

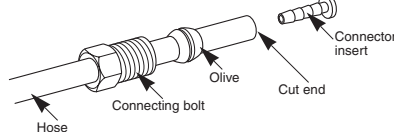
General Safety Information

WARNING

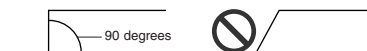
- After installing the brake hose to the brake unit, adding brake fluid and bleeding air bubbles, depress the lever again several times to check that the brakes are operating normally and there are no fluid leaks from the hose or the system.
- The connector insert is for the SM-BH90 only. Do not use it with any other types of brake hose, otherwise fluid leaks may occur.

Model No.	Length	Color
SM-BH90	11.2 mm	Silver
SM-BH59 / 80	13.2 mm	Gold
YM-BH81	13.2 mm	Silver

- Do not reuse the olive piece or the connector insert when reinstalling. A damaged or reused olive or the connector insert may not provide secure hose connection, possibly causing the hose to disconnect from the brake lever. If the hose becomes disconnected, there is the danger that the brakes may suddenly stop working.



- Cut the hose so that the cut end is perpendicular to the length of the hose. If the hose is cut at an angle, fluid leaks may result.



- If fluid leaks occur, immediately stop using the brakes and carry out the appropriate repairs. If you continue riding the bicycle while fluid is leaking, there is the danger that the brakes may suddenly stop working.
- Obtain and read the service instructions carefully prior to installing the parts. Loose, worn or damaged parts may cause the bicycle to fall over and serious injury may occur as a result. We strongly recommend only using genuine Shimano replacement parts.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

CAUTION

- When cutting the hose, handle the knife carefully so as not to cause injury.
- Be careful to avoid injury from the olive.

Note

- Parts are not guaranteed against natural wear or deterioration resulting from normal use.
- Be sure to carefully read the Service Instructions for the disc brakes also.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.

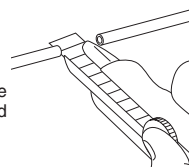
In order to realize the best performance, we recommend that the following combination be used.

Brake Hose	SM-BH90-SB
Caliper	BR-M985 / M785 / M666
Brake Lever	BL-M988 / M985 / M785 / T785 / M666
Mineral Oil	SM-DB-OIL

Installation

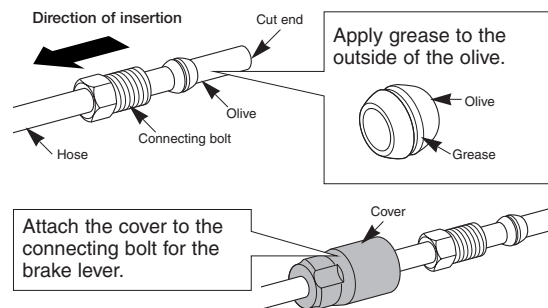
- Use a utility knife or similar tool to cut the hose.

* Make sure that you handle the utility knife safely and correctly in accordance with the instructions which are provided with the utility knife.

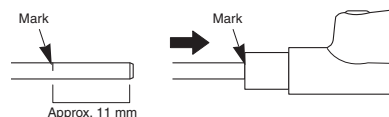


- < At brake lever end >

Pass the hose through the connecting bolt and the olive as shown in the illustration.

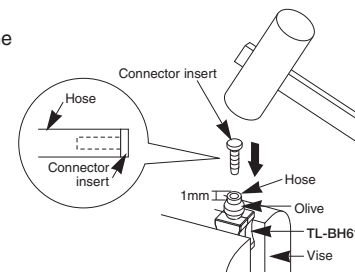


- In order to check that the end of the hose is fitted securely into the base of the hose mount of the brake lever, make a mark on the hose beforehand as shown in the illustration. (As a guide, the length of hose inside the mount should be approximately 11 mm, measured from the cut end of the hose.)

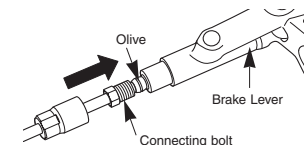
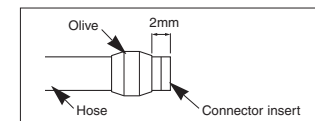


- Use an object such as a needle to smooth the inside of the cut end of the hose, and then install the connector insert. Attach the hose to the TL-BH61 as shown in the illustration, and secure the TL-BH61 in a vise. Then use a hammer or

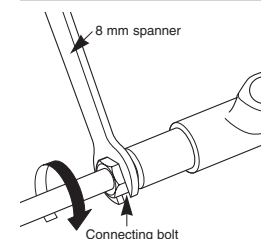
similar tool to knock the connector insert in firmly until the base of the connector insert touches the end of the hose. If the end of the hose is not touching the base of the connector insert, the hose may become disconnected or fluid leaks may occur.



- After checking that the olive is positioned as shown in the illustration, apply grease to the threads of the connecting bolts and then attach the hose to the brake lever as shown in the illustration.



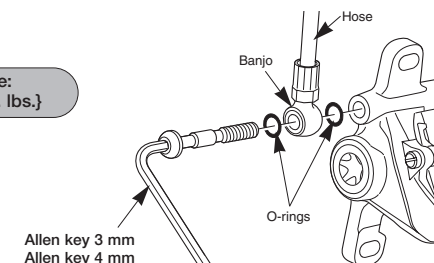
- While pushing the brake hose, tighten the connecting bolt.



< At caliper end >

Check that the O-rings are positioned in the grooves at both the top and bottom of the banjo, and then secure the banjo to the calipers as shown in the illustration. Make sure that the O-rings do not protrude from the grooves at this time.

The O-ring has grease applied.



Tightening torque
Allen key 3 mm : 5 - 7 N·m {44 - 60 in. lbs.}
Allen key 4 mm : 8 - 10 N·m {69 - 87 in. lbs.}

SHIMANO

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* Service Instructions in further languages are available at :
<http://techdocs.shimano.com>

Please note: specifications are subject to change for improvement without notice. (English)
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