

MAKE MONEY WITH YOUR DIESEL

**BIGGEST
ISSUE EVER!**
268 PAGES OF DIESEL

DIESEL POWER

THE VOICE OF THE TURBODIESEL ENTHUSIAST

**DURAMAX
VERSUS
POWER STROKE**

DYNO TEST

- INTAKE • EXHAUST
- PROGRAMMER

**1,800HP
FORD SLED PULLER**

**\$200 CUMMINS INTAKE
& EXHAUST UPGRADE**

**PLUS: SHOW YOUR TRUCK IN
THIS MAGAZINE SEE HOW ON PG. 74**

**HOW TO SURVIVE
\$4.00 DIESEL**

A SOURCE INTERLINK MEDIA PUBLICATION

JUNE 2008 VOLUME 4, NO. 6 \$5.99 IN U.S. • \$6.99 IN CANADA



VISIT: WWW.DIESELPowerMAG.COM



SILENCING A SUPER DUTY

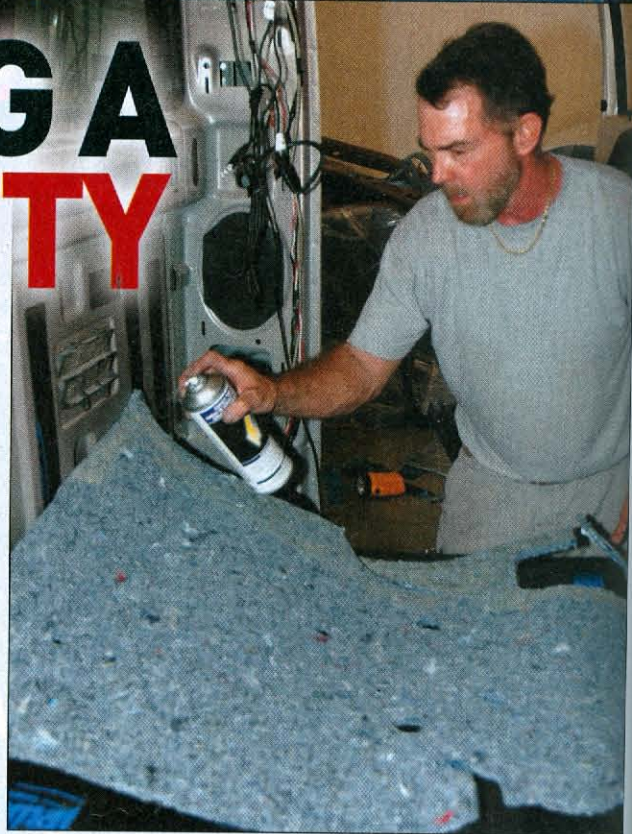
A SOUND AND HEAT INSULATION KIT YOU CAN INSTALL IN YOUR DRIVEWAY

The clatter and rumble of a big diesel has always been part of the excitement of driving our oil burners. It subtly advertises that we just might have something that the gas rigs don't. Those of us with an ear for diesel power can close our eyes and say, "There goes a Cummins," or "That's a Power Stroke."

NOISEMAKER

It's true diesel engines have gotten much quieter over the years, but they still have a unique sound that makes them distinguishable. Yet after hundreds, if not thousands of miles on the road, sounds that were cool around town can become downright annoying. Our own F-550—with its big Michelin XZL tires, MagnaFlow performance exhaust, and a thin coating of Rhino Lining on the floor—was obnoxious at 65 mph, and to our disappointment, the Rhino Lining did little to keep heat out from below.

It was time to do something about this. The road noise problem had



The first step in installing an Acoustishield was to strip the cab of seats and all floor-mounted accessories. Each strip was placed on the floor over the Rhino Lining coating and pressed into place with a wallpaper seam roller (top) for maximum surface contact. Each Heat Shield panel was then sprayed with quick-drying contact glue (bottom) and pressed into place over the strips of Dynamat.

continued on page 142 >>>



The entire floor and the rear cab wall were covered with the Heat Shield panels.



All seams were then sealed with aluminum tape to further isolate heat and keep any moisture from getting in under the Heat Shield.



The factory Super Duty door panels came padded with this sheet of insulation. Ours were still in very good shape, but if you live in a wet climate, this material may be damaged to the point that you can't reuse it. The same goes for the plastic dust cover material that lines the door shells.



We needed to cover the Dynamat and Heat Shield insulation so we ordered a rubber floor mat from our local Ford dealership. The factory mat was a pretty good fit, but we still had to do some custom cutting around the transfer case lever and the rear wall.

been greatly improved on our older F-350 diesel by installing a full Dynamat noise reduction kit. We called Tim Cox, owner of QuietRide Solutions in Stockton, California, for some suggestions. He had just finished the Acoustishield kit for the F-350 Super Duty, and we figured the F-550 must be close to the same. As the saying goes, "Close only counts in horse shoes and hand grenades."

SOUND-SILENCING KIT

While the basic floor of our F-550 was similar, the transmission hump with a manual transmission and 4x4 was a little different than the automatic transmission the kit was designed for. Cox welcomed the opportunity to make a pattern for this truck. QuietRide Solutions has over 600 mail-order Acoustishield kits for cars, trucks, over-the-road semis, boats, and airplanes.

The first step was to remove everything from the cab—seats, center

continued on page 144 >>>

console, fire extinguishers, CD changer, GPS, and so on—and carefully mark all the screw and bolt holes. Cox set about making a pattern of an insulation material he uses called Heat Shield. All the holes for the seats and the center console were punched. Cutouts for the transmission and transfer case levers were fitted under the shift boots. Since we have a standard cab, the side panels and the rear wall were also custom-tailored.

With the pattern made, it was sent off to the cutting room to be duplicated for future kits. While that was being done, we laid out strips of Dynamat, which is a thin, flexible, easy-to-cut-and-mold sheet that actually stops noise-causing resonance and vibration by using viscoelastic qualities that promote vibro-acoustic energy conversion. In short, that means noise becomes silent energy. Sound confusing? Well, imagine rapping a drum with a stick. Now put your hand on the drum and hit it again. No vibrations! That's what Dynamat strips do to the thin sheet metal panels on your truck.

Peeling off the backing of the Dynamat, each strip was placed on the floor and pressed with a wallpaper seam roller for maximum surface contact. Cox first laid out all the Dynamat strips faceup for photos. Each Acoustishield kit comes with detailed instructions, pictures of how to install the Dynamat strips, the Heat Shield pre-cut pieces, and the necessary tape, glue, and seam roller.

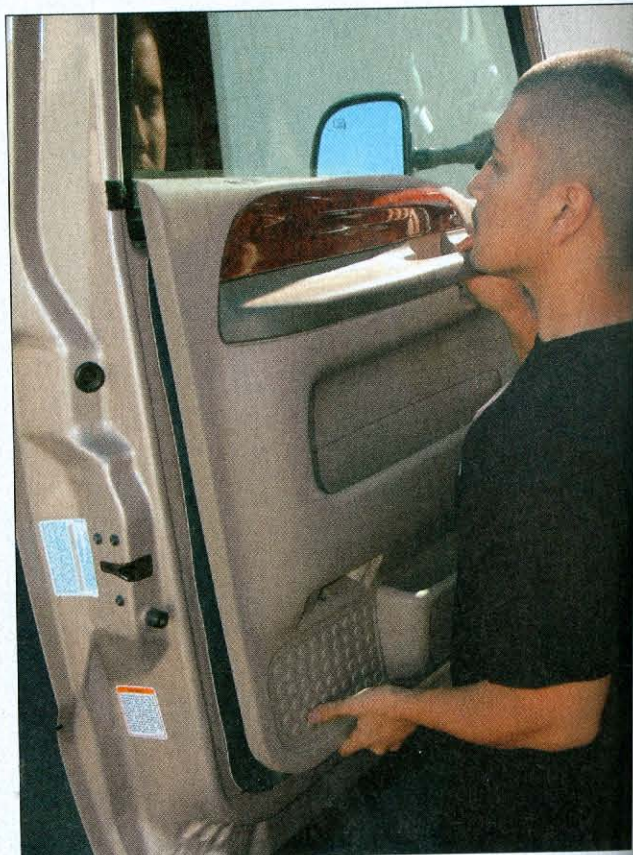
Now the new panels of Heat Shield were ready, and we started the process of spraying each section with quick-drying contact glue and pressing them into place. Then, all seams were sealed with aluminum tape to further isolate heat and keep any moisture from getting under the Heat Shield. We did not remove the headliner. Cox advised that it was easy to damage and expensive to replace. He said that very little noise comes from above, and we weren't installing a \$5,000 sound system. It was



Full sheets of Dynamat were applied to both the inside and the outside of the doors for maximum noise reduction.

more important to treat the hood, cab floor, and doors.

Since we had thrown the original carpet kit away long ago, we needed to cover the exposed layer of Heat Shield. We ordered an OEM black rubber one-piece floor mat, and it fit OK. We did need to cut a hole for the transfer case lever and do a little trimming here and there. The Ford factory mat came with a thick insulation pad similar to Heat Shield, so we effectively doubled our noise and heat insulation.



With the layer of Dynamat carefully pressed into place, the plastic moisture and dust barriers were reinstalled and the door panels were replaced.



Each Acoustishield hood kit comes with a pre-cut selection of Dynamat strips. A full Dynamat kit would use much more material and be far more expensive.

continued on page 146 >>>

DOOR INSULATION

We were able to do the hood ourselves, again using a QuietRide Solutions pre-cut kit. First, we removed the factory liner. After placing and pressing on the Dynamat strips, the pre-cut panels of Heat Shield were applied and the factory hood liner was reattached using the original "Christmas tree" plugs.

QuietRide Solutions specializes in do-it-yourself kits, but they're not in the installation business. We still needed to have the doors done, so we contacted Dynamat directly. Dynamat manufactures a wide range of noise-canceling products and kits that can be installed by owners or qualified shops. At its recommendation, we took our F-550 to Paradyme Mobile Electronics in Sacramento, California.

Since every truck and every year are a little different, we were glad the technician at Paradyme was doing the work. With the main side panel out of the way, the plastic liner was peeled back to expose the bare metal inside the doors. A Dynamat two-door kit is adequate for most cars, but for the big doors our truck, we had to use additional material. Unlike the QuietRide Solutions kits, which use pre-cut strips, Dynamat covers the entire surface with a solid sheet of its noise reduction material. The doors did not receive any Heat Shield padding as you don't want to put anything inside the door that might get caught in the latch or window mechanisms.



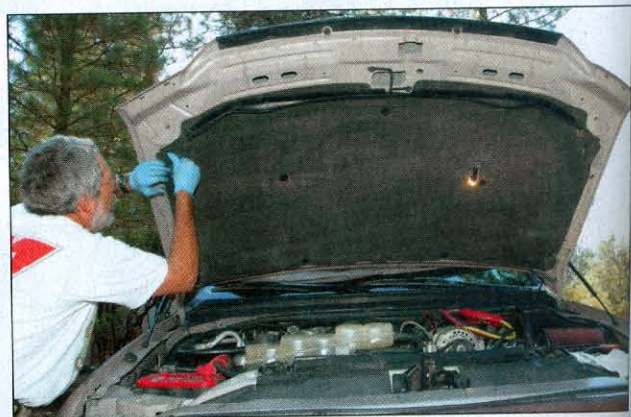
Peeling off the backing of the Dynamat, each strip was placed on the single-wall sections of the hood and pressed with a wallpaper seam roller for maximum surface contact.



With the Dynamat in place, the panels of Acoustishield were installed using quick-dry spray contact glue.



The Acoustishield panels were then pressed into position.



The final step for installing the Acoustishield in the hood was to replace the factory hood liner using the original "Christmas tree" plugs.

THE RESULTS

Back on the highway, we weren't expecting miracles given our aggressive tires, but there certainly was a difference. Noise levels were down significantly, and what was left was somewhat muffled. Was it really quiet? We're afraid our F-550 is not a Mercedes sedan. Tim said that following a full installation in a normal vehicle, they typically see a 48% to 50% reduction in noise, or about a 20-decibels reduction. In addition, the aluminum-backed Heat Shield can lower cab temperatures by up to 30° F.

Will Acoustishield and Dynamat sound and heat reduction kits turn your diesel into a Cadillac limo? Probably not, but they will definitely make those long trips more enjoyable, and it will certainly improve the quality of your sound system. **DP**

Sources

Dynamat

(800) 225-8133 • www.dynamat.com

Paradyme Mobile Electronics

(916) 971-3600 • www.paradyme.com

QuietRide Solutions

(209) 942-4777 • www.quietride.com