



Oil Tool Sales · Rental

131 N. Sunnylane Road

P.O. Box 6145

Moore, Oklahoma 73153

405/793-9101

Fax: 405/799-8735

Product Specifications

Name: Cactus Drilling

Date: 10-2-13

Purchase Order No.

Work Order/ Serial Number: 21870

Description: Double BOP 11"-5M Flocon LWS Profile w/(4) 4-1/16"-5M EFO's, no pipe and CSO Rams Asset M10101

Certificate of Compliance

This is to certify that all item(s) supplied under the referenced order were remanufactured, inspected and shipped in compliance with the Horn Equipment Company, Inc., Quality System. Horn Equipment Company, Inc., is a licensed API 6A & 16A manufacturer as evidenced by license numbers 6A-0550 and 16A-0124 respectively. The pressure containing components of the above described product(s) meet NACE MR-0175 hardness requirements. Dimensional inspection has been performed and documented.

**Sonny Honaker
Operations Manager
Horn Equipment Company, Inc.**



LWS Double BOP **Repair Sheet** **Repair & Certify**

Date:	5/1/13
Work Order No:	21870
Date Completed:	9/26/13

Customer Information

Customer:	Cactus	Contact:	
Rig #:		Asset#:	M10101
Date Received:	4/30/13	Date Approved:	7/3/13
		Date Needed:	9/27/13

Part Information

Manufacturer:	FloCon	Type:	LWS	Size:	11" 5,000# wp
SN#:					
Is H2S Certification Required?		No			
Sand Blast?		No	Time:		
Scope of Service	Repair	Certify			
Outlet Size:	#1-BTM: 4"5m	#2-BTM: 4"5m	#3-TOP: 4"5m	#4-Top: 4"5m	
Comments:					

Ram Shaft #1		Rework	Replace	Locking Shaft #1	OK		Replace
Ram Shaft #2		Rework	Replace	Locking Shaft #2	OK		Replace
Ram Shaft #3		Rework	Replace	Locking Shaft #3	OK		Replace
Ram Shaft #4		Rework	Replace	Locking Shaft #4	OK		Replace

PO#:		PO#:	27466
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Comments:	
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Cylinder #1		Skim	Replace	Cylinder Head #1		Weld	Replace
Cylinder #2		Skim	Replace	Cylinder Head #2		Weld	Replace
Cylinder #3		Skim	Replace	Cylinder Head #3	OK		Replace
Cylinder #4		Skim	Replace	Cylinder Head #4		Weld	Replace

PO#:		PO#:	
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#1 BHN: 191		#2 BHN: 191	
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Mud Seal	OK	Alloy		Mud Seal	OK	Alloy	
Bonnet Groove		Weld	Alloy	SS	Bonnet Groove		Weld
Hinge Pin Hole		Weld	Alloy	SS	Hinge Pin Hole	OK	
Cylinder Seal Area		Weld	Skim		Cylinder Seal Area		Weld
Injection Port		Repair			Injection Port		Repair
Premachining Performed		No			Premachining Performed		No
Premachining PO#:					Premachining PO#:		
Final Machining PO#:					Final Machining PO#:		
Stress Relieve Chart					Stress Relieve Chart		

#3 BHN: 191		#4 BHN: 223	
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Mud Seal	OK	Alloy		Mud Seal	OK	Alloy	
Bonnet Groove		Weld	Alloy	SS	Bonnet Groove		Weld
Hinge Pin Hole	OK			SS	Hinge Pin Hole		Weld
Cylinder Seal Area		Weld	Skim		Cylinder Seal Area		Weld
Injection Port		Repair			Injection Port		Repair
Premachining Performed		No			Premachining Performed		No
Premachining PO#:					Premachining PO#:		
Final Machining PO#:					Final Machining PO#:		
Stress Relieve Chart					Stress Relieve Chart		

