

THE GUSHER

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*"...100% Archer
and am going to
stay 100% Archer"*

-Donnie Hafenstine



Testimonial

for Archer Petroleum from Donnie Hafenstine of Alma Kansas.

Donnie Hafenstine became an Archer Dealer in the spring of 1989 but had been using Archer Products for several years prior to becoming a Dealer. He uses Archer Products in all his equipment and vehicles.



Donnie sells screened river rock, a product very much in demand. He has a long waiting list and his equipment must be on the job every day! Donnie says with Archer engine oils and gear lubes his equipment is ready for the rugged use required to get the job done.

His list of equipment includes:

- 1-2002 Cat 236 Skid Loader
- 1-1994 Cat Track Loader
- 1-1969 Cat 930 Rubber Tire Loader
- 2-1974 Cat Track Loaders
- 5-Chevy Dump Trucks
- 2-International Dump Trucks
- 5-Chevy Pick Ups
- 1-Buick LeSabre

Donnie says he is "100% Archer and am going to stay 100% Archer". He attributes the use of Archer

Products to the longevity and dependability of his equipment. One example is this Cat Track Hoe that he has had for 13 years of tough service and it does not use any oil!

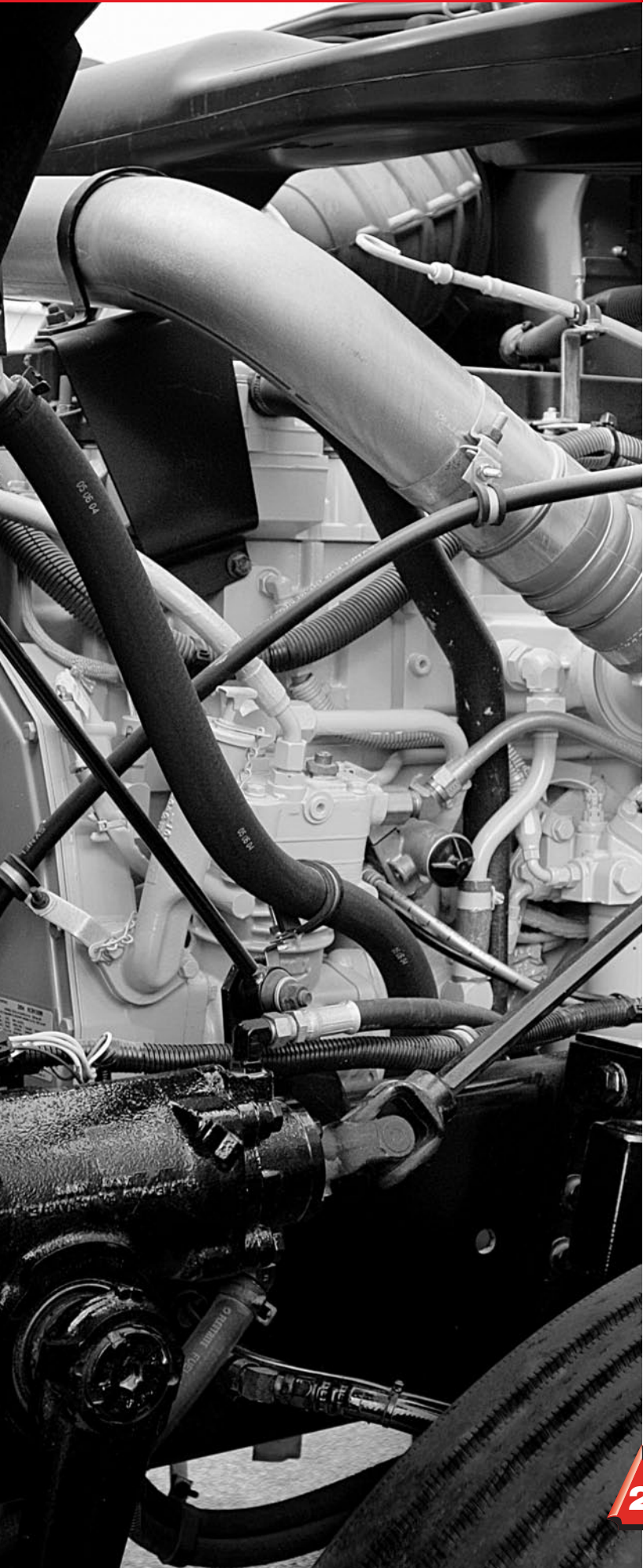
Donnie now relies on Archer Distributor Dennis Schwant to keep him well supplied with Archer Products to keep his equipment lubricated properly.

Donnie Hafenstine
33120 Phillips Creek Rd
Alma KS 66401

Distributor:

Dennis Schwant
19050 Clear Creek Rd
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OIL PRESSURE



What exactly is oil pressure and how is it created? It's important to note that the oil pump does not create oil pressure. The oil pump is the component that moves the oil from the crankcase to the rest of the engine. Pressure is created when a greater volume of liquid tries to move through a smaller area of space and is measured in pounds per square inch (psi). In an engine, oil flow is regulated by the size of the oil pump gears, and the pressure is determined by how much resistance that the oil meets as it travels through the engine's galleys and clearances.

