

DRIVE AND DRIVEN PULLEY

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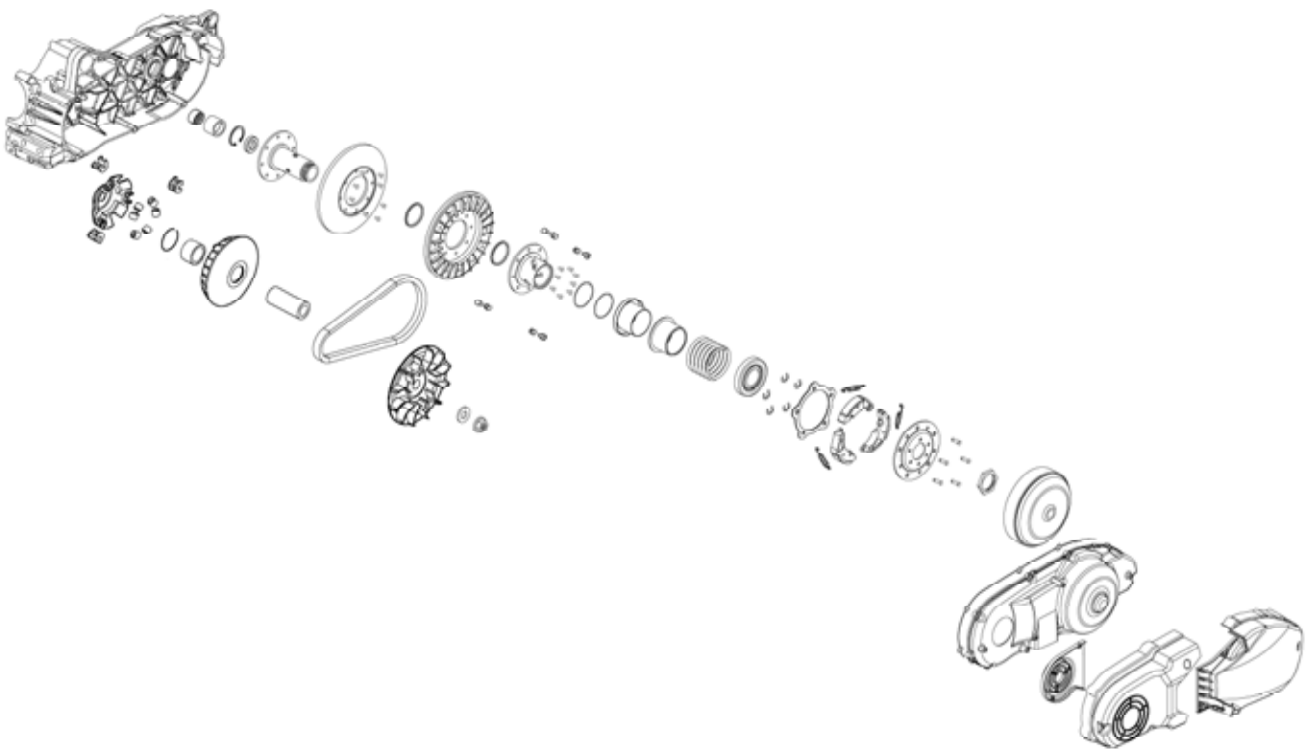
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SCHEMATIC DRAWING



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.
- Do not apply grease to the movable drive face and weight rollers.

SPECIFICATIONS

Unit: mm (in)

Item	Standard	Service Limit
Movable driven face bushing I.D.	48 (1.89)~48.025 (1.891)	48.06 (1.892)
Driven face collar O.D.	47.965 (1.888)~47.985 (1.889)	47.94 (1.887)
Drive belt width	28.9 (1.156)	27.9 (1.116)
Clutch lining thickness	4 (0.16)	1 (0.04)
Clutch outer I.D.	160 (6.3)~160.2 (6.31)	160.5 (6.32)
Drive pulley collar O.D.	28.96 (1.158)~28.974 (1.159)	28.9 (1.156)
Weight roller O.D.	29.98 (1.1992)~30.08 (1.203)	29.5 (1.18)

TORQUE VALUES

Drive face nut	135 N•m (13.5 kgf•m, 97 lbf•ft)
Clutch outer nut	80 N•m (8 kgf•m, 58 lbf•ft)
Clutch drive plate nut	78 N•m (7.8 kgf•m, 56 lbf•ft)

SPECIAL TOOLS

Universal holder	E017
Clutch spring compressor	E053
Oil seal & bearing install	E014

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
- Faulty driven face

Engine stalls or motorcycle creeps

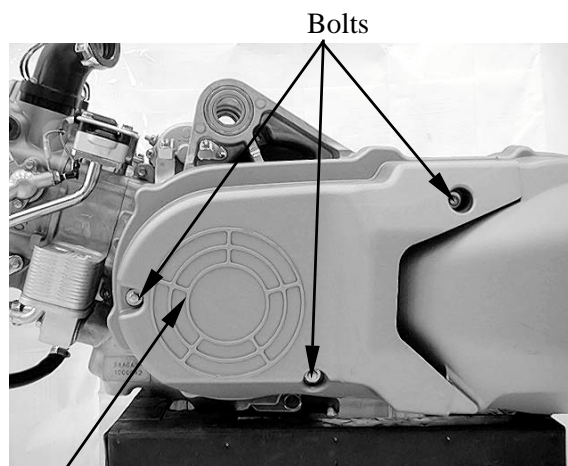
- Broken clutch weight spring

LEFT CRANKCASE COVER

REMOVAL

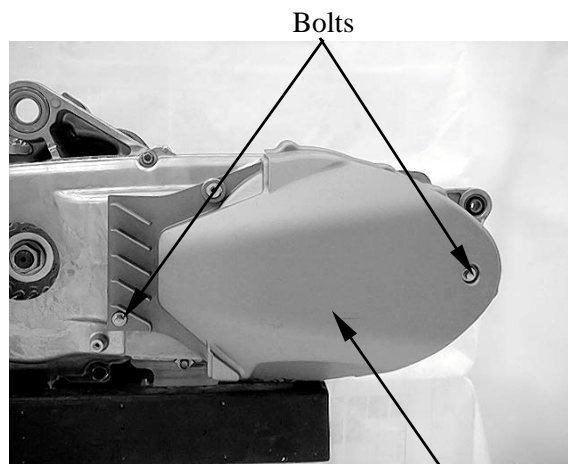
Remove the left center body cover (page 2-5).

Remove the three bolts and the left front cover.



