

**7. KICK STARTER/DRIVE PULLEY/  
CLUTCH/DRIVEN PULLEY**

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**KICK STARTER/DRIVE PULLEY/  
CLUTCH/DRIVEN PULLEY**

**7**

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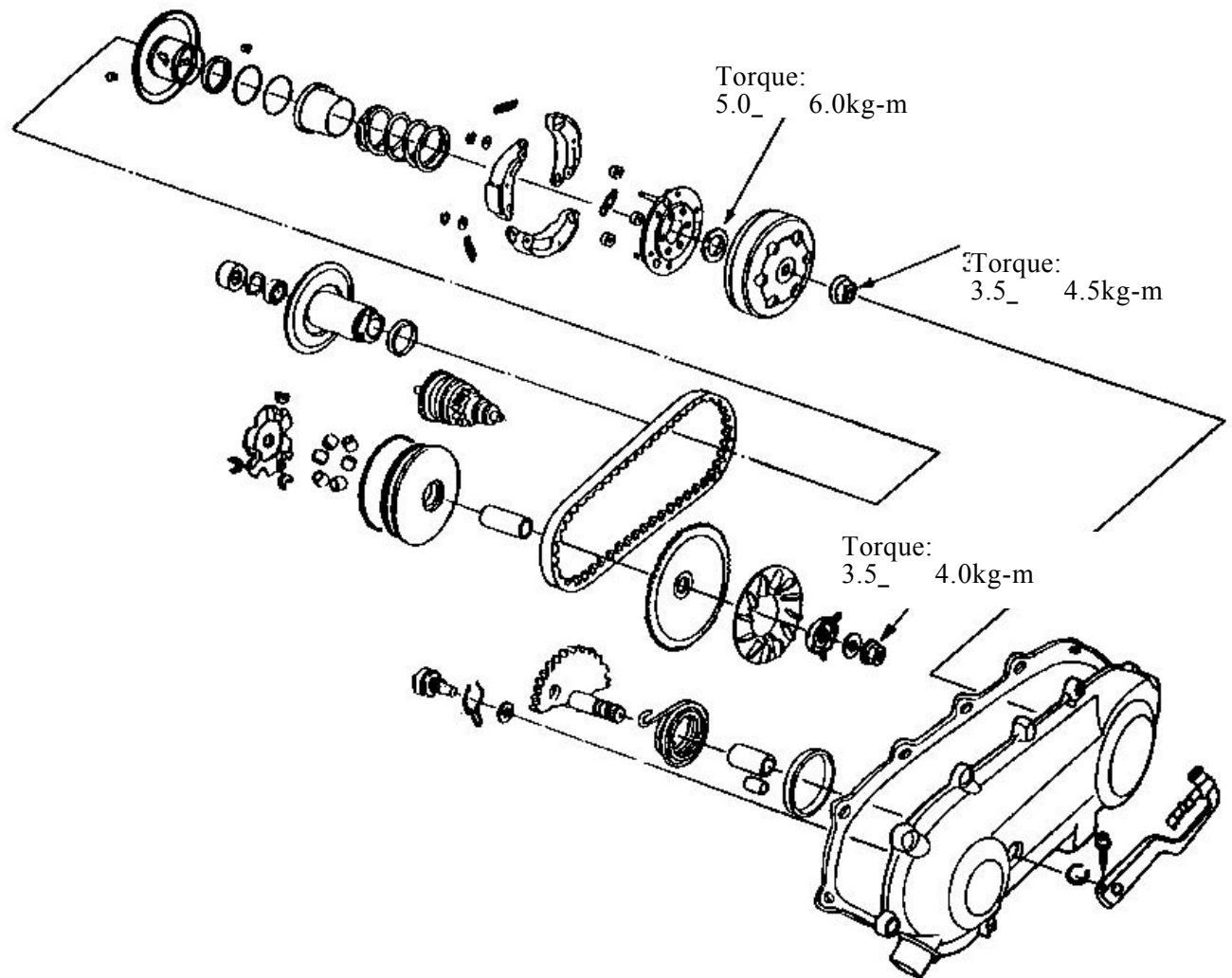
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MODEL SH10BA.SH10AA



## 7. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

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### SERVICE INFORMATION

#### GENERAL INSTRUCTIONS

- Avoid getting grease and oil on the drive belt and pulley faces.

SPECIFICATIONS	SH10BA		SH10AA	
	Standard (mm)	Service Limit (mm)	Standard (mm)	Service Limit (mm)
Drive pulley collar O.D.	20.01_ 20.02	24.24	20.01_ 20.02	24.24
Movable drive face I.D.	20.035_ 20.0	19.97	20.035_ 20.0	19.97
Weight roller O.D.	13.0	12.4	13.0	12.4
Clutch outer I.D.	107_ 107.2	107.5	107_ 107.2	107.5
Driven face spring free length	879	82.6	87.9	82.6
Driven face O.D.	33.965_ 33.9	33.94	33.965_ 33.9	33.94
Movable driven face I.D.	34.0_ 34.25	34.06	34.0_ 34.25	34.06
Drive belt width	18	17	18	17

#### TORQUE VALUES

Drive face nut	3.5_	4.0kg-m
Clutch outer nut	3.5_	4.5kg-m
Clutch drive plate nut	5.0_	6.0kg-m

#### SPECIAL TOOLS

Lock nut wrench, 28mm  
Clutch spring compressor  
Bearing outer driver 37x40mm  
One-way clutch puller

Universal holder  
Lock nut socket wrench, 32mm  
Bearing driver pilot, 17mm  
Outer driver, 24x26mm

#### TROUBLESHOOTING

##### Engine starts but motorcycle won't move

- Worn drive belt
- Broken ramp plate
- Worn or damaged clutch lining

##### Engine stalls or motorcycle creeps

- Broken clutch weight spring

##### Poor performance at high speed or lack of power

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

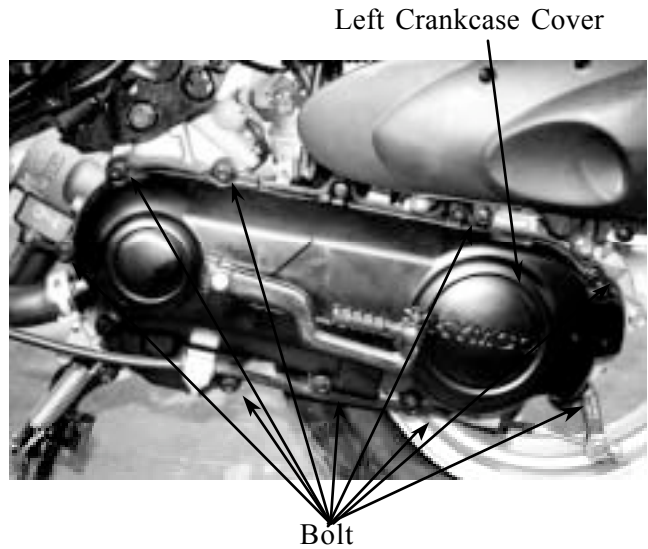
## 7. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

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### KICK STARTER

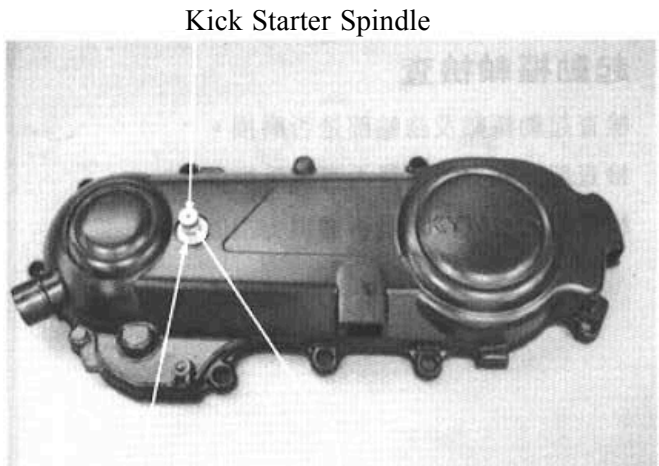
#### LEFT CRANKCASE COVER REMOVAL

Remove the drive belt cooling air tube connector circlip.  
Remove the nine left crankcase cover bolts, left crankcase cover and dowel pins.  
Inspect the left crankcase cover seal rubber for damage or deterioration.

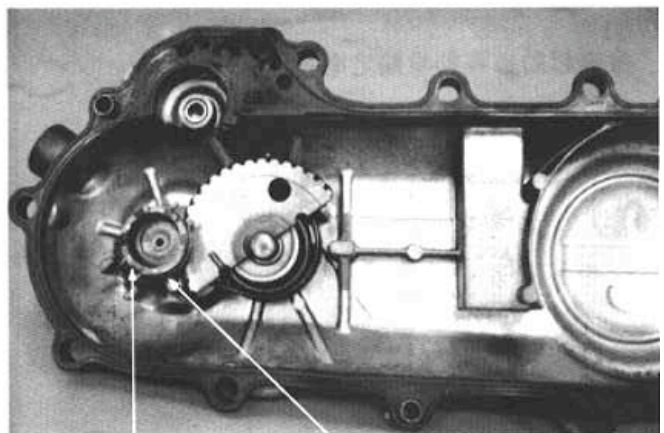


#### KICK STARTER SPINDLE REMOVAL

Remove the kick lever from the kick starter spindle.  
Remove the circlip and washer from the kick starter spindle.



Slightly rotate the kick starter spindle to remove the kick starter driven gear together with the friction spring.



## 7. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

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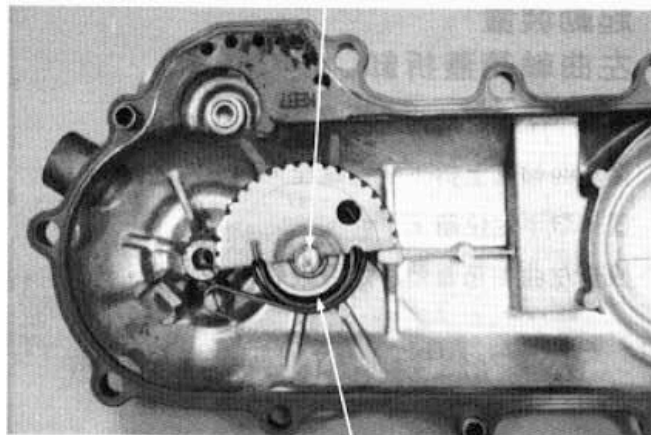
Remove the kick starter spindle and return spring from the left crankcase cover.  
Remove the kick starter spindle bushing.

### KICK STARTER SPINDLE 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 bushing for wear or damage.

Check the kick starter driven gear for wear or damage.  
Check the friction spring for wear or damage.

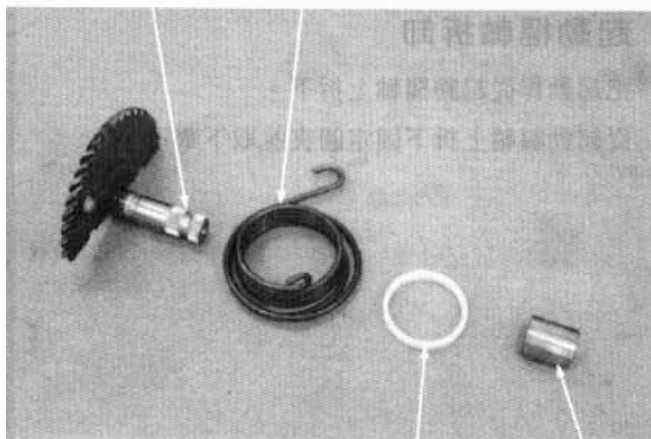
Kick Starter Spindle



Return Spring

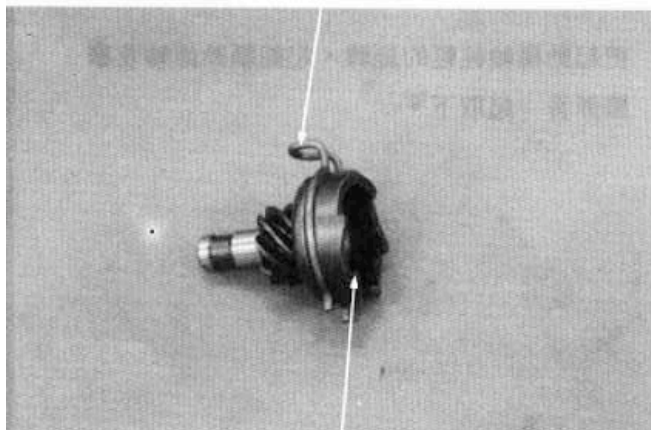
Spindle

Return Spring



Plastic Bushing Spindle Bushing

Friction Spring



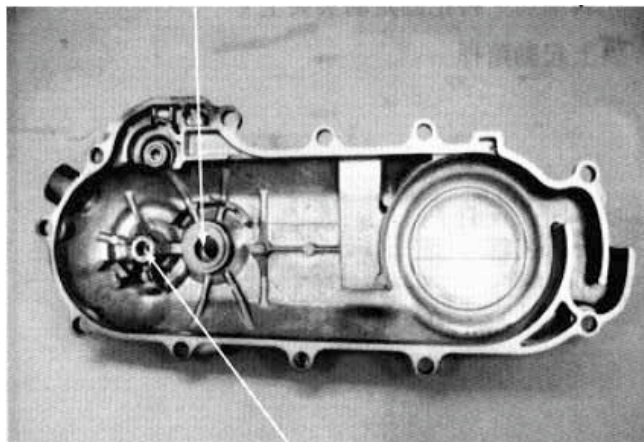
Kick Starter Driven Gear

## 7. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

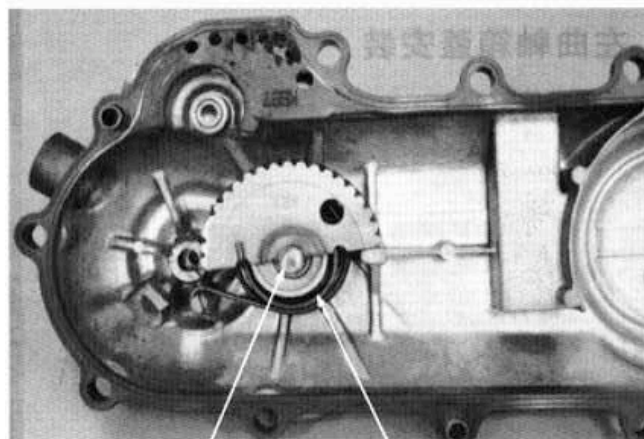
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Inspect the kick starter spindle and driven gear forcing parts for wear or damage.

