
DRIVE AND DRIVEN PULLEYS/KICK STARTER

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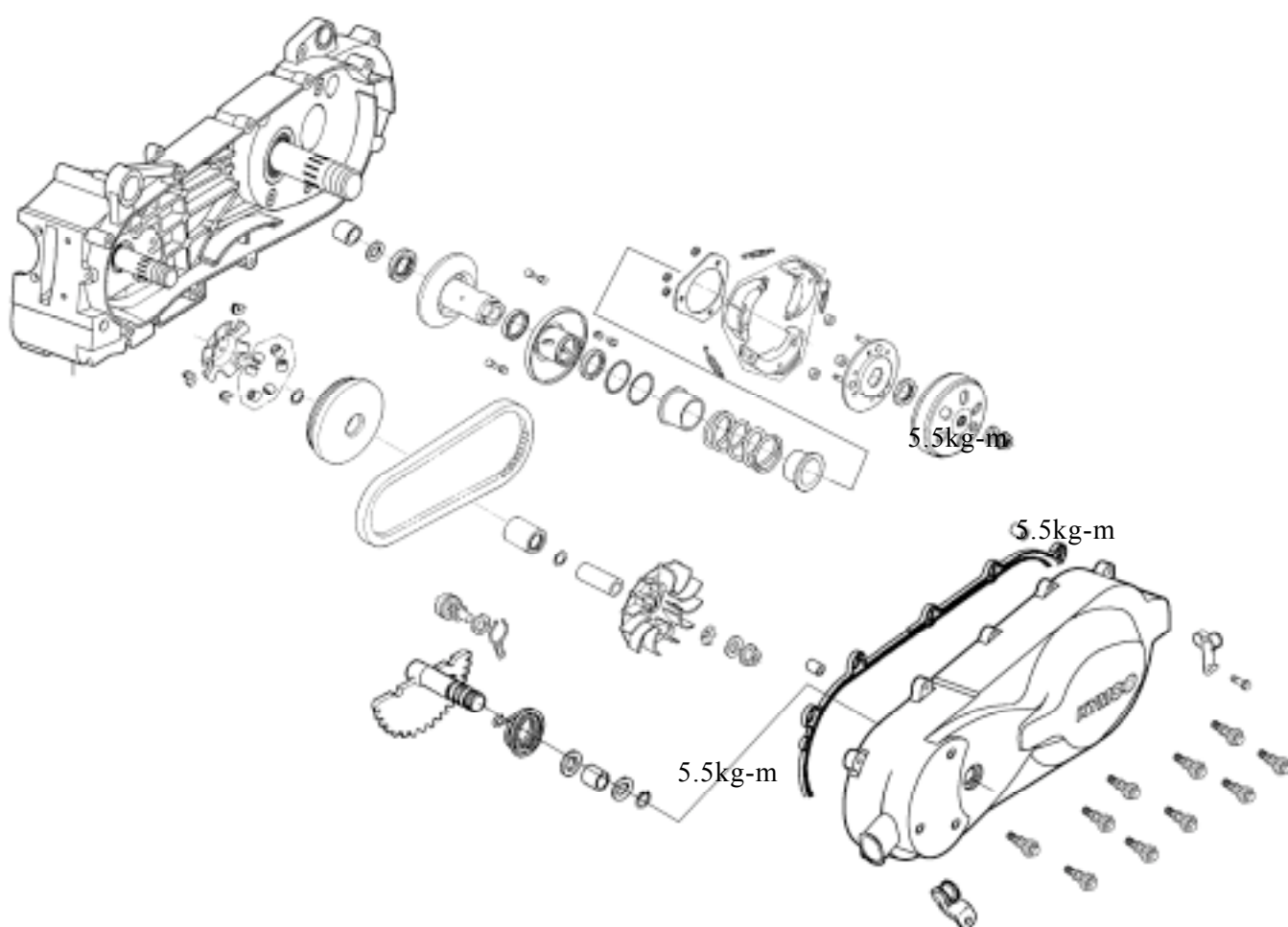
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9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER



9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

SERVICE INFORMATION

GENERAL INSTRUCTIONS

- The drive pulley, clutch and driven pulley can be serviced with the engine installed.
- Avoid getting grease and oil on the drive belt and pulley faces. Remove any oil or grease from them to minimize the slipping of drive belt and drive pulley.

SPECIFICATIONS

| Item | Standard (mm) | | Service Limit (mm) |
|---------------------------------|---------------|--------|--------------------|
| Movable drive face bushing I.D. | 24.011 | 24.052 | 24.06 |
| Drive face collar O.D. | 23.960 | 23.974 | 23.94 |
| Drive belt width | 20.0 | 21.0 | 19.0 |
| Clutch lining thickness | □ | | 1.5 |
| Clutch outer I.D. | 125.0 | 125.2 | 125.5 |
| Driven face spring free length | □ | | 163.7 |
| Driven face O.D. | 33.965 | 33.485 | 33.94 |
| Movable driven face I.D. | 34.000 | 34.025 | 34.06 |
| Weight roller O.D. | 17.920 | 18.080 | 17.40 |

TORQUE VALUES

| | |
|------------------|---------|
| Drive face nut | 5.5kg-m |
| Clutch outer nut | 5.5kg-m |

SPECIAL TOOLS

| | |
|------------------|--------------------------|
| Universal holder | Clutch spring compressor |
| Driver handle A | Lock nut wrench, 39mm |
| Pilot, 20mm | Flywheel holder |
| | Bearing driver |

TROUBLESHOOTING

Engine starts but motorcycle won't move

- Worn drive belt
- Broken ramp plate
- Worn or damaged clutch lining
- Broken driven face spring

Lack of power

- Worn drive belt
- Weak driven face spring
- Worn weight roller
- Fouled drive face

Engine stalls or motorcycle creeps

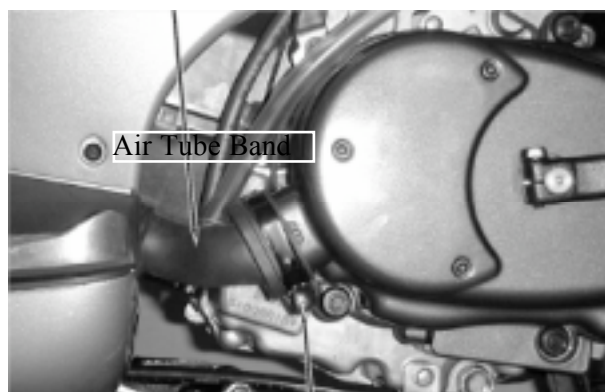
9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

- Broken clutch weight spring

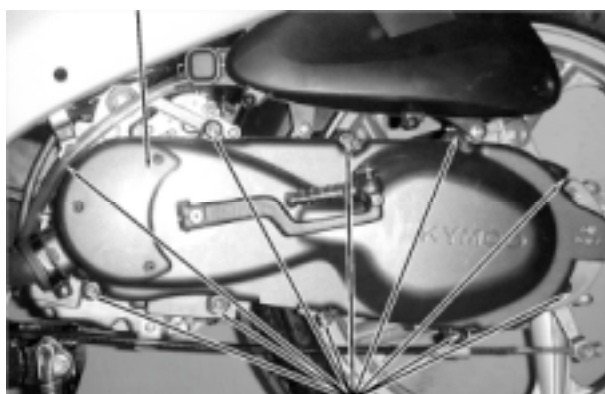
LEFT CRANKCASE COVER

REMOVAL

Loosen the drive belt air tube band screw.



Remove the left crankcase cover bolts and left crankcase cover.
Remove the seal rubber and dowel pins.



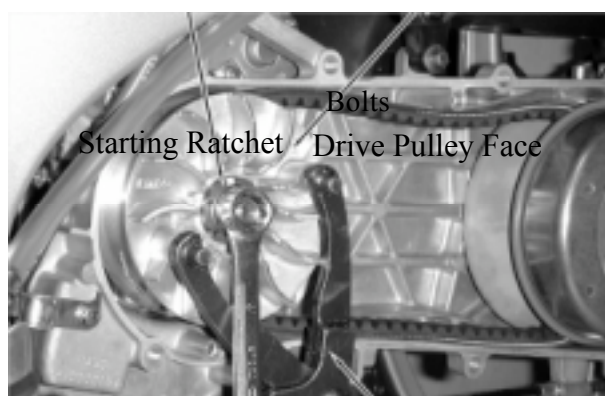
DRIVE PULLEY

REMOVAL

Hold the drive pulley using an universal holder and remove the drive face nut and starting ratchet.
Remove the drive pulley face.

Special

Universal Holder



CLUTCH/DRIVEN PULLEY

Remove the drive pulley and drive belt.
Hold the clutch outer with the flywheel holder and remove the clutch outer nut.
Remove the clutch outer.
Remove the clutch/driven pulley and drive belt.

Special



Flywheel Holder

9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

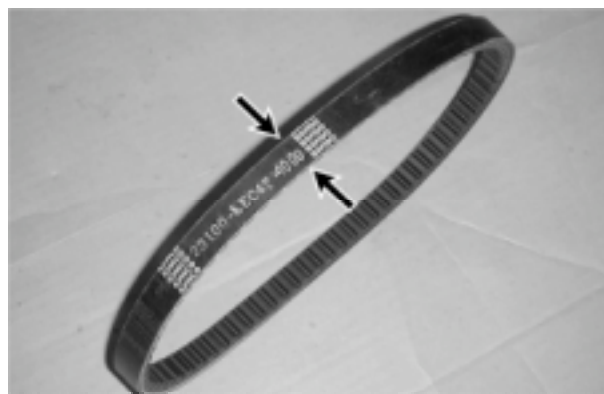
INSPECTION

Check the drive belt for cracks, separation or abnormal or excessive wear.

Measure the drive belt width.

Service Limit: 19.0mm replace if below

- * Use specified genuine parts for replacement.



Remove the movable drive face assembly.
Remove the drive pulley collar.

Drive Pulley Collar



Movable Drive Face Assembly
Ramp Plate

DISASSEMBLY

Remove the ramp plate.



Remove the weight rollers.

Weight Rollers

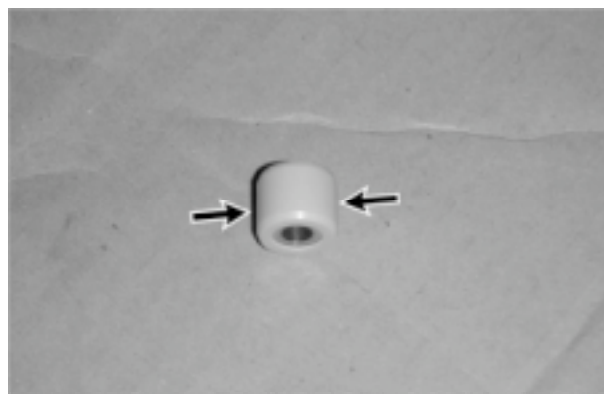


9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

INSPECTION

Check each weight roller for wear or damage.
Measure each weight roller O.D.

Service Limit: 17.4mm replace if below



Measure the movable drive face bushing I.D.

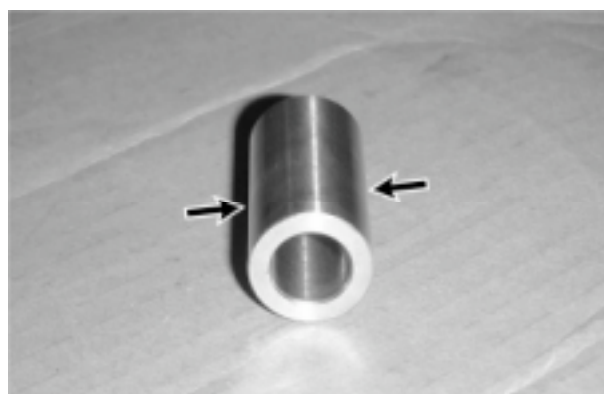
Service Limit: 24.06mm replace if over



Check the drive pulley bushing for wear or damage.

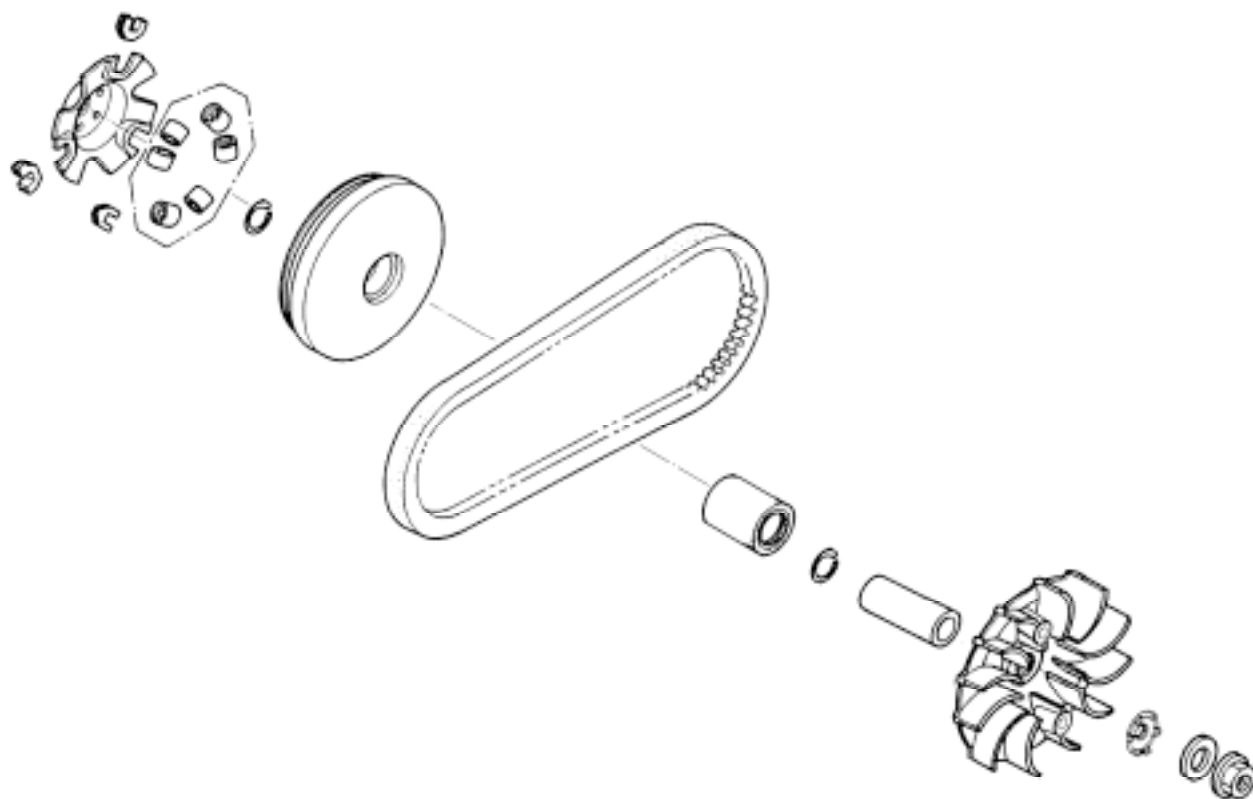
Measure the O.D. of the drive pulley bushing sliding surface.

Service Limit: 23.94mm replace if below



9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

ASSEMBLY



Install the weight rollers into the movable drive face.



Weight Roller

Install the ramp plate.

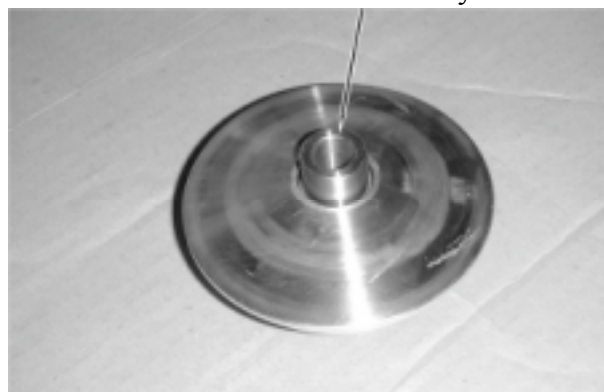
Ramp Plate



9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

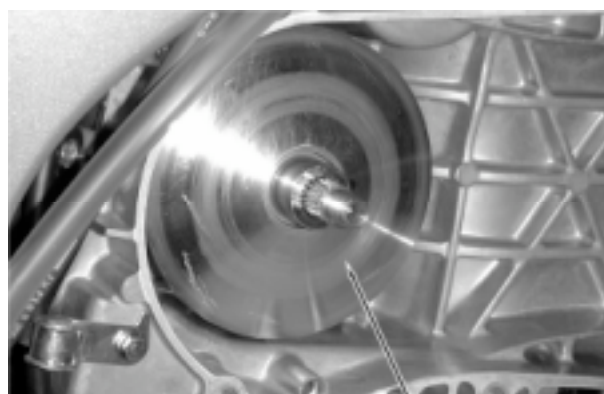
Insert the drive pulley collar into the movable drive face.

Drive Pulley Collar



INSTALLATION

Install the movable drive face onto the crankshaft.

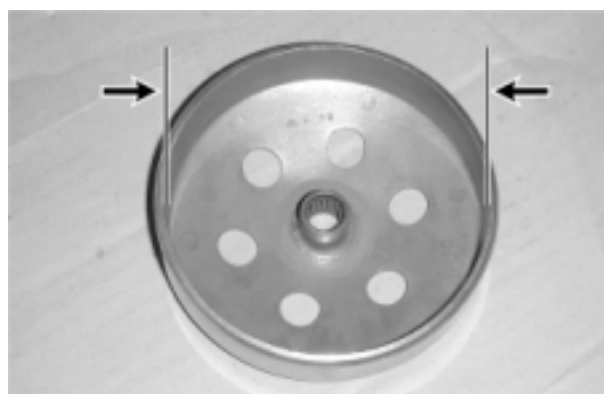


Movable Drive Face Assembly

INSPECTION

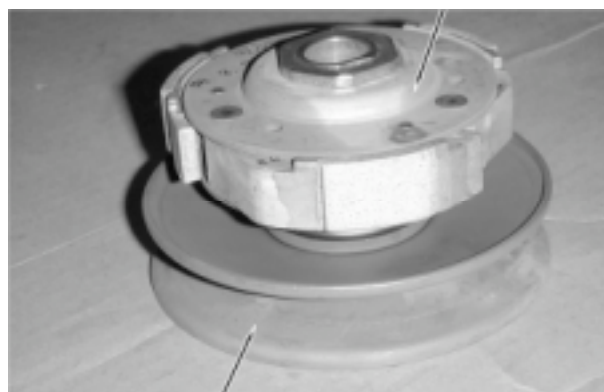
Inspect the clutch outer for wear or damage.
Measure the clutch outer I.D.

Service Limit: 125.5mm replace if over



CLUTCH/DRIVEN PULLEY DISASSEMBLY

Clutch



Driven Pulley

9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

Hold the clutch/driven pulley assembly with the clutch spring compressor.

- * Be sure to use a clutch spring compressor to avoid spring damage.

Special

Clutch Spring Compressor

Set the clutch spring compressor in a vise and remove the clutch drive plate nut.

Special

Lock Nut Wrench, 39mm

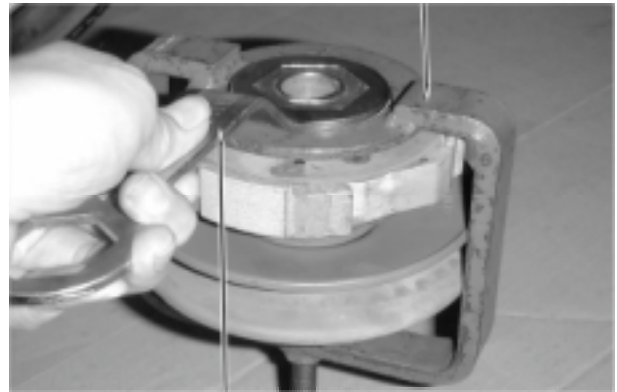
Loosen the clutch spring compressor and disassemble the clutch/driven pulley assembly. Remove the seal collar.

Check the driven face for wear or damage. Measure the clutch lining thickness.

Service Limit: 33.94mm replace if below

Pull out the guide roller pins and guide rollers. Remove the movable driven face from the driven face.

Clutch Spring Compressor

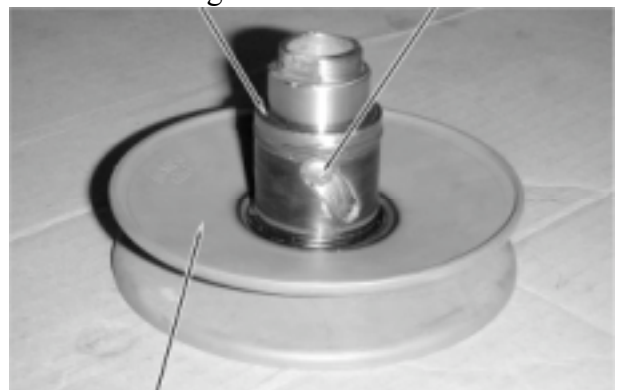


Lock Nut Wrench



O-ring

Guide Roller Pin

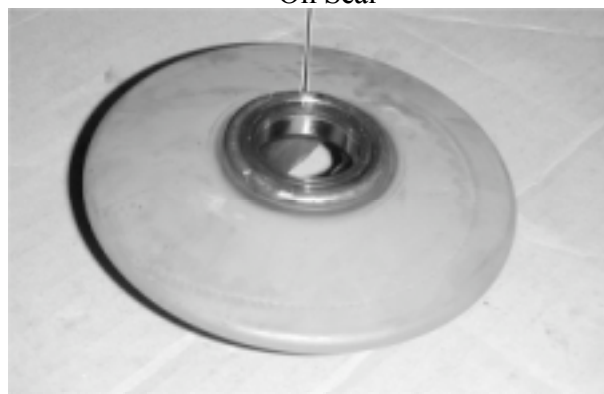


Movable Driven Face

9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

Remove the oil seal from the movable driven face.

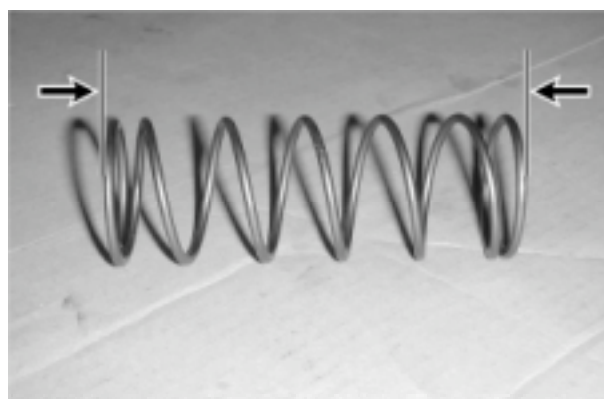
Oil Seal



INSPECTION

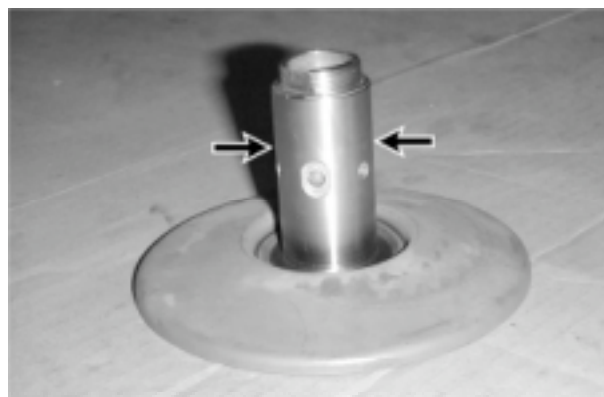
Measure the driven face spring free length.

Service Limit: 163.7mm replace if below



Check the driven face for wear or damage.
Measure the driven face O.D.

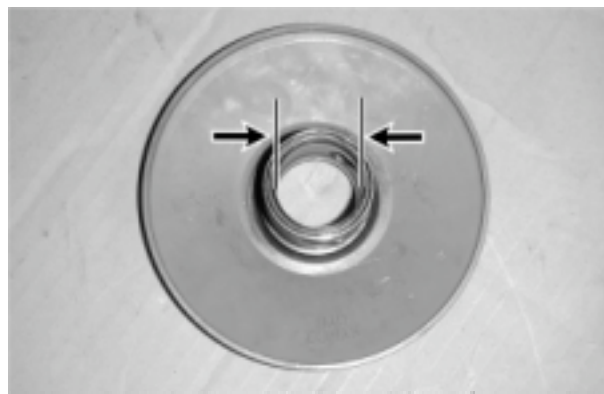
Service Limit: 33.94mm replace if below



Check the movable driven face for wear or damage.

Measure the movable driven face I.D.

Service Limit: 34.06mm replace if over



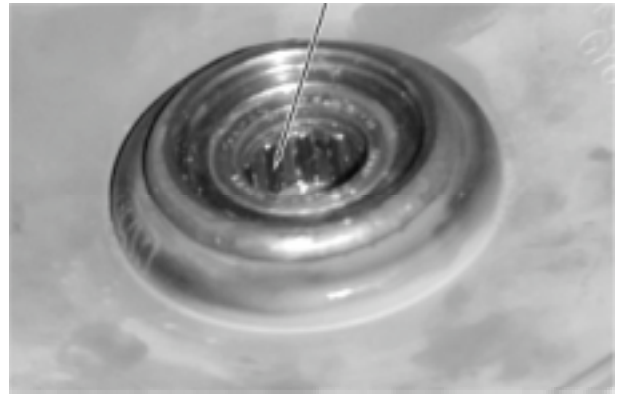
9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

DRIVEN PULLEY FACE BEARING REPLACEMENT

Drive the inner needle bearing out of the driven pulley face.

- * Discard the removed bearing and replace with a new one.

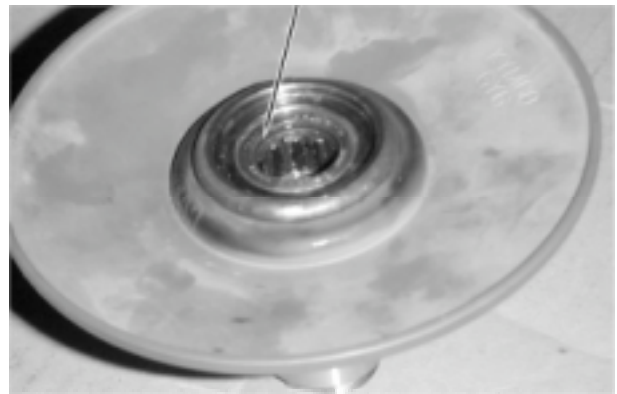
Inner Bearing



Remove the snap ring and drive the outer bearing out of the driven face.

- * Discard the removed bearing and replace with a new one.

Outer Bearing



Apply grease to the outer bearing.
Drive a new outer bearing into the driven face with the sealed end facing up.

Special

Bearing Driver

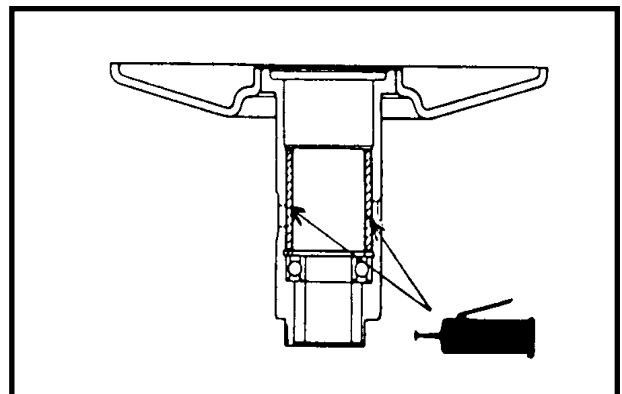
Seat the snap ring in its groove.
Apply grease to the driven face bore areas.

- * Pack all bearing cavities with 9_ 9.5g grease.
Specified grease: Heat resistance 230°C

Press a new needle bearing into the driven face.

Special

Bearing Driver
Pilot, 20mm

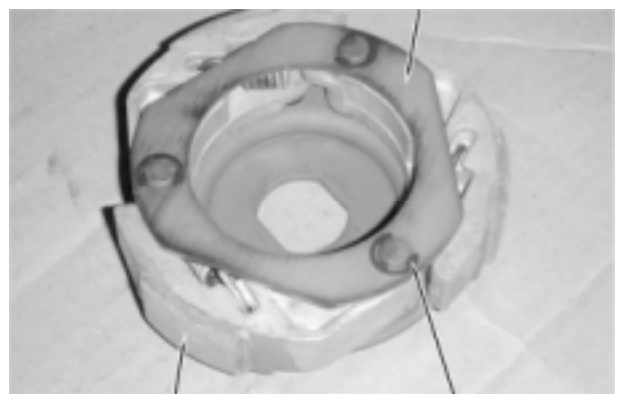


CLUTCH DISASSEMBLY

Remove the circlips and retainer plate to disassemble the clutch.

- * Keep grease off the clutch linings.

Retainer Plate

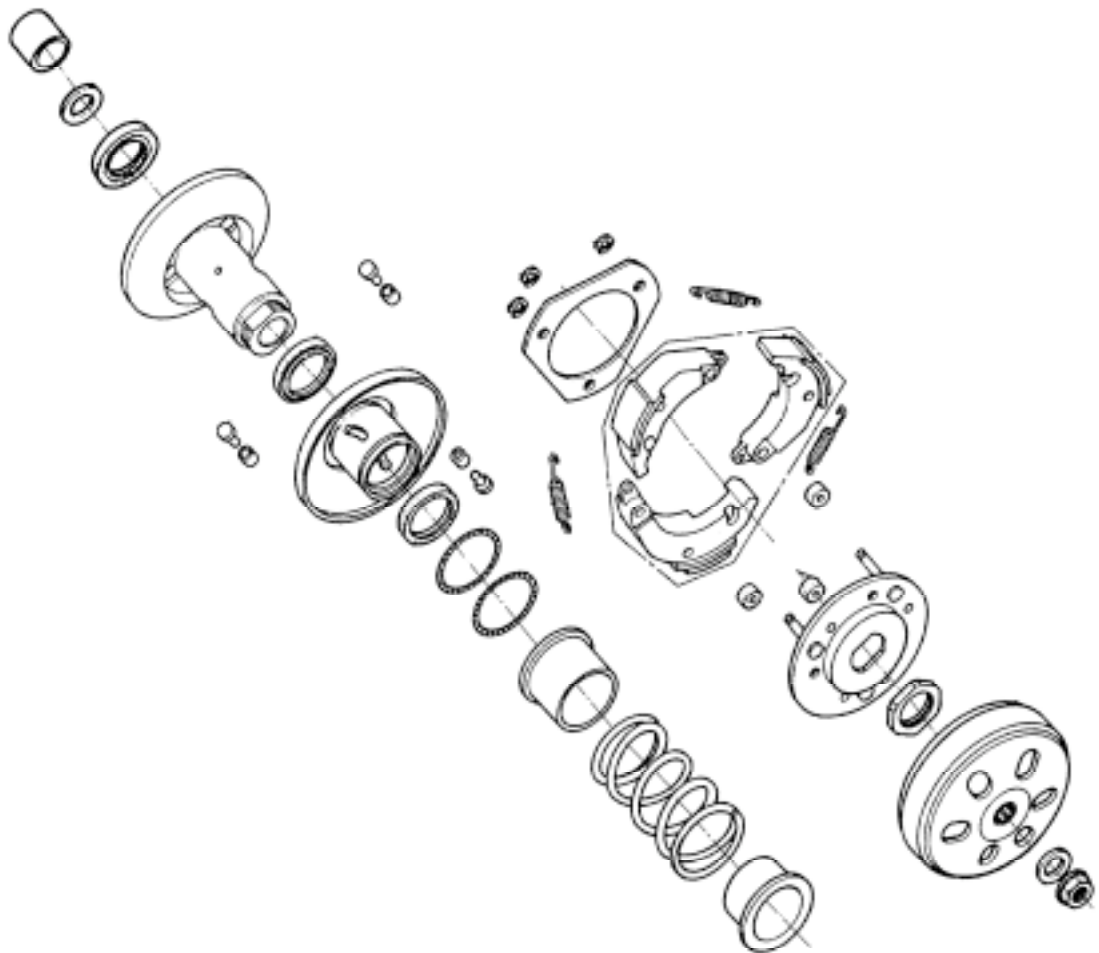


Clutch Lining

Circlip

9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

CLUTCH / DRIVEN PULLEY ASSEMBLY



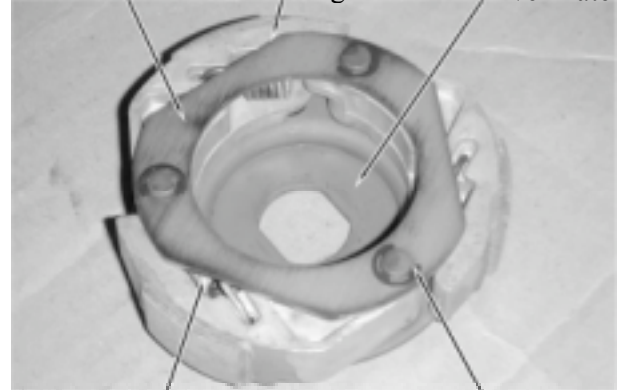
9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

Install the damper rubbers on the drive plate pins.

