

Wilson Trailer Company

Operators Manual for HYDRO-Trap



This manual has been prepared to help you operate your HYDRO-Trap successfully and safely. Should you have any questions, we ask that you contact a Wilson Trailer factory representative immediately for a clear explanation.

NOTE: Wilson Trailer constantly makes product improvement to its product line. Your trap may vary slightly from the equipment described and/or pictures in this manual.

We thank you for expressing your confidence in us through the purchase of your new Wilson HYDRO-Trap. We want you to know that it was designed to meet your specific needs and is built for long life and low cost operation. With regular, proper maintenance and your common sense, we are confident that it will do so.



Additional manuals and decal kits are available without charge.

MODEL NO.

SERIAL NO.

HYDRO-Trap Operator's Manual



This safety alert symbol is to raise your awareness to important messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

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General Description

The Hydro Trap utilizes hydraulic cylinders to open and close the traps. The Hydraulic pump is powered by the tractor through and cab wiring kit with a master disconnect switch. The hydraulic traps are activated with the control panel located at the center of the trailer or by the optional remote. The remote is capable of being programmed to operate a Shurco 4500 Series power tarp and the HYDRO-Traps.

SAFETY

Decals and Emblems

The following section contains the decals and emblems specific for this HYDRO-Trap.

AAA06891RV

INFORMATION
USE PETRO-CANADA HYDREX MV ARCTIC 15 HYDRAULIC FLUID. Or any mineral based hydraulic oil between 10 cSt and 100 cSt at your ambient outdoor operating temperature. <small>WTC 9-18 AAA06891RV</small>

AAA06891RW

SAFETY INSTRUCTIONS
Cab Wiring (w/Master Disconnect) Kit for Hydro Trap Opener (WTC #APP04780YZ) The enclosed parts are used to provide power to the HYDRO Trap and Electric tarp options. Install these components per the enclosed instructions from Shur-Co. The Master Disconnect should be placed in the cab of the truck. This provides a secure location to be able to disconnect Power from the options providing safety and security when the options are NOT in use. <small>WTC 8-18 AAA06891RW</small>

AAA06891RZ

	⚠ DANGER PINCH POINT Stay clear of power traps while they are operational. <small>WTC 8-18 AAA06891RZ</small>
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Power Requirements



CAUTION

Make sure all power supply to trailer is disconnected and the ground wire in the nose of the trailer and on the receiver box is disconnected prior to any welding on trailer. Failure to do so could result in damage to receiver control box!

It is required that Cab Wiring w/Disconnect switch be installed in the Tractor to Power the Hydro-Trap (WTC P/N APP04780YZ). This kit includes a Master Disconnect. It is recommended this be installed in the cab of the tractor and turned to the ON position ONLY when the traps need to be operated. This kit includes a 120 amp Breaker required for the HYDRO-Trap option.

Lubrication Requirements

INFORMATION

USE PETRO-CANADA HYDREX MV ARCTIC 15 HYDRAULIC FLUID.

Or any mineral based hydraulic oil between 10 cSt and 100 cSt at your ambient outdoor operating temperature.

WTC 9-18 AAA06891RV

OPERATION

HYDRO-Trap Operation

IMPORTANT NOTICE

WTC recommends the Cab Wiring w/Disconnect switch be installed in the tractor to power the HYDRO-Trap (WTC P/N APP04780YZ). This kit includes a Master Disconnect. It is recommended that this be installed in the cab of the tractor and turned to the ON position ONLY when the traps need to be operational. It should be turned to the OFF position when the traps are not required to be operational. This kit includes a 120 amp Breaker required for the HYDRO-Trap option.

Disconnect power before servicing. Make sure all power supply to trailer is disconnected and the ground wire in the nose of the trailer and on the receiver box is disconnected prior to any welding on trailer. Failure to do so could result in damage to receiver control box.

HYDRO-Trap Manual Operation



1. Turn **Master Disconnect Switch** in the tractor to the "ON" position.
2. Make sure tractor is running and all connections to the trailer are hooked up.
3. Verify that all personnel are clear of the power trap and tarp (if equipped) before operating either.
4. Press and hold button for desired operation (Open or Close).
5. Close trap door when finished unloading.
6. When finished operating the traps, turn **Master Disconnect Switch** in the tractor to the "OFF" position.



CAUTION

The hydraulic cylinders and trap doors/frames may be damaged if trailer is transported with the doors in the open position.

