



Mi-T-M[®]
C O R P O R A T I O N

OPERATION MANUAL

CM-1400-0MEC-M

CM-1400-1MEH-M

COLD WATER ELECTRIC
PRESSURE WASHER AND
MISTER COMBINATION UNIT



CAUTION
RISK OF INJURY! READ ENTIRE MANUAL BEFORE
OPERATING! THIS MANUAL IS AN IMPORTANT PART
OF THE PRESSURE WASHER AND MUST REMAIN WITH
THIS UNIT!

Introduction

THANK YOU for purchasing this product.

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT HAND AND LEFT HAND sides are determined by facing the motor end of the machine.

The SERIAL NUMBER is located in the Specification or Identification Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place off the machine.

WARRANTY is provided from your dealer for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate shown in this manual.

This warranty provides you the assurance that your dealer will back products where defects appear within the warranty period. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void.

RECORD SERIAL NUMBER

Write your model number, machine serial number (see serial number tag (A) in illustration) and date of purchase in the spaces provided below. Your dealer needs this information when ordering parts.

Model No. _____

Machine Serial No. _____

Date of Purchase _____
(To be filled in by purchaser)



⚠ 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

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All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

Safety

RECOGNIZE SAFETY INFORMATION

This is the safety alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



UNDERSTAND SIGNAL WORDS

A signal word--DANGER, WARNING or CAUTION--is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.



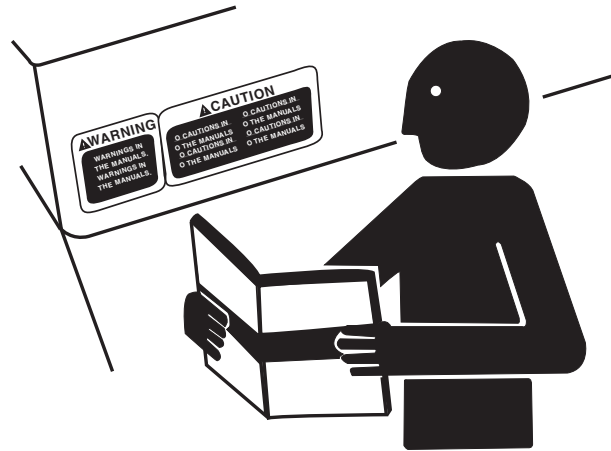
FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your dealer.

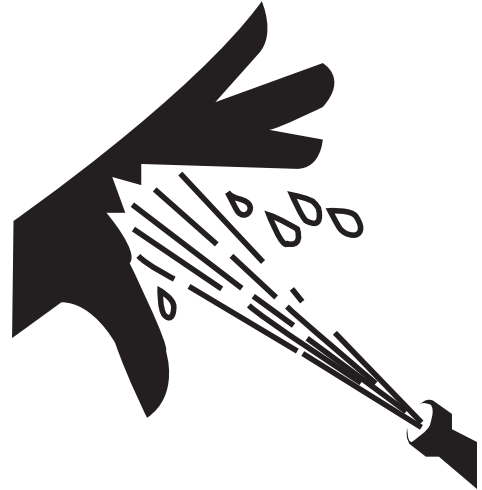




PROTECT AGAINST HIGH PRESSURE SPRAY

Spray from high pressure nozzles can penetrate the skin and cause serious injury. Keep spray from contacting hands or body.

If an accident does occur and the spray appears to have penetrated the skin, **SEEK EMERGENCY MEDICAL CARE. DO NOT TREAT AS A SIMPLE CUT.** If you are using cleaning agents, be prepared to tell a physician exactly what kind.



GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with local codes and ordinances.

DANGER - Improper connection of the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the product--if it will not fit, have a proper outlet installed by a qualified electrician.

GROUND FAULT CIRCUIT INTERRUPTER PROTECTION

This pressure washer is provided with a Ground Fault Circuit Interrupter (GFCI) built into the power cord. This device provides additional protection from the risk of electric shock. Should replacement of the plug or power cord become necessary, use only identical replacement parts that include GFCI protection.

DO NOT drop the GFCI as damage could result. If the GFCI is accidentally dropped, be certain to test the GFCI before using to ensure it is working properly. (Follow instructions on GFCI for test procedures.)

DO NOT pull on the electrical cord to disconnect from the outlet, **OR** carry the unit by the cord.





EXTENSION CORDS

Extension cords are not recommended for use on this pressure washer. If the use of an extension cord is unavoidable, it must be plugged into a GFCI found in circuit boxes or protected receptacles.

Use only 3-wire extension cords that have 3-prong grounding type plugs and 3-pole cord connectors that accept the plug from the washer. Use only extension cords that are intended for outdoor use. These extension cords are identified by a marking "Acceptable for use with outdoor appliances; store indoors while not in use". Use only extension cords having an electrical rating not less than the rating of the product. Do not use damaged extension cords. Examine extension cord before using and replace if damaged. Do not abuse extension cord and do not yank any cord to disconnect. Keep cord away from heat and sharp edges. Always disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.



WARNING: To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch plug with wet hands.

On extension cords:

<u>Cable Length</u>	<u>Wire Gauge</u>
Up to 50 feet	14 AWG
50 to 100 feet	12 AWG

Use of smaller cords will cause electric motor stalling or circuit breaker stoppage.

CLEANING DETERGENT PRECAUTIONS

Know the detergent being used. Be prepared to tell a physician exactly what you are using in the event of an emergency. Read all detergent labels and follow all instructions exactly regarding preparation, use, safety, transportation, and disposal. Keep all detergents out of the reach of children, pets and livestock.