Install the clutch weights/shoes and clutch springs onto the drive plate.

Install the retainer plate and secure with the circlips.

Retainer Plate Clutch Weights/Shoes Drive Plate



Springs

Circlip

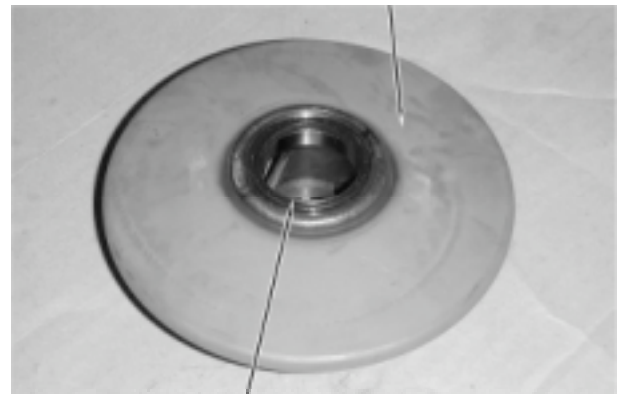
CLUTCH/DRIVEN PULLEY ASSEMBLY

Clean the driven pulley faces and remove any grease from them.

Install the oil seal onto the moveable driven face.

Apply grease to the O-rings and install them onto the moveable driven face.

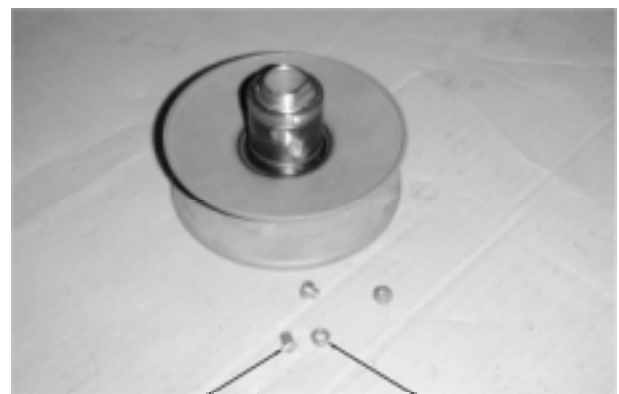
Movable Driven Face



Oil Seal

Install the movable driven face onto the driven face.

Apply grease to the guide rollers and guide roller pins and then install them into the holes of the driven face.



Guide Roller Pin

Guide Roller

Movable Driven Face

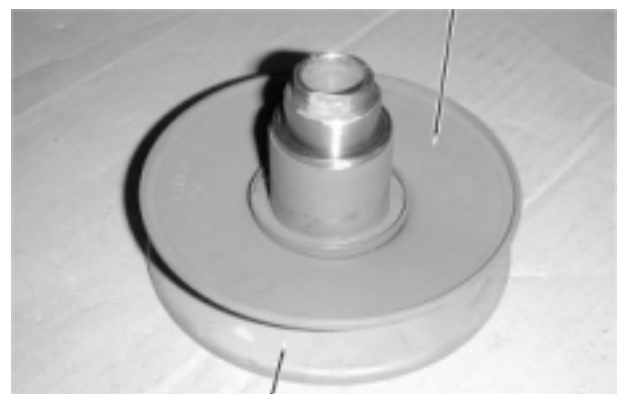
Install the seal collar.

Remove any excessive grease.

- * Be sure to clean the driven face off any grease.

Set the driven pulley assembly, driven face spring and clutch assembly onto the clutch spring compressor.

- * Align the flat surface of the driven face with the flat on the clutch drive plate.



Driven Face

9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

Compress the clutch spring compressor and install the drive plate nut.
Set the clutch spring compressor in a vise and tighten the drive plate nut to the specified torque.

Torque: 5.5kg-m

- * Be sure to use a clutch spring compressor to avoid spring damage.

Special

Clutch Spring Compressor

INSTALLATION

Install the clutch/driven pulley onto the drive shaft.

- * Keep grease off the drive shaft.

Install the clutch outer.
Hold the clutch outer with the flywheel holder.
Install and tighten the clutch outer nut.

Torque: 5.5kg-m

Special

Flywheel Holder

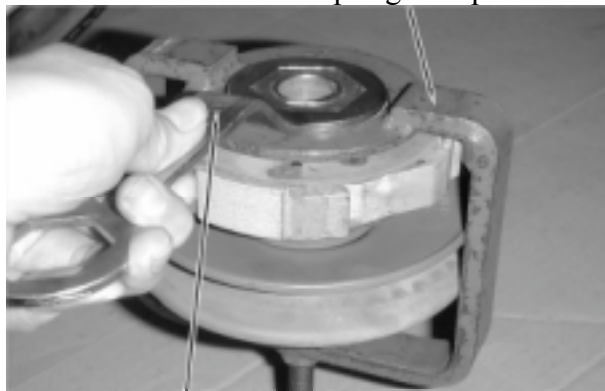
Install the drive belt.

Install the drive pulley face, starting ratchet and drive face nut.

