

FRONT WHEEL HUBS

TECHNICAL MANUAL

DT SWISS

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1. GENERAL

1.1 VALIDITY

This manual describes the component specified on the front page and the footer. This manual is valid for the design of the product as of 03.12.2025. Deviations are possible and all items are subject to technical changes.

1.2 SAFETY

The safety instructions are classified as follows:



DANGER

...indicates a hazardous situation that, if not avoided, will result in death or serious injury.



CAUTION

... indicates a hazard with a medium level of risk which, if not avoided, may result in minor or moderate injury.



NOTE

... indicates a potentially hazardous situation that may result in damage to property.

1.3 TARGET GROUP

This manual is intended for the user of the component and dealers. This manual offers the experienced user the possibility to carry out minor service work himself. If you have any doubts about your own abilities, you should definitely contact an expert or a DT Swiss Service Center. Any warranty claims will lapse if work is not carried out properly.

1.4 LAYOUT

The cover page and the footing provide information about the type of product and manual as well as the version of the manual. The DT Swiss contact details can be found on the back. A list of all DT Swiss service centers can be found at www.dtswiss.com.

This manual is intended for being printed as an A5 booklet. Only print this manual if electronic usage is not possible.

1.5 DT SWISS MANUAL CONCEPT

The DT Swiss manuals are split into the following types of manuals:

- User Manual: Information for the end user on how to install and use the component.
- Technical Manual: Detailed information for the end user and the dealer on how to maintain the component, spare parts and technical data.

1.6 GENERAL MAINTENANCE INFORMATION

Unless otherwise specified, moving parts, threads, O-rings and sealings must be greased before assembly.

CLEANING

For an optimal result of the maintenance work, every component that will be disassembled must be cleaned. Only use cleaners and degreasers which do not damage the components. Especially the cleaning of O-rings and sealings requires mild cleaners. Observe the instructions for use of the respective cleaner.

DT Swiss recommends the following cleaners:

- Motorex Rex
- Motorex Swissclean
- Motorex OPAL 2400, 3000 OPAL, OPAL 5000

Use soap water or similar mild cleaners for external cleaning.

TOOLS

To ensure a damage-free mounting and dismounting of the components, only use the tools which are mentioned in this manual. Special tools are indicated at the beginning of a chapter in the table "Required material".

The use of different tools is at the discretion of the user. If components are damaged by the usage of differing tools, the user is liable.

DT Swiss special tools are precision tools. Damage-free mounting and dismounting of the components can only be ensured if the tools are working properly and if the condition of the tools are perfect. Always keep the tools in their original packaging or adequate devices to prevent damage.

1.7 ENVIRONMENTAL PROTECTION

The statutory regulations shall apply. Whenever possible, avoid creating waste. Waste, especially carbon, lubricants, cleaners and any other fluids must be disposed in an environmentally compatible manner.

Only print this manual if electronic usage is not possible.

1.8 EXCLUSION OF LIABILITY

The activities listed in this manual may only be carried out by persons with sufficient specialist knowledge. The user is liable for any damage or consequential damage caused by wrongly maintained or installed components. If you have doubts, please contact an expert or your region's DT Swiss pro level service center.

1.9 WARRANTY

Warranty conditions, see www.dtswiss.com

2. SERVICE INTERVALS

DT Swiss recommends the following maintenance activities and intervals.

Task	Interval
Small hub service (function check, cleaning and greasing)	
Under normal operating conditions	3 months
In case of extreme operating conditions (regular rides in dust, rain, snow, or in case of frequent transport while raining)	as required
Full hub service (replacement of defective parts as required)	as required
Check the tightening torques	20 operating hours
– Center Lock adapter: 40 Nm	
– Screws of the brake rotor: 6 Nm	
Clean with soft cloth and a suitable cleaning agent	After each ride
→ Do not use a high-pressure cleaner, aggressive cleaning agents, solvents or surfactants!	
Check the hub for damage.	After each ride

SMALL HUB SERVICE

During the small hub service, the following activities should be performed:

1. Dismount the end caps.
2. Clean the end caps and the underlying surfaces of the ball bearings.
3. Check the ball bearings.
 - The hub must turn smoothly.
 - There must be no play between hub and axle.
 - If there is play, or the ball bearings are running heavy or rough, a full hub service needs to be performed.
4. Grease the surfaces of the ball bearings.
5. Mount the end caps.

