



Des-Case[®] Breathers

Paper Mill in Western Montana

Customer Profile

This Paper Mill in Western Montana is a premier integrated paperboard and paper-based packaging manufacturer. They are a leading producer of containerboard, including white top linerboard and recycled medium, kraft paper, corrugated containers, and point-of-purchase displays.

Challenge

The manufacturer tried to establish a desiccant breather program at their plant through the assistance of a local supply house. Without proper assistance, the manufacturer had difficulties with the program. Some applications back pressured and many were consumed prematurely while using a competitor's brand of breather.

LE Solution

The reliability manager approached Pezoldt Petroleum Products (PPP) about trying to re-establish their desiccant breather program. After a tour of the plant, it was clear that the problems associated with the initial program could be corrected. A spreadsheet was produced by PPP. The spreadsheet gave specifics on the correct type, size and mounting instructions for Des-Case Desiccant Breathers.

Results

The installation of Des-Case breathers at these critical ingress points is a cost-effective means to prevent contaminants from entering the fluid reservoirs as differential pressures occur.



Photos before desiccant breather conversion. **Above:** no breather utilized. **Below:** pleated air filter only, no desiccant.



Thank you to Jim Pezoldt, LE lubrication consultant (pictured), for providing the information used in this report.





Incorrect size



Breather mounted too close to tank

Desiccant Breather Worksheet

Prepared by Pezoldt Petroleum Products

Unit I.D.	Part #	Product Description	Mounting Suggestions
Washer Thick Stock Pump	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount as is, replacing existing breather
AC Pumps	LE BB	3 CFM capability 3/8"NPT, size 3"x2"	Mount @ 90° Angle, minimal height required
All other small rotary assemblies (pumps/reducers)	LE BB	3 CFM capability 3/8"NPT, size 3"x2"	Mount @ 90 deg. Angle, minimal height required
Washer / De Shiv	LE 4	16 CFM Capability 1"NPT, size 10"x4"	2 units w/a 12" vertical pipe and a 12" manifold
#2 Paper Mach. Vacuum Blower Drive X3-03	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount @ 90° Angle
#2 Paper Mach. Vacuum Blower Drive X9-100	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount @ 90° Angle
#2 Paper Mach. Press Hyd Syst.	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Consider creating a mount next to level probe on top of tank.
#3 Paper Mach. Couch Roll Lube Syst.	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount as is, replacing existing breather
#3 paper Mach. Main Lube Syst.	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount as is, replacing existing breathers. Consider raising them higher to make them easier to replace.
#2 Paper Mach. Main Lube Syst.	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount as is, replacing existing breathers
#3 Paper Mack. Calendar Stack Hyd. Oil	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount 6" higher than existing vent cap
#3 Winder Hdy. Resv.	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Loosen before install per instructions
Same area as Winder Spitter Reservoir	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount 6" higher than existing vent cap
Top Roll Felt Charge Cylinder Oil Reservoir	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount 6" higher than existing vent cap
#3 Shoe Press	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount 6" higher than existing vent cap; w/galvanized steel (no black steel) w/manifold for 2 breather set-up

#6 and 7 FWP	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount into open area space approx. 12" higher than existing steel breather
#7 and 8 FWP	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount into open area space approx. 12" higher than existing steel breather
#4 I.D. Fan Gearbox	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount into open area space approx. 12" higher than existing steel breather
#4 I.D. Fan Oil Reservoir	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Need at least 6 more inches of height using 90° Angle to keep water from breather
#1 Truck Dump Reservoir	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount 6" higher from existing vent
#2 Truck Dump Reservoir	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount 6" higher from existing vent
Make-up Hyd Oil @ Chipper Fuel Depot	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Replace existing vent cap with 6" pipe and LE 4
Diesel Fuel Tank	LE 4	16 CFM Capability 1"NPT, size 10"x4"	No existing breather; install LE 4
Waste Fuel Feeder #1, #2, #3, #4 and spare	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Replace steel breather w/LE 4 as is
Bridge Breaker Resv. (Hdy oil)	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Replace steel breather w/LE 4 as is
Shifting Drag Conveyor	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Raise existing pipe at least 6" and replace steel breather w/LE 4
Kiln Gear Drive	LE 4	16 CFM Capability 1"NPT, size 10"x4"	No breather, however there is existing pipe that can be used.
#2 Turbine Kidney Loop System	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Replace steel filter w/LE 4 using existing mount
#2 Turbine Generator Lube Syst.	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Mount using an elbow from existing dip stick pipe
#4 Kidney Loop System	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Replace steel breather w/LE 4 using existing mount conditions (raise if possible)
#4 Turbine Generator Lube Syst. Gearbox	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Remove rubber hose and install breather as is
#4 Turbine Generator Lube Syst.	LE/CS-6	100 CFM capability 2"NPT, size 10"x9" Rebuildable breather	Mount is per Maintenance Request
#4 Turbine Generator Lube Syst.	LE DC-60	Desiccant Bag Filter	
#4 Turbine Generator Lube Syst.	LE DC-6F/1	Pleated Filter Element	
High Pressure & Low Pressure Feeder	LE 4	16 CFM Capability 1"NPT, size 10"x4"	Replace existing steel breather w/LE 4

Quantity Recommended	Product Number	Description
48	LE4	4" x 9" Hygroscopic Breather
24	LEBB	2.75" X 3.25" Button Breather
1	LE/CS-6	10" X 9" Rebuildable breather
2	LEDC-60	Desiccant Bag Filter
2	LEDC-6F/1	Pleated Filter Element



Pictures after desiccant breather conversion



Des-Case® is a registered trademark of Des-Case Corporation.

Based on actual user experience. Individual results may vary. Not intended to supersede manufacturer specifications.

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