WSM

WORKSHOP MANUAL

FRONT LOADER

LA1403EC

Kubota

KiSC issued 07, 2008 A

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SERVICING

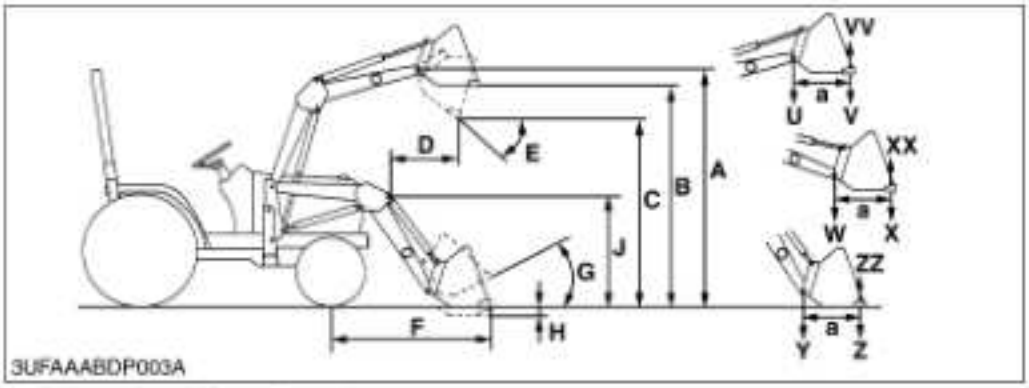
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[3] DIMENSIONAL AND OPERATIONAL SPECIFICATIONS



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■ Dimensional Specifications

Loader Model		LA1403EC	
Tractor Model		M108S-EC	
Boom Cylinder Fulcrum Point		HEIGHT	POWER
(A)	Maximum lift height to pivot pin	3700 mm (145.7 in.)	3370 mm (132.7 in.)
(B)	Maximum lift height under level bucket	3470 mm (136.6 in.)	3160 mm (124.4 in.)
(C)	Clearance with bucket dumped	2860 mm (112.6 in.)	2490 mm (98.0 in.)
(D)	Reach at maximum lift height (Dumping Reach)	590 mm (23.2 in.)	975 mm (38.4 in.)
(E)	Maximum dump angle	0.91 rad (52 °)	1.1 rad (63 °)
(F)	Reach with bucket on ground	2230 mm (87.8 in.)	
(G)	Bucket roll-back angle	0.70 rad (40 °)	
(H)	Digging depth	60 mm (2.4 in.)	65 mm (2.6 in.)
(J)	Overall height in carry position	1700 mm (66.9 in.)	
(a)	Length	800 mm (31.5 in.)	

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■ Operational Specifications

