

BREVETTI INTERNAZIONALI



catalogue n. 18

INDEX

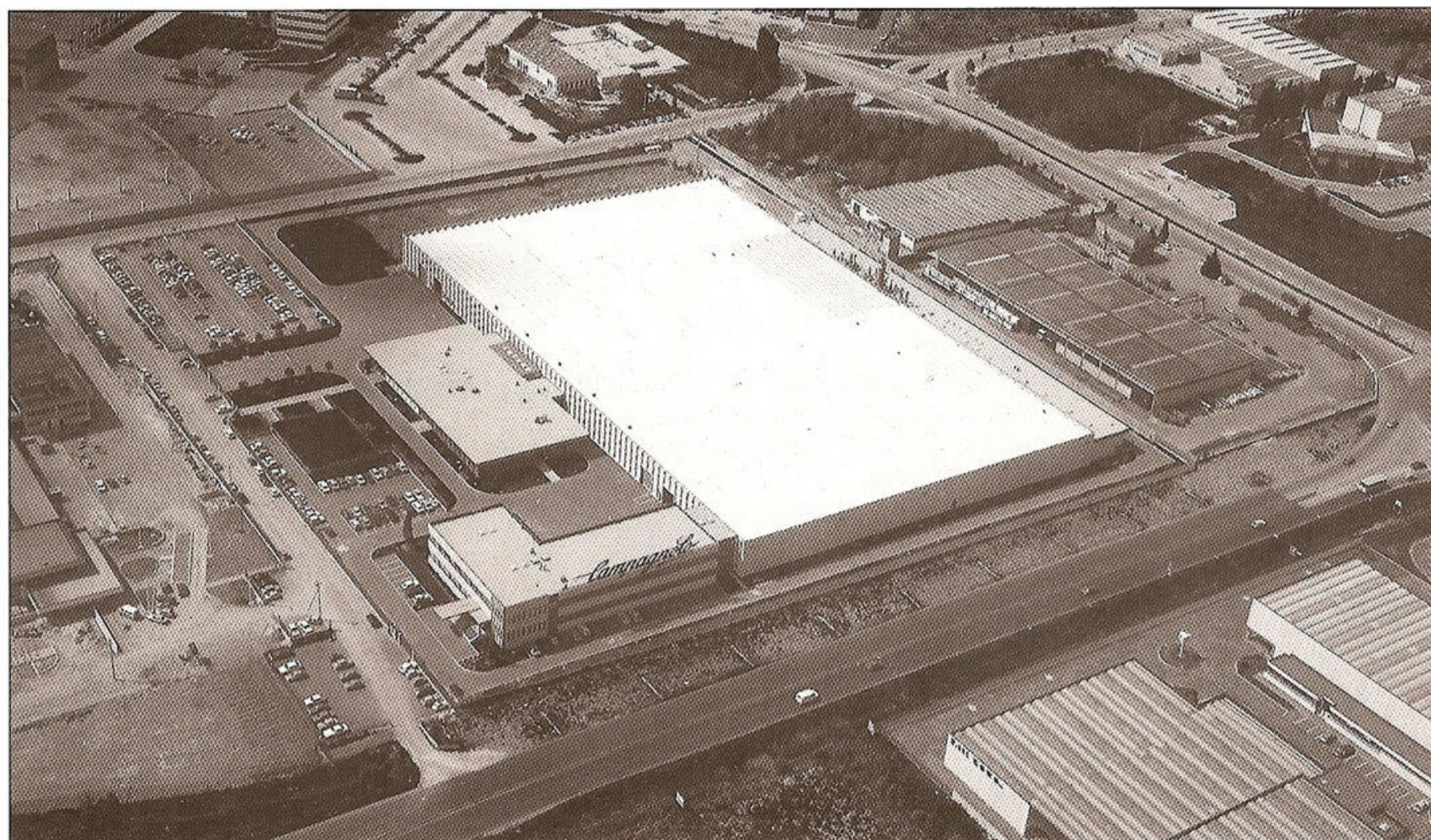
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THE COMPANY

1927. Tullio Campagnolo, valid cyclist, punctures during a race on the Croce d'Aune pass. It is winter time: the cold, the snow and the frozen hands do not permit him to release the screws that fix the wheel to the frame.

Tullio Campagnolo loses the race, but that event is the push of a series of happy intuitions that in a few years radically change the bicycle and the cycling sport too.

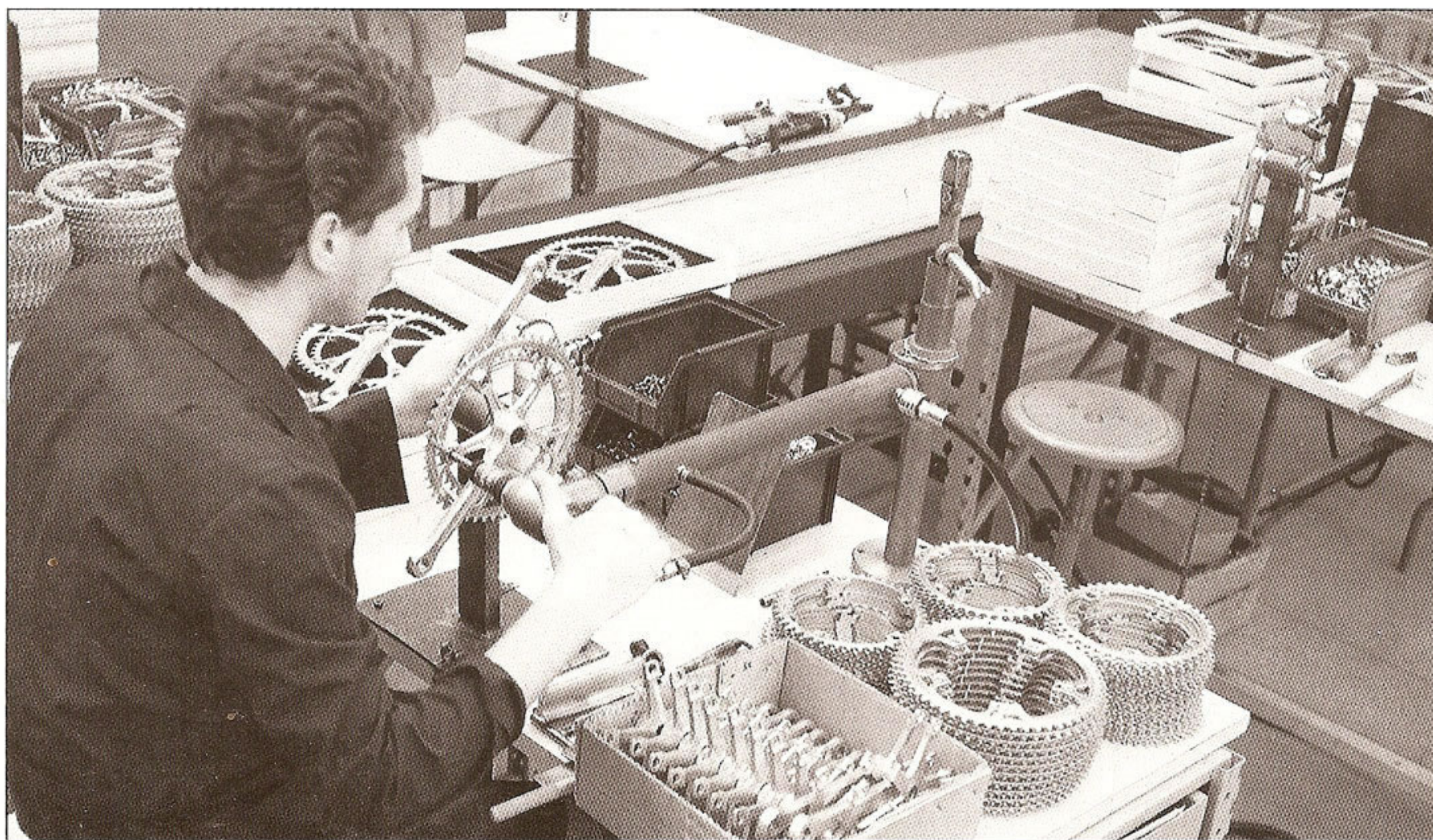
Those times are now far away: today the most famous components in the world are produced by a leader Company that entrusts its performances to a valid managerial team, to its technicians' experience, to the qualifications of the employees, to its capacity to change and of updating its range of products.



ITS PRODUCTS

The vocation of the Company is certainly the production of bicycle components: Campagnolo is one of the very few Companies in the world that manufactures a complete ensemble and the only one that offers a production of exclusive quality.

All the parts as the hubs and the brakes, the gear and the chainset, but especially the small components such as the titanium screw for the gear and the seasoned rubber hoods for levers, witness the steady research of the quality, which is meant as safety, aesthetics, simplicity of solutions. A complete range of products which are the soul of the bicycle and which ennoble and mark it in an unmistakable way.



SUPER RECORD Road Group

4000/F

«SUPER RECORD» Road Campagnolo Group composed of: **4061/1** «Super Record» brakes set, **0102018** «Super Record» gear, **0104010** front changer, **1013/5N-1013/6N** braze-on twin levers, **606-608-617** twin cables, **1034** «Record» hubs set, **1049/A** «Super Record» road chainset, **1046/A** «Nuovo Record» bottom bracket set, **1037/A** «Record» road superlight pedals set, **4041** «Super Record» headset, **4051/1** «Nuovo Super Record» seat-pin, **0990/06** superlight toe-clips set medium size, **1072** seat-pin fixing bolt-nut $\varnothing$ 8.

On request the above group can be supplied with «Super Record» pedals set with titanium axle.

It is the jewel Group of Campagnolo line, for professionals, balanced to obtain the best results during races. It is manufactured with aeronautic and space materials (titanium and light alloys). The lightness of each component takes into consideration the safety while racing and the stiffness, to have immediate action during the sprints and efficiency in climbing.

All the frictions are reduced to the minimum, with surfaces grinded to have a very low roughness.

The gear and the front changer are extremely functional; also used under stress give a sure and smooth performance.

The brakes intervene also in descents covered at 80 km/h., with dry and wet roads, gradually and with the minimum effort of the hands, without vibrations and slipping of the wheel on the road.

Everything is extremely sliding and silent, accentuated by the very high handicraft care of the details: it is the group of the world Champions.

Campagnolo®



RECORD Road Group

1032/F

«RECORD» Road Campagnolo Group composed of: **2040/1** «Record» brakes set, **1020/A** «Nuovo Record» gear, **0104007** front changer, **1013/5N-1013/6N** braze-on twin levers, **606-608-617** twin cables, **1034** «Record» hubs set, **1049** «Record» road chainset, **1046/A** «Nuovo Record» bottom bracket set, **1037** «Record» road pedals set, **1039** «Record» headset, **1044** «Record» seat-pin, **0110056** fixing shoe plates set, **1072** seat-pin fixing bolt-nut $\varnothing$ 8.

This group has all the ideal characteristics to obtain the victory during the races, but it has been planned to keep the efficiency of the bicycle with a less specialized assistance. It is destined to professional riders and to the amateurs of the sporting cycling.

The production of all the components is always balanced to give the best performances to the riders, exploiting at the most their agonistic and sporting capacities.

The safety is at the maximum level even if the bicycle is not always overhauled before the race.

It is a group that lasts long, either aesthetically or functionally; the care of the details continues during the manufacturing process and the standards of test at different stages are very severe: according to Campagnolo level.

GRAN SPORT Road Group

2240/5F

«GRAN SPORT» Road Campagnolo Group composed of: **117** «Gran Sport» brakes set, **3500** «Nuovo Gran Sport» gear, **0104006** «Gran Sport» front changer, **1207/N-1208/N** «Gran Sport» braze-on twin levers, **606-608** cables, **617** casing, **1251** «Nuovo Tipo» small flange quick release hubs, **0304** «Gran Sport» chainwheel set and **3331** «Sport» bottom bracket set, **1040/A** «Sport» headset with **7300109** washer, **3700** «Gran Sport» pedals set, **0110056** fixing shoe plates set, **3800** «Gran Sport» seat-pin.

The approach to the sophisticated qualities of Campagnolo product for he who tends for the first time (or almost) to become an amateur of the sporting cycling, is easier when he starts using this group.

It has the contents of the technical evolution of those who have always made components for winning racing bicycles; lightness, safety, functionality are in fact looked for with the same stubbornness as in the «Nuovo Record» and «Super Record» ranges.

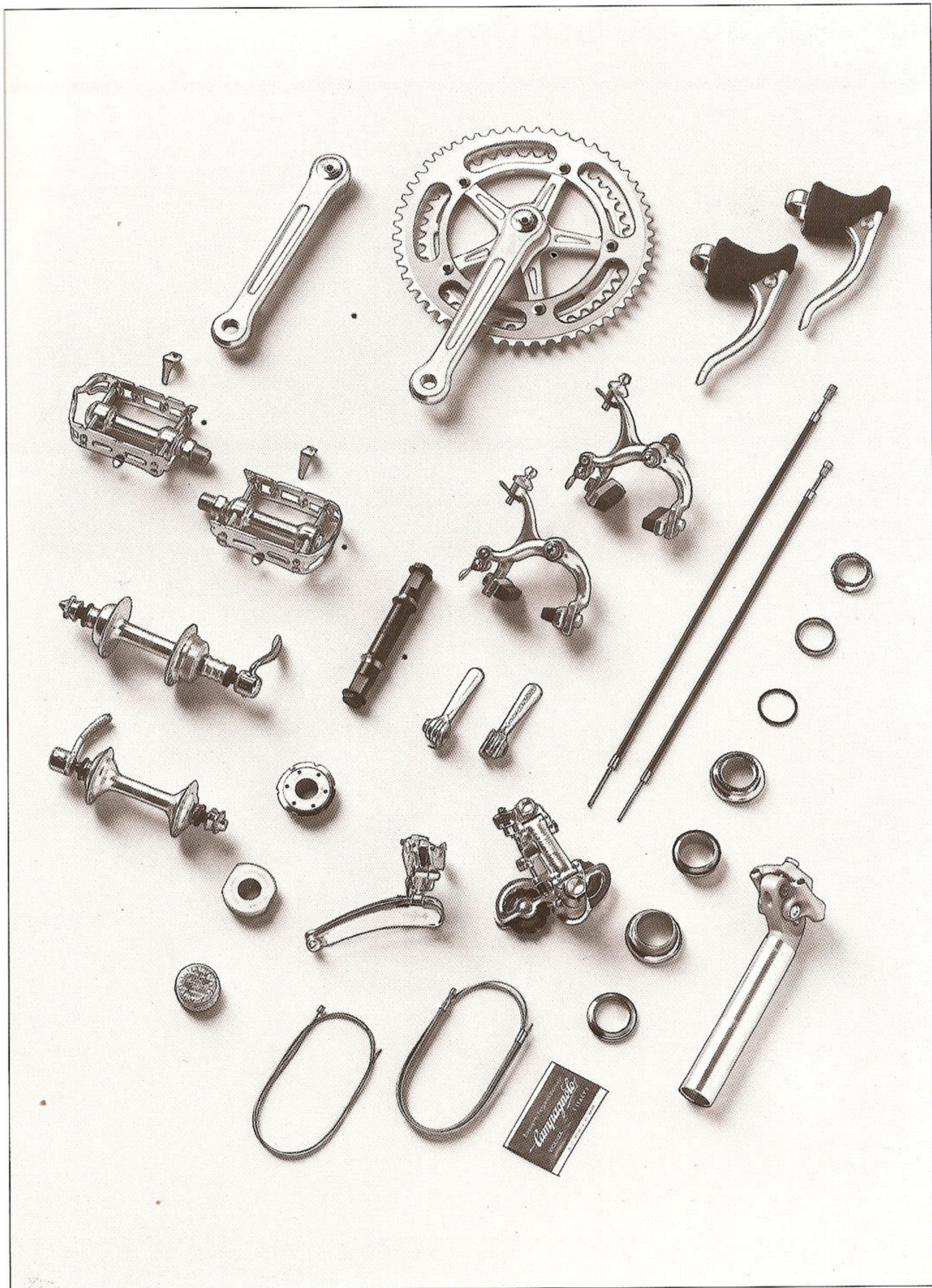
On said group the same planning and executing Campagnolo mentality is expressed with the research of the aesthetics and of the care of details realized with less sophisticated techniques.

It is hence a group for amateurs and for young people who can already understand how important it is to have from their own bicycle high performances, safety and endurance.

It is a group in which the project and the raw material used are always of high technological level, without saving of material or of process.

It is a product that immediately realizes the enthusiasm of pedalling.

*No more available and replaced by the "Victory" range.



SUPER RECORD Track Group

4100

«SUPER RECORD» Track Campagnolo Group composed of: **1036** «Record» track large flange hubs set, **4151** «Super Record» track chainset, **1046** «Record» track bottom bracket set, **1038/A** «Record» track superlight pedals set, **4141** «Super Record» track headset, **4051/1** «Nuovo Super Record» seat-pin, **0990/06** superlight toe-clips set medium size, **1072** seat-pin fixing bolt-nut $\varnothing$ 8.

On request the above group can be supplied with «Super Record» pedals set.

RECORD Track Group

1033

«RECORD» Track Campagnolo Group composed of: **1036** «Record» track large flange hubs set, **1051** «Record» track chainset, **1046** «Record» track bottom bracket set, **1038** «Record» track pedals set, **1040** «Record» track headset, **1044** «Record» seat-pin, **0110056** fixing shoe plates set, **1072** seat-pin fixing bolt-nut $\varnothing$ 8.

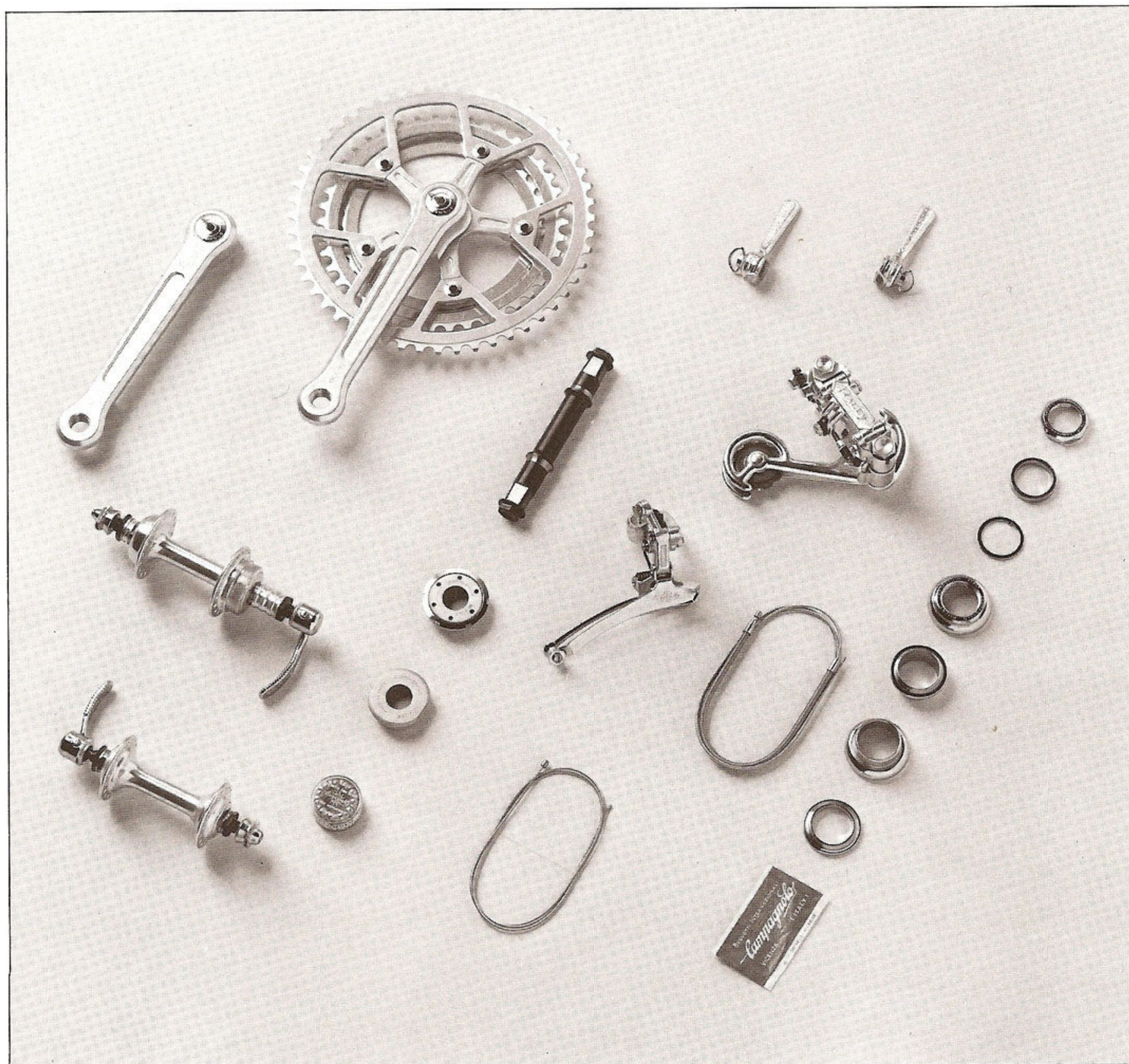
Campagnolo



TOURING Group

279

«TOURING» group composed of: **5011/06** Rally Touring » gear, **0104012** front changer, **1013/5N-1013/6N** braze-on twin levers, **606-608** cables, **617** casing, **1251** «Nuovo Tipo» small flange quick release hubs set, **0306/C** 116 mm. chainwheel set complete with **5031/00** «Gran Sport» bottom bracket set for triple chainring, **1040/A** «Sport» headset with **7300109** «Sport» headset washer.



980 EQUIPAGGIAMENTO Group

281

«980 EQUIPAGGIAMENTO» Group composed of: **6011/00** «980» gear, **0104012** front changer, **1207/N-1208/N** braze-on twin levers, **606-608** cables, **617** casing, **1251** «Nuovo Tipo» small flange quick release hubs set.



GEARS

0102018 «Super Record» gear
1020/A «Nuovo Record» gear
5011/06 «Rally Touring» gear
3500 «Nuovo Gran Sport» gear
6011/00 «980» gear
2170 «Valentino Extra» gear

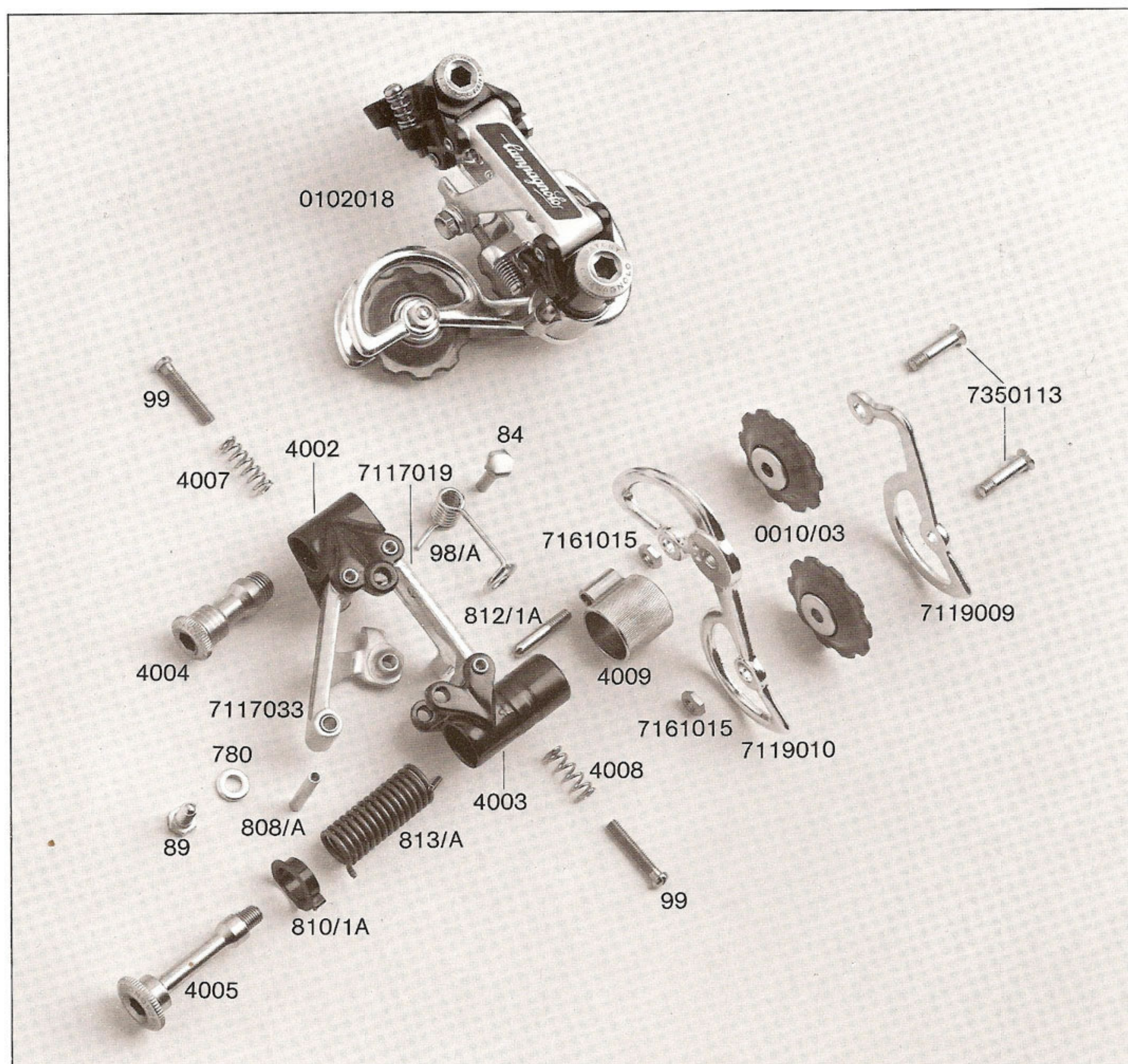
	0102018	1020/A	5011/06	3500	6011/00	2170
Weight/grammes	182	199	225	220	200	235

To make a good gear are necessary experience and passion.
 From the far thirties, Campagnolo plans, tries on the spot, produces and patents new gears.
 The various versions produced are the synthesis of these 50 years of love for the racing bicycle.
 The Campagnolo gears always realize the new ratio, also if used while the rider pedals under stress.
 The working precision and the use of the most proper metals make of it the safest and the most long lasting gear.
 The cage plate moves remaining always parallel to itself for the arms coupling precision.
 When it turns to give or pick up the chain, it does it around his axle, without conical sliding.
 The movement of the cage plate carries on the change from one sprocket to the following, in climbing and in descent, making the chain move on the desired sprocket without overrun.
 The lever of the derailment is sliding and safe, and it renders easier the research of the desired ratio.
 The chain winds up on the rollers of the cage plate without frictions and with smoothness.
 It is of easy adjusting for the research of the ends of the transversal stroke.
 It is a safe and long lasting gear.

