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LAHTI**

Installation of Ramlube II RG540 series

[RG5410313-UP]

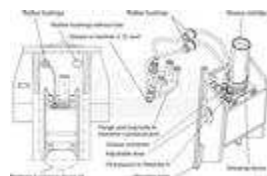
Ramlube II greasing device can be installed to the existing BR2063, BR2064, BR2265, BR2266, BR2268, BR3890, BR4510, BR4511, 4510, 4511, E 60- and G-series hammers. The kit consists of a greasing device, hoses and a mounting plate tailored for different hammer models.

The greasing device is operated by the hydraulic pressure from the hammer's pressure fitting. The unit is installed to the hammer's housing with a mounting plate and no external electric cables or hydraulic hoses are needed. Ramlube II contains a replaceable 500-gram grease cartridge.

Important notes

- The pressure in hammer oil supply line must drop below 60 bar between hammer impact series. In order to ensure reliable operation of Ramlube II, please note that the hammer return line must be connected directly to the carrier oil tank. If the pressure between impact series stays over 60 bar level (specially in applications where fast repeated impact series occur), an additional pressure discharge valve must be installed to hammer oil supply line. Consult your local Sandvik dealer for further instructions. *For more information, see "Additions to Ramlube II installation instructions, Publ. no. A000131E" in Bulletins.*
- Ramlube II is not recommended for underwater applications. Under no circumstances must Ramlube II unit get under water.

See the illustrations below for details.



Safety

General safety

All mechanical equipment can be hazardous if operated without due care or correct maintenance. Most accidents involving machine operation and maintenance are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs.

Because it is impossible to anticipate every possible circumstance that might involve a potential hazard, the warnings in this guide are not all inclusive. If a procedure, tool, working method or operating technique not specifically recommended by manufacturer is used, you must satisfy yourself that it is safe for you and others. You should also ensure that the product will not be damaged or made unsafe by the method of operation or maintenance procedures you choose.

Safety is not just a matter of responding to the warnings. All the time you are working with your attachment you must pay attention to what hazards there might be and how to avoid them. Do not work with the product until you are sure that you control it. Do not start any job until you are sure that you and those around you will be safe.



Warning! Read the following warning messages carefully. They tell you of different hazards and how to avoid them. If proper precautions are not taken you or others could be seriously injured.

Safety instructions

Manuals

Study this manual and hammer's operator manual before installing, operating or maintaining the product. If there is anything you don't understand, ask your employer or your local dealer to explain it. Keep this manual clean and in good condition.

Study also the operating and maintenance manual of your carrier before operating the attachment.

Flying chips of rock



Protect yourself and your neighbourhood against flying chips of rock. Do not operate the product or carrier if someone is too close.

Keep the cabin windows and doors closed during operation. Window bars are recommended to protect the windows from flying chips of rock.

Equipment limits

Operating the product beyond its design limits can cause damage. It can also be dangerous.

Do not try to enhance the product's performance by unapproved modifications.

Hydraulic fluid

Fine jets of hydraulic fluid at high pressure can penetrate the skin. Do not use your fingers to check for hydraulic fluid leaks. Do not put your face close to suspected leaks. Hold a piece of cardboard close to suspected leaks and then inspect the cardboard for signs of hydraulic fluid. If hydraulic fluid penetrates your skin seek medical help immediately.

Hot hydraulic fluid can cause severe injuries.

Hydraulic hoses and fittings

Ensure all hydraulic components will withstand maximum pressure and mechanical stresses caused by

operation of the attachment. Consult your local dealer for instructions.

Fire hazard

Most hydraulic fluids are flammable and might ignite when contacting hot surface. Avoid spilling hydraulic fluid to hot surfaces.

Working with the product on certain materials can cause sparks and hot splinters to get loose. These can ignite flammable materials around working area.

Ensure that adequate extinguisher is available.

Hydraulic pressure

Hydraulic fluid at system pressure can injure you. Before disconnecting or connecting hydraulic hoses, stop the carrier engine, operate the controls to release pressure trapped in the hoses and wait ten (10) minutes. During the operation, keep people away from the hydraulic hoses.

There might be pressurized oil trapped inside the product even if it is disconnected from the carrier. Be aware of possible blank firing while greasing or removing and installing hammer tools.

Spare parts

Use only genuine spare parts. The use of other spare part may damage the product.

Equipment condition

Defective equipment can injure you or others. Do not operate equipment which is defective or has missing parts.

Make sure the maintenance procedures in this manual are completed before using the product.

Repairs and maintenance

Do not try to do repairs or any other maintenance work you do not understand.

