

Keep With Operator's Manual

BACKHOE SUBFRAME KIT RHINO 60C & SMC 65 BACKHOE KUBOTA B7300 & B7500 TRACTORS

Reference to left and right used in this installation instruction sheet refer to position when seated in the operating position on backhoe.

Complete backhoe mounting requires subframe channel kit 2-6565. Tractor must be equipped with KUBOTA or SMC Loader.

IMPORTANT: Remove lynch pins and disconnect supports to disable 3-point hitch arms.

NOTE: Leave all attaching hardware loose until mounting kit is completely assembled to facilitate assembly and proper alignment unless otherwise instructed. Tighten all hardware to torque specifications in operator's manual.

INSTALLING MOUNTING BRACKETS (Figure 3)

1. Install front mounting bracket (3) to underside of transmission casting using 12mm x 50mm cap screws (6), 1/2 flat washers (11), 12mm x 45mm cap screws (7) and 1/2 lock washers (10).
2. Install rear mounting bracket (1) and plate (2) to rear of tractor rear of tractor using 12mm x 45mm cap screws (7) and 1/2 lock washers (10). Fasten plate (2) to rear mounting bracket (1) using 1/2 x 1-1/2 cap screws (8) and 1/2 lock nuts (12).

INSTALLING SUBFRAME (Figure 3)

1. Install front and rear crosstubes (4 & 5) to channels (20 & 21) using 1/2 x 1-1/4 cap screws (9) and 1/2 lock nuts (12).

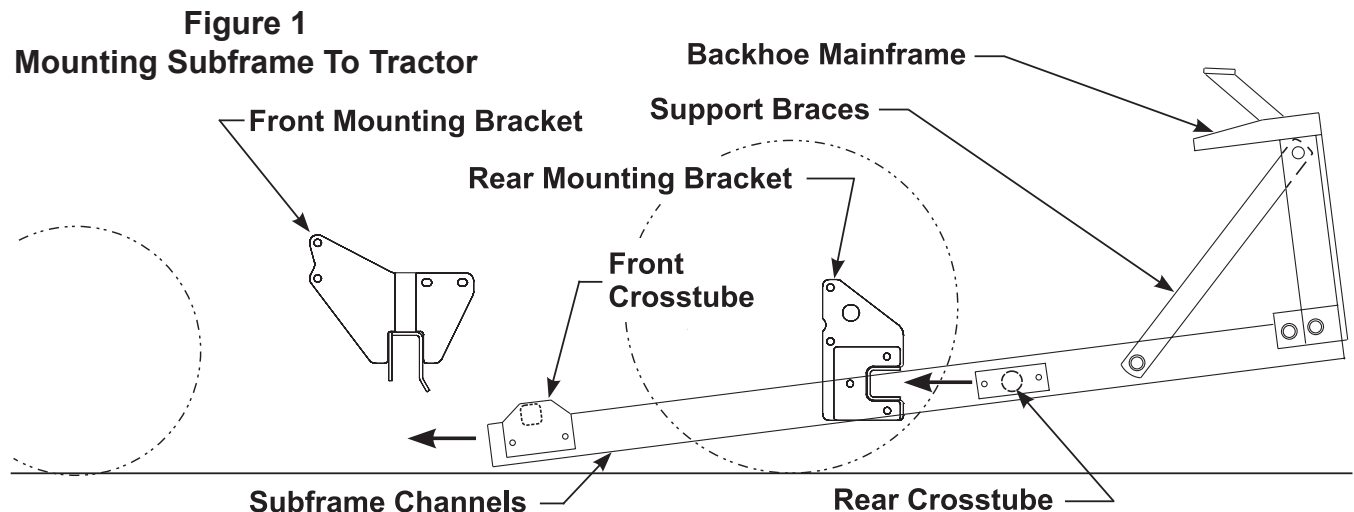
NOTE: Install front and rear crosstubes (4 & 5) in forward most set of holes in subframe channels (20 & 21).

2. Install subframe assembly to backhoe mainframe using 7/8 x 4 cap screws (14), 7/8 lock washers (16) and 7/8 nuts (15) in rear holes and 3/4 x 3-1/2 cap screws (13) and 3/4 lock nuts (17) in front holes.
3. Install support brackets (22) onto subframe using 3/4 x 2-3/4 cap screws (23) and 3/4 lock nuts (24) in channels (20 & 21) on backhoe mainframe.

