

A large orange excavator is shown in profile, lifting a bucket full of dark soil. The machine is positioned on a pile of dirt. The background is a clear, bright blue sky. The excavator's arm is extended upwards and to the left, with the bucket held open. The body of the excavator is on the right side of the frame. The overall scene is one of heavy construction work.





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.

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	Bearings >140 bar >2000 psi	
Pressure control (modulating)	16/14/11	Ball bearing	15/13/10
Proportional cartridge valve	16/14/11	Gearbox (industrial)	18/16/13
Proportional directional	16/14/11	Journal bearing (high speed)	17/15/12
Proportional flow control	16/14/11	Journal bearing (low speed)	17/15/12
Proportional pressure control	16/14/11	Roller bearing	16/14/11
Servo valve	15/13/10		



ELEMENT TECHNICAL SPECIFICATIONS

Efficiency	Beta 4>4193 (ISO 16889:99)
DHC	40gr @1gpm (MTD)
Flow Calibration	0.1-1 gpm [1-3 gpm Optional]
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.

ISO CLEANLINESS REQUIRED NEW MACHINE SYSTEMS:			DIESEL ENGINES: 17/15/12		HYDRAULIC SYTEMS: 15/13/10	
Current Machine Cleanliness ISO	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
22/20/17	19/17/14	18/16/13	17/15/12	16/14/11	15/13/10	14/12/9
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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