



# BUSH HOG®

# MODELS: PFLD, PFHD, PFXHD

# PALLET FORK

Published 08/23

Part No. 50084026

## OPERATOR'S MANUAL



This Operator's Manual is an integral part of the safe operation of this machine and must be maintained with the unit at all times. **READ, UNDERSTAND, and FOLLOW** the Safety and Operation Instructions contained in this manual before operating the equipment. *C01-Cover str*

PFLD/PFHD



FS-SS-0012

PFXHD



FC-SS-0013

## BUSH HOG®

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## To the Owner/Operator/Dealer

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

**BEFORE YOU START!** Read the safety messages on the implement and shown in your manual. Observe the rules of safety and common sense!

 **WARNING**

**TO AVOID SERIOUS INJURY OR DEATH:**

1. READ AND UNDERSTAND OPERATOR'S MANUAL.	6. KEEP BYSTANDERS CLEAR OF MOVING PARTS AND WORKING AREA. KEEP CHILDREN AWAY!
2. TRACTOR MUST BE EQUIPPED WITH ROLL-OVER PROTECTION (ROPS) AND SWAY CHAINS.	7. DO NOT LIFT, LOWER, OR OPERATE UNLESS EVERYONE IS CLEAR OF IMPLEMENT.
3. ALWAYS WEAR SAFETY GLASSES, SAFETY SHOES AND SEAT BELT FASTENED TIGHTLY.	8. USE INCREASED CAUTION ON SLOPES & NEAR BANKS AND DITCHES TO PREVENT OVERTURN.
4. STOP TRACTOR, LOCK BRAKES, AND BLOCK UP OR SUPPORT IMPLEMENT SECURELY BEFORE WORKING UNDER RAISED COMPONENTS.	9. LOCK LIFT LEVER UP FOR TRANSPORT. HAVE SMV SIGN VISIBLE. FOLLOW LOCAL LAWS.
5. ALLOW NO RIDERS AT ANY TIME ON TRACTOR OR IMPLEMENT. FALLING OFF CAN KILL.	10. USE PARKING STAND OR BLOCK UP WHEN UNHITCHING FROM TRACTOR.

999200

### WARRANTY INFORMATION:

Read and understand the complete Warranty Statement found in this Manual. Fill out the Warranty Registration Form in full and return it to within 30 Days. Make certain the Serial Number of the Machine is recorded on the Warranty Card and on the Warranty Form that you retain.

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# **SAFETY SECTION**

Safety Section 1-1

# SAFETY

## GENERAL SAFETY INSTRUCTIONS AND PRACTICES

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this Implement. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.



The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

**Practice all usual and customary safe working precautions and above all--remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.**



Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.

**Important**

Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

**NOTE:** *Identifies points of particular interest for more efficient and convenient operation or repair.* (SG-1) str

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Death or serious injury may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2) str



Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3) str

¡ LEA EL INSTRUCTIVO!



# SAFETY

## **WARNING**

Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Death or serious injury could result from falling off the tractor, particularly during a turnover when the operator could be pinned under the ROPS. (SG-7) str



## **DANGER**

Never allow children to operate, ride on, or come close to the Tractor or Implement. Usually, 16-17 year-old children who are mature and responsible can operate the implement with adult supervision, if they have read and understand the Operator's Manuals, been trained in proper operation of the tractor and Implement, and are physically large enough to reach and operate the controls easily. (SG-11) str



## **DANGER**

Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in death or serious injury. (SG-10)str

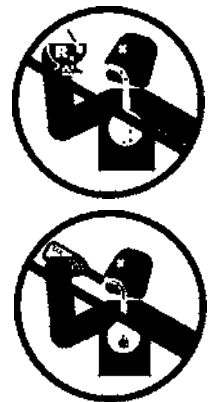


## **DANGER**

Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be killed or injured. Inadvertent contact with controls can cause the Implement to shift or fall crushing themselves or others. (SG-25) str

## **DANGER**

DO NOT use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27) str



## **DANGER**

Never walk or work under any raised boom or bucket. The Boom could fall and cause serious bodily injury or death. Always lower the boom and bucket flat on the ground or support the Boom and bucket on safety stands. Unload all hydraulic actuators prior to performing any maintenance. To do this, set the bucket on the ground then kill the tractor engine. Push and pull the control levers in and out several times to remove pressure. Do not work under raised Boom or Bucket unless components are securely blocked up to prevent inadvertent dropping. (SBH-7) str

# SAFETY

## OPERATOR SAFETY INSTRUCTIONS AND PRACTICES

### **⚠ DANGER**

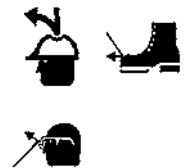
Never operate the Tractor or Implement until you have read and completely understand this Manual, the Tractor Operator's Manual, and each of the Safety Messages found in the Manual or on the Tractor and Implement. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced or untrained personnel to operate the Tractor or Implement without supervision. Make sure the operator has fully read and understood the manuals prior to operation.

(SG-4)str



### **⚠ WARNING**

The operator and all support personnel should wear hard hats, safety shoes, safety glasses, and proper hearing protection at all times for protection from injury including injury from items that may be thrown by the equipment. (SG-16)str



### **⚠ CAUTION**

PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractors with or without an Implement attached can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the Operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the Operator over an extended period of time will cause permanent or total hearing loss. **NOTE:** *Hearing loss from loud noise [from tractors, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery.* (SG-17)str



### **⚠ WARNING**

Always read carefully and comply fully with the manufacturer's instructions when handling oil, solvents, cleansers, and any other chemical agent. (SG-22)str



### **⚠ DANGER**

Never run the Tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23) str

### **⚠ WARNING**

Battery posts, terminals and related accessories contain lead and lead compounds and chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. (SG-31)

### **⚠ WARNING**

Prolonged operation may cause operator boredom and fatigue affecting safe operation. Take scheduled work breaks to help prevent these potentially impaired operating conditions. Never operate the Implement and Tractor in a fatigued or bored mental state which impairs proper and safe operation. (SG-32) str

# SAFETY

## **WARNING**

Use extreme caution when getting onto the Implement to perform repairs, maintenance and when removing accumulated material. Only stand on solid flat surfaces to ensure good footing. Use a ladder or raised stand to access high spots which cannot be reached from ground level. Slipping and falling can cause serious injury or death. (SG-33) str

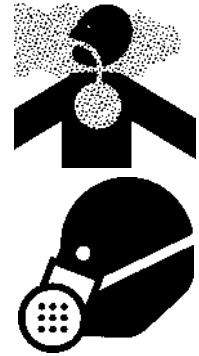
## **WARNING**

Use extreme care when loading, carrying or handling any agricultural fertilizers, chemicals or biological residue. Follow the manufacturer's handling instructions and wear appropriate Personal Protective Equipment including gloves, safety glasses and respirator when required. If you are using a tractor equipped with a cab, make sure the cab is rated for appropriate environmental exposure. Be safe and always wear proper protection. Short or long term exposure to certain chemicals and materials can result in serious injury or death. (SL-19) str



## **WARNING**

Repeated or substantial breathing of hazardous dusts, including crystalline silica, could cause fatal or serious respiratory disease including silicosis. Concrete, masonry, many types of rock, and various other materials contain silica sand. California lists respirable crystalline silica as a substance known to cause cancer. Operation of this equipment under certain conditions may generate airborne dust particles that could contain crystalline silica. In those conditions, personal protective equipment including an appropriate respirator must be used. If excessive dust is generated, a dust collection or suppression system should also be used during operation. (SG-41) str



**SAFETY**

## **EQUIPMENT OPERATION SAFETY INSTRUCTIONS AND PRACTICES**

## **DANGER**

This Implement may be wider than the Tractor. Be careful when operating or transporting this equipment to prevent the Implement from running into or striking sign posts, guard rails, concrete abutments or other solid objects. Such an impact could cause the Implement and Tractor to pivot violently resulting in loss of steering control, death, or serious injury. Never allow the Implement to contact obstacles. (S3PT-12)str

## **DANGER**

Never grasp control levers when mounting the machine. (SBH-4) str

## **DANGER**

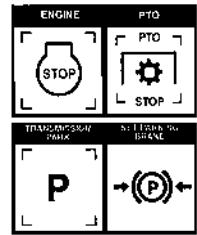
The Boom is designed only to position and operate the Bucket which is attached to it. Never attempt to lift, pull, or push other solid objects with the boom or bucket. Serious injury could result from a structural failure when the Boom is used for purposes other than those for which it was designed. (SBH-9) str

# SAFETY

## **⚠ DANGER**

BEFORE leaving the tractor seat lower the implement, set the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only.

