

Keep With Operator's Manual

BACKHOE SUBFRAME KIT 60C, 75C & 85C BACKHOE JOHN DEERE TRACTORS

JOHN DEERE	FWA	ROPS	CAB
3120	X	X	X
3320	X	X	X
3520	X	X	X
3720	X	X	X

TRACTOR AND BACKHOE GENERAL INFORMATION

Subframe can be installed on tractor and backhoe using tools ordinarily available. Tractor must be equipped with loader for front ballast. Complete backhoe installation requires hose kit 2-7744 (tractor must have power beyond kit installed) or PTO pump kit 2-7599.



CAUTION: After backhoe is mounted onto tractor, three-point hitch arms must be disabled. Disable hitch by removing pins connecting link arm to lower three-point arms, swinging link arm to side and reinstalling pin to link arm. Lower three-point arms rest on backhoe subframe. Make sure there is clearance between backhoe swing cylinders and three-point arms. Failure to disable three-point arms could result in damage to backhoe if three-point hitch is raised.

Shut off tractor engine and set parking brakes while installing backhoe subframe, mounting kit, and hydraulics.

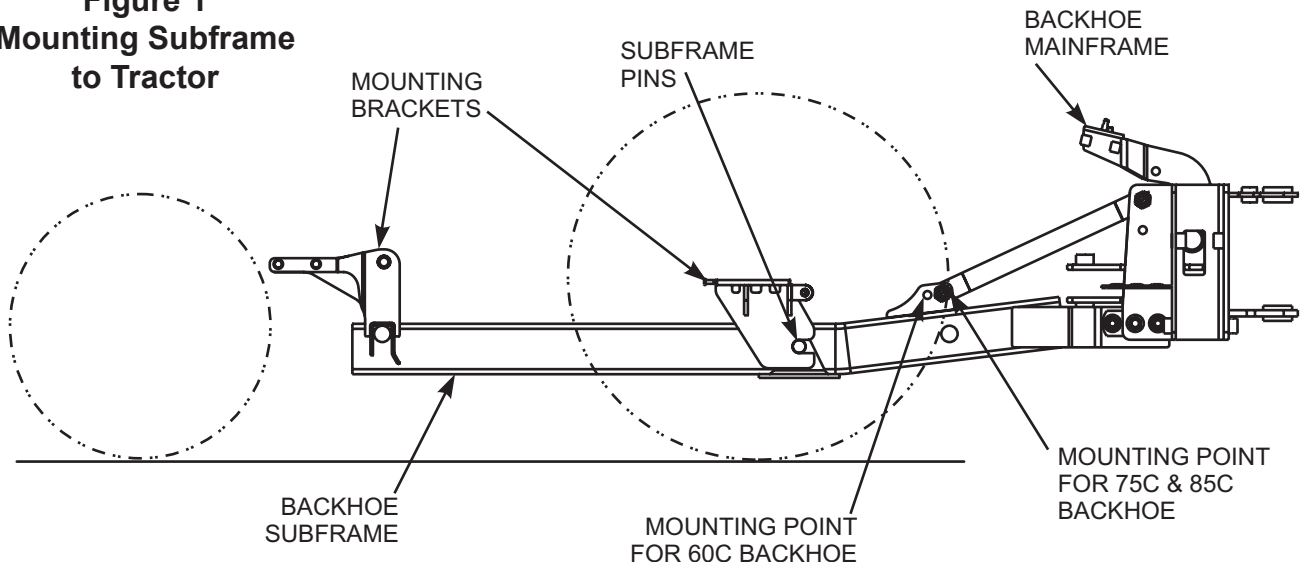
Read backhoe operator's manual and become familiar with backhoe controls before installing subframe.

Knowing how backhoe functions is necessary to attach subframe and backhoe to tractor.

INSTALLING SUBFRAME TO BACKHOE (Figure 2)

1. Install subframe (1) to backhoe using $\frac{3}{4}$ " x 4" cap screws (15) and $\frac{3}{4}$ " Spiral Lock nuts (17) in front and rear holes and $\frac{7}{8}$ " x 4-1/2" cap screws (16) and $\frac{7}{8}$ " Spiral Lock nuts (18) in middle holes.
2. Fasten support braces (6, or 7 & 8) to inside of subframe lug and inside of backhoe frame using $\frac{3}{4}$ " x 2-3/4" cap screws (14) and $\frac{3}{4}$ " lock nuts (19). Use mount bars (6) for 75C and 85C attached to the rear most hole on subframe lug and mount bars (7 & 8) for 60C attached to the front most hole on subframe lug. Torque to 350 ft lbs and install double nut (19).

Figure 1
Mounting Subframe to Tractor



INSTALLING MOUNTING BRACKETS (Figure 2)

1. Loosen oil line clamp on loader oil lines on right side of tractor under cab or platform. Slide clamp forward. Remove bolt and spacer on oil line bracket on left side of tractor under cab or platform. Keep spacer in event of subframe removal.
2. Position front hanger (4) under tractor with left arm placed between oil line bracket and tractor casting and slide mount tube (5) in between oil lines on right hand side of tractor. Insert tube (5) through front hanger (4), through tractor casting, and through front hanger (4) on the opposite side. Secure with 1- 1/4" machinery bushings (10) and cotter pins (9).
3. Rotate front hanger (4) as needed to secure with three M12-1.75 x 35mm cap screws (11), flat washers (12) and lock washers (13). Use original hardware on oil line bracket.
4. Reposition and tighten oil line clamp on oil lines on right hand side.
5. Remove 3-point hitch stabilizer brackets from under rear axle. Save hardware for later.

NOTE: Must detach springs on left hand side from 3-point hitch stabilizer bracket. Keep springs positioned to reinstall.

6. Fasten rear hanger brackets (2 & 3) to underside of tractor axle on each side. Use previously removed hardware. Reinstall 3-point stabilizer arms to rear hanger brackets (2 & 3).

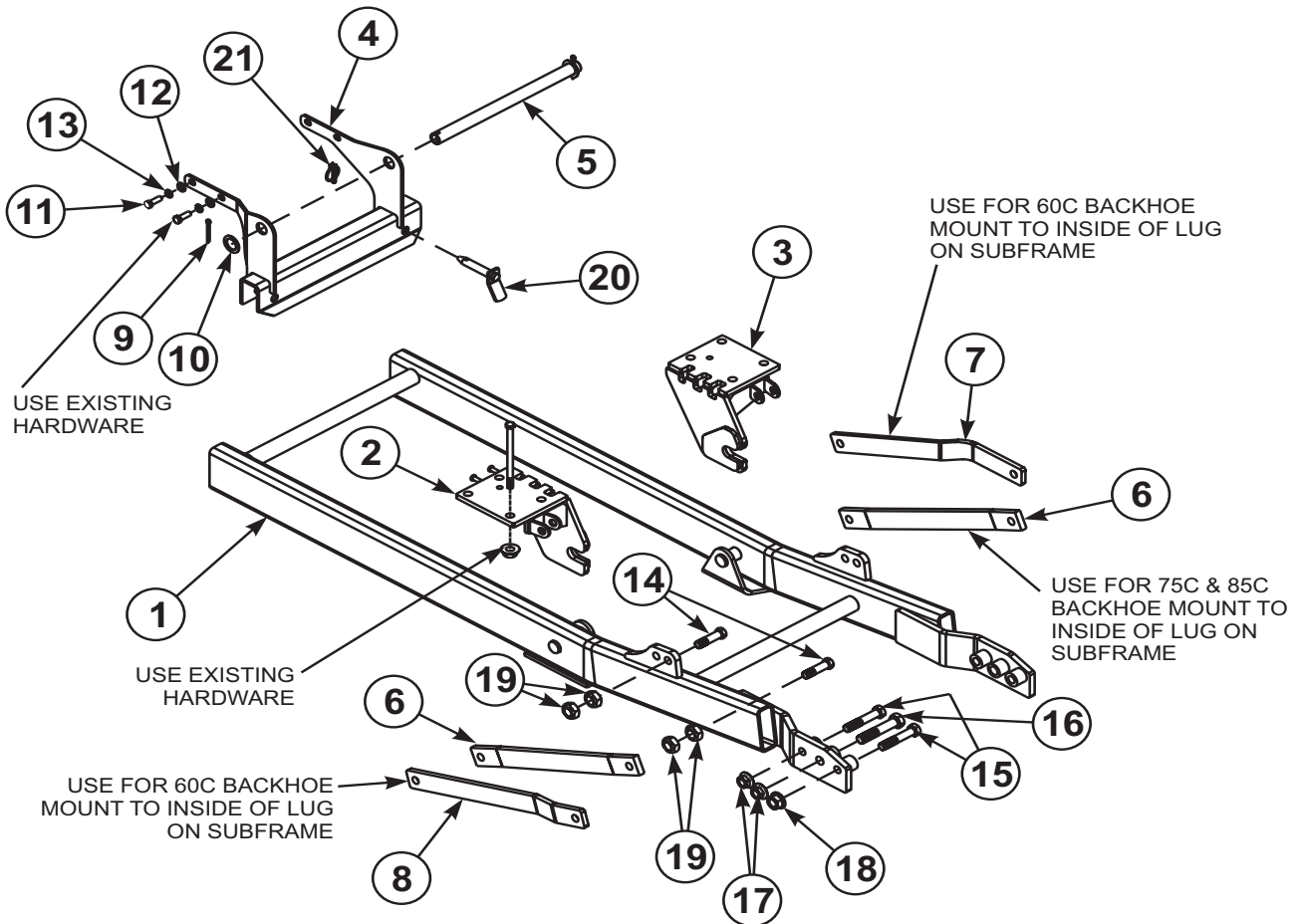
NOTE: On left hand side, attach springs to protrusions on stabilizer bracket. Failure to attach springs properly will cause brake malfunction.

