



M5044310B

ITEM NUMBER: 5044310

SERIAL NUMBER: _____

Owner's Manual

Instructions for Assembly, Testing, Operation,
Servicing and Storage

24-Ton Log Splitter: Hydraulic powered machine that splits wood logs.

⚠ WARNING

READ and UNDERSTAND this manual completely before using log splitter.

All operators of this equipment must read and completely understand all safety information, operating instructions, maintenance and storage instructions. Failure to properly operate and maintain the log splitter could result in serious injury to the operator and bystanders from moving parts that can crush or cut, flying objects, burns, fire or explosion, escaping high pressure hydraulic fluid, be aware of the following hazards.

Crush and Cut Hazards

Moving parts can crush and cut hands and fingers. Keep hands clear of endplate, wedge, logs, and log strippers while splitting.

High Pressure Hydraulic Fluid Hazards

High fluid pressures and temperatures are developed in hydraulic log splitters. Hydraulic fluid escaping through even a pin-size hole opening can puncture skin and cause severe blood poisoning. Inspect hydraulic system regularly for possible leaks. Never check for leaks with your hand while the system is pressurized. Seek medical attention immediately if injured by escaping fluid.

Electrical Hazards

- **FOR USE ONLY** with NorthStar Li-Ion Battery Pack item #5043106 and NorthStar Charger item #5050015. Using other batteries or chargers may result in fire and/or bursting (explosion).
- **DO NOT** operate in a wet environment or expose to rain.
- **DO NOT** operate in extreme temperatures or expose to fire.
- **DO NOT** charge or use if damaged.
- **DO NOT** drop or impact the battery.
- **DO NOT** disassemble, modify, or repair the battery.
- **DO NOT** allow water to contact the battery terminals or get inside the battery.
- **DO NOT** touch the battery connectors with metal objects or insert metal objects through openings into the battery.
- **DO NOT** store battery in damp location. Doing so can cause a malfunction.

Fire Hazards

- Keep a fire extinguisher rated "ABC" nearby. Keep it properly charged and be familiar with its use.

STOP!

ADD HYDRAULIC OIL: Your log splitter was shipped without hydraulic oil. Refer to Periodic Maintenance section of this manual for instructions on filling the hydraulic reservoir

INSPECT COMPONENTS: Closely inspect to make sure no components are missing or damaged.

See Initial Unpacking and Set-up for instructions and for whom to contact to report missing or damaged parts.

Any Questions, Comments, Problems or Parts Orders
Call NorthStar Product Support 1-800-270-0810

Hazard Signal Word Definitions






	<p>This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.</p>
	<p>DANGER (red) indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.</p>
	<p>WARNING (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p>
	<p>CAUTION (yellow) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.</p>
	<p>CAUTION (yellow) used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.</p>

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About Your Log Splitter

Thank you for purchasing your NorthStar log splitter!

About Your Log Splitter:

This log splitter is a machine designed to split wood logs using a hydraulically powered moving wedge. The log splitter's motor is used to pressurize the hydraulic system.

This log splitter is designed to split logs *lengthwise with the grain only*.

This log splitter model is capable of splitting logs up to 25' long and 16" in diameter.

Your splitter can be used in either a vertical or horizontal splitting position:

- When the splitter is set up to operate in the horizontal splitting position, a log is placed on the horizontal beam and the wedge moves horizontally into the end of the log to split it.
- When the splitter is set up to operate in the vertical splitting position, the log is placed on the endplate, upright on its end, and the wedge moves down into the top of the log to split it.

The horizontal splitting position is used for lighter logs that can be easily loaded onto the beam. The vertical splitting position is used for heavier logs that are difficult to load onto the beam.

The technical specifications for your log splitter are provided in the Specifications section of this manual.

WARNING

This log splitter uses a high-pressure hydraulic system to generate a very strong splitting force.

Read the manual completely before using the machine to understand how to safely operate and maintain it.

Follow all safety precautions presented throughout this manual. A summary of important safety information can be found at the end of this manual.

Contact NorthStar Product Support at 1-800-270-0810 for any questions about the appropriate use of this log splitter and/or optional accessories.

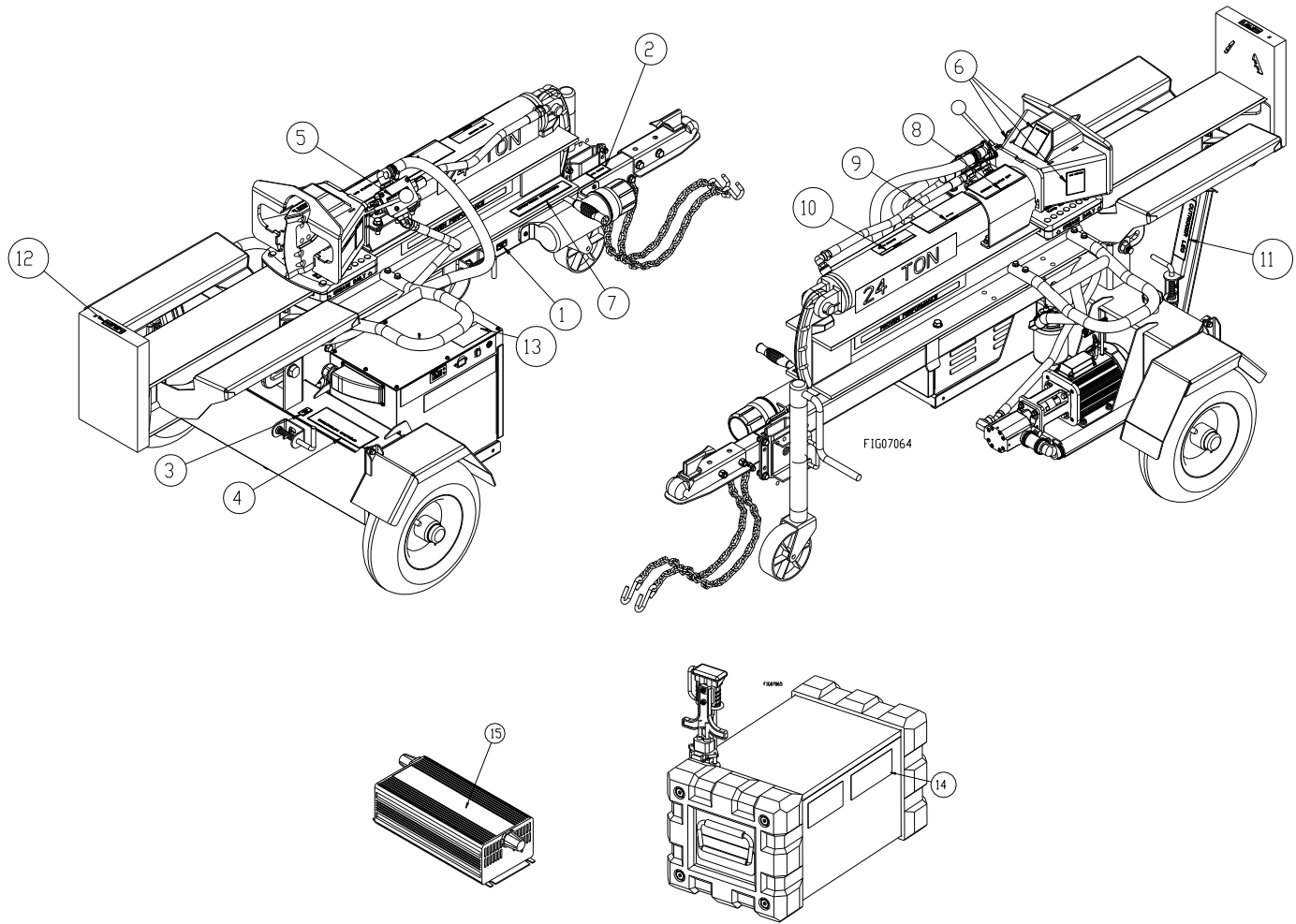
Warranty Registration:

Please fill out and submit the warranty registration card so that we have your contact information for any future product literature or replacement parts you may need.

Attention: All Rental Companies and Private Owners who loan this equipment to others!

All persons to whom you rent/loan the log splitter must have access to and read this manual. Keep this owner's manual with the splitter at all times and advise all persons who will operate the machine to read it. You must provide instruction on how to safely operate the splitter and remain available to answer any questions a renter/borrower might have.

Safety Label Locations



Reference #	Part Number	Description	Qty
1	778597	Decal, Horizontal Lock	1
2	791123	Decal, 45 mph	1
3	778714	Decal, Vertical Lock	1
4	777887	Decal, Operation Instructions	1
5	778609	Decal, Split Control	1
6	778717	Decal, Log Stripper	3
7	791105	Decal, Moving/Towing Instructions	1
8	778610	Decal, Log Splitter Warning	1
9	777889	Decal, Stuck Log	1
10	777891	Decal, Escaping Fluid	1
11	791107	Decal, Outrigger Leg	1
12	787944	Decal, Pinch Point	1
13	804884	Decal, Product Warning	1
14	804768	Decal, Battery Warning	1
15	804766	Decal, Charger	1

Always make sure safety labels are in good condition. If a safety label is missing or not legible, order new labels or unsafe operation could result. **Contact NorthStar Product Support at 1-800-270-0810**

Safety Label Locations

1 **HORIZONTAL LOCK**
PN 778597

2 **MAX TOWING SPEED**
45
MPH

3 **VERTICAL LOCK**
PN 778714

5 **SPLIT CONTROL LEVER OPERATION**

4 **OPERATING INSTRUCTIONS**

GENERAL

- Stay in the OPERATOR POSITION while actuating controls.
- Never actuate controls until the helper is 10ft away from log splitter, including any helpers assisting to load logs.
- Wear eye protection, hearing protection, snug fitting gloves, and safety shoes or heavy boots. No loose or dangling apparel.

SETTING UP

- Place log splitter on dry, level ground.
- Secure splitter for unintended movement.
- Place splitter in horizontal or vertical position.
- Start engine/motor.

SPLITTING LOG

- Position log on beam, against endplate.
- Move split control to extend wedge and split log.
- Release split control to stop wedge.
- Move split control to return wedge.
- Remove split wood from work area.

Operator Position - horizontal

Operator Position - vertical

PN 778597

6 **LOG STRIPPER**
RETRACT WEDGE
TO REMOVE
STUCK WOOD

WARNING

PINCH POINT
Keep hands clear
of wedge and
log stripper

PN 778597

7 **MOVING/TOWING INSTRUCTIONS**

Moving log splitter by hand:

- Lock beam in horizontal position (tip-up models only).
- Lock towbar leg or jack stand in DOWN position.
- Lock support leg in UP position (if equipped)
- Do not attempt to move log splitter up or down slope by hand.

Towing log splitter:

- Latch coupler securely to class 2 or higher hitch with 2" ball.
- Lock towbar leg/jack stand or support leg (if equipped) in the UP position.
- Attach safety chains to tow vehicle.
- Close fuel shut-off valve on engine (if equipped)
- Do not tow faster than 45 mph. Higher speeds can cause loss of control.
- Check local, state, and federal requirements before towing on public roads.

PN 791105

8 **WARNING**

Moving parts can crush and cut. Pieces can fly out while splitting. Follow safety rules for operating the log splitter or serious injury could result.

- READ the Owner's Manual completely before operating.
- Only one person should operate the log splitter. If an assistant is helping to load logs, the operator should not actuate controls until the assistant is at least 10 ft away.
- Stay in the designated OPERATOR POSITION while actuating the controls.
- Split wood in direction of the grain only.
- Hold bark side of logs when loading.
- Keep hands away from wedge, endplate/ram, and partly split logs.
- Never leave log splitter unattended during operation.
- Stay off slopes and slippery surfaces.

See additional safety rules in the Owner's Manual.

PN 778597

9 **WARNING**

IF LOG BECOMES STUCK ON WEDGE

A log can become stuck to the wedge if the wedge becomes embedded in the log and the log doesn't split and separate. This can happen if the log is too stringy or tough to split completely. A stuck log will move back with the wedge on the initial attempt to retract the wedge. **If this happens, STOP retracting the wedge immediately** and follow the directions below.

NEVER attempt to remove a stuck log by:

- Using the hydraulic force of the splitter
- Modifying the splitter
- Adding attachments to the splitter.

Personal injury could result from log or metal pieces flying out at high speed toward the operator or bystanders, or the splitter could become damaged.

ALWAYS remove the log MANUALLY using the following procedure:

1. If there is already 1" or more of clearance between the log and endplate, go to step 2. Otherwise, retract wedge just enough to remove pressure between the log and endplate - about 1" clearance.
2. Turn engine/motor OFF.
3. Remove stuck log from the wedge manually with a pry bar or sledgehammer.

Important: Be extremely careful as log pieces may fly off as they separate from the wedge. Wear safety goggles and make sure bystanders are clear.

4. Do not attempt to resplit a stuck log once it has been removed from the wedge.

PN 778889

10 **WARNING**

ESCAPING HIGH PRESSURE HYDRAULIC FLUID HAZARD

High fluid pressures and temperatures are developed in the hydraulic system. Hydraulic fluid escaping through even a pin-size hole opening can puncture skin and cause blood poisoning.

- Inspect hydraulic system regularly for leaks
- Never check for leaks with your hand while system is pressurized.
- Seek medical attention immediately if injured by escaping fluid.

PN 778889


Safety Label Locations

11

OUTRIGGER LEG
 LOCK OUTRIGGER LEG IN THE
 DOWN POSITION BEFORE SPLITTING

12

⚠ WARNING

 **PINCH POINT**
 Keep hands clear
 during operation. 

787944

13

⚠ WARNING

- Read owner's manual before using. Failure to follow instructions may result in fire or electric shock.
- For use only with NorthStar Li-Ion Battery Pack item # 5043106 and NorthStar Charger item # 5050015. Using other batteries or chargers may result in fire and/or bursting (explosion).
- Do NOT operate in a wet environment or expose to rain.
- Do NOT operate in extreme temperatures or expose to fire.
- Do NOT charge or use if damaged.

801598

14


⚠ WARNING

- Read owner's manual before using. Failure to follow instructions may result in fire or electric shock.
- Charge only with NorthStar Charger item# 5050015. Using other chargers may result in fire and/or bursting (explosion).
- Do NOT drop, disassemble, modify, crush, pierce, or attempt to repair.
- Do NOT expose to water, fire, or extreme temperatures.
- Do NOT short terminals, may cause burns or a fire.
- Do NOT charge or use if damaged.
- Store indoors in a cool, dry, ventilated environment.

894768

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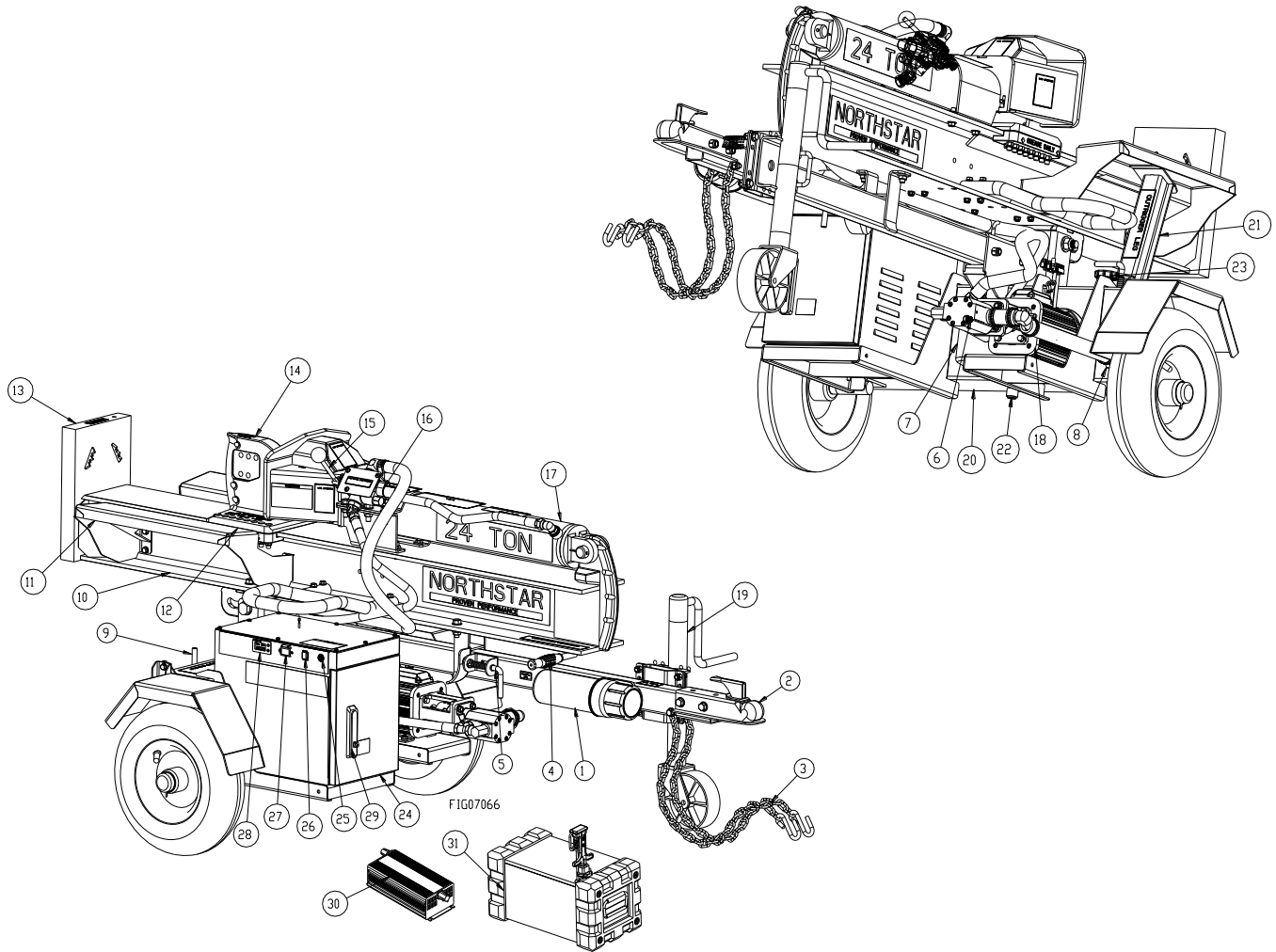
NORTH STAR
 Proven Performance



- Read owner's manual before using. Failure to follow instructions may result in fire or electric shock.
- For use only with NorthStar Li-Ion Battery Pack item# 5043106. Charging other types of batteries may result in fire or bursting.
- Do NOT disassemble, modify or repair.
- Do NOT expose to rain or wet conditions.
- Do NOT use in an enclosed space.
- Do NOT use if cord is damaged.

801576

Machine Component Identification



Ref #	Description
1	Manual Tube
2	2" Ball Coupler
3	Safety Chains
4	Lifting Handle
5	Horizontal Lock
6	Hydraulic Pump
7	Return Line Filter
8	Suction Strainer
9	Vertical Lock
10	Beam
11	Log Cradles
12	Grease Zerks
13	Endplate
14	Wedge
15	Split Control Lever
16	Control Valve

Ref #	Description
17	Cylinder
18	Motor
19	Jack
20	Hydraulic Tank
21	Outrigger Leg
22	Magnetic Drain Plug
23	Breather Cap/Oil Dipstick
24	Battery Box
25	On/Off Switch
26	ECO Switch
27	Charge Port
28	Battery Meter
29	Door Latch
30	Charger
31	Battery, 60V/30Ah

Initial Setup

IMPORTANT!

See Assembly Instructions section of this manual to assemble the log splitter before setup.

Step One:

Inspect Log Splitter Components.

Closely inspect all log splitter components.

(See Machine Components section of this manual for diagram of components.)

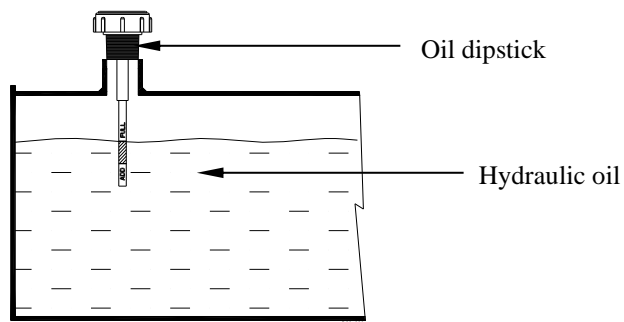
- If you have missing or damaged components, please contact Product Support at 1-800-270-0810.

Step Two:

Add Hydraulic Oil to Reservoir

⚠ WARNING: High fluid pressures and temperatures are developed in hydraulic log splitters. Hydraulic fluid escaping through a pin hole sized opening can burn or puncture skin, resulting in wounds that could cause blood poisoning, infection, disability, gangrene, amputation, or death. Therefore, the following instructions should be heeded at all times when inspecting or servicing the hydraulic components of the log splitter.

1. NEVER check for leaks with your hand. Leaks can be located by holding a piece of cardboard or wood (at least two feet long) with your hand at one end and passing the other end over the suspected area (wear eye protection). Look for discoloration of the cardboard or wood.
2. NEVER adjust the pressure of the pump or valve.
3. If injured by escaping fluid, no matter how small the wound is, see a doctor at once. A typical injection injury may be a small wound that does not look serious. However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.
4. Remove hydraulic oil dipstick.
5. Refer to the **Specifications** section for approximate hydraulic oil capacity.
6. Fill reservoir with 10 wt. AW32, ASLE H-150, or ISO 32 oil. Use a funnel
7. Replace hydraulic oil dipstick and check that oil level reads full. Note: Do not thread in dipstick when checking oil level.



8. Turn motor on and use control valve handle to extend and retract wedge 5 (five) times to remove air from the high-pressure lines.
9. With wedge retracted, check oil level again.
10. Replace hydraulic oil fill/vent cap.

Initial Setup

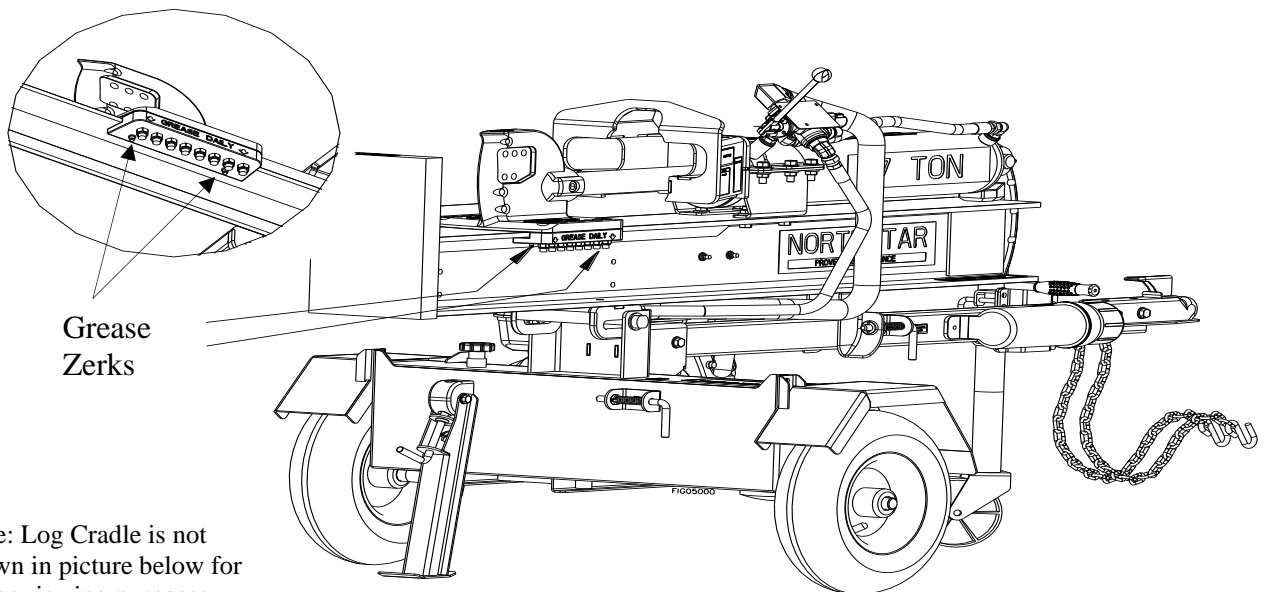
11. Turn motor on and use control valve handle to extend and retract wedge five (5) times to remove air from the high-pressure lines.
12. With wedge retracted, check oil level again. Fill if necessary.

⚠ WARNING: NEVER remove the hydraulic oil fill cap when the motor is on. Hot oil can escape causing severe burns. Allow log splitter to cool completely before removing hydraulic oil fill cap.

