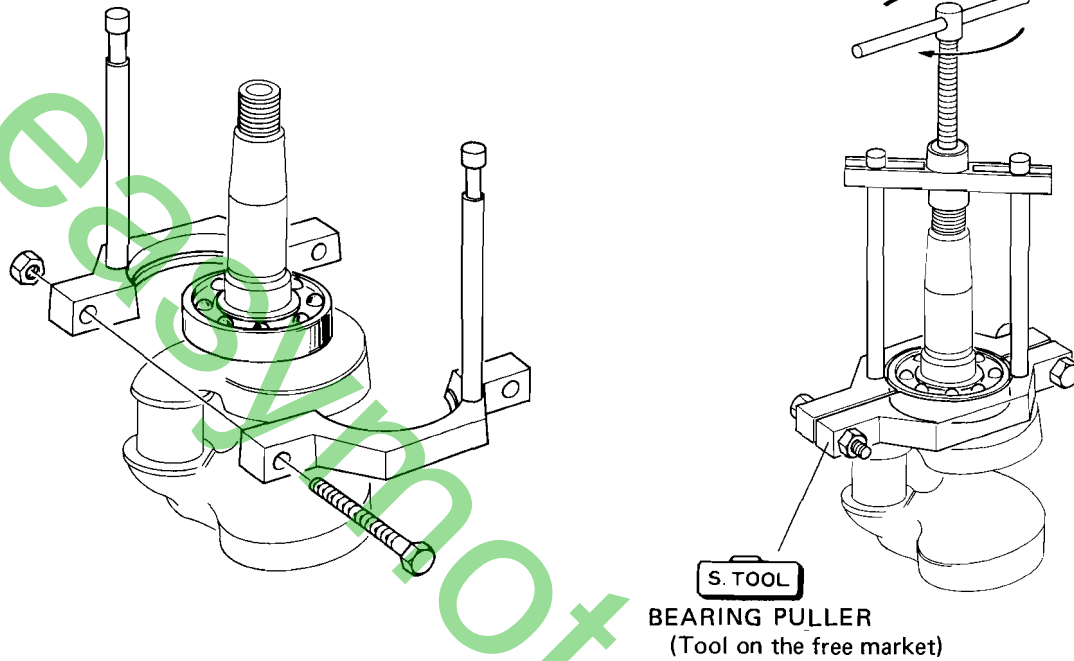
| Standard                 | Service limit    |                        |
|--------------------------|------------------|------------------------|
| 25.980 mm<br>(1.023 in.) | Replace if under | 25.7 mm<br>(1.012 in.) |



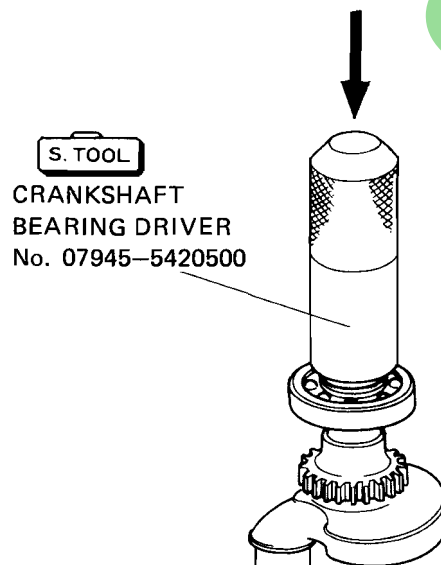
(c) REPAIR

< CRANKSHAFT BEARING REPLACE >

DRIVING OUT



DRIVING IN





## **1. SERVICE INFORMATION**

## **2. TORQUE TABLE**

easymotoculture



Unit: mm

| Piston O.D. at skirt |                   |
|----------------------|-------------------|
| Standard             | 63.96<br>(2.518") |
| Service Limit        | 63.7<br>(2.508")  |

| Cylinder I.D. |                   |
|---------------|-------------------|
| Standard      | 64.0<br>(2.5197") |
| Service Limit | 64.1<br>(2.524")  |

| Clearance between piston and cylinder |                  |
|---------------------------------------|------------------|
| Standard                              | 0.04<br>(0.002") |
| Service Limit                         | 0.12<br>(0.005") |

| Valve spring free length |                  |
|--------------------------|------------------|
| Standard                 | 27.9<br>(1.098") |
| Service Limit            | 26.0<br>(1.023") |

| Tappet clearance |                                 |
|------------------|---------------------------------|
| Standard         | 0.05 - 0.10<br>(0.002 - 0.004") |

| Cam height    |                   |
|---------------|-------------------|
| Standard      | 17.03<br>(0.670") |
| Service Limit | 16.5<br>(0.650")  |

