ALLIED

by Farm King

OPERATOR AND PARTS MANUAL

2895 Loader

For serial numbers 0528950045 and later

122011 P4110

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Manufacturer's statement: for technical reasons Buhler Industries Inc. reserves the right to modify machinery design and specifications provided herein without any preliminary notice.
Information provided herein is of descriptive nature. Performance quality may depend on soil fertility, applied agricultural techniques, weather conditions and other factors.

Introduction

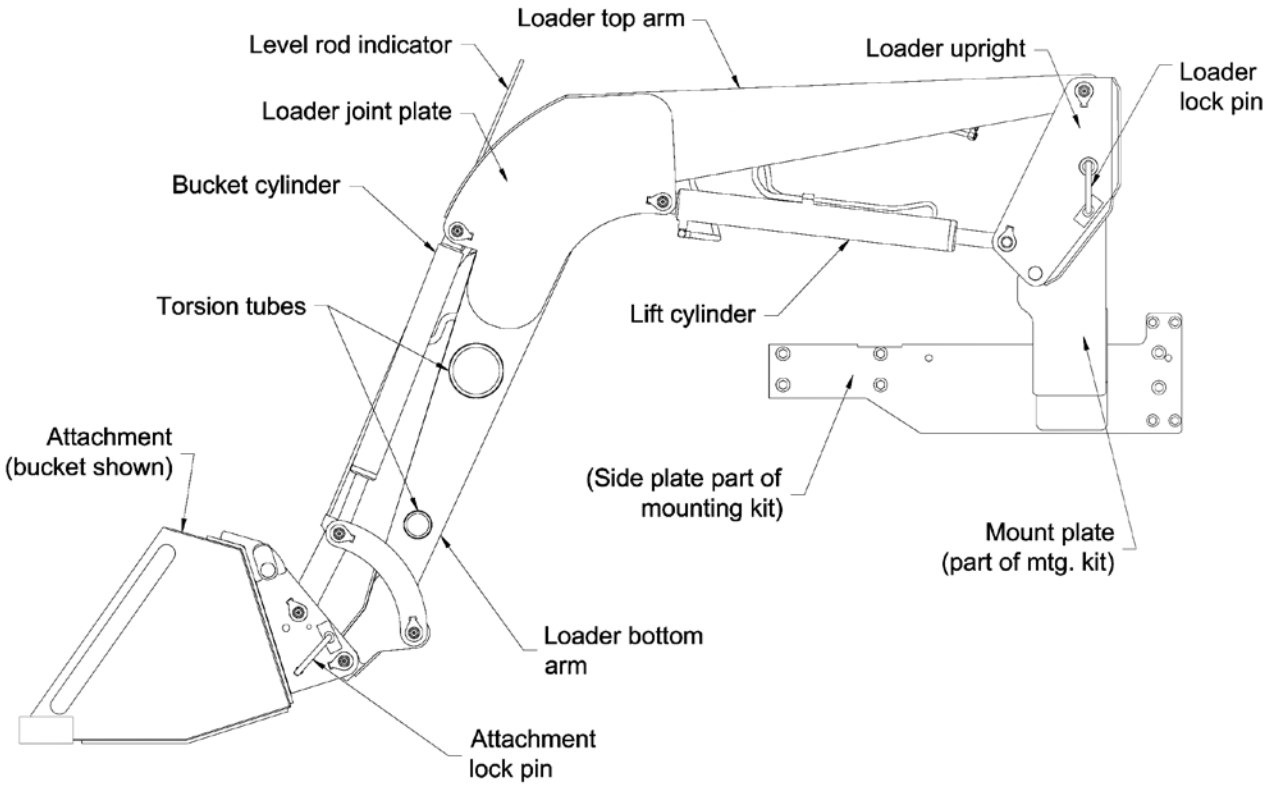
Allied by Farm King front-end loaders are backed by years of extensive research. Factory testing simulates specific operations to evaluate durability; days of continuous cycling in raising, twisting and dropping loads using a programmed hydraulic power unit represents years of extreme use. With one of the largest mounting kit application lists in the industry, there is an Allied front-end loader available for nearly every tractor, large or small, new or old. Custom colors are available to match all tractor brands which adds resale value and visual appeal.

Keep this manual handy for frequent reference. All new operators or owners must review the manual before using the equipment and at least annually thereafter. Contact your Allied by Farm King Dealer if you need assistance, information, or additional copies of the manual. Visit our website at www.buhlerindustries.com for a complete list of dealers in your area.

The directions left, right, front and rear, as mentioned throughout this manual, are as seen facing in the direction of travel of the implement.

Terminology

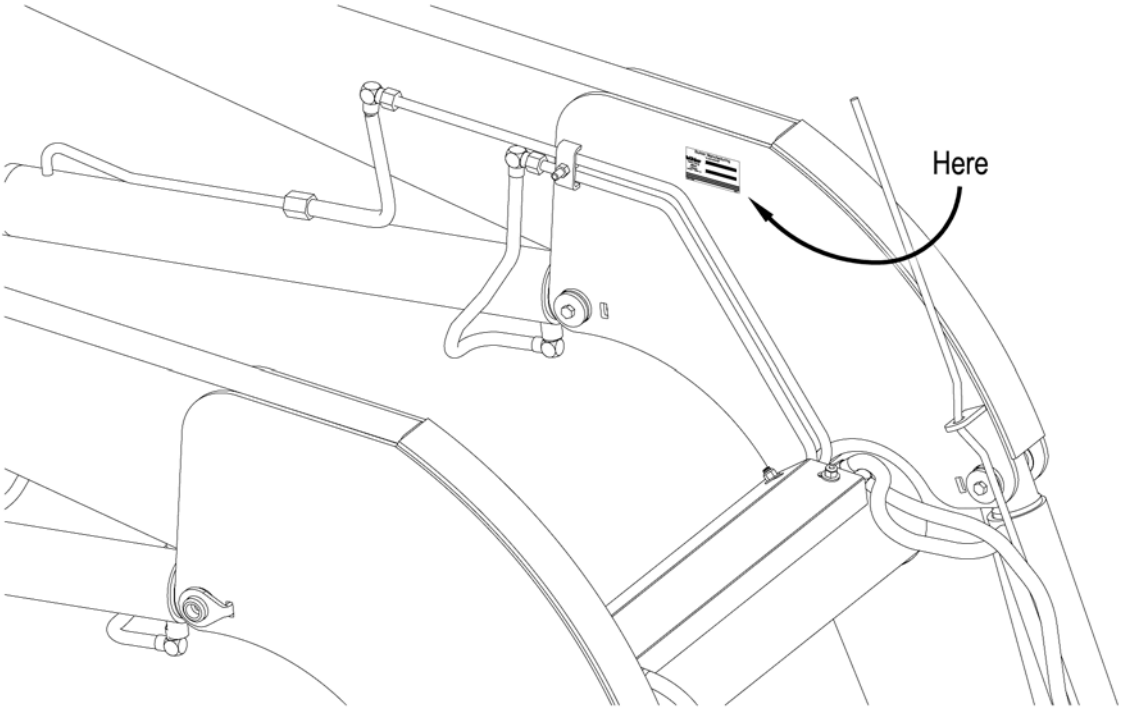
Basic terminology used throughout this manual has been identified below. For part numbers and further details refer to the Parts section.



Serial Decal Location

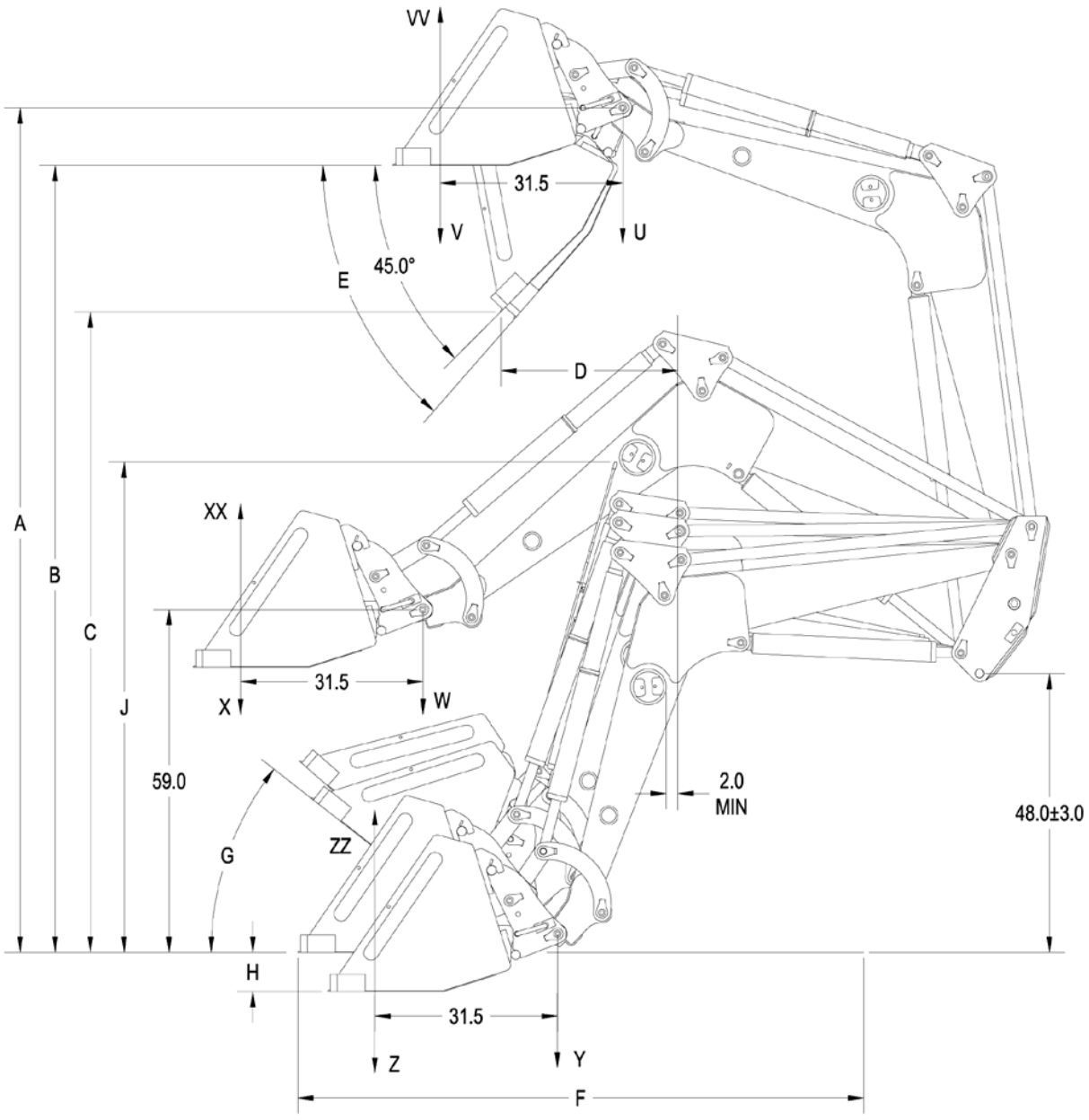
The serial decal is located on the inside left arm of the loader joint plate. Please record the serial number in the space provided for future reference. The serial decal will provide the model and date of manufacture of the loader and will be required to obtain correct replacement parts and complete warranty claims.

For your records, record serial number here:



Warranty Registration: The Warranty Registration and Delivery Report must be completed within thirty (30) days of delivery to validate the warranty.

Specifications



It.	Description	2895E Reg	2895E TSL	2895E S Reg	2895E S TSL
A	Maximum lift height to pivot pin [in/cm]	181/460	181/460	169/429	169/429
B	Maximum lift height under level bucket [in/cm]	172/437	172/437	160/406	160/406
C	Clearance with bucket dumped [in/cm]	146/370	146/370	134/340	134/340
D	Reach at maximum lift height [in/cm]	29/74	29/74	20/51	20/51
E	Maximum dump angle [deg]	62	61	62	61
G	Maximum rollback angle [deg]	37	37	37	37
H	Digging depth [in/cm]	5.0/12.7	5.0/12.7	5.0/12.7	5.0/12.7
J	Overall height in carry position [in/cm]	101/255	103/262	101/255	103/262
U	Lift capacity to maximum height - at pivot pin [lb/kg] optional cylinder	7000/3175	6900/3129	6900/3129	6875/3118
V	Lift capacity to maximum height [lb/kg] optional cylinder	4950/2245	4950/2245	4925/2234	4925/2234
W	Lift capacity to 59 in. height - at pivot pin [lb/kg] optional cylinder	7650/3470	7650/3470	8375/3798	8400/3800
X	Lift capacity to 59 in. height [lb/kg] optional cylinder	6125/2778	6125/2778	6600/2993	6600/2993
Y	Breakout force - at pivot pin [lbf/daN] optional cylinder	8475/3770	8500/3781	9950/4426	9950/4426
Z	Breakout force [lbf/daN] optional cylinder	6550/2914	6550/2914	7450/3314	7475/3325
VV	Bucket rollback force at maximum height [lbf/daN] optional cylinder	6250/2780	6375/2836	6300/2802	6400/2847
XX	Bucket rollback force at 59 in. lift height [lbf/daN] optional cylinder	8000/3559	7850/3492	8000/3559	7875/3503
ZZ	Bucket rollback force at ground line [lbf/daN] optional cylinder	7400/3292	7025/3125	7400/3292	7000/3114
	Raising/Lowering time [sec] optional cylinder	8.1/5.5	8.1/5.5	8.1/5.5	8.1/5.5
	Bucket dumping/rollback time [sec]optional cylinder	4.0/2.6	4.0/2.6	4.0/2.6	4.0/2.6
	Lift cylinder tube/shaft size [in] optional cylinder	3.50/2.00	3.50/2.00	3.50/2.00	3.50/2.00
	Lift cylinder stroke/retracted length [in]	32.50/52.50	32.50/52.50	32.50/45.25	32.50/45.25
	Bucket cylinder tube/shaft size [in] optional cylinder	3.00/1.75	3.00/1.75	3.00/1.75	3.00/1.75
	Bucket cylinder stroke/retracted length [in]	27.50/38.75	24.50/52.25	27.50/38.75	24.50/52.25
	Mounting Height (+/- 3.0) [in]	55			
	Hydraulic pressure rating/flow rate [psi]/[gpm]	2500/20			
	Tractor size [H.P. @ normal duty]	130-275			
	Bucket size [in/cu.ft.] - * Indicates bucket size used for calculations of lift capacities and rollback forces.	72/27.0 84/30.5* 96/37.3			
	Weight (with bkt & mtg kit) [lb/kg]	3800/1270			

NOTE: Specifications are subject to change without notice or obligation

Safety

Safety Instructions

Remember, YOU are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that everyone operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

The alert symbol is used throughout this manual. It indicates attention is required and identifies hazards. Follow the recommended precautions.

