TECHNICAL INFORMATION

SHIMANO

DEORE XT

SHIMANO DEORE XT SERIES

Derailleur Set

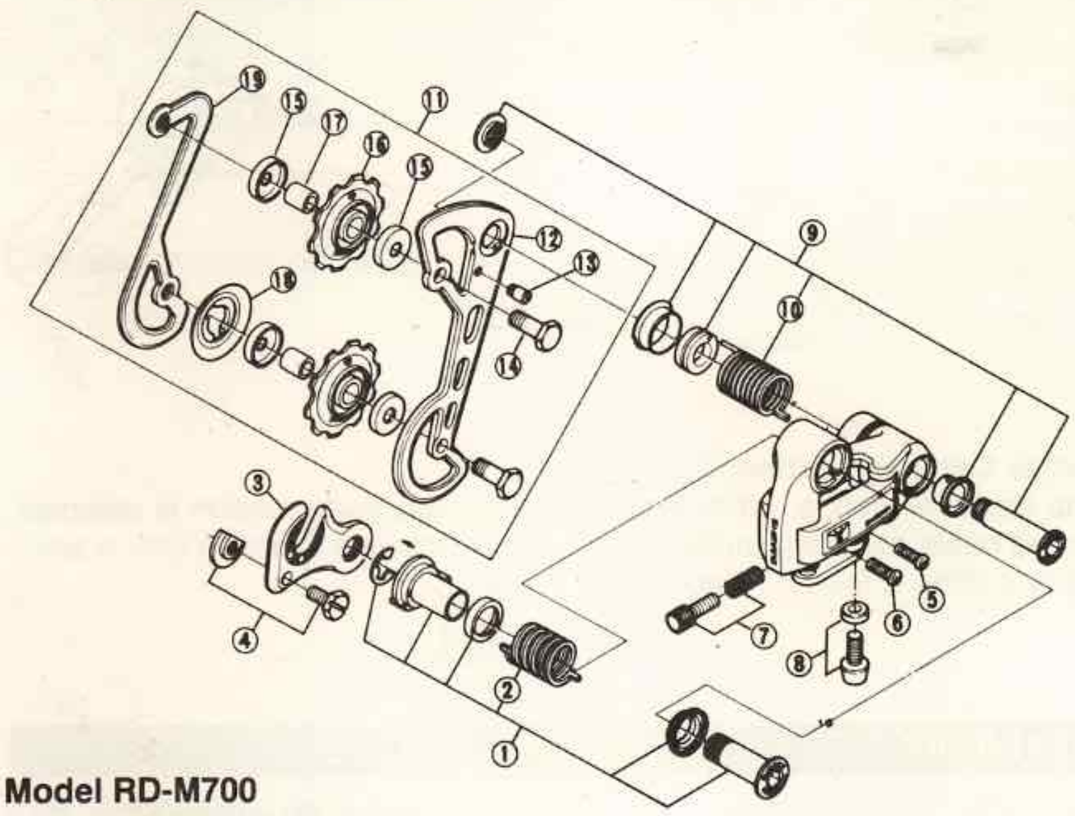


RD-M700 Rear Derailleur
FD-M700 Front Derailleur
SL-M700 Shifting Lever

Features:

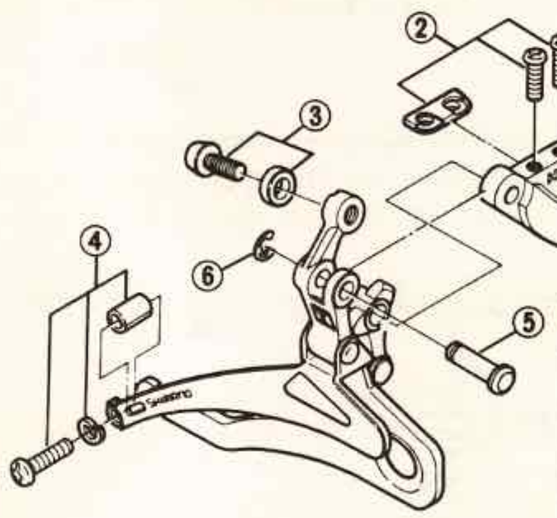
- The derailleur is now designed to have an expanded capacity.
- The derailleur employs sealed mechanisms to protect the internal mechanisms from mud and water.
- The rear derailleur Centeron Mechanism automatically centers to the selected gear during gear changing, thereby eliminating the need for fine adjustment.
- The front derailleur uses the Trap-Ease Mechanism for high shifting performance.
- The front derailleur can be used with a triple chainwheel.
- The shifting lever incorporates a one-way clutch mechanism which allows movement in both directions with an equal amount of effort.

☐ Exploded View and Parts List



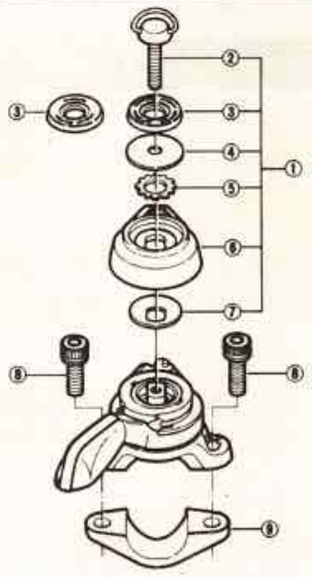
Model RD-M700

ITEM NO.	PART NO.	DESCRIPTION			
1	3-569 9806	Bracket Axle Assembly	11	3-569 9805	Pulley Plate Assembly
2	569 0300	B-Tension Spring	12	569 0200	Outer Plate
3	541 2701	Adapter	13	544 1700	Plate Stopper Screw
4	3-525 9069	Adapter Screw & Nut	14	569 0800	Pulley Bolt (M5)
5	582 3001	Stroke Adjusting Screw (M4x12)	15	511 2700-1	Pulley Cap
6	542 0501	Stroke Adjusting Screw (M4x14.5)	16	521 3100	Pulley
7	3-541 9002	Cable Adjusting Barrel & Spring	17	511 2900	Pulley Bushing
8	3-571 9004	Cable Fixing Plate & Bolt	18	534 2500	S.B. Cap
9	3-569 9807	Plate Axle Assembly	19	569 0500	Inner Plate
10	569 0400	P-Tension Spring			



Model FD-M700

ITEM NO.	PART NO.	DESCRIPTION
1	3-586 9023	Clamp Bolt & Nut
2	3-594 9802	Stroke Adjusting Screw (M4x12) & Plate
3	3-571 9004	Cable Fixing Bolt (M5x8) & Plate
4	3-578 9802	Roller & Roller Fixing Screw
5	586 3600	Link Axle
6	582 3600	Stop Ring



Model SL-M700

ITEM NO.	PART NO.	DESCRIPTION
1	3-639 9802	Cover Unit
2	3-683 9001-1	Lever Fixing Bolt
3	639 0601	Cap
4	639 0700	Spacer B
5	639 0800	Teethed Washer
6	639 0100	Cover
7	681 3500	Washer B
8	585 3301	Clamp Bolt
9	3-639 9803	Lever Band

☐ Specifications

- Rear Derailleur

Capacity:	Rear largest sprocket/34 teeth or less Total capacity (front difference plus rear difference)/ 40 teeth or less
Weight:	230g. (8.2 oz.)
Material:	Light alloy
Type:	Centeron Mechanism

- Front Derailleur

Capacity:	22 teeth or less [difference between the large and the small gear] 8 teeth or more [difference between the large and the middle gear (triple gear type) or between the large and the small gear (double gear type)
Weight:	120g. (4.2 oz.)
Material:	Light alloy, steel
Clamp diameter:	28.6mm (1-1/8″)

- Shifting Lever

Weight:	212g. (7.5 oz.) (as a pair)
Material:	Light alloy
Clamp diameter:	22.2mm (7/8″)

Note:

- SL-M700 Centeron type shifting lever must be used in combination with a rear derailleur which employs the Centeron Mechanism.

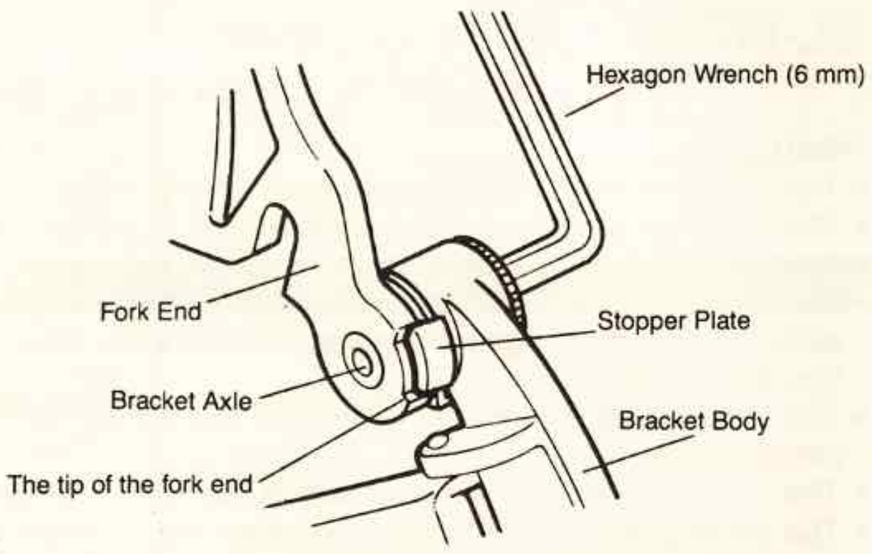
Rear Derailleur Assembly

Frame Assembly

1. Assemble the rear derailleur bracket axle to the fork end by means of the hexagon wrench (6mm). Then tighten the bracket axle pushing the bracket body forward so that the stopper plate can be set to the tip of the fork end. When tightening is completed, release the bracket body. And ensure that the stopper plate makes proper contact with the tip of fork end. (Diagram 1)

Tightening Torque: 80~100 kgfcm (70~85 in. lbs.)

