OPERATING INSTRUCTIONS FOR THE DIESEL TANK

JFC1300/1600

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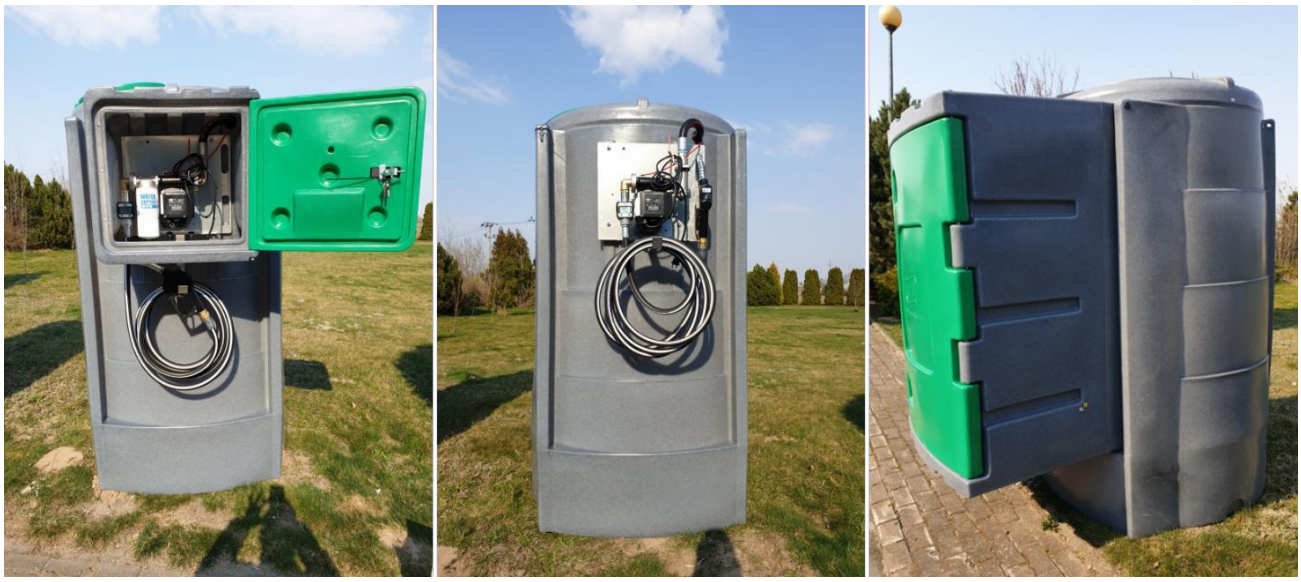
The instruction is of an auxiliary nature and does not constitute a source of law.

Compliance with the Manual does not release you from the obligation to comply with local laws.

I. APPLICATION

Ground based tank JFC1300/1600 is designed for storage and in-plant distribution of oils belonging to the group of flammable liquids of class III fire hazard, i.e. petroleum products with flashpoint above 55°C, including diesel oil.
The tank is manufactured in accordance with PN-EN 13341:2005+A1:2011. The production of tanks in JFC Polska takes place under the supervision of the Office of Technical Inspection (UDT). The tank is designed as a self-supporting, double-shell construction with vertical axis, made of UV-stabilized PE-LLD polyethylene. The external tank can be fitted with a tight big or small distribution cabinet (made of PE-LLD) with doors secured with 1 or 2 locks. There are distribution accessories in the cabinet. The distribution system can be mounted on the distribution board attached to the external tank In the Eco version.



II. TECHNICAL DATA AND EQUIPMENT

Tank type	Capacity [L]	Dimensions		
		L [m]	W [m]	H [m]
JFC1300 (w/o box)	1300	1.21	1.20	1.80
JFC1300 SB (small box)	1300	1.65	1.20	1.80
JFC1300 SB (big box)	1300	1.67	1.20	1.80
JFC1600 (w/o box)	1600	1.21	1.20	2.10
JFC1600 SB (small box)	1600	1.65	1.20	2.10
JFC1600 SB (big box)	1600	1.67	1.20	2.10

The complete unit with distribution system comprises:
1. Double-shell tank with distribution cabinet (protected with two locks).
2. Distribution system, which includes (depending on the version):
   - pump with a capacity of max 90 l/min, 230V/50Hz,
   - flexible suction hose with non-return valve and mesh filter,

- digital flow meter,
- automatic filling gun with overflow protection,
- flexible distribution conduit with a length of 6m.

