



Maxfield Inc.

MS 6011

Service inspection of unit C6011 on job 15-0895 for P.O. RD-55470					
	Labor/Hrs	Labor	Materials	Subtotal	
1. Receive CO2 queen, initiate job file and associated work order documents and move into shop.	2.5	\$250.00	\$0.00	\$250.00	
2. Blowdown Unit complete	1.0	\$100.00	\$0.00	\$100.00	
3. Open Manway and ventilate until safe for entry.	3.5	\$350.00	\$0.00	\$350.00	
4. Buff & clean	4.0	\$400.00	\$25.00	\$425.00	
5. Clean out after MPI, and reseal manway.	4.0	\$400.00	\$25.00	\$425.00	
6. 3rd Party MPI - Arranged and Supplied by Customer.	0.0	\$0.00	\$0.00	\$0.00	
7. Air up to shop pressure and perform final leaktest - Reliefs and Manway. Additional leak repair to be quoted in addition.	2.5	\$250.00	\$0.00	\$250.00	
8. Reinstall insulated manway cover.	2.0	\$200.00	\$31.25	\$231.25	
9. Remove, check, and reinstall rotogauge.	1.5	\$150.00	\$4.91	\$154.91	
10. Repair riser inside vessel	6.5	\$650.00	\$4.91	\$654.91	
11. Move to yard and park.	1.5	\$150.00	\$0.00	\$150.00	
SUBTOTALS		29.0	\$2,900.00	\$91.06	\$2,991.06

Ferus Potential Parts Used					
	Labor/Hrs	Labor	Materials	Subtotal	
1. Replace all 13 Hydrostats	1.0	\$100.00	\$400.00	\$500.00	
2. Send both 1" x 1 1/2" pressure series farris relief valves away for recertification	2.2	\$223.00	\$187.72	\$410.72	
3. Send both 2 1/2" relief valves NPT CO away for recertification	0.5	\$50.00	\$220.00	\$270.00	
SUBTOTALS		3.7	\$373.00	\$807.72	\$1,180.72
Total		32.7	\$3,273.00	\$898.78	\$4,171.78

FERUS CHECK LIST FOR SERVICE INSPECTION ON QUEENS

VESSEL A#: 505788
 VESSEL UNIT #: 6011
 VESSEL S/N.: 39527 A
 MAXFIELD JOB #: 15-0895

WORK REQUIRED	COMMENTS	SIGNATURE	DATE
Vessel opened and ventilated for safe entry	OK	Blake Z. Field	05/11/09
Vessel welds buffed for inspection	OK	Blake Z. Field	05/12/09
Relief valves removed for recertification	OK	Blake Z. Field	05/11/09
Roto Gauge checked for function/damage	OK Rebuilt.	Blake Z. Field	05/14/09
Hydrostats removed and replaced with new	OK	Blake Z. Field	05/20/09
Relief valves reinstalled c/w dual tags installed	OK	Blake Z. Field	05/20/09
Installed manway/airtest at 100 psi	OK	Blake Z. Field	05/20/09
Manway cover reinstalled	OK	Blake Z. Field	05/20/09
Prepped for pickup	OK	Blake Z. Field	05/20/09

* Vapour pipe running along top portion of tank was broken at weld close to flange at rear of tank. It was a non-^{BE} Pressure boundary repair. Repair completed and checked 05/13/09

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division I

JOB 31-0736

A# 505788

1. Manufactured and certified by MaXfield Inc. 1026 Western Drive, Crossfield, Alberta T0M 0S0
(Name and address of manufacturer)

2. Manufactured for Ferus Gas Industries 500-640-8th Ave. S.W. Calgary, AB. T2P 1G7
(Name and address of purchaser)

3. Location of Installation Non-Stationary
(Name and Address)

4. Type: HORIZONTAL 38527A R4684.2 2003-0827D Rev A 247 2004
(Style or vertical) (Mfg's serial No.) (RV) (Drawing No.) (Valve No.) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division I
10 2002 2001
(Addenda Dates) (Code Case Nos.) (Special Service per UG-120(c))

6. Shell: SA516-70 0.750" Nil 90" ID 47' 1"
(Mat'l Spec No., Grades) (Nom Thk, (in.)) (Corr. Allow (in.)) (Blow L.D. (ft. x in.)) (Length (overall) (ft. x in.))

