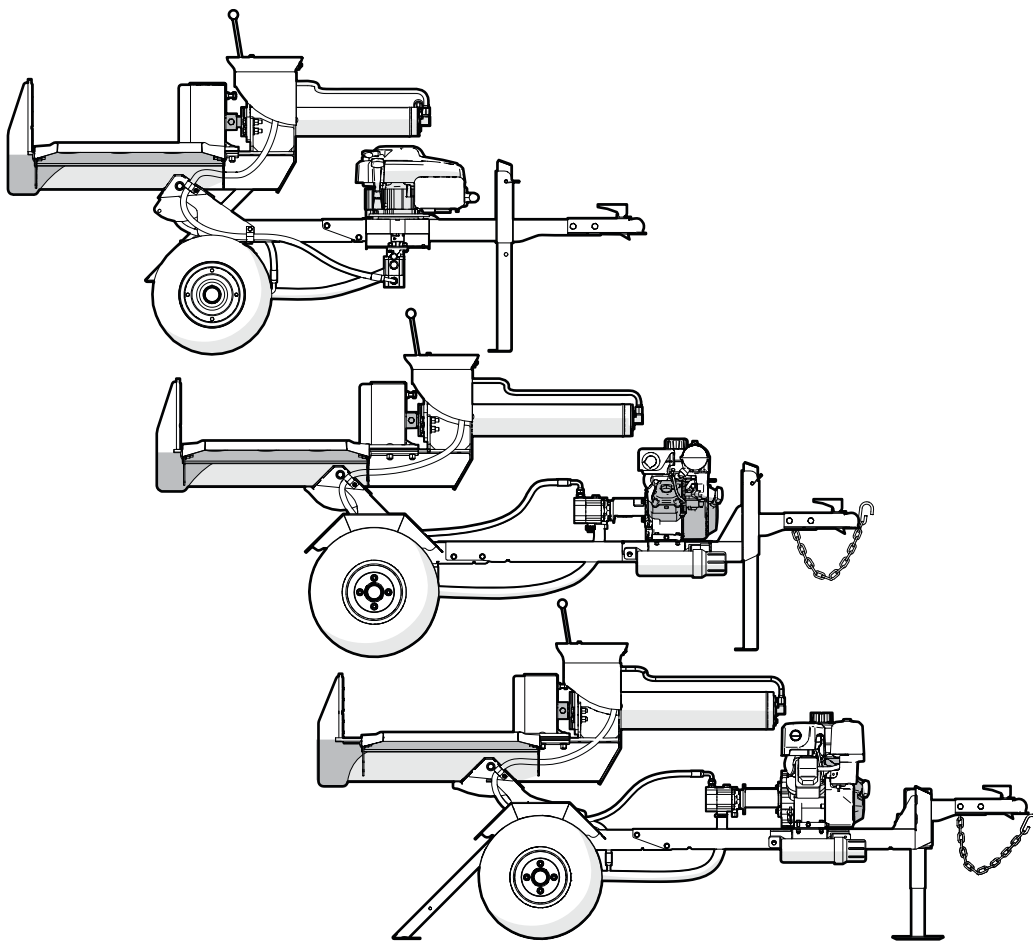


OPERATOR'S MANUAL

Serial number 1102975 and up

WXT15V / WXT20V / WXT30V Log Splitter



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WALLENSTEIN

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1. Introduction

WARNING!

Do not start or operate the machine before you read this manual. Make sure that you fully understand all the safety, operation, and maintenance information before you operate the machine.

Keep this manual with the machine at all times and available for frequent reference.

W034

Congratulations on your choice of a Wallenstein WXT15V, WXT20V, or WXT30V Log Splitter!

This high-quality machine is designed and manufactured to meet the needs of homeowners or small businesses.

These log splitters are towable gas-powered machines that are designed to split logs in a horizontal or vertical position. To split heavy logs, use the split-bed latch to change the split-bed position to vertical.

| Model | Engine | Splitting force | Split opening | Highway towable |
|--------------|------------------------------------|------------------------|----------------------|------------------------|
| WXT15V | Briggs & Stratton® 5.5 hp (190 cc) | 15 tons | 19" (48 cm) | No |
| WXT20V | Vanguard® 6.5 hp (203 cc) | 20 tons | 24" (61 cm) | Yes |
| WXT30V | Vanguard® 10 hp (305 cc) | 30 tons | 24" (61 cm) | Yes |

For safe, efficient, and problem-free operation of this Wallenstein Equipment product, make sure that everyone who uses or maintains the machine reads and understands the information in this manual and the engine manufacturer's manual.

For information about the accessories, go to WallensteinEquipment.com.

Keep this manual available for frequent reference and to give to new operators. For support or service, contact your local dealer or Wallenstein Equipment.

Units of measurement in Wallenstein technical manuals are written as: US Customary (SI metric)

This manual is subject to change without notice. For the most current information, go to WallensteinEquipment.com.

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1.1 Delivery Inspection Report

Wallenstein WXT15V / WXT20V / WXT30V Log Splitter

To register your product and start the warranty, go to WallensteinEquipment.com.

This form must be completed by the dealer at the time of delivery, and then signed by the dealer and customer.

I received the product manuals and was thoroughly instructed about the care, adjustments, safe operation, and applicable warranty policy.

I thoroughly instructed the customer about the equipment care, adjustments, safe operation, and applicable warranty policy, and reviewed the manuals with them.

Customer

Dealer

Address

Address

City, State/Province, ZIP/Postal Code

City, State/Province, ZIP/Postal Code

()

()

Phone Number

Phone Number

Contact Name

Model

Serial Number

Delivery date

Dealer Inspection Checklist

- _____ All support stands move freely.
- _____ Machine controls function correctly.
- _____ All fasteners are torqued to the correct specifications.
- _____ All grease points are lubricated.
- _____ Hydraulic system and cylinders function correctly.
- _____ Hydraulic controls move freely.
- _____ Hydraulic fluid reservoir level is correct.
- _____ Hydraulic connections are tight, and hoses and fittings are in good condition.
- _____ There are no hydraulic leaks.
- _____ Engine starts and operates, and fluid levels are correct.
- _____ Tire pressure is correct (see the tire sidewall).
- _____ Tires are in good condition.
- _____ Split-bed latch functions correctly and the split bed moves freely.

- _____ Purchased accessories are included, if applicable.
- _____ Operator's Manual is in the document tube.

Safety Checks

- _____ All safety labels are applied and legible.
- _____ All guards and shields are installed.
- _____ Wheel lug nuts are tightened to the correct torque.
- _____ A retainer is installed through each hitch point.
- _____ Operating and safety instructions were reviewed.
- _____ Rear reflectors are present and not damaged.

WXT20V or WXT30V

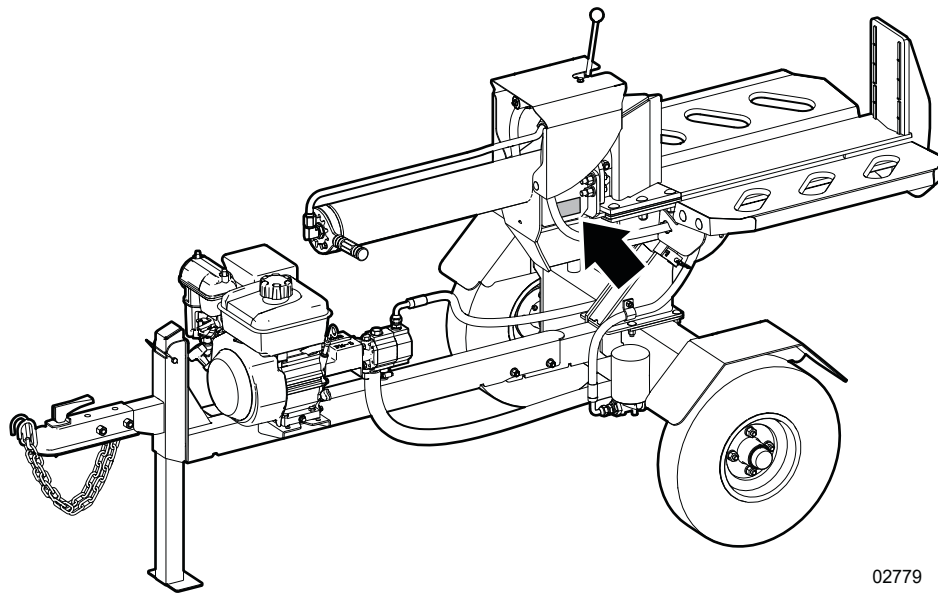
- _____ Safety chains are on the ball-mount hitch.
- _____ Trailer jack functions correctly (WXT30V)
- _____ If the light kit was purchased, all lights operate correctly (for example, running, brake, turn signal, license plate).

1.2 Serial Number Location

Always provide the model and serial number of your Wallenstein product when you order parts, or request service or other information. The product information plate location is shown in the following illustration.

Record the model and serial number of your product here:

| | |
|----------------------|--|
| Model | |
| Serial Number | |



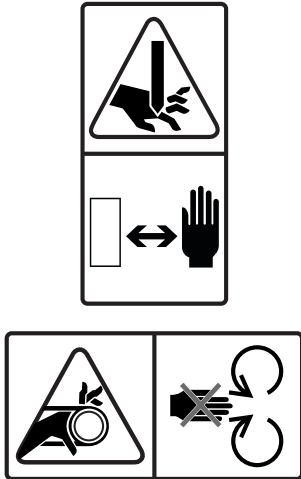
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Figure 1 – Product identification plate location (typical)

1.3 Types of Labels on the Machine

There are different types of labels on your Wallenstein product. The labels are for safety, information, and product identification. This section explains what the labels are for and how to read them.

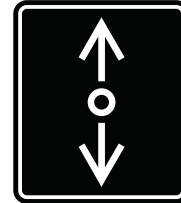
Safety labels are pictorial with a yellow background and have two panels. They can be vertical or horizontal.



Mandatory action labels are pictorial with a blue background and usually rectangular with one or more symbols. This label shows the type of personal protective equipment (PPE) that is necessary for safe operation.



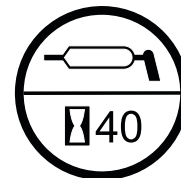
Information labels are usually pictorial with a white or black background and the number of panels can be different. This type of label gives the operator information or shows the operation of a control.



Product labels show the machine model and serial number. For more product information, scan the quick response (QR) code.



Maintenance labels have a green background and the number of panels can be different. This label shows the type of maintenance and how frequently it is necessary.



For safety label definitions, see *Safety Label Definitions on page 16*. For a complete illustration of labels and label locations, download the parts manual for your Wallenstein product at WallensteinEquipment.com.

2. Safety

Read and make sure that you fully understand all the safety information before you operate, service, or maintain a machine.

2.1 Safety Alert Symbol

Look for this safety alert symbol on the machine and in the machine information.



When you see this symbol, it means:

There is a hazard! Be careful!
Your safety is involved!

The safety alert symbol identifies important safety messages that you need to understand. Safety messages show or tell you about hazards that can or will make you ill, cause you serious injury, or kill you. **Always obey the instructions in a safety message.**

2.2 Why Safety is Important

- **Accidents disable and kill people.**
- **Accidents cost money.**
- **Accidents are preventable.**

You are responsible for the safe operation and maintenance of your Wallenstein Equipment product. **You** must make sure that you and anyone who uses, maintains, or works around the machine is familiar with the operation and maintenance procedures and related **safety information** in this manual. Obey the safety best practices in this manual when you operate or maintain your machine.

You are responsible for your own safety and the safety of the people around you. Most accidents can be prevented. **Do not ignore safety instructions and best practices.**

2.3 Signal Words

The signal words **DANGER**, **WARNING** and **CAUTION** identify the severity of a hazard to anyone who uses the machine. The applicable signal word for each message is selected based on the following guidelines:

DANGER

Identifies a hazardous situation that, if not avoided, **will** result in serious injury or death. This signal word is used to tell anyone who uses the machine about the most hazardous situations and machine components that cannot be guarded against.

WARNING

Identifies a hazardous situation that, if not avoided, **can** result in serious injury or death. This signal word includes hazards that occur when guards are removed and can be used to tell anyone who uses the machine about unsafe practices.

CAUTION

Identifies a hazardous situation that, if not avoided, **can** result in minor or moderate injury. It can also be used to tell anyone who uses the machine about unsafe practices.

IMPORTANT – Identifies a situation that could result in damage to the machine or property, but is not a personal injury hazard.



Provides additional information that is helpful.

2.4 Safety Rules

WARNING!

Put on the necessary hearing protection before you operate the machine. Long exposure to loud noise can cause permanent hearing loss.

W016

Wallenstein Equipment puts considerable effort into designing products that are safe to use; however, it is the responsibility of the operator to use the equipment safely.

For safety information that is specific to machine operation, service, or maintenance, see the applicable section in this manual.

- It is the operator's responsibility to read, understand, and follow ALL safety and operating instructions in this manual.
- If you do not understand any part of this manual or need assistance, contact your local dealer, the distributor, or Wallenstein Equipment.
- Do not let anyone use this machine before they read this manual. The operator must fully understand the safety precautions and how the machine operates. Review the safety instructions with all the operators annually.
- Operators must be responsible, familiar with, and physically able to use the machine. Each operator must be trained before they use the machine. Before operation, evaluate the physical and/or mental limitations of each operator to make sure that they can use the machine safely. Do not let a child operate the machine.
- Make sure that all users understand the safety labels on the machine before they operate, service, adjust, or clean it. For safety label definitions, see *Safety Label Definitions on page 16*.
- Learn the controls and how to stop the machine quickly in an emergency. For instructions, see *Emergency Stop on page 40*.
- Keep a first-aid kit available and know how to use the contents of it.



- Keep a fire extinguisher available and know how to use it.



- Put on the applicable PPE before you operate, service, or maintain the machine. This includes, but is not limited to:
 - Heavy gloves.
 - Hearing protection.
 - Protective shoes with steel toes and slip resistant soles.
 - Protective glasses, goggles, or a face shield.

- Long exposure to loud noise can cause permanent hearing loss. Power equipment, with or without a vehicle attached, can make a quantity of noise that is sufficient to cause permanent, partial hearing loss.
- Put on hearing protection and keep it on if the noise in the operator's position is greater than 80 dB. Noise that is louder than 85 dB on a long-term basis can cause severe hearing loss. Noise that is greater than 90 dB and adjacent to the operator on a long-term basis can cause permanent, total hearing loss.
- Remove all loose clothing, jewelry, or loose personal articles. Keep long hair tied up and covered. Loose items can get caught in moving parts and cause personal injury. Jewelry can ground a live electrical circuit and cause personal injury and machine damage.
- Do not consume alcohol or drugs before or during machine operation. Alertness or coordination can be affected. When you take prescription medications, consult your doctor before you operate the machine.
- Only use the machine in daylight or good artificial light.
- Make sure that all guards and shields are installed, and the covers are closed. If it is necessary to remove a guard or shield for repair, install the guard or shield before you use the machine.
- Do not let anyone ride on the machine during transport.
- Keep bystanders a minimum of 10 ft (3 m) from the work zone. Use safety cones to identify the work zone perimeter.
- Before you start the engine, make sure that the machine is clear of debris.
- Do not touch hot engine parts, muffler cover, hoses, engine body, or engine oil during operation or after the engine stops. These surfaces can cause burns.



2.5 Equipment Safety Guidelines

Safety is one of the primary concerns in equipment design and development. However, every year there are accidents that can be prevented. Handle equipment carefully and fully understand the hazards. Everyone who works with the equipment must obey the following precautions to prevent hazards.

- Replace safety or instruction labels that are not readable or are missing. For more information, see *Safety Labels on page 13*.
- Do not change the equipment in any way. Unapproved changes can result in serious injury or death. In addition, unapproved changes can cause incorrect machine operation and decrease the service life of the machine. If anyone makes an unapproved change to the machine, the warranty is immediately void.
- Make sure that the machine is correctly stationed, adjusted, and in good condition.
- Keep the machine free of accumulated grease and debris to prevent fires and machine damage.
- Make sure that the logs and split-wood pile do not prevent safe operation of the machine.
- Look for and avoid overhead hazards (for example; branches, cables, and electrical wires).
- Do not exceed the limitations of the machine. If the machine does not operate normally or you feel unsafe, stop the machine!

2.6 Safety Training

An untrained operator can cause serious injury or death to themselves or other people who are nearby. Review the safety instructions with all users. To keep a record of safety training, see the *Training Record on page 10*.

- When someone does not understand the operation of a machine, they can create dangerous situations very quickly. Operators must understand the safety information in this manual and the safety labels that are on the machine.
- The owner has the responsibility to provide instruction to anyone who is going to operate the machine. This machine is dangerous to anyone who is unfamiliar with its operation.
- It is the owner's responsibility to make sure that, before anyone uses the machine, every operator does the following:
 - Reads and understands this manual.
 - Receives instruction in the safe and correct use of the machine.
 - Understands and knows how to set the machine to a **Safe Condition**.
For instructions, see *Safe Condition*.

2.7 Safe Condition

References are made to **safe condition** throughout this manual. Safe condition means that you put the machine in a state that makes it safe to service or maintain.

Before you start any service or maintenance, do the following:

SAFE CONDITION

1. If the machine is attached to a tow vehicle, set the tow-vehicle parking brake, stop the engine, and remove the ignition key.
2. Stop the machine.
For instructions, see *Stop the Machine on page 39*.
3. Wait for all motion to stop.
4. Operate the hydraulic controls to release the pressure.
5. Put the split bed in the horizontal position.
For instructions, see *Move the Split Bed to the Horizontal Position on page 41*.
Make sure that the split-bed latch is engaged.
6. Disconnect the engine spark-plug wire and keep it away from the spark plug.
7. Block the wheels.
8. Wait for the hydraulic fluid to cool.

2.9 Work Site



The operator must be fully familiar with the work site before starting work. It is the operator's responsibility to prevent unsafe situations and make every effort to prevent accidents.

W112

2.9.1 Select a Work Site

Select a safe work area and machine location:

- The ground should be firm and level.
- Make sure that there is a sufficient amount of space and clearance for the operator, the machine, and the split-wood pile.
- Remove all stones, branches, or hidden obstacles that can create a hazard.
- Make sure that there are no overhead hazards such as branches, cables, or electrical wires.
- Select a location for the logs and split wood. Make sure that the logs and split-wood pile do not prevent safe operation of the machine.
- Park the machine in a position where the prevailing winds blow the engine exhaust away from the operator.

2.9.2 Create a Safe Work Area

Read and obey the instructions for safe operation of the machine.

Keep bystanders and workers safe from hazards. Obey the following important guidelines:

- Use safety cones to identify the work zone perimeter. The work zone perimeter must be a minimum of 10 ft (3 m) away from any hazard in the work zone. The area outside the work zone perimeter is the safe zone.
- Do not let people approach the work zone during machine operation. Everyone must signal and make eye contact with the operator before they approach the work zone.
- Keep all bystanders in the safe zone. Do not let bystanders in the work zone.
- Only the operator can let people enter the work zone. The operator must make sure that it is safe for a person to enter the work zone.
- When there are two or more workers, they must agree on a system of hand-signals to use for communication.
- The operator must make eye contact with coworkers and use the agreed system of hand signals. The operator must always be aware of their coworkers and know where they are.
- If there is fuel on the work site, store it far away from the machine and wood material.
- Use extreme caution around stacked logs. Stacked logs can roll in unpredictable ways.
- Select a location to pile the logs and split wood. The split-wood pile should be on level ground. Make sure that the split-wood pile does not cause interference with safe operation of the machine.
- Cut and remove all tree limbs and branches from the logs before they are put onto the machine.

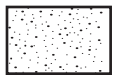
A safe work area is divided into two zones:

1. Safe Zone

The safe zone is the area outside the work zone perimeter (a minimum of 10 ft [3 m] away from any hazard). All people who are not directly involved with the work can be in this area. There are minimal hazards in the safe zone.

2. Work Zone

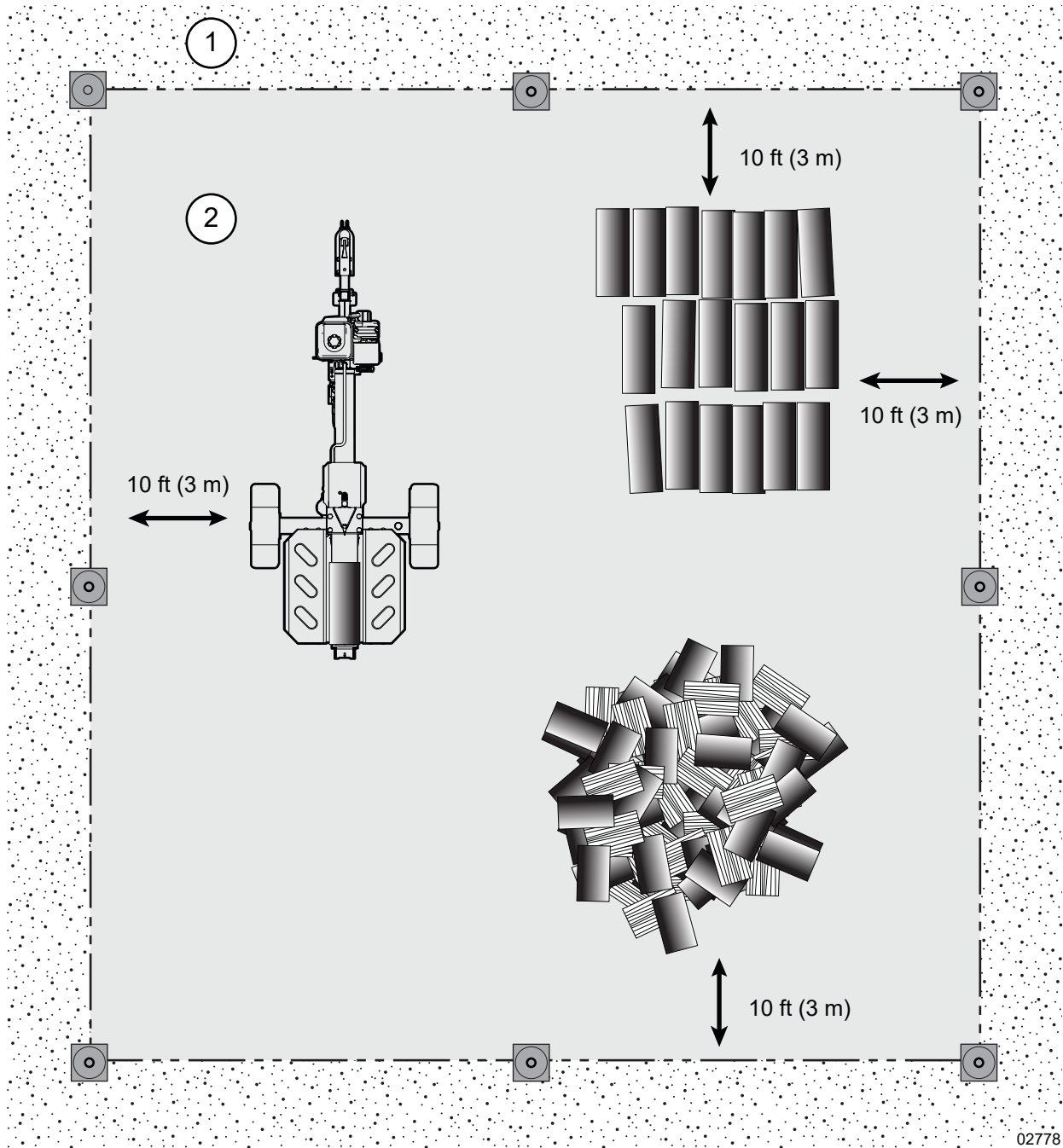
The work zone is the area between the hazard zone and the safe zone. People who help with the work and put on the necessary PPE can be in this zone. It is possible that there are hazards in the work zone.



