

Keep With Operator's Manual

# INSTALLATION MANUAL 1585 LOADERS L3130, L3430, L3830, & L4440 KUBOTA TRACTORS

## TRACTOR & LOADER GENERAL INFORMATION

Mounting kit can be installed using tools ordinarily available, including a hoist capable of lifting and supporting the loader for initial mounting, standard and metric wrenches, torque wrench, and hydraulic oil.

Tractor-supplied hydraulic power is required for loader mounting and operation.

The grille guard (3) may be installed with or without the loader. Refer to instructions on page 2.

Check tractor tire pressure. Refer to tractor operator's manual for recommended pressures. With tractor on a firm, level surface, compare tractor rear axle height from left to right, measuring from axle center to ground. Adjust air pressure in rear tires until axle height measures same for both sides.

**NOTE:** If rear axle on tractor is not level from side to side, cutting edge on loader bucket or similar loader-mounted attachments will not sit flat on ground.

Set the tractor's Front Tread Width to 1055mm (41.5") on a 2WD tractor to provide adequate clearance, the 4WD is not adjustable. For better stability, set the rear tread to 1020mm (40.2").

Tractor steering stops may have to be adjusted to provide clearance between front tire and loader on full left and right turn with front axle fully oscillated. Be sure lift cylinders are fully retracted when checking tire clearances. Refer to tractor operator's manual for steering stop adjustment.

**NOTE:** Reference to left and right used in these instructions refer to position when seated in the operating position on tractor.

## PREPARING TRACTOR

Shut off engine, engage brakes, and remove key during installation. If tractor is equipped with front weights, remove weights and weight bracket.

Remove plastic thread protectors from holes on left and right sides of tractor clutch housing and front axle.

**IMPORTANT:** Clean threaded holes in tractor chassis thoroughly using a tap of proper size. Paint, rust, or debris in the threads may not permit cap screws to be installed and tightened correctly.

## PALLET COMPONENT REMOVAL (Figure 1)

The loader boom, bucket, left and right mid mounts, hydraulic package, and grille guard come on one pallet. Remove plastic protective cover from pallet. Untie and remove grille guard from pallet. Support mid mounting brackets and untie and remove from pallet. Remove hydraulic box of parts from pallet. Support bucket then remove hold downs and remove from pallet.

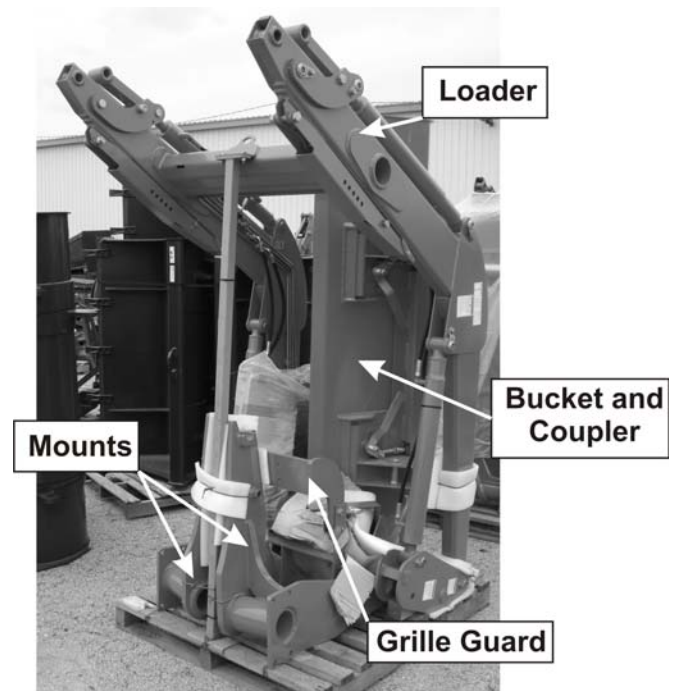


Figure 1 - Loader Shipping Example

**NOTE:** Support mid mounting brackets when removing from shipping materials.



**Warning:** Loader must be supported before removing hardware securing loader to shipping pallet or loader will tip over.

Support loader boom arms with lifting device and nylon straps. Lift loader slightly to remove load from support post and remove it.

## PALLET COMPONENT REMOVAL (CONTINUED)

Lower loader boom onto ground, positioning scraps of cardboard on floor under loader to prevent loader paint damage. Remove Pallet.

**NOTE:** Do not tighten hardware to full torque until the mounting kit is completely assembled unless otherwise noted. This will allow proper assembly and alignment of parts as they are installed. Before finally tightening all mounting hardware, start the engine and apply downward pressure to the loader bucket, removing the load from the front tires (Do not lift tires off the ground!). Make sure the mounting pins can be rotated easily.

## INSTALLING GRILLE GUARD (Figure 3)

1. Position grille guard (3) on front of tractor.
2. Secure with HHCS M14x40mm (12) and M14 lockwashers (11).
3. Torque bolts after all have been installed using General Torque Specifications. (See page 12)

## INSTALLING LEFT AND RIGHT MIDMOUNTING BRACKETS (Figure 3)

1. Lift right mid mounting bracket (1) with overhead hoist. Fasten right mid mounting bracket (1) to tractor casting and front axle housing using HHCS M16x40mm (13) and M16 lockwashers (14).
2. Raise left mid mounting bracket (2) with overhead hoist. Fasten left mid mounting bracket (2) to tractor casting and front axle housing using HHCS M16x40mm (13) and M16 lockwashers (14).

## PLUMBING HYDRAULIC VALVE

1. Install O-ring 90° elbow fittings in port on each side of valve pointing away from handle. Install O-ring 90° elbow fitting in front tank port pointing away from joystick. Tighten jam nuts.
2. Install straight O-ring to pipe adapters on front ports of valve. Install male quick couplers on male adapters on valve. Attach color coded identification dust covers on quick couplers. Boom lift is on right and bucket functions are on left. (Figure 8)

## ATTACHING VALVE AND VALVE BRACKET TO TRACTOR (Figure's 2, 3, & 8)

1. Attach valve bracket (4) to tractor frame on the right side inside of the mid mount using HHCS 10mm-1.5x40mm CL10.9ZP bolts (8), 10mm-1.5 PL10.9 nuts (10), and M10 lockwashers (9).

**NOTE:** Make sure there is adequate clearance between valve mounting bracket and the linkage that runs behind it.

2. Attach valve (19) to valve bracket (4) using HHCS 8-P15-50mm PL10 bolts (5), M8 lockwashers (6), and M8 hex nuts (7). (See Figures 2, 3, & 8)

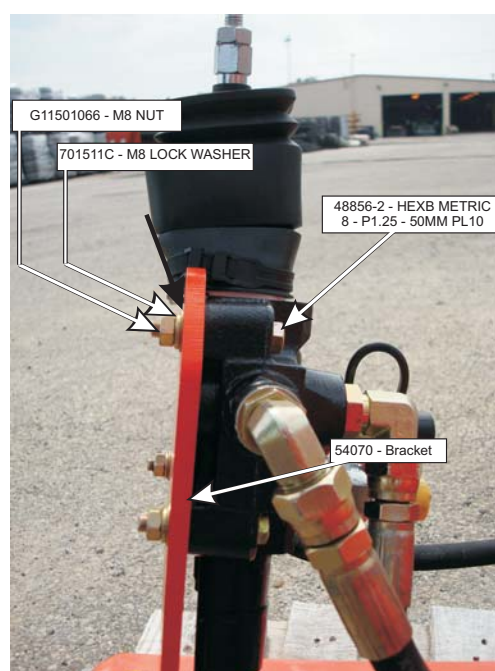


Figure 2- Joystick and Valve Mounting

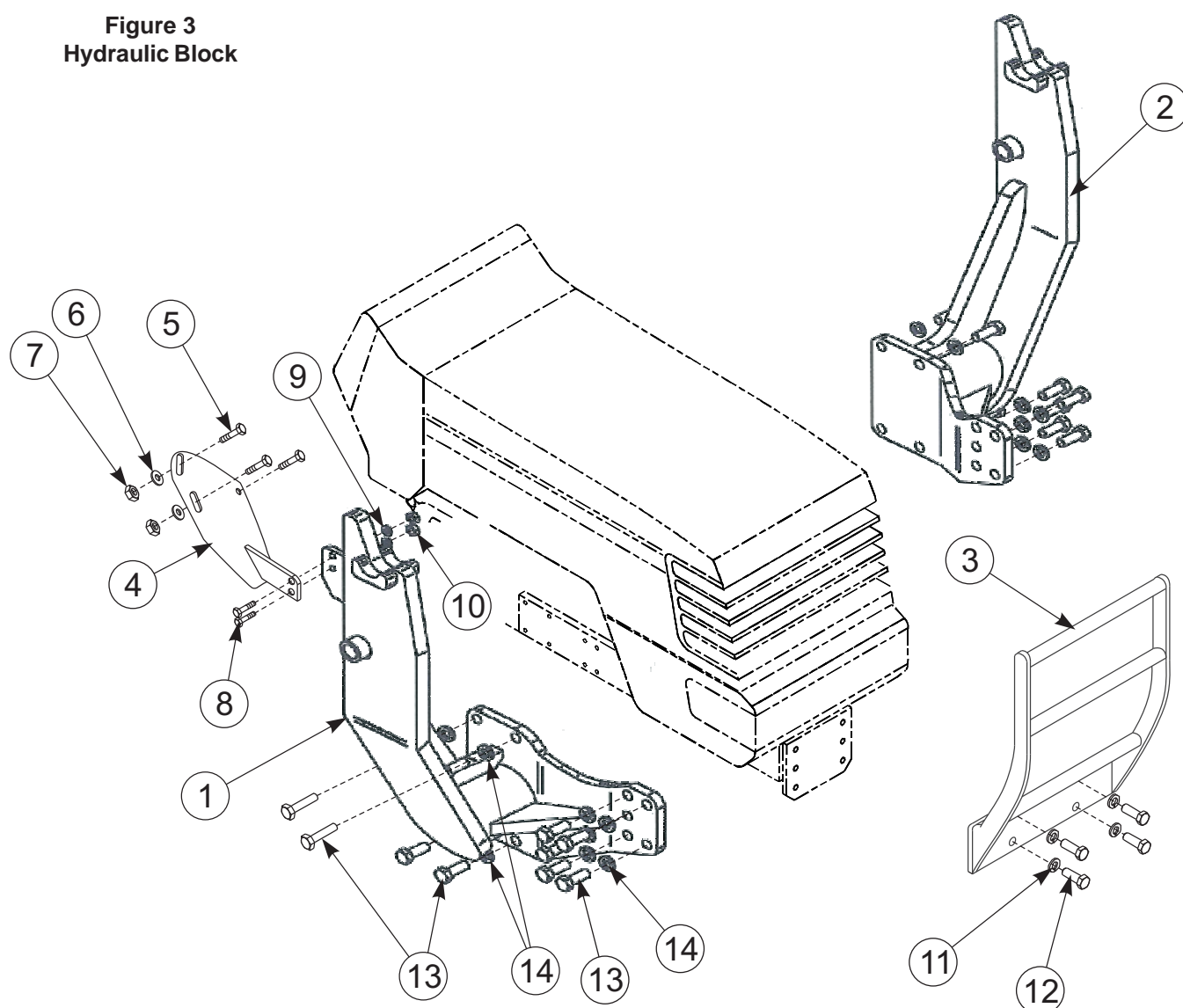
## ATTACHING TRACTOR HYDRAULIC BLOCK

1. Remove cover from tractor hydraulic area located under foot rest on right side of tractor. Align attaching holes in tractor with holes in hydraulic block. Install hydraulic block with O-rings in place using (4) bolts, Lockwashers (35mm for the L4440 and 90mm for others) and O-rings. (2 ports are on top and one port to lower front of tractor).

