



FILTRATION SYSTEMS

Leading the Way in Aerospace & Defense

Now There's A Filtration Solution That's
All About YOU.



Experience the Donaldson Difference.

The right filter media choice.

The right combination of efficiency, pressure drop and filter life.

The right performance, reliability and durability.

The right system configuration.



Filtration Solutions Leading the Way in Aerospace & Defense

Quality There's no margin for error at any altitude. To ensure top quality, Donaldson develops and tests products for your specific applications and requirements. We don't rely on off the shelf solutions, and neither should you. Based on a foundation of experience and expertise, our custom designs and technologies deliver the superior performance aerospace and defense customers need, the quality they require and the peace of mind they want.



Customer Service The best customer support isn't just there, it's there when and where you need it. Donaldson has a uniquely qualified and dedicated worldwide customer support team that includes experts from every discipline. You're supported by people who are empowered and equipped to give you exactly what you need when you need it.

Comprehensive Product Line The biggest names in aerospace and defense rely on Donaldson's ever-evolving portfolio of filtration solutions. A deep understanding of the aerospace and defense industries, coupled with the most innovative products, has resulted in a robust product line that meets the needs of those who operate ground vehicles, airplanes, rotorcraft, space and marine vehicles.





PROBLEM: Premature engine overhauls caused by dirt and debris are costly and preclude effective, efficient helicopter operations.

SOLUTION: Donaldson air intake filtration solutions, such as barrier filtration and inertial particle separator systems, remove contaminants before they reach the engine. Liquid systems protect critical hydraulics and engine fuel lines.

Solving Customer Problems

PROBLEM: Exposure to bacteria, viruses, odors and other contaminants are a growing concern among airline passengers and crews.

SOLUTION: The Donaldson Air Purification System™ (APS) efficiently removes gaseous irritants and odors, as well as allergens, bacteria, and viruses from the aircraft cabin. Additionally, Donaldson offers a range of High Efficiency Particulate Air (HEPA) filters that are highly efficient and effective.

PROBLEM: Maintaining clean engines, top performance, and maximum readiness for military vehicles operating in harsh environments.

SOLUTION: The self-cleaning Pulse Jet Air Cleaner (PJAC™) Ultra® eliminates the need for frequent filter servicing (with a lifespan 200+ hours) while delivering a 10 time improvement in engine protection in harsh environments. In addition to reducing life cycle costs, PJAC Ultra can cost less than a conventional scavenged heavy-duty filtration system.

PROBLEM: Contamination from sand and dust can cause higher operating temperatures and costly malfunctions in piston engine aircraft.

SOLUTION: Donaldson general aviation air and liquid filters significantly reduce particulate matter from the engine, increasing engine reliability and life.

“Our experience has been very positive. After installing the barrier filters on our fleet of AW119 helicopters, the overhaul cost dropped by an average of 25% (\$102,000.00). This was largely due to the reduction of erosion. We operate our aircraft in a very sandy environment and the filter system stops it all, with no power loss.”

*- Sid Essex
Director of Maintenance, TriState CareFlight*

“The Gas Phase Absorption Unit (Donaldson) gave the best overall performance and avoided the major problems that were identified in connection with the Photocatalytic Oxidation Units.”

Excerpt of an article in Environmental Science Technology, 2007, 41 (1).

“Extreme conditions require prepositioned ground fleet to be equipped with PJAS.”

PM Combat Systems, U.S. Army speaking about lessons learned with tanks and other equipment in Operation Iraqi Freedom.

Note: The Army uses Pulse Jet Air System (PJAS) instead of Pulse Jet Air Cleaning (PJAC).

“At Ram Aircraft we require only the best air filter be used in our engines, and that means Donaldson.”

*- Charles E. Butler
Executive Vice President, RAM Aircraft*



Technology at its Best

BIOAdvantage™

High Efficiency Particulate Air (HEPA) filters are extremely efficient in removing both smaller particles (smoke, atmospheric dust, microbiological material) and larger ones (lint, pollen). Donaldson BIOAdvantage HEPA filters with antimicrobial additives take contamination control to the next level by disabling bacteria, spores, fungus, and other microbial aerosols trapped by the filter media.



