

CONDITION	MACHINE DETAILS		COMMENTS & RECOMMENDATIONS	
J OKAY	Plant ID:	SAM Sam	ref Sample	
	Cmpt:	New Oil		
K WARNING	Date:	04 Jun 11	Work Order#: NEW OIL	Report Number: 641,996
	Plant ID:	SAM Sam	Iron elevated, primary sources of iron are liners, gears, tappets and rings. PQ-90 ferrous debris elevated indicating large ferrous particle wear. 1.4 % Water Contamination Detected.	
	Cmpt:	Gemini	Work Order#: USED OIL	Report Number: 641,997
	Date:	04 Jun 11	Has Recommendation Been Actioned?: Yes <input type="checkbox"/> No <input type="checkbox"/>	SMR: Date: Signed by:

Site  
Attention To:  
Machine:  
Sample Location:  
Oil Type:

One Off Analysis

SAM Sam  
New Oil  
ENGINE OIL

# OilSTest

4 Walter Street \ PO Box 490  
Singleton NSW 2330  
Phone: (02) 6571-1444  
Facsimile : (02) 6571-4433



Sample Date  
Analysis Report No.  
Service Meter Reading  
Top Up  
Oil Hrs  
Oil Changed?

						4-Jun-11
-	-	-	-	-	-	641,996
-	-	-	-	-	-	0hrs
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	No

## Wear Metals

	Limit	ppm	ppm	ppm	ppm	ppm	ppm
lead							0
iron	10						0
aluminium	10						0
copper	10						0
chromium	5						0
tin	5						0
nickel	5						0
silver							0
titanium							0

## Contaminants

	Limit	ppm	ppm	ppm	ppm	ppm	ppm
silicon	20						9
sodium	25						1
vanadium							1

## Oil Additives

	Limit	ppm	ppm	ppm	ppm	ppm	ppm
magnesium							11
zinc							1060
molybdenum							113
calcium							2226
phosphorous							1105
boron							2
barium							0

## Physical Tests

TBN							0
TAN							0.00
fuel dilution %							0
water %	0.1						< 0.1
viscosity index							147
visc @ 100oC - Cst	14	-	-	-	-	-	19.17
visc @ 40oC - Cst	105						148

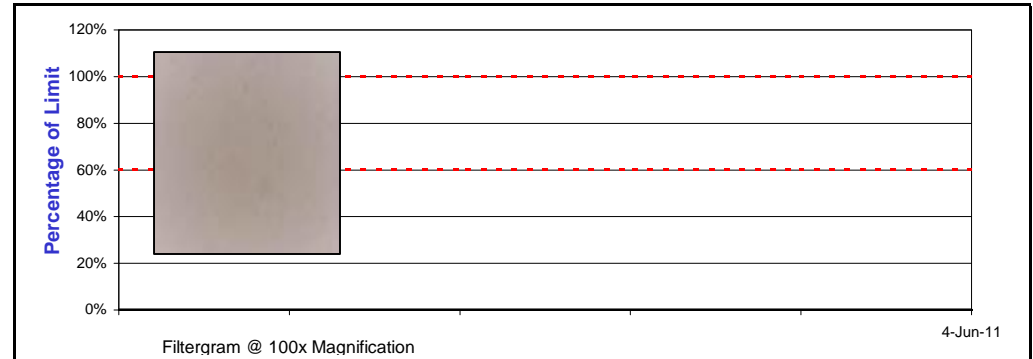
## FTIR Analysis

soot - abs							0
glycol%							0
water ppm							0
oxidation - abs							0
nitration - abs							0
sulphation - abs							0

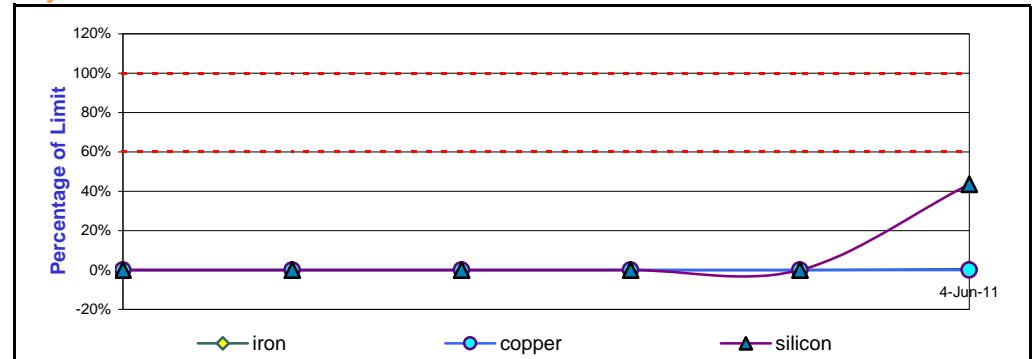
## Particle Analysis

particle count in 1ml							0
ISO-4406 6um \ 14um	-/-	-/-	-/-	-/-	-/-	-/-	-/-
PQ90 Fe - mg \ ltr	15						0

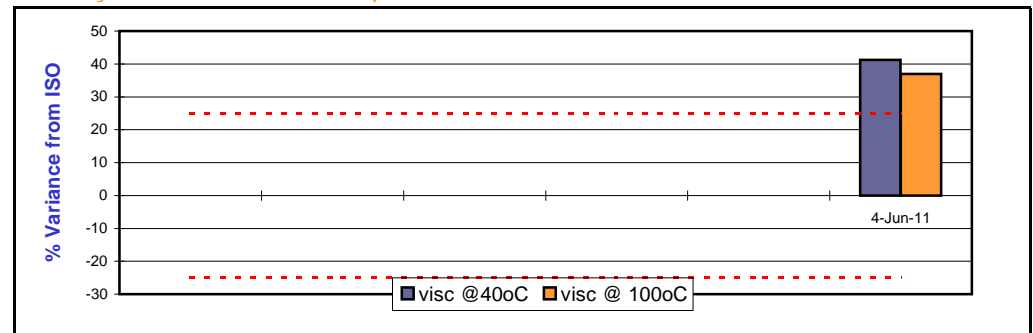
## PQ - Ferrous Wear Debris (Fe mg \ ltr)



## Major Small Particle Element Trends



## Viscosity Condition From New Oil Specification



## Comments & Recommendation

ref Sample

NOTE: This machine \ oil condition report should be used in conjunction with normal maintenance practises. All care will be taken in processing and analysing samples but no express or implied guarantee is offered in regard to the continuing operation or condition of machinery.

Site  
Attention To:  
Machine:  
Sample Location:  
Oil Type:

One Off Analysis

SAM Sam  
Gemini  
ENGINE OIL

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Sample Date  
Analysis Report No.  
Service Meter Reading  
Top Up  
Oil Hrs  
Oil Changed?

						4-Jun-11
-	-	-	-	-	-	641,997
-	-	-	-	-	-	0hrs
-	-	-	-	-	-	-
-	-	-	-	-	-	2
-	-	-	-	-	-	No

## Wear Metals

	Limit	ppm	ppm	ppm	ppm	ppm	ppm
lead	45						12
iron	90						85
aluminium	40						5
copper	30						10
chromium	15						4
tin	15						3
nickel	15						0
silver							0
titanium							0

## Contaminants

	Limit	ppm	ppm	ppm	ppm	ppm	ppm
silicon	30						13
sodium	40						13
vanadium							1

## Oil Additives

	Limit	ppm	ppm	ppm	ppm	ppm	ppm
magnesium							13
zinc							1032
molybdenum							114
calcium							2072
phosphorous							1064
boron							3
barium							0

## Physical Tests

TBN	12.2						9.60
TAN							2.58
fuel dilution %							0
water %	0.1						< 0.1
viscosity index							136
visc @ 100oC - Cst	14	-	-	-	-	-	17.03
visc @ 40oC - Cst	105						136

