

LIMITED LIABILITY COMPANY “KALANCHA”



ISO 9001:2015

**FIRE POWER PUMP
MP-10/70 “Geysер”**

Technical Data Sheet
TECHNICAL DESCRIPTION
USER MANUAL
4854-033-13393076-2017 PC



Certificate of conformity No. C-RU.ПБ97.В.00856
Expires on 13 October, 2022.

CITY OF SERGIEV POSAD

NACE: 28.13.14.190

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The present passport is for getting the basic information on the fire power pump, its structure, operating principles and set up as well as technical maintenance, probable failures and troubleshooting.

ATTENTION!

The manufacturer reserves the right to constantly improve the product configuration. The changes which do not influence the product operation, technical parameters and reliability may not be indicated in the present operating manual.

1. BASIC INFORMATION ON THE PRODUCT

Fire power pump MP-10/70 “Geyser” with drive motor Llifan 2V28F-2;

The numbers in the product name mean:

140 – rated flow rate, l/s;

70 – rated pump suction head, m;

2. PRODUCT APPLICATION

The power pump is used for a flow of water and aqueous solution of foaming agents with a temperature of up to 30°C, the pH hydrogen exponent from 7 to 10,5, the density of up to 1100 kg/m³, the mass concentration of particulates of up to 0,5% with their max size of 3 mm during the fire-extinguishing.

The power pump can be used for pumping water from one reservoir into the other, for pumping water from wells, cellars, draining ponds, basins, for eliminating flooding of pits, cellars, buildings, for irrigations and watering, for preventing soil run-off, etc.

The power pump is designed according to GOST standard 15150-69 and is to be used at the outdoor temperature of -40°C to + 40°C.

In order to operate the pump at the temperature of lower than -40°C it is necessary to use anti-freeze and engine oils with the corresponding temperature parameters.

Appendix 2 contains a list of fire-technical weapons supplied with a power pump at the request of the Buyer for an additional fee.

3. TECHNICAL SPECIFICATIONS

Table 1

Basic parameters	
Type of power pump	Mobile fire power pump
Rated flow rate Q_{nom} , l/min (l/s)	10
Rated pump suction head H_{nom} , m, minimum	70
Rated speed n_{nom} , rpm	3600
Rated geometric suction height $h_{g\ nom}$, m	1.5
Maximum geometric suction height $h_{g\ max}$, m	5
Flow at maximum geometric suction height Q , l/s, minimum	5
Pressure at maximum geometric suction height H , m	50
Maximum inlet pressure, $p_{1\ max}$, MPa (kgf/cm ²)	0,6 (6)
Maximum outlet pressure, $p_{2\ max}$, MPa (kgf/cm ²)	1,0 (10)
Dimensions, mm (max):	
- length	800
- width	610
- height	750
Weight (dry), kg	105
Number and nominal diameter of the connections, mm:	
- suction	1x80
- pressure	2x70
Pump	
Pump type	NP-10/70, centrifugal, console, single-step
Vacuum system	automatic
Type of vacuum pump	diaphragm
Maximum value of the created vacuum in the cavity of the centrifugal pump, kgf/cm ²	- 0.8
Suction (fill-in) time at max geometric suction height t_{st} , s, maximum	40
Engine	
Type	4-stroke, gasoline, carbureted
Model	LF2V28F-2
Number and type of cylinders	2, V-type
Bore*stroke (mm)	78x66
Displacement, cm ³	690
Compression	8,5/1

Max output at torque of 3600 rpm $N_{дв}$, kW (HP)	14 (19)
Starting system	by electric kick
Cooling system	air-cooled, forced
Fuel	gasoline 92 RON
Fuel consumption g_f , l/h	5.7

4. DELIVERY PACKAGE

Table 2

	Description	Qty.
MP-10/70 "Geyser"	The power pump	1
4854-033-13393076-2017 ПС	Technical data sheet	1
SPTA	Spare parts and accessories	1 set
	Rechargeable led flashlight	1

Kitting list of SPTA

Table 3

Reference code	Description	Application	Qty.
	Parts	Automatic vacuum water filling system	
030-035-30	O-ring		1
072-078-36	O-ring		1
092-098-36	O-ring	Pressure valve body	1
120-126-36	O-ring	Clutch case	1
205-210-36	O-ring	Cover	1
	Work tools		
GOST 2839-80	Nut wrench 8x10	engine	1
	Nut wrench 13x14	pump	1
	Nut wrench 13x17		1
	Combined screwdriver		1
	Accessories		
GOST 14286-69	Special wrench K-80	fire valves	1

Note: A variation of a standard set and SPTA is allowed in coordination with the Consumer.

5. CONSTRUCTION AND PRINCIPLE OF OPERATION

5.1. Pump

Centrifugal pump NP-10/70 is installed on the power pump for water supply. The pump (Fig.1) consists of housing, cover, impeller, shaft and seal assembly. The pump shaft is made of stainless steel and is installed in the sliding maintenance-free bearing

on the suction side and the intermediate ball bearing ball bearing hub. Sealing of ball bearing units is provided by seals.

The pump is equipped with a pressure gauge showing the pressure at the pump outlet.

The pump is equipped with two flow-regulating valves of disc type (Fig.2), a distinctive feature of which is that in the absence of pressure in the pressure pipe outlet is automatically blocked from the pump. The spring 8 pushes the stem 5 with the piston 1.

A drain valve is installed to drain water from the pump cavity.

5.2. Vacuum water filling system

The pump is equipped with an automatic vacuum water filling system (Fig.3). The diaphragm type vacuum pump is located directly in the centrifugal pump. When the centrifugal pump is switched on from the eccentric located on the shaft, the vacuum pump starts to work and the air is removed from the suction cavity.

Eccentric 1 moves the plunger 4 forward and backward through the pusher 2. During the suction, the plunger moves outward and the air from the centrifugal pump enters the chamber 9. Membrane 3 (Fig.3) covers the entrance to the chamber under the influence of spring 5 in the reverse movement of the plunger, and the air is vented to atmosphere through the holes in the plunger through the channel 6.

After filling the suction line and the pump, the pressure water enters the chambers 9 and overcomes the forces of the springs. Both plunger with a membrane 1 (Fig.7) and membrane 2 (Fig.8) takes the extreme position and block the entrance into the atmosphere. In this case both pushers come out of the eccentric working field.

Drainage holes are located on the body of the vacuum pump, they are allowed to leak water during the work of the pump.

