SERVICE MANUAL

CB 80S
CB 90S
CB 135S

Hydraulic Breaker

Part number 51553916
English
December 2018

NEW HOLLAND CONSTRUCTION

Basic instructions - Shop and assembly

Shimming

For each adjustment operation, select adjusting shims and measure the adjusting shims individually using a micrometer, then add up the recorded values. Do not rely on measuring the entire shimming set, which may be incorrect, or the rated value shown on each shim.

Rotating shaft seals

For correct rotating shaft seal installation, proceed as follows:

1. Before assembly, allow the seal to soak in the oil it will be sealing for at least thirty minutes.
2. Thoroughly clean the shaft and check that the working surface on the shaft is not damaged.
3. Position the sealing lip facing the fluid.

   NOTE: *With hydrodynamic lips, take into consideration the shaft rotation direction and position the grooves so that they will move the fluid towards the inner side of the seal.*
4. Coat the sealing lip with a thin layer of lubricant (use oil rather than grease). Fill the gap between the sealing lip and the dust lip on double lip seals with grease.
5. Insert the seal in its seat and press down using a flat punch or seal installation tool. Do not tap the seal with a hammer or mallet.
6. While you insert the seal, check that the seal is perpendicular to the seat. When the seal settles, make sure that the seal makes contact with the thrust element, if required.
7. To prevent damage to the seal lip on the shaft, position a protective guard during installation operations.

O-ring seals

Lubricate the O-ring seals before you insert them in the seats. This will prevent the O-ring seals from overturning and twisting, which would jeopardize sealing efficiency.

Sealing compounds

Apply a sealing compound on the mating surfaces when specified by the procedure. Before you apply the sealing compound, prepare the surfaces as directed by the product container.

Spare parts

Only use CNH Original Parts or NEW HOLLAND CONSTRUCTION Original Parts.

Only genuine spare parts guarantee the same quality, duration, and safety as original parts, as they are the same parts that are assembled during standard production. Only CNH Original Parts or NEW HOLLAND CONSTRUCTION Original Parts can offer this guarantee.

When ordering spare parts, always provide the following information:

- Machine model (commercial name) and Product Identification Number (PIN)
- Part number of the ordered part, which can be found in the parts catalog

Pressure

Weight pounds/square inch to weight kilograms/square centimeter

lbf/in^2 (psi)	0 kgf/cm^2	1 kgf/cm^2	2 kgf/cm^2	3 kgf/cm^2	4 kgf/cm^2	5 kgf/cm^2	6 kgf/cm^2	7 kgf/cm^2	8 kgf/cm^2	9 kgf/cm^2	lbf/in^2 (psi)
----		0.0703	0.1406	0.2109	0.2812	0.3515	0.4218	0.4921	0.5624	0.6327	----
10	0.7030	0.7733	0.8436	0.9139	0.9842	1.0545	1.1248	1.1951	1.2654	1.3357	10
20	1.4060	1.4763	1.5466	1.6169	1.6872	1.7575	1.8278	1.8981	1.9684	2.0387	20
30	2.1090	2.1793	2.2496	2.3199	2.3902	2.4605	2.5308	2.6011	2.6714	2.7417	30
40	2.8120	2.8823	2.9526	3.0229	3.0932	3.1635	3.2338	3.3041	3.3744	3.4447	40
50	3.5150	3.5853	3.6556	3.7259	3.7962	3.8665	3.9368	4.0071	4.0774	4.1477	50
60	4.2180	4.2883	4.3586	4.4289	4.4992	4.5695	4.6397	4.7100	4.7803	4.8506	60
70	4.9209	4.9912	5.0615	5.1318	5.2021	5.2724	5.3427	5.4130	5.4833	5.5536	70
80	5.6239	5.6942	5.7645	5.8348	5.9051	5.9754	6.0457	6.1160	6.1863	6.2566	80
90	6.3269	6.3972	6.4675	6.5378	6.6081	6.6784	6.7487	6.8190	6.8893	6.9596	90
100	7.0299	7.1002	7.1705	7.2408	7.3111	7.3814	7.4517	7.5220	7.5923	7.6626	100

