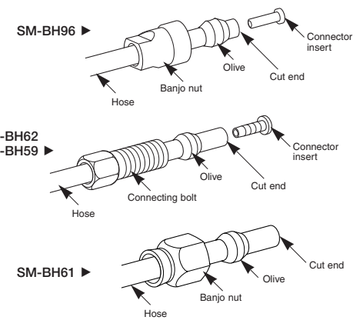
BH96-En 03.8.29 11:42 AM Page 1

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.
- 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 calipers or 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 serious injury to the rider.
  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.
- Read these Service Instructions together with the Service Instructions for the disc brake system.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.

Technical Service Instructions **SI-BH96A**

SM-BH96 / SM-BH62 / SM-BH61 / SM-BH59

Brake Hose

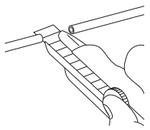
In order to realize the best performance, we recommend that the following combination be used.

Series	XTR	DEORE XT	DEORE	DEORE XT	DEORE	NEXAVE	DEORE
Brake Hose	SM-BH96	SM-BH62		SM-BH61			SM-BH59
Caliper	BR-M965 /M966	BR-M755	BR-M555	BR-M755	BR-M555	BR-C901	BR-M525
Brake Lever	ST-M965	BL-M756	BL-M556	BL-M755	BL-M555	BL-C901	BL-M525
Mineral Oil	SM-DB-OIL						

Installation

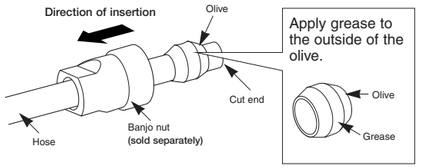
Use a utility knife or similar tool to cut the hose.

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

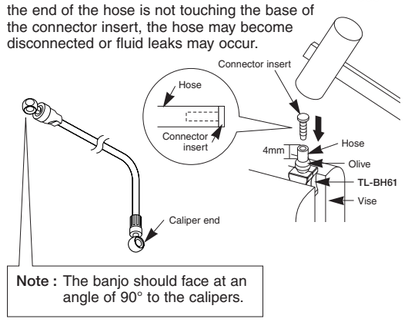


< SM-BH96 >

1. < At brake lever end >
Pass the hose through the banjo nut and the olive as shown in the illustration.

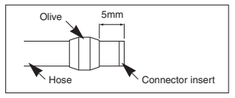


2. Use an object such as a needle to smooth the inside of the cut end of the hose, and then install the connector insert. Attach the hose to the TL-BH61 as shown in the illustration, and secure the TL-BH61 in a vise. Then use a hammer or similar tool to knock the connector insert in firmly until the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



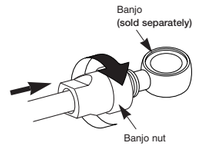
Note : The banjo should face at an angle of 90° to the calipers.

3. After checking that the olive is positioned as shown in the illustration, apply grease to the thread of the banjo nut and then tighten the banjo nut.



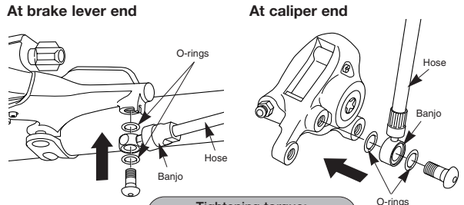
While pushing the brake hose, tighten the banjo nut.

Tightening torque: 5 - 7 N·m {44 - 60 in. lbs.}



4. < Installation of the hose >
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 brake lever and 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.

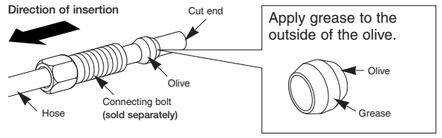
At brake lever end **At caliper end**



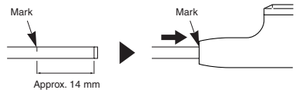
Tightening torque: 5 - 7 N·m {44 - 60 in. lbs.}

< SM-BH62 >

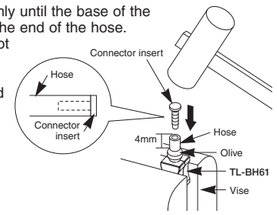
1. < At brake lever end >
Pass the hose through the connecting bolt and the olive as shown in the illustration.



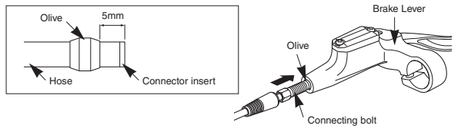
2. In order to check that the end of the hose is fitted securely into the base of the hose mount of the brake lever, make a mark on the hose beforehand as shown in the illustration. (As a guide, the length of hose inside the mount should be approximately 14 mm, measured from the cut end of the hose.)



3. 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.

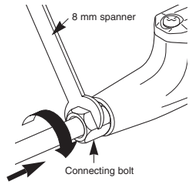


4. After checking that the olive is positioned as shown in the illustration, apply grease to the threads of the connecting bolts and then attach the hose to the brake lever as shown in the illustration.



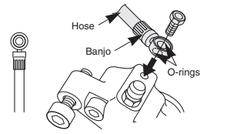
5. While pushing the brake hose, tighten the connecting bolt.

Tightening torque: 5 - 7 N·m {44 - 60 in. lbs.}



< 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.

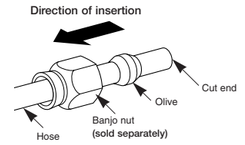
The O-ring has grease applied.



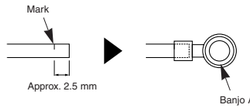
Tightening torque: 5 - 7 N·m {44 - 60 in. lbs.}

< SM-BH61 >

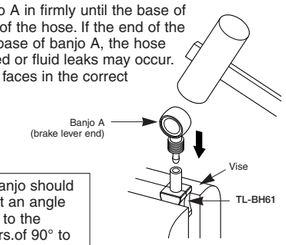
1. Pass the hose through the banjo nut and the olive as shown in the illustration.



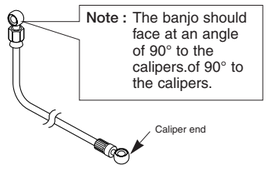
2. In order to check that the end of the hose is fitted securely into the base of banjo A, make a mark on the hose beforehand as shown in the illustration.
(As a guide, the length of hose inside banjo A should be approximately 2.5 mm, measured from the cut end of the hose.)



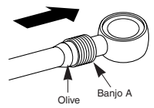
3. Use an object such as a needle to smooth the inside of the cut end of the hose, and then install banjo A. Place the TL-BH61 as shown in the illustration, and secure it in a vise. Then use a hammer or similar tool to knock banjo A in firmly until the base of banjo A touches the end of the hose. If the end of the hose is not touching the base of banjo A, the hose may become disconnected or fluid leaks may occur. Make sure that the banjo faces in the correct direction at this time.



Note : The banjo should face at an angle of 90° to the calipers.of 90° to the calipers.

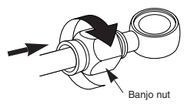


4. Slide the olive into banjo A until banjo nut can thread on to banjo A.



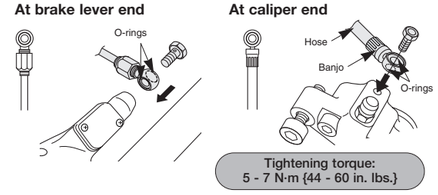
5. While pushing the brake hose, tighten the banjo nut.

Tightening torque: 5 - 7 N·m {44 - 60 in. lbs.}



6. < Installation of the hose >
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 brake lever and 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.

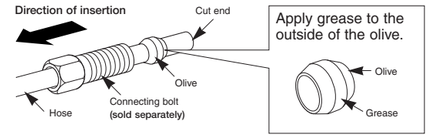
At brake lever end **At caliper end**

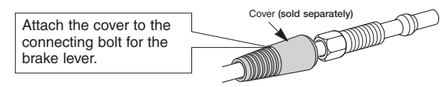


Tightening torque: 5 - 7 N·m {44 - 60 in. lbs.}

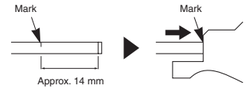
< SM-BH59 >

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

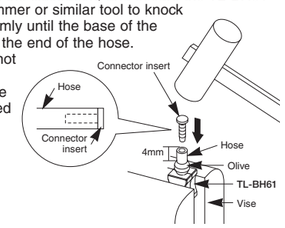




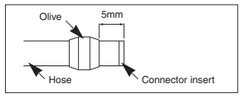
2. In order to check that the ends of the hose are fitted securely into the base of the hose mounts of the calipers and brake lever, make marks on the hose beforehand as shown in the illustration.
(As a guide, the length of hose inside the mounts should be approximately 14 mm, measured from the cut end of the hose.)

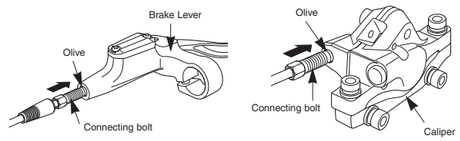


3. Use an object such as a needle to smooth the inside of the cut end of the hose, and then install the connector insert. Attach the hose to the TL-BH61 as shown in the illustration, and secure the TL-BH61 in a vise. Then use a hammer or similar tool to knock the connector insert in firmly until the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

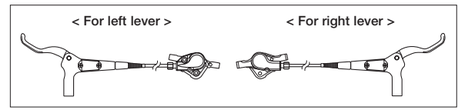


4. After checking that the olive is positioned as shown in the illustration, apply grease to the threads of the connecting bolts and then attach the hose to the brake lever and caliper as shown in the illustration.



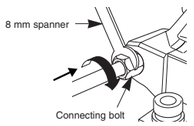


Do not let the hose become twisted.
Make sure that the calipers and levers are in the positions shown in the illustrations.



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

Tightening torque: 5 - 7 N·m {44 - 60 in. lbs.}



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