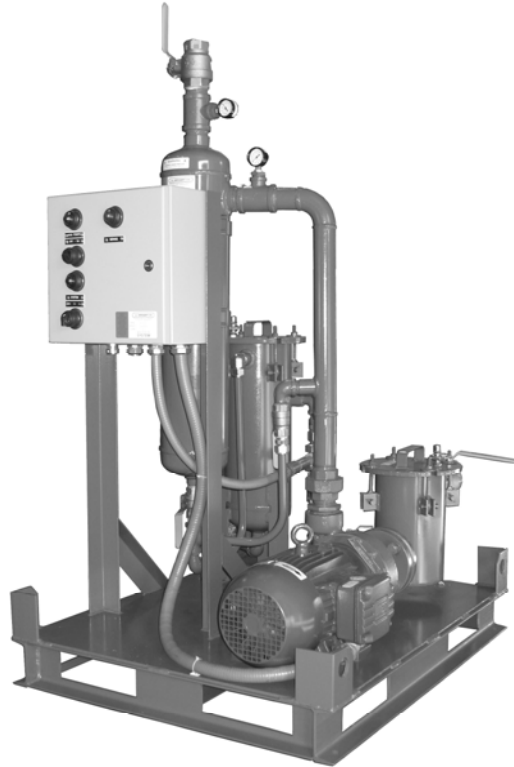


J.L. WINGERT CO.

SEPARATOR SYSTEM OPERATION & MAINTENANCE MANUAL



PLEASE RECORD THE FOLLOWING DATA
(Information is located on the product label or packing slip)

Model Number: _____

Service: _____

Code: _____

Installation Date: _____

Installation Location / Application: _____

The above information will help when ordering replacement parts and accessories for your Wingert Separator System.

J.L. WINGERT MANUFACTURED PRODUCTS

Mixers, Bypass Feeders, Filter Feeders, Bromine Feeders, Sample Coolers, Sludge Traps, Separators, Separator Systems, Tank Stands, Tank Package Systems, Glycol Feed Systems, Coupon Racks, Control Stations, NEMA Enclosures, Custom Packaged Systems and Specialty Welding

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1.0 INTRODUCTION

Thank you for your purchase of a J.L. Wingert Separator System. Your system is designed to remove solids from sump basins or closed loop systems with a minimum amount of water loss. The system includes a pump, pump strainer, separator, recovery tank or motorized purge kit, control panel and all necessary interconnecting plumbing. Standard flow rates from 38 to 1200 GPM at 90 TDH are available to meet a variety of applications.

2.0 WARRANTY

Wingert Separator Systems are warranted against manufacturing defects in material and workmanship for one year from the date of shipment. Applications outside the service for which the product is designed, including any non-factory modifications, will automatically void any warranty. Items returned to J.L. Wingert Co. for warranty consideration must be transported via prepaid freight. Final warranty determination will be made upon inspection. J.L. Wingert Co. will, at their discretion, repair or replace any defective item. Any repair or replacement outside warranted limitations will be considered a repair order and quoted accordingly. All replacements will be F.O.B. factory. There are no other implied or expressed warranties.

Motors, gear reducers and other ancillary items not manufactured by J.L. Wingert Co. are warranted by the original manufacturer. Repair or replacement is contingent upon inspection and determination by the original manufacturer. Their findings are final and beyond our control.

3.0 UNPACKING

Wingert Separator Systems are shipped, assembled and ready for installation. Systems with flanged connections have valves packed separately. Systems are shipped from the factory bolted to a shipping pallet. Inspect shipment upon receipt for any damage or missing components. Notify the factory of any discrepancies immediately upon receipt. If any product is damaged due to freight handling, contact the factory immediately for further assistance. It is recommended that photo documentation of any damage or discrepancy be supplied to support any claims.

NOTE: Most freight carriers allow only a limited time after receipt of goods to file a freight claim.