1. Safe zone



2. Work zone



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Figure 2—Example of a safe work area

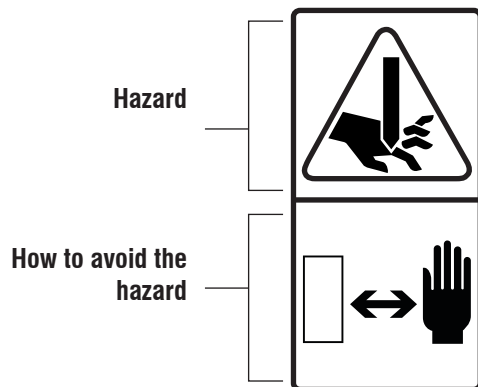
3. Safety Labels

WARNING!

Replace all safety labels that are missing, damaged, or illegible. If a component is replaced and it has a safety label on it, apply a safety label to the new component. If a person operates a machine with missing, damaged, or illegible safety labels it puts them at risk of serious injury or death.

W100

Learn what the safety labels mean and know the safety hazards. A safety label can be vertical or horizontal. Vertical safety labels have a top panel and a bottom panel. Horizontal safety labels have a left side panel and a right side panel. The top or left side panel shows the safety alert (possible hazard), and the bottom or right side panel shows the action message (how to prevent illness, injury, or death).



Think SAFETY! Work SAFELY!

3.1 Replace a Safety Label

- Always replace safety labels that are missing or have become illegible. Replacement safety labels are available from your local Wallenstein Equipment dealer or distributor.
- Keep the safety labels clean and legible at all times.
- When a part that has a safety label on it is replaced, the correct safety label must be applied to the replacement part.

3.1.1 Conditions

- The installation area must be clean and dry.
- The application surface must be clean and free of grease or oil.
- The ambient temperature must be above 50 °F (10 °C).

3.1.2 Tool

Use a squeegee, plastic card, or similar tool to smooth out the label.

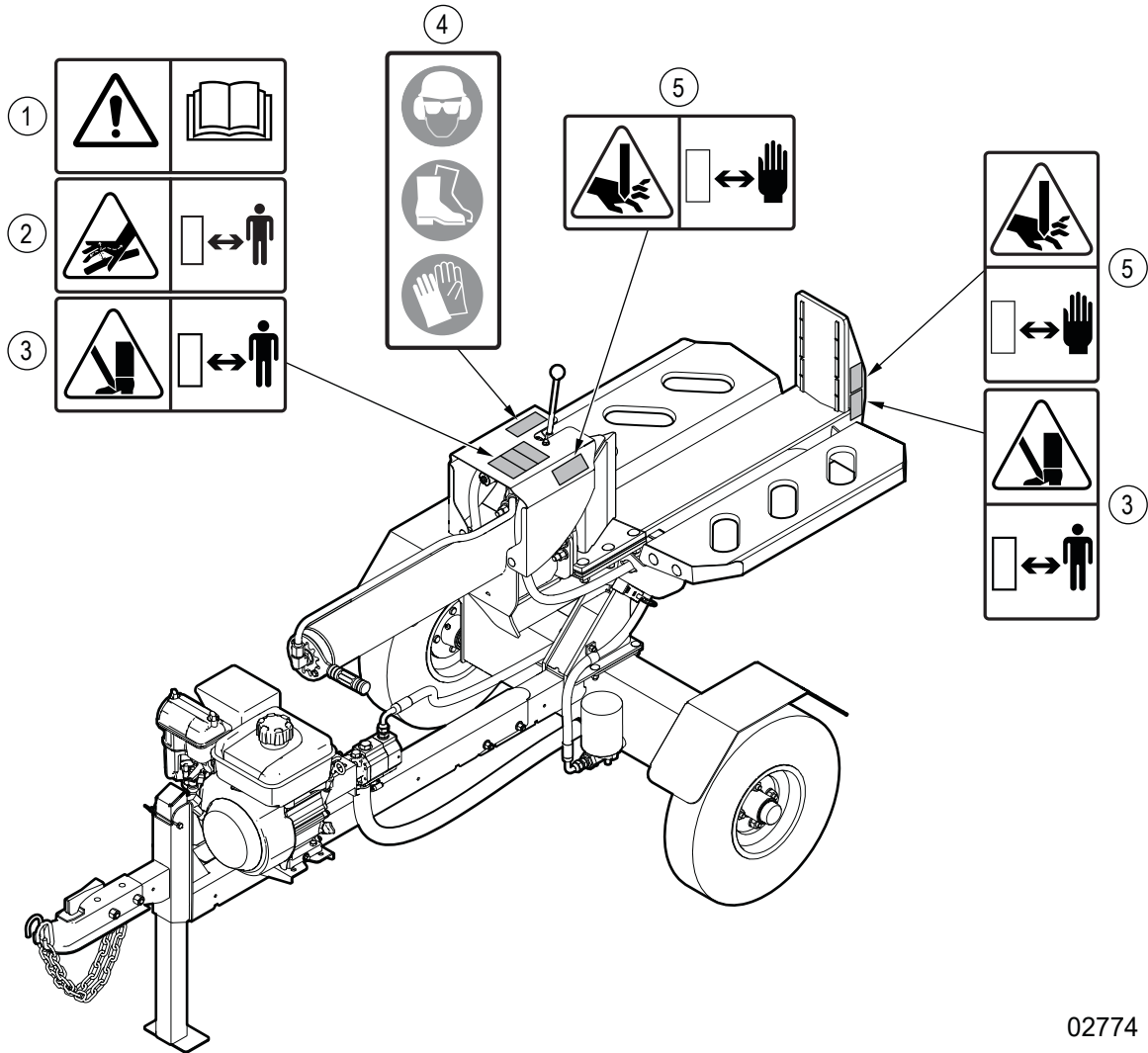
3.1.3 Procedure

1. Identify the label location.
2. Peel the label off the backing paper.
3. Hold the label above the location where you are going to apply it.
Align the edges of the label with an edge of the machine.
4. Start at one edge and carefully press the center of the adhesive side of the label onto the machine.
5. Use an applicable tool to apply and smooth the label. Apply the label from one side to the other.
6. If there are small air pockets:
 - a. Use a pin to pierce the air pocket.
 - b. Use a piece of the label backing paper to press the air pocket flat.

3.2 Safety Label Locations

The WXT20V is shown; however, the WXT15V and WXT30V safety labels are in the same or almost the same locations.

Numbers correspond with the *Safety Label Definitions* on page 16.



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Figure 3 – Safety label locations- left side (WXT20V shown)

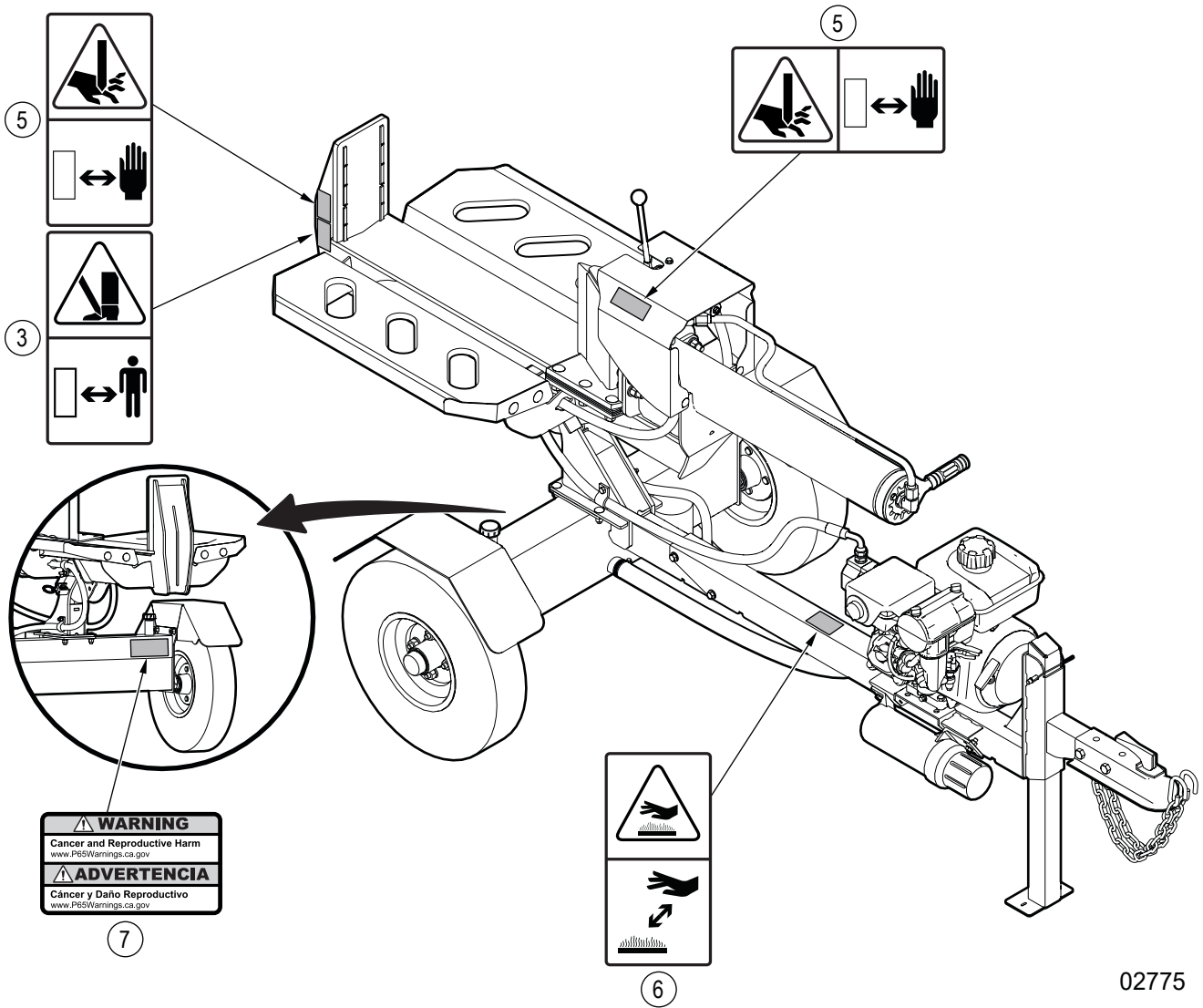


Figure 4—Safety label locations- right side (WXT20V shown)

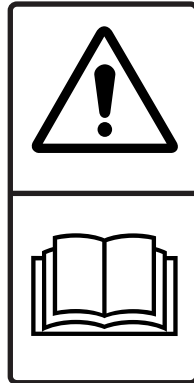
3.3 Safety Label Definitions

1. Caution!

Read the Operator's Manual

There is important safety information and instructions in the Operator's Manual.

Read all the safety information and instructions in the Operator's Manual. Know what all the safety labels mean.



2. Warning!

High-pressure injection hazard

Injection of pressurized hydraulic fluid can cause serious illness, injury, or death.

If you think there is a hydraulic fluid leak, move away from the area. Do not use your hands to inspect for hydraulic fluid leaks. Put on the correct hand and eye protection, and always use a piece of cardboard or wood to find a leak.

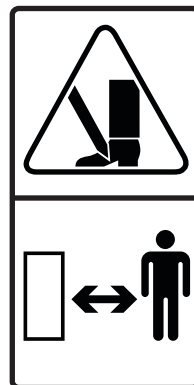


3. Warning!

Impact and crush hazard

Feet and toes can be hit or crushed by material that falls from the machine or when you turn the split bed to the vertical position.

Keep feet away from the area where the material falls. Keep feet away from the split bed when you change its position. It is necessary for everyone who operates or works near the machine to put on the correct protective footwear.



4. Warning!

Put on the necessary PPE

For example:

- A hard hat.
- Heavy gloves.
- Hearing protection.
- Protective footwear with steel toes and slip resistant soles.
- Protective goggles or a face shield.



5. Warning!

Crush, pinch, cut, or sever hazard

Hands or fingers can be crushed, pinched, cut, or severed in this area.

Keep your hands away from all moving parts. Wait for all moving parts to stop before you load or remove material. Put the machine in a safe condition before you remove a blockage.

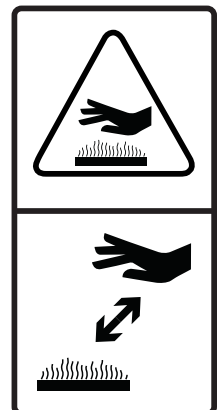


6. Warning!

Burn hazard

The area is hot and can cause burns if you touch it.

Keep hands and body parts away from this area. Wait for the machine to cool. Use a no-touch thermometer to measure the temperature.



7. Warning!

Risk of cancer and reproductive harm

The machine materials contain chemicals or machine operation can produce gases or dust that are identified by the state of California as causes of cancer, birth defects, or other reproductive harm.

This warning is a requirement of the state of California, USA to comply with Proposition 65: the Safe Drinking Water and Toxic Enforcement Act of 1986.



4. Familiarization

The Wallenstein WXT15V, WXT20V, and WXT30V log splitters are designed to split logs into firewood.

When a log is put onto the split bed, the operator extends the wedge to split the log. The operator can put the split bed in the vertical position to split heavy logs. A Briggs & Stratton® (WXT15V) or a Vanguard® (WXT20V and WXT30V) engine provides power to the hydraulic system that moves the wedge.

4.1 New Operator

WARNING!

Make sure that all operators understand how to put the machine in a safe condition before they start any service or maintenance work. For instructions, see *Safe Condition* on page 9.

It is the responsibility of the owner and the operator to read this manual, and to train all operators before they work with the machine. Obey all safety instructions.

Only a fully trained operator is approved to use the machine. A person who operates the machine without the correct training is a danger to themselves and others, and can cause property damage.

4.2 Training

Each operator must be trained in the correct operating procedures before using the machine. Use the form on page 10 to keep a training record.

1. Teach the new operator the control locations, functions, and movement directions.
2. Put the machine in a large open area and let the new operator learn the control functions and machine responses.
3. After the new operator knows and is comfortable with the machine, they can start work.

4.3 Operator Orientation

IMPORTANT! When describing controls throughout this manual, the directions for left side, right side, front, and rear are determined when standing at the operator controls, facing the direction of forward machine travel.

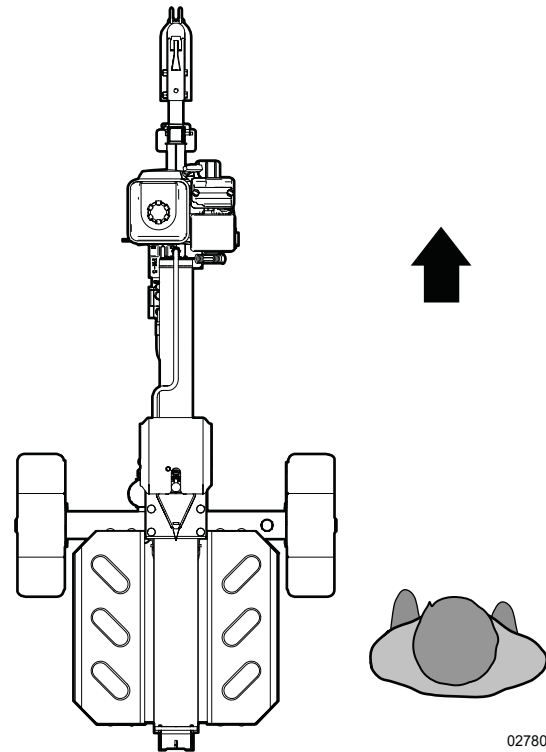
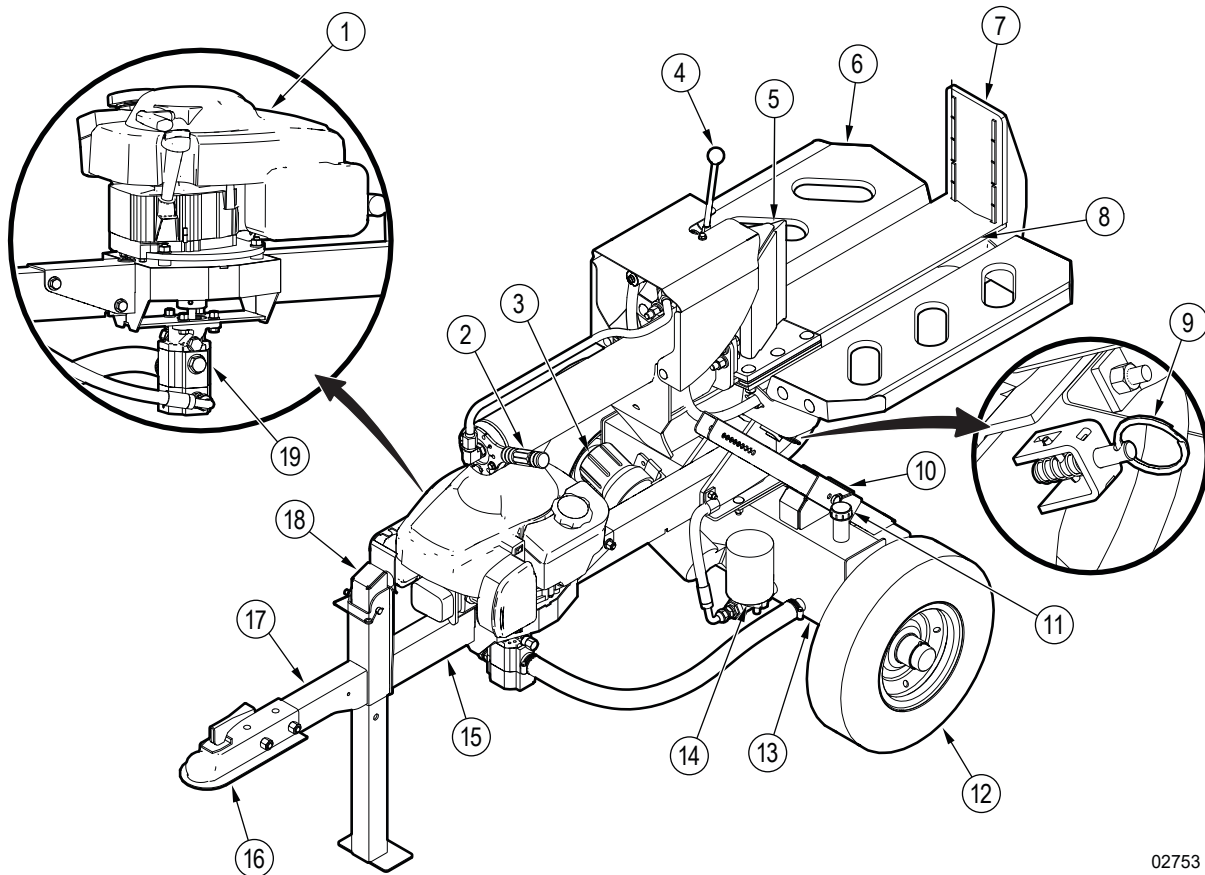


Figure 5—Direction of forward machine travel

4.4 Machine Components

Know the machine components before you operate, service, or maintain the machine.

4.4.1 WXT15V Machine Components

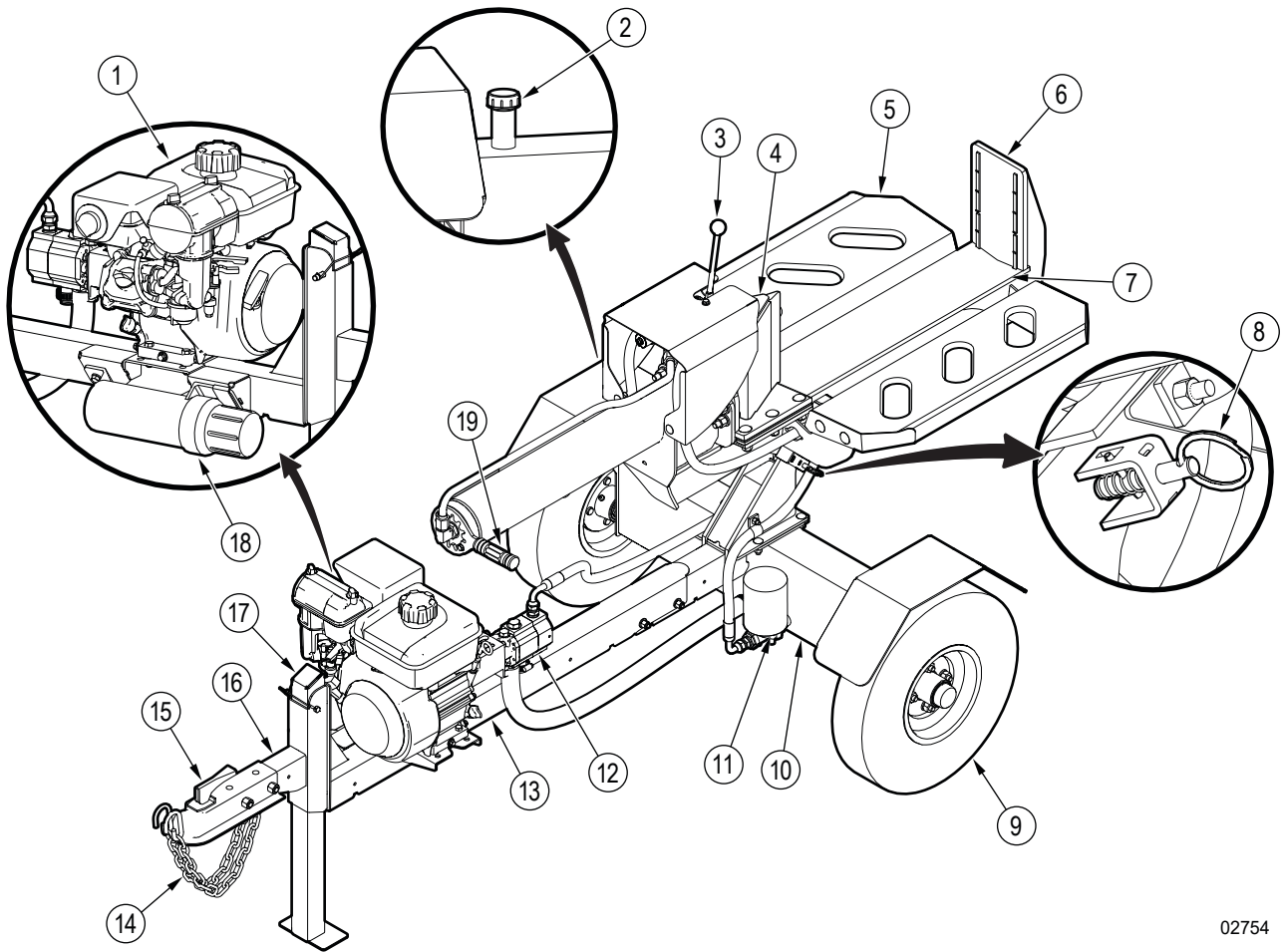


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Figure 6—WXT15V machine components

