quality parts
by müller motorcycle ag

MÜLLER MOTORCYCLE AG

Installation Manual

Throttle with Interior Wiring

Part Nr.: 170-5 & 172-5

Safety Notes

Alternations of the handle bar are required to install the interior throttle. This should only be performed by an authorized/qualified repair shop. There are tools required that may only be available at such a shop.

For simple and exact fitting, we recommend the installation kit part-nr 179-0.
Includes drilling and cutting template, clamping screw and Ø 6,4 mm metal drill.

Or just make use of our installation service! Send in the handle bar and we do the mounting for you.

Consider Before Installation

Requirements

- Handle bar with cable passage (A)
- Groove for instrument mounting has to be minimum 150 mm (B) from bar end.

The right grip with throttle cable fitting is obsolete for installation, it has to be replaced by a clean left-hand grip (not included in kit).

=> *We recommend "Müller Aluminum Grips for the interior throttle"*

1. Demount handle bar from the bike

2. Remove original accelerator throttle

Remove the orig. throttle and the handle bar controls of the right side. Make sure that there are no cables or other things routed thru the bar.

3. Mount the drilling and cutting template to the bar

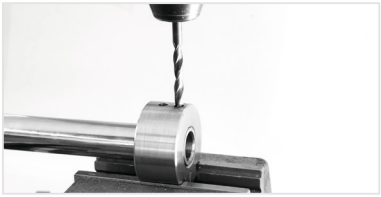
Push the drilling and cutting template 118 mm (measured from the outer edge) onto the bar end. Adjust the cutting template to make the two mounting holes look downward and secure it with the set screw.

4. Cut the handle bar

Fix the template in a vise with the notch looking downwards. Cut the handle bar flush on the right side (outside).
Try to cut evenly!

5. Drill mounting holes

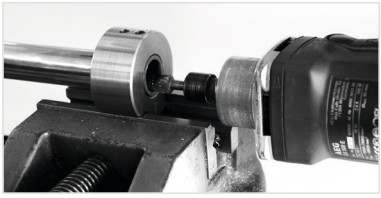
Use the Ø 6.4 mm metal drill for the mounting holes.



Without the kit,
drill the red marked holes (ø 6,4 mm, lower picture)
in order to have them looking in downward.

6. To deburr

Deburr the mounting holes and the cut edge of the handle bar. If there is a weld seam on the bar it has to be smoothened at a range of 28 mm. Using a rotation tool is helpful.



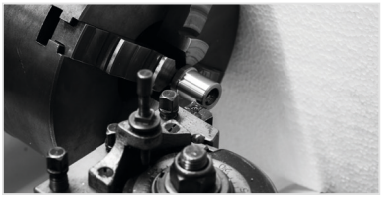
7. Mounting the handle bar

Attach the modified handle bat to the bike.

8. Fitting the grip

Measure the bar´s inner diameter. The diameter of the grip unit (pos 1) must be approx. 0.02-0.05 mm **smaller** than the inner diameter of the handle bar. If required you must lathe down the grip unit to the necessary diameter.

I might be required to recut the thread with an M6 tap drill after milling.



9. Installing the Bowden cable – outer casing

Route the Bowden cable –outer casing (pos 12) into the grip unit to the stop. Then route it thru the handle bar all the way to the carburetor. When cutting the Bowden Cable casing you must make sure the Bowden Cable is long enough and not under tension when the bike is in full turn position.

10. Throttle adjustment screw

Cut the Bowden Cable casing at a convenient position and place the adjustment screw. Make sure you got enough space to counter secure with two 8 mm open end spanners. Put the two ends in the adjustment screw and fixate them with tape to avoid that they come loose. You can remove the tape once the Bowden Cable is installed.

11. Mounting the grip unit

Apply extra strength bushing/bearing glue on the fitted grip unit. Push/press the grip unit into the handle bar. Watch for aligned drillings when pushing in the grip unit.