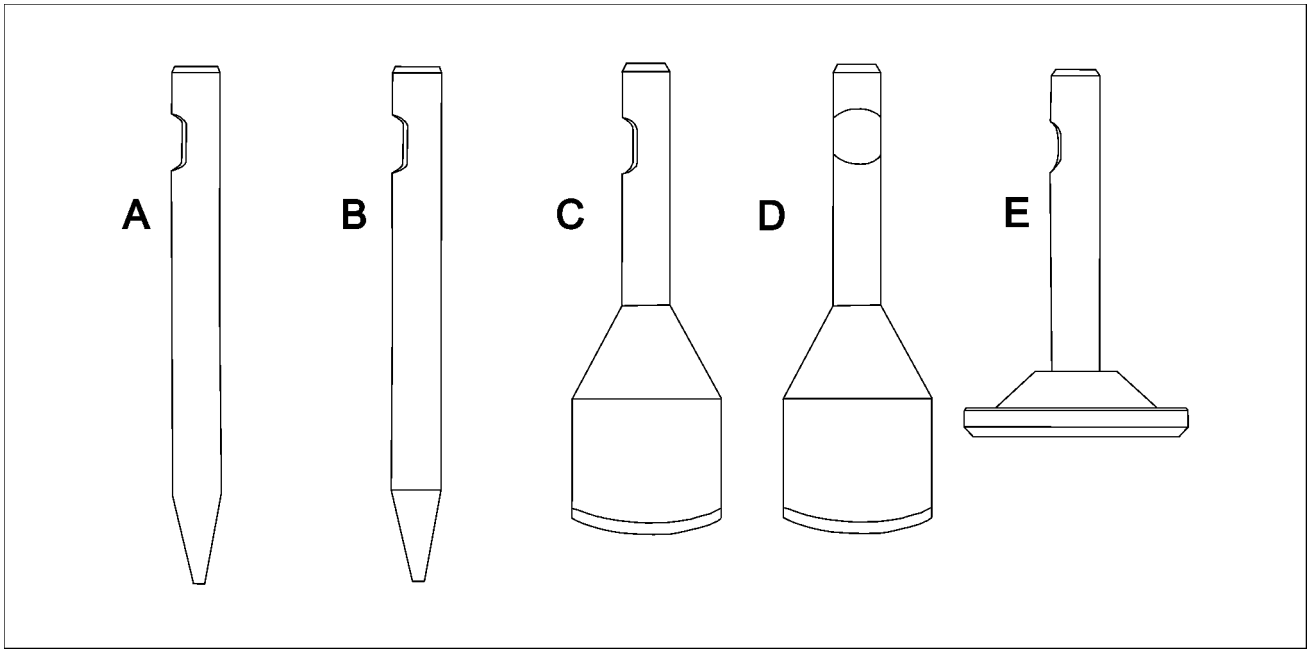
Weight kilograms/square centimeter to weight pounds/square inch

kgf/cm^2	0 lbf/in^2(psi)	1 lbf/in^2(psi)	2 lbf/in^2(psi)	3 lbf/in^2(psi)	4 lbf/in^2(psi)	5 lbf/in^2(psi)	6 lbf/in^2(psi)	7 lbf/in^2(psi)	8 lbf/in^2(psi)	9 lbf/in^2(psi)	kgf/cm^2
----		14.22	28.45	42.67	56.90	71.12	85.35	99.57	113.80	128.02	----
10	142.25	156.47	170.70	184.92	199.15	213.37	227.60	241.82	256.05	270.27	10
20	284.50	298.72	312.95	327.17	341.40	355.62	369.85	384.07	398.30	412.52	20
30	426.75	440.97	455.20	469.42	483.65	497.87	512.10	526.32	540.55	554.77	30
40	569.00	583.22	597.45	611.67	625.90	640.12	654.35	668.57	682.80	697.02	40
50	711.25	725.47	739.70	753.92	768.14	782.37	796.59	810.82	825.04	839.27	50
60	853.49	867.72	881.94	896.17	910.39	924.62	938.84	953.07	967.29	981.52	60
70	995.74	1009.97	1024.19	1038.42	1052.64	1066.87	1081.09	1095.32	1109.54	1123.77	70
80	1137.99	1152.22	1166.44	1180.67	1194.89	1209.12	1223.34	1237.57	1251.79	1266.02	80
90	1280.24	1294.47	1308.69	1322.92	1337.14	1351.37	1365.59	1379.82	1394.04	1408.27	90
100	1422.49	1436.72	1450.94	1465.17	1479.39	1493.62	1507.84	1522.06	1536.29	1550.51	100

