

Keep with Operators Manual

**LOADER MOUNTING KIT
SMC & RHINO 2410 LOADER
JOHN DEERE TRACTORS**

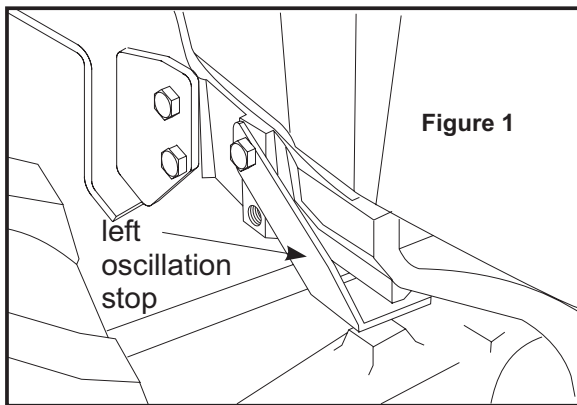
MODEL	2WD	FWA	CAB	LESS CAB
5210	X	X	X	X
5220	X	X	X	X
5310	X	X	X	X
5320	X	X	X	X

Mount kit can be installed using tools ordinarily available. Shut off engine and engage brakes during installation.

NOTE: Leave all attaching hardware loose until loader is completely assembled to facilitate assembly and proper alignment. Torque all hardware to specifications listed in loader operator's manual.

TRACTOR PREPARATION

1. Shut off engine and engage brakes during installation of mounting kit.
2. If tractor is equipped with toolbox, it will be necessary to relocate it where it will not interfere with loader.
3. If tractor is equipped with optional front fenders, they must be removed.
4. If tractor is equipped with weight bracket and front weights, they must be removed.



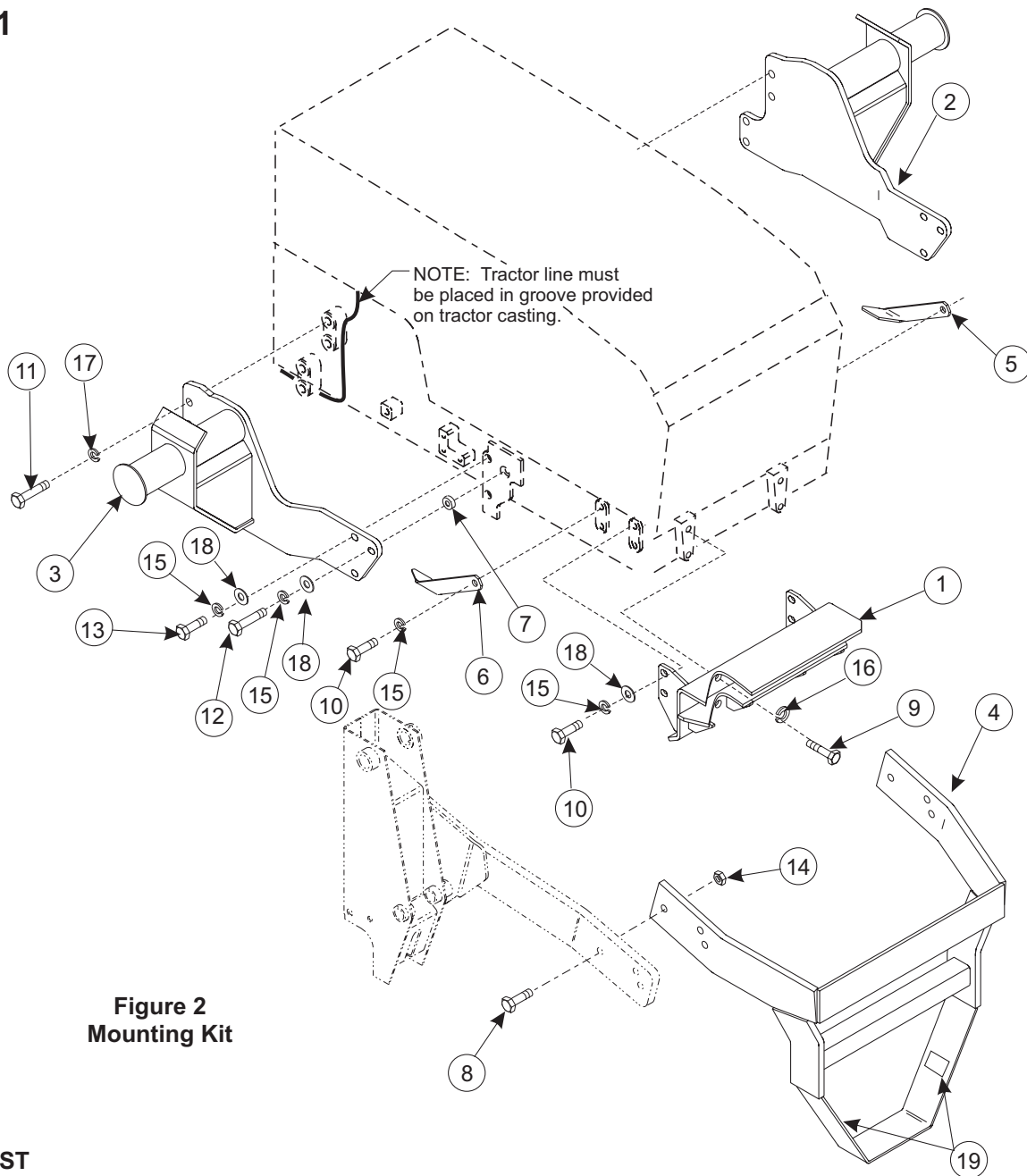
5. FWA tractors require axle oscillation stops and must be used with loader installation (see Figures 1 & 2). Attach oscillation stops (5 & 6) to front tractor casting using 5/8 x 1-1/2 cap screw (10) and 5/8 lock washer (15).

