MANUAL

Front Hub MIG70

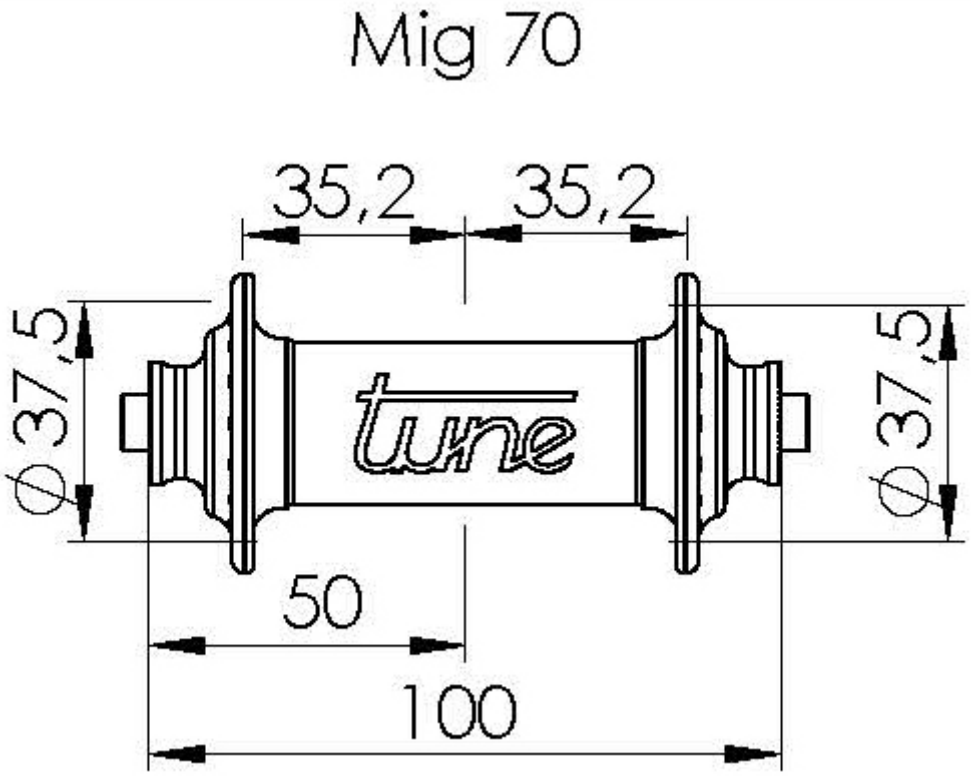
BORN IN THE BLACK FOREST BUILT TO ENJOY NATURE

as of May 2015

Number of holes	12, 16, 18, 20, 24, 28, 32
Disc mount	none
Build-in-with	100 mm
Axle diameter	17 mm
Colours	black, silver, red, gold, blue, green, orange, froggy-green and white (powder-coated)
Bearings hub body	2 specific Tune grooved ball bearings (2 x 61803)
Sealing	dust cap, washer and rubber lip seal
Weight limit	none

Material:

Flange	aluminium, CNC machined
Axle	aluminium, CNC machined
Endcaps	aluminium, CNC machined
Inner sleve	aluminium, CNC machined



General:

- Before every ride, make sure that your tune product is in a good condition and functioning properly. If there seems to be any irregularities the product should not be used. Contact your retailer for help.
- The Quickrelease must be mounted properly.
- Never clean your Tune products directly with high water pressure (pressure cleaner) and do not use aggressive detergents.
- Only use tires that suit the rim, pay attention not to exceed the maximum tire pressure of the rim and tire.

Maintenance:

The hub should be maintained at least once a year. If used in extreme conditions (rain, mud, salted streets, transport in the rain) regularly, the hub should be maintained more often. A regular service supports the technical condition, as well as the durability of the hub.

What does the regular maintenance include?

- The mounted hub should be cleaned. Afterwards it should be undertaken a detailed visual and technical examination.
- When disassembled, the bearings should be examined. The maintenance is described in detail below.

Lacing:

- The hub is constructed for radial lacing or crossed lacing.
- The 32 and 36 hole version has to be laced crossed.
- If the MIG70 hub is gets laced radially the spoke heads have to face outwards.
- The MIG 70 flanges have been designed to automatically distribute the tension among the spokes evenly during the lacing process. There will be no more movement, of the flanges relative to each other, once the spokes all have been tensioned (exerting an overall pulling force of several tons).

