ROUSSAKIS Supplies

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HIGH PRESSURE WATER JETTING MACHINE

OPERATION MANUAL

Model: RS ECOJET 300

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CONTENTS

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General Conditions

Introduction:

Roussakis Supplies thanks you for selecting its products. This machine has been designed and constructed to ensure maximum performance, comfort, and operating facility in a wide range of conditions and jobs.

This manual is a guide for the proper use of the machine, and it also contains useful information about the function and maintenance of the machine.

To guarantee a faultless condition, this product has been precisely checked by our technical department and by our distributors. To maintain the machine in perfect condition, it is important that the periodical maintenance procedure is performed.

Please read this manual prior to operating the machine, especially as far as safety precautions are concerned. In case more information is needed please contact us or your local distributor.

Spare Parts:

For the safety of the operator and the machine, you should only use original spare parts and accessories.

By ordering of parts and or accessories, please always indicate the Serial Number and the exact model type.

Delivery and Guarantee Conditions:

This machine has been dispatched in perfect condition and fully tested. Observed external damages should be notified in written within one (1) week.

Guarantee:

This machine is covered by 1 year guarantee for quality. This guarantee includes and is limited to our choice, either the repair or the replacement of any defective part. Please send us the defected part free of freight charges.

This guarantee does not cover abrasion parts or damage caused by improper or careless use of the equipment.

Repairs should be exclusively done by authorized technicians.

Technical Data of RS ECOJET 300	
Engine	HONDA
Engine type	GX390
Engine power	13 HP
Fuel	Gasoline
Type of pump	UDOR PUMP BKC 13/30 S
Type of pump oil	15W40
Pump oil quantity	1 ltr
Max volume flow	15 lt/min
Adm. working pressure	300 bar
Nozzle size	035
Max operating pressure	300 bar
Max water intake temperature	40°
Weight in kg	72 kg
Dimensions LXWXH	65X70X70 cm

Important Safety Instructions:

! Please carefully read this chapter before starting the high-pressure water cleaning machine.

This machine is a high-pressure water jetting machine which produces a water jet under high pressure and can cause severe injuries. Complete understanding of this manual is necessary to prevent injuries and damage to objects and or the equipment.

This manual includes basic information that must always be respected concerning the installation, start up, operation and maintenance of the machine. It must be therefore read carefully by the operator and should always be on site.

- **Training of personnel**

The personnel responsible for the operation and maintenance should have the corresponding qualification for this job. The areas of responsibility, competence and supervision of the personnel should have to be exactly defined by the operator in charge. If the personnel do not possess the required knowledge, they must be trained and instructed. Furthermore, the operator supervisor must guarantee that the personnel have completely understood the contents of this manual.

- **Safety conscious work**

The safety instructions mentioned in this manual, the existing national regulations concerning the prevention of accidents as well as the company internal regulations governing the working environment must be applied.

You are obliged to have your machine checked by an approved specialist with respect to the safe operation at least every 12 months. The result of the inspection must be recorded in written form.

- **Location of equipment**

RS ECOJET 300 water jetting unit is designed to be placed and operated under normal environmental conditions according to DIN 500100-1 and DIN 50014.

When you transport the high-pressure cleaner on vehicles or trucks, please fasten it on a suitable transport pallet.

Before operating, please check that installation is proper.

- Do not operate RS ECOJET 300 in places with explosion or fire danger.
- Secure that installation is horizontal and steady.
- Secure against scrolling.
- Check oil level.

- **Intended use**

High Pressure equipment and its components are specially designed for professional use in hard situations. By using them, a variety of cleaning problems may be solved with environmentally friendly methods. Always use this equipment with clean water & original spare parts.

- **Use and Descriptions**

The RS ECOJET 300 is a covered portable high pressure water jetting machine.

The working pressure is procreated by a triplex pump with 3 ceramic plungers.

On the high-pressure side of the pump there is a pressure regulation valve that switches on bypass when the gun closes, the water gets back to the high-pressure pump without pressure, till the engine runs and the pump is unloaded.

When you interrupt work or you have breaks for more than 20 minutes, you should switch off the high-pressure cleaner.

- **Tips for working with a high-pressure cleaner**

The choice of the working pressure depends on the cleaning job.

The working pressure depends on the size of the spraying nozzle and the adjustment of the pressure regulation valve, the working pressure is limited on top by the pressure regulation valve.

A rotating nozzle (optional) has the highest mechanical effect.

As standard equipment the machine is supplied with a 15° nozzle.

- **Flexible High-Pressure Hoses**

Use only high-pressure hoses duly certified and treat them as high-pressure vessels under pressure.