12. Bolting of the grip unit

Apply medium loc tide onto the special screws (pos 2). Bolt the grip unit to the bar with these screws (Allen Key 4 mm, with 8 Nm torque)

13. Routing the Bowden cable cord

Put in the Bowden cable cord (pos 13), starting from the carburetor upward. Do not oil or grease it.

14. Pushing in the cable clamp

Push in the cable clamp (pos 3) as shown in the exploded view (page 8) into the grip unit.

15. Route the cord thru the clamp

Route the Bowden cable cord thru the cable clamp.

Note: make sure to route it thru the aluminum tube for optimum protection.

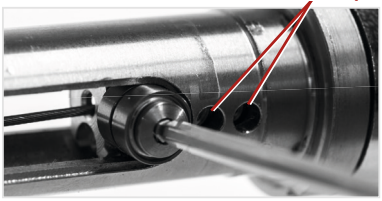
16. Pre-assemble the ball bearing

Mount the special screw (pos 4 drawing) with the ball bearings (pos 5) and the spacer disc (pos 6) at the side of the cable clamp - as depicted in the drawing - using a 2.5 mm Allen Key, 5 Nm torque.

Attention:
watch out for losing the spacer discs, no correct operation without these.

Note:
ensure max 5 Nm torque, avoiding squeezing the bearing.

Cable clamping



17. Hook in the Bowden cable

Hook in the Bowden cable at the carburetor

18. Clamping the pulling cable

Thereafter clamp the pulling cable with the set screws (pos 7) to give the ball bearings an axial play of app. 0.5 mm. 2 mm Allen Key, 3 Nm torque.

Before clamping the cable, make sure the adjustment screw is set in a way to allow a later reduction of the Bowden Cable play.

19. Dismount the ball bearing

Dismount the special screw with the ball bearings from the carriage.

20. Trimming of the pulling cable

Disengage the Bowden cable from the carburetor. Push the carriage all the way to the stop and cut the overlong cable with the diagonal cutter. For safety reasons it is recommended to solder the cut end of the cable to avoid fringing.
Then reengage the cable to the carburetor.

21. Slide on the hand grip

Slide on the hand grip (pos 8)

22. Mount ball bearing

Refit the special screw with the ball bearing again to the cable clamp (step 16) this time on both sides using medium loc tide.

23. Install bearing collar screw

Close the throttle with the bearing collar screw, using a 14 mm Allen Key at 25 Nm torque.

24. Slide on hand grip

Oil the O-ring at the hand grip and slide on the accessory hand grip with the clamp screw.

25. Fixate hand grip

Align the clamp screws of the hand grip with the provided drillings and tighten the carefully with medium loc tide, 1 Nm torque.

Caution:
Tightening the crews to much may deform the hand-grip and clamp the throttle. If that occurs, rewind the screw a bit.

26. Finish mounting

The interior throttle is now completely installed. Remount the handle bar controls and set the throttle play with the adjustment screw.

Torque Values:

- Pos. 2
  special screw M6x7,5 — 8 Nm
- Pos. 4
  special screw M4x9,5 — 5 Nm
- Pos. 7
  special screw M4x5 — 3 Nm
- Pos. 9
  bearing collar screw — 25 Nm

Safeguard

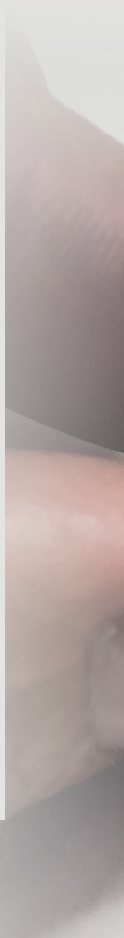
- Pos.1:
  extra strength bushing/
  bearing glue
- Pos. 2, 4 & 9:
  medium loc tide

Required Tools

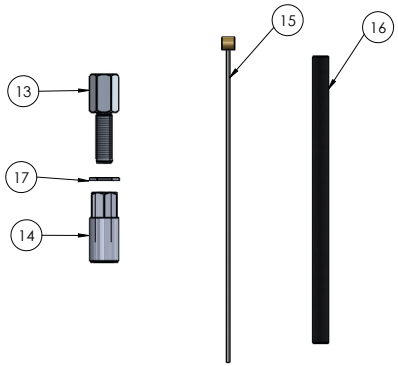
- Installation kit part-nr 179-0 (optional*)
- Bench vise
- Hacksaw
- Drilling machine
- Lathe
- Caliper gauge/ pocket rule
- Deburring tool
- Diagonal cutter
- Oil and grease
- Torque wrench
- Allen Key: 2mm, 2.5mm, 4mm, 14mm
- Loc tide medium and extra strength

In case installation kit is not available** *(not recommended):**

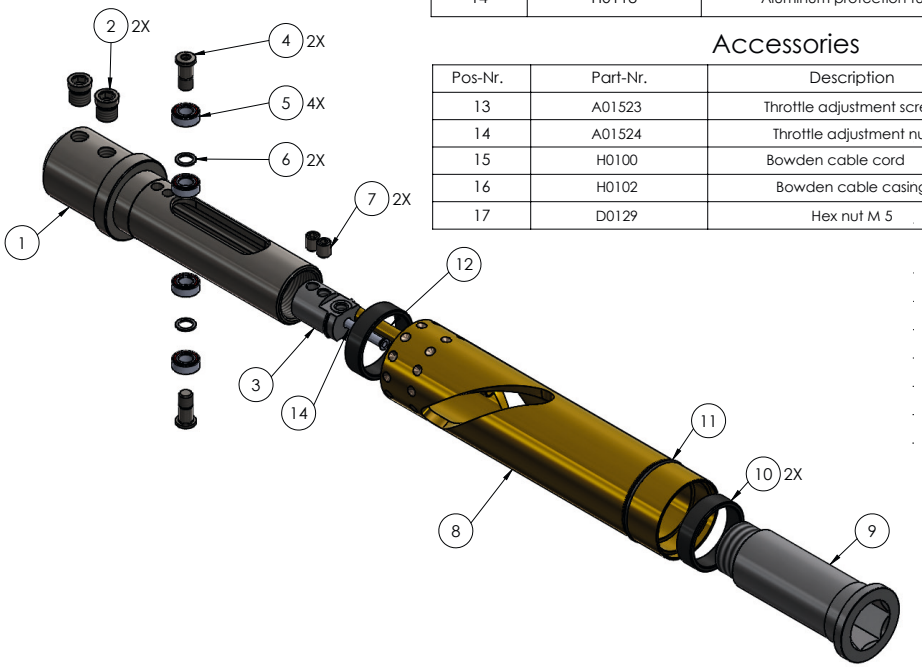
- Scriber
- Felt pen
- Metal drill Ø 6.4 mm



If you have handle bar turn signals, consider the following:
After cutting the Bowden cable it must be reengaged at the carburetor. The hand grip unit (pos 1) must be dismounted again. Then you route the cable thru the handle bar mirror (if applicable) then thru the bearing collar screw, the grip and finally thru the brass fitting. Now connect the cable with the cables on the handle bar. Reconnect all parts reversely.
For tightening the bearing collar screw we recommend the include tool of the kit, to avoid squeezing or damaging (pic).



Pos-Nr.	Part-Nr.	Description	Quantity
1	A01397	Grip unit 1" bar	1
2	A01354	M6 x 7.5 sp. screw	2
3	A01399	Cable clamp carriage	1
4	A01393	M4 x 9.5 sp. screw	2
5	A01407	Ball bearing	4
6	A01412	Spacer disc 0,5 mm	2
7	D0115-16	Lock screw M4 x 5	2
8	A01398	Hand grip 1"	1
9	A01467	Bearing collar screw	1
10	A0200-1	Slide bearing	2
11	A0024-2	O-ring D 18 x 2	1
12	H0104	Turn signal cable housing	1
14	H0118	Aluminum protection tube	1



Accessories

Pos-Nr.	Part-Nr.	Description	Quantity
13	A01523	Throttle adjustment screw	1
14	A01524	Throttle adjustment nut	1
15	H0100	Bowden cable cord	1
16	H0102	Bowden cable casing	1
17	D0129	Hex nut M 5	1