ROT	ROTARY SCREW AIR COMPRESSOR MAINTENANCE CHART										
Rig	#	1	22	Oil Type		pao-46					
MODEL#	50dg	hw-te	SERIAL#			ASSET#	2-1228				
HRS	18	397	W/O#			DATE 7/28/2014					
COMPANY	k	oroken arr	ow	TECHNICIAN		josl	n				
		De	escription	of work and p	oarts us	sed					
у				FLUSHED OIL	SYSTEM						
У				CHANGED	OIL						
У				CHANGED OIL	FILTER						
У				CHANGED AIR	FILTER						
у				CHANGED SEP	ERATOR						
у				CLEANED RAI	DIATOR						
n			AD	DED NEW OIL SA	MPLE VA	LVE					
n or equipr	nent, ev	ery thu	ng looks g	good, sample	valve ir	n place					

Rig	#		22	Oil Type		р	ao-46		
MODEL#		hw-te	SERIAL#	11b026		ASSET# 2-1229			
HRS	20 ⁻	184	W/O#				7/28/2014		
COMPANY	k	oroken arı	ow	TECHNICIAN		josh			
		De	escription	of work and	oarts us	sed			
У				FLUSHED OIL					
v				CHANGED					
y V				CHANGED OIL					
y V				CHANGED AIR					
<u>,</u>				CHANGED SEP					
У									
У				CLEANED RAI					
n			AD	DED NEW OIL SA	MPLE VA	LVE			
Cond	ition of	equipm	nent, ever	y thing looks	good, s	ample valv	/e in place		



doc # /ms-mf-1/ rev. date 08-13-2014

RIG	122

Pump Inspection

NAME	Brian Monger					
JOB TITLE:	Mechanic	Wo	ork Order N		55526	
DATE MAINTENANCE STARTED	9/23/2014	co	MPLETED:		9/24/2014	
EQUIPMENT DESCRIPTION:		triplex mud pum	p 5000 psi fl	uid end		
SERIAL NUMBER:	2010-11	_	#1 Asset Make Model	38-491 TFI-1600		1600
Travel Time to Rig	4	_From: 🗹 Home 🗸 Shop	#2 Asset Make Model	38-492 TFI_1600		1600
Time at Rig:	20	_	#3 Asset			
Travel Time from Rig	4		Make Model			

ACTON ITEMS

Company/Division:				Asset #	38-491	
Rig:		122				
Pump#:1						
Field Inspection Report -		Make:	TFI-1600	Mode	l: 1600	
		marke.	1111000	mouc		
Recommended Running Clearances		Inches				
		Min.	Max.	Actual	General	
Crosshead to slide - Left		.030	.045	0.034	Check all oil lines	>
Crosshead to slide - Center		.030	.045	0.037	Check all tied Bolts	>
Crosshead to slide - Right		.030	.045	0.033	Drain & check Cleanouts	>
Main Bearing - Left		.005	.020	0.017	Check and clean, gear end	~
Main Bearing - Right		.005	.020	0.013	with diesel if needed	
Pinion Shaft Bearing - Left		.002	.015	0.008	Pony Rod Alignment	7
Pinion Shaft Bearing - Right		.002	.015	0.009	Check pony rods for cracks	~
Crosshead Pin Bearing - Left		.002	.005	0.004	and wear (replace if necessary)	
Crosshead Pin Bearing - Center		.002	.005	0.004	Check piston rods for cracks	~
Crosshead Pin Bearing - Right		.002	.005	0.004	and wear (replace if necessary)	
Connecting Rod to Eccentric Bearing -	LH	.002	.020	0.013	Check clamps for wear	~
Connecting Rod to Eccentric Bearing -		.002	.020	0.007	(replace if necessary)	
Connecting Rod to Eccentric Bearing -		.002	.020	0.012	Check all bearings w/ mirror	~
Oil Pump Pinion to Main Gear - Backla		.010	.025	0.014	for pitting and flaking	
Pinion Shaft to Main Gear - Backlash		.010	.050	0.035	Check all oil pump screens	~
Bull Gear Wear					Check pillow block bearings	
Pinion Gear Wear					on independent pump	
Extension Rods					On inspection replace pony	~
			- A		rod seals (Regardless if the	
	Comr	nents:			rig says they have already	
					been changed seals still	
left main bearing	n is starting	to show a little	e discoloration		need to be checked)	
		rollers			replace gaskets if need do not	
new wind		ee been painte	ed over		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 pressure	and Gauge		Oil pressure and Gauge	 ✓
Check crosshead's for cracks		Oil Filter	and Guuge		Check pony rod wiper if equipped	
at pony rod clamp			r 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		Check to see if baffle plates	~
Loosen pony rod clamp bolts and			ween it and oil		are doweled in pump	
tighten pony rod then retorque bolts		stop plate.				
aginen pony for men retorque bolls	L	Oil pump Sc	reen		-1	
			rs are not there get		-1	
			all floating seals			
		parts to insta	Action Items:	1		