- Never exceed maximum allowed water temperature.

- Use hoses up to their maximum allowed working pressure.

- Never use damaged or worn-out hoses.

- Always use high pressure connections suitable to operate on or above maximum pressure provided by the equipment.

- Locate the high-pressure connection in such a way to prevent danger in case of leakage, breaks or false coupling.

- **Warning**

- Never aim the water jet at people, animals, and electrical installations or directly at the high-pressure cleaner.

- Never try to clean clothes or shoes that you or other people are wearing.

- Always wear protective clothing all over.

- People that are in the immediate proximity of the cleaning area must protect themselves against spurting particles.

- Never suck up solvent liquids such as thinners, petrol or oil as the resulting spray is highly inflammable, explosive, and toxic.

- Vehicle tires and tire valves must be cleaned only with a flat jet nozzle and a minimum spray distance of at least 30 cm.

- According to the law in force, persons under 18 years of age are not allowed to operate such kind of equipment with an operating pressure exceeding 1000 psi.

Increased hazard caused by short spray equipment (less than 750 mm from the handle to the nozzle)! Never direct the jet against parts of the body! Protect yourself from any particles splashing back against you!

Water quality requirements

The environment temperature when the high-pressure cleaner operates should be min +2° C and max + 40° C.

Notes on the requirements for the water used.

The STANDARD pumps work with clean, soft water, at a maximum temperature of 40˚C, and, only for short periods, up to 60˚C.

The water must be free of abrasive materials, undissolved gases, and air bubbles. Max. 5 mg/l filterable materials.

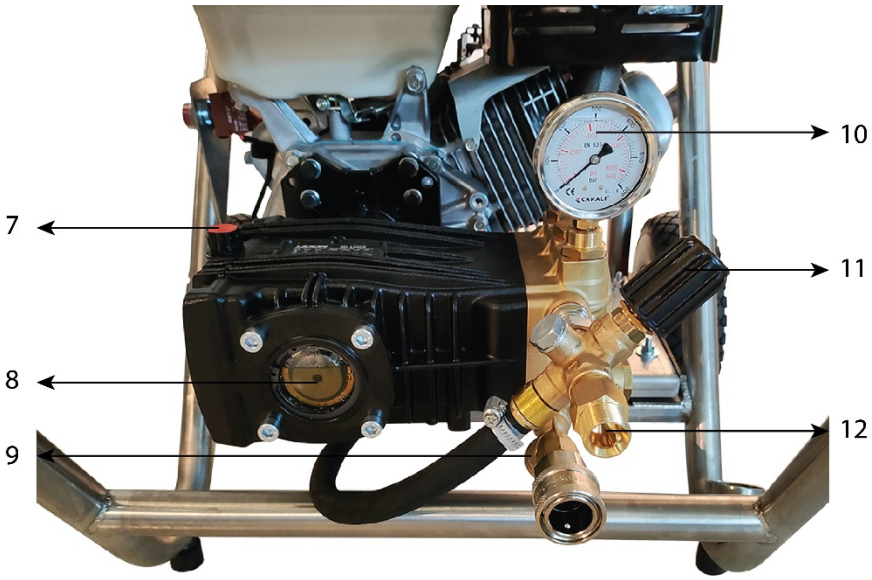
The filter sizes used are defined and must be adhered to: Working pressure up to 1000 bar: max 50 µm.

Working pressure from 1000 bar: max 5 µm.

The conductivity at 20° C must be below 2000 µs/cm.

Machine Description

1. Inox frame
2. Fuel Tank
3. High pressure pump
4. Honda gasoline driven engine
5. High pressure gun
6. Wheels



7. Pump oil filler
8. Pump oil level indicator
9. Strainer
10. High pressure gauge
11. Pressure regulator knob
12. Connection for high pressure hose

Description and function of the security installations

- **Pressure regulator valve and by-pass valve**

The high-pressure valve limits the operation pressure. The desired operation pressure can be adjusted with the high-pressure regulation valve. When the maximum operation pressure is exceeded or the gun is closed, the pressure regulation valve administrates the water over a bypass connector back to the high-pressure pump.

Remove leakages in the pressure system or on the spraying system immediately.

Leakages behave to continuously intercede from the engine and the pressure regulator, consequently the high pressure can be damaged.

- **Protection against freezing**

- Freeze can destroy equipment which has not been emptied completely of water. The best protection against freeze is to place the device in a room protected against frost.

- **Storage for long time without use**

If you need to store the machine for long time without use always fill the pump with antifreeze fluid. It serves as a pump conditioner and prolongs the life of the machine.

- **Safety Instructions during Operation**

Incorrect use of the high-pressure machine can cause severe injuries. For your own safety and the safety of other people, the following rules should be adhered to:

- Never aim the water jet at electronic installations or directly at the machine.
- Switch off the machine before cleaning or servicing.
- Do not operate the machine in areas subject to danger of explosions.
- Do not cover the machine during operation.
- When working the machine with pressure of more than 3500 psi/240 bar, the operator should always wear medium protection clothes.

Operating Instructions

- Place the high-pressure cleaner on a plain and secure it against rolling.
- Check the oil level of the high-pressure pump. If it is too low, refill oil like specifications on the data sheet.
- The maximum oil level from the high-pressure pump is on the top mark of the oil dip stick or in the middle of the window.
- Do not overfill the pump with oil.

Water connections

- Connect the water intake hose to the high-pressure cleaner.
- Water intake pressure should have pressure min 2.5 bar and max 4.0 bar.
- Always ensure that the water flow intake is constant and undisturbed.

Connection of high-pressure hose

- Screw one end from the high-pressure hose on the pressure exit nipple from the machine.
- The other end is to be tightened to the spraying gun.

Danger – Caution

In case you stop working for more than 10 minutes, the pump must be stopped.

When the gun is closed, the machine is running in circulation mode. If in this working condition the water temperature exceeds 55°C a thermo valve opens, releases small amounts of hot water and the same amount of cold water enters.

Operation

The engine is equipped with a recoil starter.

- Reduce the pressure by turning the black pressure regulator knob anti clockwise.
- Connect the water supply and the pressure hoses without the nozzle.
- Pull spray gun trigger. The pump at first empties the device from air. After a while, water comes out of the spray gun. Hold firmly the gun until a steady jet of water is ejected.
- Close the gun and switch off the device.
- Screw the lance with nozzle into the spray gun.
- The device is now ready for operation.
- Pull the recoil starter to start the engine.

- Allow the engine to work for a few minutes without load to warm up.
- Increase the pressure by turning the black pressure regulator knob clockwise.

Adjusting the operating pressure

- Adjust the operating pressure according to the job which is to be performed by using the unloader valve.
- By turning the knob clockwise, pressure increases, anticlockwise pressure decreases.

Stopping

- Close handgun by releasing its trigger.
- Push the red button till the engine stops.
- Activate handgun by pulling trigger, to release the remaining pressure.
- Close gun and secure trigger.
- Close water supply.
- Store hoses without hanging.

Maintenance Plan for Gasoline Models

Your RS ECOJET 300 high pressure cleaner is extremely easy to maintain, a fact that helps you to increase the efficiency of your work considerably. To guarantee a long and trouble-free service life, however, the machine requires a minimum amount of care and maintenance.

During daily use please respect the following:

Free the water supply and the high-pressure hoses and in particular their couplings from dirt before assembly.

Clean lance and gun, in particular their connections before assembly.

To protect against wear the components of the unit to particularly heavy duty, specified maintenance and inspection works must be carried out in certain time intervals.

In connection with these works the following safety instructions must be observed by all means:

Maintenance works must be carried out only with a stopped motor and pressure-free hoses. Danger of injury due to rotating parts!

Daily inspection – Testing

For the safety of the machine and operator please check following points:

- High pressure pump
- Pressure manometer - gauge
- High pressure hoses
- High pressure gun
- Pressure regulator
- Fuel tank
- Engine oil

Weekly inspection – Testing

- First oil change of high-pressure pump after 50 working hours, then every 500 working hours.
- Checking of oil level of high-pressure pump.
- Checking of oil quality.

6 Month inspection

- Change of pump oil every 6 months (whichever comes first)

12 Month inspection

- This yearly inspection including changes of parts must be carried by authorized technicians.

Water filter

- Unscrew the brass cover of the strainer.
- Clean the dirty strainer or replace it if damaged.
- Screw the cover.

Time interval for filter cleaning depends on water supply quality. In case of the existence of particles or soil, the cleaning should be done frequently.

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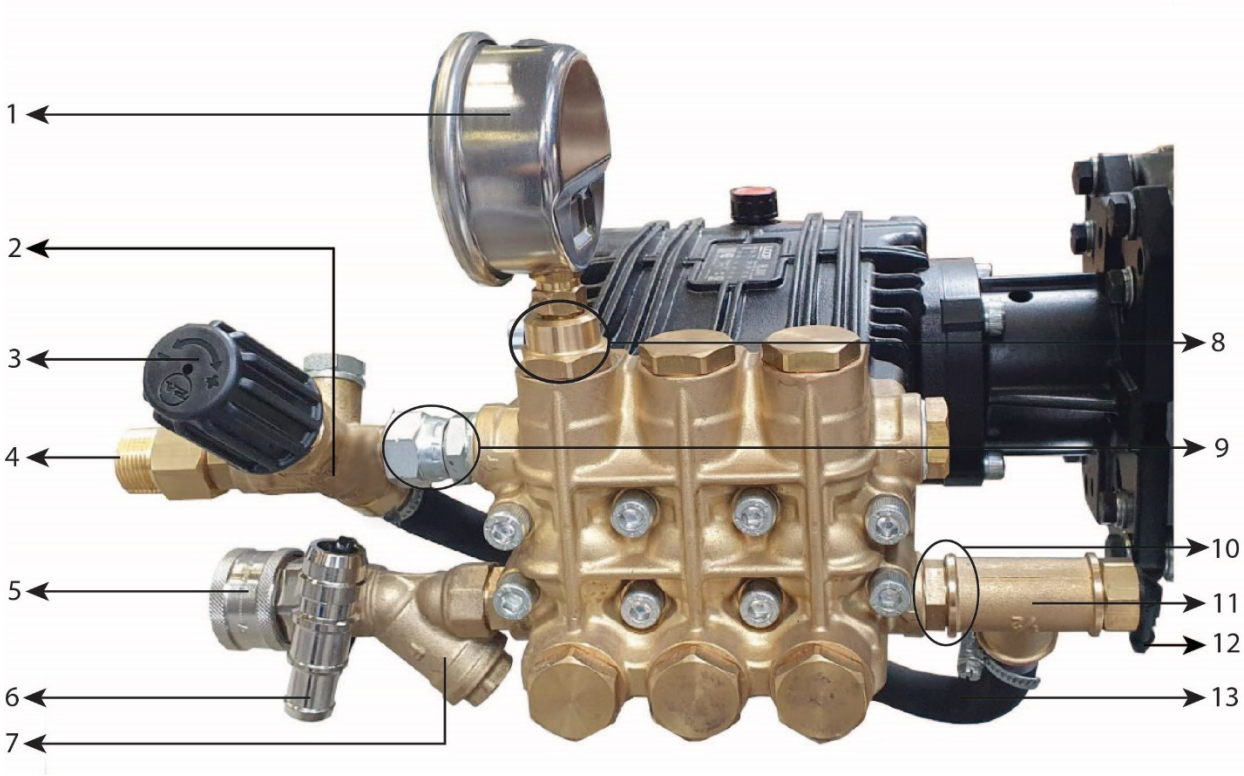
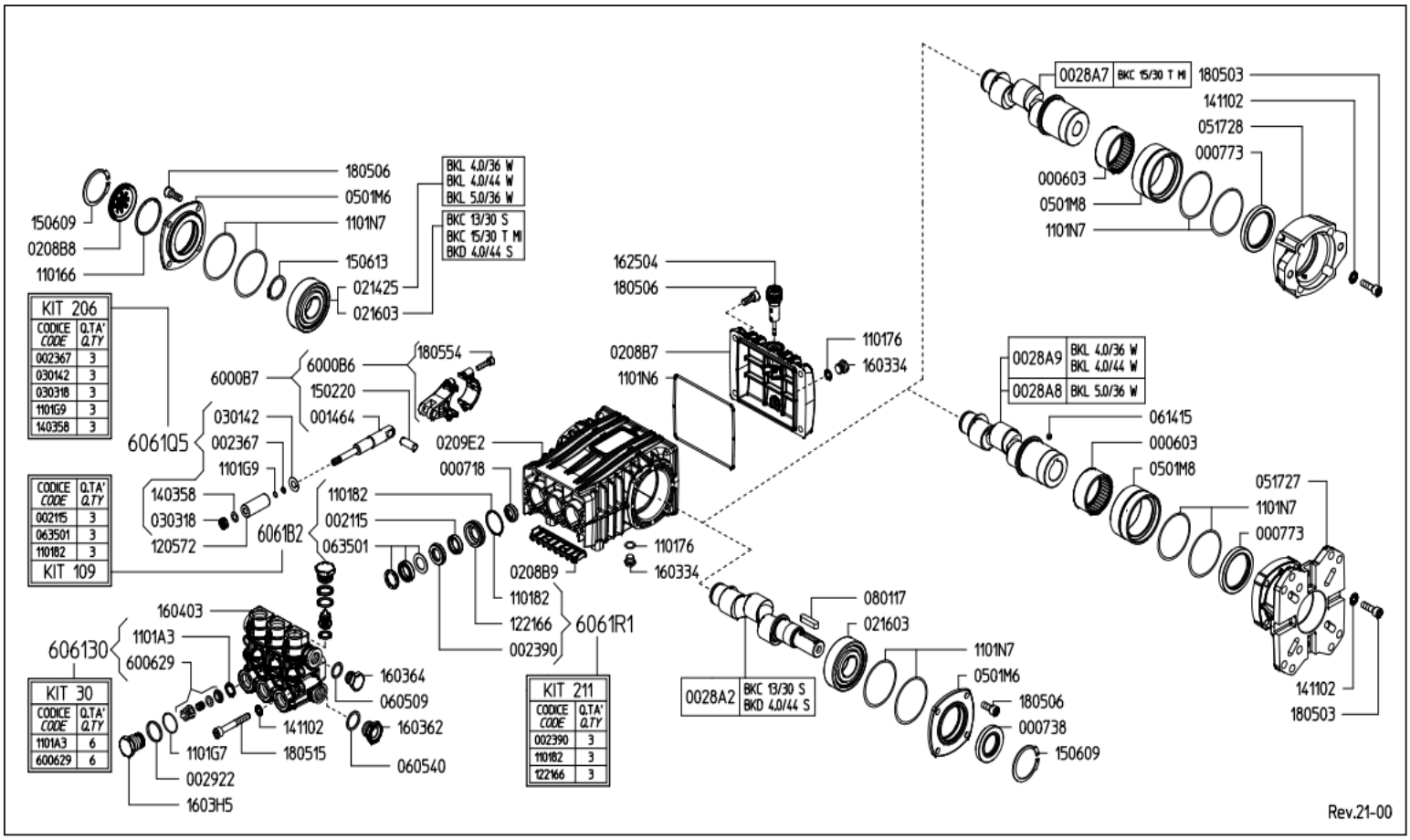
Spare Parts