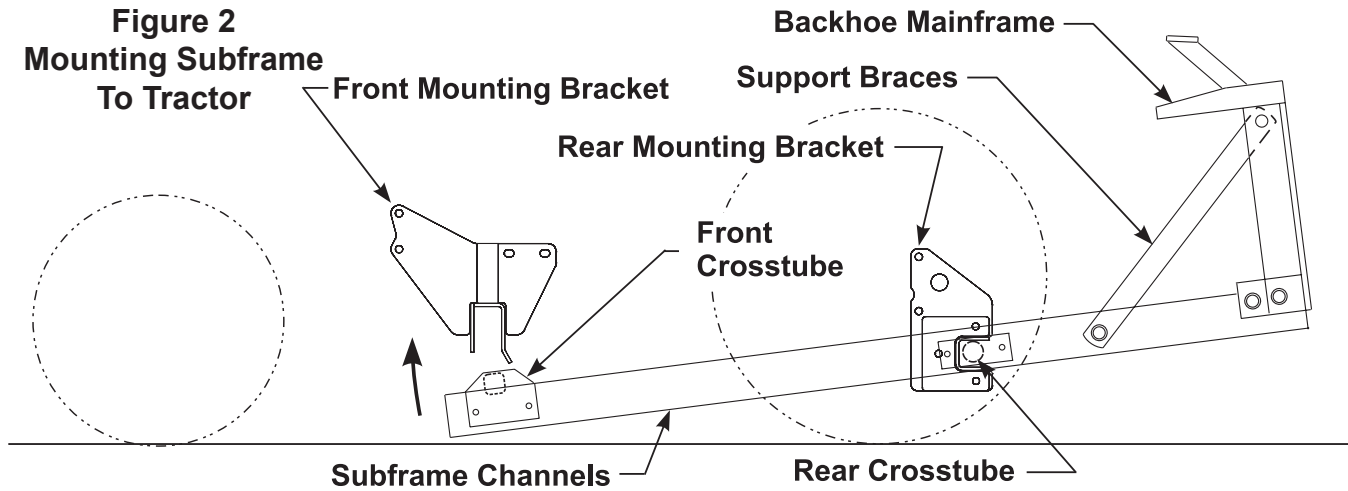
60C ONLY: Use support braces 55882 (25) and 55883 (26).

MOUNTING BACKHOE TO TRACTOR

1. Back tractor over subframe close enough to connect to backhoe hydraulic system.
2. Using backhoe hydraulic controls, extend stabilizer cylinders and boom cylinder until rear crosstube (5) is level with rear mounting bracket (1) and front of subframe is on ground (Figure 1).
3. Slowly back tractor until rear crosstube (5) is seated in rear mounting bracket (1).
4. Retract boom cylinder and stabilizer cylinders so front of subframe swings up until front crosstube (4) is seated in front mounting bracket (3) (See Figure 2).
5. Secure front crosstube in place using pins (18) and lynch pins (19).



