



CID

BRUSH CUTTER

ATTACHMENTS

EXCAVATOR



STANDARD DUTY



TREE REAPER



X-TREME DUTY



SEVERE DUTY

STANDARD DUTY	TREE REAPER EXCAVATOR	X-TREME DUTY	SEVERE DUTY
12-17 GPM	10-17 GPM	14-20 GPM	17-35 GPM
12-29 GPM	18-25 GPM	20-26 GPM	35+ GPM
17-24 GPM		24-30 GPM	

OPERATING INSTRUCTIONS | SAFETY RULES | MAINTENANCE PROCEDURES

FEB
2026

OWNER'S MANUAL

REGISTER YOUR PRODUCT

CID

336-859-2002

MODEL

WEIGHT

PART

HP RANGE

SERIAL

HYDRAULIC PRESSURE

HYDRAULIC FLOW

WWW.CIDATTACHMENTS.COM

Please see the inside of the back cover for instructions of where to find your model and serial number.

WARNING

To prevent personal injury or even death, be sure you read and understand all the instructions in this manual and other related OEM equipment manuals! This excavator brush cutter, if not used and maintained properly, can be dangerous to users unfamiliar with its operation. Do not allow operating, maintaining, adjusting, or cleaning of this brush cutter until the user has read this manual and has developed a thorough understanding of the safety precautions and functions of the unit. This excavator brush cutter is designed for the specific purpose of clearing brush. DO NOT modify or use this attachment for any application other than that for which it was designed. Attachments maintained or operated improperly or by untrained personnel can be dangerous, exposing the user and/or bystanders to possible serious injury or death.

**STORE THIS MANUAL IN THE
DOCUMENT CANISTER ATTACHED
TO THIS MACHINE.**



Purchase Date:

Dealer Name:

Address:

Phone Number:

WELCOME

Thank you for choosing CID. This attachment has been designed and manufactured to meet the needs of discerning users. We are committed to providing you with a heavy duty product that will provide years of satisfaction and safe operation.

This manual will provide instructions on how to safely operate and maintain this attachment. All users must read and understand this manual before operating this machine. Upon reading this manual, all users should sign the “Safety Acknowledgment Form” at the end of this manual.

Please record your model and dealer information on the inside front cover. You will be asked to provide this information when ordering parts or requesting service. If you need more information on this product, contact your local dealer or visit www.cidattachments.com.

Sincerely,
The CID Team



MODEL COMPARISON	STANDARD DUTY	TREE REAPER	X-TREME DUTY	SEVERE DUTY
GPM	12-17 GPM 12-29 GPM 17-24 GPM	10-17 GPM 18-25 GPM	12-29 GPM 14-20 GPM 20-26 GPM 24-30 GPM	17-35 GPM 35+ GPM
Operating Weight	Mini-Excavators < 12,000 lbs	< 14,000 lbs	12,000-20,000 lbs operating weight	>14,000 lbs operating weight
Blades/Mulch Teeth (MT)	2 blades	2 blades 3 blades/ 9 MT	2 blades	3 blades / 9 MT
Cut Capacity	Trees up to 2” in diameter	Trees up to 4” in diameter	Trees up to 4” in diameter	Trees up to 7” in diameter
Case Drain	None Required	None Required	None Required	Required
Motor	LSHT Torqmotors (Opt.) Star Piston	Radial Piston	LSHT Torqmotors (Opt.) Star Piston	Bent Axis Piston
Cutting Width	44” Debris Chain (opt)	36”, 44”	44” Debris Chain (opt)	44”
Weight	552, 556, 624 lbs	431, 481 439, 488 lbs	789, 794, 838, 868 lbs	890, 920 lbs

Mounts are additional weight and can range from 75-300 lbs

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IMPORTANT WARRANTY DISCLAIMERS

ATTENTION: If your attachment has control valves, cylinders, gearboxes, or motors and they are opened or disassembled, the **WARRANTY for that item WILL IMMEDIATELY BE VOIDED!**

GEAR OIL STATEMENT: If applicable in your attachment, check gear oil before each use:

We recommend using 85-140 grade gear oil, for use with all our gear boxes, and bearing housings which is separate from the hydraulic fluid used to move your attachment or machine.

(Exception: gear oil used in mulchers is Shell Omala S2 GX 150!)

HYDRAULIC FLUID STATEMENT: Check your machine’s hydraulic level and add hydraulic fluid if necessary before each use. Inspect for leaks, and repair if necessary. **Always use your machine’s manufacturer recommended hydraulic fluid in your machine!** Fluid must be clean and debris free. If damage occurs from debris in hydraulic fluid flowing from your machine to our attachment it will VOID the warranty on any cylinders, motors, couplers, manifolds &/or valves (relief, lock, selector, check and flow control) down line from that flow.

NOTE: If your attachment requires a case drain, the warranty **WILL BE** immediately voided if the attachment is ran without it. Please refer to specifications sheet on page 35 of this manual.



WARNING: This product can expose you to chemicals including benzene and mineral oils, which are known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

SECTION 2

SAFETY INFORMATION

The following terms may be used interchangeably throughout this manual.

Term	Alternate Terms Used
Excavator Cutter	implement, attachment, machine, brush cutter, cutter, excavator
Excavator	mini-excavator, mini-ex, machine, excavator
Operator	user, personnel

This Excavator Cutter is designed and manufactured with safety in mind. However, improper use and operator error can result in death or serious injury. It is important that you read and fully understand the safety instructions and operating procedures presented in this manual before operating this brush cutter. Accident prevention is a combination of good judgment, common sense, awareness and proper training!

 **BEFORE YOU OPERATE THIS EXCAVATOR CUTTER:**

KNOW how to safely operate your machine.

READ and **UNDERSTAND** the safety instructions and operating procedures contained in this manual.

ACKNOWLEDGE your understanding of all safety instructions presented in this manual by signing the “Safety Acknowledgment Form” at the end of this manual.

Although every effort has been made to ensure a safe product, every possible circumstance that could pose a potential hazard cannot be anticipated. The warnings presented in this manual and on this product, are therefore not all-inclusive.

In addition to the safety messages presented in this section, you must also read and understand the safety messages presented in the other sections of this manual.

This manual and the decals on this attachment use safety symbols, hazard labels, pictograms and color coded signal words to alert you to potential hazards that may cause severe injury or death if a safety instruction is ignored.



SAFETY ALERT SYMBOL - This symbol is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

HAZARD CLASSIFICATIONS

Hazards are identified by the “Safety Alert Symbol” and followed by the signal word “DANGER”, “WARNING”, or “CAUTION”.

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
This signal word is limited to the most extreme situations.

WARNING

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

CAUTION

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

NOTICE

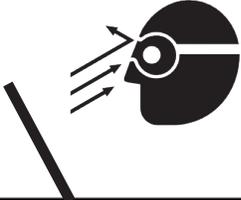
Indicates a situation which may cause damage to equipment or property.
Messages are not related to personal injury.

Safety Instructions

Indicates specific safety-related instructions or procedures.

2.2 SAFETY PICTOGRAMS

Pictograms are graphic symbols meant to alert you of a potential hazard. Read and understand the hazard description for each of these symbols.

Pictogram	Description
	<p>PINCH HAZARD: Keep clear of excavator / machine to prevent death or serious injury from pinching of moving parts.</p>
	<p>FLYING DEBRIS HAZARD: ONLY operate this attachment using a machine that has a shatter proof cab to prevent death or serious injury from objects being thrown.</p>
	<p>OPERATING MANUAL: Operators must read and understand the safety instructions in the operating manual to prevent death or serious injury.</p>
	<p>EYE PROTECTION & CARDBOARD: Operators and Maintenance personnel must wear proper eye protection and use cardboard or wood to investigate hydraulic leaks to prevent death or serious injury from being injected with high pressure hydraulic fluid.</p>
	<p>HIGH PRESSURE FLUID INJECTION HAZARD: Operators and Maintenance personnel must not place fingers or hands directly over a hydraulic leak to prevent death or serious injury from being injected with high pressure hydraulic fluid.</p>
	<p>NO BYSTANDERS: DO NOT operate this attachment near bystanders. Bystanders must stay back at least 300 feet from the attachment to prevent death or injury from objects being thrown.</p>
	<p>CRUSH HAZARD: DO NOT place any part of the body under the attachment or excavator boom to prevent death or serious injury from being crushed .</p>
	<p>AMPUTATION HAZARD: Keep hands and feet away from cutting blades. Do not operate without guards in place. Turn off engine before servicing.</p>

2.3 SAFETY DECALS

The safety decals affixed to this attachment are to keep you safe. **DO NOT** ignore these decals.

Read and understand each decal's safety message. Follow these Safety Decal Instructions:

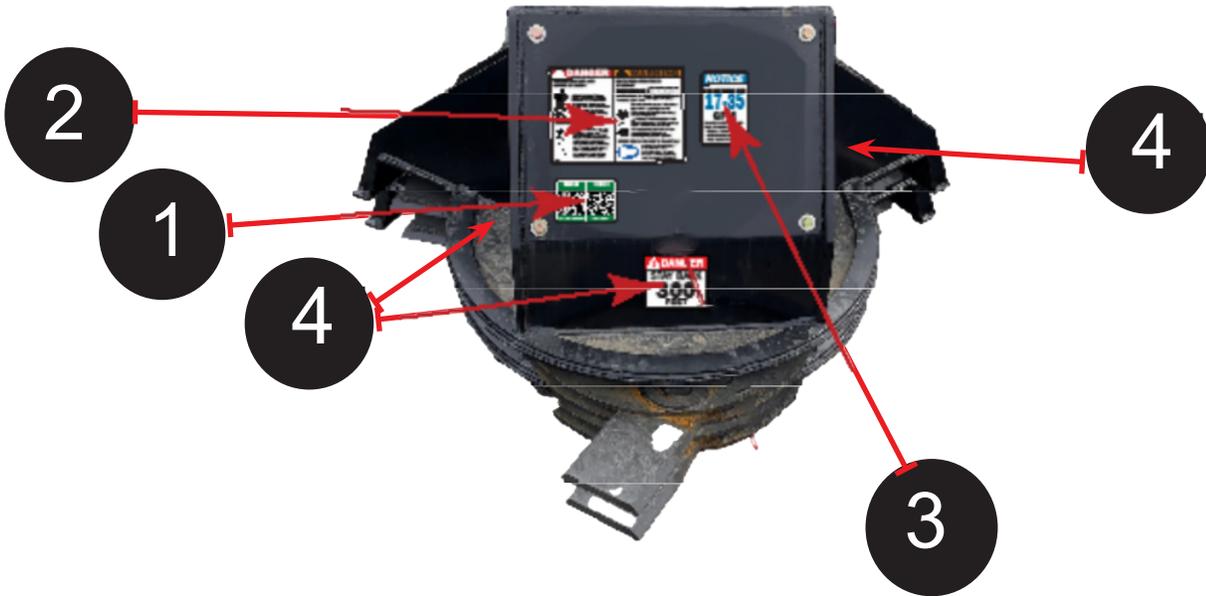
REF	DESCRIPTION	LABEL	QTY
1	SCAN TO VIEW OWNER'S MANUAL QR CODE STICKER		1
2	COMBO DANGER WARNING LABEL Pinch Hazard, High Pressure Fluid Hazard, Flying Debris Hazard		1
3	WARNING DO NOT EXCEED GPM LABEL		1
4	DANGER STAY BACK LABEL **There are TWO decals left side front and right side front.		2

**WHEN ORDERING, CHOOSE THE PROPER DECAL FOR YOUR MODEL*

CONTACT YOUR LOCAL DEALER TO ORDER REPLACEMENT DECALS

-  Decals must be kept clean and legible at all times.
-  Operators must inspect the attachment for safety decals.
-  Replace missing, worn or damaged decals immediately.
-  Use care when cleaning the attachment. When using a hot pressure washer to clean this attachment make sure water jet is not too close to the decal as this may cause the decal to peel.
-  When replacing parts, be sure safety decals are in place prior to using the attachment.
-  Make sure metal surface is dry and free of dirt and grease before affixing decals to this attachment.

2.3 SAFETY DECALS



2.4 EXCAVATOR REQUIREMENTS



Tracked

VS.



Wheeled

A Tracked or Wheeled Excavator (full-size or mini) may be used with these attachments.

⚠ CAUTION Ensure your machine is in good operating condition. Follow the operating instructions found in your excavator operator's manual. Failure to do so could result in minor or moderate injury.

Machines must have impact resistant windshields and cab side windows.

THESE CUTTERS SHOULD ONLY BE USED WITH MACHINES THAT SUPPORT THE CORRECT HYDRAULIC FLOW (GPM) AND MATCH YOUR MACHINE'S MANUFACTURER RECOMMENDED OPERATING WEIGHT.

MACHINE	STANDARD DUTY	TREE REAPER	X-TREME DUTY	SEVERE DUTY
Operating Weight	<12,000 lbs	<14,000 lbs	12,000-20,000 lbs	>14,000 lbs

2.6 GENERAL SAFETY INSTRUCTIONS



MAKE SURE YOU FOLLOW THE GENERAL SAFETY INSTRUCTIONS THAT RELATE TO THE OVERALL OPERATION AND MAINTENANCE OF THIS ATTACHMENT. IT IS IMPORTANT THAT YOU READ AND UNDERSTAND EACH OF THESE MESSAGES TO PREVENT SERIOUS INJURY OR DEATH.

- ⚠ **NEVER** use drugs or alcoholic beverages while operating or servicing this attachment.
- ⚠ **DO NOT** allow children to play on or around this attachment at any time. Store this attachment in an area not frequented by children.
- ⚠ **ALWAYS** operate this attachment during daylight or well-lit areas.
- ⚠ **ALWAYS** wear the proper personal protection equipment while operating or servicing this attachment. **NEVER** operate or service this attachment with bare feet, sandals, or other light footwear.
- ⚠ We recommend using a high strength clear protective door panel when using with this attachment.
- ⚠ **ALWAYS** wear work gloves when handling cutter blades as they are often very sharp.
- ⚠ To prevent the machine and attachment from rolling forward, stop the engine and set the parking brake when exiting the machine.
- ⚠ **ALWAYS** use eye protection while operating or servicing this attachment.
- ⚠ Inspect attachment for loose or missing hardware prior to using this machine.
- ⚠ **DO NOT** operate this attachment during lightning or severe weather conditions.
- ⚠ **ALWAYS** watch for overhead power lines.
- ⚠ **DO NOT** place hands or feet under deck while blades are spinning.
- ⚠ **DO NOT** allow riders on the machine or on this attachment.
- ⚠ **NEVER** operate this excavator brush cutter when bystanders are within 300 feet of your work area. Flying debris could cause serious injury or death.
- ⚠ **DO NOT** speed! Keep your driving between 2 and 5 mph.
- ⚠ **NEVER** position your body or limbs under an unsupported attachment.
- ⚠ **NEVER** leave equipment unattended with the engine running, or with this attachment in a raised position.
- ⚠ **DO NOT** allow this attachment to contact buildings, utilities, large rocks or tree stumps or you may lose control of the machine.



2.7 FEDERAL LAWS & REGULATIONS

IMPORTANT FEDERAL LAWS AND REGULATIONS CONCERNING EMPLOYERS, EMPLOYEES, AND OPERATORS

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 Safety 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...”

Sec. S(a) Each Employer – **DUTIES**

(1) shall furnish to each of its 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 its 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 or her 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 equipment.

Make sure no one is within 300 feet of machinery before starting the engine, engaging power, or operating the machine.

EMPLOYEE MACHINE OPERATING INSTRUCTIONS:

1. Securely fasten your seat belt if the machine has the capability.
2. Where possible, avoid operating the machine 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 machine smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by machine manufacturers.
9. When machine 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).

SECTION 3

OPERATING PROCEDURES

Your attachment may arrive from the factory strapped to a wood pallet and requires no final assembly. Use a steel band cutting tool to remove the steel straps.

CAUTION

Shipping straps are under great tension, and could lash out uncontrollably when cut causing injuries to your body or bystanders. Keep bystanders away and wear safety glasses and gloves while removing the steel straps.

3.1 PRE-OPERATING CHECKLIST

Pre-Operating Checklist	
<input type="checkbox"/>	Excavator Cutter is securely attached to the machine.
<input type="checkbox"/>	Hydraulic hoses are connected and locked to the machine hydraulic couplers with no signs of hydraulic fluid leaks present.
<input type="checkbox"/>	Blades are in working condition and securely attached to the cutter and all bolts and nuts are tight.
<input type="checkbox"/>	Safety labels are present and legible.
<input type="checkbox"/>	No material, ropes, wire, etc. is obstructing the blades and blade holder assembly.
<input type="checkbox"/>	The area of operation is clear of bystanders and any obstacles that could damage the equipment or injury to the operator.
<input type="checkbox"/>	The operator is of good health and not under the influence of any mind altering substances or alcohol.

3.2 HOW TO CONNECT EXCAVATOR CUTTER ATTACHMENT

GENERAL ATTACHMENT METHOD

Refer to your machine operator's manual for specific instructions on how to connect and disconnect your attachment.

This attachment method refers specifically to excavators with the Excavator Quick Attach Coupler. For all other attachment instructions, refer to the Original Equipment Manufacturer (OEM) for instructions.

1. Make sure the excavator attachment is in a stable and secure position before attaching.
2. Ensure the hydraulic lines are clear from the excavator cutter's attachment mount and that the locking pins are removed for attaching.
3. Tilt the Excavator's Quick Attach Coupler slightly upward as you move the boom into place. Slowly move the boom until the Attach Coupler connects into the excavator attachment mount. *See step 1 below.*
4. Lower the front of the boom until the Excavator Attach Coupler is in full contact with the excavator attachment mount. *See step 2 below.*
5. Secure the locking pin in the locking channel and verify that it is solidly locked in place. *See step 3 below.*

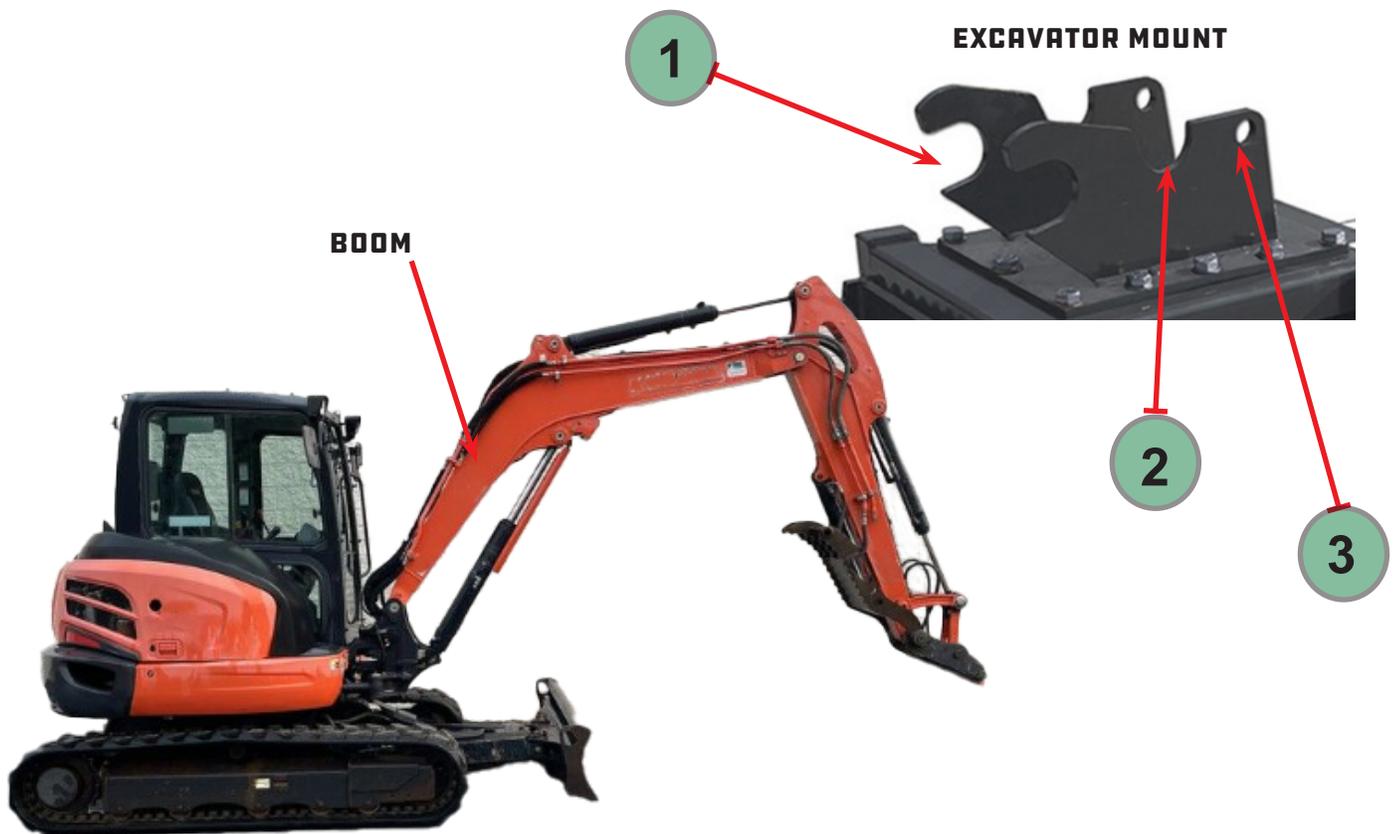


FIGURE 3.2A - EXCAVATOR QUICK ATTACH COUPLER TO EXCAVATOR MOUNT

3.2 HOW TO CONNECT EXCAVATOR CUTTER ATTACHMENT CONT.

! WARNING

To avoid serious injury or death, ensure locking pins fully extend through the slots on the attachment bracket and that pins are in the locked position to prevent cutter from detaching from machine and causing serious injury or death.

NOTICE

To keep contaminants from entering the hydraulic system, use a clean cloth to wipe away dirt and grease from the hydraulic couplers.

6. Connect the attachment hydraulic hoses and the case drain hose (if applicable) to the auxiliary supply couplers located on your excavator boom.

NOTICE

Check that hydraulic hoses are locked into the machine's couplers with the preferred output auxiliary port corresponding to the correct input line on the attachment before use.

Check the hose routing through the full range of intended motion before operating attachment. It is the responsibility of the owner/operator to make sure the hoses are routed correctly and are not pinched.



HYRAULIC HOSE EXAMPLES



NOTICE

Refer to the operator's manual for your specific machine's operating instructions.

3.3 HOW TO START EXCAVATOR CUTTER



Please refer to our “Hydraulic Fluid and Oil Statement” on Page 5 for gear oil or hydraulic fluid instructions.



EXCAVATOR CUTTER CONTROLS

Your excavator cutter is designed to run off the machine’s auxiliary hydraulic system, and is activated and deactivated by a control in the operator’s cab. The height and tilt of your excavator cutter is operated with the controls in the cab. Consult your machine operator’s manual for instructions regarding these functions.

HYDRAULIC FLOW REQUIREMENTS

When operating this attachment, set the machine engine RPM to a speed that will produce the required auxiliary flow. Your machine dealer can measure the flow available on your machine and recommend a throttle or auxiliary flow setting that is compatible with this attachment. **DO NOT EXCEED** the designated flow rate (GPM) as damage to hydraulic components can occur.

NOTICE

DO NOT exceed the designed flow rate (GPM) of your excavator cutter. Check the specifications table on page 35 for your specific model’s max GPM.

STARTING THE CUTTER

WARNING

To avoid serious injury or death from thrown objects and flying debris, ensure no bystanders are within 300 feet of the work area before starting this excavator cutter.

1. Verify attachment is secure with couplers in the locked position and locking pins fully secured.
2. Ensure hydraulic hoses are locked to the machine’s hydraulic couplers.
3. Set machine engine RPM to slightly above idle.
4. Activate machine’s auxiliary hydraulic circuit.
5. Once the excavator cutter is up to speed, increase machine engine to full throttle. Ensure cutter is running smoothly.

3.4 HOW TO STOP EXCAVATOR CUTTER

NOTICE

If the excavator cutter vibrates while increasing RPM's, switch off the auxiliary hydraulic circuit and investigate the cause. Refer to the Troubleshooting Chart on page 33 of this manual.

STOPPING THE CUTTER

1. Raise the cutter slightly and set machine engine RPM to idle.
2. Switch off the auxiliary hydraulic flow to the excavator cutter.
3. Allow the excavator cutter to slow down and come to a complete stop.
4. Lower the excavator cutter to the ground.

WARNING

After switching off the auxiliary hydraulic circuit, keep hands and feet clear of the cutter deck until blade rotation has come to a complete stop.

NOTICE

ALWAYS release the hydraulic system pressure from the auxiliary hydraulic circuit prior to removing the attachment or performing any hydraulic service work.

3.5 FIRST TIME USE



Please refer to our “Hydraulic Fluid and Oil Statement” on Page 5 for gear oil or hydraulic fluid instructions.



NOTICE

Before operating excavator cutter, check the hydraulic fluid level in the machine and add manufacturer recommended fluid if necessary.

NOTICE

Make sure the case drain hose is properly attached to the machine's case drain connection.

(If Applicable) **DO NOT operate this attachment WITHOUT the case drain hose attached.**

Excessive hydraulic pressure will blow out seals and damage the motor.

(Only Severe Cutter requires case drain.)

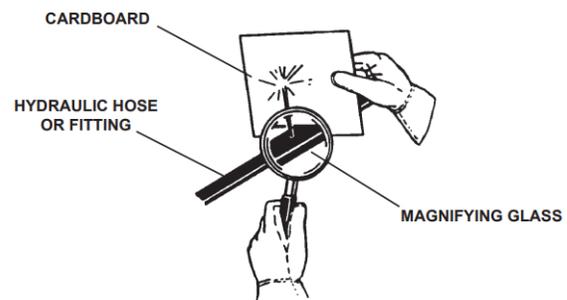
3.5 FIRST TIME USE CONT.

Verify that hydraulic hoses are securely locked to the machine's hydraulic couplers before starting the excavator cutter.

After starting machine, lift attachment 6 inches off the ground surface:

1. Set machine engine RPM to just above idle and activate the auxiliary hydraulic circuit.
2. Allow the cutter to run for 30 seconds to purge air from the system, then switch off the auxiliary hydraulic circuit and allow excavator cutter blades to come to a complete stop.
3. Lower the excavator cutter to the ground, set the parking brake, shut off machine engine and exit the cab.
4. Check the hydraulic fluid level in the host machine, add manufacturer recommended hydraulic fluid if necessary. Check machine owner's manual for the proper procedure for checking hydraulic fluid level.

! WARNING To avoid serious injury by hydraulic fluid injection into your skin, never use your hand or other body parts to locate a hydraulic leak. Detect leaks with a piece of wood or cardboard. Flesh injected with Hydraulic fluid may develop gangrene or other permanent disabilities.



5. Inspect the excavator cutter hydraulic plumbing for noticeable leaks. Fix before continuing.
6. Restart machine, set engine RPM to slightly above idle
7. Raise excavator cutter off the ground and switch on the auxiliary hydraulic circuit.
8. Once excavator cutter ramps up to speed, increase the machine's engine to full throttle.

3.6 CUTTING OPERATIONS

GENERAL OPERATING TIPS

1. **LEARN** what the excavator cutter looks like in a level position when you are seated in the machine. Knowing what a level excavator cutter looks like will prevent you from damaging the attachment if you cut too close to the ground.
2. **SLOW** down the host machine if the engine "bogs" down or if the cutter speed is too slow because of too much load or travel speed.
3. **LOOK, LISTEN** and **FEEL** for any abnormal vibrations or noises. If you see, hear, or feel a strong vibration or abnormal noise while cutting, slow the machine down and see if the vibration stops. If not, stop the excavator cutter, lower the attachment, set the parking break, turn off the machine engine and investigate the cause. Refer to the "Troubleshooting Chart" in this manual.
4. **ALWAYS** inspect the work area before cutting or digging. Locate any utilities, steel posts, rocks, overhead obstructions, or any other objects that could damage the equipment or cause injury if struck.

ADJUSTING CUTTER HEIGHT & LEVEL

Use the machine's controls to adjust excavator cutter height and level. Refer to your machine operator's manual for instructions on these controls.

CAUTION

Use caution and slower movements when raising the cutter, and when fully extended while cutting trees or other brush. DO NOT over extend!

NOTICE

If the cutter speed slows down, reduce your travel speed and allow the excavator cutter to reach the proper rotating speed. Mowing TOO fast in thick vegetation could result in "balling" of the material underneath the cutter deck resulting in a loss of cutting efficiency.

CAUTION

When cutting trees, beware of the direction of fall to avoid the tree from falling onto your machine and attachment.

WARNING

DO NOT operate this attachment if you can see the cutter blade while seated in the operator's seat. If the operator can see the cutter blade, the back of the cutter is raised TOO HIGH!

Lower or adjust the cutter deck to avoid debris being thrown at the operator.

CAUTION

NEVER use your excavator cutter to push, pull, lift or move any type of object or vehicle. DO NOT use this excavator cutter to "push" down trees. (Excluding the use of the X-Treme and Severe Cutter digging teeth or opposing thumb knee.)

BEFORE CUTTING

1. ALWAYS inspect work area before starting the cutter. Locate and mark any utilities, steel posts, rocks or any other objects that could damage the brush cutter during operation. NEVER assume the work area is safe.
2. Operate the excavator cutter at a safe speed that will allow you to watch the area ahead of the machine and cutter.
3. Ensure the machine RPMs are sufficient to deliver the required hydraulic flow to the excavator cutter.

3.6 CUTTING OPERATIONS CONT.

COMMON CUTTING METHOD

1. Once the excavator cutter is activated and at full RPM, position the excavator cutter slightly above the vegetation to be cut with the deck angled away from the operator's cab.
2. Lower the cutter onto the vegetation while swinging the boom. Adjust the boom height as necessary to compensate for changes in terrain elevation.
3. ALWAYS lower the excavator push blade for added stability before extending the boom. Point the push blade TOWARDS the direction of cutting. (If applicable.)

NOTICE

When cutting vertically, without swinging the boom, position the cutter so that the material being cut is at the end of the blades.

! WARNING

Vertical cutting can disperse flying debris over a large area and could cause death or serious injury to bystanders. DO NOT operate this cutter when bystanders are within 300 feet of this machine.

! WARNING

Use care when operating on uneven terrain or any type of sloped surface. Be aware of the center of gravity when using the excavator cutter to avoid a roll over accident that could result in serious injury or death.

! DANGER

To prevent death from electrocution, watch out for overhead or underground or any electrical lines when operating the cutter boom.



TO CUT VERTICALLY:

1. Raise the excavator boom.
2. Tilt the cutter head so the blade holder is not seen from the cab (with the front deck tipped up).
3. Swing the boom to the left or right above the desired vegetation to cut.
4. Raise and lower the excavator boom to cut vegetation.

3.7 HOW TO DISCONNECT EXCAVATOR CUTTER ATTACHMENT

DISCONNECTING BRUSH CUTTER

1. Turn off auxiliary hydraulic circuit once blades have come to a complete stop. Relieve hydraulic pressure by moving the joysticks back and forth or pressing the hydraulic relief valve (if applicable).
2. Park machine on a flat and level surface, lower the push blade (if applicable), then lower excavator cutter to the ground.
3. Set parking brake and disengage the coupler using the lock switch (if installed).
4. Turn off machine engine.
5. Disconnect hydraulic hoses and connect together or install dust caps to prevent contaminants from entering the hydraulic system.
6. Remove coupler locking pins or disengage coupler via manual locking mechanism. (if applicable)
7. Re-enter cab and start machine engine.
8. Tilt excavator mounting coupler backward until coupler is free from mounting bracket on cutter.
9. Drive machine backward to clear cutter.



SECTION 4

MAINTENANCE PROCEDURES

The maintenance procedures described in this manual should only be carried out by qualified mechanics who have been trained to repair this attachment.

Some procedures require special tools and skills to complete. **DO NOT** attempt to repair or perform service work on this attachment unless you have the skills and tools to do so. Contact your local dealer for maintenance and repair services.

⚠ WARNING Only use genuine Original Equipment Manufacturer (OEM) replacement parts on this attachment. We will not be liable for any damages or injuries caused by the use of after market use parts on this attachment.

NOTICE

Improper maintenance or modifications to the design or performance of this attachment will void the warranty. **ONLY** use genuine replacement parts on this attachment.

Safety Instructions

Obey the following safety instructions when servicing or repairing this attachment.

- ⚠** Wear proper Personal Protective Equipment (PPE) while working on this attachment, which may include safety glasses, hard hats, steel toe boots, gloves, etc.
- ⚠** If servicing is performed while the excavator cutter is attached to the machine, lower attachment to the ground, turn engine off and set parking brake to prevent machine from moving.
- ⚠** Ensure all jack stands, lifts and hoists are in good working condition and have the rated load capacity to support the load.
- ⚠** Wear a welding helmet when welding to protect your eyes and body from flash burn, ultra-violet radiation and heat. Only perform service work in a well-lit area.
- ⚠** Allow the attachment to cool down before servicing this attachment.

⚠ NEVER work under an unsupported excavator cutter.

4.1 MAINTENANCE SCHEDULE

This attachment will provide years of dependable service if routine maintenance procedures are performed. The maintenance tasks listed below are based on normal operating conditions. More frequent maintenance may be necessary with intense use or when operating in adverse environmental conditions.

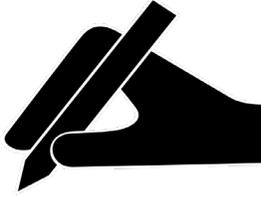
MAINTENANCE TASK	BEFORE EACH USE	WEEKLY	YEARLY
<p>Check hydraulic fluid level of host machine. Add manufacturer recommended fluid as necessary.</p> <p><i>Please refer to our "Hydraulic Fluid and Oil Statement" on Page 5 for gear oil or hydraulic fluid instructions.</i></p>	X		
<p>Check that all fasteners (nuts, bolts, washers, pins, keepers) are in place. Tighten as necessary.</p>	X		
<p>Inspect and replace any worn, torn, or missing safety decals.</p>	X		
<p>Inspect hydraulic hoses and connectors for damage or leakage. Repair or replace hydraulic items as necessary.</p>	X		
<p>Check condition of cutter blades. Sharpen or replace as necessary.</p> <p><i>*We recommend replacing the bushing & bolts with the blades.</i></p>	X		
<p>Check oil level in gearbox or bearing house and check for leaks. Add oil as necessary & repair leaks before using.</p>	X		
<p>Wash Excavator Cutter</p>		X	
<p>Change 85-140 oil in bearing house or gearbox.</p> <p><i>*Change oil after 50 hours of first time use, then every 1000 hours or yearly.</i></p>			X 1,000 HRS
<p>Check excavator cutter for major scratches & dings. Sand and repaint these areas to prevent rust damage. *Contact the manufacturer for approved OEM paint for your attachment.</p>			X

DANGER

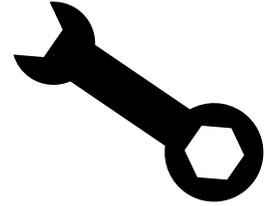
ONLY service this attachment on stable, even terrain. NEVER park on sloped terrain to avoid being struck and killed or seriously injured by the unexpected rolling or movement of the attachment or machine.

4.2 MAINTENANCE LOG INSTRUCTIONS

Document all maintenance and service activities performed on this excavator cutter using the maintenance log sheets included at the end of this manual.



MAINTENANCE LOG



10. MAINTENANCE

MAINTENANCE LOG

DESCRIPTION OF MAINTENANCE/REPAIR	SERVICED BY:	DATE:
<i>Replace Putter Blades</i>	<i>Joe Smith</i>	<i>01/24/24</i>
<i>Suspect Hydraulic Plumbing</i>	<i>Joe Smith</i>	<i>02/25/24</i>
<i>Change Oil in Bearing Housing</i>	<i>Joe Smith</i>	<i>04/24/24</i>

4.3 STORAGE TIPS

To get years of quality use out of your attachment, follow these tips when storing your attachment for the season:

	<p>Ensure attachment is free of water, debris, dirt and grease.</p>
	<p>Store your attachment in a dry shed or garage.</p>
	<p>When storing your attachment for the season, cover with a weather proof tarp to protect it from the elements.</p>

4.4 TORQUE SPECIFICATION TABLE AND INSTRUCTIONS

BOLT TORQUE INSTRUCTIONS

1. Apply and maintain proper torque on all bolts.
2. Use lubricated torque values when applying Loctite. **Do not grease or oil bolts.**
3. Wipe bolts clean and use Loctite 635 or equivalent before tightening bolts. May need curing activator.
4. Use a torque wrench to assure the proper amount of torque is being applied to the bolt.
5. **MUST CURE 72 HOURS BEFORE USE TO PREVENT LOOSENING OF BOLTS.**

TORQUE VALUES

SAE GRADE 8

	DRY lb.-ft.	LUBRICATED lb.-ft.
1/4"	12	9
5/16"	24	18
3/8"	45	35
1/2"	110	80
3/4"	380	280
7/8"	600	450
1"	910	680
1 1/4"	1820	1360
1 1/2"	3162	2688

4.5 TORQUE EQUIPMENT REQUIREMENTS

TOOLS & EQUIPMENT REQUIREMENTS

To complete the maintenance procedures described in this section, you may need the following tools:

- 1/2 inch drive breaker bar
- 3/4 inch impact socket
- 1/2 inch impact socket
- Tapping Hammer
- 1/2 inch drive torque wrench
- Nylon pry bar set
- Safety stands
- **Loctite 635 or Equivalent-MUST CURE 72 HRS**
- Lifting device (overhead crane hoist, forklift)



NOTE:

When removing bolts with Loctite, it will be necessary to apply localized heat of at least 250 degrees Celsius or to 482 degrees Fahrenheit to loosen bolts.

LOCTITE 635 TECHNICAL SPECIFICATIONS FOR BONDING, CURING, REMOVAL AND INSTALLATION CAN BE FOUND HERE:
<https://next.henkel-adhesives.com/>

4.6 BLADE HOLDER REMOVAL

WARNING

To avoid serious injury or death only use jacks, hoists, lifts and tools that have the capacity for the job. Use certified safety stands rated to support the applicable load.

DANGER

To prevent a crushing death by the excavator boom, the arm or boom must be held in a secure and unmoving position. Refer to your excavator operator's manual for instructions on securing the boom and lift arm lock installation procedures.

DANGER

ONLY service the excavator cutter on stable, even terrain. **NEVER** park on sloped terrain to avoid being struck and killed or seriously injured by the unexpected rolling or movement of the excavator..

NOTICE

ALWAYS release the hydraulic system pressure from the auxiliary hydraulic circuit prior to removing the blade holder.

CAUTION

When performing this procedure alone, rig a pair of choker slings through the blade holder and connect to an overhead hoist. This will prevent the blade holder from falling on to you causing injury to your body. Ensure attachment is secure and stable prior to blade holder removal.

BLADE HOLDER REMOVAL PROCEDURE

1. Shut off hydraulic flow circuit and release pressure from the auxiliary hydraulic circuit and allow blades to completely stop.
2. Place the excavator attachment below an overhead hoist (recommended) or crane to raise into position.
3. With the excavator cutter attached to the machine, (Step 1) raise the boom enough so the (Step 2) arm can be extended. Then (Step 3) tilt the cutter either facing the operator or completely away from the cab for optimal positioning. **See Figure 4.6A**
4. Position the cutter deck in a vertical position to gain access to the blade holder assembly. Rest cutter on the ground with the blade holder in a vertical position for access. **See See Figure 4.6A**

4.6 BLADE HOLDER REMOVAL CONT.

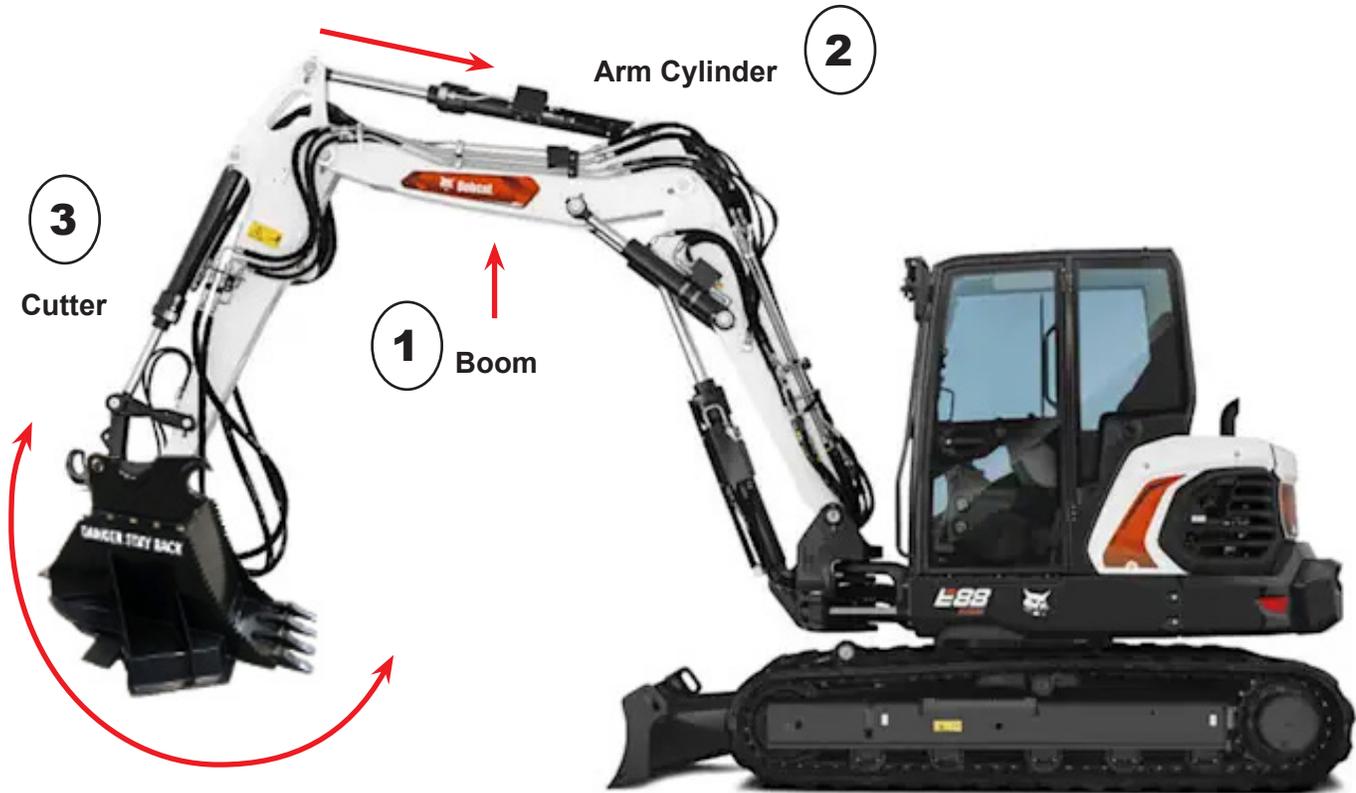


Figure 4.6A EXCAVATOR

5. Turn OFF machine engine, SET parking brake, and **install boom and arm locks**.
6. Rig a pair of choker slings through the blade holder and connect to an overhead hoist. Keep a slight amount of tension on the slings to prevent the blade holder from falling once the bolts are removed. **See Figure 4.6B**
7. TAPERED SHAFT GEARBOXES: Straighten and remove cotter pin before removing the castle nut. Proceed to remove castle nut that secures blade holder to the gearbox shaft and let the blade holder rest in the choker sling. If the blade holder fails to separate, use a wedge breaker tool to help separate the blade holder from the gearbox shaft.
8. FLANGED OUTPUT SHAFT BEARING HOUSE OR GEARBOX: Remove the six or eight 3/4 inch diameter hex bolts that secure the holder to the output flange and let the blade holder rest in the choker sling. If the blade holder fails to separate, use a wedge breaker tool to help separate the blade holder from the output flange.
9. Use the hoist to place the blade holder on a suitable work surface.

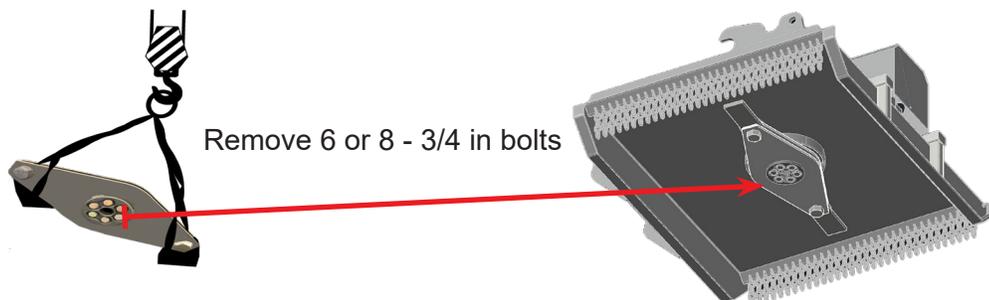


Figure 4.6B BLADE HOLDER AND SLING SYSTEM

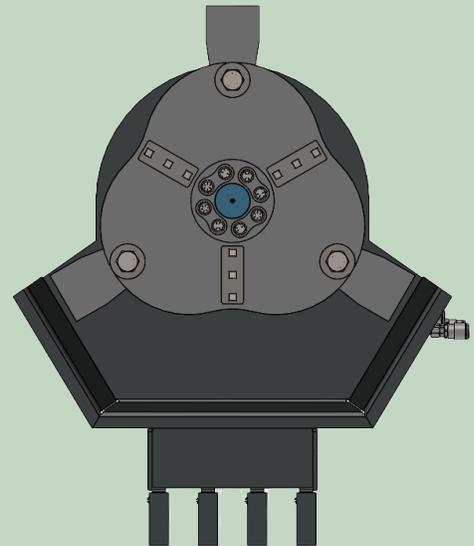
4.7 BLADE HOLDER INSTALLATION

INSTALLATION PROCEDURE

NOTICE

Use a hoist, lift table or forklift to support the blade holder during installation.

1. Align the bolt holes in the blade holder with the bolt holes on the output flange or insert spline bushing onto splined shaft.
2. The blade holder must be seated flat against the output flange or the splined bushing up tight on the splined shaft with no gaps and splines aligned before proceeding to the next step.
3. Lubricate the six or eight 3/4 inch diameter grade 8 hex bolts with Loctite 635 or equivalent. NOTE: The splined output shaft does not require Loctite with the castle nut.
4. Install and torque bolts or castle nut to the Torque Value of 450-600 ft-lbs. Once torqued, the castle nut may need adjusted to align with the hole in the shaft. Insert cotter pin once torqued and aligned, bending cotter pin ends back around nut.



NOTICE

This procedure requires special tools and skills. DO NOT attempt to remove or sharpen blades if you do not have the tools or skills. Take your excavator to your local dealer for blade services.

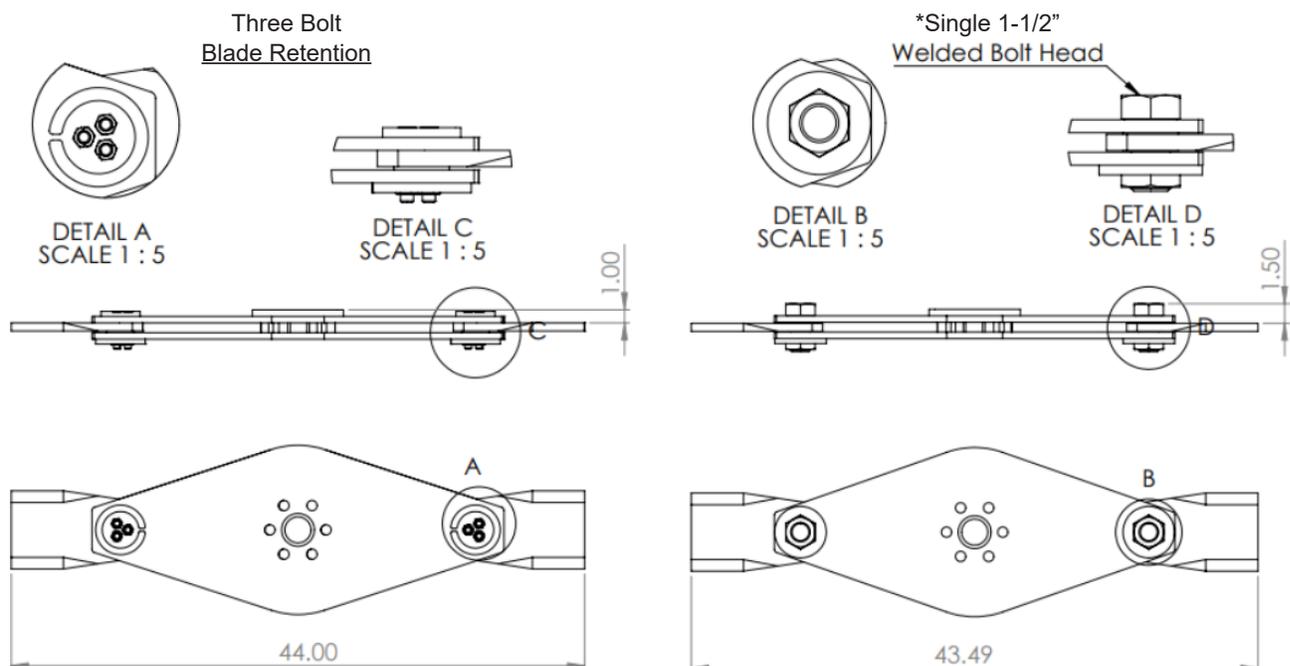
! CAUTION

Excavator blades are sharp and could cut you if mishandled. ALWAYS wear protective gloves and footwear when handling cutter blades.

BLADE REMOVAL PROCEDURE

***PLEASE NOTE:** For other styles of bolted blade retention, please refer to Appendix A at the end of this manual.

1. Remove the blade holder as described in Section 4.6 of this manual.
2. Remove the three bolts and nuts that secure the blade to the blade holder. (See Detail A below.)
3. Drive the bolt shank from the blade and blade holder, being careful not to let the blade fall onto your feet.
4. Repeat steps 2-3 for the second and third bolts.



4.9 BLADE SHARPENING AND REPLACEMENT

Blade Sharpening and Replacement Notes

- Sharpen excavator blades with the appropriate tool.
- When sharpening the blades, be careful not to overheat the blade steel causing the blade material to become brittle and prone to early failure.
- Grind each blade to the similar shape and size so as to not create a set of mismatched blades. Mismatched blades or severe distortion of blade or blade holder may result in excess vibration or unbalancing which could result in damage to your attachment.
- ALWAYS sharpen or replace excavator blades as a set.
- NEVER mix and match used blades with new blades as they will cause the excavator cutter to be unbalanced and result in a vibration that may cause damage to other excavator cutter parts.
- Install blades in the same orientation they were in when removed.
- Flip hydraulic lines going into the hydraulic motor if you wish to use the blades opposing edges.
- You MUST reinstall the bushing prior to re-bolting the bushing. DO NOT REPLACE with any other hardware!
- We recommend changing the bushing and bolts each time the blades are replaced.

NOTICE

Blades must be installed as a set to ensure proper balance of the blade holder. Improper balance will cause vibrations that could result in component failure.

4.10 BLADE INSTALLATION

BLADE INSTALLATION PROCEDURE

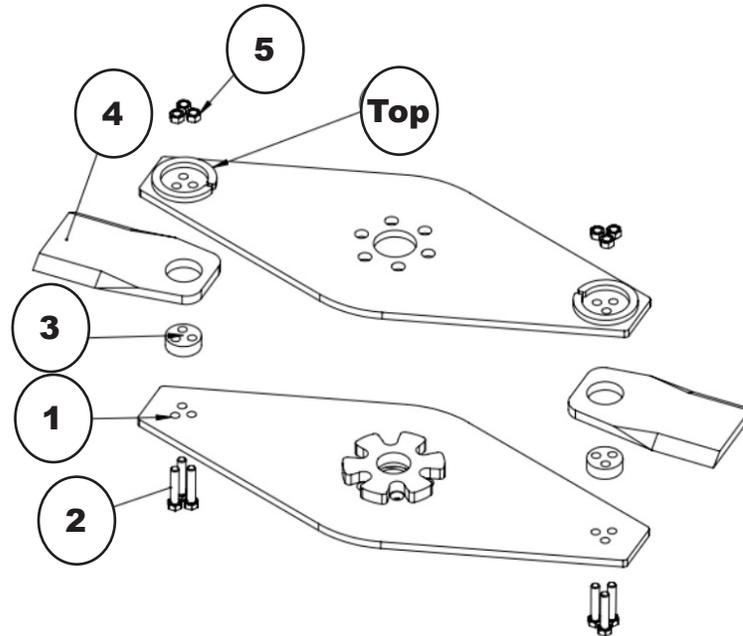
1. Line up the blade parts as demonstrated on the next page.
2. With the Bottom Weldment lying flat on a secure surface as shown on the following page, insert the three (3) bolts on each end from the bottom up.
3. Add your blade bushing.
4. Place your blades in the line of assembly as shown.
5. Place the top weldment on top of the assembly line-up and make sure the bolts are lined up accordingly.

4.10 BLADE INSTALLATION CONT.

NOTICE

The blade bolt threads must extend beyond the nut, with the nut seated flush in the recessed hole.

6. Apply Loctite 635 or equivalent to the end of each bolt and finger tighten the six nuts on the ends of the bolts.
7. Torque the blade bolt to the value shown in the torque table on page 25 of this manual.



4.11 SHEAR BOLT REPLACEMENT

Any motor coupled to a gearbox with a double chain and sprockets will require a shearbolt.

NOTICE

Only use a Grade 5 Zinc shear bolt as a replacement part. Using a hardened bolt or higher grade may result in damage to the gearbox.

1/2-13 X 3-1/2 HEX C/S GR 5 ZNC



1. Remove the motor cover if applicable.
2. Remove the damaged shear bolt from the gearbox input shaft & sprocket.
3. Align the holes in the input shaft with the gearbox input shaft with the sprocket & insert new shear bolt.
4. Install shear bolt nut and Torque to 75 ft-lbs.

4.11 GEARBOX & BEARING HOUSING MAINTENANCE



Please refer to our “Hydraulic Fluid and Oil Statement” on Page 5 for gear oil or hydraulic fluid instructions.

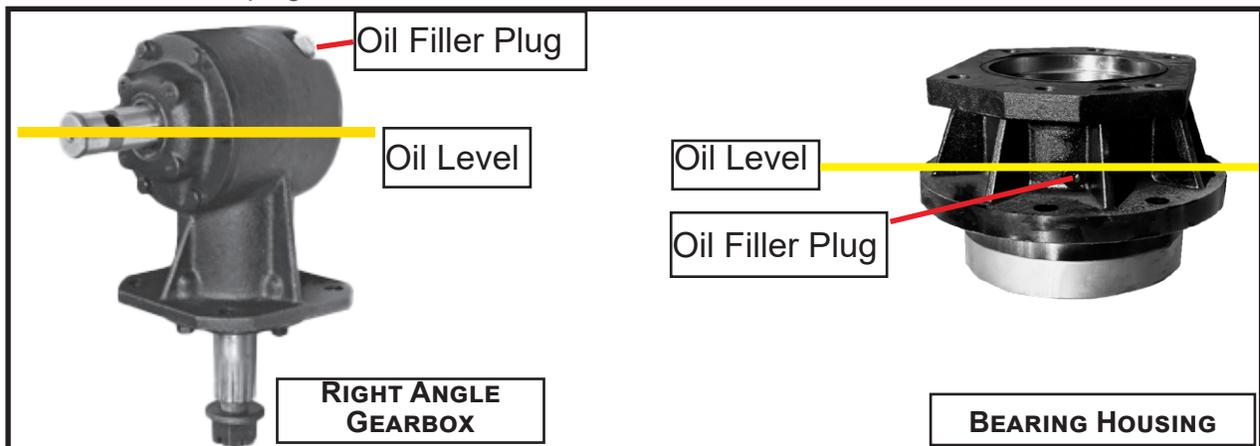


NOTICE

Disassembly for the drive bearing housing or gearbox requires special tools and skills. DO NOT attempt to service drive bearings or gear boxes unless you have the tools and skills to do so.

CHECKING OIL LEVEL

1. Check the oil level before each use. Refill with 85-140 grade gear oil.
2. Check the oil level by removing the oil filler plug. The oil level should be to the bottom of the oil filler plug.



NOTICE

The initial oil should be changed after 50 hours of operation under load. Subsequent oil changes should take place after every 1000 hours of operation. More frequent oil changes may be necessary if operating this cutter in extreme hot conditions.

OIL CHANGE PROCEDURE

1. Remove oil filler plug and insert one end of a discharge hose into the oil filler port and the other end into an approved waste oil container.
2. Using an oil removal pump, remove the old oil from the gear box unit.
3. Refill with 85-140 grade gear oil until oil level is up to approximately the level shown above.
4. Reinstall oil filler plug.

NOTICE

Properly dispose of used oil. Visit www.Earth911.com to search for the nearest used oil recycling center near you.



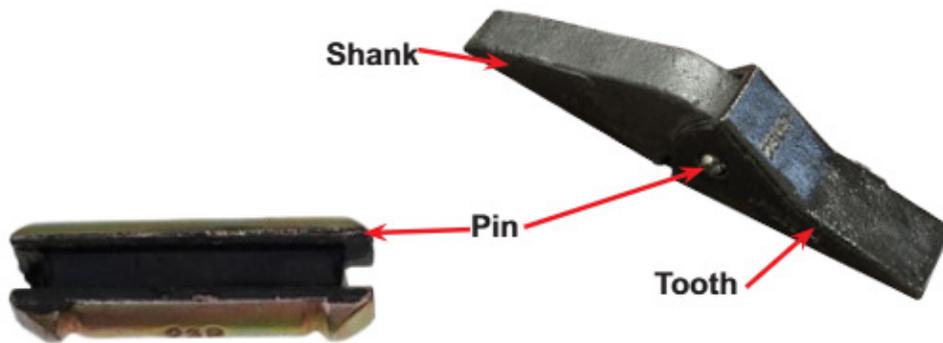
SECTION 5

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Cutter bogs down, loses power, or doesn't get up to full RPM.	<p>Material or debris is "balling" under deck.</p> <p>Bearing failure-(To diagnose, shut off hydraulic flow to cutter then slowly rotate the blade holder assembly & listen for bearing noise.)</p> <p>Cutter speed too slow, travel speed too fast or boom movement too fast.</p> <p>Hydraulic auxiliary flow too slow or damaged hydraulic line.</p>	<p>Remove material or debris from under the deck.</p> <p>See dealer for gearbox or bearing housing service; replace gearbox or bearing housing.</p> <p>Increase engine throttle/RPMs and or reduce boom movement or travel speed.</p> <p>Look for hydraulic leaks or damage, or stuck check valve in H-valve section.Repair or replace.</p>
Excessive Vibration	<p>Missing, loose, or damaged mulching teeth and/or blades.</p> <p>Blades are stuck in blade holder and do not move freely.</p> <p>Blade holder damaged.</p> <p>Bearing failure.</p>	<p>Tighten or replace missing, loose or damaged mulching teeth &/or blades.</p> <p>Check to see if blades are damaged and replace. Clear material causing blade to stick.</p> <p>Repair or replace blade holder.</p> <p>Repair or replace gearbox or bearing housing.</p>
Blades dull too quickly or are breaking too easily.	<p>Blades are receiving excessive shock loads from contacting solid objects (rocks, steel pipes, etc.)</p>	<p>Clear the cutting area of solid objects, raise cutter height to clear exposed rock surfaces.</p>
Hydraulic fluid level goes down during operation.	<p>Hydraulic motor and/or hose leak, or leaks in machine's hydraulic system.</p>	<p>Investigate and repair leaks.</p>
Blades do not rotate when flow is activated.	<p>Hydraulic motor, gearbox or bearing house failure.</p> <p>Hydraulic lines disconnected or not fully connected.</p> <p>Problem with machine hydraulic auxiliary flow.</p> <p>Flow is bypassing through check valve.</p>	<p>Repair or replace necessary components.</p> <p>Connect hydraulic lines to machine couplers. Ensure hoses are locked in place.</p> <p>Contact machine dealer for diagnosis and repair.</p> <p>Check for stuck check valve in hydraulic line H-Valve section or reverse flow direction.</p>

5.0 TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Tooth falls off shank or breaks.	<p>Excessive prying with tooth.</p> <p>Tooth receiving excessive shock loads from contacting solid objects (rocks, steel pipes, etc.)</p> <p>Retaining pin is damaged or not properly installed.</p>	<p>Do not use tooth to pry on solid objects.</p> <p>Clear the area of solid objects or avoid them.</p> <p>Replace damaged pin. make sure pin is fully seated.</p>



! DANGER

ONLY service the brush cutter on stable, even terrain. NEVER park on sloped terrain to avoid being struck & killed or seriously injured by the unexpected rolling or movement of the machine.

SECTION 6

SPECIFICATIONS

MODEL COMPARISON	STANDARD DUTY	TREE REAPER	X-TREME DUTY	SEVERE DUTY
GPM	12-17 GPM 12-29 GPM 17-24 GPM	10-17 GPM 18-25 GPM	12-29 GPM 14-20 GPM 20-26 GPM 24-30 GPM	17-35 GPM 35+ GPM
Operating Weight	Mini-Excavators < 12,000 lbs	< 14,000 lbs	12,000-20,000 lbs operating weight	>14,000 lbs operating weight
Blades/Mulch Teeth (MT)	2 blades	2 blades 3 blades/ 9 MT	2 blades	3 blades / 9 MT
Cut Capacity	Trees up to 2" in diameter	Trees up to 4" in diameter	Trees up to 4" in diameter	Trees up to 7" in diameter
Case Drain	None Required	None Required	None Required	Required
Motor	LSHT Torqmotors (Opt.) Star Piston	Radial Piston	LSHT Torqmotors (Opt.) Star Piston	Bent Axis Piston
Cutting Width	44"	36", 44"	44"	44"
Weight	552, 556, 624 lbs	431, 481 439, 488 lbs	789, 794, 838, 868 lbs	890, 920 lbs
Gearbox/ Bearing Housing	RC51 P70/MDH65/BC65	P70	RC100 P70/MDH65/BC65	BC75
Options	Debris Chain		Optional Knee Debris Chain	



SECTION 7

PARTS INFORMATION

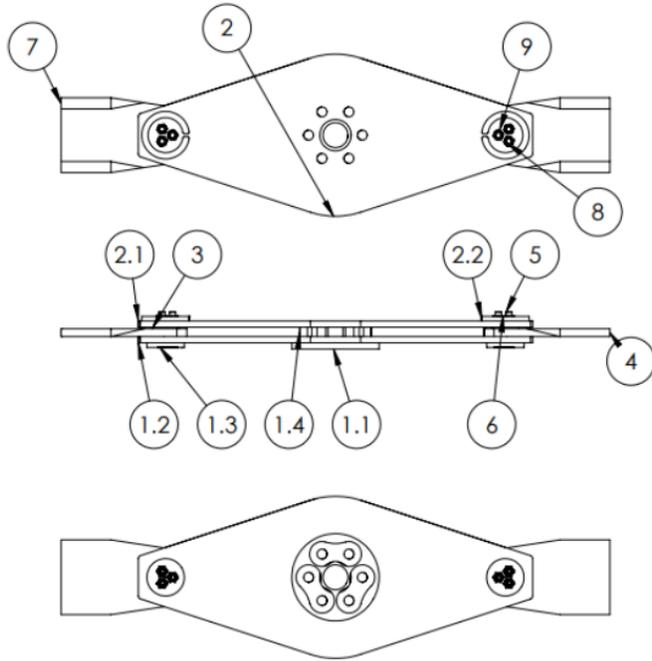
Factory OEM parts specifically designed for your attachment are readily available.

For hassle free service and to ensure you receive the correct parts for your attachment, please provide your dealer with the following information:

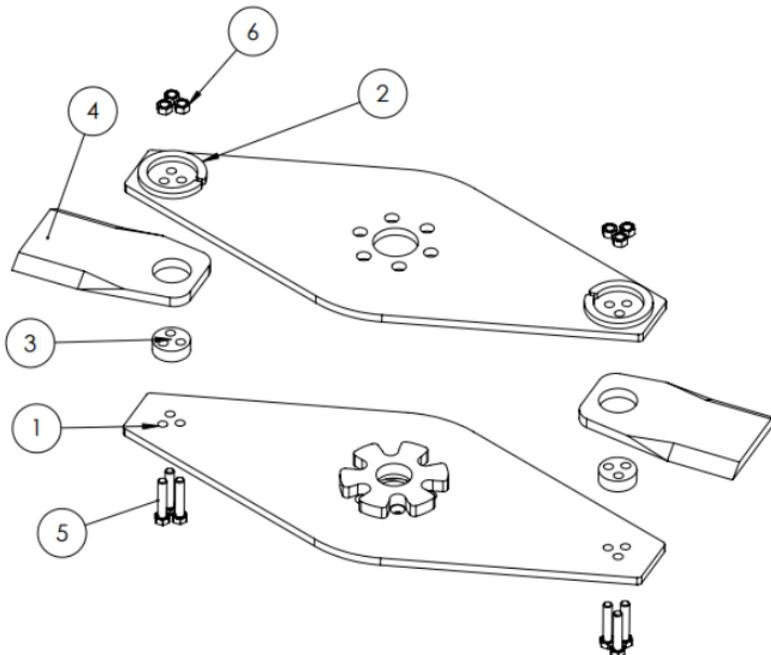
Model Number	
Serial Number	
GPM Requirements	
Date of Owners Manual (Bottom Left Corner of Cover Page)	
Parts Diagram Page Number	
Part Description	
Reference #	
Quantity Desired	
Ship To Information	
Bill To / Payment Information	

7.1 THREE BOLT BLADE RETENTION SYSTEM

Three Bolt Blade Retention System



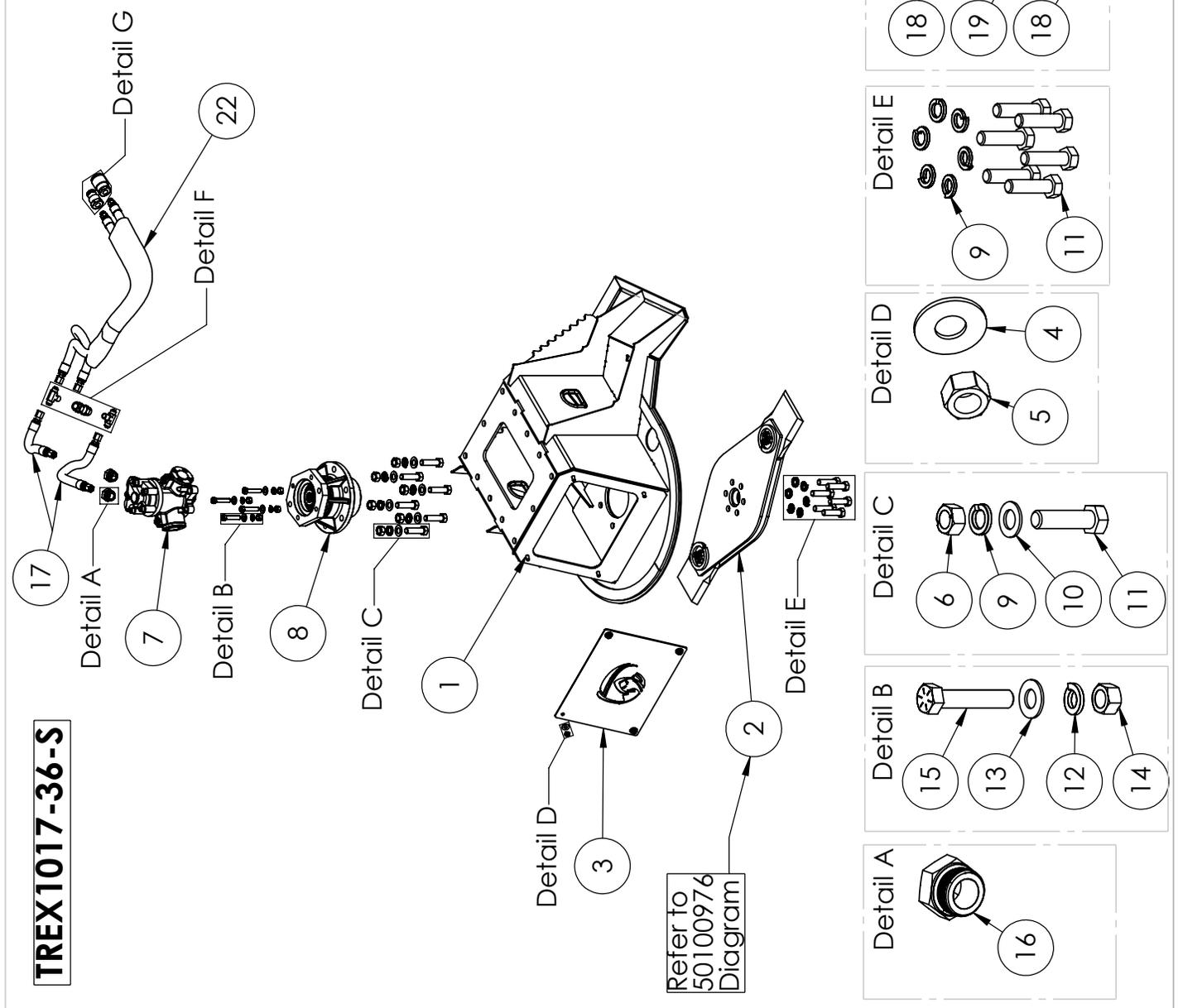
ITEM NO.	PART NUMBER	QTY.
1	SBC-2BLD-44-Bottom-Weldment	1
1.1	XBC-BoltGuard	1
1.2	SBC-BladeHolder-44-GR50	1
1.3	SBC-BoltHeadProtector	2
1.4	XBC-BladHldr-Spacr	1
2	SBC-2BLD-44-Top-Weldment	1
2.1	SBC-BladeHolder-44-GR50	1
2.2	TRBC-NutProtector	2
3	-PI-REAPERBUSHING	2
4	20100056	2
5	50F225HCS9Y	6
6	50FNSTOZ	6



ITEM NO.	PART NUMBER	QTY.
1	SBC-2BLD-44-Bottom-Weldment	1
2	SBC-2BLD-44-Top-Weldment	1
3	-PI-REAPERBUSHING	2
4	20100056	2
5	50F225HCS9Y	6
6	50FNSTOZ	6

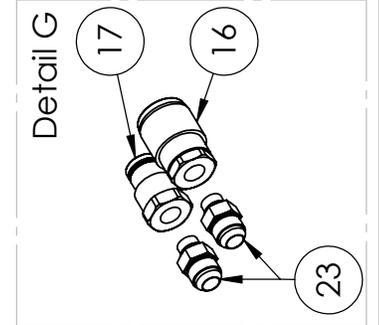
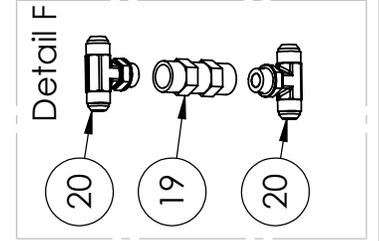
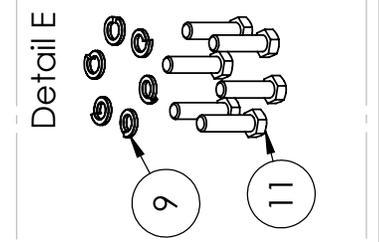
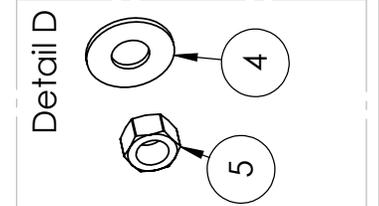
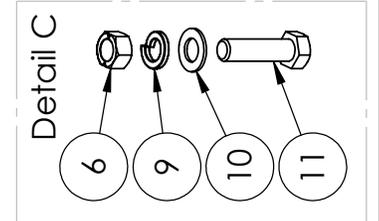
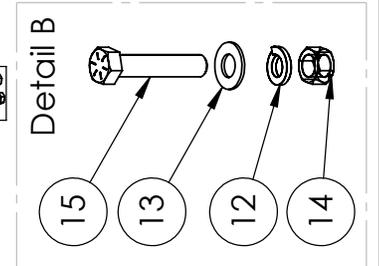
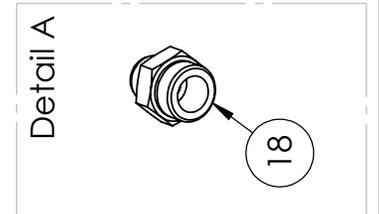
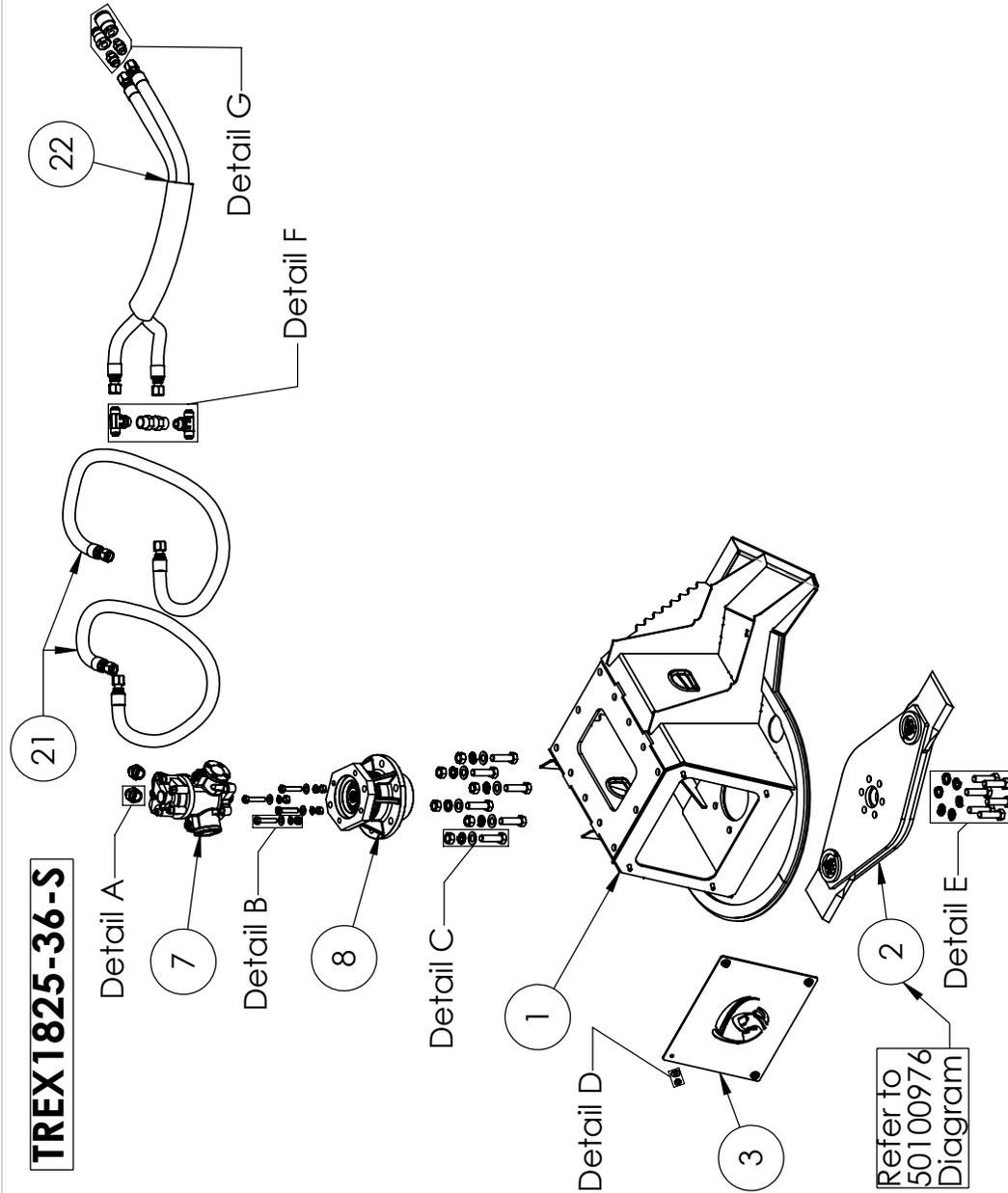
7.2.1 36" 1017 TREE REAPER EXCAVATOR PARTS DIAGRAMS

ITEM	Part #	DESCRIPTION	QTY.
1	81500056	Deck Weldment	1
2	50100976	36" Blade Holder	1
3	60100046	Bolt on Cover	1
4	11200146	3/8" USS Flat Washer GR 8	4
5	11200816	3/8"-16 Hex FIN Nut	4
6	11200216	3/4"-10 Lock Nut GR C	6
7	40100306	Motor	1
8	40200046	Gearbox	1
9	11200226	3/4" Split Lock Washer GR 8	12
10	11200236	3/4" SAE Flat Washer GR 8	6
11	11200206	3/4"-10 X 2 3/4" Hex Bolt GR 8	12
12	11200176	1/2" Split Lock Washer GR 8	4
13	11200306	1/2" SAE Flat Washer GR 8 Z/YEL	4
14	11200446	1/2"-13 Lock Nut GR C	4
15	11201256	1/2"-13 X 2 1/2" Hex Bolt GR 8	4
16	41000526	1/2" x 1" Motor Fitting	2
17	51900036	1/2" D x 11" L Hose	2
18	41000216	1/2" Tee Fitting	2
19	40600066	Check Valve	1
20	41000116	1/2" Flat Coupler FE - Changeable	1
21	41000106	1/2" Flat Coupler M - Changeable	1
22	53000106	1/2" D X 6' 11" Machine Hose Kit	1



7.2.2 36" 1825 TREE REAPER EXCAVATOR PARTS DIAGRAMS

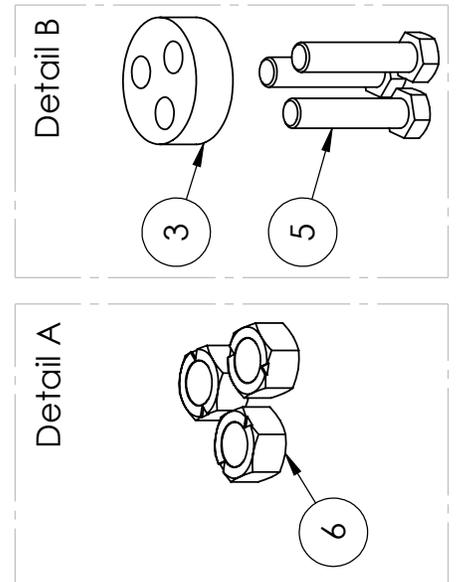
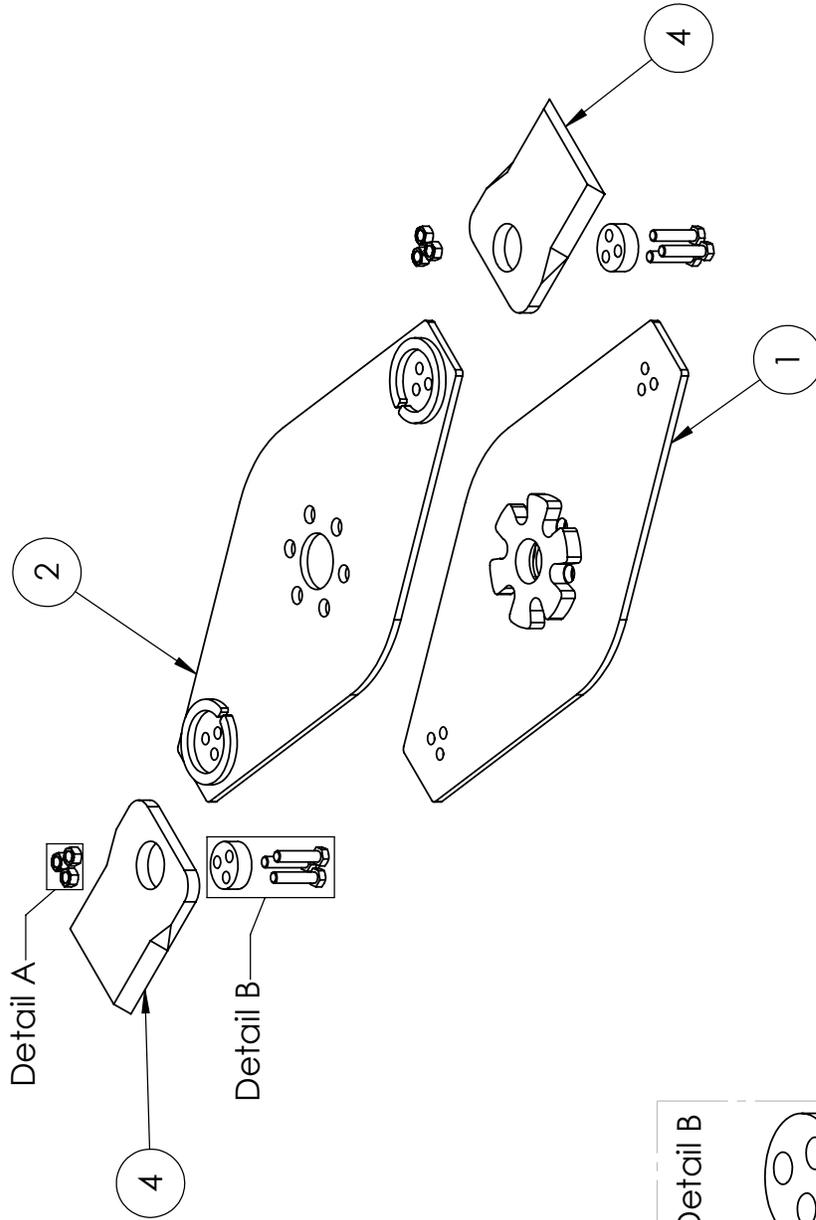
ITEM	Part #	DESCRIPTION	QTY.
1	81500056	Deck Weldment	1
2	50100976	36" Blade Holder	1
3	60100046	Bolt on Cover	1
4	11200146	3/8" USS Flat Washer GR 8	4
5	11200816	3/8"-16 Hex FIN Nut	4
6	11200216	3/4"-10 Lock Nut GR C	6
7	40100296	Motor	1
8	40200046	Gearbox	1
9	11200226	3/4" Split Lock Washer GR 8	12
10	11200236	3/4" SAE Flat Washer GR 8	6
11	11200206	3/4"-10 X 2 3/4" Hex Bolt GR 8	12
12	11200176	1/2" Split Lock Washer GR 8	4
13	11200306	1/2" SAE Flat Washer GR 8 Z/YEL	4
14	11200446	1/2"-13 Lock Nut GR C	4
15	11201256	1/2"-13 X 2 1/2" Hex Bolt GR 8	4
16	41000116	1/2" Flat Coupler FE - Changeable	1
17	41000106	1/2" Flat Coupler M - Changeable	1
18	41000026	3/4" X 1" Motor Fitting	2
19	40600046	Check Valve	1
20	41000086	3/4" Tee Fitting	2
21	52100066	3/4" D X 54" L Hose	2
22	53200056	3/4" D X 7" L Machine Hose Kit	1
23	41000096	3/4" - 1/2" Straight Fitting	2



7.2.3 36" TREE REAPER EXCAVATOR BLADE PARTS DIAGRAMS

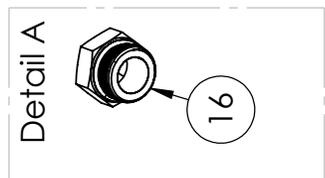
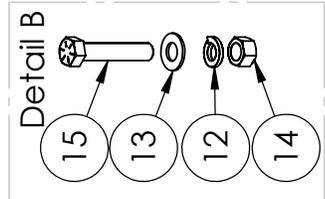
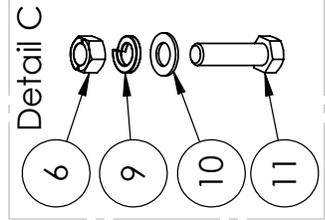
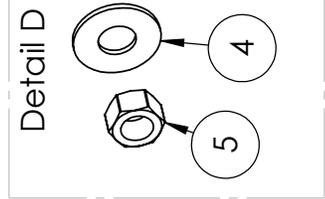
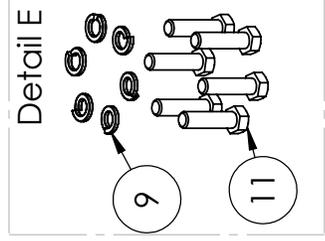
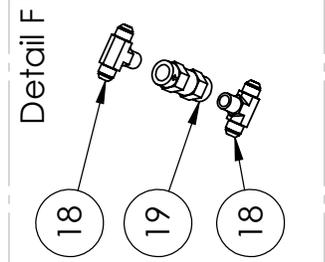
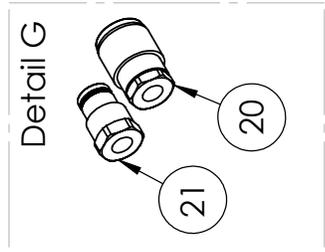
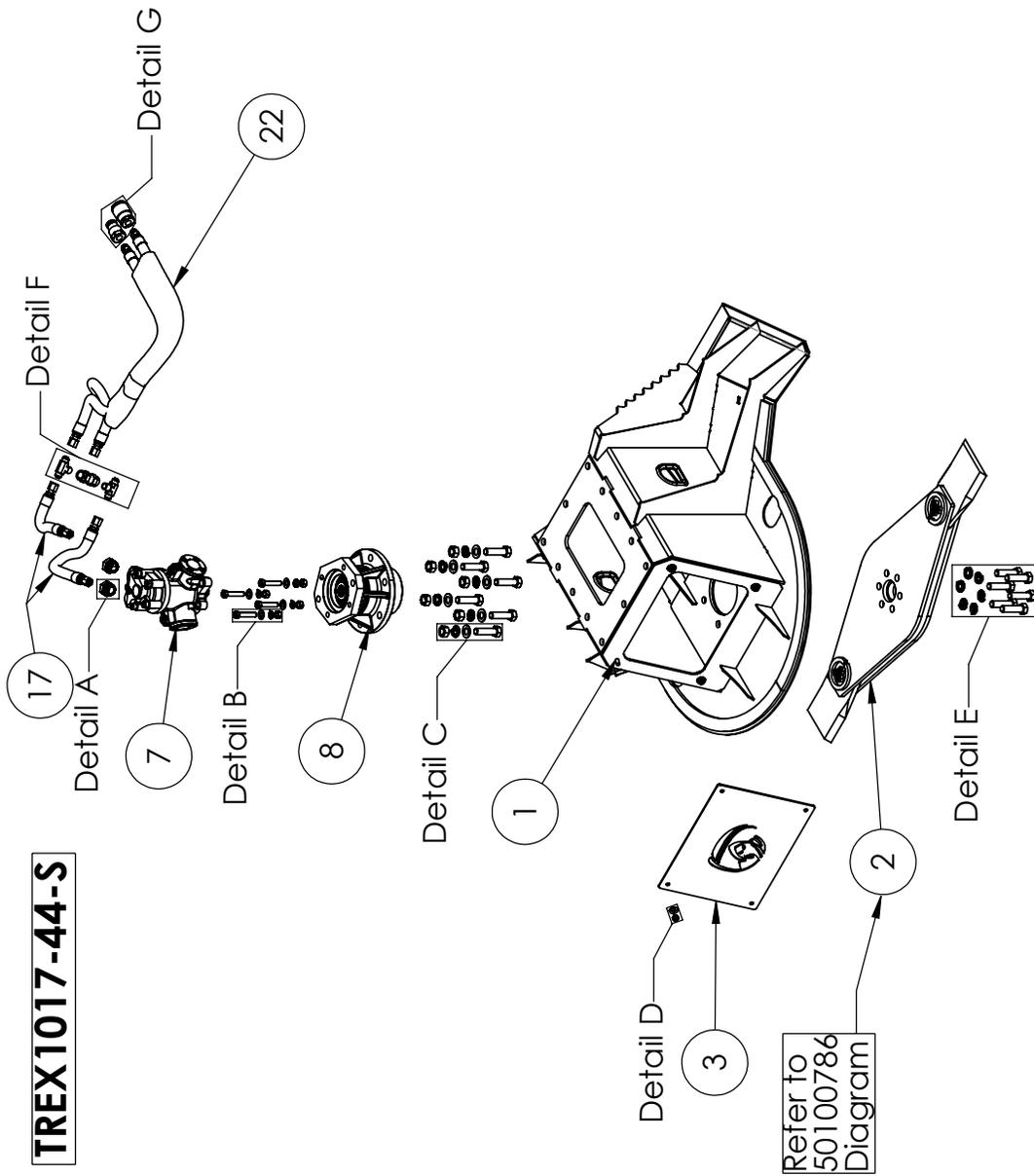
50100976

ITEM	Part #	DESCRIPTION	QTY.
1	50100986	36" Bottom Blade Holder Weldment	1
2	50100996	36" Top Blade Holder Weldment	1
3	10400046	Blade Bushing	2
4	50101006	Blade	2
5	11200286	1/2"-20 x 2 1/4" Hex Bolt L9	6
6	11200296	1/2"-20 Lock Nut GRC	6



7.3.1 44" 1017 TREE REAPER EXCAVATOR PARTS DIAGRAM

ITEM	Part #	DESCRIPTION	QTY.
1	81500066	Deck Weldment	1
2	50100786	Blade Holder	1
3	60100046	Bolt on Cover	1
4	11200146	3/8" USS Flat Washer GR 8	4
5	11200816	3/8"-16 Hex FIN Nut	4
6	11200216	3/4"-10 Lock Nut GR C	6
7	40100306	Motor	1
8	40200046	Gearbox	1
9	11200226	3/4" Split Lock Washer GR 8	12
10	11200236	3/4" SAE Flat Washer GR 8	6
11	11200206	3/4"-10 X 2 3/4" Hex Bolt GR 8	12
12	11200176	1/2" Split Lock Washer GR 8	4
13	11200306	1/2" SAE Flat Washer GR 8 Z/YEL	4
14	11200446	1/2"-13 Lock Nut GR C	4
15	11201256	1/2"-13 X 2 1/2" Hex Bolt GR 8	4
16	41000526	1/2" x 1" Motor Fitting	2
17	51900036	1/2" D x 11" L Hose	2
18	41000216	1/2" Tee Fitting	2
19	40600066	Check Valve	1
20	41000116	1/2" Flat Coupler FE - Changeable	1
21	41000106	1/2" Flat Coupler M - Changeable	1
22	53000106	1/2" D X 6' 11" Machine Hose Kit	1

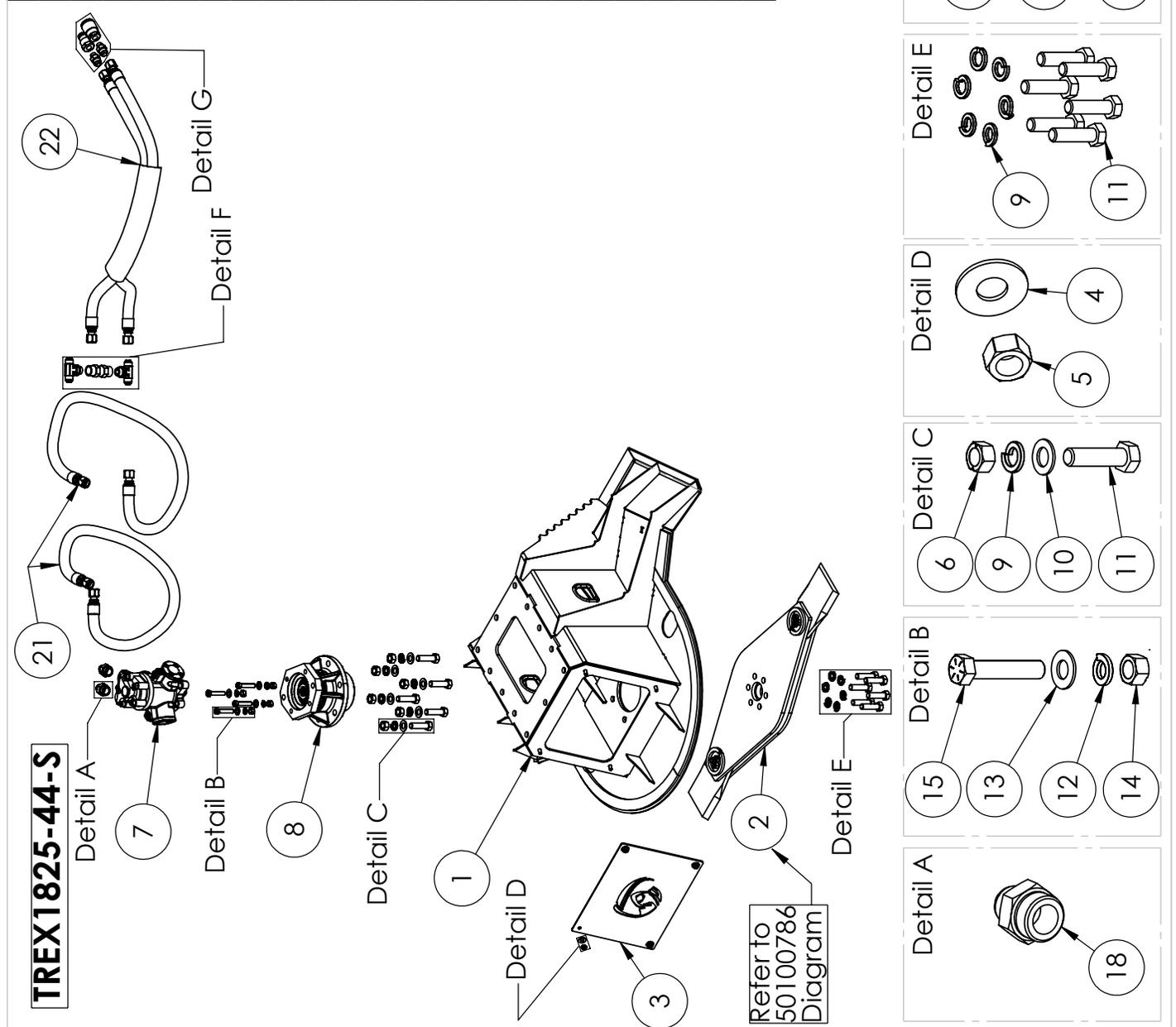


TREX1017-44-S

Refer to
50100786
Diagram

7.3.2 44" 1825 TREE REAPER EXCAVATOR PARTS DIAGRAM

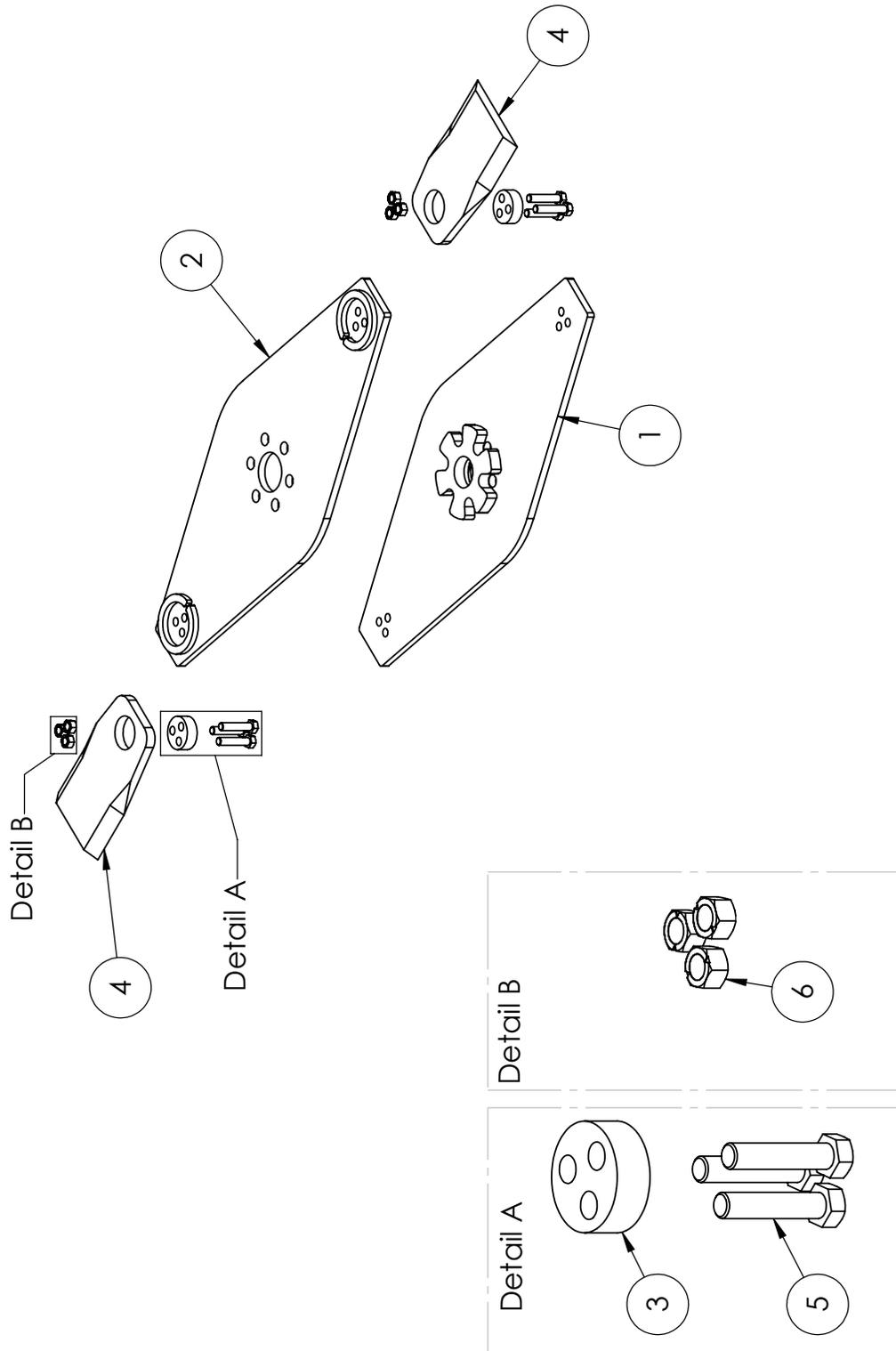
ITEM	Part #	DESCRIPTION	QTY.
1	81500066	Deck Weldment	1
2	50100786	Blade Holder	1
3	60100046	Bolt on Cover	1
4	11200146	3/8" USS Flat Washer GR 8	4
5	11200816	3/8"-16 Hex FIN Nut	4
6	11200216	3/4"-10 Lock Nut GR C	6
7	40100296	Motor	1
8	40200046	Gearbox	1
9	11200226	3/4" Split Lock Washer GR 8	12
10	11200236	3/4" SAE Flat Washer GR 8	6
11	11200206	3/4"-10 X 2 3/4" Hex Bolt GR 8	12
12	11200176	1/2" Split Lock Washer GR 8	4
13	11200306	1/2" SAE Flat Washer GR 8 Z/YEL	4
14	11200446	1/2"-13 Lock Nut GR C	4
15	11201256	1/2"-13 X 2 1/2" Hex Bolt GR 8	4
16	41000116	1/2" Flat Coupler FE - Changeable	1
17	41000106	1/2" Flat Coupler M - Changeable	1
18	41000026	3/4" X 1" Motor Fitting	2
19	40600046	Check Valve	1
20	41000086	3/4" Tee Fitting	2
21	52100066	3/4" D X 54" L Hose	2
22	53200056	3/4" D X 7" L Machine Hose Kit	1
23	41000096	3/4" - 1/2" Straight Fitting	2



7.3.3 44" TREE REAPER EXCAVATOR BLADE PARTS DIAGRAM

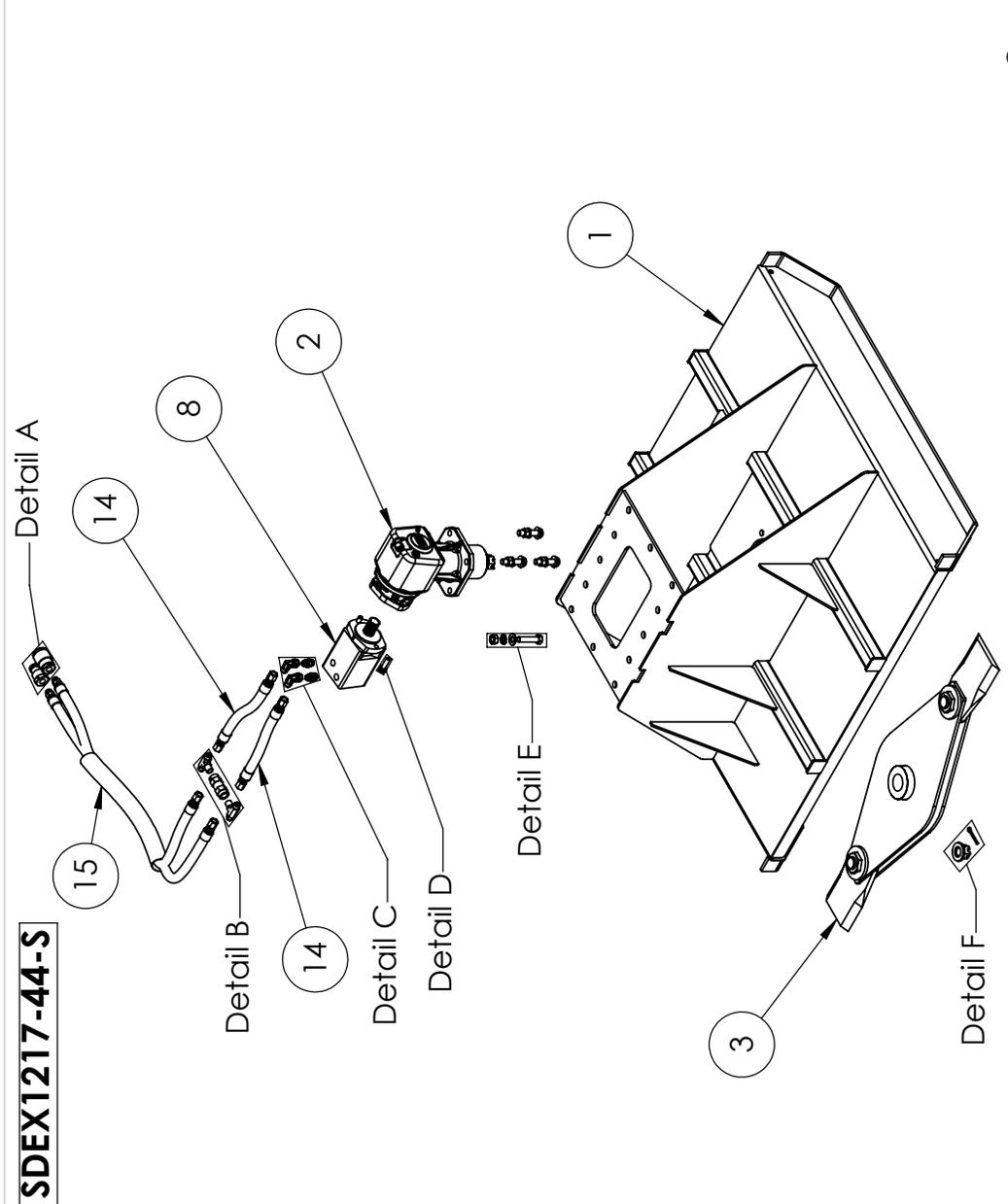
50100786

ITEM	Part #	DESCRIPTION	QTY.
1	50100796	Bottom Weldment	1
2	50100806	Top Weldment	1
3	10400046	Blade Bushing	2
4	20100076	Blade	2
5	11200286	1/2"-20 x 2 1/4" Hex Bolt L9	6
6	11200296	1/2"-20 Lock Nut GRC	6

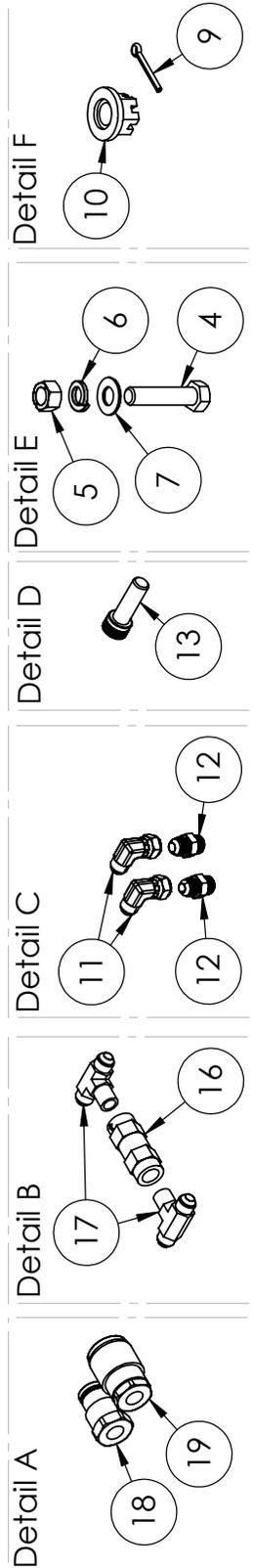


7.4 44" STANDARD EXCAVATOR CUTTER 14-17 GPM

ITEM	Part #	DESCRIPTION	QTY.
1	81500026	Deck Weldment	1
2	40200086	Gearbox	1
3	50100866	Blade Holder	1
4	11200976	5/8"-11 X 2 3/4" Hex Bolt GR 8	4
5	11200366	5/8"-11 Lock Nut GR C	4
6	11200336	5/8" Split Lock Washer GR 8	4
7	11200196	5/8" SAE Flat Washer GR 8	4
8	40100236	Motor	1
9	11201006	Cotter Pin	1
10	11201046	Castle Nut	1
11	41000306	3/4" 90° Fitting	2
12	41000466	1/2" to 1/2" Straight Fitting	2
13	11200956	1/2"-13 X 1 1/2" Socket Bolt	2
14	51900036	1/2" D X 11" L Hose	2
15	53000076	1/2" D X 83" L Machine Hose Kit	1
16	40600066	Check Valve	1
17	41000216	1/2" Tee Fitting	2
18	41000106	1/2" Flat Coupler M - Changeable	1
19	41000116	1/2" Flat Coupler FE - Changeable	1

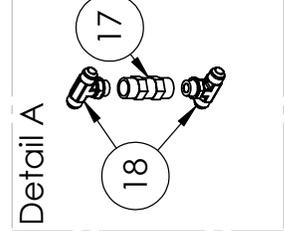
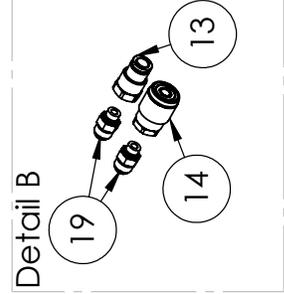
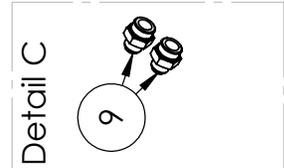
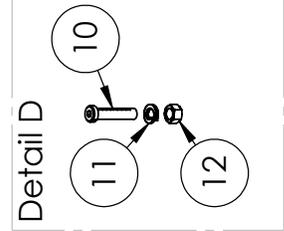
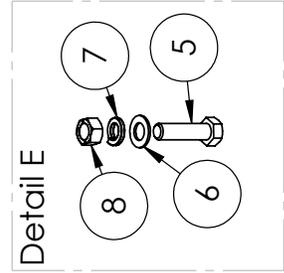
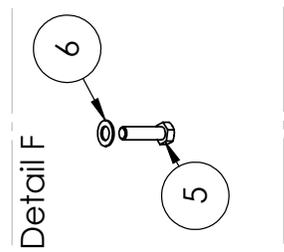
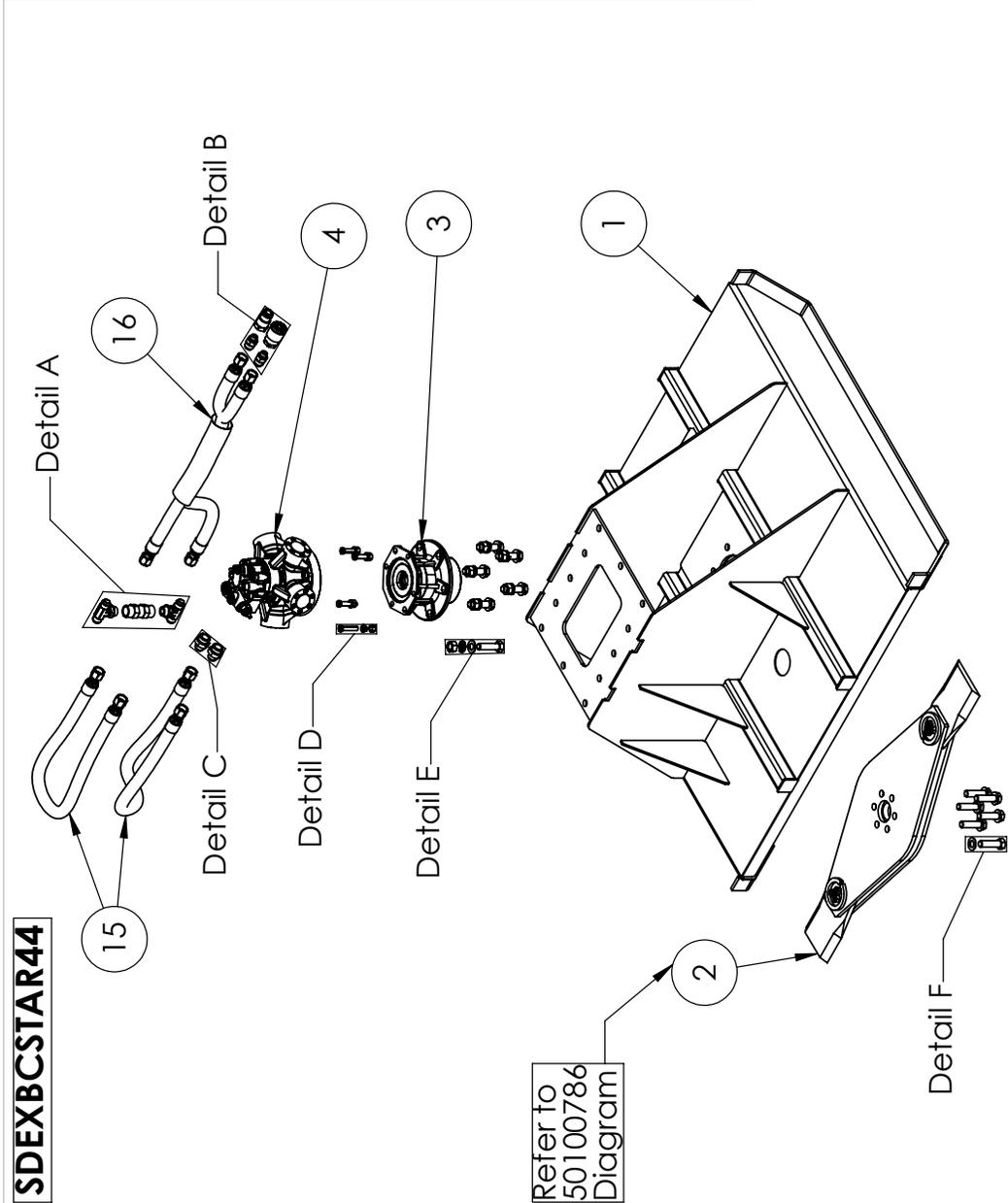


STANDARD EXCAVATOR CUTTER 12-17 GPM 44"



7.5 44" STANDARD EXCAVATOR CUTTER PISTON STAR MOTOR

ITEM	Part #	DESCRIPTION	QTY.
1	81500016	Deck Weldment	1
2	50100786	Blade Holder	1
3	40200016	Gearbox	1
4	40100106	Motor	1
5	11200206	3/4"-10 X 2 3/4" Hex Bolt GR 8	12
6	11200236	3/4" SAE Flat Washer GR 8	12
7	11200226	3/4" Split Lock Washer GR 8	6
8	11200216	3/4"-10 Lock Nut GR C	6
9	41000026	3/4" X 1" Motor Fitting	2
10	11201306	1/2-13 X 2 1/4" L Socket Head Bolt	4
11	11200176	1/2" Split Lock Washer GR 8	4
12	11200446	1/2"-13 Lock Nut GR C	4
13	41000106	1/2" Flat Coupler M - Changeable	1
14	41000116	1/2" Flat Coupler FE - Changeable	1
15	52100056	3/4" D X 16 1/4" L Hose	2
16	53200056	3/4" D X 7' L Machine Hose Kit	1
17	40600046	Check Valve	1
18	41000086	3/4" Tee Fitting	2
19	41000096	3/4" - 1/2" Straight Fitting	2

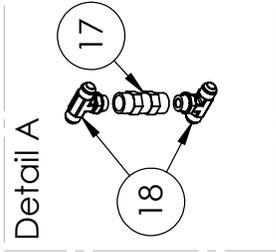
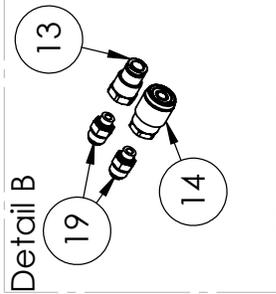
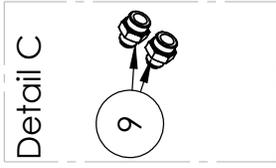
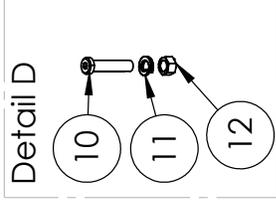
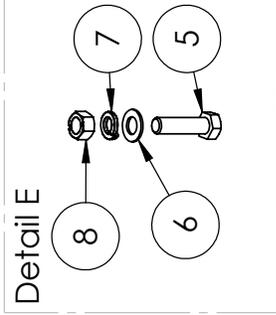
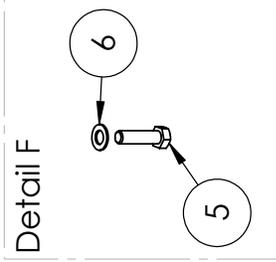
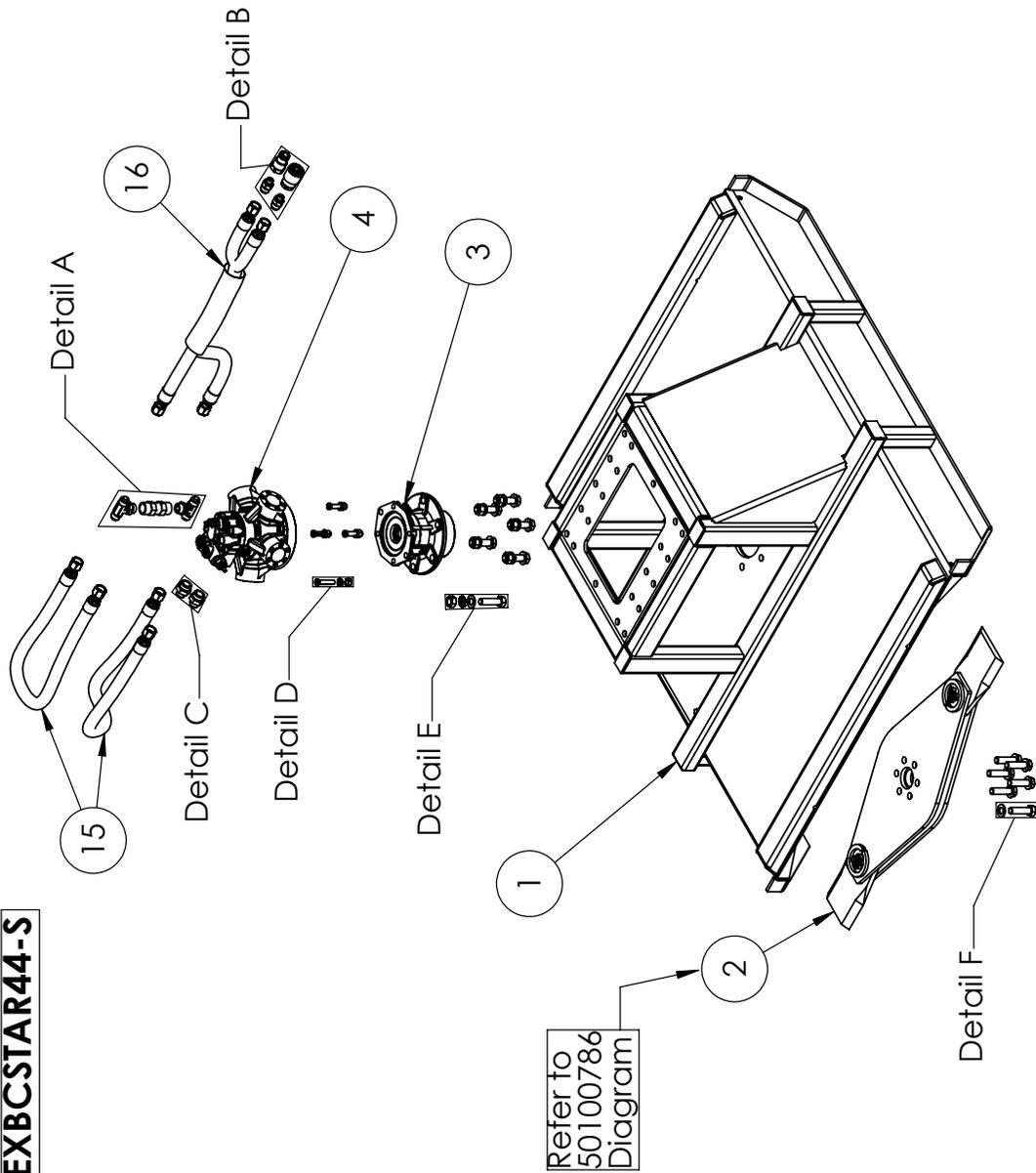


SDEXBCSTAR44

Refer to
50100786
Diagram

7.6 44" X-TREME EXCAVATOR CUTTER PISTON STAR MOTOR

ITEM	Part #	DESCRIPTION	QTY.
1	81500036	Deck Weldment	1
2	50100786	Blade Holder	1
3	40200016	Gearbox	1
4	40100106	Motor	1
5	11200206	3/4"-10 X 2 3/4" Hex Bolt GR 8	12
6	11200236	3/4" SAE Flat Washer GR 8	12
7	11200226	3/4" Split Lock Washer GR 8	6
8	11200216	3/4"-10 Lock Nut GR C	6
9	41000026	3/4" X 1" Motor Fitting	2
10	11201306	1/2-13 X 2 1/4" L Socket Head Bolt	4
11	11200176	1/2" Split Lock Washer GR 8	4
12	11200446	1/2"-13 Lock Nut GR C	4
13	41000106	1/2" Flat Coupler M - Changeable	1
14	41000116	1/2" Flat Coupler FE - Changeable	1
15	52100056	3/4" D X 16 1/4" L Hose	2
16	53200056	3/4" D X 7" L Machine Hose Kit	1
17	40600046	Check Valve	1
18	41000086	3/4" Tee Fitting	2
19	41000096	3/4" - 1/2" Straight Fitting	2

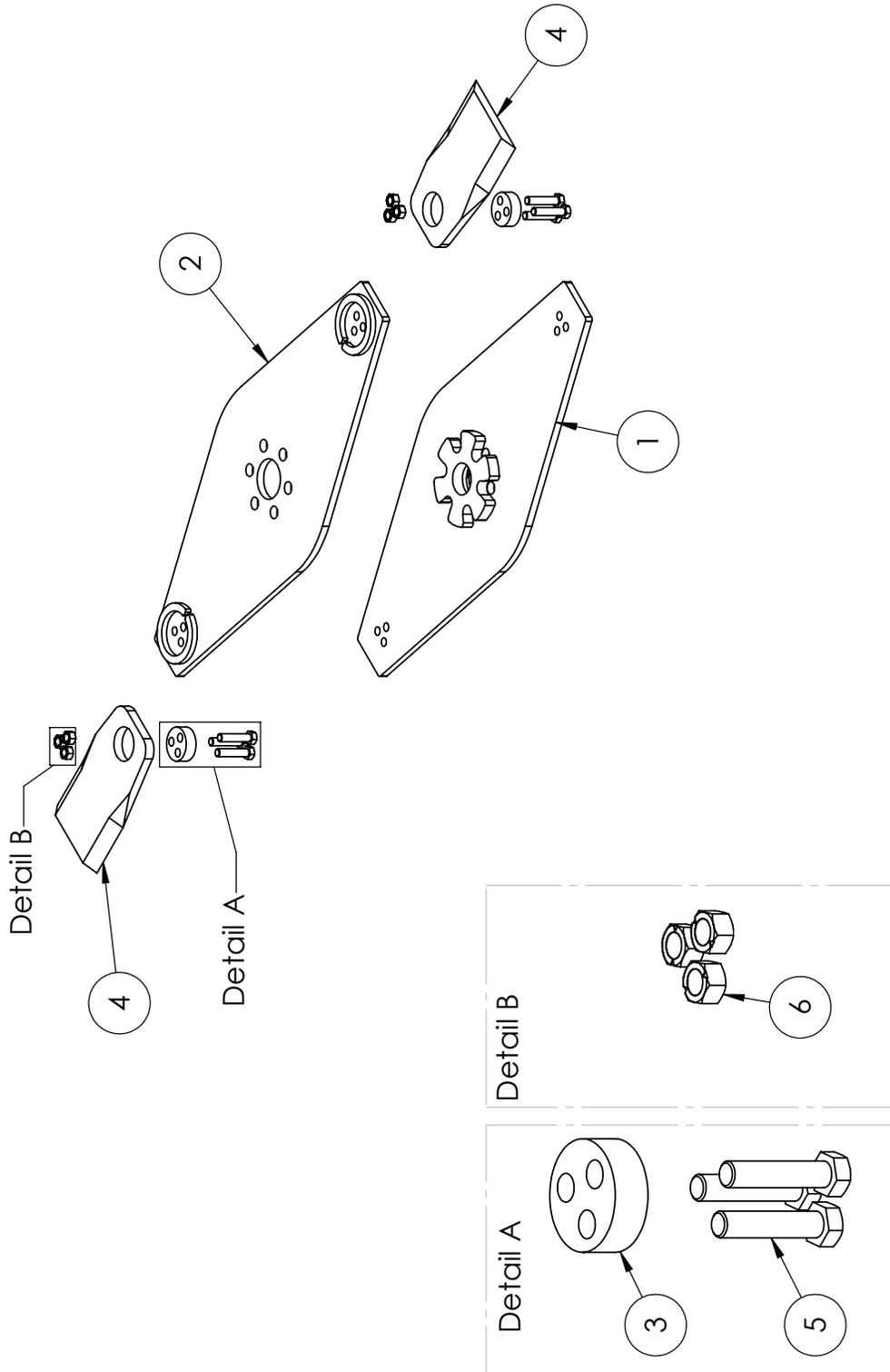


7.6.1 44" STANDARD AND X-TREME EXCAVATOR CUTTER STAR MOTOR

BLADE ASSEMBLY

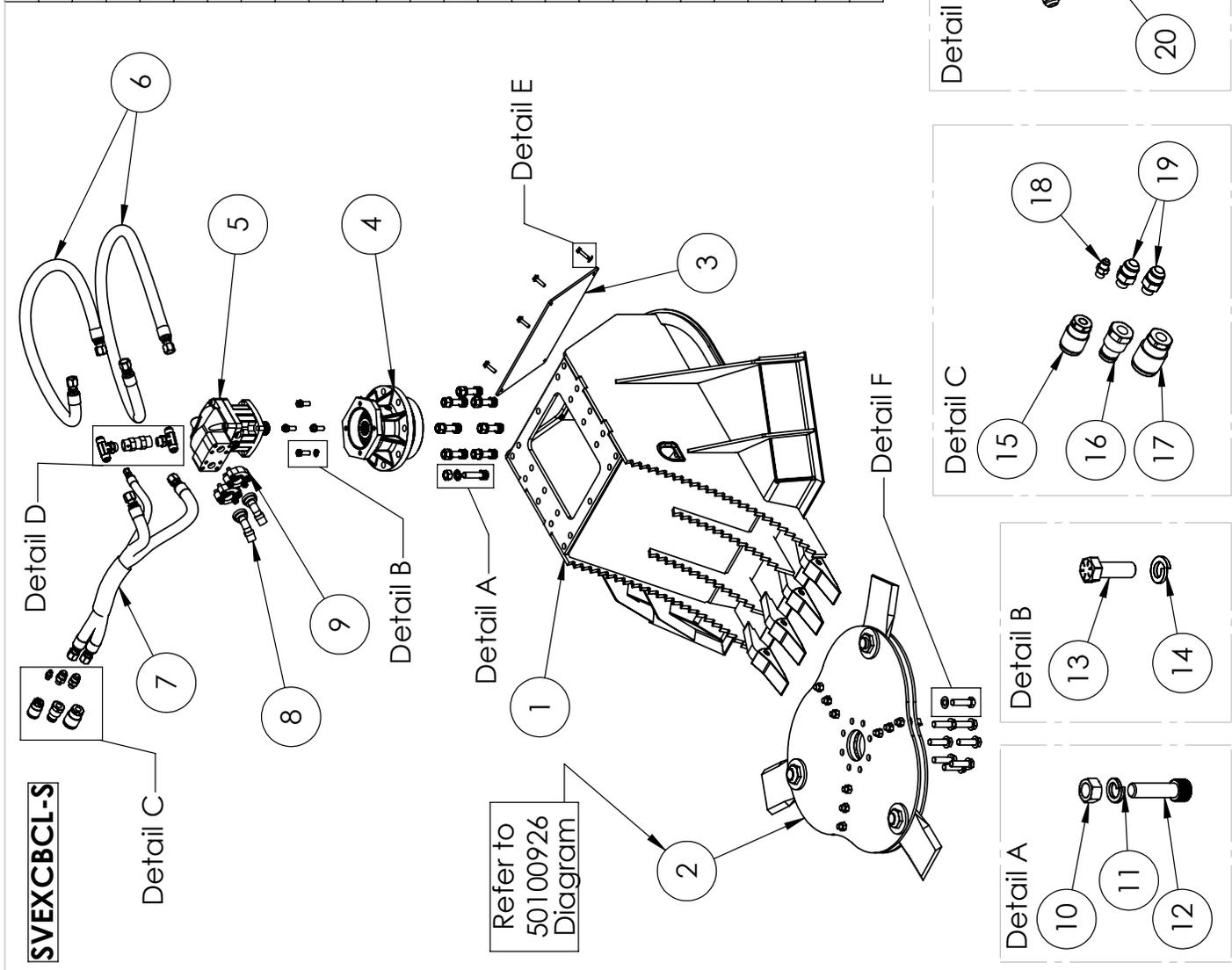
50100786

ITEM	Part #	DESCRIPTION	QTY.
1	50100796	Bottom Weldment	1
2	50100806	Top Weldment	1
3	10400046	Blade Bushing	2
4	20100076	Blade	2
5	11200286	1/2"-20 x 2 1/4" Hex Bolt L9	6
6	11200296	1/2"-20 Lock Nut GR C	6



7.7 SEVERE EXCAVATOR PARTS DIAGRAM

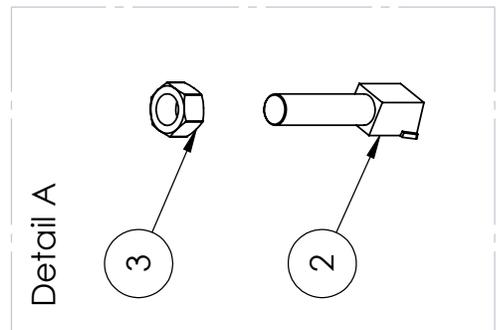
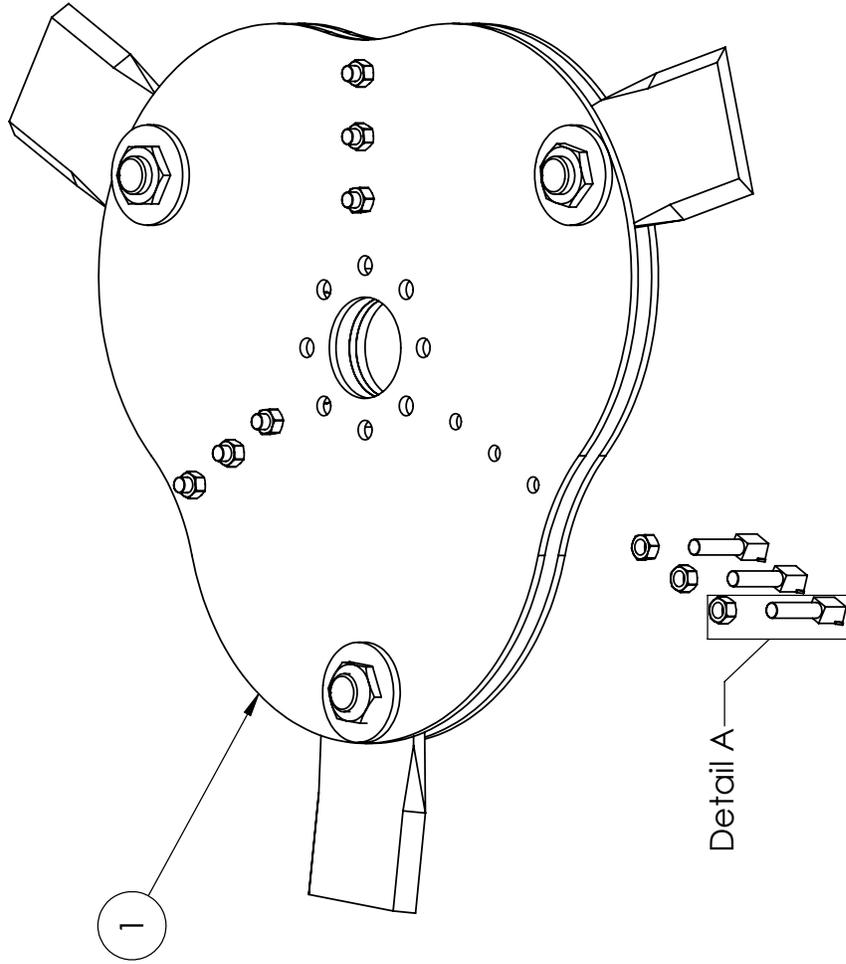
ITEM	Part #	DESCRIPTION	QTY.
1	81500046	Deck Weldment	1
2	50100926	Blade Holder (Mulching Teeth)	1
3	90200046	Bolt On Motor Cover	1
4	40200106	Gearbox	1
5	40100116	Motor	1
6	52100066	3/4" D X 54" L Hose	2
7	83200016	3/4" D X 7' L Machine Hose Kit	1
8	41000336	Motor Fitting	2
9	41000346	Motor Flange Kit	2
10	11200216	3/4"-10 Lock Nut GR C	8
11	11200226	3/4" Split Lock Washer GR 8	8
12	11200716	3/4" X 2 3/4" Socket Head Coarse Bolt	8
13	11201086	1/2"-13 X 1 1/2" Hex Bolt GR 8	4
14	11200176	1/2" Split Lock Washer GR 8	4
15	41000126	3/8" Flat Coupler FE - Changeable	1
16	41000106	1/2" Flat Coupler M - Changeable	1
17	41000116	1/2" Flat Coupler FE - Changeable	1
18	41000136	3/8" to 3/8" Straight Fitting	1
19	41000096	3/4" - 1/2" Straight Fitting	2
20	40600046	Check Valve	1
21	41000086	3/4" Tee Fitting	2
22	11200646	3/8"-16 X 1 1/2" Hex Bolt GR 8	4
23	11201356	3/8" SAE Flat Washer	4
24	11200576	3/4"-16 X 2 3/4" Hex Bolt GR 8	8
25	11200236	3/4" SAE Flat Washer GR 8	8



7.7.1 SEVERE EXCAVATOR BLADES PARTS DIAGRAM

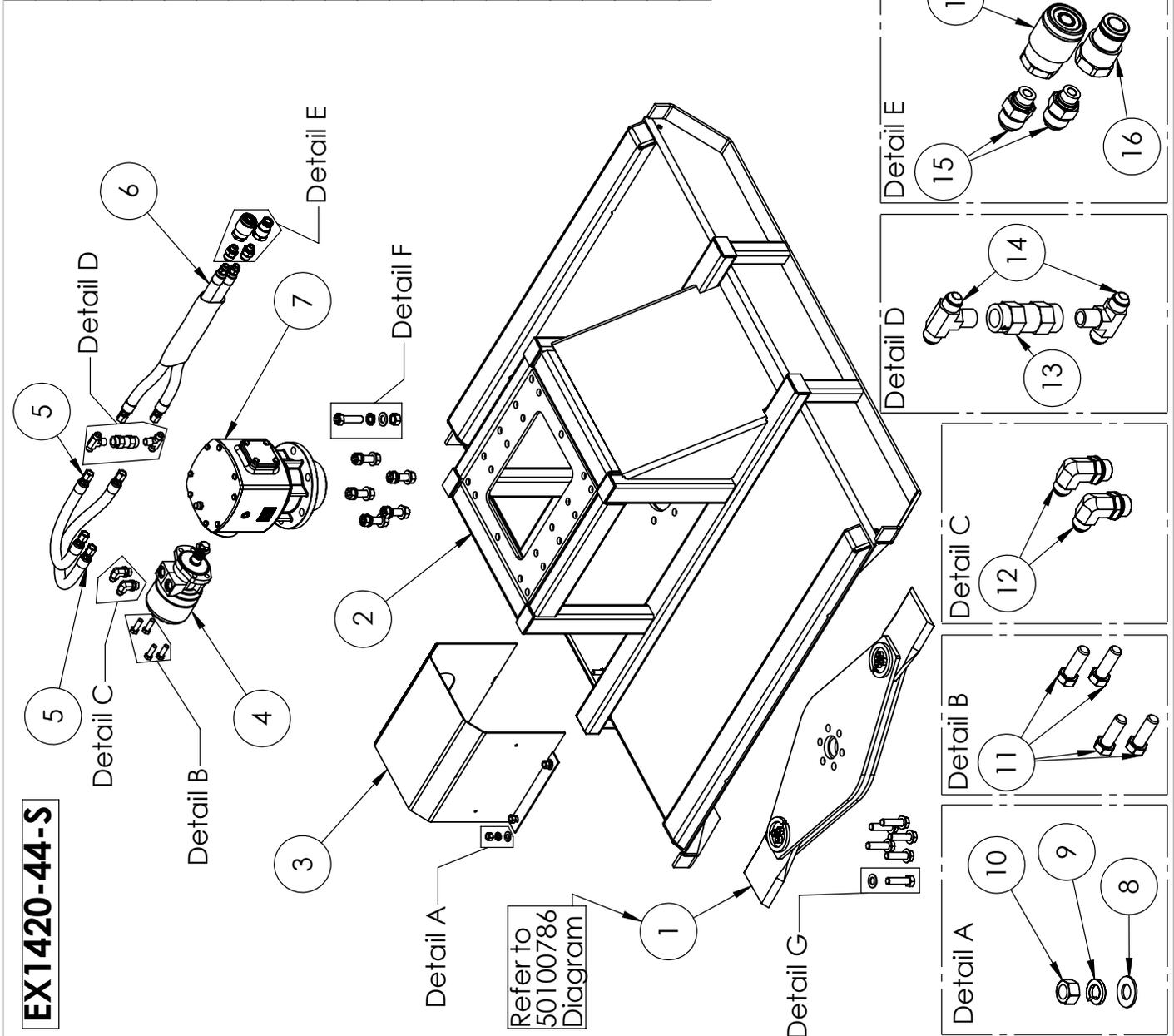
50100926

ITEM	Part #	PART NUMBER	DESCRIPTION	QTY.
1	50100926	SVEXBC-3BlDMT-Subassembly	Blade Holder (No Mulching Teeth)	1
2	10500016	CID8000	Mulching Teeth	9
3	11200736	62FNFH8Y	5/8"-18 HEX FIN NUT GR 8	9



7.8 44" X-TREME EXCAVATOR PARTS DIAGRAM

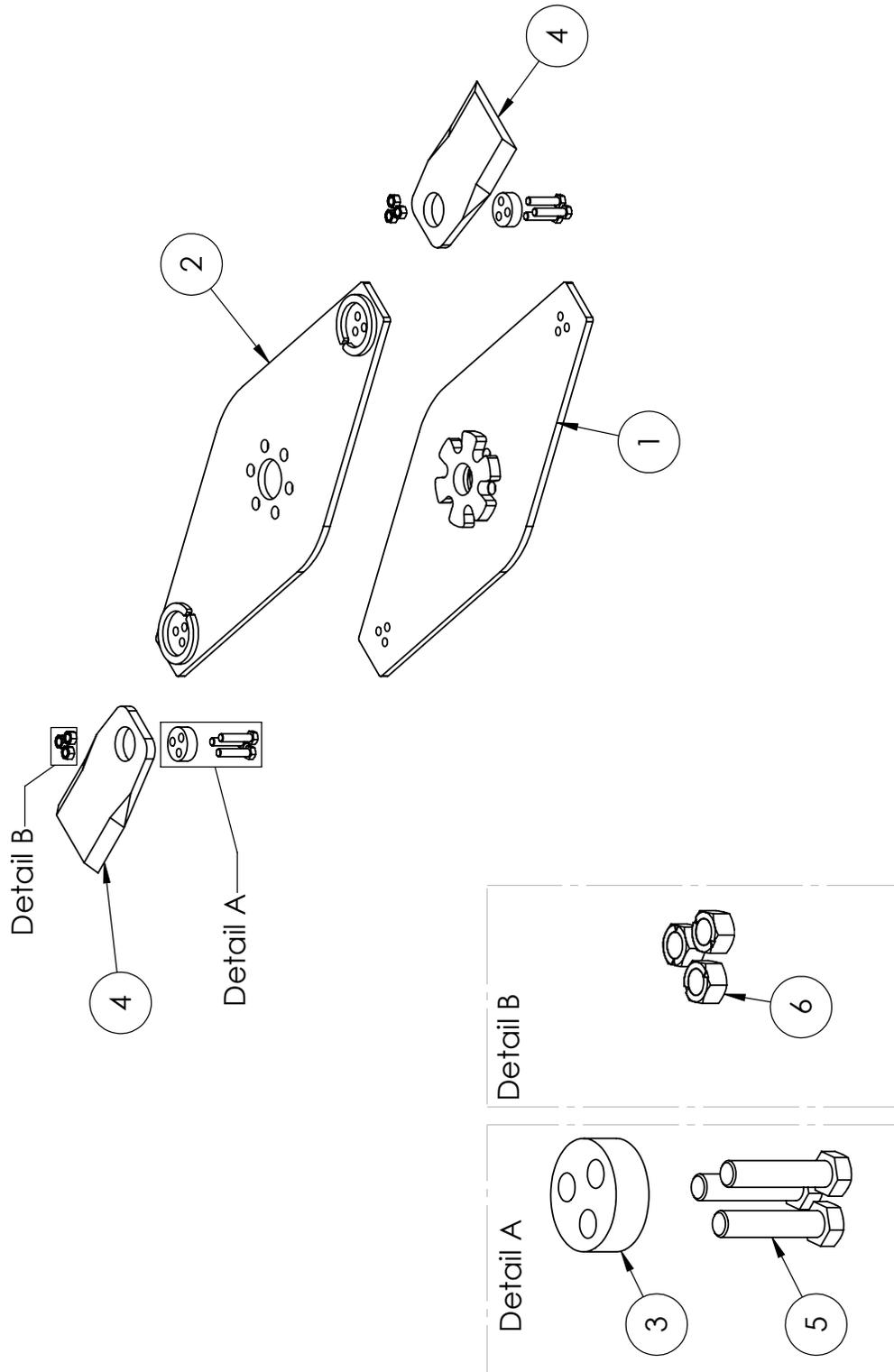
ITEM	Part #	DESCRIPTION	QTY.
1	50100786	Blade Holder	1
2	81500036	Deck Weldment	1
3	50400186	Motor Cover	1
4	40100076	Motor	1
5	51900036	1/2" DX 11" L Hose	2
6	53000026	1/2" D X 6' L Machine Hose Kit	1
7	40200116	Gearbox	1
8	11200306	1/2" SAE Flat Washer GR 8 Z/YEL	4
9	11200176	1/2" Split Lock Washer GR 8	4
10	11200166	1/2"-13 Hex FIN Nut	4
11	11200566	1/2"-20 X 1 1/2" Hex Bolt GR 8	4
12	41000186	1/2" - 5/8" 90° Fitting	2
13	40600066	Check Valve	1
14	41000216	1/2" Tee Fitting	2
15	41000096	3/4" - 1/2" Straight Fitting	2
16	41000106	1/2" Flat Coupler M - Changeable	1
17	41000116	1/2" Flat Coupler FE - Changeable	1
18	11200206	3/4"-10 X 2 3/4" Hex Bolt GR 8	12
19	11200226	3/4" Split Lock Washer GR 8	6
20	11200216	3/4"-10 Lock Nut GR C	6
21	11200236	3/4" SAE Flat Washer GR 8	12



