

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.



RR2540 Hydraulic Saw-Kit

The first piece to be mounted will be the cylinder mounting bracket.

This piece will be bolted to the cage, this will require drilling four holes.

Slide the bracket up tight to the orange multi-holed bracket.

Use a marker or spring-loaded punch to mark the four holes



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



RR2540 Hydraulic Saw-Kit

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.



Here is a photo showing the rear of that bracket.



RR2540 Hydraulic Saw-Kit

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

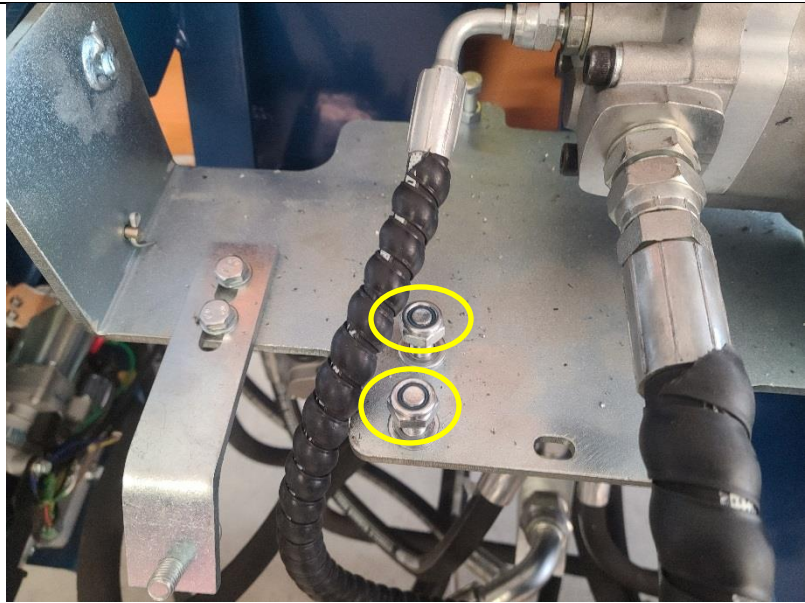
This piece installs using 4 bolts on the swivel plate.

2 of the bolts used are the same ones that are used for holding on the manual pull down handle.

There are 2 more bolts that will require drilling out 2 holes on the swivel plate



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



RR2540 Hydraulic Saw-Kit

The saw motor activation bracket – this piece may need to be removed to install the lower bracket in the next steps.

Once the blue lower bracket is installed, you can re-install this piece, but it may have to be installed on the bottom side of the plate instead of the top side due to interference issues with the blue lower bracket.

Shown here on the top side of the plate.



Loosely install the bottom bracket onto the swivel plate.

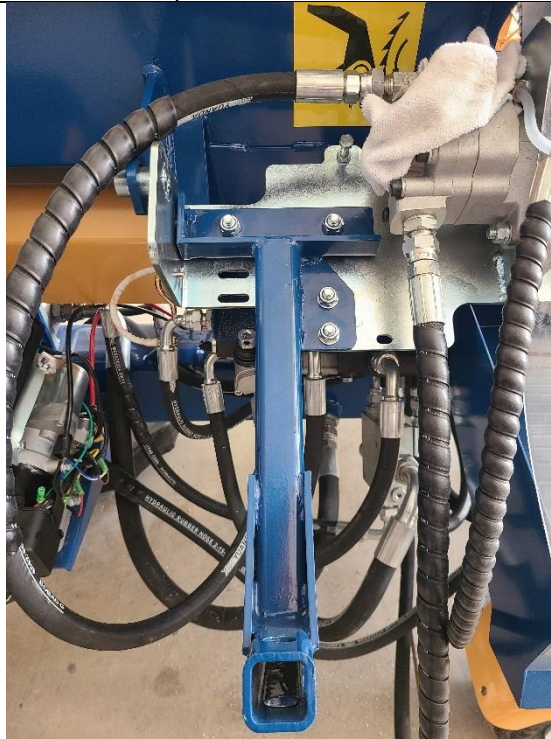
The two upper holes will need to be marked so holes can be drilled there



RR2540 Hydraulic Saw-Kit

Lower bracket after installation.

