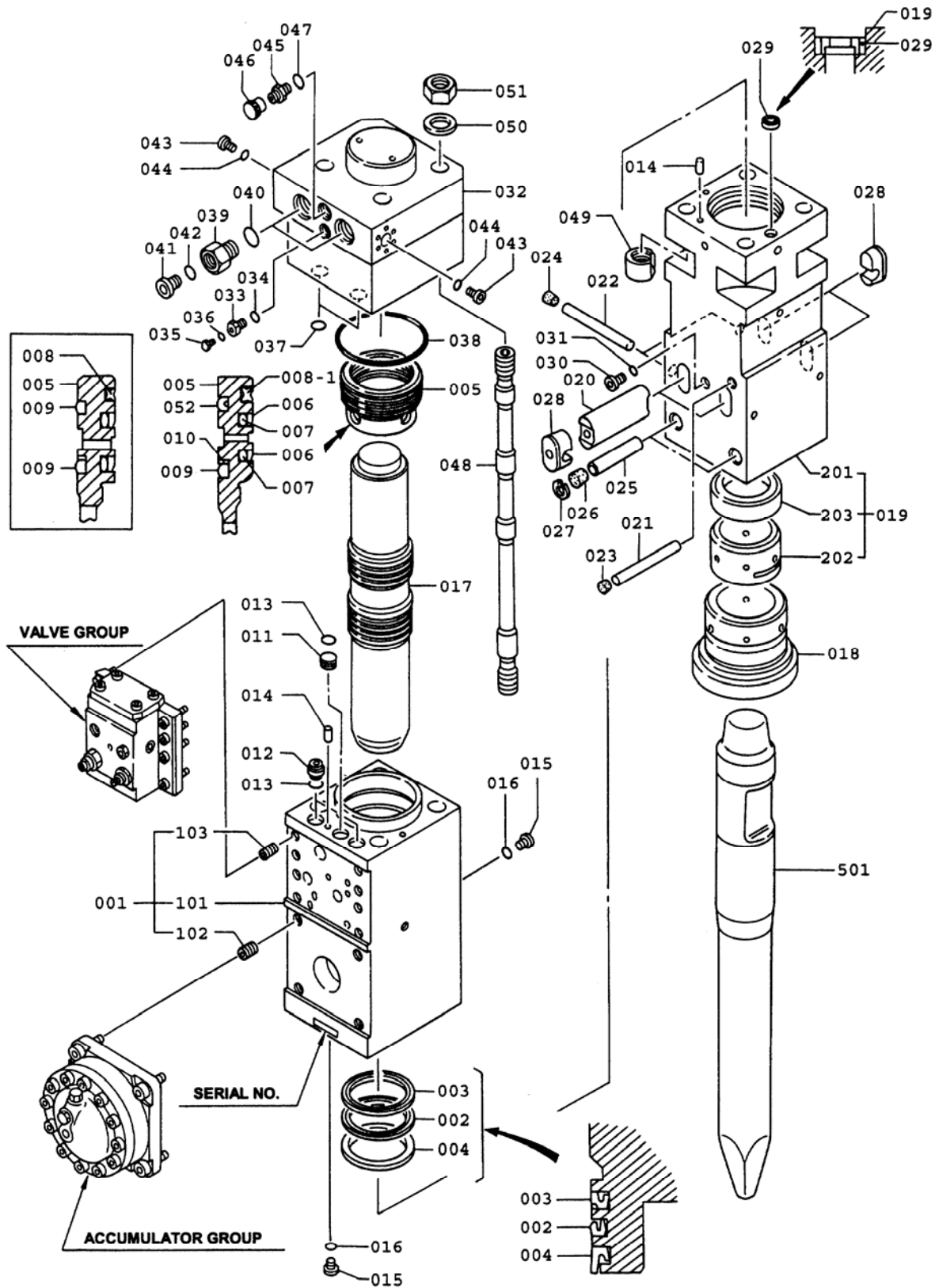


**SECTION VI**

**PARTS LIST**

# F45Qt HYDRARAM PARTS BREAKDOWN



# F45Qt HYDRARAM PARTS LIST



<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
001	KF45-10101	1	Cylinder	029	KF45-20113	1	Check Valve [/SB]
102	KHB40G-10104	(4)	Heli-Sert Insert	030	K084891-06000	1	GPF Plug
103	KHB20G-10105	(8)	Heli-Sert Insert	031	K160011-00024	1	O-Ring
002	KHB40G-10207	1	U-Packing [/SA]	032	KF45-30201	1	Backhead
003	KF45-10108	1	Buffer Ring [/SA]	033	KHB15G-30103	1	Charging Valve
004	KHB40G-10110	1	Dust Seal [/SA]	034	K160011-00018	1	O-Ring [/SB]
005	KF45-10111	1	Seal Retainer	035	KHB20G-30109	1	Plug
006	KHB40G-10212	2	Slide Packing [/SA]	036	K160011-00006	1	O-Ring [/SB]
007	KHB40G-10213	(2)	O-Ring [/SA]	037	K160011-00036	2	O-Ring [/SB]
008	KF45-10214	1	Seal Ring [/SA]	038	K160021-00240	1	O-Ring [/SB]
009	KF45-10116	1	D Ring [/SA]	For FRONT Mounted Hoses use:			
010	K262032-00200	1	Backup Ring [/SA]	039	KF45007	2	Port Adapter □
011	KHB40G-10120	1	Plug [/SA]	040	(Included)	(2)	O-Ring □
012	KHB40G-10121	2	Bushing [/SA]	043	K084891-10000	2	GPF Plug □
013	K160011-00036	3	O-Ring [/SA]	044	K160011-00029	2	O-Ring [/SB] □
014	K001300-20118	1	Knock Pin	For SIDE Mounted Hoses use:			
015	K084891-02000	2	GPF Plug	039	KF45-30111	2	Connector □
016	K160011-00011	2	O-Ring [/SA]	040	K160011-00044	2	O-Ring □
017	KF45-11101	1	Piston	041	K084891-12000	2	GPF Plug □
018	KF45-20101	1	Front Cover	042	K160011-00038	2	O-Ring [/SB] □
018	KF45-20501	1	Front Cover (NTBox)	045	K084869-06000	1	Filter Connection
019	KF45-20102	1	Fronthead	046	KF22-30113	1	Air Inlet Cap
201	KF45-20103	(1)	Fronthead, Bare	047	K160011-00024	1	O-Ring [/SB]
202	KF45-20904	(1)	Thrust Bushing	048	KF45-36101	4	Through Bolt
203	KF45-20105	(1)	Thrust Ring	049	KF45-36102	4	Lower Nut
020	KHB40G-20206	2	Rod Pin (Retainer)	050	KF45-36105	4	Washer
021	KHB40G-20107	1	Stop Pin	051	KF45-36106	4	Hexagon Nut
022	KF45-20207	1	Stop Pin	052	KF45-10216	1	Delta Ring [/SA]
023	KHB50G-20109	1	Rubber Plug [/SB]	501	KF45-25221	-	Blunt Tip
024	KF45-20208	1	Rubber Plug [/SB]	501	KF45-25225	-	Moil Point
025	KF35-20110	2	Fronthead Pin	501	KF45-25224	-	Chisel Bit
026	K001300-20107	2	Rubber Plug [/SB]	-	KF45-90001	1	Service Tool Kit
027	K264020-00030	2	Snap Ring [/SB]				
028	KF45-20112	-	Dust Plug [/SB] ⊙				

