

Montana
T R A C T O R S

OPERATOR'S MANUAL
INSTALLATION MANUAL
PARTS MANUAL

MODEL 100 LOADER

BASIC LOADER
QUICK ATTACH TOOLBAR
66" BUCKET

SERIAL NUMBER 1001 AND LATER

CONTENTS

SAFETY INFORMATION

Safety Alert Symbol..... 3

Safety Information 3

Safety Decals 8

Tractor and Safety Points..... 9

OPERATING INSTRUCTIONS

Operation..... 11

ASSEMBLY INSTRUCTIONS

Base Loader 16

Bucket Quick Attach Tool Bar 17

Bucket Level Indicator..... 17

SERVICE AND MAINTENANCE

Loader Parts Diagram and Identification Listing 20

Quick Attach Tool Bar 21

Cylinder Service Parts Breakdown 22

66" Quick Attach Bucket..... 23

Specifications 24

Torque Chart 25

SAFETY INFORMATION

SAFETY ALERT SYMBOL

The symbol shown below is used to call your attention to instructions concerning your personal safety. Watch for this symbol, it points out important safety precautions. It means **ATTENTION! Become Alert! Your Personal Safety Is Involved!**

Read the message that follows and be alert to the possibility of personal injury or death.

DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.

WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION: Indicates a potentially hazardous situation that, if not avoided may result in minor or moderate injury.



Anyone who will operate or work around a front-end loader should first read this manual.

IMPORTANT SAFETY PRECAUTIONS

This symbol is used to call attention to safety precautions that should be followed by the operator to avoid accidents. When you see this symbol, carefully read the message that follows and heed its advice. Failure to comply with safety precautions could result in serious bodily injury.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel in the operation, transport, maintenance and storage of equipment. Lack of attention to safety can result in accident, personal injury, reduction of efficiency and worst of all – loss of life. Watch for safety hazards and correct deficiencies promptly. Use the following safety precautions as a general guide to safe operations when using this machine. Additional safety precautions are used throughout this manual for specific operating and maintenance procedures. Read this manual and review the safety precautions often until you know the limitations.

THE TRACTOR AND/OR LOADER

1. Read the tractor and/or loader operator's manual to learn how to operate your tractor and/or loader safely. Failure to do so could result in serious injury or death and equipment damage.
2. It is recommended that tractor be equipped with Rollover Protective System (ROPS) and seat belt used for all loader operations.
3. Add wheel ballast or front weight for stability.

4. Move wheels to the tractor manufacturer's widest recommended settings to increase stability.
5. For better stability, use tractor with wide front axle rather than tricycle front wheels.
6. Move and turn the tractor at low speeds.
7. Stop tractor engine, place transmission in park (or neutral), engage parking brake, lower loader arms to ground, cycle all hydraulic controls to relieve pressure, allow machine moving parts to stop, remove ignition key to prevent unauthorized person from starting before tractor or servicing, repairing, or making adjustments to the equipment.
8. Wear personal protective equipment (PPE), such as, but not limited to, protection for eyes, ears, lung, head, hands and feet when operating, servicing, or repairing equipment. Avoid wearing loose clothing or jewelry that may catch and entangle on equipment moving parts.
9. DO NOT operate the loader unless it is rigidly attached to the tractor.
10. KNOW your controls. Read this operator's manual and the manual provided with your tractor. Learn how to stop the tractor, the engine and the loader quickly in an emergency.
11. PROVIDE adequate rear weight and/or wheel ballast to counter-balance the loader at all times. Total vehicle weight, including loader and counter weights, must not exceed the ROPS certificate for gross vehicle weight.
12. BE SURE the area is clear of overhead or underground utilities hazards.
13. POSITION a barricade around the work area.
14. KEEP all bystanders a safe distance away.
15. OPERATE from the tractor operator's seat only.
16. ALLOW only one person to operate the loader at any time.
17. WATCH for overhead wires. DO NOT touch wires with any part of the loader.
18. NEVER allow a person to work under a raised bucket.
19. NEVER lift a person with the loader.
20. DO NOT use the loader as a battering ram. Use the loader only for digging.
21. ALWAYS lower the loader bucket to the ground, shut off engine, and apply the parking brake before getting off unit, or when not digging.
22. NEVER leave the tractor unattended with the engine running.
23. This loader is designed for farm type operations such as removal, barn and feedlot cleaning, light commercial or light grading and digging. Its design is **NOT** intended for commercial and/or industrial use.

TRANSPORTATION

1. TRANSPORT all loads at slow and safe speed.
2. DO NOT drive the tractor near the edge of a ditch or excavation.
3. ALWAYS use accessory lights and devices when transporting on a road or highway to warn operators of other vehicles. Check your local government regulations.
4. BE SURE the SMV emblem is visible to the rear.
5. CARRY loads as low as possible and maintain adequate visibility and good ground clearance at all times.

ADJUSTMENTS AND INSPECTION

1. CHECK pins that attach loader to tractor and all pivot pins for tightness several times daily. Replace any parts that are bent, broken or missing.
2. If loader is to be disengaged from tractor, be sure the loader is securely supported on a hard, level surface and the stand is securely engaged. Be certain all connections between tractor and loader are free before disengaging.
3. DO NOT oil, grease, or adjust the loader while it is in motion. For greasing, see Service section for details.
4. DO NOT change any loader relief valve settings. They are factory set for best loader performance and safety.
5. PROTECT YOUR EYES – WEAR SAFETY GLASSES.
6. GUARD AGAINST INJURY when driving connecting pins or performing any repair in which particles can chip from work piece or striking tool.
7. DO NOT remove any guards on loader or tractor.

AVOID HIGH-PRESSURE FLUIDS



ESCAPING fluid under pressure can have sufficient force to penetrate the skin and cause serious injury. Be sure to stop engine and relieve all pressure before disconnecting lines. Be sure all connections are tight and that lines, pipes, and hoses are not damaged before applying pressure to the system. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood – not your hands – to search for suspected leaks.

SEE A DOCTOR at once if injured by escaping fluid. Serious infection or gangrene can develop if proper medical treatment is not administered immediately.

PERFORMING MAINTENANCE

Carefully review, understand, and follow the “maintenance” section in this owner's manual before attempting to service loader.

Lower the bucket or attachment to the ground, shut off tractor engine, and relieve pressure in the hydraulic system before adjusting, lubricating, or servicing the loader.

Escaping hydraulic oil under pressure can penetrate the skin. Never use any part of your body to check for hydraulic leaks. Use cardboard when checking for leaks. Relieve hydraulic pressure before disconnecting any hydraulic line. Failure to heed may result in serious injury or death.

Before disconnecting hydraulic lines, lower the loader and attachments. Lock out the hydraulic supply and relieve all hydraulic pressure.

Replace any damaged or painted-over decals.

REMEMBER:

1. Move Slowly!
2. Always use care and common sense!
3. Be careful for your own sake and for that of others!
4. Amerequip Corporation includes all reasonable means for accident prevention except a safe and careful operator.

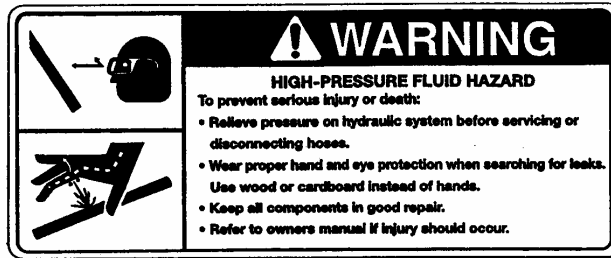
AVOID HIGH-PRESSURE FLUIDS



ESCAPING fluid under pressure can have sufficient force to penetrate the skin and cause serious injury. Be sure to stop engine and relieve all pressure before disconnecting lines. Be sure all connections are tight and that lines, pipes, and hoses are not damaged before applying pressure to the system. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood – not your hands-to search for suspected leaks.

