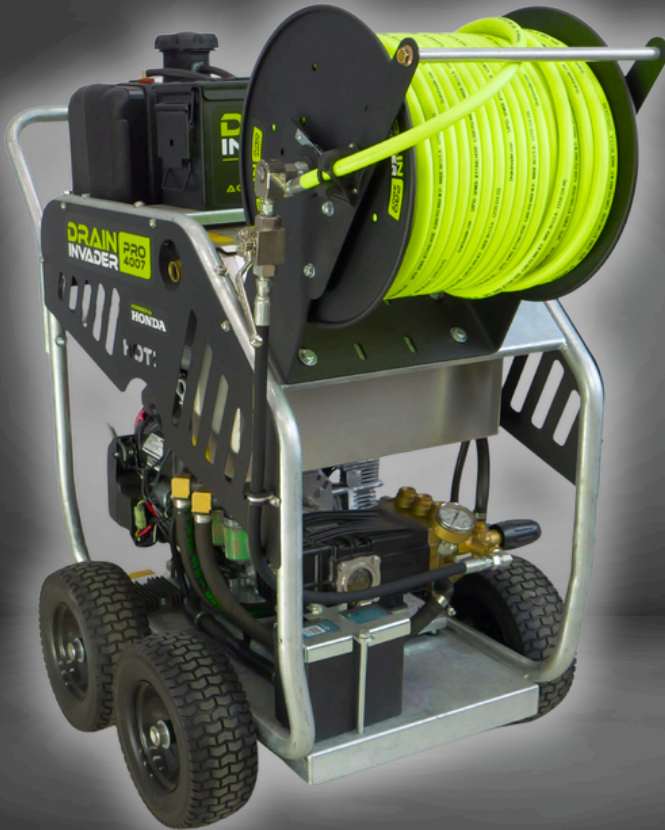


DRAIN INVADER PRO 4007

User Manual & Instructions



HYDRO JETTER

PRO 4007 Specs:
7.5 GPM
4000 PSI



Scan QR Code for Digital Manual

DRAIN INVADER



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DrainInvader.com

FOR THE UNSUNG HEROES OF PLUMBING

We know your work isn't easy. Long days, tight spaces, nasty blockages. **You face the problems most people would rather not even think about.** Yet, you show up with grit, skill, and pride, keeping drains flowing and the world moving. That's something worth honoring!



When you invest in *DRAIN INVADER*, you're getting more than a machine; you're getting a dedicated team that's committed to supporting you. Whether it's replacement parts, accessories, nozzles, or even troubleshooting tips, our job is to make sure we always have your back. Need help in the field? Call us. Looking for the right tool for the next big job? We'll walk you through it. **From the first start-up to years down the line, we're here to keep you running strong.**

So, from all of us at *DRAIN INVADER*, thank you for letting us be a part of your work. We're proud to serve the professionals who keep drains clear, businesses open, and families safe. Every line you clear is a victory, and we're honored to stand in your corner.

Built for pros. Built for you. Thank you for being a *DRAIN INVADER*.

— The *DRAIN INVADER* Team

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**DRAIN
INVADER** **PRO
4007**


Safety Precautions

! WARNING: A hazard that could result in death, serious injury, or substantial property damage.

! CAUTION: A hazard that could result in minor personal injury or property damage.

! WARNING

Explosive Fuel can cause fires and severe burns.




Stop engine before filling fuel tank.

Explosive Fuel!
Gasoline is extremely flammable and its vapors can explode if ignited. Store gasoline only in approved containers, in well ventilated, unoccupied buildings, away from sparks or flames. Do not fill the fuel tank while the engine is hot or running, since spilled fuel could ignite if it comes in contact with hot parts or sparks from ignition. Do not start the engine near spilled fuel. Never use gasoline as a cleaning agent.

! WARNING

Rotating Parts can cause severe injury.




Stay away while engine is in operation.

Rotating Parts!
Keep hands, feet, hair, and clothing away from all moving parts to prevent injury. Never operate the engine with covers, shrouds, or guards removed.

! WARNING

Hot Parts can cause severe burns.




