

# Cotter joint

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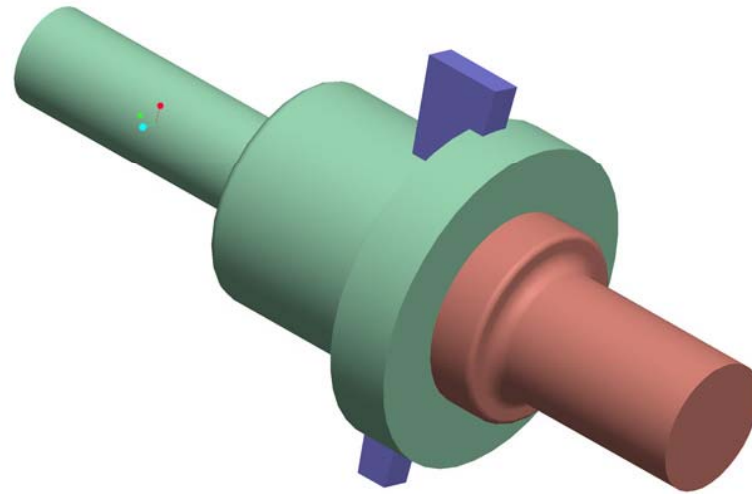


FIG 01: ASSEMBLED COTTERED JOINT

# Cotter joint – modes of failure

TENSION FAILURE

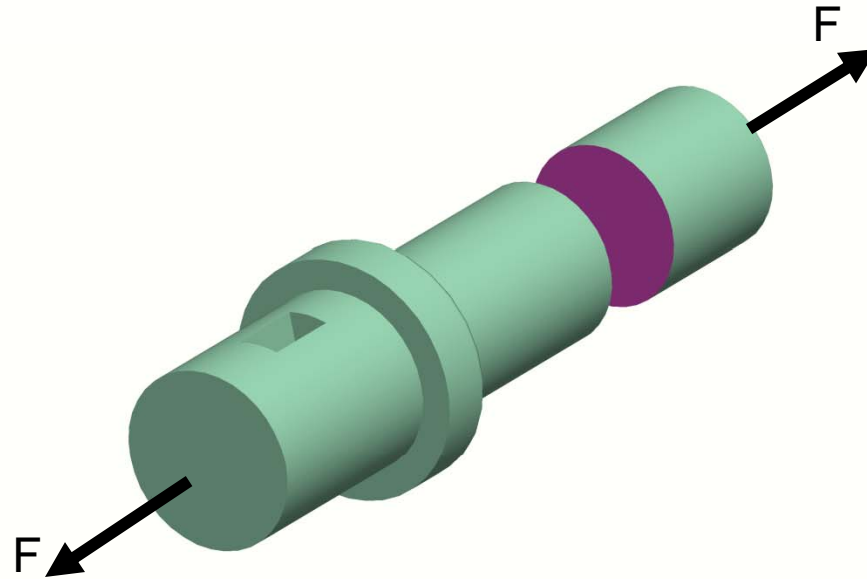
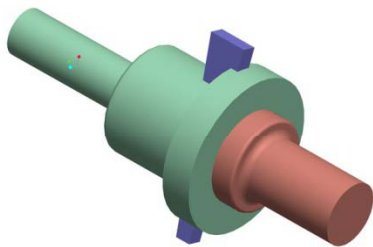


