# SHIMANO BICYCLE PARTS

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SPECIFICATIONS ARE SUBJECT TO
CHANGE WITHOUT NOTICE.

Shimano, with a history of 50 years as a respected manufacturer of bicycle parts, ranks worldwide as one of the largest in this field. This fact is, of course, an important factor . . . both to Shimano and to our customers. Every facet of our products reflects the quality and service that has helped Shimano to consistently grow. But size isn't everything, and of course doesn't necessarily assure the quality and service which our customers have come to expect from Shimano.
We think that our technology has played a very important role in our progress. Last, and certainly not least, is the painstaking care we put into the development and production of our products. It's really almost a love affair between us and our product. Because, you see, Shimano has a long-standing passion for bicycles that can really perform. We get just as excited about each new breakthrough . . . even the seemingly insignificant ones . . . as do our riding friends throughout the world.
The products introduced in this catalogue are our finest . . . and therefore the best that money can buy . . . each designed and produced with tender loving care.
They're made for bicycle lovers by bicycle lovers.
By SHIMANO

# SHIMANO ROAD ENSEMBLE


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- Ⓓ "SHIMANO-SF" Fork Ends .....P.30
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Ⓐ



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Q




H "DURA-ACE" Front Derailleur .....P.12
I "DURA-ACE" Caliper Brakes.....P.26
J "DURA-ACE" Brake Levers .....P.27
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# SHIMANO TRACK ENSEMBLE




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- Ⓖ Tool/Cotterless Crank Extractor .....P.34
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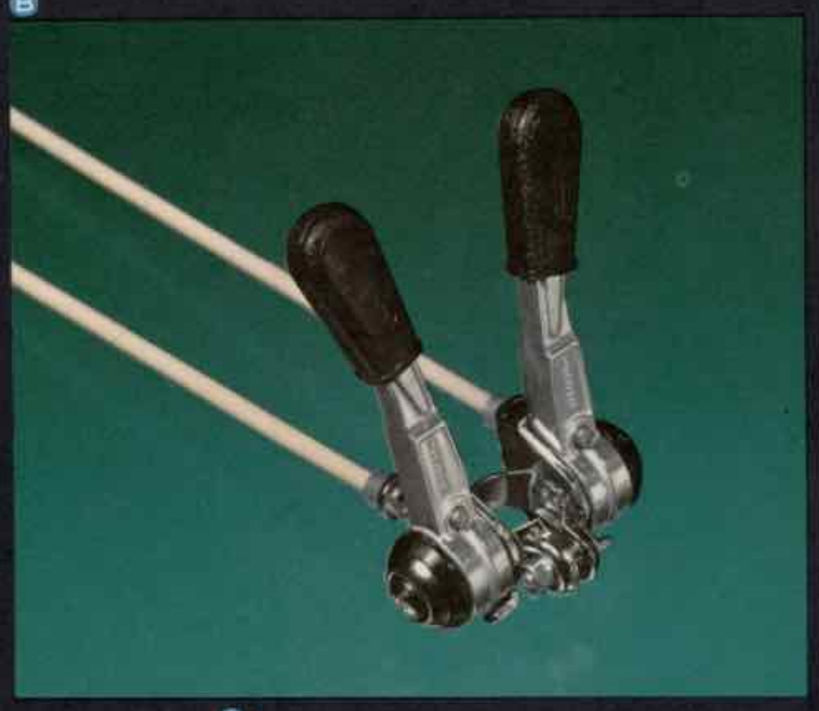
# SHIMANO TOURING ENSEMBLE


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- Ⓑ "SUPER SHIFTER" Shifting Lever ...P.21
- Ⓒ Spoke Protectors .....P.31
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Ⓘ

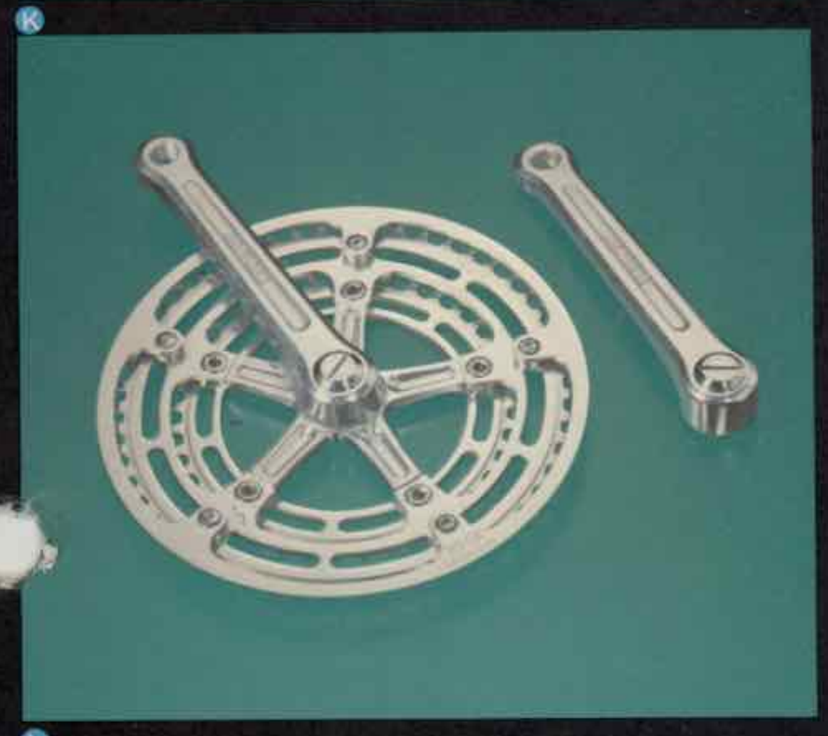


























- J "TITLIST" Front Derailleur .....P.12
- K "TITLIST" Front Chainwheel .....P.15
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- M "TOURNEY" Caliper Brakes .....P.28
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- S Tool/Hexagon Wrench Keys .....P.34
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11.35 33.

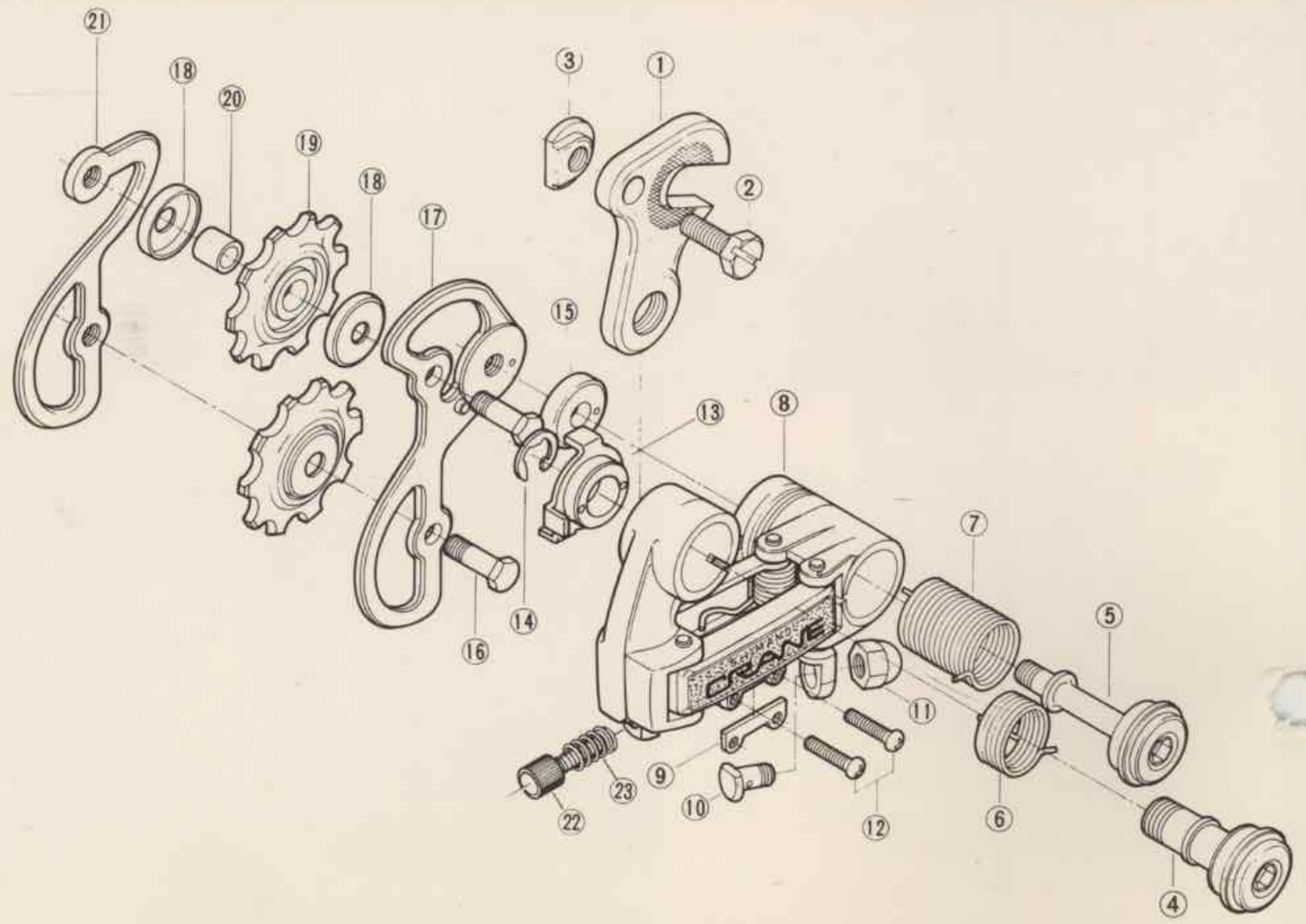
REAR DERAILLEUR
**Model D-501**
CRANE

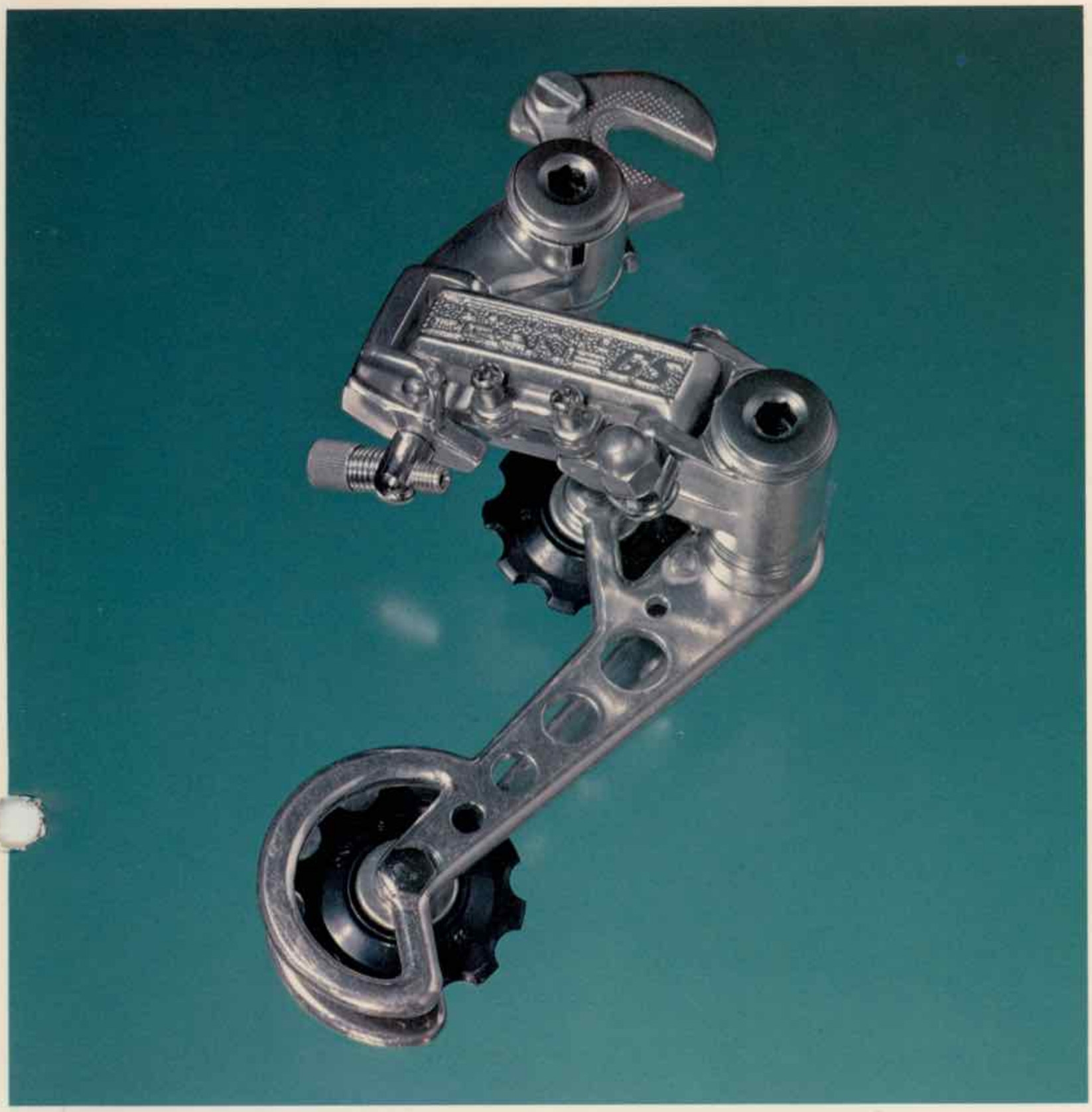
**SPECIFICATIONS**
Capacity: 28 teeth
Weight: 7.9 oz.(225 g)
Material: Light Alloy
Type: Servo Panta Mechanism
With Adapter: *Model D-500*

**PARTS LIST**

| | |
|---|---|
| Adapter ① | 527 2400 |
| Adaptor Screw (M5 x 10) ② | 000 1104-1 |
| Adapter Nut ③ | 511 3500-1 |
| Adapter Mounting Bolt ④ | 527 0200 |
| Plate Mounting Bolt ⑤ | 527 1300 |
| B-Tension Spring ⑥ | 528 1100 |
| P-Tension Spring ⑦ | 527 1400 |
| Mechanism Assembly ⑧ | 527 9009 |
| Adjusting Plate ⑨ | 527 0700 |
| Cable Fixing Bolt ⑩ | 521 1500-1 |
| Cable Fixing Nut ⑪ | 527 0900 |
| Adjusting Screw ⑫ | 527 0800 |
| Adapter Bushing ⑬ | 528 9002 |
| Stop Ring ⑭ | 528 1200 |
| Plate Bushing ⑮ | 527 1500 |
| Pulley Bolt ⑯ | 511 2600-1 |
| Inner Cage Plate ⑰ | 527 1600 |
| Pulley Cap ⑱ | 511 2700-1 |
| Pulley ⑲ | 527 1800 |
| Pulley Bushing ⑳ | 511 2900 |
| Outer Cage Plate ㉑ | 527 1900 |
| Cable Adjusting Barrel ㉒ | 524 0400-1 |
| Cable Adjusting Spring ㉓ | 525 1400 |







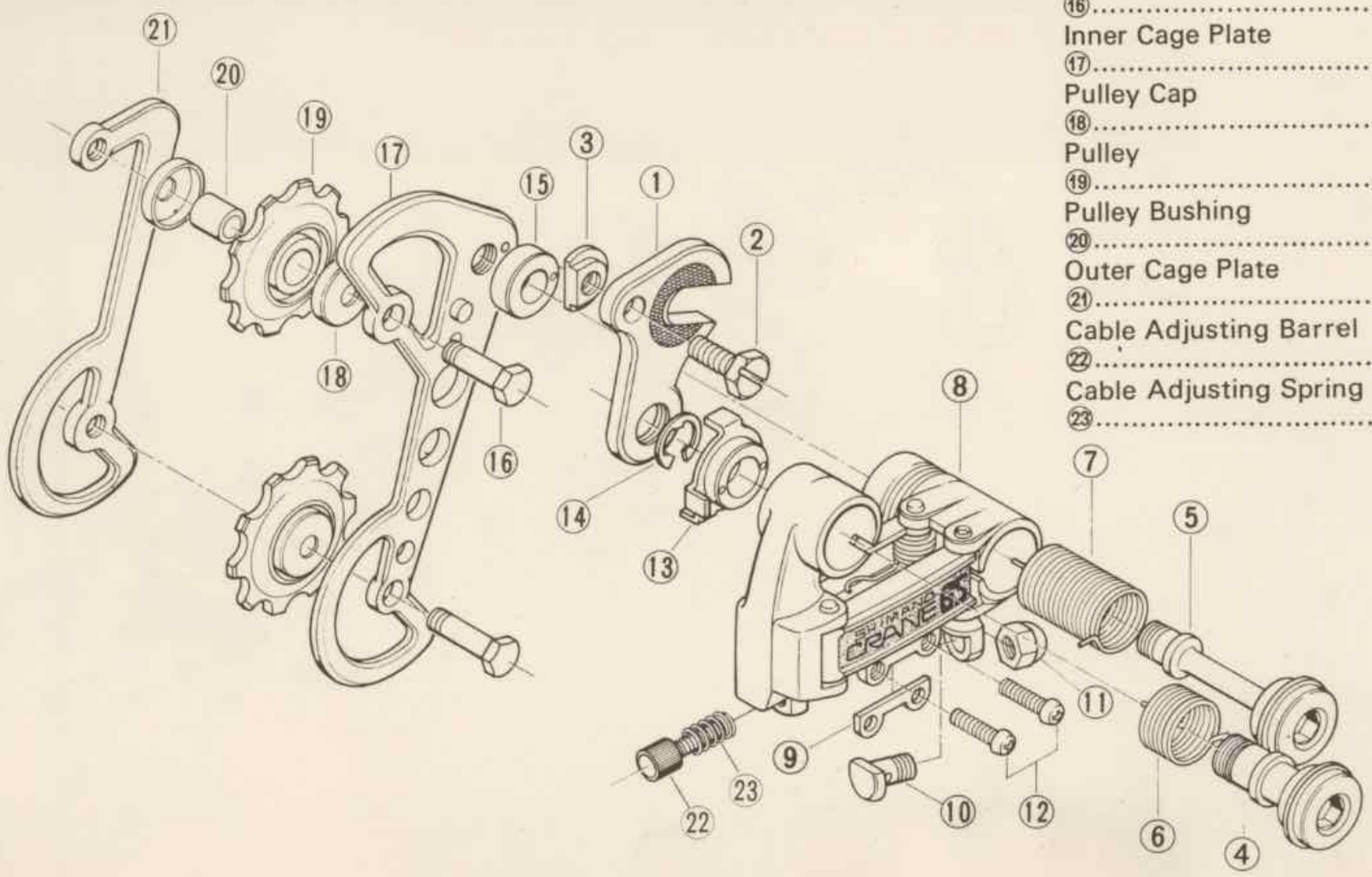
REAR DERAILLEUR
**Model D-510**

CRANE GS

**SPECIFICATIONS**
Capacity: 34 teeth
Weight: 9.5 oz.(270 g)
Material: Light Alloy
Type: Servo Panta Mechanism (Long Cage Plate)
Without Adapter: *Model D-511*

**PARTS LIST**

| | |
|---|---|
| Adapter ① | 527 2400 |
| Adapter Screw (M5 x 10) ② | 000 1104-1 |
| Adapter Nut ③ | 511 3500-1 |
| Adapter Mounting Bolt ④ | 527 0200 |
| Plate Mounting Bolt ⑤ | 527 1300 |
| B-Tension Spring ⑥ | 528 1100 |
| P-Tension Spring ⑦ | 528 0700 |
| Mechanism Assembly ⑧ | 527 9003 |
| Adjusting Plate ⑨ | 527 0700 |
| Cable Fixing Bolt ⑩ | 521 1500-1 |
| Cable Fixing Nut ⑪ | 527 0900 |
| Adjusting Screw ⑫ | 527 0800 |
| Adapter Bushing Assembly ⑬ | 528 9002 |
| Stop Ring ⑭ | 528 1200 |
| Plate Bushing ⑮ | 527 1500 |
| Pulley Bolt ⑯ | 511 2600-1 |
| Inner Cage Plate ⑰ | 528 0801 |
| Pulley Cap ⑱ | 511 2700-1 |
| Pulley ⑲ | 527 1800 |
| Pulley Bushing ⑳ | 511 2900 |
| Outer Cage Plate ㉑ | 522 1402 |
| Cable Adjusting Barrel ㉒ | 524 0400-1 |
| Cable Adjusting Spring ㉓ | 525 1400 |



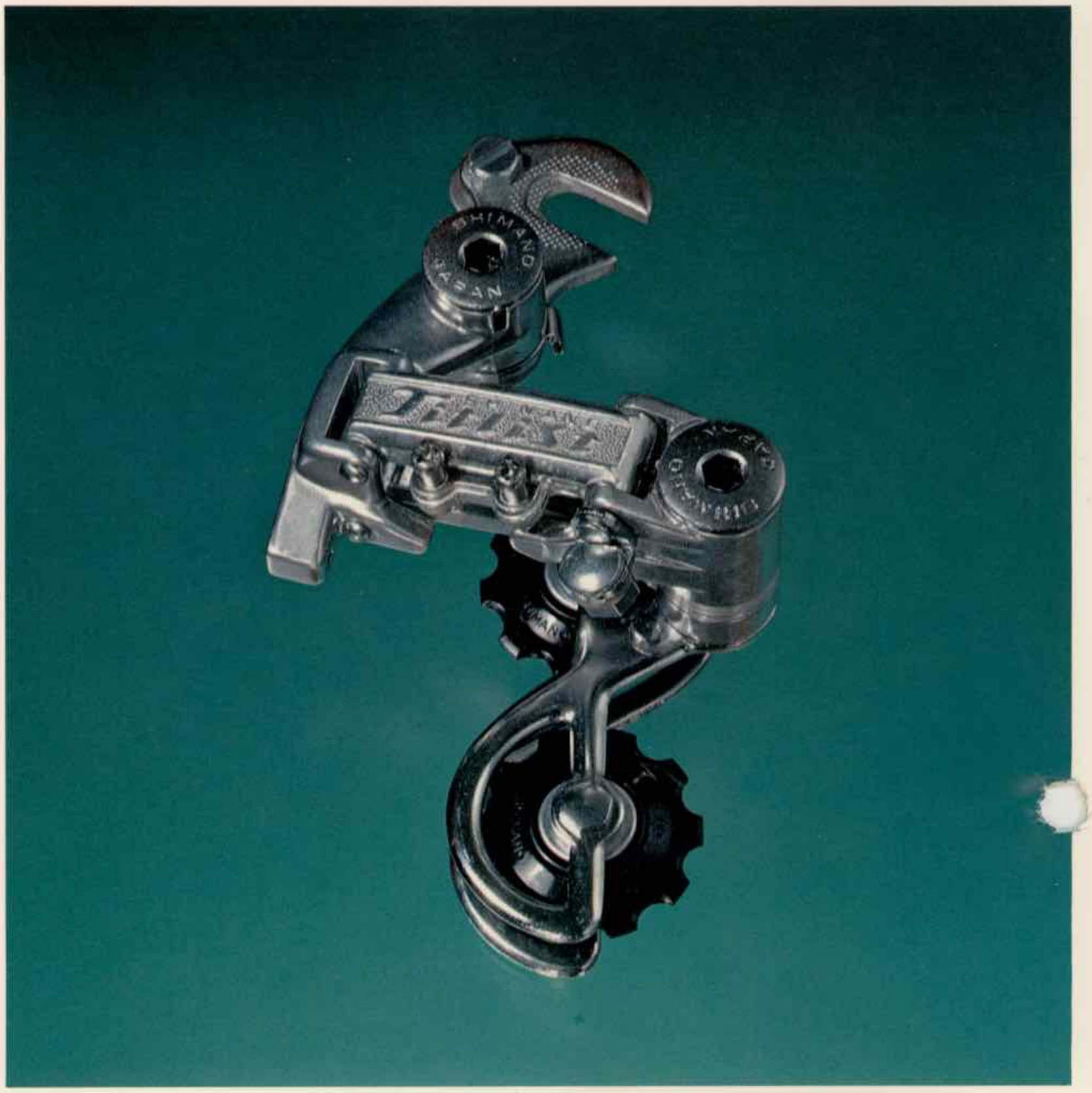
REAR DERAILLEUR
**Model D-600**

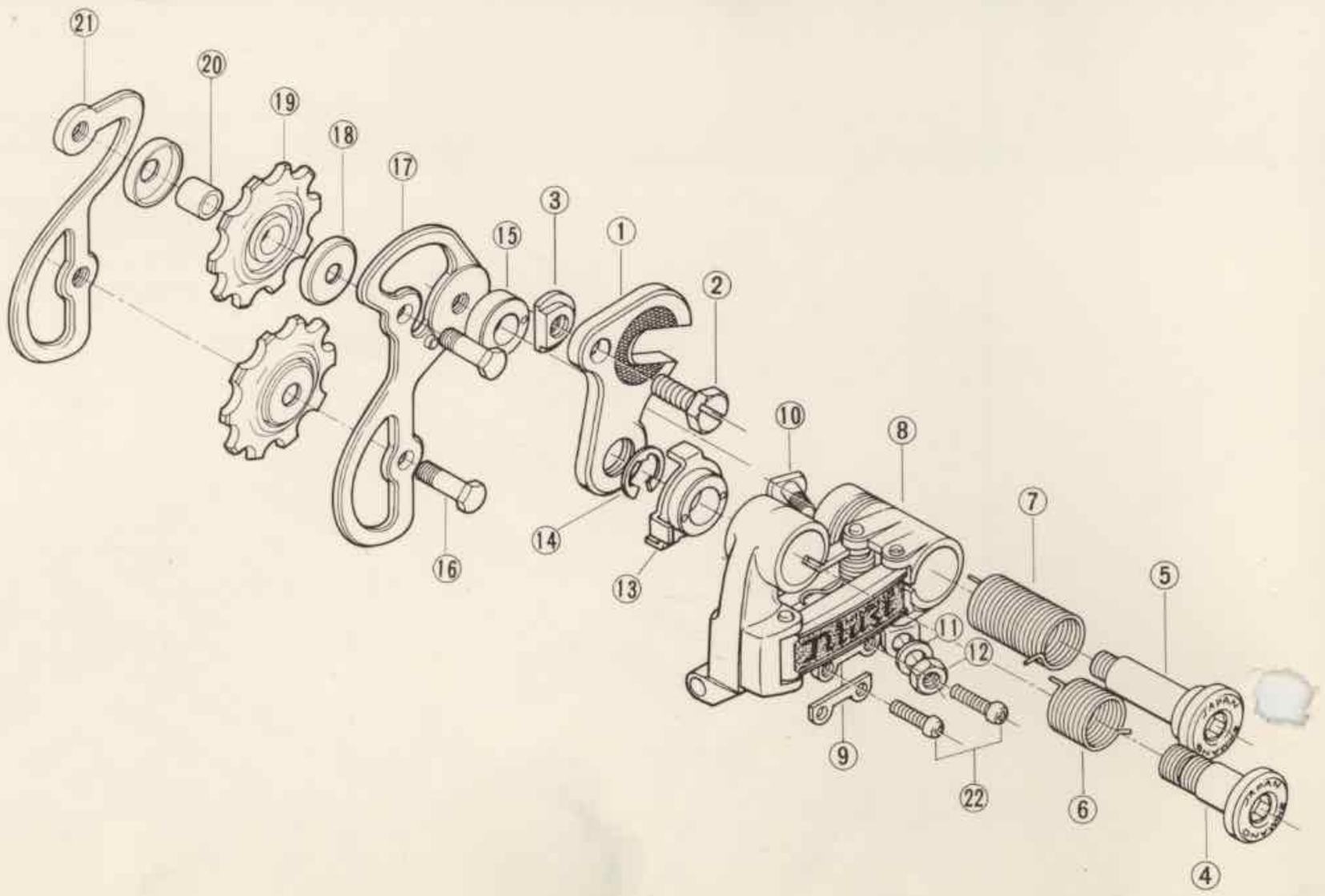
Titlist

**SPECIFICATIONS**
Capacity: 28 teeth
Weight: 9.9 oz.(280 g)
Material: Light Alloy (Body), Steel (Cage Plate)
Type: Servo Panta Mechanism
Without Adapter: *Model D-601*

