

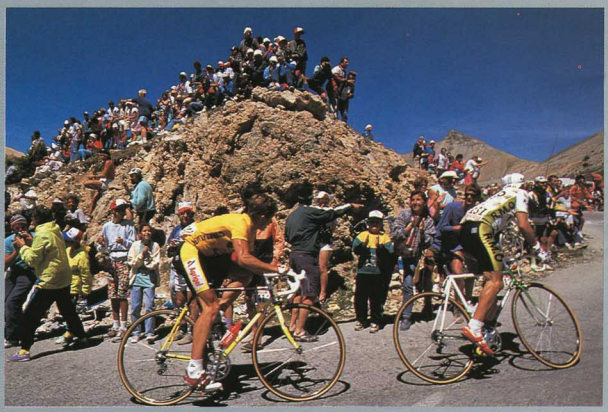


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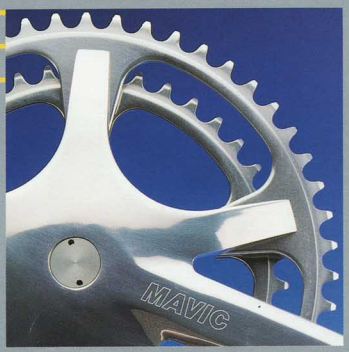
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ROAD



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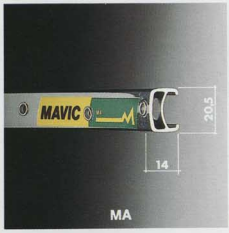
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DESCRIPTION	SIZE	SEAT DIMENSION	DRILLING	AVERAGE WEIGHT
MAVIC 190 FB				
For narrow clinchers from18 to 23 mm. A gentle profile with a neutral color anodizing. Single eyelet. A rim designed particularly for O.E.M. construction of recreational sport bicycles.	700 C	622	36	430 g
MAVIC MA				
For narrow clincher tires from 19 to 25 mm. Polished finish. Single eyelet. The squared profile makes this rim very rigid.	700 C	622	36	410 g
	27"	630	36	415 g
MAVIC MA 2				
For narrow clincher tires from 19 to 22 mm. Polished finish. Double eyelet. This rim has a very good quality to price ratio and is well suited to the needs of cyclotourists.	700 C	622	32-36-40	430 g
	27"	630	32-36-40	435 g
MAVIC MA 2 ARGENT				
For narrow clincher tires from 19 to 22 mm. Silver anodized finish. Double eyelet. The same rigid profile of the MA series with a low maintenance anodized finish.	700 C	622	32-36	430 g
	27"	630	32-36	435 g
MAVIC MA 40				
For narrow clincher tires from 19 to 22 mm. Double eyelet with exterior eyelet in stainless steel. Hard anodized treatment makes this a rim of exceptional rigidity. Ideal for high end bicycles of cyclosportifs, triathletes and amateur racers.	700 C	622	32-36-40	430 g
	27"	630	32-36-40	435 g
		571	28-32-36	395 g





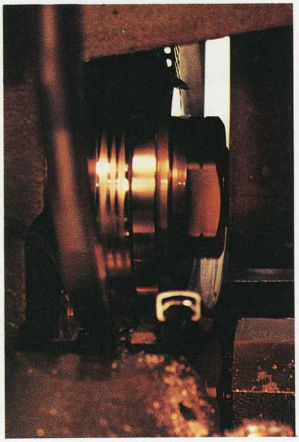






RIMS

CLINCHER TYPE





OPEN 4 CD

DESCRIPTION	SIZE	SEAT DIMENSION	DRILLING	AVERAGE WEIGHT
A new generation ! For narrow clincher tires from 18 to 23 mm. Double eyelet with exterior eyelet in stainless steel. Hard anodized and finished with particular care. It's aero profile gives this rim a proud allure. The high quality alloy, double eyelets, hard anodizing gives this rim « super rigidity ». The performance of this rim appeals to top mechanics, cyclosportifs and triathletes.	700 C	622	28-32-36	420 g
		571	28-32	385 g



MODULE 3

For clincher tires from 22 to 28 mm. Single eyelet. Polished finish. This rim is designed for easy riding or cyclotouring.	700 C	622	36-40	510 g
	27"	630	36-40	515 g
	650 B	584	36-40	470 g
	650 A	590	36-40	475 g



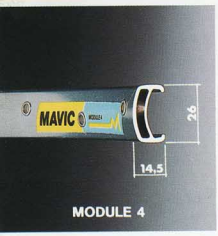
MODULE 3 D ARGENT

For clincher tires from 22 to 28 mm. Double eyelet. Silver anodizing finish. For cyclotouring.	700 C	622	36-40	530 g
	27"	630	36-40	535 g
	650 B	584	36-40	490 g



MODULE 3 CD

For clincher tires from 22 to 28 mm. Double eyelet. Hard anodizing treatment. For cyclotouring or cyclocamping.	700 C	622	36-40	530 g
	27"	630	36-40	535 g



MODULE 4

For clincher tires from 28 to 35 mm. Anodized brilliant. Double eyelet. A very lugged rim designed specifically for long distance touring, expeditions and tandems.	700 C	622	36-40-48	550 g
	27"	630	36-40-48	560 g
	650 B	584	36-40	520 g
	650 A	590	36-40	530 g

MAVIC PISTE

MAVIC SPECIALE SPORT

MAVIC MONTLHERY ROUTE

MAVIC MONTLHERY PRO

MAVIC GP 4

MAVIC ARGENT 10

MAVIC GL 330

MAVIC GEL 280

MAVIC CX 18

MAVIC MACH 2 CD 2

MAVIC PARIS-ROUBAIX S.S.C.



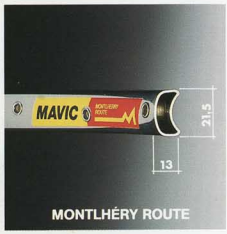
PISTE

DESCRIPTION	SIZE	DRILLING	AVERAGE WEIGHT
Polished finish. Single eyelet. Rim especially for track racing. Special grooves for tubular tire adhesion have been designed into the rim.	700 C	28-32-36	370 g



SPÉCIALE SPORT

Polished finish. Single eyelet. Intended for O.E.M. use.	700	32-36	400 g



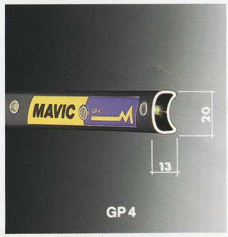
MONTLHÉRY ROUTE

Polished finish. Double eyelet. A very rigid rim designed for O.E.M. or equally effective as a training or cyclo-cross rim.	700	32-36-40	420 g



MONTLHÉRY PRO

Polished finish. Double eyelet. A very rigid rim recommended for medium priced racing bicycles.	700	24-28-32-36-40	395 g



GP 4

Hard anodized finish. Double eyelet, with visible eyelet in stainless steel. The rim « *par excellence* » of amateur racing and the most popular racing rim world wide. Applicable to all uses.	700	24-28-32-36-40	395 g

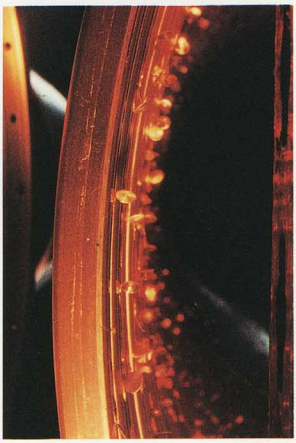


ARGENT 10

Silver anodized finish. Double eyelet. A very light and refined rim for light racing or time trials.	700	24-28-32-36	330 g

RIMS

TUBULAR TYPE





G.L. 330

DESCRIPTION	SIZE	DRILLING	AVERAGE WEIGHT
Hard anodized finish. Double eyelet, with visable eyelet in stainless steel. Lightweight road racing rim, equally suited for time trials and triathlons. Excellent strength to weight ratio.	700	24-28-32-36	330 g
	650 (26")	28-32	310 g
	600 (24")	28-32	290 g



G.E.L. 280

Hard anodized finish. Double eyelet, with visable eyelet in stainless steel. Designed for « super light » bicycles. Especially time trials, hill climbs and triathalons.	700	28-32-36	280 g



CX18

Hard anodized finish. Double eyelet, with visable eyelet in stainless steel. Despite it's width of 18 mm, this specially designed rim for « time trials » offers exceptional rigidity. ATTENTION : for proper mounting of tubular tires and proper tire adhesion, it is recommended that only tires from 18 to 20 mm width be used with this rim.	700	24-28-32-36-40	310 g
	650 (26")	28-32	295 g
	600 (24")	28-32	280 g



MACH 2C D2

1. MAVIC concept of double eyelet on an aero rim has these advantages : – easier to lace the wheel and insert nipples, – more rigid whee,l – more consistant spoke tension. 2. A 2 piece stainless eyelet : – longer eyelet life, – better finish. 3. Recessed eyelet head : – easier to center tubular, – better glueing surface. « Flash brilliant » treatment + 50 µ hard anodizing 600 vickers.	700	24-28-32-36	470 g
	650 (26")	24-28-32-36	437 g
	600 (24")	24-28	396 g



PARIS-ROUBAIX SSC

The rim ! Double eyelet with exposed eyelet in stainless steel. Counting the thousands of victories in professional races to this day. This is the rim most used in the pro peloton. Made from the finest alloys and manufactured to the closest tolerances. Hard anodized to a thickness of 80 µ it's rigidity and reliability are amazing.	700	24-28-32-36-40	400 g

COMETE WHEELS

Paracular shaped wheels.

The elements used to construct these wheels are very different in nature.

The hub is made of dural and carefully machined on a numeric lathe.

The sides of the disc are made from lightweight carbon fiber.

