



TIMBER WOLF™

TIMBERWOLF™ MFG.
CORPORATION
WOOD PROCESSING EQUIPMENT

118 SPRUCE STREET
RUTLAND, VERMONT 05701

800-340-4386

FAX 802-773-1275

www.timberwolfcorp.com

e-mail: info@timberwolfcorp.com

WOOD PROCESSING EQUIPMENT



M A N U A L

Bundled Firewood Splitter

❖ **TW-7**

TIMBERWOLF
Manufacturing Corporation

TW-7
Bundled Firewood
Splitter

Operation Manual

Fill out and submit Registration Form to ensure warranty coverage and receive product updates.

This manual and all its contents Copyright © 2003
TIMBERWOLF Manufacturing Corporation,
Rutland, VT 05701

Every effort has been made to ensure the accuracy of this document.

TIMBERWOLF Manufacturing Corporation
118 Spruce Street
Rutland, Vermont 05701

Phone: 802-775-4227

FAX: 802-773-1275

E-mail: info@timberwolfcorp.com

Web page: www.timberwolfcorp.com

TIMBERWOLF is a trademark of TIMBERWOLF Manufacturing Corporation. All other brands or product names are trademarks or registered trademarks of their respective holders.

Printed in the USA

No part of this work covered by copyright may be reproduced in any form. Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws.

TIMBERWOLF Manufacturing Corporation provides this document "as-is" without warranty of any kind, either express or implied. This includes, but is not limited to, implied warranties or conditions of merchantability or fitness for a particular purpose. TIMBERWOLF Manufacturing Corporation shall not be liable for any errors or omissions that may occur in this document, nor for incidental or consequential damages of any kind resulting from the furnishing, performance, or use of this document.

The information in this document reflects current or planned product features, functions, and characteristics as of the publication date. Because of on-going product improvements and feature additions, information in this document is subject to change without notice.

Rev 04/03

Manual Produced by Osborne Gibbs (ozgibbs@aol.com)
Cover & Line Art by Anything Graphic (norma0765@aol.com)

About the Manual

Thank you for buying a Timberwolf Manufacturing Corporation log splitter. This splitter is made with high quality components and will provide years of service under normal working conditions.

Please read this entire manual before you operate the machine. If you have any questions regarding assembly, use, safety, or maintenance, please call Timberwolf Manufacturing Corp. at 802-775-4227.

Safety Note

Please take time to read this manual and learn how operate and maintain the log splitter safely. The log splitter is a powerful piece of equipment that can generate more than 50,000 pounds of force. Incorrect use of the log splitter can cause serious injury or death.

Read Entire Manual Before Operating the Log Splitter

Attention Rental Companies

It is extremely important that any person who operates this equipment has access to and has read the operator's manual. Timberwolf Manufacturing Corporation strongly urges you to keep the manual with the splitter at all times, and to instruct all persons who will operate this machine to read the manual.

Caution!

Residual Hydraulic Energy

Residual energy must be released from the pressurized hydraulic fluid before any maintenance or repair work is done on the log splitter. Hydraulic fluid can remain highly pressurized even while the splitter's motor is off. Escaping pressurized hydraulic fluid can penetrate skin and cause serious injury.

To release residual hydraulic energy:

1. Shut off splitter motor (tractor motor if splitter is a three-point hitch model).
 2. Move control valve back and forth, from one limit of travel to the other, at least four times.
 3. Hold valve for three seconds at each limit of travel.
-

Record your log splitter's ID numbers here:

Model # _____

Serial # _____

Motor # _____

Table of Contents

About Your Timberwolf Log Splitter	1
General.....	1
General Description.....	2
CRS Frame	3
Two-stage Hydraulic Pump.....	3
Auto-cycle Valve.....	4
Wedges	4
BFS Wedge	4
Single-blade Wedge	5
Four-way Slip-on Wedge.....	6
Six-way Slip-on Wedge	6
Hydraulic Wedge Lift	7
Log Cradle	7
Hydraulic Log Lift.....	8
TW-7 Specifications.....	9
TW-7 Features	9
Important Safety Instructions	10
What You SHOULD Do	10
What You SHOULD NOT Do	10
What You SHOULD <u>NEVER</u> Do	11
Hydraulic Safety	12
What You SHOULD Do	12
What You SHOULD NOT Do	12
Before You Start the Log Splitter	13
Location.....	13
Setup	14
Changing Wedge Assembly	14
Check Fluids.....	16
Operating Instructions	17
Start Up.....	17
Splitting Safety	17

Controls – Auto-cycle, Log & Wedge Lifts	18
Loading	20
Wedge Positioning	20
Hydraulic Wedge Lift.....	20
Splitting with Auto-cycle Valve	21
Transporting the Log Splitter	22
Preparation	22
Towing Safety	23
Maintenance	25
Engine Oil	25
Hydraulic Oil	25
Hydraulic Oil Filter	25
Push Block	26
Wedge	26
Daily Maintenance	26
General.....	26
Grease	26
Motor.....	26
Hydraulic Hoses.....	26
Annual Maintenance	27
Grease	27
Hydraulics.....	27
Trouble Shooting	27
Seal Kit Installation – Auto-cycle Valve.....	27
Rear O-ring Replacement	27
Front O-ring Replacement.....	27
Détente Plunger O-ring Replacement.....	28
Auto-cycle Valve Détente Adjustment.....	29
Problems/Solutions	29
Limited Warranty	31
Registration Card	33

Protect the investment you've made in a Timberwolf Manufacturing log splitter.

Fill out the Registration Form and send it to us by mail or Fax to ensure your warranty coverage and enable you to receive product updates.

All warning stickers and hazard triangles should be secured and clearly visible at all times. Please check decals daily.

Replacement safety and warning stickers are available free of charge from Timberwolf Manufacturing. Warning stickers include: **One Man Operation**, **Caution**, **Warning**, and **Keep Feet Away** (machines with log lift only).