SUPER RECORD Gear

0102018 composed of:

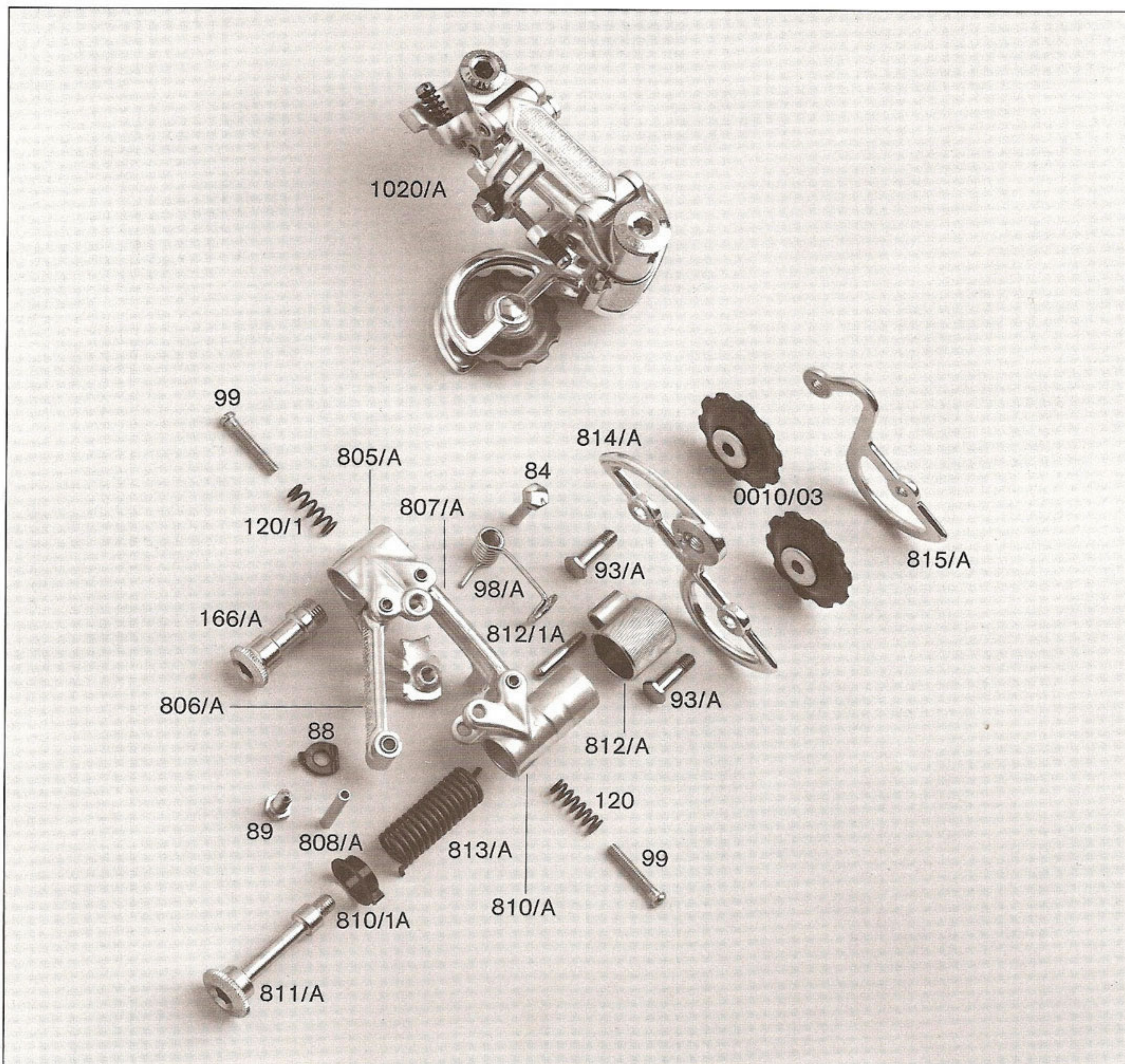
0010/03 roller, **84** gear return spring screw, **89** cable locking screw, **98/A** gear return spring, **99** gear adjusting screws, **780** cable clamp bolt washer, **808/A** spindle, **810/1A** lower body bush, **812/1A** grub screw, **813/A** tension spring, **4002** upper body, **4003** spring cage, **4004** upper pivot titanium bolt, **4005** spring cage titanium bolt, **4007** adjusting bolt upper spring, **4008** adjusting bolt lower spring, **4009** spring cage cover, **7119010** outer cage plate, **7117019** inner arm, **7117033** front arm, **7119009** inner cage plate, **7161015** sprocket bolt nut, **7350113** gear sprocket bolt.



NUOVO RECORD Gear

1020/A composed of:

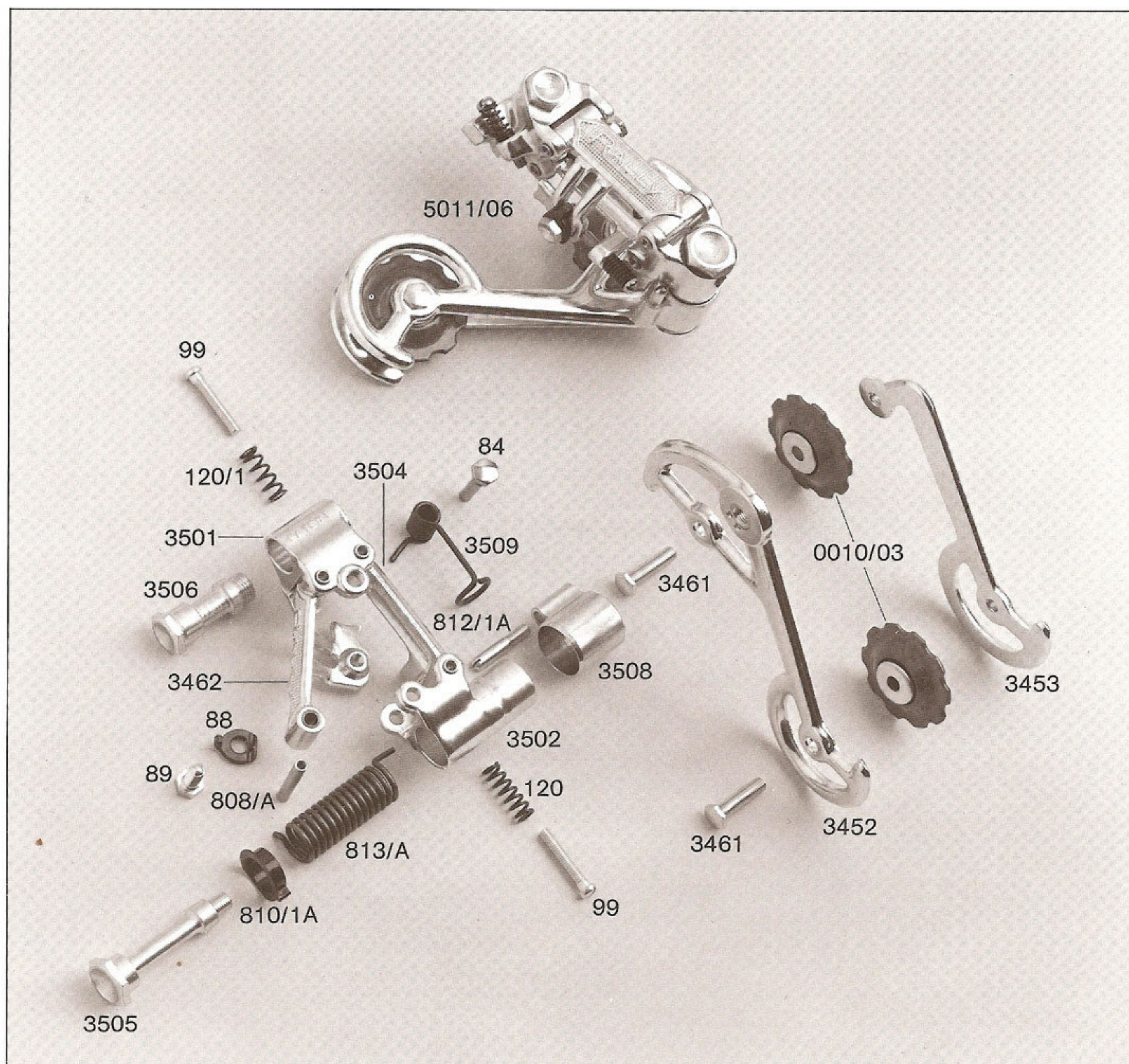
0010/03 gear roller, **84** gear return spring screw, **88** clamp washer, **89** cable locking screw, **93/A** sprocket bolt, **98/A** gear return spring, **99** adjusting screw, **120** lower adjusting spring, **120/1** upper adjusting spring, **166/A** upper pivot bolt, **805/A** upper body, **806/A** front arm, **807/A** inner arm, **808/A** spindle, **810/A** lower body, **810/1A** lower body bush, **811/A** gear spring bolt, **812/A** spring cage cover, **812/1A** grub screw, **813/A** tension spring, **814/A** outer cage plate, **815/A** inner cage plate.



RALLY TOURING Gear

5011/06 composed of:

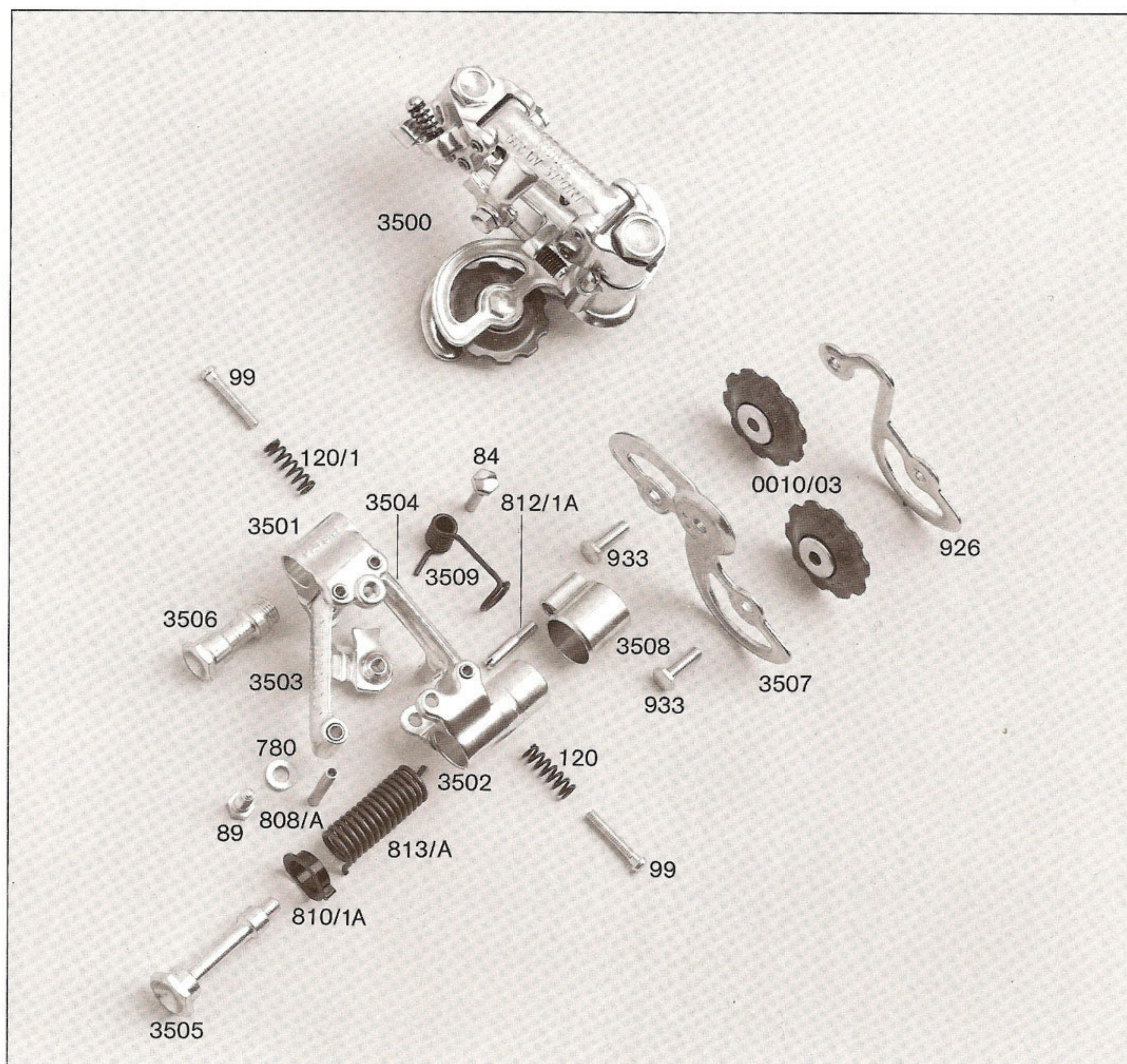
0010/03 gear roller, **84** gear return spring screw, **88** clamp washer, **89** cable locking screw, **99** adjusting screw, **120** lower adjusting spring, **120/1** upper adjusting spring, **808/A** spindle, **810/1A** lower body bush, **812/1A** grub screw, **813/A** tension spring, **3452** outer cage plate, **3453** inner cage plate, **3461** sprocket bolt, **3462** front arm, **3502** lower body, **3504** inner arm, **3505** spring cage bolt, **3506** gear upper pivot bolt, **3508** spring cage cover, **3509** return spring, **3501** upper body.



NUOVO GRAN SPORT Gear

3500 composed of:

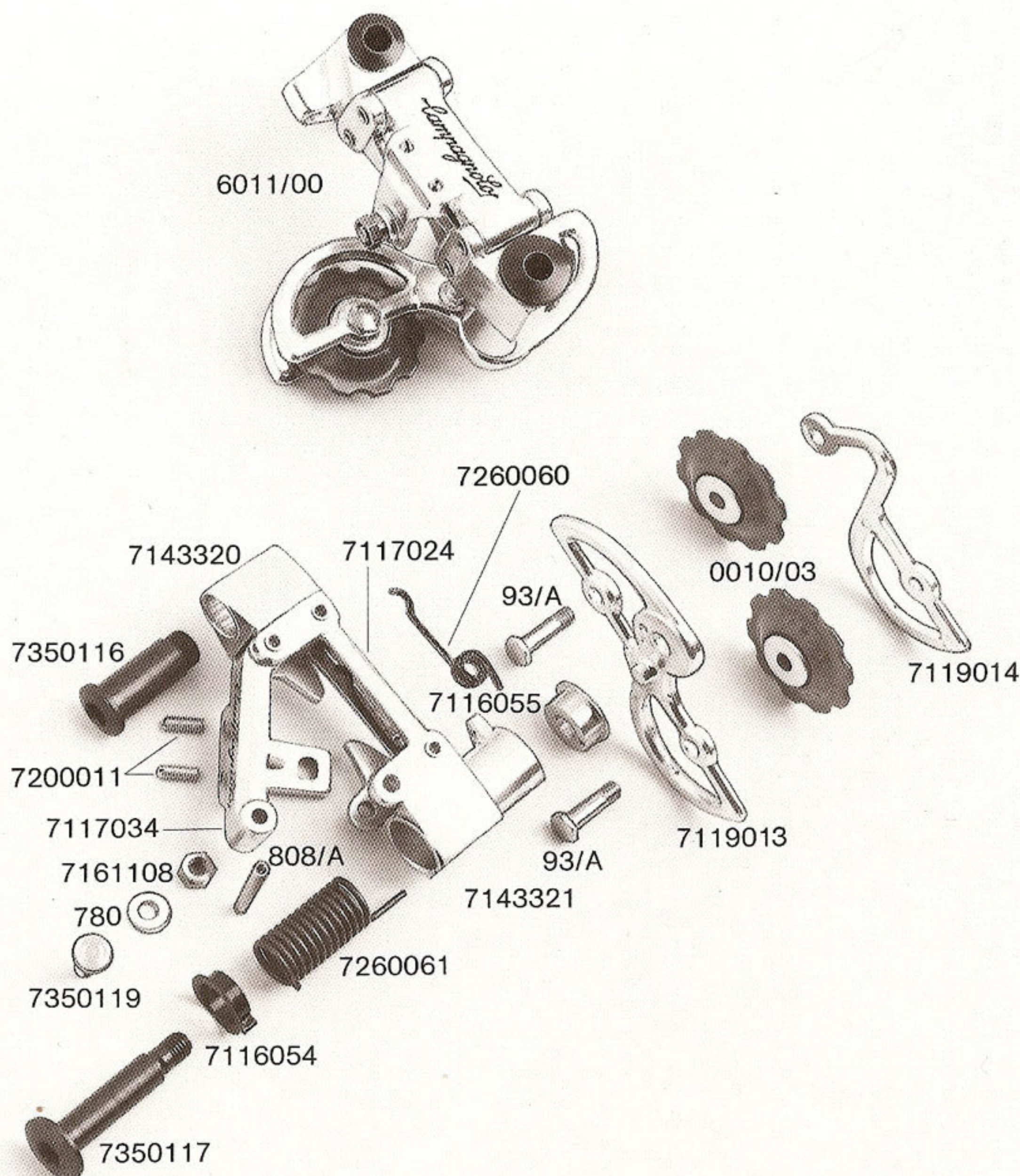
0010/03 gear roller, **84** return spring screw, **89** cable locking screw, **99** adjusting screw, **120** lower adjusting spring, **120/1** upper adjusting spring, **780** cable clamp bolt washer, **808/A** spindle, **810/1A** lower body bush, **812/1A** grub screw, **813/A** tension spring, **926** inner cage plate, **933** roller screw, **3501** upper body, **3502** lower body, **3503** front arm, **3504** inner arm, **3505** spring cage bolt, **3506** upper pivot bolt, **3507** outer cage plate, **3508** spring cage cover, **3509** return spring.



980 Gear

6011/00 composed of:

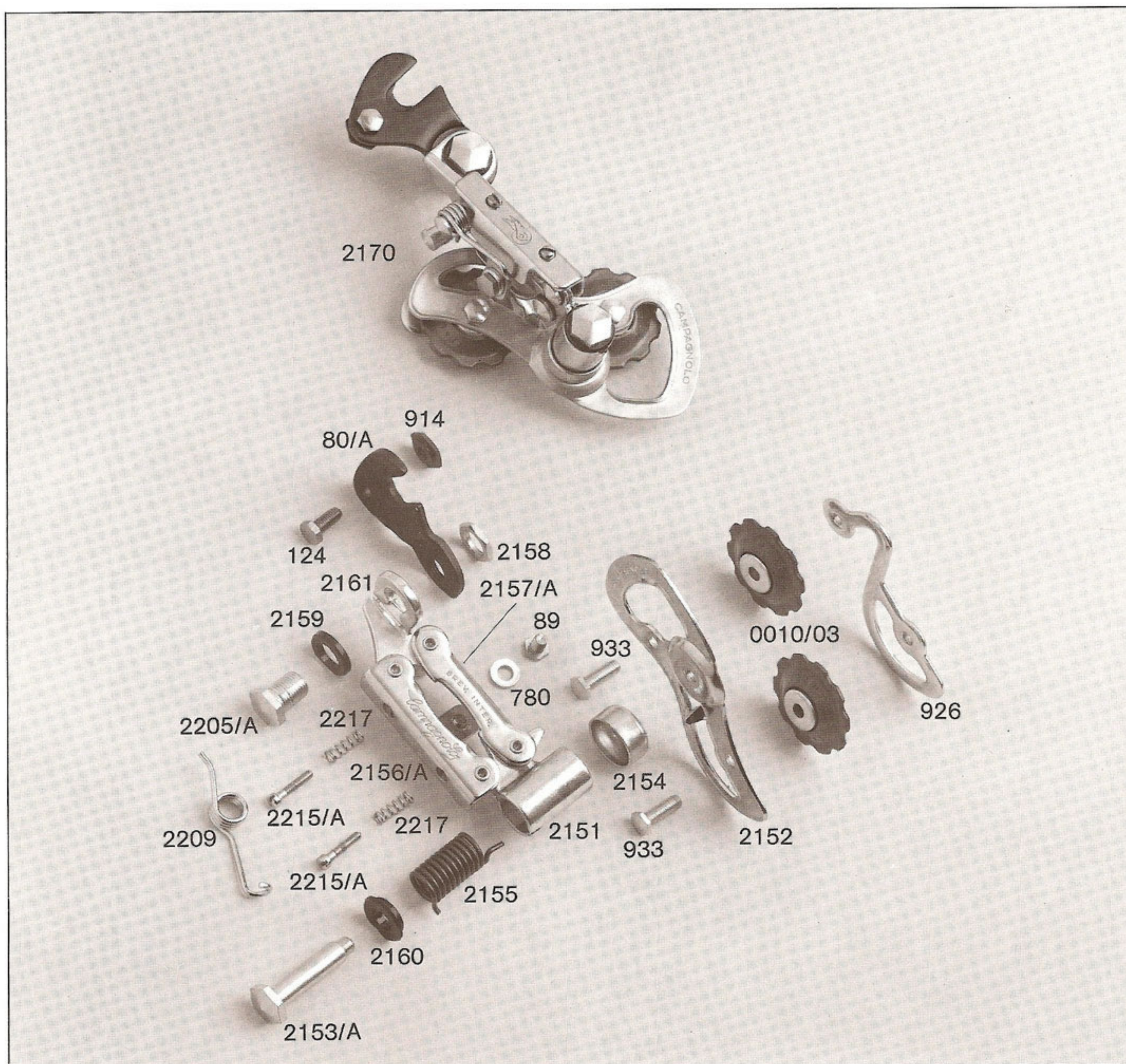
0010/03 gear roller, **93/A** sprocket bolt, **780** cable clamp bolt washer, **808/A** spindle, **7116054** lower body bush, **7116055** spring cage cover, **7117034** front arm, **7117024** inner arm, **7119013** outer cage plate, **7119014** inner cage plate, **7143320** upper body, **7143321** lower body, **7161108** fixing screw nut, **7200011** adjusting screw, **7260060** return spring, **7260061** gear tension spring, **7350116** upper pivot bolt, **7350117** spring cage bolt, **7350119** cable locking screw.



VALENTINO EXTRA Gear

2170 composed of:

0010/03 gear roller, **80/A** gear fixing plate, **89** cable locking screw, **124** screw, **780** cable clamp bolt washer, **914** clamp nut, **926** inner cage plate, **933** roller screw, **2151** lower body, **2152** outer cage plate, **2153/A** gear spring bolt, **2154** gear cover, **2155** gear spring, **2156/A** front arm, **2157/A** inner arm, **2158** gear lock nut, **2159** gear hanger washer, **2160** lower body bush, **2161** upper body, **2205/A** fixing pivot bolt, **2209** gear return spring, **2215/A** gear adjusting screw, **2217** adjusting bolt spring.



FRONT CHANGERS

- 0104011** braze-on «Super Record» front changer
- 0104010** clip-on «Super Record» front changer
- 0104009** braze-on «Record» front changer
- 0104007** clip-on «Record» front changer
- 0104006** «Gran Sport» front changer
- 0104008** «Nuovo Valentino» front changer
- 0104012** clip-on «980» front changer
- 2050** front changer



0104011



0104010



0104009



0104007



0104006



0104008



0104012



2050

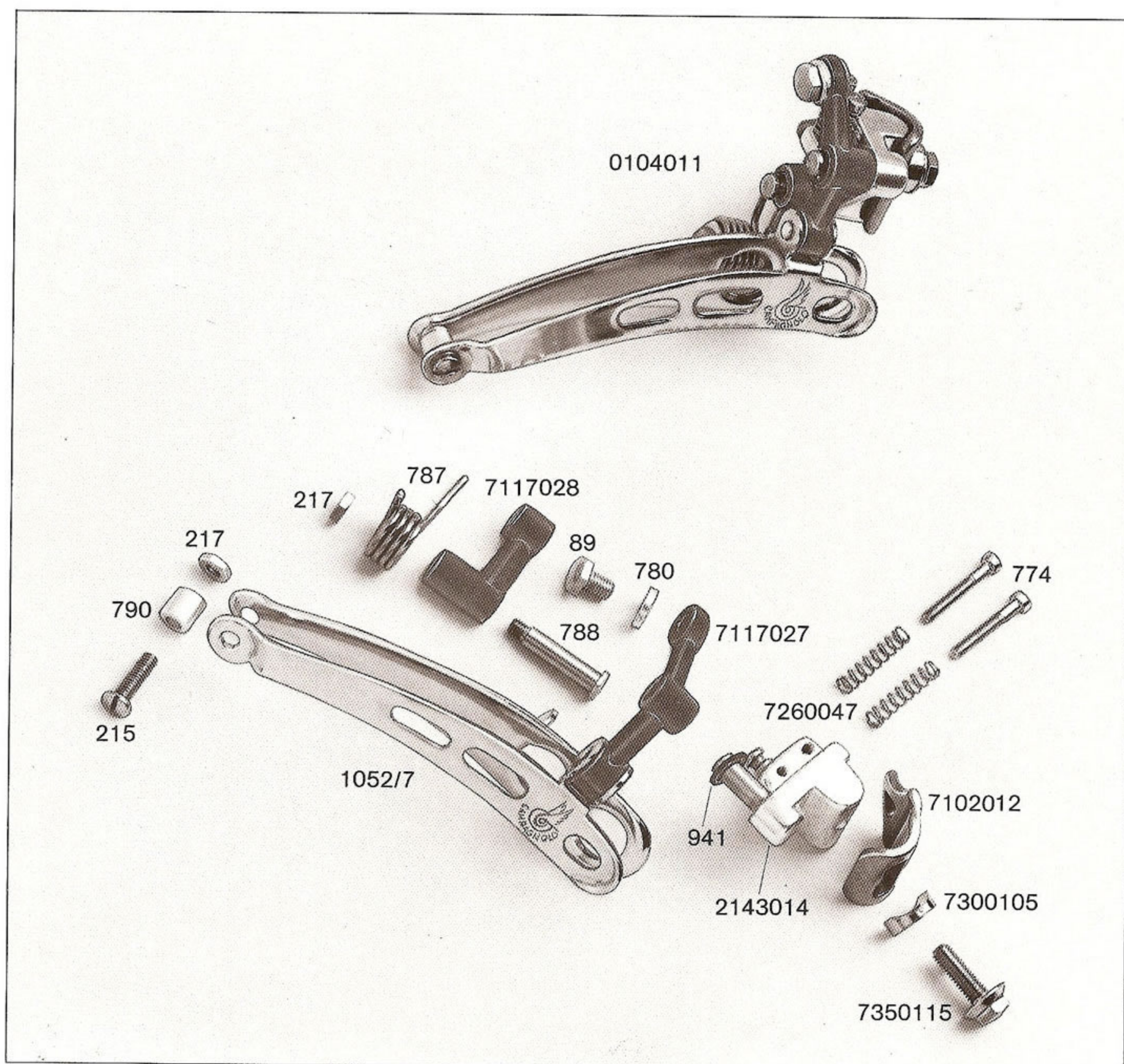
Braze-on SUPER RECORD Front Changer

0104011 composed of:

89 locking screw, 215 cage spanner bolt, 217 cage spacer bolt nut, 774 adjusting screw, 7117027 upper arm, 780 cable clamp bolt washer, 7117028 lower arm, 788 cage shank bolt, 790 bush, 7260047 spring for adjusting screw, 787 return spring, 7102012 braze-on hanger, 7300105 concave washer, 7350115 screw for braze-on front changer, 941 circlip.

1180006 Fork complete with: 215 - 217 - 790 - 1052/7 - 7117027.

1143036 Body complete with: 2143014 - 7300105 - 7350115 - 941.



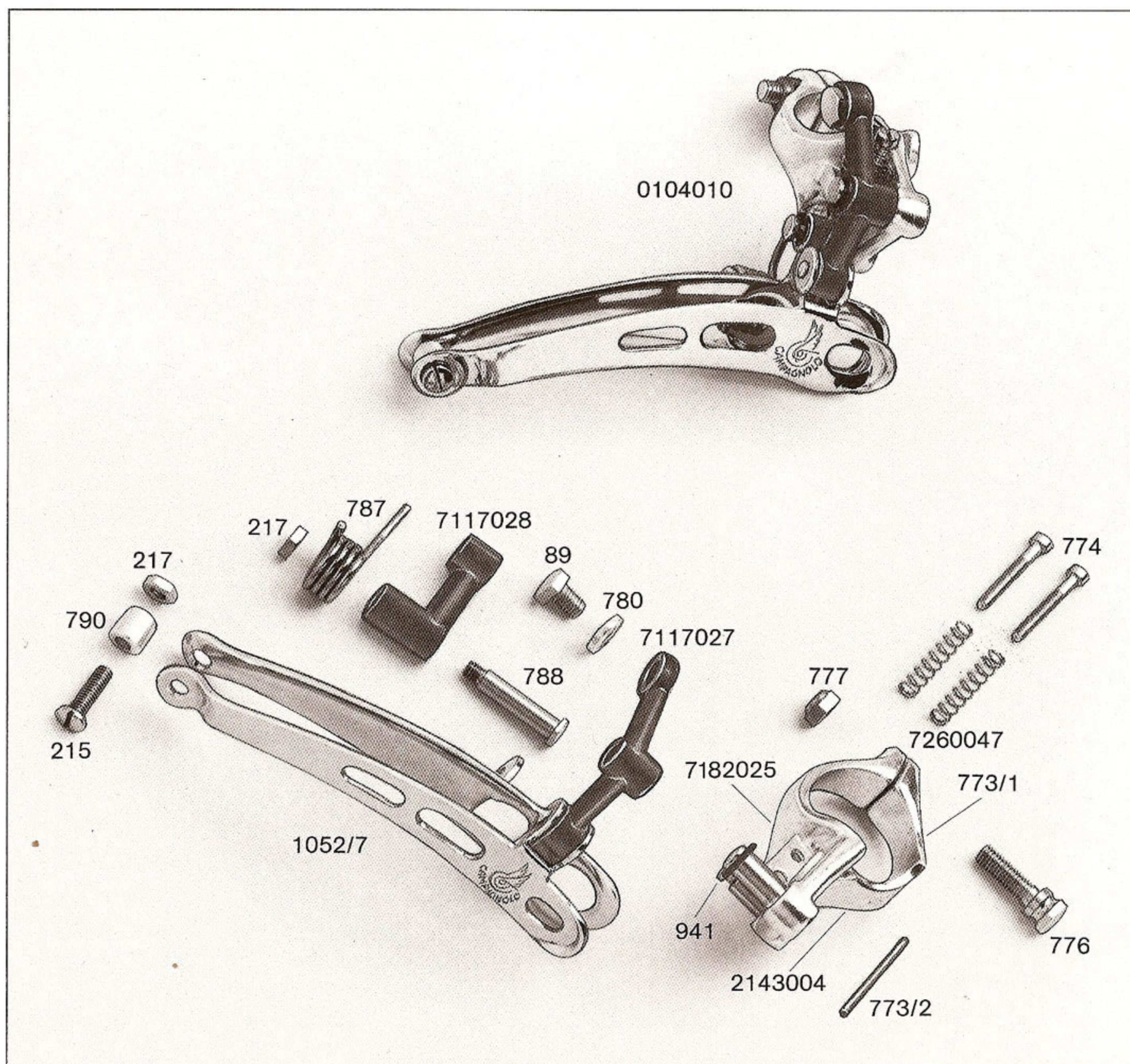
Clip-on SUPER RECORD Front Changer

0104010 composed of:

89 locking screw, **215** cage spanner bolt, **217** cage spacer bolt nut, **774** adjusting screw, **776** clip fixing screw, **777** nut, **7117027** upper arm, **780** cable clamp bolt washer, **7117028** lower arm, **788** cage shank bolt, **790** bush, **7260047** spring for adjusting screw, **787** return spring, **7182025** clip, **773/1** hinge, **773/2** hinge spindle, **941** circlip.