Air Purification System™ (APS)

The Donaldson APS is designed to help improve cabin air quality and passenger and flight crew comfort without generating ozone by-products. Donaldson's latest advancement in filtration technology is extremely efficient at removing gaseous irritants and odors from the aircraft cabin as well as allergens, bacteria, and viruses. In fact, it has been selected as standard equipment on the new Boeing 787.



Donaldson is continuously improving the state-of-the-art in filtration technology to better meet the needs of aerospace and defense customers. A variety of solutions are available exclusively from Donaldson.





Pulse Jet Air Cleaner (PJAC™) Ultra®

The Donaldson PJAC is a patented, self-cleaning air filter that cleans filter elements with short duration pulses of compressed air. Using Donaldson's UltraWeb® Nanofiber Filtration Technology, the PJAC Ultra air cleaner provides the highest level of efficiency – 99.997+% – and has a filter life of greater than 200 hours when tested per MIL-PRF-62048. Lab and field tests have demonstrated that filter servicing is reduced to less than one-tenth compared to conventional air cleaners.



The best technologies deliver big benefits to customers. Donaldson customers can expect measurable reductions in maintenance and associated costs.



Media Design and Development

Donaldson has the ability to design and develop liquid and air filtration media for specific applications. Unique to the industry, Donaldson's prototype filter manufacturing facility allows us to develop and test numerous media formulations. This allows us to develop our proprietary media grades for advanced applications.

Donaldson Filtration Systems for the Aerospace & Defense Industry



Rotorcraft (Commercial & Military)

Agusta Westland
Bell
Boeing
Eurocopter
MD Helicopters
Sikorsky

Main Engine & APUs

Air Intake Filters
Donaldson designs and supplies integral filtration units that include blowers, actuators, indicators, engine inlets and other critical equipment.

Multiple filtration solutions to reduce component wear, improve performance and lengthen engine life.

- Oiled and dry media barrier filtration systems
- Inertial particle separator systems with Strata® Tubes

Liquid Filtration
Donaldson provides an extensive line of liquid filters for rotorcraft main engine and APUs. Donaldson designs t-type filters and manifolds that include

indicators, valves and sampling ports for coolant, fuel lube/oil, and transmission systems.

Hydraulic Systems

Donaldson provides complex filter manifolds for main hydraulic systems that protect return, case drain, and high pressure lines.

Avionics and Environmental Control Systems

Clean air solutions for crew and avionic systems.

- HEPA filtration
- APS™
- Chemical filtration
- Particulate filtration
- Inertial particle separator systems with Strata Tubes



Amphibious & Marine

AAV7
Arleigh Burke Class
Destroyer
LCAC Hovercraft
Virginia Class
Submarine

Electronic Equipment

A range of solutions to protect and improve reliability of critical electronics.

Main Engine, APU & Generators

Air Intake Filters
Multiple filtration solutions to reduce component wear, improve performance and lengthen engine life.

- PJAC™
- Barrier filters and air cleaner assemblies
- Inertial particle separator systems with Strata Tubes
- Exhaust and emission systems

Liquid Filtration
Donaldson provides an extensive line of liquid filters for engines. Donaldson designs t-type filters and manifolds that include indicators, valves and sampling ports for coolant, fuel, lube/oil and transmission systems.

Hydraulic Systems

Donaldson provides a range of hydraulic solutions for your vehicle, ranging from t-type filters to complex manifolds. Our manifolds are used for return, case drain, and high pressure lines.

Environmental Control Systems

Donaldson has over 100 proprietary media solutions. We choose the right filter media for each application.

- HEPA filtration
- APS
- Chemical filtration

Mist Eliminators

Removes water from the airstream of critical equipment and components.



Space & Missiles

Hamilton Sundstrand
Harpoon
MBDA
NASA
SLAM II
United Launch Alliance
United Space Alliance

Electronic Equipment

A range of solutions to protect and cool critical electronics.

Engine & Generators

Air and liquid filtration that reduce component wear, improve performance and lengthen engine life.

- Barrier filtration and air cleaners
- Inertial particle separator systems with Strata Tubes
- Surface tension filters
- Coolant filters
- Fuel filters
- Lube/oil filters
- Transmission filters

Guidance Control Systems

Donaldson protects critical surface tension systems and other critical components.

Environmental Control Systems

Donaldson has over 100 proprietary media solutions. We choose the right filter media for each application.