3. Monitoring system, which includes:
   - sensor monitoring the shell-to-shell space (leakage control),
   - fuel level probe
   - overfill sensor (limit level indicator).
4. Inspection lid in the inner tank.
5. Inspection lid in the outer tank, padlocked.
6. Filling stub pipe for filling the tank with a tight connection of DN50 diameter or filling connection with
   with a D140 lock.
7. Vent and aeration valve.
8. Grounding of the unit, routed to the unit exterior.

Attachments No. 1 - 6 are dimensional drawings of JFC1300 and JFC1600 tanks in options with and without a big/ small box.

III. OPERATION

The JFC1300/1600 fuel tank is designed and built to be as robust, safe and maintenance-free as possible.

After acceptance, the tank should be checked to ensure that the equipment is complete and that no damage has occurred during transport. If the tank is equipped with a pump and distribution set, the tank is ready for operation after filling it with fuel and connecting to the power supply.

The User of the device is obliged to comply with national legal requirements concerning the installation and operation of this product, as well as with the recommendations of local fire and environmental protection services. The owner and users of the equipment should take appropriate safety measures, appropriate to the nature and extent of the foreseeable risks, to prevent damage and injuries and, if necessary, to minimise their consequences. In the event of an imminent threat to public security, they should immediately inform the emergency services and provide them with the information they need to carry out their operations. The obligations in this respect shall be laid down in the relevant national legislation.

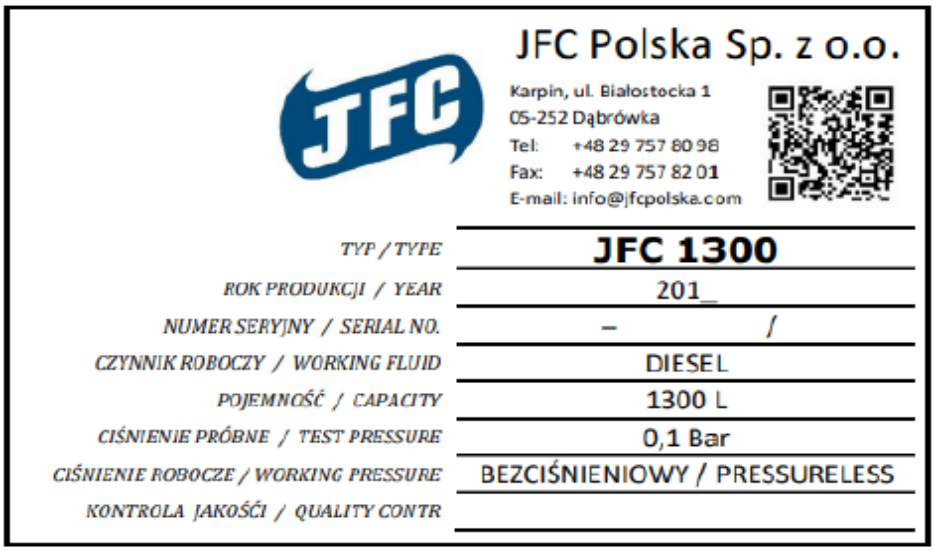
Distribution and storage facilities for diesel fuel up to 2500 l shall be subject to simplified technical supervision. The customer is not obliged to obtain the decision of the UDT permitting the operation. The tank may be subject to ad-hoc inspections at the user's premises (e.g. in case of failure or repair).

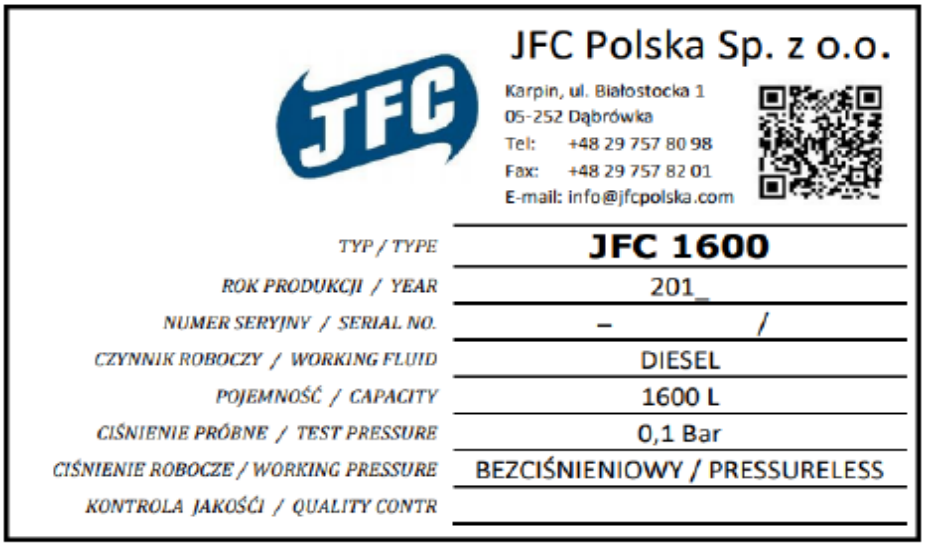
A durable and legible manufacturer's plate is attached to the tank in an accessible place, hereinafter referred to as the "nameplate" , which is corrosion-resistant and resistant to the working medium. The nameplate contains the following information:

1) Maufacturer name
2) Type
3) Year of manufacture
4) Serial number
5) Names of working factors to which the tank is designed
6) Capacity
7) Test pressure
8) Operating pressure
9) Quality control.

Observe the following instructions in view of the type of liquid stored and possible environmental hazards:

- The fuel tank should be filled exclusively through the filler hole (dry coupling DN50 or inlet ⌀120mm with vent valve) located under the tank flap, after unscrewing the nut.
  Do not overfill the tank! The tank can optionally be equipped with a GWD-type overfill sensor. The loading tanker installation should be connected to the sensor to prevent overfilling of the tank. The plug of the GWD sensor is located under the tank inspection flap or in the distribution box.
- To prevent contamination and damage to the pumping system, do not store dirty fuel in the tank!
- Read and observe the operating instructions before startup.
- Filling and refuelling must be carried out under the supervision of an authorised person.
- During transport and storage of the fuel tank, no damage to the tank may occur (see transport instructions). Only **empty** tanks may be transported.
- Always keep the tank equipment in good working order.
- If the unit is equipped with a 230V/50Hz pump, earthing system (supplied with the tank) must be connected and the electrical installation carried out in accordance with the guidelines of the pump manufacturer (see Appendix to the documentation) and the applicable regulations.
- If the pumping capacity is too low, clean the filter of the flexible suction hose and the pump mesh filter if necessary. If additional oil filters and water separators are installed, check that they are clean and replace them if necessary.





- Periodically calibrate the flow meter according to the instructions in the manual. If the system is equipped with a digital flow meter, the batteries must be replaced periodically.
- Check and maintain the leakage sensor periodically according to the instructions in the manual.
- Protect the device from unauthorized access.
- Any changes to the design, equipment and purpose of the device are **not permitted** without prior agreement with the manufacturer. **The JFC2500 outdoor storage tank has a monolithic design. It is forbidden todrill holes in the outer shell below 2/3 of the height of the tank.**

In the event of damage to the fuel tank or any part of its equipment, do not use the device until the damage is repaired. If the tank is found to be leaking, proceed as follows pump the fuel into another tank. Inform the supplier of the appliance.