Note: If the log splitter will be run for long periods of time in outdoor temperatures above 70°F, we recommend changing the hydraulic oil to DEXTRON III.

Step Three: Lubricate Keepers

Pump grease into grease zerks found under each keeper. This will help prevent wear between the keepers and beam.



Note: Log Cradle is not shown in picture below for better viewing purposes.

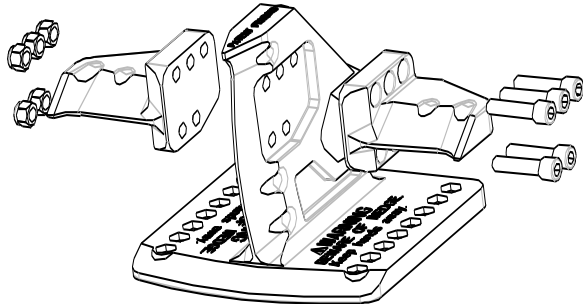
Optional 4-Way Wedge Wings

4-Way Wedge Wings (optional)

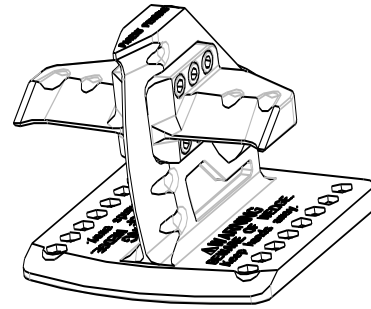
Wing Assembly

1. Unbox and identify components
2. Insert Nylon nuts into hex cutouts in wing
3. Position wings into proper locations on the wedge and bolt into position using supplied bolts
4. Tighten the bolts with a 3/8" hex wrench

Exploded View



Assembled View



⚠ WARNING

- 4-Way Wings create additional pinch points when the wedge is moving forward or backwards. Keep hands clear of the wedge, wedge wings, and the log while the wedge is moving. When the log is caught on the wedge do not use the auto-return feature. Retract wedge manually, paying close attention so the log does not hit the motor or control valve.
- Pay particular attention to stringy wood, such as elm, because it becomes lodged on the wedge easily.

To order call: Northern Tool + Equipment at 1-800-556-7885
Item # 110910

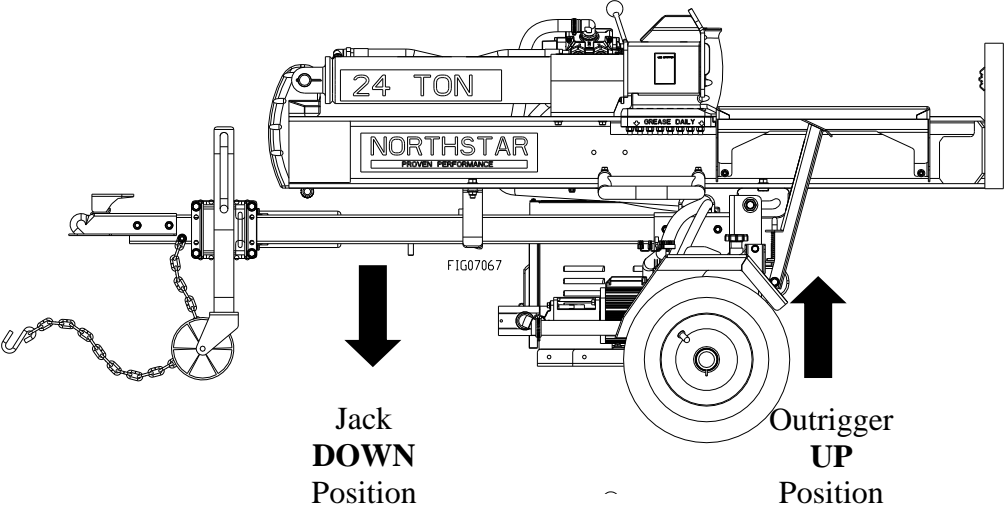
Moving and Towing to the Job Site

⚠ WARNING

The log splitter is heavy. It can crush and cause serious injury if it rolls out of control or tips over.

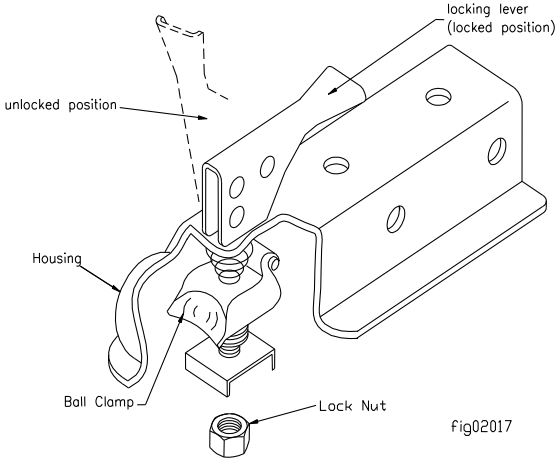
Follow the instructions below for safely moving and towing the log splitter.

Moving the log splitter:

<p>1. Place in Horizontal position</p>	<p>Make sure the log splitter is locked in the horizontal position with hitch pin before moving.</p> <p>NEVER move log splitter when it is in vertical configuration because it will be unstable and could tip.</p>
<p>2. Lock:</p> <ul style="list-style-type: none"> • Front jack DOWN • Rear outrigger leg UP 	<p>Lock jack in DOWN position and the rear outrigger leg in the UP position before you move the log splitter.</p> 
<p>3. Move log splitter to work site or tow hitch</p>	<p>Move log splitter by hand either directly to chosen work site or to vehicle hitch for towing.</p> <p>(See Before Each Use: Step Three: instructions on selecting a work site)</p> <p><u>Important Safety Instructions:</u></p> <ul style="list-style-type: none"> • Hills. Do not move the log splitter up or down hills by hand—use a towing vehicle. • No riding. Never allow anyone to sit or ride on the log splitter. • No cargo. Never transport cargo or wood on the log splitter.

Moving and Towing to the Job Site

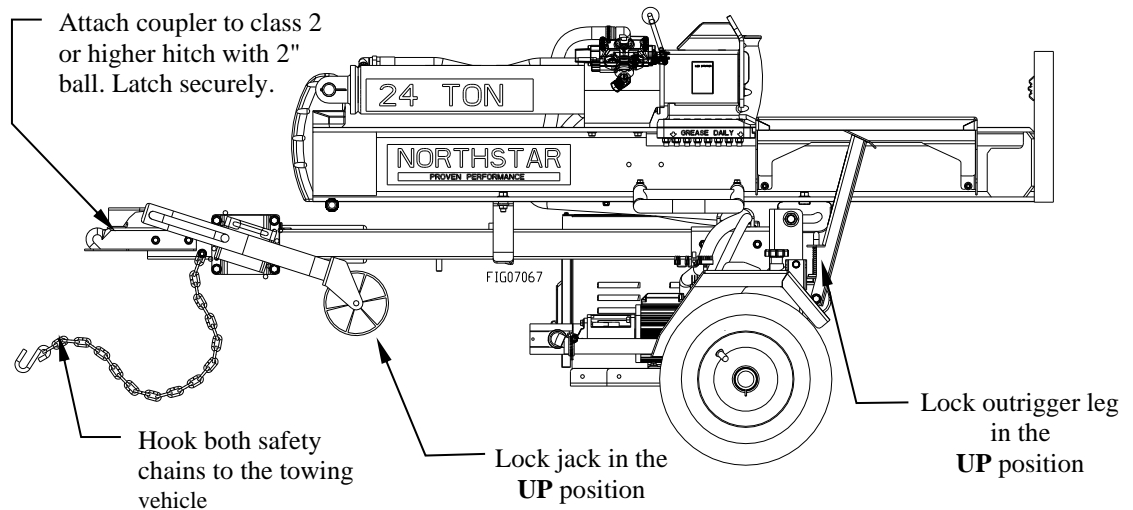
Towing:

<p>1. Read instructions</p>	<p>Review towing safety instructions in your vehicle manual.</p>
<p>2. Check tires</p>	<p>Make sure tires are fully inflated and in good repair.</p> <p>⚠️ WARNING:</p> <ul style="list-style-type: none"> • Do not over-inflate tires. Serious injury can occur if tire explodes. • When seating a bead after repair, do not exceed 30 PSI. Pressures higher than 30 PSI can cause the tire and wheel to rupture and explode.
<p>3. Disconnect battery</p>	<p>Make sure battery is disconnected and rubber caps/plugs are installed on terminals before towing the log splitter.</p>
<p>4. Attach to hitch (2" ball)</p>	<p>Attach log splitter to vehicle hitch</p> <ol style="list-style-type: none"> 1. Attach log splitter's coupler to a class 2 or higher hitch with 2" ball (only). 2. Adjust coupler to ball by raising locking lever and turning lock nut with fingers. 3. Proper adjustment is obtained when coupler is as tight as possible on ball and locking lever can still be opened and closed. 4. Lock lever closed to secure the attachment. An optional locking pin or padlock may be inserted in the locking lever hole for extra security. <div style="text-align: center;">  <p>Fig02017</p> </div>
<p>5. Attach safety chains</p>	<p>Attach safety chains.</p> <ol style="list-style-type: none"> 1. Two safety chains must be used while towing. 2. Cross safety chains under the coupler allowing only enough slack for vehicle turns.

Moving and Towing to the Job Site

6. Lock jack and outrigger leg UP

Move the **jack** to the **UP** position and lock. (Both the jack and the outrigger leg must remain in the up position during towing.)



7. Tow to desired location

Tow log splitter carefully to desired work site.
(See Before Each Use section on selecting an appropriate work site)

Important safety instructions:

- **Added length.** Be aware of the added length of the splitter.
- **Backing up.** The log splitter is short and can easily jack-knife. Use caution and drive slowly if backing log splitter into position.
- **Speed limit.** Never tow this log splitter over 45 mph. Faster speeds may result in loss of control.
- **Rough terrain.** Drive slowly and take extra caution when traveling over rough terrain.
- **On public roads.** If towing on a public road, make sure to comply with all local, state, and federal towing requirements. It is the sole responsibility of the purchaser to obtain licensing, trailer lights, safety chains or signage, as needed to comply.
- **Unattended.** Turn off the towing vehicle before leaving the splitter unattended.
- **Under the influence.** Never tow or operate this splitter while under the influence of alcohol, drugs, or medication.

8. Lock jack down and unhitch

Lock jack in the DOWN position and disconnect from vehicle.
NEVER operate log splitter while it is attached to the vehicle.

Before Each Use — Inspection/Maintenance

Step One: Inspect and maintain log splitter before each use

If the log splitter has been used previously, it must be inspected and maintained BEFORE EACH SUBSEQUENT USE.

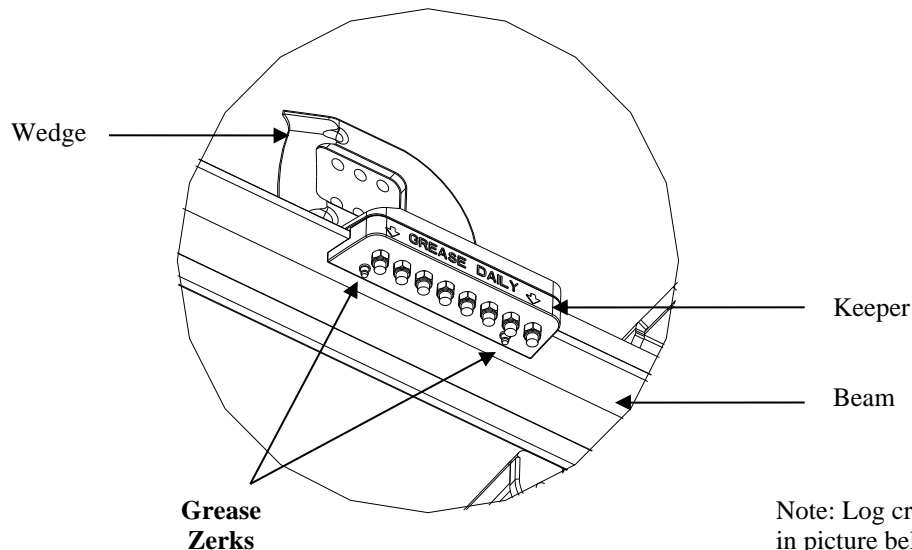
⚠ WARNING

ALWAYS shut off the motor and relieve system pressure before inspecting, cleaning, adjusting, or repairing the splitter. Relieve system pressure by moving Split Control Lever back and forth several times.

IMPORTANT:

If a part needs replacement, only use parts that meet the manufacturer's specifications. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the log splitter.

1. Motor off / relieve pressure	<p>Perform all inspections/repairs with the motor off, hydraulic system pressure relieved, and battery disconnected.</p> <ol style="list-style-type: none"> 1. Make sure motor is off. 2. Relieve all hydraulic system pressure by moving the Split Control Lever back and forth several times. 3. Make sure battery is disconnected.
2. Remove debris	<p>Remove debris from motor and moving parts.</p> <ol style="list-style-type: none"> 1. <u>Motor debris.</u> Clean debris from motor. 2. <u>Other debris.</u> Debris on moving parts can cause excess wear. Clear debris from the slide beam, wedge, and endplate.
3. Mechanical parts	<p>Check to be sure that all nuts and bolts are tight to make sure the log splitter is in safe working condition.</p> <p>Apply grease to grease zerks under both keepers.</p>



Note: Log cradle is not shown in picture below for better viewing purposes

Before Each Use — Inspection/Maintenance

4. Hydraulic system

Check the hydraulic system carefully:

1. Visually inspect all hoses, tubing, clamps/fittings, pump, and cylinder for cracks, fraying, kinks, or other damage.
2. Check all components for oily residue, which may indicate a leak.

Do NOT operate the log splitter if there is any indication of damage or oily residue. Small leaks in hydraulic lines can cause severe injuries and can also be an indication of catastrophic failure in the near future. The life of hydraulic hoses may be from a few months to a few years, depending on use and storage patterns.

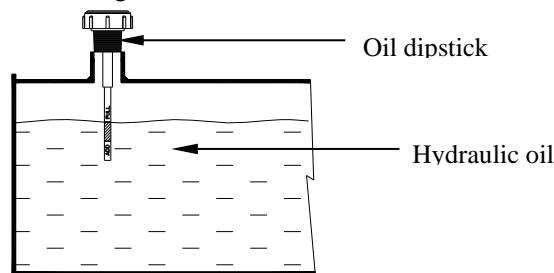


WARNING: High fluid pressures and temperatures are developed in hydraulic log splitters. Hydraulic fluid escaping through a pin hole sized opening can burn or puncture skin, resulting in wounds that could cause blood poisoning, infection, disability, gangrene, amputation, or death. Therefore, the following instructions should be heeded at all times when inspecting or servicing the hydraulic components of the log splitter:

- Turn off the motor, move all control valve handles back and forth to relieve pressure, and disconnect battery before changing or adjusting hydraulic system components such as hoses, tubing, fittings, or other components.
- NEVER check for leaks with your hand. Leaks can be located by holding a piece of cardboard or wood (at least two feet long) with your hand at one end and passing the other end over the suspected area (wear eye protection). Look for discoloration of the cardboard or wood.
- NEVER adjust the pressure setting of the pump or valve.
- If injured by escaping fluid, no matter how small the wound is, see a doctor at once. A typical injection injury may be a small puncture wound that does not look serious. However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.

5. Hydraulic oil level

Check the hydraulic oil level. Fill as needed – check that oil level reads full. Note: Do not thread in dipstick when checking oil level.



WARNING: NEVER remove the hydraulic oil dipstick when the motor is on. Hot oil can escape causing severe burns. Allow log splitter to cool completely before removing hydraulic oil dipstick.

Before Each Use — Inspection/Maintenance

6. Tires

Make sure tires are fully inflated and in good repair if you will be towing the splitter.

See tire sidewall for recommended tire pressure.

 **WARNING:**

- Do not over-inflate tires. Serious injury can occur if tire explodes.
- When seating a bead after repair, do not exceed 30 PSI. Pressures higher than 30 PSI can cause the tire and wheel to rupture and explode.

7. Shields / guards

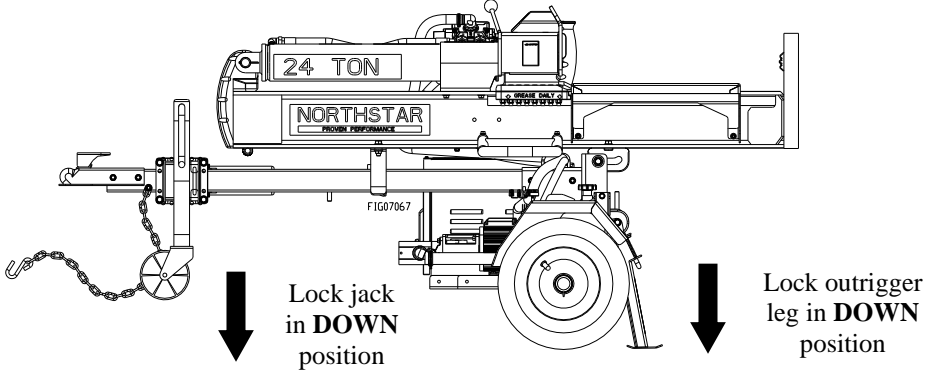
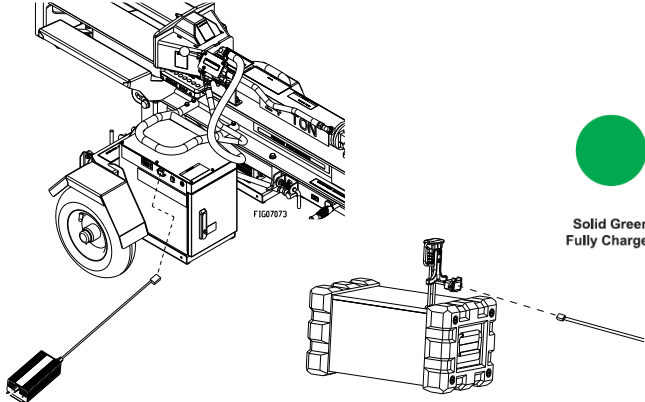












Replace all guards and shields after servicing the log splitter.

Before Each Use – Work Site Selection and Set-up

Step Two: Work site selection and log splitter setup

⚠ WARNING

It is important to select an appropriate work site and properly set up the log splitter in order to minimize the risk of slips and falls, equipment rolling or tipping over, and accidental fires.

<p>1. Select location</p>	<p>Select an appropriate location for operating the log splitter.</p> <p><u>Requirements:</u></p> <p>1. Dry-level surface with good footing. Stay clear of areas with mud, ice, tall grass, weeds, brush, or snow.</p>				
<p>2. Fire precautions</p>	<p>Take the following precautions against fire:</p> <p>1. Keeps a fire extinguisher rated “ABC” nearby as a precautionary measure when operating the log splitter in dry areas. Keep it properly charged and be familiar with its use.</p>				
<p>3. Lock jack and outrigger leg DOWN</p>	<p>Lock both the <u>jack and outrigger leg</u> in the DOWN position.</p> <div style="text-align: center;">  </div>				
<p>4. Block wheels</p>	<p>Block the wheels to prevent unintended movement of the log splitter.</p>				
<p>5. Apply grease</p>	<p>Apply grease into grease zerks located under both keepers.</p>				
<p>6. Charge battery</p>	<p>Plug charger into battery or battery box (if battery is already installed in battery box, if not see step 4 in operation section to install). See charger manual for more detail.</p> <p>ONLY USE NorthStar Charger item #5050015. Using other chargers may result in fire and/or bursting (explosion).</p> <p>Do not charge the battery during operation. This can damage the battery.</p> <div style="text-align: center;">  </div> <div style="text-align: center;"> <p>Charger Indicator Lights</p> <table style="margin: auto;"> <tr> <td style="text-align: center;">  Solid Green Fully Charged </td> <td style="text-align: center;">  Solid Red Charging </td> <td style="text-align: center;">  Blinking Red Battery Fault </td> <td style="text-align: center;">  Blinking Red/Green Overheated </td> </tr> </table> </div>	 Solid Green Fully Charged	 Solid Red Charging	 Blinking Red Battery Fault	 Blinking Red/Green Overheated
 Solid Green Fully Charged	 Solid Red Charging	 Blinking Red Battery Fault	 Blinking Red/Green Overheated		

Splitting Operation

WARNING

Before starting this log splitter, review the following instructions and safety information for safe operation of the log splitter.

Failure to follow these rules may result in serious injury to the operator or bystanders from moving parts that crush, cut, or entangle from flying objects, burns, fire, falling or tripping.

General safety information:

- **Read manual.** Do not allow anyone to operate the log splitter who has not read the Owner's Manual or has not been instructed on the safe use of the splitter. The log splitter owner should instruct all operators in safe log splitter operation.
- **Age restrictions.** Never allow anyone under 16 years old to operate the log splitter. Anyone 16 years and older must be trained and supervised by a trained adult.
- **Intended use.** Log splitters should only be used for splitting wood logs, lengthwise with the grain. Do not use for other purposes as unforeseen hazards may result.
- **Modifications.** Never modify or alter the log splitter in any way. Modifications can create serious safety hazards and will void the warranty:
- **Attachments.** Never add attachments to the splitter, except for authorized accessories supplied by the manufacturer with instructions for safe installation and use.
- **Motor speed.** The maximum motor speed is preset at a safe limit. Never attempt to modify the motor speed setting to run at a higher speed.
- **Remote control.** NEVER attach a rope, cable, or other remote device to the splitting control.
- **Splitting wedge.** NEVER attempt to change the height or speed of the splitting wedge.
- **Pressure setting.** NEVER increase the pressure setting of the pump or control valve.
- **Safety equipment / controls.** Always operate the log splitter with all safety equipment in place and in good working order, and all controls properly adjusted for safe operation.
- **Know how to stop.** Be thoroughly familiar with all controls and with the proper use of the equipment. Know how to stop the log splitter and relieve system pressures quickly if needed.
- **Operating speed.** Always operate the log splitter at the manufacturer's recommended speed. The maximum speed of the motor, pump and wedge are preset within safe limits.
- **Daylight only.** Only use the log splitter in daylight so you can see what you are doing.
- **Smoking / sparks.** Never smoke while operating the log splitter, and never operate near sources of sparks or flames.
- **Under the influence.** Never operate, or let anyone else operate, the log splitter while under the influence of alcohol, drugs, or medication.
- **Unattended.** Never leave the machine unattended while the motor is on.
- **Adjusting / repairing.** Always make sure the motor is off before cleaning, repairing, or adjusting the splitter, except as recommended by the manufacturer. In addition, move all control handles back and forth to relieve system pressure *before changing or adjusting hydraulic system components* such as hoses, tubing, fittings, or other components.
- **Replace labels.** Always make sure safety labels are in place and in good condition. If a safety label is missing or not legible, order new labels because unsafe operation can result. Call 1-800-270-0810 to order new safety labels.
- **Battery Recycling.** To protect the environment, do not dispose of the battery using standard waste collection. Observe local laws and regulation for disposal.

Splitting Operation

WARNING

Failure to follow the instructions below may result in excessive heat, fire, and/or bursting (explosion), etc.

Do not heat, or place into fire. Do not use, charge, or leave in a hot place.

General Electrical Safety

- **READ** owner's manual before using. Failure to follow instructions may result in fire or electric shock.
- **FOR USE ONLY** with NorthStar Li-Ion Battery Pack item #5043106 and NorthStar Charger item #5050015. Using other batteries or chargers may result in fire and/or bursting (explosion).
- **DO NOT** operate in a wet environment or expose to rain.
- **DO NOT** operate in extreme temperatures or expose to fire.
- **DO NOT** charge or use if damaged.
- **DO NOT** drop or impact the battery.
- **DO NOT** disassemble, modify, or repair the battery.
- **DO NOT** allow water to contact the battery terminals or get inside the battery.
- **DO NOT** touch the battery connectors with metal objects or insert metal objects through openings into the battery.
- **DO NOT** store battery in damp location. Doing so can cause a malfunction.
- **DO NOT** charge the battery during operation. This can damage the battery.
- **IF THE BATTERY LEAKS** fluid or smells strangely, immediately move it away from any heat sources or flame. There is a risk of fire or rupturing if the leaked liquid or gas ignites. Also, if liquid gets into your eyes, rinse them with plenty of water. After that, immediately seek medical care.
- **WHEN BATTERY IS NOT IN USE**, keep away from metal objects, like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting battery terminals together may cause burns or a fire.
- **IN CASE OF FIRE**, stop using machine immediately and extinguish with dry chemical, sandy soil, carbon dioxide, or appropriate foam.

Splitting Operation

1. Put on protective clothing / gear

Wear the following protective clothing and safety gear:

- 1) **Eye protection.** Always wear safety glasses or goggles when operating the machine. Pieces of log may fly out and serious eye injury can occur.
- 2) **Boots.** Falling logs can crush feet. Always wear safety shoes or heavy boots when operating or helping to load logs.
- 3) **Gloves.** Wear snug fitting gloves without drawstrings or loose cuffs.
- 4) **No loose/dangling.** Loose or dangling apparel can become entangled in moving parts. Never wear jewelry or loose-fitting clothing.

2. Lock and block

Block the wheels to prevent unintended movement of the log splitter. Check that:

- 1) The jack and outrigger leg are both locked in the DOWN position.
- 2) The wheels are blocked.

3. Set to horizontal or vertical:

Set log splitter into either the horizontal or vertical splitting position

The HORIZONTAL splitting position is used for lighter logs that can be easily loaded onto the beam. The VERTICAL splitting position is used for light logs as well as heavy logs that are difficult to load onto the beam.

Note:

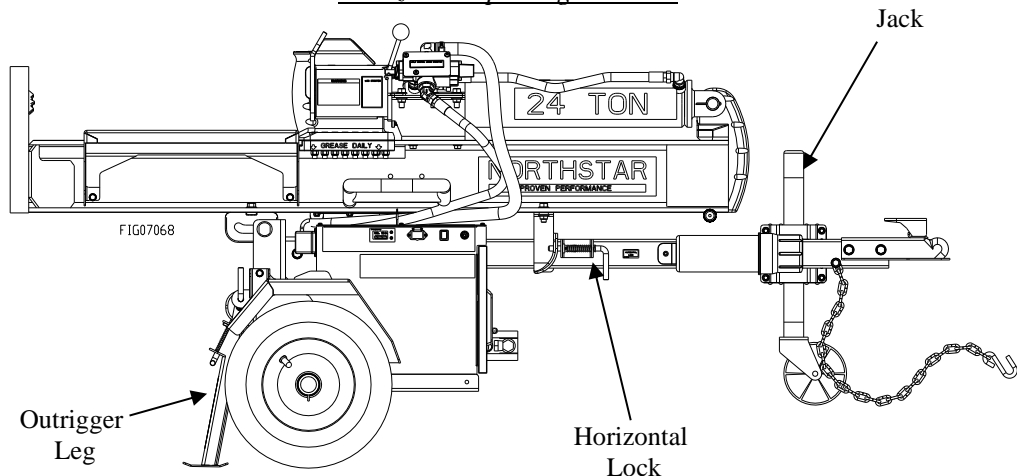
Musculoskeletal injury can result from lifting logs onto the log splitter if proper lifting techniques are not used or the logs are too heavy for a person's size, weight, or strength. In some cases, logs as small as 8" in diameter and 14" in length may be heavier than what some persons should be repeatedly lifting onto the splitter.

The use of the vertical splitting position can greatly reduce the need to lift logs onto the splitter. Employers are advised to consider NIOSH lifting guidelines when assigning employees to log splitting tasks for an extended period of time.

a) Set to Horizontal position

Make sure beam is locked securely in the horizontal position by checking the horizontal lock. Jack must be locked in the down position. Rear outrigger leg must be locked in horizontal splitting position.

Horizontal Splitting Position



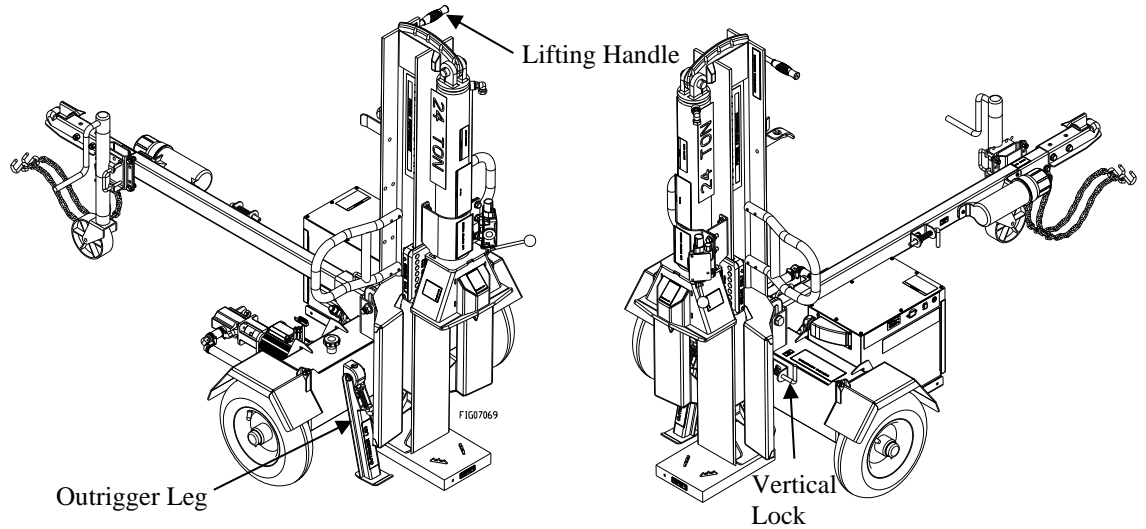
Splitting Operation

b) Set to
Vertical
position

- 1) Lock rear outrigger leg in down position.
- 2) Pull out horizontal lock catch pin, grasp lifting handle and lift beam until it rotates into vertical position.

⚠ WARNING: Crush hazard. The beam is heavy – do not let it just drop. It could crush fingers or cause damage to the splitter.

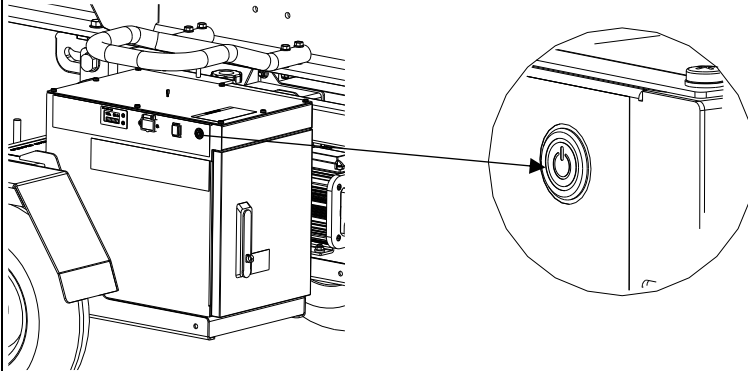
Vertical Splitting Position



- 3) Lock in vertical position using catch pin through the vertical lock.
- 4) To return to horizontal position, unlock vertical position, grasp lifting handle and lower beam carefully in a controlled manner until it rests on the tow bar, lock beam in the horizontal position with catch pin.

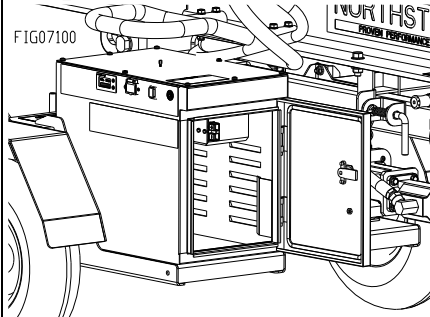
4. Install and connect battery

a. Ensure main power switch on the battery box control panel is in the Off position.



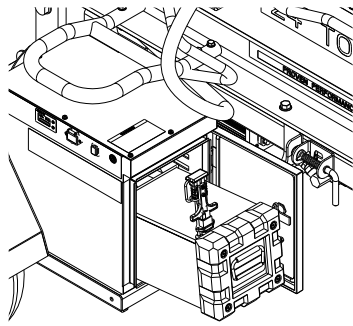
In the “off” position, the switch button is flush to the control panel surface.
In the “on” position, the switch button is recessed into the panel.

b. Open battery enclosure door by lifting and rotating the handle.



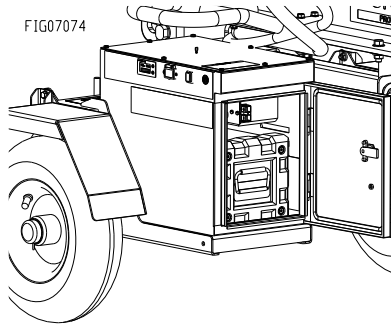
Splitting Operation

c. Using both carry handles, place the end of the battery pack opposite the power plug just inside the battery box enclosure.

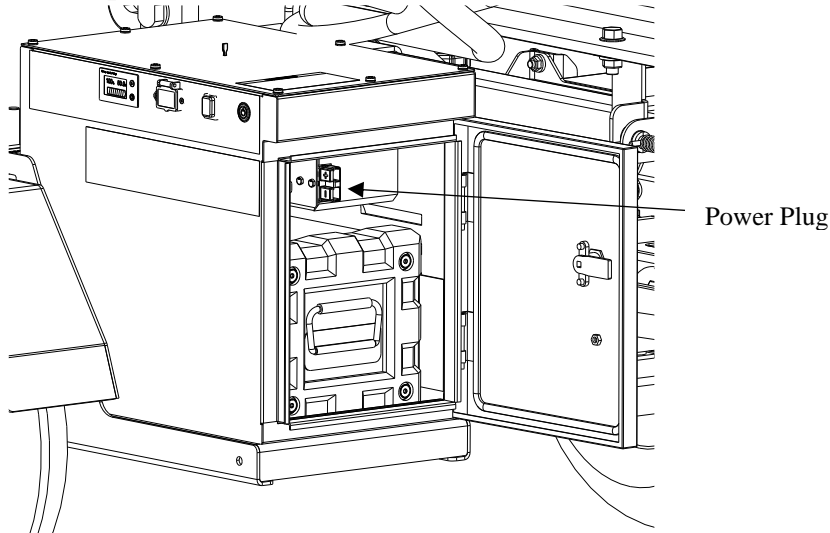


d. Make sure all wires and terminals are hanging over the outside end of the battery pack so they do not get pinched or damaged.

e. Slide the battery pack into the battery box until it reaches the back of the battery box. The front of the battery pack should be resting on the bottom of the battery box just inside the door.



f. Remove the power plug cover and use the power plug handle to insert the power plug into the receptacle mounted inside the battery box.

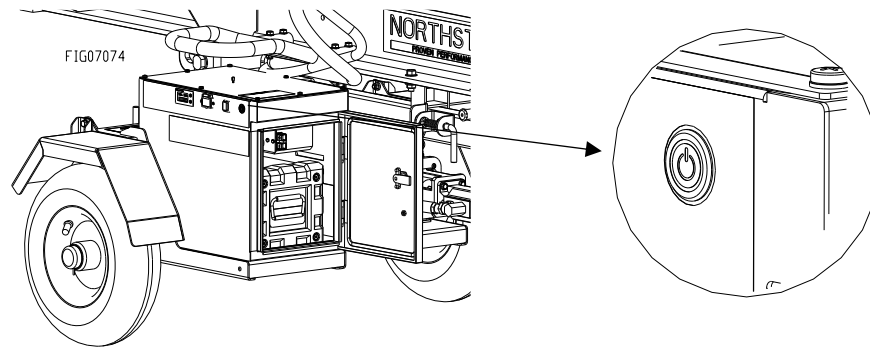


g. Close and latch the battery box door.

Splitting Operation

5. Turn motor on

Turn motor on.



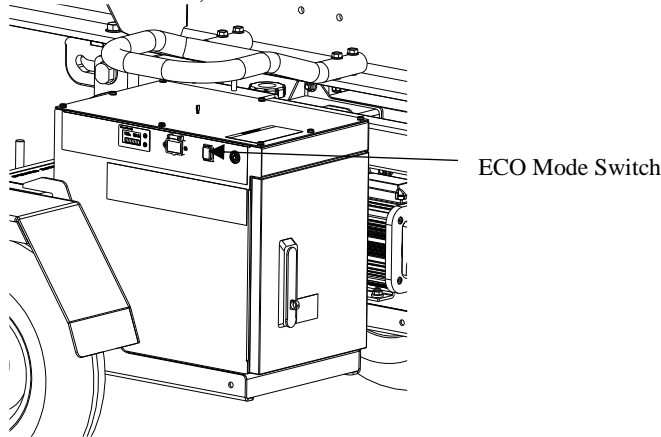
NOTE:

- Make sure the hydraulic oil is above 10°F before starting the motor. Cold hydraulic oil can damage the hydraulic pump. In addition, cold hydraulic oil is viscous and requires much more power to push through the hydraulic system. The motor will automatically turn off if the system is drawing too much power.
- If oil temperature is between 10°F and 32°F, allow the motor to run without moving the wedge for at least five minutes. After five minutes, extend and retract the wedge 10-15 times to circulate and warm the hydraulic oil before splitting wood.
- The log splitter can be started and run normally if the oil temperature is above 32°F.

6. Turn ECO mode on

Turn ECO mode on (if desired).

- Activate ECO mode using the switch shown below. If the log splitter is left inactive for 30 seconds, ECO mode will shut the motor off to conserve battery.



- Push main power switch back to the 'on' position to restart the log splitter if ECO mode shuts off the motor.

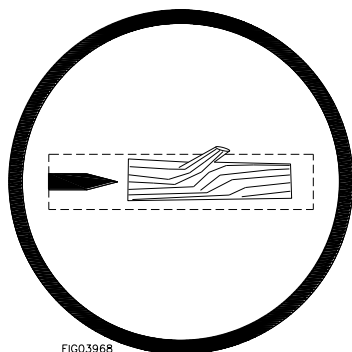
Splitting Operation

7. Load log

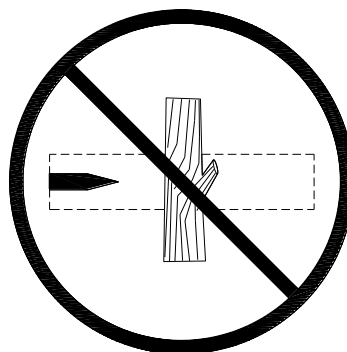
Load log onto beam with a cut end against the endplate – positioned for a lengthwise cut.

Notes:

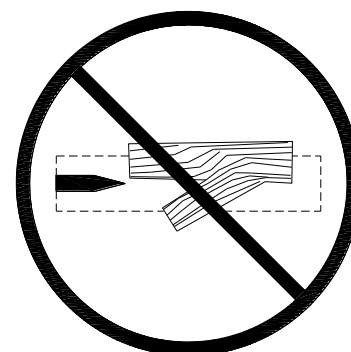
- The log splitter is designed only for cutting lengthwise with the grain, NOT for cutting across the grain.
- This log splitter is designed for cutting logs only up to a maximum of 16" in diameter and 25" long. Larger diameter logs could get stuck on the wedge and longer logs will not fit on the beam.



Correct Log Orientation



Incorrect Log Orientation



⚠ WARNING: ALWAYS keep hands and feet away from the endplate, wedge, and partially split logs while loading, operating, and unloading the log splitter.

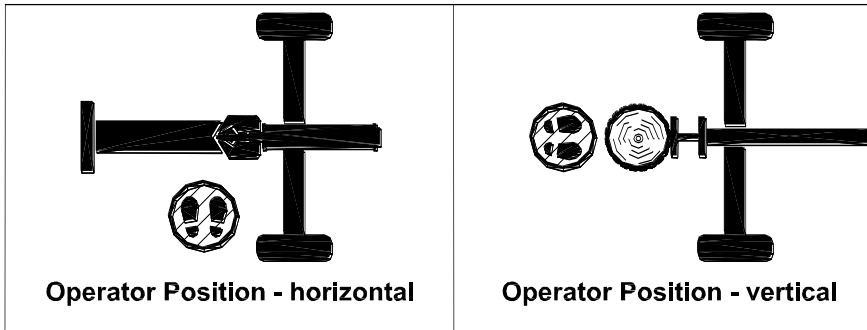
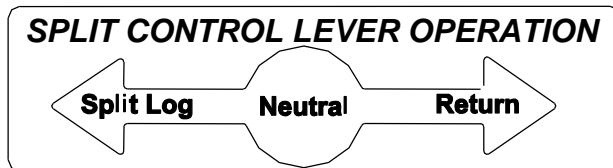
Important safety instructions:

- Hold bark side.** Hold the bark side of logs when loading or positioning, never the ends. Never place your hands or any part of your body between a log and any part of the log splitter.
- NOTE for vertical position loading:** Place the log on the endplate and turn it until it leans against the beam and is stable. If the log is too big or oddly shaped, stabilize the log with wooden shims between the log and endplate or ground. DO NOT use your leg or knee to stabilize the log. NEVER stabilize the log by placing your hand on top of the log.
- Wedge moving.** NEVER load or unload logs while the wedge is moving.
- Straddling / reaching across.** Never straddle, reach across, or step over the beam while the motor is on and the log splitter is in the horizontal position. You could trip, actuate the controls, and get seriously injured.
- Unsplit log pile.** Do not pile logs to be split in a place that will make you reach across the log splitter in order to load them.
- Square log ends.** Logs that are not cut square can slide out while splitting and become a safety hazard or cause excessive force to log splitter components. Use a chainsaw to cut logs square on each end before attempting to split them.
- Single log.** Never attempt to split more than one log at a time. Pieces of log can unexpectedly be thrown from the machine causing serious injury.
- Split along grain.** Do not use the log splitter to split logs across the grain. Doing so will damage the log splitter and could also cause pieces of log to be thrown, injuring the operator or bystanders.
- Forked logs.** Splitting forked logs can cause damage the log splitter. Trim the forked log with a chain saw prior to splitting the log.

Splitting Operation

8. Extend wedge

Move Split Control Lever toward endplate to extend wedge and split log.



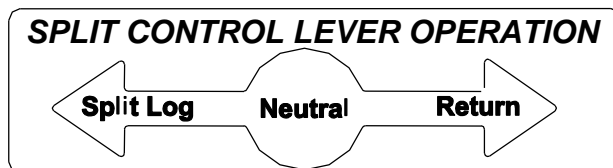
Important safety instructions:

- **Operator position.** ALWAYS operate the log splitter from the manufacturer's indicated OPERATOR POSITION. (See diagram above.) Other positions are unsafe because they can increase the risk of injury from crushing, cutting, flying objects, or burns.
- **Remove hands.** Remove both hands from log before activating Split Control Lever.
- **Hand activate.** Use only your hand to operate the Split Control Lever. Never use any other body part, or a rope, cable, or other remote device to actuate the control.
- **Second person.** Many accidents occur when there is more than one person involved in loading and operating the log splitter. Only one person should operate the controls. *If a second person is assisting in loading logs, the operator must NEVER actuate the Split Control Lever until the assistant and all bystanders are at least 10 feet away. NEVER allow an assistant to hold the log in place while the operator actuates the Split Control Lever.*

9. Stop wedge

Release Split Control Lever to stop wedge movement when log is split.

⚠ WARNING: Cracks in logs can close quickly and pinch fingers. Keep fingers away from any cracks that open in partially split logs.



Splitting Operation

10. Important STUCK LOG procedure

If a log does not split completely and becomes stuck on the wedge, follow the instructions below to remove the log.
A log can become stuck to the wedge if the wedge becomes embedded in the log and the log doesn't split and separate. This can happen if the log is too stringy or tough to split completely. A stuck log will move back with the wedge on the initial attempt to retract the wedge. If this happens, retract the wedge completely to allow the splitter to strip the log from the wedge. Keep hands clear of log and wedge while wedge is retracting.

⚠ WARNING: NEVER attempt to remove a stuck log by:

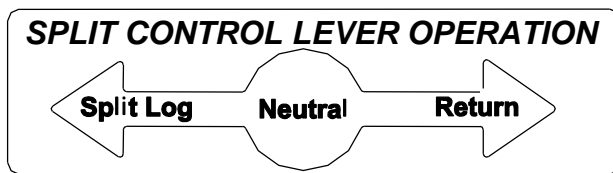
- Modifying the splitter.
- Adding attachments to the splitter.

Personal injury could result from log or metal pieces flying out at high speed toward the operator or bystanders, or the splitter could become damaged.

11. Return wedge

Move Split Control Lever away from end plate to return wedge.

Once the control valve is actuated in the return direction, the wedge is designed to keep returning by itself completely and then stop automatically.



⚠ WARNING:

Stay clear while the wedge is returning. It is still powerful enough on the return stroke to cause serious injury.

12. Remove split wood

Remove split wood from area.

Move each log away from log splitter after it is split. Split logs left near the log splitter are a trip hazard.

Splitting Operation

13. After use

1. Turn off motor.

2. Remove debris.

After the motor is off, clean debris from the log splitter.

3. Return to horizontal position.

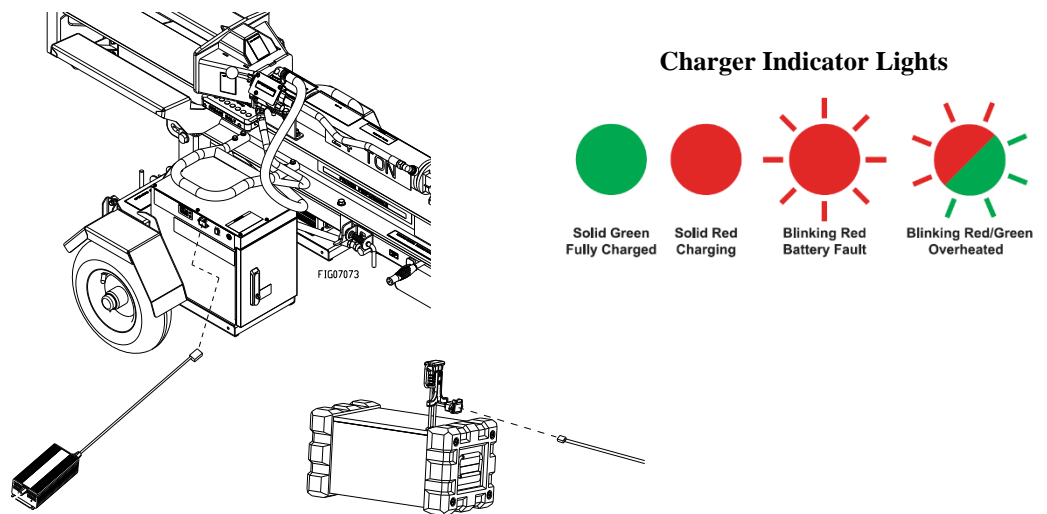
If in the vertical position, return log splitter to the horizontal position for greater stability and to prepare for transportation.

4. Charge battery.

Plug charger into battery or battery box (if battery is already installed in battery box, if not see step 4 in operation section to install). See charger manual for more detail.

ONLY USE NorthStar Charger item #5050015. Using other chargers may result in fire and/or bursting (explosion).

Do not charge the battery during operation. This can damage the battery.



Storage

Follow the instructions below for storing your log splitter between uses.

1. Retract wedge	Retract the wedge completely to keep the rod protected from corrosion.
2. Cool	Allow the machine to cool 5 minutes before storing.
3. Wipe with oily rag	Wipe the beam and wedge with an oily rag to prevent corrosion.
4. Charge battery and store indoors	Charge battery and store indoors. <ol style="list-style-type: none">1. Store the battery indoors in a cool, dry, ventilated environment.2. Unplug the battery from the charger.3. Keep the battery's charge above 50%. Charge the battery at least once every three months.4. Do not stack items on top of the battery.5. Inspect the battery and wires for any damage prior to use. <p>ONLY USE NorthStar Charger item #5050015. Using other chargers may result in fire and/or bursting (explosion).</p>

Periodic Maintenance

In addition to the maintenance performed with each use, periodic maintenance should also be performed according to the following schedule.

WARNING


ALWAYS turn off the motor, relieve system pressure, and disconnect battery before cleaning, adjusting, or repairing the splitter. Relieve system pressure by moving Split Control Lever back and forth several times.

Important:

If a part needs replacement only use parts that meet the manufacturer's specifications. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the log splitter.


1. Hydraulic Oil Change

Change Hydraulic Oil Annually or Every 100 Hours.

 **WARNING:** High fluid pressures and temperatures are developed in hydraulic log splitters. Hydraulic fluid escaping through a pin hole sized opening can burn or puncture skin, resulting in wounds that could cause blood poisoning, infection, disability, gangrene, amputation, or death. Therefore, the following instructions should be heeded at all times when inspecting or servicing the hydraulic components of the log splitter.

- NEVER check for leaks with your hand. Leaks can be located by holding a piece of cardboard or wood (at least two feet long) with your hand at one end and passing the other end over the suspected area (wear eye protection). Look for discoloration of the cardboard or wood.
- NEVER adjust the pressure of the pump or valve.
- If injured by escaping fluid, no matter how small the wound is, see a doctor at once. A typical injection injury may be a small wound that does not look serious. However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.