□ Note: See Section VI - Page # 12 in this section for Hose Configurations

⊙ Dust Plugs are not used in the QT Box Hammer version

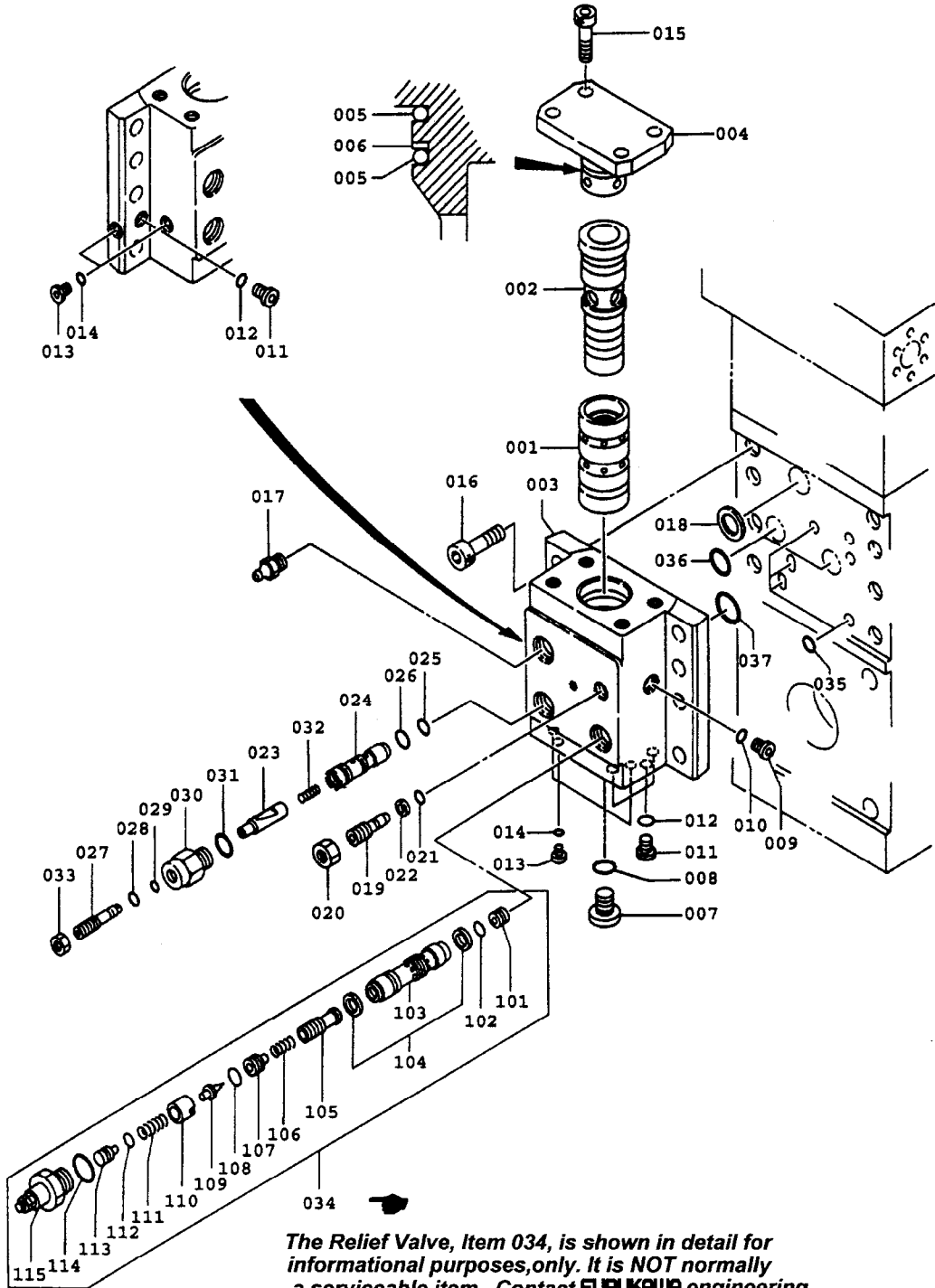
( ) Bracketed quantities indicate items included with the prior assembly.

[/SA] Items marked Option /SA are included in the Cylinder Group Seal Kit KF45-92021

[/SB] Items marked Option /SB are included in the Front-Backhead Group Seal Kit KF45-92032

[/SC] Items marked Option /SC are included in the Valve-Accumulator Group Seal Kit KF45-92023

## CONTROL VALVE DETAIL F45Qt HYDRARAM



*The Relief Valve, Item 034, is shown in detail for informational purposes, only. It is NOT normally a serviceable item. Contact FURUKAWA engineering prior to disassembling this valve.*

## **CONTROL VALVE DETAIL** **F45Qt HYDRARAM**

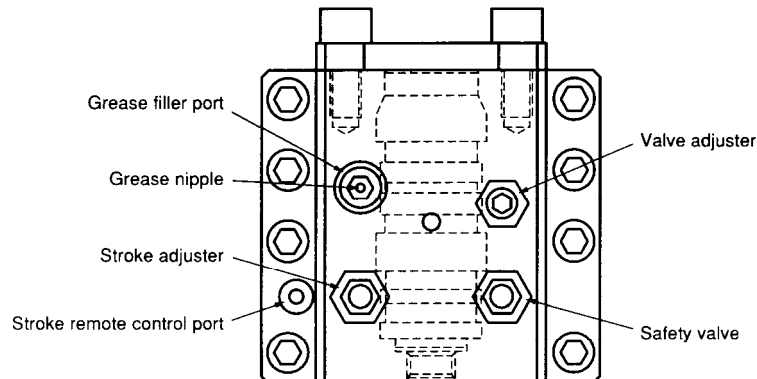
<i>ITEM</i>	<i>PART NUMBER</i>	<i>QTY</i>	<i>DESCRIPTION</i>	<i>ITEM</i>	<i>PART NUMBER</i>	<i>QTY</i>	<i>DESCRIPTION</i>
001	KF45-13101	1	Valve	027	KF22-13122	1	Stroke Adjuster
002	KHB40G-13202	1	Valve Plug	028	K262021-00009	1	Backup Ring [/SC]
003	KF45-13103	1	Valve Housing	029	K160011-00009	1	O-Ring [/SC]
004	KF45-13104	1	Housing Cover	030	KF22-13123	1	Stroke Plug
005	K161025-00070	2	O-Ring [/SC]	031	K160011-00024	1	O-Ring [/SD]
006	K262032-00070	1	Backup Ring [/SC]	032	KF22-13124	1	Spring
007	K084891-10000	1	GPF Plug	033	K120133-16000	1	Nut
008	K160011-00029	1	O-Ring [/SC]	034	KF22-13330	1	Safety Valve
009	K084891-03000	1	GPF Plug	101	-	(1)	Stopper
010	K160011-00014	1	O-Ring [/SC]	102	K161011-00010	(1)	O-Ring [/SD]
011	K084891-02000	4	GPF Plug	103	-	(1)	Spool
012	K160011-00011	4	O-Ring [/SC]	104	KF22-13332	(2)	Glide Ring [/SD]
013	K084891-01000	5	GPF Plug	105	-	(1)	Sleeve
014	K160011-00008	5	O-Ring [/SC]	106	-	(1)	Spring
015	K102033-22050	4	Fine Thread Bolt	107	-	(1)	Retainer
016	K102032-20055	8	Socket Bolt	108	K161011-00012	(1)	O-Ring [/SD] [/SE]
017	K001100-20123	1	Grease Nipple	109	-	(1)	Needle Valve [/SE]
018	KHB30G-13208	1	Face Seal [/SC]	110	-	(1)	Valve Guide
019	KHB40G-13110	1	Valve Adjuster	111	-	(1)	Spring [/SE]
020	K120133-24000	1	Fine Thread Nut	112	K161011-00008	(1)	O-Ring [/SD]
021	K160011-00016	2	O-Ring [/SC]	113	-	(1)	Push Rod
022	K262021-00016	1	Backup Ring [/SC]	114	K161011-00024	1	O-Ring [/SD]
023	KF22-13120	1	Stroke Valve	115	-	(1)	Retainer
024	KF22-13121	1	Stroke Bushing	035	K161025-00025	4	O-Ring [/SC]
025	KF22-13521	1	O-Ring [/SC]	036	K161025-00045	2	O-Ring [/SC]
026	KF22-13522	1	O-Ring [/SC]	037	K161025-00050	1	O-Ring [/SC]

( ) Bracketed quantities indicate items included with the prior assembly.

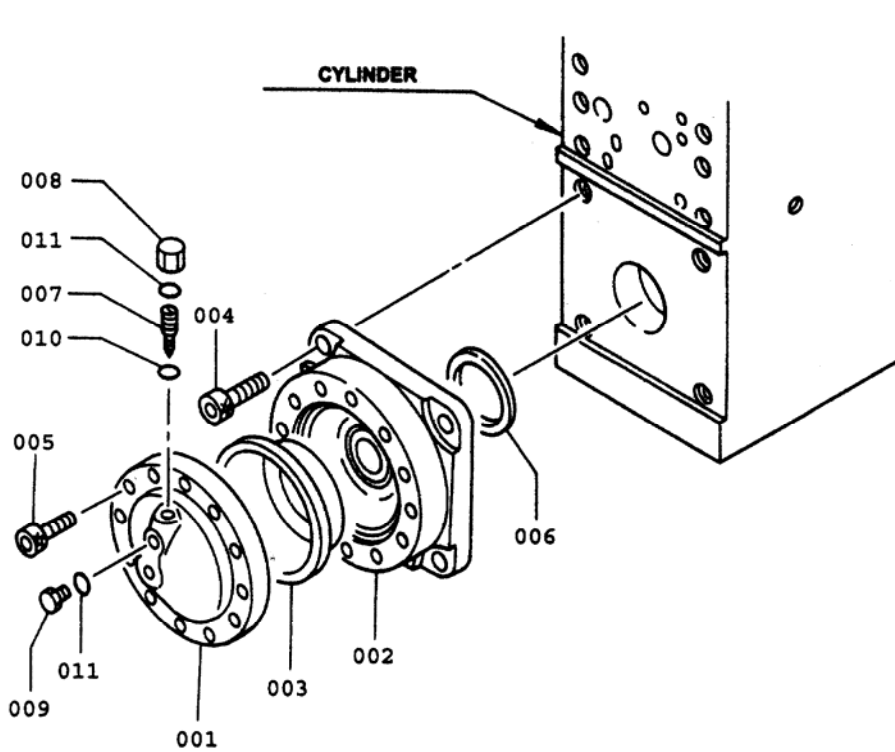
[/SC] Items marked Option /SC are included in the Valve-Accumulator Group Seal Kit KF45-92023

[/SD] Items marked Option /SD are included in the KF22-92025 Safety Valve Seal Kit

[/SE] Items marked Option /SE are included in the KF22-13331 Needle Valve Kit



**KF45-70001**  
**ACCUMULATOR ASSEMBLY**  
**F45Qt HYDRARAM**



<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
001	KHB40G-70101	1	Accumulator Cover	007	K007120-70134	1	Valve
002	KF45-70102	1	Accumulator Body	008	K007010-70029	1	Cap
003	KHB40G-70111	1	Diaphragm	009	K007010-70030	1	Plug
004	KHB50G-70115	4	Socket Bolt	010	K160011-00005	1	O-Ring [/SC]
005	K102033-20060	12	Socket Bolt	011	K160011-00014	2	O-Ring [/SC]
006	KHB40G-70219	1	Face Seal [/SC]				

[/SC] Items marked Option /SC are included in the Accumulator Group Seal Kit KF45-92023



## **KF45-92021 SEAL KIT** **CYLINDER GROUP (A)**

Line items refer to the drawing in section VI on page 2

<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
002	KHB40G-10207	1	U-Packing	009-2	KF45-10216	1	Delta Ring
003	KF45-10108	1	Buffer Ring	010	K262032-00200	1	Backup Ring
004	KHB40G-10110	1	Dust Seal	011	KHB40G-10120	1	Plug
006	KHB40G-10212	2	Slide Packing	012	KHB40G-10121	2	Bushing
007	KHB40G-10213	[2]	O-Ring	013	K160011-00036	3	O-Ring
008	KF45-10214	1	Seal Ring	016	K160011-00011	2	O-Ring
009-1	KF45-10116	2	D Ring	038	K160021-00240	1	O-Ring

## **KF45-92032 SEAL KIT** **FRONTHEAD & BACKHEAD GROUP (B)**

Line items refer to the drawing in section VI on page 2

<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
023	KHB50G-20109	1	Rubber Plug	036	K160011-00006	1	O-Ring
024	KF45-20208	2	Rubber Plug	037	K160011-00036	2	O-Ring
026	K001300-20107	2	Rubber Plug	040	K160011-00044	2	O-Ring
027	K264020-00030	2	Snap Ring	042	K160011-00038	2	O-Ring
028	KF45-20112	4	Dust Plug	044	K160011-00029	1	O-Ring
029	KF45-20113	1	Check Valve	047	K160011-00024	1	O-Ring
034	K160011-00018	1	O-Ring				

## **KF45-92023 SEAL KIT** **VALVE & ACCUMULATOR GROUP (C)**

Line items refer to the drawing in section VI on page 4

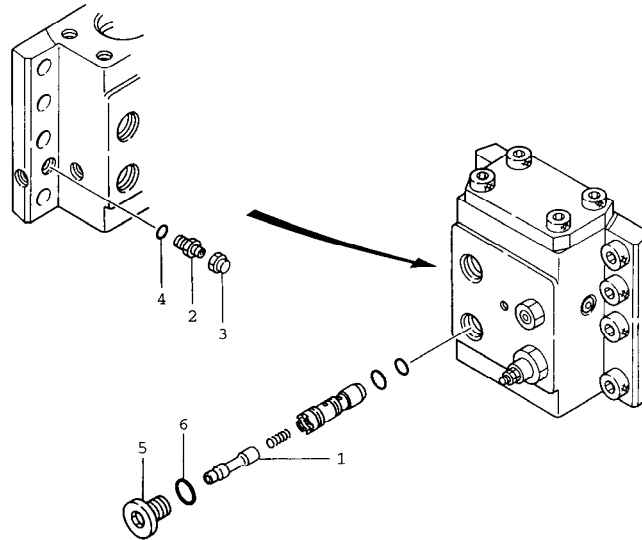
<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
005	K161025-00070	2	O-Ring	025	KF22-13521	1	O-Ring
006	K262032-00070	1	Backup Ring	026	KF22-13522	1	O-Ring
008	K160011-00029	1	O-Ring	028	K262021-00009	1	Backup Ring
010	K160011-00014	1	O-Ring	029	K160011-00009	1	O-Ring
012	K160011-00011	4	O-Ring	031	K160011-00024	1	O-Ring
014	K160011-00008	6	O-Ring	035	K161025-00025	4	O-Ring
018	KHB30G-13208	1	Face Seal	036	K161025-00045	2	O-Ring
021	K160011-00016	2	O-Ring	037	K161025-00050	1	O-Ring
022	K262021-00016	1	Backup Ring				

Line items refer to the drawing in section VI on page 6

006	KHB40G-70219	1	Face Seal	011	K160011-00014	2	O-Ring
010	K160011-00005	1	O-Ring				

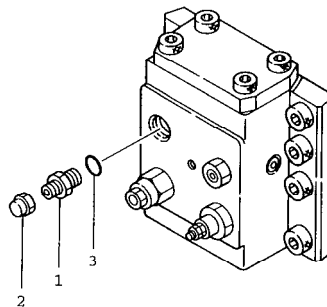


## **KF22-13011 REMOTE STROKE CONTROL OPTION KIT**



<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
1	KF22-13220	1	Stroke Valve	4	K160011-00011	1	O-Ring
2	K084861-02000	1	Male Connector	5	K084891-06000	1	GPF Plug
3	K084891-02000	1	Union Cap	6	K160011-00024	1	O-Ring

## **KF22-13013 REMOTE LUBRICATION (AUTO-LUBE) OPTION KIT**

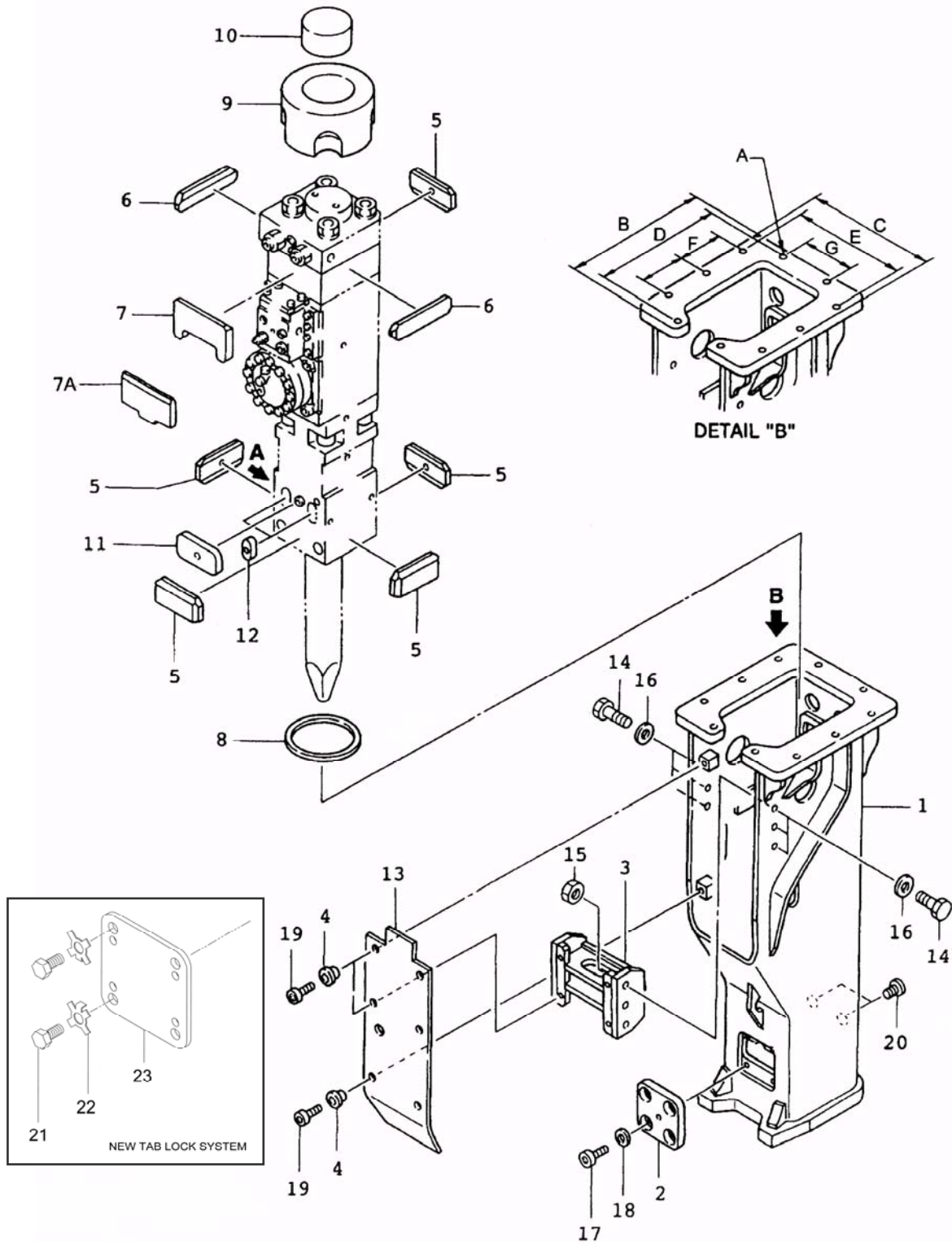


<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
1	K15525	1	Male Connector	3	(Included w/ #1)	1	O-Ring
2	K15034	1	Union Cap	Use:	K19602	1	Lubricator System

⇒ Contact Furukawa Rock Drill USA's Product Support Department for additional information and specific recommendations.

## T-BOX MOUNTING

F45Qt  
 HYDRARAM



## **T-BOX MOUNTING PARTS** **F45Qt HYDRARAM**

<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
1	KF45-88101	1	T-Box Weldment	13	KF45-88229	1	Soundproof Cover
2	KF45-88112	1	Pin Cover *	14	K101032-42100	6	Bolt, M42
3	KF45-88113	1	Spacer	15	K120132-42000	6	Hex Nut, M42
4	KF45-88114	6	Collar	16	K140112-42000	6	Washer
5	KF45-88121	5	Front Damper	17	K102032-24040	4	Socket Bolt, M24 *
6	KF45-88323	2	Back Damper (A)	18	K140112-24000	4	Washer *
7	KF45-88124	1	Back Damper (B)	19	K102032-16025	6	Socket Bolt, M16
7A	KF45-88124A	1	Back Damper (B)				
8	KF45-88125	1	Dust Ring	20	K084891-10000	2	GPF Plug
9	KF45-88126	1	Top Damper	21	K19876	4	Cap Screw, M24 *
10	KF45-88127	1	Top Stoper	22	KF45101	4	Tab Lock Washer *
11	KF45-88128	1	Pin Damper	23	KF45100	1	Pin Cover *
12	KHB40G-88229	2	Pin Plug	**	KF4588232	1	Top Spacer

\* Use either items 2, 17, and 18, or items 21, 22, and 23.

The tab washer system replaces the socket bolt version.

