

STANDARD *Pump*

Operation & Parts Manual

Models: SP-430EX & SP-440EX



Introduction

This manual pertains to the SP-430EX & SP-440EX Series drum pump motors. When properly installed and operated, your Standard Pump motor and pump will provide long, trouble-free service; therefore, please read this manual carefully before carrying out any operations on the pump-motor unit. Any use other than that described herein is considered incorrect and; consequently, Standard Pump, Inc. shall not be held responsible for any damages to people or property. In case of doubt or inquiries, please apply to our Technical Service department directly at the following address:

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SAFETY

1. Introduction

This manual contains all the information needed for the correct installation, use and maintenance of your new Standard Pump, Inc. motor. It should be read and understood by all the personnel involved in installation, operating and servicing of the pump before it is started.

2. Operator Qualification and Training

The personnel in charge of the installation, operation and maintenance of the pump unit we produce must be qualified and able to perform the operations described in this manual. Standard Pump, Inc. shall not be held responsible for the training level of personnel and for the fact that they are not fully aware of the contents of this manual.

3. Safety Instructions



FOR YOUR OWN SAFETY:

BEFORE UNDERTAKING ANY SERVICE OPERATION ON YOUR MOTOR OR PUMP, PLEASE MAKE SURE TO WEAR THE PROPER PROTECTIVE GEAR.



GENERAL DANGER

NEVER use a plastic pump or an open, splash-proof, TEFC or non-ATEX motor when pumping or mixing flammable or combustible material. **ALWAYS** use and store the pump and motor in an upright position.



DANGER: POWER SUPPLY

NEVER perform any maintenance operation on the motor while it is running or before it has been disconnected from the power supply. Avoid any possible hazard that might be caused by electric power. **ALWAYS** check the electrical specifications on the motor data plate and make sure they correspond to the power supply to which it will be connected.

ALWAYS place motor in the OFF position prior to connecting the power source. **NEVER** immerse the motor in liquid.

ALWAYS use an ATEX Zone 1 approved plug and receptacle for ATEX motor models.

ALWAYS use a UL/CSA Class I Division 1 Group D approved plug and receptacle for Hazardous Location motor models.

NEVER operate ATEX rated or Haz Loc rated motors outside their rated ambient temperature range of -20°C to +40°C.

Warning: Explosion Hazard - Do not replace the cord on Explosion proof motor models. Replacing the cord will invalidate the safety of the equipment. Return the motor back to the manufacturer for cord replacement. Do not open or repair the flame-proof joints of Explosion proof motors. Contact the manufacturer for cord, fuse, and circuit board replacement.

Static sparking can cause an explosion. Always follow NFPA 77 and CLC/TR 60079-32-1 guidelines for control of static electricity and proper grounding methods when using ATEX and Hazardous Location motor models. When operating in a hazardous area or pumping a hazardous fluid, the motor and entire pump system must be grounded to prevent static discharge using appropriate grounding wires and connectors.

4. Noise Level

At normal operating conditions, SP-430EX and SP-440EX motors produce a sound level equal or less than 81 dBA at a distance of three feet (~ one meter).

5. Modifications and Spare Parts

Any changes concerning the service of the motor as originally purchased, can be executed only after written approval from Standard Pump, Inc. It is recommended to use only genuine Standard Pump, Inc. spare parts and approved accessories. The use of non-original spare parts or non-approved accessories will void warranty and removes any responsibility on our behalf for any damage caused to people or things.

Sécurité

1. Introduction

Ce manuel donne toutes les instructions nécessaires pour assurer l'installation, l'utilisation et l'entretien adéquats du moteur de pompe Standard Pump, Inc. Ces instructions doivent être lues et comprises par tout le personnel participant à l'installation, à l'utilisation et à l'entretien de la pompe avant son démarrage.

