

Self Service

Self Service 70 K44
Self Service 70 K44 F
Self Service 100 K44
Self Service 100 K44 F

Self Service Tank 70 K44
Self Service Tank 100 K44



M0085 EN rev. 2

INSTALLATION, USE AND MAINTENANCE MANUAL

English

DECLARATION OF CONFORMITY

The under signed, representative of the following manufacturer

PIUSI S.p.A.
46029 SUZZARA (MANTOVA) ITALIA

DECLARES that the product:

Description: DIESEL FUEL DISTRIBUTOR

Model: SELF SERVICE K44

complies with the following Directives:

89/336 EEC (Electromagnetic Compatibility Directive) and following amendments

73/23 EEC (Low Voltage Directive) and following amendments

98/37/EC (Machines) and following amendments

- **International Standards** (and following amendments):

EN 292-1	Safety of Machines – Basic concepts, general design principles – Terminology, basic methods.
EN 292-2	Safety of Machines – Basic concepts, general design principles – Technical specifications and principles.
EN 294	Safety of Machines – Safety distances preventing upper limbs from reaching dangerous areas.
EN 61000-6-1	Electromagnetic compatibility – General rule on immunity – industrial rooms, residential rooms, commercial rooms.
EN 61000-6-3	Electromagnetic compatibility – General rule on emission – Residential, commercial, and light industry rooms.
EN 60204-1	Safety of machines – Electric Equipment of machines
EN 60335-1	Safety for domestic use of electrical equipment – General rules
EN 60335-2-41/A1	Safety for domestic use of electrical equipment – particular rules for pumps
EN 60335-2-75	Safety for domestic use of home appliance – particular rules for commercial distributor, with or without paying system. (electrical or gas fuel).

- Italian National Decree:

DM 31.07.1934 - Title 1 N. XVII Approval of provisions applicable to safety rules concerning storage, use and transport of mineral oils.

Suzzara 01.01.2005



OTTO VARINI , President

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B**GENERAL INFORMATION**

SELF-SERVICE distributors have been developed for private distribution of Diesel fuel. All models show common features, such as a solid metal structure and self-priming pumps, but they differ in fuel meter type (mechanical or electronic); besides, some models are equipped with Electronic Delivery Control System. Additional options (anti-water filter, integrated level indicator, printer/ticket distributor) make this model range even wider. Reliability of pumping units, accurate measurement of product delivered and high performances of Control Systems are the strong points of SELF-SERVICE.

This manual refers exclusively to Self Service models equipped with mechanical fuel-meter K44.

C**ISTRUZIONI DI SICUREZZA**

All SELF-SERVICE models have been developed and built according to the applicable EC rules concerning fundamental safety and health requirements.

A copy of the manufacturer's DECLARATION OF COMPLIANCE is supplied at the beginning of this manual.

C1 FIRST-AID RULES

Ingestion of toxic liquids by people: should fuel be ingested, do not induce vomiting, but let the person involved drink large quantities of milk or water.



Electrocution: disconnect the unit from the mains, or use a dry insulator as protection while moving the electrocuted person far from any conductor. Do not touch the electrocuted person with bare hands until he/she is far from any conductor. Ask qualified and trained people for help immediately.

IN ALL CASES ASK FOR A DOCTOR IMMEDIATELY.

C2 SAFETY RULES

Safety gloves. Prolonged contact with hydrocarbons can result in skin irritation: during delivery always wear PVC safety gloves, as per EN 388 class 2.



Proper use. The unit should be used for the purpose it was intended for. Follow the instructions set forth in paragraph "Use".



Overheating. To prevent overheating make sure that the pump stops when no fuel is delivered for over 2 minutes.



Do not smoke. When working on the unit, and in particular during refuelling, do not smoke and do not use open flames.



Electrical safety measures. Dangerous voltages are present inside the unit. Therefore opening of the same is allowed by qualified and authorized personnel only.



Service. Service operations should be carried out by qualified personnel only.

C3 TRANSPORT, HANDLING AND UNPACKING

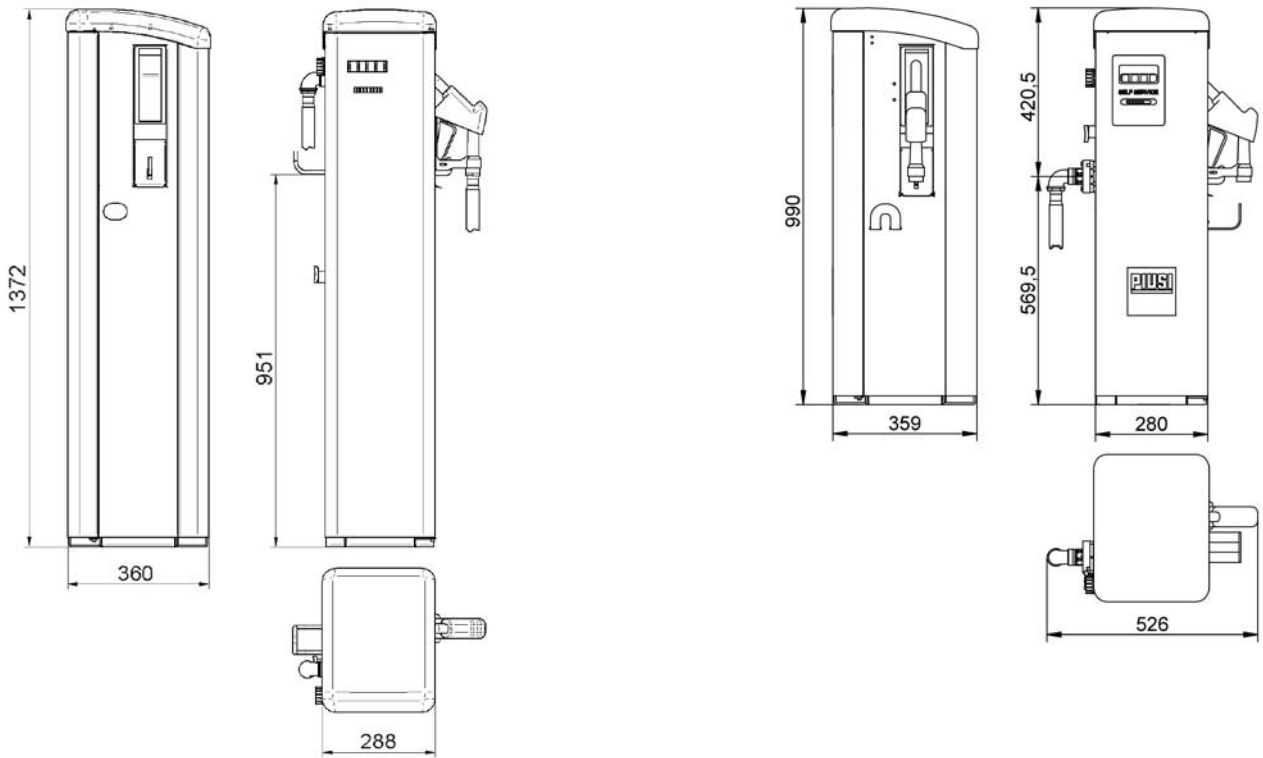
SELF SERVICE is supplied in non-stackable cardboard packing. Store and handle the unit paying attention to the indications supplied graphically on the packing.

In case of lifting make sure that capacity of lifting means and accessories (bands, for example) are suitable.