Company/Division:				Asset #	38-492	
Rig:		122				
Pump#:2						
Field Inspection Report -		Make:	TFI_1600	Mode	l: 1600	
		marce.	111_1000	moue	1000	
Recommended Running Clearances		Inches				
		Min.	Max.	Actual	General	
Crosshead to slide - Left		.030	.045		Check all oil lines	~
Crosshead to slide - Center		.030	.045		Check all tied Bolts	~
Crosshead to slide - Right		.030	.045		Drain & check Cleanouts	7
Main Bearing - Left		.005	.020	0.013	Check and clean, gear end	7
Main Bearing - Right		.005	.020	0.011	with diesel if needed	
Pinion Shaft Bearing - Left		.002	.015	0.009	Pony Rod Alignment	7
Pinion Shaft Bearing - Right		.002	.015	0.008		~
Crosshead Pin Bearing - Left	· · · · · · · · · · · · · · · · · · ·	.002	.005	0.004	and wear (replace if necessary)	
Crosshead Pin Bearing - Center		.002	.005	0.004	Check piston rods for cracks	~
Crosshead Pin Bearing - Right		.002	.005	0.004	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	0.009	(replace if necessary)	
Connecting Rod to Eccentric Bearing -	RH	.002	.020	0.009	Check all bearings w/ mirror	~
Oil Pump Pinion to Main Gear - Backla		.010	.025	0.013	for pitting and flaking	
Pinion Shaft to Main Gear - Backlash		.010	.050	.027	Check all oil pump screens	~
Bull Gear Wear				good	Check pillow block bearings	
Pinion Gear Wear				good	on independent pump	
Extension Rods				good	On inspection replace pony	~
			1	0	rod seals (Regardless if the	
	Comm	nents:			rig says they have already	
					been changed seals still	
3 new	windows b	een painted c	over		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 pressure	and Gauge		Oil pressure and Gauge	 ✓
Check crosshead's for cracks		Oil Filter			Check pony rod wiper if equipped	_
at pony rod clamp	_		r for crossheads		if not equipped with wipers get parts	
Check pony rod clamp			e if correct pony		to correct	
on bolts on crosshead's			alled by gauging		Check to see if baffle plates	~
Loosen pony rod clamp bolts and		1	ween it and oil		are doweled in pump	
tighten pony rod then retorque bolts	_	stop plate.				
	L	Oil pump Sc	reen		1	
			rs are not there get		1	
			all floating seals			
		IPORTO TO INSIG	Action Items:			

Company/Division:				Asset #		
Rig:		122				
Pump#:3						
Field Inspection Report -		Make:		Mode	ŀ	
		Mare.		Mode		
Recommended Running Clearances		Inches				
		Min.	Max.	Actual	General	
Crosshead to slide - Left		.030	.045		Check all oil lines	
Crosshead to slide - Center		.030	.045		Check all tied Bolts	
Crosshead to slide - Right		.030	.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 - Backla		.010	.025		for pitting and flaking	
Pinion Shaft to Main Gear - Backlash		.010	.050		Check all oil pump screens	
Bull Gear Wear					Check pillow block bearings	
Pinion Gear Wear					on independent pump	
Extension Rods					On inspection replace pony	
					rod seals (Regardless if the	
	Com	ments:			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 pressure an	d Gauge		Oil pressure and Gauge	
Check crosshead's for cracks		Oil Filter			Check pony rod wiper if equipped	
at pony rod clamp		Oil spray bar fo	r crossheads		if not equipped with wipers get parts	
Check pony rod clamp		Check to see if			to correct	
on bolts on crosshead's		rods are installe		_	Check to see if baffle plates	
Loosen pony rod clamp bolts and		distance betwe			are doweled in pump	
tighten pony rod then retorque bolts		stop plate.			a second in banda	1
	1	Oil pump Scree	en		1	
			are not there get		1	
		parts to install f	-			
			ction Items:	I		

				Doc# /n		ev.Date 11-1	1-2011
	WW		RIG		122		
			Rig Inspecti	on			
NAME	Brian Mon	ger					
JOB TITLE	mechani	ic		Work O	rder No.	55597	
DATE MAINTENANC	E STARTED:	9/2	25/2014	_ COMF	PLETED	9/28/2	2014
EQUIPMENT DESCRIPT	'ION:			drilling rig			
SERIAL NUMBER:			ASS	SET # :		122	
Travel Time to Rig	6	FROM:	HOME		SHOP		
Time at Rig:	40						
Time from Rig	8	FROM:	✓ HOME		SHOP		
		ACTO	ON ITEMS				

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

Rig: <u>122</u>			
Date: 9/28/2014			
Scheduled Rig Inspection C	heck List		
Air Hoist:			
Check oil in air motor.	#1 ASSET	27-	
Check grease in gear case.	#2 ASSET	27-	
Grease throttle valve.	#3 ASSET	27-	
Check brake system for wear.			
Check cable for fraying.			
Comments:			
hyd winches			
Blocks:			
Check grooves for wear.	ASSET #	5- 167	
Check smoothness of roll.	ASSET #	67-	
Check for play in bearings.		COMBO	
✓ Ensure bolts are in place.			
✓ Grease all zerks.			
Comments:			
Brakes:			
Hydromatic Brakes:			
Jack bearings.	ASSET #	66-	
Inspect couplings. DS	ODS		
Grease all zerks.			
Comments:			
Electric Brakes:		<u></u>	
Electric Brake Only:		66-	
Inspect plumbing (must meet Unit Drillings Specifications) Note: contact the mai Take air gap reading. Reading:	Intenance department for Ins	tructions.	
Ensure brass shifting collars suspend off of sleeve OD.			
Ensure vents are in place and clean.			
□ Inspect bearing clearance DS	ODS		
Comments:			

] Inspect be	aring clearance	DS	0.007		ODS	0.	007	
	between reaction pla				Y gap	0.70	gap	2.72
Record Qu	antity of discs	Number of discs			5-1		51	
Check Eate	on Brake Temp Gaug				At the Brak	<i>(</i> 0	~	
Function b	rakes Auto Safety Sy						x	
lerances:			Follow Ea	on & Hydrau		Check Sheet with 25 psi of air	pressure	
Disc Size		X new	X max (Adjustment)	Y new	Y min	Znew	Z min	
	1	0.12	0.54	2.75	2.31	—		
36	2	0.24	0.66	2.75	2.31			
	3	0.36 0.48	0.78	2.75 2.75	2.31 2.31	2.75	2.31	-
	~	0.10	Comments		2.51	2.15	2.51	- 22
	recomme	end this rig be the ne	ext to get gen 2 bral	ke handle/m	issing asset	tag on brake		
Dry C	ooler:					78- 385		
Flush Dry								
Clean Stra	iner er Pressures	Inlet			Outlet			
_								
Drawy	vorks:							
_			Drum Shaft:					
Grease all	zerks. Change all filte	ers and clean screens.		ASS	ET #	15- 161		
Grease all	zerks. Change all filte	ers and clean screens. & oil quality. Clean picki		ASS	ET #	15- 161		
Grease all	zerks. Change all filte	& oil quality. Clean pick		ASS	ET #	15- 161		
 Grease all Inspect oil Inspect clu 	zerks. Change all filte	& oil quality. Clean picki ir pressure.		ASS	ET #	15- 161		
] Grease all] Inspect oil] Inspect clu	zerks. Change all filte lines. Check oil level utches for wear and a	& oil quality. Clean picki ir pressure. wear and grease.		ASS	ET #	15- 161		
 Grease all Inspect oil Inspect clu 	zerks. Change all filte lines. Check oil level utches for wear and a	& oil quality. Clean picki ir pressure. wear and grease.	up screens. Sk bearing readings	ASS		15- 161		
Grease all Grease all Inspect oil Inspect clu Inspect tig	zerks. Change all filto lines. Check oil level utches for wear and a pht member teeth for	& oil quality. Clean picki ir pressure. wear and grease.	up screens. Sk bearing readings			15- 161		
Grease all Inspect oil Inspect clu Inspect tig Inspect tig	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS	& oil quality. Clean pick ir pressure. wear and grease. Jac	up screens. ck bearing readings 0.011 0.01			15- 161		
Grease all Inspect oil Inspect clu Inspect tig Inspect tig	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other	& oil quality. Clean picku ir pressure. wear and grease. Jac	up screens. Sk bearing readings 0.011 0.01 gh drum ods .008			15- 161		
Grease all Inspect oil Inspect clu Inspect tig Inspect tig	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other	& oil quality. Clean picku ir pressure. wear and grease. Jac	up screens. ck bearing readings 0.011 0.01			15- 161		
Grease all Inspect oil Inspect clu Inspect tig Inspect tig	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other	& oil quality. Clean picku ir pressure. wear and grease. Jac	up screens. ck bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007			15- 161		
Grease all Inspect oil Inspect clu Inspect tig Inspect tig	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other Other	& oil quality. Clean picku ir pressure. Wear and grease. Jac hig	up screens. tk bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007 Comments					
Grease all Inspect oil Inspect clu Inspect tig Inspect tig	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other Other	& oil quality. Clean picku ir pressure. Wear and grease. Jac hig	up screens. ck bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007				<u>s zerks</u>	
Grease all Inspect oil Inspect clu Inspect tig Inspect tig Inspect tig Inspect tig	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other Other	& oil quality. Clean picku ir pressure. Wear and grease. Jac hig	up screens. tk bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007 Comments				<u>s zerks</u>	
Grease all Inspect oil Inspect clu Inspect tig Inspec	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other Other had to remove lo inkage:	& oil quality. Clean pick ir pressure. Jac Jac hig k	up screens. tk bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007 Comments			Repaired grea	<u>s zerks</u>	
Grease all Inspect oil Inspect clu Inspect tig Inspect tig Inspect tig D D Brake L Grease all	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other Other had to remove lo inkage: zerks and insure link	& oil quality. Clean picki ir pressure. Jac Jac hig w drum to repair gu age is tight.	up screens. tk bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007 Comments				<u>s zerks</u>	
Grease all Inspect oil Inspect clu Inspect tig Inspect tig Inspect tig Inspect big Inspec	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other Other had to remove lo inkage: zerks and insure link eak bands for cracks	& oil quality. Clean picku ir pressure. Jac Jac hig w drum to repair gu age is tight. and wear.	up screens. tk bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007 Comments			Repaired grea	<u>s zerks</u>	
Grease all Inspect oil Inspect clu Inspect tig Inspect tig Brake L Grease all Inspect bra Check bra	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other Other had to remove lo inkage: zerks and insure link eak bands for cracks ke block bolts and en	& oil quality. Clean picku ir pressure. Wear and grease. Jac hig w drum to repair gu age is tight. and wear. sure bolts are tight.	up screens. tk bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007 Comments			Repaired grea	s zerks	
Grease all Inspect oil Inspect clu Inspect tig Inspect tig Brake L Grease all Inspect bra Check bra	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other Other Other thad to remove loc inkage: zerks and insure link eak bands for cracks ke block bolts and en ake block thickness	& oil quality. Clean picku ir pressure. Wear and grease. Jac hig w drum to repair gu age is tight. and wear. sure bolts are tight.	up screens. tk bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007 Comments			Repaired grea	<u>s zerks</u>	
Grease all Inspect oil Inspect clu Inspect tig Inspect tig Brake L Grease all Inspect br Check bra Check	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other Other thad to remove loc inkage: zerks and insure link eak bands for cracks ke block bolts and en ake block thickness ement.	& oil quality. Clean picka ir pressure. Wear and grease. Jac hig w drum to repair gu age is tight. and wear. sure bolts are tight. s, record <u>thinnest</u> .	up screens. tk bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007 Comments Jard that was damag	ged when ch		Repaired grea 15- 161		
Grease all Inspect oil Inspect clu Inspect tig Inspect tig Brake L Grease all Inspect br Check bra Check	zerks. Change all filt lines. Check oil level utches for wear and a pht member teeth for DS ODS Other Other Other thad to remove loc inkage: zerks and insure link eak bands for cracks ke block bolts and en ake block thickness ement.	& oil quality. Clean picka ir pressure. Wear and grease. Jac hig w drum to repair gu age is tight. and wear. sure bolts are tight. s, record <u>thinnest</u> .	up screens. tk bearing readings 0.011 0.01 gh drum ods .008 ow drum ds .007 Comments Jard that was damag	ged when ch		Repaired grea 15- 161		

In	put Shaft:			
✓ Inspe	ect for leaking seals.	lock bearing readings	<u> </u>	1
	50	Jack bearing readings		
 ✓ 	DS	0.009		
	ODS	0.007		
	Other			
	Other	Comments:		
		repaired grease zerks		
Out	tput Shaft:			
✓ Greas	se all zerks and inspe	-		
		Jack bearing readings		
	DS	0.008		
~	ODS	0.008		
\checkmark	Other	low trans sprocket .015		
\checkmark	Other	high trans sprocket .015		
		Comments:		
		repaired grease zerks		
R	otary Counter S	Shaft:		
Greas	se all zerks and inspe	ect oil system.		
		Jack Bearings (Findings)		
~	DS	0.005		
\checkmark	ODS	0.004		
	Other	chain garn in .004		
	Other	chain guard out .005		
	Other			
	Other			
		Comments:		
C	at Shaft:	l		
Greas	se all zerks and inspe	ect oil system.		
Greas	se cathead with 4 sh	ots of grease.		
		Jack bearing readings		
	DS	hyd cat heads	ASSET # MU	68- n/a
	ODS	no cat shaft	ASSET # BO	68- n/a
	Other			
	Other			

Compound:			15- 161	_
	Engine shafts:			
#1 DS	#1 ODS			
#2 DS	#2 ODS			
#3 DS	#3 ODS			
111 D D	Pump drive shaft:			
#1 DS	#1 ODS			
#2 DS	#2 ODS Pump sheave shaft:			
#1 DS	#1 ODS			
#2 DS	#2 005			
Grease all zerks and inspect oil system.				
Inspect all chains for wear.				
Ensure all oil pumps are working properly.				
Change all filters and clean screens.				
	Comments:			
Hook:		ASSET #	28-	_
Check oil in snubber.		ASSET #	67- COMBO	_
Grease all zerks.			COMBO	
Visually check for cracks or wear.				
Rotate hook and feel for smoothness of roll				
Ensure lock is working properly.	0			
	Comments:			
	top drive no hook			
Kelly Spinner:				
Run spinner and check bearings.		ASSET #	69-	
Ensure air pressure is 90 PSI.				_
Grease all zerks.				
	Comments:			
	top drive			
Mud Pumps:				
Fill out pump inspection report.		ASSET #	#1 38- 491	
Check piston rods and replace if worn.		ASSET #	#2 38- 492	_
Check rod clamps and replace if worn.				_
	Comments:	ASSET #	#3 38-	

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			
	Comments			
Independent Pump Drive #2				
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 comments	section.)			
Service clutch and grease splines.				
Changed Oil				
Γ	Comments:			
Pipe Spinners:				
Ensure Spinner is hung level with drill pipe.		ASSET #	41-	
✓ Inspect drive chains and rollers for wear. (clean if necessary))			
Grease all zerks and check hanger spring.				
	Comments:			

Rotary Table:					
Pull top off and wash mud out of table.			ASSET #	44- 279	_
✓ Inspect through bore.					
Record main bearing play.		Reading		0.01	_
Record pinion bearing play.		Reading		0.005	_
Record backlash play in gears.		Reading		0.008	_
Check quality of oil					_
	Cor	nments:			
	rig didn't pull off top a	nd wash prio	r to rig move		
Swivel:					
Clean mud accumulation around top seal	s and install mud guard.		ASSET #	50-	
Roll check swivel for smoothness of roll.	j		A33E1 #	50-	_
Record endplay readings. Radial run out.		Reading			
Check quality of oil		Reading			_
	Cor	nments:			
	canrig top drive	e intergrated	swivel		
Crown		<u> </u>			
Crown:			A 00FT #	10 100	
Check for play in bearings.			ASSET #	10- 122	_
Check for smoothness of roll.					
Grease all zerks.					
	Cor	nments:			
Fail Safe System:					
✓ Test System					
ST-80					
		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

	11111		Doc# /ms-mf-1.1/ Rev.Date (11-05-2012
		RIG _	122	
		Engine Inspec	tion	
NAME broken a	arrow field services		Work Order No	
			JOB TITLE	mechanic
DATE MAINTENANCE S	TARTED:	9/17/2014	COMPLETED	9/18/2014
EQUIPMENT DESCRIPTIO				
SERIAL NUMBE	R:			
Travel Time to Rig	FRO	M: Home Sho)b	
Time from Rig	FRO	M: HOME SHO	DP	
Time at Rig:			ASSET # : #1 Engine 22	-1478
	ACTON ITEMS		#1 Gen. <u>24</u>	-965
	ACTONTIEMS		#2 Engine 22	-1477
			#2 Gen. <u>24</u>	-964
			#3 Engine 22	-1476
			#3 Gen. <u>2</u> 4	-963
			Other Asset #	engine Position
			Asset #	gen Position
			Other Asset #	engine Position
			Asset #	gen
			Other	engine Position
			Asset #	gen
			Other Asset #	engine Position
				gen
			Asset #	Position

Rig:	122						
			Antifreeze:		Green		
Date:	9/18/20	014	Freeze point:				_
	a aiti a a t	1		If antifree	zo is aroon tost	the NA-Cool level	
Engine Po Make:	osition:	cat	_	ii antiricez	Le 13 green test		
Model:	_	3512c	_				-
Serial Nu	mher [.]	lla2585	_	For 3512's:	Radiator	pass -45	
Asset Nu		22-1478	_				-
Hours:		18236			Aftercooler	pass -45	_
Tighter	n pan bolts on D-	379, 398, 399.					
🗹 Ensure	D-3508 and D-3	512 individual gauge par	nels has been silicon	e to prevent w	ater entry.		
Clean v	water passages o	n water cooled turbos (o	ne time only).		-		
Run ov	verhead valvetrair	1.	-				
		s and idler bearings.					
	-	tors. Note: Wash in oppis	site direction of air f	low. (You shou	ld be able to see	clearly through the ra	adiators fins.)
		and install new belts.				, <u>,</u>	· · · · · · · · · · · · · · · · · · ·
	and clean auxilia						
		Iters are being serviced ((on 3508,3512).				
		Ū .					
		Record belt #'s, ra	idiator fan brg.,io	dler brg., sh	aft size, and p	ulley sizes.	
Generato	r position:	1		Torque co	nverter		
Make:		kato		Oiler chain	ı		
Model:		aa27673	8013	Clutch size	e		
Asset Nu	mber:	24-96	5	Hrs since I	ast P.M.		
KW:	_	1204		RPM:			
			2-	BRG			
		Review ser	vice procedures	for engines	s with rig perso	onell.	

Grease and inspect for wear.

Clean generator and blow out if necessary.

Check and Grease Drive Couplings, Plug and Remove all Grease Fittings, Install New Rubbers and O-Ring Yearly!!!, (3)7L-5589 Rubber, (1) 9H846 O-Ring, (3) Tubes 5N5561 Compound Rubber Coupling,

Comments:

everything looked good

Rig:	122		Antifreeze: Freeze point:	✓ Red	Green		
Date:	9/18/201	4	Fieeze point.	If antifreez	e is green test t	the NA-Cool level	
Engine Po	sition:	2		II antineezo	e is green test		
Make:		cat					
Model:		3512c		For 3512's:	Radiator	pass-42	
Serial Nur	nber:	lla2584					
Asset Nun	nber:	22-1477			Aftercooler	pass-42	
Hours:		18441					
Clean w Clean w Clean w Grease Inspect Test shi Check a	rater passages on v erhead valvetrain. fan hub bearings a and clean radiator utdown system and ind clean auxiliary ure crank case filter	2 individual gauge panel: water cooled turbos (one nd idler bearings. s. Note: Wash in oppisite d install new belts.	time only). e direction of air fle a 3508,3512).	ow. (You should	d be able to see		liators fins.)
Generator	position:	2		Torque con	verter		
Make:	·	kato		Oiler chain			
Model:		aa276730 ⁻	13	Clutch size			
Asset Nun	nber:	24-964		Hrs since la			
KW:	_	1204	2-	RPM: BRG	_		

Review service procedures for engines with rig personell.

Grease and inspect for wear.

Clean generator and blow out if necessary.

Check and Grease Drive Couplings, Plug and Remove all Grease Fittings, Install New Rubbers and O-Ring Yearly!!!, (3)7L-5589 Rubber, (1) 9H846 O-Ring, (3) Tubes 5N5561 Compound Rubber Coupling,

Comments:

pulled expansion joint to muffler and had welder repair crack, everything looked good

Rig:	122			✓ Red 🗌	Green		
Date:	9/18/2014		Freeze point:	If antifreez	e is areen test t	the NA-Cool level	
Engine Po	osition:	3					
Make:	—	cat	-				
Model:	_	3512c	-	For 3512's:	Radiator	pass-38	
Serial Nur	mber:	lla2585	-				
Asset Nur	nber:	22-1476			Aftercooler	pass-38	
Hours:	_	17795	_				
 ✓ Ensure ✓ Clean w ✓ Run ove ✓ Grease ✓ Inspect ✓ Test sh ✓ Check a 	vater passages o erhead valvetrain fan hub bearing and clean radia utdown system a and clean auxilia	512 individual gauge pane n water cooled turbos (one n. s and idler bearings. tors. Note: Wash in oppisit and install new belts.	e time only). Re direction of air fle n 3508,3512).	ow. (You should	d be able to see		liators fins.)
Generator	position:	3		Torque con	verter		
Make:	_	kato		Oiler chain			
Model:	_	aa276730	13	Clutch size			
Asset Nur	nber:	24-963		Hrs since la	ast P.M.		
KW:	_	1204		RPM:			
			2-	BRG			

Review service procedures for engines with rig personell.

Grease and inspect for wear.

Clean generator and blow out if necessary.

Check and Grease Drive Couplings, Plug and Remove all Grease Fittings, Install New Rubbers and O-Ring Yearly!!!, (3)7L-5589 Rubber, (1) 9H846 O-Ring, (3) Tubes 5N5561 Compound Rubber Coupling,

Comments:

pulled expansion joint to muffler and had welder repair crack, everything looked good

Rig:	122	Antifreeze:	Red Green	
		Freeze point:		
Date:	9/18/2014	_	lf antifra and in another too	the NA Cool level
Engine Po	osition:		If antifreeze is green tes	the NA-Cool level
Make:				
Model:			For 3512's: Radiator	
Serial Nur	mber:		-	
Asset Nur	nber:		Aftercooler	
Hours:				
Tighten	n pan bolts on D-379, 398, 3	399.		
Ensure	D-3508 and D-3512 individ	lual gauge panels has been silicone	to prevent water entry.	
Clean w	vater passages on water co	oled turbos (one time only).		
Run ov	erhead valvetrain.			
Grease	fan hub bearings and idler	r bearings.		
Inspect	and clean radiators. Note:	Wash in oppisite direction of air fle	ow. (You should be able to se	e clearly through the radiators fins.)
Test sh	utdown system and install	new belts.		
Check a	and clean auxiliary oil filter.			
Make s	ure crank case filters are be	eing serviced (on 3508,3512).		
r	Record	d belt #'s, radiator fan brg.,id	ler brg., shaft size, and	pulley sizes.
Generator	position:		Torque converter	
Make:			Oiler chain	
Model:			Clutch size	
Asset Nur	nber:		Hrs since last P.M.	
KW:			RPM:	
		2-	BRG	
		Review service procedures	for engines with rig pers	sonell.
Grease	and inspect for wear.			
🗌 Clean g	enerator and blow out if ne	ecessary.		
Check a		plings, Plug and Remove all ober, (1) 9H846 O-Ring, (3)		New Rubbers and O-Ring Yearly!!!, and Rubber Coupling,
		Com	ments:	

Rig:	122	Antifreeze:	Red Green	
		Freeze point:		
Date:	9/18/2014	_	lf antifra and in another too	the NA Cool level
Engine Po	osition:		If antifreeze is green tes	the NA-Cool level
Make:				
Model:			For 3512's: Radiator	
Serial Nur	mber:		-	
Asset Nur	nber:		Aftercooler	
Hours:				
Tighten	n pan bolts on D-379, 398, 3	399.		
Ensure	D-3508 and D-3512 individ	lual gauge panels has been silicone	to prevent water entry.	
Clean w	vater passages on water co	oled turbos (one time only).		
Run ov	erhead valvetrain.			
Grease	fan hub bearings and idler	r bearings.		
Inspect	and clean radiators. Note:	Wash in oppisite direction of air fle	ow. (You should be able to se	e clearly through the radiators fins.)
Test sh	utdown system and install	new belts.		
Check a	and clean auxiliary oil filter.			
Make s	ure crank case filters are be	eing serviced (on 3508,3512).		
r	Record	d belt #'s, radiator fan brg.,id	ler brg., shaft size, and	pulley sizes.
Generator	position:		Torque converter	
Make:			Oiler chain	
Model:			Clutch size	
Asset Nur	nber:		Hrs since last P.M.	
KW:			RPM:	
		2-	BRG	
		Review service procedures	for engines with rig pers	sonell.
Grease	and inspect for wear.			
🗌 Clean g	enerator and blow out if ne	ecessary.		
Check a		plings, Plug and Remove all ober, (1) 9H846 O-Ring, (3)		New Rubbers and O-Ring Yearly!!!, and Rubber Coupling,
		Com	ments:	

Rig:	122	Antifree	ze: 🗌 Red 🗌 Green	
		Freeze po	int:	
Date:	9/18/2014		lf antifra and is group to	ant the NA Cool layed
Engine Po	osition:		If antifreeze is green te	ist the NA-Cool level
Make:				
Model:			For 3512's: Radiator	
Serial Nur	mber:			
Asset Nur	nber:		Aftercooler	
Hours:				
Tighten	pan bolts on D-379	, 398, 399.		
Ensure	D-3508 and D-3512	individual gauge panels has been sil	cone to prevent water entry.	
Clean w	vater passages on w	ater cooled turbos (one time only).		
Run ove	erhead valvetrain.			
Grease	fan hub bearings an	d idler bearings.		
Inspect	and clean radiators	Note: Wash in oppisite direction of	air flow. (You should be able to s	see clearly through the radiators fins.)
Test sh	utdown system and	install new belts.		
Check a	and clean auxiliary o	l filter.		
Make su	ure crank case filters	are being serviced (on 3508,3512).		
	R	ecord belt #'s, radiator fan bre	g.,idler brg., shaft size, and	l pulley sizes.
Generator	position:		Torque converter	
Make:			Oiler chain	
Model:			Clutch size	
Asset Nur	nber:		Hrs since last P.M.	
KW:			RPM:	
			2-BRG	
		Review service procedu	res for engines with rig pe	rsonell.
Grease	and inspect for wea	r.		
🗌 Clean g	enerator and blow o	ut if necessary.		
Check a		Couplings, Plug and Remove 9 Rubber, (1) 9H846 O-Ring,		II New Rubbers and O-Ring Yearly!!!, ound Rubber Coupling,
		C	Comments:	

Rig:	122	Antifreeze:	Red Green	
		Freeze point:		
Date:	9/18/2014	_	lf antifra and in another too	the NA Cool level
Engine Po	osition:		If antifreeze is green tes	the NA-Cool level
Make:				
Model:			For 3512's: Radiator	
Serial Nur	mber:		-	
Asset Nur	nber:		Aftercooler	
Hours:				
Tighten	n pan bolts on D-379, 398, 3	399.		
Ensure	D-3508 and D-3512 individ	lual gauge panels has been silicone	to prevent water entry.	
Clean w	vater passages on water co	oled turbos (one time only).		
Run ov	erhead valvetrain.			
Grease	fan hub bearings and idler	r bearings.		
Inspect	and clean radiators. Note:	Wash in oppisite direction of air fle	ow. (You should be able to se	e clearly through the radiators fins.)
Test sh	utdown system and install	new belts.		
Check a	and clean auxiliary oil filter.			
Make s	ure crank case filters are be	eing serviced (on 3508,3512).		
r	Record	d belt #'s, radiator fan brg.,id	ler brg., shaft size, and	pulley sizes.
Generator	position:		Torque converter	
Make:			Oiler chain	
Model:			Clutch size	
Asset Nur	nber:		Hrs since last P.M.	
KW:			RPM:	
		2-	BRG	
		Review service procedures	for engines with rig pers	sonell.
Grease	and inspect for wear.			
🗌 Clean g	enerator and blow out if ne	ecessary.		
Check a		plings, Plug and Remove all ober, (1) 9H846 O-Ring, (3)		New Rubbers and O-Ring Yearly!!!, and Rubber Coupling,
		Com	ments:	

UNIT DRILLING RIG 122 GENERAL LAYOUT

Last Revision: 1/13/2015