6. Tractor steering stops must be adjusted to provide a minimum clearance of 3/4" between front tire and any part of loader on full left and right lock with front axle fully oscillated. Adjustment must be made with lift cylinders fully retracted. Refer to tractor operator's manual for steering stop adjustment.
7. Check that tractor line, which is located directly forward of upper bolt hole pattern on tractor fly wheel casting on right side of tractor, is properly placed in groove provided in casting. This will prevent possible damage to tractor line from loader midmounting (see Figure 2).

INSTALLING LOADER MOUNTING BRACKETS (Figure 2)

NOTE: Unless specified, leave all attaching hardware loose until mounting brackets are completely installed to facilitate assembly and proper alignment of mounting brackets.

1. Attach left and right midmountings (2 & 3) to bolt hole pattern in tractor fly wheel casting using 20MM x 50MM cap screws (11) and lock washers (17).
2. Attach midmountings (2 & 3) to rear bolt hole pattern of front tractor casting using 16MM x 65MM cap screws (12), lock washers (15), flat washers (18), and spacers (7) in recessed bolt hole of tractor casting as shown in figure 2. Finish securing midmountings to front tractor casting using 16MM x 45MM cap screws (13), lock washers (15) and flat washers (18).
3. Attach front of front mounting bracket (1) to tractor casting using 3/4 x 2-1/4 cap screws (9) and 3/4 lock washers (16). Secure sides of front mounting bracket to tractor casting using 5/8 x 1-1/2 cap screws (10), 5/8 flat washers (18) and 5/8 lock washers (15).



PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY.
1	50194	FRONT MOUNT BRACKET	1
2	50322-1	MID MOUNT ASSEMBLY, Left	1
3	50322-2	MID MOUNT ASSEMBLY, Right	1
4	50320	YOKE ASSEMBLY, with Decals	1
5	50182-1	OSCILLATION STOP ASSEMBLY, Left	1
6	50182-2	OSCILLATION STOP ASSEMBLY, Right	1
7	49706-1	SPACER	2
8	41838-7	SCREW, Cap, 3/4-10 x 2-1/2	6
9	41838-15	SCREW, Cap, 3/4-10 x 2-1/4, Gr.5	4
10	41838-29	SCREW, Cap, 5/8-11 x 1-1/2	6
11	42672-37	SCREW, Cap, 20mm-2.5 x 50mm	8
12	42672-52	SCREW, Cap, 16mm-2.0 x 65mm	2
13	42672-21	SCREW, Cap, 16mm-2.0 x 45mm	4
14	41840-8	NUT, Lock, 3/4-10	6
15	41837-7	WASHER, Lock, 5/8	12
16	41837-8	WASHER, Lock, 3/4	4
17	48093-2	WASHER, Lock, 20mm	8
18	42502-12	WASHER, Flat, 5/8	10
19	39240	DECAL, Warning	2



WARNING: Loader must be supported before removing hardware securing loader to the shipping pallet, or loader will tip over.

INSTALLING LOADER TO MOUNTING BRACKETS

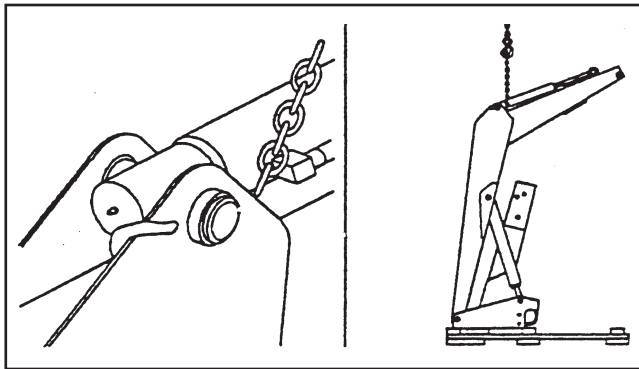


WARNING: To avoid injury during installation of quick attach loader, do not permit bystanders within ten feet of loader.

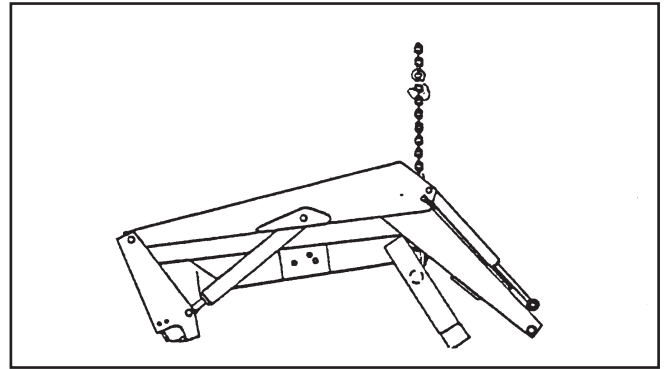
1. Loop chain under each tilt cylinder and hook on loader boom arm. Using overhead hoist to support loader remove hardware securing loader to pallet. Lift loader and remove pallet.



CAUTION: Do not damage grease fitting on end of cylinder. Be sure chain does not pinch tilt cylinder hose.

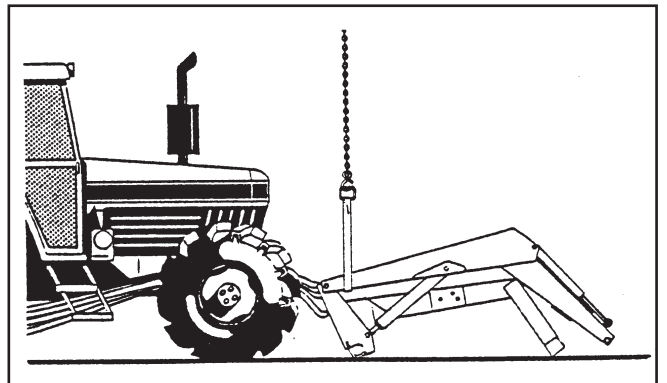


2. Using overhead hoist, lower loader from vertical shipping position to horizontal position leaving enough room to install yoke (scraps of cardboard may be used to protect paint). Install yoke assembly (4) using 3/4 x 2-1/2 cap screws (8) and 3/4 lock nuts (14). Lower loader completely to the ground.

