

Magnum Diesel Powered, Diesel Heated, V-Belt Drive Skid

Instructions for use



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Symbols used to mark instructions



Before using the high-pressure cleaner, be sure to also read the enclosed operating instructions and keep them within reach at all times.



Safety instructions in these operating instructions which must be observed to prevent risks to persons are marked with this danger symbol.



This symbol is used to mark safety instructions that must be observed to prevent damage to the machine and its performance.



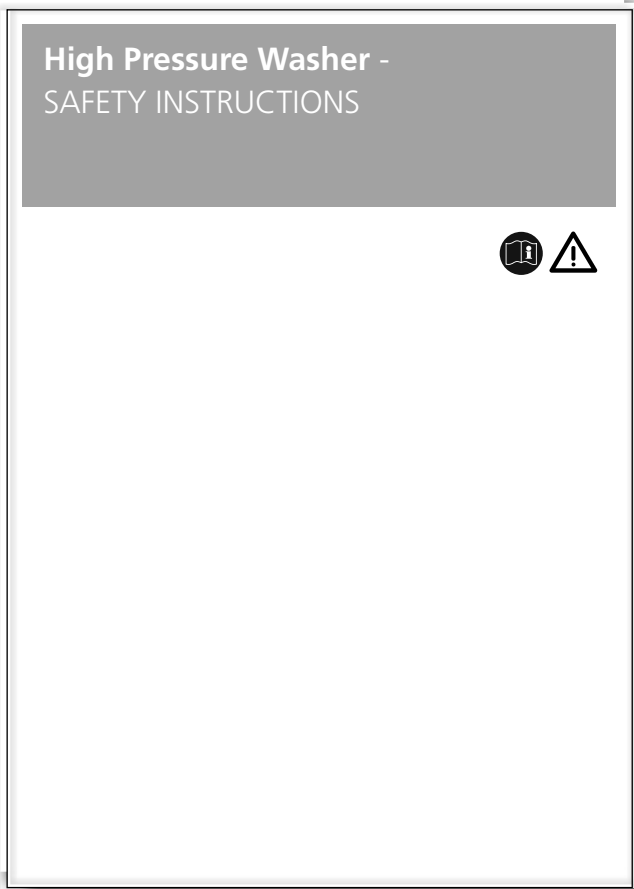
This indicates tips and instructions to simplify work and to ensure safe operation.



Operations marked with this symbol should only be carried out by Qualified Service Technicians.



1 Important safety instructions



2 Description

2.1 Purpose


This high-pressure cleaner has been designed for professional use in


- Agriculture
- Industry
- Transport industry
- Automotive
- Municipal Facilities
- Janitorial
- Construction
- Food industry


etc.

Section 5 describes the use of the high-pressure cleaner for various cleaning jobs.

Always use the cleaner as described in these operating instructions. Any other use may damage the cleaner or the surface to be cleaned or may result in severe injury to persons.

 **WARNING!** Do not use combustion engine powered machines indoors unless adequate ventilation is assessed by national labour authorities.

 **WARNING!** Ensure, that any exhaust emissions are not in a vicinity of air intakes.

 **WARNING!** Incorrect fuels shall not be used as they may prove hazardous.

3 Before starting the machine

3.1 Fuel and air mixture

Every fuel-burning appliance, such as pressure washers, depends upon a proper mix of fuel and air (by weight) for proper combustion. Therefore some adjustment of the air supply to the burner may be necessary to take account and the resulting air pressure. This is true whether your fuel is 'Natural gas', Propane or Diesel.

Your hot water pressure washer was thoroughly tested and adjusted for optimum performance before it left our factory.

If your location is higher than 1200m (3900 ft) above sea level, your burner may require re-adjustment for proper performance and best fuel economy. Contact your local Dealer for assistance.

3.2 Fill up fuel tank

With the machine cold and turned off:

1. Fill fuel tank from a clean container with fresh diesel fuel Maximum storage time in high pressure cleaner diesel tank: 1 month.

Use clean fuel only, free of moisture and contamination. Contact your dealer for fuel source and type recommendations.

Diesel stored externally for more than 6 months is not allowed to be filled into high pressure cleaners.