Pump Assembly



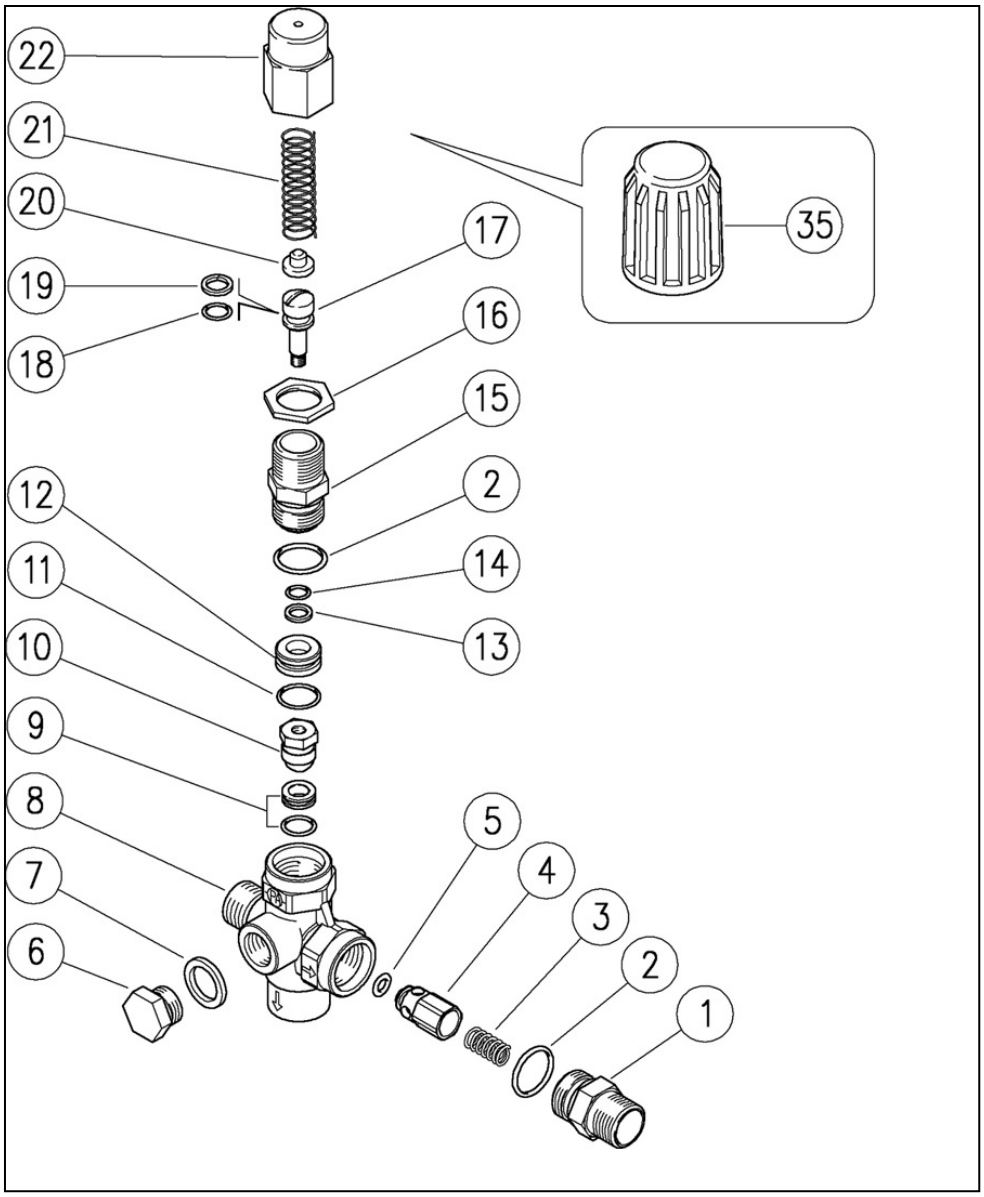
ITEM CODE	Pos.	DESCRIPTION
ITAL000004	1	Manometer
PAI0000261	2	Pressure regulating unloader valve
PAI0000217	3	Knob for pressure regulator valve
PAI0000127	4	Hp water inlet connecting nipple
PAI0000140	5	Water inlet connection
PAI0000141	6	Hose barb
KOTS000013	7	Strainer
UDOR000007	8	Valve plug
TIEF000030	9	Rotary nipple
KOTS000037	10	Nipple
KOTS000032	11	Tee
TECO000007	12	Thermostatic valve
CANH000035	13	Unloader bypass hose with hose clamps