Do not touch engine while operating or just after stopping.

Hot Parts!
Engine components can get extremely hot from operation. To prevent severe burns, do not touch these areas while the engine is running, or immediately after it is turned off. Never operate the engine with heat shields or guards removed.

! WARNING

Accidental Starts can cause severe injury or death.




Disconnect and ground spark plug lead before servicing.

Accidental Starts!
Disabling engine. Accidental starting can cause severe injury or death. Before working on the engine or equipment, disable the engine as follows: 1) Disconnect the spark plug lead(s). 2) Disconnect negative (-) battery cable from battery.

! CAUTION

Electrical Shock can cause injury.




Do not touch wires while engine is running.

Electrical Shock!
Never touch electrical wires or components while the engine is running. They can be sources of electrical shock.

! WARNING

Explosive Gas can cause fires and severe acid burns.




Charge battery only in a well ventilated area. Keep sources of ignition away.

Explosive Fuel!
Batteries produce explosive hydrogen gas while being charged. To prevent a fire or explosion, charge batteries only in well ventilated areas. Keep sparks, open flames, and other sources of ignition away from the battery at all times. Keep batteries out of the reach of children. Remove all jewelry when servicing batteries. Before disconnecting the negative (-) ground cable, make sure all switches are OFF. If ON, a spark will occur at the ground cable terminal which could cause an explosion if hydrogen gas or gasoline vapors are present.

! WARNING

Carbon Monoxide can cause severe nausea, fainting or death.



Do not operate engine in closed or confined area.

Lethal Exhaust Gases!
Engine exhaust gases contain poisonous carbon monoxide. Carbon monoxide is odorless, colorless, and can cause death if inhaled. Avoid inhaling exhaust fumes, and never run the engine in a closed building or confined area.

CALIFORNIA PROPOSITION 65 WARNING

Engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

PREPARATION BEFORE USE

**ALWAYS WEAR EYE PROTECTION & other PPE
Such As Tough Gloves & Protective Clothing!**

GETTING STARTED

We recommend that you become familiar and skilled with the unit before trying it in a customer's pipe. Please follow these steps to learn to operate the machine.

FIND A SUITABLE WATER SOURCE

Your PRO 4007 jetter is equipped with a built-in 10-gallon water-tank with garden-hose connection inlet that we call a "Buffer Tank". To avoid pump-cavitation due to inadequate water-supply, the tank works as a buffer between how much water (GPM) is being fed into the tank from your water-supply versus how much water (GPM) the jetter is drinking in. It is important to realize that **this jetter will drink in & pump out 7½-GPM (Gallons-Per-Minute) at full-throttle**. If your water-supply cannot keep up with the jetter's water-demand then the tank will gradually draw down to empty and the jetter will shut down.

PRO TIPS to avoid running out of water:

- (a) Avoid cheap garden-hoses for water-supply; use a commercial-grade 3/4-inch water-hose, no longer than 50-feet in length.
- (b) If one water-hose can't keep up with the jetter's water demand, add a double-hose connector so you can hook up two water-hoses from 2 different sources.
- (c) If water-supply is still lacking, you can reduce the jetter's GPM-demand by throttling-down the engine until the incoming water-supply can keep up with the jetter's thirst.

DO NOT run the pump "dry" of water; DO NOT use water over 100°f.; DO NOT exceed 4000psi maximum pressure; avoid thermal-shock to the pump; avoid cavitation.



PREPARATION BEFORE USE

FOR YOUR *DRAIN INVADER PRO 4007*

FAMILIARIZE YOURSELF WITH THE JETTER'S WATER SYSTEM & CONTROLS

Just to the left of the Hose/Reel is the **Flow-Control Valve** which functions as your main **Jetting-On/Jetting-Off control** to start and stop water-flow through the hose-reel and out the Jetting Nozzle into the pipe.

Just behind the *Flow-Control Valve* under the top-bar of the frame you'll find the Garden Hose Water-Connection with Filter for feeding the jetter's water-tank (leave connected and filling while jetting).