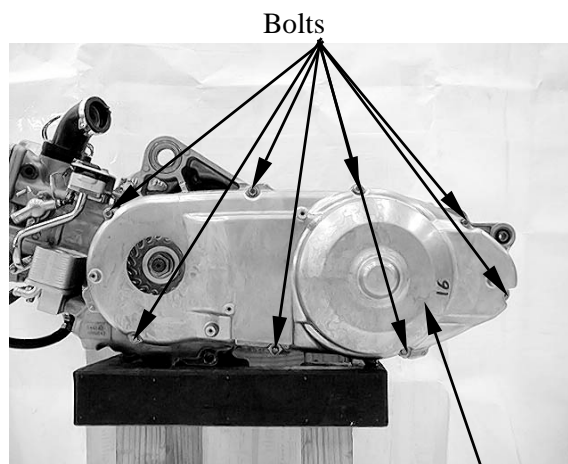
Left Front Cover

Remove the two bolts and left rear cover



Left Rear Cover

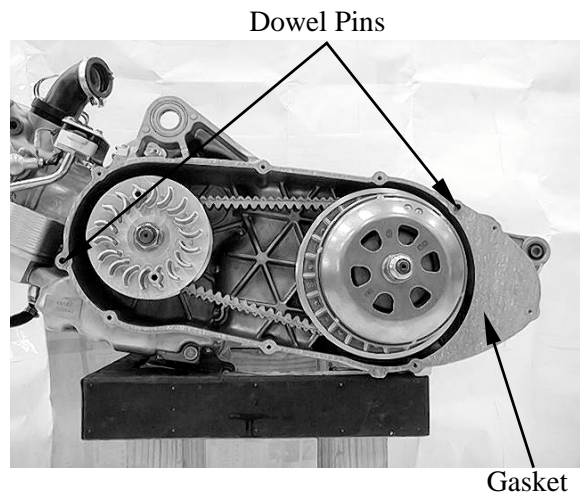
Remove the eight bolts and left crankcase cover.



Crankcase

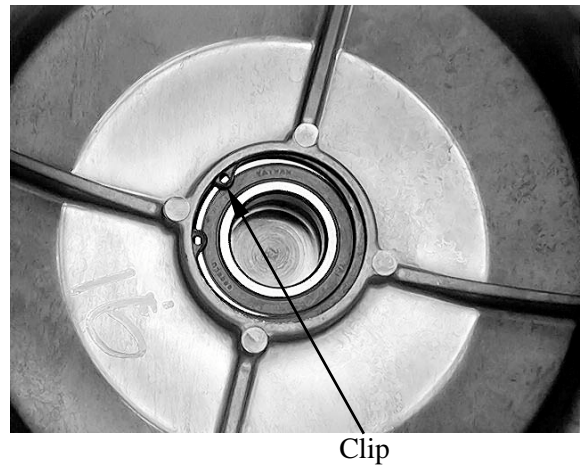
10. DRIVE AND DRIVEN PULLEY

Remove the dowel pins and gasket.

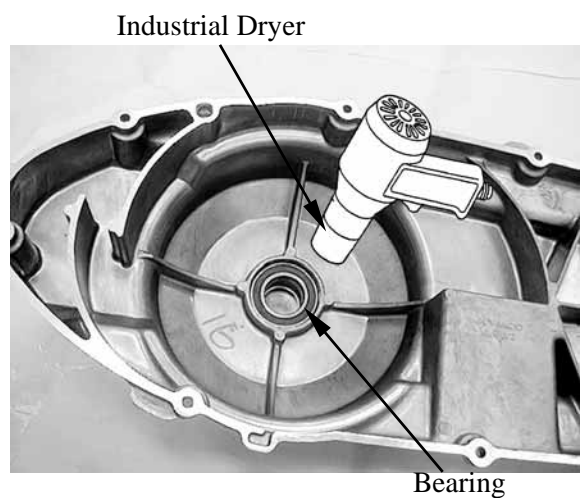


DRIVESHAFT BEARING REPLACEMENT

Remove the snap ring.



Heat the left crankcase cover around the driveshaft bearing with industrial dryer.
Remove the driveshaft bearing from the left crankcase cover.



10. DRIVE AND DRIVEN PULLEY

Install the new driveshaft bearing into the left crankcase cover using a special tool.

Special tool:

Oil seal & bearing install **E014**



Bearing Install

INSTALLATION

Installation is in the reverse order of removal.

- * Clean the gasket on the left crankcase before installation.

DRIVE PULLEY REMOVAL

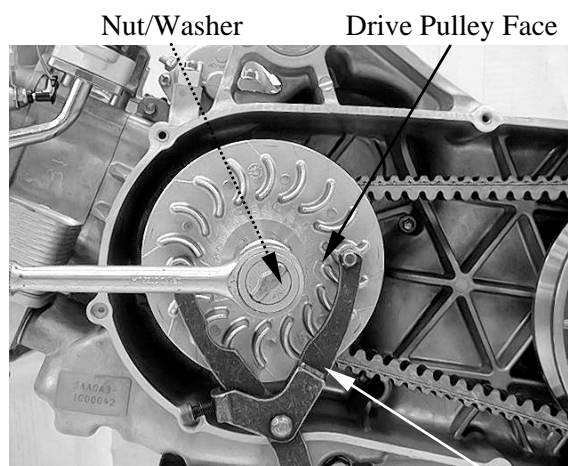
Remove the left crankcase cover (page 10-3).

Hold the drive pulley face with the special tool and loosen the drive pulley face nut.

Special tool:

Universal holder **E017**

Remove the nut, washer and drive pulley face.



Universal Holder

10. DRIVE AND DRIVEN PULLEY

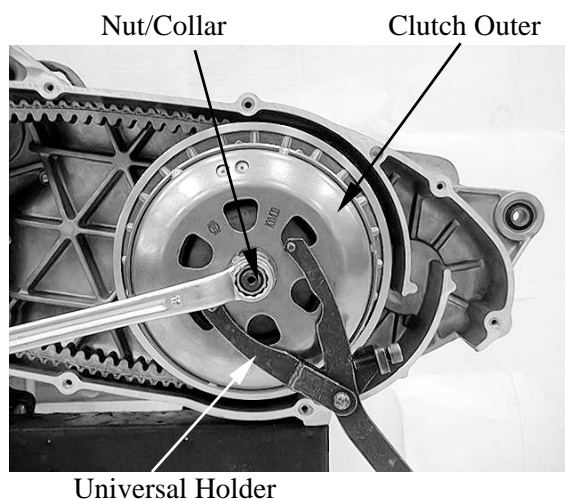
Hold the clutch outer with the special tool as shown.