Rams		Top	
Size:	NONE	Type:	
Rams		Bottom	
Size:	CSO	Type:	70
Packers	OK	Replace	PO#:
Retracting Screws	OK	Replace:	PO#:
Carriers	OK	Repair	Replace
Carriers	OK	Repair	Replace
Ram Blocks	OK	Repair	Replace
Ram Blocks	OK	Repair	Replace
Comments:			
Blind Flanges	OK	Replace	HT#
Blind Flanges	BHN 206	BHN 198	BHN 191
Blind Flanges	Dim 2.545	Dim 2.541	Dim 2.539
Seal Kits	OK	4	PO#:
Piston Seals	OK	8	
Door Gasket	OK	4	PO#:
Hinge Pins	OK	Replace	PO#:
Outlet Studs	OK	32	Size: 1 1/4 X 8 1/2
Top & BTM Studs	OK	Replace	Size:
Outlet Ring Gaskets	OK	4	Size: R-39
Ring Gaskets Used to Test		Top Size: R-54	Bottom Size: R-54
Door Bolts	OK	Replace	
Manifold Tubes	OK	Replace	Straight: Curved:
Hinge Bracket	OK	1	
Hinge Pin Retainer	OK	4	
Wiper Holder Ram Shaft	OK	Replace	
Wiper Holder Lock Shaft	OK	Replace	
Brass Piston Nut	OK	Replace	
Brass Packing Adapter	OK	Replace	R. Shaft L. Shaft
Body	Flanged or Studded	Thickness	Ring Groove
Top Connection	Flanged	OK	Repair
Bottom Connection	Flanged	OK	Repair
Outlets	Studded	OK	Repair
Outlets	Studded	OK	Repair
Outlets	Studded	OK	Repair
Outlets	Studded	OK	Repair
Comments:			



131 North Sunnyslane
P.O. Box 6145
Moore, Oklahoma 73153
p. 405.793.9101
f. 405.799.8735
homeequipment.com

Customer: Cactus

Date: 5-1-13

Work Order No.: 21870

Inspected By: B. Bruehl

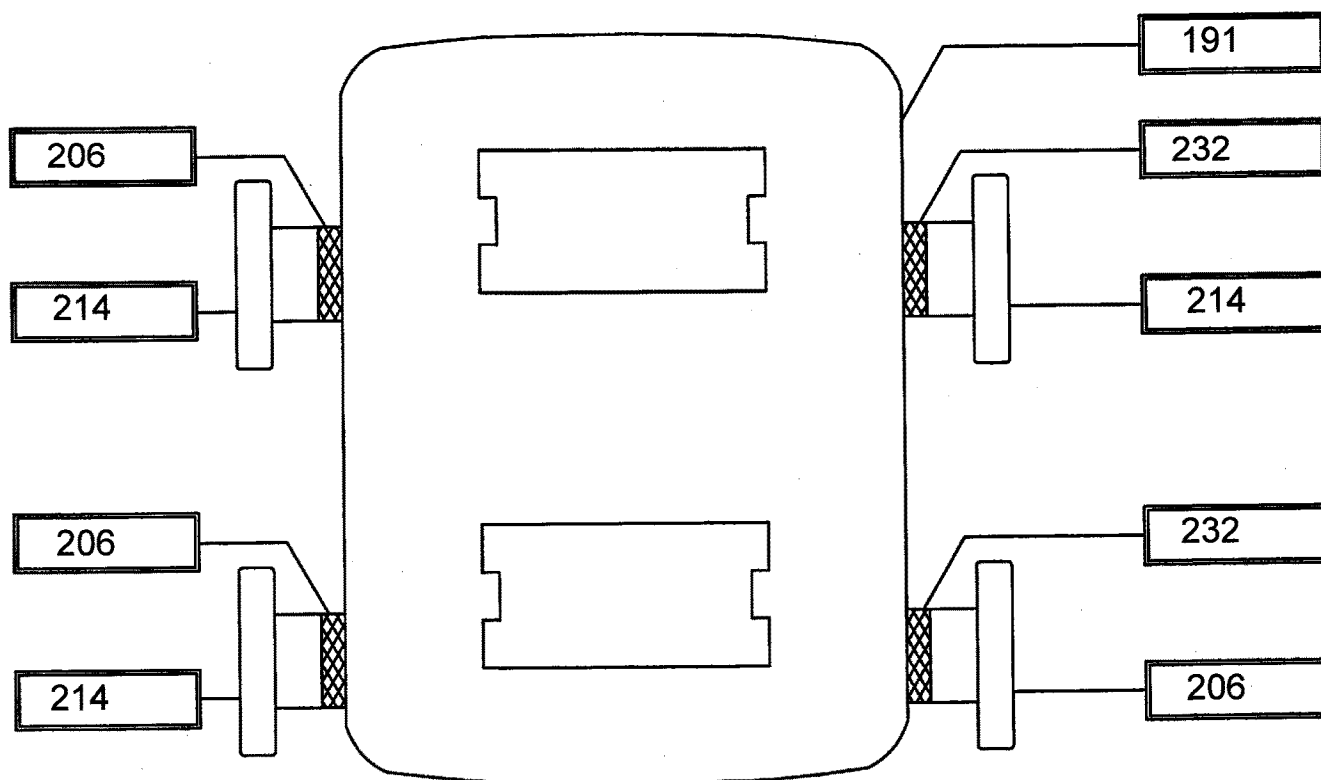
Serial No.:

Size: 11"5000wp

Manufacturer: FloCon

Calibration Date: 6-24-13 Scope Serial No.: 1207

Shaffer Type LWS Studded Double Brinell Hardness Report





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Work Order No.: 21870

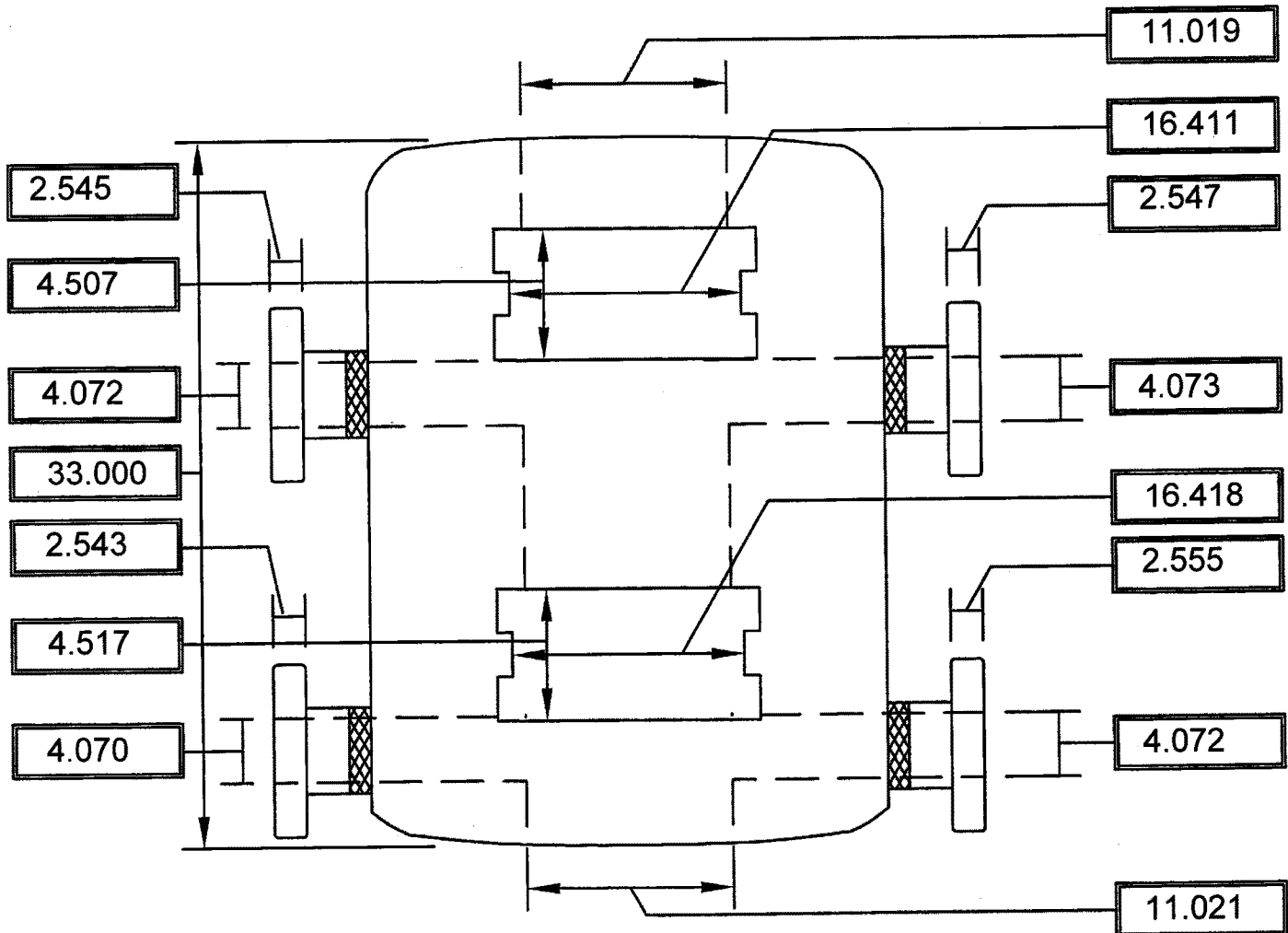
Inspected By: B. Bruehl

Serial No.:

Size: 11"5000wp

Manufacturer: FloCon

Shaffer Type ^{LWS} Studded Double Dimensional Report



60 MIN.

5

10

15

20

25

30

35

40

45

50

55

18000

16000

14000

12000

10000

8000

6000

4000

2000

1000

500

250

125

62.5

31.25

15.625

7.8125

3.90625

1.953125

0.9765625

0.48828125

0.244140625

0.1220703125

0.06103515625

0.030517578125

0.0152587890625

0.00762939453125

0.003814697265625

0.0019073486328125

0.00095367431640625

Horn Equipment Co. Inc.
More, OK USA www.hornequipment.com

Customer: *Cactus*

Item: *11" Sn LWS 061* WCH: *21870* Shell: *0.0*

Test Perform: *3243*

Test Proced: *CSO*

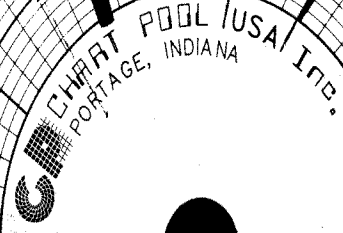
Test Mandrol: *02-026* Expiry Date: *10-26-13*

