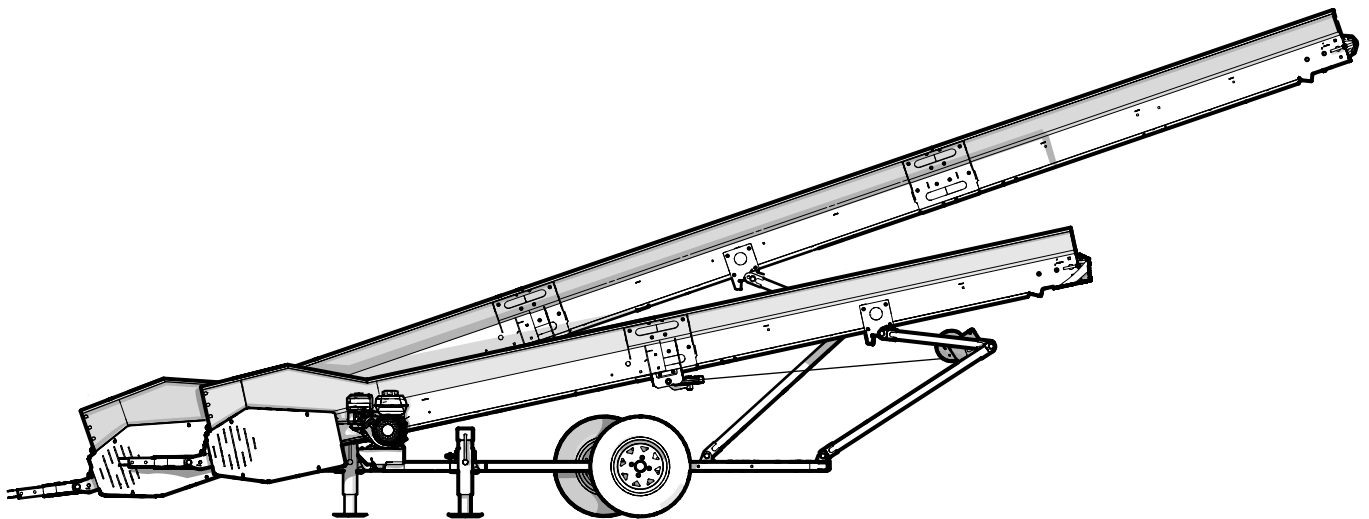


OPERATOR'S MANUAL

CT16B – S/N CT16B8- CT16B26
CT24B – S/N CT24B12-CT24B29

CT16B / CT24B Trailer Firewood Conveyor



1. Foreword

1.1 Introduction

Congratulations on choosing a Wallenstein CT-B Series Trailer Firewood Conveyor!

This manual covers Wallenstein trailer conveyor models CT16B and CT24B. These high-quality machines are designed and manufactured to meet the needs of a proficient timber or woodlot industry.

Wallenstein CT16B and CT24B conveyors are built to compliment the Wallenstein wood processors and splitters. These 16 ft (4.9 m) and 24 ft (7.3 m) belt-drive conveyors feature tension-adjustable heavy-duty 662 chain. Conveyors are powered by either a HONDA® GX120 or VANGUARD® 160 10V3 engine.

Wallenstein conveyors provide fast and efficient means of moving and stockpiling large quantities of split wood. Wheels can be rotated 90 degrees to reposition as the split stack pile builds up.

Safe, efficient, and trouble-free operation of this Wallenstein product requires that anyone using or maintaining the machine reads and understands the Safety, Operation, Maintenance information contained within the Operator's Manual.

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

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Wallenstein dealer or the Distributor if you need assistance, information, or additional copies of the manuals.



WARNING!

Do not attempt to start or operate the machine without thoroughly reviewing this manual for safe and proper operation.

Always keep this manual with the machine.

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Table of Contents

1. Foreword	2	8. Service and Maintenance.....	36
1.1 Introduction.....	2	8.1 Fluids and Lubricants	36
1.2 Delivery Inspection Report.....	4	8.2 Maintenance Schedule	37
1.3 Serial Number Location	5	8.3 Honda Engine.....	37
1.4 Types of Decals on the Machine	6	8.4 Grease Points.....	37
2. Safety	7	8.5 Chain Tension, Adjust.....	37
2.1 Safety Alert Symbol.....	7	8.6 Drive Belt, Adjust / Replace	38
2.2 Signal Words.....	7	8.7 Hand Winch	39
2.3 Why is SAFETY important?	7	9. Troubleshooting.....	40
2.4 Safety Rules.....	8	10. Specifications	41
2.5 Operating Safety.....	8	10.1 Conveyor Specifications	41
2.6 Equipment Safety Guidelines	9	10.2 Common Bolt Torque Values	42
2.8 Safety Sign Explanations	11	10.3 Wheel Lug Torque	43
2.9 Replacing Damaged Safety Signs	13	11. Product Warranty	44
2.10 Sign-Off Form	14	12. Alphabetical Index	45
3. Familiarization.....	15		
3.1 To the New Operator	15		
3.2 Training.....	15		
3.3 Job Site Familiarization	15		
3.4 Equipment Condition	15		
3.5 Operator Orientation	15		
3.6 Conveyor Components	16		
4. Controls	17		
4.1 Honda® Engine	17		
4.2 Vanguard® Engine.....	19		
4.3 E-Stop Button.....	19		
4.4 Conveyor Angle Indicator.....	20		
4.5 Hitch Lock Pin.....	20		
4.6 Height Adjustment.....	21		
5. Conveyor Setup	22		
6. Pre-start Checks	23		
6.1 Before Starting the Engine	23		
6.2 Honda Engine	24		
6.3 Vanguard Engine	25		
6.4 Reduction Case Oil Level Check.....	28		
7. Operating Instructions	29		
7.1 Honda Engine – Starting	29		
7.2 Vanguard Engine – Starting.....	30		
7.3 Stopping Procedure.....	31		
7.4 Stopping in an Emergency	31		
7.5 Rotate Wheels.....	31		
7.6 Moving, Swinging the Conveyor Sideways	32		
7.7 Conveyor Axle Position.....	33		
7.8 Break-in Period.....	34		
7.9 Transporting.....	34		
7.10 Storage	35		

1.2 Delivery Inspection Report

Wallenstein CT16B, CT24B Trailer Firewood Conveyor

To activate warranty, register your product at:
www.wallensteinequipment.com

The product manuals have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation, and applicable warranty policy.

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

I have thoroughly instructed the buyer on the equipment care, adjustments, safe operation, applicable warranty policy, and have reviewed the manuals.

_____	Customer
_____	Address
_____	City, State/Province, ZIP/Postal Code
()	Phone Number
_____	Contact Name
_____	Model
_____	Serial Number
_____	Delivery date

_____	Dealer
_____	Address
_____	City, State/Province, ZIP/Postal Code
()	Phone Number

1.2.1 Dealer Inspection Report

- _____ Engine Oil Level checked
- _____ Reduction Case Oil Level Checked
- _____ Engine Starts and Runs
- _____ All Fasteners Tight
- _____ Conveyor Drive Lubricated
- _____ Pivot Tongue Moves Freely
- _____ Review Operating and Safety Instructions

Safety Checks

- _____ All Safety Decals Installed
- _____ Guards and Shields Installed and Secured
- _____ Check Crank Jack Function
- _____ Tire Pressure Correct
- _____ Wheel Lug Torque Checked

1.3 Serial Number Location

Always provide the model and serial number of your Wallenstein product when ordering parts or requesting service or other information. This information is found on the serial number plate shown in the illustration below.

Record product information in the spaces provided below for future reference.

Record Product Information Here	
Model:	
Serial Number:	

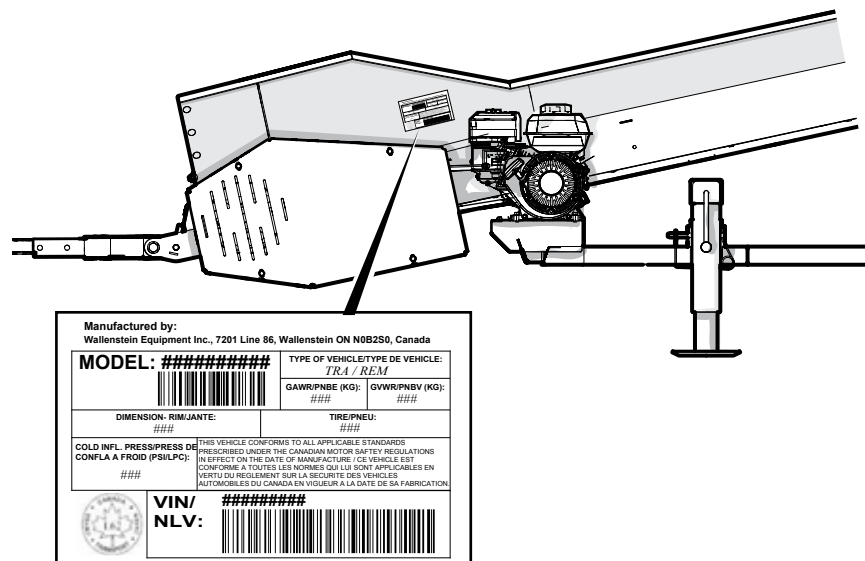
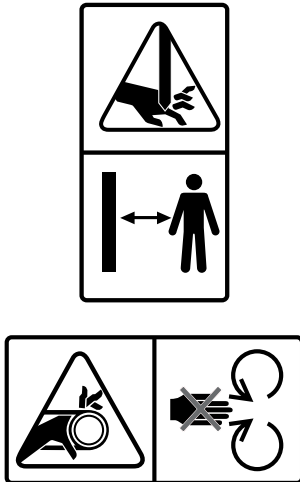


Fig. 1 – Serial Number Plate Location

1.4 Types of Decals on the Machine

When getting familiar with the Wallenstein product, notice that there are numerous decals located on the machine. There are different types of decals for safety, information, and product identification. The following section explains what they are for and how to read them.

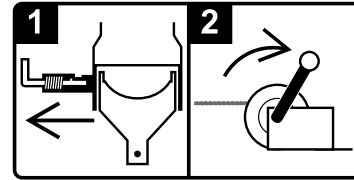
Safety Decals have a yellow background and have two panels. They can be either vertical or horizontal.



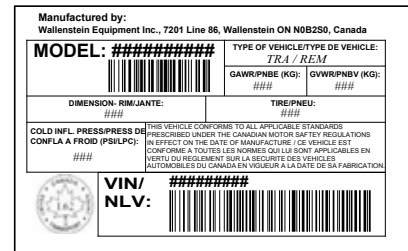
Safety Notice Decals are blue with a white background and rectangular with single or multiple symbols. This decal informs what Personal Protective Equipment is required for safe operation.



Informative Decals are pictorial with a white background and can vary in the number of panels. This type of decal provides additional information to the operator or explains the operation of a control.



Product Decals indicate machine model and serial number, and other important information.



Maintenance Decals have a green background and can vary to the number of panels. This decal shows the maintenance required and frequency interval.



See the section on safety signs for safety decal definitions. For a complete illustration of decals and decal locations, download the parts manual for your model product at www.wallensteinequipment.com.

2. Safety

2.1 Safety Alert Symbol

This Safety Alert Symbol means:

ATTENTION! BE ALERT!

YOUR SAFETY IS INVOLVED!

The **Safety Alert Symbol** identifies important safety messages on the Wallenstein conveyor and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.



2.2 Signal Words

The signal words **DANGER**, **WARNING** and **CAUTION** determine the seriousness level of the warning messages in this manual. The appropriate signal word for each message in this manual has been selected using the following guidelines:

DANGER –

Indicates an imminently hazardous situation that, if not avoided, **will** result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING –

Indicates a potentially hazardous situation that, if not avoided, **could** result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION –

Indicates a potentially hazardous situation that, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe practices.

IMPORTANT – To avoid confusing equipment protection with personal safety messages, a signal word **IMPORTANT** indicates a situation that if not avoided, could result in damage to the machine.

2.3 Why is SAFETY important?

Three Big Reasons:

- **Accidents can disable and kill**
- **Accidents can cause financial hardship**
- **Accidents can be avoided**

YOU are responsible for the SAFE operation and maintenance of your Wallenstein trailer conveyor. **YOU** must ensure that you and anyone else who is going to use, maintain or work around the conveyor be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual provides good safety practices that should be followed while using this machine.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** using this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented.

Do not risk injury or death by ignoring good safety practices.

2.4 Safety Rules

- Anyone who is going to use this machine must read and understand all safety and operating instructions beforehand.



- Always wear appropriate Personal Protective Equipment (PPE). This equipment includes but is not limited to:
 - A hard hat
 - Heavy gloves
 - Hearing protection
 - Protective shoes with slip resistant soles
 - Protective glasses, goggles, or face shield



- Read and understand ALL Safety and Operating instructions in the manual and follow them. Most accidents can be avoided. The most important safety device on this equipment is a SAFE operator.
- Be sure you understand all safety signs located on the machine before using, maintaining, adjusting, or cleaning.
- Inspect and secure all guards before starting.
- Place the machine in a Safe Condition before performing any service, maintenance work, storage preparation, or hooking up.

Placing the machine in a Safe Condition involves performing the following:

SAFE CONDITION
<ol style="list-style-type: none"> 1. Unload the conveyor. 2. Shut off the engine. Disconnect spark plug leads. Disconnect negative (-) battery cable from battery. 3. Lower the conveyor fully until it is resting on the stops.

- Have a first-aid kit available for use should the need arise.



- Always keep a fire extinguisher available for use should the need arise and know how to use it.



- Check the machine is clear of debris prior to starting the engine.
- Review safety related items annually with all personnel who will be operating or performing maintenance.
- Do not expect a person who does not understand operation and safety instructions to use the machine. Untrained operators are not qualified and can create risks of serious injury or death. It is the machine owner's responsibility to make sure every operator is fully trained.
- Do not modify the equipment in any way. Unauthorized modification may impair function or safety, could affect the life of the equipment, and can void warranty.
- Never allow riders during transport.
- Do not risk injury or death by ignoring good safety practices.
- **Think SAFETY! Work SAFELY!**

2.4.1 Safety Training

- Safety is a primary concern in the design and manufacture of Wallenstein products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act.
- The best safety feature is an informed, careful operator—we ask you to be that kind of an operator. It is the operator's responsibility to read, understand and follow ALL safety and operation instructions in the manual. Accidents can be avoided.



- Do not allow anyone to use this machine until they have read this manual. Operator's must have a thorough understanding of the safety precautions and of how the machine works. Review the safety instructions with all users annually.

2.5 Operating Safety

It is important that you read and pay attention to the safety signs on the machine. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety, as well as the safety of others.

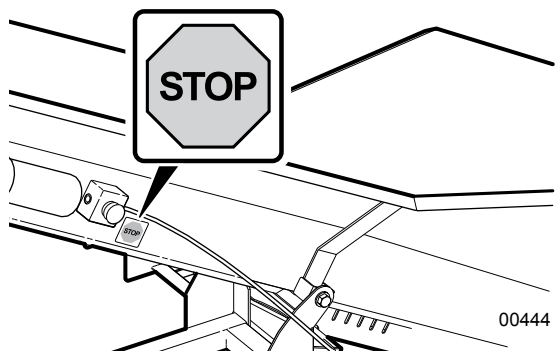
- Train all operators to be familiar with equipment operation. The operator should be a responsible, trained and physically able person familiar with machinery. If elderly people are assisting with work, their physical limitations need to be recognized and accommodated.

