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Campagnolo®

HYPERON ULTRA

PART 2

Manuale Uso e Manutenzione - Owner's Manual - Bedienungs-Anleitung
Manuel d'instructions et d'entretien - Manual de Uso y de Manutención - Handleiding



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USE OF THE MANUALS (PART 1 + PART 2)

WARNING!

Carefully read, understand and follow the instructions given in both manuals (PART 1 + PART 2), that are an essential part of the product, and keep them for future reference.

Please be advised that many bicycle service and repair tasks require specialized knowledge, tools and experience.

General mechanical aptitude may not be sufficient to properly service or repair your bicycle. If you have any doubt whatsoever regarding your ability to properly service or repair your bicycle, please take your bicycle to a qualified repair shop.

Improper adjustment or service can result in an accident, personal injury or death.

Campagnolo S.r.l. reserves to modify the content of this manual without notice.

The updated version will always be available www.campagnolo.com.

On our website you will also find information on the other Campagnolo® products and the spare parts catalogue.

This product is protected by one or more of the following:

- **Patent:** AU 783315 – EP 1231077 – FR 2771370 – FR 2814114 – IT 1296196 - IT 1320644 – MX 237380 – NL 1018963 – PT 102664 – TW 184989 – TW 240365 - US 5997104 - US 6761847 - US 6783192
- **Patent applications:** CN 01140856.1 - CN 02105419.3 - CN 0510074749.1 - CN 0610059756.9 - CZ PV2001-3314 - CZ PV2002-513 - DE 10145149.0 - DE 19828009.2 - EP 03425547.1 - EP 04425402.7 - EP 05425235.8 - IT TO2001A000121 - JP 10-217047 - JP 2001-273748 - JP 2002-35606 - JP 2005-155510 - JP 2006-111831 - TW 94113301 - TW 95108446 - US 10/815585 - US 10/913641 - US 10/914454 - US 11/136237 - US 11/397071 - VN 1-2002-00166

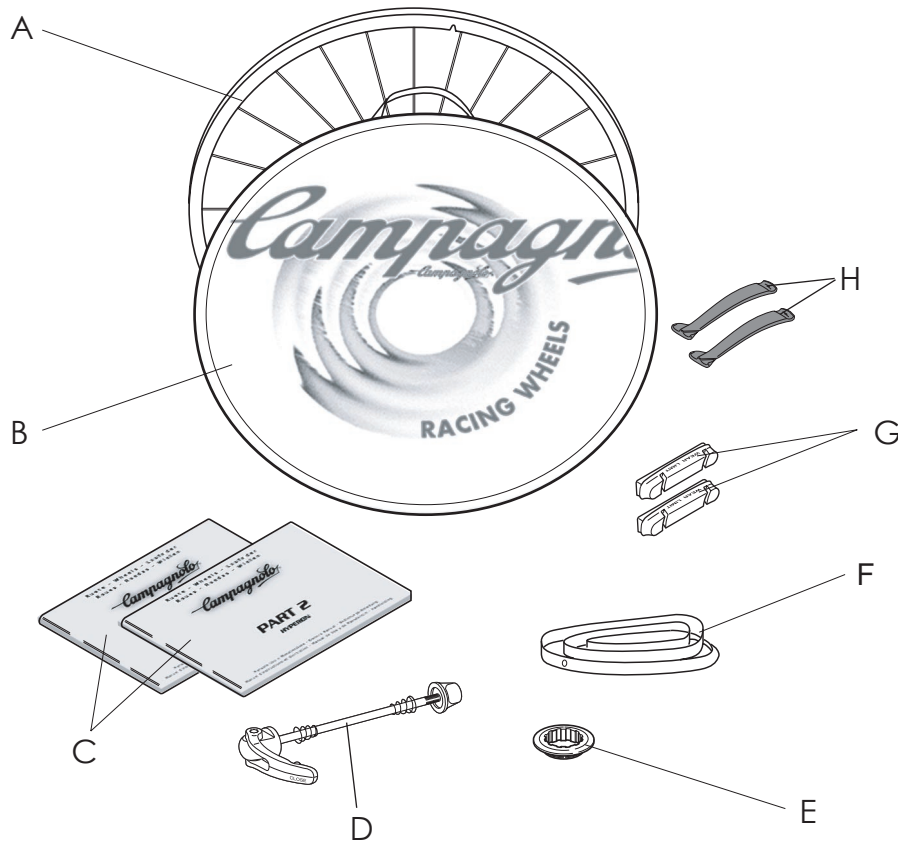


1. THE PACKAGE

The package you have purchased contains the following items (Fig. 1):

- A - The wheel;
- B - The wheel carry-bag (not all models);
- C - "Owner's Manual PART 1" and "Owner's Manual PART 2 - **HYPERON™ ULTRA™**";
- D - The quick release;
- E - The lock ring for clamping the sprocket set (rear wheels only);
- ⚠ **Caution!**
The lock ring is not compatible with sprocket sets starting from 11.
- F - The rim tape.
- G - Package containing a pair of dedicated brake pads which are mandatory for use with this model of wheels.
- H - Levers in composite material for removing clinchers.

1



2. TECHNICAL SPECIFICATIONS

WHEEL TECHNICAL SPECIFICATIONS

Rim diameter: ETRTO 622x13C	Quick release types: front QF6-20 - rear QR6-20
Hub type: HPW Carbon	Nominal wheel weight: front 575 g - rear 775*/780** g * Campagnolo ** HG10
O.L.D.: front: 100 mm - rear: 130 mm	Inflation pressure: see the inflation pressures listed in the table on Page 5.
Use: road racing on smooth road or track surfaces <u>only</u> .	

SPOKES TECHNICAL SPECIFICATIONS



WARNING!

Only use genuine Campagnolo® spokes for your specific type and model of wheel. Failure to use the correct spokes can lead to an accident, personal injury or death.

Front wheel:

- Spokes type: AERO 2/1.5/2 - black
- Spokes number: 22
- Spokes length: 291 mm
- Recommended tension: 60÷80 Kg

Rear wheel - freewheel side:

- Spokes type: AERO 2/1.5/2 - black
- Spokes number: 12
- Spokes length: 289 mm
- Recommended tension: 120÷140 Kg

Rear wheel - side opposite the freewheel:

- Spokes type: AERO 2/1.5/2 - black
- Spokes number: 12
- Spokes length: 291 mm
- Recommended tension: 50÷70 Kg

The section of the two spokes adjacent to the position diametrically opposite the valve hole is oversized in order to obtain a dynamically balanced wheel. This occurs because the mass of these two spokes counterbalances the mass of the valve, thus obtaining a reduction of the unbalance of the masses in movement during rotation. In the event of replacement of the spokes themselves, keep them in the same position to maintain the wheel balancing effect.



3. TIRES

! WARNING! Rim-Tire Compatibility

All Campagnolo® rims are built in strict accordance with ETRTO (European Tire and Rim Technical Organization) specifications, and are very precise dimensionally.

If a tire is too easy to install on a Campagnolo® rim, that tire is most likely too big and will not seat properly on the rim. If a tire is too difficult to install, that tire is most likely too small. Use only high quality tires that require the use of tire levers and a reasonable installation effort. Using talcum powder on the tire will make installation easier. Using a tire that does not fit properly on the rim can cause unexpected tire failure, resulting in an accident, personal injury or death.

- The wheel you have purchased is designed to use clincher tires.
- Before fitting the tires, install the protective rim tape on the rim. Use only the rim tape provided (which is also available as spare part **WH-RT02**).
- Before fitting the tires, check that the diameter indicated on the tire is 622 and cross-section is between 18 and 25 mm, to insure that the tire and wheel are compatible in accordance with ETRTO (European Tire and Rim Technical Organization) standards.

! WARNING!

