range-road

# User Manual

## SAFETY AND OPERATION INSTRUCTIONS



# RR130

**IMPORTANT: Read safety rules and instructions carefully before operating equipment.**

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## Conventions used in this manual

### ⚠ WARNING

**This indicates a hazardous situation, which, if not avoided, could result in death or serious injury.**

### ⚠ CAUTION

**This indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.**

### ⚠ NOTICE

**This information is important in proper using of your machine. Failure to follow this instruction could result in damage to your machine or property.**

## Additional Information and Potential Changes

**We reserve the right to discontinue, change, and improve its products at any time without notice or obligation to the purchaser. The descriptions and specifications contained in this manual were in effect at printing. Equipment described within this manual may be optional. Some illustrations may not be applicable to your machine.**

# PART I: General Safety Rules

## ⚠ WARNING

**Read this Safety & Operating Instructions manual before you use the LOG SPLITTER. Become familiar with the operation and service recommendations to ensure the best performance of your machine.**

## Labels

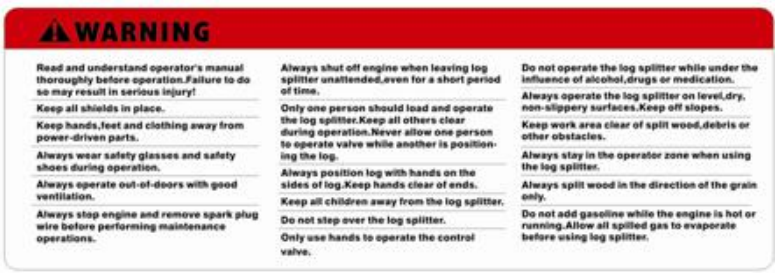
**The LOG SPLITTER carries prominent labels as reminders for its proper and safe use. Shown below are copies of all the Safety and Information labels that appear on the equipment. Take a moment to study them and make a note of their location on your LOG SPLITTER as you set up and before you operate the unit. Replace damaged or missing safety and information labels immediately.**















## Protecting Yourself and Those Around You

# ⚠ WARNING

**This is a high-powered machine, with moving parts operating with high energy. You must operate the machine safely. Unsafe operation can create a number of hazards for you, as well as anyone else in the nearby area. Always take the following precautions when using this machine:**

**A. Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people, their property, and themselves.**
**B. Always wear protective goggles or safety glasses with side shields while using the Log Splitter to protect your eyes from possible thrown debris.**
**C. Avoid wearing loose clothing or jewelry, which can catch on moving parts.**
**D. We recommend wearing gloves while using the Log Splitter. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.**
**E. Wear shoes with non-slip treads when using your Log Splitter. If you have safety shoes, we recommend wearing them. Do not use the machine while barefoot or wearing open sandals.**
**F. Wear long pants while operating the Log Splitter.**
**G. Use ear protectors or ear plugs rated for at least 20dba to protect your hearing.**
**H. Keep bystanders at least 50 feet away from your work area at all times. Stop the engine when another person or pet approaches.**

## Safety for Children and Pets

# ⚠ WARNING

**Tragic accidents can occur if the operator is not alert to the presence of children and pets. Children are often attracted to the machine and the splitting activity. Never assume that**

**children will remain where you last saw them. Always follow these precautions:**

**A. Keep children and pets at least 50 feet from the working area and ensure they are under the watchful care of a responsible adult.**

**B. Be alert and turn the machine off if children or pets enter the work area.**

**C. Never allow children to operate the Log Splitter.**

## Safety with Gasoline - Powered Machines

# ⚠ WARNING

**Gasoline is a highly flammable liquid. Gasoline also gives off flammable vapor that can be easily ignited and cause a fire or explosion. Never overlook the hazards of gasoline. Always follow these precautions:**

**A. Never run the engine in an enclosed area or without proper ventilation as the exhaust from the engine contains carbon monoxide, which is an odorless, tasteless, and a deadly poisonous gas.**

**B. Store all fuel and oil in containers specifically designed and approved for this purpose and keep away from heat and open flame, and out of the reach of children.**