FIG 02: STEEL SPIGOT BREAKING IN TENSION OUTSIDE THE JOINT



# Cotter joint – modes of failure

TENSION FAILURE

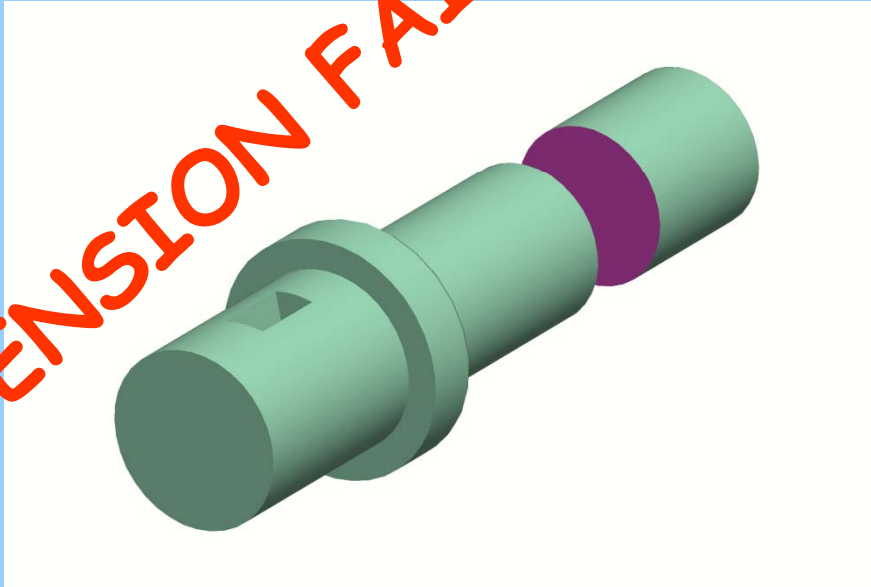


FIG 02: STEEL SPIGOT BREAKING IN TENSION  
OUTSIDE THE JOINT

WROUGHT IRON ROD BREAKING IN TENSION  
OUTSIDE THE JOINT

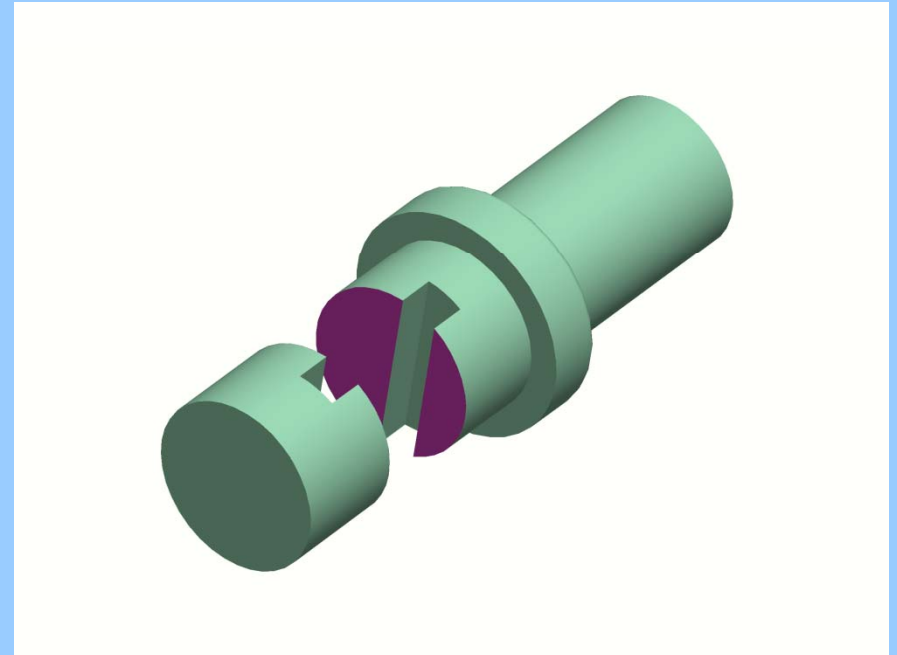
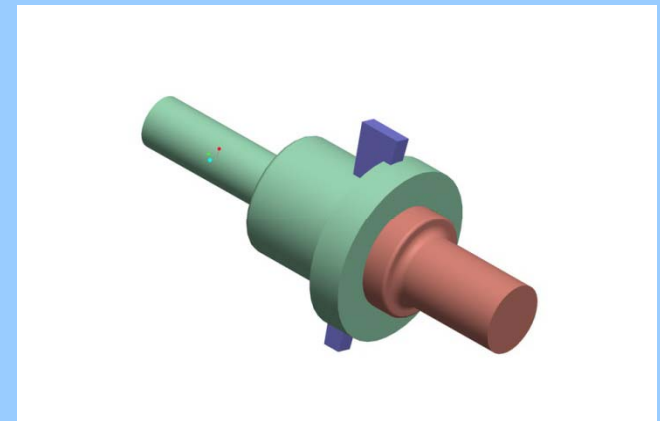