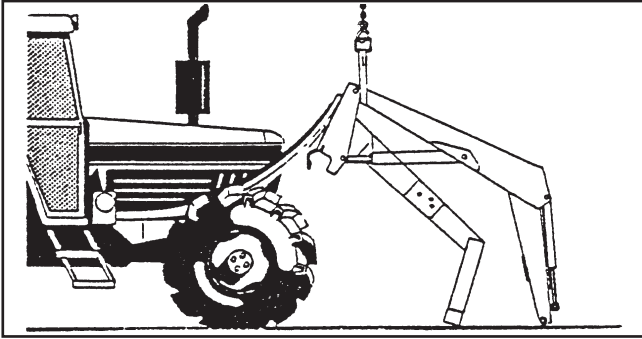


NOTE: Hardware connecting yoke to loader sideframes should be snug but do not torque completely. After loader has been mounted to tractor and aligned with mid mounting brackets and front mounting brackets, torque hardware to specifications in loader operators manual.

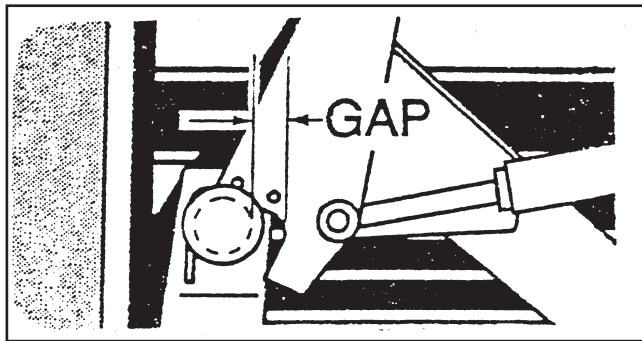
3. Install hoses to tractor and loader. Refer to hose kit instructions (2-7143) for tractors using rear remotes or refer to hose kit instructions (2-7144) for tractors using mid-mounted couplers.
4. Position tractor close enough so plumbing can be connected to tractor. Route hoses loosely to allow maximum reach. Using nylon straps reposition overhead hoist to loader boom arms near pivot point to side frames.
5. Operate loader control valve to extend lift cylinders until front yoke is resting on ground and side frame uprights will clear front tires. Shut off tractor engine and engage tractor brakes. Reroute loader hoses to inside of right mid mount bracket. Remove lock nut and washer from loader hinge and swing each hinge open.



INSTALLING LOADER TO MOUNTING BRACKETS
(Continued)



6. Start tractor engine, release tractor brakes and slowly drive forward while operating lift control levers to retract lift cylinders. Position loader so hinges hook over mid mounting tubes. Use of overhead hoist will facilitate positioning loader into mid mounting tubes.



IMPORTANT: Position loader uprights so mid mounting tubes are tight against hinges until loader has finished rotating so loader front bumper tube does not hit lower flange of front mounting channel.

7. With tractor in neutral, retract lift cylinders, bringing side frame up so front yoke tube contacts upper flange of front mounting bracket channel. Move tractor ahead until front yoke tube engages in front mounting channel and upright hinges can clamp around mid mounting tube. Engage tractor brakes and shut off tractor engine.
8. Clamp hinges to mid mounting tubes with 3/4 flat washers and 3/4 flex-lock nuts (supplied with loader).

NOTE: Only one washer per side is necessary for mounting. Second washer is for shipping purposes only.

IMPORTANT: Be sure to use flex-lock nuts to clamp hinge. Tighten flex-lock nuts against hinge securely, but not to more than 125 ft.-lb. torque.