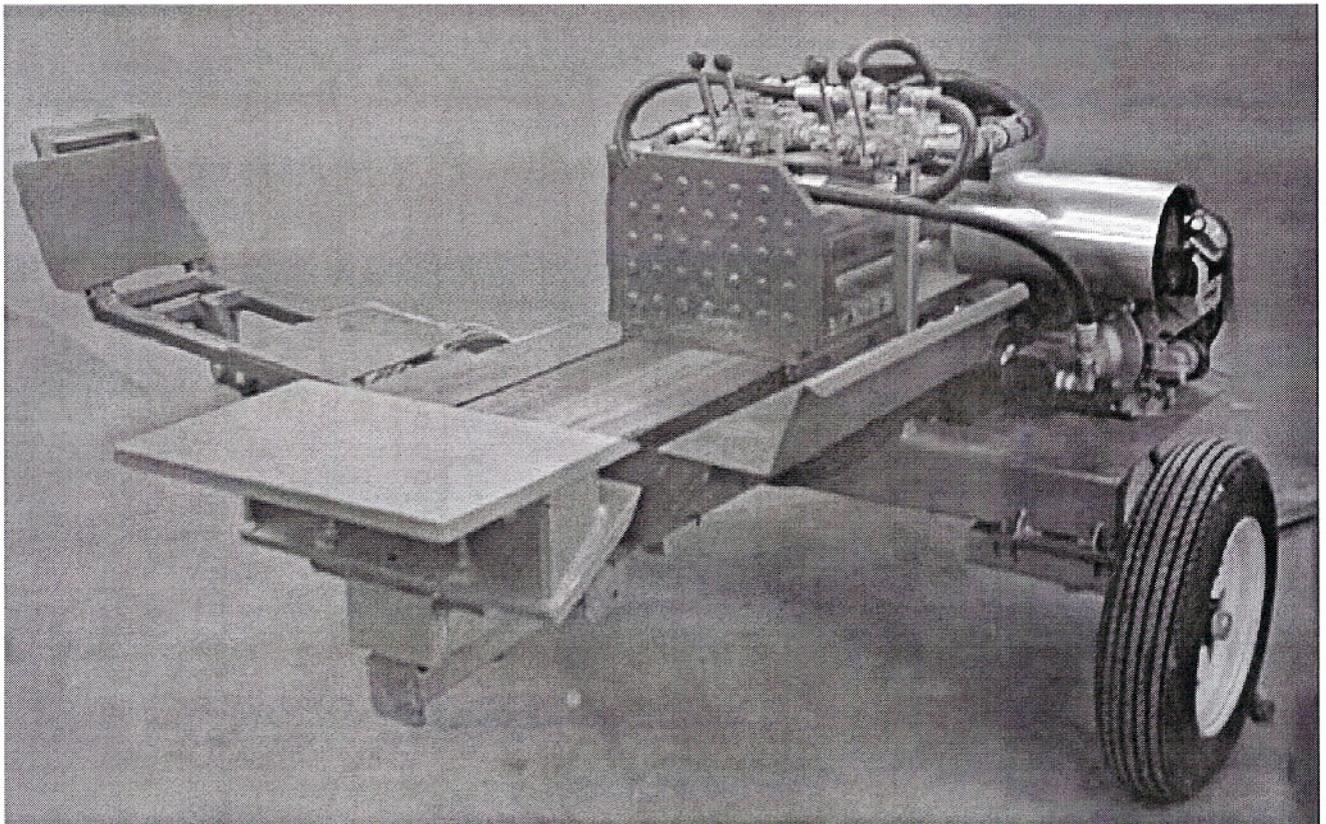
About Your Timberwolf Log Splitter

General

This manual covers Timberwolf Manufacturing Corporation's exceptionally versatile TW-7 log splitter. This heavy duty, high production log splitter features interchangeable wedge assemblies:

- Box-style Bundled Firewood Splitter wedge for turning out small, conveniently sized pieces with maximum efficiency.
- Single blade two-way wedge can be combined with optional multiple blade and hydraulic wedge lift to split logs to a wide variety of sizes.

The log splitter is available with an array of standard and optional features that increase production by making them more versatile and convenient to use.

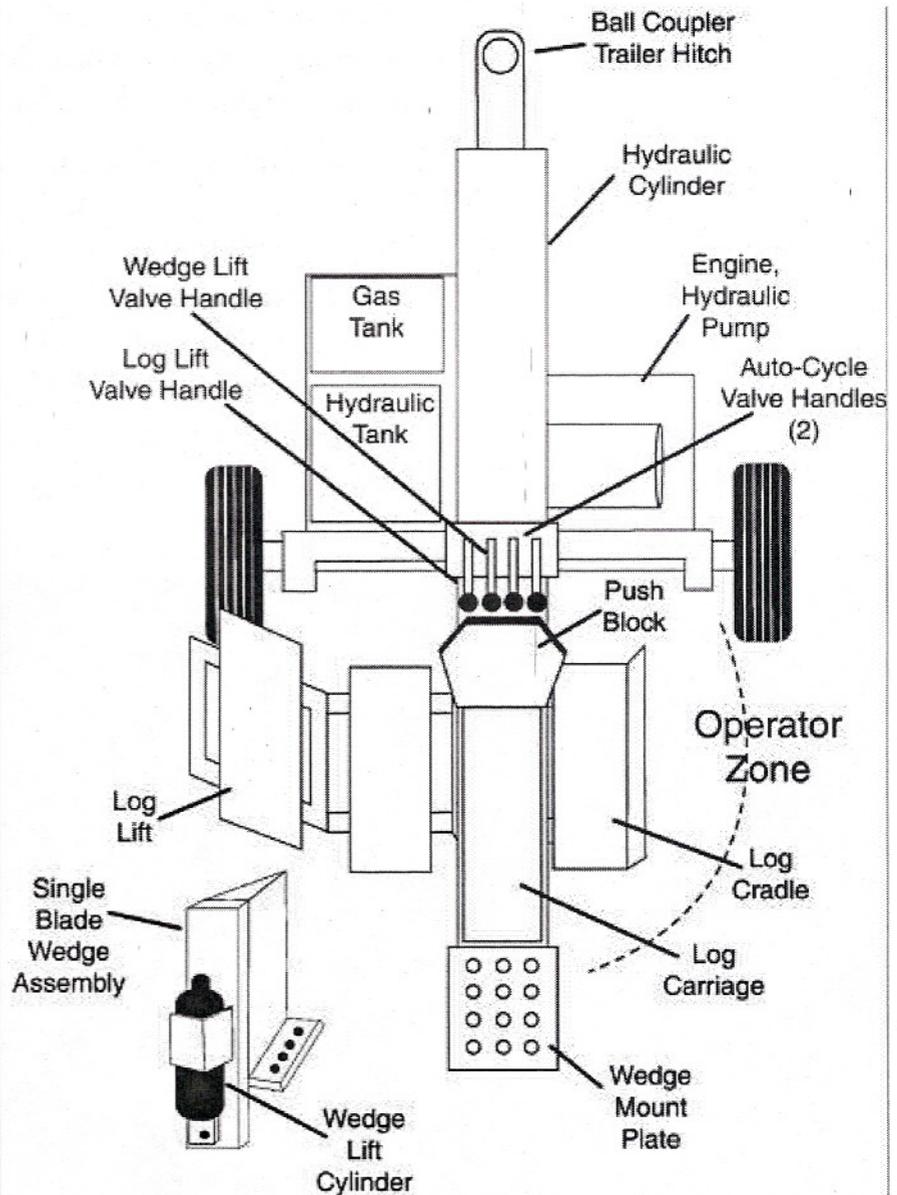


TW-7 – 18 HP motor, 22 GPM pump, and 5 inch cylinder provide 28 tons of force and 8-second cycle time

Don't forget to fill out and submit your Log Splitter's registration form.

