



BUSH HOG®

Models BSE-1, BSSS-1 BSSS-2, BSSS-3

BALE SPEAR

Published 08/23

Part No.50084019

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*



BSE-1



BSSS-2



BSSS-1



BSSS-3

FC-HE-0003

BUSH HOG®

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¡ATENCIÓN!
LEA EL INSTRUCTIVO



Si No Lee Ingles, Pida Ayuda a Alguien Que Se Lo Lea Para Que le Traduzca Las Medidas de Seguridad

MEMBER OF THE ALAMO GROUP
ALWAYS ON THE CUTTING EDGE®

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



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



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!



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



SAFETY

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



WARNING

Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. (SG-30) 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

SAFETY

OPERATOR SAFETY INSTRUCTIONS AND PRACTICES

DANGER

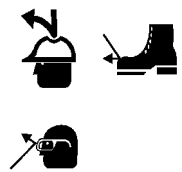
Never operate the Tractor or Implement until you have read and completely understand this Manual, the Tractor Operator's Manual, and each of the Safety Messages found in the Manual or on the Tractor and Implement. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced 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



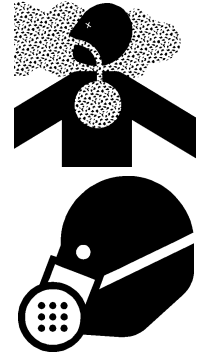
Use extreme caution when getting onto the Implement to perform repairs, maintenance and when removing accumulated material. Only stand on solid flat surfaces to ensure good footing. Use a ladder or raised stand to access high spots which cannot be reached from ground level. Slipping and falling can cause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



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



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



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



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



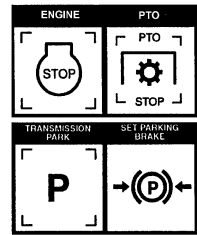
The Boom is designed only to position and operate the Bucket which is attached to it. Never attempt to lift, pull, or push other solid objects with the boom or bucket. Serious injury could result from a structural failure when the Boom is used for purposes other than those for which it was designed.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

SAFETY



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



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



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



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



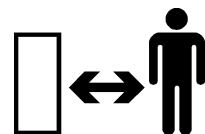
DO NOT operate this Implement on a Tractor that is not properly maintained. Should a mechanical or Tractor control failure occur while operating, immediately shut down the Tractor and perform repairs before resuming operation. Serious injury and possible death could occur from not maintaining this Implement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



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



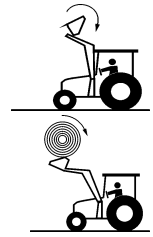
Keep bystanders 10 feet away from the tractor and loader while operating. The bystanders could enter the path of the tractor or items could fall from the loader resulting in serious injury to the bystander. (SL-01



SAFETY

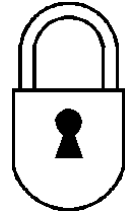
WARNING

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

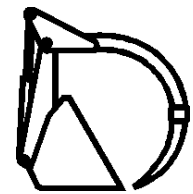
DANGER

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

SAFETY

SAFETY

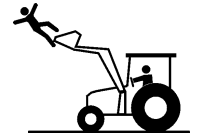
WARNING

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

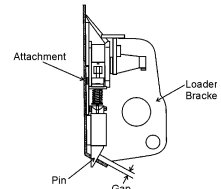
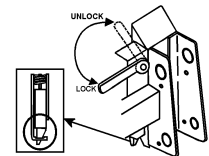


DANGER

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

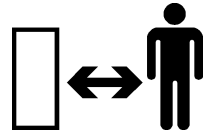
CAUTION

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 AND PRACTICES

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



WARNING

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

WARNING

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

DANGER

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



WARNING

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

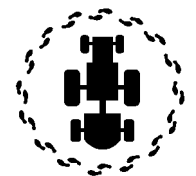


WARNING

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

WARNING

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



SAFETY

SAFETY



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



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



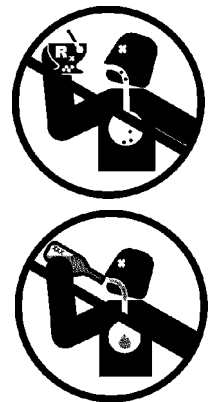
Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in death or serious injury. (SG-10)str



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



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



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



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



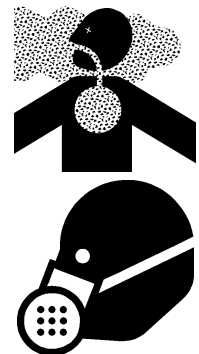
Use extreme care when loading, carrying or handling any agricultural fertilizers, chemicals or biological residue. Follow the manufacturer's handling instructions and wear appropriate Personal Protective Equipment including gloves, safety glasses and respirator when required. If you are using a tractor 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



Never crawl under a raised Implement supported solely by the Tractor 3-Point hitch. Release of the control lever or mechanical failure will result in the Implement falling and possible injury or death. Always securely block up the Implement before crawling underneath to perform repairs and service. (S3PT-19) str



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



EQUIPMENT OPERATION SAFETY INSTRUCTIONS AND PRACTICES

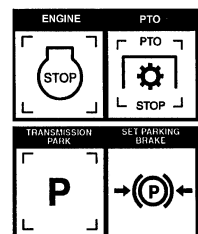


Never grasp control levers when mounting the machine. (SBH-4) str



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



SAFETY

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

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

SAFETY

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)

CONNECTING OR DISCONNECTING IMPLEMENT SAFETY INSTRUCTIONS AND PRACTICES

WARNING

Never unhitch without using the Tongue Jack. The Tongue is very heavy. Attempting to lift the Tongue without using the Tongue Jack could cause strains or other injury. Allowing the tongue to fall suddenly and unexpectedly could result in crushing injury. Use the Tongue Jack for lifting the Implement only. Overloading the Tongue Jack can cause failure with possible serious bodily injury or even death. (STI-04) str

MAINTENANCE AND SERVICE SAFETY INSTRUCTIONS AND PRACTICES

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



WARNING

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

WARNING

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

DANGER

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



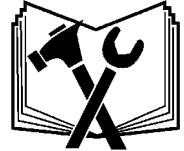
WARNING

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

SAFETY

WARNING

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



WARNING

Perform service, repairs and lubrication according to the maintenance section. Ensure the unit is properly lubricated as specified in the lubrication schedule and all bolts and nuts are properly torqued. Failure to properly service, repair and maintain this Implement in good operating condition could cause component failure and possible serious injury or even death. (SG-35str)

WARNING

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

WARNING

Cancer and Reproductive Harm www.P65Warnings.ca.gov

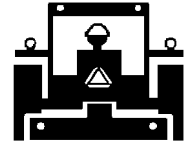
SAFETY

SAFETY

TRANSPORTING SAFETY INSTRUCTIONS AND PRACTICES



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



Transport only at speeds where you can maintain control of the equipment. Serious accidents and injuries can result from operating this equipment at high speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.



