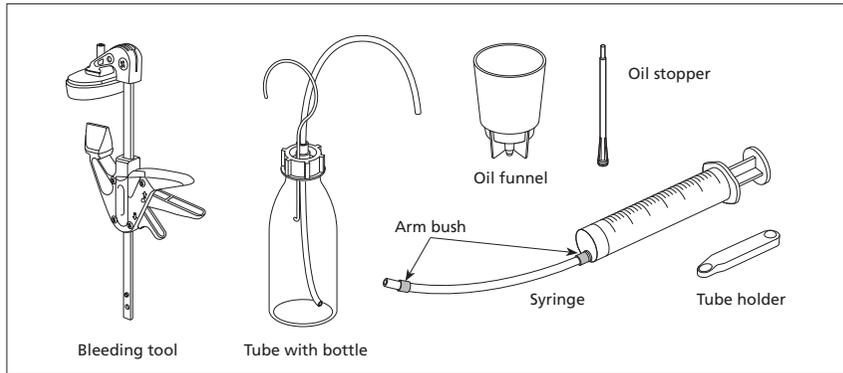


TL-BT03

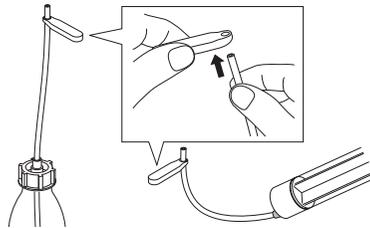
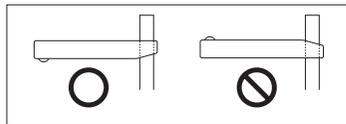
Air bleeding kit

< Contents of kit >



Install the tube holder as shown in the illustration. Make sure that the direction of installation is correct.

Tube holder installation direction



■ Type where bleed screw is opened (using an oil funnel)

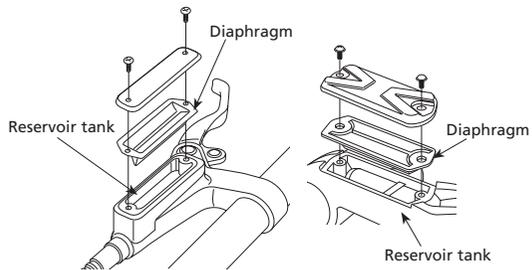
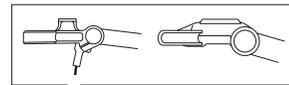
Be sure to read the Service instructions for "Adding mineral oil and bleeding air" together with these service instructions.

■ Type where reservoir tank cover is opened

- With the spacer for bleeding (yellow) still attached to the calipers, place the bicycle into a bicycle stand or similar as shown in the illustration.

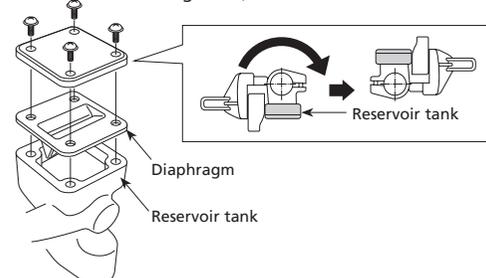
< BL type >

Set so that the brake lever is parallel to the ground, and then remove the reservoir tank cover.

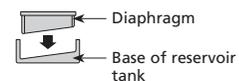


< ST type >

Turn the lever unit so that the top of the reservoir tank is parallel to the ground, and then remove the reservoir tank cover.

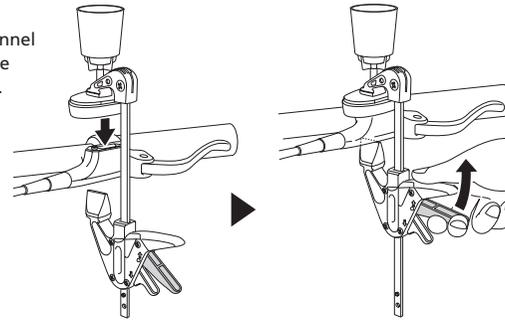


Note: When reassembling, set the diaphragm so that it is aligned at the same angle as the base of the reservoir tank.



- Cover the reservoir tank with the bleeding tool which has the oil funnel attached, and then secure with the clamp as shown in the illustration.

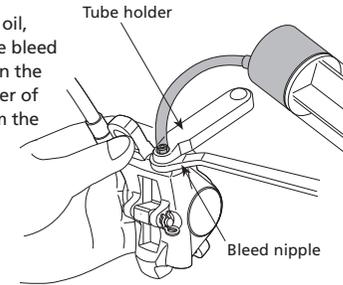
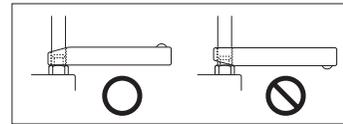
Note: Be careful not to overtighten the oil funnel when attaching it.



< In case of a bleed nipple type caliper >

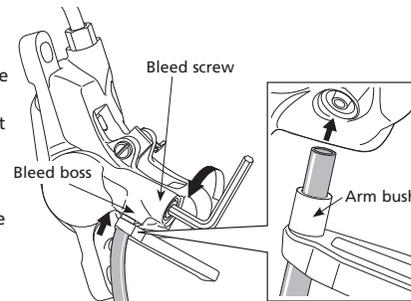
Set a 7 mm socket wrench in place, fill the syringe with oil, and then connect a tube to the bleed nipple. Secure the bleed nipple and the tube with a tube holder, and then loosen the bleed nipple by 1/8 of a turn to open it. Push the plunger of the syringe to add oil. The oil will start coming out from the oil funnel. Continue adding oil until there are no more air bubbles mixed in with the oil that is coming out.

Tube holder installation direction

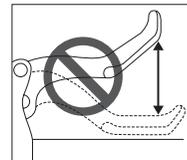


< In case of a bleed boss type caliper >

Fill the syringe with sufficient oil. After attaching the arm bush to the end of the tube, connect the tube to the bleed boss. Fasten the tube with the tube holder so that it will not be disconnected. Loosen the bleed screw by 1/8 of a turn to open it. Push the plunger of the syringe to add oil. The oil then starts coming out from the oil funnel. Continue adding oil until there are no more air bubbles mixed in with the oil that is coming out.

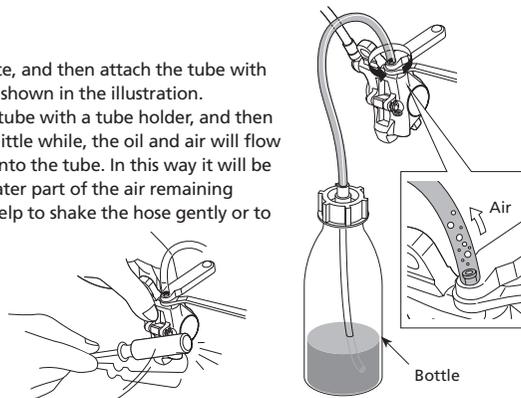


- Once there are no more air bubbles mixed in with the oil, temporarily close the bleed nipple and remove the syringe.

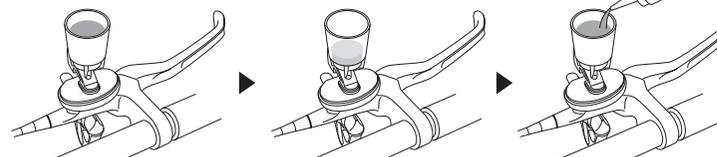


Do not continually squeeze and release the lever at this point. If this is not observed, air bubbles may remain mixed in with the oil inside the caliper, and it will take longer to bleed the air. (If the lever is continually squeezed and released, drain out all of the oil and then add oil again.)

- Set a 7 mm socket wrench in place, and then attach the tube with the bottle to the bleed nipple as shown in the illustration. Secure the bleed nipple and the tube with a tube holder, and then loosen the bleed nipple. After a little while, the oil and air will flow naturally from the bleed nipple into the tube. In this way it will be possible to easily extract the greater part of the air remaining inside the brake system. It may help to shake the hose gently or to tap the reservoir tank or caliper gently with a screwdriver or move the position of the caliper at this time.

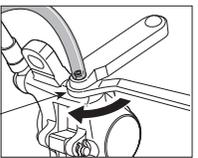


- The level of liquid inside the funnel will drop at this time, so keep filling the funnel with oil to maintain the level of liquid so that air is not drawn in (air does not get inside).



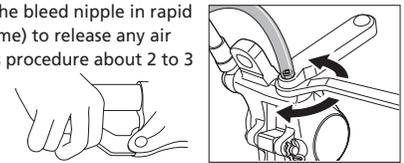
- Once air bubbles stop coming out from the bleed nipple, temporarily tighten the bleed nipple.

Bleed nipple



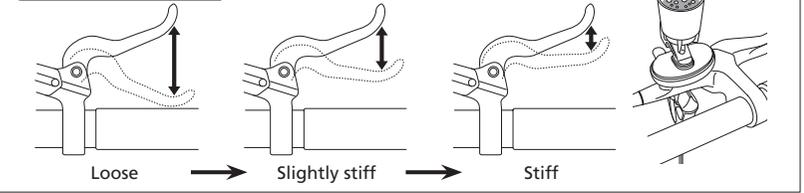
- With the brake lever depressed, open and close the bleed nipple in rapid succession (for approximately 0.5 seconds each time) to release any air bubbles which may be in the calipers. Repeat this procedure about 2 to 3 times. Then tighten the bleed nipple again.

Tightening torque:
4 - 6 N·m {35 - 52 in. lbs.}



- If the brake lever is then operated, air bubbles in the system will rise up through the port into the oil funnel. Once the bubbles stop appearing, depress the brake lever as far as it will go. The normal condition is for the lever to be stiff at this point.

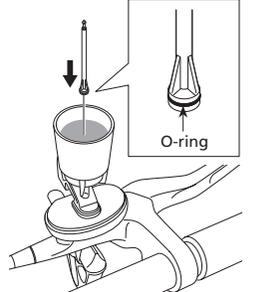
Lever operation



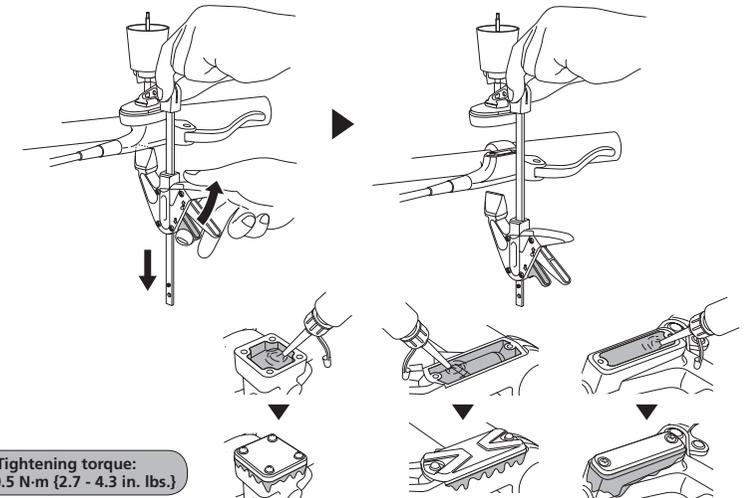
- Plug the oil funnel with the oil stopper so that the side with the O-ring attached is facing downward.

Oil stopper

O-ring



- Remove the bleeding tool as shown in the illustration, fill the reservoir tank with oil and then replace the reservoir tank cover. Fill the reservoir tank to overflowing with oil while replacing the cover to ensure that no air bubbles remain inside the reservoir tank. In addition, be careful not to get any oil on parts such as the rotor and brake pads.



Tightening torque:
0.3 - 0.5 N·m {2.7 - 4.3 in. lbs.}

- Wipe away any oil which has flowed out.

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

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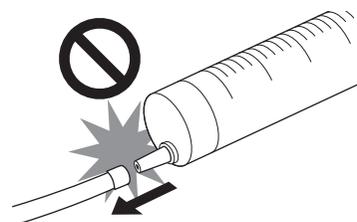
SHIMANO INC.
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Please note: Specifications are subject to change for improvement without notice. (English)
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SI-1304A-003

Note

- Clean and maintain the bleeding kit by using isopropyl alcohol or soapy water, or wipe it with a dry cloth. Do not use products such as commercially-available brake cleansers. Using such products may damage plastic and other parts.
- When disassembling and cleaning the bleeding kit, some of the liquid used for cleaning may remain on the kit parts, so make sure that all the parts are completely dry before reassembling them.
- Avoid removing the tube from the syringe. If the tube accidentally comes off, remove the arm bush and tube from the syringe and clean each part thoroughly to remove any oil. If the end of the tube is widened, cut off the widened part. Check that the tube is firmly connected to the syringe before using it again. If the tube does not fit securely during use, oil may leak from the tube connection.

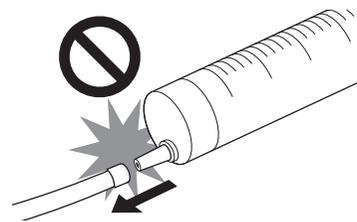


(English)

SI-1304A-003

Opmerking

- De ontluichtingsset reinigen en in goede staat houden met behulp van isopropyl alcohol of zeepwater of deze schoonvegen met een droge doek. Gebruik geen producten zoals in de handel verkrijgbare remreinigers. Gebruik van deze producten kan plastic en overige onderdelen aantasten.
- Bij het demonteren en reinigen van de ontluichtingsset bestaat de kans dat er wat van de vloeistof die voor het reinigen is gebruikt op de onderdelen van de set achterblijft, dus zorg er voor dat alle onderdelen volledig droog zijn alvorens deze te hermonteren.
- De slang niet van het spuitje verwijderen. Als de slang per ongeluk is losgeraakt, haal dan de het armbusje en de slang van het spuitje. Reinig deze grondig om alle olie te verwijderen. Als het uiteinde van de slang verwijd is, knip dan het verwijde deel af. Controleer of de slang stevig aan het spuitje vastzit voordat u het opnieuw gebruikt. Als de slang bij gebruik niet goed vastzit, bestaat de kans dat er olie uit de slangaansluiting lekt.

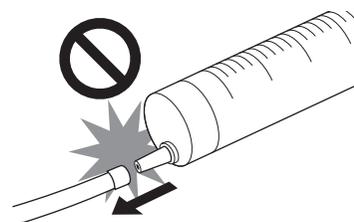


(Dutch)

SI-1304A-003

Remarque

- Nettoyer et entretenir le kit de purge de l'air en utilisant de l'alcool d'isopropyle ou de l'eau savonneuse ou l'essuyer avec un chiffon sec. Ne pas utiliser de produits tels que nettoyeurs pour frein disponibles dans le commerce. L'utilisation de tels produits peut endommager les pièces en plastique et autres.
- Lors du démontage et du nettoyage du kit de purge, du liquide utilisé pour le nettoyage peut demeurer sur les pièces du kit. Il faut donc veiller à ce que les pièces soient complètement sèches avant de les remonter.
- Évitez de retirer le tube de la seringue. Si le tube se détache accidentellement, retirez le coussinet de bras et le tube de la seringue et nettoyez minutieusement chaque pièce afin de retirer toute huile. Si le bout du tube s'est élargi, couper la partie élargie. Vérifiez que le tube est fermement raccordé à la seringue avant de l'utiliser à nouveau. Si le tube ne s'ajuste pas bien pendant l'utilisation, de l'huile peut fuir de la connexion du tube.

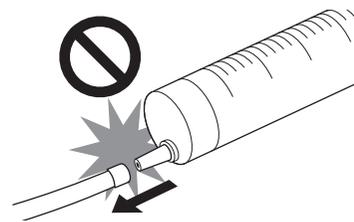


(French)

SI-1304A-003

Hinweis

- Reinigen Sie das Entlüftungsset mit Isopropylalkohol oder Seifenwasser oder reiben Sie es mit einem trockenen Tuch ab. Verwenden Sie keine im Handel erhältlichen Reinigungsmittel für Bremsen. Durch solche Produkte können die Kunststoffteile beschädigt werden.
- Beim Zerlegen und Reinigen des Entlüftungssets kann etwas Reinigungsflüssigkeit in den Teilen zurückbleiben; kontrollieren Sie vor dem Zusammenbau, ob alle Teile vollständig trocken sind.
- Nehmen Sie das Rohr nicht von der Spritze ab. Sollte das Rohr sich versehentlich lösen, die Hebelbuchse und das Rohr von der Spritze abziehen und alle Teile gründlich reinigen, sodass alles Öl vollständig entfernt wird. Falls das Rohrende aufgeweitet ist, den aufgeweiteten Teil abschneiden. Vor erneuter Verwendung sicherstellen, dass das Rohr fest mit der Spritze verbunden ist. Falls das Rohr nicht richtig festsitzt, kann bei der Verwendung am Rohranschluss Öl austreten.