NEVER spray combustible liquids of any kind.

Do not use highly corrosive detergents or acid-type cleaners with this washer.



HANDLE CHEMICAL PRODUCTS SAFELY

Direct exposure to hazardous chemicals can cause injury. Potentially hazardous chemicals used with the pressure washer includes such items as detergents.

A Material Safety Data Sheet (MSDS) provides specific details on detergents; physical and health hazards, safety procedures and emergency response techniques.

Check the MSDS before you start any job using a detergent. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.



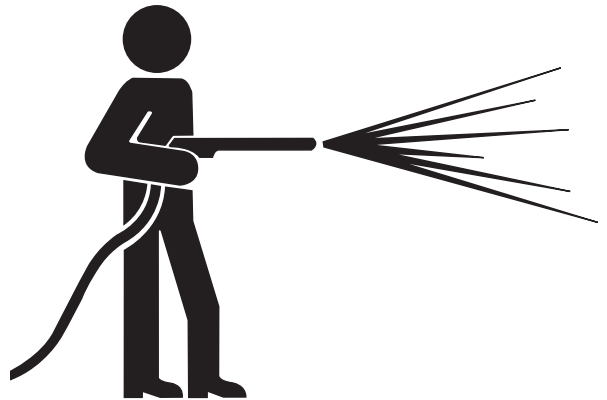


IMPORTANT SAFETY INSTRUCTIONS

WARNING: To reduce the risk of injury, read this operator's manual completely. When using this product, the following basic precautions should always be followed:

1. Read all the instructions before using the product.
2. This product is equipped with a Ground Fault Circuit Interrupter (GFCI) in the power cord to reduce the risk of electrical shock. If replacement of the plug or cord is needed, use only identical replacement parts.
3. Follow the grounding instructions included in this manual.
4. High pressure water spray can cut skin. Do not direct spray at persons. Keep operating area clear of all persons or pets. Warn children that the water spray can cut. Supervise children closely.
5. Do not allow children or untrained person to operate the washer.
6. Do not spray electrical switches, receptacles or light bulbs, or glass or fragile objects that may shatter.
7. Dirt and debris removed by spray can cause eye injury. Wear eye protection.
8. Wet surfaces can be slippery. Wear shoes and keep both feet on the ground. Do not climb on items being cleaned. Do not overreach or stand on unstable support. Keep good footing and balance at all times.
9. When the spray trigger is released, water pressure is trapped in the discharge hose. Release trapped pressure by triggering the spray gun after the washer is turned off.
10. Do not operate the washer when fatigued or under the influence of drugs or chemicals. Stay alert. Watch what you are doing.
11. Follow the maintenance instruction specified in this manual.

SAVE THESE INSTRUCTIONS



WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



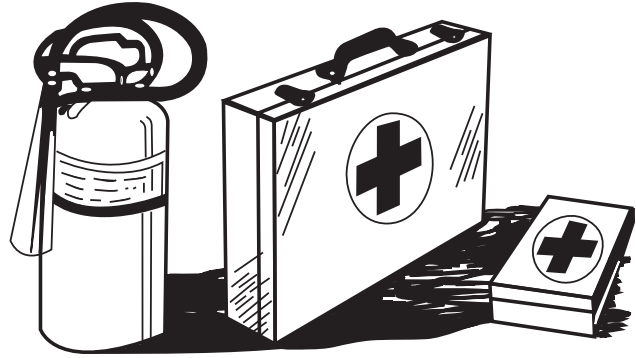


PREPARE FOR EMERGENCIES

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital and fire department near your telephone.

Be prepared if a fire starts.



INSPECT HIGH PRESSURE WASHER

Be sure all covers, guards and shields are in place.

Locate all operating controls and safety labels.

Keep all hardware and plumbing fittings tight.

Inspect power cord for damage before using. There is a hazard of electrical shock from crushing, cutting or heat damage.

Inspect high pressure hose for kinking, cuts or abrasive wear.

SERVICE HIGH PRESSURE WASHER SAFELY

Before servicing washer, disconnect unit from power source, relieve water pressure and allow unit to cool down.

Service washer in a clean dry flat area.



SAFETY SIGNS

⚠️ WARNING

RISK OF ELECTROCUTION. DO NOT REMOVE THIS TAG.

1. Connect only to a properly grounded outlet. Do not remove grounding pin.
2. Inspect cord before using. Do not use if cord is damaged.
3. Keep all connections dry and off the ground.
4. Do not touch plug with wet hands.
5. This product is provided with a GFCI built into the power cord plug. Use identical parts for replacement.
6. Do not use an extension cord with this machine.
7. Read the operator's manual before using.

34-1423/073012

⚠️ ADVERTENCIA

RIESGO DE ELECTROCUCION. NO quite ESTA ETIQUETA.

1. Conecte solamente a una toma corriente que está bien fundado. No quite la pata de conexión de la tierra.
2. Antes de usar inspeccione la cuerda. No use si la cuerda está dañando.
3. Mantenga los conexiones secos y apartados de la tierra.
4. No torque el enchufe con manos mojados.
5. Este producto viene con un interruptor de circuito de falla de conexión a tierra (GFCI) incorporado al enchufe del cordón eléctrico. Use solo piezas idénticas de repuesto si se necesita un reemplazo del enchufe o del cordón.
6. No use una cuerda extensión con la unidad.
7. Antes de usar lea y entienda todas las instrucciones y el manual de operación.