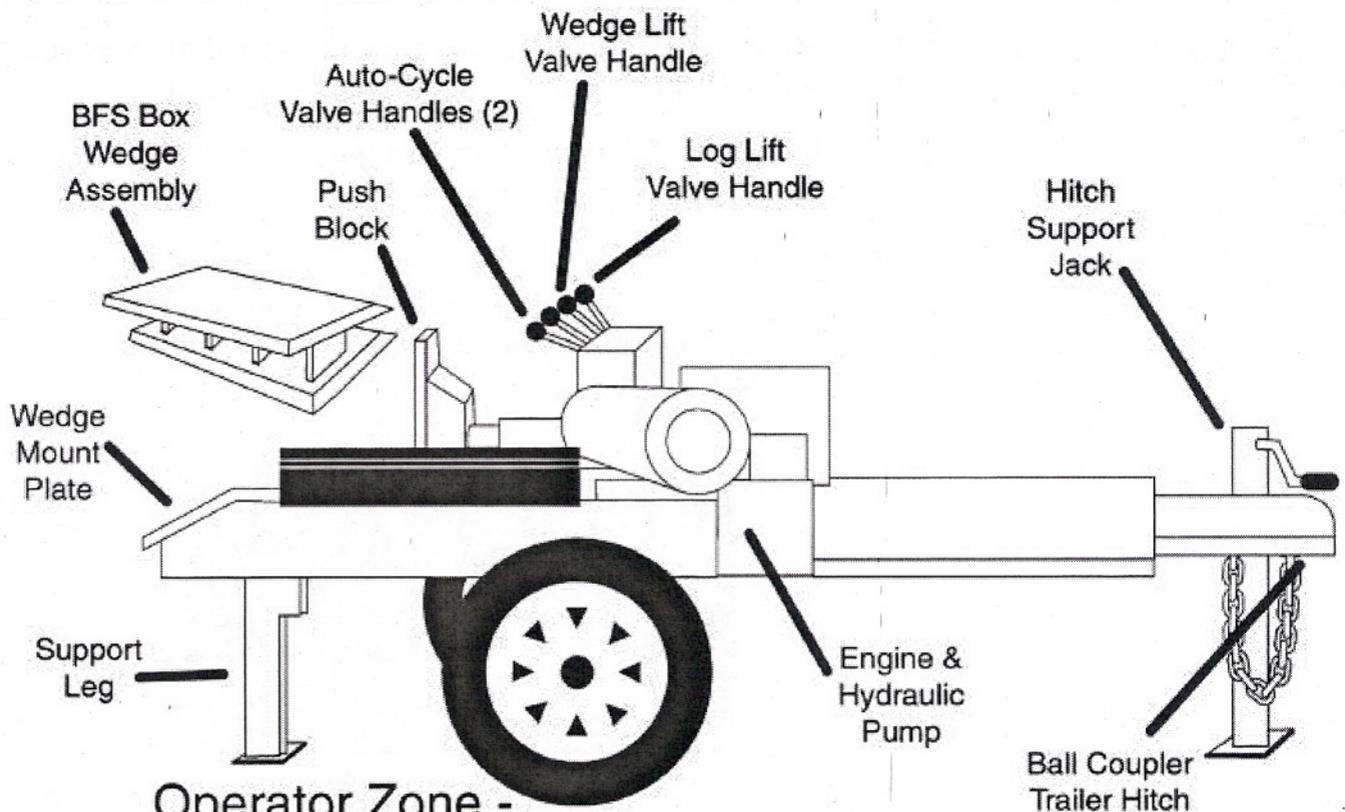
General Description

The drawings on this page and the next identify log-splitter components by the names this manual uses for them.



⚠ CAUTION

Operator Zone identifies area to stand in while operating the log splitter. Do not reach across to the controls from anywhere else.



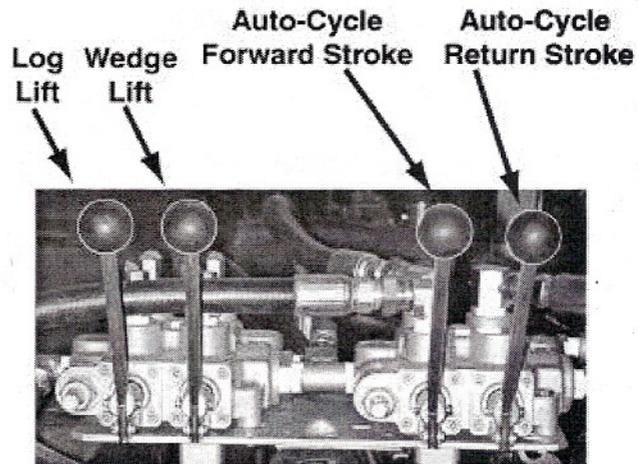
Operator Zone -
Stand On This Side
When Operating Log Splitter

CRS Frame	<ul style="list-style-type: none"> • The extra-wide frame and log carriage of the TW-7 log splitter is constructed from heavy-duty cold rolled steel (CRS) plates. • Extra-wide design permits convenient positioning.
Two-stage Hydraulic Pump	<p>Timberwolf log splitters' two-stage hydraulic pump –</p> <ul style="list-style-type: none"> • Normally moves the push block at high speed with low force. • Shifts automatically to low speed and high force when the log splitter encounters more resistance. • May shift two or three times splitting some logs. <p style="text-align: center;">NOTE</p> <p>If the two-stage hydraulic pump stays in one stage all the time, contact your local dealer or another authorized Timberwolf service facility.</p>

Auto-cycle Valve

The standard auto-cycle hydraulic control valve frees you to get the next log ready while one is being split.

- Hold down the two auto-cycle valve handles to start the push block forward.
- Release valve handles as log begins to split.



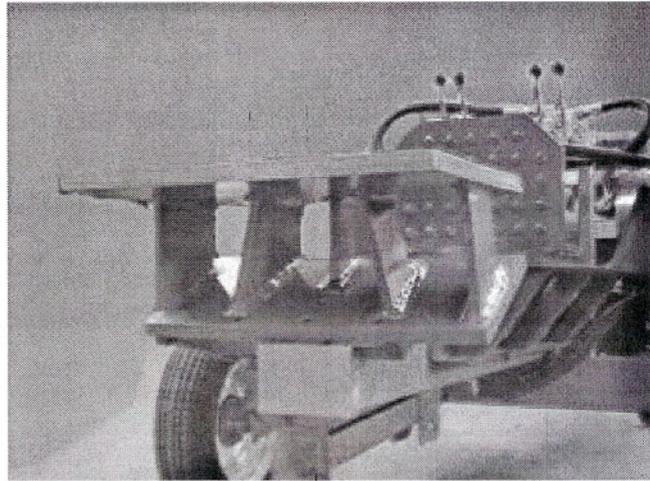
- Cylinder automatically completes forward and return strokes, leaving push block set for next cycle.
- Forward and return valve handles pop up separately at end of forward and return strokes.

Wedges

The TW-7 log splitter derives its versatility from its two interchangeable, bolt-on wedge assemblies. Twelve bolts, inserted from below, secure the assembly to the log splitter's wedge mount.

