Keep with Operators Manual

LOADER MOUNTING KIT
2491 LOADER
JOHN DEERE 5103, 5203, 5303 TRACTORS

MODEL	2WD	LESS CAB
5103	X	X
5203	X	X
5303	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 weight bracket and front weights, they must be removed.
3. 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.
4. 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 1).

INSTALLING LOADER MOUNTING BRACKETS (Figure 1)

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 mid mountings (2 & 3) to bolt hole pattern in tractor fly wheel casting using 20MM x 50MM cap screws (9) and lock washers (15).
2. Attach mid mountings (2 & 3) to upper front bolt hole pattern of front tractor casting using 16MM x 65MM cap screws (10), lock washers (13), flat washers (16), and spacers (5) in recessed bolt hole of tractor casting as shown in figure 1. Finish securing midmountings to front tractor casting using 16MM x 45MM cap screws (11), lock washers (13) and flat washers (16).
3. Attach front of front mounting bracket (1) to tractor casting using 3/4 x 2-1/4 cap screws (7) and 3/4 lock washers (14). Secure sides of front mounting bracket to tractor casting using 5/8 x 1-1/2 cap screws (8), 5/8 flat washers (16) and 5/8 lock washers (13).

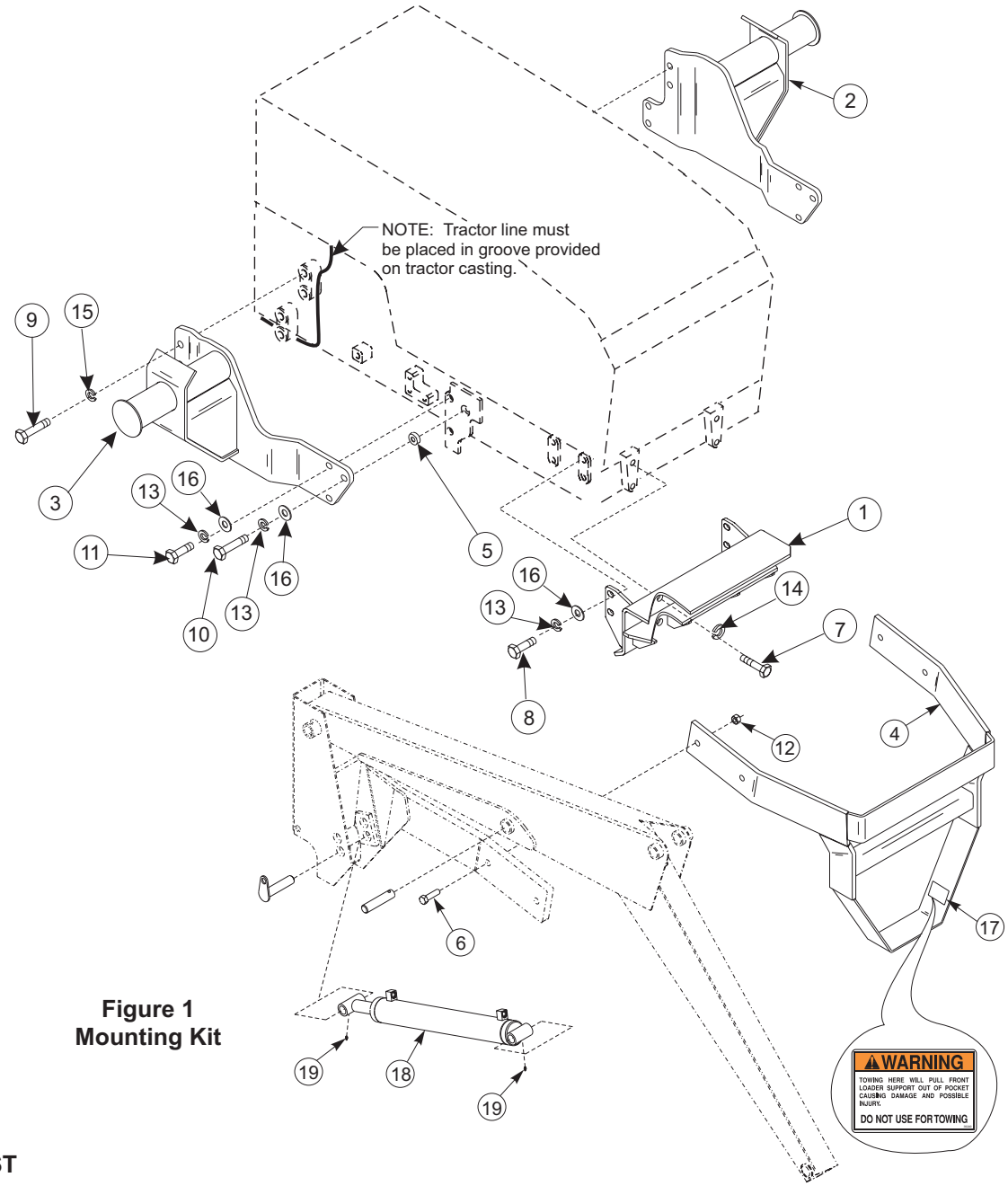


