CAT[®] FLUID FILTERS

FOR MARINE CUSTOMERS





WHY DESIGN MATTERS

Today's high-performance, low emission engines require tighter tolerances, higher pressure and run at increased temperatures so contaminants become an ever-increasing problem.

When we design Cat[®] Filters, our objectives are to provide your engine with greater protection from contaminants and reduce your costs. We accomplish this through unparalleled design that delivers features none of our competitors offer.

Manufactured exclusively for Caterpillar, Cat Filters provide consistent quality and performance proven to be better than the rest.

Let's look inside a Cat Fluid Filter...





STRONGER BY DESIGN

The non-metallic center tubes in Cat Filters also deliver added strength, helping prevent collapse during cold starts and pressure spikes.

Tests have shown that Cat non-metallic center tubes are up to 30% stronger than the typical metal tube used by other brands. This added strength helps make Cat Filters extremely durable, providing a longer filter life and lower operating costs.

DON'T INTRODUCE PROBLEMS

Cat Filters start with a non-metallic center tube, made from fiberglassreinforced nylon. Unlike other brands, Cat prefers a non-metallic tube because it adds strength and eliminates a source of contamination.

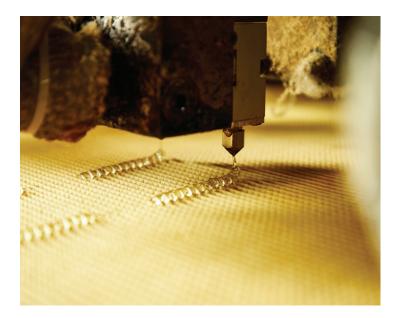
Metal center tubes, preferred by other brands, can carry metal shavings left over from the manufacturing process. These metal shavings can be picked up by the fluid on the clean side of the media and carried through the system causing component wear and premature failure.

Tests have shown that non-metallic center tubes are up to 30% stronger than the metal tubes in similar filters.

SEPARATION THAT MATTERS

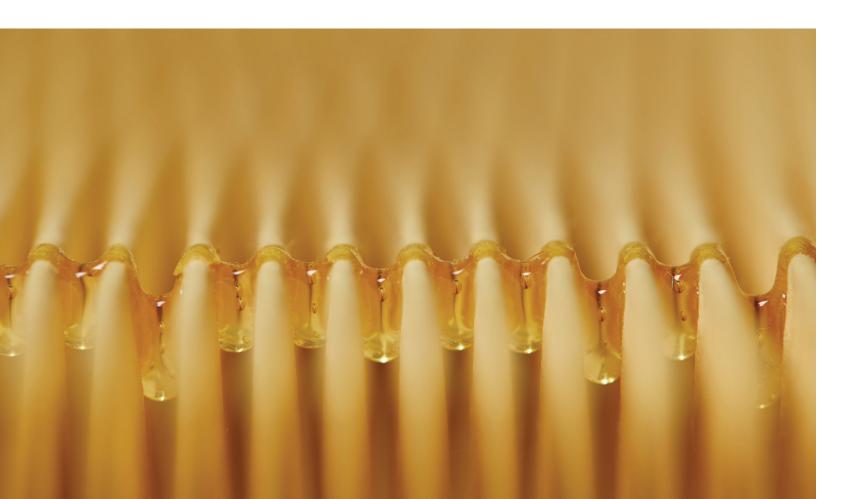
Consistent pleat spacing is critical to the efficient functioning of a fluid filter. It maximizes the media's surface area and helps capture and hold contaminates until the next change interval.

Cat Filters utilize acrylic beads to keep the pleated filter media evenly spaced and the media more rigid, which prevents the media from bunching. Bunching, which other brands commonly experience, reduces filter life and



can also trigger a bypass allowing contaminants to continually circulate through the system and cause additional wear.

The acrylic beads in Cat Filters help keep your asset in production, decreasing downtime and lowering operational costs so you can avoid non-productive time.

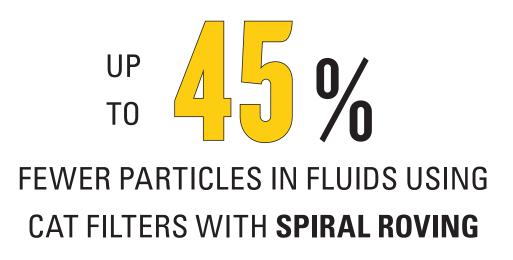




HOLD IT, DON'T MOVE

When a filter's pleats flex, contaminants can be released through the filter media into the clean side of the filter where they continue to circulate through the engine causing increased wear.

Cat Filters have a fiberglass cord wrapped around the media called spiral roving. This spiral roving prevents the pleats in the media from flexing as the fluid travels through the filter, ensuring that contaminates are captured and held. This improves filtration efficiency and reduces the particle count in the fluids by up to 45%.



Tests have shown that particle counts of filters with spiral roving were 45% lower than similar filters without spiral roving

CAPPING IT OFF..

