

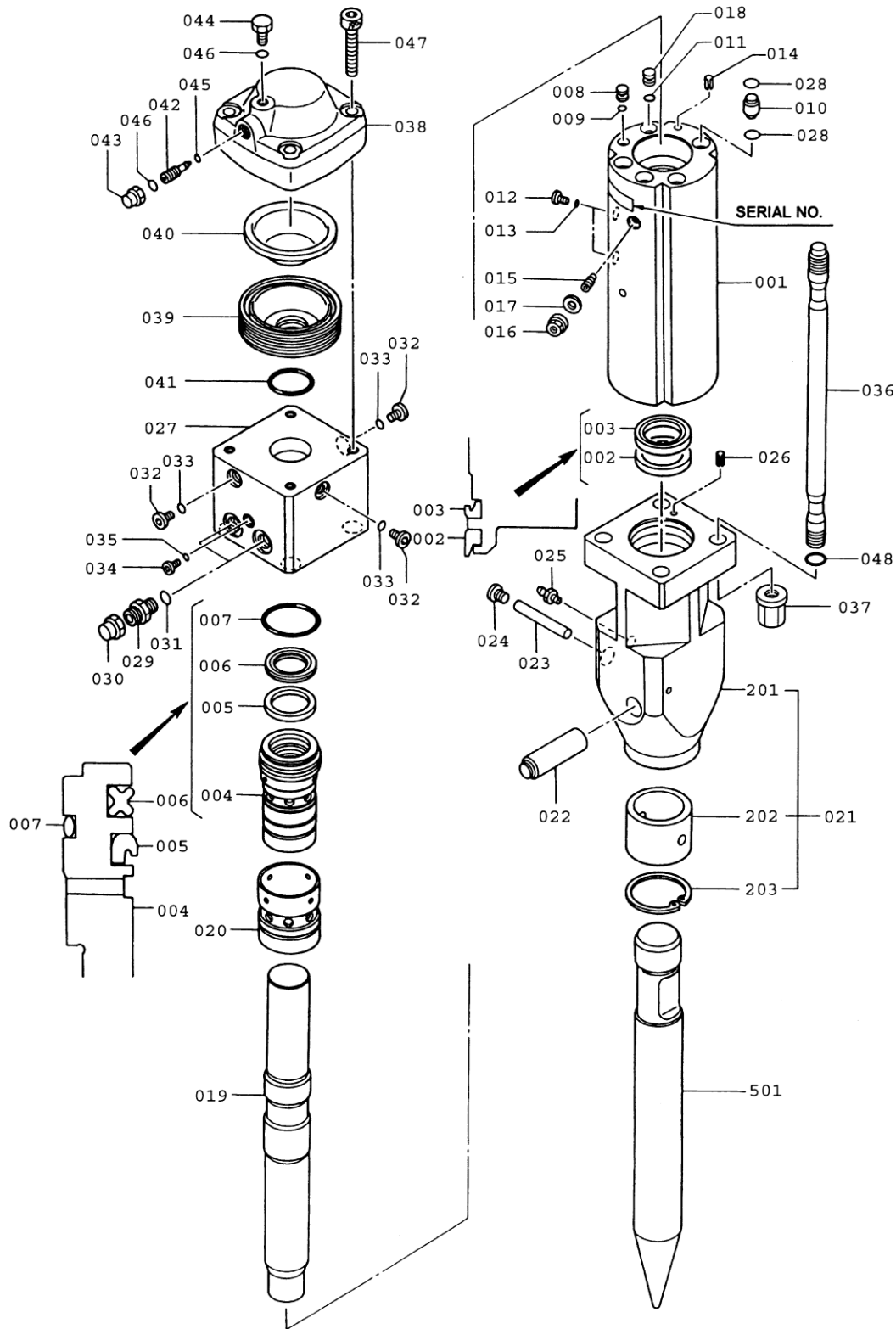
SECTION VI

PARTS LIST

***F4 Serial No. 5001 ~ & up
TLB SIDE PLATE VERSION***

*Revised: September, 2015
Section VI - Page # 1
KF4 Serial No. 5001 and up
KF4-K107-1*

F4 HYDRARAM **PARTS BREAKDOWN**



F4 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	KF4-10201	1	Cylinder	025	K170312-00000	1	Grease Nipple
002	KHB4R-10106	1	Dust Seal [/S]	026	K154037-10025	1	Spring Pin
003	KHB4R-10107	1	U-Packing [/S]	027	KF4-30101	1	Back Head
004	KF4-10111	1	Seal Retainer	028	K160011-00020	4	O-Ring [/S]
005	KF4-10112	1	U-Packing [/S]	029	K15287	2	Connector
006	KF4-10114	1	Seal Ring [/S]	030	(Not Used)	2	Union Cap
007	K161021-00075	1	O-Ring [/S]	031	K160011-00018	2	O-Ring [/S]
008	KHB2R-10120	1	Plug [/S]	032	K084891-02000	3	GPF Plug
009	008110-20024	1	O-Ring [/S]	033	K160011-00011	3	O-Ring [/S]
010	KF4-10121	4	Bushing [/S]	034	K084891-01000	1	GPF Plug
011	K160011-00020	5	O-Ring [/S]	035	K160011-00008	1	O-Ring [/S]
012	K084891-01000	2	GPF Plug	036	KF4-36201	4	Through Bolt
013	K160011-00008	2	O-Ring [/S]	037	KF4-36302	4	Hexagon Nut
014	K154037-10025	1	Spring Pin		KF4-70001	1	Accumulator Group
015	KF4-10231	1	Valve Adjuster	038	KF4-70101	(1)	Accumulator Cap
016	KF4-10233	1	Sealing Nut	039	KF4-70102	(1)	Accumulator Body
017	KHB1G-10532	1	Seal Washer [/S]	040	KHD500-07012	(1)	Diaphragm
018	KF4-10220	1	Plug [/S]	041	K161021-00055	(1)	O-Ring [/S]
019	KF4-11101	1	Piston	042	K007120-70134	(1)	Valve
020	KF4-13101	1	Valve	043	KHB2G-70121	(1)	Cap
021	KF4-20301	1	Fronthead Group	044	K007010-70030	(1)	Plug
201	KF4-20202	(1)	Bare Fronthead	045	K160011-00005	(1)	O-Ring [/S]
202	KHB4R-20103	(1)	Front Bushing	046	K160011-00014	(2)	O-Ring [/S]
203	K264020-00080	(1)	Snap Ring	047	K102032-16070	(4)	Socket Bolt
022	KF4-20206	1	Rod Retainer Pin	048	KF4-36303	4	O-Ring [/S]
023	KF4-20207	1	Stop Pin	501	KF4-25114	1	Chisel Bit [/O]
024	KHB4R-20108	1	Screw Plug	501	KF4-25115	1	Moil (Cone) Point
				501	KF4-25111	1	Blunt Bit [/O]

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

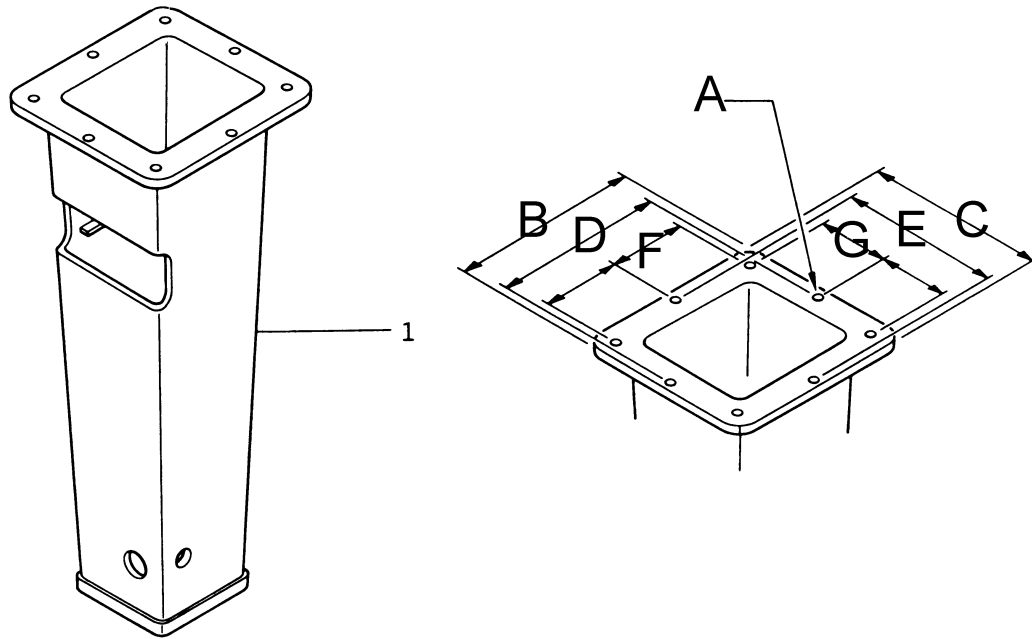
[/O] Items marked Option /O are optional depending on configuration

[/S] Items marked Option /S are included in the KF4-92011 Seal Kit

(Refer to Section VII for Seal Kit Details)

F4 Serial No. 5001 ~ & up

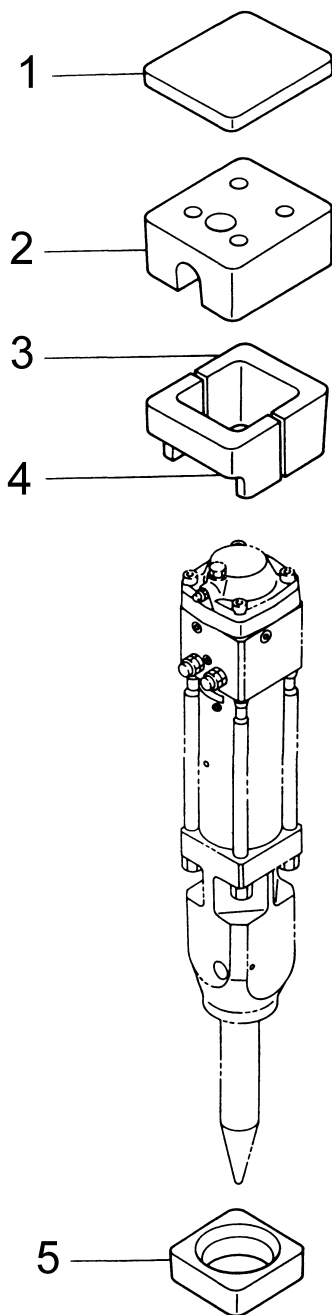
T-BOX MOUNTING **F4QT HYDRARAM**



ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	KF4-88201	1	T-Box Weldment

	<u>Inch</u>	<u>Milimeter</u>	
A	0.886	22	Bolt Hole Diameter
B	14.016	356	Flange, Long Side
C	13.228	336	Flange, Short Side
D	12.362	314	Center to Center
E	11.575	294	Center to Center
F	5.512	140	Center to Center
G	5.118	130	Center to Center

DAMPER PARTS LIST
F4QT HYDRARAM CRADLE

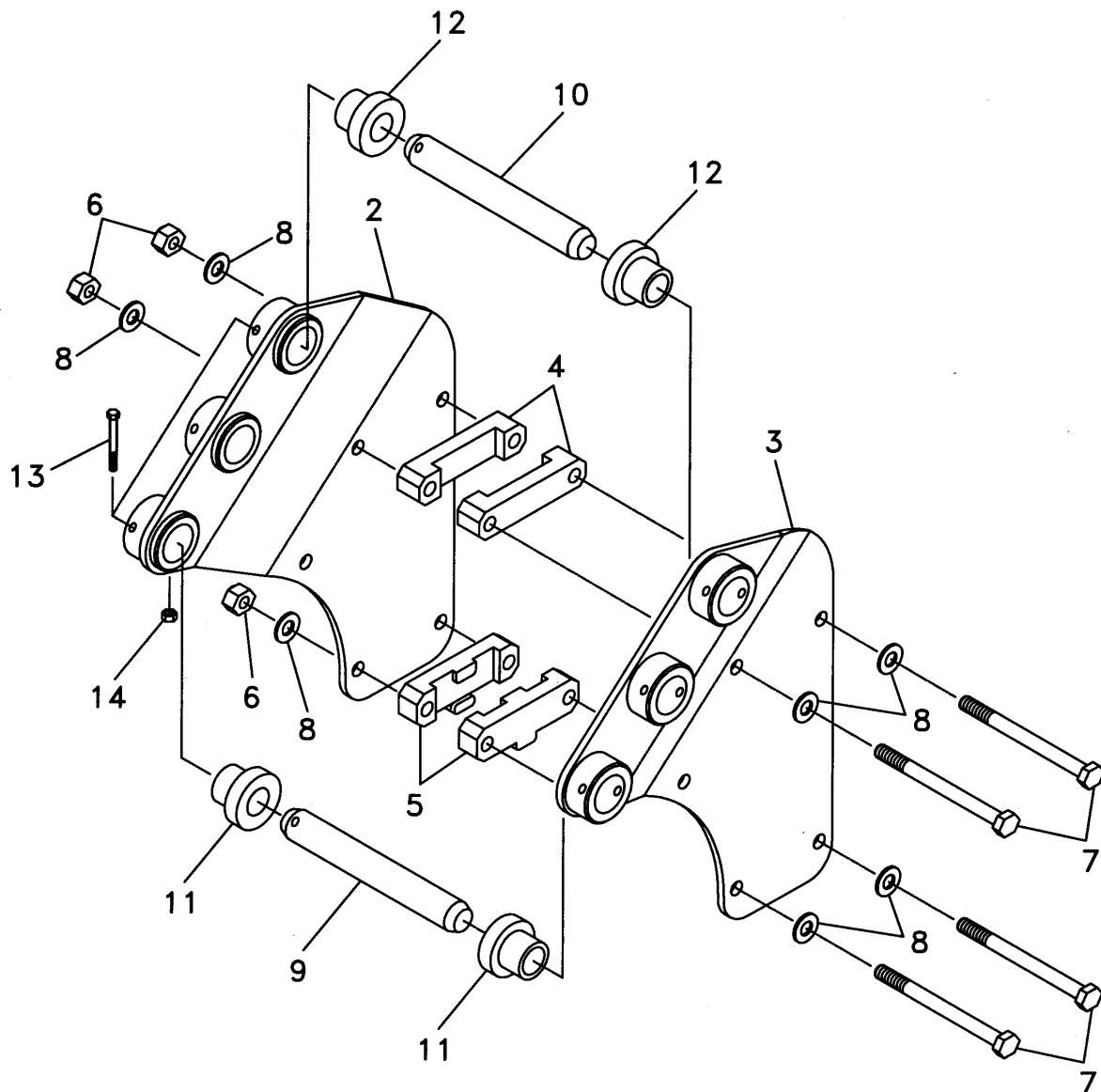


DAMPER PARTS LIST
F4QT HYDRARAM CRADLE

<i>ITEM</i>	<i>PART NUMBER</i>	<i>QUANTITY</i>	<i>DESCRIPTION</i>
1	KF4-88122	1	Top Damper
2	KF4-88121	1	Top Spacer
3	KF4-88128	1	Back Damper, Half
4	KF4-88127	1	Back Damper, Half
5	KF4-88124	1	Front Damper



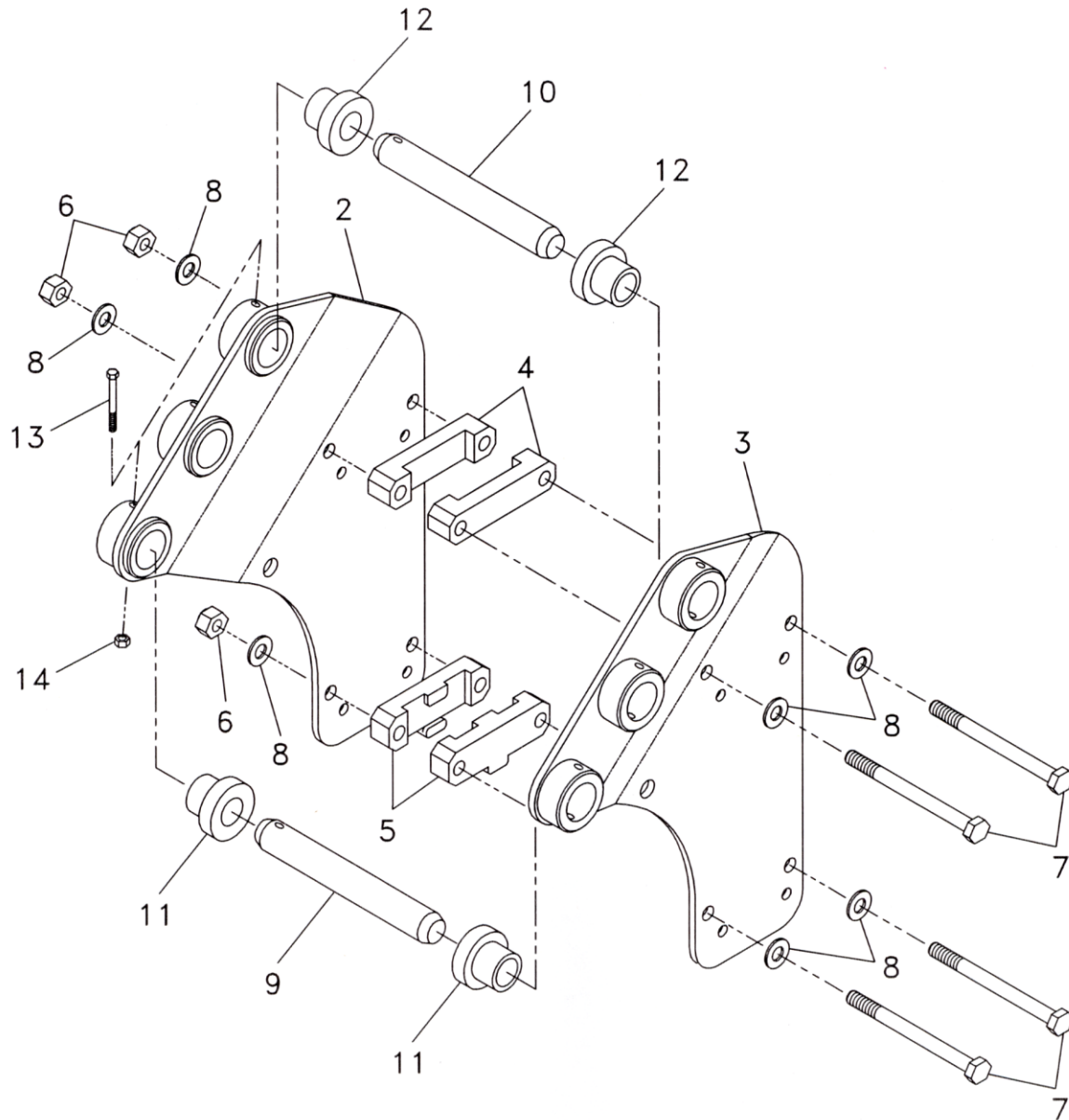
STANDARD MOUNTING
F4 HYDRARAM
FOR TRACTOR-LOADER-BACKHOES



STANDARD MOUNTING **F4 HYDRARAM** **FOR TRACTOR-LOADER-BACKHOES**

<i>ITEM</i>	<i>PART NUMBER</i>	<i>QUANTITY</i>	<i>DESCRIPTION</i>
1	KF4B	1	Hydraulic Braker <i>(Not Shown)</i>
2	KF40018	1	Three-Boss Side Plate, Left Side
3	KF40019	1	Three-Boss Side Plate, Right Side
4	KF430416	2	Set Plate "B", Upper
5	KF430415	2	Set Plate "A", Lower
6	K10189	4	7/8"-9 UNC Locknut
7	K10188	4	7/8"-9 UNC x 10.50" HHCS
8	K07236	8	7/8" Flat Washer
9	<i>Refer</i> <i>to the</i> <i>specifications</i> <i>Page 13</i>	1	Set Plate "A", Upper
10		2	7/8"-9 UNC Locknut
11		1	7/8" Flat Washer
12		2	7/8"-9 UNC x 10.50" HHCS
13	K06422	2	1/2"-13 x 5" HHCS
14	K10188	2	1/2"-13 Locknut

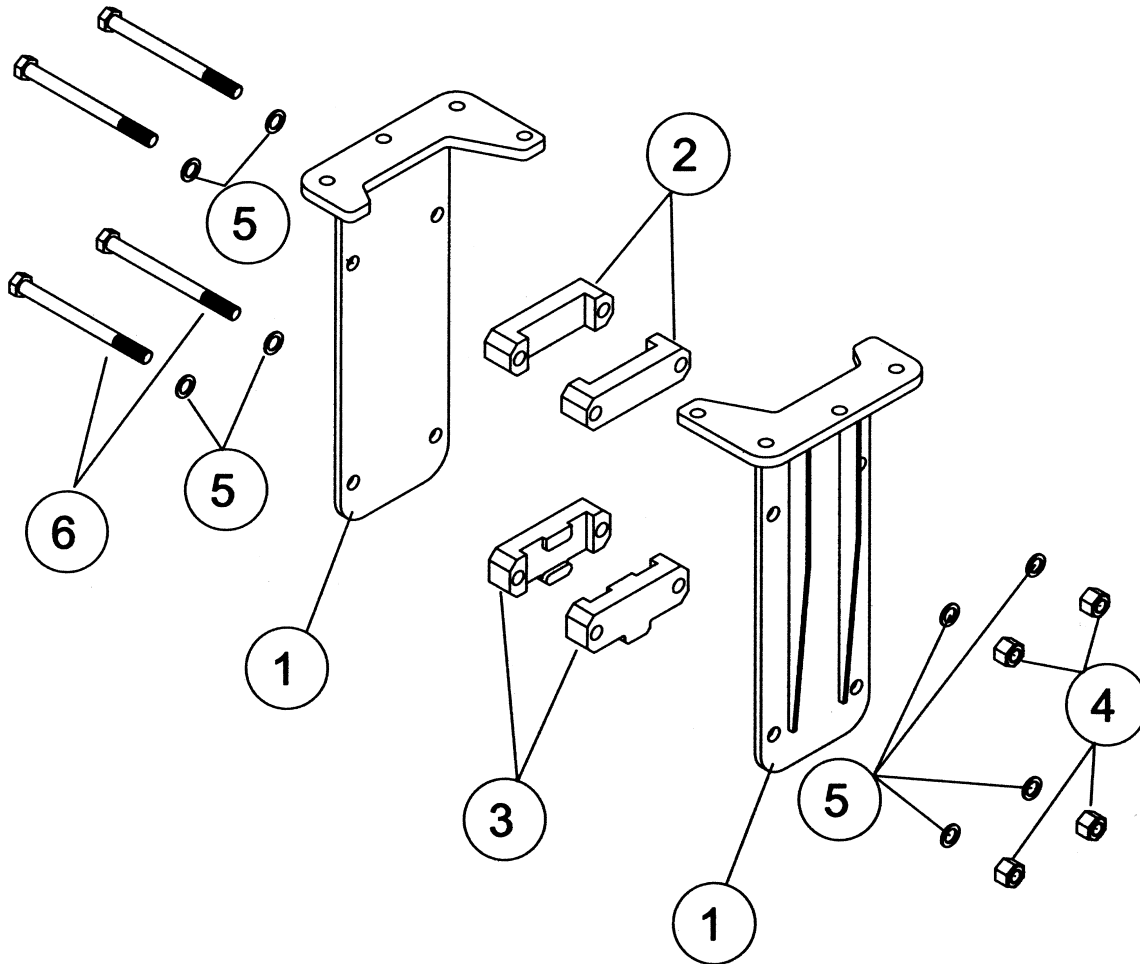
F4TLB "A" HYDRARAM **FOR TRACTOR-LOADER-BACKHOES**