Weight kilograms/square centimeter to kilopascals

kgf/cm^2	0 kpa	1 kpa	2 kpa	3 kpa	4 kpa	5 kpa	6 kpa	7 kpa	8 kpa	9 kpa	kgf/cm^2
----		98.1	196.1	294.2	392.3	490.3	588.4	686.5	784.5	882.6	----
10	980.7	1078.7	1176.8	1274.9	1372.9	1471.0	1569.1	1667.1	1765.2	1863.3	10
20	1961.3	2059.4	2157.5	2255.5	2353.6	2451.7	2549.7	2647.8	2745.9	2843.9	20
30	2942.0	3040.1	3138.1	3236.2	3334.3	3432.3	3530.4	3628.5	3726.5	3824.6	30
40	3922.7	4020.7	4118.8	4216.9	4314.9	4413.0	4511.1	4609.1	4707.2	4805.3	40
50	4903.3	5001.4	5099.5	5197.5	5295.6	5393.7	5491.7	5589.8	5687.9	5785.9	50
60	5884.0	5982.1	6080.1	6178.2	6276.3	6374.3	6472.4	6570.5	6668.5	6766.6	60
70	6864.7	6962.7	7060.8	7158.9	7256.9	7355.0	7453.1	7551.1	7649.2	7747.3	70
80	7845.3	7943.4	8041.5	8139.5	8237.6	8335.7	8433.7	8531.8	8629.9	8727.9	80
90	8826.0	8924.1	9022.1	9120.2	9218.3	9316.3	9414.4	9512.5	9610.5	9708.6	90
100	9806.7	9904.7	10002.8	10100.8	10198.9	10297	10395.0	10493.1	10591.2	10689.2	100

Hammer tools



R040155 6

Type	Length	Weight	Diameter
A = Chisel	**830 mm** (**32.68 in**)	**38.5 kg** (**84.9 lb**)	∅ **90 mm** (**3.54 in**)
B = Moil Point	**830 mm** (**32.68 in**)	**38.4 kg** (**84.7 lb**)	∅ **90 mm** (**3.54 in**)
C = Parallel asphalt spade	**840 mm** (**33.07 in**)	**37.7 kg** (**83.1 lb**)	width **210 mm** (**8.27 in**)
D = Transverse asphalt spade	**840 mm** (**33.07 in**)	**37.7 kg** (**83.1 lb**)	width **210 mm** (**8.27 in**)
E = Compaction plate	**800 mm** (**31.50 in**)	**76.6 kg** (**168.9 lb**)	∅ **330 mm** (**12.99 in**)

