

OPERATOR'S AND PARTS MANUAL

PALLET FORK & BALE SPEAR LOADER ATTACHMENTS

AB11

AB12

AB13

AB14

AB15

AB18

AP12

AP13



MANUAL #5MP76313

FRONTIER[™]

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SAFETY STATEMENTS



THIS SYMBOL BY ITSELF OR WITH A WARNING WORD THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY OR THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.



DANGER

THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH WILL RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.



WARNING

THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.



CAUTION

THIS SIGNAL WORD IS USED WHERE MINOR INJURY COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.

NOTICE

NOTICE INDICATES A PROPERTY DAMAGE MESSAGE.

GENERAL SAFETY PRECAUTIONS

WARNING!

READ MANUAL PRIOR TO INSTALLATION



Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance. **FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE PRIME MOVER'S MANUAL(S).**



READ AND UNDERSTAND ALL SAFETY STATEMENTS

Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all OSHA regulations, local laws, and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing, or operating this equipment.



KNOW YOUR EQUIPMENT

Know your equipment's capabilities, dimensions, and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact. Check all hardware to ensure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued, or excessively worn parts. Make certain all safety decals are in place and are legible. Keep decals clean, and replace them if they become worn or hard to read.

GENERAL SAFETY PRECAUTIONS

WARNING!



PROTECT AGAINST FLYING DEBRIS

Always wear proper safety glasses, goggles, or a face shield when driving pins in or out, or when any operation causes dust, flying debris, or any other hazardous material.

WARNING!



LOWER OR SUPPORT RAISED EQUIPMENT

Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels, or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to ground level or on blocks. Lower booms and attachments to the ground before leaving the cab or operator's station.

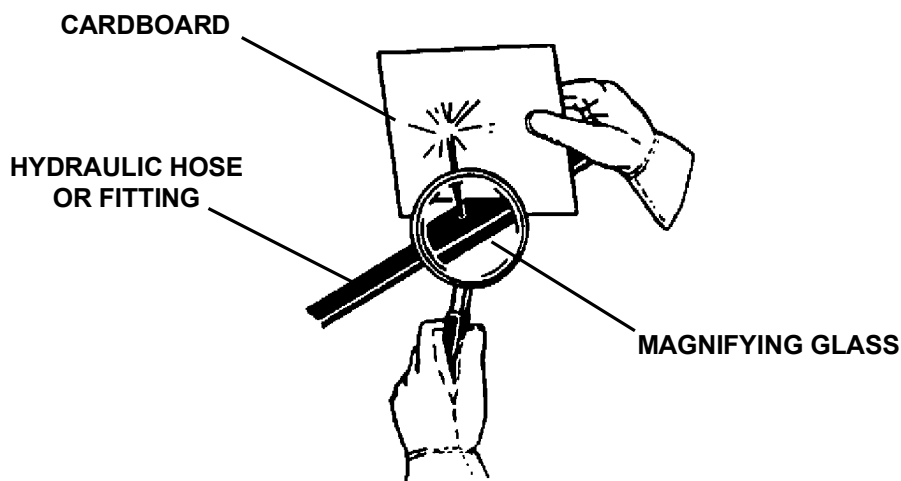
WARNING!



USE CARE WITH HYDRAULIC FLUID PRESSURE

Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible. Before connecting or disconnecting hydraulic hoses, read your prime mover's operator's manual for detailed instructions on connecting and disconnecting hydraulic hoses or fittings.

- Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.
- If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research it immediately to determine proper treatment.
- Wear safety glasses, protective clothing, and use a piece of cardboard or wood when searching for hydraulic leaks. **DO NOT USE YOUR HANDS!** SEE ILLUSTRATION.



GENERAL SAFETY PRECAUTIONS

WARNING!



DO NOT MODIFY MACHINE OR ATTACHMENTS

Modifications may weaken the integrity of the attachment and may impair the function, safety, life, and performance of the attachment. When making repairs, use only the manufacturer's genuine parts, following authorized instructions. Other parts may be substandard in fit and quality. Never modify any ROPS (Roll Over Protection Structure) or FOPS (Falling Object Protective Structure) equipment or device. Any modifications must be authorized in writing by the manufacturer.

WARNING!



SAFELY MAINTAIN AND REPAIR EQUIPMENT

- Do not wear loose clothing or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tools for the job at hand. Make sure they are in good condition for the task required.
- Wear the protective equipment specified by the tool manufacturer.



SAFELY OPERATE EQUIPMENT

Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, dimensions, and all safety requirements. See your machine's manual for these instructions.

- Keep all step plates, grab bars, pedals, and controls free of dirt, grease, debris, and oil.
- Never allow anyone to be around the equipment when it is operating.
- Do not allow riders on the attachment or the prime mover.
- Do not operate the equipment from anywhere other than the correct operator's position.
- Never leave equipment unattended with the engine running, or with this attachment in a raised position.
- Do not alter or remove any safety feature from the prime mover or this attachment.
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation.

WARNING!



KNOW WHERE UTILITIES ARE

Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call your local utilities for location of buried utility lines, gas, water, and sewer, as well as any other hazard you may encounter.

EQUIPMENT SAFETY PRECAUTIONS



TRANSPORTING ALL ATTACHMENTS

- Travel only with the attachment as close to the ground as possible. Drive slowly over rough ground and on slopes.
- When driving on public roads use safety lights, reflectors, Slow Moving Vehicle signs etc., to prevent accidents. Check local government regulations that may affect you.
- Do not drive close to ditches, excavations, etc., cave in could result.
- When on a slope, keep the load low and proceed with extreme caution. Do not drive ACROSS a steep slope - drive straight up and down.
 - With a LOADED attachment - face the attachment and load uphill.
 - With an EMPTY attachment - face the attachment downhill.
- Do not smoke when refueling. Allow room in the gas tank for expansion. Wipe up any spilled fuel. Secure cap tightly when done.




MAINTAINING ALL ATTACHMENTS

- Before performing maintenance, lower the attachment to the ground, apply the brakes, turn off the engine, and remove the key.
- Worn, damaged, or illegible safety decals must be replaced. New safety decals can be ordered from your Frontier Dealer.
- Never work under a raised attachment.