- | | | |
|--------------------------|--|---|
| 1. Engine | 8. Split bed | 15. Frame |
| 2. Split-bed handle | 9. Split-bed latch | 16. Ball-mount hitch (clevis hitch below) |
| 3. Document storage tube | 10. Support stand | 17. Trailer tongue |
| 4. Splitter control | 11. Hydraulic fluid reservoir cap and dipstick | 18. Jack stand |
| 5. Wedge | 12. Tire (1 of 2) | 19. Hydraulic motor |
| 6. Log shelf (1 of 2) | 13. Hydraulic fluid reservoir | |
| 7. Stop-block | 14. Hydraulic fluid filter | |

4.4.2 WXT20V Machine Components

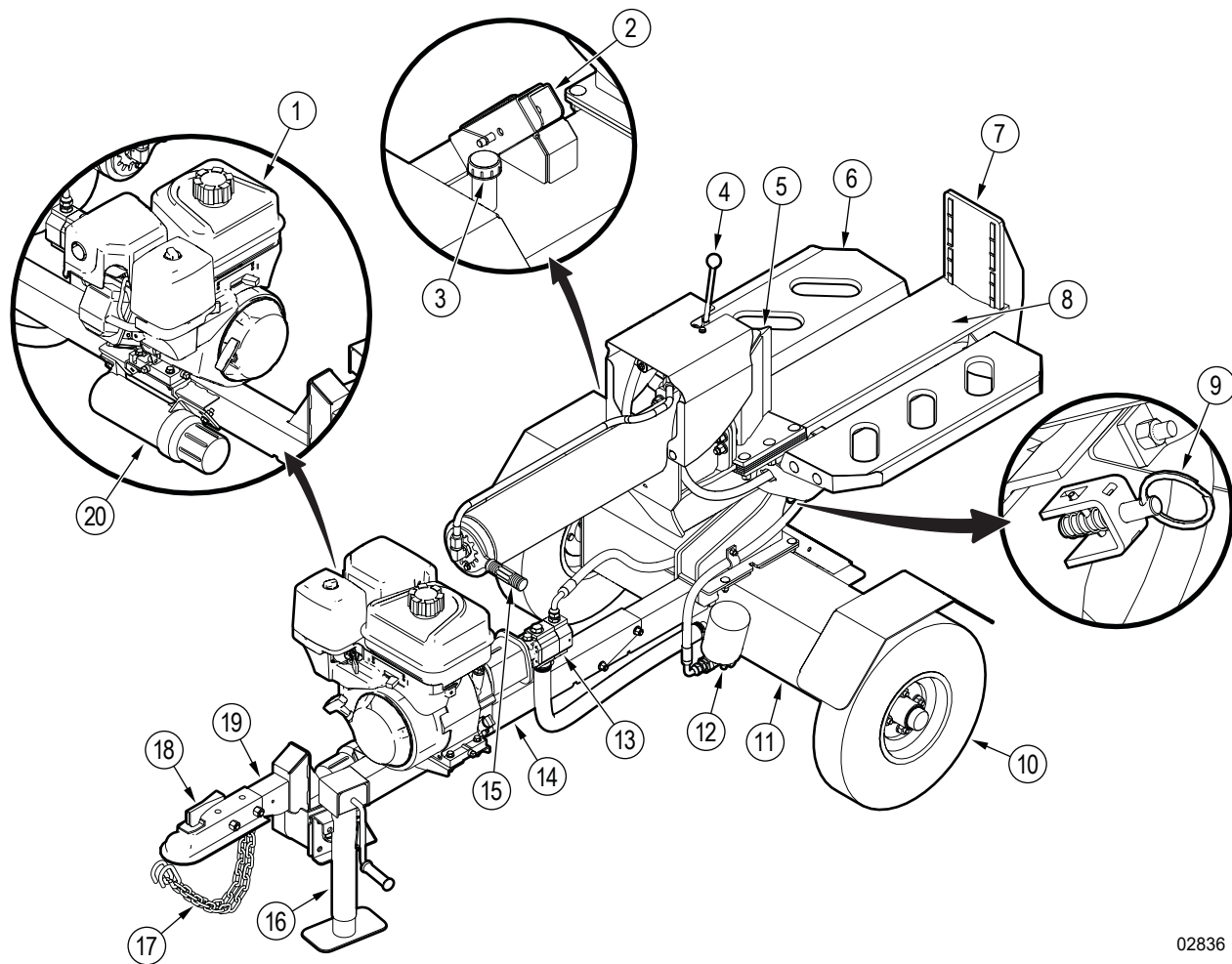


02754

Figure 7 – WXT20V machine components

- | | | |
|---|-------------------------------|---|
| 1. Engine | 8. Split-bed latch | 15. Ball-mount hitch (clevis hitch below) |
| 2. Hydraulic fluid reservoir cap and dipstick | 9. Tire (1 of 2) | 16. Trailer tongue |
| 3. Splitter control | 10. Hydraulic fluid reservoir | 17. Jack stand |
| 4. Wedge | 11. Hydraulic fluid filter | 18. Document storage tube |
| 5. Log shelf (1 of 2) | 12. Hydraulic motor | 19. Split-bed handle |
| 6. Stop-block | 13. Frame | |
| 7. Split bed | 14. Safety chains | |

4.4.3 WXT30V Machine Components



02836

Figure 8 – WXT30V machine components

- | | | |
|---|-------------------------------|---|
| 1. Engine | 8. Split bed | 15. Split-bed Handle |
| 2. Support stand | 9. Split-bed latch | 16. Trailer jack |
| 3. Hydraulic fluid reservoir cap and dipstick | 10. Tire (1 of 2) | 17. Safety chains |
| 4. Splitter control | 11. Hydraulic fluid reservoir | 18. Ball-mount hitch (clevis hitch below) |
| 5. Wedge | 12. Hydraulic fluid filter | 19. Trailer tongue |
| 6. Log shelf (1 of 2) | 13. Hydraulic motor | 20. Document storage tube |
| 7. Stop-block | 14. Frame | |

5. Controls

! WARNING!

Do not operate the machine until you know the location of all the controls and how to use them correctly.

! WARNING!

Before you start the engine, read and understand the safety and operating information under *Engine Operation on page 31*.

5.1 Splitter Control

The splitter control extends the wedge to split a log. The splitter control has the following functions:

- Extend** Move and hold the lever in one of the following directions to extend the wedge and split a log:
- In the horizontal position, move the lever toward the rear.
 - In the vertical position, lower the lever.

When you release the lever, it goes to the **Neutral** position and the wedge stops.

- Neutral** When the splitter-control lever is at the center of the hydraulic valve, it is in the neutral position. In this position, the wedge is stopped. Logs can be put onto or removed from the log splitter when the splitter control is in the **Neutral** position. You can move the lever to neutral at any time.

- Retract** Move the lever in one of the following directions, and then release it to retract the wedge:
- In the horizontal position, move the lever forward.
 - In the vertical position, lift the lever.

When you release the lever, the lever stays in the **Retract** position until the wedge is fully retracted. When the wedge is fully retracted, the lever automatically moves to the **Neutral** position (the hydraulic detent valve holds and moves the lever).

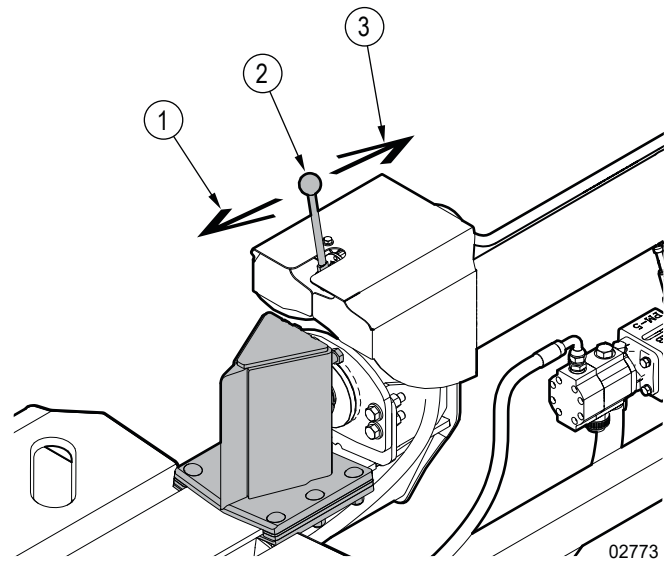


Figure 9—Splitter control

1. Extend
2. Neutral
3. Retract

5.2 WXT15V Engine Controls

IMPORTANT! For complete information about the engine controls, see the engine manufacturer's manual.

5.2.1 Engine Switch

The engine switch has two functions:



Stop
Push the bottom of the switch to stop the engine.
When the switch is in the **STOP** position, you cannot start the engine.



Standby
Push the top of the switch to set the engine to standby.
When the switch is in the **Standby** position, you can start the engine.

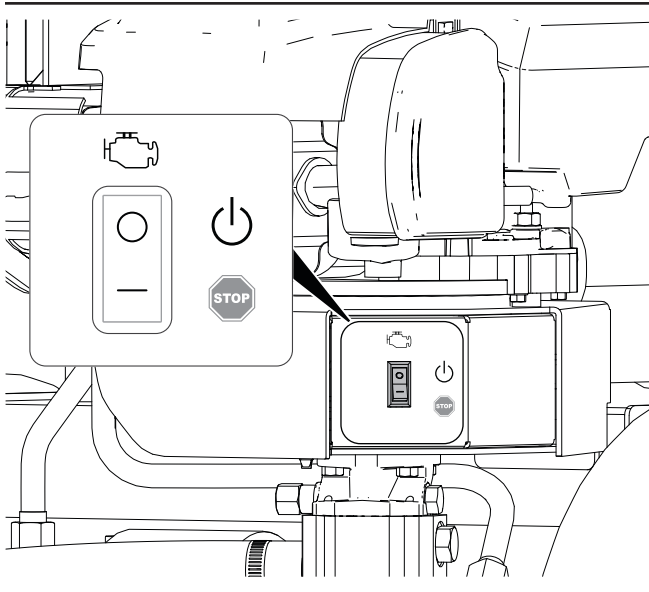


Figure 10 – WXT15V engine switch

5.2.2 Choke Control

The choke control lever has the following functions:



Closed
Close the choke to start a cold engine.



Open
Open the choke when the engine is warm.

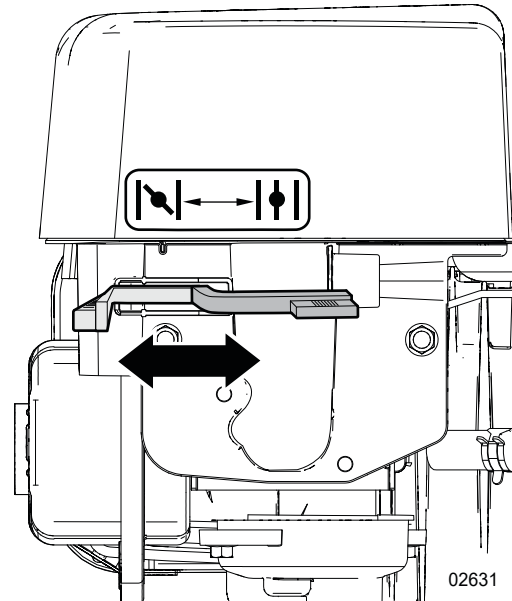


Figure 11 – WXT15V engine choke control

5.2.3 Starter-cord Handle

WARNING!

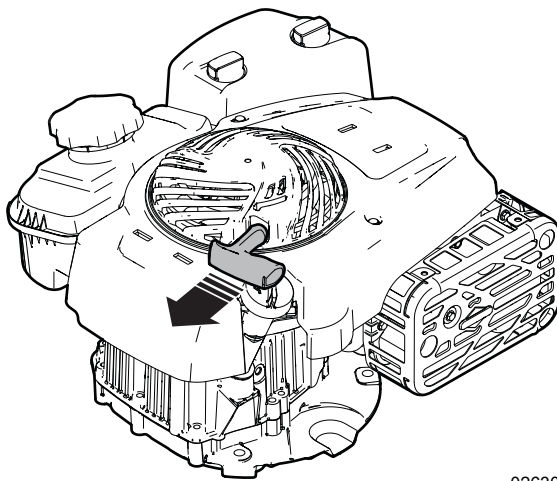
Fast retraction of the starter cord (called kickback) pulls your hand and arm toward the engine faster than you can let go of the handle. Serious bodily harm (for example; bruises, sprains, fractures, and broken bones) can result.

When you start the engine, pull the starter cord slowly until you feel resistance, and then pull it rapidly to avoid kickback.

W102

The engine is a rewind-start. Grip the starter-cord handle to pull the starter cord and start the engine.

The engine switch must be in the **Standby** position for the engine to start.



02630

Figure 12—WXT15V engine starter-cord handle

5.3 WXT20V Engine Controls

IMPORTANT! For complete information about the engine controls, see the engine manufacturer's manual.

5.3.1 Throttle Control and Fuel Shutoff

The throttle control and fuel shutoff lever has the following functions:



Fast
Engine speed is fast.



Slow
Engine speed is slow.



Fuel shutoff closed



STOP
The engine is stopped.

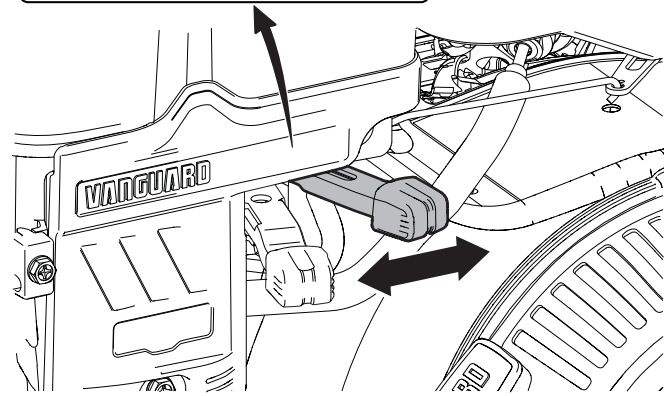
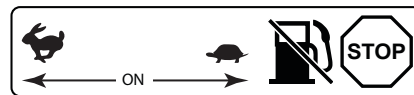


Figure 13—WXT20V engine throttle control and fuel shutoff

5.3.2 Choke Control

The choke control lever has the following functions:

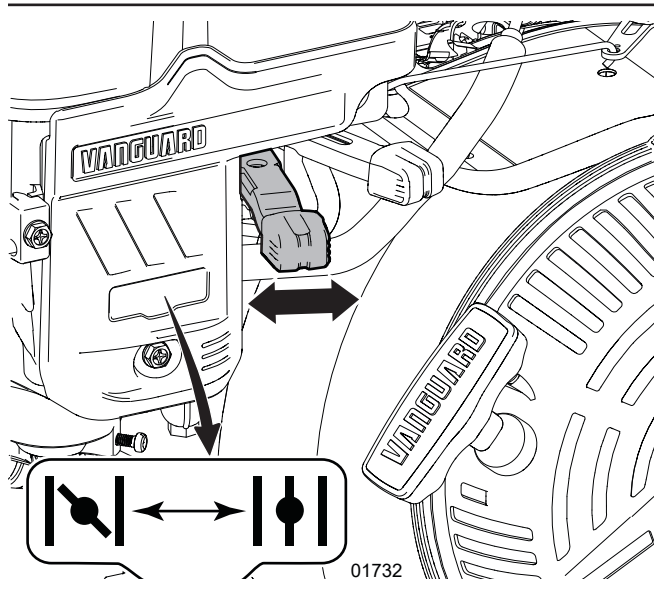
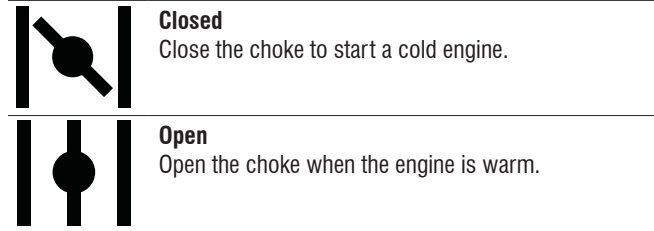


Figure 14—WXT20V engine choke control

5.3.3 Starter-cord Handle

! WARNING!

Fast retraction of the starter cord (called kickback) pulls your hand and arm toward the engine faster than you can let go of the handle. Serious bodily harm (for example; bruises, sprains, fractures, and broken bones) can result.

When you start the engine, pull the starter cord slowly until you feel resistance, and then pull it rapidly to avoid kickback.

W102

The engine is a rewind-start. Grip the starter-cord handle to pull the starter cord and start the engine.

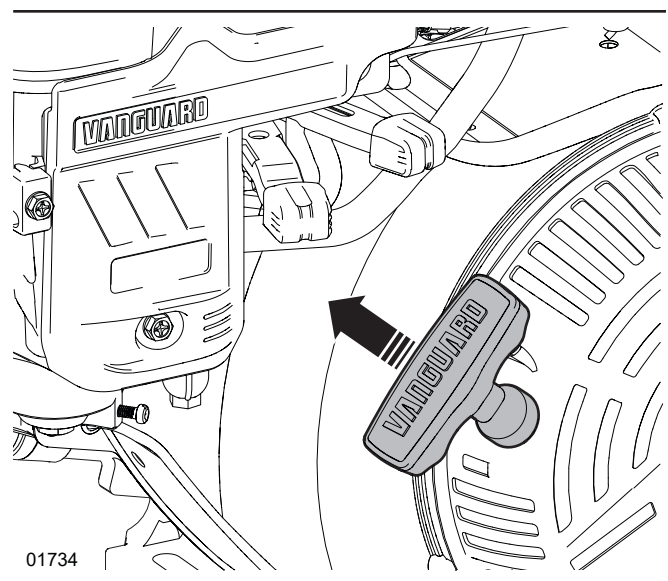


Figure 15—WXT20V engine starter-cord handle

5.4 WXT30V Engine Controls

IMPORTANT! For complete information about the engine controls, see the engine manufacturer's manual.

5.4.1 Throttle Control

The throttle control lever has the following functions:



Fast
Engine speed is fast.



Slow
Engine speed is slow.

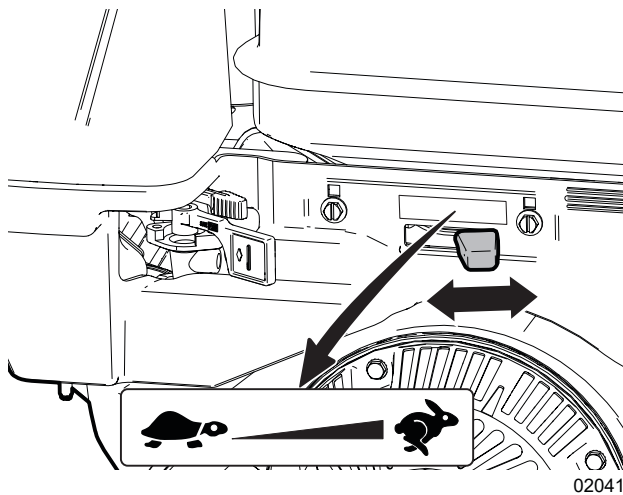


Figure 16—WXT30V engine throttle control

5.4.2 Fuel Shutoff

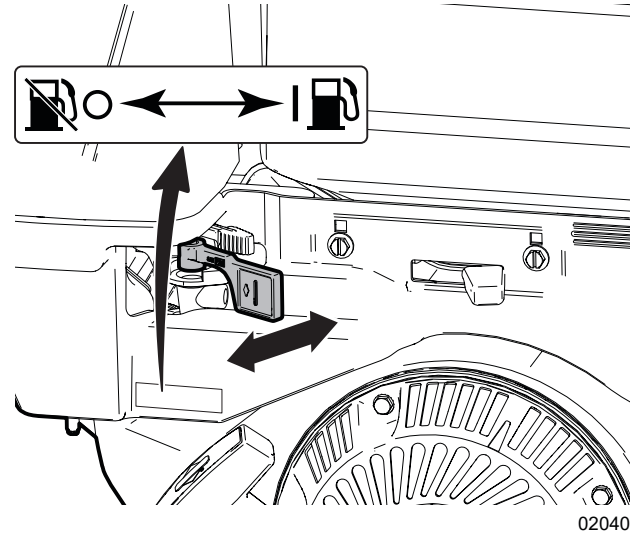
The fuel shutoff valve has the following functions:



Closed
Fuel valve is closed. The engine is off.



Open
Fuel valve is open. The engine can be started.



02040

Figure 17—WXT30V engine fuel shutoff

5.4.3 Choke Control

The choke control lever has the following functions:

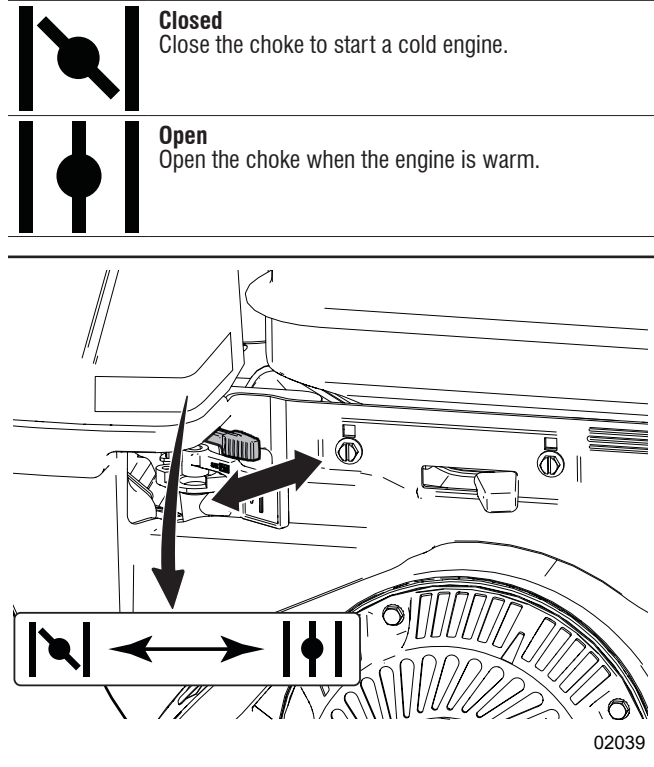


Figure 18 – WXT30V engine choke control

5.4.4 Starter-cord Handle

! WARNING!

Fast retraction of the starter cord (called kickback) pulls your hand and arm toward the engine faster than you can let go of the handle. Serious bodily harm (for example; bruises, sprains, fractures, and broken bones) can result.

When you start the engine, pull the starter cord slowly until you feel resistance, and then pull it rapidly to avoid kickback.

W102

The engine is a rewind-start. Grip the starter-cord handle to pull the starter cord and start the engine.

