



## SERVICE AND APPLICATION NOTES

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### Correct Knockout Removal – Air Handler Cabinets

#### ISSUE:

Reports from the field citing difficulty removing air handler cabinet knockouts.

#### HOW KNOCKOUTS ARE CREATED:

In the press, the punch cuts the knockout and pushes the knockout through the material until it breaks mostly free, except for several thin attachment points. Then the knockout is pressed flat back into place, closing the gaps that were formed.

#### KNOCKOUTS FACTORY TESTED:

The factories do destructive testing of knockouts at the beginning of each manufacturing run setup. The testing consists of using a force gauge to make sure the knockout can withstand at least 10 lbs. of force without deforming and the use of a screwdriver to remove the knockout.

#### CORRECT TECHNIQUE FOR REMOVING KNOCKOUTS:

During manufacturing the knockouts are cut and pushed in one direction. Correct removal applies force to the knockout in the same direction. To avoid damage, the knockout must be removed (pushed) in the same direction it was punched. For example, the top panel knockout is designed to be removed (pushed) from the outside in. The side panel knockouts are designed to be removed (pushed) from the inside out.

#### IMPORTANT:

- To remove knockouts in the field, knock them out in the same direction the punch did.
- Always start with the smallest knockout and work outward to the knockout for the appropriately-sized hole.