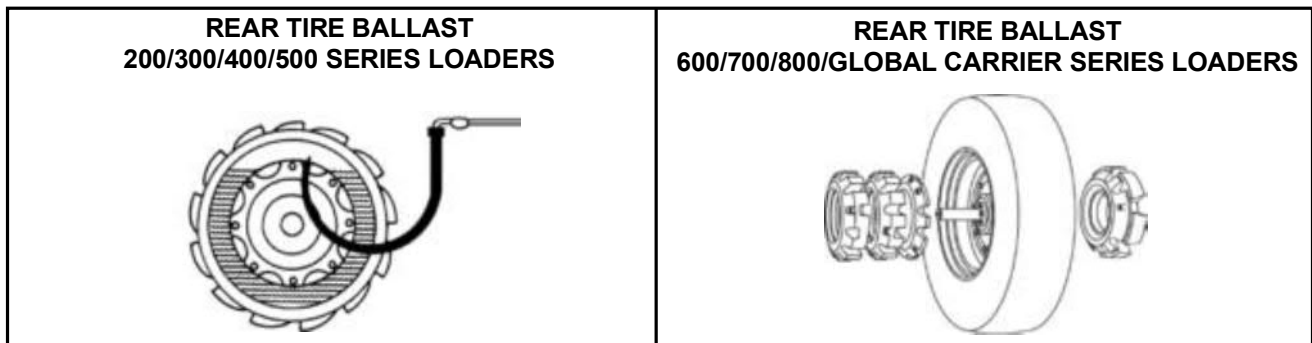


OPERATING ALL ATTACHMENTS

- Operate only from the operator's station. Always use the seat belt if the prime mover has a ROPS. Do not use a seat belt if there is not ROPS. Check the seat belt daily and replace if frayed or damaged.
- Specified lift capacities must not be exceeded. See loader specifications.
- An operator must not use drugs or alcohol, which can change his or her alertness or coordination. An operator taking prescription or over-the-counter drugs should seek medical advice on whether or not he or she can safely operate equipment.
- Never use any of these attachments for a work platform or personnel carrier.
- Always check locking pins before tilting or operating any attachment.
- Do not handle round bales unless loader is equipped with approved bale handling attachments.
- Do not detach loader from tractor with any of these attachments installed. Equip loader with material bucket when detaching.
- Stop loader gradually when lowering or lifting loads
- Before exiting the prime mover, lower the attachment to the ground, apply the brakes, turn off the prime mover's engine, and remove the key.
- Add the required amount of ballast to tractor. (See Preparing the Tractor section of the Loader Operator's Manual to determine the type and amount of ballast required.)

<p>REAR BALLAST BOX</p> 	<p>WARNING! TRACTOR STABILITY OR LOSS OF STEERING CONTROL MAY RESULT IF BALLAST BOX IS INSTALLED WITHOUT LOADER. DO NOT OPERATE TRACTOR WITH BALLAST BOX UNLESS LOADER IS INSTALLED.</p>
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EQUIPMENT SAFETY PRECAUTIONS



ADDITIONAL PRECAUTIONS FOR AP12 & AP13 SERIES PALLET FORKS

- Secure the load properly. Unsecured loads can fall unexpectedly.
- Never lift a load with one fork.
- Keep lifting surface of the forks level at all times.
- Do not exceed the recommended lifting capacity of any approved fork tines or prime mover.
- Do not lift round or square bales.
- Never stack loads on uneven ground. Loads stacked on uneven ground can topple.
- Do not use the fork tines for prying or any purpose other than lifting.



ADDITIONAL PRECAUTIONS FOR AB11, AB12, AB13, AB14, AB15 & AB18 SERIES BALE SPEARS

- Park and store this attachment with tines pointed down or against a bale, building or other stable object.
- Do not use the AB12 series bale spears to lift pallets.
- The AB11E, AB12E & AB13E series bale spears exceed the lifting capacity of the 300 and the 300X loaders. ONLY mount these attachments onto the 300CX loader or onto the 400 and 500 series loaders.
- Never stack bales on uneven ground. Loads stacked on uneven ground can topple.
- Do not handle more bales than your attachment was designed to lift. Be sure stack and load heights do not exceed the lifting capabilities of your loader.
- Never use tractor or loader to stop a rolling bale.
- Do not lift two round bales with the 600 series loader. This will exceed the rated lifting capacity of this loader. The AB14 on 600 series loader is for (1) large square bale only.
- Always spear bales (round or square) with a slight downward motion. Spearing bales with a 5° angle on the spear will allow the bale to be dropped off the spear easier.
- Be sure stack and load heights do not exceed the lifting capabilities of your loader.

SET-UP

GENERAL INFORMATION

The AP12 & AP13 pallet forks require the installation of the forks and the AB11, AB12, AB13, AB14, AB15 and AB18 bale spears and carriages require the installation of the bale spears and stabilizing tines before installing the attachment onto your unit.

FORK TINE INSTALLATION

It is recommended that the pallet fork frame be supported with a hoist or other suitable device before installing the tines. This will help prevent the frame from tipping and facilitate installation.

ITA CLASS II FORK TINES (AP12 Series Pallet Forks): Ensure that the locking assembly on the tine is in the unlocked (UP) position. Place the top of the fork on the top rail in the middle of the frame and then rotate down. Slide the fork to the side to seat it on the frame and, using the locking assembly that is on your tine, lock in place. Install the second tine in the same fashion making sure that the left and right tine are the same distance from the center of the frame. **NOTE: Make sure the locking assembly has been set into a notch on the top rail and therefore securing the tines to the frame.**

FLOATING FORK TINES (AP13 Series Pallet Forks): Remove the right cotter pin securing the fork pin in the frame assembly and loosen all set collars. Slide the fork pin out of the frame and the two center supports while removing three of the set collars. Position one fork tine and one set collar onto the fork pin and slide to the left. Slide the fork pin through the two center supports. Install a set collar and then the remaining fork tine and the last set collar. Slide the fork pin through the right side of the frame and reinstall the cotter pin. Position the forks, making sure that the left and right tine are the same distance from the center of the frame. Tighten the set screws in the set collars to lock the tines in place.