Special tool:

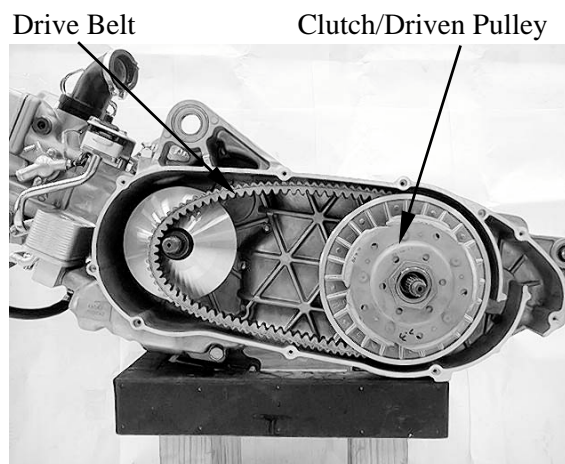
Universal holder

E017

Remove the nut, collar and clutch outer.



Remove the clutch/driven pulley assembly and drive belt.

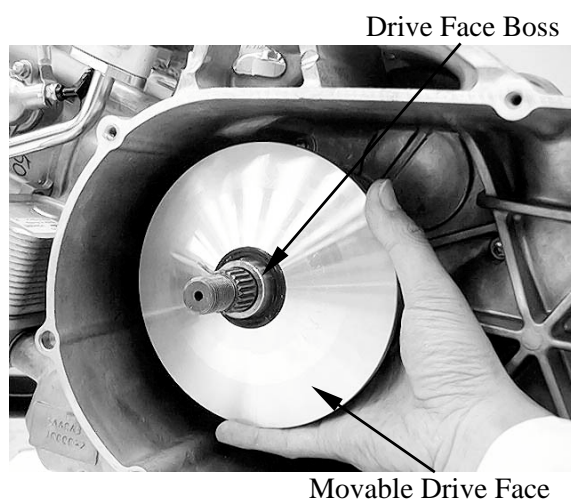


Remove the washer.

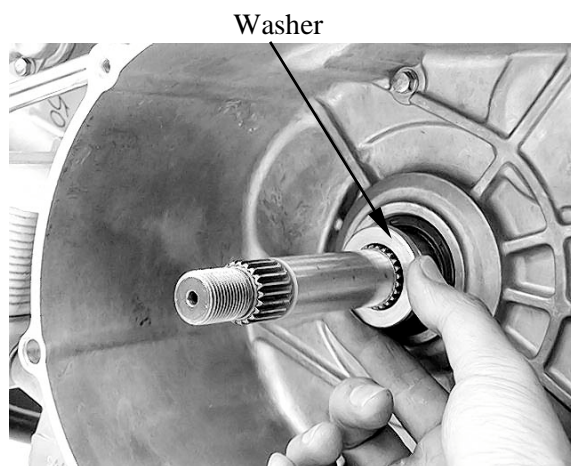


10. DRIVE AND DRIVEN PULLEY

Remove the movable drive face assembly while holding the back of the face (ramp plate).



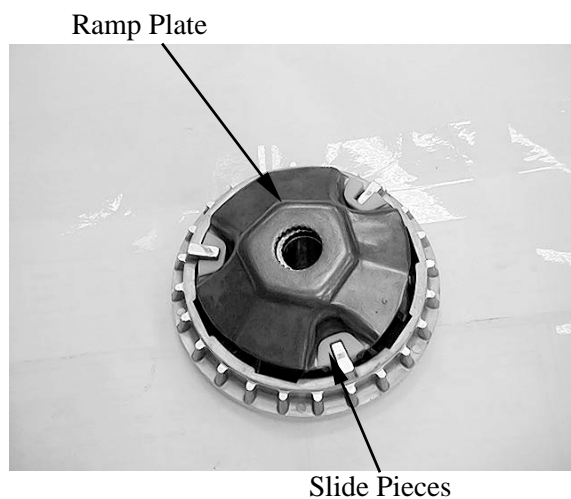
Remove the washer.



DISASSEMBLY

Drive pulley

Remove the ramp plate and slide pieces.



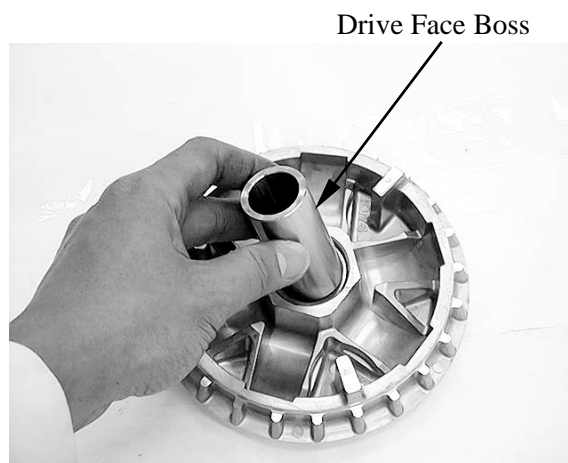
10. DRIVE AND DRIVEN PULLEY

Remove the weight rollers.



Weight Rollers

Remove the drive face boss from the movable drive face.



INSPECTION

Movable Drive Face

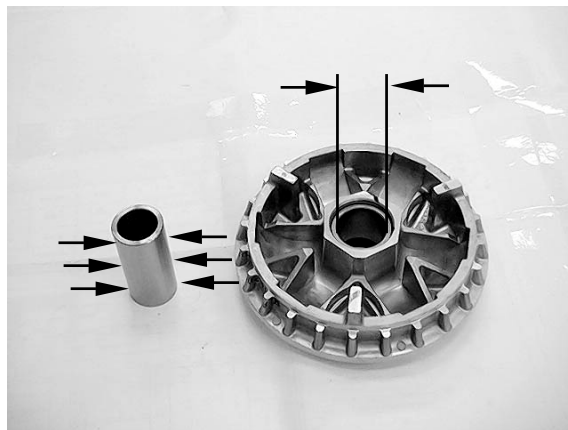
Check the drive face boss for wear or damage.

Measure the boss O.D..

Service limit: 28.9 mm (1.156 in)

Measure the face bushing I.D..

