# EXHIBIT H

**REVEALED!** FUTURE OF CUMMINS, FORD, AND GM DIESELS

### THE VOICE OF THE TURBODIESEL ENTHUSIAST

BULLETPROOF BOLT-ONS:

• SUPER DUTY OIL AND EGR COOLERS

ELECTRONICALLY REPRINTED FROM OCTOBER 2010

RAM TWIN TURBOS FOR 6.7L CUMMINS

2,000HP, TRIPLE-TURBO, 7.3L POWER STROKE

2,300-LB-FT, BILLET-STEEL-BLOCK CUMMINS

PLUS!

FACTORY-ENGINEERED PARTS FROM FORD & MOPAR

DIESELPOWERMAG.COM NTI000755

**2011 PICKUP TRUCK SHOOTOUT** 

## HEART ATTACK PREVENTION FOR THE 6.0L POWER STROKE BULLETPROOF EGR AND OIL COOLER UPGRADES FOR '03 TO '07 FORDS

ngine oil and coolant are the interrelated lifeblood of the 6.0L Power Stroke. If a clot should form, preventing flow, or the fluids become mixed, severe damage can be done to the injectors, high-pressure oil pump (HPOP), engine bearings, heads, turbo, block, and pistons. The symptoms to watch out for include: steam coming out of the exhaust pipe, the puking or unexplained loss of coolant from the overflow bottle, and coolant or sludge in the intake manifold when you remove the EGR valve. A thick, black ooze in either the engine coolant or oil systems and internal sections of the intake manifold that look like they've been steam-cleaned is also a sign that something is wrong. The factory liquid-to-liquid engine

DIESELTECH

oil cooler (EOC) situated on top of the 6.0L directly below the oil filter is prone to clogging because the internal coolant passages are narrow and BulletProofDiesel (BPD) says the 6.0L requires 18½ gallons of cooled oil per minute at peak demand. BulletProofDiesel's solution is to replace the factory oil cooler and filter with a remotely mounted air-to-liquid cooler and spin-on filter. The other line of defense is an upgraded EGR cooler. This operation turned an '03 Ford into a reliable diesel truck that still has functioning emissions equipment. This isn't the first time we've operated on one of these potentially reliable engines; for more critical information see "Every 6.0L Problem Solved," in the July '09 issue of *Diesel Power* magazine.**D**P



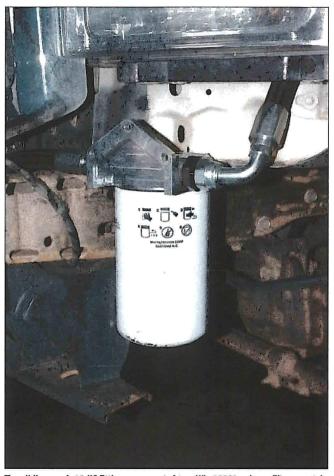
Here is the heart of the problem—the 6.0L Power Stroke's factory engine oil cooler has small passages that can clog, reducing flow and limiting the amount of heat transfer from the oil to the coolant. If coolant can't pass through the oil cooler, it can't get to the EGR cooler, which can then rupture. According to BPD, the best way to test an engine oil cooler is to measure the temperature of the engine oil and coolant at the same time. When the engine oil cooler is working, the coolant and the oil temperature should correspond closely within 5 degrees at idle. It's not advised to run your 6.0L if you have a leaking EGR cooler.



Here is the backside of the BPD billet aluminum oil transfer block (replacing the factory oil cooler and filter block) with its steel screen (replacing the factory plastic screen) bolted and safety-wired so there is no chance of anything coming loose and falling into the HPOP.



After bolting the transfer block to the top of the engine, ¾-inch high-pressure Goodyear oil lines and -12 JIC (joint industry Conference 37-degree flared fittings) were routed.



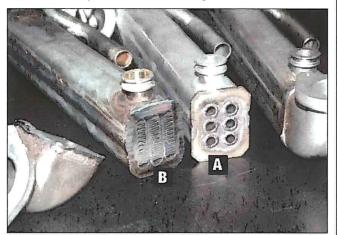
The oil lines and -12 JIC fittings were routed to a Wix 85832 spin-on filter remotely mounted with a custom bracket since the factory bumper-where BPD usually mounts the 18½-gpm filter-had been replaced with a large, tubular, steel winch bumper.



The bumper-mounted Fluidyne air-to-liquid cooler was bolted in front of the A/C condenser. If A/C performance suffers, BPD recommends removing the OE orifice tube and replacing it with a GM white orifice tube (Four Seasons Part# 38623) after reclaiming the original refrigerant. Then recharge the A/C system with an additional 6 ounces of refrigerant more than the OE specified amount. Perform a testdrive at highway speeds and add up to an additional 12 ounces of refrigerant as needed.



BulletProofDiesel reminded us that the '03 6.0L Power Stroke has a round-style EGR cooler, and '05-and-newer engines came with a square style. Most '04 models have the square cooler (right), but early '04 models have the round version (left). You can tell by the VIN number. A sample VIN number is: 1FTRW21P24EB10150. In the middle of the VIN number, you see the digits 4EB. The 4 means it was an '04 model year. The E denotes which production plant built the truck (in this case, E is for Kentucky). Lastly, the B is the start of the sequence number (the last 6 digits of the VIN). Some early '04 models have a 4EA code. The A denotes the early build and most likely is a round-style cooler. The B, C, D or more all denote later-model '04 builds with square-style EGR coolers. Round and square models are not interchangeable.



The BulletProofDiesel upgraded EGR cooler (cutaway A) is better than the stock piece (cutaway B) because it's made out of stainless steel, its internals have a generoussized round geometry that expands and contracts at the same rate, and it is less likely to clog. The purpose of the EGR cooler is to introduce oxygen-depleted exhaust gas back into the intake air after it's cooled by engine coolant. This scheme limits or cools combustion, thereby reducing NOx production, which takes place in the cylinders at high temperatures.





Installation of the BPD enhanced replacement EGR cooler upgrade and oil cooler up grade takes a whole weekend for the average enthusiast. It requires removal of the intake manifold, turbo, and factory components to be replaced. You'll also need to loosen the up-pipe-to-exhaust manifold bolts located between the engine block and firewall. Remember, this is surgery, so keep everything as clean as possible. If you decide to pay a good diesel mechanic to have it done, you're looking at a seven-hour job (\$500 to \$800 for labor).

### "This operation turned an '03 Ford into a reliable diesel truck that still has functioning emissions equipment."

Source

BulletProofDiesel (888) 967-6653 • www.bulletproofdiesel.com

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# EXHIBIT I

**FIRST LOOK:** 

11 GM DURAMAX

ERFORMANCE DNG BLOCK

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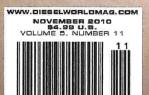
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## 6.0L EGR COOLER FIX CUMMINS INTAKE TEST **BYPASS OIL FILTER INSTALL**

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EASY FIXES FOR COMMON PROBLEMS



## **6.0L Power Stroke Problems and Solutions:**

## Part F. The Truth About EGR and Oil-Cooler Failures

BY KEVIN WILSON PHOTOGRAPHY: KEVIN WILSON AND BULLET FROOF DIESEL

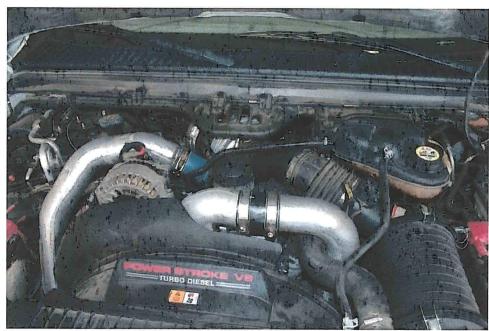
When Ford introduced the 6.0L version of the Power Stroke back in '93, diesel enthusiasts were ecstatic that Ford had upgraded its diesel offering, which had many more advanced features and more power. However, over time, many of the design weaknesses of 6.0L Power Stroke began to surface.

Topping the list was the repetitive failure of the EGR cooler.

EGR cooler failures were symptomatic of a much larger problem and replacing the cooler with another factory one only prolonged the agony and owner frustration. According to Bullet Proof Diesel, the real culprit behind these repetitive EGR cooler failures is not only the design of the stock EGR cooler, but also the truck's oil cooler.

Since most trucks were under warranty when the EGR cooler failed, the fix was to take the truck back to the dealer where the same style EGR cooler was installed. Unfortunately, for 6.0L owners, that wouldn't be their only trip back to the dealer for the same problem. And when the warranty ran out, those trips got really expensive.

According to the folks at Bullet Proof Diesel, which is a division of Neil Technologies, the



When introduced in 2003, Ford's 6.0L Power Stroke was deemed more advanced than the 7.3L version. But the power plant has been plagued with problems including failures of both the EGR cooler and oil cooler.

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Located at the front of the block, just under the intake manifold, the water to oil intercooler sits in an oil-filled recess in the valley of the motor, and supposedly is used to cool the truck's hot oil by circulating coolant through the cooler. Unfortunately, the sandwich style design of the cooler features tiny water passages which eventually get clogged with debris from the cooling system.

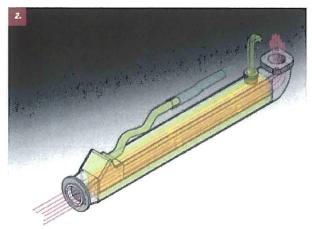
The EGR cooler is located slightly to the left and down stream of the oil cooler and receives its coolant from the output side of the oil cooler. When the coolant flow in the oil cooler is reduced, temps inside the EGR cooler go up, way up. High enough to cause a failure of the cooler itself, which allows hot exhaust gases to bubble into the cooling system. Bullet Proof Diesel has a great symptom diagnostic on their web site (www.bulletproofdiesel.com) so we borrowed it to help you understand the symptoms of a bad EGR cooler.

#### How To Tell If the EGR Cooler is Bad

Symptom 1: The unexplained loss of coolant from your degas (overflow) bottle or cooling system. This can easily be explained



 On 6.0L Power Strokes, the question is not if the EGR cooler is going to fail, but when. Take a look at the gunk buildup inside this EGR cooler. Not much flow going on here.



2. This diagram, courtesy of Bullet Proof Diesel, shows the exhaust flow in red and coolant flow in green through the EGR cooler.

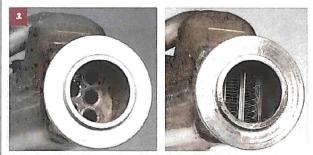
when you have a bad EGR cooler – the EGR cooler is simply leaking the coolant back into the exhaust system, not outside of the engine. Most people make an expensive mistake of ignoring this warning sign. They assume that since they can not find or see the leak, it must not actually be a leak. The longer they ignore it, the more coolant that leaks out of the engine and quickly creates warning sign number two.

**Symptom 2:** All that white smoke coming out of the tailpipe is actually steam. As the coolant is dumped into the exhaust system, it quickly vaporizes and turns from liquid to steam and comes out of the exhaust.

**Symptom 3:** That "puking" of coolant out of your degas bottle is actually not a sign, necessarily, of a bad EGR cooler. It's more likely a sign that your engine oil cooler is plugged and is restricting the flow of coolant getting to your EGR cooler.

The EGR cooler is not getting enough coolant flowing through, so the coolant that is inside it quickly begins to boil. When the coolant boils, it creates high-pressure steam pockets which billow out through your degas bottle, pushing and forcing coolant out of the lid. The EGR cooler should be replaced in this instance because it's already been overheated and stressed, and is very likely to fail in the near future.

How to Diagnose a Bad EGR Cooler: This method is easy to do and is a good "test" if you have any of the three symptoms



3. Here's a side-by-side comparison of the Bullet Proof Diesel tubular-style, replacement EGR cooler at left, and the stock radiator-fin-design factory EGR cooler on the right.



 Bullet Proof Diesel's replacement EGR coolers are not only smog-legal, they also carry a lifetime warranty.

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above. To do this test, turn off your rig. When it's all cooled down, remove the EGR valve (between your alternator and oil filter; it looks like a 7-ounce beer can with wires going to it) and look inside with a flashlight. If it looks wet, gooey or steam cleaned, then you probably have EGR cooler problems.

#### Engine-Oil Cooler Issues

As we said earlier, according Bullet Proof Diesel, the root of many of the 6.0L problems can be traced to a poor oil-cooler design. Among the common issues on 6.0L Power Strokes are



5. Check out the fine welds on each of the exhaust tubes. This type of design and construction insures reliability.



In this shot, you can see the small, round exhaust outlet that feeds exhaust gases to the EGR cooler from one of the up pipes.



7. Here's how the EGR cooler, at top, sits on the motor in relationship to the factory oil manifold at left. Underneath that oil manifold is the factory oil cooler. Coolant flow leaves the oil cooler and goes into the EGR cooler.



8. The EGR cooler is mounted to the bottom of the intake manifold and returns coolant through passages in the manifold.



R. Here's what the factory oil cooler looks like; it sits below the intake manifold on top of the motor in a shallow galley of oil.