Orders: *02-041* Expiry Date: *12-1-13*

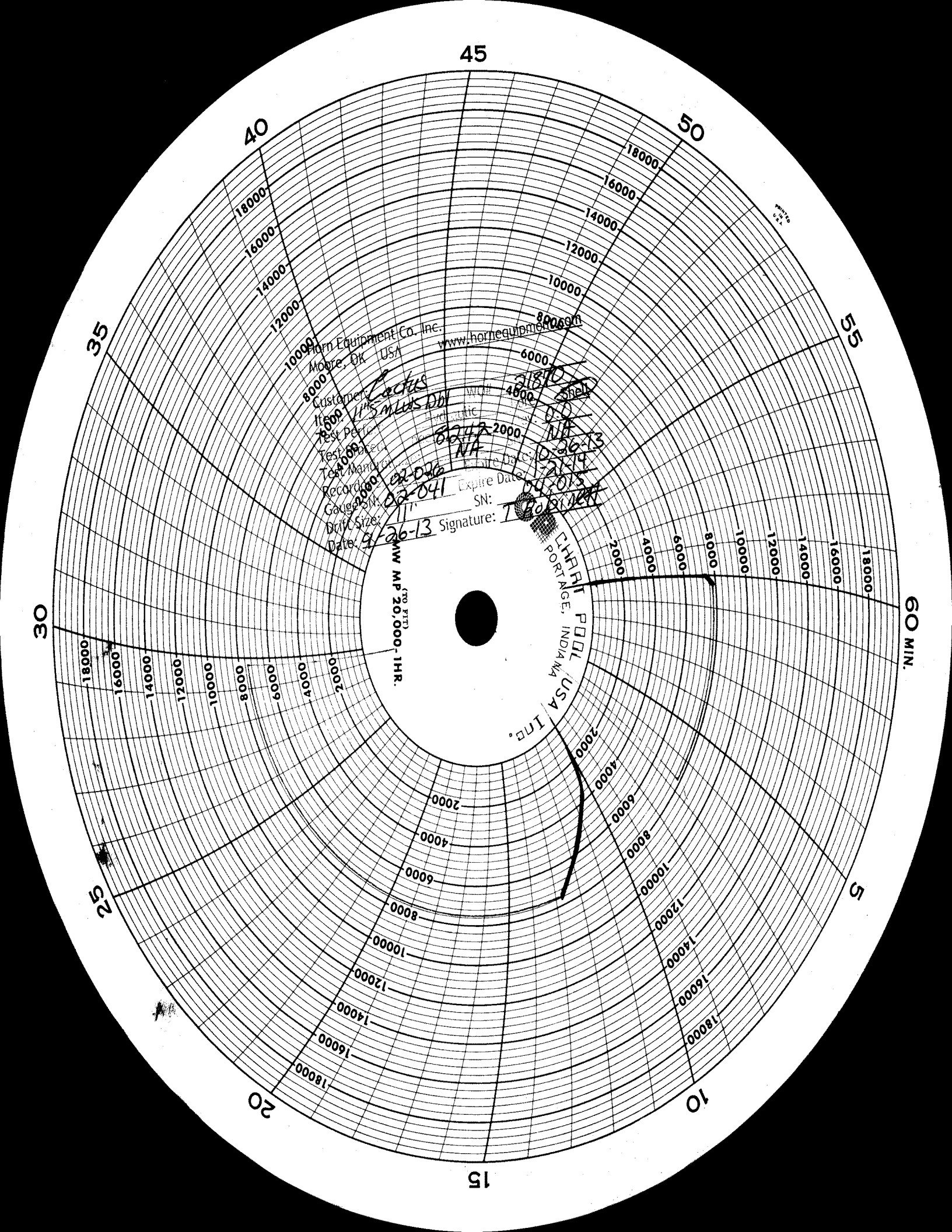
Gauge SN: *02-041* SN: *04-015*

Size: *11"* Signature: *T. R. R. 1966*

Date: *9-26-13*



(TO FIT)
MW MP 20,000-1HR.



45

40

50

55

60 MIN.

5

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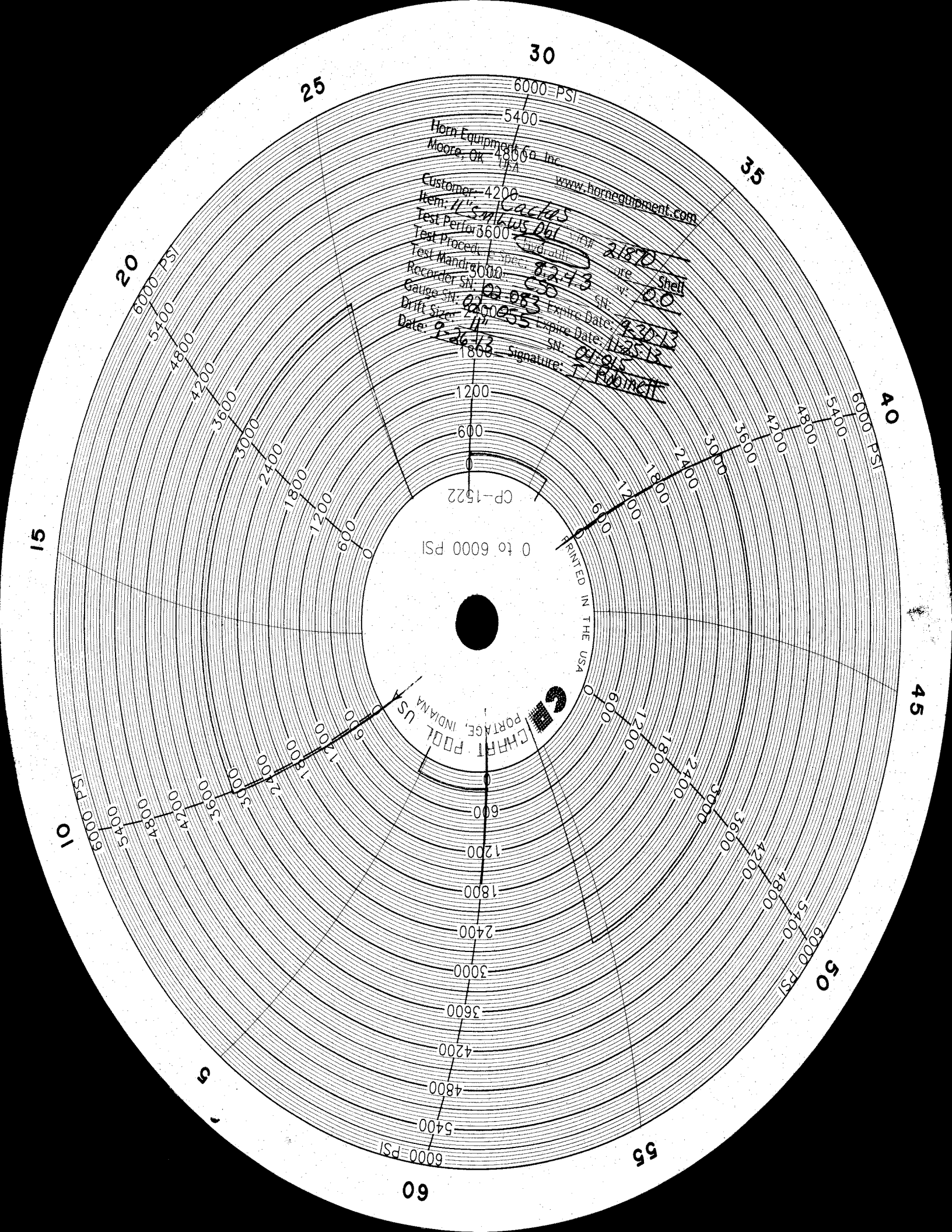
35

Form Equipment Co. Inc.
Moore, OK USA
Customer: *Lactus*
Test Piece: *115 MLLS DB*
Test Method: *NA*
Record: *02-04*
Gauge SN: *02-04*
Drift Size: *11"*
Date: *9/26-13*

www.hornegun.com
SN: *31870*
Expire Date: *09-2013*
Signature: *T. B. B. B.*

(720 FTT)
MP 20,000-1HR.

CHERRY
PORTAGE, INDIANA
PUL USA INC.