1180001 Fork complete with: 215 - 217 - 790 - 1052/7 - 7117027.

1143029 Body complete with: 776 - 777 - 2143004 - 7182025 - 773/1 - 773/2 - 941.



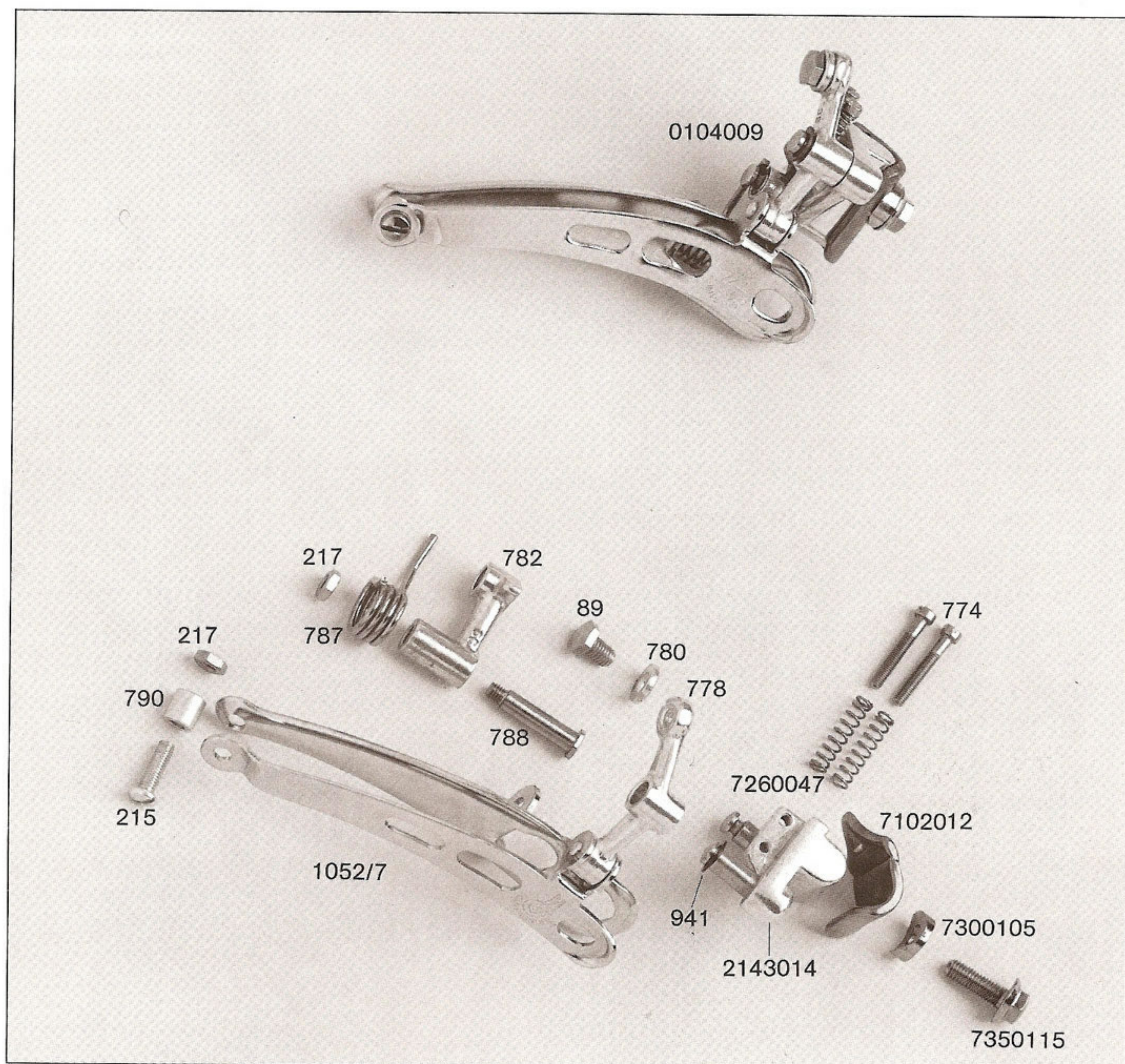
Braze-on RECORD Front Changer

0104009 composed of:

89 locking screw, **215** cage spanner bolt, **217** cage spacer bolt nut, **774** adjusting screw, **778** upper arm, **780** cable clamp bolt washer, **782** lower arm, **788** cage shank bolt, **790** bush, **7260047** spring for adjusting screw, **787** return spring, **941** circlip, **7102012** braze-on hanger, **7300105** concave washer, **7350115** screw for braze-on front changer.

1180001 Fork complete with: 215 - 217 - 778 - 790 - 1052/7.

1143036 Body complete with: 2143014 - 7300105 - 7350115 - 941.



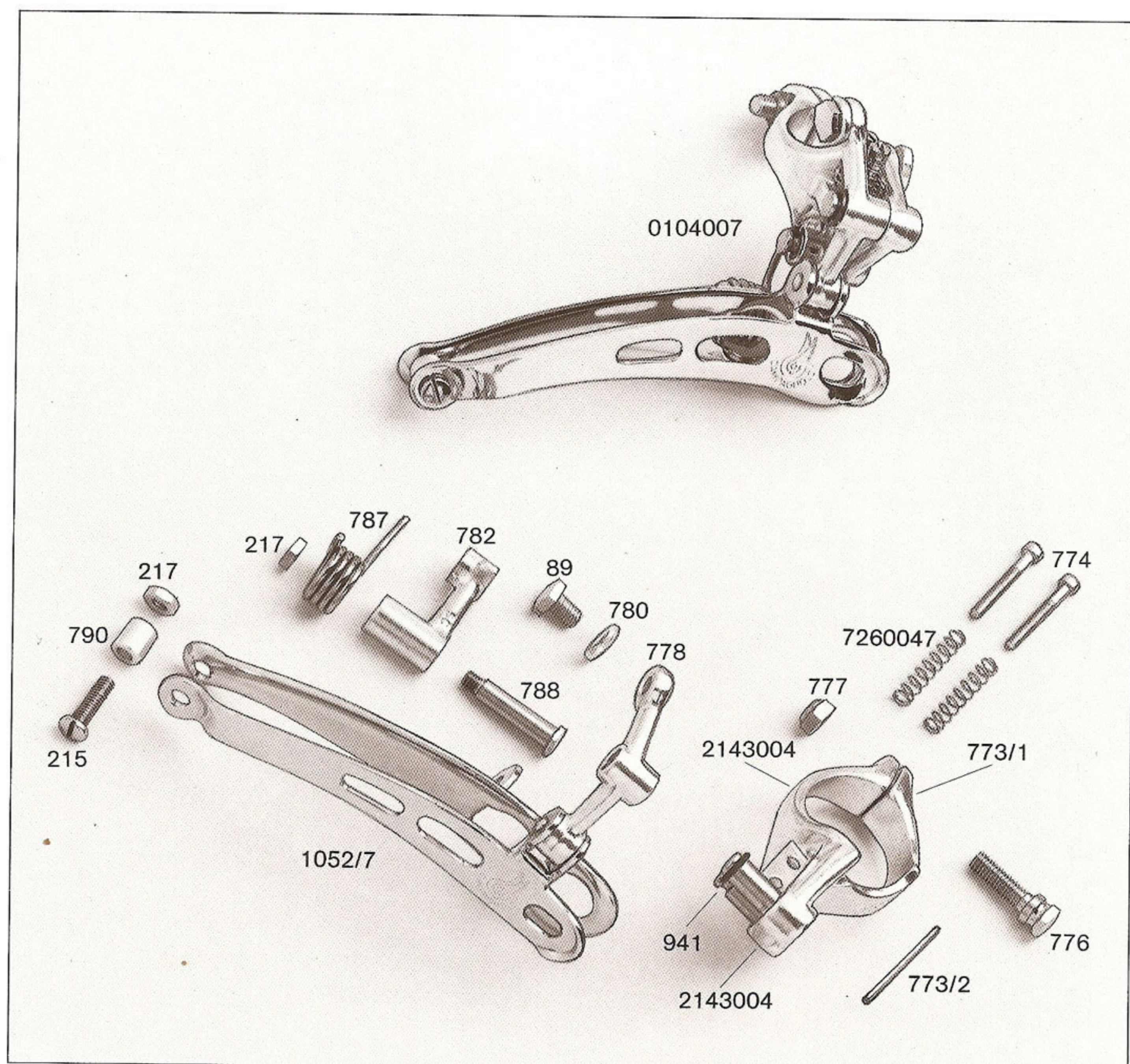
Clip-on RECORD Front Changer

0104007 composed of:

89 locking screw, **215** cage spanner bolt, **217** cage spacer bolt nut, **773/2** hinge spindle, **774** adjusting screw, **776** clip fixing screw, **777** nut, **778** upper arm, **780** cable clamp bolt washer, **782** lower arm, **788** cage shank bolt, **790** bush, **7260047** spring for adjusting screw, **787** return spring, **773/1** hinge, **941** circlip.

1180001 Fork complete with: 215 - 217 - 778 - 790 - 1052/7.

1143029 Body complete with: 776 - 777 - 773/1 - 773/2 - 941 - 2143004.



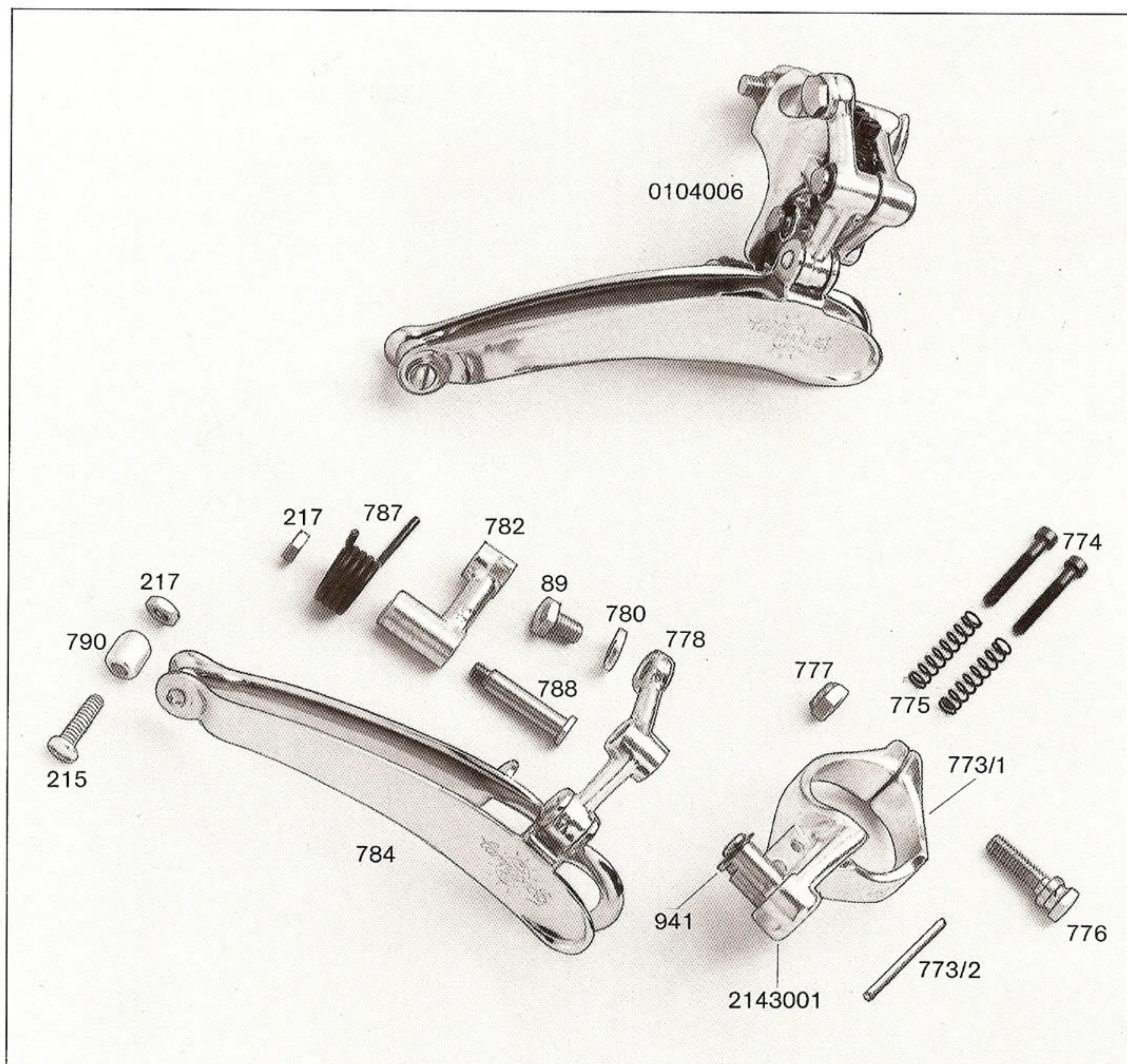
GRAN SPORT Front Changer

0104006 composed of:

89 locking screw, 215 cage spanner bolt, 217 cage spacer bolt nut, 773/1 hinge, 773/2 hinge spindle, 774 adjusting screw, 775 adjusting bolt spring, 776 clip fixing screw, 777 nut, 778 upper arm, 780 cable clamp bolt washer, 782 lower arm, 787 return spring, 788 cage shank bolt, 790 bush, 941 circlip.

1180003 Fork complete with: 215 - 217 - 778 - 790 - 784.

1143013 Body complete with: 773/1 - 776 - 777 - 773/2 - 941 - 2143001.



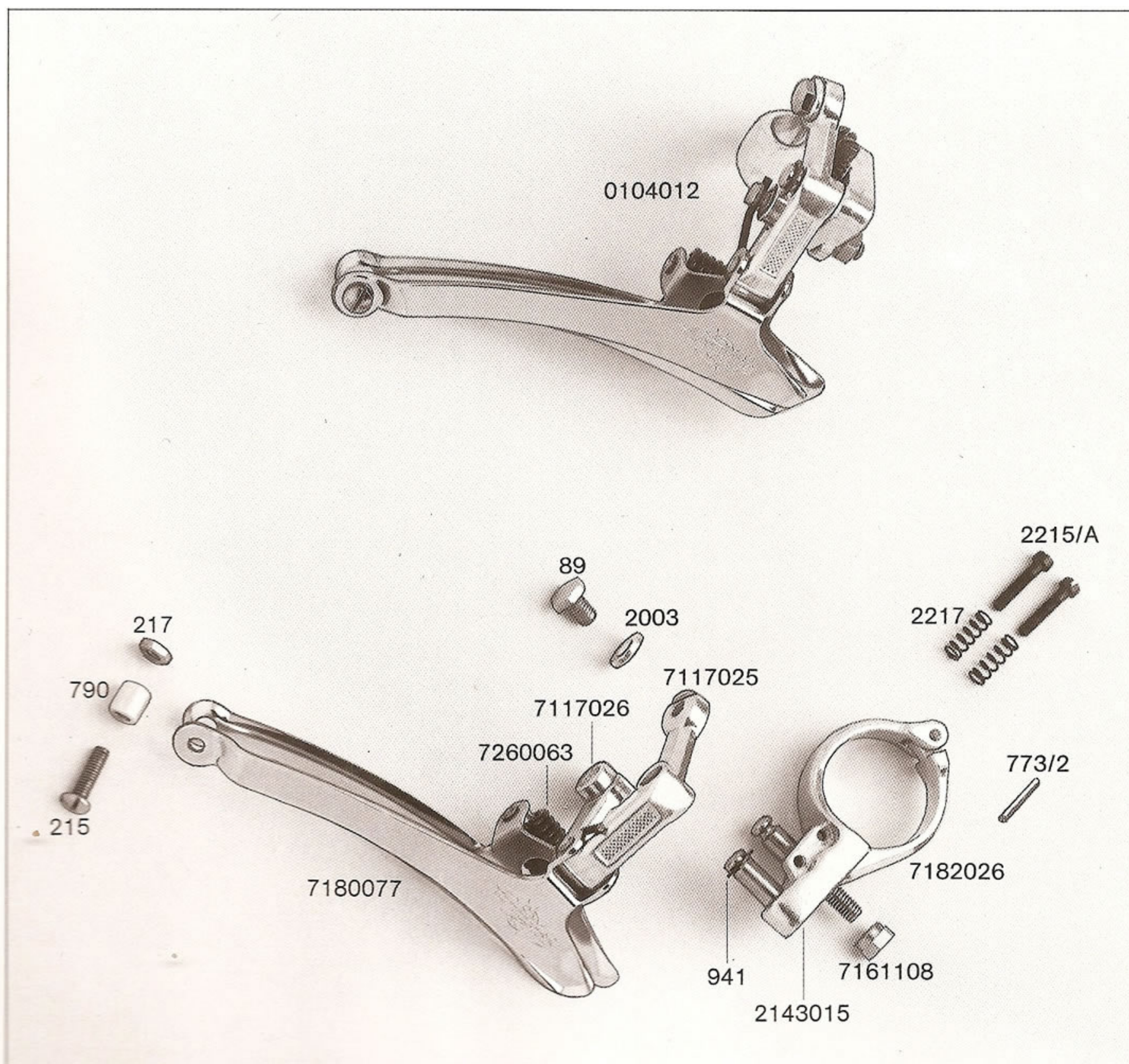
980 Front Changer

0104012 composed of:

89 locking screw, **215** cage spanner bolt, **217** cage spacer bolt nut, **773/2** hinge spindle, **790** bush, **2003** cable clamp bolt washer, **2215/A** upper adjusting screw, **2217** spring for adjusting screw, **7117025** upper arm, **7117026** lower arm, **7161108** nut, **7182026** hinge, **7260063** return spring, **941** circlip.

1180005 Fork complete with: 215 - 217 - 790 - 7117025 - 7117026 - 7180077 - 7260063.

1143046 Body complete with: 2143015 - 7161108 - 7182026 - 941 - 773/2.



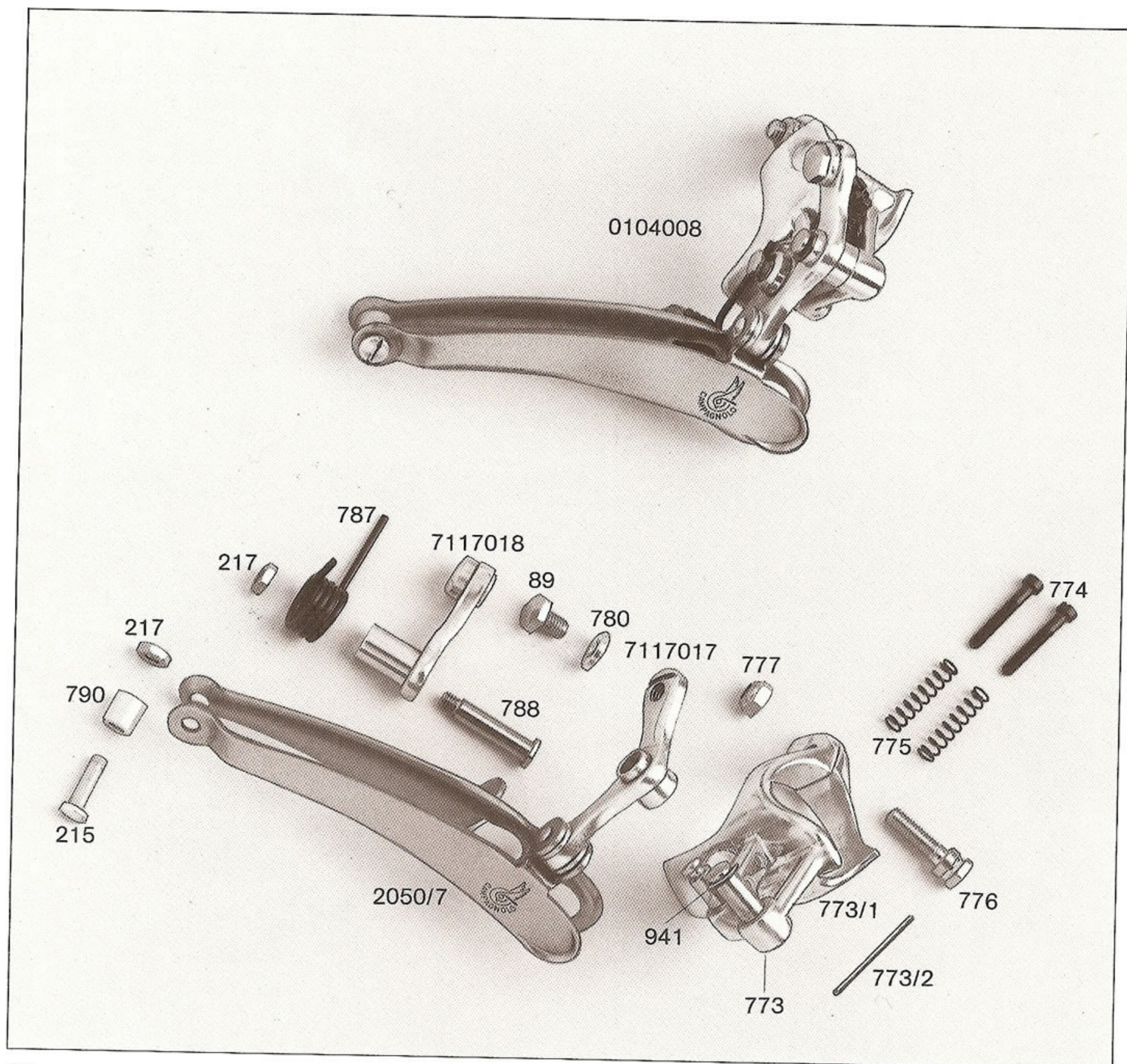
NUOVO VALENTINO Front Changer

0104008 composed of:

89 locking screw, **215** cage spanner bolt, **217** cage spacer bolt nut, **773/1** hinge, **773/2** hinge spindle, **774** adjusting screw, **775** adjusting bolt spring, **776** clip fixing screw, **777** nut, **780** cable clamp bolt washer, **788** cage shank bolt, **790** bush, **787** return spring, **7117017** upper arm, **7117018** lower arm, **941** circlip.

1180004 Fork complete with: 215 - 217 - 790 - 7117017 - 2050/7.

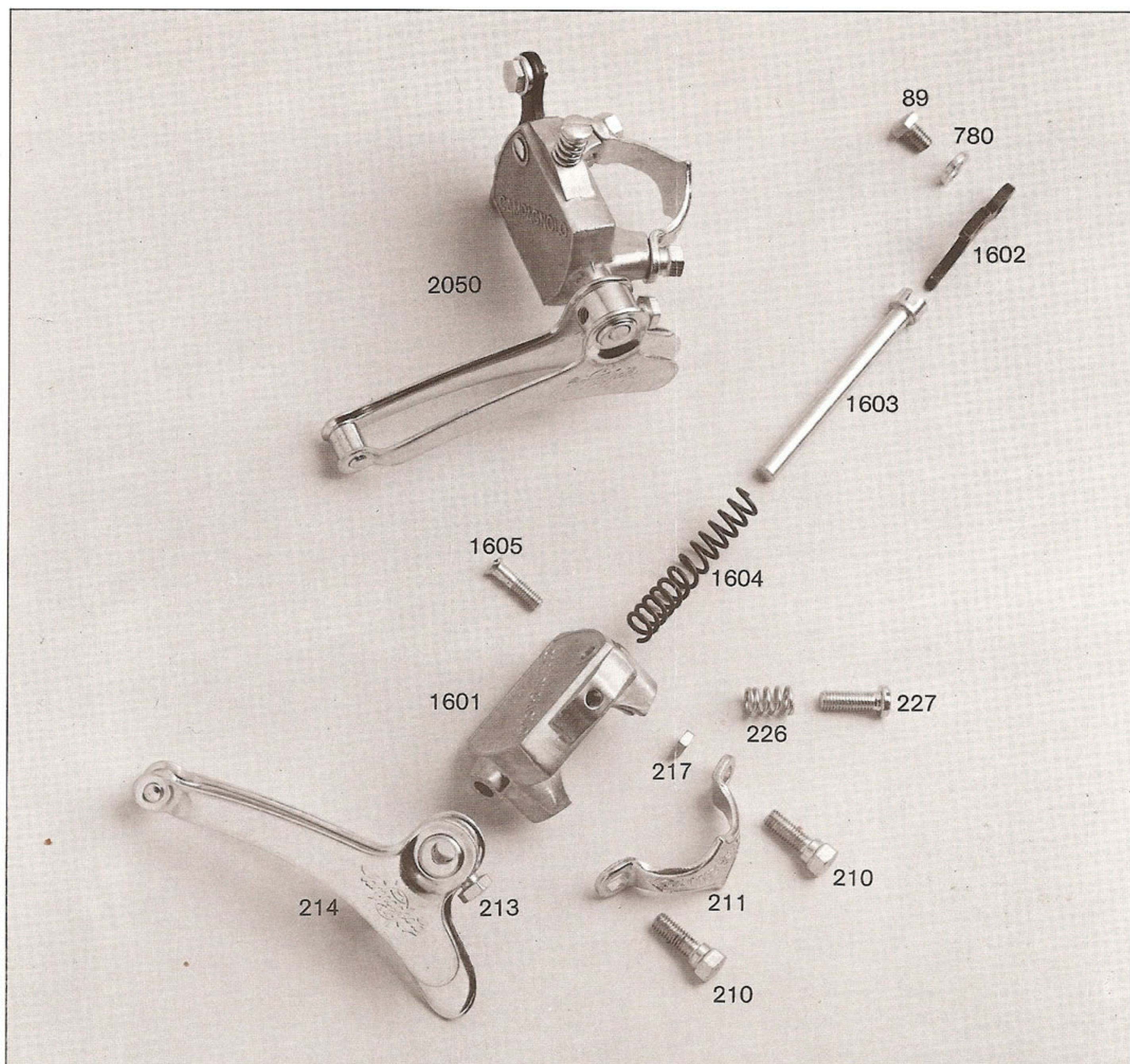
1143013 Body complete with: 773 - 773/1 - 776 - 777 - 773/2 - 941.