(SG-9)str



## **⚠ WARNING**

Do not mount or dismount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. Dismounting a moving power unit can result in a crushing hazard that can cause death or serious injury. (SG-12) str



## **⚠ DANGER**

Start tractor only when properly seated in the Tractor seat. Starting a tractor in gear can result in death or serious injury. Read the Tractor operators manual for proper starting instructions. (SG-13) str



## **⚠ DANGER**

Operate the Tractor and/or Implement controls only while properly seated in the Tractor seat with the seat belt securely fastened around you. Inadvertent movement of the Tractor or Implement may cause death or serious injury. (SG-29)str

## **⚠ DANGER**

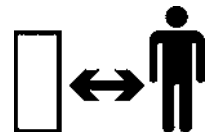
DO NOT operate this Implement on a Tractor that is not properly maintained. Should a mechanical or Tractor control failure occur while operating, immediately shut down the Tractor and perform repairs before resuming operation. Serious injury and possible death could occur from not maintaining this Implement and Tractor in good operating condition. (SG-36) str

## **⚠ WARNING**

Do Not operate this equipment in areas where insects such as bees, may attack you and/or cause you to lose control of the equipment. If you must enter in such areas, use a tractor with an enclosed Cab and close the windows to prevent insects from entering. If a tractor cab is not available, wear suitable clothing including head, face, and hand protection to shield you from the insects. Attacking insects can cause you to lose control of the tractor, which can result in serious injury or death to you or bystanders. Never dismount a moving tractor. (SG-40) str

## **⚠ WARNING**

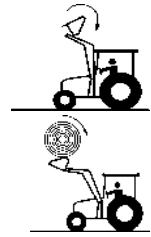
Keep bystanders 10 feet away from the tractor and loader while operating. The bystanders could enter the path of the tractor or items could fall from the loader resulting in serious injury to the bystander. (SL-01



# SAFETY

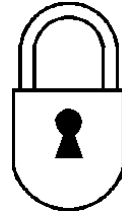
## WARNING

For added safety when lifting loads above the height of the operator, install a certified Falling Object Protective Structure. Shiftable loads, round bales, large loose items, and loader attachments can fall toward the operator resulting in serious injury or death. Falling Object Protective Structure (FOPS) rated Cab may be obtained from the tractor dealer or other sources. (SL-02) str



## WARNING

Before dismounting the tractor and loader lower the loader to the ground or onto solid support blocks. Engage the loader valve travel lock to prevent inadvertent movement of the valve controls causing the loader to suddenly move and drop. Sudden dropping of the loader and attachment could result in serious injury. (SL-05) str



## CAUTION

Use extra care when turning or stopping. Allow for increased length and weight of added loader. The loader adds five to six feet of length in front of the tractor and significant weight. Allow extra distance when stopping or turning. Do not allow loader or attachment to contact solid objects. (SL-07)str

## WARNING

Do not raise the loader into an overhead structure or allow a raised attachment to contact overhead structures. Sudden or unexpected contact with an overhead structure could result in serious injury. (SL-08)str

## DANGER

Do not let the loader or attachment contact electrical power lines. Contact with electrical power lines can result in serious injury or electrocution. If the loader attachment contacts a power line remain in the tractor seat until the power has been shut off. Stepping off the tractor can permit electrical current to pass through the body resulting in electrocution. (SL-09) str



## DANGER

Store the grapple bucket or bale spear attachment with the point(s) on the ground. Walking into the point of the bale or grapple spear can cause serious bodily injury. Never drive the bale spear or grapple bucket attachment forward if a bystander is in front of the loader. (SL-10) str



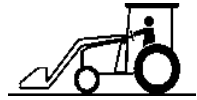
## WARNING

Only mount the loader on a tractor that is listed on the mounting instructions. Never mount on a tricycle steering front axle. Move the tractor front and rear wheels to the widest spacing and add the recommended rear tractor ballast to prevent tractor tip over. Keep the tractor tires properly inflated. Maintain at least 25% of the total Tractor and Loader weight including the maximum load in the bucket or attachment on the rear axle. Always wear your seatbelt and make sure the ROPS structure is fully deployed to prevent serious injury or death from the tractor tipping over. (SL-11)

# SAFETY

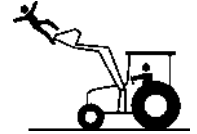
**WARNING**

Carry the loader and attachment low when transporting to reduce the potential of the tractor tipping over. Transport on slopes only at slow speeds and use gradual turning angles. Tractor wheel contact with any wash out, drop off or ground obstruction with a raised loader could result in the tractor tipping over and causing serious injury. (SL-12)str



**DANGER**

Do not work from the loader or attachments. Do not allow any riders on the loader, tractor or attachments. Falling off the loader could result in serious injury and/or tractor run over (SL-14)str

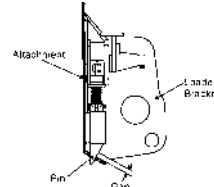
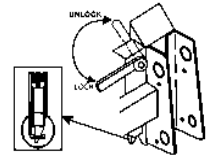


**DANGER**

Do not use an attachment that is not securely attached to the quick hitch. The attachment could fall resulting in severe crushing injuries or death to the operator or bystanders.



- Rotate both hitch pin levers down to the locked position. You should feel a firm resistance when locking the levers down. The pins must extend through the slots in the bottom of the attachment bracket.
- Examine the fit between the quick hitch and the bottom of the attachment bracket. The pins must extend through the slots in the bottom of the attachment bracket. The tapered side of each pin must be firmly wedged against the surface of the slot on the bottom of the attachment bracket. The attachment bucket should fit snugly against the bottom of the quick hitch bracket. If there is a gap of more than 1/8" or if the pins are not firmly seated do not use the attachment. Contact your dealer before using the attachment.
- On level ground, tilt the attachment down 90° degrees and lower it to the ground. Lower the loader further to slightly raise the front of the tractor off the ground. Drive the tractor in reverse while the attachment is on the ground for 20-30 feet to ensure the attachment does not disconnect. If the attachment disconnects during this process, discontinue the use of the attachment and contact your dealer.



**WARNING**

NEVER walk or work under or allow any person to be underneath a raised loader or attachment. (SL-15) str



**WARNING**

Do not operate the loader from the ground. Operate the tractor and loader only while seated in the tractor seat with the seatbelt fastened. The loader could fall crushing a person resulting in serious injury or death. (SL-16) str

**WARNING**

Use extreme care when piling material above 6 feet high. Material could shift and fall onto the operator or bystanders. The material could crush or suffocate the operator or bystander resulting in serious injury or death.

(SL-17) str



# SAFETY

## **WARNING**

Know before you DIG. Call 888-258-0808 and request that all buried utilities locations be identified before digging in unfamiliar ground. Do not let the loader or attachment contact buried electrical power lines, utilities, or gas lines. Contact with electrical power lines can result in serious bodily injury or electrocution. If the loader contacts a power line, remain in the tractor seat until the power has been shut off. Stepping off the tractor can permit electrical current to pass through the body resulting in electrocution. (SL-18)str

## **DANGER**

Do not use loader as a jack to raise the tractor tires off the ground. The loader could fail causing the tractor and loader to fall to the ground resulting in serious injury. (SL-25)str

## **WARNING**

Use extreme care when loading, transporting, or dumping loads that impair or partially block the operator's line of sight. Know where you are traveling. Make sure no bystanders are in the area of travel. If a bystander assists in providing guidance, make sure they are not in the path of travel. Keep all bystanders 25 feet away from travel path. (SL-29)str

## **WARNING**

Always look behind you before backing up. Make sure you are looking in the direction of travel. A bystander could walk behind the tractor. Running into a bystander can result in serious injury or death. (SL-30)str



## **WARNING**

Operate the tractor and loader only in conditions where you have clear visibility in daylight or with adequate artificial lighting. Never operate in darkness or foggy conditions where you cannot clearly see at least 100 feet in front and to the sides of the tractor. Make sure you can clearly see bystanders, ditches, steep slopes, drop-offs, overhead obstructions, power lines, and debris or obstruction in the travel path. If you are unable to clearly see these types of items discontinue operating. Contact with unseen vehicles, bystanders, obstructions, or drop-offs can cause serious injury. (SL-35)str