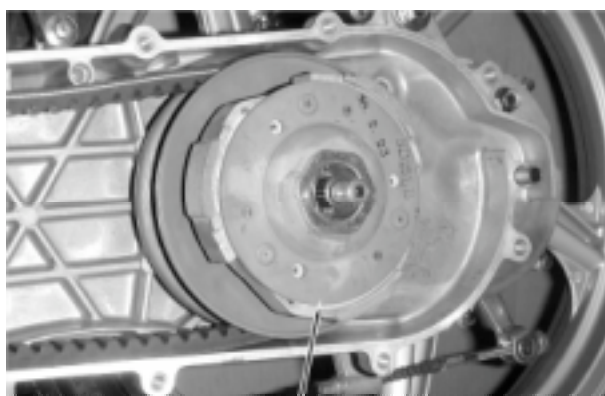
- * When installing the drive pulley face, compress it to let the drive belt move downward to the lowest position so that the drive pulley can be tightened.
Install the starting ratchet by aligning the starting ratchet teeth with the crankshaft teeth.
Do not get oil or grease on the drive belt or pulley faces.

Torque: 5.5kg-m

Clutch Spring Compressor

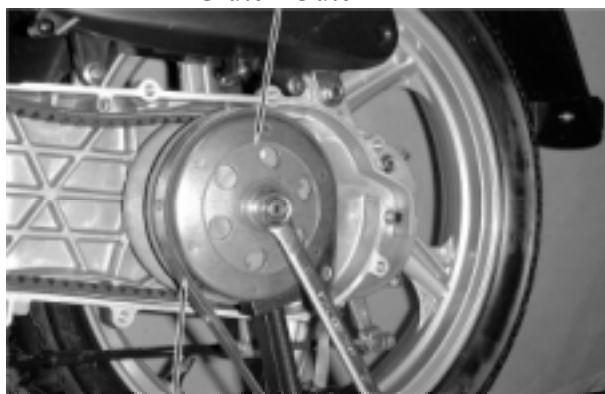


Lock Nut Wrench



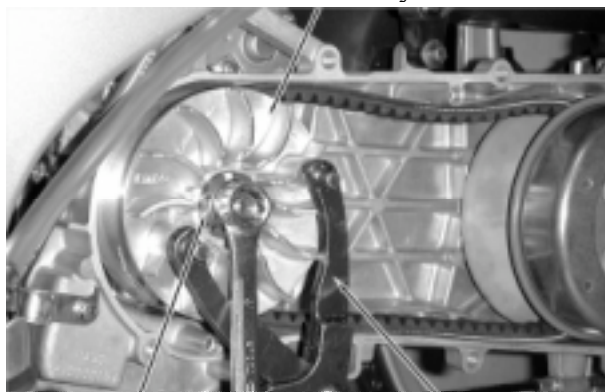
Clutch/Driven Pulley

Clutch Outer



Flywheel Holder

Drive Pulley



Starting Ratchet

Universal Holder

9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

KICK STARTER

REMOVAL

Remove the left crankcase cover. (⇒9-2)
Remove the seal rubber and dowel pins.
Remove the kick lever.
Remove the circlip and washer from the kick starter spindle.



Kick Starter Spindle

Gently turn the kick starter spindle to remove the starter driven gear together with the friction spring.



Friction Spring

Remove the kick starter spindle and return spring from the left crankcase cover.
Remove the kick starter spindle bushing.



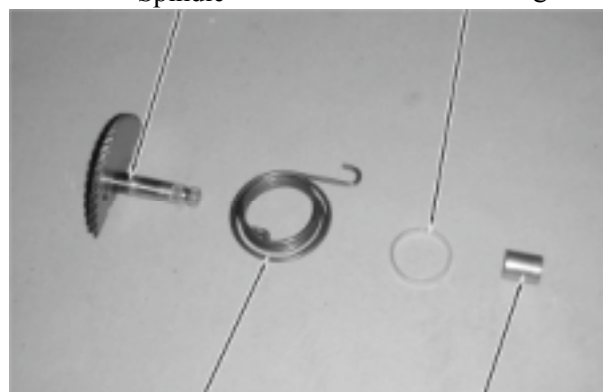
Return Spring

Spindle

Plastic Bushing

INSPECTION

Inspect the kick starter spindle and gear for wear or damage.
Inspect the return spring for weakness or damage.
Inspect the kick starter spindle bushings for wear or damage.



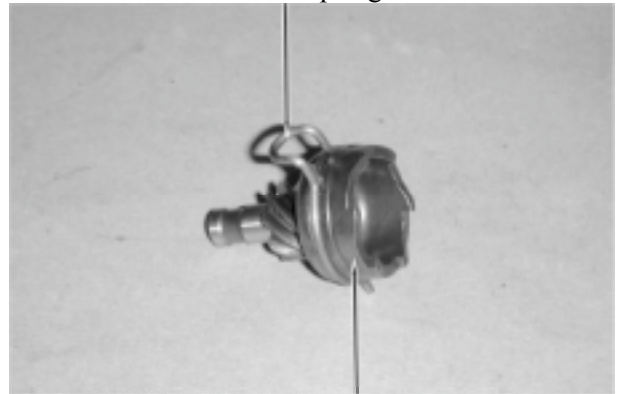
Return Spring

Spindle Bushing

9. DRIVE AND DRIVEN PULLEYS/ KICK STARTER

Inspect the starter driven gear for wear or damage.
Inspect the friction spring for wear or damage.

Friction Spring



Starter Driven Gear
Kick Starter Spindle Forcing



Inspect the kick starter spindle and starter driven gear forcing parts for wear or damage.

Starter Driven Gear Shaft Forcing
Starting Ratchet



INSTALLATION

Install the kick starter spindle bushings and return spring onto the left crankcase cover.

- * When installing the return spring, use a screw driver to press the inward and outward return spring hooks into their original positions respectively.

Install the starter driven gear and friction spring as the figure shown.

Friction Spring

Kick Starter Spindle

Install the kick lever.
Install the left crankcase cover and tighten the cover bolts diagonally.
Connect the drive belt air tube and tighten the band screw.



Left Crankcase Cover