MIG70:

The highest permitted spoke tension is **1000 N.**

Pitch circle diameter Ø	37.5 mm
Distance hub flange to wheel center line (l / r)	35.2 / 35.2 mm
Spoke hole diameter Ø	2.4 mm

Construction of the hub:

This hub is built up from firmly connected parts, i.e. the axle goes all the way through, with endcaps at both sides, and all parts are fixed exactly in place.

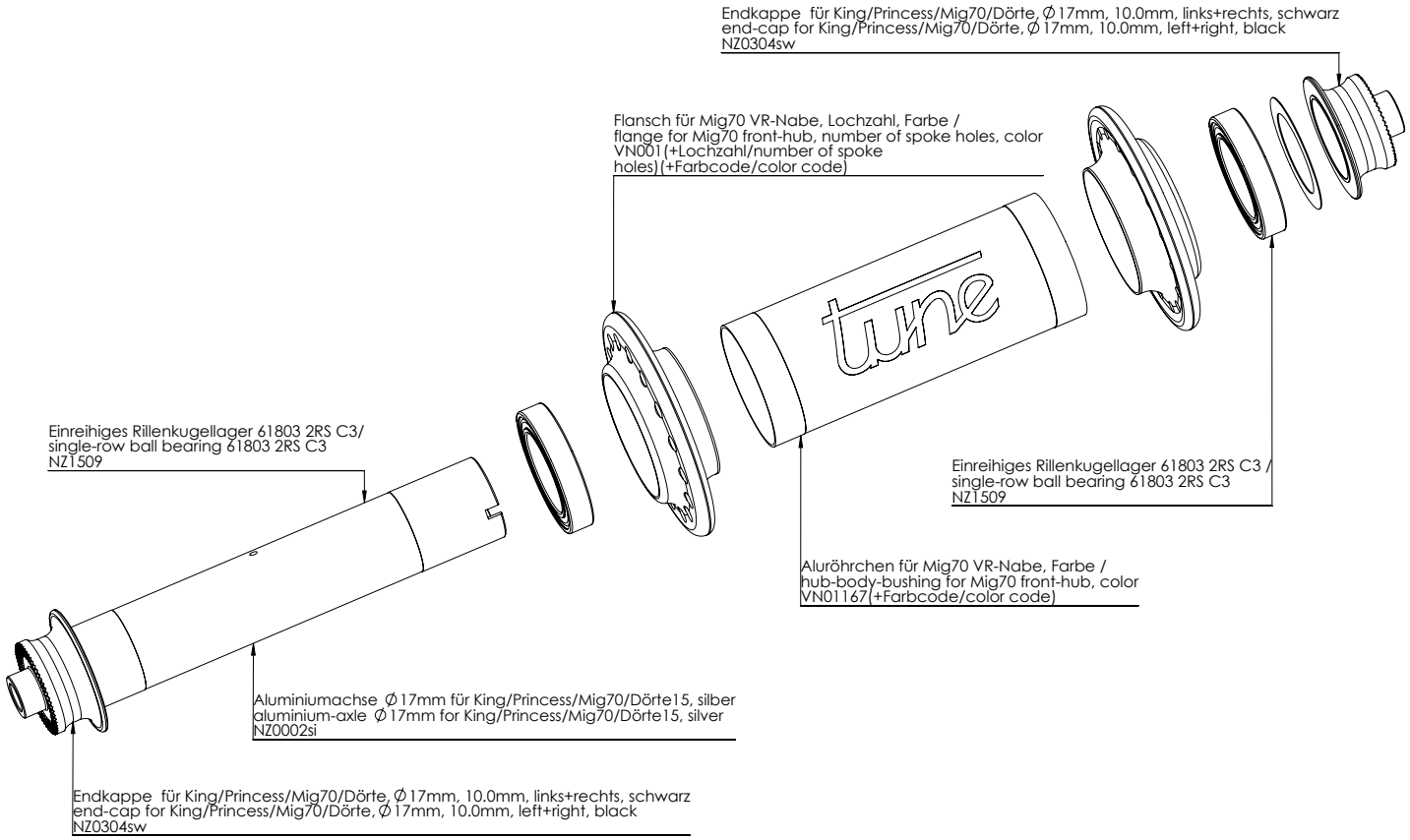
Tune uses specific bearings not available from any other manufacturer. The bearings distinguish themselves by there unusual high amount of special grease and a radial play adjusted for the use. The bearings have a double slid sealing, the hub therefore will run comparatively sluggishly when new. This will change after the first rides, when the grease has been dispersed evenly in the ball-bearings and the seals are working optimally.

Spare parts can be ordered through your local Tune retailer.

Mig70

Stand: Oktober 2013
as of: October 2013

BVN01 (+Lochzahl/number of spoke holes)(+Farbcode/color code)



Disassembly and assembly of the hub:

Important notes:

- All contact surfaces, except between the bearings and the hub body, should be greased.
- Always remember the exact position of all parts.
- Please contact your dealer, if you feel insecure, don´t have appropriate skills or the needed equipment.

Needed tools / material:

- tool kit **Tune Tool 08** (No. BWZ0000)
- plastic hammer
- an rob (old Quickrelease axle)
- hot air blower
- vernier caliper
- (1) Grease (we recommend Molykote Rapid Plus Paste, alternative bearing grease)
- (2) Glue (e.g. 3M Scotch-Weld TL-70, Loctite 641)

This manual leads you through the complete disassembly, assembly and adjustment of the hub. Not all steps have to be carried out maintaining the hub.
If you only want to adjust the bearing play you can start with the first step **„Removing the endcap“** afterwards you can continue with the step **„Setting the bearing play“.**

1 Removing the endcap

Needed tools:

- plastic hammer
- old Quickrelease axle
- main tool **TT08.1**

TT08.1

Tip:
The right side of the hub is next to the “e” in the **Tune** logo. (see graphic on p.3)

The hub gets placed on the main tool **TT08.1.**
An Quickrelease axle gets pushed through the left endcap into the hub axle, so that it touches the inner side of the right endcap.
The right end cap can now be pushed of the axle by hitting the Quickrelease with the plastic hammer.
Be careful to not loose the distances, which are placed between the endcap and bearing.

fig.1

fig.2

2 Removing the axle

fig.3

Needed tools:

- plastic hammer
- TT08.2 article No. WZ0202
- TT08.1 article No. WZ0200

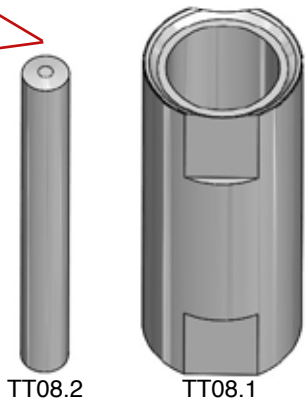


fig.4

Place the hub on the main tool **TT08.1**.
Now the axle can be pushed out using the to the Tool **TT08.2** and a hammer. **fig. 3 & 4**

If the hub is not laced, the flange (including the pressed-in bearings) as-well as the inner sleeve can be separated already.

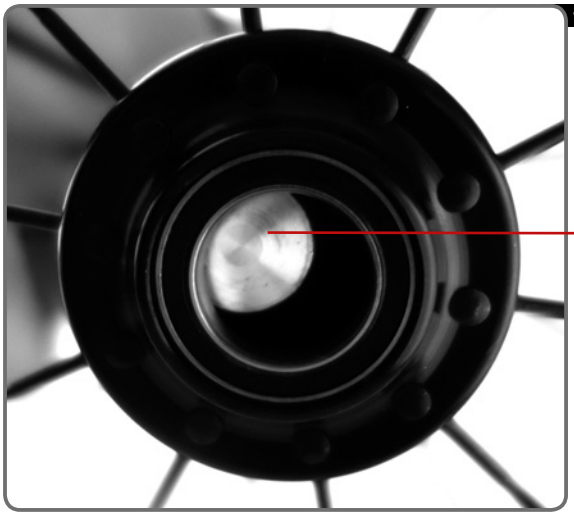


fig.5

4 Removing the bearings

Needed tools:

- TT08.1
- TT08.2
-

TT08.2

Place the hub on the main tool **TT08.1.** Now the bearings can be pushed out using the tool **TT08.2** and a plastic hammer. Always dispense the force all around the bearing to not damage both the bearing and the hub body. **fig. 5 + 6**

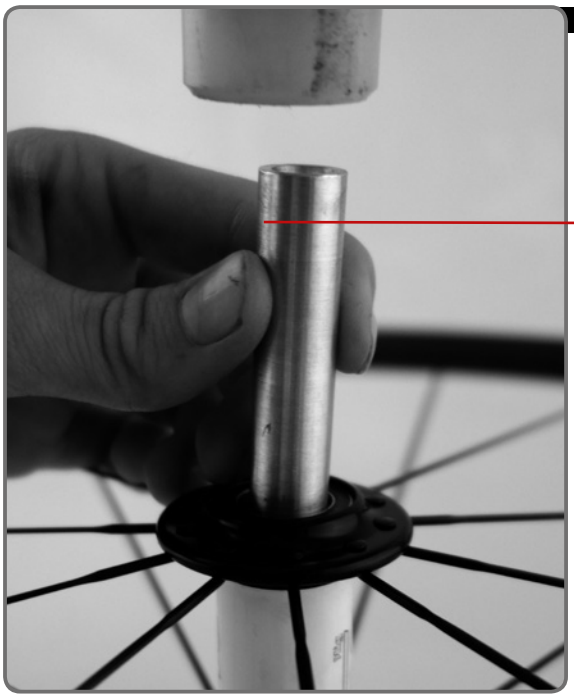
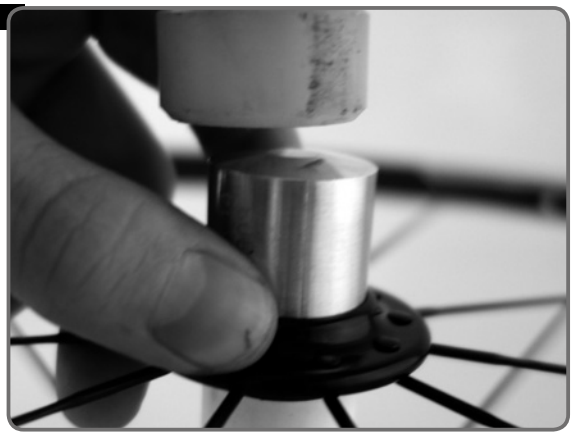


fig.6

5 Installing a new bearing

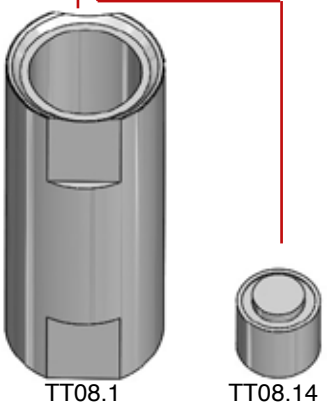
fig.7

fig.8



Needed tools:

- TT08.1 No. WZ0200
- TT08.14 No. WZ0209
- plastic hammer
- glue (2)



TT08.1 TT08.14

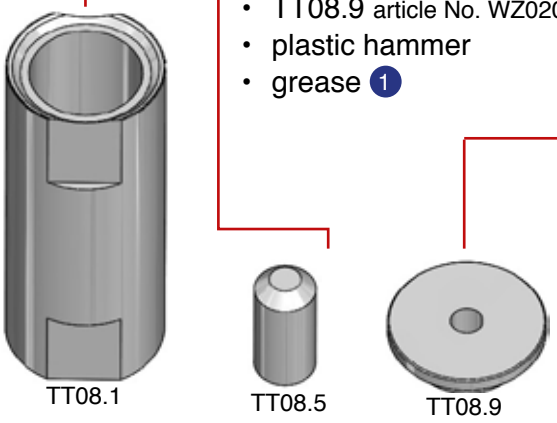
The cleaned bearing seat gets covered with a thin layer of glue (3). The bearing gets pressed in with some light hits from a hammer **fig. 8**, using the correct sized fitting stamp **fig. 7**.

Pay attention to not cant the bearings and always only strain the outer ring of the bearing.

6 Reassembling the hub

Needed tools:

- TT08.1 article No. WZ0200
- TT08.5 article No. WZ0218
- TT08.9 article No. WZ0204
- plastic hammer
- grease 1



The axle gets slightly covered with grease 1 in the contact areas. **fig.10**
The hub gets placed on the main tool **TT08.1**. Using the tool **TT08.5** and a plastic hammer the axle gets pushed back into the hub. **fig.9**

fig.9

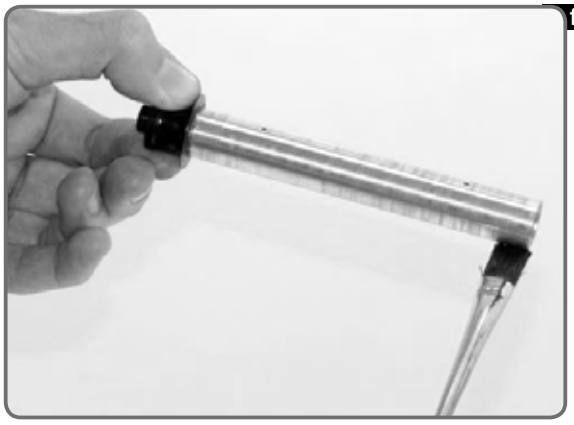


fig.10

Release axle and bearings
Place the hub on the main tool with the extra attachment **TT08.9**, that only the left endcap touches the tool. Using the tool **TT08.5** and a plastic hammer hit the axle softly. **fig.11** By doing so, strain is taken of the axle and the bearings.

fig.11

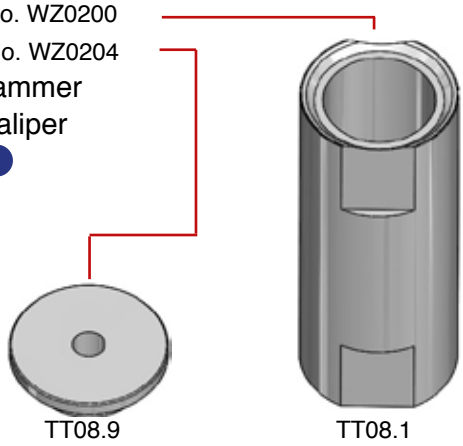
7 Setting the bearing play

Reasons for bearing play can be worn bearings, a damaged axle or just the adjustment. A certain bearing play is normal and enables a soft and smooth rotation.

The axial bearing play is adjusted with washers. These are available in 0,1mm (NZ1604), 0,15mm (NZ1605) and 0,2mm (NZ1606) width. The washers are placed between the outer freewheel bearing and the right endcap. We adjust the bearing play during production for every hub in manual labour. With wear, or when new bearings are installed, the bearing play has to be readjusted.

Needed tools:

- TT08.1 No. WZ0200
- TT08.9 No. WZ0204
- plastic hammer
- vernier caliper
- grease 1



Now the open end of the axle on the right side has to be measured. With the depth gauge of a vernier caliper measure the axle from the inner ring of the bearing to the end of the axle. The measurement has to be extremely precise, we recommend to repeat the measurement a couple of times. **fig.12**

fig.12

From the measured length **(e.g.: 8.4 mm)** subtract the depth of the endcap **(8.0 mm)**. The difference is the axial bearing play (**here 8.4 - 8.0 = 0.4 mm**).

The optimal axial bearing play amounts 0.15-0.20mm. The difference between the **measured open end of the axle (e.g.: 8.4 mm)** and the **depth of the endcap (8,0 mm)** has to be adjusted to 0.15-0.20 mm using washers. **fig.13**

fig.13

The axial bearing play is adjusted perfectly, if the length, of the open end of the axle, with washers is set to 8.15-8.20mm.

To finish of, the endcap is slightly covered with grease 1 on the inside. Now it can be pushed back on using a plastic hammer. **fig.14**

fig.14

Now the wheel is usable again.

Service

Warranty:

Tune grants a two year warranty from the date of purchase on material defects and production errors. On bearings, rims and spokes we grant a one year Warranty, as these are wear parts. Claims can only be made if a copy of an original dealer invoice is presented.

There is no claim for warranty services in case of:

- normal wear
- improper use or careless treatment
- disregard of service instructions
- inappropriate repair, assembly, or maintenance works or negligence
- defects caused by wrong wheel building (spoke patterns, spoke crossings, spoke tension, etc.)

Warranty claims have to be sent to the local Tune distributor and are subject to the assessment of Tune. Based on this warranty, the company Tune is not liable for compensation, especially not for indirect damage caused by accidents, collateral damage and consequential damage. All anodized parts can bleach in sunlight.

Crash Replacement:

Tune offers a Crash Replacement in addition to the legal warranty. The service can be engaged if your Tune product is damaged and not be ridable any more, due to a crash, accident or overload .

Conditions:

- Due to our huge products variety, the discount we can give, is assessed individually for every case.
- The damaged part is replaced by the same model. Tune reserves the right to replace the damaged part with an equal alternative.
- The damage has to affect the functionality of the component (optical damage is excluded).
- Damaged parts pass into the ownership of Tune.
- The Crash Replacement offer does not cover the costs of transport and labour.

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Outside of Germany please contact your local distributor.

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