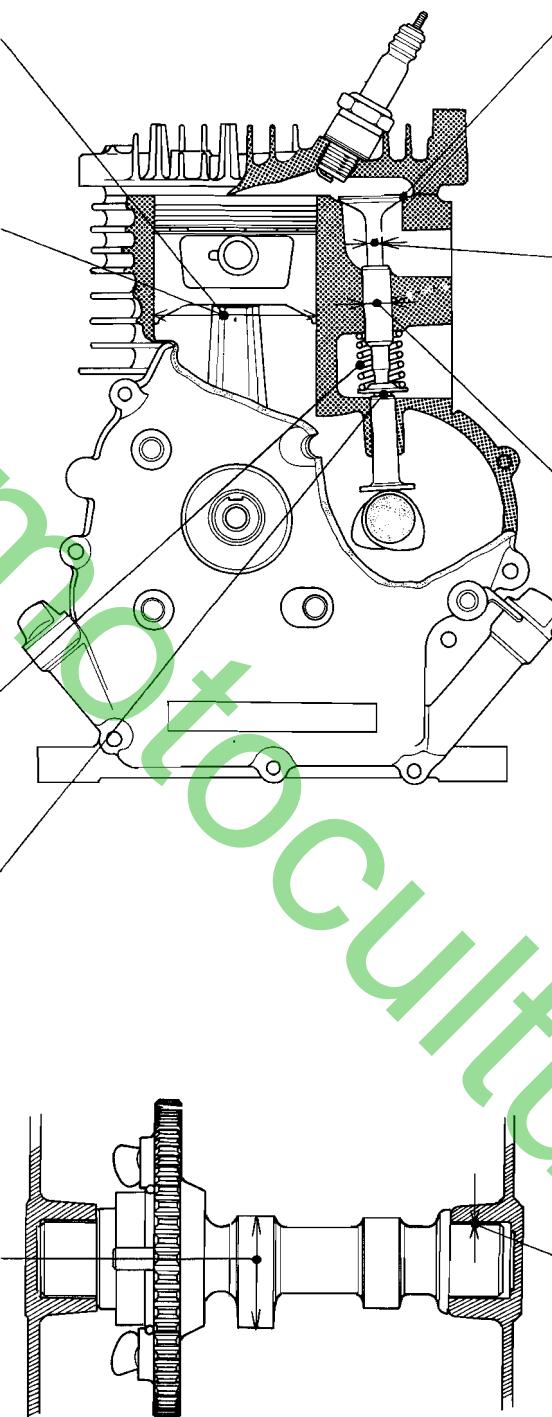
| Valve seat width |                |
|------------------|----------------|
| Standard         | 0.7<br>(0.03") |
| Service Limit    | 1.5<br>(0.06") |

| Valve stem O.D. |    |                    |
|-----------------|----|--------------------|
| Standard        | IN | 6.970<br>(0.2744") |
|                 | EX | 6.925<br>(0.2726") |
| Service Limit   | IN | 6.91<br>(0.2720")  |
|                 | EX | 6.89<br>(0.2713")  |

| Valve guide I.D. |                    |
|------------------|--------------------|
| Standard         | 7.0<br>(0.2756")   |
| Service Limit    | 7.065<br>(0.2781") |

| Clearance between stem and valve guide |    |                   |
|--|----|-------------------|
| Standard                               | IN | 0.03<br>(0.001")  |
|  | EX | 0.075<br>(0.003") |
| Service Limit                          | IN | 0.10<br>(0.004")  |
|  | EX | 0.12<br>(0.005")  |

| Clearance between bearing and camshaft |                  |
|--|------------------|
| Standard                               | 0.02<br>(0.001") |
| Service Limit                          | 0.1<br>(0.004")  |





| Piston pin O.D. |                    |
|-----------------|--------------------|
| Standard        | 15.0<br>(0.5906")  |
| Service Limit   | 14.97<br>(0.5894") |

| Connecting rod small end I.D. |                     |
|-------------------------------|---------------------|
| Standard                      | 15.005<br>(0.5907") |
| Service Limit                 | 15.05<br>(0.5925")  |

| Clearance between piston pin and connecting rod |                    |
|---|--------------------|
| Standard  | 0.005<br>(0.0002") |
| Service Limit                                   | 0.05<br>(0.0020")  |

| Connecting rod big end axial clearance |                 |
|--|-----------------|
| Standard                               | 0.1<br>(0.004") |
| Service Limit                          | 1.0<br>(0.04")  |