Modifications and welding

Non-approved modifications can cause injury and damage. Contact your local dealer for advice before modifying the product. Before welding on the product while it is installed on the carrier, disconnect the carrier alternator and battery.

Metal splinters

You can be injured by flying splinters when driving metal pins in and out. Use soft-faced hammer or drifts to remove and fit metal pins, such as pivot pins. Always wear safety glasses.

Technical data

Description	Specification
Lubricant	NLGI1 - NLGI2
Operating pressure	120...200 bar (1740...2900 psi)
Grease supply / stroke. <i>For more information, see "Adjusting the dose" in Installation Guide.</i>	2 turns open / means 0.1 g grease/impact period
Cartridge	500 g (see part list)

Installation

Releasing pressure



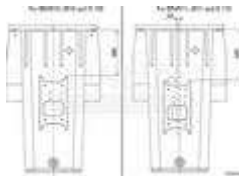
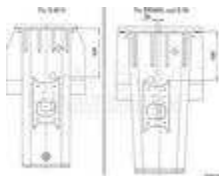
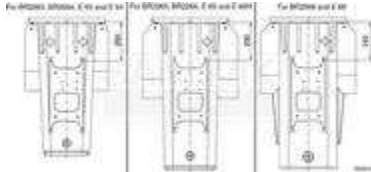
Warning! The hydraulic pressure inside the hammer must always be released before making any adjustments or repairs when the hammer is connected to the carrier. There may also be

pressurized oil trapped inside the hammer even if the hammer is disconnected from the carrier. Release the hydraulic pressure according to the following instructions before opening any plugs or valve covers.

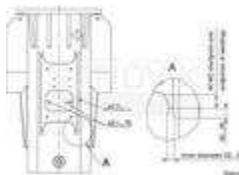
1. Stop the carrier engine.
2. Operate boom and hammer controls to release any pressure trapped inside hoses.
3. Wait at least 10 minutes for oil pressure to drop inside the hammer.

Mounting plate

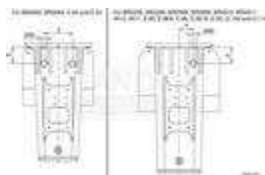
3. Mark the correct positioning of the mounting plate to housing.



3. Weld mounting plate to housing.



4. Check the location of the pressure connection and the grease connection in the hammer. Drill D50 mm holes for leading the hoses through the hammer's housing. For the dimensions, see the illustration and the table below.

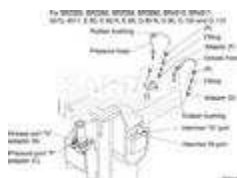
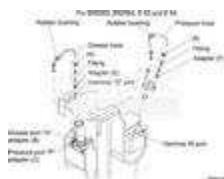


	BR2063, BR2064, E 63, E 64	BR2265, BR2266, E 65, E 66 N	BR2568, E 68	G 80 N	BR3890, G 90	BR4510, 4510, G 100	BR4511, 4511, G 110
X	125	125	125	170	170	170	170

Y		110	110	110	130	130	130
Z	220						

Hoses

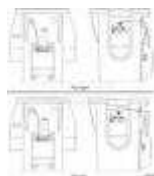
Ramlube II greasing device kit includes hoses for grease and operating pressure. Because the required hose lengths are specific for each installation, the fittings have been installed at the factory to one hose end only. Please see the instructions below to complete the assembly.



Item	Tightening torque/specification
Nut (A)	45 Nm (33 lbf ft)
Grease adapter in greasing device (B)	45 Nm / Locktite 2701 (33 lbf ft / Locktite 2701)
Pressure adapter in greasing device (C)	45 Nm / Locktite 2701 (33 lbf ft / Locktite 2701)
Grease adapter in hammer (D)	50 Nm (37 lbf ft)
Grease adapter in hammer (E)	35 Nm (26 lbf ft)
Pressure adapter in hammer (F)	35 Nm (26 lbf ft)

1. Install the oil supply flange and the long bolts (supplied with the kit) to the hammer's pressure port (IN-port). Install the adapter to the oil supply flange. Replace the hammer's valve body "G" port flange plug with an adapter supplied with the kit.
2. If removed, install the hammer powercell back to the housing. Install the buffers and lower the mounting bracket to its place. Compress the buffers by tightening the mounting bracket screws.
3. Lead the pressure hose from the greasing device "P" port to the hammer oil supply flange through the housing's D50 mm hole. Lead the grease hose from the greasing device "G" port to the hammer "G" port through the housing's D50 mm hole.
4. Measure and mark the required length for both the hoses.

Note: The hoses must not be tight because the powercell moves during hammer operation. Add few centimeters to the measured length. See the illustration below.