\*\* Items Not Shown

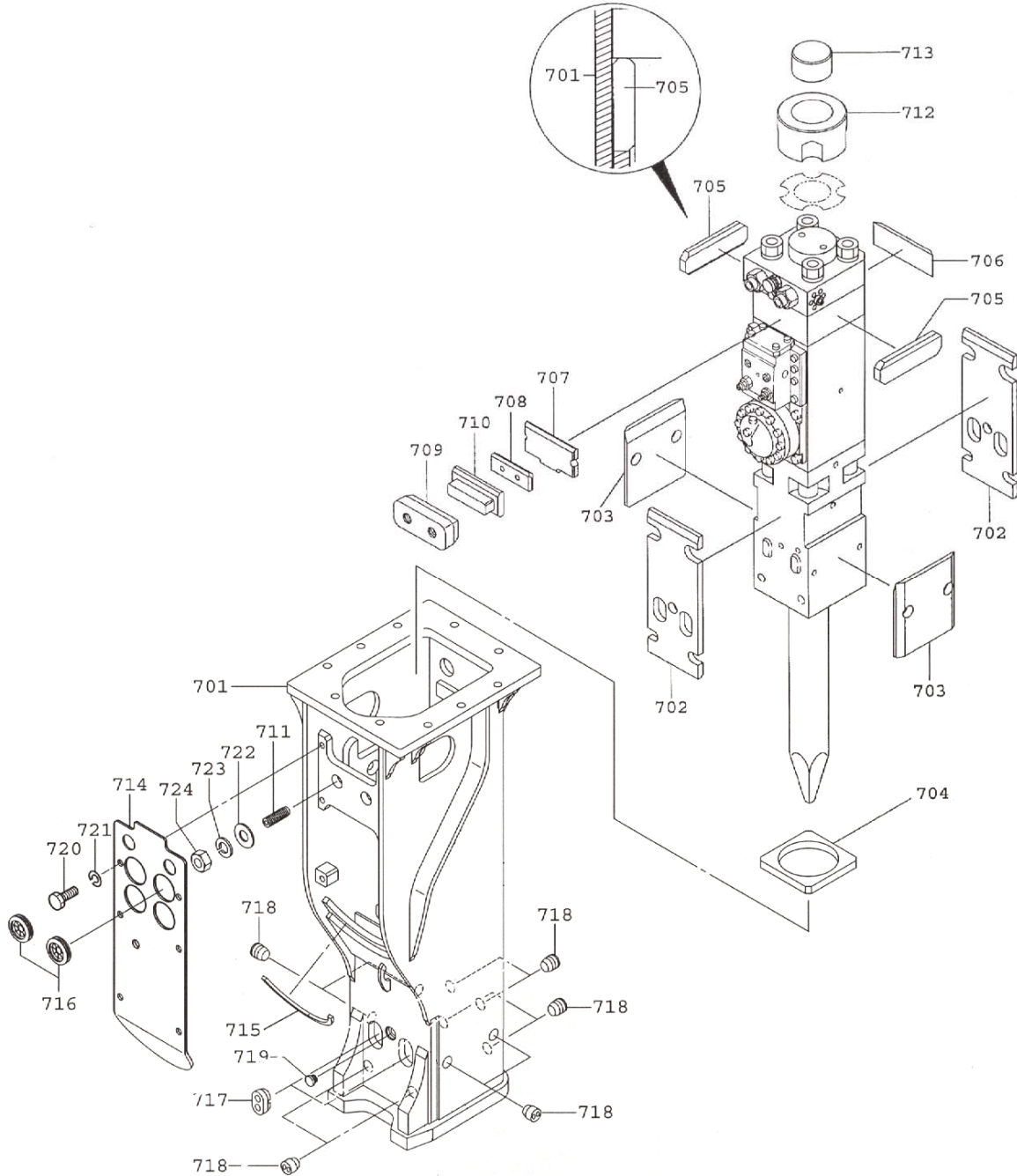
**NOTE:**

The Stop Pin, Dust Plugs, and Rubber Plug indicated at Detail A on the T-Box Parts Breakdown are NOT used when the hammer is mounted in the T-Box Case. Remove the stop pin, rubber plug, and dust plugs from fronthead of hammer before assembling T-Box Case.

	<u>Inch</u>	<u>Milimeter</u>	
A	1.496	38	Bolt Hole Diameter
B	29.724	755	Flange, Long Side
C	27.953	710	Flange, Short Side
D	26.575	675	Center to Center
E	24.803	630	Center to Center
F	7.874	200	Center to Center
G	9.843	250	Center to Center

⇒ Furukawa Rock Drill USA offers a variety of top caps that match the original equipment for many excavator makes and models and work with many coupler systems. Please contact Furukawa Rock Drill USA's Product Support Department for additional information.

