

MODEL NO.

RR270

Owner's Manual

ASSEMBLY & OPERATING INSTRUCTIONS



This safety alert symbol identifies important safety messages in this manual. Failure to follow this important safety information may result in serious injury or death.

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IMPORTANT SAFETY INFORMATION



WARNING: Read and thoroughly understand all instructions in this manual and on safety decals before assembling or operating this log splitter. Failure to do so may cause serious injury or death. Do not allow anyone to operate this log splitter who has not read this manual. As with all power equipment, a log splitter can be dangerous if assembled or used improperly. Do not operate this log splitter if you have any questions concerning safe operation. To get answers to any questions, email our customer service department at sales@range-road.ca.



This is the SAFETY ALERT SYMBOL. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates a hazardous situation which, if not avoided, will result in serious injury or death.



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



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

NOTICE

NOTICE is used to address practices not related to personal injury.

INTENDED USE

NEVER use this log splitter for any other purposes than splitting wood. It is designed for this use **only**. Any other use can cause serious injury or death.

PERSONAL PROTECTIVE EQUIPMENT



BEFORE operating this log splitter, make sure that you wear safety gear such as goggles or safety glasses, steel toed shoes and tight fitting gloves (without loose cuffs or draw strings). Always wear a protective hearing device when operating this log splitter.

SAFETY DECALS

Make sure that all safety warning decals are in good condition and readable. Always replace missing or defaced decals. Contact Range Road Enterprises for replacement decals.



IMPORTANT SAFETY INFORMATION

GENERAL SAFETY

ALWAYS keep the operator's manual nearby for reference. Reread the manual periodically.

ALWAYS keep all bystanders and pets a minimum of 10 feet away from your work area when operating this log splitter. Only the operator is to be near the log splitter during use.

NEVER allow adults lacking proper instructions and understanding to operate this log splitter.

NEVER actuate the control until all people are clear of the work area.

NEVER wear loose clothing or jewelry that can be caught by moving parts of the log splitter. Keep clothing and hair away from all moving parts when operating this log splitter.

NEVER operate the log splitter when under the influence of alcohol, drugs or medication or when otherwise not alert enough to operate dangerous machinery.

WORK AREA

NEVER operate the log splitter on slippery, wet, muddy or icy ground.

NEVER operate the log splitter in an enclosed area. Exhaust fumes contain carbon monoxide which can be deadly when inhaled.

ONLY operate the log splitter on level ground. Operating on a slope could cause the log splitter to roll over or logs to fall off.

ONLY operate the log splitter in daylight or under good artificial light.

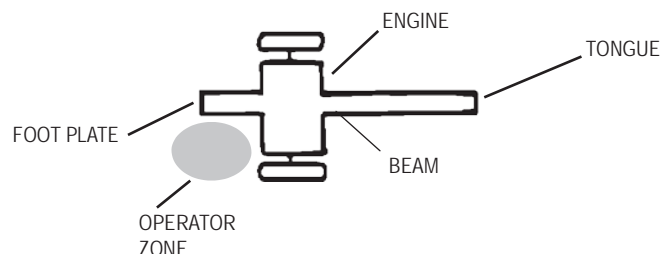
ALWAYS keep the work area clean. Remove split wood around the log splitter immediately so that you don't stumble over it.

PREPARATION OF THE LOG

Both ends of the log should be cut as square as possible to help prevent the log from riding out of the splitter during operation. Do not split logs greater than 610mm in length.

OPERATION OF THE LOG SPLITTER

ONLY operate the log splitter from the operator zone as shown in the diagram. The operator has the safest and most efficient access to the control valve and the beam in this location. Operating the log splitter in another location can result in serious injury or death.





IMPORTANT SAFETY INFORMATION

ALWAYS block the wheels to prevent movement of the log splitter while in operation.

KNOW how to stop the log splitter and disengage the controls before operating it.

NEVER place hands or feet between the log and splitting wedge during forward or reverse stroke as this could result in serious injury or death.

NEVER straddle or step over the log splitter during operation.

NEVER reach or bend over the log splitter to pick up a log.

NEVER try to split two logs on top of each other.

NEVER try to cross split a log.

NEVER attempt to load the log splitter when the ram or wedge is in motion.

NEVER use your foot, a rope or any extension device to operate the control lever on the valve. Only use hand.

NEVER move the log splitter while the engine is running. Shut off the engine if you are leaving the log splitter, even for a short period of time.

NEVER touch the muffler and other hot areas of the engine during operation. Wait until the engine cools down.

GENERAL REPAIR

NEVER operate your log splitter when it is in poor mechanical condition or in need of repair.

NEVER alter your log splitter in any manner. Such alterations may cause your log splitter to be unsafe and will void the warranty.