7. Torque all hardware to torques specified in general torque specifications in table at end of instructions unless otherwise noted.

MOUNTING BACKHOE TO TRACTOR (Figure 1)

1. Back tractor slowly toward backhoe, parallel to subframe assembly, until hoses can be connected to tractor.
2. Connect hoses to tractor hydraulics.
3. Using backhoe controls, extend bucket and lower stabilizers to provide a base for raising subframe. Using backhoe controls, raise subframe to proper height to connect to tractor.
4. Back tractor and position rear subframe pins so they will engage completely into rear hanger brackets (2 & 3). Gradually lower backhoe mainframe so front cross shaft engages into front hanger bracket (4).
5. Install hitch pins (16) through front hanger brackets (4 & 5) to secure subframe in place. Secure hitch pins (20) using lynch pins (21).

Figure 2
Subframe Kit



PARTS LIST - SUBFRAME KIT

ITEM	PART NO.	DESCRIPTION	QTY.
1	55919	SUBFRAME	1
2	55922	BRACKET, Left Rear Hanger	1
3	55923	BRACKET, Right Rear Hanger	1
4	55929	BRACKET, Front Hanger	1
5	55934	TUBE, 1.19 OD X .88 ID	1
6	53885	BAR, Mount	2
7	55935	BAR, 60C Left Mount	1
8	55936	BAR, 60C Right Mount	1
9	41903-14	PIN, Cotter	2
10	42577-1	BUSHING, Machinery 1 1/4	2
11	42672-30	HHCS, M12-1.75 X 35MM GR 8.8	3
12	55953-4	WASHER, Flat M12	3
13	48093-6	WASHER, Lock M12	3
14	42969-4	HHCS, 3/4-10 X 2.75 GR8 (YDP)	4
15	41838-71	HHCS, 3/4-10 X 4.00 GR 5 (YDP)	4
16	41838-102	HHCS, 7/8-9 X 4.50 GR5 (YDP)	2
17	54591-1	NUT, Spiral Lock 3/4-10	4
18	54591-2	NUT, Spiral Lock 7/8-9	2
19	47264-8	NUT, Lock 3/4-10	8
20	44892	PIN, Hitch	2
21	44756-1	PIN, Lynch	2

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