## **DANGER**

Be particularly careful in transport. The Implement has raised and moved the center of gravity to the front of the Power Unit increasing the possibility of overturn and tipping forward. Turn curves or go up slopes only at low speed and using a gradual turning angle. Go up slopes with the Implement located uphill. Slow down on rough or uneven surfaces. (SPU-02)str

## **WARNING**

Never leave the Implement and Power Unit unattended while the Implement is in the raised position. Accidental operation of a lifting lever or a hydraulic failure may cause the implement to suddenly fall causing serious injury or possible death to anyone who might inadvertently be under the Implement. Lower the implement carefully to the ground. Do not put hands or feet under lifted components. (SPU-03)str

## **DANGER**

The center of gravity of a Power Unit equipped with a front-mounted Implement is shifted to the front and removes weight from the rear wheels. The Power Unit should maintain at least 25% total weight with the maximum load in the bucket or attachment on the rear wheels to prevent tipping forward, loss of steering control, and possible injury. Add counterweight if required when operating on slopes and proceed with the load uphill to prevent tipping. Reference the Power Unit's Operator's Manual or an authorized dealer for information on adding additional weight. (SL-37)str

# SAFETY

**WARNING**

Your driving vision may be reduced or impaired by the tractor, cab, or implement. Before driving on public roadways identify any limited vision areas, and make adjustments to your operating position, mirrors, and the implement transport position so that you can clearly see the area where you will be traveling, and any traffic that may approach you. Failure to maintain adequate vision of the public roadway and traffic can result in serious injury or even death. (STI-10)

**WARNING**

Make sure the hydraulic quick disconnects are fully seated into the connections. Do not use the loader if the hydraulic connection is leaking. Leaking oil could allow the loader to fall resulting in a serious crushing injury. (SL-22) str

**WARNING**

If the loader valve controls fail to functions properly discontinue use of the tractor and loader until the controls are properly repaired. Sudden or unexpected movement or dropping of the loader and attachment could result in serious injury. (SL-31) str

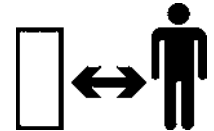
**CAUTION**

Make sure all air is purged from the hydraulic system before using the loader. Air in the system can cause the loader to respond sluggishly or with unexpected movement. The air can be purged from the cylinder lines by fully cycling the cylinders several times from the fully closed to fully open position. Sudden or unexpected movement or dropping of the loader and attachment could result in serious injury. (SL-32) str

## CONNECTING OR DISCONNECTING IMPLEMENT SAFETY INSTRUCTIONS AND PRACTICES

**WARNING**

Do not stand or allow bystander or coworkers between the loader and the tractor while installing or disconnecting the loader from the tractor. Keep hands and body clear of the loader and the loader mounts. Serious injury or death can result from a person being crushed between the tractor and loader. (SL-03) str



**DANGER**

Never allow anyone to get under the loader or attachment or to reach through the loader lift arms when raised. Serious injury could result from crushing or pinching by the loader or attachment. (SL-06) str



**WARNING**

Make sure the loader is properly attached to the tractor and the retaining pins securely lock the loader into position. Improper mounting of the loader onto the tractor can result in the loader falling causing serious injury. (SL-23) str

**WARNING**

Make sure all tractor and loader guards are in place and properly functioning. Do not use an attachment if the roll back guards are damaged or missing. The roll back guards prevents items carried in the attachment from rolling back onto the operator causing serious injury. For added safety when lifting loads above the height of the operator, install a certified Falling Object Protective Structure. (SL-28) str

# SAFETY

## MAINTENANCE AND SERVICE SAFETY INSTRUCTIONS & PRACTICES



Always maintain the safety signs in good readable condition. If the safety signs are missing, damaged, or unreadable, obtain and install replacement safety signs immediately. (SG-5)str



Do not modify or alter this Implement. Do not permit anyone to modify or alter this Implement, any of its components or any Implement function. (SG-8)str



Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SL-36)str



Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15) str



Never attempt to lubricate, adjust, or remove material from the Implement while it is in motion or while tractor engine is running. (SG-20)str



Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)str



Avoid contact with hot surfaces including hydraulic oil tanks, pumps, motors, valves and hose connections. Relieve hydraulic pressure before performing maintenance or repairs. Use gloves and eye protection when servicing hot components. Contact with a hot surface or fluid can cause serious injury from burns or scalding. (SG-34)str



Use caution and wear protective gloves when handling sharp objects such as blades, knives, and other cutting edges. Be alert to worn component surfaces which have sharp edges. Sharp surfaces can inflict severe laceration injuries if proper hand protection is not worn. (SG-37)str



Cancer and Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

SAFETY

# SAFETY

## PARTS INFORMATION

Bush Hog products are designed utilizing specifically matched system components to ensure optimum equipment performance. These parts are made and tested to Bush Hog specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce equipment performance, void warranties, and present a safety hazard. Use genuine Bush Hog parts for economy and safety. (SPBH-2)str

SEE YOUR BUSH HOG DEALER

## Storage and Parking Safety Instructions and Practices



Never crawl under or allow children to play around or on a loader that is disconnected from the tractor. The loader could fall crushing a person resulting in serious injury or death. (SL-13)str



Do not remove the attachment from the loader when the loader is disconnected from the tractor. The attachment stabilizes the loader. If the attachment is removed, the loader will fall and could result in serious injury. (SL-26)str



Only disconnect and store the loader on firm flat ground. Make sure the loader stands are properly installed and rest on firm ground or support blocks. If the stands sink or fail, the loader could fall causing serious injury. (SL-27)str

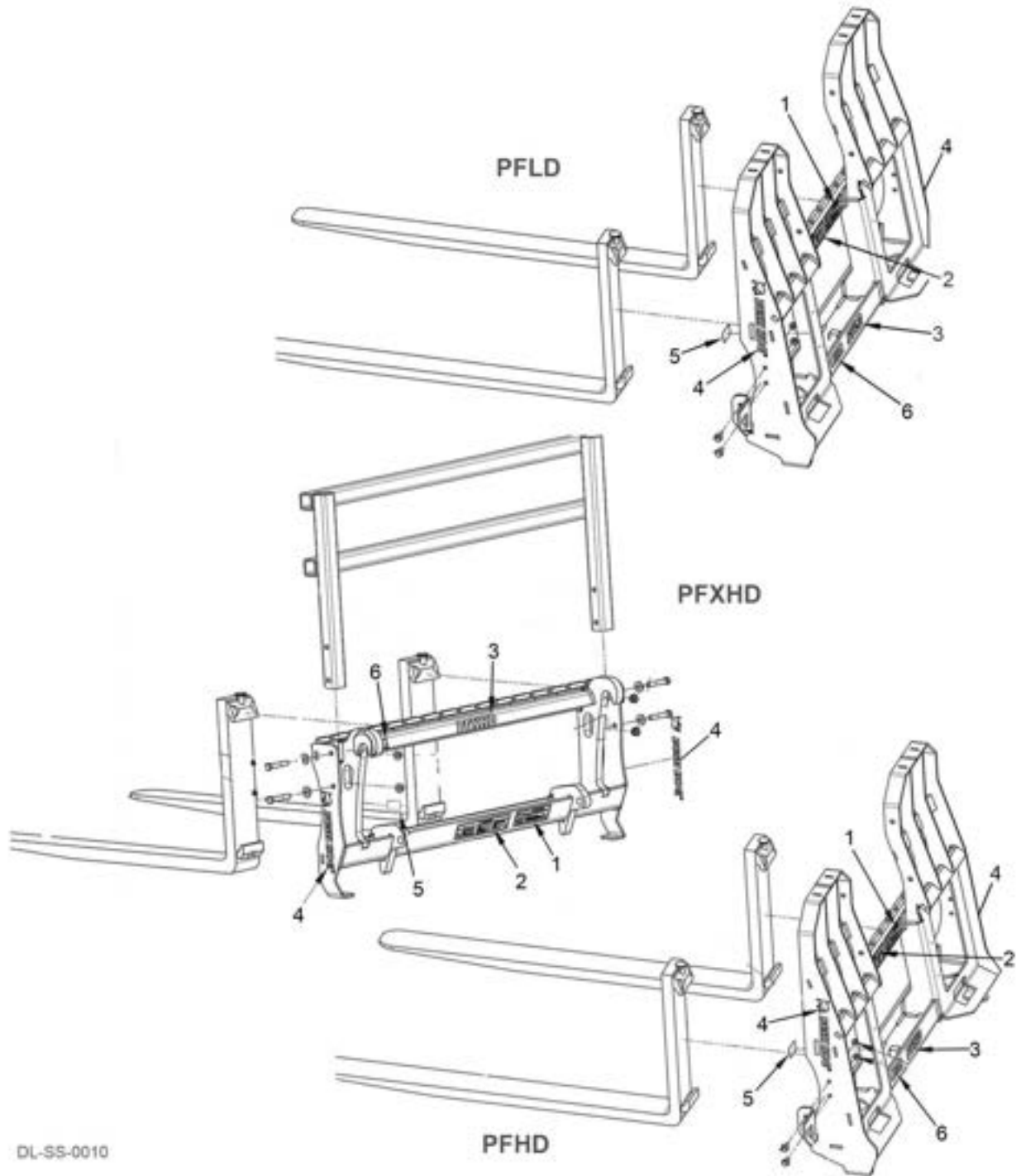
## Concluding Safety Instructions and Practices