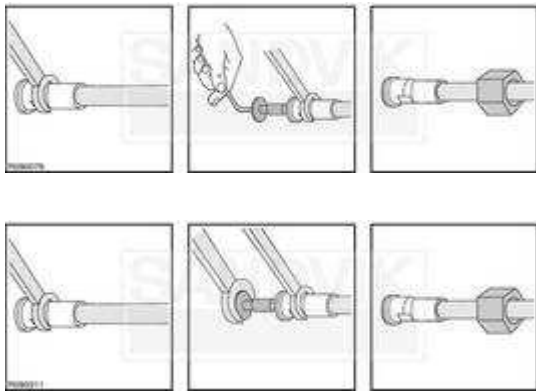


5. Remove the greasing device from the hammer housing and remove the hoses from it.
6. By using a sharp knife, cut the hoses to the appropriate lengths.

7. Lubricate the fitting parts with hydraulic oil.



8. Insert the rubber bushing and the nut to the hose.
9. By using a 12 mm open end spanner, screw the sleeve on the hose as far as it will go. The thread is left-handed.
Important: After stopping, turn the sleeve back 1 round.
10. Install the insert and tighten it. There are two different designs of insert: one can be tighten using a 14 mm combination spanner and the other one, using a 5 mm allen key. Make sure the hose does not turn inside the sleeve while tightening the insert. Continue until the insert faces the sleeve.



11. Check that there are not blockages in the hoses.
12. Install the hoses to the greasing device and torque the nuts to 45 Nm. Install the greasing device to the hammer housing and torque the screws to 40 Nm.



13. Install shield and tighten mounting screws to 200 Nm.



14. Connect the pressure hose to the oil supply flange and the grease hose to the hammer's "G" port. While tightening the nut to specified torque, hold the adapter in place to prevent the adapter from being tightened too hard.



Start-up

Remove the tool from the hammer.

Prefill the hammer's grease channel by applying tool grease with a grease gun to the grease nipple located on the side of the greasing device. Continue until some grease appears from the tool bushing's grease holes (use assistant if possible). This may take some time; the capacity of hammer internal grease channel is approximately 500 - 1000 grams. Install the tool.



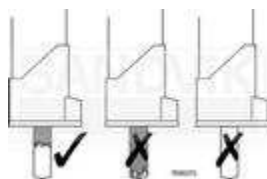
Insert the grease cartridge to the greasing device. [For more information, see "Replacing the grease cartridge" in Installation Guide.](#)

Disconnect the grease hose from the hammer's "G"-port. Operate the hammer with the grease hose disconnected from the valve body. After 10 minutes operation, check that some grease has protruded from the grease hose.

Connect the grease hose to the hammer's "G" port and tighten the nut properly. The unit is now ready for use.

Operation

The tool shank must be greased during operation. Regular visual inspections are required. During operation, some grease should be visible on the upper part of the tool. This indicates that the greasing device is working properly and the adjustment is correct. See the illustration below.



If the tool shank is covered with excessive grease, the lubrication device needs to be adjusted. [For more information, see "Adjusting the dose" in Installation Guide.](#)

An unlubricated tool shank indicates that the grease supply is too low, the grease cartridge is empty or the greasing device is not working properly. See Ramlube II problems.

Replacing the grease cartridge

Measure the distance from the top of the grease cartridge. It is recommended to replace the grease cartridge when the distance is more than 200 mm. The grease cartridge is completely empty and has to be replaced when the distance is 210 mm.



1. Wear gloves when you are handling the grease cartridge. If you get grease onto your skin, wash it away with water.



2. Unscrew and remove the grease cartridge.
3. Dispose the used cartridge appropriately.
Note: The grease cartridge is disposable, it can not be refilled.
4. Check and clean the grease cartridge seat in the cartridge holder. Remove old grease cartridge seal.
5. Remove the protective cap from the new cartridge.



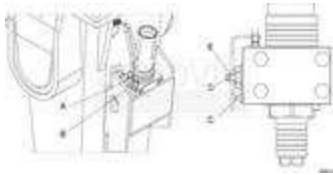
6. Check the grease cartridge seal.
7. Press the cartridge piston with fingers until approximately 15 mm of grease comes out.
8. Insert the cartridge to its place and tighten.



Note: The hammer must not be used without Ramlube II grease cartridge installed under any circumstances. If replacement is not available, keep empty grease cartridge in its place and grease hammer manually by applying tool grease through the grease nipple located on the underside of the greasing device.

Adjusting the dose

Note: Some hammer models are equipped with an adapter kit for manual greasing and do not include an automatic greasing device.