The rim section is also of carbon fiber.

The corp is polymethacrylique rigid foam. These materials are hardened and assembled using Epoxy resin and structural adhesive.

This type of assembly is called COMPOSITE.

Width of rim section : 18 mm.
Hub with sealed cartridge bearings.
These wheels are sold with a kit which permits the wheels to be changed to a road or track version.

There are three models in this series :

COMETE FRONT WHEEL

Axle spacing : 80 to 100 mm
Diameter : 650 mm
Weight : 950 grams.

COMETE REAR WHEEL

Threads : 34,7 x 100 or Ø 35 x 24 F
Diameter : 700 C (28")
Weight : 1140 grams.

COMETE REAR WHEEL ±

The originality of this rear wheel comes from possibility to vary the weight of the wheel according to the profile of the course or the type of race.
Twelve holes situated at the periphery of the wheel accept steel weights permitting 8 different weight combinations. For example, on a short fast prologue, it's advised to use the lightest wheel as possible.
Contrarily, for a time trial with some descending a wheel weighted to the maximum is recommended. All these wheels are supplied with adapter kits permitting road or track versions.

Threads : 34,7 x 100 or Ø 35 x 24 F
Diameter : 700 C (28")

VERSION	NUMBER OF WEIGHTS	WEIGHT IN GRAMS	TOTAL WEIGHT
1	0	0	1050
2	2	130	1180
3	3	195	1245
4	4	260	1310
5	6	390	1440
6	8	520	1570
7	9	585	1635
8	12	780	1830







DISC WHEELS



BULB'AIR WHEELS

Lenticular profile front wheels, ultra light, with maximum bulb profile.
Another technique of COMPOSITE, the wheel is built from Carbon fiber + honey comb + Kevlar.

Hub has sealed cartridge bearings.

Axle spacing : 100 mm
Diameter : 650 mm (26") and 600mm (24")
Weight : 900 and 830 grams



CHALLENGER WHEELS

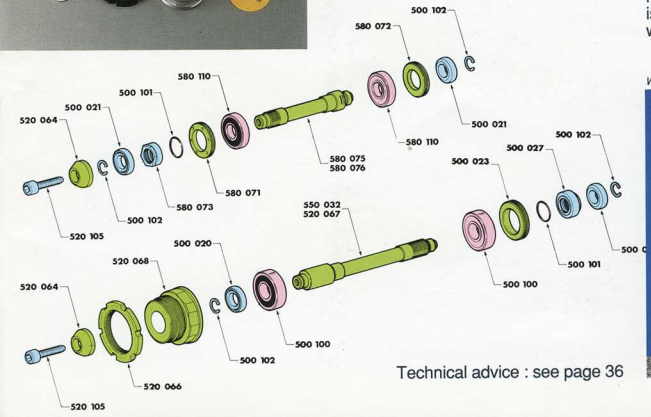
Paracular shaped wheel.

Rim section and disc sides in light alloy.
Hub has sealed cartridge bearings.

FRONT WHEEL- Diameter : 650 mm (26")
- Weight : 2300 grams

REAR WHEEL - Threading : M 34,7 x 100 or Ø 35 x 24 F
- Diameter : 700 C (28")
- Weight : 2600 grams

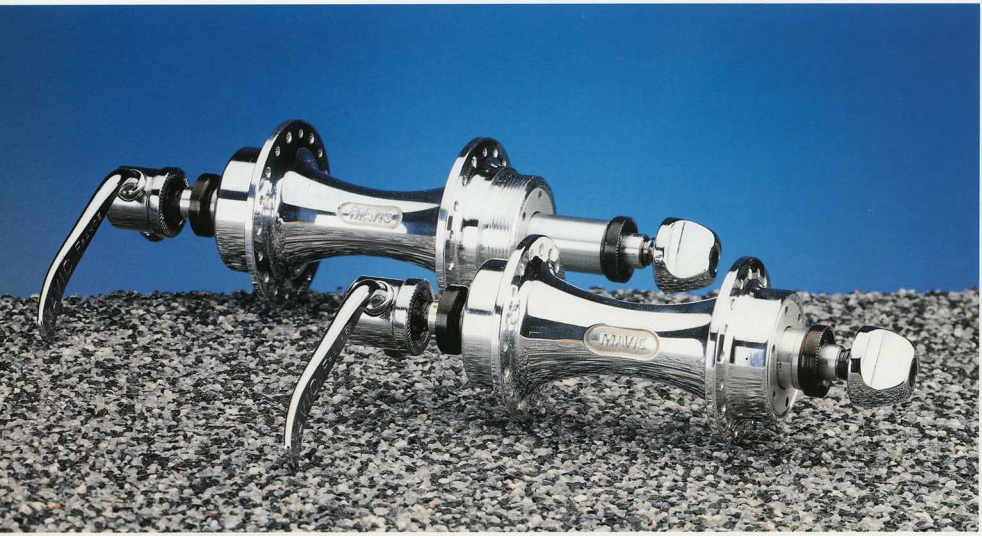
These wheels are able to be used on the road for « time trials » or on the track. A kit is delivered with the wheels to modify these wheels to road or track version.



Wheel cover



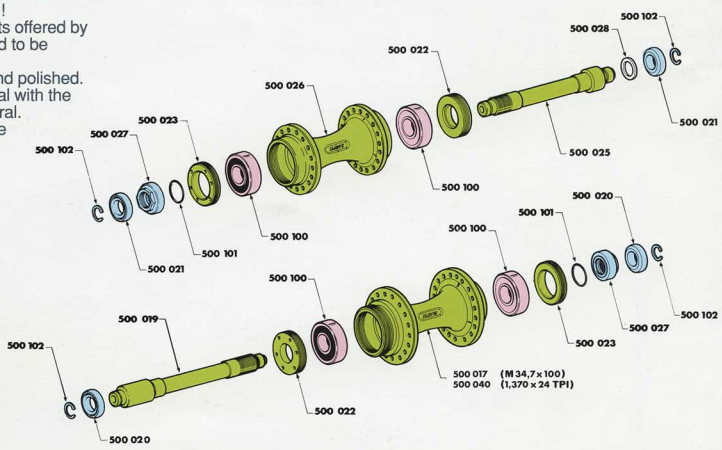
Technical advice : see page 36

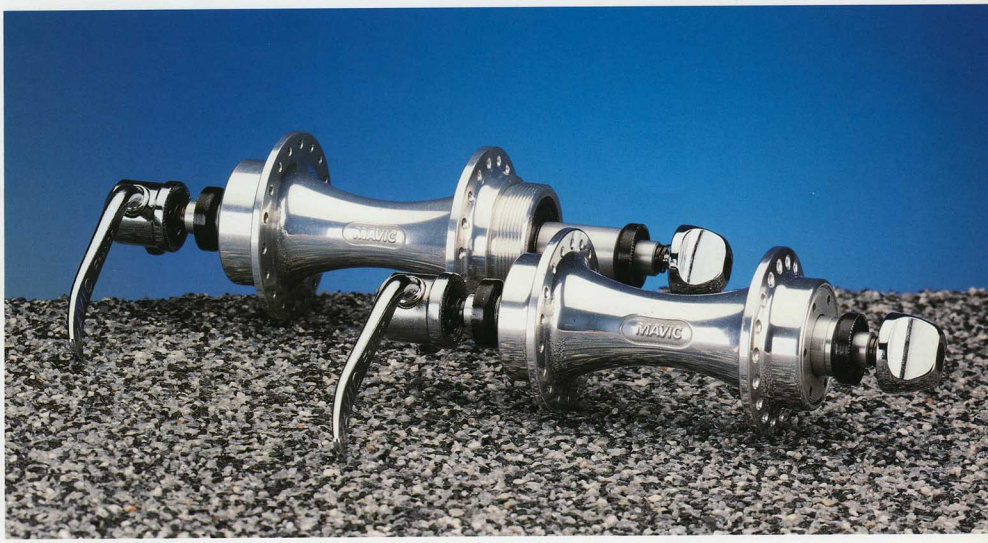


500 RD

Hub designed for a cyclist who prefers only the highest quality components and will search out these ingredients for his machine.
The 500 RD is certainly the hub which delivers the smoothest rooling thanks to its precision sealed cartridge bearings.
Maintenance and adjustment of this important part of your bicycle is so simple it is easily forgotten !
The essential improvements offered by this type of hub do not need to be proved.
The body is forged dural and polished.
The hollow axle is light dural with the quick release in steel or dural.
As always all the pieces are replaceable.

	AXLE SPACING	DRILLING	WEIGHT WITH STEEL QUICK RELEASE	WEIGHT WITH ALLOY QUICK RELEASE
Front 500 RD hub	100	24-28-32-36	230 g	215 g
Rear 506 RD hub M 34,7 x 100 1,370 x 24 TPI	126	24-28-32-36-40	280 g	260 g



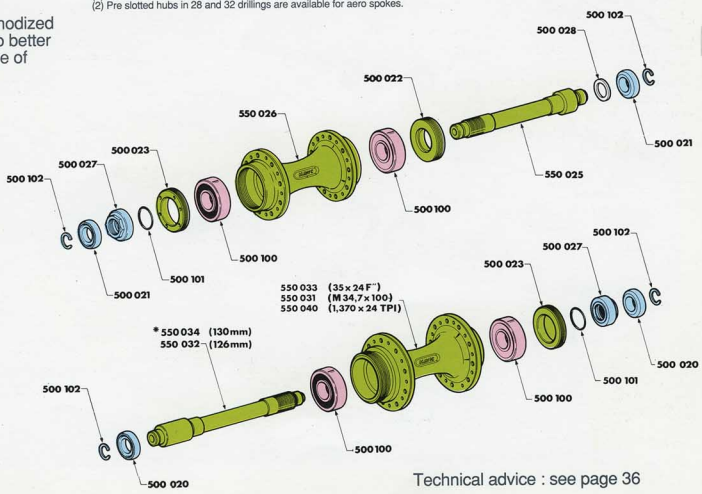


550 RD

Conception and components are identical to the 500 RD.
In order to increase the rigidity of the rear axle the bearing on the freewheel side has been moved to the extremity of the hub.
This modification is necessary for the cyclists who use larger ratios. For example, professional and amateur racers.
Also the hub body has been anodized to improve maintenance and to better incorperate the hub into our line of silver anodized products.
- Forged dural body,
- Light alloy axle,
- Steel or dural quick releose,
- All pieces are replaceable.