In addition to the design and configuration of this Implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Tractor and Equipment Manuals. Pay close attention to the Safety Signs affixed to the Tractor and Equipment. (SG-18)str

# SAFETY

## DECAL LOCATION

**NOTE:** Bush Hog supplies safety decals on this product to promote safe operation. Damage to the decals may occur while in shipping, use, or reconditioning. Bush Hog cares about the safety of its customers, operators, and bystanders, and will replace the safety decals on this product in the field, free of charge (Some shipping and handling charges may apply). Contact your Bush Hog dealer to order replacement decals.



DL-SS-0010

# SAFETY



SAFETY

ITEM	PART NO.	QTY	LEVEL	DESCRIPTION
1.	D1151	1	WARNING	Lockpin Engagement
2.	D1152	1	WARNING	Multi-Hazard
3.	50084023	1	MODEL	PFLD
	50084024	1	MODEL	PFHD
	50084025	1	MODEL	PFXHD
4.	50083387	1	LOGO	Bush Hog
5.	NFS	1	SERIAL PLT	Serial Plate Number
6.	D960	1	WARNING	Prop 65 Warning

# SAFETY

 **WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov) D960

SAFETY

   
**Coupler Handles - Locked**  
**Handle Locked**  
**Lockpin Extended**


**WARNING**

Do not operate without confirmation that lockpins are fully engaged. Loader attachment can fall off if not properly attached.

**To avoid death or serious injury:**

- Only use loader manufacturer approved attachments.
- Read all operators manuals and decals before operating. Follow all safety, operating and service instructions. Contact dealer for replacement parts.

D1151

**WARNING**

**To avoid death or serious injury:**

- Do not use attachment to lift large objects, round bales, or items that may roll or slide down loader arms onto operator.
- Avoid transporting with implement raised high. Always transport loads with attachment low and level to ground.
- Always keep attachment level when raising loads.
- Avoid raising to full height with attachment rolled back.
- Keep implement tilted back and low to the surface while moving.
- Do not lift or carry anyone on bucket, forks, or bale spear, or any other portion of the loader or loader attachments.
- ROPS (Roll-Over Protective Structures) and seat belt equipped tractors are recommended for operator use in all operations.
- Do not allow riders on tractor, loader, or attachment.
- Avoid contact with electrical power lines by loader and attachments.

D1152

# SAFETY

## FEDERAL LAWS AND REGULATIONS

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

### **Employer-Employee Operator Regulations**

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 are 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 Training Requirements**

***Title 29, Code of Federal Regulations Part 1928.57(a)(6).*** [www.osha.gov](http://www.osha.gov)

Operator instructions. At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee who operates an agricultural tractor and implements in the safe operating practices and servicing of equipment with which they are or will be involved, and of any other practices dictated by the work environment.

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.

### **Employer Responsibilities:**

To ensure employee safety during Tractor and Implement operation, it is the employer's responsibility to:

1. Train the employee in the proper and safe operation of the Tractor and Implement.
2. Require that the employee read and fully understand the Tractor and Implement Operator's Manual.
3. Permit only qualified and properly trained employees to operate the Tractor and Implement.
4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.
5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.
8. Require that the employee operator stop operation if bystanders or passersby come within 300 feet.

### **Child Labor Under 16 Years of Age**

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 situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

# INTRODUCTION SECTION

Introduction Section 2-1

# INTRODUCTION

This Pallet Fork was designed with care and built with quality materials by skilled workers. Proper assembly, maintenance, and operating practices, as described in this manual, will help the owner/operator get years of satisfactory service from this piece of equipment.

The purpose of this manual is to familiarize and instruct.

Careful use and timely service saves extensive repairs and costly downtime losses. The Operation and Maintenance Sections of the manual train the owner/operator how to work the Pallet Fork correctly and attend to appropriate maintenance. The Troubleshooting Guide helps diagnose difficulties and offers solution to the problems.

Safety is of primary importance to the owner/operator and to the manufacturer. The first section of this manual includes a list of Safety Messages, that, if followed, will help protect the operator and bystanders from injury or death. Many of the Safety Messages will be repeated throughout the manual. The owner/operator/dealer should know these Safety Messages before assembly and be aware of the hazards of operating this Grapple during assembly, use, and maintenance. The Safety Alert Symbol combined with a Signal Word, as seen below, is intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this machine.



Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.

**Important**

Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

# INTRODUCTION



The Bush Hog PFLD, PFHD, and the PFXHD Pallet Forks have uses and applications in farming, ranching, construction sites, nurseries, campuses, theme parks, salvage operations, warehouses, lumber yards, and large or small retail outlets. They have the capability of quickly and conveniently turning your skid steer loader or tractor loader equipped with a universal quick attach mounting system into a pallet fork expanding your material handling capabilities.

This manual is intended for all models, but will show specific pictures and diagrams of the PFHD Pallet Fork. If any specifications are different than the model shown, it will be noted.

**NOTE:** The specific term “Pallet Fork Attachment” will be referred to simply as “Pallet Fork” or attachment throughout the rest of this manual and may refer to any of the models covered by this manual. The term skid steer loader or small utility tractor will be referred to as “Machine” throughout this manual.

Front and rear, and left and right are determined by the normal direction of travel (the same as on your automobile).

Literature Page



[www.algqr.com/ble](http://www.algqr.com/ble)

# INTRODUCTION

## BUSH HOG LIMITED WARRANTY



Bush Hog warrants to the original purchaser of any new Bush Hog equipment, purchased from an authorized Bush Hog dealer, that the equipment be free from defects in material and workmanship for a period of one (1) year for non-commercial, state and municipalities' use and ninety (90) days for commercial use from date of retail sale. The obligation of Bush Hog to the purchaser under this warranty is limited to the repair or replacement of defective parts.

Replacement or repair parts installed in the equipment covered by this limited warranty are warranted for ninety (90) days from the date of purchase of such part or to the expiration of the applicable new equipment warranty period, whichever occurs later. Warranted parts shall be provided at no cost to the user at an authorized Bush Hog dealer during regular working hours. Bush Hog reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

### DISCLAIMER OF IMPLIED WARRANTIES & CONSEQUENTIAL DAMAGES

Bush Hog's obligation under this limited warranty, to the extent allowed by law, is in lieu of all warranties, implied or expressed, **INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE** and any liability for incidental and consequential damages with respect to the sale or use of the items warranted. Such incidental and consequential damages shall include but not be limited to: transportation charges other than normal freight charges; cost of installation other than cost approved by Bush Hog; duty; taxes; charges for normal service or adjustment; loss of crops or any other loss of income; rental of substitute equipment, expenses due to loss, damage, detention or delay in the delivery of equipment or parts resulting from acts beyond the control of Bush Hog.

### THIS LIMITED WARRANTY SHALL NOT APPLY:

1. To vendor items which carry their own warranties, such as engines, tires, and tubes.
2. If the unit has been subjected to misapplication, abuse, misuse, negligence, fire or other accident.
3. If parts not made or supplied by Bush Hog have been used in connection with the unit, if, in the sole judgment of Bush Hog such use affects its performance, stability or reliability.
4. If the unit has been altered or repaired outside of an authorized Bush Hog dealership in a manner which, in the sole judgment of Bush Hog, affects its performance, stability or reliability.
5. To normal maintenance service and normal replacement items such as gearbox lubricant, hydraulic fluid, worn blades, or to normal deterioration of such things as belts and exterior finish due to use or exposure.
6. To expendable or wear items such as teeth, chains, sprockets, belts, springs and any other items that in the company's sole judgment is a wear item.