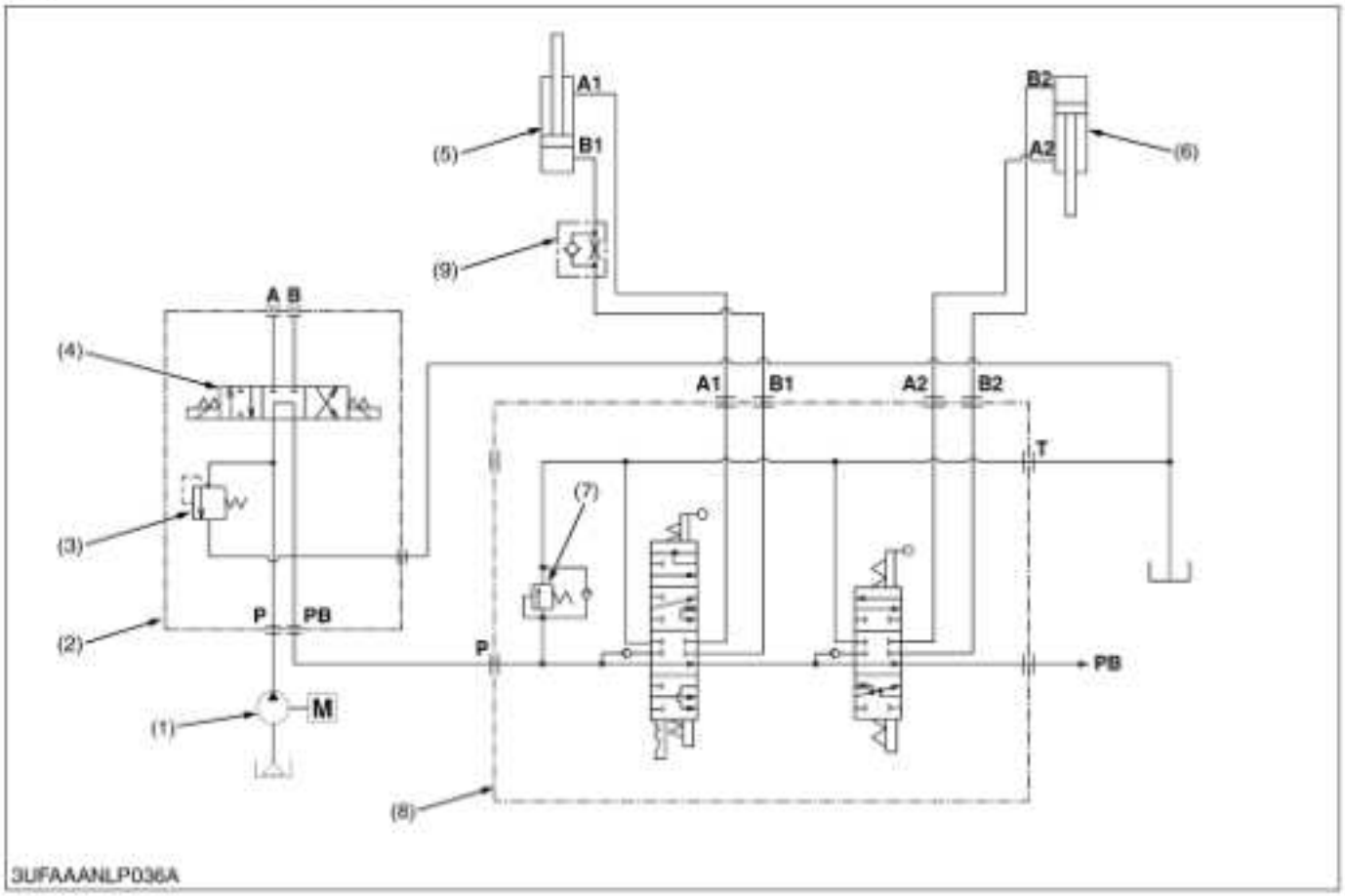
Loader Model		LA1403EC	
Tractor Model		M108S-EC	
Boom Cylinder Fulcrum Point		HEIGHT	POWER
Lift capacity (Bucket bottom mid point)		1350 kg (2976 lbs)	1400 kg (3086 lbs)
(U)	Lift capacity (Bucket pivot pin, max. height)	1895 kg (4178 lbs)	1950 kg (4299 lbs)
(V)	Lift capacity (800 mm forward, max. height)	1210 kg (2668 lbs)	1350 kg (2976 lbs)
(W)	Lift capacity (Bucket pivot pin, 1500 mm height)	2125 kg (4685 lbs)	2380 kg (5247 lbs)
(X)	Lift capacity (800 mm forward, 1500 mm height)	1575 kg (3472 lbs)	1840 kg (4057 lbs)
(Y)	Breakout force (Bucket pivot pin)	24860 N (5589 lbf)	29250 N (6576 lbf)
(Z)	Breakout force (800 mm forward)	17190 N (3864 lbf)	22200 N (4991 lbf)
(VV)	Bucket roll-back force at maxumum height	13720 N (3084 lbf)	16080 N (3615 lbf)
(XX)	Bucket roll-back force at 1.5 m (59 in.)	25860 N (5814 lbf)	
(ZZ)	Bucket roll-back force at ground level	25810 N (5802 lbf)	
Raising time		4.7 sec.	
Lowering time		3.7 sec.	
Bucket dumping time		2.8 sec.	
Bucket roll-back time		2.9 sec.	