Down below, on the opposite side, there are two (2) Control-Valves built onto the high-pressure pump: [a] the large **Pressure-Regulator/Unloader Valve** with round Adjustment-Knob (to the left of the pump), and [b] the smaller **Pulsation-Control Valve** with star-shaped Adjustment-Knob (just above the tire).

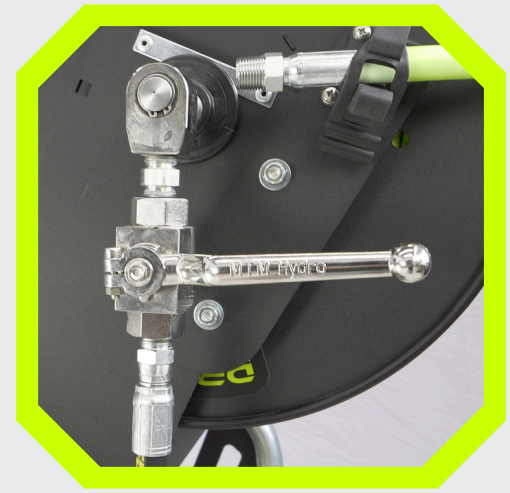
Unloader Valve



Pulse Valve



Flow Control Valve



PREPARATION BEFORE USE

FOR YOUR **DRAIN INVADER PRO 4007**

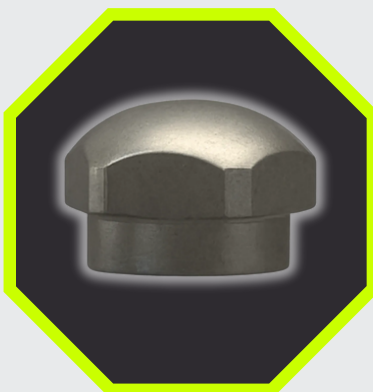
WHAT'S INCLUDED: JETTER NOZZLES

Included with your *DRAIN INVADER PRO 4007* are 4 jetting nozzles; a "Penetrator", "Flusher", "Pusher", and "Spinner" (you may have also ordered optional nozzles). All have several "Thrust" water jets spraying toward the hose to pull the hose into the pipe and flush debris away. The "**Penetrator**" & "**Pusher**" Nozzles also have forward-spraying water jets to break up clogs. *Note:* the more water that jets out the nose of the nozzle the less "pulling-power" that nozzle will have since the forward jet(s) are pushing back against the rear thrust-jets. The "**Flusher**" nozzle will have the most hose-pulling power since it doesn't have a forward-jet. The "**Spinner**" nozzle rotates its water-jets to scour the pipe clean & is often used for clearing "goeey" buildup like sludge or soft grease.

Penetrator



Flusher



Pusher



Spinner



SAFETY FIRST: BEFORE RUNNING THE JETTER

Please have any and all operators review the safety information on page 1

OPERATING

YOUR **DRAIN INVADER PRO 4007**

PRACTICE MAKES PERFECT

Find a safe and stable 3-inch or 4-inch diameter “practice pipe” to practice/learn the jetting process (preferably not at a live job on the 1st run). Set the jetter at least 15 feet away from the practice pipe.

KNOW YOUR HOSE & REEL

Familiarize yourself with Hose-Reel's function, and then unwind several feet of hose (WITH NO NOZZLE ATTACHED). **Add a few wraps of electrical tape around the Jetting-Hose about 5 feet from the end to work as a "safety-stop" marker - this is to warn you that the nozzle is near so you don't pull the hose out of the pipe when jetting under pressure!**

NOTE: you may want to add more tape-marks at particular footages [50', 100', etc.]

KNOW YOUR HONDA ENGINE

Please read the HONDA Engine manual to learn the proper starting and daily-maintenance procedures.



HONDA OWNERS MANUAL

START YOUR ENGINE

When starting the jetter for the first time (or after long periods of non-use) hook up and turn on the water, hold the hose firmly near the end so the water will discharge away from you with NO NOZZLE OR TRIGGER ATTACHED, open the *Flow-Control Valve*, start the engine and run it at medium-throttle for about 3 minutes, then shut down the engine. This is to wet the pump-seals and warm the engine before building pressure in the next step...