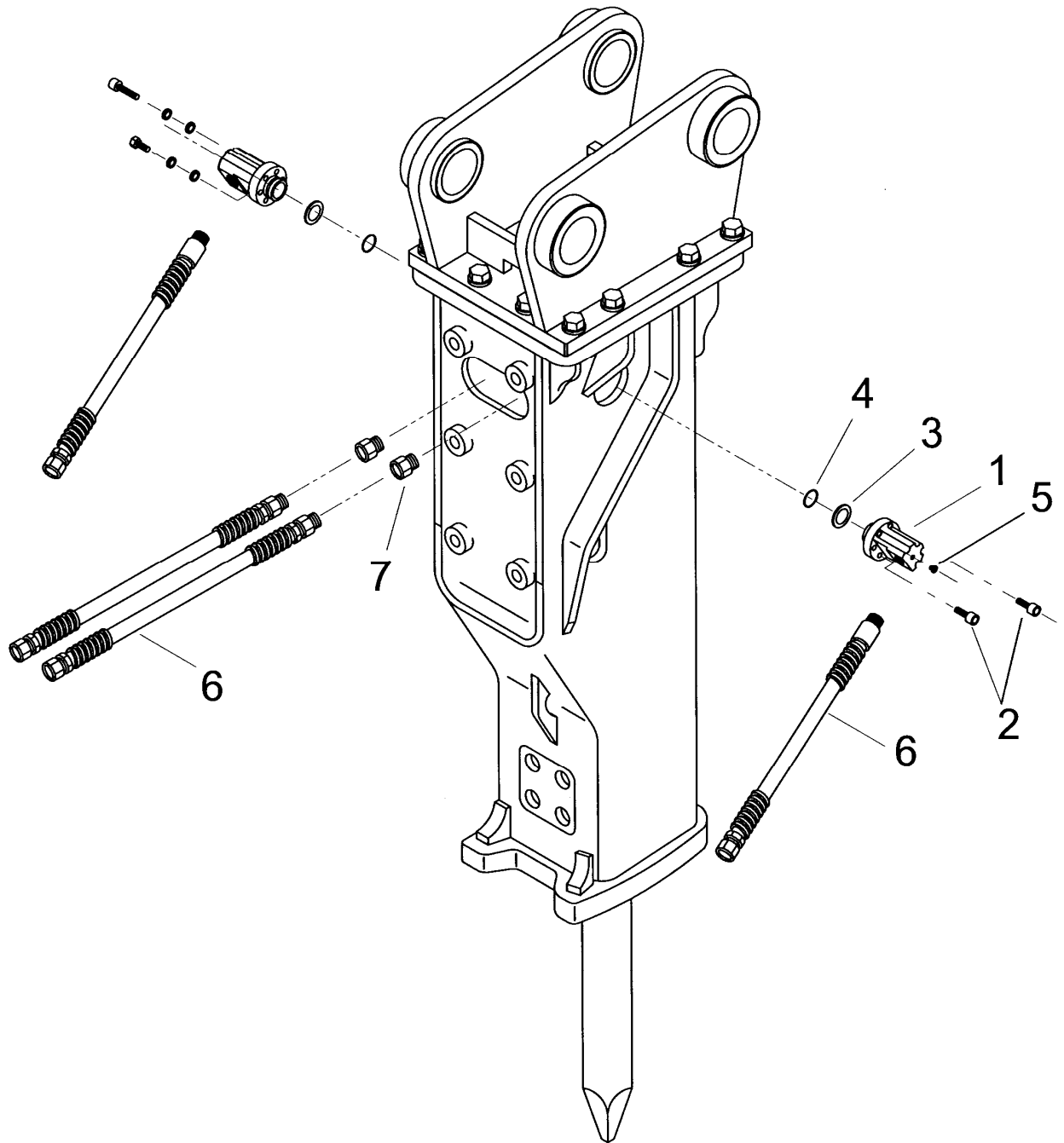
***F45Qt HYDRARAM with NT-Box***  
 S/N 2167~



## **NT-BOX MOUNTING PARTS** **F45Qt HYDRARAM**

<i>ITEM</i>	<i>PART NUMBER</i>	<i>QTY</i>	<i>DESCRIPTION</i>	<i>ITEM</i>	<i>PART NUMBER</i>	<i>QTY</i>	<i>DESCRIPTION</i>
701	KF45-88501	1	NT-Box Weldment	713	KF45-83213	1	Top Stopper
702	KF45-83202	2	Front Damper	714	KF45-88502	1	Soundproof Cover
703	KF45-83203	2	Side Damper	715	KF45-88504	1	Cushion
704	KF45-83204	1	Dust Protector	716	KF45-88505	2	Grommet
705	KF45-83205	2	Back Damper (A)	717	KF45-83218	2	Pin Plug
706	KF45-83206	1	Back Damper (B)	718	KF35-83222	10	Dust Plug
707	KF45-83207	1	Back Damper (C)	719	KF22-83220	1	Grease Cap
708	KF35-83208	1	Back Spacer	720	K10103224050	6	Bolt
709	KF35-83209	1	Spacer (A)	721	K14501224000	6	Spring Washer
710	KF35-83210	1	Spacer (B)	722	K14011248000	2	Washer (H)
711	KF35-83211	2	Damper Adjuster	723	K14501248000	2	Spring Washer
712	KF45-83212	1	Top Damper	724	K12213348000	2	Nut

**HOSE CONFIGURATIONS**  
**F45Qt HYDRARAM**



## **HOSE CONFIGURATIONS**

### **F45Qt HYDRARAM**

The F45Qt Hammer can be equipped with either FRONT or SIDE mounted hose whips. Hammers will be shipped with FRONT hoses unless SIDE hoses are specified.

#### **SIDE MOUNTED HOSES**

(2) KBM12481 Hose Assemblies consist of the following:

<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
1	K19882	2	Port Adapter
2	K102033-14040	12	14mm Socket Head Bolt
3	K10735	2	Backup Ring
4	K10734	2	O-Ring
5	K19296	2	#4 Hollow Pipe Plug
6	K12481	2	Hose Whip

⇒ The following parts are used when the SIDE mounted hoses are installed:

--	KF45-30111	2	Front Port Adapter ( <i>Not Shown</i> )
--	K160011-00044	2	O-Ring for Port Adapter ( <i>Not Shown</i> )
--	K084891-12000	2	Plug for Front Hose Ports ( <i>Not Shown</i> )
--	K160011-00038	2	O-Ring for Adapter Plug ( <i>Not Shown</i> )