	AXLE SPACING	DRILLING	WEIGHT WITH STEEL QUICK RELEASE	WEIGHT WITH ALOY QUICK RELEASE
Front 550 RD hub	100	24-28 (2)-32 (2)-36	230 g	210 g
Rear 556 RD hub M 34,7 x 100 1,370 x 24 TPI 35 x 24 F	126 (1)	24-28 (2)-32 (2)-36-40	275 g	255 g

(1) A 130 mm rear axle is available for 8 speed freewheels. (Ref. 550034).
(2) Pre slotted hubs in 28 and 32 drillings are available for aero spokes.



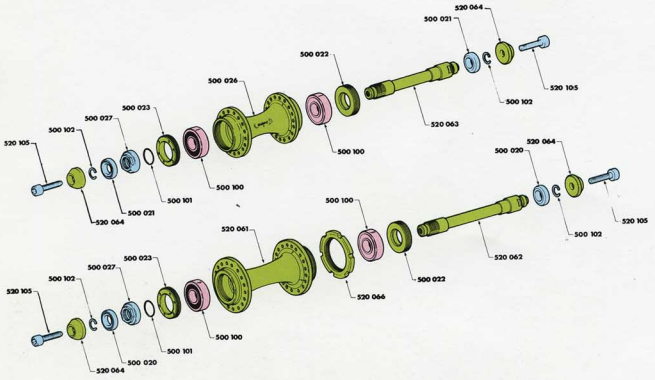
Technical advice : see page 36

520 TRACK HUBS



Mechanical concept identical to the 500 RD road hub.
- Dural forged body,
- Dural axle,
- Sealed cartridge bearing,
- Mount with a 6 mm allen key.

	SPACING	DRILLING	WEIGHT
Front 520 track hub	100	24-28-32-36	175 g
Rear 520 track hub	120	24-28-32-36-40	225 g

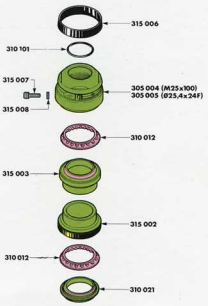




305 HEADSET

A new adjustment and fixing method with an ingenious locking device which eliminates the lock nut and washer. This system makes adjustment very simple :
- tighten until contact with the bearings is appropriate **manually**,
- using a 2,5 mm allen key tighten the fixing bolt,
- stainless steel bearings and racers,
- bearings are sealed by plastic seals.

REFERENCE	THREADING	WEIGHT
305	25 x 100	118 g
	25,4 x 24 F	118 g





Technical advice : see page 38

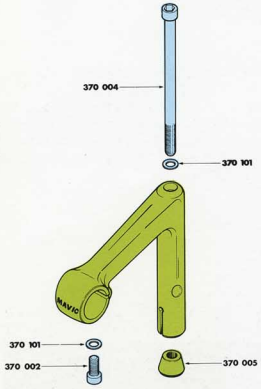
STEMS



365

- Light forged alloy.
- Silver anodized finish.
- Very efficient « Underneath » handlebar bolt.

A mm	80	90	100	110	120	130
Ø mm	21,95 or 22,2					
Weight (g)	242	250	260	265	270	275

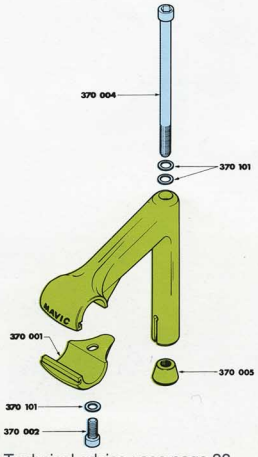




370

The two pieces of this stem are forged from light alloy.
They are machined entirely on a numerical milling machine.
The lower piece fits in a dovetail joint and permits removal of the handlebars without removing the accessories.
Silver anodized finish.

A mm	95	105	115	125
Ø mm	21,95 or 22,2			
Weight (g)	315	325	335	345



Technical advice : see page 38

KIT 357

Handlebars kit which includes :
- a hard anodized dural « U » bend bar,
- 2 elbow supports in light alloy covered with foam,
- all mounting brackets and hardware.

This extension mounts on all types of handlebars from normal road bends to 355 style bars. Advantages to this system are :

HANDLE BARS



350

Light alloy, reinforced by an exterior sleeve.
Silver anodized finish.

Width between centers	40	41	42	43	44
Weight (g)	320	325	330	335	340



351

An addition to our RACING line.
A square shaped light alloy handlebar, silver anodized.

Width between centers	40	42	44
Weight (g)	350	360	370



355

Thanks to an angled horizontal tube, this handlebar allows a good aerodynamic position on a « plongeant », the hand position is very comfortable. Delivered with 2 cable guides permiting use with non aero brake levers.
Hard anodized.

Width between centers	40	42
Weight (g)	300	310

Technical advice : see page 40



- Different angles of inclination are possible, also the length of extension is adjustable.
- Adaptable to physique of each racer.
- Width of bar 135 mm.

Used on an ATB this kit allows different positions on the « flats ».
Weight : 560 grams.



610 URD BOTTOM BRACKETS

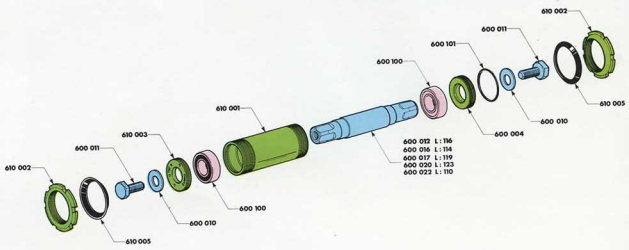
The mounting technique of the 610 URD suffices to distinguish it from existing types. Actually it can be mounted on frames of all thread types simply by cham fering the bottom bracket.

- Dural silver anodized body,
- Steel tempered axle,
- Bearing seats calibrated,
- Sealed cartridge bearings,
- Dural fixing rings hard anodized with 2 plastic fixing washers.

The 610 URD posseses a number of advantages :

- Ease of mounting,
- Adjustable chain line,
- One model fits all frame threading,
- Can be used to save a frame with damaged bottom bracket threading,
- All pieces are replaceable.

MODEL	AXLE LENGTH	WEIGHT
610 URD track	110 mm	290 g
610 URD double	114 mm	300 g
610 URD double long	116 mm	305 g
610 URD triple	119 mm	310 g
610 URD triple long	123 mm	315 g



Technical advice : see page 37



631 CRANKSETS

The system of mounting the chainrings on the interior (MAVIC patent) gives this crankset advantages which are far superior to traditional cranksets.

1. The dural crank arms have extremely « pure » lines.
2. The chainring star gives additional rigidity to the outside chainring.

ALSO :

3. The chainring mounting system allows use of the same crank arms with a single chainring, double chainrings or triple chainring.

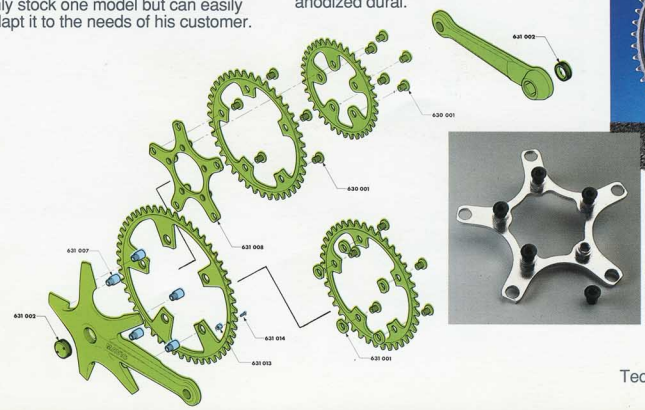
This is not only interesting for the cyclist but also for a bike shop which may may only stock one model but can easily adapt it to the needs of his customer.

CRANKS	THREADING	CHAINRINGS	AVERAGE WEIGHT
165 170 172,5 175 177,5 180	9 / 16 x 20 F"	Track mounting from 48 to 54	668 g
		Double mounting from 38 to 56	730 g
		Triple mounting from 30 to 38 for small rings and from 38 to 56 for second and large ring	835 g

The same crank can be used in three versions.

Crankarms are forged in light alloy and anodized silver.
Chainrings are silver anodized « zicral » with machine cut teeth.
Spacer for the 3rd chainring is silver anodized dural.





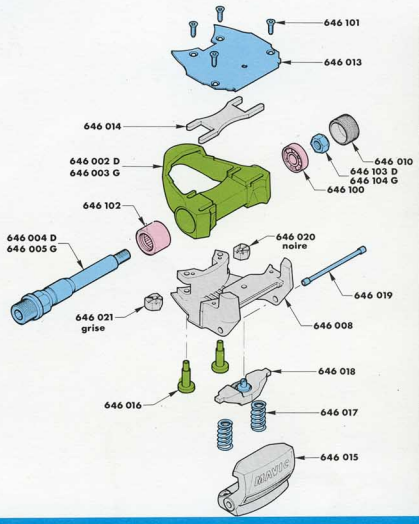
Technical advice : see page 38

646 LMS
PEDALS

The standard « Look System » cleat and fixing system + the « Mavic System » allows movement of the foot 0 to 5 degree to the left or right (Mavic patent).
This movement is adjustable degree by degree.
The user is able, at his convienence, to change the latitude of foot movement or immobilise the movement.
- Needle bearings and sealed bearings.