Kick Starter Spindle Forcing Part



Kick Starter Driven Gear Forcing Part



Kick Starter Spindle    Friction Spring

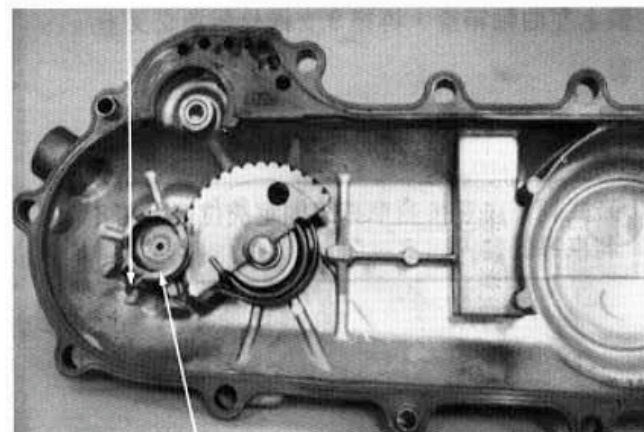
### KICK STARTER INSTALLATION

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

- \* If the hooks of the return spring can not be installed properly, use a screw driver to press them into their locations respectively.

Properly install the kick starter driven gear and friction spring as the figure shown.

Friction Spring



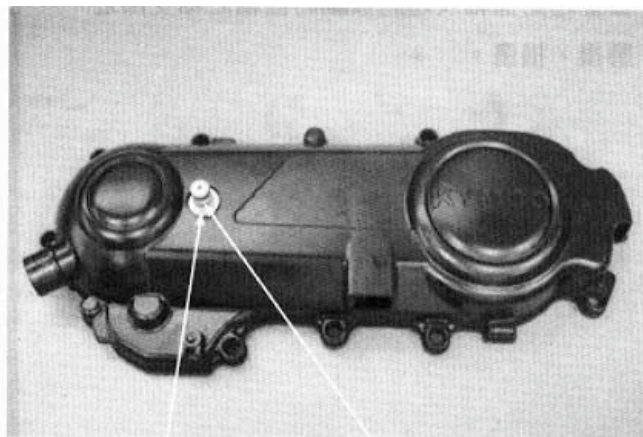
Kick Starter Driven Gear



## 7. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

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First install the washer and then the circlip onto the kick starter spindle.  
Install the kick lever.



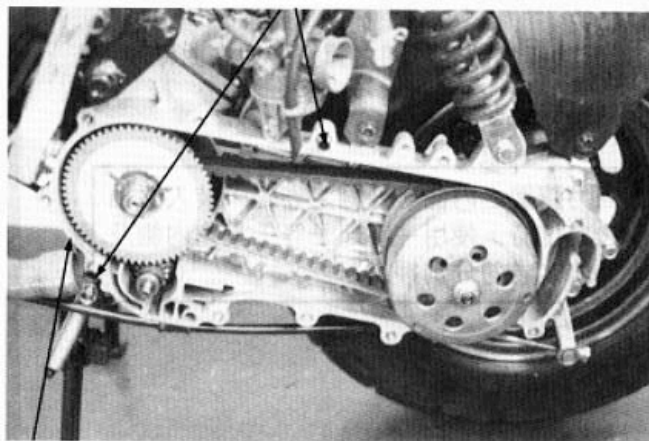
Washer

Circlip

Dowel Pins

### LEFT CRANKCASE COVER INSTALLATION

First install the dowel pins and then the seal rubber.



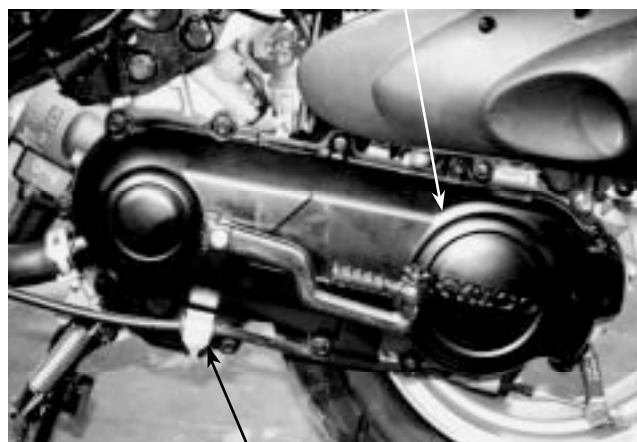
Seal Rubber

Install the left crankcase cover and tighten the nine bolts diagonally.  
Connect the drive belt cooling air tube and install the circlip.

\*

For drum brake, note the location of the brake cable clamp and install the rear brake cable in place with the clamp.

Left Crankcase Cover



Rear Brake Cable Clamp

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### DRIVE BELT

Remove the left crankcase cover.

### INSPECTION

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

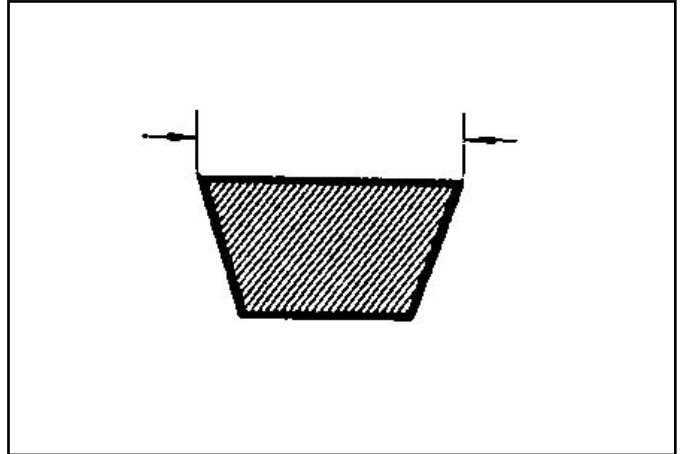
#### Service Limit:

SH10BA: 16.5mm replace if below

SH10AA: 16.5mm replace if below

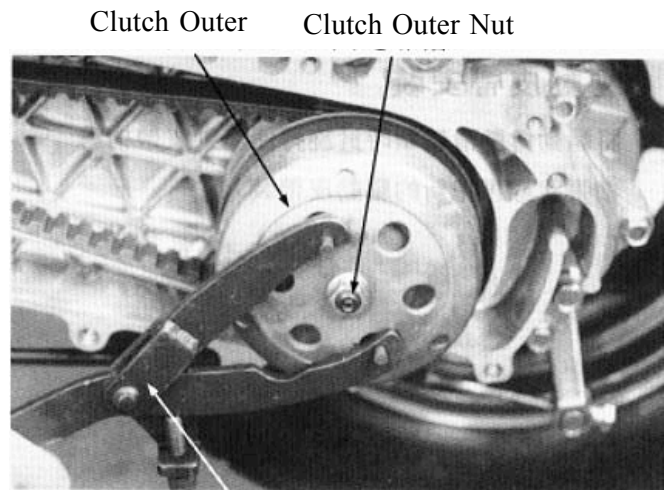
\*

Use specified genuine parts for replacement.



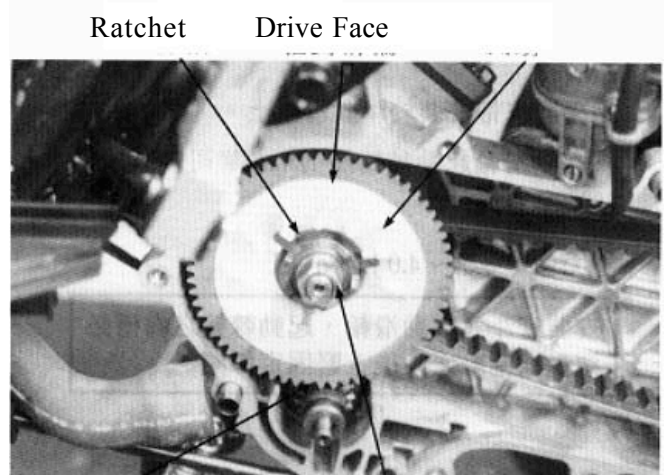
### REPLACEMENT

Remove the nine left crankcase cover bolts and left crankcase cover. (⇒ 7-3)  
Hold the clutch outer with the universal holder and remove the 10mm clutch outer nut and clutch outer.



Universal Holder

Hold the drive pulley with the holder and remove the 12mm drive face nut.  
Remove the starting ratchet.  
Remove the drive pulley face.



Drive Face Nut

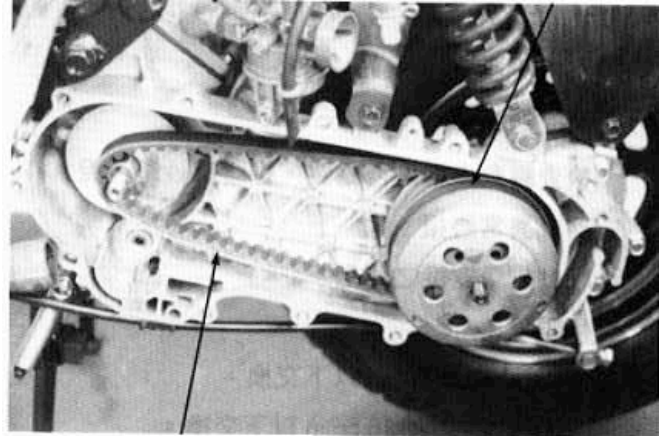


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Remove the drive belt from the clutch/  
driven pulley.

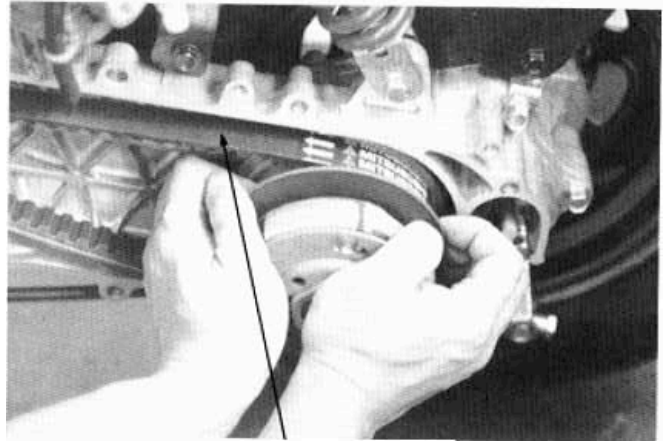
Clutch/Driven Pulley



Drive Belt

### DRIVE BELT INSTALLATION

Turn the driven pulley clockwise and lift it  
up to expand the drive belt groove and then  
install a new drive belt.



Drive Belt

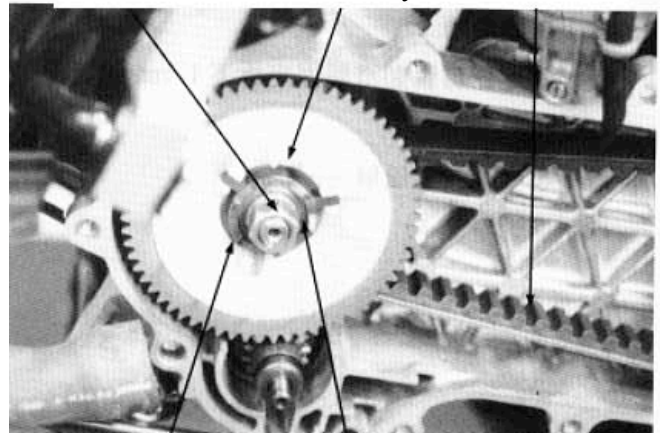
Set the drive belt on the drive pulley.  
Install the drive pulley face, starting ratchet  
and 12mm washer, then tighten the drive  
face nut.

**Torque:** 3.5\_ 4.0kg-m

\*

When installing the drive face nut, make  
sure that the tooth spaces of the drive  
pulley face and starting ratchet align  
with the teeth of the crankshaft.

Drive Face Nut    Drive Pulley Face    Drive Belt



Starting Ratchet    12mm Washer

## 7. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

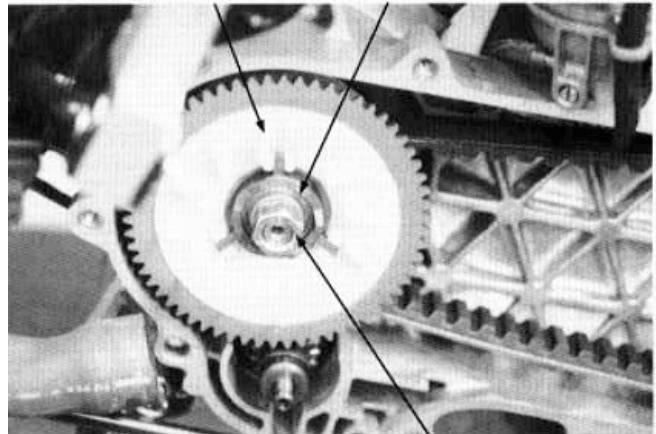
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### DRIVE PULLEY

#### REMOVAL

Hold the drive pulley with the holder and remove the 12mm drive face nut. Remove the starting ratchet, 12mm washer and drive pulley face.

Drive Pulley Face Starting Ratchet

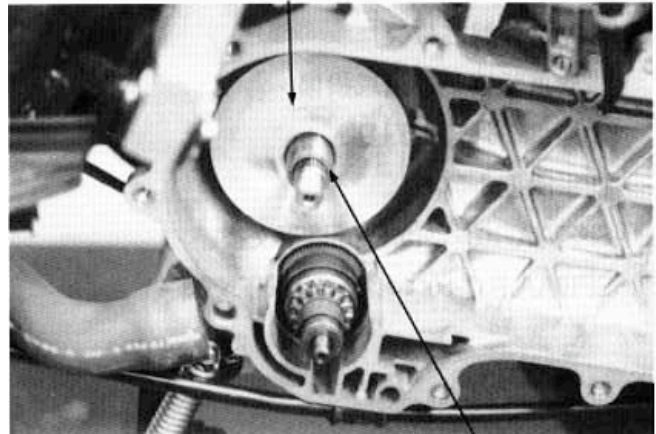


12mm Drive Face Nut

#### MOVABLE DRIVE FACE DISASSEMBLY

Remove the movable drive face and drive pulley collar from the crankshaft.

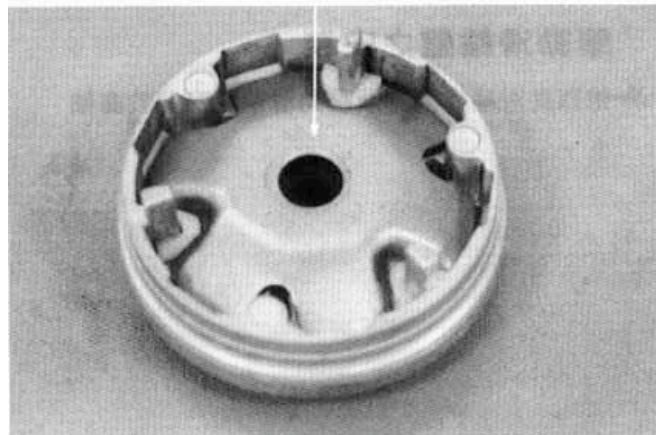
Movable Drive Face



Drive Pulley Collar

Remove the ramp plate.

Ramp Plate

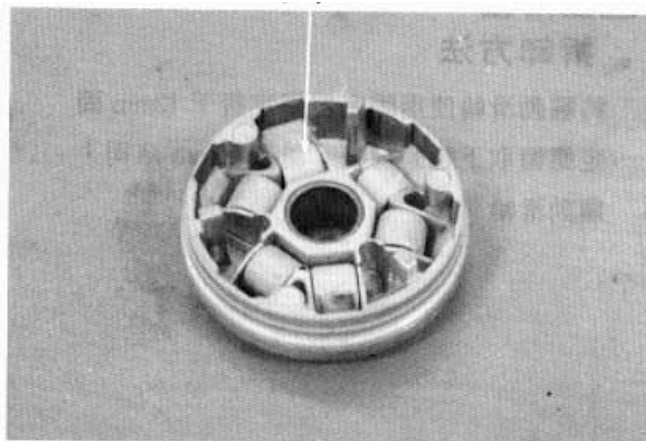


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Remove the weight rollers.

Weight Roller



### MOVABLE DRIVE FACE INSPECTION

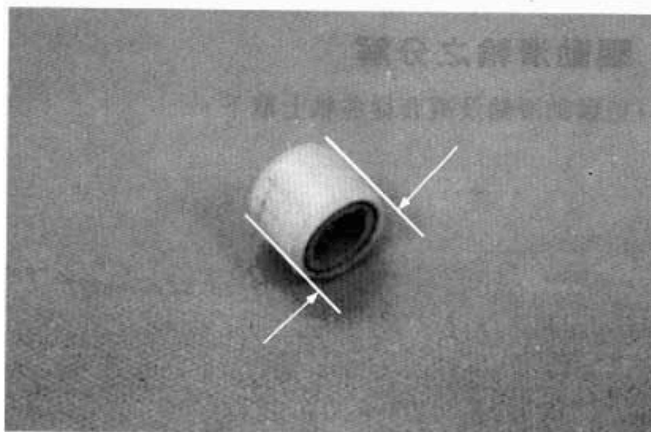
Check each weight roller for wear or damage.

Measure each roller O.D.

#### Service Limit:

SH10BA: 12.4mm replace if below

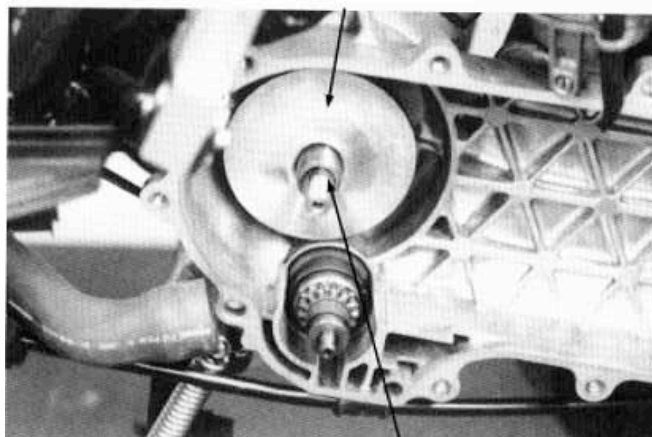
SH10AA: 12.4mm replace if below



### DRIVE PULLEY INSTALLATION

Install the drive pulley collar and movable drive face onto the crankshaft.

Movable Drive Face



Drive Pulley Collar



## 7. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

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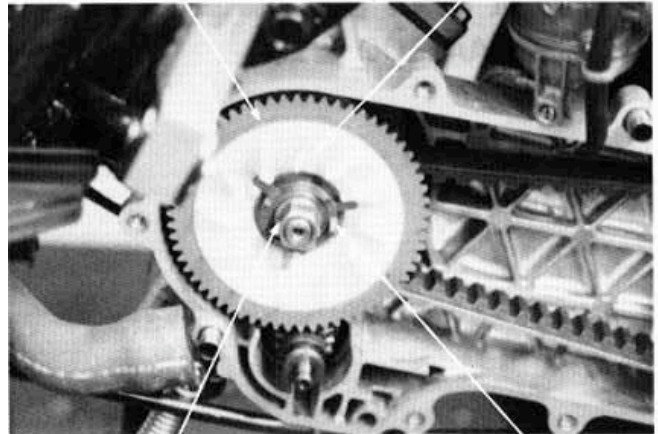
Install the drive belt on the crankshaft.  
Install the drive face, starting ratchet and  
washer, then tighten the 12mm drive face  
nut.

**Torque:** 3.5\_ 4.0kg-m

\*

Keep grease or oil off the drive belt and  
drive pulley faces.

Drive Pulley Face



Drive Face Nut

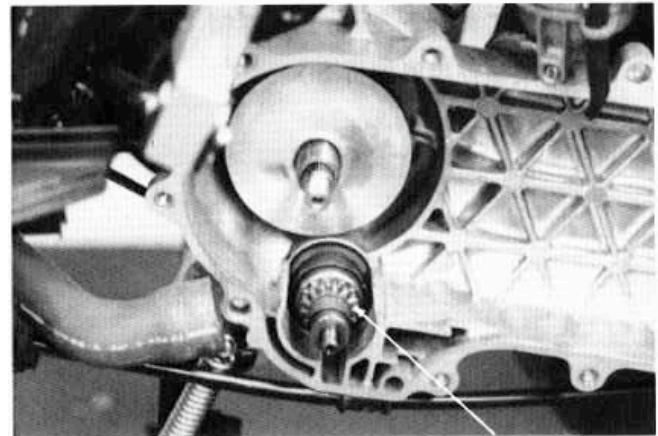
Starting Ratchet

### STARTER PINION REMOVAL

Remove the left crankcase cover. (⇒7-3)

Remove the drive pulley. (⇒7-7)

Remove the starter pinion.



Starter Pinion

### INSPECTION

Inspect the starter pinion seat for wear.

Inspect the starter pinion for smooth  
operation.

Inspect the starter pinion shaft forcing  
parts for wear and damage.

### INSTALLATION

Apply a small amount of grease to the  
starter pinion teeth.

Install the starter pinion in the reverse order  
of removal.

Shaft Forcing Parts



Starter Pinion

## 7. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

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### CLUTCH/DRIVEN PULLEY

#### CLUTCH/DRIVEN PULLEY REMOVAL

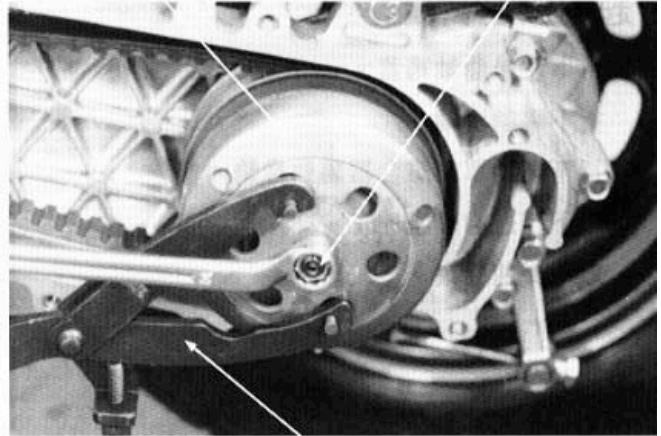
Remove the drive pulley. (⇒7-7)

Hold the clutch outer with the universal holder and remove the 10mm clutch outer nut.

Remove the clutch outer.

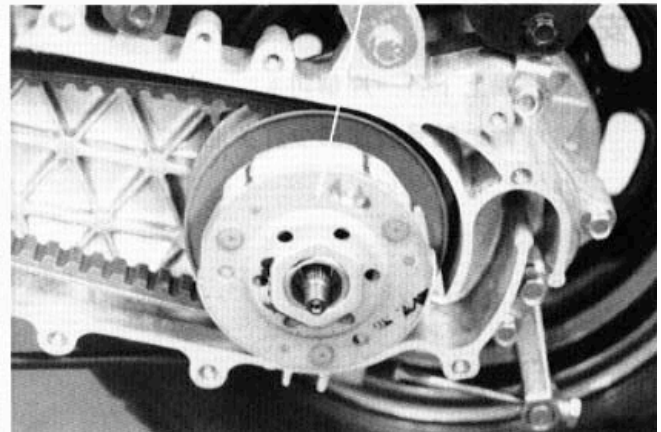
Clutch Outer

10mm Clutch Outer Nut



Universal Holder

Clutch/Driven Pulley



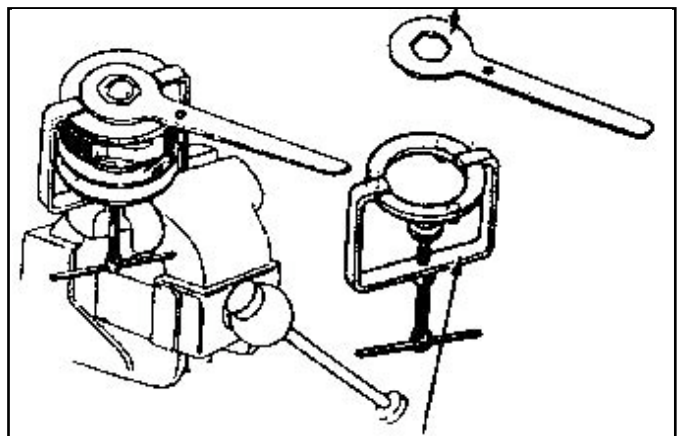
Remove the clutch/driven pulley.  
Remove the drive belt from the  
clutch/driven pulley.

#### CLUTCH/DRIVEN PULLEY DIS- ASSEMBLY

Compress the clutch/driven pulley spring  
with the clutch spring compressor and  
remove the 28mm drive plate nut.

Remove the driven face spring.

Lock Nut Wrench, 28mm



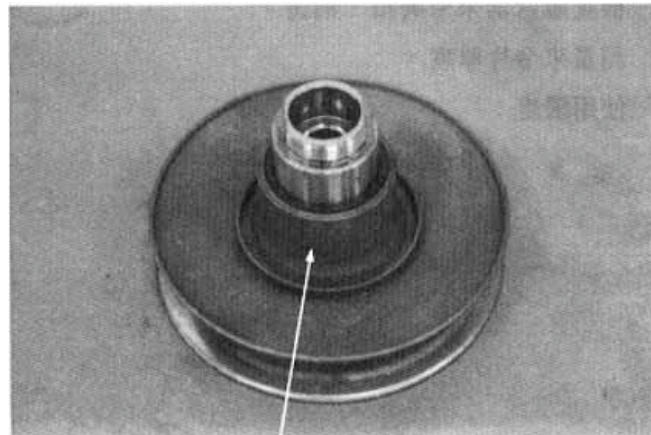
Clutch Spring Compressor



## 7. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

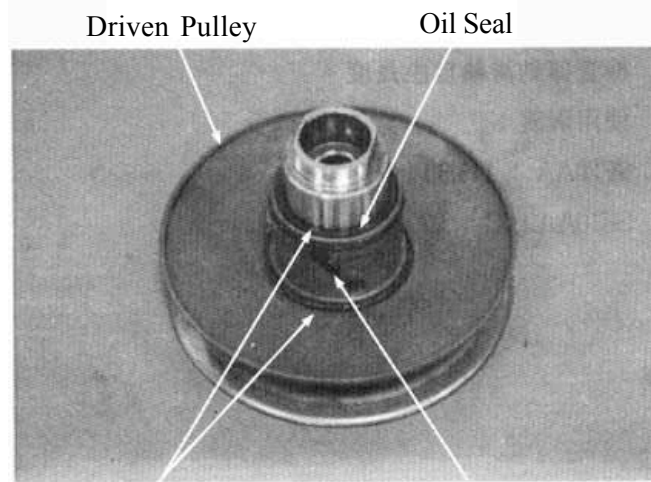
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Remove the seal collar.



Seal Collar

Pull out the guide roller pins from the driven pulley and then remove the O-rings and oil seal from the driven pulley.



O-rings

Guide Roller Pin

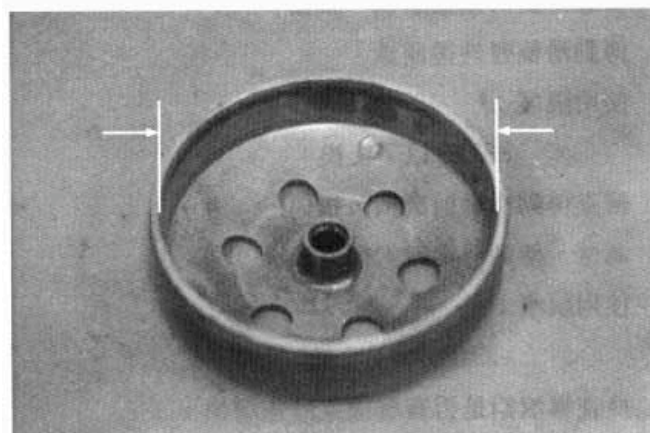
### CLUTCH/DRIVEN PULLEY INSPECTION

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

#### Service Limit:

SH10BA: 107.5mm replace if below

SH10AA: 107.5mm replace if below

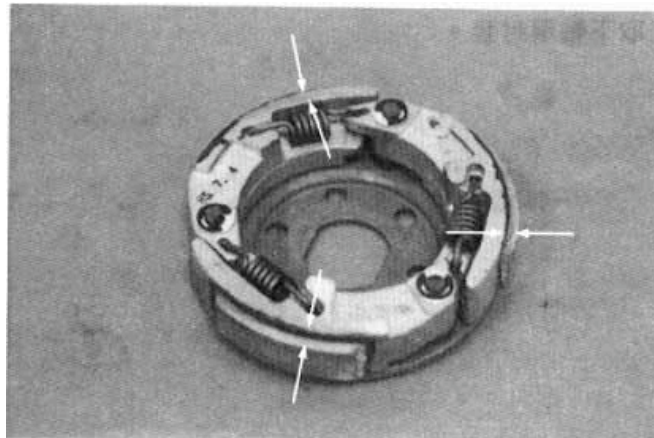


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Check the clutch shoes for wear or damage.  
Measure the clutch lining thickness.

**Service Limit:** 2.0mm replace if below

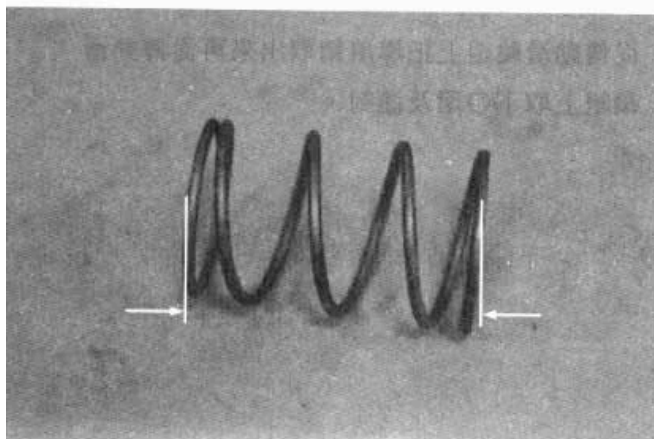


Measure the driven face spring free length.

**Service Limit:**

SH10BA: 82.6mm replace if below

SH10AA: 82.6mm replace if below



Check the driven face assembly for wear or damage.

Measure the driven face O.D.

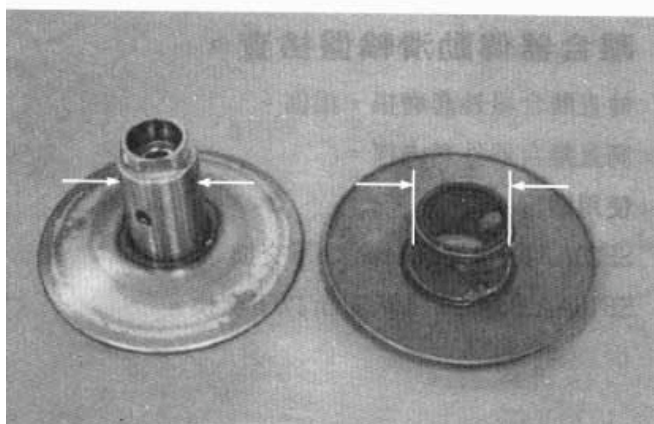
**Service Limit:** 33.94mm replace if below

Check the movable driven face for wear or damage.

Measure the movable driven face I.D.

**Service Limit:** 34.06mm replace if below

Check the guide roller pins for stepped wear.



## 7. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

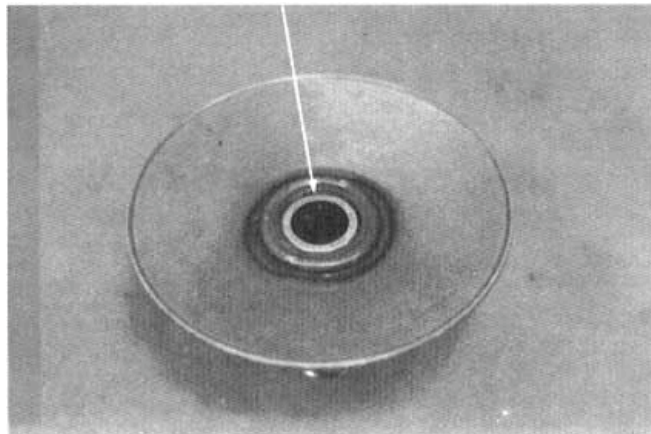
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### DRIVEN PULLEY FACE BEARING REPLACEMENT

Check the needle bearings in the driven face and replace them if they have excessive play, damage or abnormal noise.

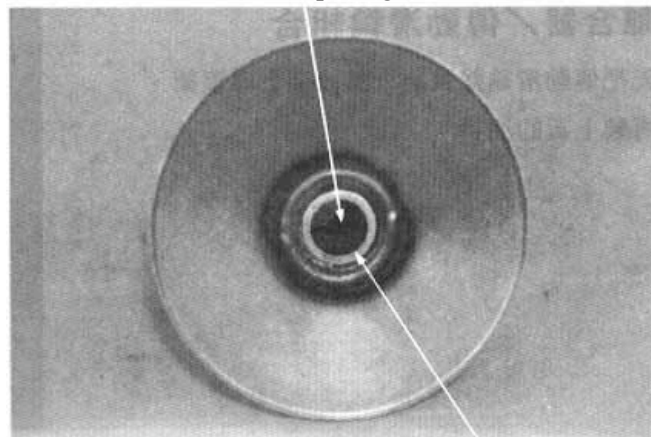
Drive the inner bearing out of the driven pulley face.

Inner Bearing



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

Snap Ring



Outer Bearing

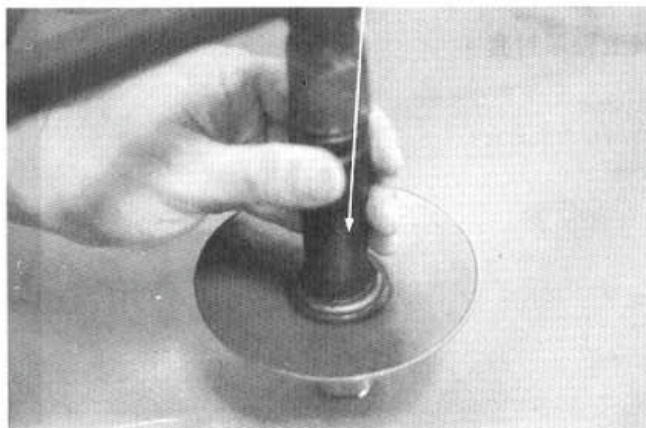
Drive a new outer bearing into the driven face with the sealed end facing up. Seat the snap ring in its groove.