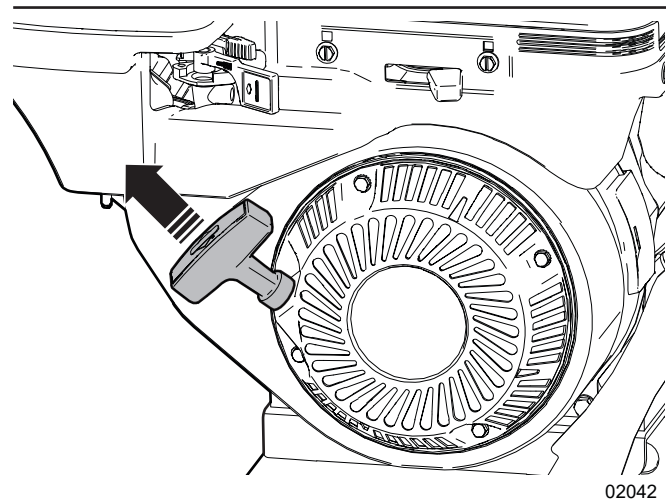


Figure 19 – WXT30V engine starter-cord handle

5.5 Split-bed Latch

The split-bed latch holds the split bed in the horizontal position or the vertical position.

The split-bed latch has two positions:

| | |
|-------------------|---|
| Engaged | The split-bed latch is extended and engaged with the split-bed latch plate. When the split-bed latch is in the engaged position, you cannot move the split-bed. |
| Disengaged | The split-bed latch is retracted, the pin is in the slot, and the split-bed latch is not engaged with the split-bed latch plate. When the split-bed latch is in the disengaged position, you can move the split-bed. |

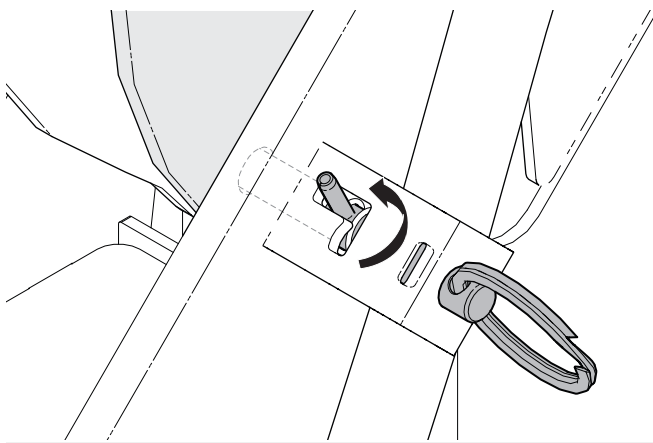


Figure 20—Split-bed latch engaged

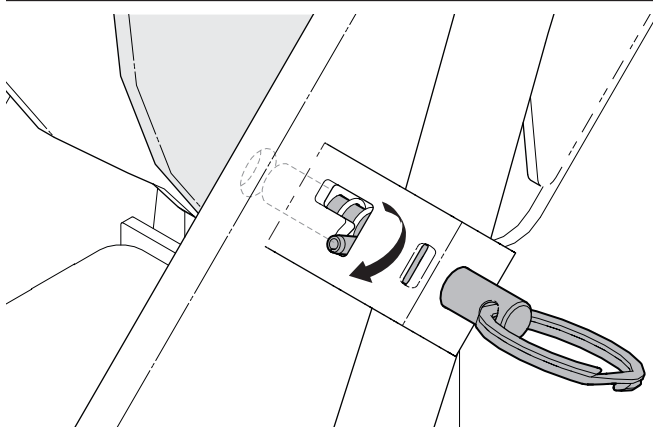


Figure 21—Split-bed latch disengaged

5.6 Support Stand

This section only applies to the WXT15V and WXT30V models.

The support stand stabilizes the machine while you split logs in the horizontal position. For more information, see *Change the Support Stand Position on page 38*.

The support stand has two positions:

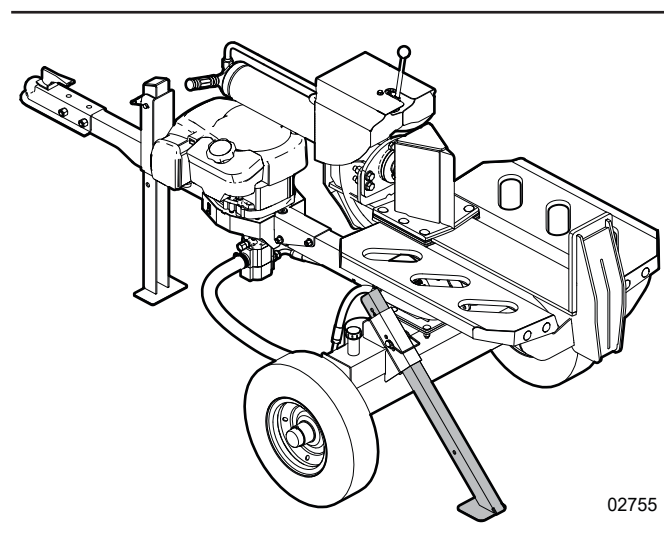
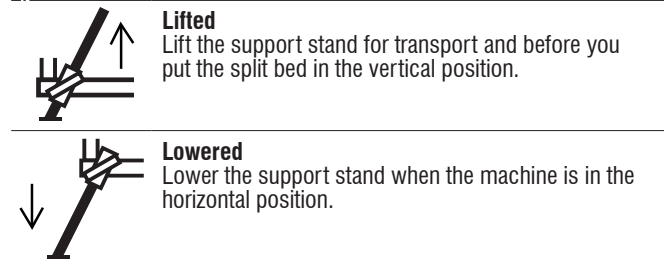


Figure 22—Support stand lowered (WXT15V shown)

6. Operating Instructions

The operator must be familiar with and obey the operating and safety procedures.

6.1 Operating Safety

WARNING!

Put on the personal protective equipment (PPE) that is necessary to do the work safely.

This includes, but is not limited to, hearing protection, heavy gloves, a face shield, and protective footwear.

W135

WARNING!

Do not let more than one person handle the log or split wood and operate the machine. A second person can be pinched, crushed, or have their hand or fingers severed by the wedge.

CAUTION!

Do not split more than one log at one time. The log can be pushed out of the machine and cause injury.

CAUTION!

Do not split wood across the grain. Some types of wood can burst or splinter. Pieces of wood can become projectiles that are impact and cut hazards. Projectiles can cause personal injury.

CAUTION!

Wait for all motion to stop before you put a log on the machine or remove split wood or debris from the machine. When the wedge moves it can cut, sever, pinch, or crush your hands or feet.

- Read and understand this manual before you start the machine. Review all safety information annually.
- Park the machine in a clear location on dry, level ground. Do not operate the machine on a hillside or area that is cluttered, wet, muddy, or icy to prevent slips, trips, and falls.
For more information, see *Work Site* on page 11.
- Keep the work area clean and free of debris.
- Only operate the engine in a location that has good air flow. Engine exhaust gases contain carbon monoxide (an odorless gas) that can cause asphyxiation.
- Attach all guards and shields, and close all covers before you start the machine.
- Do not move or transport the machine when the engine is on.
- Stop the engine before you leave the machine unattended.
- Do not stand, sit, or climb on any part of the machine, especially while the engine is on.
- Do not operate the machine alone. Always have a minimum of two trained people:
 - There should be one operator and one spotter present during machine operation. The operator and spotter must know all the machine safety, controls, and operating functions.
 - The operator must be in control of the machine at all times. The spotter must stay outside of the hazard zone while the machine is operating.
- Keep bystanders a minimum of 10 ft (3 m) from the machine, logs, and the spilt-wood pile. Use safety cones to identify the work zone perimeter.
- Do not step over or straddle the log splitter during operation.
- Hold the sides of a log when you put it on the machine. Do not hold the cut ends of the log.
- Keep your hands, feet, clothing, and long hair away from the machine during operation.

6.2 Pre-start Checklist

Do the following before you start the machine the first time and each time after that.

| Items to Complete | ✓ |
|--|---|
| Read and obey the <i>Operating Safety on page 29</i> , <i>Engine Operation Safety on page 31</i> , and <i>Hydraulic System Operation Safety on page 36</i> . | |
| Check the engine oil level. For instructions, see <i>Check the Engine Oil Level on page 34</i> . If necessary, add oil. | |
| Check the engine fuel level. For instructions, see <i>Check the Engine Fuel Level on page 32</i> . If necessary, add fuel. | |
| Check the hydraulic fluid level. For instructions, see <i>Check the Hydraulic Fluid Level on page 36</i> . If necessary, add hydraulic fluid. | |
| Check the wedge and stop-block. Make sure that they are in good condition and that the wedge moves freely. | |
| Torque the wedge bolts to the correct specification. For specifications, see <i>Bolt Torque on page 61</i> . | |
| Use a safe method to check the hydraulic hoses, tubes, and fittings for leaks. If necessary, tighten the fittings or replace the components. Move a hose if it is pinched or rubs on something. For more information, see <i>Hydraulic Fitting Torque on page 62</i> . | |
| Make sure that the machine is sufficiently lubricated. | |
| Remove anything that is entangled on the machine. For example, branches or vines. | |
| Make sure that all guards and shields are installed, and the covers are closed. If necessary, replace the guards, shields, or covers. | |
| Check the tire air pressure, and the wheels, hubs, and axle. See the side of the tire for the correct air pressure. | |
| Make sure that all the fasteners are installed and torqued to the correct specifications. For more information, see <i>Bolt Torque on page 61</i> and <i>Lug Nut Torque on page 62</i> . | |
| Make sure that the operator and spotter put on the necessary PPE. The PPE must be in good condition. | |
| Make sure that the operator and spotter do not have loose-fitting clothing or jewelry on, and that long hair is tied up. | |
| Make sure that there are no bystanders inside the work zone and the spotter is not near a hazard. For zone definitions, see <i>Work Site on page 11</i> . | |

6.3 Machine Break-in

Before and during the first eight hours of operation, do the following tasks.

6.3.1 Before First Use

1. Read and understand all the safety information in this manual and the engine manufacturer's manual.
2. Review the operation and function of the *Familiarization on page 18*.
3. Do the tasks in the *Pre-start Checklist*.

6.3.2 After One Hour of Operation

- Check the engine oil level. If necessary, add oil. For instructions, see *Check the Engine Oil Level on page 34*.
- Check the engine fuel level. If necessary, add fuel. For instructions, see *Check the Engine Fuel Level on page 32*.
- Check the hydraulic fluid level. If necessary, add hydraulic fluid. For instructions, see *Check the Hydraulic Fluid Level on page 36*.
- Check the wedge and stop block. Make sure that they are in good condition and that the wedge moves freely.
- Use a safe method to check the hydraulic hoses, tubes, and fittings for leaks. If necessary, tighten the fittings or replace the components. Move a hose if it is pinched or rubs on something. For more information, see *Hydraulic Fitting Torque on page 62*.
- Remove anything that is entangled on the machine. For example, branches or vines.
- Check the tire air pressure, and the wheels, hubs, and axle. See the side of the tire for the correct air pressure.
- Make sure that all the fasteners are installed and torqued to the correct specifications. For more information, see *Bolt Torque on page 61* and *Lug Nut Torque on page 62*.

6.3.3 After Five Hours of Operation

This section only applies to WXT20V and WXT30V models.

Change the engine oil.
For instructions, see the engine manufacturer's manual.

6.3.4 After Eight Hours of Operation

1. Complete the tasks that are listed under *After One Hour of Operation*.
2. Torque the wedge bolts to the correct specification. For specifications, see *Bolt Torque on page 61*.
3. Torque the wheel lug nuts to the correct specification. For specifications, see *Lug Nut Torque on page 62*.
4. Continue with the *Maintenance Schedule on page 53*.

6.4 Engine Operation

CAUTION!

Before you start the engine, read the safety, operating, and maintenance instructions in the engine manual.

W019

For complete safety and operating information, see the engine manufacturer's manual.

6.4.1 Engine Operation Safety

WARNING!



Do not smoke or vape when you handle fuel. Fuel vapours can explode causing serious injury or death. Keep sparks, flames, or hot components away from fuel.

W027

WARNING!

Do not operate the engine indoors. Park the machine outdoors in a position where the prevailing winds blow the exhaust away from you.

Engine exhaust contains carbon monoxide (CO) that can quickly accumulate to a dangerous level. Carbon monoxide can cause illness, unconsciousness, or death.

W072

WARNING!

Fast retraction of the starter cord (called kickback) pulls your hand and arm toward the engine faster than you can let go of the handle. Serious bodily harm (for example; bruises, sprains, fractures, and broken bones) can result.

When you start the engine, pull the starter cord slowly until you feel resistance, and then pull it rapidly to avoid kickback.

W102

IMPORTANT! In some regions, when an engine is used on any forest covered, brush covered, or grass covered unimproved land it is necessary by law to have a spark arrestor installed on the muffler. A spark arrestor traps exhaust particles that are expelled from the engine. It is the responsibility of the operator to comply with the local laws and regulations. To purchase a spark arrestor, contact your local Wallenstein dealer or distributor.

- Keep the cylinder fins and engine shrouds free of debris to prevent the engine from overheating.
- Keep the engine free of wood chips and other debris that can affect the engine speed.
- Use fresh fuel (less than three months old). Stale fuel creates deposits that cause the carburetor to be blocked and leak.
- Check the fuel lines and fittings on a regular basis for cracks or leaks. Replace damaged fuel lines or fittings if necessary.
- Store fuel away from all wood material.
- Only operate the engine in a location that has good air flow. Engine exhaust gases contain carbon monoxide (an odorless gas) that can cause asphyxiation.
- Do not put your hands or feet near moving parts.
- Do not check for a spark with the spark plug or spark plug wire removed.
- Do not close the choke to stop the engine. When it is possible, gradually reduce the engine speed before you stop the engine.
- Do not hit the flywheel with a hard object or metal tool. This can cause the flywheel to shatter during operation. Use the correct tools to service the engine.
- Do not touch a hot muffler, cylinder, or fins. Contact can cause burns. Wait for the machine to cool. Use a no-touch thermometer to measure the temperature.
- Do not tamper with governor springs, governor links or other parts that can increase the governed speed. Engine speed is selected by the original equipment manufacturer.

- Do not operate the engine in the following situations:
 - When there is an accumulation of wood material, dirt, or other combustible materials in the muffler area.
 - In an area where there is a fuel spill. Move the machine away from the spill until the fuel evaporates. Make sure that there are no sources of ignition in the area of the fuel spill.
 - With the air filter or air filter cover removed. This can damage the engine.
 - Without a muffler or heat shield. Examine the muffler and heat shield on a regular basis. Replace a muffler or heat shield that is damaged.
- Do not try to start the engine with the spark plug removed. If the engine floods, do one of the following:
 - WXT15V: set the choke control to **Open**, and then try to start the engine again.
 - WXT20V and WXT30V: set the choke control to **Open**, set the throttle control to **Fast**, and then try to start the engine again.

- Engine fuel is highly flammable. Handle it carefully.
- Stop the engine and let it cool before you add fuel to the tank.
- Do not overfill the fuel tank.
- Carefully remove any spilled fuel, and then wait until any remaining fuel dries before you start the engine.
- After you add fuel to the tank, make sure that the fuel cap is tight.

6.4.3 Check the Engine Fuel Level

Check the engine fuel level before each use.

Start work with a full fuel tank to decrease interruptions during operation. Do not let the fuel tank become empty.

1. Park the machine on level ground.
2. Stop the machine.
For instructions, see *Stop the Machine on page 39*.
3. Wait a minimum of five minutes for the engine to cool.
4. Turn the fuel cap counterclockwise to remove it.
5. Check the fuel level. The fuel tank is full when the fuel level is visible 1/2 inch (12 mm) below the filler neck. There must be room for fuel expansion.
6. Do one of the following:
 - If the fuel level is sufficient, install the fuel cap and make sure that it is tight.
 - If the fuel level is not sufficient, add fuel to the tank.
For instructions, see *Add Fuel to the Engine on page 33*.
7. Install the fuel cap and make sure that it is tight.

6.4.2 Fuel Safety

WARNING!



Do not smoke or vape when you handle fuel. Fuel vapours can explode causing serious injury or death. Keep sparks, flames, or hot components away from fuel.

W027

WARNING!

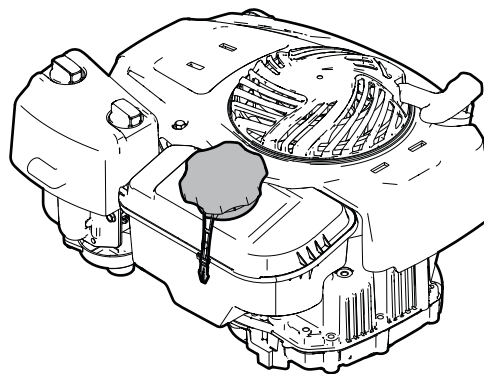
Fuel and vapors are very flammable and explosive. Fire or explosion can cause severe burns, bodily harm, or death. Keep fuel away from sparks, open flame, pilot lights, heat, and any other source of ignition.

W116

CAUTION!

Fuel vapors are very toxic. If you breathe fuel vapors, it can cause irritation, illness, or unconsciousness. Check the fuel level or add fuel to the engine outdoors or in an area that has good air flow.

W117



02626

Figure 23—WXT15V- fuel cap

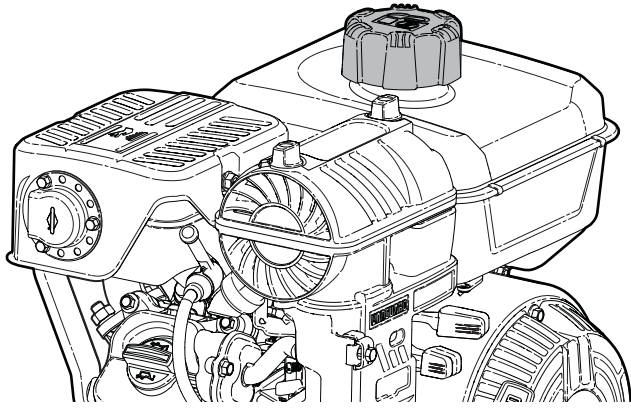


Figure 24—WXT20V- fuel cap

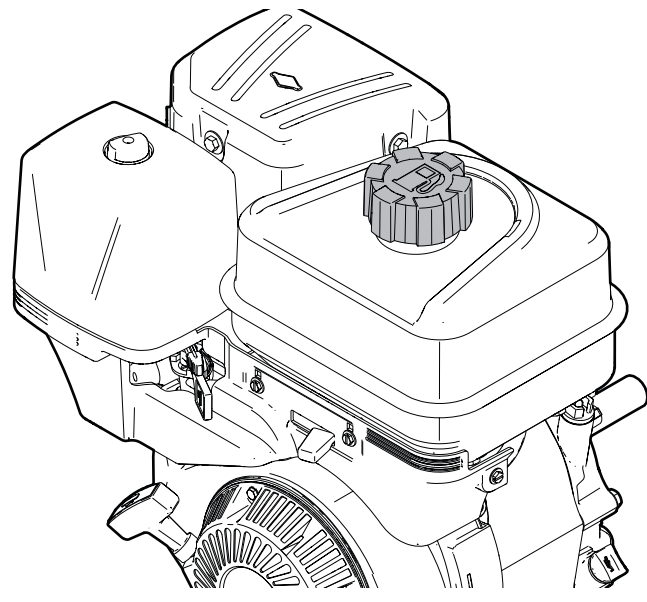


Figure 25—WXT30V- fuel cap

6.4.4 Add Fuel to the Engine

The engine needs clean, fresh, unleaded gasoline with a pump octane rating of 87 or higher (research octane number [RON] of 91 or higher). Gasoline with up to 10% ethanol (gasohol) is acceptable. For more information, see *Engine Fuel* on page 52.

For information about the fuel that is necessary for engine use at high altitudes, see the engine manufacturer's manual.

| Model | Fuel tank capacity |
|--------|----------------------|
| WXT15V | 0.42 US gal (1.6 L) |
| WXT20V | 0.87 US gal (3.3 L). |
| WXT30V | 0.95 US gal (3.6 L) |

1. Stop the machine.
For instructions, see *Stop the Machine* on page 39.
2. Wait a minimum of five minutes for the engine to cool.
3. Clean the area around the fuel cap.
4. Turn the fuel cap counterclockwise to remove it.
5. Use a clean funnel to add the correct type and amount of fuel to the tank. Add fuel until the fuel level is visible 1/2 inch (12 mm) below the filler neck. Leave room for expansion. **Do not overfill the tank.**
6. Carefully remove any spilled fuel, and then wait until any remaining fuel dries before you start the engine.
7. Install the fuel cap and make sure that it is tight.

6.4.5 Check the Engine Oil Level

IMPORTANT! For more information about engine oil, see the engine manufacturer's manual and *Engine Oil* on page 52.

Operating the engine with a low oil level can cause engine damage that is not covered by the warranty.



The engine must be in a level position for the dipstick to show the oil level correctly.

Check the engine oil level before each use.

1. Park the machine on level ground.
2. Stop the machine.
For instructions, see *Stop the Machine* on page 39.
3. Remove the oil-level dipstick and clean it.
4. Fully insert the oil-level dipstick.
5. Remove the oil-level dipstick and check the oil level.
The oil level is correct when the oil is visible on the dipstick from the end to the full (upper) mark.
6. Do one of the following:
 - If the oil level is correct, continue with step 7.
 - If the oil level is low, add oil until the oil level is at the full (upper) mark. For instructions, *Add Oil to the Engine* on page 35.
7. Install the oil-level dipstick and make sure that it is tight.

