

RR2540 Hydraulic Saw-Kit

Assembly of the RR2540 Hydraulic Saw-Kit

This Kit allows you to operate the chainsaw up and down with a hydraulic cylinder that is operated via a single valve, plumbed into the machine's existing hydraulics with the hoses provided in this kit.

The manual pull down arm and gas saw-return shock that come standard on the EcoPro 300 will need to be removed prior to installation of this kit.

Open packaging and remove items from box. Remove plastic wrap from items and lay out for easy identification.



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In this photo the four marks can be seen where the holes will be drilled to mount the bracket.

Using a drill bit, drill completely through both sides of the square tubing.



The holes have been drilled and the bracket has been mounted in this photo.

The bolts have been left slightly loose, to ease in the installation of the hydraulic cylinder later.

Note how close the blue bracket is to the orange bracket.

Also note that the flange is facing AWAY from the orange bracket.



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Here is a photo showing the rear of that bracket.



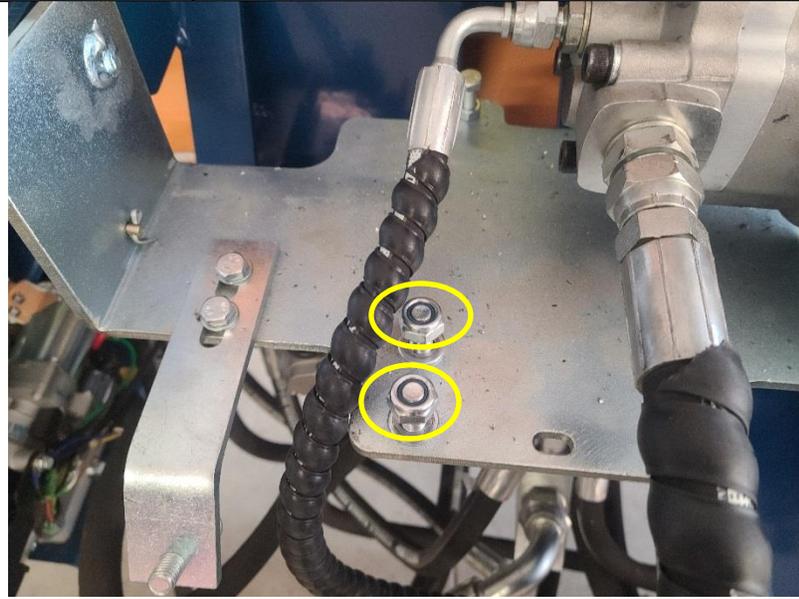
The next part to be installed is the hydraulic cylinder, lower mounting bracket.

This piece installs on the two studs that previously held down the manual saw engagement arm.



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Photo showing the two studs and nuts on the saw swivel plate where the lower bracket will be installed.



Lower bracket after installation.

Leave the nuts slightly loose to ease in the installation of the hydraulic cylinder



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The hydraulic cylinder will be installed next.



The hydraulic cylinder after installation.

The cylinder can be installed "upside down" or "right side up"

If the ports face towards the front of the machine, the hoses are less in the way of the sawdust chute and the ram, so that is the recommended way to install the cylinder.

Take care to ensure the cylinder is straight in line between the upper and lower brackets before tightening all of the bolts that have been installed up to this point.



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Remove the 2 plastic caps from the ports on the cylinder (green arrows) and compress cylinder completely (red arrow)



Now go to the other side of the processor and look at the bar height. With the cylinder compressed this is how far down the bar will go. If the bar sits similar to this picture it is ok to tighten the nuts and continue assembling.

If your bar sits higher or lower - go to the steps on the last page of the manual



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The hydraulics will now be plumbed into the valve we mounted on the cage earlier.

Locate the hydraulic pump-located underneath the splitting ram and behind the engine.

Find the hose located at the rear port of the pump, and remove.

This hose will be pulled up to the valve located on the cage as shown in the next photo.

Take care to catch and clean up any fluid that leak out once the hose is removed.



Pull the hose from the last step up and over to the cage mounted valve.

To the fitting on the left side of the valve or the port that marked "T"

This hose will be the "out" flow from the valve, back to the rear conveyor.

Once the hose is in place, tighten hose to valve fitting.

Next step is to install the "in" flow, from the pump (or from another valve if you have an infeed accessory installed already)



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Lay out the four hoses that come with the kit and find the shortest hose.

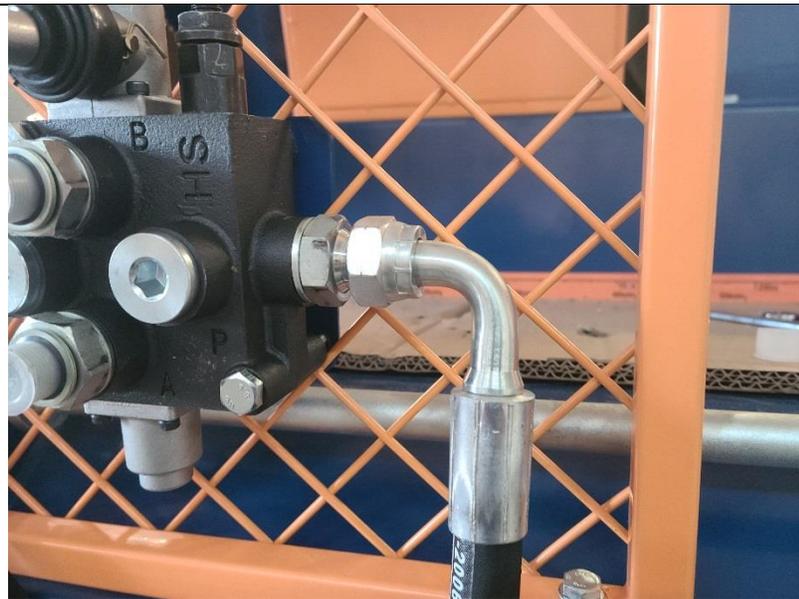
The shortest hose will be the one used to get flow from the pump to the cage mounted valve.