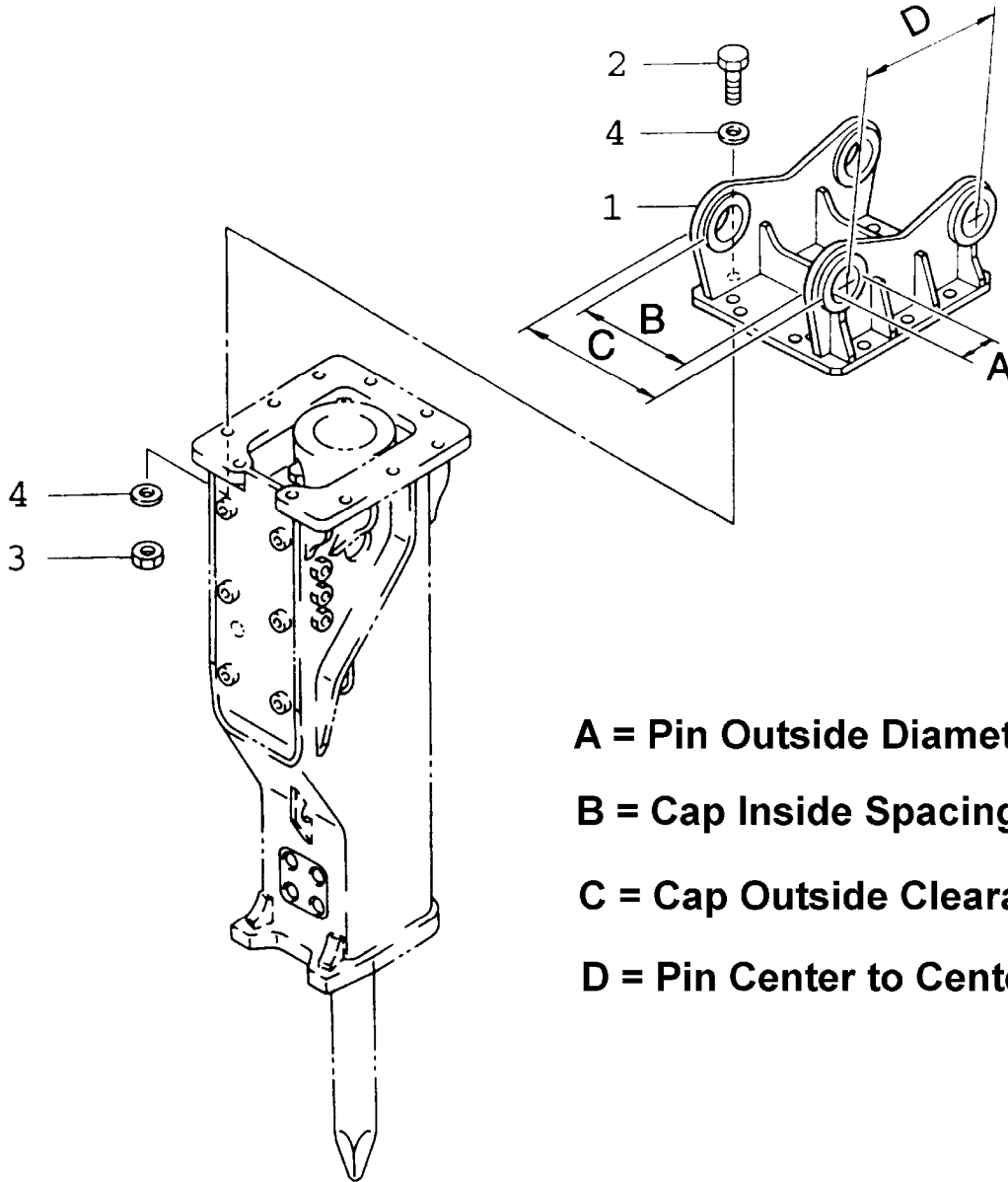
#### **FRONT MOUNTED HOSES:**

<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
6	K12481	2	Hose Whip
7	KF45007	2	Front Port Adapter with O-Ring

⇒ The following parts are used when the FRONT mounted hoses are installed:

--	K084891-10000	2	Plug for Side Hose Ports ( <i>Not Shown</i> )
--	K160011-00029	2	O-Ring for Side Hose Ports ( <i>Not Shown</i> )

**UNIVERSAL TOP CAP**  
**F45Qt HYDRARAM**



- A = Pin Outside Diameter**
- B = Cap Inside Spacing**
- C = Cap Outside Clearance**
- D = Pin Center to Center**

<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
1	KF45050	1	Universal Cap	4	KF45014	20	Hardened Washer
2	KF45012	10	Cap Screw	*	K12481	2	Whip Hose
3	KF45013	10	Heavy Hex Nut				* Not Shown

⇒ Furukawa Rock Drill USA offers a variety of top caps that match the original equipment for many excavator makes and models and work with many coupler systems. Please contact Furukawa Rock Drill USA's Product Support Department for additional information.



**MOUNTING PIN KIT**  
**FOR UNIVERSAL TOP CAP**  
**KF45050**  
**F45QT HYDRARAM**

Base Machine Make: \_\_\_\_\_  
 Base Machine Model: \_\_\_\_\_  
 Dipperstick Pin Diameter: \_\_\_\_\_  
 Link Pin Diameter: \_\_\_\_\_  
 Dipperstick Width: \_\_\_\_\_  
 Link Pin Width: \_\_\_\_\_

**MOUNTING KIT PART NO:** \_\_\_\_\_

Consisting of the following:

<u>ITEM</u>	<u>P/N</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	_____	1	_____ DIA. MOUNTING PIN x 26" LONG
2	_____	1	_____ DIA. MOUNTING PIN x 26" LONG
3	<u>K12125</u>	2	_____ DIA. MOUNTING BUSHING X _____ LG.
4	<u>K12125</u>	2	_____ DIA. MOUNTING BUSHING X _____ LG.
5	<u>K10193</u>	2	3/4" -10 UNC BOLT
6	<u>K10195</u>	2	3/4" -10 UNC LOCKNUT

## **SERVICE TOOL KIT**

***P/N KBM4590001***

Furukawa Rock Drill USA includes a tool box with every new hydraulic breaker. This tool box contains many of the special tools and wrenches required to perform normal maintenance or repairs on the breaker. This is a basic tool box, and is by no means complete or comprehensive, but it does contain many specialized tools, and wrench sizes not commonly found in the field. The following illustration depicts a typical tool box and its contents:

