## ROTARY SCREW AIR COMPRESSOR MAINTENANCE CHART

	Last Updated: SEPTEMBER 05, 2013						
Riç	g #	12	25	Oil Type		Palasyn 45 PAO46	
MODEL #	50DG	DDGH-TE SERIAL #		10J035	ASSET #	2-1248	
HRS	405	590	W/O #	68258	DATE	9/7/2017	
COMPANY		UNIT		TECHNICIAN	ROBBIE	SANDS	
		DESCRI			RTS USED		
Completed				CHANGED OIL			
Completed				CHANGED OIL FILTER			
Completed				CHANGED AIR FILTER			
Completed				CHANGED SEPERATO	२		
Completed				CLEANED RADIATOR			
Completed			ADE	DED NEW OIL SAMPLE \	/ALVE		
Completed			CHECK	AND INSPECT DRIVE CO	DUPLINGS		
Completed			C	PRAIN WATER FROM TA	NK		
Completed	OPEN PANEL DOOR AND CHECK TO BE SECU			D BE SECURE			
Completed			CHECK A	LL SIGNAL LINES (BLAC	K PLASTIC)		
Completed			ENSURE IT I	S CLEAN AND WASH W	ITH SOLVENT		
			PALATI	EK COLD START			
	CHANGE EN YOU SERVIC		TER, AIR FIL	TER, FUEL FILTER AND	TAKE AN OIL SA	MPLE EVERY TIME	
Completed					ND ALL FILTERS	S)- MARK THE DATE ON	
			PALAT	EK AIR DRYER			
Completed	Cł	HANGED INLE		ET FILTER TO DRYER.	JSE ONLY PALA	TEK FILTERS.	
-			Condit	ion of equipment			

## ROTARY SCREW AIR COMPRESSOR MAINTENANCE CHART

Last Updated: SEPTEMBER 05, 2013 Palasyn 45 Rig # Oil Type 125 **PAO46** MODEL # 50DGH-TE SERIAL # 11L027 ASSET # 2-1249 HRS 41109 W/O # 68258 DATE 9/7/2017 UNIT **TECHNICIAN** COMPANY **ROBBIE SANDS** DESCRIPTION OF WORK AND PARTS USED CHANGED OIL Completed CHANGED OIL FILTER Completed CHANGED AIR FILTER Completed CHANGED SEPERATOR Completed CLEANED RADIATOR Completed ADDED NEW OIL SAMPLE VALVE Completed CHECK AND INSPECT DRIVE COUPLINGS Completed DRAIN WATER FROM TANK Completed OPEN PANEL DOOR AND CHECK TO BE SECURE Completed Completed CHECK ALL SIGNAL LINES (BLACK PLASTIC) Completed ENSURE IT IS CLEAN AND WASH WITH SOLVENT PALATEK COLD START CHANGE ENGINE OIL, FILTER, AIR FILTER, FUEL FILTER AND TAKE AN OIL SAMPLE EVERY TIME Completed YOU SERVICE THE RIG AIR COMPRESSORS. YEARLY SERVICE THE AIR END OF THE COMPRESSOR (OIL AND ALL FILTERS)- MARK THE DATE ON Completed THE FILTER. PALATEK AIR DRYER CHANGED INLET AND OUTLET FILTER TO DRYER. USE ONLY PALATEK FILTERS. Completed Condition of equipment

1		<b>UNIT</b>		E	ENGINE IN	ISPECTION	FORM Last Updated: 08/27/2014
			Rig:	125	Work C	rder Number:	
	Da	te Mainten	ance Started:	7/19/2017	Date	Completed:	7/20/2017
Ν	lame:	RC	OBBIE SANDS	STEVE CASSELL	<u> </u>	Job Title:	Eng. Mechanic
		Time to Rig:		From: Home		om Rig:	To: HOME
T NUMBERS	G E N S E T S	S/N# #1 G Model: #4 Eng S/N#	ine 22- <u>1511</u> LLA02891 en. 24- <u>992</u> AA27673013 ine 22- en. 24-	#2 Gen. A	LLA02896	s/N# LLAC #3 Gen. 24 Model: AA276	02902 - 985 573013 re Convertor
ASSET	P U M P	#1 Pu s/n#	mp 22-	#2 Pump	22	#3 Pump s/N#	22
	F L O O R	#1 Flo s/n#	oor 22-	#2 Floor s/n#	22	#3 Floor s/N#	22
EV	ERYTHII	NG LOOKED	) GREAT	Action	Items		

Rig: Date: 7/2	125 0/2017					Engir	ne Position:	#1 ENGINE
	7			Antifreeze		Reco	ord the following inf	formation:
Make:	∠ Cat ] Detroit ] Waukesha		Green Freeze P	✓ Red Point:	-35	Belt	Number:	5VX1120
Other			Test NA	-Cool (Green	n Only)	Radiator Fan I	Bearing:	2 3/16
Model:			For 3512	Freeze Pt.	NA-Cool	Idler	Bearing:	1 11/16
S/N:	LLA02	2891		adiator		Pւ Shaft Size:	Illey Size:	18.5
Asset:	22- 1	511	After	cooler		11	1/16	2 3/16 Fan Shaft
Hours:	384	15	_					
Grease f Grease f Inspect a Test shu Check ar Make su	and clean ra tdown syste nd clean au>	rings and id diators. Not em and inst kiliary oil fill	all new belts.	ed (on 3508, 352		e able to see clearly th Generate	nrough the radiators	s fins). #1 GEN
	Spectrum	Cat	Other:				. f	
Model:	AA276		_		✓ Cle ✓ Ch	ease and inspect an generator an eck and record e	d blow out if n	ecessary.
Asset: KW 12	1-	bearing	– RPM	1200	Exciter Air Gap: <b>TOP:</b>		BOTTON	<b>/</b> :68
Torque Converter		bearing		1200	LEFT SIDE:	70	RIGHT SID	E: 68
Oiler Chain					COMI	MENTS / ACTION	N ITEMS:	
Clutch Size								