OPERATION

HYDRO-Trap Wireless Operation

NOTE

Shurco Electric Tarp (if equipped) can also be operated using this wireless remote.



Remote

1. Turn **Master Disconnect Switch** in the tractor to the "ON" position.
2. Make sure tractor is running and all connections to trailer are hooked up.
3. To turn the remote "ON", press and hold power button on remote for 3 seconds and release to turn on remote.
4. Press and hold button for desired operation (Open or Close). Hopper 1 is the front trap; Hopper 2 is the rear trap; ACC operates the third trap if equipped.
5. To turn remote "OFF", press and hold power button on remote until the two LED's (red and green) turn off to turn off remote. Remote will automatically turn off after 15 minutes of inactivity.
6. When finished operating the traps, turn **Master Disconnect Switch** in the tractor to the "OFF" position.



CAUTION

The hydraulic cylinders and trap doors/frames may be damaged if trailer is transported with the doors in the open position.

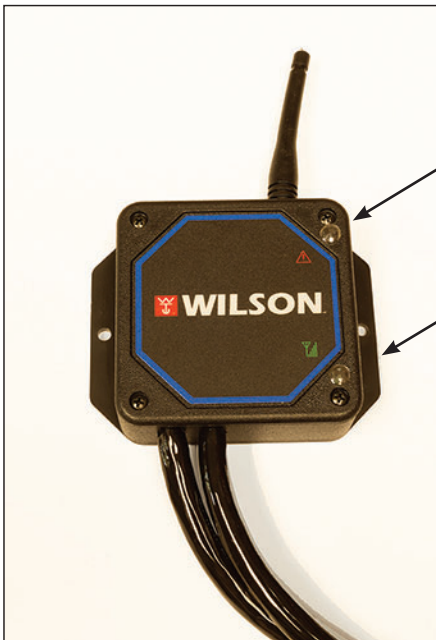
OPERATION

HYDRO-Trap Remote & Receiver Information



Remote

1. When turned on the green LED on remote will flash rapidly if the remote is connected to the receiver. If the remote is not connected to the receiver then the green LED on remote will blink slowly. This may be caused by the receiver not having power.
2. The red LED will blink (once/second) when the remote battery gets low.
3. If connection between receiver and remote is lost you can synchronize the remote and receiver by the following steps:
 - Make sure the receiver and remote are off
 - Press and hold the power button on the remote for more than 10 seconds. The red and green LEDs will start flashing.
 - Apply power to the receiver by connecting your 7 way with hot center pin to trailer.
 - Wait for a few seconds until only the green LED begins to blink on the remote
4. When receiver has power only the red LED on the receiver will blink. When the remote is connected to receiver the green LED on the receiver will blink.



Receiver

RED (Error Code LED)

GREEN (Signal LED)

TROUBLESHOOTING

Power Requirement Overview

In order to operate, this system **requires two power supplies:**

1. The **control system logic power** is supplied a constant nominal 12v by the 7-way center pin (blue wire) and grounded by the bottom (larger) ground pin (white wire). These connections must be kept in good repair. Chassis ground is not adequate or reliable. The ground connection of the 7-way must have a good connection to the tractor ground.
2. **Pump motor power** and ground are supplied via a heavy gauge high current Shurco 2 pin connector at the front the trailer. Tractor wiring kits are available from Wilson Trailer and are the only approved system for powering this unit. **Note: Previously installed cab wiring kits for powering Shurco power tarp or trap openers use the same connector but do not supply adequate power to operate the unit when loaded.** It is possible to retrofit these tractor systems. (Contact WTC service for details.) The cab wiring kit must be installed per instructions (including the Master Disconnect Switch and 120 amp slow-trip circuit breaker module). The installation should use sufficient cable to comfortably reach components and support maintenance, but avoid coiling up excess as any extra cable length reduces power available to the motor. Chassis ground is not adequate or reliable, ensure that the ground cable is connected to a tractor battery cable. All high power connections need to be kept in good repair. **For maximum door opening force, the trap should be operated with the tractor running.**