F4TLB "A" HYDRARAM **FOR TRACTOR-LOADER-BACKHOES**

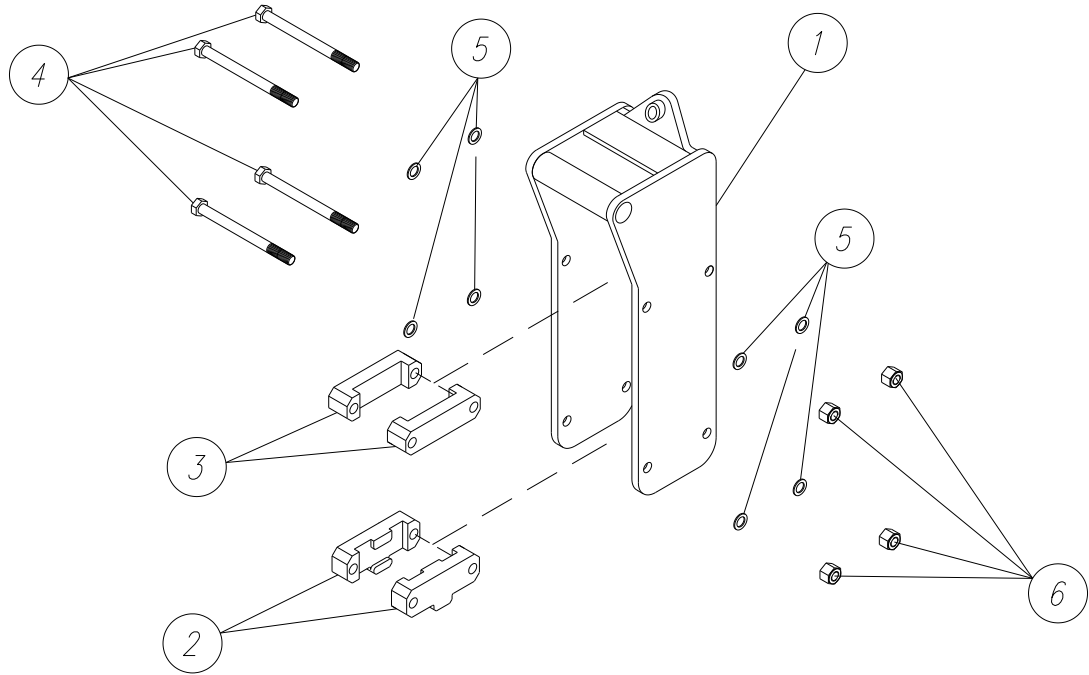
ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	KF4B	1	Hydraulic Breaker <i>(Not Shown)</i>
2	KF50021	1	Side Plate, Left Hand
3	KF50022	1	Side Plate, Right Hand
4	KF430416	2	Set Plate "B"
5	KF430415	2	Set Plate "A"
6	K10189	4	7/8"-9 UNC Locknut
7	KF40065	4	7/8"-9 UNC x 11.0" HHCS GR.5
8	K07236	8	7/8" Flat Washer
9	<i>Refer to the specifications on page 13</i>	1	Mounting Pin, Dipperstick
10		1	Mounting Pin, Link
11		2	Mounting Bushing, Dipperstick
12		2	Mounting Bushing, Link
13	K06422	2	1/2" -13 x 5" Bolt
14	K07228	2	1/2" -13 UNC Locknut

FLANGE SIDE PLATE MOUNTING **F4FSP HYDRARAM**



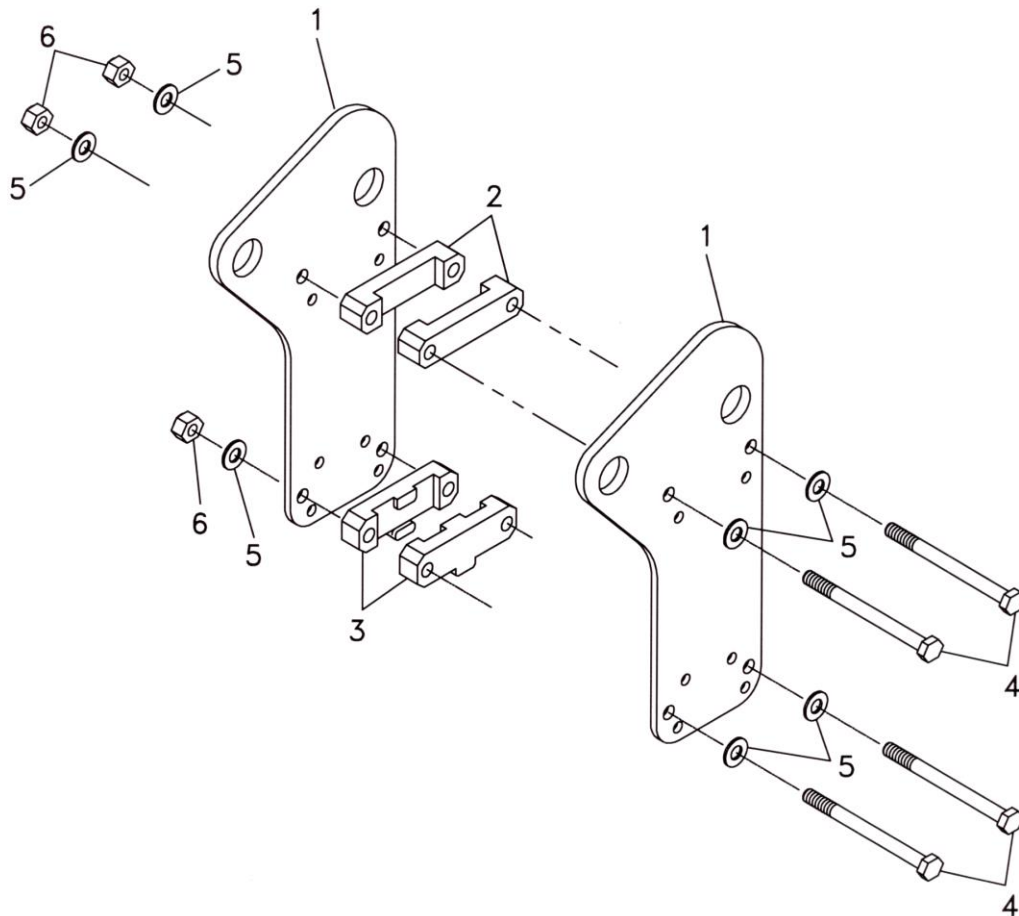
ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	KF40030	2	Side Plate with Flange
2	KF430416	2	Upper Set Plate
3	KF430415	2	Lower Set Plate
4	K10189	4	7/8"-9 UNC Locknut
5	K07236	8	7/8"-9 Flat Washer
6	K10188	4	7/8"-9 UNC x 10.50" HHCS, Gr.5

