

Rotary Screw Air Compressor Maintenance Chart

Name

Alan Bural

My E-Mail

alan.bural@unitcorp.com

Rig #

103

Start Date

Tuesday, March 12, 2019

Completed Date

Tuesday, March 12, 2019

Oil Type

SH 46

Air Compressor

Cold Start

Change oil, all filters and take an oil sample every time you service the rig air compressors.

Air Dryer

Email the Following:

Mike Almond

David Baker

Caleb Carpenter

Nathan Arnett

Inspection Comments

Replaced #1 drive coupling.

Unplugged #2 drain valve

Ticket Status

Open

	#1 Compressor	#2 Compressor
Changed Oil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Changed Oil Filter	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Changed Air Filter	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Changed Seperator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pull and wash cooler core	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Added new oil sample valve		
Check and inspect drive couplings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Drain water from tank	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Open panel door and check to be secure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Check all signal lines (black plastic)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ensure it is clean and wash with solvent	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

	#1 Compressor	#2 Compressor
MODEL #:	50DG	50DG
SERIAL #:	03E013	03H014
ASSET #:	2-246	2-245
HOURS #:	48215	26964

	OLD	NEW
#1 Compressor Style	<input checked="" type="checkbox"/>	
#2 Compressor Style	<input checked="" type="checkbox"/>	



Engine Inspection Form

Rig #

103

Date Maintenance Started

Sunday, January 5, 2020

Date Maintenance Completed

Sunday, January 5, 2020

Name

Randy Reid

Total Hours:

12

Job Title

Engine mechanic

Fuel Tank Sample

Yes

Action Items

#1 fan bearing

#1 Engine Antifreeze

Red

#1 Engine Freeze Point

-30

Aftercooler?

Yes

Aftercooler Antifreeze

Red

#1 AC- Freeze Point

-30

#2 Engine Antifreeze

Red

#2 Engine Freeze Point

-30

Aftercooler?

Yes

#3 Engine Freeze Point

-30

#3 AC- Freeze Point

-30

Aftercooler Antifreeze

Red

#2 AC- Freeze Point

-30

#3 Engine Antifreeze

Red

Aftercooler?

Yes

Aftercooler Antifreeze

Red

Generator

Email the following:

Mike Almond

Frank Smith

Nathan Arnett

Caleb Carpenter

David Baker

Work Order Status

Opened

Exciter Air Gap

	Top	Bottom	Left Side.	Right Side
Gen. #1	.055	.045	.045	.045
Gen. #2	.055	.045	.050	.045
Gen. #3	.060	.038	.045	.055
Gen. #4				

	#1	#2	#3	#4
Grease and inspect for wear	✓	✓	✓	
Clean generator and blow out if necessary	✓	✓	✓	
Check and record exciter air gap	✓	✓	✓	

Generator Asset Information

	Model Number	Gen. Asset	KW.	1 or 2 Brg.	RPM
#1 Generator	A266710000	24-135	1204	2	1200
#2 Generator	A266710000	24-134	1204	2	1200
#3 Generator	A271090000	24-468	1204	2	1200
#4 Generator					
Top Drive					

Generator

	Kato	MTU	Cat	GE	Marathon	Spectrum	Magnamax	Baylor
#1 Generator	✓							
#2 Generator	✓							
#3 Generator	✓							
#4 Generator								
Top Drive								

Genset Engines

	#1 Gen set	#2 Gen set	#3 Gen set	#4 Gen set
Tighten pan bolts on D-379, D-398, D-399				
Ensure D-3508 & D-3512 individual gauge panels has been silicone to prevent water entry				
Clean water passages on water cooled turbos (one time only)				
Run overhead valve train	✓	✓	✓	
Grease fan hub bearings and idler bearings	✓	✓	✓	
Inspect and clean radiators. NOTE: Wash in opposite direction of air flow; (You should be able to see clearly through the radiators fins)	✓	✓	✓	
Test shutdown system	✓	✓	✓	
Installed new belts	✓			
Check & clean auxiliary oil filter	✓	✓	✓	
Make sure crank case filters and being serviced (On 3508, 3512)	✓	✓	✓	

Belt Information

	Belt Number	Radiator Fan Bearing	Idler Bearing	Pulley Size	Shaft Size: Idler Shaft	Shaft Size: Fan Shaft
Record Information	5vx1180	2 -2 3/16 big	1 15/16 blower		1 15/16×20	2 3/16×67

#3 AC- Extended Life

Pass	Test
Fail	

#3 Extended Life

Pass	Test
Fail	

Belt Information

	Belt Number	Radiator Fan Bearing	Idler Bearing	Pulley Size	Shaft Size: Idler Shaft	Shaft Size: Fan Shaft
Record Information	5vx1180	2 -2 3/16	1 15/16blower		1 15/16×20	2 3/16×67

#2 Extended Life

Pass	Test
Fail	

Belt Information

	Belt Number	Radiator Fan Bearing	Idler Bearing	Pulley Size	Shaft Size: Idler Shaft	Shaft Size: Fan Shaft
Record Information	5vx1180	2 3/16 big	1 15/16 blower		1 15/16×20	2 3/16×67

#1 AC- Extended Life

Pass	Test
Fail	

#1 Extended Life

Pass	Test
Fail	

Genset Asset Information

	Asset #	Serial #	Hours	Manufacture	Model
#1 Engine	22-713	4aw	29944	Cat	3512b
#2 Engine	22 -712	4aw	30691	Cat	3512b
#3 Engine	22-711	4aw	29488	Cat	3512b
#4 Engine					

Monday, January 6, 2020

Pump Inspection Form

Rig #

103

Date Maintenance Started

Tuesday, December 31, 2019

Date Maintenance Completed

Thursday, January 9, 2020

Name

cory calvillo

Job Title

mechanic

My E-mail

cory.calvillo@unitcorp.com

Check all that apply:

Robert Lovett

From:

Shop

To:

Home

Pump Asset Info.

	Pump #1	Pump #2	Pump #3
Asset #	38-365	38-349	
Make			
Model	1600	1600	

1 Pump GENERAL INSPECTION CHECKLIST

	Inspect
Check all Oil Lines	✓
Check all tied Bolts	✓
Drain & Check Cleanouts	✓
Check & Clean, gear end with diesel if needed	✓
Pony Rod Alignment	
Check Pony Rods for Cracks & Wear (Replace if necessary)	✓
Check Piston Rods for Cracks & Wear (Replace if necessary)	✓
Check Clamps for Wear (Replace if necessary)	✓
Check all bearings with mirror for Pitting & Flaking	✓
Check all oil pump screen	✓
Check pillow block bearings on independent pump	
On inspection replace pony rod seals (Regardless if the 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)	✓

1 Pump "Continental Emsco" Checklist

	Inspect
Oil pressure and guage	✓
Check pony rod wiper if equipped, if not equipped with wiper, get parts to correct.	✓
Check to see if baffle plates are doweled in pump.	✓

1 Pump Recommended Running Clearances

	Reading
Crosshead to slide - Left - Min .030 Max .045	.031
Crosshead to slide - Center - Min .030 Max .045	.029
Crosshead to slide - Right - Min .030 Max .045	.034
Main Bearing - Left - Min .005 Max .020	.012
Main Bearing - Right - Min .005 Max .020	.010
Pinion Shaft Bearing - Left - Min .002 Max .015	.009
Pinion Shaft Bearing - Right - Min .002 Max .015	.008
Crosshead Pin Bearing - Left - Min .002 Max .005	.002
Crosshead Pin Bearing - Center - Min .002 Max .005	.003
Crosshead Pin Bearing - Right - Min .002 Max .005	.003
Connecting Rod to Eccentric Bearing - Left - Min .002 Max .020	.005
Connecting Rod to Eccentric Bearing - Center - Min .002 Max .020	.007
Connecting Rod to Eccentric Bearing - Right - Min .002 Max .020	.004
Oil Pump Pinion Shaft to Main Gear, Backlash - Left - Min .010 Max .025	.020
Pinion Shaft to Main Gear, Backlash - Right - Min .010 Max .050	.027
Bull Gear Wear - Findings	normal
Pinion Gear Wear - Findings	normal
Pinion Gear Wear - Findings	
Discharge Dampner Charge Pressure - PSI Reading	1000
Suction Dampner Charge Pressure - PSI Reading	51

#2 Pump GENERAL INSPECTION CHECKLIST

	Inspect
Check all Oil Lines	✓
Check all tied Bolts	✓
Drain & Check Cleanouts	✓
Check & Clean, gear end with diesel if needed	✓
Pony Rod Alignment	
Check Pony Rods for Cracks & Wear (Replace if necessary)	✓
Check Piston Rods for Cracks & Wear (Replace if necessary)	✓
Check Clamps for Wear (Replace if necessary)	✓
Check all bearings with mirror for Pitting & Flaking	✓
Check all oil pump screen	✓
Check pillow block bearings on independent pump	
On inspection replace pony rod seals (Regardless if the 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)	✓

2 Pump Recommended Running Clearances

	Reading
Crosshead to slide - Left - Min .030 Max .045	.032
Crosshead to slide - Center - Min .030 Max .045	.026
Crosshead to slide - Right - Min .030 Max .045	.030
Main Bearing - Left - Min .005 Max .020	.010
Main Bearing - Right - Min .005 Max .020	.009
Pinion Shaft Bearing - Left - Min .002 Max .015	.009
Pinion Shaft Bearing - Right - Min .002 Max .015	.009
Crosshead Pin Bearing - Left - Min .002 Max .005	.003
Crosshead Pin Bearing - Center - Min .002 Max .005	.003
Crosshead Pin Bearing - Right - Min .002 Max .005	.003
Connecting Rod to Eccentric Bearing - Left - Min .002 Max .020	.006
Connecting Rod to Eccentric Bearing - Center - Min .002 Max .020	.005
Connecting Rod to Eccentric Bearing - Right - Min .002 Max .020	.007
Oil Pump Pinion Shaft to Main Gear, Backlash - Left - Min .010 Max .025	.021
Pinion Shaft to Main Gear, Backlash - Right - Min .010 Max .050	.026
Bull Gear Wear - Findings	normal
Pinion Gear Wear - Findings	normal
Pinion Gear Wear - Findings	
Discharge Dampner Charge Pressure - PSI Reading	1000
Suction Dampner Charge Pressure - PSI Reading	47

2 Pump "Continental Emsco" Checklist

	Inspect
Oil pressure and guage	✓
Check pony rod wiper if equipped, if not equipped with wiper, get parts to correct.	✓
Check to see if baffle plates are doweled in pump.	✓

Email the Following

Mike Almond

Frank Smith

Ticket Status

Open

Rig Inspection Form

Rig #

103

Date Maintenance Started

Tuesday, December 31, 2019

Date Maintenance Completed

Thursday, January 2, 2020

Name

Robert Lovett

My E-mail

robert.lovett@unitcorp.com

Additional Technicians?

Yes

Additional Name of Technicians (Check all that apply)

Cory Calvillo

Air Hoist:

	Inspect
Check oil in air motor.	✓
Check grease in gear case.	✓
Grease throttle valve.	✓
Check brake system for wear.	✓
Check cable for fraying.	✓

Block Asset

	Asset #	Action Items:
Block 5--	117	

	Asset #	Action Items:
Block 67-		

Block Inspection

	Inspect
Check grooves for wear	✓
Check for Smoothness of Roll	✓
Check for Play in Bearings	✓
Ensure bolts are in place	✓
Grease all Zerks	✓

Disc Size	Qty of VC Discs	X _{new}	X _{min} (4Q _{min} /π)	Y _{new}	Y _{min}	Z _{new}	Z _{min}
38	1	0.12	0.54	2.75	2.31	—	—
	2	0.24	0.66	2.75	2.31	—	—
	3	0.36	0.78	2.75	2.31	2.75	2.31
	4	0.48	0.90	2.75	2.31	2.75	2.31

Hydromatic Brakes Comment:

Does not apply

Drawworks Drum Shaft Asset

	Asset #	Action Items:
Asset # 15-	76	

Eaton Brakes Inspection

	Inspect
Grease all Zerks.	✓
Inspect bearing clearance.	✓
Check gap between reaction plates. Record below	✓
Record quantity of discs	✓
Check Eaton brake temp gauges	✓
Function brakes Auto Safety System	✓
Follow Eaton & Hydraulic Weekly Check Sheet	✓
Test with 25 psi of air pressure	✓

Electric Brakes Comment:

Does not apply

Dry Cooler Inspection

	Inspect
Flush Dry Cooler	
Clean strainer	✓
Check water pressure	

Reaction Plate readings

	Readings:
X gap	.520
Y gap	
Z gap	
Number of discs	3
Drillers Console	115
At the brake.	115

Drawworks Drum Shaft Inspection

	Inspect
Grease all zerks.	✓
Change all filters	✓
Clean screens	✓
Inspect oil lines.	✓
Check oil level	✓
Check oil quality	✓
Clean pickup screens	✓
Inspect clutches for wear	✓
Inspect clutches for air pressure	✓
Inspect tight member teeth for wear and grease.	✓

Brake Linkage Asset

	Asset #	Action Items:
Asset # 15-	76	

Drawworks Readings

	Jack Bearing Readings:
DS	.006
ODS	.008
Other	H.D .011
Other	L.D .009
Other	

Brake Linkage Inspection

	Inspect
Grease all zerks.	
Ensure linkage is tight.	✓
Inspect break bands for cracks and wear.	✓
Check brake block bolts and ensure bolts are tight.	✓

	Inspect
Check brake block thickness, record thinnest.	✓

Brake Linkage Readings

	Readings:
DS	7/8
ODS	7/8
Brake block thinnest reading	13/16

Input Asset

	Asset #	Action Items:
Asset # 15-	76	

Input Inspection

	Inspect
Inspect for leaking seals.	✓

Input Readings

	Jack Bearing Readings:
DS	.005
ODS	.003
Other	
Other	
Other	

Output Inspection

	Inspect
Grease all zerks.	✓
Inspect oil system.	✓

Output Readings

	Jack Bearing Readings:
DS	.004

	Jack Bearing Readings:
ODS	.007
Other	H .008
Other	L .009
Other	

Rotary Counter Shaft:

	Inspect
Grease all zerks.	✓
Inspect oil system.	✓

Rotary Counter Shaft Readings

	Jack Bearing Readings:
DS	.005
ODS	.005
Other	B .009
Other	
Other	

Cat Shaft Asset

	Asset #	Action Items:
Asset # MU 68-	150	
Asset # BO 68-		

Cat Shaft Inspection

	Inspect
Grease all zerks.	✓
Inspect oil system.	✓
Grease cathead with 4 shots of grease.	✓

Cat Shaft Readings

	Jack Bearing Readings:
DS	.007

	Jack Bearing Readings:
ODS	.006
Other	
Other	
Other	

Mud Pumps Asset

	Asset #	Action Items:
Asset # 1 38-	365	
Asset # 2 38-	349	
Asset # 3 38-		

Mud Pumps Inspection

	Inspect
Fill out pump inspection report.	✓
Check piston rods and replace if worn.	✓
Check rod clamps and replace if worn.	✓

Independent Pump Drive #1 Comments

Does no apply

Pipe Spinners Asset

	Asset #	Action Items:
Asset # 41-	120	

Over running clutch Comment:

Does not apply

Pipe Spinners Inspect:

	Inspect
Ensure spinner is hung level with drill pipe.	
Inspect drive chain and rollers for wear. (Clean if needed)	✓
Grease all zerks.	✓
Check hanger springs.	✓

Rotary Table Inspect:

	Inspect
Pull top off and wash mud out of table.	
Inspect through bore.	✓
Record main bearing play.	✓
Record pinion bearing play.	✓
Record backlash play in gears.	✓
Check quality of oil.	✓

Rotary Table Readings

	Readings:
Main Bearing play	.005
Pinion Bearing play	.020
Backlash play in gears	.025

Swivel Asset

	Asset #	Action Items:
Asset # 50-	174	

Swivel Inspect:

	Inspect
Clean mud accumulation around top seals and install mud guard.	✓
Roll check swivel for smoothness of roll.	✓
Record endplay readings. Radial out.	✓
Check quality of oil.	✓

Swivel Readings

	Readings:
Record endplay reading	.004

Crown Asset

	Asset #	Action Items:
Asset # 10-	103	

Crown Inspect:

	Inspect
Inspect grooves for wear.	✓
Check for play in bearings.	✓
Check for smoothness of roll.	✓
Grease all zerks.	✓

Email the following:

Mike Almond

Frank Smith

Nathan Arnett

Ticket Status

Open