**PARTS LIST**

| | |
|---|---|
| Adapter ① | 527 2401 |
| Adapter Screw (M5 x 10) ② | 000 1104-1 |
| Adapter Nut ③ | 511 3500-1 |
| Adapter Mounting Bolt ④ | 528 0200 |
| Plate Mounting Bolt ⑤ | 528 0600 |
| B-Tension Spring ⑥ | 528 1100 |
| P-Tension Spring ⑦ | 527 1400 |
| Mechanism Assembly ⑧ | 528 9003 |
| Adjusting Plate ⑨ | 527 0700 |
| Cable Fixing Bolt ⑩ | 521 1500 |
| Cable Fixing Washer ⑪ | 511 1600 |
| Cable Fixing Nut ⑫ | 525 1800 |
| Adapter Bushing Assembly ⑬ | 528 9002 |
| Stop Ring ⑭ | 528 1200 |
| Plate Bushing ⑮ | 527 1500 |
| Pulley Bolt ⑯ | 511 2600-1 |
| Inner Cage Plate ⑰ | 527 1601 |
| Pulley Cap ⑱ | 511 2700-1 |
| Pulley ⑲ | 521 3100 |
| Pulley Bushing ⑳ | 511 2900 |
| Outer Cage Plate ㉑ | 527 1901 |
| Adjusting Screw ㉒ | 527 0800 |






REAR DERAILLEUR
**Model D-610**

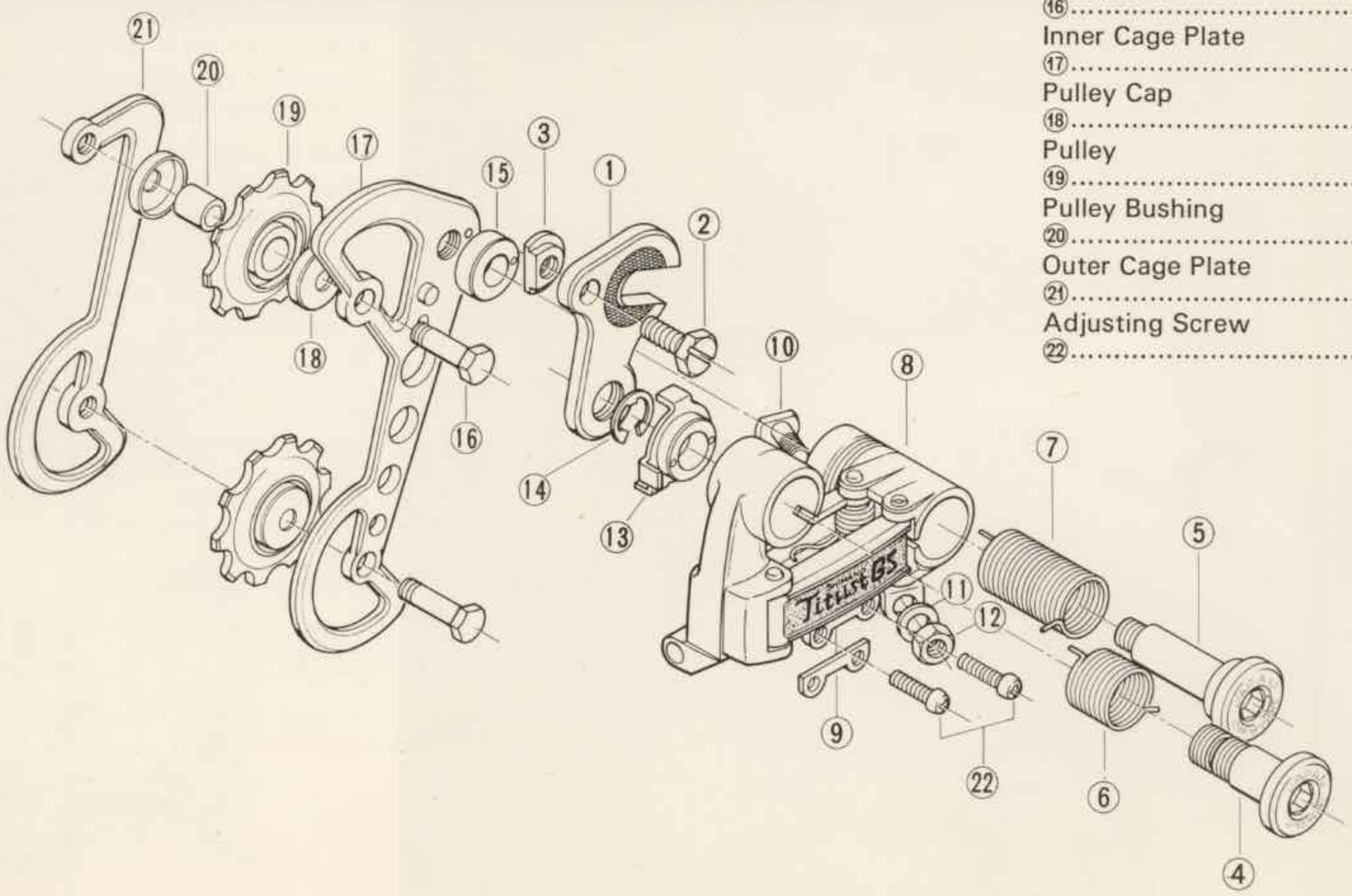
Titlist GS

**SPECIFICATIONS**

Capacity: 34 teeth
Weight: 10.9 oz.(310 g)
Material: Light Alloy (Body), Steel (Cage Plate)
Type: Servo Panta Mechanism
Without Adapter: *Model D-611*

**PARTS LIST**

| | |
|---|---|
| Adapter ① | 527 2401 |
| Adapter Screw (M5 x 10) ② | 000 1104-1 |
| Adapter Nut ③ | 511 3500-1 |
| Adapter Mounting Bolt ④ | 528 0200 |
| Plate Mounting Bolt ⑤ | 528 0600 |
| B-Tension Spring ⑥ | 528 1100 |
| P-Tension Spring ⑦ | 528 0700 |
| Mechanism Assembly ⑧ | 528 9001 |
| Adjusting Plate ⑨ | 527 0700 |
| Cable Fixing Bolt ⑩ | 521 1500 |
| Cable Fixing Washer ⑪ | 511 1600 |
| Cable Fixing Nut ⑫ | 525 1800 |
| Adapter Bushing Assembly ⑬ | 528 9002 |
| Stop Ring ⑭ | 528 1200 |
| Plate Bushing ⑮ | 527 1500 |
| Pulley Bolt ⑯ | 511 2600-1 |
| Inner Cage Plate ⑰ | 525 0520 |
| Pulley Cap ⑱ | 511 2700-1 |
| Pulley ⑲ | 521 3100 |
| Pulley Bushing ⑳ | 511 2900 |
| Outer Cage Plate ㉑ | 522 1410 |
| Adjusting Screw ㉒ | 527 0800 |





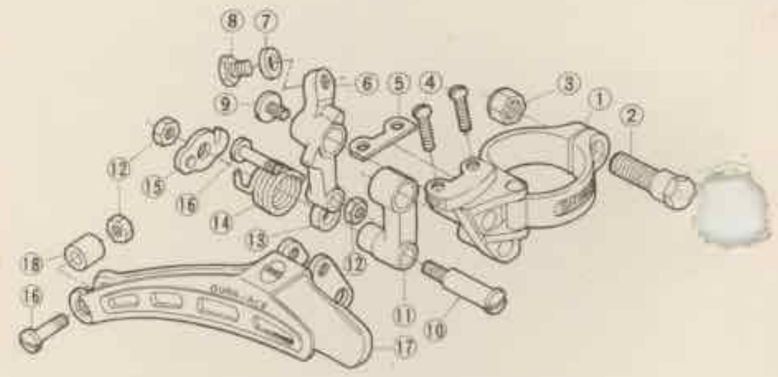
FRONT DERAILLEUR
**Model E-404**

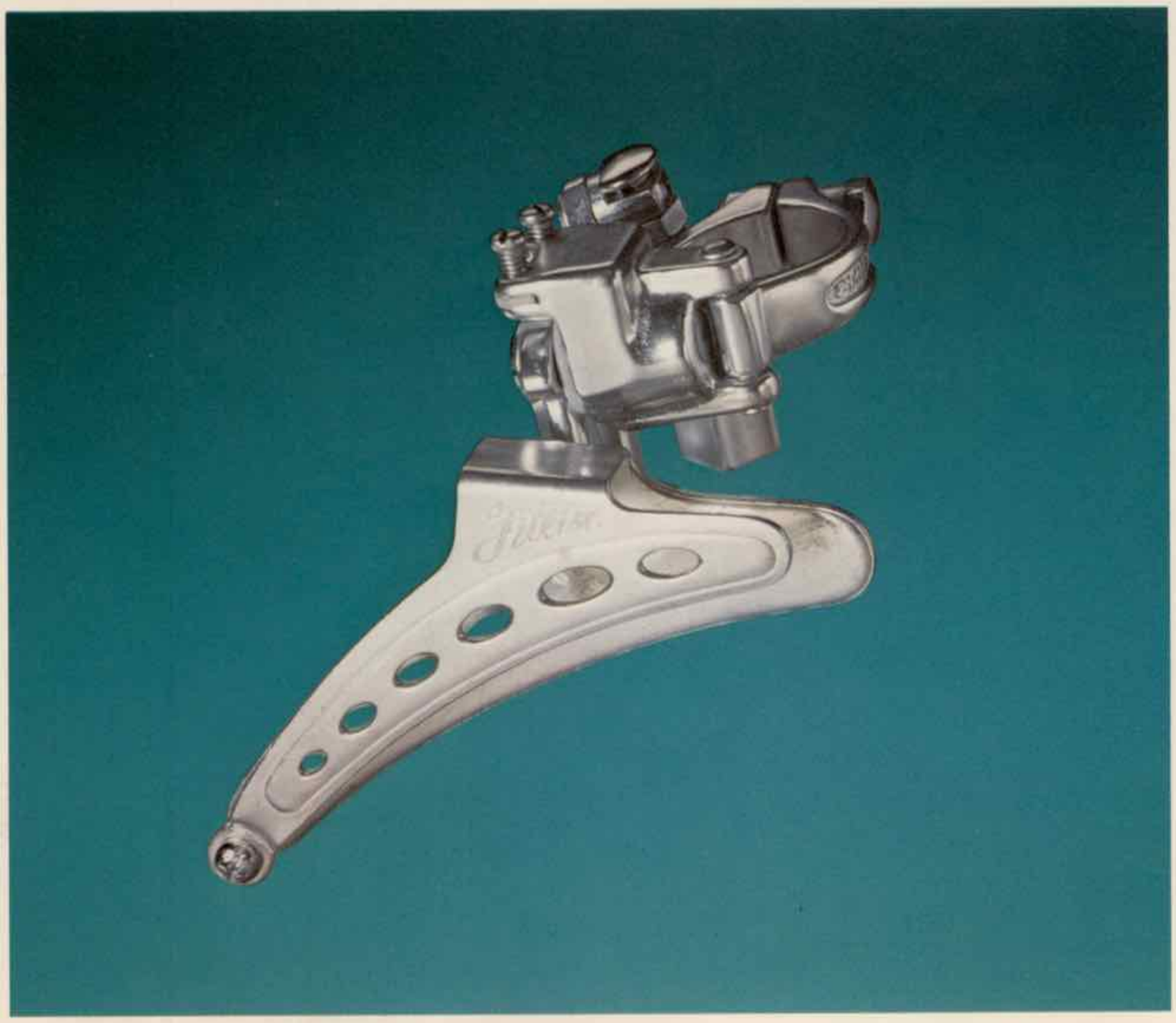
DURA-ACE

**SPECIFICATIONS**
Weight: 3.7 oz.(105 g)
Material: Light Alloy (Body), Steel (Chain Guide)
Type: Lower Inlet Type

**PARTS LIST**

Mechanism Assembly
①.....585 9001
Clamp Bolt
②.....584 0700
Clamp Nut
③.....525 1801
Adjusting Bolt(M4x12)
④.....584 1300
Adjusting Plate
⑤.....584 1400
Outer Link
⑥.....585 1200
Cable Fixing Plate
⑦.....585 1500
Cable Fixing Bolt
⑧.....585 1600
Fixing Bolt
⑨.....585 1000
Link Bolt B
⑩.....585 0500
Inner Link
⑪.....585 0700
Nut
⑫.....585 0800
Spring Collar
⑬.....585 0600
Return Spring
⑭.....585 0300
Spring Plate
⑮.....585 0200
Link Bolt A
⑯.....585 1300
Chain Guide Assembly
⑰.....585 9002
Bushing
⑱.....585 0900





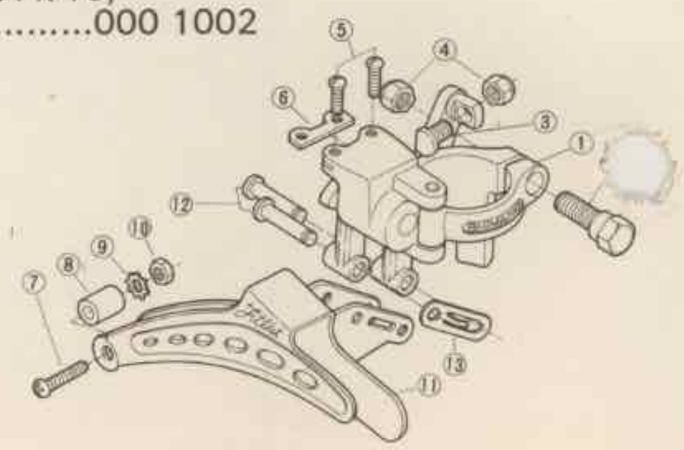
FRONT DERAILLEUR
**Model E-304**

Titlist

**SPECIFICATIONS**
Weight: 4.9 oz.(140 g)
Material: Light Alloy (Body), Steel (Chain Guide)
Type: Lower Inlet Type

**PARTS LIST**

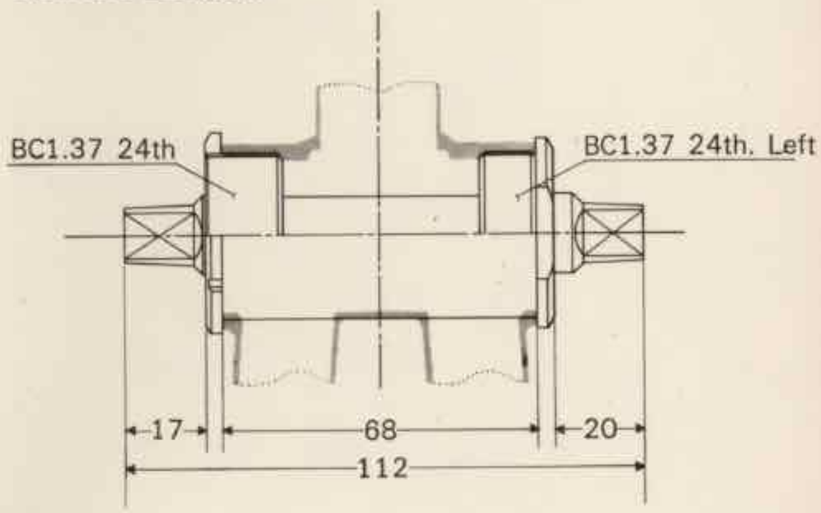
Mechanism Unit Lower Inlet Type (1-1/8″)
①.....584 9002
Clamp Bolt
②.....584 0700
Cable Fixing Bolt
③.....521 1501
Cable Fixing Nut
④.....525 1801
Adjusting Bolt (M4x12)
⑤.....584 1300
Adjusting Plate
⑥.....584 1400
Bolt (M4 x 16)
⑦.....000 1002
Bushing
⑧.....584 1100
Toothed Lock Washer
⑨.....521 1800
Nut (M4)
⑩.....581 2001
Chain Guide
⑪.....584 9003
Pin A
⑫.....584 0800
Clip A
⑬.....584 1900



FRONT CHAINWHEEL

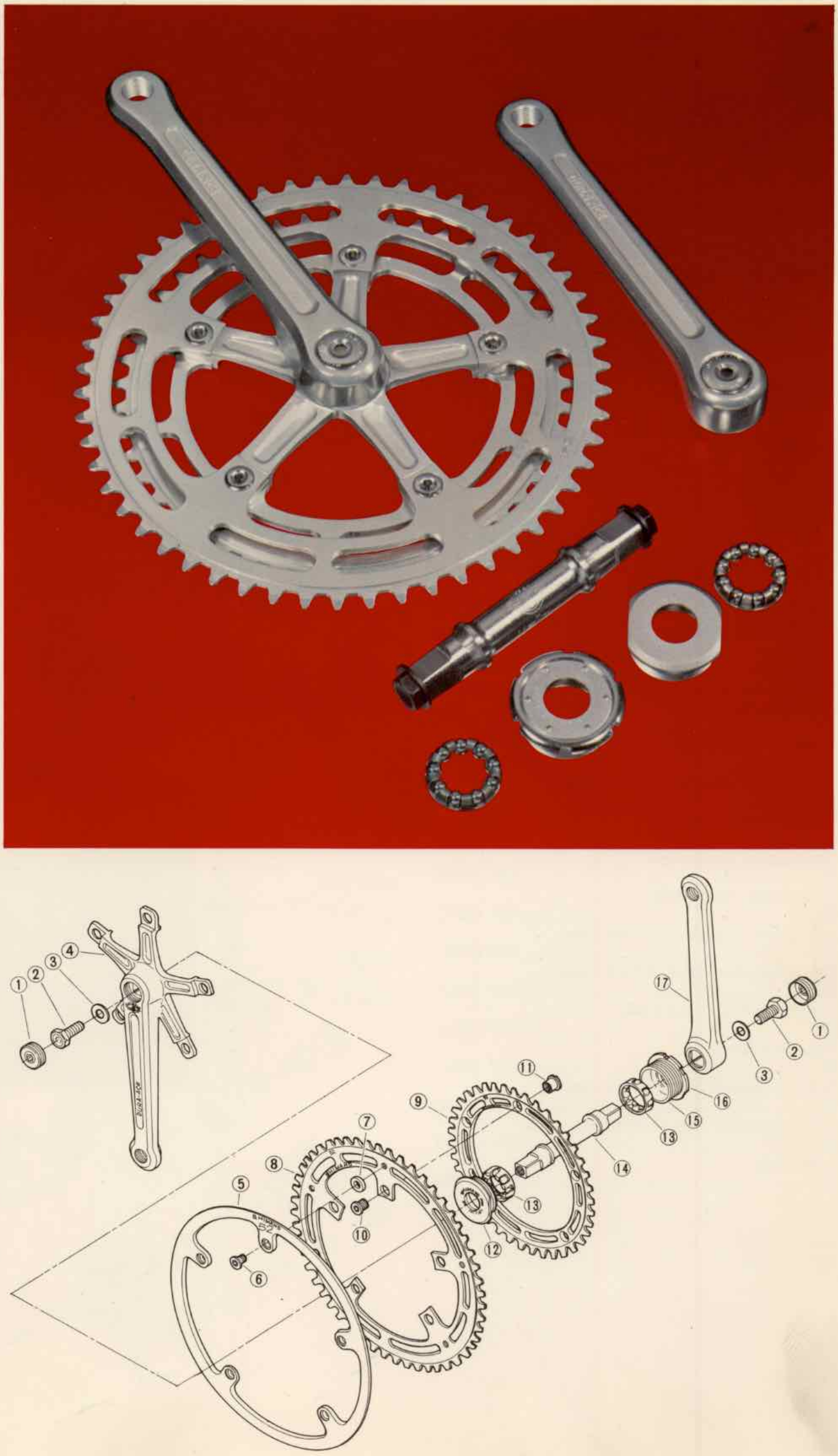
# DURA-ACE

**SPECIFICATIONS**
Material: Light Alloy
Type: Cotterless
Chain Ring: 1/2″ x 3/32″ Chain (2mm)
Teeth: Inner Chain Ring 39～48 teeth
Outer Chain Ring 48～55 teeth
Crank Lengths: 6-1/2″(165mm),
6-3/4″(170mm)
Crank Screw: 9/16″ x 20t.
Cup Screw: 1.37″ x 24t.
Spindle Length:




**PARTS LIST**

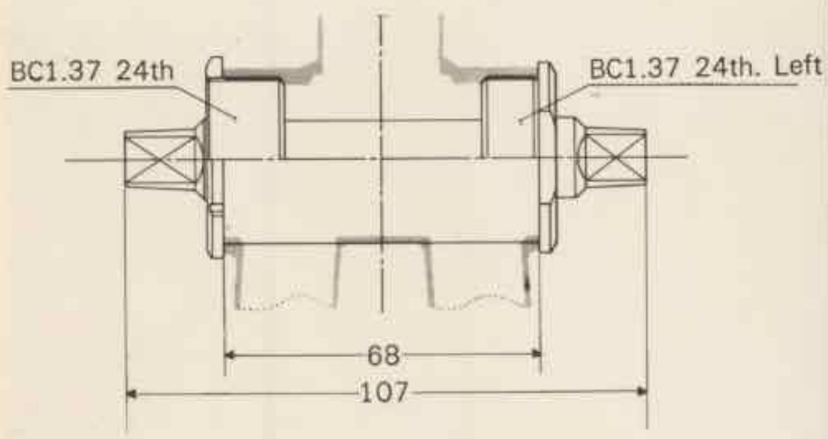
| | |
|---|---|
| Crank Arm Cap ⑧ | 134 0200 |
| Fixing Bolt ② | 134 0300 |
| Fixing Washer ③ | 134 0400 |
| Right Crank Arm (6-1/2″) 165mm W ④ | 132 0101 |
| Right Crank Arm (6-3/4″) 170mm W ④ | 132 0103 |
| Chain Guard ⑤ | 132 0200 |
| Guard Fixing Bolt ⑥ | 132 0300 |
| Guard Fixing Spacer ⑦ | 132 0400 |
| Chainwheel 52 teeth ⑧ | 132 5200 |
| Chainwheel 39 teeth ⑨ | 132 3900 |
| Chainwheel Fixing Bolt ⑩ | 132 0500 |
| Chainwheel Fixing Nut ⑪ | 132 0600 |
| R.H. Fixed Cup (1.37 x 24) ⑫ | 137 0200 |
| Steel Ball Retainer ⑬ | 137 9001 |
| Bottom Bracket Spindle 112 mm W ⑭ | 137 0100 |
| L.H. Adjustable Cup (1.37 x 24) ⑮ | 137 0400 |
| Lock Ring ⑯ | 137 0500 |
| Left Crank Arm (6-1/2″) 165 mm ⑰ | 134 0101 |
| Left Crank Arm (6-3/4″) 170 mm ⑰ | 134 0103 |