Fire pump NP-10/70

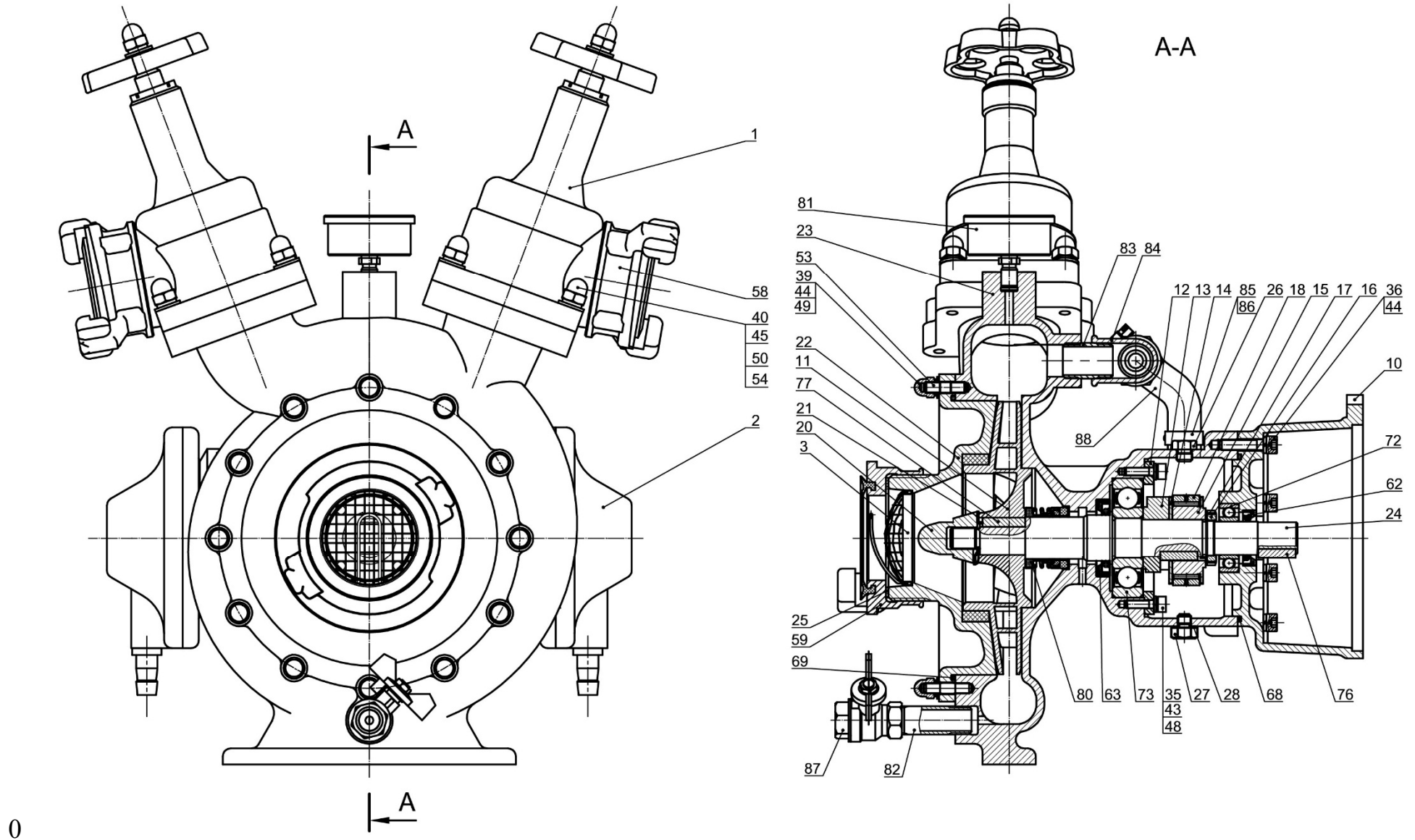


Fig.1

1. Flow-regulating valve
2. Diaphragm pump
3. Mesh
10. Clutch case
11. Impeller
12. Rib
13. Bushing
14. Washer
15. Eccentric
16. Nut
17. Lockwasher
18. Needle bearing
20. Nut
21. Lockwasher
22. Cover
23. Casing
24. Axis
25. Leather
26. Upper plug fitting
27. Lower plug fitting
28. Leather
- Screws (GOST 11738-84)*
35. M6-6g x 25.48.019
36. M8-6g x 35.48.019
- Nuts (GOST 11860-85)*
39. M8-7H. 5.019
40. M10-7H. 5.019

Lockwashers (GOST 6402-78)

43. 6.65Г.019

44. 8.65Г.019

45. 10.65Г.019

Washers (GOST 11371-79)

48. 6.01.08.019

49. 8.01.08.019

50. 10.01.08.019

Studs (GOST 22036-79)