Before transporting the Tractor and Implement, determine the proper transport speeds for you and the equipment. Make sure you abide by the following rules:

Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum transport speed not to exceed 20 mph (30 kph) for transporting this equipment.

Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that the equipment can be operated at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum turning speed for you and this equipment before operating on roads or uneven ground.

Only transport the Tractor and Implement at the speeds which allow you to properly control the equipment.

Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes or worn tires. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)str



Be particularly careful when transporting the Implement using the tractor. Turn curves or go up or down hills only at a low speed and at a gradual steering angle. Make certain that at least 20% of the tractor's weight is on the front wheels to maintain safe steering. Slow down on rough or uneven surfaces. (STI-01) str



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



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

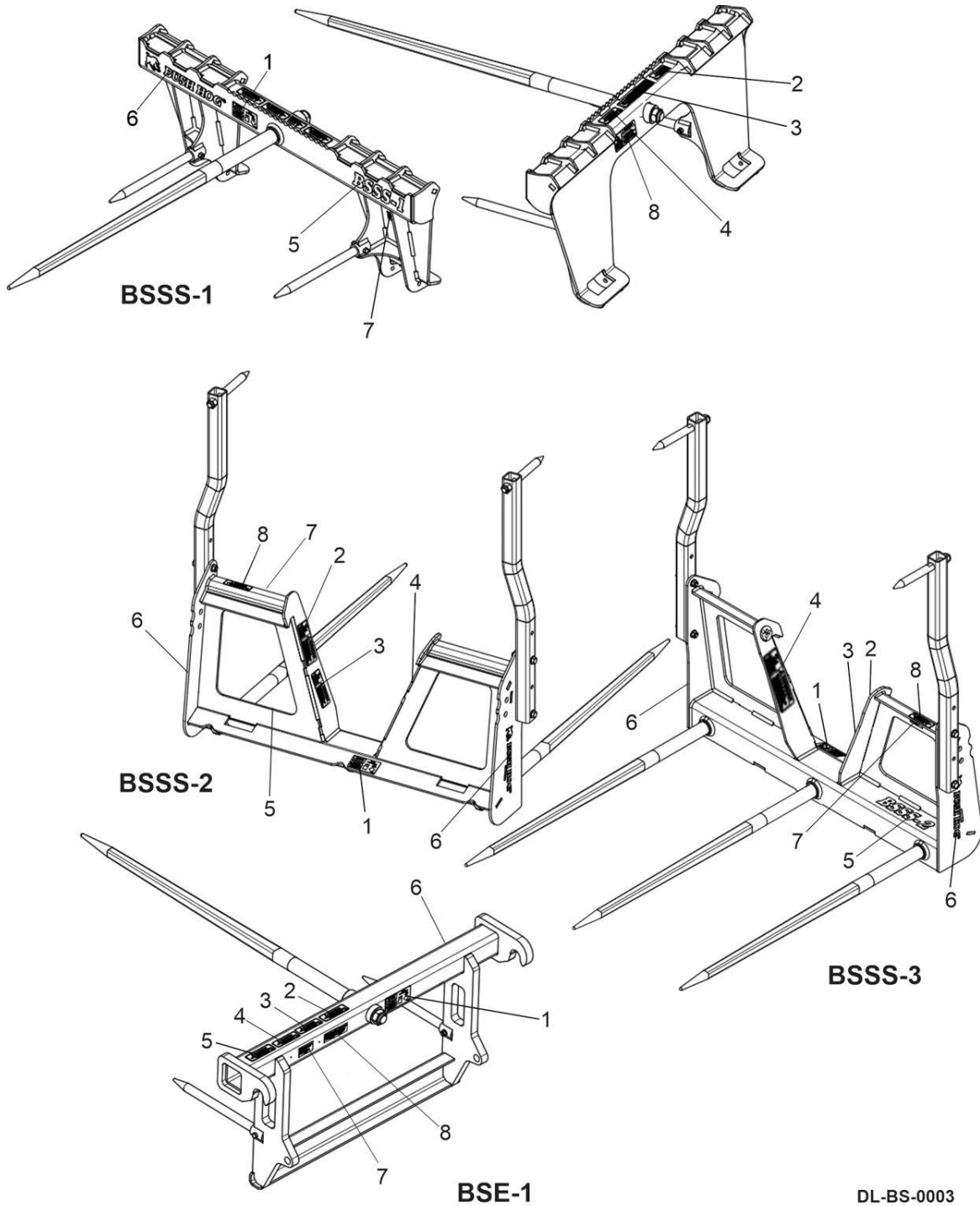
Concluding Safety Instructions and Practices

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



SAFETY



SAFETY

ITEM	PART NO.	QTY	LEVEL	DESCRIPTION
1.	D1147	1	NOTICE	Spear Alignment
2.	D1148	1	WARNING	Pin Engagement
3.	D1149	1	DANGER	Unloading Bales
4.	D1150	1	WARNING	Multi-Hazard
5.	50084015	1	MODEL	BSE-1
	50084016	1	MODEL	BSSS-1
	50084017	1	MODEL	BSSS-2
	50084018	1	MODEL	BSSS-3
6.	50083392	1	LOGO	Bush Hog - Model BSE-1, BSSS-1
	50083387	2	LOGO	Bush Hog - Model BSSS-2, BSSS-3
7.	NFS	1	SERIAL PLT	Serial Plate Number
8.	D960	1	WARNING	Prop 65 Warning


SAFETY


SAFETY

SAFETY

NOTICE	
Proper Spear Alignment	DO NOT WELD SPEARS For maximum longevity, tighten nut to 516 ft/lb torque every 6 months. D1147
 CORRECT	
 NOT CORRECT	

 **WARNING**
Cancer and Reproductive Harm
www.P65Warnings.ca.gov D960


 **DANGER**




To avoid death or serious injury:

- Unload only on a level surface.
- Keep bystanders clear of work area when loading and unloading bales.

D1149

 **WARNING**





To avoid death or serious injury:

- Be careful during loading, transporting, and stacking to minimize rolling bales and tractor tip over.
- ROPS (Roll-Over Protective Structures) and seat belt equipped tractors are recommended for operator use in all bale spear operations.
- Do not allow riders on tractor, loader, or bale spear.
- Avoid loading/unloading bales on sloping or uneven surfaces.
- Avoid transporting with bales raised high. Keep bales tilted back and low to the surface while moving.
- Approach, penetrate, and transport bales at low speeds. Reduce speeds on curves, hills, rough ground, or when turning.
- Do not lift anything with bale spear other than bales.
- Avoid raising bale to full height with bale spear rolled back.
- Park and store bale spear points pointed against bale, building, or other stable object.
- Avoid contact with electrical power lines by loader and attachments.

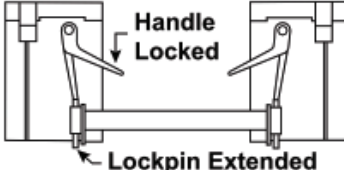
D1150

SAFETY

⚠ WARNING



Coupler Handles - Locked



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. D1148

SAFETY

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

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

INTRODUCTION

These bale spears are 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 the machine.

The purpose of this manual is to familiarize and instruct. This manual is intended for all models, but will show specific pictures and diagrams of the BSSS-2 bale spear. If any specifications are different than the model shown, it will be noted.

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 Bale Spear 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.

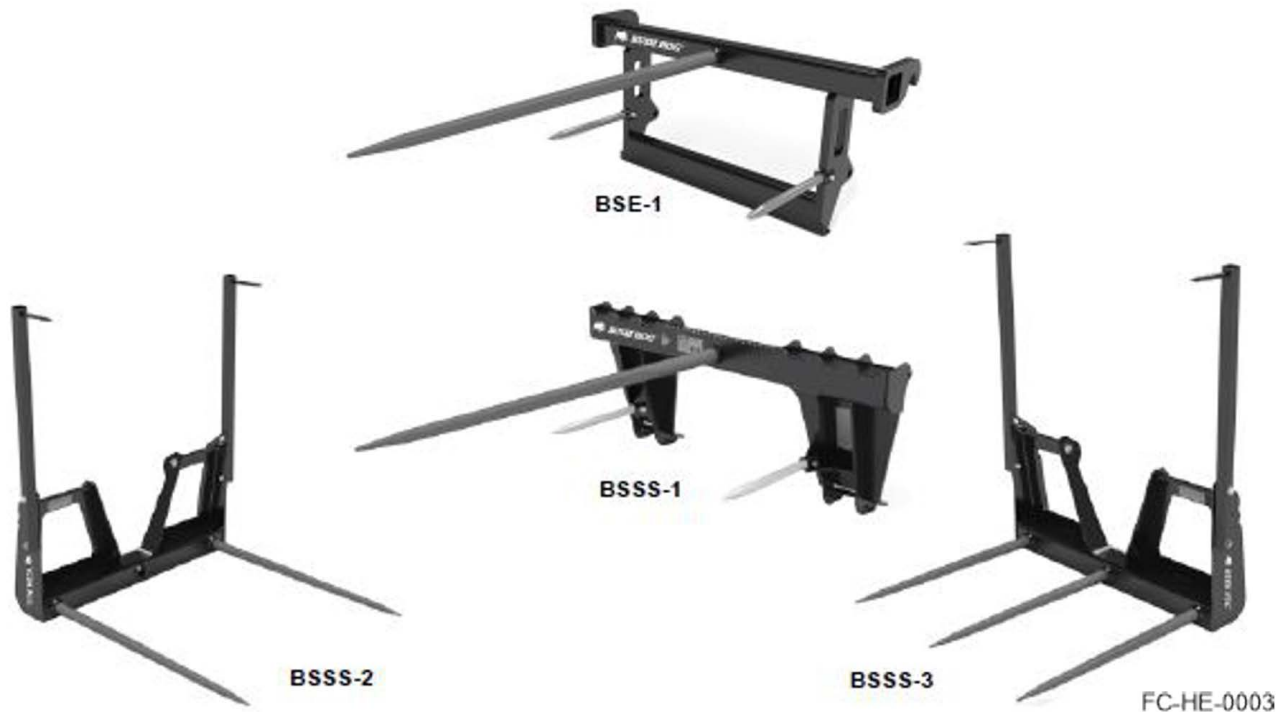


Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.

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 BSSS-1, BSSS-2, BSSS-3, and BSE-1 have uses and applications in farming and ranching. They have the capability of quickly and conveniently turning your Skid Steer loader or Tractor loader equipped with a Skid Steer adapter plate. It is designed to move large bales of hay or straw. Whichever model you select, you'll find that these Bush Hog attachments will save you time and money and make getting that bale handling job done a whole lot easier.

Literature Page



www.algqr.com/ble

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

Carefully read the Operator's Manual completely, understand the Safety Messages and instructions, and know how to operate correctly both the tractor and bale spear.

INTRODUCTION

ATTENTION OWNER/OPERATOR

1. Carefully read the Operator's Manual, completely understand the Safety Messages and instructions, and know how to operate correctly both the tractor and implement.
2. Fill out the Warranty Card in full. Be sure to answer all questions, including the Serial Number of the implement. Mail within 30 days of delivery date of this implement.

NOTE: *Warranties are honored only if completed "Owner Registration and Warranty" forms are received by Bush Hog within thirty days of delivery of the implement.*

3. Record the Model and Serial Numbers on the Warranty page at the front of the Operator's Manual. Keep this as part of the permanent maintenance file for the implement.



INTRODUCTION

BUSH HOG LIMITED WARRANTY



INTRODUCTION

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:

4. To vendor items which carry their own warranties, such as engines, tires, and tubes.
5. If the unit has been subjected to misapplication, abuse, misuse, negligence, fire or other accident.
6. 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.
7. 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.
8. 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.
9. 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 Bale Spear is fully assembled at the factory. Upon receipt, the operator must make sure all nuts and or bolts are properly torqued before use of attachment. Refer to “Torque Chart” in the Maintenance Section of this manual.



WARNING

Light weight tractors and some skid steer loaders will require rear ballast for heavy loads to maintain steering control. Be sure to consult your Skid Steer or Tractor Operator’s Manual to determine whether or not to add ballast.

ASSEMBLY

OPERATION SECTION

Operation Section 4-1

OPERATION

BUSH HOG BALE SPEAR OPERATING INSTRUCTIONS

Your Bush Hog Series Skid Steer Bale Spear 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 bale spear 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 bale spear. 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 bale spear and skid steer or tractor operation and all associated safety practices before operating. Proper operation of the bale spear, as detailed in this manual, will help ensure years of safe and satisfactory use of the bale spear.

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)



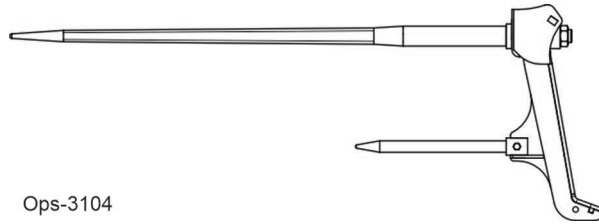
Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3) str

¡ LEA EL INSTRUCTIVO!