1. Use 10wt AW32, ASLE H-150, or ISO32 oil.
2. Relieve hydraulic system pressure by moving Split Control Lever back and forth several times.
3. Remove hydraulic breather cap/oil dipstick

 **WARNING:** NEVER remove the hydraulic breather cap/oil dipstick when the motor is on. Hot oil can escape causing severe burns. Allow the log splitter to cool completely before removing hydraulic breather cap/oil dipstick.

4. Remove the magnetic drain plug from the hydraulic tank to drain the hydraulic oil into a 10-gallon pan.
5. Remove suction strainer and wipe off debris with a dry cloth.
6. Fill the hydraulic tank with wedge retracted.
7. Dispose of used oil at an oil-recycling center. Used hydraulic oil is hazardous waste.
8. Extend and retract wedge 5 (five) times to purge air from the system.
9. Check hydraulic oil level and fill if necessary. Note: Do not thread in the oil dipstick when checking the hydraulic oil level.

Troubleshooting

⚠ WARNING

Before troubleshooting or attempting to service, read the following safety instructions to avoid serious injury to the operator or bystanders from moving parts that can crush or cut, burns, fire or explosion, or escaping high pressure hydraulic fluid.

Important Safety Instructions:

1. **Motor off.** Always make sure the motor is off and battery is disconnected before cleaning, repairing, or adjusting the splitter, except as recommended by the manufacturer.
2. **Hydraulic safety.** High fluid pressures and temperatures are developed in the hydraulic log splitters. Hydraulic fluid escaping through a pin hole sized opening can burn or puncture skin, resulting in wounds that could cause blood poisoning, infection, disability, gangrene, amputation, or death. Therefore, the following instructions should be heeded at all times when inspecting or servicing the hydraulic components of the log splitter:
 - Turn motor off, move all control valve handles back and forth to relieve pressure, and disconnect battery before changing or adjusting hydraulic components such as hoses, tubing, fittings, or other components.
 - Do not remove the hydraulic oil fill cap when the motor is on. Hot oil can escape causing severe burns. Allow the log splitter to cool completely before removing the hydraulic oil fill cap.
 - Do not adjust the pressure setting to the pump or valve.
 - Do not check for leaks with your hands. Leaks can be located by holding a piece of cardboard or wood (at least 2 feet long) with your hand at one end and passing the other end suspected area (wear eye protection). Look for discoloration of the cardboard or wood.
 - If injured by escaping fluid, no matter how small the wound is, see a doctor at once. A typical injection injury may be a small puncture that does not look serious. However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.

Problem	Solution
Wedge will not move	Solution: A,D,E,H,J
Motor will not turn on	Solution: L,M
Motor stops suddenly	Solution: M,N,O
Slow wedge speed when extending or retracting	Solution: A,B,C,H,I,K
Wood will not split or splits extremely slow	Solution: A,B,C,F,I,K
Motor bogs down during splitting	Solution: G
Motor bogs down under low load condition	Solution: D,E
Cause	Solution
A- Insufficient oil to pump	Check oil level in reservoir
B- Air in oil	Check oil level in reservoir, check for leaks in the suction line
C- Excessive pump inlet vacuum	Check pump inlet hose for blockage or kinks
D- Blocked hydraulic lines	Flush and clean the splitter hydraulic system
E- Blocked control valve	Flush and clean the splitter hydraulic system
F- Low control valve setting	Adjust control valve with a pressure gauge
G- High control valve setting	Adjust control valve with a pressure gauge
H- Damaged control valve	Return control valve for authorized repair
I- Internal control valve leak	Return control valve for authorized repair
J- Damaged cylinder piston	Return cylinder for authorized repair
K- Internally damaged cylinder	Return cylinder for authorized repair
L- Battery is not connected	Connect battery power plug
M- Battery is exhausted	Charge battery
N- ECO mode has activated	Disable ECO mode
O- Over-current protection	Reduce load on motor, allow hydraulic oil to warm

Any Questions, Comments, Problems or Parts Orders
Call NorthStar Product Support 1-800-270-0810

Specifications

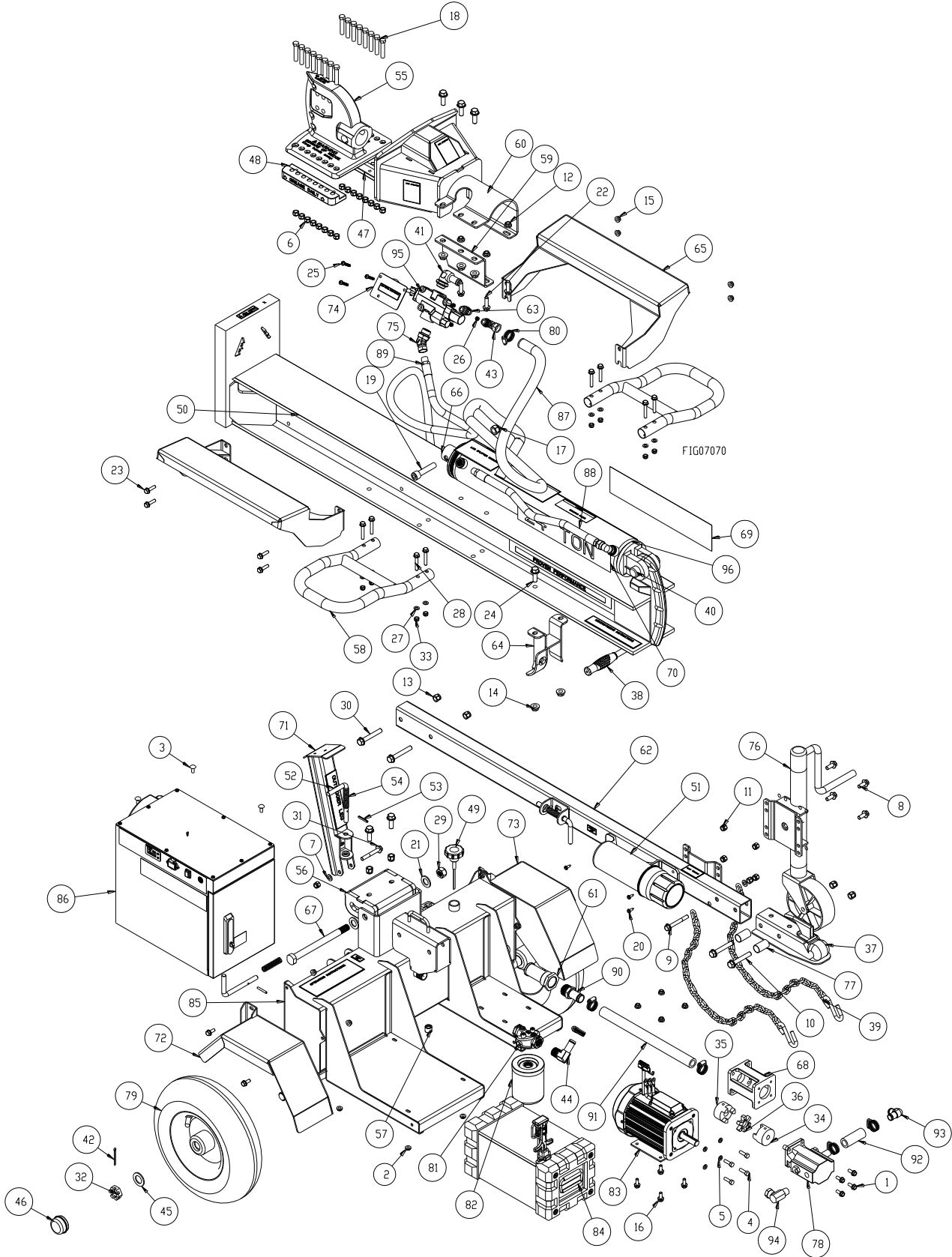
Splitter Specifications

Item #	5044310
Tonnage	24 TON
Pressure	3500 PSI
Flow	11 GPM
Hydraulic Cylinder Bore	4"
Hydraulic Cylinder Stroke	24"
Maximum Log Length	25"
Maximum Log Width	16"
Hydraulic Fluid Type	10wt AW32, ASLE H-150, or ISO32
Hydraulic Oil Capacity	8 GAL
Coupler Size	2" Ball
Maximum Towing Speed	45 MPH
Overall Dimensions	90" x 45" x 45" (LxWxH)
Dry Weight	750 LB
Volts	57.6V Nominal (60V Max)
Amp Rating	30 Ah
Charge Time	3.5 hours

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

Any Questions, Comments, Problems or Parts Orders
Call NorthStar Product Support 1-800-270-0810

Parts Breakdown – Exploded View – Rev B

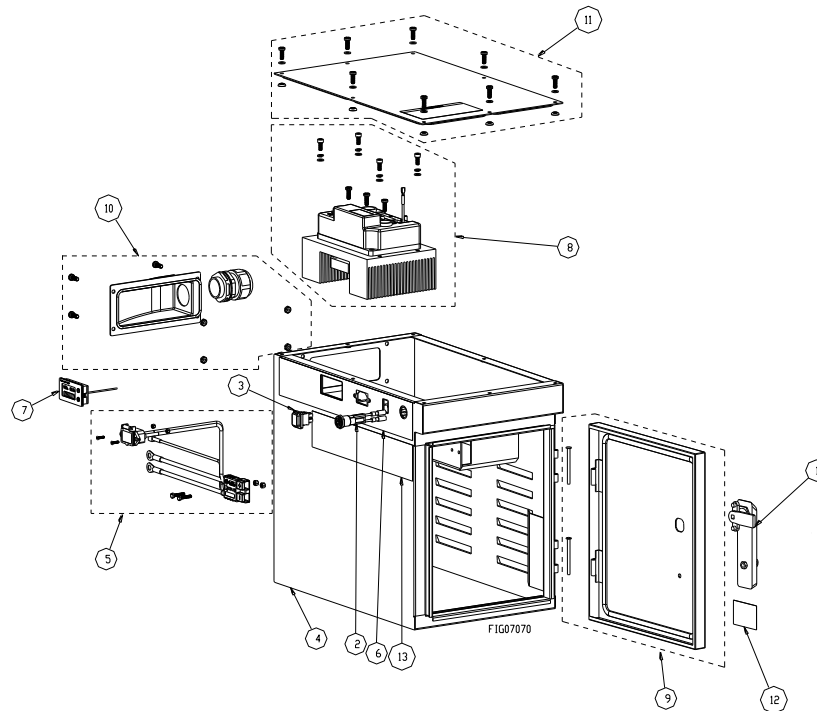


Parts Breakdown – Exploded View – Rev B

Ref #	Part #	Description	QTY
1	82015	5/16-18 X 3/4 HHSF BOLT	4
2	82019	SERRATED FLANGE NUT	4
3	82088	CARRIAGE BOLT, 5/16 X 3/4"	4
4	82092	5/16-24 X 1 HH BOLT	4
5	82100	5/16 SPLIT LOCK-WASHER	4
6	82115	NUT, 7/16 NYLON INSERT	16
7	82201	10MM FLAT WASHER	2
8	82262	M10-1.5 X 25 HHSF GR5	4
9	82266	M10-1.5 x 80 HHSF GR5	1
10	82267	M12-1.75 X 75 HHSF	2
11	82270	M10-1.5 NYLON INSERT NUT	6
12	82271	M10-1.5 SER FLANGE NUT	4
13	82272	M12-1.75 NYLOC NUT	6
14	82273	M12-1.75 SER FLANGE NUT	5
15	82281	M8-1.25 SER FLANGE NUT	12
16	82292	M8-1.25 X 20 HHCS GR5	8
17	82332	NUT, 5/8 NYLON INSERT	1
18	82467	7/16-14 X 57MM HHCS CLASS 10.9	16
19	82468	5/8-11X2 3/4 SHCS (CLASS 12.9)	1
20	82529	M6 X 20MM SELF TAPPING SCREW	3
21	82530	M20 SAE FLAT WASHER	4
22	82535	M10-1.5 X 35 HHSF GR5Z	4
23	82545	M8-1.25 X 30 HHSF GR5Z BOLT	4
24	82551	M12-1.75 x 35 HHSF GR5 z	7
25	82562	M6-1.0 X 35MM, PHCS, ZINC	3
26	82563	M6-1.0 NYLON-INSERT LOCKNUT	3
27	82564	M8 FLAT WASHER	8
28	82565	M8-1.25 x 50 HHSF GR5	8
29	82567	M18-2.5 NYLON INSERT NUT	1
30	82569	M12-1.75 HHSF	2
31	82574	M10-1.5 X 70 HHSF GR5 Z	1
32	777124	WHEEL NUT	2
33	777495	M8-1.25 NYLOCK NUT	8
34	777909	COUPLING 1/2"	1
35	777910	COUPLING 3/4"	1
36	777912	COUPLING INSERT	1
37	778423	2" TRAILER COUPLER	1
38	778459	HAND GRIP	1
39	778481	27" CHAIN WITH "S" HOOK	2
40	778592	CLEVIS PIN, 1.25"	1
41	778642	90 O-RING X 3/4" HB	1
42	778674	COTTER PIN, 1/8" X 2"	4
43	778827	O-RING X FNPT SWIVEL ELBOW,8-8	2
44	778829	MNPT X HOSE BARB ELBOW, 12-12	1
45	778844	AXLE STUB WASHER	2
46	780598	DUST CAP	2
47	783968	WEDGE KEEPER, RIGHT	1
48	783969	WEDGE KEEPER, LEFT	1

Ref #	Part #	Description	QTY
49	784470	LS BREATHER/DIPSTICK	1
50	787833	SPLITTER BEAM WELDMENT	1
51	788040	MEDIUM MANUAL TUBE	1
52	788243	LATCH ROD	3
53	788244	SPRING PIN	3
54	788245	LATCH SPRING	3
55	788263	WEDGE	1
56	788343	PIVOT WELDMENT	1
57	790064	1/2" DRAIN PLUG WITH MAGNET	1
58	790431	ENGINE GUARD	2
59	790444	NSTAR HOOP BRACKET	1
60	790445	STRIPPER WLDT	1
61	790470	STRAINER 1" FPT X 1-1/2" MPT	1
62	790473	TOWBAR WLDT	1
63	790488	8MOR X 8MOR ADJ FITTING	1
64	790548	TOWBAR LATCH WLDT-PH	1
65	790562	LOG CRADLE	2
66	790564	ADAPTOR SLEEVE	1
67	790746	LS, PIVOT BOLT	1
68	790747	ITI PUMP MOUNT BRKT	1
69	790776	NORTHSTAR DECAL	2
70	790810	TONNAGE DECAL	2
71	790926	OUTRIGGER LEG WLMT	1
72	790930	LS, NS RIGHT FENDER WLDT	1
73	790931	LS, NS LEFT FENDER WLDT	1
74	791187	VALVE PLATE ASSEMBLY	1
75	791219	12 MOR-8 FP X 45 FORGED	1
76	791311	SINGLE WHEEL JACK-NS LS	1
77	791545	NS LS, TOWBAR SPACER	2
78	791862	PUMP, CONCENTRIC 11GPM HI/LO	1
79	791875	TIRE,480X8, INTEGRAL HUB ASM	2
80	805411	HOSE CLAMP	6
81	802541	FILTER HEAD	1
82	802542	FILTER	1
83	804300	MOTOR, 60V DC, 3.6kW	1
84	5043106	BATTERY ASSEMBLY	1
85	804516	HYDRAULIC TANK WELDMENT	1
86	804686	BATTERY BOX ASM, SPLITTER	1
87	804811	HOSE, 65" X 3/4" SUCTION	1
88	804814	1/2" X 25" HOSE W/ 1/2" MALE NPT	1
89	804815	HOSE, 1/2" MALE NPT HP	1
90	804896	FITTING, 1"HB X 1"MPT	1
91	805066	HOSE, 3/4" X 15" SUCTION	1
92	805067	HOSE, 3/4" X 3" SUCTION	1
93	805068	FITTING, 3/4 HOSE BARB ELBOW	1
94	50RAS8	1/2" M X 1/2" F RT ANGLE	1
95	802543	HYDRAULIC CONTROL VALVE	1
96	790397	4" x 24" CYLINDER	1
N/A	5050015	BATTERY CHARGER	1

Parts Breakdown – Exploded View – Rev B



Ref #	Part #	Description	QTY
1	804626	LATCH, BATTERY BOX DOOR	1
2	805028	SWITCH, MAIN POWER	1
3	804636	SWITCH, ROCKER WITH COVER	1
4	804687	BATTERY BOX WELDMENT, SPLITTER	1
5	805124	WIRE HARNESS KIT, SPLITTER	1
	-	WIRE HARNESS	1
	-	SCREW, M3 -0.5 X 12mm	2
	-	NUT, M3 -0.5 NYLOC	2
	-	MAIN CONNECTOR	1
	-	BOLT, M4 -0.7 X 20mm HHCS	2
	-	NUT, M4 -0.7 NYLOC	2
	802671	WIRE SLEEVING, 1200mm	1
6	804773	DECAL, CONTROL PANEL, SPLITTER	1
7	805196	BATTERY MONITOR, 60V	1
8	805125	MOTOR CONTROLLER KIT	1
	-	MOTOR CONTROLLER	1
	-	SCREW, M5 -0.8 X 15mm PPHM	3
	-	SCREW, M5 -0.8 X 12mm SHCS	4
	-	WASHER, M5 SPRING	4
9	805120	DOOR KIT	1
	-	DOOR	1
	-	PIN	2
10	805121	WIRE ROUTING BOX KIT, SPLITTER	1
	-	WIRE ROUTING BOX	1
	-	CORD STRAIN RELIEF	1
	-	SCREW, #10-24 X 15mm PPHM	4
11	805123	BATTERY BOX LID KIT	1
	-	LID	1
	-	SCREW, #10-24 X 15mm PPHM	8
	-	D-RING	8
		WASHER, NYLON	8
12	805003	DECAL, LATCH INSTRUCTIONS	1
13	805004	DECAL, 60V LI-ION	1
N/A	804686	BATTERY BOX FULL ASSEMBLY, SPLITTER	1

Summary of Important Safety information for Operation

WARNING

Carefully read and make sure you understand the following safety information before using the log splitter. Improper use or maintenance of the log splitter can result in serious injury to the operator or bystanders from moving parts that can crush or cut, flying objects, burns, fire or explosion, escaping high pressure hydraulic fluid.

Introduction

- **Read Manual.** Read this operator's manual completely before attempting to use the log splitter. Serious injury or death can result if safety instructions are not followed.
- **Instruct operators.** The log splitter owner should instruct all operators in safe log splitter operation.
- **Intended use.** Log splitters should only be used for splitting wood logs, lengthwise with the grain. Do not use for other purposes, as unforeseen hazards may result.

DANGER

Failure to follow the instructions below may result in excessive heat, fire, and/or bursting (explosion), etc.

Do not heat, or place into fire. Do not use, charge, or leave in a hot place.

General Electrical Safety

- **READ** owner's manual before using. Failure to follow instructions may result in fire or electric shock.
- **FOR USE ONLY** with NorthStar Li-Ion Battery Pack item #5043106 and NorthStar Charger item #5050015. Using other batteries or chargers may result in fire and/or bursting (explosion).
- **DO NOT** operate in a wet environment or expose to rain.
- **DO NOT** operate in extreme temperatures or expose to fire.
- **DO NOT** charge or use if damaged.
- **DO NOT** drop or impact the battery.
- **DO NOT** disassemble, modify, or repair the battery.
- **DO NOT** allow water to contact the battery terminals or get inside the battery.
- **DO NOT** touch the battery connectors with metal objects or insert metal objects through openings into the battery.
- **DO NOT** store battery in damp location. Doing so can cause a malfunction.
- **IF THE BATTERY LEAKS** fluid or smells strangely, immediately move it away from any heat sources or flame. There is a risk of fire or rupturing if the leaked liquid or gas ignites. Also, if liquid gets into your eyes, rinse them with plenty of water. After that, immediately seek medical care.
- **WHEN BATTERY IS NOT IN USE**, keep away from metal objects, like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting battery terminals together may cause burns or a fire.
- **IN CASE OF FIRE**, stop using machine immediately and extinguish with dry chemical, sandy soil, carbon dioxide, or appropriate foam.

Prohibition Against Modifications

Never modify or alter the log splitter in any way. Modifications can create serious safety hazards and will void the warranty.

- **Attachments.** Never add attachments to the splitter, except for authorized accessories supplied by the manufacturer with instructions for safe installation and use.
- **Motor Speed.** The maximum motor speed is preset at a safe limit. Never attempt to modify the motor speed setting to run at a higher speed.
- **Remote Control.** NEVER attach a rope, cable, or other remote device to the splitting control.
- **Splitting Wedge.** NEVER attempt to change the height or speed of the splitting wedge.
- **Pressure Setting.** NEVER increase the pressure setting of the pump or control valve.

Operator Restrictions

- **Untrained Operators.** Do not allow anyone to operate the log splitter who has not read the owner's manual or been instructed on the safe use of the splitter.
- **Minimum Operator Age.** Never allow anyone under age 16 to operate the log splitter. Anyone 16 years of age and older must be trained and supervised by a trained adult.

Summary of Important Safety information for Operation

General Safety While Moving

- **Horizontal position.** Make sure the log splitter is secured in the horizontal position before moving the log splitter. DO NOT move the log splitter when it is in the vertical position because it will be unstable and could tip.
- **Hills.** Do not move the log splitter up or down hills by hand – use a towing vehicle.
- **No riding.** Never allow anyone to sit or ride on the log splitter.
- **No cargo.** Never transport cargo or wood on the log splitter.

Safety During Towing

- **Read instructions.** Review towing safety instructions in your towing vehicle manual.
- **Securely attached.** Be sure the log splitter is securely attached to the towing vehicle before towing.
- **Tires.** Be sure the tires are fully inflated and in good repair before towing the log splitter. When adding air to the tires, do not over-inflate – serious injury could occur if tire explodes.
- **Added length.** Be aware of the added length of the splitter.
- **Speed Limit.** Never tow this log splitter over 45 mph. Faster speeds may result in loss of control.
- **Rough terrain.** Be extra cautious and drive slowly when traveling over rough terrain.
- **Under the influence.** Never tow this splitter while under the influence of alcohol, drugs, or medication.
- **On public roads.** If towing on a public road, make sure to comply with all local, state, and federal towing requirements. It is the sole responsibility of the purchaser to obtain licensing, trailer lights, safety chains or signage, as needed to comply.
- **Unattended.** Turn off the towing vehicle before leaving the splitter unattended.
- **Disconnect before operating.** Do not use the log splitter while it is connected to the towing vehicle.

Safety – Before Use

Read/instruct

- **Read manual.** Do not allow anyone to operate the log splitter who has not read the owner's manual or has not been instructed on the safe use of the splitter.
- **Review safety rules.** Before starting this log splitter, review the "Rules for Safe operation." Failure to follow these rules may result in serious injury to the operator or bystanders.
- **Know how to stop.** Be thoroughly familiar with all controls and proper use of the equipment. Know how to stop the splitter and relieve system pressures quickly if needed.

Personal protective equipment

- **Eye protection.** Always wear safety glasses or goggles when operating the machine. Pieces of log may fly out and serious eye injury can occur.
- **Boots.** Falling logs can crush feet. Always wear safety shoes or heavy boots when operating or helping to load logs.
- **Loose/dangling.** Loose or dangling apparel can become entangled in moving parts. Never wear jewelry or loose-fitting clothing.
- **Gloves.** Wear snug fitting gloves without drawstrings or loose cuffs.

Safety During Inspection/Maintenance

Always inspect your log splitter before each use, and repair as needed, to keep it in safe working condition:

- **Motor off.** Always make sure the motor is off before cleaning, repairing, or adjusting the splitter, except as recommended by the manufacturer.
- **Motor debris.** With the motor off, clean debris from the motor shell.
- **Other debris.** Debris on moving parts can cause excess wear. With the splitter motor off, clear debris from moving parts.
- **Mechanical parts.** Check to be sure that all nuts and bolts are tight to make sure the log splitter is in safe working condition.
- **Hydraulic system.** Check the hydraulic system (hoses, tubing, clamps/fittings, pump, and cylinder) carefully before each use. Do not operate the log splitter with frayed, kinked, cracked or damaged hydraulic hoses, fittings, or tubing, or if oily residue is observed on any of the components. High fluid pressures and temperatures are developed in the log splitter. Hydraulic fluid escaping through a pin hole sized opening can burn or puncture skin, resulting in wounds that could cause blood poisoning, infection, disability, gangrene, amputation, or death. Therefore, the following instructions should be heeded at all times when inspecting or servicing the hydraulic components of the log splitter:
 - Do not remove the hydraulic oil dipstick when the motor is on. Hot oil can escape causing severe burns. Allow log splitter to cool completely before removing hydraulic oil dipstick.
 - Do not adjust the pressure setting of the pump or valve.