Handling and lifting equipment shall be used by authorized and properly trained personnel only.

During standstill periods the unit, either in packed or unpacked conditions, shall be kept in a place sheltered from dust and weather (rain, humidity, sun, etc...).

Remove the cardboard packing using scissors or a cutter. Operate carefully, to avoid damaging the unit.



TOTAL WEIGHT:

Self Service 70 K44	Kg 50,5
Self Service 70 K44 F	Kg 53
Self Service 100 K44	Kg 57
Self Service 100 K44 F	Kg 61,5
Self Service Tank 70 K44 230V/50 Hz	Kg 44
Self Service Tank 70 K44 Pulser 230V/50 Hz	Kg 44
Self Service Tank 100 K44 230V/50 Hz	Kg 50

PACKING DIMENSIONS

PACKING WEIGHT: Kg 3

height = 1440 mm
 length = 470 mm
 depth = 400 mm

PACKING DIMENSIONS OF SELF SERVICE TANK

height = 1150 mm
 length = 480 mm
 depth = 400 mm

Have the packing opened completely, two people must move the SELFSERVICE unit to a vertical position to facilitate reaching its final site. Once unpacked, the unit should always be kept in a vertical position.

Put all packing elements (cardboard, wood, cellophane, etc.) into the corresponding containers. Do not leave them in the environment or within children's reach as they are potentially dangerous. They should be disposed of according to the regulations in force in the country where the unit will be used.

Check the conditions of the unit making sure that no part shows such damages as compromise safety and functionality.

In case of doubt, do not install the machine and contact the manufacturer's Technical Service.

Make sure that all accessories are available (see enclosure).

After unpacking, assemble the unit as follows:

- Loosen the securing screws of the hose hook and extract it by 60/70 mm to make room for the hose (pictures 1 and 2)
- Tighten the screws and fix the hook in the desired position (picture 2)
- Before mounting nozzle and hose, apply a sealant paste on the threads as indicated in picture 3.

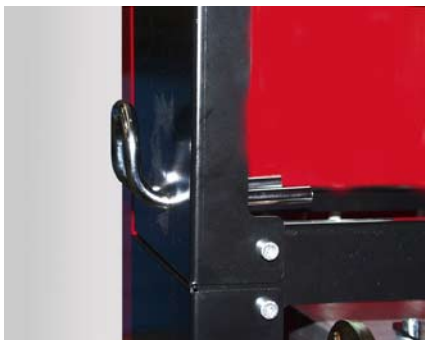


FOTO 1

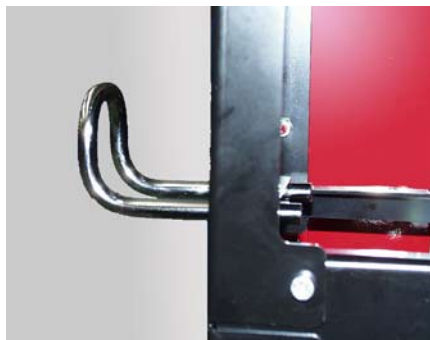


FOTO 2



FOTO 3

C4 DISPOSAL

In case of scrapping, the components should be delivered to specialised companies dealing with disposal and recovery of industrial waste, taking the following into account:

Disposal of packing:

Packing consists of biodegradable cardboard. It can be destined to common cellulose recovery.

Protection is in chemically inert polyurethane foam MDI: it can be disposed of in dumps where it does not contribute to gas formation and water pollution.

Disposal of metal parts:

Metal parts, both painted and in stainless steel, can be recovered by companies specialized in metal scrapping.

Disposal of electronic cards:

Electronic cards must be disposed of by companies specialized in electronic component disposal.

Disposal of other parts:

Other parts such as pipes, rubber gaskets, plastic parts and wires should be delivered to companies specialised in industrial waste disposal.

D USE AND AVAILABILITY OF MANUALS

This manual describes the main features of all SELF SERVICE 44 models and gives instructions concerning:

- electrical and mechanical installations,
- initial starting operations,
- daily use.

This manual does NOT cover subjects such as

- calibration of fuel meter K44

which are dealt with in a specific manual, supplied with each model station.

ATTENTION

Manual numbers and corresponding components (pump, fuel meter, etc.) are indicated for each model station in paragraph E1 (Table).

All manuals are contained in an envelope supplied with a detailed list of same.

This collection of manuals is an integral part of the product and shall be handed to the use and maintenance personnel according to EEC directive 98/37, in order to meet the training and information requirements set forth in EEC directive 98/37.

Read the instructions carefully: they contain important information on safety during installation, use and maintenance.

The manufacturer is not responsible for damages to people, things or to the unit when it is not used as indicated.

Keep this manual in a safe place protected from humidity, heat, dust, oil, grease, etc: it will be needed for future reference and consultation.

Do not remove, tear or modify any part of this manual for any reason. Should it be lost or damaged, ask the manufacturer for another copy, indicating manual number.

This manual shall always follow the unit; should the unit be sold, the manual will be handed to the new user.

ATTENTION

The manufacturer reserves the right to modify any features of the SELF SERVICE K44 unit at any time.

E IDENTIFICATION OF UNIT AND MANUFACTURER

E1 MODELS

The following table indicates the main components of each SELF SERVICE K44 model. Voltage and frequency of all models (listed in the table) are: 230V and 50Hz.

MODELS	COMPONENTS					
	PANTHER 72	E120	WATER SEPARATOR FILTER	K 44	PA120	PA80
SELF SERVICE 70 K44	X			X		X
SELF SERVICE 70 K44 F	X		X	X		X
SELF SERVICE 100 K44		X		X	X	
SELF SERVICE 100 K44 F		X	X	X	X	
SELF SERVICE TANK 70 K44	X			X		X
SELF SERVICE TANK 100 K44		X		X	X	
M0085	M0042	M0064		M0033		
	MANUALS					

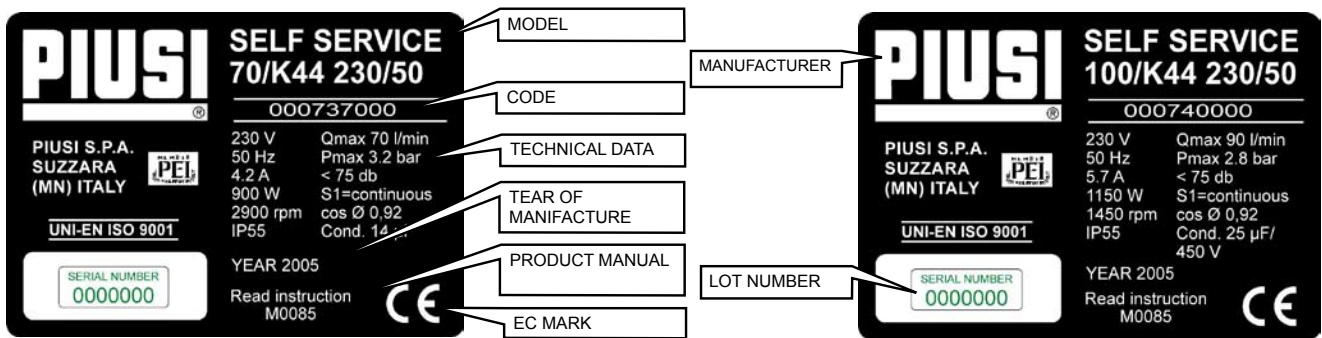
E2 DATA PLATE

SELF SERVICE stations are equipped with a plate indicating:

- Model
- Serial number / Year of manufacture
- Technical data
- EC mark

ATTENTION

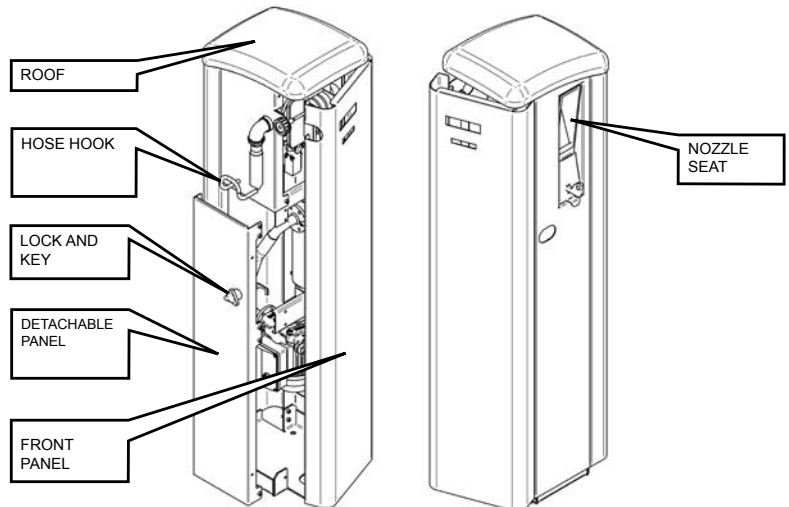
Before installing the unit, check that the model is right and suitable for currently available supply voltage and frequency.



F DESCRIPTION OF MAIN COMPONENTS

F1 BODY

The body of SELF SERVICE, both in the high and TANK versions, consists of a strong frame in treated steel, whose upper part is closed with a plastic roof. The whole front panel is hinged to offer easy access to internal components (pump, filter, fuel meter) and closed with lock and key. The right side panel can be easily detached to allow installation or maintenance operations.



F2 PUMPING UNIT

Self-priming motor-driven vane pump, equipped with by-pass valve which allows the pump to continue operating for short periods of time when the delivery nozzle is closed.

Single-phase self-ventilated induction motor, enclosed type (1P 55, as per EN 60034-5-86 laws), directly flanged on the pump.

A Y-STRAINER, easy to clean, is placed on pump suction.

Further information is supplied by the manual indicated in table 2 - paragraph E1.

F3 FUEL METER

Rotating-disk fuel meter with mechanical readout device, with wheels, indicating subtotals (which can be set to zero) and total (which can not be set to zero). Strong and reliable, the fuel meter can be set on site to achieve maximum precision levels.

Further information is supplied by the manual indicated in table 2 - paragraph E1.

F4 NOZZLE

SELF SERVICE is supplied with automatic nozzle, with delivery shutoff device operating when the tank is full.

G**TECHNICAL FEATURES****G1 PROPER USE**

Transfer of Diesel fuel, viscosity from 2 to 5,35 cSt at 37,8 °C, flash point PM ≥ 55 °C.

G2 IMPROPER USE

Transfer of fluids having features different from those indicated above. In particular transfer of the following liquids:

- petrol, solvents and inflammable liquids with PM < 55 °C (explosion/fire danger),
- alimentary liquids (contamination of the same),
- water (pump oxidation),
- corrosive chemicals (pump corrosion),
- liquids with viscosity >20 cSt (motor overload).

G3 POWER CONSUMPTION

SELF SERVICE stations shall be supplied with electric power having the same RATED VOLTAGE / FREQUENCY as shown on the DATA PLATE.

The following max. variations can be accepted:

- VOLTAGE +/- 5%
- FREQUENCY +/- 2%

The DATA PLATE also shows the MAX. POWER CONSUMPTION (in Ampere) to be taken into consideration when installing the electric safety devices required by the regulations in force and not supplied with the unit.

Max. power consumption refers to operation corresponding to the proper use of the unit – i.e. DIESEL FUEL TRANSFER – and to power consumption parameters falling within the above-indicated limits.

G4 HYDRAULIC PERFORMANCES

Provided that installation, power consumption and use are correct and proper (proper use = TRANSFER OF FUEL OIL), SELF SERVICE stations supply the following performances:

- Models SELF SERVICE 100 K44: MAX FLOW RATE 90 l/min.
- Models SELF SERVICE 100 K44 F: MAX FLOW RATE 85 l/min.
- Models SELF SERVICE 70 K44: MAX FLOW RATE 70 l/min.
- Models SELF SERVICE 70 K44 F: MAX FLOW RATE 68 l/min.
- Models SELF SERVICE 100 K44 TANK: MAX FLOW RATE 90 l/min.
- Models SELF SERVICE 70 K44 TANK: MAX FLOW RATE 70 l/min.

Pumps allow CONTINUOUS operation of the stations.

G5 METERING ACCURACY

After correct calibration on site, the fuel meter K44 ensures the following performances:

ACCURACY: +/- 1% (after calibration, for flow rates over 10 l / min.).

H**INSTALLATION****H1 GENERAL INFORMATION**

Even if SELF SERVICE stations are suitable for outdoor installation, longer life of the same and increased comfort for the operator during refuelling can be obtained by placing the units under a protective roof. Installation should be carried out by specialized personnel, following the instructions supplied in this chapter. Should SELF SERVICE not be placed under any shelter, a movable cover is available to protect display and keyboard.

ATTENTION

Motors are not explosion-proof. DO NOT install SELF SERVICE in places with danger of explosion.

SELF SERVICE stations can be connected both to underground and above-ground tanks.

H2 POSITIONING GENERAL INFORMATION

SELF SERVICE should be so positioned as to ensure

- an easy removal of detachable panels when access to internal components is required;
- compliance with max. distances and difference in height between station and tank;
- correct and safe fixing of the body to the ground on a horizontal plane.

Unit position results in the following parameters, characterizing each installation:

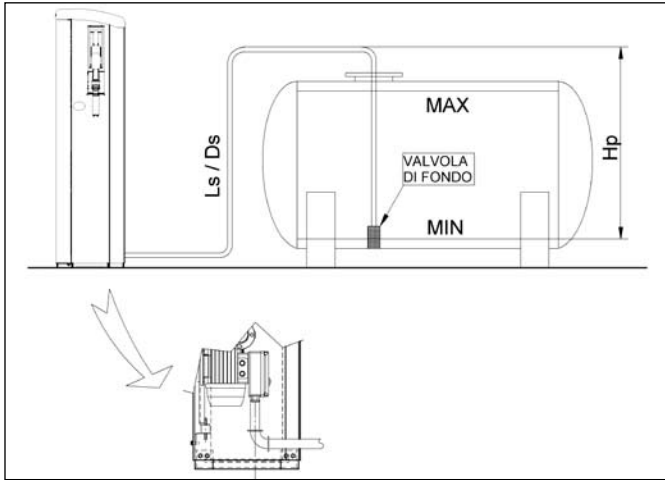
- Hp: priming height
- LS: total length of suction piping – from foot valve to station (in meters)

Correct operation of the units requires full respect of the following limits:

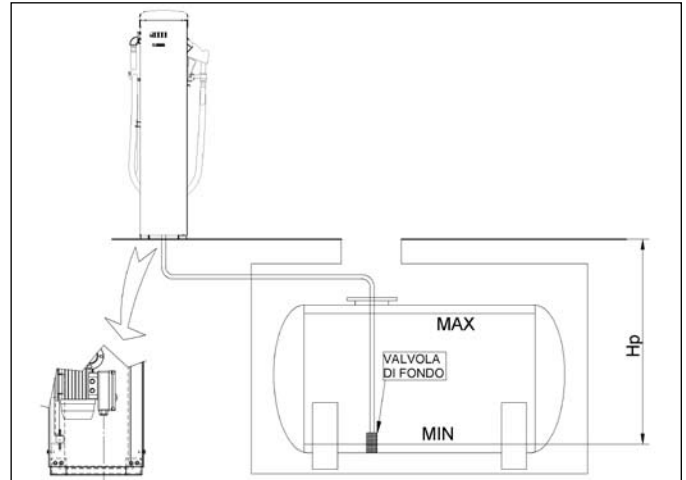
- Hp max: not exceeding 3 meters
- LS max: not exceeding 15 meters

H3 FIXING

The unit should be fixed to the ground by using screw-anchors for M12 screws, to be placed as indicated in the following pictures. Pictures 6 and 7 also show suction pipe positions (pipe axis) in case of connection to UNDERGROUND or ABOVE-GROUND tank. Before fixing the unit, make sure that the bearing area for station frame is flat and strong. To facilitate SUCTION line connection, SELF SERVICE units are equipped both with rear and bottom inlets.



Above-ground tank



Underground tank

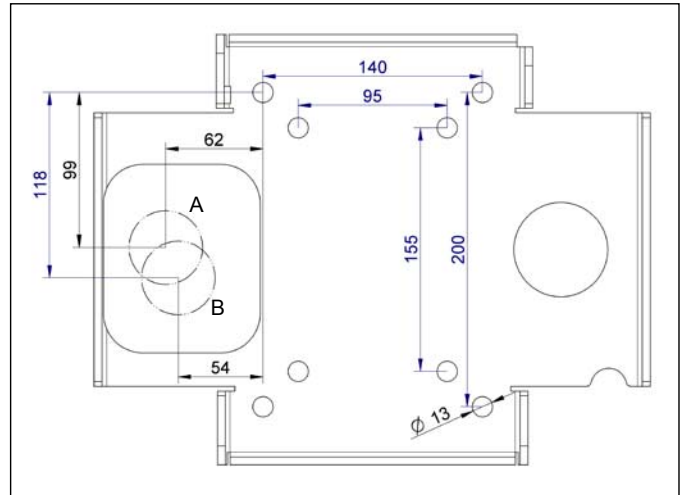


Diagram: fixing the unit to the ground.
 position A: Self Service 70
 position B: Self Service 100
 Self Service Tank 70/100

H4 HYDRAULIC CONNECTIONS

SUCTION LINE

Suction line diameter of Self Service and Self Service Tank is 1 1/2".

ATTENTION

Always follow the below-listed instructions:

- Use pipes and joints suitable for operation in vacuum conditions.
- Use pipes and accessories suitable for Diesel fuel. Unsuitable materials can result in serious damage to the pump or to people; they can also cause pollution.
- Do not use taper-threaded joints. They could damage the threaded mouth of pump filter.
- Use wide-radius bends so that pressure losses are reduced to minimum levels.
- Check that suction pipe is perfectly clean and free from scales.
- Install a FOOT VALVE equipped with FILTER at suction pipe end. Place the foot valve on tank bottom. Foot valve and pipe must have the SAME DIAMETER.
- Before starting installation, make sure that no packing material has been left in the pipes.

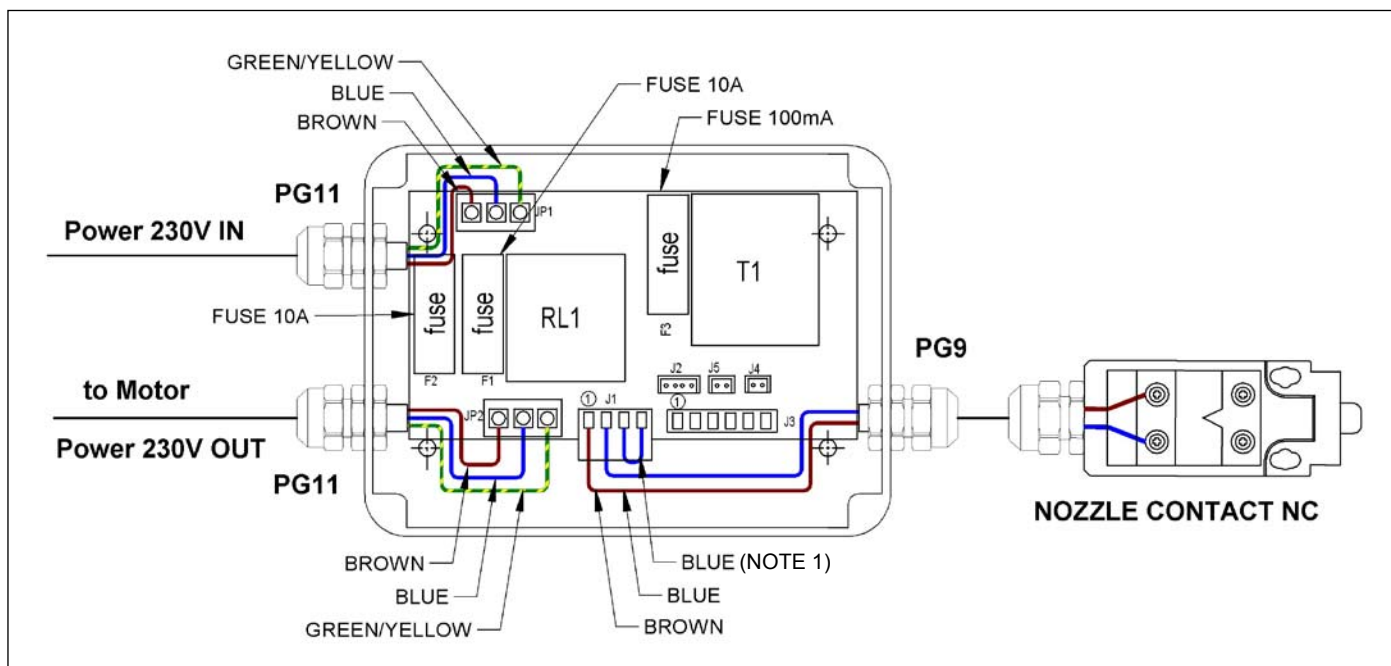
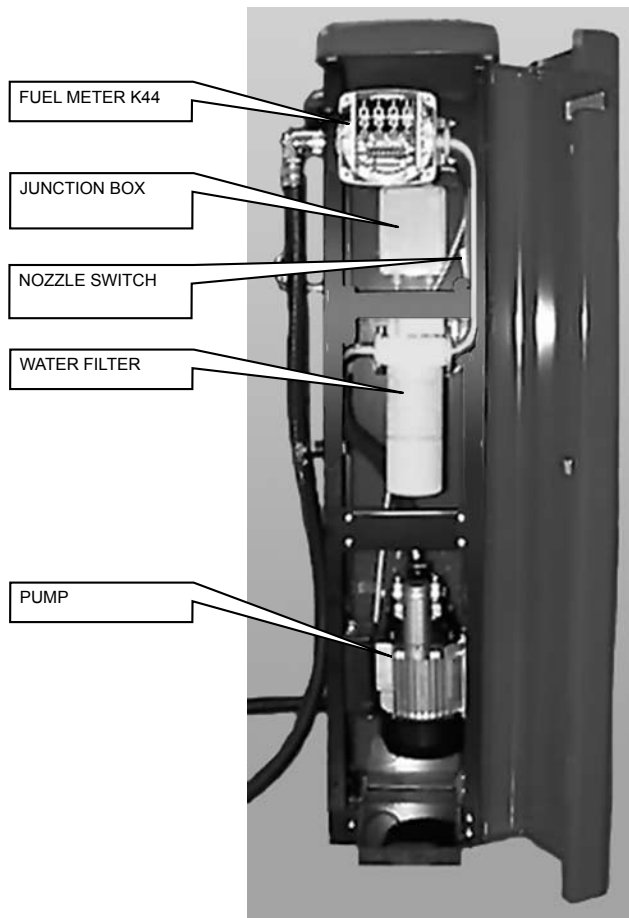
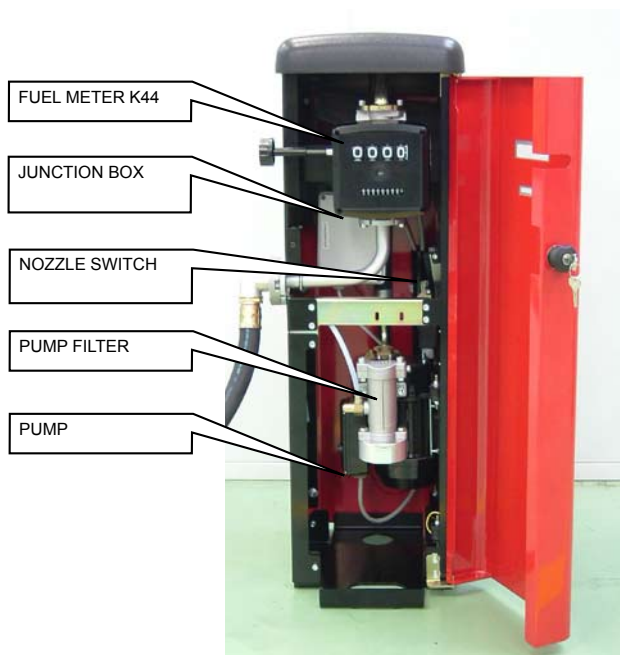
H5 ELECTRIC CONNECTIONS

