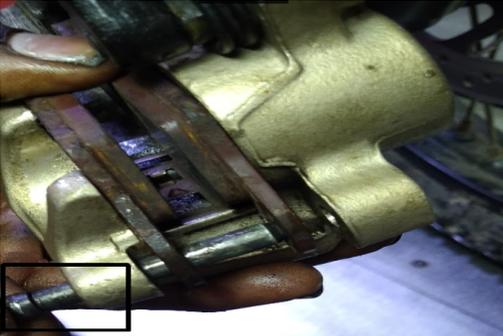
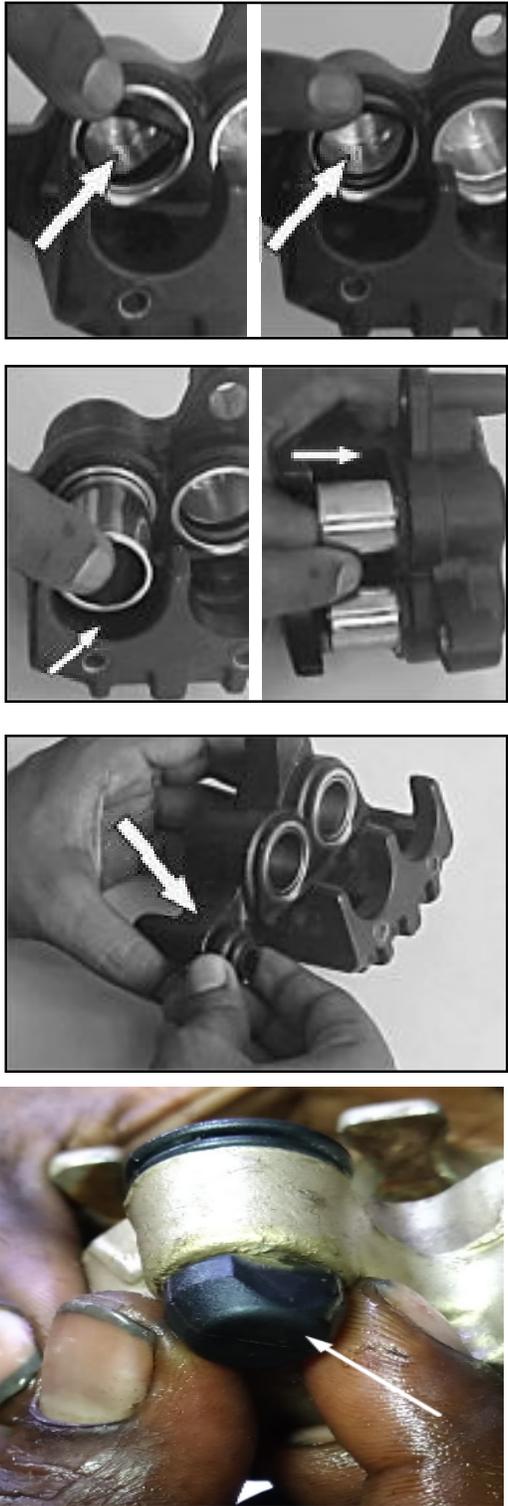


# CALIPER DISMANTLING & ASSEMBLY PROCEDURE (FRONT & REAR) HIMALAYAN MODEL

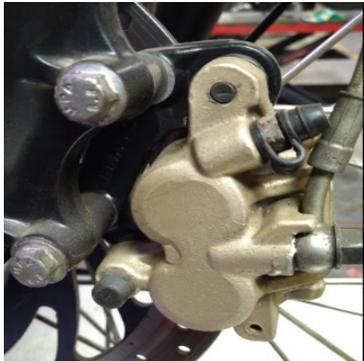
S. No.	Aggregate to Dismantle/ Instructions	Fastener, Size, Tool Usage, Precautions, Photos
<p><b>13.1 Front Disc Brake</b></p> <p>13.2 <b>Wheel caliper from fork end LH</b></p> <ul style="list-style-type: none"> <li>■ Loosen the 2 hex bolts holding brake caliper to fork end.</li> <li>■ Remove caliper assembly from fork end.</li> <li>■ Remove Banjo Bolt 12 mm</li> </ul>	<div data-bbox="618 533 902 648" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><b>Hex nut: M10</b> <b>Socket spanner: 12mm</b></p> </div>	<div style="display: flex; justify-content: space-around;">   </div>
<p>13.13 <b>Brake pads from caliper</b></p> <ul style="list-style-type: none"> <li>■ Remove clip gently.</li> <li>■ Remove pin from caliper using a punch and hammer</li> <li>■ Remove the brake pads</li> </ul>	<div data-bbox="618 1010 961 1073" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><b>Nose Plier</b></p> </div> <div data-bbox="618 1199 961 1310" style="border: 1px solid black; padding: 5px;"> <p><b>Allen screws : 4mm</b> <b>Allen key : M5</b></p> </div>	<div style="display: flex; flex-direction: column; justify-content: space-around;">    </div>