34-1424/082912

34-1423 and 34-1424
Location: Motor Housing

⚠️ WARNING

If connection is made to a potable water system, the system shall be protected against backflow.

Do not spray electrical apparatus and wiring.

34-1428/082912

⚠️ ADVERTENCIA

No rocíe el aparato y el cableado eléctricos.

Si la conexión se hace a un sistema de agua potable, el sistema será protegido contra la expulsión.

34-1429/082912

34-1428 and 34-1429
Location: Handle Sides

⚠️ CAUTION

HOT METAL SURFACES
Touch only insulated areas.

⚠️ PRECAUCION

SUPERFICIES CALIENTES DEL METAL
Áreas aisladas del tacto solamente.

34-1445/082912

34-1445
Location: Handle

⚠️ WARNING/ADVERTENCIA

<p>RISK OF INJECTION OR CUTTING INJURY: Keep clear of nozzle. Do not direct discharge stream at people.</p> <p>RISK OF EXPLOSION: Do not spray flammable fluids.</p>	<p>RIESGO DE INYECCIÓN O LESIÓN DE CORTE: Manténgase alejado de la boquilla. No dirija la corriente de descarga hacia las personas.</p> <p>RIESGO DE EXPLOSIÓN: No rocíe líquidos inflamables.</p>
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34-1427/082114

34-1427
Location: Motor Housing

CONNECT TO AN INDIVIDUAL BRANCH CIRCUIT ONLY.

CONECTAR SOLAMENTE A UN CIRCUITO DERIVADO INDIVIDUAL.

34-3146/082014

34-3146
Location: Motor Housing

⚠️ CAUTION

1. To reduce the risk of injury, read operator's manual carefully before using.
2. Spray gun can kick back. Hold with both hands.
3. Risk of eye injury. Always wear eye protection.
4. See the operator's manual for proper detergent usage.

34-1430/082912

34-1430 and 34-1431
Location: Motor Housing

⚠️ PRECAUCION

1. Lea cuidadosamente el manual del operador antes de usar.
2. El revolver rociadora puede retroceder violentemente. Sujétela con ambas manos.
3. Riesgo de lesiones a los ojos. Use siempre protección para los ojos.
4. Para un uso químico apropiado consulte el Manual del Operador.

34-1431/082912



! WARNING



RISK OF ELECTROCUTION.
DO NOT REMOVE THIS TAG.

1. Connect only to a properly grounded outlet. Do not remove ground pin.
2. Inspect cord before using. Do not use if cord is damaged.
3. Keep all connections dry and off the ground.
4. Do not touch plug with wet hands.
5. This unit may be provided with a Ground Fault Circuit Interrupter (GFCI) built into the power cord plug. If replacement of the plug or cord is needed, use only identical replacement parts. If this unit is not provided with a GFCI, this unit should only be connected to a power supply receptacle protected by a ground fault circuit interrupter.
6. Do not use an extension cord with this machine.
7. Read the operator's manual before using.

FAILURE TO FOLLOW THE ABOVE
INSTRUCTIONS COULD RESULT
IN A SEVERE ELECTRICAL SHOCK.

34-1035-E/F/S-111899-ENG

! ADVERTISSEMENT

RISQUE D'ÉLECTROCUTION NE
PAS ENLEVER CETTE ÉTIQUETTE

- Brancher seulement à une prise correctement mise à la terre. Ne pas enlever la broche de mise à la terre.
- Vérifier le cordon avant l'utilisation. Ne pas utiliser le cordon s'il est endommagé.
- Conserver toutes les connexions au sec et au-dessus du sol.
- Ne pas toucher la prise avec des mains humides.
- Cet appareil peut être équipé d'un disjoncteur de fuite à la terre incorporé dans la fiche du cordon électrique. S'il s'avère nécessaire de remplacer la fiche ou le cordon, n'utiliser que des pièces de rechange identiques. Si cet appareil ne comporte pas un disjoncteur de fuite à la terre, ne le relier qu'à une prise de courant protégée par un disjoncteur de fuite à la terre.
- L'utilisation d'une rallonge n'est pas recommandée.
- Lire le manuel de l'opérateur avant d'utiliser l'appareil.

DES CHOCS ÉLECTRIQUES SÉVÈRES
SERONT POSSIBLES SI LES DIRECTIVES
CI-DESSUS NE SONT PAS SUIVIES.

! ADVERTENCIA

RIESGO DE ELECTROCUCION.
NO quite ESTA ETIQUETA.

- Conecte solamente a una toma corriente que está bien fundado. No quite la pata de conexión de la tierra.
- Antes de usar inspeccione la cuerda. No use si la cuerda está dañando.
- Mantenga los conexiones secos y apartados de la tierra.
- No toque el enchufe con manos mojados.
- Este producto debe conectarse a tierra. Asegúrese de que la lavadora a presión esté equipada con un Interruptor de circuito de falla a tierra (Ground Fault Circuit Interrupter, GFCI) incorporado en el cordón de alimentación. Si no lo tiene, debe conectarse la lavadora a presión únicamente en un receptáculo que esté protegido por un Interruptor de circuito de falla a tierra. Desconéctela cuando no esté en uso.
- No use una cuerda extensión con la unidad.
- Antes de usar lea y entienda todas las instrucciones y el manual de operación.

SI NO SIGA LAS INSTRUCCIONES HAY EL
RIESGO DE ELECTROCUCIÓN SEVERA.