Diagram 1



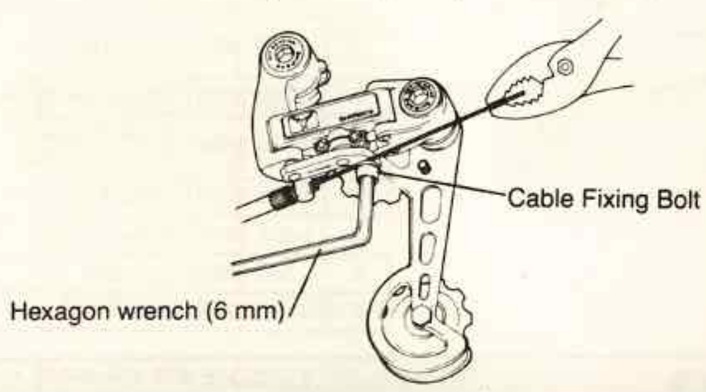
2. After assembly, confirm that the stopper plate is touching the fork end tip. (Diagram 1)
3. Set the chain. Refer to "chain assembly" for the length of the chain to be set.

Cable Assembly

- After assembling the shifting lever, fix the cable. Release cable slack by pliers or similar instrument, and then tighten the fixing bolt. Make sure at this time that the shifting lever is in top gear position. (Diagram 2)

Tightening torque: 40~60 kgfcm (35-53 in. lbs.)

Diagram 2



Stroke Adjustment

- **"H" (Top) Side adjustment**
  If the chain comes off the top gear (smallest gear) when the shifting lever is set to the top gear position, turn the adjusting screw "H" in a clockwise direction until a satisfactory setting is found. Conversely, if the chain does not move to the top gear or difficulty is experienced, turn the adjusting screw "H" in a counter-clockwise direction. (Diagrams 3, 4)
- **"L" (Low) side adjustment**
  If the chain comes off the lowest gear (largest gear) when the shifting lever is set to the low position, turn the adjusting screw "L" in a clockwise direction until a satisfactory setting is found.
  Conversely, if the chain does not move to the low gear or difficulty is experienced, turn the adjusting screw "L" in a counter-clockwise direction. (Diagrams 3, 4)

Diagram 3

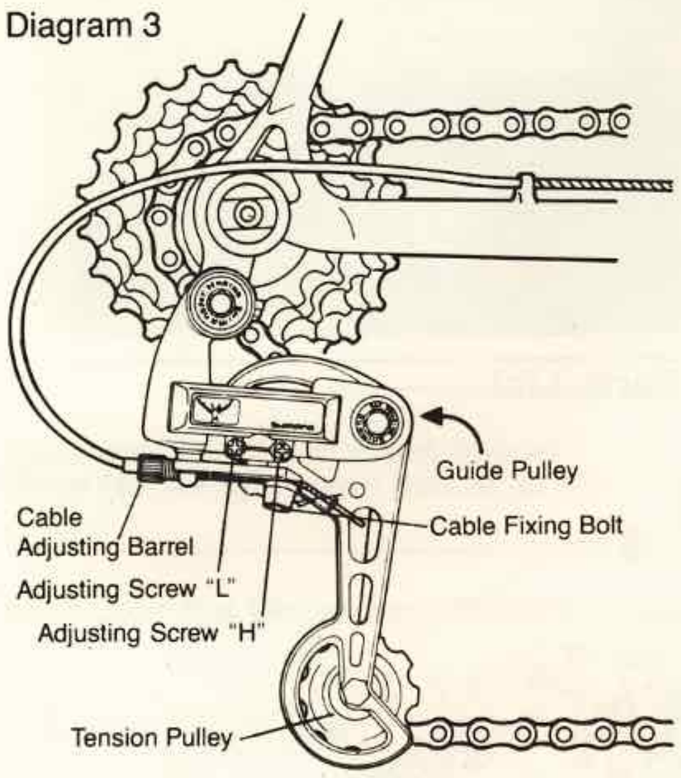
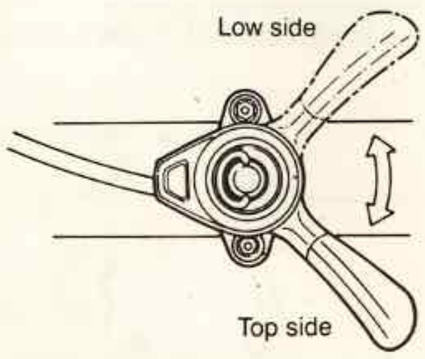


Diagram 4



Precise Cable Adjustment

If the cable tension is rather loose when the top gear position is selected, turn the cable adjusting barrel in a counter-clockwise direction until a satisfactory setting is found. (Diagram 3)

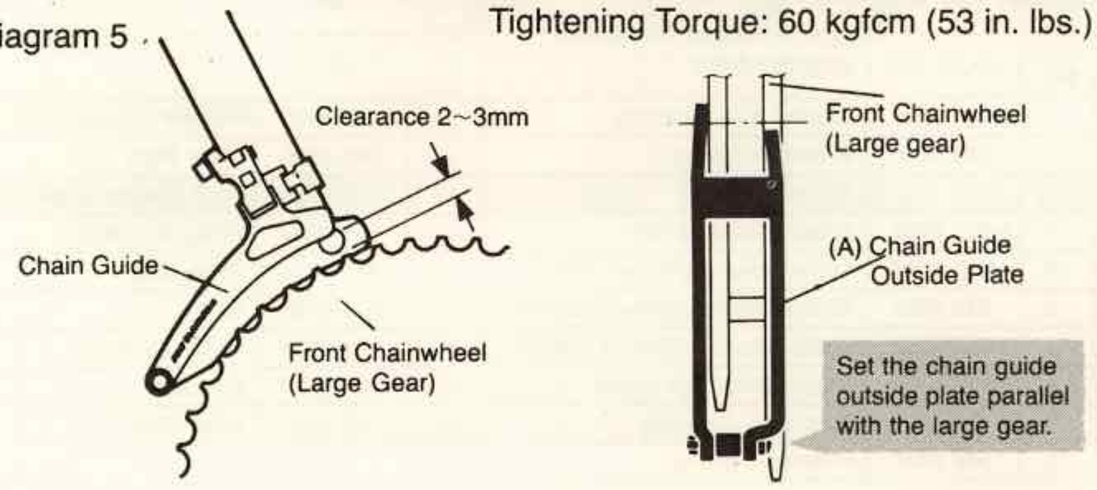
Front Derailleur Assembly

Assembly to Frame

1. Fix the clamp band to the seat tube temporarily by tightening the clamp bolt by hand. (Diagram 5)
2. And then adjust the clearance between the chain guide outside plate, as viewed from the side, and the front chainwheel large gear to between 2~3mm. (Diagram 5)
3. Next, when seen from above, adjust the chain guide position. Position the chain guide outside plate (A) exactly above the front chainwheel large gear. (Diagram 5)
4. Finally, tighten the clamp bolt with the 6mm hexagon wrench spanner. (Diagram 5)

Diagram 5

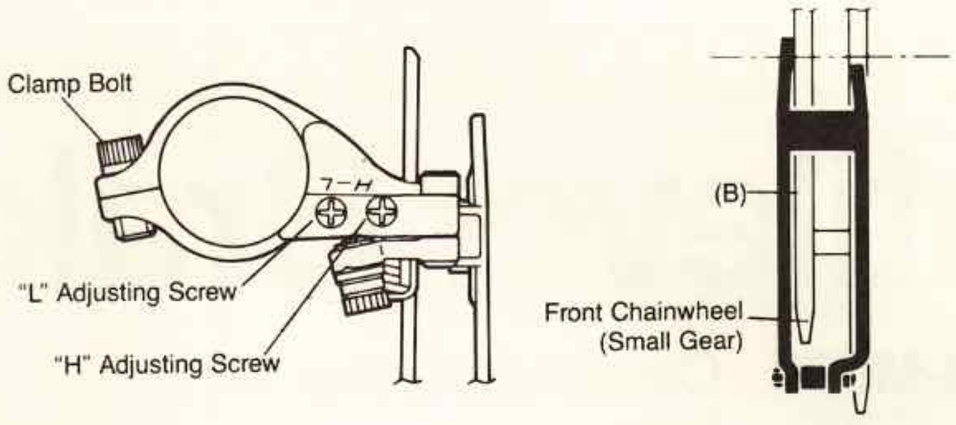
Tightening Torque: 60 kgfcm (53 in. lbs.)



Cable Assembly
Before fixing the cable, remove cable slack using pliers etc., and tighten the fixing bolt. The shifting lever should be set at the low position.

Tightening torque: 40~60 kgfcm (35-53 in. lbs.)

Diagram 6

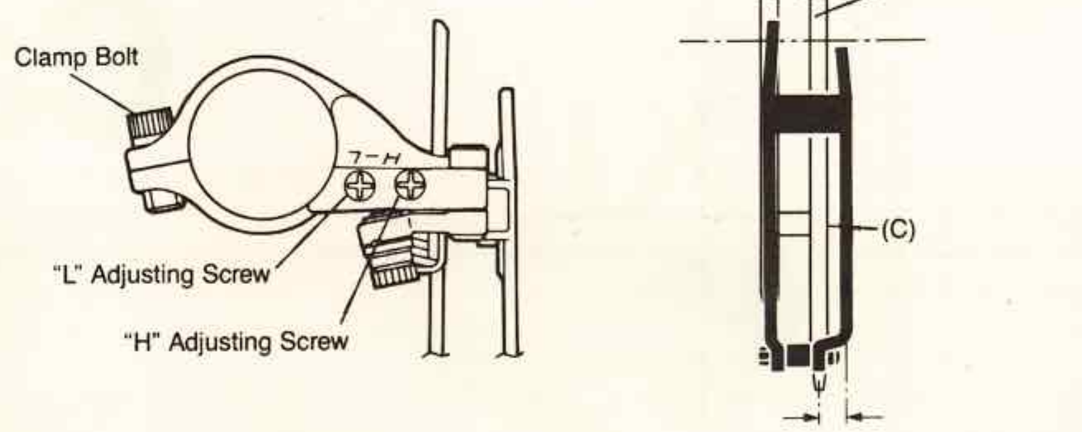


Stroke Adjustment

- **"L" (Low) side adjustment**
  Put the chain on the front chainwheel small gear and the largest gear of the freewheel. Then adjust the clearance between the chain and the chain guide inside plate (B) to a minimum by turning the "L" adjusting screw, making sure that there is no contact between the two. Turn the "L" adjusting screw in a clockwise direction for the chainguide to move toward the large gear. (Diagram 6)