Typically, most oil pumps are driven by a shaft that is connected to another part of the engine. They are designed to operate at half the speed of the engine; otherwise the flow of oil would be much too high to move through the engine beyond idle speed. During operating speed, when the oil pump is producing more flow than can be handled by the engine, excess flow is relieved by the oil pump pressure relief valve. If an oil pump manufacturer has designed the relief valve setting to be 60 psi and the engine can only produce 40 psi during operating speed, and a new oil pump is installed, the oil pressure reading will continue to be 40 psi. Remember, oil pressure is created by resistance.

Listed below are several causes of low oil pressure:

- The leading cause of low oil pressure can be traced to worn bearings, worn crankshaft journals or both.
- The oil level too low in the engine.
- Installing an oil having too low of a viscosity for a particular engine can produce low oil pressure.
- Electrical oil pressure gauges not operating properly.
- Defective oil pump relief valve causing the valve to stick open.
- Worn oil pump gears.

PRODUCT HIGHLIGHT

Archer Sampler Pack

This unique package includes seven different products in one case! It allows each customer to try seven different products without the expense of purchasing an entire case of each product.

The products included are:

- | | |
|----------------------------------|--|
| AP-16X | Spray lubricant resistant to water, temperature and rust. |
| SPL Plus | Nonflammable penetrating lubricant. Displaces moisture. |
| Clear-Vu Glass Cleaner | Contains anti-static and anti-fog properties. |
| Brake & Parts Cleaner | Highly concentrated solvent blend with a powerful spray. |
| Chain & Cable Lube | An outstanding multiple application chain lubricant. |
| Rustop³™ | Keeps your cooling system in balance by protecting all 6 metals found in cooling systems |
| Pumice Power Hand Cleaner | Can be used with or without water. Pumice and natural orange extracts provide the solvency to remove the most difficult soils. |

All these products provide the performance you've come to expect with Archer products. Try a case today!



ARCHER PRODUCTS FOR IRRIGATION

At the time of this writing, the temperature is about 10° outside and it's hard to think about irrigation products. However, that time will be here before we know it!

Archer offers a complete line of products to take care of all your lubrication needs when it pertains to your irrigation equipment. To provide the power to pump the water, you have choices between diesel engines, propane & natural gas engines, electric motors and in a few cases, gasoline engines.

For the diesel engines you can choose multi-weight engine oils from our para-synthetic Gold 15W-40, Premium Arpeco 15W-40, Arpeco 15W-40 or if you desire a straight weight oil, Chemlube SAE 30 or SAE 40. Always check the owner's manual to make certain you have the correct product in your engines.

Propane and natural gas engine require an oil that is low in ash content and the Archer product that fits that bill is our GLP Special SAE 30 or SAE 40. The ash content on our GLP Special oils is .33%. Too high an ash content can cause valve problems on these engines that run at a constant speed and load for long periods of time.

Irrigation wells that are powered by electricity have small reservoirs to lubricate the bearings. In most applications, Archer Turbine Gear is the correct choice. Again, check your owner's manual to insure you get the correct product for that application.



The irrigation well has two needs for lubrication. First, the gear head is a right-angle gear configuration that in most cases calls for an ISO VG 68 oil. Archer Turbine Gear is the Archer product that meets that requirement. While the volume can range in this application, it is very important to service the gear head on a regular basis. In some instances, the well made be driven

by belts. This set up will have bearings that are lubricated from a common sump. The Archer Turbine Gear would be the correct choice for this application also. The other need for lubrication in the well is the shaft that drives the pump. This drive shaft is held in line by a series of bushings placed at 5 foot intervals along the length of the shaft. The lubricating oil is delivered to each of these bushings by means of reservoir on the gear head that has a shut-off valve and a needle valve to precisely control the volume of oil dispensed. The oil then travels the length of the shaft (the shaft has a passageway down the center) and is applied to each bushing through a hole at each 5 foot interval. Archer Turbine Drip is the correct choice for this application. This oil has a high VI (viscosity index) so it is not affected by temperature changes. Original drip oil will flow excessively during the hot afternoon then almost come to a complete stop during the overnight hours. Archer Turbine Drip provides a much more stable drip rate and in most cases will actually reduce the amount of oil needed to lubricate properly.



Center pivot irrigation systems require a variety of different lubrication products. Archer has the products to keep these systems running smoothly throughout the irrigation season.

On hydraulically driven center pivots, Regular Hydraulic 32 or Uni-Fluid XP would be the products of choice. The planetary gears and gear boxes on other center pivots would be lubricated with one of our gear lubes, All Gear 80W-90, All Gear 85W-140 or Super All Gear 80W-140. One of our customers uses Super Solidified Grease #0 (Winter) in his gear boxes. They use approximately 30-400# drums of this grease per year!

As in any application, check your owner's manual to verify that you are using the correct product.