



FMS-3-TP

HYDRAULIC OIL BYPASS FILTER

NFPA/T2/6/1
BURST & FATIGUE RATING

ISO 3968
Pressure Drop vs Flow



ULTRA CLEAN OIL MAXIMUM PERFORMANCE

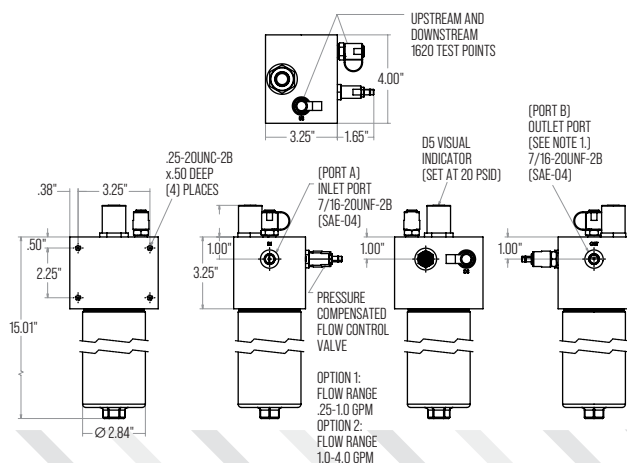
Particle contamination is the main cause of hydraulic system failures. More than 80% of component wear is particle-induced, with abrasion wear accounting for two-thirds of that figure.

An operation that runs with particulate contaminated oil is just like sandblasting the insides of their hydraulic systems. Particle contamination deteriorates metallic surfaces and directly impacts the hoses and seals, leading to leaks, system failures, loss of haulage, diminished production and creates a possible work hazard with increased risk of accidents.

HIGHEST BETA RATIO CONTAMINATION REMOVAL EFFICIENCY IN THE MARKET

Beta 4>4193

As expert consultants, we at FMS evaluate your current condition and design a contamination control strategy, according to your specific needs, to keep your operation within the optimum ISO 4406 standard.



LOWER
maintenance
costs

DECREASE
in failure
and
downtime

MORE machinery
uptime

LOWER production
costs

LOWER equipment
replacement costs

LOWER total
fluid costs

FMS FILTRATION BENEFITS

HOUSING TECHNICAL SPECIFICATIONS

Max. Flow per Housing	Up to 1 gpm (up to 3 gpm optional)
Porting	SAE-04
Testing ISO	US/DS 1620 Test points
Delta P	Pop-up indicator (sensor optional)
Pressure compensated flow control valve	0.1-1 gpm (3gpm optional)
Bypass Opening	25 psi (1.7 bar)
Elements Options	FMS-1.6-PA (particulate & absorbing)
Max. Operating Pressure	3000 psi (210 bar)
Min. Yield Pressure	Contact Factory
Temperature Range	-20°F to 225° (-29°C to 107°C)
Max. Hydraulic Oil Sump	100 gls
Porting Base	Aluminum
Element Case	Aluminum
Weight	6 lbs (2.2 kg)
Element Change Clearance	4.5" [115 mm]



FMS-1/6-PA

HYDRAULIC OIL ELEMENT

100% SYNTHETIC MEDIA

ULTRA CLEAN HYDRAULIC SYSTEM

Modern hydraulic systems impose demanding cleanliness conditions to preserve and extend the service life of such sensitive components as servo valves, vane and piston motors/pumps, and directional and pressure control valves.

The contamination cycle of abrasion, surface fatigue, and accumulating debris continues until the particles are either caught by a filter or flushed from the system. The longer the particles stay in the system, the more damage they cause.



ELEMENT TECHNICAL SPECIFICATIONS

Efficiency	Beta 4-4193 (ISO 16889:99)
DHC	20 grams (MTD)
Maximum Flow	6 gpm
Recommended Flow	2 gpm
Dimensions	12x2.1x2.1"
Weight	0.3 lbs
Housings	FMS-3-TP

Hydraulic systems optimum performance is about more than just using the right oil, it's also about good maintenance practices and taking the right strategy to ensure a clean operating environment. FMS Filtering Systems guarantee absolute fluid cleanliness to the point that particle contamination is not a risk factor of system failures of any component.

TABLE OF RECOMMENDED TARGET ISO CLEANLINESS CODES

Equipment	Pressure >212 bar >3000 psi	Equipment	Pressure >212 bar >3000 psi
Pumps		Actuators	
Fixed piston	17/15/12	Cylinder	15/13/10
Fixed vane	18/16/13	Vane motor	18/16/13
Variable piston	16/14/11	Axial piston motor	17/15/12
Valves		Gear motor	18/16/13
Cartridge	17/15/12	Radial piston motor	18/16/13
Check valve	19/17/14	Hydrostatic transmission	16/14/11
Directional (solenoid)	18/16/13	Test stand	15/13/10
Flow control	17/15/12		
Pressure control (modulating)	16/14/11	Bearings	>140 bar >2000 psi
Proportional cartridge valve	16/14/11	Ball bearing	15/13/10
Proportional directional	16/14/11	Gearbox (industrial)	18/16/13
Proportional flow control	16/14/11	Journal bearing (high speed)	17/15/12
Proportional pressure control	16/14/11	Journal bearing (low speed)	17/15/12
Servo valve	15/13/10	Roller bearing	16/14/11

Current Machine Cleanliness ISO	ISO CLEANLINESS REQUIRED NEW MACHINE SYSTEMS:				DIESEL ENGINES: 17/15/12		HYDRAULIC SYSTEMS: 15/13/10	
	Target	Target	Target	Target	Target	Target	Target	
23/21/18	20/18/15	19/17/14	18/16/13	17/15/12	16/14/11	15/13/10	14/12/9	
22/20/17	19/17/14	18/16/13	17/15/12	16/14/11	15/13/10	14/12/9	13/11/8	
21/19/16	18/16/13	17/15/12	16/14/11	15/13/10	14/12/9	13/11/8	-	
20/18/15	17/15/12	16/14/11	15/13/10	14/12/9	13/11/8	-	-	
19/17/14	16/14/11	15/13/10	14/12/9	13/11/8	-	-	-	
18/16/13	15/13/10	14/12/9	13/11/8	-	-	-	-	
17/15/12	14/12/9	13/11/8	-	-	-	-	-	
16/14/11	13/11/8	-	-	-	-	-	-	
15/13/10	13/11/8	-	-	-	-	-	-	
Life Extension Factor	2X	3X	4X	5X	6X	7X		



SCAN TO VISIT OUR WEBSITE



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