



OPERATORS MANUAL FOR Mi-T-M®
WCU SERIES
Undercarriage Wash System



CAUTION

RISK OF INJURY!

READ MANUAL BEFORE OPERATING!

This manual is an important part of the Undercarriage Wash System and must remain with the unit when you sell it!

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⚠ WARNING

⚠ WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

⚠ WARNING

⚠ WARNING: This product can expose you to chemicals including carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

INTRODUCTION

Congratulations on the purchase of your new Mi-T-M Undercarriage Wash System. The system is designed to wash and rinse the undersides of vehicles or equipment before or after primary cleaning to remove dirt, grime and road salts from these hard to reach areas.

Mi-T-M Undercarriage Wash System can be used in a variety of environments, including:

*Rental Yards
Heavy Equipment Dealers
Trucking Facilities
Military Bases
Truck Rental Fleets
Forklift Washing Operations
Aircraft Maintenance & Restoration
Shipyards
Mining Operations*

The information in this operator's manual was compiled for your benefit. By reading and following the simple safety, installation, operation, maintenance and troubleshooting steps described in this manual, you will receive years of trouble free operation from your new Mi-T-M Undercarriage Wash System. The contents of this manual are based on the latest product information available at the time of publication. Mi-T-M reserves the right to make changes in price, color, materials, equipment, specifications or models at any time without notice.

! IMPORTANT !

THESE PARAGRAPHS ARE SURROUNDED BY A "SAFETY ALERT BOX". THIS BOX IS USED TO DESIGNATE AND EMPHASIZE SAFETY WARNINGS THAT MUST BE FOLLOWED WHEN OPERATING THIS UNDERCARRIAGE WASH SYSTEM. ACCOMPANYING THE SAFETY WARNINGS ARE "SIGNAL WORDS" WHICH DESIGNATE THE DEGREE OR LEVEL OF HAZARD SERIOUSNESS. THE "SIGNAL WORDS" USED IN THIS MANUAL ARE AS FOLLOWS:

DANGER: INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

WARNING: INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

CAUTION: INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED MAY RESULT IN MINOR OR MODERATE INJURY.

THE SYMBOL SET BELOW THIS PARAGRAPH IS A "SAFETY ALERT SYMBOL". THIS SYMBOL IS USED TO CALL ATTENTION TO ITEMS OR PROCEDURES THAT COULD BE DANGEROUS TO YOU OR OTHER PERSONS USING THIS EQUIPMENT.



ALWAYS PROVIDE A COPY OF THIS MANUAL TO ANYONE USING THIS EQUIPMENT. READ ALL INSTRUCTIONS BEFORE OPERATING THIS UNDERCARRIAGE WASH SYSTEM AND ESPECIALLY POINT OUT THE "SAFETY WARNINGS" TO PREVENT THE POSSIBILITY OF PERSONAL INJURY TO THE OPERATOR.

ONCE THE UNIT HAS BEEN UNCRATED, IMMEDIATELY WRITE IN THE SERIAL NUMBER OF YOUR UNIT IN THE SPACE PROVIDED BELOW.

SERIAL NUMBER _____

Inspect for signs of obvious or concealed freight damage. If damage does exist, file a claim with the transportation company immediately. Be sure that all damaged parts are replaced and that the mechanical and electrical problems are corrected prior to operation of the unit. If you require service, contact Mi-T-M Customer Service.

CALL OUR TOLL-FREE NUMBER

800-553-9053

for the Sales or Service Center nearest you! Please have the following information available for all service calls:

1. Model Number
2. Serial Number
3. Date and Place of Purchase

CONTENTS OF THE UNDERCARRIAGE WASH SYSTEM

Carefully unpack your new Mi-T-M Undercarriage Wash System. Contact the freight line if a damage claim is required on any component. The following items are the basic equipment sent with your Undercarriage Wash System.

1. Pump Skid
2. Remote Control Box and Photo-eye
3. Holding Tank
4. 2" Supply Jumper Hose- 5' Long
5. Spray Bar
6. Spray Bar Cover
7. Manual and Parts List

SPECIFICATIONS

MODEL#	WCU-35-0ME1	WCU-35-0ME3
FLOW (GPM)	35	
PSI	110	
HORSEPOWER	3	
VOLTAGE	230	208-230
AMPERAGE	15	10
HZ	60	
PHASE	1	3
OPTIONS	N/A	WX-0144 (460V 3PHASE- 5 AMPS)
PUMP SKID DIMENSIONS	42"L X 20"W X 40"H	
HOLDING TANK VOLUME	250 GALLONS	
HOLDING TANK SIZE	36"DIAMETER X 62" TALL	
SPRAY BAR	94"L, 1-1/2" STAINLESS SQ. TUBING, 1" FPT CONNECTION	
SPRAY BAR COVER	100"L X 6"W X 1/2"H STEEL PLATE	
SPRAY BAR NOZZLES	(16X) 25 DEGREE SIZE 15	
SHIPPING WEIGHT	450LBS	




IMPORTANT SAFETY WARNINGS



WARNING: When using this product, basic precautions should always be observed, including the following:

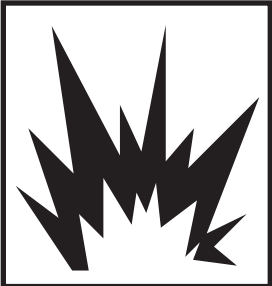




READ ALL SAFETY WARNINGS BEFORE USING YOUR Mi-T-M UNDERCARRIAGE WASH SYSTEM

HAZARD	POTENTIAL CONSEQUENCE	PREVENTION
<p data-bbox="167 264 505 321">RISK OF ELECTRIC SHOCK OR ELECTROCUTION</p> 	<p data-bbox="540 264 943 470">Serious injury or death could occur if the Undercarriage Wash System is not properly grounded. Your Undercarriage Wash System is powered by electricity and may cause electric shock or electrocution if not installed properly.</p> <p data-bbox="540 905 927 993">Electrical shock may occur if the Undercarriage Wash System is not operated properly.</p> <p data-bbox="540 1346 943 1434">Serious injury or death may occur if electrical repairs are attempted by unqualified persons.</p>	<p data-bbox="995 264 1511 352">Installation of this unit, including all electrical connections, must comply with all local, state and national codes.</p> <p data-bbox="995 369 1511 575">This product must be grounded. Connect to a GFCI circuit breaker when available. If the unit should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. Do not ground to a gas supply line.</p> <p data-bbox="995 592 1511 760">Improper connection of the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the system is properly grounded.</p> <p data-bbox="995 777 1511 919">Always be certain the unit is receiving proper voltage (+/- 5% of the voltage listed on the nameplate). Before installing electrical connections, be certain the power switches are in the "OFF" position.</p> <p data-bbox="995 936 1295 961">Keep all connections dry.</p> <p data-bbox="995 978 1511 1121">DO NOT spray on or into electrical installations of any kind! This includes electrical outlets, light bulbs, fuse boxes, transformers, the Undercarriage Wash System itself, etc..</p> <p data-bbox="995 1138 1511 1226">DO NOT allow metal components of the Undercarriage Wash System to come in contact with live electrical components.</p> <p data-bbox="995 1243 1511 1356">Never operate the Undercarriage Wash System with safety guards/covers removed or damaged. Ensure all electrical covers are securely in place when unit is operating.</p> <p data-bbox="995 1373 1511 1516">Any electrical wiring or repairs performed on this Undercarriage Wash System should be done by Authorized Service Personnel in accordance with National and Local electrical codes.</p> <p data-bbox="995 1533 1511 1818">Before opening any electrical enclosure, always shut off the Undercarriage Wash System. Disconnect the Undercarriage Wash System from the power source. If the power disconnect is not in sight, lock it in the open position and tag it to prevent power usage. (Never assume the Undercarriage Wash System is safe to work on just because it is not operating! Always disconnect from the power source.)</p>



IMPORTANT SAFETY WARNINGS

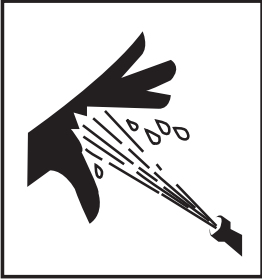



HAZARD	POTENTIAL CONSEQUENCE	PREVENTION
<p data-bbox="115 241 483 268">RISK OF EXPLOSION OR FIRE</p>  	<p data-bbox="516 241 878 359">Serious injury or death could occur from an explosion or fire caused by a system electric spark.</p>	<p data-bbox="954 241 1474 359">This unit must be placed in an area that is well ventilated, free of flammable vapors, combustible dust, gases or other combustible materials.</p>
<p data-bbox="175 884 422 911">RISK OF BURSTING</p> 	<p data-bbox="516 884 922 968">Serious injury or death could occur from bursting caused by excessive pressure in the system.</p> <p data-bbox="516 982 894 1100">Serious injury may occur if attempting to start the Undercarriage Wash System when the pump is frozen.</p>	<p data-bbox="954 884 1479 968">Do not use this Undercarriage Wash System to pump flammable material! An explosion could occur.</p> <p data-bbox="954 1024 1479 1171">In freezing temperatures, the unit must be protected from freezing. Do not start the Undercarriage Wash System if it has been in a freezing environment without first allowing the pump to thaw.</p>
<p data-bbox="196 1241 401 1268">RISK OF BURNS</p> 	<p data-bbox="516 1241 873 1409">Serious injury may occur from touching the electrical motor. This area can remain hot for some time after the Undercarriage Wash System is shut-down.</p>	<p data-bbox="954 1241 1446 1293">Never allow any part of your body to contact the electrical motor until cooled.</p>
<p data-bbox="142 1598 488 1625">RISK FROM MOVING PARTS</p> 	<p data-bbox="516 1598 927 1682">Serious injury may occur to the operator from moving parts on the Undercarriage Wash System.</p>	<p data-bbox="954 1598 1463 1650">Do not operate the unit without all protective covers in place.</p> <p data-bbox="954 1665 1474 1728">Follow the maintenance instructions specified in the manual.</p>



