

Design Change Advisory: Safety and Technical Bulletin



Notification of 2" 602 Design Change

Avoiding the Dangers of Mismatching Hammer Unions

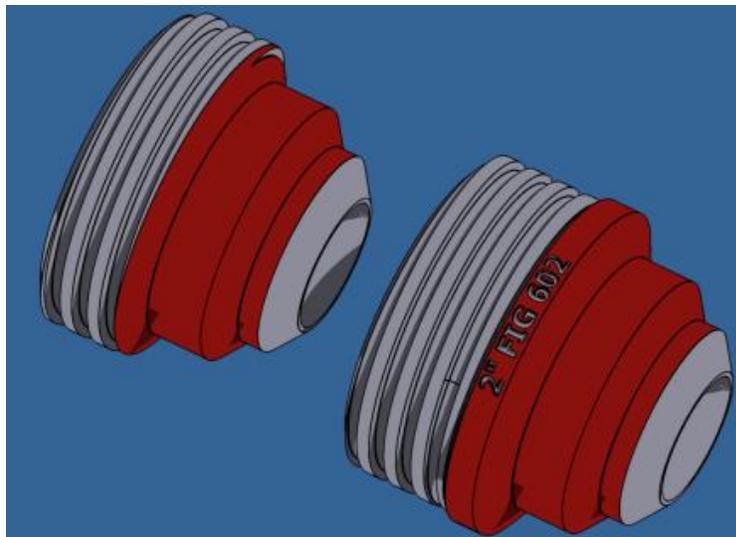
There is a longstanding safety issue surrounding the mismatching of hammer union connections in this industry. Mismatched connections are likely to fail under pressure, with potential consequences of personal injury, death and/or property damage.

A major contributing factor to the mismatch conditions stem from a failure to detect (recognize) hammer union connections with the same size, but different figure number.

As a member of the API Task Group TG5, Best Flow Line Equipment, along with other major manufacturers are adopting a new standardized and interchangeable 2" 602 female connection design, in addition to raising awareness among customers about the potential dangers of a mismatch, and the benefits of the new design.

The most common danger is from the improper make-up of a 2" 602 end connection with a 2" 1502 end connection. By changing the design of the 2" Fig 602 female end connectors (see detail below), a reduction of the external ACME thread prevents engagement with a 2" Fig 1502 end connector, and the marked raised shoulder allows for ready identification of the new engineering design.

The design change does not change the application in any way other than preventing improper makeup with 2" Fig. 1502 components.



**Raised Shoulder on New Engineering Design (sub on right)
as Compared to Original Design without Raised Shoulder**



Users should only purchase components and assemblies that implement this solution. Hammer union components should be regularly inspected and maintained by the user. Figure numbers and markings on all 2-inch female unions of 402, 602, 1002 or 1502 designation should be gauged and marked for ready identification, and not used until proper identification by gauging and marking is completed.



Go/No-Go gauges should be used on all 2-inch female subs to determine whether the component is acceptable or unacceptable for use with a 2-inch Figure 1502 male sub. These gauges should be used on a routine basis in the industry by the companies that are regular users of 2-inch hammer unions. These gauges should be readily available on all rigs and job sites with 2" size unions, and field personnel should be trained in the use of the Go/No-Go gauges. Gauges are available from Wood Machine Co., Tulsa OK, Part #477990000, Tel. 918-438-2412