Rig: ate:7/2	125 20/2017						Engine	Position:	#2 ENGINE
				Antifree	eze		Record	I the following i	nformation:
Make: [ [	<ul> <li>✓ Cat</li> <li>Detroit</li> <li>Waukesha</li> </ul>		Green	✓ Red oint:	-35		Belt N	umber:	5VX1120
Other			Test NA-	-Cool	(Green Only)		Radiator Fan Be	aring:	2 3/16
Model:							Idler B	earing:	1 11/16
S/N:	LLAC	)2896	For 3512	diator	eeze Pt. NA-C			ey Size:	18.5
Asset:	22- 2	1507	After	cooler		SI	naft Size: 1 11/		2 3/16
Hours:	38	306					Idler Sł	1811	Fan Shaft
Run ove Grease Inspect	erhead valv fan hub bea and clean r	arings and ic adiators. Not	ller bearings.				ole to see clearly thro	ough the radiato	ors fins).
Run ove Grease Inspect Test shu Check a Make su Nodel:	erhead valv fan hub bea and clean r utdown syst nd clean au	e train. arings and ic adiators. Να tem and inst uxiliary oil fil	ller bearings. te: Wash in oppisite tall new belts.	e direction	ime only). of air flow; (You		ole to see clearly thro Generator		ors fins). #2 GEN
Run ove Grease Inspect Test shu Check a Make su Model:	erhead valv fan hub bea and clean r utdown syst nd clean au ure crank ca	e train. arings and ic radiators. Not tem and inst uxiliary oil fil ase filters ar	dler bearings. te: Wash in oppisite tall new belts. ter. ter. De being service	e direction	ime only). of air flow; (You	shoud be al	Generator	Position:	
Run ove Grease Inspect Test shu Check a Make su Model: [ [	erhead valv fan hub bea and clean r utdown syst nd clean au ure crank ca Marathon Kato Spectrum	e train. arings and ic radiators. Not tem and inst uxiliary oil fil ase filters ar MTU Baylor Cat 673013	dler bearings. te: Wash in oppisite tall new belts. ter. ter. e being service Magnamax GE	e direction	ime only). of air flow; (You 08, 3512).	shoud be al		• <b>Position:</b> or wear. blow out if	<b>#2 GEN</b> necessary.
Run ove Grease Inspect Test shu Check a Make su Model: [ [ //odel: _ Asset: _	erhead valv fan hub bea and clean r utdown syst nd clean au ure crank ca Marathon Kato Spectrum AA270 24- 9	e train. arings and ic adiators. Not tem and inst uxiliary oil fil ase filters ar MTU Baylor Cat 673013 988 1-bearing	dler bearings. te: Wash in oppisite tall new belts. iter. re being service Magnamax GE Other:	e direction ed (on 350	ime only). of air flow; (You 08, 3512).	shoud be al	<b>Generator</b> se and inspect for generator and	• <b>Position:</b> or wear. blow out if	<b>#2 GEN</b> necessary.
Run ove Grease Inspect Test shu Check a Make su Model: [ [ Model: _ [ Asset: _ (W1 Torque	erhead valve fan hub bea and clean r utdown syst nd clean au ure crank ca Marathon Kato Spectrum <u>AA276</u> 24- 9	e train. arings and ic adiators. Not tem and inst uxiliary oil fil ase filters ar MTU Baylor Cat 673013	dler bearings. te: Wash in oppisite tall new belts. ter. ter. e being service Magnamax GE	e direction	ime only). of air flow; (You 08, 3512). Exciter	shoud be al Greas Clear Clear Check	Generator se and inspect for generator and c and record exc	• <b>Position:</b> or wear. blow out if citer air gap	<b>#2 GEN</b> necessary.
Run ove Grease T Inspect Test shu Check a Make su Model: [ [ Model: _ [ Model: _ [ [ Model: _ [ [ Model: _ [ [ Model: _ [ ]	erhead valve fan hub bea and clean r utdown syst nd clean au ure crank ca Marathon Kato Spectrum AA270 24- 9 204 2: 204 2:	e train. arings and ic adiators. Not tem and inst uxiliary oil fil ase filters ar MTU Baylor Cat 673013 988 1-bearing	dler bearings. te: Wash in oppisite tall new belts. iter. re being service Magnamax GE Other:	e direction ed (on 350	ime only). of air flow; (You 08, 3512). Exciter	shoud be al Great Clear Clear Check Air Gap: TOP:	Generator se and inspect for generator and c and record exc 70	Position: or wear. blow out if citer air gap BOTTO RIGHT SI	<b>#2 GEN</b> necessary.
Run ove Grease Inspect Test shu Check a Make su Model: [ [ [ Model: _	erhead valve fan hub bea and clean r utdown syst nd clean au ure crank ca Marathon Kato Spectrum AA270 24- 9 204 2: 204 2: n 91-	e train. arings and ic adiators. Not tem and inst uxiliary oil fil ase filters ar MTU Baylor Cat 673013 988 1-bearing	dler bearings. te: Wash in oppisite tall new belts. iter. re being service Magnamax GE Other:	e direction ed (on 350	ime only). of air flow; (You 08, 3512). Exciter	shoud be al Great Clear Clear Check Air Gap: TOP:	Generator se and inspect for generator and c and record exe 70 68	Position: or wear. blow out if citer air gap BOTTO RIGHT SI	<b>#2 GEN</b> necessary.
Run ove Grease T Inspect Test shu Check a Make su Model: [ [ Wodel: _ [ Model: _ [ [ Model: _ [ [ Model: _ [ [ Model: _ [ [ Model: _ [ ]	erhead valve fan hub bea and clean r utdown syst nd clean au ure crank ca Marathon Kato Spectrum AA270 24- 9 204 2: 204 2: n 91-	e train. arings and ic adiators. Not tem and inst uxiliary oil fil ase filters ar MTU Baylor Cat 673013 988 1-bearing	dler bearings. te: Wash in oppisite tall new belts. iter. re being service Magnamax GE Other:	e direction ed (on 350	ime only). of air flow; (You 08, 3512). Exciter	shoud be al Great Clear Clear Check Air Gap: TOP:	Generator se and inspect for generator and c and record exe 70 68	Position: or wear. blow out if citer air gap BOTTO RIGHT SI	<b>#2 GEN</b> necessary.

Date: 7/2	125 0/2017			Engine Position:	#3 ENGINE
	_	Antifree	eze	Record the following	information:
Make:	<ul> <li>✓ Cat</li> <li>Detroit</li> <li>Waukesha</li> </ul>	Green V Red Freeze Point:	-35	Belt Number:	5VX1120
Other		Test NA-Cool	(Green Only)	Radiator Fan Bearing:	2 3/16
Model:			eze Pt. NA-Cool	Idler Bearing:	1 11/16
S/N:	LLA02902	For 3512's: Radiator	eze Pt. NA-Cool	Pulley Size:	18.5
Asset:	22- 1504	Aftercooler		Shaft Size: 	2 3/16
Hours:	39085			ldler Shaft	Fan Shaft
] inspect a	and clean radiators. Not	te: Wash in oppisite direction	of air flow; (You shoud be	e able to see clearly through the radiate	ors fins).
<ul> <li>Test shu</li> <li>Check and</li> <li>Make su</li> <li>Model: [</li> </ul>	tdown system and inst nd clean auxiliary oil fil ire crank case filters ar Marathon MTU Kato Baylor	tall new belts. ter. e being serviced (on 350 Magnamax GE		e able to see clearly through the radiate Generator Position:	ors fins). #3 GEN
Test shu Check an Make su Model:	tdown system and inst nd clean auxiliary oil fil ire crank case filters ar Marathon MTU Kato Baylor Spectrum Cat AA27673013	tall new belts. ter. e being serviced (on 350	08, 3512). 		<b>#3 GEN</b> necessary.
] Test shu Check an Make su Model: [ Model: _	tdown system and inst nd clean auxiliary oil fil ire crank case filters ar Marathon MTU Kato Baylor Spectrum Cat AA27673013 24- 985 1-bearing	tall new belts. ter. e being serviced (on 350 Magnamax GE Other:	08, 3512). 	Generator Position: ease and inspect for wear. an generator and blow out if eck and record exciter air gap	<b>#3 GEN</b> necessary.
] Test shu ] Check an ] Make su Model: [  Model:  KW12 Torque	tdown system and inst nd clean auxiliary oil fil ire crank case filters ar Marathon MTU Kato Baylor Spectrum Cat AA27673013 24- 985 1-bearing 204 2-bearing	tall new belts. ter. e being serviced (on 350 Magnamax GE	08, 3512). ✓ Gre ✓ Cle ✓ Cle Exciter Air Gap:	Generator Position: ease and inspect for wear. an generator and blow out if eck and record exciter air gap 68 BOTTC	<b>#3 GEN</b> necessary. o. <b>DM:</b> 68
Test shu Check an Check an Model: Model:  Model:  KW_12 Torque Converter	tdown system and inst nd clean auxiliary oil fil ire crank case filters ar Marathon MTU Kato Baylor Spectrum Cat AA27673013 24- 985 1-bearing 204 2-bearing 91-	tall new belts. ter. e being serviced (on 350 Magnamax GE Other:	08, 3512).	Generator Position: ease and inspect for wear. an generator and blow out if eck and record exciter air gap 68 BOTTC	<b>#3 GEN</b> necessary. ).
<ul> <li>✓ Test shu</li> <li>✓ Check an</li> <li>✓ Make su</li> <li>✓ Model: [</li> <li>✓</li> <li>✓ Model: _</li> <li>✓</li> <li>✓ Asset: _</li> <li>✓</li> <li>✓ KW 12</li> </ul>	tdown system and inst nd clean auxiliary oil fil ire crank case filters ar Marathon MTU Kato Baylor Spectrum Cat AA27673013 24- 985 1-bearing 204 2-bearing 91-	tall new belts. ter. e being serviced (on 350 Magnamax GE Other:	08, 3512).	Generator Position:         ease and inspect for wear.         an generator and blow out if         eck and record exciter air gap         68       BOTTO         70       RIGHT SI	<b>#3 GEN</b> necessary. ). DM: <u>68</u>
<ul> <li>7 Test shu</li> <li>7 Check and</li> <li>9 Make su</li> <li>9 Model:</li> <li>9 M</li></ul>	tdown system and inst nd clean auxiliary oil fil ire crank case filters ar Marathon MTU Kato Baylor Spectrum Cat AA27673013 24- 985 1-bearing 204 2-bearing 91-	tall new belts. ter. e being serviced (on 350 Magnamax GE Other:	08, 3512).	Generator Position:         ease and inspect for wear.         an generator and blow out if         eck and record exciter air gap         68       BOTTO         70       RIGHT SI	#3 GEN necessary. ).