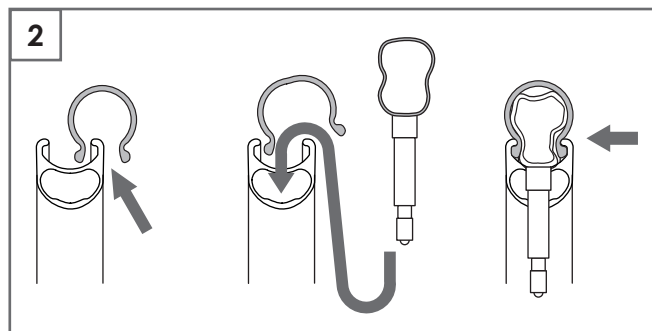
Never use Latex inner tubes with this rim. The heat generated when braking will cause the inner tube to suddenly fail, resulting in an accident, personal injury or death.

- The use of clincher tyres having a minimum diameter of 22 mm is recommended so as to better protect the sides of the rim.
- Failure to properly install the tire can cause sudden and unexpected loss of tire pressure, resulting in an accident, personal injury or death.

INSTALLING CLINCHER TIRES

Be sure that you do not bend or otherwise damage any portion of the rim when installing the tire.

- Insert one side of the clincher into the seat provided on the rim (Fig. 2).



- Slightly inflate the inner tube to facilitate assembly.
- Insert the valve through the hole in the rim, and then position the remainder of the inner tube between the rim and the clincher tire.
- Insert the second side of the clincher tire into its seat in the rim.
- In order to properly set the tube and tire on the rim, you should first inflate the tube to between 2 and 3 atmospheres. You should then manually set the tube and tire on the rim, making sure that the tube is positioned correctly within the tire and that the tire is positioned correctly on the rim. You may then fully inflate the tube to the correct working pressure. Please inflate the tube slowly, making sure that you maintain the correct positioning of the tube and tire on the rim.

3.1 - INFLATING AND DEFLATING THE TIRE

- To inflate the tire: remove the cap, unscrew the valve and inflate using a compressor or a pump with a pressure gauge to obtain the required pressure, then tighten the valve and re-fit the cap.
- To deflate the tire: remove the cap, slightly unscrew the valve, then press it until the required pressure is obtained; tighten the valve and re-fit the cap.

! WARNING!

Never exceed the maximum inflation pressure recommended by the tire manufacturer or for the cross section of the clincher tire you are using (see the "Operating Pressures" table).

Excessive tire pressure reduces the grip of the tire on the road and increases the risk that the tire will unexpectedly burst. Inflation pressure that is too low reduces tire performance and increases the probability of sudden and unexpected loss of tire pressure. In addition, premature wear and damage to the rim may occur.

! WARNING!

Incorrect tire pressure could cause tire failure or loss of control of the bicycle, resulting in an accident, personal injury or death.

Operating pressure		
Clincher cross-section (mm)	Pressure (bar)	Pressure (psi)
22	8,2	118
23	7,8	113
25	7,2	104

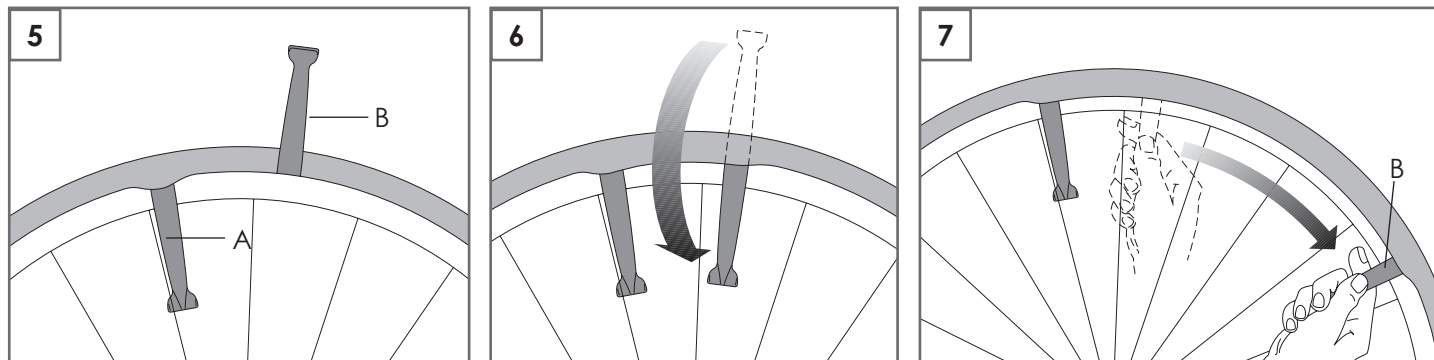


3.2 - REMOVING THE CLINCHER

- Deflate the tire.
- Insert one of the two levers (A) (supplied with the wheel) between the rim and the tire at a point opposite the valve hole (Fig. 3); press downward to pull out the edge of the clincher over the rim and fit the end of the lever (A) onto the nearest spoke (Fig. 4).
- To remove the clincher, insert lever (B) between the rim and the clincher near lever A (Fig. 5) and press downward to pull out the edge of the clincher over the rim (Fig. 6).
- To pull out the entire edge of the clincher from the rim, run the lever (B) right round the edge of the clincher (Fig. 7).



WARNING!
To remove the clincher, use only levers in composite material such as those provided. Levers in different material could damage the rim. A damaged rim may break unexpectedly resulting in accidents, personal injury or death.



4. REPLACING THE RIM



WARNING!
Replace the rim when the distance between the shoulders of the rim is greater than 13.5 mm (Fig. 10). A deformed rim may cause the clincher tire to suddenly fail, resulting in an accident, personal injury or death.

Note

Exposure to sunlight may cause the rim to turn yellow. This does not affect the performance and safety of the wheel. Nevertheless, we recommend that you protect the wheels from direct sunlight when not in use.

- Before commencing wheel disassembly operations, write on a piece of paper the original layout of the rim and the spoke arrangement to ensure that the wheel can be re-assembled correctly.
- Only use new, original Campagnolo® spare parts.
- Do not allow the spokes to rotate when nuts are tightened or loosened. Make sure that no damage is caused to the surface of the spokes.



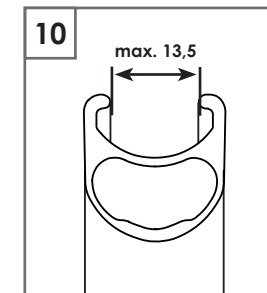
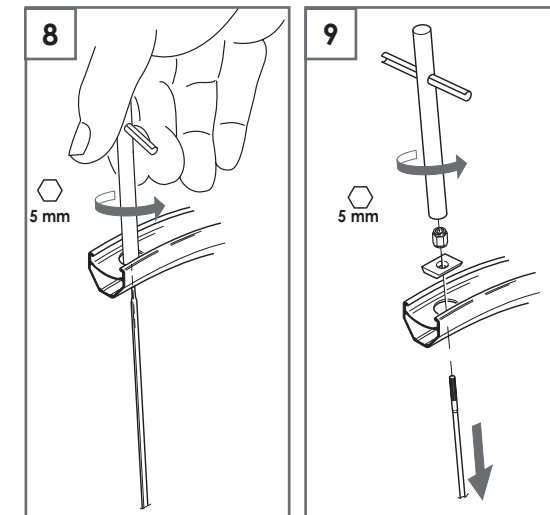
CAUTION!
Take special care when handling the spokes during assembly to prevent accidentally scratching the rim.

- Using a 5 mm hex wrench, unscrew the nuts on all wheel spokes by one turn (Fig. 8), holding the spokes steady to prevent rotation.



WARNING!
Be very careful not to damage the spokes. Using wheels that have not been centred properly or which have broken or damaged spokes may result in accidents, personal injury or death.

- For each spoke, completely unscrew the nut, remove the pad and slide the spoke out of the rim (Fig. 9).



- For every spoke (Fig. 11):
 - insert the new spoke in the hole in the new rim.
 - insert the plate, positioning the longest side longitudinally compared with the rim rotation direction.
 - install, but do not fully tighten the nut.