Attach one end of the hose to the pump, but do not tighten yet.



Take the other end of the hose that was just installed onto the pump and attach it to the right side of the cage valve, or the port marked "P".

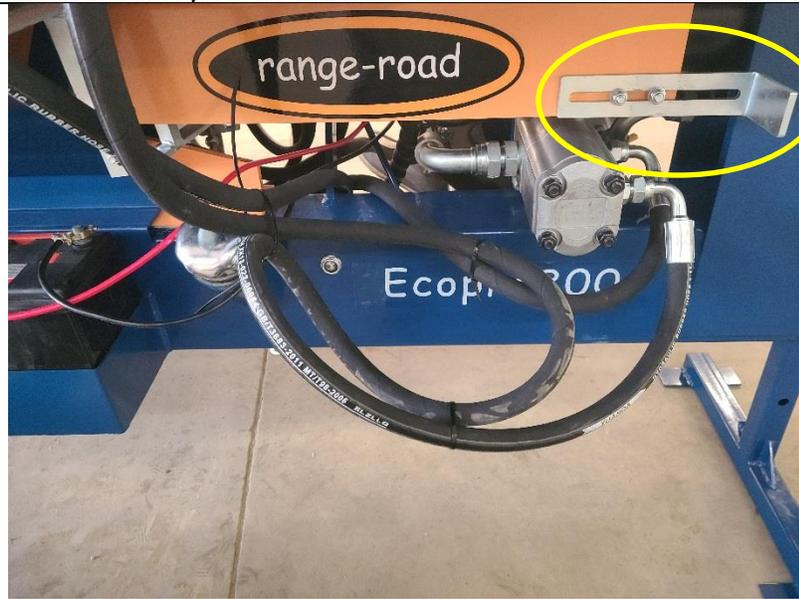
Once the hose is attached at both ends, tighten down hose and secure excess hose so as not to interfere with the ram while it moves back and forth



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A photo showing the hoses loosely tied together. (they will rub through eventually if secured to tight to one another)

Take care to ensure none of the hoses contact the silver "L" bracket shown in the photo as the ram moves back and forth.



Locate the two longer hoses, already equipped with quick connects.

Start with the hose with the adjustable needle valve installed.

Needle valve is circled in photo.

Do not remove needle valve, take hose over to machine to be installed.



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The quick connect end is pre-attached to the hose, slide collar back and disconnect.



Go ahead and screw the quick connect fitting onto the lower port of the valve.

Tighten fitting.



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Picture of the fitting after tightening onto the lower port.



Insert hose into the quick connect fitting on the valve.

Run hose underneath the ram, near the location of the battery cables.

Affix end of the hose to the LOWER port on the cylinder.

On to the second hose now.



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Locate the second hose with the quick connect pre-installed.

Remove fitting by sliding collar back.



Install fitting on top port of the valve and tighten.

Alternatively, you can remove the quick connects and thread the hose fittings directly into the valve so they do not stick out so far.



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Attach the second hose to the valve via quick connect that was just installed.

Run hose under ram, like before, and run up to the UPPER port on the cylinder.

Tighten fitting.



Install valve lever handle onto valve and tighten when jam nut.



A photo showing the pieces you will have left over from the install; these will not be needed and can be stored away.

Check over all hose fittings and ensure everything is tight and free of hang-ups while the machine (ram) operate.

Operate the valve down **SLOWLY** to actuate the saw down.

The valve will never require full engagement, simply ease pressure onto the valve hand until the saw starts to

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come down.

When raising the saw, lift the valve fully.

The key is control, you want to have good speed control when that saw comes down, so nothing is forced.

Adjust the needle valve as necessary to adjust how quickly (or slowly) the saw comes down.

If the engine starts to bog while the saw is moving down, open up the valve a little bit until there is very little load on the engine while operating the saw.

Remember, just ease on the valve, it should never be fully engaged on the way down.



Steps to follow to adjust the bar height if necessary

Remove the 2 - 16mm bolts that retain the manual saw arm.



The cylinder and brackets should already be bolted together at this point.

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Use a clamp or vice grip to hold the lower cylinder mount to the silver swivel plate



Use the clamp or vice grip to hold the lower cylinder mount in various positions until the chainsaw bar sits in the desired position, as in the next picture.



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Make sure the cylinder is completely compressed.

This is the lowest the bar will go when the cylinder is retracted, if you put it too low it could possibly hit the processor frame.



Now mark silver plate to drill new holes to mount the lower bracket or slot the holes as we did in this picture, whichever is easier.