**Figure 2
Mounting Subframe
To Tractor**



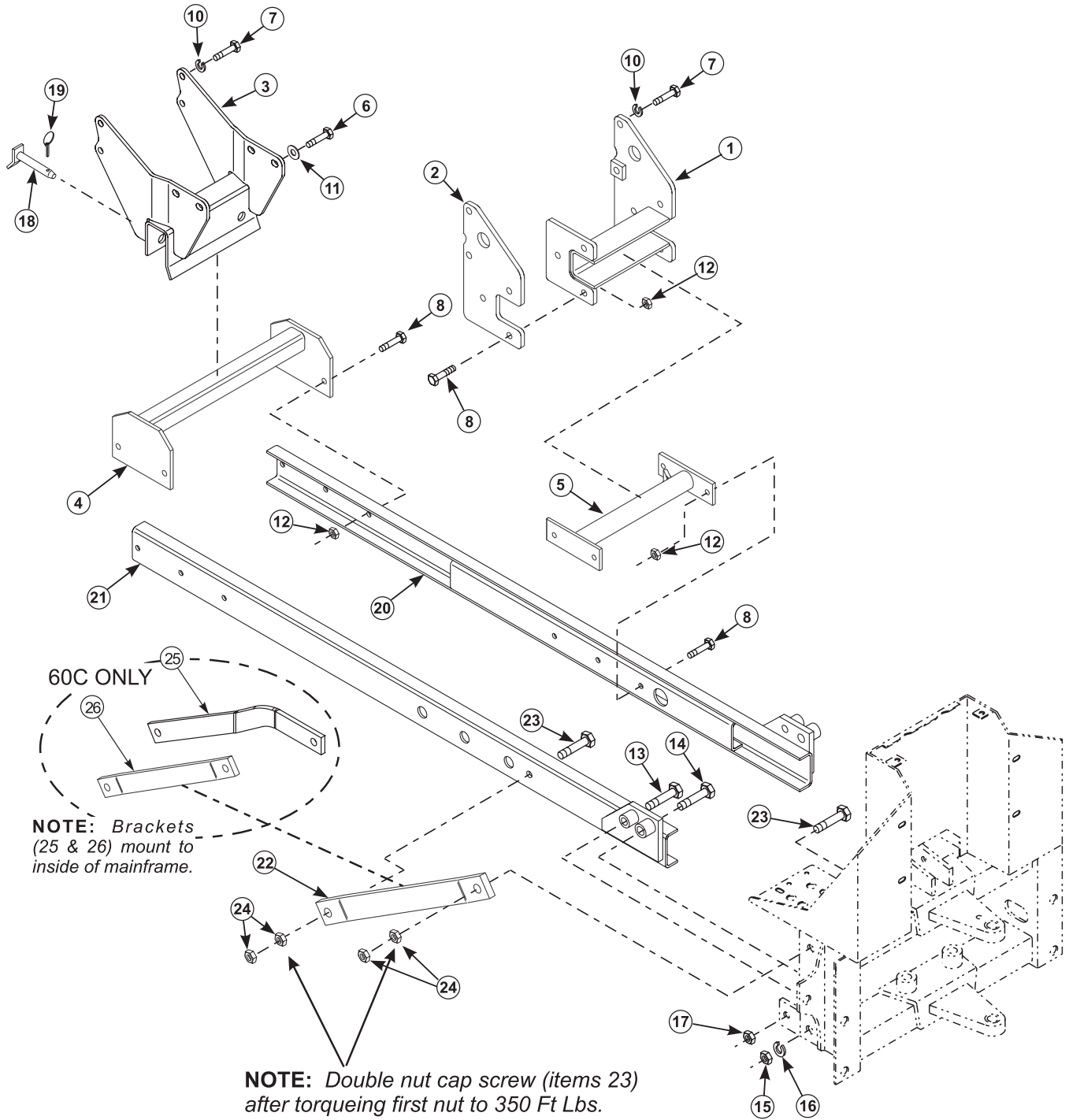
PARTS LIST - BACKHOE SUBFRAME KIT

Item	Part No.	Description	Qty.
1	48556	MOUNTING BRACKET ASSEMBLY, Rear	1
2	48561	MOUNTING BRACKET ASSEMBLY, Rear, Plate	1
3	48562	MOUNTING BRACKET ASSEMBLY, Front	1
4	48565	CROSSTUBE ASSEMBLY, Front	1
5	48569	CROSSTUBE ASSEMBLY, Rear	1
6	6090-17	SCREW, Cap, 12mm-1.25 x 50mm, Class 8.8	4
7	6090-10	SCREW, Cap, 12mm-1.75 x 45mm, Class 8.8	8
8	G180177	SCREW, Cap, 1/2-13 x 1-1/2	3
9	G180175	SCREW, Cap, 1/2-13 x 1-1/4	8
10	G120384	WASHER, Lock, 1/2	12
11	G120396	WASHER, Flat, 1/2	4
12	G9414074	NUT, Lock, 1/2-13	11
13	G271777	SCREW, Cap, 3/4-10 x 3-1/2	2
14	G271823	SCREW, Cap, 7/8-9 x 4	2
15	G220087	NUT, 7/8-9	2
16	G131047	WASHER, Lock, 7/8	2
17	G9414076	NUT, Lock, 3/4-10	2
18	46298	PIN ASSEMBLY	2
19	44756-1	LINCH PIN	2
25	55882	SUPPORT BRACE, Left	1
26	55883	SUPPORT BRACE, Right	1

PARTS LIST - SUBFRAME CHANNEL KIT - 2-6565 - Order Separately

ITEM	PART NO.	DESCRIPTION	QTY.
20	46289-1	CHANNEL ASSEMBLY, Left	1
21	46289-2	CHANNEL ASSEMBLY, Right	1
22	44836	SUPPORT BRACE	2
23	G221135	SCREW, Cap, 3/4-10 x 2-3/4, Grade 8	4
24	47264-8	NUT, Lock, 3/4-10	8

Figure 3
Backhoe Subframe Kit



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	<p>NOTE: 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 moly sulphide greases or other extreme lubricants are used.</p>									
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 _f ·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