

# Range Road RR400 Series Wood Chipper



## Owners Manual

## Warning



Read this manual. Serious injury or death can result if safety instructions are not followed.

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Engine is shipped without oil.

Before starting engine, fill with SAE 10/30 motor oil.

See engine manual for engine oil capacity.

Closely inspect all wood chipper components and ensure all exterior bolts are tightened.

If components are damaged during delivery, please contact the freight company that delivered the unit and file a claim.

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This wood chipper is designed solely to chip wood and must not be used for any other purpose.

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It is potentially hazardous to fit or use any other parts except genuine parts from your dealer. RANGE ROAD ENTERPRISES LTD disclaims all liability for the consequences of such use, which in addition voids the machine warranty.

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DO NOT put any part of your body into the in-feed chute while the machine is running.

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We recommend wearing gloves while using the Wood Chipper. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.

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You must be 16 or older to operate this machine.

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Keep untrained people out of work zone.

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Never leave the wood chipper unattended, while the engine is running.

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The cutting edges can cut through skin and break bones. Keep both hands away from cutting edges and other moving parts. Serious accidents can happen when other people are allowed inside the work zone. Keep everyone else out of the work zone while operating wood chipper.

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Never wear loose clothing, when operating the wood chipper.

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Only operate the wood chipper in daylight.



Wear safety glasses to avoid eye injury while operating the wood chipper.



Make sure belts are adjusted before using wood chipper.



Only wooden materials free of nails should be fed into the machine.



Serious injury or death can occur if towing safety rules are not followed, The wood chippers are supplied with low speed tires & wheels, not for hi-way use.



Review towing safety warnings in your towing vehicle manual.



Drive safely. Be aware of the added length of the wood chipper.



Choose a level surface to operate the wood chipper.  
Block the wood chipper wheels to prevent unintended movement.



Never tow or operate this wood chipper while under the influence of alcohol, drugs, or medication.



Risk of fire and explosion.  
Hot exhaust fumes from engine can cause fire. Gasoline is highly flammable and explosive. You can be burned or seriously injured when handling fuel.



Position muffler at least 213 cm (7 feet) from combustible objects.



Before adding fuel, stop the engine and keep heat, sparks, and flame away. Do not add fuel when engine is running or still hot. Do not smoke near the engine while fueling.



Do not pump fuel directly into engine at gas station. Static charge can build and ignite fuel. Use a safety approved fuel container to transfer gas to the engine. Wipe up fuel spills immediately.

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Only store and handle fuel outdoors. Gasoline vapors can ignite if they collect inside an enclosure. Explosion may result.



Do not change or add to exhaust system. Fire may result.



Do not change or add fuel tanks or fuel lines. Fire may result.



Before each use, check fuel tank and fuel lines for leaks. Any fuel leak is a fire hazard. Fix any fuel leaks before starting engine.



During transportation take precautions to make sure machine will not tip over and cause a fuel leak fire hazard.

