

## WHEEL BUILDING

### REPLACING THE FRONT RIM OF CROSSMAX SLR DISC, CROSSMAX SL DISC 07 AND CROSSMAX ST DISC WHEELS

#### Tools needed

- 1 spoke wrench M40652
- 1 spoke wrench for aerodynamic spokes M40567 (for Crossmax SLR Disc and Crossmax SL Disc 07 wheels)
- Mavic tensiometer 995 643 01 + tension-reading conversion chart supplied

The reference and length of spokes to be used are given in the product pages (pages 07, 09 and 15).

These wheels must be built as follows:

- Spokes crossed 2 on both sides
- Braking spokes located in the notches of the outer most slots of the hub, on both sides.



With the valve hole near you, place the rim such that the raised indicator bump is to the left of the valve hole.



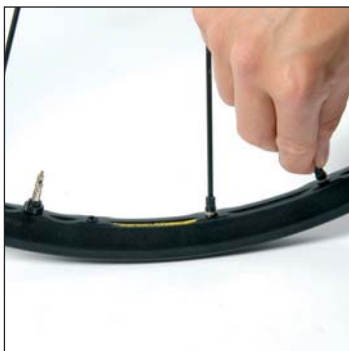
Screw a spoke 2 turns into the first hole to the right of the valve hole. Do likewise for all the non-braking spokes, 1 hole in 4 on the rim.



Now screw a spoke 2 turns into the third hole to the right of the valve hole. Do likewise for all the braking spokes, 1 hole in 4 on the rim.



Insert the heads of these spokes into the hub slots on the disc side: the non-braking spokes into the inside notches, the braking spokes into the outside notches.



Turn the wheel round. Screw a spoke 2 turns into the third hole to the right of the valve hole. Do likewise for all the non-braking spokes, 1 hole in 4 on the rim.



And finally, screw a spoke 2 turns into the first hole to the right of the valve hole. Do likewise for all the braking spokes, 1 hole in 4 on the rim.



Insert the heads of these spokes into the hub slots on the non-disc side: the non-braking spokes into the inside notches, the braking spokes into the outside notches.

Tighten each nipple uniformly in the rim to tension the wheel (1/2 turn of the spoke wrench for each spoke and per wheel rotation).

Set the final tension and center the wheel respecting the spoke tensions given in each product page (pages 07, 09 and 15).

Braking and non-braking spokes must not overlap: over their entire length, non-braking spokes are below the braking spokes.

**Tools needed:**

- 1 spoke wrench alu M40494 or M40652
- 1 x 5 mm Allen wrench (for the front wheel)
- 1 x 10 mm Allen wrench (for the front wheel)
- 1 hub wrench M40123 (for the front wheel)
- 1 tensiometer + tension-reading conversion chart adapted to the tensiometer used.

- When replacing a spoke on the Crossmax™ XL front wheel, you need to remove the axle beforehand by following the procedure described on page 17, and remove the spoke retention plates M40461.
- When replacing a spoke on the free wheel side of the rear wheel, you need to remove the retention clip beforehand and make sure you don't bend it.

**1** Start by removing the defective spoke :

**1.1** Loosen the spoke nipple using the alu spoke wrench M40494 or M40652.

**1.2** Remove the spoke head from the hub.

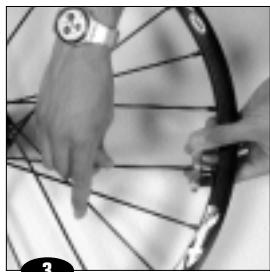
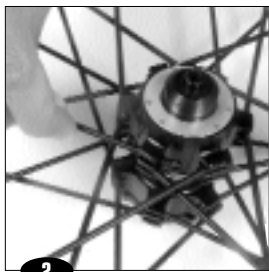
**2** Mount the new spoke in the hub by pivoting it until it can no longer turn.

**3** Tighten the spoke nipple using the alu spoke wrench M40494 or M40652 ;

**4** Adjust the tension (120 - 130 kg for the front wheel disc side (if necessary) and 130 - 140 kgs on the free wheel side of the rear wheel) ;

**5** Check the lateral and radial truing of the wheel.

Since the brake ring locks the nipples in place, it is not necessary to use thread lock.