FULL HUB SERVICE

The full hub service must only be carried out if malfunctions are present or faults are detected during the functional tests.

The full hub service includes the activities of the small hub service and additionally the disassembly of the ball bearings and assembly of new ball bearings and the exchange of the corresponding spare parts.

2.1 IDENTIFICATION OF YOUR WHEEL/HUB

IDENTIFICATION OF YOUR WHEEL

The DT Swiss ID can be used to uniquely identify your wheel and thus the spare parts for your hub. The sticker with the ID is located either between the spokes, in the rim well or on the tubeless tape.



IDENTIFICATION OF YOUR HUB

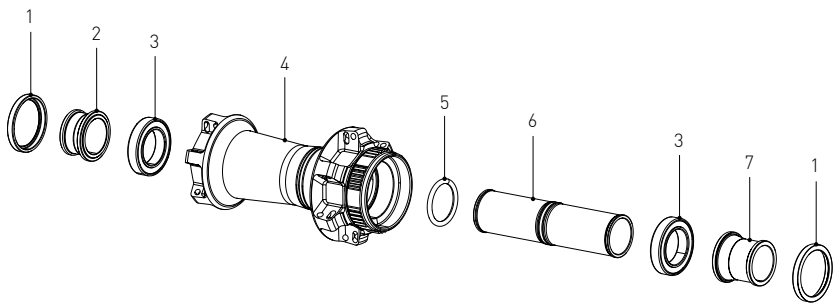
Every DT Swiss hub has a unique serial number. Note the number and contact a service center for further information.



3. SERVICING THE FRONT HUB 180 [PRESSED ON END CAPS]

Preparatory Steps	Link
Dismount the brake rotor	
Clean the hub	

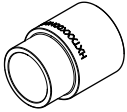
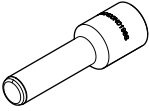
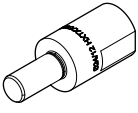
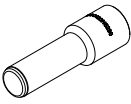
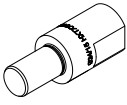
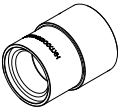
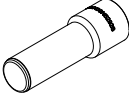
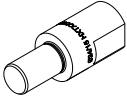
3.1 OVERVIEW



1	cover	5	O-ring
2	end cap drive side	6	spacer
3	ball bearing	7	end cap non drive side
4	hub shell		

The illustration shows an example of a 180 hub with pressed-on end caps. Details such as end caps and hub shell may vary.

3.2 REQUIRED TOOLS

Tools	Specification	Quantity	Article number
tool kit Ø24/12 mm, includes – installation cylinder Ø24/12 mm – mounting pin Ø12 mm – mounting cylinder Ø24/12 mm		1	HWTXXX00N4760S
		1	
		1	
		2	
tool kit Ø24/15 mm, includes – installation cylinder Ø24 mm – mounting pin Ø15 mm – mounting cylinder Ø24/15 mm		1	HWTXXX00N1083S
		1	
		1	
		2	
tool kit Ø26/15 mm, includes – installation cylinder Ø26 mm – mounting pin Ø15 mm – mounting cylinder Ø26/15 mm		1	HWTXXX00N1084S
		1	
		1	
		2	

Tools	Specification	Quantity	Article number
dismounting punch		1	HXTXXX00N1192S

3.3 REQUIRED WEARING PARTS AND MATERIALS

Wearing parts / Materials	Specification	Quantity	Article number
DT Swiss universal grease		20 g	HXTXXX00NMG20S

Due to the large variety of spare parts, they cannot be listed here.

At <https://www.dtswiss.com/en/support/product-support> you will find all suitable spare parts after selecting your components.

3.4 REMOVING PRESSED-ON END CAPS



NOTE

RISK OF DAMAGE TO THE END CAPS AND THE BALL BEARINGS!

The mounting pin must not touch the ball bearing while the end caps are being levered out.

1. Insert the mounting pin into one of the end caps.
→ Risk of damage: see note!
2. Push the mounting pin downwards (see picture).

