



Case Study

Eliminating air moisture in fuel tanks



The Challenge

One of the biggest oil companies in Northern Europe faced difficulties with the storage of diesel, blended with 5% RME (Rape Methyl Ester) that complies with FAME (Fatty Acid Methyl Esters) rules for diesel vehicles. This diesel contains more water than standard diesel and therefore storage time is reduced. The problem was going to increase because the company was planning to introduce up to 10% higher blends of RME (FAME).

The Solution

The Donaldson Clean. Protect. Polish.™ attitude towards bulk filtration delivers optimal solutions to increase cleanliness level of liquids downstream refineries.

Particon Teknik Ab/Wennström offered a customized solution featuring the **Donaldson's T.R.A.P.™ breather** for bulk filtration and a 2-ways safety valve. Hereby avoiding air moisture coming into the tank via inhaled air, as this could increase the water content causing bacterial growth in it.

The T.R.A.P.™ solution had been successfully tested out for one year in six geographically different locations. The breathers kept the water content far below the limits of 100 ppm allowed by the oil company. Moreover, application tests showed an extended expected service life of 6 months.

The Result

Donaldson T.R.A.P.™ breathers will be installed on all the company's diesel tanks, starting with the filling stations for heavy duty vehicles.

Donaldson's innovative T.R.A.P. Technology

Protect your investment while it's in storage

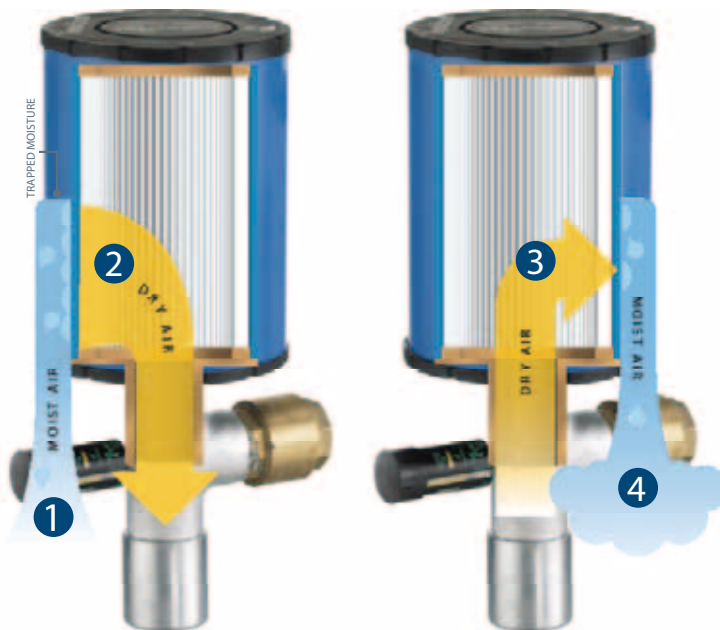
The Donaldson T.R.A.P.™ (Thermally Reactive Advanced Protection) breather reduces the risk of dust and moisture entering storage tanks from the vent while allowing high flow rates of fluid into and out of the tank.



T.R.A.P.™

| T.R.A.P. BREATHER | Max. Flow Range | Filter Efficiency | Replacement filter | Connection |
|-------------------|------------------|-------------------|--------------------|------------|
| DFP0078 | 500 gpm/1893 lpm | >97% at 3 micron | P923075 | 1 1/2" BSP |

How a T.R.A.P.™ Breather Works



Intake Cycle (Inhalation)

- 1 The circuit "breathes in" air containing moisture vapor.
- 2 The T.R.A.P. breather strips moisture and particulate from the incoming air, allowing only clean, dry air to enter the circuit.

Outflow Cycle (Exhalation)

- 3 During the "exhalation" cycle, The T.R.A.P. breather allows unrestricted airflow outward.
- 4 The outflow of dry air picks up the moisture collected by the T.R.A.P. breather during intake, and "blows it back out" – fully regenerating the T.R.A.P. breather's water-holding capacity.



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