Rig: 125 Date: 7/20/2017		Engine Position: #4 ENGINE
Make: Cat	Antifreeze Green Red Freeze Point:	Record the following information: Belt Number:
Waukesha	Test NA-Cool (Green Only)	Radiator Fan Bearing:
Model:	For 3512's: Freeze Pt. NA-Cool	Idler Bearing:
S/N:	Radiator	Pulley Size:Shaft Size:
Asset: 22-	Aftercooler	Idler Shaft Fan Shaft
Hours: Tighten pan bolts on D-379, 3	_	
<ul> <li>Ensure D-3508 and D-3512 ind</li> <li>Clean water passages on wate</li> <li>Run overhead valve train.</li> <li>Grease fan hub bearings and i</li> </ul>	dividual gauge panels has been silicone er cooled turbos (one time only). dler bearings. ote: Wash in oppisite direction of air flow; (You shou stall new belts. ilter.	
Model: Marathon MTU Kato Baylor	Magnamax GE Other:	Generator Position: #4 GEN
Model: Asset: 24- I-bearing KW 2-bearing		Grease and inspect for wear. Clean generator and blow out if necessary. Check and record exciter air gap. Gap: BOTTOM:
Torque Converter 91-	LEFT SIC	DE: RIGHT SIDE:
Oiler Chain		MMENTS / ACTION ITEMS:
Clutch Size		
Scheduled	Engine Inspection	94- Work Order No: 67100

	<b>.</b> .			
Rig: 125 Date: 7/20/2017			Engine Position:	TOP DRIVE
	Antifreeze		Record the following info	rmation:
Make: Cat	Green Red		Belt Number:	
Other	Test NA-Cool (Green C	Dnly)	Radiator Fan Bearing:	
Model:			Idler Bearing:	
S/N:	For 3512's: Freeze Pt. Radiator	NA-Cool	Pulley Size:	
Asset: 22-	Aftercooler		Idler Shaft	Fan Shaft
<ul> <li>Ensure D-3508 and D-3512 ind</li> <li>Clean water passages on water</li> <li>Run overhead valve train.</li> <li>Grease fan hub bearings and id</li> <li>Inspect and clean radiators. Not</li> <li>Test shutdown system and inst</li> <li>Check and clean auxiliary oil filt</li> <li>Make sure crank case filters are</li> </ul>	r cooled turbos (one time on ller bearings. te: Wash in oppisite direction of air flo call new belts. ter.	lly). w; (You shoud be a		fins).
Model: Marathon MTU Kato Baylor	Magnamax GE Other:		Generator Position:	TOP DRIVE
Model:	RPM	Clea Chece Exciter Air Gap: TOP: LEFT SIDE:	ase and inspect for wear. In generator and blow out if ne ck and record exciter air gap. BOTTOM RIGHT SIDE ENTS / ACTION ITEMS:	:
Clutch Size				

Rig: 125	<b>.</b> .		Engine Position:	#1 PUMP
Date: 7/20/2017				
	Antifreeze		Record the following info	rmation:
Make: Cat	Green Red		Belt Number:	
Other	Test NA-Cool (Green	only)	Radiator Fan Bearing:	
Model:	Freeze Pt.	NA-Cool	Idler Bearing:	
S/N:	For 3512's: Freeze Pt. Radiator		Pulley Size:	
Asset: 22-	Aftercooler		Shaft Size:	
Hours:			ldler Shaft	Fan Shaft
<ul> <li>Run overhead valve train.</li> <li>Grease fan hub bearings and ic</li> <li>Inspect and clean radiators. Not</li> <li>Test shutdown system and inst</li> <li>Check and clean auxiliary oil fil</li> <li>Make sure crank case filters ar</li> </ul> Model: Marathon MTU	te: Wash in oppisite direction of air t tall new belts. ter.		e able to see clearly through the radiators f	ins).
Kato Baylor	GE Other:		Generator Position:	#1 PUMP
Model: 24-		Cle	ease and inspect for wear. an generator and blow out if ne eck and record exciter air gap.	cessary.
KW 2-bearing		TOP:	воттом	:
Torque		LEFT SIDE:	RIGHT SIDE	:
Converter <u>91-</u> Oiler Chain	_	COMM	MENTS / ACTION ITEMS:	
Clutch Size				

Rig: <u>125</u> Date: 7/20/2017	<b>·</b> .	ſ	Engine Position:	#2 PUMP
Dute. 1/20/2011				
	Antifreeze		Record the following info	rmation:
Make: Cat	Green Red		Belt Number:	
Waukesha	Test NA-Cool (Green	Only)	Radiator Fan Bearing:	
Model:	Freeze Pt.	NA-Cool	Idler Bearing:	
S/N:	For 3512's:     Freeze Pt.       Radiator		Pulley Size:	
Asset: 22-	Aftercooler		Shaft Size:	Fan Shaft
Hours:		L		
<ul> <li>Clean water passages on wate</li> <li>Run overhead valve train.</li> <li>Grease fan hub bearings and id</li> <li>Inspect and clean radiators. No</li> <li>Test shutdown system and inst</li> <li>Check and clean auxiliary oil fil</li> <li>Make sure crank case filters ar</li> </ul>	dler bearings. te: Wash in oppisite direction of air f tall new belts. lter. re being serviced (on 3508, 351)	low; (You shoud be a	able to see clearly through the radiators f	ins).
Model: Marathon MTU Kato Baylor	Magnamax GE Other:		Generator Position:	#2 PUMP
Model: 24- 1-bearing		🗌 Clea	ase and inspect for wear. In generator and blow out if ne ck and record exciter air gap. BOTTOM	
KW   2-bearing     Torque	RPM	LEFT SIDE:	RIGHT SIDE	:
Converter 91- Oiler Chain	_		IENTS / ACTION ITEMS:	
Clutch Size				

Rig: 125	<b>.</b>		Engine Position:	#3 PUMP
Date: 7/20/2017				
Make:	Antifreeze		Record the following info	rmation:
Make: Cat	Green Red		Belt Number:	
Other	Test NA-Cool (Green	n Only)	Radiator Fan Bearing:	
Model:	Freeze Pt.	NA-Cool	Idler Bearing:	
S/N:	For 3512's: Freeze Pt. Radiator		Pulley Size:	
Asset: 22-	Aftercooler		Shaft Size:	Fan Shaft
Hours:		l		
<ul> <li>Test shutdown system and inst</li> <li>Check and clean auxiliary oil fil</li> <li>Make sure crank case filters ar</li> </ul>	ller bearings. te: Wash in oppisite direction of air tall new belts. ter. e being serviced (on 3508, 351	flow; (You shoud be	able to see clearly through the radiators i	fins).
Model: Marathon MTU Kato Baylor	Magnamax GE Other:		Generator Position:	#3 PUMP
Model: 24-		🗌 Clea	ase and inspect for wear. an generator and blow out if ne eck and record exciter air gap.	ecessary.
1-bearing	– RPM	TOP:	воттом	:
Torque		LEFT SIDE:	RIGHT SIDE	:
Converter <u>91-</u> Oiler Chain		COMM	IENTS / ACTION ITEMS:	
Clutch Size				