SEE A DOCTOR at once if injured by escaping fluid. Serious infection or gangrene can develop if proper medical treatment is not administered immediately.

SAFETY DECALS



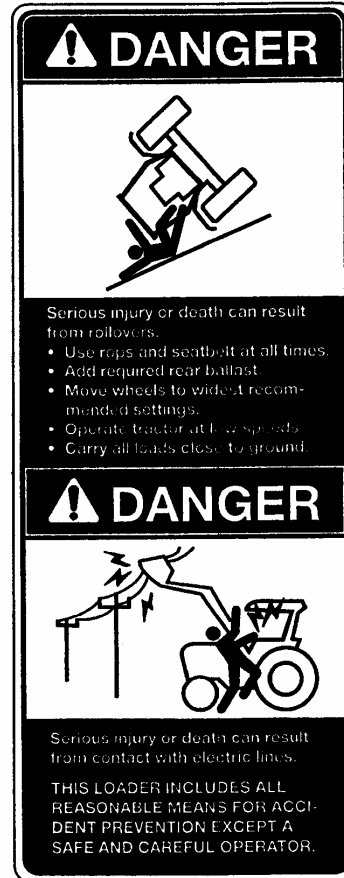
PART NO. 20180



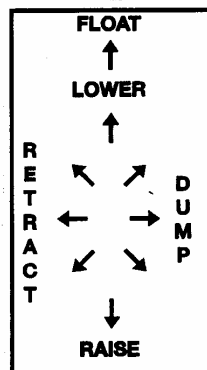
PART NO. 20178



PART NO. 20177



PART NO. 20179



INFORMATIONAL
DECAL

PART NO. 20182

TRACTOR & SAFETY POINTERS

The use of good judgment and common sense is necessary by the operator in using this loader. The front and rear wheels should be set for the widest wheel tread to assure best stability. Use extra caution when rear wheel weights and tire ballast are added to a loader-equipped tractor. DO NOT ram into frozen dirt piles, frozen manure piles, ice, etc... with great momentum where sudden shock loads are encountered. Serious and costly damage may result to both the loader and the tractor.

Do not use a bucket to scrape or as a dozer blade, unless the bucket is tilted so that the bucket stops are in contact with the boom. A limited amount of leveling may be done, when the loader valve is arranged with a float control. This will prevent damage to cylinder rods. Never ride in bucket.

Before operating the loader, be sure no one is standing near it. Only one person, the operator, should be on the tractor. Remain at the controls and under no circumstances leave the tractor unattended with the bucket in a raised position.

Never lift a person in the bucket or walk under a raised bucket.

Never drive your loader-equipped tractor down a hill that is steeper than 15 degrees. Carry all loads low and use care on side hills.

Always keep unused PTO shaft clutch levers disengaged.

Keep hands, feet, and clothing away from all moving parts.

Hydraulic oil, under pressure, can cause injury. Be sure that all connections are tight and that all pressure is relieved before disconnecting any lines.

Care must be taken with your loader cylinders. Nicks, scratches, rust, or other shaft damage can result in worn packing causing cylinder leakage and subnormal performance.

MOVE SLOWLY

USE COMMON SENSE

BE CAREFUL FOR YOUR OWN SAKE AND THAT OF OTHER PEOPLE

IMPORTANT FEDERAL LAWS AND REGULATIONS* CONCERNING EMPLOYERS, EMPLOYEES AND OPERATIONS.

*(This section is intended to explain in broad terms the concept and effect of the following federal laws and regulations. It is not intended as a legal interpretation of the laws and should not be considered as such).

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

This Act Seeks:

“...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources...”

DUTIES

Sec. 5(a) Each employer-

- (1) shall furnish to each of his employees employment and a place of employment, which are free from recognized hazards that are causing or likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.
 - (b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act, which are applicable to his own actions and conduct.

OSHA Regulations

Current OSHA regulations state in part: “At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved.” These will include (but are not limited to) instructions to:

- Keep all guards in place when the machine is in operation.
- Permit no riders on equipment.
- Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.
- Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.

EMPLOYEE TRACTOR OPERATING INSTRUCTIONS:

1. Securely fasten your seat belt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going, especially at row ends, on roads, and around trees.
6. Do not permit others to ride.
7. Operate the tractor smoothly – no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by tractor manufacturers.
9. When tractor is stopped, set brakes securely and use park lock if available.

Child Labor Under 16 Years Old

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situations. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

OPERATION

REMOVING LOADER FROM TRACTOR



WARNING

Never attempt to remove the loader from the tractor unless the bucket is installed.

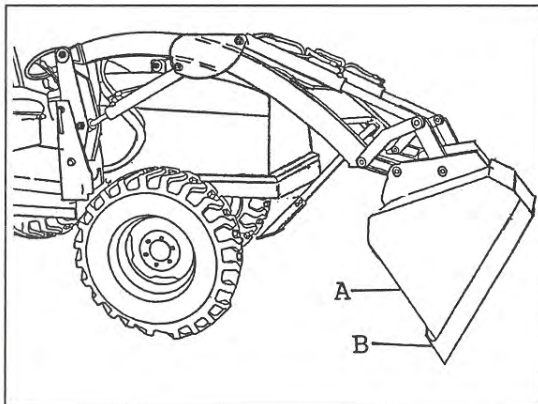
1. Position the tractor and the loader on firm level ground.



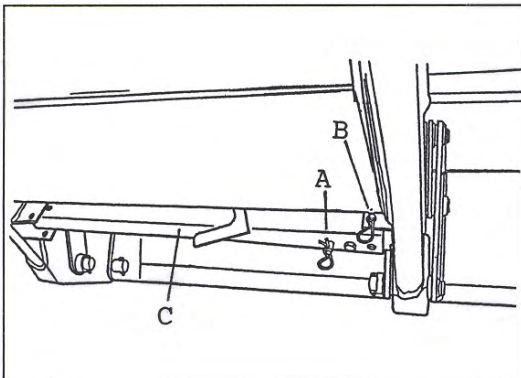
WARNING

Never attempt to unfold the loader support leg unless the bucket is resting on the ground.

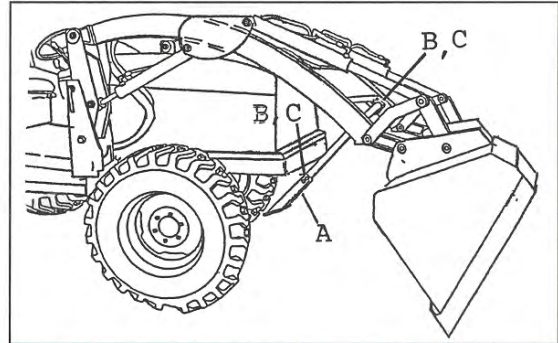
2. Lower the bucket, A, in the extended, dump position, with the bucket cutting edge, B, resting on the ground. Stop the engine on the tractor and set the parking brake.