The safety alert symbol means...
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

	CAUTION	The caution symbol indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
	WARNING	The Warning Symbol indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.
	DANGER	The Danger Symbol indicates an imminently hazardous situation that, if not avoided will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

General Safety Instructions

- Have a first-aid kit available for use and know how to use it.
- Have a fire extinguisher available, stored in a highly visible location, and know how to use it.
- Wear appropriate protective gear. This list may include but is not limited to:
  - hard hat
  - protective shoes with slip resistant soles
  - protective glasses or goggles
  - heavy gloves
  - wet weather gear
  - hearing protection
  - respirator or filter mask
- Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing, or unplugging the equipment.
- Do not attempt any unauthorized modifications to your Allied by Farm King product as this could affect function or safety, and could affect the life of the equipment.
- Inspect and clean the working area before operating.
- Keep hands, feet, clothing, and hair away from moving parts.
- Ensure bystanders are clear of the area before operating.
- Improper use of the loader and tractor can cause serious injury or death.
- Operate the loader while seated in the tractor seat only.
- Keep the work area clear of other persons.
- Never leave the tractor unattended while the attachment is raised. Always lower the attachment to ground and shut tractor off before leaving the tractor seat.
- Never work beneath a raised loader unless it is securely supported. The control lever can be moved or a hydraulic leak could cause the loader to drop resulting in serious injury or death. Refer to the Hydraulic Lock Instructions Decal for proper use of the lift locks.
- Prior to use, check to ensure the attachment is properly locked to the quick-tach. Verify from tractor seat by lowering the attachment to the ground and retracting the lift cylinders.
- Never operate loader with frayed or damaged hoses or leaking fittings. A burst could cause the loader to drop suddenly and result in serious injury or death and cause damage to the loader or tractor.
- Keep tractor on solid ground when raising loader. Loose fill rocks and holes can be dangerous for loader operation and movement.
- If for some reason, you feel the tractor tipping, immediately lower the loader.
- A pivoting front axle acts like a three-wheeled tractor until the stops hit the axle.
- Space rear tires as recommended by the tractor manufacturer. Maximize width for high lift applications and uneven terrain.
- Add rear ballast as required to ensure 25% of gross vehicle weight is transferred to the rear axle. Loader, attachment and payload must be included as weight.
- Do not raise attachment to extreme heights while tractor is on an incline. Be alert for terrain changes and adjust accordingly. Keep attachment at low travel height, no more than one foot, as long as possible.
- Allow for attachment and loader length when turning.
- The tractor must be equipped with an approved Roll Over Protection Structure (ROPS) and safety belts.

- Use proper lighting and safety warnings when transporting equipment on public roads and during darkness. The Slow Moving Vehicle (SMV) emblem must be visible. Check with your local Law Enforcement Agency for specific requirements.

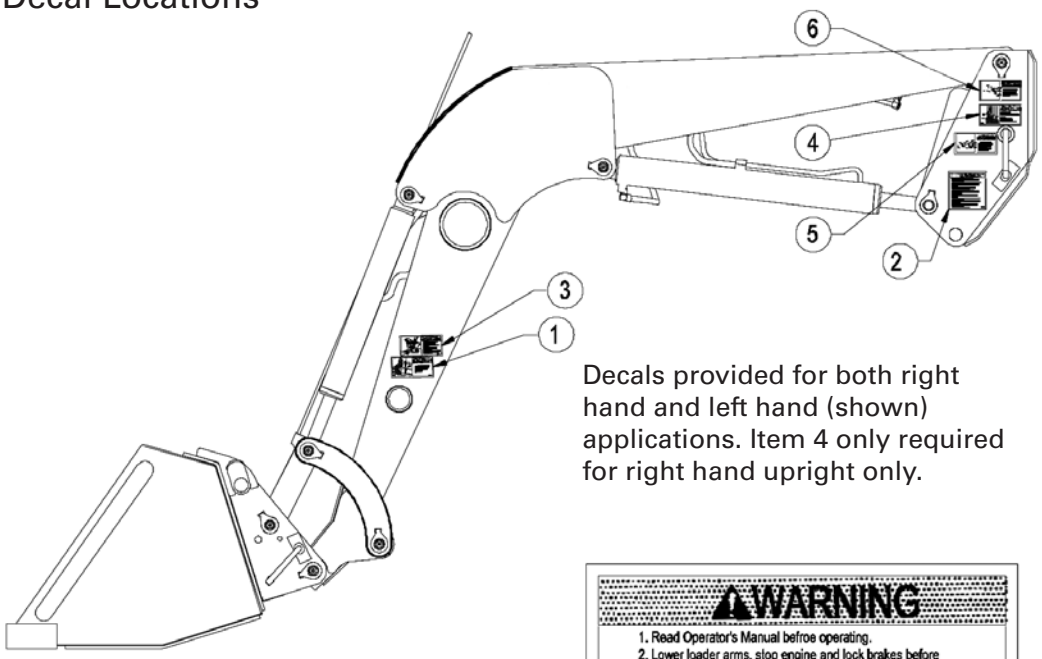
Safety Signs

- The following illustration shows the approximate location and detail of safety signs.
- Keep all safety signs clean and legible and replace any that are damaged or missing.
- When original parts are replaced, any safety signs affixed to those parts should be replaced as well. Replacement safety signs are available from your local dealer.

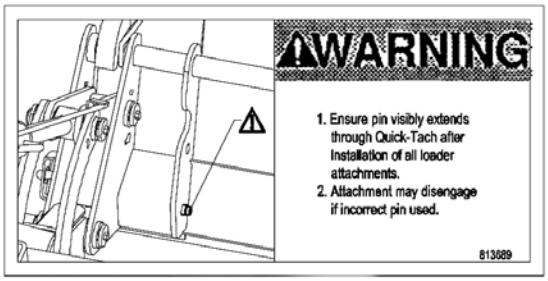
Installation

- To install safety signs, ensure the installation area is clean and dry. Decide on the exact position before you remove the backing paper. Remove the smallest portion of the split backing paper and align over the specified area. Carefully press in place.
- Slowly peel back the remaining paper and smooth the remaining portion in place. Small air pockets can be pierced with a pin and smoothed out.

Safety Decal Locations

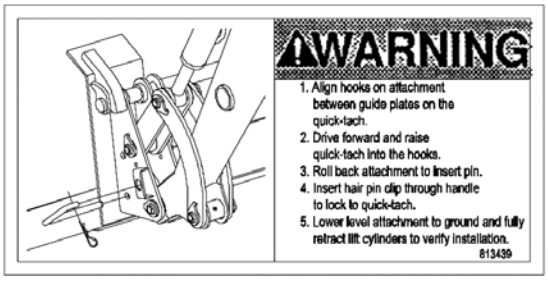


Decals provided for both right hand and left hand (shown) applications. Item 4 only required for right hand upright only.

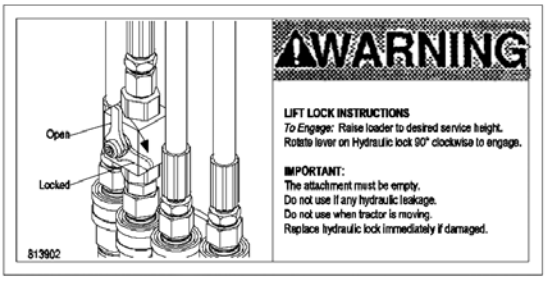


1 - Part # 813689

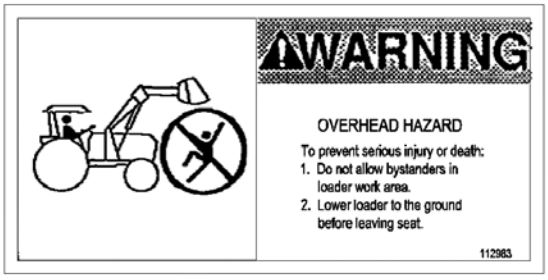
1 - Part # 112812



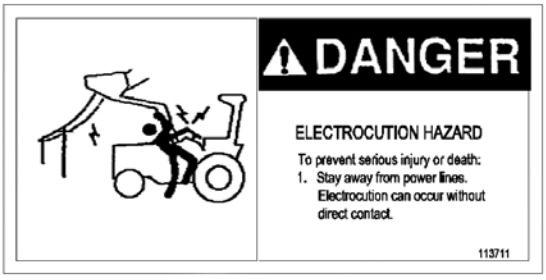
3 - Part # 813439



4 - Part # 813902



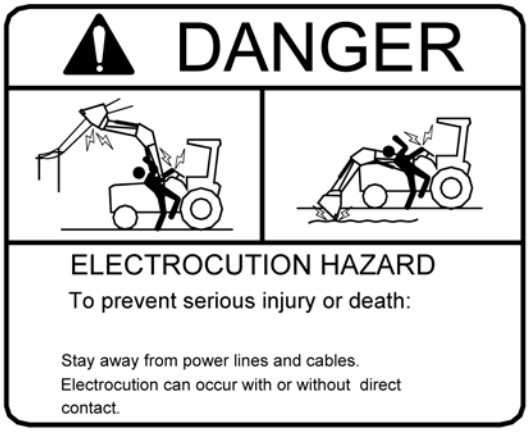
5 - Part # 112983

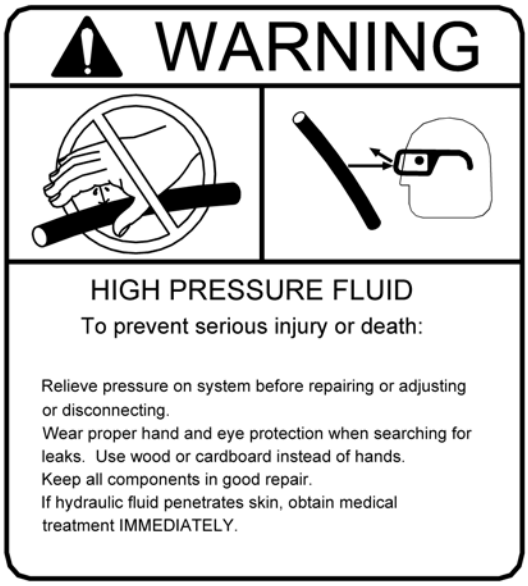


6 - Part # 113711

Precautions

The following pictorials indicate important precautions to be used during the operation of the loader.





Operation

Pre-Operation

The following pictorials indicate important precautions to be used during the operation of the loader.

	WARNING	The tractor must be equipped with an approved Roll over Protection Structure (ROPS) and safety belts to help prevent personal injury or death caused by tractor roll over.

	CAUTION	Maximum rated loader capacity may exceed tractor rating. Load restrictions or reduction in hydraulic operating pressure may be required for safe operation. Torque all fittings and hoses prior to operating loader. Ensure hoses do not rub or pinch during loader operation. Ty-rap as required.

Rops: Do not exceed the manufacturer's rating for maximum gross vehicle weight. Refer to the Tractor Manual or the ROPS Serial Decal for rating. Do not alter or modify the ROPS structure.

Tractor Tires: Space rear tires as recommended by the tractor manufacturer. Tire inflation and capacity must meet or exceed additional weight of loader, attachment and payload. Maximize width for high lift applications. Tread width must not exceed maximum width as recommended in the Mounting Kit Listing.

	WARNING	Add rear ballast to help prevent personal injury or death caused by tractor roll over.

Rear Ballast: Rear ballast is required to ensure 25% of gross vehicle weight is transferred to the rear axle. Attachment and load must be included as weight. Adequate rear weights are required to counterbalance maximum loader capacity and safe loader operation. Weight can be added as rear tire liquid (calcium solution), rear wheel weights, rear axle weights and/or three point hitch mounted ballast or implement. Ballasting will vary with tractor and loader attachment. Refer to the Tractor Manual for recommended ballasting.

Operation

General Operating Notes: The following section provides general information that can be applied towards your specific application. Ensure that you've read and understood this manual and your Tractor Manual. Observe all safety precautions and follow local laws pertaining to the use of your loader and tractor.

Hydraulics: Under normal conditions, operate the tractor's engine at 1/2 throttle.

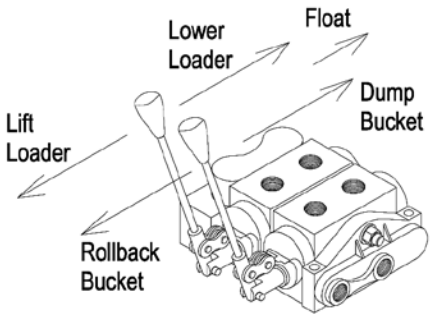
Note: In cold weather, tractors with load sense hydraulic systems require longer warm-up periods for the loader to respond when valve is operated.

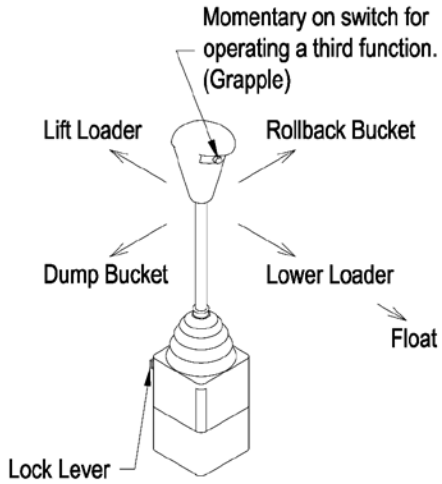
In cold weather, operate the tractor's engine at idle speed until the hydraulic fluid is warmed up. Slowly cycle the loader and attachment several times to further warm the hydraulic fluid. High engine speed when the hydraulic fluid is cold will cause the pump to wear prematurely and may cause the loader to operate erratically.

The hydraulic hoses should be connected to the loader valve such that when joystick is pulled back the loader rise and when pushing forward on joystick lowers the loader. (If joystick is pushed past the detent, the loader will go in to the float mode.) Move joystick to left to roll back the bucket an move to the right to dump.

The Allied Remote Hydraulic Control is equipped with a momentary push button switch and a lock. The push button is for operating a third function when an electric diverter is installed. The third function is normally for operating a grapple. When the button is depressed the valve ports are open to the grapple cylinders. Shifting the joystick to the left while button is depressed will close the grapple and shifting to the right will open.

Important: Always feather the grapple when closing or opening to avoid unnecessary shock loads on grapple components.