AB11, AB12, AB13, AB14, AB15 & AB18 BALE SPEAR INSTALLATION

It is recommended that the bale spear frames be supported with a hoist or other suitable device before installing the spears and tines. This will help prevent the frame from tipping and facilitate installation.

BALE SPEAR INSTALLATION (AB11 & AB12) SERIAL NUMBER BREAK AND UP: Install the 49" crossbolt bale spear (5MP116336) into the frame at the required location. (See parts schematics at the back of this manual.) Secure the spear to the frame using the 5-8" x 3-1/4" hex bolt and nylock nut.

UP TO SERIAL NUMBER BREAK: Before installing the 49" spear(s) (5FP0710141) into the frame at the required location(s), remove any excess paint from the tapered surfaces on the 49" spear and inside the mating surface of the frame. (See parts schematics at the back of this manual.) Secure the spear to the frame using the nut provided (5FP0710148). Torque to 475 ft. lbs.

IMPORTANT: Check nut torque after initial use and periodically thereafter. Retorque as required. Do not operate if spear is not properly secured to the frame.

BALE SPEAR INSTALLATION (AB13, AB14, AB15 & AB18) Install the main bale spear(s) into the frame at the required location(s). (See parts schematics at the back of this manual.) Secure the spear to the frame using the 5/8" hex bolt and nylock nut.

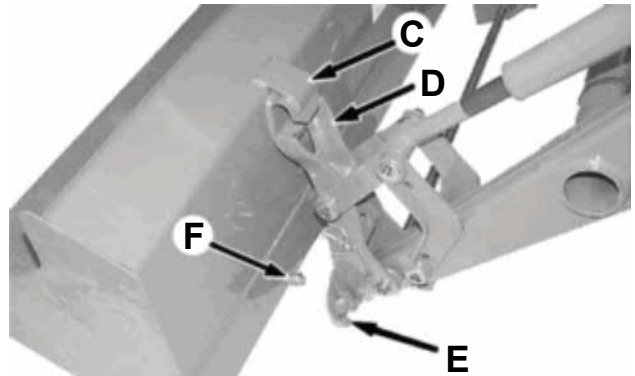
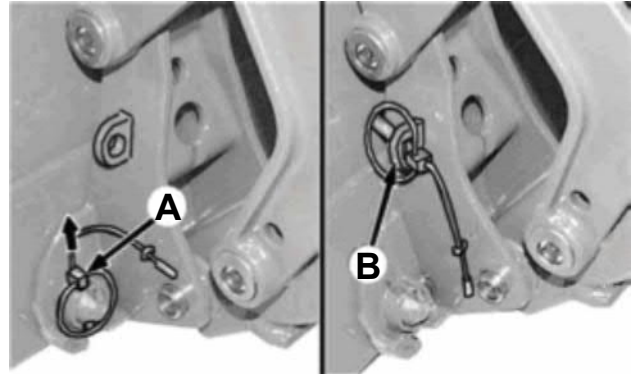
STABILIZING TINE INSTALLATION (AB11, AB13, AB14, AB15 & AB18) Position the stabilizing tine(s) into the frame at the required location(s) and secure in place with hardware provided. Torque to specification. (See bolt torque specifications and parts schematics at the back of this manual.)

INSTALLATION

ATTACHING AND DETACHING EQUIPMENT (200/300/400/500 SERIES LOADERS)

NOTE: Procedure is the same for all attachments. Bucket attachment shown.

