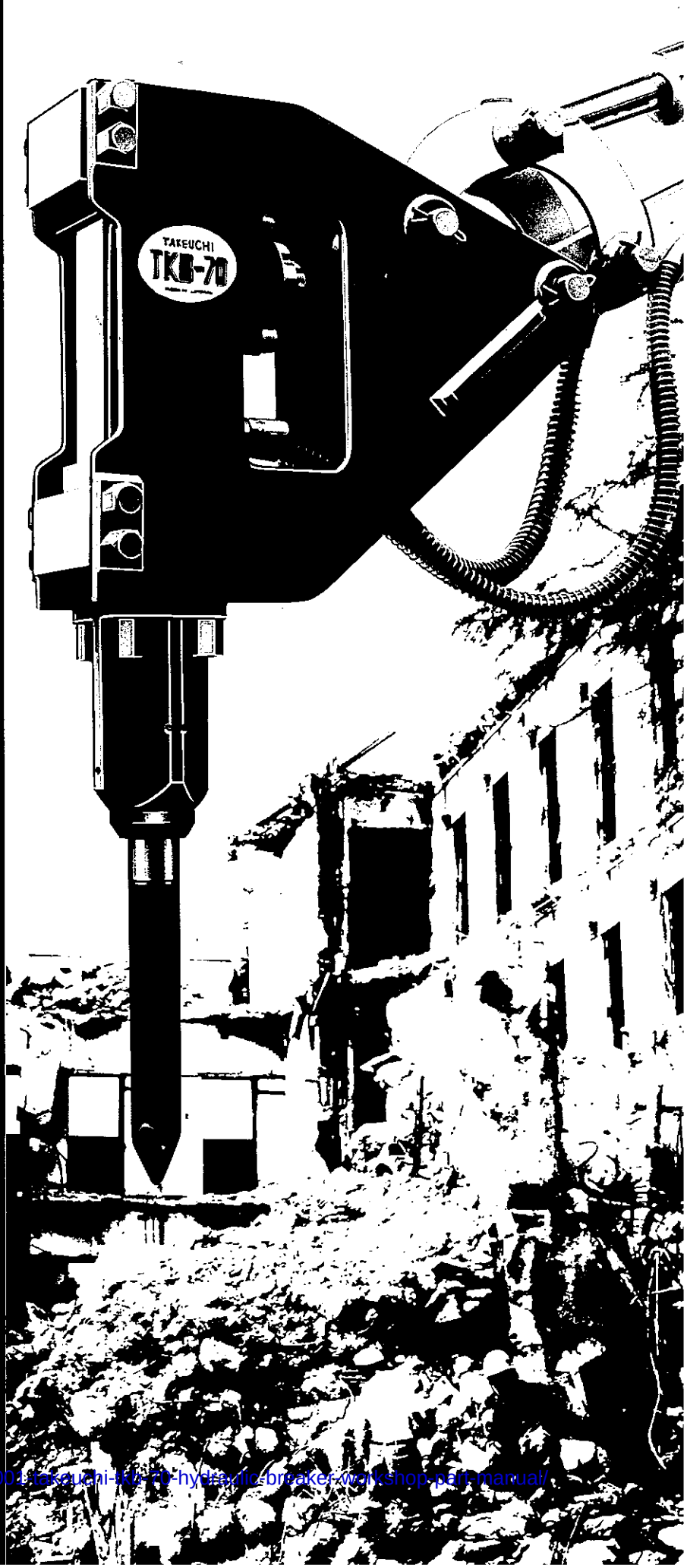
TKB-70



INTRODUCTION

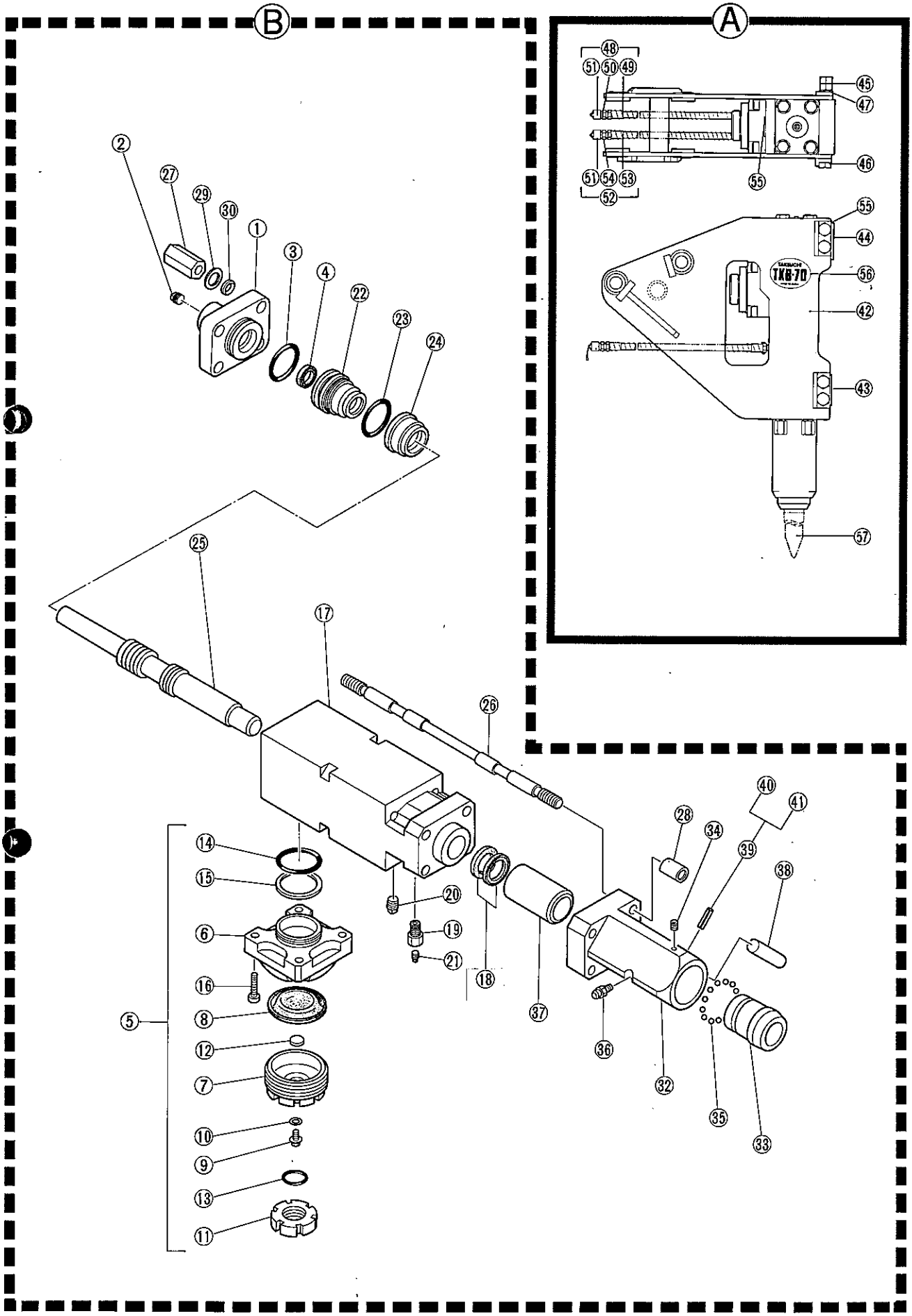
This time you have purchased our TAKEUCHI Hydraulic Breaker for which we are very grateful.
This is a highly efficient hydraulic breaker of purely fluid operating type developed under strict quality control, based on accumulated experience and high technical skill in the manufacturing of Excavator.
Since the equipment has the maximum Power of blow, outstanding durability and economical advantages for this class, it ensures increase in working capacity.
No matter how good the unit may be, however, if 'proper handling' and 'proper maintenance' are not performed, working capacity will surely fall, with marked drop in life of hydraulic breaker, and result in great loss from exonomic point of view, too.
This manual has been prepared to exhibit fully the efficiency of TAKEUCHI Hydraulic Breaker, in which basic methods are described simply enough for those who actually handle the machine.
When handling this product, we trust that the above will be carried out after reading over carefully what is contained in this manual.
Moreover, we shall not be held responsible in any way whatever for the loss and damage incurred by method of use, storage, etc. not in accordance with this manual.

CONTENTS

1. Parts list.Section drawing

Description		TB10S . TB15
		Part number
TKB-70 Hydraulic Breaker & Bracket Ⓐ		TS17-00-101E
Drawing No. Name	Q'ty	Part number
TKB-70 Hydraulic Breaker Cp. Ⓑ		TS17-00-000B
Back Head Gr.	1	TS17-01-0000
1. Back Head	1	TS17-01-001B
2. Plug	1	TV67-12-101A
3. O Ring	1	VV54-20-6001
4. Lip Seal	1	TS17-30-158B
Accumulator Gr.	1	TS17-10-0000
5. Accumulator Assy.	(1)	TS17-10-020A
6. Accumulator Body	(1)	TS17-10-021A
7. Accumulator Cap	(1)	TS48-20-022B
8. Diaphragm	(1)	TS48-20-023B
9. Accumulator Plug	(1)	TS50-01-0240
10. Seal Washer	(1)	TS50-01-0270
11. Blind Cap	(1)	TS20-20-025A
12. Protector	(1)	TS20-20-0280
13. O Ring	(1)	VV54-20-3001
14. O Ring	(1)	VV54-20-6501
15. Back-up Ring	(1)	TS17-10-0030
16. Socket Bolt	4	VV81-81-6450
Cylinder Gr.	1	TS17-20-000A
17. Cylinder Assy.	1	TS17-20-050B
18. Lip Seal	2	TS17-20-159B
19. Bush	1	TS17-20-0610
20. Plug	1	VV50-24-0000
21. Plug	1	VV50-23-0000
Valve Gr.	1	TS17-30-0000
22. Valve Retainer Assy.	1	TS17-30-070A
23. O Ring	1	VV54-10-5001
24. Valve	1	TS17-30-0730
Piston Gr.	1	TS17-50-0000
25. Piston	1	TS17-50-1030
Through Bolt Gr.	4	TS17-70-0000
26. Through Bolt	4	TS17-70-123A
27. Cap Nut (Rear)	4	TS17-70-122B
28. Cap Nut (Front)	4	TS17-70-121A
29. Through Bolt Washer	4	TS17-70-1250
30. Taper Ring	1	TS17-70-1260
Front Gr.	1	TS17-80-0000
31. Front Head Assy.	(1)	TS17-80-130A
32. Front Head	(1)	TS17-80-1310
33. Front Head Bushing (Front)	(1)	TS17-80-141A
34. Plug	(29)	VV50-31-0000
35. Steel Ball	(1)	VV61-12-0000
36. Grease Nipple	1	TS17-80-0010
37. Front Head Bushing (Rear)	1	TS17-80-143A
38. Chisel Set Pin	1	TS17-80-1530
39. Spring Pin Assy.	(1)	TS17-80-1600
40. Spring Pin	(1)	VV22-20-8400
41. Spring Pin	1	VV22-20-5400
Tool Gr.	1	TS17-99-9000
Accumulator hook Spanner	1	TU89-99-5010
Hook Spanner	1	TU89-99-5020
Socket Wrench (Hex. 14)	1	TV06-15-1410
Pin Wrench (Hex. 14)	1	TV03-01-4010
D-Spanner (26x29)	1	TV02-26-2910
D-Spanner (26x27)	1	TV02-24-2710
D-Spanner (22x24)	1	TV02-22-2410
Screwdriver	1	TV09-10-0010
Pin	1	TU83-01-206A
Bracket Gr.	1	TS17-91-100A
42. Bracket Assy.	1	TS17-91-101B
43. Support Plate A	1	TS17-91-102A
44. Support Plate B	4	TS17-91-1030
45. Hard Lock Nut	4	TS17-91-1910
46. Bolt	4	VV80-71-8190
47. Plane Washer	1	VV95-11-8000
48. **Hydraulic Hose Assy. (in)**	(1)	TS17-91-2100
49. Hydraulic Hose	(1)	TN97-13-0110
50. Coupling S2 Half	(1)	TS17-91-0120
51. Dust Cap.	1	TS17-91-0130
52. **Hydraulic Hose Assy. (out)**	(1)	TS17-91-2200
53. Hydraulic Hose	(1)	TN97-14-0110
54. Coupling S2 Half	(1)	TS17-91-0220
50. Dust Cap	1	TS17-91-0230
55. **Name Plate**	2	TV99-60-0050
56. **Bracket Seal**	1	TU99-60-0060
57. **Chisel (Point)**		TS17-99-001A