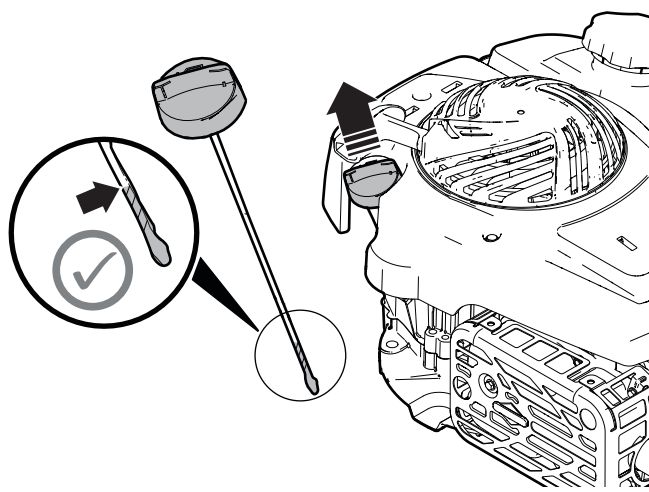


Figure 26—WXT15V- check the engine oil level

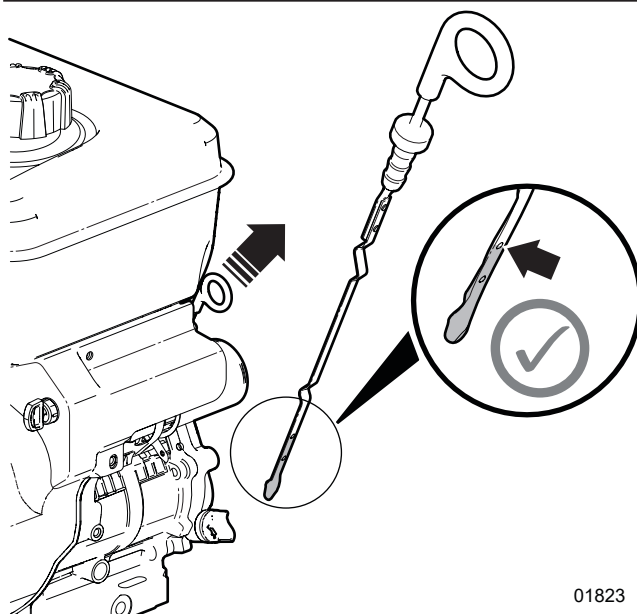


Figure 27—WXT20V- check the engine oil level

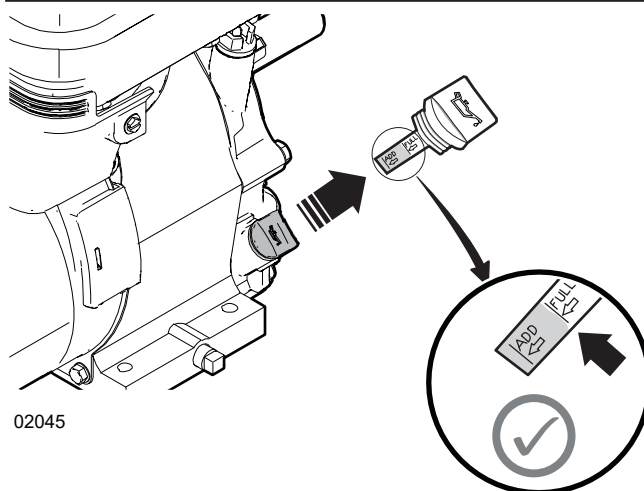


Figure 28—WXT30V- check the engine oil level

6.4.6 Add Oil to the Engine

IMPORTANT! For more information about engine oil, see the engine manufacturer's manual and *Engine Oil* on page 52.

1. Check the engine oil level to make sure that the oil level is low.
For instructions, see *Check the Engine Oil Level* on page 34.
2. Turn the oil-fill cap counterclockwise to remove it.
3. Use a clean funnel to slowly add the correct type and amount of oil. **Do not overfill.**
4. Wait a minimum of one minute.
5. Remove the funnel, and then check the engine oil level.
6. Install the oil-fill cap and make sure that it is tight.

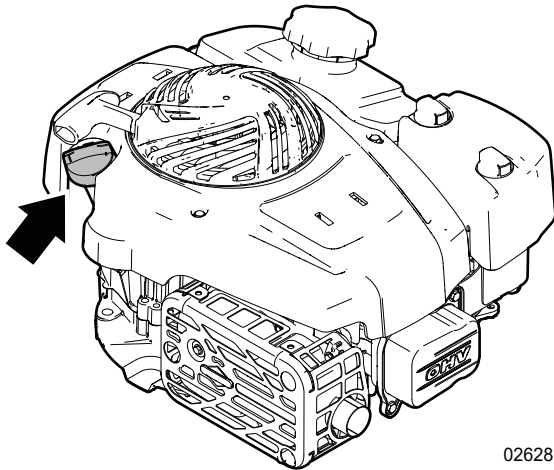


Figure 29 – WXT15V- engine oil-fill location

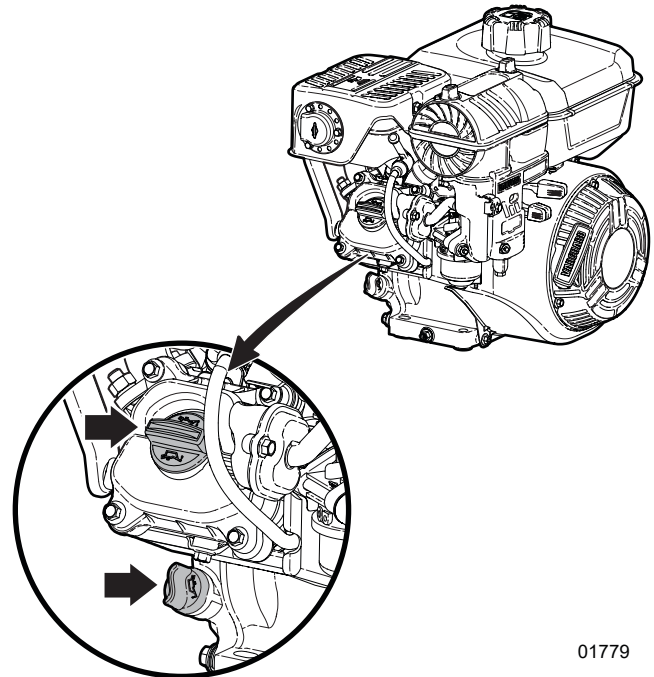


Figure 30 – WXT20V- engine oil-fill locations

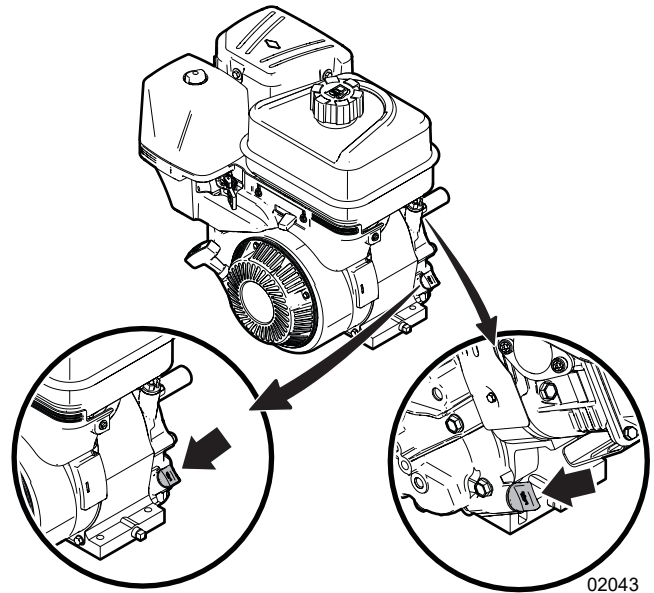


Figure 31 – WXT30V- engine oil-fill locations

6.5 Hydraulic System Operation

A hydraulic system is a closed-loop system that provides pressurized hydraulic fluid to the splitter control.

6.5.1 Hydraulic System Operation Safety

WARNING!

Pressurized hydraulic fluid can penetrate the skin or eyes and cause serious illness, injury, or death.

- **Make sure that all hydraulic connections are tight before you apply pressure to the hydraulic system.**
- **Put on the correct hand and eye protection and always use a piece of cardboard or wood to find a leak. Do not use your hands.**
- **If a high-pressure stream of hydraulic fluid penetrates your skin, get immediate medical attention from a doctor who is familiar with this type of injury. Serious infection or a toxic reaction can occur.**

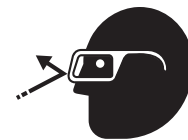
W040

IMPORTANT! Optimal hydraulic fluid temperatures are between 120° F and 140° F (50° C and 60° C). If the hydraulic fluid temperature is higher than 180° F (82° C), it can cause seal damage and degrade the hydraulic fluid. High hydraulic fluid temperatures often indicate that there is a problem.

- Keep all hydraulic system components clean and in good condition.
- Release the pressure on the hydraulic system before you work with it. The hydraulic system operates under extremely high pressure.
- Before you apply pressure to the hydraulic system, make sure that all the connections are tight, and the hoses and fittings are not damaged
- Immediately replace a hydraulic hose or tube that shows signs of swelling, wear, leaks, or damage. A swollen, worn, damaged, or leaking hose or tube can burst and cause a hazardous and unsafe condition.
- High-pressure hydraulic fluid leaks:
 - Do not use your hand to check for hydraulic fluid leaks. Injection of pressurized hydraulic fluid can cause serious illness, injury, or death. Put on heavy gloves and use a piece of cardboard or wood to check for leaks.



- Put on the correct eye protection when doing an inspection for a high-pressure hydraulic leak.



- Get medical attention immediately if you are injured by a concentrated high-pressure stream of hydraulic fluid. Serious infection or a toxic reaction can occur after hydraulic fluid pierces the skin.

- Do not bend or hit high-pressure hydraulic hoses.
- Make sure that hydraulic hoses are routed to avoid chafing.
- Do not adjust a pressure relief valve or other pressure-limiting device to a pressure that is greater than the specified pressure.

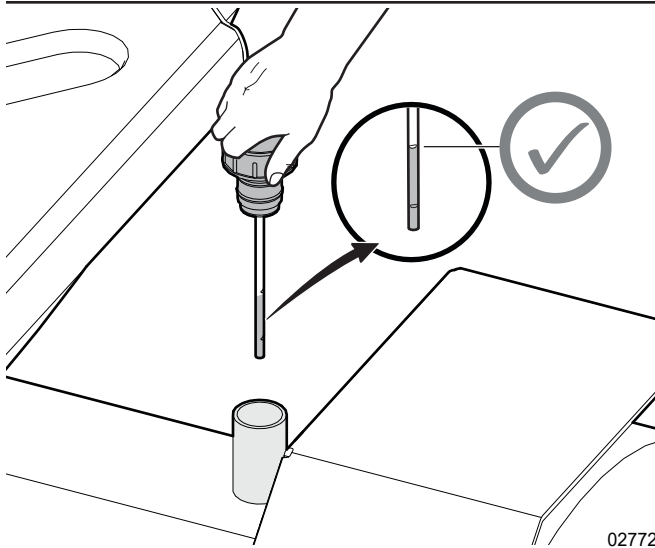
6.5.2 Check the Hydraulic Fluid Level

IMPORTANT! Do not operate the machine if the hydraulic fluid level is low. Damage to the motor and other components can occur.

Check the hydraulic fluid level before each use, after changing the filter, and after servicing hydraulic components.

For more information, see *Figure 32 on page 37*.

1. Park the machine on level ground.
2. Set the machine to a safe condition.
For instructions, see *Safe Condition on page 9*.
3. Clean the area around the hydraulic fluid reservoir cap and dipstick.
4. Remove the hydraulic fluid reservoir cap and dipstick.
5. Clean the fluid-level dipstick.
6. Fully insert the fluid-level dipstick.
7. Remove the fluid-level dipstick and check the fluid level.
The fluid level is correct when the hydraulic fluid is visible on the dipstick from the end to the full (upper) mark.
8. Do one of the following:
 - If the fluid level is correct, continue with step 7.
 - If the fluid level is low, add fluid until the fluid level is at the full (upper) mark. For instructions, see *Add Hydraulic Fluid to the Reservoir on page 37*.
9. Install the hydraulic fluid reservoir cap and dipstick, and make sure that it is tight.



02772

Figure 32—Check the hydraulic fluid level

6.5.3 Add Hydraulic Fluid to the Reservoir

IMPORTANT! Do not fill the hydraulic-fluid reservoir higher than the full mark on the hydraulic fluid-level dipstick.

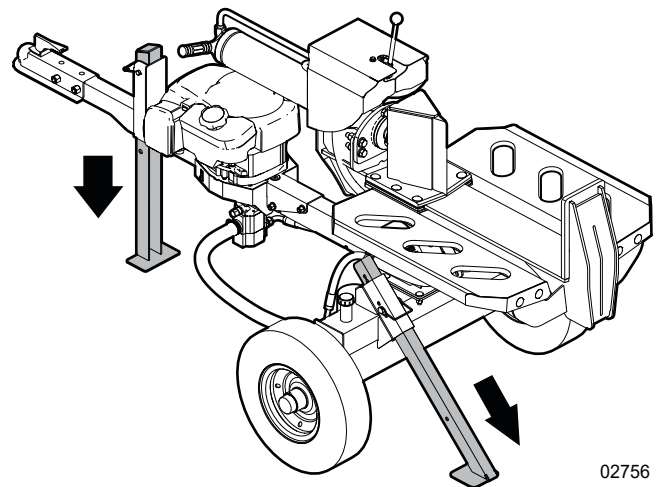
For more information, see *Hydraulic Fluid* on page 52.

| Model | Hydraulic fluid reservoir capacity |
|--------|------------------------------------|
| WXT15V | 3.17 US gal (12 L) |
| WXT20V | 3.70 US gal (14 L). |
| WXT30V | 6.60 US gal (25 L) |

1. Check the hydraulic fluid level to make sure that the fluid level is low.
For instructions, see *Check the Hydraulic Fluid Level*.
2. Set the machine to a safe condition.
For instructions, see *Safe Condition* on page 9.
3. Clean the area around the fill cap.
4. Remove the fill cap.
5. Use a clean funnel to add hydraulic fluid to the reservoir.
6. Remove the funnel.
7. Check the hydraulic fluid level.
For instructions, see *Check the Hydraulic Fluid Level*.
8. Do steps 5 to 7 again until the hydraulic fluid level is correct.
9. Install the fill cap and make sure that it is tight.
10. Clean the area around the fill cap and remove any spilled fluid.

6.6 Set Up the Machine

1. Do the tasks in the *Pre-start Checklist* on page 30.
2. Select a work site and set up a safe work area.
For more information, see *Work Site* on page 11.
3. Do one of the following:
 - Disconnect the machine from the tow vehicle.
For instructions, see *Disconnect from a Clevis Hitch* on page 46 or *Disconnect from a Ball-mount Hitch* on page 45.
 - If more stability is necessary, leave the machine attached to the tow vehicle. Set the tow-vehicle parking brake, stop the engine, and then remove the key from the ignition.
4. Lower the jack stand to support the machine in a level position. The machine should be as level with the ground as possible.
For instructions, see *Lower the Jack Stand* on page 47.
5. WXT15V or WXT30V: Lower the support stand and make sure that it is on the ground.
For more information, see *Lower the Support Stand* on page 38.
6. If any guards or shields were removed, install them.
7. Do one of the following:
 - If you want to split wood in the horizontal position, the machine setup is complete.
 - If you want to split wood in the vertical position, change the split bed position.
For instructions, see *Move the Split Bed to the Vertical Position* on page 40.



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Figure 33—Set up the machine (WXT15V shown)

6.7 Change the Support Stand Position

CAUTION!

Keep your feet away from the area below the support stand. When you remove the snap pin, the support stand can lower and cause injury.

This section only applies to the WXT15V or WXT30V models.

Always lift the support stand before you move the split bed to the vertical position or before you transport the machine.

For more information, see *Support Stand* on page 28.

6.7.1 Lower the Support Stand

1. Carefully, remove the snap pin from the support stand.
2. Lower the support stand until the bottom is on the ground.
3. Align a hole in the support stand with the holes in the support-stand bracket.
4. Insert the snap pin to prevent movement.

6.7.2 Lift the Support Stand

1. Carefully, remove the snap pin from the support stand.
2. Lift the support stand until the bottom hole aligns with the holes in the support-stand bracket.
3. Insert the snap pin to prevent movement.

6.8 Start the Machine

WARNING!

Before you start the machine, read and understand all of the safety information in this manual and the engine manufacturer's manual.

WARNING!

Fast retraction of the starter cord (called kickback) pulls your hand and arm toward the engine faster than you can let go of the handle. Serious bodily harm (for example; bruises, sprains, fractures, and broken bones) can result.

When you start the engine, pull the starter cord slowly until you feel resistance, and then pull it rapidly to avoid kickback.

W102

IMPORTANT! If the engine does not start after repeated tries, contact your local dealer or go to BriggsandStratton.com or VanguardPower.com.

6.8.1 Start a WXT15V

For more information, see *Splitter Control* on page 22 and *WXT15V Engine Controls* on page 23.

1. Do the tasks described in the *Pre-start Checklist* on page 30.
2. Set up the machine.
For instructions, see *Set Up the Machine* on page 37.
3. Move the **splitter control** to the **Neutral** position.
4. Push the **engine switch** to the **Standby** position.
5. Move the **choke control** to the **Closed** position.
If the engine is warm, the choke can be moved to the **Open** position.
6. Start the engine.
Firmly grip the **starter-cord handle**, pull the starter cord slowly until you feel resistance, and then pull it rapidly.
7. As the engine warms up, move the **choke control** to the **Open** position.

6.8.2 Start a WXT20V

For more information, see *Splitter Control on page 22* and *WXT20V Engine Controls on page 24*.

1. Do the tasks described in the *Pre-start Checklist on page 30*.
2. Set up the machine.
For instructions, see *Set Up the Machine on page 37*.
3. Move the **splitter control** to the **Neutral** position.
4. Move the **choke control** to the **Closed** position.
If the engine is warm, the choke can be moved to the **Open** position.
5. Move the **throttle control and fuel shutoff** to the **Fast** position.
6. Start the engine.
Firmly grip the **starter-cord handle**, pull the starter cord slowly until you feel resistance, and then pull it rapidly.
7. As the engine warms up, move the **choke control** to the **Open** position.

6.8.3 Start a WXT30V

For more information, see *Splitter Control on page 22* and *WXT30V Engine Controls on page 26*.

1. Do the tasks described in the *Pre-start Checklist on page 30*.
2. Set up the machine.
For instructions, see *Set Up the Machine on page 37*.
3. Move the **splitter control** to the **Neutral** position.
4. Move the **choke control** to the **Closed** position.
If the engine is warm, the choke can be moved to the **Open** position.
5. Move the **throttle control** to the **Fast** position.
6. Move the **fuel shutoff** to the **Open** position.
7. Start the engine.
Firmly grip the **starter-cord handle**, pull the starter cord slowly until you feel resistance, and then pull it rapidly.
8. As the engine warms up, move the **choke control** to the **Open** position.

6.9 Stop the Machine

IMPORTANT! Do not use the choke to stop the engine. If you use the choke to stop the machine it can cause damage to the engine.

6.9.1 Stop a WXT15V

For more information, see *Splitter Control on page 22* and *WXT15V Engine Controls on page 23*.

1. Move the **splitter control** to the **Retract** position.
2. Wait for the wedge to fully retract and the **splitter control** to move to the **Neutral** position.
3. Push the **engine switch** to the **STOP** position.
For more information, see *Engine Switch on page 23*.
4. Operate the **splitter control** to release the hydraulic pressure.

6.9.2 Stop a WXT20V

For more information, see *Splitter Control on page 22* and *WXT20V Engine Controls on page 24*.

1. Move the **splitter control** to the **Retract** position.
2. Wait for the wedge to fully retract and the **splitter control** to move to the **Neutral** position.
3. Move the **throttle control and fuel shutoff** to the **STOP** position.
4. Operate the **splitter control** to release the hydraulic pressure.

6.9.3 Stop a WXT30V

For more information, see *Splitter Control on page 22* and *WXT30V Engine Controls on page 26*.

1. Move the **splitter control** to the **Retract** position.
2. Wait for the wedge to fully retract and the **splitter control** to move to the **Neutral** position.
3. Move the **throttle control** to the **Slow** position.
4. Move the **fuel shutoff** to the **Closed** position.
5. Operate the **splitter control** to release the hydraulic pressure.

6.10 Emergency Stop

The procedures in this section only apply to an emergency situation.

6.10.1 Stop a WXT15V in an Emergency

In an emergency:

1. Push the **engine switch** to the **STOP** position.
For more information, see *Engine Switch on page 23*.
2. Wait for all movement to stop.
Do not let anyone start the machine until the emergency is resolved.

6.10.2 Stop a WXT20V in an Emergency

In an emergency:

1. Move the **throttle control and fuel shutoff** to the **STOP** position.
For more information, see *Throttle Control and Fuel Shutoff on page 24*.
2. Wait for all movement to stop.
Do not let anyone start the machine until the emergency is resolved.

6.10.3 Stop a WXT30V in an Emergency

In an emergency:

1. Move the **fuel shutoff** to the **Closed** position.
For more information, see *Fuel Shutoff on page 26*.
2. Wait for all movement to stop.
Do not let anyone start the machine until the emergency is resolved.

6.11 Change the Split Bed Position

CAUTION!

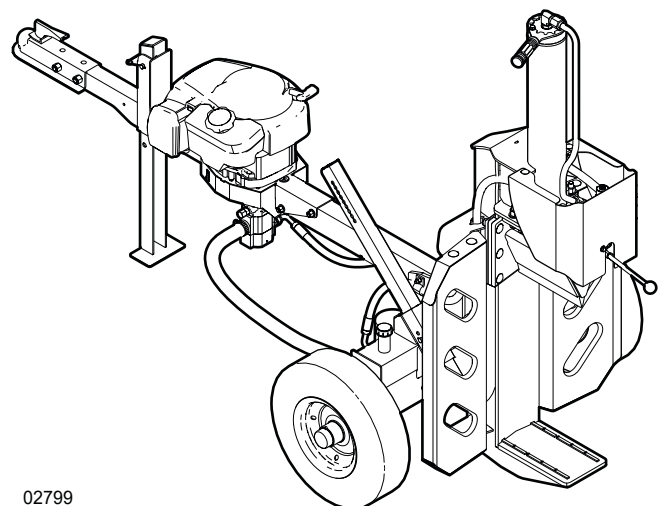
WXT15V or WXT30V: Lower the support stand after you change the split bed to the horizontal position. If the support stand is not lowered, the machine can tip over and cause personal injury.

For more information about the split-bed latch, see *Split-bed Latch on page 28*.

6.11.1 Move the Split Bed to the Vertical Position

This procedure tells you how to move the split bed to the vertical position from the horizontal position.

1. Move the splitter control to the **Retract** position.
2. Wait for the wedge to fully retract and the splitter control to move to the **Neutral** position.
For more information, see *Splitter Control on page 22*.
3. Stop the machine.
For instructions, see *Stop the Machine on page 39*.
4. Remove all logs from the split bed.
5. WXT15V or WXT30V: Lift the support stand.
For more information, see *Support Stand on page 28*.
6. Remove all debris from around the split-bed latch.
7. Disengage the split-bed latch:
For more information, see *Split-bed Latch on page 28*.
 - a. Pull the latch out of the latch plate until the pin aligns with the slot.
 - b. Turn the latch counterclockwise to move the pin into the slot.
8. Use the split-bed handle to move the split bed to the vertical position. Control the movement and make sure that the bottom of the stop block is on the ground.
See *Figure 34*.
9. Engage the split-bed latch:
 - a. Turn the latch clockwise to move the pin out of the slot.
 - b. Release the latch and make sure that it engages with the hole in the latch plate.
10. Use the split-bed handle to try and move the split bed.
Make sure that the split-bed latch is engaged.



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Figure 34—Split bed in the vertical position (WXT15V shown)

6.11.2 Move the Split Bed to the Horizontal Position

This procedure tells you how to move the split bed to the horizontal position from the vertical position.

1. Move the splitter control to the **Retract** position.
2. Wait for the wedge to fully retract and the splitter control to move to the **Neutral** position.
For more information, see *Splitter Control on page 22*.
3. Stop the machine.
For instructions, see *Stop the Machine on page 39*.
4. Remove all logs from the split bed.
5. Remove all debris from around the split-bed latch.
6. Disengage the split-bed latch:
For more information, see *Split-bed Latch on page 28*.
 - a. Pull the latch out of the latch plate until the pin aligns with the slot.
 - b. Turn the latch counterclockwise to move the pin into the slot.
7. Use the split-bed handle to move the split bed to the horizontal position. Control the movement.
See *Figure 35 on page 41*.
8. Engage the split-bed latch:
 - a. Turn the latch clockwise to move the pin out of the slot.
 - b. Release the latch and make sure that it engages with the hole in the latch plate.
9. Use the split-bed handle to try and move the split bed. Make sure that the split-bed latch is engaged.
10. WXT15V or WXT30V: Lower the support stand.
For more information, see *Support Stand on page 28*.

