

(R) Aerospace - Accumulator, Hydraulic, Cylindrical, Piston Separated

RATIONALE

ARP4379 has been revised to issue A for the following reasons:

- Major editorial changes
- Document restructured and reformatted in its entirety to reflect latest industry practice and standards
- Vessel Proof and Burst factors changed for commercial to comply with new regulations
- Updated references
- New and revised technical and test requirements have been incorporated

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1. SCOPE

This SAE Aerospace Recommended Practice (ARP) is intended as a guide in defining the requirements for aerospace piston separated hydraulic accumulators, including details pertinent to the design, fabrication, and performance of the accumulator. This type of accumulator has a piston separator and contains both high-pressure gas and fluid. The accumulator is used in aerospace hydraulic systems of the following types as defined in AS5440 with design operating pressures of up to 8000 psi (55,160 kPa).

- Type I: -65 to +160 °F (-54 to +71 °C) fluid temperature
- Type II: -65 to +275 °F (-54 to +135 °C) fluid temperature

For commercial aerospace or helicopter applications, the information and guidelines of ARP4752 or ARP4925 respectively, are considered.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15091-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

AS1241	Fire Resistant Phosphate Ester Hydraulic Fluid for Aircraft
ARP1288	Placarding of Aircraft Hydraulic Equipment to Identify Phosphate Ester Fluid Compatibility
ARP1383	Impulse Testing of Aerospace Hydraulic Actuators, Valves, Pressure Containers, and Similar Fluid System Components
MA2012	Port, Internal, Straight Thread, Fitting Connection, Design Standard, Metric
AS4059	Aerospace Fluid Power - Cleanliness Classification for Hydraulic Fluids
ARP4150	Procedure for Inspection of Inservice Airborne Accumulators for Corrosion and Damage
ARP4386	Terminology and Definitions for Aerospace Fluid Power, Actuation and Control Technologies
AIR4543	Aerospace Hydraulics and Actuation Lessons Learned
AS4716	Gland Design, O-Ring and Other Elastomeric Seals
ARP4752	Aerospace - Design and Installation of Commercial Transport Aircraft Hydraulic Systems
ARP4925	Aerospace Design and Installation of Commercial Transport Helicopter Hydraulic Systems
AS4941	Aerospace - General Requirements for Commercial Aircraft Hydraulic Components