**NOTE:** The remaining bolts will be left after install

2. Install 90° pipe hydraulic elbow fitting in top front pressure port and point the end toward front of

**Figure 3**  
**Hydraulic Block**



**PARTS LIST - KUBOTA MOUNTING KIT**

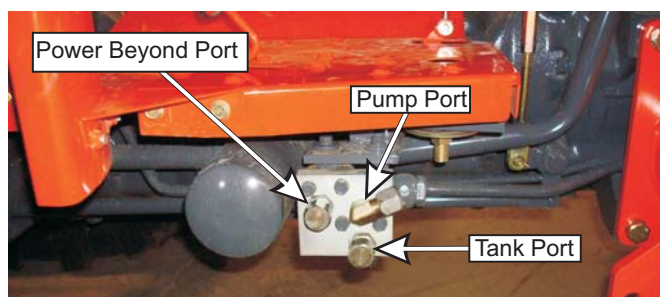
ITEM	PART NO.	DESCRIPTION	QTY.
1	54056	WDMT, RH MID MOUNT	1
2	54057	WDMT, LH MID MOUNT	1
3	54061	WDMT, GRILLE GUARD (L3130, L3430, L3830)	1
	55598	WDMT, GRILLE GUARD (L4440)	1
4	54070	WDMT, CONTROL VALVE BRACKET	1
5	49040-23	HHCS 8-P15-50mm PL10	3
6	701611C	LOCKWASHER, M8	3
7	54133-2	NUT HEX 8mm-1.25mm CL10.9	3
8	49040-42	HHCS 10mm-1.5x40mm CL10.9ZP	2
9	00755954	LOCKWASHER M10	2
10	54133-1	NUT METRIC 10mm-1.5 PL10.9	2
11	701614C	LOCKWASHER, M14	4
12	49040-20	HHCS METRIC 14-P1.5-40mm PL10	4
13	49040-28	HHCS METRIC 16-P1.5-40mm PL10	18
14	701615C	LOCKWASHER, M16	18

tractor.

3. Install straight pipe adapters into other two ports. (Figure 8)

#### HOSE PLUMBING

1. Connect pressure hose from top front 90° elbow fitting on tractor hydraulic block to valve 90° elbow fitting left inlet on valve. (P Port).
2. Connect tank hose with tube 90° bend from hydraulic block lower front port (tank port) to 90° elbow fitting on front of valve. (T Port).



**Figure 4- Joystick and Valve Mounting**

3. Connect power beyond hose with tube 90° bend from hydraulic block rear upper port (power beyond) to 90° elbow fitting on valve (on right side of valve). (Figure 4)

#### PLUMBING LOADER TO CONTROL VALVE (Figure 8)

1. Install hoses onto boom oil tubes. Install and tighten one at a time from the bottom up. Loosening the closest oil line clamp will ease installation.
2. Install large identification dust plugs onto free ends of hoses. Slide Hose sleeve over hoses. Install female quick couplers onto free ends of hoses.
3. Connect hoses from upper two boom oil lines to right male couplers on valve and the lower two boom oil lines to left male quick couplers on valve, making sure to match the colors. (Figure 8)
4. Attach free end of rubber strap to loader right side frame.
5. After all plumbing has been completed, slowly cycle lift and bucket cylinders several times to purge air from hydraulic system. Retract cylinders and shut off tractor engine, engage parking brake, and remove key. Replenish tractor hydraulic system with recommended hydraulic fluid.

#### INSTALLING MANUAL CANISTER TO BOOM ASSEMBLY

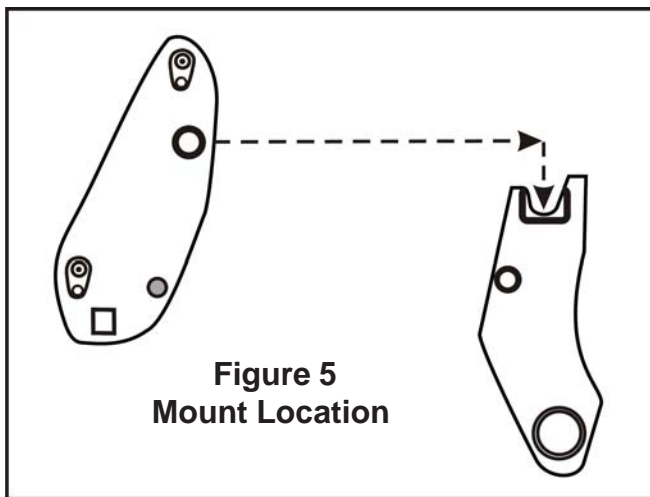
1. Use two 1/4" bolts, M8 lock washers, M8 plain washers, and 1/4" nuts to attach canister to bracket.
2. Remove bolts (27) and washers (28 & 30) from cover (26).
3. Using bolts that were just removed, attach bracket and cover to boom assembly.
4. Insure manual is placed in the canister.

#### MOUNTING LOADER TO TRACTOR (Figures 5 & 6)



**WARNING:** To avoid injury, an overhead hoist must be used for initial mounting, do not permit bystanders within ten feet of loader. Parking stands are not operational without bucket or heavy attachment mounted. Bale spear or pallet fork alone do not provide enough weight.

1. Secure a hoist strap around loader upper boom arms and slowly raise loader with overhead hoist until loader uprights are slightly higher than mounts on the tractor. Make sure loader is centered with the tractor.



**Figure 5  
Mount Location**

2. Start tractor, release brakes, and drive tractor forward until mounts are touching. Engage brakes and shut off tractor.
3. With overhead hoist, lower loader until loader upright mounts are seated in saddle of tractor mounts. Connect hydraulic hoses to correct ports.

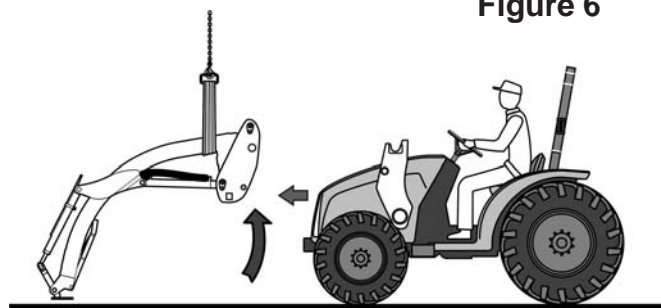


## MOUNTING LOADER TO TRACTOR (CONTINUED)

4. Start tractor and extend lift cylinders, rotating the loader upright until the lower connector pin holes line up with holes in tractor mount. Shut off tractor and engage brakes. Insert both lower connection pins and safety linch pins.

**NOTE:** Do not lift the tractor tires off the ground. While pressure is applied, make sure the loader mounting pins can be rotated easily.

6. Tighten all remaining hardware to the torque level shown in the General Torque Specification Chart at the end of this document.



**Figure 6**

## PRE-OPERATION CHECK

1. Adjust front wheel tread setting stops, if necessary, to provide a minimum 3/4" clearance between front tires and any part of loader with lift cylinders fully oscillated. Be sure lift cylinders fully retracted. Refer to page 1, under preparing tractor. Refer to tractor operator's manual for tread setting and steering stop adjustment procedures.
2. Lubricate all grease fittings with SAE multipurpose grease.
3. Check hydraulic fluid level in tractor. Fill to recommended level, using oil specified in tractor operators manual.