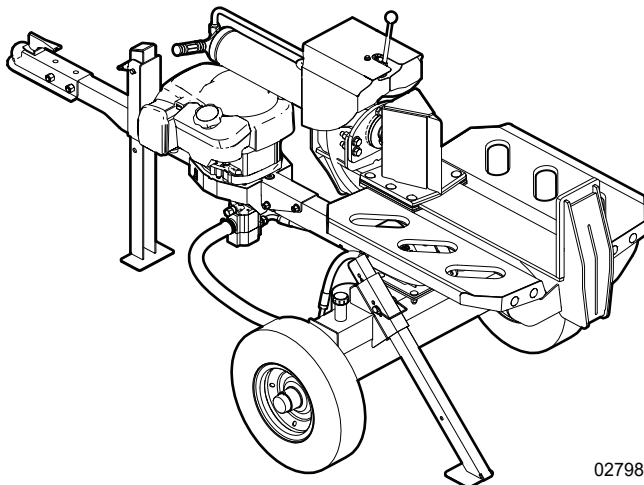


Figure 35—Split bed in the horizontal position (WXT15V shown)

6.12 Operate the Log Splitter

! WARNING!

Put on the personal protective equipment (PPE) that is necessary to do the work safely.

This includes, but is not limited to, hearing protection, heavy gloves, a face shield, and protective footwear.

W135

! WARNING!

Do not let more than one person handle the log or split wood and operate the machine. A second person can be pinched, crushed, or have their hand or fingers severed by the wedge.

! CAUTION!

Do not split more than one log at one time. The log can be pushed out of the machine and cause injury.

! CAUTION!

Do not split wood across the grain. Some types of wood can burst or splinter. Pieces of wood can become projectiles that are impact and cut hazards. Projectiles can cause personal injury.

! CAUTION!

Wait for all motion to stop before you put a log on the machine or remove split wood or debris from the machine. When the wedge moves it can cut, sever, pinch, or crush your hands or feet.

6.12.1 Prepare the Material

- Remove all tree limbs and branches from the logs.
- Cut the logs across the grain. Make the ends of the log as flat as possible.
- Cut logs to a correct length for the split bed.
- Hold the sides of a log when you put it on the machine. Do not hold the cut ends of the log.

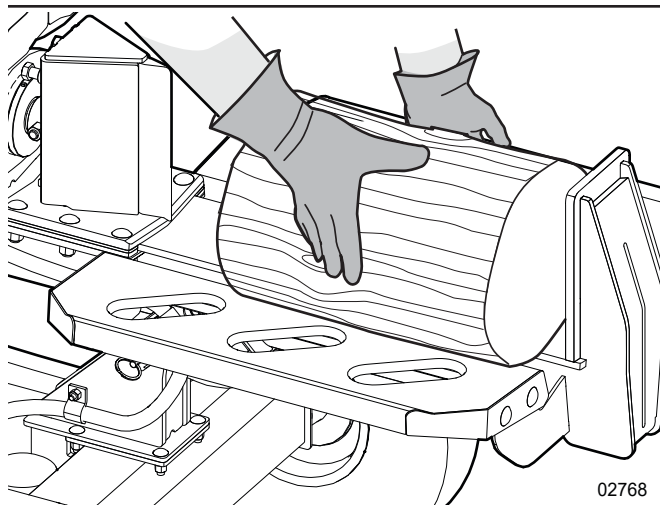


Figure 36—Hold the sides of the log (horizontal position)

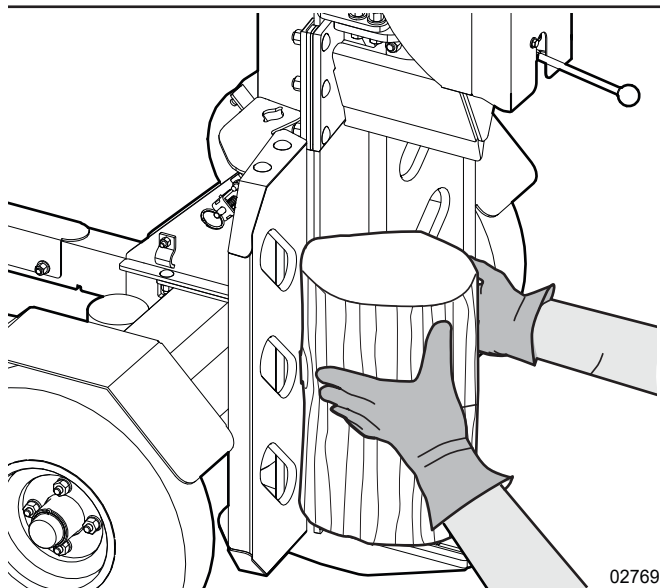


Figure 37—Hold the sides of the log (vertical position)

6.12.2 Split a Log in the Horizontal Position

IMPORTANT! Release the splitter control immediately when the wedge gets to the fully extended position. If you hold the splitter control after the wedge is fully extended, the hydraulic fluid will become too hot.



When a log is cut unevenly, put the flattest edge of the log toward the stop-block.

1. Set up the machine.
For instructions, see *Set Up the Machine on page 37*.
2. Prepare the material.
For instructions, see *Prepare the Material*.
3. Start the machine.
For instructions, see *Start the Machine on page 38*.
4. Put a log on the split bed between the wedge and the stop-block.
5. Move away from the split bed.
6. Push and hold the splitter control in the **Extend** position.
7. Release the splitter control when the log splits or the wedge gets to the fully extended position.
8. Pull the splitter control to the **Retract** position, and then release it.
The wedge will continue to retract. When the wedge gets to the fully retracted position, the splitter control will automatically move to the **Neutral** position.
9. After all movement stops, put the split wood on the split-wood pile.
10. Do steps 4 to 9 again, until the work is complete.

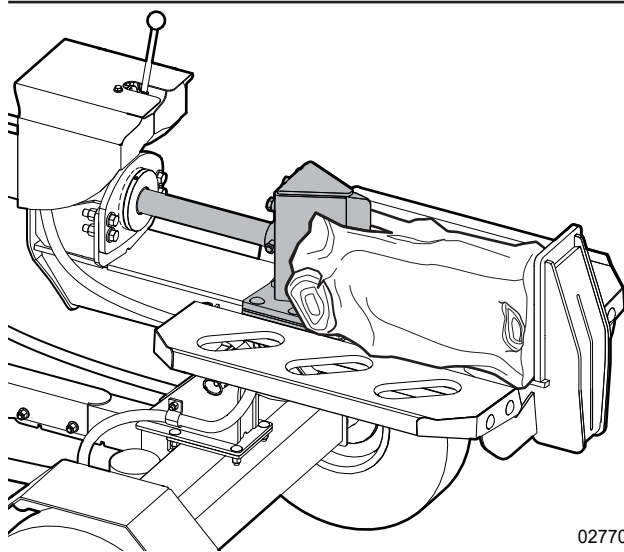


Figure 38—Split a log in the horizontal position

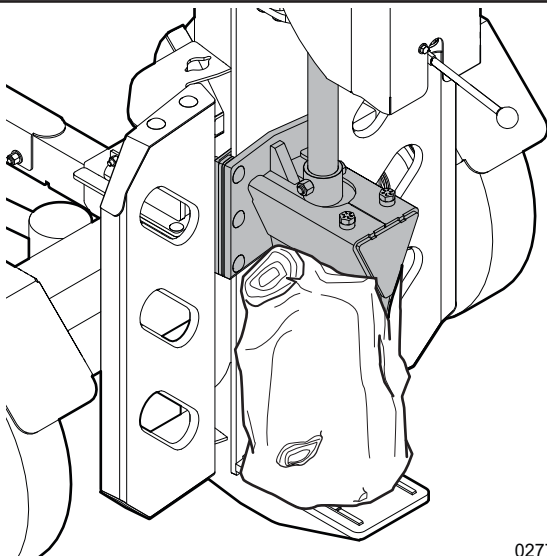
6.12.3 Split a Log in the Vertical Position

IMPORTANT! Release the splitter control immediately when the wedge gets to the fully extended position. If you hold the splitter control after the wedge is fully extended, the hydraulic fluid will become too hot.



When a log is cut unevenly, put the flattest edge of the log toward the stop-block.

1. Set up the machine.
For instructions, see *Set Up the Machine on page 37*.
2. Prepare the material.
For instructions, see *Prepare the Material on page 41*.
3. Move the machine to the vertical position.
For instructions, see *Move the Split Bed to the Vertical Position on page 40*.
4. Start the machine.
For instructions, see *Start the Machine on page 38*.
5. Put a log on the stop-block, against the split bed.
6. Move away from the stop-block and split bed.
7. Lower and hold the splitter control in the **Extend** position.
8. Release the splitter control when the log splits or the wedge gets to the fully extended position.
9. Lift the splitter control to the **Retract** position, and then release it.
The wedge will continue to retract. When the wedge gets to the fully retracted position, the splitter control will automatically move to the **Neutral** position.
10. After all movement stops, put the split wood on the split-wood pile.
11. Do steps 5 to 10 again, until the work is complete.



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Figure 39 – Split a log in the vertical position

6.12.4 Remove a Blockage



WARNING!

Put the machine in a safe condition before you remove a blockage. Do not reach into the machine when it is not in a safe condition. When the machine is not in a safe condition, there are impact, crush, and sever hazards that can cause serious injury or death.



CAUTION!

Put on thick work gloves to remove a blockage. Thick work gloves give some protection from sharp objects and splinters.

If material collects on the machine, follow this procedure to remove the blockage:

1. Set the machine to a safe condition.
For instructions, see *Safe Condition on page 9*.
2. Remove all the material from the split bed.
3. Remove all the material from around the wedge.

7. Transport

IMPORTANT! Equipment that is transported on a public roadway must comply with the local laws that govern the safety and transport of machinery.

Before taking a WXT20V or WXT30V on a public roadway, make sure that the machine has the necessary lights, reflectors, and markings, and that they are in good condition.

For specific requirements, contact your local transportation authority.

WXT15V models are not intended for use or transport on public roadways. Therefore, the machine does not include the necessary lights, reflectors, and markings. Also, the WXT15V engine does not have a fuel shutoff valve. Transport vibration can cause fuel to leak and damage the engine.

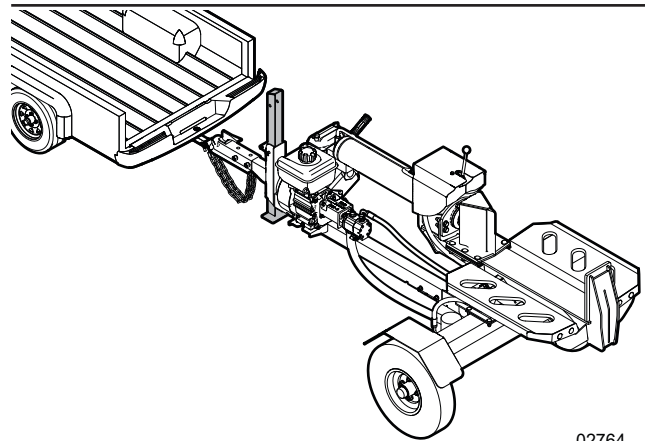
7.1 Transport Safety

- Make sure that the machine is safely attached to the tow vehicle with a retainer through the hitch.
- WXT15V or WXT30V: Lift the support stand.
For instructions, see *Lift the Support Stand on page 38*.
- WXT20V or WXT30V: Always attach the safety chains between the machine and the tow vehicle.
- WXT20V or WXT30V: Examine the wheel rims for damage and torque the wheel lug nuts to the correct specifications.
For more information, see *Lug Nut Torque on page 62*.
- Make sure that the split-bed latch is engaged and the split bed cannot move.
- Do not let people ride on the machine.
- Do not exceed a safe travel speed. Decrease your speed for rough terrain and around corners.
- Plan your route to avoid heavy traffic.
- Do not transport or move the machine with the engine on.
- Make sure that the hydraulic reservoir cap and fuel tank cap are on and tight.
- Examine the tires for cuts or damage.
- Make sure that the tires are filled to the specified pressure.
For the correct tire pressure, see the tire sidewall.
- Examine the axle dust caps for leaks and damage. Replace a dust cap that leaks or is damaged.
- If applicable, make sure that the tow vehicle has the correct size ball-mount hitch (2 inch).
- Make sure that the jack stand is lifted.
- Make sure that all of the guards and shields are installed and the covers are closed.

- Remove all debris from the machine.
- After the machine is ready for transport, do a circle check to make sure that everything is safe.

7.2 Prepare the Machine for Transport

1. Stop the machine.
For instructions, see *Stop the Machine on page 39*.
2. Put the split bed in the horizontal position.
For instructions, see *Move the Split Bed to the Horizontal Position on page 41*.
3. WXT15V or WXT30V: Lift the support stand.
For more information, see *Lift the Support Stand on page 38*.
4. Remove all debris from the machine.
5. Do a circle check to make sure that everything is safe.
6. Attach the machine to a tow vehicle.
For instructions, see *Ball-mount Hitch on page 45* or *Clevis Hitch on page 46*.



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Figure 40—Transport position (WXT20V shown)

7.3 Ball-mount Hitch

The machine comes with a ball-mount hitch coupler.

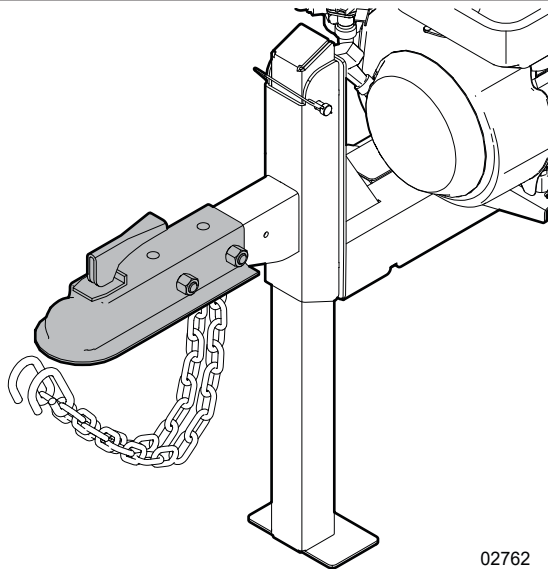


Figure 41 –Ball-mount hitch (WXT20V shown)

7.3.1 Install a Ball-mount Hitch Coupler

1. If necessary, remove the two bolts and two nuts from the hitch coupler.
2. Put the hitch coupler over the clevis hitch. Align the bolt holes with the trailer tongue bolt holes.
3. Install the two bolts and two nuts through the hitch coupler and the trailer tongue.
4. Use a calibrated torque wrench to tighten the two bolts to the correct torque. For bolt torque specifications, see *Bolt Torque* on page 61.

7.3.2 Remove a Ball-mount Hitch Coupler

1. Remove the two bolts and two nuts that attach the hitch coupler to the machine.
2. Remove the hitch coupler from the machine.
3. Install the two bolts and two nuts in the hitch coupler to prevent them from getting lost.

7.3.3 Connect to a Ball-mount Hitch

Make sure that there is space and clearance to safely reverse the tow vehicle to the machine.

1. Reverse the tow vehicle to the machine. Stop approximately 1 ft (30 cm) away from the hitch coupler.
If a back-up camera is not available, have another person guide you.
2. Stop the tow vehicle and apply the parking brake.
3. On the machine, use the jack stand or trailer jack (WXT30V) to lift the trailer tongue until the hitch coupler is higher than the ball-mount hitch.
For instructions, see *Lower the Jack Stand* on page 47 or *Lower the Trailer Jack* on page 48.
4. Remove the pin from the hitch-coupler latch. Lift the latch to the vertical (unlocked) position.
5. Slowly, reverse the tow vehicle until the ball-mount hitch is below the hitch coupler.
6. Stop the tow-vehicle engine and apply the parking brake.
7. On the machine, use the jack stand or trailer jack to lower the machine and attach the hitch coupler to the ball-mount hitch.
8. Lower the hitch-coupler latch to the locked position. Install a pin through the latch to hold the hitch coupler on the ball-mount hitch.
9. Lift the jack stand or stow the trailer jack.
For instructions, see *Lift the Jack Stand* on page 47 or *Stow the Trailer Jack* on page 48.
10. WXT20V or WXT30V: Cross the two safety chains below the trailer tongue, and then attach them to the tow vehicle (one on each side of the ball-mount hitch).

7.3.4 Disconnect from a Ball-mount Hitch

Always park the machine on level, dry ground that is free of debris and other objects before you disconnect the hitch.

Make sure that there is space and clearance to safely drive the tow vehicle forward, away from the machine.

1. Stop the tow vehicle in a location where it and the machine are on dry, level ground.
2. Stop the tow-vehicle engine and apply the parking brake.
3. On the machine, lower the jack stand or trailer jack (WXT30V).
For instructions, see *Lower the Jack Stand* on page 47 or *Lower the Trailer Jack* on page 48.
4. WXT20V or WXT30V: Remove the two safety chains from the tow vehicle and stow them safely on the machine.
5. Remove the pin from the hitch-coupler latch. Lift the latch to the vertical (unlocked) position.

6. Use the jack stand or trailer jack to lift the trailer tongue until the hitch coupler is higher than the ball-mount hitch.
7. Slowly, drive the tow vehicle forward until the ball-mount hitch is clear of the hitch coupler.
8. Stop the tow vehicle and apply the parking brake.
9. Use the jack stand or trailer jack to lower the machine until it is level with the ground.
10. Lower the hitch-coupler latch to the locked position. Install the pin through the latch.

7.4 Clevis Hitch

To use the clevis hitch, remove the ball-mount hitch coupler. For instructions, see *Remove a Ball-mount Hitch Coupler* on page 45.

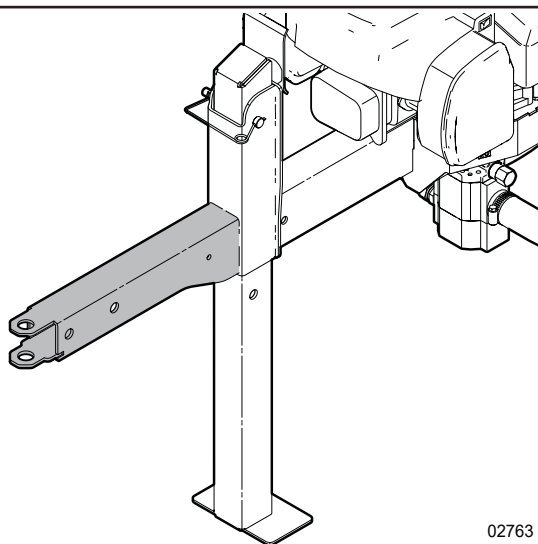


Figure 42—Clevis hitch (WXT15V shown)

7.4.1 Connect to a Clevis Hitch

Make sure that there is space and clearance to safely reverse the tow vehicle to the machine.

1. Reverse the tow vehicle to the machine. Stop approximately 1 ft (30 cm) away from the hitch.
2. Stop the tow-vehicle engine and apply the parking brake.
3. Align the clevis hitch with the tow-vehicle draw bar.
4. Insert a 3/4" hitch pin (not included with the machine) through the clevis hitch and tow-vehicle draw bar.
5. Install a snap-lock pin (not included with the machine) through the hitch pin to make the connection safe.
6. Lift the jack stand or stow the trailer jack (WXT30V). For instructions, see *Lift the Jack Stand* on page 47 or *Stow the Trailer Jack* on page 48.

7.4.2 Disconnect from a Clevis Hitch

Always park the machine on level, dry ground that is free of debris and other objects before you disconnect the hitch.

Make sure that there is space and clearance to safely drive the tow vehicle forward, away from the machine.

1. Stop the tow vehicle in a location where it and the machine are on dry, level ground.
2. Stop the tow-vehicle engine and apply the parking brake.
3. On the machine, lower the jack stand. For instructions, see *Lower the Jack Stand* on page 47.
4. Remove the snap-lock pin from the hitch pin.
5. Remove the hitch pin from the clevis hitch and tow-vehicle draw bar.
6. Slowly, drive the tow vehicle forward away from the machine.
7. Stop the tow vehicle and apply the parking brake.
8. Install the hitch pin through clevis hitch, and then install the snap-lock pin through the hitch pin.

7.5 Jack Stand

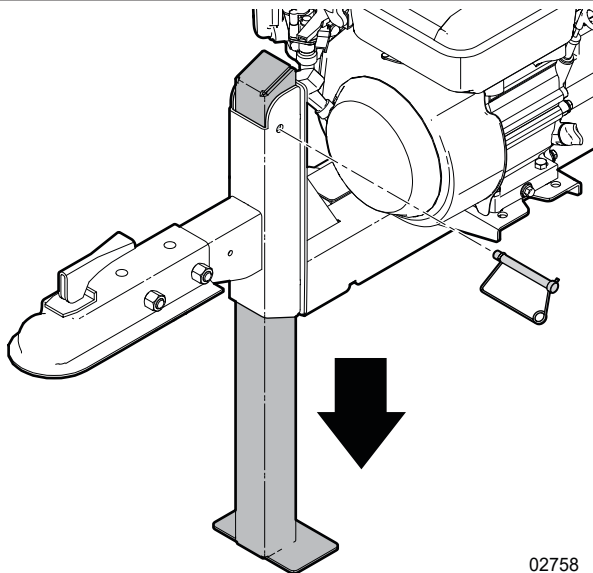
CAUTION!

Do not pull the pin out of a jack stand when there is weight on the jack. The machine can move unexpectedly and cause minor to severe injuries. Attach the machine to a tow vehicle or put blocks under the hitch to hold the weight before you remove the pin from a jack stand.

The jack stand has two functions. It supports the machine when it is not attached to a tow vehicle or helps to keep the machine stable when it is attached to a tow vehicle.

7.5.1 Lower the Jack Stand

1. Remove the snap-lock pin from the hitch frame and jack stand.
2. Lower the jack stand.
Align the top hole in the jack stand with the hole in the hitch frame.
3. Insert the snap-lock pin through the hitch frame and jack stand.

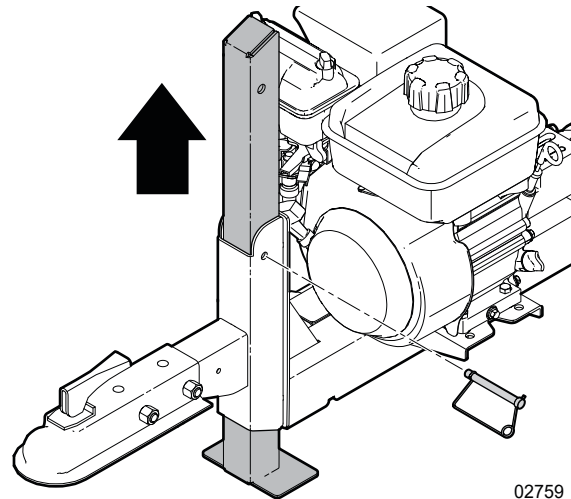


02758

Figure 43—Lower the jack stand

7.5.2 Lift the Jack Stand

1. Support the machine to remove weight from the jack stand. Attach the machine to a tow vehicle or support the front of the machine with blocks.
2. Remove the snap-lock pin from the hitch frame and jack stand.
3. Lift the jack stand.
Align the bottom hole in the jack stand with the hole in the hitch frame.
4. Insert the snap-lock pin through the hitch frame and jack stand.