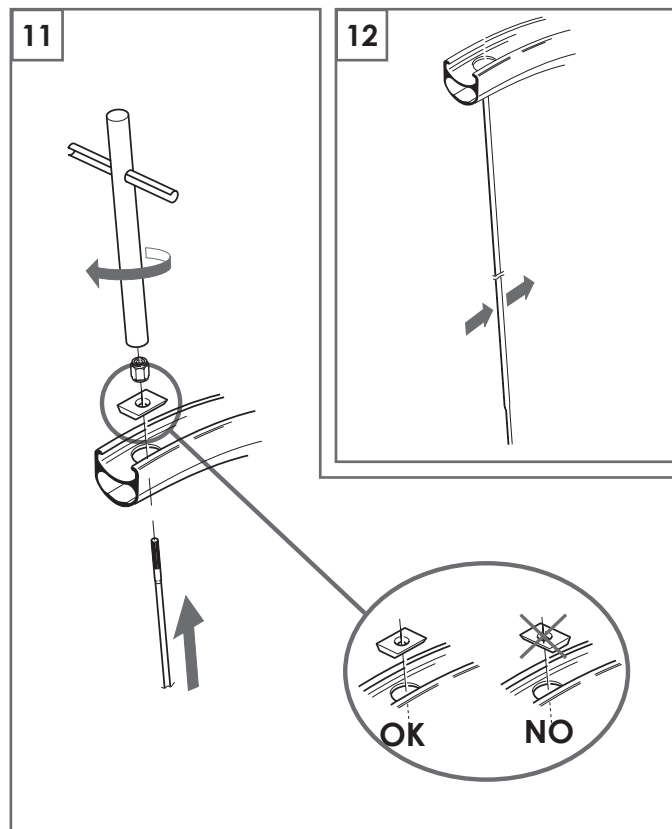
Attention

After completing the operation, check that the flat spoke (aero) is oriented in an aerodynamic position (Fig. 12).

**WARNING!**

When performing the following operations, check that the plates remain in position (Fig. 11) since an incorrectly positioned plate may cause irreparable damage to the profile of the rim when tensioning the spokes. A deformed rim may cause the clincher tire to suddenly fail, resulting in an accident, personal injury or death.

- Perform these operations for all spokes.
- Following the operations described in Section 5 of the "Owner's Manual - PART 1":
 - Tighten and Settle the Spokes.
 - Check centering and wheel dishing.

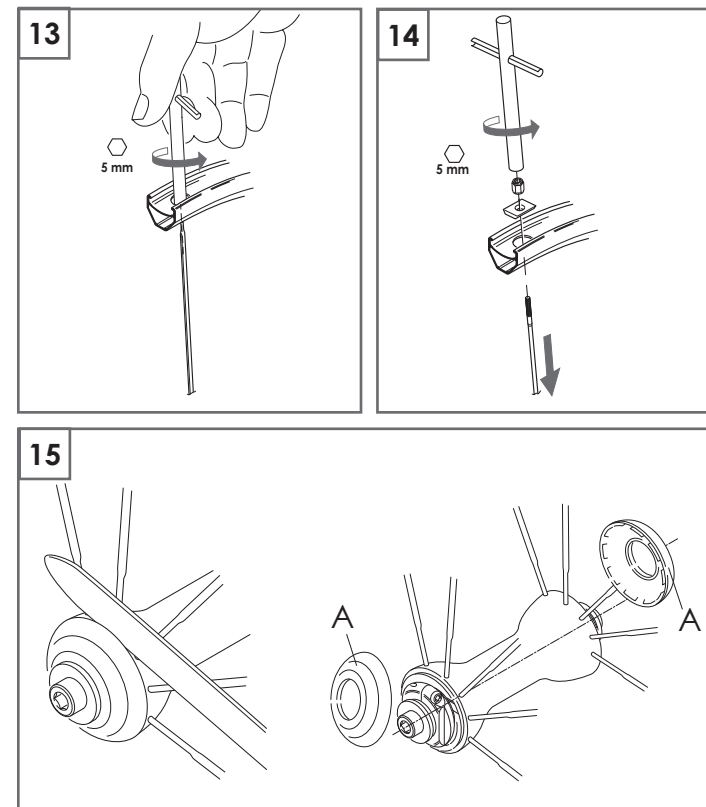
**5. REPLACING A SPOKE****5.1 - FRONT WHEEL AND REAR WHEEL ON THE SIDE OPPOSITE THE FREEWHEEL**

- Before proceeding with assembly, check in the technical specifications on page 3 the type and length of the spoke to be replaced, the recommended value and the maximum value which must not be exceeded when tightening the spokes.
- Check that there are no residues of sand or any other foreign material inside the rim and, if necessary, remove them with a jet of compressed air.
- Obtain an original Campagnolo® replacement spoke.
- Do not allow the spokes to rotate when nuts are tightened or loosened. Make sure that no damage is caused to the surface of the spokes.

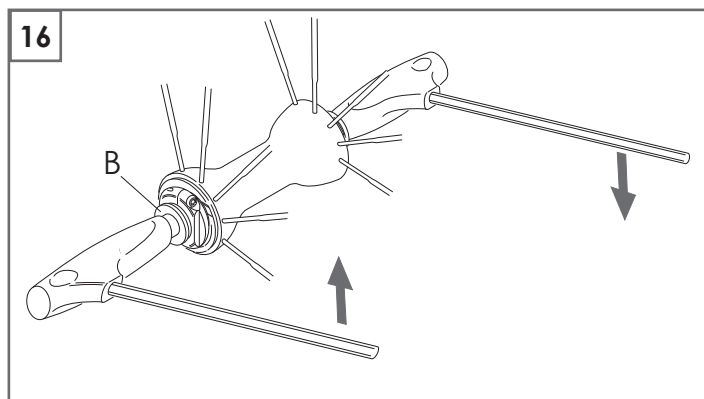
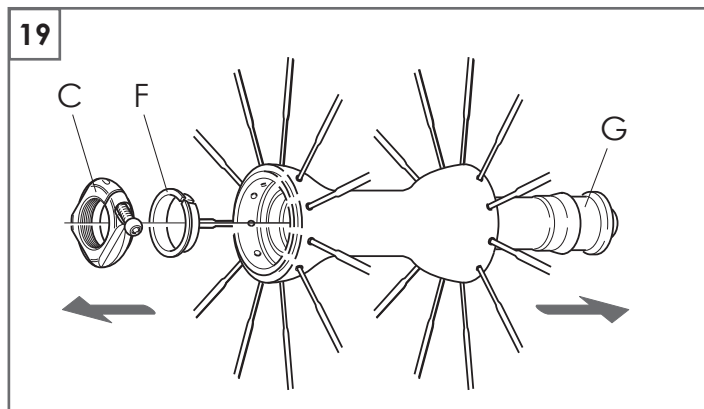
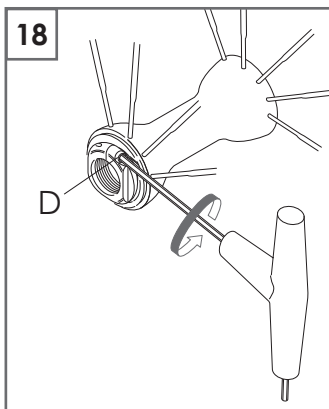
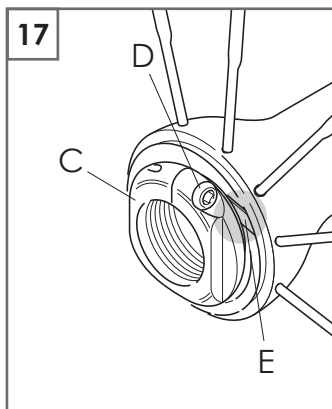
**CAUTION!**

Take special care when handling the spokes during assembly to prevent accidentally scratching the rim.

- Using a 5 mm hex wrench, completely unscrew the nut of the spoke to be replaced (Fig. 13), holding the spoke steady to prevent rotation.
- Remove the nut and plate, then slide the spoke out of the rim (Fig. 14).
- Using a stiff blade (such as small knife) positioned as indicated in fig. 15 and taking care not to damage the hub or the spokes, remove the side covers (A) from the hub.



- Unscrew the locking nut (B - Fig. 16) with a fully inserted 5 mm Allen wrench; counter the rotation of the axle with another 5 mm Allen wrench fully inserted on the opposite end of the axle itself.
- Align the screw (D - Fig. 17) of the locking (C - Fig. 17) with the groove (E - Fig. 17) on the hub body.
- Using a 2.5 mm Allen wrench, loosen the screw by 3 turns (D - Fig. 18).
- Unscrew and remove the locking (C - Fig. 19), remove the ring (F - Fig. 19), then slide out the axle (G - Fig. 19).



- Slide out the spoke to be replaced (H - Fig. 20) from the hub.
- Insert the new spoke (I - Fig. 21) in the hole in the hub, insert the spoke through the hole in the rim, and position the plate as show in Fig. 22. Tighten the spoke to the correct tension as shown in section 2, "Technical Specifications".

! WARNING!

When tightening the spoke, check that the plates remain in position (Fig. 22) since an incorrectly positioned plate may cause irreparable damage to the profile of the rim when tensioning the spokes. A deformed rim may cause the clincher tire to suddenly fail, resulting in an accident, personal injury or death.

- Refit the hub, performing disassembly operations in reverse order.

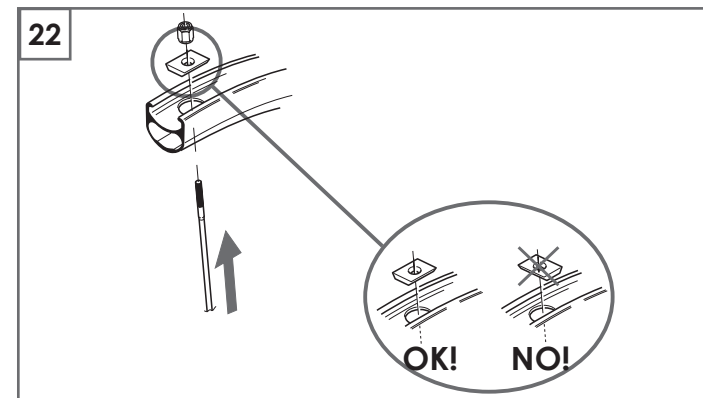
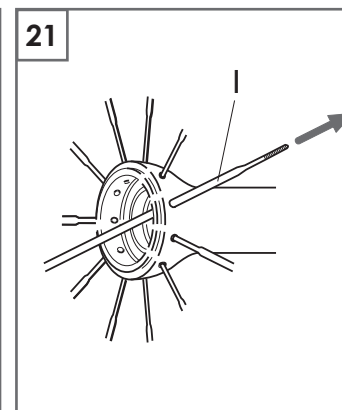
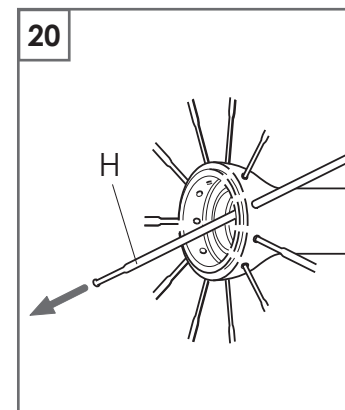
Attention

When inserting the axle, be careful not to move the ball bearings out of their seats.

Attention

After completing the operation, check that the flat spoke (aero) is oriented in an aerodynamic position (Fig. 12 - Pag. 8).

- Following the operations described in Section 5 of the "Owner's Manual - PART 1":
 - Tighten and Settle the Spokes.
 - Check centering and wheel dishing.
- After having replaced the spoke and tensioned and centered the wheel, adjust the hub (see section 7).



5.2 - REAR WHEEL ON THE FREEWHEEL SIDE

- Before proceeding with assembly, check in the technical specifications on page 3 the type and length of the spoke to be replaced, the recommended value and the maximum value which must not be exceeded when tightening the spokes.
- Check that there are no residues of sand or any other foreign material inside the rim and, if necessary, remove them with a jet of compressed air.
- Obtain a new, original Campagnolo® replacement spoke.
- Do not allow the spokes to rotate when nuts are tightened or loosened. Make sure that no damage is caused to the surface of the spokes.

! CAUTION!

Take special care when handling the spokes during assembly to prevent accidentally scratching the rim.

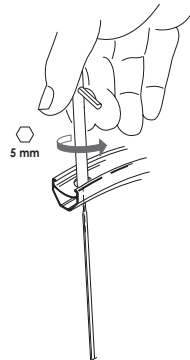
- Remove the sprocket set (Section 8).
- Using a 5 mm hex wrench, completely unscrew the nut of the spoke to be replaced, holding the latter steady to prevent rotation, remove the spoke, remove the plate and then slide the spoke out of the rim (Fig. 23).
- Remove the spoke together with the cable end (A - Fig. 24).

! CAUTION!

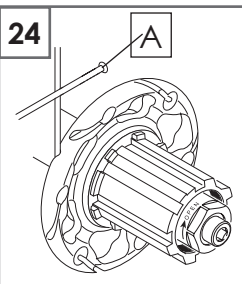
If necessary, first lift the spoke overlapping the one to be replaced and, after assembly of the new spoke, make sure it is returned to exactly the same position.

- Insert the new spoke in the hole on the rim, insert the plate positioning the longest side longitudinally compared with the rim rotation direction, then tighten the nut (Fig. 25) to the correct spoke tension as shown in section 2, "Technical Specifications".

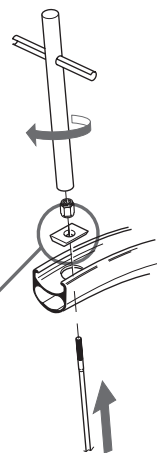
23



24



25



! WARNING!

When fitting the wheel, check that the plates remain in position since an incorrectly positioned plate may cause irreparable damage to the profile of the rim when tensioning the spokes. A deformed rim may cause the clincher tire to suddenly fail, resulting in an accident, personal injury or death.

- Insert the new spoke in the specific seat in the hub (Fig. 26).

! CAUTION!

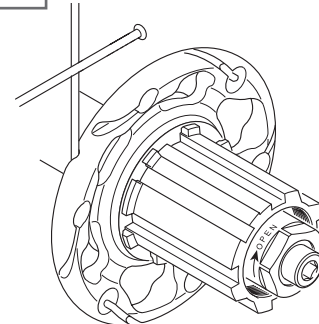
If necessary, first lift the spoke overlapping the one to be replaced and, after assembly of the new spoke, make sure it is returned to exactly the same position.

Attention

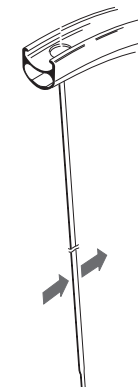
After completing the operation, check that the flat spoke (aero) is oriented in an aerodynamic position (Fig. 29).

- Following the operations described in Section 5 of the "Owner's Manual - PART 1":
 - Tighten and Settle the Spokes.
 - Check centering and wheel dishing.
- After having replaced the spoke and tensioned and centered the wheel, adjust the hub (see section 7).

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6. DISASSEMBLY, ASSEMBLY AND LUBRICATION OF HUBS



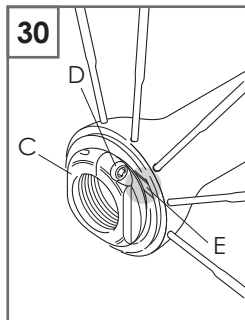
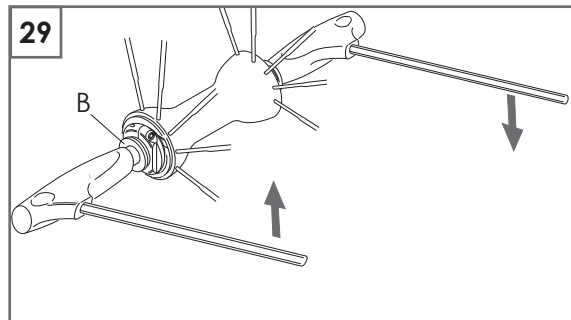
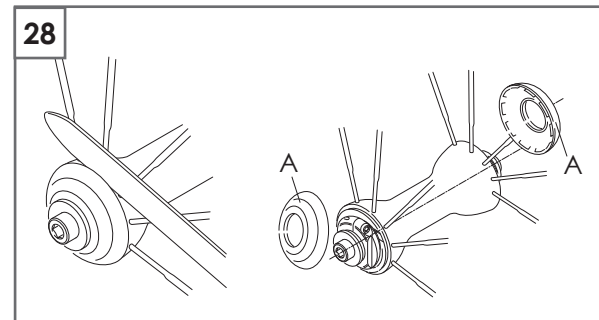
WARNING!

Always wear protective gloves and glasses while working on the hubs.

The carbon hubs of the **HYPERON™ ULTRA™** wheels have no lubrication holes. They must therefore be disassembled to carry out this operation.

6.1 - DISASSEMBLY AND ASSEMBLY OF THE FRONT HUB

- Using a stiff blade (such as small knife) positioned as indicated in fig. 28 and taking care not to damage the hub or the spokes, remove the side covers (A) from the hub.
- Unscrew the locking nut (B - Fig. 29) with a fully inserted 5 mm Allen wrench; counter the rotation of the axle with another 5 mm Allen wrench fully inserted on the opposite end of the axle itself.
- Align the screw (D - Fig. 30) of the lock ring (C - Fig. 30) with the groove (E - Fig. 30) on the hub body.

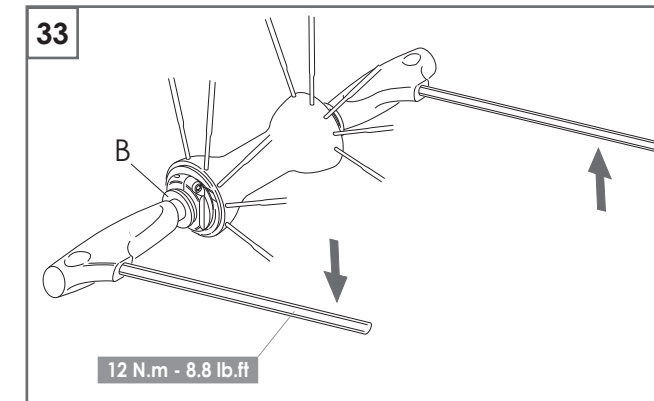
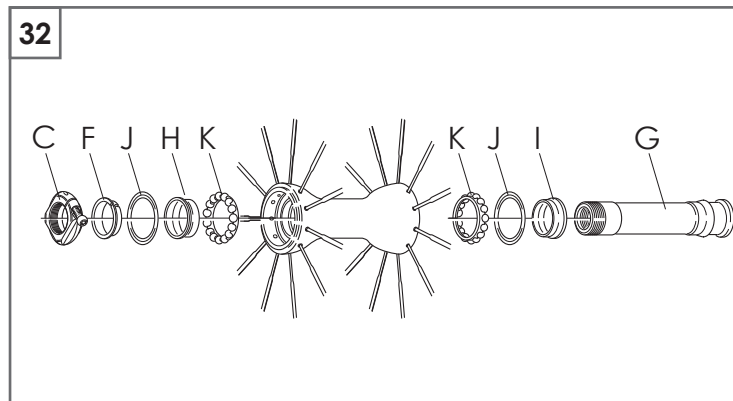
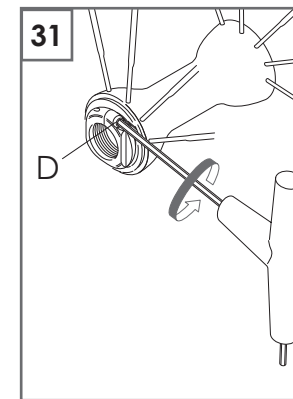


- Use a 2.5 mm allen wrench, loosen the screw by 3 turns (D - Fig. 31).
- Unscrew and remove the lock ring (C - Fig. 32), press the axle (G - Fig. 32) towards the hub body, remove the ring (F - Fig. 32), the cone (H - Fig. 32), slide out the axle (G - Fig. 32) from the hub, remove the cone (I - Fig. 32), the gaskets (J - Fig. 32) taking care not to damage it and the ball bearings (K - Fig. 32).
- Inspect each of these components for wear or damage. If it is necessary to replace, any of these components, contact a Campagnolo® Service Center.
- Proceed to re-assemble the system performing disassembly operations in reverse order.

Attention

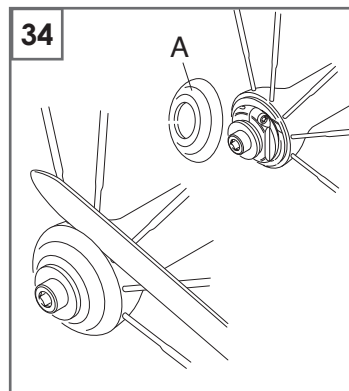
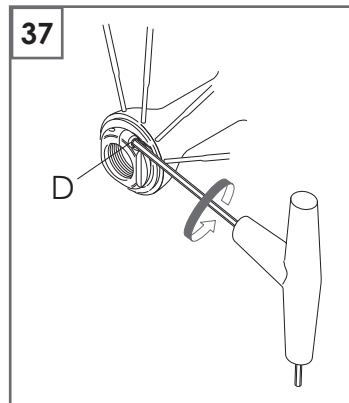
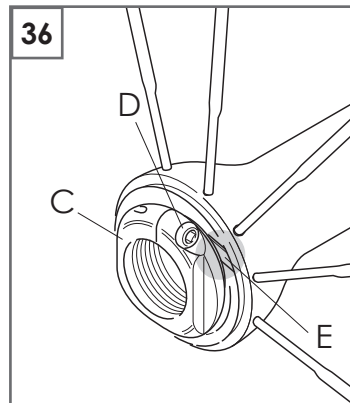
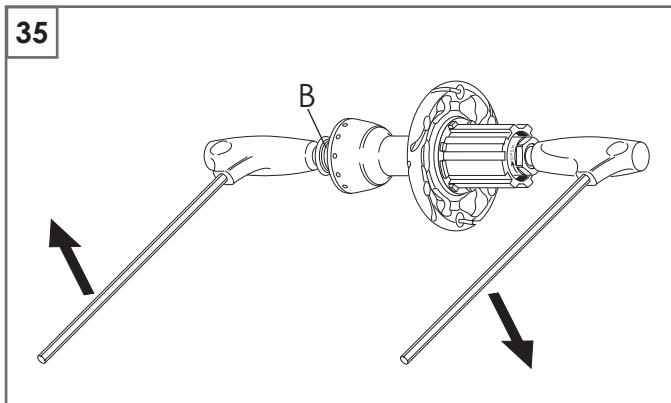
When inserting the axle, be careful not to move the ball bearings out of their seats.

- Tighten the locking nut (B - Fig. 33) to a torque setting of 12 N.m - 8.8 lb.ft.
- Adjust the hub as illustrated in section 7.