- **"H" (Top) side adjustment**
  Put the chain on the front chainwheel large gear and on the smallest gear of the freewheel. Then adjust the clearance between the chain and the chain guide inside plate (C) to a minimum by turning the "H" adjusting screw, making sure there is no contact between the two. Turn the "H" adjusting screw in a clockwise direction for the chain guide to move toward the small gear. (Diagram 7)

Diagram 7



Chain Assembly

- The Length of the chain varies depending on the number of teeth of the largest gear of the freewheel. Set the chain in the following manner.
- **In the case of a freehub or freewheel with 28 teeth or less:**
  Put the chain on the smallest sprocket of the freehub and on the largest sprocket of the front chainwheel. Adjust the length of the chain by checking that the center line connecting the rear derailleur guide pulley and the tension pulley is at right angles to the ground. (Diagram 8)
- **In the case of a freehub or freewheel with 29 teeth or more, or the front chainwheel is a triple gear:**
  Put the chain on the largest front chainwheel and the largest rear sprocket of the freehub. Stretch the chain to the limit of the derailleur and add 2 chain links. (Diagram 9)

Diagram 8

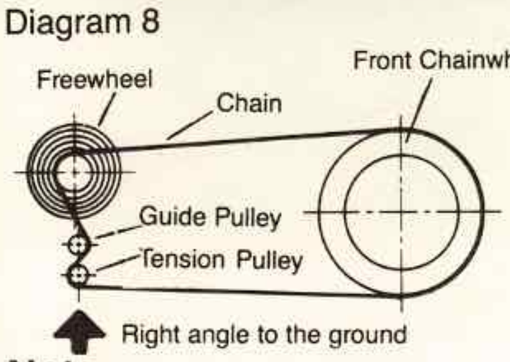
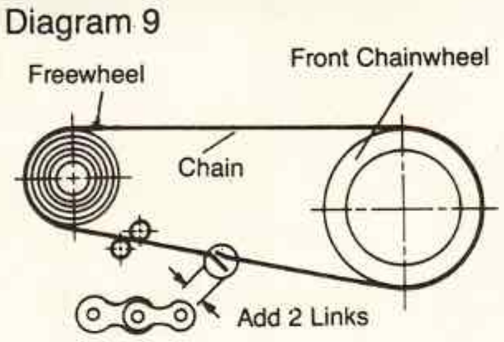


Diagram 9

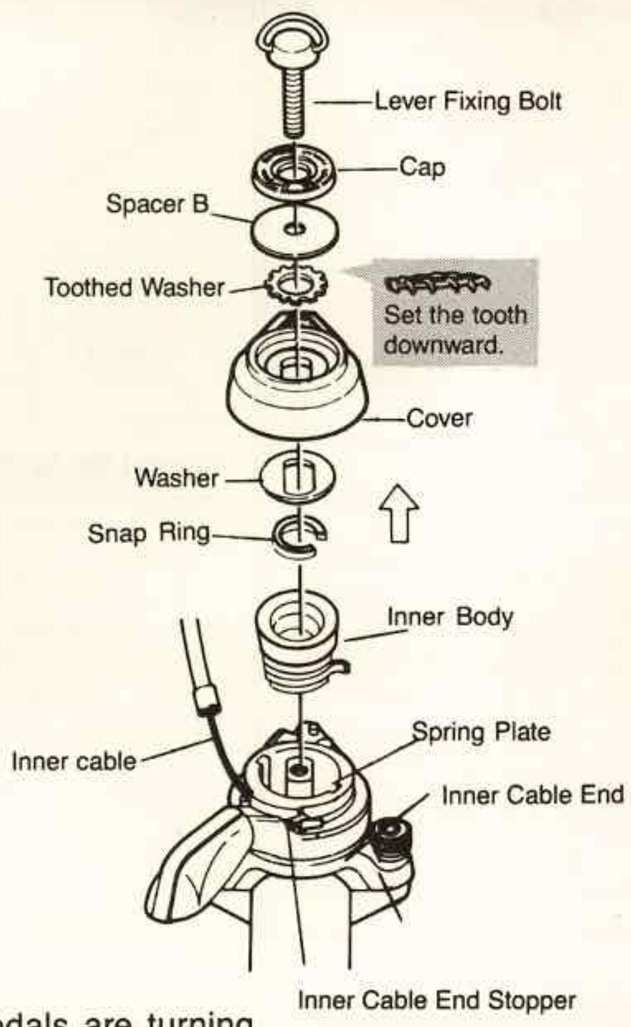


Note:
Where the total capacity is 40T, it may be impossible to establish the above setting due to the effect of the frame dimensions. In such a case, either move back the hub axle or remove two links from the chain and reset the chain.

Cable Replacement

1. Remove the lever fixing bolt and replace the cable. (Diagram 10)
2. Firmly hook the inner cable end of the new cable on the inner cable end stopper replacing the cover, then, tighten the lever fixing bolt.

Diagram 10



Note:
- Shifting Lever operation should only be while the pedals are turning forward.
- Insufficient oil on the derailleur will impede smooth operation at times, so oil all rotating and other necessary parts at regular intervals.

Lever Conversion–Centeron to Friction

The Deore XT lever has been designed to work with either Centeron derailleurs or standard friction derailleurs. To make this conversion, please follow these steps:

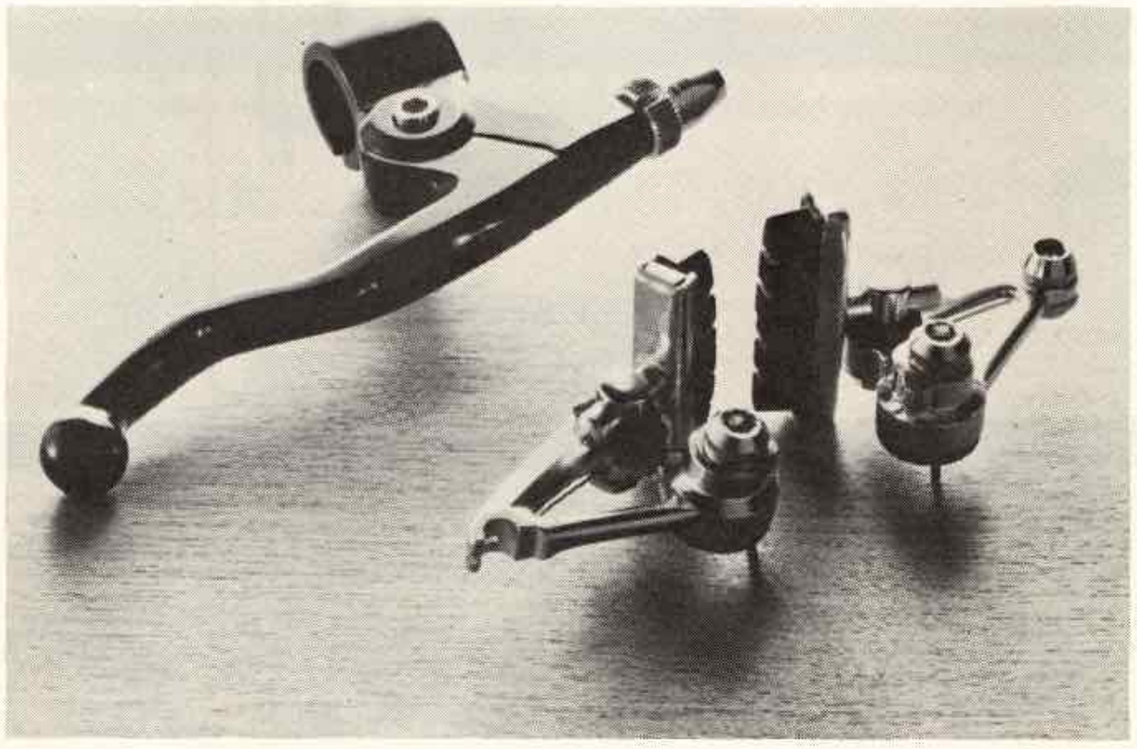
1. Disassemble lever as shown in Diagram 10 in center.
2. Remove snap ring carefully using screwdriver or snap ring pliers. Be careful not to spread or damage this snap ring.
3. Lift inner body off spring plate. In spring plate you will see two grooves. By putting the spring tip found on the inner body into the wide groove, the lever will function in the Centeron mode. By putting the spring tip in the narrow groove, lever will function in the standard friction mode.
4. Reassemble according to Diagram 10.

Caution: Please be careful when removing snap ring. If ring is spread too much during removal, it must be squeezed together into its original shape to insure secure assembly.

