Achieving near total control of fluid system contamination, NAPA Industrial Breathers have led the industry by improving productivity, prolonging fluid life, reducing maintenance costs and controlling expensive downtime. The pace of a competitive world absolutely requires this level of performance.

NAPA Industrial Breathers are designed to replace the breather cap or air filter on gear boxes, hydraulic fluid reservoirs, bulk storage tanks, oil drums, oil-filled transformers and other fluid reservoirs. NAPA Industrial Breathers make use of desiccant to adsorb water from the air before it enters your fluid system and remove particulate contaminants as small as 2 microns.

The silica gel changes color as it becomes depleted, turning from gold to dark green. It’s easy to identify the condition of a breather and quickly replace it, maintaining the cleanliness of the fluid reservoir.

Moisture

Moisture is a continuous threat. Its presence in lubricants and hydraulic fluids creates a host of problems including rust, lubricant additive depletion, viscosity changes, oxidation and sludge formation.

NAPA Industrial Breathers neutralize contamination while protecting operational efficiencies which is reason enough to go for the gold. NAPA Industrial Breathers stop moisture from entering your equipment while still allowing clean air to pass through.

With an NAPA Industrial Breather installed you can rest easy knowing that your investments are protected from humidity and the ill effects associated with moisture getting into your systems.
**Industries:**
- Manufacturing
- Recycling
- Mining
- Steel Production
- Construction
- Wastewater Treatment
- Power Generation
- Material Handling
- Railroad
- Marine
- Cement Facilities
- Agriculture

**Applications:**
- Mobile Equipment
- Stationary Equipment
- Fluid Storage
- Wind Turbines
- Transformers
- Presses

**How They Work**

NAPA Filters Industrial Breathers replace existing breather caps or air vents on fluid holding tanks, reservoirs and gearboxes. Most older style air venting methods provide minimal if any contamination control. NAPA Filters Industrial Breathers provide the first line of defense in contamination control methodology utilizing patented designs and featuring color indicating silica gel and self cleaning 2-micron filtration.

Diagram 1 indicates how the patented design allows outside air to enter through the 360° opening in the breather’s top cap. The top cap design overhangs the body of the breather helping protect the breather from rain, sleet, snow, as well as most equipment washdown procedures. When contaminated air enters the top of the breather, it passes through a self cleaning solid particle filter. This filter traps solid particles greater than 2 micron and keeps them from entering the breather and ultimately to wear surfaces on your equipment. The filtered air then passes through a bed of silica gel that adsorbs moisture in the air. During this step up to 95% of the water vapor in the air is filtered out.

Finally, the filtered air passes through an additional 2 micron filter in the bottom of the breather to ensure that no harmful particles will enter the tank or reservoir. This three stage filtration design ensures your equipment gets CLEAN, DRY AIR! As the color indicating silica gel adsorbs moisture it changes from gold to dark green. When the silica gel is adsorbed to its capacity (approximately 40% of its original weight), the breather has fully turned dark green. This color change is easily seen and serves as the visual indication that it is time to remove and replace the disposable breather.

**Diagram 2** indicates air being expelled back through the desiccant breather from the equipment the breather is mounted on. As contaminated air travels this reverse path, expelled water vapors are adsorbed by the silica gel.

During this reverse air flow process, the silica gel indicates the presence of excessive moisture inside the reservoir as the gold silica gel turns to dark green from the bottom of the breather rather than from the top of the breather.

An additional feature located in the bottom of most NAPA Industrial models is a layer of carbon impregnated foam. This carbon pad absorbs small amounts of oil vapor exhaled from the tank and protects the silica gel from minor oil mist contamination. Excessive oil mist control may be required. Adapters are available for applications with excessive oil mist problems.

As the exhausted air passes back through the self cleaning 2-micron filter, located in the top cap of the breather; any particles that were trapped as air entered the system are now back flushed from the filter.

**Diagram 2**

Exhausted Air

Solid Contaminant Filter (2 μm)

Air Diffuser

360° Air Flow

High Capacity Water Vapor Adsorbs

Solid Contaminant Filter (2 μm)

Activated Carbon

Removes Oil Vapors

CLEAN DRY AIR

EXHAUST AIR

[Diagram 2]

**NAPA Filters**

All you need to know.
napafilters.com