- Wear hearing protection on a full-time basis. Prolonged exposure to loud noise may cause permanent hearing loss!

- Noise over 85 dB on a long-term basis can cause severe hearing loss.
- Noise over 90 dB adjacent to the Operator over a long-term basis may cause permanent, total hearing loss.



- Make note of the location of the E-Stop Button on the right-hand side of the conveyor.
 - **PUSH TO APPLY.**
 - Perform a daily check to make sure the conveyor does not operate with it pushed in.



- Keep bystanders at a safe distance at least 20 ft (6 m) away from the conveyor.
- Determine a proper conveyor location ahead of time:
 - Ground should be firm and level.
 - Area must be clear of stones, branches or hidden obstacles that might cause a tripping, hooking, or snagging hazard.
 - There must be no overhead hazards such as branches, cables, electrical wires and so on.
 - Stack split wood on level ground. Make sure split wood pile does not interfere with conveyor operation, wheel rotation.
- Operate in daylight or good artificial light only.
- Make sure machine is properly stationed, adjusted and in good operating condition.

- Do not operate on hillsides or when working area is cluttered, wet, muddy, or icy to prevent slipping and tripping. Keep working area clean and free of debris.
- Make sure all guards, deflectors and shields are installed before starting and operating the machine.
- Operate the machine only when physically fit and not under the influence of alcohol, drugs or medicines that can cause drowsiness.
- Avoid loose fitting clothing, loose or uncovered long hair, jewelry, and loose personal articles. These can get caught in moving parts.
- Never walk under the conveyor. Split wood falling from the conveyor can cause serious injuries. Failure of the hoisting winch could cause the conveyor to lower unexpectedly.
- Do not climb on the conveyor. If maintenance or other work is required, avoid the risk of falling off by lowering it.

2.6 Equipment Safety Guidelines

- Replace any safety sign or instruction sign that is not readable or is missing. Location of such safety signs is indicated in this manual.
- Never exceed the limitations of the machine. If its ability to do the job, or to do it safely is in question—**STOP!**
- Always inspect the winch cable and its attachment before each use to make sure they are not damaged. Never use worn, kinked, or frayed cable. If the cable or attachment break, the cable can whip violently, causing serious bodily injury or death.
- Never stand alongside the winch cable or guide the cable with your hands.
- Never operate the conveyor winch with slippery, wet, or oily hands. Always maintain a firm grip on the winch handle. Do not attempt to stop a winch by grabbing the handle while in motion.
- Always maintain a minimum of three complete wraps of cable on the drum.
- Listen for a loud clicking sound from the ratchet when lifting the load. If a loud clicking sound is not heard, do not use. Replace winch immediately!
- Never release the crank handle unless the ratchet pawl is fully engaged, and the load is supported.
- Operate the winch by hand only. If the winch cannot be cranked using one hand, it is potentially overloaded.
- Periodically check winch mounting hardware for proper torque and tighten if necessary. Always replace bent, broken, or worn parts before using winch.
- Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death.

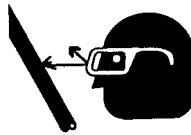
- Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.
- Have a qualified tire dealer or repair service perform required tire maintenance.
- When replacing worn tires, make sure they meet the original tire specifications.

2.6.1 Hydraulic System Safety

- Make sure that all the components in the hydraulic system are kept clean and in good condition.
- Make sure all components are tight, and that lines, hoses and couplings are not damaged before applying pressure to the system.
- Do not use a hand to check for hydraulic oil leaks. Hydraulic fluid escaping under pressure can penetrate the skin causing serious injury. Use a piece of cardboard.



- Wear proper hand and eye protection when searching for a high-pressure hydraulic leak.



- Seek medical attention immediately if injured by a concentrated high-pressure stream of hydraulic fluid. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.
- Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tape, clamps, or cements. Doing so can cause sudden failure and create a hazardous and unsafe condition.
- Relieve pressure on the hydraulic system before working it. The hydraulic system operates under extremely high pressure.
- Replace any hydraulic hose immediately that shows signs of swelling, wear, leaks, or damage before it bursts.
- Check to make sure hydraulic hoses are not worn or damaged and are routed to avoid chafing.
- Never adjust a pressure relief valve or other pressure-limiting device to a higher pressure than specified.

2.6.2 Engine Safety

- **DO NOT** run engine in an enclosed area. Exhaust gases contain carbon monoxide, which is an odorless and deadly gas.
- **DO NOT** place hands or feet near moving or rotating parts.
- **DO NOT** choke carburetor to stop engine. Whenever possible, gradually reduce engine speed before stopping.

- **DO NOT** tamper with governor springs, governor links or other parts which may increase the governed speed. Engine speed is selected by the original equipment manufacturer.
- **DO NOT** check for spark with spark plug or spark plug wire removed.
- **DO NOT** crank engine with spark plug removed. If engine is flooded, crank until engine starts.
- **DO NOT** strike flywheel with a hard object or metal tool as this may cause flywheel to shatter in operation. Use proper tools to service engine.
- **DO NOT** operate engine without a muffler or heat shield. Inspect periodically and replace if damaged.
- **DO NOT** operate engine with an accumulation of grass, leaves, dirt or other combustible materials in the muffler area.
- **DO NOT** use this engine on any forest covered, brush covered, or grass covered unimproved land unless a spark arrester is installed on the muffler. The arrester must be maintained in effective working order by the operator. In the state of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal land.
- **DO NOT** touch hot muffler, cylinder, or fins. Contact may cause burns.

Be sure to:

- Remove the wire from the spark plug when servicing the engine or equipment to prevent accidental starting.
- Keep cylinder fins and governor parts free of grass and other debris which can affect engine speed.
- Examine muffler periodically to be sure it is functioning effectively. A worn or leaking muffler should be repaired or replaced, as necessary.
- Check fuel lines and fittings frequently for cracks or leaks. Replace if necessary.

2.8 Safety Sign Explanations

The top (or left-hand) panel shows the safety alert (the potential hazard), and the bottom (or right-hand) panel shows the message (how to avoid the hazard).

Practicing good safety means becoming familiar with safety signs and warnings and being aware of the situations that require alertness.

Think SAFETY! Work SAFELY!

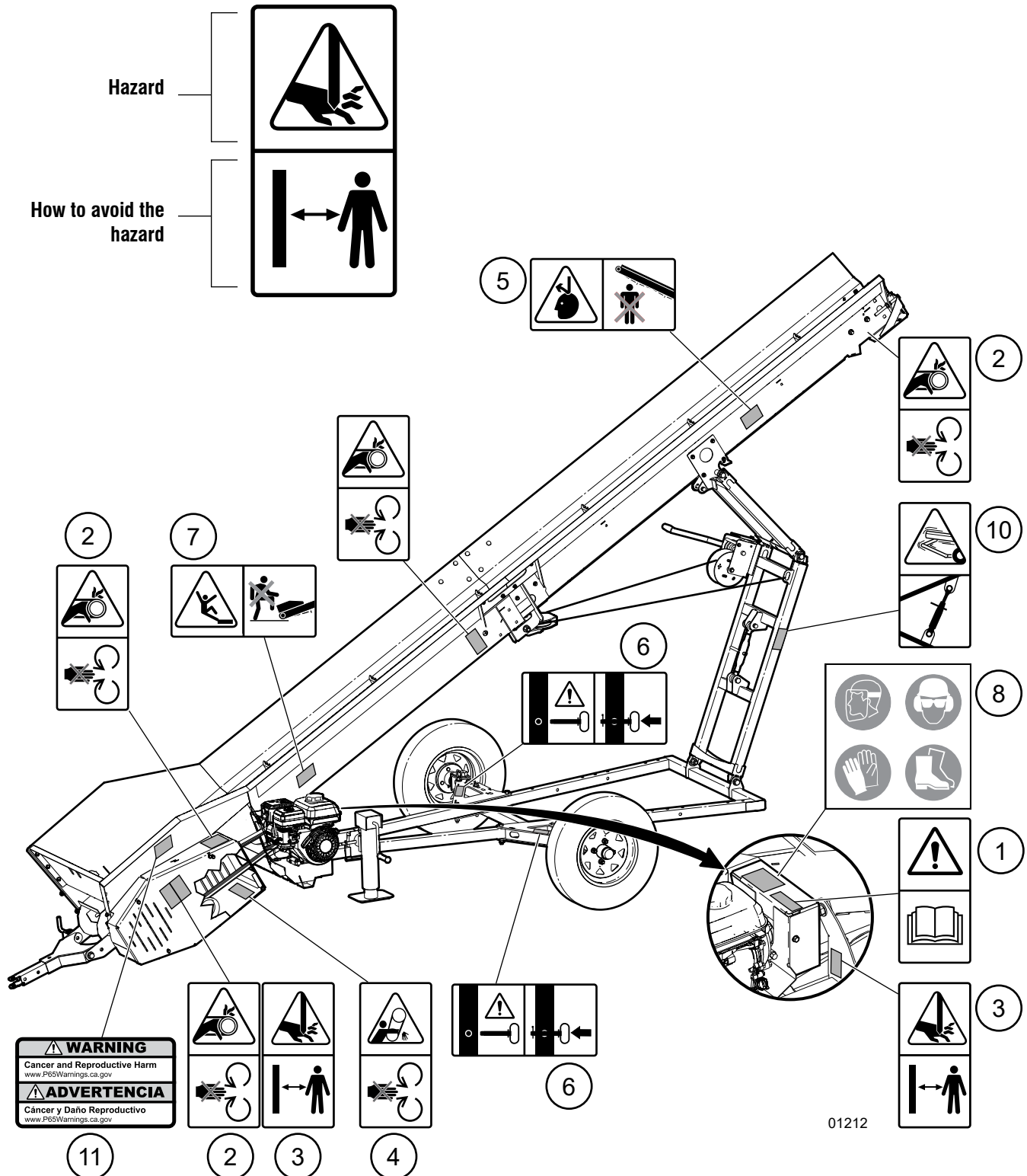


Fig. 2—Safety Decals

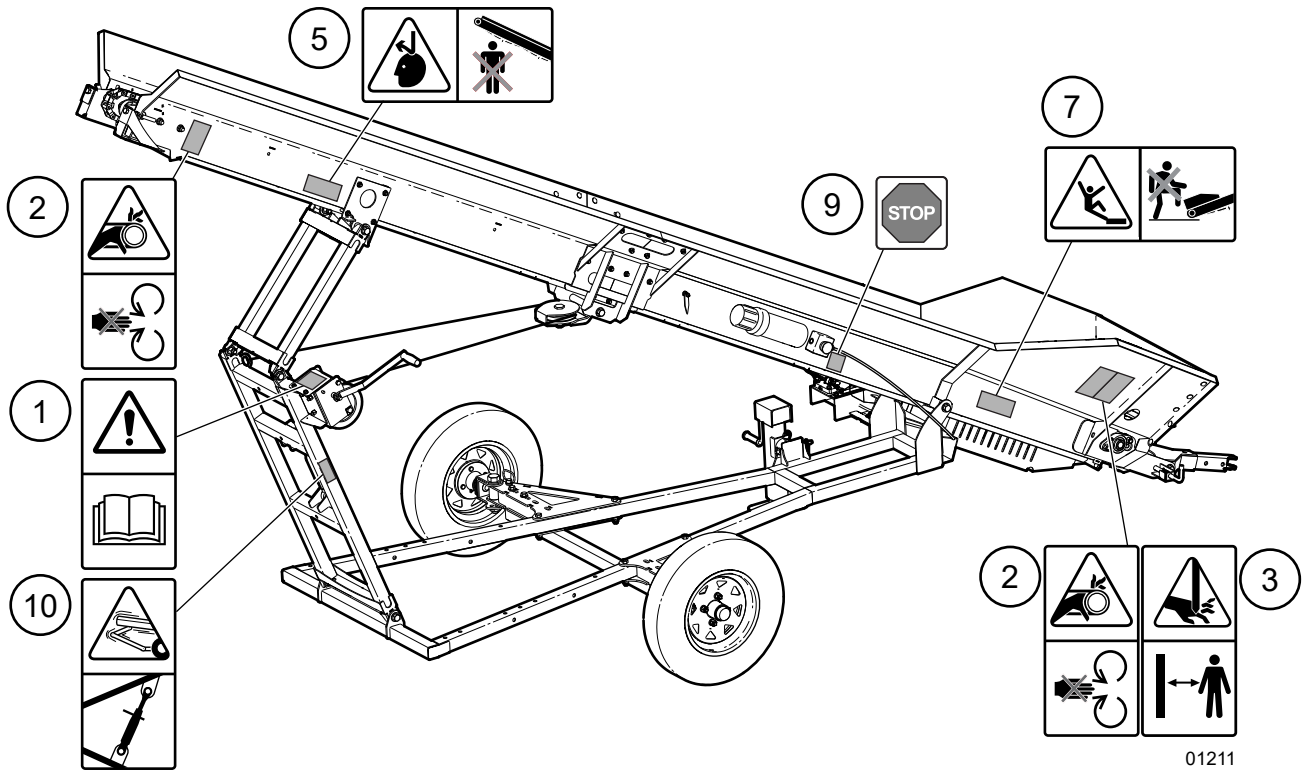


Fig. 3 – Safety Decals

1. Warning!



Refer to the operator's manual. Understand ALL operating instructions in the manual and understand ALL safety signs located on the machine.

The most important safety device on this equipment is an informed operator.

2. Warning!



Risk of hands being pinched or caught in drive chain resulting in serious injury.

Keeps hands clear of this area.

3. Warning!



Risk of hands being crushed in this area.

Keep hands clear of all moving parts.

4. Warning!



Risk of serious injury or death if hands or limbs are caught in rotating parts.

Do not operate machine without shields in place. If shield is removed, replace it before operating machine.

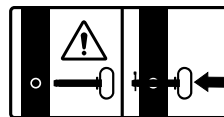
5. Warning!



Risk of being injured from falling objects.

Do not walk under the conveyor.

6. Warning!



Risk of machine moving unexpectedly when support pin is removed. Personal injury could result.

Keep pin installed and secured with pin keeper.

7. Warning!



Risk of being injured from falling off conveyor.

Do not climb on the conveyor.

8. Safety Notice



Always wear appropriate Personal Protective Equipment when using this machine. For example:

- A hard hat
- Heavy gloves
- Hearing protection
- Protective shoes with slip resistant soles
- Protective glasses, goggles, or face shield

9. E-Stop Button



Stops the conveyor engine in an emergency.

PUSH TO APPLY.

Perform a daily check to make sure the conveyor does not operate with it pushed in.

10. Caution!



Risk of conveyor frame moving or bouncing unexpectedly during operation or when transporting. Personal injury could result.

Install topline to lock top and bottom folding frames together.

11. Warning!



Risk of cancer or reproductive harm.

The machine materials contain chemicals or machine operation may 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 required by the state of California, USA to comply with Proposition 65: the Safe Drinking Water and Toxic Enforcement Act of 1986.

IMPORTANT! If parts are replaced that have safety signs on them, new signs must be applied. Safety signs must always be replaced if they become damaged, are removed, or become illegible.

Safety signs are included in the product decal kit available from your authorized dealer. Decals are not available separately.