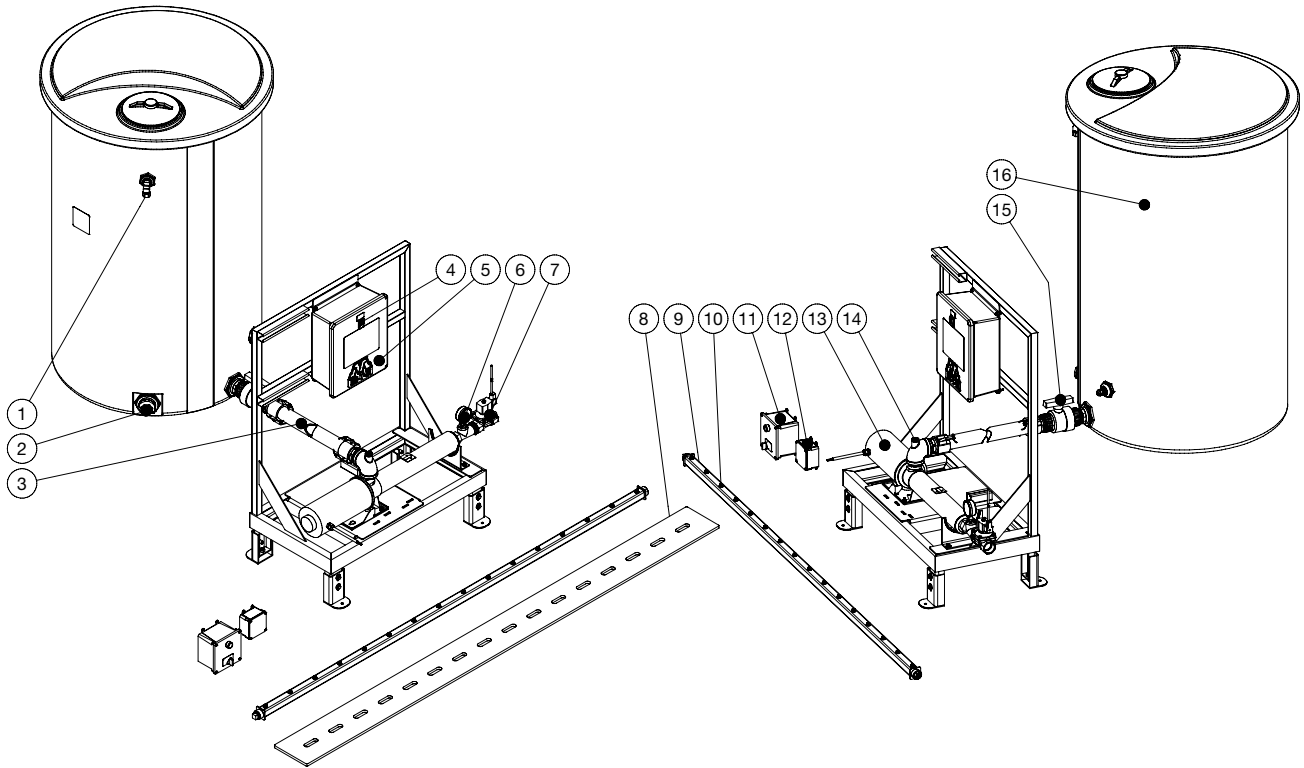
IMPORTANT SAFETY WARNINGS



HAZARD	POTENTIAL CONSEQUENCE	PREVENTION
<p>RISK OF INJECTION OR SEVERE CUTTING INJURY</p> 	<p>Serious injury or death could occur from water spray penetrating the skin.</p>	<p>Keep clear of nozzle and spray! Never put your hand, fingers or body directly over the spray nozzle.</p> <p>Never point the discharge spray at yourself or anyone else.</p> <p>Always keep operating area clear of all persons.</p> <p>SEEK EMERGENCY MEDICAL CARE if the spray appears to have penetrated the skin! DO NOT TREAT AS A SIMPLE CUT!!</p> <p>Hoses should be inspected daily for signs of wear. If evidence of failure exists, promptly replace all suspect hoses to prevent the possibility of injury from the spray. If a hose or fitting is leaking, NEVER PLACE YOUR HAND DIRECTLY ON THE LEAK.</p> <p>Before removing the spray nozzle or servicing the unit, ALWAYS shut off the unit and release trapped pressure. (Even after you shut off the unit, there is pressurized water left in the pump and hose until you release it).</p>
<p>RISK OF BODILY INJURY</p> 	<p>Serious injury or death may occur from the contact force of an uncontrolled water nozzle.</p> <p>Serious injury can occur from loose debris being propelled at a high speed from the water nozzle.</p> <p>Injury may occur if the operator loses his balance caused by the thrust of water traveling through the water nozzle.</p> <p>Injury may occur from the Undercarriage Wash System.</p>	<p>Do not start or operate the unit until an operator is securely bracing the spray nozzle.</p> <p>ALWAYS wear protective goggles when operating the Undercarriage Wash System to shield the eyes from flying debris.</p> <p>DO NOT direct spray toward fragile materials such as glass. Shattering could occur.</p> <p>Stay alert-watch what you are doing. Do not operate the unit when fatigued or under the influence of alcohol or drugs.</p> <p>NEVER open the water nozzle unless securely braced.</p> <p>DO NOT overreach or stand on unstable support.</p> <p>Wet surfaces can be slippery, wear protective foot gear and keep good footing and balance at all times.</p> <p>NEVER open the water nozzle while on a ladder or roof.</p> <p>Do not direct spray at people or pets. The force of the water can knock a person down.</p> <p>DO NOT DRINK THE WATER IN THE Undercarriage Wash System!! This is non-potable water and is not suitable for consumption.</p> <p>DO NOT allow children to operate this unit. Know how to stop the Undercarriage Wash System quickly. Be thoroughly familiar with controls.</p> <p>DO NOT leave the Undercarriage Wash System unattended. Shut off the Undercarriage Wash System before leaving.</p>

!SAVE THESE INSTRUCTIONS!

UNDERCARRIAGE WASH SYSTEM FEATURES



- 1 Water Supply Connection
- 2 Tank Drain Plug
- 3 Pump Supply Hose
- 4 Power On Switch
- 5 Control Panel
- 6 Pressure Gauge
- 7 Solenoid Valve
- 8 Spray Bar Cover
- 9 Spray Bar
- 10 Nozzles
- 11 Selector Switch Remote
- 12 Photo-Eye
- 13 Multistage Pump
- 14 Priming Plug
- 15 Tank Shut-Off Valve
- 16 Product Tank

INSTALLATION

INSTALLATION:

1. Place pump skid and holding tank on level concrete surface in an enclosed area preferably with floor drain. Place holding tank within a few feet of pump close enough to allow 5' supply hose to reach. Level pump as needed with feet levelers and anchor to concrete if desired. Do not allow pump or tank to be exposed to freezing temperatures.
2. Place spray bar inside concrete trench, nozzles about 1" below the concrete surface. Level and Anchor into place- allow enough room for connection hose or piping to connect to spray bar. Do not allow spray bar to be exposed to freezing temperatures.



NOTE: Trench will accumulate water and dirt so a drain line needs to be installed to wash bay main trench or drain line.

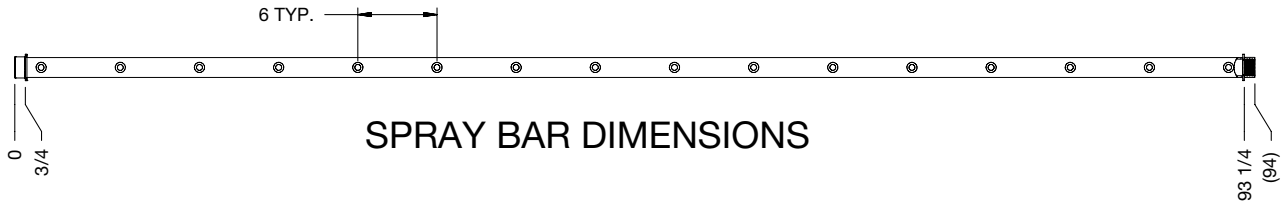


Figure 1: Spray Bar dimensions and nozzle spacing

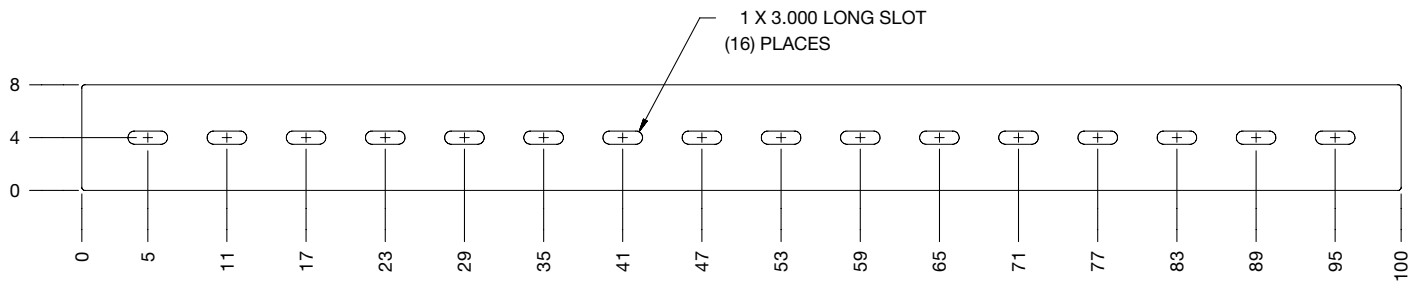
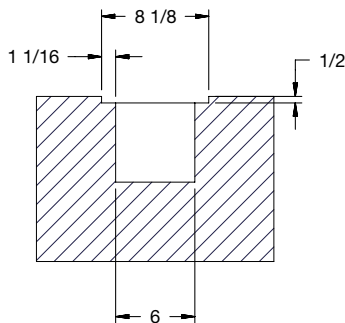


Figure 2: Cover dimensions



TRENCH MINIMUM DIMENSIONS

Figure 3: Trench minimum dimensions for spray bar and cover installation.

3. Place Cover over spray bar on lip of concrete trench. Center slots over nozzles.
4. Install selector switch remote box and photo-eye to wash-bay wall in front of undercarriage trench. Photo-eye will reach a maximum of 10', so it needs to be placed within this distance of the equipment or vehicles moving by. Place far enough in front spray bar to avoid water spraying photo-eye or remote box at least 10 ft. is recommended.