FRONT CHAINWHEEL

# DURA-ACE

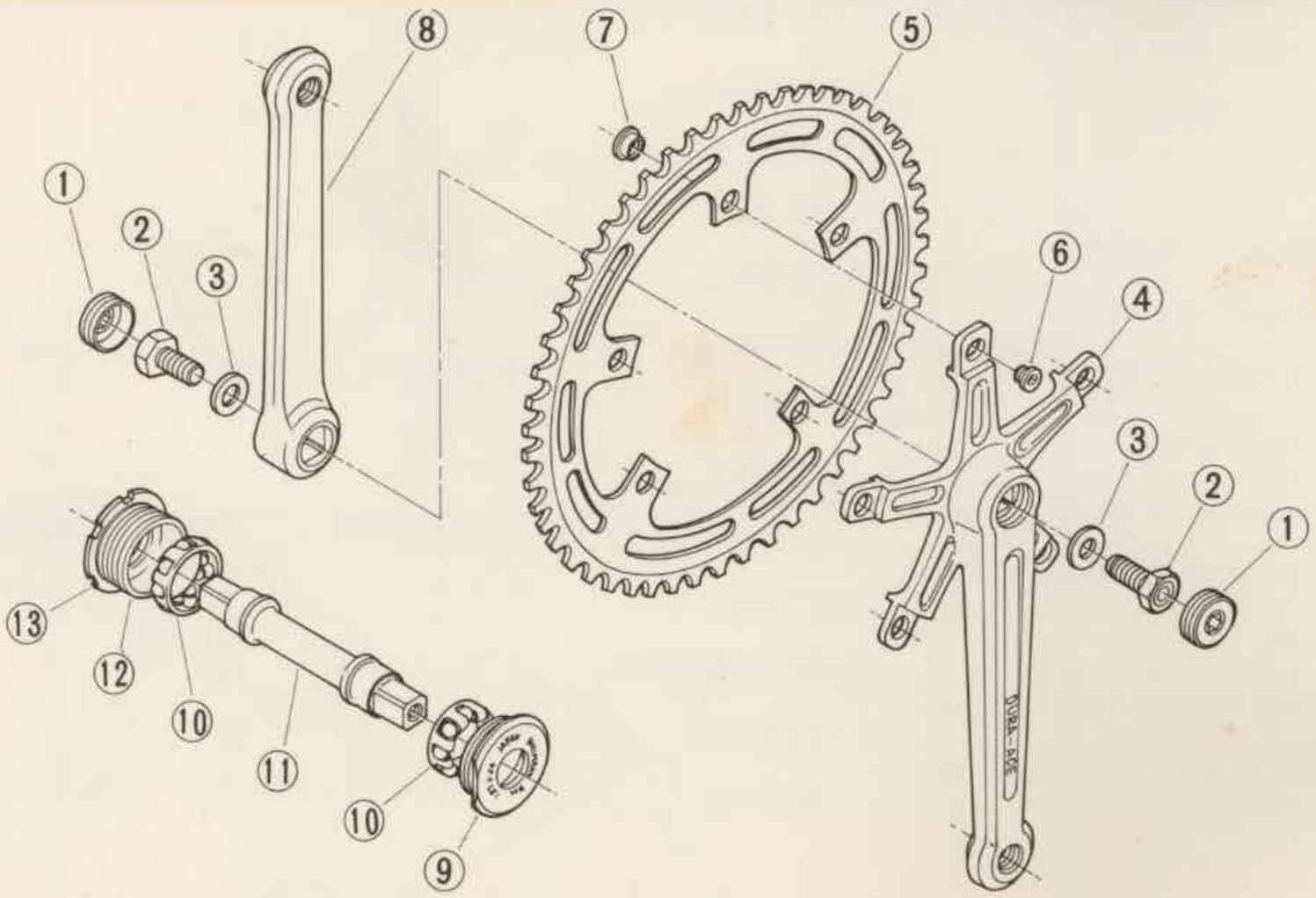
**SPECIFICATIONS**
Material: Light Alloy
Type: Cotterless
Chain Ring: 1/2″ x 1/8″ Chain
Teeth: 44～55 teeth
Crank Lengths: 165mm, 170mm
Crank Screw: 9/16″ x 20t.
Cup Screw: 1.37″ x 24t.
Spindle Length:

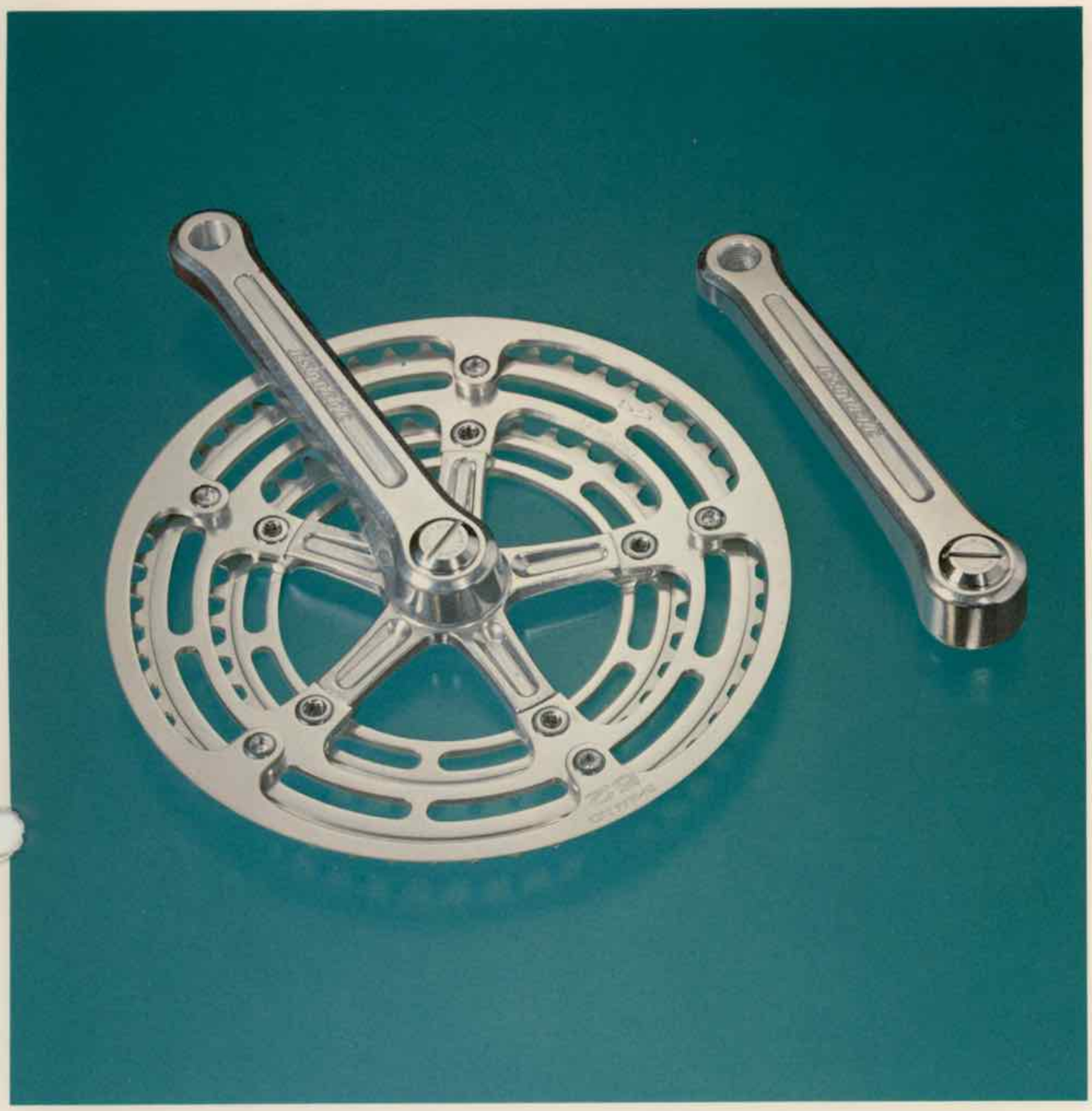





**PARTS LIST**

Crank Arm Cap
①.....134 0200
Fixing Bolt
②.....134 0300
Fixing Washer
③.....134 0400
Right Crank Arm (6-1/2″) 165 mm
④.....131 0100
Right Crank Arm (6-3/4″) 170 mm
④.....131 0300
Chainwheel 49 teeth
⑤.....131 4900
Chainwheel Fixing Bolt
⑥.....131 0500
Chainwheel Fixing Nut
⑦.....131 0600
Left Crank Arm (6-1/2″) 165 mm
⑧.....134 0101
Left Crank Arm (6-3/4″) 170 mm
⑧.....134 0103
R.H. Fixed Cup (1.37 x 24)
⑨.....137 0200
Steel Ball Retainer
⑩.....137 9001
Bottom Bracket Spindle 112 mm
⑪.....137 0100
L.H. Adjustable Cup (1.37 x 24)
⑫.....137 0400
Lock Ring
⑬.....137 0500





FRONT CHAINWHEEL

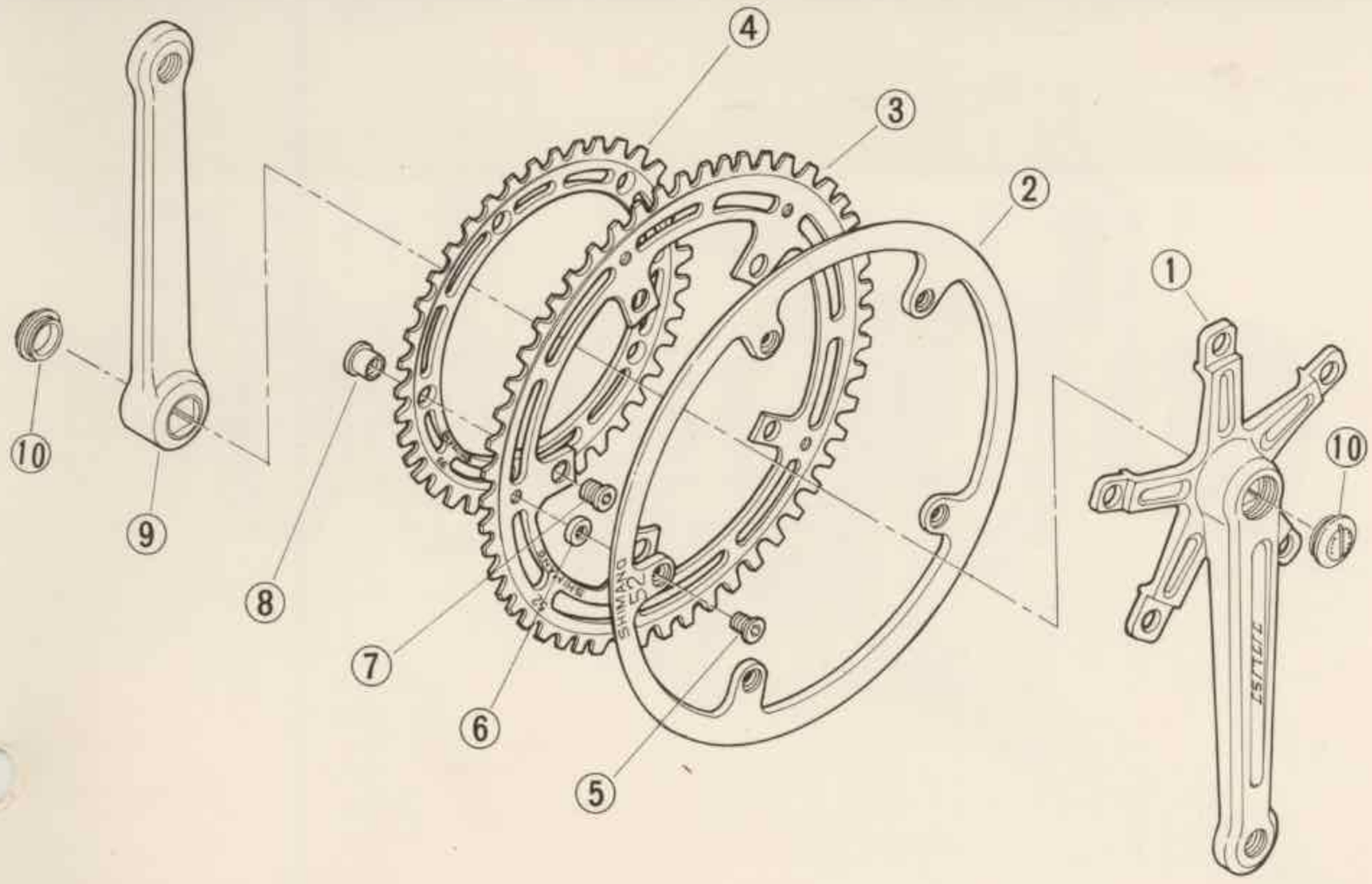
Titlist

**SPECIFICATIONS**

Material: Light Alloy
Type: Cotterless
Chain Ring: 1/2″ x 3/32″ Chain (2 mm)
Teeth: Inner Chain Ring 39～48 teeth
Outer Chain Ring 48～55 teeth
Crank Length: 6-1/2″ (165mm)
Crank Screw: 9/16″ x 20t.
Cup Screw: 1.37″ x 24t.

**PARTS LIST**

Right Crank Arm (6-1/2″)165 mm
①.....142 0101
Chain Guard
②.....142 0200
Chainwheel 52 teeth
③.....142 5200
Chainwheel 39 teeth
④.....142 3900
Guard Fixing Bolt
⑤.....142 0300
Guard Fixing Spacer
⑥.....142 0400
Chainwheel Fixing Bolt
⑦.....142 0500
Chainwheel Fixing Nut
⑧.....142 0600
Left Crank Arm (6-1/2″)165 mm
⑨.....144 0101
Cap
⑩.....144 0200



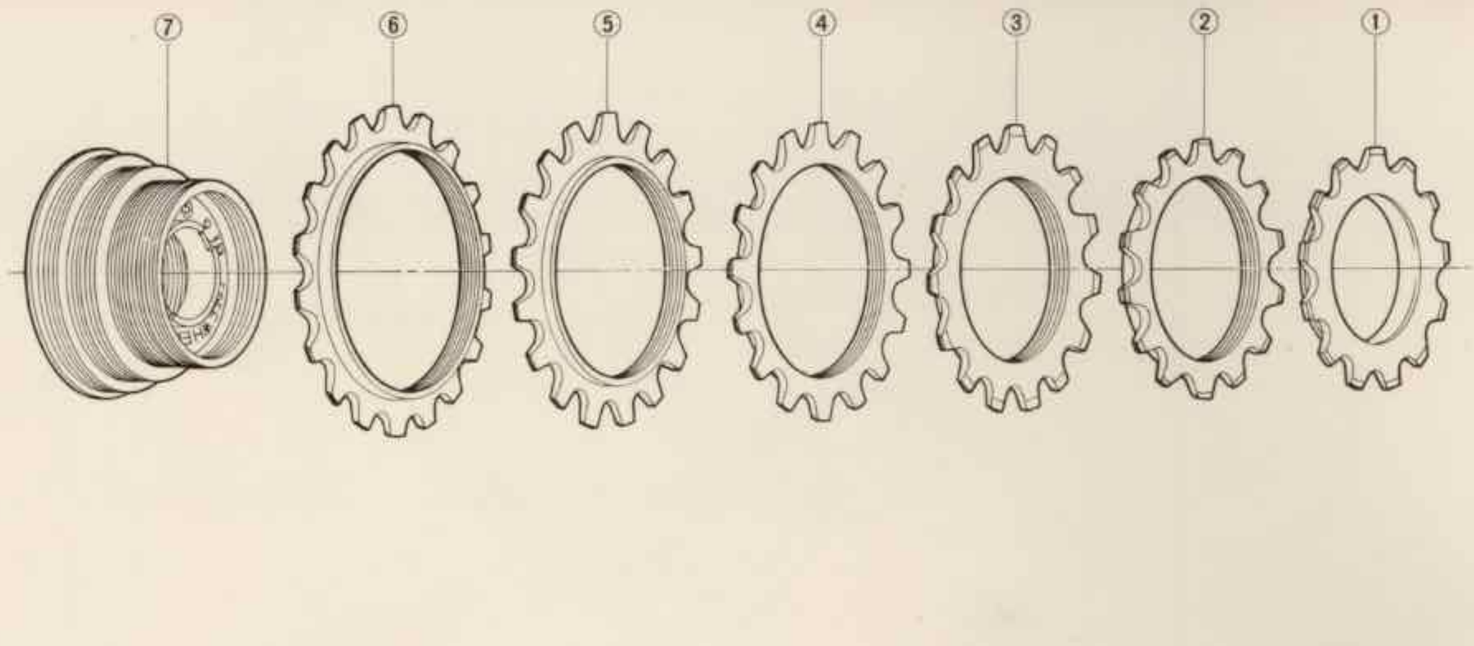
## MULTIPLE FREEWHEELS

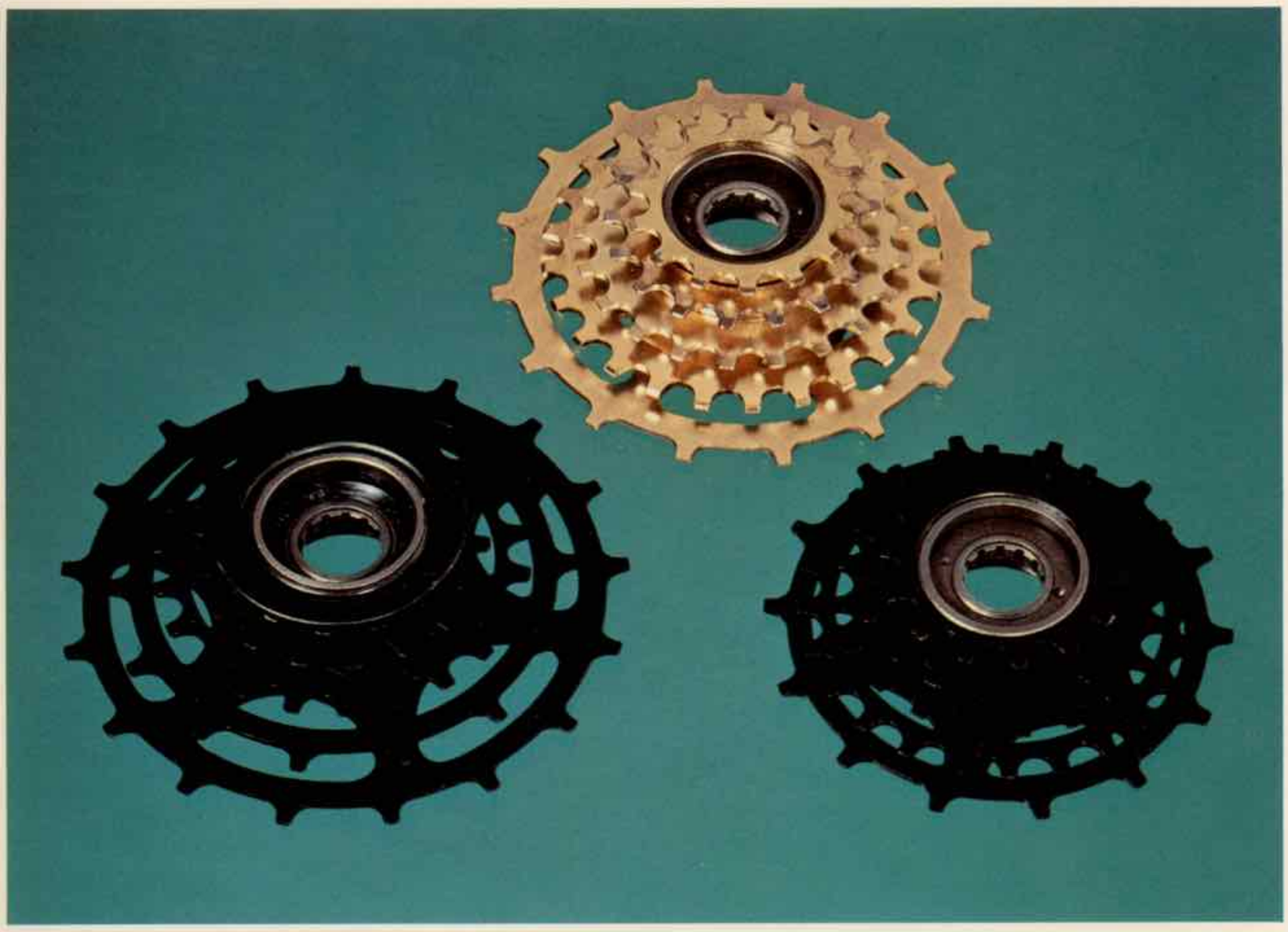
**SPECIFICATIONS**
Standard Sprocket: 1/2″ x 3/32″ Chain (2mm)
Thread: 1.37″ x 24 T.P.I.
Standard Sprocket Combinations:

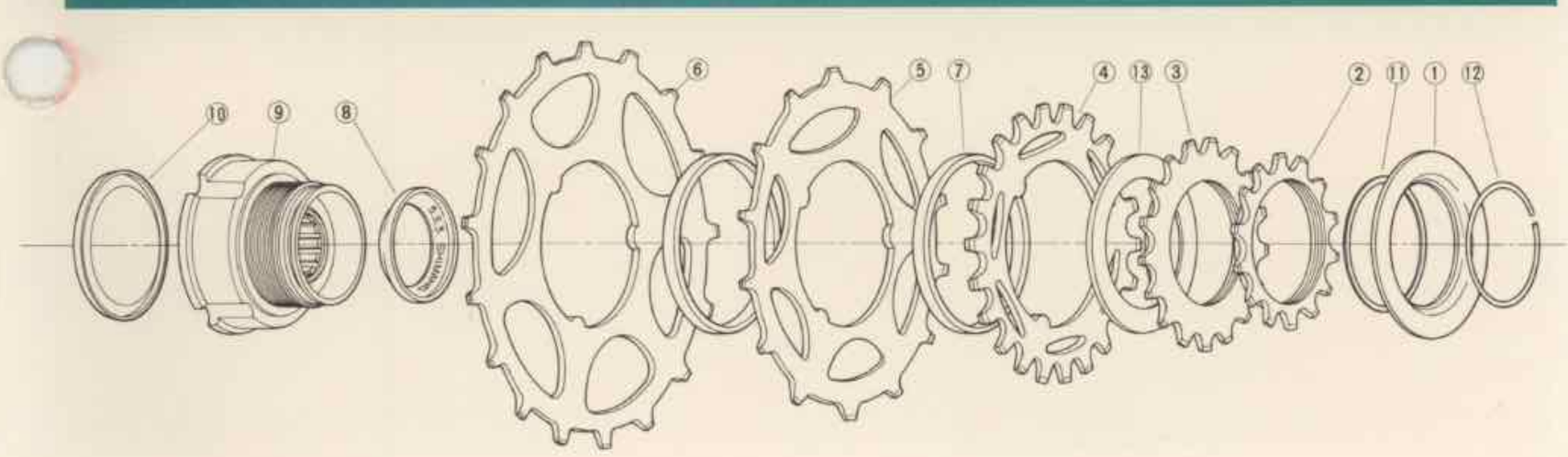
| | |
|---|---|
| 5-speed | 13, 15, 17, 19, 21T |
| | 14, 16, 18, 20, 22T |
| | 15, 17, 19, 21, 24T |
| 6-speed | 13, 14, 15, 16, 17, 18T |
| | 13, 15, 17, 19, 21, 23T |

**PARTS LIST** (6-speed 13T···18T)
Sprocket Wheel 13T
①..... 121 1301–1
Sprocket Wheel 14T
②.....124 1401
Sprocket Wheel 15T
③.....124 1501
Sprocket Wheel 16T
④.....124 1602
Sprocket Wheel 17T
⑤.....124 1703
Sprocket Wheel 18T
⑥.....124 1803
Outer Assembly
⑦.....124 9001










## MULTIPLE FREEWHEELS

**SPECIFICATIONS**
Standard Sprocket: 1/2″ x 3/32″ Chain (2 mm)
Thread: 1.37″ x 24 T.P.I.
Standard Sprocket Combinations:

| | |
|---|---|
| 5-Speed | 15, 17, 19, 21, 24T. |
| | 14, 17, 20, 24, 28T. |
| | 14, 17, 22, 27, 32T. |
| | 14, 17, 21, 26A, 32AT. |
| | 14, 17, 21, 26A, 32AT. (LT) |
| | 14, 17, 22, 28, 34T. |
| | 14, 17, 22, 28A, 34AT. |
| | 14, 17, 22, 28A, 34AT. (LT) ※ |

(LT) : with Seal and Top Protector
A : Alternate Teeth Sprocket
※PARTS LIST and EXPLODED VIEV show specifications asterisked.