## ATTACHING BUCKET TO LOADER (Figure 9)



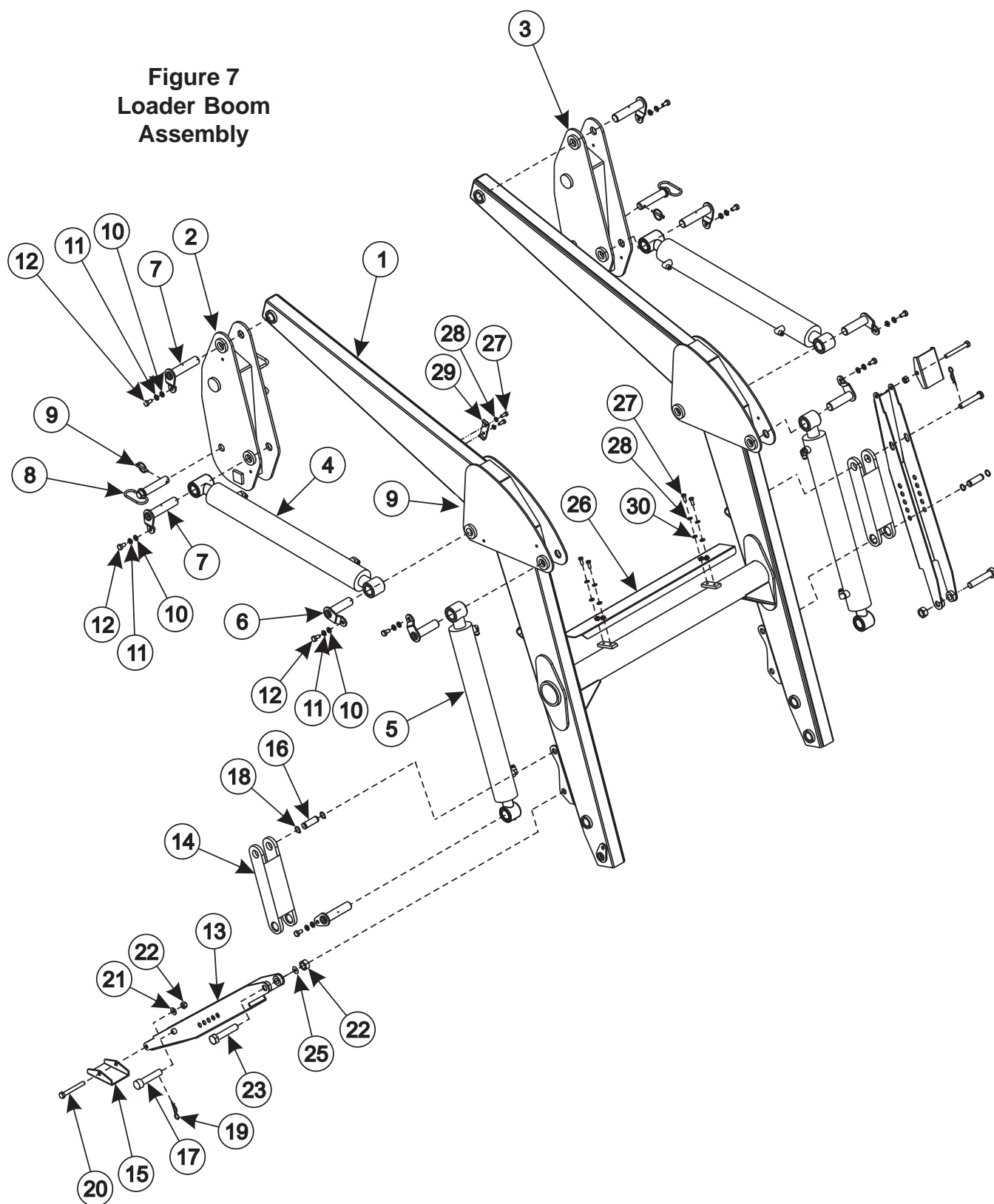
**WARNING:** To avoid injury during installation of bucket, do not allow bystanders within 10 feet of loader and bucket.

1. Locate tractor and bucket on level ground. Lower boom to the ground and extend the bucket cylinders slightly while raising the boom to provide 3" to 5" of ground clearance. Drive tractor forward to the bucket, aligning the loader's quick attach device with the pockets on the back of the bucket.
2. While driving forward slowly to maintain contact with the bucket, lift the bucket and tilt it back until the loader's quick attach device is seated in the bucket pockets. (See Figure 9)
3. Shut off tractor engine, set park brake. Move the bucket latching handles on the loader's quick attach device down to the latch position.
4. Start tractor and activate lift cylinders to raise bucket one or two feet. Tilt the bucket downward so that the latching mechanism is visible and inspect to make sure the pins are engaged through the latch plate on the back of the bucket. Lower the bucket to the ground and back up slowly with slight downward pressure on the bucket to make sure it remains attached.
5. Before finally tightening all mounting hardware, retract the bucket so the bottom is level with the ground and lower the bucket to the ground to apply downward pressure until the load is taken off the tractor's front tires.

## PARTS LIST - LOADER

ITEM	PART NO.	DESCRIPTION	QTY.
1	54053	WDMT,LOADER BOOM	1
2	54054	WDMT,RH SIDE FRAME	1
3	54055	WDMT,LH SIDE FRAME	1
4	54094	ASY, HYDRAULIC BOOM CYLINDER	2
5	54096	ASY, HYDRAULIC BUCKET CYLINDER	2
6	54124	PIN	4
7	54125	PIN	4
8	54126	PIN-LEVER	2
9	54123	PIN, LINK	2
10	701512C	FLATWASHER, M10	8
11	00755954	LOCKWASHER M10	8
12	49040-25	HHCS 10mm-P1.5- 20mm PL10	8
13	54063	STAND	2
14	54064	BRACKET, STAND	2
15	64065	BRACKET	2
16	54128	PIN	2
17	54129	PIN	2
18	54122	RING, SNAP	4
19	54127	PIN, R	2
20	49040-26	HHCS 12mm-P1.75-90mm PL10	2
21	701513C	FLATWASHER, M12	2
22	54134-1	NUT,LK MET 12mm-1.75 PL10.9	2
23	49040-37	HHCS M20-P2.5x90mm PL10.9	2
24	2971157	FLATWASHER, 20mm	2
25	54134-3	NUT,LOCK MET 20mm-2.5 PL10.9	2
26	54186	COVER	1
27	49040-34	HHCS, 8mm-1.25mmx25 GR8 ZP	6
28	701611C	LOCKWASHER, M8	6
29	54073	COVER	1
30	701511C	FLATWASHER, M8	4