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



The hydraulic cylinder will be installed next.

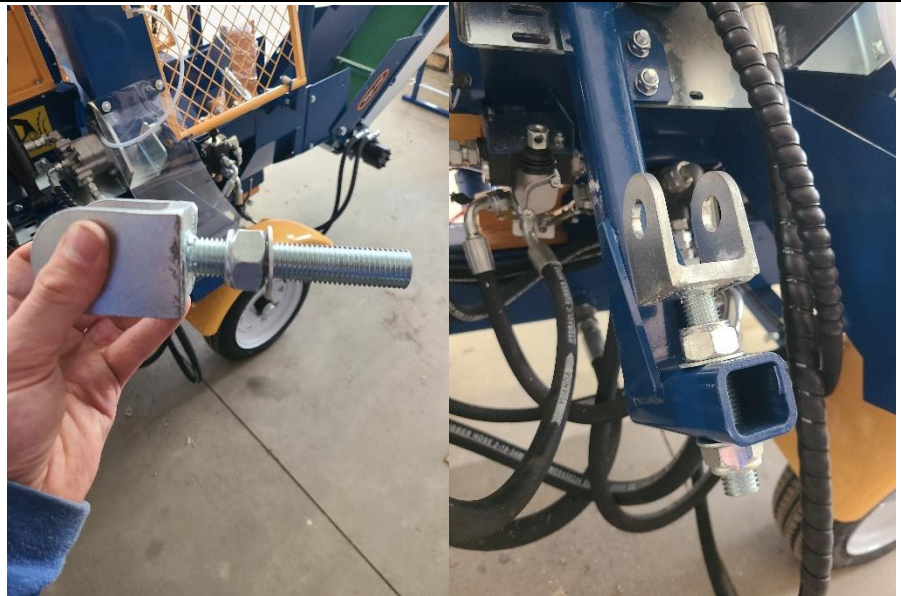


RR2540 Hydraulic Saw-Kit

Install the cylinder on the top bracket (The cylinder only fits on the one way) and install the thru bolt, leave loose for now.



The large silver cylinder bracket will now be installed onto the lower bracket with the 2 provided nuts.



RR2540 Hydraulic Saw-Kit

The cylinder can now be attached to the lower bracket using the large bolt provided.

Now the upper and lower large bolts can be tightened as well as the 4 bolts holding the lower bracket to the swivel plate.



Remove the 2 plastic covers over the ports on the hydraulic cylinder. Lower the saw bar by hand and observe the saw position with the cylinder in the fully extended position. (Use a pair of gloves and simply grab the bar and pull it down)



Check how close the bar is to the deck and check how far the bar goes up (you will want the bar to be mostly tucked away behind the blue guard)

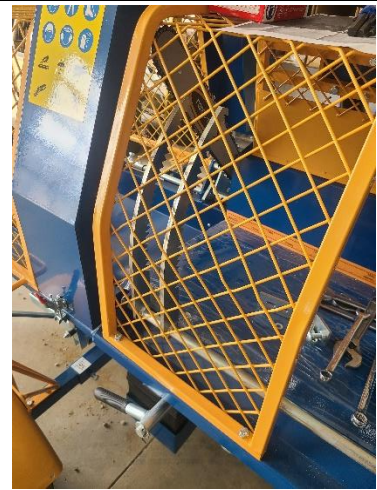
If the position is not correct, the bottom threaded bracket can be adjusted to change the position of the saw.



RR2540 Hydraulic Saw-Kit

The control valve will now be mounted to the cage. Use the bolts and the blue bracket provided.

Installed the control valve close to the center of the cage and leave the bolts loose for now. Leaving the bolts loose will make it easier to install hoses in the next steps.



After the valve is loosely installed, the hydraulics can now be plumbed to the valve.

