

ROTARY SCREW AIR COMPRESSOR MAINTENANCE CHART

Last Updated: SEPTEMBER 05, 2013

| | | | |
|--|---|-------------------|---|
| Rig # | 325 | Oil Type | Corena AS46 <input type="checkbox"/> Palasyn 45 |
| MODEL # | 50DGH-TE | SERIAL # | 10G033 |
| ASSET # | | DATE | 2-1206 |
| HRS | 25,492 | W/O # | 57176 |
| COMPANY | UNIT TEXAS DRILLING | TECHNICIAN | Bill Anderson & Guy Phillips |
| DESCRIPTION OF WORK AND PARTS USED | | | |
| <input checked="" type="checkbox"/> Completed | CHANGED OIL | | |
| <input checked="" type="checkbox"/> Completed | CHANGED OIL FILTER | | |
| <input checked="" type="checkbox"/> Completed | CHANGED AIR FILTER | | |
| <input checked="" type="checkbox"/> Completed | CHANGED SEPERATOR | | |
| <input checked="" type="checkbox"/> Completed | CLEANED RADIATOR | | |
| <input type="checkbox"/> Completed | ADDED NEW OIL SAMPLE VALVE | | |
| <input checked="" type="checkbox"/> Completed | CHECK AND INSPECT DRIVE COUPLINGS | | |
| <input checked="" type="checkbox"/> Completed | DRAIN WATER FROM TANK | | |
| <input checked="" type="checkbox"/> Completed | OPEN PANEL DOOR AND CHECK TO BE SECURE | | |
| <input checked="" type="checkbox"/> Completed | CHECK ALL SIGNAL LINES (BLACK PLASTIC) | | |
| <input checked="" type="checkbox"/> Completed | ENSURE IT IS CLEAN AND WASH WITH SOLVENT | | |
| PALATEK COLD START | | | |
| <input type="checkbox"/> Completed | CHANGE ENGINE OIL, FILTER, AIR FILTER, FUEL FILTER AND TAKE AN OIL SAMPLE EVERY TIME YOU SERVICE THE RIG AIR COMPRESSORS. | | |
| <input type="checkbox"/> Completed | YEARLY SERVICE THE AIR END OF THE COMPRESSOR (OIL AND ALL FILTERS)- MARK THE DATE ON THE FILTER. | | |
| | | | |
| | | | |
| PALATEK AIR DRYER | | | |
| <input type="checkbox"/> Completed | CHANGED INLET AND OUTLET FILTER TO DRYER. USE ONLY PALATEK FILTERS. | | |
| of equipment Rebuild inlet valve, clean unit. Order air filter housing, tighten control pane | | | |

ROTARY SCREW AIR COMPRESSOR MAINTENANCE CHART

Last Updated: SEPTEMBER 05, 2013

| | | | |
|---|---|-------------------|--|
| Rig # | 325 | Oil Type | Corena AS 46 <input type="checkbox"/> Palasyn 45 |
| MODEL # | 50DGH-TE | SERIAL # | 10G034 |
| ASSET # | | DATE | 2-1207 |
| HRS | 25,534 | W/O # | 57176 |
| COMPANY | UNIT TEXAS DRILLING | TECHNICIAN | Bill Anderson & Guy Phillips |
| DESCRIPTION OF WORK AND PARTS USED | | | |
| <input checked="" type="checkbox"/> Completed | CHANGED OIL | | |
| <input checked="" type="checkbox"/> Completed | CHANGED OIL FILTER | | |
| <input checked="" type="checkbox"/> Completed | CHANGED AIR FILTER | | |
| <input checked="" type="checkbox"/> Completed | CHANGED SEPERATOR | | |
| <input checked="" type="checkbox"/> Completed | CLEANED RADIATOR | | |
| <input type="checkbox"/> Completed | ADDED NEW OIL SAMPLE VALVE | | |
| <input checked="" type="checkbox"/> Completed | CHECK AND INSPECT DRIVE COUPLINGS | | |
| <input checked="" type="checkbox"/> Completed | DRAIN WATER FROM TANK | | |
| <input checked="" type="checkbox"/> Completed | OPEN PANEL DOOR AND CHECK TO BE SECURE | | |
| <input checked="" type="checkbox"/> Completed | CHECK ALL SIGNAL LINES (BLACK PLASTIC) | | |
| <input checked="" type="checkbox"/> Completed | ENSURE IT IS CLEAN AND WASH WITH SOLVENT | | |
| PALATEK COLD START | | | |
| <input type="checkbox"/> Completed | CHANGE ENGINE OIL, FILTER, AIR FILTER, FUEL FILTER AND TAKE AN OIL SAMPLE EVERY TIME YOU SERVICE THE RIG AIR COMPRESSORS. | | |
| <input type="checkbox"/> Completed | YEARLY SERVICE THE AIR END OF THE COMPRESSOR (OIL AND ALL FILTERS)- MARK THE DATE ON THE FILTER. | | |
| | | | |
| | | | |
| PALATEK AIR DRYER | | | |
| <input type="checkbox"/> Completed | CHANGED INLET AND OUTLET FILTER TO DRYER. USE ONLY PALATEK FILTERS. | | |
| Tighten upper skid to tank, replace missing bolts in cooler, clean unit, replace pressure | | | |



ENGINE INSPECTION FORM

Last Updated: 08/27/2014

Rig: 325

Work Order Number: 57176

Date Maintenance Started: 12/10/2017

Date Completed: 12/12/2017

Name: Bill Anderson Guy Phillips

Job Title: Eng. Mechanic

Travel Time to Rig: 11

From: HOME
 SHOP

Travel Time from Rig: 11

To: HOME
 SHOP

Hours at Rig: 30

Total Hours: 52

ASSET NUMBERS

| G E N E R A T O R | #1 Engine 22- <u>1542</u> S/N# <u>JBD00132</u> | #2 Engine 22- <u>1543</u> S/N# <u>JDB00133</u> | #3 Engine 22- <u>1540</u> S/N# <u>JDB00130</u> | | | | | | |
|---|--|---|---|----------------------------------|--------------|--------------|--------------|------------|-------|
| | #1 Gen. 24- <u>1025</u> Model: <u>1200SR9F</u> | #2 Gen. 24- <u>1023</u> Model: <u>1200SR9F</u> | #3 Gen. 24- <u>1024</u> Model: <u>1200SR9F</u> | | | | | | |
| | #4 Engine 22- _____ S/N# _____ | <table border="1" style="width: 100%;"> <tr><th colspan="2">Top Drive</th></tr> <tr><td>22- _____</td><td>94- _____</td></tr> <tr><td>S/N# _____</td><td>_____</td></tr> </table> | | Top Drive | | 22- _____ | 94- _____ | S/N# _____ | _____ |
| | Top Drive | | | | | | | | |
| 22- _____ | 94- _____ | | | | | | | | |
| S/N# _____ | _____ | | | | | | | | |
| #4 Gen. 24- _____ Model: _____ | <table border="1" style="width: 100%;"> <tr><th colspan="2">Torque Converter</th></tr> <tr><td>#1 91- _____</td><td>#2 91- _____</td></tr> <tr><td>#3 91- _____</td><td>_____</td></tr> </table> | | Torque Converter | | #1 91- _____ | #2 91- _____ | #3 91- _____ | _____ | |
| Torque Converter | | | | | | | | | |
| #1 91- _____ | #2 91- _____ | | | | | | | | |
| #3 91- _____ | _____ | | | | | | | | |
| P U M P | #1 Pump 22- _____ S/N# _____ | #2 Pump 22- _____ S/N# _____ | #3 Pump 22- _____ S/N# _____ | | | | | | |
| | F L O O R | #1 Floor 22- _____ S/N# _____ | #2 Floor 22- _____ S/N# _____ | #3 Floor 22- _____ S/N# _____ | | | | | |

Action Items

Scheduled Engine Inspection

Work Order No: 57176

Rig: 325
Date: 12/12/2017

Engine Position: #1 ENGINE

Make: Cat
 Detroit
 Waukesha
 Other C32

Antifreeze

Green Red
Freeze Point: _____

Test NA-Cool (Green Only)
_____ FAILED _____

Model: _____

S/N: JBD00132

Asset: 22- 1542

Hours: 5359

For 3512's: Freeze Pt. NA-Cool
Radiator _____
Aftercooler _____

Record the following information:
Belt Number: (4) 6N0073
Radiator Fan Bearing: CAT FAN DRIVE
Idler Bearing: NA
Pulley Size: _____
Shaft Size: _____
Idler Shaft _____ Fan Shaft _____

- Tighten pan bolts on D-379, 398, 399
- Ensure D-3508 and 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 oppisite direction of air flow; (You shoud be able to see clearly through the radiators fins).**
- Test shutdown system and install new belts.
- Check and clean auxiliary oil filter.
- Make sure crank case filters are being serviced (on 3508, 3512).