34-1035
Location: Power Cord

Controls

CONTROLS CM-1400-0MEC-M



A—On/Off Switch
B—Mister Valve
C—Detergent Hose
D—High Pressure Outlet
E—Water Inlet Fitting

F—Power Cord
G—Ground Fault Circuit Interrupter
H—Discharge Hose
I—Handle
J—Gun Trigger

K—Gun
L—Nozzle Wand
M—Nozzles
N— Quick Connect Misting Nozzle
O—Misting Gun with Nozzle

Controls

CONTROLS CM-1400-1MEH-M



A—On/Off Switch
B—Mister Valve
C—Handle
D—High Pressure Outlet
E—Water Inlet Fitting

F—Power Cord
G—Ground Fault Circuit Interrupter
H—Detergent Hose
I—Nozzle Wand
J—Gun Trigger

K—Gun
L—Discharge Hose
M—Misting Gun with Nozzle
N—Quick Connect Misting Nozzle
O—Nozzles

Preparing the Washer-Pressure Washer Mode

ELECTRICAL REQUIREMENTS

CAUTION: To avoid electrical shock, connect the washer to a properly grounded electrical receptacle. Do not use an adapter or remove third (ground) prong.

Make certain the connection between the washer power cord and receptacle is kept dry.

The following electrical requirements must be met:

1. The electrical supply must provide a minimum of 110 to 120 volts. With the washer operating, line voltage must not drop below 108 volts.

IMPORTANT: Operating the pressure washer with low line voltage may damage electrical components and cause motor to stall.

2. This pressure washer is equipped with a Ground Fault Circuit Interrupter in the power cord to reduce the risk of electrical shock. However the GFCI will not protect against all faults, short circuits, or overloads.

CAUTION: Ground Fault Circuit Interrupter (GFCI) MUST be tested before each use of the washer.

If the results in each one of the following steps are not as described, shut washer off immediately. DO NOT operate until the washer has been inspected by a qualified electrician or your dealer.

3. Plug GFCI into grounded receptacle. Connect high pressure outlet hose and turn on water supply.
4. Press and release “RESET” button (A) to verify power to the washer.
5. Press “TEST” button (B). Red indicator bar (C) on reset button should appear. (Power to the washer should be interrupted).
6. Press and release the “RESET” button. Power should be restored to the washer.

NOTE: GFCI test instructions are also found on the front of the GFCI.



INLET WATER SUPPLY REQUIREMENTS

1. Inlet water supply must be a minimum of 20 PSI (1.4 bar).

Attempting to operate the washer with less than adequate water supply will cause rapid wear of packings, valves and bearings that will dramatically shorten pump life. Symptoms of inadequate water supply are pump shuddering and flattening of the supply hose.

2. Inlet water flow must be at least 125% of pump rated flow. Check volume by timing how long it takes to fill a 5 gallon (19 L) container. For example, a flow rate of 3.0 GPM would fill a 5 gallon container in 5/3 minute (100 seconds).
3. Water supply hose should be a good grade of garden hose with a minimum I.D. 5/8 in. (16mm) and no longer than 50 ft. (15.24 m). If longer supply hose must be used, check to be certain flow is at least equal to the "GPM Supply Required".
4. If non-pressurized (static draw) water supply is used, check to be certain flow is at least 125% of pump rated flow. In static draw situations, water flow rate (GPM) can be increased by elevating the water supply tank or changing to a larger inside diameter water supply hose.
5. For static draw applications the water supply hose should be a good grade of garden hose with an I.D. of 3/8 in. (10mm) or 1/2 in. (13mm) and be no longer than 10' in length (3m).

Attempting to operate the washer in suction feed without the correct hose will result in a lack of suction causing rapid wear of packings, valves and bearings that will dramatically shorten pump life. Symptoms include pump shuddering and flattening of the supply hose.

6. Adding on extension to the supply hose will reduce water flow rates. Check for adequate water flow rate each time an extension is added. Water flow rates can be increased by using the largest possible internal diameter supply hose.

IMPORTANT: Inlet water temperature must not be more than 125° F (60° C). Damage to the pump may result.

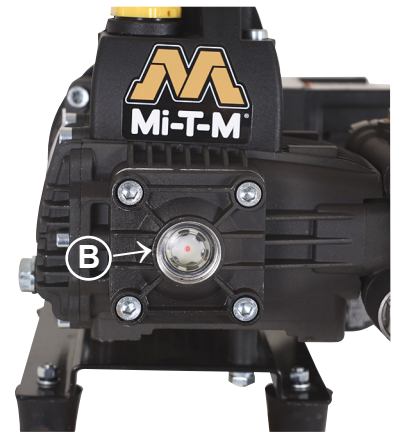


CHECK PUMP OIL

1. Remove shipping plug and install vented plug (A) on pump.



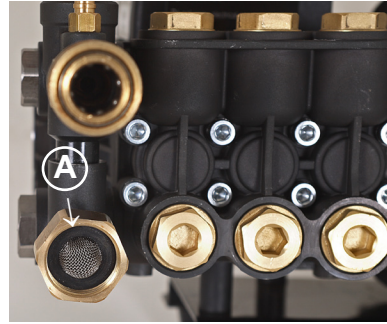
2. Check oil in pump. With washer on level surface, the oil should be 1/2 full, at the center of sight glass (B). If necessary, add SAE30W non-detergent oil, so level is 1/2 full, at center of sight glass.



