



REAR REMOTE KIT

Owner's Manual



READ BEFORE INSTALLATION

Before removing contents from the box, confirm that the kit number on the box label and on the installation instructions matches the tractor that the kit is being installed on.

Please keep this Owner's Manual in a secure and easily accessible place. This manual contains essential information regarding the proper installation, operation, and maintenance guidelines for safe and effective use.

Please read these instructions carefully before beginning the installation process.

Lifetime Support is included with your purchase.
We are here when you need us.



Help is available on our website
<https://www.wrlonginc.com/help>

Please visit the troubleshooting guide if you run into any issues.



Visit our YouTube channel for installation videos and troubleshooting tips.

<https://www.youtube.com/@WRLongInc>

Send us an email if you need any assistance: help@wrlonginc.com
Or give us a call: 252-823-4570

REAR REMOTE KIT CONTENTS

1. REAR REMOTE ASSEMBLY



- The Rear Remote assembly consists of one or more hydraulic directional valves (with two solenoids per valve), the aluminum manifold, the connection blocks (one for each valve), and the bypass valve with its solenoid.
- The aluminum manifold has a total of 4 plumbing ports, two P and two T ports. One P and one T port will be plugged, while the other P port is for supply and T port for return. The remaining ports are pairs of A & B ports for each valve in the rear remote assembly. The A & B ports are referred to as the work ports as they send and receive fluid when the valve is operated.
- The rear remote valves come mounted to the aluminum manifold with each valve numbered. The valve number is labeled on the manifold.
- The A & B ports come with female quick connects pre-installed and the P & T ports comes with the appropriate adapter installed according to the kit specification.

2. REAR REMOTE ASSEMBLY BRACKET

- Each rear remote has a mounting bracket that is specific to the kit. Depending on the size of the rear remote mounting bracket, the bracket may come attached to the rear remote assembly. You can confirm the bracket and its orientation on the valve manifold by referring to the kit specific instructions.

3. TRACTOR PLUMBING HOSES

- Both the P & T ports must be plumbed into the tractor in order for the valve to receive fluid. It is imperative that the W. R. Long rear remote is plumbed into the tractor hydraulics after the pressure relief valve in order to protect the hydraulic pump. See the section titled "How to Identify the Power Beyond Port" for more information.
- Depending on the tractor, the kit will include one or more hoses in order to properly connect into the tractor hydraulics. In many instances, a pre-existing hydraulic line on the tractor will be re-used. The kit specific instructions will indicate if the kit has one or more hoses included to properly install the rear remote kit. If a W. R. Long 3rd function valve kit is present, then there may be an extra hose included.

4. HYDRAULIC ADAPTORS

- Many kits require special hydraulic adaptors in order to properly connect into the tractor hydraulics. The kit specific instructions will refer to these adaptors if they are required.

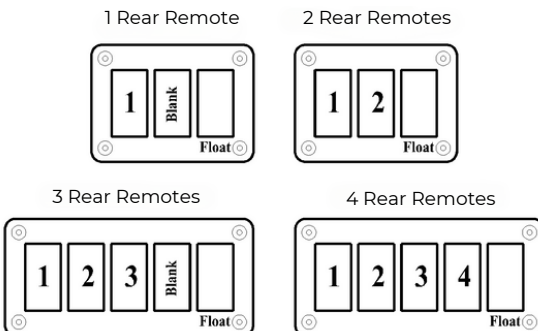
5. ELECTRICAL COMPONENTS & HARDWARE

- The Rear Remote assembly and W. R. Long handle (if this optional equipment is purchased) already have the electrical wiring required for the rear remote kit with the exception of an in-line fuse and miscellaneous electrical connectors to connect the power wire to the tractor's electrical source. These are included with the kit.
- Each kit comes with hardware to mount the valve assembly on the mounting bracket to the tractor. The kit specific instructions will indicate if you need to re-use existing mounting hardware or if the required hardware is included in the kit.