2. Qualifications et formation des opérateurs

Le personnel en charge de l'installation, de l'utilisation et de l'entretien de la pompe et de son moteur doit être qualifié et capable d'effectuer les tâches décrites dans ce manuel. Standard Pump, Inc. n'est pas responsable du niveau de formation du personnel et du fait qu'ils n'aient pas pris entièrement connaissance du contenu de ce manuel.

3. Consignes de sécurité



POUR VOTRE SÉCURITÉ

AVANT d'utiliser ou de faire l'entretien de votre pompe, s'assurer de porter les vêtements protecteurs adéquats, les protections oculaires (pour les yeux) et de suivre les procédures de sécurité standard pour manipuler les matières corrosives ou dangereuses pour la santé.



DANGERS GÉNÉRAUX

NE JAMAIS utiliser de pompe en plastique ni de moteur ouvert, étanche aux éclaboussures, de type TEFC ou non conforme à la norme ATEX, pour pomper ou mélanger des matières inflammables ou combustibles.

TOUJOURS utiliser et remiser la pompe et le moteur en position verticale.



DANGER : ALIMENTATION ÉLECTRIQUE

NE JAMAIS effectuer aucune tâche d'entretien sur le moteur lorsqu'il est en marche, ou avant de le débrancher de son alimentation électrique. Éviter toute condition dangereuse en rapport avec l'alimentation électrique.

TOUJOURS vérifier les spécifications électriques sur la plaque signalétique du moteur et s'assurer qu'elles correspondent à l'alimentation électrique à laquelle il est raccordé. **TOUJOURS** mettre le moteur en position d'arrêt («OFF») avant de le raccorder à l'alimentation électrique.

NE JAMAIS immerger le moteur dans un liquide.

TOUJOURS utiliser une prise et une prise homologuées ATEX Zone 1 pour les modèles de moteurs ATEX.

TOUJOURS utiliser une prise et un réceptacle homologués UL / CSA Classe I Division 1 Groupe D pour les modèles de moteurs à emplacement dangereux.

AVERTISSEMENT: Risque d'explosion - Ne remplacez pas le cordon sur les modèles de moteur antidéflagrants. Le remplacement du cordon annulera la sécurité de l'équipement. Retournez le moteur au fabricant pour le remplacement du cordon. Ne pas ouvrir ou réparer les joints ignifugés des moteurs antidéflagrants. Contacter le fabricant pour le remplacement du cordon, du fusible et du circuit imprimé. Les étincelles statiques peuvent provoquer une explosion. Respectez toujours les directives NFPA 77 et CLC / TR 60079-32-1 pour le contrôle de l'électricité statique et les méthodes de mise à la terre appropriées lors de l'utilisation de modèles de moteurs ATEX et de sites dangereux. En cas de fonctionnement dans une zone dangereuse ou de pompage d'un fluide dangereux, le moteur et l'ensemble du système de pompe doivent être mis à la terre pour éviter une décharge statique à l'aide d'un kit de protection statique Standard Pump.

4. Niveau de bruit

En conditions normales d'utilisation, les moteurs électriques SP-430EX et SP-440EX génèrent un niveau de bruit égal ou inférieur à 81 dBA à une distance de 3 pieds (env. 1 mètre).

5. Modifications et pièces de rechange

Toute modification concernant l'entretien du moteur/pompe, tels qu'achetés initialement, peut être exécutée seulement après en avoir obtenu l'autorisation écrite de Standard Pump, Inc. On demande d'utiliser seulement les pièces de rechange originales de Standard Pump, Inc. et les accessoires approuvés. Le fait de ne pas utiliser les pièces de rechange originales de Standard Pump, Inc. ou les accessoires approuvés annulera la garantie et dégagera le fabricant de toute responsabilité liée aux blessures ou dommages matériels.

INSTALLATION - SP-6600, SP-7600, SP-8600 & SP-8850 Series

- 1 Unpack motor from carton. Check for shipping damage. If damage is detected, save the packaging and notify the carrier immediately.
- 2 Couple motor to pump by manually threading handwheel or connection nut (depending on pump tube model) onto male threads at bottom of motor until they are hand tight (see figure 1).
- 3 Ensure that motor is fully engaged with pump tube prior to operation.

Note: Do not use hand tools to tighten the nut as this may cause damage to the motor casing.

Warning: Do not position the motor handle and cord over and in front of the pump discharge.

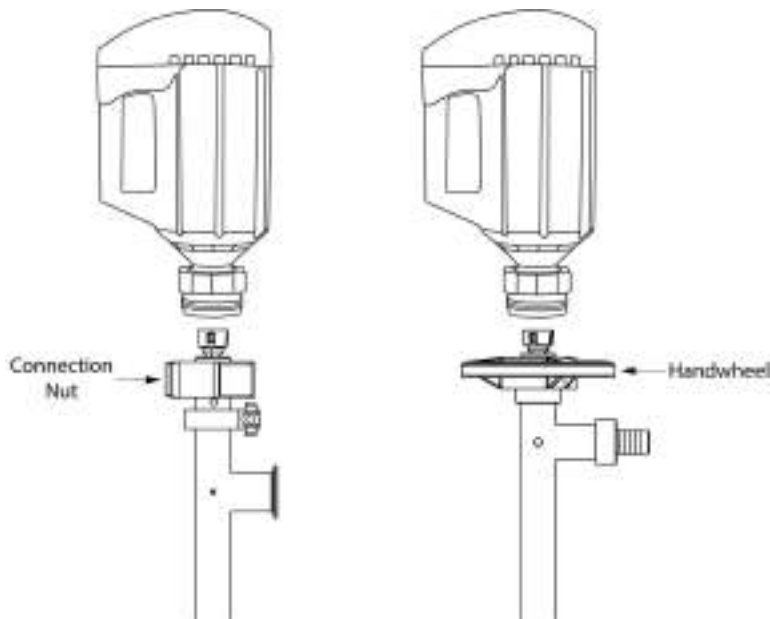


Figure 1



Figure 2

Grounding of ATEX & Haz Loc Motors (Models SP-430EX & SP-440EX)

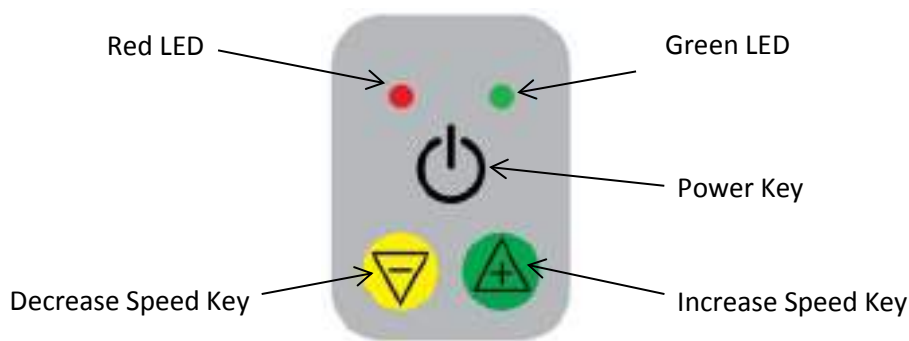
When operating in a hazardous area or pumping a hazardous fluid, the motor and entire pump system must be grounded to prevent static discharge using appropriate grounding wires and connectors.

- 1 Unscrew the #10-32 wing nut from the side of the motor housing, and attach a grounding wire with a #10 ring terminal. Screw the wing nut back on and tighten firmly by hand. Ground the motor, pump, and all containers (see figure 2).
- 2 Follow the safety instructions for the appropriate pump.

OPERATION

The SP-430EX & SP-440EX motors utilize an electronic motor controller and membrane keypad to provide precise speed control and superior motor protection. An electronic circuit board within the housing controls the motor's speed, overload protection, motor temperature, and electronics' temperature. The keypad incorporates two colored LED lights to provide feedback to the user.

Make sure the pump's discharge hose is properly secured prior to operating the motor. When the unit is plugged into a power outlet, the "Green" LED will blink indicating it is in "Standby mode", meaning that power is provided, but the motor is "Off". Pressing the "Power" key will turn the motor "On" and it will begin to ramp up to speed. The "Green" LED will change from blinking to solid indicating the motor is "On". Pressing the "Down" or "Up" keys will change the 10 available motor speeds, and can also be held in for quicker adjustment. Pressing the "Power" Key will switch the motor "Off" and the "Green" LED will again blink indicating the unit is in "Standby" mode. When the "Power" key is pressed again, the motor will ramp up to the previously set speed. When the unit's power is disconnected, the stored speed is set back to the default speed.



Keypad –Figure 2

The "Red" LED indicates a motor fault. When the motor faults, it will turn off into "Standby" mode with the "Green" LED blinking. The blink pattern of the "Red" LED will indicate the fault type:




"Red" LED Blink Pattern	Fault Type	Solution
Solid RED	Over Current	Reduce motor speed. Ensure fluid viscosity is within pump limits.
Blinking RED	Over Temperature	Allow motor to cool. Reduce motor speed. Ensure fluid viscosity is within pump limits. If motor is cool, brushes may have reached end of life.

Press the "Power" key to reset the fault and the motor will turn "On". The motor will not turn "On" until it has cooled to an acceptable level.

It may be necessary to operate the pump at a slower speed for high viscosity fluids. Contact factory for troubleshooting tips. At slower speeds, ensure the motor is running to prevent it from overheating, of which can reduce the motor's life. Unplug the unit when not in use.

Depending on the application, motor brush life is approximately 200-300 hours. Models SP-430EX & SP-440EX must be sent to Standard Pump, Inc. for factory brush replacement.

MOTOR SPECIFICATIONS

Model	SP-430EX	SP-440EX
Rated Voltage	115V	230V
Hertz	60 Hz	50/60 Hz
Input Watts	1000	1000
Output Watts	680	680
Certifications/Approvals		
	Haz Loc, CLASS I, DIVISION 1, GROUP D, T4	 II 2G Ex db ib IIB T5 Gb
Plug Type	None	None
RPM's (Variable Speed)	3,0000-12,000 RPM	3,0000-12,000 RPM
Duty Cycle	Continuous Duty	
Enclosure	TEFC	IP55 (TEFC)

STANDARD *Pump*

EU Declaration of Conformity



Standard Pump, Inc. hereby declares that the following electrical equipment fully complies with the applicable health and safety requirements as specified by the EU Directives listed. The product may not be taken into service until it has been established that the Drum and Container Pump complies with the provisions of all relevant EU Directives. The complete product complies with the provisions of the EU Directive on machinery safety provided pumps manufactured by Standard Pump, Inc. are used. This declaration is valid provided that the devices are fully assembled and no modifications are made to these devices.

Type of Device:

Electric Motors for Driving Drum and Container Pumps

Models:

SP-440EX

EU Directives:

Low Voltage Equipment (2014/35/EU)
Electromagnetic Compatibility (2014/30/EU)

Applied Harmonized Standards:

EN 60335-1	EN 60529
EN60335-2-41	EN 55014-1
	EN 55014-2

Manufacturer:

Standard Pump, Inc. 1610
Satellite Blvd, Suite D
Duluth, Georgia 3097 U.S.A

Signed,

A handwritten signature in cursive script that reads 'James Murphy'.

James Murphy
Director of Sales and Marketing
May 1, 2018



EU Declaration of Conformity

Standard Pump, Inc. hereby declares that the following machines fully comply with the applicable health and safety requirements as specified by the EU Directives listed. This declaration is valid provided that the devices are fully assembled and no modifications are made to these machines.

Type of Device:

Electric Motors for Driving Drum and Container Pumps

Pump Motor Models:

SP-440EX

EU Directives:

Equipment and protective systems intended for use in potentially explosive atmospheres (2014/34/EU)

EU-Type Examination:

Physical Technical Testing Institute 1026
Ostrava-Radvanice
FTZU 14 ATEX 0200X

Product Quality Assurance Notification:

Physical Technical Testing Institute 1026
Ostrava-Radanice
FTZU 08 ATEX Q 003

Applicable Harmonized Standards:

EN 60079-0:2012
EN 60079-1:2014
EN 60079-11:2012

Signed,

A handwritten signature in black ink that reads "Hans-Peder Jensen".

