8. Steering

This chapter covers the location and servicing of the steering components for the KYMCO XCIITING 400i models.

Handlebar.................................................8-2~8-10
Removal.................................................8-11~8-15
Installation..............................................8-16~8-21

TROUBLESHOOTING

Hard steering (heavy)
• Steeling stem top thread too tight
• Worn or damaged steering bearings
• Worn or damaged steering bearing races
• Bent steering stem
• Insufficient tire pressure
• Faulty front tire

Steers to one side or does not track straight
• Damaged or loose steering bearings
• Bent fork
• Bent front axle: wheel installed incorrectly
• Bent frame
• Faulty front tire
• Worn or damaged front wheel beatings
• Worn or damaged engine mounting bushings
Handlebar

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Removal

Bar Ends

Remove the bar ends with a 6 mm Allen.

Switch Housings and Throttle

Remove the wire and cable guide bolts with an 8 mm socket.
Remove the wire and cable guide from the back of the upper fork clamp.
Unplug the black connector for the left handlebar switches.

Unplug the green connectors for the right handlebar switches.

Remove the two right switch housing mounting screws with a #2 Phillips screwdriver.
Separate the switch housing. The right switch housing has wires on both sides so it cannot be completely opened.

Disconnect the throttle cables from the throttle tube.

Slide the throttle tube and right switch housing off of the handlebar.

Remove the two left switch housing mounting screws with a #2 Phillips screwdriver.
Separate the left switch housing from the handlebar.

**Handlebar**

Loosen the four handlebar bolts with a 12 mm socket.

Remove the handlebar holders and bolts.

Remove the handlebar.
Grips

If you plan to replace the grips you can slice them lengthwise with a razor blade and peel them off. To remove the grips without cutting them use a screwdriver to open a gap between the grip and the handlebar. Spray in contact cleaner to break up the grip cement. Use compressed air to expand the grip so it can be easily slid off the end of the handlebar. Note the relationship between the angle of the grip and the throttle tube so that the new grip can be installed with the correct angle.

NOTE: Always wear safety glasses when using compressed air and never point it directly at yourself or anyone else.

Before installing the grips to either the throttle tube or the handlebar, wipe down the area with a brake or parts cleaner that will dry without leaving a residue. When you are sure the area is dry apply grip cement to the bar or tube. Install the left grip at an angle of your preference. Install the throttle grip onto the tube with the same angle as the original grip.

Installation

Handlebar

Install the handlebar onto the holders. Fit the posts into the holes as shown.
Install the upper handlebar holders so that their punch marks face forward. Insert the handlebar holder bolts.

Tighten the handlebar bolts to specification with a 12 mm socket. Tighten the front bolts before the rear bolts.

<table>
<thead>
<tr>
<th>Item</th>
<th>Q'ty</th>
<th>Thread</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handlebar bolt</td>
<td>4</td>
<td>8</td>
<td>23 (2.3, 17)</td>
</tr>
</tbody>
</table>

**Switch Housings and Throttle**

Align the left switch housing and install it onto the handlebar. The post in the switch housing must fit into the corresponding hole in the handlebar. Fit the left side of the switch housing into the plastic ring as shown.
Insert the two housing screws and tighten them securely with a #2 Phillips screwdriver. Tighten the front screw before the rear.

Slide the right switch housing and throttle grip onto the right side of the handlebar.

Lubricate the ends of the throttle cables with grease and fit them into the throttle tube.

Install right switch housing. The post on the housing should fit into the hole in the bar.
Insert the two housing screws and tighten them securely with a #2 Phillips screwdriver. Tighten the front before the rear.

Route the throttle cables and handlebar switch wires down the back side of the upper fork clamp as shown. Install the wire and cable guide. Tighten the two cable guide bolts securely with an 8 mm socket.

Plug in the black connector for the left handlebar switches.
Plug in the green connectors for the right handlebar switches.

Bar Ends

Install the bar ends with a 6 mm Allen.
Steering Stem Removal

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Support the vehicle with a suitable stand or jack so that the front wheel is off the ground. Grip the bottom of the fork legs and turn the front end side-to-side. If the movement is rough the bearings should be greased or replaced. If the movement is too tight or loose the steering stem adjusting nut may need to be adjusted.

The KYMCO XCITING 400i uses ball bearings in the steering. Always replace the races at the same time as the bearings.

<table>
<thead>
<tr>
<th>Remove these components</th>
<th>Windshield</th>
<th>Windshield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Cover</td>
<td>Front Cover</td>
<td></td>
</tr>
<tr>
<td>Handlebar Covers</td>
<td>Handlebar Covers</td>
<td></td>
</tr>
<tr>
<td>Handlebar</td>
<td>Handlebar</td>
<td></td>
</tr>
<tr>
<td>Center Cover</td>
<td>Center Cover</td>
<td></td>
</tr>
<tr>
<td>Front Fork</td>
<td>Front Fork Removal and Installation</td>
<td></td>
</tr>
</tbody>
</table>

Remove the brake hose bracket on the left side of the lower fork clamp with an 8 mm socket.

