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.

© 2019 Alamo Group Inc.
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!

For future reference, record your Bush Hog product model number and serial number.

<table>
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<tr>
<th>Dealer</th>
<th>Telephone</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>Purchase Date:</td>
<td>Serial Number</td>
</tr>
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</table>

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.

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.
RETAIL CUSTOMER’S RESPONSIBILITY
UNDER THE BUSH HOG WARRANTY

It is the Retail Customer and/or Operator’s responsibility to read the Operator’s Manual, to operate, lubricate, maintain and store the product in accordance with all instructions and safety procedures. Failure of the operator to read the Operator’s Manual is a misuse of this equipment.

It is the Retail Customer and/or Operator’s responsibility to inspect the product and to have any part(s) repaired or replaced when continued operation would cause damage or excessive wear to other parts or cause a safety hazard.

It is the Retail Customer’s responsibility to deliver the product to the authorized Bush Hog Dealer, from whom he purchased it, for service or replacement of defective parts which are covered by warranty. Repairs to be submitted for warranty consideration must be made within forty-five (45) days of failure.

It is the Retail Customer’s responsibility for any cost incurred by the Dealer for traveling to or hauling of the product for the purpose of performing a warranty obligation or inspection.
LIMITED WARRANTY

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

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

DISCLAIMER OF IMPLIED WARRANTIES & CONSEQUENTIAL DAMAGES

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

THIS LIMITED WARRANTY SHALL NOT APPLY:

1. To vendor items which carry their own warranties, such as engines, tires, and tubes.
2. If the unit has been subjected to misapplication, abuse, misuse, negligence, fire or other accident.
3. If parts not made or supplied by Bush Hog have been used in connection with the unit, if, in the sole judgement of Bush Hog such use affects its performance, stability or reliability.
4. If the unit has been altered or repaired outside of an authorized Bush Hog dealership in a manner which, in the sole judgement of Bush Hog, affects its performance, stabilily or reliability.
5. To normal maintenance service and normal replacement items such as gearbox lubricant, hydraulic fluid, worn blades, or to normal deterioration of such things as belts and exterior finish due to use or exposure.
6. To expendable or wear items such as teeth, chains, sprockets, belts, springs and any other items that in the company’s sole judgement 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, POST OFFICE BOX 1039, SELMA, ALABAMA 36702-1039.

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

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

MODEL NUMBER ________________________

SERIAL NUMBER ______________________

DATE OF RETAIL SALE __________________
DEALER PREPARATION CHECK LIST

BOX BLADES

BEFORE DELIVERING MACHINE — The following check list should be completed.
Use the Operator’s Manual as a guide.

☐ 1. Assembly completed.
☐ 2. All fasteners torqued to specifications given in Torque Chart.
☐ 3. All decals in place and readable. (See decal page.)
☐ 4. Overall condition good (i.e. paint, welds)
☐ 5. Operators manual has been delivered to owner and he has been instructed on
   the safe and proper use of the implement.

Dealer’s Signature

________________________________________________________________________

THIS CHECKLIST TO REMAIN IN OWNER’S MANUAL
It is the responsibility of the dealer to complete the procedures listed
above before delivery of this implement to the customer.
Safety Alert Symbol

This Safety Alert Symbol means: “ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!”

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

Safety Signs  Signal Words

The signal words DANGER, WARNING, AND CAUTION are used on the equipment safety signs. These words are intended to alert the viewer to the existence and the degree of hazard seriousness.

⚠️ DANGER

White letters on RED

This signal word indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.

⚠️ WARNING

Black letters on ORANGE

This signal word indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. It may also be used to alert against unsafe practices.

