

Keep with Operator's Manual

## LOADER MOUNTING KIT 2491 LOADER JOHN DEERE TRACTOR

MODEL	2WD	FWA	ROPS
5105	X	X	X
5205	X	X	X

### TRACTOR & MOUNTING KIT GENERAL INFORMATION

Mounting kit and loader can be installed using tools ordinarily available, including an overhead hoist and sling for initial loader installation, floor jack, standard and metric wrenches, and a torque wrench.

If tractor is equipped with front weights, weights must be removed before installing loader mounting brackets.

Check front tire clearances once loader is installed and adjust tire track width as necessary.

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.

Reference to left and right used in these instructions refer to position when seated in the operating position on tractor.

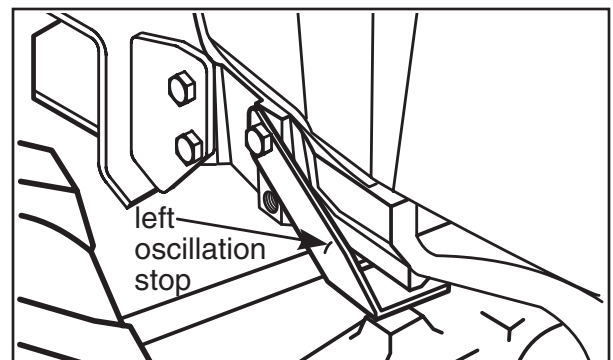
Shut off engine and engage brakes during installation of mounting kit.

### INSTALLING LOADER MOUNTING BRACKETS (Figure 1)

**NOTE:** Install all hardware loosely (unless noted otherwise), until mounting kit is completely assembled to facilitate assembly and proper alignment. Unless specified otherwise, tighten all hardware to torques specified in general torque specifications table when assembly is complete.

**IMPORTANT:** Check to make sure tractor line, which is directly forward of upper bolt hole pattern on tractor flywheel casting on right side of tractor, is properly placed in groove provided in casting. This will prevent possible damage to tractor line from loader right mid mounting bracket (3, see Figure 1).

1. Fasten rear of left mid mounting bracket (2) to bolt hole pattern in tractor flywheel casting using 20mm x 50mm cap screws (9) and lock washers (15). Fasten front of left mid mounting bracket (2) to upper front hole of forward bolt hole pattern of tractor casting using 16mm x 65mm cap screw (10), 5/8" lock washer (13), flat washer (16), and spacer (5) at recessed bolt hole of tractor casting, as shown in Figure 1. Finish securing left mid mounting bracket (2) to tractor front casting using 16mm x 45mm cap screws (11), lock washers (13), and flat washers (16).
2. Repeat above procedure to fasten right mid mounting bracket (3) to right side of tractor.
3. Attach front mounting bracket (1) to front of tractor casting using 3/4 x 2-1/4" cap screws (7) and lock washers (14). Secure sides of front mounting bracket to tractor casting using 5/8 x 1-1/2" cap screws (8), flat washers (16) and lock washers (13).
4. Attach oscillation stops (20 & 21) to sides of tractor using 5/8 x 1-1/2" cap screws (8) and lock washers (13). Use upper hole just rear of front mounting bracket (1).