S. No.	Aggregate to Dismantle/ Instructions	Fastener, Size, Tool Usage, Precautions, Photos
13.1.3	<p><b>Brake pads from caliper</b></p> <ul style="list-style-type: none"> <li>■ Remove Mounting Bracket from the Caliper Assembly.</li> <li>■ Remove the Pad tensioner spring plate from caliper.</li> </ul>	 <p>The top photograph shows a hand using a screwdriver to remove a mounting bracket from the caliper. A white arrow points to the bracket. The bottom photograph shows the removal of the pad tensioner spring plate, with a white arrow pointing to the plate.</p>
13.1 13.1.4	<p><b>Front Disc Brake</b></p> <p><b>Pistons &amp; seals from caliper</b></p> <ul style="list-style-type: none"> <li>■ Remove the bellow &amp; boot from the caliper assembly.</li> <li>■ Hold the caliper body with the pistons facing downwards.</li> <li>■ Blow low pressure compressed air with a nozzle into the oil passage hole on the caliper, to drive out the pistons from the caliper bores.</li> <li>■ Gently remove the seals from caliper using a blunt and soft tool.</li> </ul>	 <p>The four photographs show: 1) A hand using a tool to remove a bellow and boot from the caliper. 2) A hand holding the caliper body with pistons facing downwards. 3) A hand using a nozzle to blow compressed air into the oil passage hole to drive out the pistons. 4) A hand using a blunt tool to gently remove the seals from the caliper.</p>

S. No.	Aggregate to Assemble/ Instructions	Fastener, Size, Tool Usage, Precautions, Photos
<p>13.3</p> <p>13.31</p>	<p><b>Front Disc Brake</b></p> <p><b>Pistons &amp; seals in caliper</b></p> <ul style="list-style-type: none"> <li>■ Coat fresh brake fluid on new dust seals and piston seals.</li> <li>■ Install piston seals in the inner groove and dust seals in the outer groove in the bore in caliper assembly.</li> <li>■ Coat the caliper cylinders and pistons with fresh brake fluid.</li> <li>■ Insert the closed end of the pistons into the caliper bores and gently press it into caliper fully till the open ends of the piston are flush with the caliper bore outer edge.</li> <li>■ Smear fresh brake fluid on the caliper boot and bellow and assemble them on the caliper body.</li> </ul>	<p style="text-align: center;"><b>NOTE:</b></p> <p>Do not apply force while assembling the pistons into the caliper. Press only with minimal hand pressure.</p> <p>Assemble pistons one at a time into the caliper.</p> 

S. No.	Aggregate to Assemble/ Instructions	Fastener, Size, Tool Usage, Precautions, Photos
<p>13.3</p> <p>13.31</p>	<p><b>Front Disc Brake</b></p> <p><b>Pistons &amp; seals in caliper</b></p> <ul style="list-style-type: none"> <li>■ Install the pad tension springplate in the Caliper body.</li>   <li>■ Assemble Bleed screw with the dust cap on the caliper body.</li>   <li>■ Assemble the Mounting Bracket on the caliper Body.</li> </ul>	<p style="text-align: center;"><b>Ring Spanner: 10 mm</b> <b>Torque: 10Nm (0.1Kgm)</b></p>   

S. No.	Aggregate to Assemble/ Instructions	Fastener, Size, Tool Usage, Precautions, Photos
13.3 13.3.2	<p><b>Front Disc Brake</b></p> <p><b>Brake pads in caliper</b></p> <ul style="list-style-type: none"> <li>■ Install brake pad on the piston side first with its friction material facing outside.</li> <li>■ Install the other brake pad with the friction material facing the opposite brake pad.</li> <li>■ Insert the pin in the caliper</li> <li>■ Insert the clip in the caliper pin</li> </ul>	<p><b>NOTE:</b> Ensure pads are positioned and locked correctly in the mounting bracket lug.</p>   <p><b>Brake pad pins</b> <b>Allen key: 5mm</b> <b>Torque: 20Nm (2.0Kgm)</b></p> 

S. No.	Aggregate to Assemble/ Instructions	Fastener, Size, Tool Usage, Precautions, Photos
13.3 13.3.3	<p><b>Front Disc Brake</b></p> <p><b>Wheel caliper on fork end LH</b></p> <ul style="list-style-type: none"> <li>■ Locate caliper on fork end LH and ensure the brake disc is positioned between the brake pads.</li> <li>■ Tighten Banjo Bolt 12 mm</li> <li>■ Tighten caliper assembly to fork end with 2 hex bolts and tighten to torque</li> </ul>	<div data-bbox="618 646 959 800" style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><b>Hex bolt: M10</b>  <b>Socket spanner: 12mm</b>  <b>Torque: 30Nm (3.0Kgm)</b></p> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div> <div style="text-align: center; margin-top: 20px;">  </div>

## GENERAL PRECAUTIONS

- Check the system for any fluid leaks at banjo union joints, damaged brake hose etc. at periodic intervals as detailed in the maintenance schedule.
- Whenever checking brake fluid level, ensure vehicle is on its centre stand and the fluid reservoir is parallel to the ground, whenever checking fluid level.
- Cover motorcycle painted surfaces, plastic and rubber parts while overhauling or bleeding a brake system. Do not allow brake fluid to come in contact with any parts of the motorcycle as brake fluid has highly corrosive properties.

## CLEANING

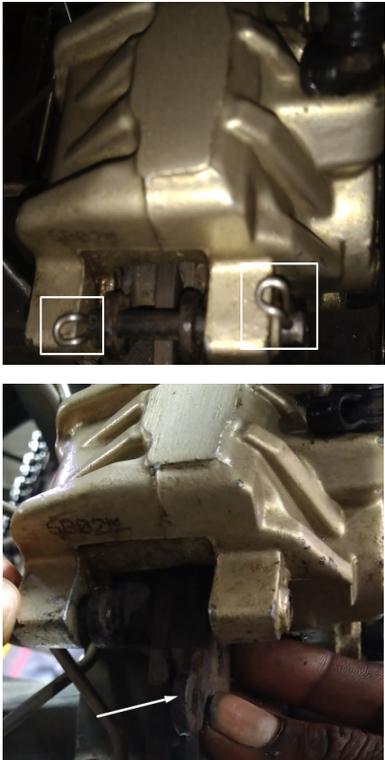
- Clean master cylinder filler cap before removing.
- Use only fresh brake fluid to clean rubber and other parts of the hydraulic brake system. DO NOT use any petroleum based cleaning solvents, water or detergents etc.

## INSPECTION:

- Inspect brake fluid level is always between the MAX and MIN level markings in the reservoir.
- Prior to riding the motorcycle every time, check brake disc inside and outside surfaces carefully for any contamination with oil, grease, slippery substances, brake fluid etc. as these will render the braking system ineffective. In case of any contamination, wash the brake disk with water and mild detergent to remove the contaminations, clean well with a good degreasing agent, blow compressed air to dry the brake disc thoroughly.
- Inspect brake hose joints; reservoir and wheel caliper ends for any traces of fluid seepage or leaks. Check and correct the leaks immediately, if any noticed.
- Inspect Brake hoses for any damage, cracks or cuts, ageing etc and replace damaged parts immediately.
- Inspect brake pads for embedded foreign objects, abnormal wear, age hardening of friction material etc.
- Inspect and ensure the pads are not worn out beyond the wear indication limit marks on the pads. Replace pads as soon as they have reached the wear limit marks
- Check rubber seals on the plunger for wear, cracked edges or any other damage. Replace seals whenever the plunger is removed
- Check master cylinder housing and piston for any scoring, pitting due to corrosion or any other damages.
- Check the master cylinder bore for any damages, scoring marks etc.
- Check piston outside surfaces for any damages, scoring marks, corrosion etc. Replace pistons if any of the above is observed.

## CAUTION:

- **Use only DOT 3 or DOT 4 grade brake fluid from a sealed container.** Do not mix different types of brake fluid as they may not be compatible.
- Whenever the disc brake system is overhauled, ensure that the old fluid is drained out completely and then filled with fresh brake fluid ONLY from a sealed container.
- In case of any brake fluid contamination in the brake system, the contaminated brake fluid must be flushed out completely from the entire system, the internal parts cleaned well, filled with fresh brake fluid and the brake system bleeding must be carried out.

