FSJL

Aeroderivative Jet Lube Oil Conditioning Systems

FSJL fluid conditioning skids are a total solution for managing aeroderivative jet lube oils susceptible to high thermal oxidative stress and coke deposit formation. FSJL prevents and reduces coke deposits that lead to variable geometry failures. Extend useful fluid life by removing the catalysts for oxidation; O_2 contact, acid, oxidative coking precursors, dissolved metals, combustible gases, water, and varnish all while maintaining low ISO Codes. Specifically designed for MIL-L-23699 aeroderivative jet lube oils, the FSJL eliminates the contamination that leads to variable geometry failures.

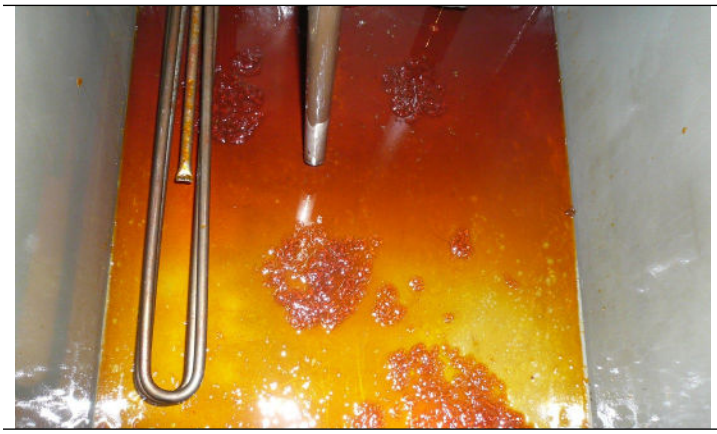
Ideal for maintenance of aeroderivative jet lube oil and hydraulic systems.

Donaldson HY-PRO™

hyprofiltration.com/

Prevent coking deposits.

Mechanical wear, oil flow restrictions, and increased operating temperature are all caused by coking deposits, the major cause of premature failure in aeroderivative oils. ICB's patented ion-exchange resin technology removes the oxidation by-products before they can cause additive depletion and coking deposits that form on the turbine rotor, bearings and other wetted surfaces.

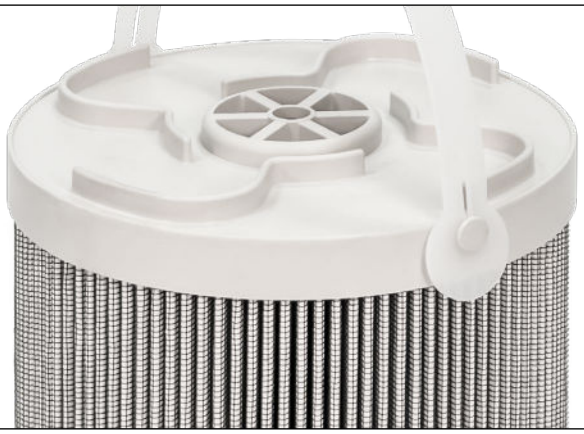


Remove acids & dissolved metals.

Aeroderivative turbines often operate at elevated Acid Number (AN) values which attack metal surfaces, adding dissolved metals into the lubricant. ICB technology removes acids and metals, keeping rates of breakdown at a minimum while eliminating the feedstock that leads to coke formation.

High efficiency filtration.

The FSJL high efficiency final filter removes particles and insoluble by-products, delivering unimaginably low ISO Codes to extend the life of your mechanical components and bearings. To top it off, every HP107 filter element comes with an integral bypass valve to give you the safety and security you want with the filtration power you need.



Actively manage oxidation.

Normal lubricant reservoirs are vented to atmosphere, the key ingression pathway for water and oxygen which are two major causes of jet lube breakdown. The integrated TMR®-N_2 headspace dehydrator on every FSJL actively blankets the reservoir with dry nitrogen to remove water, oxygen and combustible gases and greatly reduce the rate of oxidation and extend your fluid's useful life.

Full-time (water) extraction.

For applications that require full-time operation of reservoir headspace extraction fans, special option V1 integrates the V1 Compact Vacuum Dehydrator in place of the TMR®-N_2 to provide a powerhouse water removal option that complements ICB and high efficiency on-board particulate filtration.

FSJL Specifications

Dimensions[1]	**Height** 58" (147 cm)	**Length**[2] 47.5" (121 cm)	**Width**[2] 31.5" (80 cm)	**Approximate Weight** 571 lbs (259 kg)
Connections	**Inlet** 1" FNPT with ball valve		**Outlet** 1" FNPT with ball valve	
Max Reservoir Size	**FSJL05** 150 gal (560 liters)	**FSJL1** 300 gal (1,125 liters)	**FSJL2** 800 gal (3,000 liters)	**FSJL4** 1,600 gal (6,000 liters)
Element Configuration	**Particulate filter** HP107L18-VTM710-C-V		**ICB** FSJL05: ICB600504-J FSJL1: ICB 600504-J x 2 FSJL2: ICB600524-J FSJL4: ICB600524-J x 2	
Seals	Fluorocarbon + silicone			
Operating Temperature	**Fluid Temperature** 86°F to 176°F (30°C to 80°C)		**Ambient Temperature** -4°F to 104°F (-20C to 40C)	
Materials of Construction	**Housings** Carbon steel with industrial coating		**Tray** Carbon steel with industrial coating	
Electric Motor	TEFC, 56-145 frame 0.5 – 1 HP, 900 – 1750 RPM			
Motor Starter	MSP (motor starter/protector) in an IP55, aluminum enclosure with short circuit and overload protection.			
Pump	Cast iron, positive displacement gear pump with internal relief. Maximum pressure on pump inlet 15 psi (1 bar). Consult factory for higher pressures.			
Pump Bypass	Full bypass at 150 psi (10 bar)			
Pneumatic Option Air Consumption	~40 cfm @ 80 psi[2]			
TMR-N_2 Option Air Consumption	**FSJL05** < 1.2 SCFM TMR-N_2 - 601902	**FSJL1** < 1.2 SCFM TMR-N_2 - 601902	**FSJL2** < 2.0 SCFM TMR-N_2 - 601903	**FSJL4** < 3.6 SCFM TMR-N_2 - 601904
Media Description	**VTM** $\beta 0.9_{(C)} \geq 4000$ particulate, insoluble oxidation by-product and water removal media.		**ICB** Ion charge bonding resin media for molecular removal of acids, gels and deposits, oxidation by-products and dissolved metal ions from polyol ester and other synthetic fluids.	
Fluid Compatibility	Type II, MIL-L-23699, polyol ester base stock, synthetic turbo oils and polyol esters.			
Hazardous Environment Options	Select pneumatic powered unit (Power Option 00) or explosion proof NEC Article 501, Class 1, Division 1, Group D. Call for IEC, Atex or other requirements.			

[1]Dimensions & weights are approximations taken from base model and will vary according to options chosen.
[2]Air consumption values are estimated maximums and will vary with regulator setting.

FSJL Part Number Builder

FS [ ] [ ] [ ] [ ] - [ ]

Fluid Type | Flow Rate | Indicator | Power Options | Special Options

Fluid Type

JL	Aeroderivative jet lubricants

Flow Rate[1]

05	0.5 gpm (1.7 lpm)	900 RPM (50Hz) / 1200 RPM (60Hz)
1	1 gpm (3.7 lpm)	1450 RPM (50Hz) / 1750 RPM (60Hz)
2	2 gpm (7.5 lpm)	1450 RPM (50Hz) / 1750 RPM (60Hz)
4	4 gpm (15.1 lpm)	1450 RPM (50Hz) / 1750 RPM (60Hz)

ΔP Indicator[2]

D	22 psid visual gauge + electric switch
E	22 psid visual gauge

Power Options

Contact factory for options not listed

60 Hz

12	120 V ac, 1P
22	208-230 V ac, 1P
23	208-230 V ac, 3P
46	460-480 V ac, 3P
57	575 V ac, 3P

50 Hz

11	110 V ac, 1P
21	220 V ac, 1P
40	380-440 V ac, 3P
52	525 V ac, 3P

Pneumatic

00	Pneumatically driven air motor & PD pump. FRL & flow meter included.

Explosion proof - Class 1, Division 1, Group D per NEC 501 – Ready for outdoor use

X__	Add X prefix to power option listed above. Not available with (00) Pneumatic Option.

Special Options

A	Air cooled heat exchanger (consult factory)
B	Complete filter bypass line
C	CE marked for machinery safety directive 2006/42/EC
D[3]	High filter ΔP auto shutdown
E	100 mesh cast iron basket strainer
F	Filter element ΔP gauge with tattle tale follower needle
H	Automatic high temp shut down (160°F, 71°C)
L	High filter element ΔP indicator light
M	Total system flow meter (120 cSt max)
O	On-board PM-1 particle monitor & clean oil indicator light
S	All wetted components 303 or higher stainless steel[4]
U	CUL and/or CSA marked starter enclosure for Canada
V	Lifting eye kit
V1	Add V1 Compact Vacuum Dehydrator
W	Automatic air bleed valve
Z	On site start-up training

[1]Nominal flow rates at 60 Hz motor speeds.
[2]Particulate filter only. ICB housing is equipped with 0-160 psi static pressure gauge. Industrial, liquid filled.
[3]"D" Option required DP Indicator option with electric switch to be selected ("D").
[4]With exception to cast iron gear pump.

For all up to date option details and compatibilites, please reference our Contamination Solutions Price List or contact customer service.

Want to find out more? Get in touch.
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Donaldson HY-PRO™

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