OPERATING

YOUR DRAIN INVADER PRO 4007

CONNECTING YOUR JETTER NOZZLE

Select a jetting Nozzle and tighten it securely to the end of the jetting-hose with wrenches (use thread tape if desired). Insert the Nozzle and hose deep into the test pipe – at least 10 feet. ***It is imperative that the nozzle not flop out of the pipe or severe injury or property-damage could occur!*** Open the *Flow Control Valve* by the hose-reel – now you are ready to start the engine and get to jetting!

ASSESS YOUR SURROUNDINGS

Make sure that jetter and personnel are clear of the open pipe-end (water & possibly debris will be ejected from the pipe), then start the engine at medium throttle and watch the hose get pulled tight by the nozzle-thrust as the jetter builds pressure. Increase the engine speed to maximum throttle. Check the pressure gauge; the needle should be steady at 3500-4000 PSI if you have adequate water supply. **Do not expect full pressure unless the engine is at full throttle!** (RPM increases GPM, and forcing more GPM through the Nozzle builds PSI). Adjust the Regulator/Unloader Valve if desired – but DO NOT OVERTIGHTEN the knob. **Do not exceed the 4000-PSI maximum pressure at any time.**

PRACTICE THE “RAM-ROD” TECHNIQUE

Grip the Jetting Hose and pull it a few inches back from the pipe. This will familiarize you with the thrust generated by the water jets on the nozzle. Let it go and pull it back again several times. This is the “Ram-Rod” technique used by many technicians to break through blockages.

OPERATING

YOUR DRAIN INVADER PRO 4007

LEARNING THE FLOW-CONTROL VALVE

Close the *Flow-Control Valve* that is located near the Hose-Reel. You will hear the jetter build a little and then “release” pressure, and you'll see the Jetting Hose relax as the pump is now “recirculating” water instead of discharging out the Jetting Nozzle. Open and close the *Flow-Control Valve* several times (always fully open or fully closed) to familiarize yourself with its on/off effect. **IMPORTANT: do not run the jetter with the *Flow-Control Valve* closed for more than five (5) minutes;** recirculating water generates heat that can severely damage the pump.

FEEL YOUR PULSE

Locate the “*Pulsation Control*” – the black “star-knob” just above the tire. Pulsation is used to make the hose vibrate (or “pulse”) to help the hose overcome drag-friction in the pipe, and to help get it un-stuck if hung up in the pipe. Turn the knob counter-clockwise until the hose begins to vibrate, or “Pulsate”. Turn the knob back and forth to familiarize yourself with the pulsator effect. To stop the pulse; rotate the star-knob clockwise until it stops turning. **NOTES:** (a) *Opening the Pulse will lower your pressure as it “disables” one of the pump-cylinders.* (b) *Do not leave the pulsator on for long periods of time as it does cause extra stress to the machine.*

OPERATING

YOUR *DRAIN INVADER* PRO 4007

CONNECTING OPTIONAL ACCESSORIES

If you connect an optional accessory to the Jetter (e.g. smaller Jetting Hose, Secondary Hose/Reel, Foot-Control Valve, Pressure-Washing Trigger/Wand, etc.) we highly recommend that you back the Pressure-Regulator Unloader-Valve off one full turn to avoid "Pressure-Spikes" from these devices. **Again, do not exceed the 4000-PSI maximum pressure at any time.**

GET JETTING!

You now have run all facets of the machine. Again, we recommend that you develop these basic operational skills with the jetter in a practice-pipe before ever using it in a customer's pipe. Practice in pipes that are easy to access to gain jetting experience. Before you get to jetting, **always** make sure the jetting area is clear of bystanders.