CONNECT HOSES AND PRIME PUMP

1. Hose washer with screen (A) is already attached into end of brass hose coupler.

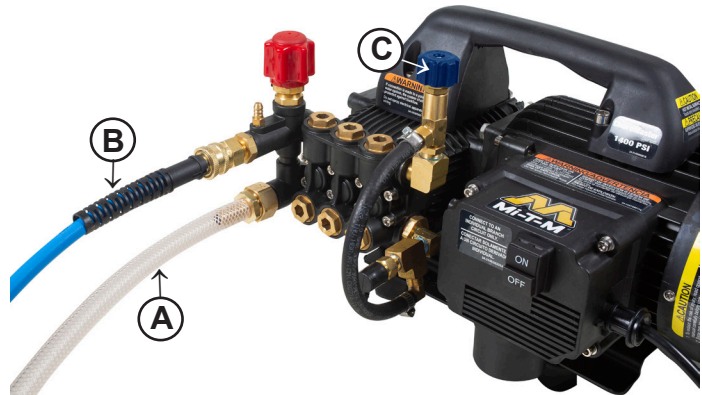
NOTE: Conical screen in washer (A) should protrude out of coupler and into flow from inlet hose.



IMPORTANT: If washer is to be connected to a well water system, use 851-0207 water inlet filter (A). This will increase sand filtering capability and avoid damage to the pump.



2. Install inlet water hose (A) and hand tighten. Install high pressure discharge hose (B) with quick connect. Turn Misting Valve (C) clockwise until fully closed.



3. Open water supply. Squeeze trigger on gun. Allow water to run (with motor off) until water runs out of pressure hose. Start motor and cycle trigger on gun until "crackling" sound (air in lines) stops.

Note: For static draw applications, start motor and cycle trigger on gun until "crackeling" (air in lines) stops.



Operating the Washer-Pressure Washer Mode

STARTING MOTOR

IMPORTANT: To prevent possible pump damage, do not allow washer pump to run in bypass (with gun trigger released) for longer than 3 minutes.

The washer ON/OFF switch (A) is a rocker switch that includes a circuit breaker for protection against motor electrical overload. Move the ON/OFF switch to the "ON" position.



INSTALLING/CHANGING NOZZLE WAND

WARNING: Never point the gun at yourself or anyone else. Never put your hand, fingers or body directly over the spray nozzle. Always keep operating area clear of all persons. Use extreme caution when operating near children.

CAUTION: Caution should be used when directing spray toward fragile materials such as glass. Shattering could result in serious injury.

CAUTION: Even after you shut off the unit, there is high pressure water left in the pump, hose and gun until you release it by triggering the gun. Before removing the spray nozzle or servicing the unit, always shut off the unit and trigger the gun to release trapped pressure.

CAUTION: Various nozzles may be quick-connected into the end of the wand to change the spray pattern or use the detergent feature. When using Quick Connects (Q.C.), be certain the connection is securely locked. If not, the high pressure water may shoot the nozzle from the wand, causing severe injury or serious damage.

Be certain the trigger gun is locked in the "OFF" position.


The nozzle assembly should be disconnected from the gun/wand assembly at this time by retracting the locking ring on the quick-connect fitting to remove the nozzle.



QUICK-CONNECT NOZZLES

When using quick-connects (Q.C.), be certain the connection is securely locked as shown at right. If not, the high pressure water may shoot the nozzle from the lance, causing severe injury or serious damage. To determine spray fan, refer to the actual number stamped on the nozzle. The first two digits indicate the spray fan degree: 15=15°, 25=25°, 65=65°.

DETERGENT USAGE GUIDE

 **CAUTION:** Use detergents carefully. Read labels thoroughly and follow all instructions for preparation, use, safety, transportation and disposal. Be prepared to tell a physician exactly what detergents you are using in the event of an emergency. Keep all detergents out of reach of children.

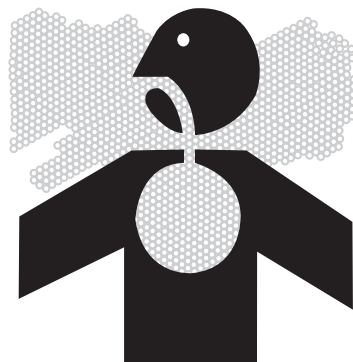
Be aware that two detergents can be mixed on the sprayed surface. In this regard, some detergents may give off harmful fumes or start an unpredictable chemical reaction when mixed with another detergent.

NEVER SPRAY FLAMMABLE LIQUIDS such as gasoline, fuel oil, alcohol, naphtha, etc.

Be sure to read and follow all detergent labels exactly regarding preparation, use, safety, transportation, and disposal. Keep in mind that the washer's detergent system further dilutes the detergent with water, and that some detergents may not be concentrated enough to properly work with the system.

Some detergents may not give premix instructions and may require experimenting to determine proper dilution for your application.

If you are not familiar with the detergent, always test a small area of the surface to be cleaned for adverse reaction. Do this a day in advance. Thoroughly rinse area with water.



CLEANING WITH DETERGENTS

Refer to “Detergent Cleaning Precautions” before working with detergents. Be certain to wear protective safety attire. Prepare detergent solution according to label directions. Never pump acids, alkaline, abrasive fluids or solvents through the unit.

1. Remove rubber cap from detergent injector barb and install detergent hose with strainer.
2. Immerse the detergent strainer into the detergent solution to allow detergent to siphon.
3. With the trigger gun locked in the “OFF” position, secure quick-connect the detergent spray nozzle (#6540° BLACK) into the end of the wand.

Note: This injection system is designed to apply detergents under low pressure only. It will not allow detergent solutions to be introduced into the system unless the nozzle assembly is in the low pressure detergent mode.

