10. DRIVE AND DRIVEN PULLEY

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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 (XCITING 500)

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movable driven face bushing I.D.</td>
<td>48 (1.92) ~ 48.025 (1.921)</td>
<td>48.06 (1.9224)</td>
</tr>
<tr>
<td>Driven face collar O.D.</td>
<td>47.965 (1.9186) ~ 47.985 (1.9194)</td>
<td>47.94 (1.9176)</td>
</tr>
<tr>
<td>Drive belt width</td>
<td>28.9 (1.156)</td>
<td>27.9 (1.116)</td>
</tr>
<tr>
<td>Clutch lining thickness</td>
<td>4 (0.16)</td>
<td>1 (0.04)</td>
</tr>
<tr>
<td>Clutch outer I.D.</td>
<td>160 (6.3) ~ 160.2 (6.31)</td>
<td>160.5 (6.32)</td>
</tr>
<tr>
<td>Drive pulley collar O.D.</td>
<td>28.96 (1.158) ~ 28.974 (1.159)</td>
<td>28.9 (1.156)</td>
</tr>
<tr>
<td>Weight roller O.D.</td>
<td>29.98 (1.1992) ~ 30.08 (1.203)</td>
<td>29.5 (1.18)</td>
</tr>
</tbody>
</table>

### SPECIFICATIONS (XCITING 250)

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movable driven face bushing I.D.</td>
<td>40 (1.6) ~ 40.025 (1.601)</td>
<td>40.06 (1.6024)</td>
</tr>
<tr>
<td>Driven face collar O.D.</td>
<td>39.965 (1.5986) ~ 39.985 (1.5994)</td>
<td>39.94 (1.5976)</td>
</tr>
<tr>
<td>Drive belt width</td>
<td>23.6 (0.944) ~ 24.4 (0.976)</td>
<td>22 (0.88)</td>
</tr>
<tr>
<td>Clutch lining thickness</td>
<td>4 (0.16)</td>
<td>1 (0.04)</td>
</tr>
<tr>
<td>Clutch outer I.D.</td>
<td>153 (6.12) ~ 153.2 (6.128)</td>
<td>153.5 (6.14)</td>
</tr>
<tr>
<td>Drive pulley collar O.D.</td>
<td>26.96 (1.0784) ~ 26.974 (1.07896)</td>
<td>26.9 (1.076)</td>
</tr>
<tr>
<td>Weight roller O.D.</td>
<td>22.92 (0.9168) ~ 23.08 (0.9232)</td>
<td>22 (0.88)</td>
</tr>
</tbody>
</table>
10. DRIVE AND DRIVEN PULLEY

TORQUE VALUES (XCITING 500)
- Drive face nut 135 N•m (13.5 kgf•m, 97 lbf•ft)  
  Apply oil to the threads
- 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)

TORQUE VALUES (XCITING 250)
- Drive face nut 93 N•m (9.3 kgf•m, 67 lbf•ft)  
  Apply oil to the threads
- Clutch outer nut 54 N•m (5.4 kgf•m, 39 lbf•ft)
- Clutch drive plate nut 54 N•m (5.4 kgf•m, 39 lbf•ft)

SPECIAL TOOLS (XCITING 500)
- Universal holder E017
- Clutch spring compressor E053
- Oil seal & bearing install E014

SPECIAL TOOLS (XCITING 250)
- Universal holder E017
- Clutch spring compressor E034
- 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 (XCITING 500)
Remove the left center body cover (page 2-5).

Remove the three bolts and the left front cover.

Remove the two bolts and left rear cover.

Remove the eight bolts and left crankcase cover.
Remove the dowel pins and gasket.

REMOVAL (XCITING 250)
Remove the left crankcase cover bolts and left crankcase covers.

Remove the seal rubber and dowel pins.
10. DRIVE AND DRIVEN PULLEY

DRIVESHAFT BEARING REPLACEMENT (XCITING 500)
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.

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

Special tool:
Oil seal & bearing install E014

INSTALLATION
Installation is in the reverse order of removal.

* Clean the gasket on the left crankcase before installation.
10. DRIVE AND DRIVEN PULLEY

**DRIVE PULLEY REMOVAL**

Remove the left crankcase cover (XCITING 500: page 10-4, XCITING 250: 10-5).

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 (XCITING 500) and clutch outer.

Remove the clutch/driven pulley assembly and drive belt.
10. DRIVE AND DRIVEN PULLEY

Remove the washer (XCITING 500).

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

Remove the washer (XCITING 500).
DISASSEMBLY
Drive pulley
Remove the ramp plate and slide pieces.

Remove the weight rollers.

Remove the drive face boss from the movable drive face.
10. DRIVE AND DRIVEN PULLEY

INSPECTION

Movable Drive Face
Check the drive face boss for wear or damage.
Measure the boss O.D..

Service limit:
- XCITING 500: 28.9 mm (1.156 in)
- XCITING 250: 26.9 mm (1.076 in)

Measure the face bushing I.D..

Service limit:
- XCITING 500: 29.1 mm (1.164 in)
- XCITING 250: 27.13 mm (1.058 in)

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

Service limit:
- XCITING 500: 29.5 mm (1.18 in)
- XCITING 250: 22 mm (0.888 in)

Movable Drive Face
Check the dust seal (XCITING 500) 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.

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 (XCITING 500).

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

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 (XCITING 500).

Install the drive belt and clutch/driven pulley assembly.

* Install the drive belt with the arrow mark facing the direction of travel.
10. DRIVE AND DRIVEN PULLEY

Hold the clutch outer with the special tool as shown.

**Special tool:**
Universal holder E017

Install the collar (XCITING 500) and nut.
Tighten the nut to the specified torque.

**Torque:**
XCITING 500: 80 N•m (8 kgf•m, 58 lbf•ft)
XCITING 250:
54 N•m (5.4 kgf•m, 36 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:**
XCITING 500:
135 N•m (13.5 kgf•m, 97 lbf•ft)
XCITING 250:
93 N•m (9.3 kgf•m, 67 lbf•ft)
CLUTCH/DRIVEN PULLEY REMOVAL
Remove the left crankcase cover (XCITING 500: page 10-4, XCITING 250: 10-5).

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 (XCITING 500) and clutch outer.

Remove the clutch/driven pulley assembly and drive belt.
**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:**

XCITING 500:
Clutch Spring Compressor E053

XCITING 250:
Clutch Spring Compressor E034

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 (XCITING 500).

Remove the spring collar (XCITING 500).

Remove the seal collar.
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.
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:**
- XCITING 500: 160.5 mm (6.32 in)
- XCITING 250: 153.5 mm (6.14 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)
Driven Face Spring
Measure the driven face spring free length.

Service limit:
XCITING 500: 100.7 mm (4.028 in)
XCITING 250: 130.5 mm (5.22 in)

Driven Face
Check the driven face for scratches, scoring or damage.
Measure the driven face boss O.D..

Service limit:
XCITING 500: 47.94 mm (1.9176 in)
XCITING 250: 39.94 mm (1.5976 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:
XCITING 500: 48.06 mm (1.9224 in)
XCITING 250: 40.06 mm (1.6024 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:
XCITING 500: 27.9 mm (1.116 in)  
XCITING 250: 22 mm (0.88 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.
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 (XCITING 500).
Install washer (XCITING 500).
Install driven face spring.

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

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

Special tool:
XCITING 500:
  Clutch Spring Compressor E053
XCITING 500:
  Clutch Spring Compressor E034

Compress the driven face spring.
Install and tighten the clutch drive plate nut to the specified torque.

Torque:
XCITING 500:
  78 N•m (7.8 kgf•m, 56 lbf•ft)
XCITING 250:
  54 N•m (5.4 kgf•m, 39 lbf•ft)
10. DRIVE AND DRIVEN PULLEY

* Install the drive belt with the arrow mark facing the direction of travel.

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:
XCITING 500: 80 N·m (8 kgf·m, 58 lbf·ft) 
XCITING 250: 
54 N·m (5.4 kgf·m, 39 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: 
XCITING 500: 
135 N·m (13.5 kgf·m, 97 lbf·ft) 
XCITING 250: 
93 N·m (9.3 kgf·m, 67 lbf·ft)