Service limit: 29.1 mm (1.164 in)



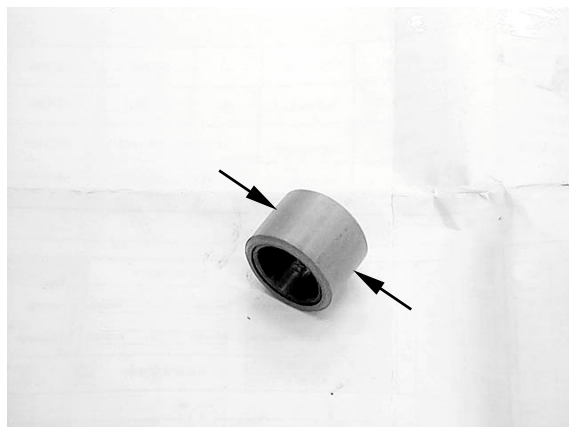
Slide Pieces

10. DRIVE AND DRIVEN PULLEY

Weight Roller

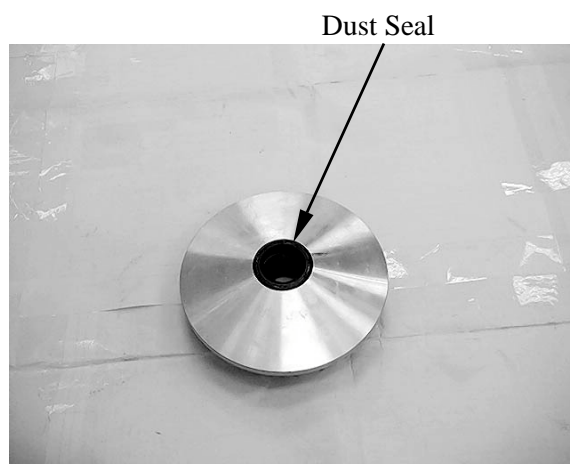
Check each roller for wear or damage.
Measure the weight roller O.D..

Service limit: 29.5 mm (1.18 in)



Movable Drive Face

Check the dust seal for wear or damage.



ASSEMBLY

Clean any oil and grease from the pulley faces and weight rollers.

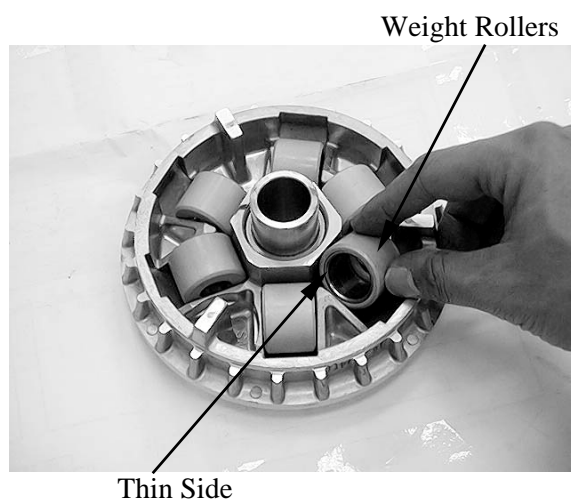
Install the drive face boss into the movable drive face.



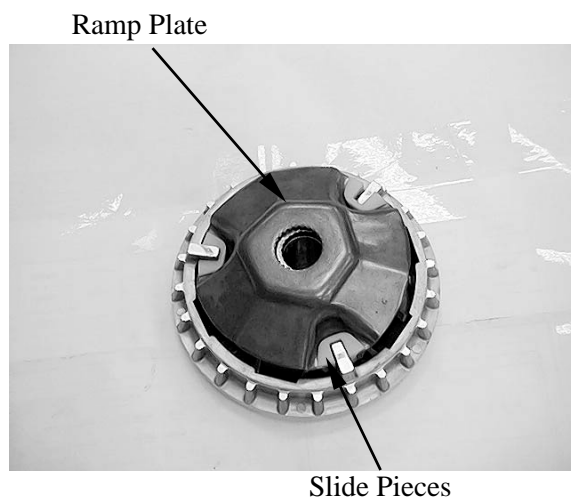
10. DRIVE AND DRIVEN PULLEY

Install the weight rollers to the movable drive face.

- * The direction of all weight rolls is the same. The thin side is towards to clockwise.



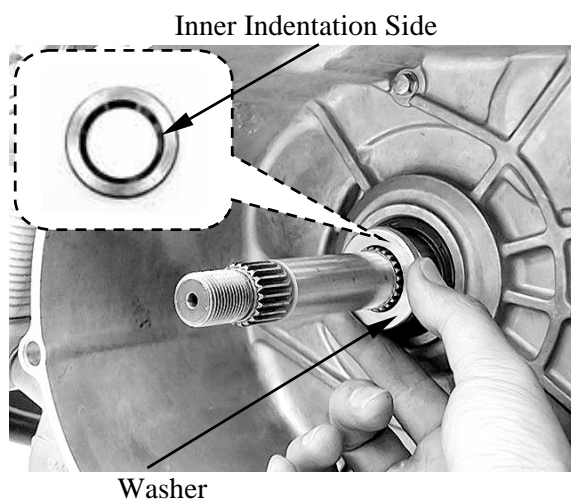
Install the slide pieces to ramp plate.
Install the ramp plate to the movable drive face.



INSTALLATION

Install the washer.

- * The inner indentation side on the washer faces the left crankcase.

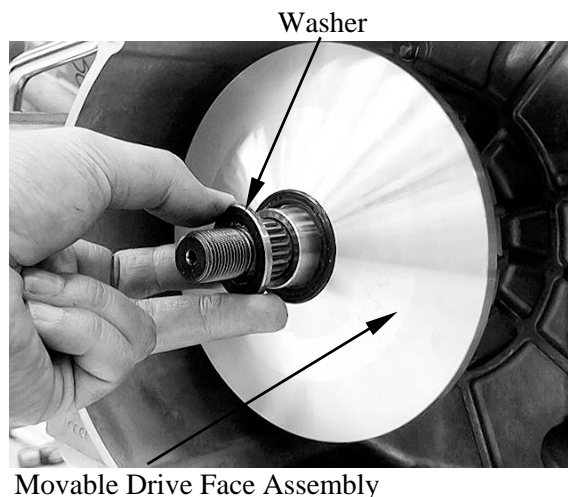


10. DRIVE AND DRIVEN PULLEY

Clean any oil and grease from the pulley faces and the drive belt.

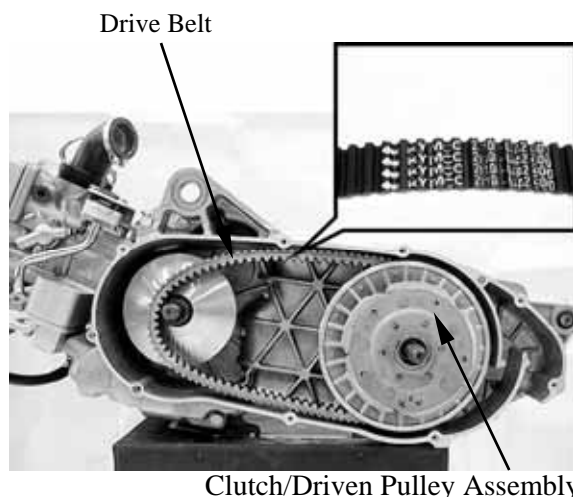
Install the movable drive face assembly onto the crankshaft while holding the ramp plate.

Install the washer.



Install the drive belt and clutch/driven pulley assembly.

* Install the drive belt with the arrow mark facing up and towards to clockwise.

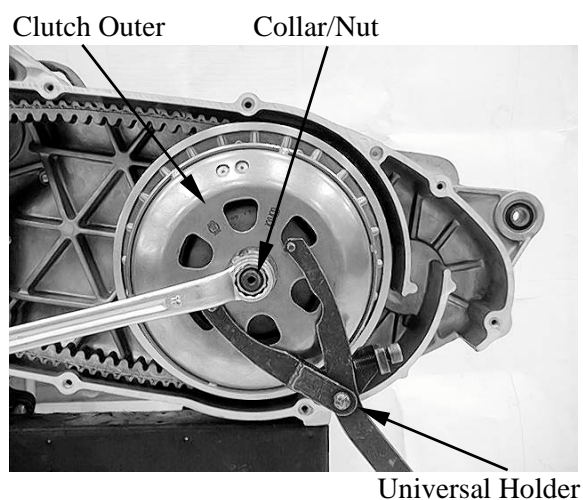


Hold the clutch outer with the special tool as shown.

Special tool:
Universal holder **E017**

Install the collar and nut.
Tighten the nut to the specified torque.

Torque: 80 N•m (8 kgf•m, 58 lbf•ft)



10. DRIVE AND DRIVEN PULLEY

Install the drive pulley face and washer.

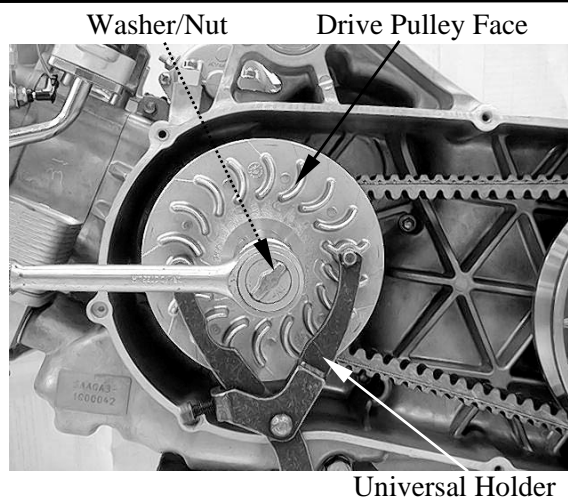
Apply oil to the drive pulley face nut threads and seating surface and install the nut.

Hold the drive face with the special tool and tighten the bolt to the specified torque.

Special tool:

Universal holder E017

Torque: 135 N•m (13.5 kgf•m, 97 lbf•ft)



CLUTCH/DRIVEN PULLEY REMOVAL

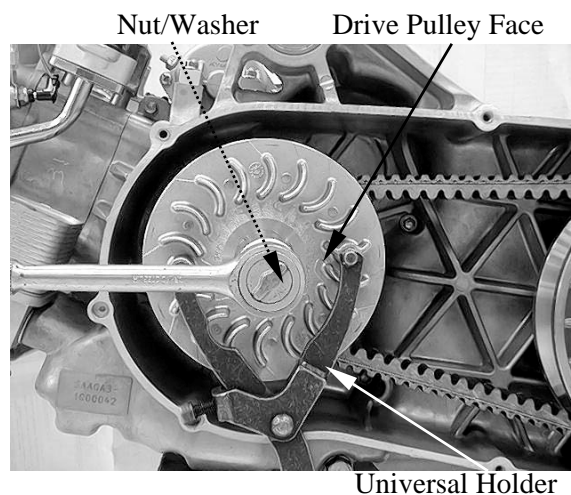
Remove the left crankcase cover (page 10-3).

Hold the drive pulley face with the special tool and loosen the drive pulley face nut.

Special tool:

Universal holder E017

Remove the nut, washer and drive pulley face.

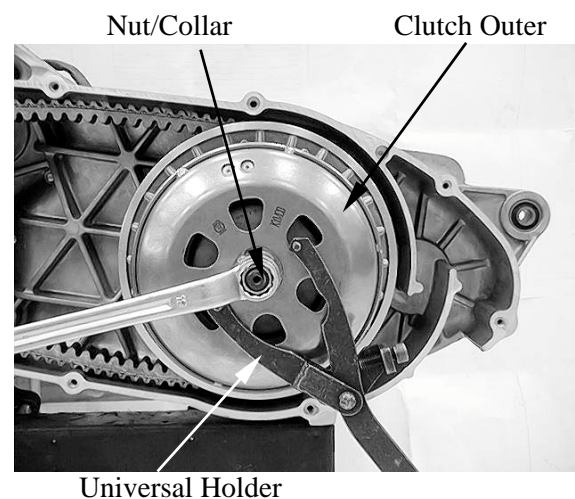


Hold the clutch outer with the special tool as shown.

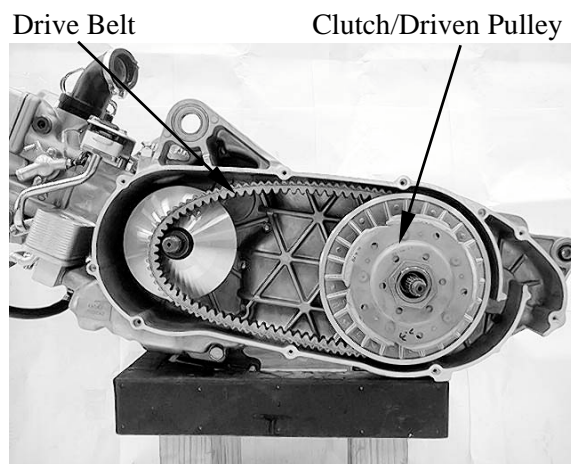
Special tool:

Universal holder E017

Remove the nut, collar and clutch outer.



Remove the clutch/driven pulley assembly and drive belt.



10. DRIVE AND DRIVEN PULLEY

DISASSEMBLY Clutch/Driven Pulley

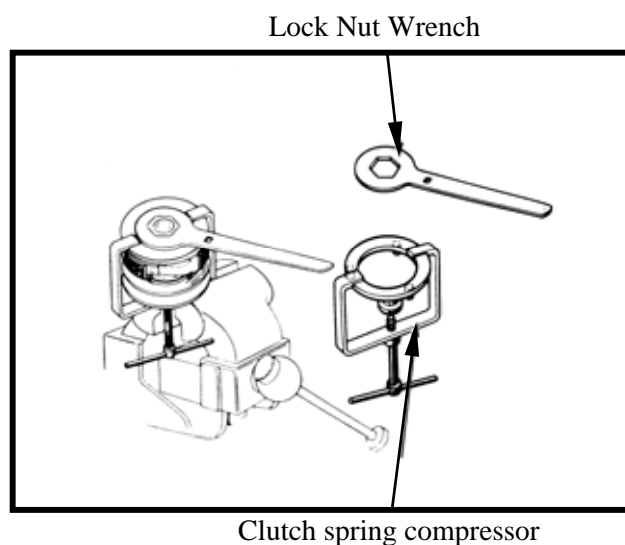
Hold the clutch/driven pulley assembly with the clutch spring compressor.