VALENTINO Front Changer

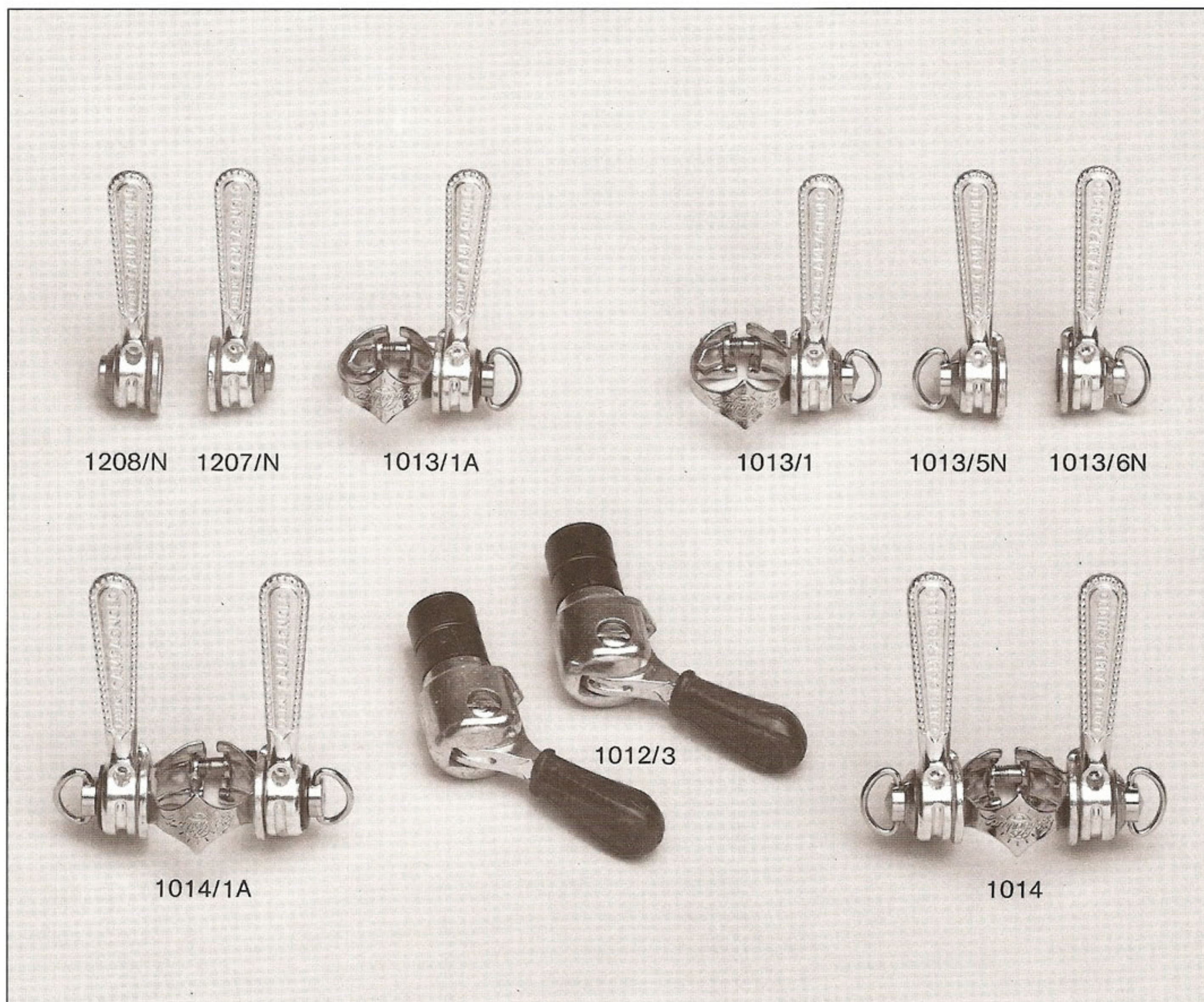
2050 composed of:

89 locking screw, **210** body clip bolt, **211** fixing clip, **213** fork fixing clip, **214** fork, **217** cage spacer bolt nut, **226** adjusting spring, **227** adjusting lever screw, **780** cable clamp bolt washer, **1601** front changer body, **1602** front changer lever, **1603** fork holder spindle, **1604** return spring, **1605** fixing lever screw.



CONTROL LEVERS

- 1012/3** handlebar control lever
- 1013/1** «Record» gear down tube control lever
- 1013/1A** R.H. down tube control lever
- 1013/5N** «Record» braze-on control lever for front changer, without 660 boss
- 1013/6N** «Record» braze-on control lever for gear, without 660 boss
- 1014** «Record» twin down tube control lever
- 1014/1A** twin down tube control lever
- 1207/N** braze-on gear control lever, without 660 boss
- 1208/N** braze-on front changer control lever, without 660 boss.



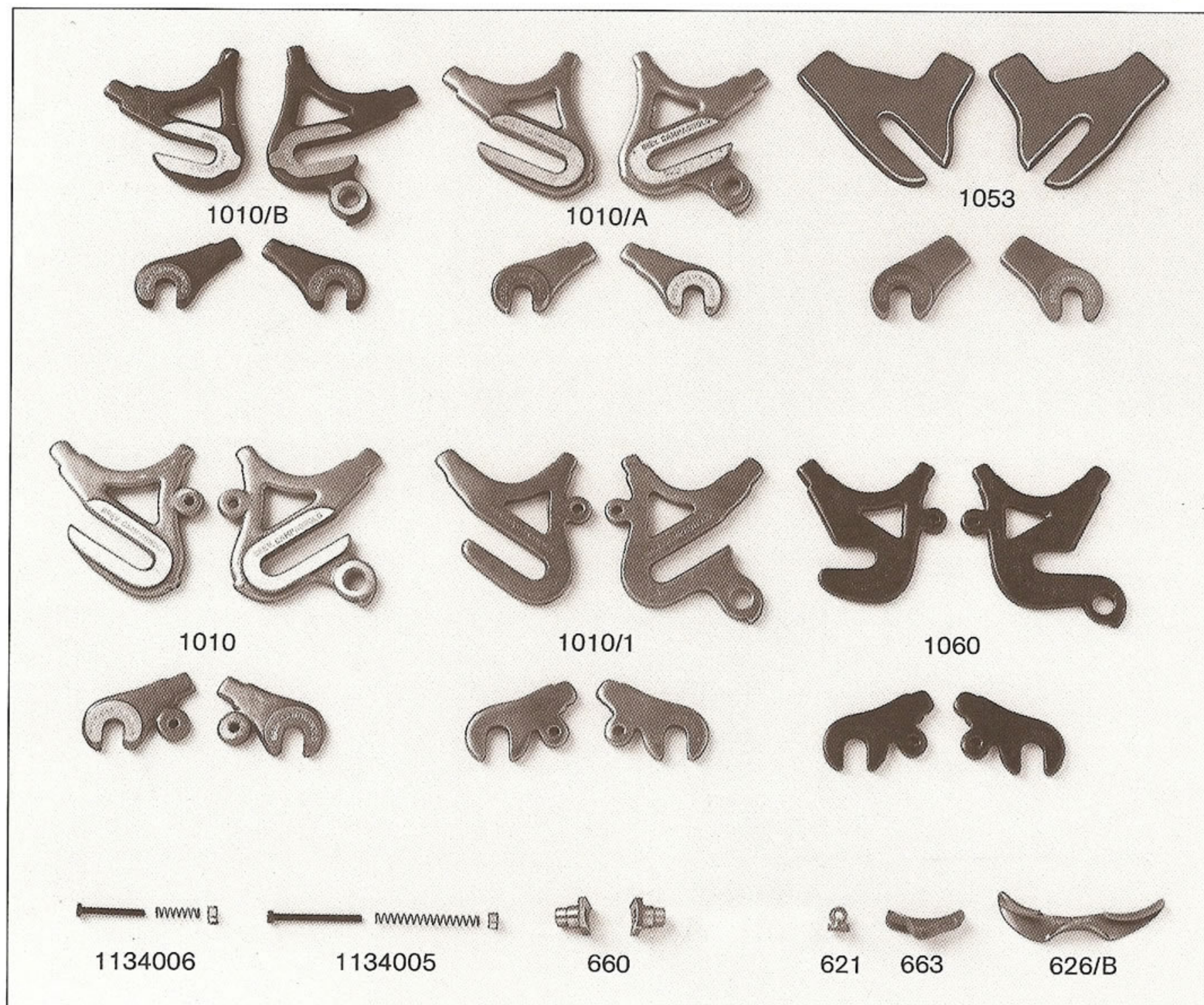
CONTROL LEVER Components

DESCRIPTION	CAT. No.	MODEL COMPOSITION								
		1014	1013/5N	1013/6N	1013/1	1014/1A	1207/N	1208/N	1013/1A	1012/2
EXPANDING SCREW	137									●
SEGMENT	138									●
COUNTER NUT	139/1									●
HEXAGONAL SCREW	139/2									●
TENSION ADJ.SCREW	140/1									●
SEG. HOLDING RING	142								●	
RUBBER CAP	173									●
FRICITION PLATE	174/1									●
CONTROL BODY	200/2									●
CONTROL LEVER	201									●
R.H. COLLAR	600				●				●	
R.H. PLATE	600/2			●			●			
R.H. CONTROL LEVER	601	●		●	●	●	●		●	
L.H. CONTROL LEVER	602	●	●			●		●		
ADJUSTING SCREW	604						●	●		
ADJ. WING NUT	604/1	●	●	●	●					
FIXING CLIP BOLT	609/1	●			●	●			●	
TWIN CONTROL CLIP	610	●						●		
L.H. PLATE	611/2		●					●		
WASHER	661		●	●			●	●		
NUT	777	●			●	●			●	
ADJ. WING NUT	1202003					●			●	
CLIP	7182003									
TWIN CONTROL CLIP	7182018									
WASHER	7300115					●	●	●	●	
ELASTIC WASHER	7304005					●	●	●	●	
COVER	0190/03	●	●	●	●					
FRICITION WASHER	0190/06	●	●	●	●	●	●	●	●	
ELASTIC WASHER	0190/07	●	●	●	●					



KIT for frame

- 1010** «Record» set fork ends, with eyelets
1010/A «Record» set fork ends, without eyelets
1010/B «Nuovo Record» set fork ends, without eyelets
1010/1 «Sport» set fork ends, with eyelets
1053 «Track» set fork ends
1060 «Corsa» set fork ends.
1134005 Set of screws, nuts and springs for «Record» fork ends, without eyelets
1134006 Set of screws, nuts and springs for «Nuovo Record» fork ends, without eyelets
1134004 Set of screws, nuts and springs for «Record» fork ends, with eyelets.
660 Braze-on boss
621 Braze-on cable stop
626/B Braze-on front changer cable ferrule
663 Braze-on cable ferrule.



HUBS SETS

- 1034** Pair «Record» road small flange quick release hubs (flanges with 24-28-32-36-40 holes)
- 1035** Pair «Record» road large flange quick release hubs (flanges with 24-28-32-36-40 holes)
- 1036** Pair «Record» track large flange solid spindle hubs (flanges with 24-28-32-36-40 holes)
- 1036/2** Pair «Record» track small flange solid spindle hubs (flanges with 24-28-32-36-40 holes)
- 1251** Pair «Nuovo Tipo» small flange quick release hubs (flanges with 28-32-36 holes)
- 1253** Pair «Nuovo Tipo» large flange quick release hubs (flanges with 36 holes)

N.B. When not specified all the hubs will be furnished with Italian thread, flanges with 36 holes, 6 speeds.

In the hubs Campagnolo expresses, perhaps, its utmost precision level.

The clearance of the two ball bearings is the minimum which can be obtained to allow the maximum smoothness.

The balls are selected to the micron.

The body of the hub is a whole piece forged, in light alloy duly treated to make a product having high and heavy features.

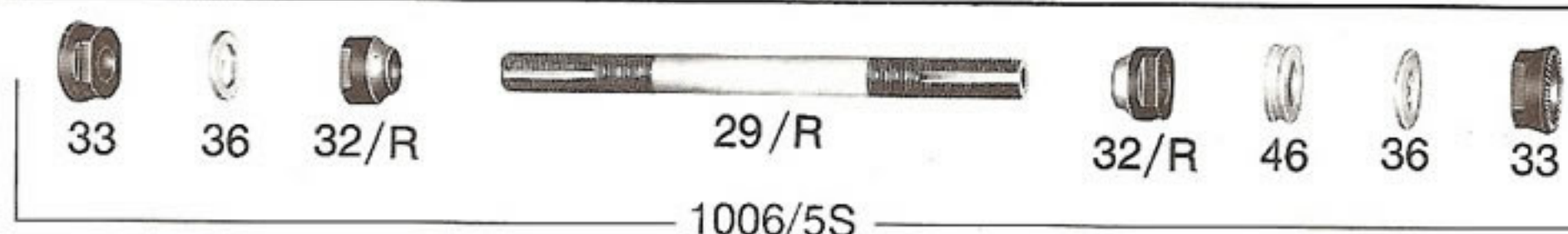
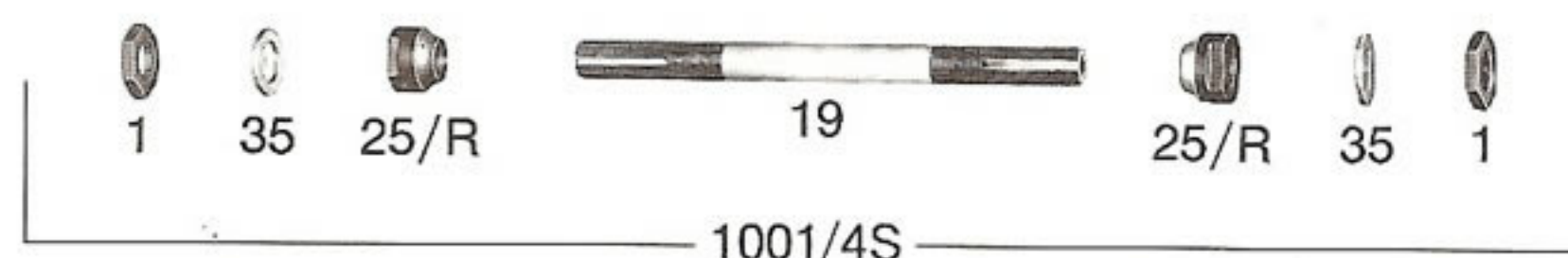
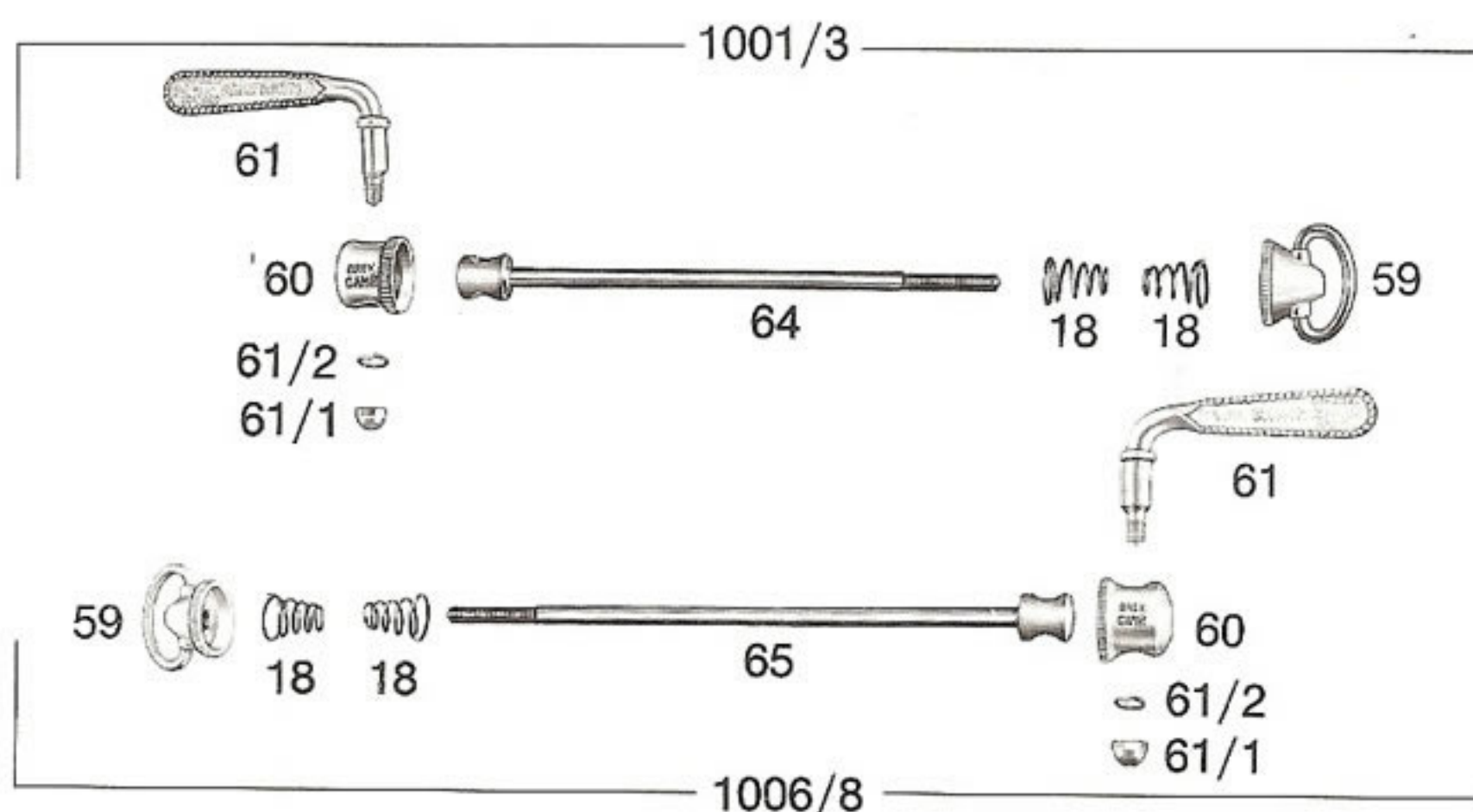
The rolling tracks are all hardened by heat treatments and grinded to obtain a very low roughness and high hardness.

The clamping is always sure and keeps the wheel in a perfect position, also thanks to the severe parallelism of the width, which guarantees the life of the axle.



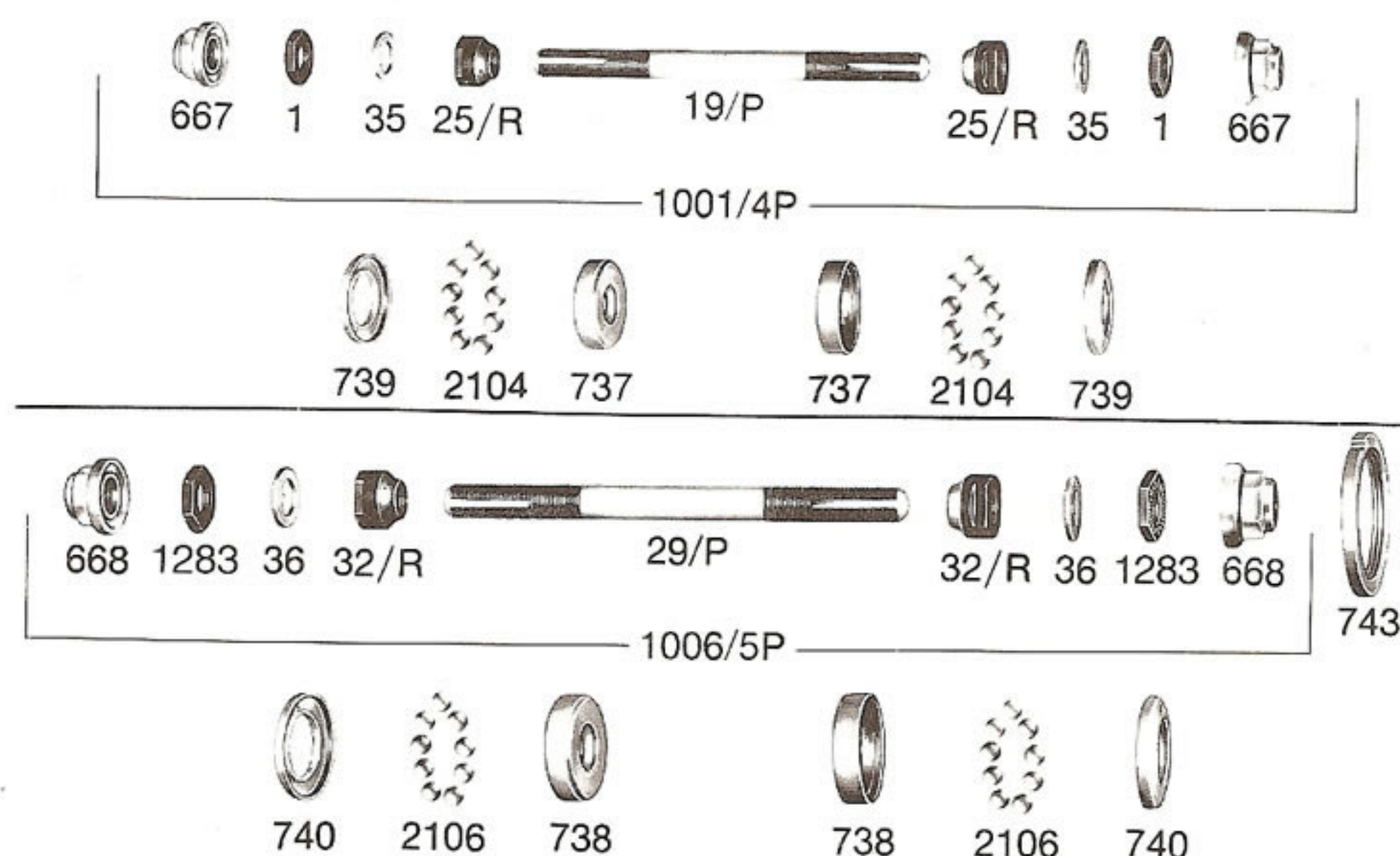
Components of RECORD Road Hubs

1 front lock nut, **18** conical spring, **19** front hollow axle, **25/R** front cone, **29/R** rear hollow axle (132 mm long). On request the axle can be supplied 134 and 140 mm long. **32/R** rear cone, **33** rear lock nut, **35** front hub lock washer, **36** rear hub lock washer, **46** rear hub spacing collar, **59** quick release conical adjuster, **60** quick release cap, **61** quick release lever, **61/1** domed nut, **61/2** Grower washer, **64** quick release front skewer, **65** quick release rear skewer, **737** front ball cup, **738** rear ball cup, **739** front dust cover, **740** rear dust cover, **741** elastic clip, **1001/3** complete front quick release skewer for «Record» hub, **1001/4S** complete front axle for «Record» road hub, **1006/5S** complete rear axle for «Record» road hub, **1006/8** complete rear quick release skewer for «Record» hub, **2104** set (9+9) special $\varnothing 7/32$ " balls selected with 1/1000 of mm tolerance, **2106** set (9+9) special $\varnothing 1/4$ " balls selected with 1/1000 of mm tolerance.



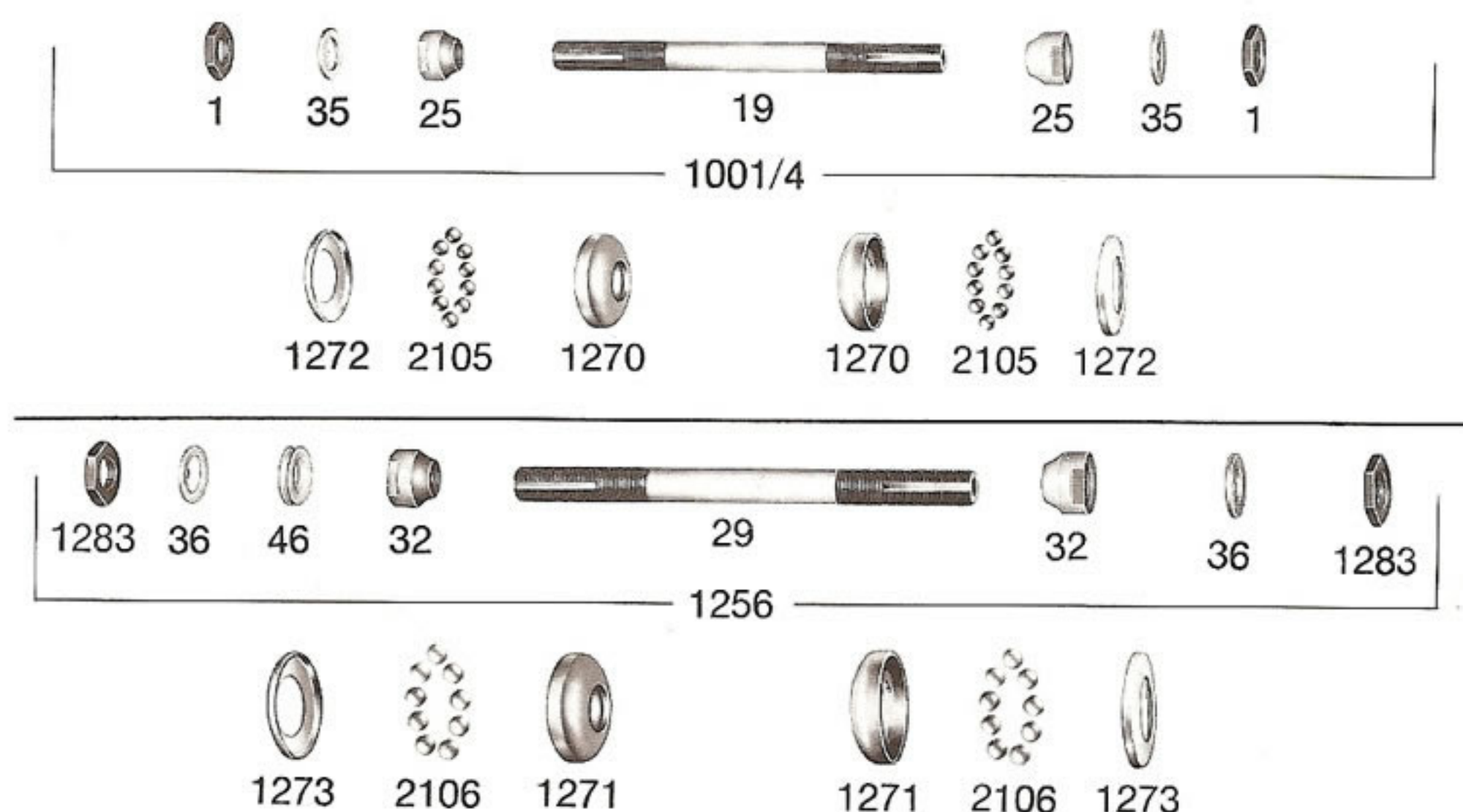
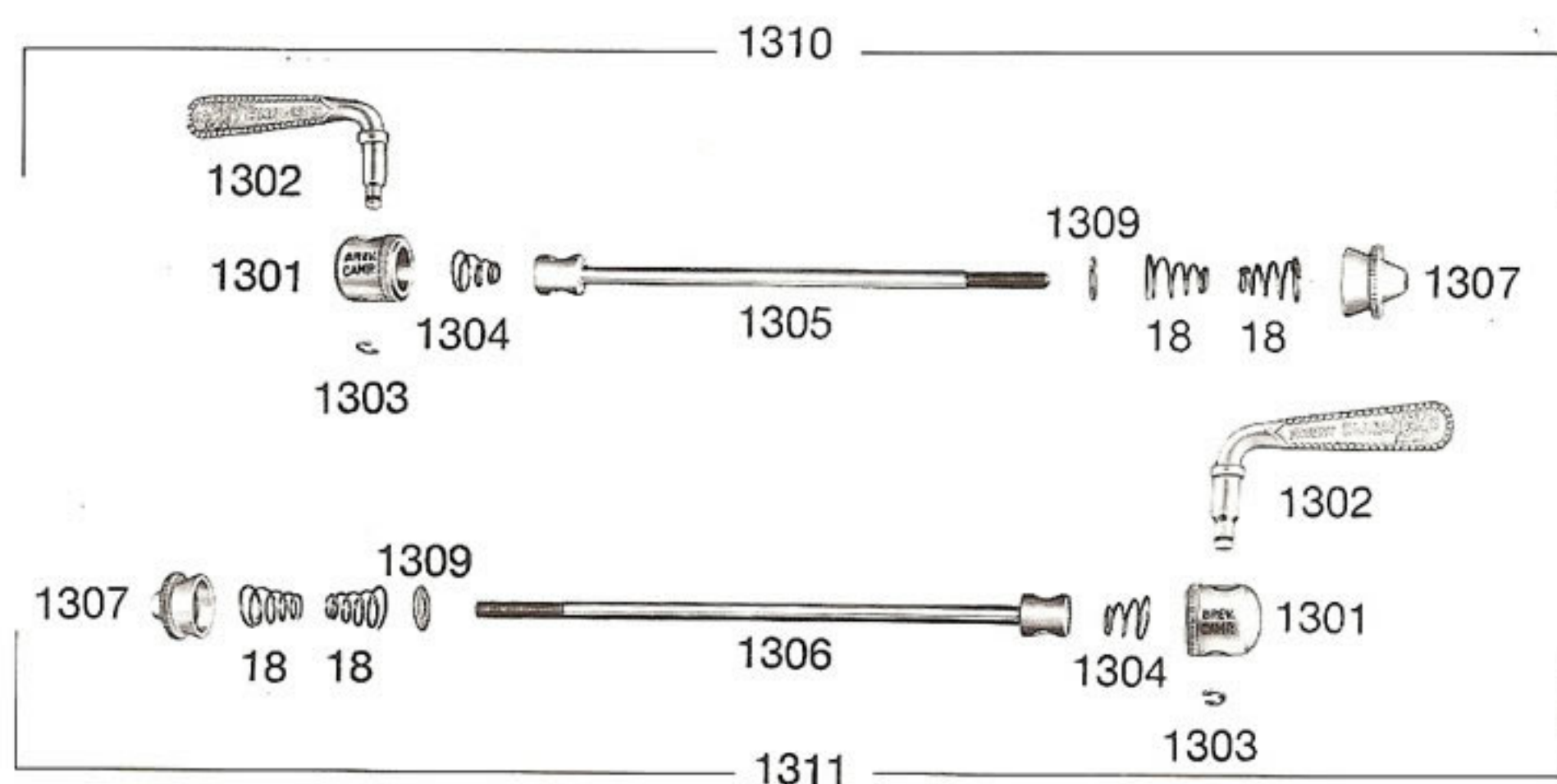
RECORD track Hubs Components

1 front lock nut, **19/P** front solid spindle axle for «Record» track hub, **25/R** front cone, **29/P** rear solid spindle axle for «Record» track hub; **32/R** rear cone, **1283** rear lock nut, **35** front hub lock washer, **36** rear hub lock washer, **667** «Record» track hub front nut, **668** «Record» track hub rear nut, **737** front ball cup; **738** rear ball cup, **739** front dust cover, **740** rear dust cover, **743** rear track hub lockring, **1001/4P** complete front axle for «Record» track hub, **1006/5P** complete rear axle for «Record» track hub, **2104** set (9+9) special $\varnothing 7/32$ " balls selected with 1/1000 of mm tolerance, **2106** set (9+9) special $\varnothing 1/4$ " balls selected with 1/1000 of mm tolerance.



