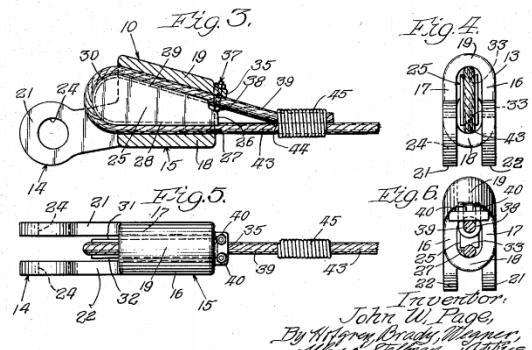


Greetings All,

This week's topic gets us back to basics with the Asymmetric Wedge Socket, or more commonly known just as the Wedge Socket.

The wedge socket was first designed in the 1950s and patented in 1961. Very little has changed since then and it is still commonly used today on machines in Australia and throughout the world.



During daily operations lifting requirements change and the crane operator and crew reconfigure the crane to best suit the application. This can commonly happen several times a day.

The Wedge Socket is a simple design, but care should still be taken to ensure that it is assembled correctly. Australian Standard AS2740-2001 defines design and use of Wedge Sockets. When assembled correctly the Wedge Socket can hold the rope in place up to 95% of the rope's breaking strength. The Wedge Socket is the termination point of the reeving system. During changes to the reeving configuration also

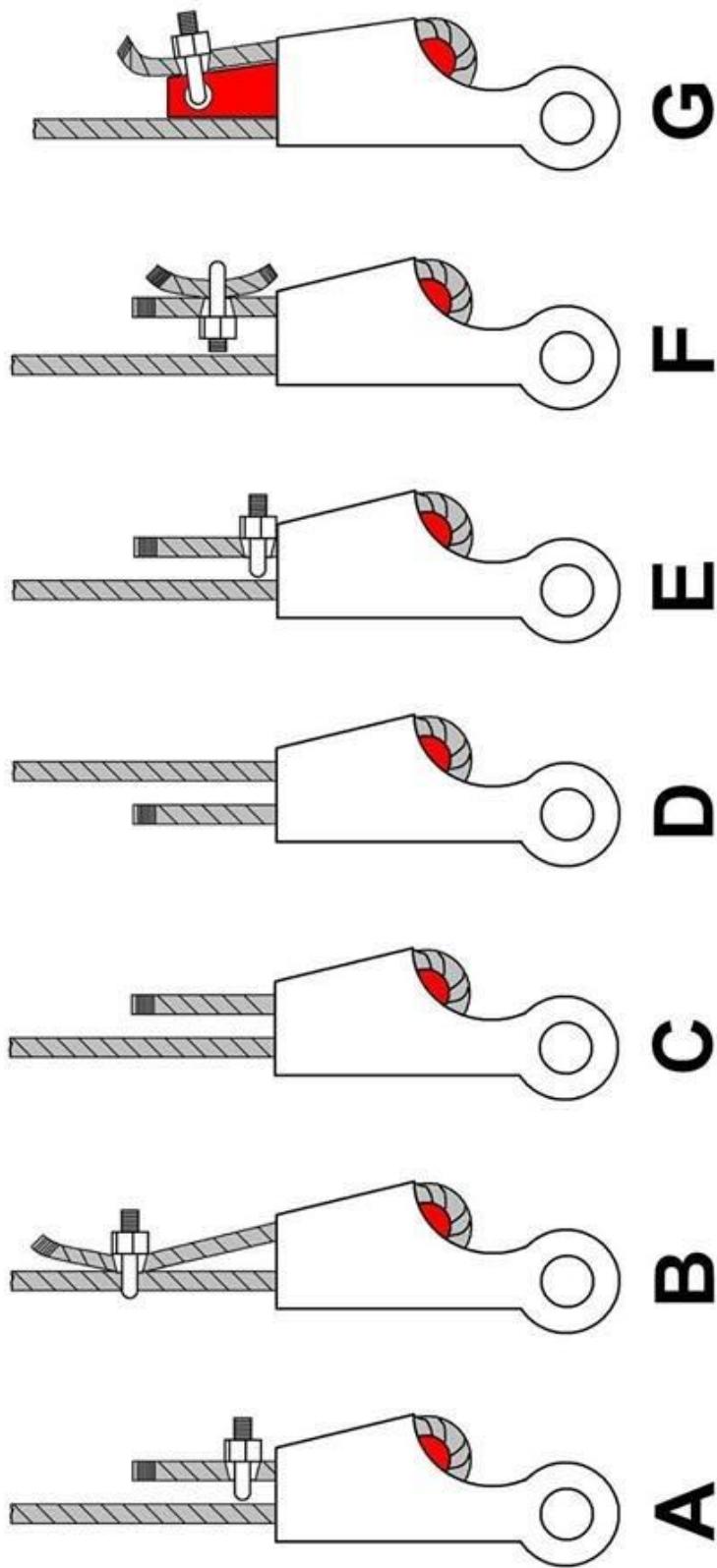
check the pin, the pin retaining clip/key, the socket casting for cracks, and follow the rope back through the hook block and head sheaves to make sure the reeving configuration follows the manufacturer's recommendations. Double check that the rope is running properly in the hook and head sheaves, not over a pin or between sheaves as this is difficult to see. Wire rope will find the straightest path to hold a load which could damage sheaves or the boom / jib.