Contents

Tools - 89

Hammer - 700

TECHNICAL DATA

Hammer

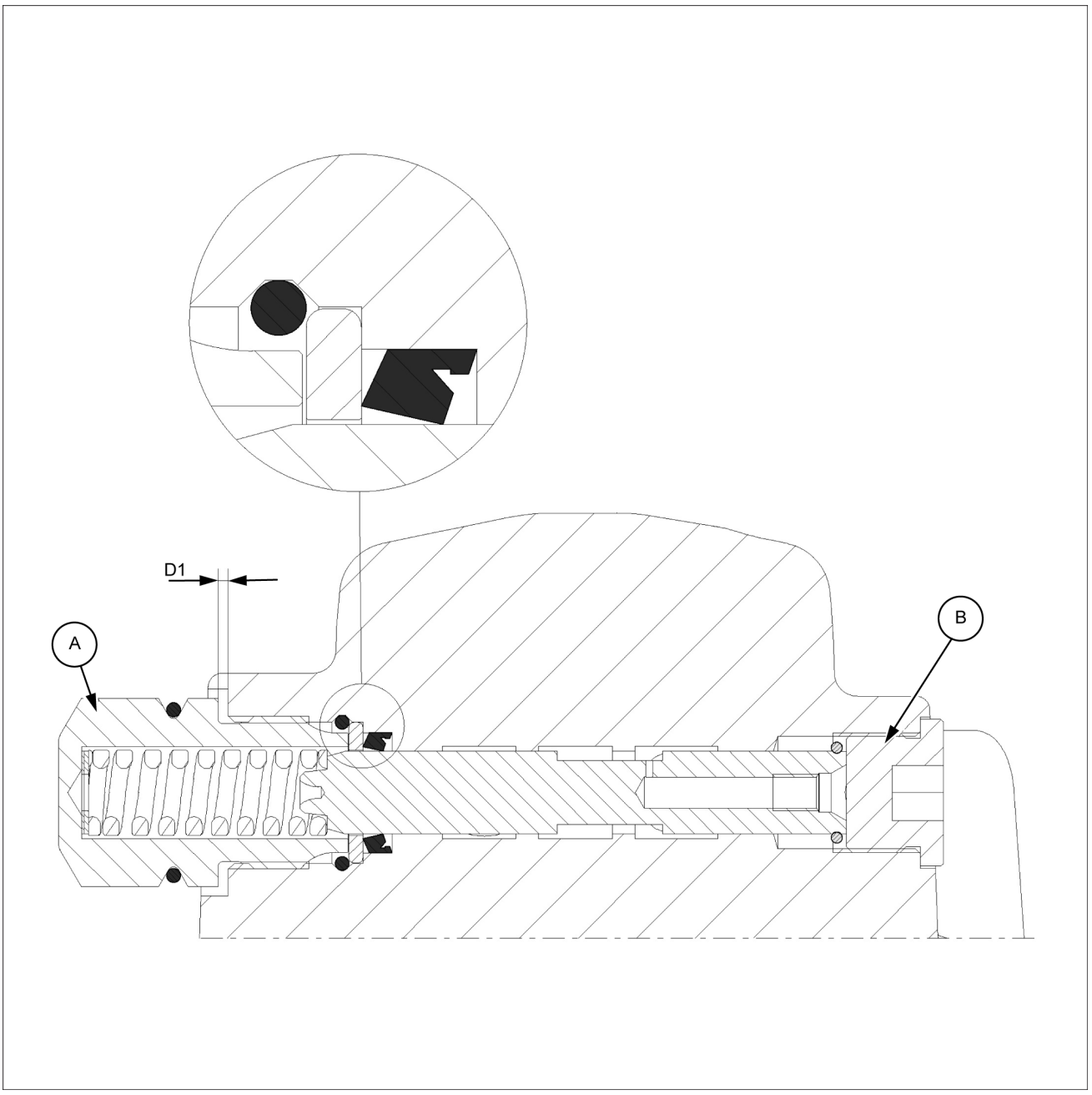
FUNCTIONAL DATA

Hammer

SERVICE

Hammer

Hammer - Technical Data - Pressure adjusting valve



SMIL18CEX2010GB 1

Item	Tightening torque
Spring housing **(A)**	**200 N·m** (**148 lb ft**)
Flange plug **(B)**	**120 N·m** (**89 lb ft**)

Item	Adjustment
Gap between body and spring housing **(D1)**	**2.0 mm** (**0.08 in**) (CB 80 and CB 135) **0.5 mm** (**0.02 in**) (CB 90)

Item	Lubricants
Seals, O-rings and cavity inside spring housing	O-ring grease
Spool and valve bore, spring housing and flange plug threads	Hydraulic oil

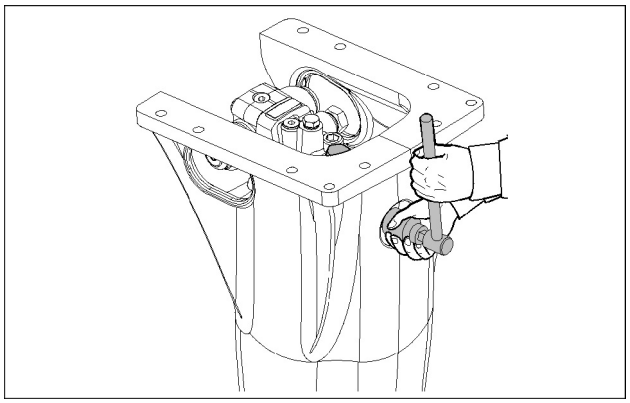
Hammer - Discharging - Low pressure accumulator

⚠ WARNING:

Do not disassemble hammer before releasing pressure from accumulators.

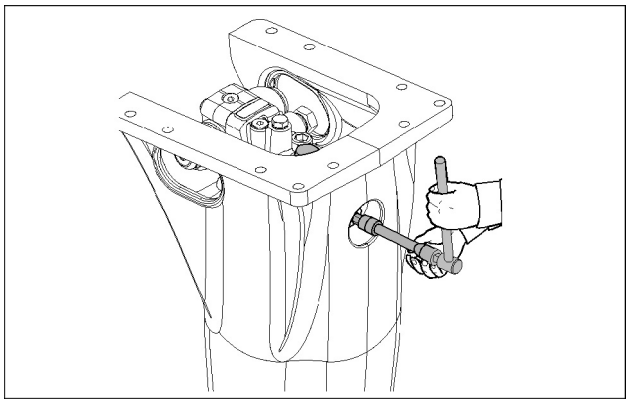
CB 80, CB 90 model "S" type and CB 135

1. Remove rubber shield plug and unscrew dust shield plug from accumulator refilling connection.
2. Carefully open filling plug and let nitrogen gas escape.