**C. Replace rubber fuel lines and grommets when worn or damaged and after 5 years of use.**

**D. Fill the gasoline tank outdoors with the engine off and allow the engine to cool completely. Don't handle gasoline if you or anyone nearby is smoking, or if you're near anything that could cause it to ignite or explode. Reinstall the fuel tank cap and fuel container cap securely.**

**E. If you spill gasoline, do not attempt to start the engine. Move the machine away from the area of the spill and avoid creating any source of ignition until the gas vapors have dissipated. Wipe up any spilled fuel to prevent a fire hazard and properly dispose of the waste.**

**F. Allow the engine to cool completely before storing in any enclosure. Never store a machine that has gas in the tank, or a fuel container, near an open flame or spark such as a water heater, space heater, clothes dryer or furnace.**

**G. Never make adjustments or repairs with the engine running. Shut down the engine, disconnect the spark plug wire, keeping it away from the spark plug to prevent accidental starting, wait 5 minutes before making adjustments or repairs.**

**H. Never tamper with the engine's governor setting. The governor controls the maximum safe operation speed and protects the engine. Over-speeding the engine is dangerous and will cause damage to the engine and to the other moving parts of the machine. If required, see your authorized dealer for engine governor adjustments.**

**I. Keep combustible substances away from the engine when it is hot.**

**J. Never cover the machine while the muffler is still hot.**

**K. Do not operate the engine with the air cleaner or the carburetor air intake cover removed. Removal of such parts could create a fire hazard. Do not use flammable solutions to clean the air filter.**

**L. The muffler and engine become very hot and can cause a severe burn; do not touch.**

## General Safety

# ⚠ WARNING

**Operating this Log Splitter safely is necessary to prevent or minimize the risk of death or serious injury. Unsafe operation can create a number of hazards for you. Always take the following precautions when operating this Log Splitter:**

**A. Your Log Splitter is a powerful tool, not a plaything. Exercise extreme caution at all times. The machine is designed to split logs. Do not use it for any other purpose.**

**B. Know how to stop the Log Splitter quickly; see "stopping the engine" in Part III.**

**C. Never operate your unit on a slippery, wet, muddy, or icy surface. Exercise caution to avoid slipping or falling.**

**D. See manufacturer's instructions for proper operation and installation of accessories.**

**E. Never use the machine without ensuring that all guards and shields are in place.**

**F. Never, under any conditions, remove, bend, cut, fit, weld, or otherwise alter standard parts on the Log Splitter. This includes all shields and guards. Modifications to your machine could cause personal injuries and property damage and will invalid your warranty.**

**G. Allow only one person to operate the Log Splitter at any time.**

**H. If the machine start to make an unusual noise or vibrate, shut down the engine, disconnect the spark plug wire, keeping it away from the spark plug to prevent accidental starting, wait 5 minutes for engine to cool down, then inspect for damage. Vibration is generally a warning of trouble. Check damaged parts and clean, repair and/or replace as necessary.**

**I. Never tamper with safety devices. Check their proper operation regularly.**

**J. Before performing any maintenance or inspection procedure on the Log Splitter shut down the engine, disconnect the spark plug wire keeping it away from the spark plug to prevent accidental starting, wait 5 minutes for machine to cool down.**

**K. Never allow people who are unfamiliar with these instructions to use the Log Splitter. Allow only responsible individuals who are familiar with these rules of safe operation to use your machine.**

**L. Never overload or attempt to split logs beyond the manufacturer's recommendation. It could result in personal injury or damage to the machine.**

**M. While using the Log Splitter, don't hurry or take things for granted. When in doubt about the equipment or your surroundings stop the machine and take time to look things over.**

**N. Never operate the machine when under the influence of alcohol, drugs, or medication.**

**O. Use the machine only in daylight.**

**P. Stay alert for hidden hazards or traffic.**

**Q. Keep all nuts and bolts tight and keep the equipment in good operating condition.**

# A Note to All Users

**List of warnings and cautions cannot be all-inclusive. If situations occur that are not covered by this manual, the operator must apply common sense and operate this LOG SPLITTER in a safe manner. Contact the dealers for assistance in your area.**

# PART II: Setting Up the Log Splitter

**It may be helpful to familiarize yourself with the controls and features of your LOG SPLITTER as shown in Figure 2, before beginning these procedures. If you have any question, please contact the dealers in your area.**

## Taking out from plywood package

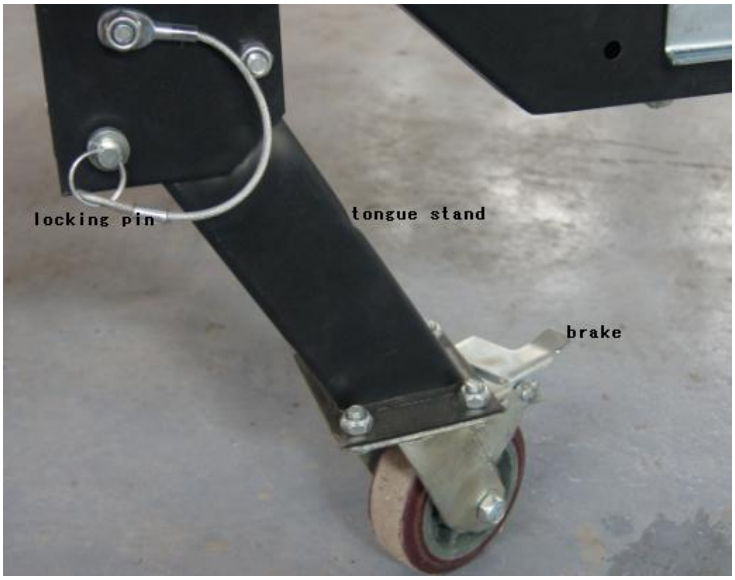



## LOG SPLITTER Controls and Features

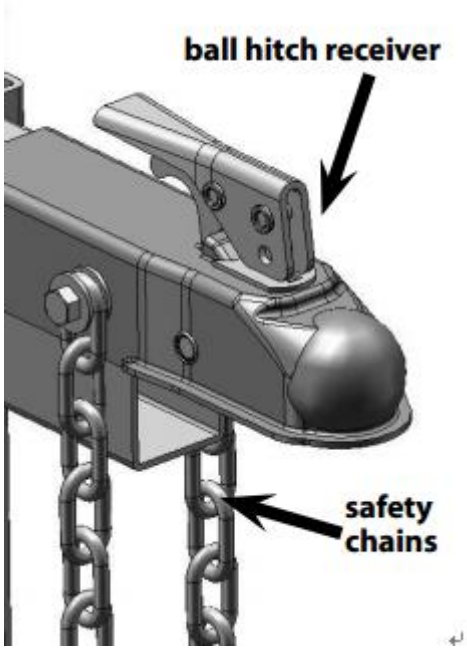



**Figure 2**

# Tongue Stand




# Towing the Log Splitter



# MECHANICAL SPECIFICATIONS

| | Recoil Start |
|---|---|
| **Engine** | **6.5HP four strokes, 3600rpm** |
| **Power** | **Gasoline/petrol** |
| **Control** | **Two-hands control** |
| **Wedge Height** | **200mm** |
| **Log Capacity** | **Length max 550mm,diameter max 710mm** |
| **Cycle Time** | **3 seconds(Approximate)** |
| **Tire** | **6.5-8，4.0-8，4.8-8** |
| **H-beam height** | **710mm** |
| **Overall Height** | **970mm** |
| **Overall Length** | **2110mm** |
| **Width** | **840mm** |
| **Splitter weight** | **235kgs** |
| **Flywheel Weight** | **25kgs** |
| **Sprocket Rate** | **1:8** |
| **Flywheel Max RPM** | **450** |

***The diameter listed is indicative of the maximum suggested size - a small log can be difficult to split when it contains knots or a particularly tough fiber. On the other hand, it may not be difficult to split logs with regular fibers even if its diameter exceeds the maximum indicated above.**

# PART III: Operating the Log Splitter

**It may be helpful to better familiarize yourself with the features of your Log Splitter by reviewing Figure 1 in PART II before beginning the steps outlined in this chapter.**

## ⚠ WARNING

**A. Read and understand all instructions, safety precautions, and/or warnings listed in "PART I: General Safety Rules" before operating the LOG SPLITTER. If any doubt or question arises about the correct or safe method of performing anything found in this manual, please contact the dealers in your area.**

**B. When operating the Log Splitter, make sure you are standing in the safe operating area (OPERATOR ZONE). You must stay in the safe operating area at all times when the ram is in motion (whether extending or retracting). Never place any part of your body into a position that causes an unsafe operating condition.**

**C. Before loading and operating the Log Splitter, always wear protective gear, including safety goggles, hearing protection, tight-fitting gloves without draw strings or loose cuffs, and steel-toed shoes.**

**D. Knowing the correct and incorrect methods of splitting logs. Never split a log using an incorrect or unsafe method.**

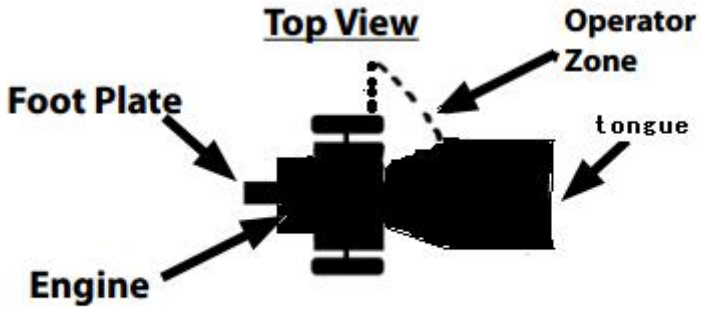
## Starting

1. **Position your Log Splitter on flat, dry ground, and then stop the front wheel with brake, make sure the machine cannot be moved.**
2. **Make sure the fuel shut-off valve is in the "ON" position.**
3. **Move the choke control lever to the "CHOKE" position (should only be needed if the engine is cold).**
4. **Move the throttle control lever to the "FAST" position.**
5. **Recoil Start: Turn the Ignition Switch to the "On" position. Grasp the recoil starter handle and slowly pull until you feel resistance. Let the cord retract a little bit then pull the cord rapidly to start the engine. One or two pulls usually starts the engine.**
6. **Electric Start: Turn and hold the Key in the start position until Engine starts then let the Key return to run position.**
7. **Move the choke control lever (if used for cold engine) slowly back to the "RUN" position when the engine is running well.**
8. **If the Log Splitter has not been running (cold engine), warm up the engine by running the engine at half throttle for 3 to 4 minutes, then advance the engine throttle control to the maximum speed.**

## Stopping

1. **Move the Throttle Lever to IDLE.**
2. **Recoil Start: Turn the Ignition Switch to the OFF position.**
3. **Electric Start: Turn the Key to the OFF position.**

## Operator Zone




LOG SPLITTER OPERATOR ZONE

## Log Splittering

**NOTICE**

**All logs should be no longer than 24".**

**WARNING**

**Do not place your hands on the ends of the log when loading the Log Splitter. This is a very UNSAFE method and could result in injury to your hands.**

**Do not reach or step across the rail while the Log Splitter is running. This is a very UNSAFE method which could cause personal injury, even death.**

**Do not reach forward and attempt to catch the split wood As the log is being split - let it fall to the ground.**

**CAUTION**

**Never attempt to split wood across the grain. The Log Splitter was not designed for cross-grain splitting. Doing so could damage the Log Splitter and may cause personal injury.**

**Make sure both ends of the log that you are splitting are cut as square as possible. This will prevent the log from sliding out of position when under pressure**

1. **Place the log on the Log Splitter. Grasp the log on the sides near the middle of the block. Center the log, side-to-side, on the rail of the Log Splitter, making sure that one end is against the Splitting Wedge.**
2. **With one hand on the Lever and the other hand push the start ball, and then pull the handle lever to the "SPLIT", and then take away your hands as soon as possible, otherwise the handle lever will hit your hands when it is retracted from "SPLIT" to "AUTO-RETRACT".**

# Splitting Tough Logs

**If the Ram stops before the end of the stroke while splitting a tough Log, the engine will be stopped, and then you push the recover button when you down the control handle, the ram will be back, if the ram cannot be back, you can put the ram back with your hands, and then restart the engine, and split again, the machine should split the log.**

# PART IV: Maintaining the Log Splitter

**Regular maintenance is the way to ensure the best performance and long life of your machine. Please refer to this manual and the engine manufacturer's user manual for maintenance procedures.**

## ⚠ WARNING

**Before performing any maintenance procedure or inspection, stop the engine, wait five minutes to allow all parts to cool. Disconnect the spark plug wire, keeping it away from the spark plug. Disconnect the Battery Terminals (Electric start only).**

## Regular Maintenance Checklist

| Procedure | Before Each Use | Every 3 Hours | Every 25 Hours | Every 100 Hours |
|---|---|---|---|---|
| Check engine oil level | Δ | | | |
| Check general equipment condition | Δ | | | |
| Check wedge for sharpness | Δ | | | |
| Grease surface of slide rail | Δ | | | |
| Check belts | Δ | | | |
| Grease rack and pinion | | Δ | | |
| Check tire pressure | | | Δ | |
| Clean engine exterior and cooling | | | Δ | |
| Change Engine Oil | First time 5hours | | Δ | |
| Replace air filter | | | Δ | |
| Replace spark plug | | | | Δ |

## Engine Service

**Refer to the engine manufacturer's user manual for engine maintenance.**

## Lubrication

# ⚠ NOTICE

**All Bearings of your Splitter are sealed units and should have sufficient lubricant to last the life of your machine with normal use.**

## Greasing the rack and Pinion

# ⚠ NOTICE

**All the rack and pinion should be greased before every use.**

# PART V: Troubleshooting

**Most problems are easy to fix. Consult the Troubleshooting Table below for common problems and their solutions. If you continue to experience problems, contact the dealers in your area.**

## ⚠ WARNING

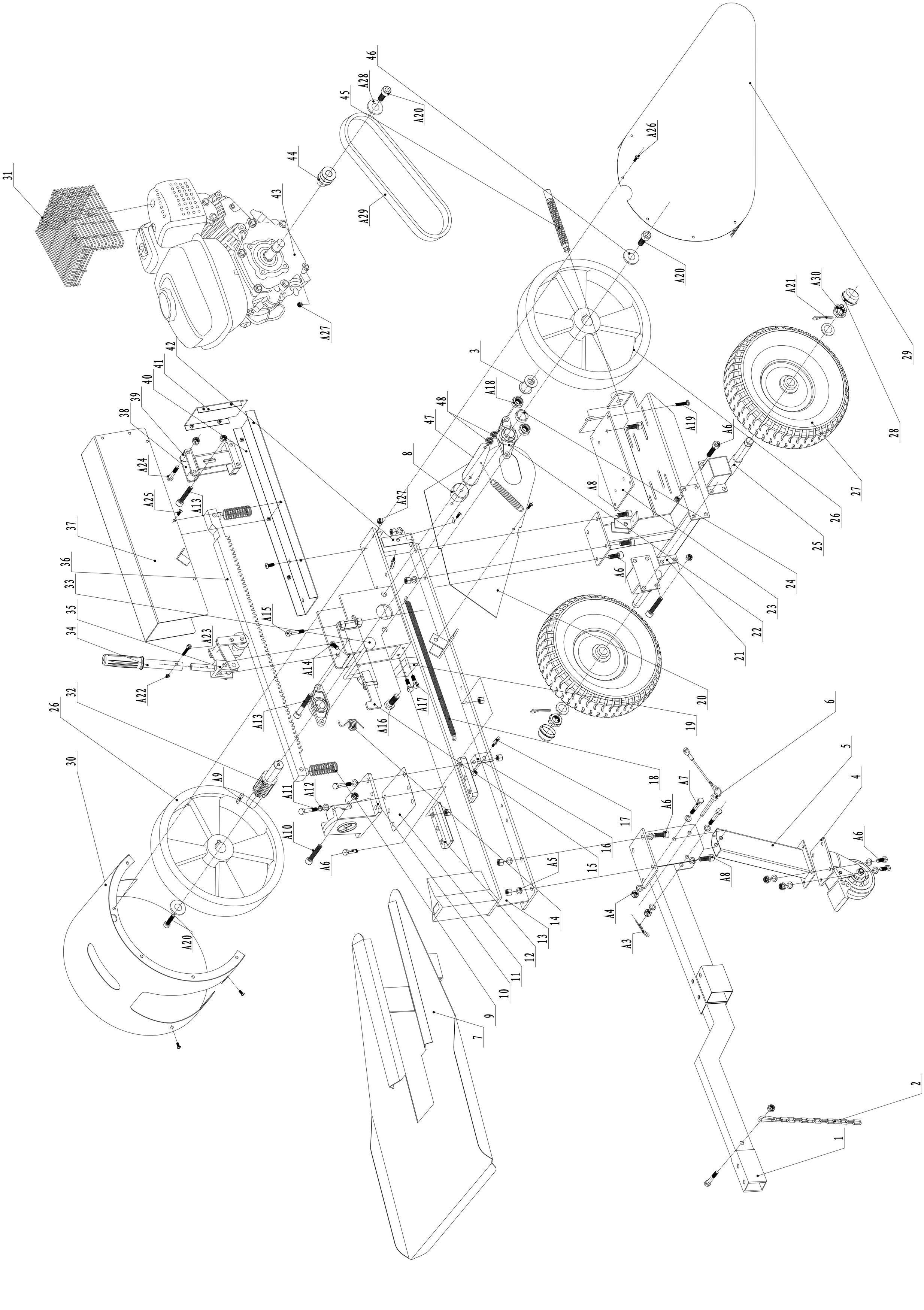
**Before performing any maintenance procedure or inspection, stop the engine, wait five minutes to allow all parts to cool. Disconnect the spark plug wire, keeping it away from the spark plug.**

## Troubleshooting Table

| SYMPTOM | POSSIBLE CAUSE |
|---|---|
| *The engine won't start.*<br><br>*(Please refer to the engine user manual for engine-specific procedures.)* | ➢ *Is the ignition switch in the "ON" position?*<br>➢ *Is the fuel shut-off valve on?*<br>➢ *Are you using fresh, clean gas? If the gas is old, change it. Use a fuel stabilizer if you keep gas longer than 30 days.*<br>➢ *Is the spark plug clean? If the spark plug is dirty or cracked, change it. If it's oily, leave it out, hold a rag over the plug hole and pull the recoil cord several times to blow out any oil in the cylinder, then wipe off the plug and reinsert it.* |
| *The engine lacks power or is not running smoothly.*<br><br>*(Please refer to the engine user manual for engine-specific procedures.)* | ➢ *Check that the Throttle Lever is in the "Run" position.*<br>➢ *Is the air filter clean? If it's dirty, change it following the procedure in the engine manufacturer's owner's manual.*<br>➢ *Is the spark plug clean? If it's fouled or cracked, change it. If it's oily, leave it out, hold a rag over the plug hole and pull your recoil cord several times to blow out any oil in the cylinder, then wipe off the plug and reinsert it.*<br>➢ *Are you using fresh, clean unleaded gas? If it's old, change it. Use a fuel stabilizer if you keep gas longer than 30 days.*<br>➢ *Does your engine have the right amount of clean oil? If it's dirty, change it following the procedure in the engine manufacturer's owner's manual.*<br>➢ *Check the oil level and adjust as needed.* |
| *Engine smokes.*<br><br>*(Please refer to the engine user manual for engine-specific procedures.)* | ➢ *Check the oil level and adjust as needed.*<br>➢ *Check the air filter and clean or replace if needed.*<br>➢ *You may be using the wrong oil—too light for the temperature. Refer to your Engine Owner's Manual for detailed information.*<br>➢ *Clean the cooling fins if they're dirty.* |

| | |
|---|---|
| *Rack catching on tail tube (at end of stroke).*<br><br>*Rack returning very slow or not going all the way back.* | ➢ *Adjust carriage hold downs (slide guides).*<br>➢ *Check for wood chips or debris between ram bushing plate and beam.*<br>➢ *Check rack lift bearing for alignment or damage.*<br>➢ *Return spring is unhooked or damaged. Reconnect or replace as needed.*<br>➢ *Machine wedge end too low. Must be almost level or wedge end slightly higher.* |
| *Operator Lever Snapping out of gear or not staying in gear.* | ➢ *Lever not all the way forward when rack comes under full load. Push lever quicker and more forcefully into the full forward position.*<br>➢ *Ram has been overloaded at lower part of face. Check rack gear for straightness.* |
| *Rack slamming back too fast.* | ➢ *Wedge end of machine too high. Must be almost level with ram end or just slightly higher.*<br>➢ *Springs not operating properly. Fix or replace as needed.* |
| *Machine does not seem to have full splitting power.* | ➢ *The belts may be too loose and slipping. Adjust or replace belts as needed.* |
| *Operator Lever not engaging rack with pinion gear.* | ➢ *Clean wood chips or other debris from under rack.*<br>➢ *Clean accumulated dirt from frame where carriage assembly rests against rubber bumpers.* |

| Ref. | Description | Num | Ref. | Description | Num |
|---|---|---|---|---|---|
| 1 | Tow hitch | 1 | 40 | Track | 1 |
| 2 | Chain | 1 | 41 | Back plate of track | 1 |
| 3 | Tension wheel | 1 | 42 | Inner plate fixation | 1 |
| 4 | Universal Wheel | 1 | 43 | Engine | 1 |
| 5 | Forefoot | 1 | 44 | Motor pulley | 1 |
| 6 | Pin | 1 | 45 | Screw rod | 1 |
| 7 | Support Table | 1 | 46 | ϕ9* ϕ35*T5 gasket | 2 |
| 8 | Tension wheel fitting | 1 | 47 | Tension wheel support | 1 |
| 9 | Spring(of gear rod) | 2 | 48 | 608 bearing | 2 |
| 10 | Split head | 1 | A1 | M12×75 hex bolt | 3 |
| 11 | Split Head pad | 1 | A 2 | M12 self-lock nut | 8 |
| 12 | Split head Fitting | 2 | A 3 | B-pin | 1 |
| 13 | Beam | 1 | A 4 | M10 self-lock nut | 10 |
| 14 | Spring(of control ball) | 1 | A 5 | ϕ10 spacer | 16 |
| 15 | Control ball fixing | 1 | A 6 | M10×25 hex bolt | 12 |
| 16 | Frame(of spring fixation) | 1 | A 7 | M10×70 cylinder bolt | 6 |
| 17 | Rings | 2 | A 8 | M10×35 cylinder bolt | 2 |
| 18 | Long spring | 2 | A 9 | 8×8 flat key | 2 |
| 19 | Damping tendon | 1 | A 10 | M12×75 cylinder bolt(8.8) | 2 |
| 20 | Inside board | 1 | A 11 | M10×45 hex bolt(8.8) | 6 |
| 21 | Engine back-plate | 1 | A 12 | ϕ10 gasket | 2 |
| 22 | Bearing | 2 | A 13 | M12×120 cylinder bolt | 2 |
| 23 | Engine fixation plate | 1 | A 14 | M12×35 bolt(8.8) | 1 |
| 24 | Bearing ring | 2 | A 15 | M12×80 bolt | 1 |
| 25 | Tire fixation | 2 | A 16 | M16×45 hex bolt | 4 |
| 26 | Pulley | 1 | A 17 | M8 bolt | 2 |
| 27 | Tire | 2 | A 18 | M16 self-lock nut | 4 |
| 28 | Wheel Dust cover | 1 | A 19 | M8×20 round head bolt | 4 |
| 29 | Belt cover | 1 | A 20 | M8×20 bolt(8.8) | 3 |
| 30 | Cover | 1 | A 21 | ϕ4 cotter pin | 2 |
| 31 | Motor heat protection | 1 | A 22 | M6 nut | 1 |
| 32 | Transmission shaft | 1 | A 23 | M6×35 bolt | 1 |
| 33 | Control ball | 1 | A 24 | M10×60 hex bolt | 4 |
| 34 | Handle | 1 | A 25 | M6×15 bolt | 10 |
| 35 | Trigger | 1 | A 26 | M6×10 bolt | 10 |
| 36 | Gear rod | 1 | A 27 | M8 self-lock nut | 6 |
| 37 | Gear rod cover | 1 | A 28 | ϕ8× ϕ32×T3 gasket | 1 |
| 38 | Gear rod fixation | 1 | A29 | belt | 2 |
| 39 | Small nylon wheel | 4 | A30 | Slot nut | 2 |


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