Model: Marathon MTU Magnamax
 Kato Baylor GE
 Spectrum Cat Other: _____

Generator Position: #1 GEN

Model: 1200SR9F

Asset: 24- 1025

KW 1-bearing
 2-bearing

Torque Converter 91-

Oiler Chain _____

Clutch Size _____

- Grease and inspect for wear.
- Clean generator and blow out if necessary.
- Check and record exciter air gap.

Exciter Air Gap:
TOP: 0.027 BOTTOM: 0.032
LEFT SIDE: 0.033 RIGHT SIDE: 0.027

COMMENTS / ACTION ITEMS:

Wash radiator and have welder repair fan guards, replace coolant
Install new heat wraps on exhaust

Rig: 325
Date: 12/12/2017

Engine Position: #2 ENGINE

Make: Cat
 Detroit
 Waukesha
 Other C32

Antifreeze

Green Red
Freeze Point: -25

Test NA-Cool (Green Only)
FAILED

Model: _____

S/N: JDB00133

Asset: 22- 1543

Hours: 5256

For 3512's: Freeze Pt. NA-Cool
Radiator _____
Aftercooler _____

Record the following information:

Belt Number: (4) 6N0073

Radiator Fan Bearing: Cat fan drive

Idler Bearing: _____

Pulley Size: _____

Shaft Size: _____
Idler Shaft Fan Shaft

- Tighten pan bolts on D-379, 398, 399
- Ensure D-3508 and 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 oppisite direction of air flow; (You shoud be able to see clearly through the radiators fins).**
- Test shutdown system and install new belts.
- Check and clean auxiliary oil filter.
- Make sure crank case filters are being serviced (on 3508, 3512).

Model: Marathon MTU Magnamax
 Kato Baylor GE
 Spectrum Cat Other: _____

Generator Position: #2 GEN

Model: 1200SR9F

Asset: 24- 1023

KW 1-bearing
 2-bearing

Torque Converter 91-

Grease and inspect for wear.
 Clean generator and blow out if necessary.
 Check and record exciter air gap.

Exciter Air Gap:
TOP: 0.033 BOTTOM: 0.032
LEFT SIDE: 0.027 RIGHT SIDE: 0.029

Oiler Chain _____

Clutch Size _____

COMMENTS / ACTION ITEMS:

Wash radiator, have welder repair fan guards, replace coolant. Replace fan drive with spare and rebuild old after picking up parts.

Install new heat wraps on exhaust

Rig: 325
Date: 12/12/2017

Engine Position: #3 ENGINE

Make: Cat
 Detroit
 Waukesha
 Other C32

Antifreeze

Green Red
Freeze Point: -25

Test NA-Cool (Green Only)
FAILED

Model: _____

S/N: JDB00130

Asset: 22- 1540

Hours: 4799

For 3512's: Freeze Pt. NA-Cool
Radiator _____
Aftercooler _____

Record the following information:

Belt Number: (4) 6N0073

Radiator Fan Bearing: CAT FAN DRIVE

Idler Bearing: NA

Pulley Size: _____

Shaft Size: _____
Idler Shaft Fan Shaft

- Tighten pan bolts on D-379, 398, 399
- Ensure D-3508 and 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 oppisite direction of air flow; (You shoud be able to see clearly through the radiators fins).**
- Test shutdown system and install new belts.
- Check and clean auxiliary oil filter.
- Make sure crank case filters are being serviced (on 3508, 3512).

Model: Marathon MTU Magnamax
 Kato Baylor GE
 Spectrum Cat Other: _____

Generator Position: #3 GEN

Model: 1200SR9F

Asset: 24- 1024

KW 1-bearing
 2-bearing

Torque Converter 91-

RPM 1800

- Grease and inspect for wear.
- Clean generator and blow out if necessary.
- Check and record exciter air gap.

Exciter Air Gap:
TOP: 0.038 BOTTOM: 0.022
LEFT SIDE: 0.03 RIGHT SIDE: 0.029

COMMENTS / ACTION ITEMS:

Oiler Chain _____
Clutch Size _____

Wash radiator, have welder repair fan guards, replace coolant
Install new heat wraps on exhaust

Rig: 325
Date: 12/12/2017

Engine Position: #4 ENGINE

Make: Cat
 Detroit
 Waukesha
 Other _____

Antifreeze

Green Red
Freeze Point: _____

Test NA-Cool (Green Only)

For 3512's: Freeze Pt. NA-Cool

Radiator _____

Aftercooler _____

Model: _____

S/N: _____

Asset: 22- _____

Hours: _____

Record the following information:

Belt Number: _____

Radiator Fan Bearing: _____

Idler Bearing: _____

Pulley Size: _____

Shaft Size: _____

Idler Shaft

Fan Shaft

- Tighten pan bolts on D-379, 398, 399
- Ensure D-3508 and 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 oppisite direction of air flow; (You shoud be able to see clearly through the radiators fins).**
- Test shutdown system and install new belts.
- Check and clean auxiliary oil filter.
- Make sure crank case filters are being serviced (on 3508, 3512).