NOTE!

At temperatures below 46°F the fuel oil begins to solidify (paraffin precipitation). This can lead to difficulties in starting the burner. Before the winter months it is recommended that a fuel conditioner/stabilizer be added (available from the fuel oil trade). Filling up the engine with fuel, see the enclosed instructions for the engine.

3.3 Connecting the pressure hose

1. Connect the high pressure hose quick connector to the high pressure nipple.

3.4 Connecting the water

1. Attach hose coupling to the water supply hose.
2. Rinse the water supply hose briefly in order to prevent sand and other dirt particles entering into the machine.
3. Attach hose coupling to inlet.
4. Open water supply faucet.



NOTE!

In the case of poor water quality (sand, etc.), it is recommended that an inlet water filter be installed.

Water supply hose should be a reinforced hose and have a minimum inside diameter of **3/4" (19 mm)**.

4 Control / Operation

4.1 Connections

4.1.1 Connecting the spray nozzle to wand

Insert spray nozzle into wand quick connect.



NOTE!

Always remove any dirt from the nipple before connecting the nozzle to the spray gun.

4.2 Switching on the cleaner

4.2.1 Cold water operation

Before starting up the engine, you must carefully read through the instructions for use of the engine. In the instructions for use the operation and service of the engine is described.

When the engine has been started, the high pressure washer can be used for cleaning with cold water.

4.2.2 Hot water operation

1. Turn the burner switch to the on position.
2. Set thermostat to desired temperature.
3. Unlock the spray handle and squeeze the trigger.
4. The oil burner will start.
5. Release the trigger and lock the spray handle when not in use.

4.3 Using cleaning agents

If you want to use detergents, you will need an external injector. Please contact your local distributor for further information.

CAUTION!

Never allow cleaning agent to dry on the surface to be cleaned. The surface may be damaged.

5 Applications and methods

5.1 Techniques

Efficient high pressure cleaning is achieved by following a few guidelines, combined with your own personal experience of specific cleaning tasks. Accessories and detergents, when correctly chosen, can increase the efficiency of your pressure washer. Here is some basic information about cleaning.

5.1.1 Soaking

Encrusted or thick layers of dirt can be loosened or softened up by a period of soaking. This is for example an ideal method within agriculture – for example, within pig sties. The ideal soaking method can be achieved by using foam or simple alkaline detergent. Let the product lie on the dirty surfaces for about 30 minutes before pressure washing. The result will be a much quicker high pressure cleaning process.

5.1.2 Detergent and Foam

Foam or detergent should be applied onto dry surfaces so that the chemical product is in direct contact with the dirt. Detergents are applied from bottom to top, for example on a automobile bodywork, in order to avoid “super clean” areas, where the detergent may collect in higher concentrations and streams downwards. Let the detergent work for several minutes before rinsing and never let it dry on the surface being cleaned.

5.1.3 Temperature

Detergents are more effective at higher temperatures. Greases, oils and fats can be broken down more effectively at higher temperatures also. Proteins can be cleaned at temperatures of around 60°C (140°F). Oils and traffic film around 70°C (158°F), and grease can be cleaned at 80°-90°C (176-194°F).

5.1.4 Mechanical Effect

In order to break down tough layers of dirt, additional mechanical effect may be required. Special lances and rotary or wash brushes offer this supplementary effect that cuts through dirt.

5.1.5 High Water Flow or High Pressure

High pressure is not always the best solution and may also damage surfaces. The cleaning effect also depends upon water flow. Pressure levels of around 100 bar (1450 psi) may be sufficient for vehicle cleaning (in association with hot water) and higher flow levels give the ability to rinse and flush away large amounts of dirt easily.