FIG 05: SPIGOT BREAKING IN TENSION  
ACROSS SLOT



## Cotter joint – modes of failure

TENSION FAILURE

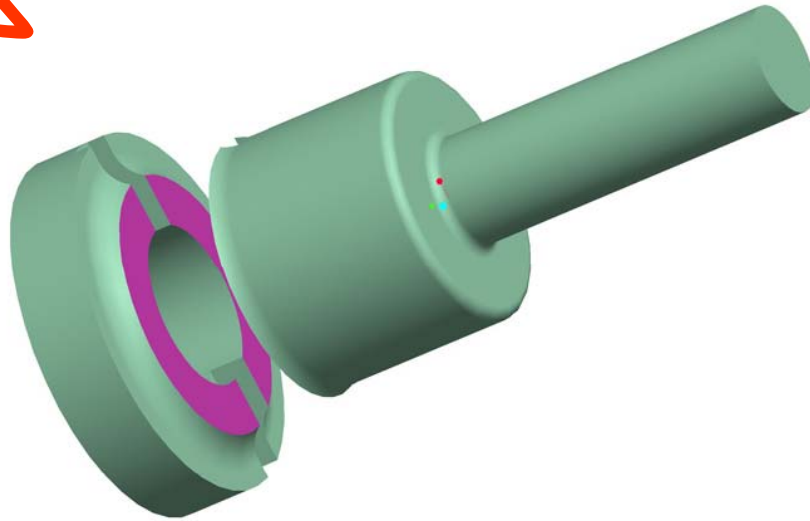
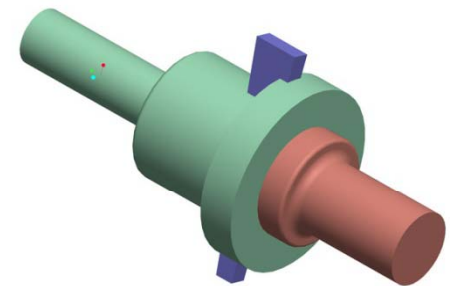