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

Special tool:

Clutch Spring Compressor E053

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

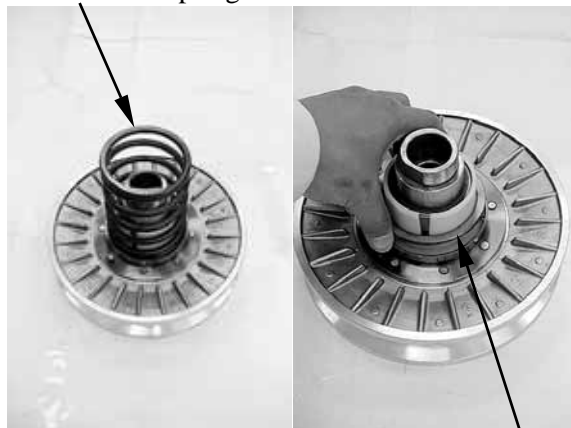


Remove the spring compressor and disassemble the following:

- Clutch assembly
- Driven face spring
- Driven pulley

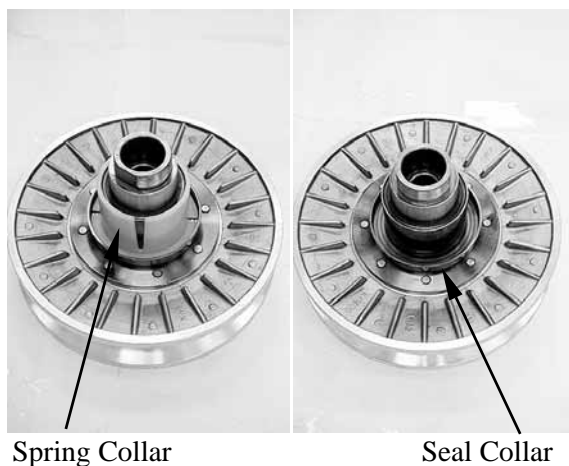
Remove the washer

Driven Face Spring



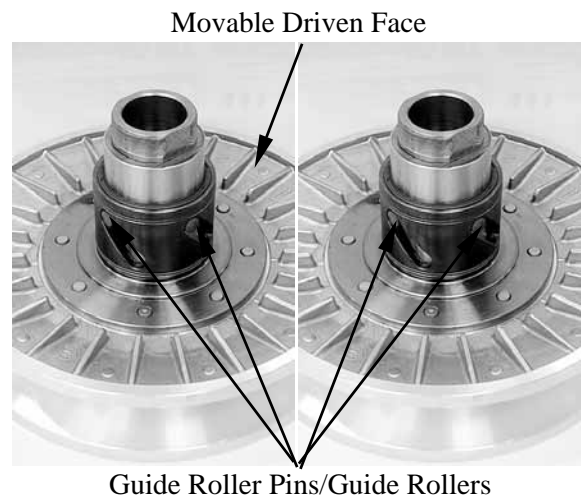
Remove the spring collar.

Remove the seal collar.

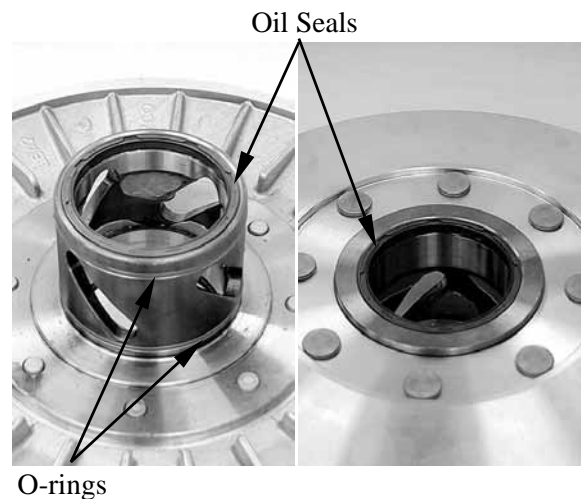


10. DRIVE AND DRIVEN PULLEY

Remove the guide roller pins, guide rollers and the movable driven face.



Remove the O-rings and oil seals from the movable driven face.



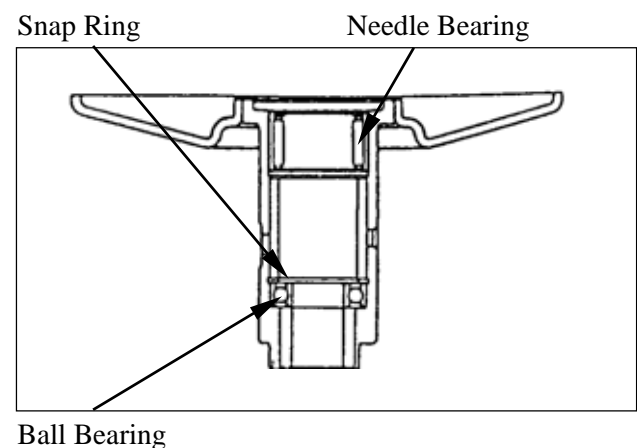
Driven Face Bearing Replacement

Remove the driven face needle bearing.

Remove the snap ring, then remove the ball bearing.

Apply grease to new ball bearing.

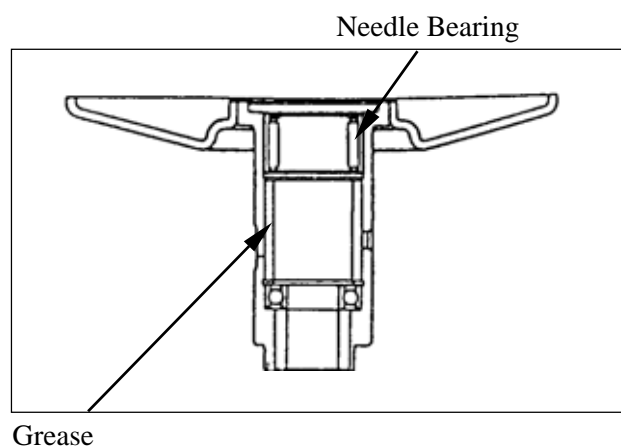
Install the ball bearing into the driven face.
Install the snap ring to groove in the driven face securely.