7. Seams: TYPE No. 1 FULL 100% N/A "F" N/A TYPE No. 1 *SPOT S
(Long. & Circ. Weld, (in.)) (R.F. (Spot or Full)) (Fit (%)) (H.T. Temp. (°F)) (How Made) (Welded, (in.)) (R.F. (Spot, Partial or Full)) (No. of Courses)

8. Heads: (a) Mat'l. SA516-70 (b) Mat'l. SA516-70
(Spec No., Grades) (Spec No., Grades)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	END	0.7420"	Nil			2:1 S.E.				Concave
(b)	END	0.7420"	Nil			2:1 S.E.				Concave

If removable, bolts used (describe other fastenings) N/A
(Mat'l Spec No., (in.))

9. MAWP 325 psig. 115°F at max. temp.
Min. design metal temp. -20 °F at 325 psig Hydro., pneu., or comb. test pressure 427 psi.

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l.	Nom Thk.	Reinforcement Mat'l.	How Attached	Location
Float Gauge	1	Float Gauge	Adaptor	SA181-60		Inherent	UW16.1(c)	Head
Vapour	1	2" NPS	300# RFSO	SA105N/SA106B	0.154"	Inherent	UW16.1(c)	Shell
Fill	1	4" NPS	300# RFSO	SA105N/SA106B	0.237"	SA516-70	UW16.1(c)	Shell
Continued on	Form	U4						

11. Supports: Skirt No Lugs 0 Legs 0 Other Sub-frame Pads Attached Shell Weld
(Type or Mat'l) (Type or Mat'l) (Type or Mat'l) (Type or Mat'l)

12. Remarks: Manufacturer's Partial Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N/A
(Name of part, item number, Mfg's name and identifying stamp)

16,500 USWG C02 Mobile Storage Manufacturer's Drawing 2003-1004D Rev B

Surface Area = 1262 sq. ft *UW11(a)(5)(b) Tank not to be pressured during transport Impact test exempt per UG20(f)1-5
Pressure Vessel Inspected to registered design Safety Relief Valve per UG125 by others Vessel for Non-Corrosive Service

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division I. "U" Certificate of Authorization No. 13,551 expires July 24, 2005
Date April 13, 2004 Co. name MaXfield Inc. Signed [Signature]

CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by MaXfield Inc. at 1026 Western Drive, Crossfield, Alberta
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Alberta and employed by Alberta Boilers Safety Association have inspected the component described in this Manufacturer's Data Report on April 13, 2004 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division I. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Date 13/4/04 Signed [Signature] Commissions NB12523A, AB175
(Authorized Inspector) (Valve Board (Incl. endorsement, State, Prov. and Sign.)

SUMMIT

Inspection Services Ltd.

The Peak in Integrity and Quality Inspection

NDT Report

Client:	Ferus	Inspection Date: May 14 th , 2009
Facility:	Maxfield Fabrication Shop	LSD:
Equipment:	CO ₂ Storage Trailer, A0505788	

Technicians/Inspectors

Adam Fitzgerald

Certifications

CGSB MT-II

CGSB UT-I

Technique:

- ☒ UT (thickness)
- ☐ UT (shearwave)
- ☐ UT (c-scan)
- ☐ UT (TOFD)
- ☐ UT (phased array)

- ☐ MPI (dry powder)
- ☒ MPI (wet fluorescent)
- ☐ MPI (wet visible)

- ☐ LPI (visible aqueous)
- ☐ LPI (visible post emulsifiable)
- ☐ LPI (visible solvent removable)
- ☐ LPI (fluorescent water washable)
- ☐ LPI (fluorescent post emulsifiable)
- ☐ LPI (fluorescent solvent removable)

- ☒ Visual (external)
- ☒ Visual (internal)
- ☐ Hardness (telebrinell)
- ☐ Hardness (microdur)

Equipment:

Ultrasonic

- ☐ DMS
- ☒ DMS-2
- ☐ USN-52L
- ☐ Epoch II
- ☐ Intraspec 6

Other:

Magnetic Particle

- ☒ AC Yoke
- ☐ DC Yoke
- ☒ Blacklight
- ☐ Permanent Yoke

Consumables:

Magnetic Particle

- ☐ Magnaflex 7HF (black)
- ☐ Magnaflex WCP-2 Contrast Paint
- ☒ Magnaflex 14 AM Fluorescent Bath
- ☐ Red Oxide Powder
- ☐ Grey Oxide Powder

Other:

Liquid Penetrant

- ☐ SKL-WP Penetrant
- ☐ SKD-S2 Developer
- ☐ SKC-S Cleaner
- ☐ DP-S1 Penetrant
- ☐ DR-62 Developer

Ultrasonic Transducers:

Description	Type	Frequency	Diameter	Angle
FH2E	Dual	5 MHz	0.375"	0°

Code 1:	ASME VIII
Code 2:	Customer Spec.
Calibration:	Stepwedge
Sensitivity:	BWR @ 80% FSH

Magnetic Particle:

Material:	Carbon Steel
Surface:	Buffed
Technique:	Wet Fluorescent
Lighting:	Black light

Code 1:	ASME V
Acc. Criteria	ASME VIII
AC Yoke	Contour III
Calibration:	Lift 10 Lbs

Comments Wet Fluorescent Magnetic Particle Inspection (WFMPI) and UT thickness measurements were performed on the CO₂ storage trailer (A0505788) at the Maxfield Fabrication Shop in Crossfield. Please refer to the following report for the inspection details.

Signature: _____

Adam Fitzgerald

Date: May 21st, 2009

May 14th, 2009

CO₂ Storage Trailer, A0505788

At the request of Ferus Inc., MPI and UT inspections were performed on the CO₂ storage trailer located at the Maxfield Fabrication Shop in Crossfield. The following report details the results of these inspections.

To ensure that the inspection of all of the Ferus trailers will be reported in a consistent manner, the front of the trailer will always be considered to be the north end. Also, the location of indications will be orientated using an o'clock position when facing the front of the trailer. All nozzles and welds will be numbered from north to south along the length of the trailer.

MPI:

Wet Fluorescent Magnetic Particle Inspection (WFMPI) was performed on 100% of head to shell welds, 8" either side of all "TEE" junctions, all welded nozzles and supports for internal piping, and all stop-starts found in the circ welds.

The following table lists all of the welds that were inspected and details any indications that were found.

Weld #	Description	Comments
C1	North head to shell	WFMPI OK
C2	Stop-Start	1/4" long indication found in the stop-start located at 3 o'clock. Indication was removed with minimal grinding (surface indication).
C3	Stop-Start	3/8" long indication found in the stop-start located at 5 o'clock. The indication was ground out at an approximate depth of 0.005".
C4	Stop-Start	WFMPI OK
C5	Stop-Start	WFMPI OK
C6	South head to shell	-1/4" long indication found at the 1 o'clock position, parallel to the weld on the head side of the weld. Indication was removed with minimal grinding (surface indication). -1/4" long indication found at the 4 o'clock position, parallel to the weld on the shell side of the weld. Indication was ground out at an approximate depth of 0.010". Appeared to be undercut. -1/8" long indication found at the 10 o'clock position, parallel to the weld on the shell side of the weld. Indication was ground out at an approximate depth of 0.005". Appeared to be undercut. -1/8" long indication found at the 10:30 clock position, parallel to the weld on the shell side of the weld. Indication was ground out at an approximate depth of 0.015". Appeared to be undercut. -1/4" long indication found at the 11:30 clock position, parallel to the weld on the shell side of the weld. Indication was ground out at an approximate depth of 0.010". Appeared to be undercut.
T1	Shell course T-joint at north head	WFMPI OK
T2	Shell course T-joint	WFMPI OK
T3	Shell course T-joint	WFMPI OK