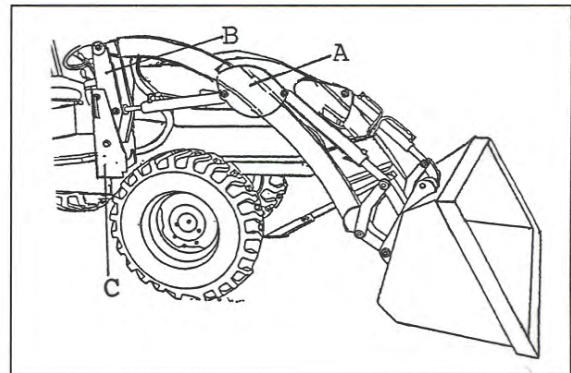
3. Remove the clips and pins, A and B, from the loader support leg, C.



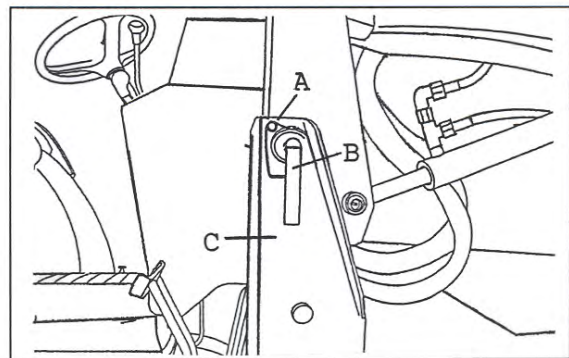
4. Unfold the loader support leg, A, and install the pins and clips, B and C as shown below.



5. Start the engine and return the bucket to the level position, resting on the ground. Activate the lift control lever to lower the loader arms, A, raising the front wheels slightly off the ground. This will move the loader arm uprights, B, rearward against the mount uprights, C, to ease removal of the lock pins. Stop the tractor engine.



6. Remove the safety pin and clip, A, from the loader arm lock pin, B. Remove the lock pin, B, from the loader arm and the mount upright, C. Repeat this step on the opposite side.

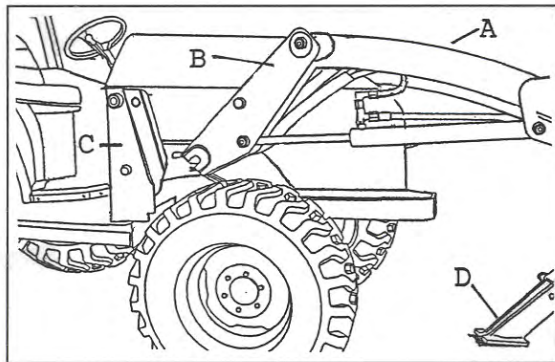


7. Start the tractor engine and release the brakes. Retract the bucket cylinders until the bucket is sitting on the back with the cutting edge raised and the loader arm uprights, B, raised out of the mounting uprights, C. Activate the loader control lever to raise the loader arms, A, allowing the loader arm uprights, B, to unseat from the mounting uprights, C, and the support leg, D, to rest on the ground.



WARNING

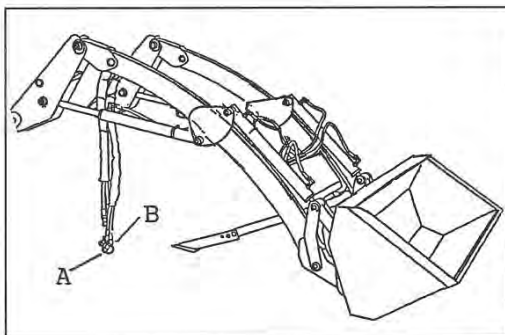
Make sure the hydraulic hoses are free as the tractor is backed away from the loader.



8. Slowly back the tractor away from the loader to allow enough room to gain access to the quick couplers, on the hydraulic lines. Shut off the engine on the tractor and set the parking brake.

9. Activate the loader control lever to relieve the pressure in both the bucket and lift hydraulic circuits. Disconnect the four quick couplers, and install clean dust caps on all couplers on the tractor.

10. Install clean dust caps, A, on all hose end couplers, B. Position the hose ends so they do not come in contact with the ground.



MOUNTING LOADER ON TRACTOR

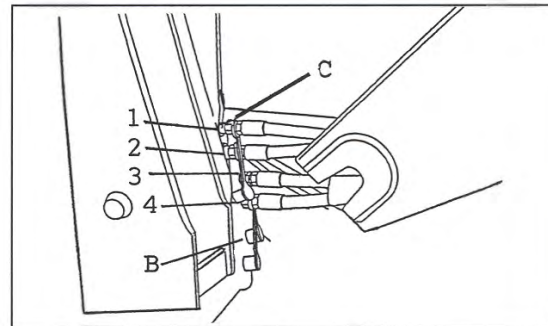
1. Start the engine on the tractor and release the parking brake. Slowly drive the tractor into the loader until the hoses reach from the loader to the tractor. Set the parking brake and shut off the engine on the tractor.

2. Activate the loader control lever to relieve the pressure in both the bucket and the lift hydraulic circuits.

3. Remove the dust caps, B, from the four quick couplers, C. Make sure the couplers are clean and connect the loader hoses to the tractor, matching the color-coded rings to make certain the proper connections are made.

Hydraulic Couplers Identification

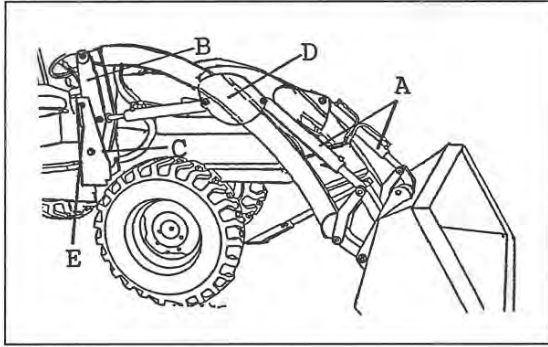
- 1 - (Red) Bucket Cylinder Rod
- 2 - (Blue) Bucket Cylinder Base
- 3 - (Green) Lift Cylinder Base
- 4 - (Yellow) Lift Cylinder Rod



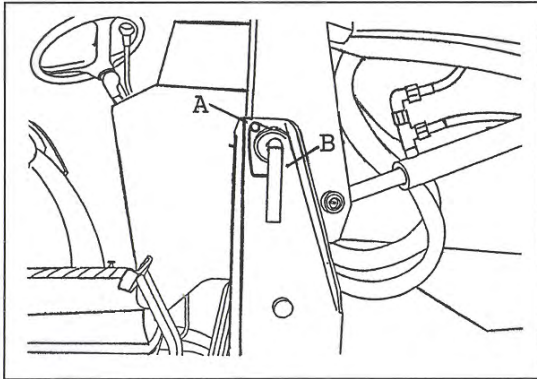
4. Start the engine on the tractor and release the parking brake. Slowly drive the tractor forward until the mounting uprights contact the loader arm uprights.

5. Extend the bucket cylinders, A, until the bucket is sitting level on the ground and the loader arm uprights, B, are lowered into the mounting uprights, C. Gradually activate the loader control lever to lower the loader arms, D, allowing the loader arm uprights, B, to seat into the mounting uprights, C. Continue to actuate loader hydraulics until the front wheels are slightly off the ground.

6. Stop the engine on the tractor and set the parking brake. Install the loader arm lock pin, E, in the loader arm upright and the mounting upright, C on both sides.