- A. Grease hose
- B. Pressure hose
- C. Grease nipple for manual greasing
- D. Adjusting screw for grease dosage
- E. Locking nut for the adjusting screw

Adjusting the dose

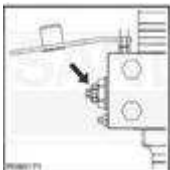
Please note that the actual amount of grease needed for proper lubrication varies according to:

- hammer size
- application: the amount of grease depends on the number of working cycles within a given time. In practice this means that, in an application where the working cycles are short but the quantity is high, a smaller dose can be used.
- wear rate of the tool shank and bushing
- condition of the tool seal
- operators working techniques
- grease quality

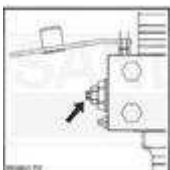
1. Turn the locking plate and plug aside.



2. Open the locking nut.



3. Turn the adjusting screw for grease dosage clockwise to close it completely.



4. Next open the adjusting screw for grease dosage by turning it counter-clockwise as needed. See table below.

5. Tighten the locking nut to the specified torque setting. See table below.
6. Turn the locking plate and plug to the correct positions.

Item	Specification/Torque
Shield screws	175 Nm (129 lbf ft)
Adjusting screw locking nut	50 Nm (37 lbf ft)
Adjusting range	Linear 0 ... 8 turns (7 mm)
Basic adjustment	2 turns open / means 0.1 g grease/impact period
1-turn adjustment	0.035 g grease/impact period

Maintenance

Routine maintenance

Overview

This product is a precision made hydraulic machine. Therefore great care and cleanliness should be taken when handling any of the hydraulic components. Dirt is the worst enemy in hydraulic systems.

Handle the parts carefully and remember to cover any cleaned and dried parts with clean lint-free cloth. Do not use anything other than purpose designed materials for cleaning hydraulic parts. Never use water, paint thinners or carbon tetrachloride.

Components, gaskets and seals in the hydraulic system should be oiled with clean hydraulic oil before assembly.

Troubleshooting

Ramlube II problems RG540 series

Upper or lower tool bushing does not get enough lubricant

- Cold conditions. Apply grease from grease gun to grease nipples.
- Blockage in greasing device. Contact your local dealer for more information.

Upper or lower tool bushing gets too much lubricant

- Leak in the doser. The doser must be replaced. Contact your local dealer for more information.

Tool does not get lubricant at all

- Grease cartridge is empty or damaged. Replace the grease cartridge.
- Doser defective. The doser must be replaced. Contact your local dealer for more information.
- Leak in the grease hose or pressure hose. Inspect the hoses and replace if necessary.
- Grease and pressure hoses are installed backwards. Swap the hoses.
- To continue troubleshooting, disconnect the grease hose from the hammer valve body and operate the hammer. After 10 minutes of operation check if grease has protruded from the grease hose.

Lubrication device is working (while the grease hose is disconnected)

- Leak in hammer lubrication channel. The hammer must be serviced in an authorized Sandvik service shop.
- Hammer lubrication channel is blocked. The hammer must be serviced in an authorized Sandvik service shop.

Lubrication device does not work (while the grease hose is disconnected)

- Remove the lubrication device from the hammer and deliver it for service in an authorized Sandvik service shop.

Further assistance

Further assistance

If further assistance is required, please prepare to answer the following questions before calling your dealer.

- Model and serial number
- Working hours and service history
- Carrier model
- Installation: Oil flow, operating pressure and return line pressure if known
- Application
- Has the product operated normally before

Workshop

Disassembly and assembly

Ramlube II RG540 series

Torques and lubricants

[RG5410313-UP]



Item	Tightening torque/Specification
Mounting plate screws (A)	200 Nm (148 lbf ft)
Greasing device screws (B)	40 Nm (30 lbf ft)
Grease nipple (C)	33 Nm (24 lbf ft)
Doser to the body (D)	150 Nm (111 lbf ft)
Locking nut for the adjusting screw (E)	50 Nm (37 lbf ft)
Check valve to the cartridge holder (F)	15 Nm (11 lbf ft)
Screw for spring housing lock plate (G)	25 Nm (18 lbf ft)
Spring housing (H)	200 Nm (148 lbf ft)
Nut (I)	45 Nm (33 lbf ft)
Connector to greasing device (J)	45 Nm (33 lbf ft) / Loctite 2701
Connector to grease connection in hammer (K)	70 Nm (52 lbf ft)
Connector to pressure connection in hammer (L)	45 Nm (33 lbf ft) / Loctite 2701
Oil pressure in hammer (P)	
Grease connection in hammer (GC)	

Item	Lubricant
All seals and O-rings	O-ring grease
Threads and lock washers	Thread grease
All parts	Hydraulic oil

Releasing pressure



Warning! The hydraulic pressure inside the hammer must always be released before making any adjustments or repairs when the hammer is connected to the carrier. There may also be pressurized oil trapped inside the hammer even if the hammer is disconnected from the carrier. Release the hydraulic pressure according to the following instructions before opening any hoses, plugs or valve covers.