T4	Shell course T-joint	WFMPI OK
T5	Shell course T-joint	WFMPI OK
T6	Shell course T-joint	WFMPI OK
T7	Shell course T-joint	WFMPI OK
T8	Shell course T-joint	WFMPI OK
T9	Shell course T-joint	WFMPI OK
T10	Shell course T-joint at south head	WFMPI OK
N1	2" Nozzle in north head (level indicator)	1/16" long indication parallel to the nozzle at the 12 o'clock position. Indication was ground out at an approximate depth of 0.005".
N2	2" Nozzle in bottom middle shell, and support for the 2" pipe welded to the top shell.	WFMPI OK
N3	4" Nozzle and vortex breaker in the bottom middle shell	WFMPI OK
N4	6" Nozzle and vortex breaker in the bottom middle shell	WFMPI OK
N5	6" Nozzle and vortex breaker in the bottom south shell	3/16" long indication found on the weld cap located at 4 o'clock. Indication was ground out at an approximate depth of 0.005".
N6	3" Nozzle in south head and supports (x4) for 3" pipe along the top shell.	WFMPI OK
Manway	16" manway in the south head	- 1/4" long indication found at the 1 o'clock position, parallel to the weld on the head side of the weld. Indication was ground out at an approximate depth of 0.005". Appeared to be undercut. - Two 1/8" indications were found in the weld located at the 3 o'clock position. Indications were removed with minimal grinding (surface indications).

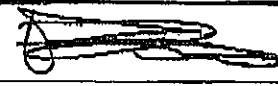
UT:

UT thickness measurements were taken on the top, east, bottom and west sides of all shell courses. As well as the middle area of the top, east, bottom and west quadrants of each head. There was no access for UT readings on the nozzles due to the insulation on the trailer. UT readings showed no indications of corrosion. The following table displays the results of the UT thickness readings.

	N. Head	Shell 1	Shell 2	Shell 3	Shell 4	Shell 5	S. Head
Top	0.891"	0.762"	0.765"	0.756"	0.764"	0.767"	0.875"
East	0.882"	0.760"	0.766"	0.759"	0.763"	0.762"	0.885"
Bottom	0.884"	0.759"	0.764"	0.759"	0.764"	0.768"	0.871"
West	0.879"	0.760"	0.766"	0.762"	0.762"	0.766"	0.868"
Nominal	0.742"	0.750"	0.750"	0.750"	0.750"	0.750"	0.742"

