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### 3. TEMPERATURE CLASSIFICATIONS:

System operating temperature ranges shall be classified as follows (see Table 1):

TABLE 1 - Temperature Type (°C)

|          |            |
|----------|------------|
| TYPE I   | -55 to 70  |
| TYPE II  | -55 to 135 |
| TYPE III | -55 to 200 |
| TYPE IV  | -55 to 320 |
| TYPE V   | -55 to 400 |
| TYPE VI  | -55 to 650 |

### 4. NOMINAL PRESSURE CLASSIFICATIONS:

Nominal pressures shall be classified as follows (see Table 2):

TABLE 2 - Nominal Pressure Classes [kPa (bar)]

|         |           |           |
|---------|-----------|-----------|
| CLASS A | 4000 kPa  | (40 bar)  |
| CLASS B | 10500 kPa | (105 bar) |
| CLASS H | 14000 kPa | (140 bar) |
| CLASS C | 17500 kPa | (175 bar) |
| CLASS D | 21000 kPa | (210 bar) |
| CLASS E | 28000 kPa | (280 bar) |
| CLASS J | 35000 kPa | (350 bar) |
| CLASS F | 42000 kPa | (420 bar) |
| CLASS G | 50000 kPa | (500 bar) |
| CLASS K | 56000 kPa | (560 bar) |

PREPARED BY SAE COMMITTEE G-3,  
AEROSPACE COUPLINGS, FITTINGS, HOSE, AND TUBING ASSEMBLIES

APPENDIX A  
ISO/DIS 6771 AEROSPACE SYSTEM PRESSURES AND TEMPERATURES

A.1 ASSIGNMENT:

At the fifth meeting of ISO/TC 20/SC 10 in Paris in October 1976, the U.S. agreed to prepare a standard for fluid system pressures and temperatures.

A.2 BACKGROUND:

Initially, the proposal was discussed under a proposed specification for fittings (SC 10 - N.53, N.93). In accordance with SC 10 resolution No. 33, the subject proposal was then drafted as a separate document (SC 10 - N.203) because of its applicability to other areas.

Revision A changed the nominal pressure classes 10 000 and 20 000 kPa to 10 500 and 21 000 kPa respectively. The 10 000 and 20 000 kPa classes follow the ISO 2944 Renard Series for nominal pressures but would require redesign and changes to the currently used 1500 and 3000 psi hydraulic system components if they were to be used in metric systems. Revision A limits the changes to the fittings of the 1500 and 3000 psi components, and will avoid changes to wall thicknesses, bore dimensions, etc., allowing such components to be used in metric systems.

Revision B revises classes C and F similar to B and D of Revision A. It also adds 14 000, 35 000 and 56 000 kPa classes, accomodating through 8000 psi operating and all combinations for return pressures at a 1:2 ratio.

A.3 ACCEPTED STANDARDS, NATIONAL, INTERNATIONAL:

The temperature ranges are fairly common to European and U.S. aircraft fluid systems specifications. The pressure ranges proposed in the referenced documents are selected from ISO 2944, pr EN2245 (AECMA) and MIL-H-5540 (U.S.).