



DES-CASE CASE STUDY

Rebuildable Steel Breathers Earnhardt-Childress Racing

Customer:

Earnhardt-Childress Racing (ECR)

Web Site:

www.ecrenines.com

Location:

Welcome, North Carolina

Industry:

Motorsports

Product Used:

Des-Case Rebuildable Steel Breather (DC-RS005SVP)

Customer Profile:

Earnhardt-Childress Racing, located in Welcome, NC, is a leader in the development of motorsports engines for Chevrolet NASCAR Cup, Nationwide, and Truck Series. With 120 dedicated employees and 62,000 sq ft, ECR produces over five hundred groundbreaking engines annually and earned (50) race victories 2010. They have redefined what it means to be a racing champion.

"The Des-Case solution was intuitively engineered and the serviceability was best in class when compared to other options."

Dr. Andrew L. Randolph — Engine Technical Director

The Challenge:

When NASCAR mandated the 15% ethanol-gasoline blend starting with the Daytona 500, in an attempt to increase green and environmentally friendly applications, it proposed an entirely different challenge for companies who supply racing engines in the NASCAR circuit.

The most problematic being the fact that ethanol is hygroscopic, readily absorbing water from the air and essentially altering the fuel mixture and compromising the purity and strength of the engine fuel.

As testing proceeded, it was quickly realized that for every 1% of water that the ethanol pulled into the fuel storage tank the engine would lose 10 hp.

In a world where speed determines the champion and every horsepower counts, ECR took immediate action to find a solution that would protect their fuel from the moisture that could ultimately negate their tireless hours of research, development, and testing.

The Solution:

ECR contacted Des-Case to find a solution to fit their 1250 gallon fuel storage tank. The team at Des-Case felt confident that the Rebuildable Steel Breather could provide ECR with the solution they were searching for. The DC-RS005SVP easily combatted the challenges ECR was facing with the newly mandated ethanol fuel mixture.

The DC-RS005SVP is equipped with a carbon steel housing, easy-to-replace desiccant bags that remove moisture from incoming air, sight-glass to determine when desiccant is spent, and filtration that is 99.9% efficient at 1 μ . The DC-RS005SVP extends fluid and system life by eliminating rust-forming condensation that can eventually compromise fuel composition.

“We were very impressed with the Des-Case breather, and appreciate the time spent in ensuring we had the proper solution for our particular situation,” *Dr. Andrew Randolph, Engine Technical Director.*

Product Specifications:



- Rugged steel housing
- Pleated filter elements captures airborne contamination to 1 micron
- Water vapor absorbent, clear silica gel absorbs water from incoming air
- Outside site glass, silica gel changes color from blue to pink when unit requires rebuild kit
- Integrated standpipe, resilient construction provides durability and allows oil mist to coalesce and drain back into reservoir
- Ideal for: high-flow applications & harsh environments