Electric connections shall be carried out by specialized personnel in a professional way. Full compliance with the regulations in force in the country where the unit is installed and with the wiring diagrams contained in this manual is required.

ATTENTION:

SELF SERVICE is not equipped with safety switches. As a consequence, a power supply panel fitted with ground fault interrupter (suitable for the SELF SERVICE model involved) must be installed at supply side.

The electric panel can be reached by opening the front panel. It is pre-wired for SELF SERVICE components, according to the following diagram.



NOTE 1: should a tank level alarm be connected, replace the jumper on J1 with the alarm contact. This contact must be of “normally closed” type, that is it will be open in case of level alarm.

To have SELF SERVICE correctly started, carry out the following operations in the indicated order.

11 ELECTRIC CONNECTIONS

After connecting the unit as described in paragraph H5, SELF SERVICE can be energized by means of the general switch placed by the installer on the line, before the unit.

12 INITIAL STARTING CONDITIONS

SELF SERVICE is equipped with self-priming pump, which makes initial starting easier: in fact the suction pipe does not need to be filled completely with Diesel fuel. However quick priming can only be achieved if the pump is wet, that is if a minimum quantity of Diesel fuel is available inside the rotor chamber (this is particularly true when the difference in height between station and tank is remarkable). The pump is supplied with this minimum quantity, ready for use.

If the installer believes the pump to be completely dry for any reason (long storage, for example), he shall wet the pump following a procedure at his choice.

13 INITIAL PRIMING

To prime the pump act as follows:

- Extract the nozzle from its seat.

The pump does not start automatically.

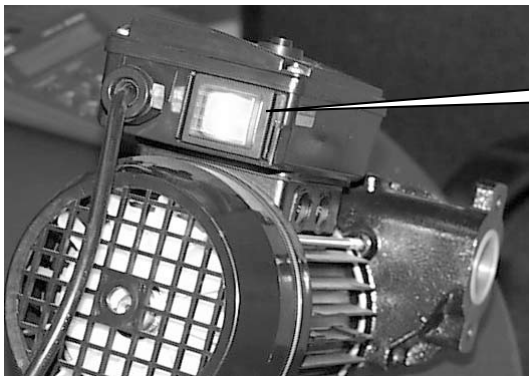
- Start the pump manually by moving the switch to ON (the switch can be operated only after extracting the nozzle).

The pump starts immediately and keeps operating until the switch is moved to OFF (manually or by putting the nozzle back in its seat).



ATTENTION:

Should the pump not start, check that the switch on pump junction box is ON



INTERRUTTORE
ON/OFF



POSIZIONE
INTERRUTTORE

Operate the nozzle lever keeping the spout in a suitable container or in the suction container. At first air will come out of the nozzle; then, after a certain time, Diesel oil will start flowing out.

ATTENTION

Initial priming shall be carried out by qualified personnel, who will be present at all operations involved. If air comes out for over 2 minutes, STOP THE PUMP and make sure that:

- *pump is not operating in dry conditions, but that a minimum quantity of Diesel fuel is available ("wet conditions");*
- *suction pipe does not let any air in and that it is completely submersed;*
- *filters are unclogged;*
- *suction and/or delivery lines are unclogged;*
- *installation has been carried out respecting the limits set forth in paragraph H2 (difference in height, pipe diameter and length).*
- *The release valve is closed.*

Continue dispensing fuel until a steady air-free flow is obtained.

Release the nozzle lever.

Put the nozzle back in its seat.

The pump stops.

I4 FUEL METER CALIBRATION

Before using SELF SERVICE station, METERING ACCURACY should be checked.

Act as follows:

- Extract the nozzle and start the pump as described in the preceding paragraph.
- Use a graduated container.

ATTENTION:

To carry out a correct accuracy test follow the below-listed instructions:

- *Use a graduated precision container with a minimum capacity of 20 liters.*
- *Before starting the test, make sure that no air is left in the system: let fuel flow out until a full regular flow is obtained.*
- *Dispense fuel uninterruptedly at max. flow rate.*
- *Stop dispensing by closing the nozzle quickly.*
- *Fill the container up to the graduated area. Do not dispense at low flow rate for long times, but at max. flow rate for short periods of time.*
- *Wait for possible foam to disappear, then compare the indication on the container with the value shown by SELF SERVICE.*

Should accuracy NOT be satisfactory, CALIBRATE the FUEL METER following the instructions supplied in manual M0033.

ATTENTION:

Differences up to 0,2 liters in 20-liter deliveries fall within the accuracy ensured (+/- 1%).

L

DAILY USE

ATTENTION :

Fuel must be supplied EXCLUSIVELY in the user's presence and under his strict supervision.

- 1 Uncoil the hose on the hook and extract the nozzle from its seat.
- 2 Check that readout is set to zero or set it to zero by turning the corresponding knob.
- 3 Start the pump manually by moving the switch to ON (the switch can only be operated after extracting the nozzle).
The pump will start immediately.

ATTENTION

Never operate the nozzle lever before introducing the nozzle into the container to be filled.