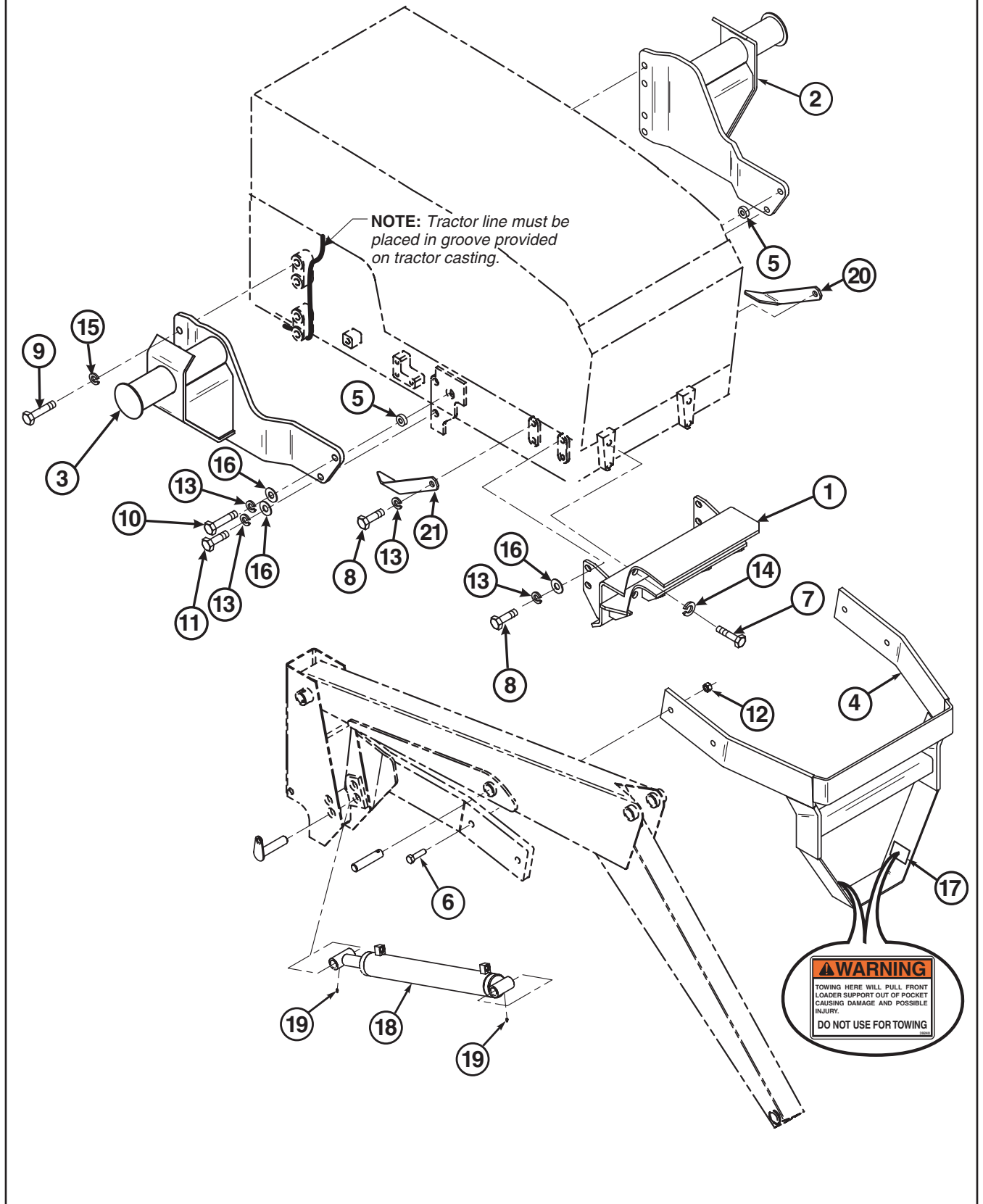
5. Tighten all attaching hardware to torques recommended in general torque specifications table. Torque 16mm-2.00 Class 8.8 hardware to 130-158ft.·lbs. (176-214Nm).

## 2-7312

### PARTS LIST - MOUNTING KIT

Item	Part No.	Description	Qty.
1	50194	BRACKET, Front Mounting	1
2	51881-1	BRACKET, Mid Mounting, Left	1
3	51881-2	BRACKET, Mid Mounting, Right	1
4	51878	BRACKET, Yoke, Front with Decals (Includes item 17)	1
5	49706-1	SPACER, Round	2
6	41838-7	SCREW, Cap, 3/4-10 x 2-1/2", Grade 5	4
7	41838-15	SCREW, Cap, 3/4-10 x 2-1/4", Grade 5	4
8	41838-29	SCREW, Cap, 5/8-11 x 1-1/2", Grade 5	6
9	42572-37	SCREW, Cap, 20mm-2.5 x 50mm	8
10	42672-52	SCREW, Cap, 16mm-2.0 x 65mm	2
11	46272-21	SCREW, Cap, 16mm-2.0 x 45mm	2
12	41840-8	NUT, Lock, 3/4-10, Type N	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"	8
17	39240	DECAL, Warning, Do Not Tow (Included with Item 4)	2
18	43128	CYLINDER, 2-3/4"	2
19	6075-4	FITTING, Grease, 1/4-28	4
20	50182-1	ANGLE, Oscillation Stop, Left	1
21	50182-2	ANGLE, Oscillation Stop, Right	1

Figure 1  
Loader Mounting Kit



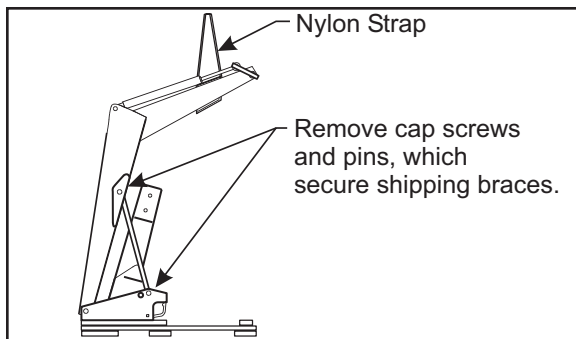
**INSTALLING LIFT CYLINDERS**

1. Install grease fittings (19) into threaded holes in base and rod ends of lift cylinders (18). Install grease fittings (19) so they are opposite cylinder ports.



**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.

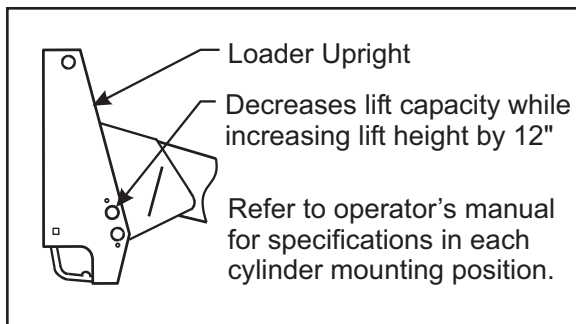
2. Loop nylon strap around center of boom cross member. Using overhead hoist to support loader, temporarily remove cap screws and pins which secure shipping braces.



3. Install lift cylinders (18) with base end connected to boom arm and hydraulic ports toward boom arm, using hardware removed earlier when shipping braces were removed.

**NOTE:** Pin rod ends of cylinders into loader uprights first, then pin base end to loader boom arms.

Refer to following illustration for an explanation of cylinder rod attachment options.



4. One hose at a time, to avoid error when reconnecting, disconnect lift cylinder hoses from loader boom oil lines, connect lift cylinders, and then reconnect to loader boom oil lines.

**NOTE:** Lift cylinder hoses must be free to rotate while being connected to lift cylinder ports.

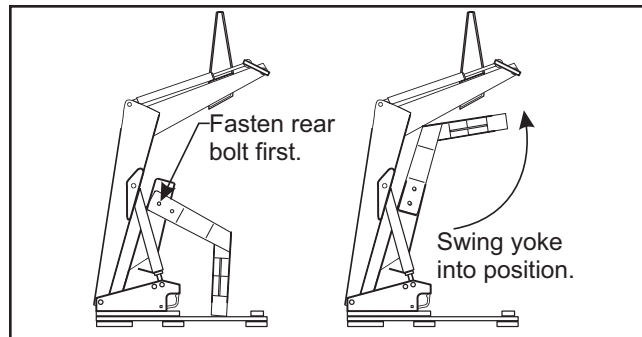
**INSTALLING YOKE ONTO LOADER**



**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.

Install loader yoke (4) using 3/4 x 2-1/2" cap screws (6) and lock nuts (12). Install rear cap screws first, then swing yoke into position and install front cap screws.

**NOTE:** Tighten hardware connecting yoke to loader side frames 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 239-262ft.·lbs. (324-355Nm).