Locate the hydraulic pump, remove the rear hose, and set in a drain pan for now



RR2540 Hydraulic Saw-Kit

Lay out the five hoses that come with the kit and find the middle length hose.

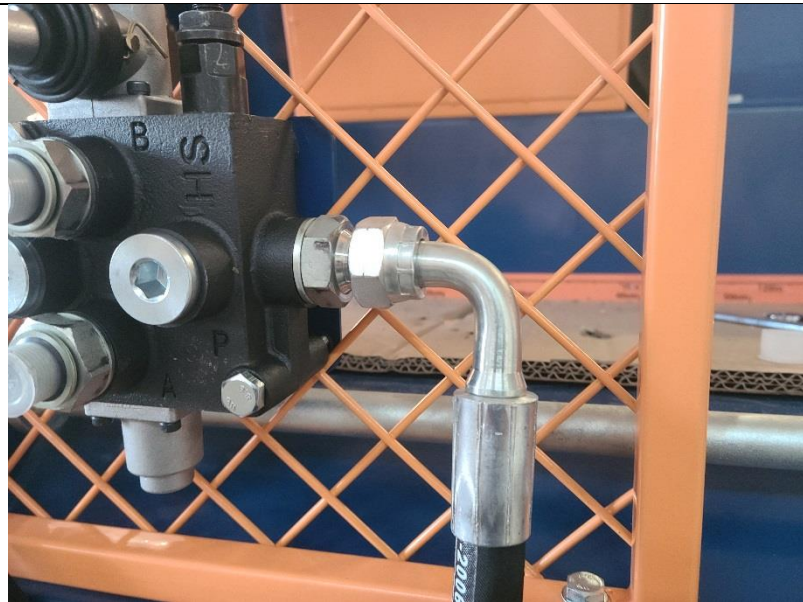
This hose will be the one used to get flow from the pump to the cage mounted valve.

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".

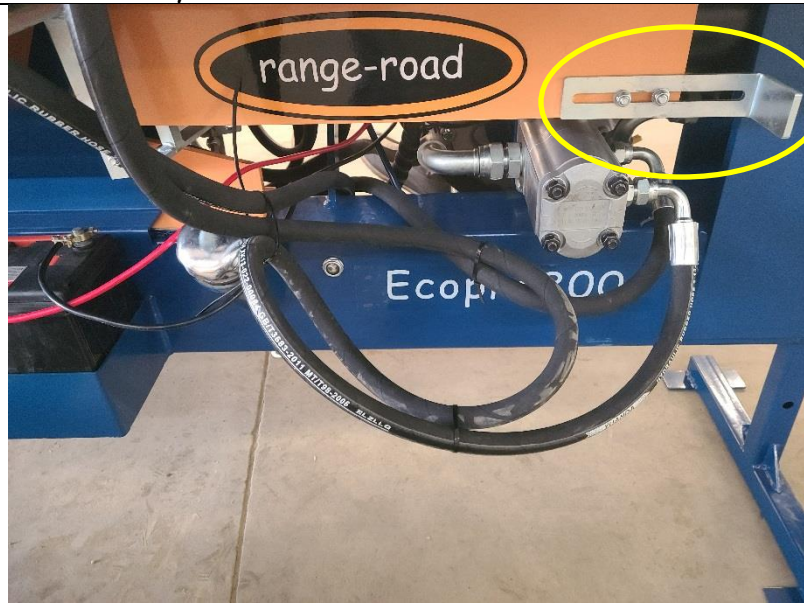
Once the hose is attached at both ends, tighten down hose and secure excess hose so as not to interfere with the ram while it moves back and forth



RR2540 Hydraulic Saw-Kit

A photo showing the hoses loosely tied together

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



The control valve will now be prepped to install the hoses that go out to the cylinder.

First step is to remove the plastic covers on the two front ports, then remove both gaskets and set aside for now.



RR2540 Hydraulic Saw-Kit

The lower fitting on the valve needs to be swapped out with a slightly larger one.

