

Mounting Instructions Jinma 30 to 35 HP 4 Cylinder Only Spirit SL-20 Front End Loader



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- (1) Begin by unpacking the loader mounts and pail from the pallet.
- (2) Identify The Right and Left Front Mount
- (3) Identify the Right and Left Mid Mount.
- (4) Identify the Axle Support Bars “Torsion Bars”
- (5) Identify the mid mount Spanner Bar
- (6) Identify the valve bracket
- (7) Identify the muffler relocation pipe.
- (8) Open the pail and identify the nuts and bolts packed individually in the pail. The valve comes with the fittings screwed into the valve loosely. You will need to tighten all fittings after the installation of the loader and prior to any operation.
- (9) Identify the front mount “C-Clips” inside your pail
- (10) Mount the right and left front mount with the hardware provided. Depending on your configuration from the factory, the front hole covers on your tractor (located on the battery box) may need to be removed to uncover the threaded holes.
- (11) Attach the left and Right side mid mounts by using the hardware provided. You may need to place a spacer on the front of the Mid Mount. Do not torque bolts on until all are in place. After all bolts are on the Mid Mount you may torque to specs listed at the end of this manual.
- (12) The torsion bars will be the next items to install. Remove the rear sway bar pins from the rear axle. Loosely attach the hex nuts and lock washers provided. The bar should be mounted with the oval holes on the mid mount and round holes on the axle bracket. Also, the bar needs to be placed on the outside of the rear axle and inside of the mid mount.
- (13) Attach the front of the rear axle support bars into the mid mounts. Run the bolts from the outside of the mid mounts, through the support bar holes and leave flush with the inside of the mid mount bracket.
- (14) Attach the muffler relocation pipe to the tractor. This mounts with the included hardware.
- (15) Unpack the loader bucket from the pallet. This will require at least two sets of hands. Handle this loader bucket with a hoist or other mechanical lifting device. The weight of the loader bucket, depending on size, can be as much as 250#.
- (16) Using a hoist, or other mechanical means – unband the loader frame from the pallet and gently set on the ground. Use care to not damage the loader, and also to lift, carry, and move with SAFETY in mind.
- (17) Lift the loader onto the mid and front mounts of the tractor. Have the mid mount attachment pins ready. Place the mid mount pins through the outside of the bracket, through the loader upright bushing, and inside of the midmount bracket. Place cotter pin through the hole on the inside of the midmount pin.
- (18) Loosely snug the saddle bolts into the mid mounts. This will require a 1-1/8” wrench or socket.
- (19) Locate the front “clips” identified in step #9 above. Place clip on the outside of the front rail with the opening facing the operator. Place as far back onto the front mount tube as possible and attach to the loader using included hardware. Torque these down on the left and right side immediately. Note: The left and right sides should be identical as far as which hole they are mounted into and the spacing on the slotted hole on the clip itself. If they are not – check each right and left side mid mount and find the problem. Correct and continue.
- (20) Now torque down the saddle bolts on the loader upright. This will draw the loader further back into the saddles and will also tighten the front mount clips onto the front mount tubes. It is very important again to make sure everything is tightened properly and that the front clips are fully engaged onto the front mount tubes. If the front mount clips are not fully engaged, they will be bent by operation

and will need to be replaced. This loader is not a pedestal mount and therefore careful installation of the front loader mounts and front loader clips is essential to proper operation of the loader.

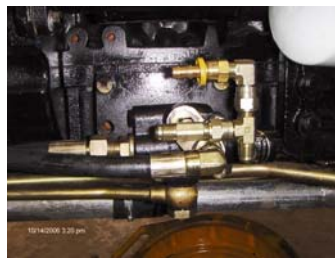
- (21) Attach the valve bracket onto the right upright. Hardware is provided for this attachment. These fasteners may be torqued to the recommended specifications at this time.
- (22) Attach valve onto the top of the valve bracket using the included hardware. The valve bracket holes are slotted to allow minor adjustment of the valve. The valve can be rotated approx 15 degrees for operator comfort. The valve should be attached with the handle up and the hoses facing the outside of the tractor.
- (23) Identify the pressure line coming from your hydraulic pump. Disconnect the quick couplers and connect the quick couplers in from the valve.
- (24) Remove banjo fitting from diverter valve. Take off the hard line that returns to tank. (Line runs between diverter valve and Hydraulic reservoir.) Cut hose off just behind the crimp on banjo fitting.