2.9 Replacing Damaged Safety Signs

Replace any safety sign that is damaged or missing. If a safety sign is attached to a part that is replaced, install a safety sign on the replacement part. Replacement safety signs are available from your authorized distributor, dealer parts department, or Wallenstein Equipment.

Procedure

Installation area must be clean and dry. Make sure the surface is free of grease or oil. Ambient temperature must be above 50 °F (10 °C).



Determine exact position before removing the backing paper on the decal.

1. Peel the decal off the backing sheet.
2. Align the decal with an edge on the machine if possible.
3. Starting on one edge, carefully press the center of the exposed sticky backing in place, smoothing it out as you work from one side to the other.
4. Use a squeegee, credit card or similar to smooth it out. Work from one end of the decal to the other end.

Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

2.10 Sign-Off Form

Wallenstein Equipment Inc. follows the general safety standards specified by the International Organization for Standardization (ISO).

Anyone who is going to use or service this conveyor must read and clearly understand ALL Safety, Usage and Maintenance information presented in this manual. Do not use or allow anyone else to use this machine until such information has been reviewed. Review this information annually before the season start-up.

Make these periodic reviews of safety and operation a standard practice for all equipment. An untrained operator is unqualified to use this machine.

A sign-off sheet is provided for your record keeping. Use it to record personnel who will be working with the equipment have read and understand the information in the Operator's Manual and have been instructed in the operation of the equipment.

Sign-off Form		
Date	Owner	Employee

Safety

3. Familiarization

IMPORTANT! Before starting work with the conveyor, become familiar with the location and function of all controls.

IMPORTANT! Make sure all operators understand how to put the machine in Safe Condition before working with or performing any maintenance on this machine.

3.1 To the New Operator

It is the responsibility of the owner or operator to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly. Safety is everyone's business.

By following recommended procedures, a safe working environment is provided for the operator, bystanders, and the area around the work site. Untrained operators are not qualified to use the machine.

3.2 Training

Each operator must be trained in the proper set-up and operating procedures prior to being allowed to operate the machine.

3.3 Job Site Familiarization

It is the responsibility of the operator to be thoroughly familiar with the work site prior to starting. Prevent the chance or possibility of problems or accidents by not being in the situation to start with.

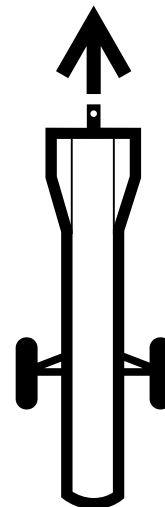
- Locate conveyor on solid, level ground.
- Position the machine so prevailing winds blow engine exhaust fumes away from operator's station.

3.4 Equipment Condition

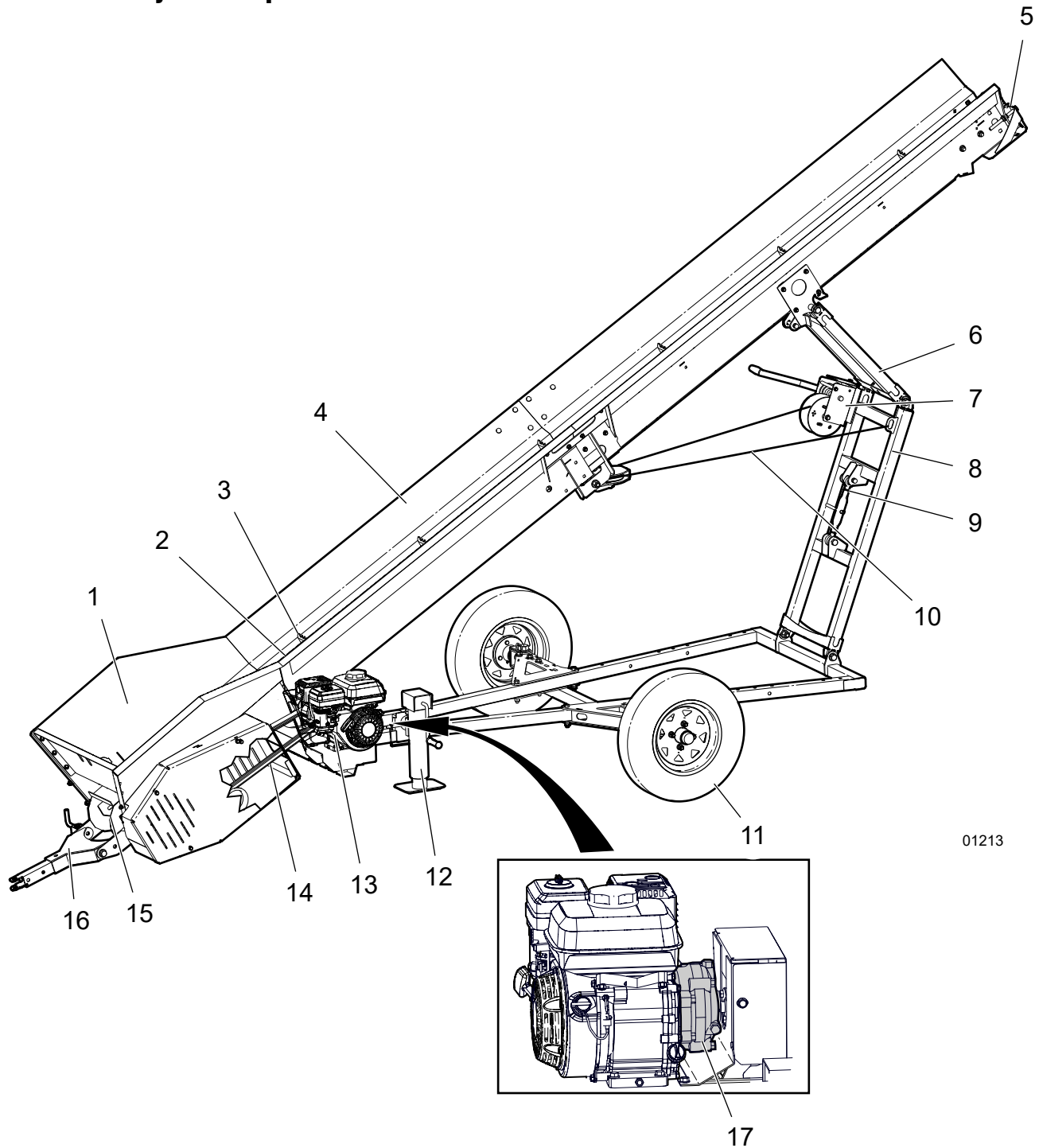
1. Check the general condition of the conveyor. Ensure that all nuts and bolts are secure and that moveable parts are secured and in their proper place.
2. Always inspect the wire rope as it is pulled out of the winch. Do not use the machine if the rope is cut, frayed, worn, or knotted. Any problem can result in early failure and create an unsafe operating condition. Replace damaged rope before resuming work.

3.5 Operator Orientation

IMPORTANT! The directions mentioned throughout this manual for left-hand, right-hand, backward, and forward are determined when facing the direction of forward travel.



3.6 Conveyor Components



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Fig. 4—CT16B / CT24B Conveyor Components

- | | | |
|-------------------------|-------------------------|---|
| 1. Conveyor Hopper | 7. Hand Winch | 13. Honda® GX120 or Vanguard® 160 10V3
Gasoline Engine |
| 2. Conveyor Chain | 8. Folding Frame, Lower | 14. Drive Belt |
| 3. Chain Cleats | 9. Toplink | 15. Drive Sprocket |
| 4. Conveyor Trough | 10. Winch Cable | 16. Hitch |
| 5. Idler Pulley | 11. Wheels | 17. Reduction Case |
| 6. Folding Frame, Upper | 12. Crank Jack | |

4. Controls

Conveyor may be equipped with either a Honda or Vanguard engine, depending on availability at time of manufacture.

4.1 Honda® Engine

Refer to the engine manual that came with this product for further explanation on engine controls. The engine manual is found in the manual tube on the side of the conveyor.

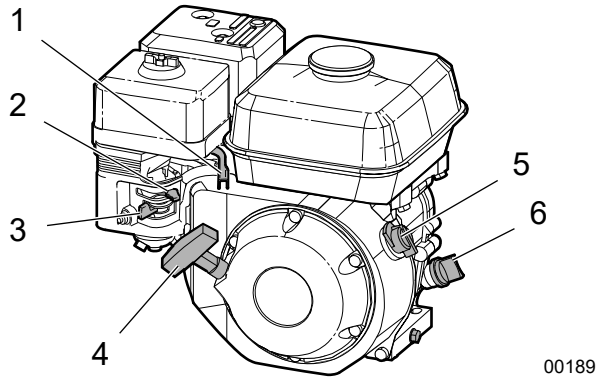


Fig. 5—Engine Controls

1. Throttle Lever
2. Choke Lever
3. Fuel Valve Lever
4. Recoil Starter Rope
5. Ignition Switch

Throttle Lever

This lever controls the engine speed. Move the lever side to side to increase or decrease engine rpm. Always operate the engine with the throttle lever in the MAX position.

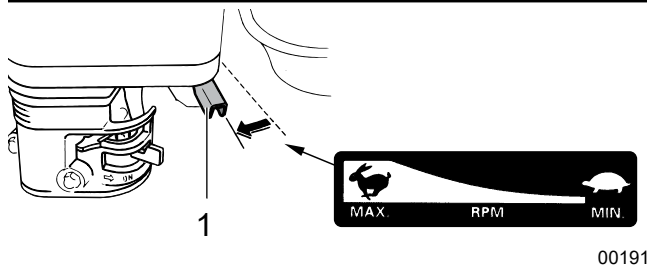


Fig. 6—Throttle Lever Positions

1. Throttle Lever

Choke Lever

The choke lever opens and closes the choke valve in the carburetor.

- Place the choke lever in the CLOSED position (3) when starting a cold engine.
- Move the choke lever to the OPEN position (2) after the engine starts. When restarting a warm engine, leave the lever in the OPEN position.

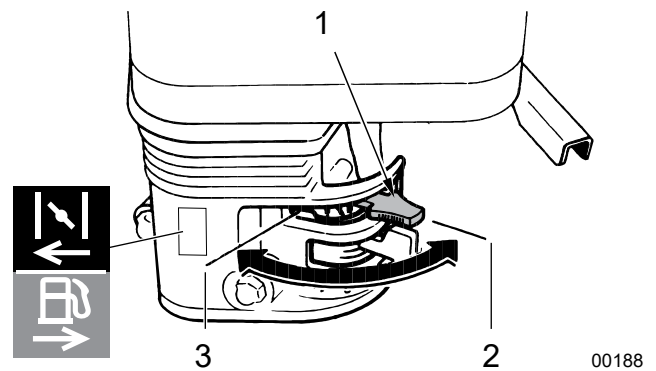


Fig. 7—Choke Lever

1. Choke Lever
2. Choke Open Position
3. Choke Closed Position

Fuel Shut-off Valve

The engine is equipped with a valve between the fuel tank and the carburetor.

- Slide the fuel valve lever toward the block (2) to turn fuel ON, and away (3) to turn OFF.
- Turn the fuel OFF when not in use or when transporting.

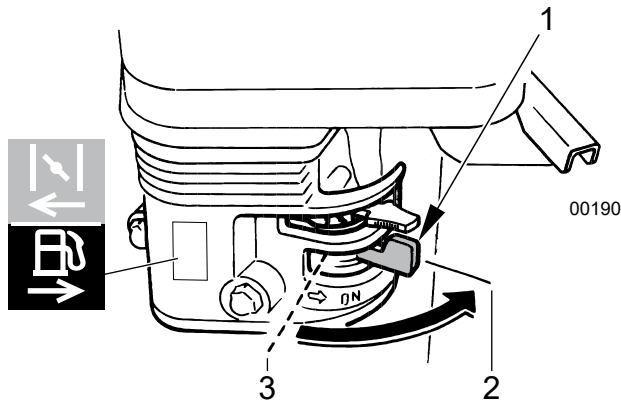


Fig. 8–Fuel Valve Lever

1. Fuel Shut-off Valve Lever
2. ON Position
3. OFF Position

Recoil Starter Rope

Pull the starter grip out lightly until resistance is felt, then pull briskly in the direction of the arrow as shown below. Return the starter grip gently.

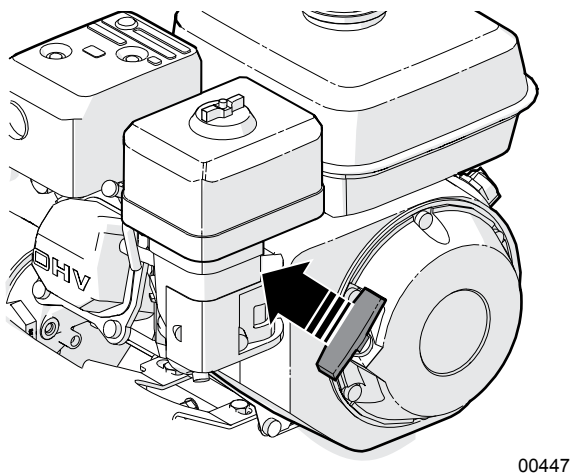


Fig. 9–Recoil Starter

1. Ignition Switch

This rotary switch controls the ignition system.

- The engine operates in the ON position. Before starting the engine, turn the switch to ON.

- Turn it counterclockwise to OFF to stop the engine.

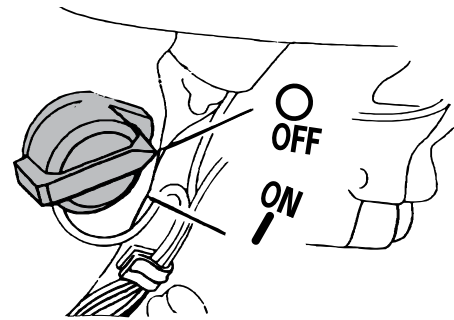


Fig. 10–Ignition Switch

4.2 Vanguard® Engine

Throttle Control and Fuel Shutoff

The throttle control and fuel shutoff levers have the following functions:



Fast
Engine speed is fast.



Slow
Engine speed is slow.



Fuel shut-off closed



STOP
The engine is stopped.

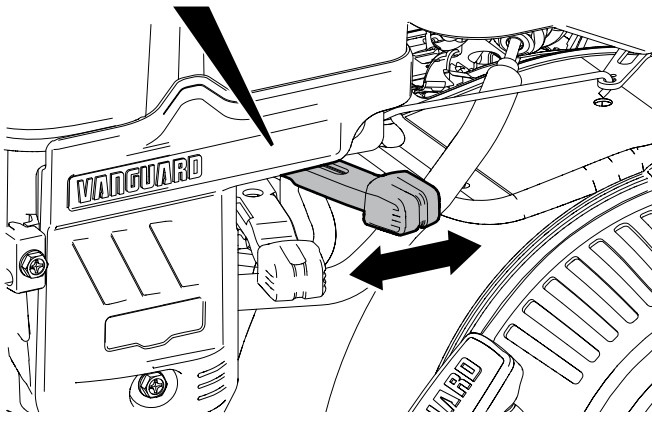
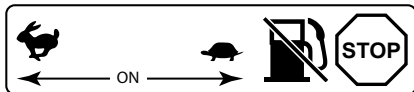


Fig. 11 – Engine throttle control and fuel shutoff

Choke Control

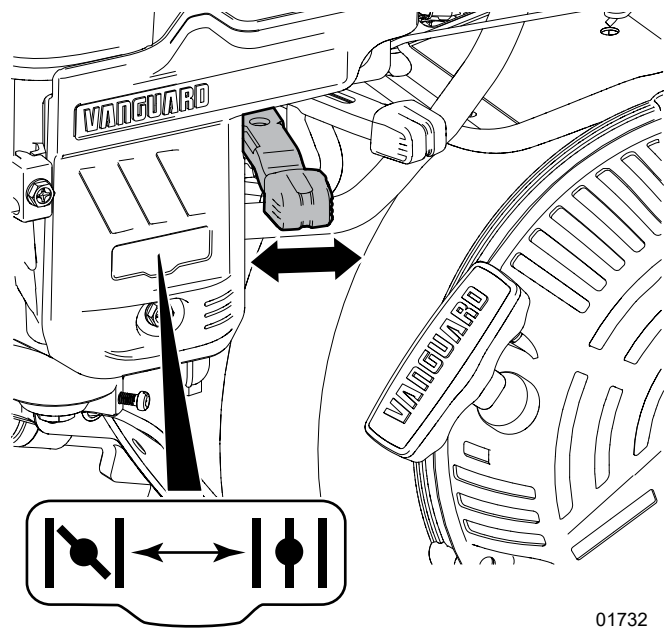
The choke control lever has the following functions:



Choke closed
Engine start.