4.0 MODEL NUMBER VERIFICATION

CT	-0038	/ (460)	
			OPTIONS
	460		460 VAC/3 phase/60 Hz main power supply in place of standard 230 VAC/3 phase/60 Hz
	MPK		Motorized purge kit in place of standard recovery tank
			FLOW RATE AND SIZE
	0038		38 GPM @ 90 TDH, 1" Separator, 2 HP pump
	0065		65 GPM @ 90 TDH, 1 1/4" Separator, 3 HP pump
	0100		100 GPM @ 90 TDH, 1 1/2" Separator, 5 HP pump
	0160		160 GPM @ 90 TDH, 2 1/2" Separator, 7.5 HP pump
	0200		200 GPM @ 90 TDH, 2 1/2" Separator, 7.5 HP pump
	0280		280 GPM @ 90 TDH, 3" Separator, 10 HP pump
	0450*		450 GPM @ 90 TDH, 4" Separator, 15 HP pump
	0550*		550 GPM @ 90 TDH, 4" Separator, 20 HP pump
	0850*		850 GPM @ 90 TDH, 5" Separator, 30 HP pump
	1200*		1200 GPM @ 90 TDH, 6" Separator, 40 HP pump
			*460 VAC/3phase/60Hz is standard on these models
			MODEL
	CT		Separator System

5.0 SAFETY

J.L. Wingert's equipment is designed and built with safety in mind. However, proper installation and operation can increase your overall safety.

DO NOT INSTALL, OPERATE OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL AND THE SAFETY PRECAUTIONS CONTAINED THROUGHOUT.

BE SURE THAT ALL INSTALLATION, OPERATION, MAINTENANCE AND REPAIR PROCEDURES ARE PERFORMED ONLY BY QUALIFIED INDIVIDUALS.

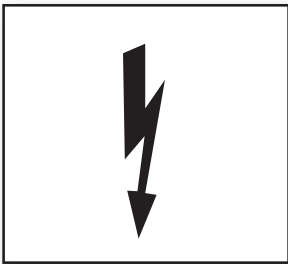
5.1 SAFETY HIGHLIGHTS

Read and understand the following safety highlights.



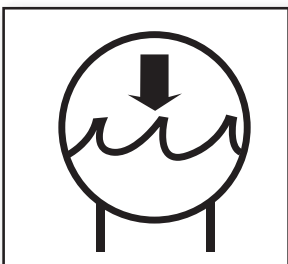
ELECTRICAL SHOCK CAN KILL

Do not perform any services without first disconnecting electrical service to all equipment. High voltage electrical power is present inside the electrical enclosure.



ELECTRICAL SERVICE CONNECTION

Install and ground equipment in accordance with the U.S. National Electrical Code, all local codes and the manufacturer's recommendations. Electrical installation and repair should be performed by a qualified individual.



WATER PRESSURE INSIDE THE UNIT

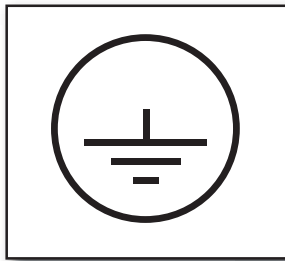
See design specification for maximum operating pressure. Do not perform maintenance or repair without first releasing the water pressure and draining the fluid from the unit.

5.1 SAFETY HIGHLIGHTS — CONTINUED



EQUIPMENT IDENTIFICATION LABEL

Identification label provides equipment information. Be sure the voltage, phase and frequency of the input power are as specified on the Equipment Identification Label and conform with your requirements.



GROUND CONNECTION

Input power and ground system for safe operation of the equipment. See your local and National Electrical Codes for proper grounding methods.

6.0 LOCATION AND ENVIRONMENT

Wingert Separator Systems are designed for use outdoors, but consideration should be taken for any adverse conditions. If these conditions arise, the separator system should be completely sheltered in a shed or at least covered by an awning.

7.0 INSTALLATION

Wingert Separator Systems include an inlet and outlet isolation valve. Select a location as close as possible to the open or closed-loop system to be cleaned. The Wingert Separator System should be placed on a firm, level surface that will offer long term stability. The three main installation designs are shown in the following diagrams (see 6.1, 6.2.1 and 6.2.2). It is recommended the plumbing design and connections be at a minimum avoiding high and low piping configurations, long runs and multiple bends and elbows.

