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Introduction

The purpose of the operations manual is to introduce service personnel with the station, its operating principles, technical and maintenance operations of fuel pumping station EST-03 PROFESSIONAL (hereinafter referred to as "FPS").

Before operating FPS, the given operations requires close attention. In case of non-compliance with technical conditions of station's use, measures should be taken to provide proper conditions for operating according to existing standards.

The company, which exploits the pumps is obliged to execute the requirements of this OM, relevant technical standards documentations, as well as the following requirements to pump operation:

- GOST 12.1.003-2014 Noise. General safety requirements
- GOST 12.1.004-91 Occupational safety standards system. Fire safety. General requirements
- GOST 12.1.012-2004 Occupational safety standards system. Vibration safety. General requirements
- GOST 12.1.030-81 Occupational safety standards system. Electric safety. Protective conductive earth, neutralling
- GOST 12.2.003-91 Occupational safety standards system. Industrial equipment. General safety requirements
- GOST 12.2.007.0-75 Occupation safety standards system. Electrical equipment. General safety requirements

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- GOST 12.1.030-81 Occupational safety standards system. Electric safety.
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- GOST 12.2.003-91 Occupational safety standards system. Industrial equipment.
General safety requirements

- GOST 12.2.007.0-75 Occupation safety standards system. Electrical equipment.
General safety requirements

1. General information and requirements

1.1 Function

Fuel pump station (FPS) EST-02 MINI is a system operating under the control of a logic controller SI20. FPS allows a complete automation of a tanks calibration and moving the fuel from various storage tanks and containers. FPS is deviced with a highly reliable fuel dispensing mechanism. A matrix keypad is used to enter a value of fuel volume.

FPS has an electronic display, which is based on a seven-segment detector. Information on fuel supply is provided by flow rate meters with a pulse output.

FPS is controlled by the electromagnetic valves and electric engine of the pumps.

1.2 Technical specification

Main parameters and technical specifications are listed below

Critical dimensions: height/width/depth mm	260x140x370
Power supply	12V
Weight	8kg
Fuel dispensing indicators	Seven-segment indicator
Relative calculating inaccuracy and dispensed fuel volume indication	$\pm 0.5\%$

Flow speed of fuel	30l per minute
Pipe joint diameter	19 mm
Operating temperature range	-20°C +50°C
Maximum air humidity	85%
Type of disel fuel	Disel
Connection to a satellite monitoring system (optional)	GPS/GLONASS/GPRS
Type of climate performance	Climatic category 2 (GOST 15150)
Maximum power consumption	400 watt

1.3. Completeness

Complete set of delivery includes:

- Fuel pump station EST-02 MINI;
- Passport;
- User manual.

1.4 Safety precautions

Protective measures against electric shock hazard conform with class I GOST 12.2.007.0-75.

Electrical work, connection to a power supply network and grounding (earthing) must be performed by a qualified specialist in a strict compliance with Rules of the Technical Operation of Electrical User, User Safety Rules for Operating Electrical Equipment, Rules For Arrangement Of Electrical Installations, as well as the requirements of this document.

While operating fuel pump station personnel must follow the safety precautions in compliance with GOST12.3.019-80.

Personnel operating a fuel pump station must be familiar with this document and authorized for operating electrical devices with voltage to 1000 V.

Fuel pump station must be operated only after being disconnected from an electrical supply network and measures being taken to prevent inadvertent activation.

After commissioning and service works are finished, all protective devices must be switched to working position.

The place of connection of a fuel pump station to the electricity supply network must be protected from water intrusion and isolated from direct access. The place of connection and use of a fuel pump station to the electricity supply network must be kept away from moisture, dirt and sparks.

STRICTLY FORBIDDEN:

- connect a fuel pump station to a power supply network without grounding (earthing)
- replace original power cable oneself
- pump chemical liquids;
- pump fuel oil and oil;
- pump highly polluted liquids and foodstuff

2 Activity sequence to start operation and dosage distribution

- 2.1 Power is supplied to fuel dispensing unit
- 2.2 Short press "PROG" button
- 2.3 Set the dosage with the help of the buttons "^" and "<"
- 2.4 Short press "PROG" button

- 2.5 Turn the pump switch to "ON" position
- 2.6 Dosage is supplied. After the end of the dosage supply, turn the pump switch to "OFF" position.
- 2.7 Short press "Discard" button
- 2.8 If another dosage is required - go back to 2.5. point

Total counter is not provided in this filling dispensing unit. Therefore, it is necessary to make additional record of dispensed dosages and their values, which are indicated by fuel level unit.

3 Configuration menu SI20.

FDP	Position of decimal point in multiplier	X.XXXXX XX.XXXX
F	Number of impulses per litre	Value is set according to the particular counter. Within the range of 97-102
DP	Position of decimal point	XXXXX.X XXXX.XX
SPM	Activity type according to reaching the set-point	Value must be - Cnt
rSt	Work type according to «Discard» signal	Value must be - Cont

Attachment. Basic diagram