7. Install the safety pin and clip, 1, in the loader arm lock pin, 2.

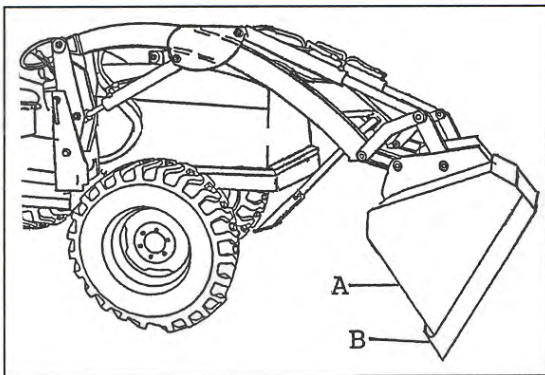


8. Start the engine on the tractor and activate the loader control lever to raise the lift cylinder. Lower the bucket, 1, in the extended; dump position, with bucket cutting edge, 2, resting on the ground. Stop the engine on the tractor and set the parking brake.

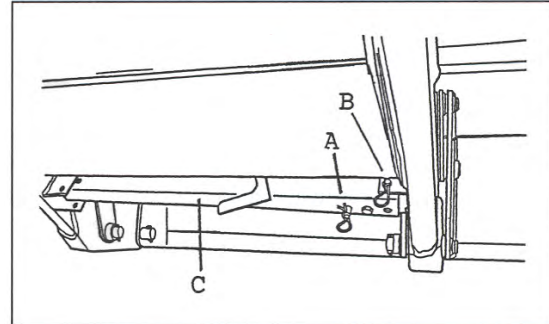


WARNING

Never attempt to fold the loader support leg unless the bucket is resting on the ground.



9. Remove the pins and clips, A and B, from the loader support leg. Fold the loader support leg, C, and place into the stored position. Install the pins and clips, A and B, to secure the loader support leg.



10. Start the engine on the tractor and activate the loader control lever. If the loader does not operate normally, as shown on the control decal, check the quick couplers for proper connections.



WARNING

Do not attempt to operate the loader without the loader arm lock pins in place and secured. The loader can fall off of the tractor.

Installation Procedure for Mounting Attachments to Quick Attach Toolbar

NOTE: To avoid injury when installing attachments to loader keep bystanders 15 feet away from tractor, loader or attachment.

1. When mounting attachments, select a firm, level site for the tractor and attachment.
2. Rotate both latch handles on the toolbar to the UNLATCHED position. Make sure that the two lock pins at the bottom of the toolbar are fully retracted.
3. Enter tractor, fasten seat belt, start the engine, release parking brake.
4. With the loader boom at 3 to 6 inches above the ground, drive the tractor slowly forward so the toolbar is aligned with the attachment.
5. Use the loader tilt cylinders to rotate the quick attach toolbar slightly forward. Drive slowly forward, so that the top edge of the toolbar goes under the upper lip of the attachment.
6. Tilt toolbar rearward slowly until the attachment is captured on the loader quick attach toolbar.



CAUTION

DO NOT over rotate toolbar. Attachment must remain on the ground.

7. Shift tractor to neutral/park, engage parking brake, turn off engine, release seat belt, and exit the tractor.
8. Rotate latch handles completely on quick attach toolbar to engage toolbar lock pins.
9. Enter tractor, fasten seat belt, start engine, release park brake.
10. Rotate toolbar rearward. Raise loader using the lift cylinders until attachment is about 6 inches off the ground.
11. Shift tractor to neutral/park, engage parking brake, turn off engine, release seat belt, and exit the tractor.
12. Place blocking under attachment. Visually inspect the attachment toolbar plate to verify that the lock pins are fully engaged into the slots on the bottom of the attachment toolbar.



DANGER

BEFORE OPERATING be sure attachment is secured to loader quick attach toolbar coupling levers.

Removal Procedure for Attachments from Quick Attach Toolbar

Note: To avoid injury when installing attachments to loader keep bystanders 15 feet away from tractor, loader or attachment.

1. When removing attachment, select a firm, level site for the tractor and attachment.
2. Using the loader boom and tilt controls, lower the boom and slowly tilt toolbar plate forward until attachment is resting on the ground. This should take pressure off of the lock pins to aid in unlatching.
3. Shift tractor to neutral/park, engage parking brake, turn off engine, release seat belt, and exit the tractor.
4. Rotate latch handles completely on loader toolbar to disengage toolbar lock pins.
5. Enter tractor, fasten seat belt, start engine, release park brake.
6. Tilt the toolbar plate further forward while backing away from the attachment.

LOADER INSPECTION, LUBRICATION, AND MAINTENANCE

Lower the bucket to the ground, shut off tractor engine, and relieve the pressure in the hydraulic system before adjusting, lubricating, or servicing the loader.

Inspect all pins and grease fittings before each use and lubricate with heavy-duty grease as indicated in this manual.

Periodically check all bolts for looseness and re-torque if necessary.

Before storage, be certain all hydraulic cylinders are fully collapsed so that the rod will not be exposed to the elements or damaged.

Be certain hydraulic system remains sealed at all times to prevent contamination.

Check and maintain an adequate fluid level in the tractor reservoir prior to use.

Inspect all hydraulic system hoses and fittings. Replace prior to further operation if damaged.



WARNING

AVOID HIGH-PRESSURE FLUIDS



ESCAPING fluid under pressure can have sufficient force to penetrate the skin and cause serious injury. Be sure to stop engine and relieve all pressure before disconnecting lines. Be sure all connections are tight and that lines, pipes, and hoses are not damaged before applying pressure to the system. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood – not your hands – to search for suspected leaks.

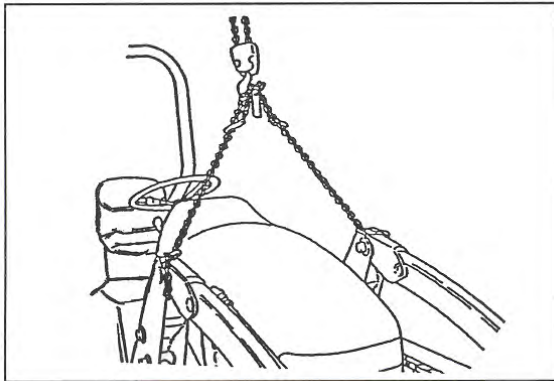
SEE A DOCTOR at once if injured by escaping fluid. Serious infection or gangrene can develop if proper medical treatment is not administered immediately.

ASSEMBLY INSTRUCTIONS – BASE LOADER

IMPORTANT – Have a suitable hoist available before proceeding with loader setup.

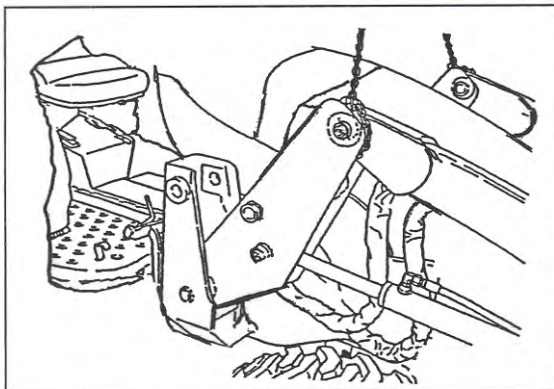
1. With Hoist in place, attach a chain and carefully raise loader and remove shipping pallet components. With shipping pallet removed, lower base loader until Uprights contact ground, tip loader forward to allow the Liftframe to make contact with the ground at the Bucket pivot location. Remove any remaining packaging materials.

