

Single Phase, 4-Pole Foot-Mounted SCI Motors

Troubleshooting
Guide



**Texmo
Industries**
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1. Basic troubleshooting



Warning

To prevent serious accidents, disconnect the power supply before inspecting the motor.

Read this Operation Manual carefully before requesting repair. Contact the dealer from whom this equipment was purchased. Servicing and troubleshooting must be handled by qualified persons with proper tools and equipment. Common faults, root causes for these and suggested actions are provided in TABLE 1 below:

Fault	Possible causes	Suggested actions
Motor not starting	No power supply to the motor	Check for availability of power
	Burnt motor coil	Rewind the motor
	Low-voltage operation	Operate in the recommended voltage range
	The ELCB has tripped out	Reset the ELCB, If trips again check the insulation resistance of the motor.
	Blown fuse	Replace fuse
	Loose connections	Tighten the electrical connections
	Motor shaft has sheared	Replace the assembly rotor
Motor drawing excessive current	Weak Capacitors	Replace capacitors
	Low-voltage operation	Operate in the recommended voltage range
	Motor overloaded	Reduce the load
	Motor belt pre-tension excessive	Reduce belt pre-tension
	Misalignment between motor drive and driven	Align motor and load
Centrifugal switch stuck	Replace centrifugal switch	

Fault	Possible Causes	Suggested Actions
Motor runs rough and noisy	Motor bearings worn out due to overload	Reduce the overload. Dismantle and replace worn out bearings
	Motor bearings worn out due to misalignment between drivers and driven	Measure misalignment and correct. Dismantle and replace worn out bearings
	Motor bearings damaged due to excessive belt tension	Reduce the belt tension. Dismantle and replace worn out bearings.
	Rotor shaft is bent resulting in rotor rubbing against stator bore	Replace rotor shaft grout the motor
	Motor not grouted	Grout the motor
	Insufficient lubrication in bearings	Replace the bearings



Note

Conduct trial operation after maintenance



Note

Dispose replaced components with appropriate care so as to protect the environment



Warning

Do not try to solve unspecified troubles of motor as it may lead to severe damage to the motor or injury to personnel. Contact the dealer from whom the motor was purchased

2. Preventive maintenance checks

Precautions to be taken



Warning

Disconnect the power supply before starting maintenance or inspection of the motor to avoid electrical shock



Note

If you find any damages or abnormalities, switch OFF the motor and report the problem to the dealer from whom the set was purchased

NOTE: The manufacturer assumes no responsibility for damage or injury due to disassembly in the field.

A definite schedule of preventive maintenance inspections should be established to avoid breakdown, serious damage and extensive downtime. The schedule will depend on operating conditions and experience with similar equipment. The below check list does not represent an exhaustive survey of maintenance steps necessary to ensure safe operation of the motor.



Warning

Utilise the services of an electrician to carry out electrical measurements / checking the functioning of the control panel

It is good practice to monitor the conditions and performance of the motor. Diagnosis may be carried out by checking the following:



Checking the current drawn by the motor at no load conditions and compare with the data recorded when the unit was initially installed



Any increase in motor current at no load conditions indicates a possible overload condition



Measure the insulation resistance of the winding to check the condition of the motor



Check the capacitance of the capacitor/s



Check the alignment between motor and driven

3. Do's and don'ts

Do's	Don'ts
Use a flexible coupling to connect to the drive	Do not overload the motor. Ensure that the current does not exceed that mentioned on the name plate
Align the motor and drive shaft	Do not restrict the space behind the cooling cover as this will obstruct the flow of air required for cooling of the motor
Rotate the shaft to ensure that motor is not jammed	Do not cover the product as this will prevent effective cooling of the motor
Ensure proper earthing is provided	Restrict the number of joints on the cable. More the cable joints, more will be the voltage drop
Mount the motor on a level foundation and bolt down the motor	Do not use undersized electric cables between motor and power source. Factor in low-voltage usage
Check all fasteners are tight	Do not earth to a water line or gas line
Motor is IP44 protected. Provide protection from rain	When using a belt drive, do not pre-tension the belt beyond a limit as this will overload the motor
If the motor is kept idle for a very long time period, the capacitor needs reforming. This can be done by switching the power supply on and off quickly about 10 times before starting the motor	When using a belt drive, do not have over slack on the belt as the belt will slip

4. Important safety instructions

Only qualified personnel should be involved for inspection, maintenance and repairs. The successful and safe operation of such a product depends on proper handling, installation and maintenance. It is suggested that in case of non-functioning of the product, the customer is requested to contact the dealer through whom the purchase was made.



Danger

Hazardous voltage will cause death, serious injury, electrocution.
Disconnect all power before working on this equipment.
Maintenance should be performed only by qualified personnel.

5. Storage & Handling



The Single Phase 4P CSIR / CSCR SCI motor is supplied from the factory in proper packing in which it should remain until they are to be installed



The product should be stored in a closed, dry and well ventilated room



Do not store the products in direct sunlight



Handle the motor with care and do not expose the product to unnecessary impact and shocks



During unpacking and prior to installation, care must be taken when handling the motor to ensure that the product is not subjected to shock loads



If the product has been stored for a very long period, check the condition of the lubrication of the bearings and the centrifugal switch



Caution

If the motors are stored, the shaft must be turned by hand at least once a month



Caution

If the motor has been stored for more than one year before installation, dismantle the motor and check the rotating parts before use

6. Company contact information

For most up to date information on Texmo Industries, please visit www.taropumps.com

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