This section shows how to check and adjust your Valve Clearance. This procedure is recommended every two years by Norton.
Remove Battery

Take a note of this FUSE location. It’s the MAIN FUSE before all the fuses.
Disconnect Coil Pack Plug.

Disconnect Spark Plug Wires Both Sides.

This is the MAIN FUSE before all the fuses. It must be zip tied shut because vibration can let the fuse fall out a little bit and the bike won’t run properly.
Valve Clearance (Check & Adjust) | Norton 961

Coil Pack Disconnected.

Remove Battery/Coil Cradle
Remove Throttle Cables at this end only
Raise nuts all the way up

Let these nuts fall off

Cables Removed
Find something to tie all the cables and wires to the frame to keep them away from the Valve Cover.

Cut the Clamps.
DO NOT UNDO BANJO BOLTS!!
One per side
Valve Clearance (Check & Adjust) | Norton 961

Slide off vent hoses. One per side.

Remove all Valve Cover Bolts

Remove Spark Plugs

Remove Valve Cover

Remove all Valve Cover Bolts
Valve Clearance (Check & Adjust)

- Adjustment Bolt
- Valve Spring
- Rocker Arm
- Remove Spark Plugs

Intake Side RH
Exhaust Side RH
Intake Side LH
Exhaust Side LH
Note: Check the Valve clearance when the engine is cold or at room temperature.

Checking and adjusting the valves is something required every two years by Norton UK. To do this requires some mechanical knowledge and experience. On the 961 Engine there are two sides, the Left Hand Side (LH) and the Right hand side (RH). There is also the INTAKE side and the EXHAUST side. You will need to turn the engine manually to activate the rocker arm into the positions required.

There are two ways to move the rocker arms & compress valve springs

OPTION 1: With the rear wheel slightly off the ground and the transmission selected to the highest gear, have a friend rotate the rear wheel. As the rear wheel is rotated, you will see the rocker arms move and the valve springs compress.

OPTION 2: Remove the Cam Chain Cover. You will need to drain the Engine oil to do this. Then, use a wrench and rotate the crank shaft clockwise until the desired valve spring is compressed fully.
ADJUSTING INTAKE SIDE LEFT HAND

- STEP 1 – Turn the engine until the INTAKE SIDE RH Spring is FULLY compressed (fully down).
- STEP 2 – On the INTAKE SIDE LH Rocker Arm, use a permanent marker or grease pen and mark the position of the adjustment bolt to the rocker arm. This is so you can count the rotations of the bolt.
- STEP 3 – On the INTAKE SIDE LH Rocker Arm, loosen the Jam Nut keeping the adjustment bolt in the original position.
- STEP 4 – Back the adjustment bolt out and count the rotations until there is free play in the rocker arm, then as gently as possible, tighten the bolt until it just touches and there is no longer free play in the arm. The count should have been between 2 turns to 2 ½ turns.
- STEP 5 – Erase the original marks you made with the marker, and remark the bolt and adjustment arm when at zero free play.
- STEP 6 – With precision, **tighten the adjustment bolt 2 ¼ turns in**
- STEP 7 – Tighten the JAM NUT without disturbing the adjustment bolts position.
- STEP 8 – Using the marker, put a checkmark on the rocker arm so you know it has been done.
ADJUSTING INTAKE SIDE RIGHT HAND

- **STEP 1** – Turn the engine until the INTAKE SIDE LH Spring is FULLY compressed (fully down).
- **STEP 2** – On the INTAKE SIDE RH Rocker Arm, use a permanent marker or grease pen and mark the position of the adjustment bolt to the rocker arm. This is so you can count the rotations of the bolt.
- **STEP 3** – On the INTAKE SIDE RH Rocker Arm, loosen the Jam Nut keeping the adjustment bolt in the original position.
- **STEP 4** – Back the adjustment bolt out and count the rotations until there is free play in the rocker arm, then as gently as possible, tighten the bolt until it just touches and there is no longer free play in the arm. The count should have been between 2 turns to 2 ½ turns.
- **STEP 5** – Erase the original marks you made with the marker, and remark the bolt and adjustment arm when at zero free play.
- **STEP 6** – With precision, **tighten the adjustment bolt 2 ¼ turns in**
- **STEP 7** – Tighten the JAM NUT without disturbing the adjustment bolts position.
- **STEP 8** – Using the marker, put a checkmark on the rocker arm so you know it has been done.
ADJUSTING EXHAUST SIDE LEFT HAND

- STEP 1 – Turn the engine until the EXHAUST SIDE RH Spring is FULLY compressed (fully down).
- STEP 2 – On the EXHAUST SIDE LH Rocker Arm, use a permanent marker or grease pen and mark the position of the adjustment bolt to the rocker arm. This is so you can count the rotations of the bolt.
- STEP 3 – On the EXHAUST SIDE LH Rocker Arm, loosen the Jam Nut keeping the adjustment bolt in the original position.
- STEP 4 – Back the adjustment bolt out and count the rotations until there is free play in the rocker arm, then as gently as possible, tighten the bolt until it just touches and there is no longer free play in the arm. The count should have been between 2 turns to 2 ½ turns.
- STEP 5 – Erase the original marks you made with the marker, and remark the bolt and adjustment arm when at zero free play.
- STEP 6 – With precision, **tighten the adjustment bolt 2 ¼ turns in**
- STEP 7 – Tighten the JAM NUT without disturbing the adjustment bolts position.
- STEP 8 – Using the marker, put a checkmark on the rocker arm so you know it has been done.
ADJUSTING EXHAUST SIDE RIGHT HAND

- **STEP 1** – Turn the engine until the EXHAUST SIDE LH Spring is FULLY compressed (fully down).
- **STEP 2** – On the EXHAUST SIDE RH Rocker Arm, use a permanent marker or grease pen and mark the position of the adjustment bolt to the rocker arm. This is so you can count the rotations of the bolt.
- **STEP 3** – On the EXHAUST SIDE RH Rocker Arm, loosen the Jam Nut keeping the adjustment bolt in the original position.
- **STEP 4** – Back the adjustment bolt out and count the rotations until there is free play in the rocker arm, then as gently as possible, tighten the bolt until it just touches and there is no longer free play in the arm. The count should have been between 2 turns to 2 ½ turns.
- **STEP 5** – Erase the original marks you made with the marker, and remark the bolt and adjustment arm when at zero free play.
- **STEP 6** – With precision, **tighten the adjustment bolt 2 ¼ turns in**
- **STEP 7** – Tighten the JAM NUT without disturbing the adjustment bolts position.
- **STEP 8** – Using the marker, put a checkmark on the rocker arm so you know it has been done.
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2014 Norton Commando SE #112 (left)      2015 Norton Commando Sport (middle)      2013 Norton Commando SE #107 (right)

2015 INOA Rally North Carolina on the Blue Ridge Parkway for a 961 ride with Richard Coote (left), John Snead’s soon to be race bike (middle) and Dave Coote (right)