



<b>AEROSPACE INFORMATION REPORT</b>	<b>AIR1904™</b>	<b>REV. B</b>
	Issued 1985-12 Revised 2001-12 Reaffirmed 2022-09	
Superseding AIR1904A		
Tire Spray Suppression - Airplane Design and Consideration for		

RATIONALE

AIR1904B has been reaffirmed to comply with the SAE Five-Year Review policy.

1. SCOPE:

This SAE Aerospace Information Report (AIR) relates considerations for design, test procedures and test data evaluation for qualification of tire spray deflection devices.

1.1 Purpose:

The purpose of tire spray deflection devices is to prevent ingestion of water or slush into engines, or to limit ingestion to non-hazardous quantities. A further purpose may be to prevent impacting of the deflected spray into pusher propellers or upon other parts of the aircraft in a harmful manner. These deflection devices may be an integral part of the tire, or may be installed on the landing gear or upon other parts of the aircraft. Considerations should cover all applicable ground operating modes including use of reverse thrust, and be extended to cover possible damage to mechanisms, systems, antennae, or pitot and static ports.

Ingestion of tire deflected water or slush has caused powerplants to lose power when no precautions were taken. Certification requires establishment of safe and acceptable air vehicle operation under flooded and slush covered runway conditions. Past aircraft operations have shown that there is a need to substantiate the capability of aircraft to operate safely from runways having standing water or slush over all or parts of the surface.

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