FIG 07: SOCKET BREAKING IN TENSION ACROSS SLOT



# Cotter joint – modes of failure

SHEAR FAILURE

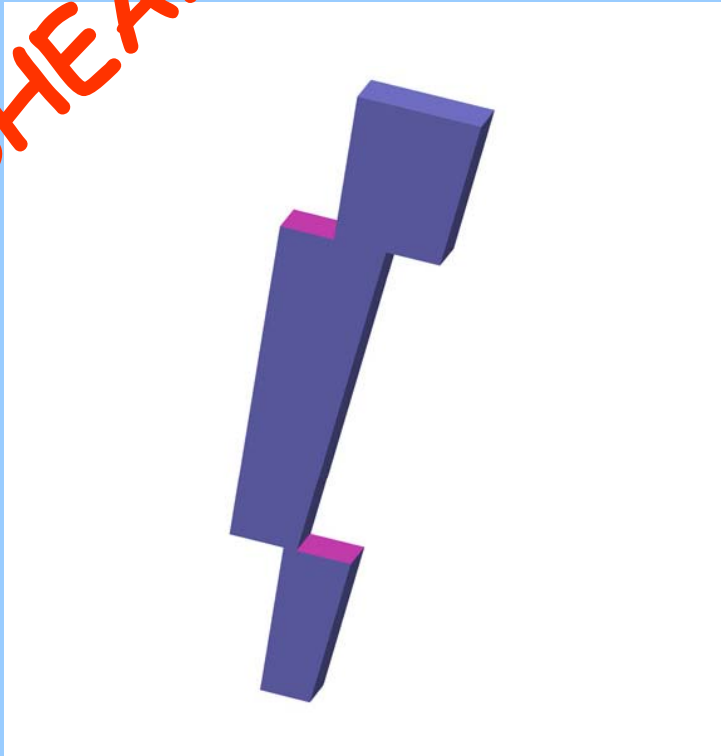


FIG 06: DOUBLE SHEARING OF COTTER PIN

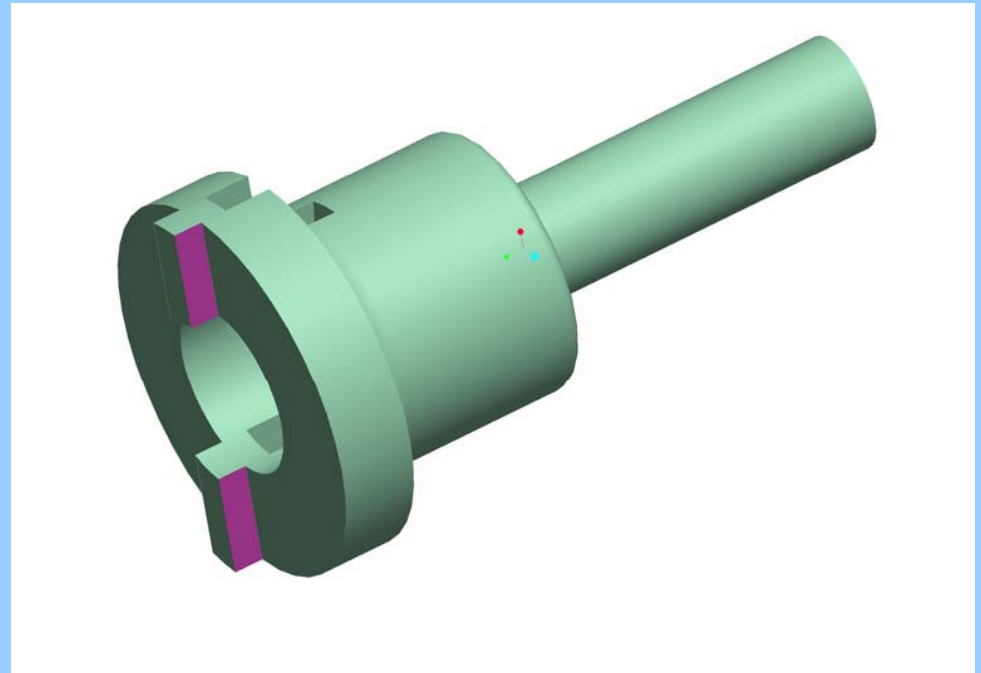
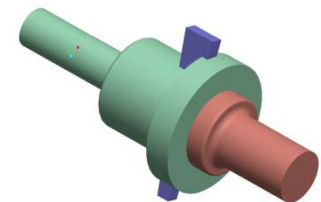