\*

Pack all bearing cavities with  
5.0\_ 5.6g grease.

Specified grease: 230°C Heat-resistant  
grease

Bearing Outer Driver, 37x40mm

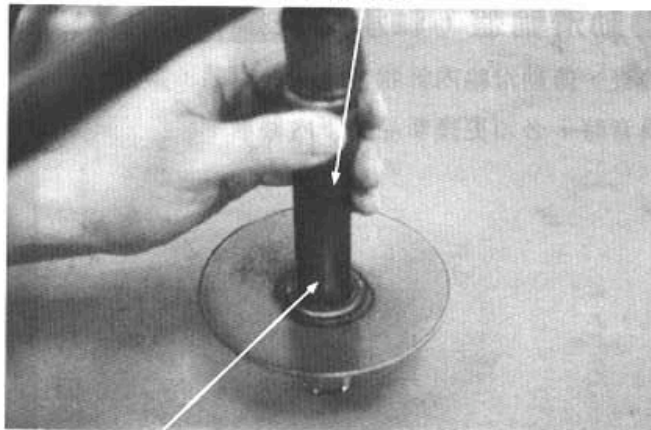


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Drive in a new needle bearing into the driven face with the mark facing up.

Bearing Driver Pilot



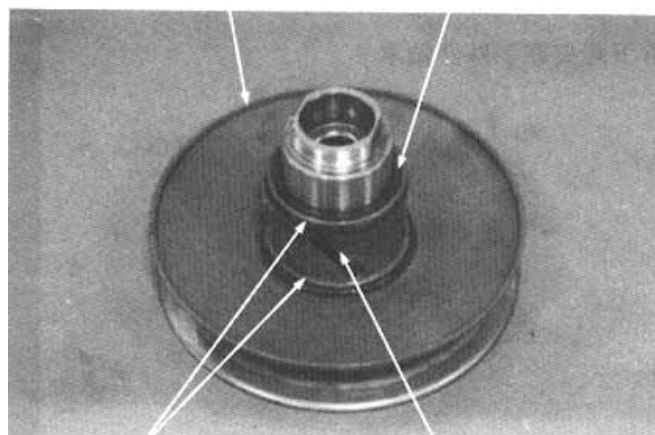
Outer Driver, 24x26mm

### CLUTCH/DRIVEN PULLEY ASSEMBLY

First install the movable driven face onto the driven face. Then, install the guide roller pins, O-rings and a new oil seal.

Driven Pulley

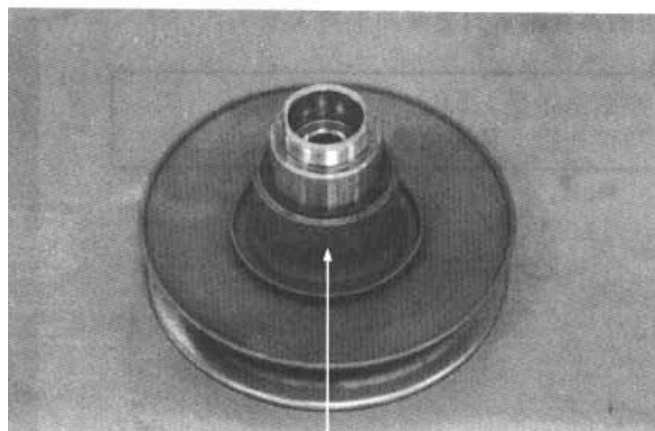
Oil Seal



O-rings

Guide Roller Pin

Install the seal collar.



Seal Collar

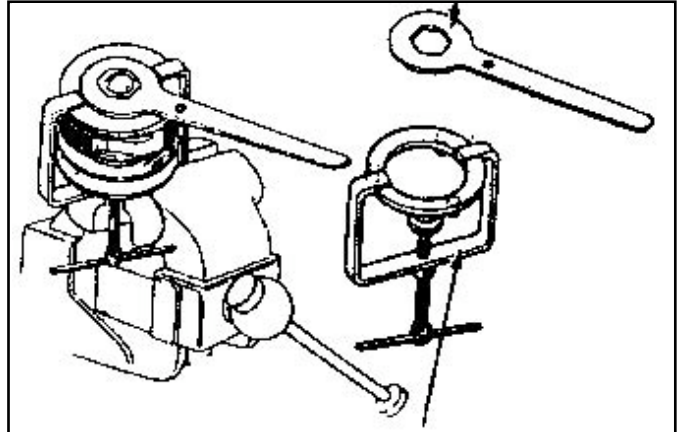


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Set the driven pulley, driven face spring and clutch assembly onto the clutch spring compressor. Compress the tool and install the 28mm drive plate nut. Tighten the 28mm nut to the specified torque.

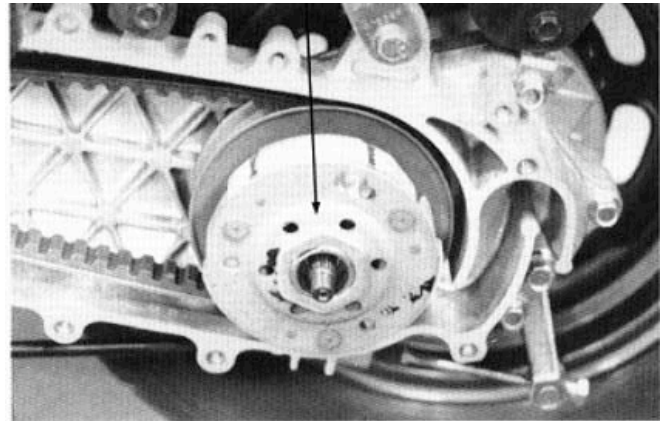
**Torque:** 5.0\_ 6.0kg-m



### CLUTCH/DRIVEN PULLEY INSTALLATION

Install the drive belt on the clutch/driven pulley and then install the clutch/driven pulley onto the drive shaft.

Clutch/Driven Pulley

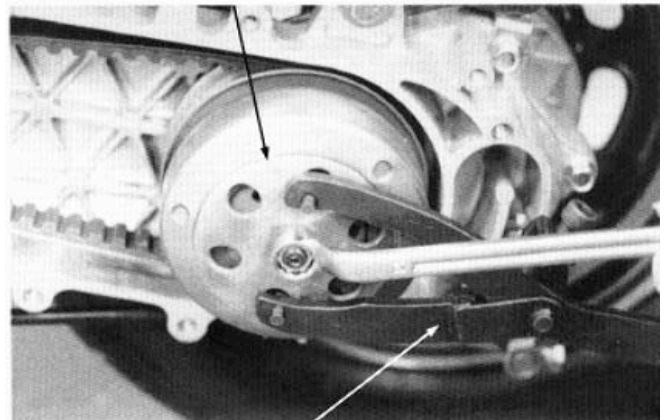


Install the clutch outer.  
Hold the clutch outer with the universal holder.  
Install and tighten the 10mm clutch outer nut.

**Torque:** 3.5\_ 4.5kg-m

Install the left crankcase cover. (⇒7-6)

Clutch Outer



Universal Holder