6.2 - DISASSEMBLY AND ASSEMBLY OF THE REAR HUB

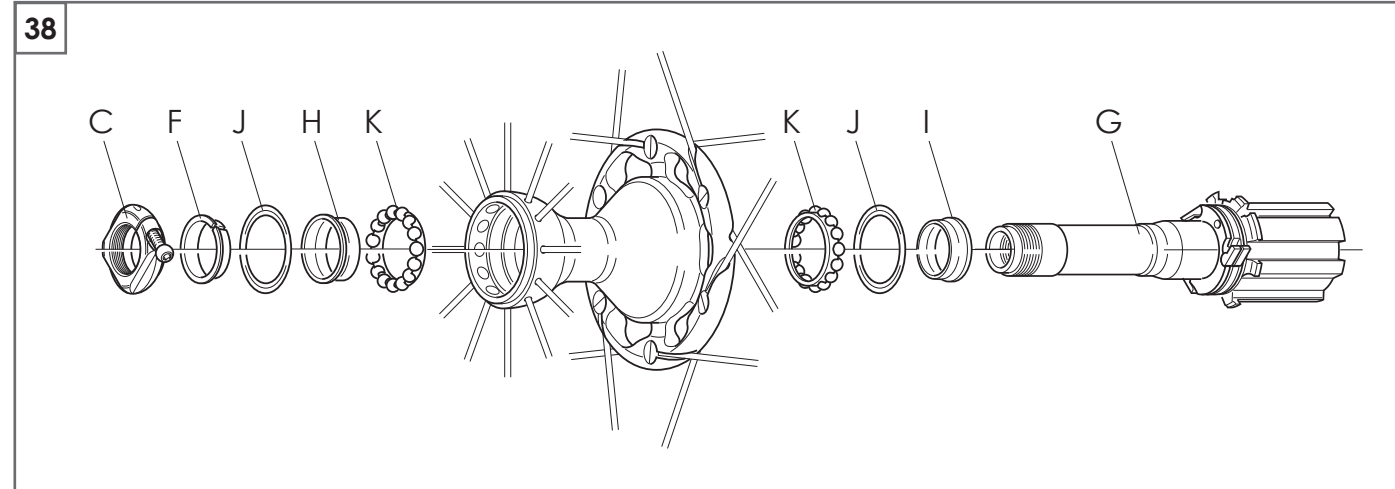
- Remove the sprocket set (Section 2 of the "Owner's Manual - PART 1).
- Using a stiff blade (such as small knife) positioned as indicated in fig. 34 and taking care not to damage the hub or the spokes, remove the side covers from the hub (A - Fig. 34) from the hub.
- Unscrew the locking nut (B - Fig. 35) with a fully inserted 5 mm Allen wrench; counter the rotation of the axle with another 5 mm Allen wrench fully inserted on the opposite end of the axle itself.
- Align the screw (D - Fig.36) of the lock ring (C - Fig. 36) with the groove (E - Fig. 36) on the hub body.
- Using a 2.5 mm Allen wrench, loosen the screw by 3 turns (D - Fig.37).



- Unscrew and remove the lock ring (C - Fig. 38), press the axle (G - Fig. 38) towards the hub body, making sure that the free-hub body comes out of its seat; slide out the axle-axle-freehub body unit, remove the ring (F - Fig. 38), the cone (H - Fig. 38), the cone (I - Fig. 38), the gaskets (J - Fig. 38) taking care not to damage it and the ball bearings (K - Fig. 38).
- Inspect each of these components for wear or damage. If it is necessary to replace any of these components, contact a Campagnolo® Service Center.
- Carefully clean the components, grease the ball bearings and proceed to re-assemble the system performing disassembly operations in reverse order.

Attention

When inserting the axle, be careful not to move the ball bearings out of their seats.



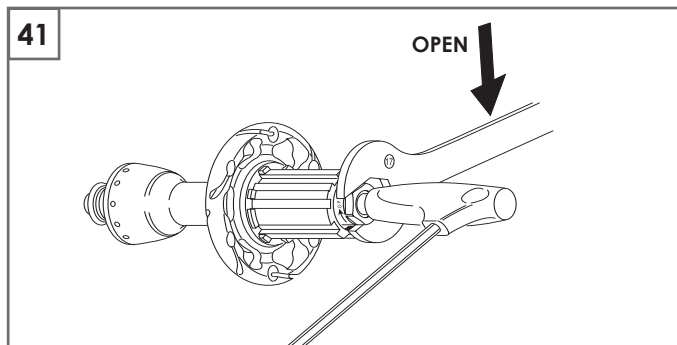
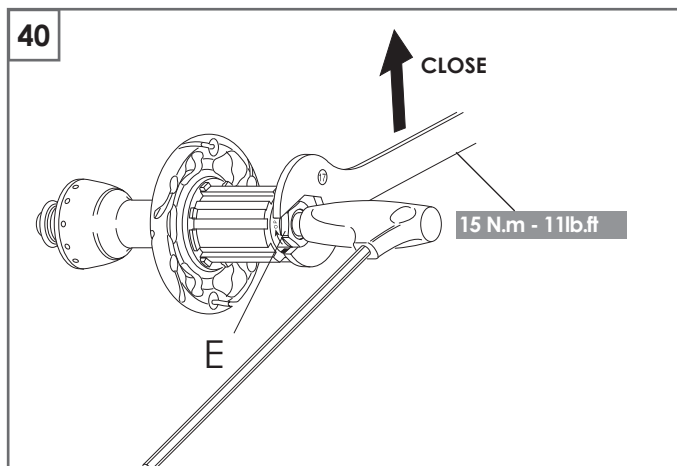
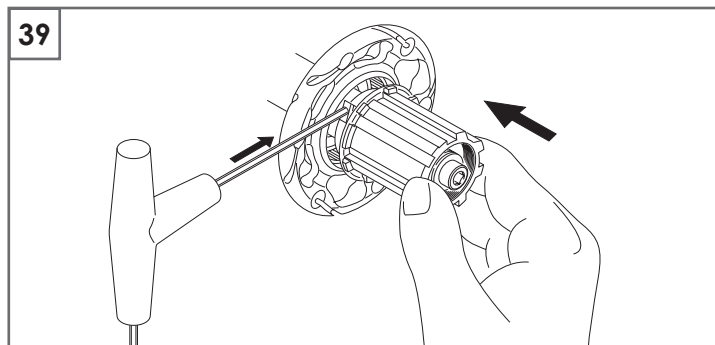
• Position the freehub close to the hub and hold it pressed against the hub; lower one by one the three pawls with an Allen wrench or a screwdriver and insert the freehub fully into its seat (Fig. 39).

• Tighten the locking nut (E - Fig. 40) with a 17 mm wrench, holding the axle steady from the freehub side with a snugly fitted 5 mm Allen wrench (approximate torque setting: 15 N.m - 11 lb.ft).

• Adjust the hub as illustrated in section 7.

6.3 - REMOVING THE FREEWHEEL BODY

Hold the axle steady by fully inserting a 5 mm Allen wrench on the freewheel side (Fig. 41). Completely unscrew the nut by turning it clockwise with a 17 mm wrench. Turn the FW body until the grooves of the FW body and the axle (Fig. 42) match. Remove the freewheel body from the axle

