

DATE

9-27-49

SUBJECT OF EXPT.

Main Springs h-721
diag # A-753-T

Load 24.4 - 26.8 at 2.97 2.83 deflex.

$$\begin{array}{r} \text{Length fired} = 985 \\ 365 \\ \hline 620 \\ 330 \\ \hline 950 \\ 742 \\ \hline 1692 \end{array}$$

$$\begin{array}{r} 3665 \\ 850 \\ \hline 2815 \end{array}$$

$$\begin{array}{r} 297 \\ 338 \\ \hline 635 \\ 3178 \end{array}$$

$$\begin{array}{r} 3.348 \\ 852 \\ \hline 2.498 \end{array}$$

$$\begin{array}{r} 430 \\ 62 \\ \hline 492 \\ 250 \\ \hline 742 \\ 5357 \\ \hline 1692 \end{array}$$

Stroke 313
Prot .054

$$\begin{array}{r} 3.665 \\ 317 \\ \hline 3.348 \end{array} \quad \text{Length fired} \quad 19 \#$$

$$3.348 \quad \text{Length cracked} \quad 21 \#$$

$$\begin{array}{r} 5800 \\ 3665 \\ \hline 2135 \end{array} = 18.5 \#$$

$$\begin{array}{r} 5800 \\ 3348 \\ \hline 2452 \end{array} = 21.1 \#$$

$$\begin{array}{r} 24.4 \\ 26.8 \\ \hline 51.2 \end{array}$$

$$\begin{array}{r} 25.4 \\ 26.6 \\ \hline 52.0 \end{array}$$

$$\begin{array}{r} 297 \\ 220 \\ \hline 517 \end{array}$$

$$\begin{array}{r} 3348 \\ 3665 \\ \hline 7013 \end{array}$$

$$\begin{array}{r} 290 \\ 45 \\ \hline 335 \end{array}$$

$$\begin{array}{r} 21396 \\ 19.8 \# \times 297 = 5.9 \# \end{array}$$

$$S = \frac{8 P D}{\pi d^3} = \frac{8 (52.2) .3145 (\text{rad})}{\pi (1.416 (\text{in}))^3} = 18.4 \text{ in/in}$$

$$\text{Max Working Stress} = \frac{121,000}{\text{in}^2}$$

EXPERIMENTER

WITNESS

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