Summary of Important Safety information for Operation

- o Do not check for leaks with your hand. Leaks can be located by holding a piece of cardboard or wood (at least two feet long) with your hand at one end and passing the other end over the suspected area (wear eye protection). Look for discoloration of the cardboard or wood.
- o Turn motor off and move all control valve handles back and forth to relieve pressure before changing or adjusting hydraulic system components such as hoses, tubing, fittings, or other components.
- o If injured by escaping fluid, no matter how small the wound is, see a doctor at once. A typical injection injury may be a small puncture wound that does not look serious. However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.
- **Tires.** Be sure tires are fully inflated and in good repair before towing the splitter. When adding air to tires, do not over-inflate -- serious injury could occur if tire explodes.
- **Guards / shields.** Make sure all guards and shields are replaced after servicing the log splitter.
- **Replacement parts.** If a part needs replacement, only use parts that meet the manufacturer's specifications. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the log splitter.

Safety in Work Site Selection

- **Fire extinguisher.** Have a Class “ABC” rated fire extinguisher available as a precautionary measure when operating the log splitter in dry areas. Keep it properly charged and be familiar with its use.
- **Level, dry surface.** To prevent accidental falls and equipment tip over, make sure the splitter is situated on a dry, level surface with good footing. Stay clear of areas with mud, ice, tall grass, weeds, brush, or snow.
- **Block wheels.** Always block the wheels to prevent unintended movement of the log splitter.

Summary of Important Safety information for Operation

Safety – During Use General Safety During Use

⚠ WARNING: Before starting this log splitter, review the following rules for safe operation. Failure to follow these rules may result in serious injury to the operator or bystanders.

- **Safety equipment / controls.** Always operate the log splitter with all safety equipment in place and in good working order, and all controls properly adjusted for safe operation.
- **Operating speed.** Always operate the log splitter at the manufacturer's recommended speed. The maximum speed of the motor, pump and wedge are preset within safe limits.
- **Know how to stop.** Be thoroughly familiar with all controls and with the proper use of the equipment. Know how to stop the log splitter and relieve system pressures quickly if needed.
- **Daylight only.** Only use the log splitter in daylight so you can see what you are doing.
- **Smoking / sparks.** Never smoke while operating the log splitter, and never operate near sources of sparks or flames.
- **Unattended.** Never leave the machine unattended while the motor is on.
- **Under the influence.** Never operate, or let anyone else operate, the log splitter while under the influence of alcohol, drugs, or medication.
- **Adjusting / repairing.** Always make sure the motor is off before cleaning, repairing, or adjusting the splitter, except as recommended by the manufacturer. In addition, move all control handles back and forth to relieve system pressure *before changing or adjusting hydraulic system components* such as hoses, tubing, fittings, or other components.

Safety in Loading, Operating, and Unloading

- **Square log ends.** Logs that are not cut square can slide out while splitting and become a safety hazard or cause excessive force to log splitter components. Use a chainsaw to cut logs square on each end before attempting to split them.
- **Single log.** Never attempt to split more than one log at a time. Pieces of log can unexpectedly be thrown from the machine causing serious injury.
- **Split along grain.** Do not use the log splitter to split logs across the grain. Doing so will damage the log splitter and could also cause pieces of log to be thrown, injuring the operator or bystanders.
- **Forked logs.** Splitting forked logs can cause damage the log splitter. Trim the forked log with a chain saw prior to splitting the log.
- **Keep hands clear.** ALWAYS keep hands and feet away from the endplate, wedge, and partially split logs while loading, operating, and unloading the log splitter.
- **Operator position.** ALWAYS operate the log splitter from the manufacturer's indicated OPERATOR POSITION. Other positions are unsafe because they can increase the risk of injury from crushing, cutting, flying objects, or burns.
- **Straddling / reaching across.** Never straddle, reach across, or step over the beam while the motor is on and the log splitter is in the horizontal position. You could trip, actuate the controls, and get seriously injured.
- **Second person.** Many accidents occur when there is more than one person involved in loading and operating the log splitter. Only one person should operate the controls. *If a second person is assisting in loading logs, the operator must NEVER actuate the Split Control Lever until the assistant and all bystanders are at least 10 feet away. NEVER allow an assistant to hold the log in place while the operator actuates the Split Control Lever.*

Summary of Important Safety information for Operation

Loading/Unloading

- **Unsplit log pile.** Do not pile logs to be split in a place that will make you reach across the log splitter in order to load them.
- **Hold bark side.** Hold the bark side of logs when loading or positioning, never the ends. Never place your hands or any part of your body between a log and any part of the log splitter.
- **NOTE for vertical position loading:** Place the log on the endplate and turn it until it leans against the beam and is stable. If the log is too big or oddly shaped, stabilize the log with wooden shims between the log and endplate or ground. DO NOT use your leg or knee to stabilize the log. NEVER stabilize the log by placing your hand on top of the log.
- **Wedge moving.** NEVER load or unload logs while the wedge is moving.
- **Cracks.** Cracks in logs can close quickly and pinch fingers. Keep fingers away from any cracks that open in partially split logs.
- **Split log pile.** Move each log away from log splitter after it is split. Split logs left near the log splitter are a trip hazard.
- **Remove hands.** Remove both hands from log before activating Split Control Lever.
- **Hand activate.** Use only your hand to operate the Split Control Lever. Never use any other body part, or a rope, cable, or other remote device to actuate the control.
- **Returning wedge.** Once the control valve is actuated in the return direction, the wedge is designed to keep returning by itself completely and then stop automatically. Stay clear while the wedge is returning. It is still powerful enough on the return stroke to cause serious injury.
- **Log stuck on wedge.** If a log does not split completely and becomes stuck on the wedge, follow the instructions below to remove the log. A log can become stuck to the wedge if the wedge becomes embedded in the log and the log doesn't split and separate. This can happen if the log is too stringy or tough to split completely. A stuck log will move back with the wedge on the initial attempt to retract the wedge. If this happens, retract the wedge completely to allow the splitter to strip the log from the wedge. Keep hands clear of log and wedge while wedge is retracting.

⚠ WARNING: NEVER attempt to remove a stuck log by:

- Modifying the splitter.
- Adding attachments to the splitter.

Personal injury could result from log or metal pieces flying out at high speed toward the operator or bystanders, or the splitter could become damaged.

Safety – After use

- **Return to horizontal.** If in the vertical position, turn off motor and disconnect battery and install rubber caps/plugs over terminals, and return log splitter to the horizontal position for greater stability and to prepare for transportation.
- **Remove motor debris.** With the motor off, clean debris from the motor shell.
- **Periodic maintenance.** Perform periodic maintenance as directed in this manual to keep the log splitter in safe working condition.

Assembly Instructions

Remove all components from the shipping container. Using this manual, identify and sort components as necessary.

Closely inspect all log splitter components.

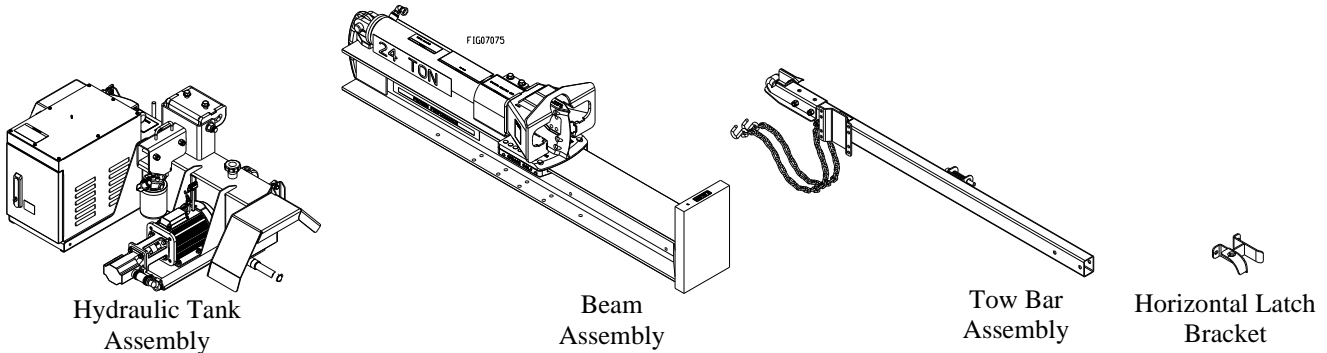
If you have missing or damaged components, please contact Product Support at 1-800-270-0810.

Find a workspace that is large enough to maneuver log splitter once completely assembled. Assemble log splitter on solid and level ground.

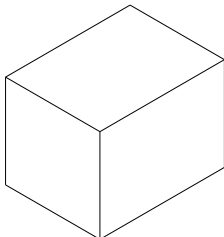
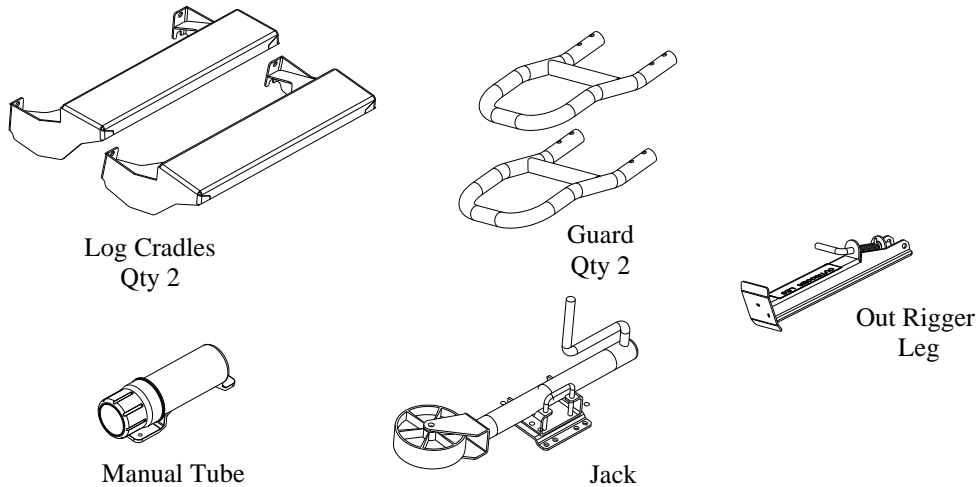
CAUTION! Heavy lifting required. Some of the components in these assembly instructions are heavy and cannot be lifted by one person safely. Please plan on assembling this product when another person can be available to help out.

CAUTION! Hose clamp orientation: When assembling hose clamps, orient the runout-tab so that it is out of the way of any interaction points on the log splitter

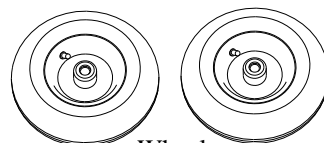
Tools needed: Adjustable wrenches, Torque Wrench, Soft Faced Mallet, Flat Blade Screwdriver, Allen Wrench



Contents below are shrink-wrapped together and packaged inside log splitter crate.



Box

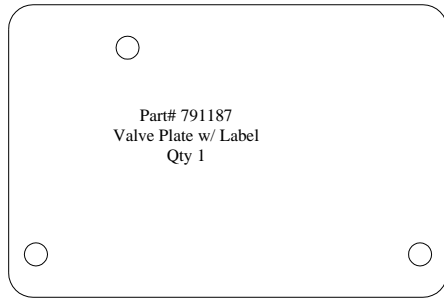


Wheels Qty 2

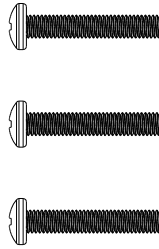
Assembly Instructions

Parts Bag:

FIG07076



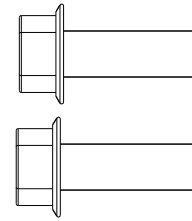
Part# 791187
Valve Plate w/ Label
Qty 1



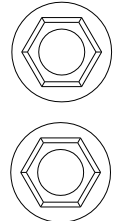
Valve Plate
Part# 82562
M6-1.0 x 35mm PHCS, Zinc
Qty 3



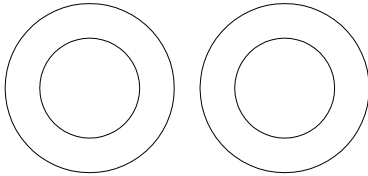
Valve Plate
Part# 82563
M6-1.0 Nylon Insert Locknut
Qty 3



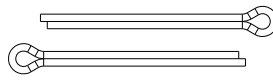
Horizontal Latch to Beam
Part# 82551
M12-1.75 x 35 HHFS GR5Z
Qty 2



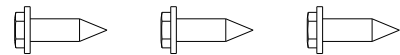
Horizontal Latch to Beam
Part# 82273
M12-1.75 Ser Flange Nut
Qty 2



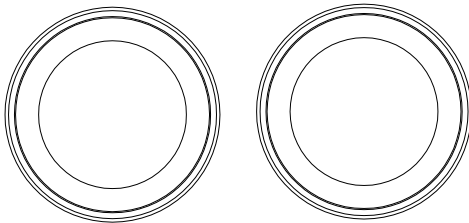
Wheel Assembly
Part# 778844
Axle Stub Washer
Qty 2



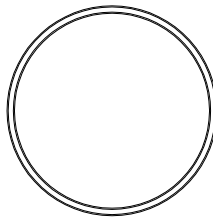
Wheel Assembly
Part# 778674
Cotter Pin, 1/8" x 2"
Qty 2



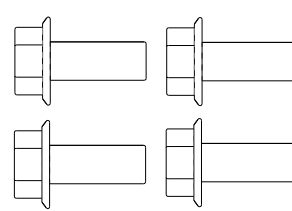
Manual Tube
Part# 82529
M6 x 20mm Self Tapping Screw
Qty 3



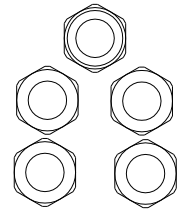
Wheel Assembly
Part# 124A
Dust Cap
Qty 2



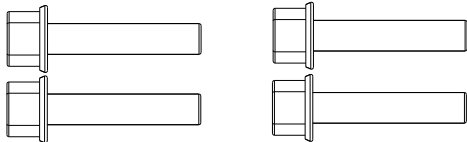
Wheel Assembly
Part# 780599
Dust Cap Tool
Qty 1



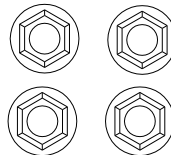
Jack to Tow Bar
Part# 82262
M10-1.5 x 25 HHFS
Qty 4



Jack to Tow Bar, Qty 4
Out Rigger to Tank, Qty 1
Part# 82270
M10-1.5 Nylon Insert Nut



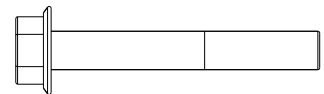
Log Cradles to Beam
Part# 82545
M8-1.25 x 30 HHFS GR5Z Bolt
Qty 4



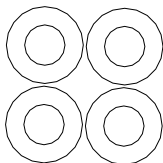
Log Cradles to Beam
Part# 82281
M8-1.25 Ser Flange Nut
Qty 4



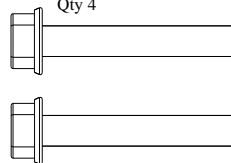
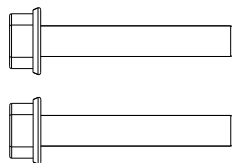
Out Rigger to Tank
Part# 82201
M10 Flat Washer
Qty 1



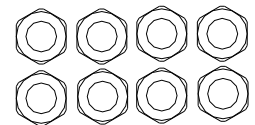
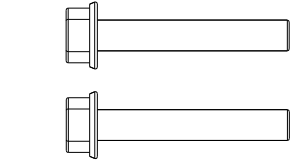
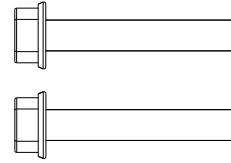
Out Rigger to Tank
Part# 82574
M10-1.5 x 70 HHFS Bolt
Qty 1



Guard to Beam
Part# 777496
M8 Flat Washer
Qty 8



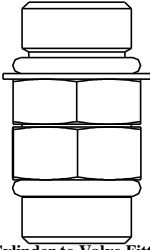
Guard to Beam
Part# 82565
M8-1.25 x 50mm HHCS GR5
Qty 8



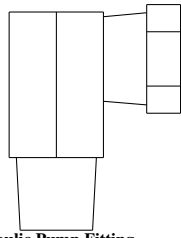
Guard to Beam
Part# 777495
M8-1.25 Nyloc Nut
Qty 8

Assembly Instructions

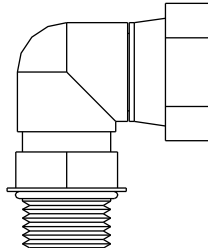
Parts Bag Continued:



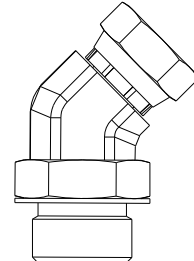
Cylinder to Valve Fitting
Part# 790488
8MOR x 8 MOR Adj Fitting
Qty 1



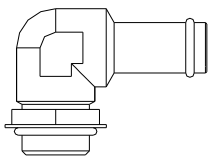
Hydraulic Pump Fitting
Part# 50RASS
1/2" M x 1/2" F Rt Angle
Qty 1



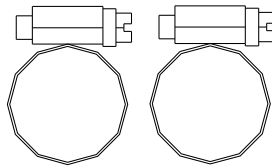
Valve to Cylinder Fitting
Part# 778827
O-Ring x FNPT Swivel Elbow, 8-8
Qty 1



Valve to Hydraulic Pump Fitting
Part# 791219
12 MOR- 8 FP x 45 Forged
Qty 1



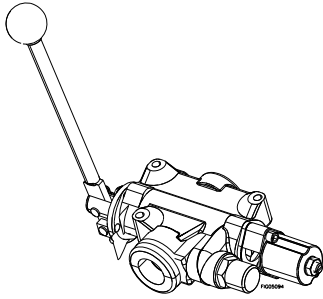
Valve to Hydraulic Filter Fitting
Part# 778642
90° O-Ring Boss x 3/4" Hose Barb
Qty 1



Filter to Valve Hose Clamps
Part# 805411
Hose Clamp
Qty 2

Assembly Instructions

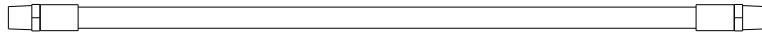
Box:



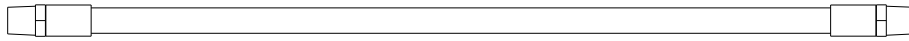
Hydraulic Valve



Owner's Manual



Valve to Cylinder Hose
Part# 778619
High Pressure Hose, 25" x 1/2" ID with
1/2" Male NPT fittings
Qty 1



Valve to Hydraulic Pump
Part# 790489
High Pressure Hose, 56" x 1/2" ID with
1/2" Male NPT fittings
Qty 1



Valve to Return Line Filter Hose
Part# 790699
Return Line Hose, 65" x 3/4" ID
Qty 1

Assembly Instructions

Step 1 – Wheel Assembly

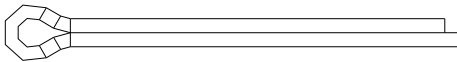
NOTE: Axle nuts are installed (hand tight only) on axles. Remove from wheel prior to beginning this step. They will be re-installed.

- Slide tire onto axle with valve stem facing out.
- Slide wheel washer up against the wheel bearing.
- Thread axle nut onto axle.
- Using a torque wrench, tighten the axle nut to 30-40 ft.- lbs. Turn hub to ensure proper bearing seating.
- Loosen the axle nut until loose enough to turn the axle nut with your fingers.
- Re-tighten the axle nut until finger tight.
- Insert cotter pin through hole in axle nut and axle. Bend and spread prongs in opposite directions so the axle nut will not come off (make sure the tire spins freely).

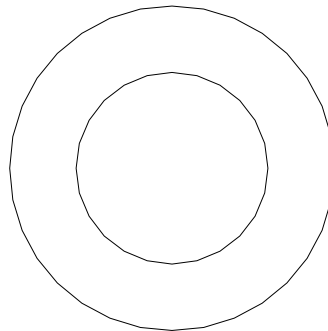
Tools Needed

- Pliers
- Torque Wrench

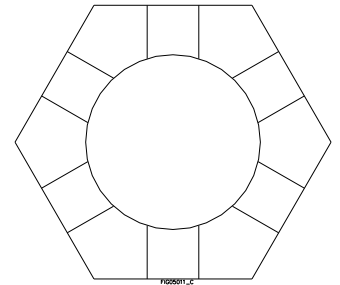
Fasteners Needed from Parts Bag (Axle Nuts Located on Tank Assembly):



Cotter Pin
Qty 2

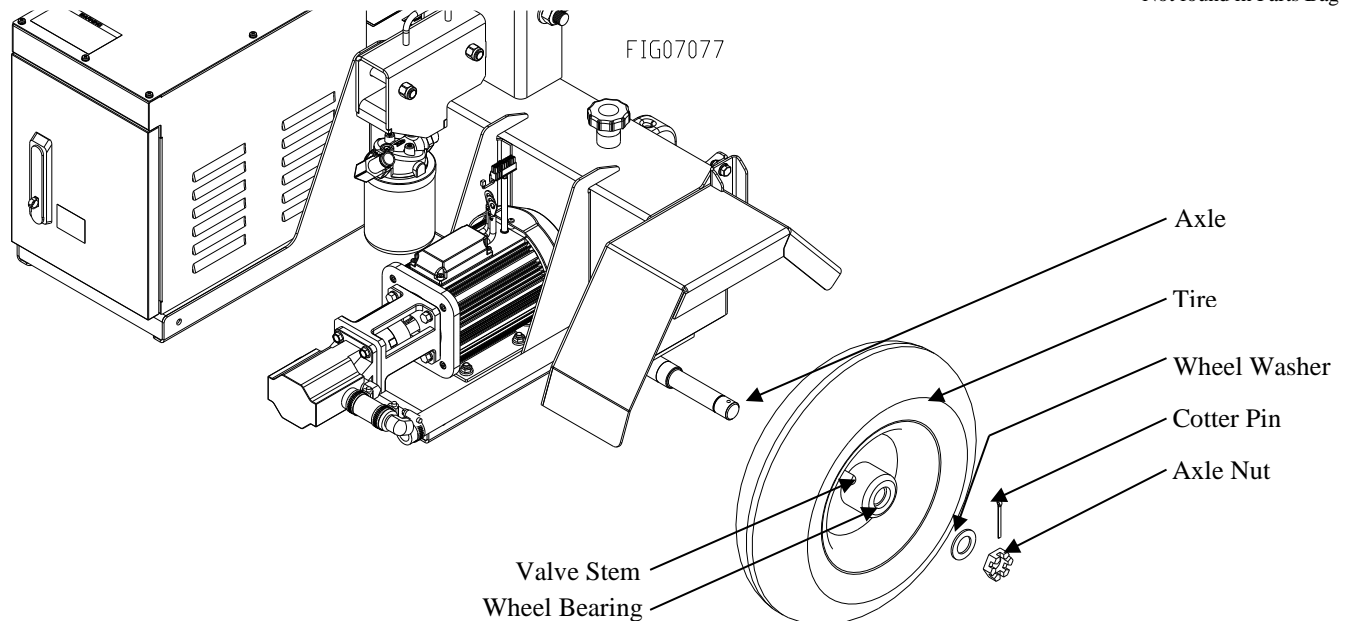


Wheel Washer
Qty 2



1" Axle Nut
Qty 2

*Partially Installed on Wheel
Not found in Parts Bag



Assembly Instructions

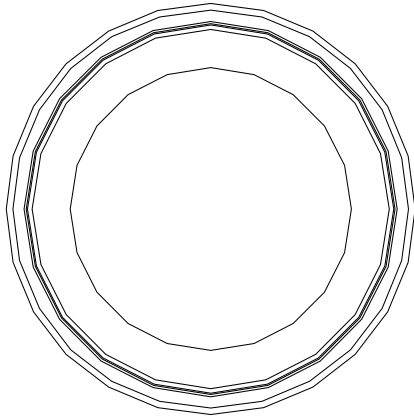
Step 1 continued – Wheel Assembly

- Align the dust cap against the wheel hub.
- Position the dust cap tool evenly onto the surface of the dust cap.
- Place a piece of wood over the dust cap tool.
- Using a soft faced mallet tap the piece of wood against the dust cap tool to install dust cap onto the wheel hub.
- Repeat for the other wheel. Discard hub cap tool.