NEVER tamper with the engine to run it at excessive speeds. The maximum engine speed is preset by the manufacturer and is within safety limits. Refer to the engine owner's manual for your particular log splitter.

NEVER perform any service or repair on your log splitter without first removing the spark plug wire.

ALWAYS perform all recommended maintenance procedures before using your log splitter.

ALWAYS check the level of hydraulic oil and engine oil before operation.

ALWAYS periodically check that all nuts, bolts, screws, hydraulic fittings and hose clamps are tight.

ALWAYS replace all damaged or worn parts immediately.

ALWAYS be sure that all replacement parts meet manufacturer's specifications.



IMPORTANT SAFETY INFORMATION

MAINTENANCE & SAFETY

The hydraulic system of your log splitter requires careful inspection along with the mechanical parts. Be sure to replace frayed, kinked, cracked or otherwise damaged hydraulic hoses or hydraulic components.

NEVER check for leaks of hydraulic fluid with your hand. Fluid escaping from a small hole can be almost invisible. Escaping fluid under pressure can have sufficient force to penetrate skin causing **SERIOUS INJURY** or even **DEATH**. Leaks can be safely detected by passing a piece of cardboard over the suspected leak and looking for discoloration.

NEVER remove the cap from the hydraulic tank or reservoir while the log splitter is running. The tank could contain hot oil under pressure which could result in serious injury.

NEVER adjust the hydraulic valve. The pressure relief valve on your log splitter is preset at the factory. Only a qualified service technician should perform this adjustment.

ALWAYS seek professional medical attention immediately if injured by escaping hydraulic fluid. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

ALWAYS be sure to relieve all pressure by shutting off the engine and moving the valve control handle back and forth should it become necessary to loosen or remove any hydraulic fitting.

FIRE PREVENTION

NEVER operate your log splitter near a flame or spark or smoke during operation. Hydraulic oil and gasoline are flammable and can explode.

NEVER fill the gas tank while the engine is hot or running. Allow the engine to cool before refueling.

ONLY refuel your log splitter in a clear area with no gas fumes or spilled gas.

ALWAYS replace the gas cap securely.

If gasoline has spilled, move the log splitter away from the area of the spill and avoid creating any source of ignition until the spilled gas has evaporated.

ALWAYS drain the fuel tank prior to storage to avoid the potential fire hazard.

ALWAYS store gasoline in an approved, tightly sealed container and away from heating appliances. Store the container in a cool, dry place.



IMPORTANT SAFETY INFORMATION

IMPORTANT NOTE – (spark arrester):

As a precautionary measure against possible flying sparks, always take a Class B fire extinguisher with you when operating this log splitter in dry areas. This log splitter is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or provincial laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. Federal laws apply on federal lands. A spark arrester muffler is optional and available as an accessory at your nearest engine dealer. Always check the legal requirements in your area.

TOWING SAFETY

NEVER attempt to move your log splitter over hilly or uneven terrain without a tow vehicle or adequate help.

NEVER carry any cargo or wood on your log splitter.

NEVER allow anyone to sit or ride on your log splitter.

NEVER exceed 90 kph when towing your log splitter. Towing the log splitter at speeds higher than 90 kph could result in loss of control, damage to the equipment, or serious injury or death. Adjust towing speed for terrain and conditions. Be extra cautious when towing over rough terrain, especially railroad crossings, and avoid sharp turns and steep angles when towing your log splitter.

NEVER exceed weight capacity of ball or load limits of coupler.

ALWAYS confirm coupler tightness each time before towing and after towing 80 kilometers.

ALWAYS disconnect your log splitter from the towing vehicle before operating it.

ALWAYS be careful when backing up with your log splitter in tow. It could jackknife.

ALWAYS allow for added length of your log splitter when turning, parking, crossing intersections and in all driving situations.

ALWAYS use safety chains when towing your log splitter.

ALWAYS check all local and state regulations regarding towing, licensing, and lights before towing your log splitter.

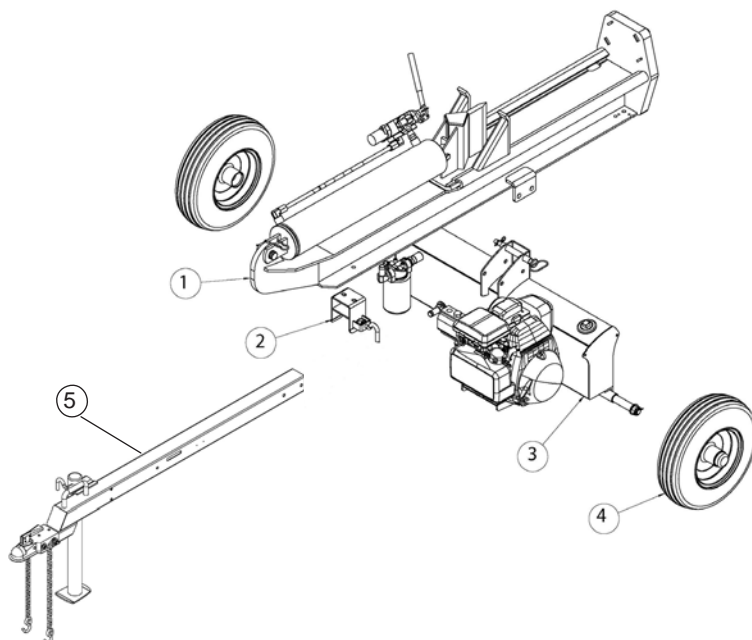
ALWAYS check before towing to make sure that the log splitter is correctly and securely attached to the towing vehicle and that the safety chains are secured to the hitch or bumper of the vehicle with enough slack to allow turning. Always use a Class I, 2" ball with this log splitter.

ALWAYS replace ball or coupler if damaged.

ALWAYS turn the fuel shut off valve on the engine to the "OFF" position before towing the log splitter. Failure to do so may result in flooding the engine.

ASSEMBLY INSTRUCTIONS

NOTE: This log splitter was partially assembled at the factory. Refer to the drawings and parts list should it become necessary to disassemble the unit for repair or replacement of parts.

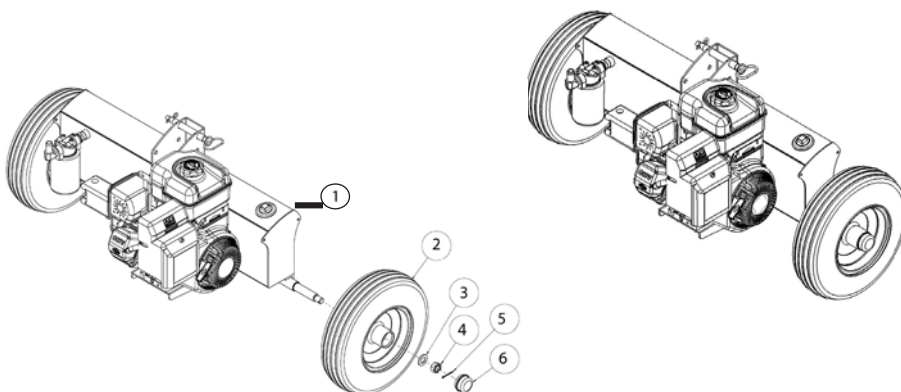


REF NO.	DESCRIPTION	QTY.
1	Beam Assembly	1
2	Beam Lock Assembly	1
3	Tank Assembly	1
4	Tire and Wheel	2
5	Tongue Assembly	1

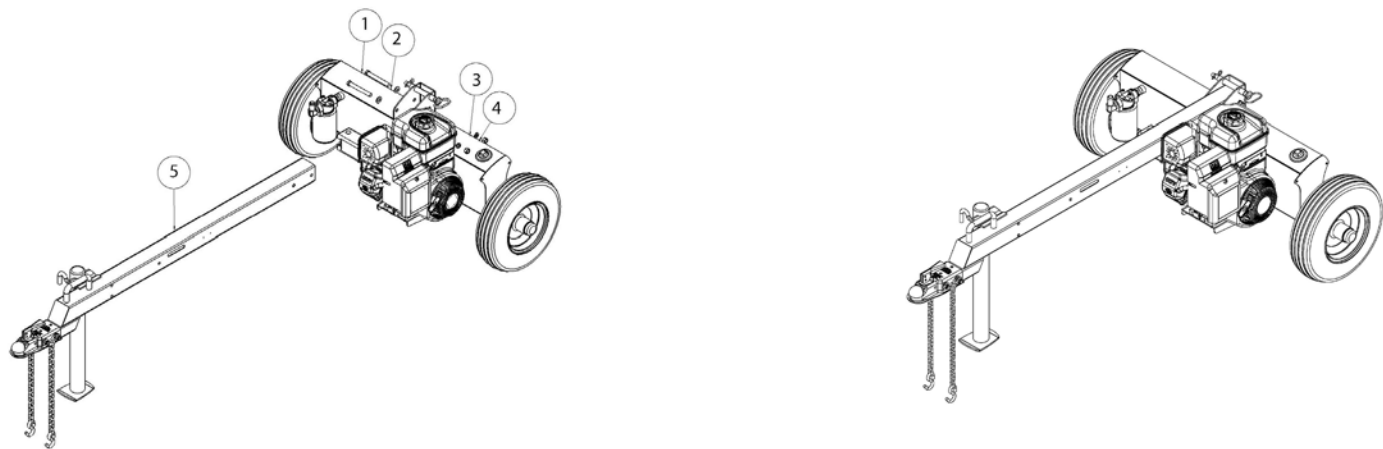
STEP 1: Remove all the components from the shipping container. Inspect each piece for shipping damage. If any part is damaged, contact your dealer or delivering carrier.

STEP 2: Attach the two wheels (2) to the tank assembly (1) wheel spindles using the 20mm light flat washers (3), 20mm slotted nuts (4), 1/8" x 1-1/2" cotter pins (5) and the hub caps (6). These items are in the hardware package. Tighten the slotted nuts and make sure the wheels rotate freely.

ITEM NO.	DESCRIPTION	QTY.
1	Tank Assembly	1
2	Wheel Assembly	2
3	20mm Light Flat Washer	2
4	20mm Slotted Nut	2
5	1/8" x 1-1/2" Cotter Pin	2
6	Hub Cap	2

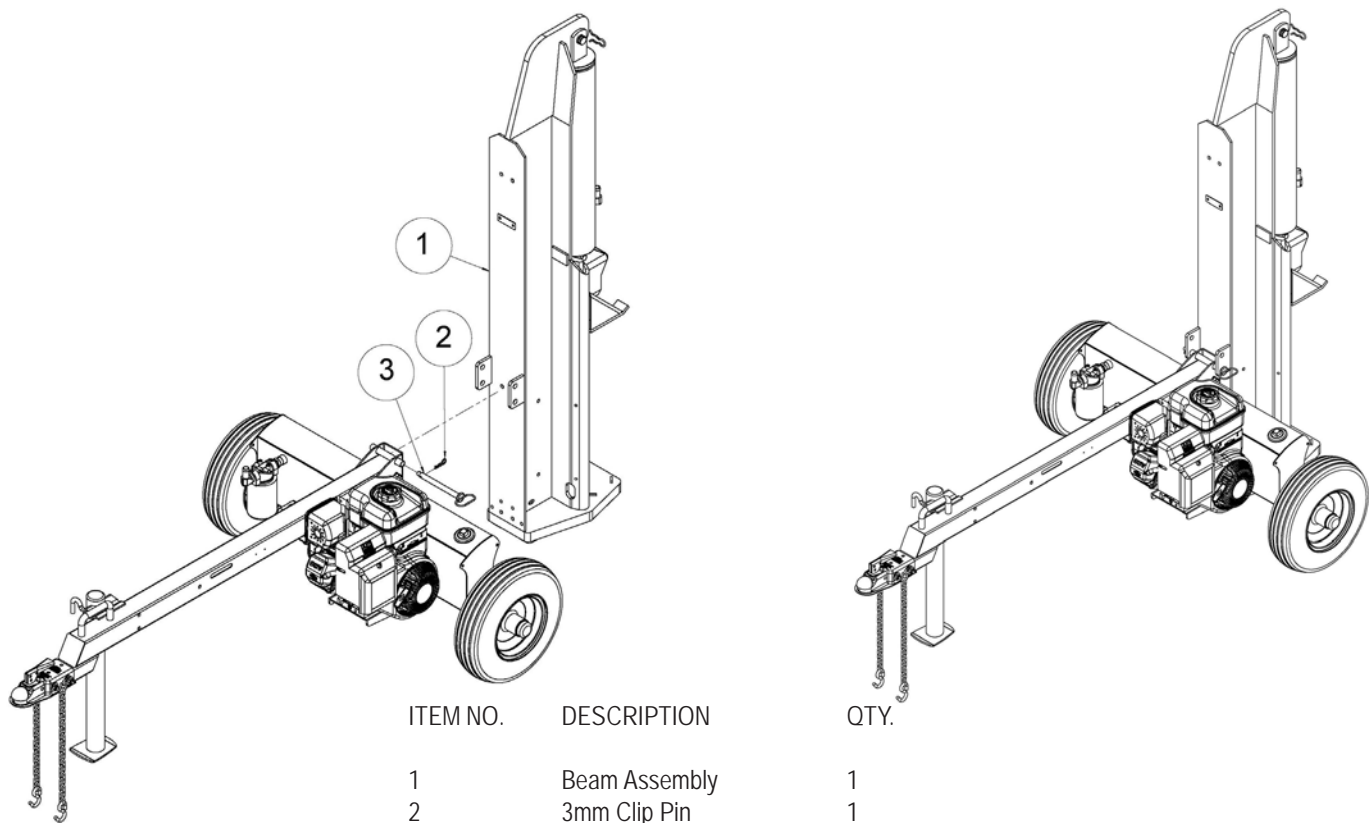


STEP 3: Attach the tongue assembly (5) to the tank assembly (1) using two 10mm x 105mm hex cap bolts (2), two 10mm lock washers (3) and two 1/2" hex nuts (4). Tighten.



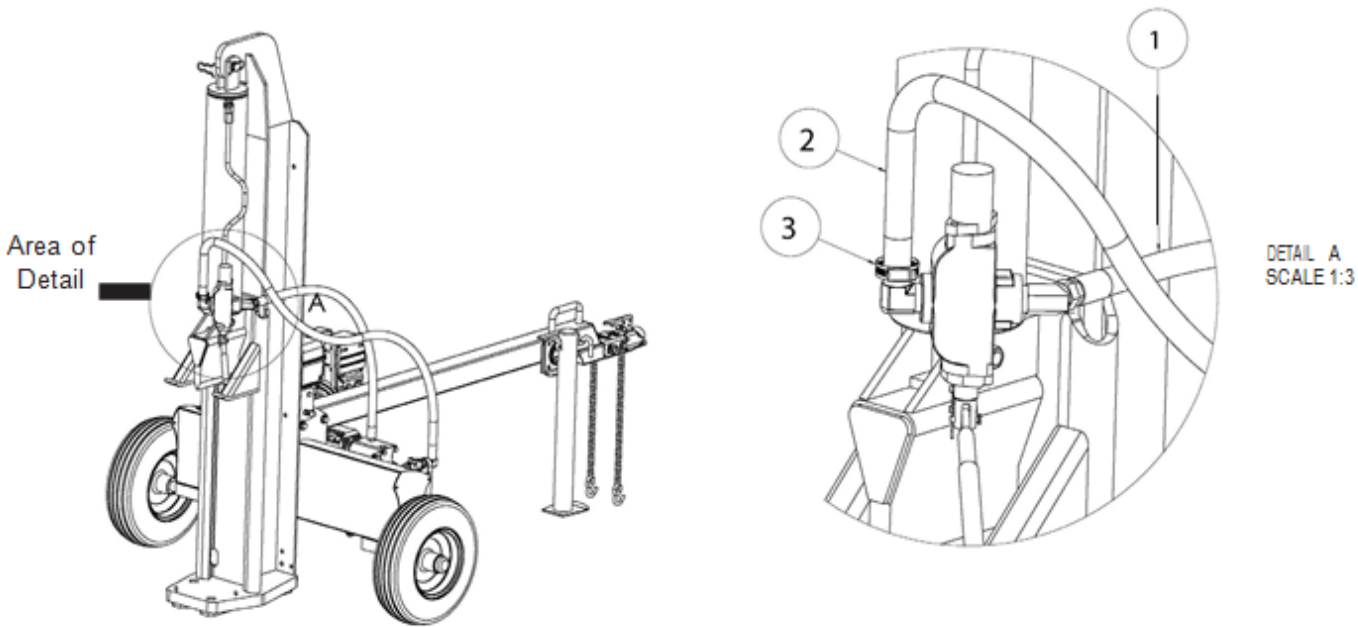
ITEM NO.	DESCRIPTION	QTY.
1	Tank Assembly	1
2	10mm x 105mm Hex Bolt	2
3	10mm Lock Washer	2
4	10mm NC Hex Nut	2
5	Tongue Assembly	1

STEP 4: Stand the beam (1) up on end. Two people may be needed for this step to ensure safety. Make sure that the beam is stable and on a level surface. Remove the pivot pin (3) and clip pin (2) from the tank assembly. Roll the tongue/tank assembly into position between the two tabs on the beam (1). Slide the pivot pin (3) through the aligned holes and lock in place with the clip pin (2).



ITEM NO.	DESCRIPTION	QTY.
1	Beam Assembly	1
2	3mm Clip Pin	1
3	Pivot Pin	1

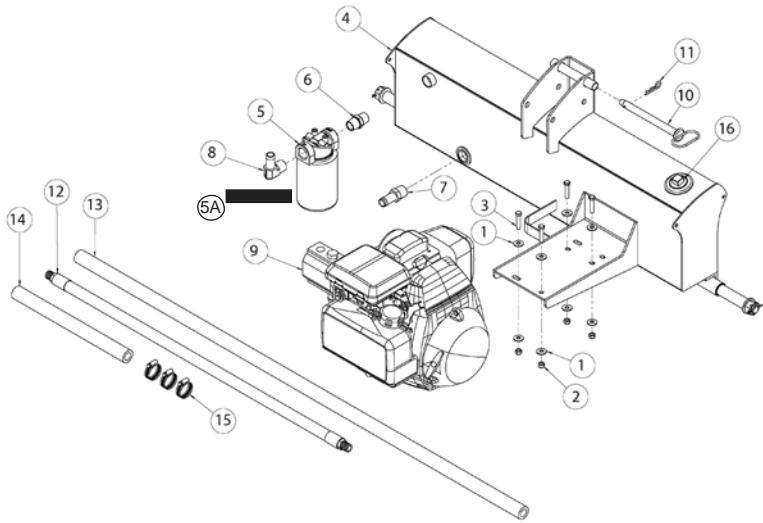
- STEP 5:** Connect the end of the 1/2" ID x 122mm hydraulic pressure hose (1) coming from the fitting on the pump to the fitting on the valve. See illustrations below.
- STEP 6:** Slide one hose clamp on the end of the 3/4" x 142mm hydraulic return hose (2) that comes from the fitting on the filter. Then connect the hose to the fitting on the valve. Tighten hose clamp. See illustrations below.



REPLACEMENT PARTS

TANK/ENGINE ASSEMBLY BREAKDOWN

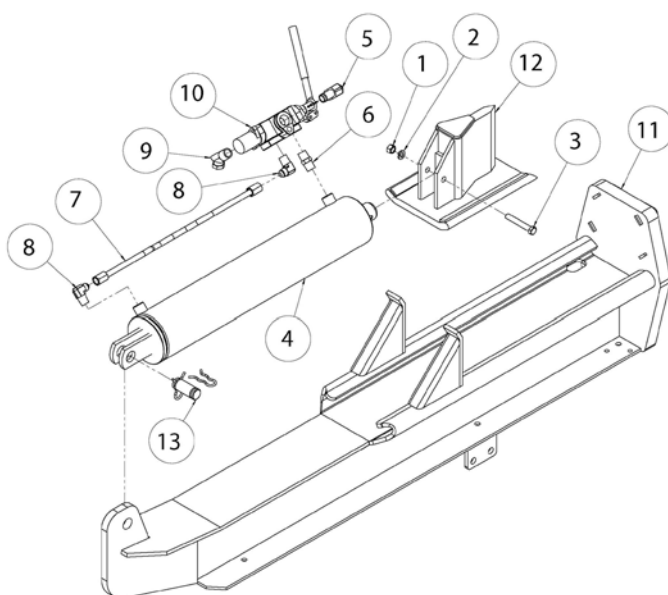
ITEM NO.	DESCRIPTION	QTY.
1	6mm Flat Washer	8
2	6mm Nylock Nut	4
3	6mm x 45mm GR 5 Bolt	4
4	Tank	1
5	Filter Base	1
5A	Filter Element	1
6	3/4" Hex Nipple	1
7	Tank Cleanout plate with 26mm Tube	1
8	3/4" NPT x 3/4" Tube	1
9	Pump/Engine Assy.	1
10	Pivot Pin	1
11	1/2"-3/4" Hairpin Cotter	1
12	1/2" x 122mm Pressure Hose	1
13	3/4" x 142mm Return Hose	1
14	25mm Suction Hose	1
15	Worm Gear Clamp	3
16	Breather Cap/Dip Stick	1



Common fasteners available through hardware and farm stores.

BEAM ASSEMBLY BREAKDOWN

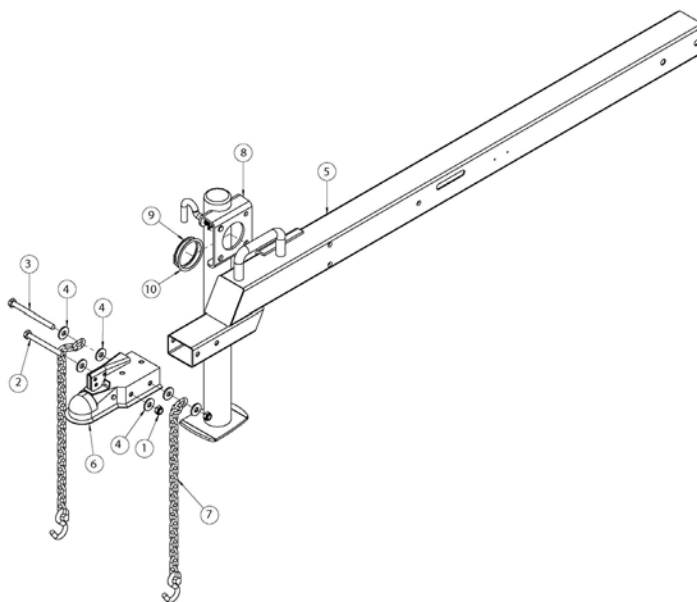
ITEM NO.	DESCRIPTION	QTY.
1	10mm Hex Nut	1
2	10mm Regular Lock Washer	1
3	10mm x 85mm Hex Bolt	1
4	4.5" x 24" Hydraulic Cylinder	1
5	3/4" NPT x 3/4" Tube	1
6	1/2" NPT Nipple	1
7	Part of cylinder Assembly	
8	Part of cylinder Assembly	
9	45° Fitting, 3/4" Male, 1/2" Fem.	1
10	Auto-Return Valve	1
11	Beam	1
12	Wedge	1
13	Cylinder Pin	1
	Beam Lock (not shown)	1



Common fasteners available through hardware and farm stores.