INSTALLATION

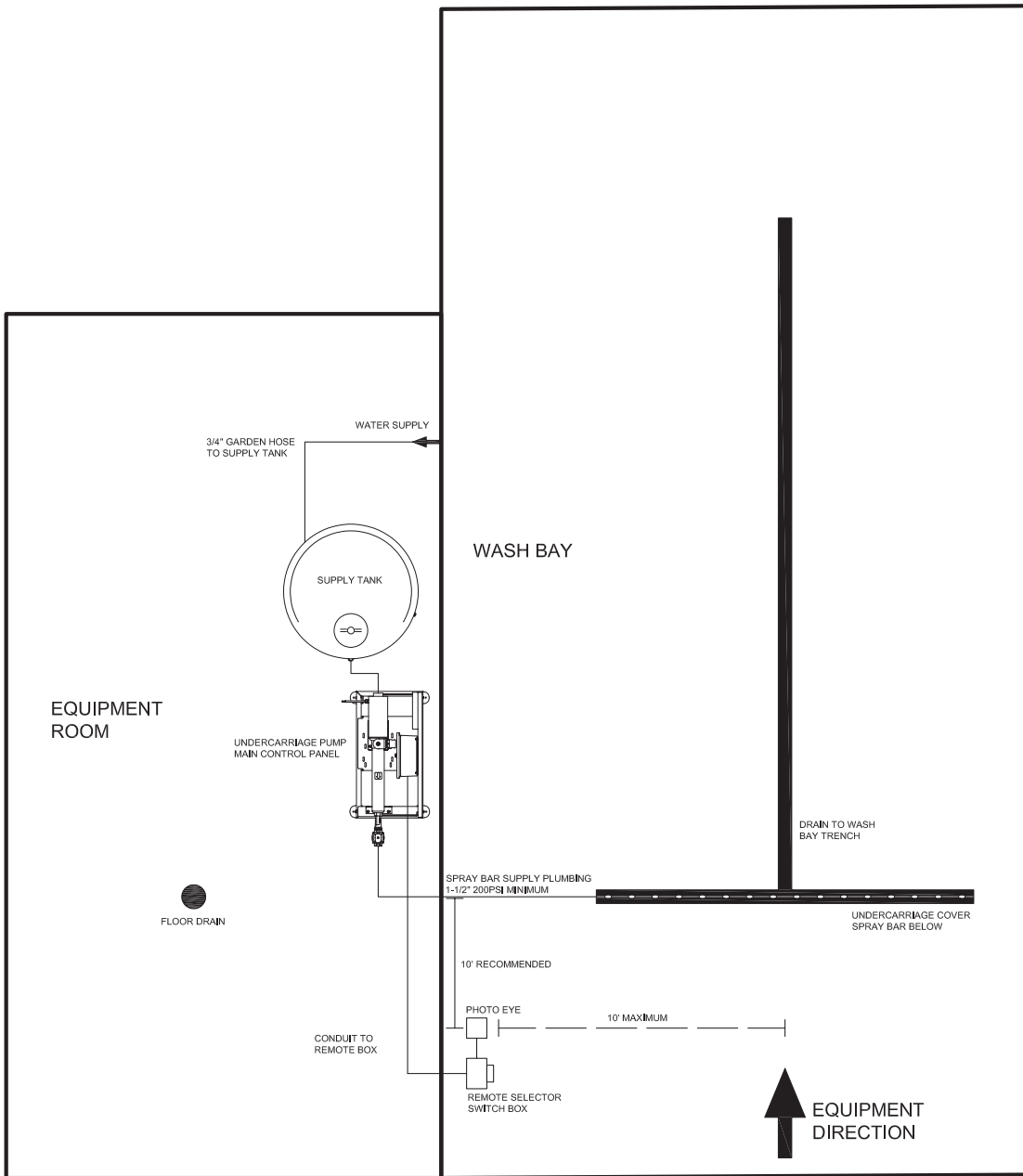


Figure 4: example wash-bay layout

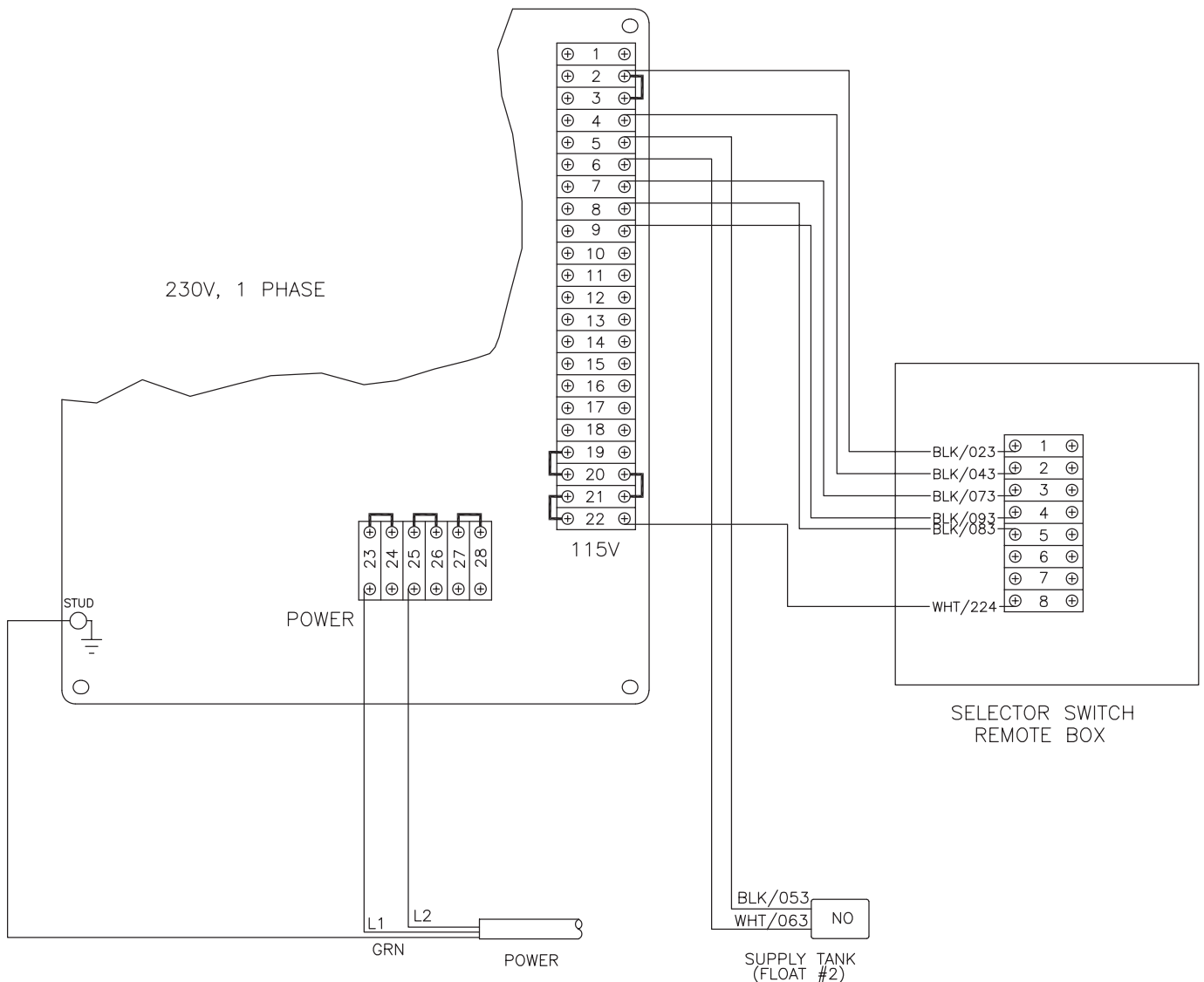
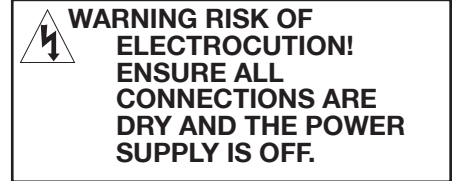
PLUMBING CONNECTIONS:

1. Water supply line: Connect 3/4" garden hose (not provided) from water supply line to the female garden hose fitting provided on top of holding tank.
2. Suction line: Connect tank and pump and the 2" water supply hose using the cam and groove connectors.
3. Discharge line: Run 1-1/2" pipe or hose from outlet of spray system to the undercarriage trench and spray bar connection. Reduce down at the spray bar to meet the 1" FPT connection. (Pipe/hose must be rated for minimum 200PSI).

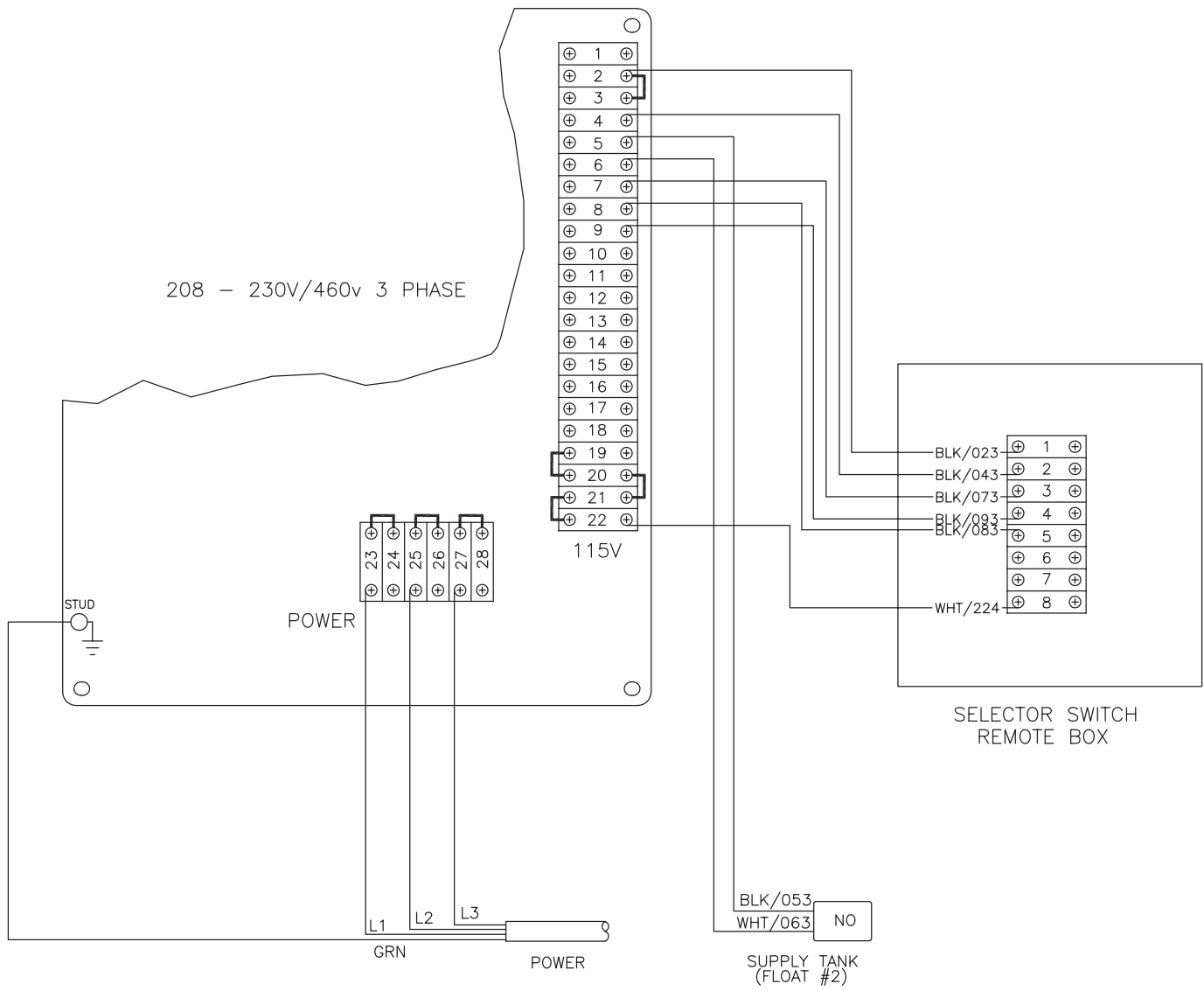
INSTALLATION

ELECTRICAL CONNECTIONS:

1. A qualified electrician must install the electrical system.
 - a. Verify electrical supply at power source is off.
 - b. Run water tight conduit:
 - i. From selector switch remote box to the undercarriage main control panel.
 - ii. From local disconnect to undercarriage main control panel.
 - c. Using correct wire sizes, connect wiring below (See wiring diagram):
 - i. From selector switch remote box to main control panel (16GA minimum).
 - ii. From main power from local disconnect to undercarriage main control panel (See amp requirements in specifications section to determine wire size.)
 - d. Connect float from holding tank into undercarriage main control panel (See wiring diagram).



INSTALLATION



STOP

TO ENSURE YOUR UNDERCARRIAGE WASH SYSTEM OPERATES SAFELY AND EFFICIENTLY, COMPLETE THE PRE-OPERATION CHECKLIST BEFORE PROCEEDING.

