

Fig.100 Press the nipple (10) in axial way as indicated from the arrow and get the head (100) of the nipple (10) on the rim (20). With this operation the gasket enters in the seating, and so must be done by naked hand with extreme lightness. After that the head (100) of the nipple (10) will be on the rim (20) it will be possible to continue the rotation of the nipple (10) in order to screw it on the spoke (70).

Continue the gradual traction of the nipple (10) handle from the special square section (50). For these operations pliers can't be used, but it's necessary to use special operation key with suitable section. The use of other tools could ruin irreparably the surfaces of key-position.

Attention: The recommended tightening torque is 4-7 Nm. Don't exceed the maximum limit. Eventual tampering on high torque could damage the rim and compromise the pressure tightness of the system.

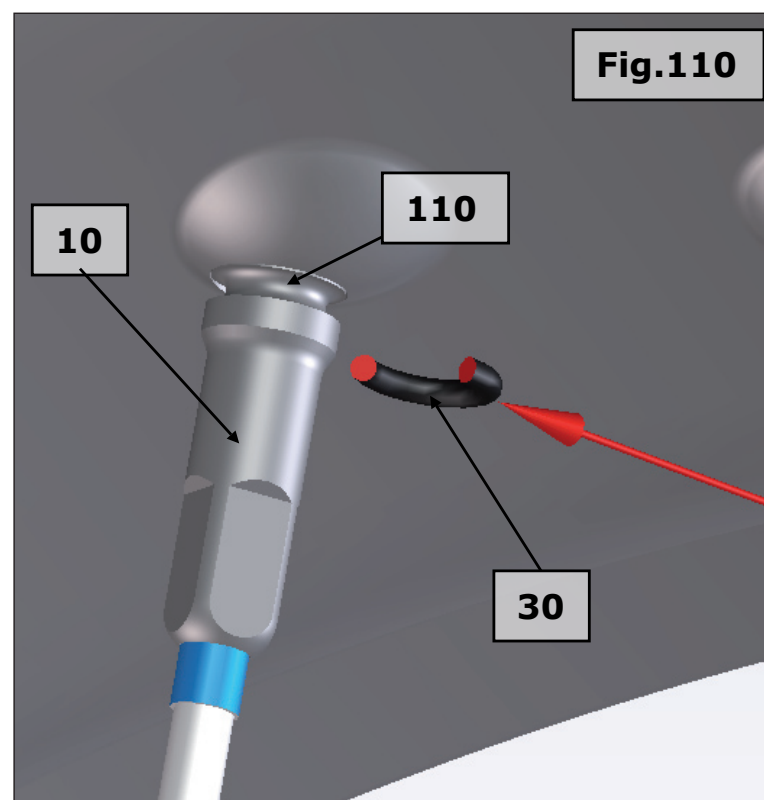


Fig.110 When the wheel is completed assemble again the security ring (30) on the nipple (10), inserting it in a radial way as indicated from the arrow.

The action can be done pointing the ring (30) in the seating (110) of the nipple (10) and then insert with a standard with tapered nose pliers.

If not executed correctly, during this action, the rim could be scratched.

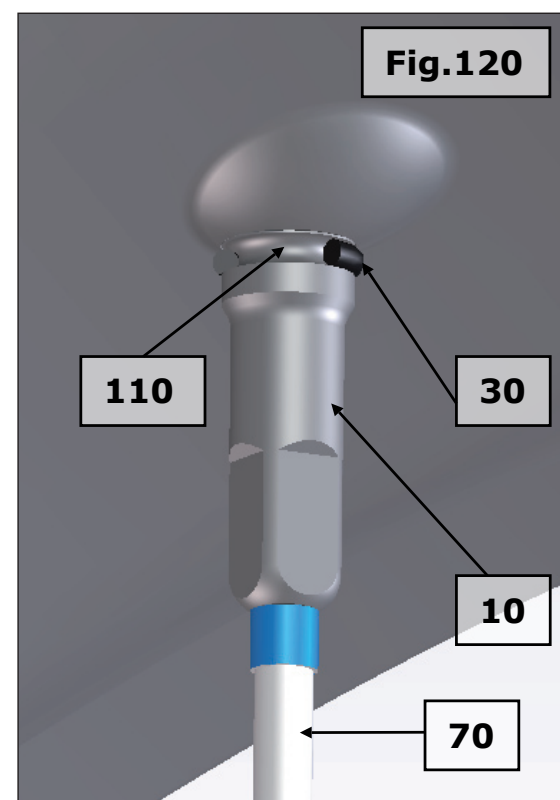


Fig.120 Be sure that the security ring (30) is completely placed in the seating (110) of the nipple (10). The task of the ring (30) is to maintain the nipple (10) in position during the wheel working or in case of breaking of the spoke (70), so the loss of this ring may generate a dangerous situation. **DON'T USE THE WHEEL EVEN IF ONLY ONE RING MISS.**

