KOSHIN

ELECTRIC DRUM PUMP

OPERATION MANUAL

《FD, FA MODEL》

● Thank you for purchasing this product.
● This manual is prepared for your safety when operating pump.
  Please read carefully and comprehend fully before use.
  (Wrong usage could cause injury or death)
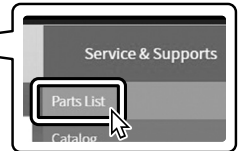● Please keep this manual handy for future reference.

Please read this manual before operation.

SPARE PARTS
For spareparts information, visit

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http://www.koshinpump.com

KOSHIN LTD.

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CAUTION

1. APPLICATION

- This pump is designed to be used exclusively for oils of comparatively low viscosity such as kerosene, light oil and heavy oil A.

- The pump can not be used for any liquid of high viscosity such as heavy oil B and machine oil.

- ABSOLUTELY REFRAIN FROM USING THE PUMP FOR PRIMARY PETROLEUM SUCH AS GASOLINE.
  (We are not responsible for any fire trouble due to use of gasoline.)

2. IDLING
Refrain from empty operation of the pump as it can be the cause for bearing seizure.

3. FALLING DOWN
The shaft that transmit the power from the motor to the impeller is made precisely. Avoid any hard impact such as falling down. It is also prohibitive to incline the body during operation.

HOW TO USE

First connect the delivery hose to the pump.

- Insert the packing into the hexagon joint, screw the joint into the pump outlet, then tighten the joint firmly.

- Insert the straight joint at an end of the hose into the hexagon joint, then tighten the small screw.

- Then insert the suction pipe into a drum can, turn the large screw into the mouth piece of the
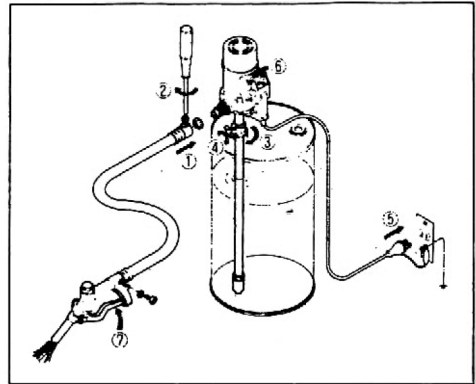

drum can while keeping the lowermost part of the pump in contact with the bottom of the brum, and fix the pump with the batterfly screw.

- Connect the cord to the power source after making sure that the switch is turned of OFF. (Type FD has a battery as the power source; DC-12V for FD-12 and DC-24V for FD-24. The power cord can be connected regardless of positive and negative poles.)
  (FA-100 requires AC-100/120v or AC-220/240v power source. Be sure to each using an earth clip.)

- After connecting the power, turn ON the switch and pull the feed oil nozzle, then the pump starts delivery.

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CARBON BRUSH REPLACEMENT

1. Use of a carbon brush worn out more than the specified limit reduces the amount of delivery and may damage the motor.

2. Obtain the carbon brush from the dealer of the pump after making sure the type of the pump. (See the name plate.)

3. How to change

   o Remove the cushion rubber of the fan cover and take out the fan cover from the motor by releasing the stop screws a 3 to 4 places (It depends on models) with a screw driver.

   o Remove the carbon caps at the right and left sides of the motor using a screw driver, then take out the carbon brushes inside the carbon caps. If they are worn out more than the specified limit, replace them with new carbon brushes.

   o For assembling, reverse the order of disassembling. Note that, however, the carbon caps may sometimes be broken if tightened too much.
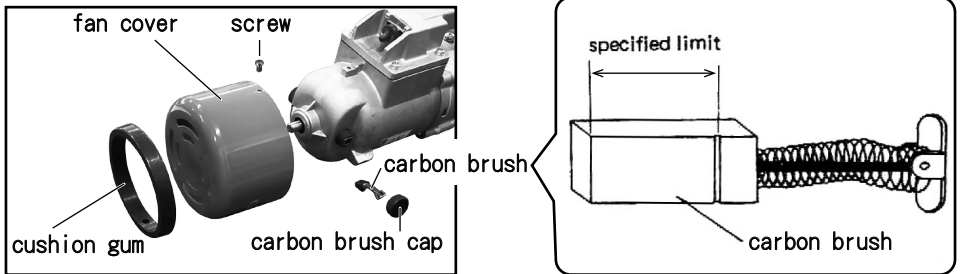
TROUBLE & REMEDY

Pump does not revolve.———┬——Incomplete connection to power source —
                          │   (Connect to the power exactly.)
                          ├——Disconnection of power cord — (Exchange the cord.)
                          ├——Carbon brush wear — (Exchange the brush.)
                          ├——Motor is in trouble — (Repair)
                          └——Blown fuse — (Exchange the fuse.)

* If the fuse is blown out frequently, dust clogging in the pump and metal seizure are the conceivalbe causes.

Amount of delivery is———┬——Hose is bent over. — (Correct the bending.)
low.   └——Carbon brush is worn out. — (Exchange the brush.)

No liquid is pumped ———┬— No oil is in the drum can. — (Stop operation right away.)
though the pump turns. └— Strainger is loaded. — (Clean the strainer.)

SPECIFICATIONS

		FD-12	FD-24	FA-100	
P U M P	Connection dia	20 mm (3/4")			
	Connection thread	Parallel pipe thread			
	Total head	4 m 13 ft	6 m 20 ft	7 m 23 ft	
	Discharge volume	40 L/min 10.6 U.S.G/min	45 L/min 12 U.S.G/min	50 L/min 13 U.S.G/min	
M O T O R	Rated voltage	DC 12 V	DC 24 V	AC 110 -120 V	AC 220 - 240V
	Ampere	14 A	7A	2.7 A	1 A
	Power	80 W / 6000 rpm	90 W / 6700 rpm	120 W / 7350 rpm	
	Continuous use time	Continuous		20 min	
	Power cord	Oil-proof cord 4.8 m 15.7 ft			
	Fuse	20 A	10 A	3 A	
Discharge hose		Oil-proof rubber hose 20 mm(3/4") × 2 m 6.5 ft			
Oil supply nozzle		Aluminum alloy made 20 mm			
Net weight		8 kg			

DELIVERY VOLUME

	FD-100	FD-24	FD-12
Kerosene	50	45	40
Light oil	50	45	40
Heavy oil A	45	40	35

(L/min)

Note : The above figures are bases on oil temperature of 20°C and delivery head of 0 (m).
Performance depends on viscosity of liquids.

PERFORMANCE CURVE

(Kerosene 20°C)   (U.S.G./min)