OPERATION

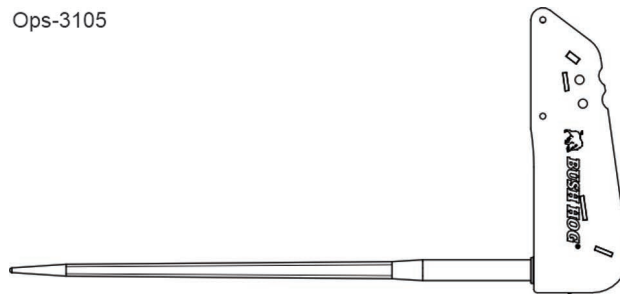
1. STANDARD EQUIPMENT AND SPECIFICATIONS



Ops-3104

BSSS-1 Specifications	
Overall Width	45"
Overall Length	52"
Overall Height	19"
Overall Approximate Weight	135 lb.
Bale Spear Length and Quantity	49" x 1
Bale Spear Socket	Conus 2
Bale Spear Rating (Each) Front of socket to load point is 19.68"	4,046 lbs
Anti-Rotation Spikes - 1" Diameter	2

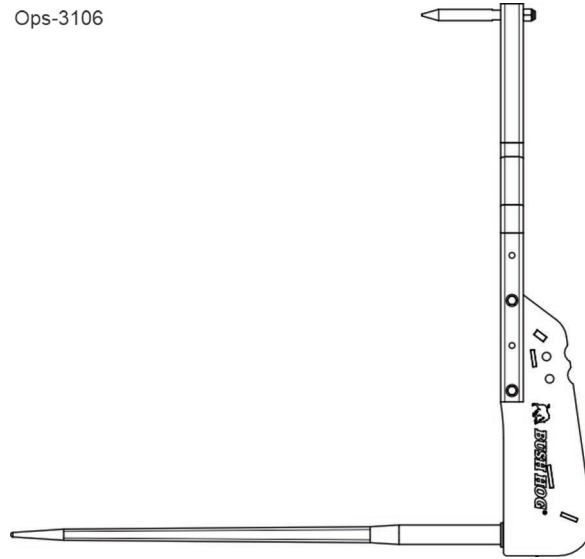
Ops-3105



BSSS-2 Specifications	
Overall Width	46"
Overall Length	51"
Overall Height	23"
Overall Approximate Weight	222 lb.
Bale Spear Length and Quantity	49" x 2
Bale Spear Socket	Conus 2
Bale Spear Rating (Each) Front of socket to load point is 19.68"	4,046 lbs

OPERATION

Ops-3106



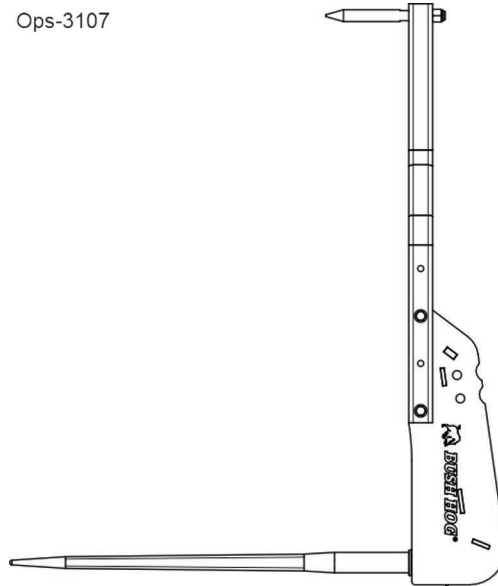
BSSS-2 Specs with Optional Extensions

Overall Width	50.75"
Overall Length	51"
Overall Height	54"
Overall Approximate Weight	224 lb.
Bale Spear Length and Quantity	49" x 2
Bale Spear Socket	Conus 2
Bale Spear Rating (Each) Front of socket to load point is 19.68"	4,046 lbs

OPERATION

OPERATION

Ops-3107

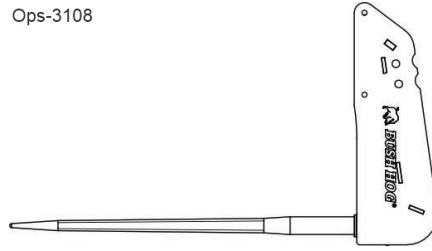


BSSS-3 Specs with Optional Extensions	
Overall Width	50.75"
Overall Length	42"
Overall Height	54"
Overall Approximate Weight	232 lb.
Bale Spear Length and Quantity	39" x 3
Bale Spear Socket	Conus 2
Bale Spear Rating (Each) Front of socket to load point is 19.68"	4,046 lbs

OPERATION

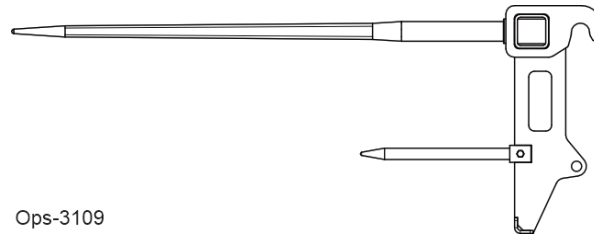
OPERATION

Ops-3108



BSSS-3 Specifications

Overall Width	46"
Overall Length	41"
Overall Height	23"
Overall Approximate Weight	230 lb.
Bale Spear Length and Quantity	39" x 3
Bale Spear Socket	Conus 2
Bale Spear Rating (Each) Front of socket to load point is 19.68"	4,046 lbs



Ops-3109

BSE-1 Specifications

Overall Width	42"
Overall Length	50"
Overall Height	21"
Overall Approximate Weight	121 lb.
Bale Spear Length and Quantity	49" x 1
Bale Spear Socket	Conus 2
Bale Spear Rating (Each) Front of socket to load point is 19.68"	4,046 lbs
Anti-Rotation Spikes - 1" Diameter	2

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.

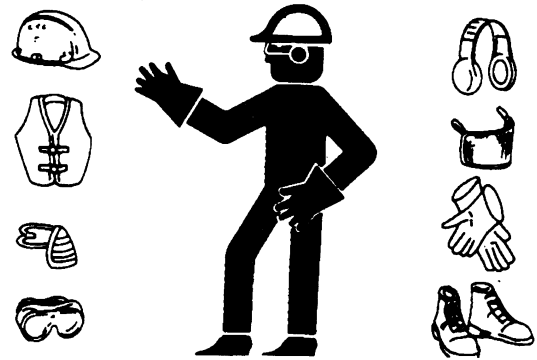
If the operator cannot read the manuals for themselves or does not completely understand the operation of the equipment, it is the responsibility of the supervisor to read and explain the manuals, safety practices, and operating instructions to the operator.

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:

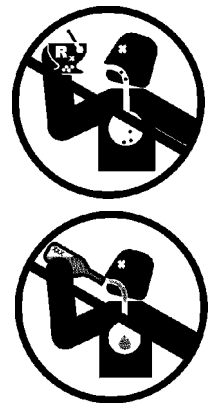
PERSONAL PROTECTIVE EQUIPMENT (PPE)

- 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



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. TRACTOR REQUIREMENTS

The tractor used to operate the Bale Spear must have the power capacity to lift, pull, and operate. The rated speed while traveling at a ground speed is between 2 and 5 MPH. Operating the Bale Spear with a tractor that does not meet the following requirements may cause tractor or Bale Spear damage and be a potential danger to the operator and passersby.

3.1 Tractor Requirements and Capabilities

- ASABE approved Roll-Over Protective Structure (ROPS) or ROPS cab and seat belt.
- Tractor Safety Devices Slow Moving Vehicle (SMV) emblem, lighting, PTO master shield
- Tractor Horsepower Minimum 35 HP
- Hitch Quick Hitch

3.2 ROPS and Seat Belt

The tractor must be equipped with a Roll-Over-Protective-Structure (ROPS) (tractor cab or roll-bar) and seat belt to protect the operator from falling off the tractor, especially during a roll over where the driver could be crushed and killed. Only operate the tractor with the ROPS in the raised position and seat belt fastened. Tractor models not equipped with a ROPS and seat belt should have these life saving features installed by an authorized dealer. OPS-U- 0003str



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



3.3 Tractor Horsepower

The power required to operate a implement is determined by the tractor PTO horsepower. For most operating conditions, the Bale Spear requires a tractor with at least 25hp. Operating the implement with a tractor that does not have adequate power may damage the tractor engine. Exceeding the recommended horsepower may cause damage by overpowering the unit in heavy operating conditions.

3.4 Front End Weight

A minimum of 20% total tractor weight must be maintained on the tractor front end at all times. Front end weight is critical to maintain steering control and to prevent the tractor from rearing up while driving. If the front end is too light, add weight until a minimum of 20% total weight is reached on the front tires. Front weights and weight carriers can be purchased through an authorized tractor dealership. OPS-U-0005 str

OPERATION

4. GETTING ON AND OFF THE TRACTOR

Before getting onto the tractor, the operator must read and completely understand the implement and tractor operator manuals. If any part of either manual is not completely understood, consult an authorized dealer for a complete explanation. OPS-U- 0007str



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



4.1 Boarding the Tractor

Use both hands and equipped handrails and steps for support when boarding the tractor. Never use control levers for support when mounting the tractor. Seat yourself in the operator's seat and secure the seat belt around you.

Never allow passengers to ride on the tractor or attached equipment. Riders can easily fall off and be seriously injured or killed from falling off and being ran over. It is the operator's responsibility to forbid all extra riders at all times. OPS-U- 0008str



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



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



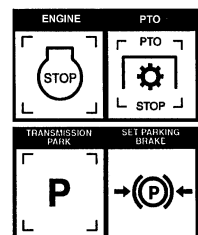
4.2 Dismounting the Tractor

Before dismounting, park the tractor and implement on a reasonably level surface, apply the parking brake, idle the engine down, disengage the PTO, and lower the implement to the ground. Shut down the tractor engine according to the operator's manual, remove the key, and wait for all motion to completely stop. Never leave the seat until the tractor, its engine and all moving parts have come to a complete stop.

Use hand rails and steps when exiting the tractor. Be careful of your step and use extra caution when mud, ice, snow or other matter has accumulated on the steps or hand rails. Use all handrails and steps for support and never rush or jump off the tractor. OPS-U- 0009 str



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



OPERATION

5. STARTING THE TRACTOR

The operator must have a complete understanding of the placement, function, and operational use of all tractor controls before starting the tractor. Review the tractor operator's manual and consult an authorized dealer for tractor operation instructions if needed.

Essential Tractor Controls:

- Locate the light control switch.
- Locate the engine shut off control.
- Locate the brake pedals and the clutch.
- Locate the PTO control.
- Locate the 3-point hitch control lever.
- Locate the hydraulic remote control levers

Before starting the tractor ensure the following:

- Conduct all pre-start operation inspection and service according to the tractor operator's manual.
- Make sure all guards, shields, and other safety devices are securely in place.
- The parking brake is on.
- The PTO control lever is disengaged.
- The 3-point hitch control lever is in the lowered position.
- The hydraulic remote control levers are in the neutral position.
- The tractor transmission levers are in park or neutral.

Refer to the tractor owner's manual for tractor starting procedures. Only start the tractor while seated and belted in the tractor operator's seat. Never bypass the ignition switch by short circuiting the starter solenoid. After the tractor engine is running, avoid accidental contact with the tractor transmission to prevent sudden and unexpected tractor movement. OPS-U-0028str



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



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



OPERATION

6. SKID STEER AND TRACTOR HOOK-UP



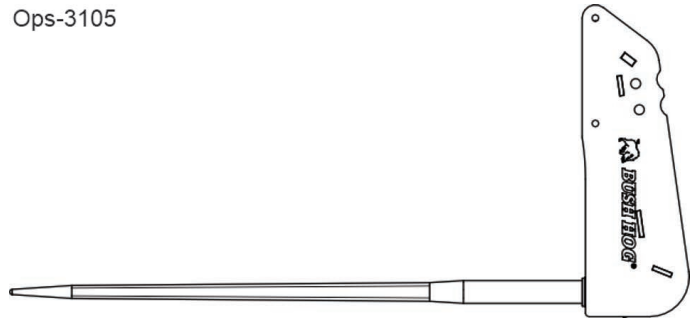
A crushing hazard exists when hooking-up attachments. DO NOT allow anyone to stand between the Skid Steer/Tractor and the attachment itself. DO NOT operate hydraulic controls while someone is near the Skid Steer/Tractor or attachment.

6.1 Attaching BSSS to Loader



Use caution when connecting the attachment to the machine. Keep hands and feet from under the attachment and clear of pinch points between bale spear and machine. Do not allow anyone to stand between the machine and bale spear during attachment process.

1. Drive Carefully towards the bale spear making sure the loader coupler is parallel to the attachment plate. Ops-3105
2. Tilt the top of the loader coupler slightly forward in relation to the attachment plate.
3. Guide the top of the loader coupler under the top lip of the attachment plate.
4. Raise and curl the loader coupler until the attachment lifts and the back surface of the attachment rests flat and firmly against the front surface of the coupler.
5. Once the attachment is fully supported, lower the lift arm until the attachment is slightly above the ground surface. Make sure the attachment remains firmly against the loader coupler
6. If your machine is equipped with hydraulically operated locking pins, activate the coupler lock at this time; in this case, skip Steps 7,8, and 9.
7. If operating a skid steer, turn off the engine, unfasten the seatbelt, raise the restraint bar (if equipped), and exit the operator's compartment. If operating a tractor, properly shut down the tractor.
8. Push the two latch handles down (over center) to lock the lock pins into the attachment plate slots on the attachment, securing it to the coupler. Make sure the locking handles are locked into position to prevent the pins from releasing.
9. Re-enter the machine and start the engine after re-fastening the seatbelt.
10. Raise the attachment and gradually roll it forward. If the attachment is not properly secured to the coupler, lower the lift arm and repeat the mounting procedure.
11. Visually inspect the engagement of the lock pins in the attachment's lower slots. The lock pins should fully extend through the bottom slots in the attachment hitch plate.
12. Before using the attachment, the operator must operate it through its full range of motion and confirm that the attachment is secure and safe.