5.2 Some typical cleaning tasks

5.2.1 Agriculture

Task	Accessories	Method
Stables Pig Pens, Sties Cleaning of walls, floors and equip- ment Disinfectant	Chemical Foam Injectors Foam lance Floor Cleaner Detergents Disinfectant	<ol style="list-style-type: none"> 1. Soaking – apply foam to all surfaces (bottom to top) and wait for approx. 30 minutes. 2. Remove the dirt from surfaces with the high pressure lance or chosen accessory. Again, clean from bottom to top on vertical surfaces. 3. To flush away large quantities of dirt, change to low pressure mode and use the higher flow to push away the dirt. 4. Use recommended disinfectant products and methods to ensure hygiene. Apply disinfectant once the surfaces are perfectly clean.
Machinery Tractors ploughs etc.	Detergent injection lances and underchassis washers brushes	<ol style="list-style-type: none"> 1. Apply detergent to vehicle or equipment surfaces in order to soften up dirt and grime. Apply from bottom to top. 2. Proceed with cleaning using the high pressure lance. Clean again from bottom to top. Use accessories to clean in difficult to reach places. 3. Clean fragile areas such as motors, rubber at lower pressure levels to avoid damage.

5.2.2 Vehicle

Task	Accessories	Method
Vehicle bodywork	Standard lance Detergent injection underchassis washers brushes Detergents	<ol style="list-style-type: none"> 1. Apply detergent to vehicle or equipment surfaces in order to soften up dirt and grime. Apply from bottom to top. In cases of particularly dirty vehicles, pre-spray with a recommended dealer product in order to remove traces of insects etc, then rinse at low pressure and apply normal car cleaning detergent. Let detergents settle for 5 minutes before cleaning off. Metallic surfaces can be cleaned using a recommended dealer product. 2. Proceed with cleaning using the high pressure lance. Clean again from bottom to top. Use accessories to clean in difficult to reach places. Use brushes in order to add a mechanical cleaning effect. Short lances can help for cleaning of motors and wheel arches. Undercarriage washers can be valuable for the cleaning of car underchassis and wheel arches. 3. Clean fragile areas such as motors, rubber at lower pressure levels to avoid damage. 4. Apply a liquid wax using the pressure washer in order to protect the bodywork from pollution.

5.2.3 Buildings and Equipment

Task	Accessories	Method
General surfaces Metallic equipment	Foam injectors Standard lance Tank cleaning head Disinfectant	<ol style="list-style-type: none"> 1. Apply thick foam over the surfaces to be cleaned. Apply on dry surfaces. Apply from top to bottom on vertical surfaces. Let the foam act for up to 30 minutes for the optimal effect. 2. Proceed with cleaning using the high pressure lance. Use applicable accessories. Use high pressure to dislodge large amounts of incrustated dirt or grime. Use lower pressure and high water volume in order to rapidly flush away loose dirt and rinse surfaces. 3. Apply disinfectant once the surfaces are perfectly clean. <p>Areas covered by amounts of loose dirt, such as animal remains in slaughterhouses, can be removed by using high water flow to flush away the dirt to evacuation pits or drains.</p> <p>Tank cleaning heads can be used to clean barrels, vats, mixing tanks etc. Cleaning heads may be hydraulically or electrically powered and give the possibility for automatic cleaning without a constant user.</p>

These are merely several examples of cleaning tasks that can be solved by a pressure washer in association with accessories and detergents. Each cleaning task is different. Please consult your local dealer or qualified representative in order to discuss the best solution for your own cleaning tasks.

6 After using the cleaner

6.1 Switching off the cleaner

1. Turn the burner switch to "OFF" position.
2. Activate spray handle for 1 minute minimum on cold water to cool down system.
3. Turn "OFF" engine. /
4. Close water tap.
5. Activate spray handle until the washer is depressurised.
6. Lock the safety catch on the spray handle.

6.2 Storing / frost protection

It is advisable to store the machine in a frost proof place between operations. If this is not possible the machine should be protected in the following way:

1. Disconnect the water inlet hose. Remove the lance and empty it of water.
2. Start the machine allowing it to run with the spray handle opened until it is empty of water.
3. Place a suction hose in a bucket with 6-8 l (1.5-2 gallons) anti-freeze.
4. Place the spray handle (without spray nozzle) above the bucket, activate the spray handle so that the anti-freeze can circulate.

5. Place the spray handle above the opening of the anti-freeze container and allow the machine to pump all of the solution back into the anti-freeze container. The anti-freeze can be re-used, but keep in mind that it is slightly diluted with water each time this is done.

Important:

To avoid damage always ensure that the washer, the hoses and the spray lance are unfrozen before restarting. Place the washer and the accessories in a warm environment for some time before starting up.

7 Maintenance

7.1 Maintenance Schedule

	Weekly	After the first 50 operating hours	Every six months or 500 operating hours	As required
7.2.1 Water filters				●
7.2.2 Oil filter				●
7.2.3 Checking the pump oil quality	●			
7.2.4 Changing the pump oil		●	●	
7.2.5 Emptying the fuel oil tank				●

Service on engine: See attached user instructions for engine.

7.2 Maintenance Work

7.2.1 Water filters

1. Unscrew quick coupling.
2. Remove filter with tool and clean it.

7.2.2 Checking the pump oil quality

1. Check color of pump oil.
If the oil has a gray or white shade, change the oil (see section 7.2.3)
2. Top off oil level with fresh oil if necessary.
Oil type

7.2.3 Change of oil

1. Unscrew the oil drain plug and drain oil into a suitable container.
2. Check that the drain plug gasket is in place and reinstall drain plug.
3. Fill pump with proper grade and amount of oil.
Oil grade and capacity



7.2.5 Cleaning of fuel filter

On the back of the fuel tank where the hoses are mounted, there is a filter.

To clean this or these filters (depending on model), dismount the hose and unplug the hose nipple.

8 Troubleshooting

8.1 Other Faults

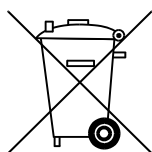
Fault	Cause	Remedy
	<ul style="list-style-type: none"> > Engine not started > Engine RPM too low 	<ul style="list-style-type: none"> • Start engine. •  Adjust RPM on the speed control to max. <p>Cold water operation possible.</p>
Pressure too low	<ul style="list-style-type: none"> > High pressure nozzle worn out 	<ul style="list-style-type: none"> • Replace nozzle
Burner soots	<ul style="list-style-type: none"> > Fuel contamination > Burner sooted or adjustment incorrect 	<ul style="list-style-type: none"> •  Contact Service

8.2 Technical Specifications

	6012MAG-35KDG	8012MAG-40KDG	6012MAG-50KDG	6115MAG-40KDG	7115MAG-40KDG	8115MAG-35KDG	6115MAG-50KDG
Pressure-PSI	3500	4000	5000	4000	4000	3500	5000
Flow-Gal/Min	5.5	8	5.5	6.5	7	8	5.5
Max. Water Inlet Temp-°F	140	140	140	140	140	140	140
Oil Type-Pump	SAE 15-40	SAE 15-40	SAE 15-40	SAE 15-40	SAE 15-40	SAE 15-40	SAE 15-40
Oil Type-Motor	SAE 15-40	SAE 15-40	SAE 15-40	SAE 15-40	SAE 15-40	SAE 15-40	SAE 15-40

9 Further information

9.1 Recycling the machine



Make the old cleaner unusable immediately.

The pressure washer contains valuable materials that should be recycled.

Contact your local waste disposal site. If you have any questions, please contact your local authorities or your nearest dealer.

THANK YOU: The employees and management thank you for selecting the **Magnum** brand product line. The production and quality assurance team have taken the greatest care to ensure that your new pressure washer exceeds the standards set by you, the customer.

YOUR RESPONSIBILITY: An operator's manual was compiled for your benefit. By studying and following the safety, installation, operation, maintenance, and troubleshooting information contained within, you can look forward to many years of trouble-free service from your equipment. Every person who will operate the equipment must read and follow the safety warning and operating instruction sections of the owner's manual prior to use. You are responsible for operating the product properly and safely. You are also responsible to follow the maintenance schedule on the back page of the manual to keep your warranty active.

FREIGHT DAMAGE: If delivered by a trucking company, please inspect for any concealed freight damage and note this on the paperwork from the trucking company before signing. Should you find damage has occurred during shipping, do not return the damaged merchandise to manufacturer, but file a claim immediately with the freight carrier involved.

QUESTIONS: Help us provide you with the fastest service. **Please locate the warranty registration card enclosed and return it to manufacturer to register your machine.**

If problems occur, contact the dealer you bought your machine from, a local authorized **Magnum** service center, or call manufacturer at 1-(772) 461-4486 and ask for technical services.