53. M8-6g x 25.48.019

54. M10-6g x 30.48.019

55. M10-6g x 35.48.019

58. Pressure head GM-70

59. Suction head GMV-80

Seals GOST 8752-79

62. 2.2-25-42-1

63. 2.2-35-58-1

Rings GOST 9833-73

68. 120-126-36-2-4

69. 205-210-36-2-4

Ball bearings GOST 8838-75

72. 205

73. 406

Coupling keys GOST 23360-78

76. 8 x 7 x 28

77. 8 x 7 x 32

80. Mechanical seal

81. Pressure gauge

82. Tube with bilateral thread NS

15 GOST 3262

832. Tube with bilateral thread NS

20 GOST 3262

84. T-branch NS 20 GOST 8948-75

85. Hose connection

86. Clamp 1T 20-32-8 GOST 28191-

89

87. Ball valve NS 15

88. Hose 16x25-1,6

Flow-regulating valve

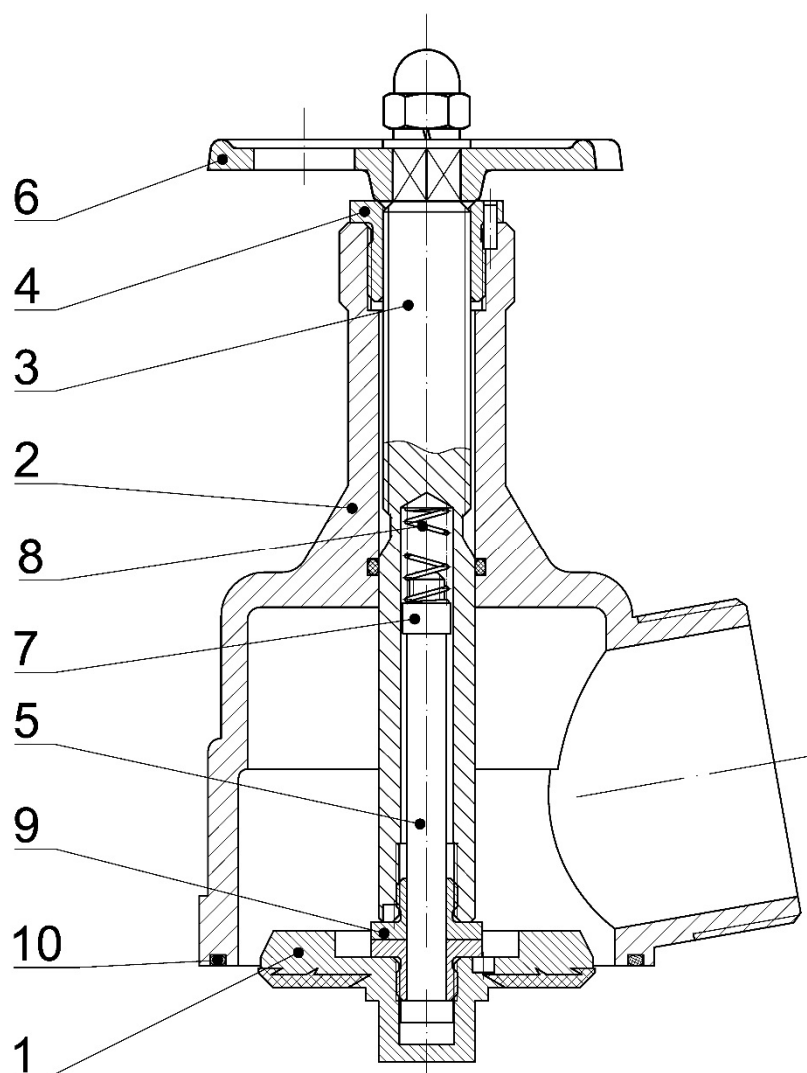


Fig.2

- | | |
|------------------|--|
| 1. Piston | 6. Balance-wheel |
| 2. Casing | 7. Nut |
| 3. Spindle shaft | 8. Spring |
| 4. Bushing | 9. Nut |
| 5. Stock | 10. Sealing ring 92-98-36-2-4 (GOST 9833-73) |

Automatic vacuum water filling system

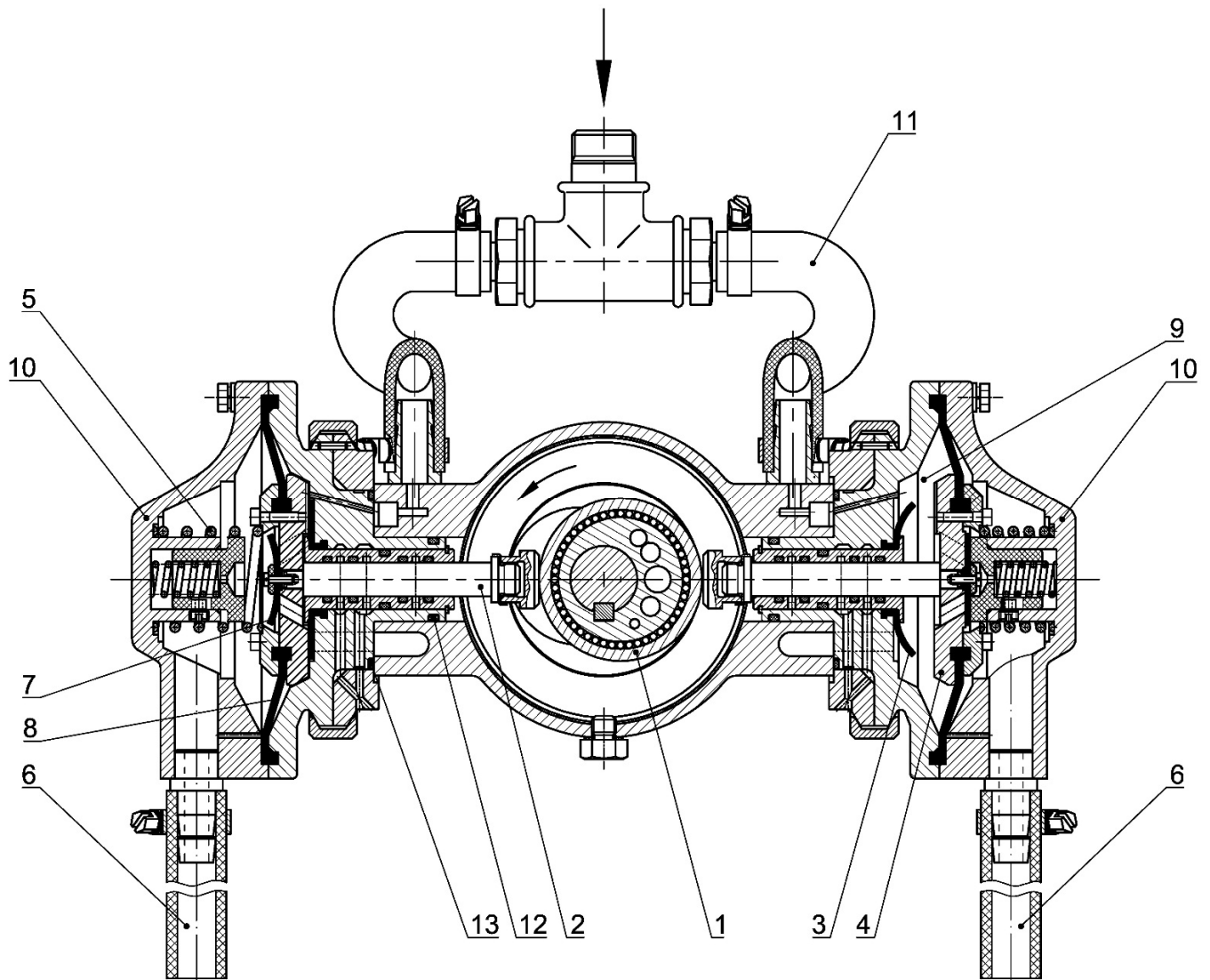


Fig.3

- | | |
|---------------|--|
| 1. Eccentric | 7. Membrane 1 |
| 2. Pusher | 8. Membrane 2 |
| 3. Membrane 3 | 9. Case |
| 4. Plunger | 10. Cover |
| 5. Spring | 11. Inlet |
| 6. Outlet | 12. Ring 30-35-30-2-4
GOST 9833-73 |
| | 13. Ring 72-78-36-2-4
GOST 9833-73. |

Diaphragm vacuum (membrane) pump

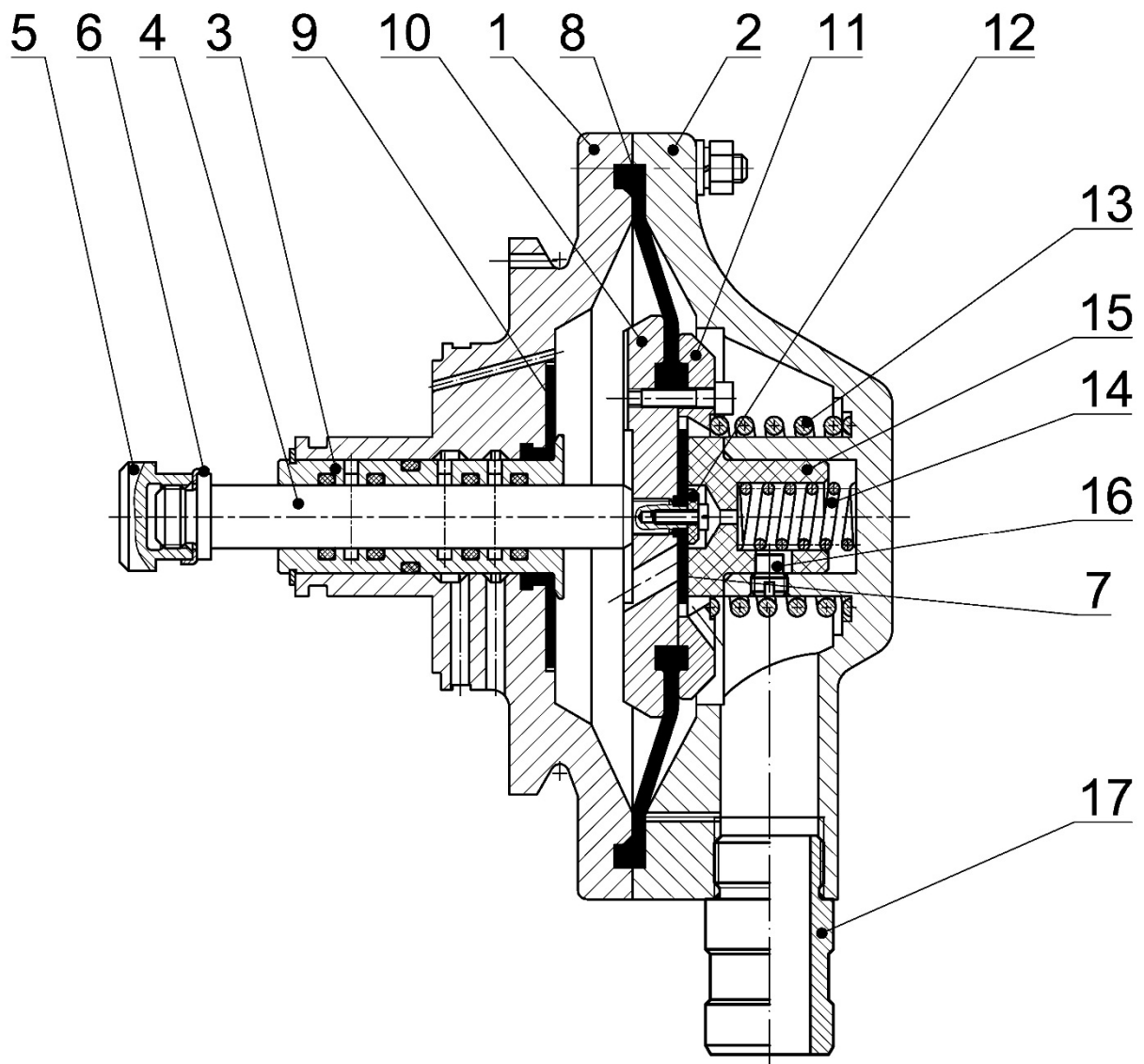


Fig.4

- | | |
|------------------|--------------------|
| 1. Casing | 10.Plunger |
| 2. Cover | 11.Lockwasher |
| 3. Fairlead bush | 12.Washer |
| 4. Stock | 13.Spring 1 |
| 5. Pusher | 14.Spring 2 |
| 6. Chip shield | 15.Counter piston |
| 7. Membrane 1 | 16.Retention screw |
| 8. Membrane 2 | 17.Nozzle. |
| 9. Membrane 3 | |

5.3. Control system, instrumentation equipment

The main controls are located on the engine of the power pump.

The control system consists of the following elements:

- start key (1);
- carburetor throttle control knob (2);
- carburetor air flap control knob (3);
- fuel tap (4).

The operation of the carburetor knob control is connected with the rods of the air and throttle valves by means of rigid wires in a protective braids.

When operating the power pump, it is necessary to ensure that all the traction control systems are properly adjusted.

A pressure gauge is installed on the pump to measure the pressure at the outlet of the pump.

The fuel tank has a fuel gauge.

