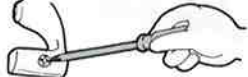


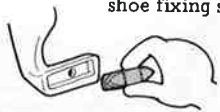
Replacement of the Brake Shoes



- Loosen the cable adjusting bolt fully and then remove the carrier from the brake arm.

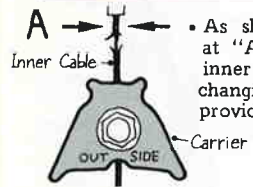


- Remove the brake shoe fixing screw.



- Replace the brake shoe with a new one. Remember to lock it in place with the brake shoe fixing screw.

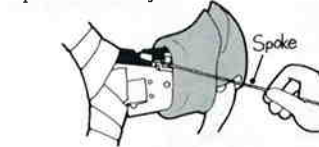
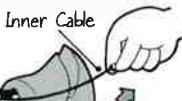
Cable Replacement



- As shown in the diagram, cut the cable at "A" position and then remove the inner cable from the lever side before changing — using a spoke to hook it provides maximum ease.

- Remove the inner cable.

- Hook the inner cable with the head of the spoke, then pull it sideways.

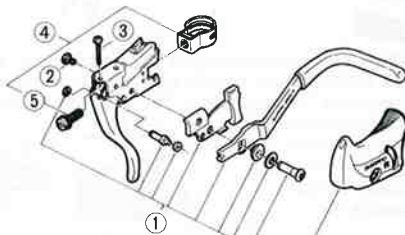


Insert the inner cable through the cable end button into the outer casing and then hook the inner cable end to the cable stopper.

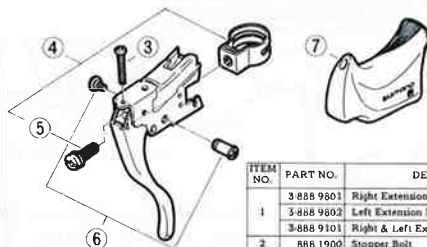
After removing the adjusting bolt to peel off the front of the bracket cover, insert a new inner cable, as shown in the diagram. For inner cable connection to the carrier, refer to the Cable Connection to Caliper Brake.

*Specifications are subject to change without notice.

Model BL-AD50 Brake Lever ADAMAS-AX w/Extension Lever



Model BL-AD10 Brake Lever ADAMAS-AX



ITEM NO.	PART NO.	DESCRIPTION
1	3-888 9801	Right Extension Lever Assembly
1	3-888 9802	Left Extension Lever Assembly
1	3-888 9101	Right & Left Extension Lever Assembly
2	888 1900	Stopper Bolt
3	888 1400	Adjusting Bolt (M4×23)
4	3-888 9805	Clamp Band & Screw (φ22.2mm)
4	3-888 9806	Clamp Band & Screw (φ23.8mm)
5	888 1100	Clamp Screw (M6×20)
6	3-885 9801	Stopper Bolt & Screw
7	885 0100	Right Hand Bracket Cover
	885 0101	Left Hand Bracket Cover

SPECIFICATIONS

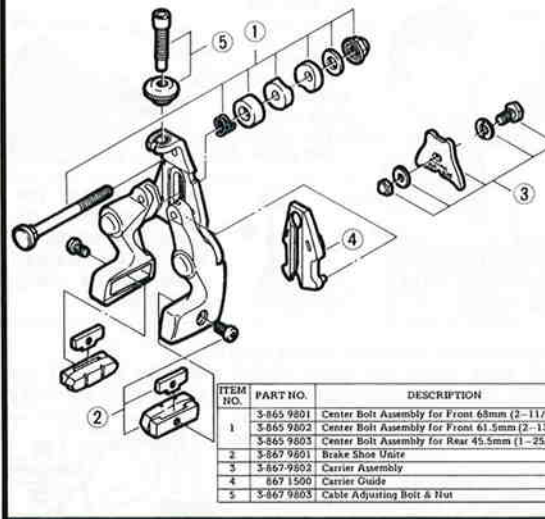
ADAMAS AX Caliper Brake Model BR-AD20

- Weight: 445g (Front and Rear)
- Size: Short/48mm – 66mm
Long/54mm – 79mm
- Material: Light Alloy, Steel

ADAMAS AX Brake Lever Model BL-AD10 BL-AD50

- Weight: 280g (pair), 440g (pair/with Extension Lever)
- Clamp diameter: φ22.2mm, φ23.8mm
- Assembly position: Drop Handle Bar
- Material: Light Alloy, Steel

Model BR-AD20 ADAMAS-AX II Caliper Brake



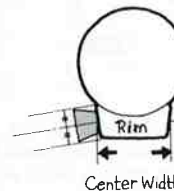
ITEM NO.	PART NO.	DESCRIPTION
1	3-865 9801	Center Bolt Assembly for Front 68mm (2-11/16")
1	3-865 9802	Center Bolt Assembly for Front 61.5mm (2-13/32")
1	3-865 9803	Center Bolt Assembly for Rear 45.5mm (1-25/32")
2	3-867 9801	Brake Shoe Unite
3	3-867 9802	Carrier Assembly
4	867 1500	Carrier Guide
5	3-867 9803	Cable Adjusting Bolt & Nut

NOTE Brake Lever

- When changing the cable, please use a genuine Shimano aerodynamic cable for outer casings and inner cables.
- When the bracket cover becomes dirty, wipe it clean with soapy water. Be sure not to use alcohol or thinner.

Caliper Brake

- Use a rim with a center width of 22mm–27mm (7/8"–1-1/16"). The length is measured at the center of a rim.
- After changing the cable or wheel, confirm that the carrier is correctly positioned.
- As the brake shoe and brake arm are built as one unit, the brake cannot be fitted to a curved top frame. Ensure that the shoe is correctly aligned with the rim plate.
- Ensure that grease or oil does not get on the brake shoes or the rim. When this happens, wipe off the grease or oil completely with alcohol.



SERVICE INSTRUCTION

adamas AX II

Brake & Brake Lever

SHIMANO
aero
dynamics



FEATURES

Brake Lever

- By assembling the cables along the handle bars, frontal area is decreased thereby reducing air resistance for aerodynamic efficiency.
- The design is simple yet ideal because the cables are never seen in front of the handle bar.
- The lever grip stroke is adjustable to suit different hand sizes.
- A well-fitting bracket cover provides a secure grip for a more comfortable ride. The hand and bracket are now combined to work as a total unit.

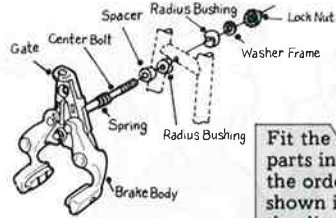
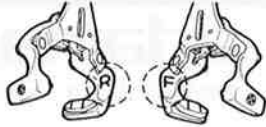
Caliper Brake

- The brake arm and brake shoe holder are made as one unit with unnecessary protrusions eliminated for decreased air resistance and a smarter design.
- The return spring is built into the brake arm and is sealed, thus enhancing the brake.
- The combined design of the brake shoes and brake arms means efficiency is no longer dependent on the assembly position of the brake shoe.

© Oct. 1981 by Shimano M-71 AZ-AGK Printed in Japan

Caliper Brake Assembly

- Fit the brake body to the frame in the same order as shown in the diagram. Fix temporarily with the lock nut.



Fit the parts in the order shown in the diagram.

- Align the brake shoes by moving the gate section up and down until the brake shoes are positioned to make proper contact with the rim. Also make sure the rim is centered between the shoes. Next tighten the lock nut.

Tightening torque:
80–100kgfcm. (70–80 in. lbs.)

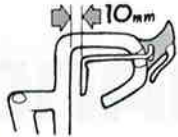
Brake Lever Assembly

Check the inscription marks R and L on the bracket cover, then assemble securely with the R mark to the right side and the L mark to the left side.

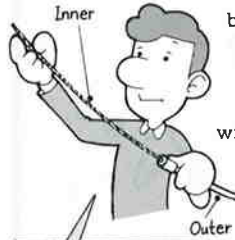
- Assemble the brake lever so that the bottom of the handle bar grip is level with the tip of the brake lever.

Clamp band fixing torque: 40kgfcm.
(35 in. lbs.)

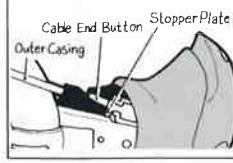
- In the case of the extension lever, fit the lever in a position where the clearance between the handle bar and extension lever is approximately 10 mm.



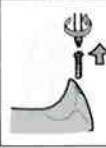
Cable Connection to Brake Lever



- Peel the bracket cover back and align the cable end button and outer casing with the stopper plate.



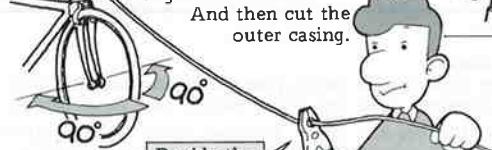
Remove the inner cable from the outer casing.



In the case of the extension lever, remove the adjusting bolt so the bracket cover can be easily peeled off.

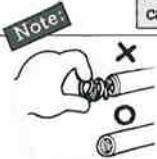
- Adjustment of the outer casing length

This time, align the outer casing with the back of the handle bar. Then check that the outer casing does not make contact with the head parts and that the handle bar can operate both left and right with more than 90-degree movement.



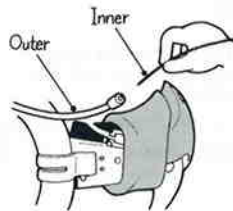
And then cut the outer casing.

Decide the length of the outer casing.

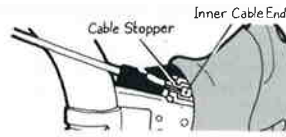


- Cutting pliers for the outer casing should be very sharp and strong. After cutting the outer casing, take care not to pull out the resin which is necessary inside the casing.

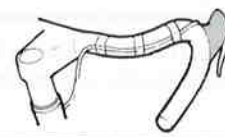
- Check the cut area of the outer casing and if the cut is not clean (i.e., wire is sticking up, thus impeding smooth cable action), please cut again.



- Insert the inner cable into the outer casing, then hook the inner cable end to the cable stopper.

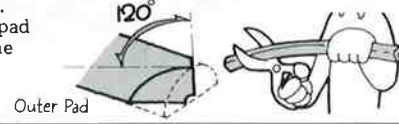


- Align the outer casing along the back of the handle bar, then fix temporarily with tape.



Note:

When using an outer pad (optional part), cut the end of the outer pad, as shown in the diagram, and align it with the outer casing. Then, fix the outer pad with tape to the handle bar. Cut the outer pad according to the length of the handle bar.



Outer Pad

Wrap bar tape around the handle bar.



Cable Clip

- Fit the cable clip.

- Adjust the grip stroke to the most suitable setting by using a screw driver.

Cable Connection to Caliper Brake

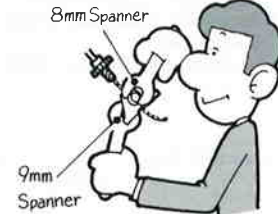
- Pass the inner cable through the cable adjusting and cable fixing bolts on the carrier.



- Pull the inner cable with a pair of pliers to eliminate cable slack. At this stage, check that cable length is 18mm (23/32") between the end of the cable adjusting bolt and the edge of the carrier.

Be sure to straighten the inner cable.

8mm Spanner



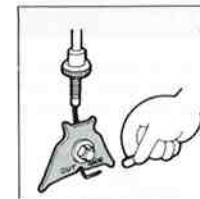
18mm

9mm Spanner

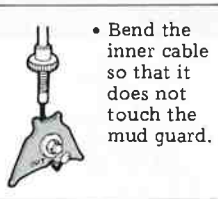
18mm in real length

- Then, tighten the cable fixing nut and bolt by using 8mm and 9mm spanners.

Tightening torque:
70–85kgfcm. (60–75 in. lbs.)



- Cut the inner cable and then put the end cap on.



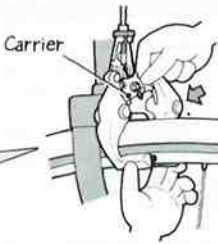
- Bend the inner cable so that it does not touch the mud guard.



Set the cable adjusting bolt to the gate section.

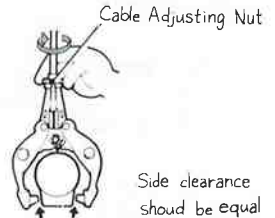
Cable Adjusting Bolt

Fit the carrier to the brake arm. Then check that the side marked "OUT SIDE" is positioned to the front.



Carrier

- Adjust the brake shoe clearance, by turning the cable adjusting nut, so that the total clearance between the brake shoes and the rim is 3mm (1/8"). If the clearances on both sides are not equal, adjust them by moving the gate section.



Cable Adjusting Nut

Side clearance should be equal on both sides.



Confirmation:

Confirm that the carrier is correctly positioned. Grip the brake lever strongly and push the bicycle forward about 2 m to confirm effectiveness. If there is no problem, then the bicycle can be used safely.