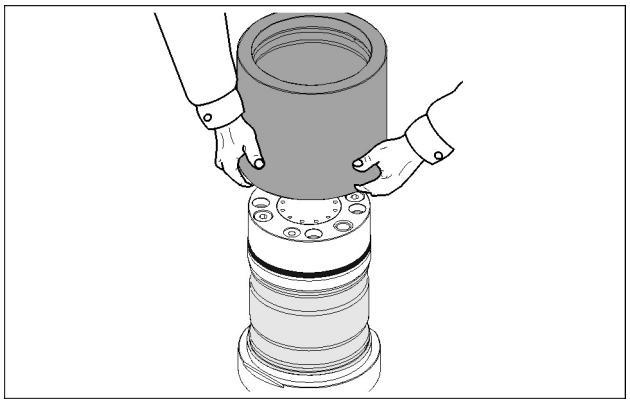
SMIL18CEX2054AA 1

3. When gas is completely released, remove filling plug and USIT-ring.



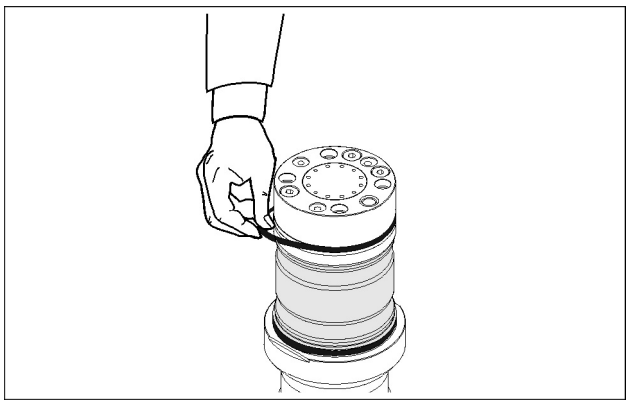
SMIL18CEX2055AA 2

13. Using plastic hammer, tap the accumulator cover's edge slightly to remove low pressure accumulator cover from cylinder.



SMIL18CEX1975AA 8

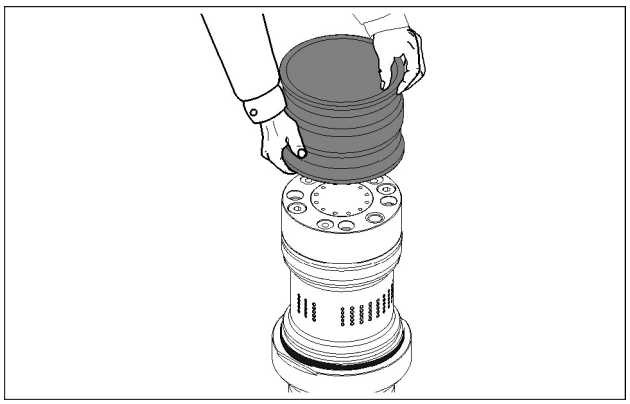
14. Remove seal.



SMIL18CEX1976AA 9

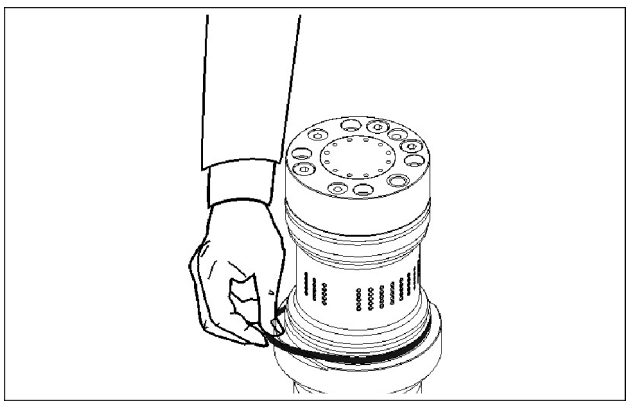
15. Remove low pressure accumulator's membrane.

NOTE: *if necessary, old membrane can be removed by cutting it lengthwise apart. Be careful not to scratch cylinder surfaces.*



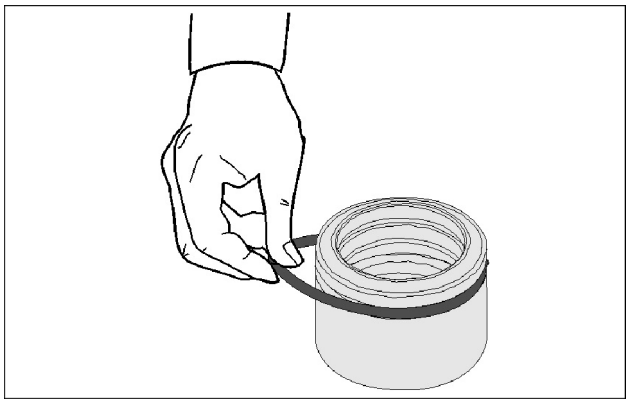
SMIL18CEX1977AA 10

16. Remove O-ring.



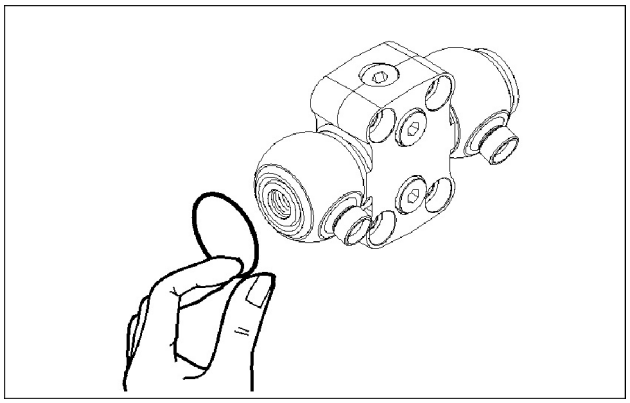
SMIL18CEX1978AA 11

10. Remove O-ring from seal carrier.

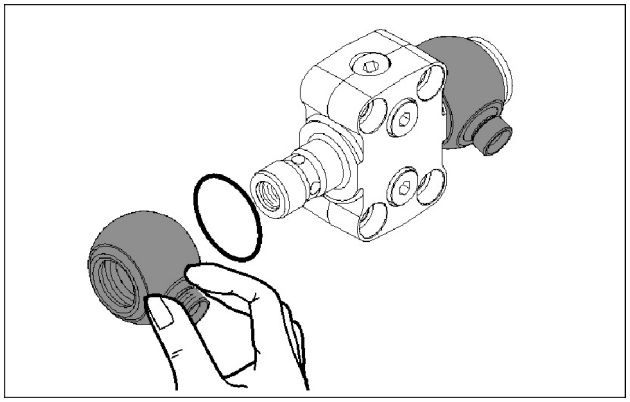


SMIL18CEX2002AA 8

5. Remove swivels and O-rings.

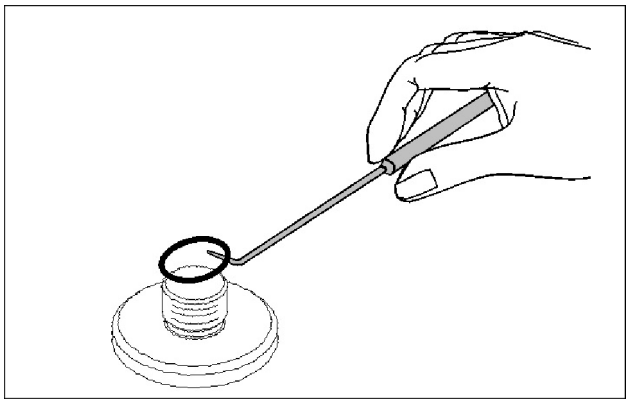


SMIL18CEX2025AA 4



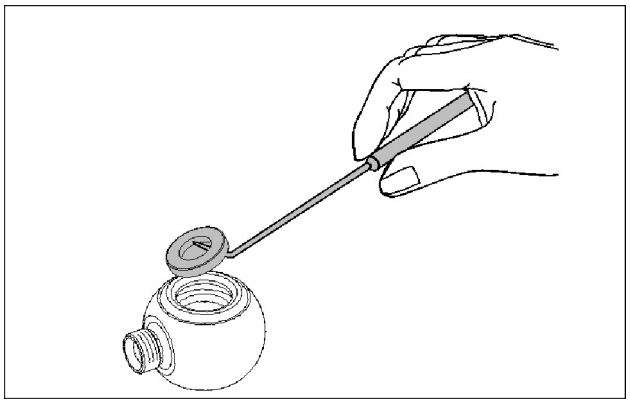
SMIL18CEX2026AA 5

6. Remove O-rings from swivel end screws.



SMIL18CEX2027AA 6

7. Remove seals from swivels.



SMIL18CEX2028AA 7