To completely seal off the clean side of the filter, Cat Filters use a molded urethane endcap. During the manufacturing process, the filter media is inserted into the polyurethane before it hardens.

Unlike other filter brands that glue a metal endcap onto the media, the Cat Filter's one-piece molded urethane endcap creates an impregnable barrier that keeps contaminates confined to the dirty side of the filter.





INTEGRITY YOU CAN RELY ON

Molding the media pleats into the polyurethane end caps also improves the structural integrity of Cat Filters and eliminates any possibility of gaps, keeping contaminants locked in the filter and out of your system.

Cat Filters also feature a one-piece, aluminum baseplate. A non-ferrous metal, the aluminum baseplate reduces harmful contaminates and provides more thread engagement.

All this, along with the thickest one-piece canister in the industry, enables Cat Filters for Fluids to ensure your assets are always ready.



THE CATERPILLAR DIFFERENCE

INSTALLATION TIPS $\mathbf{>}$

- Reduces pleat flex and fatigue •
- Maximizes media service utilization •
- Increases contaminate retention •

URETHANE END CAPS

- One piece design with media molded into urethane •
- Eliminates possible leak paths ٠



ALUMINUM TOP PLATE

- Non-ferrous metal reduces harmful contaminates
- More thread engagement ٠

ACRYLIC BEADING

- Prevents bunching •
- Maximizes media surface area utilization •



NON-METALLIC CENTER TUBE

- Stronger than metal •
- Maximum cleanliness •

> CANISTER

- Thickest can in the industry
- One piece design maximizes strength while minimizing potential leaks

LET'S DO THE WORK."

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24/7

ORDER AND ACCESS 24/7

Looking for ongoing access to information on the Cat parts, tools and materials you need to get the job done?

You'll find it at parts.cat.com. Or, contact your local Cat dealer for all the parts and services that Caterpillar has designed to help you cut operating costs.

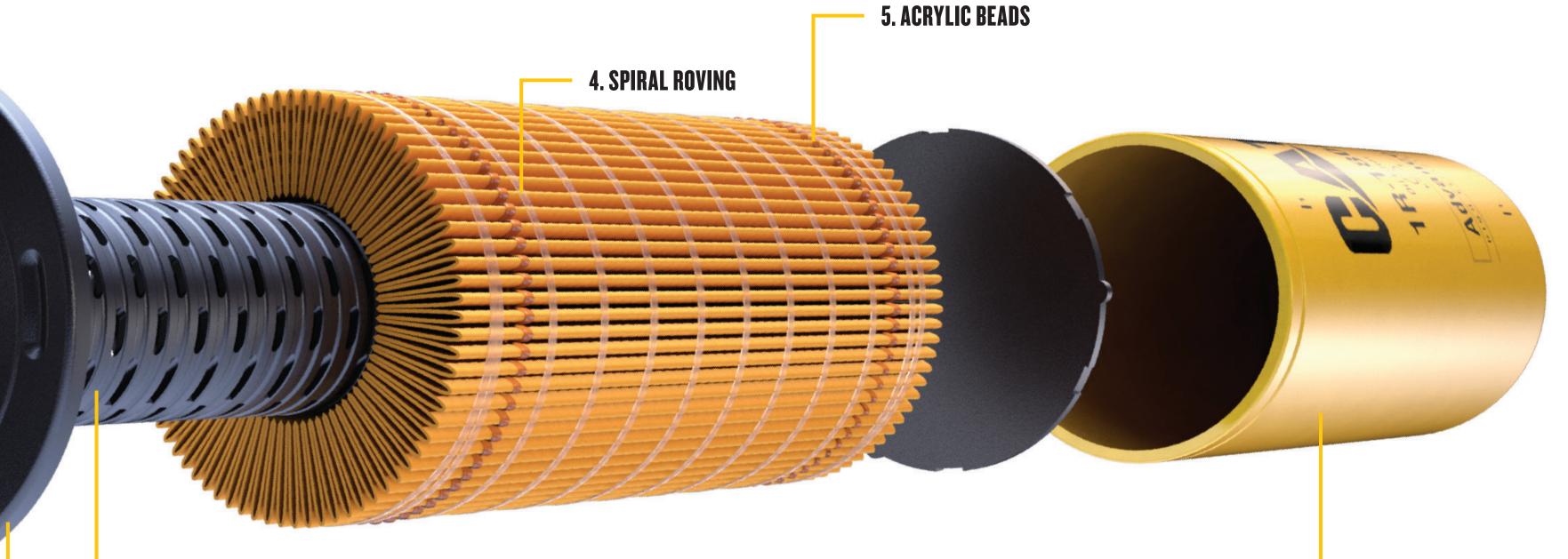


1. ONE PIECE ALUMINUM BASEPLATE



2. MOLDED URETHANE ENDCAP

BUILT EXCLUSIVELY FOR CAT DIFFERENCES THAT MATTER



3. NON-METALLIC TUBE

6. THICKEST ONE-PIECE **CANNISTER IN THE INDUSTRY**