Rig: 125 Date: 7/20/2017			Engine Position:	#1 FLOOR
Make: 🗌 Cat	Antifreeze		Record the following info	rmation:
Detroit Waukesha Other	Freeze Point:		Belt Number: Radiator Fan Bearing:	
Model:		NA-Cool	Idler Bearing:	
S/N:	For 3512's: Freeze Pt. Radiator		Pulley Size: Shaft Size:	
Asset: 22- Hours:	Aftercooler		Idler Shaft	Fan Shaft
<ul> <li>Ensure D-3508 and D-3512 ind</li> <li>Clean water passages on water</li> <li>Run overhead valve train.</li> <li>Grease fan hub bearings and id</li> <li>Inspect and clean radiators. No</li> <li>Test shutdown system and inst</li> <li>Check and clean auxiliary oil fil</li> <li>Make sure crank case filters ar</li> </ul>	r cooled turbos (one time on dler bearings. te: Wash in oppisite direction of air flo tall new belts. ter.	ly). w; (You shoud be	prevent water entry. e able to see clearly through the radiators f	ïns).
Model: Marathon MTU Kato Baylor	Magnamax GE Other:		Generator Position:	#1 FLOOR
Model:		Cle	ease and inspect for wear. an generator and blow out if ne eck and record exciter air gap.	cessary.
Asset: 24-			BOTTOM	
Torque Converter <u>91-</u>	_		RIGHT SIDE:	
Oiler Chain				

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Rig: 125 Date: 7/20/2017				Engine Position:	#2 FLOOR
Make: 🗌 Cat		Antifre		Record the following info	rmation:
Detroit		Freeze Point: Test NA-Cool	(Green Only)	Belt Number: Radiator Fan Bearing:	
Model:		For 3512's:	reeze Pt. NA-Cool	Idler Bearing:	
S/N:		Radiator		Pulley Size: Shaft Size:	
Asset: 22 Hours:	-	Aftercooler		Idler Shaft	Fan Shaft
<ul> <li>Clean water pass</li> <li>Run overhead v</li> <li>Grease fan hub</li> <li>Inspect and cleas</li> <li>Test shutdown s</li> <li>Check and cleas</li> </ul>	sages on water alve train. bearings and id in radiators. Not system and inst in auxiliary oil filt	cooled turbos (one ler bearings. e: Wash in oppisite directio call new belts.	time only). n of air flow; (You shoud b	o prevent water entry. The able to see clearly through the radiators f	fins).
Model: Marath Kato Spectru	Baylor	☐ Magnamax ☐ GE ☐ Other:		Generator Position:	#2 FLOOR
Model:			☐ Cle ☐ Ch	ease and inspect for wear. ean generator and blow out if ne eck and record exciter air gap.	ecessary.
Asset: 24 KW	- 1-bearing 2-bearing		Exciter Air Gap	воттом	
Torque Converter <u>91</u> -		-		RIGHT SIDE	:
Clutch Size					

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Rig: 125 Date: 7/20/2017		Engine Position: #3 FLOOR
Make: 🗌 Cat	Antifreeze	Record the following information:
Detroit	Freeze Point:	Belt Number:
Other	Test NA-Cool (Green Only)	Radiator Fan Bearing:
Model:	For 3512's: Freeze Pt. NA-Cool	Idler Bearing:
S/N:	Radiator	Pulley Size: Shaft Size:
Asset: 22-	Aftercooler	Idler Shaft Fan Shaft
Hours:		
<ul> <li>Clean water passages on water</li> <li>Run overhead valve train.</li> <li>Grease fan hub bearings and idl</li> </ul>	er bearings. : Wash in oppisite direction of air flow; (You sho Ill new belts. er.	e to prevent water entry. ud be able to see clearly through the radiators fins).
Model: Marathon MTU Kato Baylor	Magnamax GE GE	Generator Position: #3 FLOOR
Spectrum Cat Model: Asset: 24-	Exciter Air o	
KW 1-bearing 2-bearing	RPM	DP: BOTTOM:
Torque Converter 91-		DE: RIGHT SIDE:
Oiler Chain		OMMENTS / ACTION ITEMS:
Clutch Size		



doc # /ms-mf-1/ rev. date 11-11-2011

RIG	125

**Pump Inspection** 

NAME	ROBBIE SANDS					
JOB TITLE:	mechanic	v	Nork Order N		67100	
DATE MAINTENANCE STARTED	4/6/2017	c	OMPLETED:		4/6/2017	
EQUIPMENT DESCRIPTION:		PUMP	INSPECTION			
SERIAL NUMBER:		_	#1 Asset Make Model	F-1600		
Travel Time to Rig Time at Rig:		From: Home	#2 Asset Make Model	hhf-1600		
Travel Time from Rig		То: НОМЕ SHOP	#3 Asset Make Model			
[		ACTON ITEMS				
REPLACED ELECTRIC OIL PUMF	ON #2 DUE TO LEA	KING OIL				