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STS

SECURITY SPECIFICATIONS AND MAINTENANCE

SHORT USER MANUAL

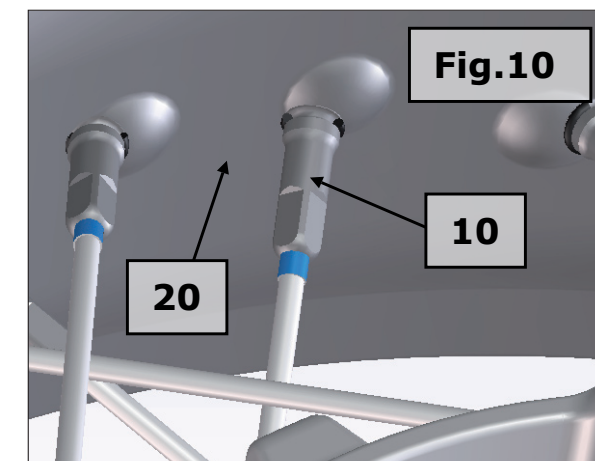
1. Stock nipples in non-transparent bags in a clean place. The light (natural or artificial) causes untimely obsolescence of sealings, and the light film of lubricating grease could be a dirt trap (please follow accurately the instruction on page 2, Fig. 10-30)
2. Before the assembly of the wheel or substitution of a nipple you have to assure that all parts of the wheel and the area of assembly are perfectly clean. The sealing will be supplied with a light film of lubricating grease that could encourage the contamination of impurities and so penalize the efficiency of the tubeless system. (please follow accurately the instruction on page 2, Fig. 10-30)
3. The most delicate phase of the wheel assembly is when, during the insert of the nipple in the rim, the O-ring has to be introduced in the rim hole. Turning and forcing laterally the nipple could provoke pinches and compromise the pressure tightness. (please follow accurately the instruction on page 5, Fig. 100)
4. Remember to check the correct positioning of the security ring. Its function is to limit the axial amplitude of the nipple during the driving operation (please follow accurately the instruction on page 6, Fig. 120)
5. Referring the CARBONMATRIX wheels (carbon rim) you have to pay full attention during the assembly of the tires. A leverage that is not well rounded or badly employed could provoke the chipping of the carbon coat.

1) The friction between the O-ring seal of the STS nipple and the calibrated rim hole makes the loosening of nipple very difficult (which normally is a classical phenomenon and typical for tube type wheels with air chamber). For that it is not necessary to retighten the wheels screwing the nipples each time. As a precaution please check by hand if a spoke becomes loose and only in this case provide for screwing the nipple carefully, paying attention that 2-3 mm of the spoke will remain always visible.

2) The STS nipple is "blind" (not passing as a traditional nipple) and for that the spoke cannot pass on the other side of the nipple head if overtightened. This causes a blocking of the spoke in the nipple and torsions consequently the fibres of the spoke that becomes brittle and provokes the breakage of the spoke.

3) The non respect of the instructions specified under 1) and 2) provokes an overload and brittleness due to the torsion of spokes (sometimes until breakage). This causes damages without remedies at nipples, hubs and rims (cracks and breakage of the dimples).

Fig.10 Disassemble the nipples (10) in case this will be necessary from the rim (20) follow these instructions. The operations showed require manual ability, so only qualified and expert personal in mechanical field can do that. Working without any ability could be dangerous for themselves and for other people. ALPINA RAGGI SpA won't be in charge for any tamperings or wrong operations that will damage person, object or invalidate the tyre holding system. The components that will guarantee the holding are and must be opportunely lubricated, so, all the maintenance stages must be done in clean and powderless habitat.



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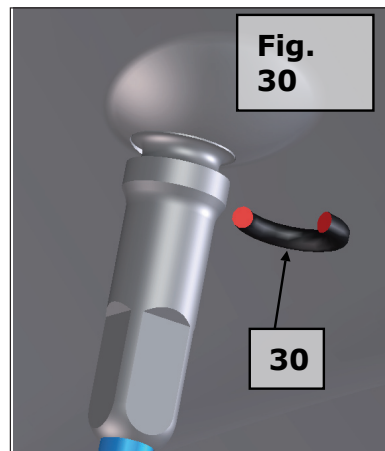
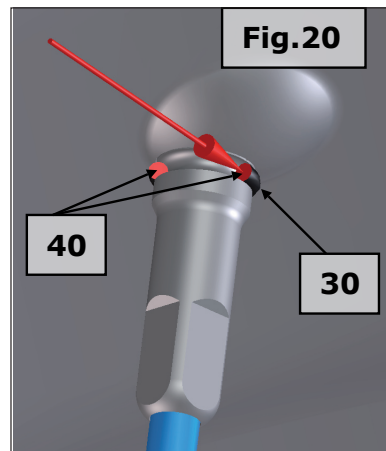


Fig.20, 30 Clean properly with a moist brush (with water) the intersection zone nipples/rim . Remove the security ring (30) pressing in orthogonal way (see the arrow) on one or both surfaces (40) of the ring (30) through a thin pointed screwdriver. The ring will come out in the direction showed in (Fig.30). Pay attention : don't lose the ring.