FERUS						Report No. A#0505788	
						Insp Date May 13, 2009	
Page <u>1</u> / <u>2</u>							
Visual Inspection Report (External) <input type="checkbox"/> Installation <input checked="" type="checkbox"/> External <input type="checkbox"/> Internal							
Date: May 13, 2009		Description: <input checked="" type="checkbox"/> Vessel <input type="checkbox"/> Exchanger <input type="checkbox"/> Furnace <input type="checkbox"/> Cold Box Vessel		Unit#: 6011		Equip #:	
Inspector: Pascal De Montigny		Equip. Name: Carbon Dioxide Refrigerated Liquid		Jurisdiction:		CRN# R-4684,213	
Agent Co:		Manufacturer: MaxField, Crossfield, Alberta		Year Built: 2004		S/N: 38527A	
Owner: Ferus		Location/LSO:		MDMT			
Region:							
Area:							
Facility:							
Service: <input type="checkbox"/> N2 <input checked="" type="checkbox"/> CO2 <input type="checkbox"/> Glycol <input type="checkbox"/> NH3 <input type="checkbox"/> Other							
Zones: MAWP DESIGN Temp SET Pres ID# MANUFACTURER S/N PSV PSV TAG# PSV Service Date CSO CAPACITY							
Shell Side: 325psi 115F 90" MaxField 38527A N Y/N Y/N							
Tube Side: Y/N Y/N							
Other:							
Material		Nominal		C/A		Retire t	
Shell: SA 516-70		0.750"		Nil			
Head: SA 516-70		0.742"		Nil			
Channel:							
Tube:							
Other:							
Orientation: <input checked="" type="checkbox"/> Hor. <input type="checkbox"/> Vert		Foundation <input type="checkbox"/> Concrete <input type="checkbox"/> Gravel <input type="checkbox"/> Timbers <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: Truck Bed		Condition: Good			
Support: <input checked="" type="checkbox"/> Saddle <input type="checkbox"/> Scal-welded <input type="checkbox"/> Free to Move		Condition: Good condition					
<input type="checkbox"/> Skirt <input type="checkbox"/> Free of debris Comment:		Condition					
<input type="checkbox"/> Hangers <input type="checkbox"/> Secure Comment:		Condition					
<input type="checkbox"/> Other Specify:		Condition					
Overall: General Condition Good Condition		Electrical grounding <input type="checkbox"/> Direct <input type="checkbox"/> Indirect <input checked="" type="checkbox"/> None					
Ext. Surface: <input type="checkbox"/> Painted <input checked="" type="checkbox"/> Insulated <input type="checkbox"/> Fire-proofed <input type="checkbox"/> Cladded <input type="checkbox"/> Other:		Condition: Good					
Ext. Fixtures: <input type="checkbox"/> Ladder <input type="checkbox"/> Platform(s) <input checked="" type="checkbox"/> Other Mounted on Truck frame		Condition: Good condition					
Nozzles: <input checked="" type="checkbox"/> Manway <input type="checkbox"/> Port Size: 16"		<input type="checkbox"/> Reinforcement Pads Used <input type="checkbox"/> Weep Holes Present					
Comment:							
Davit Arm: <input type="checkbox"/> Present <input type="checkbox"/> Greased <input type="checkbox"/> Double nutted		Condition					
Piping: <input checked="" type="checkbox"/> PSV <input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined Per Code <input type="checkbox"/> Drains Properly <input type="checkbox"/> Well Coated		Comment: Mounted horizontal, paint chipping					
<input checked="" type="checkbox"/> Inlet <input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined Per Code <input checked="" type="checkbox"/> Free from leaks <input checked="" type="checkbox"/> Well Coated		Comment					
<input checked="" type="checkbox"/> Outlet <input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined Per Code <input checked="" type="checkbox"/> Free from leaks <input checked="" type="checkbox"/> Well Coated		Comment					
<input checked="" type="checkbox"/> Drain <input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined Per Code <input checked="" type="checkbox"/> Free from leaks <input checked="" type="checkbox"/> Well Coated		Comment					
<input checked="" type="checkbox"/> Instrumentation <input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined Per Code <input checked="" type="checkbox"/> Free from leaks/kinks		Comment					
<input checked="" type="checkbox"/> Process Fluid Identified <input type="checkbox"/> Flow Direction Marked		Comment					
Valves: <input checked="" type="checkbox"/> Manual Isolation Valve <input checked="" type="checkbox"/> Free from leaks		Comment					
<input type="checkbox"/> Automated Control Valve <input type="checkbox"/> Free from leaks		Comment					
<input type="checkbox"/> Vents and Drain Plugged		Comment					
Gauges: <input checked="" type="checkbox"/> Pressure Reading: 0-600 PSIG		Condition: Good condition					
<input type="checkbox"/> Temperature Reading:		Condition					
Sight Glass: <input checked="" type="checkbox"/> Fluid Level Reading: 3-97% volume		Condition: Good condition					
Inspection Summary: Vessel was insulated. The insulation appeared to be in good condition, sealed around the edges, no mechanical damage was noted.							
No visual external of the heads, shell, welds and nozzles was possible due to the insulation cladding.							
The Manway appeared to be in good condition. The four (4) PSV were not in place at the time of inspection. They are mounted horizontally.							
The piping appeared to be in good condition, well supported, no obvious leaks were noted.							
Recommended Actions						NCR	
No actions were required at the time of inspection							

Vessel Status	
Integrity Status	Suitable for Continued Service <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Immediate Repairs Required <input type="checkbox"/> Future Repairs Required <input type="checkbox"/> Replace
Inventory Status	<input type="checkbox"/> In Service <input type="checkbox"/> Idle <input type="checkbox"/> Surplus <input type="checkbox"/> Scrap
Inspection Interval	Assigned ___ yrs, CHANGE TO ___ yrs
PSV Interval	Assigned ___ yrs, CHANGE TO ___ yrs

