



Magnaloy Coupling Company

Technical Product Information

Pump/Motor Mounts

Coupling Interference with Bolt Boss in Pump/Motor Mounts

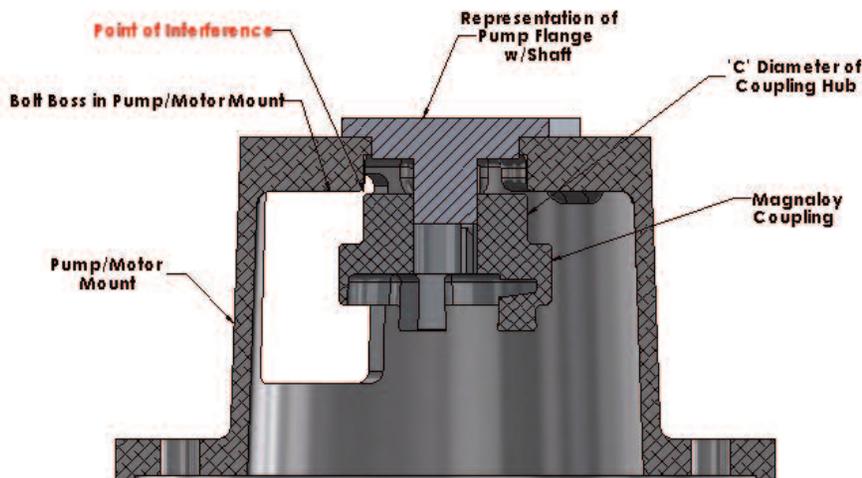
PROBLEM: With some combinations for Pump/Motor Mount / Pump / Couplings, there is the potential for interference between the small (“C”) diameter of the Coupling Hub and the Bolt Boss’s on the inside of the Pump/Motor Mount. This condition, if the pump shaft is short, results in inadequate shaft engagement in the coupling which could lead to premature coupling failure. The table below indicates the conditions under which this problem exists.

| <u>Motor NEMA Frame Size</u> | <u>Pump Flange Size (equal to or smaller than)</u> | <u>Coupling Size (larger than)</u> | <u>Pump Shaft Length* (shorter than)</u> |
|------------------------------|--|------------------------------------|--|
| 056 | SAE: A | Model 400 | 1.54” |
| | Metric: 80 | | |
| 182 | SAE: 2AA | Model 100 or PM 90 | 1.20” |
| | Metric: 50 | | |
| 284 | SAE: 2AA | Model 400 | 1.67” |
| | Metric: 80 | | |
| 324 | SAE: B | Model 400 | 1.72” |

* Pump Shaft Length is measured from the pump mounting face to the end of the shaft.

How to read chart: If your NEMA Frame Motor is a 182 frame AND your pump flange is an SAE 2AA, Metric 80 or smaller AND your coupling size is larger than a Model 100 AND your pump shaft is shorter than 1.54 inches, you will have an interference problem that will result in reduced shaft engagement.

Representation of Pump/Motor Mount Bolt Boss to Coupling Hub Interference





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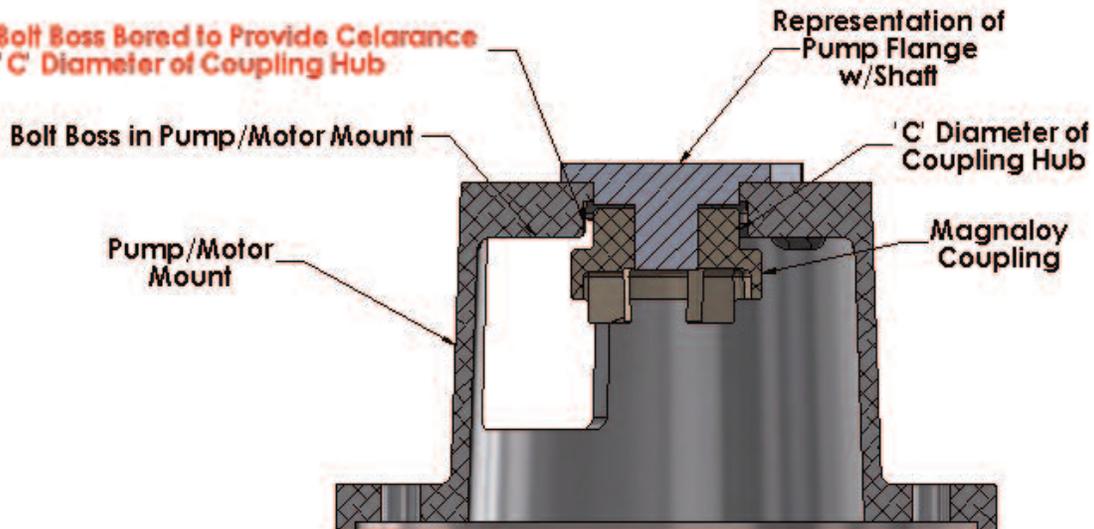
Pump/Motor Mounts

Coupling Interference with Bolt Boss in Pump/Motor Mounts (continued)

SOLUTION: Magnaloy's solution to this problem is to counterbore the Bolt Boss's to allow clearance to the "C" diameter of the coupling hub. This will result in approximately 0.50" additional shaft engagement.

Solution to Interference Problem

Solution: Bolt Boss Bored to Provide Clearance to 'C' Diameter of Coupling Hub



If your application results in this condition, specify the Bolt Boss Counterbore Solution designator (-CB(model size)) at the end of the standard Pump/Motor Mount part number. **IE. M182504F-CB(200).**