ATTENTION

- 1 : Avoid to clean the wheel with washing system with high pressure both with warm and cold water (like Puli-vapor). If you want to use in any case a washing system with high pressure , keep a distance of 50cm at least between the jet source and the intersection source nipple/rim (see Pos.30 of Fig.20). Getting closer facilitate the dirty intrusion , compromising the holding of the tire, and the damaging of the same gasket too.
- 2 : If you don't manage correctly and with care the screwdriver used to remove the ring , this could cause injuries or ruin the rim .

Fig.40 Unscrew the nipple (10) and the spoke (70) making the nipples rotate in anticlockwise sense (see arrows). First operate using the portion square section (50), and then through the hexagonal hold (60). For these operations pliers can't be used , but it's necessary to use special operation keys with suitable section. The use of other tools could ruin irreparably the surfaces of key-position.

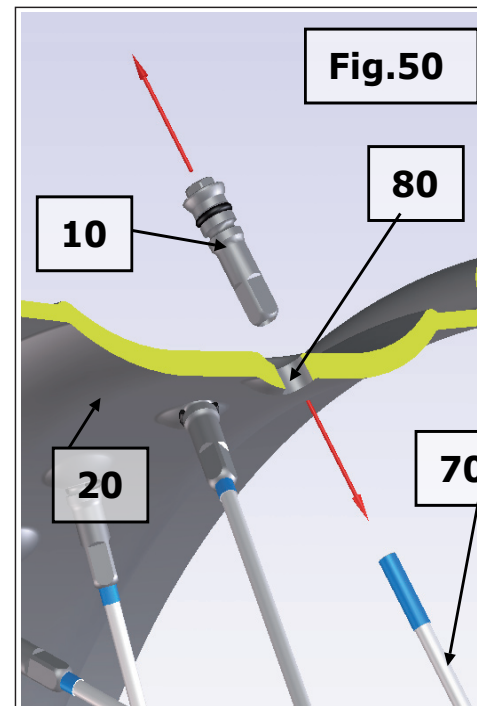
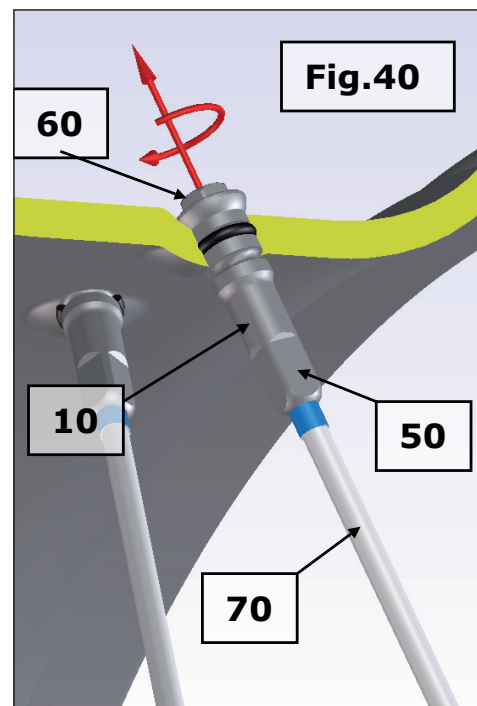
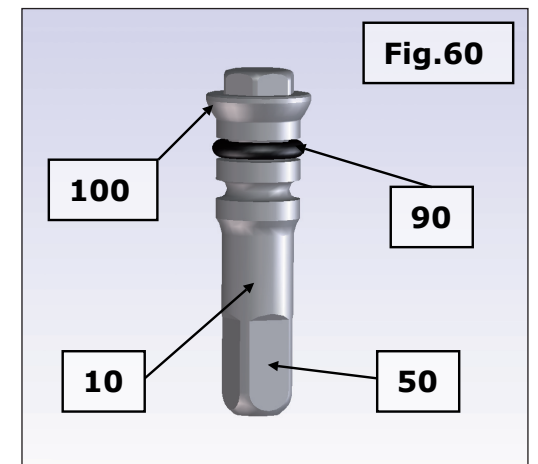


Fig.50 Remove the nipple (10) from the seating (80) of the ring (20) unthreading it in the direction of the arrow . If necessary remove the spoke (70) unthreading it from the hub following the direction indicated with the arrow.