TROUBLESHOOTING

Notes About Oil

- Hydraulic oil must be kept clean and dry to work correctly. Contamination causes wear and can cause valves to stick. Do not remove fill plug without cleaning the area around the hole. In wet conditions use a rag to wipe excess water off the top of the plug and reservoir before operating traps.
- For oil to go out to the cylinders air needs to be allowed to enter the reservoir through the fill plug vent. Keep the top of the reservoir clear of debris and wipe clean often. Remove fill plug and clean vent as needed.
- Correct oil must be used for acceptable performance and system life. Oil must be mineral based with a viscosity and must be between 10 and 100 cSt (mm^2/s) at ambient outdoor operating temperatures. Oil thinner than 10 cSt will damage the pump. Oil thicker than 100 cSt will reduce power available to open traps and can cause the power breaker to trip. Your system is supplied pre-filled with Petro-Canada Hydrex MV Artic 15 hydraulic fluid, which should give good performance from -20 to 120° F (-30 to 50° C) for operation outside this temperature range, or with other fluids, consult with Wilson Trailer Co. Service department.

Potential Issues & Resolution Procedures

No traps operate with remote or switches on the side of the trailer.

Locate the receiver (small black box with an antenna). Does the red light in the upper corner flash on and off?

If nothing lights up:

- Check for 12v on the center pin of the 7-way connector to the front of the trailer.
- Check that the ABS system is getting power. The ABS light at the rear of the trailer should power on for a few seconds when the 7-way is connected to power.
If ok:
- Check for 12v to the receiver power connection. Follow the in-board harness from the bottom of the receiver to where it divides into several wires. The red wire with a male pin should be connected to a wire that leads to the connection that taps into the ABS power (blue wire) near where the valve control plugs into the harness. If ok:

TROUBLESHOOTING

Potential Issues & Resolution Procedures

No traps operate with remote or switches on the side of the trailer.

- Check receiver ground connection. Follow the in-board harness from the bottom of the receiver to where it divides into several wires. The black wire with a male pin should be connected to a wire that leads to a main harness ground (white wire) at the front of the trailer. If ok:
- Connect the receiver power and ground connections (red and black) directly to a known good power source, if nothing lights up replace receiver.

If the red light is blinking go to the next step:

Do you hear anything when you try to operate the traps?

If you don't hear any sounds:

- Check that the purple wire from the receiver to the pump motor solenoid is supplying 12v when the trap function is pressed.

If you hear a click but no motor noise when a trap function is pressed or released:

- Check the high current power and ground connections from the tractor kit to the 2-pole connector and up to the motor solenoid.

If the pump motor is making a whirring whine noise (indicating spinning up and pumping) go to the next step.

Is there adequate oil of the correct viscosity in the reservoir?

- If low add. Repair any leaks promptly.

Is the fill plug vent plugged?

- Clean top of reservoir and remove fill plug. Attempt to operate. If a difference is noted then clean vent on fill plug.

TROUBLESHOOTING

Potential Issues & Resolution Procedures

An individual trap fails to operate in one or both directions with remote or switches on the side of the trailer.

Check connections at directional control valve solenoids. (Each double stack of solenoids controls a single trap. Individual solenoids in the stack energize to shift the valve to open or close functions.) Each solenoid connection should have a constant ground (black), and a colored wire (white, blue, brown, or green) that supplies 12v when a trap function is activated.

To isolate the problem temporarily swap solenoid connections on one stack with the connections on the other. Attempt to operate the traps.

- If the failure stays with the same trap one of the solenoids has failed, or the valve is stuck. Remove the nut on top of the solenoid stack and slide solenoids off. Temporarily reinstall them with the top one on the bottom. Do not overtighten nut. Attempt to operate the trap.
- If the trap still fails to go in the same direction as before replace the valve cartridge.
- If the direction of the failure has changed replace the bad solenoid. (A good solenoid can be borrowed from the other stack to verify correct function with a known good solenoid.)
- If the failure moved to the other trap the receiver is faulty and should be replaced.