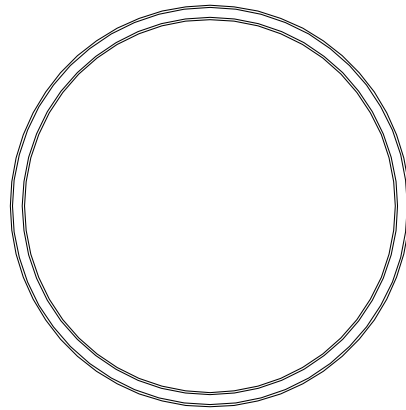
Tools Needed

- Soft Faced Mallet

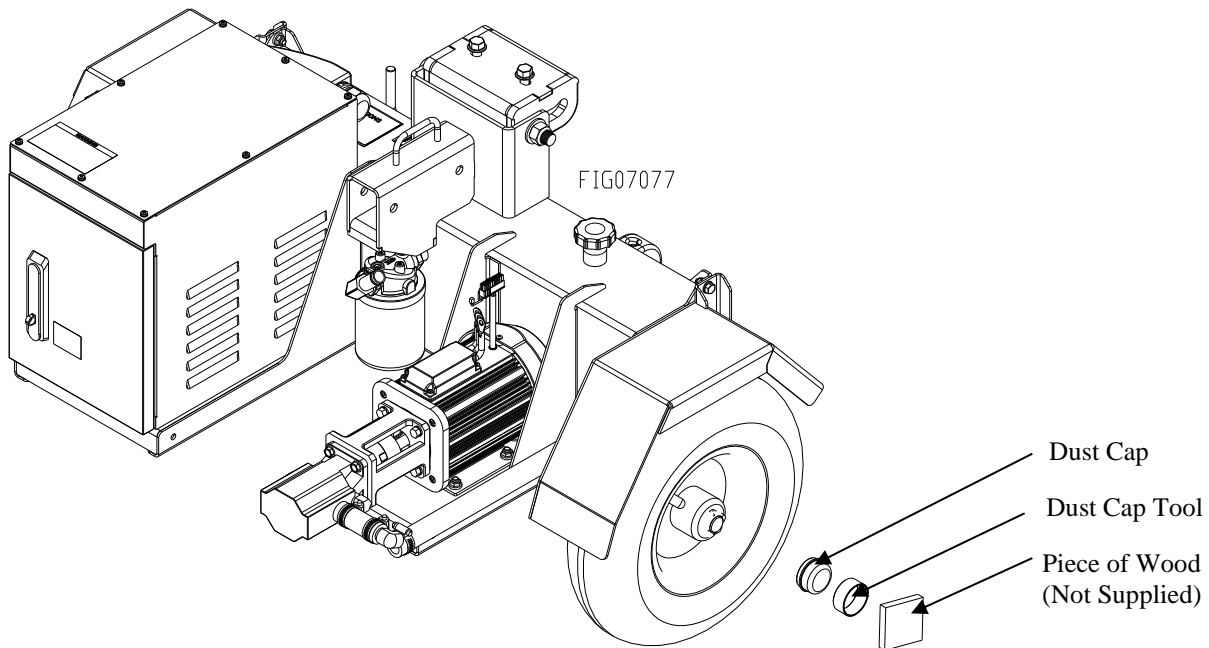
Fasteners Needed from Parts Bag:



Dust Cap
Qty 2



Dust Cap Tool
Qty 1



Dust Cap

Dust Cap Tool

Piece of Wood
(Not Supplied)

Assembly Instructions

Step 2 – Tow Bar to Tank

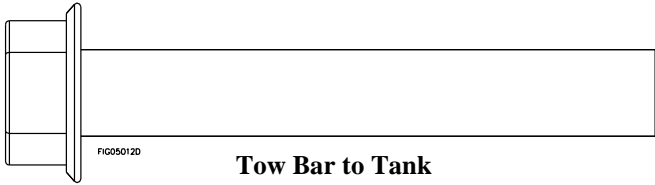
NOTE: Nut and bolt are installed (hand tight only) on tow bar mount for packaging purposes. Remove nut and bolt prior to beginning this step. They will be re-installed.

- Align holes on the tow bar to the tow bar mount on the hydraulic tank assembly.
- Re-install (2) bolts and (2) nuts and tighten with wrench.
- Torque to 71 ft.-lb.

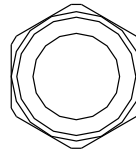
Tools Needed

- 18mm Wrench (2 Needed)
- Torque Wrench

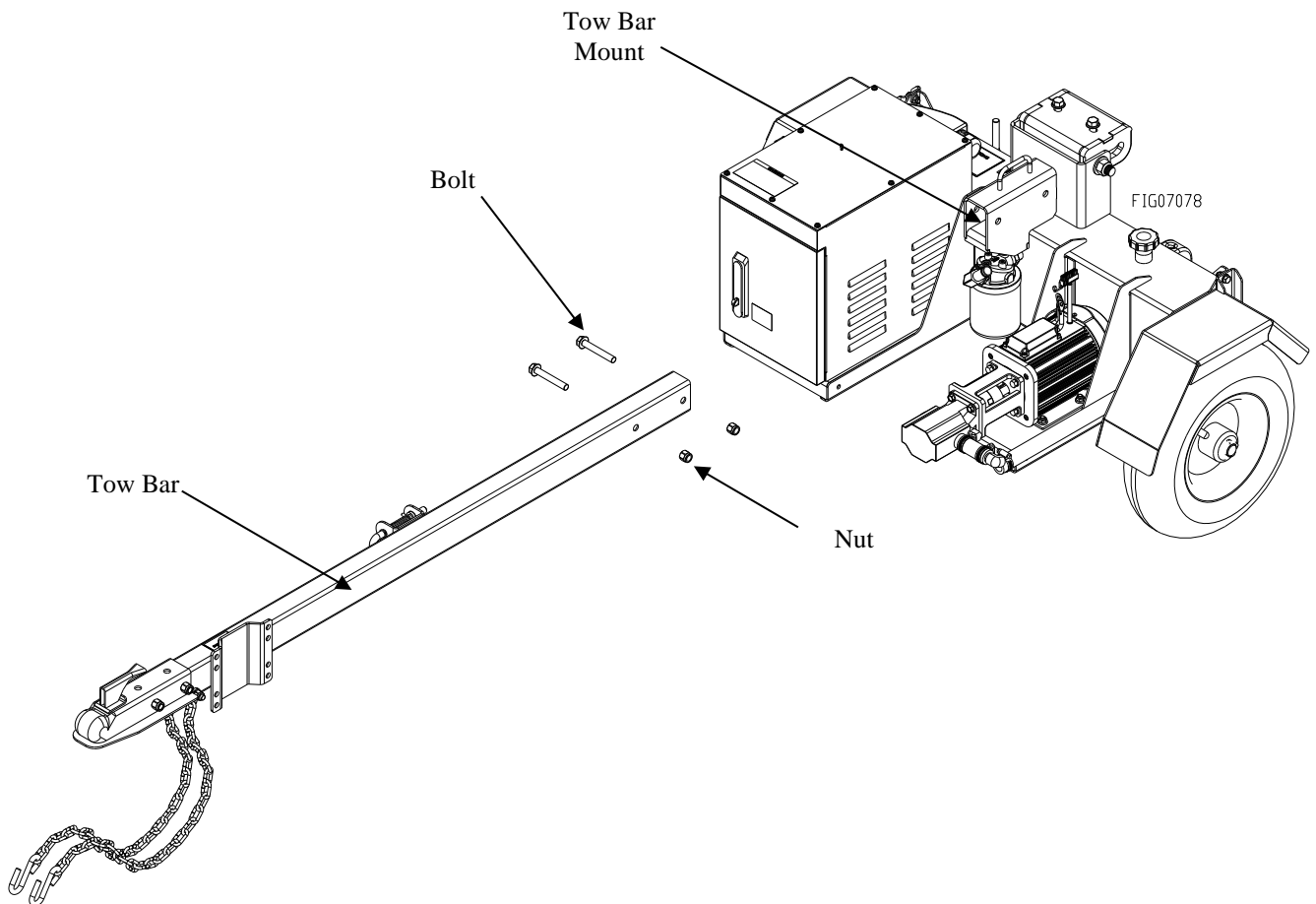
Fasteners Needed (Located on Tank Assembly):



Tow Bar to Tank
Flange Bolt
Qty 2



Tow Bar to Tank
Nyloc Nut
Qty 2



Assembly Instructions

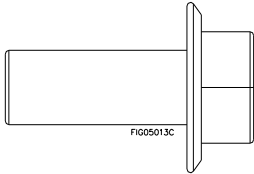
Step 3 – Jack to Jack Mount/Tow Bar

- Connect jack to jack mount located on the front end of the tow bar.
- Align jack bracket to jack mount on tow bar. Insert (4) bolts and thread on (4) locknuts.
- Torque to 41 ft.-lb.

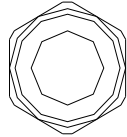
Tools Needed

- 15mm Wrench
- 16mm Wrench
- Torque Wrench

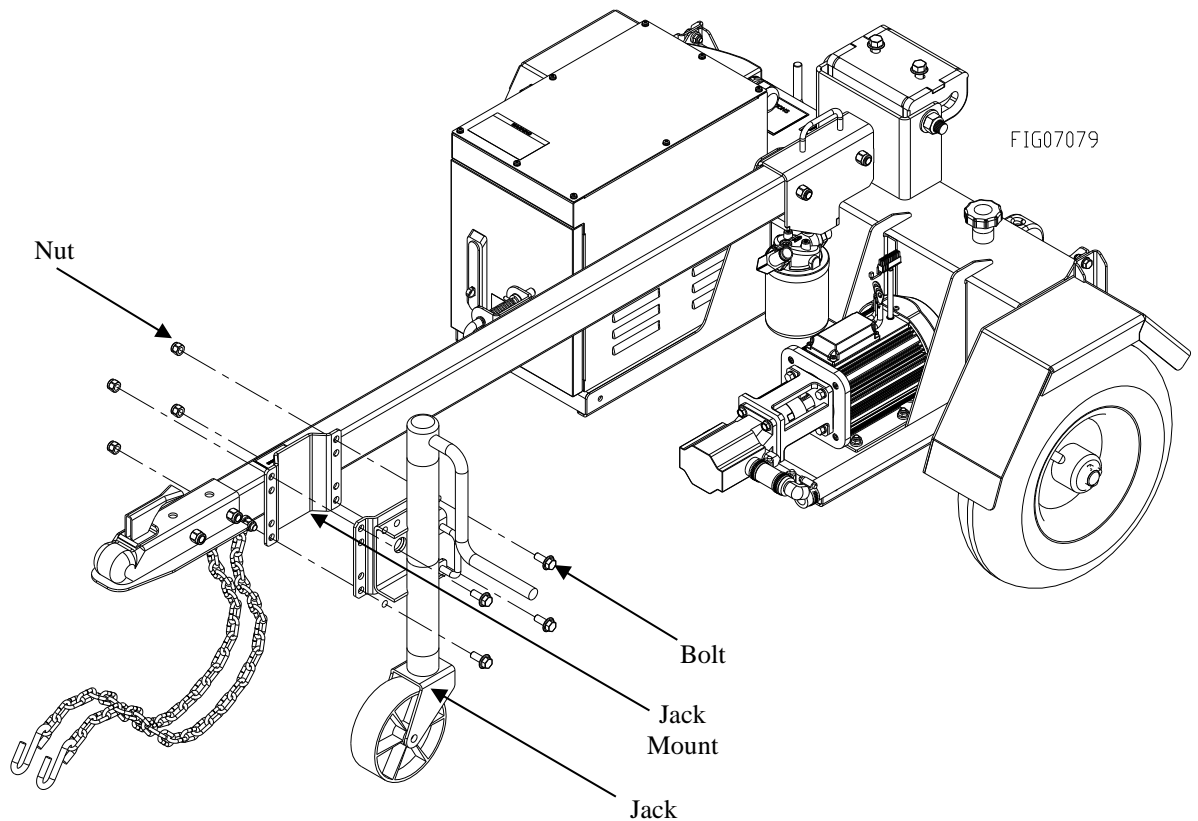
Fasteners Needed from Parts Bag:



Jack to Tow Bar
Flange Bolt
Qty 4



Jack to Tow Bar
Nyloc Nut
Qty 4



Assembly Instructions

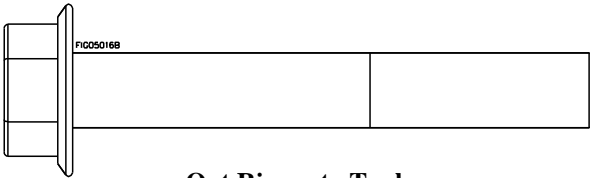
Step 4 – Outrigger Leg to Tank

- Connect the rear outrigger leg to the backside of the hydraulic tank assembly
- Tighten nut until snug then back off 1/2 turn
- NOTE: Once the Outrigger Leg is installed, lock the leg in the down position.

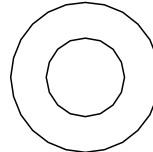
Tools Needed

- 15mm Wrench
- 16mm Wrench

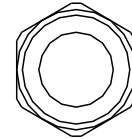
Fasteners Needed from Parts Bag:



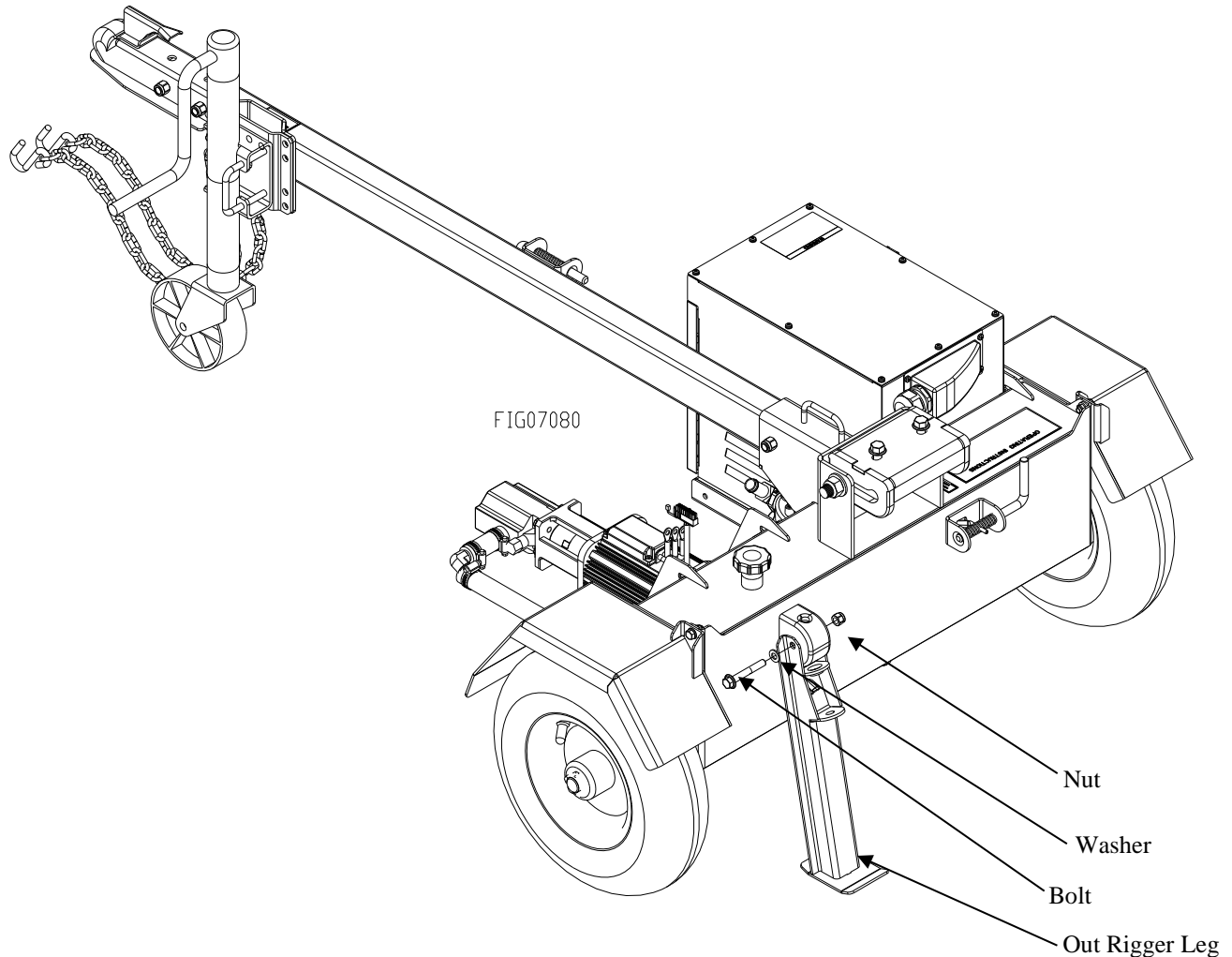
Out Rigger to Tank
Flange Bolt
Qty 1



Out Rigger to Tank
Washer
Qty 1



Out Rigger to Tank
Nyloc Nut
Qty 1



Assembly Instructions

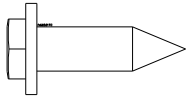
Step 5 – Install Manual Tube

- Remove the manual tube cover from manual tube
- Align holes in manual tube with holes in tow bar
- Secure the manual tube to tow bar using (3) Self-Tapping Screws
- Reattach the manual tube cover onto the manual tube.

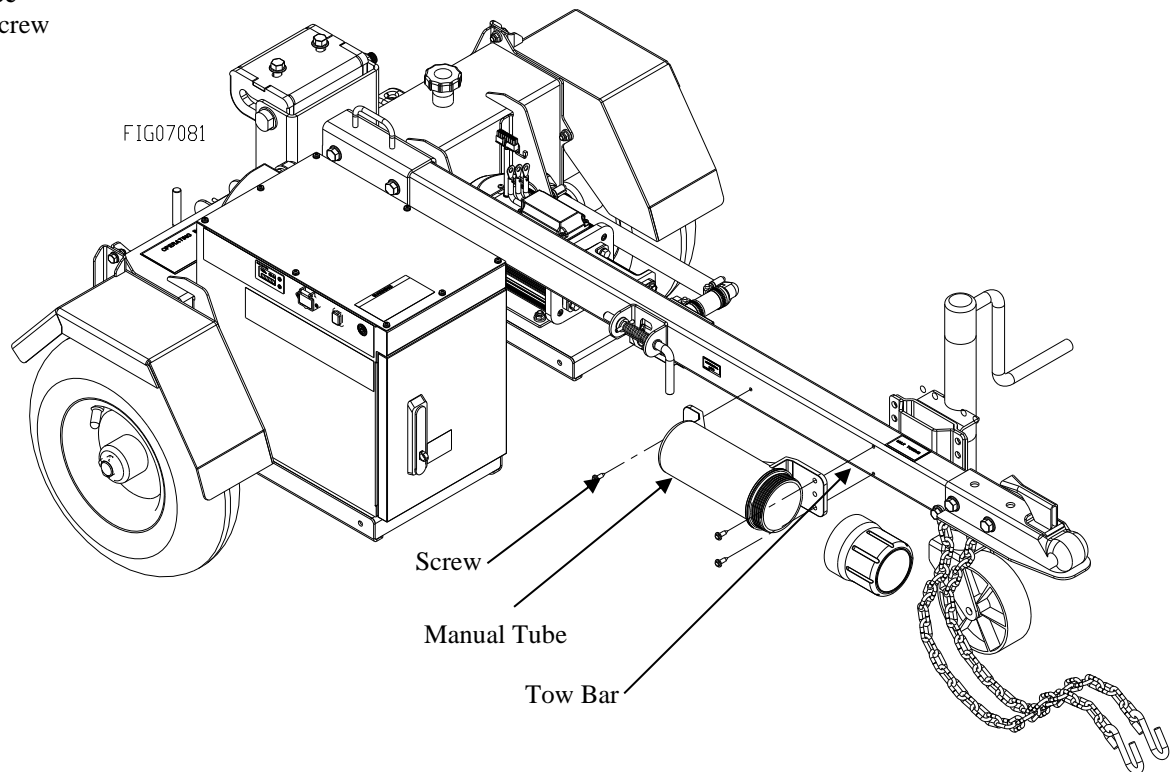
Tools Needed

- 11mm Wrench

Fasteners Needed from Parts Bag:



Manual Tube
Self-Tapping Screw
Qty 3



Assembly Instructions

Step 6 – Install Beam Assembly

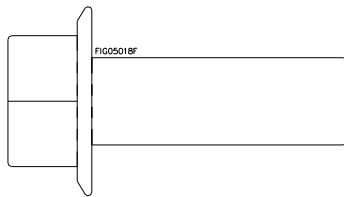
NOTE: Nut and bolt are installed (hand tight only) on pivot bracket for packaging purposes.

- Remove nut and bolt from pivot bracket. They will be re-installed.
- Push pivot bracket so that it is parallel to the back side of tank.
- Stand beam assembly on end plate with the help of another person. Have that person hold the beam in place while maneuvering the log splitter into position as shown.
- Maneuver log splitter and align with the beam as shown below.
- **NOTE:** Once log splitter is in line with beam, put the outrigger leg in the **DOWN** position to stabilize splitter for assembling.
- Insert (2) bolts and thread (2) nuts onto bolts.
- Torque to 71 ft.-lb.

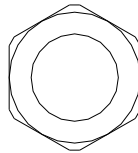
Tools Needed

- 18mm Wrench (2 Needed)
- Torque Wrench

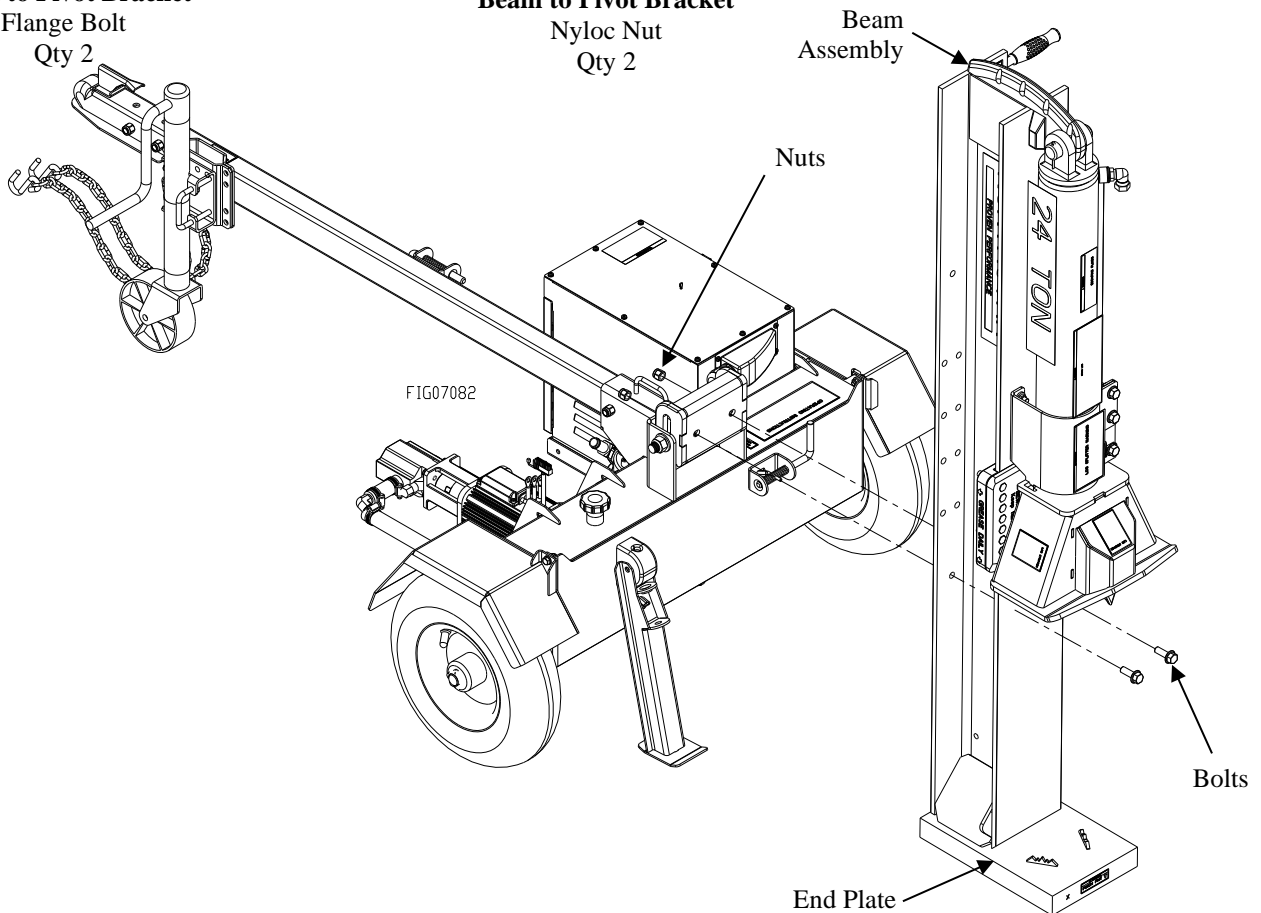
Fasteners Needed from Parts Bag:



Beam to Pivot Bracket
Flange Bolt
Qty 2



Beam to Pivot Bracket
Nyloc Nut
Qty 2



Assembly Instructions

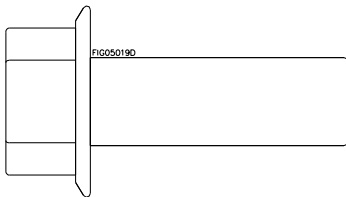
Step 7 – Horizontal Latch to Beam

- Align horizontal latch to beam using (2) bolts and (2) nuts.
- Torque to 71 ft.-lb.
- Ensure that the Outrigger leg is in the DOWN position.
- Using the handle on the beam, lower beam to the tow bar. Pull horizontal lock latch rod outwards to allow the beam to rest properly on the tow bar. Push latch rod forward to lock in the horizontal position.
- See page 20 for further instruction.
- Note: If horizontal latch bracket does not latch correctly. Loosen bolts/nuts and adjust horizontal latch bracket. If further adjustment is needed, loosen bolts/nuts from Step 6 and adjust pivot mount bracket.