6. SWITCH BOX

- One of the switch box designs shown below is provided with the rear remote kit depending on how many rear remote valves are included and if equipped with the 3rd function option.

Switch Box Mounted on Right Rear Fender



REAR REMOTE FEATURE OVERVIEW

The W. R. Long Rear Remote system uses a bypass valve sometimes called an unloading valve to help reduce the pressure drop and temperature rise of your hydraulic fluid. The bypass valve is open when the rear remotes are not being used allowing the fluid to bypass the valves through a larger port. When one of the rocker switches is engaged, a solenoid on one of the rear remote valves is energized along with the solenoid on the bypass valve. This opens the port on your rear remote and closes the bypass port, forcing the fluid through your rear remote valves and operating your attachment.

3RD FUNCTION ADD-ON TO REAR REMOTES

The W. R. Long Rear Remote kits are available with one, two, three, or four rear remotes. One of these rear remotes can be used as a live 3rd function. The 3rd function should always be connected to the highest number rear remote valve.

FLOAT OPERATION

The kit comes with a float function available on valve number one. The float function is activated by pressing the bottom of the selector switch as indicated in the switch box diagram in this manual. When the float function is engaged, a signal is sent to solenoid "A" on valve number one. This allows the fluid to flow freely through the bypass valve and rear remote number one. Due to the flow pattern through the valve, it is recommended that the hose on the rod end of your cylinder be connected to port "A" and the base end of your cylinder connected to port "B". Make sure this switch is in the middle position when not using the float function. When using the float function, the other valves will not operate as expected because the internal bypass port is open. Again, make sure your float selector switch is in the middle position when not being used.

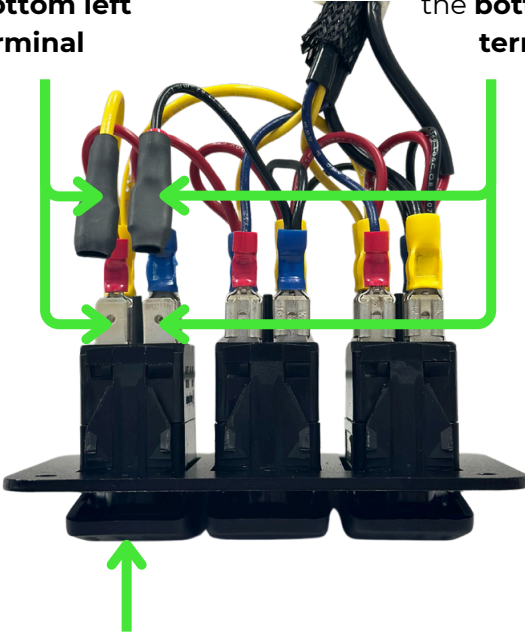
CONTINUOUS FLOW

The upper side of the float selector switch can be used for continuous flow. This function is not activated when shipped from the factory. The W. R. Long manifold is provided with two sets of "P" and "T" ports, however only one set is normally used. A hydraulic quick connect can be installed on the extra "T" port if the continuous flow feature is needed. The supply line to your attachment will be connected to the "A" port of rear remote number one and the return will be connected to the second "T" port with the quick connect. When the top side of the selector switch is engaged there is a signal sent to the A solenoid on rear remote valve number one and the bypass valve. By using valve number one, the fluid does not flow through the other valves or the second half of valve number one, but is returned through the "T" port instead of through the valve. To stop the flow, move the selector switch back to the center "off" position. The continuous flow position is always associated with rear remote number one. If the top side of the selector switch is engaged and the hoses are not connected properly it will cause a blocked flow in your hydraulic system which you do not want. If you choose to activate this feature, then make sure this switch is not engaged each time you operate the tractor and is only engaged when needed for continuous flow. To activate this feature, complete the wiring inside the switch box according to the instructions included below.