**PARTS LIST**

Top Protector
①..... 121 5100-2
Sprocket Wheel 14T
②..... 121 1402
Sprocket Wheel 17T
③..... 121 1729
Sprocket Wheel 22T
④..... 123 2201
Sprocket Wheel 28T (Alternate)
⑤..... 123 2802
Sprocket Wheel 34T (Alternate)
⑥..... 123 3402
Sprocket Wheel Spacer
⑦..... 121 4810
Seal Cap A
⑧..... 121 5010
Outer Assembly
⑨..... 121 9052
Seal Cap B
⑩..... 121 5030
Shim
⑪..... 121 5200
Snap Ring
⑫..... 121 5300
Spacer
⑬..... 121 4880

## SPROCKETS & LOCK RING

**Models FR-912/FR-913/FR-914/ FR-915/FR-916** (Sprocket)
**Model FR-900** (Lock Ring)

**SPECIFICATIONS**
Standard Sprocket: 1/2″ x 1/8″ Chain (2.5mm)
Thread: 1.37″ x 24 T.P.I.
Material: Chromium Molybdenum Steel
Teeth:

| Model | Teeth |
|---|---|
| FR-912 | 12T. |
| FR-913 | 13T. |
| FR-914 | 14T. |
| FR-915 | 15T. |
| FR-916 | 16T. |

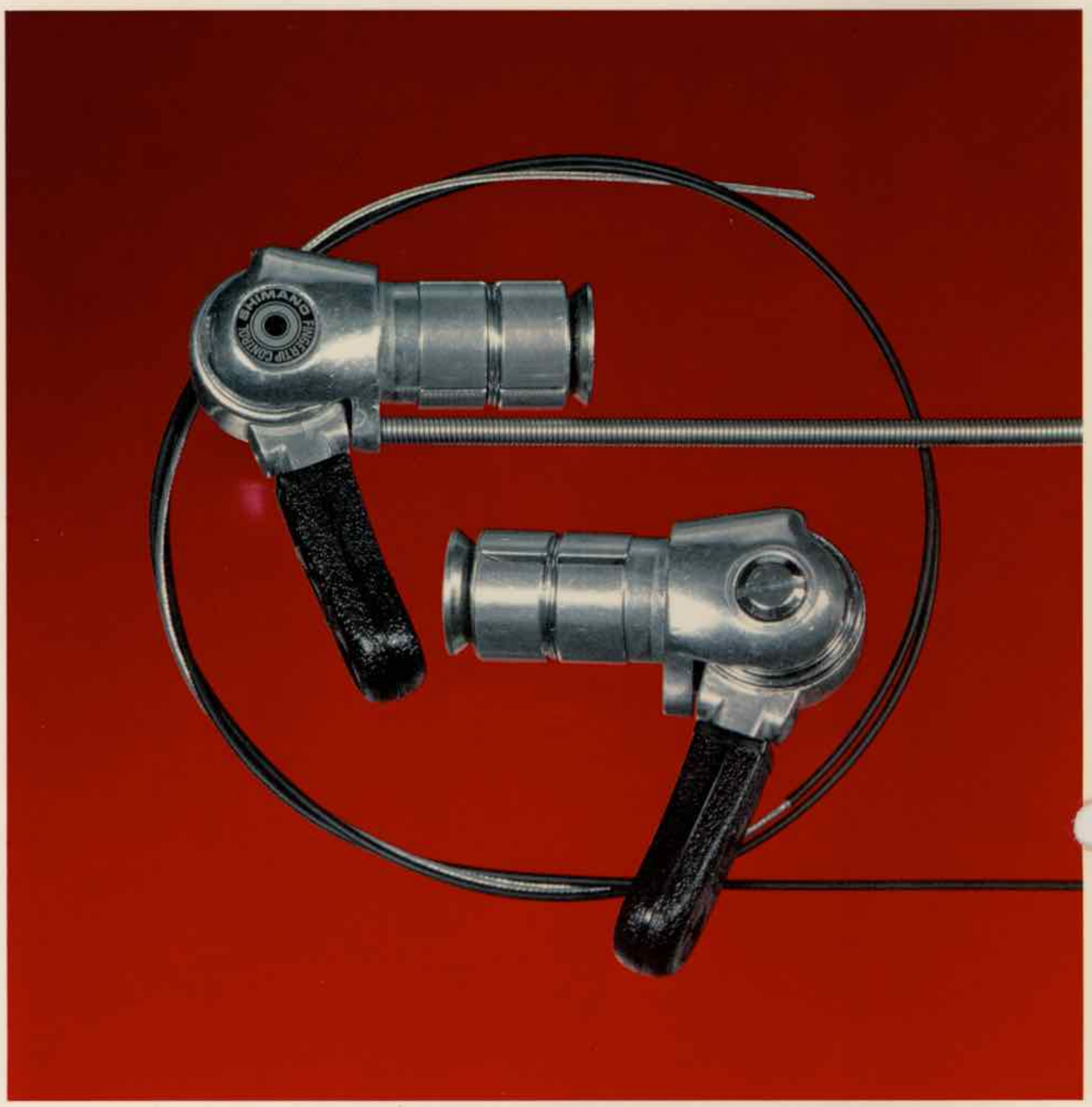
Lock Ring
Thread: 1.29″ x 24 T.P.I. (Left)



SHIFTING LEVERS

**Model L-600**

# FINGER-TIP BAREND CONTROL

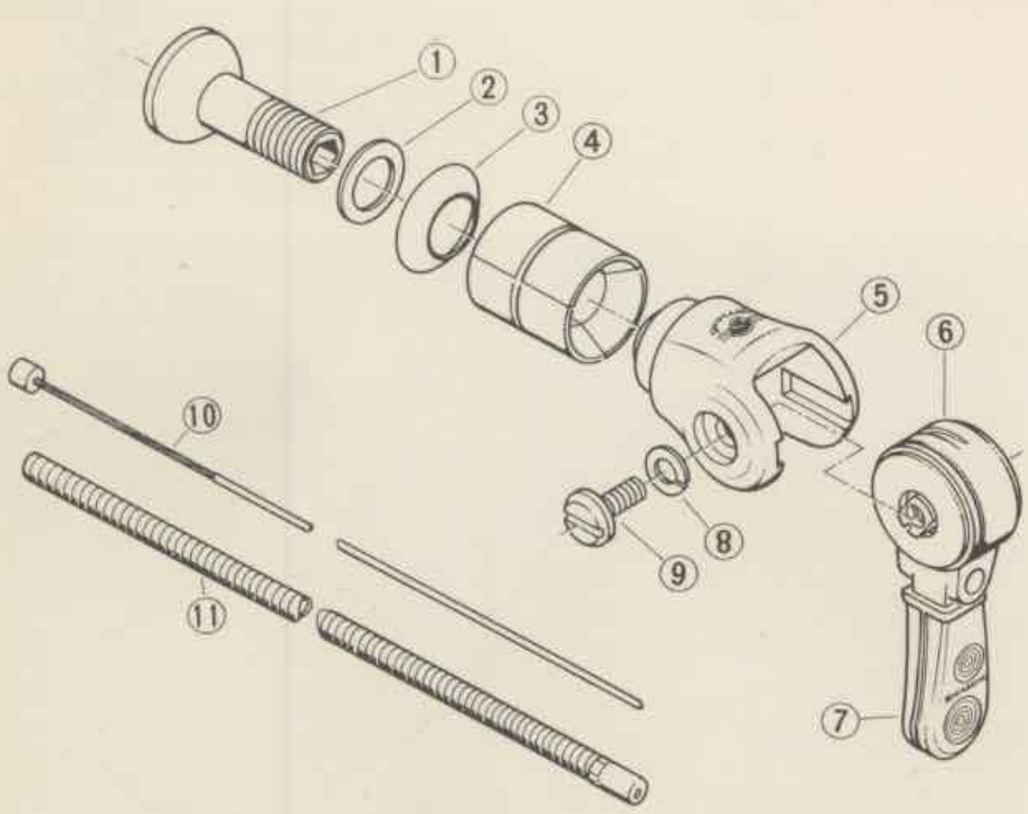


**SPECIFICATIONS**

Weight: 2.8 oz.(80 g)
Material: Light Alloy
Use: 10-speed

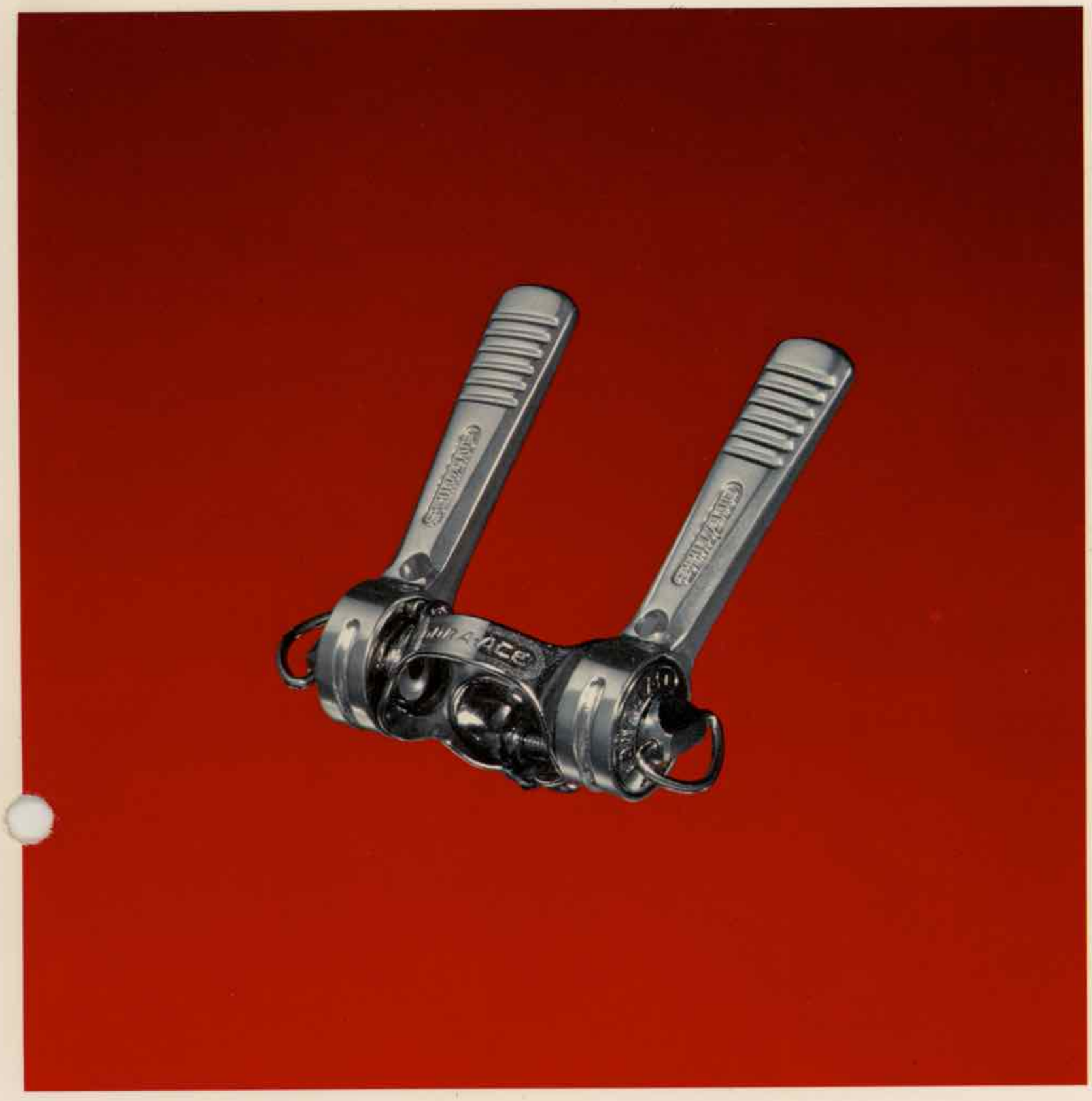
**PARTS LIST**

| | |
|---|---|
| Anchor Bolt ① | 628 0600 |
| Plastic Washer ② | 622 1000 |
| Tapered Washer ③ | 628 1300 |
| Segment Assembly with Spring ④ | 628 9001 |
| Body ⑤ | 628 9002 |
| Lever Assembly with Lever Cap ⑥ | 628 9003 |
| Lever Cap ⑦ | 628 0900 |
| Spring Washer ⑧ | 622 2600 |
| Lever Fixing Bolt ⑨ | 628 0100 |
| Front Inner Cable ⑩ | |
| Rear Inner Cable ⑩ | |
| Lever End Outer Casing ⑪ | |
| Front Derailleur Outer Casing ⑪ | |
| Rear Derailleur Outer Casing ⑪ | |



SHIFTING LEVER
**Model L-284**

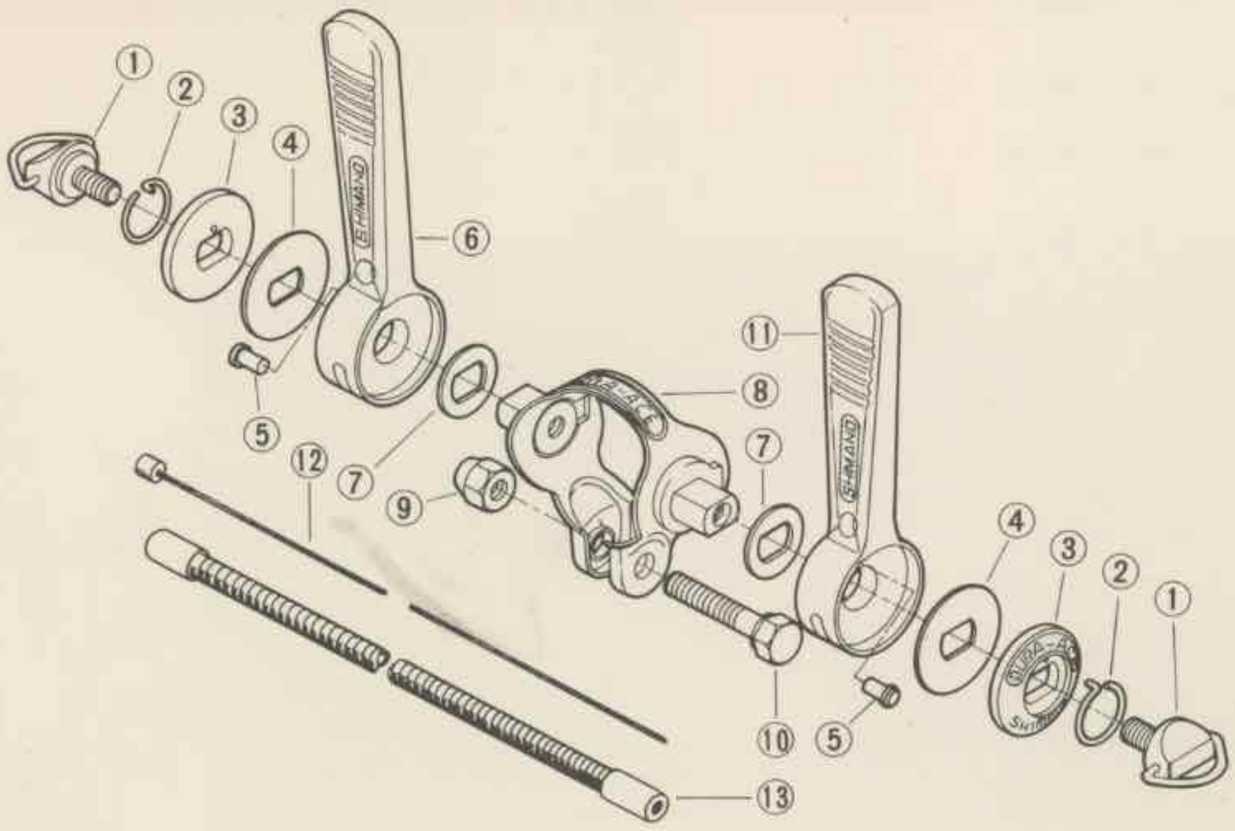
# DURA-ACE



**SPECIFICATIONS**
Weight: 2.65 oz.(75 g)
Material: Light Alloy
Use: 10-speed

**PARTS LIST**

| | |
|---|---|
| Wing Screw ① | 681 9001 |
| Clutch Spring ② | 681 1300 |
| Cap ③ | 681 0300 |
| Spring Washer ④ | 681 0400 |
| Stopper ⑤ | 681 1000 |
| L.H. Lever ⑥ | 681 0600 |
| Washer A ⑦ | 681 0700 |
| Clamp (1-1/8″) ⑧ | 681 9002 |
| Clamp Nut ⑨ | 681 1200 |
| Clamp Bolt ⑩ | 681 1100 |
| R.H. Lever ⑪ | 681 0500 |
| Front Inner Cable ⑫ | |
| Rear Inner Cable ⑫ | |
| Front Outer Casing ⑬ | |
| Rear Outer Casing ⑬ | |



SHIFTING LEVERS

**Models L-262/L-264/L-268/L-266/L-261/ L-263/ L-267/L-265**

# FINGER-TIP

**SPECIFICATIONS**

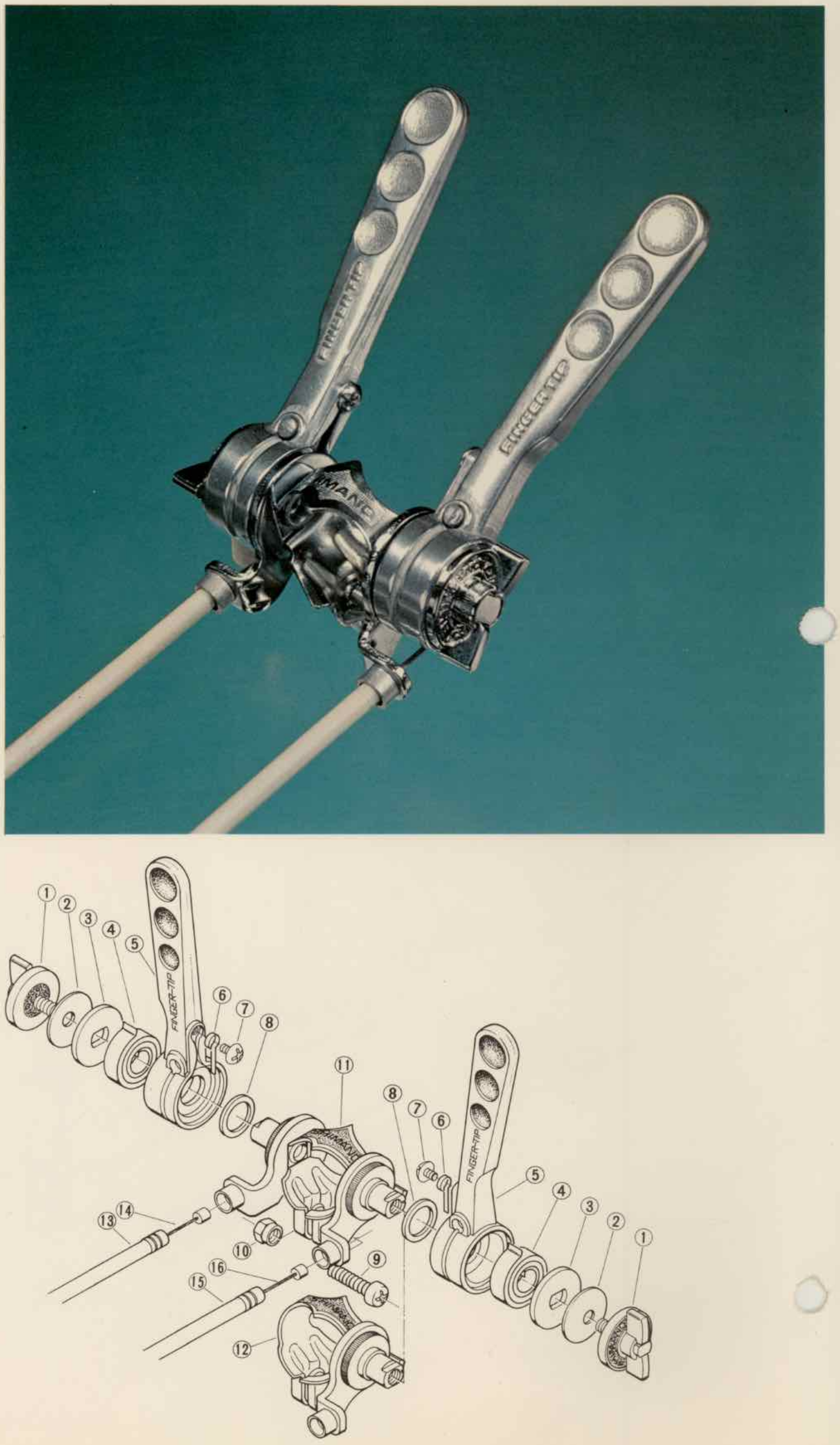
Material: Light Alloy

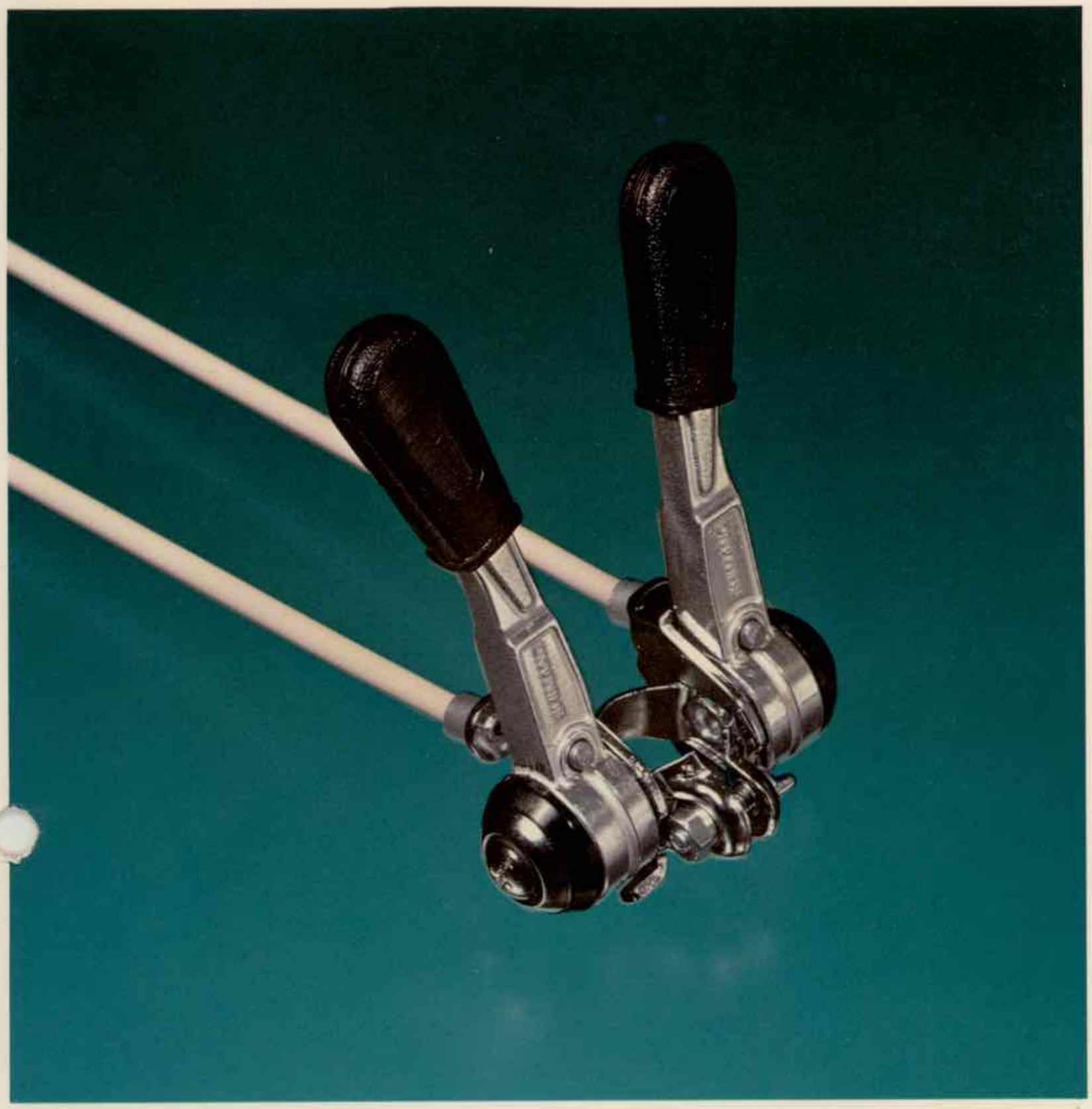
Type:

| Model | Lever Clamp Diameter | Use |
|---|---|---|
| L-262 | 1″ | 10-Speed |
| L-264 | 1-1/8″ | 10-Speed |
| L-268 | 0.833″ | 10-Speed |
| L-266 | 7/8 ″ | 10-Speed |
| L-261 | 1″ | 5-Speed |
| L-263 | 1-1/8″ | 5-Speed |
| L-267 | 0.833″ | 5-Speed |
| L-265 | 7/8 ″ | 5-Speed |