7.1 BASIN CLEANING

Figure 1 - In a basin cleaning application, the pump suction and discharge are very critical. The discharge should be plumbed to ensure a complete sweep of settled debris toward the suction. This installation can be completed by using Wingert Tower Basin Eductors which create the turbulence needed to suspend settled solids and direct them toward the suction.

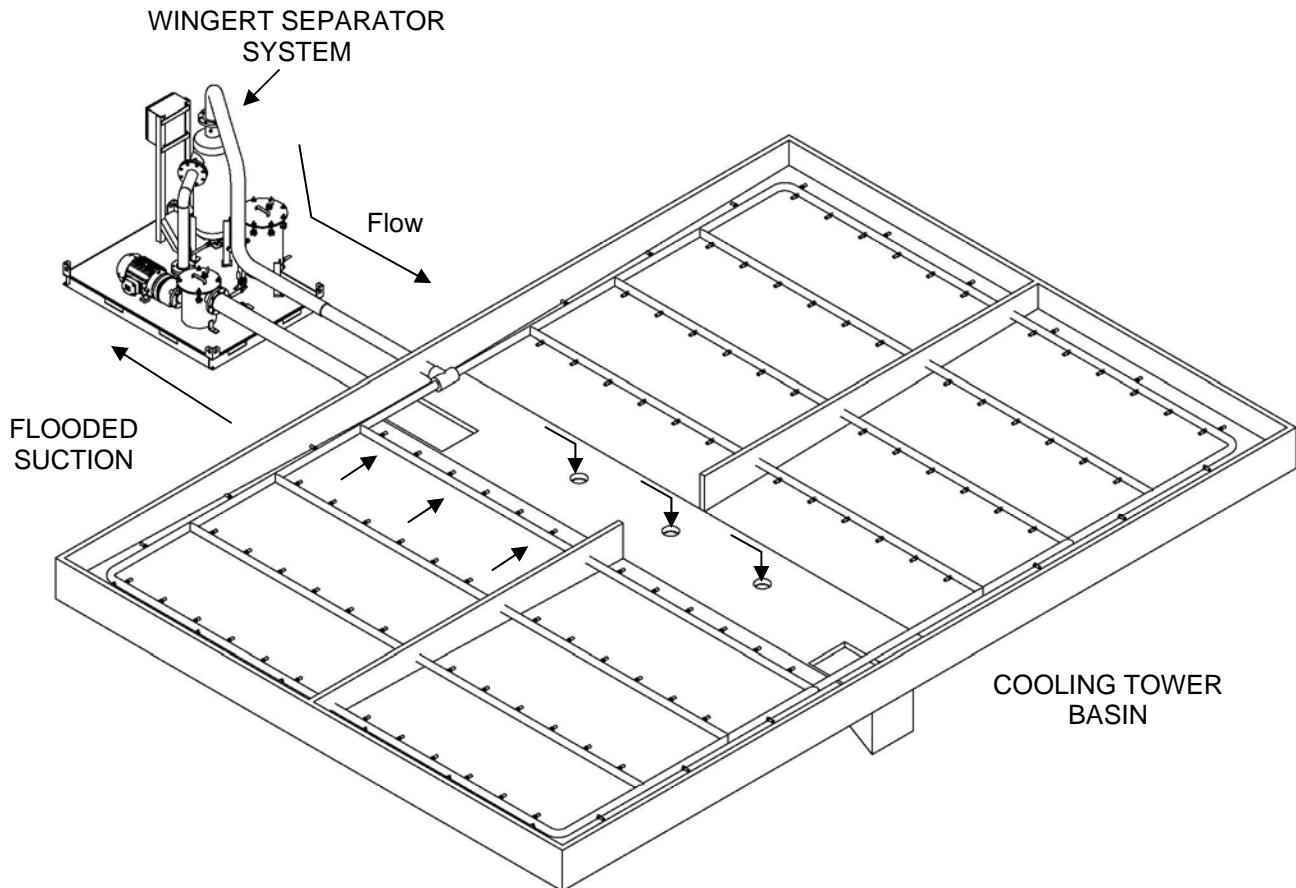


Figure 1

7.2 SIDE STREAM CLEANING

Side stream installations borrow a small percentage of the main liquid flow and is used where the system is too large or the amount of accumulated solids is minimal. The following diagrams show two acceptable installation methods.

7.2.1 Side Stream Installation with Return to Main Line

Figure 2 - This method for side stream cleaning is achieved by installing the Wingert Separator System with return to the system flow line. This type of installation allows for maximum pressure drop across the separator.

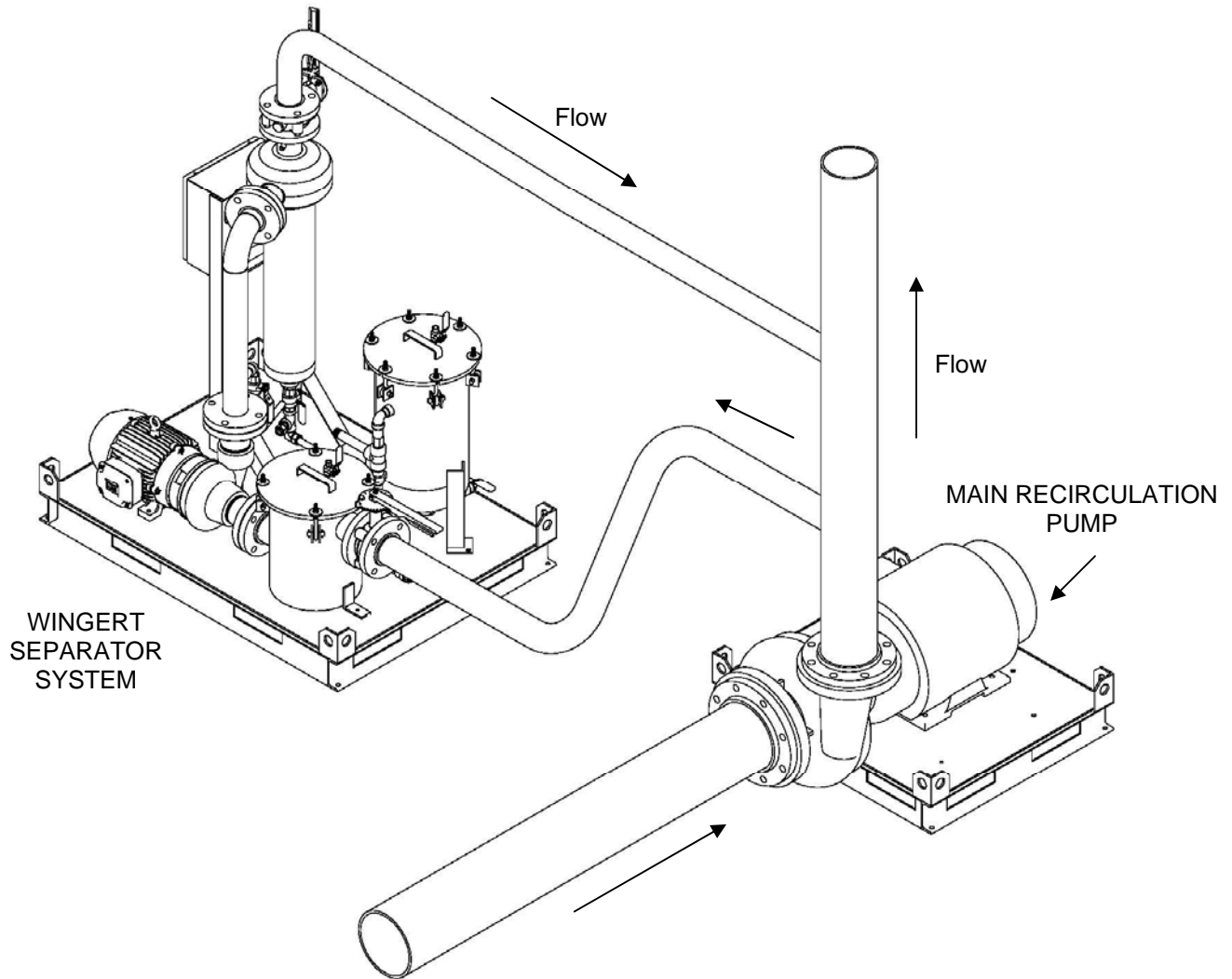


Figure 2

7.2.2 Side Stream Installation with Return to Pump Suction

Figure 3 - This installation shows the Wingert Separator System plumbed across the main recirculation pump. This type of installation only allows for the pressure drop that the separator system pump can provide. A minimum of four PSI pressure drop is needed but the greater the pressure drop, the better the separation.