"Chisels" and "Steels" mean the same thing.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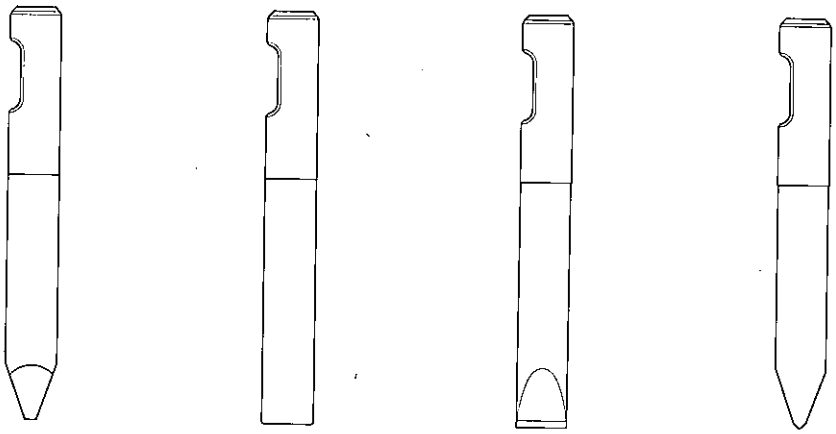
2.Specifications

BREAKER

Overall weight (without chisel)	91kg
Overall length (breaker only)	662mm
Overall length (with chisel)	940mm
Operation	Completely hydraulic system
Working pressure	90-110kg/cm^2
Oil flow	15-32ℓ/min
Number of blows	450~1100b.p.m
Hydraulic hose (in)	3/8''
Hydraulic hose (out)	1/2''
Chisel diameter	45mm

Chisel shape



Moil point type	Straight type	Flat X type	Flat Y type
TS17-99-0010	TS17-99-0020	TS17-99-0030	TS17-99-0040

3. Instruction manual

3-1. First examination

Make a test run with correct posture (vertical shots) with the engine throttle lever at low revolution for at least 30 minutes.
To lubricate the machine, do not drive with full throttle at first.
Continuous operation should be avoided at first. Do vertical hammering only.
(N.B) Do the same way as above after overhauling breaker

3-2. Preliminary Check

Inspect the following points before operation.
(N.B) Refer to 6. Maintenance and Inspection.

(1) Check the fastened bolts.
Tighten loose bolts.

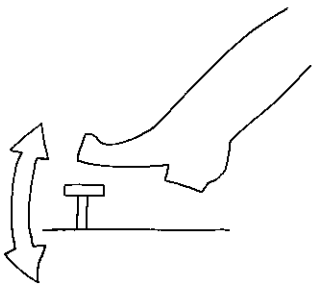
(2) Grease up to a grease nipple on the Front Head five to six times with a grease gun.