### 3 Key's to remember:

1. The live end of the rope should be in line with the socket pin hole. This is why the Wedge Socket is asymmetric.
2. The dead end of the rope should stick out at least 200mm from the socket
3. The rope clamp is not used to hold the rope. The friction in the wedge should hold the rope in place.

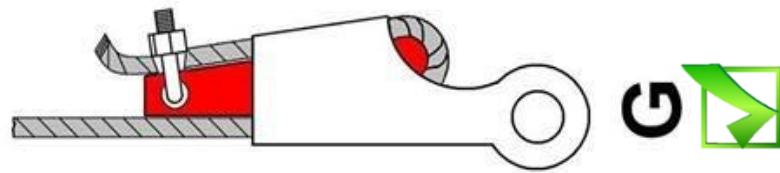
The attached page can be printed to review the correct and incorrect use of an Asymmetric Wedge Socket.



Which Wedge Socket and Rope is configured correctly? (Could be more than one.)

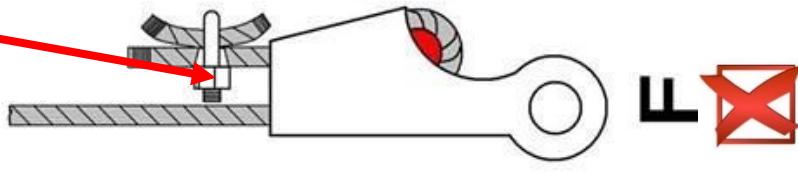
## ANSWERS

F: Rope Clamp Saddle  
should face away from  
the Live End of the Rope



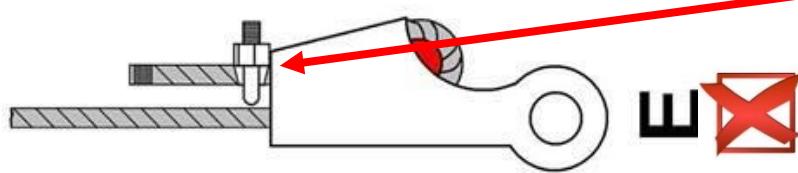
G

D: Live End of Rope is not in  
line with load path to the  
Socket Pin



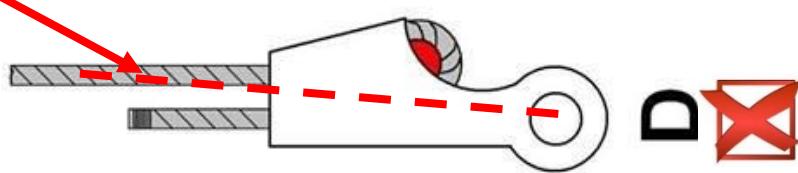
F

B: Rope Clamp  
should not be on  
Live End of Rope



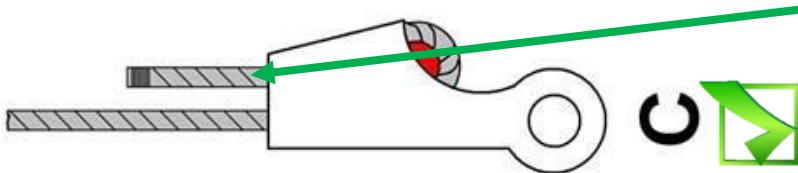
E

E: Rope Clamp should not  
be in contact with the  
Socket

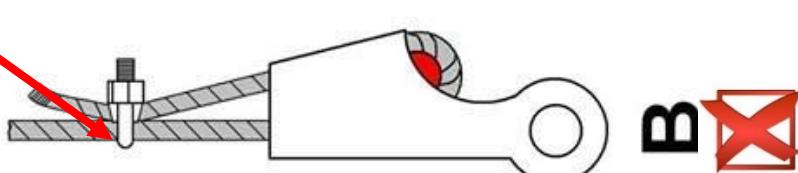


D

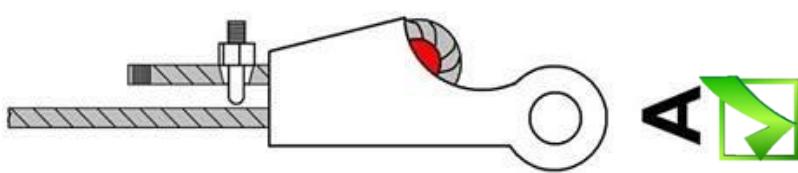
C: Allowed, but a Rope Clamp  
offset from the Socket is  
recommended (Figure A)



C



B



A



March 7<sup>th</sup>, 2016

CICA - Vic / Tas Branch Crane Safety Bulletin # 197



A joint enterprise of employer associations  
and unions in the building and  
construction industry