Signature of Inspector	
PESL Certificate	000358
Signature of Chief Inspector	
PESL Certificate	

FERUS

Report No.	A#0505788
Insp Date	May 13, 2009

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Visual Inspection Report (Internal)

Access:	<input checked="" type="checkbox"/> Manway <input type="checkbox"/> Hand-hole <input type="checkbox"/> Inspection Nozzle		
Opening:	Gasket Surfaces: Good condition	<input checked="" type="checkbox"/> Compliant with code	Comment: Good condition
	Nozzle Tube: Good condition	<input checked="" type="checkbox"/> No pitting, erosion, etc	Comment: Good condition
Shell and Head Surfaces	Uniform Corrosion: Rust	<input type="checkbox"/> Insignificant amount	Comment
	Pitting Corrosion: See comments below	<input type="checkbox"/> None Noted	Comment: Minor pitting throughout the vapor zone, less than 0.010" deep.
	Erosion:	<input checked="" type="checkbox"/> None Noted	Comment
	Mechanical Damage	<input checked="" type="checkbox"/> None Noted	Comment
Welds	Uniform Corrosion:	<input checked="" type="checkbox"/> Insignificant amount	Comment
	Pitting Corrosion:	<input type="checkbox"/> None Noted	Comment
	Welding Defects:	<input type="checkbox"/> None Noted	Comment:
	<input checked="" type="checkbox"/> NDT was performed by Adam Fitzgerald		Extent: Specified in the procedure
	Type: <input checked="" type="checkbox"/> MPI (<input checked="" type="checkbox"/> WF <input type="checkbox"/> B&W <input type="checkbox"/> Dry) <input type="checkbox"/> LPI <input checked="" type="checkbox"/> UT <input type="checkbox"/> RT <input type="checkbox"/> Other:		
Results: Please refer to the attached Summit Inspection NDT report.			
Nozzles	Obstructions:	<input checked="" type="checkbox"/> None Noted	Comment
	Corrosion:	<input checked="" type="checkbox"/> None Noted	Comment
	Erosion:	<input checked="" type="checkbox"/> None Noted	Comment
Attachments	<input checked="" type="checkbox"/> Vortex breaker	<input checked="" type="checkbox"/> Secure <input checked="" type="checkbox"/> Good Condition	Comment
	<input type="checkbox"/> Impingement Plate	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input type="checkbox"/> Suction Tube	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input type="checkbox"/> Demister	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input type="checkbox"/> Heating Cell	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input checked="" type="checkbox"/> Piping Supports	<input checked="" type="checkbox"/> Secure <input checked="" type="checkbox"/> Good Condition	Comment: Nuts and bolts appear to be in good condition. Weld repair was done on the 3" 45° elbow, appears to be of good quality.
		<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
Inspection Summary	<ul style="list-style-type: none"> Visual internal inspection of the heads, shell, welds, nozzles, internal attachments. Ultrasonic thickness readings of the heads, shell according to the Ferus inspection procedure. Magnetic Particle Inspection (Wet Fluorescent) of welds to the extent according to the Ferus inspection procedure. For details of the NDT inspection (UT and MPI) please refer to the attached NDT report. 		

Notes

- Visual internal inspection of the Vessel found the heads and the shell to be in good condition. Some minor pitting was noted throughout the upper portion of the vessel (vapor zone). Pitting appeared to be less than 0.010" deep.
- The Nozzles (2-6", 1-4", 1-3", 2-2") appeared to be in good condition, clean, not obstructed, no internal corrosion was noted inside.
- The Manway (16") appeared to be in good condition, the gasket face (seal surface) appeared to be in good condition.
- All the internal attachments (vortex breakers) appeared to be in good condition, secure, with fillet welds of good quality.
- The 3" PSV line was attached to the top shell of the Vessel with welded brackets. The Maxfield representative said that when the vessel was opened, they found that the bolts in the brackets had broken off, causing the 45° elbow to break. A picture is attached of the elbow after the repairs were completed.

PSV's:

PSV's were not present at the time of inspection.