Figure 1
Mounting Kit

PARTS LIST

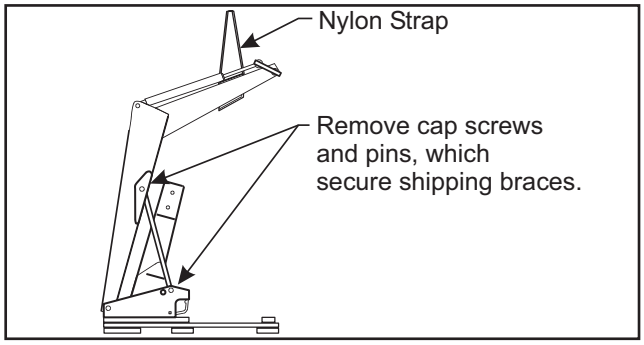
ITEM	PART NO.	DESCRIPTION	QTY.
1	50194	FRONT MOUNT BRACKET	1
2	50322-1	MID MOUNT ASSEMBLY, Left	1
3	50322-2	MID MOUNT ASSEMBLY, Right	1
4	51837	YOKE ASSEMBLY, with Decals	1
5	49706-1	SPACER	2
6	41838-7	SCREW, Cap, 3/4-10 x 2-1/2	4
7	41838-15	SCREW, Cap, 3/4-10 x 2-1/4, Gr.5	4
8	41838-29	SCREW, Cap, 5/8-11 x 1-1/2	4
9	42672-37	SCREW, Cap, 20mm-2.5 x 50mm	8
10	42672-52	SCREW, Cap, 16mm-2.0 x 65mm	2
11	42672-21	SCREW, Cap, 16mm-2.0 x 45mm	4
12	41840-8	NUT, Lock, 3/4-10	4
13	41837-7	WASHER, Lock, 5/8	10
14	41837-8	WASHER, Lock, 3/4	4
15	48093-2	WASHER, Lock, 20mm	8
16	42502-12	WASHER, Flat, 5/8	10
17	39240	DECAL, Warning	2
18	43129	CYLINDER, Lift 2-3/8	2
19	6075-4	FITTING, Grease, 1/4-28	4

INSTALLING LIFT CYLINDERS

1. Install grease fittings (19) to base and rod ends of lift cylinders (18) with fittings pointing down.

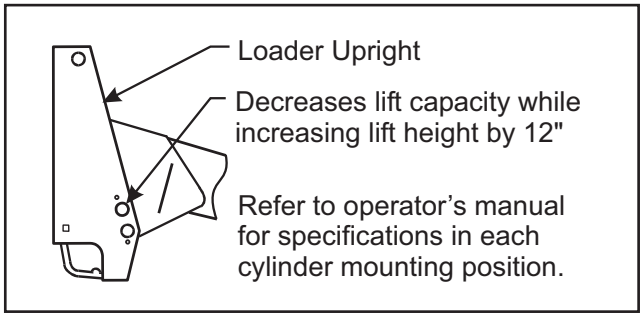
WARNING: *Be sure to support loader using an overhead hoist. Installed lift cylinders will not support loader in upright position. Boom may fall causing serious personal injury.*

2. Loop nylon strap around center of boom crossmember. Using overhead hoist to support loader, remove cap screws and pins which secure shipping braces.



3. Install lift cylinders (18), with base end toward front and hydraulic ports toward top, using hardware previously removed. **See chart for optional cylinder placement.**

NOTE: *Pin rod end into loader upright first, then pin base end into loader boom.*



4. Disconnect lift cylinder hoses from steel oil lines one at a time to avoid error when reconnecting.

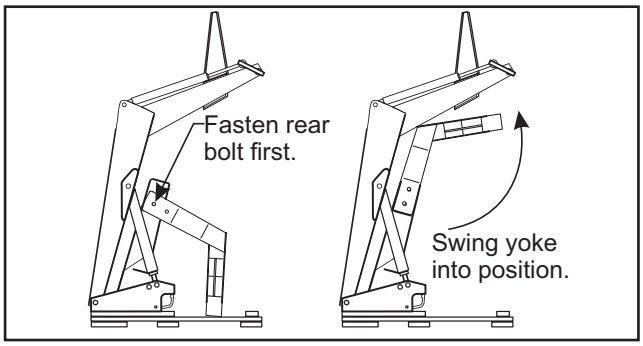
NOTE: *Lift cylinder hoses must be free to turn while they are being connected to lift cylinders.*

5. Connect hoses to lift cylinders. Reconnect hoses to steel oil lines.

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. Install yoke assembly (4) using ¾ x 2-1/2 cap screws (6) and ¾ lock nuts (12). Install rear cap screws first and swing yoke into position, then install front cap screws.



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 239-262 ft.-lb.*

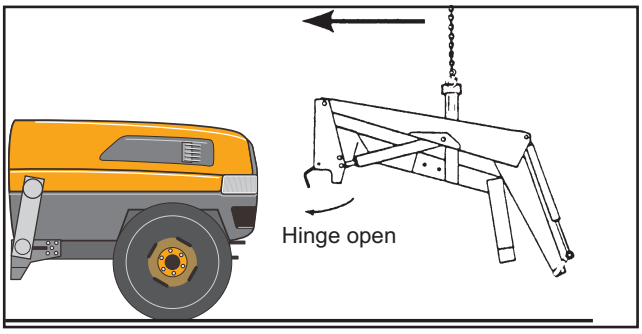
2. Remove hardware securing loader to pallet. Using overhead hoist, lower loader from vertical shipping position to horizontal position (scraps of cardboard may be used to protect paint).

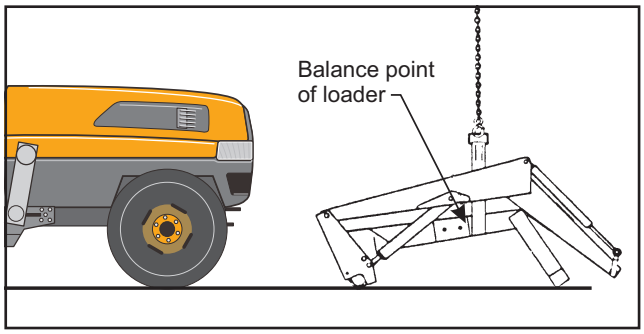
3. Install hose or valve kit to tractor and loader. Refer to assembly manual provided for installation instructions.

INSTALLING LOADER TO MOUNTING BRACKETS (Continued)

4. Reposition overhead hoist by looping nylon strap around yoke near loader side frames at balance point of loader.

5. Using overhead hoist, raise loader until side frame uprights will clear front tires. Remove locknut and washer from loader hinge and swing each hinge open.