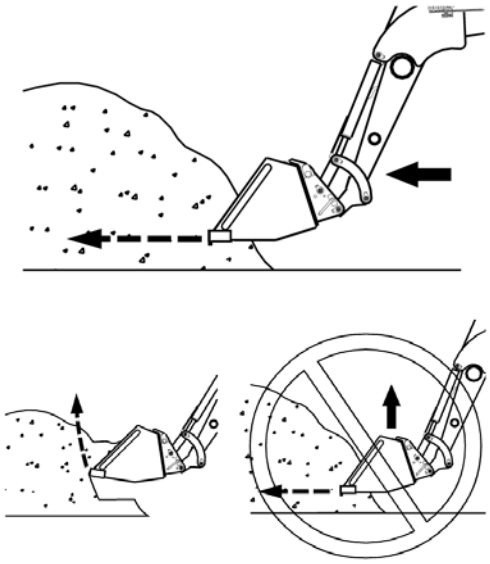
WARNING — Keep grapple closed at all times when bucket is empty and carry bucket low to the ground. Avoid operating near power wires.

All Allied by Farm King hydraulic valves are self-centering and return to neutral from all positions except float. The float or detent spool is only to be used on the boom circuit. This position allows the oil to freely flow through the valve so the lift cylinders can extend or retract. It can be engaged by slightly pushing control beyond full lower. Float will allow for the loader to lower and rise as the attachment follows the ground contours. To disengage float, slightly pull control back towards the neutral position. The Allied by Farm King Remote Hydraulic Control can be locked in the neutral position to minimize unintentional movement.

	CAUTION	Lower and dump heavy loads slowly by feathering. Stop tractor movement gradually. Never drop a loaded attachment and "catch" hydraulically. Stopping with such downward momentum may cause damage to the loader or tractor.

When handling heavy loads be sure to raise and lower the loader slowly while leveling the attachment as required. Feathering can assist in accurately controlling operations by regulating oil flow through cylinders.

A third function hydraulic control is available for grapple or other hydraulic applications. An optional divertor valve is connected to the loader attachment spool and is operated via the Allied by Farm King Remote Hydraulic Control momentary switch and simultaneously engaging the bucket spool through dump or rollback.



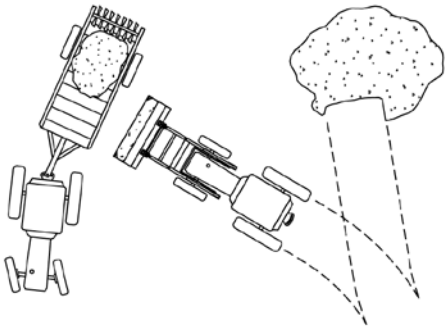
Bucket

When loading a bucket, approach straight and enter the pile with a level bucket parallel to the line of motion.

Important: Attempting to turn while loading may cause damage to the loader or tractor.

Work the controls to raise and rollback the bucket simultaneously. The combined actions of lift and bucket cylinders increases loading efficiency and minimizes resistance to lift.

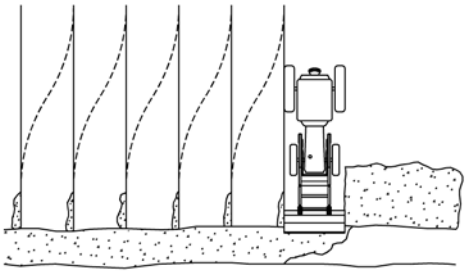
Note: On tractors with low hydraulic oil flows, both functions may not be possible



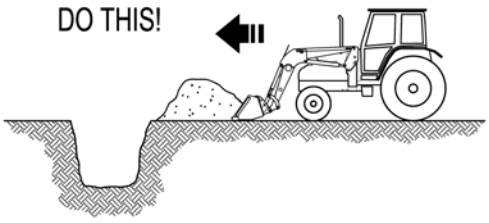
Minimize turning angle and length of run between pile and trailer to increase loading efficiency. Also, place load evenly or centered in the attachment.

WARNING

Carry the load no higher than necessary to clear the terrain. Turn and brake slowly. Always be sure that loading area is level and on solid ground. Do not raise loader higher then required while dumping. Immediately lower the loader to ground if the tractor becomes unstable.

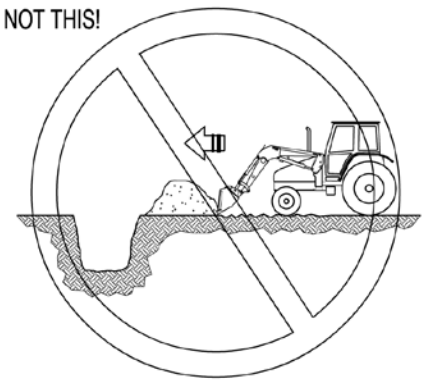


Leave material, which drifts over the bucket sides for final cleanup.

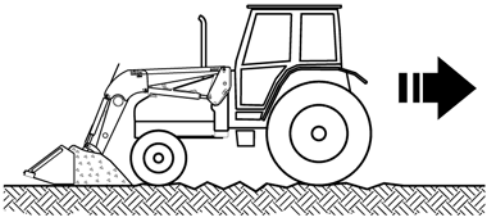


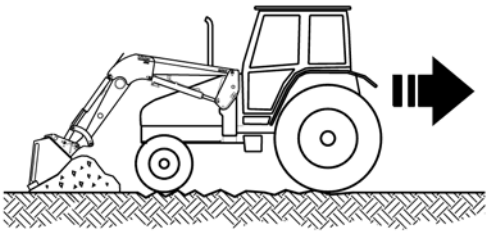
Backfilling or Scraping

For forward back filling, approach pile with a level bucket. Utilize the float position to minimize bucket cutting edge wear. Leave dirt in bucket. Dumping on each pass reduces efficiency.
Note: Use leveling rod for a guide to ensure bucket is level.

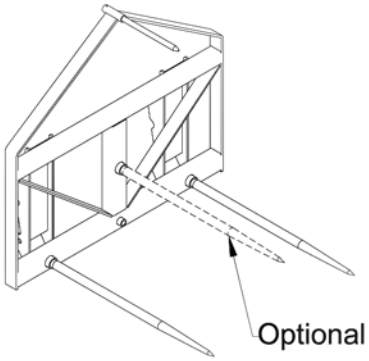


Do not use bucket in dumped position for forward grading. This will only impose severe shock loading on the bucket cylinders and it is difficult to maintain a level grade.





For back grading, either load the bucket and position the heel on the ground or position the bucket at 40° or less below level as shown. Place the valve in the float position and back up slowly. Important: Float position must be used to reduce down pressure, otherwise cylinder rod(s) and/or bucket damage could occur.

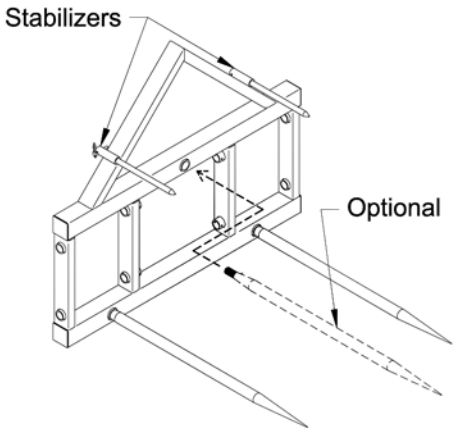


A Frame:

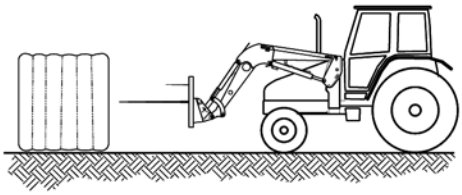
Regular Duty / Heavy Duty 60"

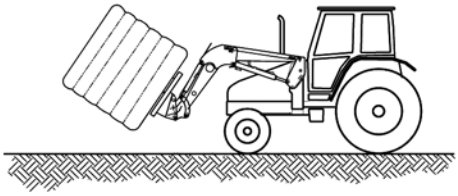
Both A-frames are for handling medium to large sized round bales (up to 2000 lbs) when fitted with two bottom 1240mm long heat treated spears and two short stabilizers. For pallet applications with a maximum payload of 4400 lbs when fitted with the 48.0” pallet fork kit.

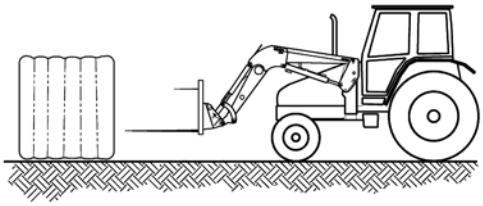
Note: The heavy duty frame can also be fitted using only the one center spear.

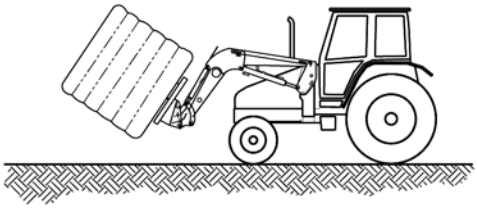


WARNING Do not operate A Frame for bales without stabilizers.









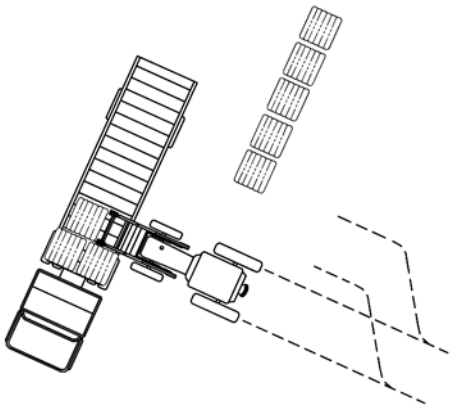
Handling bales and pallets:

For safe handling of bales and pallets please follow procedures below:

With a single spear, enter one of the ends of the bale and drive the spear horizontally into the center or slightly above center of the bale and fully penetrate the bale. Then rollback the bucket cylinders approximately three quarters of the cylinder stroke and lift bale approximately a foot off the ground.

With the double or four spears enter the bale from one of the ends and drive the spear one third to one half the way up, from the bottom and fully penetrate the bale. Then rollback the bucket cylinders approximately three quarters of the cylinder's stroke and lift bale approximately 12.0" off the ground.

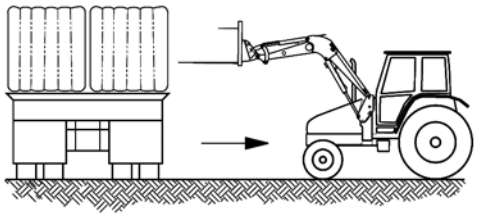
CAUTION Never attempt to use the spears as forks, as the spears can easily penetrate theground causing a spear to bend or break as well as making the bale unstable to carry. Never attempt to handle a bale with only part of the spear(s) penetrated. The nut on the bale spear must be torqued to 500 ft.-lbs. Check the torque periodically. A loose spear will damage the spear holder.



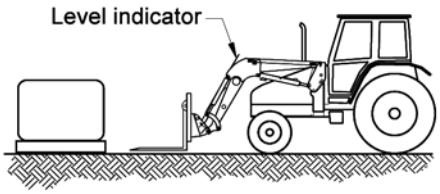
When loading bales onto a trailer, park trailer in close proximity to minimize turning angle and length of travel to increase loading efficiency.

As you lift the bale using the regular loader, it is recommended to feather the valve to allow bucket cylinders to extend to keep bale at about a 20° angle. (On TSL loaders this is not necessary) Lift the bale only enough to clear the area that the bale will be placed on. Always approach the trailer square to the tractor as shown.

CAUTION Avoid sudden stops and sharp turns. Avoid uneven terrain areas for loading and unloading.



After setting the bale down position the A Frame with spear(s) horizontal to the ground and slowly back the tractor straight out.



With pallet forks level and just above the ground, drive the forks into the pallet completely. Raise loader to lift pallet and carry level 6 to 12 inches off the ground. Note: The TSL loader is highly recommended when operating with pallet forks for maintaining a constant level load. Use the level indicator as a guide to ensure forks are level at ground.

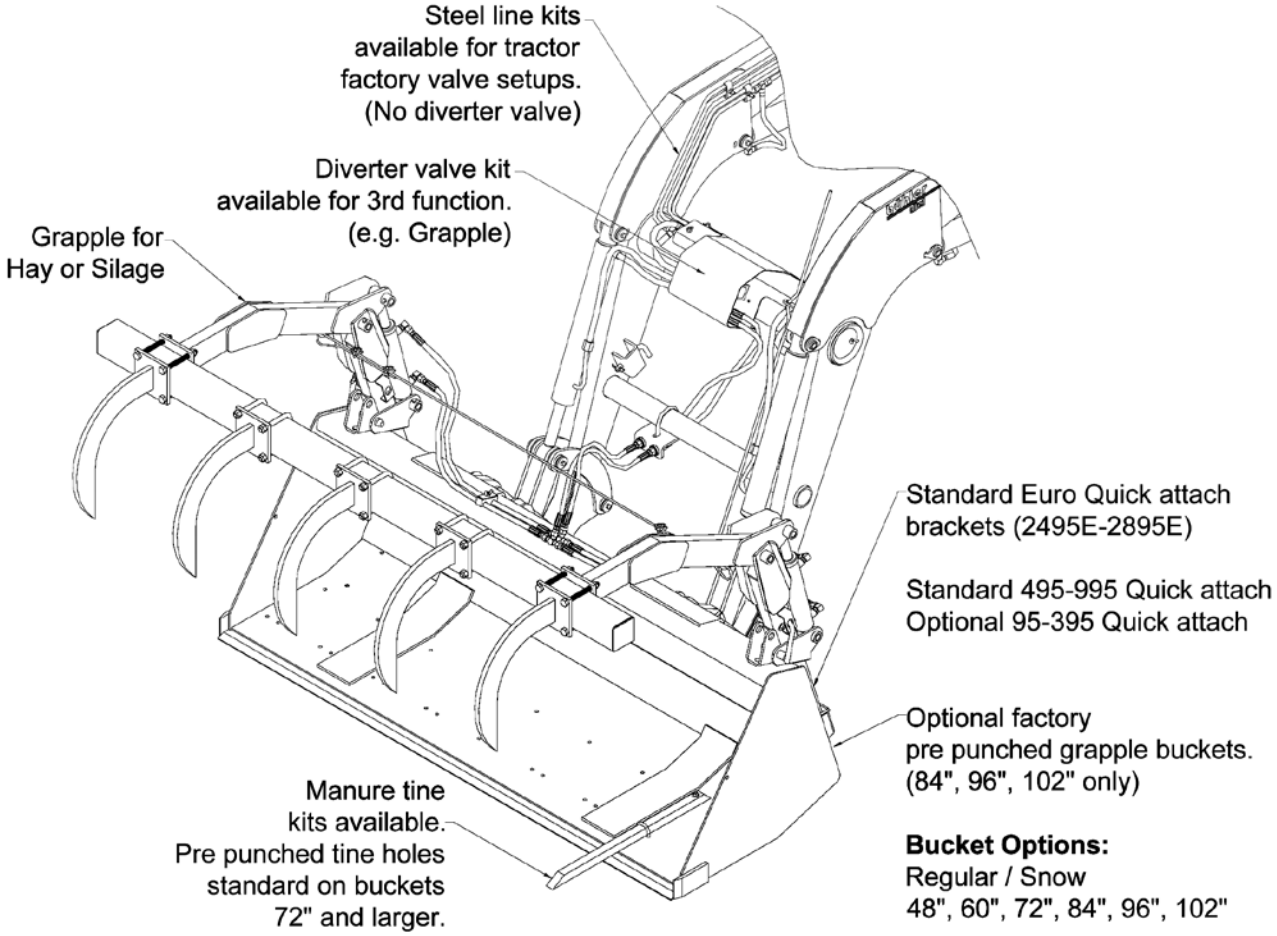
CAUTION Avoid sudden stops and sharp turns. Operate at low ground speeds. Never attempt to lift loads heavier than the rated fork specs (42" - 2200 lbs) (48" - 4400 lbs). Always lift or carry pallets using both forks and utilizing the full length of the forks.