Choke open
Engine warm

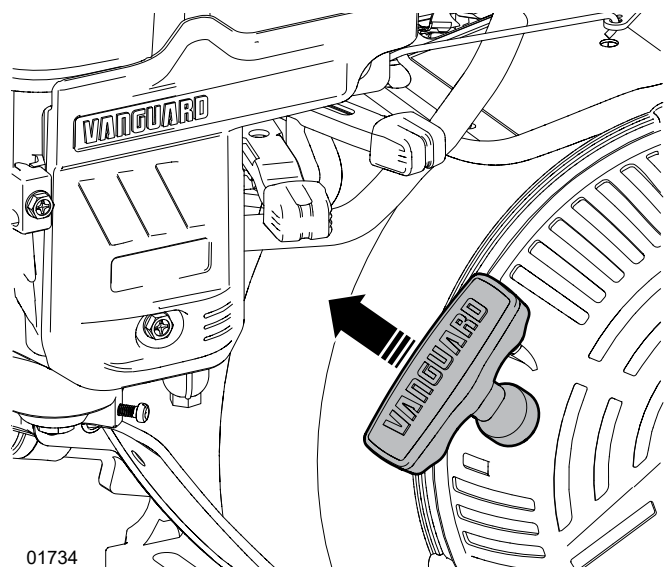


01732

Fig. 12 – Engine choke control

Recoil Starter Rope

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



01734

Fig. 13 – Starter-cord handle

4.3 E-Stop Button

The emergency stop button is located on the right-hand side of the conveyor. The switch is yellow with a bright red actuator button.

- Press to shut down the conveyor engine in an emergency. Twist-turn to release.

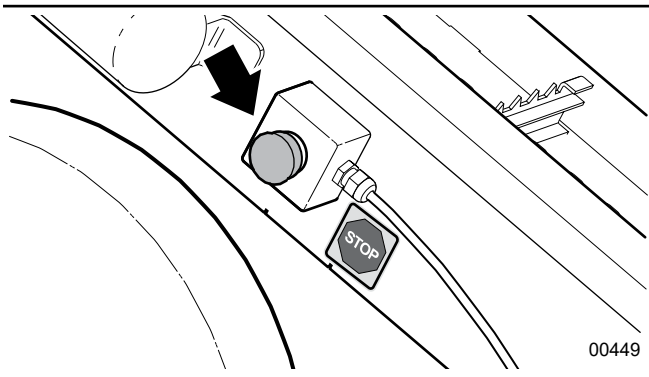


Fig. 14—Emergency Stop Button

- Test the switch periodically. The engine should not operate when the switch is pressed in.

4.4 Conveyor Angle Indicator

Some site conditions may require parking the conveyor on sloped ground.

Use the indicator on the right-hand side of the conveyor as a guide for a safe conveyor operating inclination.

When raising, always keep the indicator in white zone on the decal.

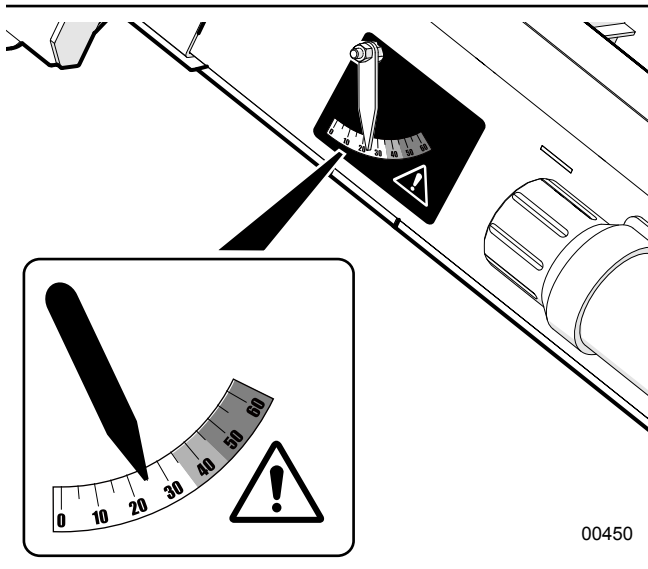


Fig. 15—Conveyor Angle Indicator

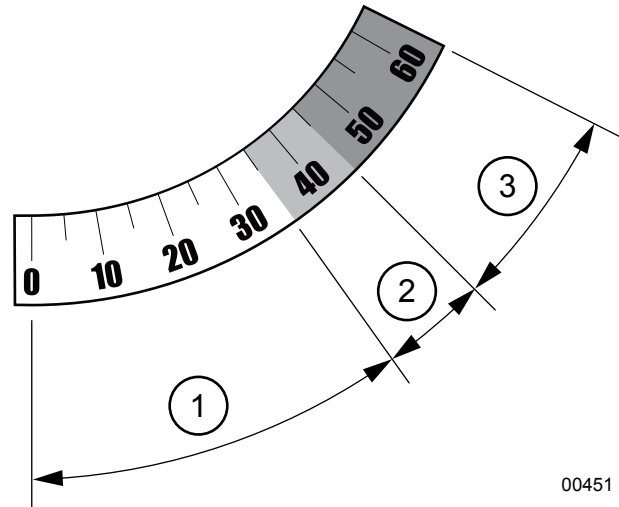


Fig. 16—Indicator Zones

1. Safe Working Angle (white area)
2. Approaching Unsafe Angle (yellow area)
3. Unsafe Angle (red area)

- White indicates a normal, safe operating angle (0°–35°).
- Yellow indicates the conveyor is approaching an unsafe angle (35°–45°). Use caution.
- Red is an unsafe angle (45°–55°). Lower the conveyor immediately.

4.5 Hitch Lock Pin

- Unlock the hitch before raising the conveyor.
- Release the pin to lock the hitch before transporting the conveyor.

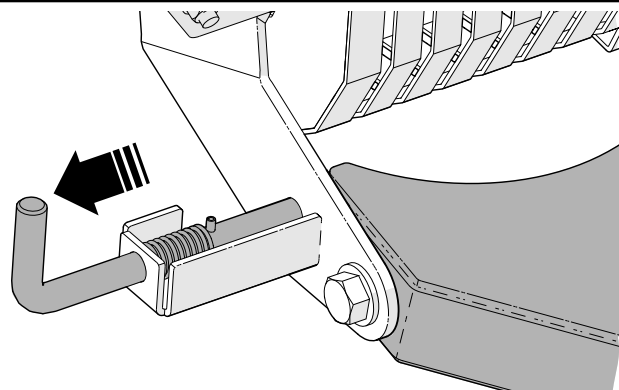
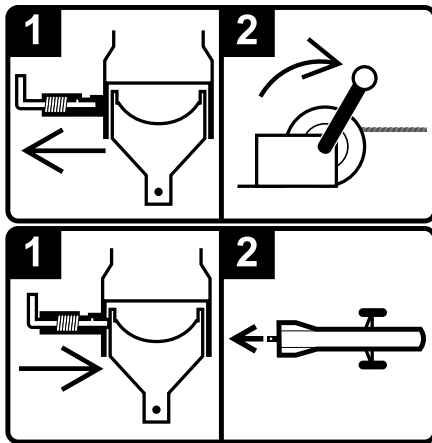


Fig. 17—Hitch Lock Pin



IMPORTANT! Winch requires 45 lb (200 N) of handle force. Excessive force in turning winch handle may indicate overload.

To Lower the Conveyor Angle

- Turn the winch handle counterclockwise. Clicking sound is not heard when the brake system is activated.

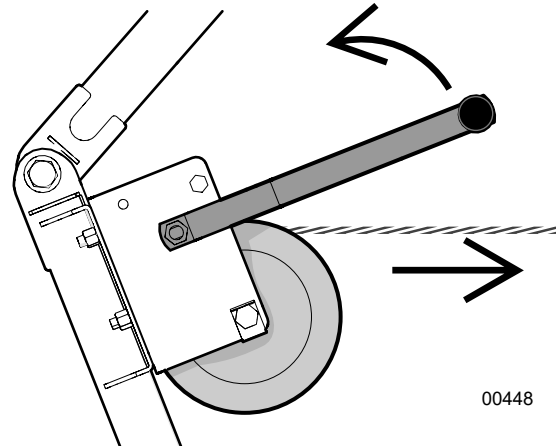


Fig. 19—Lowering Conveyor

4.6 Height Adjustment

Change the conveyor angle using the hand winch. There are stops provided on the conveyor frame; however, do not raise the conveyor higher than the safe zone on the conveyor angle indicator. See page 20.

! WARNING!

Do not use the hand winch if the wire rope (cable) is worn, kinked or frayed. It could break collapsing the conveyor and whip violently causing serious injury or death. Replace wire rope if damage is apparent.

W046

To Raise the Conveyor Angle

- Turn winch handle clockwise. Listen for a loud clicking sound while raising.

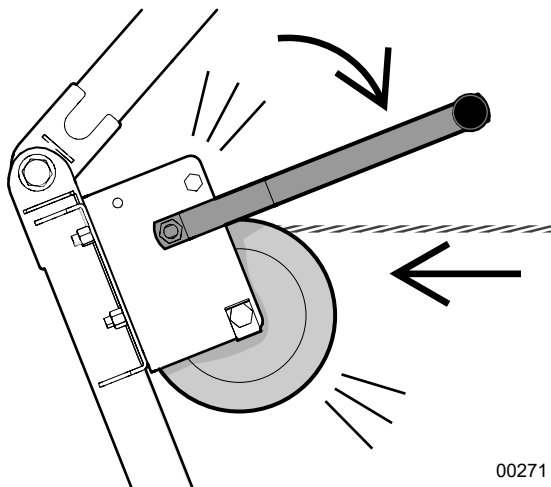


Fig. 18—Raise Conveyor

5. Conveyor Setup

CAUTION!

Park the machine so prevailing winds blow exhaust gases / fumes away from the operator.

W006

CAUTION!

Park conveyor where wheels are on firm, level ground. Never raise or move conveyor if wheels are on uneven ground.

1. Position the conveyor so that split wood from the processor discharge falls into the conveyor hopper.
2. Block the wheels so conveyor cannot roll in either direction.
3. Unlock the conveyor hitch. Pull out the Hitch Lock Pin and turn to unlock.

IMPORTANT! Failure to unlock hitch can cause damage as the conveyor is raised.

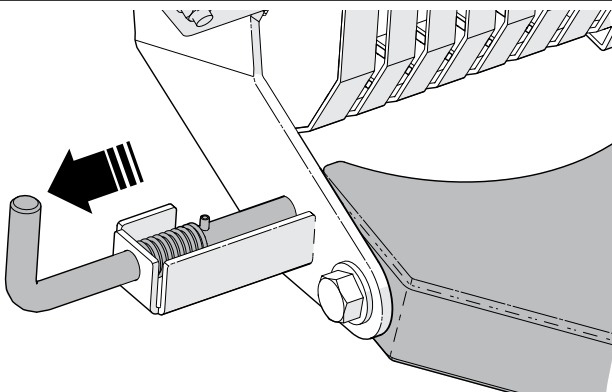
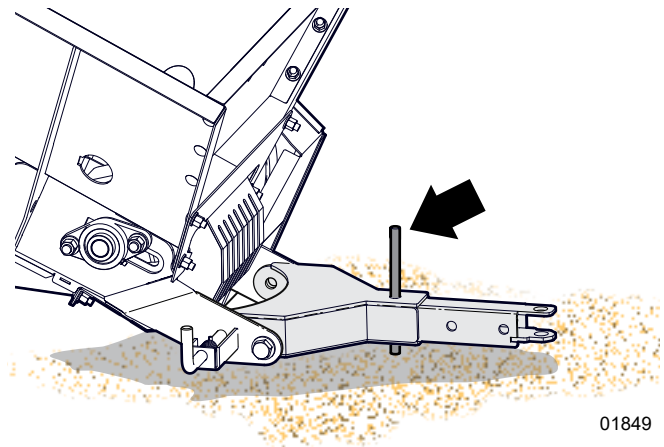


Fig. 20 – Hitch Lock Pin

4. Anchor the conveyor under the processor discharge by driving a 1/2" (12 mm) steel rod (not supplied) through the hole in the hitch into the ground. Anchoring it also holds the hopper in place if repositioning the conveyor.



01849

Fig. 21 – Steel Rod through Conveyor Hitch

5. Disconnect the Toplink Pin (if connected) and place it in the stored position.

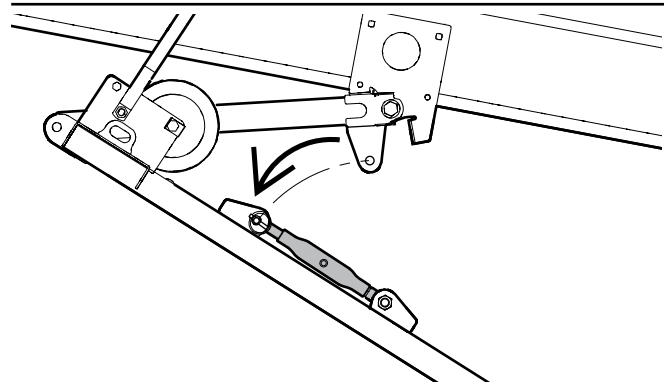
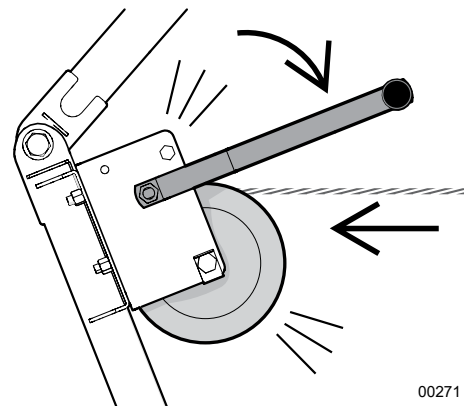


Fig. 22 – Toplink Pin

6. Set the conveyor height as required. Turn winch handle clockwise to raise it. Counterclockwise lowers it.



00271

Fig. 23 – Conveyor Winch Handle

6. Pre-start Checks

Before operating the conveyor, review this checklist.