High Pressure Pump



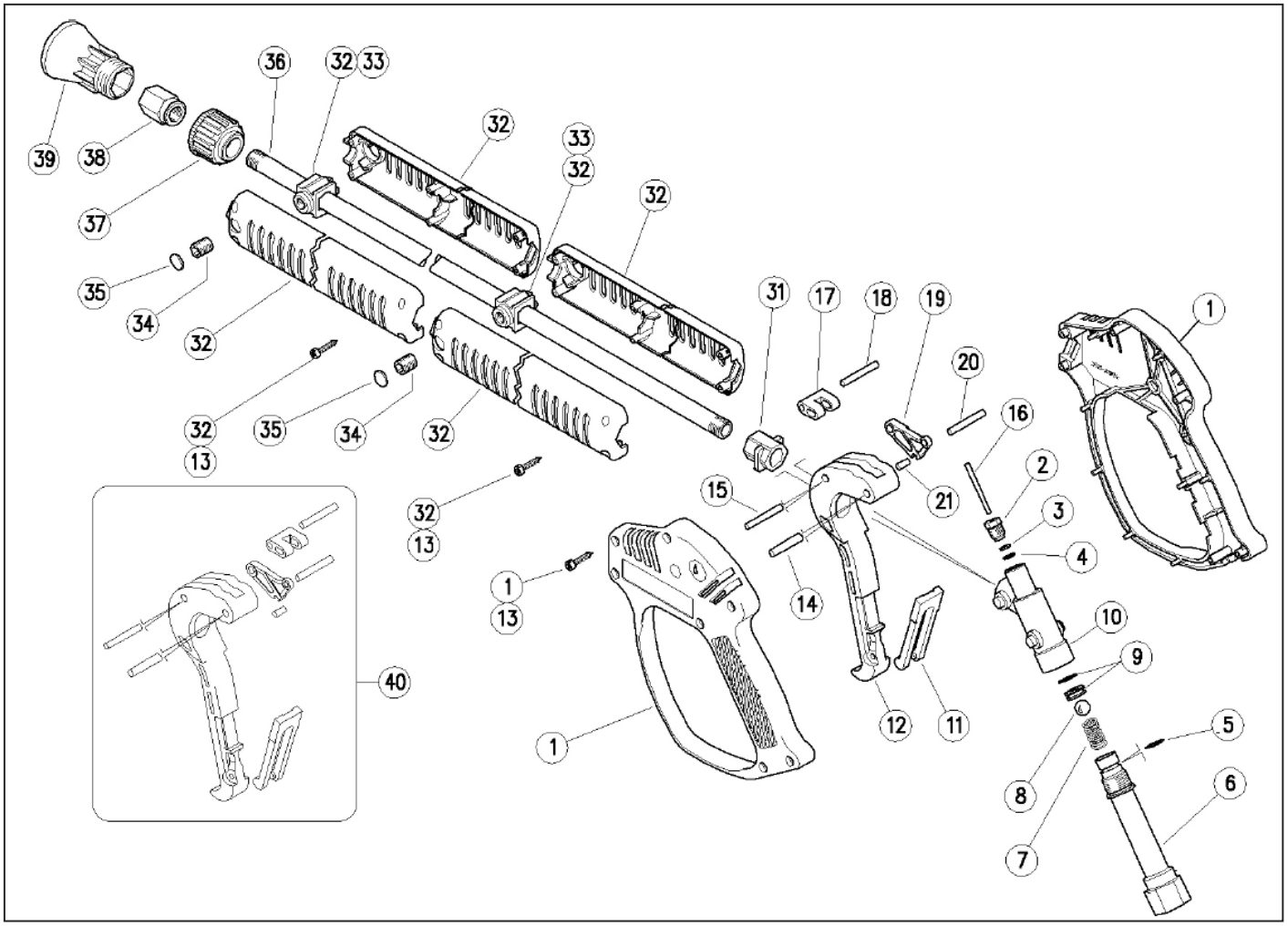
ITEM CODE	Pos.	DESCRIPTION
UDOR000095		Complete pump
UDOR000046		KIT 30 VALVE KIT
UDOR000076		KIT 109 WATER SEAL KIT D15 "M/MK"
UDOR000045		KIT 206 PLUNGER KIT D15/18 "B/BK"
UDOR000044		KIT 211 BRASS RING KIT D15 B/BK