SHIMANO

DEORE XT

SHIMANO DEORE XT SERIES
Cantilever Brake



BR-MC70 Cantilever Brake
BL-M700 Brake Lever

Features

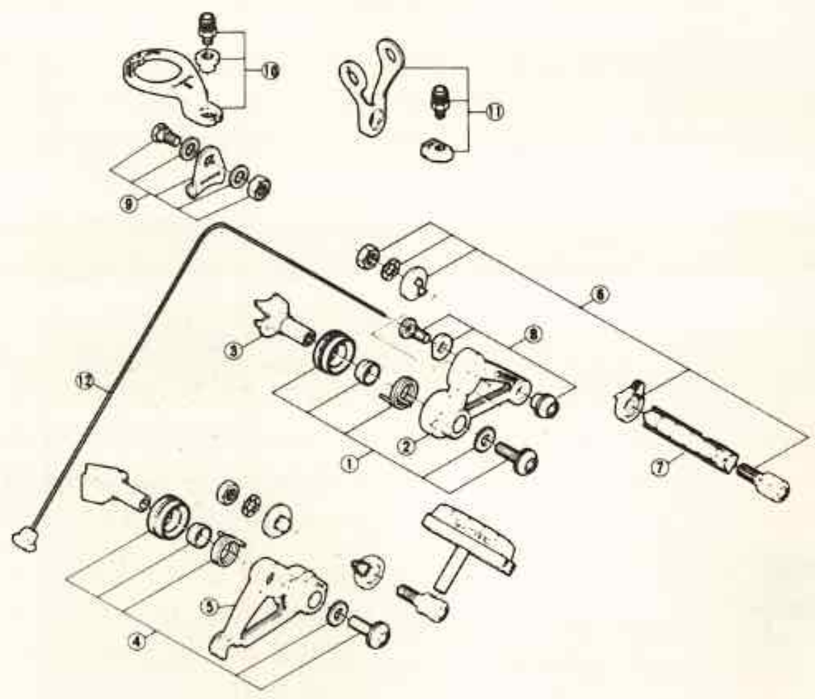
Brake Lever

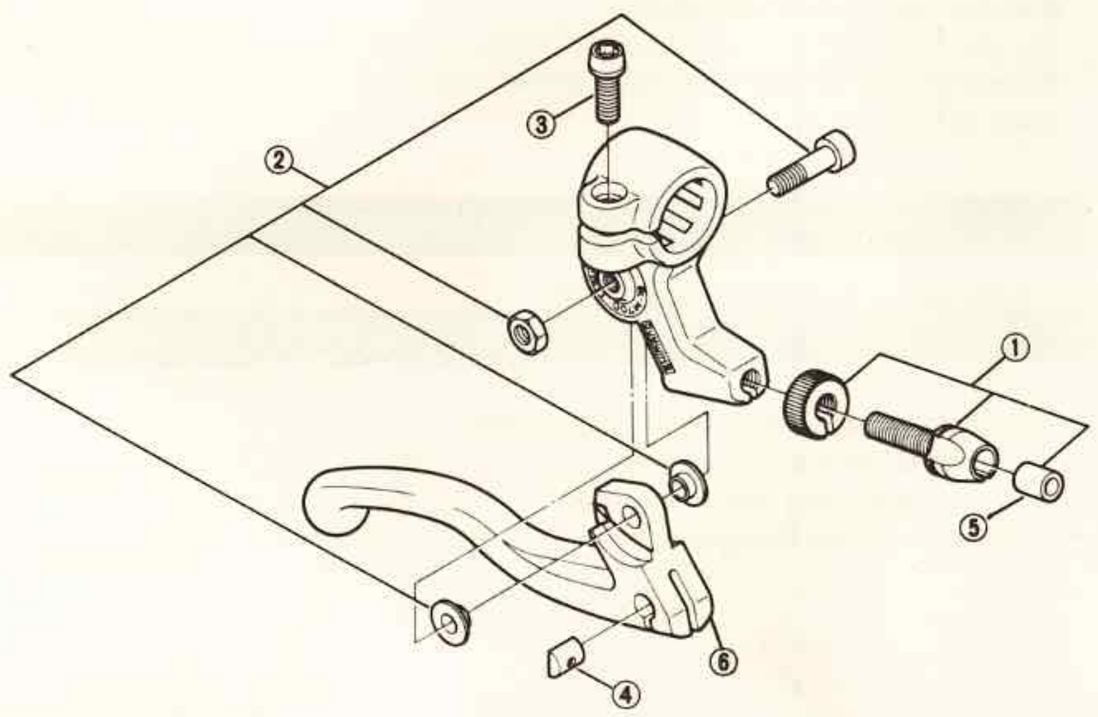
- The large brake lever is easy to hold and stable in operation.
- A motor bike cable can also be used with the brake lever.

Cantilever Brake

- It is easier to adjust the clearance between the brake shoes and the rim because the center wire can be freely adjusted.
- The control washer adjustment allows precise alignment of the brake shoes and rim, resulting in a minimum of noise caused by the rubbing of the brake shoes against the wheel.
- The wave washer on the brake shoe fixing part simplifies brake shoe angle adjustment.
- The convenient center wire design, with one easily detached end, allows the wheel to be easily and quickly removed and replaced.
- The spring cap has an improved water and dust proof seal.

☐ Exploded View and Parts List





Model BR-MC70

ITEM NO.	PART NO.	DESCRIPTION			
1	3-861 9801	Fixed Link Fixing Bolt Unit	7	3-861 9806	Brake Shoe
2	3-861 9802	Fixed Link w/Bush	8	3-861 9807	Wire Fixing Bolt Unit
3	862 1500	Front Mounting Shaft	9	3-831 9010	Cable Carrier Assembly
	862 1600	Rear Mounting Shaft	10	3-831 9078	Front Cable Hanger Assembly
4	3-861 9803	Hooked Link Fixing Bolt Unit	11	3-831 9079	Rear Cable Hanger Assembly
5	3-861 9804	Hooked Link w/Brush	12	862 1401	Center Wire
6	3-861 9805	Brake Shoe Assembly Without Brake Shoe			

Model BL-M700

ITEM NO.	PART NO.	DESCRIPTION			
1	3-893 9801	Cable Adjusting Bolt Unit	4	893 0900	Wire End Adapter
2	3-893 9802	Lever Axle Bolt Unit	5	893 0800	Ferrule for Standard Brake Cable
3	000 1303	Clamp Bolt (M6x17.5)	6	893 0200	Left Hand Lever
				893 0100	Right Hand Lever

☐ Specifications

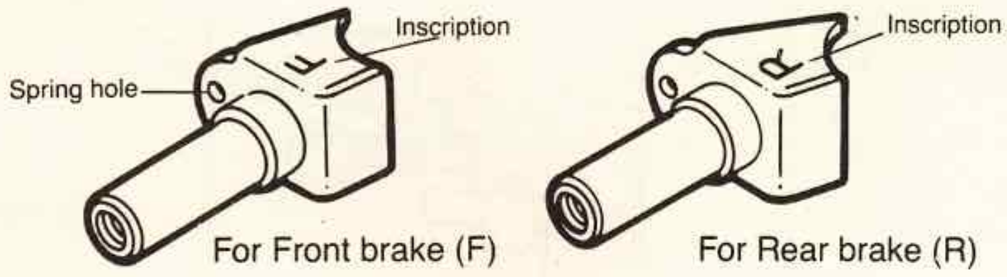
- Cantilever Brake Model BR-MC70
  Weight: 260g
  Material: Light Alloy & Steel

- Brake Lever Model BL-M700
  Weight: 350g Pair
  Material: Light Alloy
  Lever Clamp Diameter: 7/8″ (22.2mm)

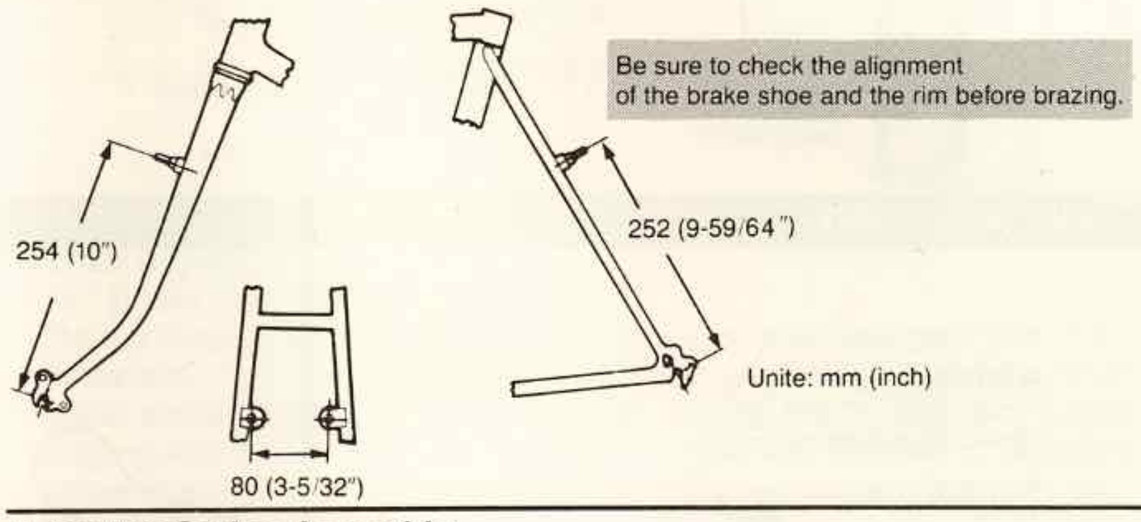
Cantilever Brake Assembly

1. Mounting Shaft Assembly

- The mounting shaft should be brazed onto the frame, with the spring holes facing inwards.

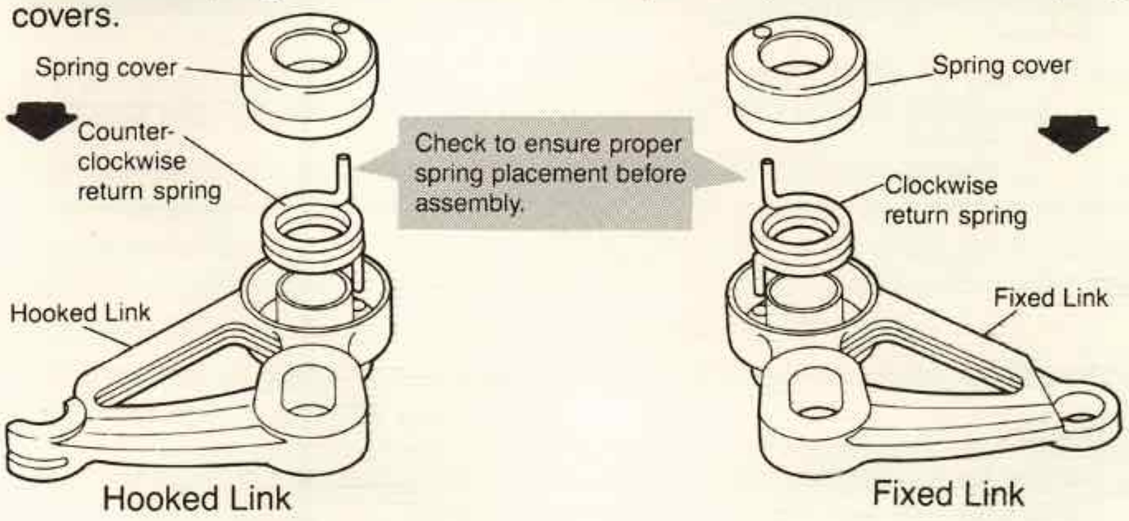


- The brazing points for the mounting shaft differ according to the shape of the frame. The brazing points in the following diagram are for a standard size 26″ rim.



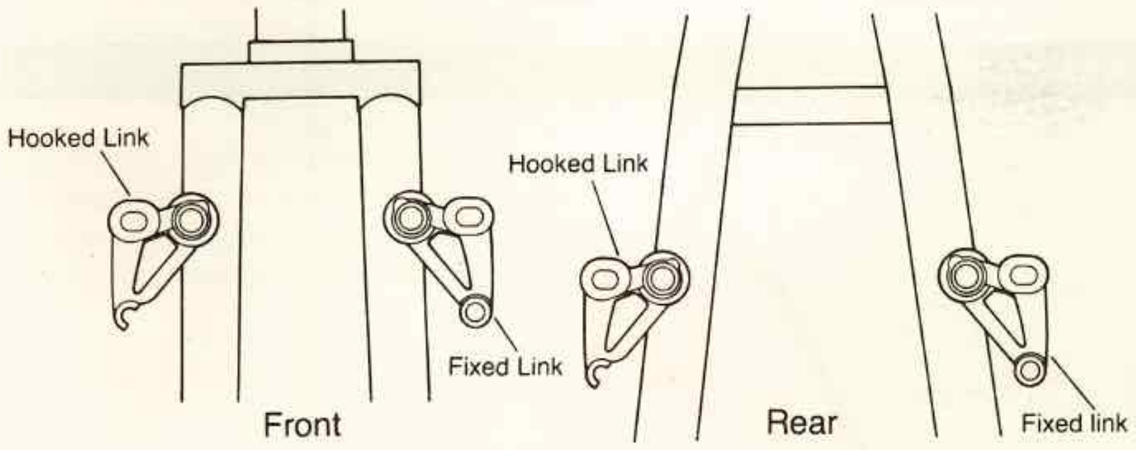
2. Return Spring Assembly

Insert the clockwise return spring into the fixed link and the counter-clockwise return spring into the hooked link respectively. Then install the spring covers.



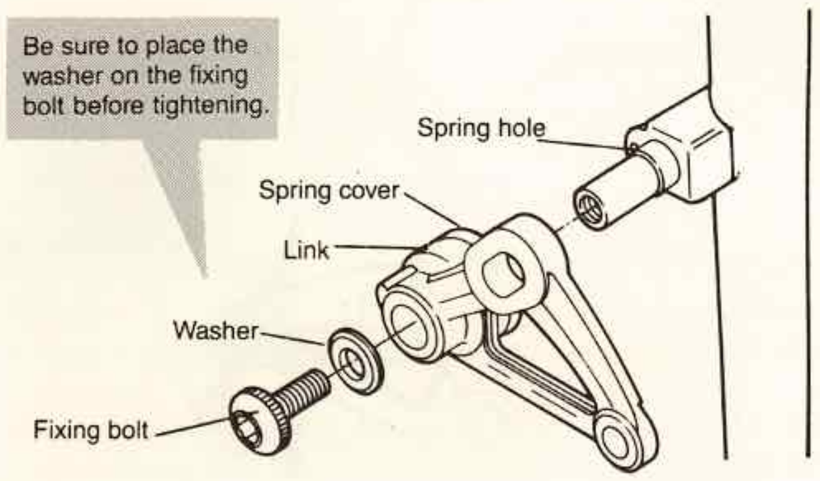
3. Link Assembly

Be sure to refer to the diagram for exact fitting.



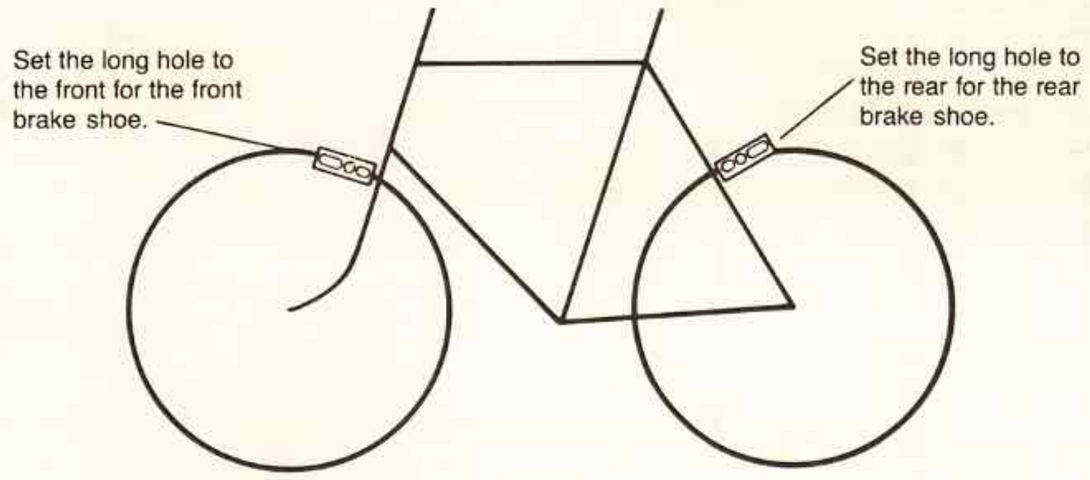
Insert the free end of the return spring into the spring hole of the mounting shaft. Then secure the link by tightening the fixing bolt.

Tightening torque: 50~70 kgfcm (45~60 in. lbs.)



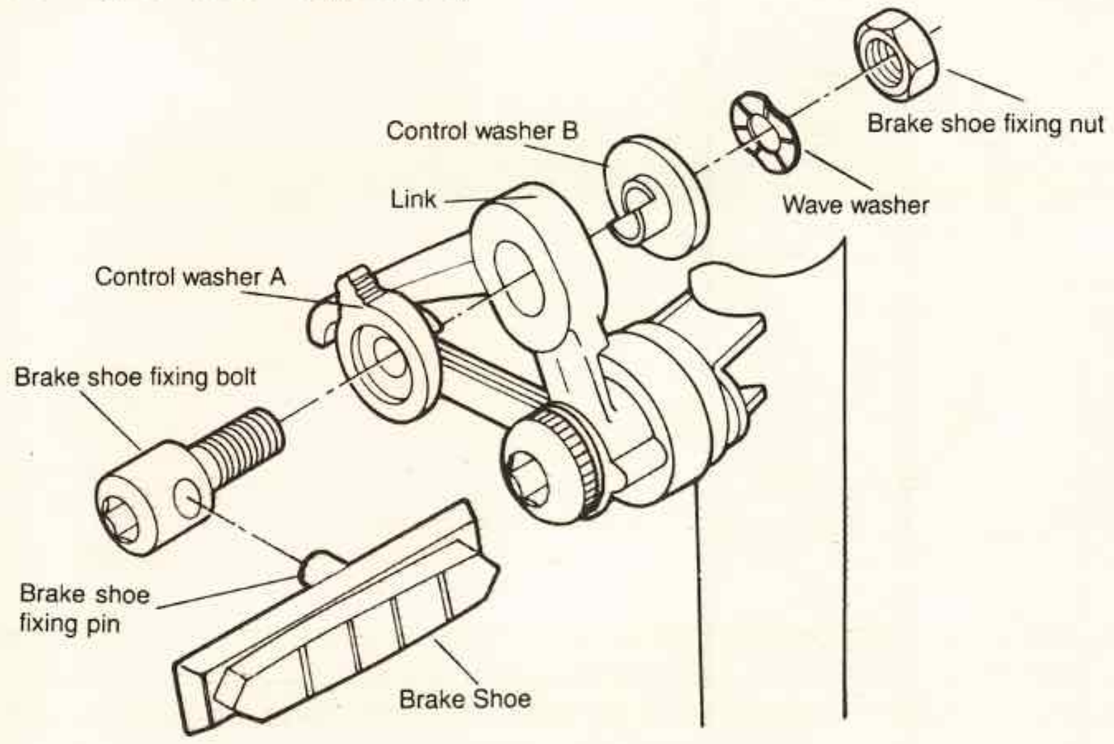
4. Brake Shoe Assembly

Attach the brake shoe as shown in the diagram.



Fit the brake shoe fixing pin into the brake shoe fixing bolt head. Fit the control washer A onto the brake shoe fixing bolt. Then fit the brake shoe fixing bolt into the link body. Next, fit the control washer B and wave washer onto the brake shoe fixing bolt. Finally, fit the brake shoe fixing nut onto the bolt and temporarily tighten it.

The special wave washer allows for easy adjustment of the brake without tightening entire assembly. Just tighten by hand, do required adjustment, then tighten assembly properly.

