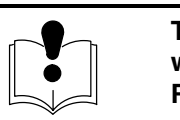
INSTRUCTIONS Parts

309829H

ASM®

Zip Clean 2525

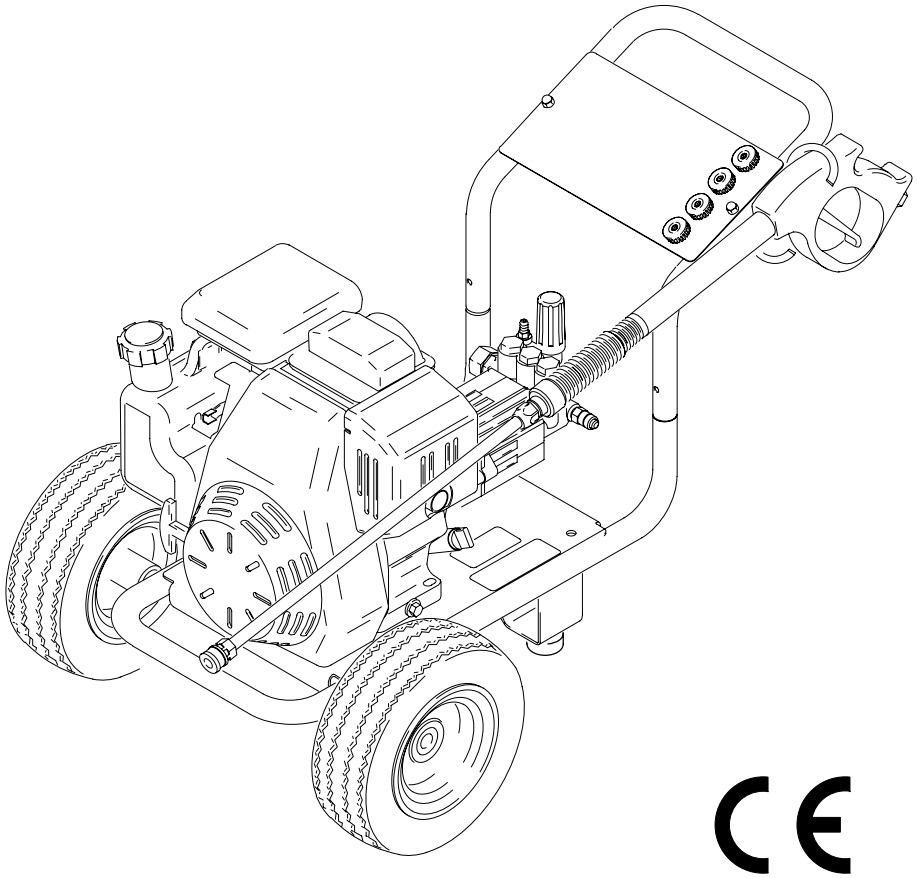


This manual contains important warnings and information.
READ AND KEEP FOR REFERENCE.

INSTRUCTIONS

Model 246602, Series A and B

2300 psi (159 bar, 15.8 MPa) Maximum Operating Pressure
2500 psi (172 bar, 17.2 MPa) Maximum Working Pressure



CE

Table of Contents

Warning Symbol

⚠ WARNING

This symbol alerts you to the possibility of serious injury or death if you do not follow instructions.

Caution Symbol

⚠ CAUTION

This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow instructions.

WARNINGS

Fuel Hazard:
Fuel is combustible. When spilled on a hot surface it can ignite and cause a fire.
Do not fill fuel tank while engine is running or hot.

Exhaust Hazard:
Exhaust contains poisonous carbon monoxide, which is colorless and odorless. Do not operate this equipment in a closed building.

Equipment Misuse Hazard:
Misuse of pressure washer or accessories can cause the equipment to rupture or malfunction and result in serious injury.

- Do not alter or modify any part or factory–setting
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed maximum working pressure (MWPR) of the lowest–rated system component
- Use fluids and solvents that are compatible with the equipment wetted parts. See Specification on page for this information.
- Wear hearing protection when operating this equipment.
- Do not “blow back” fluid; this is not an air spray system
- Follow **Pressure Relief,** page 6 before cleaning, checking or servicing equipment.

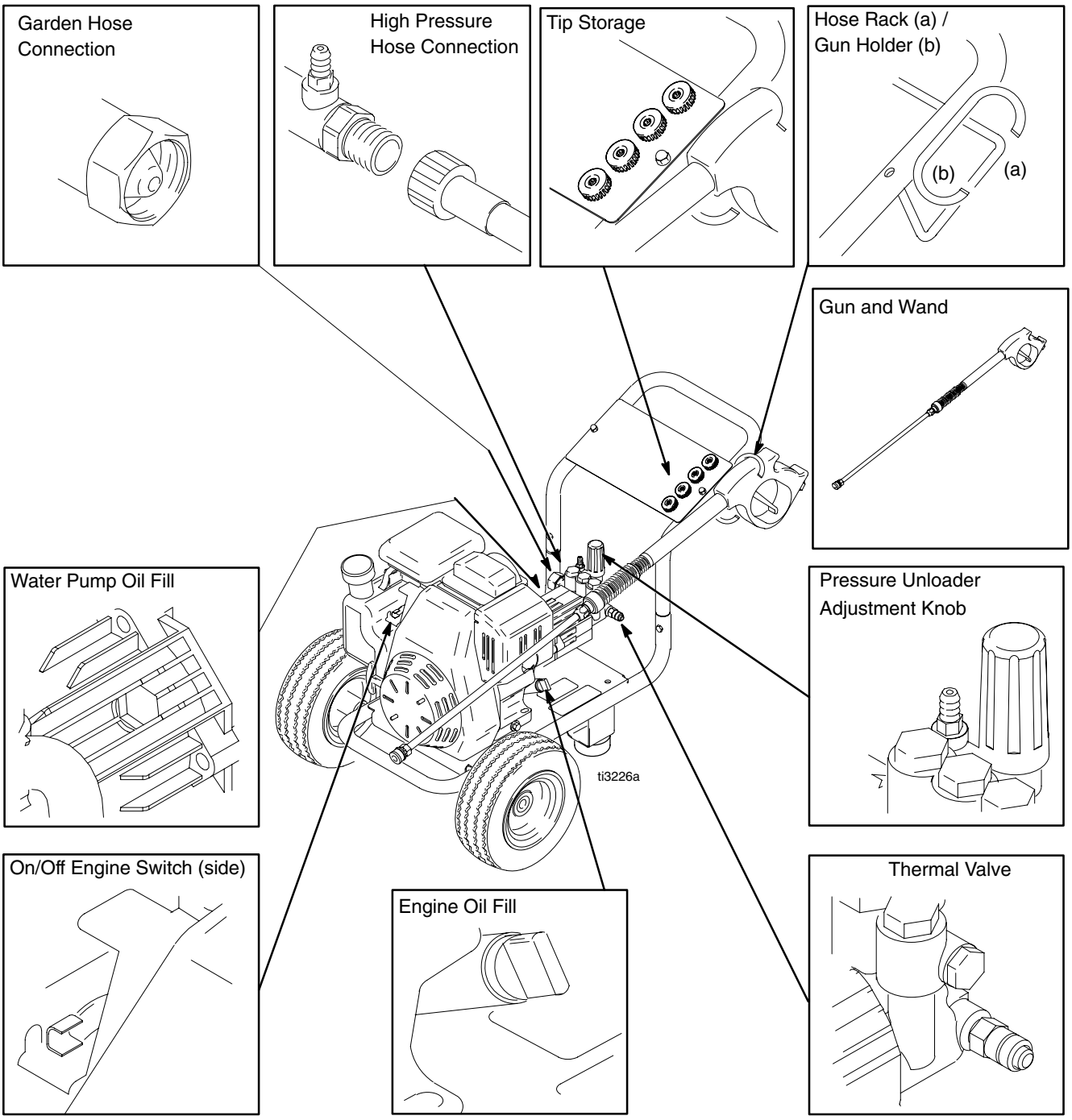
TOXIC FLUID HAZARD:
Hazardous fluid or toxi fumes can cause serious injury or death if splashed in eyes or on skin, inhaled, or swallowed.

- Know specific hazards of fluids you are using and take protective measures as recommended by the fluid and solvent manufacturer.

Skin Injection Hazard:
Spray from gun, leaks or ruptured components can inject fluid into your body and cause serious injury. Fluid splashed in eyes or on skin can also cause serious injury.

- Fluid injected into skin might look like just a cut, but it is a serious injury. **Get immediate surgical treatment.**
- Do not point gun at anyone or any part of the body.
- Do not stop or deflect leaks with hand, body, glove, or rag.
- Do not put your hand or fingers over the spray tip.
- TIghten fluid connections before you start this equipment.
- Engage the gun safety whenever you stop spraying.
- Follow **Pressure Relief Procedure,** page 6 if the spray tip clogs and before you clean, check or service this equipment.
- Repair or replace worn or damaged parts immediately.
- Check hoses, tubes, and couplings daily. Do not repair high–pressure couplings. Replace entire hose. Fluid hoses must have spring guards on both ends to prevent kinks and rupture.

Component Identification



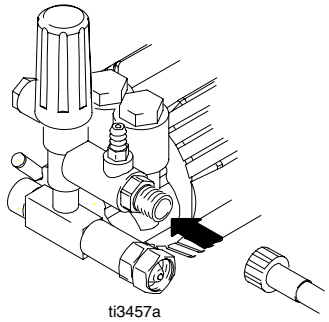
Setup

Shipping Damage

Check pressure washer for shipping damage. Notify carrier immediately if there is any damage.

Connect High–Pressure Hose and Gun

Connect high–pressure hose between the pump outlet and gun inlet.



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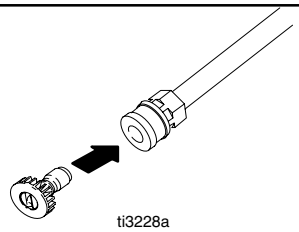
Install Spray Tip

Install spray tip on wand. Installing and Changing Spray Tips, page 11). If you are using a Sandblasting Kit, see its separate manual for installation instructions.



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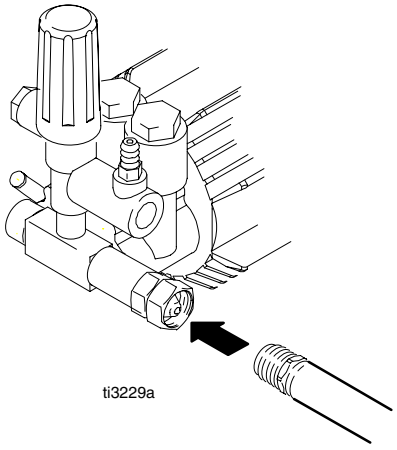
Connect to Water Supply

Connect hose with at least a 3/4 in. (19 mm) ID from water supply to 3/4 in. garden hose inlet on the pressure washer. The supply hose should not be more than 50 ft (15 m) long.



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⚠ CAUTION

Before you connect garden hose to pressure washer, check local plumbing codes regarding cross–connection to water supply. If required, install backflow preventer.

If inlet water pressure is over 60 psi (4.1 bar), a regulating water valve must be installed at garden hose connection.

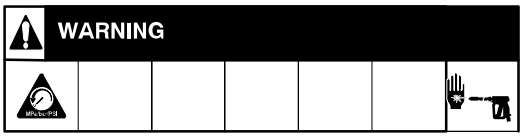
Do not exceed 104° F (40° C) inlet water temperature.

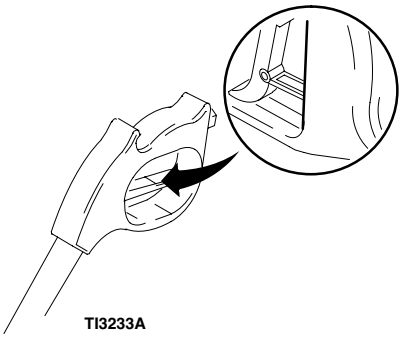
Note: Water source must have a minimum flow rate equal to that of pressure washer.

PRESSURE RELIEF

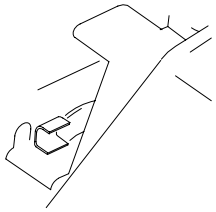
Follow these instructions whenever you are instructed to relieve pressure, stop spraying for more than 10 minutes, check or service the equipment, or install or clean the spray nozzle.

1. Engage trigger safety latch



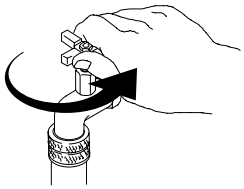


2. Turn pressure washer off

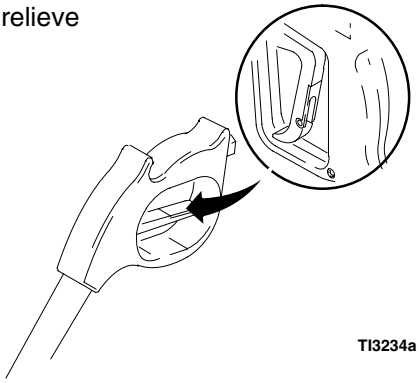


3. Remove ignition cable from spark plug.

4. Shut off water supply. Disconnect from water.



5. Disengage trigger safety latch. Trigger gun to relieve pressure. Then re–engage the safety latch.



Note: If you suspect that the spray tip or hose is clogged or that pressure has not been fully relieved after following the steps above, disengage the trigger safety latch and trigger the gun to relieve pressure.

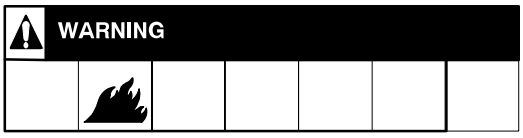
Operation

Startup

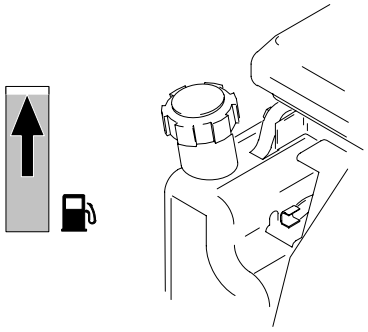
Always use this startup procedure to ensure that the pressure washer is started safely and properly.

- Always engage gun trigger safety latch when you stop spraying. This reduces the risk of fluid injection or splashing in eyes or on skin if gun is bumped or accidentally triggered.
- Always observe the CAUTIONS in this section to avoid costly damage to pressure washer.
- If you use the Sandblaster Kit, see Sandblaster Kit Manual for detailed cleaning information.

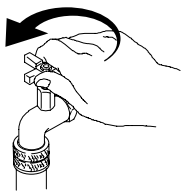
1. Check oil level of engine.



2. Check fuel level.

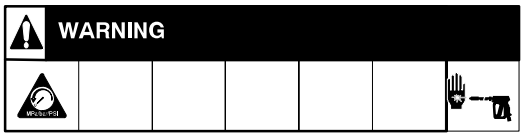


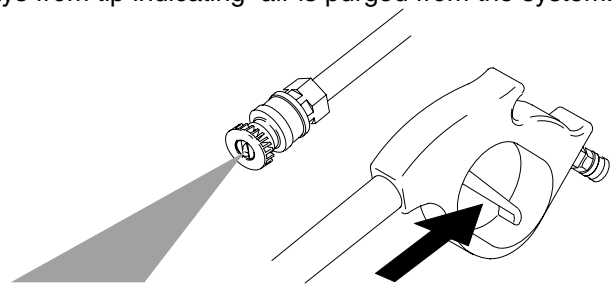
3. Turn on water supply.



CAUTION
Never run pressure washer without water. Costly pump damage will result. Always be sure water supply is completely turned on before you run pressure washer.

4. Trigger gun until a constant stream of water sprays from tip indicating air is purged from the system.





5. Be sure spark plug ignition cable is pushed firmly onto spark plug.

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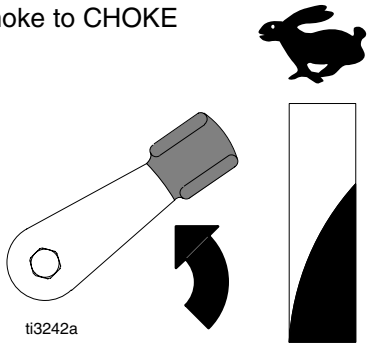
6. Move throttle to Rabbit (fast) position and choke to CHOKE position.



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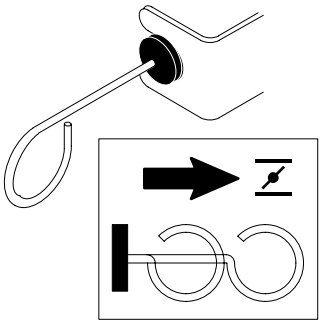

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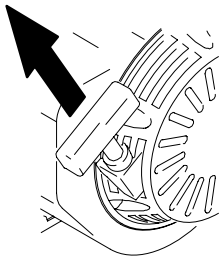
7. Pull the starter rope quickly to start the engine. Pull and return the rope until the engine starts. HINT: Placing one foot on the pressure washer as a brace provides better leverage.



NOTE: For easier starting, have one person start pressure washer while another triggers gun.

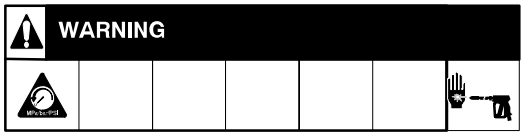
⚠ CAUTION

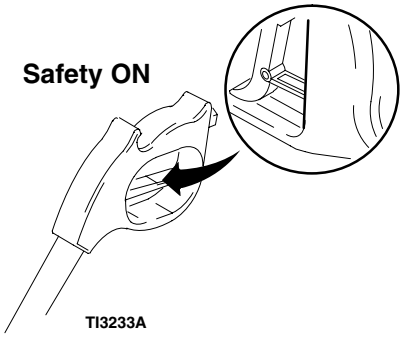
- Do not allow pressure washer to idle more than 10 minutes. This causes circulating water to overheat and serious damage to the pump. The pump is equipped with a thermal valve to help prevent severe damage if circulating water is overheating.
- Turn off pressure washer if it will not be spraying at least every 10 minutes or if thermal valve activates. If heated inlet water is used, reduce this time.
- Do not operate pressure washer with inlet water screen removed. This screen helps keep abrasive sediment which could clog pump or damage cylinders, out of pump.
- Do not pump caustic materials.

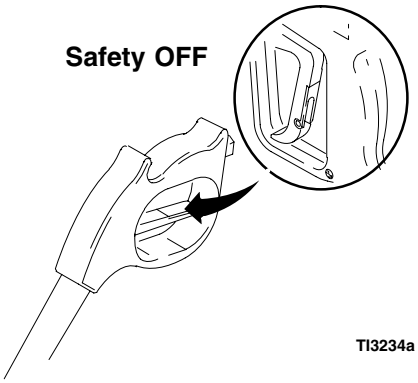
Trigger Safety Latch

Always engage the safety latch when you stop spraying.

Always engage trigger safety latch when you stop spraying even for a moment. The engaged safety latch prevents the gun from being triggered accidentally by hand or when dropped or bumped. Be sure latch is pushed fully down or it will not prevent the gun from being triggered.



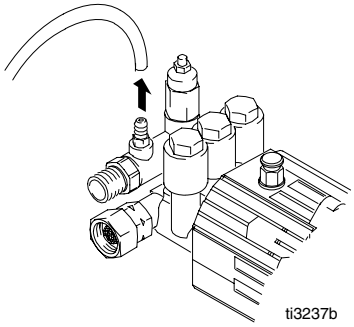




Chemical Injector Operation

1. Follow **Pressure Relief Procedure,** page 6.

2. Push end of chemical injector hose over chemical injector fitting on pump. Place other end in container of chemical solution.



3. Install the black, large–orifice, chemical tip. (**Installing and Changing Spray Tips** page 11).

4. Trigger gun for a few seconds. Chemical solution will begin mixing in spray pattern.

The large orifice of the chemical tip causes a drop in pressure that actuates the chemical injector. Changing back to a small orifice spray tip deactivates the chemical injector and produces high pressure for rinsing. The chemical filter can be left in the chemical container during high–pressure use.

Installing and Changing Spray Tips

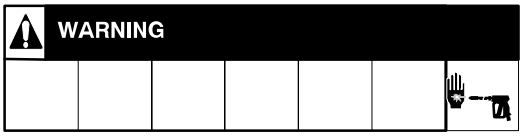
Spray tips have 4– or 5–digit numbers on them. The first two digits are the spray angle. Tip holding holes are provided on the chassis.

Spray Tip Number	Spray Pattern Fan Angle
00XXX	0° blaster (red)
15XXX	15° (yellow)
25XXX	25° (green)
40XXX	40° (white)
Chemical	XX° (black)

NOTE: The chemical injector tip is brass and has a large opening and a black plastic cap.

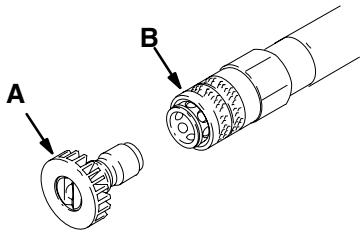
1. Perform **Pressure Relief Procedure,** page 6.

2. Point the gun and wand away from you and anyone else.



3. Lock trigger safety.

4. Without holding your hand over spray tip (A), pull back quick coupler ring (B). Remove current tip. Install a different one. Then push the ring back on.

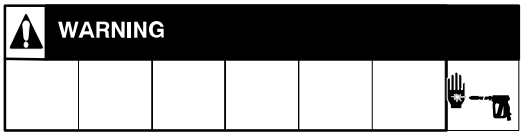


⚠ CAUTION

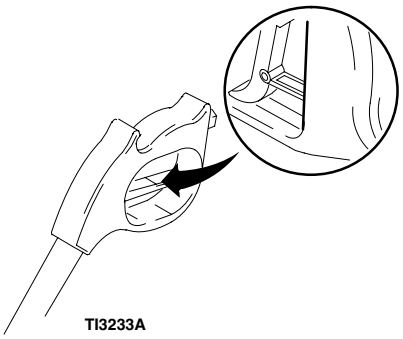
To avoid blowing the o–ring out of the quick coupler due to the high pressure in the system, never operate pressure washer without a tip securely mounted in quick coupler.

1. Remove chemical injector hose from pump, if attached.

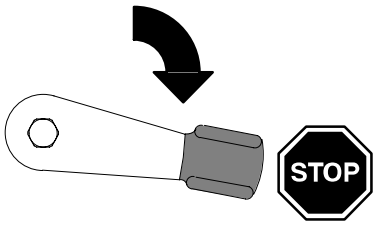
2. Trigger gun for one minute to flush pump with clear water.



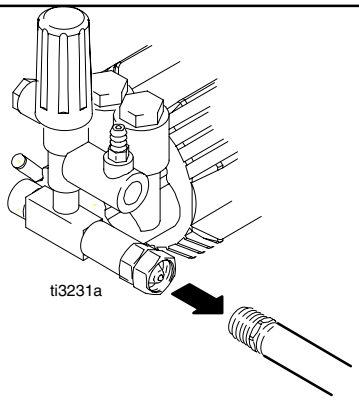
3. Engage trigger safety.



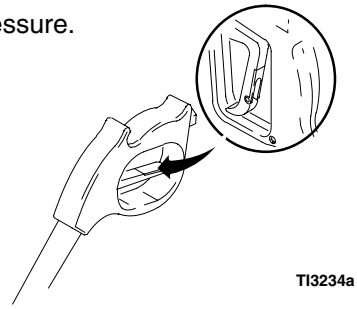
4. Adjust throttle to STOP position. Engine should turn off.



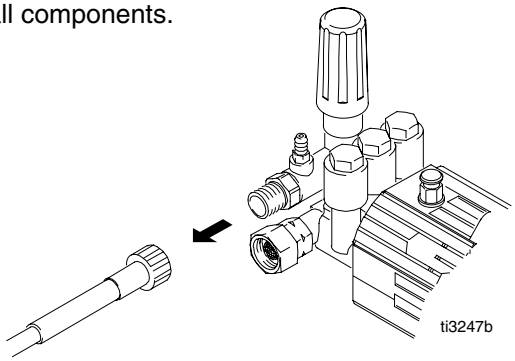
5. Shut off water supply. Disconnect water supply hose from pump.



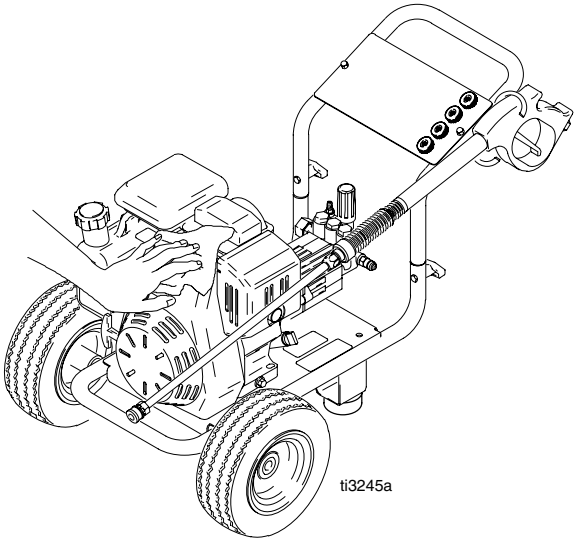
6. Remove trigger safety latch and trigger gun to relieve pressure.



7. Remove high pressure hose from pump. Drain water from all components.



- After each use, wipe all surfaces of pressure washer with a clean, damp cloth.



Long Term (more than 30 days)/Winter Storage

- Do not store unit outside where it can be exposed to rain, dirt or adverse weather conditions.
- Do not expose pressure washer to freezing temperatures or allow water to freeze in pressure washer components, causing the pump to lock–up. If this happens let pump thaw naturally in WARM ENVIRONMENT. DO NOT attempt to to speed up this process by pouring warm water on pump. This could cause further damage.