Area to check	✓
Make sure conveyor chain and drive belt are clear for startup. Check for entangled material.	
Park conveyor on stable, level ground. Block or chock wheels so it cannot roll in either direction.	
Check conveyor bearings are greased as per the schedule outlined in the Maintenance Section.	
Make sure that all covers, guards and shields are in place, secured and functioning as designed.	
Check all fasteners and tighten as required. Make sure equipment is working as designed and in good repair.	
If conveyor is off-loading into a truck or trailer, plan access for this equipment.	
Check that personal protection equipment including hard hat, safety glasses, safety shoes, safety vest, hearing protection and gloves are being used and in good repair.	
Do not wear loose-fitting clothing or jewelry. Tie back loose, long hair.	

6.1 Before Starting the Engine



Hearing loss hazard. Prolonged exposure to loud noise may cause permanent hearing loss. Use suitable protection while operating the machine.

W016

The operator has the responsibility of being familiar with and following all operating and safety procedures.

Although this machine is easy to use, each operator should review this section to get familiar with the detailed safety and operating procedures.

1. Make sure the machine is set up correctly. Set conveyor height and unlock hitch lock pin.
2. Check the engine oil level. See *page 24*.
3. Check the reduction case oil level. See *page 28*.
4. Check the fuel level. See *page 24*.
5. Review the Safety Rules on *page 8*. Make sure each operator is trained and familiar with the set up and operation of the machine. Review the Controls (see *page 24*).
6. Clear the area of bystanders.

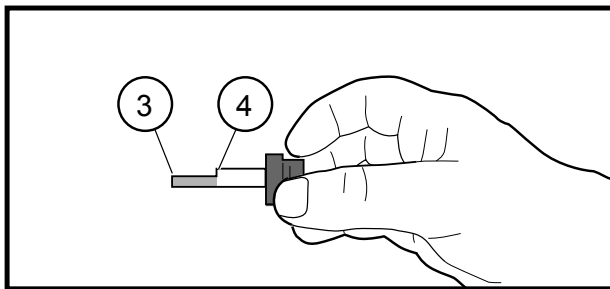
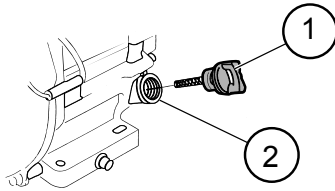
6.2 Honda Engine

6.2.1 Oil Level Check

Check engine oil level at each use. Check with the machine parked on level ground and the engine stopped.

IMPORTANT! Running the engine with a low oil level can cause engine damage not covered by warranty.

1. Remove the oil level dipstick and wipe it clean.
2. Fully insert the oil level dipstick, then remove it to check the oil level. **The proper level is when the oil is visible at the full (upper) mark on the dipstick.**
3. If the oil level is low, add oil until the level is at the full mark. **SAE 10W-30 is recommended for general use.**
4. Reinstall the oil level dipstick.



00454

Fig. 24—Engine Oil Level check

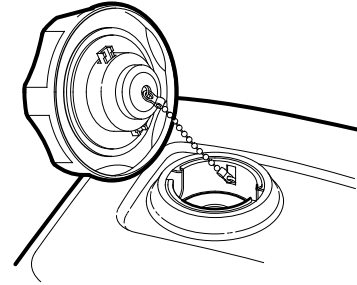
1. Oil Level Dipstick
2. Oil Filler
3. Low Level
4. Full Level

6.2.2 Fuel Level Check

Check the fuel level daily.

Starting with a full tank helps to eliminate or reduce operating interruptions for refueling.

The fuel tank is located on the engine. Avoid running the tank dry.



00198

Fig. 25—Fuel Filler Cap

6.2.3 Refueling

Honda fuel tank capacity: **0.53 US gal (2 L).**

WARNING!



Fuel vapors can explode causing injury or death. Do not smoke while refueling. Keep sparks, flames, and hot components away.

W027

Refuel in a well-ventilated area with the engine stopped. If the engine has been running, allow it to cool first. Never refuel the engine inside a building where gasoline fumes can come in contact with flames or sparks.

For fuel specification, see *page 24* . Refer to the engine manual for additional information on fuels.

1. Clean the area around fuel tank cap. Fill the tank to 1/2" (12 mm) below bottom of filler neck to provide space for any fuel expansion. Do not overfill.
2. Install fuel fill cap securely and wipe up any spilled fuel.


6.2.4 Engine Air Cleaner

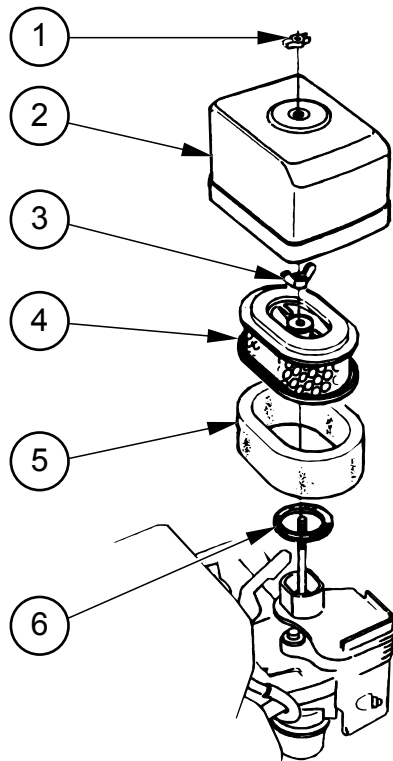
A dirty air filter can restrict air flow to the carburetor, reducing engine performance. If operating in very dusty conditions, clean the air filter more often than specified.

IMPORTANT! Operating the engine without an air filter, or with a damaged air filter, can allow dirt to enter the engine, causing rapid engine wear. This type of damage is not covered by Warranty.

Inspection

- Remove the air cleaner cover.
- Remove the foam filter element from the paper filter element.
- Clean or replace dirty filter elements. Always replace damaged filter elements.

 **NOTE:** Refer to the engine manual for further information on servicing the air cleaner.



00455

Fig. 26—Engine Air Cleaner

1. Wing Nut
2. Air Cleaner Cover
3. Wing Nut
4. Paper Filter Element
5. Foam Filter Element
6. Gasket

6.3 Vanguard Engine

6.3.1 Oil Level Check

Check engine oil level daily.

Check with the machine parked on level ground and the engine stopped.

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

1. Stop the machine.
2. Pull out the oil-level dipstick and wipe it clean.
3. Fully insert the oil level dipstick, then remove it to check the oil level. **The proper level is when the oil is visible at the top of the cross hatch pattern on the dipstick.**

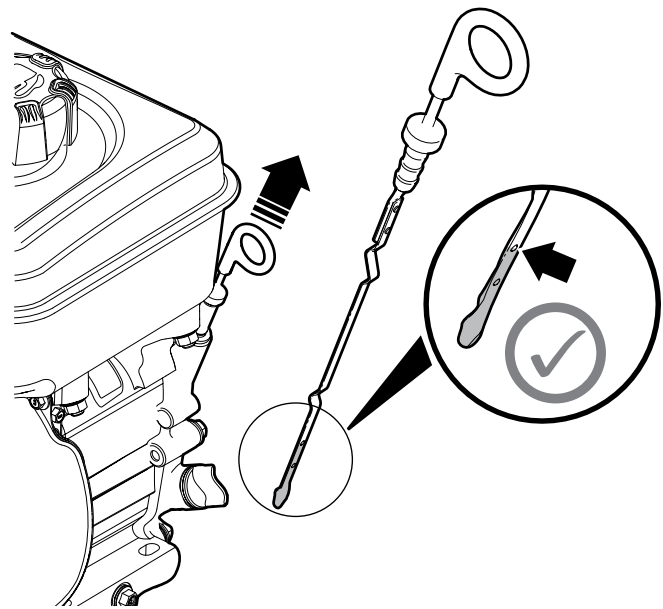


Fig. 27—Engine Oil Level Check

4. If the oil level is low, add oil until the level is at the full mark. Briggs & Stratton® Warranty Certified oils are recommended for best performance. For further information on engine oils, refer to engine manual.
5. Remove oil fill cap from valve cover.

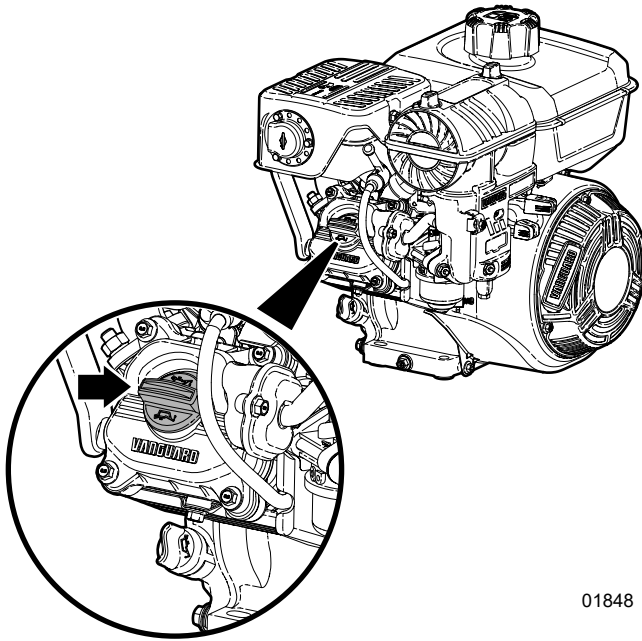


Fig. 28—Engine Oil Fill Cap

6. Using a funnel, slowly add a small amount of oil. **Do not overfill.** Allow a few seconds to elapse to allow oil to drain to the crankcase.
7. Fully insert dipstick until it bottoms in the dipstick tube to check level.
8. Remove and check that oil is **at the top of the cross hatch pattern on the dipstick.** Add oil as necessary until oil level is correct.
9. Install and secure the oil fill cap.

6.3.2 Fuel Level Check

Check the fuel level daily.

! WARNING!

Fuel and vapors are extremely 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.

! CAUTION!

Fuel vapors are very toxic. Breathing fuel vapors can cause irritation, illness, or unconsciousness. Check the fuel level outdoors or in a well-ventilated area.

Turn engine OFF and let engine cool at least two minutes before removing the fuel cap. Loosen cap slowly to relieve pressure in tank.

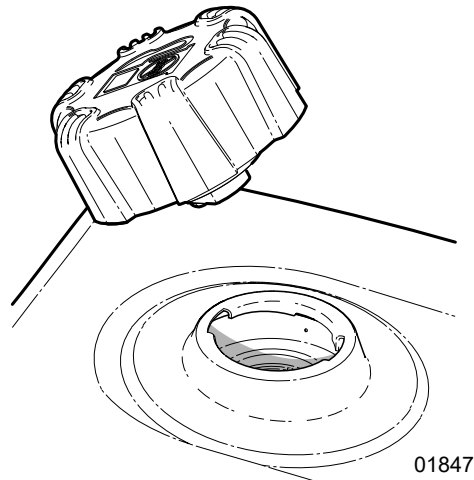


Fig. 29—Fuel Filler Cap

Starting work with a full tank helps to eliminate or reduce operating interruptions for refueling. Avoid running the tank dry.

6.3.3 Refueling

Vanguard fuel tank capacity: 3.2 US qt (3.1 L).

! WARNING!



Fuel vapors can explode causing injury or death. Do not smoke while refueling. Keep sparks, flames, and hot components away.

W027

! CAUTION!

Fuel vapors are very toxic. Breathing fuel vapors can cause irritation, illness, or unconsciousness. Fill the fuel tank outdoors or in a well-ventilated area.

The engine requires clean, fresh, unleaded gasoline with a pump octane rating of 87 or higher (research octane rating of 91 or higher). Gasoline with up to 10% ethanol (gasohol) is acceptable. For more information, see *engine manual*.

For information about use at high altitudes, see the engine manufacturer's manual.

1. Turn engine OFF and let engine cool at least two minutes before removing the fuel cap.
2. Clean the area around fuel tank cap, then loosen cap slowly to relieve pressure in tank.
3. Fill the tank to 1/2" (12 mm) below bottom of filler neck to provide space for any fuel expansion. Do not overfill.
4. Install fuel fill cap securely and wipe up any spilled fuel.

6.3.4 Engine Air Cleaner

IMPORTANT! Operating the engine without an air filter, or with a damaged air filter, can allow dirt to enter the engine, causing rapid engine wear. This type of damage is not covered by warranty.

Clean the air filter every 200 hours of operation or annually.

A dirty air filter can restrict air flow to the carburetor, reducing the engine performance. If the engine is operated in very dusty areas, clean the air filter more often than specified.

1. Loosen the two 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 two air-filter cover fasteners.

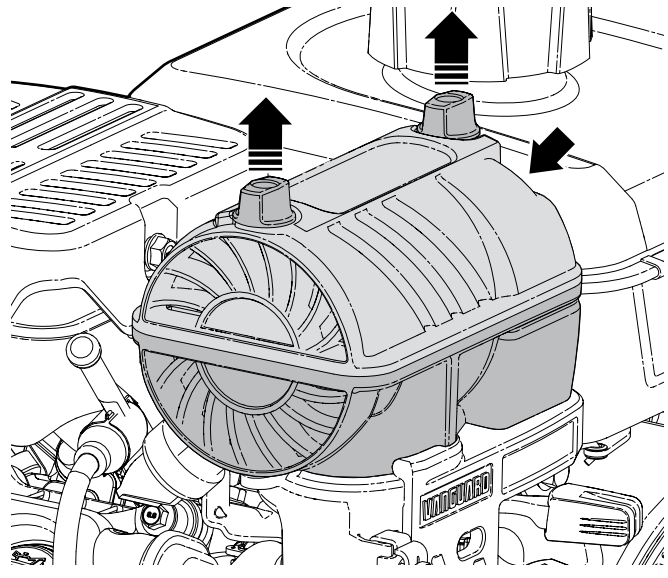


Fig. 30—Engine air filter

6.4 Reduction Case Oil Level Check

Check reduction case oil at each use. Check with the machine parked on level ground and the engine stopped.

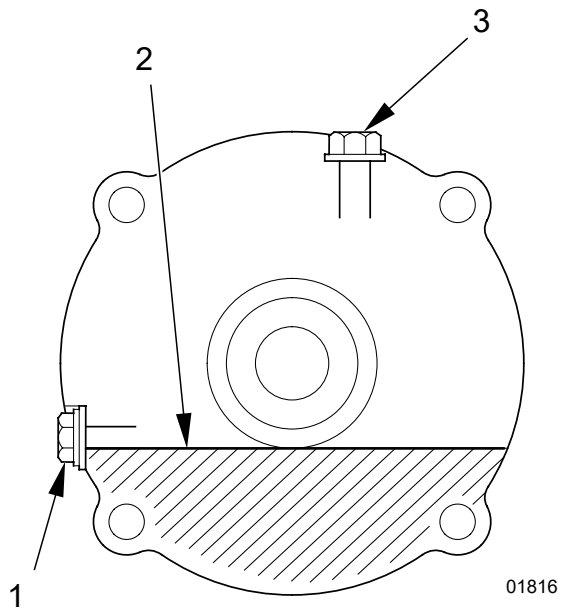


Fig. 31 – Reduction Case

1. Oil Level Check Bolt
2. Oil Level
3. Filler Bolt

1. Remove the Oil Level Check Bolt (1) and washer. The oil level should be visible at the edge of the bolt hole.
2. If the level is below the check hole edge, remove the Filler Bolt (2) and washer. The reduction case uses the same oil as the engine. Add oil until it starts to flow out the check hole.
3. Install the oil level check bolt, filler bolt, and washers.