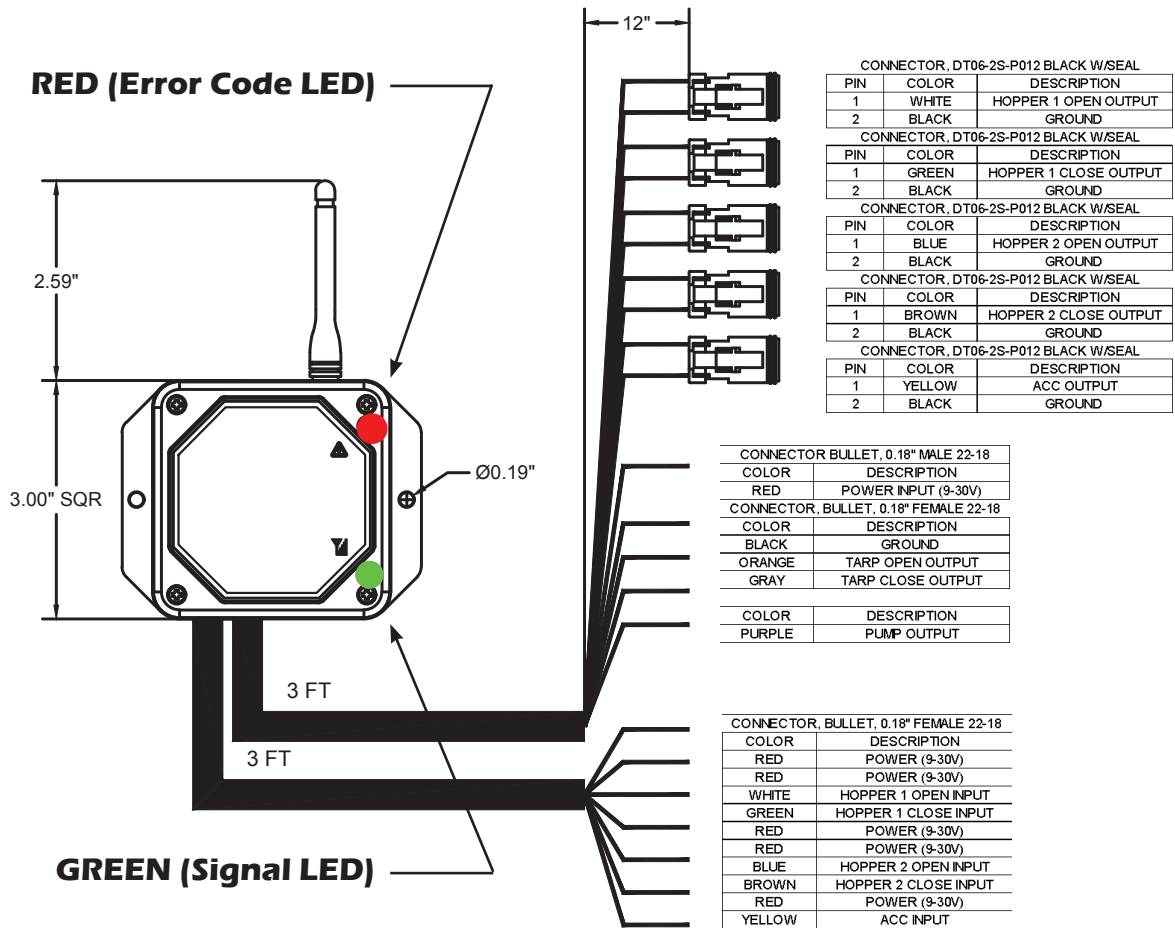
Trap function operates continuously, comes on by itself or one or more switch on the side of the trailer fails to operate a function that can be operated with the remote.

Check for defects in connections between switches and receiver harness. (The connection will be in split loom on the inboard side of the trailer rubrail behind the switch panel.) Each switch is supplied 12v from the receiver. Each switch connection should have a constant 12v power (red), and a colored wire (white, blue, brown, or green) for the switched signal (normally open, 12v when the switch is pressed). Replace any defective switches.

Note: These connections must be free from corrosion, individually sealed, and dry. (Individual sealed connections can be bundled together) Seal with appropriate adhesive lined heat shrink tubing after any repairs or inspections that require connection disassembly. Shorts or moisture bridging between red and colored wires may actuate trap functions.

SCHEMATICS

Schematic



CONSUMER INFORMATION



Warranty Coverage

Wilson Trailer will repair or replace, at its option, any factory-installed part that is defective in material or factory workmanship under normal use, maintenance and service. Normal use excludes any operation in excess of GVWR (gross vehicle weight rating) and any use the Owner's Manual states is not recommended. Warranty repairs will be made and adjusted in accordance with the Extended Warranty Schedule. Any repaired or replaced parts are covered only for the remainder of this warranty. All parts replaced under this warranty become the property of Wilson Trailer. This warranty begins on the date the trailer is delivered to the **FIRST RETAIL PURCHASER** or the date it is first placed into service as a demonstrator or leased trailer, whichever comes first and continues for a period of (3) three years.

Non-Coverage Items

Tires: Wilson Trailer provides no warranty coverage on tires. Tires are covered under the manufacturer's warranty.