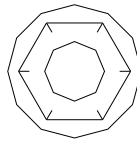
Tools Needed

- 18mm Wrench
(2 Needed)
- Torque Wrench

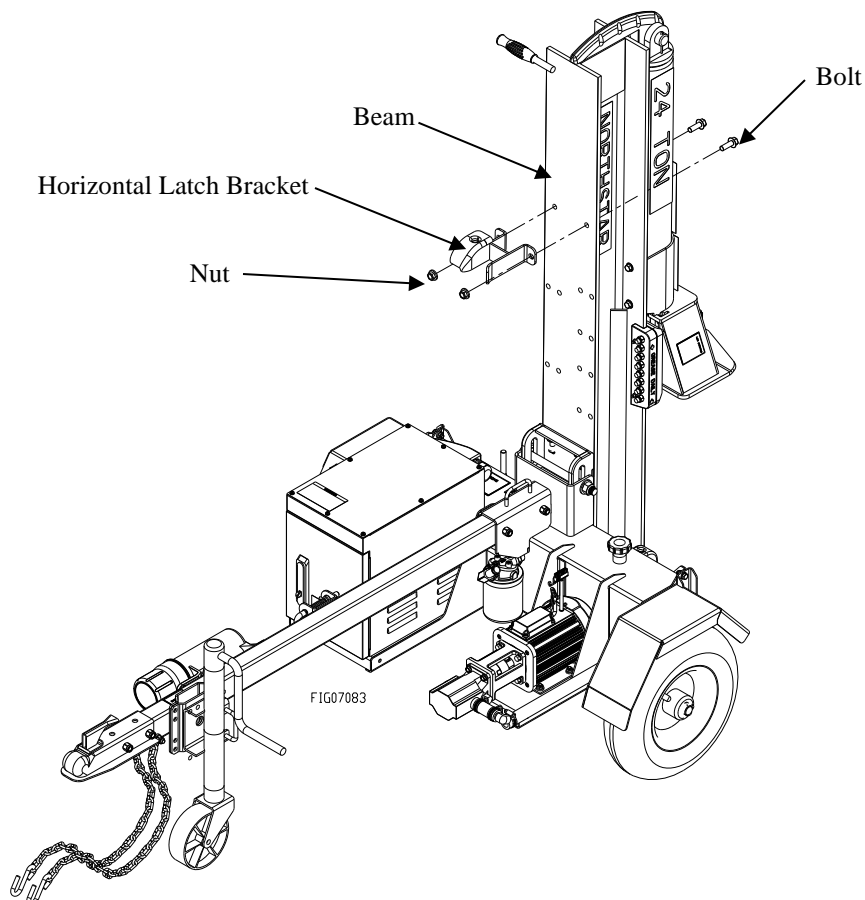
Fasteners Needed from Parts Bag:



Horizontal Latch to Beam
Flange Bolt
Qty 2



Horizontal Latch to Beam
Flange Nut
Qty 2



Assembly Instructions

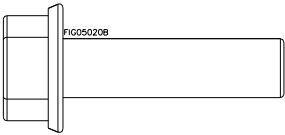
Step 8 – Log Tables to Beam

- Align right side log table to beam and insert the top (2) bolts and bottom (2) bolts.
- Align left side log table to the bolts inserted above. Add (4) nuts onto bolts and secure tightly.
- Torque to 21 ft.-lb.
- Note: It may be helpful to have another person assist with this step.

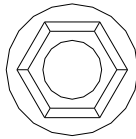
Tools Needed

- 13mm Wrench
- Torque Wrench

Fasteners Needed from Parts Bag:

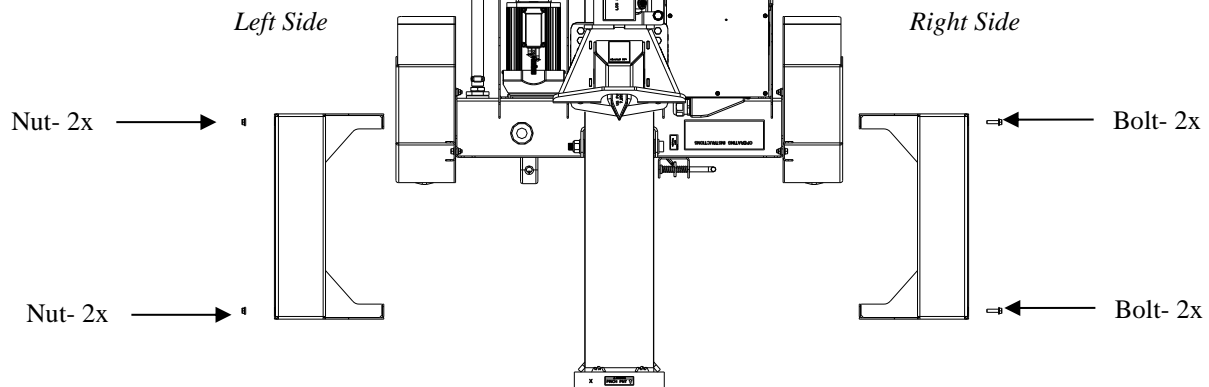
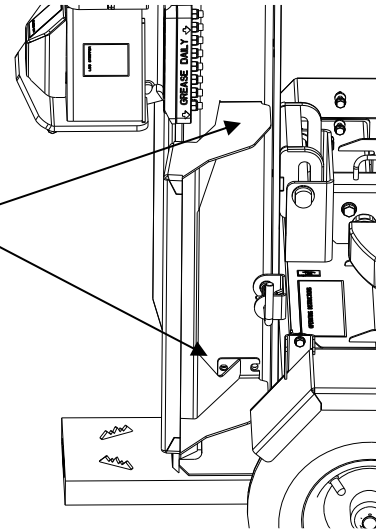


Log Cradle to Beam
Flange Bolt
Qty 4



Log Cradle to Beam
Flange Nut
Qty 4

Side view of
bolt locations



Assembly Instructions

Step 9 –Guards to Beam

- Align guard bracket to the two sets of holes in the beam
- Using (4) bolts, (4) nuts and (4) washers, secure guard to beam.
- Torque to 20 ft.lb. CAUTION: Over-tightening can crush tube.
- Repeat above steps for second guard on opposite side of beam.

Tools Needed

- 13mm Wrench
(2 Needed)
- Torque Wrench

Fasteners Needed from Parts Bag:



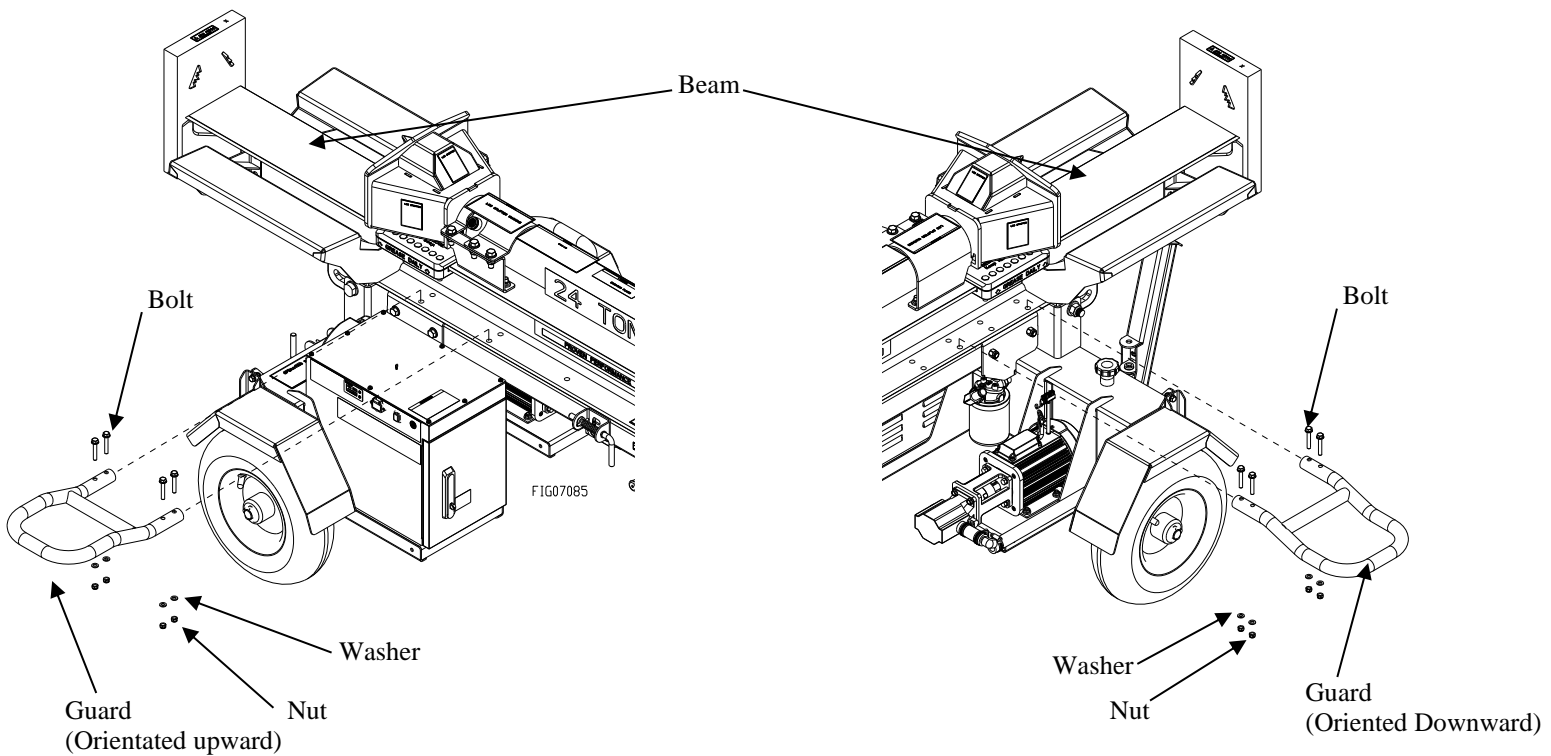
Guard to Beam
Flange Bolt
Qty 8



Guard to Beam
Nyloc Nut
Qty 8



Guard to Beam
Flat Washer
Qty 8



Assembly Instructions

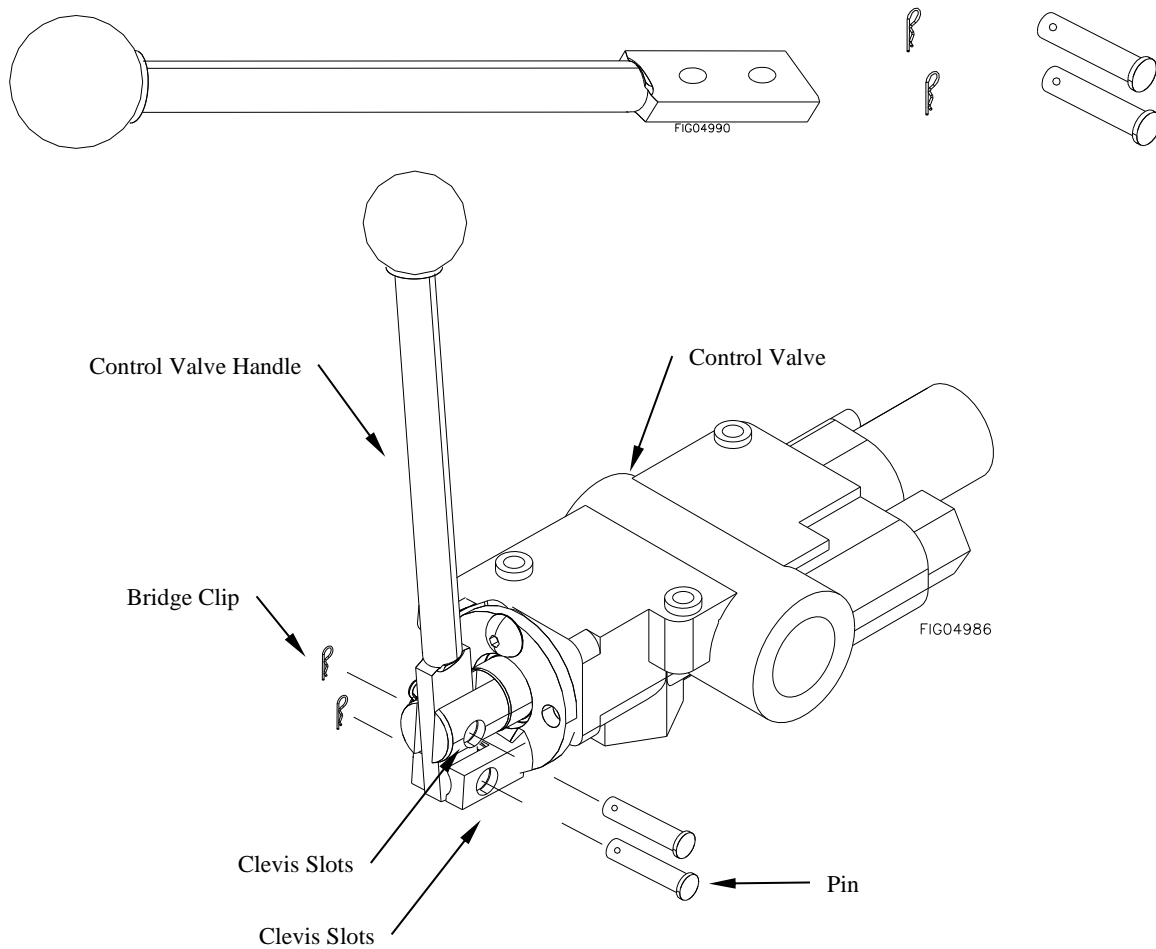
Step 10 – Control Valve

- Slide control valve handle into the clevis slots on the control valve.
- Align holes in handle with clevis holes.
- Insert the supplied pins through holes and secure with supplied bridge clips.

Tools Needed

- Pliers

Parts Needed from Valve Box:



Assembly Instructions

Step 11 – Valve Installation

- Remove plug from cylinder port and discard
- Lubricate O-ring and threads on fitting with clean oil
- Orient (1) Valve Fitting so that nut/washer/O-ring assembly is facing up. Turn fitting into cylinder port until finger-tight
- Torque to 27-43 ft.-lb.
- Looking at fitting from end with nut/washer/O-ring assembly, turn nut clockwise as far as possible
- Use valve port marked “A” to thread the control valve onto the fitting until control valve touches washer
- Hold control valve in orientation shown below and torque nut to 37-46 ft.-lb.

Tools Needed

- 7/8” Wrench
(2 needed)
OR
- Crescent Wrench
(2 needed)
- Torque Wrench

Fitting Needed from Parts Bag:

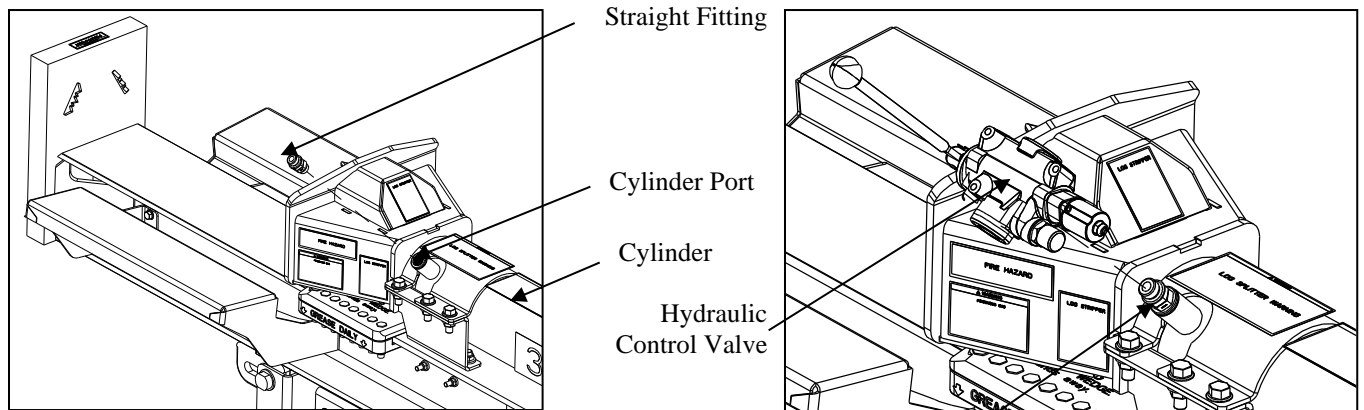
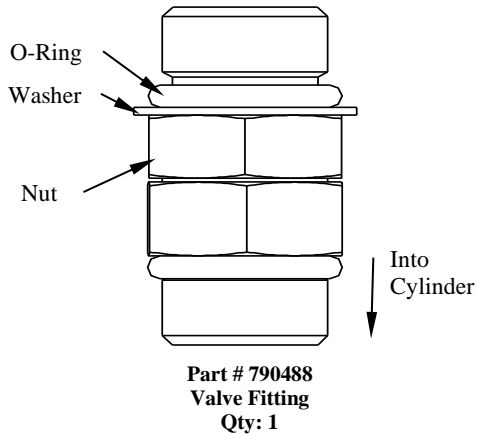


Fig05026

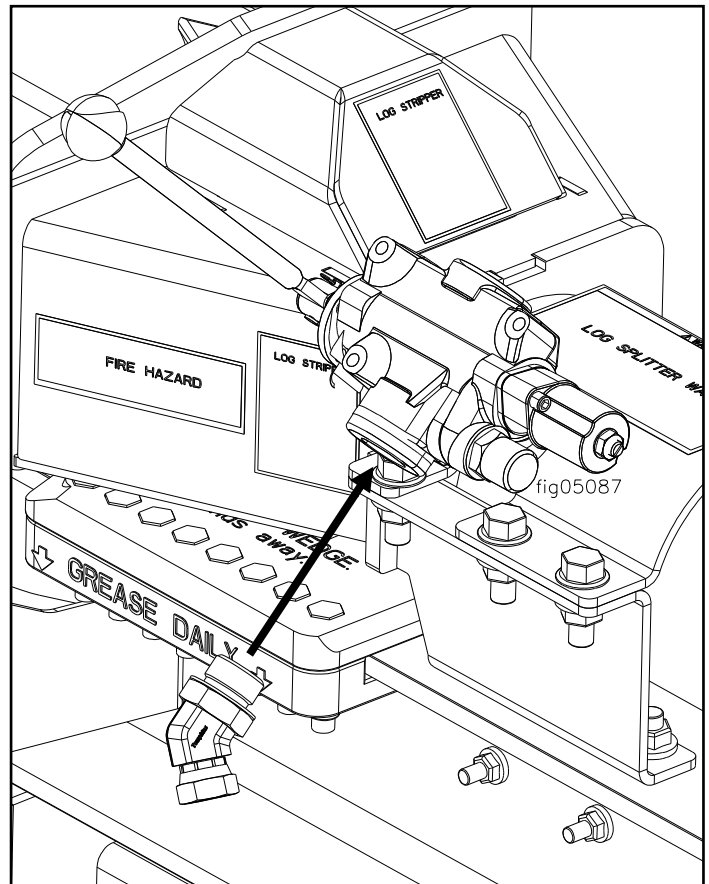
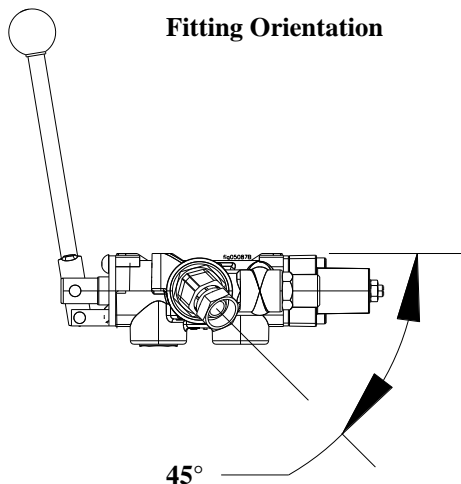
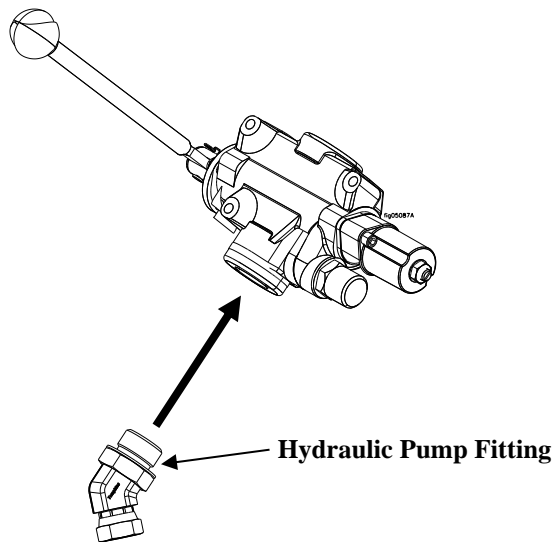
Assembly Instructions

Step 12 – Valve Installation Continued

- Remove plugs from ports in control valve
- Lubricate O-ring and threads on fitting with clean oil
- Looking at fitting from end with nut/washer/O-ring assembly, turn nut clockwise as far as possible
- Using wrench, turn (1) Valve to Hydraulic Pump Fitting into valve port marked “IN” until washer touches control valve. Continue turning until washer touches thread nearest wrench pad
- Back off fitting counterclockwise not exceeding one revolution until it is oriented in the correct position
- Place wrench on the wrench pad of fitting to prevent fitting from turning and torque nut to 70-87 ft.-lb.