- 4 Start delivery by operating the nozzle lever.
SELF SERVICE shows the quantity supplied.

ATTENTION:

Delivery can be interrupted when desired. When delivery is interrupted by releasing the nozzle lever, the pump goes on operating and the fuel circulates inside the pump thanks to the by-pass valve. This operating condition shall not exceed some minutes. Should delivery be interrupted for longer times, stop the pump by operating the switch on the nozzle holder.

- 5 After delivery release the nozzle lever, coil the hose on the hook and put the nozzle back in its seat.
When the nozzle reaches its seat, the switch in the nozzle-holder is moved to OFF and the pump stops.

M

SELF SERVICE has been so designed and built as to require minimum maintenance. However the following ORDINARY inspections and maintenance operations shall be carried out regularly to ensure safety and efficiency of the station,

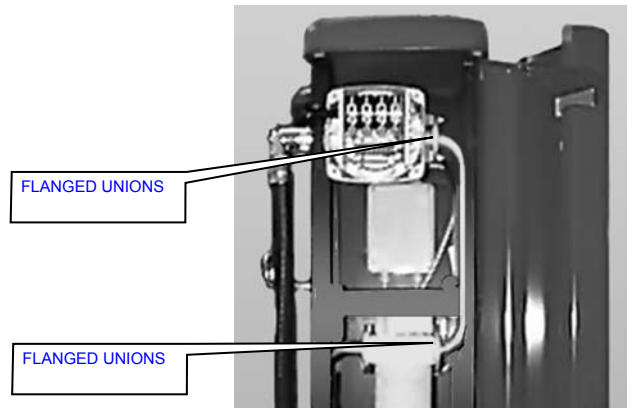
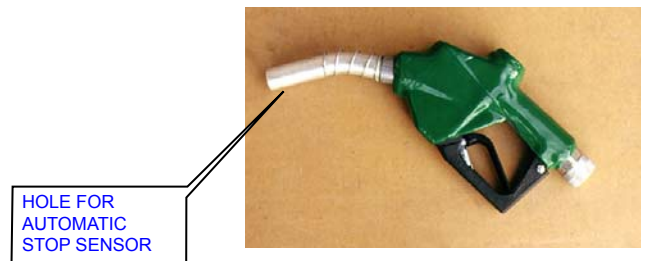
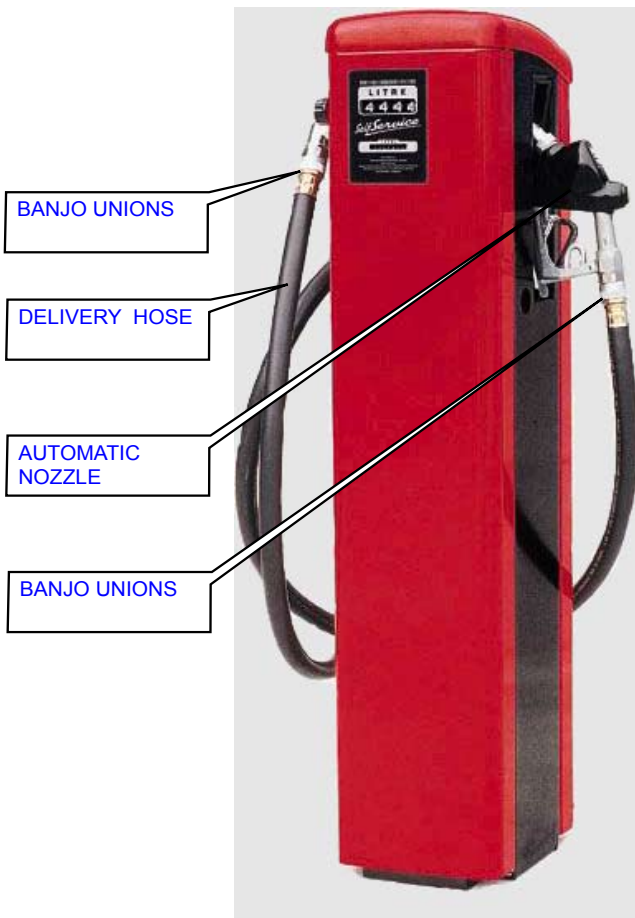
M1 PUMP AND PIPES

Inspect pump, pipes and the other internal components (filter and pulser). Keep them clean. Check that no leakage is available on flanged or threaded connections and that flexible hoses do not show any damage.

M2 DELIVERY HOSE AND NOZZLE

Keep delivery hose and nozzle clean. Make sure that:

- 1 Hose does not show any damage caused by vehicle transit.
- 2 Threaded connections are tightened and without any leakage.
- 3 Banjo unions (at station outlet and on nozzle) turn smoothly and show no leakage.
- 4 Hole of automatic stop sensor at nozzle hose end (spout) is clean.



M3 OPERATIONS PRECEDING FILTER DISASSEMBLY

To facilitate operations on filters (see below), SELF SERVICE stations are equipped with:

- PAN to collect possibly spilled liquids, placed under the delivery cartridge filter.



- RELEASE VALVE, installed on suction filter



The procedures described in this paragraph should always be followed before carrying out any operations on filters. They are absolutely required to ensure safety when working and to prevent any polluting effects.

- 1) Close the valve placed on suction line before SELF SERVICE inlet.

- 2) Put the small pipe connected with the RELEASE VALVE in a vessel and open the valve with a screwdriver. BE CAREFUL: DIESEL FUEL LEAKING OUT!



- 3) Start the pump and deliver fuel into a container with suitable capacity. The nozzle will start supplying fuel, but thanks to the release valve the flow will decrease progressively and finally stop.
- 4) Put the nozzle back in its seat; the pump will stop.
- 5) Close the RELEASE VALVE carefully moving the pipe (connected to it) and move back to a higher position.
- 6) Move the general switch of the station to OFF to prevent accidental starting during maintenance of filters.
- 7) Clean /replace filters as described in the following paragraphs.
- 8) Clean collecting PAN carefully, so that possible leakages can be identified more easily.
- 9) Move the general switch of the unit to ON.
- 10) Keeping the unit front door OPEN, start the pump and deliver fuel into a vessel until a CONTINUOUS AIR-FREE FLOW is obtained. Close the nozzle WITHOUT PUTTING IT BACK IN ITS SEAT: the pump will operate in bypass mode, producing the maximum delivery pressure.
- 11) During bypass operation CHECK THE ABSENCE OF LEAKAGES ARE AVAILABLE, then put the nozzle back in its seat.
- 12) Lock station door.

M4 FILTERS

SELF SERVICE is equipped with different filters performing different functions.

Inspection and cleaning (or replacement) of each filter is extremely important to ensure:

- protection of station components (K44, pump, nozzle);
- lasting performance (max. flow rate);
- protection of engines using fuel supplied.

ATTENTION:

Dirty or partially obstructed filters can increase pressure losses in such a way as to cause a remarkable reduction of the max. flow rate of the pump .

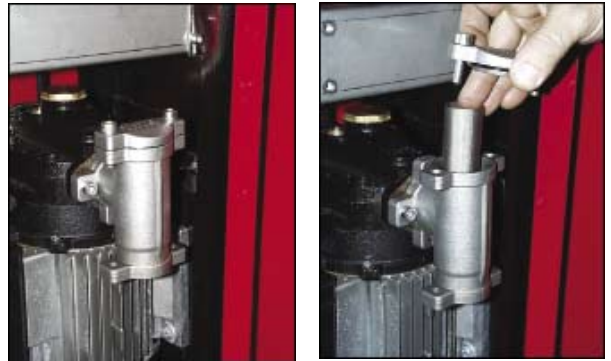
Dirty or partially obstructed filters in pump suction line can cause a strong increase in suction vacuum which, in turn, can result in higher noise levels of the pump.