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4. 3RD FUNCTION VALVE (OPTION)

[1] HYDRAULIC CIRCUIT



(1) Hydraulic Pump
(2) 3rd Function Valve Assy.
(3) Relief Valve (3rd Function Valve)
(4) 3rd Function Solenoid Valve
(5) Boom Cylinder
(6) Bucket Cylinder
(7) Relief Valve (Main)
(8) Front Loader Valve
(9) Orifice (Standard Valve Only)

P : Pump Port
PB : Power Beyond Port
T : Tank Port

A : A Port
A1 : A1 Port
A2 : A2 Port
B : B Port
B1 : B1 Port
B2 : B2 Port

If 3rd function valve assy. (2) is equipped, oil can be controlled to operate another implement.

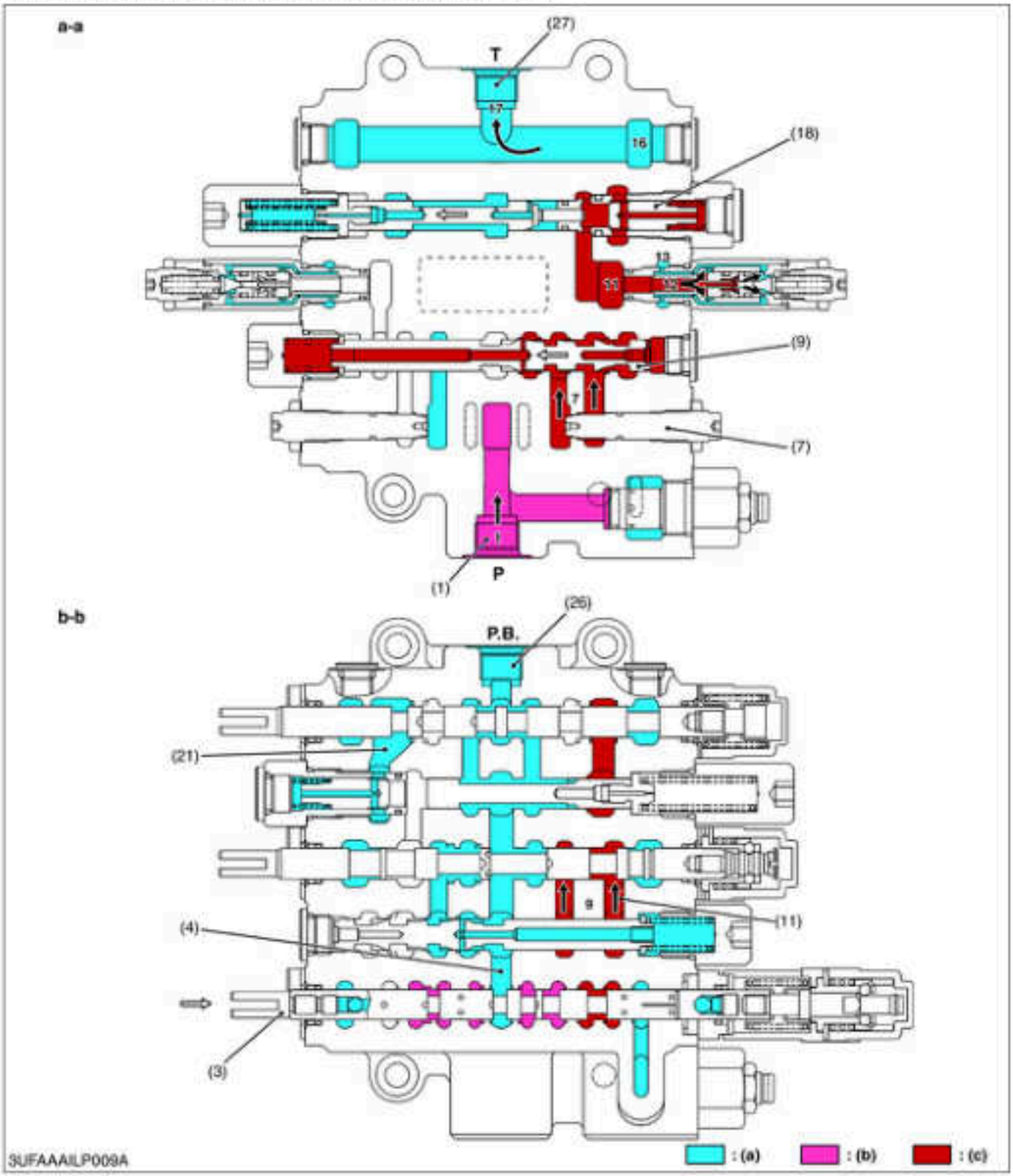
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1. TROUBLESHOOTING