Tools Needed

- 7/8” Wrench
- 1” Wrench
- OR
- Crescent Wrench (2 needed)
- Torque Wrench



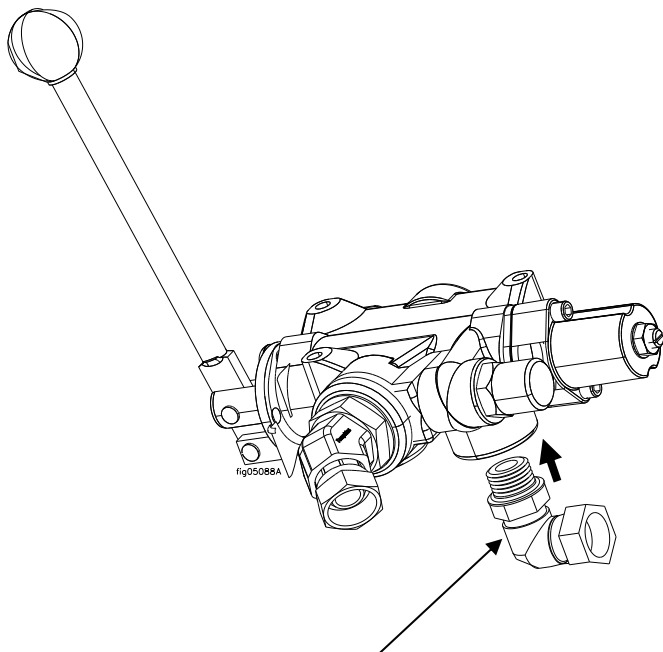
Assembly Instructions

Step 13 – Valve Installation Continued

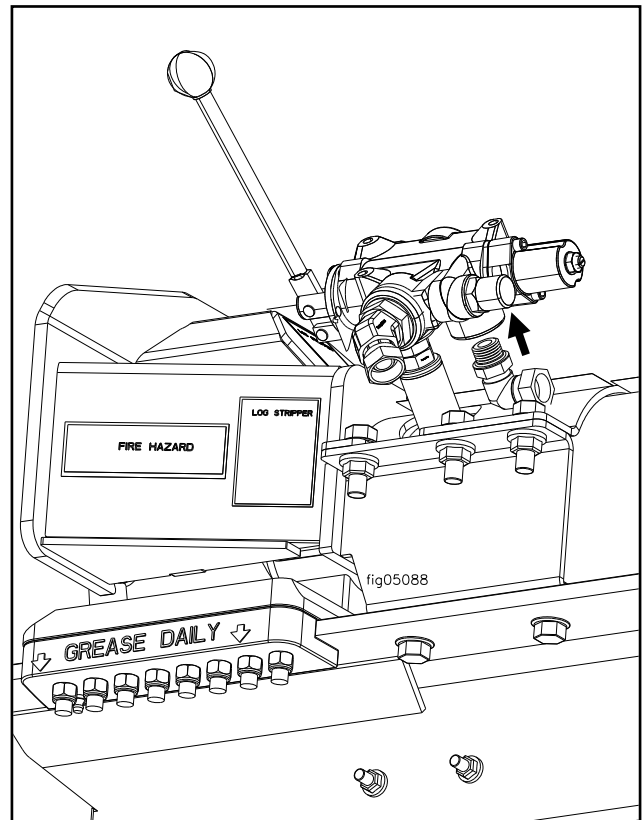
- Remove plugs from ports in control valve
- Lubricate O-ring and threads on fitting with clean oil
- Looking at fitting from end with nut/washer/O-ring assembly, turn nut clockwise as far as possible
- Using wrench, turn (1) Valve to Cylinder Fitting into valve port marked “B” until washer touches control valve. Continue turning until washer touches thread nearest wrench pad
- Back off fitting counterclockwise not exceeding one revolution until it is oriented in the correct position
- Place wrench on the wrench pad of fitting to prevent fitting from turning and torque nut to 37-46 ft.-lb.

Tools Needed

- 1” Wrench
- 1 1/4” Wrench
OR
- Crescent Wrench
(2 needed)
- Torque Wrench



Valve to Cylinder Fitting



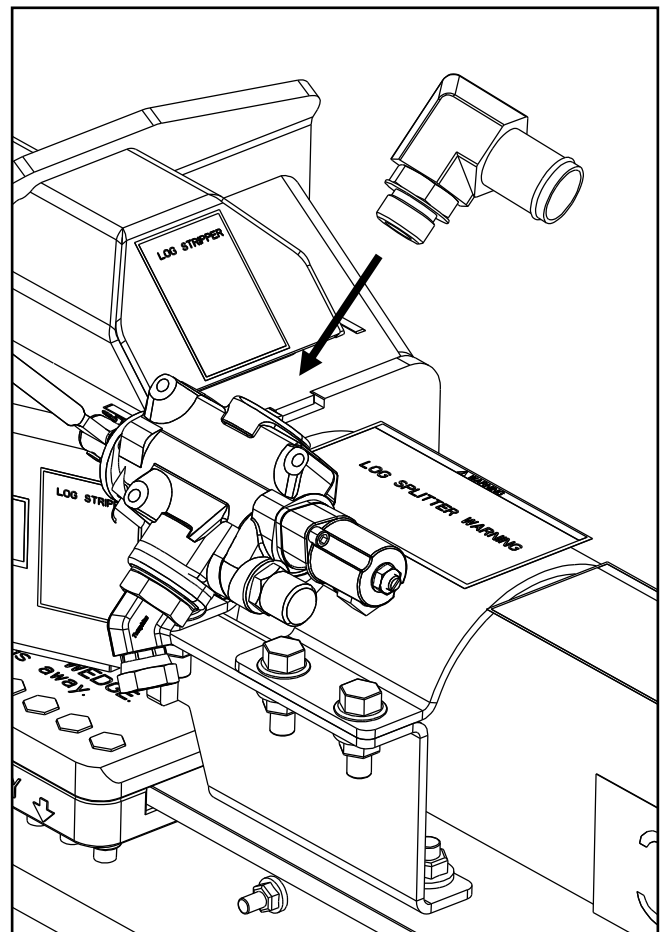
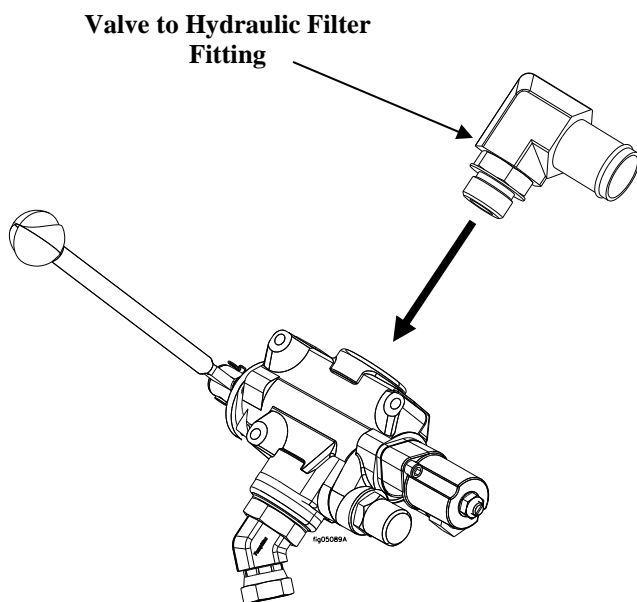
Assembly Instructions

Step 14 – Valve Installation Continued

- Remove plugs from ports in control valve
- Lubricate O-ring and threads on fitting with clean oil
- Looking at fitting from end with nut/washer/O-ring assembly, turn nut clockwise as far as possible
- Using wrench, turn (1) Valve to Hydraulic Filter Fitting into valve port marked “OUT” until washer touches control valve. Continue turning until washer touches thread nearest wrench pad
- Back off fitting counterclockwise not exceeding one revolution until it is oriented in the correct position
- Place wrench on the wrench pad of fitting to prevent fitting from turning and torque nut to 70-87 ft.-lb.

Tools Needed

- 1 5/16” Wrench
- 1 5/8” Wrench
OR
- Crescent Wrench
(2 needed)
- Torque Wrench



Assembly Instructions

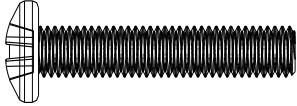
Step 15 – Valve Installation Continued

- Align valve plate to the top three holes on the mounted valve.
- Using (3) Screws and (3) Nuts secure plate to valve.
- Torque to 102 in.-lb.

Tools Needed

- 10mm Wrench
- Philips Screwdriver
- Torque Wrench
-

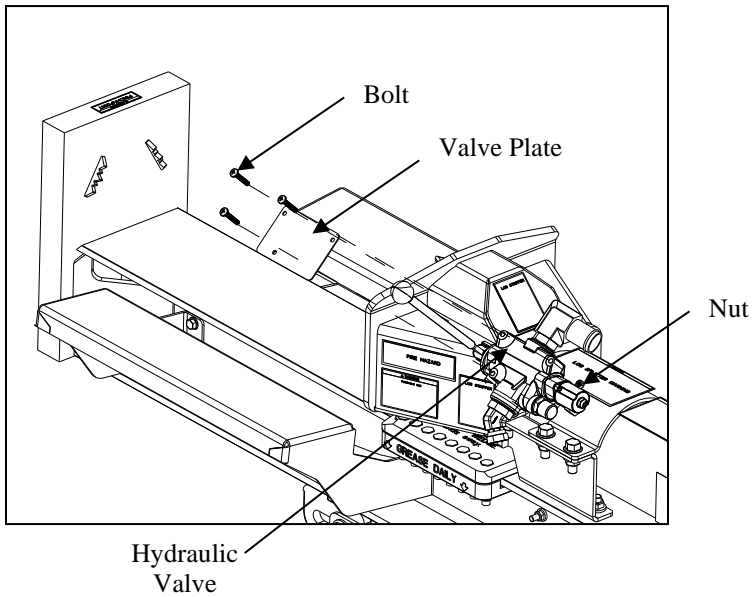
Fasteners Needed from Parts Bag:



**Valve Plate
Cap Screw**
Qty 3



**Valve Plate
Nyloc Nut**
Qty 3



Assembly Instructions

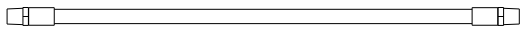
Step 16 – High Pressure Hose Routing

- Route (1) Short High-Pressure Hose from the Valve to Cylinder Fitting on the control valve to the 90° Elbow Cylinder
- Screw finger-tight Short High-Pressure Hose to the Valve to Cylinder Fitting
- Wrench tighten 1.5-3.0 Turns Past Finger Tight
- Screw finger-tight remaining end of Short High-Pressure Hose to the 90° Elbow Cylinder
- Wrench tighten 1.5-3.0 Turns Past Finger Tight

Tools Needed

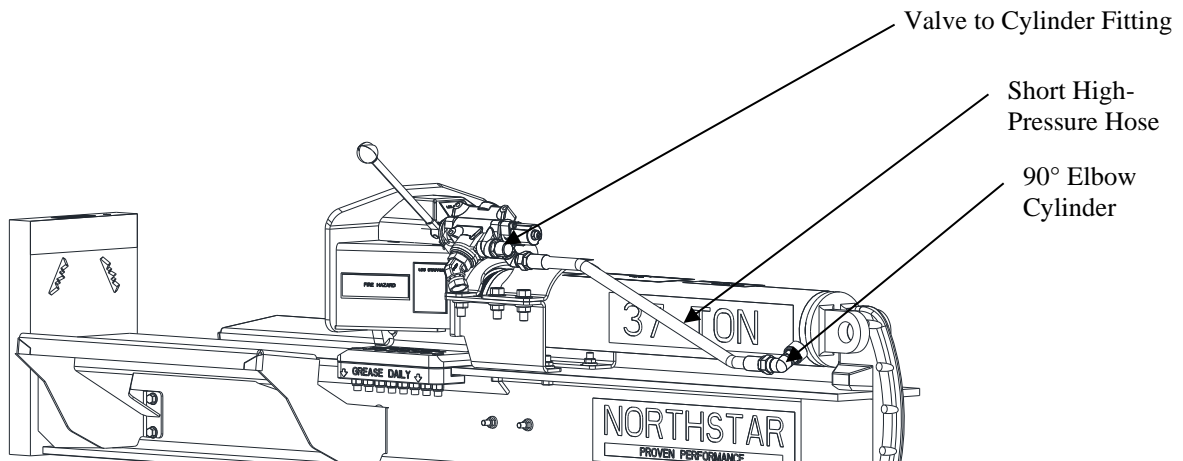
- 1" Wrench
- 7/8" Wrench
- OR
- Crescent Wrench (2 Needed)

Hoses Needed:



Valve to Cylinder Hose

High Pressure Hose, 25' x 1/2" ID with
1/2" Male NPT fittings
Qty 1



Assembly Instructions

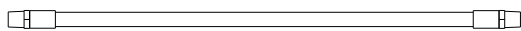
Step 17 – High Pressure Hose Routing Cont'd

- Remove plug from pump.
- Screw finger-tight (1) Pump Fitting into the pump
- Wrench-tighten the fitting to 1.5-3.0 Turns Past Finger Tight position. Consider final orientation position as to not exceed the recommended TPFT. Properly assembled fittings total thread engagement should be 3.5-6 turns.
- **CAUTION:** Never back off an installed pipe fitting to achieve proper alignment. Loosening installed pipe fittings will corrupt the seal and contribute to leakage and failure.
- Screw finger-tight Long High-Pressure Hose to Valve
- Wrench tighten 1.5-3.0 Turns Past Finger Tight
- Tip beam to vertical position and set outrigger leg to down position.
- Route Long High-Pressure Hose from the Valve to Hydraulic Pump Fitting, routing through hose guide above towbar
- Screw finger-tight remaining end of Long High-Pressure Hose to the Hydraulic Pump Fitting
- Wrench tighten 1.5-3.0 Turns Past Finger Tight

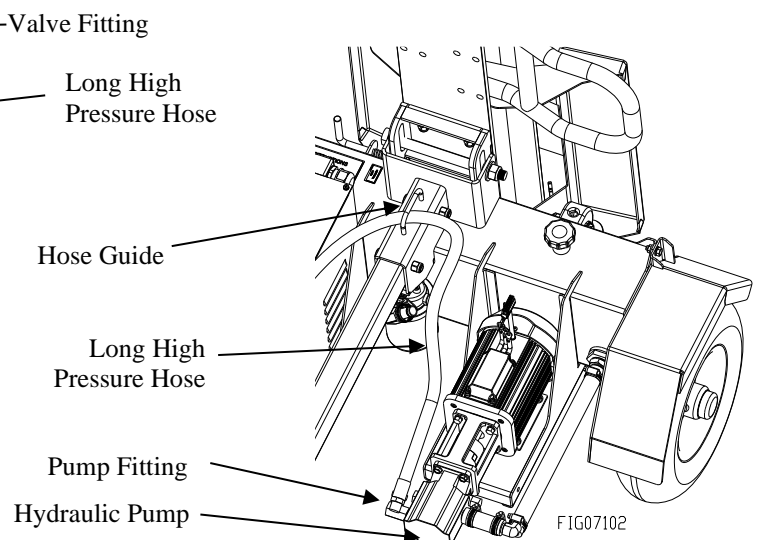
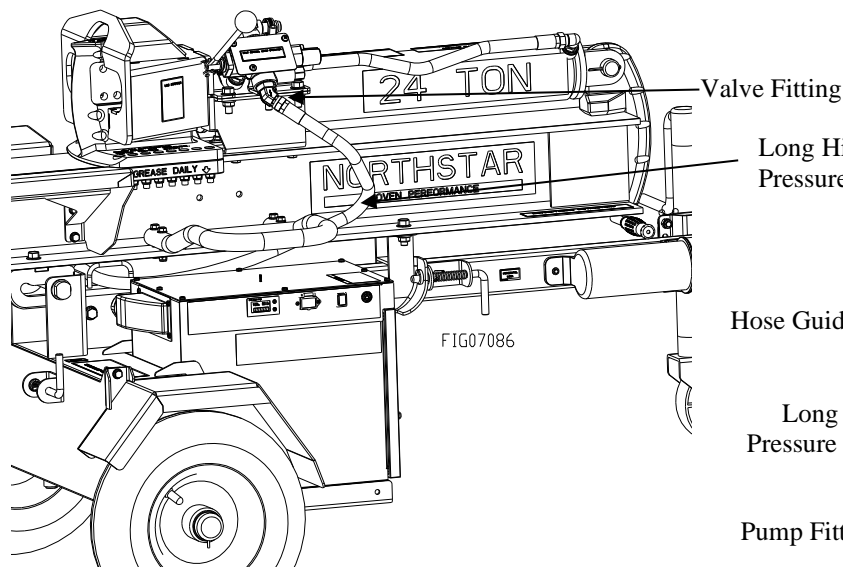
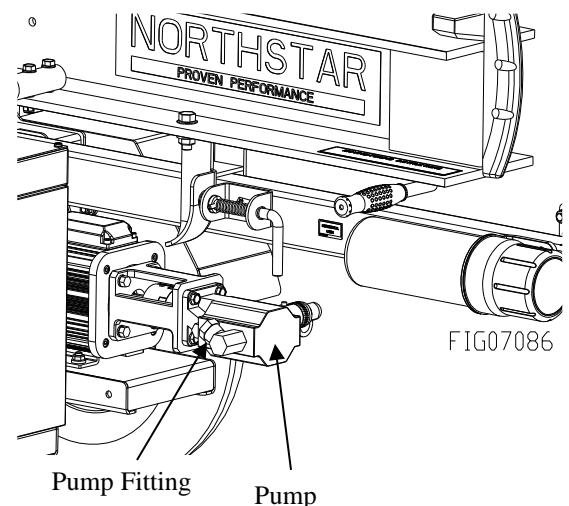
Tools Needed

- 1" Wrench
- 7/8" Wrench
- OR
- Crescent Wrench (2 Needed)

Hoses Needed:



Valve to Hydraulic Pump
High Pressure Hose, 56" x 1/2" ID with
1/2" Male NPT fittings
Qty 1



Assembly Instructions

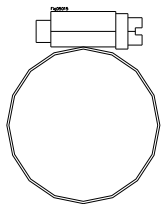
Step 18 – Suction Hose Routing

- Add hose clamp and connect one end of the suction hose to the Valve. Torque to 77 in.-lb.
- Set outrigger leg to down position and tip beam to vertical position.
- Route hose through hose guide as shown below (note location of suction and high-pressure hoses through hose guide). Zip tie suction hose to high pressure hose so they are side-by-side. Tip splitter into vertical position a few times and check hoses are not being crushed when the beam returns to horizontal position.
- Add hose clamp and connect remaining end of suction hose to Return Line Filter Fitting. Torque to 77 in.-lb.

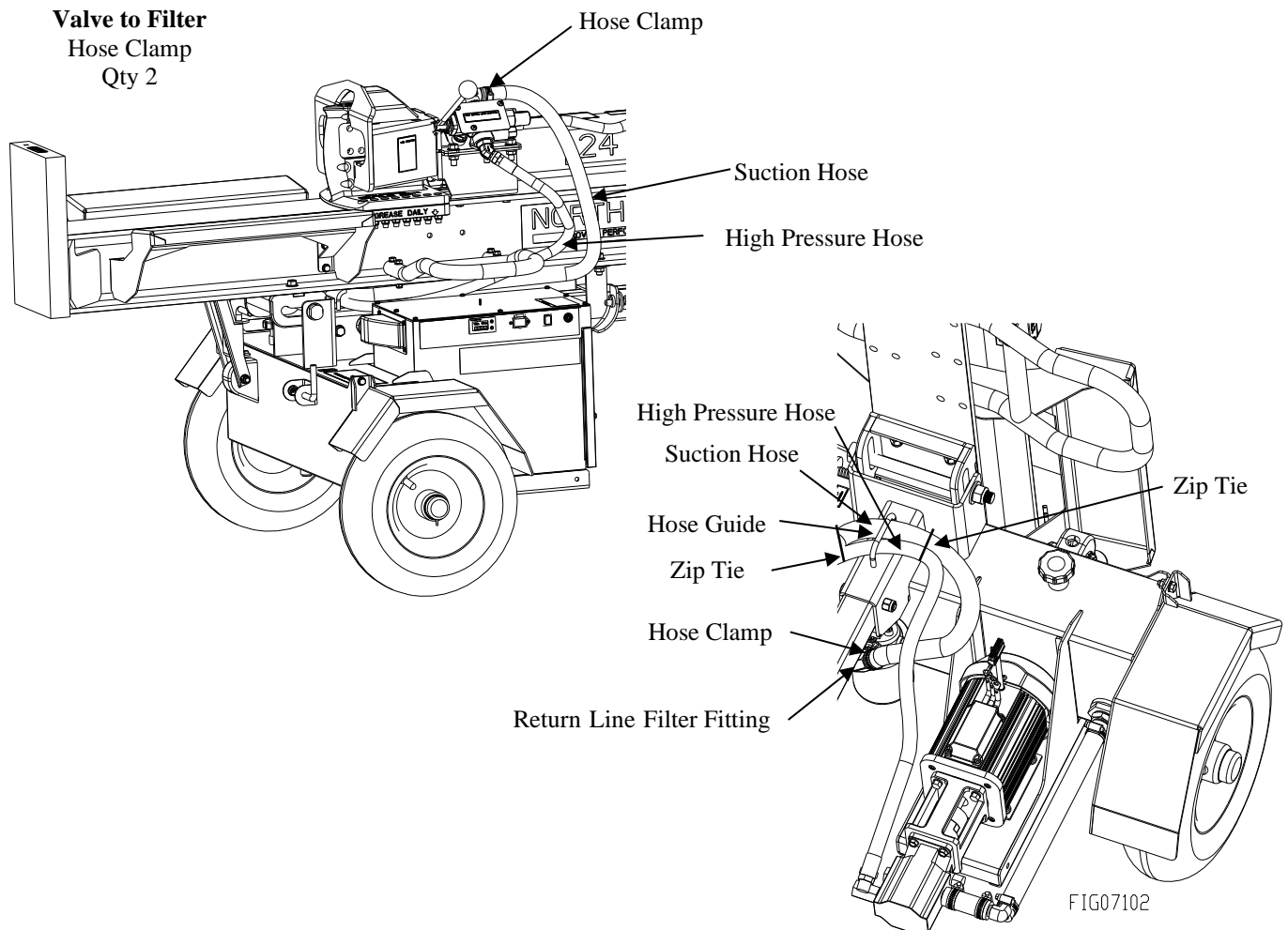
Tools Needed

- Flat Blade Screwdriver

Fittings Needed from Parts Bag:



Valve to Filter
Hose Clamp
Qty 2



Limited Warranty

Dear Valued Customer:

The NorthStar Product you just purchased is built with the finest material and craftsmanship. Use this product properly and enjoy the benefits from its high performance. By purchasing a NorthStar product, you show a desire for quality and durability. Like all mechanical equipment this unit requires a due amount of care. Treat this unit like the high-quality piece of machinery it is. Neglect and improper handling may impair its performance. Please thoroughly read the instructions and understand the operation before using your product. Always contact NorthStar Product Support at 1-800-270-0810 prior to having any service or warranty work performed, as some services performed by parties other than NorthStar approved service centers may void this warranty. This warranty is in lieu of any other warranty expressed or implied and NorthStar assumes no other responsibility or liability outside that expressed within this warranty.

Limited Warranty

NorthStar shall warranty any piece of equipment manufactured, or parts of equipment manufactured, to be free from defects in material or workmanship for a period of:

NorthStar Warranty		
Item	Consumer Warranty Period	Commercial Warranty Period
Log Splitter (5044310)	4 years from date of purchase by user	1 year from date of purchase by user
Battery (5043106)	1 year from date of purchase by user	1 year from date of purchase by user
Charger (5050015)	2 years from date of purchase by user	2 years from date of purchase by user

“Consumer use” means personal residential household use by a consumer. “Commercial use” means all other uses, including use for commercial, income producing or rental purposes or when purchased by a business.

This warranty applies to the original purchaser of the equipment (verification of purchase, in the form of a receipt, is the responsibility of the buyer), is non-transferable, and covers parts and labor. Parts will be replaced or repaired at no charge, except when the equipment has failed due to lack of proper maintenance. If a part is no longer available, the part may be replaced with a similar part of equal function. Any misuse, abuse, alteration or improper installation or operations will void warranty. Determining whether a part is to be replaced or repaired is the sole decision of NorthStar. NorthStar will not provide for replacement of complete products due to defective parts. Any costs incurred due to replacement or repair of items outside of a NorthStar approved facility is the responsibility of the buyer and not covered under warranty. Transportation costs to and from service center is the responsibility of the customer.

In addition to the normal warranty, NorthStar shall warrant any normal wear item from defects in material or workmanship for a period of 90 days from the date of purchase by user. Normal wear items include, but are not limited to, tires and filter elements.

This warranty specifically excludes the following: failure of parts due to damage caused by accident, fire, flood, windstorm, acts of God, applications not approved by NorthStar in writing, corrosion caused by chemicals, use of replacement parts which do not conform to manufacturer’s specifications, damage related to rodent and/or insect infestation and damage caused by vandalism. Additional exclusions: loss of running time, inconvenience, loss of income, or loss of use, including any implied warranty of merchantability of fitness for a specific use. Also, Outdoor Power Equipment needs periodic parts and service to perform well, and this warranty does not cover instances when normal use has exhausted the life of a component or the motor.

This warranty does not cover any personal injury or damage to surrounding property caused by failure of any part. Repair or replacement of parts does not extend the warranty period.

Please fill in the following information and have it on hand when you call in on a warranty claim.

Customer Number: _____

Date of Purchase: _____

NorthStar Serial Number: _____

Item Number: _____

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⚠️WARNING: This product can expose you to soot, tars, and mineral oils (untreated and mildly treated oils and used pump oils), which are known to the state of California to cause cancer.

For more information go to www.P65Warnings.ca.gov.



Manufactured by
Northern Tool + Equipment Co., Inc.
Burnsville, MN 55306
NorthernTool.com