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#### (Continued from page 46)

EGR cooler failures, high engine cil temperatures and overheating, injector failure, turbo failure, high-pressure cil pump failure and blown head gaskets. And, according to Bullet Proof Diesel, nearly all of these problems are related to the stock engine cil cooler.

According to the Bullet Proof Diesel website, the problem with the stock engine oil cooler stems from reduced coolant flows through the tight passages of the engine-oil cooler. These pathways are so small, they catch and stop any large particles suspended in the coolant, blocking the coolant channel and, consequently, the coolant flow.

While the mileage varies, it typically takes about 50,000 miles before the coolant can no longer flow through the cooler on its way to the EGR cooler, according to Bullet Proof Diesel, leaving less and less coolant flow to keep the engine oil cool and dramatically reduced coolant flow to the EGR cooler.

A plugged engine-oil cooler can lead to a ruptured EGR cooler, an overheated engine oil, overheated fuel injectors, a loss of coolant, ruptured engine-oil cooler, and blown head gaskets, they add. Replacing the Ford engine-oil cooler with another Ford engine-oil cooler is the usual fix, but all that does is put off the problem for another 50,000 miles.

#### **Solutions to Both Problems**

The above-described problems are all common to the 6.0L. Power Stroke, so the issue is not if your oil cooler and EGR cooler are going to fail, but when. Countless owners have replaced their



10. A cutaway of the factory cooler show's how tiny the factory oil and coolant passages are. Bullet Proof Diesel asserts when these coolant passages plug up with debris, it leads to EGR failures and eventual failure of the oil cooler, not to mention bigger problems down the road.

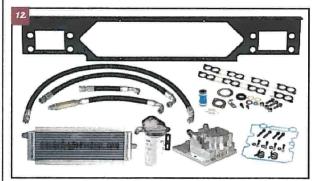
EGR coolers two, three or more times in the first 100,000 miles, and have installed at least one oil cooler in the truck.

Bullet Proof Diesel has designed solutions to both problems. The first is its own tubular-designed EGR cooler. Instead of using an internal radiator-style fin design, Bullet Proof Diesel uses a tubular setup inside the EGR cooler that is stronger and less





11A & B. Another problem area is this screen setup that sits under the oil cooler. The screen filters oil that flows into the high-pressure oil pump that operates the 6.0L fuel injectors. Over time, the screen gets plugged with debris (seen here) or starts to deteriorate on its own, according to Bullet Proof Diesel.



12. The solution to the oil-cooler issues is Bullet Proof Diesel's engine-oil cooler kit, which deletes the stock cooler in favor of a remote, mounted cooler.

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#### (Continued from page 48)

prone to cracking. In fact, Bullet Proof Diesel is so confident its street-legal EGR cooler is superior to the factory part, the company offers a lifetime warranty on it. The unit is a direct replacement, so it bolts in place of the stock part.

#### **Remote Oil Cooler**

Since we now know the root of many problems is the factory oil cooler, replacing that cooler with a remote-style cooler is the long-term fix. Bullet Proof Engine Diesel says its oil-cooler kit offers more effective engine-oil cooling, which translates into improved cooling of the EGR cooler, leading to increased EGR cooler longevity. They also say the remote setup reduces engine-oil temperatures.

The Bullet Proof Engine Oil Cooler kit uses a larger, remotemount oil-filter setup for better oil filtration, and is offered with an optional oil-bypass filtration kit as well for even more filters. Cooler, better-filtered oil for the injectors and high-pressure oil pump increases their longevity and performance, too. The setup also eliminates engine oil in your coolant by way of a ruptured engine-oil cooler. For those folks in colder climates, the Bullet Proof oil-cooler kit can also be ordered with an inline thermostat for quicker engine warmup.



13. The heart of the Bullet Proof Diesel engine-oil cooler kit is this billet manifold that sits on top of the engine in place of the factory oil manifold. It has AN fittings for both input and output lines, and provisions for the factory sensors.



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14. The bottom of the manifold features a much larger opening and filter screen than the stock unit for feeding the high-pressure oil pump. Alicraft safety wiring makes sure the bolts won't back out and drop into the engine.

#### Installation

Ok, now that you know what the problems are, how do you fix them? Both the EGR cooler and factory oil cooler are located in the same neighborhood, in the valley of the engine under the intake manifold. That's the good news.