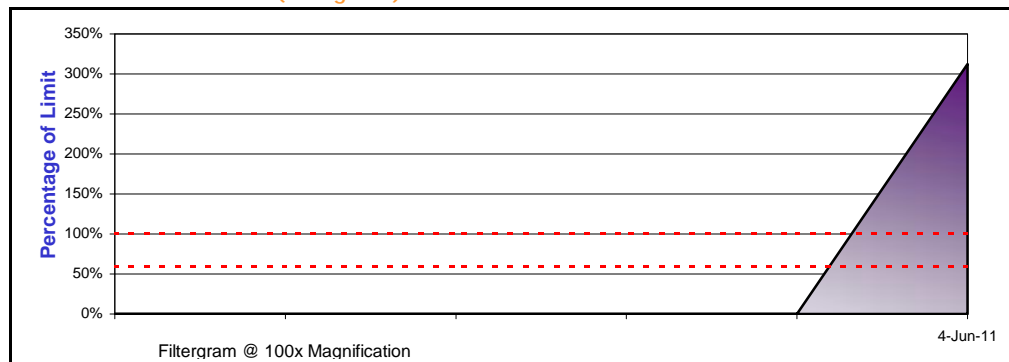
## FTIR Analysis

soot - abs	70						3
glycol%	0.1						0
water ppm							1
oxidation - abs	45						11.00
nitration - abs	45						10.00
sulphation - abs	45						0

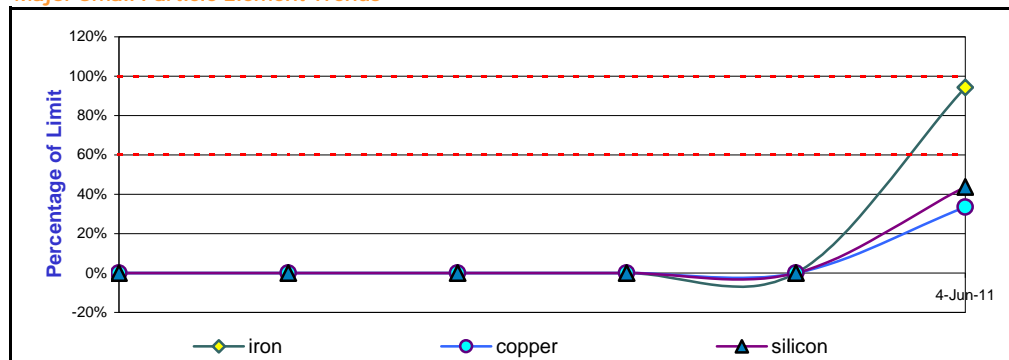
## Particle Analysis

particle count in 1ml							0
ISO-4406 6um \ 14um	-/-	-/-	-/-	-/-	-/-	-/-	-/-
PQ90 Fe - mg \ ltr	40						125

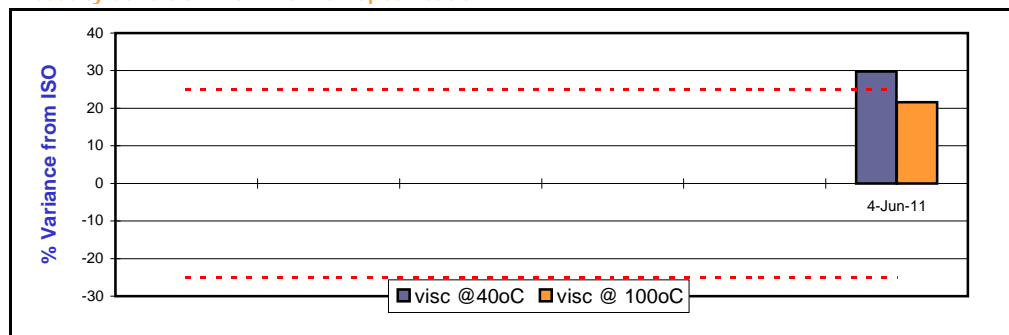
## PQ - Ferrous Wear Debris (Fe mg \ ltr)



## Major Small Particle Element Trends



## Viscosity Condition From New Oil Specification



## Comments & Recommendation

Iron elevated, primary sources of iron are liners, gears, tappets and rings. PQ-90 ferrous debris elevated indicating large ferrous particle wear. 1.4 % Water Contamination Detected.

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