- HEPA filtration
- APS
- Chemical filtration

Fuel, TVC and Hydraulic Systems

Donaldson provides filter manifolds for fuel, hydraulic, and thrust vector control (TVC) systems.



Commercial & Military Fixed Wing Aircraft (including Regional and Business)

Airbus
 Alenia Aeronautica
 BHE Systems
 Boeing
 Bombardier
 Cessna
 Daher Socata
 Dassault
 Embraer
 Gulfstream
 Learjet
 Lockheed Martin
 McDonnell Douglas
 SAAB
 Sukhoi
 Tupolev

Electronic Equipment

A range of solutions to protect and improve reliability of critical avionics, in-flight entertainment and more.

Environmental Control Systems

Clean air solutions for crew and cabin

- HEPA filtration
- BIOAdvantage™ media (antimicrobial)
- APS (including particulate and chemical filtration)
- Chemical filtration

Main Engine & APU

Donaldson provides an extensive line of liquid filters for aircraft main engine and APUs.

Donaldson designs and manufactures filter elements and manifolds for fuel, lube/oil, and transmission systems.

Hydraulic Systems

Donaldson provides complex filter manifolds for main hydraulic systems.

Pneumatic Systems

For lavatory, potable water, and other compressor systems.

Rain Repellent™, Windshield Washer and Ice Protection

For improved windshield visibility.



Ground Vehicle & Equipment

AMV
 AMX Leclerc
 Bradley
 FMTV
 Generators
 HEMTT & PLS
 HET
 LVSR
 M-ATV
 M1 Abrams
 M88 Hercules
 M113 Family
 M915
 Merkava
 MRAP
 Paladin
 Radar Systems
 Sherpa
 Spartan
 Stryker & LAV
 T-72M
 Terrier
 VBCI
 Warrior

Electronic Equipment

A range of solutions to protect critical electronics, such as radar, countermeasures and navigation systems.

Main Engine, APU & Generators

Air Intake Filters
 Donaldson designs and supplies integral air cleaner assemblies that include blowers, actuators, indicators, compressors, and exhaust systems.

Multiple filtration solutions to reduce component wear, improve performance and lengthen engine life.

- PJAC
- Barrier filters and air cleaner assemblies
- Inertial particle separator systems with Strata Tubes
- Exhaust and emission systems

Liquid Filtration

Donaldson provides an extensive line of liquid filters for main engine and APUs. Donaldson designs t-type filters and manifolds that include indicators, valves, and sampling ports for coolant, fuel, lube/oil, and transmission systems.

Hydraulic Systems

Donaldson provides hydraulic solutions for your vehicle, ranging from filter elements to complex

manifolds. Our filters protect turret, door lift and main hydraulic systems.

Environmental Control Systems

Donaldson has over 100 proprietary media solutions. We choose the right filter media for each application.

- HEPA filtration
- APS
- Chemical filtration

Nuclear, Biological and Chemical Pre-Filtration

Donaldson Strata Tubes - maintenance free filtration to protect your NBC system.

Shelters

Protecting critical environments from sand, dust, and chemical contaminant. Donaldson has over 100 proprietary medias, Strata Tubes and other filtration technologies.

Exhaust and Emission Systems

Donaldson provides integrated exhaust and emission systems. Our mufflers, silencers and exhaust systems reduce noise and backpressure, increase fuel economy, and extend service life.

- Muffler
- Exhaust devices
- Exhaust ejectors
- Air cleaner scavenge systems



General Aviation

Air Tractor
 Cessna
 Cirrus
 Diamond
 Hawker Beechcraft
 Lycoming
 Maule
 Mooney
 Piper

Engine

Donaldson designs and manufactures air and liquid filters for your main engine.

Engine intake air filters reduce component wear, improve performance, and lengthen engine life. Our filters are manufactured with dry synthetic media, superior to existing aftermarket products. Donaldson engine liquid filtration facilitates peak engine performance and includes fuel and lube/oil systems.

Instrument Air

Protect critical flight equipment and instruments from wear and contamination.

Rain Repellent, Windshield Washer and Ice Protection Systems

For improved windshield visibility.



Donaldson
FILTRATION SOLUTIONS
AEROSPACE & DEFENSE

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Aerospace & Defense Group

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