The bad news is you have to basically take off the whole top of the engine to get at them. That's why Bullet Proof Diesel recommends that, if you're going to do the labor for the EGR cooler replacement, you might as well fix the oil cooler while you have the motor torn down. You have the option of replacing it with a new factory unit or upgrading to the Bullet Proof Diesel oil-cooler kit. Since the R&R process can be fairly complicated, Bullet Proof has a list of professional installer on Bullet Proof's website so you know the job gets done right.

We spent the good part of a day at Bullet Proof Diesel's Mesa, Arizona shop to follow a typical install of both the EGR cooler and remote oil-cooler setup. Since the process is complicated, we'll hit the highlights of the EGR cooler next month in Part II, and show you the remote oil-cooler install as well.

If you own a 6.0L Power Stroke, you're all too familiar with some of its issues and have probably sent it to the dealer a few times for warranty work. Now that the repairs are coming out of your pockets and you better understand the issues, contact the folks at Bullet Proof Diesel for their down-to-earth solutions to real-world Power Stroke problems.

### SOURCE:

Neil Technologies/Bullet Proof Diesel 888.967.6653 www.bulletproofdiesel.com



www.dieselworldmag.com

# **EXHIBIT J**



THE

TACOMA SUSPENSION BUILDER'S GUIDE

DIRT. S

**ULTIMATE OFF-ROAD** 

HOW STEWART'S RACEWORKS GOT ITS START OFF-ROAD'S PERSON(S) OF THE YEAR

ELECTRONICALLY REPRINTED FROM DECEMBER 2012

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# NEAL BROTHERS OFF-ROAD'S 2012 PEOPLE OF THE YEAR



EGINNING IN 2011, OFF-ROAD SET OUT TO ANNUALLY RECOGNIZE INDIVIDUALS FROM OUR WORLD OF DIRT AND TRUCK MOTORSPORTS. IT'S AN HONOR GIVEN TO AN INDIVIDUAL WHO DOESN'T JUST STAND OUT BY CONTRIBUTING TO THE INDUSTRY BUT IS ALSO A TRAILBLAZER IN AND AN ASSET TO OUR OFF-ROAD COMMUNITY.

This year, we're renaming the honor as *OFF-ROAD* magazine's People of the Year Award, because we're recognizing two individuals: Ken and Gene Neal. These siblings reside in Mesa, Arizona, and are the owners of BulletProof Diesel.

#### BROTHERLY BOND

Ken and Gene formed a solid brotherly bond early in life when they both agreed that no matter what may lie before them, neither would ever rat out the other. Ken was the kind of kid who was always tearing apart mechanical assemblies. Gene, on the other hand was a natural salesman, profiting from selling bubble gum to his classmates. Their brotherly pact stuck through adolescence and brought the brothers closer as they grew to adulthood.

Here, they parted career paths with Ken pursuing his ASE mechanics certification and becoming a skillful automotive tech with a specialty

▶ The early years, already in the mud.



### NEAL BROTHERS OFF-ROAD'S 2012 PEOPLE OF THE YEAR

in diagnostic troubleshooting. Gene, on the other hand, pursued a mechanical engineering degree and found a job working for an electronics firm.

The Neals grew up in an entrepreneurial family with both parents self-employed, so it was natural that they ultimately evolved to forming their own business. Ken had started an auto repair business and Gene joined forces with him after securing a master's degree in business.

Diesel 6.0L Power Stroke fans will know where the Neals ended up. The brothers formed a goal to pursue improvement of these engines where the factory had shortcomings. When the brothers saw consistent EGR cooler failures, they set about finding a way to provide their customers with a more reliable product. On top of that, they developed a replacement oil cooler as well. BulletProof Diesel, and its rapid expansion over the past few years, is the result of those efforts.

#### **DIRT AND SWEAT**

They've worked hard to develop improved solutions for mechanical issues that exist for their customers. They've created a thriving business by catering to the truck segment with those solutions. They spend money within the community to bolster it, and they serve the community by producing products for enthusiasts needs. Hard work has gotten them to the point they're at today and their journey can serve as a good model to others aspiring to build up a truck or off-road related business.

Years past, Ken would often do a lot of fuel tuning on engines when he was asked to tune a truck destined to race in the Baja 500. He did the tune and soon found himself headed to Mexico, and hooked on supporting off-road racers. He did a lot of wiring and fuel injection work on various rigs and through a contact with Rick Geiser, the brothers started an association with the Desert Assassins race team about four years ago.