Model: Marathon MTU Magnamax
 Kato Baylor GE
 Spectrum Cat Other: _____

Model: _____

Asset: 24- _____

1-bearing

2-bearing

KW _____ RPM _____

Torque _____

Converter 91- _____

Oiler Chain _____

Clutch Size _____

Generator Position: #4 GEN

- Grease and inspect for wear.
- Clean generator and blow out if necessary.
- Check and record exciter air gap.

Exciter Air Gap:

TOP: _____ BOTTOM: _____

LEFT SIDE: _____ RIGHT SIDE: _____

COMMENTS / ACTION ITEMS:

Rig: 325
Date: 12/12/2017

Engine Position: TOP DRIVE

Make: Cat
 Detroit
 Waukesha
 Other _____

Antifreeze

Green Red
Freeze Point: _____

Test NA-Cool (Green Only)

For 3512's: Freeze Pt. NA-Cool

Radiator _____

Aftercooler _____

Model: _____

S/N: _____

Asset: 22- _____

Hours: _____

Record the following information:

Belt Number: _____

Radiator Fan Bearing: _____

Idler Bearing: _____

Pulley Size: _____

Shaft Size: _____

Idler Shaft

Fan Shaft

- Tighten pan bolts on D-379, 398, 399
- Ensure D-3508 and 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 oppisite direction of air flow; (You shoud be able to see clearly through the radiators fins).*
- Test shutdown system and install new belts.
- Check and clean auxiliary oil filter.
- Make sure crank case filters are being serviced (on 3508, 3512).

Model: Marathon MTU Magnamax
 Kato Baylor GE
 Spectrum Cat Other: _____

Generator Position: TOP DRIVE

Model: _____

Asset: 24- _____

1-bearing

2-bearing

KW _____ RPM _____

Torque _____

Converter 91- _____

- Grease and inspect for wear.
- Clean generator and blow out if necessary.
- Check and record exciter air gap.

Exciter Air Gap:

TOP: _____ BOTTOM: _____

LEFT SIDE: _____ RIGHT SIDE: _____

Oiler Chain _____

Clutch Size _____

COMMENTS / ACTION ITEMS:

Rig: 325
Date: 12/12/2017

Engine Position: #1 PUMP

Make: Cat
 Detroit
 Waukesha
 Other _____

Antifreeze

Green Red
Freeze Point: _____

Test NA-Cool (Green Only)

For 3512's: Freeze Pt. NA-Cool

Radiator _____

Aftercooler _____

Model: _____

S/N: _____

Asset: 22-

Hours: _____

Record the following information:

Belt Number: _____

Radiator Fan Bearing: _____

Idler Bearing: _____

Pulley Size: _____

Shaft Size: _____

_____ Idler Shaft _____ Fan Shaft

- Tighten pan bolts on D-379, 398, 399
- Ensure D-3508 and 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 oppisite direction of air flow; (You shoud be able to see clearly through the radiators fins).**
- Test shutdown system and install new belts.
- Check and clean auxiliary oil filter.
- Make sure crank case filters are being serviced (on 3508, 3512).

Model: Marathon MTU Magnamax
 Kato Baylor GE
 Spectrum Cat Other: _____

Model: _____

Asset: 24-

1-bearing

KW _____ 2-bearing RPM _____

Torque _____

Converter 91-

Oiler Chain _____

Clutch Size _____

- Grease and inspect for wear.
- Clean generator and blow out if necessary.
- Check and record exciter air gap.

