



## SVE BULLETIN

SPECIAL VEHICLE ENGINEERING – BODY BUILDERS ADVISORY SERVICE

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### Under Hood Electrical Equipment Mounting

**Models Affected:** 2017 and later Model Year Super Duty Pickups and Chassis Cabs

**Description:** *Ford has received a number of reports of upfitted chassis cab trucks that have experienced electrical grounding concerns, resulting in interior smoke, odor, and in some cases, fire. Ford recently investigated this concern with several upfitters and concluded the cause was aftermarket electrical equipment involving B+ power contacting the underside of the hood.*

The purpose of this bulletin is to bring this concern to your attention, inform you that the 2017 Super Duty under hood layout and primary battery location has changed from 2016 and prior models, and provide guidance is on:

- recommended placement of electrical equipment being installed in the engine compartment and
- minimum clearance to the hood (specifically for battery positive (B+) related components).

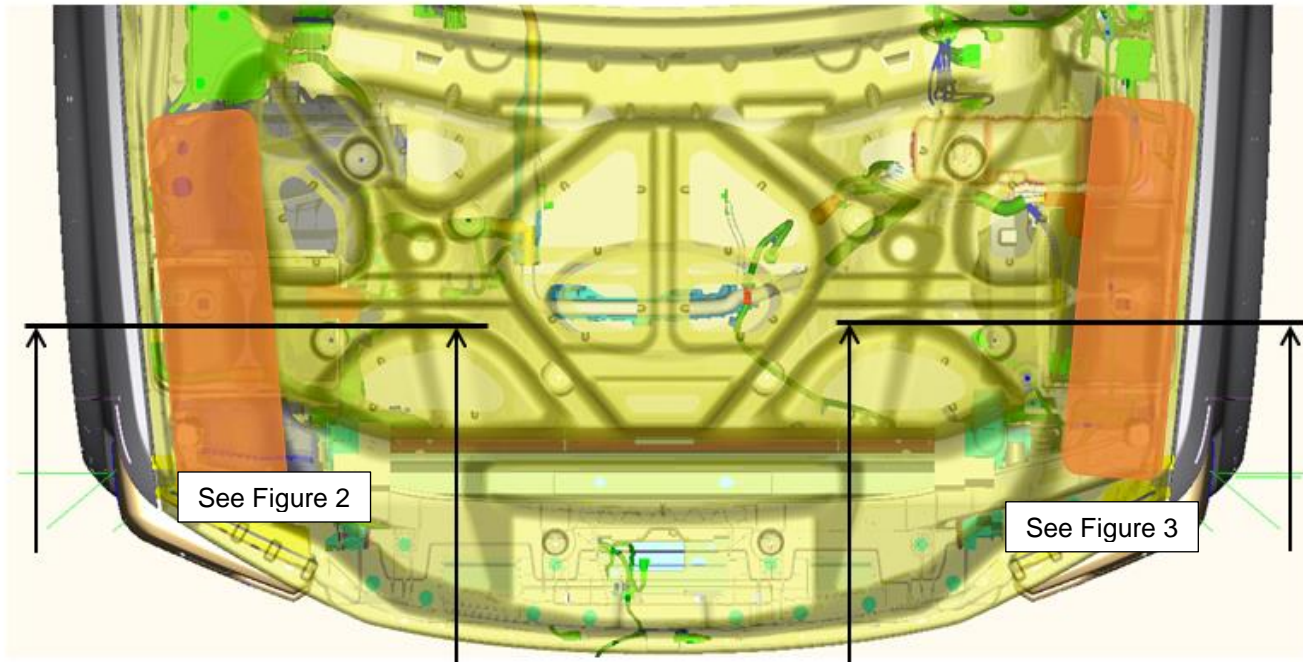
Electrical equipment added to the engine compartment during any aftermarket installations / modifications must be positioned to prevent any B+ power from coming into contact with the underside of the hood when closed. All B+ related equipment must be placed / routed per recommendations within this bulletin, adequately retained, shielded / covered, and confirmed to have clearance to the hood when closed to prevent unintended battery short to ground and damage to vehicle wiring (e.g. radio antenna and radio harness within the instrument panel).

Do not mount or place electrical equipment, including but not limited to connection terminals, cables, relays, fuses, and fusible links on top of or near the primary or secondary battery in a location that has low clearance to the underside of the hood as indicated by orange rectangles in the figures that follow.

The reduced clearance to the underside of the hood for added electrical equipment on top of or near the primary or secondary battery may not be apparent when the hood is open. **If any B+ equipment is mounted in the low clearance zone as indicated by the diagram, a minimum of 15mm must be confirmed between bottom of hood and any equipment (including any B+ shielding and under hood insulation) mounted in the engine compartment when hood is fully closed.** Several methods exist to confirm equipment and shielding meets minimum clearance to bottom of hood (e.g. clay test, bore-scope).

**The upfitter must ensure that any electrical equipment or shielding mounted under hood does not come into contact with the hood or hood components.**

**Figure 1:** 2017 Super Duty Under Hood Plan View. Low clearance to underside of hood in areas highlighted in orange



**Figures 2 & 3:** Vehicle X-Sections. low clearance areas (orange rectangles) for aftermarket equipment between battery & hood inner

**Note:** only 16 mm clearance from top of negative terminal assembly to underside of hood