Horn Equipment
Moore, OK 73160
USA

www.hornequipment.com

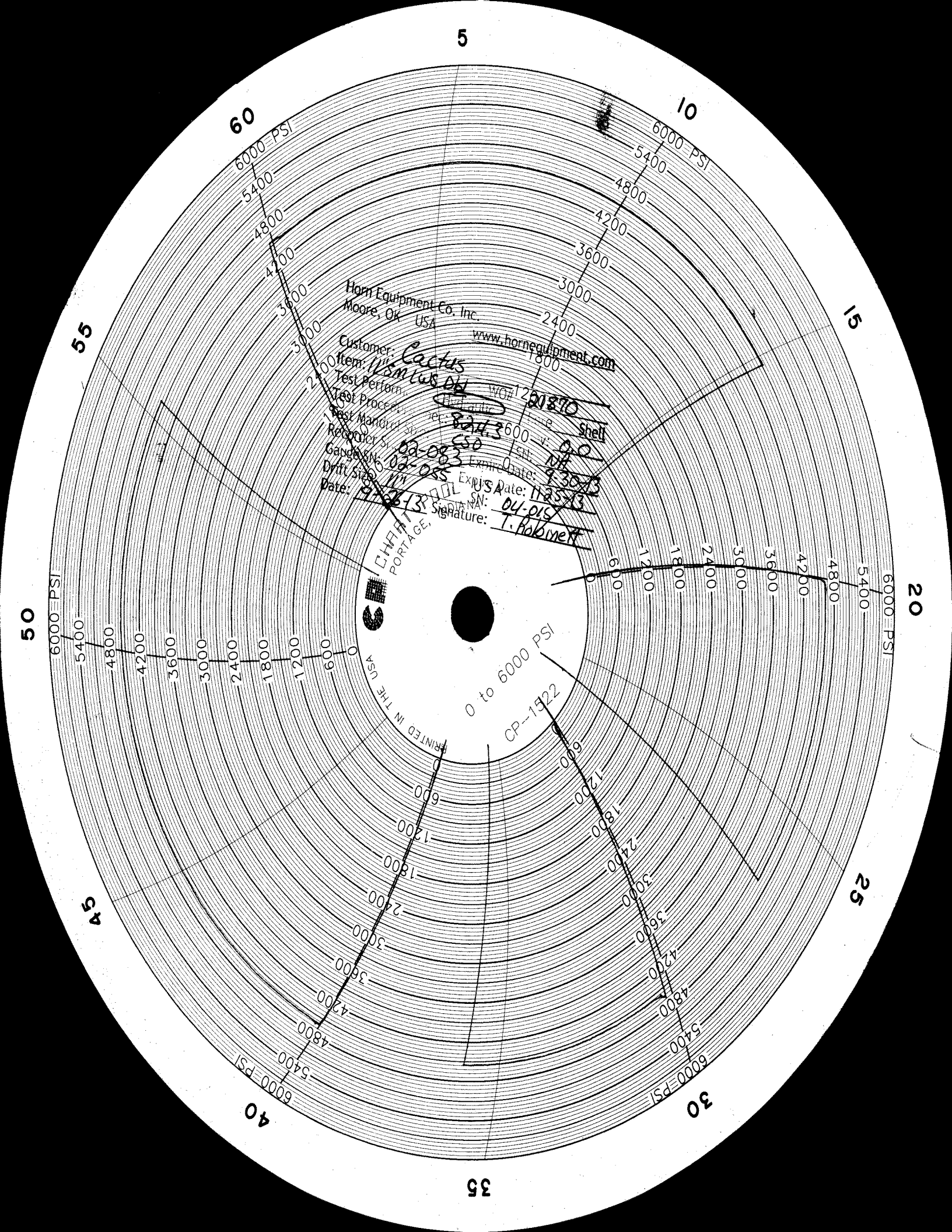
Customer: 4200
Item: 11" *Cactus*
Test Perform: 3600
Test Proceed: *21870*
Test Mandr: *8243*
Recorder SN: *02-083*
Gauge SN: *020055*
Drift Size: *11"*
Date: *9-26-13*
Signature: *J. Robnett*

0 to 6000 PSI

CP-1522

CHART POOL USA
PORTAGE, INDIANA

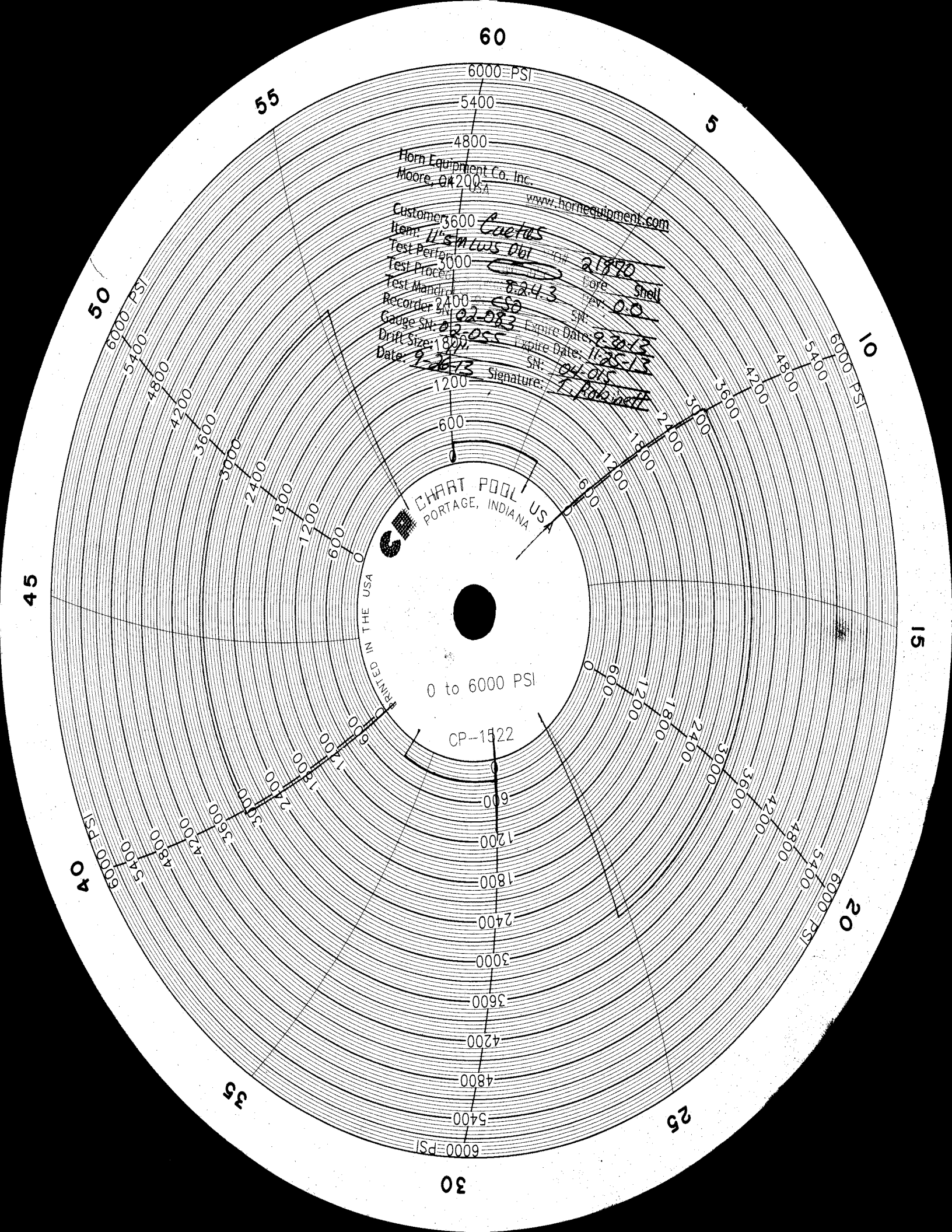
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Horn Equipment Co. Inc.
Moore, Ok USA
Customer: Cactus
Item: 1150mlus 04
Test Perform: 201870
Test Process: 201870
Test Material: Shell
Receptor: 02-08-50
Gauge SN: 02-08-50
Drift Size: 04-015
Date: 9-13-13
Signature: T. Hobmelt
www.hornequipment.com
WO#12
SN: NA
Expire Date: 9-30-13
USA Date: 11-25-13
SN: 04-015



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CP-1122



Horn Equipment Co. Inc.
Moore, OK 73160 USA

www.hornequipment.com

Customer: Cuetas
Item: USMWS Dbl

Test Perf: 3000 2/8/90

Test Proc: 8.2.4.3 Shell

Test Mand: SSO 0.0

Recorder: 02-083 SN

Gauge SN: 02-055 SN

Drift Size: 1800 SN

Date: 2-26-13 SN

Signature: T. Robnett

CHART POOL US
PORTAGE, INDIANA

0 to 6000 PSI

CP-1522

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