MODEL	THREADING	WEIGHT OF THE PAIR
646 LMS	9 / 16 x 20 F"	480 g

Technical advice : see page 40





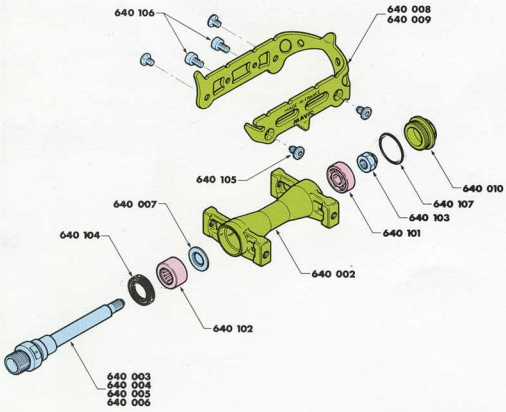
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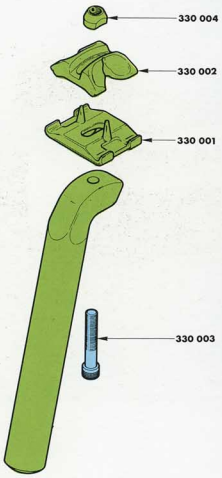
Manufactured with extremely precise machining, this pedal can be entirely disassembled and all parts are replaceable :
- the body is forged and silver anodized,
- the cage is hard anodized « zicral »,
- the bearings are needle and ball bearings,
- the steel axle is tempered and aligned,
- A sealed mechanism assures bearing life.

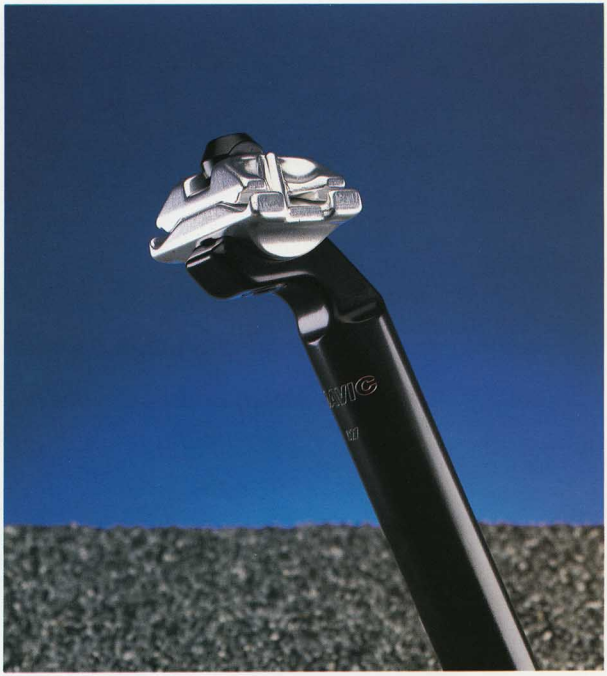
MODEL	THREADING	WEIGHT OF THE PAIR
640	14 x 125	340 g
641	9 / 16 x 20 F"	340 g




MAVIC
MADE IN FRANCE
MAVIC
MADE IN FRANCE


640 106
640 008
640 009
640 105
640 010
640 107
640 007
640 103
640 101
640 104
640 002
640 102
640 003
640 004
640 005
640 006



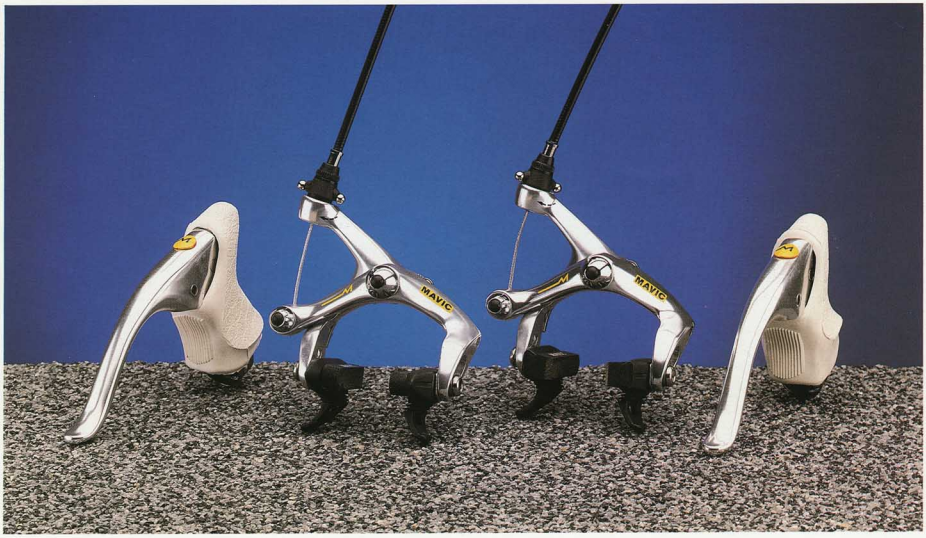


330 SEAT POST

The light alloy post is hard anodized plus anodized black (C.N.D.).
This C.N.D. treatment helps the seatpost slide in the seat tube and actually helps the clamping system grip the seatpost.
The saddle carriers are clear anodized light alloy.

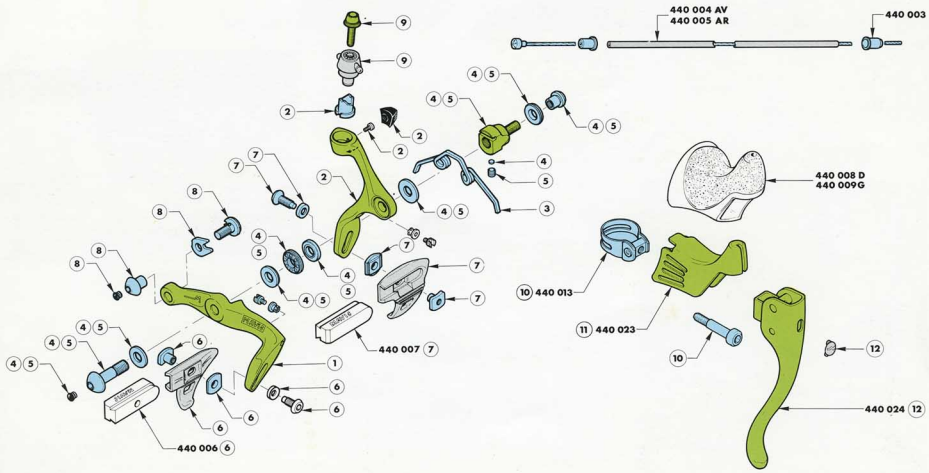
POST DIAMETER	WEIGHT (g)	MODEL NUMBER
23	260	330 090
25	270	330 100
26,2	295	330 110
26,4	300	330 120
26,6	305	330 130
26,8	310	330 133
27	315	330 135
27,2	320	330 140

440 BRAKES



Super rigid calipers forged of light alloy and anodized.
Brake levers are center pull with internal cable passage.
Composite brake pads insure stopping power in wet or dry conditions.
Weight including cables : 784 g.

1 - RIGHT CALIPER ARM	Code 440010
2 - LEFT CALIPER ARM	Code 440011
3 - FRONT OR REAR CALIPER SPRING	Code 440012
4 - FRONT CALIPER BOLT COMPLETE	Code 440014
5 - REAR CALIPER BOLT COMPLETE	Code 440015
6 - RIGHT SHOE HOLDER COMPLETE	Code 440016
7 - LEFT SHOE HOLDER COMPLETE	Code 440017
8 - CABLE FIXING BOLT FRONT OR REAR	Code 440018
9 - CABLE ADJ. BARREL FRONT OR REAR	Code 440019
10 - BRAKE LEVER CLAMP COMPLETE	Code 440013
11 - LEVER BODY	Code 440023
12 - DURAL HAND LEVER	Code 440024



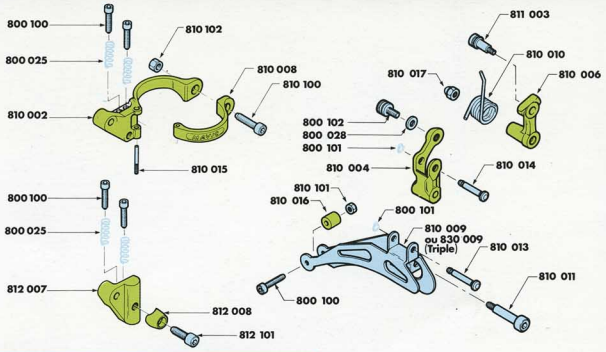
860 / 870
862 / 872
FRONT

The precision machining and finish are very evident on these pieces.
The parts exposed to use are treated C.N.D. (hard anodized + black).
The machining tolerances allow a minimum of « play » to this « high end » series.
Two types of frame mounting are available and a long cage for triple chainrings (870 and 872).

