

Application Note: Power Press Safety Control System Considerations for Used Machines

A significant number of used power presses have entered the used equipment market as a result of bankruptcies and plant closures. As a result manufacturers requiring additional press capacity or those looking to replace broken equipment are more often looking to the used equipment market as a bargain source for their needs. ***Much of this equipment has clutch/brake controls and safety systems that are suspect and out of compliance with OSHA and ANSI standards.*** Buyers often fail to properly evaluate the safety systems and incur significant unexpected post purchase costs to upgrade the presses.

When considering the purchase of a used press its important to carefully evaluate the clutch/brake control system so you can budget properly. Operator safety, OSHA 1910.217 compliance, ANSI compliance, operational efficiency, and cost are all major considerations. To complicate matters ANSI has released B11.1-2009 – a more demanding version of ANSI B11.1 safety requirements for mechanical power presses. There is some rumor that OSHA may adopt some or all of the new and more stringent ANSI language.

OSHA compliance is not the only issue or objective in evaluating the clutch/brake control and associated safety systems. The buyer needs to consider all the intended applications for the machine. Factors to consider: Available operating modes - off/inch/single/continuous are fairly standard; however, automatic single stroke, continuous on demand, or multiple operators may be required, Visual displays, operator interfaces, and automation options are also elements of the clutch/brake control that affect overall safety and productivity. Do you need automatic shut height control, counterbalance control, tonnage monitors, automatic speed control, programmable limit switches, and die protection?

You'll also want to consider the condition of the clutch/brake and its ability to stop the press. If you plan to use a light curtain or two hand controls as a point of operation safeguarding device you'll want to satisfy yourself that the press stopping time is not excessive; otherwise, safety distance requirements may be excessive. For example; the OSHA safety distance requirement for a press stopping in 200 milliseconds is 12.6" while a press stop time of 400 milliseconds requires >25". ANSI stopping formulas significantly increase safety distance.

There are some simple items a potential buyer can look for to determine basic OSHA compliance:

- Press electrical schematic dated after June 1974
- Air pressure switches for clutch and counterbalance
- Supervisory control of mode and stroke selection
- Red emergency stop and Yellow top stop
- Two hand control with anti-tie down provision
- Continuous prior action function (automatic presses)
- Control reliability – single component failure safe response
- Brake monitoring for hands in die operations
- Dual safety valve for (hands in die operations).

Want help evaluating the status of a used press clutch/brake control system. Call your PRI Application Engineer for assistance. We can also provide written information (OSHA/ANSI compliance checklist) so you can be a better informed buyer.

More information pertaining to older control systems built and designed prior to ANSI B11.1, ANSI B11.19, and OSHA 1910.217 standards can be found here: [Wintriss Clutch/Brake Power Press Control Systems.](#)