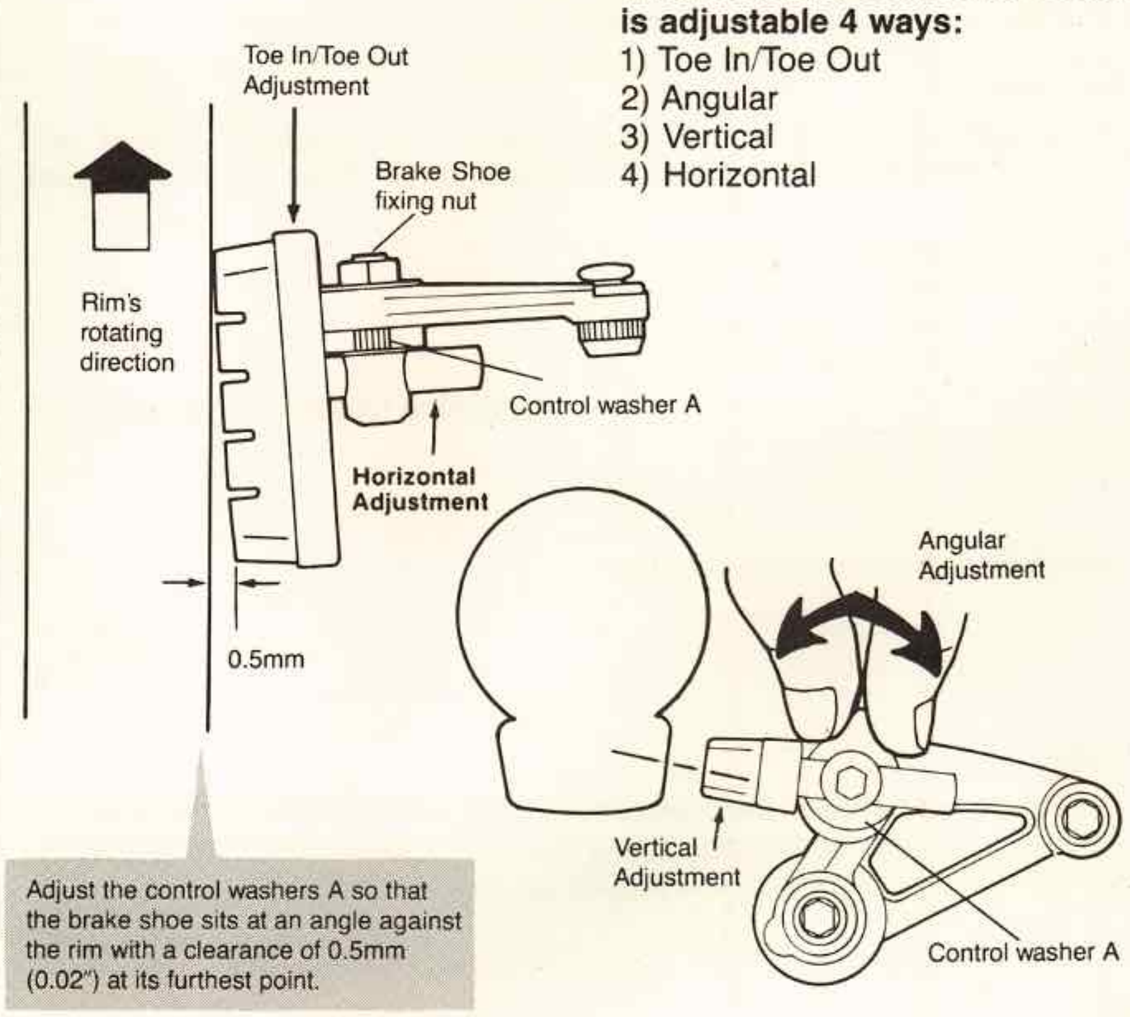


5. Brake Shoe Adjustment

Adjust the brake shoe so the rim face and brake shoe face are aligned. Next, adjust the control washer A to position the rim and brake shoe face as shown in the diagram.

The Deore XT Cantilever Brake is adjustable 4 ways:

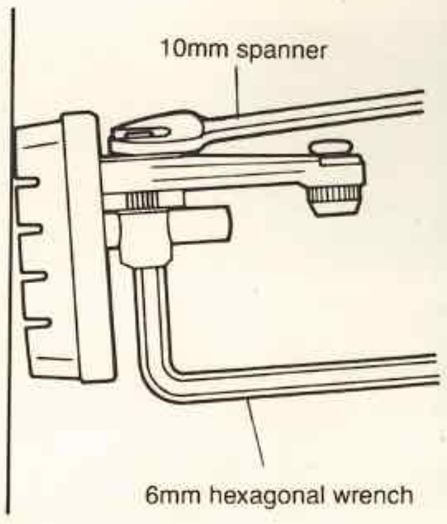
1) Toe In/Toe Out
2) Angular
3) Vertical
4) Horizontal



Cantilever Brake Assembly, Cont'd.

6. Brake Shoe Fixing
After adjustment, tighten the brake shoe fixing nut while supporting the brake shoe fixing bolt with a 6mm hexagonal wrench.

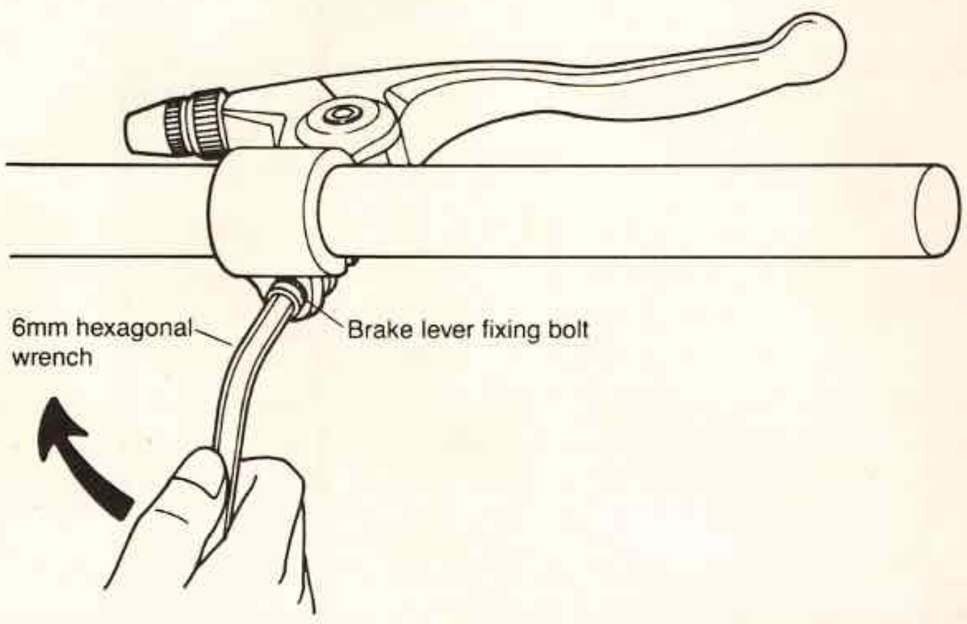
Tightening torque: 60~90 kgfcm (53~80 in. lbs.)

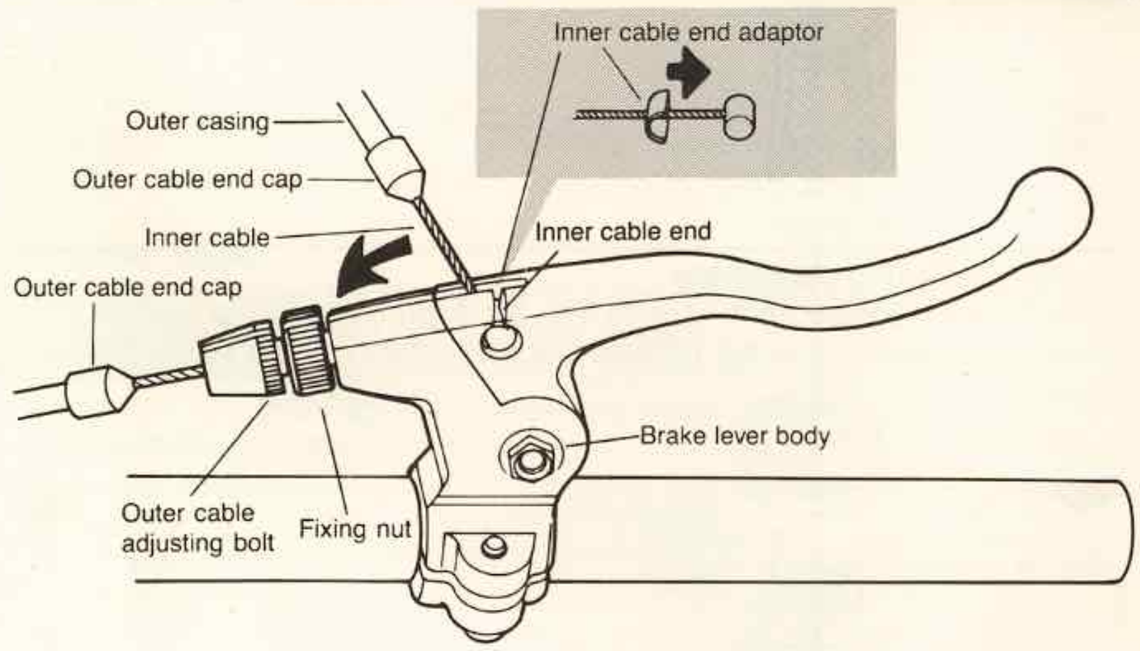


Brake Lever and Cable Assembly

1. Fit the brake levers onto the handlebar with a hexagonal wrench.

Tightening torque: 60~90 kgfcm (53~80 in. lbs.)





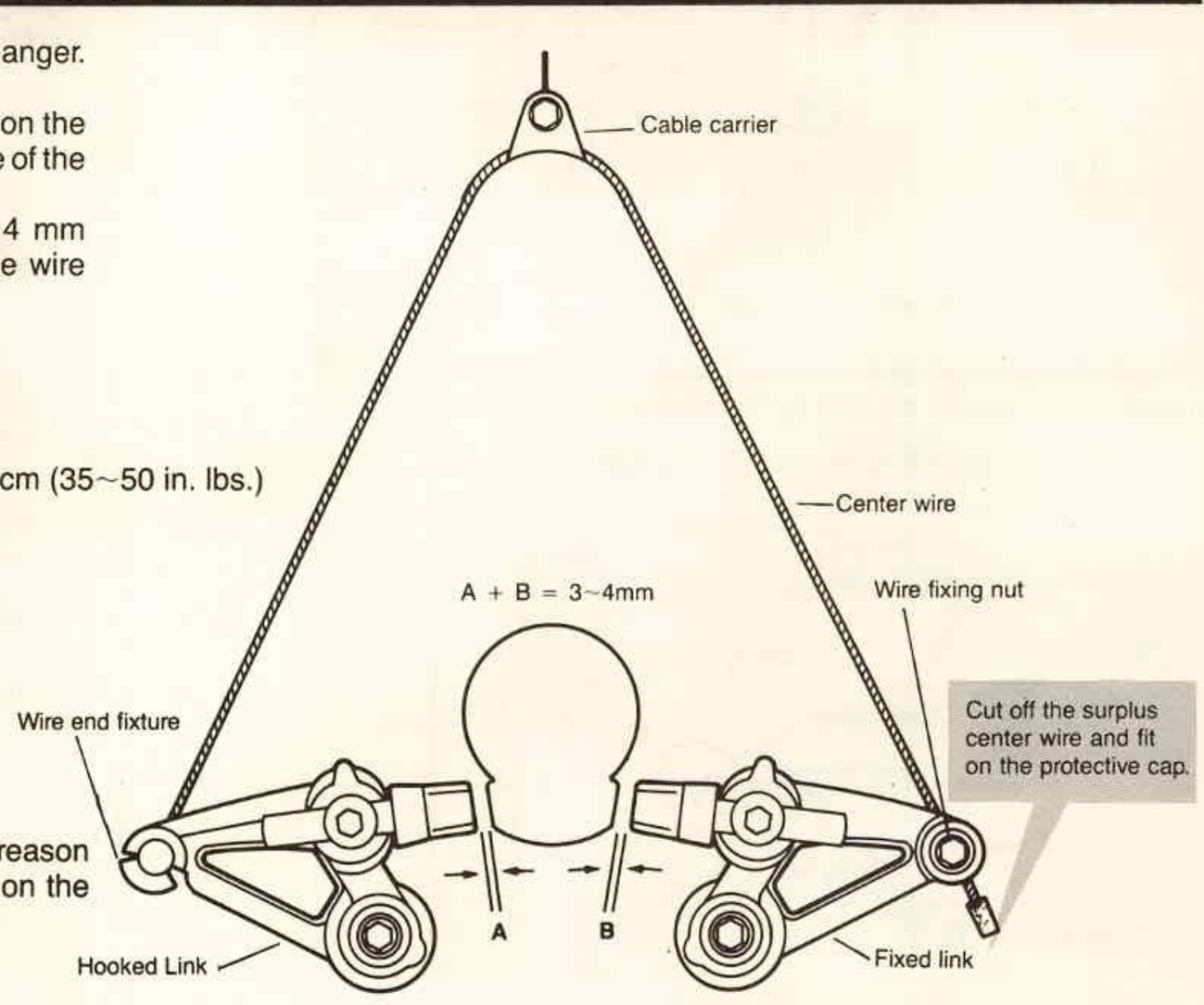
2. Insert the Inner cable into the outer casing through the inner cable end adaptor and the outer cable end cap. After aligning the groove of the brake lever body with the grooves of the outer cable adjusting bolt and the fixing nut, fit the brake cable to the brake lever body.
3. Pass the inner cable through the cable hanger. Then, fix the outer casing onto the frame with the clip.