**Figure 7  
Loader Boom  
Assembly**

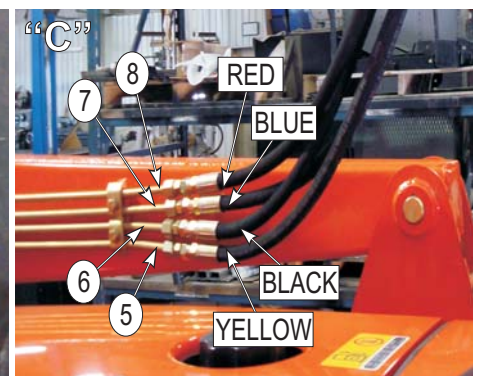
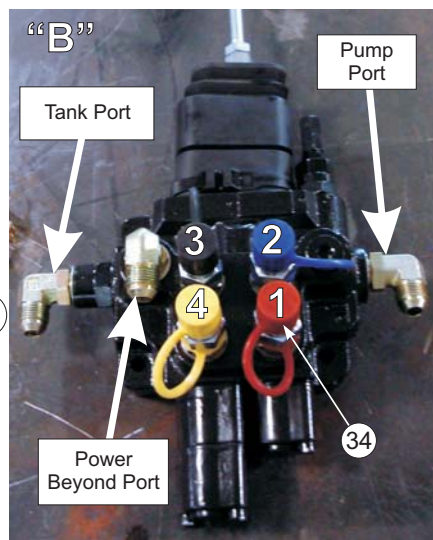
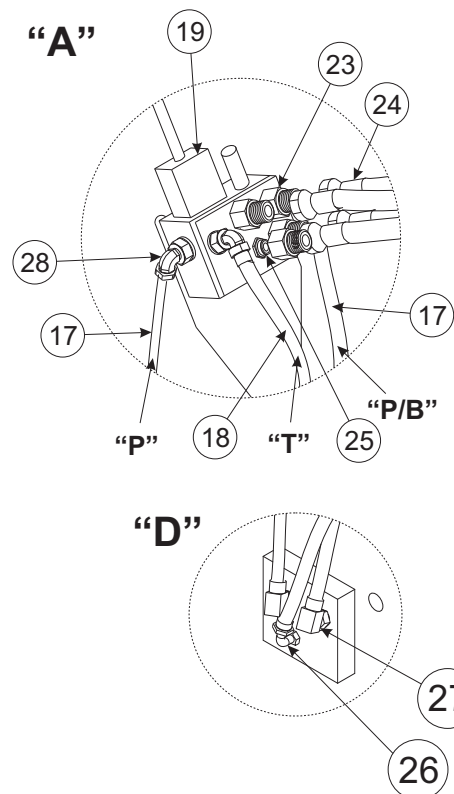
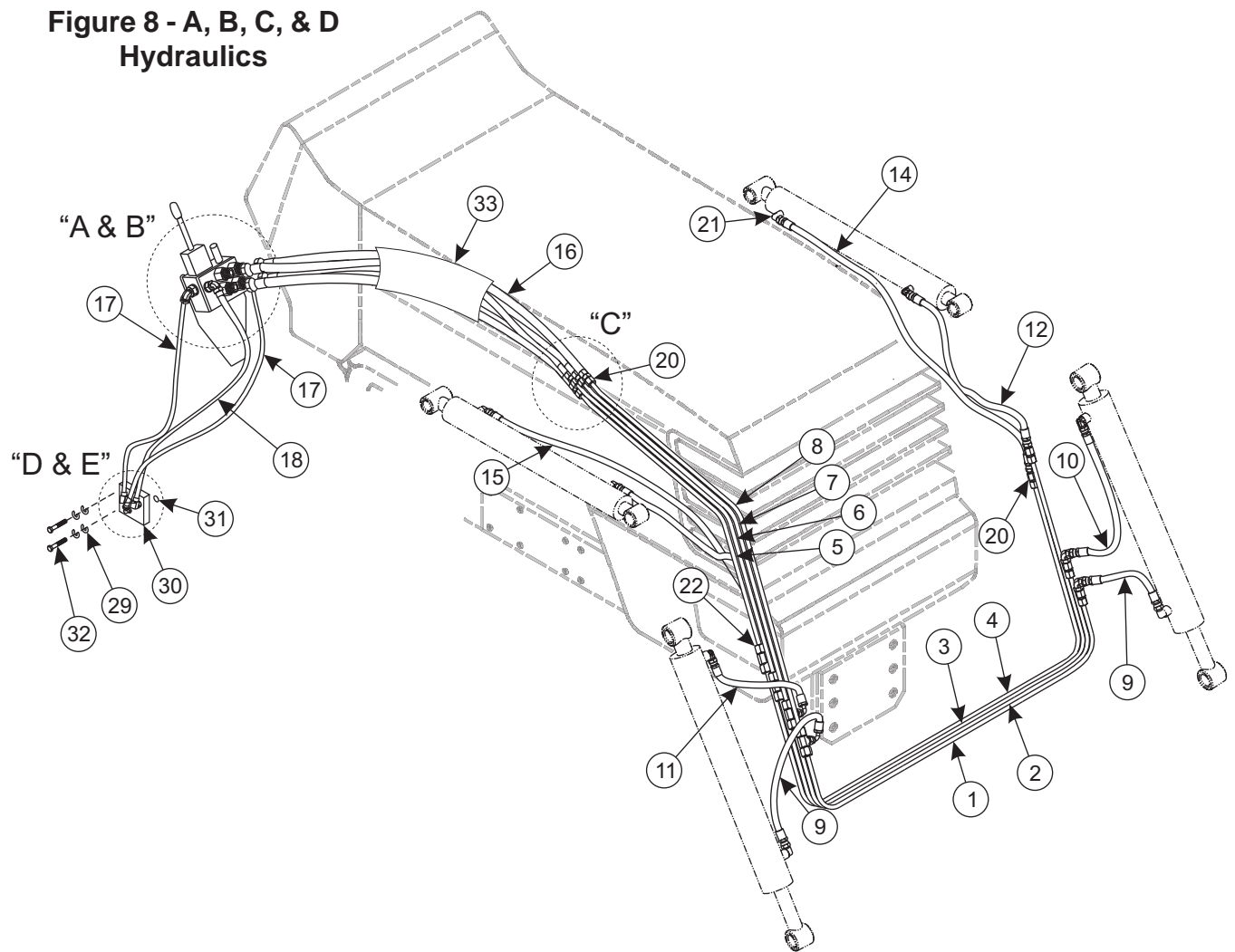