Hans-Peder Jensen
Technical Director
May 1, 2018

WARRANTY, GENERAL TERMS & CONDITIONS

1. The following terms and condition apply to the sale of machinery, components and related services and products, of Standard Pump, Inc. (hereinafter "the products").
2. Standard Pump, Inc. (the manufacturer) warrants only that:
 - a.) its products are free of defects in material, design and workmanship at the time of original purchase
 - b.) its products will function in accordance with Standard Pump, Inc. operation manuals;
Standard Pump, Inc. does not guarantee that the product will meet the precise needs of the customer, except for those purposes set out in any invitation to render documents or other documents specifically made available to Standard Pump, Inc. before entering into this agreement
 - c.) high quality materials are used in the construction of the pumps and that machining and assembly are carried out to the highest standards. Except as expressly stated above, Standard Pump, Inc. makes no warranties, express or implied, concerning the products, including all warranties of fitness for a particular purpose.
3. This warranty shall not be applicable in circumstances other than defects in material, design, and workmanship. In particular, this warranty shall not cover the following:
 - a.) Periodic checks, maintenance, repair and replacement of parts due to normal wear and tear;
 - b.) Damage to the product resulting from:
 - i. tampering with, abuse or misuse, including but not limited to failure to use the product for its normal purposes as stated at the time of purchase or in accordance with Standard Pump, Inc. instructions for use and maintenance of the product, or the installation or improper ventilation or use of the product in a manner inconsistent with the technical or safety standard in force
 - ii. repairs performed by non-authorized service workshop, or opening of the unit by non-authorized personnel, or use of non-genuine Standard Pump, Inc. parts
 - iii. accidents, acts of God or any cause beyond the control of Standard Pump, Inc., including but not limited to lightning, water, fire, earthquake, and public disturbances, etc.
4. This warranty shall cover the replacement or repair of any part(s), which is documented to be faulty due to construction or assembling, with a new or repaired part(s) free of charges delivered by Standard Pump, Inc. Part(s) subjected to normal tear and wear shall not be covered by the warranty. Standard Pump, Inc. shall decide as to whether the defective or faulty part shall be replaced or repaired. Transportation charge is prepaid to Standard Pump, Inc.
5. The warranty of the products shall be valid for a period of 36 months from the date of delivery, under the condition that notice of the alleged defect to the product(s) or part(s) thereof be given to Standard Pump, Inc. in writing within the term of 8 days from the discovery.
6. Repair or replacement under the terms of the warranty shall not give a right to an extension to, or a new commencement of, the period of warranty. Repair or replacement under the terms of this warranty may be fulfilled with functionally equivalent, reconditioned units. Standard Pump, Inc. qualified personnel shall be solely entitled to carry out repair or replacement of faulty parts after careful examination of the motor. Faulty parts or components when replaced by Standard Pump, Inc. will become the property of Standard Pump, Inc. If this warranty does not apply, the purchaser shall bear all cost for labor, material and transportation.
7. Standard Pump, Inc. will not be liable on any claim, whether in contract, tort, or otherwise, for any indirect, special, incidental, or consequential damages, caused to the customer or to third parties, including loss of profits, process down time, transportation costs, costs associated with replacement or substitution products, labor costs, installation or removal costs. In any and all events, manufacturer's liability shall not exceed the purchase price of the product and/or accessories.
8. Return Policy. Should you have any problems with this product, please contact the distributor in your area. The distributor will determine if a return to the factory is necessary and will contact the factory for a Return Authorization Number. Otherwise, contact our Technical Service Department (1-866-558-8611) or email info@standardpump.com. com if you have any questions regarding product operation or repair.