WARNING When driving amongst livestock keep bucket cylinders retracted, and loader boom at least 6 to 7' off the ground. Store A Frame away from both play and heavy traffic areas.

Grapple:

The grapple is designed to safely prevent loads (bales, silage) from falling out of the bucket. (Refer to pictorial below for options listed)

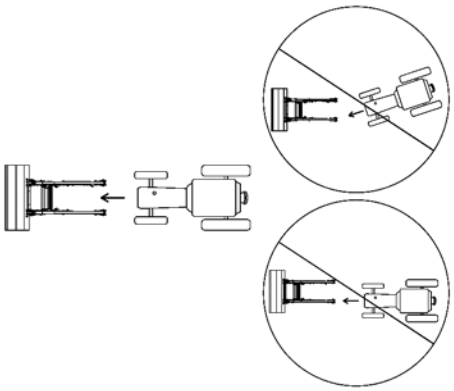
	WARNING	Travel at low speeds. Carry loads as low as possible. Avoid sharp turns and uneven terrain.

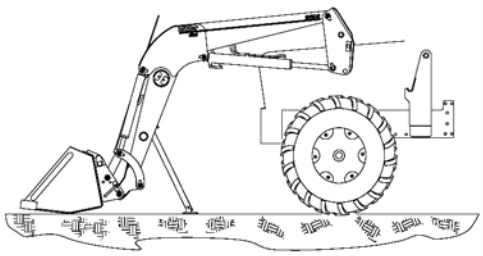


* New attachments are introduced regularly check with your dealer or Allied factory.
* Not all attachments are available for all models.

CAUTION

Prior to initial mounting, cycle loader cylinders to displace air. This ensures the loader will remain in the storage position and operate consistently.



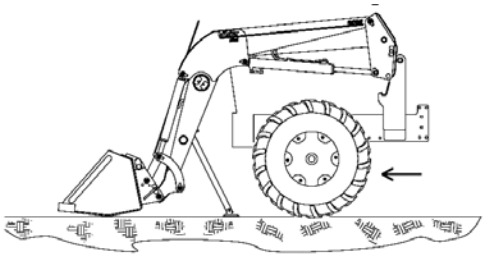


Installing Loader:

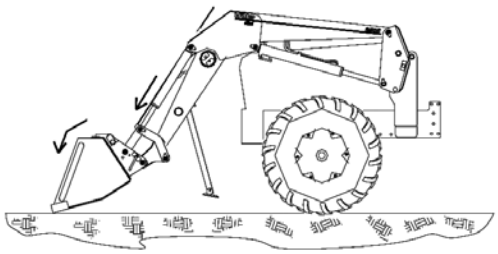
1. Position the tractor centrally and parallel to the loader uprights. Drive forward slowly until the loader hydraulic hoses can be coupled. Shut tractor off and set park brake. Couple the loader hoses to the matched color code identifiers on the auxiliary valve for proper orientation of loader operation.
2. Extend lift cylinders to tilt both loader uprights approximately 30 degrees. Rollback bucket to further raise upright for additional clearance. Both upright base pivots must be above the loader mount cradle.

CAUTION

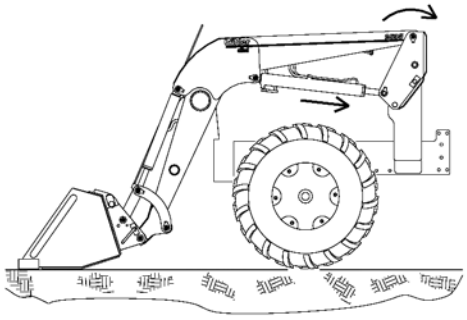
Verify front and side clearances during installation to position hydraulic hoses such that they will not be pinched or stretched during installation.

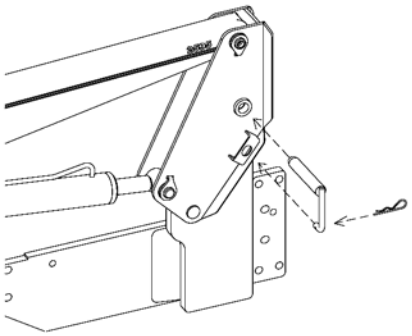


3. Slowly drive the tractor forward until the upright base pivot contacts the mount plate.
4. Slowly extend the bucket and retract the lift cylinders to lower the upright pivot into the mount plate cradle. Ensure both uprights are fully engaged within the mount plate cradle.



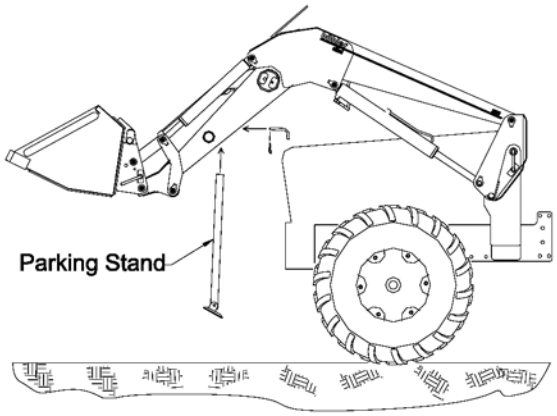
CAUTION	Shut tractor off and store parking stands within loader cross tube remembering to stand on the outside of the loader arms. Start the tractor and continue to cycle loader and attachment to verify loader operation.





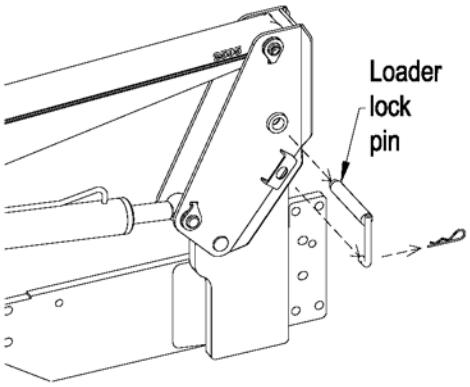
5. With the tractor in neutral, continue to retract the lift cylinders and extend the bucket cylinders to rotate the upright back against the lock pin stops. Shut the tractor off and set park brake.
6. Install both upright attachment pins and secure with hairpin clip. Start the tractor and slowly raise loader until the parking stands are off the ground.

CAUTION	Shut tractor off and store parking stands within loader cross tube remembering to stand on the outside of the loader arms. Start the tractor and continue to cycle loader and attachment to verify loader operation.



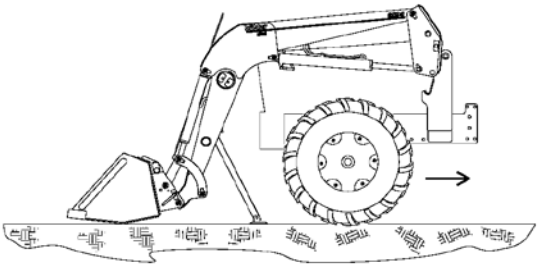
Removing Loader:

1. Raise loader to provide clearance to engage both parking stands. Shut off tractor. Standing along the outside of the loader arms remove parking stands from storage position and engage within the loader mainframe.



2. Lower attachment level to the ground while engaging float position. Ensure attachment rests firmly on ground with minimal downward pressure. If required extend bucket cylinders to rotate upright rearward. At this stage the pin should have no pressure. Set tractor park brake and remove loader lock pins. Check hydraulic hoses such that they will not get pinched or stretched during removal.

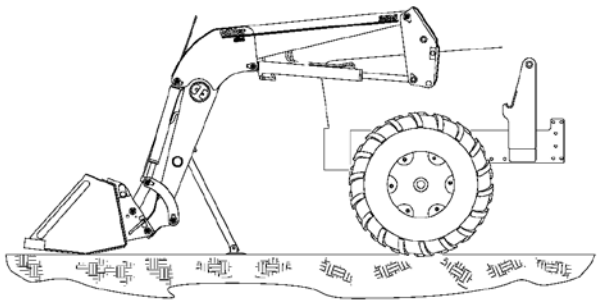
	CAUTION	Shut tractor off and store parking stands within loader cross tube remembering to stand on the outside of the loader arms. Start the tractor and continue to cycle loader and attachment to verify loader operation.



3. Retract bucket cylinders to raise upright and disengage from the loader mount cradle. If additional clearance is required, extend lift cylinders while slowly backing the tractor away from the loader.

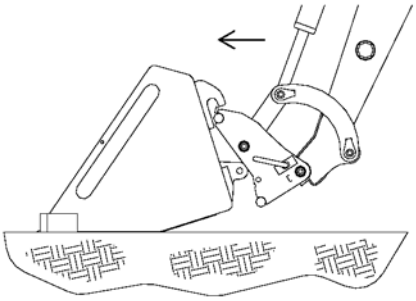
4. After the tractor is clear of the loader, retract all cylinders to protect the shafting. Shut tractor off and set park brake and relieve oil pressure in hoses by moving valve control. Disconnect hydraulic loader hydraulic hoses at the quick couplers.

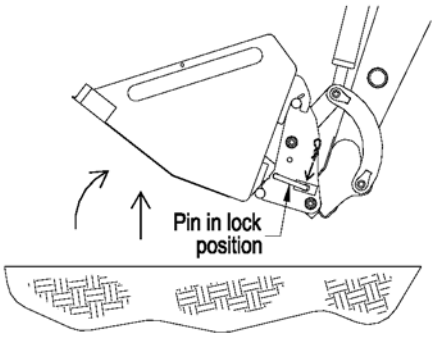
   Important: Cap both male and female couplers. Wrap loader hoses over loader arm.



CAUTION

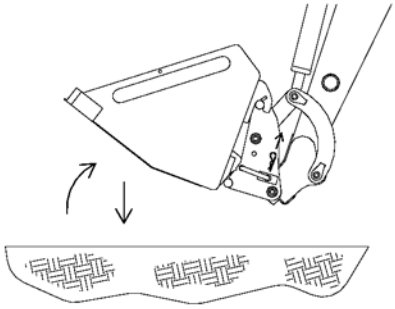
Verify attachment installation from tractor seat by lowering level attachment to ground and retracting the lift cylinders.





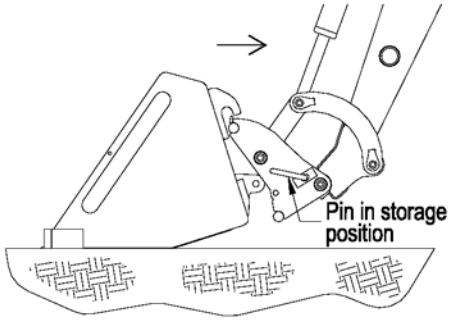
Installing Loader Attachments:

1. Position tractor centrally within the bucket hooks. Dump Quick-tach slightly from vertical position. Slowly drive the tractor forward until the Quick-tach contacts the bucket.
2. Slowly raise the loader to engage the Quick-tach within both bucket hooks. When both hooks are resting on the Quick-tach rollback the bucket. Shut tractor off. Lock using both Quick-tach pins and secure with hairpin clips.



Removing Loader Attachments:

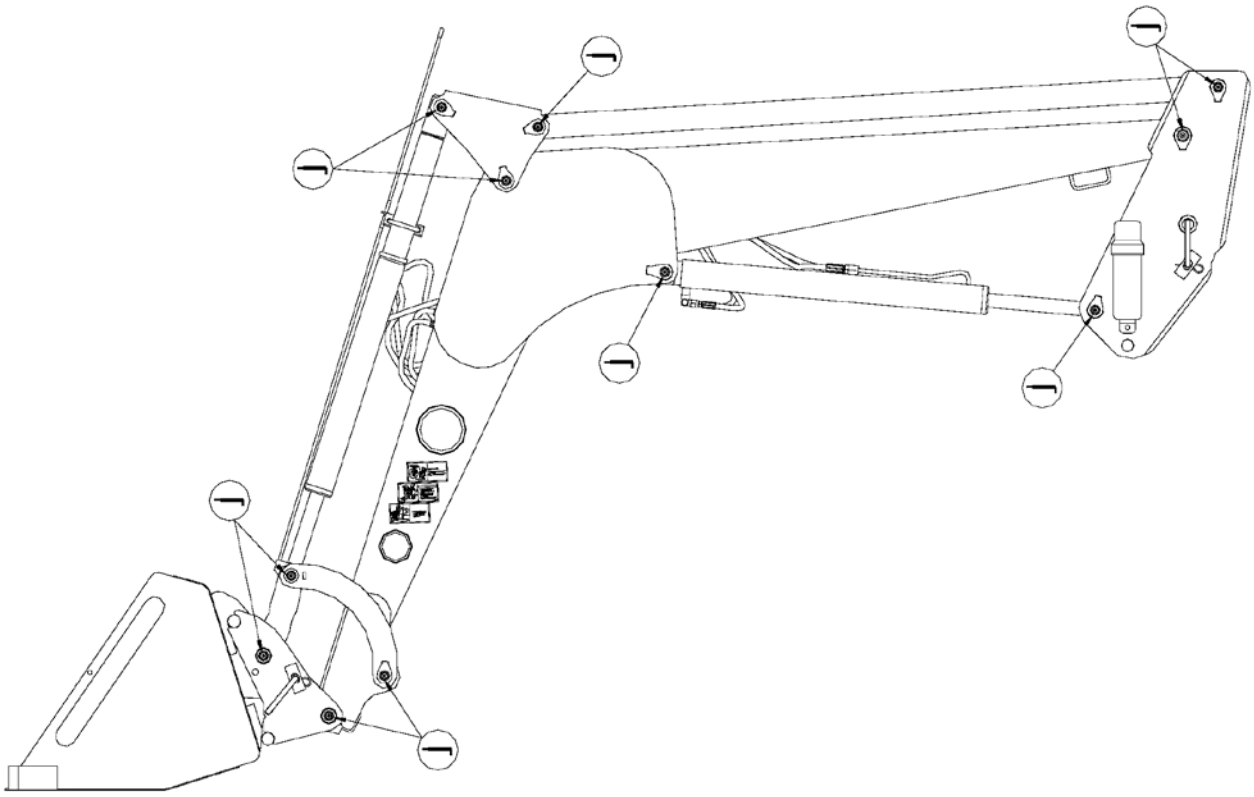
1. Rollback attachment and lower near ground position. Shut tractor off.
2. Remove both Quick-tach pins and place in storage position. Place level attachment on ground. Slowly dump attachment while backing tractor away.