SHUTTING DOWN

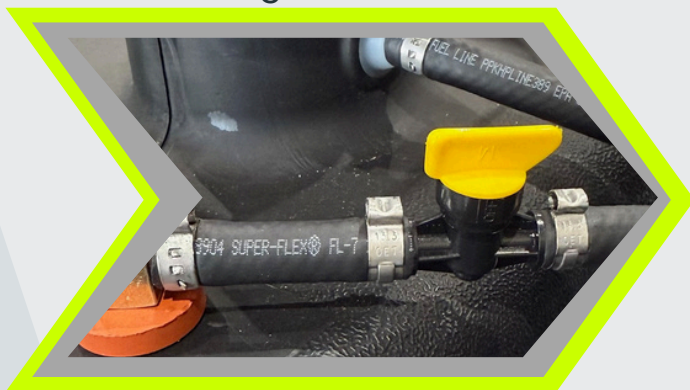
When finished jetting, turn off the engine and then the water supply. **Before removing the nozzle from the pipe relieve any pressure left in the system by opening the *Flow-Control Valve*.** If equipped, step on the *Foot-Control Valve* or squeeze the Hand-Trigger to release any trapped pressure *before* removing the Jetting Nozzle from the pipe. Rewind the Jetting Hose and store any loose nozzles or accessories.

STORAGE & MAINTENANCE

OF YOUR DRAIN INVADER PRO 4007

ANTIFREEZE PURGE PROCEDURE:

(1) remove the jet-nozzle & open the *Flow Control Valve*. (2) Drain the water-tank, remove its lid and pour in 4 gallons of RV-grade Anti-Freeze. (3) Hold the jet-hose securely & start the jetter at 1/2 throttle to purge the water out of the jet-hose, then - as soon as antifreeze exits the jetting-hose - close the *Flow Control Valve*. Lastly, open the *Pulse Valve* for 6 seconds, then close it and shut down the engine.



LONG TERM STORAGE

If storing the unit for several months, close the gasoline-valve (near the filler cap) then run the unit until it dies (with the water on but no nozzle) to clear the carburetor of gas.

ENGINE, PUMP & GEARBOX OILS

Change the *Engine* oil and filter as specified in your engine's manual

(scan QR code on page 5 or 16 of this manual)

Change the *Pump* oil after the first 30 hours and then every 300 hours.

Use 30-WT NON-DETERGENT lubricating oil.

Change the *Gearbox* oil after the first 50 hours and then every 300 hours.

Use 80W-90 Gear Oil.

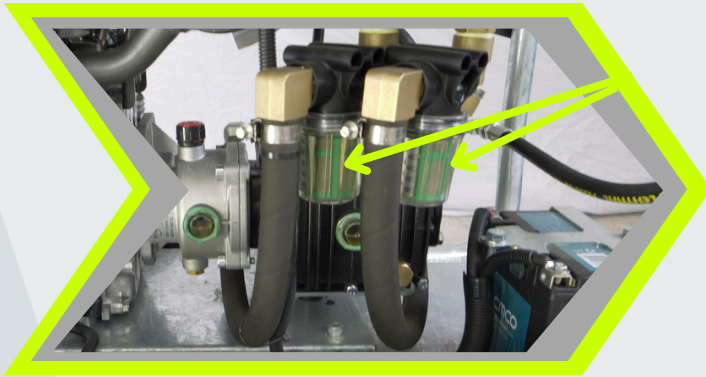


STORAGE & MAINTENANCE

OF YOUR *DRAIN INVADER* PRO 4007

DAILY PUMP CHECK

Check the oil-levels in the Pump and the Engine. The oils should be clean and clear; cloudy, milky, or dirty oils indicate that servicing is needed ASAP.



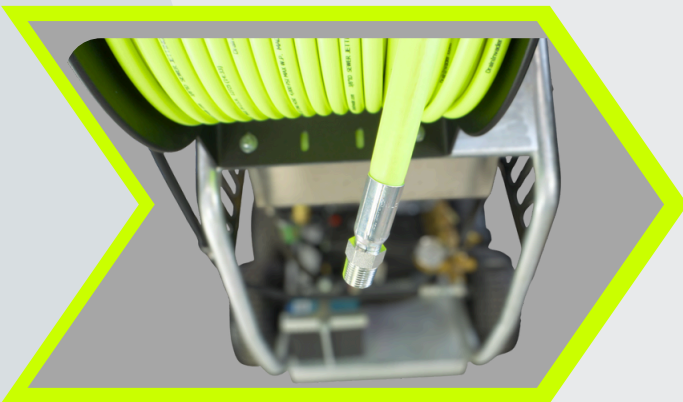
WATER FILTERS CHECK

Inspect each water filter for debris; remove and clean as needed or at least once a week.