CP 027 MOUNTING BRACKET **F4CP HYDRARAM**



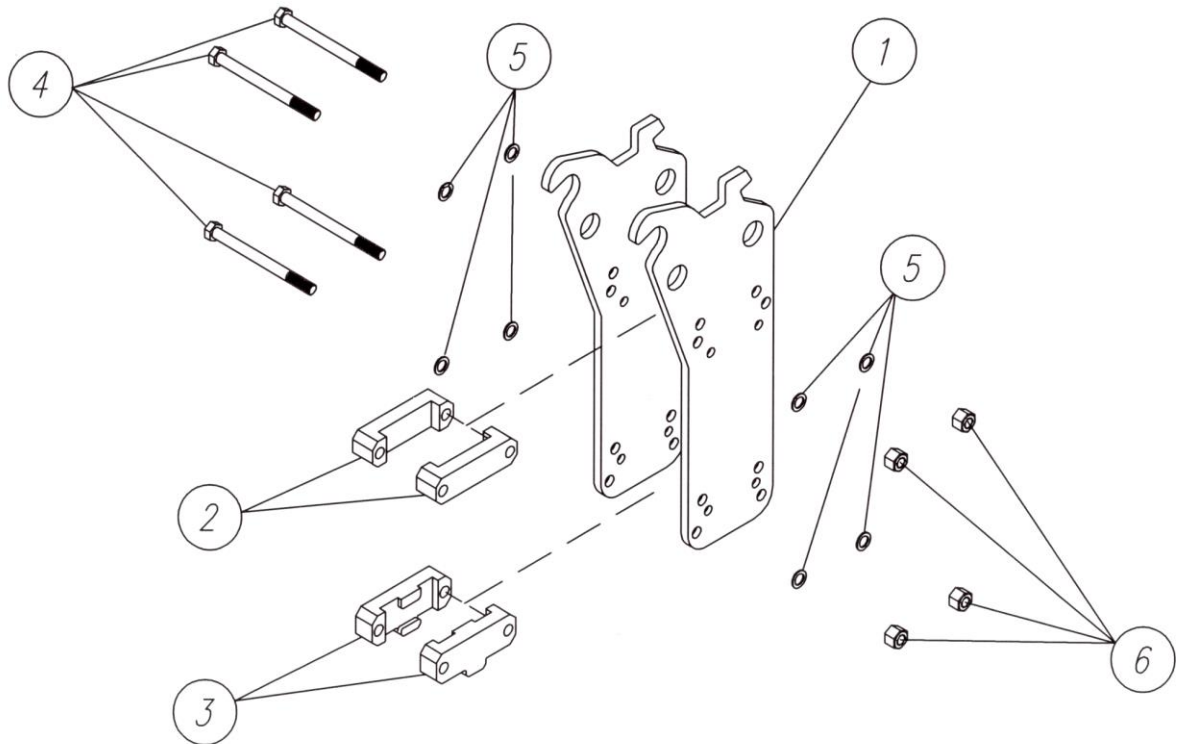
ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	K28401	1	CP Breaker Bracket
2	KF430415	2	Lower Set Plate (A)
3	KF430416	2	Upper Set Plate (B)
4	KF40065	4	7/8"-9 UNC x 11.00" HHCS, Gr.5
5	K07236	8	7/8"-9 Flat Washer
6	K10189	4	7/8"-9 UNC Locknut

MINI-EXCAVATOR SIDE PLATE MOUNTING **F4ME HYDRARAM**



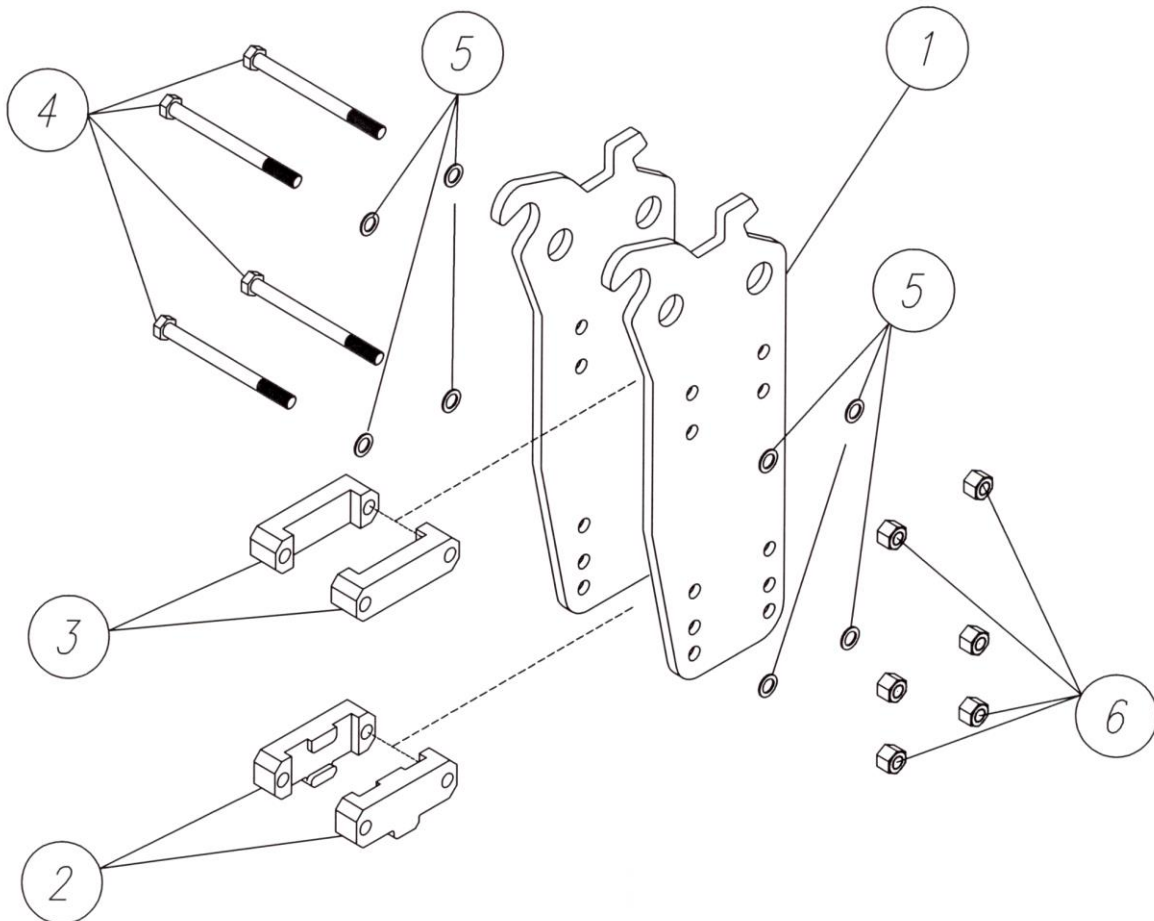
ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	K28211	2	ME Side Plate
2	KF430416	2	Lower Set Plate (B)
3	KF430415	2	Upper Set Plate (A)
4	KF40065	4	7/8"-9 UNC x 11.00" HHCS, Gr.5
5	K07236	8	7/8"-9 Flat Washer
6	K10189	4	7/8"-9 UNC Locknut