1. Start tractor engine.
2. Release parking brake and/or place transmission in NEUTRAL.
3. Roll attachment back slightly and raise boom approximately 18" (460 mm) above ground level.
4. Engage tractor parking brake and/or place transmission in PARK. Shut off tractor engine and remove key.
5. Disconnect hydraulic couplers to attachment (if so equipped).
6. Remove the quick-lock pin (A) from each side of attachment.
7. Store pins in their storage position (B).
8. Start tractor engine.
9. Extend bucket cylinders until pin (F) releases from the holder strap (E) on each side of the attachment.
10. Lower loader boom. Place transmission in REVERSE and move away from the attachment. Holder (D) will release from hook (C) on each side of the attachment.
11. Set the parking brake and/or place transmission in PARK.
12. Shut off tractor engine and remove the key.
13. Attach equipment in reverse order of detaching.



NOTE: On attachments with two pins (F), the 200,300 and 400 series loaders will utilize the upper pin and the 500 series loader will utilize the lower pin.

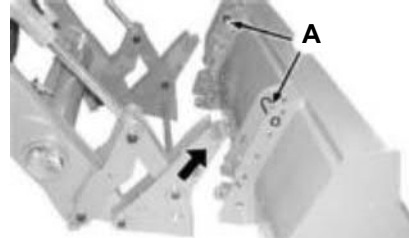
INSTALLATION

ATTACHING EQUIPMENT

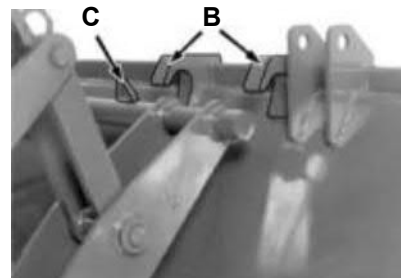
(600 & 700 SERIES LOADERS WITH QUIK-CHANGE LATCHES AND 800 SERIES LOADERS.)

NOTE: Latch pins automatically drop on 800 series loaders to prepare the loader for attachment.

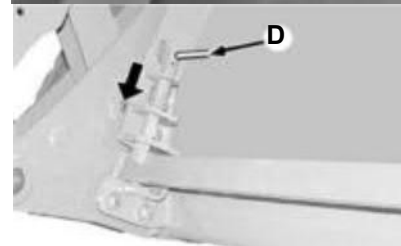
1. Extend attachment cylinders to angle attaching brackets forward.
2. 600/700 - Drive forward, adjusting loader height and position until the top of the bracket is aligned with the pins (A).
800 - Drive forward, adjusting loader height and position until the bar is under hooks (B) and tabs (C) are on the center side of hooks.
3. Raise loader to engage hooks and retract attachment cylinders quickly.
4. 600/700 - Raise loader until you can check that pins (D) on both sides have fully dropped.
800 - Raise loader until latch pins (E) are visible. Pins on both sides must extend through the attachment latch brackets.



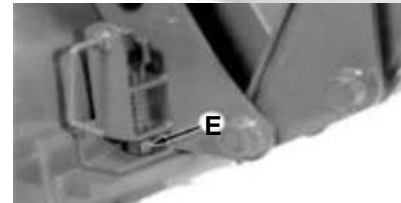
700 SERIES



800 SERIES



700 SERIES
BOLT-ON LATCH
SHOWN



800 SERIES

CAUTION! ALWAYS CHECK LATCH PINS BEFORE TILTING OR OPERATING ANY ATTACHMENT.



5. Lower attachment, shut off engine, and connect hydraulic hoses (if equipped) to the auxiliary hydraulic hook up on your loader.

Installation is now complete.

DETACHING EQUIPMENT

(600 & 700 SERIES LOADERS WITH QUIK-CHANGE LATCHES AND 800 SERIES LOADERS.)

NOTE: Disconnect hydraulic attachments before backing away.

1. Level attachment approximately 6 inches (150mm) off the ground.
2. Place transmission in PARK and shut off engine.
3. Lift and rotate latches (A) up on both sides of attachment.

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