DAILY NOZZLE CHECK

Inspect your nozzles for clogged orifice-jets which weaken cleaning power & nozzle thrust. Clear with the orifice-cleaner tool (included in the nozzle-case).



DAILY HOSE CHECK

Inspect the Jetting-Hose for cuts in its cover, kinks, exposed inner-braids, etc. ***SAFETY FIRST: Never use a damaged jetting-hose: it could burst under pressure! High-PSI water can cause injury; always repair or replace worn or kinked Jetting-Hose BEFORE it bursts under pressure!***

PRODUCT SPECIFICATIONS

OF YOUR *DRAIN INVADER* PRO 4007



Performance Specs:

Max Flow: **7.5 GPM**
Max Pressure: **4000 PSI**

Pressure-Regulation:

Pressure-Regulating Unloader Valve,
Adjustable

Engine Specs & Info:

688cc, OHV, Electric-Start, V-Twin
Cylinder (*Honda GX-690*)

Water "Buffer" Tank:

10 Gallon capacity with float-valve cutoff

Jetting Hose:

3/8" I.D. x 250-foot Low-Friction Jetting
Hose, max 4000psi, fitted 3/8" NPT

Nozzles (standard):

- Bullet Penetrator 1x6
- Flusher 0x5
- Pusher 3x6
- Spinner 0x2



POTENTIAL PROBLEMS & SOLUTIONS

Problem	Potential Cause	Solution
Low Pressure	Nozzle worn, incorrectly sized, or plugged.	Replace with proper size, or clean the orifices.
	Inadequate water supply.	Find another source or add secondary supply hose.
	Air leak in inlet plumbing.	Disassemble, reseal and reassemble.
	Pressure gauge inoperative or not registering accurately.	Check with new gauge; replace worn or damaged gauge.
	Relief / unloader valve improperly adjusted, stuck, or the valve is worn out.	Adjust relief / unloader valve. If necessary, repair or replace.
	Inlet suction filter/strainer clogged or improper size.	Clean, use adequate size, check more frequently.
	Worn high pressure seals in pump.	Replace all seals in pump.
	Fouled or dirty inlet or discharge valves in the pump.	Clean inlet and discharge valve assemblies.
	Worn inlet or discharge valves in the pump.	Replace worn valves.
	Leaky hose or fitting.	Repair or replace hose or fitting.
Pump runs extremely rough, pressure very low	Restricted water inlet or air entering the inlet plumbing.	Clear restriction, check for air tight seal at fittings & filter.
	Fouled inlet or discharge valves inside pump.	Clean out material in valves or replace worn valves.
	Plugged inlet filter.	Clean or replace filter.
Water leakage from under the manifold.	Worn pump seals, or cracked plunger in pump.	Replace seals. Install new plungers.
Oil leaking in the area of crankshaft	Worn crankshaft seal or bearing case O-ring.	Replace crankshaft seal or bearing case O-ring.
	Bad bearing.	Replace bearing.
Loud knocking noise in pump.	Inadequate water supply (cavitation noise).	Find another source or add secondary supply hose.
	Broken or worn pump bearing or rod.	Replace bearings or rod.
Frequent or premature failure of the pump seals	Scored plungers. Excessive water supply pressure. Pumping dirty water. Excessive temperature of fluid being pumped. Running pump dry.	Replace plungers. Reduce inlet pressure. Max. 75 PSI. Ensure water supply is rust-free and clean. Maximum water temperature 120 deg F. DO NOT run pump without water.
Strong surging at the inlet and low pressure discharge.	Foreign particles in the pump's inlet or discharge valve or worn inlet and/or discharge valves.	Clean or replace worn valves. Install and regularly clean water filter. Never pump abrasive fluids.