Exciter Air Gap:

TOP: _____ BOTTOM: _____

LEFT SIDE: _____ RIGHT SIDE: _____

COMMENTS / ACTION ITEMS:

Generator Position: #1 PUMP

Rig: 325
Date: 12/12/2017

Engine Position: #2 PUMP

Make: Cat
 Detroit
 Waukesha
 Other _____

Antifreeze

Green Red
Freeze Point: _____

Test NA-Cool (Green Only)

For 3512's: Freeze Pt. NA-Cool

Radiator _____

Aftercooler _____

Model: _____

S/N: _____

Asset: 22- _____

Hours: _____

Record the following information:

Belt Number: _____

Radiator Fan Bearing: _____

Idler Bearing: _____

Pulley Size: _____

Shaft Size: _____

Idler Shaft

Fan Shaft

- Tighten pan bolts on D-379, 398, 399
- Ensure D-3508 and 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 oppisite direction of air flow; (You shoud be able to see clearly through the radiators fins).*
- Test shutdown system and install new belts.
- Check and clean auxiliary oil filter.
- Make sure crank case filters are being serviced (on 3508, 3512).

Model: Marathon MTU Magnamax
 Kato Baylor GE
 Spectrum Cat Other: _____

Generator Position: #2 PUMP

Model: _____

Asset: 24- _____

1-bearing

2-bearing

KW _____ RPM _____

Torque _____

Converter 91- _____

- Grease and inspect for wear.
- Clean generator and blow out if necessary.
- Check and record exciter air gap.

Exciter Air Gap:

TOP: _____ BOTTOM: _____

LEFT SIDE: _____ RIGHT SIDE: _____

Oiler Chain _____

Clutch Size _____

COMMENTS / ACTION ITEMS:

Rig: 325
Date: 12/12/2017

Engine Position: #1 FLOOR

Make: Cat
 Detroit
 Waukesha
 Other _____

Antifreeze

Green Red
Freeze Point: _____

Test NA-Cool (Green Only)

For 3512's: Freeze Pt. NA-Cool

Radiator _____

Aftercooler _____

Model: _____

S/N: _____

Asset: 22- _____

Hours: _____

Record the following information:

Belt Number: _____

Radiator Fan Bearing: _____

Idler Bearing: _____

Pulley Size: _____

Shaft Size: _____

Idler Shaft

Fan Shaft

- Tighten pan bolts on D-379, 398, 399
- Ensure D-3508 and 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 oppisite direction of air flow; (You shoud be able to see clearly through the radiators fins).*
- Test shutdown system and install new belts.
- Check and clean auxiliary oil filter.
- Make sure crank case filters are being serviced (on 3508, 3512).

Model: Marathon MTU Magnamax
 Kato Baylor GE
 Spectrum Cat Other: _____

Generator Position: #1 FLOOR

Model: _____

Asset: 24- _____

1-bearing

2-bearing

KW _____ RPM _____

Torque _____

Converter 91- _____

Oiler Chain _____

Clutch Size _____

- Grease and inspect for wear.
- Clean generator and blow out if necessary.
- Check and record exciter air gap.

Exciter Air Gap:

TOP: _____ BOTTOM: _____

LEFT SIDE: _____ RIGHT SIDE: _____

COMMENTS / ACTION ITEMS:

Rig: 325
Date: 12/12/2017

Engine Position: #2 FLOOR

Make: Cat
 Detroit
 Waukesha
 Other _____

Antifreeze

Green Red
Freeze Point: _____

Test NA-Cool (Green Only)

For 3512's: Freeze Pt. NA-Cool

Radiator _____

Aftercooler _____

Model: _____

S/N: _____

Asset: 22- _____

Hours: _____

Record the following information:

Belt Number: _____

Radiator Fan Bearing: _____

Idler Bearing: _____

Pulley Size: _____

Shaft Size: _____

Idler Shaft

Fan Shaft

- Tighten pan bolts on D-379, 398, 399
- Ensure D-3508 and 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 oppisite direction of air flow; (You shoud be able to see clearly through the radiators fins).**
- Test shutdown system and install new belts.
- Check and clean auxiliary oil filter.
- Make sure crank case filters are being serviced (on 3508, 3512).

Model: Marathon MTU Magnamax
 Kato Baylor GE
 Spectrum Cat Other: _____

Generator Position: #2 FLOOR

Model: _____

Asset: 24- _____

1-bearing

2-bearing

KW _____ RPM _____

Torque _____

Converter 91- _____

- Grease and inspect for wear.
- Clean generator and blow out if necessary.
- Check and record exciter air gap.