**CAUTION : manipulating the integrated nipples greatly affects the spoke tension and consequently the wheel adjustment.  
In the final phase of adjusting the tension, 1/4 turn of the nipple corresponds to about 0.3 mm of lateral rim movement.**

## CROSS COUNTRY RACING\*

Tire width		Maximum pressure (bar)	Maximum pressure (PSI)
in "	in mm		
1,00	25	7,70	113
1,20	30	7,00	103
1,50	38	6,00	88
1,75	45	5,20	76
1,85	47	4,80	71
1,90	48	4,70	69
1,95	50	4,50	66
2,00	51	4,30	63
2,10	53	4,00	59

## WHEEL ASSEMBLY DIAMETER CONVERSION, FRONT 15 MM AND REAR 12 MM

### Tools needed

- None

The front 9 mm and rear 9.5 mm fork supports are clipped to the 15 mm and 12 mm axles respectively.



To unclip them, push them in turn via the inside of the hub using a quick-release rod.



Put a drop of oil on their O-ring before clipping them back on to make them easier to remove.

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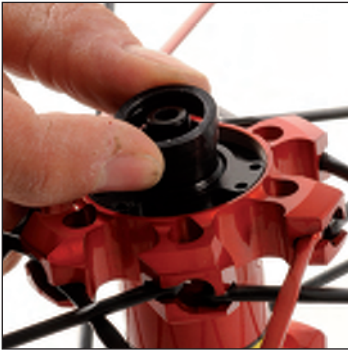
Put a drop of oil on their O-ring before clipping them back on to make them easier to remove.

## REPLACING THE FRONT AXLE AND BEARINGS ON THE CROSSMAX SLR DISC 09 AND CROSSMAX ST DISC 09 STANDARD INTERNATIONAL MODEL WHEELS

### Tools needed

- 1 hub wrench M40123
- Bearing press kit 996 887 01

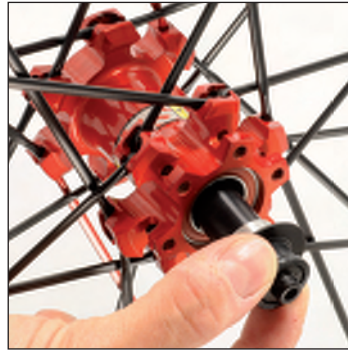
The operations below can be carried out whether or not the 9 mm axle reducers are fitted.



Unclip the non-disc side fork support.



Hold wrench M40123 in place and loosen the axle with your fingers via the disc side.



Remove the axle.



Use a bearing press kit to remove the bearings.



Fit the new bearings with press kit 996 887 01.



Refit the axle by inserting it in the hub via the disc side and retighten the adjustment nut with the hub wrench with your fingers.

Reclip the non-disc side fork support.

Fit the wheel in the fork and adjust the bearing play.

## REPLACING THE AXLE AND BEARINGS ON REAR WHEELS WITH ITS-4 2012 HUB

### Tools needed:

- 1 multifunction wrench 325 423 01
- Bearing press kit M40119
- 1 mallet
- 1 internal circlip pliers
- Mavic mineral oil for the free wheel system 996 136 01

The cassette does not need to be removed to perform this operation.



Remove the disc side frame support by pulling on it.



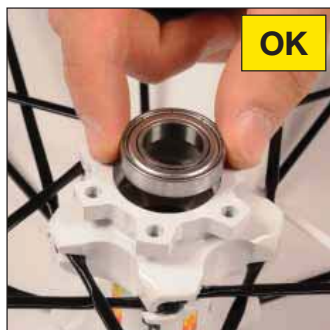
Completely unscrew the adjustment nut with the hub wrench 325 423 01.



You can now remove the axle and free wheel mechanism assembly.



Using the press kit, remove the two bearings from the inside. Clean with a dry cloth if necessary.



In order to ensure a perfect seal of the free wheel mechanism, the bearings of the hub body must be mounted with the disc side seal.



Fit the new non-drive side bearing with press kit M40119.



Position the drive side bearing with the disc side bearing seal. Refit the bearing with press kit M40119.



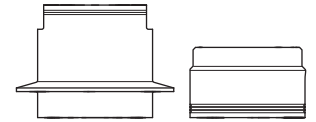
Clean the hub body and fill three ratchet teeth with oil 996 136 01 and refit the axle and free wheel mechanism assembly.



Push the free wheel body gently, rotating it anti-clockwise.



Refit the adjustment nut and the frame support.



10 Nm