PRODUCT WARRANTY

FOR YOUR *DRAIN INVADER* EQUIPMENT

WHAT IS COVERED

DRAIN INVADER* warranties new items of our manufacture from defects in materials or workmanship for a period of one year from date of delivery to the 1st customer.** This policy is limited to products manufactured by *DRAIN INVADER*. ***Products that we purchase from other manufacturers, such as the engine and the pump, are covered by their own warranties which may go beyond our one year. Refer to the original manufacturer's policy for warranty details on these types of products:

- **HONDA Engines:** **3-YEAR Limited Warranty**
- **UDOR Pumps:** **5-YEAR Limited Warranty**

WHAT IS NOT COVERED

The warranty shall not apply to product malfunctions or failures resulting from misuse, abuse, neglect, loss, damage caused by disasters (such as fire, flood, lightning, earthquake, vehicle-crash, etc.), interaction with products not approved by *DRAIN INVADER*, or improper repairs to any part of the equipment. Improper repairs shall include repairs made by persons not authorized by *DRAIN INVADER*, or repairs utilizing parts or materials not equal to those furnished by *DRAIN INVADER*. ***DRAIN INVADER* will NOT pay for unauthorized repairs.** The warranty shall not cover failure due to normal wear. Jetting hoses, Nozzles, and Hose-Fittings are not covered as they are subject to pipe conditions.

PRODUCT WARRANTY

FOR YOUR *DRAIN INVADER* EQUIPMENT

WHAT DRAIN INVADER WILL DO

Should a *DRAIN INVADER* manufactured product prove defective during the warranty period, the customer is required to notify the selling dealer or *DRAIN INVADER* immediately. The defective components or parts shall be securely packaged, including a packing list identifying the components or parts, and description of the defect and shipped to the *DRAIN INVADER* Service Department within ten working days. **Return shipping costs are the responsibility of the customer.**

After determination of warranty eligibility, *DRAIN INVADER* will, at its option, repair or replace the defective components or parts and return them to the customer. We shall also pay - if pre-authorized by *DRAIN INVADER* - reasonable labor to fix any items found to be defective, and/or refer the customer to the nearest authorized warranty center (especially for engine warranties and the like).

***DRAIN INVADER* SHALL NOT BE LIABLE FOR ANY LOSS, INCONVENIENCE, INJURY, OR DAMAGE, INCLUDING DIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF OR INABILITY TO USE ANY *DRAIN INVADER* PRODUCT, OR ANY BREACH OF WARRANTY EXPRESSED OR IMPLIED.**





REAPER ATTACK NOZZLE



WARTHOG SCOURING NOZZLE



GREASE HOG NOZZLE



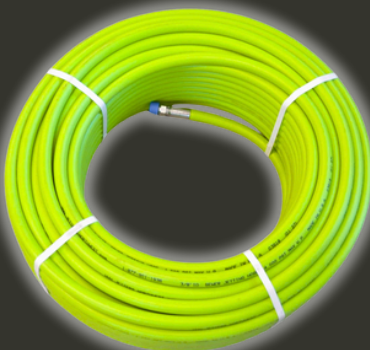
3/16" TRAP-HOSE & REEL



P-TRAP NOZZLE



1/4" MINI-HOSE & REEL



JETTER HOSES (all sizes)



INSPECTION CAMERAS



ELECTRIC MINI JETTERS

Resources



Popular Options: DRAIN INVADER
Accessories, Nozzles, Hoses, Parts
and More



Owners Manual: DRAIN INVADER
PRO 4007 Jetter



Owners Manual: HONDA Engine
X630-GX690



Owners Manual: UDOR Pump
BL Series Direct Drive, Gas Engine Flange Plunger Pumps




Contact Us

Need help with your *DRAIN INVADER* equipment? Our team is here for you pros who keep things flowing. From setup and maintenance tips to troubleshooting and replacement parts, you'll get straight answers and customer-first support every time.

For the unsung heroes of plumbing—more power, less hassle.

- **Phone**

 (866) 631-3569


- **Message**

 cs@draininvader.com

- **Website**

 www.DrainInvader.com

- **Address**

 16750 Redmond - Woodinville Rd NE C-101,
Woodinville, WA 98072, United States

- **Follow Us**



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