S. No.	Aggregate to Dismantle/ Instructions	Fastener, Size, Tool Usage, Precautions, Photos
<p><b>13.2 Rear Disc Brake</b></p> <p><b>13.2.4 Brake pads from wheel caliper</b></p> <ul style="list-style-type: none"> <li>■ Pull out the pivot pin from the inside of the caliper.</li>   <li>■ Remove the brake pads from the caliper.</li> </ul>		
<p><b>13.2.5 Wheel caliper from swing arm</b></p> <ul style="list-style-type: none"> <li>■ Remove Banjo Bolt</li> <li>■ Separate the Mounting Bracket from the Caliper Assembly by gently pulling them apart.</li> </ul>		

S. No.	Aggregate to Dismantle/ Instructions	Fastener, Size, Tool Usage, Precautions, Photos
<p><b>13.2 Rear Disc Brake</b></p> <p><b>13.2.5. Wheel caliper from swing arm</b></p> <ul style="list-style-type: none"> <li>■ Remove the Pad tensioner spring plate from caliper and mounting bracket.</li> </ul>		
<p><b>13.2 Rear Disc Brake</b></p> <p><b>13.2.5. Piston &amp; seal from caliper</b></p> <ul style="list-style-type: none"> <li>■ Hold the caliper body with the piston facing downwards.</li> <li>■ Blow low pressure compressed air with a nozzle into the oil passage hole on the caliper, to drive out the piston from the caliper bore.</li> <li>■ Gently remove the piston with seal from caliper using a blunt and soft tool.</li> </ul>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><b>CAUTION:</b></p> <p>Do not use high pressure air. Support piston while removing from caliper. Ensure the bore in the caliper does not get scored or damaged. Ensure piston outside surfaces does not get scored or damaged.</p> </div> 	 

**S. Aggregate to Dismantle/  
No. Instructions**

**Fastener, Size, Tool Usage, Precautions, Photos**

**13.4 Rear Disc Brake**

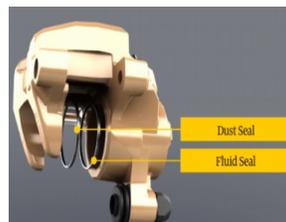
**13.4.1 Piston & seals in caliper**

- Coat fresh brake fluid on new dust seals and piston seals.
- Install piston seals in the inner groove and dust seals in the outer groove in the bore in caliper assembly.
- Coat the caliper cylinder and piston with fresh brake fluid.
- Insert the closed end of the piston into the caliper bore and gently press it into caliper fully till the open ends of the piston are flush with the caliper bore outer edge.

The images shown here are for illustrative purpose only

**NOTE:**

Do not apply force while assembling the piston into the caliper. Press only with minimal hand pressure.



S. No.	Aggregate to Assemble/ Instructions	Fastener, Size, Tool Usage, Precautions, Photos
<p>13.4</p> <p>13.4.1</p>	<p><b>Rear Disc Brake</b></p> <p><b>Piston &amp; seals in caliper</b></p> <ul style="list-style-type: none"> <li>■ Install the pad tension spring plate in the Caliper body.</li>   <li>■ Assemble Bleed screw with the dust cap on the caliper body.</li>   <li>■ Position the guides on the Caliper and mounting bracket correctly on the rubber boot and assemble caliper body in the mounting bracket</li> </ul>	<p style="text-align: center;"><b>Fastener, Size, Tool Usage, Precautions, Photos</b></p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;">  </div> <div style="width: 50%;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><b>Ring Spanner: 8 mm</b> <b>Torque: 10Nm (0.1Kgm)</b></p> </div>  </div> <div style="width: 50%;">  </div> <div style="width: 50%;">  </div> <div style="width: 50%;">  </div> </div>

S. No.	Aggregate to Assemble/ Instructions	Fastener, Size, Tool Usage, Precautions, Photos
<p>13.4</p> <p>13.4.1</p>	<p><b>Rear Disc Brake</b></p> <p><b>Wheel caliper on swing arm</b></p> <ul style="list-style-type: none"> <li>■ Locate caliper with mounting bracket on the swing arm such that the brake disc is correctly positioned inside the caliper.</li> <li>■ Assemble wheel axle through the caliper bracket on the swing arm.</li> <li>■ Assemble axle nut and tighten to torque.</li> </ul>	
<p>13.4.2</p>	<p><b>Brake pads on wheel caliper</b></p> <ul style="list-style-type: none"> <li>■ Locate the brake pads inside the caliper on either sides of the disc with the friction material facing the disc.</li> <li>■ Locate the pivot pin from the inside of the caliper correctly.</li> <li>■ Assemble the 2 locking clips on the brake pad pivot pin.</li> <li>■ Install Banjo Bolt</li> </ul>	  