IMPORTANT! Operating the engine with a low reduction case oil level can cause reduction case damage.

7. Operating Instructions

CAUTION!

Before starting the engine, review the safety, operating, and maintenance instructions in the engine manual.

W019

WARNING!

Engine exhaust contains carbon monoxide, an odorless, poisonous gas. Breathing it can cause unconsciousness or death.

Never operate engine in a closed, or even partly closed area. Exhaust gases can build up to dangerous levels.

W072

CAUTION!



Hearing loss hazard. Prolonged exposure to loud noise may cause permanent hearing loss. Use suitable protection while operating the machine.

W016

7.1 Honda Engine – Starting

Make sure the conveyor is set up to work and otherwise ready to run.

1. Slide the fuel valve lever toward the block (2) to turn fuel ON.

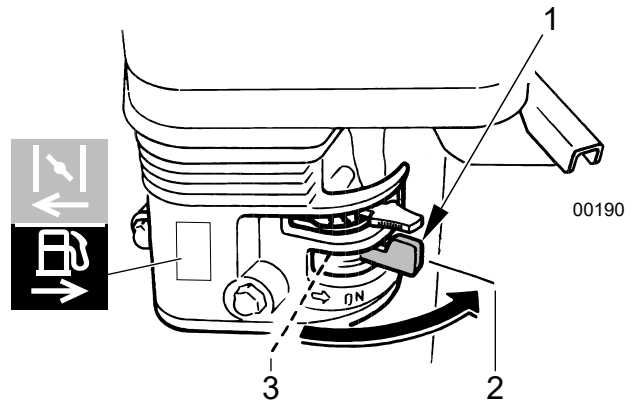


Fig. 32–Fuel Valve Lever

1. Fuel Shut-off Valve Lever
2. ON Position
3. OFF Position

2. If the engine is cold, close the choke (push choke lever to the left). To start a warm engine, leave the choke open (lever pushed to the right).

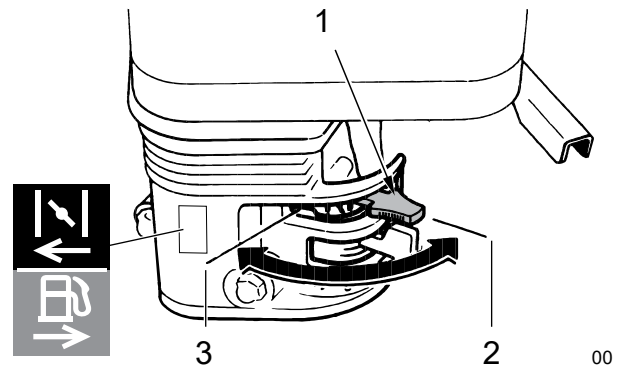
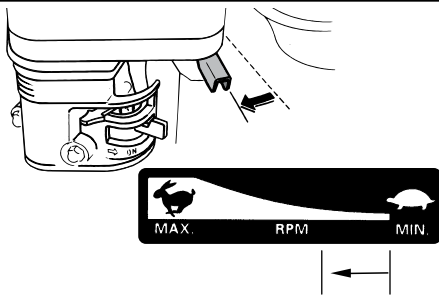


Fig. 33–Choke Lever

1. Choke Lever
2. Choke OPEN
3. Choke CLOSED

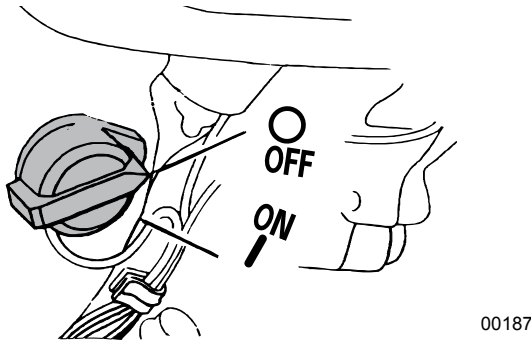
3. Move the throttle lever away from the MIN. position, about 1/3 of the way toward the MAX position.



00463

Fig. 34—1/3 Throttle

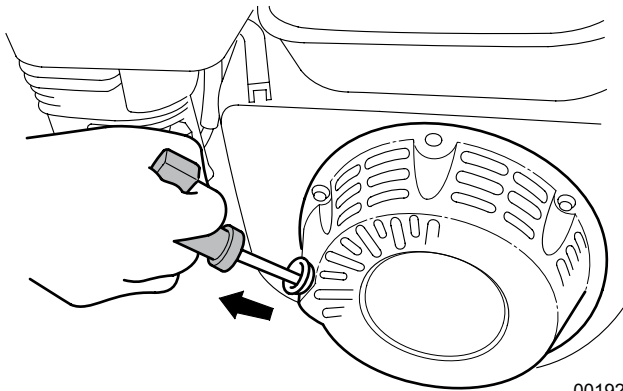
4. Turn the engine ignition switch ON.



00187

Fig. 35—Ignition Switch

5. Pull the starter grip out lightly until resistance is felt, then pull briskly in the direction of the arrow as shown below. Return the starter grip gently.



00192

Fig. 36—Recoil Starter

IMPORTANT! Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.

6. Leave the engine operating at low throttle for a few minutes to allow it to warm up. Gradually push the choke control lever open (to the left) as the engine warms.

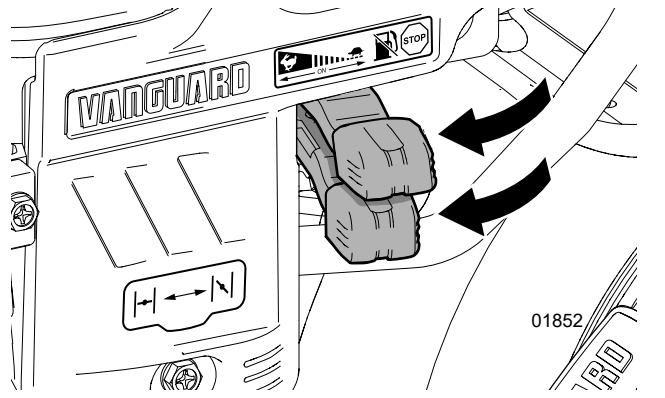
IMPORTANT! Warm up the engine before putting to work.

7. Once the engine is warm, increase throttle as required. Adjust engine speed to preferred conveyor off-load speed.

7.2 Vanguard Engine – Starting

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

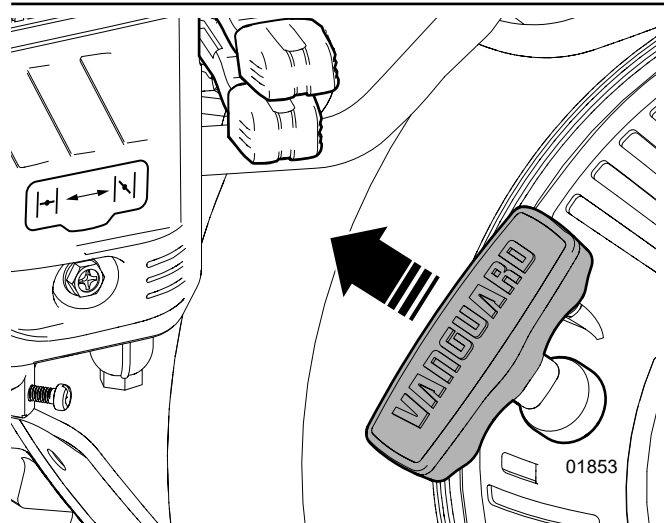
1. Make sure the machine is level and in a stable position.
2. Move the choke control to the CLOSED position. Choke is usually unnecessary when starting a warm engine.
3. Move the throttle control to the FAST position.



01852

Fig. 37—name

4. Firmly grip the starter-cord handle. Pull the starter cord out slowly until you feel resistance, then pull rapidly.



01853

Fig. 38—Recoil Starter

5. As the engine warms up, gradually push the choke control lever open (to the right).

6. If engine floods, set choke to OPEN position, move throttle to FAST position and crank until engine starts.

7.3 Stopping Procedure

1. Stop loading material onto the conveyor.
2. Decrease engine speed to **MIN**.
3. Turn the ignition switch OFF.

7.4 Stopping in an Emergency

In an emergency

- Press the E-stop Button on the right-hand side of the conveyor frame.

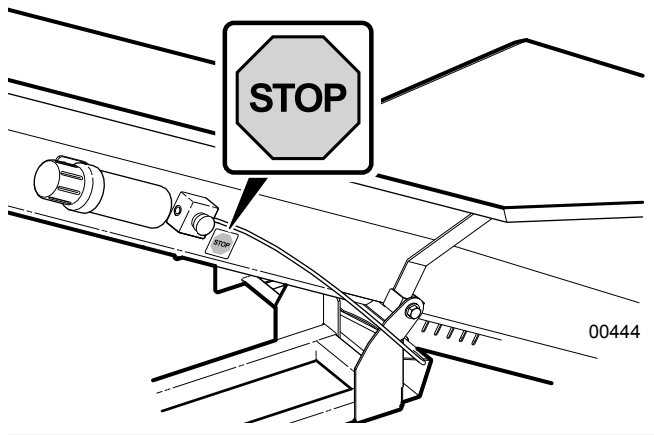
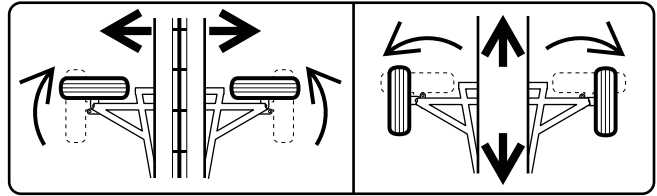


Fig. 39—E-stop button

- Correct fault situation before restarting engine and resuming work.

7.5 Rotate Wheels

Move the conveyor sideways when the split wood stack height is up to the conveyor or approaching the wheels. Unpin and rotate the wheels to swing the conveyor.



- Remove lynch pin, then pull the pin and rotate the wheel. Reinsert pin and lynch pin.
- Push the conveyor to the new position.
- Chock or block the wheels.

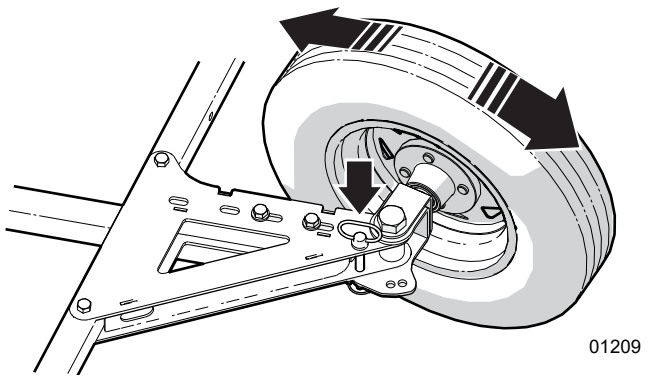
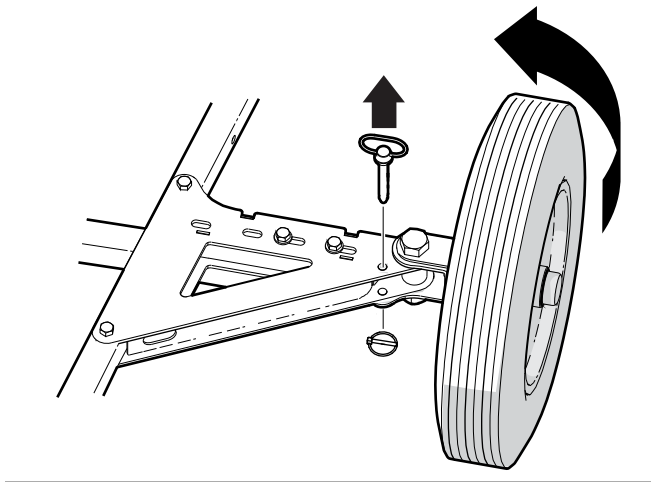
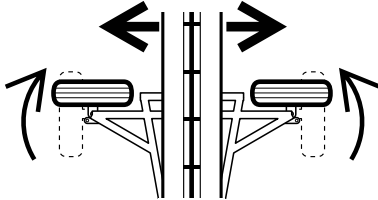


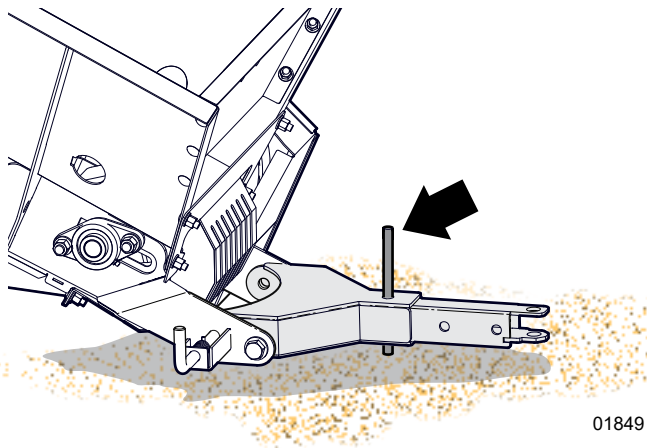
Fig. 40—Rotating the Conveyor Wheels

7.6 Moving, Swinging the Conveyor Sideways

- Shut the wood processor down.
- Unload the conveyor. Allow it to operate until all the split wood has cleared then shut the engine down.
- Lower the conveyor down to the stops on the frame.
- Remove the blocks and rotate the wheels. See *page 31* for instructions on wheel rotation.



- Push the conveyor to the new position.
- Block the wheels.
- Check the position of the hopper end of the conveyor. Make sure it is placed so split wood falls properly from the processor discharge chute.
- Reposition conveyor hopper if required, then drive a 1/2" (12 mm) steel rod (not supplied) through the hitch into the ground to anchor it there.



01849

Fig. 41 – Steel Rod through Conveyor Hitch


7.7 Conveyor Axle Position

Tongue weight varies depending on conveyor length.

Axle Location on Wheel Base Frame

The axle is positioned and bolted to the conveyor frame based on the measurements in the following table. Measure from the front of the wheel base frame to the center of the axle (measurement 'X').