For the purpose of e.g. periodic inventory of the current fuel quantity in the tank, the table below shows the device capacities:

JFC 1300 tank	
Height [mm]	Capacity [mm]*
1500	1300
1375	1200
1265	1100
1150	1000
1035	900
915	800
800	700
685	600
575	500
470	400
350	300
235	200
125	100

JFC 1600 tank	
Height [mm]	Capacity [mm]*
1850	1600
1720	1500
1595	1400
1485	1300
1375	1200
1265	1100
1150	1000
1035	900
915	800
800	700
685	600
575	500
470	400
350	300
235	200
125	100

*"Approximate values.

NOTE:

The data in the table are burdened with an error resulting from the thermal expansion of the polyethylene from which the tanks are made. Taking into account the impurities that may accumulate at the bottom of the tank over time, the suction stub pipe has been placed a few centimetres above the bottom so that the sediments are not sucked into the pump. This is associated with the creation of a so-called dead zone, which is a volume of about 60 L of fuel, which is retained in the tank.

1. TRANSPORT AND FOUNDATION – guidelines

The tank and its accessories must be transported in a safe manner that precludes mechanical damage. THE TANK FILED WITH FUEL MUST NOT BE TRANSPORTED! Loading and unloading should be carried out with specialized equipment, such as forklift truck, crane, etc. The tank must not be rolled, moved, etc.

All flaps and doors must be tightly closed before transport (these components must not be used as transport handles). The tank must be secured against displacement during transport. During transportation, secure the tank with the transport belts in a way that does not damage the tank structure. The transport space must be smooth and free of sharp edges.

The location of the tank must take into account the guidelines of the Ministry of the Internal Affairs and Administration (Journal of Laws of 22.06.2010) concerning fire protection of buildings, other structures and areas:

- minimum distance from residential buildings or public utility buildings is 10 m
- minimum distance from other buildings and from the border of the neighbouring plot is 5 m.

These distances may be halved provided that a fire separation wall of at least fire resistance class REI120 is applied between the building or structure and the tank to cover the tank from the building or structure side. It is permissible to make an external wall of a building or facility from the tank side as a wall of fire separation, as mentioned above.

The tank should be placed in a stable way on a flat, hard, level and even surface. This surface must be free of sharp edges and non-flammable. The base must be at least 30 cm wider than the unit itself. The base must be at least 5 cm thick.

The appliance must not be located in garages or on pavements.

Protect the unit from access of unauthorized persons.

The location of the tank must ensure safe, collision-free movement of delivery tankers and vehicles operated by the distributor.

Provide adequate service space around the unit to allow unobstructed access during periodic inspection or service.

2. ELECTRICAL CONNECTON - Guidelines

As standard, the JFC pump units are powered by 230V/50Hz. Use a 3x2.5mm2 power cord. The power supply line should be protected with a fuse of an appropriate value (on the customer's side).

2.1. Grounding

In order to ensure safe operation of JFC devices equipped with electric dispensing systems, it is necessary to install a system that will effectively dissipate electrical charges caused both by electrostatic phenomena on the surface of the plastic tank and by electrical devices constituting the dispensing system. For this purpose, a grounding system made of copper or galvanized wire with a cross-section of 16mm$_2$ must be installed near the tank. The depth of earth electrode digging is about 1m (depending on the type of soil on which the tank is placed). The earth bolt led out of the distribution box exterior, which is connected to the assembly board of the distribution system, should be connected to the earth electrode:

The connection should be made with a grounding cable with a resistance below 10Ω. Electrical connections should be made by a qualified electrician.

2.2. Overcurrent protection

In addition to the protection in the pump's electrical box, the overcurrent fuse protection C16A (tripping current value 16A, characteristic curve C) must also be used in the power box.

NOTE! The permanent electrical connection of JFC devices should be made by an electrician with current electrical authorisations in accordance with the applicable regulations and rules of technical knowledge.

2.3. Temporary power supply connection

You can make temporary power connections to the JFC power supply using an extension cord with the following parameters:

- minimum cross-section 3x2,5 mm_2,
- copper wire – cable,
- PE ground (grounding),
- Protection level at least IP65,
- the fuse value of the extension cable supply line should be C16A (see above),
- The extension cord must not have abrasion, insulation damage, loose plugs, and similar damage that, affects its technical condition,
- The extension cable must be connected with the pump switched off (pump switch in OFF position),
- temporary connection should be connected only for the time of refueling, then disconnect it when the device is out of service,,
- protect the extension cable from moisture.