NO EMPLOYEE OR REPRESENTATIVE OF BUSH HOG IS AUTHORIZED TO CHANGE THIS LIMITED WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGE IS MADE IN WRITING AND SIGNED BY BUSH HOG'S SERVICE MANAGER, 2501 GRIFFIN AVE., SELMA, ALABAMA 36703.



Record the model number, serial number and date purchased. This information will be helpful to your dealer if parts or service are required.

MODEL NUMBER \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

MAKE CERTAIN THE WARRANTY HAS BEEN FILED WITH BUSH HOG SELMA, ALABAMA

DATE OF RETAIL SALE \_\_\_\_\_



**BUSH HOG®**

# ASSEMBLY SECTION

Assembly Section 3-1

# ASSEMBLY

## ASSEMBLY

Your Bush Hog Pallet Fork does not come assembled from the factory. Follow the set-up instructions carefully for safe for arm installation on the pallet fork frame to avoid personal injury or equipment damage.



Pinching hazard! Keep hands and fingers clear of the area between carriage bars and fork arms.

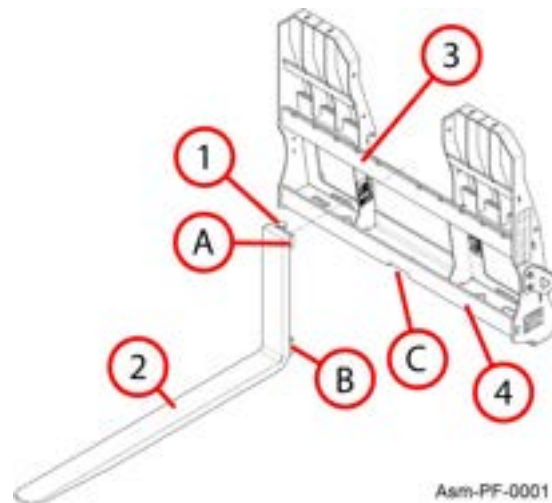
## TONGUE ASSEMBLY INSTALLATION

- Torque nuts and/or bolts on the pallet fork frame, if applicable.
- Locate fork arm locking pin on the top backside of the fork arms.
- Locate the slot centered on the bottom edge of the lower fork carriage bar

### Installing Fork Arms on Pallet Fork Frame

Install the first fork arm.

1. Raise and lock fork arm locking pin (#1).
2. Center the upper hook of first fork arm (#2) on upper carriage bar (#3).
3. Lower retaining hook (A) onto upper carriage bar (#3), and fit retaining hook (B) through slot (C) in lower carriage bar (#4).
4. Slide first fork arm towards the right. applying pressure near carriage bars (#3 & #4), until locking pin (1) aligns with a pin notch.
5. Release and seat locking pin handle (#1) in a chosen notch, ensuring full engagement and secure attachment of retaining hooks (A) and (B) behind the carriage bars.



Asm-PF-0001

### Install the second fork arm.

1. Repeat Steps 1-5 for the second fork arm, sliding it towards the left.



If the fork arm locking pin is not fully engaged the fork arm could become unintentionally disengaged, causing serious injury.

**NOTICE**

**Maintain Balanced Placement:** Do not place both fork arms on the same side of the slot opening; keep an equal distance from the frame center.

**NOTICE**

**Confirm Secure Installation:** Ensure both fork arms are properly installed and securely locked before using the pallet fork. For light-weight tractors or specific skid loaders, consult the Skid Steer or Tractor Operator's Manual to determine if rear ballast is required for heavy loads to maintain steering control.

**NOTE:** Installation and movement of the fork arms is made much easier if grease is applied to the top of the top carriage bar and to the front face of both carriage bars.

# OPERATION SECTION

Operation Section 4-1

# OPERATION

## BUSH HOG PFLD, PFHD, PFXHD PALLET FORKS OPERATING INSTRUCTIONS

Your Bush Hog Pallet Fork should now be assembled and inspected for any evidence of defective or damaged parts before use. Any evidence of damage should be reported to your dealer immediately. After Hydraulic Lines have been attached to skid steer or tractor, carefully remove safety blocks.

This section of the Operator's Manual is designed to familiarize, instruct, and educate safe and proper pallet fork use to the operator. Pictures contained in this section are intended to be used as a visual aid to assist in explaining the operation of a pallet fork. Some pictures may show shields removed for purposes of clarity. NEVER OPERATE this implement without all shields in place and in good operational condition. The operator must be familiar with the pallet fork and skid steer or tractor operation and all associated safety practices before operating. Proper operation of the pallet fork as detailed in this manual, will help ensure years of safe and satisfactory use of the pallet fork.

**READ AND UNDERSTAND THE ENTIRE OPERATING INSTRUCTIONS AND SAFETY SECTION OF THIS MANUAL AND THE TRACTOR MANUAL BEFORE ATTEMPTING TO USE THE TRACTOR AND IMPLEMENT.** If you do not understand any of the instructions, contact your nearest authorized dealer for a full explanation. Pay close attention to all safety signs and safety messages contained in this manual and those affixed to the implement and tractor. *OPS-U- 0001str*

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Death or serious injury may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2str)



Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3) str



# OPERATION

## 1. STANDARD EQUIPMENT AND SPECIFICATIONS



<b>PFLD Specifications</b>	
Overall Width	46"
Overall Length	57"
Overall Height	37"
Overall Approximate Weight	300 lb.
Nominal Blade Dimensions	3.00" x 1.18" x 48.00"
Pallet Fork Rating (Pair) Front of shank to load point is 19.68" (500mm)	2,000 lbs.

<b>PFHD Specifications</b>	
Overall Width	48"
Overall Length	57"
Overall Height	36"
Overall Approximate Weight	356 lb.
Nominal Blade Dimensions	4.00" x 1.375" x 48.00"
Pallet Fork Rating (Pair) Front of shank to load point is 19.68" (500mm)	4,000 lbs

# OPERATION

## OPERATION



PFXHD Specs with Optional Extensions	
Overall Width	47.5"
Overall Length	59"
Overall Height	36"
Overall Approximate Weight	411 lb.
Nominal Blade Dimensions	4.00" x 1.56" x 48.00"
Pallet Fork Rating (Pair) Front of shank to load point is 19.68" (500mm)	5,500 lbs

# OPERATION

## 2. OPERATOR REQUIREMENTS

Safe operation of the unit is the responsibility of a qualified operator. A qualified operator has read and understands the implement and tractor Operator's Manuals and is experienced in implement and tractor operation and all associated safety practices. In addition to the safety messages contained in this manual, safety signs are affixed to the implement and tractor. If any part of the operation and safe use of this equipment is not completely understood, consult an authorized dealer for a complete explanation.

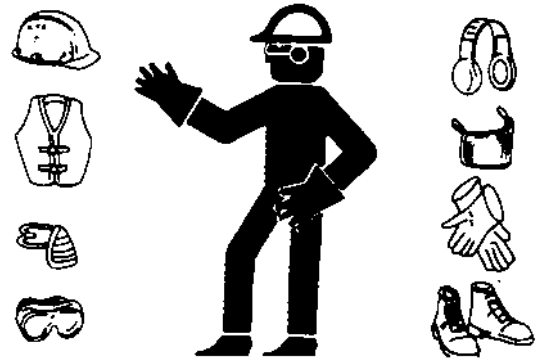
If the operator cannot read the manuals for themselves or does not completely understand the operation of the equipment, it is the responsibility of the supervisor to read and explain the manuals, safety practices, and operating instructions to the operator.