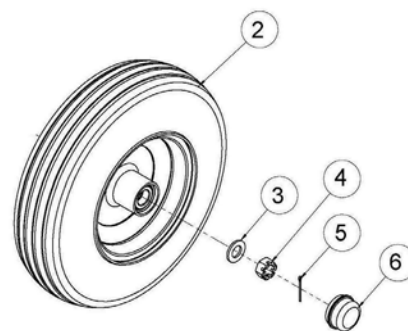
TONGUE ASSEMBLY BREAKDOWN

ITEM NO.	DESCRIPTION	QTY.
1	M10 x 1.5 Nylock Nut	2
2	M10 x 1.5 x 100mm GR5 Hex Bolt	1
3	M10 x 1.5 x 120mm GR5 Hex Bolt	1
4	M10 Flat Washer	5
5	Tongue	1
6	Hitch Ball Assembly	1
7	Chain	2
8	Ground Stand Assembly	1



WHEEL REPLACEMENT PARTS

ITEM NO.	DESCRIPTION	QTY.
2	Tire & Wheel Assembly	1
3	20mm Light Flat Washer	1
4	20mm Slotted Nut	1
5	1/8" x 1-1/2" Cotter Pin	1
6	Hub Cap	1
-	Replacement Wheel Bearing Kit (not shown)	1



Common fasteners available through hardware and farm stores.

OPERATING INSTRUCTIONS



WARNING: Read and thoroughly understand all instructions and safety information before operating this log splitter. Failure to do so may cause serious injury or death. Do not allow anyone to operate this log splitter who has not read this manual. As with all power equipment, a log splitter can be dangerous if assembled or used improperly. Do not operate this log splitter if you have doubts or questions concerning safe operation. Email our customer service department at customerservice@range-road.ca to address these concerns.

Si no entiende ingles, se prefiere que busque alguien que interprete las instrucciones para usted.



CAUTION: DO NOT START OR RUN THE ENGINE BEFORE ADDING OIL IN THE HYDRAULIC RESERVOIR AND OIL IN THE ENGINE.

STEP 1: The hydraulic reservoir must be filled with oil before operation. AW32 hydraulic oil is recommended when oil is needed. Automatic transmission fluid can be substituted and should be used instead of hydraulic oil when temperatures are below 0 degrees C. Use only clean oil and take care to prevent dirt from entering the hydraulic reservoir. Fill the hydraulic tank with approximately 13 to 15 litres of hydraulic fluid.

ENGINE OIL RECOMMENDATIONS

For temperatures above 0 degrees C use an SAE 30W oil. Using multigrade oil may increase oil consumption. Using SAE 30W oil below 4 degrees C will result in hard starting and possible engine bore damage. For temperatures below 4 degrees C use an SAE 10W-30 or SAE 5W-30 oil. Oil capacity is about 1.1 liter.

STEP 2: After the hydraulic reservoir and the engine crankcase are filled with oil, start the engine. The hydraulic pump should prime itself. With the engine running, move the hydraulic valve lever toward the foot plate. This will cause the cylinder to extend and expel air. When the cylinder is fully extended, retract it. Repeat this procedure several times. An erratic movement of the cylinder indicates that there is still air in the system. Add about 4 to 6 litres more. Twenty litres will register just above the top fill line on the dip stick. The total capacity of the entire hydraulic system is 25 litres. **NOTE:** If the tank is overfilled it will tend to expel oil from the breather cap when the cylinder is retracted. Cycle the cylinder again until it has a constant speed indicating that all air has been expelled.

STARTING INSTRUCTIONS

NOTE: REFER TO ENGINE OWNER'S MANUAL FOR COMPLETE INFORMATION ON STARTING, MAINTENANCE AND TROUBLE SHOOTING.

To Start a Cold Engine

- 1) Turn the fuel valve to the ON position.
- 2) Move the choke to the ON position.
- 3) Move the throttle control to the FAST position.
- 4) Pull the starter grip lightly until resistance is felt. Then pull rapidly to start engine.
- 5) Move the choke lever to the OFF position if it was used to start the engine as soon as it warms up enough and is running smoothly.
- 6) When engine starts, move the throttle to the FAST position. It is recommended that the engine be operated in the FAST position for maximum performance.

To Start a Warm Engine

- 1) Move the throttle lever to the FAST position.
- 2) Leave the choke lever in the OFF position.
- 3) Pull the starter grip until the engine starts.

To Stop the Engine

- 1) Move the throttle lever to the SLOW position.
- 2) Move the throttle lever to the STOP position.
- 3) Turn the fuel valve to the OFF position.



CAUTION: TURN FUEL SHUT OFF VALVE TO THE "OFF" POSITION PRIOR TO TOWING. FAILURE TO DO SO MAY RESULT IN FLOODING THE ENGINE.

NOTE: The engine maximum governed speed is preset at the factory at 3600 RPM no load speed. When splitting wood the throttle should be set at the maximum speed to develop the horsepower required for the pump.

OPERATION



WARNING: See safety information related to operation of the log splitter on page 3 and 4 of this manual. Make sure that you have the recommended personal protective equipment described on page 1.

- 1) Set up the log splitter in a clear, level area and block the wheels. Make sure that the suction port on the tank is always on the lower side of the log splitter.
- 2) For horizontal operation place a log on the beam against the foot plate. Make sure the log is securely on the foot plate and up against the beam. To split wood in the vertical position, release the pin on the beam latch located near the front end of the beam. Carefully tilt the beam up until the foot plate is sitting squarely on the ground and the log splitter is stable. Place the log on the foot plate up against the beam. When the beam is returned to the horizontal position make sure the beam latch is securely locked down. See illustrations in Step 7 on page 9.
- 3) With the engine running, depress the valve handle so that the cylinder will drive the wedge into the log. Extend the cylinder until the log splits or to the end of its stroke. If the log has not completely split after the cylinder has reached the end of its extension, retract the cylinder.
IMPORTANT: Leaving the valve in the "actuate" position at the end of the stroke may damage the pump. Always use extra care when splitting logs with unsquare ends.

NOTE: For operation in wooded areas, obtain a spark arrestor for the exhaust system. See the engine operating and maintenance manual and check with your authorized Honda service center. See also Fire Prevention on page 5 of this manual.

IMPORTANT: TO EXTEND THE LIFE OF THE HYDRAULIC CYLINDER, AVOID "BOTTOMING OUT" WEDGE PLATE TO THE FOOT PIECE. TO CONFORM WITH INDUSTRY SAFETY RECOMMENDATIONS, THE WEDGE STOPS 1.5 INCHES FROM THE END OF THE STROKE.

TOWING

This log splitter is equipped with pneumatic tires, a Class I coupler (2 in. diameter ball required) and safety chains. Before towing, the safety chains must be secured to the hitch or bumper of the vehicle. Local regulations should be checked regarding licensing, lights, towing, etc. Turn fuel shut off valve on the engine to the "Off" position prior to towing. Failure to do so may result in flooding the engine. Do not exceed 80 kph when towing this log splitter. See also Towing Safety on page 6 of this manual.

MAINTENANCE

- 1) Consult the operating and maintenance instructions of the engine manufacturer for engine care and maintenance.
- 2) Always check the oil level of the hydraulic reservoir before operation. Operating the log splitter without an adequate oil supply will cause severe damage to the pump.
- 3) Change the oil filter after the first 25 hours of operation. There after change the oil filter every 100 hours or seasonally, whichever comes first.
- 4) To drain the hydraulic oil, loosen the clamp on the hose coming from the fitting on the bottom of the tank. It is located just to the right of the oil filter.
- 5) If the wedge becomes dull or nicked, it can be removed and sharpened. Remove the 1/2 in. diameter bolt that connects the wedge to the cylinder. The hose from the valve may need to be removed. Carefully lift the cylinder to allow the wedge to slide forward. The wedge can now be lifted off and sharpened.
- 6) Clean the breather cap after 25 hours of operation. Clean it more often when operated in dusty conditions. To clean, remove the breather cap from the tank and flush with kerosene or liquid detergent to remove the dirt.
- 7) See also Repair and Maintenance Safety on page 4 of this manual.
- 8) All replacement parts must meet manufacturer's specifications.

IMPORTANT NOTICE

We, the manufacturer, reserve the right to change the product and/or specifications in this manual without notification. The manual is for information usage only and the pictures and drawings depicted herein are for reference only.

== NOTES ==

SPECIFICATIONS

Engine	Ducar 270cc
Pump	Two-Stage, 11 gpm
Cylinder	4-1/2 in. Diameter x 24 in. Stroke
Valve	Auto-Return
Maximum Splitting Force	27 Tons
Maximum Log Length	61cm
Cycle Time*	6 Seconds
Wheels	4.80 x 8 in.
Wedge	18 cm High with Spreader Wings
Beam Size	15cm x 23cm with Built-In Log Cradle
Hydraulic Capacity	26 Litres Maximum
Filter	Spin-On Replaceable Filter
Height	183cm in Vertical Position 107cm in Horizontal Position
Length	183cm
Width	125cm
Shipping Weight	268 kg
* Ideal case cycle time. Actual cycle time will vary depending on temperature, altitude, engine speed, pump efficiency, .	