02759

Figure 44—Lift the jack stand

7.6 Trailer Jack

WARNING!

Do not pull the pin out of a trailer jack when there is weight on the jack. The machine can move unexpectedly and cause minor to severe injuries. Attach the machine to a tow vehicle or put blocks under the trailer tongue to hold the weight before you remove the pin from a trailer jack.

W122

The trailer jack has two functions. It supports the machine when it is not attached to a tow vehicle or helps to keep the machine stable when it is attached to a tow vehicle.

7.6.1 Lower the Trailer Jack

1. Pull the pin out of the bracket.
2. Turn the trailer jack to the vertical position.
3. Insert the pin through the bracket to hold the trailer jack in the vertical position.
4. Turn the handle clockwise to lower the base.

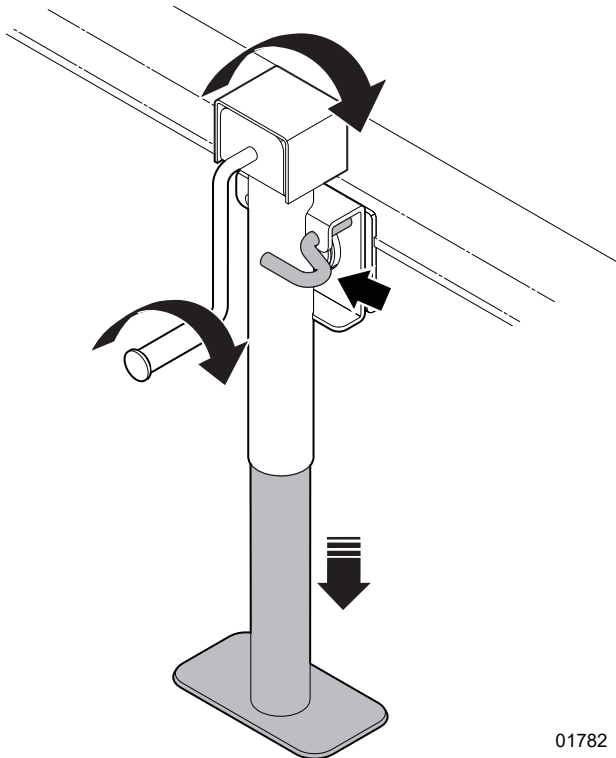


Figure 45– Trailer jack in the lowered position

7.6.2 Stow the Trailer Jack

1. Support the machine to remove weight from the trailer jack. Attach the machine to a tow vehicle or support the trailer tongue with blocks.
2. Turn the handle counterclockwise to retract the base.
3. Pull the pin out of the bracket.
4. Turn the trailer jack to the horizontal position.
5. Insert the pin through the bracket to hold the trailer jack in the horizontal position.

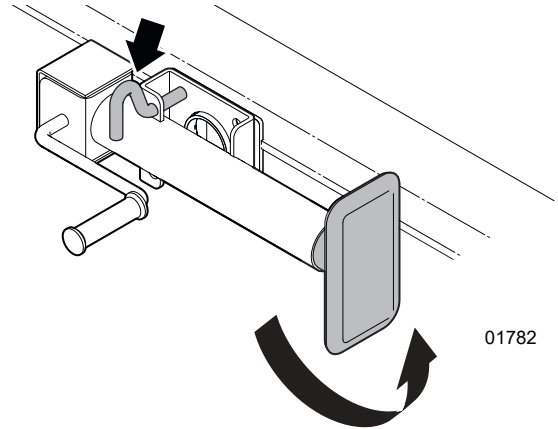


Figure 46– Trailer jack in the stowed position

8. Storage

At the end of the season or when the machine is not going to be used for an extended length of time, store the machine correctly to prevent damage.

8.1 Storage Safety



WARNING!

Do not let children play on or around the stored machine. If children play on or around the machine it can result in serious injury or death.

W105

- Store the machine in a dry, level location away from human activity.
- Store the machine indoors, where possible.
- If necessary, support the frame with planks.

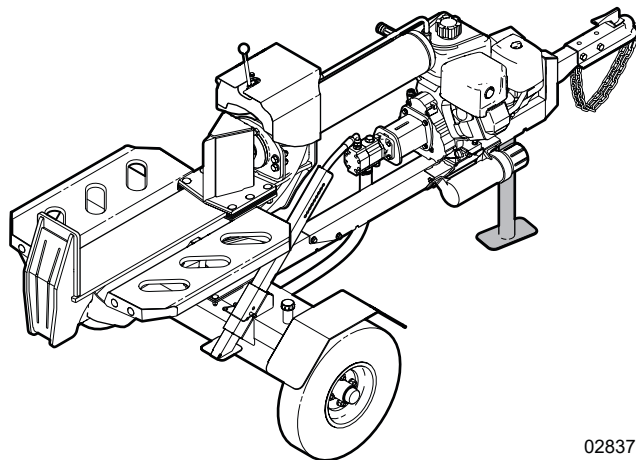
8.2 Put the Machine in Storage



WXT15V or WXT30V: Keep the support stand in the lifted position for storage.

For information about engine storage, see the engine manufacturer's manual.

1. Stop the machine.
For instructions, see *Stop the Machine* on page 39.
2. Remove all material from the machine.
3. Put the split bed in the horizontal position.
For instructions, see *Move the Split Bed to the Horizontal Position* on page 41.
4. Remove all entangled material.
Check all moving parts for entangled material.
5. Clean the machine.
For instructions, see *Clean the Machine* on page 58.
6. Do one of the following:
 - If the machine will be in storage for one to three months, add stabilizer to the engine fuel and drain the carburetor.
 - If the machine will be in storage for longer than three months, replace the engine fuel with an alkylate or appropriate engineered fuel. These fuel types prevent the buildup of insoluble solids (deposits) in the engine. For more information, see *Engine Fuel* on page 52. For instructions, see *Replace the Engine Fuel* on page 50.
7. Park the machine in the storage location.
8. Disconnect the tow vehicle.
For instructions, see *Disconnect from a Ball-mount Hitch* on page 45 or *Disconnect from a Clevis Hitch* on page 46.
9. Adjust the jack stand or trailer jack (WXT30V) until the machine is level.
If the machine must be on soft ground, put boards or plates under the jack stand or trailer jack to increase the surface area.
10. Block the machine wheels to prevent accidental movement and increase the wheel bearing life.
11. If the machine must be stored outdoors, cover the machine with a waterproof tarp. The machine should be stored indoors, if possible.
An all-weather cover is available as an accessory. To purchase a cover, go to WallensteinEquipment.com.



02837

Figure 47—Storage position (WXT30V shown)

8.2.1 Replace the Engine Fuel

1. Remove the current fuel from the engine.
Operate the machine until the fuel tank is empty or drain the fuel tank and properly dispose of the fuel.
2. Add new fuel to the engine.
For instructions, see *Add Fuel to the Engine on page 33*.
3. Start the machine.
For instructions, see *Start the Machine on page 38*.
4. Wait five to 10 minutes for the fuel to flush the carburetor.
5. Stop the machine.
For instructions, see *Stop the Machine on page 39*.

8.3 Remove the Machine from Storage

1. Do the tasks in the *Pre-start Checklist on page 30*.
2. Do the necessary maintenance.
For maintenance requirements, see the *Maintenance Schedule on page 53*.

9. Service and Maintenance

Regular preventive maintenance can improve performance and prolong the life of the machine. Machine maintenance is your responsibility.

9.1 Service and Maintenance Safety

WARNING!

Before you start service or maintenance work:

- **Set the machine to a safe condition.**
- **Wait for the machine to cool. Hot engine components and fluids can cause burns.**
- **Read and understand all the service and maintenance safety information.**

W041

WARNING!

Put on the personal protective equipment (PPE) that is necessary to do the work safely.

This includes, but is not limited to, hearing protection, heavy gloves, a face shield, and protective footwear.

W135

WARNING!

After service and maintenance, install all of the guards and shields, and close all of the covers. Do not operate the machine with any guard or shield removed, or cover open.

W110

Put the machine in a safe condition before you start any service or maintenance:

SAFE CONDITION

1. If the machine is attached to a tow vehicle, set the tow-vehicle parking brake, stop the engine, and remove the ignition key.
 2. Stop the machine.
For instructions, see *Stop the Machine on page 39*.
 3. Wait for all motion to stop.
 4. Operate the hydraulic controls to release the pressure.
 5. Put the split bed in the horizontal position.
For instructions, see *Move the Split Bed to the Horizontal Position on page 41*.
Make sure that the split-bed latch is engaged.
 6. Disconnect the engine spark-plug wire and keep it away from the spark plug.
 7. Block the wheels.
 8. Wait for the hydraulic fluid to cool.
-
- Follow good shop practices:
 - Keep the work area clean and dry.
 - Ground electrical outlets and tools.
 - Have sufficient light for good visibility.
 - Use tools that are in good condition and correct for the task. Make sure that you know how to use the tools before you use them.
 - Only operate the engine in a location that has good air flow. Engine exhaust gases contain carbon monoxide (an odorless gas) that can cause asphyxiation.
 - Do not work under equipment unless it is safely supported with blocks.
 - Do not do service or maintenance work alone. Always have a minimum of two people in case an emergency situation occurs.
 - Keep a fire extinguisher and first aid kit available at all times.
 - When service or maintenance is complete, do the following:
 - Replace all guards and shields, and close the covers.
 - Torque the fasteners to the correct specifications.
 - Make sure that all the electrical, hydraulic, and fuel connections are connected and in good condition.
 - Do not use gasoline or diesel fuel to clean parts. Use the correct cleaning product. When replacement parts are necessary, use genuine factory replacement parts to restore your machine to the original specifications. The manufacturer cannot be responsible for injuries or damages caused by use of unapproved parts and/or accessories.

9.2 Fluids and Lubricants

The machine needs the correct fluids and lubricants for operation and maintenance.

9.2.1 Lubricant Handling and Storage

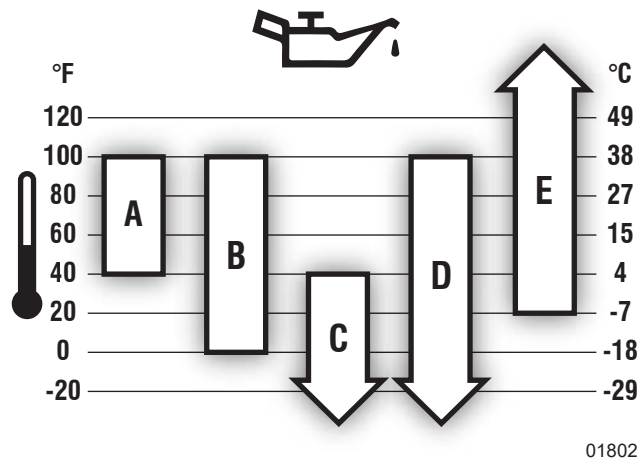
For optimum machine efficiency, use clean lubricants and clean containers to handle all lubricants. Store lubricants in an area that is protected from dust, moisture, and other contaminants.

9.2.2 Engine Oil

For engine maintenance and service information, see the engine manufacturer's manual.

Briggs & Stratton® Warranty Certified oils are recommended for the best engine performance. However, other high-quality detergent oils are permitted if they are classified for service SF, SG, SH, SJ, or higher. Do not use special additives.

Outdoor temperatures determine the necessary engine oil viscosity. Select the best oil viscosity for the expected outdoor temperature range. Use the following chart as a guide:



| | |
|----------|--|
| A | SAE 30 – Below 40 °F (4 °C) the use of SAE 30 results in hard starting. |
| B | 10W-30 – Above 80 °F (27 °C) the use of 10W-30 can cause increased oil consumption. Check the oil level frequently. |
| C | 5W-30 |
| D | Synthetic 5W-30 |
| E | Vanguard® Synthetic 15W-50 |

9.2.3 Engine Fuel

For complete fuel information and use at high altitudes, see the engine manufacturer's manual.

Fuel must meet the following specifications:

- Clean, fresh, unleaded gasoline.
- Minimum of 87 octane / 87 AKI (91 RON).
- Gasoline with up to 10% ethanol (gasohol) is acceptable if the fuel is fresh (less than three months old).

If the machine will be in storage for longer than three months, replace the fuel with one of the following fuel types:

- An alkylate fuel
- An engineered fuel that is high octane, ethanol-free, and formulated with power detergent to prevent the buildup of insoluble solids (deposits).

9.2.4 Grease

Use an SAE multipurpose high temperature grease with extreme pressure (EP) performance. An SAE multipurpose lithium-based grease is an acceptable substitute.

9.2.5 Rust Protection Oil

Use a good quality rust protection oil and lubricant that is intended for use on metal.

9.2.6 Hydraulic Fluid

Use Dexron® III automatic transmission fluid (ATF) for all operating conditions.

The following ATFs are acceptable substitutes:

- Dexron VI
- Mercon®

9.3 Maintenance Schedule

IMPORTANT! For more information, see the engine manufacturer's manual.

WXT15V model engines have Briggs & Stratton Just Check & Add™ Technology, which means that it is not necessary to change the oil.



If a specific model is not identified in the task, the task applies to all the models (WXT15V, WXT20V, and WXT30V).

Do the maintenance tasks at the specified time or hour interval, whichever comes first.

| Every 8 hours or Daily | Reference |
|--|-------------------|
| WXT15V: Check the engine oil level. | See page 34 |
| WXT20V and WXT30V: Check the engine oil level and quality. | See page 34. |
| Check the engine fuel level. | See page 32. |
| Clean the engine around the muffler and controls. | N/A. ¹ |
| Clean the engine air-intake grille. | N/A. |
| Torque all the fasteners to the correct specifications. | See page 61. |
| Torque the wheel lug nuts to the correct specifications. | See page 62. |
| Torque the hydraulic fittings to the correct specifications. | See page 62. |
| Remove all debris and entangled material. | N/A. |

| Every 25 hours or Annually | Reference |
|---|--------------|
| WXT30V: Clean the engine air filter and pre-cleaner. ² | See page 55. |

| Every 40 hours or Annually | Reference |
|--|--------------|
| Check the hydraulic fluid level and quality. | See page 36. |
| Lubricate the pivot points and hinges. | See page 54. |

| Every 50 hours or Annually | Reference |
|--|------------------------|
| WXT30V: Change the engine oil and replace the oil filter | See the engine manual. |
| WXT15V: Clean the engine air filter. ² | See page 55. |
| WXT15V and WXT30V: Service the engine exhaust system. | See the engine manual. |

| Every 100 hours or Annually | Reference |
|--|------------------------|
| Check the tire pressure. | See the tire sidewall. |
| Clean the machine. | See page 58. |
| Change the hydraulic fluid and filter. | See page 57. |
| WXT20V: Service the engine exhaust system. | See the engine manual. |
| Grease the machine. | See page 54. |

| Every 200 hours or Annually | Reference |
|---|------------------------|
| WXT20V: Clean the engine air filter. ² | See page 55. |
| WXT20V: Change the engine oil and replace the oil filter. | See the engine manual. |
| WXT15V: Replace the engine air filter. | See the engine manual. |

| Annually | Reference |
|---|------------------------|
| Check the valve clearance. ³ | See the engine manual. |
| Replace the engine spark plug. | See the engine manual. |
| Service the engine fuel system. | See the engine manual. |
| Service the engine cooling system. ² | See the engine manual. |

| Every 600 hours or Annually | Reference |
|--|------------------------|
| WXT30V: Replace the engine air filter and pre-cleaner. | See the engine manual. |

1 N/A indicates that a reference is not applicable.
 2 In dusty conditions or when airborne debris is present, clean more often.
 3 This is only necessary if there are engine performance problems.

9.4 Grease Points

The illustration below shows the WXT20V, but the grease points for the WXT15V and WXT30V are the same.

9.4.1 Hinge and Pivot Point Locations

For rust-protection oil specifications, see *Rust Protection Oil* on page 52.

Hinge and pivot points can rust and become difficult to move without the correct maintenance. Apply a small amount of rust-protection oil to the following locations:

| Item | Location | Frequency | Number of Locations |
|------|-----------------------------------|----------------------|---------------------|
| 1 | Jack stand or trailer jack | 40 hours or annually | 1 |
| 2 | Split bed | 40 hours or annually | 1 |
| 3 | WXT15V and WXT30V : Support stand | 40 hours or annually | 1 |

9.4.2 Grease Fitting Locations

IMPORTANT! Do not over grease a bearing. Too much grease can cause the bearing seals to fail.

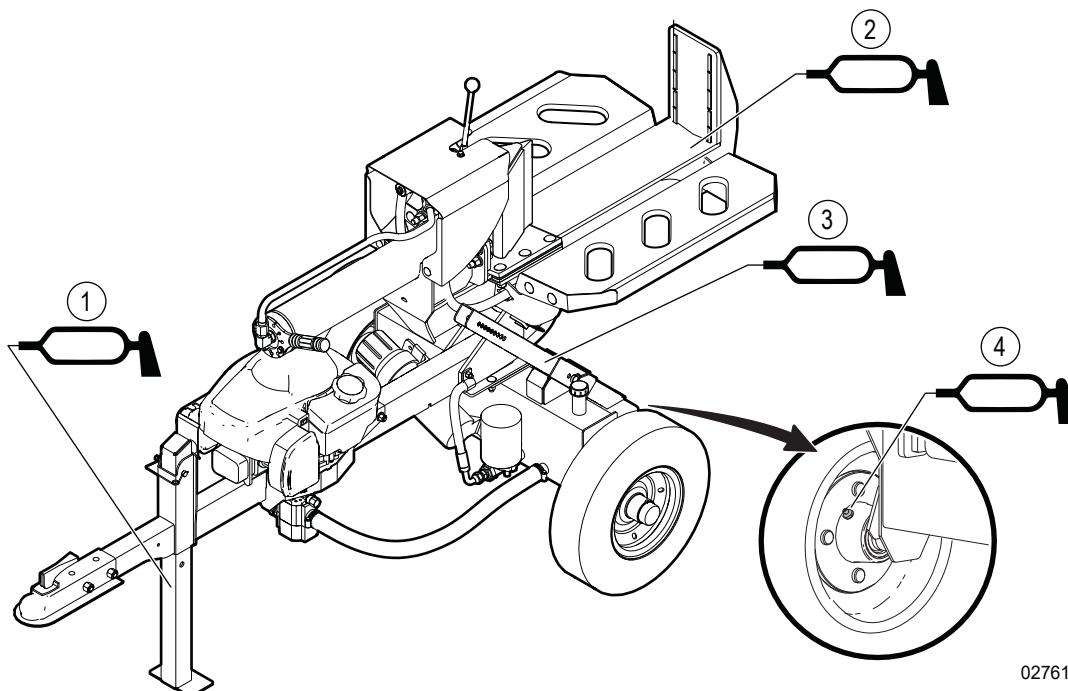


Look for this type of label on the machine. Each label identifies a grease point and shows the greasing interval in hours.

For grease specifications, see *Grease* on page 52.

- Use a clean cloth to clean each grease fitting before you apply grease. This prevents grease and dirt from getting inside the component.
- Use a hand-held grease gun to apply **one pump** of grease to each grease point.
- If a grease fitting is damaged, replace it immediately.
- If a grease fitting does not accept grease:
 - a. Remove the grease fitting.
 - b. Clean the passageway behind the grease fitting.
 - c. Clean the grease fitting thoroughly or get a new grease fitting.
 - d. Install the grease fitting.

| Item | Location | Frequency | Number of Locations |
|------|----------------|-----------------------|---------------------|
| 4 | Wheel bearings | 100 hours or annually | 2 |



02761

Figure 48—Grease fitting, hinge, and pivot point locations (WXT15V shown)

9.5 Engine Maintenance

For full engine maintenance information, see the engine manufacturer's manual.

9.5.1 Engine Maintenance Safety

WARNING!

Do not operate the engine indoors. Park the machine outdoors in a position where the prevailing winds blow the exhaust away from you.

Engine exhaust contains carbon monoxide (CO) that can quickly accumulate to a dangerous level. Carbon monoxide can cause illness, unconsciousness, or death.

W072

For more information, see *Engine Operation Safety* on page 31.

- Remove the wire from the spark plug before servicing the engine or equipment to prevent the engine from starting.
- Examine the muffler on a regular basis to make sure that it operates effectively. Repair or replace a muffler that is worn or leaks.
- Before storage, replace fuel that contains ethanol with an alkylate or appropriate engineered fuel to prevent the buildup of deposits.
- Check the fuel lines and fittings frequently for cracks or leaks. Replace fuel lines or fittings that are damaged.
- Store fuel away from all wood material.
- Do not check for a spark with the spark plug or spark plug wire removed.
- Do not hit the flywheel with a hard object or metal tool. This can cause the flywheel to shatter during operation. Use the correct tools to service the engine.
- Do not touch a hot muffler, cylinder, or fins. Contact can cause burns.

9.5.2 Clean the Engine Air Filter

IMPORTANT! If you operate the engine without an air filter, or with a damaged air filter, dirt can get into the engine. This can cause rapid engine wear and damage that is not covered by warranty.

| Model | Frequency | Figure |
|--------|-----------------------|---------------------------|
| WXT15V | 50 hours or annually | See Figure 49. |
| WXT20V | 200 hours or annually | See Figure 50 on page 56. |
| WXT30V | 25 hours or annually | See Figure 51 on page 56. |

A dirty air filter can restrict air flow to the carburetor and decrease the engine performance. If you operate the engine in very dusty areas, clean the air filter more often than specified.

1. Loosen the air-filter cover fasteners.
2. Remove the cover.
3. Remove the air filter.
4. Gently tap the air filter on a hard surface to loosen and remove dust and debris.
5. If the air filter is excessively dirty or damaged, replace it with a new air filter.
6. Install the air filter in the engine.
7. Install the cover.
8. Tighten the air-filter cover fasteners.