NUOVO TIPO Hubs Components

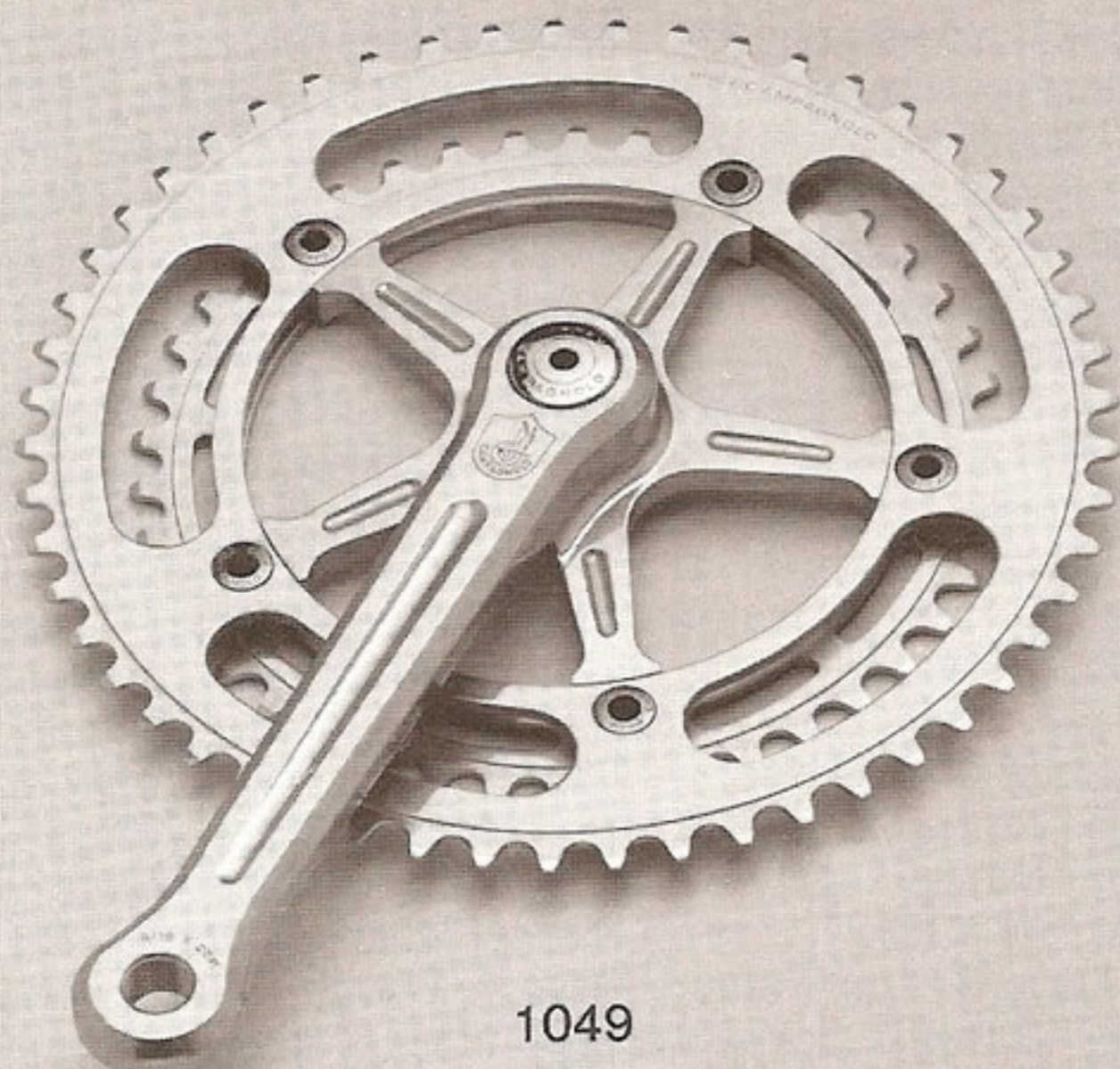
1 front lock nut, **18** conical spring, **19** front hollow axle, **25** front cone, **29** rear hollow axle (127 mm long). On request the axle can be supplied 132 and 134 mm long). **32** rear cone, **35** front hub lock washer, **36** rear hub lock washer, **46** rear hub spacing collar, **1001/4** complete front hollow axle for «Nuovo Tipo» hub, **1256** complete rear hollow axle for «Nuovo Tipo» hub, **1270** front ball cup, **1271** rear ball cup, **1272** front dust cover, **1273** rear dust cover, **1283** rear lock nut, **1301** quick release cap, **1302** quick release lever, **1303** circlip for lever, **1304** conical tension spring, **1305** front quick release skewer, **1306** rear quick release skewer, **1307** knurled adj. nut, **1309** washer for skewer, **1310** complete front quick release skewer for «Nuovo Tipo» hub, **1311** complete rear quick release skewer for «Nuovo Tipo» hub, **2105** set (10+10) special $\varnothing 3/16$ " balls selected with 1/1000 of mm tolerance, **2106** set (9+9) special $\varnothing 1/4$ " balls selected with 1/1000 of mm tolerance.



CHAINWHEEL SETS

0304 «Gran Sport» road chainwheel set (with 170 mm cranks, pedal hole $\varnothing$ 9/16"x20 F. and chainring for chain 1/2"x3/32" [2 mm]). Specify the number of teeth of chainring available from 42 to 57 teeth, **1049/4** cyclocross chainwheel set (with 170 mm cranks, pedal hole $\varnothing$ 9/16"x20 F. and chainring for chain 1/2"x3/32" [2 mm]). Specify the number of teeth of chainring available from 42 to 57 teeth, **1049/A** «Super Record» road chainwheel set (with 170 mm cranks, pedal hole $\varnothing$ 9/16"x20 F. and chainring for chain 1/2"x3/32" [2 mm]). Specify the number of teeth of chainring available from 42 to 57 teeth. On request cranks 165-167,5-172,5-175-177,5-180 mm long are supplied, **1049/5** Triple chainring chainwheel set (with 170 mm cranks, pedal hole $\varnothing$ 9/16"x20 F. and chainring for chain 1/2"x3/32" [2 mm] with fixed 36 toothing). Specify the number of teeth of the other two chainrings available from 42 to 57 teeth. On request cranks 165-167,5-172,5-175-177,5-180 mm long are supplied, **1049** «Record» road chainwheel set (with 170 mm cranks, pedal hole $\varnothing$ 9/16"x20 F. and chainring for chain 1/2"x3/32" [2 mm]). Specify the number of teeth of chainring available from 42 to 57 teeth. On request cranks 165-167,5-172,5-175-177,5-180 mm long are supplied, **1051** «Record» track chainwheel set (with 170 mm cranks, pedal hole $\varnothing$ 9/16"x20 F. and chainring for chain 1/2"x1/8" [3 mm]). Specify the number of teeth of chainring available from 44 to 56 teeth. On request cranks 165-167,5-172,5-175-177,5-180 mm long and chainring for chain 1/2"x3/32" (2 mm) are supplied, **0305** «Gran Sport» road chainwheel set, 116 mm (with 170 mm cranks, pedal hole $\varnothing$ 9/16"x20 F. and chainring for chain 1/2"x3/32" [2 mm]) available as follows: 35, 36, 37, 38, 39, 40, 41, 42, 43, 50, 51, 52, 53 teeth, **0306** «Gran Sport» road chainwheel set, 116 mm, with triple chainring (with 170 mm cranks, pedal hole $\varnothing$ 9/16"x20 F. and chainring for chain 1/2"x3/32" [2 mm]), available as follows: 35, 36, 37, 38, 39, 40, 41, 42, 43, 50, 51, 52, 53 teeth, **4151** «Super Record» track chainwheel set, (with 170 mm cranks, pedal hole $\varnothing$ 9/16"x20 F. and chainring for chain 1/2"x1/8" [3 mm]). Specify the number of teeth of chainring available from 44 to 56 teeth. On request cranks 165-167,5-172,5-175-177,5-180 mm long and chainring for chain 1/2"x3/32" (2 mm) are supplied.

From the aeronautics emerges the concept of need of lightness combined with the maximum safety. The manufacturing process of Campagnolo cranks, the raw materials employed, the heat treatment used, follow the same standards of the civil and military aeronautics, starting from the purchase of the raw material. They are obtained with a pressing process of aeronautical type light alloy and are worked on all surfaces. Their reliability degree follows the same concept of the aeroplanes: to an accurate calculation of the technical parameters follows the application of safety coefficients which can guarantee the reliability also under conditions of work heavier than those simulated. The working of all the surface gives to the crank a high precision degree; the weight and balancing are steady for each piece and the squareness among the rotating spindle, the pedal run and the ring toothing on which the chain slides are perfect. The foot leaned on the pedal follows a cylindrical and non conical run, the chain does not receive lateral inclinations. The shining finishing of the surface, besides giving a pleasant look, allows a strict selective control.



1049



1049/A



1051



4151



1048/4



1049/5



0305*



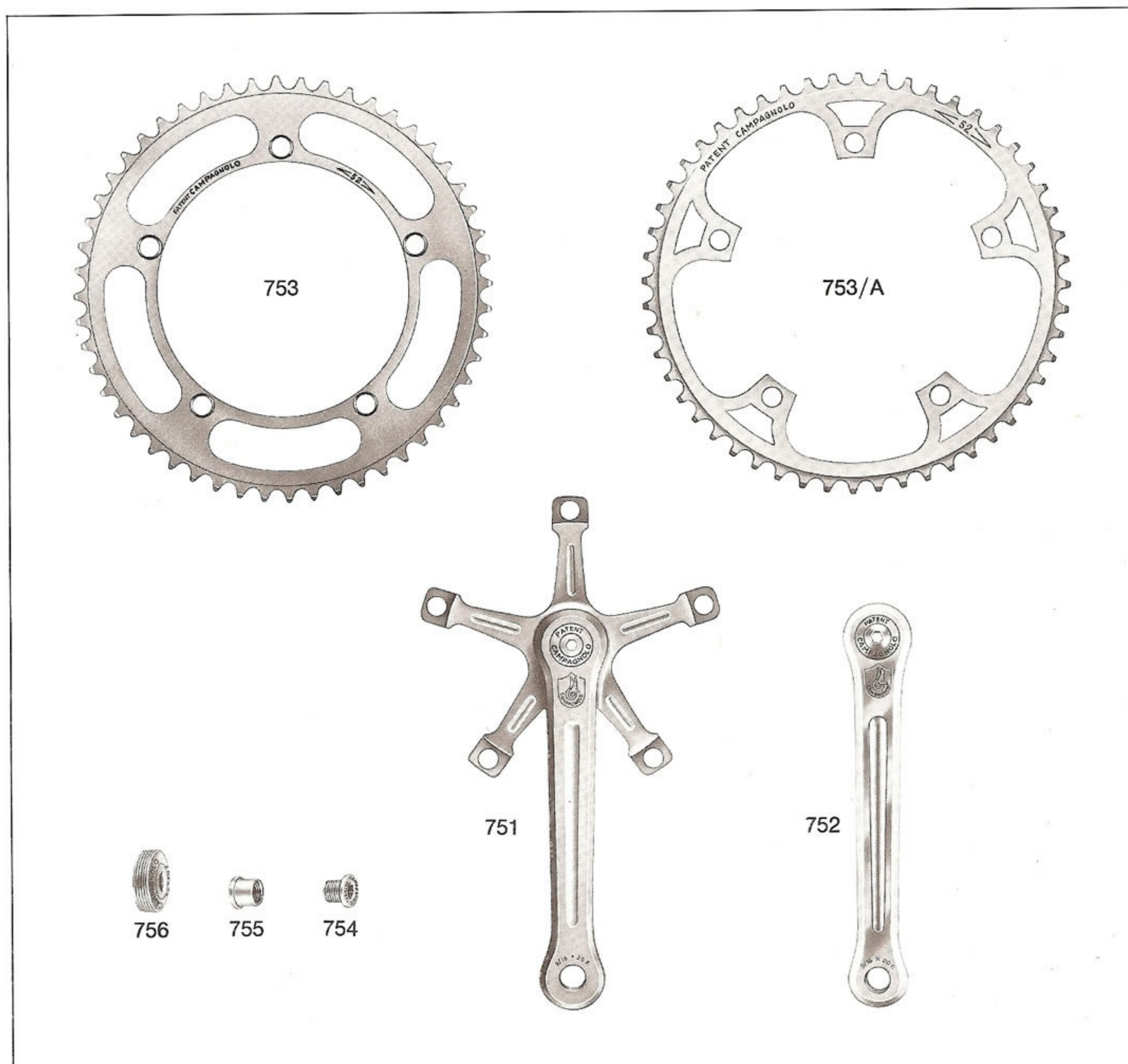
0304*



0306*

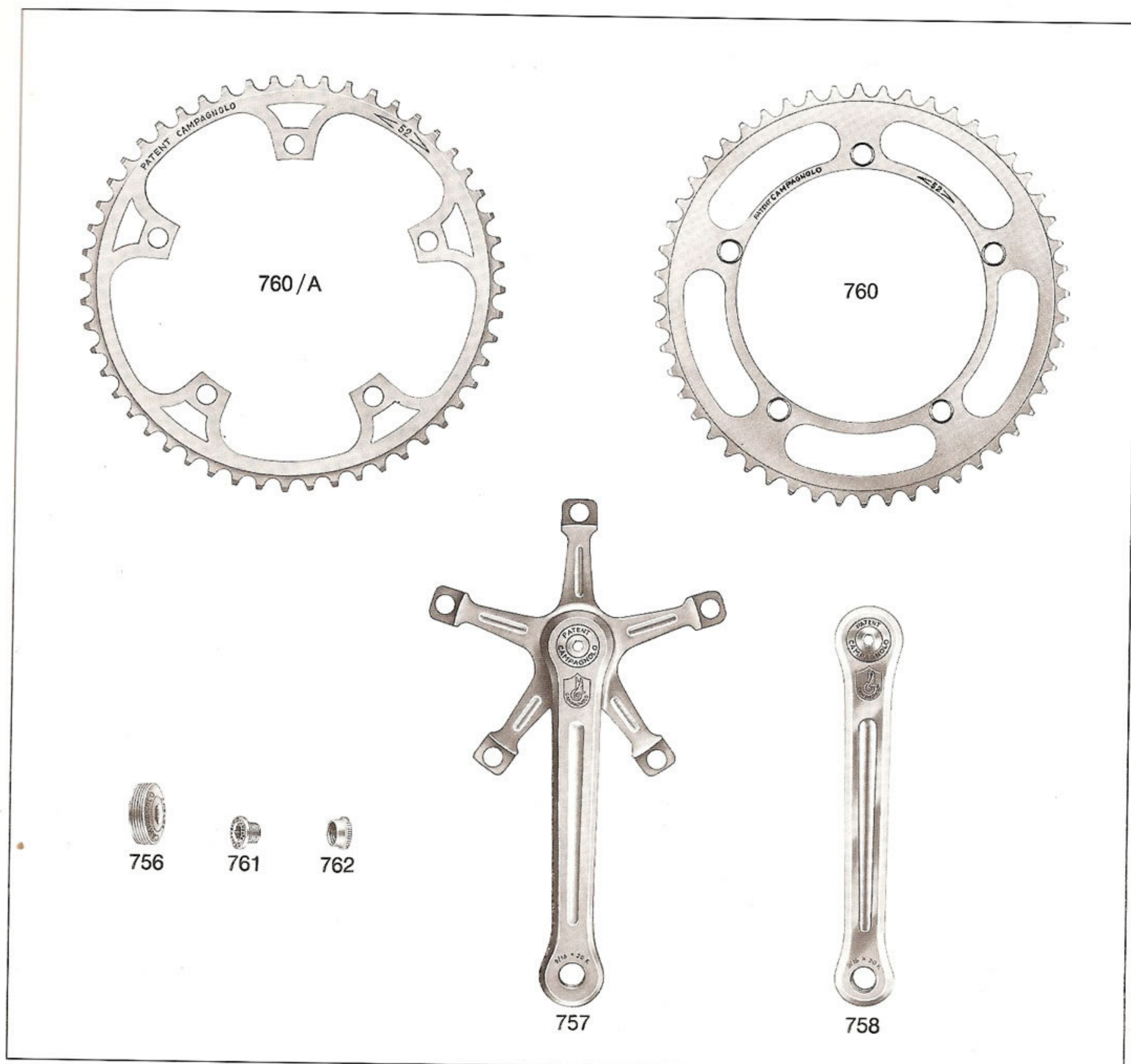
SUPER RECORD and RECORD ROAD Chainwheel set Components

751 R.H. road crank (complete with 756 cover) 170 mm long. On request the following sizes: 165-167,5-172,5-175-177,5-180 mm long are supplied, **752** L.H. road crank (complete with 756 cover) 170 mm long. On request the following sizes: 165-167,5-172,5-175-177,5-180 mm long are supplied, **753** «Record» road chainring for chain 1/2"x3/32" (2 mm). Specify the number of teeth of chainring available from 42 to 57 teeth, **753/A** «Super Record» road chainring for chain 1/2"x3/32" (2 mm). Specify the number of teeth of chainring available from 42 to 57 teeth, **754** Road chainwheel fastening screw, **755** Nut for road chainwheel fastening screw, **756** Crank cover plate.



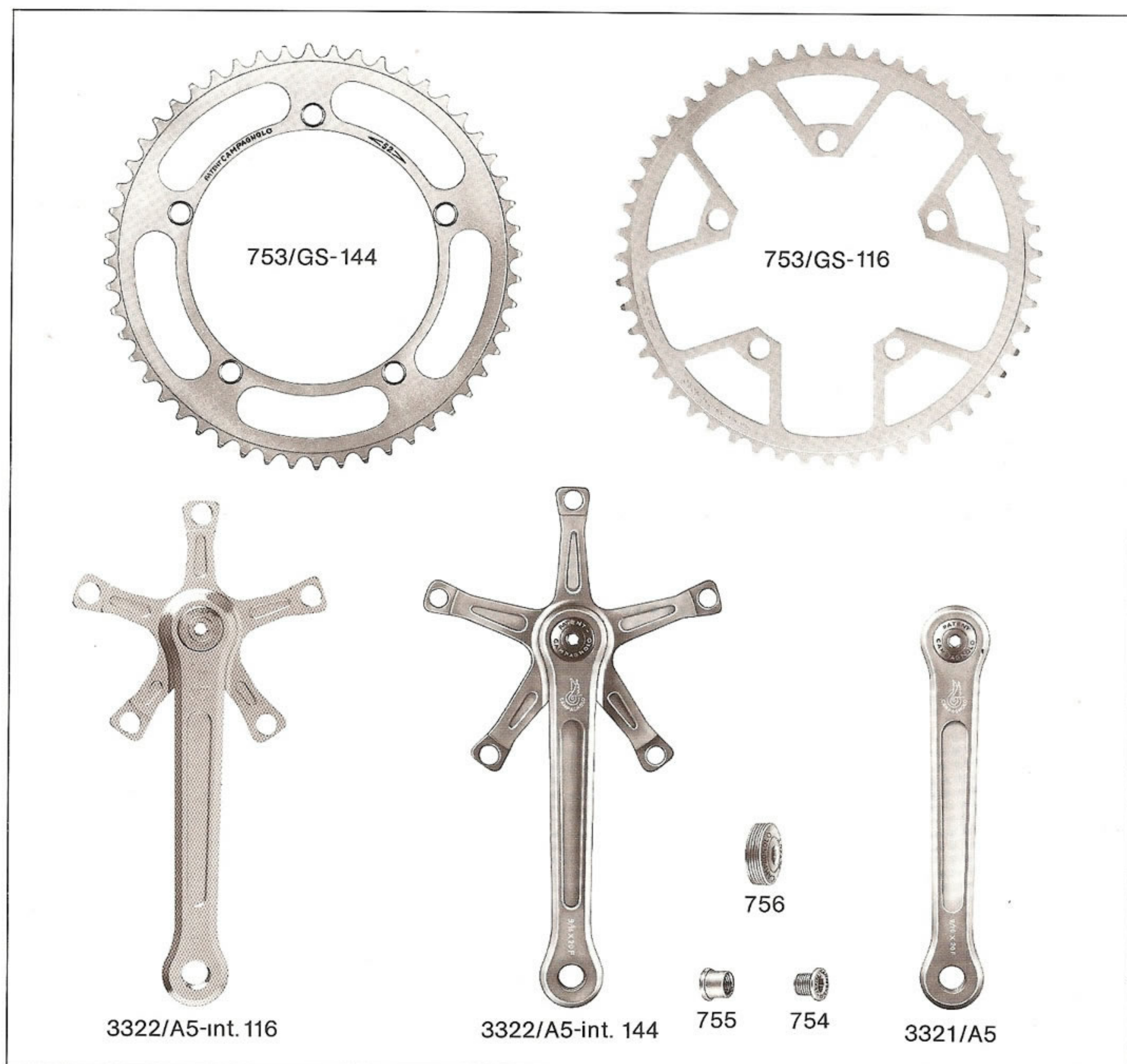
SUPER RECORD and RECORD TRACK Chainwheel set Components

756 Crank cover plate, **757** R.H. track crank (complete with 756 cover) 170 mm long. On request the following sizes: 165-167,5-172,5-175-177,5-180 mm long are supplied, **758** L.H. track crank (complete with 756 cover) 170 mm long. On request the following sizes: 165-167,5-172,5-175-177,5-180 mm long are supplied, **760** «Record» track chainring for chain $1/2 \times 1/8$ (3 mm). Specify the number of teeth of chainring available from 44 to 57 teeth, **760/A** «Super Record» track chainring for chain $1/2 \times 1/8$ (3 mm). Specify the number of teeth of chainring available from 44 to 57 teeth, **761** Track chainwheel fastening screw, **762** Nut for track chainwheel fastening screw.



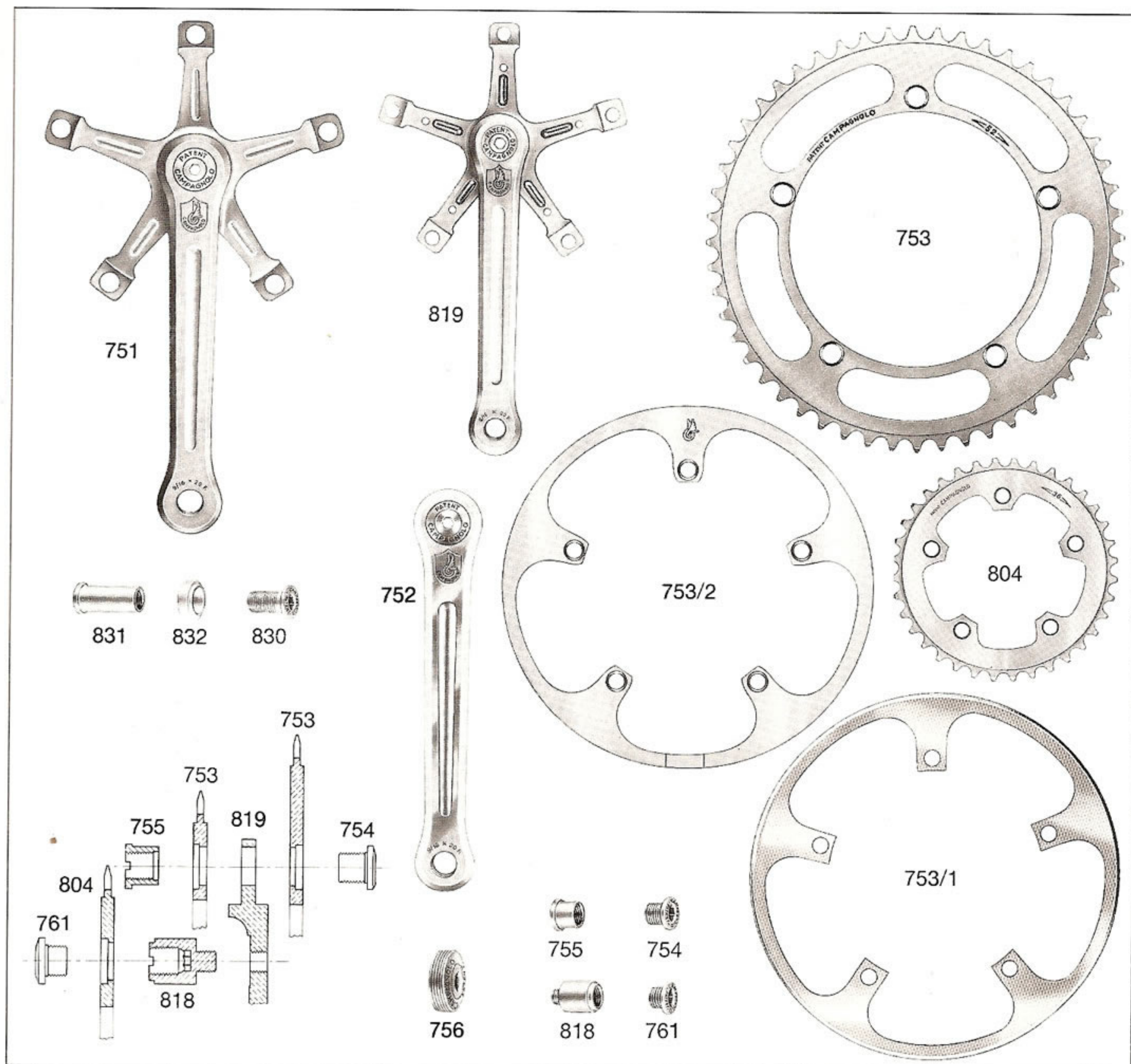
GRAN SPORT road Chainwheel set Components

3322/A5 «Gran Sport» R.H. crank, 144 mm (complete with 756 cover) 170 mm long, pedal hole $\varnothing$ 9/16"x20 F.,
3322/A5 «Gran Sport» R.H. crank, 116 mm (complete with 756 cover) 170 mm long, pedal hole $\varnothing$ 9/16"x20 F.,
3321/A5 «Gran Sport» L.H. crank, (complete with 756 cover) 170 mm long, pedal hole $\varnothing$ 9/16"x20F., **756** Crank cover plate, **754** Chainwheel fastening screw, **755** Nut for chainwheel fastening screw, **753/GS** Road chainring, 144 mm, for chain 1/2"x3/32" (2 mm). Specify the number of teeth of chainring available from 42 to 57 teeth, **753/GS** Road chainring, 116 mm for chain 1/2"x3/32" (2 mm) available as follows: 35-36-37-38-39-40-41-42-43-50-51-52-53 teeth.



Triple chainring and cyclo-cross chainwheel set Components

751 R.H. road crank (complete with 756 cover) 170 mm long. On request the following sizes: 165-167,5-172,5-175-177,5-180 mm long are supplied, **752** L.H. road crank (complete with 756 cover) 170 mm long. On request the following sizes: 165-167,5-172,5-175-177,5-180 mm long are supplied, **753** Road chainring for chain 1/2"x3/32" (2 mm). Specify the number of teeth available from 41 to 57 teeth, **753/1** Cyclo-cross inner flange. Specify diameter. Supplied with diameter of 186-198-210-222 mm, **753/2** Cyclo-cross outer flange. Specify diameter. Supplied with diameter of 186-198-210-222 mm, **754** Road chainwheel fastening screw, **755** Nut for road chainwheel fastening screw, **756** Crank cover plate, **830** Triple chainring and cyclo-cross fixing bolt, **831** Nut for triple chainring and cyclo-cross fixing bolt, **832** Spacer for triple chainring and cyclo-cross, **761** Chainwheel fastening screw, **804** Special chainring for chain 1/2"x3/32" (2 mm) with fixed 36 toothings, **818** Triple chainring spacer, **819** R.H. crank for special triple chainring (complete with 756 cover) 170 mm long. On request cranks 165-167,5-172,5-175-177,5-180 mm long are supplied.



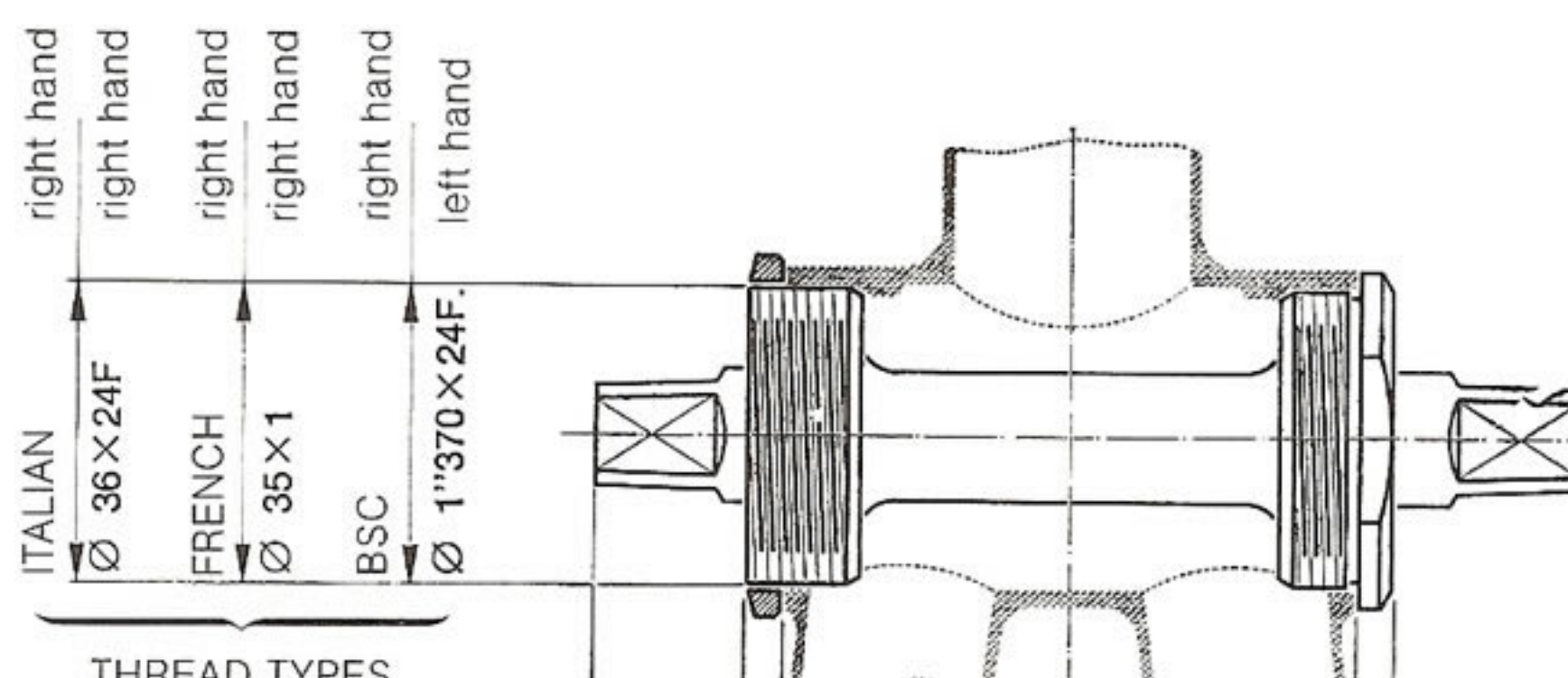
BOTTOM BRACKET SETS

- 1046** «Record» road and track bottom bracket set,
1046/A «Nuovo Record» road bottom bracket set,
1046/3 «Record» road triple chainring bottom bracket set,
1046/4 «Record» road cyclo-cross bottom bracket set,
3331 «Sport» road bottom bracket set,
5031/00 «Gran Sport» triple chainring bottom bracket set.

Meaning of «AXLE MARK»:

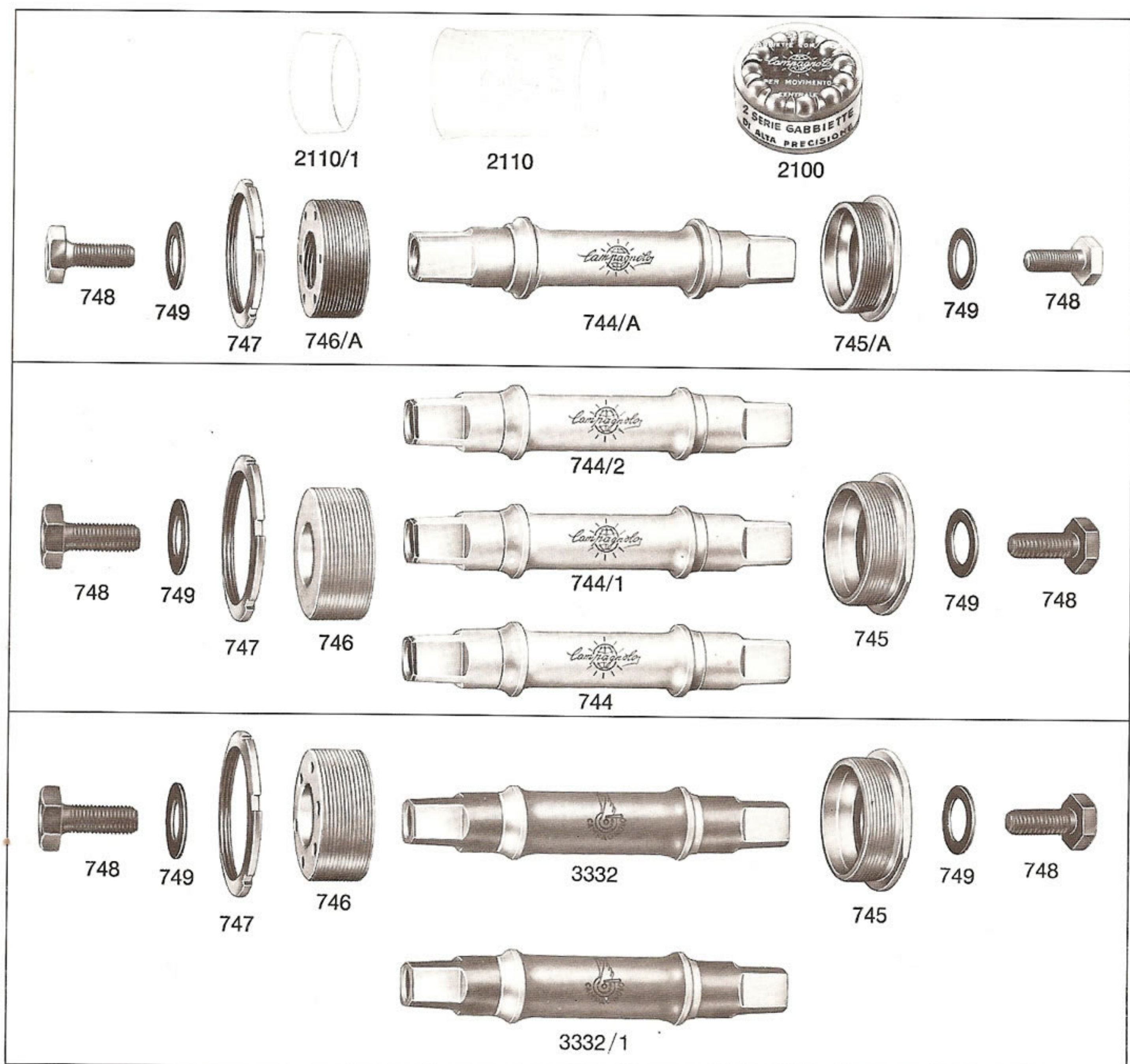
- the first number indicates the bracket width
- «P» indicates track
- «SS» indicates road
- «C» indicates cross

On request we supply cups and lockrings with thread increased by 0,5 mm.

								
		THREAD TYPES						
		AXLE MARK						
TRACK	{	65-P-110	16	3,5	65	3,5	16	mm. 104
		68-P-110	14,5	3,5	68	3,5	15,5	» 105
		68-P-120	17	3,5	68	3,5	17	» 109
		70-P-120	16	3,5	70	3,5	16	» 109
ROAD	{	68-SS	17	3,5	68	3,5	20	mm. 112
		70-SS	17	3,5	70	3,5	19	» 113
ROAD TRIPLE	{	68-SS x 3	20	3,5	68	3,5	29	mm. 123
		70-SS x 3	20	3,5	70	3,5	27	» 124
CROSS	{	68-C	17	3,5	68	3,5	23,5	mm. 115,5
		70-C	16	3,5	70	3,5	22,5	» 115,5

BOTTOM BRACKET SETS Components

744 Axle for «Record» road and track bottom bracket set, **744/A** Axle for «Nuovo Record» road bottom bracket set, **744/1** Axle for triple chainring bottom bracket set, **744/2** Axle for cyclocross bottom bracket set, **745** Fixed cup (specify thread), **745/A** «Nuovo Record» fixed cup (specify thread), **746** Adjusting cup (specify thread), **746/A** «Nuovo Record» adjusting cup (specify thread), **747** Lockring with normal 3,5 mm thickness (available also 4 or 4,5 mm thick) (specify thread), **748** Crank fixing screw, **749** Crank fixing washer, **2100** Set (11+11) special $\varnothing 1/4$ " balls, selected with 1/1000 of mm tolerance, **2110** Sleeve, **2110/1** Cone for sleeve, **3332** Axle for «Gran Sport» bottom bracket set, **3332/1** Axle for «Sport» triple chainring bottom bracket set.



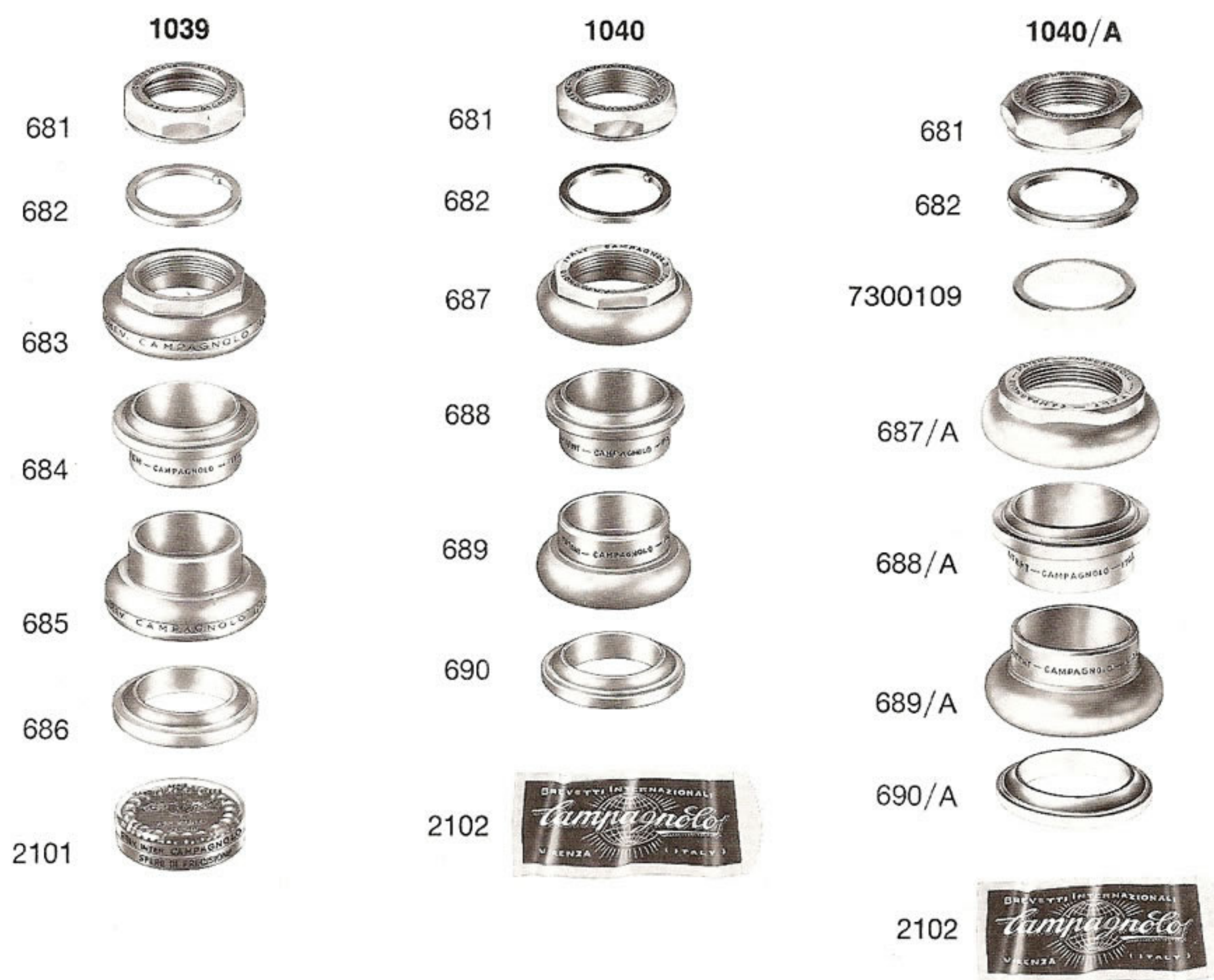
HEAD SETS

- 1039** «Record» road head set,
1040 «Record» track head set,
1040/A «Sport» road head set complete with 7300109 washer,
4041 «Super Record» road head set,
4141 «Super Record» track head set.



HEAD SETS Components

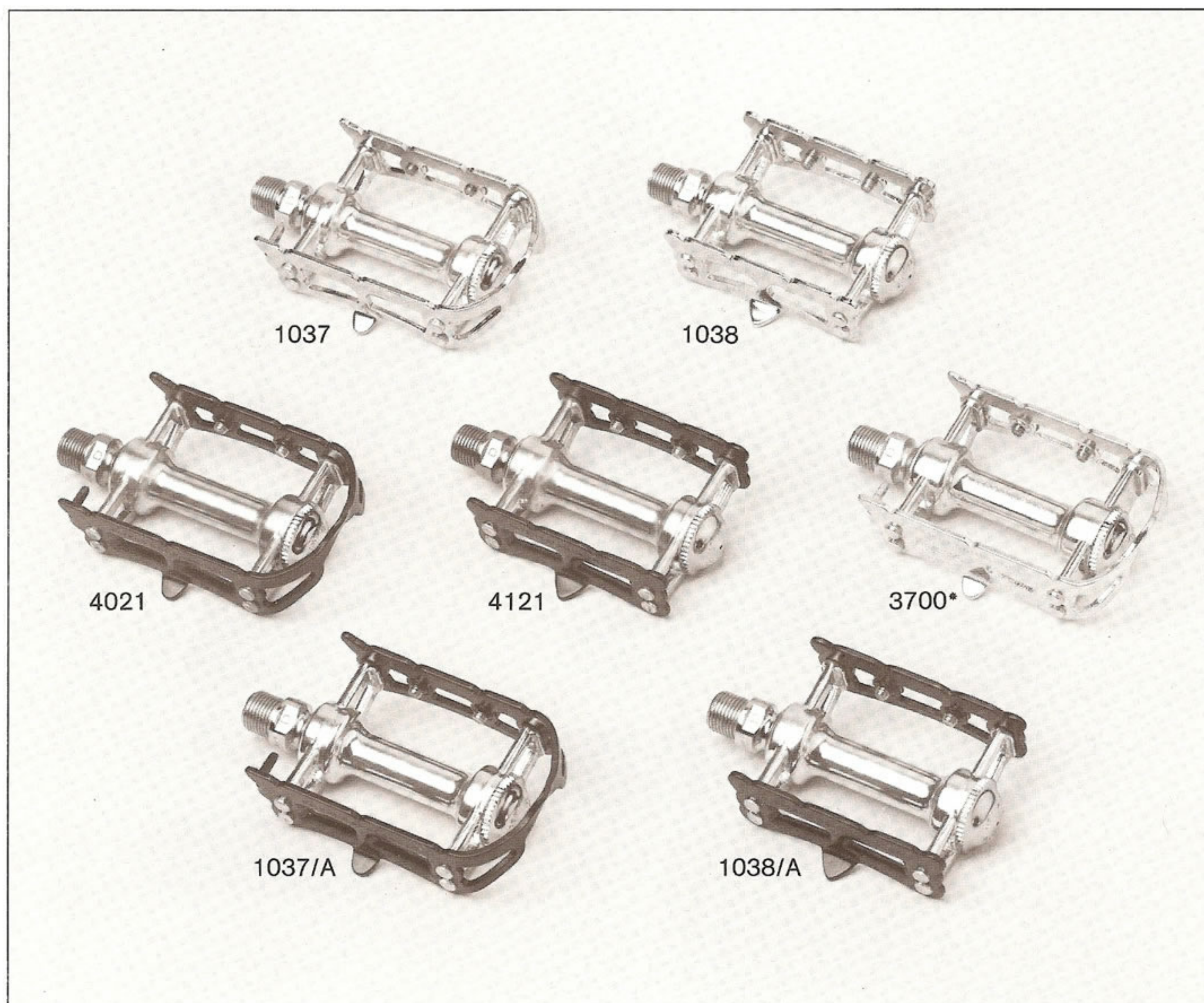
681 Locking nut (specify thread), **682** Locking washer, **683** Road top race (specify thread), **684** Road top cone (0,5 mm larger diameter available), **685** Road bottom race (0,5 mm larger diameter available), **686** Road bottom cone (small diameter available), **687** Track top race (specify thread), **687/A** «Sport» top race (specify thread), **688** Track top cone (0,5 mm larger diameter available), **688/A** «Sport» top cone (0,5 mm larger diameter available), **689** Track bottom race (0,5 mm larger diameter available), **689/A** «Sport» bottom race (0,5 mm larger diameter available), **690** Track bottom cone (small diameter available), **690/A** «Sport» bottom cone (small diameter available), **2101** Set (20+20) special $\varnothing 3/16$ " balls selected with 1/1000 of mm tolerance, **2102** Set (24+24) special $\varnothing 5/32$ " balls selected with 1/1000 of mm tolerance, **4042** «Super Record» locking nut (specify thread), **4044** «Super Record» road top race (specify thread), **4045** «Super Record» road top cone (0,5 mm larger diameter available), **4046** «Super Record» road bottom race (0,5 mm larger diameter available), **4047** «Super Record» road bottom cone (small diameter available), **4142** «Super Record» track top race (specify thread), **4143** «Super Record» track top cone (0,5 mm larger diameter available), **4144** «Super Record» track bottom race (0,5 mm larger diameter available), **4145** «Super Record» track bottom cone (small diameter available), **4145** «Super Record» track bottom cone (small diameter available), **7300072** «Super Record» locking washer, **7300109** «Sport» headset washer.



PEDALS

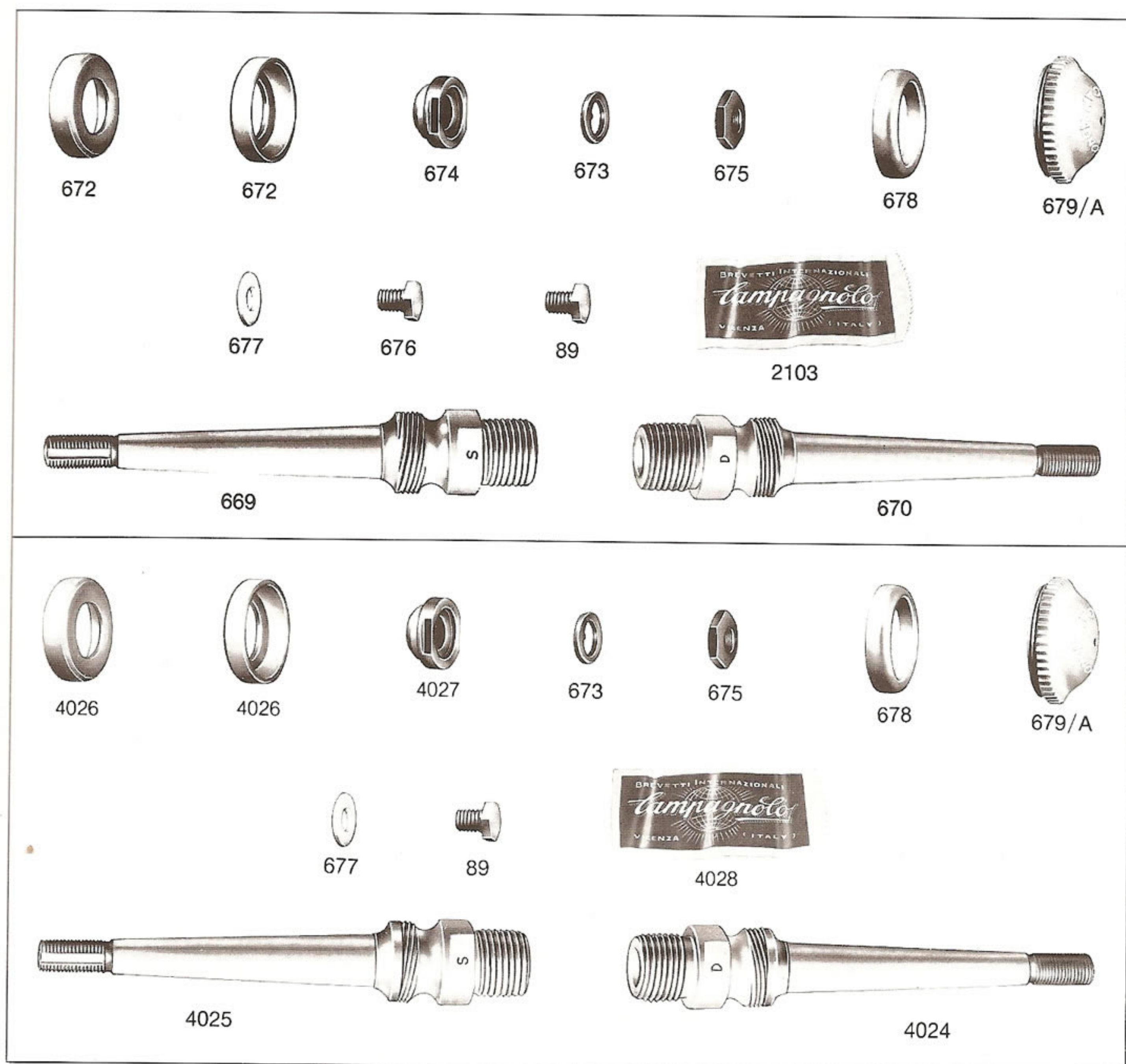
- 4021** Pair «Super Record» road pedals,
- 4121** Pair «Super Record» track pedals,
- 1037/A** Pair Superlight «Record» road pedals,
- 1037** Pair «Record» road pedals,
- 1038/A** Pair Superlight «Record» track pedals,
- 1038** Pair «Record» track pedals,
- 3700** Pair «Gran Sport» road pedals.

* No more available.



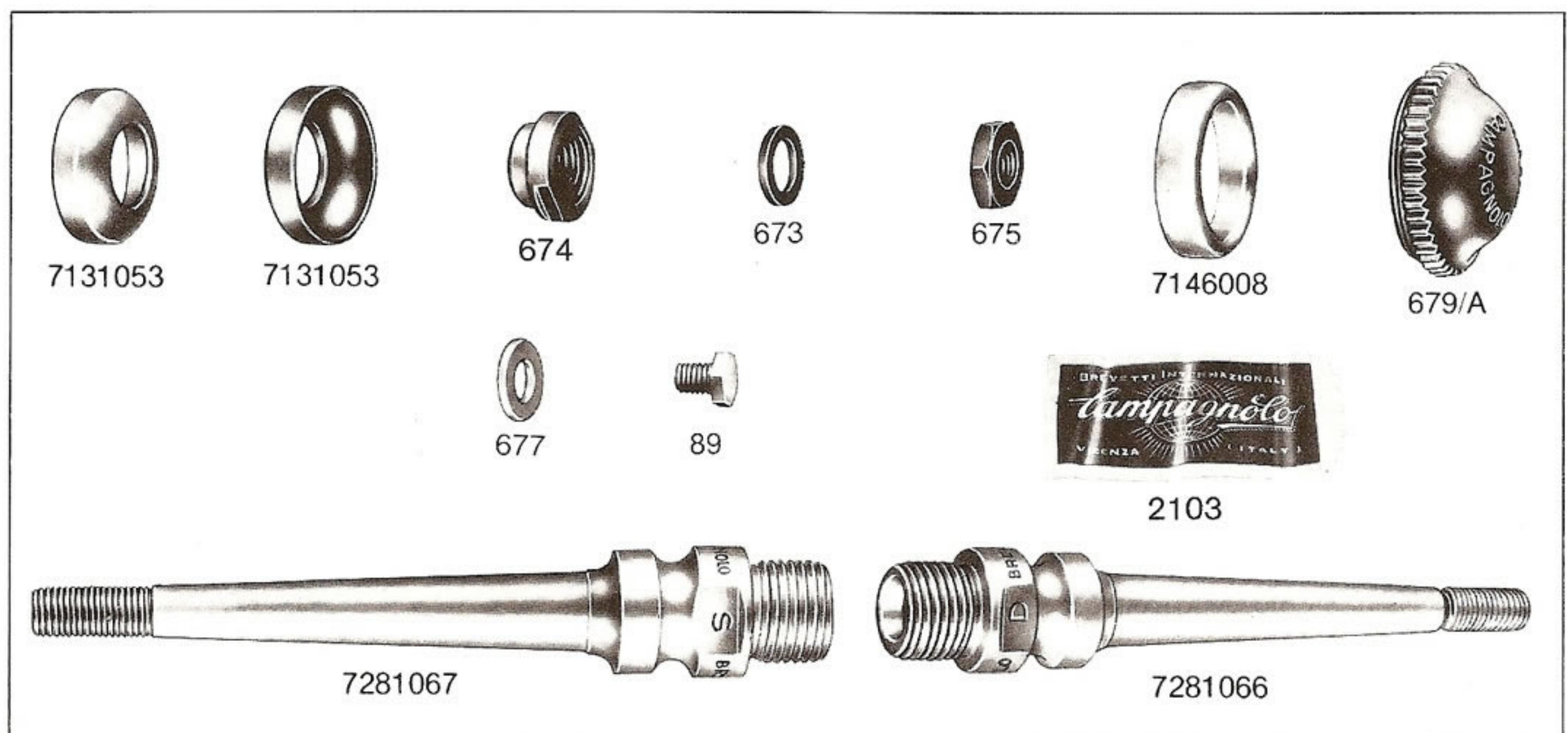
RECORD and SUPER RECORD Pedals Components

89 toe clip screw for «Super Record», «Record», «Gran Sport» pedals, **669** L.H. pedal axle with thread $\phi 9/16 \times 20$ F., **670** R.H. pedal axle with thread $\phi 9/16 \times 20$ F., **672** pedal inserted race (available also in oversize), **673** toothed washer, **674** pedal axle cone, **675** pedal axle lock nut, **676** toe clip bolt, **677** toe clip washer, **678** dust cap, **679/A** superlight pedal cap, **2103** set (48) special $\phi 5/32$ " balls selected with 1/1000 of mm tolerance, **4024** «Super Record» R.H. titanium pedal axle, **4025** «Super Record» L.H. titanium pedal axle, **4026** pedal inserted race (available also in oversize), **4027** pedal axle cone, **4028** set (64) special $\phi 1/8$ " balls, selected with 1/1000 of mm tolerance.



GRAN SPORT Pedals Components

89 toe clip screw for «Super Record» and «Gran Sport» pedals, **673** toothed washer, **675** pedal axle lock nut, **677** toe clip washer, **7146008** dust cap, **679/A** superlight pedal cap, **2103** set (48) special $\phi 5/32$ " balls, selected with 1/1000 of mm tolerance, **7131053** pedal inserted race, **674** pedal axle cone, **7281067** L.H. pedal axle with thread $\phi 9/16$ "x20 F., **7281066** R.H. pedal axle with thread $\phi 9/16$ "x20 F.

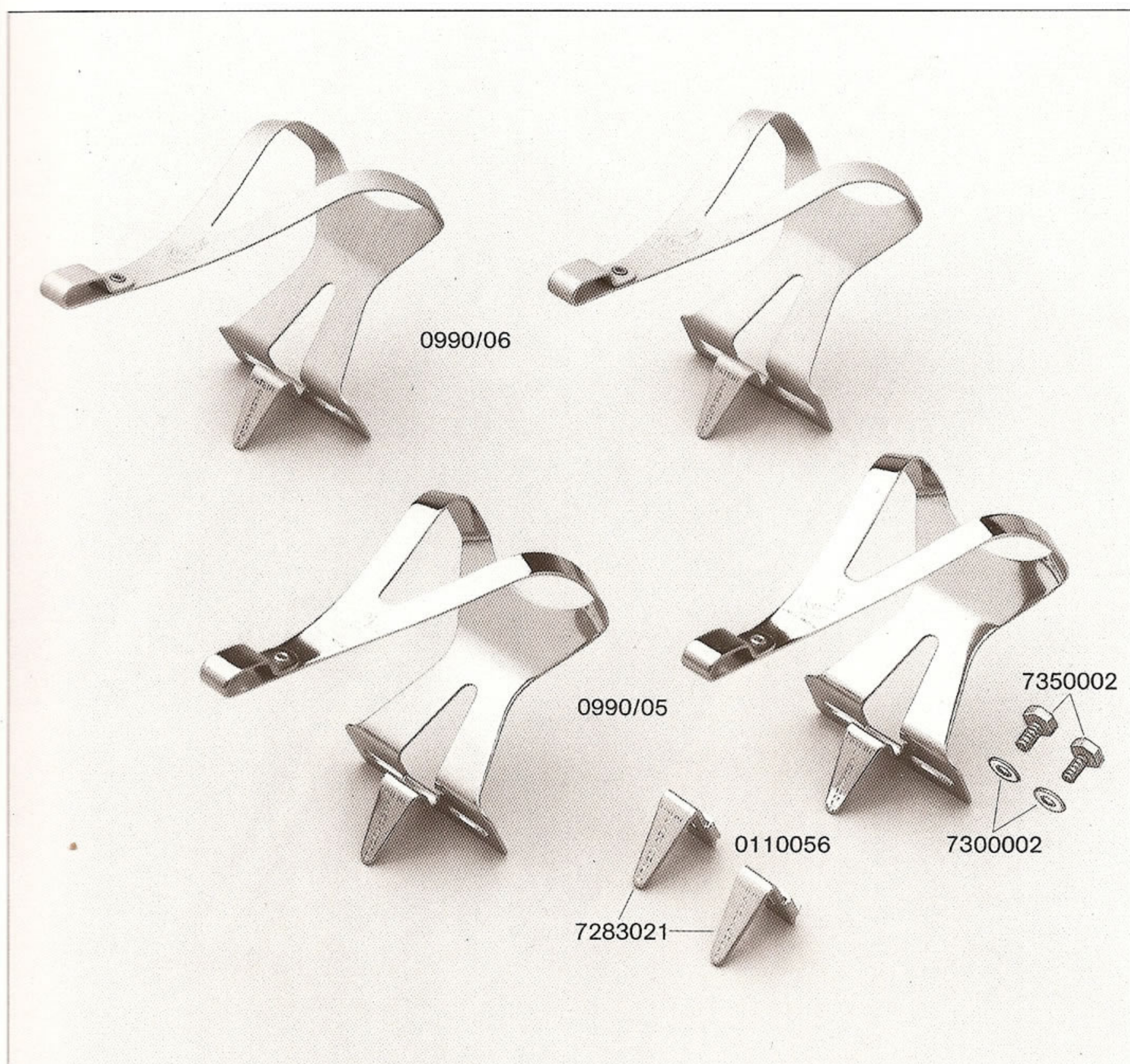


Toe Clips and fixing shoe plates

0990/05 «Campagnolo» set toe clips with fixing shoe plate.

0990/06 «Campagnolo» set superlight toe clips with fixing shoe plate. Both types are available in the following sizes: small, medium, large.

0110056 Fixing shoe plate set, consisting of **7300002** washers, **7350002** screws and **7283021** fixing shoe plates.



SEAT PILLAR

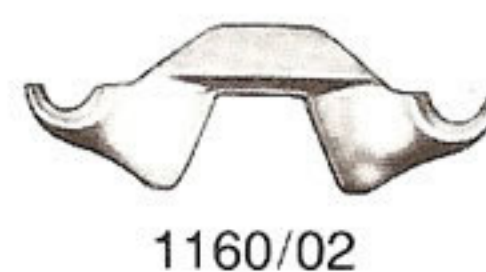
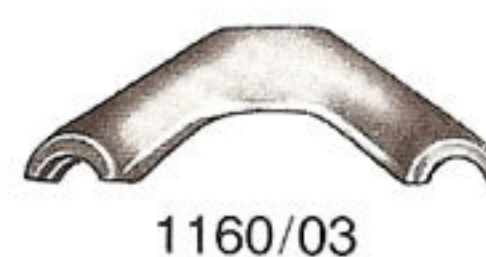
- 1044** «Record» seat pillar, 130 and 180 mm long,
3800 «Gran Sport» seat pillar, 130 and 180 mm long,
4051/1 «Nuovo Super Record» seat pillar, 180 mm long.

All the seat pillars are available in the following diameters: 25-25,8-26-26,2-26,4-26,6-26,8-27-27,2-27,4.



SEAT PILLAR Components

698 front bracket, **699** rear bracket, **700** bolt nut, **701** L.H. side support, **702** R.H. side support, **703** seat pillar fixing and adjusting bolt, **1160/01** convex washer for « Super Record » seat pillar, **1160/02** seat pillar sliding support, **1160/03** seat pillar fixing bracket, **1160/04** « Super Record » seat pillar screw, **7300107** « Nuovo Super Record » seat pillar washer.



BRAKES

- 4061** «Super Record» 52 mm brakes set with drilled levers and cables,
- 4061/1** «Super Record» 47 mm brakes set with drilled levers and cables,
- 2040** «Record» 52 mm brakes set with levers and cables,
- 2040/1** «Record» 47 mm brakes set with levers and cables,
- 118** «Gran Sport» 52 mm brakes set with levers and cables,
- 117** «Gran Sport» 47 mm brakes set with levers and cables.

On request the brakes set are supplied in the allen bolt version.

4061



2001



2000



4062



4062

2040



2000



2001



2030



2030

117



0116010



0116011



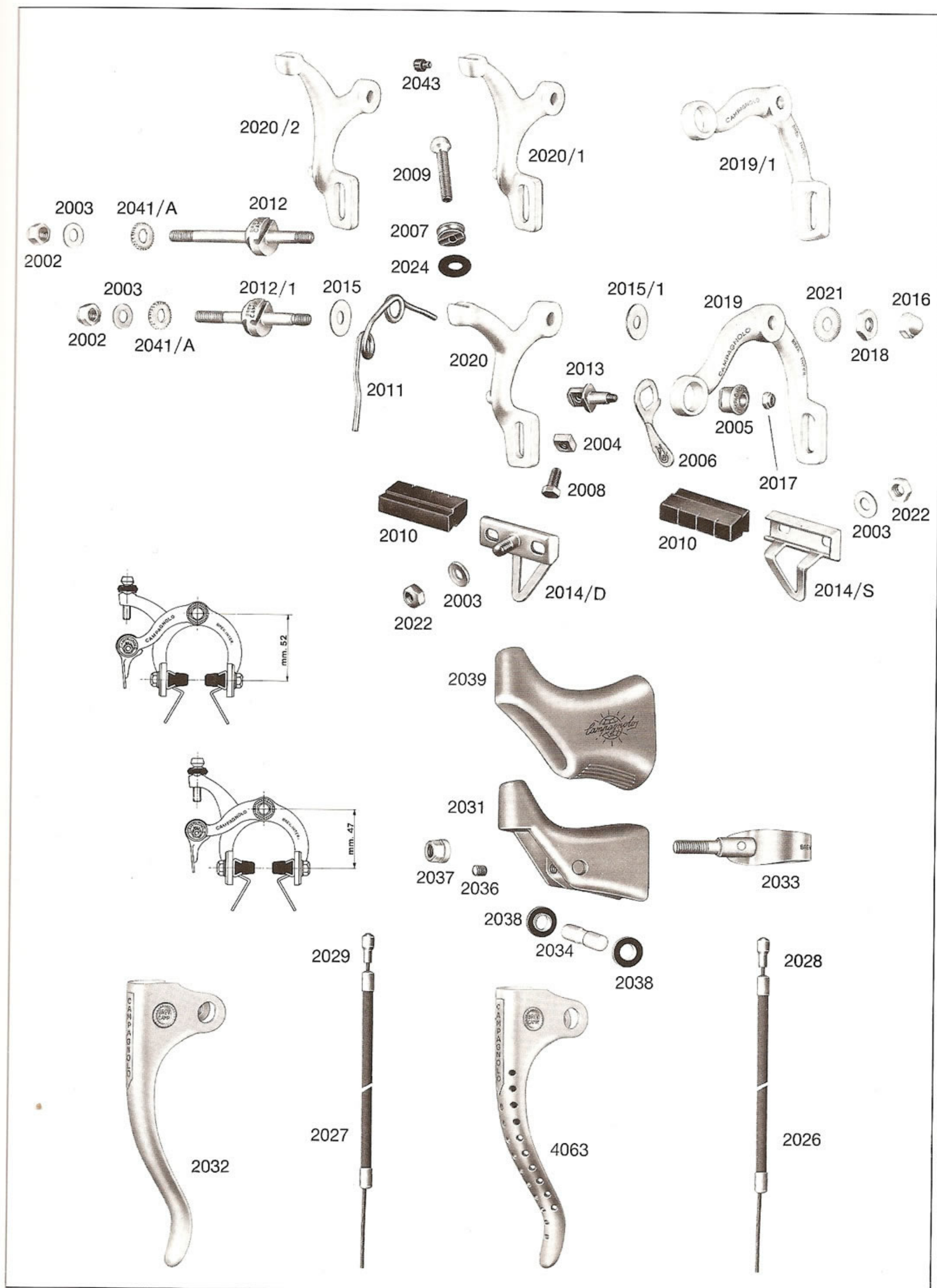
0118028



0118028

BRAKES SPARE PARTS

2002 rear center bolt fixing nut, **2003** washer, **2004** cable clamp washer, **2005** cam, **2006** quick release cam lever, **2007** adjusting nut, **2008** cable clamp bolt, **2009** adjusting screw, **2010** brake block, **2011** tension spring, **2012** front brake center bolt, **2012/1** rear brake center bolt, **2013** cable clamp, **2014/D** R.H. brake shoe, **2014/S** L.H. brake shoe, **2015** friction washer, **2015/1** inner friction washer, **2016** domed nut, **2017** cam locking nut, **2018** locking nut, **2019** front stirrup arm, **2019/1** front stirrup arm for small brake, **2020** rear stirrup arm, **2020/1** rear stirrup arm for front small brake, **2020/2** rear stirrup arm for rear small brake, **2021** knurled nut, **2022** brake shoe nut, **2024** adjusting rubber, **2026** front brake outer casing (61 cm), **2027** rear brake outer casing (119 cm), **2028** front inner cable (73 cm), **2029** rear inner cable (131 cm), **2031** lever hood, **2032** control lever (complete with 2035 cable holder), **2033** brake lever clip, **2034** lever pivot pin, **2036** grub screw, **2037** clamp nut, **2038** brake lever bush, **2039** rubber lever hood, **2041/A** serrated washer for rear brake, **2041/A** serrated washer for front brake, **2043** rubber for small brake lever, **4063** drilled lever (complete with 2035 cable holder).



FREEWHEEL

0521/00

Tool kit for fitting and unfitting freewheel, including:

0520/10 Tool for fitting freewheel body,

0520/20 2 keys with chain for freewheel sprockets,

0520/30 Complete key with profile freewheel teeth,

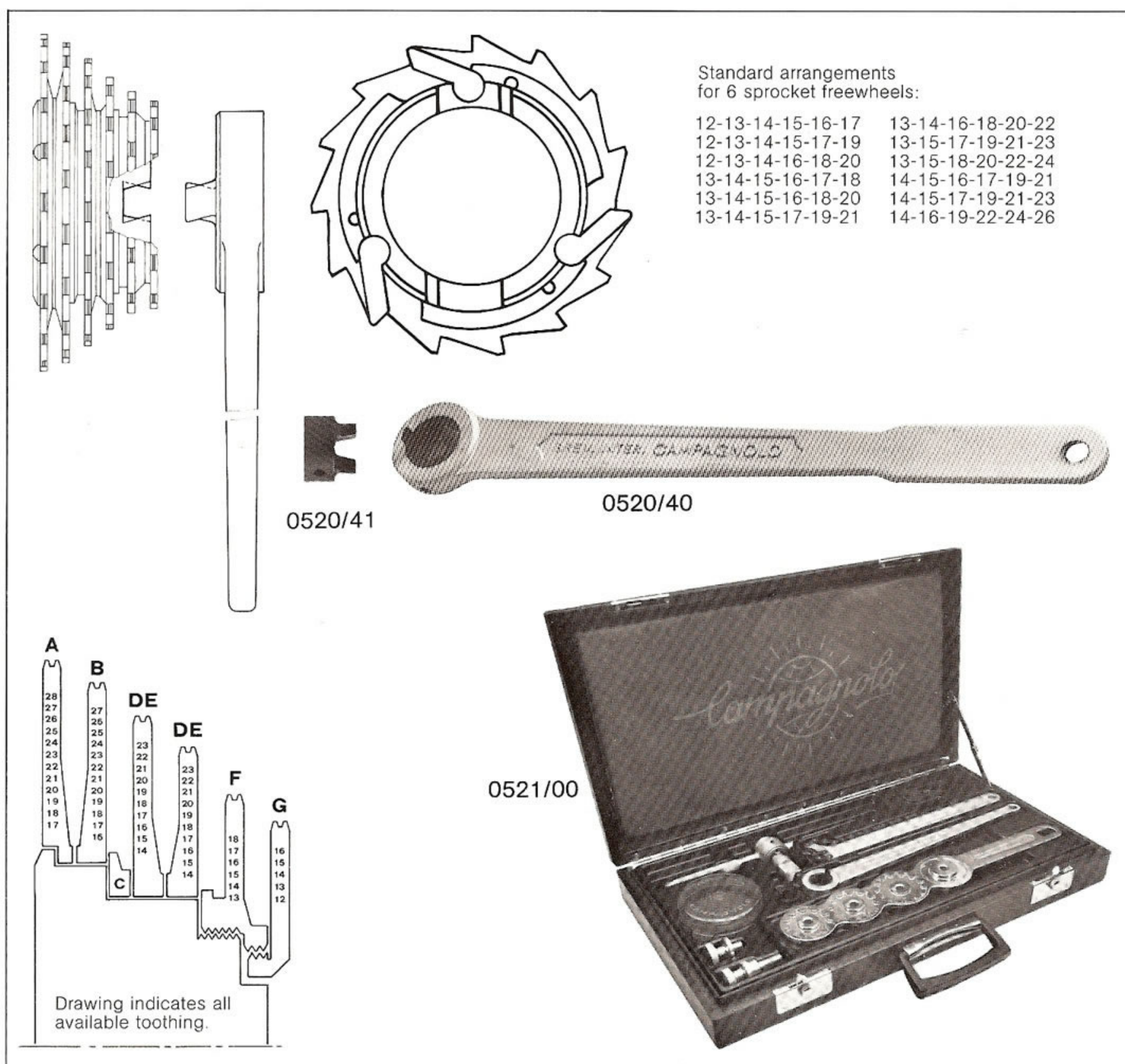
0520/40 Complete key for unfitting freewheel,

0520/41 Sleeve for unfitting freewheel key,

0520/42 2 grains for unfitting freewheel key,

0520/40 Complete key for unfitting «Campagnolo» freewheel from hub,

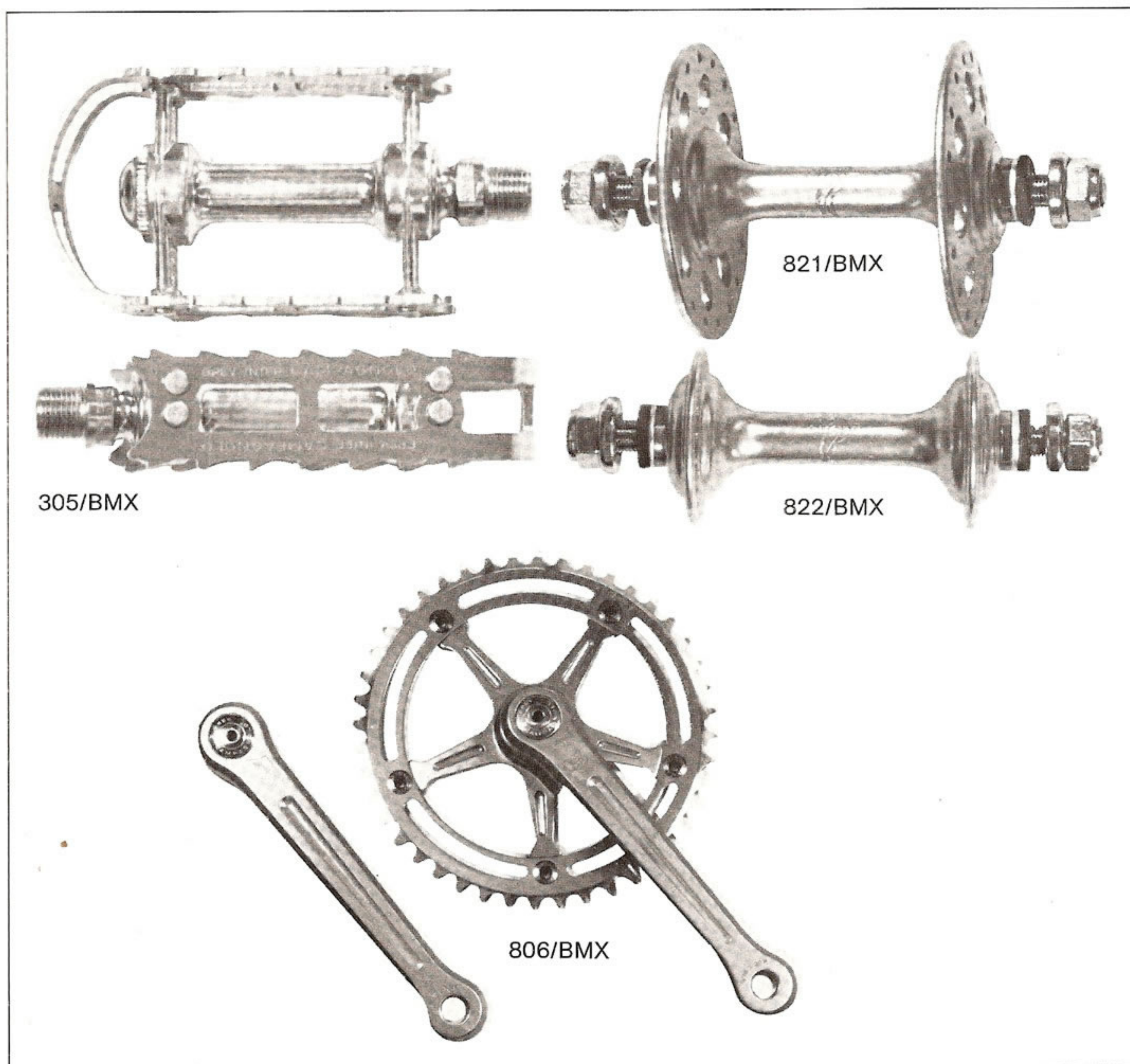
0520/41 Sleeve for unfitting freewheel key.



BMX

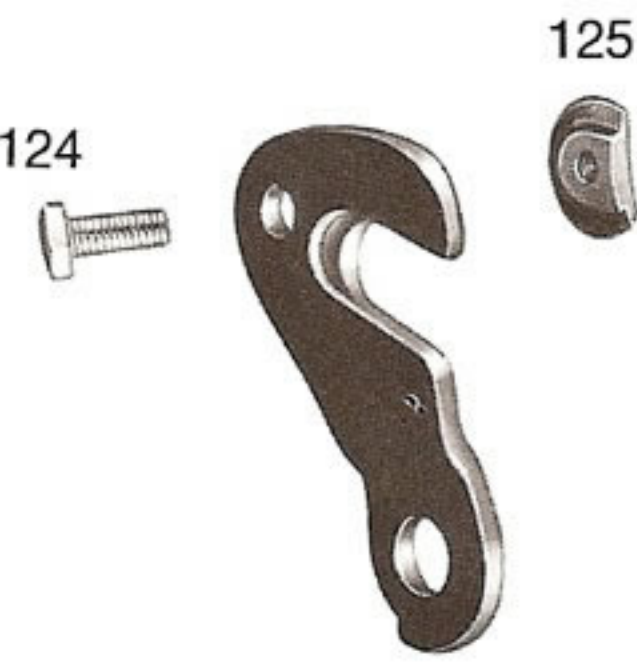
806/BMX «BMX» chainset without B.B., **305/BMX** «BMX» pair pedals with special toothing cage, **821/BMX** «BMX» large flange, solid spindle, fixing nuts pair hubs, **822/BMX** «BMX» small flange, solid spindle, fixing nuts pair hubs.

The above «BMX» items are available in silver, light blue, gold colours.



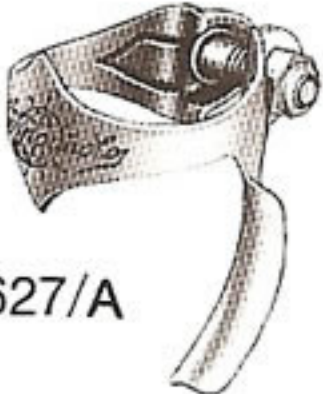
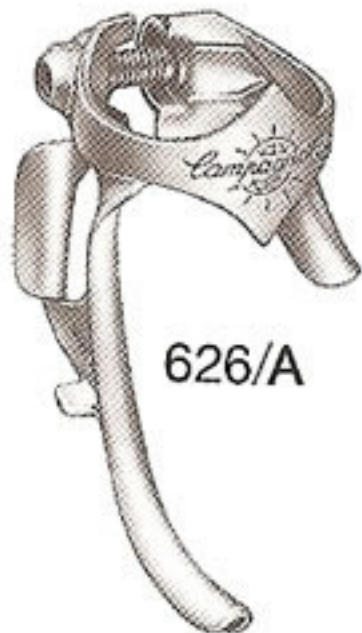
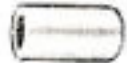
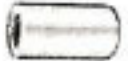
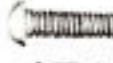
SUNDRY SPARE PARTS

80/1 gear fixing plate, **80/2** fixing plate for « Super Record » « Nuovo Record » « Rally Touring » « Gran Sport » and « 980 » gears, **80/A** fixing plate for « Valentino Extra » gear, **124** fixing screw, **125** clamp nut, **763** standard sprocket for normal chain 1/2"x1/8" (3 mm). Sprockets available with 12-13-14-15-16 teeth. On request sprockets for chain 1/2"x3/32" (2 mm) are supplied, **763/A** superlight sprocket for normal chain 1/2"x1/8" (3 mm). sprockets available with 13-14-15-16 teeth. On request sprockets for chain 1/2"x3/32" (2 mm) are supplied, **914** clamp nut, **1030/2** pump connector with square base, **3346** superlight pump connector with square base, **3385** 100 grs. tin special grease, **3386** 500 grs. tin special grease, **3387** 1 kg. tin special grease.

 80/1	 1030/2 3346	 3385
 124 914 80/A	 124 125 80/2	 3386
 763/A	 763	 3387

SUNDRY SPARE PARTS

145 gear cable for handlebar control, **171** clip bolt, **172** nut for clip bolt, **218** front changer cable for handlebar control, **609/1** fixing clip bolt, **617** stainless steel outer casing for braze-on gear, **619** outer casing ferrule, **620** spindled ferrule, **622** stainless steel outer casing for gear, **623** stainless steel outer casing for front changer, **625** stainless steel outer casing for gear and front changer handlebar controls, **626/A** twin gear cable clip, **627/A** down tube gear clip, **629** top clip for gear and front changer handlebar control, **636** horizontal stay clip, **649** brake cable clip, **652** safety cable, **777** nut, **2012/2** rear brake center bolt with modified axle, **2045** brake outer casing ferrule.

 629  636	 627/A	 626/A
 777  609/1	 2045  619  620  652	 145  218  625  623  622  617
 649  171  172	 2012/2	

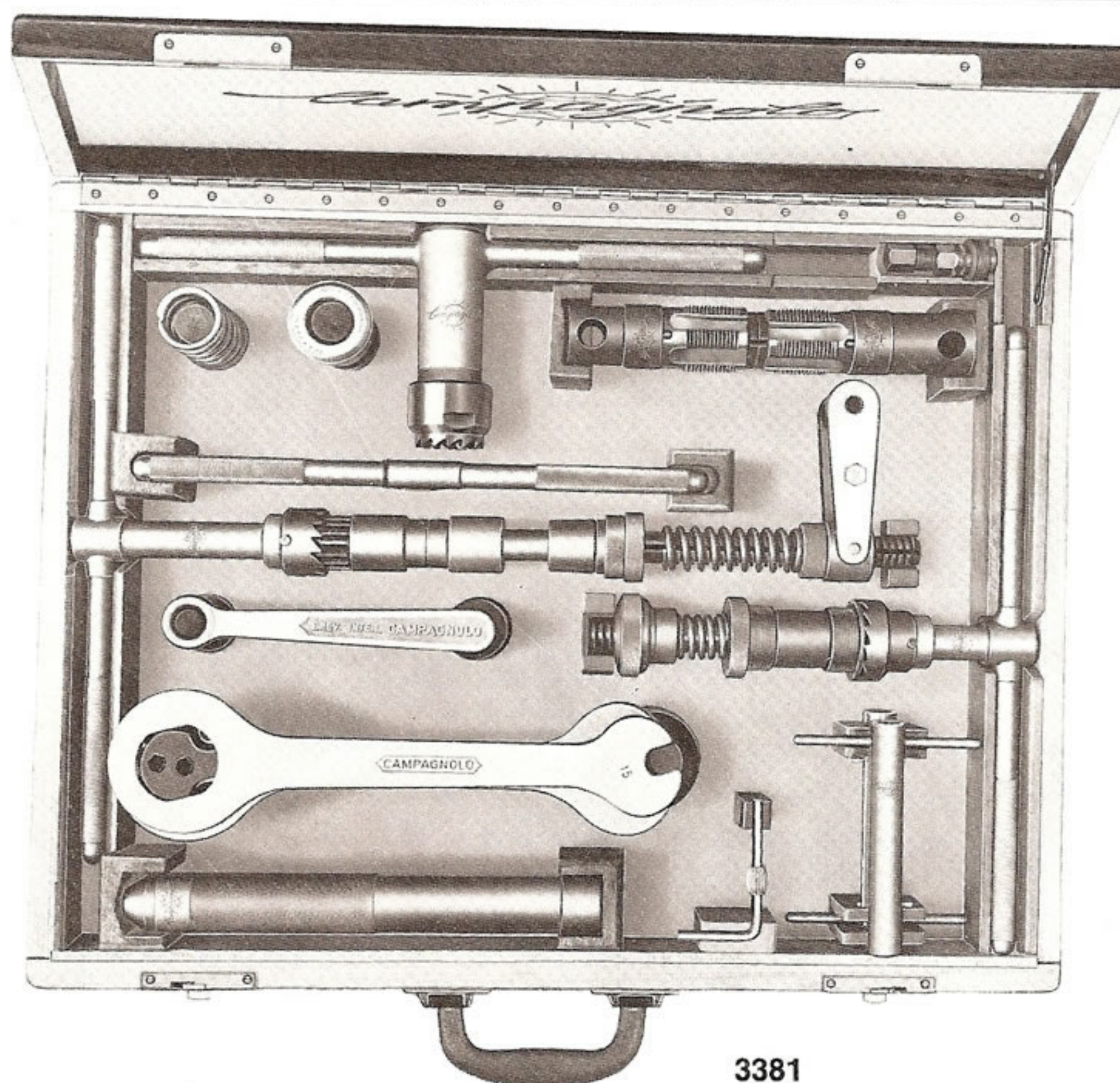
TOOL CASE

REDUCED

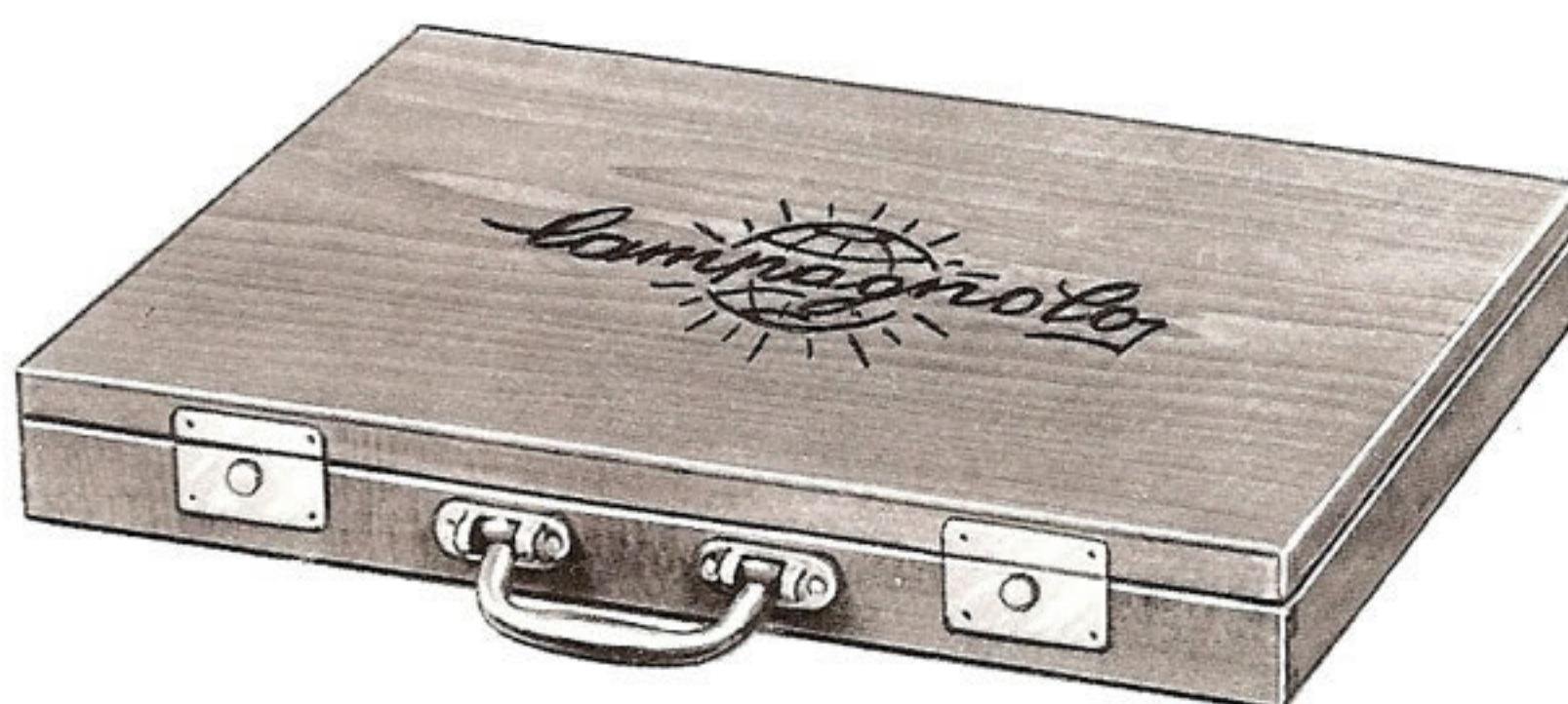
Watching a mechanic specialized in racing bicycles while he assembles on the frame all the components to make of it a winning bicycle, one may realize how many specific tools to overhaul the frame on the coupling points, how many calipers to test the work made and the perfect squaring of all parts, are needed. Campagnolo has manufactured, with the utmost precision, all the set of these tools and calipers to make a perfect bike.