GETTING STARTED: If your dealer has not prepared the machine for startup, you may need to connect the hose to the pressure outlet on the washer and connect the other end of the hose that swivels to the trigger gun inlet and tighten. Engine powered pressure washers are shipped from the manufacturer with the fuel tanks empty. Follow the operation instructions for starting. Electric motor powered pressure washers will require an appropriate electric outlet or disconnect box and an electric plug that is rated for your machine's voltage and amperage and matches to your electrical socket. Smaller machines are equipped with a ground fault interrupter on the electrical cord and you will need to press the reset button after it is plugged in.

ONE YEAR PARTS & LABOR WARRANTY: Manufacturer promises to repair **Magnum** branded pressure washers if defective in materials or workmanship for one year from the date of original retail purchase including the cost of PARTS and LABOR, but **you must pay** transportation/shipping costs and travel time.

LIMITED LIFETIME FRAME/1 YEAR LABOR WARRANTY
The stainless steel frame on Magnum brand pressure washers includes a lifetime frame warranty against defect in material or workmanship. Freight excluded.

LIMITED 10 YEAR COIL / 1 YEAR LABOR WARRANTY
The heating coil on Magnum brand pressure washers includes a limited ten year warranty against defect in material or workmanship. 1 year replacement and 9 additional years prorated. Warranty excludes damage due to freezing, chemical deterioration, scale build up, rust, corrosion, or thermal expansion. Freight excluded.

ONE YEAR PARTS WARRANTY: Manufacturer will provide replacement parts on accessories and on all other product brands including Hydro Twisters, Hydro Vacuum systems and Hydro Loop. (Labor is not included)

TWO YEAR EVAPORATIVE EMISSIONS CONTROL SYSTEM WARRANTY: Manufacturer will repair or replace a defective evaporative emission control system (EECS) part on your pressure washer for a period of two years. (*more information on next page*)

Items and Conditions Not Covered:

1. Normal wear items such as discharge hose, guns, wands, spray arms, nozzles, quick couplers, o-rings, motor & generator brushes, filters, fuses, belts, & tires.
2. Cost of regular maintenance/adjustments, damage from lack of maintenance or correct operation
3. Damage due to freezing, abrasive fluids, chemical deterioration, scale build-up, rust, corrosion, thermal expansion or water ingress.
4. Damage from fluctuation in electrical or water supply.
5. Any product or part that has been altered, modified, over pressurized, misused, or has been in an accident.
6. Dealer installation or damage from improper installation of the machine or alteration by a dealer or promise of additional warranty from dealer. The manufacturer warranty is not transferable from the dealer to the retail purchaser on used or rented equipment.
7. Labor is not paid if the dealer that serviced your machine is not an authorized service center.
8. Labor is not paid on added accessories such as surface cleaners, hose reels, wastewater recovery, **hot link** water heaters, and filtration.

WARRANTY PROVIDED BY OTHERS: Gasoline and diesel engines, electric motors, and pumps are warranted by the manufacturer of the component and their warranty is provided through the manufacturer's service centers. Contact your authorized distributor for the closest repair center. Additional extended warranties may be provided by engine or pump manufacturer.

GENERAL CONDITIONS: Manufacturer's responsibility with respect to claims is limited to making the required repairs or replacements to the original retail purchaser, and no claim of breach of warranty shall be cause for any cancellation or rescission of the contract of sale of any Magnum product. Manufacturer reserves the right to change or improve the design of any of its products or illustrations without assuming any obligation to modify any product previously manufactured.

This supersedes any and all previous warranty statements for products purchased after June 2017. Manufacturer is not liable for indirect, incidental or consequential damages including any cost of substitute equipment, loss of revenue, pecuniary expense or loss, or inability to use a Magnum product. Manufacturer disclaims all implied warranties, including those of merchantability and fitness for use for a particular purpose. Some states do not allow exclusions or limitations on how long an implied warranty lasts, so the above exclusions may not apply to you. It is the buyer's responsibility to ensure installation and use of Magnum products conforms to local codes.