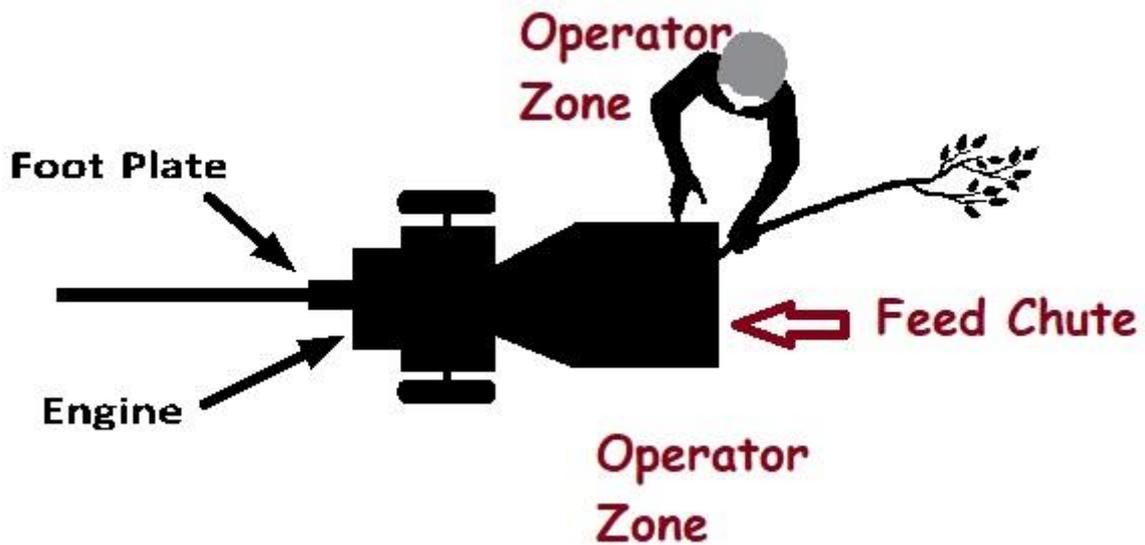


Poisonous fumes from engine can kill you. Do not operate indoors even if ventilated. For outdoor use only.



Do not touch the muffler as you may get burned.

**Note: Any modification to wood chipper will void all warranty**



## Setting up the RR400 Series Wood Chipper

For Instructions on how to properly setup your crated RR400 Series Wood Chipper please see the RR400 Series Wood Chipper Assembly Manual available on the Range Road website.

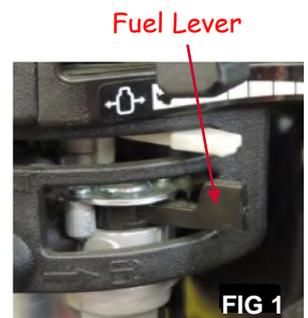
### 1. Operation

Proper Operation of the Firewood Processor

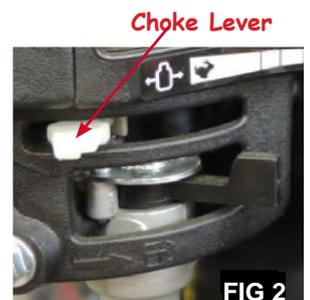
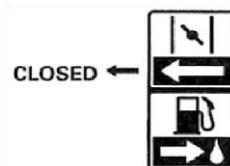
1. You must familiarize yourself with the controls and features of your Wood Chipper before continuing on to the next steps in this chapter.
2. When operating the wood chipper, make sure you are working from the safe OPERATOR ZONE, You should stay in this zone at all times when the wood chipper drum is in motion.
3. Never place any of your body into a position that causes unsafe operating conditions.
4. Always wear protective gear when operating the wood chipper.

### Starting the Engine:

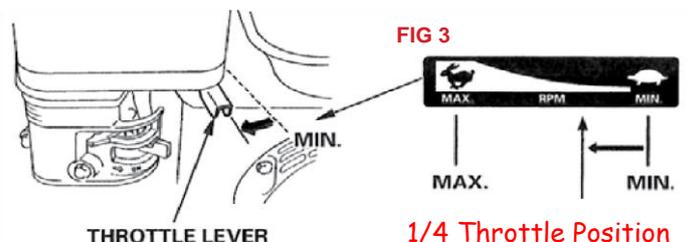
- 1) Make sure the fuel lever is in the ON Position (Fig.1)



- 2) When engine is cold, move the choke lever to the closed (ON) position (Fig.2)  
When engine is warm, leave the choke lever in the open (OFF) position.



- 3) Move the throttle lever away from the MIN position, slightly more than  $\frac{1}{4}$  toward the MAX position. (Fig.3)



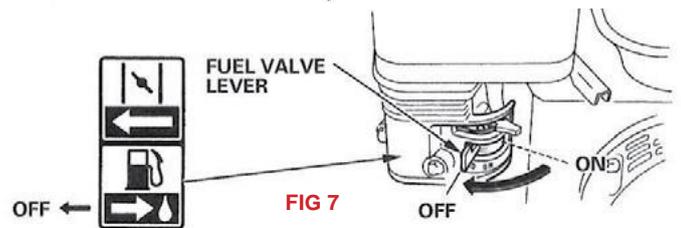
4) Turn the key to the start position and engage the starter until the engines starts to run.

OR

To stop the engine in an emergency situation, simply turn the key to the "off" position or push the emergency stop button.