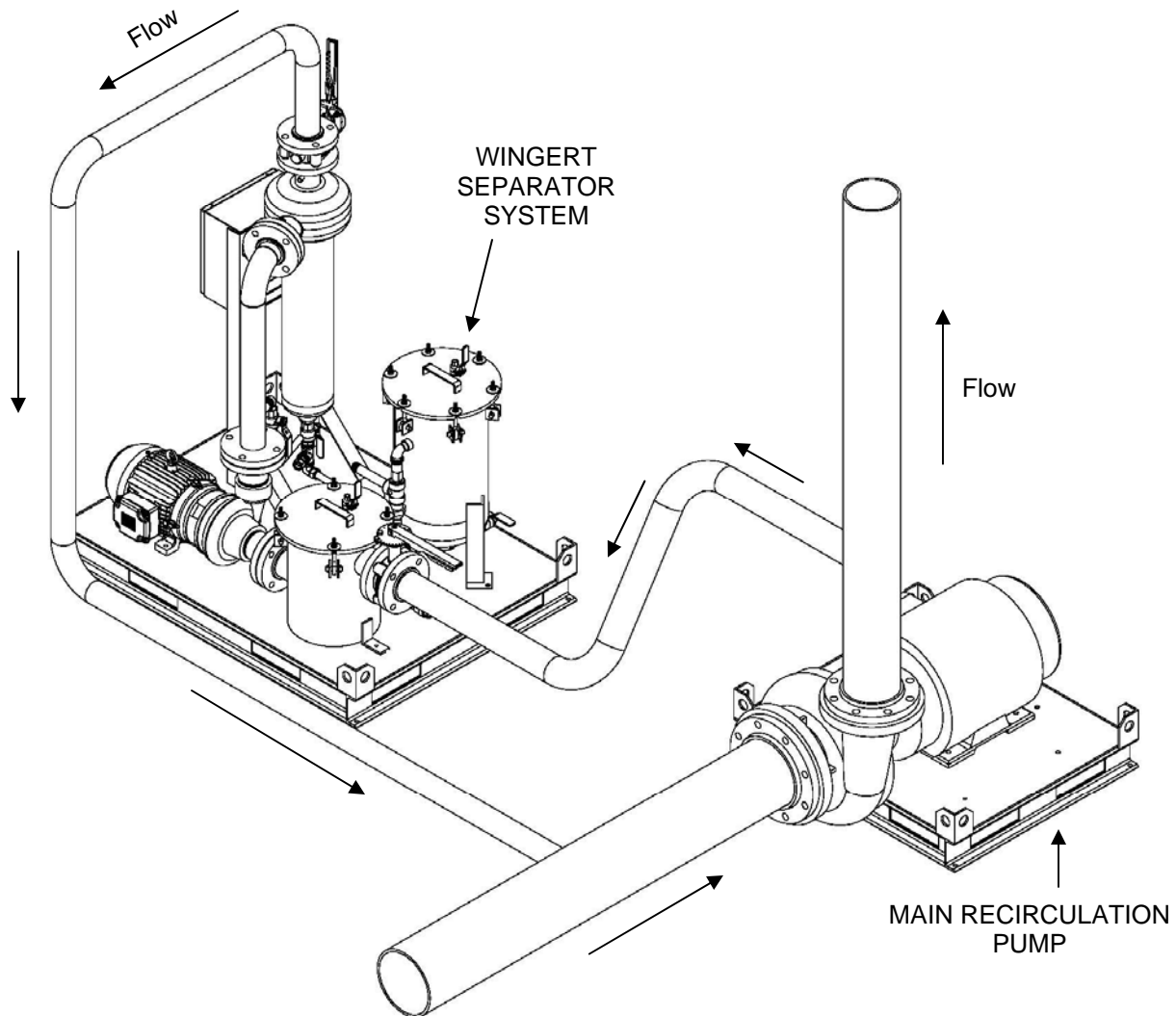


Figure 3

8.0 ELECTRICAL

DO NOT INSTALL ANY SYSTEM WITH LIVE ELECTRICAL POWER ALL POWER MUST BE DEACTIVATED BEFORE SERVICING

All electrical work should be handled by a qualified electrician and meet local electrical codes. Before connecting any power, verify correct voltage, phase and Hertz by reading the label inside the control panel, located on the door. Consult the factory if these do not match your needs. Connect incoming power leads to the appropriate terminals as indicated on the wiring diagram located in the control panel.

As an option, the Wingert Separator System can be configured to initiate in a remote or automatic mode. This mode is a switch closure at 110 VAC, 1 phase, 60 Hz and less than 5 amps. Turn the system switch on the control panel to the “A” position. Then place a hot wire to terminal #14 and the control wire to terminal #15. Once the circuit is closed and maintained, the system will operate in an automatic fashion.

Additionally, a service indicator remote signal or motorized purge signal can be wired to a control booth to allow maintenance personnel to be alerted when service is needed or when the package is in a blow down mode. This signal is also 110 VAC, 1 phase, 60 Hz and less than 5 amps. To get this signal to the control booth or external alarm for the service indicator, place a wire for neutral to terminal #13 and a hot lead to terminal #12. For a signal to the control booth or external alarm for system blow down, wire neutral to terminal #10 and a hot lead to terminal #11, (MPK models only). This connection needs to ground to the box or to the control booth panels. When finished with wiring, close and secure the control panel. Make sure all electrical connections are in compliance with local codes and that all connections have no open exposures.

9.0 START-UP AND OPERATION