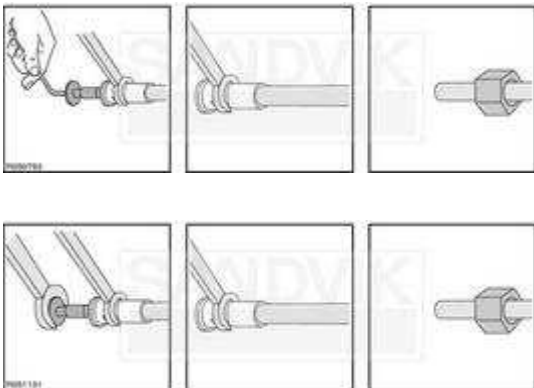
1. Stop the carrier engine.
2. Operate the boom and hammer controls to release any pressure trapped inside the hoses.
3. Wait at least 10 minutes for the oil pressure to drop inside the hammer.

Replacing greasing device hoses

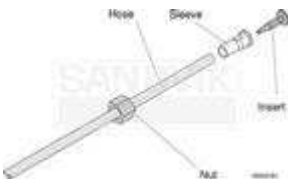
1. Remove the hose assembly by opening the nuts from both ends of the hose.



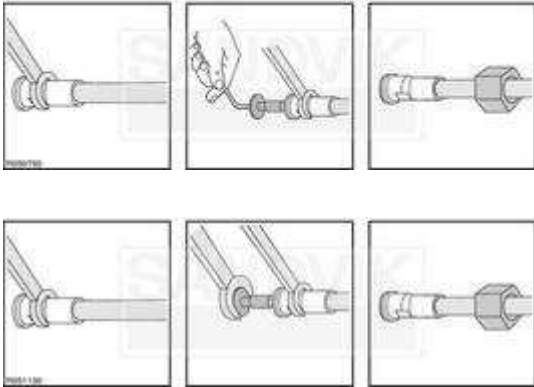
2. Unscrew the inserts with a 5-mm Allen key and a 12-mm open-ended spanner or a 12-mm and 14-mm open-ended spanners.
3. Remove the sleeves. The thread is left-handed.
4. Remove the nuts.



5. Use a sharp knife to cut the new hose to the appropriate length. See the parts manual specification for the correct hose length.
6. Lubricate the coupling parts with hydraulic oil.



7. Insert the nut on the hose.
8. Use a 12-mm open-ended spanner to screw the sleeve on the hose as far as it will go. The thread is left-handed.
Important: After stopping, turn the sleeve back one (1) round.
9. Install the insert and tighten it. There are two different designs of insert: one can be tightened using a 14 mm combination spanner and the other one, using a 5 mm allen key. Make sure the hose does not turn inside the sleeve while tightening the insert. Continue until the insert faces the sleeve.



10. Prepare the other end of the hose.
11. Check that there are no blockages in the hose assembly.
12. Install the hose assembly.
13. Connect the hose assemblies. While tightening the nut to the specified torque, hold the adapter in place to prevent the adapter from being tightened too hard.



Disassembling the greasing device

[RG5410313-UP]



Warning! The hydraulic pressure inside the hammer must always be released before removing any of the plugs or valves. Read the instructions on releasing the hydraulic pressure from the hammer.

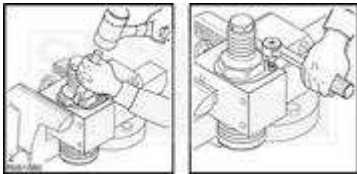
1. Release the pressure inside the hammer.
2. Remove the shield from the housing.



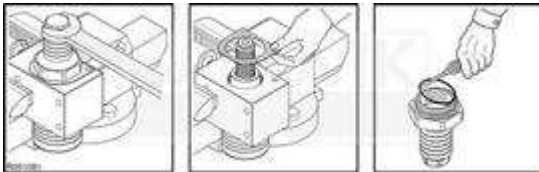
3. Remove the grease and pressure hoses from the greasing device.
4. Remove the greasing device from the housing.