M4.1 SUCTION FILTER

It is placed just before the suction mouth of the pump.

To inspect and clean it act as follows:

- 1 remove filter cover after unscrewing the two screws on same;
- 2 extract basket filter;
- 3 if necessary, clean it: wash and blow it;
- 4 put the basket filter back in the filter casing;
- 5 inspect and clean the O-ring. Put cover in position and tighten the screws.



ATTENTION:

After a reasonable number of maintenance operations, replace the flat gasket of the cover filter.

M4.2 PUMP FILTER (available on models with PANTHER 72 only)

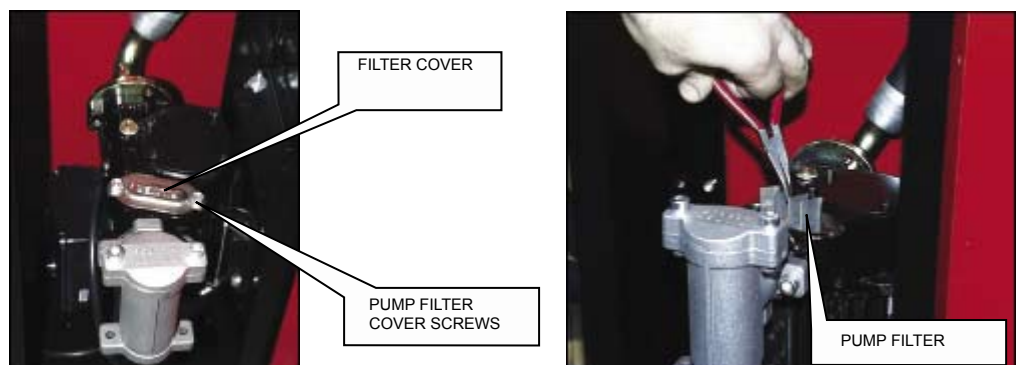
It is installed in pump body, as a standard accessory of PANTHER pump, just after the suction filter. As a consequence it will not require frequent cleaning.

To inspect and clean it act as follows:

- 1 remove filter cover after unscrewing the two screws on same;
- 2 extract net filter using pliers;
- 3 if necessary, clean it: wash and blow it through;
- 4 put the filter back in pump body making sure it does not stand out of cover seat;
- 5 inspect and clean the flat seal. Put cover in position and tighten the screws.

ATTENTION:

After a reasonable number of maintenance operations, replace the flat gasket of the cover filter.



M4.3 DELIVERY FILTER (only for high Self Service versions)

The delivery filter is provided with a WATER-ABSORBING CARTRIDGE. It represents a fundamental element for the protection of the engines using fuel delivered by the station.

This kind of filter separates and absorbs possible water available in fuel oil.

When water is absorbed, the filtering capacity is progressively reduced with a resulting increase in pressure loss (caused by the filter).

The filter CAN NOT BE CLEANED OR REGENERATED; after a certain operating time it must be replaced to restore station performances (max. flow rate).

ATTENTION:

Filter life is usually very long but it can vary remarkably depending on the quantity of water available in fuel. In case of a large quantity of water, the filter could get obstructed in a few minutes.



FILTER



FILTER HEAD

THREAD

To replace the filter act as follows:

- 1 loosen head filter by means of chain tongs;
- 2 unscrew and remove the filter from the head manually;
- 3 inspect and, if necessary, clean head thread and filter seal seat;
- 4 place a new filter (complete with seal) manually in position and screw as tightly as possible (wet the seal with Diesel fuel);
- 5 tighten the filter (not too much) using the chain tongs

ATTENTION

Some station models are equipped with DOUBLE-CARTRIDGE FILTER. Both cartridges operate simultaneously and must be replaced at the same time.



Self Service does not work if there aren't any delivery filters or if they are obstructed.

Self Service is equipped with a cartridge without filtering elements, which is used as a by-pass when there isn't a spare separating filter.

ATTENTION

When the by-pass cartridge is used, NO separation of water from Diesel fuel takes place.

M5 TROUBLESHOOTING

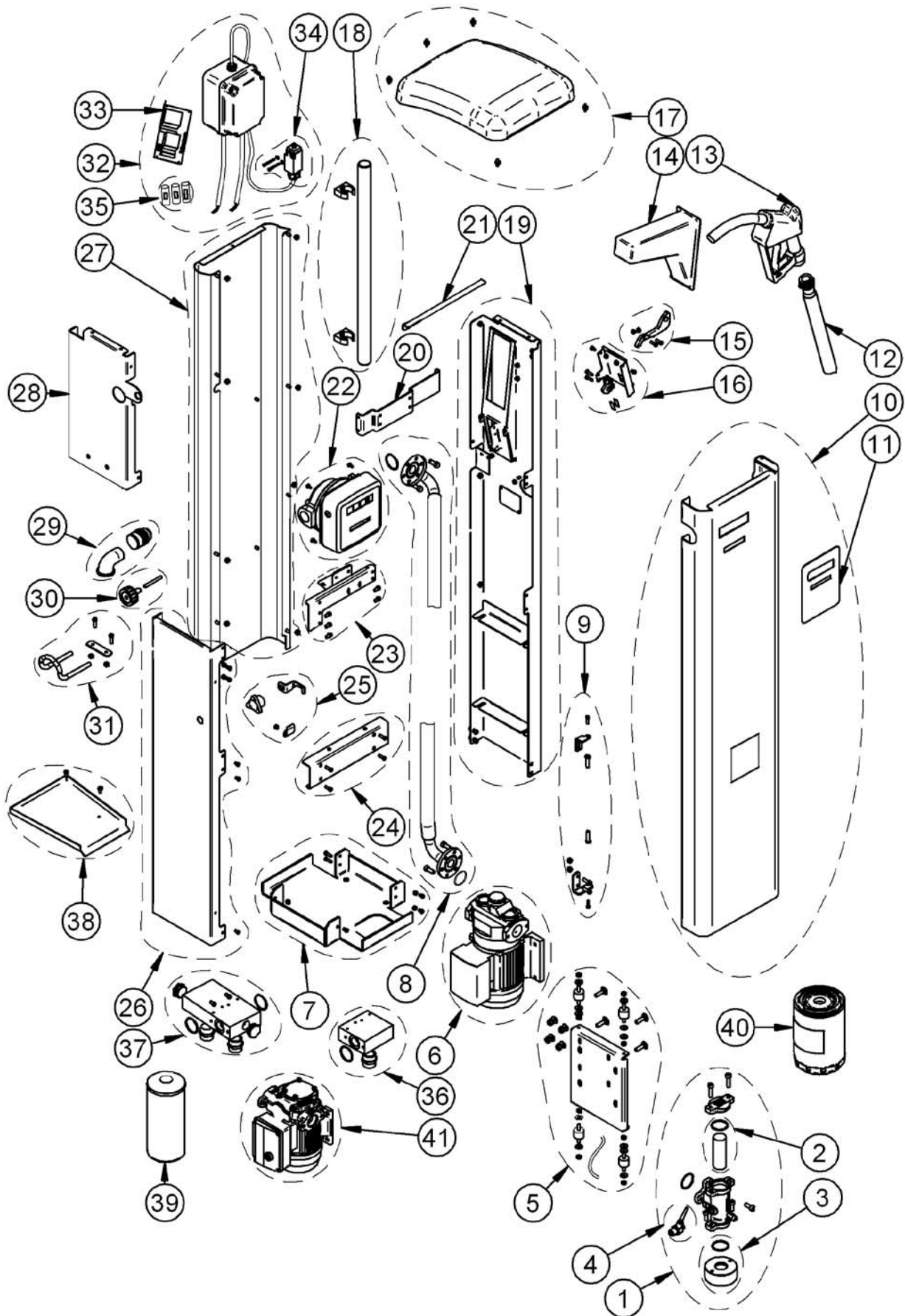
PROBLEM	POSSIBLE CAUSES	POSSIBLE SOLUTIONS
MOTOR NOT TURNING	No electric power	Turn the pump ON/OFF switch to the ON position. Recock the external residual current circuit breaker. Check the electrical connections.
	Fuses burned out	Replace the fuses in the electric panel
	Nozzle Lever control micro switch broken.	Replace the microswitch
	Problems with the motor	If the rotor is jammed, dismount and check for damage and obstructions then remount. Contact the service Department
MOTOR WIN'T START WITH NOZZLE CLOSED	Electric Voltage too low	Check the voltage is not more than 5% below the nominal voltage.
LOW OR NO FLOW	Excessive suction pressure	Lower the Self Service with respect to the tank or increase the diameter of the tubing.
	High loss of head	Use shorting tubing or ofd greater diameter
	Suction tube resting on the bottom of the tank	Raise the suction tube
	Lowlevel in the suction tank	Fill the tank
	Air entering the suction tube or in the pump	Check the seals connection in the tubing and the leevl of diesel fuel in the tank
	Low rotation speed	Check the voltage at the motor Regulate the voltage of the motor and/or use the larger diameter cables.
	Check valve blocked	Clean or replace
	Tank filter clogged	Clean the filter
	Pump filter clogged	Clean the filter
	Cim-tek filter plogged	Replace the filter
	Fluid Leaking	Check the connection seals and the condition of the rubber tubes
Meter chamberv obstructed	Clean the Meter chamber	
METER NOT ACCURATE ENOUGH	Air in the suction line	Clean the meter measuring chamber
	Insufficient calibration	Calibrate the meter (see M0033)
THE NOZZLE SHUT OFF TOO OFTEN	Probe hole automatic stop is obstructed	Clean probe hole of automatic stop spout

N **SPECIAL MAINTENANCE**

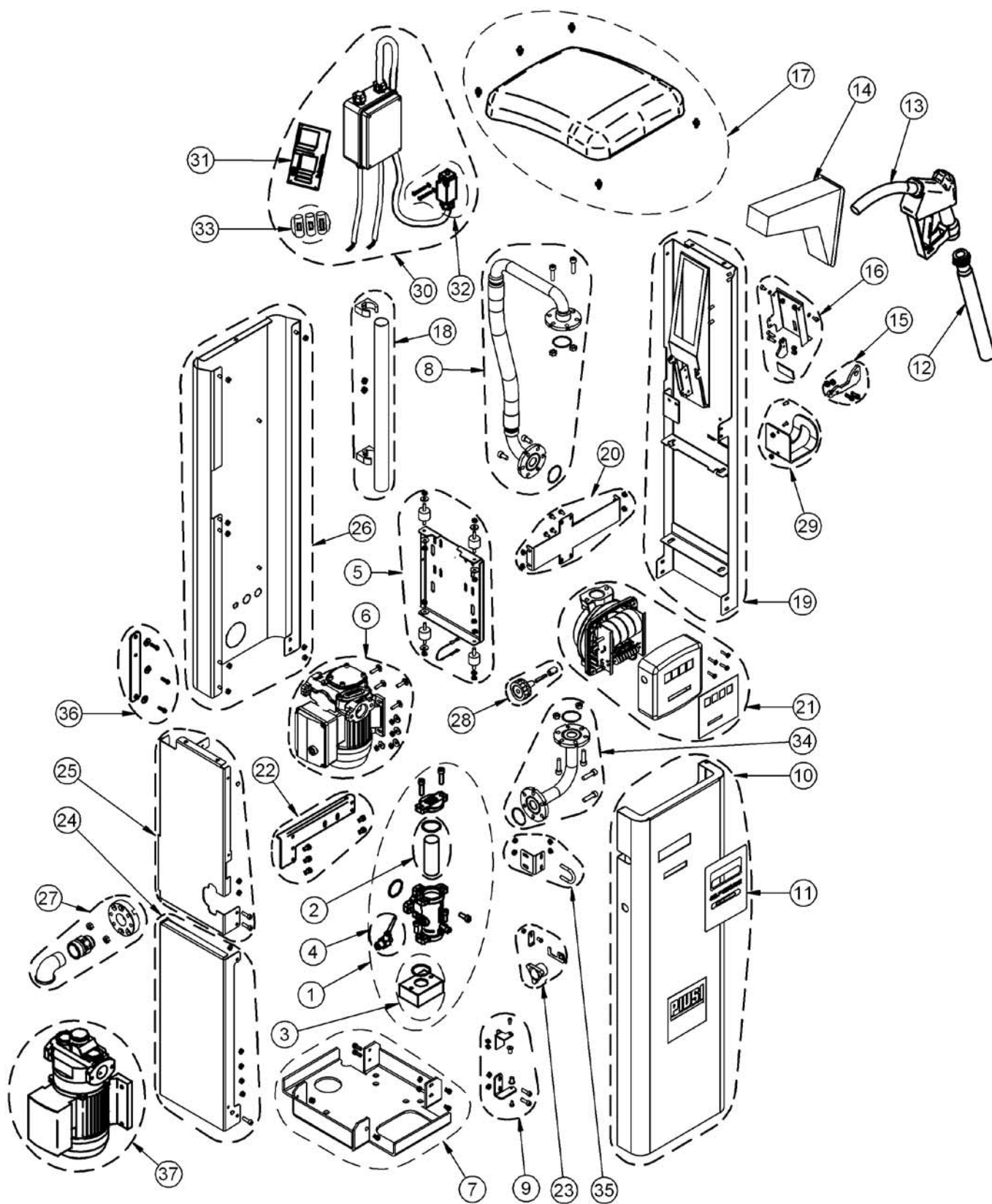
All maintenance operations not described in this manual should be regarded as SPECIAL MAINTENANCE. As such they must be carried out by our specialized SERVICE technicians exclusively.

AUTHORIZED DEALER:

Self Service 70/100 K44



Self Service Tank 70/100 K44



MANUFACTURER:	PIUSI S.p.A.
DOCUMENT TYPE:	General description and installation, starting, use and maintenance instructions
ISSUE:	Bulletin M0085 Rev. 2
PRODUCT:	Fuel distributor with fuel meter, for private use
MODEL:	All models belonging to SELF SERVICE range, single or three phase, with different voltages/frequencies, fitted with mechanical/electronic fuel meter.
COMPLIANCE:	EC Mark (see Declaration of Conformity, page X)
SERVICE:	supplied by Service Centers of Authorized Dealers

The data contained in this manual was supplied by the Manufacturer, who reserves the right to modify them at any time without notice.