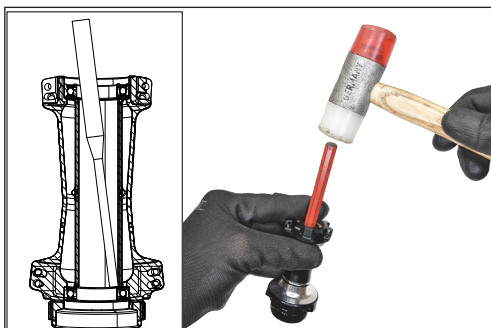


3. Remove end cap and cover.



DISMOUNTING BALL BEARINGS AND SPACER

1. Variant 1 (axle without recess):
Press the spacer slightly aside and carefully tap out the first ball bearing with a suitable punch.



1. Variant 2 (axle with recess):
Take the disassembly punch and push the end with the smaller diameter into the axle. Place the tip of the punch in the recess of the axle and carefully knock out the bearing.



2. Turn the hub by 180°.
3. Place the large diameter of the mounting pin on the spacer sleeve.
4. Tap out ball bearing.



3.5 CLEANING AND DEGREASING ALL PARTS

Clean all parts of the hub (see "Cleaning" on page 4).

3.6 MOUNTING BALL BEARING AND SPACER



NOTE

Risk of damaging the ceramic bearings!

Ceramic bearings must be installed with special care.

- The assembly force may only be applied on the outer ring of the bearing.
- Tap in the bearings carefully with slight hammer strokes.
- Only use original DT Swiss tools.
- The tools must be in good order and condition.

1. Grease the inner surface of the hub shell and especially the bearing seats with universal grease.



2. Clamp the mounting tool into a vise vertically.
3. Push the spacer onto the mounting tool.



4. Push the hub shell with the drive side onto the mounting tool.



5. Place a new ball bearing on the bearing seat with the colored side facing outwards.



6. Attach the second mounting tool to the non drive side.



7. Tap in the ball bearing with a plastic hammer.



8. Turn the hub by 180° and place it on the mounting tool.



9. Push the spacer with O-ring into the hub.



10. Place a new ball bearing on the bearing seat with the colored side facing outwards.



11. Fit the mounting tool onto the ball bearing.



12. Tap in the ball bearing with a plastic hammer.



13. Check the ball bearings.
 - The hub must turn smoothly.
 - The spacer must not be loose between the ball bearings.
14. If necessary, drive in the bearing on the non drive side or loosen the bearing.
15. Repeat previous steps until the hub is turning smoothly.

3.7 ATTACHING PRESSED-ON END CAPS

1. Grease the bearings and the inner surface of both end caps.
2. Fit one of the two end caps and the cover onto the hub.
The longer end cap must be placed on the non drive side.



3. Push on the installation cylinder.
4. Insert the mounting pin into the tool.



5. Tap the cover onto the hub shell.
6. Repeat the procedure for the second end cap.



Closing Steps:

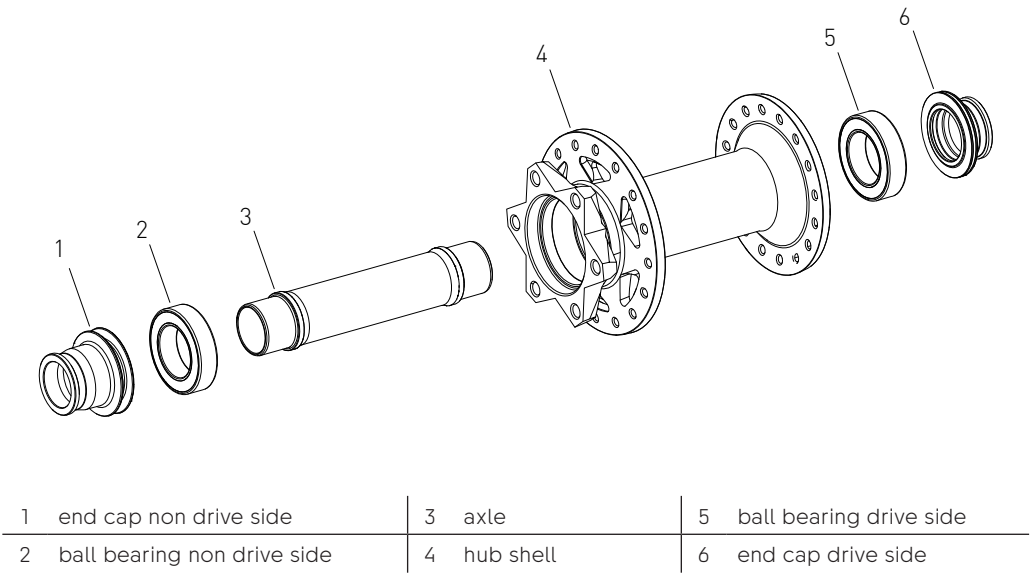
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Mount the brake rotor

