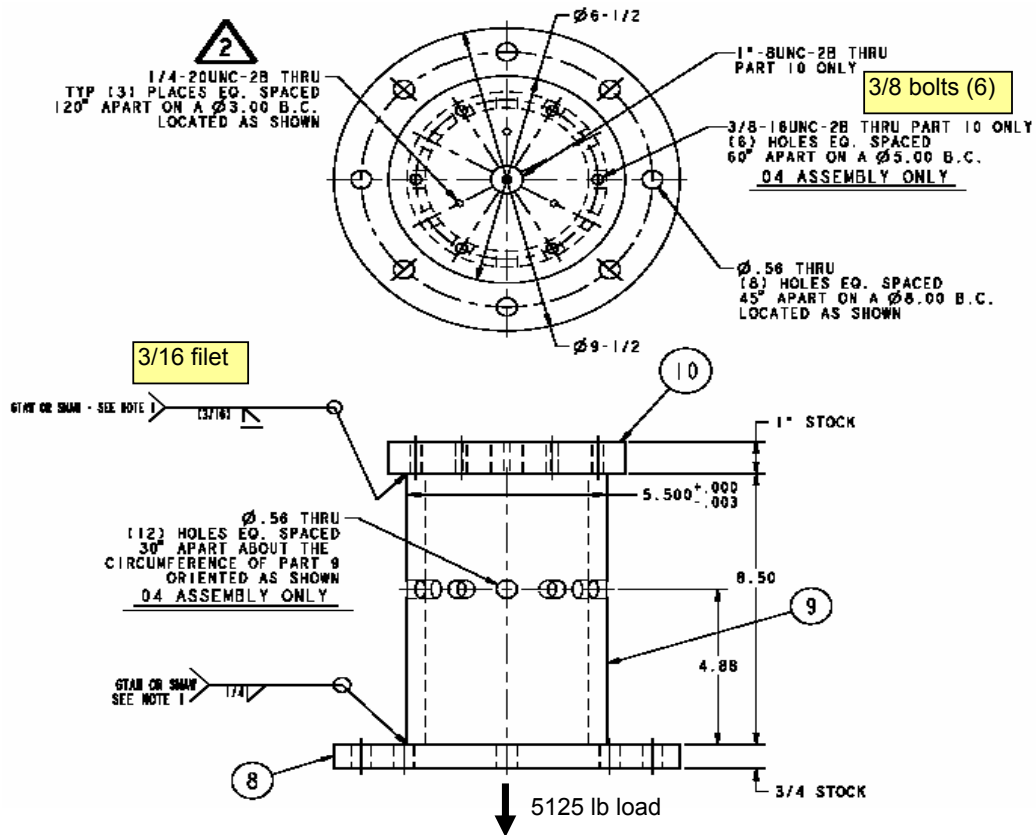


CHECK LIFT CAPACITY OF STAGE 1 END FITTING



Check load capacity of 3/16 fillet weld

Allowable force on fillet weld is: $f = .707 \omega \tau$, lbs per linear inch

where ω is the fillet leg size, inches

τ is allowable shear stress on throat of weld, psi

$\omega = 0.1875$

$\tau = 13600$ value based on Allowable for welds - buildings (AWS bldg & AISC) Table 6, A36 steel

$f = 1803$ lbs per inch

Weld length = 17.28 "

Allowable load = 31151 lbs

where $d = 5.5$

F.S = 6.1

17279 lbs Based on designer assumed 1000 lbs/in capacity for 3/16 fillet weld

F.S = 3.4

Check load capacity of six 3/8" bolts.

70,000 bolt tension allowable

0.321 minor diameter of bolt

5665 single bolt capacity

33,990 Total load capacity (lb)

6.63 F.S.

OR

$F = (.707)\omega(.3)(EXX)L$

EXX = min tensile strength of the filler metal

L = length of weld

ER70S-2 filler material $F_y = 58,000$

$F = 39,855$

Analysis performed by:

Reviewed by: