

Safety Bulletin				Tesco Corporation 5616 – 80th Avenue SE Calgary, Alberta, Canada T2C 4N5 Tel: 1-877-TESCO-77 (North America) Tel: 1 (713) 359-7195 (AMSS 24-hour support) Tel: 1 (713) 359-7295 (International) Email: bulletins@tescocorp.com www.tescocorp.com www.tescoparts.com
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Weld Failure on EMI Guard Hinges				

BACKGROUND INFORMATION:

A recent incident occurred where a TESCO EMI Top Drive guard (TESCO part number 960057-1) was being lifted while the top drive was in the cradle and instead of turning, the hinges holding the top door (TESCO part number 920020-1) broke off (Figure 1). One hinge stayed on the guard and the other stayed attached to the top drive's guard frame.

While the lid on the top door is secured by two hinges and two bolts (Figure 2), upon inspection it was discovered that the hinges were welded only on one side and not on the other. Further investigation revealed that although the top door hinges on a majority of the EMI guards are welded on both sides, it was found that some are welded to the frame and door only on one side.



Figure 1: Hinge weld failure on the top door of the EMI guards

AFFECTED PRODUCTS:

Guards (TESCO part number 960057-1) used on all TESCO EMI Top Drives.

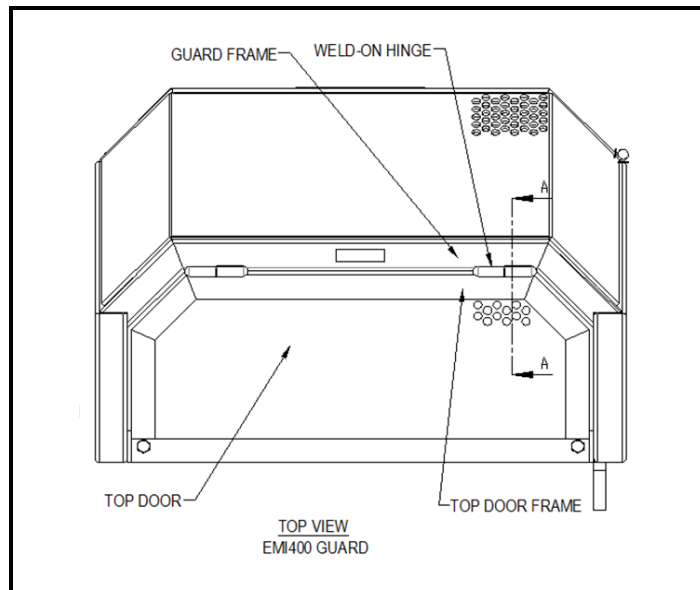


Figure 2: Hinge weld arrangement on some of the existing EMI guards

ACTION REQUIRED:

TESCO recommends to visually inspect all hinges on all guards to ensure that the welds are present on both sides of the hinges. Any guards where the hinge is welded on only one side (Figure 3) must be re-welded so that both sides of the hinge are welded (i.e., for the top door, between the guard frame and hinge and between the top door frame and hinge), see Figure 4.

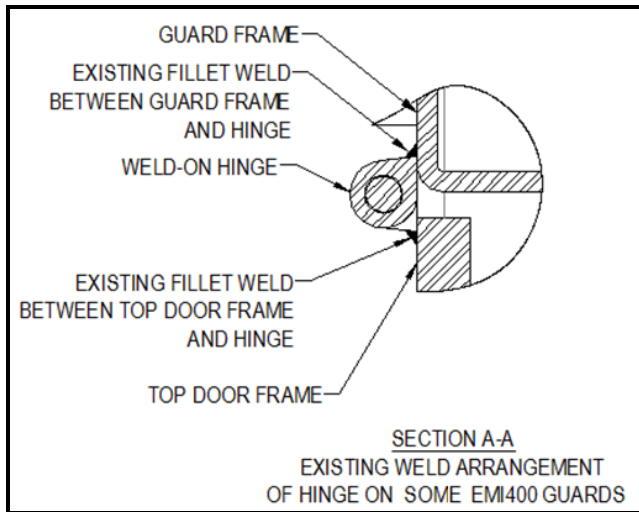


Figure 3: Hinge welded on one side

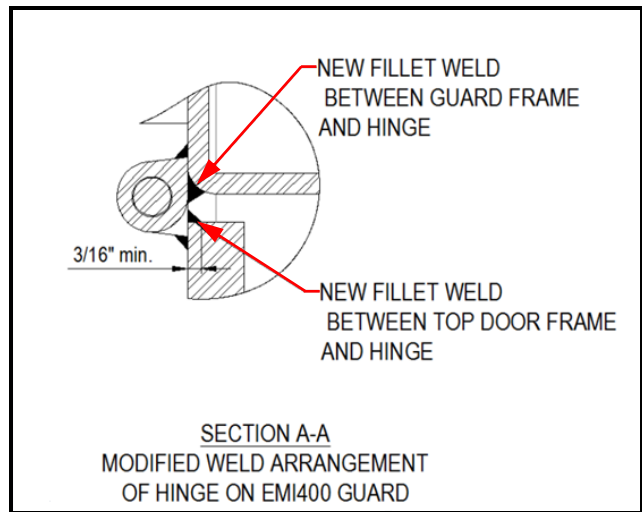


Figure 4: Hinge welded on both sides

The guards are made of carbon steel, so conventional welding methods may be applied. The following steps outline general guidelines to perform the welding procedure:

1. Grind or buff the hinge welding points on the frame guard, top door and hinge to remove any rust and paint up to 0.5" from each side.
2. Clean, degrease and dry the welding surface.
3. Preheat the welding point up to a minimum 100°F. In cases where the welding is multi-pass, the inter-pass temperature must also be a minimum 100°F.
4. Use E7018 electrode for welding. The fillet weld size should be a minimum of 3/16" (Figure 4).
5. Perform a magnetic particle inspection (MPI) to AWSD1.1 cyclically loaded criteria (welder must be qualified to AWSD1.1).

Version	Date (D/M/Y)	ECN	Description of changes
Rev 0	04/10/2013	220-0036	Initial release of document

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