To stop the engine under normal conditions, do the following:

- 1) Move throttle lever to the MIN position. Fig.6
- 2) Turn the key Switch to off.
- 3) Turn the fuel lever to the OFF position. Fig.7



### Setting the Engine Speed:

Move the throttle lever to MAX for operating speed. Fig. 8



## Chipping:

- 1) Wood and branches should be no larger than 115mm (4.5") inches in diameter.
- 2) Be kind to your chipper knives, they are high quality steel but they are not indestructible. All situations are different, you must use your best judgment about what to put in your chipper.
- 3) All chippers will perform better when chipping fresh, green limbs. Try to avoid dry or dirty limbs, any material that may contain nails or foreign objects should be avoided. These will greatly reduce the life or even break the knives.
- 4) Treat your chipper knives as you would a chainsaw blade or blades on your lawn mower. Be conscious of what you put into the chipper, and the knives will last much longer

**Do not place your hands into the feed chute when loading, this is a very UNSAFE method and could easily result in serious injury to your hands. Do not reach or step across the engine while the Wood Chipper is running. This is very UNSAFE, doing so could cause personal injury, or even death.**

## Clearing a Jam:

If the wood chipper gets jammed while chipping wood or branches, the engine must be stopped, clear the wood that is stuck and then restart the engine.

Stop the engine, turn the key to the off position AND push the emergency stop button.

Use a wrench and turn the drum shaft, first clockwise and then counter clockwise until the jam is cleared.

Clear the infeed chute.



## Maintenance:

Before performing maintenance, the wood chipper must be placed in maintenance mode.

- 1.) Turn off engine.
- 2.) Depress emergency stop button.
- 3.) In some cases the battery should be disconnected for maintenance.
- 4.) Allow 5-10 minutes for the unit to cool down.

After performing maintenance, make sure all guards, shields, and safety features are put back in place. Failure to follow this warning can result in serious injury.

**Refer to the engine owner's manual for engine maintenance.**

**Failure to do regular maintenance will void warranty**

## Lubrication:

The chipper drum bearings should be greased every 10 hours with a quality bearing grease.

Bearing 1: behind bottom belt pulleys



Bearing 2: on outside of body



## Tensioning Belts:

<p>Loosen 4- 16mm bolts holding engine mount plate to chipper body</p>	
<p>Loosen 2-16mm jam nuts and tighten the belt adjustment bolts. Adjust each bolt <math>\frac{1}{4}</math> turn at a time until you have less than 1" of deflection on the belts.</p> <p>Tightening these bolts actually moves the whole engine away from the bottom pulley on the machine, thus increasing the distance between the two pulleys and putting more tension on the belts</p>	
<p>Double check that upper and lower pulleys are still running true to each other</p>	
<p>Tighten 2-16mm jam nuts</p>	
<p>Tighten 4-16mm bolts holding engine mount plate to chipper body</p>	
<p>Replace belt cover and tighten 4-13mm bolts</p>	

## Replacing Belts:

<p>Remove 4 - 13mm Bolts from the belt cover, set cover to the side</p>	
<p>Loosen 2-16mm jam nuts and loosen the belt adjustment bolts</p>	
<p>Remove 2-13mm bolts holding inner belt cover and let the cover hang from the crankshaft</p>	
<p>Gently tilt and hold the engine until the belts are loose enough to remove, set the engine back down</p>	
<p>Rotate the bottom pulley by hand to make sure it is not jammed and to check that the bearings are smooth</p>	
<p>Gently tilt and hold the engine and install the new belts and gently set the engine back down</p>	

## RR400 Series

Install the 4-16mm bolts holding engine mount plate to chipper body, snug the bolts up -Do Not Tighten Them



Tighten the belt adjustment bolts. Adjust each bolt  $\frac{1}{4}$  turn at a time until you have less than 1" of deflection on the belts.

Tightening these bolts actually moves the whole engine away from the bottom pulley on the machine, thus increasing the distance between the two pulleys and putting more tension on the belts



Now tighten the 4-16mm bolts holding the engine plate



Re-install the 2-13mm bolts in the inner belt cover, center the cover over the pulleys and tighten the bolts