4. To apply solution; unlock the trigger gun and squeeze the trigger. In a few moments a detergent/water mixture will exit the low pressure nozzle. Start spraying the lower portion of the surface being cleaned and move up, using long overlapping strokes. Applying from the bottom up helps avoid streaking. Allow to soak briefly. Do not allow detergent solution to dry on the surface. (Avoid working on hot surfaces or in direct sunlight to minimize the chances of the detergent drying, which may result in damaging painted surfaces.) Be certain to rinse a small section at a time.
5. To rinse; lock the trigger gun in the “OFF” position, securely quick-connect the desired high pressure nozzle into the end of the wand. Unlock the trigger gun and spray. It will take about 30 seconds to purge all detergent from the line. For best rinsing results, start at the top and work down.
6. Siphon a gallon of water through the low pressure detergent injection system after each use. This prevents the possibility of corrosion or detergent residue causing mechanical problems during the next use.



SHUTDOWN

IMPORTANT: Shutdown procedures should be followed at the end of each cleaning operation.

1. If a detergent was used, place detergent inlet strainer in CLEAN water and operate trigger to spray water for a period of three minutes. This will flush the system of detergents and help prevent the detergent valve from sticking or corrosion.
2. Turn unit off and unplug washer.
3. Turn inlet water supply off. Squeeze trigger momentarily to relieve pressure. Disconnect hoses.
4. Allow motor to cool, then wipe washer down with a damp cloth.

Preparing the Washer-Mister Mode

ELECTRICAL REQUIREMENTS

CAUTION: To avoid electrical shock, connect the washer to a properly grounded electrical receptacle. Do not use an adapter or remove third (ground) prong.

Make certain the connection between the washer power cord and receptacle is kept dry.

The following electrical requirements must be met:

1. The electrical supply must provide a minimum of 110 to 120 volts. With the washer operating, line voltage must not drop below 108 volts.

IMPORTANT: Operating the pressure washer with low line voltage may damage electrical components and cause motor to stall.

2. This pressure washer is equipped with a Ground Fault Circuit Interrupter in the power cord to reduce the risk of electrical shock. However the GFCI will not protect against all faults, short circuits, or overloads.

CAUTION: Ground Fault Circuit Interrupter (GFCI) MUST be tested before each use of the washer.

If the results in each one of the following steps are not as described, shut washer off immediately. DO NOT operate until the washer has been inspected by a qualified electrician or your dealer.

3. Plug GFCI into grounded receptacle. Connect high pressure outlet hose and turn on water supply.
4. Press and release “RESET” button (A) to verify power to the washer.
5. Press “TEST” button (B). Red indicator bar (C) on reset button should appear. (Power to the washer should be interrupted).
6. Press and release the “RESET” button. Power should be restored to the washer.

NOTE: GFCI test instructions are also found on the front of the GFCI.



INLET WATER SUPPLY REQUIREMENTS

SUCTION FEED

1. Water supply hose should be a good grade of garden hose with an I.D. of 3/8 in. (10mm) or 1/2 in. (13mm) and be no longer than 10' in length (3m).

Attempting to operate the washer in suction feed without the correct hose will result in a lack of suction causing rapid wear of packings, valves and bearings that will dramatically shorten pump life. Symptoms include pump shuddering and flattening of the supply hose.

2. Water supply (or chemical) tank should be clean and located at or above the height of the unit's water inlet.
3. In static draw situations, water flow rate (GPM) can be increased by elevating the water supply tank or changing to a larger inside diameter water supply hose.

IMPORTANT: Inlet water temperature must not be more than 90° F (32° C). Damage to the pump may result.



CHECK PUMP OIL

1. Remove shipping plug and install vented plug (A) on pump.

2. Check oil in pump. With washer on level surface, the oil should be 1/2 full, at the center of sight glass (B). If necessary, add SAE30W non-detergent oil, so level is 1/2 full, at center of sight glass.

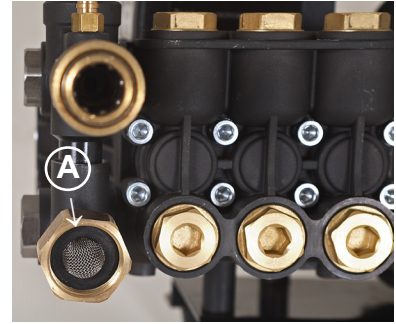


CONNECT HOSES AND PRIME PUMP

SUCTION FEED

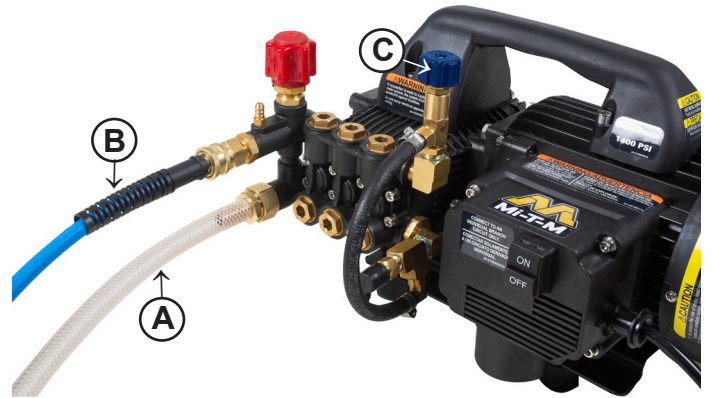
1. Hose washer with screen (A) is already attached into end of brass hose coupler.