Racer Cameron Steele put it quite succinctly when he told us, "These guys are awesome." Ken is a big part of their pit and chase team, and chase team guys are the unsung heroes of racing. They work their butts off, spend their own money to do so, and are satisfied with the reward of seeing their race truck driver do well in the race.

#### PASSION AND COMPASSION

The Neal brothers fit into the off-road community deeper



One of the brothers' "off-road" vehicles: a '6os British Chieftain tank. And we just got word at time of print that they recently bought a troop carrier with tank tracks.



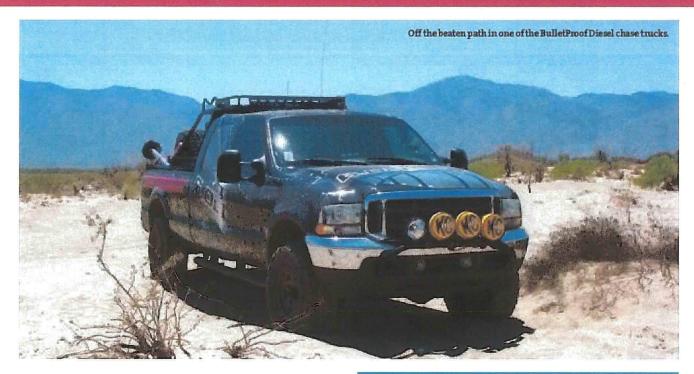
▲ Gene having a little fun rattling a Dillon Mini Gun in the Arizona desert.



▲ South of the border, preparing for another desert race with the Desert Assassins crew.



▲ "Uh, honey, yes, we're stuck out in the desert again."





▲ Ken in a moment of levity, challenging the main gun on the British Chieftain tank.

than you may see at first glance. We found they care about that community. They care about people in need and respond with charity. Twice in the past year or so they've donated \$10,000 to a charity event for a young girl suffering from brain cancer. Time and again they've proven they can be counted on to support the community. People speak complimentary of the brothers, and they're described as enthusiastic and just plain fun.

Ask some of their employees (and we did) and you'll find Ken and Gene to be well-respected by their work crew. Their employees describe the pair as smart, business-wise, and with a good dynamic between the two. We could tell their crew looks up to their bosses, and respect their work ethic in the business world, where they consistently strive to be best in the market and offer top-notch customer service. To us in the industry, they're also helpful and an excellent source of diesel tech information.



A Paying respects to Jeff "Ox" Kargola after his passing.

We asked the guys for the best advice they could give our readers who aspire to reach goals in life, be those personal or career. Their input was to take it a step at a time, be consistent in your actions, and go that extra step to push a good result to a great result. When we visited their gleaming new business location, we found a Thomas Edison quote they had purposely etched in glass on their conference room wall: "Opportunity is missed by most people because it is dressed in overalls and looks like work." Thanks again for your contributions, Ken and Gene. **OR** 



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## BULLETPROOFDIESEL

### Is Your Ford 6.0L Ready For This?



"We got the BulletProof Diesel system and - for the first time in a long time - our trip didn't end with a tow. Our 6.0 has been problem-free ever since!" - E.G. Salinas, CA

Ask any Ford 6.0L Diesel owner how they feel about their rig and you're likely to get an ear-full about warranty repairs, EGR coolers, and road-side tows. Your 6.0L diesel should be more about the open road and not about an open hood. That's why we developed the BulletProof line of products:

#### BulletProof EGR Cooler:

Lifetime Warranty<sup>\*</sup>, Exact Fit, 100% Success Rate, No Check Engine Lights

#### BulletProof Engine Oil Cooler:

Cool Engine Oil, Extreme-Duty Construction, No More Plugged or Failed OEM Oil Coolers \* see bulietproofdiesel.com for details

Go to BulletProofDiesel.com and learn more, find an installer, and finally smile when you talk about your 6.0L 888-967-6653

# **EXHIBIT K**

3/11/2016

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BulletProofDiesel - YouTube bulletproof diesel Q Upload **BulletProofDiesel** Home Videos Playlists Channels Discussion About 3,025 subscribers • 1,695,987 views Joined Oct 28, 2009 Description The official YouTube channel of Bullet Proof Diesel; If you depend on it, Bullet Proof it! We are committed to educating the 6.0 and 6.4 liter diesel community on how to properly diagnose and Bullet Proof their engine for years of dependab Visit us online at http://www.bulletproofdiesel.com/

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