REPLACED ELECTRIC OIL PUMP ON #2 DUE TO LEAKING OIL					

	1	munuua	al Pump Insp				
Company/Division:				Asset #	38-479		
Rig:				125			
Pump#:1							
Field Inspection Report -		Make:	TFI	Model:	F-1600		
		<u> </u>					
Recommended Running Clearances		Inches					
Crosshead to slide - Left		Min. .020	Max. .045	Actual F.029,R.028	General Check all oil lines	<b>V</b>	
Crosshead to slide - Center		.020	.040	,	Check all tied Bolts		
Crosshead to slide - Right		.020	.045		Drain & check Cleanouts	v V	
Main Bearing - Left		.020	.020	0.014	Check and clean, gear end		
Main Bearing - Right		.005	.020	0.014	with diesel if needed	<u> </u>	
Pinion Shaft Bearing - Left		.002	.015	0.012	Pony Rod Alignment		
Pinion Shaft Bearing - Right		.002	.015	0.007	Check pony rods for cracks		
Crosshead Pin Bearing - Left		.002	.005	0.000	and wear (replace if necessary)		
Crosshead Pin Bearing - Center		.002	.005		Check piston rods for cracks	~	
Crosshead Pin Bearing - Right		.002	.005		and wear (replace if necessary)	_	
Connecting Rod to Eccentric Bearing	LH	.002	.020	0.009	Check clamps for wear		
Connecting Rod to Eccentric Bearing	CTN	.002	.020	0.010	(replace if necessary)		
Connecting Rod to Eccentric Bearing	RH	.002	.020	0.008	Check all bearings w/ mirror	1	
Oil Pump Pinion to Main Gear - Backlash		.010 .025		0.020	for pitting and flaking		
Pinion Shaft to Main Gear - Backlash	Pinion Shaft to Main Gear - Backlash		.050	0.026	Check all oil pump screens	~	
Bull Gear Wear		GOOD	GOOD		Check pillow block bearings	<	
Pinion Gear Wear		GOOD			on independent pump		
Extension Rods		GOOD			On inspection replace pony	<	
					rod seals (Regardless if the		
	Con	nments:			rig says they have already		
					been changed seals still		
					need to be checked)		
					replace gaskets if need do not		
					use silicone unless need to fill		
					a void. (do not use to excess		
					because it gets into gear end)		
National			Gardner Denver		Continental Emsco		
Check troughs		· ·	e and Gauge		Oil pressure and Gauge		
Check crosshead's for cracks		Oil Filter			Check pony rod wiper if equipped	~	
at pony rod clamp			ar for crossheads		if not equipped with wipers get parts		
Check pony rod clamp			e if correct pony		to correct		
on bolts on crosshead's			talled by gauging tween it and oil		Check to see if baffle plates are doweled in pump	Ľ	
Loosen pony rod clamp bolts and tighten pony rod then retorque bolts		stop plate.				<u> </u>	
agraen pony for their retorque bolts	1	Oil pump So	creen		1		
			ers are not there get		1		
			all floating seals				
		parts to inst	Action Items:	1	l		

Individual Pump Inspections

Company/Division:				Asset #	38-498		
Rig:				125			
Pump#:2							
Field Inspection Report -		Make:	H&H	Model:	HHF-1600		
Recommended Running Clearances		Inches		1	Γ		
		Min.	Max.	Actual	General		
Crosshead to slide - Left		.020	.045	F.028,R.028		<ul> <li>✓</li> </ul>	
Crosshead to slide - Center		.020 .020	.040	F.031,R.027	Check all tied Bolts		
Crosshead to slide - Right	Crosshead to slide - Right		.045	F.0,R33.027	Drain & check Cleanouts	$\checkmark$	
Main Bearing - Left		.005	.020	0.014	Check and clean, gear end		
Main Bearing - Right		.005	.020	0.014	with diesel if needed		
Pinion Shaft Bearing - Left		.002	.015	0.010	Pony Rod Alignment		
Pinion Shaft Bearing - Right		.002	.015	0.008	Check pony rods for cracks	$\checkmark$	
Crosshead Pin Bearing - Left		.002	.005		and wear (replace if necessary)	_	
Crosshead Pin Bearing - Center		.002	.005		Check piston rods for cracks	$\checkmark$	
Crosshead Pin Bearing - Right		.002	.005		and wear (replace if necessary)	]	
Connecting Rod to Eccentric Bearing ·	LH	.002	.020	0.010	Check clamps for wear	$\checkmark$	
Connecting Rod to Eccentric Bearing -	CTN	.002 .020 0.007 (re		(replace if necessary)			
Connecting Rod to Eccentric Bearing -	RH	.002	.020	0.010	Check all bearings w/ mirror		
Oil Pump Pinion to Main Gear - Backlash		.010 .025 0.020 for pitting and flakin		for pitting and flaking	~		
Pinion Shaft to Main Gear - Backlash		.010 .050		0.022	Check all oil pump screens	$\checkmark$	
Bull Gear Wear		GOOD Check pillow block bear		Check pillow block bearings			
Pinion Gear Wear				on independent pump			
Extension Rods				GOOD	On inspection replace pony		
					rod seals (Regardless if the		
	Comn	nents:			rig says they have already		
					been changed seals still		
FVF	RYTHING I	OOKED GO	D		need to be checked) replace gaskets if need do not		
					use silicone unless need to fill		
					a void. (do not use to excess		
					because it gets into gear end)		
National			Gardner Denver		Continental Emsco		
Check troughs			e and Gauge		Oil pressure and Gauge	I	
Check crosshead's for cracks		Oil Filter	c and Gauge		Check pony rod wiper if equipped	Ĺ	
			ar for crossheads		if not equipped with wipers get parts	$\checkmark$	
at pony rod clamp	_					Ľ	
Check pony rod clamp		Check to see if correct pony			to correct	~	
on bolts on crosshead's	_	rods are installed by gauging distance between it and oil			Check to see if baffle plates	Ľ	
Loosen pony rod clamp bolts and			etween it and oll		are doweled in pump		
tighten pony rod then retorque bolts	l	stop plate.			4		
		Oil pump S			4		
			ers are not there get tall floating seals				