HOW TO ACTIVATE CONTINUOUS FLOW

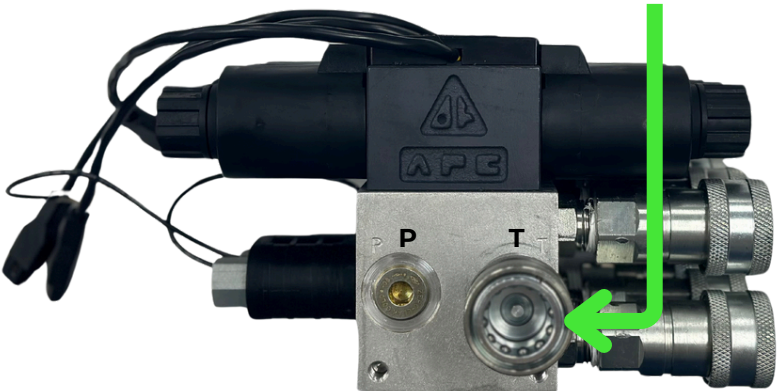
Remove protective cover and attach the **yellow wire** to the **bottom left terminal**

Remove protective cover and attach the **black wire** to the **bottom right terminal**



Float and Continuous Flow Selector Switch

Remove plug and install 1/2" Female Ag Style Quick Connect to "T" port



3RD FUNCTION ADD-ON INSTALLATION INSTRUCTIONS

1. Remove the knob from your joystick and unpack the provided handle from its box.
2. The handle comes pre-assembled with three black cables. One cable is a red wire that will run to your power source. The other cable contains two control wires that will run to the connection block on the valve. The third is connected to the bypass valve and will be connected to the dual bullet connection on the rear remote switch box.
3. Back out the set screws and place the W. R. Long handle over the joystick rod. Be sure to leave the button head bolt installed as it is used to secure the back of the handle and prevent the bottom of the switch from touching the top of the joystick. Adjust the handle orientation as necessary according to your preference and tighten down the set screws and lock nuts.
4. Run the black cable with the Molex plug from the W. R. Long Handle to the highest numbered valve on your rear remote. Plug in the connector on the end of the cable to the mating connector attached to the highest number valve (2, 3, or 4) valve.
5. Connect the red wire from the handle to a hot wire on the tractor using the 10 amp in line fuse provided in the kit.
6. Connect the male bullet terminal from the handle to the dual bullet connector connected to the rear remote manifold.
7. Test the valve by pressing one side of the rocker switch at a time. If the attachment opens or closes opposite your preferred side you can switch the hoses on the back side of the bulkhead bracket.
8. Secure the cable runs to the joystick with a few tie wraps.

HOW TO IDENTIFY THE POWER BEYOND PORT



Scan the QR Code to watch how to identify the Power Beyond Port.

