

Saving Money on Hydraulic Rebuilds

by Brendan Casey,

Rebuilding a hydraulic component involves reworking or replacing all parts necessary to return the component to an “as new” condition in terms of performance and expected service life. In other words, a rebuilt component should perform as well and last as long as a new one. In this column, the terms “rebuild” and “repair” will be used interchangeably with the same meaning.

In many cases, rebuilding a component can result in significant savings when compared to the cost of purchasing a new one. The economics of proceeding with repairs ultimately depends on the cost of the repair relative to the cost of a new component. As a rule, the more expensive a new component is, the more likely that a repair will be cost-effective.

Factors That Influence Component Repair Costs

A component’s rebuild cost is determined by many factors including:

- extent of wear or damage to the component
- facilities and expertise of the repairer
- repair techniques employed

If you are responsible for keeping one or more hydraulic machines running and are serious about minimizing operating costs, then at some point, a hydraulic component will need to be rebuilt by a specialist.

There are generally three options for rebuilding: the machine dealer, the component manufacturer or an independently owned hydraulic shop.

Machine Dealers

With hydraulic component repairs, the capabilities of machine dealers vary. Some have the necessary expertise and equipment to perform most hydraulic rebuilds in-house, while others are completely reliant on outside suppliers to provide this service. If a dealer relies on a third party for repairs to hydraulic components, it could end up costing more.

Exchange Programs

If machine downtime is an issue and the dealer offers an exchange or “reman” program, this can be an attractive option. The benefit of an exchange program is the dealer carries inventory of rebuilt components. Therefore, instead of waiting for a component to be repaired, it can be exchanged with a reman unit from the dealer’s stock.

It's important to understand the exchange price is not necessarily based on the cost of repairing a particular component. It is usually based on the average rebuild cost for that component plus an inventory charge, and may be conditional on certain parts of the component being reusable.

Because the dealer's exchange price is based on an average rebuild price, if you were to have a component repaired it could cost more than the exchange price, or it may cost less. Of course, machine downtime costs money and the main advantage of an exchange program is that downtime is minimized.

If downtime is not a concern, then it is wise to obtain a repair quote for the component before opting for an exchange unit. This is one reason for scheduling component change-outs upon completion of their expected service life. If component rebuilds can be scheduled when machine downtime is not an issue, it will not be necessary to pay a premium for an exchange unit.

Hydraulic Component Manufacturers

When a hydraulic component needs to be repaired, a logical option is to send it to the company that manufactured it. Note here that the shop being referred to is a repair shop owned and operated by the hydraulic component manufacturer, rather than an independent hydraulic shop that is an authorized repairer or distributor of the manufacturer's products.

By using the component manufacturer, a repair to OEM standards will be achieved, but in some cases this can mean foregoing the opportunity to save money. Consider the following example.

Let's say a radial piston motor has been removed from a hydraulic machine and shipped to the motor manufacturer for repair. Upon dismantling the motor, it is discovered that several of the pistons and bores are badly scored as a result of contamination. The manufacturer suggests that because of this damage, the motor housing and all of its pistons need to be replaced. As a result, the manufacturer's price to repair the motor is almost as much as a new one.

You don't want to buy a new motor if you can avoid it, so you decide to get a second repair quote. This time you take the unit to an independent hydraulic shop. After inspecting the motor, the repair shop advises that it can rebuild it for around 60 percent of the cost of new one - a significant saving on a \$10,000 motor!

The lower cost is possible by employing a money-saving repair technique that involves machining the piston bores to remove scoring, and fitting a set of oversize pistons, thereby salvaging the housing. The oversize pistons are nongenuine or aftermarket parts, however their quality has been proven in a large number of rebuilt units. The repair shop's confidence in this method of repair is supported by a 12-month warranty.

Independent Hydraulic Shops

This example highlights the type of savings possible by using a reputable, independently-owned hydraulic shop to carry out your component rebuilds. The motor manufacturer didn't offer this lower-cost solution because the oversize pistons are nongenuine parts, therefore the repair is not to OEM standard. However, just because a repair is not carried out to OEM standard doesn't mean the rebuilt component won't perform and last like a new one.

It is important to distinguish between a properly engineered and proven repair technique that will save you money and a dubious repair that will likely cost twice as much in the long-run. Always ask the repair shop two questions:

Has the repair technique been proven successful in terms of performance and achieved service life?

Is the repair covered by warranty?

If the repair technique is unproven, or the shop offering the repair is not willing to back it up with a warranty, think twice before proceeding. You need to make an informed decision based on the amount of money the repair technique will save you if it works, versus the cost if it doesn't. The repair shop may be willing to share some of the risk involved in finding out, given that if the technique proves to be successful, it can offer the same solution to other customers. These issues should be discussed with the repair shop before making a decision.

About the Author:

Brendan Casey has more than 17 years experience in the maintenance, repair and overhaul of mobile and industrial hydraulic equipment. For more information on reducing the operating cost and increasing the uptime of your hydraulic equipment, visit his Web site:

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