NOTE: Conical screen in washer (A) should protrude out of coupler and into flow from inlet hose.



2. Install inlet water hose (A) and hand tighten. Install high pressure discharge hose (B) with quick connect. Turn Misting Valve (C) clockwise until fully closed.

NOTE: Make sure rubber cap is installed on detergent hose barb for mister mode setup. Pump will not prime without cap installed.



3. Place end of high pressure discharge hose in water supply (or chemical) tank. Start motor and allow unit to run until all air has been evacuated from the pump and hose. Once air has been evacuated turn motor off, turn misting valve counter-clockwise until fully open and install misting gun.



Operating the Washer-Mister Mode

STARTING MOTOR

IMPORTANT: To prevent possible pump damage, do not allow washer pump to run in bypass (with gun trigger released) for longer than 3 minutes.

The washer ON/OFF switch (A) is a rocker switch that includes a circuit breaker for protection against motor electrical overload. Move the ON/OFF switch to the "ON" position.



DETERGENT(S) AND CHEMICAL(S) USAGE GUIDE



CAUTION: Use detergent(s) and chemical(s) carefully. Read labels thoroughly and follow all instructions for preparation, use, safety, transportation and disposal. Be prepared to tell a physician exactly what detergent(s) and chemical(s) you are using in the event of an emergency. Keep all detergent(s) and chemical(s) out of reach of children.

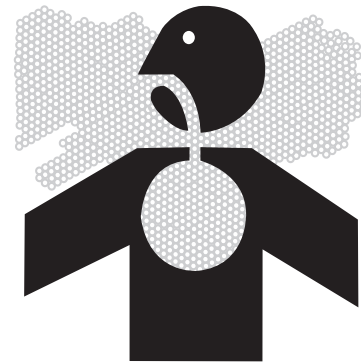
Be aware that two detergent(s) and chemical(s) can be mixed on the sprayed surface. In this regard, some detergent(s) and chemical(s) may give off harmful fumes or start an unpredictable chemical reaction when mixed with another detergent(s) and chemical(s).

NEVER SPRAY FLAMMABLE LIQUIDS such as gasoline, fuel oil, alcohol, naptha, etc.

Be sure to read and follow all detergent(s) and chemical(s) labels exactly regarding preparation, use, safety, transportation, and disposal.

Some detergent(s) and chemical(s) may not give premix instructions and may require experimenting to determine proper dilution for your application.

If you are not familiar with the detergent(s) and chemical(s), always test a small area of the surface to be cleaned for adverse reaction. Do this a day in advance. Thoroughly rinse area with water.



CLEANING WITH DETERGENTS AND CHEMICALS

Refer to “Detergent and Chemical Cleaning Precautions” before working with detergents. Be certain to wear protective safety attire.

Prepare detergent and chemical solution according to label directions. Never pump acids, alkaline, abrasive fluids or solvents through the unit.

1. To apply solution; unlock the trigger gun and squeeze the trigger. In a few moments a detergent/chemical mixture will exit the misting gun assembly. Consult detergent and chemical manufacturer for application information.
2. Siphon a gallon of water through the pump and hose after each use. This prevents the possibility of corrosion or detergent and chemical residue causing mechanical problems during the next use.



SHUTDOWN

IMPORTANT: Shutdown procedures should be followed at the end of each cleaning operation.

1. Turn unit off and unplug washer.
2. Squeeze trigger momentarily to relieve pressure. Disconnect hoses.
3. Allow motor to cool, then wipe washer down with a damp cloth.

Troubleshooting

Symptom	Problem	Solution
No discharge at nozzle when trigger mechanism is squeezed.	Inadequate water supply. (Pressure Feed)	Ensure hose is 3/4" (19.05mm) diameter and incoming water supply is turned on.
	Lost Prime In Pump. (Suction Feed)	Ensure hose is 3/8" (10mm) or 1/2" (13mm) diameter and water supply (or chemical) tank is full. Remove high pressure hose until pump builds pressure. Turn unit off and install hose. Elevate tank if problem continues.
Low or fluctuating pressure.	Kink in water inlet hose.	Remove kink.
	Kink in high pressure discharge hose.	Replace hose.
	Water inlet screen obstructed.	Remove screen, clean or replace.
	Pump sucking air. (Prime eliminated)	Tighten all water intake connections. Eliminate leaks in intake line.
	Not in high pressure mode.	Insert a high pressure nozzle.
	Obstructed or worn spray nozzle.	Remove, clean or replace.
	Damaged or obstructed valve assembly on pump.	Remove, inspect, clean or replace.
Motor Will Not Come On When.	Mister valve open while in pressure washer mode.	Turn mister valve clockwise until fully closed.
	No power at receptacle.	Check electrical power fuse or circuit breaker.
Switch is Pressed.	Motor overload protector (on/off switch) tripped.	Allow motor to cool and try again. Check voltage requirements. Contact your customer service if condition persists.
	Switch malfunction.	Contact your customer service.
	Faulty motor.	Contact your customer service.