7.8.1 44" X-TREME EXCAVATOR BLADE PARTS DIAGRAM

50100786

ITEM	Part #	DESCRIPTION	QTY.
1	50100796	Bottom Weldment	1
2	50100806	Top Weldment	1
3	10400046	Blade Bushing	2
4	20100076	Blade	2
5	11200286	1/2"-20 x 2 1/4" Hex Bolt L9	6
6	11200296	1/2"-20 Lock Nut GRC	6



SECTION 8

WARRANTY INFORMATION

LIMITED WARRANTY

Construction Implements Depot, Inc. (CID) products are warranted to be free from defects in workmanship or materials for a period of 12 months from the initial sale.

WARRANTY EXCLUSIONS

This warranty does not cover normal wear items, including but not limited to: bearings, hoses, blade holders, ground engaging parts such as teeth, blades, cutting edges, pilot bits, auger teeth and broom bristles. This warranty does not cover maintenance, service or adjustments. This warranty does not cover damage due to improper application or installation, misuse, negligence, accidents or improper maintenance. Please note: Any modification or customization made to your attachment may void its warranty. This warranty is void if any components have been disassembled, i.e., pumps, gear boxes or motors or the attachment has been used without the case drain attached (if applicable). Be sure to follow all recommended Horsepower and GPM requirements as outlined in product specifications, in order to prevent the warranty from being void. This warranty is contingent upon the use of approved BRAND parts exclusively. Any use of non-approved parts may result in voiding the warranty. Please be advised that the warranty does not cover refurbished attachments. Specially modified attachments built by the manufacturer to meet your needs shall not be warranted by CID, Inc.

REPAIRS UNDER WARRANTY

Any repairs, including welding, on attachments must be performed by certified repair technicians who have requested and obtained written approval from an authorized representative of CID before repairs begin. If you are completing the repair, you must also have prior written approval to prevent the warranty from being voided.

WARRANTY STATEMENT

Our obligation under this Limited Warranty shall be solely limited to repairing or replacing any part (see non-covered items above) that, according to our judgment, show evidence of a defect in quality of workmanship or materials for the stated 12 month warranty period. All defective parts must be routed directly to CID, Inc. with freight or delivery charges to be prepaid. This limited warranty shall not be interpreted to render CID, Inc. liable

8.0 WARRANTY INFORMATION CONT.

WARRANTY STATEMENT CONT.

for any injury or damage to persons, businesses or property of any kind nor expenses or losses incurred for labor, supplies, substitute machinery rental or for any other reason. Repair or replacement parts are subject to the supply conditions at the time of repair or replacements, which may directly affect our ability to obtain material and/or replacement parts. CID, Inc. reserves the right to make improvements in design or changes in specifications at any time without incurring any obligations to owners of previously purchased products. No one but CID, Inc. is allowed to alter, modify or enlarge this warranty nor the exclusions, limitations and reservation at any time. CID, Inc. products are warranted to be free from defects in workmanship or materials for a period of 12 months from the initial sale.

Purchaser and Manufacturer hereby (a) submit to the non-exclusive jurisdiction of the courts of competent jurisdiction in North Carolina and Davidson County in which this company resides for resolution of any dispute concerning this Limited Warranty or the rights or obligations of Purchaser and/or Manufacturer; (b) agree that any litigation in connection with this Limited Warranty shall be venued in North Carolina and Davidson County in which the company resides and (c) waive any objection they may have as to any such action or proceeding brought in such court that such court is an inconvenient forum. Nothing herein shall limit the right of Purchaser or Manufacturer (or the right of any permitted successor or assign of either) to bring proceedings against the other in the courts of any other jurisdiction wherein any assets of such other party may be located.

8.1 WARRANTY RETURN AUTHORIZATION POLICY

WARRANTY RETURN AUTHORIZATION POLICY:

If repairs are required, a Return Material Authorization (RMA) number must be obtained for the defective part as well as proof of purchase. RMA and services are rendered by CID only. Any responsibility of shipping costs on any item returned for repair is at the discretion of CID, Inc.

All returned parts must have the following:

1. A legible RMA number written on the outside of the package.
2. Warranty Claim Form (online)
3. The defective part.

RMA numbers are only valid for 30 days from the date of issue. All shipped replacement parts will require a Parts Order (PO) number from the original CID, Inc dealer. Repairs not covered by the warranty, will be charged for parts and labor at the current pricing rate. Should you have any problems with your attachment, please follow the instructions listed on the following page.

8.2 WARRANTY PROCEDURE

WARRANTY RETURN AUTHORIZATION PROCEDURE:

1. Call the Warranty Department at (336) 859-2002 EXT 215. You will need to provide the model and serial number of the defective item(s) (see Appendix for where to find this information), a description of the problem, and have photographs available.
2. Upon a warranted issue, visit www.cidattachments.com, click on the warranty tab, and fill in the warranty information on the Warranty Claim Form. CID, Inc will retain a Return Material Authorization (RMA) number of the defective part. If all the information above is completed CID, Inc will issue a RMA number via email.
3. Once you have an approved RMA number, a shipping label will be provided with CID's address and instructions for returning the defective part. **Appropriate RMA's/PO's will be invoiced and payment received while the evaluation process is being completed to prevent delays in your normal business operations. In the event the defective part(s) is un-warranted and repairs are not covered by the warranty, the customer will be invoiced for any additional parts and labor at the current pricing rate. If the part is deemed under warranty, a credit of the invoice will be issued.**
4. CID will ship a replacement part to the provided location or customer with a RMA identifier of some kind. **The customer is responsible for initial shipping charges until evaluation of the part has been completed.** If the part failure is covered by the warranty, the customer will be reimbursed for any paid shipping charges. In the event, the part is not covered by the warranty, the customer is responsible for return shipping.
5. Once the defective part is warranted by CID, the customer will be issued a credit and the PO number will no longer be active.
6. In the event CID decides that the attachment needs to be returned to them for repair, CID will make arrangements for pickup and return. Repairs will be performed by CID qualified technicians. Non-warranted issues will be discussed, and repairs will be performed upon the owner's agreement and receipt of payment for parts and labor.

APPENDIX A

WELDED 1-1/2" BOLT BLADE REMOVAL

NOTICE

This procedure requires special tools and skills. DO NOT attempt to remove or sharpen blades if you do not have the tools or skills. Take your cutter to your local dealer for blade services.

! CAUTION

Cutter blades are sharp and could cut you if mishandled. ALWAYS wear protective gloves and footwear when handling cutter blades.

BLADE REMOVAL PROCEDURE

1. Remove the blade holder as described in Section 4.6 of this manual.
2. Use a cutting torch or grinder with a cut off wheel to remove the weld bead around the bolt head. DO NOT cut into the blade holder. (See Figure A1 below)

! CAUTION

Wear proper protective equipment while using a cutting torch and grinder tool to prevent injuries from flying hot metal pieces. DO NOT use a cutting torch during windy conditions or near dry vegetation to prevent a catastrophic brush fire.

3. After carefully cutting the weld bead around the bolt head to allow the bolt to rotate, use a wrench to turn the bolt until loose from nut.
4. Drive the bolt shank from the blade and blade holder, being careful not to let the blade fall onto your feet.
5. Repeat steps 2-4 for the second bolt.

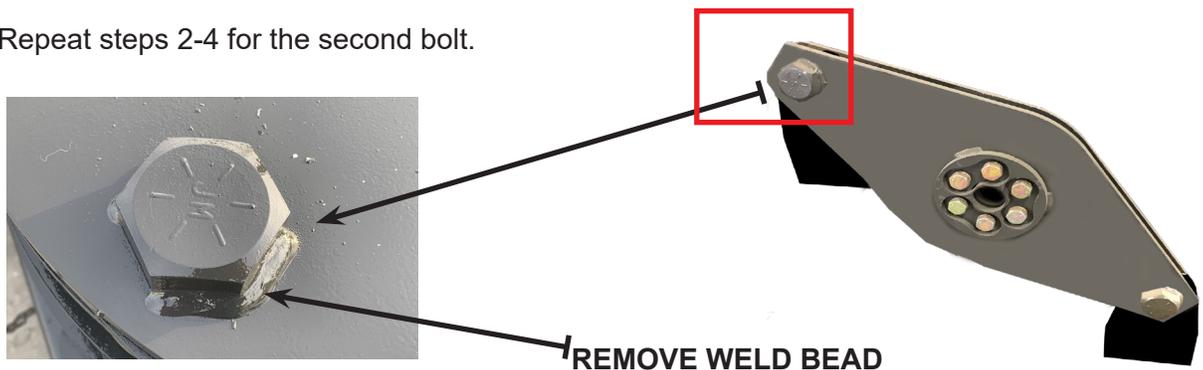


Figure A1 Blade Holder Bolt Weld Bead Removal

A. WELDED 1-1/2" BOLT BLADE INSTALLATION

BLADE INSTALLATION PROCEDURE

NOTICE

Blades must be installed as a set to ensure proper balance of the blade holder. Improper balance will cause vibrations that could result in component failure.

1. Completely remove the old weld bead to ensure a flat smooth surface for the new bolt head to mate to.
2. Place nut in the recessed hole on top of blade holder and insert blade with bushing in between top and bottom plates so the bushing hole aligns with the plate holes..
3. Insert new blade bolt up through the holes in the blade holder and bushing and tighten into the nut.
4. Torque the blade bolt to the value shown in the torque table on page 25 of this manual.
5. Weld the outside of the bolt head as shown in Figure A1.

NOTICE

The blade bolt threads should be flush with the nut or slightly beyond the nut, with the nut seated flush in the recessed hole.

⚠ WARNING

DO NOT weld the bolt head unless the nut is firmly seated into the recessed hole. See *Figure A2 below.*



Figure A2 Bolt Thru Nut

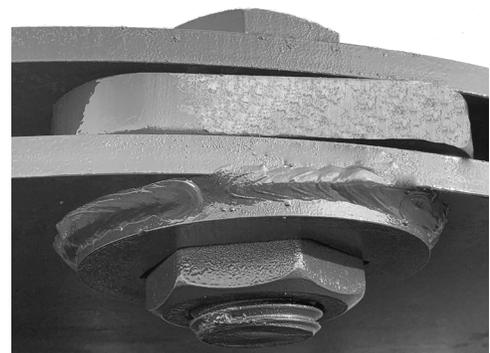
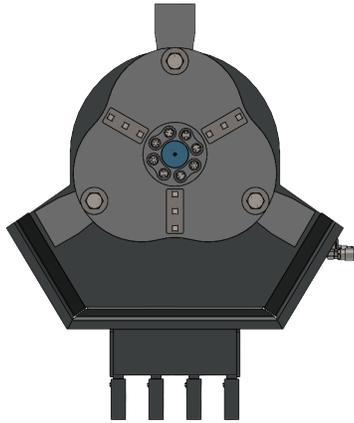


Figure A3 Bolt Head Bead Weld & Assembly

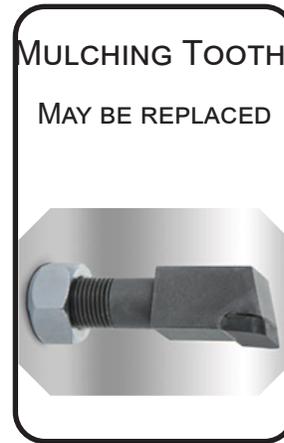
APPENDIX B

MULCHING TEETH APPENDIX

! DANGER OBSERVE ALL SAFETY PRECAUTIONS OUTLINED IN THIS MANUAL.



**BLADE HOLDER WITH
MULCHING TEETH- EXAMPLE**



! DANGER

Before attempting to begin mulching operation, ensure that all personnel or bystanders are standing at least 300 feet away.

MAINTENANCE TASK	Daily /	WEEKLY
	Every 10 Hrs	EVERY 50 HRS
BEFORE STARTING BRUSH CUTTER WITH TEETH:		
All mulching tooth mounting bolts are properly torqued and none missing.	X	
Blades & Blade holder is in good condition. No cracks, gouges, or heat discoloration.	X	
All tooth holders are sitting flat with blade holder.	X	
All teeth are still sharp and are not worn round at corners.	X	
START UP:	X	
All protective devices are in place and secure.	X	
Warning sign "Stay out of Reach" in place & visible.	X	
No unusual noises or vibrations.	X	

MULCHING TEETH APPENDIX

HOW TO CHECK FASTENER TIGHTENING TORQUES-SEE PG 25 FOR TORQUE VALUES

1. With brush cutter firmly on the ground, turn off host machine & make sure parking brake is applied and wheels are chocked.
2. Set the torque wrench 10% lower than the recommended torque value of the fastener to be checked.
3. Place the torque wrench on the head of the nut or bolt and pull the torque wrench arm steady until you hear the "click" of the torque wrench setting point.
4. If the nut or bolt does not turn, the torque is still good.
5. If the nut or bolt turns, replace it if necessary and tighten to the recommended torque value specified.
6. Check torque of every mulching tooth fastener.

TEETH INSPECTION, ROTATION, AND/OR REPLACEMENT

1. Brush Cutter is firmly on the ground in the vertical position with all power shut down.
2. While slowly rotating the blade holder by hand, thoroughly clean the visible parts of all TOOTH HOLDERS, and TOOTH.
3. Carefully inspect each TOOTH and TOOTH BOLT for looseness, cracks, damage, or excessive wear.
4. All damaged or loose parts must be replaced.
5. Carefully inspect ALL teeth. Teeth should have sharp cutting edges for maximum productivity.
6. Loosen TOOTH NUT and tap on the nut while nut is still slightly engaged on the threads until TOOTH pops loose.
7. Remove TOOTH NUT and TOOTH.
8. Ensure that the mating surfaces of the TOOTH and TOOTH HOLDER are clean and free of burrs.
9. Apply Loctite 635 or equivalent to the TOOTH threads and insert into TOOTH HOLDER taking care to keep TOOTH cutting face in the direction of the BLADE HOLDER rotation. (NOTE: If swapping hydraulic hoses into motor to change blade holder rotation, mulching teeth will need turned to the new cutting direction.)
10. While holding TOOTH snugly into TOOTH HOLDER, thread on NUT and torque to the specifications.
11. Repeat this procedure for the opposite tooth and for all other teeth that have to be replaced. Always replace teeth in pairs to keep balance of the blade holder correct.

SIGNS OF TOOTH WEAR THAT AFFECT QUALITY AND PERFORMANCE:

- Material being mulched does not break down quickly into smaller pieces.
- Excessive smoke.
- Cloud of fine sawdust.

NOTICE

Damaged or worn teeth will decrease operating efficiency.

ALWAYS use sharp teeth.

REPLACE TEETH UNDER THE FOLLOWING CONDITIONS:

- Missing tooth
- Damaged Teeth (fragmented)
- Worn cutting edges.
- Damaged threads.

APPENDIX C

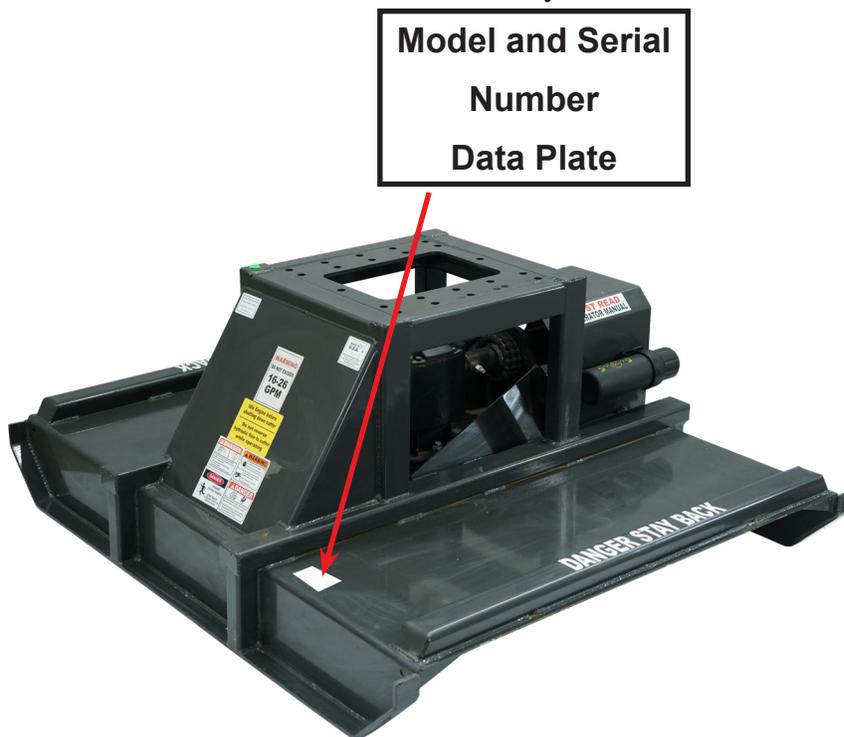
FINDING YOUR MODEL AND SERIAL NUMBER

The Model and Serial numbers will be in one of (2) places and will either be etched into the attachment or on a Data Plate.

Instructions: Stand at the back of the attachment facing the attachment mounting bracket and look in the following locations:

Back-left or right

PLEASE NOTE: The Model and Serial number may be etched or on a Data Plate.



**Model and Serial
Number
Data Plate**

Disclaimer: Any critical changes made to this manual by individuals outside the manufacturer's authorized personnel are doing so at their own risk. The manufacturer cannot be held legally responsible for any consequences, damages, or liabilities resulting from such modifications. It is advised to adhere strictly to the original manual provided by the manufacturer for optimal performance, safety, and reliability.



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