Note:
Cables for motor bikes can also be used. Such cases do not require the outer cable end cap and the inner cable end adaptor.

Center Wire Assembly

1. Fit the cable carrier onto the inner cable protruding from the cable hanger. Cut off the surplus cable and fit on the protective cap.
2. Set the wire end fixture into the hook link and hang the center wire on the cable carrier. Then, feed the free end through the wire fixing bolt hole of the fixed link.
3. Push both links toward the rim allowing a total clearance of 3~4 mm (1/8″~5/32″) between the brake shoes and rim. Then, tighten the wire fixing nut.

Tightening torque: 40~60 kgfcm (35~50 in. lbs.)



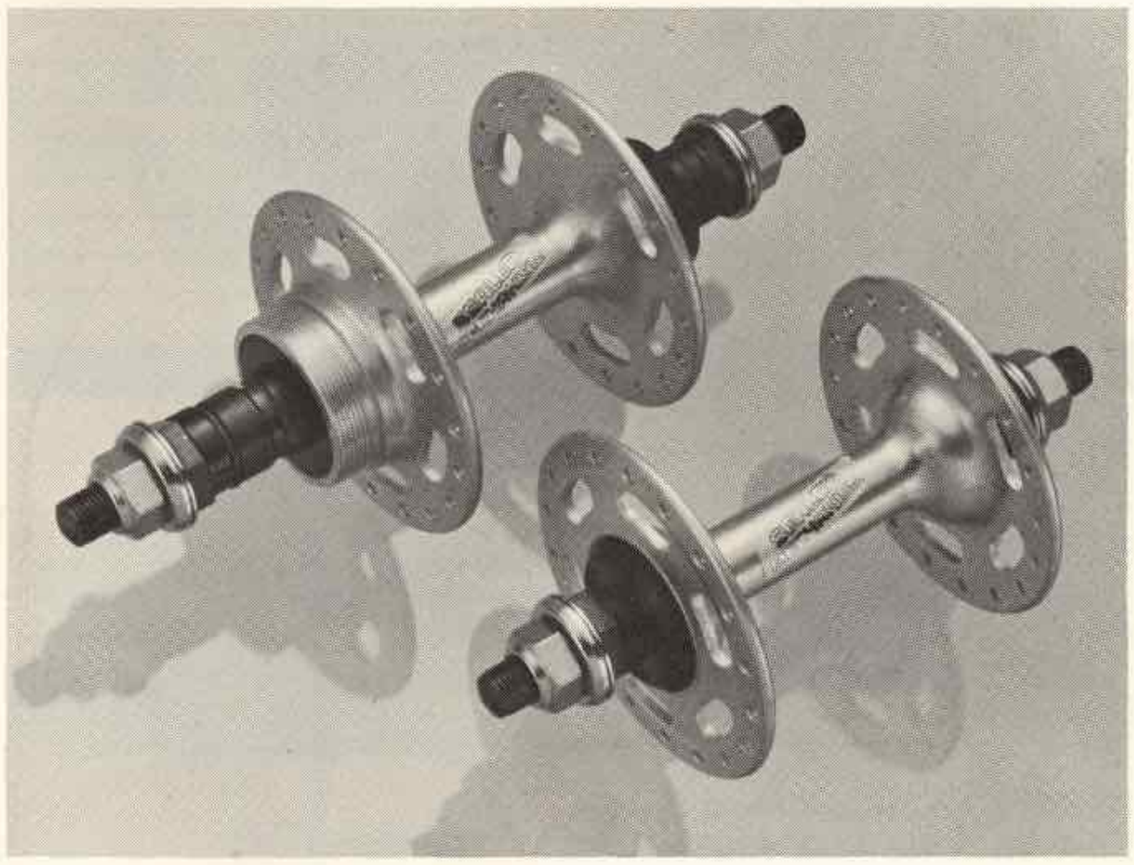
Note:
If the clearance between the brake shoes and the rim is altered for any reason such as cable wire stretching, adjust the outer cable, adjusting bolt on the side of the brake lever until the proper clearance is achieved.

SHIMANO

DEORE XT

SHIMANO DEORE XT SERIES

Sealed Mechanism



HB-MN72 Front & Rear Hub

Features:

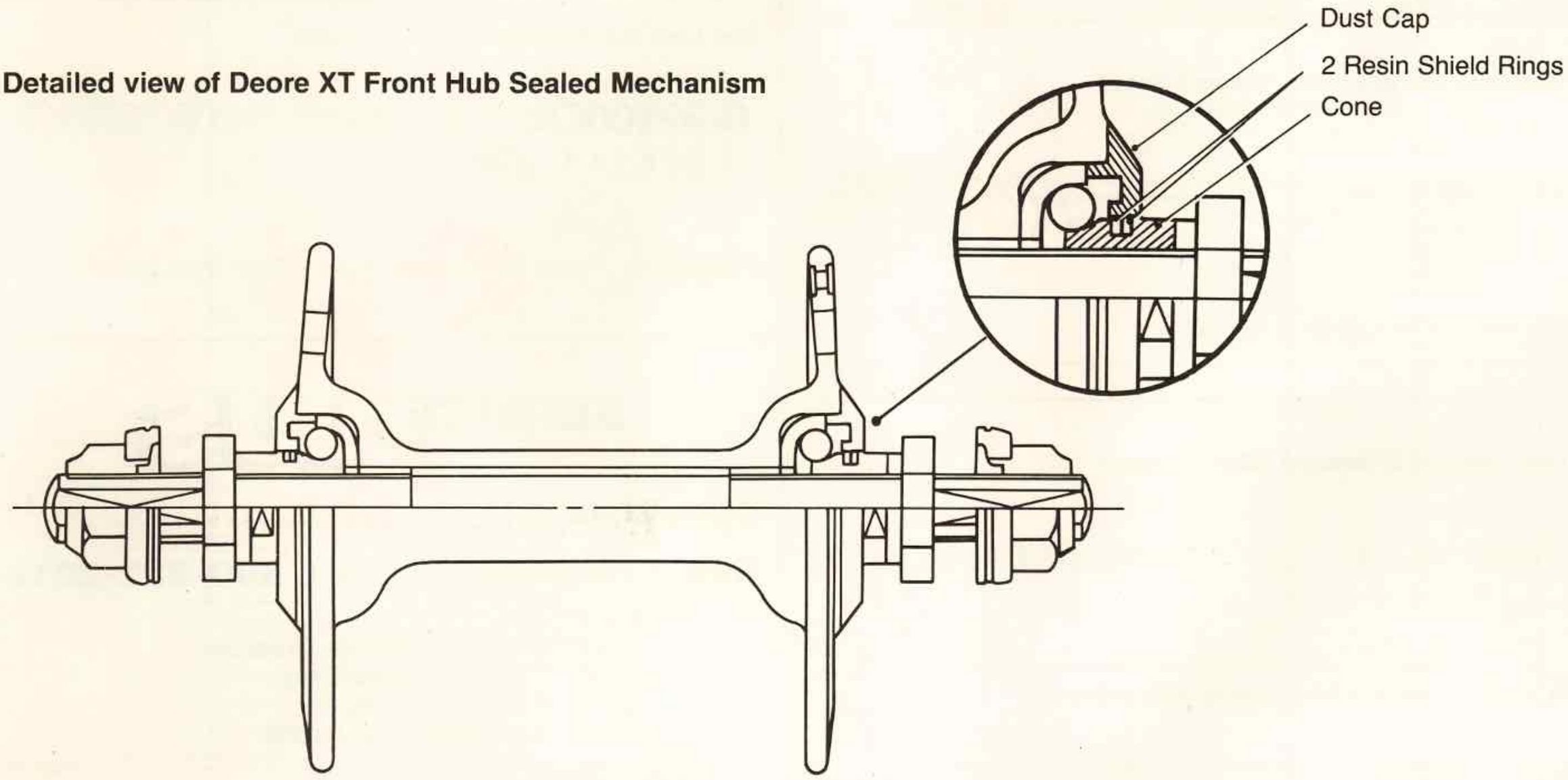
Water-proof and dust-proof durability is required for heavy-duty mountain bike and touring components. The Deore XT model HB-MN72 has an improved sealed mechanism which prevents mud, dust, and water from entering the rotating parts of the hub.

Model HB-MN72 employs two resin shield rings between the cone and dust cap, instead of the conventional single shield ring or single dust cap. This provides a better fit than conventional models and enhances its water- and dust-proof efficiency.

The Shimano sealed mechanism has been exclusively developed for mountain bikes and touring bikes which must be ridden hard in unfavorable conditions.

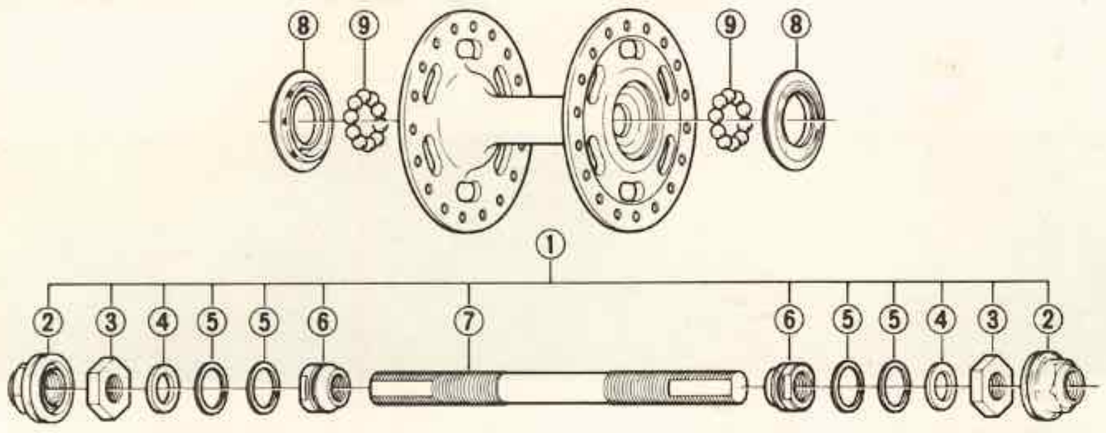
Mr. Dealer: This hub set is also available in a BMX spec. Please call your local distributor or our ServicePLUS line for more details.

Detailed view of Deore XT Front Hub Sealed Mechanism

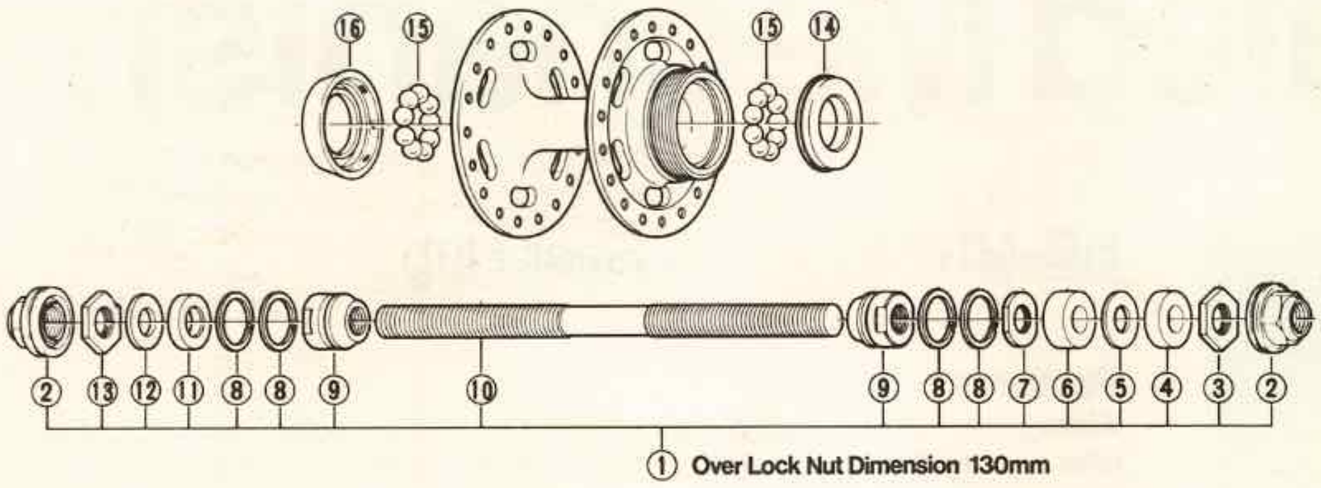


Exploded View and Parts List

Front Hub



Rear Hub



① Over Lock Nut Dimension 130mm

Model HB-MN72 Front Hub

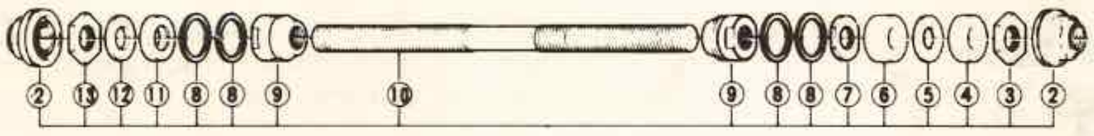
ITEM NO.	PART NO.	DESCRIPTION
1	3-236 9801	Complete Hub Axle 3/8"x143mm (5 10/16") O.L.: 100mm (3 15/16")
2	3-373 9002	Hub Nut
3	220 0510	Lock Nut 4.5mm
4	220 0451	Spacer 2mm
5	236 0300	Seal Ring
6	236 0400	Cone 10.4mm (13/32")
7	236 0200	Hub Axle 3/8"x143mm (5 10/16")
8	210 0908-1	Dust Cap
9	000 0121	Steel Ball (3/16") 20 pcs.

Model HB-MN72 Rear Hub

ITEM NO.	PART NO.	DESCRIPTION
1	3-299 9802	Complete Hub Axle 3/8"174mm (6 27/32") O.L.: 130mm/126mm
2	3-373 9002	Hub Nut
3	220 0510	Right Hand Lock Nut 4.5mm
4	224 0601	Right Hand Spacer 5.5mm
5	224 0700	Right Hand Spacer 1mm
6	220 0411	Right Hand Spacer 8mm (5/16")
7	200 0402	Lock Nut (Small) 3mm
8	299 0500	Seal Ring
9	299 0300	Cone 15mm (19/32")
10	299 0200	Hub Axle 3/8"x174mm (6 27/32")
11	220 0460	Left Hand Spacer 4mm for O.L.: 130mm (5 1/8")
12	220 0451	Washer 2mm
13	220 0520	Left Hand Lock Nut 3mm
14	299 0400	Right Hand Dust Cap
15	000 0131	Steel Ball (1/4") 18 pcs.
16	220 0709-1	Left Hand Dust Cap

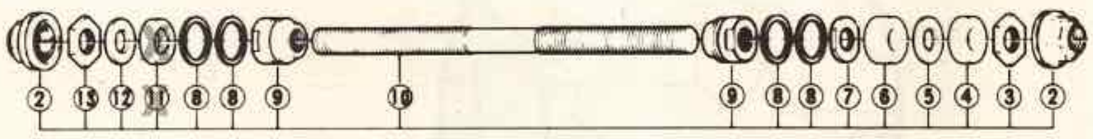
Rear Hub Axle Conversions

Over Lock Nut Dimension 130mm/6 Speed



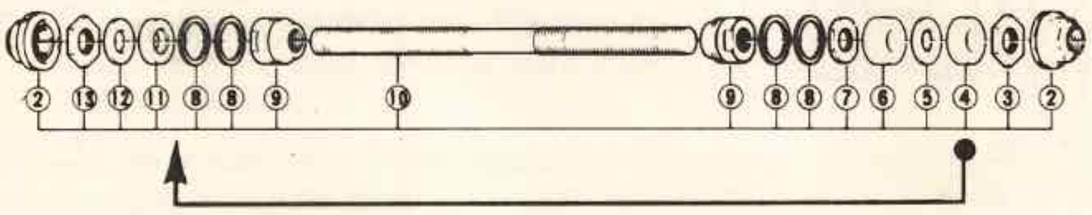
Use axle set as assembled at factory.

Over Lock Nut Dimension 126mm/6 Speed



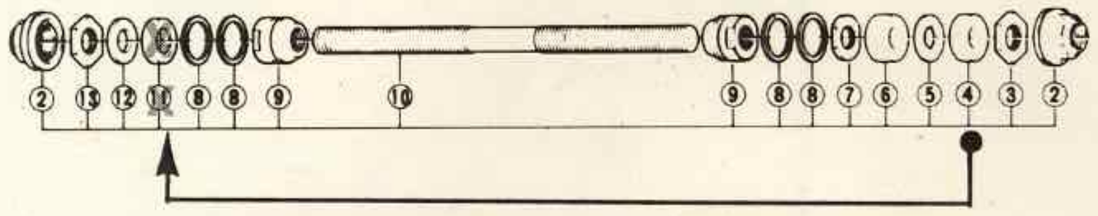
Eliminate No. 11 Left Hand Spacer.

Over Lock Nut Dimension 130mm/5 Speed



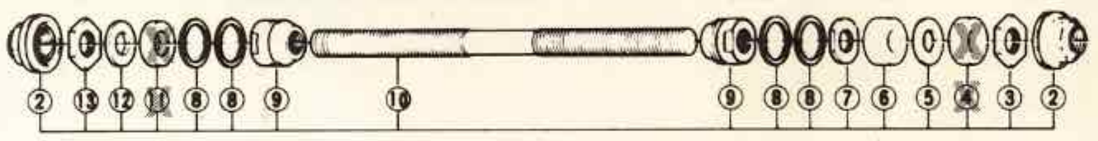
Move No. 4 Right Hand Spacer to right of No. 11.

Over Lock Nut Dimension 126mm/5 Speed



Eliminate No. 11 Left Hand Spacer.
Move No. 4 Right Hand Spacer to No. 11 position.

Over Lock Nut Dimension 120mm/5 Speed



Eliminate No. 11 Left Hand Spacer & No. 4 Right Hand Spacer.

SERVICE PLUS

Call toll free:

800-432-2420/ In Calif. **800-232-2016**

Shimano Service Division
Shimano Sales Corp.
9259 Fernando Rd.
Sun Valley, CA 91352

2/8312M

Please note: Specifications are subject to change for improvement without notice.