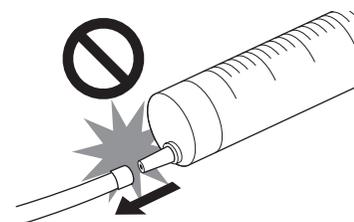


(German)

SI-1304A-003

Nota

- Limpie y mantenga el juego de purga usando alcohol isopropilico o agua jabonosa, o límpielo con un paño seco. No use productos como limpiadores comerciales de frenos. Usando esos productos podría dañar los plásticos y otras partes.
- Al desarmar y limpiar el juego de purga, puede quedar un poco de líquido usado en las partes del juego, por lo cual se recomienda asegurarse que todas las partes queden completamente secas antes de volver a armarlas.
- Evite retirar el tubo de la jeringa. Si el tubo se sale accidentalmente, extraiga el casquillo del brazo y el tubo de la jeringa y limpie bien cada pieza para eliminar todo el aceite. Si el extremo de la cámara está ensanchado, corte esa parte. Compruebe que el tubo esté bien conectado a la jeringa antes de volver a usarlo. Si el tubo no calza con seguridad, durante el uso podría perder aceite por la conexión del tubo.

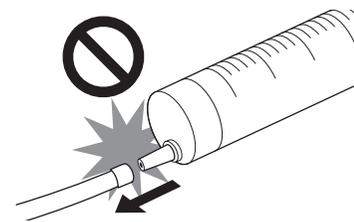


(Spanish)

SI-1304A-003

Nota

- Pulire il kit di spurgo con alcool isopropilico o acqua saponata, oppure usare un panno asciutto. Non usare prodotti quali i detergenti per freni disponibili in commercio. L'uso di tali prodotti potrebbe danneggiare le parti in plastica e le altre parti.
- Quando si smonta e si pulisce il kit di spurgo, un po' di liquido usato per la pulizia potrebbe rimanere sulle parti del kit, per cui assicurarsi che tutte le parti siano completamente asciutte prima di rimontarle.
- Evitare di rimuovere il tubo dalla siringa. Se il tubo dovesse staccarsi accidentalmente, rimuovere la boccola del braccetto e il tubo dalla siringa e pulire tutti gli elementi a fondo per eliminare eventuali tracce di olio. Se la parte terminale del tubo appare allargata, tagliare la parte. Prima di riutilizzarlo, verificare che il tubo sia saldamente collegato alla siringa. Se il tubo non viene fissato in modo sicuro, l'olio potrebbe fuoriuscire dalla giuntura di collegamento.



(Italian)

SI-1304A-003

ご注意

- ブリーディングキットの洗浄またはメンテナンスにはイソプロピルアルコール、石鹼水を使用するか空拭きを行なってください。市販のブレーキクレンザー等は使用しないでください。樹脂部品等を損傷する恐れがあります。
- ブリーディングキットを分解清掃した場合、洗浄に使用した液体成分が残る場合がありますので再組み立ての際は十分に乾燥させてから行ってください。
- 注射器からチューブを取り外すことは避けてください。万一チューブが外れてしまった場合は、アームブッシュとチューブを注射器から取り外し、各部を洗浄し油分を除去してください。チューブの先が広がっている場合は、その部分を切り取ってください。チューブが注射器にしっかり固定されている事を確認のうえ再使用してください。固定が不十分のまま使用されると、その部分からの油漏れの恐れがあります。

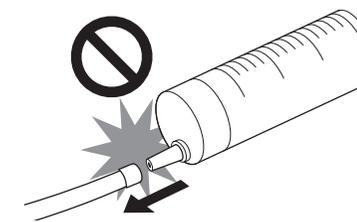


(Japanese)

SI-1304A-003

Nota

- Limpe e mantenha o kit de sangria utilizando álcool isopropílico ou água com sabão, ou limpe com um pano seco. Não use produtos como os limpadores de freio disponíveis comercialmente. Utilizar tais produtos pode danificar plástico ou outras partes.
- Ao desmontar e limpar o kit de sangria um pouco do líquido utilizado para a limpeza pode permanecer nas partes do kit, portanto, certifique-se que todas as partes estejam totalmente secas antes de remontá-las.
- Evite remover o tubo da seringa. Se o tubo sair acidentalmente, retire o casquilho de braço e o tubo da seringa e limpe todas as peças cuidadosamente para remover qualquer óleo. Se a ponta do tubo for alargada, corte a parte alargada. Verifique se o tubo está firmemente encaixado na seringa antes de usá-lo novamente. Se o tubo não encaixar firmemente durante o uso, o óleo poderá vazar da conexão do tubo.



(Portuguese)