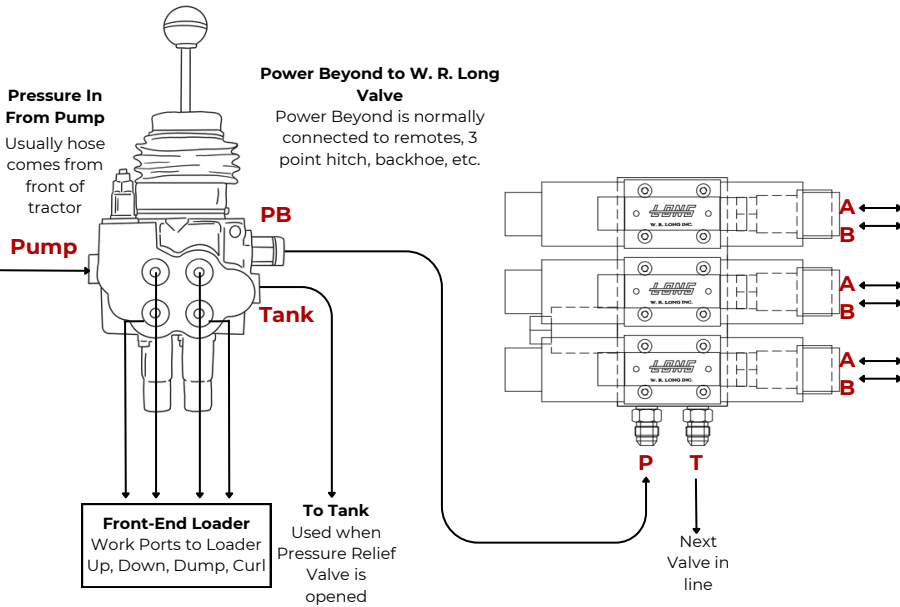


WARNING

This Rear Remote Kit is designed to work off the power beyond port of the loader valve. The power beyond port is the output port on the loader valve that is protected by the pressure relief valve. Connecting the W. R. Long valve up to any other port poses the risk of damage to the hydraulic pump or other hydraulic components and will void the W. R. Long warranty.

See the Additional Resources section for Tech Tips

FLOW DIAGRAM



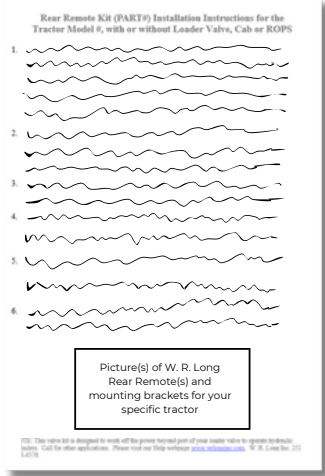
PRODUCT VARIATION

A note about backhoes and other optional equipment

Backhoes are a common add on for many tractors and they require hydraulics to operate. When a backhoe is installed on the tractor, the pressure for the backhoe typically comes from the power beyond port of the loader valve. The W. R. Long rear remote kit is designed for the most common tractor configuration. That's why some of our kits are designed specifically for tractors with backhoes, but most are not. If your tractor has a backhoe and the W. R. Long kit is not specifically designed for the backhoe, it can still be installed on the tractor. The most important principle to remember is the P port on the W. R. Long valve should be connected to the power beyond port on the loader valve then the T port on the W. R. Long valve will be connected to what was previously connected to the power beyond port.

KIT SPECIFIC INSTRUCTIONS

Kit specific installation instructions are provided in addition to this owner's manual. Please begin installation by referring to the kit specific instructions to follow each step. If you do not have kit specific instructions, please contact W. R. Long, Inc. with the part number of your kit for a copy of those instructions.



EXAMPLE OF INSTALLATION INSTRUCTION SHEET LAYOUT

OPERATING INSTRUCTIONS

Carefully read and understand these operating instructions before attempting to operate the Rear Remote Kit.

Verify that the attachment you intend to operate is correctly attached to the tractor and that the hydraulic lines are correctly installed, and all hydraulic quick couplers are fully seated before cranking up the tractor.

Your switch box comes with a spring return to center rocker switch for each rear remote. Refer to the switch box diagram in this manual to determine which switch operates which rear remote. To operate the rear remote simply press one of these rocker switches and when you want to stop then let go of the switch.

If your kit comes with the 3rd function option, then press the rocker switch on the handle on your joystick to operate the attachment on the front of your loader.

It's essential to follow these maintenance steps for optimal valve performance:

- Visually inspect all components to make sure they are in good condition before every use.
- Hoses and fittings should be thoroughly inspected for damage or leaks every 50 hours of use. Before checking for leaks be sure the tractor is off and has had time for hydraulic fluid to cool down.
- Ensure the two black plastic retaining nuts are tight on each of the valve solenoids every 50 hours of use.
- Always use the included dust caps and plugs on the hydraulic quick couplers when detaching attachments.
- Always keep quick couplers free of dirt and debris.
- Thoroughly clean quick couplers if dropped in dirt or mud before reconnecting.
- Be sure quick couplers are fully seated before operating attachment.
- Relieve pressure from hydraulic lines before disconnecting attachment. To relieve pressure, turn tractor off (while keeping electrical power to the valve) and alternate pressing each button of the rear remote kit. This will relieve any pressure that may be remaining in the hydraulic lines.
- Periodically manually operate unused valves to ensure the spool moves freely. This is especially important if valve is not used for longer periods of time. (See our YouTube channel for a detailed instruction video)
- Always be aware of your surroundings while operating your attachment using your rear remote kit.