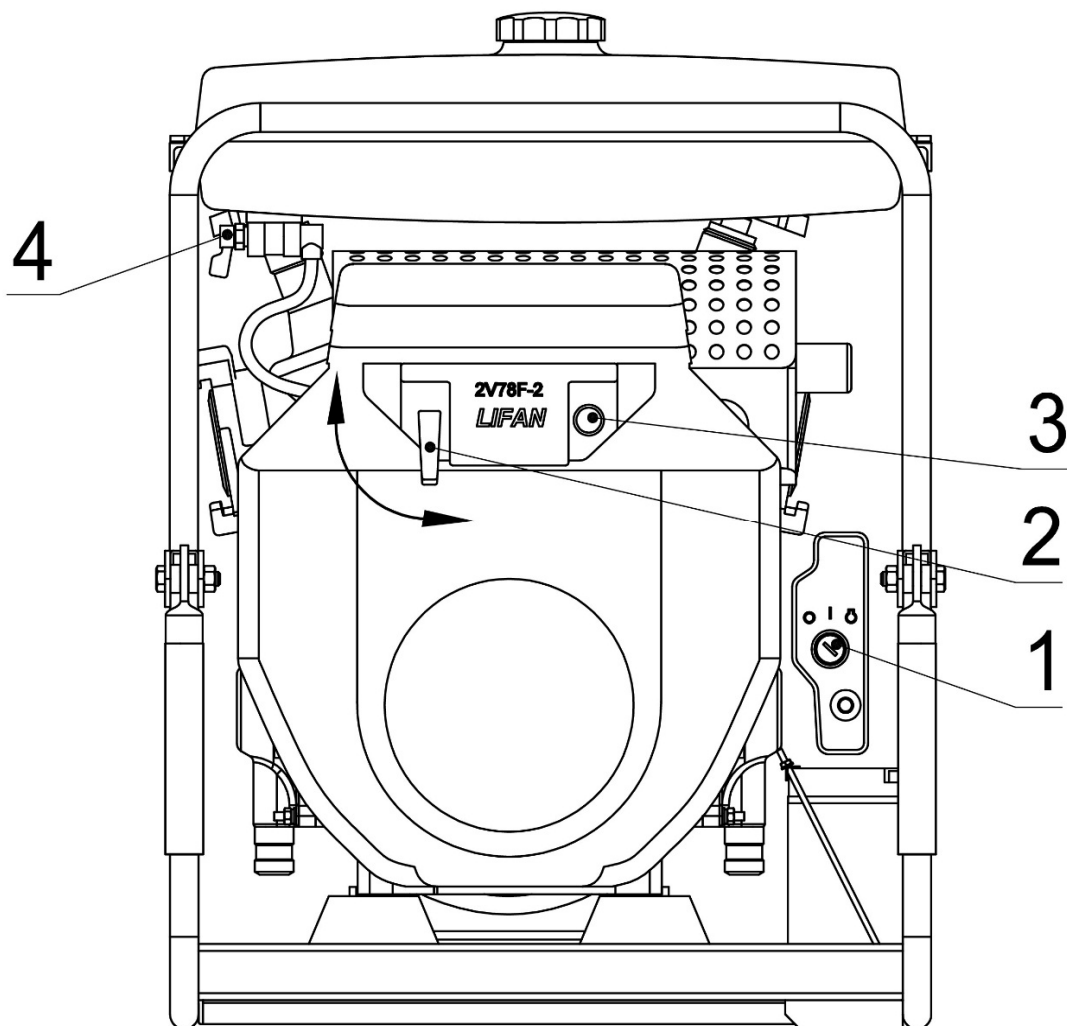


Fig.5

5.4. Frame

The centrifugal pump and engine are mounted on a special welded frame made of steel pipe. The frame is equipped with four folding handles for carrying a power pump.

5.5. Engine

The power pump is equipped with a serial gasoline carburated engine Lifan 2V28F-2. The engine instruction manual is included.

5.6. Engine cooling system

The engine is equipped with forced air cooling system.

5.7. Fuel tank

The fuel tank holds 15 liters and is equipped with a fuel level indicator. The tank is installed in a special recess on the frame of the power pump.

5.8. Accumulator bench

The power pump is equipped with accumulator bench with capacity of 16 Ahr Bench voltage - 12V.

5.9. Search flashlight

The power pump is equipped with a rechargeable led flashlight.

6. SAFETY MEASURES

Only persons who have studied the apparatus and the rules of operation of the power pump are allowed to work with it.

Operation of the pump must be carried out only outdoors. The operator's workplace must be windward.

Refueling is carried out only when the engine is switched off! When refueling, keep in readiness the fire extinguisher OP-5 or OU-5!

It is forbidden to connect and disconnect sleeves, pipelines, to tighten threaded connections during operation of the power pump.

The power pump during operation should be installed horizontally on a hard surface. A slope of more than 10° is not allowed when installed on the ground.

The minimum water pressure at the outlet (see pressure gauge) should be at least 1.5 kg/cm² while the pump is on.

ATTENTION! Do not operate the pump for more than 1 minute (dry vacuum test) with the pump turned on in dry mode (without water) and the outlet pressure is greater than 1.5 ATM, it can damage the pump!

It is not allowed to leak fuel from the fuel tank, gas pipeline and float chamber of the gasoline pump carburetor during operation.

Strongly prohibited!

- smoking and making of an open torch near the power pump!

- operation of the power pump at the open energized power lines located in a radius of action of a jet of the hand-held branch;

- operation of the pump in deep wells, mines and in non-ventilated areas;

In the event of an accident, stop the engine immediately by turning off the ignition.

7. MAKEREADY

The durability of the engine and the pump as a whole largely depend on the mode of its operation during the run-in.

Before the first start:

- check the level and the presence of oil in the crankcase of the engine and the pump;

- check the electrolyte level in the battery cells and if necessary top up with distilled water (the electrolyte);

Carefully inspect the entire pump.

Open the fuel tap in the carburetor.

Start the engine and check if there is any leaking oil or petrol.

7.1. Engine oil

Engine oil is a key factor in the operation of the engine. Do not use engine oil with impurities or oil for two stroke engines, as there may be problems with lubrication, which will shorten the life of the engine.

We recommend engine oil **SAE 10W-30**

Since the viscosity varies in different regions at different temperatures, it is necessary to select the oil in accordance with the recommendations of Fig. 6.

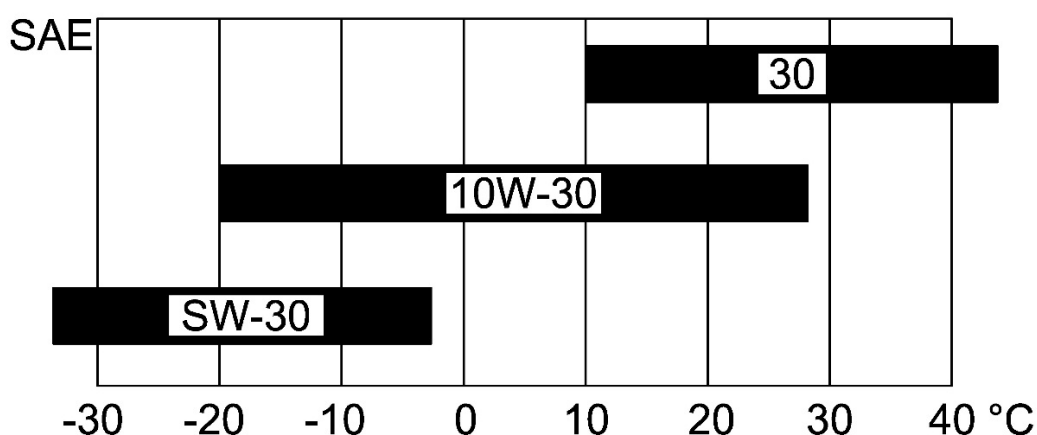


Fig.6

Oil level check:

- install the power pump on a flat surface;

- remove the oil dipstick and clean it from the oil;

- fix the oil dipstick without twisting it and check the oil level;

- if the oil level is too low, add the oil to the top level;

- fix the oil dipstick.