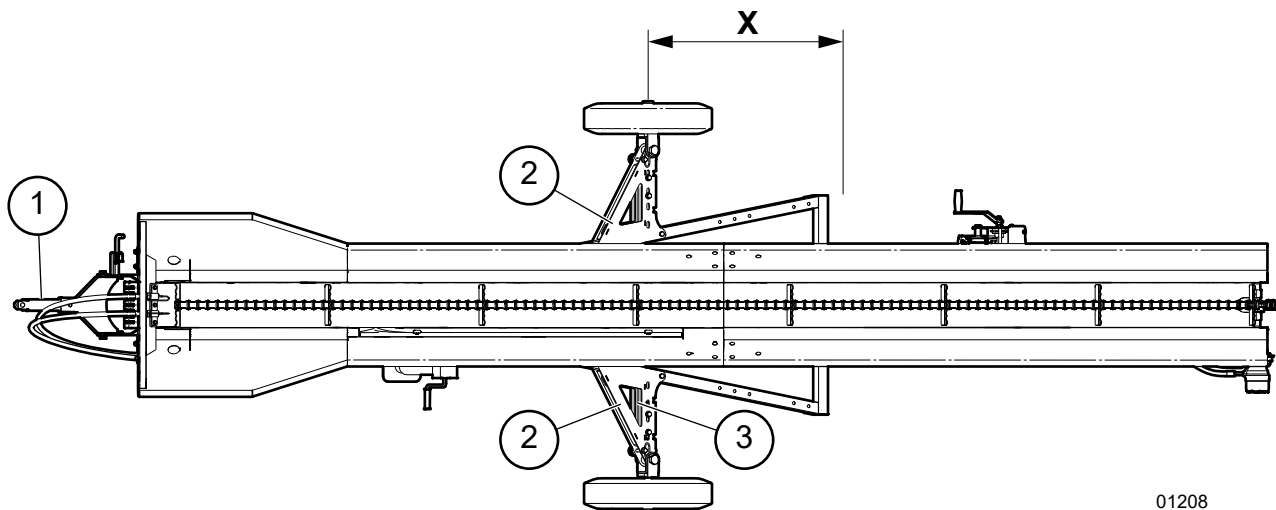
Conveyor Model	Measurement 'X'
CT16B	41-½" (105.4 cm)
CT24B	23-½" (60 cm)

 **NOTE:** CT model shown in the illustration. CT-B model set-up is the same.

Tongue Weight, Adjusting

Adjust tongue weight further for tow vehicle capability or preference using the additional holes provided in the conveyor wheel base frame.

IMPORTANT! If repositioning axles, always install spanner bar and properly torque-tighten all fasteners.



01208

Fig. 42 – Axle Position on Wheel Base Frame

1. Conveyor Tongue
2. Axles
3. Spanner Bar

7.8 Break-in Period

Although there are no operational restrictions on the conveyor when used for the first time, check the following items:

After 1–5 hours of operation:

1. Check all nuts, bolts and other fasteners. Tighten to their specified torque.
2. Check engine fuel, oil fluid levels. Top up as required.
3. Check for entangled material. Remove all entangled material before resuming work.

After 20 hours of operation:

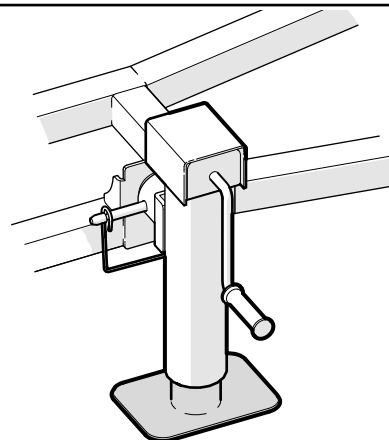
4. Repeat steps 1 through 3 listed above.
5. Adjust conveyor chain tension. See *page 37*.
6. Change engine oil after initial 20 hours of operation or first month.

After 50 hours of operation

7. Adjust conveyor chain tension. See *page 37*.
8. Check condition of hand winch and wire rope. Replace wire rope if kinked, worn or has broken strands.

7.9 Transporting

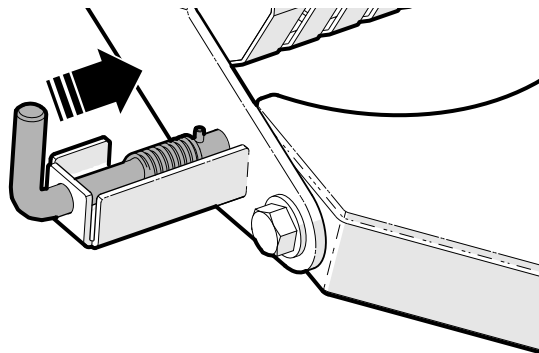
- Unload the conveyor and clean off debris.
- Turn the fuel valve on the engine OFF when not in use or when transporting.
- If tongue weight requires adjusting, see *page 33*.
- Use safety flags as required to properly mark conveyor while traveling on roadways.
- Raise the conveyor up and connect to the tow vehicle. Rotate the crank jack to vertical and secure with the lynch pin.



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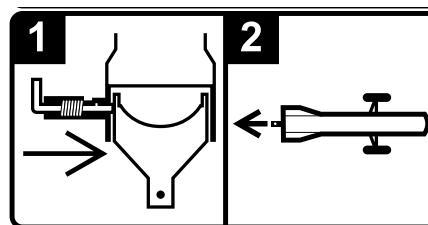
Fig. 43—Crank Jack

- Lock the hitch before towing.



00459

Fig. 44—Hitch Lock Pin



- Fully lower the conveyor to the stops on the frame. The conveyor must be in its fully-lowered position for transporting.

- Turn the winch handle counterclockwise. There is no clicking sound because the brake system is activated.

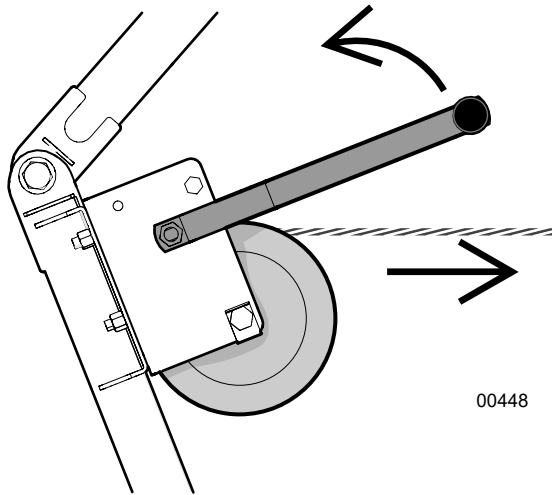


Fig. 45—Lowering Conveyor

Install topline to lock top and bottom folding frames together.

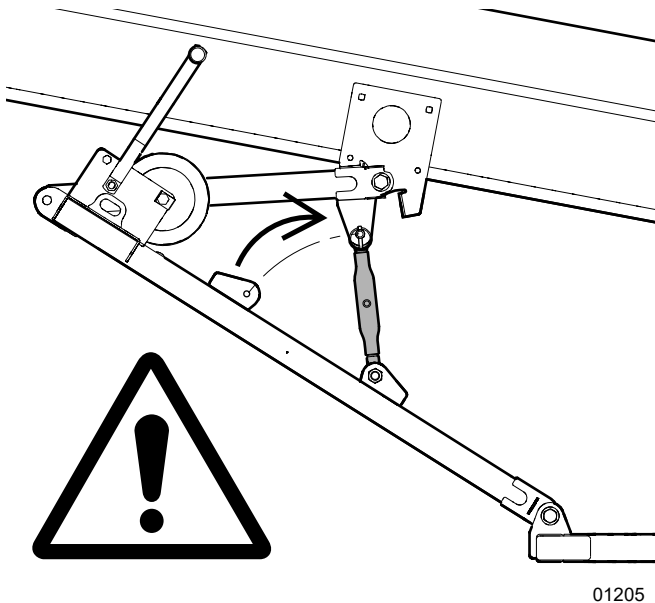
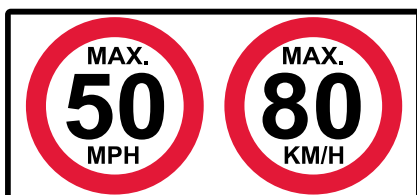


Fig. 46—Topline Installed

- Do not exceed 50 mph (80 Km/h) if traveling on a roadway.



7.10 Storage

Repair or replace any worn or damaged components to prevent any unnecessary down time at the start of next season.

IMPORTANT! Refer to the engine manufacturer's manual for information specific to engine storage.

Placing Conveyor in Storage

1. Clean off all dirt, mud, and debris.
2. Turn fuel valve OFF on the engine.
3. Add fuel stabilizer to the fuel tank.
4. Grease conveyor drive bearings—one grease gun shot for each bearing. See *page 37*.
5. If parking the machine for longer periods (over 6 months), follow the engine manufacturers recommendations for that period.
6. Select an area that is dry, level and free of debris to park the conveyor.
7. Store the conveyor away from human activity. Do not allow children to play on or around it.

Removing from Storage

8. Check air pressure in tires. See tire sidewall for rating.
9. Review and follow the Pre-operation Checklist. See *page 23*
10. Review safety and operation procedures. See *page 8*.

8. Service and Maintenance

WARNING!

Risk of serious personal injury. Stop engine before performing ANY service or maintenance procedure. Reinstall all covers and shields removed before putting machine back into service.

W033

Placing the machine in a Safe Condition involves performing the following:

SAFE CONDITION

1. Empty the conveyor.
2. Shut off the engine. Disconnect spark plug leads. Disconnect negative (-) battery cable from battery.
3. Lower the conveyor fully until it is resting on the frame stops.

Follow good shop practices:

- Have at least two workers present when performing maintenance on this equipment. Never work alone in case an emergency should arise.
- Keep service area clean and dry.
- Never work under unsupported equipment.
- Use only genuine OEM replacement parts. The manufacturer is not responsible for injuries or damage caused by using non-approved parts or accessories.
- Make sure all safety shields and devices are re-installed after a maintenance or service procedure is finished.
- Do not use gasoline or diesel fuel when cleaning any parts. Use a regular cleanser.
- Use proper tools that are in good condition. Make sure the procedure is understood before performing any service work.

IMPORTANT! Allow the engine to cool. Engine components and oil may be hot enough to cause injury.

IMPORTANT! Refer to the engine manufacturer's manual for engine maintenance and service information.

8.1 Fluids and Lubricants

1. Engine Oil

SAE 10W-30 motor oil is recommended for general use. Refer to the engine manufacturer's manual for maintenance and service information

2. Grease

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

3. Engine Fuel

These engines are certified to operate on unleaded gasoline with a pump octane rating of 86 or higher (a research octane rating of 91 or higher).

4. Storing Lubricants

Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture, and other contaminants.

8.2 Maintenance Schedule

Perform maintenance procedures at time shown or hour interval, whichever comes first.

As Required	
Remove any entangled material from conveyor	
Check that all fasteners are tight.	

Every 8 hours or at Each Use	
Check fuel level	See page 24
Check engine oil level.	See page 24
Check reduction case oil level	See page 28

Every 50 hours or Annually	
Clean engine air filter	See page 25
Grease conveyor drive bearings	See page 37
Check conveyor chain tension	See page 37

Every 100 hours or Annually	
Change engine oil	See engine manual
Check tire pressure	See rating on tire sidewall
Change reduction case oil	See engine manual
Change engine air filter	See page 25
Clean machine. Remove debris and entangled material.	—
Change fuel filter	See engine manual
Check drive belt tension.	See page 38
Check conveyor chain tension	See page 37
Grease hand winch	See page 39

8.3 Honda Engine

8.3.1 Engine and Reduction Case Oil Change

Refer to engine manual for procedure. Change oil every six months or 100 hours.

8.4 Grease Points

Use a hand-held grease gun for all greasing. Pump one shot of grease slowly into each fitting.

- Wipe grease fitting with a clean cloth before greasing to avoid injecting dirt and grit.
- If fittings do not take grease, remove and clean them thoroughly. Replace grease fittings as necessary.

Location	Grease Points – Every 50 hours of operation or annually
1	Driven shaft bearings–1 per side

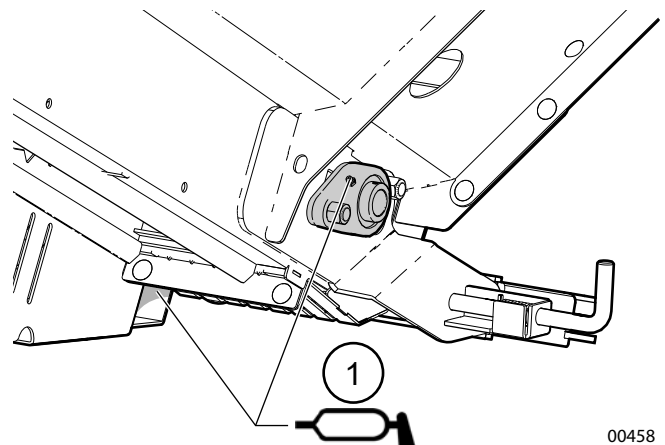


Fig. 47–Grease Points

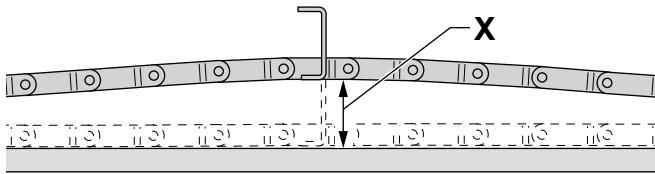
IMPORTANT! Do not over grease. Pumping more than one shot from a grease gun into the bearings can push the grease out of the seals. Doing that repeatedly can damage the seals. Grease is not kept in, and dirt and moisture are not kept out.

8.5 Chain Tension, Adjust

The conveyor chain can stretch a slight amount and can require occasional adjustment. Be careful not to over adjust the chain. That adds pretension into the chain and reduces chain life.

IMPORTANT! The main requirement of chain adjustment is to remove slack from the chain (take up the clearances in each link). It is easy to over tighten the chain, so great care is needed!

Measure conveyor chain slack from the topside, inside the conveyor trough. Pull the chain up at the middle and measure dimension X. Adjust accordingly.



Ideal Conveyor Chain Slack (X)	
16 ft (4.8 m) Conveyor	X = 4" (10 cm)
24 ft (7.3 m) Conveyor	X = 6" (15 cm)

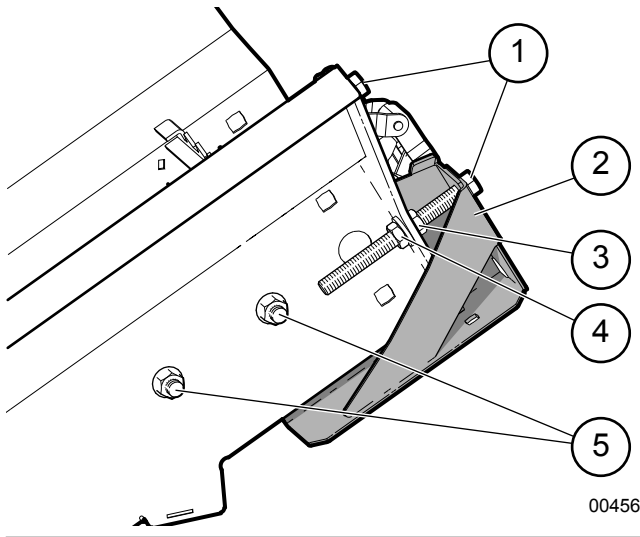


Fig. 48—Chain Tensioner

1. Hex Bolts
2. Tensioner Sled
3. Adjuster Nuts
4. Jam Nuts
5. Tensioner Sled Bolts

Lower the conveyor down so the chain tensioner can be adjusted from the ground.

1. Loosen sled tensioner bolts (5) on both sides of the conveyor.
2. Back off the jam nuts (4) a slight amount.
3. Take the slack out of the chain by tightening (turning clockwise) adjuster nuts (3) equally. Refer to table above.

4. Tighten the jam nuts (4).
5. Tighten the sled bolts (5).

8.6 Drive Belt, Adjust / Replace

8.6.1 Adjust Drive Belt Tension

1. Remove drive belt shield.
2. Loosen idler pulley bolt (1).
3. Slide the idler pulley (2) up the chain tensioner rail to tighten the belt. Pry it upwards and snug the idler pulley bolt. Measure the deflection and adjust as required.
4. Tighten the idler pulley so that deflection at the top of the belt is 1/2"–3/4" (12 mm–19 mm).