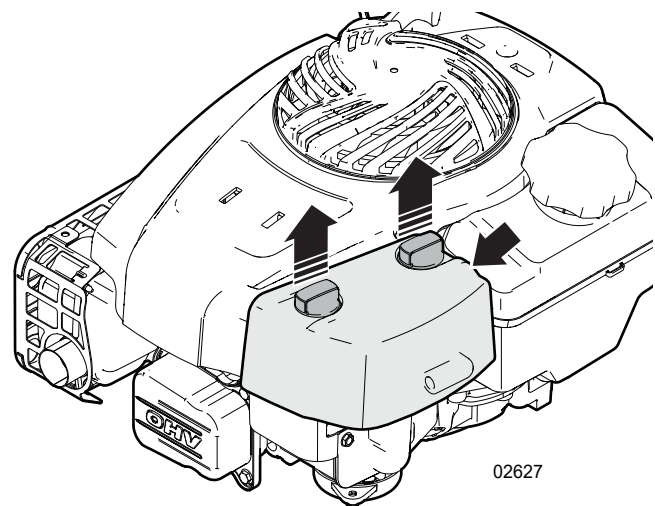


Figure 49—WXT15V- engine air filter

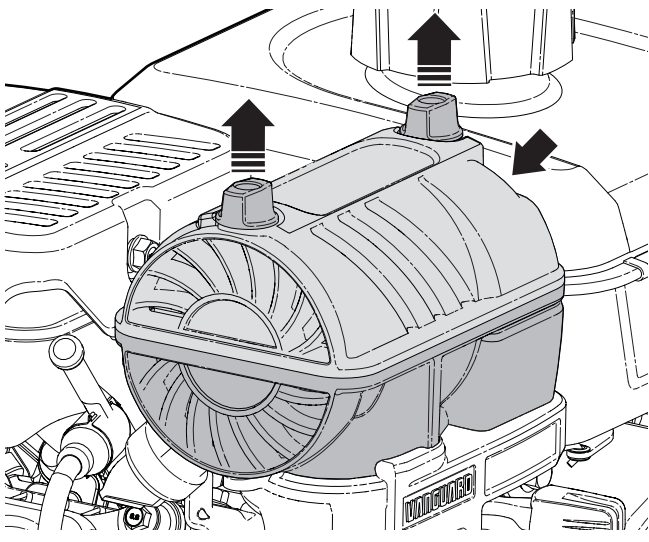


Figure 50—WXT20V- engine air filter

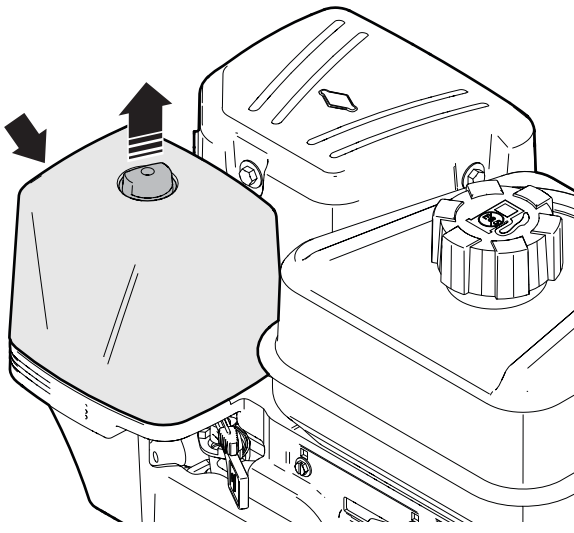


Figure 51—WXT30V- engine air filter

9.6 Hydraulic System Maintenance

The hydraulic system provides pressurized hydraulic fluid to the splitter control and hydraulic cylinder. The hydraulic system makes the wedge extend or retract.

9.6.1 Hydraulic System Maintenance Safety

WARNING!

Pressurized hydraulic fluid can penetrate the skin or eyes and cause serious illness, injury, or death.

- Make sure that all hydraulic connections are tight before you apply pressure to the hydraulic system.
- Put on the correct hand and eye protection and always use a piece of cardboard or wood to find a leak. Do not use your hands.
- If a high-pressure stream of hydraulic fluid penetrates your skin, get immediate medical attention from a doctor who is familiar with this type of injury. Serious infection or a toxic reaction can occur.

W040

CAUTION!



Risk of burns to exposed skin. Hydraulic fluid gets hot during operation, which makes hoses, lines, and other parts hot as well. Wait for the fluid and components to cool before starting maintenance or service.

IMPORTANT! Optimal hydraulic fluid temperatures are between 120° F and 140° F (50° C and 60° C). If the hydraulic fluid temperature is higher than 180° F (82° C), it can cause seal damage and degrade the hydraulic fluid. High hydraulic fluid temperatures often indicate that there is a problem.

For more information, see *Hydraulic System Operation Safety* on page 36.

- Keep all the hydraulic system components clean and in good condition.
- Release the pressure on the hydraulic system before you work with it. The hydraulic system operates under extremely high pressure.
- Before you apply pressure to the hydraulic system, make sure that all the connections are tight, and the hoses, tubes, and fittings are not damaged.

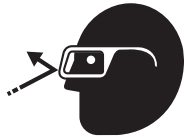
- Immediately replace a hydraulic hose or tube that shows signs of swelling, wear, leaks, or damage. A swollen, worn, damaged, or leaking hose or tube can burst and cause a hazardous and unsafe condition. For more information, see *Hydraulic Hose Specifications on page 60*.

- High-pressure hydraulic fluid leaks:

- Do not use your hand to check for hydraulic fluid leaks. Injection of pressurized hydraulic fluid can cause serious illness, injury, or death. Put on heavy gloves and use a piece of cardboard or wood to check for leaks.



- Put on the correct eye protection when doing an inspection for a high-pressure hydraulic leak.



- Get medical attention immediately if you are injured by a concentrated high-pressure stream of hydraulic fluid. Serious infection or a toxic reaction can occur after hydraulic fluid pierces the skin.

- Do not make any temporary repairs to the hydraulic hoses or fittings. Do not use tape, clamps, or cements to attempt a repair. This can cause sudden failure and create a hazardous and unsafe condition.
- Do not bend or hit high-pressure hydraulic hoses or install them in a bent or damaged condition.
- Make sure that hydraulic hoses are routed to avoid chafing.
- Do not adjust a pressure relief valve or other pressure-limiting device to a pressure that is higher than the specified rating.

9.6.2 Change the Hydraulic Fluid and Filter

CAUTION!



Risk of burns to exposed skin. Hydraulic fluid gets hot during operation, which makes hoses, lines, and other parts hot as well. Wait for the fluid and components to cool before you start maintenance or service.

Change the hydraulic fluid and filter every 200 hours of operation or annually.

Wait for the machine to cool before you change the hydraulic fluid. However, it is best to change the fluid while the machine is warm so that any contaminants in the fluid do not settle at the bottom of the reservoir.

The hydraulic fluid filter is on the rear of the machine, on the left side.

1. Set the machine to a safe condition. For instructions, see *Safe Condition on page 9*.
2. Put a drain pan under the fluid filter. Make sure the drain pan is large enough to collect and contain the hydraulic fluid that will drain from the filter and reservoir.
3. Remove the hydraulic fluid filter. If necessary, use a filter wrench.
4. Wait for the hydraulic fluid to fully drain from the reservoir.
5. Apply a light coat of clean lubricant to the seal, and then install the new filter. Tighten the filter by hand, and then tighten it another half turn.
6. Remove the hydraulic fluid reservoir cap.
7. Fill the reservoir with the correct type of hydraulic fluid. For more information, see *Hydraulic Fluid on page 52* and *Add Hydraulic Fluid to the Reservoir on page 37*.
8. Start the machine. For instructions, see *Start the Machine on page 38*.
9. Operate the hydraulic controls for 1 to 2 minutes to remove air from the hydraulic system.
10. Check the hydraulic fluid filter for leaks.
11. Stop the machine. For instructions, see *Stop the Machine on page 39*.
12. Check the hydraulic fluid level. If necessary, add hydraulic fluid. For instructions, see *Check the Hydraulic Fluid Level on page 36*.
13. Dispose of the used hydraulic fluid in an environmentally safe manner.

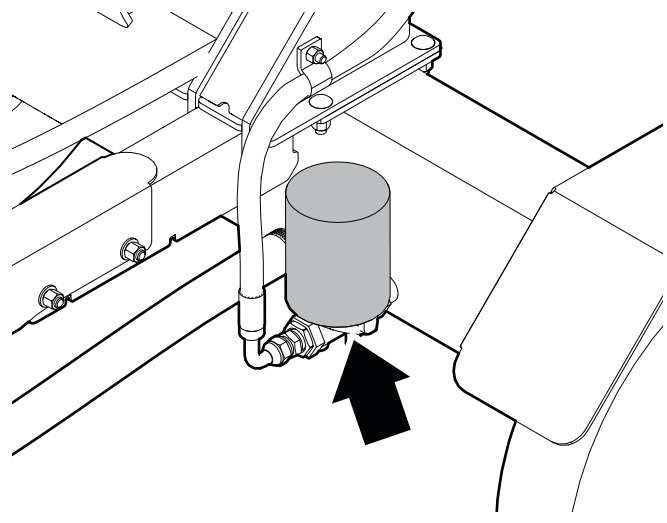


Figure 52—Hydraulic fluid filter

9.7 Clean the Machine

IMPORTANT! Do not use gasoline, diesel fuel, or thinners for cleaning. Harsh chemicals can damage the machine finish.

IMPORTANT! Do not direct the spray from a pressure washer onto the following components:

- The product identification plate.
- Bearings.

A pressure washer can damage these components.

1. Use a hose or pressure washer and mild detergent to remove dust, dirt, and debris.
2. Use a clean, soft cloth, that is dampened with water to remove dirt from the product identification plate.
3. Start the machine.
For instructions, see *Start the Machine on page 38*.
4. Let the engine run for a few minutes to dry.
5. Stop the machine.
For instructions, see *Stop the Machine on page 39*.
6. Apply grease to the areas where the pressure washer may have removed it.
For instructions, see *Grease Points on page 54*.

9.8 Tire Maintenance



WARNING!

Failure to follow the correct procedures when mounting a tire on a wheel or rim can cause an explosion, which can result in serious injury or death. Do not try to mount a tire unless you have the correct equipment and experience. Have a qualified tire dealer or repair service do the tire maintenance.

IMPORTANT! Replace worn tires with tires that are the same as the original tire specifications. Do not use tires that are smaller than the specified size.

Check the tire pressure every 100 hours of operation or annually.

- Torque the wheel lug nuts to the correct specifications daily. For torque specifications, see *Lug Nut Torque on page 62*.
- Check the tire pressure before you tow a WXT20V or WXT30V on a roadway. See the tire sidewall for the correct pressure.

9.9 End of Service Life

When the machine is at the end of its service life (EoSL), take it to an approved location for recycling.

10. Troubleshooting



WARNING!

Before troubleshooting, read and understand the *Service and Maintenance Safety on page 51.* Set the machine to a safe condition.

For engine troubleshooting, see the engine manufacturer's manual.

The following table lists some of the problems that can occur and gives possible causes and solutions.

If you find a problem that is difficult to solve, even after reading this information, please contact your local dealer, distributor, or Wallenstein Equipment. When you contact someone, please have the serial number of your product available. To find the serial number on your machine, see *Serial Number Location on page 5.*

| Problem | Possible cause | Solution |
|---|---|--|
| The wedge moves slowly or does not move (there is an unusual or loud noise). | There is no hydraulic fluid pressure. | If the hydraulic fluid filter is blocked, change the hydraulic filter. If hydraulic fluid level is low, add hydraulic fluid to the reservoir. See page 37. If system relief pressure is set too low, contact an approved technician. |
| | The wedge is blocked. | Set the machine to a safe condition and remove the blockage. See page 43. |
| | The engine speed is low. | If applicable, set the throttle control to Fast . Set the choke control to Closed . See page 24. |
| The hydraulic control does not move to neutral when the wedge is fully retracted. | The hydraulic detent valve release pressure is too high. | Adjust the detent release pressure. Contact an approved technician. |
| | The hydraulic fluid is cold. | Operate the machine until the hydraulic fluid is warm. |
| | The hydraulic fluid is contaminated. | Change the hydraulic fluid and filter. See page 57. |
| The wedge stops before it is fully retracted. | The hydraulic detent valve release is loose. | Adjust the valve. Contact an approved technician. |
| | The hydraulic fluid is cold. | Operate the machine until the hydraulic fluid is warm. |
| | The hydraulic fluid is contaminated. | Change the hydraulic fluid and filter. See page 57. |
| The wedge does not stop when the splitter control is released. | The splitter control is damaged. | Repair or replace the splitter control. Contact an approved technician. |
| | The hydraulic fluid is contaminated. | Change the hydraulic fluid and filter. See page 57. |
| The wedge stops when it touches the log. | The hydraulic pump does not operate correctly. | Service or replace the hydraulic pump. Contact an approved technician. |
| | The hydraulic-cylinder seals are worn or damaged. | Replace the hydraulic-cylinder seals. Contact an approved technician. |
| | The hydraulic pressure relief is set too low. | Verify and adjust the hydraulic pressure relief setting. Contact an approved technician. |
| The wedge does not move smoothly. | The split bed is not lubricated. | Lubricate the split bed with rust-protection oil. See page 54. |
| A hydraulic hose, tube, or fitting is leaking. | The hydraulic hose or tube is worn or damaged, or a fitting is loose. | Repair or replace the hydraulic hose or tube, or tighten the fitting. Contact an approved technician. |
| The hydraulic cylinder is leaking. | The hydraulic-cylinder seals are worn or damaged. | Replace the hydraulic-cylinder seals. Contact an approved technician. |
| The wedge moves in the incorrect direction. | The hydraulic hoses are connected incorrectly. | Disconnect the two hoses, and then connect them to the opposite connections. |

11. Specifications¹

For engine specifications, see the engine manufacturer's documentation.

For available accessories, go to WallensteinEquipment.com.

11.1 Machine Specifications

| Parameter | WXT15V | WXT20V | WXT30V |
|------------------------|---|---|--|
| Compatibility | Towable or self-contained | | |
| Engine | Briggs & Stratton® 5.5 hp (190 cc) | Vanguard® 6.5 hp (203 cc) | Vanguard® 10 hp (305 cc) |
| Split force | 15 ton | 20 ton | 30 ton |
| Highway towable | No | Yes | Yes |
| Cylinder stroke | 19" (48 cm) | 24" (61 cm) | |
| Cylinder diameter | 3.5" (9 cm) | 4" (10 cm) | 4.5" (11 cm) |
| Split bed orientation | Horizontal or vertical | | |
| Wedge type | Single-sided | | |
| Wedge height | 9.5" (24 cm) | | |
| Split bed height | 27.5" (70 cm) | | |
| Tires | 16.5" (42 cm) | 18.2" (46 cm) | |
| Hitch | 2" ball coupler or clevis | | |
| Average cycle time | 4 seconds | 6 seconds | 7 seconds |
| Total cycle time | 8 seconds | 13 seconds | 14 seconds |
| Total weight | 380 lb (172 kg) | 480 lb (218 kg) | 650 lb (295 kg) |
| Tongue weight | 28 lb (13 kg) | 65 lb (30 kg) | 80 lb (36 kg) |
| Dimensions (L x W x H) | 83.3" x 39.5" x 47.3" (211.6 cm x 100.3 cm x 120.1 cm) | 97.0" x 43.2" x 48.8" (246.4 cm x 109.7 cm x 124.0 cm) | 104.4" x 45.6" x 49.9" (265.2 cm x 115.8 cm x 126.7 cm) |

11.2 Hydraulic System Specifications

The following table provides information about the hydraulic system. When you repair or replace parts, make sure that the new components have the correct specifications.

11.2.1 Hydraulic Hose Specifications

| Parameter | Type | Operating Pressure |
|----------------------------------|--|--------------------|
| High-pressure | SAE 100R17 braided 1/2" (12.5 mm) inside diameter (SAE -8) 3/8" (10 mm) inside diameter (SAE -6) | 3,000 psi |
| Suction line (pump to reservoir) | Tank truck hose 1" (25 mm) inside diameter (SAE -16) | 150 psi |

11.2.2 Hydraulic Fluid Flow Rate

Hydraulic fluid flow rate of less than **11 US gpm (42 Lpm)**.

11.2.3 Hydraulic System Relief Pressure

Set the hydraulic system relief pressure to **3200 psi (221 bar)**.

¹ Specifications are subject to change without notice.

11.3 Bolt Torque

IMPORTANT! If you replace hardware, use fasteners of the same grade.

IMPORTANT! The torque specifications in these tables are for non-greased or non-oiled threads. Do not grease or oil fastener threads unless otherwise indicated. When you use a thread lock, increase the specified torque 5%.



Bolt grades are identified by the marks on top of the bolt head.

These bolt torque specification tables provide the correct torque settings for common bolts and capscrews. Tighten all bolts to the torque that is specified in the table, unless otherwise indicated. Check the bolt tightness periodically.

Imperial Bolt Torque Specifications

| Bolt Diameter | Torque | | | | | |
|---------------|-----------|-----|-----------|-----|-----------|-----|
| | SAE Gr. 2 | | SAE Gr. 5 | | SAE Gr. 8 | |
| | lbf•ft | N•m | lbf•ft | N•m | lbf•ft | N•m |
| 1/4 inch | 6 | 8 | 9 | 12 | 12 | 17 |
| 5/16 inch | 10 | 13 | 19 | 25 | 27 | 36 |
| 3/8 inch | 20 | 27 | 33 | 45 | 45 | 63 |
| 7/16 inch | 30 | 41 | 53 | 72 | 75 | 100 |
| 1/2 inch | 45 | 61 | 80 | 110 | 115 | 155 |
| 9/16 inch | 60 | 95 | 115 | 155 | 165 | 220 |
| 5/8 inch | 95 | 128 | 160 | 215 | 220 | 305 |
| 3/4 inch | 165 | 225 | 290 | 390 | 400 | 540 |
| 7/8 inch | 170 | 230 | 420 | 570 | 650 | 880 |



SAE Gr. 2



SAE Gr. 5



SAE Gr. 8

Metric Bolt Torque Specifications

| Bolt Diameter | Torque | | | |
|---------------|---------|-------|----------|-------|
| | Gr. 8.8 | | Gr. 10.9 | |
| | lbf•ft | N•m | lbf•ft | N•m |
| M3 | 0.4 | 0.5 | 1.3 | 1.8 |
| M4 | 2.2 | 3 | 3.3 | 4.5 |
| M6 | 7 | 10 | 11 | 15 |
| M8 | 18 | 25 | 26 | 35 |
| M10 | 37 | 50 | 52 | 70 |
| M12 | 66 | 90 | 92 | 125 |
| M14 | 83 | 112 | 116 | 158 |
| M16 | 166 | 225 | 229 | 310 |
| M20 | 321 | 435 | 450 | 610 |
| M30 | 1,103 | 1,495 | 1,550 | 2,100 |



8.8



10.9

11.4 Hydraulic Fitting Torque

Tighten flare-type tube fittings:

1. Check the flare and flare seat for defects that might cause leaks.
2. Align the tube with the fitting before tightening.
3. Hand-tighten the swivel nut until it is snug.
4. To prevent the tube from twisting, use two wrenches. Place one wrench on the connector body and tighten the swivel nut with the second wrench. Torque the fitting to the correct specification.

If a torque wrench is not available, use the flats from finger tight (FFFT) method.

| Hydraulic Fitting Torque Specifications | | | | | |
|---|-----------------------|---------|---------|-------------------------|-------|
| Tube size OD | Hex size across flats | Torque | | Flats from finger tight | |
| | | lbf•ft | N•m | Flats | Turns |
| 3/16 | 7/16 | 6 | 8 | 2 | 1/6 |
| 1/4 | 9/16 | 11–12 | 15–17 | 2 | 1/6 |
| 5/16 | 5/8 | 14–16 | 19–22 | 2 | 1/6 |
| 3/8 | 11/16 | 20–22 | 27–30 | 1-1/4 | 1/6 |
| 1/2 | 7/8 | 44–48 | 59–65 | 1 | 1/6 |
| 5/8 | 1 | 50–58 | 68–79 | 1 | 1/6 |
| 3/4 | 1-1/4 | 79–88 | 107–119 | 1 | 1/8 |
| 1 | 1-5/8 | 117–125 | 158–170 | 1 | 1/8 |

Specifications are for non-lubricated connections.

11.5 Lug Nut Torque



WARNING!

Wheel lug nuts must be installed and kept at the correct torque to prevent loose wheels, broken studs, or possible separation of a wheel from the axle.

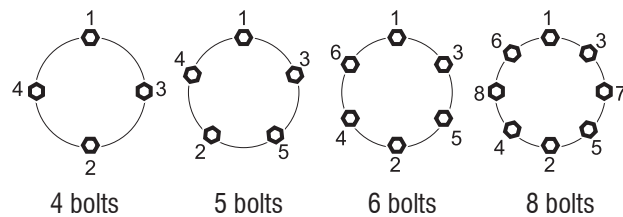
It is an extremely important safety procedure to apply and maintain the correct torque on lug nuts that secure the wheel to the trailer axle. A calibrated torque wrench is the best tool to make sure that the correct amount of torque is applied to a fastener.

Tighten wheel lug nuts to the correct torque before the first use and after each wheel removal. After a wheel is installed, check and torque the lug nuts after the first 10 miles (16 km), 25 miles (40 km), and 50 miles (80 km). Check the lug nut torque periodically thereafter.

- Start all lug nuts onto the threads by hand.
- Tighten lug nuts in stages, following the pattern shown below the Lug Nut Torque Specifications table.

| Lug Nut Torque Specifications | | | | |
|-------------------------------|---------------|------------------|------------------|--------------------|
| Wheel size | Units | First stage | Second stage | Third stage |
| 8 inch | lbf•ft N•m | 12–20 16–26 | 30–35 39–45.5 | 45–55 58.5–71.5 |
| 12 inch | lbf•ft N•m | 20–25 26–32.5 | 35–40 45.5–52 | 50–60 65–78 |
| 13 inch | lbf•ft N•m | 20–25 26–32.5 | 35–40 45.5–52 | 50–60 65–78 |
| 14 inch | lbf•ft N•m | 20–25 26–32.5 | 50–60 65–78 | 90–120 117–156 |
| 15 inch | lbf•ft N•m | 20–25 26–32.5 | 50–60 65–78 | 90–120 117–156 |
| 16 inch | lbf•ft N•m | 20–25 26–32.5 | 50–60 65–78 | 90–120 117–156 |

Lug nut torque pattern:



12. Warranty



LIMITED WARRANTY

Wallenstein products are warranted to be free of defects in materials and workmanship under normal use and service, for a period of

Five Years for Consumer Use

Two Years for Commercial/Rental Use

from the date of purchase, when operated and maintained in accordance with the operating and maintenance instructions supplied with the unit. Warranty is limited to the repair of the product and/or replacement of parts.

This warranty is extended only to the original purchaser and is not transferable.

Repairs must be done by an authorized dealer. Products will be returned to the dealer at the customer's expense. Include the original purchase receipt with any claim.

This warranty does not cover the following:

- 1) Normal maintenance or adjustments
- 2) Normal replacement of wearable and service parts
- 3) Consequential damage, indirect damage, or loss of profits
- 4) Damages resulting from:
 - Misuse, negligence, accident, theft or fire
 - Use of improper or insufficient fuel, fluids or lubricants
 - Use of parts or aftermarket accessories other than genuine Wallenstein parts
 - Modifications, alteration, tampering or improper repair performed by parties other than an authorized dealer
 - Any device or accessories installed by parties other than an authorized dealer
- 5) Engines. Engines are covered by the manufacturer of the engine for the warranty period they specify. For the details of your engine warranty, see your engine owner's manual. Information about engine warranty and service is also available in the FAQ section at www.wallensteinequipment.com

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