Exciter Air Gap:

TOP: _____ BOTTOM: _____

LEFT SIDE: _____ RIGHT SIDE: _____

Oiler Chain _____

Clutch Size _____

COMMENTS / ACTION ITEMS:

| | | | | | |
|--|-------------------------------------|--|--------------------------|--|--|
| Company/Division: | | Asset # 38-307 | | | |
| Rig: | | 325 | | | |
| Pump#:2 | | | | | |
| Field Inspection Report - | | Make: national | Model: 12p | | |
| Recommended Running Clearances | | Inches | | | |
| | | Min. | Max. | Actual | General |
| Crosshead to slide - Left | | .020 | .045 | 0.020 | Check all oil lines <input checked="" type="checkbox"/> |
| Crosshead to slide - Center | | .020 | .040 | 0.019 | Check all tied Bolts <input checked="" type="checkbox"/> |
| Crosshead to slide - Right | | .020 | .045 | 0.024 | Drain & check Cleanouts <input checked="" type="checkbox"/> |
| Main Bearing - Left | | .005 | .020 | 0.005 | Check and clean, gear end with diesel if needed <input type="checkbox"/> |
| Main Bearing - Right | | .005 | .020 | 0.004 | |
| Pinion Shaft Bearing - Left | | .002 | .015 | 0.006 | Pony Rod Alignment <input checked="" type="checkbox"/> |
| Pinion Shaft Bearing - Right | | .002 | .015 | 0.005 | Check pony rods for cracks and wear (replace if necessary) <input checked="" type="checkbox"/> |
| Crosshead Pin Bearing - Left | | .002 | .005 | 0.002 | |
| Crosshead Pin Bearing - Center | | .002 | .005 | 0.002 | Check piston rods for cracks and wear (replace if necessary) <input checked="" type="checkbox"/> |
| Crosshead Pin Bearing - Right | | .002 | .005 | 0.003 | |
| Connecting Rod to Eccentric Bearing - LH | | .002 | .020 | 0.005 | Check clamps for wear (replace if necessary) <input checked="" type="checkbox"/> |
| Connecting Rod to Eccentric Bearing - CTN | | .002 | .020 | 0.008 | |
| Connecting Rod to Eccentric Bearing - RH | | .002 | .020 | 0.007 | Check all bearings w/ mirror for pitting and flaking <input checked="" type="checkbox"/> |
| Oil Pump Pinion to Main Gear - Backlash | | .010 | .025 | | Check all oil pump screens <input type="checkbox"/> |
| Pinion Shaft to Main Gear - Backlash | | .010 | .050 | 0.029 | |
| Bull Gear Wear | | | | | Check pillow block bearings on independent pump <input type="checkbox"/> |
| Pinion Gear Wear | | | | | |
| Extension Rods | | | | | 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) <input checked="" type="checkbox"/> |
| Comments: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| National | | Gardner Denver | | Continental Emsco | |
| Check troughs | <input checked="" type="checkbox"/> | Oil pressure and Gauge | <input type="checkbox"/> | Oil pressure and Gauge | <input type="checkbox"/> |
| Check crosshead's for cracks at pony rod clamp | <input checked="" type="checkbox"/> | Oil Filter | <input type="checkbox"/> | Check pony rod wiper if equipped if not equipped with wipers get parts to correct <input type="checkbox"/> | <input type="checkbox"/> |
| | | Oil spray bar for crossheads | <input type="checkbox"/> | | |
| Check pony rod clamp on bolts on crosshead's | <input checked="" type="checkbox"/> | Check to see if correct pony rods are installed by gauging distance between it and oil stop plate. | <input type="checkbox"/> | Check to see if baffle plates are doweled in pump <input type="checkbox"/> | <input type="checkbox"/> |
| Loosen pony rod clamp bolts and tighten pony rod then retorque bolts | <input checked="" type="checkbox"/> | | | | |
| | | Oil pump Screen | <input type="checkbox"/> | | |
| | | If new floaters are not there get parts to install floating seals | <input type="checkbox"/> | | |

[Action Items:](#)

Individual Pump Inspections

| | |
|-------------------|---------|
| Company/Division: | Asset # |
|-------------------|---------|