**BFS
Wedge**

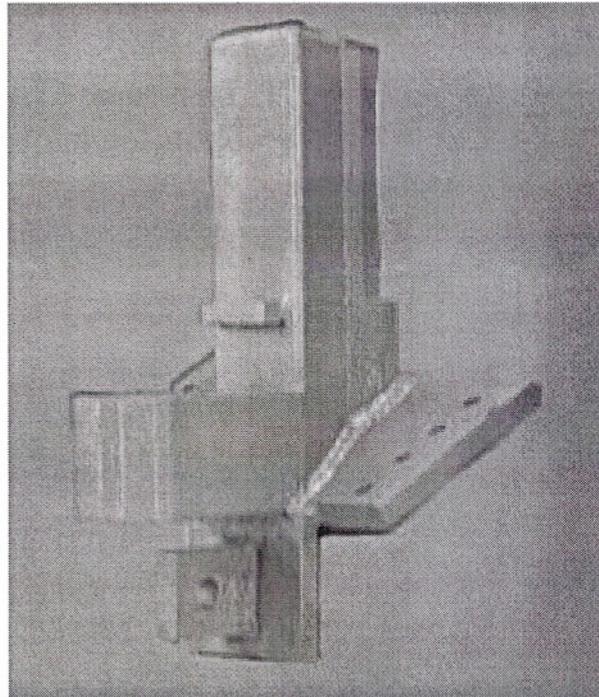
- Bundled Firewood Splitting (BFS) wedge assembly is a box-style unit.
- Vertical blades make six uniform pieces on each stroke – just the right size to bundle for retail fireplace wood.
- Large horizontal blade cuts away the rest of the log to be repositioned and split to fireplace size on the next cycle.

**NOTE**

Do not use the BFS wedge with logs that have more than one knot or that have twisted grain.

**Single-blade
Wedge**

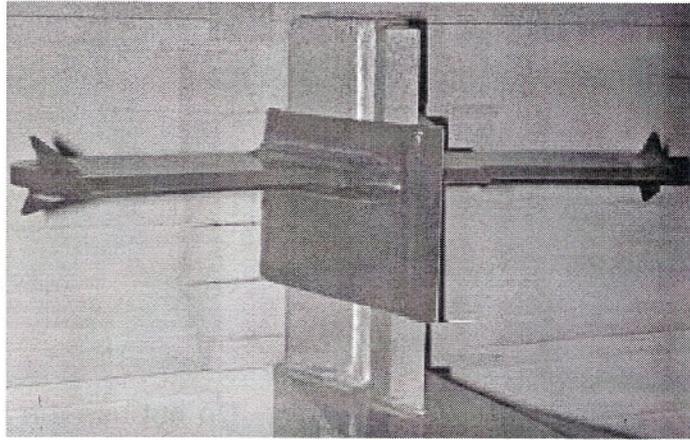
- Single-blade wedge assembly can be used alone or combined with slip-on multi-blade wedge and hydraulic wedge lift.



- By itself, the fixed wedge splits logs into two pieces.
- There are also two slip-on wedges and a wedge lift feature available as options for greater versatility and control.

**Four-way
Slip-on
Wedge**

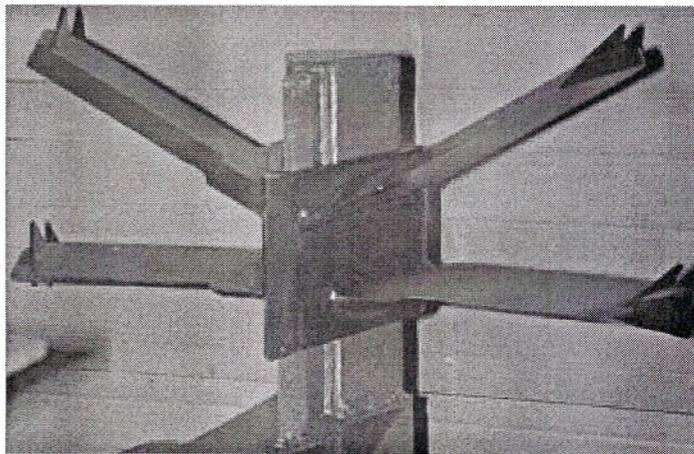
- Mounts on single blade wedge.
- Splits log into quarters on each cycle.



- Handles logs up to 24 inches in diameter.
- Can be put on either end up for different splitting heights.
- Optional

**Six-way
Slip-on
Wedge**

- Mounts on single blade wedge.
- Splits log into six pieces with one thrust of the ram.



- Handles logs up to 24 inches in diameter.
- Optional

NOTE

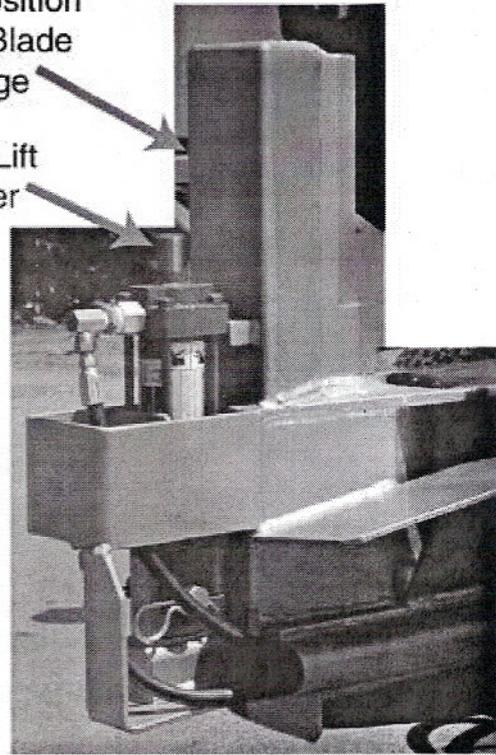
Do not use either slip-on wedge with logs that have more than one knot or that have twisted grain.

Hydraulic Wedge Lift

- Moves slip-on wedge up and down for best splitting position.

Fixed Position
Single-Blade
Wedge

Wedge Lift
Cylinder



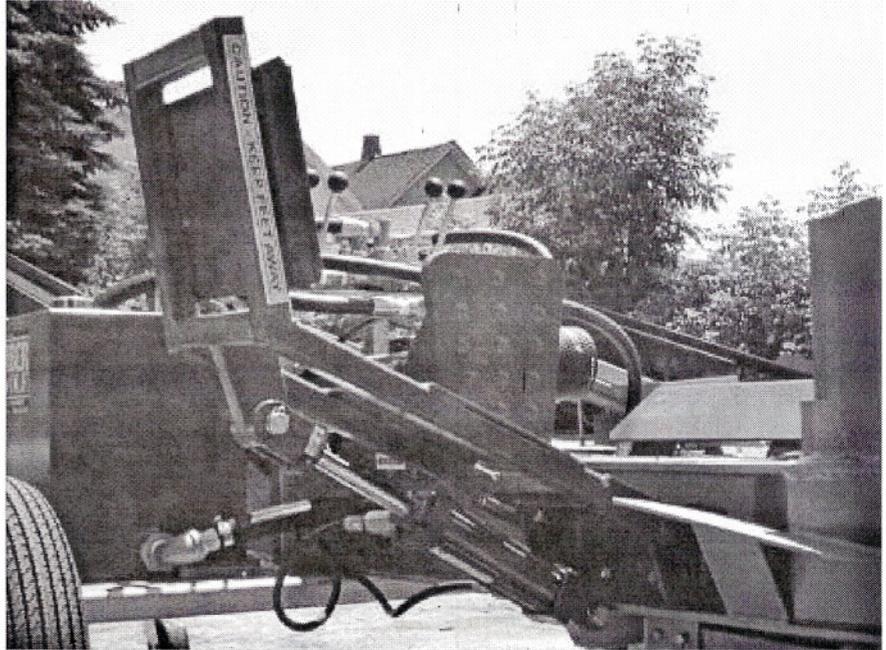
- 4 inches of vertical adjustment.
- 2 inch hydraulic cylinder.
- One-lever hydraulic control.
- Quick connect/disconnect hydraulic hose fittings.
- Optional.