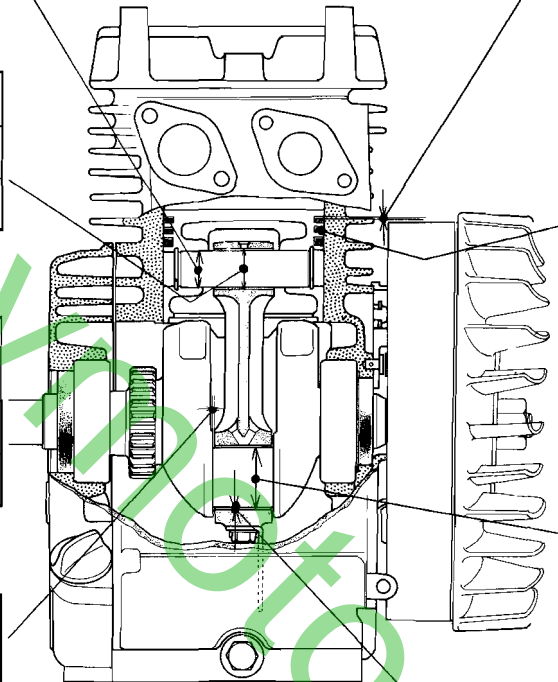
| Point gap |                               |
|-----------|-------------------------------|
| Standard  | 0.3 - 0.4<br>(0.012 - 0.016") |

| Piston ring side clearance |                   |
|----------------------------|-------------------|
| Standard                   | 0.01<br>(0.0004") |
| Service Limit              | 0.1<br>(0.0040")  |

| Piston ring gap |                 |
|-----------------|-----------------|
| Standard        | 0.2<br>(0.008") |
| Service Limit   | 0.6<br>(0.024") |

| Crankshaft pin O.D. |                     |
|---------------------|---------------------|
| Standard            | 25.980<br>(1.0228") |
| Service Limit       | 25.7<br>(1.0118")   |

| Connecting rod big end oil clearance |                   |
|--------------------------------------|-------------------|
| Standard                             | 0.027<br>(0.001") |
| Service Limit                        | 0.1<br>(0.004")   |





|                |                       |   |
|----------------|-----------------------|---|
| Carburetor     | 6 mm nut              | 80 – 120 Kg-cm<br>(5.79 – 8.68 ft.-lbs.)    |
| Flywheel       | 14 mm nut             | 600 – 650 Kg-cm<br>(43.39 – 47.01 ft.-lbs.) |
| Cylinder Head  | 8 x 35 mm flange bolt | 200 – 280 Kg-cm<br>(14.46 – 20.25 ft.-lbs.) |
| Connecting Rod | 6 x 37 mm bolt        | 90 – 110 Kg-cm<br>(6.51 – 7.96 ft.-lbs.)    |





| No. | Tool Name  | Tool No.        |
|-----|--|-----------------|
| 1.  | Piston Ring Compressor   | 07755 – 0010000 |
| 2.  | Bearing Driver   | 07945 – 5420500 |
| 3.  | Valve Guide Driver   | 07942 – 8230000 |
| 4.  | Valve Guide Reamer   | 07984 – 5900000 |
| 5.  | "F" Mark Guide   | 07974 – 8780000 |
| 6.  | Cutter Holder  | 07981 – 8050000 |
| 7.  | 90° Cutter   | 07980 – 8050100 |
| 8.  | 120° Cutter  | 07980 – 0980300 |
| 9.  | Cutter Case  | 07797 – 0510100 |
| 10. | Flywheel Puller  | 07935 – 8050001 |
| 11. | Tool Case  | 07797 – 0010400 |
| 12. | Special Tool Set<br>(Including all tools<br>from No. 1 to No. 11.) | 07900 – 8780000 |