## PARTS LIST - HYDRAULICS

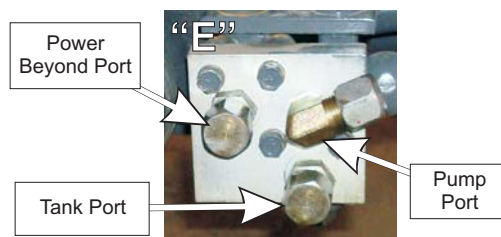
ITEM	SMC NO.	DESCRIPTION	QTY.
1	54076	TUBE, HYDRAULIC LINE	1
2	54077	TUBE, HYDRAULIC LINE	1
3	54078	TUBE, HYDRAULIC LINE	1
4	54079	TUBE, HYDRAULIC LINE	1
5	54080	TUBE, HYDRAULIC LINE	1
6	54081	TUBE, HYDRAULIC LINE	1
7	54082	TUBE, HYDRAULIC LINE	1
8	54083	TUBE, HYDRAULIC LINE	1
9	54092	ASY, HYDRAULIC HOSE, 5/16"x17"	2
10	54091	ASY, HYDRAULIC HOSE, 5/16"x13-1/2"	1
11	54088	ASY, HYDRAULIC HOSE, 5/16"x12-3/4"	1
12	54086	ASY, HYDRAULIC HOSE, 5/16"x14-3/4"	1
13	54089	ASY, HYDRAULIC HOSE, 5/16"x13-3/4"	1
14	54090	ASY, HYDRAULIC HOSE, 5/16"x31-1/2"	1
15	54087	ASY, HYDRAULIC HOSE, 5/16"x31-1/2"	1
16	54093	ASY, HYDRAULIC HOSE, 3/8"x49-1/2"	1
17	54085	ASY, HYDRAULIC HOSE	2
18	54084	ASY, HYDRAULIC HOSE	4
19	54116	VALVE, CONTROL	1
20	54113	ADAPTER, HYD. 6MJ	8
21	54112	ADAPTER, HYD. ELBOW	8
22	54114	ADAPTER, HYD. TEE - 6J	4
23	54118	COUPLER, MALE QUICK	4
24	54196	COUPLER, FEMALE QUICK	4
25	54110	ADAPTER, HYD.	4
26	54074	NIPPLE	2
27	54112	ADAPTER, HYD. ELBOW	1
28	54111	ADAPTER, HYD. ELBOW	3
29	701611C	LOCKWASHER, M8	4
30	54115	BLOCK, HYDRAULIC	1
31	54182	O-RING	2
32	49040-24	HHCS M8-P1.25 - 90mm (L3130, L3430, & L830)	4
	49040-56	HHCS M8-P1.25 - 35mm (L4440)	4
33		SLEEVE	1
34		DUST CAPS, MALE	4
35		DUST PLUGS, FEMALE	4



**Figure 8 - A, B, C, & D  
Hydraulics**



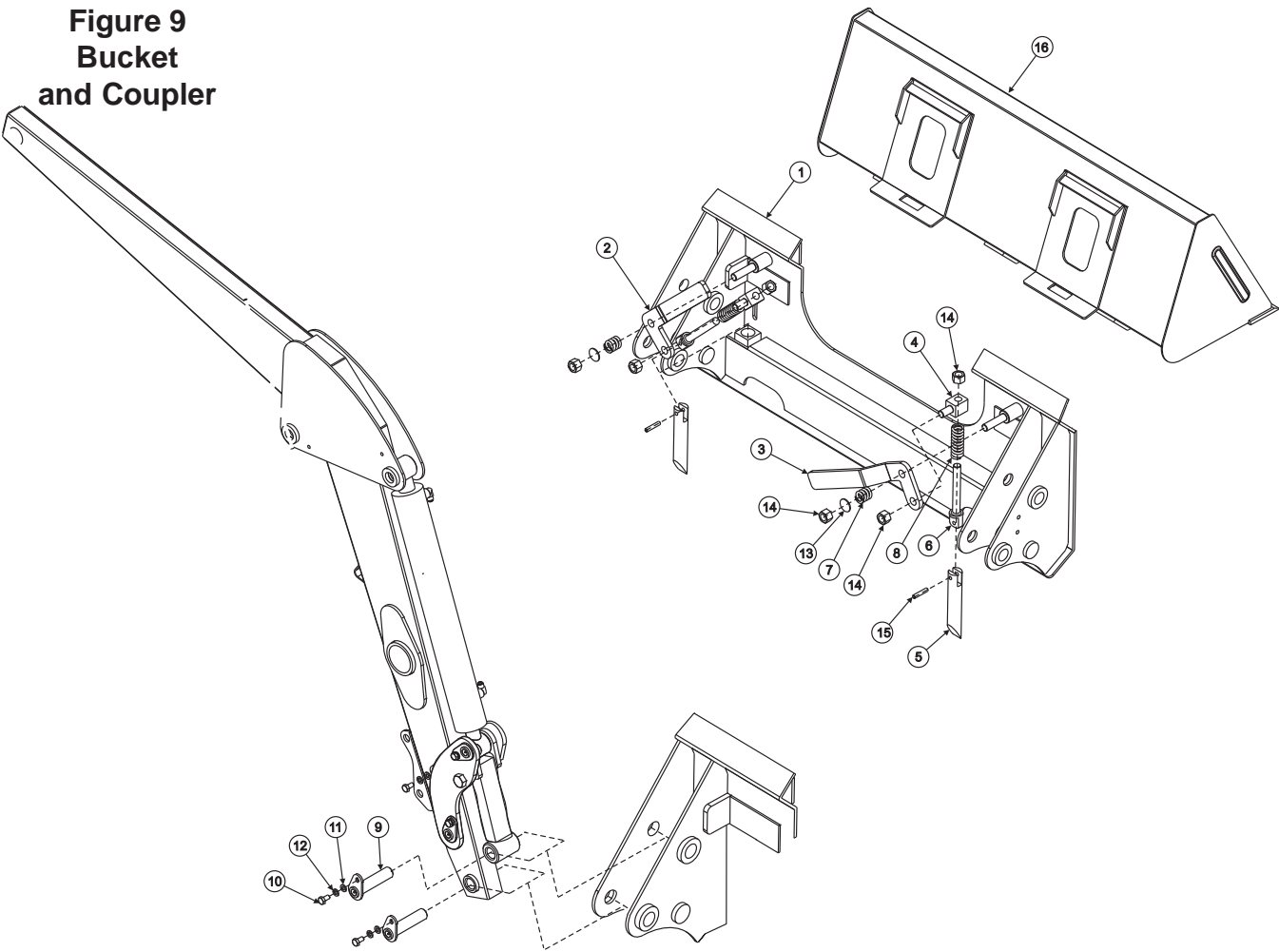
1. RED, 3/8" x 26" (Tilt Cylinder Rod end)
2. BLUE, 3/8" x 26" (Tilt Cylinder Butt end)
3. BLACK, 3/8" x 26" (Lift Cylinder Rod end)
4. YELLOW, 3/8" x 26" (Lift Cylinder Butt end)



**PARTS LIST - Coupler & Bucket**

<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1	54069	WDMT, COUPLER	1
2	54072	LEVER, LH QH	1
3	54071	LEVER, RH QH	1
4	54130	PIN, 30mm DIAx30mm L	2
5	54131	PIN, 30mm DIA	2
6	54132	PIN, 30mm DIA	2
7	54119	SPRING, 5mm DIA	2
8	54120	SPRING, 4.55mm DIA	2
9	54125	PIN	4
10	48856-4	HHCS 10mm-P1.5-20mm PL10	4
11	701512C	FLATWASHER, M10	4
12	00755954	LOCKWASHER M10	4
13	701515C	FLATWASHER, M16	2
14	54134-2	NUT, LOCK MET 16mm-2.0 PL10.9	6
15	54121	PIN, SPRING	2
16	54068	WDMT, BUCKET	1

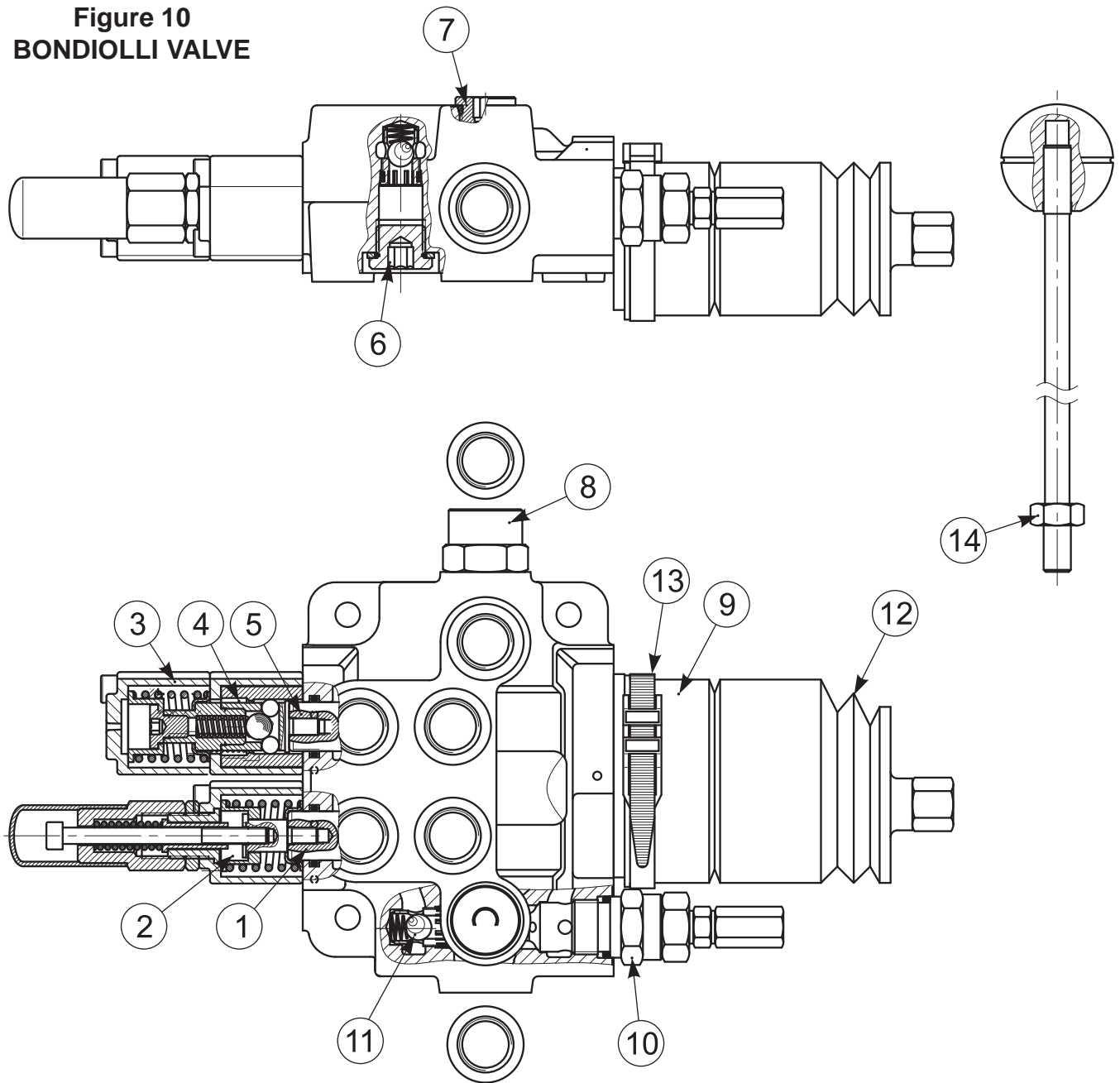
**Figure 9**  
**Bucket**  
**and Coupler**



**PARTS LIST - Bondioli Valve**

ITEM	PART NO.	DESCRIPTION	QTY.
1	54618	SPOOL ASSEMBLY	1
2	54619	SPOOL CONTROL T17	1
3	54620	SPOOL CONTROL HOUSING	1
4	54621	SPOOL CONTROL N70	1
5	54622	SPOOL ASSEMBLY	1
6	54623	PLUG, M18-1.5	1
7	54624	PLUG, 3/4-16	1
8	54625	SLEEVE, POWER BEYOND	1
9	54574	KIT, JOYSTICK	1
10	54627	RELIEF VALVE, 170 bar	1
11	54628	CHECK VALVE	2
12	54630	RUBBER BOOT, JOYSTICK	1
13	54631	CABLE TIE	1
14	54617	LEVER, JOYSTICK	1
15	54629	SEAL KIT, VALVE	1