Remove the upper brake hose bracket bolts with an 8 mm socket. Remove the upper brake hose bracket from the upper fork clamp. Loosen the bridge stem nut with the special long socket wrench.
Remove the parking brake cable guide on the right side.

Remove the two inner front fender bolts with an 8 mm socket.
Remove the inner front fender.

Remove the bridge stem nut and washer.
Lift off the upper fork clamp.
Special tool: A120F00002
A special lock nut wrench is needed to loosen the steering stem lock nut. Remove the steering stem lock nut.

Special Tool - Long Socket Wrench: A120F00007

Slide off the lock washer.

Loosen the steering stem adjusting nut with the special tool or a pin spanner.
Special Tool - Steering Stem Top Thread Wrench: A120F00023

Support the lower fork clamp and remove the steering stem adjusting nut.
8. Steering > Removal

Remove the inner race for the upper bearing.

Lower the lower fork clamp and steering stem out of the frame.

Lift out the upper ball bearings.

Slide the lower ball bearings up and off of the steering stem.
Inspect the bearings and races for wear and damage. Replace them as needed.

Use a chisel to remove the bottom bearing inner race and dust seal. Do not damage the steering stem.

Use the special tools or a drift and hammer to drive out the bearing races in the steering head.

Have the drift set against the lip of the race, and work around the race evenly to drive it out. Repeat the process with the remaining bearing race.
Steering Stem Installation

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Drive the new lower bearing inner race with dust seal onto the steering stem with a pipe with the same outside diameter as the bearing race. Use a press if available.

Drive the new bearing races into the steering head with a suitable driver with the same outside diameter as the bearing race.

Lubricate the upper bearing with grease and set it into place.
Lubricate the new lower bearing with grease and place it on the steering stem.

Guide the steering stem into the steering head of the frame.

Install the inner race around the steering stem and into the upper bearing.

Support the lower fork clamp and thread on the steering stem adjusting nut.
Tighten the steering stem adjusting nut to the initial specification with a pin spanner or the special wrench.

Special Tool - Steering Stem Top Thread Wrench: A120F00023

Loosen the adjusting nut and retighten it to the final torque spec.

<table>
<thead>
<tr>
<th>Item</th>
<th>Q’ty</th>
<th>Thread dia.(mm)</th>
<th>Torque Nm (kgf-m, ft-lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steering stem Adj. nut (initial)</td>
<td>1</td>
<td>25.4</td>
<td>52 (5.2, 37)</td>
</tr>
<tr>
<td>Steering stem Adj. nut (final)</td>
<td>1</td>
<td>25.4</td>
<td>20 (2.0, 15)</td>
</tr>
</tbody>
</table>

Turn the steering stem lock-to-lock several times to seat the bearings. Loosen the adjusting nut 1/4 to 1/2 half turn. Adjust the nut so the steering moves correctly. The adjusting nut should be tight enough so that the steering doesn't flop back and forth and vertical movement is eliminated. However, it should not be so tight as to cause binding or require excessive force to turn.

Slide the lock washer onto the steering stem as shown.
Thread the steering stem lock nut onto the steering stem.

Torque the steering stem lock nut to specification with the lock nut wrench special tool.

<table>
<thead>
<tr>
<th>Item</th>
<th>Q'ty</th>
<th>Thread dia.(mm)</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steering stem lock nut</td>
<td>1</td>
<td>25.4</td>
<td>55 (5.5, 40)</td>
</tr>
</tbody>
</table>

Special Tool - Long Socket Wrench: A120F00007

Set the upper fork clamp into place.
Install the bridge stem washer and nut onto the steering stem.

Torque the bridge stem nut to specification with the special deep well socket.

**Special Tool - Long Socket Wrench: A120F00002**

<table>
<thead>
<tr>
<th>Item</th>
<th>Q’ty</th>
<th>Thread dia.(mm)</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge stem nut</td>
<td>1</td>
<td>22</td>
<td>62 (6.2, 45)</td>
</tr>
</tbody>
</table>

Install the inner fender and tighten the two bolts securely with an 8 mm socket.
Install the brake hose guide to the left side of the lower fork clamp and tighten its bolt securely with an 8 mm socket.

Install the parking brake cable bracket to the right side.

<table>
<thead>
<tr>
<th>Install these components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Fork</td>
</tr>
<tr>
<td>Center Cover</td>
</tr>
<tr>
<td>Handlebar</td>
</tr>
<tr>
<td>Handlebar Covers</td>
</tr>
<tr>
<td>Front Cover</td>
</tr>
<tr>
<td>Windshield</td>
</tr>
</tbody>
</table>