Maintenance

Lubrication

Lubricate loader bushings and pivots every eight hours of average operation with high-grade grease. For grease fitting locations see illustration below. Select grease based on the expected outside temperature range. Lithium, Molybdenum and synthetic greases are preferred. Use the tractor hour meter as a guide. Increase lubrication intervals for extreme use or adverse conditions. Each pivot should be lubricated until grease is visible at pin.



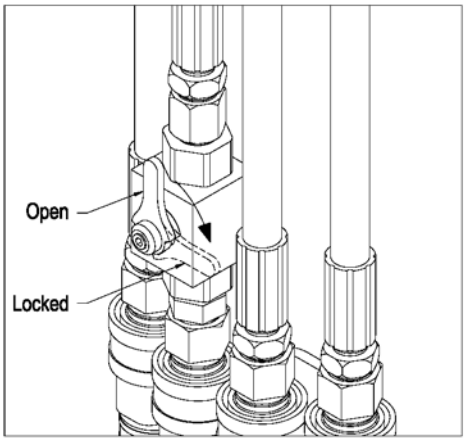
Important: Ensure that grease fittings accept grease. Should any fitting become plugged, replace immediately. Pivots not greased as specified would cause premature wear of pins and bushings.

General Inspection:

⚠	CAUTION	Lower attachment and loader to ground, place all controls in neutral, stop engine, set parking brake and remove ignition key before inspecting, servicing, adjusting or repairing loader.

⚠	WARNING	Relieve hydraulic pressure before repairing, adjusting or disconnecting hydraulics components. Escaping hydraulic oil can penetrate skin causing serious personal injury. If injured consult a physician immediately.

⚠	WARNING	Never work beneath a raised loader unless it is securely supported. The control lever can be moved or a hydraulic leak could cause the loader to drop resulting in serious injury or death. Refer to the hydraulic lift lock instructions decal for proper use of the lift lock.

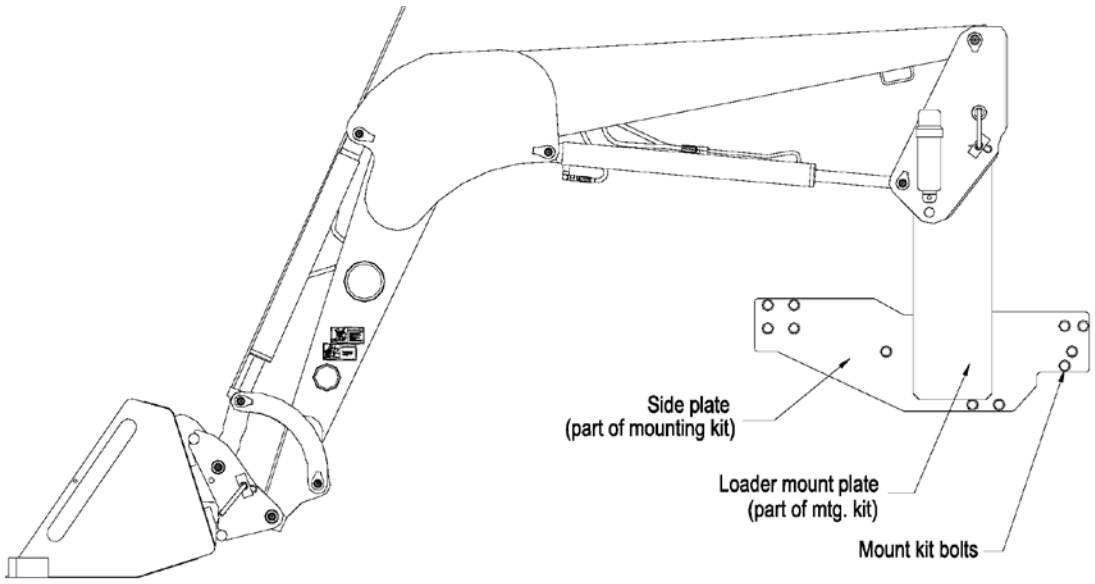


Hydraulic Lift Lock: the lift lock on your loader is to be used whenever someone is attempting to be under the loader or for tractor servicing. When using the lock ensure loader is free of any load in the loader attachment or no attachment.

To engage hydraulic lift lock, raise loader to desired service height. Rotate lever on hydraulic lock 90° clockwise to lock. Then lock joystick in neutral position. Do not use if there are any hydraulic leaks.

Pins and Bushings: Every 6 months or 1000 hours check loader and cylinder pivots for movement that would be due to bushing or pin wear. Change bushings when excessive movement is noticed and replace any worn or rough surfaced pins.

Mounting Kit: After the initial 2 weeks or 40 hours of loader operation, and 6-month intervals thereafter re-torque all mounting kit bolts. (See Bolt Torque Chart)



Hydraulics:

WARNING	Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before repairing, adjusting, or disconnecting lines, be sure to relieve all pressure. Before applying pressure to the system, be sure all connections are tight and the lines, pipes, and hoses are not damaged. Wear proper hand and eye protection when searching for leaks. Use a piece of wood or cardboard instead of hand to check for leaks. Maintain all components in good working order. If injured by escaping fluid, see a doctor at once. Serious infection or toxic reaction can develop if proper medical treatment is not administered immediately.

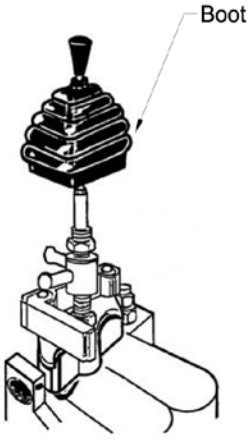
With loader attachment on the ground, check and add if necessary the approved hydraulic fluid. Refer to the Tractor Manual for proper inspection of fluid level, oil type and service intervals. Visually check hoses and fittings for leaks and damage on a daily bases. Ensure hoses do not bind or stretch during operation. Always keep hoses tied or supported to prevent rubbing against sharp areas or being pinched. We suggest using tie wraps to support hoses. Hoses routed from steel lines to cylinders should be in a relaxed position. To correct, loosen swivel end of hose and retighten.

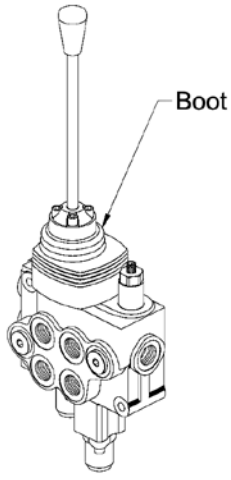
WARNING	Never operate the loader with frayed or damaged hoses or leaking fittings. A burst would cause the loader to drop suddenly and result in serious injury or death and cause damage to the loader or tractor.

Replacement hoses must be equal to a working pressure of 3000 PSI or higher.

A yearly inspection of the valve is recommended. However the maintenance intervals on the valve depends on the surrounding environment or if valve spools become stiff. Where temperatures fluctuate from one extreme to another or exposed to high salt the intervals for maintenance should be increased to protect from corrosion.

On non-cab tractors mounted with the joystick valve, slip back the boot and clean away any debris. Spray a corrosion resistant lubricant and remount the boot. Replace a torn or cracked boot.



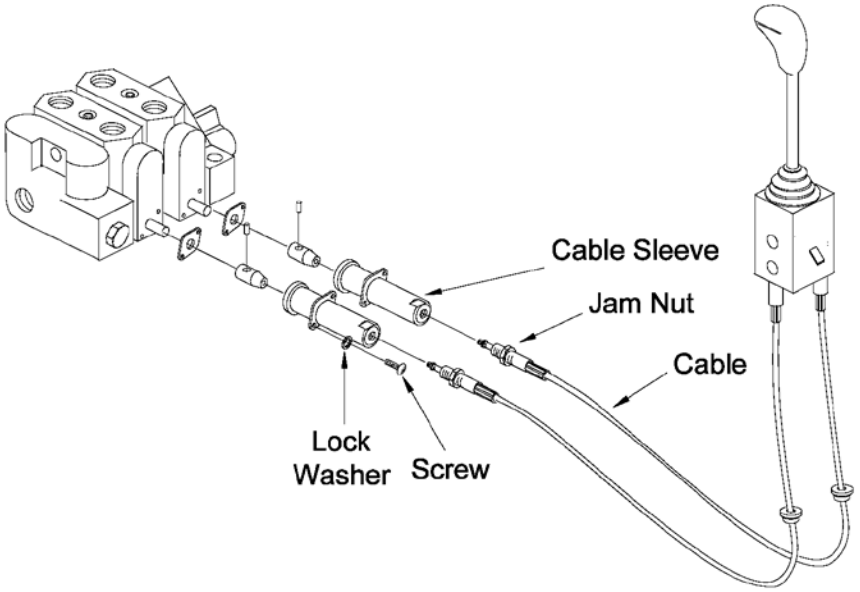


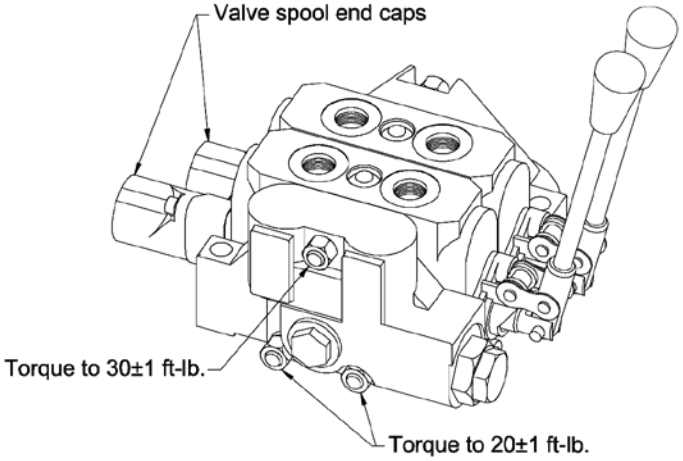
WARNING	Shut tractor down and relieve oil pressure in system by moving the control valve spools in both directions before doing any maintenance.

Maintenance involves yearly removal of valve spool end caps and cleaning all debris and corrosion. Spray area with a corrosive resistant lubricant and recap.

CAUTION	Never use grease to lubricate valve components where climate temperature drops below 0° as this could cause spools to jam.

On valves fitted with joystick cables loosen off jam nut and cable sleeves to gain access to the valve spool. Clean all debris and any existing corrosion. Spray areas with a light corrosion resistant lubricant. Re-mount cables sleeves and adjust so that joystick is centered in both axis to the base. Lock cable sleeve by using the jam nut. Note: In severe cold weather climates, inspect and maintain the valve and joystick cables before cold weather.





TSL General Note and Instructions

1. The true self leveling system (TSL) utilizes mechanical linkages to maintain bucket level while raising and lowering. The pivot plate weldment, leveling tubes and linkages have been developed to ensure that the bucket remains at the same position throughout its range of motion. This feature is standard with 2.50" and 3.00" diameter bucket cylinders.

2. The TSL system incorporates a relief and anticavitation manifold to provide extra dump at ground and rollback at full lift height. This feature is available on 3.00" bucket cylinders only. If the loader is raised with the bucket fully dumped, oil from the bucket piston side will be bypassed at high pressure to the bucket shaft side and the lift shaft side as the quickattach contacts the dump stop. If the loader is lowered with the bucket fully rolled back, oil from the bucket shaft side will be bypassed at high pressure to the bucket piston side and the lift piston side will provide makeup as the quick attach contact the rollback stop. Note that these two conditions are likely to occur intermittently and although the pump will be forced to supply oil at a higher pressure, no damage to the loader components will occur. It is, however, recommended to avoid the above situations and keep the bucket somewhat level while raising or lowering the loader for smoother operation.

3. The extra bucket stroke length allows for the bucket to be dumped to approximately 90° at ground. This allows for bucket assist when traction is minimal. If the loader is raised from this position, the bucket will retract as the quick attach contacts the dump stop and the circuit goes through relief as described in note 2.

4. Extra bucket retraction allows for the bucket to be rolled back as the loader raises. The TSL feature maintains the bucket level, but as required the bucket can be manually rolled back approximately 20° to allow for increased bucket capacity. If the loader is lowered from this position, the bucket will extend as the quick attach contacts the rollback stop and the circuit goes through relief as described in note 2.

5. The relief valve is factory set at 3250 PSI cracking pressure and is capable of bypassing 10-15 GPM. If loader lock-up should occur due to a low tractor relief setting, higher inlet flows or return line restrictions, the relief valve may be backed off slightly until the lock-up condition is overcome (counterclockwise turn of set-screw). Contact the factory for further instructions.

Troubleshooting

Problem	Possible Cause	Remedy
Loader slow and/or will not dump	Quick couplers leaking	Check connections and compatibility or replace
	Hydraulic oil too heavy	Change or replace filter
	Oil filter plugged	Clean or replace filter
	Hydraulic pump worn	Repair or replace pump
	Oil line restricted or leaking	Check all hoses and tubes for leaks, damage or restrictions
		Replace damaged or restricted hoses or tube lines
	Control valve does not shift properly	Inspect, clean, repair or replace valve
	Air in hydraulic system	Cycle lift cylinders and bucket cylinders several times to free system of air
	Cylinder leaks internally	Replace seals
	Faulty valve	Repair or replace valve
Loader chatters or vibrates when raising and lowering	Air leak in pump inlet line	Check, tighten or replace inlet line
	Air in hydraulic system	Cycle lift cylinders and bucket cylinders
	Oil level too low	Add oil as required
Excessive movement at pivots	Worn bushings and/or pins	Replace bushings and/or pins
Pump noisy	Inlet line restricted or leaking	Check for air leaks, restrictions or collapsed hose
		Tighten or replace hose
		Clean filter if necessary
	Oil level too low	Add oil as required
	Pump worn or damaged	Repair or replace pump
Oil leaks	Damaged fitting or hoses	Replace damaged parts
	Loose connections	Tighten fittings
	Worn or damaged o-ring wiper seal in cylinder rod end	Install a seal repair kit
Oil Leaks at valve	Worn or damaged o-rings at valve	Install an o-ring repair kit
	Solenoid or o-rings blown at cap or spool ends (restriction on return port or pressure plumbed to return port of valve)	Remove restriction or ensure valve is plumbed correctly

Problem	Possible Cause	Remedy
Insufficient lift capacity	Improper hydraulic pump operation	Repair or replace pump
	Load is greater than boom lift capacity	Check loader specifications
	Internal boom cylinder leakage	Replace any worn parts and install a seal repair kit
	Improper hydraulic valve operation	Repair or replace valve
Slow leak down	Worn control valve	Have authorized dealer replace seals
	Worn cylinder piston seals	
Excessive wear on bottom of bucket and wear pads	Float position not used while operating loader	Use float position provided on valve
Hydraulic cylinders inoperative	Hose from control valve improperly connected	Refer to plumbing diagrams
Pump operating continually on closed center tractor hydraulics system	Tractor control valve relief stuck open	See your service manual for proper adjustment
	Incorrect Auxiliary Valve	Check with loader dealer for proper valve application
	Hydraulic control valve set to low	Adjust valve in accordance with manual
Loader lift and bucket tilt controls do not work according to decal	Hoses improperly connected	Refer to plumbing diagrams and correct hose connections
Valve noisy and/or hot	Open center control valve on closed center tractor	Replace relief valve with closed center plug and plug the power beyond adapter on valve
Tractor loads/pump squeals	Closed center control valve on open center tractor	Install open center plug on optional valve
		Replaceclosed center plug with relief and install short plug in place of the power beyond adapter
Stiff control valve	Dirt or moisture build up on spool ends	Clean spool ends and if applicable cable ends at valve
	Incorrect torque (applies to sectional valves only)	Loosen and re-torque bolts to specs

Bolt Torque

Checking Bolt Torque

The tables shown below give correct torque values for various bolts and hex bolts. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

Standard Bolt Torque

Bolt Size (in)	Grade 2		Grade 5		Grade 8	
	Torque		Torque		Torque	
	ft-lb	NM	ft-lb	NM	ft-lb	NM
0.25	6	7	8	11	12	16
0.313	11	15	17	23	25	33
0.375	20	27	31	41	44	60
0.438	32	43	49	66	70	95
0.5	49	66	76	103	106	144
0.563	70	95	109	148	153	207
0.625	97	131	150	203	212	287
0.75	144	195	266	360	376	509
0.875	166	225	430	583	606	821
1	250	339	644	873	909	1232
1.125	354	480	795	1077	1288	1745
1.25	500	678	1120	1518	1817	2462
1.375	655	887	1470	1992	2382	3228
1.5	870	1179	1950	2642	3161	4283

Metric Bolt Torque

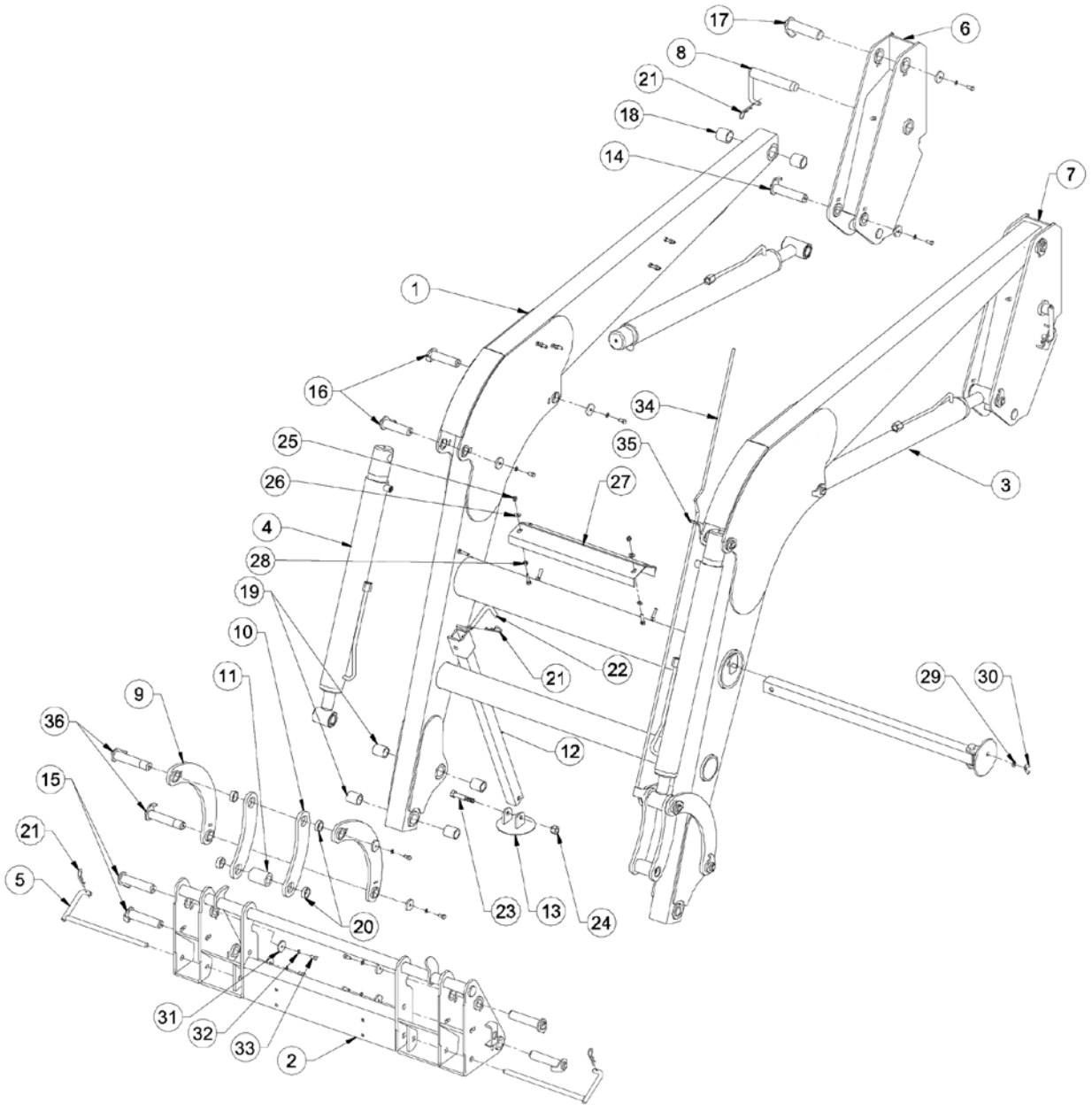
Bolt Size (mm)	Class 5.6		Grade 8.8		Grade 10.9		Grade 12.9	
	Torque		Torque		Torque		Torque	
	ft-lb	NM	ft-lb	NM	ft-lb	NM	ft-lb	NM
6	3.1	4.3	7.3	9.9	10.3	14	12.1	16.5
8	7.7	10.5	17.7	24	25	34	29	40
10	15	21	35	48	49	67	59	81
12	26	36	61	83	86.2	117	103	140
14	42	58	97	132	136	185	162	220
16	64	88	147	200	210	285	250	340
18	89	121	202	275	287	390	346	470
20	126	171	287	390	405	550	486	660
22	169	230	390	530	549	745	656	890
24	217	295	497	675	708	960	840	1140
27	320	435	733	995	1032	1400	1239	1680
30	435	590	995	1350	1401	1900	1681	2280
33	590	800	1349	1830	1902	2580	2278	3090
36	759	1030	1740	2360	2441	3310	2935	3980
39	988	1340	2249	3050	3163	4290	3798	5150

Hydraulic Fitting Torques					
Dash Size	Thread Size	Jam Nut or Straight ORB Fitting Torque		SAE 37° (JIC) Swivel Nut Torque	
		ft-lb	NM	ft-lb	NM
-04 -05 -06	7/16-20 1/2-20 9/16-18	14-16 18-20 24-26	20-22 24-27 33-35	10-11 13-15 17-19	13-15 18-20 23-26
-08 -10 -12	3/4-16 7/8-14 1-1/16-12	50-60 72-80 125-135	68-78 98-110 170-183	34-38 50-56 70-78	47-52 69-76 96-106
-14 -16 -20	1-3/16-12 1-5/16-12 1-5/8-12	160-180 200-220 210-280	215-245 270-300 285-380	80-90 94-104 124-138	110-122 127-141 169-188
-24	1-7/8-12	270-360	370-490	156-173	212-235

Prevailing Torque Locknuts				
Nut Size and Threads	Grade B Nuts Nut Tightening Torque		Grade C Nuts Nut Tightening Torque	
	ft-lb	NM	ft-lb	NM
Coarse Thread				
0.250-20 0.313-18 0.375-16	5-7 9-12.5 14.5-20	7-9 12-17 20-27	7-10 11-16 20-28	9-14 15-22 27-38
0.438-14 0.500-13 0.563-12	23-32 37-50 50-70	31-43 50-68 68-95	31-43 45-62.5 70-95	42-58 61-85 95-129
0.625-11 0.750-10 0.875-9	70-95 125-165 185-250	95-129 169-224 251-339	90-122.5 155-210 225-312.5	122-166 210-285 305-423
1.000-8	275-375	373-508	360-462.5	360-462.5
Fine Thread				
0.250-28 0.313-24 0.375-24	5.5-7.5 10-13 16-22	7-10 14-18 22-30	7-10 12-17 21-29	9-14 16-23 28-39
0.438-20 0.500-20 0.563-18	24-34 37.5-52.5 57.5-77.5	33-46 51-71 78-105	31-43 50-70 70-95	42-58 68-95 95-129
0.625-18 0.750-16 0.875-14	72.5-97.5 120-165 200-270	98-132 163-224 271-366	90-125 155-210 225-312.5	122-169 210-285 305-423
1.000-14	300-400	407-542	362.5-500	491-678

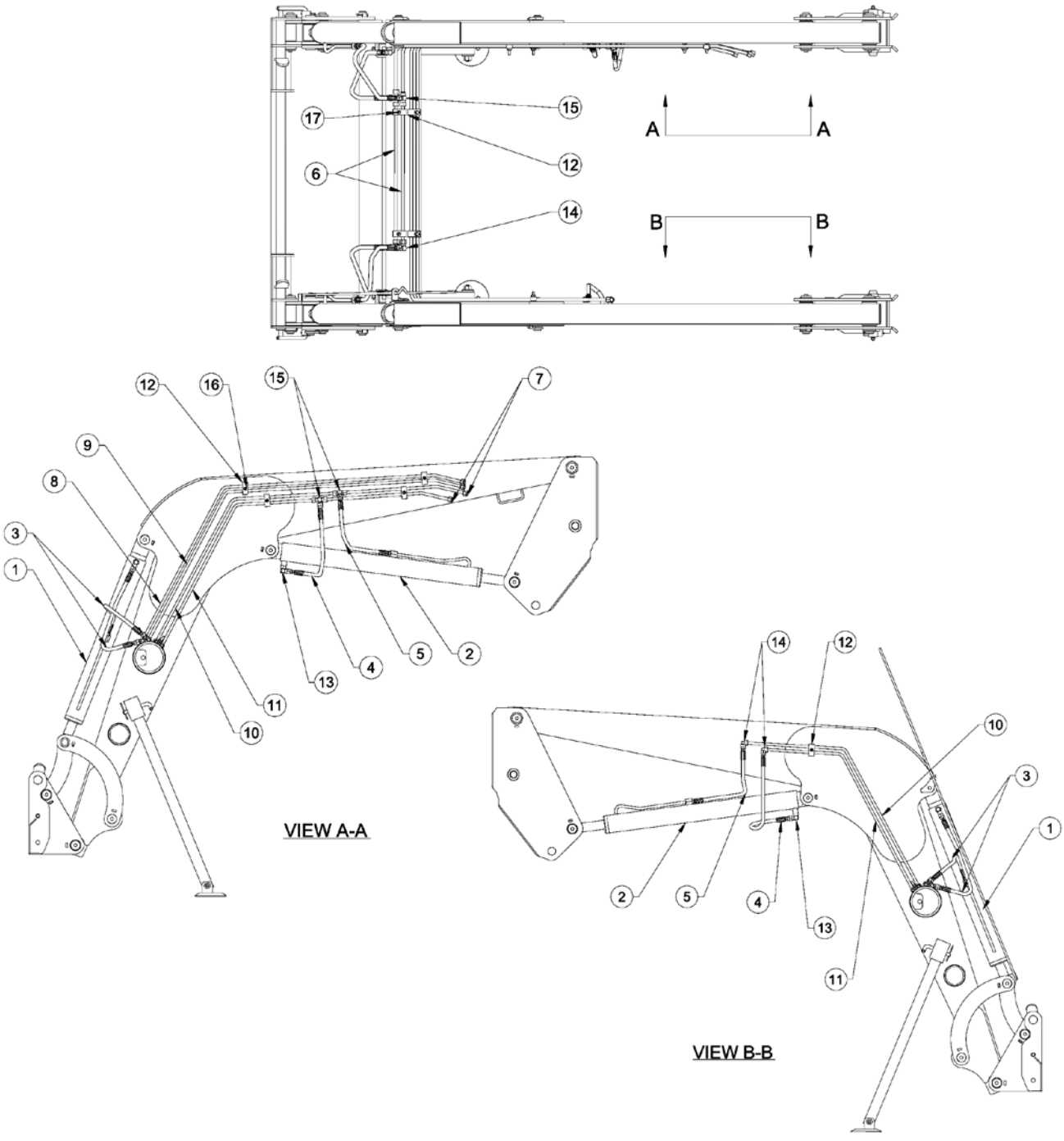
For Grade A locknut torque specifications refer to Grade B specifications