Symptom	Probable Cause	Solution	Reference Page
Boom Does Not Rise	Control valve malfunctioning	Repair or replace	S-13
	Boom cylinder defective	Repair or replace	S-21
	Control lever cable defective	Repair or replace	S-19
	Hydraulic pump malfunctioning	Repair or replace	–
	Oil filter clogged	Clean or replace	–
	Relief valve spring damaged	Replace	S-6
	Hydraulic hose damaged	Replace	S-21
	Relief valve dirty or stuck	Clean	S-6
Boom Does Not Lower	Control valve malfunctioning	Repair or replace	S-13
Insufficient Boom Speed	Boom cylinder tube worn or damaged	Replace	S-21
	Boom cylinder piston ring (piston seal and O-ring) worn or damaged	Replace	S-23
	Oil leaks from tube joints	Repair	–
	Relief valve setting pressure too low	Adjust	S-6
	Insufficient transmission fluid	Refill	G-8
	Dirty relief valve	Clean	S-6
Bucket Does Not Move	Control valve malfunctioning	Repair or replace	S-13
	Bucket cylinder defective	Repair or replace	S-21
	Control lever cable defective	Repair or replace	S-19
	Hydraulic pump malfunctioning	Repair or replace	–
	Oil filter clogged	Clean or replace	–
	Relief valve spring damaged	Replace	S-6
	Hydraulic hose damaged	Replace	S-21
	Dirty relief valve	Clean	S-6
Insufficient Bucket Speed	Bucket cylinder tube worn or damaged	Replace	S-21
	Bucket cylinder piston ring (piston seal and O-ring) worn or damaged	Replace	S-23
	Oil leaks from tube joints	Repair	–
	Relief valve setting pressure too low	Adjust	S-6
	Insufficient transmission fluid	Refill	G-8
	Dirty relief valve	Clean	S-6
Front End Loader Drops by its Weight	Boom cylinder tube worn or damaged	Replace	S-21
	Boom cylinder piston ring (piston seal and O-ring) worn or damaged	Replace	S-23
	Oil leaks from tube joints	Repair	–
	Control valve malfunctioning	Repair or replace	S-13

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■ Boom Raising with Bucket Cylinder Extended (Figure 2)