Included with the parts kit, is a $\frac{1}{2}$ " by $\frac{1}{2}$ " fitting.

Remove the lower fitting from the control valve.

Take the small gasket off the backside of the fitting that was just removed, and install that gasket onto one side of the new fitting (it doesn't matter what side)

Then, install the new, larger fitting onto the lower port on the valve.

Picture showing the old fitting compared to the new, larger fitting in the valve.



Locate the two hydraulic "T's". take the larger of the two and install it on the left port of the control valve.



RR2540 Hydraulic Saw-Kit

Showing the larger of the two “T’s” that is to be installed onto the left side of the control valve.



The hose that was originally taken off the pump will now be installed on the left port on the control valve (The port stamped with a “T”)

The hose can be installed on either of the two ports on the “T”, whichever is easiest for routing.

Do not fully tighten hose



RR2540 Hydraulic Saw-Kit

The remaining, smaller "T" will be installed on the lower port on the face of the control valve.

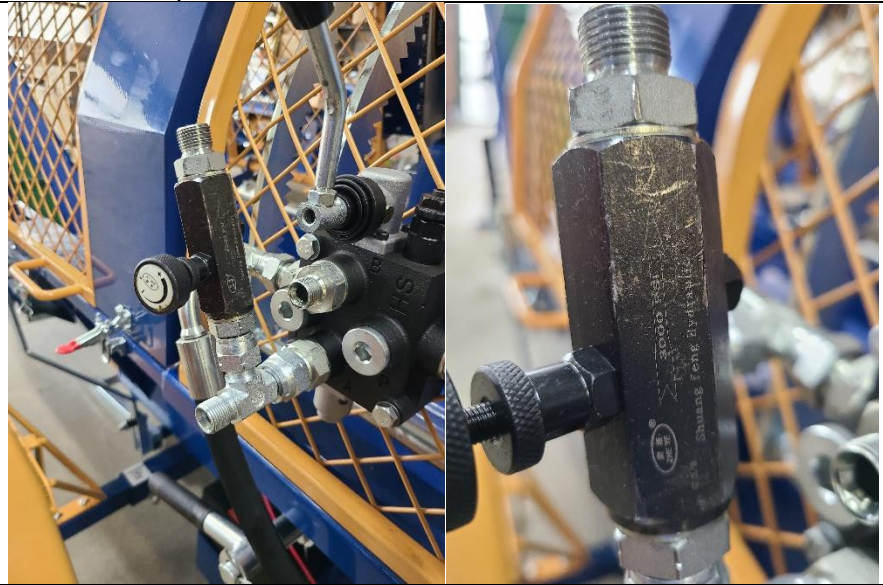


The 3/8' coupler with gasket will be installed onto the "T"



RR2540 Hydraulic Saw-Kit

Install the needle valve onto the 3/8" coupler, ensure the direction of flow arrow is facing away from the "T"



Locate the return hose with the gold-coloured end.

This hose will install onto the needle valve from the last step and will attach to the open side of the large "T"



RR2540 Hydraulic Saw-Kit

Putting the hose in this orientation will allow for easy access to the Ram engagement handle located below.



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

Remove the quick connects from both hoses, they aren't required for this install.



RR2540 Hydraulic Saw-Kit

Install one of the hoses on the top port on the control valve.



This hose will install on the upper port on the cylinder.



RR2540 Hydraulic Saw-Kit

Install the 2nd hose onto the lower port on the control valve.



The other end of the 2nd hose will go to the lower port on the cylinder.



RR2540 Hydraulic Saw-Kit

Install valve lever handle and tighten the jam nut.

Go over all the hose connections and tighten.

Tighten all hardware.

Take special care to ensure the hoses are clear of the ram as it moves back and forth.



Start the machine and operate the control lever to get comfortable with the control.

Operate the control valve down **SLOWLY** to begin with.

ease pressure onto the valve hand until the saw starts to come down.

Check again for leaks after using



RR2540 Hydraulic Saw-Kit

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

Assembly complete.