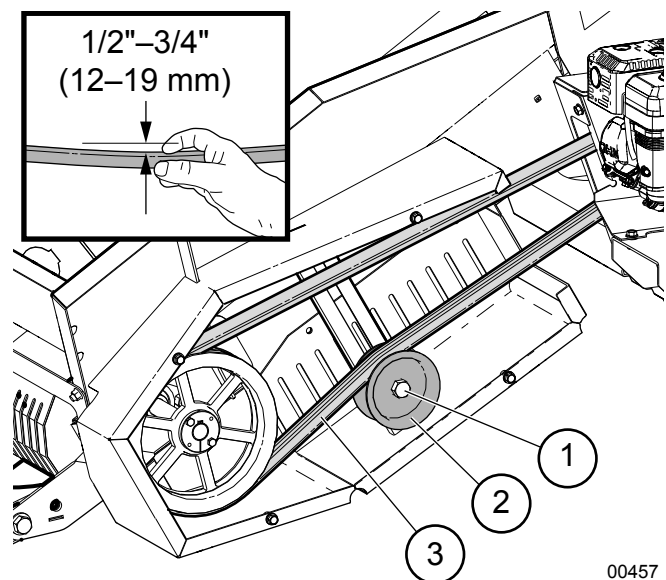


Fig. 49—Conveyor Drive Belt

1. Idler Pulley Bolt
2. Idler Pulley
3. Drive belt

8.6.2 Replace Drive Belt

1. Perform the same steps above, loosening off the idler pulley altogether.
2. Pull the belt off the driven pulley and the engine pulley.
3. Tension the new drive belt as indicated in the steps above.
4. Check belt tension again after 50 hours of use.

8.7 Hand Winch

IMPORTANT! Do not get oil or grease on the winch friction discs. The winch brake system cannot function properly if exposed to oil or grease.

- Apply a drop or two of SAE 30 engine oil to each bushing inside diameter and to the ratchet pawl pivot points.
- Maintain a thin layer of marine grease on the gear teeth and shaft threads.

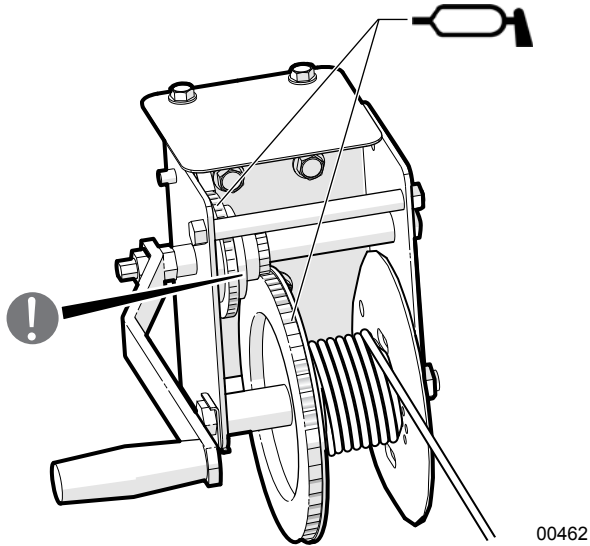


Fig. 50 – Hand Winch

9. Troubleshooting

The following table lists problems that may be encountered, with possible causes and suggested solutions.

If a problem persists after reading this Troubleshooting section, contact the local dealer, distributor, or Wallenstein. Have the machine serial number ready.

Engine related issues

Refer to the engine owner's manual found in the manual tube.

Problem	Cause	Solution
The chain is winding on the sprocket.	Too much slack in the chain	Adjust the chain length or distance between axle sprockets.
	Excessively worn sprocket. The chain and sprocket do not match.	Replace the chain and/or sprocket with the correct-sized part.
Unusual noises.	Excessive wear in the chain or sprocket.	Replace the chain or sprocket.
	Drive belts are loose or worn.	Tighten or replace.
Excessive wear at the inside of the chain's link plates or the teeth surfaces.	Improper centering of the sprocket.	Correct the centering of the drive and driven sprockets.
	The chain is being pushed to the side.	Remove the debris or reason the chain is being pressed to the side.
Chain does not move.	Chain is frozen to conveyor trough or trough is jammed with material.	Free up the chain. Clear jammed material.
	Drive or idler sprocket set screws have come loose, allowing sprocket to move from side to side and bind.	Tighten set screws or repair sprocket as required.
Drive belt slips when conveyor starts.	Drive belt too loose.	Increase belt tension.
	Belt replaced with incorrectly sized belt.	Install correctly sized belt. Refer to parts manual.
	Drive belt wet.	Dry off belt.
	Chain is frozen to conveyor trough or trough is jammed with material.	Free up the chain. Clear jammed material.
Drive belt slips while conveyor is operating.	Drive belt too loose.	Increase belt tension.
	Drive pulley has oil, grease or other debris on it.	Clean drive pulley.
	Improper loading on conveyor.	Increase engine speed so conveyor speed matches processor output.
Unusual drive belt wear.	Belt replaced with incorrectly sized belt.	Install correctly sized belt. Refer to parts manual.
	Drive belt too tight.	Adjust belt to proper tension.
Engine does not start.	Chain is frozen to conveyor trough or trough is jammed with material.	Chain is frozen to conveyor trough or trough is jammed with material.
	E-Stop button depressed.	Twist-turn to release.
	No fuel getting to carburetor.	Add fuel to fuel tank. Refer to engine manual if condition persists.

10. Specifications

Specifications current at time of publication and subject to change without notice.

10.1 Conveyor Specifications

Conveyor Model		CT16B	CT24B
Maximum Split Wood Pile Height		8.5' (2.6 m)	13.5' (4.1 m)
Trough	Length	16' (4.9 m)	24' (7.3 m)
	Width	8" (20 cm) at Bottom Flared out to 20" (51 cm) at Top	
	Depth	7" (18 cm)	
Power Source		HONDA® GX120 Engine with Integral 6:1 Gearbox VANGUARD® 160 10V3 with Integral 6:1 Gearbox	
Chain	Type	662 Pintle Heavy Conveyor Chain	
	Drive	Engine Direct-drive, Bottom sprocket	
	Flight	2" (5 cm) High Serrated	
Dimensions¹	Raised (L x W x H)	180" x 70" x 119" (457 cm x 178 cm x 302 cm)	260" x 74" x 174" (660 cm x 188 cm x 442 cm)
	Lowered (L x W x H)	212" x 70" x 63" (538 cm x 178 cm x 160 cm)	307" x 74" x 83" (780 cm x 188 cm x 211 cm)
Hitch		Clevis Hitch (Optional 2" Ball Hitch)	
Tire Size		5.30-12 LRC	
Total Weight (estimated, dry)		880 lb (399 kg)	1040 lb (472 kg)
Wheels		90° Swivel, Adjustable Axle	

¹ Maximum height indicated. Width is variable with axle position (axle adjusts to modify tongue weight).

10.2 Common Bolt Torque Values

Checking Bolt Torque

The tables shown give correct torque values for various bolts and capscrews. Tighten all bolts to the torque values specified in the table, unless indicated otherwise. Check tightness of bolts periodically.

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

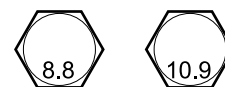
IMPORTANT! Torque figures indicated in the table are for non-greased or non-oiled threads. Do not grease or oil threads unless indicated otherwise. When using a thread locker, increase torque values by 5%.

 **NOTE:** Identify bolt grades by their head markings.

Imperial Bolt Torque Specifications						
Bolt Diameter	Torque Value					
	SAE Gr. 2		SAE Gr. 5		SAE Gr. 8	
	lbf•ft	N•m	lbf•ft	N•m	lbf•ft	N•m
1/4"	6	8	9	12	12	17
5/16"	10	13	19	25	27	36
3/8"	20	27	33	45	45	63
7/16"	30	41	53	72	75	100
1/2"	45	61	80	110	115	155
9/16"	60	95	115	155	165	220
5/8"	95	128	160	215	220	305
3/4"	165	225	290	390	400	540
7/8"	170	230	420	570	650	880
1"	225	345	630	850	970	1320



Metric Bolt Torque Specifications				
Bolt Diameter	Torque Value			
	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



10.3 Wheel Lug Torque

It is extremely important safety procedure to apply and maintain proper wheel mounting torque on your trailer axle. Torque wrenches are the best method to ensure the proper amount of torque is being applied.

Torque wheel lugs before first road use and after each wheel removal. Check and re torque after the first 10 miles (16 km), 25 miles (40 km), and again at 50 miles (80 km). Check periodically thereafter.

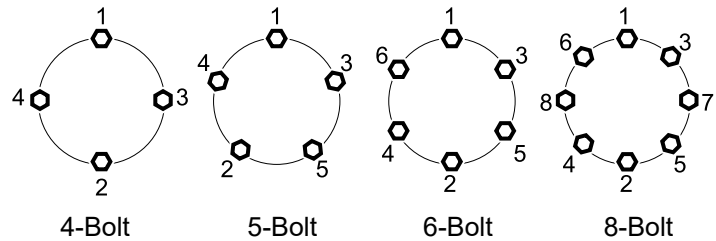
WARNING!

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

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

Wheel Lug Nut Torque				
Wheel Size	Units	1st Stage	2nd Stage	3rd Stage
8"	lbf•ft N•m	12–20 16–26	30–35 39–45.5	45–55 58.5–71.5
12"	lbf•ft N•m	20–25 26–32.5	35–40 45.5–52	50–60 65–78
13"	lbf•ft N•m	20–25 26–32.5	35–40 45.5–52	50–60 65–78
14"	lbf•ft N•m	20–25 26–32.5	50–60 65–78	90–120 117–156
15"	lbf•ft N•m	20–25 26–32.5	50–60 65–78	90–120 117–156
16"	lbf•ft N•m	20–25 26–32.5	50–60 65–78	90–120 117–156

Wheel Lug Torque Pattern



11. Product 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

12. Alphabetical Index

A		Fuel, engine	
Air Cleaner Inspection.....	25	Add	27
B		Fuel Level - Checking	24
Before Starting the Engine.....	23	Fuel Level, Checking.....	26
Bolt torque.....	42	Fuel Shut-off Valve.....	18
Break-in Period	34	G	
C		Gas Motor Safety	10
Checking Bolt Torque	42	Grease Points	37
Choke Lever.....	17	Grease Type.....	36
Controls.....	17	H	
Honda Engine.....	17	Height Adjustment.....	21
Vanguard® Engine.....	19	Hitch Lock Pin	20
Choke Control	19	Honda Engine	24
Recoil Starter Rope	19	Engine Air Cleaner.....	25
Throttle Control and Fuel Shutoff	19	Fuel Level Check.....	24
Conveyor Angle Indicator.....	20	Oil Level Check.....	24
Conveyor Axle Position	33	Reduction Case Oil Level Check	28
Axle Location on Wheel Base Frame	33	Hydraulic System Safety.....	10
Tongue Weight, Adjusting	33	I	
Conveyor Chain Slack.....	38	Ignition Switch.....	18
Conveyor Chain Tension, Adjust	37	Informative Decals	6
Conveyor Set-up		Introduction	2
Pre-Operation Checklist.....	23	L	
Conveyor Setup	22	Lowering Conveyor	21
D		Lubricants.....	36
Decals on the machine, types.....	6	M	
Drive Belt, Adjust / Replace.....	38	Machine Components	16
Drive Belt, Replace	38	Machine Set-Up	
Drive Belt Tension, Adjust	38	Height Adjustment.....	21
E		Hitch Lock Pin.....	20
Engine Air Cleaner	25	Maintenance Decals.....	6
Engine and Reduction case Oil Change	37	Maintenance Schedule.....	37
Engine Controls.....	17	8 hours or Daily.....	37
Choke Lever	17	50 hours or Annually.....	37
Fuel Shut-off Valve	18	100 hours or Annually	37
Ignition Switch.....	18	Measure conveyor chain slack.....	38
Recoil Starter.....	18	Move the conveyor sideways.....	31
Throttle Lever.....	17	O	
Engine Fuel.....	36	Operating Instructions	
Engine Oil.....	36	Break-in Period.....	34
Engine Oil Level.....	25	Conveyor Axle Position.....	33
Engine Oil Level Check.....	24	Height Adjustment.....	21
Engine related issues.....	40	Hitch Lock Pin.....	20
Equipment Safety Guidelines.....	8, 9	Honda Engine – Starting.....	29
E-Stop Button.....	9, 19	Pre-Operation Checklist.....	23
F		Rotate Wheels	31
Familiarization.....	15	Starting the Engine	29
Engine Controls	17	Stopping in an Emergency.....	31
Equipment Condition	15	Stopping Procedure.....	31
E-Stop Button	19	Vanguard Engine – Starting.....	30
Job Site Familiarization.....	15	Operating Safety	8
Operator Orientation.....	15	Operator Orientation	15
To the New Operator.....	15	P	
Training.....	15	Personal Protective Equipment (PPE).....	8
Fluids.....	36	Placing Conveyor in Storage.....	35
Foreword.....	2		
Delivery Inspection Report.....	4		

Pre-start Checks	23
Before Starting the Engine.....	23
Engine Air Cleaner.....	25
Engine Oil Level Check	24
Fuel Level Check.....	24
Height Adjustment.....	21
Hitch Lock Pin.....	20
Honda Engine.....	24
Oil Level Check.....	24
Reduction Case Oil Level Check.....	28
Vanguard Engine	25
Oil Level Check.....	25

R

Raising Conveyor.....	21
Reduction Case Oil Level Check	28
Refueling.....	24
Replacing Damaged Safety Signs	13
Rotate Conveyor Wheels.....	31

S

Safe Condition.....	8, 36
Safety.....	7
Equipment Safety Guidelines	8, 9
Gas Motor Safety.....	10
How to Install Safety Signs.....	13
Hydraulic System Safety.....	10
Operating Safety.....	8
Personal Protective Equipment (PPE).....	8
Replacing Damaged Safety Signs.....	13
Safety Alert Symbol	7
Signal Words	7
Safety Alert Symbol.....	7
Safety Notice Decals.....	6
Safety Rules.....	8
Safety Sign Locations	11
Safety Signs	
Safety Sign Locations.....	11
Safety signs, installing.....	13
Safety Training	8
Serial number.....	5
Service and Maintenance.....	36
Engine and Reduction case Oil Change.....	37
Fluids and Lubricants.....	36
Grease Points.....	37
Hand Winch	39
Honda Engine.....	37
Maintenance Schedule	37
Sign-off form.....	14
Specifications.....	41
Conveyor Specifications	41
Starter	18
Stopping in an Emergency.....	31
Stopping Procedure	31
Storage.....	35
Placing Conveyor in Storage	35

T

Throttle Lever.....	17
Tongue Weight, Adjusting.....	33
Transporting	34
Hitch Lock Pin.....	34
Troubleshooting Guide.....	40

V

Vanguard Engine.....	19, 25
Choke Control.....	19
Engine Air Cleaner.....	27
Fuel Level Check	26
Oil Level Check.....	25
Recoil Starter Rope	19
Refueling.....	27
Throttle Control and Fuel Shutoff.....	19

W

Warranty.....	44
Wheel Lug Torque.....	43



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