



AEROSPACE RECOMMENDED PRACTICE

Society of Automotive Engineers, Inc.
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ARP 465 A

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FLANGE - THERMOCOUPLE

1. This document supersedes and cancels ARP 465 and ARP 466, issued 2-15-58.
2. Flanges described in this ARP are used for mounting temperature sensing probes in gas turbine engines. The probes are welded or brazed to the flange for positive support. The flanges are bolted or secured by nuts and studs to mounting bosses located on the engine case. This arrangement permits removal of the probes for service, test and replacement, if necessary.
3. Figure 1 illustrates the standard size flange mounts with bolt holes. "a" applies when the terminal mounting shell is round, and "b" when the shell is square or rectangular.

Figure 2 shows slotted flanges for use with rectangular shouldered studs, providing for the use of lock nuts which eliminates the need for safety wire.

Figure 3 shows the miniaturized flange suitable for applications where short, small diameter probes are used.
4. The advantages of flanges are:
 - (a) Low cost in large quantities, since they are readily produced by stamping.
 - (b) Use of flange mount, with .0625 offset, facilitates orientation of probes (when probes are separable from harness).
5. A gasket between the flange and mounting boss is sometimes needed for sealing internal pressures. Sealing difficulty may be experienced if the internal pressure is greater than four atmospheres.
6. The following notes apply to Figures 1, 2 & 3:
 - (a) Flange faces to be flat within .010 F. I. R.
 - (b) Surface texture USAS B46.1 unless otherwise specified surfaces to be 125 ✓
 - (c) Break sharp edges .003 - .015 unless otherwise specified.
 - (d) Stamping rollover (deformation at edge of stamping due to shearing action of die) to be .005 max.
 - (e) Dimensions in inches, unless otherwise specified. Tolerances: Linear dimension $\pm .010$.

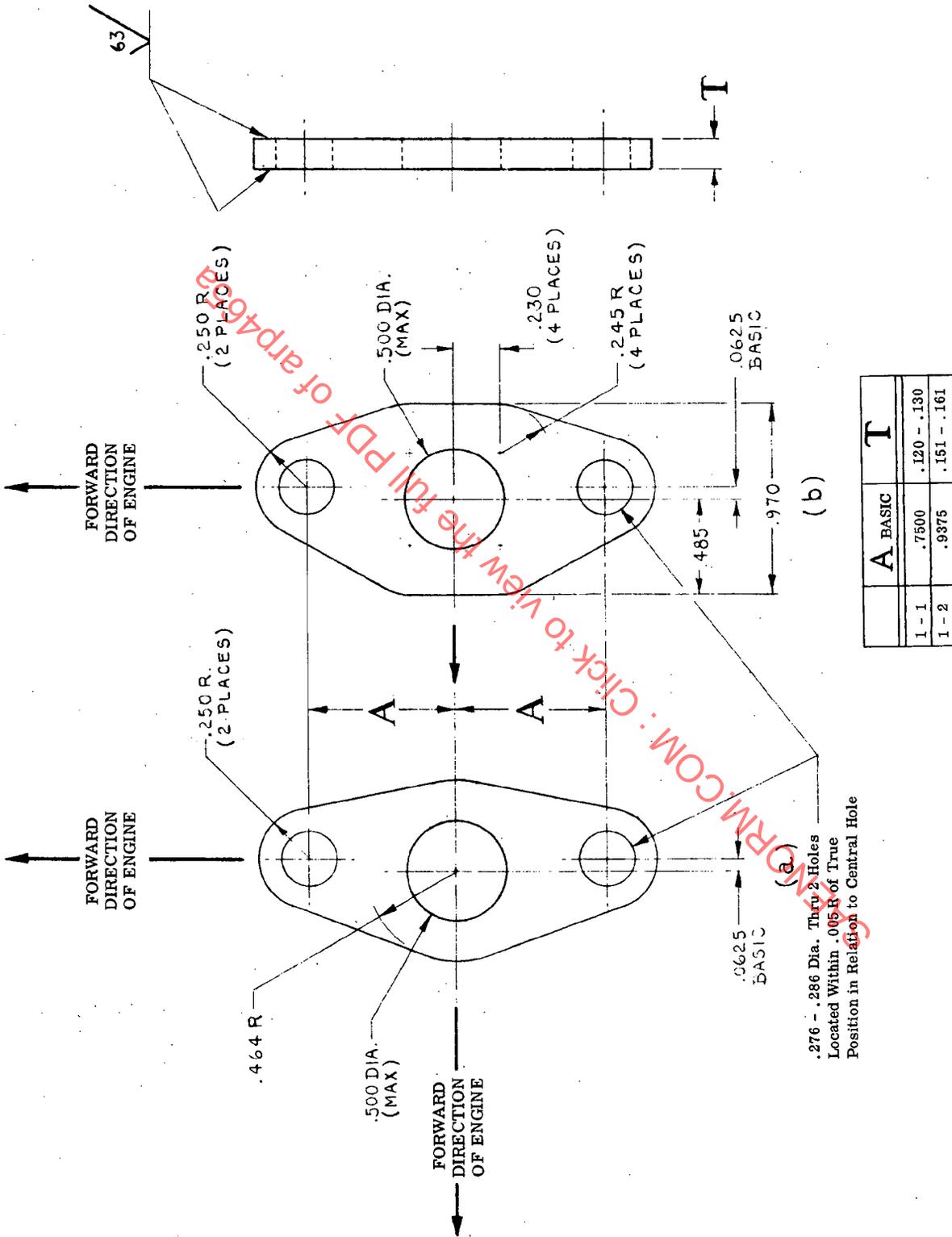
REAFFIRMED

PREPARED BY

SUBCOMMITTEE AE-2, ENGINE TEMPERATURE SENSING, of
SAE COMMITTEE E-21, DESIGN AND GENERAL STANDARDS FOR
AEROSPACE PROPULSION SYSTEMS

2/92

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Ø FIGURE 1

