



Sl.No.	Do's & Don'ts	Effects
1	Direction of Rotation-	Possibility of high current/more power, impeller loosening, shaft damage, shaft cut in long run.
	Check the physically as pump delivers 70% flow/pressure in reverse direction also.	
	As per arrow on the pump- looking from fan cover or motor top end.	
2	Contamination in the pump portion-	Causes pump parts to wear faster, break/damage, draw more power, cut the shaft, low life of mechanical seals & bush bearings.
	Paste like sludge , cotton wastes & other fibrous materials,bolts , nuts,etc are strictly no.	
	If have large contamination problem-suitable pumps are available to handle them-contact factory.	
3	Suction mesh at the pump inlet-	Causes reduction in flow & pressure,deposition of contamination in the impellers, damage to the pump parts.
	Not for filtering the coolant-but for only avoiding fibrous & solid contaminations.	
	Proper & suitable Filtration to be provided in the tank design only.	
4	Pipe fittings-	Causes heavy pipe line losses & will not give desired flow &/or pressure, heating of the coolant,excess power consumption,wearout of pumps parts.
	Must use only parallel threaded (G-type) nipples at the pump outlets.	
	Tapered threading should never be tried.	
	Hydraulic fittings are not recommended-only GI are recommended for better flow & efficiency.	
	Should avoid an Elbow (90° bend) immediately at the pump outlet	
5	In misty/moistorous environment-	Causes bearing failures, earthing, electrical shock.
	Avoid deposition of oil & dirt on motor body, inside of fan cover	
6	Storing of pumps-	If not stored properly-the bearings may fail prematurely,contamination will go into pump portion, coolant may enter motor portion-causing motor or bearing failure.
	Always store in horizontal position.	
	Drain coolant from the pump portion-by blowing the air from outlet before storing	
	Rotate the pump shaft for grease in bearing to redistribute atleast once a month -in case of long period storing.	
7	Coolant Level in the tank-	Causes loss in pressure/ flow,dry running, air clogging & failure of priming (especially when an NRV is used at the outlet),blurping noise, spilling of coolant from the tank.
	Maintain a min.-max. level as per the catalog	
	Refill the tanks at regular intervals	
	Check the coolant baffles provided for filtration for clogging/blocking of the holes-periodically clean them.	
8	Electrical Switchgear parts associated with pumps-	Causes the motor fail by single phasing, overloading,excess voltage fluctuations.
	Check the MPCB or OLR setting once a while	
	Check the proper functioning of the MPCB or OLR-especially for ratings below 2A.	
	Contactors to be checked for carbon formation at conatcts	
	Loose connections at the controls & pump terminal	
Check the 3 phase voltages for equal voltage-within 1% -among all the 3 pairs (RY,YB,RB).		
9	Rigidly coupled pumps-	Disturbing the coupling alignment causes excessive wearout of the pump parts, mechanical seal failure, shaft damage, reduction in performance, motor over loading.
	Do not disurb the coupling position-by loosening the screws	
	Tighten the coupling screws periodically-atleast once in 6 months	
	While taking out the motor for maintainance-give packing at the coupling bottom to maintain the same gap while refitting the motor	
10	On/Off cycles-	High on/off causes more mechanical damage (to pump portion) than electrical, damage to contactors,reductionin bearing life.
	Maximum 20-40 on/off per hour is allowed-dependng on the pump construction/model	
	Use solenoids,soft-starters/star delta starters/VFDs in case of higher on/off cycles	