	DOUBLE		TRIPLE	
MOUNTING SYSTEM	REF.	AVERAGE W.	REF.	AVERAGE W.
Collar Ø 28 mm	860	100 g	870	110 g
Italian braze-on	862	90 g	872	100 g







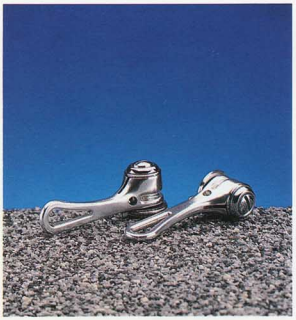
SHIFTERS

22

Technical advice : see page 42

820

Light alloy silver anodized.
Retrofriction system.
Weight : 70 g

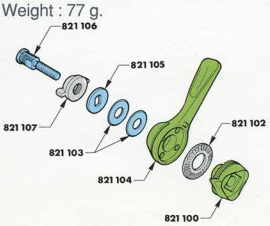


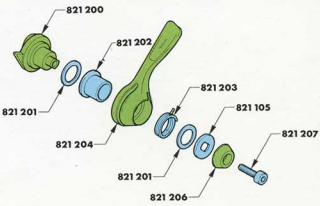
821

Chainring lever with retrofriction and right hand indexed lever.
Compatable with 840 and 841 rear derailleurs.
- For 6 or 7 speed freewheelswith even spacing.
- Supplied with prestreched cables and anti-compression cable housing.
- Lightweight forged alloy silver anodized.

Weight : 77 g.









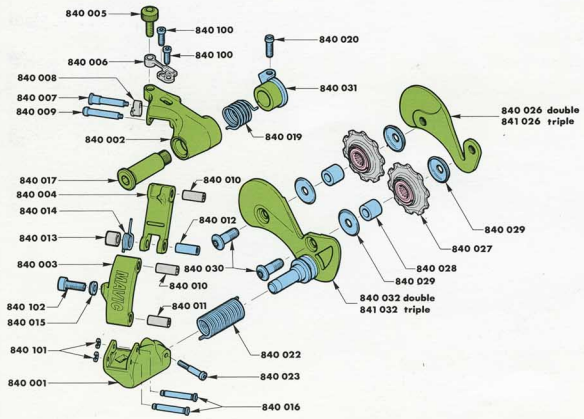
DERAILLEURS
840 / 841
REAR

The derailleurs 840 short cage (racing) and 841 medium cage (for triple chainring) are compatible with our 820 retrofriction shifters and 821 indexed shifters.

They are composed of an ensemble of high precision pieces :
- Body pieces are of lightweight forged alloy silver anodized or teated C.N.D. (hard anodized + black),
- Jockey wheels with needle bearings,
- 6 or 7 speed selectable with 821 indexed levers,
- Adjustment of optimal shifting position by adjusting the spring tension of the upper articulation.

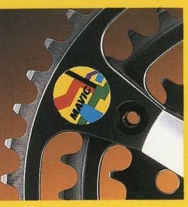
On the rear derailleur 841 the cage is lengthened to accomodate the wider ratios of triple cranksets :
- Possible ratios up to 30 teeth,
- Total capacity 32 teeth.

Weight 840 short cage : 230 g.
Weight 841 medium cage : 235 g.



Technical advice : see page 41





A T B



CONTENTS

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pages 26 and 27

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DERAILLEURS
SHIFTERS
pages 32 and 33

DESCRIPTION	SIZE	SEAT DIMENSION	DRILLING	AVEARAGE WEIGHT
For tires from 44 to 55 mm. Double eyelet. Excellent weight / rigidity.. The profile allows ease in mounting tires of all makes. Brilliant anodizing.	26"	559	36	490 g
For tires from 44 to 55 mm. Double eyelet with exposed eyelet in stainless steel. Flash brilliant treatment + hard anodizing 50 µ 600 vickers. Excellent strength to weight ratio.	26"	559 mm	36	490 g
Tubular profile super rigid. Maximum braking surface. Double eyelet with exposed eyelet in stainless steel. Lowerd inner section to ease mounting and centering of tires. Flash brilliant treatment + hard anodizing 50 µ 600 vickers.	26 "	559 mm	32-36	580 g
For ATB tires from 44 to 55 mm. Double eyelet. Hard anodized treatment.	26 x 1,75	559	36	550 g
For ATB tires from 44 to 55 mm. Double eyelet. Hard anodized treatment. Very rigid rim for intense use.	26 x 2,125	559	36	550 g
Very narrow rim for smaller section tires. Double eyelet, visible eyelet in stainless steel. Hard anodized treatment.	26"	559	32-36	400 g



OXYGEN M6



OXYGEN M6 CD



ENERGY M7 CD



RANDO M4



RANDO M5



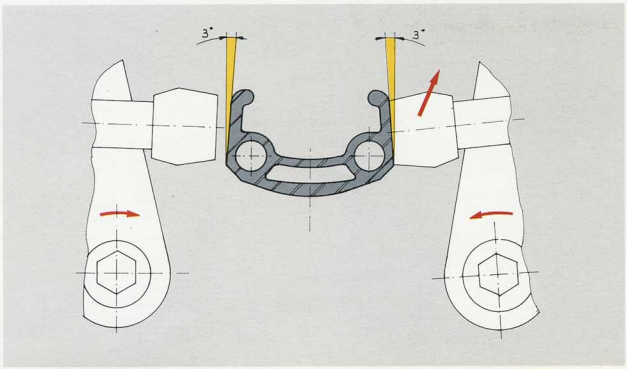
MA 40 MB

PROFILE P.S.P. RIMS

This profile has been specially developed for use with « Cantilever » type brakes.

These rims are characterized by their pyramidal shape.
In addition this profile gives additional support to the braking surface.
The 3 degree angle towards the center of the rim, which reduces the chance of the pads being drawn into the spokes.

From this profile a new series of rims has been born, destined particularly for competition and the increasing demands of competitors.



DESCRIPTION	SIZE	SEAT DIMENSION	DRILLING	AVEARAGE WEIGHT
For tires up to 37 mm. Single stainless steel eyelet. Anodized neutral.	26"	559	28-32-36	410 g



M 231

For tires up to 37 mm. Single stainless steel eyelet. Flash brilliant treatment + 50 µ of hard anodizing 600 vickers.	26"	559	28-32-36	410 g



M 231 CD

For all types of tires. Double eyelet with exposed eyelet in stainless steel. Anodized neutral.	26"	559	28-32-36	460 g



M 261

For all types of tires. Double eyelet with exposed eyelet in stainless steel. Flash brilliant treatment + 50 µ of hard anodizing 600 vickers.	26"	559	28-32-36	460 g



M 261 CD

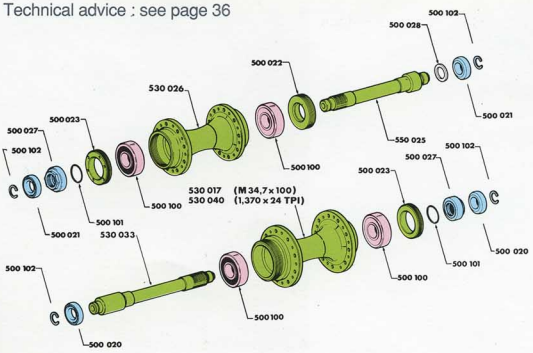
530 HUBS



Derived from the 556 RD hub, this hub differs mainly in the shape of the hub body, the color of anodization and the decor.
- The bearing on the freewheel side is at the extrimity of the hub.
This augments the rigidity of the rear axle.
- Dural forged body.
- Light alloy axle.
- Steel quick release.
- All the parts are replaceable.

SPACING	THREADING	DRILLING	HOLE Ø	LENGTH OF SPOKES 3 CROSS	WEIGHT
F. / 100 mm R. / 130 mm 1,370 x 24 TPI	34,7 x 100 (métric) or (BSA)	28-32-36	2,5 mm for spokes 14 / 15 jauge	262 mm and 260 mm	505 g pair

Technical advice : see page 36

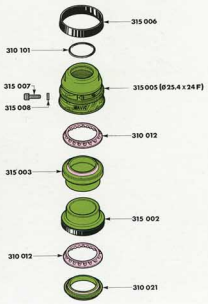




KIT PARIS - GAO - DAKAR

Composed of a pair of 530 hubs and a pair of OXYGEN M6 CD rims.





315 HEADSET

As with the 305 headset, the system of adjustment and fixing the upper race is accomplished with an ingenious system of immobilisation eliminating the lock nut and washer.
This system allows a very simple adjustment :
- Tighten until contact with the bearings is appropriate **manually**.
- Using a 2,5 mm allen key tighten the fixing bolt.

The upper race has been heightened to increase thread contact with the steerer tube and decrease the chance of loosening, a phenomenum well known to ATB riders.

MODEL	THREADING	WEIGHT
315	25,4 x 24 F	128 g



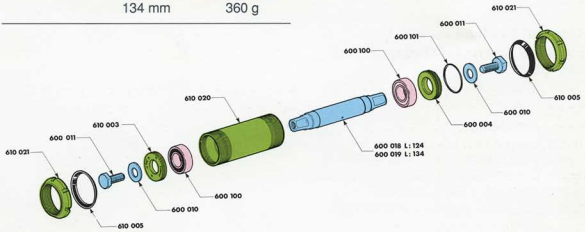
Technical advice : see page 38



616 RD BOTTOM BRACKET

The mechanical conception is identical to the 610 URD but the shell has been widened to position the bearings at the exterior of the bottom bracket.
This increase in support to the bearings augments their life on an ATB used in competition.
The axles are symetrical.

MODEL	AXLE LENGTH	AVERAGE WEIGHT
VTT 616 RD	124 mm	350 g
	134 mm	360 g



Technical advice : see page 37



637 CRANKSETS

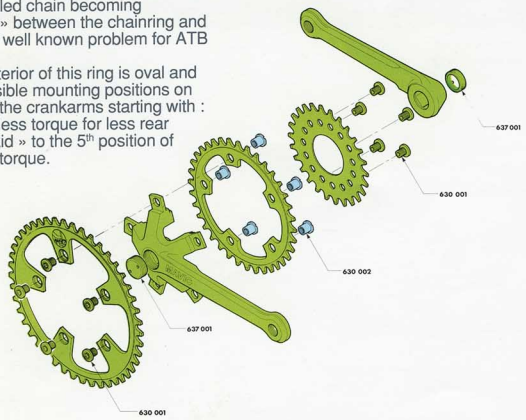
Lightweight forged alloy crankarms, machined with precision and silver anodized.
« Zicral » chainrings anodized grey bronze with machine cut teeth.