2. Reposition hoist, and relocate chain to the Liftframe to Right and Left Hand Upright connection points.



3. Raise the base loader assembly high enough such that the Right Hand and Left Hand Base Loader Uprights clear the front tires of the tractor.

4. Enter tractor, start, and release parking brake and drive the tractor forward, aligning Right and Left Hand Loader Uprights with Mounts on tractor.

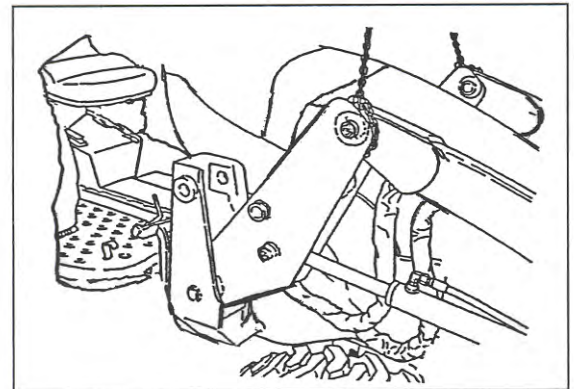


5. Stop tractor. Engage Parking Brake. Activate loader control lever to relieve any pressure in the hydraulic system. Exit tractor.

6. Remove the four dust caps from the quick couplers on the base loader. Route loader hoses and connect hoses to the tractor by matching the color-coded rings.

Lift Cylinder Base End – Green
Lift Cylinder Rod End – Yellow
Bucket Cylinder Base End – Blue
Bucket Cylinder Rod End – Red

7. Using the hoist, lower the Right And Left Hand Loader Uprights onto the pins located in the loader Mounts on the tractor.



8. Make sure Bucket Quick Attach connection points on loader liftframe are resting securely on the ground.

9. Relocate hoist and chain to the front of the loader, to the Bucket Quick Attach Tool bar pivot points.

10. Carefully and slowly lift the front of the loader liftframe to allow the Loader Uprights to fully pivot back into the tractor loader mounts.

11. Install the Lock Pins into the Mounts to secure Right and Left Hand Uprights. Secure with lock pins.



WARNING

Do not operate the loader with out the Loader Lock Pins in place and secured. The loader can fall off of the tractor.

12. Enter tractor. Start the engine and activate the loader control lever. If the loader functions do not operate in the directions indicated on the loader control decal, check the quick couplers for proper connection. Shut off tractor. Relieve hydraulic pressure in loader by moving control levers. Exit tractor.

ASSEMBLY INSTRUCTIONS – BUCKET QUICK ATTACH TOOLBAR

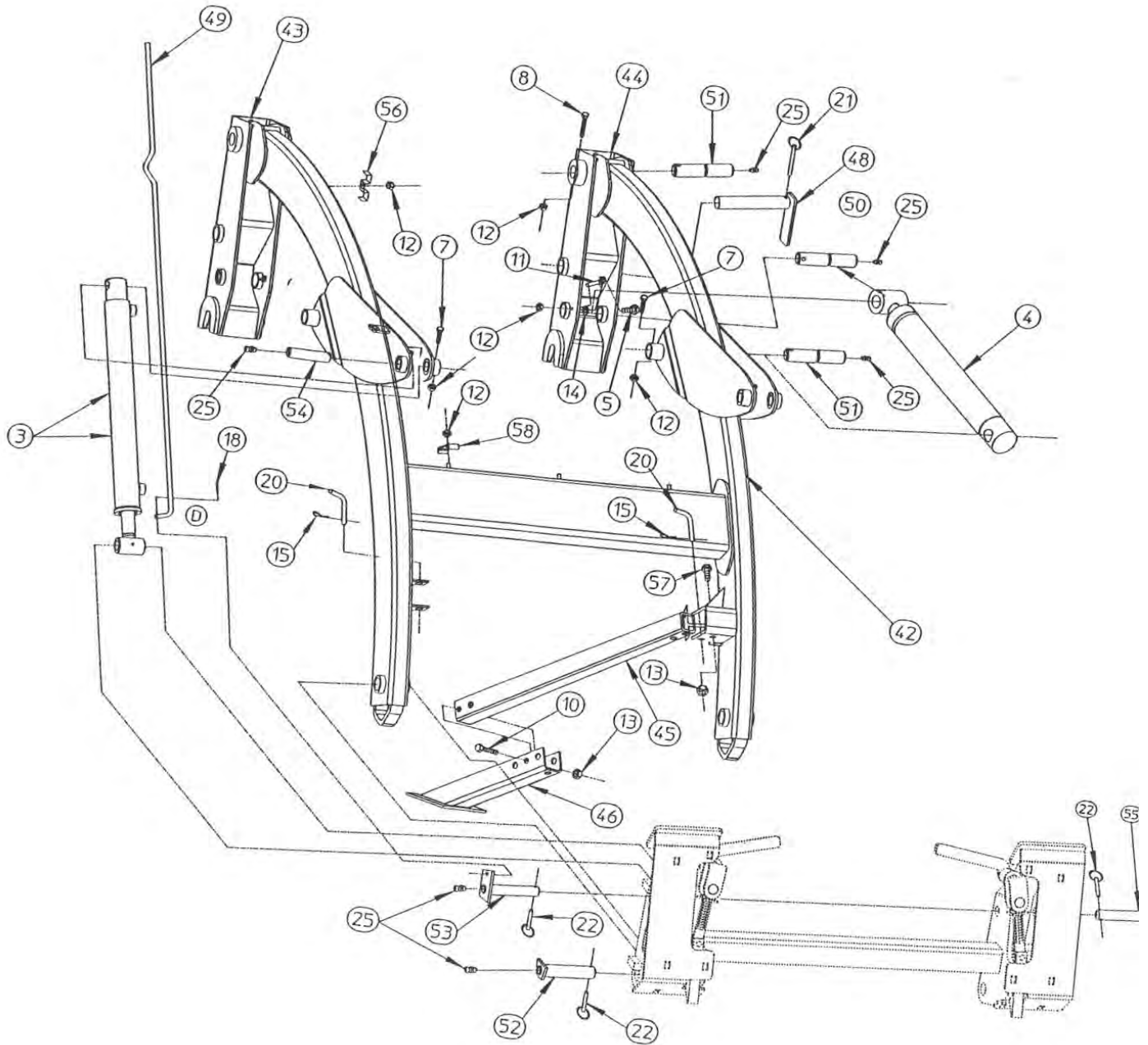
IMPORTANT – Reposition hoist on Base Loader. Raise Loader Liftframe just enough to allow alignment of Bucket Quick Attach pivots with Loader Liftframe pivots.

1. Install Bucket Quick Attach Tool Bar Assembly to Loader Liftframe using two Pivot Pins (52), Lynch Pins (22).
2. Install Bucket Cylinder Linkages to Bucket Quick Attach Tool Bar Assembly using two Pivot Pins (53, 55), Lynch Pins (22).
3. Lower Loader Assembly with Bucket to ground.

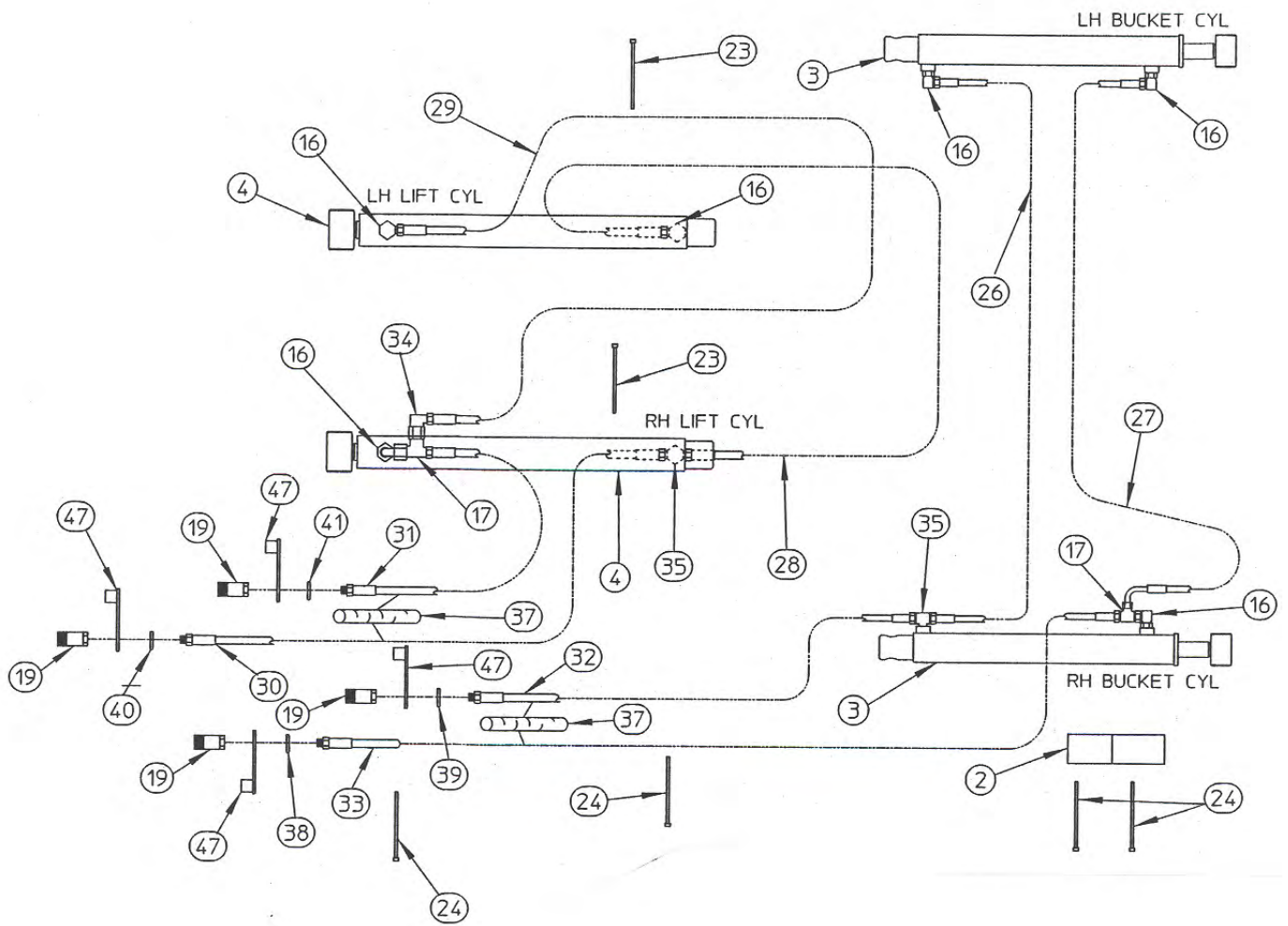
ASSEMBLY INSTRUCTIONS – BUCKET LEVEL INDICATOR

1. Install Bucket Level Rod Weldment (49) to Right Hand Bucket Cylinder Rod End pivot pin using a cotter pin (18).

BASE LOADER



HYDRAULIC SYSTEM PARTS DIAGRAM

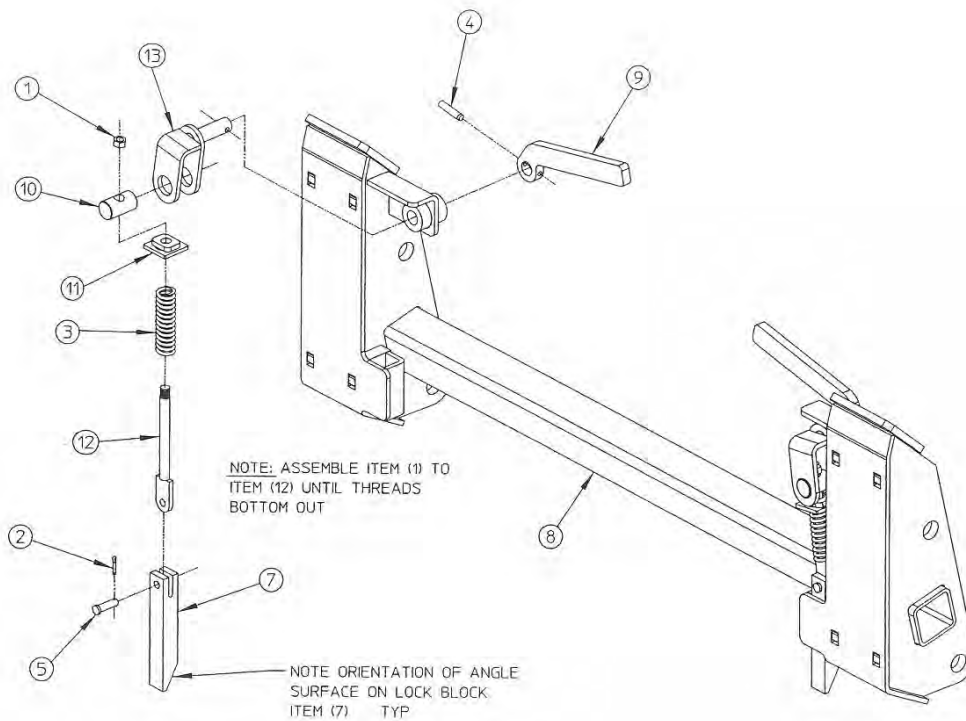


BASE LOADER PARTS BREAKDOWN

<u>ITEM NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
2	616205	MANUAL TUBE AND CAP	1
3	614625	HYD CYL 2" DIA, BUCKET WITH DECALS	2
4	614620	HYD CYL 2-1/4DIA, LIFT WITH DECALS	2
5	6787	BLT HEX SAE5 5/16 NC X .75 GR2	2
7	6810	BLT HEX SAE5 5/16 NC x 2"	4
8	6818	BLT HEX SAE5 5/16 NC X 3"	2
10	7063	BLT HEX SAE5 1/2 NC X 3"	1
11	13473	PIN RETAINER	2
12	7433	LOCKNUT 5/16 NC	12
13	7508	LOCKNUT 1/2 NC	2
14	8152	WASHER 5/16 SAE	2
15	8624	CLIP HAIR PIN #10	2
16	11078	ADAPTER UNION, 3/4-16 JICM X 3/4-16 STRM X 90 DEG	6
17	11177	SWIV NUT RUN TEE 3/4-16 JIC	2
18	8560	COTTER PIN, 1/8 X 1"	1
19	11274	COUPLER BODY	4
20	13475	CLEVIS PIN 5/8 X 3-1/2	2
21	13477	LOCK PIN	2
22	13491	LINCH PIN	4
23	14132	PLASTIC TIE-BLACK, LARGE	2
24	14133	PLASTIC TIE BLACK, SMALL	4
25	14505	GREASE FIT	12
26	17337	HOSE 48"	1
27	17339	HOSE 57"	1
28	17346	HOSE 76"	1
29	17442	HOSE 115"	1
30	17357	HOSE 80"	1
31	17359	HOSE 83"	1
32	17394	HOSE 95"	1
33	17433	HOSE 110"	1
34	24012	ADAPTER UNION, 3/4-16 JICM X 3/4-16 JICF	1
35	24031	BRANCH TEE, 3/4-16 JICM X 3/4-16 STR THD	2
37	14182	HOSE SLEEVE	2
38	20183	COLOR CODED RING - RED	1
39	20184	COLOR CODED RING - BLUE	1
40	20185	COLOR CODED RING - GREEN	1
41	20186	COLOR CODED RING - YELLOW	1
42	614630	LIFT FRAME WELDMEMENT WITH DECALS	1
43	614635	RH UPRIGHT WELDMENT WITH DECALS	1
44	614640	LH UPRIGHT WELDMENT WITH DECALS	1
45	616144	TUBE	1
46	616145	STAND WELDMENT	1
47	11299	DUST PLUG	4
48	616155	PIN WELDMENT	2
49	614509	ROD WELDMENT	1
50	614517	PIVOT PIN - LIFT CYL ROD END	2
51	616164	PIVOT PIN	4
52	616165	PIN WELDMENT, BUCKET	2
53	614515	PIN WELDMENT WITH HOLE	1
54	616167	PIVOT PIN	2
55	616170	PIN WELDMENT	1
56	866104	HOSE CLAMP	1
57	7068	BOLT, HEX 1/2 X 3-1/2	1
58	616034	CLAMP	3

MONTANA QUICK ATTACH TOOLBAR PARTS LIST

Index No.	Part Number	Description
1	7508	Nut, Lock ½ NC
2	8560	Cotter Pin
3	8669	Spring, Compression
4	8995	Roll Pin
5	13442	Clevis Pin
7	66032	Block, Lock
8	616035	Adapter Frame Weldment
9	612947	Handle, Pivot
10	612948	Pin, Pivot
11	612950	Guide Weldment
12	612955	Rod Weldment
13	612960	Pivot Weldment



HYDRAULIC CYLINDERS PARTS LIST

Index	Description	LIFT	BUCKET
1	Locknut	7609	7574
2	Wiper Seal	*	*
3	Step Seal	*	*
4	U-Cup Seal	*	*
5	O-Ring	*	*
6	Back-Up Ring	*	*
7	Wear Ring	*	*
8	Cylinder Tube Weldment with Decal	902550	903980
9	Piston Rod Weldment	902535	903865
10	Gland with O-Rings, Back-Ups, & Wear Rings	902520	904845
11	Piston	11687	11684
12	For Complete Cylinder, order	614620	614625
13	Seal Repair Kit for One Cylinder	902525	904850

*Not available as a separate repair part - order Seal Repair Kit.

IMPORTANT - Replace cylinder nut (1) any time nut must be removed, and torque to proper value shown.

CYLINDER	PISTON DIA.	STROKE	RETRACTED LENGTH	EXTENDED LENGTH	ROD DIA.	PIVOT PIN DIA.	TYPE OF ACTION
LIFT	2-1/4"	16-1/4	23-1/2	39-3/4	1-3/8	1-1/4"	DA
BUCKET	2"	14-3/4	24-1/4	39	1-1/4	1"	DA

LIFT CYLINDER

PROPER PISTON ASSEMBLY

NOTE LOCATION OF 45 DEG CHAMFER ON PISTON FOR ASSEMBLY

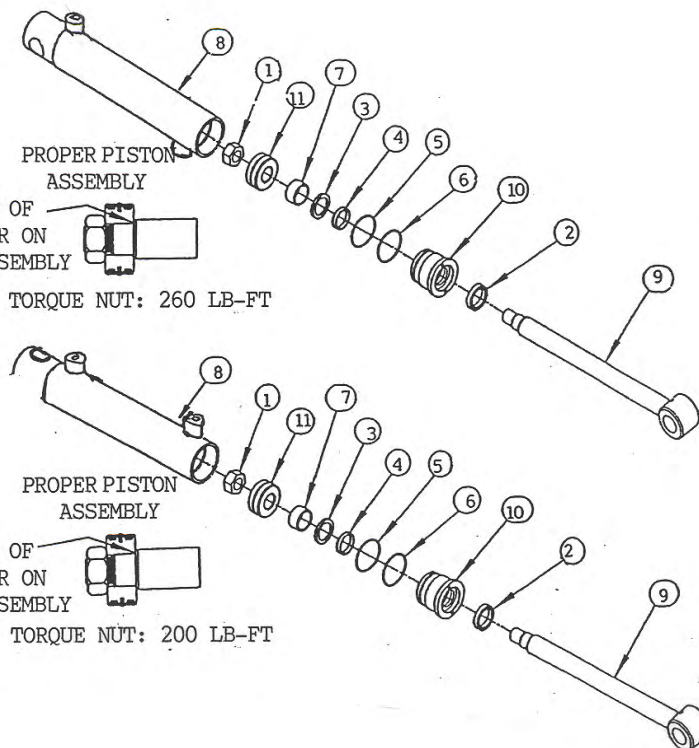
TORQUE NUT: 260 LB-FT

BUCKET CYLINDER

PROPER PISTON ASSEMBLY

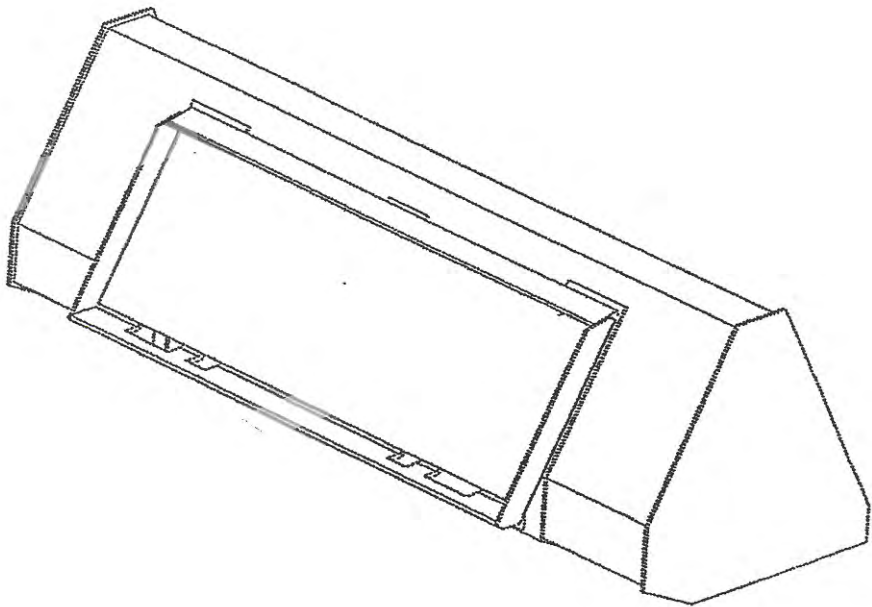
NOTE LOCATION OF 45 DEG CHAMFER ON PISTON FOR ASSEMBLY