**PARTS LIST**

Wing Bolt Assembly
①..... 627 9001
Coned Disc Spring
②..... 627 0700
Non-Turn Washer
③..... 627 0600
Spiral Spring
④..... 627 0500
Lever
⑤..... 627 0100
Leaf Spring
⑥..... 627 1100
Screw
⑦..... 627 1000
Washer
⑧..... 627 0400
Clamp Bolt (M4.5 x 24)
⑨..... 622 0100
Clamp Nut (M4.5)
⑩..... 622 0200
Clamp For 10-Speed (1″)
⑪..... 627 9002
Clamp For 10-Speed (1-1/8″)
⑪..... 627 9003
Clamp For 10-Speed (0.833″)
⑪..... 627 9006
Clamp For 10-Speed (7/8″)
⑪..... 627 9007
Clamp For 5-Speed (1″)
⑫..... 627 9004
Clamp For 5-Speed (1-1/8″)
⑫..... 627 9005
Clamp For 5-Speed (7/8″)
⑫..... 627 9008
Front Outer Casing
⑬
Front Inner Cable
⑭
Rear Outer Casing
⑮
Rear Inner Cable
⑯





SHIFTING LEVERS

**Models L-254/L-258/L-256/L-253/ L-257/L-255**

# SUPER SHIFTER

**SPECIFICATIONS**

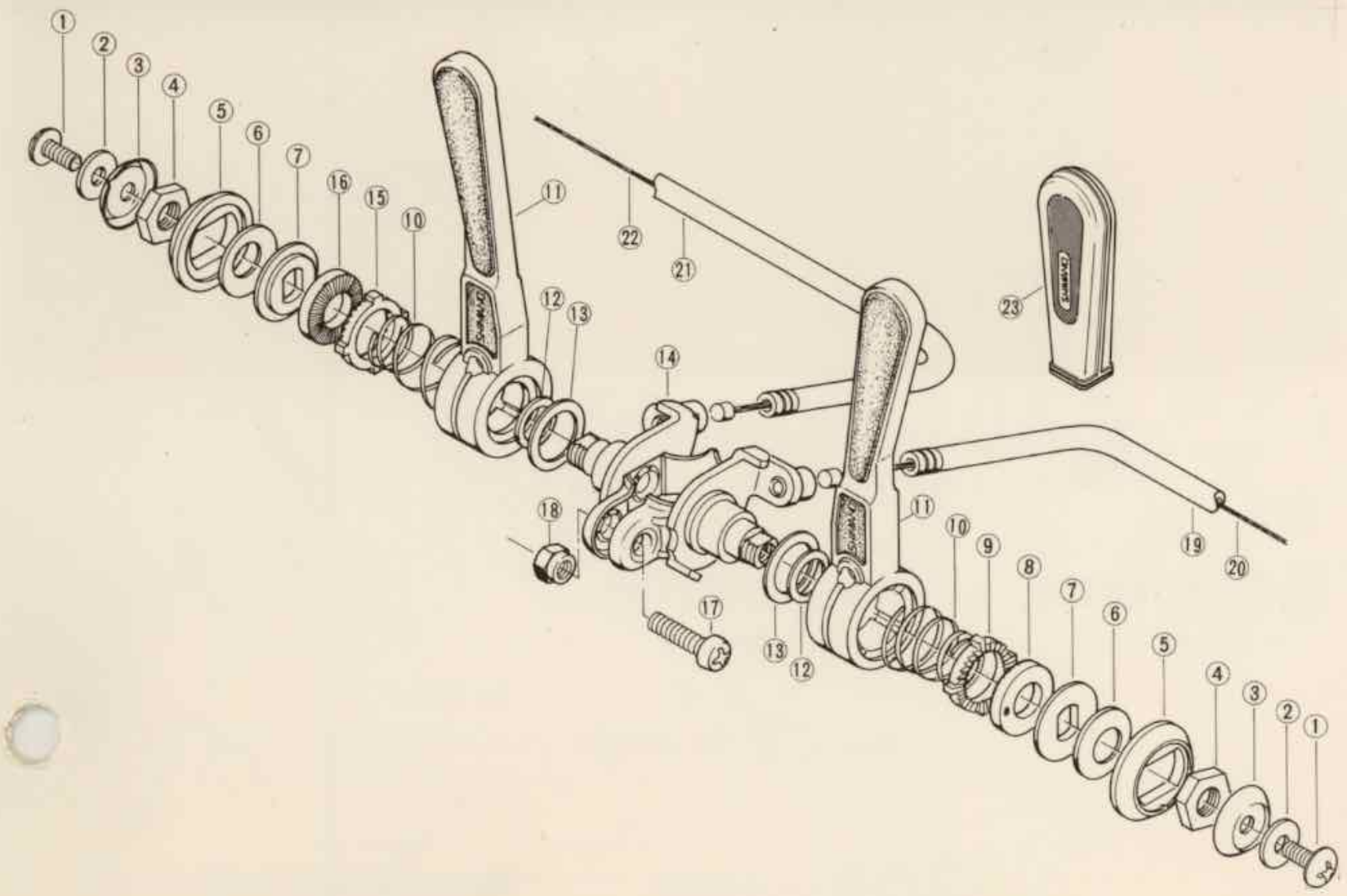
Material: Light Alloy

Type:

| Model | Lever Clamp Diameter | Use |
|---|---|---|
| L-254 | 1-1/8″ | 10-Speed |
| L-258 | 0.833″ | 10-Speed |
| L-256 | 7/8 ″ | 10-Speed |
| L-253 | 1-1/8″ | 5-Speed |
| L-257 | 0.833″ | 5-Speed |
| L-255 | 7/8 ″ | 5-Speed |

**PARTS LIST**

Lever Bolt (M4.5 x 10)
①..... 625 1400
Rubber Washer
②..... 627 1400
Cap
③..... 625 0400-1
Lock Nut
④..... 521 2500
Washer B
⑤..... 625 1500
Coned Disc Spring
⑥..... 641 1100
Non-Turn Washer
⑦..... 625 0200-1
R.H. Ratchet B with O-Mark
⑧..... 625 0901
R.H. Ratchet A with O-Mark
⑨..... 625 0801
Spring
⑩..... 625 1000
Lever
⑪..... 625 0100
Washer S
⑫..... 625 1100
Washer L
⑬..... 625 1200
Clamp for 10-Speed (1-1/8″)
⑭..... 625 9010
Clamp for 5-Speed (1-1/8″)
⑭..... 625 9009
Clamp for 10-Speed (0.833″)
⑭..... 625 9002
Clamp for 10-Speed (7/8″)
⑭..... 625 9004
L.H. Ratchet A
⑮..... 625 0802
L.H. Ratchet B
⑯..... 625 0902
Clamp Bolt (M4.5 x 18)
⑰..... 612 1700
Clamp Nut (M4.5)
⑱..... 622 0200
Rear Outer Casing
⑲
Rear Inner Cable
⑳
Front Outer Casing
㉑
Front Inner Cable
㉒
Lever Cap
㉓..... 626 1900



FRONT & REAR HUBS
**Models H-731** (Front)**/H-831** (Rear): Large Flange Hub
**Models HS-731** (Front)**/HS-831** (Rear): Small Flange Hubs

## DURA-ACE

**SPECIFICATIONS** (Large Flange Hub)
Weight: Front 9.2oz.(260g), Rear 12.7oz.(360g)
Material: Light Alloy
Type: Large Flange, Small Flange, Quick Release
Thread: 1.37″ x 24 T.P.I.
Over Lock Nut Dimensions:
Front 3.94″ (100mm), Rear 4.72″ (120mm)
Spoke Holes: 36 x 36H.

**SPECIFICATIONS** (Small Flange Hub)
Weight: Front 7.8oz.(220g), Rear 10.2oz.(290g)
Material: Light Alloy
Type: Small Flange, Quick Release
Thread: 1.37″ x 24 T.P.I.
Over Lock Nut Dimensions:
Front 3.94″ (100mm), Rear 4.72″ (120mm)
Spoke Holes: 36 x 36H.

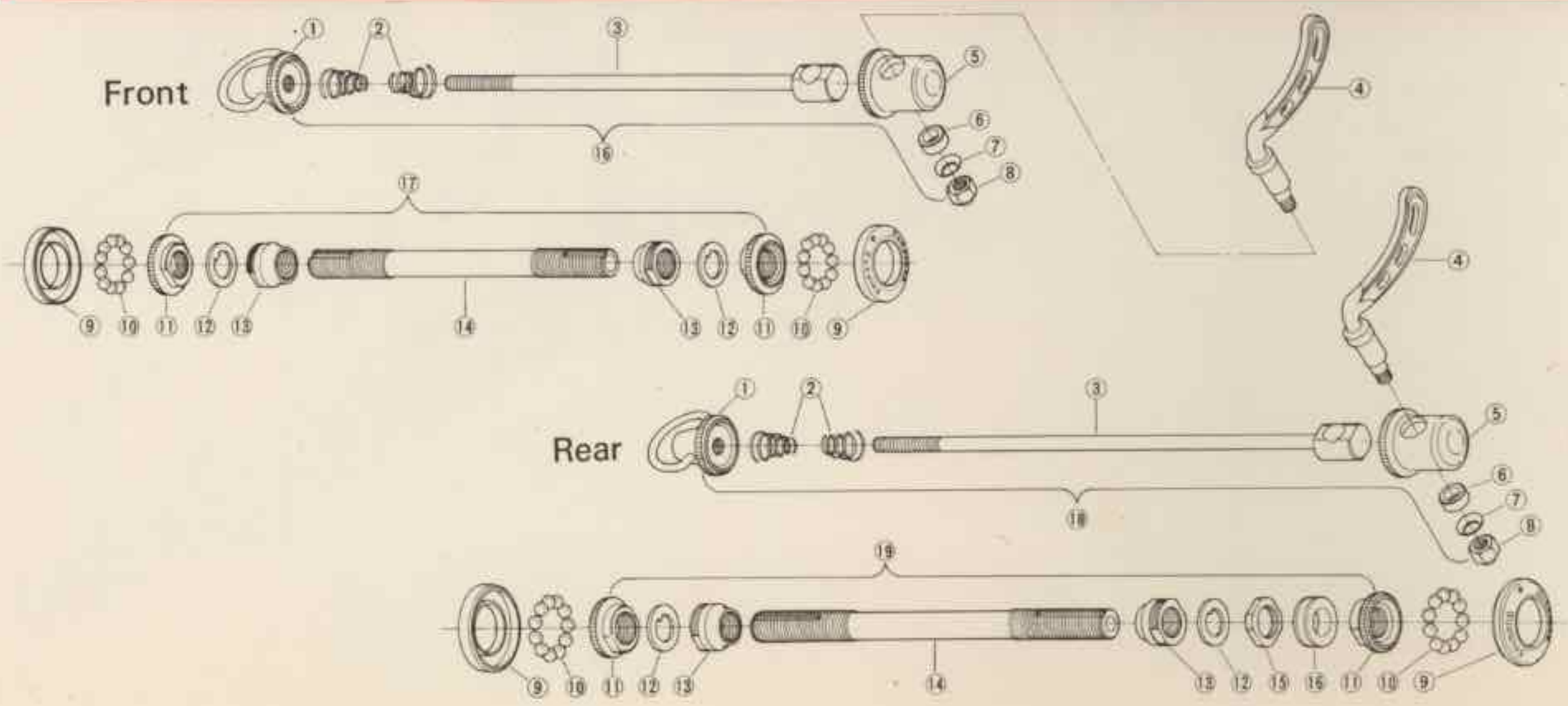
**PARTS LIST** (Front)

| | |
|---|---|
| Nut for Mounting Stud ① | 233 9001 |
| Volute Spring ② | 233 2100 |
| Mounting Stud ③ | 233 0800 |
| Cam Lever ④ | 233 0400 |
| Body Cam Lever ⑤ | 233 0300 |
| Bushing ⑥ | 233 0700 |
| Coned Disc Spring ⑦ | 233 0500 |
| Cap Nut ⑧ | 233 0600 |
| Dust Cap ⑨ | 233 1400 |
| Steel Balls (3/16″) ⑩ | 000 0125 |
| Locking Nut ⑪ | 233 1700 |
| Key Washer ⑫ | 233 1600 |
| Cone ⑬ | 233 1500 |
| Axle (M9 x 108 mm) ⑭ | 233 1800 |
| Oil Cap ⑮ | 233 1200 |
| Complete Quick Release Unit ⑯ | 233 9002 |
| Complete Axle Unit ⑰ | 233 9003 |

**PARTS LIST** (Rear)

| | |
|---|---|
| Nut for Mounting Stud ① | 233 9001 |
| Volute Spring ② | 233 2100 |
| Mounting Stud ③ | 243 0800 |
| Cam Lever ④ | 233 0400 |
| Body Cam Lever ⑤ | 233 0300 |
| Bushing ⑥ | 233 0700 |
| Coned Disc Spring ⑦ | 233 0500 |
| Cap Nut ⑧ | 233 0600 |
| Dust Cap ⑨ | 243 1400 |
| Steel Balls (1/4″) ⑩ | 000 0135 |
| Locking Nut ⑪ | 243 0700 |
| Key Washer ⑫ | 243 1600 |
| Cone ⑬ | 243 1500 |
| Axle (M10 x 130 mm) ⑭ | 243 2000 |
| Lock Nut ⑮ | 243 1800 |
| Spacer ⑯ | 243 1900 |
| Oil Cap ⑰ | 233 1200 |
| Complete Quick Release Unit ⑱ | 243 9002 |
| Complete Axle Unit ⑲ | 243 9004 |







FRONT & REAR HUBS

**Models H-741** (Front),/**H-841** (Rear): Large Flange HubS

**Models HS-741** (Front),/**HS-841** (Rear): Small Flange HubS

# DURA-ACE

**SPECIFICATIONS**

Weight: Large Flange Hub, Front 8.5 oz.(240g), Rear 10.2 oz.(290g)
Small Flange Hub, Front 7.1 oz.(200g), Rear 8.8 oz.(250g)
Material: Light Alloy
Type: Solid Axle (Large Flange&Small Flange)
Thread: 1.37″ x 24 T.P.I.
Over Lock Nut Dimensions:
Front 3.94″ (100mm), Rear 4.33″ (110mm)
Spoke Holes: 36 x 36H.

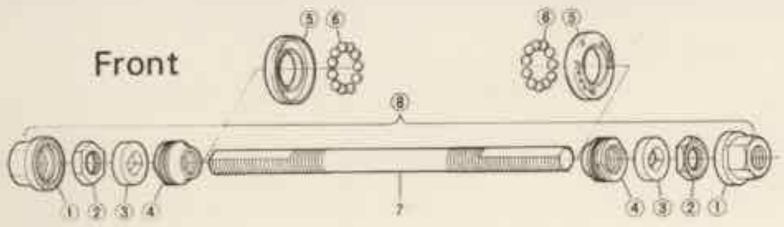
**PARTS LIST**/Front

Track Nut
①.....237 0700
Lock Nut
②.....237 0600
Spacer
③.....237 0500
Cone
④.....237 0400
Dust Cap
⑤.....237 0800
Steel Balls 3/16″
⑥.....000 0125
Axle
⑦.....237 0300
Complete Axle Unit
⑧.....237 9001

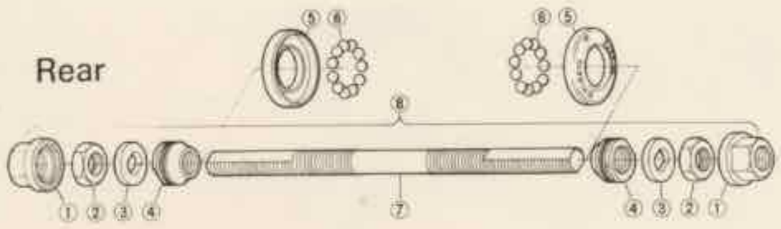
**PARTS LIST**/Rear

Track Nut
①.....247 0700
Lock Nut
②.....247 0600
Spacer
③.....247 0500
Cone
④.....247 0400
Dust Cap
⑤.....247 0800
Steel Balls 1/4″
⑥.....000 0135
Axle
⑦.....247 0300
Complete Axle Unit
⑧.....247 9001

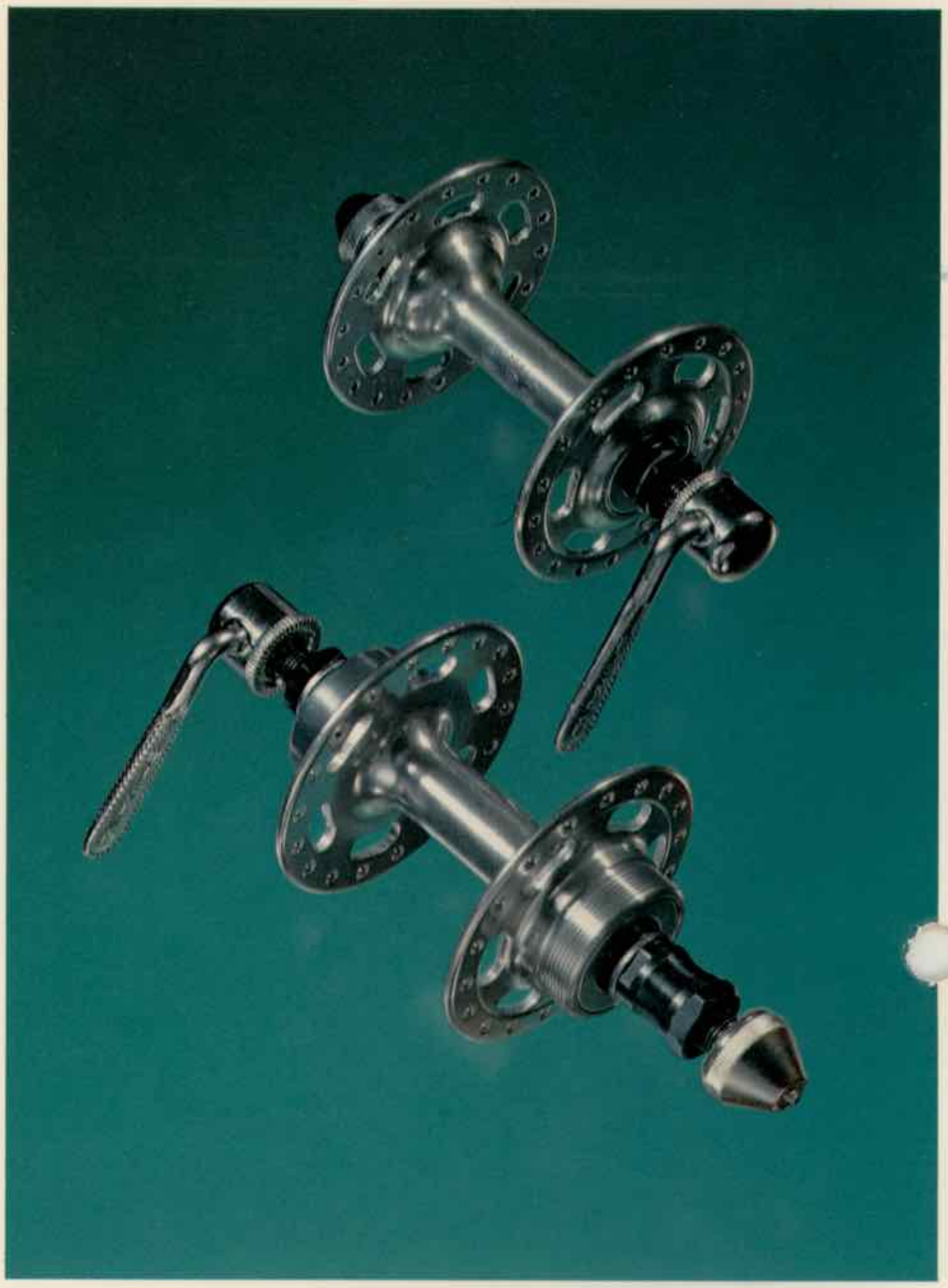
Front



Rear



FRONT & REAR HUBS
**Models H-710** (Front) **/H-810** (Rear)



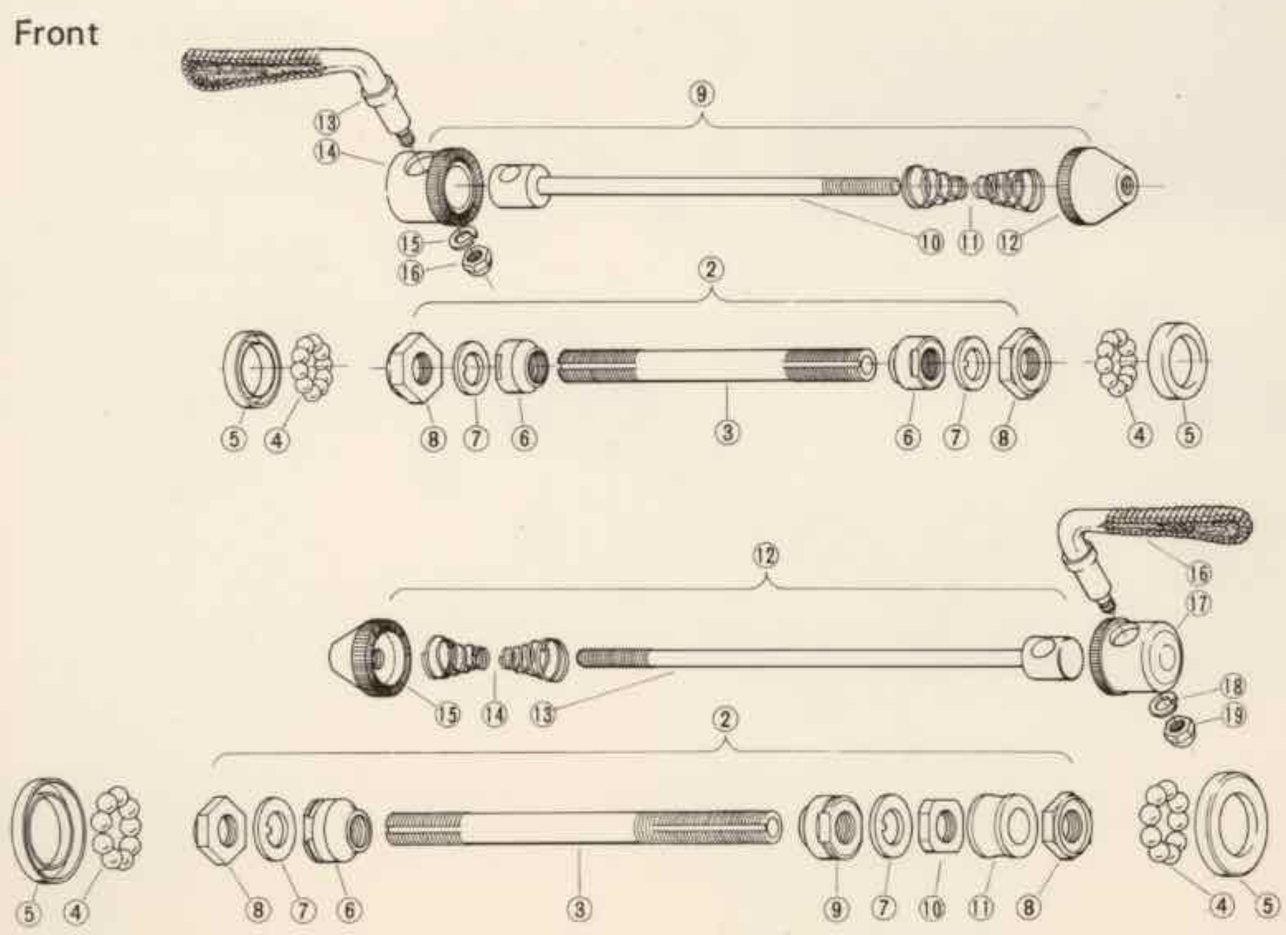
**SPECIFICATIONS**
Weight: Front 9.5oz.(270 g), Rear 12.7oz.(360 g)
Material: Light Alloy
Type: Large Flange, Quick Release
Thread: 1.37″ x 24 T.P.I.
Over Lock Nut Dimensions: Front 3.78″(96mm), Rear 4.88″(124mm)
Spoke Holes: 36 x 36H.

**PARTS LIST** (Front Hub)

| | |
|---|---|
| Complete Axle Unit ② | 231 9003 |
| Axle ③ | 231 0300 |
| Steel Balls (3/16″) ④ | 000 0121 |
| Dust Cap ⑤ | 231 1300 |
| Cone ⑥ | 231 0400 |
| Key Washer ⑦ | 231 1500 |
| Locking Nut ⑧ | 210 0820 |
| Complete Quick Release Unit ⑨ | 231 9001 |
| Mounting Stud ⑩ | 231 0900 |
| Volute Spring ⑪ | 231 1100 |
| Nut for Mounting Stud ⑫ | 231 1000-1 |
| Cum Lever ⑬ | 231 0600-1 |
| Body Cum Lever ⑭ | 231 0500-1 |
| Spring Washer ⑮ | 231 0700 |
| Cap Nut ⑯ | 231 0800 |

**PARTS LIST** (Rear Hub)

| | |
|---|---|
| Complete Axle Unit ② | 241 9003 |
| Axle ③ | 241 0300-1 |
| Steel Balls (1/4″) ④ | 000 0131 |
| Dust Cap ⑤ | 241 0600 |
| L.H. Cone (0.59″) ⑥ | 220 0820-2 |
| Key Washer ⑦ | 241 0700-1 |
| Locking Nut ⑧ | 220 0501 |
| R.H. Cone (0.51″) ⑨ | 220 0800-2 |
| Lock Nut ⑩ | 200 0400-1 |
| Spacer (0.47″) ⑪ | 241 0800 |
| Complete Quick Release Unit ⑫ | 241 9001 |
| Mounting Stud ⑬ | 241 0400 |
| Volute Spring ⑭ | 231 1100 |
| Nut for Mounting Stud ⑮ | 231 1000-1 |
| Cum Lever ⑯ | 231 0600-1 |
| Body Cum Lever ⑰ | 231 0500-1 |
| Spring Washer ⑱ | 231 0700 |
| Cap Nut ⑲ | 231 0800 |





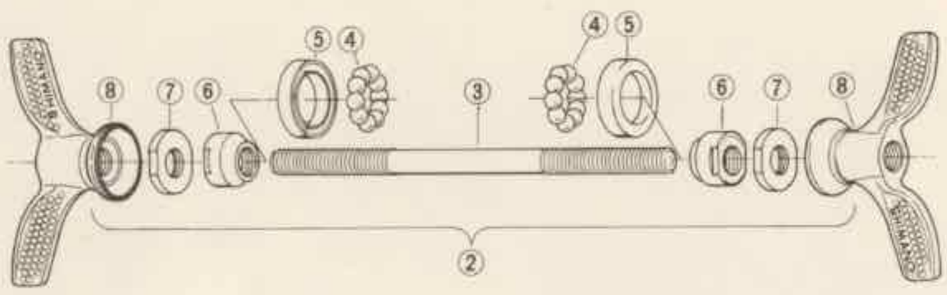
FRONT & REAR HUBS
**Models H-720**(Front)**/H-820**(Rear)

**SPECIFICATIONS**
Weight: Front 8.2oz.(230g), Rear 12.3oz.(350g)
Material: Light Alloy
Type: Large Flange Solide Axle Type with Wing Nut
Thread: 1.37″ x 24 T.P.I.
Over Lock Nut Dimensions
Front 3.78″(96mm), Rear 4.88″(124mm)
Spoke Holes: 36 x 36H.

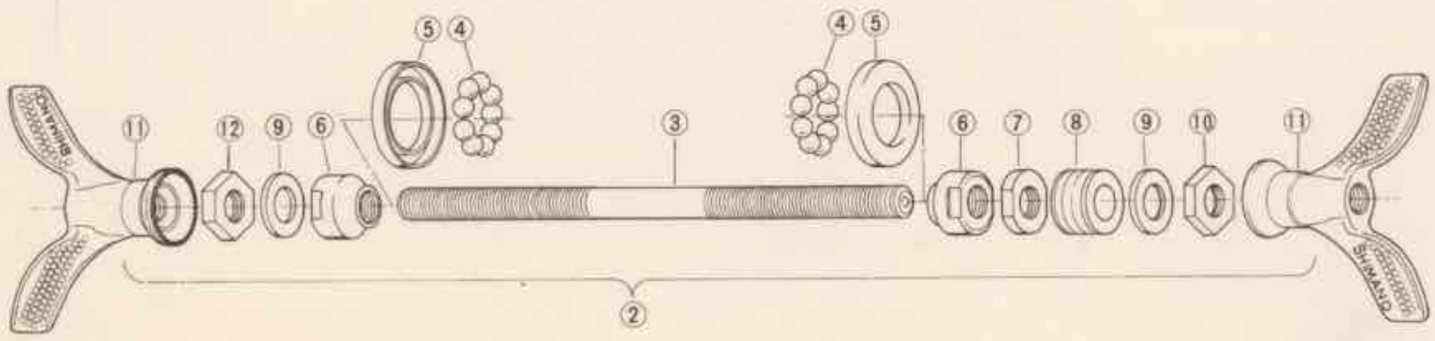
**PARTS LIST**(Front Hub)
Complete Axle Unit 5/16″ x 5.52″ (140mm)
②.....232 9005
Axle 5/16″ x 5.52″ (140mm)
③.....210 0320
Steel Balls (3/16″)
④.....000 0121
Dust Cap
⑤.....210 0902
Cone
⑥.....210 0400-1
Lock Nut
⑦.....210 0810
Front Wing Nut
⑧.....210 9002

**PARTS LIST**(Rear Hub)
Complete Axle Unit 3/8″ x 7.09″ (180mm)
②.....242 9005
Axle 3/8″ x 7.09″ (180mm)
③.....220 0330
Steel Balls (1/4″)
④.....000 0131
Dust Cap
⑤.....220 0702
Cone
⑥.....220 0820-1
Lock Nut A
⑦.....200 0401
Spacer A 0.45″(11.5mm)
⑧.....220 0420-1
Spacer B 1/16″(1.5mm)
⑨.....220 0400-1
Lock Nut B (1/8″)
⑩.....321 3800
Rear Wing Nut
⑪.....220 9002
Lock Nut C (3/16″)
⑫.....220 0510-1

Front




Rear



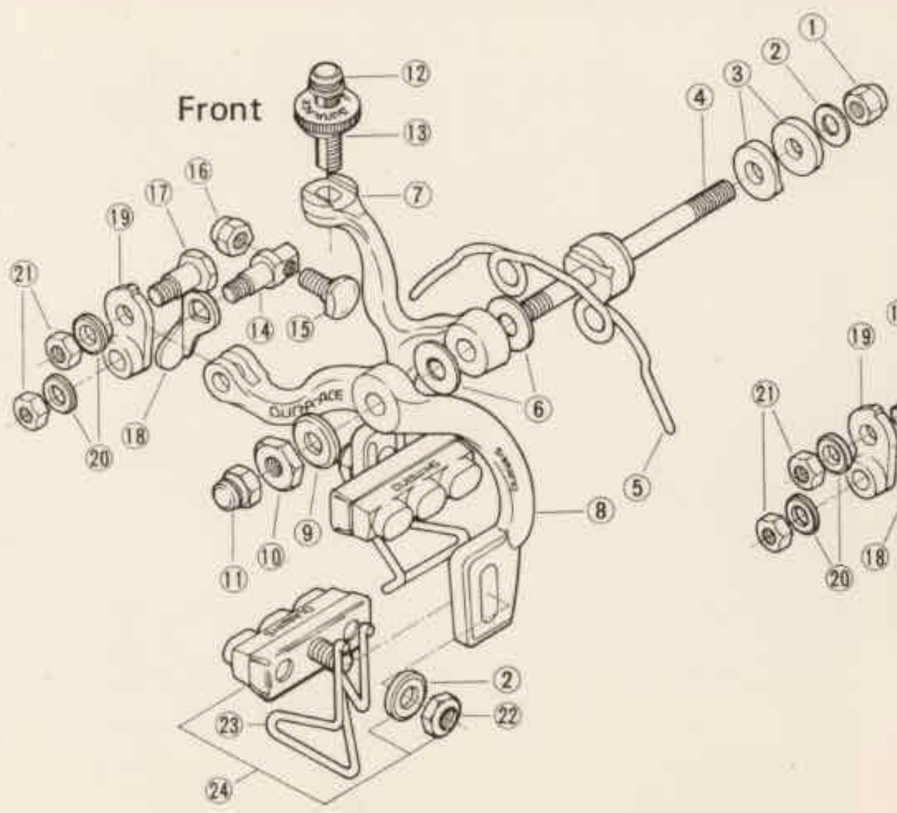
CALIPER BRAKES
**Model B-210**
# DURA-ACE

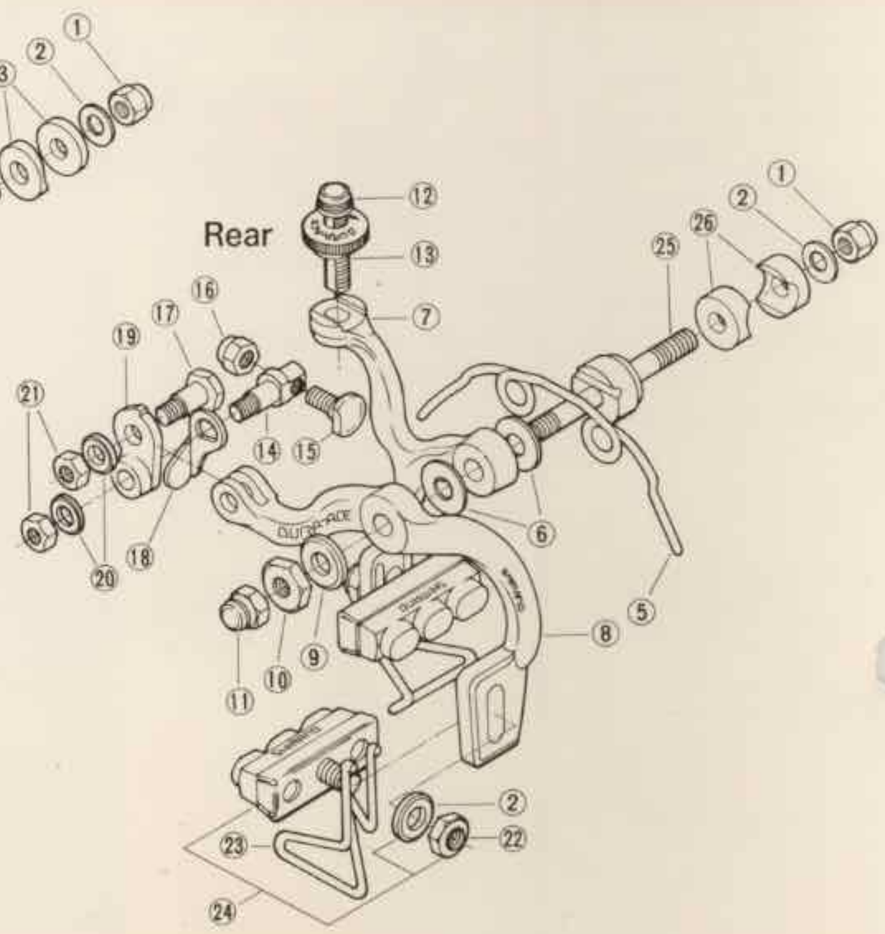
**SPECIFICATIONS**
Weight: Front 7.1 oz.(200g), Rear 7.1 oz.(200g)
Material: Light Alloy
Type: Side Pull with Quick Release

**PARTS LIST**
Lock Nut for Pivot Bolt
①..... 855 0900
Washer (M6)
②..... 855 1000
R-Washer
③..... 855 2700
Pivot Bolt
④..... 855 0300
Arm Return Spring
⑤..... 855 2800
Arm Washer
⑥..... 855 0500
Brake Arm "Y" Shape
⑦..... 855 0100
Brake Arm "C" Shape
⑧..... 855 0200
Washer
⑨..... 855 0600
Lock Nut (M6)
⑩..... 855 0700
Cap Nut (M6)
⑪..... 855 0800
Outer Adjust Bolt
⑫..... 855 2400
Outer Adjust Nut
⑬..... 855 2500
Inner Fixing Pin
⑭..... 855 1900
Wire Fixing Bolt
⑮..... 855 2000
Cap Nut (M5)
⑯..... 855 2100
Link Pin
⑰..... 855 1600
Quick Lever
⑱..... 855 2300
Link
⑲..... 855 2200
Washer (M5)
⑳..... 855 1700
Nut (M5)
㉑..... 855 1800
Shoe Holder Fixing Nut
㉒..... 855 1100
Tire Guide
㉓..... 855 1500
Brake Shoe Assembly
㉔..... 855 9001

(REAR)
Pivot Bolt
㉕..... 855 0400
R-Washer
㉖..... 855 2600







BRAKE LEVERS

**Model M-140**

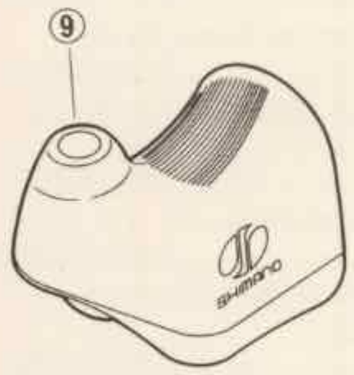
# DURA-ACE

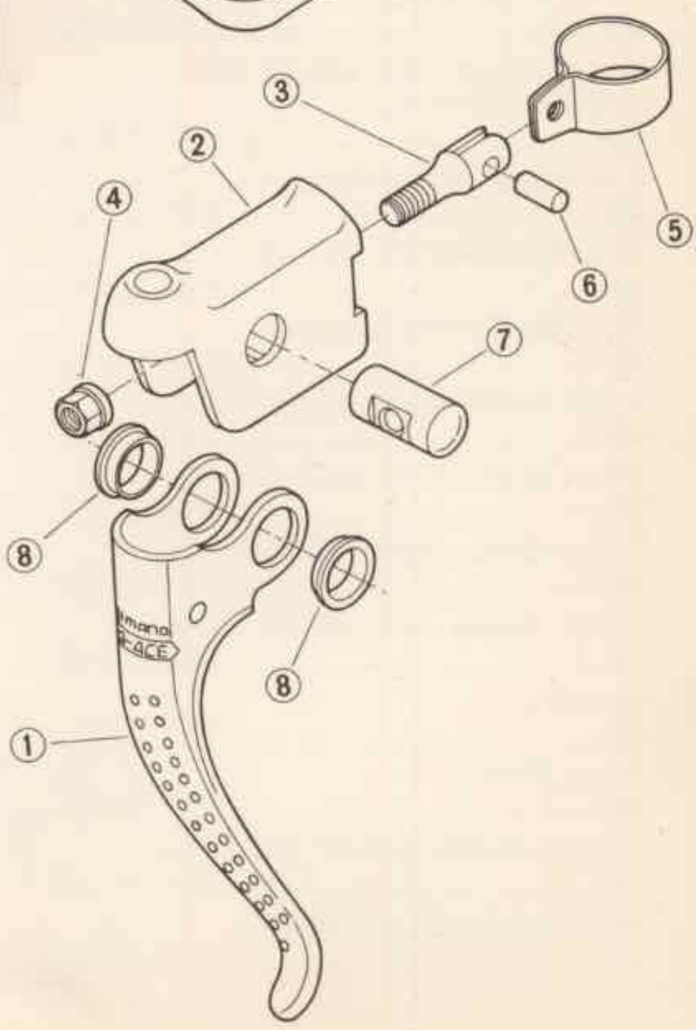
**SPECIFICATIONS**

Weight: 5.2 oz.(150 g)/ Pair
Material: Light Alloy
Type: Hooded Lever
Lever Clamp Diameter: 23.8$\phi$

**PARTS LIST**

| | |
|---|---|
| Lever ① | 843 9001 |
| Lever Bracket ② | 843 0100 |
| Pull Up Bolt ③ | 843 0700 |
| Pull Up Nut ④ | 843 0900 |
| Clamp ⑤ | 843 0600 |
| Joint Pin ⑥ | 843 0800 |
| Lever Shaft ⑦ | 843 0500 |
| Bushing ⑧ | 843 0400 |
| Rubber Cover ⑨ | 843 1000 |

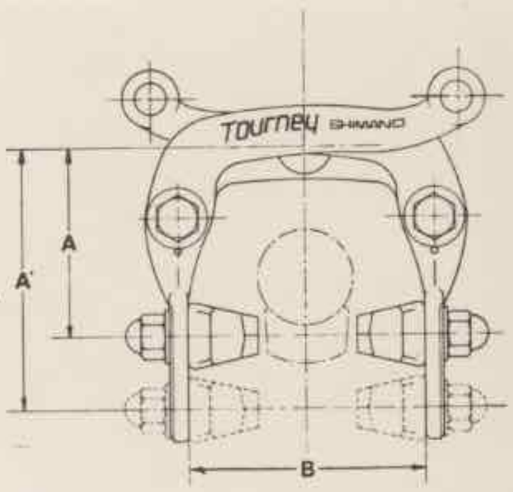


CALIPER BRAKES

**Models B-110/B-120**

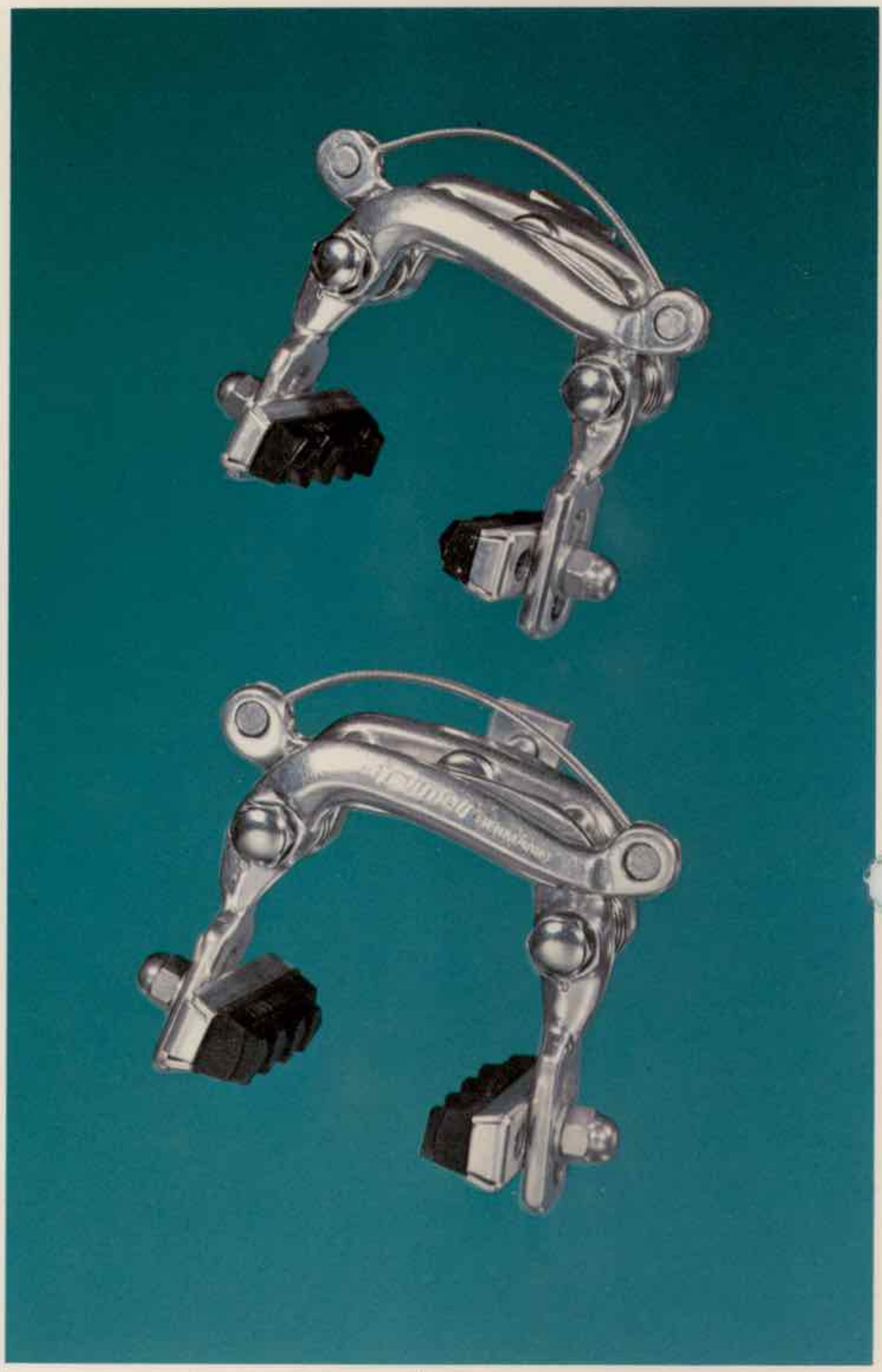
# Tourney




**SPECIFICATIONS**

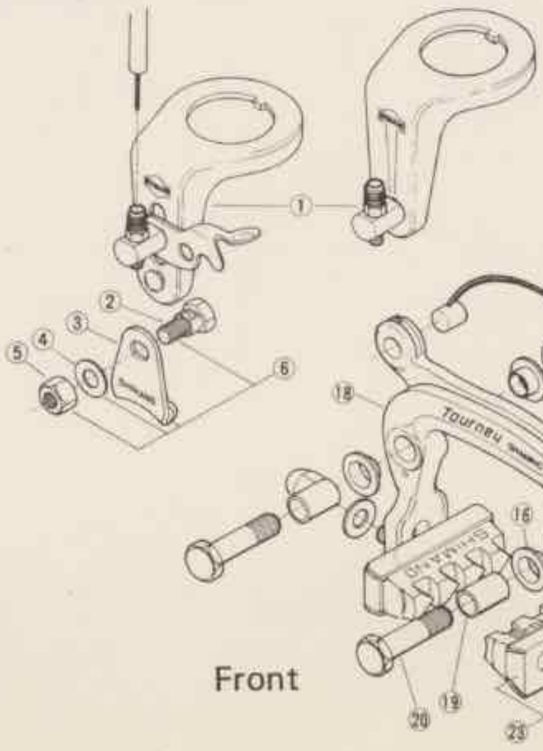
Weight: Model B-110, Front 6.0 oz.(170 g), Rear 6.3 oz.(180 g)
Model B-120, Front 6.5 oz.(185 g) Rear 6.2 oz.(175 g)
Material: Light Alloy
Type: Caliper Brake Center Pull

| Type | Model | A～A' | B | Use |
|---|---|---|---|---|
| CC-65 | B-110 | (1-7/8″) 47mm～(2-1/2″) 65mm | (2-5/16″) 59mm | 27″ |
| CC-75 | B-120 | (2-1/4″) 57mm～(3″) 75mm | (2-1/2″) 65mm | 26″ |

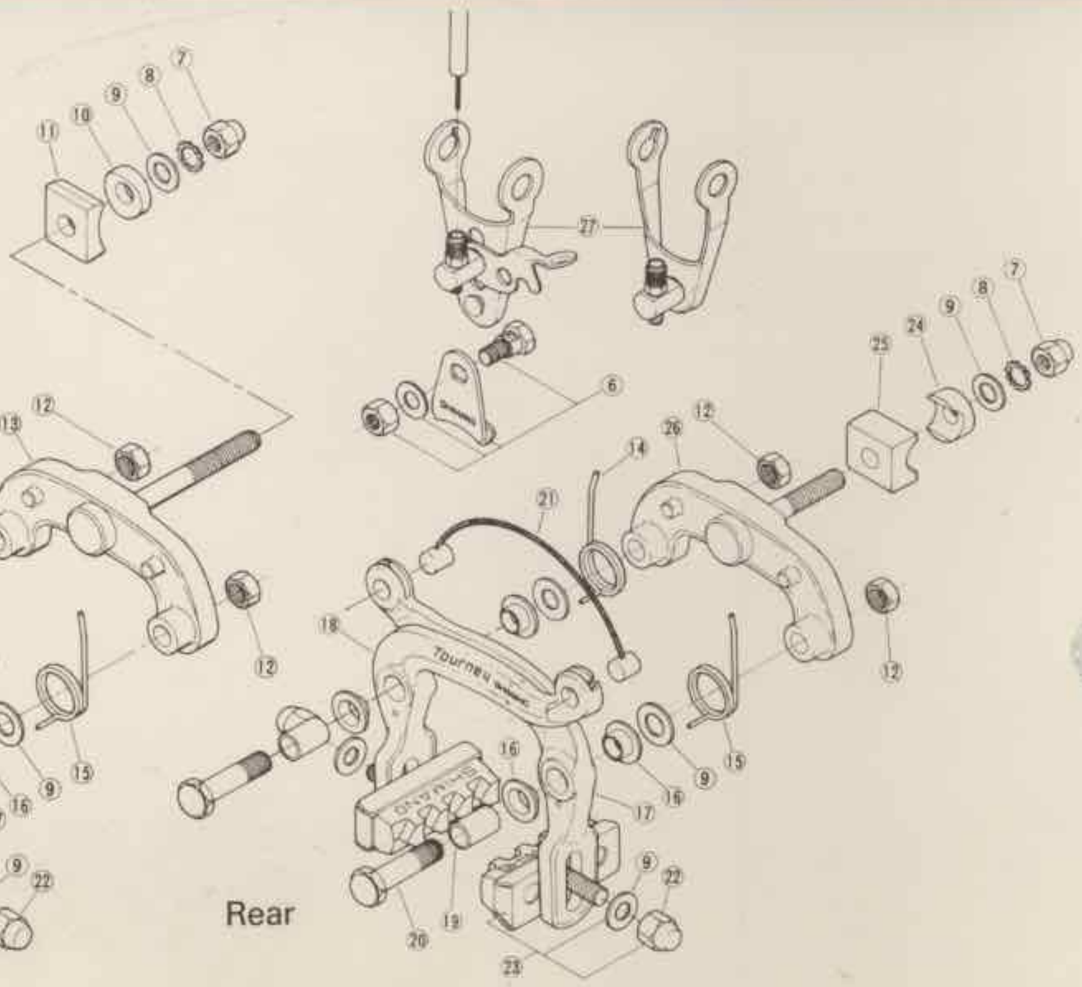


**PARTS LIST**

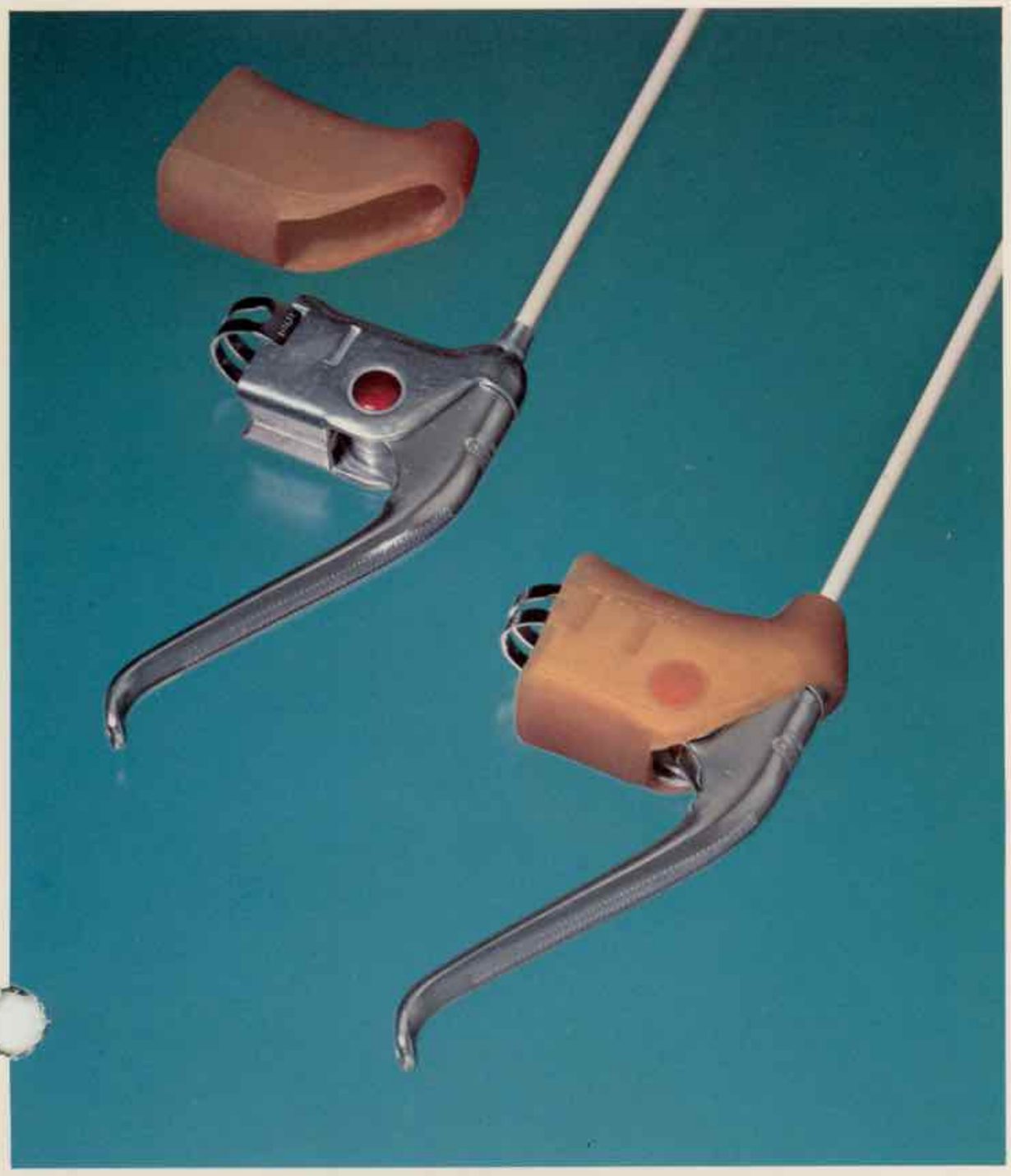
Front Cable Hanger Complete with Quick Release Unit
①..... 831 9004
Front Cable Hanger Complete
①..... 831 9005
Cable Anchor Bolt
②..... 831 5300
Cable Carrier
③..... 831 5200
Cable Anchor Washer
④..... 831 5400
Cable Anchor Nut
⑤..... 831 0700
Cable Carrier Complete
⑥..... 831 9010
Lock Nut for Center Bolt
⑦..... 831 3700
Toothed Lock Washer
⑧..... 811 6100
Washer.
⑨..... 831 0600
Concave Washer for Front Brake
⑩..... 811 6000
Square Concave Washer for Front Brake
⑪..... 831 3300
Lock Nut for Pivot Bolt
⑫..... 831 0700
Arm Bridge with Center Bolt 2-1/2″ (63mm)
⑬..... 831 9001
Arm Bridge with Center Bolt 2-3/4″ (71mm)
⑬..... 831 9002
L.H. Arm Return Spring
⑭..... 831 2101
R.H. Arm Return Spring
⑮..... 831 2100
Flanged Thrust Washer
⑯..... 831 0500
Inner Brake Arm CC-75 Type
⑰..... 831 0201
Inner Brake Arm CC-65 Type
⑰..... 831 0211
Outer Brake Arm CC-75 Type
⑱..... 831 0200
Outer Brake Arm CC-65 Type
⑱..... 831 0210
Bushing
⑲..... 831 0400
Pivot Bolt
⑳..... 831 0300
Center Cable 3-1/2″ (90mm)
㉑..... 831 5100
Cap Nut for Brake Shoe
㉒..... 831 4300
Brake Shoe Assembly
㉓..... 831 9009
(REAR)
R-Washer
㉔..... 811 6010
Square Concave Washer for Rear Brake
㉕..... 831 3400
Arm Bridge with Center Bolt 1-5/8″ (42mm)
㉖..... 831 9003
Rear Cable Hanger Complete with Quick Release Unit 7/8″ (23mm)
㉗..... 831 9006
Rear Cable Hanger Complete with Quick Release Unit 1-1/16″ (27mm)
㉗..... 831 9007
Rear Cable Hanger Complete 1-1/16″ (27mm)
㉗..... 831 9008




Front




Rear



BRAKE LEVERS

**Models M-110/M-120**

## HOODED LEVER

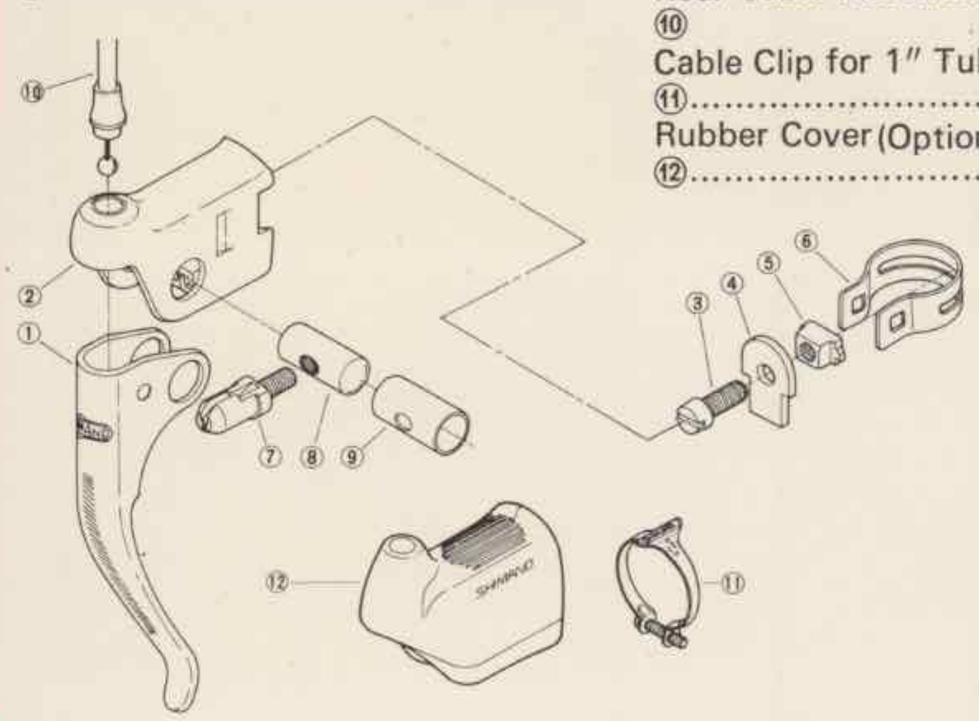
**SPECIFICATIONS**

Weight: 7.1 oz.(200 g)/Pair
Material: Light Alloy
Type :

| Model | Lever Clamp Diameter |
|---|---|
| M-110 | 22.2 $\phi$ |
| M-120 | 23.8 $\phi$ |

**PARTS LIST**

Lever
①..... 841 0600
Lever Bracket
②..... 841 0100
Pull up Bolt
③..... 841 0500
Pull up Plate
④..... 841 0200
Pull up Nut
⑤..... 841 0400
Clamp 7/8″ (22.2 mm)
⑥..... 841 0300
Clamp 15/16″ (23.8 mm)
⑥..... 841 0301
Cable Anchor Pin
⑦..... 841 1000
Stud for Pull up Bolt
⑧..... 841 0900
Sleeve
⑨..... 841 0700
Front Cable Assembly
⑩
Rear Cable Assembly
⑩
Cable Clip for 1″ Tube
⑪..... 831 9011
Rubber Cover (Option)
⑫..... 841 1100






BRAKE LEVERS

**Models M-210/M-220**

## DUAL EXTENSION LEVER

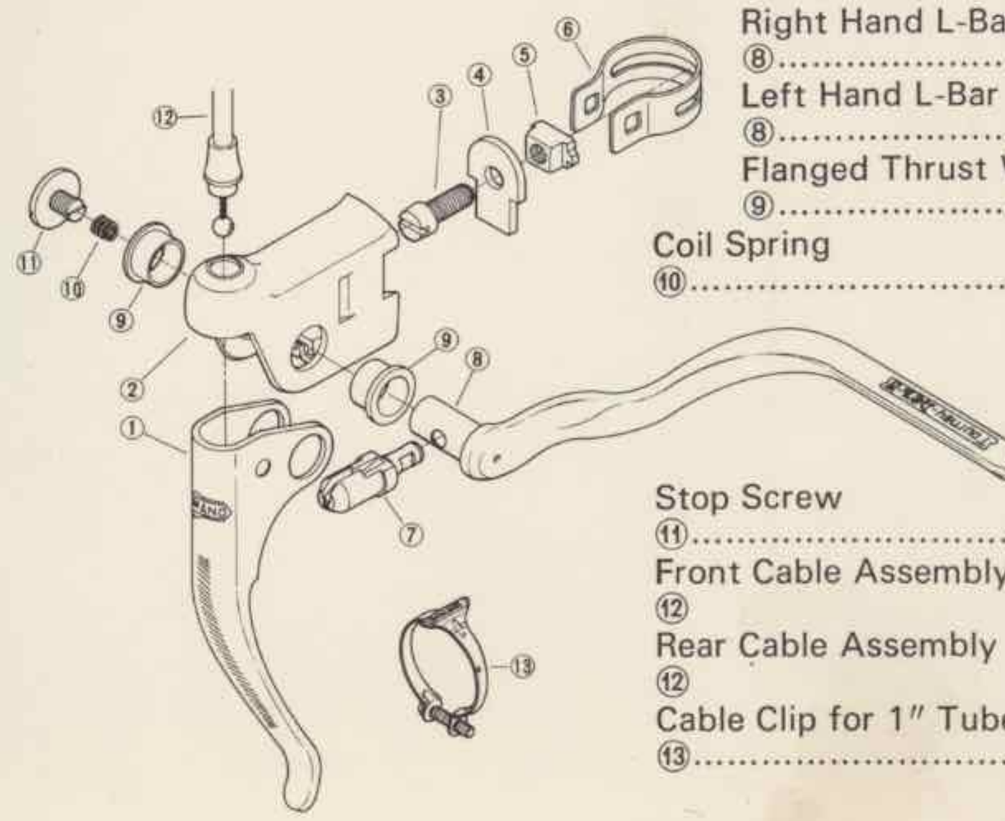
**SPECIFICATIONS**

Weight: 11.3 oz.(320 g)/Pair
Material: Light Alloy
Type :

| Model | Lever Clamp Diameter |
|---|---|
| M-210 | 22.2 $\phi$ |
| M-220 | 23.8 $\phi$ |

**PARTS LIST**

Lever
①..... 841 0600
Lever Bracket
②..... 841 0100
Pull up Bolt
③..... 841 0500
Pull up Plate
④..... 841 0200
Pull up Nut
⑤..... 841 0400
Clamp 7/8″ (22.2 mm)
⑥..... 841 0300
Clamp 15/16″ (23.8 mm)
⑥..... 841 0301
Cable Anchor Pin
⑦..... 842 1000
Right Hand L-Bar
⑧..... 842 0901
Left Hand L-Bar
⑧..... 842 0902
Flanged Thrust Washer
⑨..... 842 0700
Coil Spring
⑩..... 842 1100

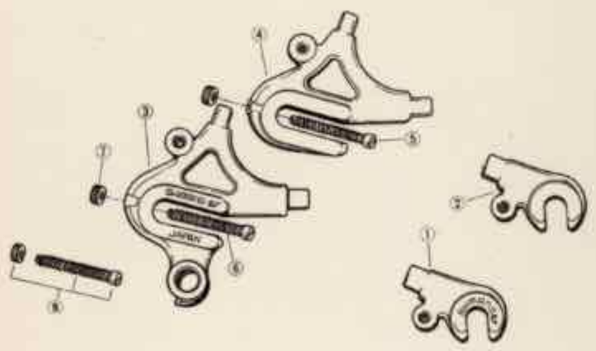



Stop Screw
⑪..... 842 1200
Front Cable Assembly
⑫
Rear Cable Assembly
⑫
Cable Clip for 1″ Tube
⑬..... 831 9011



FORK ENDS
**Model N-101**
SHIMANO-SF

**SPECIFICATIONS**
Material: Steel
Type: With Adjusting Bolt



**PARTS LIST**

| | |
|---|---|
| R.H. Front Fork End ① | 710 0100 |
| L.H. Front Fork End ② | 710 0200 |
| R.H. Rear End ③ | 710 0300 |
| L.H. Rear End ④ | 710 0400 |
| Adjusting Bolt ⑤ | 710 0500 |
| Adjusting Spring ⑥ | 710 0600 |
| Nut ⑦ | 710 0700 |
| Adjusting Bolt, Nut and Spring ⑧ | 710 9001 |



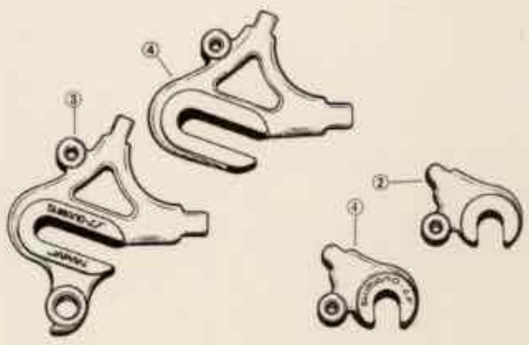
FORK ENDS
**Model N-103**
SHIMANO-TF

**SPECIFICATIONS**
Material: Steel
Type: Track Type



FORK ENDS
**Model N-102**
SHIMANO-LF

**SPECIFICATIONS**
Material: Steel
Type: Without Adjustinng Bolt



**PARTS LIST**

| | |
|---|---|
| R.H. Front Fork End ① | 710 0101 |
| L.H. Front Fork End ② | 710 0201 |
| R.H. Rear End ③ | 710 0301 |
| L.H. Rear End ④ | 710 0401 |

# SHIMANO SPOKE PROTECTOR



P-100



P-320



P-420



P-310



P-410

SPOKE PROTECTORS
**Models P-100/P-310/P-320/ P-410/P-420**

**SPECIFICATIONS**

| Model | Diameter | Use |
|---|---|---|
| P-100 | 4-1/2″ (110 mm) | 24 teeth |
| P-310 | 7-1/2″ (190 mm) | 28 teeth |
| P-320 | 5″ (123 mm) | |
| P-410 | 8-1/2″ (215 mm) | 34 teeth |
| P-420 | 5-1/2″ (145 mm) | |



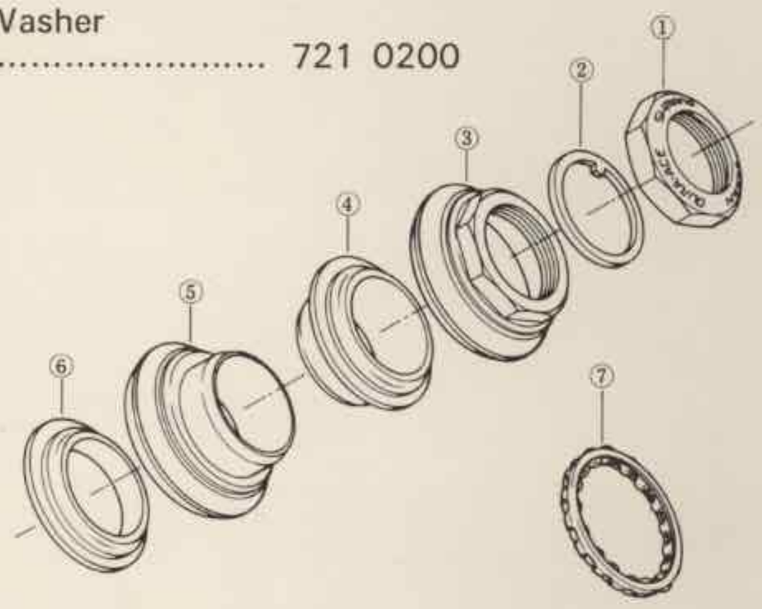
HEAD PARTS
**Model K-901**

## DURA-ACE

**SPECIFICATIONS**
Material: Chromium Bearing Steel
Type: Road Type

**PARTS LIST**

| | |
|---|---|
| Lock Nut ① | 721 0100 |
| Lock Washer ② | 721 0200 |
| Top Bearing Cup ③ | 721 0300 |
| Top Bearing Cone ④ | 721 0400 |
| Bottom Bearing Cup ⑤ | 721 0500 |
| Crown Cone ⑥ | 721 0600 |
| Ball Retainer ⑦ | 721 0700 |



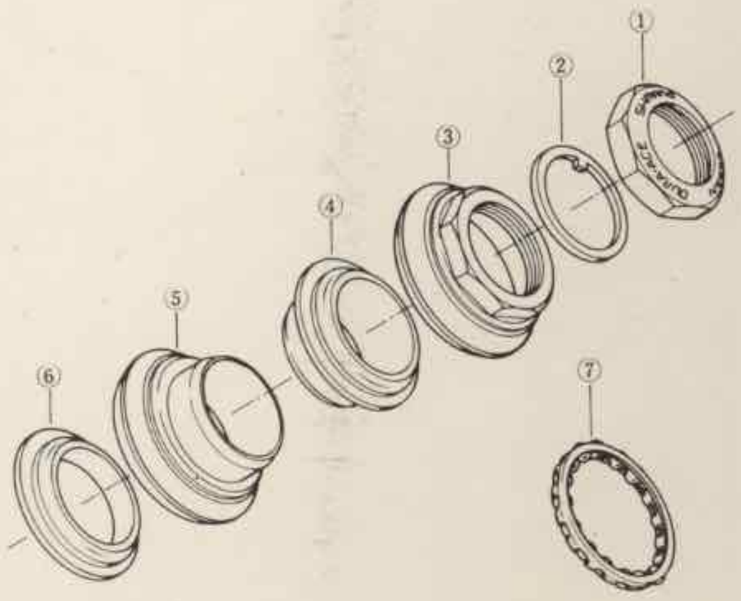



HEAD PARTS
**Model K-902**

**SPECIFICATIONS**
Material: Chromium Bearing Steel
Type: Track Type

**PARTS LIST**

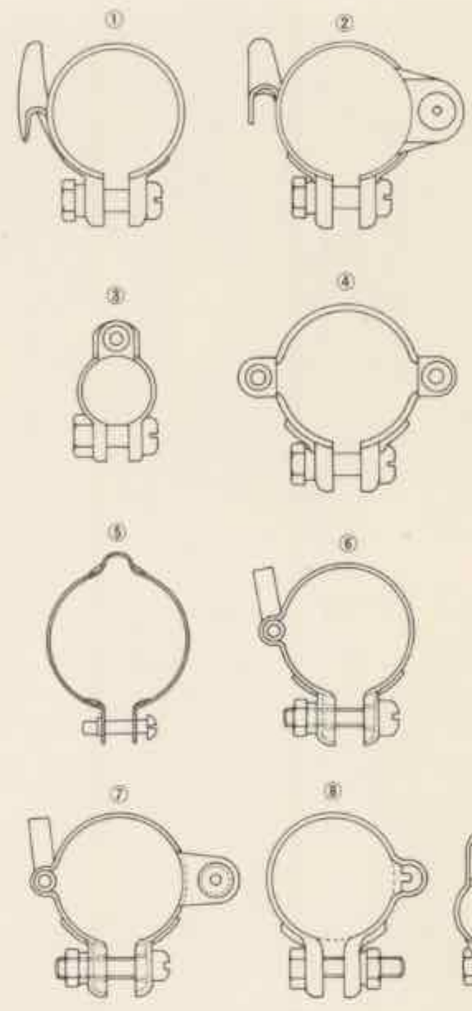
| | |
|---|---|
| Lock Nut ① | 721 0100 |
| Lock Washer ② | 721 0200 |
| Top Bearing Cup ③ | 722 0300 |
| Top Bearing Cone ④ | 721 0400 |
| Bottom Bearing Cup ⑤ | 722 0500 |
| Crown Cone ⑥ | 721 0600 |
| Ball Retainer ⑦ | 721 0700 |





## CABLE PARTS

**Model K-511**
CABLE GUIDE (1-1/8″)W.....②
**Model K-521**
CABLE STOP (5/8″) .....③
**Model K-524**
CABLE STOP (1-1/8″)W. .....④