The small chainring has been studied in particular :

1 - The inner circle of this ring has been reduced so it just clears the bottom bracket. This eliminates the possibility for a derailled chain becoming « jammed » between the chainring and the axle, a well known problem for ATB riders.
2 - The exterior of this ring is oval and has 5 possible mounting positions on relation to the crankarms starting with : position 1 less torque for less rear wheel « skid » to the 5th position of maximum torque.

MODEL	CRANKARMS	THREADING	CHAINRINGS	AVERAGE WEIGHT
V.T.T. 637	170	9 / 16 x 20 F"	Oval small chainring 26 - 28 or round 24 - 26 - 28 2nd chainring 36 or 38 3rdchainring 46 or 48	660 g
	175			680 g
	180			700 g

Also available are round inner rings of 24-26 or 28 teeth for replacement.





Oval ring



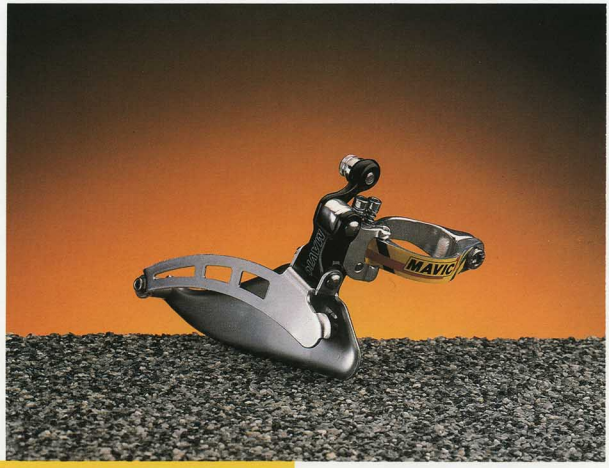
Round ring

Technical advice : see page 39

875 FRONT

Front derailleur which is a decendant of the road version. The pieces exposed to use have been treated C.N.D. (hard anodized + black). The cage is case hardened steel with matte chrome.

MODEL	MOUNTING	AVERAGE WEIGHT
VTT 875	Collar Ø 28 mm	110 g



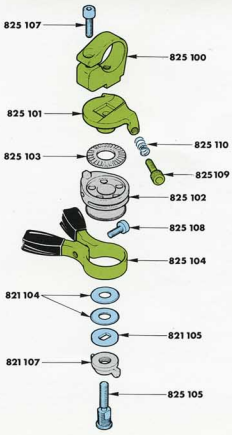
825 SHIFTERS

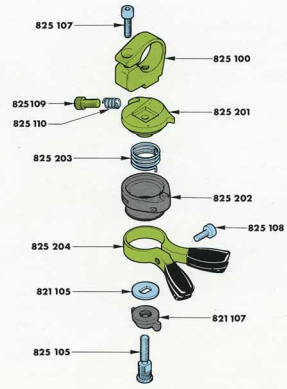


Shifter « under the bar » mount for a more natural shifting position.

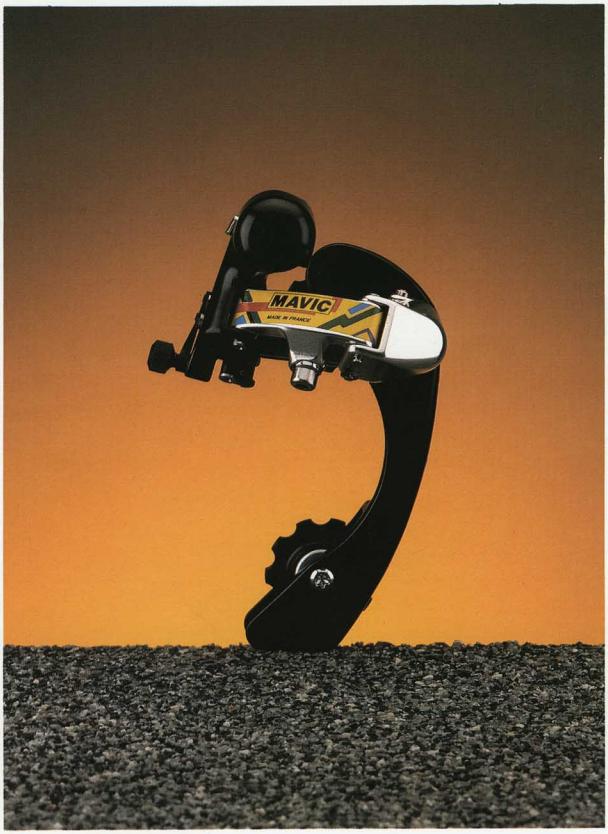
- Chainring lever « assisted » for easy up shifts.
- Right lever indexed with adjustable indexation.
- Pieces in light alloy anodized silver or « cataphorese » treated.
- « Swallowtail » double lever adjustable in hand position to each riders needs.
- Rubber anatomic lever covers.
- Shifters delivered with prestreched cables and anti-compression cable housing.

Weight per pair : 160 g.





Technical advice : see page 43

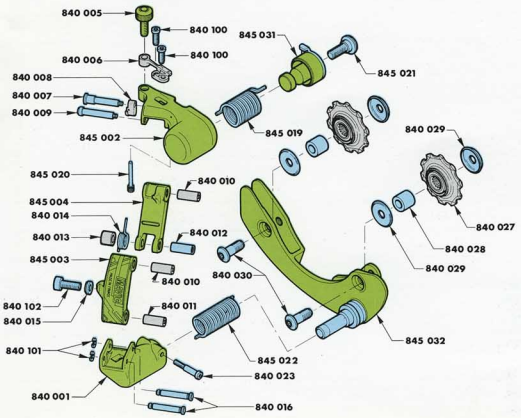


DERAILLEURS
845 REAR

Conception derived from the 840 road derailleur.

- Body pieces are of light weight forged alloy silver anodized or treated C.N.D. (hard anodized + black).
- Jockey wheels with needle bearings.
- 6 or 7 speed selectable with 825 indexed levers.
- Long cage which permits wide gear ratios with cranksets or freewheels.
- Sealed upper and lower articulation, mounting from the rear.
- Stainless steel pivot axle.

Weight : 250 g



Technical advice : see page 41

CLINCHER RIMS

SPOKE LENGTHS FOR LACING WITH MAVIC 500 - 530 - 550 HUBS

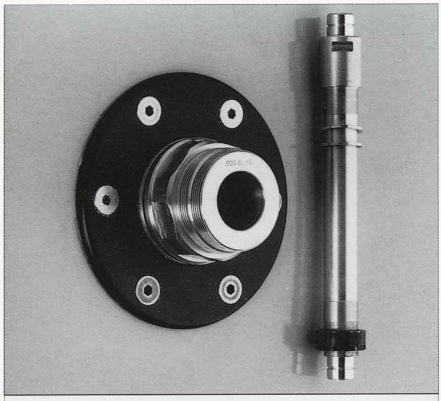
TYPE OF RIMS	SIZES	RADIAL LACING	3 CROSS											
			28 HOLES			32 HOLES			36 HOLES			40 HOLES		
			FR.	REAR R.	REAR L.	FR.	REAR R.	REAR L.	FR.	REAR R.	REAR L.	FR.	REAR R.	REAR L.
190 B	700 C	285							298	296	298			
MA	700 C	285							298	296	298			
	27"	287							300	298	300			
MA 2	700 C	285				300	298	300	298	296	298	296	294	296
MA 2 ARGENT	27"	287				302	300	302	300	298	300	298	296	298
MA 40	700 C	285				300	298	300	298	296	298	296	294	296
	Ø au seat 571	265	278	276	278	276	274	276	274	272	274			
	27"	287				302	300	302	300	298	300	298	296	298
OPEN 4 CD	700 C	283	298	296	298	296	294	296	294	292	294			
	Ø au seat 571	260	273	271	273	271	269	271	269	267	269			
MODULE 3	700 C	285							298	296	298	296	294	296
	650 A								280	278	280	278	276	278
	650 B								278	276	278	276	274	276
	27"	287							300	298	300	298	296	298
MODULE 30 ARGENT	700 C	285							298	296	298	296	294	296
	650 B								278	276	278	276	274	276
	27"	287							300	298	300	298	296	298
MODULE 3 CD	700 C	285							298	296	298	296	294	296
	27"								300	298	300	298	296	298
MODULE 4	700 C	285							298	296	298	296	294	296
	650 A								280	278	280	278	276	278
	650 B								278	276	278	276	274	276
	27"	287							300	298	300	298	296	298
OXYGEN M6 **OXYGEN M6 CD**	Ø au seat 559								262	260	262			
RANDO M4	Ø au seat 559								264	262	264			
RANDO M5	Ø au seat 559								264	262	264			
ENERGY M7 CD	Ø au seat 559					300	298	300	260	258	260			
M 231 **M 231 CD**	Ø au seat 559		269	267	269	267	265	267	265	263	265			
M 261 **M 261 CD**	Ø au seat 559		269	267	269	267	265	267	265	263	265			
MA 40 MB	Ø au seat 559		269	267	269	267	265	267	265	263	265			