FIG 09: DOUBLE SHEARING OF SOCKET END



# Cotter joint – modes of failure

SHEAR FAILURE

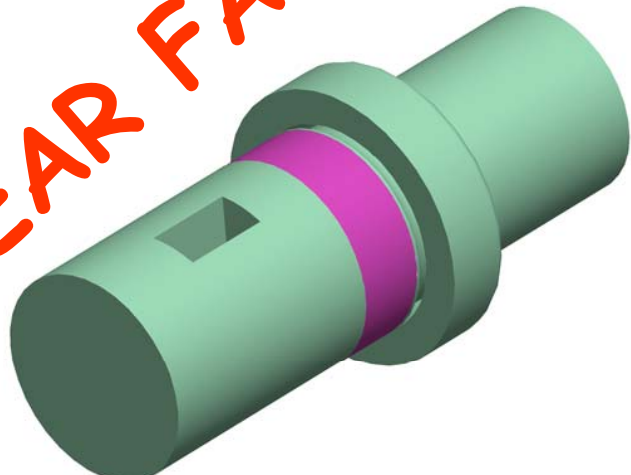


FIG 11: SHEARING AWAY OF THE COLLAR IN THE SPIGOT

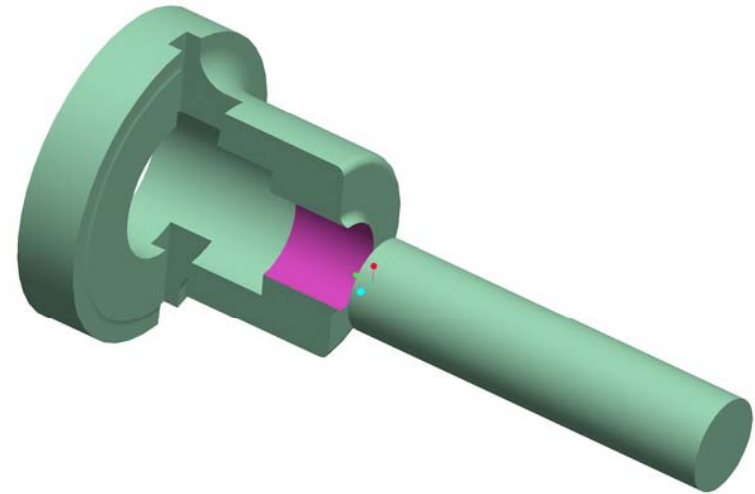


FIG 12: SHEARING AWAY OF SOCKET (IF  $d_w < d_l$ )

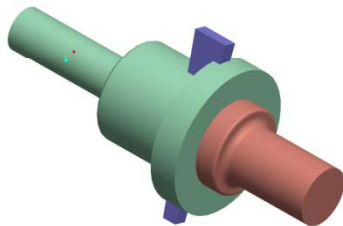
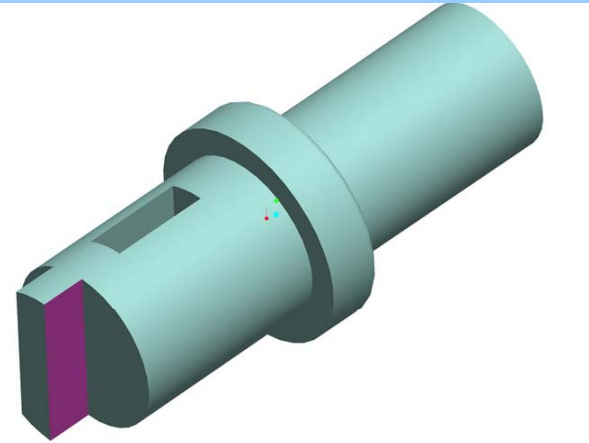


FIG 10: SHEARING OF SPIGOT END



# Cotter joint – modes of failure

BEARING FAILURE

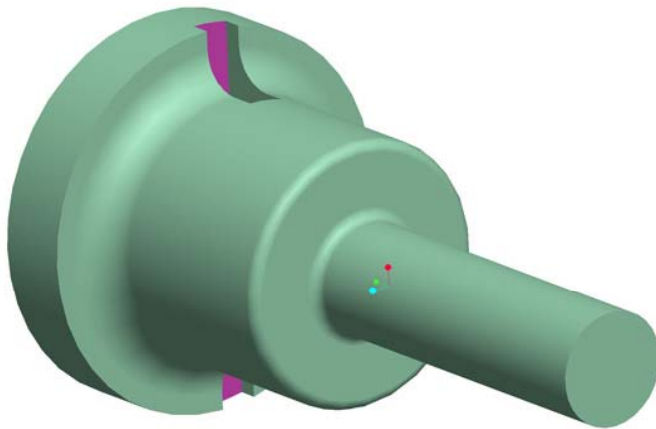


FIG 08: CRUSHING OF COTTER PIN AGAINST SOCKET

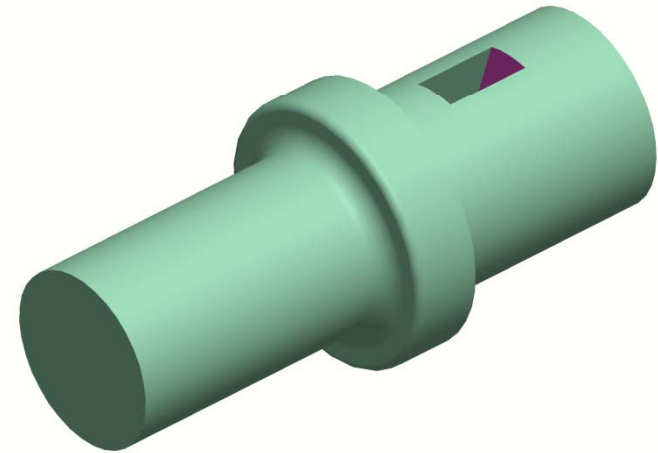


FIG 04: CRUSHING OF COTTER PIN AGAINST ROD  
END