10. DRIVE AND DRIVEN PULLEY

Filling 25 g of grease to the driven face inner surface.

Apply grease to new needle bearing.
Press the needle bearing into the driven.

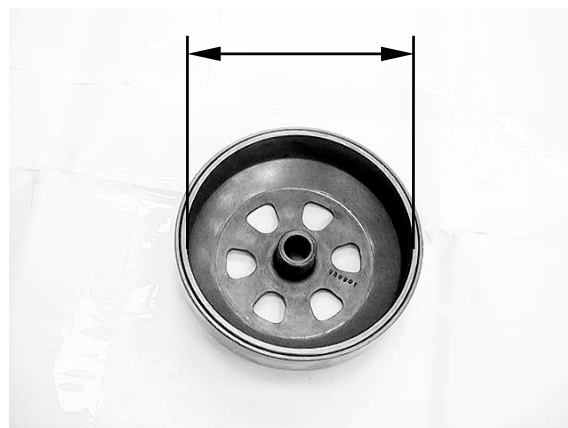


INSPECTION

Clutch Outer

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

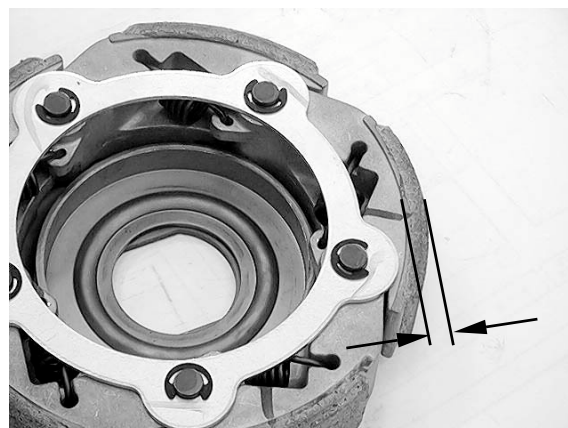
Service limit: 160.5 mm (6.32 in)



Clutch Shoe Lining

Check the clutch shoe for wear or damage.
Measure the thickness of each shoe.

Service limit: 1 mm (0.04 in)

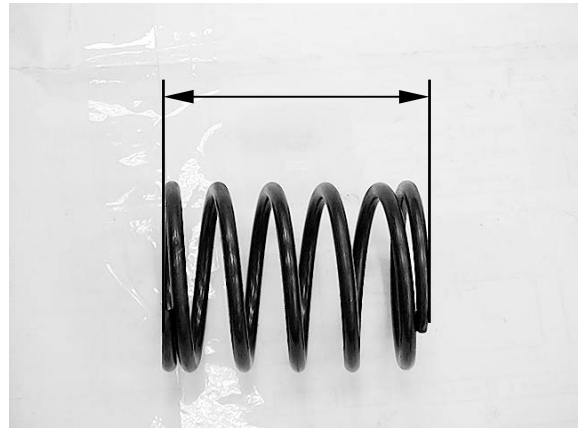


10. DRIVE AND DRIVEN PULLEY

Driven Face Spring

Measure the driven face spring free length.

Service limit: 100.7 mm (4.028 in)



Driven Face

Check the driven face for scratches, scoring or damage.

Measure the driven face boss O.D..

Service limit: 47.94 mm (1.887 in)



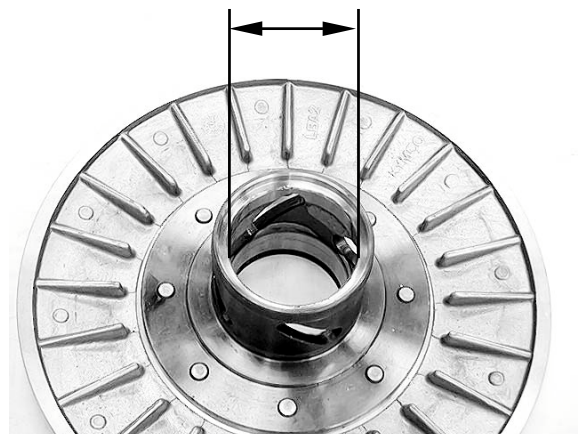
Movable Driven Face

Check the movable driven face for scratches, scoring or damage.

Check the guide grooves for stepped wear or damage.

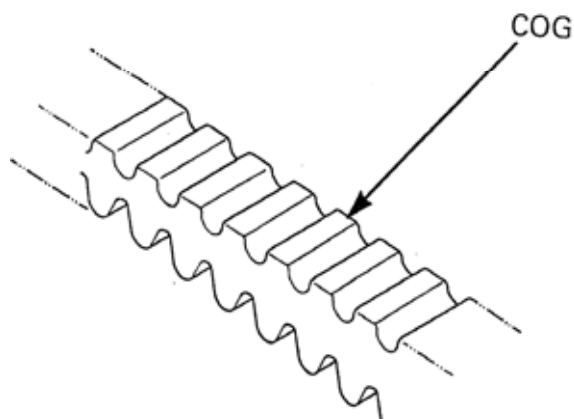
Measure the movable driven face I.D..

Service limit: 48.06 mm (1.892 in)



Drive Belt

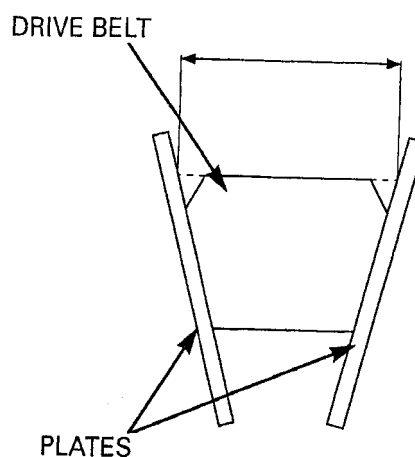
Check the drive belt for cracks, separation or abnormal or excessive wear.



Attach the suitable plates as shown.
Measure the drive belt width.

Service limit: 27.9 mm (1.116 in)

Remove the clutch/driven pulley, then replace the drive belt if necessary.

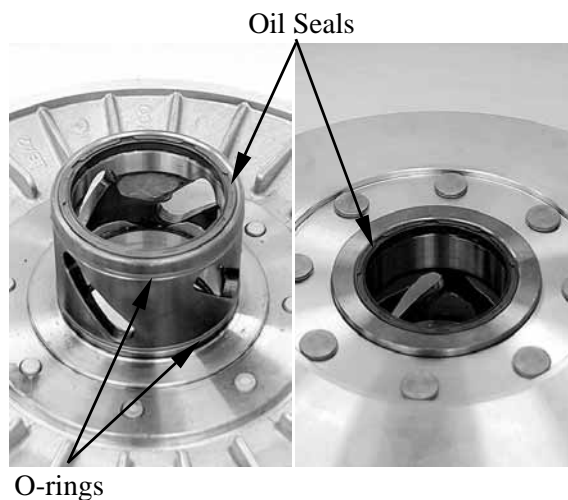


ASSEMBLY

Clean any oil from the drive belt sliding surfaces on the driven face.

