

BL Motorcycles Ltd

Professional Workshop Manual - English Translation

Hyosung - sense_sd50

SERVICE MANUAL

99000-91201

SERVICE MANUAL

HYOSUNG MOTORS & MACHINERY INC.

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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 country 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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GENERAL INFORMATION

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1-1 GENERAL INFORMATION

FUEL AND OIL RECOMMENDATIONS

Be sure to use the specified fuel and oils.

The following are the specification.

FUEL

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

Keep to these breaking-in speed limit:

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.

MODEL IDENTIFICATION

FRAME NUMBER

The frame number or VIN is stamped on the right side of the under

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center in the frame.

ENGINE NUMBER

The engine serial number is stamped on the crankcase.

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

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GENERAL INFORMATION 1-2

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.

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.

HYOSUNG GENUINE PARTS

CAUTION:

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

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installed.

When installing a new circlip, care must be taken not to expand 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.

CAUTION:

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

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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 available.

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

Material use

Reed valve securing screw

Crankshaft oil seal outer
surface

Front fork socket bolt

THREAD LOCK 1342

99000-32050

THREAD LOCK 1324

99000-32030

Material use

Oil seal

Throttle grip

Speedometer cable

Oil pump drive/driven gear

Kick starter gear

Kick starter shaft

Movable driven face

Fixed driven face

Starter pinion

Starter motor

Wheel bearing

Brake camshaft

Steering stem bearing

Magneto rotor nut

Crankcase mating surface

Final gear cover

Front brake caliper

Multi-purpose Grease

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GREASE G2

99000-07C00

THREE BOND No. 1215

99000-31110

SILICONE GREASE

99000-25110

THREAD LOCK SUPER 1322

99000-32110

1324 A4A021 Anaerobic Adhesive Sealant

Liquid Gasket Gray.

Solventless Silicone & Sag type.

Excellent heat & gasoline resista

1-3 GENERAL INFORMATION

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GENERAL INFORMATION 1-4

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 (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

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Front suspension Telescopic, coil spring, oil damped

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.

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PERIODIC MAINTENANCE AND

TUNE-UP PROCEDURES

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GENERAL LUBRICA