

CANCELLED

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**AEROSPACE
RECOMMENDED PRACTICE**

ARP 886

SST GROUND HANDLING

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Revised

1. SCOPE - This recommended practice is a listing of recommendations for consideration by the designers of a civil supersonic aircraft which will facilitate ground handling.

It is not intended that any of the recommendations set forth herein take precedence over the aerodynamic and structural characteristics of the aircraft.

2. RECOMMENDATIONS

2.1 Baggage and Cargo Doors (Passenger Aircraft)

- 2.1.1 Side loading belly compartment doors should be 48 x 50 in. and the door opening and compartment configuration should accommodate a package 32 x 27 x 89 in. These doors should be designed opening in such a way as to minimize loss of cargo volume. Door sill extension capability should be considered.
- 2.1.2 Belly compartments and doors should be optimized to accommodate preloaded containers.
- 2.1.3 Containers should have a volume of at least 60 cu ft or larger to obtain reasonable utility without excess cube loss but not more than 80 cu ft.
- 2.1.4 A self-contained hoist system should be incorporated into the aircraft if bottom loading containerization is employed.
- 2.1.5 Side loading doors should be employed for compartments on the same level as the passenger floor level. Where practical these should be 60 in. high, minimum, and 48 in. wide, minimum. These doors should be designed opening in such a way as to minimize loss of cargo volume. Door sill extension capability should be considered.
- 2.1.6 Compartments on the same level as the passenger floor level should be loaded by the use of ground support equipment.
- 2.1.7 Easily replaceable heavy gauge steel scuff plates should be employed on the door sill and up 12 in. on side loading door openings or on all sides of bottom loading door openings.
- 2.1.8 It is not anticipated that more use will be made of "Carry-On" baggage than at the present time.

3. PASSENGER DOORS

- 3.1 At least two passenger doorways should be provided, one forward and one aft.

Section 8.3 of the SAE Technical Board rules provides that: "All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."

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3.2 Integral stairways should be available as an option, but if of the side loading type, they should permit the use of conventional loading bridges.

4. GALLEY DOORS - One doorway should be provided for each galley with dimensions not less than 33 x 64 in., if practical, based on the present concept of food packaging.

5. FUELLING

5.1 Pressure fuelling connections should be 2-1/2 in. diameter (MS24484).

5.2 The fuel management panel should be located as near as possible to the fuelling connections. It should not be necessary to deploy a man in the cockpit to monitor fuelling. Gauges on the management panel should measure pounds of fuel and agree with the cockpit fuel gauging system.

5.3 Alternate fuel quantity verification should be provided.

5.4 Defuelling should be accomplished through the fuelling manifold at a rate of not less than 100 gpm per connection.

5.5 It should be possible to fuel any aircraft tank from any one of the pressure fuelling connections.

5.6 The vent system should be adequate to handle a full flow of fuel in the event of the shut off valve sticks.

6. PNEUMATIC START - The connection should be located at a point accessible from ground level and which is safe during engine operation and which does not interfere with other activities on the ground.

7. POTABLE WATER SERVICE

7.1 The aircraft potable water system should be designed to withstand 100 psig and should accommodate a filling rate of at least 20 gpm @ 50 psig.

7.2 The fill connection should be 3/4 in. (Roylyn 8652-12 or equal) to mate with Roylyn 1041-12 fitting or equal.

7.3 The overflow should be large enough to prevent tank damage under any fill condition.

7.4 The connection panel should be heated in flight so as to be unfrozen on reaching ground level.

7.5 The complete water system should be drainable without any entrapment.

7.6 The system should be capable of withstanding a complete freeze-up without damage.