Axles, wheels, tires, suspension, trailer frame and other components and structure damaged through the use of single axle dump valves.

Non-standard features or items specified by the purchaser.

Parts that fail due to lack of required maintenance or use of non-equivalent parts.

Normal wear or deterioration on any part.

Any trailer normally driven outside the United States or Canada.

The replacement of expendable maintenance items when the replacement is not due to a defect in material or factory workmanship.

Any pre-owned trailer.

Major Component Coverage

1 Year Coverage

- Coating on Steel Parts – Parts and Labor Covered
- 18 oz Shurco Tarps – Parts Only
- Cleveland Vibrators
- Air Springs - Parts and ½ Hour Labor 1-12 Months
- Suspension Major Structural Components – Parts and Labor
- Wheel Seals – 1-6 Months Parts and \$150 labor per wheel end – 6-12 months Parts and \$75 per wheel end
- Cylinders, HYDRO-Trap
- Receiver & Remote, HYDRO-Trap
- KTI - Pump, Motor, and Solenoids, HYDRO-Trap

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CONSUMER INFORMATION

Major Component Coverage

2 Year Coverage

- Shurco Diamond Core Tarp – Parts Only
- Shocks – Parts and ½ Hour labor
- Air Springs – Parts and ½ Hour Labor 1 year - Parts only through year 2
- Pivot Bolts/Alignment Components – 1 year Parts and Labor – Parts only through year 2

3 Year Coverage

- All components manufactured by Wilson Trailer
- Shurco 4500 Electric Tarp Motor – Parts Only
- Shurco Protrap Electric Motor – Parts Only

5 Year Coverage - Vendor only coverage

- Landing Legs – Parts and Labor
- 2-Speed Gear Box - Parts and Labor
- Aluminum Wheels – Parts
- Steel Wheels – Parts

6 Year Coverage - Vendor only coverage

- Slack Adjusters – Parts

7 Year Coverage - Vendor only coverage

- 7-way receptacle
- Wiring Harnesses - Parts and Labor covered for 3 years – parts only coverage thereafter through year 7

10 Year Coverage - Vendor only coverage

- Grote LED lights (Parts and Labor covered for 3 years – parts only coverage thereafter through year 10)

To Get Warranty Service

Parts claimed to be defective in material or workmanship must be brought to the attention of Wilson Trailer or the selling dealer by taking the trailer to the dealer or by written notification within ten (10) days of discovery, and any repairs or replacement must be commenced within forty-five (45) days thereafter. Wilson Trailer has the right to inspect the claimed defect and determine whether the part is covered by this warranty. If you cannot get warranty service, or you are dissatisfied with the service or with a warranty decision, contact Technical Service and Claims Manager, 1-800-798-2002, Wilson Trailer, P.O. Box 6300, Sioux City, IA 51106.

Owner's Responsibility

As the **FIRST RETAIL PURCHASER** of the trailer, you have the responsibility to perform the required maintenance at the proper intervals and make reasonable and normal use of the trailer.

The **FIRST RETAIL PURCHASER** needs to contact Wilson Trailer's Warranty Department at the 1st sign of a defect in material or workmanship at 1-800-798-2002 to get the claim on record.

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CONSUMER INFORMATION

Warranty Work

All warranty work must be performed at a repair shop approved in advance by Wilson Trailer Company.

Limitations and Disclaimers

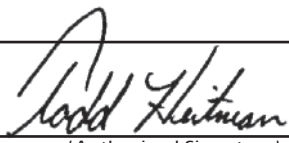
Wilson Trailer disclaims any responsibility for any loss of time or use of the parts or trailers in which the parts are installed, transportation, cargo loss, or other incidental or consequential damage. Any implied warranties, including the implied warranty of merchantability and fitness for a particular purpose, are limited to the duration of this written warranty. Wilson Trailer makes no warranty as to quality or performance of its trailer other than set forth above. Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you special legal rights, and you may also have other rights which vary from state to state.

To file a claim or if you need answers to questions about this warranty, contact the Wilson Trailer Warranty Department:

**Wilson Trailer, PO Box 6300, Sioux City, IA 51106
800-798-2002**

www.wilsontrailer.com
email: warranty@wilsontrailer.com



Serial Number _____
G.V.W. Rating _____
Purchased By _____
Date In Service _____
Selling Dealer _____
By  _____
(Authorized Signature)

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HYDRO-Trap Operator's Manual



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