Main Frame Assembly



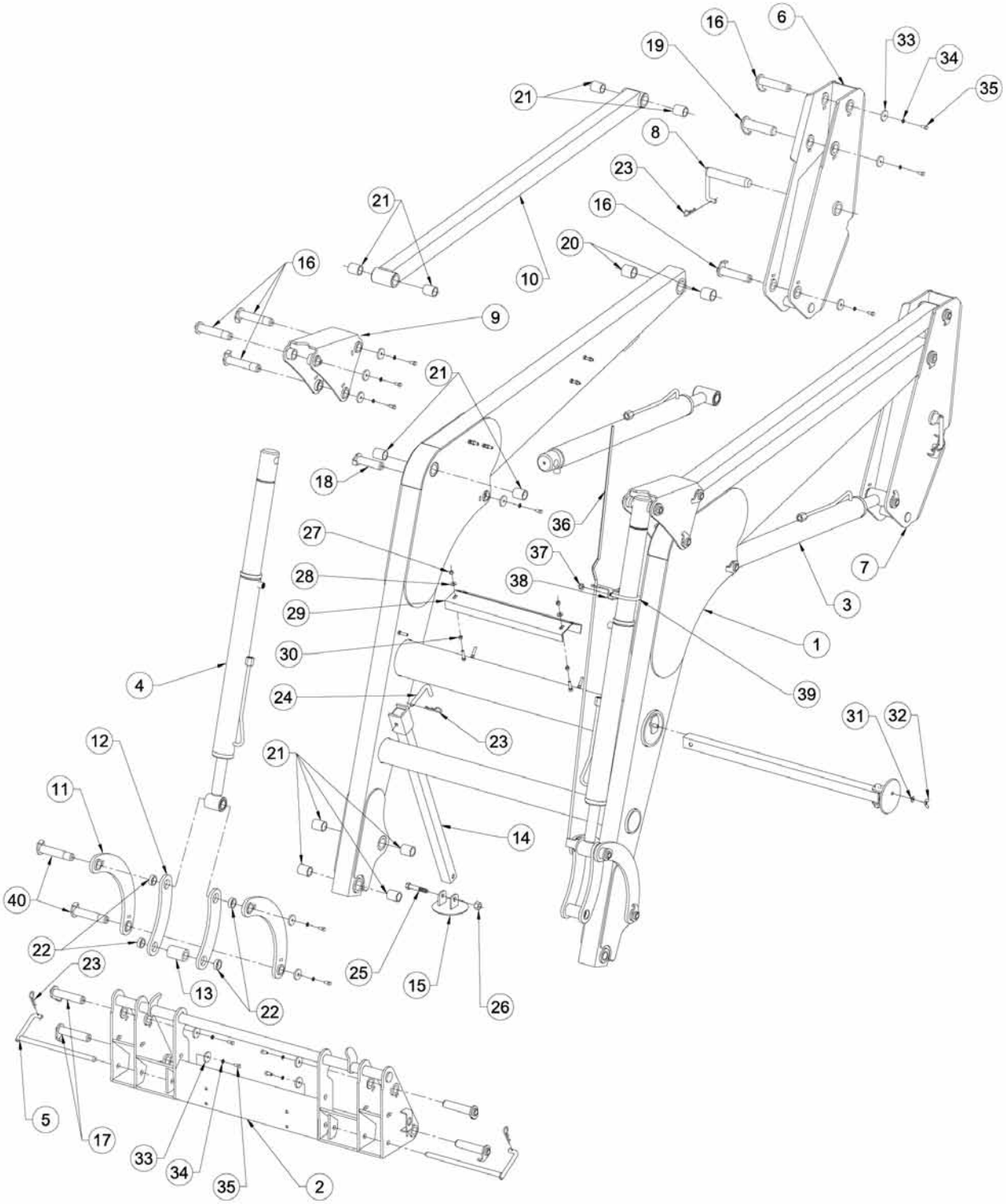
Item	Part #	Description	Qty 2895	Qty 2895S
1	24966	2895 Main Frame Weldment (113579, 113633 included)	1	
	24944	2895 S Main Frame Weldment (bushings included)		1
2	25165	2895 Quick Attach Weldment	1	1
3	Ref.	Lift Cylinder (see cylinder assembly)	2	2
4	Ref.	Bucket Cylinder (see cylinder assembly)	2	2
5	115585	Pin Weldment (quick attach)	2	2
6	24940	Upright Weldment Right	1	1
7	24939	Upright Weldment Left	1	1
8	115527	Pin Weldment (upright)	2	2
9	116344	Link Weldment 17.0"	4	4
10	116343	Link Assembly 10.50"	4	4
11	116349	Link Spacer	2	2
12	115486	Stand Tube	2	2
13	114303	Stand Foot	2	2
14	115906	Pin 1.25 Dia x 6.75	2	2
15	115904	Pin 1.25 Dia x 6.25	4	4
16	115900	Pin 1.25 Dia x 5.25	4	4
17	115908	Pin 1.50 Dia x 6.75	2	2
18	113579	Bushing 1.50 Id x 1.88 Od	4	4
19	113633	Bushing 1.25 Id x 1.63 Od	8	8
20	113691	Bushing 1.25 Id x 1.63 Od x 0.75 Lg	8	8
21	12779	Hair Pin Clip	6	6
22	110907	Stand Pin	2	2
23	81669	Hex Bolt 0.625 Unc x 3.5 Lg	2	2
24	81967	Nut Lock 0.625 Dia	6	6
25	81344	Nut Lock (Nylon) 0.375 Unc	7	9
26	81570	Flat Washer 0.375 Dia	4	4
27	24242	Cross Tube Cover	1	1
28	81592	Nut Hex 0.375 Unc Gr2 Pl	4	4
29	81637	Lock Washer 0.50 Dia	2	2
30	813228	Wing Nut 0.50 Dia	2	2
31	115909	Pin Cap	11	11
32	81615	Washer Lock 0.438 Dia	15	15
33	81597	Hex Bolt 0.438 Unc x 1.00 Lg Gr5 Pl	16	16
34	115564	Leveling Rod	16	16
35	115813	Leveling Rod Guide	1	1
36	116347	Pin 1.25 Dia x 7.25	4	4

Hydraulic Plumbing Assembly



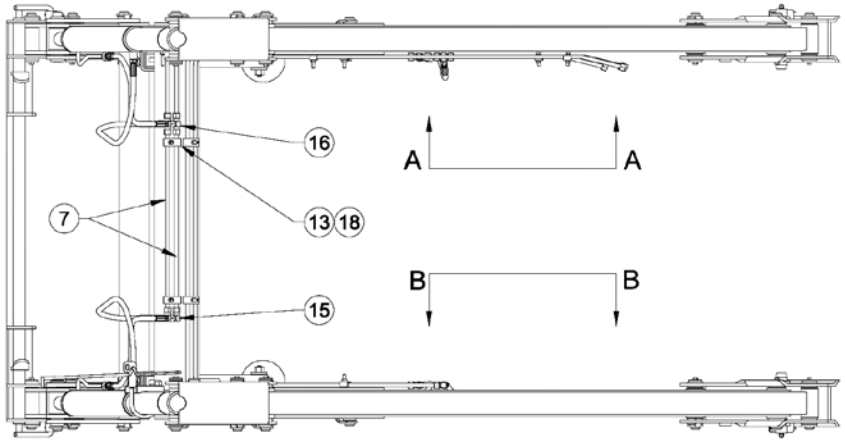
Item	Part #	Description	Qty 2895	Qty 2895S
1	Ref.	Bucket Cylinder (cylinder assembly for breakdown)	2	2
2	Ref.	Lift Cylinder (cylinder assembly for breakdown)	2	2
3	812703	Hose 3/8 x 22 3/4-16 Morb x 3/4-16 Swfjic	4	4
4	114492	Hose 3/8 x 22 3/4-16 Swfjic x 3/4-16 Swfjic	2	
4	812696	Hose 3/8 x 18 3/4-16 Swfjic x 3/4-16 Swfjic		2
5	114605	Hose 3/8 x 24 3/4-16 Morb x 3/4-16 Swfjic	2	
5	811754	Hose 3/8 x 18 3/4-16 Morb x 3/4-16 Swfjic		2
6	112837	Tubing Bucket Cyl Cross Tube	2	2
7	112937	Tubing Lift Cyl Common (31.0)	2	
7	113031	Tubing Lift Cyl Common (23.0)		2
8	115510	Tubing Bucket Cyl Top/Dump	1	
8	115701	Tubing Bucket Cyl Top/Dump		1
9	115511	Tubing Bucket Cyl Bottom/Rollback	1	
9	115702	Tubing Bucket Cyl Bottom/Rollback		1
10	115512	Tubing Lift Cyl Top/Drop	1	1
11	115513	Tubing Lift Cyl Bottom/Raise	1	1
12	11362	Clip Pipe Std	9	9
13	811414	Elbow 90 3/4 Morb x 3/4 Mjic	2	2
14	812128	Elbow 90 3/4 Mjic x 3/4 Mjic	4	4
15	812069	Tee 3/4 Mjic	4	4
16	81344	Nut Lock (Nylon) 0.375 Nc	9	9
17	81592	Nut Hex 0.375 Nc Gr2 Pl	4	4

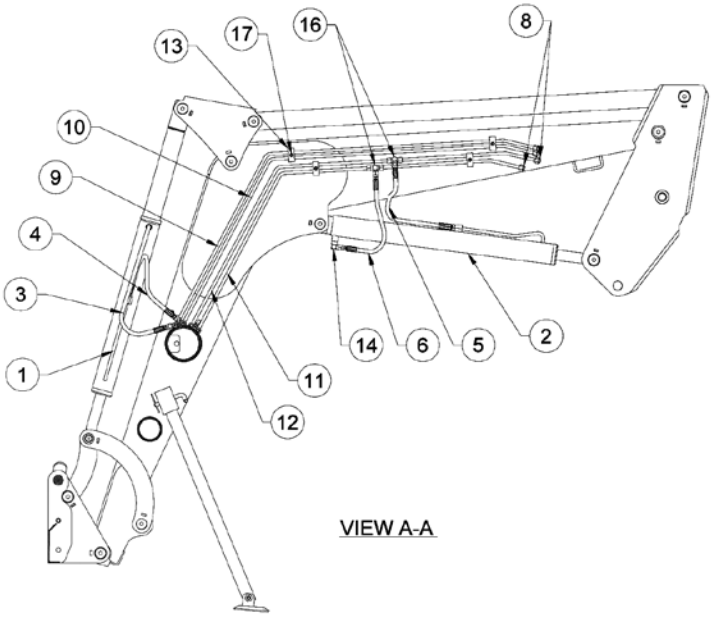
Main Frame Assembly - TSL



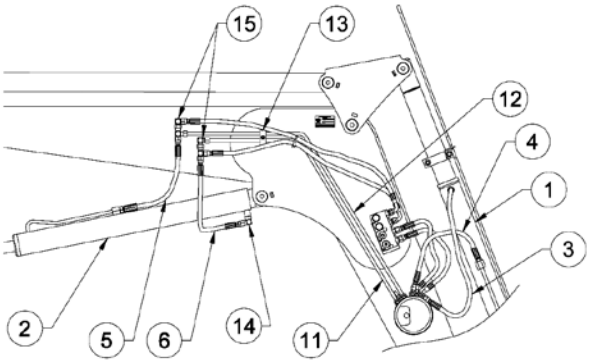
Item	Part #	Description	Qty 2895	Qty 2895S
1	24967	2895 Tsl Main Frame Weldment (bushings incl.)	1	
	24945	2895 S Tsl Main Frame Weldment (bushings incl.)		1
2	25165	2895 Quick Attach Weldment	1	1
3	Ref.	Lift Cylinder (see cylinder assembly)	2	2
4	Ref.	Bucket Cylinder (see cylinder assembly)	2	2
5	115585	Pin Weldment (quick attach)	2	2
6	24942	Upright Weldment Right (Tsl)	1	1
7	24941	Upright Weldment Left (Tsl)	1	1
8	115527	Pin Weldment (Upright)	2	2
9	115473	Pivot Plate	2	2
10	115583	Leveling Tube Weldment	2	
10	115475	Leveling Tube Weldment		2
11	116344	Link Weldment 17.0"	4	4
12	116343	Link Assembly 10.50"	4	4
13	116349	Link Spacer 2.0 Od x 2.5 Lg	2	2
14	115486	Stand Tube	2	2
15	114303	Stand Foot	2	2
16	115906	Pin 1.25 x 6.75	10	10
17	115804	Pin 1.25 x 6.25	4	4
18	115900	Pin 1.25 x 5.25	2	2
19	115908	Pin 1.50 x 6.75	2	2
20	113579	Bushing 1.50 Id x 1.88 Od	4	4
21	113633	Bushing 1.25 Id x 1.63 Od	20	20
22	113691	Bushing 1.25 Id x 1.63 Od x 0.75 Lg	8	8
23	12779	Hair Pin Clip	6	6
24	110907	Stand Pin	2	2
25	81669	Hex Bolt 0.625 Unc x 3.5 Lg	2	2
26	81967	Nut Lock 0.625 Unc	6	6
27	81344	Nut Lock (Nylon) 0.375 Unc	9	9
28	81570	Flat Washer 0.375 Dia	4	4
29	24242	Cross Tube Cover	1	1
30	81592	Nut Hex 0.375 Unc Gr2 Pl	4	4
31	81637	Lock Washer 0.50 Dia	2	2
32	813228	Wing Nut 0.50 Dia	2	2
33	115909	Pin Cap	22	22
34	81615	Washer Lock 0.438 Dia	22	22
35	81597	Hex Bolt 0.438 Unc x 1.00 Lg Gr5 Pl	22	22
36	115564	Leveling Rod	1	1
37	81966	Nut Lock (Nylon) 0.50 Unc	2	2
38	114969	Guide Bracket	1	1
39	115012	U-Bolt	1	1
40	116347	Pin 1.25 x 7.25	4	4

Hydraulic Plumbing Assembly - TSL

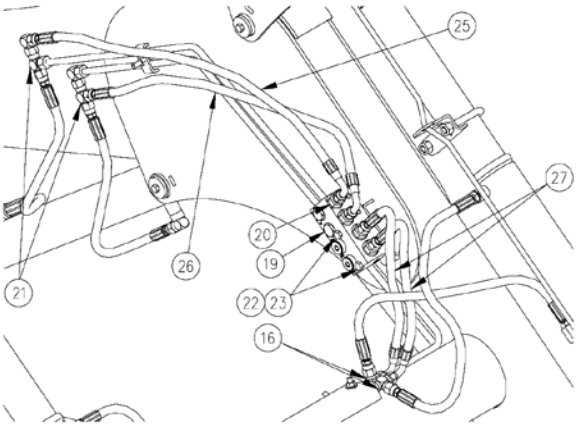




VIEW A-A



VIEW B-B



Item	Part #	Description	Qty 2895	Qty 2895S
1	Ref.	Bucket Cylinder (see cylinder assembly for breakdown)	2	2
2	Ref.	Lift Cylinder (see cylinder assembly for breakdown)	2	2
3	114605	Hose 3/8 x 24 3/4-16 Morb x 3/4-16 Swfjic	2	2
4	811467	Hose 3/8 x 36 3/4-16 Morb x 3/4-16 Swfjic	2	2
5	812703	Hose 3/8 x 22 3/4-16 Morb x 3/4-16 Swfjic	2	
5	811754	Hose 3/8 x 18 3/4-16 Morb x 3/4-16 Swfjic		2
6	114492	Hose 3/8 x 22 3/4-16 Swfjic x 3/4-16 Swfjic	2	
6	812696	Hose 3/8 x 18 3/4-16 Swfjic x 3/4-16 Swfjic		2
7	112837	Tubing Bucket Cyl Cross Tube	2	2
8	112937	Tubing Lift Cyl Common (31.0)	2	
8	113031	Tubing Lift Cyl Common (23.0)		2
9	115510	Tubing Bucket Cyl Top/Dump	1	
9	115701	Tubing Bucket Cyl Top/Dump		1
10	115511	Tubing Bucket Cyl Bottom/Rollback	1	
10	115702	Tubing Bucket Cyl Bottom/Rollback		1
11	115512	Tubing Lift Cyl.Top/Drop	1	1
12	115513	Tubing Lift Cyl Bottom/Raise	1	1
13	11362	Clip Pipe Std.	9	9
14	811414	Elbow 90 3/4 Morb x 3/4 Mjic	2	2
15	812128	Elbow 90 3/4 Mjic x 3/4 Mjic	2	2
16	812069	Tee 3/4 Mjic	6	6
17	81344	Nut Lock (Nylon) 0.375 Nc	9	9
18	81592	Nut Hex 0.375 Nc Gr2 Pl	4	4
19	25253	Hydraulic Manifold	1	1
20	886897	Adaptor Str 7/8 Morb x 3/4 Mjic	4	4
21	812786	Tee 3/4 Mjic x 3/4 Swfjic	2	2
22	812052	Bolt Hex 0.250Nc x 3.00 Gr5 Pl	2	2
23	81922	Nut Lock (Nylon) 0.250Nc x Grbpl	2	2
24	812075	Ty-Wraps	3	3
25	116940	Hose 3/8 x 44 3/4 Swfjic x 3/4-90 Swfjic	1	1
26	116941	Hose 3/8 x 36 3/4 Swfjic x 3/4-90 Swfjic	1	1
27	116942	Hose 3/8 x 20 3/4 Swfjic x 3/4-90 Swfjic	2	2

Assembly

Possible Attachment Interference (S2895 and 2895TSL)

Regular loader linkage setup allows for maximum rollback.

TSL loader linkage setup provides reduced rollback.

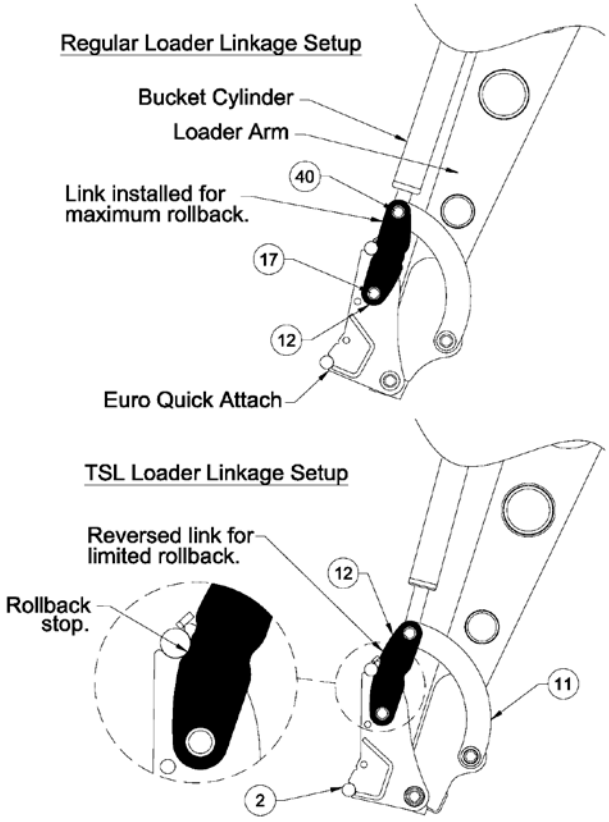
When fully rolled back, large attachments (such as the C2000 Grapple) may contact the 2895 or the 2895E STSL pivot plate. This interference is avoided in factory assembly by installing the linkages (item 12) in the limited rollback position. These linkages can be reversed to increase attachment rollback if large attachments are not used. See following description below to reverse links.

Before reversing the linkages, remove attachments and engage the hydraulic loader lock.

Remove the 1.25 x 7.25 pin (item 40) connecting the linkages (items 11 & 12).

Remove the 1.25 x 6.25 pin (item 17) connecting the linkages (item 12) to the quick attach (item 2).

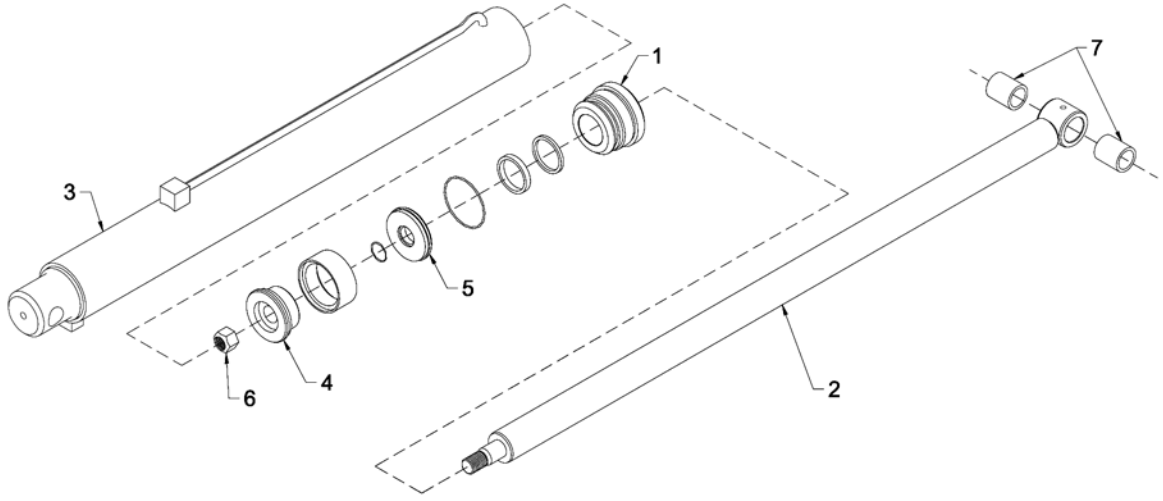
Reverse the four linkages (item 12), and reinstall pins and quick attach.



2895 Cylinder Assembly

Item	Description	Bucket Cylinders		Lift Cylinders	
		Regular	TSL	Regular	Short
	Diameter	3.00"	3.00"	3.50"	3.50"
	Length of Stroke	27.50"	24.50"	32.50"	32.50"
	Retracted Length	38.75"	52.25"	52.50"	45.25"
	Extended Length	66.25"	76.75"	85.00"	77.75"
	Cylinder Assembly No.	25166	25186	24607	24774
	Seal Kit No.	X1424	X1424	X1425	X1425
	Shaft Diameter	1.75"	1.75"	2.00"	2.00"
1	Head Plate	24606	24606	24430	24430
2	Shaft Weldment	116264	116368	113700	114719
3	Cylinder Tube Weld't	24949	24951	24785	24785
4	Piston Half (wide)	112862	112862	112940	112940
5	Piston Half (narrow)	112863	112863	112941	112941
6	Self-Locking Nut	813407	813407	810457	810457
7	Shaft Bushing	116342	116342	113633	113633

1. Bucket cylinder shown.
2. All cylinder seals are contained in corresponding seal kit.
3. Refer to Bolt Torque section for prevailing torque locknuts.



CAUTION Maximum pressure - 3000 psi

Allied by Farm King Limited Warranty

This document limits your warranty rights.

Base Limited Warranty

Buhler Industries Inc. provides this warranty only to original retail purchasers of its product. Buhler Industries Inc. warrants to such purchasers that all Buhler Industries Inc. manufactured parts and components used and serviced as provided for in the Operator's Manual shall be free from defects in materials and workmanship for a period following delivery to the original retail purchaser of 12 months (80 days for commercial applications). This limited warranty applies only to those parts and components manufactured by Buhler Industries Inc. Parts and components manufactured by others are subject to their manufacturer's warranties, if any.

Buhler Industries Inc. will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Buhler Industries Inc. within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Buhler Industries Inc. reserves the right to either inspect the product at the buyer's location or have it returned to the factory for inspection. Parts must be returned through the selling representative and the buyer must prepay transportation charges.

Buhler Industries Inc. will not be responsible for repairs or replacements that are necessitated, in whole or part, by the use of parts not manufactured by or obtained from Buhler Industries Inc. Under no circumstances are component parts warranted against normal wear and tear. There is no warranty on product pump seals, product pump bearings, rubber product hoses, pressure gauges, or other components that require replacement as part of normal maintenance. Also: Buckets and Bucket Tines carry no warranty, Bent Spears carry no warranty, Snowblower Fan Shafts carry no warranty, Mower Blades carry no warranty, Portable Auger Parts Have Two (2) Year Warranty, Loader Parts Have Two (2) Year Warranty. The purchaser is solely responsible for determining suitability of goods sold. This warranty is expressly in lieu of all other warranties expressed or implied. Buhler Industries Inc. will in no event be liable for any incidental or consequential damages whatsoever. Nor for any sum in excess of the price received for the goods for which liability is claimed.

Repair Parts Limited Warranty

Buhler Industries Inc. warrants Allied by Farm King replacement parts purchased after the expiration of the Buhler Industries Inc. Limited Warranty, and used and serviced as provided for in the Operator's Manual, to be free from defects in materials or workmanship for a period of thirty (30) days from the invoice date for the parts. Buhler Industries Inc. will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Buhler Industries Inc. within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Such parts must be shipped to Buhler Industries Inc. at the purchaser's expense.

What is Not Covered

Under no circumstances does this limited warranty cover any components or parts that have been subject to the following: negligence; alteration or modification not approved by Buhler Industries Inc.; misuse; improper storage; lack of reasonable and proper maintenance, service, or repair; normal wear; damage from failure to follow operating instructions; accident; and/or repairs that have been made with parts other than those manufactured, supplied, and or authorized by Buhler Industries Inc.

Authorized Dealer and Labor Costs
Repairs eligible for labor under this limited warranty must be made by Buhler Industries Inc. or an authorized Allied by Farm King dealer. Buhler Industries Inc. retains the exclusive discretion to determine whether it will pay labor costs for warranty repairs or replacements, and the amount of such costs that it will pay and the time in which the repairs will be made. If Buhler Industries Inc. determines that it will pay labor costs for warranty work, it will do so by issuing a credit to the dealer's or distributor's account. Buhler Industries Inc. will not approve or pay invoices sent for repairs that Buhler Industries Inc. has not previously approved. Warranty service does not extend the original term of this limited warranty.

Warranty Requirements
To be covered by warranty, each Allied by Farm King new product must be registered with Buhler Industries Inc. within thirty (30) days of delivery to original retail purchaser. If the customer decides to purchase replacement components before the warranty disposition of such components is determined, Buhler Industries Inc. will bill the customer for such components and then credit the replacement invoice for those components later determined to be covered by this limited warranty. Any such replacement components that are determined not be covered by this limited warranty will be subject to the terms of the invoice and shall be paid for by the purchaser.

Warranty Claims:
Warranty requests must be prepared on Buhler Industries Inc. Warranty Claim Forms with all requested information properly completed. Warranty Claims must be submitted within a thirty (30) day period from date of failure repair.

Warranty Labor:
Any labor subject to warranty must be authorized by Buhler Industries Inc. The labor rate for replacing defective parts, where applicable, will be credited at 100% of the dealer's posted shop rate.

Exclusive Effect of Warranty and Limitation of Liability

TO THE EXTENT PERMITTED BY LAW, BUHLER INDUSTRIES INC. DISCLAIMS ANY WARRANTIES, REPRESENTATIONS, OR PROMISES, EXPRESS OR IMPLIED, AS TO THE QUALITY, PERFORMANCE, OR FREEDOM FROM DEFECT OF THE COMPONENTS AND PARTS COVERED BY THIS WARRANTY AND NOT SPECIFICALLY PROVIDED FOR HEREIN.

TO THE EXTENT PERMITTED BY LAW, BUHLER INDUSTRIES INC. DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ON ITS PRODUCTS COVERED HEREIN, AND DISCLAIMS ANY RELIANCE BY THE PURCHASER ON BUHLER INDUSTRIES INC.'S SKILL OR JUDGMENT TO SELECT OR FURNISH GOODS FOR ANY PARTICULAR PURPOSE. THE PURCHASER'S ONLY AND EXCLUSIVE REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON PRODUCTS MANUFACTURED BY BUHLER INDUSTRIES INC. ARE THOSE SET FORTH HEREIN. IN NO EVENT SHALL BUHLER INDUSTRIES INC. BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BY WAY OF EXAMPLE ONLY AND NOT LIMITATION, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE, OR COST OF REPLACEMENT OF RENTAL EQUIPMENT). IN NO EVENT SHALL ALLIED BY FARM KING'S CONTRACT OR WARRANTY LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT.

(Note that some provinces or states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusion may not apply to you.) This warranty gives you specific legal rights and you may also have other rights, which vary from province to province or state to state.

Buhler Industries Inc. neither assumes nor authorizes any person or entity, including its selling representatives, to assume any other obligations or liability in connections with the sale of covered equipment, or to make any other warranties, representations, or promises, express or implied, as to the quality, performance, or freedom from defect of the components and parts covered herein. No one is authorized to alter, modify, or enlarge this limited warranty, or its exclusions, limitations and reservations.

Corrections of defects and improper workmanship in the manner, and for the applicable time periods, provided for herein shall constitute fulfillment of all responsibilities of Buhler Industries Inc. to the purchaser, and Buhler Industries Inc. shall not be liable in negligence, contract, or on any other basis with respect to the subject equipment.

This limited warranty is subject to any existing conditions of supply which may directly affect Buhler Industries Inc.'s ability to obtain materials or manufacture replacement parts.

Buhler Industries Inc. reserves the right to make improvements in design or changes in specifications to its products at anytime, without incurring any obligation to owners of units previously sold.

Government Legislation:
Warranty terms and conditions are subject to provincial or state legislation.

Important Note: This warranty does not apply to rentals.

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