TECHNICAL ADVICE

TUBULAR RIMS

SPOKE LENGTHS FOR LACING WITH MAVIC 500 - 550 HUBS

TYPE OF RIMS	SIZES	RADIAL LACING	3 CROSS														
			24 HOLES			28 HOLES			32 HOLES			36 HOLES			40 HOLES		
			FR.	REAR R.	REAR L.	FR.	REAR R.	REAR L.	FR.	REAR R.	REAR L.	FR.	REAR R.	REAR L.	FR.	REAR R.	REAR L.
PISTE	700	290				305	303	305	302	300	302	300	298	300			
SPECIALE SPORT	700	290							302	300	302	300	298	300			
MONTLHERY ROUTE	700	290							302	300	302	300	298	300	298	296	298
MONTLHERY PRO	700	290	307	305	307	305	303	305	302	300	302	300	298	300	298	296	298
GP4	700	290	307	305	307	305	303	305	302	300	302	300	298	300	298	296	298
ARGENT 10	700	290	307	305	307	305	303	305	302	300	302	300	298	300			
G.L. 330	700	290	307	305	307	305	303	305	302	300	302	300	298	300			
	650	270				286	284	286	284	282	284						
	600	242				256	254	256	254	252	254						
G.E.L. 280	700	290				305	303	305	302	300	302	300	298	300			
MACH 2 CD 2	700	282	300	298	300	298	296	298	296	294	296	294	292	294			
	650	264	280	278	280	278	276	278									
	600	235	254			250											
CX 18	700	290	307	305	307	305	303	305	302	300	302	300	298	300	298	296	298
	650	270				286	284	286	284	282	284						
	600	242				256	254	256	254	252	254						
PARIS ROUBAIX SSC	700	290	307	305	307	305	303	305	302	300	302	300	298	300	298	296	298



CHALLENGER AND COMETE WHEELS

TRANSFORMATION OF ROAD DISC WHEELS TO TRACK DISCS

1.Remove the road kit. Remove the clips 500 102 and the fixing washers 500 020. Lock the wheel in an axle vise. Unscrew the adjusting nut 500 027 and knock out the axle.

2. Mounting the track kit : install the axle 580 067 and the adjusting nut 500 073. Adjust the hub, install the cog adapter and remount the mounting washers and clips.

< Showing the cog adapter in place

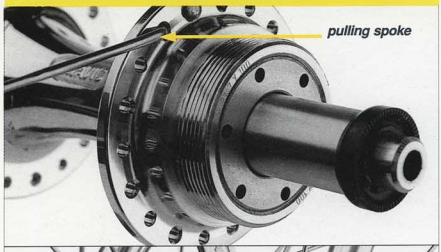


MISE EN PLACE ET RETRAIT DES MASSES SUR ROUES COMETE ±

1. Mise en place : introduire les masses acier dans les alvéoles de la roue; les maintenir en place en collant une pastille adhésive.

2. Retrait de masses : décoller les pastilles adhésives et utiliser l'aimant livré dans le kit pour retirer les masses.

< Removing a weight with magnet

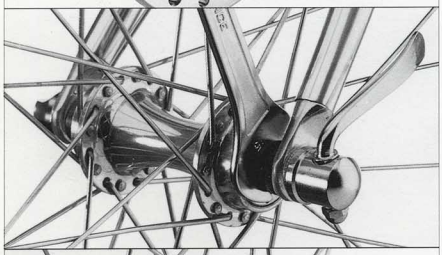


500 - 530 - 550 HUBS

LACING SPOKES

At the height of competition, a broken spoke can have unbearable consequences. During the last few years, Mavic has conducted tests with elite racing teams. The conclusions we have drawn from these tests lead us to recommend a particular lacing pattern to help increase spoke life.

With Mavic hubs every other spoke hole has been chamfered on the inside and the outside of the flange.
When lacing, install the spoke so that it exits the flange on the chamfered side.
For the rear wheel all the outside spokes should be pulling spokes.



ADJUSTMENT OF PLAY OR TIGHTNESS OF THE HUBS

Mount the wheel on a frame.

1. In case of play : tighten adjusting nut 500 027 slowly with a 15 mm spanner checking the play at the rim.

2. In case of tightness : loosen the adjusting nut 500 027 1/2 turn. Remove the wheel from the frame and the quick release from the hub. Give the axle a light tap with a mallet on each side of the axle. Continue the process until a smoother rotation is obtained.

< Adjustment of play : wheel mounted in the frame



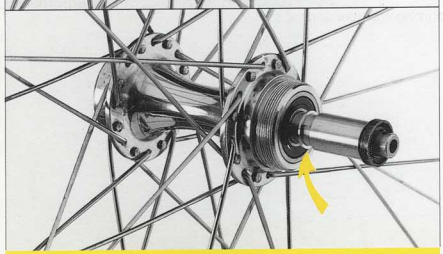
CHANGING THE BEARINGS

Marche à suivre :

1.Disassembly : remove clips 500 102 also the washers 500 020 or 500 021; lock the wheel in an axle vise. Unscrew the adjusting nut 500 027; remove the axle and unscrew the two bearings covers 500 022 and 500 023. Knock out the bearings.

< Remove the bearings covers with tool 670





2. Reassembly : after cleaning the body, install all the pats in the reverse order of disassembly. Take care to in sure you install bearing cover 500 022 on the freewheel side.

< Installing the bearings

MODIFICATION OF THE REAR HUB AXLE SPACING

Remove the axle as per the preceding instructions. Slide one or two of the 1 mm spacers (supplied with the hubs) on the axle to the freewheel side and replace the axle.

For 8 speed spacing : replace axle 550 032 with a 550 034 axle and follow preceding instructions.

< Installing the axle spacers



610 URD AND 616 URD BOTTOM BRACKETS

PREPARING THE FRAME

1. Drill a 4 or 5 mm hole in the center of the bottom bracket on the frame. This hole ventilates the BB.

2. Put a 45 degree chamfer or 2 to 2,5 mm on each side of the frame bottom bracket. This operation must be carried out of proper installation and can be accomplished with Mavic tools Ref. 652 and 653.

3. Clean bottom bracket thouroughly.

< Cutting the frame



MOUNTING THE BOTTOM BRACKET

1. Slide the bottom bracket into the frame with the side marked « fixe » on the chainwheel side.

2. On each side of the bottom bracket install one of the plastic washers (large diameter on the outside).

3. Screw on the two rings 610 002 (610 021) making sure the chain line is correct.

4. Tighten the two rings with sufficent torque to secure them properly.

ADJUSTMENT

In case of play, remove the left hand crank and with the aid of tool Réf. 670 slowly tighten the mobile bearing cover 610 004 until the play disappears using the right hand crank to check the play.

< Adjusting play or removing bearing covers



DISASSEMBLY FOR BEARING REPLACEMENT

1. Remove both crank arms. Unscrew bearing covers 610 003 and 610 004 with the Mavic tool Réf. 670; tap out the axle and the bearings; clean the body.

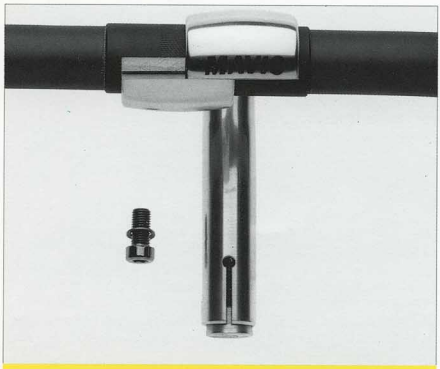
2. Install the chainring side bearing and secure it with the bearing cover marked « fixe » 610 003; tighten it securely.

3. Slide the axle in and install the second bearing with Mavic tool 6702 (pay attention to install the proper end of the axle in the correct direction).

4. Install and tighten the bearing cover 610 004 until the axle play disappears.

5. Remount the crank arms.

< Installing bearings



THE370 STEM

To be used exclusively with bars of 26,0 mm.

< Installing the stem



305 ROAD OR 315 ATB HEADSETS

< Tightening the allen bolt

- Threading : M 25 x 100 or Ø 25,4 x 24 F".
- Ø steerer tube race : 26,4.
- Ø frame race : 30,2.

FRAME PREPARATION

1. Mill the fork crown to the proper dimension.
2. Mill the head tube until the surfaces until properly surfaced.
3. Using a deburring tool deburr the inside of the steerer tube.
4. Cut the steerer tube to length :
39 mm plus the length of the head tube for road;
38 to 44 mm plus the length of the head tube for ATB
(we recommend 44 mm for addition thread contact for ATB).

INSTALLATION

1. Install the cups 315 002 and 315 003 in the frame.
2. Mount the fork crown race on the fork.
3. After cleaning and greasing the races and bearings set the bearing on the races.
4. Screw on the upper race 305 004 (305 005 or 315 005) by hand until the play is gone and the headset functions properly (the flats will take a 32 mm spanner).
5. Tighten the bolt 305 007 with a 2,5 mm allen key until secure.
6. Put the cover 315 006 in place to cover the locking bolt.



631 ROAD CRANKSET

MOUNTING CHAINRINGS

DOUBLE CHAINRING

1. Place the outer ring on first, with the countersunk holes facing the crankarm and the chainstop in the proper position.
2. Put the 5 spacers 631 001 on the 5 studs 631 007 (for 38 tooth rings make sure to place the spacer flats outward so the chain will clear them).
3. Mount the 2nd chainring with the countersunk holes facing outward to accept the heads of the mounting bolts 630 001.
4. Tighten bolts until secure.

< Mounting a double chainring



TRIPLE CHAINRINGS

For the triple version, the spacers will be replaced with an adapter star 631 010 on which the third chainring is mounted.
Mounting the 2nd chainring stays the same.

< Mounting a triple chainring



TRACK

1. Using a 5 mm allen key, remove the 5 studs 631 007.
2. Position the chainring (countersunk holes facing out).
Le serrer à l'aide des vis 630 001.