Take out banjo fitting



Cut hose behind fitting



See step 25



See step 24



See step 26

- (25) The hydraulic fittings should be facing this way see photo above. The tank return line fitting is facing down. The hose that was cut in the previous step should be placed over the barb fitting and clamped down. The fitting facing the rear of the tractor is the return line to valve.
- (26) Connect the hose where the hard line returns to tank to the diverter valve.
- (27) Unscrew the hard line plastic caps from the end of each hard line. This will allow the loader to move relatively freely. Attach the bucket using the pins and bolts provided. The pins are tapered for an easy fit, but usually a rawhide hammer must be used to place the pins properly. Place the small bolts through the bushings on the bucket after the pins are installed.
- (28) The four loader control hoses attached to the valve are color coded as are the hard lines on the loader. Attach the Red to Red, Blue to Blue, etc... If a protective hose wrap is included with your kit – install it prior to attaching the hoses on your loader. The hoses will route from the valve, inside the right upright, to the SAE fittings on your hard lines.
- (29) After all components are in place and before loader is set in place, torque all bolts in accordance with the torque chart included with this manual. **Double check all torques with a calibrated torque wrench. It is an important safety consideration that the fasteners are torqued properly and**

rechecked frequently. Failure to do so will void the manufacturer warranty and may cause a mechanical failure causing injury or death to the operator or those around the machine.

- (30) Check all torques again. Check front clip engagement on the front mounts. Check all hydraulic fittings to ensure they are tight. Check hoses and all connections. Check quick connects for proper engagement.
- (31) Start tractor and operate loader cycling loader, and adding hydraulic oil to the reservoir continuously until all air is worked from the system. If your loader has a small reservoir, and you cannot remove all air from the system you will need the auxillary hydraulic reservoir kit available from Foton.
- (32) After the loader is completely installed with all hydraulic fittings tight operate to check for leaks. If there are no leaks in the hard line attachments, place heat shield sleeve over fittings and zip tie in place.



(33)

Comments on how we can make your installation better? Toll Free 866-533-5536.

READ AND UNDERSTAND THE OPERATION MANUAL PRIOR TO USE.

TORQUE VALUES (SAE FASTNERS)

Common bolts and nuts

Tightening Torque Plus/Minus 20%

Size	Grade 2	Grade 5	Grade 8
¼ -20 NC	70 in. lbs	115 in. lbs	165 in. lbs
¼ -28 NF	85 in. lbs	140 in. lbs	200 in. lbs
5/16-18 NC	150 in. lbs	250 in. lbs	350 in. lbs
5/16-24 NF	165 in. lbs	270 in. lbs	30 ft. lbs
3/8-16 NC	260 in. lbs	35 ft. lbs	50 ft. lbs
3/8-24 NF	300 in. lbs	40 ft. lbs	60 ft. lbs
7/16-14NC	35 ft. lbs	55 ft. lbs	80 ft. lbs
7/16-20 NF	45 ft. lbs	75 ft. lbs	105 ft. lbs
½ -13 NC	50 ft. lbs	80 ft. lbs	115 ft. lbs
½ -20 NF	70 ft. lbs	105 ft. lbs	165 ft. lbs
9/16-12 NC	75 ft. lbs	125 ft. lbs	175 ft. lbs
9/16-18 NF	100 ft. lbs	165 ft. lbs	230 ft. lbs
5/8-11 NC	110 ft. lbs	180 ft. lbs	260 ft. lbs
5/8-18 NF	140 ft. lbs	230 ft. lbs	330 ft. lbs
¾-10 NC	150 ft. lbs	245 ft. lbs	350 ft. lbs
¾-16 NF	200 ft. lbs	325 ft. lbs	470 ft. lbs

METRIC FASTNER METRIC FASTNER (ISO) TORQUE CHART

ISO CLASS NO. BOLT SIZE	8.8		10.9		12.9	
	LB/FT Min. / Max.		LB/FT Min. / Max.		LB/FT Min. / Max.	
M4	2	3	3	4		
M5	5	6	7	8		
M6	8	9	11	13		
M8	19	23	27	32		
M10	38	45	54	64		
M12	66	79	93	112		
*M14	106	127	149	179		
M16	160	200	230	280		
M20	320	380	450	540		
M24	500	600	780	940		
M30	920	1100	1470	1770		
M36	1600	1950	1519	1681		

Because of the low ductility of these fasteners, the torque range is to be determined individually for each application. As a general rule, the torque ranges specified for grade 10.9 fasteners can be used satisfactorily on 12.9 fasteners.

*M14 is not a preferred size.

Note 1: Bolt head identification marks as per grade. Manufacturing marks will vary.