Safe operation of equipment requires that the operator wear approved Personal Protective Equipment (PPE) for the job conditions when attaching, operating, servicing, and repairing the equipment. PPE is designed to provide operator protection and includes the following safety wear:

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

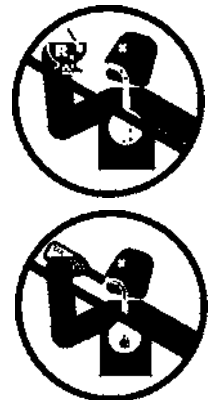
- Always Wear Safety Glasses (with side shields marked to comply with ANSI Z87)
- Hard Hat
- Steel Toe Safety Footwear
- Gloves
- Hearing Protection
- Close Fitting Clothing
- Respirator or Filter Mask (depends on operating conditions)

OPS-U- 0002str



### **⚠ DANGER**

DO NOT use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27) str



# OPERATION

## **3. SKID STEER & TRACTOR HOOK-UP**



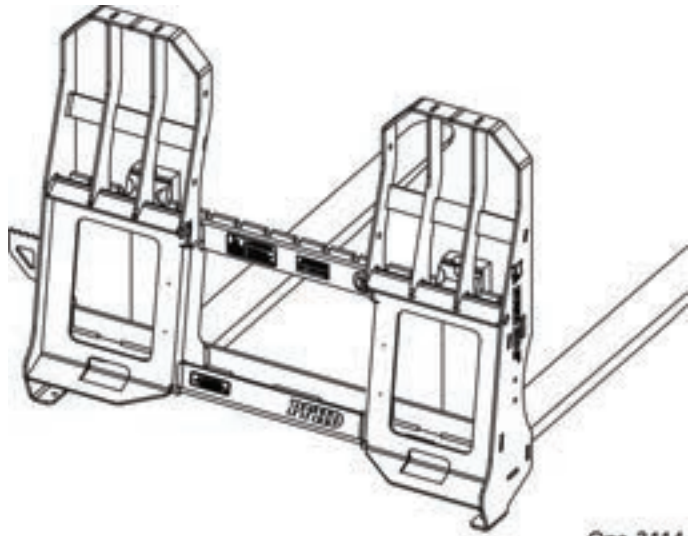
A crushing hazard exists when hooking-up attachments. DO NOT allow anyone to stand between the Skid Steer/Tractor and the attachment itself. DO NOT operate hydraulic controls while someone is near the Skid Steer/Tractor or attachment.

### **3.1 Hook-Up with Skid Steer Style Hitch**



Make sure Skid Steer Hitch Plate is properly attached to the pallet forks. It must be secured under the top angle bar and locking handles must be locked down with locking pins extending fully through the bottom slots. An improperly attached can fall resulting in serious injury and or death.

1. If needed, pull locking handles up on the Skid Steer hitch plate until locking pins are raised up and ready for hook-up.
2. Carefully drive up to the Pallet Fork making sure the hitch plate on the Skid Steer arms are parallel with the Pallet Fork hitch plate.
3. Rotate top of Skid Steer tilt arms slightly forward.
4. Place top of Skid Steer hitch plate under the top angled bar on the bucket.
5. Slowly lift Skid Steer hitch up until top angle bar and Pallet Fork hitch plate have come together.
6. Rotate top of Skid Steer hitch plate back to align bottom slots in the Pallet Fork with locking pins in the Skid Steer hitch plate.



Push lock handles on Skid Steer hitch down so that the pins go through the bottom slots of the Pallet Fork hitch plate and handles lock down.

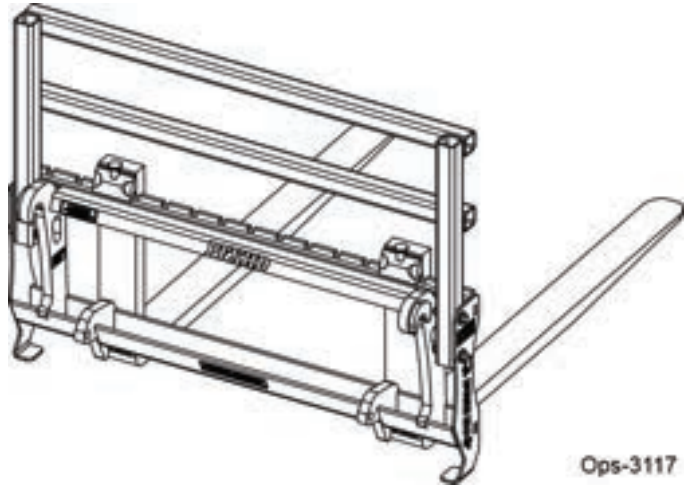
# OPERATION

## 3.2 Hook-up With Euro Style Hitch

### CAUTION

Make sure Euro hitch plate is properly attached to the Pallet Forks. It must be secured under the hooks and locking pins must be fully extended into the locking lugs. An improperly attached Pallet Fork can fall resulting in serious injury and or death.

1. Lower Euro hitch plate down as far as possible.
2. If required, manually move locking handle until locking pins are fully back and ready for hook-up.
3. Carefully drive up to the Pallet Forks hooks until mounting bar and hook guides on the Euro hitch plate are aligned under the Bale Spear hooks.
4. Raise Euro hitch plate up until mounting bar is completely caught inside the Pallet Fork hooks
5. Continue to raise Euro hitch plate up to allow bottom of Pallet Fork to sing in until pin holes in locking lugs align with locking pins in Euro hitch plate. If necessary, rotate top of Pallet Fork hitch back to align pin holes with locking pins.
6. If pins do not auto-lock into the pin holes, then manually operate Euro hitch plate lever to push the locking pins into the pin holes, Make sure locking handles are locked into position to prevent the pins from releasing.

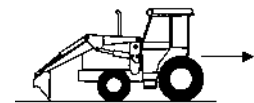


### WARNING

Do not use an attachment that is not securely attached to the quick hitch, The attachment could fall resulting in severe crushing injuries or death to the operator or bystanders.



On level ground, tilt the attachment down 90° degrees and lower it to the ground. Lower the loader further to slightly raise the front of the tractor off the ground. Drive the tractor in reverse while the attachment is on the ground for 20-30 feet to ensure the attachment does not disconnect. If the attachment disconnects during this process, discontinue the use of the attachment and contact your dealer.



# OPERATION

## PALLET FORK PRE-OPERATION INSPECTION



Bale Spear ID# \_\_\_\_\_

Date: \_\_\_\_\_

Make: \_\_\_\_\_

Shift: \_\_\_\_\_



Before conducting the inspection, make sure the tractor engine is off, all rotation has stopped and the tractor is in park with the parking brake engaged. Make sure the pallet fork is resting on the ground or securely blocked up and all hydraulic pressure has been relieved.

Item	Condition at Start of Shift	Specific Comments if not OK
The Operator's Manual has been read and understood.		
All Safety Decals are in place and legible.		
The Hitch connection pins are properly retained.		
There are no cracks in Hitch.		
All bolts are in place and properly tightened.		
All grease fittings and lubrication points have been greased.		
Check for chips, cracked or worn parts past intended use.		

Operator's Signature: \_\_\_\_\_

**DO NOT OPERATE an UNSAFE TRACTOR or IMPLEMENT**

# OPERATION

## TRACTOR PRE-OPERATION INSPECTION



Tractor ID# \_\_\_\_\_ Make: \_\_\_\_\_

Date: \_\_\_\_\_ Shaft: \_\_\_\_\_



Before conducting the inspection, make sure the tractor engine is off, all rotation has stopped and the tractor is in park with the parking brake engaged. Make sure the mower is resting on the ground or securely blocked up and all hydraulic pressure has been relieved.

Item	Condition at Start of Shift	Specific Comments if not OK
The flashing lights function properly		
The SMV Sign is clean and visible		
The tires are in good condition with proper pressure		
The wheel lug bolts are tight		
The tractor brakes are in good condition		
The steering linkage is in good condition		
There are no visible oil leaks		
The hydraulic controls function properly		
The ROPS or ROPS Cab is in good condition		
The seatbelt is in place and in good condition		
The 3-point hitch is in good condition		
The drawbar pins are securely in place		
The PTO master shield is in place		
The engine oil level is full		
The brake fluid level is full		
The power steering fluid level is full		
The fuel level is adequate		
The engine coolant fluid level is full		
The radiator is free of debris		
The air filter is in good condition		

Operator's Signature: \_\_\_\_\_

**DO NOT OPERATE an UNSAFE TRACTOR or IMPLEMENT**

**OPERATION**

# OPERATION

## **4. PALLET FORK OPERATION**

By now you should have familiarized yourself with the Operator's Manual for your Plate Mounted Pallet Fork. If you haven't, please do so now. We cannot over-stress the importance of following the safety operating procedures that are spelled out in this manual. Proceed by getting onto the seat of your Tractor or Skid Steer and starting it up. We recommend that you take a little time to practice securely attaching and detaching your Pallet Fork to and from your skid steer style or Euro style hitch. It is also important to practice lifting, lowering, maneuvering, and placing an empty pallet on a level site until you gain the confidence and skill needed to have a good feel in what you are doing. Do not exceed the lift capacity of your Forks, Tractor, or Skid Steer. Don't lift your load too high creating an unstable load and unsafe situation. Don't tilt your load too far backwards, setting up a situation that could cause your load to roll or spill backwards onto you, the skid steer/tractor, and the operator's platform. Don't drive too fast for your ground and load conditions. Don't work on or around slippery or sloped areas that could cause you to lose control of the Tractor or Skid Steer. Don't allow pedestrians, pets, or livestock to approach the danger zone of your working area. Don't leave your Tractor or skid steer with forks or load raised off the ground. If you follow these few safety reminders, you will find that you will quickly become very adept, handy, and skillful at using your Bush Hog Pallet Fork.

### **4.1 Picking up a Load**

1. Make sure the load does not exceed the smaller of the lift capacities below:

- Rated lift capacity of the forks.
- 83% of the Skid Steer or Tractor rated lift capacity for an attached pallet fork.

**Important**

Using 83% of the Skid Steer or Tractor rated lift capacity for an attached front loader accounts for increased loader stresses caused by the added extension of the Pallet Fork and ensures that the front tires on your Skid Steer/Tractor are rated properly for the job.

**Important**

The forks should be fully inserted into the load before lifting. Picking up heavy loads without the forks fully inserted can damage the unit and void its warranty.

2. Stop completely before raising or lowering the forks to the correct height. Insert forks into the load as follows:

- Center forks under the pallet to evenly distribute the weight.
- Make sure the load is balanced and secure.
- Check for overhead obstructions.
- Stop completely before positioning forks at the correct height.
- Drive into the load as far as possible.
- Lift load just off the ground and tilt it back slightly.
- Back out slowly to clear racks or other obstacles.
- Position load at a safe traveling height before moving. Two to four inches above the floor is recommended traveling height.
- Slow down when traveling over rough or hilly terrain.
- Do not transport loads on public roadways.
- When traveling on public roadways, transport in such a way that faster moving vehicles may pass you safely.
- Plan your route to avoid heavy traffic.

# OPERATION

## **4.2 Placing a Load**

1. Stop in front of desired location to place the load.
2. Slowly raise load to required height.
3. Move forward slowly with load raised until load is positioned square and straight above its final destination.
4. Level load to position it for placement.
5. Lower load onto its final resting location.
6. Before backing, check all sides for pedestrians or other traffic.
7. Once load has settled, back up slowly.
8. Make sure forks clear pallet before turning or changing fork height.
9. Lower forks before moving again.

## **5. UNHOOKING THE PALLET FORK**

1. Park skid steer/tractor with unit on a flat, level solid surface and lower pallet fork onto the surface.
2. Place transmission in park, set park brake, shut /power equipment off, and remove switch key.
3. Unhook pallet fork as follows.

### **5.1 Skid Steer Style Hitch**

1. Pull lock handles up to remove pins from bottom slots in hitch plate.
2. Return to skid steer/tractor and tilt top of hitch plate slightly forward toward the pallet fork.
3. Slowly lower pallet fork until its top angle bar and loader hitch have separated.
4. Back skid steer/tractor slowly away from the pallet fork while making sure the loader hitch does not interfere with the pallet fork.

### **5.2 Euro Style Hitch**

1. If required, manually move locking handle until locking pins release. If Euro style hitch does not have a locking handle, locking pins should auto-release when separated from the pallet fork hooks.
2. Return to tractor and tilt front of forks down 5 to 10 degrees to the horizontal.
3. Begin lowering pallet fork down until front of fork ends are touching the ground.
4. Continue to slowly lower the pallet fork until the mounting bar on the Euro style hitch has separated from the pallet fork hooks.

# OPERATION

## **6. TRANSPORTING A LOAD**

1. Always use Tractors and/or Skid Steers that are properly ballasted for the load being transferred. Not doing so can result in loss of steering control.
2. Only use Tractors with wide front axles and move all wheels out to their widest position for maximum stability.
3. When traveling empty, transport with Pallet Forks at a safe height and angle that will not impale a person or livestock.
4. When transporting with a load, transport with load fully against the Pallet Fork Frame and with forks pointing up 5-10 degrees from horizontal. Never transport with load halfway or more out on the forks.
5. When stopped, always lower forks to the ground so that no person or livestock could walk/run into the Pallet Fork and become impaled. If forks will not rest on the ground, point forks down to protect people and livestock.
6. Always keep load centered horizontally on the forks. This will optimize stability while transporting.
7. Always transport with load raised to a height that does not hinder the line of sight going forward. When possible, keep the load low to the ground to help maintain stability of the Skid Steer/Tractor.
8. Reduce ground speed when turning and leave enough clearance to avoid making contact with obstacles such as building, trees, and fences.
9. Transporting loads over ramps, grades, bumpy ground, soft surfaces, or slippery surfaces reduces machine stability and lift capacity. Transporting and lifting loads under these conditions is extremely dangerous.
10. Always travel straight up and down inclines. Never make turns while on an incline and always keep forks tilted up 5-10 degrees from horizontal regardless of angle of incline.
11. Always transport over ramps and inclines in excess of 10 percent with load on the "Uphill" side of the machine. This will require one to drive-up and back down steep inclines.
12. Keep equipment away from electrical power lines. Place an orange warning sign under overhead electrical power lines indication type of danger above.
13. When traveling on public roads at night or during the night or during the day, use accessory lights and devices for adequate warning to operators of other vehicles. Comply with all federal, state, and local laws.
14. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.

## **7. IMPLEMENT STORAGE**

Clean, inspect, service, and make necessary repairs to the Pallet Fork when parking it for long periods and when parking it at the end of a working season. This will help ensure that the unit is ready for use next time you hook up to it.

1. Clean off any dirt and grease that may have accumulated on the bale spear. Scrape off compacted dirt and then wash its surface thoroughly with a garden hose.
2. Inspect pallet fork for loose, damaged, or worn parts and adjust or replace when needed.
3. Repaint parts where paint is worn or scratched to prevent rust. Paint is available from your local Bush Hog dealer.
4. Replace all damaged or missing guards and decals.
5. A coating of oil may also be applied to areas where paint is worn off to minimize oxidation.
6. Store pallet fork inside a building and away from human activity if possible. Inside storage will reduce maintenance and make for a longer life.
7. Follow all unhooking instructions when disconnecting skid steer or tractor from Plate Mounted Pallet Fork.
8. Do not allow children to play on or around the stored pallet fork.

# OPERATION

## **8. TRANSPORTING THE TRACTOR AND IMPLEMENT**

Inherent hazards of operating the tractor and implement and the possibility of accidents are not left behind when you finish working in an area. Therefore, the operator must employ good judgment and safe operation practices when transporting the tractor and implement between locations. By using good judgment and following safe transport procedures, the possibility of accidents while moving between locations can be substantially minimized. *OPS-U- 0017str*



Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in death or serious injury. *(SG-10)str*



When transporting, only raise the blade enough to clear ground obstacles to prevent tipping, especially when traveling through rough terrain.

Before transporting the tractor on a public roadway or boarding a trailer for transport, the tractor brake pedals should be locked together. Locking the pedals ensures that both wheels brake simultaneously while stopping, especially when making an emergency stop.



Use extreme caution and avoid hard applications of the tractor brakes when towing heavy loads at road speeds. Never tow the implement at speeds greater than 20 MPH (32 kph). *OPS-U- 0018str*

## **9. TRANSPORTING ON PUBLIC ROADWAYS**

Extreme caution should be used when transporting the tractor and implement on public roadways. The tractor must be equipped with all required safety warning features including a SMV emblem and flashing warning lights to alert drivers of the tractor's presence. Remember that roadways are primarily designed for automotive drivers and most drivers will not be looking out for you, therefore, you must look out for them. Check your side view mirrors frequently and remember that vehicles will approach quickly because of the tractor's slower speed. Be extremely cautious when the piece of equipment that you are towing is wider than the tractor tire width and/or extends beyond your lane of the road.