Apply grease to new oil seal lips and install into the movable driven face.

Coat new O-rings with grease and install them into the movable driven face grooves.

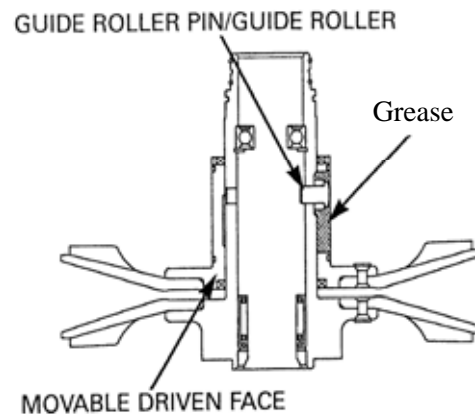


10. DRIVE AND DRIVEN PULLEY

Install the movable driven face onto the driven face.

Install the guide rollers and guide roller pins.

Filling 8 g of grease to each guide groove.

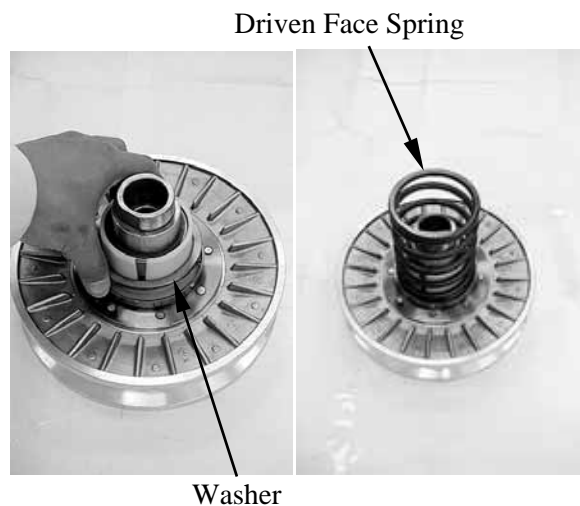


Install the seal collar.

Install spring collar.

Install washer.

Install driven face spring.



Install the drive belt into the driven pulley.
Squeeze and hold the drive belt your hand.

Set the clutch spring compressor over the clutch/driven pulley assembly and hold the spring compressor in a vice.

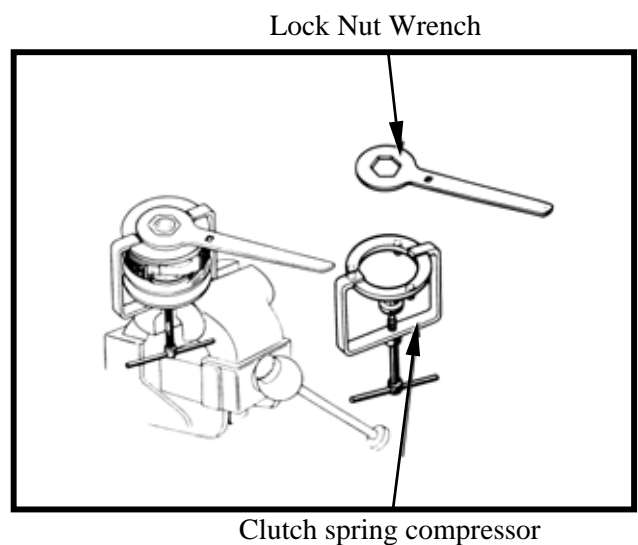
Special tool:

Clutch Spring Compressor

E053

Compress the driven face spring.

Install and tighten the clutch drive plate nut to the specified torque.

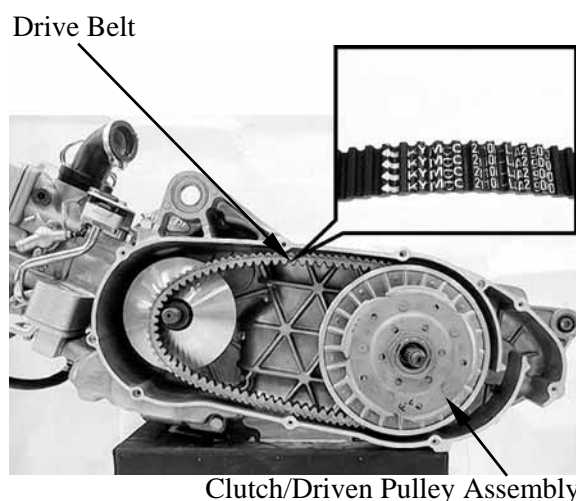


Torque: 78 N•m (7.8 kgf•m, 56 lbf•ft)

10. DRIVE AND DRIVEN PULLEY

- * Install the drive belt with the arrow mark facing up and towards to clockwise.

Install the drive belt and clutch/driven pulley assembly.



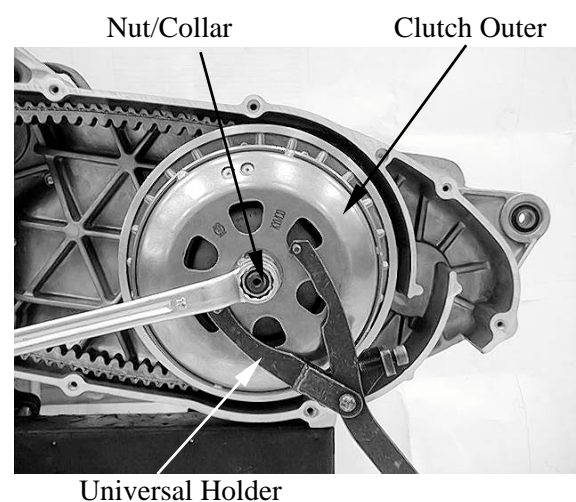
Hold the clutch outer with the special tool as shown.

Special tool:

Universal holder E017

Install the collar and nut.
Tighten the nut to the specified torque.

Torque: 80 N•m (8 kgf•m, 58 lbf•ft)



Install the drive pulley face and washer.
Apply oil to the drive pulley face nut threads and seating surface and install the nut.

Hold the drive face with the special tool and tighten the bolt to the specified torque.

Special tool:

Universal holder E017

Torque: 135 N•m (13.5 kgf•m, 97 lbf•ft)