WB 27/35 SIDE PLATE MOUNTING **F4WBME HYDRARAM**



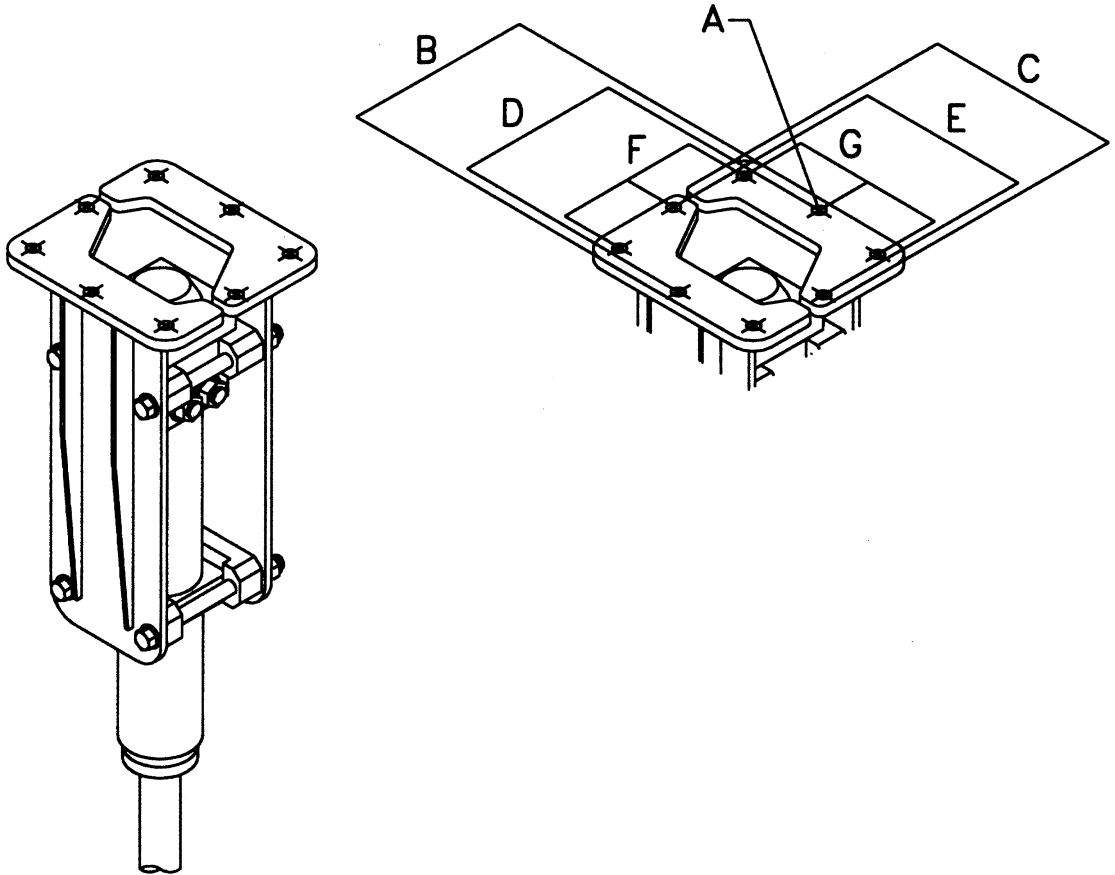
ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	KF40076	2	ME Side Plate
2	KF430416	2	Lower Set Plate (B)
3	KF430415	2	Upper Set Plate (A)
4	KF40065	4	7/8"-9 UNC x 11.00" HHCS, Gr.5
5	K07236	8	7/8"-9 Flat Washer
6	K10189	4	7/8"-9 UNC Locknut

WB 50 SIDE PLATE MOUNTING **F4WB50ME HYDRARAM**



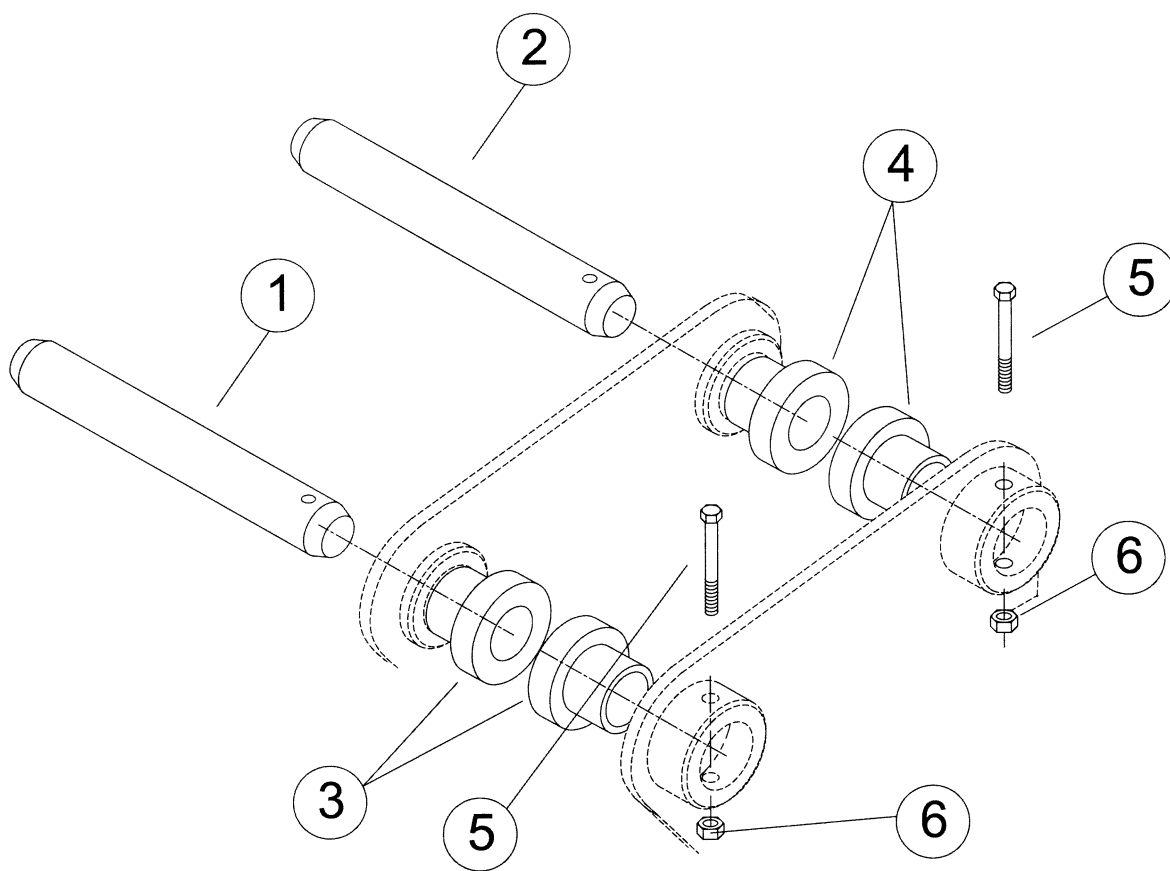
ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	KF40078	2	WB50ME Side Plate
2	KF40074	2	Lower Set Plate (B)
3	KF40073	2	Upper Set Plate (A)
4	K18498	4	1"-8 UNC x 12.00" HHCS, Gr.5
5	K06643	8	1" Flat Washer
6	K02584	4	1"-8 UNC Locknut

FLANGE SIDE PLATE MOUNTING **F4FSP HYDRARAM**



	<u>Inch</u>	<u>Milimeter</u>	
A	0.886	22	Bolt Hole Diameter
B	13.228	336	Flange, Short Side
C	14.015	356	Flange, Long Side
D	11.575	294	Center to Center
E	12.362	314	Center to Center
F	5.118	130	Center to Center
G	5.512	140	Center to Center

MOUNTING PIN KIT FOR
F4Qt AND F4 TLB VERSIONS



MOUNTING PIN KIT FOR F4Qt AND F4 TLB VERSIONS

Serial Number _____

Base Machine Make: _____

Base Machine Model: _____

Dipperstick Pin Diameter: _____

Link Pin Diameter: _____

Dipperstick Width: _____

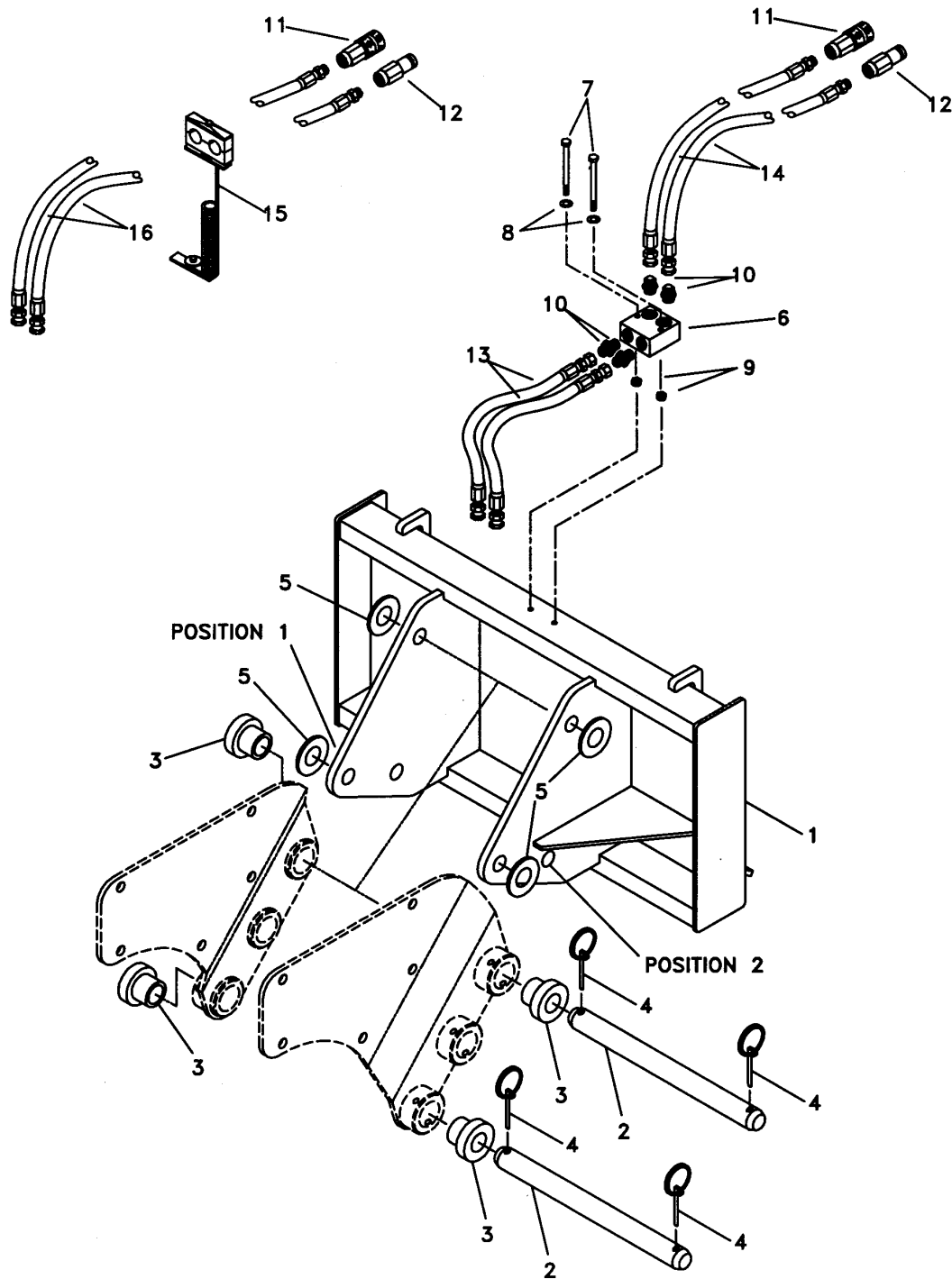
Link Pin Width: _____

MOUNTING KIT PART NO: _____

Consisting of the following:

<i>ITEM</i>	<i>PART NUMBER</i>	<i>QUANTITY</i>	<i>DESCRIPTION</i>
1	_____	1	_____ Dia. Mounting Pin x 17" Long
2	_____	1	_____ Dia. Mounting Pin x 17" Long
3	_____	2	_____ Dia. Mounting Bushing x _____ lg.
4	_____	2	_____ Dia. Mounting Bushing x _____ lg.
5	<u>K06422</u>	2	1/2" -13 x 5" Bolt
6	<u>K07228</u>	2	1/2" -13 UNC Locknut

TWO-POSITION (PIN-ON) **UNIVERSAL QUICK ATTACH BRACKET** **FOR F4 HYDRARAMS**

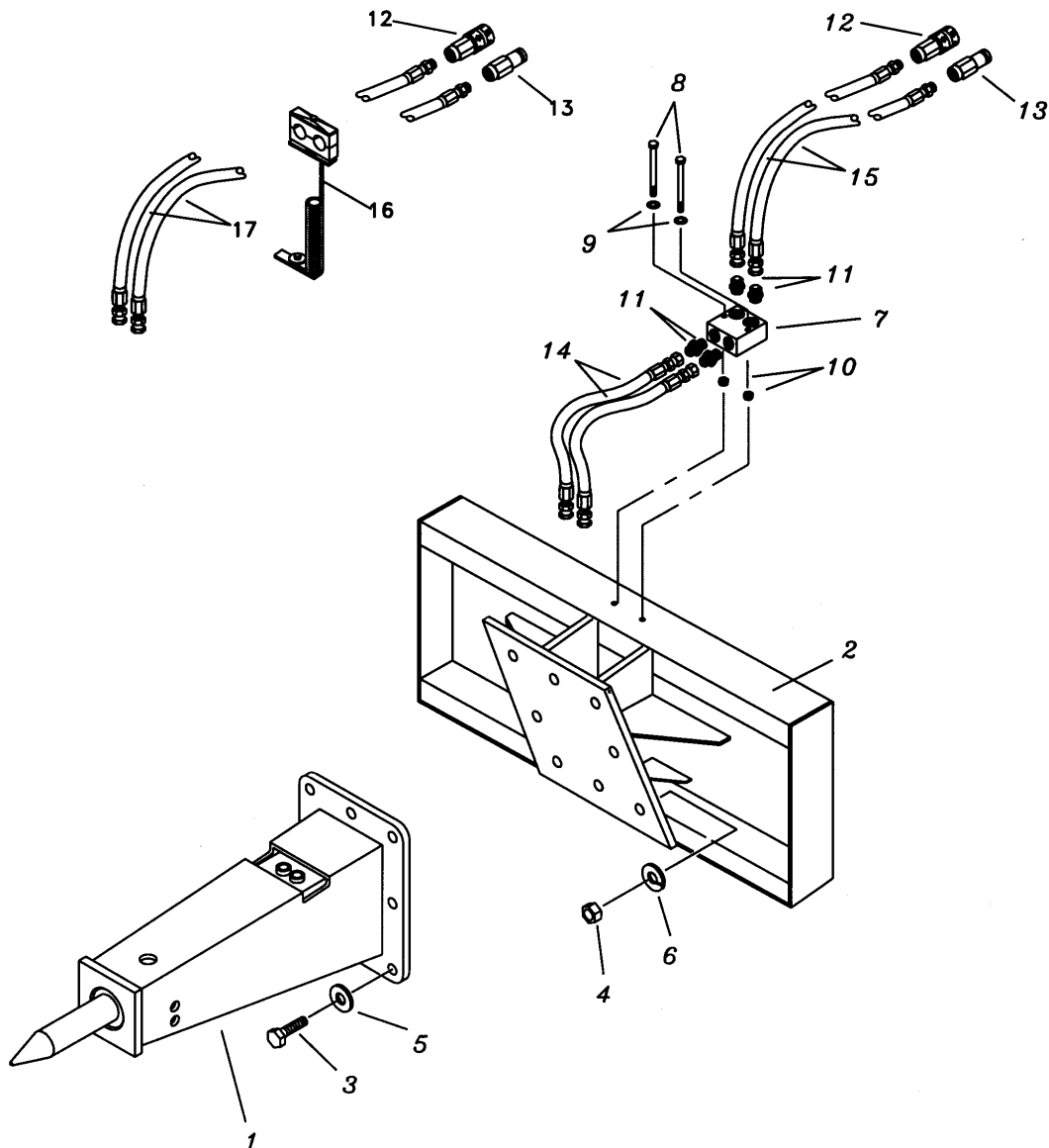


TWO-POSITION (PIN-ON) **UNIVERSAL QUICK ATTACH BRACKET** **PARTS LIST**

ITEM	PART NUMBER	QUANTITY	DESCRIPTION
1	K26675	1	Universal Quick Attach Bracket
	K26676	---	Quick Attach Bracket for Case Unloaders
2	K19360	2	◆ Mounting Pin, 1 ½" x 23"
3	K14129	4	◆ Mounting Bushing, 1.51" x 2.45"
4	K07218	4	Retainer Lynch Pin
5	K02467	4	Flat Washer
6	K19945	1	Control Valve Block
7	K19946	2	3/8"-16 x 5.00" Lg HHCS
8	K07241	2	3/8" Flat Washer
9	K12272	2	3/8"-16 Locknut
10	K15593	4	Adapter
11	K19115	1	Quick Disconnect - Female
12	K19114	1	Quick Disconnect - Male
13	K28278	2	Hose Assembly
14	K28275	2	Hose Whip
15	K14950	2	Spring Hose Guide
16	K15845	2	Hose Whip

◆ **NOTE:** The bushings are installed on the outside of the hammer frame, and the pins extend through the attachment bracket. This configuration requires extra-long pins as noted.

