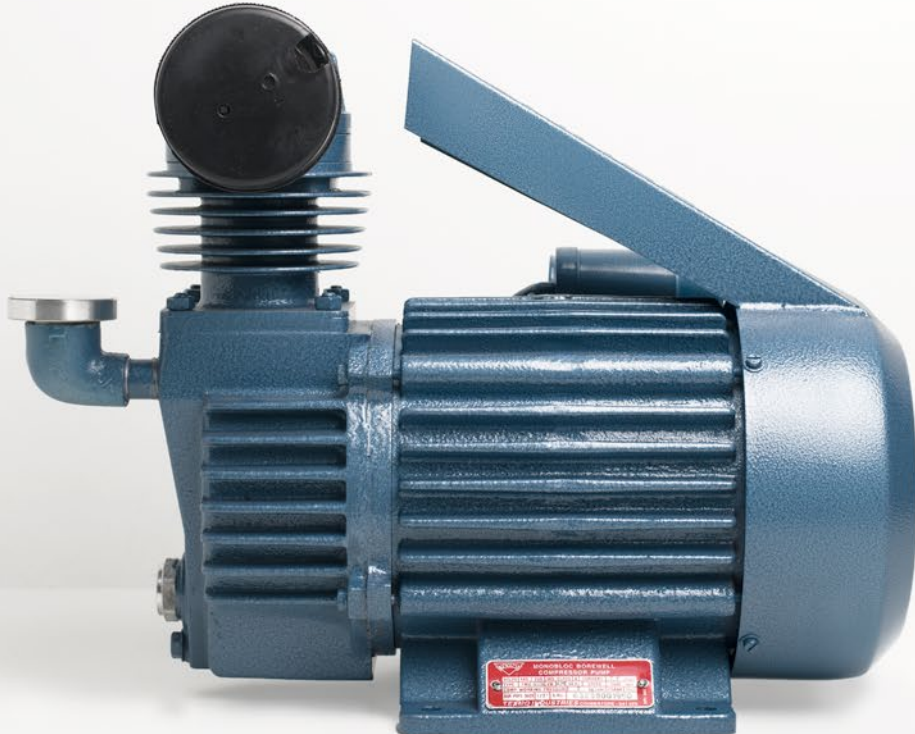


# Borewell Compressor Pumps

Troubleshooting  
Guide



**Texmo  
Industries**  
Est. 1956

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# 1. Basic troubleshooting



Warning

To prevent serious accidents, disconnect the power supply before inspecting the Borewell Compressor Pump.

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

<b>Fault</b>	<b>Possible Causes</b>	<b>Suggested Actions</b>
Compressor Pump Overheats	Dirty oil	Change oil
	Oil level LOW	Fill correct grade of oil up to the maximum mark on the oil level indicator
	Cylinder and intercooler fin dirty	Clean the fins
	Recommended air pipe not used	Fit the recommended pipe sizes
	Located in a closed room with no ventilation	Improve the ventilation
Oil contamination in compressed air	Breather valve not working	Clean the breather valve and refit after checking
	Choked Air Filter	Clean the air filter/ replace it
	Oil level HIGH	Drain excessive oil
	Piston Rings end gap may be inline	Change the piston rings end gap
	Oil viscosity too low	Use recommended oil grade
	Piston Rings are broken or stuck in grooves	Remove the piston and loosen the rings. Replace if broken. Check all related parts for wear before fitting.
	Piston to cylinder clearance excessive	Change as required.

<b>Fault</b>	<b>Possible Causes</b>	<b>Suggested Actions</b>
Compressor Pump knocking	Worn out piston, cylinder, crank shaft and connecting rod bearings	Overhaul the pump
	Piston to Cylinder clearance excessive	Change as required
	Fan - Fly Wheel loose	Remove fan-fly wheel and examine key-way and key for wear
Water discharge is poor	Leaky joints in pressure lines	Leak proof the identified leaky joints
	Improper seating of inlet and outlet delivery blades	Dismantle and seat the blades and reassemble
	Worn out piston rings	Replace the rings as a set
	Loose belts	Adjust or replace if elongated
Unusual wear of cylinder, piston and piston rings	Inadequate air filter maintenance	Clean the air filter frequently
	Insufficient frequency of oil change	Check the oil frequently and change when necessary
	Incorrect grade of oil	Use grade of oil
Water or rust formation in crankcase	Faulty breather	Check and replace breather if necessary
Excess belt wear	Incorrect motor and compressor pump pulley alignment.	Check and adjust using a straight edge/string across the diameter of both pulleys
	Incorrect belt tension	Check belt adjustment frequently