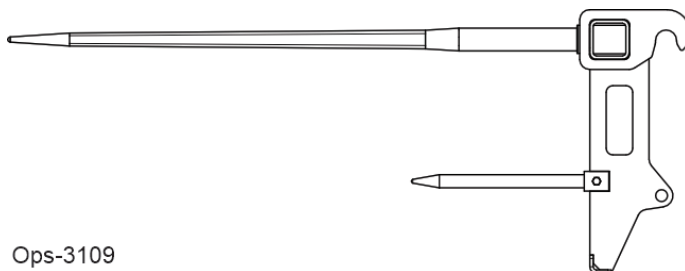
OPERATION

6.2 Attaching BSE to Loader

CAUTION

Use caution when connecting the attachment to the machine. Keep hands and feet from under the attachment and machine. Do not allow anyone to stand between the machine and bale spear during attachment process.

1. Ensure there are no potential unintended collisions between the attachment and the loader before connecting them for the first time.
2. Tilt the tool carrier forward completely to angle the carrier arms downward toward the attachment. Position the tool carrier an inch below the attachment hooks. Ops-3109
3. Drive the machine forward slowly, centering the carrier arms between the hooks on the attachment.
4. When the tool carrier makes contact with the attachment, raise the loader to engage both hooks of the attachment on the tool carrier.
5. Roll the tool carrier back toward the machine.
6. If equipped, the hydraulic or electronic powered locking pins can be engaged. In this case; skip Steps 7, 8, and 9.
7. If your loader requires manual locking, perform a full roll back to automatically lock the attachment onto the tool carrier.
8. If your loader requires a fully manual locking process:
 - Raise the back of the attachment slightly off the ground and angle it back to apply pressure against the stops.
 - Shut off the machine.
 - Apply the parking brake.
 - Manually lock the attachment to the carrier assembly.



WARNING

To avoid serious injury or death caused from falling attachment, lock pins must completely engage attachment eyes.

9. If equipped, the attachment's locking lug will impact/push aside the Click-on system on the tool carrier, automatically locking the attachment in position. The lock lever is released and moves to the "locked attachment" position.
10. Raise the loader arms until the tool carrier is clearly visible from the driver's cab. Inspect alignment and verify positioning.
11. Pay attention to the tool carrier lock indicators, which may differ depending on the type of tool carrier installed on the loader. Carefully observe how your specific tool carrier indicates a locked attachment.
12. Before starting work with the loader/attachment review the Pre-Operation Checklist to ensure the attachment is correctly locked onto the loader's tool carrier:
 - Visually check that the locking lever indicates a locked attachment.
 - Visually check that the tool carrier locking pins are in the locked position
13. Verify that the attachment is locked in place on the tool carrier by pressing the front of the attachment against the ground.
14. Before using the attachment, the operator must operate it through its full motion and confirm that the attachment is secure and safe.

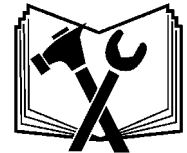
OPERATION

7. PRE-OPERATION INSPECTION AND SERVICE

Before each use, a pre-operation inspection and service of the implement and power unit must be performed. This includes routine maintenance and scheduled lubrication, inspecting that all safety devices are equipped and functional, and performing needed repairs. Do not operate the implement and power unit if the pre-operation inspection reveals any condition affecting safe operation. Perform repairs and replacement of damaged and missing parts as soon as noticed. By performing a thorough pre-operation inspection and service, valuable down time and repair cost can be avoided. *OPS-UPI-0008 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



7.1 Tractor Pre-Operation Inspection/Service

Refer to the tractor operator's manual to ensure a complete pre-operation inspection and scheduled service is performed according to the manufacturers recommendations. The following are some of the items that require daily service and inspection:

- Tire condition/air pressure
- Wheel lug bolts
- Steering linkage
- PTO shield
- SMV sign is clean and visible
- Tractor's lights are clean and functional
- Tractor Seat belt is in good condition
- ROPS is in the raised position
- No tractor oil leaks
- Radiator free of debris
- Engine oil level and condition
- Engine coolant level and condition
- Power brake fluid level
- Power steering fluid level
- Fuel condition and level
- Sufficient lubrication at all lube points
- Air filter condition *OPS-U-0030 str*



OPERATION

7.2 Implement Pre-Operation Inspection/Service

Before each implement use, a complete inspection and service is required to ensure the implement is in a good and safe working condition. Damaged and/or broken parts should be repaired and/or replaced immediately. To ensure the implement is ready for operation, conduct the following. *OPS-T-0002 str*

The operator's manual and safety signs affixed on the unit contain important instructions on the safe and proper use of the equipment. Maintain these important safety features on the implement in good condition to ensure the information is available to the operator at all times.

- Ensure the manual canister is secured to the equipment with the operator's manual inside.
- Ensure all safety signs are in place and legible. Replace missing, damaged, and illegible decals. *OPS-U- 0011 str*



OPERATION

BALE SPEAR 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 bale spear 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

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.

OPERATION

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

8. OPERATING THE TRACTOR AND IMPLEMENT

By now you should have familiarized yourself with the Operator's Manual for your Bale Spear. 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 Bale Spear to and from your mounting plate. It is also important to practice lifting, lowering, maneuvering, and placing a bale on a level site until you gain the confidence and skill needed to have a good feel in what you are doing. We cannot over-stress the importance of following the safety operating procedures that are spelled out in this Operator's Manual. Do not exceed the lift capacity of your Bale Spear, Tractor, or Skid Steer. Don't lift your bale too high creating an unstable bale situation. Don't tilt your bale too far forward, setting up a situation that could cause your bale to fall off the spear(s). Don't drive too fast for your ground 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 loader with the Bale Spear 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 Bale Spear.

8.1 Picking up a Bale

1. Make sure the bale does not exceed the smaller of the lift capacities below:
 - Rated lift capacity of the spears (4,046 Lbs @ 19.68" from the front of the spear sleeve).
 - 83% of the Skid Steer or Tractor rated lift capacity for an attached front loader.

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 Bale Spear and ensures that the front tires on your Skid Steer/Tractor are rated properly for the job.