⚠️ CAUTION

Black letters on YELLOW

This signal word indicates a potentially hazardous situation exist which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
IMPORTANT SAFETY PRECAUTIONS

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

1. Read the Operator's Manual. Failure to read the Operator's Manual is considered a misuse of this equipment.
2. Become familiar with all the machine’s controls and all the caution, warning and danger decals affixed to the machine before attempting to start or operate.
3. Before starting or operating the machine, make a walk around inspection and check for obvious defects such as loose mounting bolts and damaged components. Correct any deficiency before starting.
4. Do not allow children to operate the implement. Do not allow adults to operate it without proper instruction.
5. Do not carry passengers.
6. Keep the area of operation clear of all persons, particularly small children and pets. The operator should cease operation whenever anyone comes within the area.
7. Lower implement to ground, stop tractor engine and apply parking brake before leaving the tractor.
8. Keep hands and feet away from implement.
9. Wear personal protective equipment such as, but not limited to, protection for eyes, ears, feet, hands and head when operating or repairing the equipment. Do not wear loose clothing or jewelry that may catch on equipment moving parts.
10. When performing adjustments or maintenance on the implement, first lower it to the ground or block it securely at a workable height.
11. Never stand between tractor and implement while tractor is being backed to the hitch.
12. Reduce speed when transporting implement to avoid bouncing and momentary loss of steering.
13. Use tractor flashing warning lights, day or night, when transporting implement on road or highways unless prohibited by law.
14. Use a Rollover Protective Structure (ROPS) and seat belt equipped tractor for all implement operations.

**WARNING** Operating, servicing and maintaining this equipment can expose you to chemicals including gasoline, diesel fuel, lubricants, petroleum products, engine exhaust, carbon monoxide, and phthalates, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. This website, operated by California’s Office of Environmental Health Hazard Assessment, provides information about these chemicals and how individuals may be exposed to them.
IMPORTANT FEDERAL LAWS AND REGULATIONS* CONCERNING
EMPLOYERS, EMPLOYEES AND OPERATIONS.

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

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

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

DUTIES

Sec. 5 (a) Each employer—
(1) shall furnish to each of his employees employment and a place of employment
which are free from recognized hazards that are causing or are likely to cause
dead or serious physical harm to his employees;
(2) shall comply with occupational safety and health standards promulgated under
this Act.
(b) Each employee shall comply with occupational safety and health standards
and all rules, regulations and orders issued pursuant to this Act which are
applicable to his own actions and conduct.

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

Keep all guards in place when the machine is in operation;

Permit no riders on equipment;

Stop engine, disconnect the power source, and wait for all machine movement to stop before
servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be
running to be properly serviced or maintained, in which case the employer shall instruct employees
as to all steps and procedures which are necessary to safely service or maintain the equipment.

Make sure everyone is clear of machinery before starting the engine, engaging power, or operating
the machine.

EMPLOYEE TRACTOR OPERATING INSTRUCTIONS:

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

Child Labor Under 16 Years Old
Some regulations specify that no one under the age of 16 may operate power machinery. It is your
responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of
Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)
DURING BLADE ADJUSTMENT
KEEP BODY, HANDS AND FEET CLEAR OF BLADE.

ATTACHMENT
The box blade should be placed on level ground.

Place the tractor rockshaft control in “position control” (non-floating) for attaching and detaching the rear mounted blade. “Draft control” or “position control” can be used while operating.

Back the tractor until the ends of the lift arms can be attached to the lift points on the implement. Secure the lift arms to the hitch lugs. (Figure 1)

Attach the center link to the top of the mast and adjust so that the blade frame will be level in the operating position.

DETACHING FROM TRACTOR
Lower the blade to the ground with rockshaft control in position control. Remove top link from mast, disconnect hitch arms from bottom pins and pull tractor away from blade.

### SECTION 1 OPERATION

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<td>Number of Scarifiers</td>
</tr>
<tr>
<td>Hitch</td>
</tr>
<tr>
<td>Cutting Edge</td>
</tr>
<tr>
<td>Maximum HP Required</td>
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<tr>
<td>Points &amp; Shanks</td>
</tr>
</tbody>
</table>

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
Level the box blade from side to side and front to rear using adjustments on the tractor’s 3-point lift.

To adjust the scarifier shanks, first remove the pins which hold the shanks in place. Slide the shanks up or down to desired position and replace the pins. (Figure 2)

The scarifiers should be adjusted to the lowest position to penetrate and break up the surface when moving large volumes of soil. When leveling, the tips should be positioned to barely chip the surface, and when smoothing, the tips should completely clear the ground.

Care should be exercised during use of the box blade to prevent hanging the scarifier points or the blades on immovable objects or otherwise use the implement under conditions beyond its designed capacity.

RETRACTABLE SHANKS (Figure 4)

The scarifier shanks can be retracted to completely clear the ground when moving and leveling the soil.

With scarifier points contacting the ground, back the tractor slightly. This will relieve pressure on the latch mechanism and allow the control lever to be pulled forward. Upon lifting the box above the ground the shank assembly will rotate backward and up into the latched position. The handle should be released to insure that the shanks are securely locked in the raised position.

To return the shanks to the lowered position, pull the handle forward to unlatch the mechanism. Lower the box to the ground until scarifier tips contact ground. Back tractor slightly to allow latch mechanism to snap back into position.

NOTE: Adjustment of the tractor top link may be needed to insure proper operation of the mechanism.

OPERATION

Keep all blade nuts and bolts tightened to 175 ft. lbs. Blades can be reversed to use opposite cutting edge when needed. (Figure 3)

SECTION II - MAINTENANCE

Inspect your box scraper periodically and replace any worn or broken parts in order to have it ready for use when needed.

Worn scarifier tips may be removed from the shank by hammering at “A” on the tooth point or by driving a chisel at “B”, just between the tooth point box section and the shank. Install the new point and anchor it to the shank by peening on both sides at the location shown. (Figure 1)

Store the box blade out of the weather when it is not in use. This helps prevent rusting of the blades and other components.
To promote safe operation, Bush Hog supplies decals on all products manufactured. Because damages can occur to safety decals either through shipment, use or reconditioning, Bush Hog will, upon request, provide safety decals for any of our products in the field at no charge. Contact your authorized Bush Hog for more information.

**SAFETY DECALS**

**WARNING**

**TO AVOID SERIOUS INJURY OR DEATH:**

1. **DURING BLADE ADJUSTMENTS:**
   - Keep fingers away from adjusting holes.
   - Keep body, hands and feet clear from elevated blade.

2. **DURING BLADE OPERATION:**
   - Avoid high speed over rough terrain or slopes.
   - Do not hit immovable objects with blade or scarifier points.
   - Do not hit mounds, ridges or areas with hidden obstructions during snow, ice removal or similar high speed operations.

**CAUTION**

**TO AVOID SERIOUS INJURY OR DEATH:**

- Read operators manual before operating and follow all precautions (contact dealer for manual).
- It is recommended operator use rollover protective system and seat belt equipped tractor for all implement operations.
- Add tractor front end weights required for tractor stability.
- Lower implement to ground, stop engine, place transmission in neutral or park, set parking brake and remove key before dismounting tractor or adjusting implement.
- Allow no riders.
- Transport blade in full raised position with tilt and offset angles at “zero” position.

**WARNING**

Cancer and Reproductive Harm

www.P65Warnings.ca.gov D960
### TORQUE SPECIFICATIONS

Proper torque for American fasteners used on Bush Hog equipment. Recommended torque in Foot Pounds (Newton Meters).*

<table>
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<tr>
<th>WRENCH SIZE (IN.) “A”</th>
<th>BOLT DIAMETER (IN.) “B” AND THREAD SIZE</th>
<th>SAE GRADE 2</th>
<th>SAE GRADE 5</th>
<th>SAE GRADE 8</th>
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<tr>
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<td>7/16 - 12 UNC</td>
<td>6 (7)</td>
<td>8 (11)</td>
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### TORQUE SPECIFICATIONS

Proper torque for metric fasteners used on Bush Hog equipment. Recommended torque in Foot Pounds (Newton Meters).*

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<tr>
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<th>BOLT DIAM. (mm) “B”</th>
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<td>911 (1200)</td>
<td>1031 (1370)</td>
<td>1151 (1540)</td>
</tr>
</tbody>
</table>

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