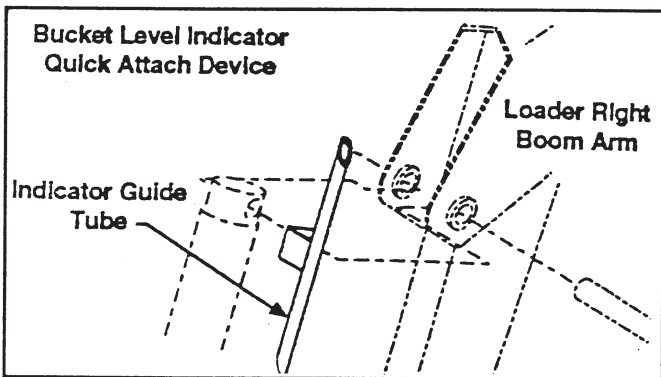
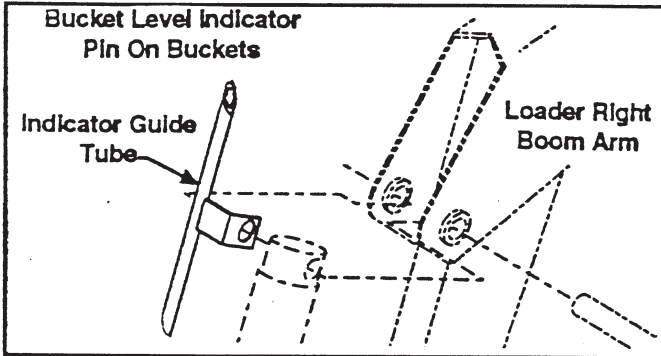
9. Adjust front wheel tread settings or steering stops, if necessary to prevent interference between tires and loader. Refer to tractor operator's manual for adjustment procedures.

INSTALLING BUCKET OR OPTIONAL ATTACHMENT

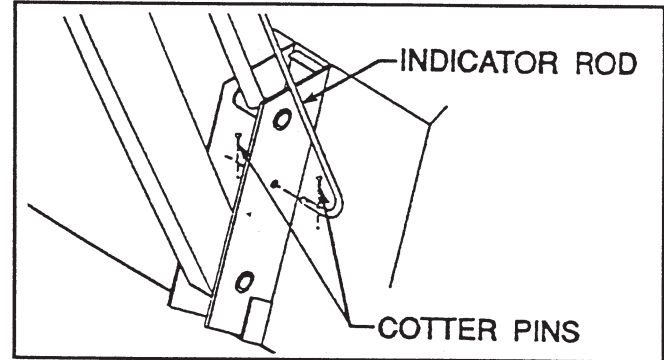
Refer to loader operator's manual for instructions on installing bucket or optional attachment.

INSTALLING BUCKET LEVEL INDICATOR

1. Attach indicator guide tube to cylinder pin. Guide tube is positioned to outside of boom for pin on attachments and inside of boom when quick attach device is used.







2. Slide bucket level indicator rod through guide tube. Attach other end of rod with 1/8 x 1 cotter pins and 3/8 flat washers. If pin on bucket is used, attach lower end of rod to bucket ear. If quick attach device is used, attach lower end of rod to quick attach device.



3. Locate tractor and loader on level surface. With bottom of bucket resting on surface, cut off excess rod flush with end of guide tube or paint exposed rod a contrasting color.

GENERAL TORQUE SPECIFICATIONS

USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

AMERICAN STANDARD CAP SCREWS					METRIC CAP SCREWS												
SAE Grade	5				8				Metric Grade	8.8				10.9			
																	
Cap Screw	TORQUE				TORQUE				Cap Screw	TORQUE				TORQUE			
Size	FT-LBS		Nm		FT-LBS		Nm		Size	FT-LBS		Nm		FT-LBS		Nm	
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	M6x100	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	215	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	mm24 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									
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									

NOTE: These values apply to fasteners as received from the supplier, dry or when lubricated with normal engine oil. They do not apply if special graphite or molydisulphide greases or other extreme pressure lubricants are used.