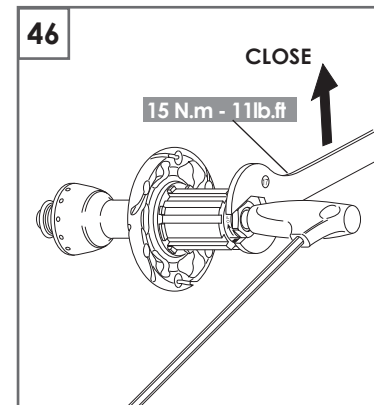
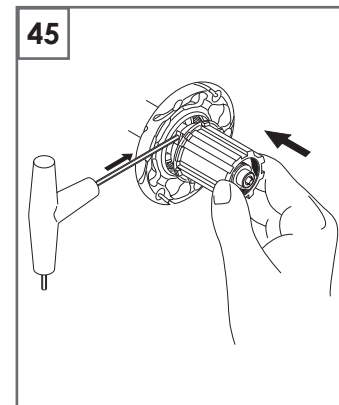
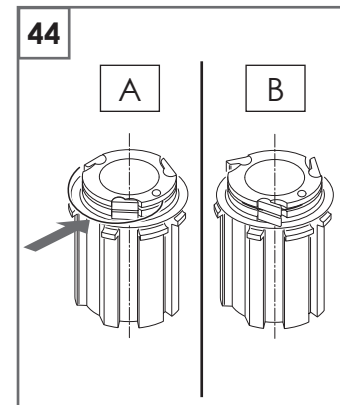
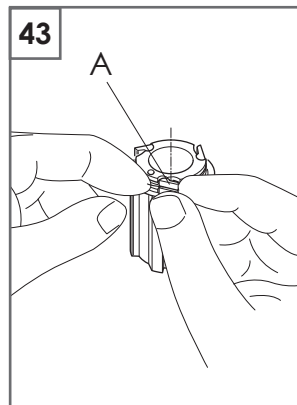
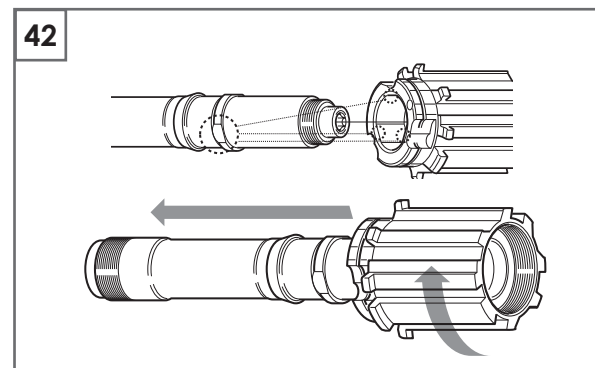


6.4 - REMOVAL AND INSTALLATION OF PAWLS

Remove the spring by slightly raising the pawl (A - Fig. 43), being careful not to distort it. Pull out the pawls and replace them if necessary. Insert the bent part of the spring into the hole of the pawl carrier. Fit the spring between the openings in each pawl, simultaneously setting the pawls into their final position (Fig. 44A). When the operation is complete make sure that all three pawls rotate freely and remain in the open position (Fig. 44B).

6.5 - FITTING THE FREEWHEEL BODY ON THE HUB

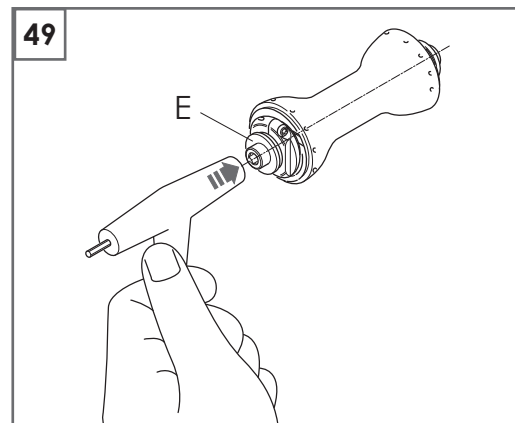
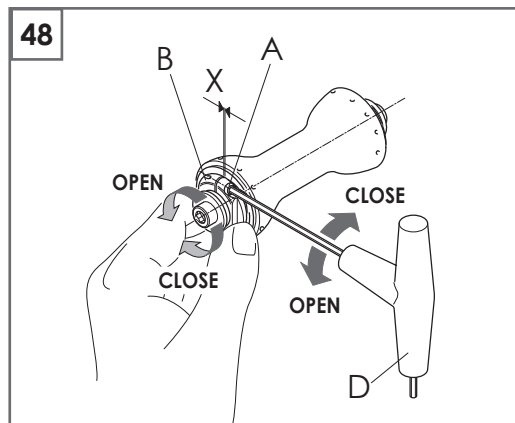
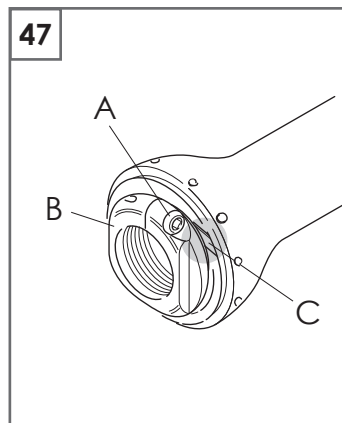
Turn the FW body until the grooves of the FW body and the axle (Fig. 45) match. Fully insert the freewheel body on the axle. Place the freewheel on the hub and hold it in position. Lower the three (3) pawls one by one with an Allen wrench or screwdriver, and fully insert the freewheel in its seat (Fig. 46). Hold the axle steady by fully inserting a 5 mm Allen wrench on the freewheel side. Tighten the locking screw with a 17 mm wrench to a torque of 15 N.m (11 lb.ft).





7. HUBS ADJUSTMENT

- Using a stiff blade (such as small knife) positioned as indicated in Fig. 34 and taking care not to damage the hub or the spokes, remove the side covers from the hub.
- Align the screw (A - Fig. 47) of the lockring (B - Fig. 47) with the groove (C - Fig. 47) on the hub body.
- Fully insert the 2.5 mm Allen wrench (D - Fig. 48) into screw (A - Fig. 48) and tighten it by about three (3) turns.
- To reduce axle clearance, tighten lockring (B - Fig. 48) by turning it clockwise by hand or with a 21 mm wrench.
- To increase axle clearance, loosen lockring (B - Fig. 48) by turning it counter-clockwise by hand or with a 21 mm wrench. Strike screw (E - Fig. 49) lightly with the plastic handle of the Allen wrench.
- Tighten the Allen screw (A - Fig. 48) with the wrench properly seated on it until the gap (X - Fig. 48) on the lockring (B - Fig. 48) is completely closed.
- Make sure that the adjustment is correct (the axle slides easily and without play), otherwise repeat the adjustment procedure.



8. SPROCKET ASSEMBLY AND REMOVAL



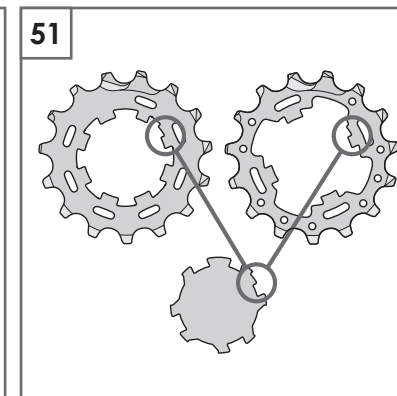
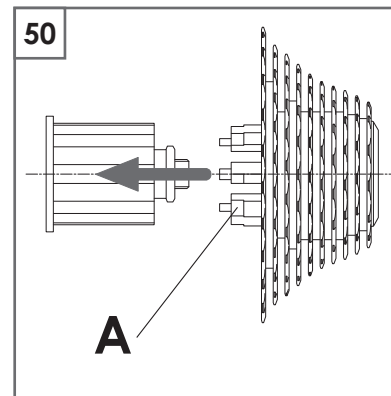
WARNING!

Always wear protective gloves and glasses while working on the sprockets.

8.1 - CAMPAGNOLO® SPROCKETS (on Campagnolo® type FW body)

8.1.1 - Assembly

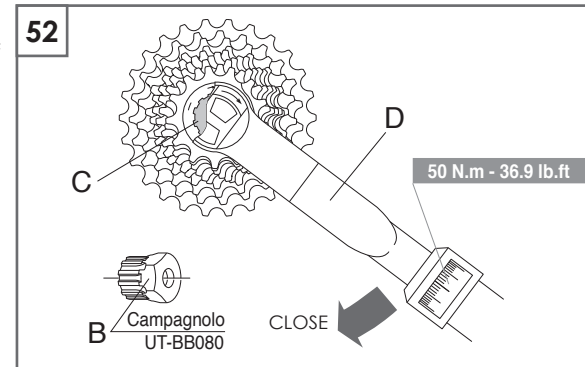
- The sprockets are pre-assembled and timed on the plastic support (A - Fig. 50).
- Insert the support on the side of the freewheel body, align the spline patterns, press the sprockets onto the freewheel and extract the support (A) from the hub (Fig. 50).