**Figure 10**  
**BONDIOLLI VALVE**











## GENERAL TORQUE SPECIFICATIONS

USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

### Standard American and Metric Cap Screws

AMERICAN STANDARD CAP SCREWS									METRIC CAP SCREWS								
SAE Grade	5				8				Metric Class	8.8				10.9			
Typ. Head Markings									Typ. Head Markings	 				 			
Cap Screw	TORQUE				TORQUE				Cap Screw	TORQUE				TORQUE			
Size	FT-LBS		N-m		FT-LBS		N-m		Size	FT-LBS		N-m		FT-LBS		N-m	
Inches	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	Millimeters	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
1/4 - 20	6.25	7.25	8.5	10	8.25	9.5	11	13	M6 x 1.00	6	8	8	11	9	11	12	15
1/4 - 28	8	9	11	12	10.5	12	14	16	M8 x 1.25	16	20	21.5	27	23	27	31	36.5
5/16 - 18	14	15	19	20	18.5	20	25	27	M10 x 1.50	29	35	39	47	42	52	57	70
5/16 - 24	17.5	19	23	26	23	25	31	34	M12 x 1.75	52	62	70	84	75	91	102	123
3/8 - 16	26	28	35	38	35	37	47.5	50	M14 x 2.00	85	103	115	139	120	146	163	198
3/8 - 24	31	34	42	46	41	45	55.5	61	M16 x 2.50	130	158	176	214	176	216	238	293
7/16 - 14	41	45	55.5	61	55	60	74.5	81	M18 x 2.50	172	210	233	284	240	294	325	398
7/16 - 20	51	55	69	74.5	68	75	92	102	M20 x 2.50	247	301	335	408	343	426	465	577
1/2 - 13	65	72	88	97.5	86	96	116	130	M22 x 2.50	332	404	450	547	472	576	639	780
1/2 - 20	76	84	103	114	102	112	138	152	M24 x 3.00	423	517	573	700	599	732	812	992
9/16 - 12	95	105	129	142	127	140	172	190	M27 x 3.00	637	779	863	1055	898	1098	1217	1488
9/16 - 18	111	123	150	167	148	164	200	222	M30 x 3.00	872	1066	1181	1444	1224	1496	1658	2027
5/8 - 11	126	139	171	188	168	185	228	251	<b>NOTE:</b> These values apply to fasteners as received from supplier, dry or when lubricated with normal engine oil. They do not apply if special graphite or molysulphide greases or other extreme lubricants are used.								
5/8 - 18	152	168	206	228	203	224	275	304									
3/4 - 10	238	262	322	355	318	350	431	474									
3/4 - 16	274	305	371	409	365	402	495	544									
7/8 - 9	350	386	474	523	466	515	631	698									
7/8 - 14	407	448	551	607	543	597	736	809									
1 - 8	537	592	728	802	716	790	970	1070									
1 - 14	670	740	908	1003	894	987	1211	1337									

### 37° JIC Fittings

Size	Thread Size	Assembly Torque		Tube Connection F. F. F. T.	Swivel Nut or Hose Connection F. F. F. T.
		in.·lb.	ft.·lb.		
-4	7/16 - 20	140 ± 10	12 ± 1	2	2
-5	1/2 - 20	180 ± 15	15 ± 1	2	2
-6	9/16 - 18	250 ± 15	21 ± 1	1 1/2	1 1/4
-8	3/4 - 16	550 ± 25	45 ± 5	1 1/2	1
-12	1 1/16 - 12	1000 ± 50	85 ± 5	1 1/4	1
-16	1 5/16 - 12	1450 ± 50	120 ± 5	1	1
-20	1 5/8 - 12	2000 ± 100	170 ± 10	1	1
-24	1 7/8 - 12	2400 ± 150	200 ± 15	1	1
-32	2 1/2 - 12	3200 ± 200	270 ± 20	1	1

### O-Ring Face Seal Tube/ Hose Swivel Nut

Metric Tube O.D. (mm)	Dash Size	Thread Size (in.)	Swivel Nut Hex Size (in.)	Swivel Nut Torque	
				N·m	lb·ft
5	-3	--	--	--	--
6	-4	9/16 - 18	11/16	16	12
8	-5	--	--	--	--
10	-6	11/16 - 16	13/16	24	18
12	-8	13/16 - 16	15/16	50	37
16	-10	1 - 14	1-1/8	69	51
20	-12	1-3/16 - 12	1-3/8	102	75
22	-14	1-3/16 - 12	--	102	75
25	-16	1-7/16 - 12	1-5/8	142	105
32	-20	1-11/16 - 12	1-7/8	190	140
38	-24	2 - 12	2-1/4	217	160
50.8	-32	--	--	--	--

### SAE O-Ring Fittings

Size	Swivel Nut or Hose	Assembly Torque		F. F. F. T.
		in.·lb.	ft.·lb.	
2	5/16 - 24	90 ± 5	7.5 ± 0.5	1 ± .25
3	3/8 - 24	170 ± 10	14 ± 1	1 ± .25
4	7/16 - 20	220 ± 15	18 ± 1	1 ± .25
5	1/2 - 20	260 ± 15	22 ± 1	1 ± .25
6	9/16 - 18	320 ± 20	27 ± 2	1.5 ± .25
8	3/4 - 16	570 ± 25	48 ± 2	1.5 ± .25
10	7/8 - 14	1060 ± 50	90 ± 5	1.5 ± .25
12	1 1/16 - 12	1300 ± 50	110 ± 5	1.5 ± .25
14	1 3/16 - 12	1750 ± 75	145 ± 6	1.5 ± .25
16	1 5/16 - 12	1920 ± 125	160 ± 6	1.5 ± .25
20	1 5/8 - 12	2700 ± 150	225 ± 12	1.5 ± .25
24	1 7/8 - 12	3000 ± 150	250 ± 12	1.5 ± .25
32	2 1/2 - 12	3900 ± 200	325 ± 15	1.5 ± .25

# INSTALLATION INSTRUCTIONS