7.2. Engine running-in

Start the engine and let it warm for 1-2 minutes. During running-in the power pump must pump water. Do not overload it and take mandatory breaks at work every 20-25 min. After the break, when the engine has cooled down (15-20 min.), you can continue to work. The engine should work the first 5 hours in this mode, after that it is necessary to replace the oil. Running-in is completed.

After running-in:

- replace the oil in the engine;
- replace the oil filter;
- adjust the idling speed of the engine;
- check the mounting of the alternator, battery, radiator, engine mounting, exhaust system, clutch housing to the engine;

8. MODE OF OPERATION

8.1. Operation with open water sources (made by trained personnel)

Install the power pump on a flat ground.

Remove the plug from the suction pipe of the pump. Connect the suction hoses and attach them to the suction mesh SM-80. Connect one end of the hose to the pump, and lower the other end with the mesh into the pond. The mesh shall be submerged in water to a depth of not less than 0.5 m. When laying the suction line should not have kinks in the vertical plane, as this can lead to the formation of "air bags" and unstable operation of the pump.

Remove the plugs from the discharge valves of the pump and connect the pressure hose with **the trunks** to the discharge valves.

Check the closing of the drain valve.

Open the fuel tap in the carburetor.

Open the air flap (carburetor air flap control knob in a "pull" position)

Turn the ignition key to position **ON**.

Turn the ignition key to position **START** (10 sec max). If the engine will not start, turn the ignition off and restart engine after 10-15 seconds.

Close the air flap after the engine starts operating smoothly (carburetor air flap control knob in "push" position).

When the engine starts, a centrifugal pump and a vacuum water filling system start to operate.

After filling the suction line and the pump with water and the pressure at the pump outlet of 1.5-2 kgf/cm², the vacuum system shall shut off automatically.

Select the desired mode of operation using the handle of the throttle control of the carburetor and slowly open the discharge valves.

The operating mode of the pump is regulated by the throttle control knob (pressure at the pump outlet) and pressure fans (pump supply).

After finishing the work smoothly reduce the engine speed by turning the control knob to the throttle valve of the carburetor in the down position, it reduces the pressure

at the outlet of the pump. Stop the engine at the minimum revolutions, by turning the ignition key to the **OFF** position.

Close the fuel tap.

If the pump has been running on contaminated or salty water, rinse it

Do not leave the pump running at idle, it causes the maximum wear and tear of the engine and the pump!

Operating from hydrant:

Fix the power pump on a flat ground (the slope during installation should not exceed 10°) in a convenient position in relation to the hydrant.

Attach suction and pressure hoses. Open the hydrant valve and drain contaminated water until clean water is available. Attach the second end of the suction hose to the hydrant. Open the hydrant valve. Check the closing of the drain valve. Then proceed as described when operating from open water sources.

When operating at low temperatures, the pump must be dry before starting.

Drain the remaining water from the pump with a tap (Fig.1) after working in sub-zero temperatures.

8.2. Maintenance of the pump during operation (performed by trained personnel)

When the pump is running, visually monitor the pressure at the pump outlet.

Ensure the suction mesh is immersed in water to a depth of not less than 0,5 m. in order to avoid the ingress of air into the suction line when working from the pond.

8.3. Maintenance of the pump after operation (performed by trained personnel regularly after each application)

After operation:

8.3.1 - disconnect the suction hose;

8.3.2 - open the drain tap on the pump;

8.3.3 - place the plug on the suction nozzle of the pump;

8.3.4 - disconnect the pressure hoses and drain the water from them;

8.3.5 - install plugs on the pressure valves of the pump;

8.3.6 - **start the pump 2-3 times for 5-7 seconds, it is necessary to exit water from the pressure and suction cavity of the pump (especially in the cold season);**

8.3.7 - dry suction and pressure hoses;

8.3.8 - check the level of oil in the engine and pump,

8.3.9 - thoroughly clean all equipment and the power pump both inside and outside from dirt and dust;

8.3.10 - carefully inspect all piping, engine mounts and pump attachment, individual components of the engine. Tighten the loose joints, if necessary.

8.3.11 - check the welds of the frame visually;

8.3.12 - eliminate all defects seen during operation.

Following logs must be kept during operation:

- a log of operating time of the power pump;
- a log of faults in the operation;
- a log of the technical condition;
- a log of maintenance.

The logs should also contain information about changes in the design of the product and its components made during operation and repair, information about the replacement of the components of the product during operation, information about the repair of the product.

9. TECHNICAL MAINTENANCE (maintenance, repairs and inspections are made only by trained personnel!)

9.1. Trouble-free operation of the power pump depends on proper and timely maintenance.

9.2. Maintenance of a power pump consists of periodic check of the condition of units and mechanisms, carrying out necessary repair work, adjustment and oiling.

9.3. Maintenance of the power pump in the scope of work and frequency of meetings is divided into three types:

- every shift maintenance (table 5);
- maintenance no.1 (TO-1), held after 100 hours of operation of the power pump (table 6);
- maintenance no.2 (TO-2), held after 200 hours of operation of the power pump (table 7);

When storing the power pump in the warehouse for more than 3 months, it is necessary to make every-shift maintenance (table 5).

9.4. Every shift maintenance

Таблица 5

Content of works and methods of their performing	Specifications требования	Devices, tools, devices and materials needed to perform the work
Inspect the installation site of the pump and make sure there is no leaking oil and fuel.	Leaking of oil and fuel is not allowed.	Visually
Clean the power pump from dirt and dust.		Rags, water, gasoline
Clean up used hardware.		
Check the level of oil in the engine and pump.	The oil level should be on the upper label of the probe.	Probe

Check the density and reliability of the wires attached to the battery terminals		Visually
Check and, if necessary, adjust the tension of the alternator belt	Slippage of the belt is not allowed	SPTA keys
Check the smoothness of movement of the carburetor flap control knob	No signs of sticking are allowed	SPTA keys
Start the power pump for 5-7 seconds		

9.5. Maintenance No. 1

Таблица 6

Content of works and methods of their performing	Specifications требования	Devices, tools, devices and materials needed to perform the work
Perform maintenance work on a shift basis		
Check that the starter and alternator are securely attached to the engine	Loosening of fastening is not allowed	SPTA keys
Clean the battery terminals and wire terminals.	Dirt, oxidation is not allowed	Rags, technical petrolatum
Check the electrolyte level in the battery banks and the degree of charging	According to the instruction manual of the battery	SPTA keys Distilled water, electrolyte, load plug

9.6. Maintenance No. 2

Таблица 7

Content of works and methods of their performing	Specifications требования	Devices, tools, devices and materials needed to perform the work
Perform maintenance No. 1		
Replace the filter and oil in the engine	In accordance with the procedures of maintenance	SPTA keys Oil strainer.
Replace the oil in the pump	In accordance with the procedures of maintenance	Oil SAE 10W-30 - 1.4 litres SPTA keys Oil Tad-17 – 150 ml.

9.7. Maintenance procedure

Oil change in the pump

- turn off the cap (ref. 28) (Fig.1);
- drain the oil and screw the cap back on;
- through hole for tube-breather Ref. 26 fill in 150 ml of tad-17 oil (or equivalent);
- put the fill hole plug back.

Oil change in the engine

- pre-heat the engine;
- put off the filler cap and drain plug;
- completely drain the used oil from the engine;
- put on the drain plug;
- fill the engine oil to the top of the level;
- put on the filler cap.

Oil filter replacement (it is recommended to replace the oil filter simultaneously with the oil change in the engine)

- drain the engine oil;
- use the oil filter wrench to remove the waste oil filter;
- fill the new filter with clean engine oil;
- lubricate the seal ring with new engine oil;
- the oil filter must be spun at a tightening torque of 22 N/m.

10. PROBABLE MALFUNCTION AND TROUBLESHOOTING

Table 8

Name of malfunction, external manifestation and additional signs	Probable cause	Troubleshooting
The vacuum system does not fill the suction line and the pump with water	1.The drain valve is open 2.The suction line is not hermetic	1. Close the valve 2. Check availability of packing seals in the coupling head. Check the condition of the suction hoses, if punctures or breaks are found, replace them with new ones
	3.Suction mesh is not fully immersed in water 4. Vacuum pump membranes are dirty	3. Load the mesh to a depth of not less 4. Clean membranes, inspect and replace them, if necessary
Vacuum pump works, the vacuum is normal, the water does not enter the pump	1. Clogged suction mesh or filter at the inlet of the pump 2. Stratification of suction hoses	1. Clean the suction mesh and filter 2. Replace the faulty hoses
When the pump is operated, the vacuum pump is frequently switched on and off	Failure of the head as a result of insufficient penetration of the suction mesh	Load the mesh to a depth

When the pump is running, the flow has decreased, the pressure gauge arrow fluctuates greatly	<ol style="list-style-type: none"> 1. Clogged suction mesh or filter at the inlet of the pump 2. The pump flow exceeds the permissible value for the height of the suction 	<ol style="list-style-type: none"> 1. Clean the suction mesh and filter 2. Reduce pump flow
During the operation of the pump, knocks and vibration are observed	<ol style="list-style-type: none"> 1. The pump mounting bolts are loosened 2. Bearings are worn 3. The impellers are damaged 4. Extra items entered 	<ol style="list-style-type: none"> 1. Tighten the bolts 2. Replace the bearings 3. Replace impellers 4. Remove extra objects
Water flows from the drain hole with a stream	Violation of tightness of the mechanical seal	Replace the seal

11. STORAGE, PRESERVATION AND DELIVERY POLICY

The power pump should be stored in closed heated room at a temperature not exceeding +40°C.

A power pump, spare parts and tool should be prepared for putting in prolonged storage. Putting in prolonged storage should be carried out indoors at a temperature not lower than + 15°C.

For this you need:

- to wipe with a cloth dampened in gasoline, all parts and assemblies;
- to clean, rinse and dry parts and components that have traces of corrosion;
- to put the plugs on the suction and pressure pipes;
- to start the engine and warm it up, stop the engine, drain the gasoline from the fuel tank;
- to start the engine again and run in idle mode until full fuel consumption from the carburetor;
- to clean up all the wiring and wipe dry;
- to lubricate all unpainted metal part of the pumps the oil preservative NG-208 or technical petrolatum VTV-1;

- to remove the battery and grease the terminals with petrolatum.

It is necessary to check the condition of the power pump at least once every three months.

The power pump can be transported by all means of transport.

Oil for the pump - **TAD-17** (or similar), oils for the engine – **SAE 10W-30**. Depending on the climatic zone in which the power pump is operated, it is recommended to use engine oil in accordance with fig. 6.

Replacement of oil in the engine, pump, oil filter after running-in and during operation **during the warranty period** is carried out at the expense of the organization operating the power pump.

The manufacturer reserves the right to constantly improve the product configuration in case there is no damage effect on the main characteristics of the product.

Periodic verification of the pressure gauge and the vacuum meter is produced by the organization that operates the power pump.

ATTENTION!

The pressure gauge is filled with silicone oil. It is strictly forbidden to drain it from the casing.

12. CERTIFICATE OF ACCEPTANCE

FIRE POWER PUMP MP-10/70 “Geyser” serial No.

the engine Lifan 2V78F-2 No.

centrifugal pump NP-10/70 No.

meets the requirements of 4854-033-13393076-2017 PC

Operating is made in full according to the 4854-033-13393076-2017 PC.

Release date _____

Stamp here

Chief of QCD

Source inspector

OOO "Kalanča"

141313, 22/1 Zheleznodorozhnaya st., Sergiev Posad, Moscow region, Russia.

E-mail: kalancha@kalancha.ru
Tel./fax +7 495 781-92-48.

13. GUARANTEE OBLIGATIONS

The service life of the power pump is 10 years.

The manufacturer guarantees the correct operation of the power pump 12 months from the date of shipment to the consumer, subject to the rules of operation and storage specified in the passport.

The manufacturer is obliged at its own expense and as soon as technically possible to restore the performance of the motor pump in case of failure of individual parts or the power pump during the warranty period.

The warranty period of components is considered equal to the warranty period of the power pump and expires simultaneously with the expiration of the warranty period of the power pump.

The warranty will not apply to the pumps used for competition and training, disassembled for repair without agreement with the manufacturer, as well as with traces of mechanical damage, changing the design of individual components and without the presence of the seals of the manufacturer.

Warranty obligations of the manufacturer can be changed in accordance with the terms of the the supply contract. They must be stated in the warranty card in this case.

14. INFO ON RECLAMATION

The reclamation report is made by the consumer during the warranty period together with the representative of the manufacturer; in case of absence within the prescribed time - with a representative of another uninterested organization.

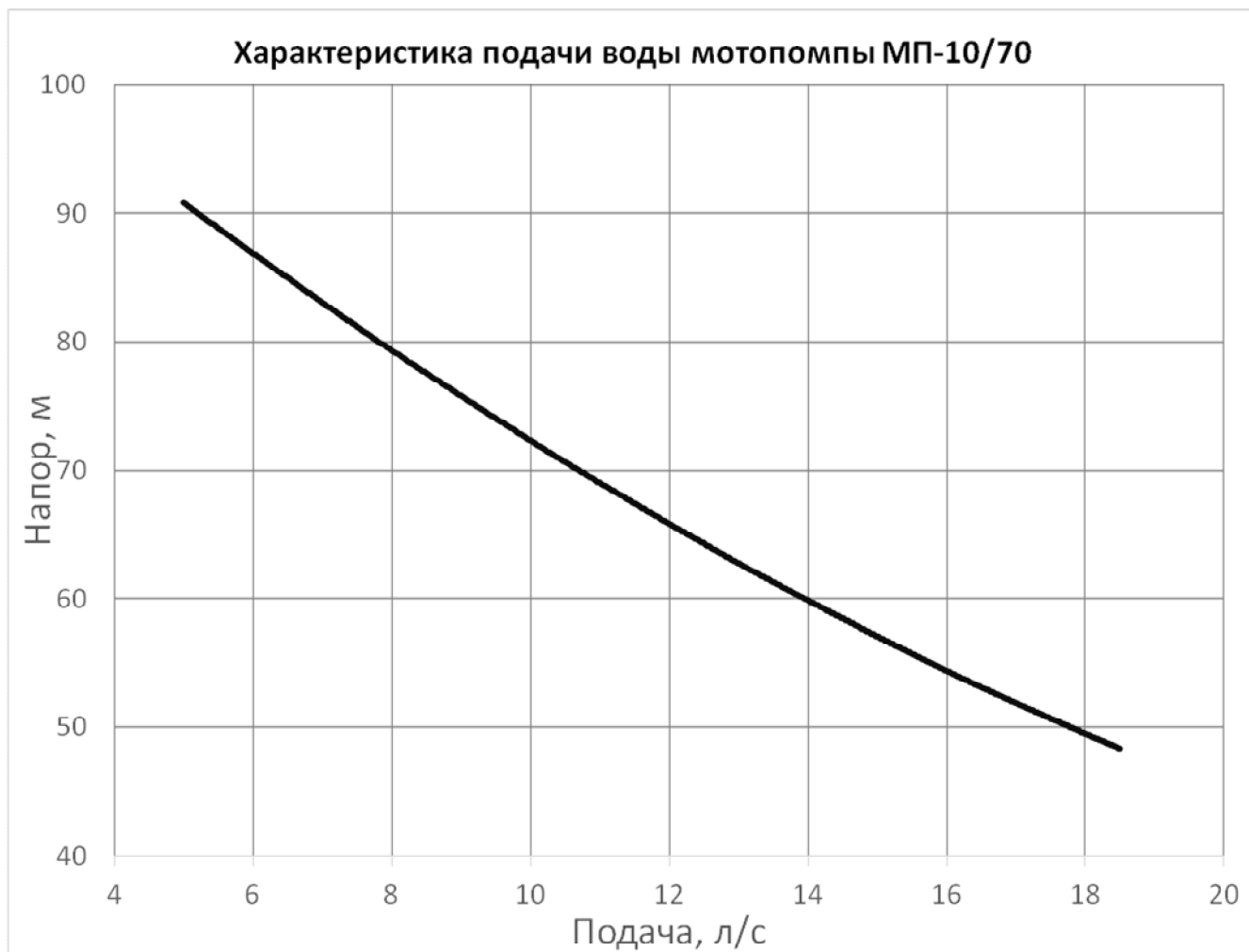
The following information should be provided in the report:

- time and place of drawing up the report;
- last names and job titles of the persons which made the report;
- exact both postal and railway addresses of the consumer;
- sort, serial number of the power pump and receipt date;
- the readings during operation;
- a detailed description of the malfunctions or apparent defects that have arisen, indicating, where possible, the causes of the defects;
- repairs made by the consumer before the reclamation.

The card of revision of the power pump is sent together with the act if the consumer made repair of the power pump.

At the request of the manufacturer the power pump must be sent to its address with the passport and the reclamation.

The visit of the representative of the manufacturing enterprise for carrying out warranty repair of a power pump at the consumer is performed according to terms of the contract.

Annex 1.

Annex 2.

The list of the firefighting equipment supplied with a power pump at the request of the Buyer for an additional fee.

No.	Description	Qty, pcs
1	2	3
1.	Suction mesh SMNE-80 GOST R 53253	
2.	Suction hose DN 80 x 4 m assembled with suction hose head GRV-80 GOST R 53279	
3.	Pressure hose DN 50 GOST R 51049 assembled with hose discharge head HH-50 GOST R 53279	
4.	Pressure hose DN 65 GOST R 51049 assembled with hose discharge head HH-50 GOST R 53279	
5.	Adapter pressure head AH 65 x 50 GOST R 53279	
6.	Adapter pressure head AH 80 x 65 GOST R 53279	
7.	Branching RT-70 GOST R 50400	
8.	Branching RT-80 GOST R 50400	
9.	Keys for fire connecting fittings K-80, K-150 DSTU 2798-94 (GOST 14286-95)	
10.	The adjustable nozzle RS-50	
11.	The adjustable nozzle RS-70	
12.	The diverter nozzle RSP-70	
13.	The diverter nozzle RSP-570	
14.	The hand-held branch RSKU-50A	
15.	The hose clamp ZRP-80	
16.	Foam mixer	
17.	Foam mixer tank, 200 litres	
18.	Compartment for firefighting equipment	
19.	Foam generator GPS-600	
20.		
21.		
22.		
23.		
24.		
25.		
26.		
27.		
28.		

At the request of the customer, fire pressure hoses can be equipped with an adjustable nozzle with an appropriate conditional passage.

Certificate of completion

FIRE POWER PUMP MP-10/70 "Geyser" serial No.

equipped with firefighting equipment in the quantity specified in column 3

Release date _____

Stamp here

Chief of QCD

Source inspector

Annex 3.**REPAIR**

1. Repair reason

2. Information about repairs

3. Data on the organization which carried out repair work

date

signature

job title

Full name

date

signature

job title

Full name