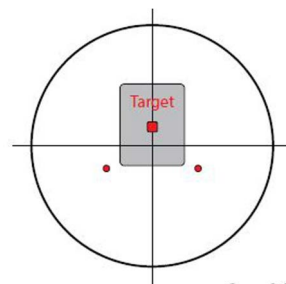
Important

The spear should be fully inserted into the bale before lifting the bale. Picking up heavy bales without the spear(s) fully inserted can damage the unit and void its warranty.

2. Stop completely before raising or lowering the spear(s) to the correct height. Insert spear(s) into the bale as follows:

BSSS-1 and BSE-1

3. Locate spear point at center of bale or a small distance vertically above center.
4. Check to make sure the two lower spikes will also insert into the bale. If lower spikes are positioned outside of the bale, adjust spear height up until spikes will insert into the bale.
5. With spear level, drive spear into bale until spear and lower spikes are fully inserted and bale is against the hitch frame.



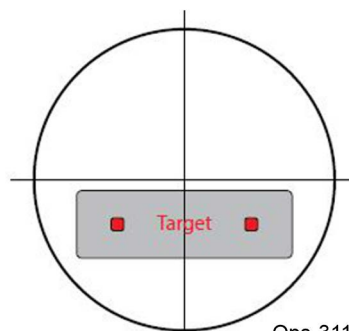
Ops-3110

NOTE: Soft center bales will tend to droop after being lifted by a single spear. Placing the spear in a lower position in the bale will allow for more lifting height and lessen the load on the stabilizer spikes.

OPERATION

BSSS-2

6. While driving up to the bale, center the Bale Spear horizontally on the bale and spear points about 1/3 of the way below center of bale while driving up to the bale.
7. Push the spear(s) into the bale until the bale is against the frame of the attachment
8. Lift bale up a short distance and tilt spear points up 5 - 10 degrees from horizontal. Check to make sure bale is properly secured before traveling.



Ops-3111

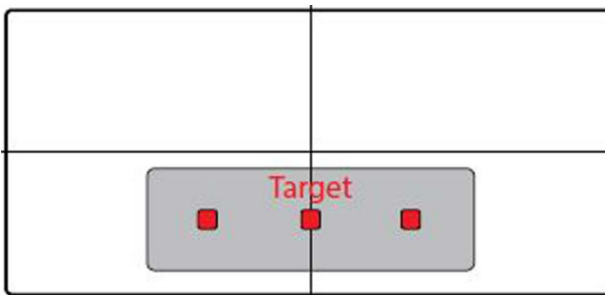
NOTE: If the bale is lying on its flat face, use a loader to tip the bale up on its side before using this product.

Important

Do not attempt to spear a round bale down from the top if it is lying on its flat face, as excessive movement of the machine while operating the loader can seriously damage the machine and/or its hydraulic cylinders or hoses. Instead, first tip the bale up on the round side.

BSSS-3

9. While driving up to the bale, center the Bale Spear horizontally on the bale and spear points about 1/3 of the way below center of bale while driving up to the bale.
10. Push the spear(s) into the bale until the bale is against the frame of the attachment
11. Lift bale up a short distance and tilt spear points up 5 - 10 degrees from horizontal. Check to make sure bale is properly secured before traveling.



Ops-3112

NOTE: Partial engagement of the spear(s) can damage the spear(s), as it locates the weight of the bale on the outer end of the spear(s).

Raise and roll back the bale just high enough to provide ground clearance. If the bale appears unstable, lower it, remove the spears, and repeat the first steps until the bale is secure. To minimize jerking, stop and start the loader gradually when lowering or lifting loads.

Important

For Tractor Operators only: Always ensure the tractor is properly ballasted before attempting to lift any load with the attachment. If handling bales with both the front-end loader and the 3 point hitch on the tractor, always load the 3 point attachment first and unload it last.

8.2 Traveling with 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 spear points at a safe height and angle that will not impale a person or livestock.

OPERATION

4. When transporting with a bale, transport with bale fully against the spear frame and with spear points(s) up 5-10 degrees from horizontal. Never transport with bale halfway or more out on the spear(s).
5. When stopped, always lower spear point to the ground so that no person or livestock could walk/run into the spear and become impaled. If spear will not rest on the ground, point spear down to protect people and livestock
6. Always keep bale centered horizontally on the spear(s). This will optimize stability while transporting.
7. Always transport with bale raised to a height that does not hinder the line of sight going forward. When possible, keep the bale low to the ground to help maintain stability of the Skid Steer/Tractor.
8. Use gradual acceleration, turning, and braking to prevent any loss of control.
9. Reduce ground speed when turning and leave enough clearance to avoid making contact with obstacles such as building, trees, and fences.
10. Transporting bales over ramps, grades, bumpy ground, soft surfaces, or slippery surfaces reduces machine stability and lift capacity. Transporting and lifting bales under these conditions is extremely dangerous.
11. Always travel straight up and down inclines. Never make turns while on an incline and always keep spear point(s) tilted up 5-10 degrees from horizontal regardless of angle of incline.
12. Always Transport over ramps and inclines in excess of 10 percent with bale on the "Uphill" side of the machine. This will require one to drive-up and back down steep inclines.
13. Keep equipment away from electrical power lines. Place an orange waring sign under overhead electrical power lines indication type of danger above.
14. When traveling on public roads at night or during the night or during the day, use accessory lights and devices for adequate waring to operators of other vehicles. Comply with all federal, state, and local laws.
15. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
16. Frequently check the bale to make sure that is has not become unstable during transport.

8.3 Placing the Bale

After the bale has been positioned and stabilized in the desired location, tilt the spear slightly downward to enable the bale to slide off the spear. To prevent the bale from sliding on the ground, it may be necessary to apply a small amount of downward pressure to it.

8.4 Unhooking the Bale Spear



Keep hands and feet from under the attachment and clear of pinch points. Do not allow anyone to stand near the machine or attachment when disconnecting.

Detach BSSS

1. Move the machine onto a flat, level, solid surface. Lower the attachment slightly above the surface with the hitch angled, front of the attachment slightly higher than the rear.
2. If your machine is equipped with hydraulically operated locking pins, retract the coupler lock at this time. In this case; lower the attachment to the ground and skip Steps 3, 4, and 5.
3. Shut down the machine and set the parking brake properly without lowering the attachment.
4. Move the locking lever to disengage the locking pins.
5. Start the engine and lower the attachment to the ground
6. Tilt the tool carrier forward to allow the tool carrier to clear the hooks on the attachment.
7. Make sure the area is clear of bystanders and animals, then slowly back the machine away from the attachment, ensuring that the tool carrier does not interfere with the attachment.

OPERATION

Detach BSE

1. Move the machine onto a flat, level, solid surface. Lower the attachment slightly above the surface with the hitch angled, front of the attachment slightly higher than the rear.
2. If your machine is equipped with hydraulically operated locking pins, retract the coupler lock at this time. In this case; lower the attachment to the ground and skip Steps 3, 4, and 5.
3. Shut down the machine and set the parking brake properly without lowering the attachment.
4. Move the locking lever to disengage the locking pins.
5. Start the engine and lower the attachment to the ground
6. Tilt the tool carrier forward to allow the tool carrier to clear the hooks on the attachment.
7. Make sure the area is clear of bystanders and animals, then slowly back the machine away from the attachment, ensuring that the tool carrier does not interfere with the attachment.

Important

Do not store the bale spear where it will be exposed to livestock. Damage and livestock injury could result.

9. IMPLEMENT STORAGE

Clean, inspect, service, and make necessary repairs to the Bale Spear 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 it surface thoroughly with a garden hose.
2. Inspect bale spear for loose, damaged, or worn parts and adjust or replace when needed.
3. Repaint parts where paint is worn or scratched too prevent rust. Paint is available from your local Bush Hog dealer.
4. Replace all damaged or missing guards and decals.
5. Store bale spear on a level surface in a clean, dry place. Inside storage will reduce maintenance and make for a longer bale spear life.
6. Do not allow children to play on or around the stored bale spear.

10. 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*



OPERATION

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*

11. 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*



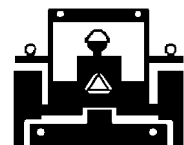
Only tow the Implement behind a properly sized and equipped Tractor which exceeds the weight of the Implement by at least 20%. DO NOT tow the Implement behind a truck or other type of vehicle. Never tow the Implement and another Implement connected in tandem. Never tow the Implement at speeds over 20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



OPERATION

OPERATION

The SMV (Slow-Moving Vehicle) emblem is a 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*

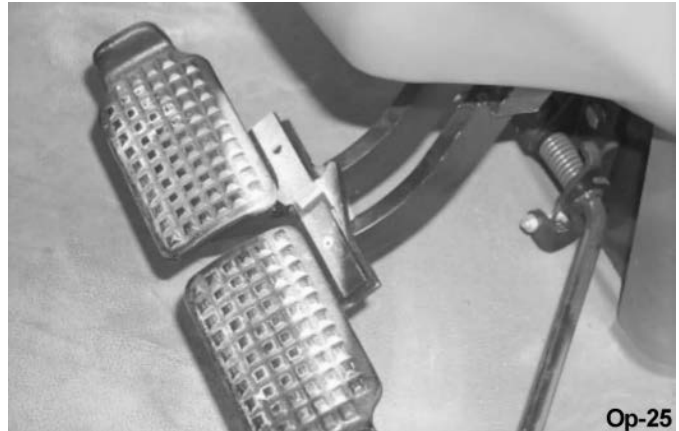


When operating on public roads, have consideration for other road users. Pull to the side of the road occasionally to allow all following traffic to pass. Do not exceed the legal speed limit set in your country for agricultural tractors. Always stay alert when transporting the tractor and implement on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



OPERATION

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*



11.1 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*



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*



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*

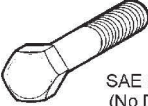
NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal engine oil. They do not apply if special graphite or molydisulphide greases or other extreme pressure lubricants are used. This applies to both UNF fine and UNC coarse threads.

TORQUE SPECIFICATIONS - DRY TORQUE

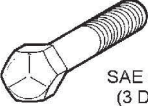
Proper torque for American fasteners.
Recommended Torque in Foot Pounds (Newton Meters).*

AMERICAN

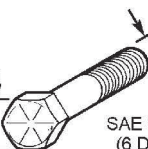
Bolt Head Markings




SAE Grade 2
(No Dashes)



SAE Grade 5
(3 Dashes)



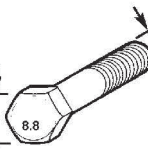
SAE Grade 8
(6 Dashes)



All Capscrews
SAE Grade 8

WRENCH SIZE (IN.) "A"	BOLT DIAMETER (IN.) "B" AND THREAD SIZE	SAE GRADE 2	SAE GRADE 5	SAE GRADE 8
7/16	1/4 - 20 UNC	6 (7)	8 (11)	12 (16)
7/16	1/4 - 28 UNF	6 (8)	10 (13)	14 (18)
1/2	5/16 - 18 UNC	11 (15)	17 (23)	25 (33)
1/2	5/16 - 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 (49)	55 (75)	78 (106)
3/4	1/2 - 13 UNC	49 (66)	76 (103)	106 (144)
3/4	1/2 - 20 UNF	55 (75)	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 (165)	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)	266 (360)	376 (509)
1-1/8	3/4 - 16 UNF	192 (260)	297 (402)	420 (569)
1-5/16	7/8 - 9 UNC	166 (225)	430 (583)	606 (821)
1-5/16	7/8 - 14 UNF	184 (249)	474 (642)	668 (905)
1-1/2	1 - 8 UNC	250 (339)	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)	1288(1745)
1-11/16	1-1/8 - 12 UNF	397 (538)	890 (1206)	1444 (1957)
1-7/8	1-1/4 - 7 UNC	500 (678)	1120 (1518)	1817 (2462)
1-7/8	1-1/4 - 12 UNF	553 (749)	1241 (1682)	2013 (2728)
2-1/16	1-3/8 - 6 UNC	655 (887)	1470 (1992)	2382 (3228)
2-1/16	1-3/8 - 12 UNF	746 (1011)	1672 (2266)	2712 (3675)
2-1/4	1-1/2 - 6 UNC	870 (1179)	1950 (2642)	3161 (4283)
2-1/4	1-1/2 - 12 UNF	979 (1327)	2194 (2973)	3557 (4820)

METRIC



Wrench Size "A"

Bolt Diameter "B"

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.

Proper torque for Metric fasteners. Recommended torque in Foot Pounds (Newton Meters).*					
WRENCH SIZE (mm) "A"	BOLT DIA. (mm) "B"	ASTM 4.6	ASTM 8.8	ASTM 9.8	ASTM 10.9
8	5	1.8 (2.4)		5.1 (6.9)	6.5 (8.8)
10	6	3 (4)		8.7 (12)	11.1 (15)
13	8	7.3 (10)		21.1 (29)	27 (37)
16	10	14.5 (20)		42 (57)	53 (72)
18	12	25 (34)	74 (100)	73 (99)	93 (128)
21	14	40 (54)	118 (160)	116 (157)	148 (201)
24	16	62 (84)	167 (226)	181 (245)	230 (312)
30	20	122 (165)	325 (440)		449 (608)
33	22		443 (600)		611 (828)
36	24	211 (286)	563 (763)		778 (1054)
41	27		821 (1112)		1138 (1542)
46	30	418 (566)	1119 (1516)		1547 (2096)

Mnt-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[®]

**BSE-1/BSSS-1/BSSS-2/BSSS-3
BALE SPEAR**