

TECHNICAL

Points of engine and frame assembly

RS125R / RS250R

**Engine assembly (particulars described in the manual.
*indicates that appropriate parts should turn smoothly)**

▶ Crankshaft

For both the RS125R and the RS250R, tightening should be made diagonally from the center (no oil seal/only the RS125R)

- 1) All the bolts should be slightly tightened using a T-wrench.
After slight tightening stops, then tighten all the bolts without applying torque.
- 2) Tighten all the bolts within the specified torque.
***Tighten one by one, making sure that the crankshaft turns smoothly by hands.**
- 3) Tighten the bolts by the specified torque (tightening torque must not exceed the specified value)
- 4) Press into pressure oil seals (RS125R only) for both the R and L using a clutch outer thrust washer
***Insert seals uniformly so that they are perpendicular to the crankshaft.**
(Before insertion, clean the sliding surface of oil seals and apply one drop of transmission fluid to soft grease)

▶ Piston

- 1) Smear the piston pin with engine oil and set it to the piston, making sure that the piston pin can be drawn and inserted smoothly.
- 2) Set the pin clip at the right side (viewed from the rear), confirming the stamp on the piston ring.
- 3) Smear needle bearings with engine oil.
- 4) Set the piston in the connecting rods and secure by installing clips. (Pin clips can be inserted by putting abutment from the opposite side of the groove and pushing up the floated parts)

▶ Cylinder

- 1) Check the inner wall for scratches or peeled plates and apply #600 to #800 wet abrasive papers to around the ports (abrade 10 to 15 times)
- 2) Put a small amount of engine oil on the inner wall and smear it on around the skirt.
- 3) Insert the piston so that the ring abutment is aligned with the longer section of the cylinder skirt. Then when the ring goes so deep into the cylinder that it becomes invisible, put the cylinder by turning so that it is aligned with stud bolts.
*** Turning the cylinder should be completed before the ring comes to the port.**
- 4) After setting, hold the cylinder from the upper and turn the

crank (2 to 3 turns). Then wipe off engine oil from the piston with the piston put at the top dead center.

▶ Cylinder head

- 1) Wet abrasive papers should not be used for combustion chambers. Carbon should be removed using gasoline and finished by compounds.
- 2) Grease O-rings and set it in the cylinder. Apply oil to knock pins and set in the cylinder.
**Oiled knock pins will allow easy removal at the next maintenance.*
- 3) Set all the copper washers (plain washers for the RS250R). Note that they are equally positioned since they have their own positions.
**This is done to ensure equal tightening torque among washers.*

▶ Reed valves

Contaminated reed valves will cause cracks. Wash and clean at the time of maintenance.

**Washing should be done using water and detergent for household use.*

Frames (other than described in the manual, simple servicing before running)

▶ Tires/wheels (front)

- 1) Tires/wheels should be turned smoothly when raised up using the jack.
**Front wheels should turn smoothly despite the presence of calipers.*
**Axle shafts should allow smooth installation and removal.*
**If wheels do not turn smoothly with brake pads installed, calipers should be overhauled and checked for movement of pistons.*

▶ Tires/wheels (rear)

- 1) Tires/wheels should be turned smoothly when raised up using the jack.
**They should turn smoothly despite the presence of drive chains.*
 - 2) When axle nuts are tightened to a specified torque, tire/wheels should turn smoothly.
**If wheels do not turn smoothly, make shim adjustment for the RS125R and check for bearing movement for the RS250R.*
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