

HOW TO IMPLEMENT OR CONVERT TO A CONTROL SYSTEM



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GET STARTED

● **Get Everyone on the Same Page.**

While simple, surprisingly few people usually know the machine's full scope. Management, engineering, and service all need to be involved. Include machine operators for valuable hands-on input.

Key customers will have valuable input about what the current design does and doesn't do well. Understand what the market wants and needs, what brings value. Toss out what does not.

● **Get Market and Customer Research.**



● **Keep the Operator Interface Simple.**

Don't add too many things into an operator interface. It can get cluttered and difficult to read and understand. Simple is always better.

Unless you want to blow up your budget, know what you want up front. Only make changes that are absolutely necessary to improve the function of your machine.

● **Avoid "Trial & Error" Design Approach.**



Use Messaging & Diagnostics to Simplify Machine Use.

The operator runs the machine. The operator interface should make sense to the operator, not just to someone in engineering. Keep it simple and to the point so the operator can focus on the job, not the machine.

All machines eventually need service. Design your wiring and plumbing with ease of access in mind. Use quick disconnects where possible and never make up a hydraulic hose that has two 90 degree fittings (one 90 and one straight is great).

Wiring & Plumbing Access.

Price & Cost are Different.

Price is not cost. Fully evaluate the cost of each product. Does it provide a production advantage? It may cost \$30 more to design a panel with quick disconnects, but it could save an hour when wiring up that machine on the production floor.

Prototypes should be fully evaluated and tested, but never be sold as a production unit. Through testing, you will find operating or production issues. Take time to get it right. Loan it out for a month to run it through its paces. This will save you heartache, time, money, and possibly your company name in the marketplace.

Build & Fully Test a Prototype.

Plan For Service & Maintenance.

The service team should be part of the design process so that they can plan for the machine maintenance. Get them involved in the prototype so they understand the diagnostics and can provide input. You do not want to put a piece of equipment in the field that you can not service.



MOBILE HYDRAULIC CONTROL SYSTEMS