- If installing the sprockets without the plastic support, install the individual or preassembled sprockets and the spacers on the sprocket body of the hub aligning the spline patterns (Fig. 51). The profile of the freewheel body with two asymmetrical grooves ensures automatic sprocket timing since there is only one assembly option.
- Using a torque wrench (D - Fig. 52) equipped with the Campagnolo tool UT-BB080 (B - Fig. 52), tighten the lockring (C - Fig. 52), which is provided with the hub, on to the freewheel body to 50 N.m (36.9 lb.ft).

8.1.2 - Disassembly

- Remove the lockring (A - Fig. 53) using the Campagnolo tool UT-BB080 (B - Fig. 53) with a 24 mm hexagonal wrench (C - Fig. 53) and the Campagnolo chain whip UT-CS060 (Fig. 53).



- Insert the plastic sprocket carrier on the side of the freewheel body, align the spline patterns on the body with those on the carrier and slide the sprockets onto it.
- Slide the sprocket carrier, with the sprockets, off the freewheel body.

8.2 - 10S SPROCKETS STARTING FROM 11 AND 12 OF SHIMANO INC. (ON FW BODY FOR 10S SPROCKETS STARTING FROM 11 AND 12 OF SHIMANO INC.)

8.2.1 - Assembly

- Fit the sprockets on the FW body and check that:
 - the surface with the name of the groupset of each sprocket is facing the outside of the FW body.
 - the broadest grooving of the sprocket (A - Fig. 54) is aligned with the broadest of the FW body (B - Fig. 54).
- Using a torque wrench (D - Fig. 52) equipped with the Campagnolo tool UT-BB080 (B - Fig. 52), tighten the locking (C - Fig. 52), which is provided with the hub, on to the freewheel body to 50 N.m (36.9 lb.ft).

Note

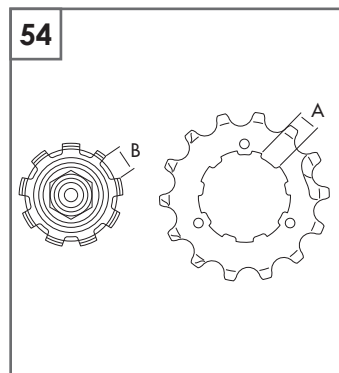
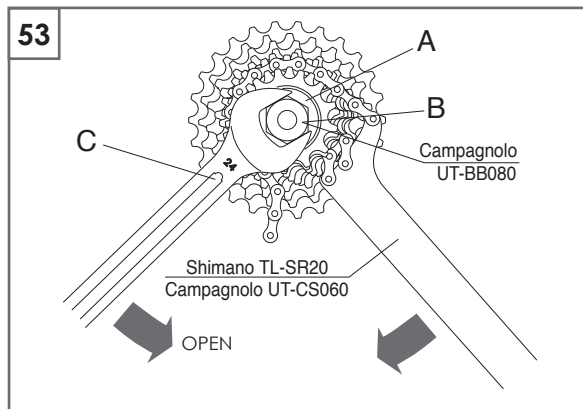
Tools supplied by other manufacturers for components similar to Campagnolo® components, including but not limited to Shimano Inc., may not be compatible with Campagnolo® components. Likewise, tools supplied by Campagnolo S.r.l. may not be compatible with components supplied by other manufacturers. Always check with your mechanic or the tool manufacturer to insure compatibility before using tools supplied by one manufacturer on components supplied by another.

! WARNING!

Failure to insure compatibility between tools and components could result in improper operation or failure of the component, an accident, personal injury or death.

8.2.2 - Disassembly

- Remove the locking (A - Fig. 53) using the Campagnolo tool (B - Fig. 53 - Campagnolo code UT-BB080) with a 24 mm hexagonal wrench (C - Fig. 53) and the Shimano chain whip TL-SR20 (Fig. 53).
- Take the sprockets off the FW body.



9. BRAKES

! WARNING!

Use only the special brake pads part number BR-RE702 (for Campagnolo® brakes) and part number BR-702X (for Dura-Ace brakes) with the composite HYPERON™ ULTRA™ clincher rims. Use of these pads with any other type of rim could result in insufficient and/or irregular braking performance, thereby causing an accident, personal injury or death. Use of any other brake pads-rim combination could also seriously damage the rim. Always check that the brake pad is compatible with the rim by checking the specifications on the brake pad package.

9.1 - CAMPAGNOLO® BRAKES

Attention

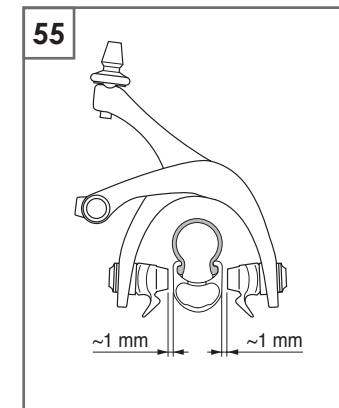
Also consult the section "Brakes" of the "Owner's Manual - Part 1.

- When replacing brake pads, cables and casings - only use original Campagnolo® spare parts.
 - Slide out the brake pads from the pad holders and replace them with those supplied in the wheel package.
 - To facilitate insertion of the new brake pad, wet the inside of the brake shoe with alcohol.
- Never** use lubricants.

! WARNING!

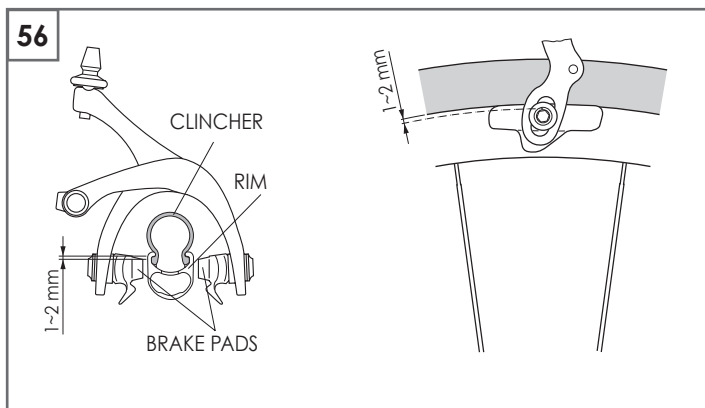
Alcohol is extremely flammable. Use in a well ventilated area. Do not use alcohol near any fire, flame, spark, heat or other source of combustion.

- Adjust the brake pads so that they are perfectly aligned with the wheel braking surface, about 1 mm from the surface of the rim (Fig. 55) so that they are positioned at about 1~2 mm from the top edge of the rim (Fig. 56) (refer to the brake pad instruction sheet).
- Before every ride:
 - make sure that the brakes function correctly.
 - check your brake pads and cables to be sure they are in good condition.



- make sure that the brake pads are perfectly aligned with the wheel braking surface, about 1 mm from the surface of the rim (Fig. 56) so that they are positioned at about 1~2 mm from the top edge of the rim (Fig. 55) (refer to the brake pad instruction sheet).

- To maintain the brake pads are in efficient working order and to avoid wear on the sides of the rims, you should remove with a file any residue of sand, debris or foreign objects which may become embedded in the brake pads, especially during use in the rain.
- When riding in wet conditions, remember that the stopping power of your brakes is greatly reduced and the adherence of the tires to the ground is considerably reduced. This makes it harder to control and stop your bicycle. Extra care is required when riding your bicycle in wet conditions to avoid an accident. An accident could result in severe personal injury or death.



9.2 - BRAKES OF OTHER MANUFACTURER

Please consult the instruction sheet supplied by the manufacturer.

Note

Never spray your bicycle with water under pressure.

Pressurized water, even from the nozzle of a small garden hose, can pass seals and enter into your Campagnolo® components, damaging them beyond repair.

Wash your bicycle and Campagnolo® components by wiping them down with water and neutral soap.