ENGINE:

1. Run engine until gas is gone or stabilize the fuel and run it through the fuel system and carburetor.
2. Drain water out of pressure washer hose.
3. Turn fuel system to OFF position.

Pump:

4. Attach one end of a 4 or 5–foot section of hose to pump inlet and other end in an antifreeze solution approximately 1–foot off the ground.
5. Pull pull–cord on engine until antifreeze comes out of pump outlet.

Storage Location:

6. Store pressure washer in garage, basement or other area where it is protected from freezing temperatures.

Maintenance Chart

Perform **Pressure Relief Procedure** (page 6).

Interval	What to do
Daily	Clean water inlet screen and filter. Check engine and pump oil levels. Fill as necessary. Check gasoline level. Fill as necessary.
After first 5 hours of operation	Change engine break-in oil. Drain oil when warm. Use SAE 30 or 10W–30 detergent oil.
Every 3 months or 25 hours of operation	Clean and remove air cleaner foam. Wash with water and detergent. Dry thoroughly. Rub with oil, and squeeze to distribute oil.
Every 6 months or 50 hours of operation	Change engine oil. Use Use approved SAE30 or 10W30 detergent oil.
After every 100 hours of operation, or every 3 months	Check/adjust spark plug and idle speed. Clean fuel tank and filter..

NOTE: It is not necessary to change pump oil during the life of the pump. If pump oil is drained for repair, use part number 117784 replacement oil only.

Troubleshooting

Perform **Pressure Relief Procedure** (page 6).

Problem	Cause	Solution
Engine will not start or is hard to start.	No gasoline in fuel tank or carburetor	Fill tank with gasoline, open fuel shutoff valve. Check fuel line and carburetor.
	Low oil	Add oil to proper level.
	Throttle in STOP position	Move throttle to FAST (rabbit) position
	Water in fuel or old fuel	Drain fuel tank and carburetor. Use new fuel andmake sure spark plug is dry.
	Engine flooded or improperly choked	Open choke, pull engine starter rope several times to clear out fuel. Make sure spark plug is dry.
	Dirty air cleaner filter	Remove and clean.
	Spark plug dirty, wrong gap, or wrong type	Clean, adjust gap or replace.
	Gun not triggered	Trigger gun while starting engine.
Engine misses or lacks power	Partially plugged air cleaner filter	Remove and clean.
	Spark plug dirty, wrong gap, or wrong type	Clean, adjust gap or replace.
Pressure is too low and/or pump runs roughly	Worn or wrong size tip	Replace with tip of proper size.
	Inlet filter clogged	Clean. Check more frequently.
	Worn packings, abrasives in water, or natural wear	Check filter. Replace packing.
	Inadequate water supply	Check water flow rate to pump.
	Fouled or dirty inlet or discharge valves	Clean inlet and discharge valve assemblies. Check filter.
	Restricted inlet	Garden hose might be collapsed or kinked.
	Worn inlet or discharge valves	Replace worn valves.
	Leaking high–pressure hose	Replace high–pressure hose.
Water leaks from under pump manifold	Worn packings	Install new packings.
	Loose fitting connections	Check all fitting connections. Tighten if loose.
Water on oil side of pump	Worn packings	Install new packings.
	Oil seals leaking	Install new oil seals.

Problem	Cause	Solution
Packings are failing frequently or prematurely	Scored, damaged, or worn plungers	Install new plungers.
	Abrasive material in fluid being pumped	Install proper filtration on pump inlet plumbing.
	Inlet water temperature too high	Check water temperature. It should not exceed 104°F (40°C).
	Overpressurizing pump	Do not modify any factory–set adjustments.
	Excessive pressure due to partially plugged or damaged tip	Clean or replace tip. See **Installing and Changing Spray Tips** (page 11).
	Pump running too long without spraying	Never run pump more than 10 minutes without spraying.
	Running pump dry	Do not run pump without water.
Strong surging at inlet and low pressure on discharge side	Foreign particles in inlet or discharge valve or worn inlet and/or discharge valves	Clean or replace valves.
Water spitting out of thermal valve	Pump running too long without spraying	Trigger gun to get fresh, cooler water in pump.

Note: For complete pump repair and design information see website: www.ARNORTHAMERICA.com

Pump Service

Repair kits are available. See the **Parts Lists** (page 21). For the best results, use all parts in the kits.

Perform **Pressure Relief Procedure** (page 6).

Servicing Valves

Discharge Valves:

Disassembly

1. Remove valve cap.
2. Inspect valve cap o–ring for damage. Replace if necessary.
3. Using a needle nose pliers, remove valve.
4. Use a small probe to move the poppet up and down to assure it is functioning properly.
5. Inspect for any debris that may be lodged between poppet and seal.
6. Remove valve seat o–ring and inspect for damage.

Assembly

1. Install valve seat o–ring squarely into bottom of manifold.
2. Insert valve assembly squarely into port, pushing it into o–ring.
3. Install valve cap and torque to 443 in.–lbs (37 ft–lbs).