TORQUE NUT: 200 LB-FT



66" QUICK ATTACH BUCKET

ITEM	PART NUMBER	DESCRIPTION
1	MTB879	66" BUCKET, 9 CUBIC FOOT



SPECIFICATIONS

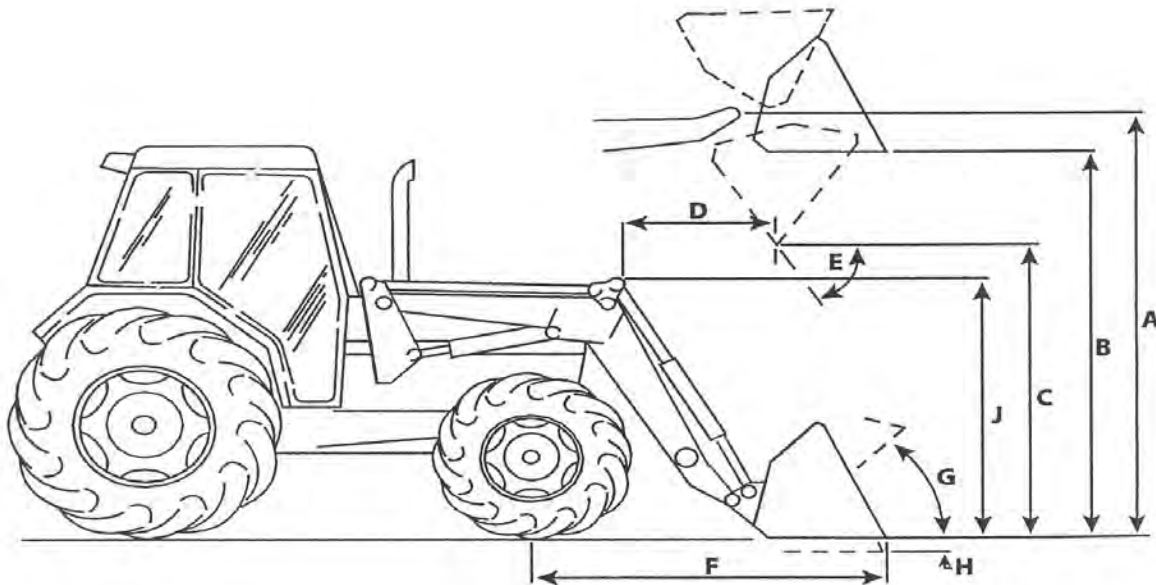
MONTANA MODEL 100 LOADER MONTANA COMPACT TRACTORS MEASURED PER ASAE S301.3 DEC01

	TRACTOR MODEL(S)		
	2740/3240	3040/3840	4540
A Maximum Lift Height - Measured at Pivot Pin (inches)	93	93.5	94.75
B Maximum Lift Height - Under Level Bucket (inches)	86.0	86.75	87.75
C Clearance With Attachment Dumped (** - ° deg) (inches)	75.8	77	78
Reach At Maximum Lift Height (° deg) (inches)	45.75	43.25	40.75
D Maximum Dump Angle (degrees)	24	24	24
F Reach With Bucket on Ground (inches)	67	66.5	61.38
G Maximum Rollback Angle (degrees)	18	18	18
H Digging Depth (inches)	3.0	6.5	5.5
J Over Height in Carry Position (inches)	60.25	59.75	59.75
U Lift Capacity to Maximum Height - At Pivot Pin (lbs)	1585	2035	1985
V Lift Capacity to Maximum Height - 19.5" Forward Pivot Pin (lbs)			
W Lift Capacity to 59" Height - At Pivot Pin (lbs)	2360	2495	2605
X Lift Capacity to 59" Height - 19.5" Forward Pivot Pin (lbs)			
Y Breakout Force - At Pivot Pin (lbs)	3240	3705	3870
Z Breakout Force - 19.5" Forward Pivot Pin (lbs)			
Raising Time - Ground Level to Full Height (s)	5.0	4.0	4.0
Lowering Time - Full Height to Ground (s)	3.0	2.6	2.4
Bucket Dumping Time - Full Rollback to Full Dump (s)	3.6	2.9	2.9
Bucket Rollback Time - Full Dump to Full Rollback (s)	2.4	1.9	1.8
Specifications Based On Tractor System (psi)	2165	2410	2390
Front Tires	25x8.50-14NHS	28x8.50-15NHS	28x8.50-15NHS
Rear Tires	43x16.00-20NHS	43x16.00-20NHS	43x16.00-20NHS
Date	8/8/2006	8/21/2006	8/8/2006

* Measurement taken at maximum dump angle (D)

** From front bumper on 4540 and from hood on all others

For all lift capacity measurements, the 3-point hitch was used to
*** hold 700 lb of ballast



MINIMUM HARDWARE TIGHTENING TORQUES

IN FOOT POUNDS (NEWTON-METERS) FOR NORMAL ASSEMBLY APPLICATIONS

INCH HARDWARE

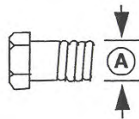
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

Fasteners must always be replaced with the same grade as specified in the manual parts list.

Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for metric hardware.

Make sure fastener threads are clean and you start thread engagement properly.

All torque values are given to specifications used on hardware defined by SAE J1701 & J1701M JUL96.



SAE SERIES TORQUE CHART



SAE Grade 2
(No Dashes)


SAE Bolt Head
Identification



SAE Grade 5
(3 Radial Dashes)



SAE Grade 8
(6 Radial Dashes)

 Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
1/4"	7/16"	6	8	10	13	14	18
5/16"	1/2"	12	17	19	26	27	37
3/8"	9/16"	23	31	35	47	49	67
7/16"	5/8"	36	48	55	75	78	106
1/2"	3/4"	55	75	85	115	120	163
9/16"	13/16"	78	106	121	164	171	232
5/8"	15/16"	110	149	170	230	240	325
3/4"	1-1/8"	192	261	297	403	420	569
7/8"	1-5/16"	306	416	474	642	669	907
1"	1-1/2"	467	634	722	979	1020	1383

MINIMUM HARDWARE TIGHTENING TORQUES

IN FOOT POUNDS (NEWTON-METERS) FOR NORMAL ASSEMBLY APPLICATIONS

METRIC HARDWARE

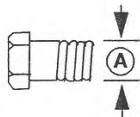
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

Fasteners must always be replaced with the same grade as specified in the manual parts list.

Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for metric hardware.

Make sure fastener threads are clean and you start thread engagement properly.

All torque values are given to specifications used on hardware defined by SAE J1701 & J1701M JUL96.



METRIC SERIES TORQUE CHART



Metric
Grade 8.8

Metric Bolt Head
Identification



Metric
Grade 10.9

Ⓐ Diameter & Thread Pitch (Millimeters)	Wrench Size	COARSE THREAD				FINE THREAD				Ⓐ Diameter & Thread Pitch (Millimeters)
		MARKING ON HEAD				MARKING ON HEAD				
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
		N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13 mm	20	15	27	20	21	16	29	22	8 x 1.0
10 x 1.5	16 mm	39	29	54	40	41	30	57	42	10 x 1.25
12 x 1.75	18 mm	68	50	94	70	75	55	103	76	12 x 1.25
14 x 2.0	21 mm	109	80	151	111	118	87	163	120	14 x 1.5
16 x 2.0	24 mm	169	125	234	173	181	133	250	184	16 x 1.5
18 x 2.5	27 mm	234	172	323	239	263	194	363	268	18 x 1.5
20 x 2.5	30 mm	330	244	457	337	367	270	507	374	20 x 1.5
22 x 2.5	34 mm	451	332	623	460	495	365	684	505	22 x 1.5
24 x 3.0	36 mm	571	421	790	583	623	459	861	635	24 x 2.0
30 x 3.0	46 mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0



**be careful.....
avoid accidents**