4. SERVICING THE FRONT HUB 180, 240 [PRESSED ON END CAPS]

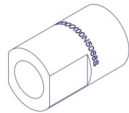
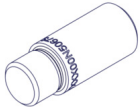
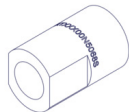
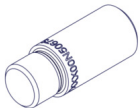
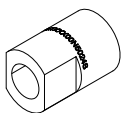
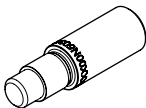
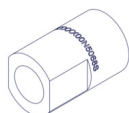
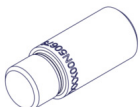
Preparatory Steps	Link
Dismount the brake rotor	
Clean the hub	

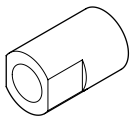
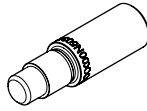
4.1 OVERVIEW



The figure shows the exemplary structure of a 180 and 240 hub. Details such as end caps, hub shells and bearing and axle diameters may vary.

REQUIRED TOOLS

Tools	Specification	Quantity	Article number
Tools for front wheel hubs with Ø17 / 28 mm ball bearings			
installation cylinder Ø17 / 28 mm x 40 mm		2	HXTXXX00N9345S
axle tool Ø17 mm		1	HXTXXX00N5067S
Tools for front wheel hubs with Ø18 / 30 mm ball bearings			
Tool kit HWTXXX00NTK15S, includes: – installation cylinder Ø18 / 30 mm x 40 mm		2	HXTXXX00N5167S
– axle tool Ø18 mm		1	HXTXXX00N5168S
Tools for front wheel hubs with Ø15 / 28 mm ball bearings			
installation cylinder Ø15 / 28 x 35 mm		2	HXTXXX00N5024S
axle tool Ø15 mm		1	HXTXXX00N5031S
Tools for front wheel hubs with Ø17 / 26 mm ball bearings			
Tool kit HWTXXX00NTKRAS, includes: – installation cylinder Ø17 / 26 mm		2	HXTXXX00N5068S
– axle tool Ø17 mm		1	HXTXXX00N5067S

Tools	Specification	Quantity	Article number
Tools for front wheel hubs with Ø15 / 26 mm ball bearings			
installation cylinder Ø15 / 26 x 40 mm		2	HXTXXX00N5314S
axle tool Ø15 mm		1	HXTXXX00N5031S

Tools for front wheel hubs with Ø20 / 37 mm ball bearings			
tool kit HWTXXX00NTKFRS, includes: – installation cylinder Ø20 / 37 mm		2	HXTXXX00N5038S
– axle tool Ø20 mm		1	HXTXXX00N5046S

4.2 REQUIRED WEARING PARTS AND MATERIALS

Wearing parts / Materials	Specification	Quantity	Article number
DT Swiss universal grease		20 g	HXTXXX00NMG20S

Due to the large variety of spare parts, they cannot be listed here.

At <https://www.dtswiss.com/en/support/product-support> you will find all suitable spare parts after selecting your components.



NOTE

RISK OF DAMAGE TO THE END CAPS BY THE CLAMPING JAWS OF THE VISE!

If end caps are clamped in a vise with roughened jaws, the end caps will be damaged.

- Only use ground clamping jaws, aluminium or plastic clamping jaws for clamping the end caps.

4.3 REMOVING THE END CAPS

1. Pull off both end caps by hand.

If the end caps cannot be pulled off by hand, clamp the end caps carefully into a vise with ground clamping jaws and pull the hub / wheel upwards.



4.4 DISMOUNTING THE BEARINGS AND THE AXLE

1. Push the axle tool onto the axle.



2. Tap the bearing out of the hub shell using the disassembly tool and a hammer.



3. Turn the hub over, put the axle through the second bearing and put the axle tool on the axle.
4. Tap out the second bearing using the axle tool and a hammer.