Inlet Valves

Disassembly

1. Remove manifold.
2. Remove low–pressure seals by inserting a flat screwdriver under seal lip and lifting up.
3. Using a reversible pliers, carefully remove packing retainers (plunger guides).

Note: Packing retainers can be reused if not worn.

4. Remove high–pressure packing by pulling straight out with your finger.
5. Pull out valve cage/head ring assembly, valve poppet, spring and o–ring.
6. Inspect for debris and/or damage.
7. Remove valve o–ring.

Assembly

1. Install valve seat o–ring squarely into bottom of manifold.
2. Insert valve assembly and push squarely into o–ring.
3. Install high–pressure packing by placing it into cylinder at an angle and then pushing into place.

Note: The point of the “v” or flat side of packing is pointed at you.

4. Lubricate packing retainer o–ring with a light film of oil and install it into cylinder.
5. Push it completely into place.

Note: O–ring will seat just inside manifold and you will hear a slight pop.

6. Insert low–pressure seal by placing it into cylinder at an angle and pushing it into place.
7. Put a thin coat of oil on plungers and packings.
8. Carefully install manifold and torque bolt to 443 in.–lbs (37 ft–lbs).

Note: Valve life is dependant on many variables. Hard water, cavitation, corrosion, chemicals and equipment care. The valves are a wear item and need periodic replacement. Worn o–rings or damaged valves will cause pressure loss and pulsations.

Packings

Disassembly

1. To access water seals for inspection or replacement, remove head of pump.

Note: It is important to note the order in which the components of the packing stack are arranged and facing during disassembly.

2. Remove head bolts.

3. Insert a small pry bar between head and body at opposite corners and apply pressure down on one pry bar and up on the other pry bar.

4. Lift head up and away from body.

Note: Packing stack will not always stay in head of pump when it is removed. Sometimes one or more components of the packing stack will come out of the head and stay on the plunger.

5. To remove any components that stay on plungers twist back and forth while pulling up.

6. Remove low–pressure seals by inserting a flat screwdriver under seal lip and lifting up.

7. Remove piston guides from head by using a reverse pliers (preferably rubber coated) inserted into center of piston guide.

8. Use back and forth twisting motion while pulling up (clockwise and counter–clockwise).

9. Another method is to use a two–prong slide hammer puller. Insert prongs into piston guide allowing prongs to grab under support ring, then use slide hammer to pull packing stack up and out of head.

Note: Damage to piston guides and or seals may occur during removal. Inspect carefully before reusing any components of packing stack.

10. Remove high–pressure packing by pulling straight out with your finger.

Assembly

1. Install high–pressure seal into head.

Note: It should fit snugly. The packing support is part of the valve cage.

2. Place high–pressure seal at an angle and work it into cylinder.

Note: The point of the “v” or flat side of packing is pointed at you.

3. Lubricate packing retainer o–ring with a light film of oil and install it into cylinder.

4. Push it completely into place.

Note: O–ring will seat just inside manifold and you will hear a slight pop.

5. Insert low–pressure seal by placing it into cylinder at an angle and pushing it into place.

6. Put a thin coat of oil on plungers and packings.

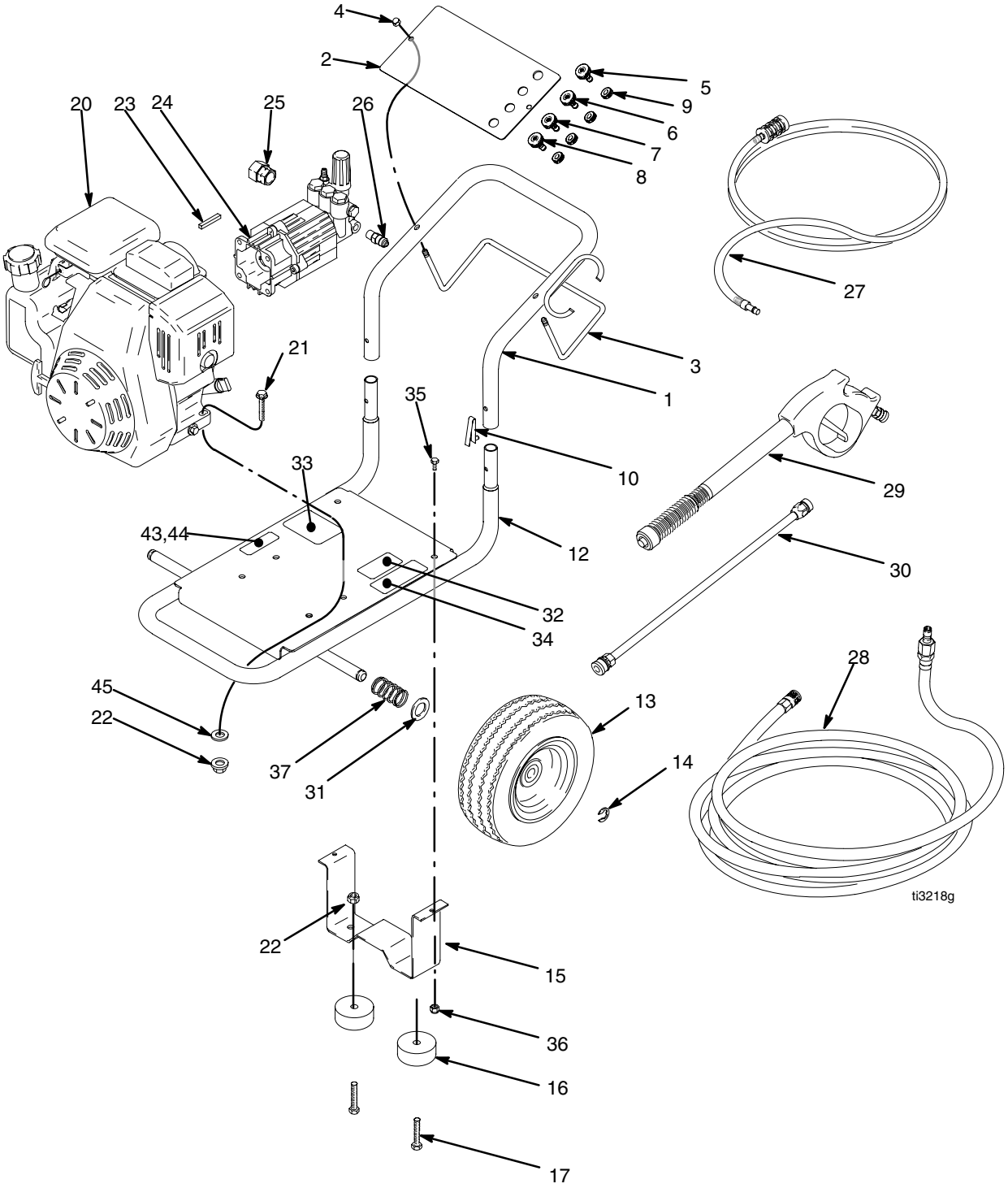
7. Carefully install manifold and torque bolt to 443 in.–lbs (37 ft–lbs).