| | | | | | |
|---|--------------------------|---|--------------------------|--|--------------------------|
| Rig: | 325 | | | | |
| Pump#:3 | | | | | |
| Field Inspection Report - | Make: | Model: | | | |
| Recommended Running Clearances | Inches | | | | |
| | Min. | Max. | Actual | General | |
| Crosshead to slide - Left | .020 | .045 | | Check all oil lines | <input type="checkbox"/> |
| Crosshead to slide - Center | .020 | .040 | | Check all tied Bolts | <input type="checkbox"/> |
| Crosshead to slide - Right | .020 | .045 | | Drain & check Cleanouts | <input type="checkbox"/> |
| Main Bearing - Left | .005 | .020 | | Check and clean, gear end with diesel if needed | <input type="checkbox"/> |
| Main Bearing - Right | .005 | .020 | | | |
| Pinion Shaft Bearing - Left | .002 | .015 | | Pony Rod Alignment | <input type="checkbox"/> |
| Pinion Shaft Bearing - Right | .002 | .015 | | Check pony rods for cracks and wear (replace if necessary) | <input type="checkbox"/> |
| Crosshead Pin Bearing - Left | .002 | .005 | | | |
| Crosshead Pin Bearing - Center | .002 | .005 | | Check piston rods for cracks and wear (replace if necessary) | <input type="checkbox"/> |
| Crosshead Pin Bearing - Right | .002 | .005 | | | |
| Connecting Rod to Eccentric Bearing - LH | .002 | .020 | | Check clamps for wear (replace if necessary) | <input type="checkbox"/> |
| Connecting Rod to Eccentric Bearing - CTN | .002 | .020 | | | |
| Connecting Rod to Eccentric Bearing - RH | .002 | .020 | | Check all bearings w/ mirror for pitting and flaking | <input type="checkbox"/> |
| Oil Pump Pinion to Main Gear - Backlash | .010 | .025 | | | |
| Pinion Shaft to Main Gear - Backlash | .010 | .050 | | Check all oil pump screens | <input type="checkbox"/> |
| Bull Gear Wear | | | | Check pillow block bearings on independent pump | <input type="checkbox"/> |
| Pinion Gear Wear | | | | | |
| Extension Rods | | | | 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) | <input type="checkbox"/> |
| Comments: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| National | | Gardner Denver | | Continental Emsco | |
| Check troughs | <input type="checkbox"/> | Oil pressure and Gauge | <input type="checkbox"/> | Oil pressure and Gauge | <input type="checkbox"/> |
| Check crosshead's for cracks at pony rod clamp | <input type="checkbox"/> | Oil Filter | <input type="checkbox"/> | Check pony rod wiper if equipped if not equipped with wipers get parts to correct | <input type="checkbox"/> |
| | | Oil spray bar for crossheads | <input type="checkbox"/> | | |
| Check pony rod clamp on bolts on crosshead's | <input type="checkbox"/> | Check to see if correct pony rods are installed by gauging distance between it and oil stop plate. | <input type="checkbox"/> | Check to see if baffle plates are doweled in pump | <input type="checkbox"/> |
| Loosen pony rod clamp bolts and tighten pony rod then retorque bolts | <input type="checkbox"/> | | | | |
| | | Oil pump Screen | <input type="checkbox"/> | | |
| | | If new floaters are not there get parts to install floating seals | <input type="checkbox"/> | | |

Action Items:

| |
|--|
| |
|--|

YOU NEED TO HAVE SIGNATURE'S AND TIME FILLED OUT ON FIRST PAGE

Rig: 325

Date: 7/10/2017

Scheduled Rig Inspection Check List

Air Hoist:

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

#1 ASSET 27-
 #2 ASSET 27-
 #3 ASSET 27-

Comments:

Empty text box for comments.

Blocks:

- Check grooves for wear.
- Check smoothness of roll.
- Check for play in bearings.
- Ensure bolts are in place.
- Grease all zerks.

ASSET # 5-
 ASSET # 67-
 COMBO

Comments:

Empty text box for comments.

Brakes:

Hydromatic Brakes:

- Jack bearings.
- Inspect couplings. DS _____
- Grease all zerks.

ASSET # 66-
 ODS _____

Comments:

Empty text box for comments.

Electric Brakes:

Electric Brake Only:

- Inspect plumbing (must meet Unit Drillings Specifications) Note: contact the maintenance department for instructions.
- Take air gap reading. Reading: DS .018 ODS .019
- Ensure brass shifting collars suspend off of sleeve OD.
- Ensure vents are in place and clean.
- Grease all zerks.
- Inspect bearing clearance DS 0.014 ODS 0.016

Comments:

Empty text box for comments.