4.5 CLEANING AND DEGREASING ALL PARTS

Clean all parts of the hub (see "Cleaning" on page 4)

4.6 MOUNTING BEARINGS AND AXLE

1. Slightly grease the seating of the bearings and the inner surface of the hub shell using universal grease.



2. Put the installation cylinder into the vise.
3. Push the drive side of the hub shell onto the installation cylinder.



4. Put the axle onto the installation cylinder.



5. Slightly grease the bearing and put it onto the non drive side with the colored side facing outwards.



6. Place the axle tool on the ball bearing and axle.



7. Put the installation cylinder onto the bearing.



8. Tap the bearing into the hub shell with slight hammer strokes.



9. Remove the axle and press the bearing in as far as it will go (approx. 0.2 mm).
10. Remove the installation cylinder from the hub and remove the hub from the vise.
11. Put the non drive side of the hub with the axle onto the installation cylinder.



12. Slightly grease the bearing and put it onto the drive side with the colored side facing outwards.



13. Attach the axle tool to the axle.
→ The axle tool centers the installation cylinder on the bearing, preventing it from tilting during installation.
14. Fit the installation cylinder onto the axle tool and ball bearing.



15. Drive the second bearing into the hub shell with slight hammer strokes.
16. Remove both installation cylinders from the hub.



17. Check the bearing.
→ The hub must turn smoothly.
→ The hub must not have axial play.
18. If necessary, drive in the bearing on the non drive side or loosen the bearing.
19. Repeat previous steps until the hub is turning smoothly.



4.7 PUTTING ON THE END CAPS

1. Grease the bearings and the inner surface of both end caps.



2. Put on both end caps by hand.
3. Caution: If the end caps have different lengths, the longer one must be put to the non drive side.



Closing Steps:

Mount the brake rotor

[Link](#)

5. SERVICING THE FRONT HUB 350 THRU AXLE

Preparatory Steps	Link
Dismount the brake rotor	
Clean the hub	

5.1 OVERVIEW

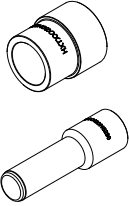
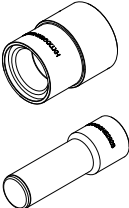
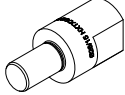
OVERVIEW 350 THRU AXLE WITH PRESSED-ON END CAPS

1	cover	4	spacer	7	end cap drive side
2	end cap non drive side	5	O-ring		
3	ball bearing	6	hub shell		

OVERVIEW 350 THRU AXLE WITH PLUGGED END CAPS

1	end cap non drive side	3	spacer	5	hub shell
2	ball bearing	4	O-ring	6	end cap drive side

5.2 REQUIRED TOOLS

Tools	Specification	Quantity	Article number
Tool set 350 Ø15 mm, includes – installation cylinder Ø28 mm – mounting pin Ø15 mm		1	HWTXXX00N5290S
		1	
		1	
Tool set 350 Ø20 mm, includes – installation cylinder Ø37 – mounting pin Ø20 mm		1	HWTXXX00N5292S
		1	
		1	
mounting tool		2	HXTXXX00N9793S

5.3 REQUIRED WEARING PARTS AND MATERIALS

Wearing parts / Materials	Specification	Quantity	Article number
DT Swiss universal grease		20 g	HXTXXX00NMG20S

Due to the large variety of spare parts, they cannot be listed here.

At <https://www.dtswiss.com/en/support/product-support> you will find all suitable spare parts after selecting your components.

5.4 REMOVING PRESSED-ON END CAPS

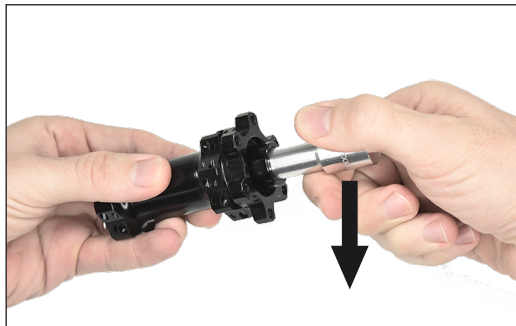


NOTE

RISK OF DAMAGE TO THE END CAPS AND THE BALL BEARINGS!

The mounting pin must not touch the ball bearing while the end caps are being levered out.

1. Insert the mounting pin into one of the end caps.
→ Risk of damage: see note!
2. Push the mounting pin downwards (see picture).
3. Remove end cap and cover.