If any issues arise during operation, consult the trouble shooting section of the manual provided.

ADDITIONAL RESOURCES



Troubleshooting Guide

<https://www.wrlonginc.com/tsg>



Spare Parts Store

<https://www.wrlonginc.com/store>

Tech Tip: Signs that the hydraulic plumbing is wrong

ISSUE		MOST LIKELY CULPRIT
Rear Remote attachment only works when moving joystick.	→	Rear Remote valve is hooked to the tank port on the loader valve instead of the power beyond port.
Rear Remote attachment only works when running backhoe, loader, 3-point hitch, etc.	→	Hydraulic tee was added causing fluid to bypass rear remote kit.
Tractor hydraulics straining	→	Continuous flow feature engaged incorrectly

Please refer to the Troubleshooting Guide for additional resources.

WARRANTY

Warranty Program of products manufactured by W. R. Long, Inc. is as follows:

- All materials and workmanship for a period of 180 days from the date of original purchase, except hydraulic and electrical components.
- Hydraulic valves and cylinders for a period of 12 months from the date of original purchase.
- Hydraulic hose assemblies, couplings, fittings, and seals for a period of 30 days from date of original purchase.
- Electrical switches, components, and wiring for a period of 90 days.
- W. R. Long, Inc. will, at its discretion, repair or replace this product or any components of this product found to be defective within the specified warranty periods.
- W. R. Long, Inc. must be notified prior to ANY warranty repairs being made. All warranties are void should this product be repaired or modified in any way not authorized by W. R. Long, Inc.

If you need warranty service, notify the dealer from whom this product was purchased.

PRODUCT REGISTRATION



Scan the QR code to register your product and enter into prize drawing.

Terms and Conditions for Prize Drawing

This drawing is open to end user individuals who have purchased and registered their product. Actual prize will be at the discretion of W. R. Long and is to be awarded through a random selection process. Winners will be notified by e-mail or phone. Your privacy is important and all personal information will be kept confidential. We reserve the right to modify or terminate the drawing at any time if necessary.

MESSAGE FROM THE OWNER

On behalf of the entire W. R. Long family, I want to say Thank You for choosing our Rear Remote Kit and now being a part of the Long Legacy! Your trust in our products is a testament to our commitment to quality and customer service.

At W. R. Long, we take pride in providing solutions that enhance your equipment's functionality and performance. The Rear Remote Kit you've chosen is designed with function and durability to meet your needs.

Your satisfaction is our top priority, and we are confident that this kit will exceed your expectations. Should you have any questions or need assistance, our dedicated team is here to support you every step of the way. We answer the phone—and with this purchase you receive lifetime support—so call us when you need us.

At W. R. Long, Inc., we strive to run our business as a ministry. While we must generate a profit to keep operating, making money is not our only driving factor. We desire to enrich the lives of everyone we interact with, including our employees, customers, vendors, local community, and beyond. As a Christian, I believe in the teachings of the Bible and try to live out these principles both personally and through our business. I trust your experience with W. R. Long has been excellent, and if there's any way we can improve, I would love to hear from you. Feel free to call and request to speak with me directly. As a ministry to you our customers, you are welcome to contact our corporate chaplain Gerson at 1-800-582-7327 ext. 4188 or at gtoress@chaplain.org.

Best Regards,

A handwritten signature in black ink that reads "Nelson Long".

President/CEO

Colossians 3:23 "Whatever you do, work heartily, as for the Lord and not men..."