INTERNATIONAL END USERS: Warranty is furnished by authorized **Magnum** dealers or distributors only; and the warranty may vary depending on the dealer or distributor and may be different from **Magnum's** warranty; please consult distributor for details.

HOW TO OBTAIN WARRANTY SERVICE:

1. Contact your local service dealer and return the **Magnum** washer or part within the warranty period along with your sales receipt. To locate service, call customer service at (772) 461-4486 or go to: www.magnumpressurewashers.com
2. You also have the option to obtain a return goods authorization and ship the questionable part freight prepaid directly to the manufacturer. The part will be evaluated upon receipt. If found defective, manufacturer will repair or replace part under the conditions of warranty and return to you.
3. If the defective component is an engine or motor made by another manufacturer, we, or your authorized **Magnum** dealer, can help you obtain warranty service through the specific manufacturer's local authorized service center.
4. If you are unable to resolve the warranty claim, write to **Magnum** Pressure Washers c/o Pressure-Pro, 7300 Commercial Circle, Fort Pierce, FL 34951 USA, Attn.: Technical Services. Please enclose a copy of the dated purchase receipt and explain the nature of the defect.

EVAPORATIVE EMISSION CONTROL STATEMENT The U.S. Environmental Protection Agency and **Magnum** are pleased to explain the evaporative emission control system (EECS) warranty on your 2017 model year or newer pressure washer. New equipment that uses small off-road engines must be designed, built, and equipped to meet California anti-smog and also U.S. EPA standards. **Magnum** must warrant the EECS on your pressure washer for the period of time listed below provided there has been no abuse, tampering, neglect or improper maintenance.

Your EECS may include parts such as the carburetor, fuel-injection system, the ignition system, catalytic converter, fuel tanks, fuel lines, fuel caps, valves, canisters, filters, vapor hoses, clamps, connectors, and other associated emission-related components.

MANUFACTURER'S WARRANTY COVERAGE:

This evaporative emission control system is warranted for two years. Where a EECS component is defective and a warrantable condition exists, **Magnum** will repair your pressure washer at no cost to you including diagnosis, parts and labor.

GENERAL EMISSIONS WARRANTY COVERAGE:

Subject to certain conditions and exclusions as stated below, the warranty on emission-related parts is as follows:

- (1) Any warranted part that is not scheduled for replacement as required maintenance in the written instructions supplied, is warranted for the warranty period stated above. If the part fails during the period of warranty coverage, the part will be repaired or replaced by **Magnum**, according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period.
- (2) Any warranted part that is scheduled only for regular inspection in the written instructions supplied is warranted for

the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.

- (3) Any warranted part that is scheduled for replacement as required maintenance in the written instructions supplied is warranted for the period of time before the first scheduled replacement date for that part. If the part fails before the first scheduled replacement, the part will be repaired or replaced by **Magnum** according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
- (4) Repair or replacement of any warranted part under the warranty provisions herein must be performed at a warranty station at no charge to the owner.
- (5) Notwithstanding the provisions herein, warranty services or repairs will be provided at all of our distribution centers that are franchised to service the subject engines or equipment.
- (6) The Pressure Washer owner will not be charged for diagnostic labor that is directly associated with diagnosis of a defective, emission-related warranted part, provided that such diagnostic work is performed at a warranty station.
- (7) **Magnum** is liable for damages to other engine or equipment components proximately caused by a failure under warranty of any warranted part.
- (8) Throughout the Pressure Washer warranty period stated, **Magnum** will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.
- (9) Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of **Magnum**.
- (10) Add-on or modified parts that are not exempted by the Air Resources Board or U.S. EPA may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claims. **Magnum** will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

WARRANTED PARTS:

The following emission warranty parts list are covered (use portions of this list applicable to your pressure washer: Fuel Tank, Fuel Cap, Fuel Line, Fuel Line Fittings, Clamps, Canister Mounting Brackets, Carbon Canister, Vapor Hoses, Vapor Hose Clamps

USE ONLY MAGNUM CERTIFIED ORIGINAL EQUIPMENT REPLACEMENT PARTS, FAILURE TO DO SO COULD LEAD TO WARRANTY EXCLUSION AND SEVERE BODILY INJURY