Unloader Valve VB



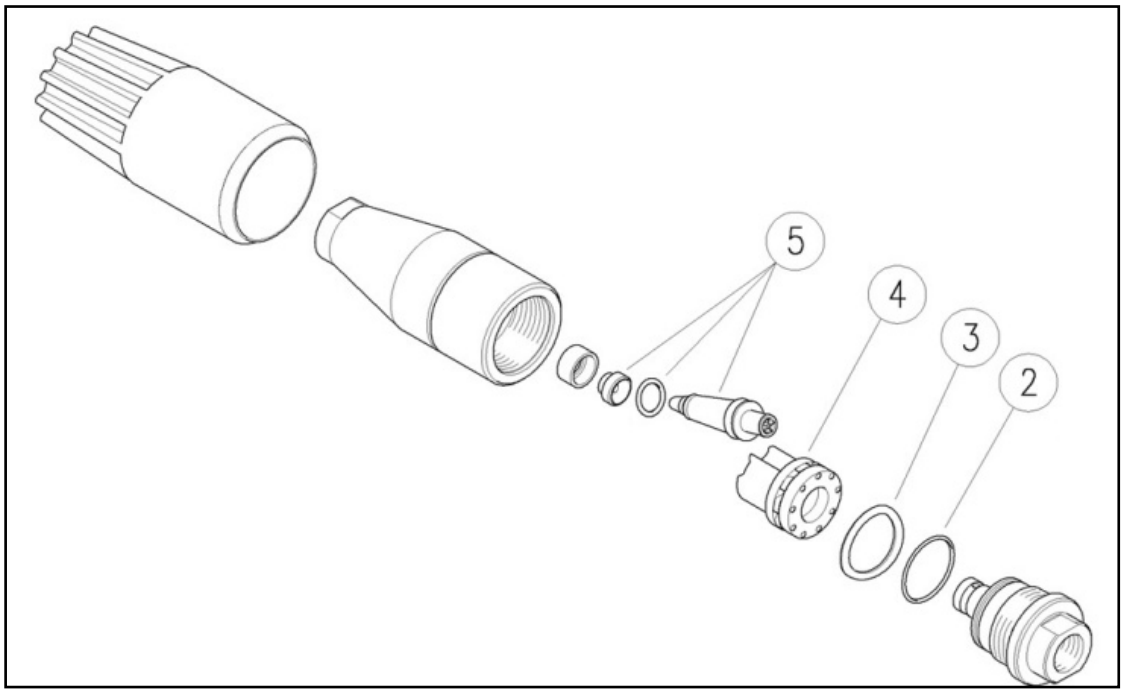
ITEM CODE	Pos.	DESCRIPTION
PAI0000261		Pressure regulating unloader valve
PAI0000217	35	Plastic knob for regulator valve
PAI0000263	KIT	Spares kit – 9 pieces (pos.2,5,14,15,16,18,19,23,24)

High Pressure Gun



ITEM CODE	Pos.	DESCRIPTION
PAI0000176		Complete spray gun
TECO000011		Flat jet nozzle 035 (not shown)
PAI0000174	KIT1	Repair kit spray gun, 7 pcs. (pos. 3,4,5,8,9,16)
PAI0000175	KIT2	Repair kit spray gun, 11 pcs. (pos. 5,8,9,23,24,28,29)

Rotating Nozzle (Optional Equipment)



ITEM CODE	Pos.	DESCRIPTION
UNIJ000132		Rotating nozzle 035 with nipple
PAI0000019	2	Oring
PAI0000101	3	Washer
PAI0000103	4	Turbine
PAI0000110	5	Spares kit for rotting nozzle 035

Faults and Remedy

FAULTS	POSSIBLE CAUSE	REMEDY
Low pressure	Insufficient inlet water supply	Unkink high pressure hose, ensure full water pressure coming from tap
	Blocked inlet water filter	Remove high pressure hose connection and remove debris
	None or incorrect nozzle	Ensure correct nozzle being used
No pressure	Damaged unloader valve	Adjust unloader screw, check for damaged seals/springs
	Damaged pump inlet valves/manifold	Disassemble pump and replace/clean components of inlet manifold
Pulsing pressure (high then low)	Damaged pump inlet valves/manifold	Disassemble pump and replace/clean components of inlet manifold
	Faulty pump	Replace pump
	Pump sucking air	Turn off machine (but not water supply) and release pressure by squeezing trigger gun
	Obstructed nozzle, water inlet filter or gun/spray wand	Use needle to clear nozzle, fresh water to flush water inlet and vinegar to clear any deposits in gun/wand
Spiking pressure	Poorly calibrated unloader valve	Adjust unloader to proper pressure as per manual
Pressure drops after a few seconds' use.	Nozzle blocked	Clear nozzle with needle
	Issues with unloader valve	Remove unloader and clean/repair
Pressure washer isn't cleaning the surface	Using wrong nozzle	Switch to higher pressure spray nozzle
Water leaking from pump	Seals broken, cracked, or worn	Return and replace under warranty
	Loose bolts on pump assembly	Tighten bolts to ensure pump casing properly sealed together
	Thermal valve activated	Wait 5 minutes before using (it will de-activate once cool enough)
Water leaking from high pressure hose connection	Broken or improper connection	Connect properly
	Broken rubber washer	Replace
Water leaking from spray wand or connections	Broken O-ring inside hose connection	Replace O-ring or return hose for new
	Not properly connected	Connect properly
Engine will not start	No gas	Fill with gas
	Choke is wrong position	Move to correct position as per

		manual
	Pressure builds up	Squeeze trigger gun to release pressure in system
	Spark plug wire not connected	Connect wire
	Faulty spark plug	Replace with new
Engine stops running while in use	Low oil level	Check and fill oil
	Dirty air filter	Clean or replace
Engine not providing enough power	Dirty air filter	Clean or replace
	Engine not running at correct RPM	Adjust RPM to engine specs with pump detached
Oil dripping from engine	Worn seals	Replace seals.
Water in oil - looks milky	Worn or broken pistons allowing water through	Repair engine through warranty
	Worn seals	Replace seals.

General Guarantee Conditions

Guarantee Period

The guarantee period for new high-pressure devices and accessories is 12 months from the date of purchase. In all cases the guarantee is based on normal utilization of the devices and accessories. Guarantee services are limited to services that are immediately related to the products delivered. Any consequential or accompanying damage such as idle run times, lost production or other damages that do not occur directly to the product are excluded from service under the guarantee.

Guarantee Limitations

The guarantee includes and is limited to our choice, the repair, or the replacement of any defective part. In case of repair, this will be performed in our technical department. Please send us the defected part(s) free of freight charge.

Requirements

Roussakis Supplies is only obliged to honor claims made under guarantee if the requirements listed below have been met by the customer:

- Devices and accessories have been used exclusively in accordance with the requirements of the operating instructions or other items of documentation provided.
- The devices have been operated exclusively with original high pressure/ Roussakis Supplies accessory parts.
- All maintenance tasks and safety checks have been performed within the prescribed period by a Roussakis Supplies authorized service center.

Exclusions

No guarantee is extended for unusual operating conditions for which Roussakis Supplies® has not issued express written approval. In addition, all damages and detrimental effects that are attributable to normal wear and tear are excluded from guarantee coverage.

Further criteria for exclusion are:

- Calcification
- Wear and tear
- Fatigue
- Corrosion

- Frost influence
- Dirt from air, water, and consumable materials
- Defective intake and output air quality

Guarantee Services

Guarantee services include replacement delivery or repairs of the goods in our premises, where they should be sent with no freight charge.

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