



Hydraulics : Integrex CNC Lathe, ACI Mould Manufacturers

ACI Mould Manufacturers Integrex CNC Lathe

ACI asked Filter Technology to assess cleanliness and determine whether an off-line filtration system would assist with oil quality management and in particular, eliminate oil changes and system cleaning.

One FMO2 oil filter was fitted to the 80 litre system. It was decided to resample the oil at 400 hours of operation to evaluate the improvement in oil cleanliness.

As the oil analysis results below indicate, the oil now has 18,240 hour on it without being changed. The oil cleanliness is at ISO 14/12, a 3-grade improvement and contamination particle counts are down 83% on average. Most importantly, after 30 months of operation, ACI's goal of no oil changes was achieved.



Lubetech Pty Ltd

Oil Analysis Report

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Client	Filter Technology Australia Pty Ltd / Leopold	Site	ACI Mould Manuf Co Box Hill
Address	33 Townview Court Leopold, VIC 3224	Unit ID/Name	Lathe #47 / CNC Lathe
Telephone	(03) 5250 1219	Manufacture/Model	Integrex / 40ATC
Fax	(03) 5250 4519	Origin	Feed line/ Bleed (Chuck)
		Fuell/Oil Type	Shell Tellus 32

Diagnosis:

Oil and wear condition appear satisfactory. Improvement in the cleanliness (Particle Count) noted. Continue to monitor.

	Sample Number	38467	34453	30041	26473	22470	22087	21213	Indicative Levels
	Date	05/12/2002	06/06/2002	18/10/2001	22/04/2001	15/09/2000	25/08/2000	06/07/2000	
	Total Hours/Km	24288	14472 Ftr hrs	9728 Filt	7104 Filt	840-Filt	408-Filt	6048	
	Hours/Km on Oil	24288	20520	15768	12144	7488	7056	6048	
	Oil Changed	NO	NO	NO	NO	NO	NO	NO	
	Oil Added	Umknown	Nil		Nil			20	
Condition Tests	Fuel Dilution (%)								
	WT Solids (%)								
	Volume Water (%)	ND	ND	ND	ND	ND	ND	ND	0.05
	Water PPM								
	Viscosity @ 40C (cST)	32	31	32	31	33	31	31	>10%
	TAN (mg/KOH/g)	0.79	0.62	0.60	0.61	0.70	0.64	0.51	
	TBN (mg/KOH/g)								
Wear Metals	ApH								
	PQ90 Index								
	Aluminum (Al)	<1	<1	<1	<1	<1	<1	0	15
	Silicon (Si)	<1	1	<1	43	2	7	<1	20
	Tin (Sn)	<1	1	1	<1	0	<1	2	20
	Iron (Fe)	<1	1	<1	1	2	1	0	25
	Lead (Pb)	<1	2	<1	<1	<1	1	2	15
	Copper (Cu)	<1	<1	1	2	2	6	3	25
	Chromium (Cr)	<1	<1	2	2	0	0	0	15
	Sodium (Na)	2	1	<1	<1	<1	<1	1	80
Zinc (Zn)	302	340							
Cleanliness	Others								
	ISO4406	14/12	16/13	15/12	18/15	14/10	14/11	17/14	18/15
	Gravi-Metric								
	>2 micron	524	885	670	4811	223	369	1642	
	>5 micron	193	456	247	1778	82	136	656	
>15 micron	20	55	26	189	8	14	88		
Contamination	Low	Moderate	Low	Moderate	Low		Moderate		