	Individual Pump Inspections
Company/Division:	Asset #

Rig:		125						
Pump#:3								
Field Inspection Report -		Make:		Mode	l:			
Recommended Running Clearances		Inches		1				
		Min. .020	Min. Max. Actual		General			
Crosshead to slide - Left			.045		Check all oil lines			
Crosshead to slide - Center		.020	.040		Check all tied Bolts			
Crosshead to slide - Right		.020	.045		Drain & check Cleanouts			
Main Bearing - Left		.005	.020		Check and clean, gear end			
Main Bearing - Right		.005	.020		with diesel if needed			
Pinion Shaft Bearing - Left		.002	.015		Pony Rod Alignment			
Pinion Shaft Bearing - Right		.002	.015		Check pony rods for cracks			
Crosshead Pin Bearing - Left		.002	.005		and wear (replace if necessary)			
Crosshead Pin Bearing - Center		.002	.005		Check piston rods for cracks			
Crosshead Pin Bearing - Right		.002	.005		and wear (replace if necessary)			
Connecting Rod to Eccentric Bearing	- LH	.002 .020		Check clamps for wear				
Connecting Rod to Eccentric Bearing	- CTN	.002 .020			(replace if necessary)			
Connecting Rod to Eccentric Bearing	- RH	.002 .020			Check all bearings w/ mirror			
Oil Pump Pinion to Main Gear - Backl	ash	.010	.010 .025 fo		for pitting and flaking			
Pinion Shaft to Main Gear - Backlash		.010	.050		Check all oil pump screens			
Bull Gear Wear				Check pillow block bea				
Pinion Gear Wear					on independent pump			
Extension Rods					On inspection replace pony			
					rod seals (Regardless if the			
	Con	nments:			rig says they have already			
					been changed seals still			
					need to be checked)			
					replace gaskets if need do not			
					use silicone unless need to fill			
					a void. (do not use to excess			
					because it gets into gear end)			
National			Gardner Denver		Continental Emsco			
Check troughs		Oil pressu	ire and Gauge		Oil pressure and Gauge	$\Box$		
Check crosshead's for cracks		Oil Filter			Check pony rod wiper if equipped			
at pony rod clamp			oar for crossheads		if not equipped with wipers get parts			
Check pony rod clamp			see if correct pony		to correct			
on bolts on crosshead's			nstalled by gauging		Check to see if baffle plates	_		
Loosen pony rod clamp bolts and			between it and oil		are doweled in pump			
tighten pony rod then retorque bolts		stop plate						
	1	Oil pump			1			
		aters are not there get		1				
<u> </u>			stall floating seals Action Items:					

				Doc# /	′ms-mf-1.1/ <b>R</b>	ev.Date 11-11	-201
		F	RIG		125		
		I	Rig Inspectio	on			
NAME	STEVE CASSEL ROB	BIE SANDS	<u>.</u>				
JOB TITLE	MECHANIC	2	_	Work O	rder No.	67100	
DATE MAINTEN	IANCE STARTED:	7/2	0/2017	COM	PLETED	7/21/20	17
EQUIPMENT DESCR			DRAW	ORKS INS	PECTION		
SERIAL NUMBER:	JN 1500		ASSE	ET # :		15-162	
Travel Time to Rig		FROM:	HOME		SHOP		
Time at Rig:		_					
Time from Rig		FROM:	HOME		SHOP		
		ACTO	N ITEMS				
REPLACED ROTARY C	LUTCH DUE TO LEAK IN	I AIR BOOT	-				
REPLACED ROTARY B	ACK BRAKE DUE TO BO	OT SWELL	ED UP AND	PADS WE		NG	

Doc# /ms-mf-1.1/ Rev.Date 11-11-2011 YOU NEED TO HAVE SIGNATURE'S AND TIME FILLED OUT ON FIRST PAGE

Rig:125								
Date: 7/21/2017								
Scheduled Rig Inspection Check List								
Air Hoist:								
Check oil in air motor.	#1 ASSET	27- 594						
Check grease in gear case.	#2 ASSET	27- 595						
Grease throttle valve.	#3 ASSET	27-						
Check brake system for wear.								
Check cable for fraying.								
Comments:								
RIG HAS HYD TUGGERS NO PRO	BLEMS NOTED							
Blocks:								
Check grooves for wear.	ASSET #	5-						
Check smoothness of roll.	ASSET #	67-						
Check for play in bearings.		COMBO						
Ensure bolts are in place.								
Grease all zerks.								
Comments:								
CHANGED OUT BLOCKS FOR A	4 YEAR INSP							
Brakes:								
Hydromatic Brakes:								
Jack bearings.	ASSET #	66-						
Inspect couplings. DS	ODS							
Grease all zerks.								
Comments:								
Electric Brake Silectric Brakes:		66-						
Inspect plumbing ( must meet Unit Drillings Specifications) Note: contact the mainten	ance department for i							
Take air gap reading. Reading:								
Ensure brass shifting collars suspend off of sleeve OD.								
Grease all zerks.								
Inspect bearing clearance     DS	ODS							
Comments:								

	ton Brake						66- 295	
_	ease all zerks							
_	spect bearing					obs		
	• •	een reaction pla	Reading	: X gap	Ύ	gap		
	cord Quantity		Number of dise	CS <u>3</u>				
[√] Ch	eck Eaton Bra	ake Temp Gauge	Drillers Conso	le	/	At the Brake		
🗸 Fu	nction brakes	Auto Safety Sys	stem	Follow Eato	on & Hydrau		Check Sheet	
Toleran	ices:	<u>.</u>				Test v	vith 25 psi of air p	oressure
1	Disc Size	Qty of WC Discs	X new	X max (Adjustment)	Y new	Y min	Z new	Z min
		1	0.12	0.54	2.75	2.31	1	-
	36	2	0.24	0.66	2.75	2.31		2 <b></b> 22
		3	0.36 0.48	0.78 0.90	2.75 2.75	2.31 2.31	2.75	2.31
		-	0.40	Comments:	2.15	2.31	2.15	2.31
			E	EATON 2.80/2.82/2.	81/.330			
	Dry Cool	er:				_	78- 391	
	ush Dry Coole	r						
	ean Strainer ieck water Pre	essures	Inlet	20	C	utlet	1	5
				20	0			0
	Drawwor	ks:						
				Drum Shaft:	4005	т "	45 400	
		•	rs and clean screens.		ASSE	1#	15- 162	
_			& oil quality. Clean picku	p screens.				
[√] Ins	spect clutches	s for wear and a	ir pressure.					
🗸 Ins	spect tight me	ember teeth for	wear and grease.					
			Jack	bearing readings				
	DS			0.006				
	ODS			0.008				
	Other		HIGH	TRANS LIVE .005				
	Other	_	LOW	TRANS LIVE .003				
	Other			Comments:				
				commond.				
E	Brake Link	age:						
		and insure linka	age is tight.				15- 162	
		ands for cracks						
	•		sure bolts are tight.					
			sure boils are light.	,				
	irement.	JOOK UNCKINESS	, record <u>unimest</u> DIOCI	DS	17MM		ODS	18MM
		on brake Linkag	e (brake bands, slack adj		removal).			
				Comments:				
				DISC BRAKES				

	Input Shaft:			
√ In	spect for leaking seals.	-	15- 162	
	50	Jack bearing readings		
	DS	0.006	_	
	ODS	0.006	_	
	Other	HIGH CLUTCH LIVE .005	_	
	Other	LOW CLUTCH LIVE .004 Comments:	_	
	Output Shaft:			
[√] Gi	rease all zerks and inspect	t oil system. Jack bearing readings		
	DS	0.004		
	ODS	0.004	_	
	Other		_	
	Other		_	
		Comments:	_	
	Rotary Counter SI	haft:		
⊡ G	rease all zerks and inspec			
		Jack Bearings (Findings)		
	DS		_	
	ODS	0.002	_	
	Other		_	
		Comments:		
		NEW ROTARY CLUTCH AND NEW BACK BRA	KE	
	Cat Shaft:			
G	rease all zerks and inspec	t oil system.		
🗌 Gi	rease cathead with 4 shot	-		
		Jack bearing readings		
	DS		ASSET # MU	68-
	ODS		ASSET # BO	68-
	Other		_	
	Other		_	

Compound:			15- 162	
	Engine shafts:	-		
#1 DS	#1 ODS			
#2 DS	#2 ODS			
#3 DS	#3 ODS			
	Pump drive shaft:			
#1 DS	#1 ODS			
#2 DS	#2 ODS Pump sheave shaft:			
#1 DS	#1 ODS			
#2 DS	#2 ODS			
Inspect all chains for wear.	Stem.			
Ensure all oil pumps are working	· · -			
Change all filters and clean screer	ns. Comments:			
	<u> </u>			
Hook:		ASSET #	28-	
Check oil in snubber.		ASSET #	67-	_
Grease all zerks.			COMBO	
Visually check for cracks or wear.				
Rotate hook and feel for smoothn	less of roll.			
Ensure lock is working properly.				
	Comments:			
Kelly Spinner:				
Run spinner and check bearings.		A 6 6 F T #	<u> </u>	
Ensure air pressure is 90 PSI.		ASSET #	69-	_
Grease all zerks.				
	Comments:			
Mud Pumps:				
Fill out pump inspection report.		ASSET #	#1 38-	_
Check piston rods and replace if v	worn.	ASSET #	#2 38-	_
Check rod clamps and replace if v		ASSET #	#3 38-	
	Comments:			
	INSP WAS FILLED	OUT		

Independent Pump Drive #1:	]			
Inspect belts and sheave grooves for wear.				
Inspect chains and chain sprockets for wear.				
Inspect clutch and clutch drum.				
Check air lines and record PSI.	PSI			
Record bearing play on engine side of shaft.	Reading			
Record bearing play on pump side of shaft.	Reading			
Γ	Comments			
Independent Pump Drive #2	1			
Inspect belts and sheave grooves for wear.				
Inspect chains and chain sprockets for wear.				
Inspect clutch and clutch drum.				
Check air lines and record PSI.	PSI			
Record bearing play on engine side of shaft.	Reading			
Record bearing play on pump side of shaft.	Reading			
	Comments:			
Over running clutch:				
Roll clutch and check oil.				
Check seals for leaks. Note: identify leak found in commen	ts section.)			
Service clutch and grease splines.				
Changed Oil				
	Comments:			
Pipe Spinners:				
✓ Ensure Spinner is hung level with drill pipe.		ASSET #	41-	
$\checkmark$ Inspect drive chains and rollers for wear. (clean if necessar	y)			
Grease all zerks and check hanger spring.				
	Comments:			

Rotary Table:					
Pull top off and wash mud out of table.			ASSET #	44-	
Inspect through bore.					
Record main bearing play.		Reading			
Record pinion bearing play.		Reading			
Record backlash play in gears.		Reading			
Check quality of oil					
	Com	ments:			
Swivel:	and install mud quard				
Roll check swivel for smoothness of roll.	s and install mud guard.		ASSET #	50- 203	
<ul> <li>Roir check swiver for smoothness of foil.</li> <li>Record endplay readings. Radial run out.</li> </ul>					
Check quality of oil		Reading			
	Com	ments:			
Crown:					
✓ Inspect grooves for wear.			ASSET #	10-	
Check for play in bearings.					
Check for smoothness of roll.					
Grease all zerks.	Com	ments:			
	00111				
Fail Safe System:					
Test System					
ST-80					
31-00		Con	nments		
Test operation & check leaks					
Perform ST-80 Inspection Form					
Service ST-80 HPU					
HPU					
		Con	nments		
Run HPU & check leaks					
Change all filters					

Insure Rig Manager knows to change HPU oil once a year

## UNIT DRILLING RIG 125 GENERAL LAYOUT

Last Revision: 1/13/2016