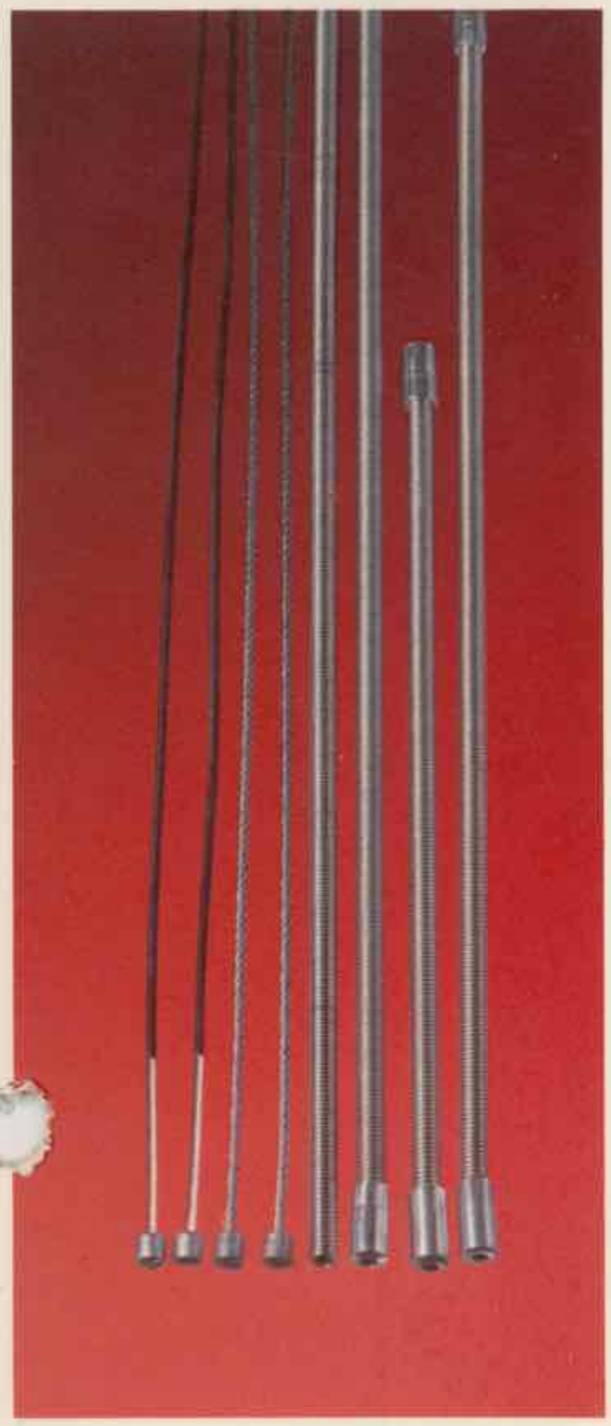


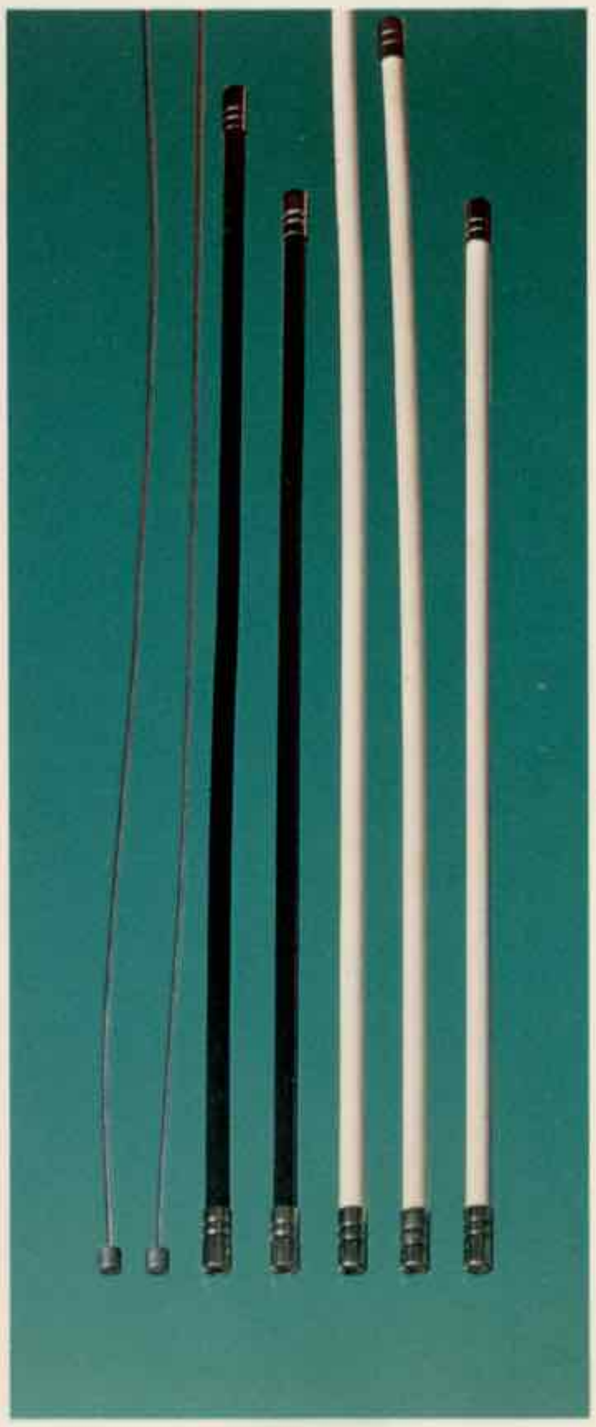



## CABLE PARTS

**Model K-512**
CABLE GUIDE (1-1/8″)S. .....①
**Model K-515**
CABLE GUIDE (1-1/8″)S. .....⑥
**Model K-514**
CABLE GUIDE (1″)S. .....①
**Model K-516**
CABLE GUIDE (1-1/8″)W.....⑦
**Model K-525**
CABLE STOP (5/8″) .....⑨
**Model K-523**
CABLE STOP (1-1/8″)S. .....⑧

**Model K-541**
OUTER BAND (1″) .....⑤
**Model K-522**
CABLE STOP (1/2″) .....⑨





## OUTER CASINGS & INNER CABLES

### STAINLESS OUTER CASING with BOTH CAPS
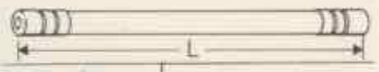



| Model | Length |
|---|---|
| W-601 | 170 mm |
| W-602 | 280 mm |

### STAINLESS OUTER CASING with ONE CAP
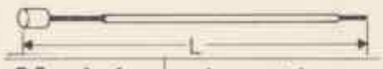



| Model | Length |
|---|---|
| W-621 | 600 mm |
| W-622 | 630 mm |
| W-623 | 670 mm |

### OUTER CASING with BOTH CAPS



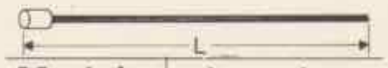

| Model | Length |
|---|---|
| W-501 | 180 mm |
| W-502 | 250 mm |
| W-503 | 280 mm |
| W-504 | 360 mm |
| W-505 | 530 mm |
| W-506 | 1,030 mm |
| W-507 | 1,360 mm |
| W-508 | 1,550 mm |

### COATED INNER CABLE (1.2 mm$\phi$)



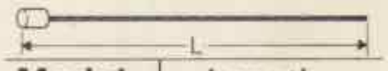

| Model | Length |
|---|---|
| W-121 | 1,800 mm |
| W-122 | 1,850 mm |
| W-123 | 1,900 mm |
| W-124 | 1,320 mm |
| W-125 | 1,360 mm |
| W-126 | 1,400 mm |

### INNER CABLE (1,5 mm$\phi$)




| Model | Length |
|---|---|
| W-641 | 1,180 mm |
| W-642 | 670 mm |

### INNER CABLE (1.2 mm$\phi$)

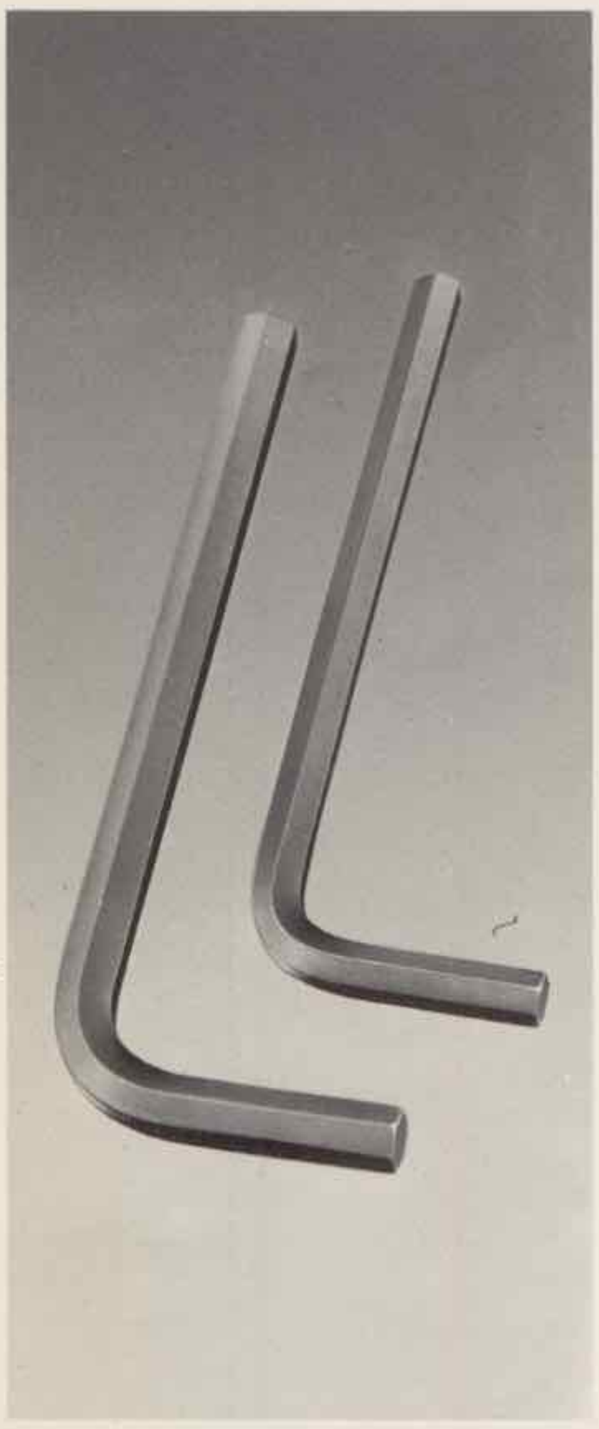



| Model | Length |
|---|---|
| W-101 | 670 mm |
| W-102 | 750 mm |
| W-103 | 1,030 mm |
| W-104 | 1,180 mm |
| W-105 | 1,360 mm |
| W-106 | 1,550 mm |
| W-107 | 1,650 mm |

### INNER CABLE (1.5 mm$\phi$)




| Model | Length |
|---|---|
| W-201 | 670 mm |
| W-202 | 750 mm |
| W-203 | 1,030 mm |
| W-204 | 1,180 mm |
| W-205 | 1,360 mm |
| W-206 | 1,550 mm |
| W-207 | 1,650 mm |



HEXAGON WRENCH KEYS
**Model X-101** (5mm)
**Model X-102** (6mm)



COTTERLESS CRANK EXTRACTOR
**Model X-701**

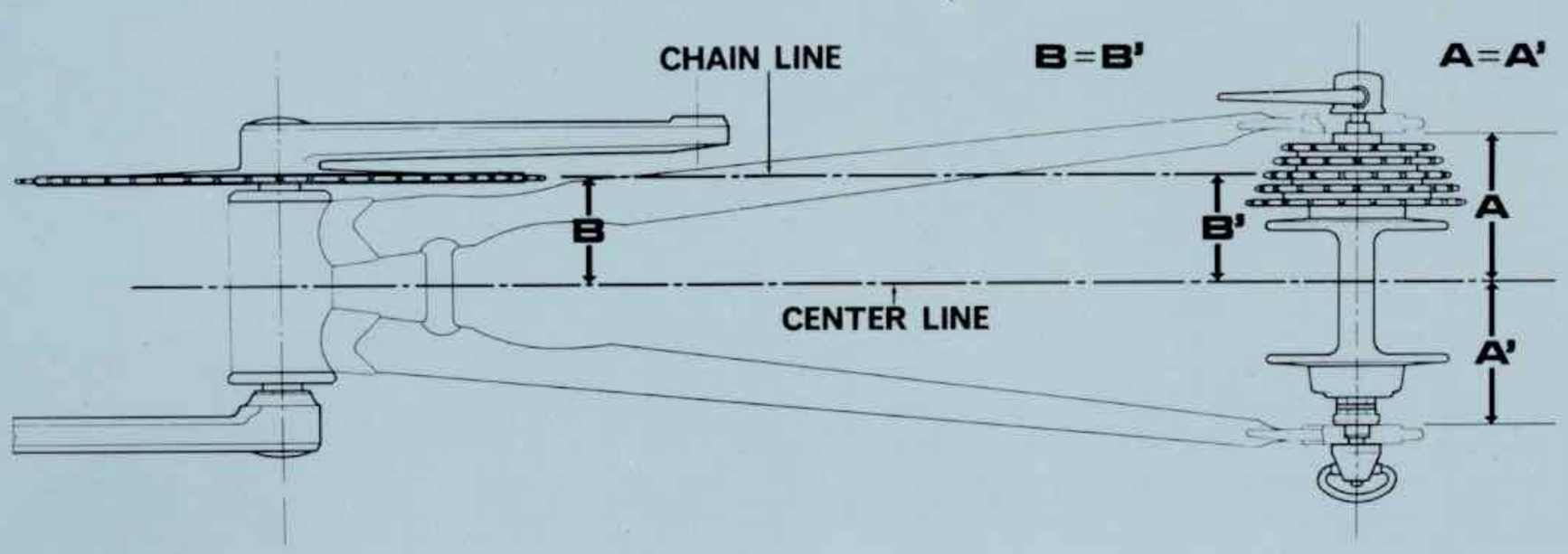


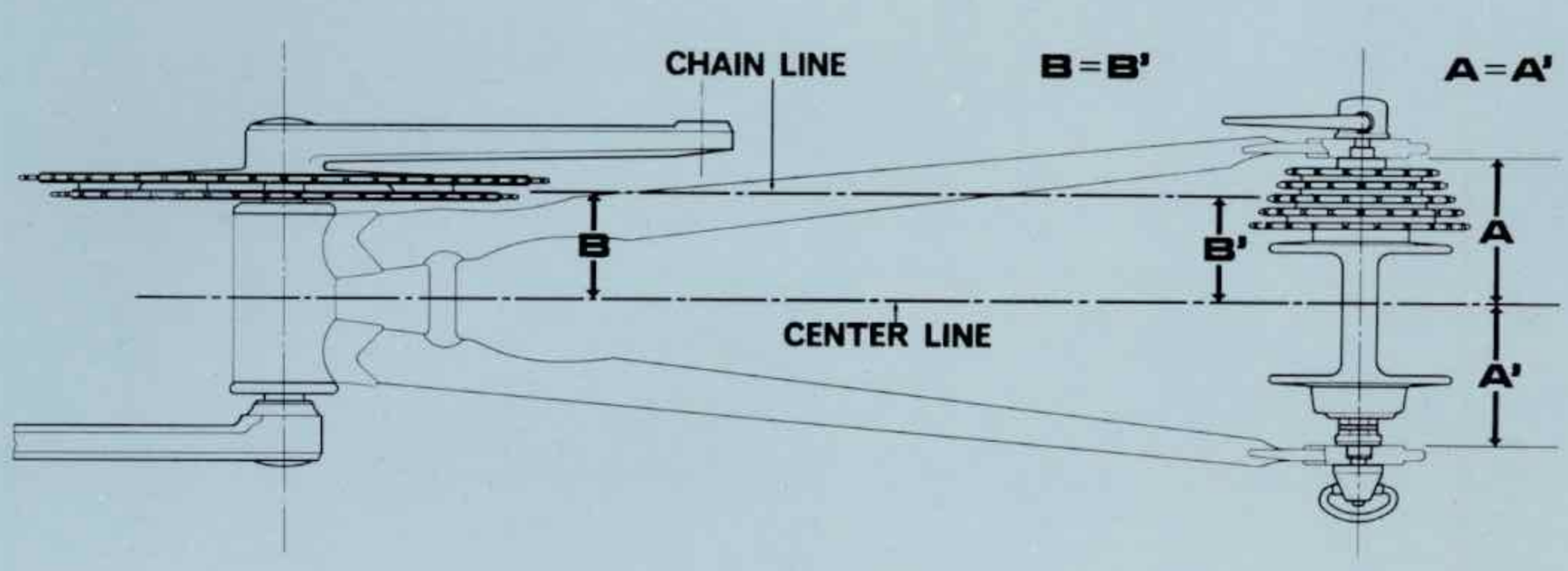
CHAINWHEEL SCREW PEG SPANNER
**Model X-702**



BOSS TYPE MULTIPLE FREEWHEEL REMOVAL TOOL
**Model X-401**

# CHAIN LINE


CHAIN LINE
B=B'
A=A'
B
B'
A
A'
CENTER LINE


CHAIN LINE
B=B'
A=A'
B
B'
A
A'
CENTER LINE

# GEAR TABLE

Blue Figures: with 27" Bicycle Wheel; Black Figures: with 26" Bicycle Wheel.

| | Chainwheel | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 54T | 52T | 50T | 49T | 48T | 47T | 46T | 45T | 44T | 42T | 40T | 39T | 38T | 36T |
| Rear Gear 13T | 112.2<br>108.0 | 108.0<br>104.0 | 103.8<br>100.0 | 101.8<br>98.0 | 99.7<br>96.0 | 97.6<br>94.0 | 95.5<br>92.0 | 93.5<br>90.0 | 91.4<br>88.0 | 87.2<br>84.0 | 83.1<br>80.0 | 81.0<br>78.0 | 78.9<br>76.0 | 74.8<br>72.0 |
| 14T | 104.1<br>100.3 | 100.3<br>96.6 | 96.4<br>92.3 | 94.5<br>91.0 | 92.6<br>89.1 | 90.6<br>87.3 | 88.7<br>85.4 | 86.8<br>83.6 | 84.9<br>81.7 | 81.0<br>78.0 | 77.1<br>74.3 | 75.2<br>72.4 | 73.3<br>70.6 | 69.4<br>66.6 |
| 15T | 97.2<br>93.6 | 93.6<br>90.1 | 90.0<br>86.7 | 88.2<br>84.9 | 86.4<br>83.2 | 84.6<br>81.5 | 82.8<br>79.7 | 81.0<br>78.0 | 79.2<br>76.3 | 75.6<br>72.8 | 72.0<br>69.3 | 70.2<br>67.6 | 68.4<br>65.9 | 64.8<br>62.4 |
| 16T | 91.1<br>87.8 | 87.8<br>84.5 | 84.4<br>81.3 | 82.7<br>79.6 | 81.0<br>78.0 | 79.3<br>76.4 | 77.6<br>74.8 | 75.9<br>73.1 | 74.2<br>71.5 | 70.9<br>68.2 | 67.5<br>65.0 | 65.8<br>63.4 | 64.1<br>61.8 | 60.8<br>58.5 |
| 17T | 85.8<br>82.6 | 82.6<br>79.5 | 79.4<br>76.5 | 77.8<br>74.9 | 76.2<br>73.4 | 74.6<br>71.9 | 73.1<br>70.4 | 71.5<br>68.8 | 69.9<br>67.3 | 66.7<br>64.2 | 63.5<br>61.2 | 61.9<br>59.6 | 60.4<br>58.1 | 57.2<br>55.1 |
| 18T | 81.0<br>78.0 | 78.0<br>75.1 | 75.0<br>72.2 | 73.5<br>70.8 | 72.0<br>69.3 | 70.5<br>67.9 | 69.0<br>66.4 | 67.5<br>65.0 | 66.0<br>63.6 | 63.0<br>60.7 | 60.0<br>57.8 | 58.5<br>56.3 | 57.0<br>54.9 | 54.0<br>52.0 |
| 19T | 76.7<br>73.9 | 73.9<br>71.2 | 71.1<br>68.4 | 69.6<br>67.1 | 68.2<br>65.7 | 66.8<br>64.3 | 65.4<br>62.9 | 63.9<br>61.6 | 62.5<br>60.2 | 59.7<br>57.5 | 56.8<br>54.7 | 55.4<br>53.4 | 54.0<br>52.0 | 51.2<br>49.3 |
| 20T | 72.9<br>70.2 | 70.2<br>67.6 | 67.5<br>65.0 | 66.2<br>63.7 | 64.8<br>62.4 | 63.4<br>61.1 | 62.1<br>59.8 | 60.8<br>58.5 | 59.4<br>57.2 | 56.7<br>54.6 | 54.0<br>52.0 | 52.6<br>50.7 | 51.3<br>49.4 | 48.6<br>46.8 |
| 21T | 69.4<br>66.8 | 66.8<br>64.4 | 64.3<br>61.9 | 63.0<br>60.7 | 61.7<br>59.4 | 60.4<br>58.2 | 59.1<br>57.0 | 57.9<br>55.7 | 56.6<br>54.5 | 54.0<br>52.0 | 51.4<br>49.5 | 50.1<br>48.3 | 48.9<br>47.0 | 46.3<br>44.6 |
| 22T | 66.3<br>63.8 | 63.8<br>61.5 | 61.4<br>59.1 | 60.1<br>57.9 | 58.9<br>56.7 | 57.7<br>55.5 | 56.5<br>54.4 | 55.2<br>53.2 | 54.0<br>52.0 | 51.5<br>49.6 | 49.1<br>47.3 | 47.9<br>41.6 | 46.6<br>44.9 | 44.2<br>42.5 |
| 23T | 63.4<br>61.0 | 61.0<br>58.8 | 58.7<br>56.5 | 57.5<br>55.4 | 56.3<br>54.3 | 55.2<br>53.1 | 54.0<br>52.0 | 52.8<br>50.9 | 51.7<br>49.7 | 49.3<br>47.5 | 47.0<br>45.2 | 45.8<br>44.1 | 44.6<br>43.0 | 42.3<br>40.7 |
| 24T | 60.8<br>58.5 | 58.5<br>56.3 | 56.2<br>54.2 | 55.1<br>53.1 | 54.0<br>52.0 | 52.9<br>50.9 | 51.8<br>49.8 | 50.6<br>48.8 | 49.5<br>47.7 | 47.2<br>45.5 | 45.0<br>43.3 | 43.9<br>42.2 | 42.8<br>41.2 | 40.5<br>39.0 |
| 25T | 58.3<br>56.2 | 56.2<br>54.1 | 54.0<br>52.0 | 52.9<br>51.0 | 51.8<br>49.9 | 50.8<br>48.9 | 49.7<br>47.8 | 48.6<br>46.8 | 47.5<br>45.8 | 45.4<br>43.7 | 43.2<br>41.6 | 42.1<br>40.6 | 41.0<br>39.5 | 38.9<br>37.4 |
| 26T | 56.1<br>54.0 | 54.0<br>52.0 | 51.9<br>50.0 | 50.9<br>49.0 | 49.8<br>48.0 | 48.8<br>47.0 | 47.8<br>46.0 | 46.7<br>45.0 | 45.7<br>44.0 | 43.6<br>42.0 | 41.5<br>40.0 | 40.5<br>39.0 | 39.5<br>38.0 | 37.4<br>36.0 |
| 27T | 54.0<br>52.0 | 52.0<br>50.1 | 50.0<br>48.1 | 49.0<br>47.2 | 48.0<br>46.2 | 47.0<br>45.3 | 46.0<br>44.3 | 45.0<br>43.3 | 44.0<br>42.4 | 42.0<br>40.4 | 40.0<br>38.5 | 39.0<br>37.6 | 38.0<br>36.6 | 36.0<br>34.7 |
| 28T | 52.1<br>50.1 | 50.1<br>48.3 | 48.2<br>46.4 | 47.2<br>45.5 | 46.3<br>44.6 | 45.3<br>43.6 | 44.4<br>42.7 | 43.4<br>41.8 | 42.4<br>40.9 | 40.5<br>39.0 | 38.6<br>37.1 | 37.6<br>36.2 | 36.6<br>35.3 | 34.7<br>33.4 |
| 30T | 48.6<br>46.8 | 46.8<br>45.1 | 45.0<br>43.3 | 44.1<br>42.5 | 43.2<br>41.6 | 42.3<br>40.7 | 41.4<br>39.8 | 40.5<br>39.0 | 39.6<br>38.1 | 37.8<br>36.4 | 36.0<br>34.7 | 35.1<br>33.8 | 34.2<br>32.9 | 32.4<br>31.2 |
| 32T | 45.6<br>43.9 | 43.9<br>42.2 | 42.2<br>40.6 | 41.3<br>39.8 | 40.5<br>39.0 | 39.7<br>38.2 | 38.8<br>37.4 | 38.0<br>36.6 | 37.1<br>35.8 | 35.4<br>34.1 | 33.8<br>32.5 | 32.9<br>31.7 | 32.1<br>30.9 | 30.4<br>29.2 |
| 34T | 42.9<br>41.3 | 41.3<br>39.8 | 39.7<br>38.2 | 38.9<br>37.4 | 38.1<br>36.7 | 37.3<br>35.9 | 36.5<br>35.2 | 35.7<br>34.4 | 34.9<br>33.6 | 33.4<br>32.1 | 31.8<br>30.6 | 31.0<br>29.8 | 30.2<br>29.1 | 28.6<br>27.5 |

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**SHIMANO AMERICAN CORPORATION**
1133 Avenue of the Americas, New York,
N.Y. 10036 U.S.A. Tel. 212-586-2350
**SHIMANO (EUROPA) GmbH.**
4, Düsseldorf, Hüttenstrasse 5,
West Germany, Tel. 12541 & 12542
**SHIMANO INDUSTRIAL CO.,LTD.**
3-77, Oimatsucho, Sakai, Osaka, Japan
Tel. 0722-45-0333

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Printed in Japan