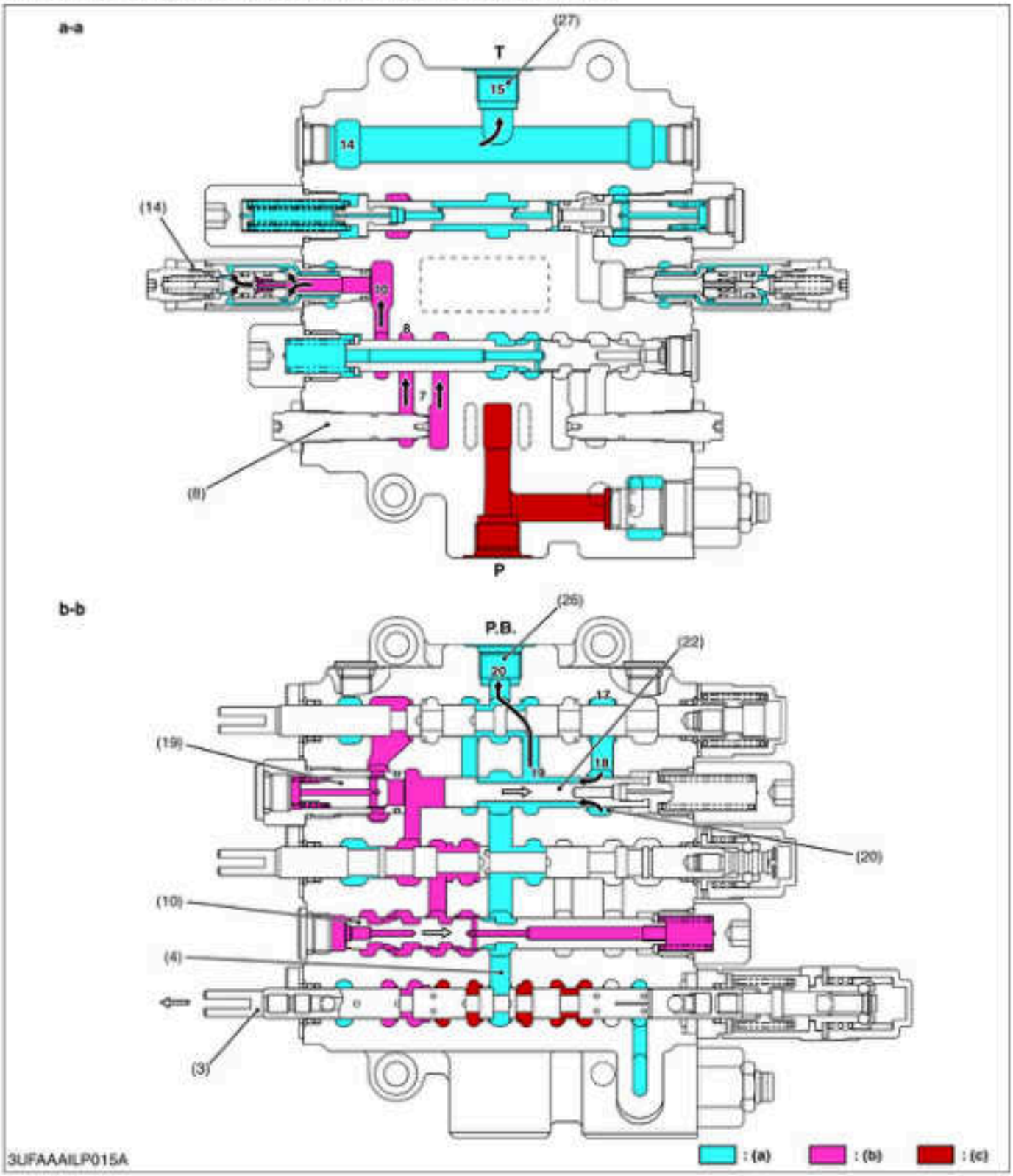
(1) P Port
(3) Boom Spool
(4) Center By-pass Passage
(7) Raising Adjuster
(9) Raising Divider Spool
(11) Passage C
(18) Check Valve
(21) Passage H
(26) P.B. Port
(27) T Port

P : P Port (Pump Port)
T : T Port (Tank Port)
P.B. : P.B. Port (Power Beyond Port)
1 to 17 : Oil Flow

a-a : Section a-a
b-b : Section b-b
(a) Low Pressure
(b) Middle Pressure
(c) High Pressure

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■ Boom Lowering with Bucket Cylinder Fully Retracted (Figure 2)



(3) Boom Spool
(4) Center By-pass Passage
(8) Lowering Adjuster
(10) Lowering Divider Spool
(19) Check Valve
(20) Passage G
(22) Lowering Sequence Spool
(26) P.B. Port
(27) T Port
P : P Port (Pump Port)
T : T Port (Tank Port)
P.B.: P.B. Port (Power Beyond Port)
1 to 20 : Oil Flow
a-a : Section a-a
b-b : Section b-b
(a) Low Pressure
(b) Middle Pressure
(c) High Pressure

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