



PROVEN POWERTRAIN PERFORMANCE, TWO WAYS: DIRECT-FIT OR TUBE-MOUNT VENTS

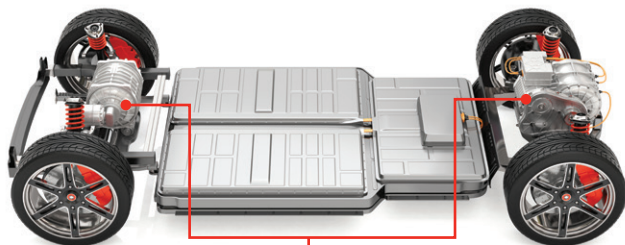
Choose Gore direct-fit or tube-mount vents: Both provide high performance and durable protection for electrified and traditional powertrain components

Venting for Protection

As packaging constraints push e-drivetrain components closer to the road surface, they are more vulnerable to extremes of weather, water, submersion or road contaminants that can threaten component reliability.

Now, GORE® Automotive Vents for powertrain offers two paths to high-performance venting and ingress protection: Traditional tube-mount vents (Part VE2048) and a new, more compact direct-fit mounting option (Part VE2148). Both can help you overcome the challenges inherent in designing, validating, and protecting electrified and traditional powertrain components.

Typical Applications



Traditional components:

- Transfer Case
- Power Transfer Unit
- Solid Beam
- Rear/Front Drive Module

E-Drivetrain:

- e-Axles
- Oil-Cooled e-Motor

Different Mounts. Same Benefits.

■ Improve component reliability

The vents' GORE Membrane protects oil-cooled e-motors and other e-drivetrain components from damaging contaminants, while Gore's integrated Pre-filter protects the Membrane from internal oil aerosols that would quickly degrade an unprotected membrane.

■ Preserve seal integrity

Even in extreme operating conditions, the breathable GORE Membrane rapidly equalizes pressures to avert stress on seals.

■ Meet global OEM standards

Our vents' performance complies with OEM standards for water wading and fluid containment.

■ Streamline validation and reduce design cycles

These waterproof vents can eliminate vent-related wading test "fails" and associated engineering redesign time.

■ Global support resources

Every GORE® Automotive Vent is backed by our global network, materials technology expertise and application support.

About Gore's Direct-Fit Powertrain Vent (AVS 2148/VE2148)

- Compact, low-profile construction enables more design options, especially for space-constrained e-drivetrain and e-motor applications.
- Direct-fit (vent mounted directly into component housing) can streamline sourcing, supply and assembly efforts.
- Easy snap-fit integration to housing.

About Gore's Tube-Mount Powertrain Vent (AVS 41/VE2048)

- Tube-mount "distances" vent from potential exposure to high temperatures or lubricants.
- Tube format enables more flexibility in routing, especially for traditional powertrain components.
- Easy integration into existing applications; vent replacement, if required, is easy.

The same proven performance characteristics ... in two mounting styles



Product name (order number for samples)	AVS 2148 (Direct-Fit)	AVS 41 (Tube-Mount)
Order number (order number for series production)	VE2148	VE2048

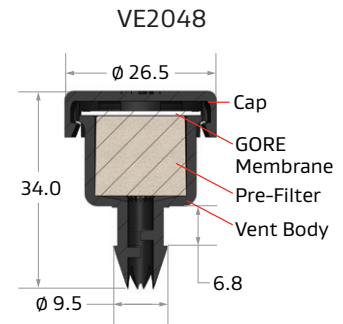
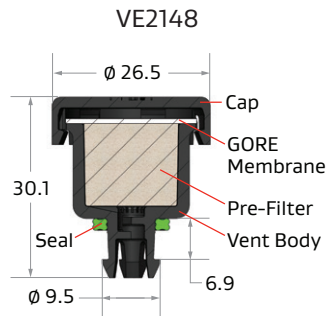
Product performance characteristics	
Minimum airflow (per part) at 70 mbar (1 psi)	64 l/h
Water Entry Pressure (assembly)	> 345 mbar (> 5.0 psi) for 60 seconds
Ingress Protection (IP)	IPX9K*, IPX6K, IPX8, IP6X, IPX4
Operating temperatures	-40 °C to +125 °C
Membrane characteristic	Hydrophobic and oleophobic

Materials of construction		
Cap material	PA6.6 Impact modified	
Body material	PA6.6 – GF13	PA6.6 – GF33
Membrane type	GORE Membrane oleophobic ePTFE	
Pre-filter type	Sorbent	
Quad-ring (VE2148 only)	HNBR	N/A

*IPX9K Test Parameters: Pressure = 80 bar, Distance = 150 mm, Temp = 75 °C

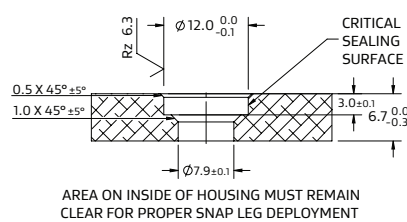
Vent design and dimensions

Units are in mm

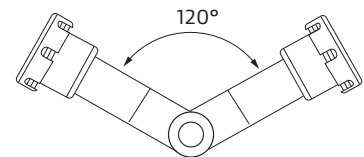


Vent positioning, installation and tolerances

For full details on integrating these vents into your components, ask your representative for the **Design and Installation Guidelines for Gore Powertrain Vents**.

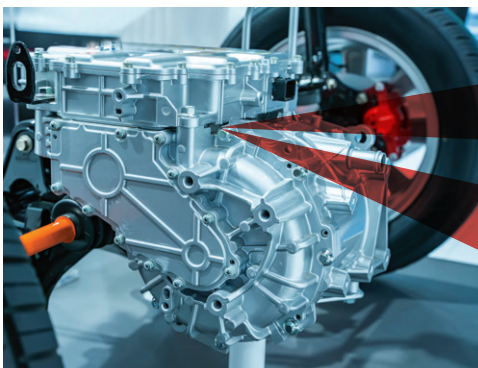


Recommended component interface to maintain ingress protection. (Interface shown above was tested using aluminum housing material.)



Suggested tube ID: 6.0–8.0 mm; wall thickness: 3.0 mm. Your tube supplier should recommend materials and dimensions that are optimal for your specific application.

Contact your Gore representative to request the complete **Design and Installation Guidelines for Gore Powertrain Vents**



Gore Direct-Fit Vent
VE2148

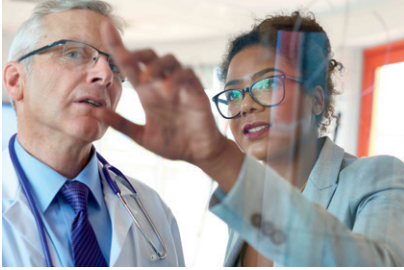


Gore Tube-Mount Vent
VE2048



Learn more

Contact your Gore representative or connect with us at [GORE® Automotive Vents for Powertrain](#).



A materials science company dedicated to transforming industries and improving lives

About Gore

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Learn more at gore.com/autovents

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