When a mechanic or a fan is in a position to use, as he must, all the kit tools, the bicycle that originates is a «Master» bicycle.

The reduced version si destined only to the fitting of the headset and of the bottom bracket set.

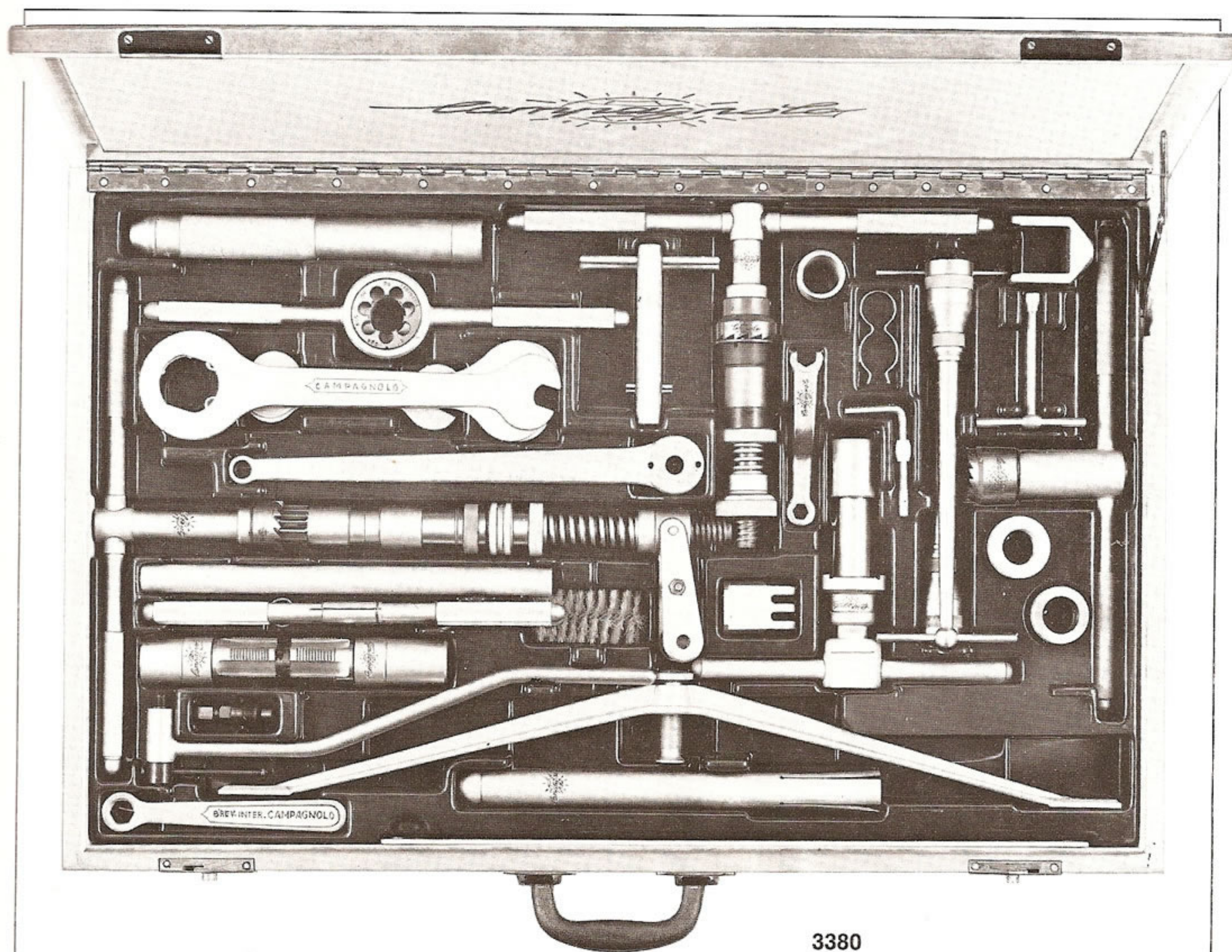


3381



TOOL CASE

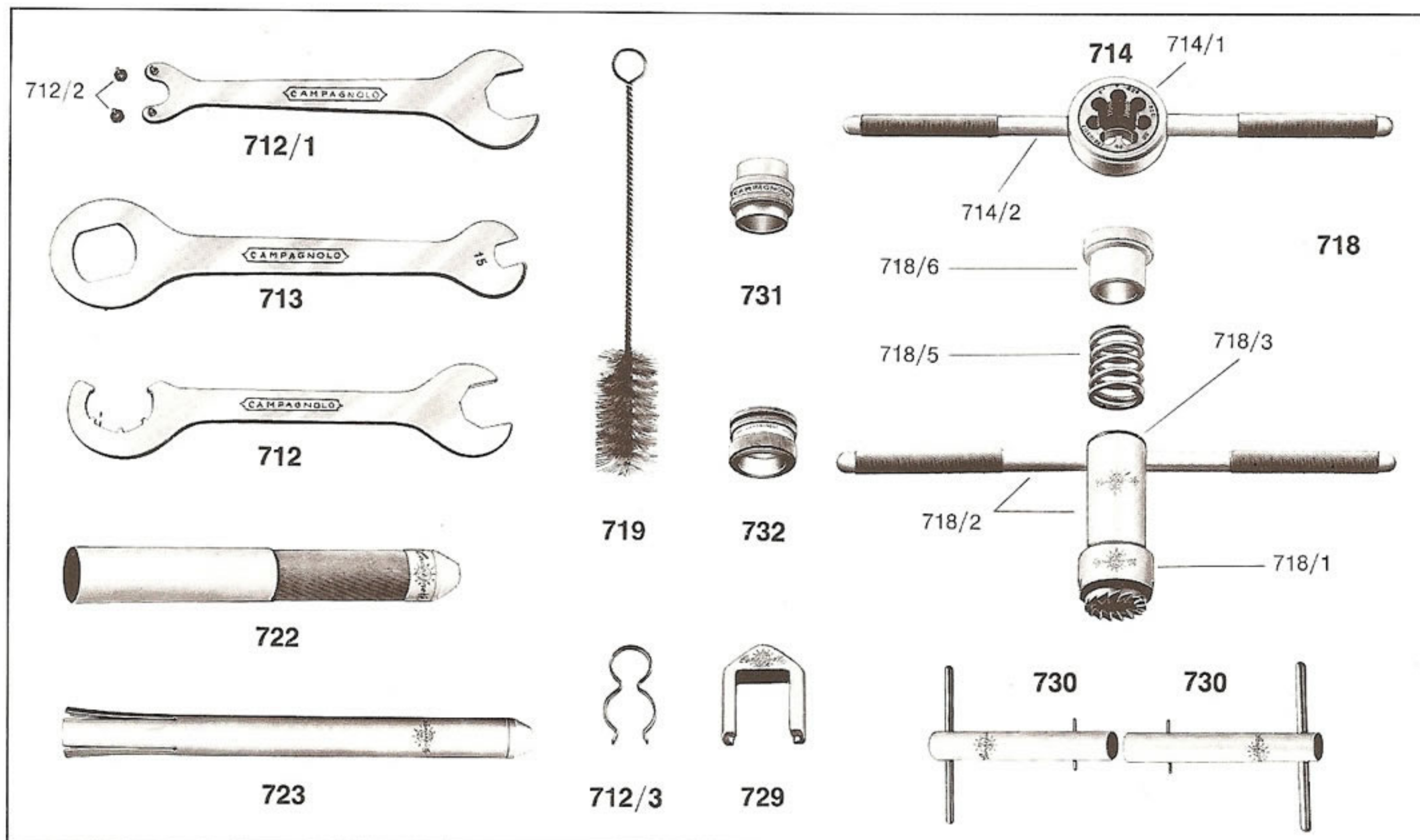
COMPLETE



TOOLS CONTAINED IN KITS

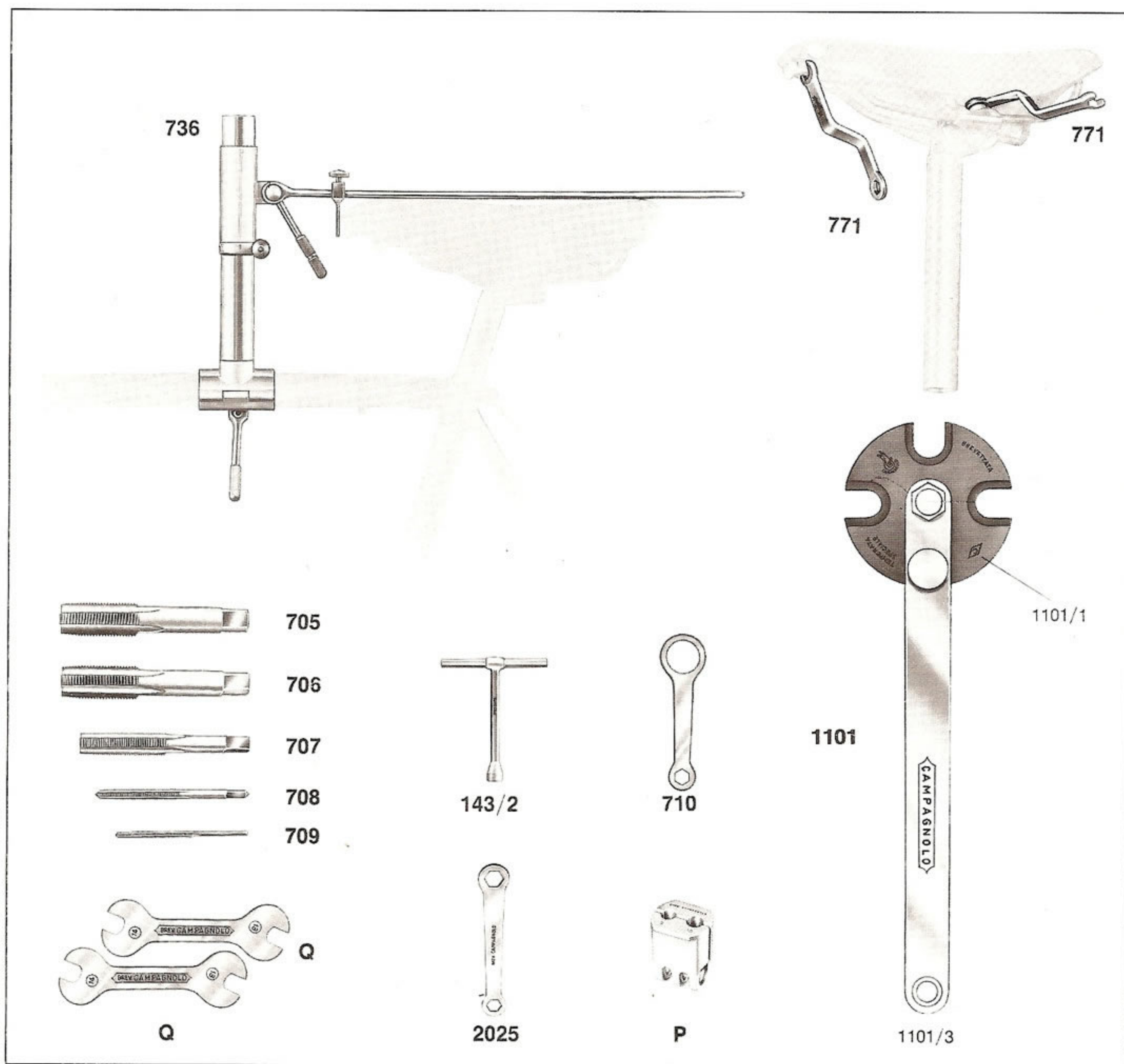
143/2 T wrench 6/8 mm, **704** insert for tool fig. I, **704/1** reducing insert for 13 teeth freewheel tool fig. I (it is supplied only on specific request), **710** pedal wrench, **712*** bottom bracket locking and headset tool, **712/1*** bottom bracket headset and L.H. cup tool, **712/2*** pin for **712/1** tool, **712/3*** spacing spring for headset tool, **713*** bottom bracket R.H. cup and pedal axle tool, **714** fork column die (specify thread), composed by: **714/1** fork column die (specify thread) and **714/2** die holder body, **718** crown race cutter composed by: **718/1*** crown race mill, **718/2*** cutter holder with rotation lever, **718/3*** guide ring, **718/5*** tension spring, **718/6*** threaded locking (specify thread), **719** brush, **721*** bottom bracket double tap (specify thread) composed by: **720*** rotation lever, **721/1*** tap body with stem, **721/2*** tap body with stem guide hole, **721/3*** tap locking nut, **721/5** spare tap (specify thread), **722*** headset cup punch, **723** headset cup remover, **725*** bottom bracket face cutter, composed by: **724/1*** inner guide threaded sleeve for **725** (specify thread), **724/2*** outer guide threaded sleeve for **725** (specify thread), **725/1*** mill, **725/2*** cutter holder stem with rotation lever, **725/3*** tension spring, **725/4*** washer, **725/7*** threaded locking, **725/8*** toothed washer, **729*** fork crown race remover, **730*** key for sleeve **724/1** and **724/2**, **731** headset jig, **732** fork crown jig, **733** head race mill composed by: **725/8*** toothed washer and **728** sleeve for fitting headset cups with **733** tool, **0260/02*** double head race mill, **733/3*** cutter holder with rotation lever, **733/5*** washer, **733/6*** tension spring, **733/8*** locking stirrup, **733/14*** centraliser sleeve, **767*** «L» shaped chainwheel allen key 5 mm, **768** chainwheel screw peg spanner, **769*** cotterless bottom bracket axle spanner, **770*** crank extractor, **771** double saddle spanner, **793/A** R.H. bottom bracket tool composed by: **793/1** tool holder body with rotation lever, **793/2** 36 mm tool, **793/3** cutter sleeve, **793/4** tube for tool rotation, **2025** special brake spanner, **G** straight edge for the alignment of the rudder pedals, **H** back stay tool for the perfect alignment of fork ends, composed by: **H/1** stem with lever, **H/4** spacer for 120 mm width, **H/4A** additional spacer for 125 mm width (to be coupled with **H/4** spacer), **H/5** cup, **I** tool for 14 teeth and other freewheels, composed by: **I/2** ring nut lever holder, **N** wheel dish tool for checking the centering of the rim to the locknuts of hubs, **P** axle holding tool, **Q** steel tool for cones and locknuts (size 13-14 mm). On request size 15-16 mm is supplied, **R** back stay tool for checking the R.H. fork end eyelet, composed by: **R/1** screw, **R/4** rotating rod, **R/6** spindle with lever.

All tools marked with an asterisk (*) are those contained in the 3381 reduced tool kit.

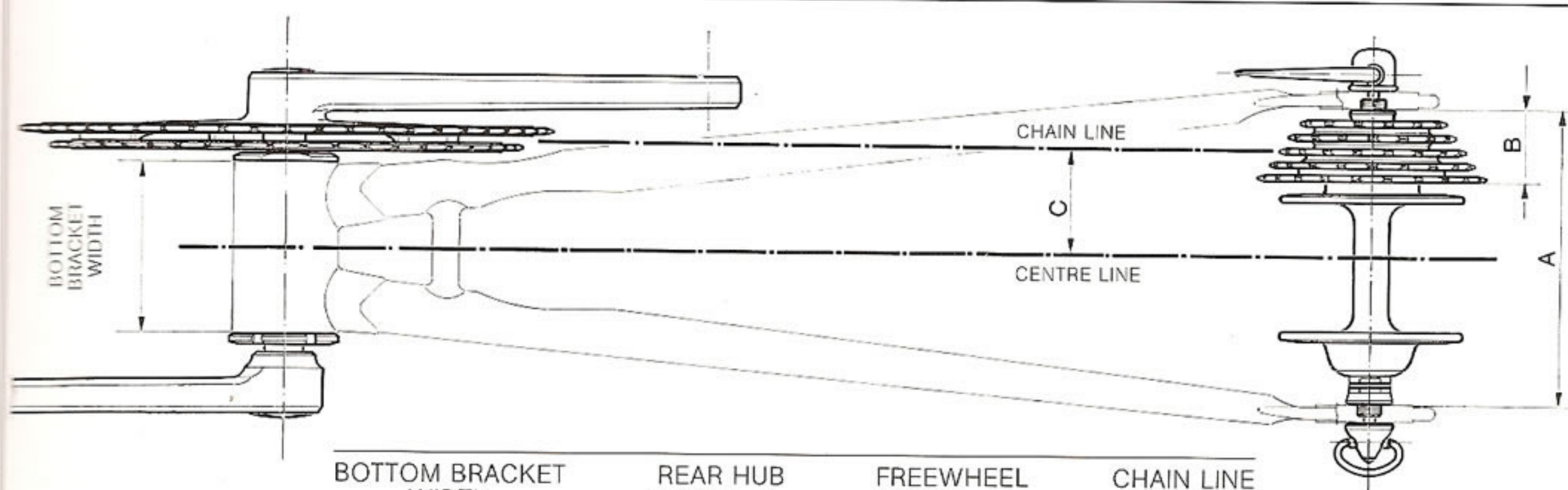


CAMPAGNOLO SPECIAL TOOLS

P axle holding tool, **Q** steel tool for cones and locknuts (size 13-14 mm). On request size 15-16 mm is supplied, **143/2** «T» wrench (size 6-8 mm), **705** R.H. tap ϕ 9/16"x20 F., **706** L.H. tap ϕ 9/16"x20 F., **707** tap ϕ 10x26 F., **708** tap M 5x0,8, **709** tap M 3x0,5, **710** pedal wrench, **736** saddle alignment tool to keep in position the saddle when replacing the seat pin and the pin, **771** double saddle spanner, **1101** multiple pedal spanner composed by: **1101/1** multiple head (15-16-17 mm), **1101/3** multiple spanner lever, **2025** special brake spanner.

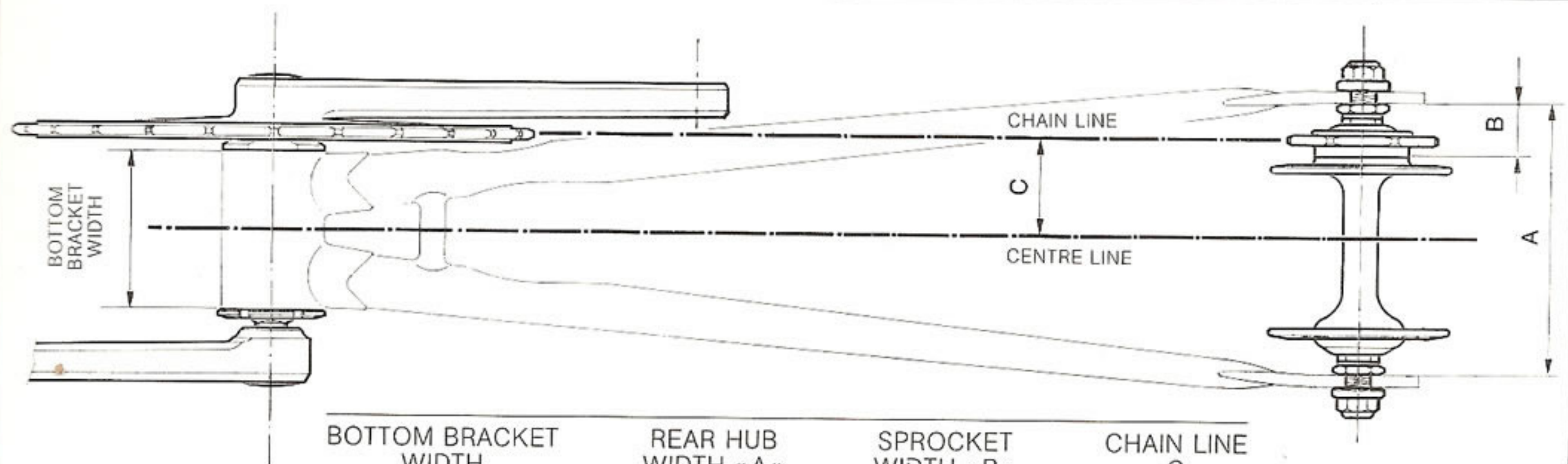


ROAD CHAIN LINE



BOTTOM BRACKET WIDTH	REAR HUB WIDTH «A»	FREEWHEEL WIDTH «B»	CHAIN LINE «C»
68	120	29	43,5
70	120	29	43,5
74	120	29	43,5

TRACK CHAIN LINE



BOTTOM BRACKET WIDTH	REAR HUB WIDTH «A»	SPROCKET WIDTH «B»	CHAIN LINE «C»
65	110	21.5	40
68	110	21.5	40
68	120	24	42,5
70	120	24	42,5

GEAR TABLE

Number of teeth on sprocket wheel	Number of teeth on rear chainring																				
	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
35	6,23	5,75	5,34	4,98	4,67	4,39	4,15	3,83	3,73	3,56	3,39	3,25	3,11	2,99	2,87	2,76	2,67	2,57	2,49	2,41	2,33
36	6,40	5,91	5,49	5,12	4,80	4,52	4,27	4,04	3,84	3,66	3,49	3,34	3,20	3,07	2,95	2,84	2,74	2,65	2,56	2,48	2,40
37	6,58	6,07	5,64	5,26	4,93	4,64	4,39	4,15	3,95	3,76	3,59	3,43	3,29	3,16	3,03	2,92	2,82	2,72	2,63	2,54	2,46
38	6,76	6,24	5,79	5,41	5,07	4,77	4,50	4,27	4,05	3,84	3,68	3,52	3,38	3,24	3,12	3,00	2,89	2,79	2,70	2,61	2,53
39	6,94	6,40	5,94	5,55	5,20	4,90	4,62	4,38	4,16	3,96	3,78	3,62	3,47	3,33	3,20	3,08	2,97	2,81	2,77	2,68	2,60
40	7,12	6,57	6,10	5,69	5,34	5,02	4,74	4,50	4,27	4,07	3,88	3,71	3,56	3,42	3,28	3,16	3,05	2,94	2,83	2,75	2,66
41	7,30	6,73	6,25	5,84	5,47	5,15	4,86	4,60	4,37	4,17	3,98	3,80	3,64	3,50	3,36	3,24	3,11	3,01	2,92	2,81	2,75
42	7,47	6,90	6,40	5,98	5,60	5,27	4,98	4,72	4,48	4,27	4,07	3,90	3,73	3,58	3,45	3,33	3,20	3,09	2,98	2,88	2,79
43	7,65	7,06	6,56	6,12	5,74	5,40	5,10	4,83	4,59	4,37	4,17	3,99	3,82	3,67	3,53	3,39	3,28	3,16	3,05	2,96	2,86
44	7,83	7,23	6,71	6,26	5,87	5,52	5,22	4,94	4,70	4,47	4,27	4,08	3,91	3,76	3,61	3,48	3,35	3,24	3,13	3,03	2,92
45	8,01	7,39	6,86	6,40	6,00	5,65	5,34	5,05	4,80	4,57	4,37	4,18	4,00	3,84	3,69	3,56	3,43	3,30	3,20	3,09	3,01
46	8,18	7,55	7,01	6,55	6,14	5,78	5,45	5,17	4,91	4,67	4,46	4,27	4,09	3,93	3,78	3,62	3,50	3,39	3,26	3,16	3,07
47	8,36	7,72	7,17	6,69	6,27	5,90	5,57	5,28	5,02	4,78	4,56	4,36	4,18	4,01	3,86	3,71	3,58	3,45	3,35	3,24	3,13
48	8,54	7,88	7,32	6,83	6,40	6,03	5,69	5,39	5,12	4,88	4,66	4,45	4,27	4,10	3,94	3,80	3,65	3,54	3,41	3,28	3,20
49	8,72	8,05	7,47	6,97	6,54	6,15	5,81	5,50	5,23	4,98	4,75	4,55	4,36	4,18	4,02	3,86	3,73	3,60	3,48	3,37	3,26
50	8,90	8,21	7,63	7,12	6,67	6,28	5,93	5,62	5,34	5,08	4,85	4,64	4,45	4,27	4,10	3,94	3,80	3,67	3,56	3,43	3,33
51	9,07	8,38	7,78	7,26	6,81	6,40	6,05	5,73	5,44	5,18	4,95	4,73	4,54	4,35	4,19	4,03	3,88	3,75	3,62	3,52	3,39
52	9,25	8,54	7,93	7,40	6,94	6,53	6,17	5,84	5,55	5,29	5,04	4,83	4,62	4,44	4,27	4,12	3,92	3,82	3,69	3,58	3,45
53	9,43	8,70	8,08	7,54	7,07	6,66	6,29	5,95	5,66	5,39	5,14	4,92	4,71	4,52	4,35	4,18	4,03	3,90	3,77	3,65	3,51
54	9,61	8,87	8,23	7,69	7,20	6,78	6,40	6,07	5,76	5,49	5,24	5,01	4,80	4,61	4,43	4,27	4,12	3,97	3,84	3,71	3,60
55	9,78	9,03	8,39	7,83	7,34	6,91	6,52	6,10	5,87	5,59	5,34	5,10	4,89	4,69	4,51	4,34	4,19	4,05	3,91	3,79	3,66
56	9,97	9,20	8,54	7,97	7,47	7,03	6,64	6,29	5,98	5,69	5,43	5,20	4,98	4,78	4,60	4,41	4,27	4,12	3,99	3,86	3,73
57	10,14	9,35	8,68	8,11	7,62	7,15	6,76	6,40	6,08	5,78	5,53	5,29	5,06	4,86	4,67	4,50	4,33	4,20	4,05	3,92	3,80
58	10,31	9,52	8,83	8,26	7,72	7,28	6,87	6,51	6,19	5,89	5,63	5,38	5,16	4,95	4,76	4,59	4,41	4,27	4,12	3,99	3,86
59	10,50	9,69	8,98	8,39	7,87	7,40	7,00	6,64	6,29	5,99	5,72	5,48	5,25	5,03	4,84	4,67	4,50	4,33	4,20	4,05	3,92
60	10,67	9,86	9,15	8,54	8,01	7,53	7,11	6,74	6,40	6,10	5,82	5,57	5,33	5,12	4,93	4,73	4,56	4,41	4,27	4,12	3,99

BREVETTI INTERNAZIONALI



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