Before starting the system:

- *Check that all latches on the recovery tank and pump strainer are secure.*
- *Close the two drain valves on the Recovery Tank.*
- *Close the valve between the Strainer and Recovery Tank. (Does not apply to MPK models).*
- *Open all other system valves.*
- *Open the air release valve on the Pump Pre-Strainer.*
- *Close the air release valve once fluid comes out.*
- *Turn the main power switch to “ON.” The green indicator light will illuminate.*

To prime the system and remove air from the lines:

- Turn the system switch to “**H**” for hand operation. The pump will activate and will energize system liquid flow.
- Visually check all components for leaks that may have developed during shipment.
- Open the Air Release valve on the separator to purge trapped air. (Optional AR)
- Close the valve once all the air has been purged and water is discharged from the valve. (Optional AR)
- Once flow has been established for a few minutes and there are no signs of leakage, open the air release valve on the Recovery Tank until water is visible, then close.
- Open the valve from the Recovery Tank to the pre-strainer. (Does not apply to MPK models).

10.0 MAINTENANCE AND SERVICING

The only maintenance that is needed for the Wingert Separator System with recovery tank is a periodic check for leaks, wear, and a cleaning of the recovery tank and pre-strainer. When you service the recovery tank, it is always best to clean the pump pre-strainer. If your Separator System was ordered with a Motorized Purge Kit, (MPK), this purging will happen automatically; however, periodical checking of the pre-strainer is required.

10.1 SERVICING THE RECOVERY TANK (Does not apply to MPK models)

An illuminated service light on the control panel indicates that the recovery tank has become full and needs to be cleaned. There are two types of servicing.

10.1.1 (QUICK SERVICING) The recovery tank can be serviced, while in operation, by closing the isolation valves, opening the drain valve and the air release valve. Once the recovery tank is empty of liquid, the securing clamps can be opened and the lid removed. **DO NOT REMOVE THE LID UNTIL ALL PRESSURE HAS BEEN RELIEVED.** Remove the basket and filter by the basket handle. Rinse out the solids collected by the basket and filter. Reinstall the used, cleaned filter into the basket, or replace with a new filter, if needed. Reinstall the recovery basket and filter assembly. Secure the clamps and close the drain valve. Open the isolation valve between the separator and the recovery tank, then close the air release valve after purging the air from the recovery tank. Open the isolation valve between the pre-strainer and the recovery tank. At this point, the service light should no longer be illuminated.

10.1.2 (RECOMMENDED)

When the recovery tank is full, it is assumed that the pre-strainer will have caught a significant amount of debris. To service the recovery tank and pre-strainer, the system power needs to be turned off and the isolation valves need to be closed. The system can then be drained by opening the strainer drain valve and the recovery tank drain valve. Opening both of the air release valves aids in this process. Once the system has been drained, open the strainer and recovery tank clamps and clean the strainer and basket. **DO NOT OPEN THE STRAINER AND RECOVERY TANK UNTIL ALL PRESSURE HAS BEEN RELIEVED.** Once cleaned, secure the clamps, replace the filter and return the strainer basket assembly. Next, follow start-up procedures section 8.0 on page 6 of this manual.

10.2 CHECKING FOR LEAKS AND WEAR

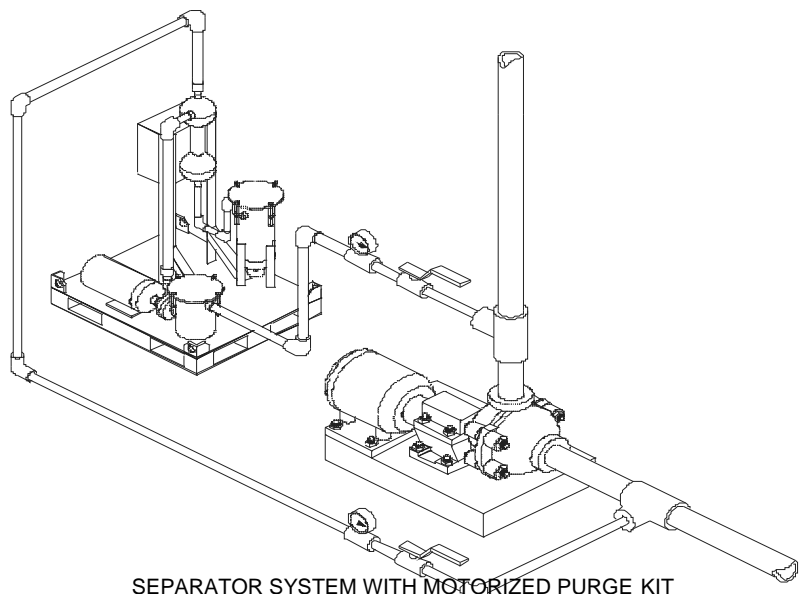
Checking the system at the threaded and flanged fittings for leaks is essential to the performance of any piping system. Leaks can cause external corrosion when the system is not in use and allow air pockets to develop. When the system has been installed and is running, it will develop a pressure drop. A pressure drop is the system's way of settling the solids through the separation chamber. Typically the first item to show wear will be the pump impeller. Once the pump impeller starts to wear, the pressure drop will start to decline. To monitor this, mark the pressure gauges where the pressure drop has been established in the system. After doing this, any deviations noted from these marking either means that the impeller is wearing, that the recovery tank needs servicing or that the separator has become clogged.

10.3 SERVICING THE MOTORIZED PURGE KIT

A maintenance schedule should be developed and followed to service the motorized purge kit. Periodically check for leakage, cracks or other wear. The service frequency is dependent on the amount of solids removed from the system as the more solids removed, the quicker the chance for system wear. Because the dirt and system water are being discharged, the trap or waste filter will have to be checked or installed so that the plumbing does not clog.



SEPARATOR SYSTEM WITH RECOVERY TANK



SEPARATOR SYSTEM WITH MOTORIZED PURGE KIT