3.MAINTENANCE OF JFC1300/1600 tank

The following table shows the procedure for operating the JFC1300/1600 tank.

No.	Actions	Frequency of activities
1	Check technical condition, and completeness FS-JFC 1300/1600	Before commissioning
2	Check the technical condition of electrical installation	Before commissioning
3	Check the condition of the ground system, continuity of the cable	Once every six months
4	Check the mesh filter and clean if Necessary.	Once every six months
5	Check the level sensor	Once every six months
6	Calibrate the flow meter	Once every 2 months or every 40,000 litres
7	Check the leakage and overfilling sensor	Once every six months
8	Checking the pump's vent line	Once every six months
9	Control of the distribution system	Once every six months
10	Check the tank for contamination.	Once every six months
11	Clean the accessories	Once every six months
12	Check the tightness of the connections	Once every six months

Detailed information on the operation and maintenance of individual distribution system devices (pump, flow meter, leakage sensor, etc.) can be found in the Operation and Maintenance Manual of the manufacturer of those devices..

IV. SAFETY RULES DURING OPERATION OF THE JFC1300/1600 TANK

1. Information on dangerous substance

Diesel oil is a commonly used fuel for diesel engines used in vehicles, stationary equipment, construction machines, various types of agricultural machinery.
Diesel oil as a flammable liquid is classified to class III in accordance with §2 of the Regulation [1] due to its flash point. It is a liquid obtained by distillation of crude oil, consisting mainly of a mixture of hydrocarbons with the number of carbon atoms from C9 to C20.
The freezing point depends on the species from - 4°C to - 40°C. Flash
point from 56°C to 64°C.
Self-ignition temperature from 270°C.
The vapours of diesel oil are about 6 times heavier than air and accumulate near the ground surface and in the lower parts of rooms and depressions of the ground . Diesel vapours can form explosive mixtures with air under specific conditions.
Diesel oil is available at petrol stations which must comply with the strict provisions of the regulation [1], but it is possible, in accordance with the current law, to use the tank with diesel oil for own needs by civilians and legal entities, in order to power various devices.

[1] - - Regulation of the Minister of Economy of 21 November 2005 on the technical conditions to be met by liquid fuel depots and stations, long-distance pipelines for the transport of crude oil and petroleum products and their location (Journal of Laws. No. 243, item 2060, as amended)

2. Hazards that can be posed by stored material (diesel) and ways to minimize them

When operating the JFC1300/1600 tank, you must:
− Wear protective gloves when refuelling
− protect your skin from repeated or prolonged contact with diesel
− in the event of contamination of body parts, wash immediately with soap and water
− Do not eat or drink while handling JFC1300/1600
− The use of open fire, smoking and any other factors that may initiate the ignition of diesel fuel are prohibited in the immediate vicinity of the unit.
− harmful oil vapours may cause irreversible effects on human health; special care must be taken when handling diesel
− protect your eyes as there is a risk of exposure, wear safety goggles
− Diesel oil is toxic to aquatic and terrestrial organisms and may cause long-term adverse effects in the environment
− increases the risk of fire; vapours form explosive mixtures with air, which are heavier than air, accumulate near the ground surface and in the lower parts of rooms.
− It is forbidden to park vehicles near the tank.
− A protective belt of at least 2 m in width must be maintained around the device from a surface made of non-flammable materials or from a ground surface cleaned to a mineral layer.
− There should be a 12 kg powder extinguisher protected against weather conditions, marked in accordance with PN with the safety mark - "Extinguisher", near the device. The extinguisher must be inspected annually by an authorised person.
− The appliance or its vicinity must bear the "No smoking or open fires" mark in accordance with the PN and the label of the substance stored in the tank.

3. Guidelines for persons authorised to operate the tank JFC1300/1600

JFC1300/1600 may be operated by persons who are 18 years of age or older and who have read the instruction manual and safety instructions. Keep children and bystanders away from the machine. Persons operating the tank should follow the instructions for use of the tank, in particular:

- check that the permissible parameters are not exceeded, and in the event of exceeding them, take actions provided for in the operating instructions to reduce the parameters to the permissible level,
- keep records of the operation of the tank or installation in accordance with the instructions for use and of the inspections, periodic inspections and replacement of components and accessories carried out..
- The owner and operators of JFC1300/1600 should take appropriate safety measures, appropriate to the nature and extent of the foreseeable risks, to prevent damage and injury and, where necessary, to minimise its consequences. In the event of an imminent threat to public security, they should immediately inform the emergency services and provide them with the information they need to carry out their operations. The obligations in this respect are laid down in the relevant national legislation.
- When delivering diesel for the first time it is the responsibility of the driver/supplier and the owner of the equipment to check that the equipment is stable, the tank is clean inside and empty. Refuelling should be carried out in two stages between which you should check the condition of the tank - whether there are any leaks. Before filling the tank for the first time, take appropriate measures to prevent possible hazards from occurring in or around the tank.
  When the tank is at a considerable distance from the tanker, the filling of the tanks should always be supervised by additional person or additional necessary persons.
  The maximum permissible filling speed of 350 l/min must not be exceeded. Attention must be paid to the permeability of the (breathing) ventilation stub pipe of the tank, which must not be blocked, covered or contaminated.
- If the tank is equipped with a Type GWD overflow sensor, the loading tanker should be connected into the sensor to prevent overflow of the tank.

4. Actions during refueling.

When refuelling, it should be:

- condition of the unit should be visually inspected.
- Make sure that the distribution nozzle, flexible hose are in good condition without visible external damage.
- Drive the vehicle close to the machine and switch off the engine.
- It is forbidden to be inside the vehicle while refuelling.
- After refuelling, drive away from the unit immediately.
- Only one vehicle may stand by the tank during refuelling. The next vehicle should be at a distance of 5 metres.
- It is forbidden to park the vehicle during refuelling in a way that makes it difficult to evacuate the fire hazard zone.
- In the event of spillage of fuel, remove impurities immediately, using sorbents, dispersants or other materials intended to remove diesel fuel from the environment, before the device is restarted.
- The device can be used at temperatures between -20°C and +40°C. Do not use the device in bad weather conditions, e.g. heavy rain, strong wind, lightning, etc.

5. If JFC1300/1600 fails (tank unsealed, electric shock) it is necessary to:

- interrupt work in the hazardous area,
- disconnect the distributor's power supply,
- provide assistance to victims - after making sure that the danger zone can be entered safely,
- notify your supervisor,
- person in a managerial position responsible for the warehouse or area where the hazard occurred, or a designated person, shall lead the rescue operation and, if necessary, call upon the fire brigade,
- In the event of a leak, pump the contents of the JFC2500 into another device,
- Call the authorized service center of the manufacturer.

V. WARRANTY

The manufacturer shall provide:

- A 10-year warranty on the tightness of the double-shell tank from the date of purchase.
- A 2-year warranty on the distribution equipment installed in the tank, if the purchaser is a natural person. If the customer is a business entity, he is entitled to a one-year warranty.

NOTE! Exceptions are a filling gun with a rotary union and an O-ring, and screwed connections, which are covered by the so-called start-up warranty..

Each appliance receives a Declaration of Conformity at the time of purchase.

If you encounter a problem despite all quality measures, please contact our customer service center:

JFC Polska Sp. z o.o.
Karpin, ul. Białostocka 1
05-252 Dąbrówka
Phone no. +48 29 757 80 98
@: info@jfcpolska.com

1. Defects disclosed within the warranty period shall be rectified within two weeks of the date of written notification. If the notification is received on a working day, the company guarantees that the customer will receive feedback within 48 hours (including working days).
2. If it turns out that the damage during the warranty period was caused by improper handling or installation of the product, or that the damage occurred after the warranty expired, then the costs of technical support shall be borne by the owner. By ordering a paid service, the customer agrees to the issuance of an invoice for service activities not covered by the warranty.
3. The warranty does not cover::

- standard maintenance of the equipment, such as cleaning the filter, cleaning or replacement of the bypass system in the pump, cleaning the pump chamber,
- battery replacement or fuse replacement,
- the calibration of the flow meter,
- Replacing the blades or bearings in the pump if mechanical damage is found,
- Replacing the defective pump if dry-running is detected,
- replacement of O-rings in pumps in case of leakage,
- Replace mechanically damaged hoses or due to contact with nonintended fluids,

4. The Purchaser loses his rights under the warranty in the case of:

- damage caused by improper installation and operation of the device.
- maintenance not carried out,
- mechanical damage or acts of vandalism,
- errors caused by repairs or structural changes carried out by an unauthorized service technician,
- change of the application of the product,
- damage due to short circuit caused by incorrect electrical connection, or overvoltages caused by random events.

5. The manufacturer recommends periodical inspections at least every 6 months (or every 100 thousand litres of fuel issued. Periodic inspection is not subject to warranty and is a paid service.

Firma JFC Polska Sp. z o.o. is not liable for damages resulting from the use of the product in an improper manner, contrary to the instructions for use and contrary to the regulations.

VI. OPERATION/DAMAGE/REPAIR REPORTS

Tab.1. List of standard maintenance activities for JFC1300/1600

Operation	***Minimal frequency***	***Date***	***Date***	***Date***	***Date***
Check and clean the pump filter	Every 6 Months:				
Check and clean the flow meter filter (if the filters are very dirty, check and clean also the measuring chamber)	Every 6 Months:				
Check the battery status of the flow meter	Every 6 Months:				
Calibrate the flow meter.	Every 2 months or every 40,000 liters				
Check and clean the mesh filter of the suction hose					
Check the condition of the leakage sensor and level probe (correct indication, connection status, batteries)	Every 6 Months:				
Clean the tank and its accessories (pump, (e.g. flow meter, conduits, housing, etc.)	Every 6 Months:				
Check the function of the pump system (tightness, capacity, nozzle, etc.)	Every 6 Months:				
Check the condition of the tank and its accessories for completeness and mechanical damage	Every 6 Months:				
Check the electrical installation of the pump (correctness, connections, protections)	Every 6 Months:				
Lubricate door and padlock locks	Every 6 Months:				

O – correctly **X** - incorrectly

NOTE! Follow the steps in the table above immediately if you notice a malfunction of the JFC1300/1600.

Tab.2. Damage and repair report of JFC1300/1600

Date/signature	*Type of damage and measures taken*

Tab.3. Fault report form

FAULT REPORT FORM No.:	…..	Date:
MAINTENANCE SERVICE ORDER		
JFC Polska Sp. z o.o.		
Karpin, ul. białostocka 1, 05-252 Dąbrówka		
Tel. + 48 29 757 80 98		
Fax. + 48 29 757 82 01		
Mail:info@ifcpolska.com		

Tank type:	JFC5000	JFC2500	JFC1600	JFC1500	JFC1300	TT250	TT425	TT600	TT950
Fuel type:		Desel		AdBlue					
Flowmeter type:		K24		K33	K600	RAASM	FMTII	FMMOG	Adams
Pump type:	BP3000	Panther 56 (12V)	Panther 56 (230V)	Panther 72 (230V)	Panther 72 (230V)	E120M	Adams	HORN	AdBlue Memb/sub
Monitoring system:			YES		NO				

REASON FOR NOTIFICATION/DAMAGE DESCRIPTION: Legible signature of notifying person: NOTE: If it is found that damage during the warranty period was caused by improper handling or installation of the product or that the damage occurred after the warranty expired, then the maintenance costs will be charged to the owner.
SERVICE DEPARTMENT DECISION: Legible signature :
DESCRIPTION OF PERFORMED REPAIRS: LEGIBLE SIGNATURE:
……. Filled by JFC Polska