PRE-OPERATION CHECKLIST

Before proceeding, answer all the questions on this checklist.	YES	NO
CODES:		
1. Does the electrical wiring meet all codes?		
2. Does plumbing meet all codes?		
LOCATION:		
1. Is the unit located on a hard level surface?		
2. Is the unit located in a large ventilated area?		
3. Is the spray bar securely anchored and lined up underneath the cover?		
4. Does the cover have enough clearance over spray bar to avoid deflecting into spray bar when vehicles drive over?		
5. Is cover lined up over spray bar with nozzles centered in slots?		
6. Is the photo-eye and selector switch remote box located in the proper location?		
ELECTRICAL:		
1. Is the unit properly grounded?		
2. Does the power supply, voltage and amperage match the data plate?		
3. Are the control floats and remote switch(es) properly installed?		
4. Is the selector switch remote box wired in correctly?		
PLUMBING:		
1. Is the plumbing sized correctly?		
2. Have all connections been tightened and been made properly.		
3. Are all unions tightened?		
GENERAL:		
1. Have all operators using this unit read and understood this entire manual?		
2. Has the unit been installed by qualified service people who followed the instructions listed in this manual?		

IF "NO" WAS MARKED TO ANY OF THESE QUESTIONS, CORRECT THE SITUATION BEFORE OPERATING.

OPERATION

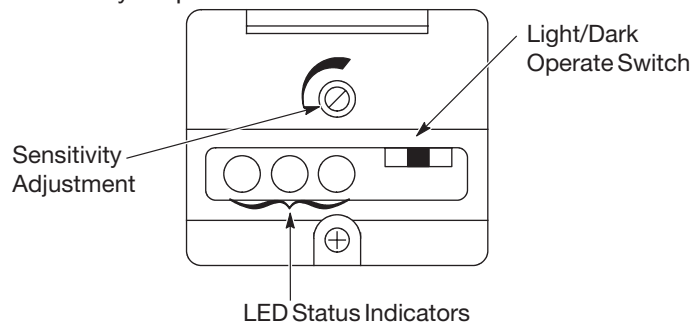
FILLING AND PRIMING SYSTEM

1. Turn on water supply line to holding tank. Water will begin to fill the holding tank through the float valve. Allow water to fill holding tank- float valve will shut-off water when full and re-fill tank as water is used.
2. Open 2" supply valve between holding tank and pump. Slightly open ½" plug on top of pump to allow air to escape. Tighten plug when water begins coming out of fitting.

OPERATION GUIDELINES

1. Main Power switch allows control power to the system- enabling remote selector switch operation. Can be left on at all times except when performing maintenance or for long term shut-downs.
2. Remote selector switch allows two operation modes:
 - a. Test: Undercarriage system turns on until selector switch is turned off. Green light turns on indicating undercarriage system is on. Select Test for manual turning on and off of system and for initial testing of spray system.
 - b. Operate: Undercarriage system will turn on and off with the photo-eye control. Green light becomes active on remote box to indicate to operators photo-eye is currently active. (Warning if the undercarriage system will not be used, keep selector switch off so personnel or vehicles will not trip the photo-eye and turn on system.)
3. Photo-eye operation: The photo-eye is a diffuse type sensor that sends out a light beam. It is able to sense objects when this beam is returned to the sensor by bouncing of the object. The max range the photo-eye will sense is 10ft- the surface and finish of the object will affect the range. Initially Test photo-eye operation and location with remote selector switch set to off.

- a. Photo-eye top view:



- b. Photo-eye indicator lights:
 - i. Yellow- Power Light: On when photo-eye has power. Should be on all the time.
 - ii. Green- Relay Light: On when photo-eye relay is on. In light mode (LT) an object sensed in front of the photo-eye turns this relay on.
 - iii. Red- Margin Light: Indicates strong signal being sensed from the photo-eye. This light should also come on when objects pass in front of the photo-eye. If it does not photo-eye needs to be cleaned or moved closer to object. Use when setting photo-eye location.
 - c. Photo-eye light/dark switch: Keep set to LT (light mode). Relay turns on when object is in front of photo-eye.
 - d. Photo-eye sensitivity dial: Keep on maximum setting- fully clockwise.
4. PLC Program:
 - a. When Test is selected:
 - i. Green Light turns on indicating system is active.
 - ii. Pump solenoid opens.
 - iii. After short delay pump turns on.
 - iv. Pump remains on until selector switch is turned off.
 - v. After pump shuts off there is a short delay and solenoid closes.
 - b. When Operate is selected:
 - i. Green Light turns on indicating photo-eye is active.
 - ii. Objects passing in front of photo-eye will initiate start sequence:
 1. Pump solenoid opens.
 2. After short delay pump turns on.

OPERATION

3. Pump remains on as long as object remains in front of photo-eye.
 4. When object is no longer in front of photo-eye delay timer is started~ standard is 15 seconds (adjustable on PLC if needed). (This timer's purpose is to give enough time for the vehicle to pull past the photo-eye and all the way through the spray bar before the pump shuts off. If the photo-eye senses another object, IE another vehicle it will reset.)
 5. After delay timer is up pump shuts off.
 6. After pump shuts off there is a short delay and solenoid closes.
5. Pump Solenoid: The purpose of the solenoid is to open when undercarriage system is running and close when it is off. This prevents water from gravity feeding from holding tank, through the pump, and out the spray bar when the system is off.

START-UP:

1. Turn Main power switch on.
2. Turn remote selector switch to Test. Pump will turn on and begin delivering water out of the spray bar.
3. Check pump motor direction is correct- swap motor wiring leads to change direction.
4. Check flow, pressure, spray pattern- adjust/plug nozzles as desired.
5. Turn remote selector switch to Operate. Move objects in front of photo-eye to check photo-eye and verify operation.

OPERATION:

1. System is ready for Operation: Users can select Test or Operate when ready to use the undercarriage system.
2. As water from the holding tank is used, water from the water supply will continue to fill up tank through the float valve as long as water supply is kept on.
3. Turn Selector switch off when undercarriage system will not be used.

Shut-Down: Turn either Selector switch to off, or main panel rocker switch off at any time to shut system off.

**MAKE SURE SYSTEM IS SHUT-DOWN BEFORE WINTERIZING OR PERFORMING ANY MAINTENANCE.
DISCONNECT MAIN POWER FROM DISCONNECT BEFORE SERVICING CONTROL BOX.**

WINTERIZING

Before performing maintenance or winterizing the equipment turn of main rocker switch panel.

For winterizing or long term shut-downs disconnect inlet and outlet fittings from pump and let water drain and empty supply tank.

Remove plug at end of spray bar and drain water out.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	REMEDY
ELECTRICAL		
No power at the Control Panel.	Power failure to the Control Panel.	Check circuit breaker at power source or contact your local distributor.
	Improper or loose wire connections.	Check wire diagram/schematic.
CENTRIFUGAL PUMP		
Centrifugal Pump motor will not start or stops.	Circuit overload/breaker has tripped.	Reset breaker or replace fuse at power source.
	Improper or loose wire connections.	Check wire diagram/schematic.
	Improper or loose motor connections.	Check and tighten connections.
	Pump motor overload.	Allow motor to cool. Reset overload.
	Pump motor is defective.	Replace motor.
Centrifugal Pump motor hums but will not start.	Obstruction in pump.	Remove obstruction.
	3 phase motor supplied with Single phase.	Have electrician check and correct.
Centrifugal Pump won't prime.	Insufficient water in supply tank.	Add water or adjust floats.
	Air locked.	Remove plug on top of pump.
	Blocked suction line or strainer.	Remove obstruction.
	Air leak in suction piping.	Correct air leak.
	Motor rotation is backward.	Have qualified electrician reverse rotation.
	Pump is obstructed.	Remove obstructions.
	Insufficient voltage.	Check voltage with voltmeter.
Centrifugal Pump has noisy operation.	Insufficient incoming water flow.	Blocked suction or strainer.
	Air leak in suction piping.	Correct air leak.
	Improper mounting causing vibration.	Ensure pump is mounted level with the unit base.
	Debris in pump.	Clean.
Centrifugal Pump has low output.	Blocked suction line or strainer.	Remove obstruction.
	Air leak in suction piping.	Correct air leak.
	Plugged or restricted impeller.	Correct restriction.
	Low operating speed.	Correct voltage.
	Discharge line from pump is obstructed.	Remove obstruction.
	Pump is not primed.	See Priming Instructions, pg. 15.
	Plumbing is obstructed or too small.	Remove obstruction or use larger plumbing.
	Scale buildup in metal piping.	Clean or replace.
	Motor direction is backward.	Have qualified electrician reverse rotation.
SHAFT SEALS		
Water is leaking at pumps.	Damaged stationary shaft seal.	Seal ran dry. Ensure seal chamber is filled with liquid.
Short seal life.	Unexpected temperature and chemical usage.	Replace.
WATER FLOW		
Air shoots from Water Outlet.	This is a common occurrence while pump is priming.	Air will stop shooting from the water outlet when pump is primed.
Make-up water will not turn off.	Float rake stuck	Repair or replace.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	REMEDY
PHOTO-EYE		
Power light not on	Main control switch off	Turn main control switch on
Green light always on	Object in front of photo-eye	Check photo-eye alignment, move objects if necessary
	Photo-eye dirty	Clean photo-eye
	In Dark mode	Switch to Light mode
Not turning on pump	Remote switch in wrong position	Turn to operate for photo-eye operation
SPRAY BAR		
Low flow	Nozzles plugged	Clean nozzles
	Pump rotating wrong direction	Swap motor leads at contactor to reverse rotation
Water seeping out when system off	Solenoid failure	Clean or replace solenoid

STATEMENT OF WARRANTY

Mi-T-M warrants all parts (except those referred to below) of your new Undercarriage Wash System to be free from defects in materials and workmanship for one year from the date of original purchase.

Defective parts not subject to normal wear and tear will be repaired or replaced at Mi-T-M's option during the warranty period. In any event, reimbursement is limited to the purchase price paid.

EXCLUSIONS

1. Normal wear parts:

Seals	Filters
O-rings	Gaskets
2. Parts damaged due to:
 - normal wear, misapplication, modifications/alterations, abuse,
 - operation at other than recommended speeds, pressures or temperature,
 - the use of caustic liquids,
 - chloride corrosion or chemical deterioration,
 - fluctuations in electrical or water supply,
 - operating unit in an abrasive, corrosive or freezing environment.
3. Parts damaged by failure to follow recommended:
 - installation, operating and maintenance procedures.
4. This warranty does not cover the cost of:
 - normal maintenance or adjustments,
 - labor charges,
 - transportation charges to Service Center,
 - freight damage.
5. The use of other than genuine Mi-T-M parts will void warranty. Parts returned, prepaid to Mi-T-M's factory or to an Authorized Service Center will be inspected and replaced free of charge if found to be defective and subject to warranty. There are no warranties which extend beyond the description of the face hereof. Under no circumstances shall Mi-T-M bear any responsibility for loss of use of the unit, loss of time or rental, inconvenience, commercial loss or consequential damages.

Manufactured by Mi-T-M
50 Mi-T-M Drive, Peosta IA 52068
563-556-7484/ Fax 563-556-1235