

HYOSUNG

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HYOSUNG MOTORS & MACHINERY INC.

GF125

*GF125*

SERVICE MANUAL

SERVICE MANUAL

99000-94200

## ***FOREWORD***

The HYOSUNG GF 125 was designed to offer superior performance through light weight design and four stroke power. The new GF 125 represents another major advance by HYOSUNG in four stroke motorcycles.

This service manual has been produced primarily for experienced mechanics whose job is to inspect, adjust, repair and service HYOSUNG Motorcycles. Apprentice mechanics and “do it yourself” mechanics will also find this manual to be an extremely useful guide.

Model GF 125 manufactured to standard specifications is the main subject matter of this manual. However, the GF 125 machines distributed in your country might differ in minor respects from the standard-specification GF 125 and, if they do, it is because some minor modifications (Which are of no consequence in most cases as far as servicing is concerned) had to be made to comply with the statutory requirements of your country.

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

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# GENERAL INFORMATION

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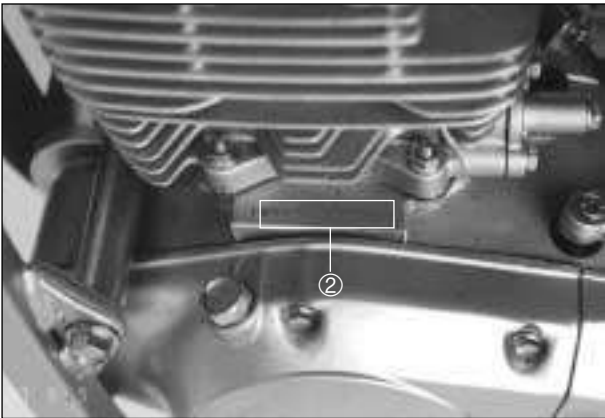
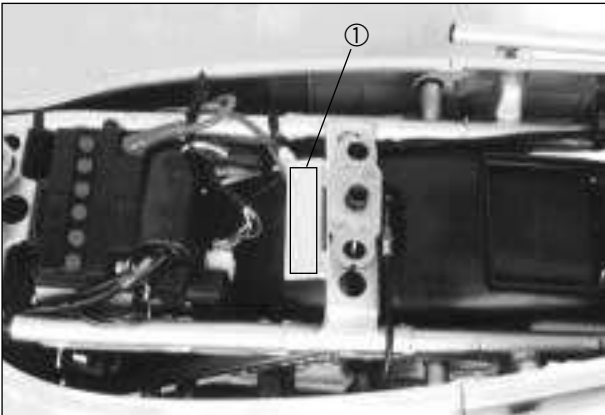
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# 1-1 GENERAL INFORMATION

## SERIAL NUMBER LOCATIONS

The frame serial number ① is stamped on the rear end of the frame. The engine serial number ② is located on the crankcase.

These numbers are required especially for registering the machine and ordering spare parts.



## FUEL AND OIL RECOMMENDATIONS

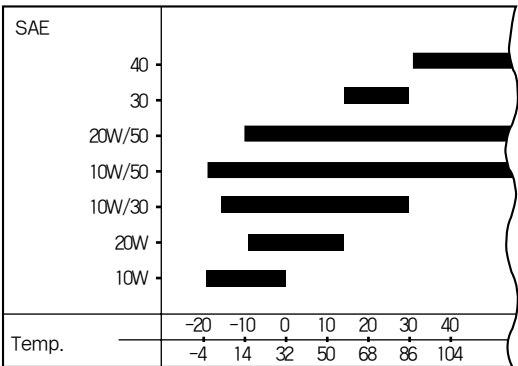
### FUEL

Gasoline used should be graded 85-95 octane or higher. An unleaded or low-lead gasoline type is recommended.

**NOTE:**  
Unleaded and low-lead gasoline will extend spark plug life.

## ENGINE OIL

Be sure that the engine-oil you use comes under API classification of SF or SG and that its viscosity rating is SAE 10W-40. If SAE 10W-40 motor oil is not available, select the oil viscosity according to the following chart.