(3) Check oil amount in the hydraulic oil tank.
Replenish when the amount is insufficient.

3-3. Operations

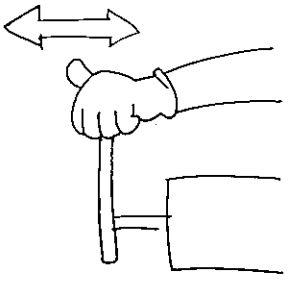
Two kinds of operation methods are available according to your undercarrige.

(1) Pedal system



Depress the breaker pedal and the breaker starts striking.
The breaker stops striking when the pedal is off.

(2) Lever system



A switching lever on the side of the seat is shifted to breaker striking. When the traction lever (R.H.) is operated forward, the breaker starts striking.
(N.B) When the switching lever is shifted to a trvelling and the traction lever (R.H.) is operated, the undercarriage normally travels.
(Possible to change the operation by adding a breaker pedal.)

3-4. Correct Operation

(1) Idle the engine at low speed to warm it up, especially on cold days.
(2) Fix the chisel on the rock so that the breaker pressure is transmitted to it vertically.
(3) Continue the striking with the chisel contacting the rock.
(4) Stop hammering immediately after the rock is broken.

3-5. Cautions

(1) Do not do no-load hammering.
The chisel must contact the rock constantly during the breaker operation. No-load hammering causes wear and tear of inner parts, loosens or damages bolts and nuts.

(2) Do not break the rock by prizing. This results in the trouble to the chisel as well as mechanical damage of breaker body and the bracket due to the unreasonable force applied.
Use a chisel for breaking rocks only. Do not prize.

(3) Continuous hammering at one point of rock must be done no longer than one minute.
Long-time hammering raises the oil temperature and reduces the life of chisel and main components. Change the striking point frequently instead of long-time striking of the same section.

(4) Hammering must be made with the bolts tightened efficently.
In case the breaker is operated with the bolts and nuts loosened, bolts may be broken. Stop hammering promptly to tighten the bolts when they are found loose.

(5) Unusual vibration of the hydraulic hose for the breaker results in the trouble to the accumulator. Examine the accumulator once again after stopping operation.

(6) Remove water or mud from the breaker before operation, as it results in trouble to the breaker.

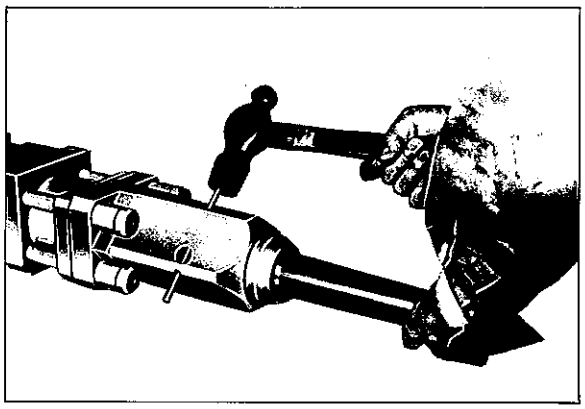
(7) When the temperature rises above 80°C, stop operation and continue use only after the temperature has dropped. The seals come off when the temperature rises above 80°C.

(8) Before disassembling the breaker(s) or when removing the hose(s), first make sure the oil temperature is low. You could suffer burns if the oil temperature is high when you are performing this task.

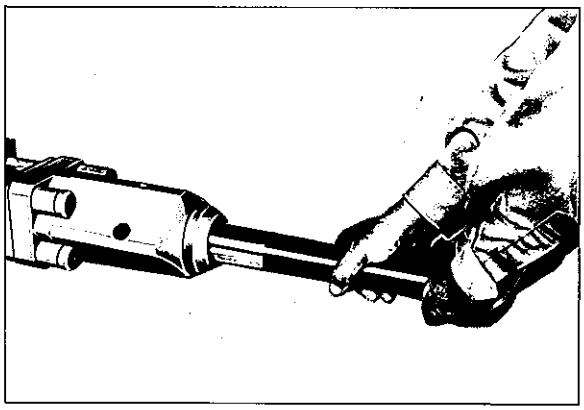
(9) When you are disassembling the accumulator, wait for the pressure of the confined gas to come down to 0kg/cm^2 before releasing the gas. If there is any gas pressure remaining at the time of disassembly, parts could fly out and cause bodily injury, and the machine could be damaged.

4. Exchange of chisel

4-1. Removing the chisel



Remove the chisel with a hammer by releasing the spring pin holding the chisel set pin, as shown in the left picture.



Then take out the chisel set pin and the chisel.

4-2. Installing the chisel

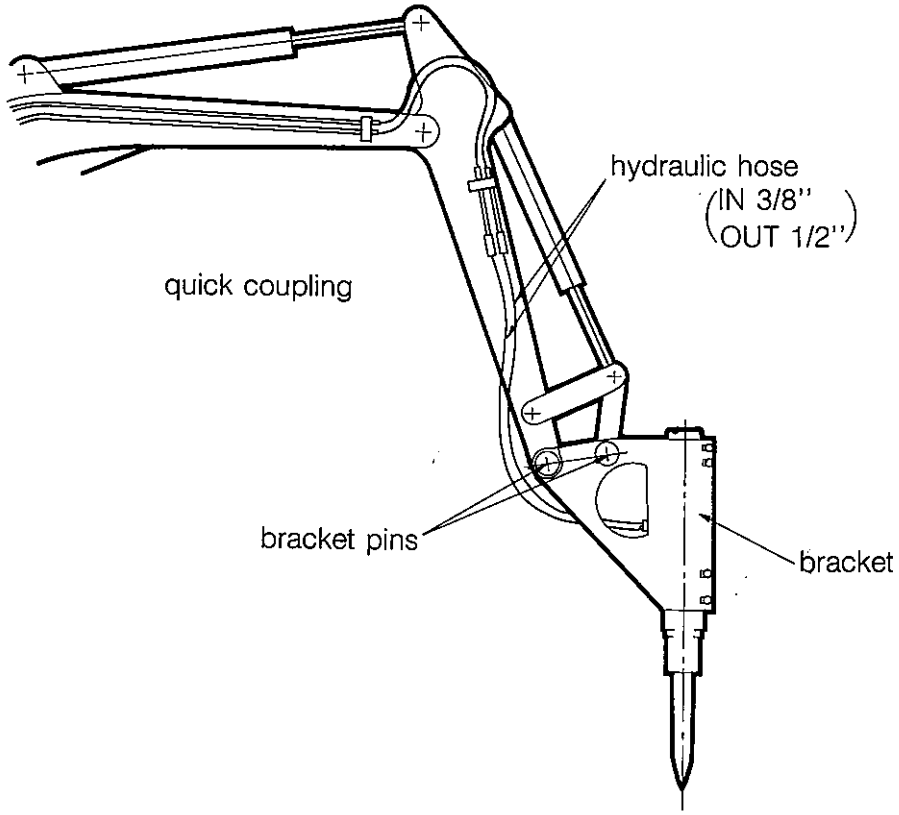
Grease the shank of the chisel fully and install it in the reverse order of above.

(N.B) use a high-lubricant grease containing molybdenum disulfide (MoS_2).

5. Installation and removal of breaker

5-1. Removing the breaker

(1) Remove the two hydraulic hoses from the quick coupling connector on the arm.
(2) Connect the breaker hydraulic hoses IN and Out with a quick coupling.
(3) Remove the two fastening pins and a whole bracket in the same manner as when changing the backet.



5-2. Cautions for installing the breaker

(1) Remove any foreign materials or dust when the bracket is connected with a quick coupling of the arm.
(2) Quick coupling is not connected easily if the hydraulic hoses have any remaining pressure inside.
Release the pressure completly by operating the control lever.