

# « JUST THE FACTS »

## Diesel EGR Coolers

### Not All EGR Coolers Are Designed the Same

EGR coolers use engine coolant to reduce exhaust gas temperatures before the gas is recirculated through the intake system. Reducing exhaust gas temperatures is critical for reducing NOx emissions. Plus, engines that run with higher EGR temperature don't adequately cool the combustion, which can reduce the life expectancy of the EGR valve, engine valves, and head gaskets.

But not all EGR coolers are the same. The original equipment EGR cooler's fin-and-tube-style design is prone to clogging and leaking. Additionally, many aftermarket EGR coolers feature various tube designs that do not provide the necessary cooling. Providing a superior alternative to both designs, BWD® is proud to offer an EGR cooler with an upgraded 20 spiral tube design. Take a look at our DEK1, for example:

### DEK1

**Ford F Series & Excursion w/ 6.0L (2007-04)**

**Ford E-Series w/ 6.0L (2010-04)**

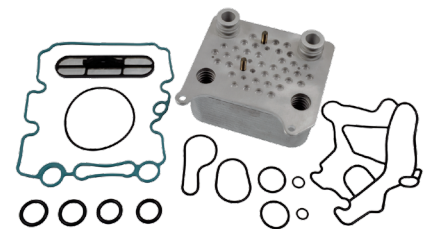
**Navistar VT 365 Engines (2007-04)**

Upgraded 20 spiral tube design provides OE-matching cooling efficiency while preventing clogging and leaking

100% new, not remanufactured, so there are no core charges or core returns

Stainless steel construction maximizes corrosion resistance and dimensional stability

Comes with intake manifold gaskets, seals, and hardware for a complete EGR cooler install



DC1 - Diesel Oil Cooler Kit

**Tech Tip:** When replacing an EGR cooler, experts recommend inspecting and servicing the oil cooler, too.

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## The Benefits of a 20 Spiral Tube Design

The OE EGR cooler features a tube-and-fin-style design that is prone to clogging from soot and to internal leaks from fractures caused by overheating. To address the design flaw, our EGR cooler features a 20 spiral tube construction that resists soot clogging and prevents leaks to maintain proper system flow and pressure. Plus, our design provides the same cooling efficiency as the OE design.



### BWD® DEK1

**Design:** 20 spiral tubes

**Effect:** Provides OE-matching cooling efficiency while resisting soot clogging and maintaining necessary system flow and pressure



### OE

**Design:** Fin-and-tube

**Effect:** Although this design is efficient, it's prone to soot clogging and internal leaks from fractures caused by overheating



### Competitor A

**Design:** 6 spiral tubes

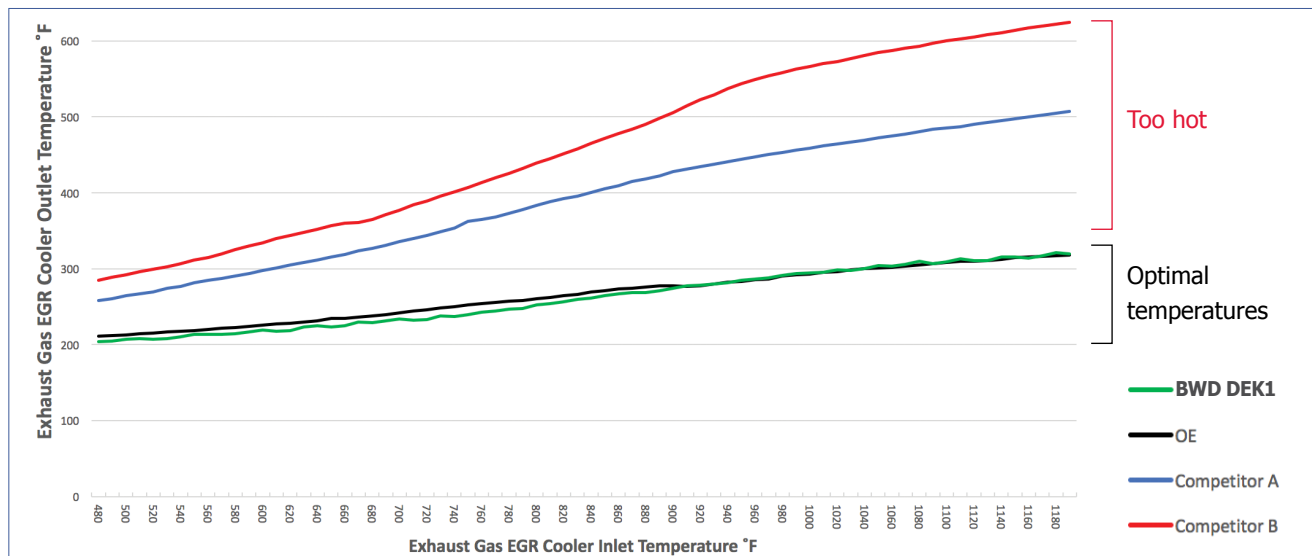
**Effect:** Exhaust gas temperatures that are hundreds of degrees hotter than OE specs, which can reduce the life expectancy of the EGR valve, engine valves, and head gaskets.



### Competitor B

**Design:** 6 straight tubes

**Effect:** The straight tubes are less efficient than spiral tubes, which creates even hotter exhaust gas temperatures than Competitor A



## Tested to Ensure OE Cooling Efficiency

Most aftermarket suppliers fail to adequately test their EGR coolers for proper performance. We subject our EGR Coolers to 100% factory testing for air and water leaks. To see how our DEK1 EGR Cooler performs against both the OE and our aftermarket competitors, see the results of our heat exchange test above. Note that vehicles with exhaust gas temperatures not in the optimal temperature range are at risk of failing NOx emissions inspections.