Make sure that a proper size safety tow chain is secured between the tractor and implement before entering a public road. *OPS-U- 0019 str*

# OPERATION



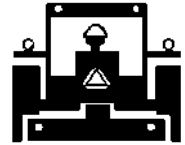
Only tow the Implement behind a properly sized and equipped Tractor which exceeds the weight of the Implement by at least 20%. DO NOT tow the Implement behind a truck or other type of vehicle. Never tow the Implement and another Implement connected in tandem. Never tow the Implement at speeds over 20 MPH. (STI-06)str



Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in death or serious injury. (SG-10)str



Make certain that the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)str



The SMV (Slow-Moving Vehicle) emblem is universal symbol used to alert drivers of the presence of equipment traveling on roadways at a slow speed. SMV signs are a triangular bright orange with reflective red trim for both easy day and night visibility. Make sure the SMV sign is clean and visible from the rear of the unit before transporting the tractor and implement on a public roadway. Replace the SMV emblem if faded, damaged, or no longer reflective. OPS-U- 0020str



Make sure that all tractor flashing warning lights, headlights, and brake/tail lights are functioning properly before proceeding onto public roads. While newer model tractors have plenty of lighting to provide warning signals and operating lighting, most older models are only equipped with operating lights. Consult an authorized tractor dealer for lighting kits and modifications available to upgrade the lighting on older tractor models. OPS-U- 0021str



# OPERATION

When operating on public roads, have consideration for other road users. Pull to the side of the road occasionally to allow all following traffic to pass. Do not exceed the legal speed limit set in your country for agricultural tractors. Always stay alert when transporting the tractor and implement on public roads. Use caution and reduce speed if other vehicles or pedestrians are in the area. *OPS-U- 0022 str*



Reduce speed before turning or applying the brakes. Ensure that both brake pedals are locked together when operating on public roads. *OPS-U-0023 str*



## **9.1 Hauling the Tractor and Implement**

Before transporting a loaded tractor and implement, measure the height and width dimensions and gross weight of the complete loaded unit. Ensure that the load will be in compliance with the legal limits set for the areas that will be traveled through. *OPS-U-0024 str*



## OPERATION

Use adequately sized and rated trailers and equipment to transport the tractor and implement. Consult an authorized dealer to determine the proper equipment required. Using adequately sized chains, heavy duty straps, cables and/or binders, securely tie down both the front and rear of the tractor utilizing the proper tie down locations as specified by the tractor manufacturer. *OPS-U-0025 str*



OPERATION

# **MAINTENANCE SECTION**

Maintenance Section 5-1

# MAINTENANCE

MAINTENANCE

## PROPER TORQUE FOR FASTENERS

The chart lists the correct tightening torque for fasteners. When bolts are to be tightened or replaced, refer to this chart to determine the grade of bolts and the proper torque except when specific torque values are assigned in manual text.


Recommended Torque in Foot Pounds Unless Otherwise Stated in the Manual\*

**NOTE:** These values apply to fasteners as received from supplier, dry or when lubricated with normal engine oil. They do not apply if special graphited or molydisulphide greases or other extreme pressure lubricants are used. This applies to both UNF fine and UNC coarse threads.

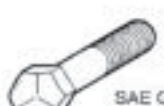
### TORQUE SPECIFICATIONS - DRY TORQUE

Proper torque for American fasteners.  
Recommended Torque in Foot Pounds (Newton Meters).\*


#### AMERICAN Bolt Head Markings




SAE Grade 2 (No Dashes)



SAE Grade 5 (3 Dashes)




SAE Grade 8 (6 Dashes)



All Cap screws SAE Grade 8

WRENCH SIZE (IN.) "A"	BOLT DIAMETER (IN.) "B" AND THREAD SIZE	SAE GRADE 2	SAE GRADE 5	SAE GRADE 8
1/16	1/4 - 20 UNC	6 (7)	8 (11)	12 (16)
1/16	1/4 - 28 UNF	6 (8)	10 (13)	14 (18)
1/2	5/16 - 18 UNC	11 (15)	17 (23)	25 (33)
1/2	9/16 - 24 UNF	13 (17)	19 (26)	27 (37)
9/16	3/8 - 16 UNC	20 (27)	31 (42)	44 (60)
9/16	3/8 - 24 UNF	23 (31)	35 (47)	49 (66)
5/8	7/16 - 14 UNC	32 (43)	49 (66)	70 (95)
5/8	7/16 - 20 UNF	36 (48)	55 (73)	78 (106)
3/4	1/2 - 13 UNC	49 (66)	75 (103)	106 (144)
3/4	1/2 - 20 UNF	55 (73)	85 (115)	120 (163)
7/8	9/16 - 12 UNC	70 (95)	109 (148)	153 (207)
7/8	9/16 - 18 UNF	79 (107)	122 (166)	172 (233)
15/16	5/8 - 11 UNC	97 (131)	150 (203)	212 (287)
15/16	5/8 - 18 UNF	110 (149)	170 (230)	240 (325)
1-1/8	3/4 - 10 UNC	144 (195)	206 (280)	376 (509)
1-1/8	3/4 - 16 UNF	192 (260)	297 (402)	420 (569)
1-1/16	7/8 - 9 UNC	186 (255)	430 (583)	606 (821)
1-1/16	7/8 - 14 UNF	184 (249)	474 (642)	668 (905)
1-1/2	1 - 8 UNC	250 (338)	644 (873)	909 (1232)
1-1/2	1 - 12 UNF	274 (371)	705 (955)	995 (1348)
1-1/2	1 - 14 UNF	280 (379)	721 (977)	1019 (1381)
1-11/16	1-1/8 - 7 UNC	354 (480)	795 (1077)	1206 (1745)
1-11/16	1-1/8 - 12 UNF	397 (536)	890 (1206)	1444 (1967)
1-7/8	1-1/4 - 7 UNC	600 (818)	1120 (1518)	1817 (2462)
1-7/8	1-1/4 - 12 UNF	553 (749)	1241 (1682)	2013 (2738)
2-1/16	1-3/8 - 8 UNC	655 (887)	1470 (1992)	2382 (3238)
2-1/16	1-3/8 - 12 UNF	746 (1011)	1672 (2286)	2712 (3675)
2-1/4	1-1/2 - 8 UNC	870 (1178)	1950 (2642)	3791 (5163)
2-1/4	1-1/2 - 12 UNF	979 (1327)	2194 (2973)	3667 (4930)

#### METRIC



Numbers appearing on bolt heads indicate ASTM class.

\*Use 75% of the specified torque value for plated fasteners. Use 85% of the specified torque values for lubricated fasteners.

WRENCH SIZE (IN.) "A"	BOLT DIA. (IN.) "B"	ASTM 8.8	ASTM 9.8	ASTM 10.9	ASTM 12.9
8	5	1.8 (2.4)		3.1 (6.9)	6.5 (8.8)
10	6	3.1 (4)		8.7 (12)	11.1 (15)
13	8	7.3 (10)		21.1 (29)	27 (37)
15	10	14.5 (20)		42 (57)	55 (75)
18	12	25 (34)	74 (100)	73 (99)	93 (126)
21	14	40 (54)	118 (160)	118 (167)	148 (201)
24	16	62 (84)	167 (228)	181 (245)	230 (312)
30	20	122 (166)	328 (448)		449 (608)
33	22		443 (600)		611 (826)
36	24	211 (286)	563 (763)		778 (1064)
41	27		821 (1112)		1138 (1542)
48	30	418 (566)	1119 (1516)		1547 (2096)

Mri-B-0005



## TO THE OWNER/OPERATOR/DEALER

To keep your implement running efficiently and safely, read your manual thoroughly and follow these directions and the Safety Messages in this Manual. The Table of Contents clearly identifies each section where you can easily find the information you need.

The OCCUPATIONAL SAFETY AND HEALTH ACT (1928.51 Subpart C) makes these minimum safety requirements of tractor operators:

### REQUIRED OF THE OWNER:

1. Provide a Roll-Over-Protective Structure that meets the requirements of this Standard; and
2. Provide Seat belts that meet the requirements of this paragraph of this Standard and SAE J4C; and
3. Ensure that each employee uses such Seat belt while the tractor is moving; and
4. Ensure that each employee tightens the Seat belt sufficiently to confine the employee to the protecte-darea provided by the ROPS

### REQUIRED OF THE OPERATOR:

1. Securely fasten 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 the tractor manufacturer.
9. When the tractor is stopped, set brakes securely and use park lock, if available.

**X** Keep children away from danger all day, every day...

**X** Equip tractors with rollover protection (ROPS) and keep all machinery guards in place...

**X** Please work, drive, play and live each day with care and concern for your safety and that of your family and fellow citizens.



**BUSH HOG<sup>®</sup>**

**PFLD/PFHD/PFXHD  
PALLET FORKS**

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P/N 50084026