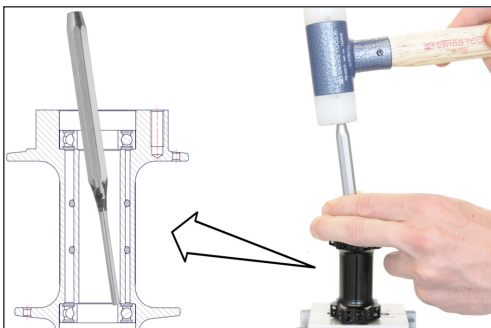
5.5 REMOVING THE PLUGGED-IN END CAPS

1. Clamp one of the end caps into a vise.
2. Pull off the wheel, respectively the hub.
3. Clamp the second adapter into the vise.
4. Pull off the wheel, respectively the hub.

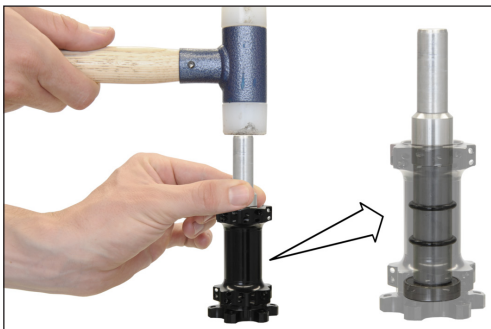


DISMOUNTING BALL BEARING AND SPACER

1. Press the spacer slightly aside and carefully tap out the ball bearing on the drive side with a suitable punch.



2. Turn the hub by 180°.
3. Place the large diameter of the mounting pin on the spacer sleeve.
4. Knock out the ball bearing on the non drive side.



5.6 CLEANING AND DEGREASING ALL PARTS

Clean all parts of the hub (see Cleaning, page 5)

5.7 MOUNTING BALL BEARING AND SPACER

1. Grease the inner surface of the hub shell and especially the bearing seats with universal grease.



2. Clamp the mounting tool into a vise vertically.
3. Push the spacer onto the mounting tool.



4. Push the hub shell with the drive side onto the mounting tool.



5. Fit the ball bearing onto the hub with the colored side facing outwards.



6. Attach the second mounting tool to the non drive side.



7. Tap in the ball bearing with a plastic hammer.



8. Turn the hub by 180° and place it on the mounting tool.



9. Push the spacer with O-rings into the hub.



10. Place a new ball bearing on the bearing seat with the colored side facing outwards.



11. Fit the mounting tool onto the ball bearing.



12. Tap in the ball bearing with a plastic hammer.



13. Check the ball bearings.

→ The hub must turn smoothly.

→ The spacer must not be loose between the ball bearings.

14. If necessary, drive in the bearing on the non drive side or loosen the bearing.

15. Repeat previous steps until the hub is turning smoothly.



5.8 ATTACHING PRESSED-ON END CAPS

1. Grease the bearings and the inner surface of both end caps.
2. Fit one of the two end caps and the cover onto the hub.
The longer end cap must be placed on the non drive side.



3. Push on the installation cylinder.
 - end cap non drive side: Attach the installation cylinder with the small diameter.
 - end cap drive side: Attach the installation cylinder with the large diameter.
4. Insert the mounting pin into the tool.



5. Tap the cover onto the hub shell.
6. Repeat the procedure for the second end cap.



5.9 ATTACHING PLUGGED END CAPS

1. Grease the bearings and the inner surface of both end caps.
2. Push one of the two end caps on the hub.
The longer end cap must be placed on the non drive side.



3. Press the end cap into the hub by hand.
4. Repeat the procedure for the second end cap.



Closing Steps:

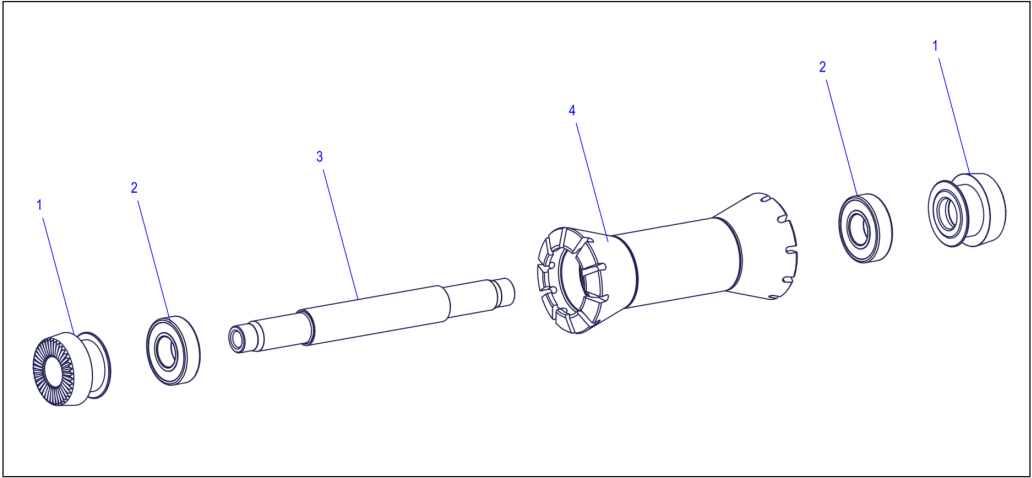
[Link](#)

Mount the brake rotor

6. SERVICING THE FRONT HUB 350 QR

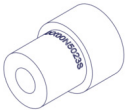
Preparatory Steps	Link
Clean the hub	

6.1 OVERVIEW



1 end cap	3 axle
2 ball bearing	4 hub shell

6.2 REQUIRED TOOLS

Tools	Specification	Quantity	Article number
installation cylinder		2	HXTXXX00N5023S

6.3 REQUIRED WEARING PARTS AND MATERIALS

Wearing parts / Materials	Specification	Quantity	Article number
DT Swiss universal grease		20 g	HXTXXX00NMG20S

Due to the large variety of spare parts, they cannot be listed here.

At <https://www.dtswiss.com/en/support/product-support> you will find all suitable spare parts after selecting your components.

6.4 REMOVING THE END CAPS

1. Lever off the end caps by a few millimeters using a small screwdriver or similar suitable tool.



2. Remove the end caps from the hub by hand.



6.5 DISMOUNTING THE BEARINGS AND THE AXLE

1. Tap out ball bearing. To do this, hit the axle with a plastic hammer.



2. Remove the ball bearing from the axle.



3. Push the axle through the second ball bearing.
4. Repeat steps on second ball bearing

6.6 CLEANING AND DEGREASING ALL PARTS

Clean all parts of the hub (see Cleaning, page 5)

6.7 MOUNTING BEARINGS AND AXLE

1. Grease the inner surface of the hub shell and bearing seats.



2. Insert the axle into the installation cylinder.
3. Push the hub shell onto the installation cylinder and axle.
For hubs with disc brake mount, the ball bearing on the non drive side must be mounted first.
4. Push a new bearing on the axle and the hub shell with the colored side facing outwards.



5. Fit the second installation cylinder onto the ball bearing and tap in the ball bearing.



6. Turn hub 180° and repeat step 3 to step 5 on the second side of the hub.
7. Check the play of the hub. To do this, hold the hub and move the axle axially.
→ The axle must not have any play!
8. If play is noticeable, tap in the ball bearing.
→ For hubs with disc brake mount, tap in the bearing on non drive side first.
9. Check the running of the ball bearings. To do this, hold the axle firmly and turn the hub shell.
→ The hub must turn smoothly.
10. If the hub runs sluggishly, loosen the ball bearings slightly by tapping the axle lightly with a hammer.
→ For hubs with disc brake mount, slightly loosen the ball bearing on the drive side.



6.8 PUTTING ON THE END CAPS

1. Grease the bearings and the inner surface of both end caps.
2. Push the end caps onto the hub by hand.
For hubs with disc brake mount, the longer end cap must be fitted on the non drive side.



Closing Steps:

not required

[Link](#)

7. TROUBLE SHOOTING

Issue	Reason	Solution
Hub has axial play	Ball bearings were not mounted correctly.	Check correct assembly.
	Ball bearings are worn out.	Replace ball bearings.
Hub rotates stiffly	Ball bearings are worn out.	Replace ball bearings.
	Ball bearing non drive side too tight.	Check correct assembly.
	Mounting sequence of the ball bearings not observed.	
Hub makes noise	Ball bearings are worn out.	Replace ball bearings.

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