Re-install the 4-13mm bolts in the belt cover



## Trouble Shooting:

Symptom	
Engine won't start	<ul style="list-style-type: none"> <li>- Please refer to Engine users manual for engine specific Procedures.</li> <li>- Is the key in the "on" Position?</li> <li>- Is the emergency stop switch in the up position?</li> <li>- Is the safety switch on the infeed chute depressed completely?</li> <li>- Is the fuel lever in the ON position?</li> <li>- Is the gas fresh?</li> <li>- Is the spark plug clean? If it is dirty or cracked -replace it.</li> </ul>
Engine Smokes	<ul style="list-style-type: none"> <li>- Is engine oil full &amp; clean?</li> <li>- Is the air filter clean? If dirty-replace</li> <li>-You may be using the wrong oil—too light for the temperature. Refer to your Engine Owner's Manual for detailed information.</li> </ul>
Chipper does not seem to have full chipping power	-Belts may be loose -check & adjust
Limbs get stuck and stop engine	<ul style="list-style-type: none"> <li>-Limb is too large or hard. Clear the infeed chute and run smaller material until it cleans itself then slowly feed larger pieces</li> <li>-Green branches are much easier on the blades, dry wood wears the blades faster</li> <li>-see section on clearing a jam</li> </ul>
Belts need replaced	See section on tensioning or replacing belts

### Regular Maintenance Check List

Procedure	Before Each Use	Every 10 Hours	Every 25 Hours
Check engine oil	✓		
Check general equipment condition. (tighten bolts, etc.)	✓		
Check Knives	✓		
Check Belts	✓		
Check Tire Pressure			✓
Check engine components			✓
Change engine oil		First time 10 Hours	✓
Replace Air Filter			✓

## Specifications

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Model	RR403
Engine	13.5HP Briggs & Stratton
	Gasoline
Chipping Capacity	8-9 CBM/hour
Wood Diameter	125mm (5")
Chipper Knife	2 - reversible
Tire	16x8-7
Overall Height	1150mm (40")
Overall Length	1800mm (71")
Width	800mm (31.5")
Weight	460 Lbs
Drum Rpm	2400 RPM
Trailer Coupler	2"
Maximum Towing Speed	16 km/h (10 mph)

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

**Note: Any modification to wood chipper will void all warranty**

**Failure to do regular maintenance will void warranty**



## RR400 Series

### Range Road Equipment

This equipment comes with a 12 month warranty against Manufacturer's defects and excludes wear parts. If any product or part is proved to be defective within 12 months from date of purchase, by reason of improper workmanship and/or material we will replace, or repair at Range Road Enterprises Ltd. discretion, that part or product at no charge to you, excluding any freight costs.

**Items not covered:**

Wear parts -including Saw Bar, Saw Chain, Drive Sprocket, Lovejoy Coupling & Rubbers, Ram Cable, Tires, Bearings, Belts, Etc.

(Conveyor Belt - does not include rips or tears)

**The engine is warranted separately by the engine manufacturer** (Honda, Lifan, Kohler, Princess Auto, Ducar, Etc.)

The warranty begins on the date of sale and is warranted by Range Road Enterprises Ltd. to the original purchaser only. This Warranty does not cover items that have been damaged by accident, alteration, abuse or improper lubrication.

If the equipment is used commercially (Over 50 cords of firewood per year for processor) or a rental, warranty for this product is limited to a period of 90 days from the date of purchase.

**Warranty cancellation**

Unauthorized modification voids the warranty, Including but not limited to, welding, engine modification, pump and hydraulic system modification. The warranty is void if the user violates the assembly and/or operating & maintenance instructions.

Range Road Enterprises Ltd. shall not be liable under any circumstances for any incidental or consequential damages or expenses of any kind, including but not limited to - the cost of equipment rental, loss of profits, or cost of hiring services to perform tasks normally performed by the equipment.

Range Road Enterprises Ltd. obligation under this warranty shall be exclusively limited to repairing or replacing (at Range Road Enterprises Ltd. discretion) products which are determined by Range Road Enterprises Ltd. to be defective upon delivery F.O.B. (return freight paid by customer) Range Road Enterprises Ltd., and on inspection by Range Road Enterprises Ltd.. This warranty does not apply to defects due, directly or indirectly, to misuse, abuse, negligence, accidents, unauthorized repairs, alterations, lack of maintenance, acts of nature, or items that would normally be consumed or require replacement due to normal wear. In no event shall Range Road be liable for death, personal or property injury, or damages arising from the use of its products. Range Road Enterprises Ltd. does not issue credits or refunds on products purchased directly from a distributor or dealer.