Note: Valve life is dependant on many variables. Hard water, cavitation, corrosion, chemicals and equipment care. The valves are a wear item and need periodic replacement. Worn o–rings or damaged valves will cause pressure loss and pulsations.

Water seals are wear items. Lift of seals is dependent on many factors. Water seals should be replaced when water leak or loss of performance is noticed. Prompt replacement of worn seals will insure peak operating performance and trouble–free operation.

Notes

Parts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Parts

Ref. No.	Part No.	Description	Qty.
1	15C311	HANDLE, cart	1
2	15C312	FRAME, placard	1
3	15C307	RACK, hose	1
4	115651	NUT, acorn	2
5	805535	TIP, 0°, red	1
6	805536	TIP, 15°, yellow	1
7	805538	TIP, 40°, white	1
8	805634	TIP, chemical, black	1
9	801012	GROMMET	4
10	112827	BUTTON, snap	2
12	15C308	FRAME, cart, Series A	1
	287611	FRAME, cart, Series B	1
13	116968	WHEEL	2
14	101242	RING, retaining	2
15	287609	FRAME, leg, Series B	1
16	113817	FOOT, base, rubber	2
17	100057	SCREW, hex, cap	2
20	118000	ENGINE, 5 hp, Honda	1
21	110837	SCREW, hex hd	4
22	111040	NUT, nylon	6
23	197792	KEY, motor shaft	1
24	118122	PUMP (with bolts)	1
25	117758	ADAPTER, garden hose	1
26	117759	VALVE, thermal	1
27	117760	HOSE, injector	1
28	118125	HOSE	1
29	246674	GUN	1
30	118124	EXTENSION, gun	1
31	116477	WASHER	2
32▲	290013	LABEL, warning	1
33▲	290131	LABEL, warning	1
34▲	802363	LABEL, caution	1
35	100270	SCREW, cap, hex hd	2
36	102040	NUT, lock	2
37	116411	SPRING	2
45	100527	WASHER	4

▲ *Additional danger and warning tags and labels available free.*

Repair Kits

287131	KIT, repair, water seals	1
287132	KIT, repair, valves	1
287133	KIT, repair, pistons	1
287134	KIT, repair, oil seals	1
287135	KIT, repair, o–rings	1
287136	KIT, repair, unloader	1
287137	PUMP (includes 24, 25, 26)	1
117784	OIL, pump	1

Technical Data

Working pressure range	
Operating Pressure	2300 psi (159 bar, 15.8 MPa)
Maximum Working Pressure	2500 psi (172 bar, 17.2 MPa)
Engine horsepower	5.0
Maximum delivery (with nozzle)	2.4 gpm
High pressure hose	30 ft x 5/16 in. supplied
Chemical injector hose	4 ft (m) 1/4 in. ID
Weight, pressure washer only	60 lb (27.22 kg)
Weight: sprayer, hose and gun	73 lb (33.11 kg)
Dimensions	
	23.5 in. (59.69 cm) Length
	22.0 in. (55.88 cm) Width
	22.0 (55.88 cm) Height
Pump inlet fitting	3/4 in. internal thread (standard garden hose thread)
Stoarage temperature range*	–30° to 160°F (–35° to 71°C)
Operating temperature range	40° to 115°F (4° to 46°C)

*When pump is stored with non–freezing fluid.

ASM Standard Warranty

ASM warrants all equipment referenced in this document which is manufactured by ASM and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized ASM distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by ASM, ASM will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by ASM to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with ASM's written recommendations.

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This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized ASM distributor for verification of the claimed defect. If the claimed defect is verified, ASM will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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