## FRONT-FORK OIL

TELLUS #22

## BREAK-IN PROCEDURE

During manufacture only the best possible materials are used all machined parts are finished to a very high standard but it is still necessary to allow the moving parts to "BREAK-IN" before subjecting the engine to maximum stresses. The future performance and reliability of the engine depends on the care and restraint exercised during its early life. The general rules are as follows:

|               |                   |
|---------------|-------------------|
| Initial 800km | Below 4,500r/min  |
| Up to 1,600km | Below 5,500r/min  |
| Over 1,600km  | Below 10,500r/min |

- Keep to these break-in engine speed limits:
- Upon reaching an odometer reading of 1,600km you can subject the motorcycle to full throttle operation. However, do not exceed 10,500r/min at any time.
- Do not maintain constant engine speed for an extended time period during any portion of the break-in. Try to vary the throttle position.

### SPECIAL FEATURES

HYOSUNG **GF 125** is a improved model that has been revised from 2 valve engine of GF 125 to 4 valve engine and has much more developed features as follows.

#### 1. IMPROVEMENT OF ENGINE POWER AT MIDDLE AND LOW SPEEDS

In order to make long distance driving more comfortable and easier which is the best point of American Style, the VALVE TIMING, multi-valve from 2 valve to 4 valve and the proper design of narrower angle VALVE port are done without losing TORQUE at high speeds.

#### 2. LESS VIBRATION AND NOISE

In order to meet customer's demands for less vibration, the VIBRATION with the body is prevented by making the engine strength higher and natural frequency high order AND the previous SYSTEM which prevents vibration transmissibility is get together.

For less noise, the INTAKE & EXHAUST system and VALVE TRAIN system are redesigned in order to satisfy 71 db, the strict '96 KOREA NOISE REGULATION.

#### 3. COMFORTABLE SEATING

The seat is made out of two different hardness FOAM URETHANE in order to absorb shock which makes seating more comfortable.

### THE TECHNICAL FEATURES

#### 1. CYLINDER HEAD

The best combustion efficiency is done by the 4 VALVE seat system's connecting TWO IN ONE HOLE INTAKE AND EXHAUST to SPARK PLUG in Pentroof combustion chamber casted at the low pressure.

The silent chain is more closely united and the cylinder head wall is thickened more for decreasing chain noise.

By choosing ALUMINUM forging, HOLDER gets lighter and stronger.

#### 2. PISTON, CONNECTING ROD and CAM CHAIN

PISTON, high tension HI-SILICON, AC8A, is FLAT type, HEAD, and T-type, SHORT SKIRT which is  $\varnothing 57$ , suitable for high speeds and lightened for less vibration.

The part of CONNECTING ROD's small hole is  $\varnothing 15$ , the PIN SIZE of large hole is  $\varnothing 28$  for enduring high engine power and PITCH is 99.8.

CAM CHAIN is LINK PITCH 6.350(1/4")'s endless type and gets TIMMING and less noise by adopting Borg Warner 92RH.

## 1-3 GENERAL INFORMATION

### 3. CLUTCH MISSION

The Primary Gear Ratio is improved from 3.47 to 3.50 in order to increase rotation.

For improving CLUTCH durability while long distance driving, CLUTCH DAMPER is changed from rubber to steel Spring type.

### 4. VALVE TRAIN

The maximum power appears at 8500rpm, so that TORQUE is good enough to have a long distance driving or downtown driving.

The valve angle is  $25^{\circ}$  (IN) and  $28^{\circ}$  (EX) which are much narrower angles for ROCKER ARM 4 VALVE and TORQUE ( $1.02\text{kg} \cdot \text{m}$ ) is achieved by improving VOLUME EFFICIENCY.

The technical design is done through the enough simulation by the design SOFTWARE which our company have kept, in order to not making trouble like JUMPING or SURGING.

### 5. CAM SHAFT, LOCK ARM and VALVE

The material of CAM is CHILLED FC, whose durability and safty is high.

For improving acceleration, the inside of Cam Shaft is designed empty.

For improving durability, BALL BEARING TYPE for CAM SHAFT is adopted and LOCK ARM is surfaced with HARD CROME COATING and LUBRITE.

For preventing the touching noise, the contacted SPRING CAM is adopted.

The Valve (IN 22, EX 19) is surfaced with TUFTLITE.

The left side of VALVE and TAPPET are surfaced with STELLITE, especially the surface hardness is over HRC50 by surfacing STELLITE NO 1, so that TAPPET's durability is improved by preventing wearing.