6. Position loader so hinges hook over mid mounting tubes and yoke tube fits inside front mounting bracket.

7. Clamp hinges to mid mounting tubes with ¾ flat washers and ¾ flex-lock nuts (supplied with loader).

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

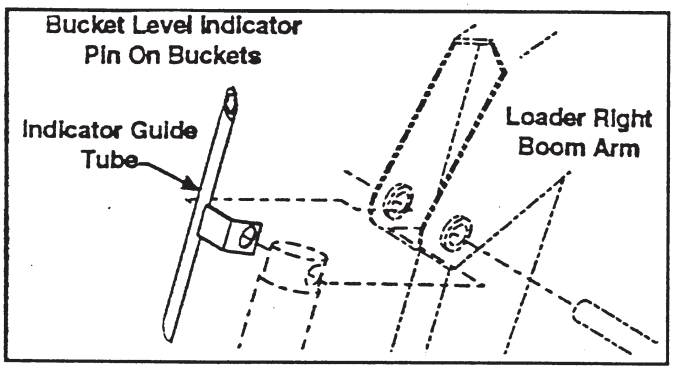
8. Adjust front wheel tread settings or steering stops, if necessary to prevent interference between tires and loader. Refer to tractor operator's manual for adjustment procedures.

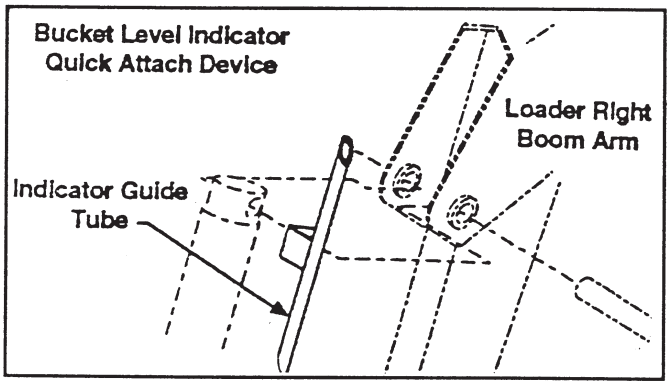
INSTALLING BUCKET OR OPTIONAL ATTACHMENT

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

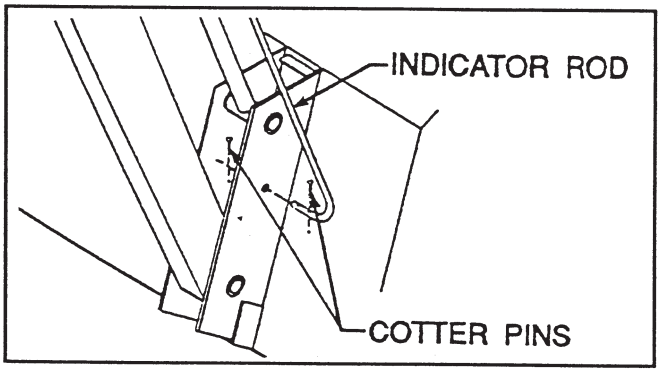
INSTALLING BUCKET LEVEL INDICATOR

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.





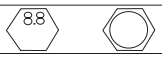
2. Slide bucket level indicator rod through guide tube. Attach other end of rod with 1/8 x 1 cotter pins and 3/8 flat washers. If pin on bucket is used, attach lower end of rod to bucket ear. If quick attach device is used, attach lower end of rod to quick attach device.



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	555	61	55	60	74.5	81	M18 x 2.50	172	210	233	284	240	294	325	398
7/16 - 20	51	55	69	745	68	75	92	102	M20 x 2.50	247	301	335	408	343	426	465	577
½ - 13	65	72	88	975	86	96	116	130	M22 x 2.50	332	404	450	547	472	576	639	780
½ - 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									
¾ - 10	238	262	322	355	318	350	431	474									
¾ - 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.

INSTALLATION INSTRUCTIONS