Fig.60 Everytime that the nipple (10) will be disassembled it's necessary to check carefully through a standard magnifying glass the aspect of the gasket(90). This must not have any pinch, crushing or irregular deformations. If the gasket is undamaged it's necessary (before assembling the nipple) , to clean it carefully (without moving it from the seating) through a little brush with soft bristles soaked in a standard clean hydrocarbon (pethrol, gas oil or similar) . Verify that after cleaning any bristles of the brush will not remain. Oil the gasket (Alpina recommend grease RASSINT – PTFE from LOCHIM) In case it would be necessary to change the gasket (90) it's necessary to clean adequately the seating before assembling the new gasket. About the cleaning of the seating use a little brush with soft bristles soaked in a standard clean hydrocarbon (pethrol, gas oil or similar) Verify that after the cleaning any bristles of the brush will not remain. The gasket (90) is a standard OR-2025-NBR (American Norm AS 568 A Cod. 010). Oil the seating and gasket with a standard grease P.T.F.E. (ALPINA recommend grease RASSINT - PTFE from LOCHIM).



The introduction of the gasket (90) will be from the head side (100) of the nipples (10) and not from the side of the square key (50).

Fig.70 Everytime that the nipple will be disassembled (10 Fig.60) it will be necessary to clean carefully the seating (80) of the rim (20). About the cleaning of the seating use a little brush with soft bristles soaked in a standard clean hydrocarbon (pethrol, gas oil or similar) . Verify that after cleaning any bristles of the brush will not remain. Oil the seating (Alpina recommend grease RASSINT – PTFE from LOCHIM)

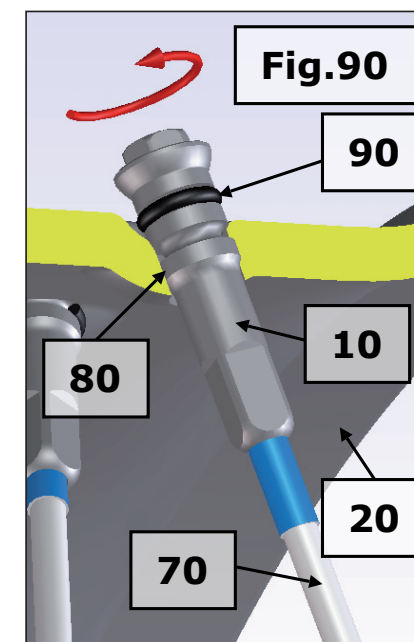
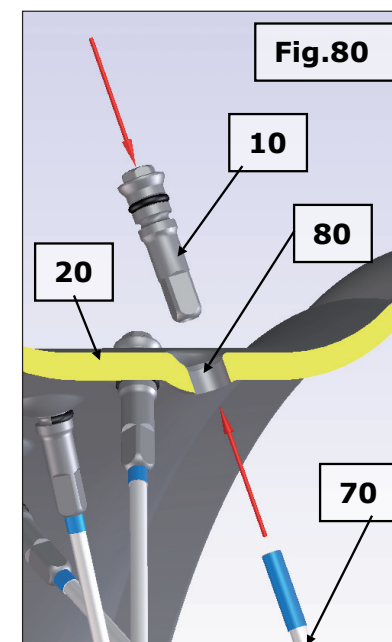
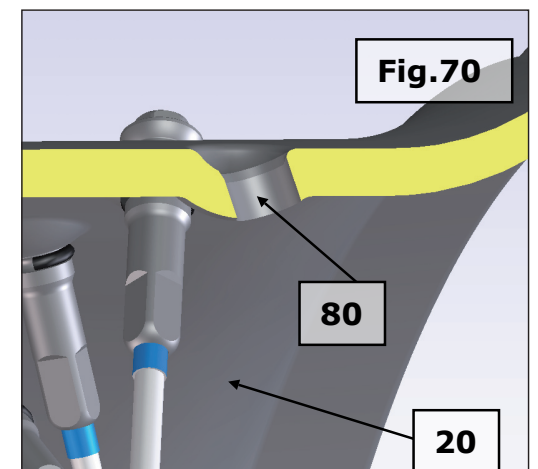


Fig.80 Introduce (not completely) the nipple (10) in the seating (80) of the rim (20). Drawing up the spoke (70) to the nipple (10) following the direction of the arrow .

NB If the system of axial tightness of the nipple should be with spiral spring, remember to put it on the spoke before screwing the spoke on the nipple. As the ring is closed, it won't be possible to assemble it once the wheel has been preassembled or in any consecutive phase.

Fig.90 Screw clockwise as indicated with the arrow , the nipple (10) on the spoke (70), until drawing up the gasket (90) to the seating entrance (80) of the rim (20). STOP THE NIPPLE ROTATION (10)