< Mounting a triple chainring

-ATB 637

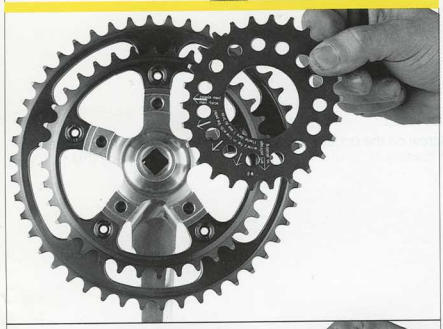
MOUNTING THE CHAINRINGS

The mounting principle for the two large chainrings is standard.

For the third chainring, which has an oval shape, we have machined 15 mounting holes in the ring.

This allows the cyclist to choose five positions of the oval in relation to the crank arm.
The marks that are lazer etched into the ring indicate the position of the oval.
As the arrows thicken the amount of torque created by the oval chainring also increases. Positions range from a low « skid » position to a maximum torque setting.

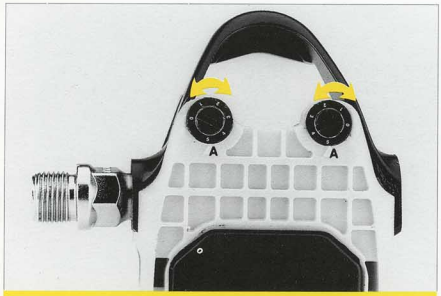
Round rings in 24-26-28 teeth are also available.



< Oval ring



< Round ring



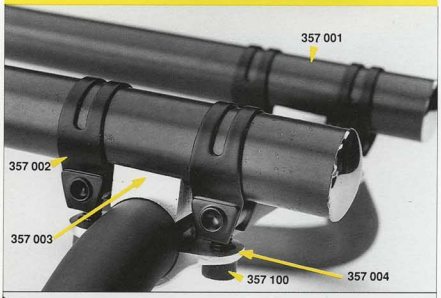
646 LMS PEDALS

ADJUSTING LATERAL PEDAL MOVEMENT

The pedals are sold with the set screw on 5 (see A) for maximum movements.

It is possible to reduce this movement to 0 in increments by turning the 2 adjustment screws to the indicated setting.

Each position is set by index.

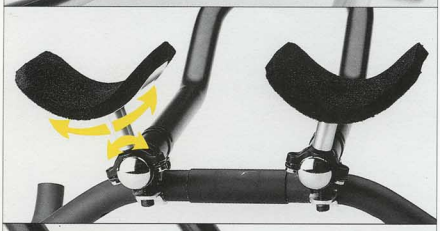


357 KIT

Mount the collars 357 002 on the extension bar 357 001, insert the support piece 357 003 between the collars (1 on each side). Tighten the bolts 357 100 to secure the extension in place.
The extension may be adjusted to length as desired.



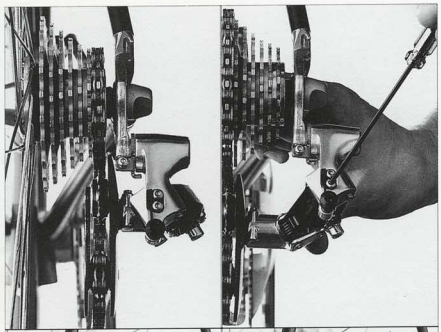
Position the arm rests in front of or behind the collars, or if desired on the handlebar.

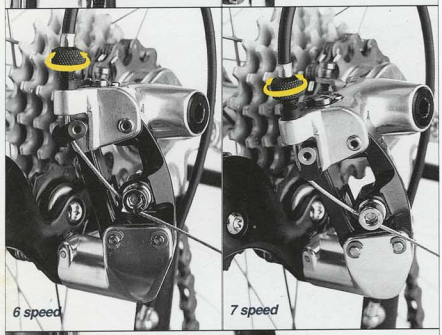


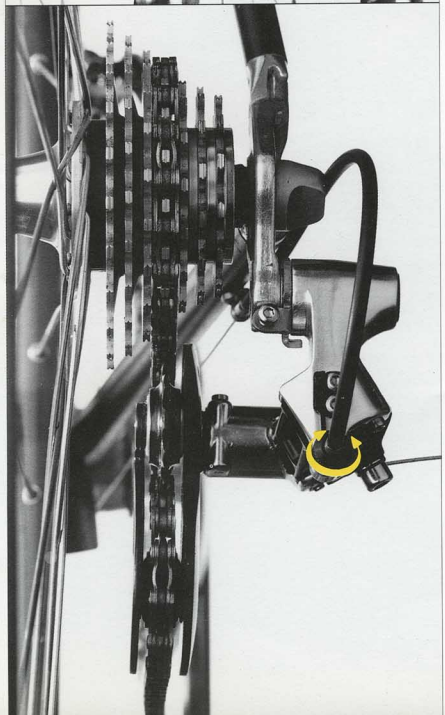
The angle of the supports may be changed to widen the elbow position as the foam supports remain horizontal by adjusting the 4 fixing bolts.

If necessary, cut off the extra extension past the mounting collars.









DERAILLEURS
840 - 841 - 845

Before installing the cable, set the L and H adjustment screws with the derailleur set in the extreme cog positions.

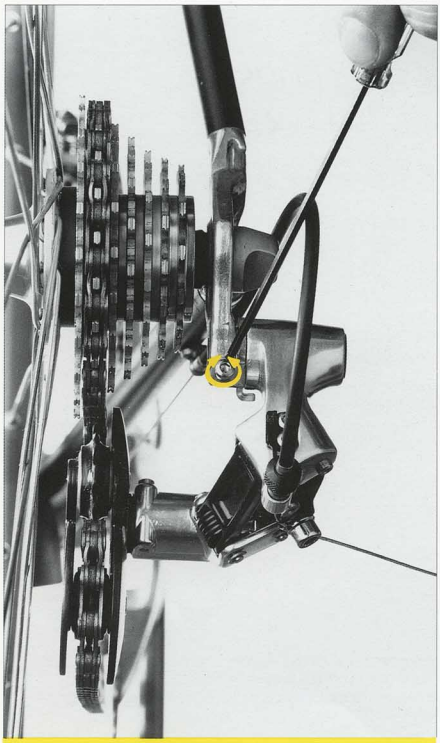
Push the shift lever against its' stop.

Unscrew the cable adjuster two revolutions. Thread the cable through the shifters and through the anti-compression cable supplied with the shifters.

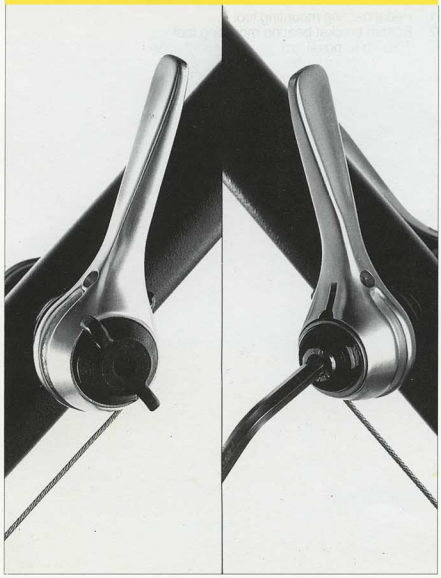
Pass the cable through the selection hole 840 008 for assembly with a standard six speed freewheel. For 7, 8 or compact 6 freewheels pass the cable in front of this piece 840 008 (see photo).

Shift into the 3rd or 4th cog, align the chain with the respective cog using the cable adjusting barrel 840 005

Shift through the gears making any additional adjustments with the adjusting barrel.



On models 840 and 841 the adjusting screw 840-841 permits positioning the derailleur closer to the freewheel cogs for more precise shifting.



SHIFTERS -821

RIGHT LEVER

1. Mount the lever by sliding the lever on the bar. Adjust the position with a 4 mm allen key.
2. Install the cable and insert the housing into the cable adjuster.
3. Orient the « swallow tail » lever by loosening the lever with a 4 mm allen key, after finding the best hand position. Tighten the screw.
4. Adjust the amount of indexation with the wing nut.

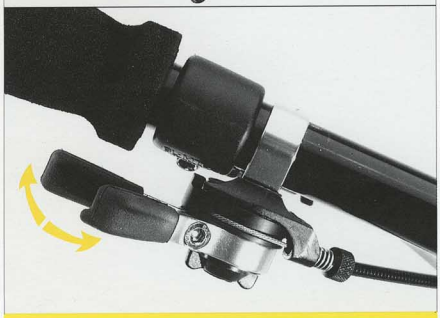
LEFT LEVER

Same mounting and orientation possibilities as with the right « swallow tail » lever.

Insert the cable and housing into the adjuster.

The assistance of the lever may be adjusted with the wing nut.





-825

RIGHT LEVER

1. Mount the lever by sliding the lever on the bar. Adjust the position with a 4 mm allen key.
2. Install the cable and insert the housing into the cable adjuster..
3. Orient the « swallow tail » lever by loosening the lever with a 4 mm allen key, after finding the best hand position. Tighten the screw.
4. Adjust the amount of indexation with the wing nut.

LEFT LEVER

Same mounting and orientation possibilities as with the right « swallow tail » lever.

Insert the cable and housing into the adjuster.

The assistance of the lever may be adjusted with the wing nut.



TOOLS

652 Bottom bracket cutter
653 Cutter centering pieces
654 Cutting handle
670 Pin tool
673 Lubricant
6701 Pedal bearing mounting tool
6702 Bottom bracket bearing mounting tool
6703 Bearing removal tool for pedals and hubs
6704 Mounting tool for hub bearings
6705 Bottom bracket mounting ring spanners

MAVIC

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