WEAR CHECK AFRICA

Barlows CAT

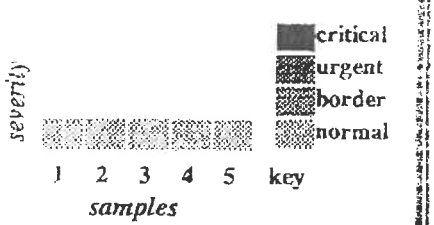
MOBILE EQUIPMENT

KWAZULU-NATAL:
P.O. BOX 15108,
WESTMEAD, 3608.
TEL: (031) 7005460
FAX: (031) 7005471

GAUTENG:
P.O. BOX 284
ISANDO 1600
TEL: (011) 392-6322
FAX: (011) 392-6340

PROBLEM SEVERITY

NORMAL



Mr [redacted] Bill Sweeney
Highveld Steel & Vanadium Corp (W\Shop 2A)
TO BE COLLECTED
c/o CALEDONIAN EXPRESS

Vehicle	: K12	Code	: 1HSV2A
Alt id	:	Job no	:
Model	: CATERPILLAR 621F	Site	: WITBANK
Comp	: ENGINE	Oil	: 15W40
Model	: CATERPILLAR 3406	Queries	: PLEASE CONTACT DIAGNOSTIC DEPARTMENT.

DIAGNOSIS

5) Sample Number 9565777 of 10.11.98 smr 14900
Wear rates are normal and the oil was fit for further use.

TROUBLE SHOOTING CHECK LIST

PREVIOUS HISTORY

DIAGNOSES

1) 9427864 14.07.98 smr 2787
Wear rates are normal and the oil was fit for further use.

2) 9528588 25.08.98 smr 3665
Wear rates are normal and the oil was fit for further use.

3) 9528654 11.09.98 smr 3909
Wear rates are normal and the oil was fit for further use.

4) 9603052 09.10.98 smr 14385
Wear rates are normal and the oil was fit for further use.

FEEDBACK

Issued subject to standard conditions (available on request).

P.T.O

Barlows CAT

ENGINE DYNAMOMETER TEST RECORD

25000 HRS

Mike Watson
Bob Brinkate

ENGINE MODEL: 3306
ENGINE SERIAL NO: 132 - up - 2240
ENGINE ARRANGEMENT:

MACHINE MODEL: D25C
MACHINE SERIAL NO: 94C

DATE: 20-01-94
ARCHIVE NO: JQ 1790
CUSTOMER NAME: Highveld Steel
OT NUMBER: 7416

TEST POINTS	Engine Spec. Min.	Engine Spec. Max.	DATA	Time On / Off	TEST TIME SCHEDULE: High Idle	¼ Load	½ Load	¾ Load	Full Load	Balance Point	Low Idle	TOTAL RUN TIME
ALTITUDE	0	2250	M	Reef								1½
AMBIENT TEMPERATURE			°C	20	22	22	22	23	24		23	
ENGINE — LOW IDLE	740	760	rpm								711	
ENGINE — HIGH IDLE	2390	2510	rpm		2495	2451	2386	2300				
ENGINE FULL LOAD	2190	2210	rpm						2200			
GOVERNOR RACK SETTING			mm	260								
DEVELOPED POWER	195	207	KW			50	100	150	196			
SYSTEM OIL PRESSURE	275	600	kpa @ full load		660	520	480	420	380		180	
OIL PRESS. BEFORE FILTER			K.P.A.		660	530	440	470	390		140	
SYSTEM OIL TEMPERATURE		110	°C		44	68	78	96	99		96	
ENGINE FUEL PRESSURE	172	345	K.P.A.		400	390	380	370	360		240	
BOOST PRESSURE L/H			K.P.A.									
BOOST PRESSURE R/H	88	120	K.P.A.		0	5	25	52	78		94	
BOOST TEMPERATURE L/H			°C									
BOOST TEMPERATURE R/H	107	118	°C		44	62	66	87	91		76	
FILTERS			Clean									
EXHAUST TEMPERATURE L/H		590	°C		296	380	468	532	604			
EXHAUST TEMPERATURE R/H			°C									
ENGINE COOLANT TEMP.	85	99	°C		48	65	70	72	78		79	
FUEL CONSUMPTION	53	59	G/KW/Hr						56			
Lubricating Oil — Viscosity Type			Lt	SAE 30 CD								

CUSTOMER RATING

HP 260
KW 201

LOADS

Full Load	196
¾ Load	150
½ Load	100
¼ Load	50

SUPERVISOR SIGNATURE:

OBSERVER SIGNATURE:

DYNAMOMETER TECHNICIAN SIGNATURE:

00

Bellows

ENGINE DYNAMOMETER TEST RECORD

25 000 HRS

Mike Walton
Bob Brinkale

ENGINE MODEL: 3306
ENGINE SERIAL NO: 132 - up. 2890
ENGINE ARRANGEMENT:

MACHINE MODEL: D25C
MACHINE SERIAL NO: 94C

DATE: 20-01-94
ARCHIVE NO: JO 1790
CUSTOMER NAME: Highveld Steel
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AMBIENT TEMPERATURE			°C	20									
ENGINE — LOW IDLE	740	760	rpm			22	22	22	23	24		23	
ENGINE — HIGH IDLE	2390	2510	rpm									711	
ENGINE FULL LOAD	2190	2210	rpm			2495	2451	2386	2300				
GOVERNOR RACK SETTING			mm	260						2200			
DEVELOPED POWER	195	209	KW										
SYSTEM OIL PRESSURE	275	600	kpa @ full load			50	100	150	196				
OIL PRESS. BEFORE FILTER			K.P.A.			660	520	480	420	380		180	
SYSTEM OIL TEMPERATURE		110	°C			660	530	440	470	390		140	
ENGINE FUEL PRESSURE	172	345	K.P.A.			44	68	78	96	99		96	
BOOST PRESSURE L/H			K.P.A.			400	390	380	370	360		240	
BOOST PRESSURE R/H	86	120	K.P.A.										
BOOST TEMPERATURE L/H			°C			0	5	25	52	78		94	
BOOST TEMPERATURE R/H			°C										
			Clean			44	62	66	87	91		96	
			°C										
			°C			994	380	468	532	604			
ENGINE COOLANT TEMP	78	99	°C										
FUEL CONSUMPTION	53	59	GR/KW/H			48	65	70	72	78		79	
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CUSTOMER RATING

HP: 260
KW: 201

LOADS

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¾ Load	150
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¼ Load	50

SUPERVISOR SIGNATURE:

OBSERVER SIGNATURE:

DYNAMOMETER TECHNICIAN SIGNATURE:

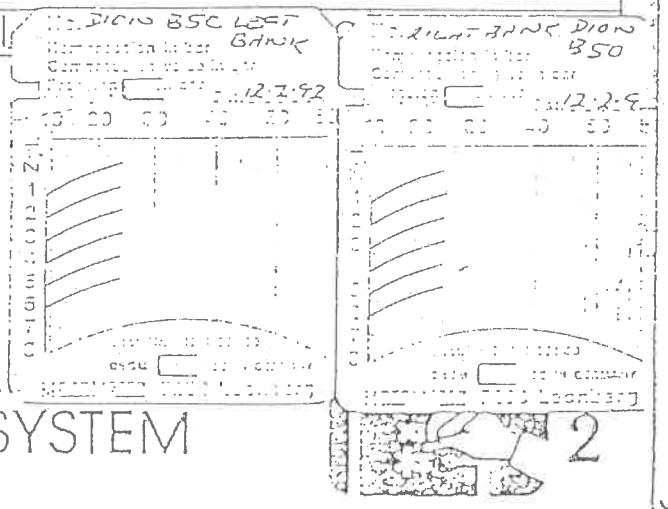
DESCRIPTION	SPEC	ACTUAL	SAT	UNSAT	ACTION CODE	COMMENTS
ENGINE				-		
1. Low idle	700 +30	710	✓			
2. High idle	2159 +50	2140	✓			
3. Full load rpm	1900 +0	1903	✓			
4. Converter stall rpm	1617 +45	1609	✓			
5. Boost pressure full load	N/A	N/A	N/A			
6. Boost pressure torque converter stall	114 +9		✓			
7. Fuel transfer pump pressure	230 +35	O.K.	✓			
8. Rack setting (if not sealed) FULL LOAD	6.22mm	SEALED	✓			
9. Inspection of cylinder with bore scope			✓			FOUND CONDITIONS SATISFACTORY
10. Turbo End Play 0.09 – 0.25 in			✓			NOT INSPECTED BOOST PRESSURE SEALED
11. Crankcase pressure blow by	1 in MAX H2O	O.K.	✓			
12. Injector test results	CYLINDER No 1 | No 2 | No 3 | No 4 | No 5 | No 6 | No 7 | No 8 | No 9 | No 10 | No 11 | No 12 | No 13 | No 14 | No 15 | No 16					
	PART No /ACTUAL 4W7019 → 4W7019					
	SAT. | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No					
ELECTRICAL						
1. Alternator voltage output	28 V	25.5 V	✓			
2. Alternator current output	50 A	45 A	✓			
3. No. 1 Starter maximum current draw	120 A	105 A	✓			
4. No. 2 Starter maximum current draw	101 A	N/A	N/A			

OT4180 | ACTION CODES: | A | URGENT | B |

COMMENTS:

FOUND INSPECTION SATISFACTORY AS ABOVE.

REPLACED ALL FUEL INJECTOR SEALS.



ENGINE A
ELECTRICAL SYSTEM

2

MODEL: D 6 N SERIAL NUMBER: [illegible] PLANT NUMBER: [illegible] JCB NUMBER: