

## FOREWORD

This service manual has been specially prepared to provide all the necessary information for the proper maintenance and repair of the SD-50.

The SD-50 is a new type of motorcycle that has many technical features such as :

- ※ V-belt drive automatic transmission
- ※ Forced air-cooling system
- ※ P.E Ignition system
- ※ Electric starter system

The SD-50 fits the needs of a wide variety of motorcycle users. Those who will be servicing this motorcycle should carefully review this manual before performing any repair or services.

Information of this manual is up-to-date at the time of issue. Major modification and changes incorporated later will be advised to HYOSUNG product distributor in each market. Therefore, if newest information is requested in the future, please contact the local HYOSUNG distributor.

The SD-50 motorcycles distributed in your county might differ in minor respects from the standard specification and, if they do, it is because some minor modifications (which are of no consequence in most cases as far as servicing is concerned) has to be made to comply with the statutory requirements of your country.

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# HYOSUNG MOTORS & MACHINERY INC.

*Overseas Service*

# GENERAL INFORMATION

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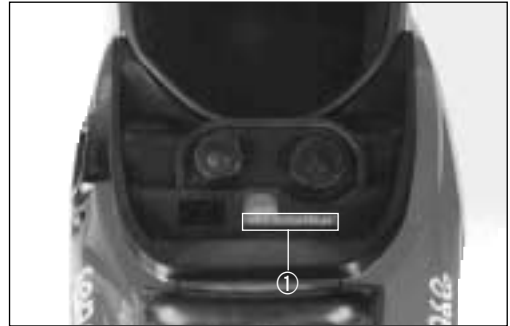
## 1-1 GENERAL INFORMATION

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### MODEL IDENTIFICATION

#### FRAME NUMBER

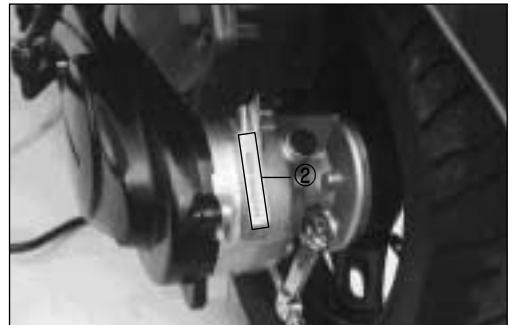
The frame number ① or VIN is stamped on the right side of the under center in the frame.



#### ENGINE NUMBER

The engine serial number ② is stamped on the crankcase.

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



### FUEL AND OIL RECOMMENDATIONS

Be sure to use the specified fuel and oils.

The following are the specifications.

#### FUEL

Gasoline used should be graded 85-95 octane or higher.

Unleaded gasoline is recommended.

#### ENGINE OIL

For the HYOSUNG CCI system, use of "APOLLOIL BIKE-K" or "HYPOL HS" is highly recommended, but if they are not available, a good quality two-stroke oil (non-diluent type) should be used.

#### FINAL GEAR OIL

Use a good quality SAE 10W/40 multi-grade motor oil.

### BREAKING-IN PROCEDURE

During manufacture only the best possible materials are used and 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 :

- Keep to these breaking-in speed limits:  
Up to 1000 km(600 miles): Less than 4/5 throttle
- Upon reaching an odometer reading of 1000km(600 miles) you can subject the motorcycle to full throttle operation.
- Do not maintain constant engine speed for an extended time period during any portion of the break-in.  
Try to vary the throttle position.

## PRECAUTIONS AND GENERAL INSTRUCTIONS

Observe the following items without fail when disassembling and reassembling motorcycles.

- Do not run engine indoors with little or no ventilation.
- Be sure to replace packing, gaskets, circlips, O-rings and cotter pins with new ones.

**CAUTION:**

Never reuse a circlip after it has been removed from a shaft, it should be discarded and a new circlip must be installed.

When installing a new circlip, care must be taken not to expend the end gap larger than required to slip the circlip over the shaft.

After installing a circlip, always insure that it is completely seated in its groove and securely fitted.

- When tightening cylinder head or a case, torque the bolt or nut of larger thread diameter first and then proceed to that of smaller diameter. They should also be tightened crosswise from inside to outside to the specified torque.
- Use special tools where specified.
- Use genuine parts and recommended oils.
- When two or more persons work together, pay attention to safety of each other.
- After the reassembly, check parts for tightness and operation.
- Treat gasoline, which is extremely flammable and highly explosive, with greatest care. Never use gasoline as cleaning solvent.

Warning, Caution and Note are included in this manual occasionally, describing the following contents.

**WARNING** ..... The personal safety of the rider may be involved. Disregarding this information could result in injury to rider.

**CAUTION** ..... These instructions point out special service procedures or precautions that must be followed to avoid damaging the machine.

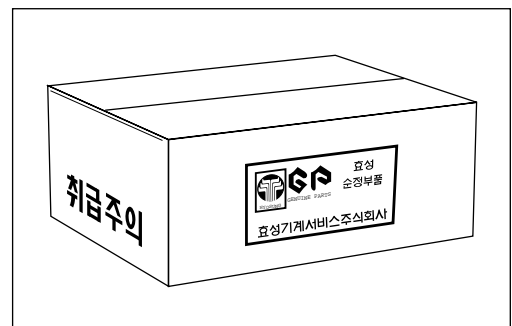
**NOTE** ..... This provides special information to make maintenance easier or important instructions clearer.

## REPLACEMENT PARTS

When you replace any parts, use only genuine HYOSUNG replacement parts, or their equivalent. Genuine HYOSUNG parts are high quality parts which are designed and built specifically for HYOSUNG vehicles.

**CAUTION:**

Use of replacement parts which are not equivalent in quality to genuine HYOSUNG parts can lead to performance problems and damage.

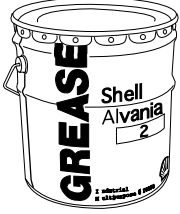
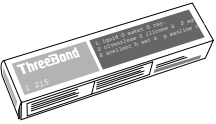
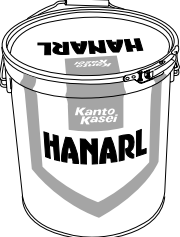





## 1-3 GENERAL INFORMATION

### SPECIAL MATERIALS

The materials shown are required for maintenance works on the Model SD-50 and should be kept on hand for ready use. In addition, such standard materials as cleaning fluids, lubricants, etc., should also be available.

Methods of use are discussed in the text of this manual on later pages.

Material	use
 <p>GREASE "G2" 99000-07C00</p>	<ul style="list-style-type: none"> <li>● Oil seal</li> <li>● Throttle grip</li> <li>● Speedometer cable</li> <li>● Oil pump drive/driven gear</li> <li>● Kick starter gear</li> <li>● Kick starter shaft</li> <li>● Movable driven face</li> <li>● Fixed driven face</li> <li>● Starter pinion</li> <li>● Starter motor</li> <li>● Wheel bearing</li> <li>● Brake camshaft</li> <li>● Steering stem bearing</li> </ul>
 <p>THREE BOND No. 1215 99000-31110</p>	<ul style="list-style-type: none"> <li>● Crankcase mating surface</li> <li>● Final gear cover</li> </ul>
 <p>SILICONE GREASE 99000-25110</p>	<ul style="list-style-type: none"> <li>● Front brake caliper</li> </ul>
 <p>THREAD LOCK SUPER "1322" 99000-32110</p>	<ul style="list-style-type: none"> <li>● Magneto rotor nut</li> </ul>

Material	use
 <p>THREAD LOCK "1342" 99000-32050</p>	<ul style="list-style-type: none"> <li>● Reed valve securing screw</li> <li>● Crankshaft oil seal outer surface</li> </ul>
 <p>THREAD LOCK "1324" 99000-32030</p>	<ul style="list-style-type: none"> <li>● Front fork socket bolt</li> </ul>

**SPECIFICATIONS**

**DIMENSIONS AND DRY MASS**

Overall length	1,780 mm(70.1 in)
Overall width	660 mm(26.0 in)
Overall height	1,065 mm(41.9 in)
Wheelbase	1,221 mm(48.1 in)
Ground clearance	112 mm (4.4 in)
Dry mass	84 kg(185 lbs)

**ENGINE**

Type	Two-stroke, forced air-cooled
Intake system	Reed valve
Number of cylinder	1
Bore	41.0 mm(1.614 in)
Stroke	37.4 mm(1.472 in)
Piston displacement	49 cm <sup>3</sup> (3.0 cu.in)
Corrected compression ratio	7.4:1
Carburetor	SIDEDRAFT V.V.
Air cleaner	Polyurethane foam element
Starter system	Electric and kick
Lubrication system	HYOSUNG "CCI"

**TRANSMISSION**

Clutch	Dry shoe, automatic, centrifugal type
Reduction ratio	2.815-0.866 (Variable)
Drive system	V-belt drive

**CHASSIS**

Front suspension	Telescopic, coil spring, oil dampened
Rear suspension	Swingarm type, coil spring, oil damped
Caster	25 °
Trail	70 mm(2.75 in)
Steering angle	45 ° (right & left)
Turning radius	1.9 mm(6.2 ft)
Front tire size	100/80-10 53J
Rear tire size	100/80-10 53J
Front brake	Disc
Rear brake	Internal expanding

**ELECTRICAL**

Ignition type	HYOSUNG "CDI"
Ignition timing	23 ° B.T.D.C.at 4,000 r/min
Spark plug	GOLDEN: BP6HS
Battery	12V 3Ah/10HR
Generator	Magneto
Fuse	10 A
Headlight	12V 15/15 W×2
Front turn signal light	12V 21 W
Rear turn signal light	12V 10 W
Tail/Brake light	12V 5/21 W
Speedometer light	12V 3.4 W×2
Oil level indicator light	12V 1.7 W
Turn signal indicator light	12V 1.7W
Trunk light	12V 2 W

**CAPACITIES**

Fuel tank	4.8 L(1.3/1.1 US/Imp gal)
Engine oil tank	1.2 L(1.2/1.0 US/Imp qt)
Final gear oil	80 ml(2.7/2.8 US/Imp oz)

\* The specifications are subject to change without notice.