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FOR IMMEDIATE RELEASE

Philippi-Hagenbuch Hard Rock / Ore Truck Bodies Maximize Payload, Minimize Maintenance

PEORIA, Ill. (November 27, 2012) – **Philippi-Hagenbuch** (PHIL) takes hauling hard rock and ore to an innovative new level with its **HiVol® Hard Rock / Ore Bodies**.

Designed with the hard rock and ore mining industry in mind, PHIL engineered its special Hard Rock / Ore bodies to easily handle highly abrasive material while minimizing carryback and maintenance requirements. The unique, reduced-weight design also keeps operators comfortable while allowing trucks to haul at maximum capacities.

PHIL customizes every HiVol truck body to the individual mine's specifications. The custom design approach provides each operation with the highest possible payload, longest lifespan and best possible long-term return on investment.

To ensure the body will fit a company's application and specifications precisely, PHIL's engineers work closely with mining customers in identifying key factors that will impact the design of the truck body. Those factors may include density and cohesive qualities of the material, height and width restrictions, loading equipment and climate conditions. In addition, PHIL applies its proprietary Load Profiling™ process in examining the natural angle of repose, or how the material lays once it is dumped into the body, to maximize its payload capacity and reduce potential for material to fall out of the body.

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Once it has identified all the key factors, PHIL begins the engineering process. As with all of its products, the company's engineers focus on a proprietary process for all HiVol bodies that removes unnecessary steel and, as a result, unnecessary weight. By doing so, they are able to add features, such as greater width and the most substantial floor bolster system available; all based on PHIL standards that have been refined over five decades. The combined design aspects contribute to greater capacity to equal fully utilized Gross Vehicle Weights (GVW).

The innovation continues within the load containing portion of HiVol Hard Rock / Ore bodies with patent-pending hydrophobic steel liners in the front corners and the front third of the body slope, along with a high-abrasion liner in the rear third of the floor. The liners provide ultimate durability against abrasive materials while ensuring as much hauled material as possible leaves the body during dumping. Often, the ore and soil mixed payload becomes muddy and sticky, and it tends to form a bridge across the front of the truck body. Traditionally, that has left valuable and costly material behind. As the name suggests, hydrophobic materials repel moisture. PHIL strategically places this unique steel in key parts of the truck body – areas where carryback begins – greatly reducing the likelihood that materials will be able to build up.

A substantial taper of the body from the front to the back also decreases wear and carryback potential on the body sides. Because the body is narrower at the front than at the back, material releases immediately as it begins to dump and slides straight out of the body without abrading the sides. By constructing the body in a manner that reduces wear to the sides, Philippi-Hagenbuch is able to cut weight from the sides of the body and use the extra weight capacity to reinforce other areas of the truck body that generally receive the most wear.

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Reinforced body side top rails are half sections of rounded pipe that tie the inside steel plate to the outside plate at the top and cover the gap between them. They provide added reinforcement to the sides of the truck body and eliminate the potential for material to build up within the sidewalls. With outside steel plates that taper inward near the top, the top rails also provide a compressive effect. In other words, they provide added strength to the body walls to protect their integrity in the unlikely event that they are struck by a loading tool.

In addition, steel bolsters that run from side to side under the body floor double the size of the “sweet spot,” the area that can handle the greatest material impact, within the center floor section. The patent pending bolster design runs through the frame rails, which run from front to back and tie the floor together more substantially than any other floor in the industry. The floors in all PHIL custom bodies create a super structure that won’t buckle under the immense weight of the mined materials. At the same time it keeps payload at a maximum capacity.

PHIL also incorporates specially sourced 450 Brinell steel throughout every HiVol body. This unique steel contains less carbon than most 450 Brinell steel being used in truck bodies today. The lower the carbon level, the less likely it is that the steel will become brittle and crack in cold weather conditions. As a result, the steel in PHIL bodies is able to handle intense environments and require little maintenance, even after hundreds of thousands of tons hauled.

In addition, HiVols are wider than other bodies and have a lower center of gravity, with a third of the weight over the front axle and two-thirds over the back. The combination delivers several benefits.

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First, it allows for even and well-balanced weight distribution across the entire bed of the truck body. Improved weight distribution benefits truck body and tire life by eliminating the potential for greater weight wearing on specific areas. With the weight more equally distributed across all of the tires themselves, the potential for uneven wear is also greatly reduced. Finally – and most importantly – the near perfect weight distribution provides a smoother, safer ride for the driver.

Customizing each HiVol body to the mine's specifications increases loading safety and greatly reduces the potential for loading damage. PHIL designs each body to ensure the width is correctly paired with the loading tool. This provides for the lowest possible loading height and allows the shovel to get closer to the floor of the body, nearly eliminating the chances that loading equipment will damage the sides. It also translates to less vibration to the truck driver and less impact within the truck body when material is loaded.

In addition, the HiVol is constructed to ensure that the tail of the truck body has ample clearance at full dump. Taking berm height requirements into consideration, PHIL engineers its bodies so they do not fall below the center of the wheels, or the height of the berm, at full dump. This helps eliminate tail damage from dumping into a pile.

PHIL's patent-pending Body Lifting System also contributes to easy maintenance and installation of its truck bodies. The system builds four removable free-floating lifting eyes made of 450 Brinell steel for temporary integration into the floor of the truck body. This compares to traditional bodies, which place lifting eyes on the body sides and pull in on them when the body is being lifted. During installation or removal of a body, the 10-inch diameter lifting hole covers are removed and operators can attach rigging to the eyes that are inserted from beneath the body. The lifting eyes integrate into the floor

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support structure, so there is no stress placed on the body's sides, increasing their life. Lower lifting points also mean bodies don't need to be lifted as high during removal, which results in the ability to remove or install a body within most mine maintenance shops. This provides greater efficiency and enhances safety for personnel during installation and removal. Worker safety is further increased as lifting straps can be hooked from the truck floor rather than from the high sides of the body.

Philippi-Hagenbuch, Inc., Peoria, Ill., has been designing and building equipment for off-highway haul trucks since 1969 and has become a global leader in off-highway truck customization. In addition to HiVol bodies, rear eject bodies and trailers, the company designs and builds tailgates and water tanks for nearly every make and model of articulated and rigid frame off-highway truck available.

For more information, contact Philippi-Hagenbuch, 7424 W Plank Road, Peoria, IL 61604, call 309-697-9200, toll-free 800-447-6464, fax 309-697-2400, email sales@philsystems.com, visit the website at www.philsystems.com, on Facebook at www.facebook.com/philsystems, Twitter at www.twitter.com/philsystems, [LinkedIn](#) or on YouTube at www.youtube.com/philippihagenbuch.

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