Troubleshooting

Symptom	Problem	Solution
Motor Shuts Off - GFCI Trips.	Power interruption.	Reset GFCI. If problem continues, contact your customer service or have electrical system checked by a qualified electrician.
	Electrical short in power cord or in washer.	Reset GFCI. Try again. If problem persists, do not operate. Contact your customer service.
Motor Shuts Off - Trips On-Off Switch.	Excessive discharge pressure caused by partially clogged nozzle.	Inspect and clean or replace nozzle.
	Low voltage.	Check electrical system requirements. Check extension cords for proper gauge.
	Internal pump malfunction.	Contact your customer service.
Water Continues to Flow from Nozzle after Gun Trigger is Released.	Spray gun valve malfunction.	Replace gun.
Motor Hums - Does Not Turn.	Pump plungers - sticking to packing due to drying.	Use a 4 mm hex wrench to manually turn and free pump. (See Service Section.)
	Motor malfunction.	Contact your customer service.
Fan Spray is uneven or distorted.	Clogged nozzle.	Clean nozzle. (See Service Section.)
Pump Oil is Milky or White.	Water in oil.	Change oil. Do not direct spray at washer.
Does not draw soap.	Detergent nozzle not installed.	Install nozzle.
	Too many hose extensions in use.	Use only one hose extension.

Service

CLEANING INLET WATER

 **CAUTION:** Disconnect power cord from electrical receptacle before cleaning inlet screen.

IMPORTANT: Do not operate washer with water inlet screen removed. Foreign material may enter and damage pump or valves.

Inspect the water inlet screen (A) (inside brass fitting) periodically for buildup of scale, grit and dirt. Clean as necessary. If it is corroded or broken, replace.



CLEANING DETERGENT HOSE STRAINER

Check detergent hose strainer for detergent or contaminant buildup.

Remove strainer from hose and back flush with clean water and a stiff bristle brush.

NOTE: If strainer frequently becomes plugged, check detergent to be sure it is thoroughly mixed.



CLEANING MISTING NOZZLE

Remove nozzle from misting gun assembly.

Inspect nozzle filter for debris and contaminant buildup.

Remove nozzle filter from nozzle and back flush with clean water and a stiff bristle brush.

NOTE: If filter frequently becomes plugged, check detergent to be sure it is thoroughly mixed and that supply tank is free of debris.



CHECKING WATER PUMP OIL LEVEL

IMPORTANT: If oil is white or foaming, water is in the oil reservoir. Change oil.

NOTE: Water in oil occurs as a result of spray or condensation. Milky oil is not indicative of a pump malfunction.

1. Put unit on level surface.
2. Oil level should be at the center of sight glass (A).
3. Add oil if necessary with SAE30W non-detergent. Do not overfill.



CHANGING WATER PUMP OIL

IMPORTANT: Change pump break-in oil after first 25 hours of operation and at 250 hour intervals thereafter.

1. Place unit on level surface.
2. Run unit for a few minutes to warm oil.
3. Stop washer. Use an 22 mm deep well socket to remove drain plug (A) to drain oil into container. Install plug. Do not pollute; dispose of waste oil properly.



4. Remove vented plug (A). Fill pump with 11 oz. SAE30W non-detergent oil. Oil level should be at the center of sight glass. Replace plug.



Storage

STORING WASHER

IMPORTANT: Protect washer from freezing temperatures. If unit will experience freezing conditions, pump must be filled with antifreeze to prevent cracking of pump manifold and unloader valve due to water expansion. Draining alone will not remove all the water.



CAUTION: If the washer will be used where food is prepared, stored or consumed, or where sanitation is required, use a nontoxic antifreeze.

NOTE: This operation requires two people: one to operate washer and one to add antifreeze.

1. Install short piece (2 to 4 feet long) garden hose on water inlet.
2. Raise open end of hose above washer and insert funnel.

IMPORTANT: Be careful not to kink hose.

3. Fill hose with 50 - 50 mix of antifreeze.
4. While adding antifreeze, start washer, depress spray gun trigger, and let run for 15 seconds.
5. Release trigger for 15 seconds.

NOTE: Trigger must be released to pull antifreeze into unloader valve.

6. Repeat cycle of 15 seconds trigger on, 15 seconds trigger off.

IMPORTANT: Dispose of sprayed solution safely according to instructions on the antifreeze container.

REMOVING WASHER FROM STORAGE

IMPORTANT: Before starting unit, thaw out any possible ice from wand, gun or hose.

1. Connect and open water supply. Squeeze trigger on gun. Allow water to run (without motor running) until water runs out of pressure hose.
2. If unit was stored with antifreeze solution, purge solution from washer, before using. Dispose of sprayed solution safely according to instructions on the antifreeze container.





STATEMENT OF WARRANTY

The manufacturer warrants all parts, (except those referred to below), of your new pressure washer to be free from defects in materials and workmanship during the following periods:

For One (1) Year from the date of original purchase:

High Pressure Pump
Regulating Valve
GFCI

For Ninety (90) days from the date of original purchase:

Trigger Gun	High Pressure Hose
Wand	Strainer/Filters
On/Off Switch	

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

EXCLUSIONS

1. Normal wear parts:

Pump Packings	Spray Nozzles
Pump Valves	Screw Connects
Detergent Valves	O-rings

- This warranty does not cover parts damaged due to normal wear, misapplication, misuse, operation at other than recommended speeds, pressures or temperature. Parts damaged or worn because of the use of caustic liquids or by operation in abrasive or corrosive environments or under conditions causing pump cavitation are not warranted. Failure to follow recommended operating and maintenance procedures also voids warranty.
- The use of other than genuine manufacturer repair parts will void warranty.
- Warranty will be void if used in any application other than consumer/homeowner. Parts returned, prepaid to our 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 the manufacturer bear any responsibility for loss of use of the unit, loss of time or rental, inconvenience, commercial loss or consequential damages.

For Service or Warranty Consideration Call:
1-800-648-8478
Monday - Friday 8:00 a.m. - 5:00 p.m. CST