Eaton Brake Only:

66- _____

- Grease all zerks.
- Inspect bearing clearance DS _____ ODS _____
- Check gap between reaction plates Reading: X gap _____ Y gap _____ Z gap _____
- Record Quantity of discs Number of discs _____
- Check Eaton Brake Temp Gauges Drillers Console _____ At the Brake _____
- Function brakes Auto Safety System _____ Follow Eaton & Hydraulic Weekly Check Sheet
- Inspect all hose and hard plumbing (leaks, cracks, kinks, crushed)
- Inspect high temperature warning system for correct operation
- Inspect flow meter for correct operation. Record GPM: _____

Tolerances: _____ Test with 25 psi of air pressure

| Disc Size | Qty of WC Discs | X new | X max (Adjustment) | Y new | Y min | Z new | Z min |
|-----------|-----------------|-------|--------------------|-------|-------|-------|-------|
| 36 | 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 |

Comments:

Dry Cooler:

78- _____

- Inspect all hose and hard plumbing (leaks, cracks, kinks, crushed)
- Inspect coolant tank low coolant alarm for correct operation. NOTE: Does system still need to be installed? YES NO
- Inspect and record coolant level in tank. Coolant Level: _____
- Clean Strainer
- Check fresh water pressures Inlet _____ Outlet _____
- Flush Heat Exchange

Drawworks:

Drum Shaft:

ASSET # 15- 120

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

Jack bearing readings

- DS _____ 0.003
- ODS _____ 0.001
- Other _____ low drum .003
- Other _____ high drum .006
- Other _____

Comments:

air/water spear plugged-unplug spear andchange seals

Brake Linkage:

15- 120

- Grease all zerks and insure linkage is tight.
- Inspect break bands for cracks and wear.
- Check brake block bolts and ensure bolts are tight.
- Check brake block thickness, record **thinnest** block measurement. DS _____ 1" ODS _____ 1"
- MPI Inspection on brake Linkage (brake bands, slack adjusters, equalizer without removal).

Input Shaft:

Inspect for leaking seals.

15- 120

Jack bearing readings

- DS _____ 0.012 _____
- ODS _____ 0.016 _____
- Other _____
- Other _____

Comments:

Output Shaft:

Grease all zerks and inspect oil system.

Jack bearing readings

- DS _____ 0.005 _____
- ODS _____ 0.006 _____
- Other _____ low trnsmission .001 _____
- Other _____ high transmission .001 _____

Comments:

Rotary Counter Shaft:

Grease all zerks and inspect oil system.

Jack Bearings (Findings)

- DS _____
- ODS _____
- Other _____
- Other _____
- Other _____
- Other _____

Comments:

Cat Shaft:

Grease all zerks and inspect oil system.

Grease cathead with 4 shots of grease.

Jack bearing readings

- DS _____ ASSET # MU 68- _____
- ODS _____ ASSET # BO 68- _____
- Other _____
- Other _____

Compound:

15- 120

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 | _____ |

- 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:

| |
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| |
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Hook:

ASSET # 28- _____

- Check oil in snubber.
- Grease all zerks.
- Visually check for cracks or wear.
- Rotate hook and feel for smoothness of roll.
- Ensure lock is working properly.

ASSET # 67- _____
COMBO

Comments:

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Kelly Spinner:

- Run spinner and check bearings.
- Ensure air pressure is 90 PSI.
- Grease all zerks.

ASSET # 69- _____

Comments:

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Mud Pumps:

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

ASSET # #1 38- 306 _____

ASSET # #2 38- 307 _____

ASSET # #3 38- _____

Comments:

| |
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| |
|--|

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.
- Record bearing play on engine side of shaft.
- Record bearing play on pump side of shaft.

PSI _____
 Reading _____
 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.
- Record bearing play on engine side of shaft.
- Record bearing play on pump side of shaft.

PSI _____
 Reading _____
 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

Comments:

Pipe Spinners:

- Ensure Spinner is hung level with drill pipe.
- Inspect drive chains and rollers for wear. (clean if necessary)
- Grease all zerks and check hanger spring.

ASSET # 41- _____

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

Comments:

Swivel:

Clean mud accumulation around top seals and install mud guard.

ASSET # 50- 233

Roll check swivel for smoothness of roll.

Record endplay readings. Radial run out.

Reading end play .003 runout .002

Check quality of oil

Comments:

Crown:

Inspect grooves for wear.

ASSET # 10-

Check for play in bearings.

Check for smoothness of roll.

Grease all zerks.

Comments:

Fail Safe System:

Test System

ST-80

Comments

Test operation & check leaks

Perform ST-80 Inspection Form

Service ST-80 HPU

HPU

Comments

Run HPU & check leaks

Change all filters

Insure Rig Manager knows to change HPU oil once a year

Unit Drilling Rig 325 General Layout

Scale: 1 inch = 25 feet

Last Revision:

11/02/09