<b>Fault</b>	<b>Possible Causes</b>	<b>Suggested Actions</b>
Oil leak through breather	Breather valve not working	Open, clean and refit the breather
	Piston rings are broken or stuck in grooves	Remove the piston rings and replace as a set
	Piston to cylinder clearance excessive	Inspect and change the non-conforming components
	Oil level HIGH	Drain till the correct level is achieved
Oil leak past Oil Seal	Dirt in the crankcase	Drain the oil, clean the crankcase and replace with fresh oil
	Dust deposits on Oil Seal outside	Clean the dirt near the oil seal
	Alignment between motor pulley and compressor pulley incorrect	Correct the alignment between the pulleys
	Excessive belt tension	Adjust the belt tension for 10mm play
Oil leak through cylinder Head and Inter-Cooler Joints	Choked air filter	Clean/replace the air filter
	Oil level HIGH	Drain till correct level is achieved
	Dust deposits on the compressor	Clean the compressor regularly
	Lower cooling of compressor pump	Increase cooling by providing sufficient space around the compressor

**NOTE:** Not applicable to Monoblock Compressor Pumps



Note

Conduct trial operation after maintenance



Note

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



Warning

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






Caution

If the Borewell Compressor Pump runs with unusual noise, stop it immediately.

## 2. Preventive maintenance checks



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### Precautions to be taken



 Warning	Disconnect the power supply before starting maintenance or inspection of the Borewell Compressor Pump to avoid electrical shock.
 Warning	During operation, the compressor gets hot. Cool before working on the compressor.
 Note	If you find any damages or abnormalities, switch OFF the Borewell Compressor Pump 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. Below check list does not represent an exhaustive survey of maintenance steps necessary to ensure safe operation of the pump set.

 Warning	The Borewell Compressor Pump must not be operated with the delivery valve shut-off for more than a few seconds; otherwise the motor will overheat, possibly causing permanent damage.
 Warning	Utilize the services of an electrician to carry out electrical measurements / checking the functioning of the starter

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

-  Check the direction of rotation of the pump set
-  Check all electrical connections are proper

## Daily checks

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- ✓ Clean the compressor pump thoroughly
- ✓ Check the oil level in the crankcase. If required, replenish with the right grade and quantity of oil
- ✓ Check the belt tension

## Monthly checks

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- ✓ Check the air filter, clean the filter mesh in kerosene, dry and then refit
- ✓ The breather valve should be dismantled, cleaned and checked for perfect seating of valve
- ✓ All the pipe joints should be checked for leakage

## Every 500 hours of operation

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- ✓ Check if there is unusual operational noise and vibration of the compressor pump
- ✓ Check if all mounting bolts and other fasteners are tight
- ✓ Check if there are air leaks from pipe joints, intercooler and air cock
- ✓ Clean the air filter. If the air filter element is contaminated, replace it
- ✓ Examine the lubricating oil in the crank case. If necessary, drain and refill. The compressor should be run for some time and draining the oil should be done when the oil is warm

## Note

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- ✓ First oil change shall be done after 150 hours of operation.
- ✓ The subsequent oil change shall be carried out every 500 hours of operation
- ✓ Not applicable to Monoblock Borewell Compressor Pumps



### 3. Do's and don'ts

Do's	Dont's
Before installation, rotate the shaft to ensure that compressor pump is not jammed	Do not run without fan guard
Ensure proper earthing is provided	Do not place the product in a poorly ventilated space
Mount the compressor pump on a concrete foundation.	Do not have multiple joints on the cable. More the cable joints, more will be the voltage drop.
Ensure the compressor pump runs in the right direction.	Do not run the product without air filter
First oil change is after 150 hours of operation.	Do not start the product with back pressure. Release the air by opening the air cock and re-start.
Subsequent oil changes should be carried out once every 500 hours of operation.	Do not earth to a water line or gas line
Inspect the air filter regularly. Clean if required. If not, replace the filter element.	Do not use undersized electric cables. Factor in low voltage usage.
Check the drain and filling plugs for tightness before erection.	Do not run the compressor pump if the oil level in the sight glass is below the prescribed level
Check for oil leak through breather	Do not run with air cock open
Check for oil leak into the motor	Do not run with over tight belts
Oil contamination in compressed air	Do not run with loose belts

# 4. Important safety instructions

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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 by only qualified personnel



Caution

Hot surfaces. Do not touch.

## 5. Storage & Handling



The products are supplied from the factory in proper packing in which they 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 Borewell Compressor Pump 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 Borewell Compressor Pump to ensure that the product is not subjected to shock loads.



If the product has been stored for a very long period, check for free rotation of the shaft and level of oil inside the crank case.



Caution

If the compressor is stored, the shaft must be turned by hand at least once a month



Caution

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



Caution

After a long period of storage, the compressor should be inspected before it is put in operation. Ensure the impeller can rotate freely when turned by hand.



Caution

For mono compressors, an Oil Seal is provided to prevent oil from leaking into the motor. For belt driven compressors, the oil seal prevents oil from leaking into the environment. Check the condition of the oil seal if the product has not been use for a long period of time.

## 6. Company contact information

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For most up to date information on contacting Texmo Industries, please go to [www.taropumps.com](http://www.taropumps.com)

P.B.No. 5303,  
Mettupalayam Road,  
Coimbatore - 641 029, India

1800-102-8888  
[www.taropumps.com](http://www.taropumps.com)  
[info@taropumps.com](mailto:info@taropumps.com)



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