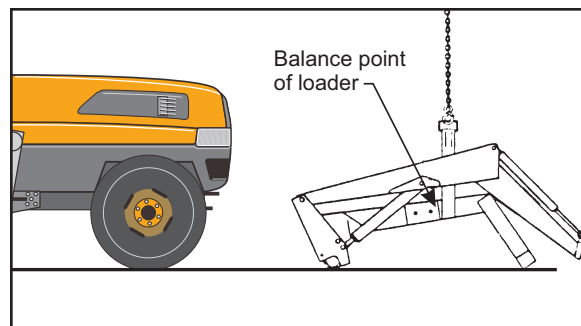


**INSTALLING LOADER TO MOUNTING BRACKETS**



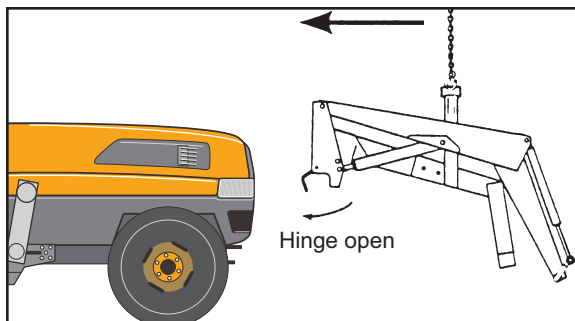
**WARNING:** To avoid injury during installation of quick attach loader, do not permit bystanders within ten feet of loader.

1. Remove hardware which secures loader to pallet. Using overhead hoist, lower loader from vertical shipping position to horizontal position (use scraps of cardboard to protect paint).
2. Install hose or valve kit to tractor and loader. Refer to installation instructions provided with hose or valve kit.



## INSTALLING LOADER TO MOUNTING BRACKETS (Continued)

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



4. Using overhead hoist, raise loader until side frame uprights will clear front tires. Temporarily remove lock nut and washer from loader hinges and swing each hinge open.
5. Position loader so hinges hook over tubes of mid mounting brackets (2 & 3) and cross tube of yoke (4) fits inside channel of front mounting bracket (1).
6. Clamp hinges around mid mounting bracket tubes using 3/4" flat washers and flex-lock nuts (supplied with loader).
 

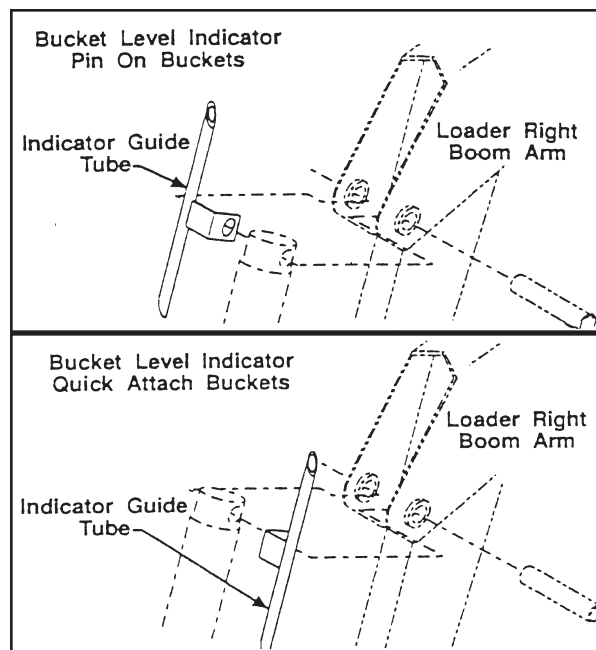
**IMPORTANT:** Be sure to use flex-lock nuts to clamp hinge. Tighten flex-lock nuts against hinge securely, but not to more than 125ft.·lbs. (169Nm) torque.
7. Adjust front wheel tread settings of steering stops, if necessary to prevent interference between tires and loader. Refer to tractor operator's manual for adjustment procedures.

## INSTALLING BUCKET

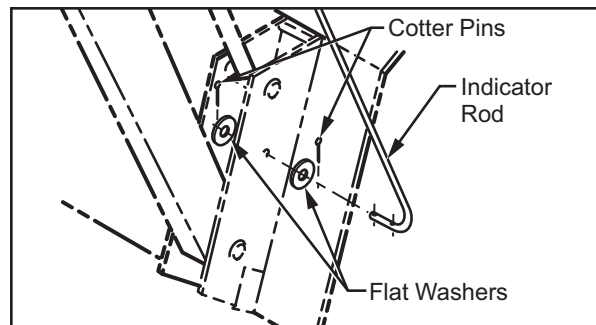
Refer to instructions provided with bucket or loader attachment to install bucket or attachment onto loader.

## INSTALLING LEVEL INDICATOR

1. Attach indicator guide tube to cylinder pin. Attach guide tube positioned to outside of boom.



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.



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

**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><b>NOTE:</b> 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										

# INSTALLATION INSTRUCTIONS