Log Cradle

- Steadies log on beam.
- Heavy-duty bolt-on cradle panels.
- Two panels, one each side of beam, when log lift not installed.
- One panel opposite installed log lift.
- Standard.

Hydraulic Log Lift

- Lifts log from ground and tips onto beam.
- Lifts up to 500 pounds.



- One-lever hydraulic control.
- Optional feature.

⚠ CAUTION

Use the Log Lift only for picking up logs. Never let anyone ride on the Log Lift.

TW-7 Specifications	
Weight –	2250 lb.
Splitting Force –	28 tons
Horse Power –	18
Hydraulic Pump –	22 gpm
Hydraulic Tank –	20 gallons
Max. Log Length –	26 inches
Cylinder Size –	24 x 5 x 3.5 in.
Cycle Time –	8 seconds
Frame –	12 in. CRS plate
Hitch –	2 in. ball coupler

TW-7 Features	
Auto Cycle Valve –	Standard
BFS Box Wedge	Standard
Single Blade Wedge	Standard
4-way Wedge –	Optional
6-way Wedge –	Optional
Wedge Lift –	Optional
Log Lift –	Optional
Log Cradles –	Standard
Fenders –	Optional

Important Safety Instructions

What You SHOULD Do

- Read this manual before you operate the log splitter.
- Locate log splitter only on firm, level ground. Site must be free of slippery surfaces and tripping obstacles.
- Only operate the log splitter outdoors or in a well-ventilated area. The engine emits colorless, odorless carbon monoxide gas that can cause fatal poisoning.
- Only operate the log splitter in a well-lit area.
- Always wear personal protective equipment.–
 - Goggles or face shield for eye protection
 - Ear plugs or hearing protectors
 - Snug-fitting work gloves (loose gloves increase risk of snagging)
 - Safety shoes.
- Use a pickaroon or peavy tool for repositioning log section on splitting carriage.
- Keep hands and feet clear of splitting area while the push block is in motion.

What You SHOULD NOT Do

- Never split anything other than logs.
- Don't handle logs by their ends when you position them.



You don't want your hands at pinch points where they can get caught between a log and the wedge, push block, or log cradle.

	<ul style="list-style-type: none">• Don't put any part of yourself, your clothing, or your personal protective equipment into a crack in a log that's being split; it might close suddenly and with great force.• Don't put anything between the log cradle and the side of a log; logs spread as they're forced against the wedge.• Do not straddle or climb over the log splitter at any time.• Do not move or reposition the log splitter with the motor running.• Do not modify or alter the machine in any way at any time.
What You SHOULD <u>NEVER</u> Do	<ul style="list-style-type: none">• Never team up with another person to operate the log splitter controls – it's a one-person job.• Never operate log splitter under the influence of alcohol, drugs, or medication.• Never operate log splitter with faculties reduced by any physical condition such as head cold or dizziness.• Never allow an untrained operator to use the log splitter.• Never allow anyone under age eighteen to operate the log splitter.• Never leave log splitter unattended with its motor running.

Hydraulic Safety

WARNINGS

Escaping pressurized fluid from hydraulic system leaks can have enough force to penetrate skin and cause serious injury or death.

Hydraulic fluid can remain highly pressurized while splitter motor is off.

Never use your hand or any part of your body to check for hydraulic system leaks while the system is pressurized.

Get professional medical help at once if hydraulic oil penetrates anyone's skin.

Always release residual energy from pressurized hydraulic fluid before doing any maintenance or repair work on the log splitter.

What You SHOULD Do

- Inspect hydraulic hoses every day – check for worn, frayed, kinked, and cracked areas.
- Replace any damaged or worn hoses.
- Use sheet of cardboard or log to check for hydraulic leaks while system is running.
- Depressurize system to release residual hydraulic energy before starting any repairs.
 1. Shut off splitter motor.
 2. Move control valve handle back and forth, from one limit of travel to the other, at least four times.
 3. Hold valve for three seconds at each limit of travel.
- Contact Timberwolf Manufacturing Corp. or a qualified hydraulic mechanic to replace worn components.

What You SHOULD NOT Do

- Do not make any adjustments to the pressure relief valve.
- Never remove cap from hydraulic tank while motor is running or while tank is still warm after motor is shut off. Hot pressurized oil can cause serious injury, so wait for hydraulic tank to cool before removing cap.
- Never use any connectors, valves, or fittings that are different from the ones originally installed on the log splitter.

Before You Start the Log Splitter

Location

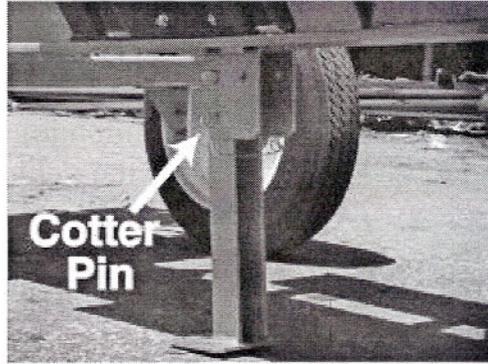
- Place log splitter on level ground, in a well lit, well ventilated spot.
- Check around log splitter for hazards. Make sure area is free of slippery surfaces and objects to trip over.
- Make sure there won't be people or animals in the area around the log splitter.
- Unhitch log splitter from tow vehicle by lifting coupler off the vehicle's towing ball with the hitch support jack.

To Raise



Setup

- Log splitter requires solid, four-point support.
- Support the wedge end on its swing-down leg:
 - Take out cotter pin holding leg in raised position.
 - Swing leg down.
 - Insert cotter pin in hole for down position.



- If leg cannot swing into vertical position, lift wedge end higher by lowering the hitch support jack.
- When leg is down, raise the hitch support jack until the leg is firmly on the ground.

Changing Wedge Assembly

Changing the wedge assembly is a two-person job.

Removing a wedge assembly:

1. Turn off engine.
2. Before taking off a single blade wedge assembly with optional equipment, remove the slip-on multi-blade wedge, depressurize and disconnect the wedge lift hydraulic hoses.

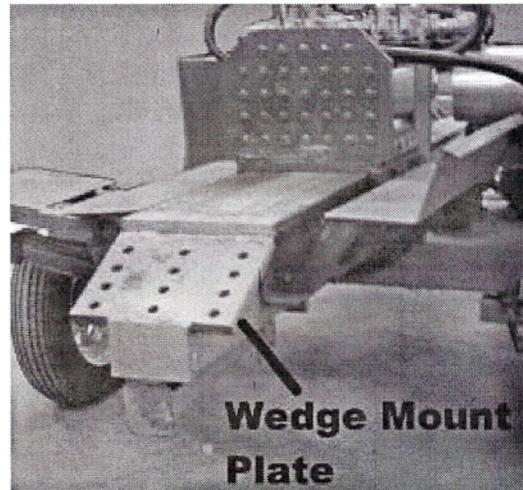
WARNING

Make sure system is depressurized before disconnecting hoses. See Hydraulic Safety in the Safety section.

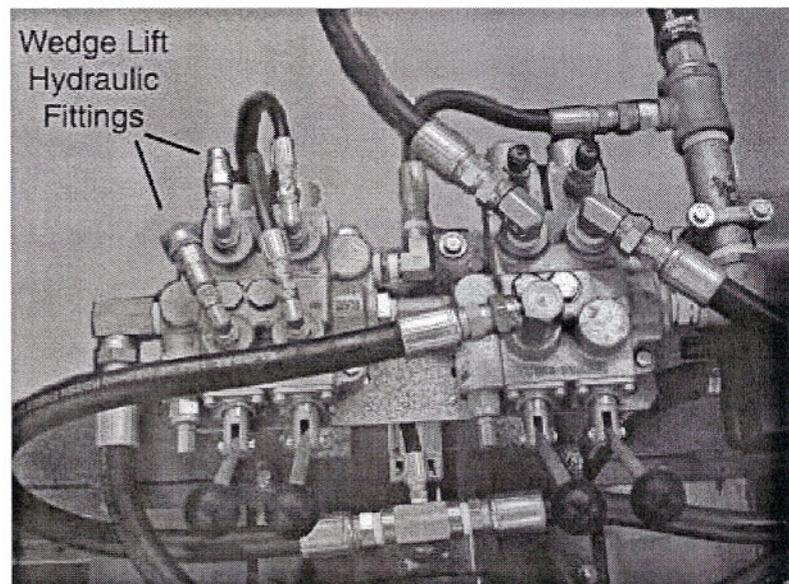
3. Use a wrench to loosen all twelve bolts on the underside of the wedge mount plate.
4. With one person standing on each side, steady the wedge assembly while fully removing the bolts.
5. Lift off the wedge assembly.

Installing a wedge assembly:

1. With one person standing on each side, lift the selected assembly into place and position it on the wedge mount plate.



2. While one person steadies the wedge assembly, insert bolts from the underside and start them into the assembly's bolt holes. Do not tighten bolts until all twelve have been started.
3. Use a wrench to securely tighten all twelve bolts.
4. When installing a single blade wedge assembly with optional equipment, connect the wedge lift hydraulic hoses and put on the slip-on multi-blade wedge.



Check Fluids

- Engine oil should be to the level of the fill pipe.
- Hydraulic oil:
 - Timberwolf recommends use of Rando 46 (Texaco).
 - Level should be two inches below the top of the tank.

Operating Instructions

Start Up

- Start motor.

NOTE

See motor manufacturer's manual for motor starting and maintenance instructions.

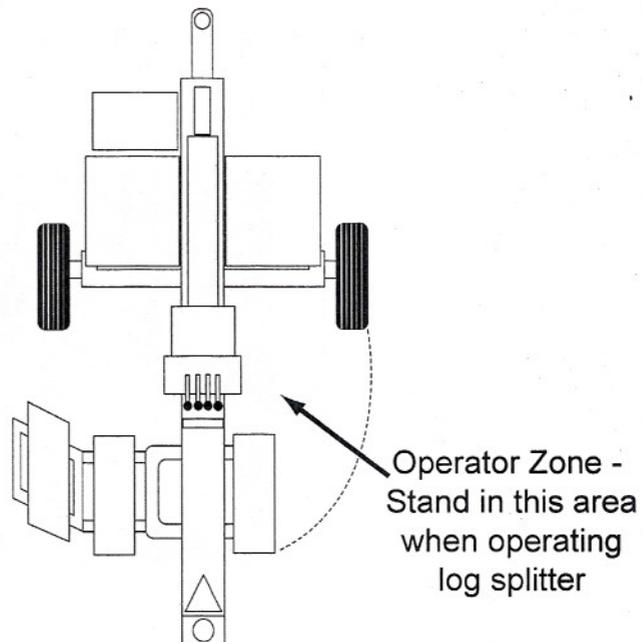
- Run motor at idle for 10 – 15 minutes to let hydraulic oil warm up.

CAUTION

Run engine between three-quarter throttle and full throttle. Running engine at lower speed can force fuel into the crankcase. If that happens, the engine motor oil and spark plug have to be replaced.

Splitting Safety

- Always stand inside the **Operator Zone** to run the log splitter. That's the area between the well and the control valve. Never operate the log splitter from anyplace else, including the area in front of the valve handle.



- Handle logs only from the sides; never by the ends.

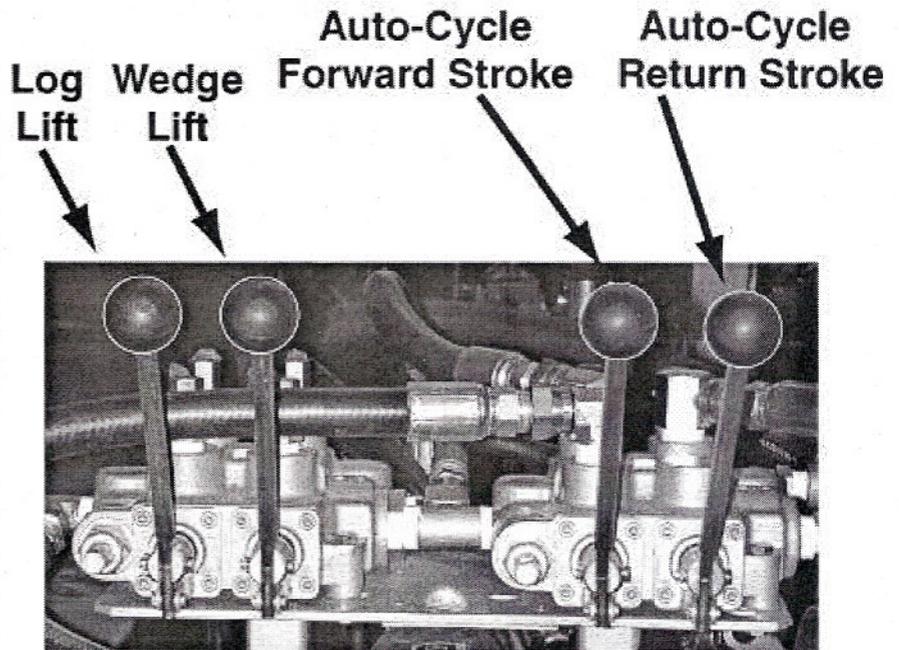
Splitting Safety
(Continued)

- Put one hand on top of log in the middle to keep it steady until it's held firmly between push block and wedge – then get your hand out of there.
- Be very careful to keep arms and fingers away from the wedge and push block.
- Keep hands and fingers clear at **all** times. Many log-splitting accidents happen on the return portion of the stroke.
- Don't put any part of your body within the splitting area. Use a stick if you need to remove debris from the splitting area.

**Controls –
Auto-cycle,
Log & Wedge Lifts**

Log splitters equipped with auto-cycle valve, wedge lift, and log lift have the four control valve handles shown below.

- Auto-cycle valve is standard.
- Log lift and wedge lift are optional.



Log Lift	Wedge Lift	Auto-cycle Valve	
Push to raise	Push to raise	Push for manual retract	
Pull to lower	Pull to lower	Pull & release to split	Pull & release for auto retract

NOTE

Pull and release both handles at once for auto-cycle operation. For manual operation, use only left auto-cycle handle.

<p>Loading</p>	<ul style="list-style-type: none"> • For best splitting results, place logs on beam with butt end toward hydraulic cylinder. • Log lift operation: <ul style="list-style-type: none"> • Stand in the operator zone when raising or lowering log lift. • Log lift only moves while handle is held in position. • Pull handle to lower log lift. • With lift fully lowered, go around the log splitter and roll log onto lifting platform. • Return to operator zone. • Raise lift by pushing handle; hold until log rolls onto beam. • Keep lift raised until log is securely held between push block and wedge.
<p>Wedge Positioning</p>	<p>There are no position adjustments for the BFS wedge assembly or for the single blade wedge assembly when it is used by itself.</p> <p>When the single blade wedge assembly is combined with a slip-on wedge, the 4-way or 6-way wedge can be installed with either end up. Installed position alters the height of the wedge cross pieces.</p>
<p>Hydraulic Wedge Lift</p>	<p>The hydraulic wedge lift provides four inches of vertical adjustment so you can reposition a multi-blade slip-on wedge for each log to get best results.</p> <ul style="list-style-type: none"> • Wedge lift operation: <ul style="list-style-type: none"> • Wedge lift only moves while you hold the handle in position. • Push to raise; pull to lower. • Position wedge before you start the push block forward.

Splitting with Auto-cycle Valve

- Activate control valves – pull both handles forward into locked position.
 - Steady log until it's held firmly between push block and wedge, then quickly remove your hand.
 - Release control valve handles when wedge starts into log – handles stay in locked position.
 - While auto-cycle completes you can get the next log ready or clear split pieces away from the wedge area.
 - Forward control valve handle pops up and push block starts return stroke when push block reaches full extension, one or two inches from wedge.
 - Return control valve handle stays in locked position until push block fully retracts, then pops up.
 - At start of return stroke make sure nothing will interfere with push block while it retracts.
 - To stop push block in mid-cycle, push back on both control valve handles; you can then either –
 - Pull both handles forward to resume forward stroke.
- or
- Push back on left auto-cycle control handle to retract push block.

Transporting the Log Splitter

Preparation

- Never move the log splitter with the motor running.
- Make sure fuel valve on log splitter motor is in the "OFF" position.

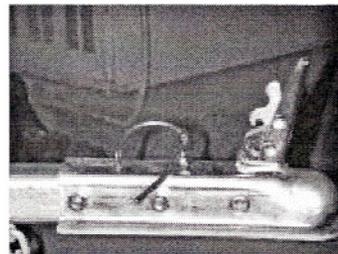
⚠ CAUTION

If fuel valve isn't shut off, fuel will be forced into the cylinder and crankcase during travel. If that happens, the engine motor oil and spark plug have to be replaced.

- Leave the installed wedge assembly bolted in place.
- Transport the extra wedge assembly in the tow vehicle, not on the log splitter.
- If single blade wedge assembly is installed, remove optional four-way or six-way wedge and transport it in the tow vehicle – wedge lift can remain in place.
- Make sure there are no loose parts or debris on the log splitter to fall off while it's being towed.
- Never tow the log splitter with a log on it.
- Make sure the front support leg is retracted and pinned up before transporting.



- Attach log splitter's ball coupler firmly to ball on tow vehicle hitch:
 - Raise hitch latch to unlocked position.



Preparation (Continued)	<ul style="list-style-type: none">• Place hitch onto ball of tow vehicle's trailer hitch.• Lower hitch latch into locked position and secure with locking bolt.• Make sure safety chains are securely attached, with sufficient slack to allow for turning.• Use crank to raise leveling jack/wheel assembly as far as it will go.
Towing Safety	<ul style="list-style-type: none">• Never allow anyone to ride on the log splitter.• Never transport anything on the log splitter.• Obey local, state, and federal regulations when you tow the log splitter on public roads and highways. <p style="text-align: center;"><u>NOTE</u></p> <p style="text-align: center;">Some states may require the log splitter to be registered with the State Department of Motor Vehicles.</p> <ul style="list-style-type: none">• Fenders and light kits, required in some states, are available from Timberwolf Manufacturing as optional equipment.• Do not exceed 30 MPH while towing the log splitter.• Towing log splitter can affect handling:<ul style="list-style-type: none">• Log splitter might "off track" tow vehicle.• Log splitter can turn tighter than tow vehicle does.• Never back up tow vehicle with log splitter attached. Log splitter can jack knife, causing damage to itself and/or tow vehicle.• Long distance towing is not recommended.

Maintenance

WARNING

Make sure motor is shut off and hydraulic system is depressurized before you perform any maintenance. Make sure hydraulic oil has cooled. Read "Safety" section of this manual before performing any repairs.

Engine Oil	<ul style="list-style-type: none"> • First change after first 5 hours of operation • Regular changes after every 20 hours of operation
Hydraulic Oil	<ul style="list-style-type: none"> • Regular changes after every 200 hours of operation <p style="text-align: center;"><u>NOTE</u></p> <p style="text-align: center;">If hydraulic oil becomes contaminated it should be changed immediately.</p>
Hydraulic Oil Filter	<ul style="list-style-type: none"> • The log splitter is equipped with an in-tank, ultra-fine steel mesh hydraulic oil filter. • Under normal operating conditions change the filter after every 1000 hours of operation. • There is also a green/yellow/red filter condition gauge mounted on the hydraulic oil tank filler cap. <div data-bbox="714 1130 1302 1569" data-label="Image"> </div> <ul style="list-style-type: none"> • Change the filter if gauge approaches the red zone.

Push Block	<ul style="list-style-type: none"> • Grease assembly daily to reduce wear on beam and sides. • Use any high-grade tube grease. • Replace wear plates (also called "gibbs") if push block can be raised more than one quarter inch off the beam.
Wedge	<ul style="list-style-type: none"> • Sharpen wedges regularly with file or grinder.

Daily Maintenance

General	<ul style="list-style-type: none"> • Check all nuts, bolts, and welds to be sure that the frame and components are secure. • Make sure that the wear plates attached to the push block are firmly bolted in place.
Grease	<ul style="list-style-type: none"> • Make sure push block and top of beam are well lubricated with grease. • Grease push block at grease fittings. • Smear grease across top of beam.
Motor	<ul style="list-style-type: none"> • Consult motor manufacturer's manual for motor's daily maintenance requirements.
Hydraulic Hoses	<ul style="list-style-type: none"> • Inspect hydraulic hoses for frayed, worn, kinked, or abraded areas. • Replace any damaged or worn hydraulic hoses immediately. <p style="text-align: center;"> WARNING</p> <p style="text-align: center;">Make sure system is depressurized before you do any hydraulic system repairs. See Hydraulic Safety in the Safety section.</p>

Annual Maintenance

Grease	<ul style="list-style-type: none"> • Grease wheel bearings annually. • Grease wheel bearings after any trip longer than 50 miles.
Hydraulics	<ul style="list-style-type: none"> • Change hydraulic oil annually. • Change hydraulic oil filter after 1000 hours of operation or when filter condition gauge approaches red zone. <p style="text-align: center;"> WARNING</p> <p style="text-align: center;">Make sure system is depressurized before you do any hydraulic system repairs. See Hydraulic Safety in the Safety section.</p>

Troubleshooting

Seal Kit Installation – Auto-cycle Valve	<p>If valve is leaking from the back of the détente block, then the large O-rings can be replaced without disturbing the détente block. (Refer to Prince Parts Manual for breakdown.)</p>
Rear O-ring Replacement	<ol style="list-style-type: none"> 1. Remove cotter pin from the handle where it connects to valve spool. 2. Remove 4 screws from rear of détente block and slide entire spool with détente block still attached out the back of the valve. 3. Slide old O-rings off the spool. 4. Check for any burrs in the recessed area where O-ring seats on the back of the main valve body. If you find burrs, remove them with sandpaper 5. Slide new O-rings onto the spool.
Front O-ring Replacement	<ol style="list-style-type: none"> 1. Remove 4 screws from front plate and slide plate over the end of the spool. 2. Slide old O-rings off the spool. 3. Slide new O-rings onto the spool.

**Détente
Plunger
O-ring
Replacement**

If auto cycle valve leaks from the top of the détentes, the O-rings on the détente plunger must be replaced.

To replace détente plunger O-rings:

1. Turn 7/8" base nut on détente spring assembly counter-clockwise and remove the assembly.
2. Use needle nose pliers to remove inner détente plunger.
3. Replace small O-rings and plastic spacers on inner plunger.
4. Use needle nose pliers to replace inner détente plunger.
5. Reposition détente spring assembly and turn 7/8" base nut on clockwise.
6. If oil still leaks from the top holes, détente block must be removed from the back of the valves.
7. Remove the Allen screw from the center of the valve spool and slide détente block off the back of the spool.
8. Be careful not to lose the ball bearing in the bottom of the détente block.
9. Once the détente block is removed, you can push the outer plunger up through the détente hole.
10. Now the large détente O-ring can be replaced on this plunger.

NOTE

If the valve is leaking between the détente block and the valve body, then either the large O-ring on the spool or the small O-ring on the détente block face must be replaced.

Auto-Cycle Valve Détente Adjustment

Several things you need to know before you adjust the détentes for the auto-cycle valve:

- Auto-cycle valve will not function properly if the forward détente is adjusted so the handles can be released before the wedge starts into the log.
- Valve setting should not let you release handles before log is firmly held between ram and wedge.
- Correct auto-cycle valve setting requires you to hold the handles until the wedge starts into the log and the log begins to split.
- You should then be able to release the handles while the valves automatically advance and retract the ram through the rest of the cycle.
- Normally you need to adjust both détentes to make the auto cycle work properly.
- Make all adjustments with the log splitter at normal operating temperature.

The détentes to each spool on the auto cycle must be adjusted periodically, depending upon use. Below is a trouble-shooting chart.

NOTE

When directions refer to the left and right sides of the valve, it means looking at the valve from the wedge end.

Problems/Solutions

Cylinder will not extend completely on normal log.

- Adjust détente on left side of valve.
- Turn the screw clockwise, a quarter turn at a time, until handle will stay forward through the entire stroke.

NOTE

If the engine slows way down before it can kick the lever into the neutral position, the détente is turned too far in.

Problems/Solutions
(Continued)**Cylinder will not return all the way.**

- Adjust détente on right side of valve.
- Turn the screw clockwise, a quarter turn at a time, until cylinder will return on its own.

Both handles kick to neutral when cylinder completes outward stroke.

- Turn right détente clockwise to increase spring pressure.

Right or left valve handle will not kick back to neutral position.

- Turn détente counter-clockwise a quarter turn at a time.
- If that doesn't work, remove entire détente assembly, check for dirt or broken parts.

Limited Warranty

Product Covered:

This warranty is for Timberwolf and/or Valley Wood Processing branded log splitters, conveyors, wood processors, ride-on equipment and their attachments or accessories.

Date Warranty Begins:

The warranty begins on the date of sale and is warranted by Timberwolf Mfg. Corp. to the original purchaser only.

What We Will Do for You:

We or your authorized dealer will, at our option, repair or replace any part found to be defective in material or workmanship, without charge for parts or labor, to the original residential purchaser for a period of time of one year. However, charges for pickup, delivery, and service calls are not covered by this warranty. The engine is warranted separately by the engine manufacturer.

What Is Not Covered:

This warranty does not apply to parts that have been damaged by accident, alteration, misuse, abuse or improper lubrication. The following items are not covered after the first six months of home use: hoses, batteries, bushings, seals, filters, tires, wheels, paint, chains, appearance items, light bulbs, and similar items which are normally replaced through periodic maintenance.

Limited Commercial Use Warranty:

If used for commercial, institutional or rental purposes, the warranty on this product is limited in duration to 90 days from date of purchase. This warranty does not apply to parts that have been damaged by accident, alteration, misuse, abuse or improper lubrication. The engine for commercial use is warranted separately by the engine manufacturer.

Commercial Use Definition:

For the purpose of this warranty "consumer use" means personal residential household use by the original retail consumer. "Commercial use" means all other uses, including use for commercial, income producing or rental purposes. Once a unit has experienced "commercial" use it will be considered as a commercial unit for the purposes of this warranty.

How To Get Service:

To obtain service, contact our nearest dealer, or Timberwolf Mfg. Corp. at 118 Spruce Street, Rutland, VT 05701, or call us at 802-775-4227. For engines, contact us or our dealers, or consult your Yellow Pages for the name of the service dealer that is authorized by the manufacturer.

Disclaimer of Consequential Damages:

Timberwolf Mfg. Corp. shall not be liable under any circumstances for any incidental or consequential damages or expenses of any kind, including – but not limited to – the cost of equipment rental, loss of profits, or cost of hiring services to perform tasks normally performed by the equipment.

Limitation of Implied Warranties:

Any implied warranties, including without limitation any implied warranty of merchantability or fitness for a particular purpose, shall be limited in duration to a period of one year (90 days if product is purchased for commercial or other non-residential use) from the date of sale.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty lasts.

Your Rights Under State Law:

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

TIMBERWOLF MANUFACTURING CORPORATION**Warranty Registration Form**

Timberwolf Manufacturing Corporation requires this warranty registration form to be filled out and returned within 30 days after the machine's purchase. The record of your purchase helps us to efficiently process any warranty claims that may arise.

Purchaser Name**(Individual or Company):** _____**Address:**_____

_____**Purchased From****(Dealer):** _____**Address:**_____

_____**Date of Purchase:**

Model Number:

Serial Number:

Motor Serial Number:

Options:

Mail to TIMBERWOLF Manufacturing Corporation
 118 Spruce Street
 Rutland, Vermont 05701

OR

Fax to 802-773-1275

Detach and Fold this page, Tape Shut, Affix Stamp, and Mail To:

TIMBERWOLF Manufacturing Corporation
118 Spruce Street
Rutland, Vermont 05701