BOLTED ONE-PIECE RIGID
QUICK ATTACH BRACKET
For F4QT or F4FSP HYDRARAM

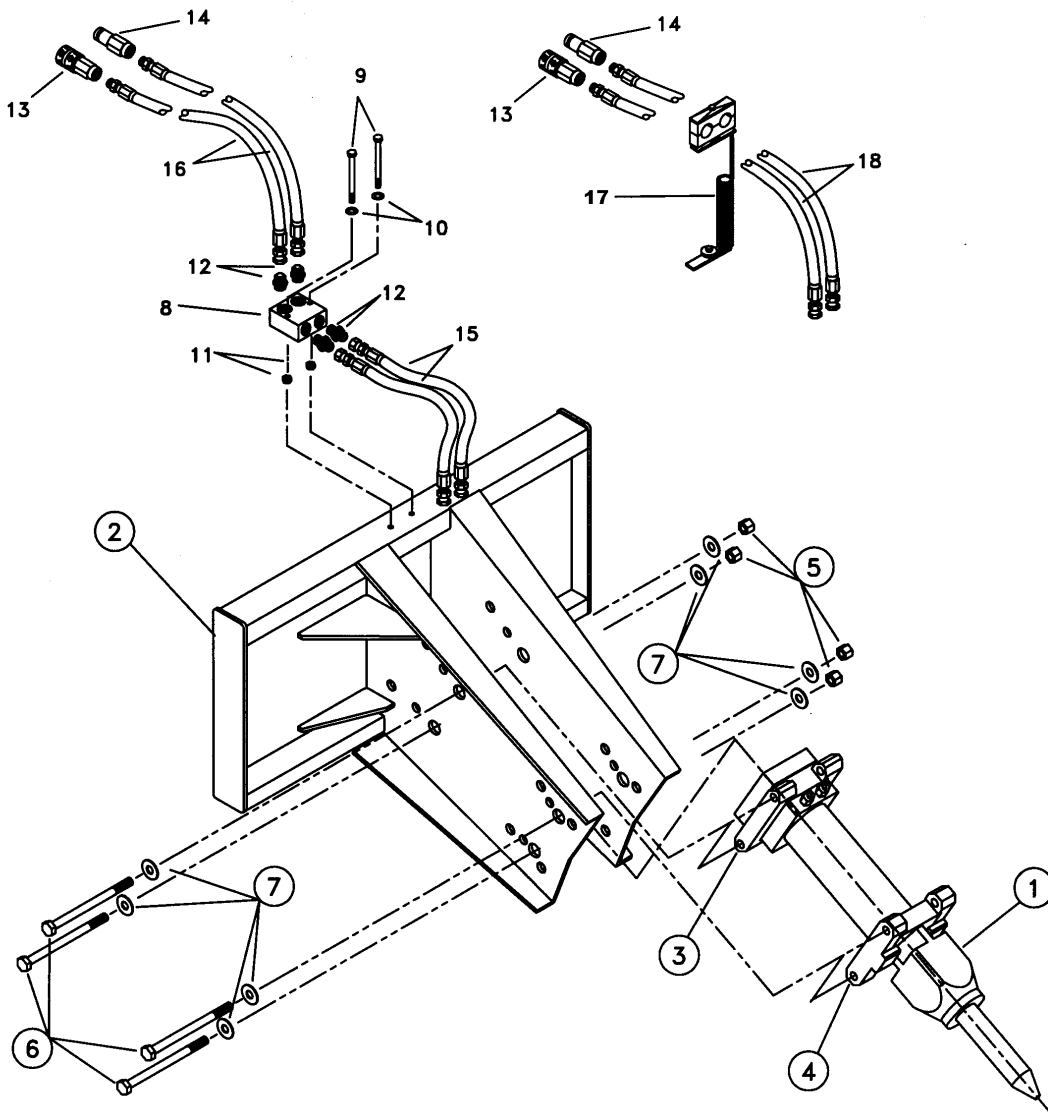


BOLTED ONE-PIECE RIGID **QUICK ATTACH BRACKET** **PARTS LIST**

<i>ITEM</i>	<i>PART NUMBER</i>	<i>QUANTITY</i>	<i>DESCRIPTION</i>
1	KF4QT (or KF4FSP)	1	HydraRam, T-Box or Flange Style*
2	K26671	1	Universal Quick Attach Bracket
	K26673	---	Quick Attach Bracket for Case Unloaders
3	KF430403	8	3/4 - 10 UNC Bolt x 3 1/4" Long (Grade 8)
4	K02025	8	3/4 - 10 UNC Nut
5	K10278	8	3/4" Hardened Washer
6	K10194	8	3/4" Lock Washer
7	K19945	1	Control valve Block
8	K19946	2	3/18"-16 x 5.00" Lg HHCS
9	K07241	2	3/8" Flat Washer
10	K12272	2	3/8"-16 Locknut
11	K15593	4	10-8 Adapter
12	K19115	1	Quick Dissconnect - Female
13	K19114	1	Quick Dissconnect -Male
14	K28276	2	Hose Assembly
15	K28275	2	Hose Whip
16	K14950	1	Spring Hose Guide
17	K15845	2	Hose Whip

* The Loader Attachment Plate shown here can be use with EITHER the T-Box or Flange mounting.

OPEN STYLE ONE-PIECE RIGID
QUICK ATTACH BRACKET
For F4SS HYDRARAM



OPEN STYLE ONE-PIECE RIGID **QUICK ATTACH BRACKET** **PARTS LIST**

<i>ITEM</i>	<i>PART NUMBER</i>	<i>QUANTITY</i>	<i>DESCRIPTION</i>
1	KF4B	1	Breaker, Bare
2	K26660	1	Universal Quick Attach Bracket
	K26661	---	Quick Attach Bracket for Case Loaders
3	KF430416	2	Set Plate (B)
4	KF430415	2	Set Plate (A)
5	K10189	4	7/8"-9 UNC NC Lock Nut
6	K10188	4	7/8"-9 UNC x 10 1/2" Hex Head Bolts
7	K07236	8	7/8" Flat Washer
8	K14950	1	Hose Saver Spring Bracket, 1/2" Hose
8	K19945	1	Control Valve Block
9	K19946	2	3/8"-16 x 5.00" Lg HHCS
10	K07241	2	3/8" Flat Washer
11	K12272	2	3/8"-16 Locknut
12	K15593	4	10-8 Adapter
13	K19115	1	Quick Disconnect - Female
14	K19114	1	Quick Disconnect - Male
15	K28276	2	Hose Assembly
16	K28275	2	Hose Whip
17	K14950	2	Spring Hose Guide
18	K19624	2	Hose Whip

SERVICE TOOL KIT

P/N KBM490001

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