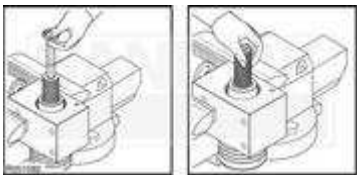
5. Remove grease cartridge.
6. Clamp the greasing device in a vice.
7. Release the lock plate with a hammer and a chisel.
8. Remove the lock plate screw with a 6-mm Allen key.



9. Loosen and remove the spring housing with a 36-mm open-ended spanner.
10. Remove the lock plate.
11. Remove the O-ring from the spring housing.



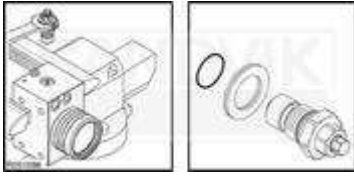
12. Remove the piston with the nut.
13. Remove the spring.



14. Remove the lock plate with the plug.



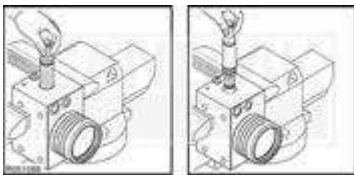
15. Use a 30-mm open-ended spanner to remove the doser plug with adjusting screw, nut and lock washer .
16. Remove the O-rings and lock washer from the plug.



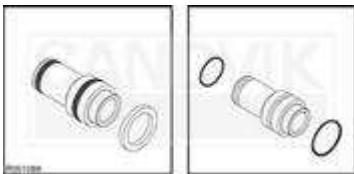
17. Remove the O-ring from the adjusting screw.
18. Remove the nut from the adjusting screw.
19. Remove the adjusting screw from the plug.
20. Remove the O-ring from the adjusting screw.
21. Remove the spring.



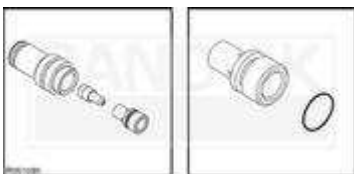
22. Turn the doser body assembling tool (part number 953795) onto the doser body.
23. Pull the doser body with pistons out using the assembling tool.



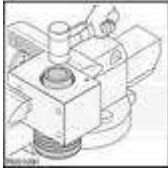
24. Remove the shim plate from the doser body.
25. Remove the O-rings from the doser body.



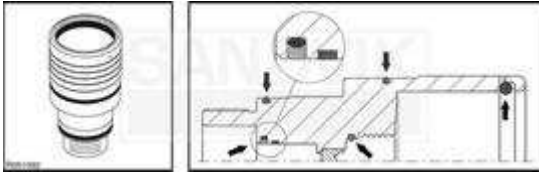
26. Push the pistons out from the doser body with a pin.
27. Remove the O-ring from the piston.



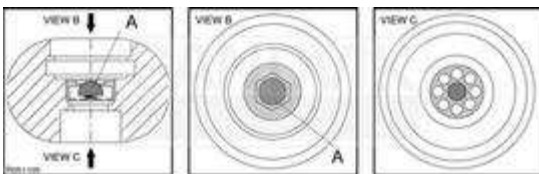
28. Remove the cartridge holder from the body with a plastic hammer.



29. Remove the O-rings from the cartridge holder.
30. Remove the seal and the guide ring from the cartridge holder.



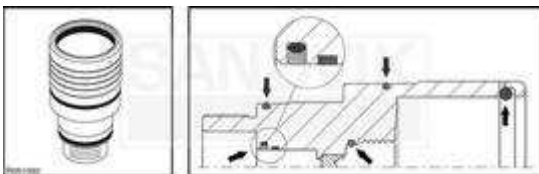
31. Clean the cartridge holder thoroughly with a suitable solvent. Check that the spool (A) moves freely inside the check valve. It is not recommended that you remove the check valve if no damage is found.



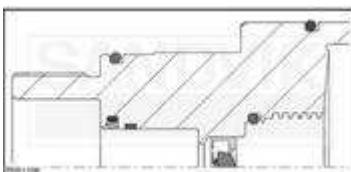
Assembling the greasing device

[RG5410313-UP]

1. Clean all parts carefully.
2. Install the O-rings, guide ring and the seal in to the cartridge holder.



3. If you removed the check valve earlier, install the check valve in to the cartridge holder and tighten it to the specified torque.

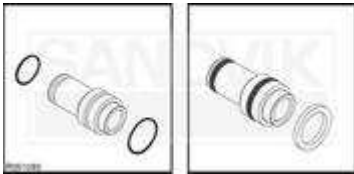


4. Clamp the greasing device body in a vice.

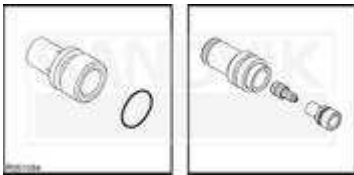
5. Install the cartridge holder to the body. Align the holes for the dosers in the cartridge holder and the body with a doser body assembly tool (part number 953795).



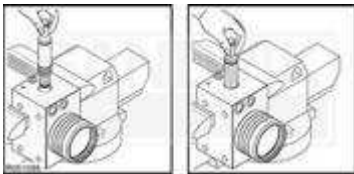
6. Install the O-rings to the doser body.
7. Install a new shim plate to the doser body.



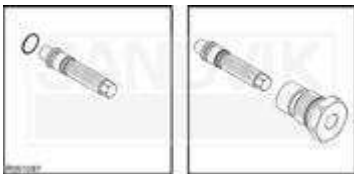
8. Install the O-ring to the piston.
9. Install the pistons to the doser body. Note: Install new rubber piston.



10. Install the doser body and pistons in to the body with an assembling tool (part number 953795).



11. Install the O-ring to the adjusting screw.
12. Install the adjusting screw to the plug. Turn the adjusting screw so that it is fully open.



13. Install the nut to the adjusting screw.
14. Install the O-ring to the adjusting screw.



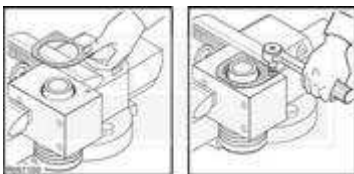
15. Install the spring.
16. Install the O-rings and the lock washer to the plug.
17. Install the doser plug with adjusting screw, nut and lock washer. Tighten the plug to the specified torque setting.



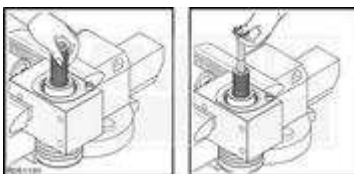
18. Install the lock plate with plug.



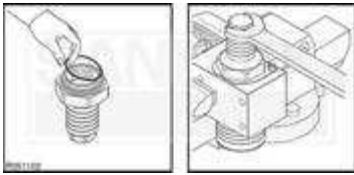
19. Install the lock plate of the spring housing. Note: Use always a new lock plate.
20. Install the lock plate screw. Tighten the screw to the specified torque setting.



21. Install the spring.
22. Install the piston with the nut.



23. Install the O-ring to the spring housing.
24. Install the spring housing. Tighten it to the specified torque setting.



25. Lock the spring housing by bending the lock plate with a chisel and a hammer.



26. Install the new grease cartridge. Prefill the greasing device by pressing the piston of the grease cartridge manually.



27. Attach the greasing device in to the housing. Tighten the screws to the specified torque setting.
28. Connect the grease and pressure hoses to the greasing device and hammer.
29. Install the shield to the housing. Tighten screws to the specified torque setting.



30. Prefill the hammer's grease channel by applying tool grease with a grease gun to the grease nipple located on the side of the greasing device. Continue until some grease appears from the tool bushing's grease holes (use assistant if possible). This may take some time; the capacity of hammer internal grease channel is approximately 500 - 1000 grams.

Parts

Ramlube II kit RG540 serie (BR 2063, BR 2064, E 63, E 64)

[RG5410313-UP]



Item	Description	Part no.	Specification	Note	Qty
Kit1	Ramlube II kit (incl. parts 10-36)	K60064			1
10	Greasing device RG541	953344			1
11	Hose assembly (incl. parts 11.1-11.4)	169221			2
11.1	Sleeve	153035			2
11.2	Insert	153036			2
11.3	Hose	953946			1
11.4	Nut	951296			2
12	Hex. screw	953794	M10x110-8.8 ISO 4014		4
13	Lock washer	953503	M10 NL10sp NORD-LOCK		4
14	Hex. socket screw	902895	M16x35-8.8 ISO 4762		4
15	Lock washer	90597	M16 NORD-LOCK		4
20	Shield	168029			1
21	Mounting plate	169220			1
30	Rubber bushing	158147			2
31	Shield	952093			2
32	Connector	951294	BSPP 1/4		2
34	Flange	154404	SAE 1		1
35	O-ring	90010	BS 1806 32.92x3.53-NBR 90		1
36	Hex. socket screw	91041	M12x60-8.8 ISO 4762		4
40	Grease cartridge	951370	Special tool grease, Ramlube II cartridge. Greasing device cartridges are sold also in box which includes 24 cartridges.		1

Ramlube II kit RG540 serie (BR 2265, BR 2266, E 65, E 66 N)

[RG5410313-UP]



Item	Description	Part no.	Specification	Note	Qty

Kit1	Ramlube II kit (incl. parts 10-36)	K60065			1
10	Greasing device RG541	953344			1
11	Hose assembly (incl. parts 11.1-11.4)	169221			2
11.1	Sleeve	153035			2
11.2	Insert	153036			2
11.3	Hose	953946			1
11.4	Nut	951296			2
12	Hex. screw	953794	M10x110-8.8 ISO 4014		4
13	Lock washer	953503	M10 NL10sp NORD-LOCK		4
14	Hex. socket screw	902895	M16x35-8.8 ISO 4762		4
15	Lock washer	90597	M16 NORD-LOCK		4
20	Shield	168029			1
21	Mounting plate	169220			1
30	Rubber bushing	158147			1
31	Shield	952093			1
32	Connector	951294	BSPP 1/4		1
33	Connector	951295	BSPP 3/8		1
34	Flange	152334	SAE 1 / SAE 1 1/4		1
35	O-ring	90009	BS 1806 37.69x3.53-NBR 90		1
36	Hex. socket screw	91041	M12x60-8.8 ISO 4762		4
37	Hex. socket screw	903075	M14x70-8.8 ISO 4762		4
40	Grease cartridge	951370	Special tool grease, Ramlube II cartridge. Greasing device cartridges are sold also in box which includes 24 cartridges.		1

Ramlube II kit RG540 serie (BR 2568, BR 3890, BR 4510, BR 4511, 4510, 4511, E 68, G 80 N, G 90, G 100, G 110)

[RG5410313-UP]

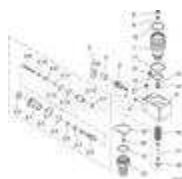


Item	Description	Part no.	Specification	Note	Qty
Kit1	Ramlube II kit (incl. parts 10-36)	K60100			1
10	Greasing device RG541	953344			1
11	Hose assembly (incl. parts 11.1-11.4)	169221			2

11.1	Sleeve	153035			2
11.2	Insert	153036			2
11.3	Hose	953946			1
11.4	Nut	951296			2
12	Hex. screw	953794	M10x110-8.8 ISO 4014		4
13	Lock washer	953503	M10 NL10sp NORD-LOCK		4
14	Hex. socket screw	902895	M16x35-8.8 ISO 4762		4
15	Lock washer	90597	M16 NORD-LOCK		4
20	Shield	168029			1
21	Mounting plate	169220			1
30	Rubber bushing	158147			1
31	Shield	952093			1
32	Connector	951294	BSPP 1/4		1
33	Connector	951295	BSPP 3/8		1
34	Flange	153728	SAE 1 / SAE 1 1/4		1
35	O-ring	90009	BS 1806 37.69x3.53-NBR 90		1
36	Hex. socket screw	903075	M14x70-8.8 ISO 4762		4
40	Grease cartridge	951370	Special tool grease, Ramlube II cartridge. Greasing device cartridges are sold also in box which includes 24 cartridges.		1

Ramlube II greasing device RG540 serie

[RG5410313-UP]



Item	Description	Part no.	Specification	Note	Qty
1	Greasing device RG541 (incl. parts 2-21)	953344			1
2	Doser (incl. parts 2.1-2.14)	953305			1
2.1	Plug	953318			1
2.2	Nut	953330	M12x1 DIN 934		1
2.3	Lock washer	91038	M24 NORD-LOCK	*	1
2.4	O-ring	953325	D21	*	1
2.5	Adjusting screw	953317			1
2.6	O-ring	953326	D8	*	1
2.7	O-ring	953324	D11	*	2
2.8	Spring	953331		*	1
2.9	Piston	953319			1
2.10	O-ring	953322	D7	*	1

2.11	Piston	953329		*	1
2.12	Body	953320			1
2.13	O-ring	953323	D15	*	1
2.14	Shim plate	953321		*	1
3	Grease nipple	90200	BSP 1/4	*	1
4	Plug	953303		*	1
5	Locking plate	953302			1
6	Body	953310			1
7	Cartridge holder	953309			1
8	Check valve	951767			1
9	O-ring	951416	D19	*	1
10	O-ring	951453	D62	*	1
11	O-ring	953300	D71	*	1
12	O-ring	953301	D52	*	2
13	Guide ring	950272		*	1
14	Seal	953299		*	1
15	Spring housing	953308			1
16	Spring	950257			1
17	Piston	953307			1
18	Nut	953306			1
19	Lock plate	951410		*	1
20	Hex. socket screw	951421	M8x10-8.8 ISO 4762	*	1
21	Connector	951294	BSPP 1/4		3
kit	Seal set for greasing device	953385			1
	*) Are included in seal set for greasing device				