Central Valve Service

Site 5, Box 1, RR1, Sylvan Lake, AB. T4S 1X6

GST 839209350RT0001

Service Report

PSV Tag # 6011-2

SR # Invoice No.

40525 PSV 10619

Date In Customer Name

13-May-09 MAXFIELD INC.

Location/Area

Ordered By

Shipped in Via

JOB #15-0895 CROSSFIELD RHONDA JOHN W/CVS

Code

Valve ID

Serial No.

Vessel ID

Vessel

464320-28-KE A#505788

Make

Orifice

Inlet

Outlet

Type

Connection

Tag #

Farris E 1 1.5 27EA34-M20 Thread 6011-2

Preliminary Inspection and Service Required

Required Service

Turn Around Time

Seal

Condition

Recon & Reset Normal Unbroken Traces of Oil or Product

Service Details

Disc Seat

Nozzle Seat

Spring

Spring #

Spring Type

Lapped Lapped OK OK

Stem

Bellows

Bellows Tes

Bubble Test

Medium

OK N/A N/A OK Air

Tag Set Pressure

Back Pressur

Temp. Correctio

Actual Set Pressure (psi)

Capacity

Units

325 0 0 325 1395 SCFM

Parts Used

Qty Part No. Part Description

Comments

CRN #0G0386.9C

Date Completed

Ship via

Assembled by

Tested By

14-May-09

Scott W/CVS

MH

TH

Initials

TH

Central Valve Service

Site 5, Box 1, RR1, Sylvan Lake, AB. T4S 1X6

GST 839209350RT0001

Service Report

PSV Tag # 6011-1

SR # Invoice No.

40526 PSV 10619

Date In Customer Name

13-May-09 MAXFIELD INC.

Location/Area

Ordered By

Shipped in Via

JOB #15-0895 CROSSFIELD RHONDA JOHN W/CVS

Code

Valve ID

Serial No.

Vessel ID

Vessel

464320-40-KE A#505788

Make

Orifice

Inlet

Outlet

Type

Connection

Tag #

Farris E 1 1.5 27EA34-M20 Thread 6011-1

Preliminary Inspection and Service Required

Required Service

Turn Around Time

Seal

Condition

Recon & Reset Normal Unbroken Traces of Oil or Product

Service Details

Disc Seat

Nozzle Seat

Spring

Spring #

Spring Type

Lapped Lapped OK OK

Stem

Bellows

Bellows Tes

Bubble Test

Medium

OK N/A N/A OK Air

Tag Set Pressure

Back Pressur

Temp. Correctio

Actual Set Pressure (psi)

Capacity

Units

325 0 0 325 1395 SCFM

Parts Used

Qty	Part No.	Part Description
-----	----------	------------------

Comments

CRN #0G0386.9C

Date Completed

Ship via

Assembled by

Tested By

14-May-09

Scott W/CVS

MH

TH

Initials

TH

Central Valve Service

Site 5, Box 1, RR1, Sylvan Lake, AB. T4S 1X6

GST 839209350RT0001

Service Report

PSV Tag # 6011-3

SR # Invoice No.

40530 PSV 10619

Date In Customer Name

13-May-09 MAXFIELD INC.

Location/Area

Ordered By

Shipped in Via

JOB #15-0895 CROSSFIELD RHONDA JOHN W/CVS

Code

Valve ID

Serial No.

Vessel ID

Vessel

60113 A#505788

Make

Orifice

Inlet

Outlet

Type

Connection

Tag #

Rego 2.5 3.5 A3149 Thread 6011-3

Preliminary Inspection and Service Required

Required Service

Turn Around Time

Seal

Condition

Test & Report Normal Unbroken Traces of Oil or Product

Service Details

Disc Seat

Nozzle Seat

Spring

Spring #

Spring Type

OK OK OK OK

Stem

Bellows

Bellows Tes

Bubble Test

Medium

OK N/A N/A OK Air

Tag Set Pressure

Back Pressur

Temp. Correctio

Actual Set Pressure (psi)

Capacity

Units

358 0 0 358 11601 SCFM

Parts Used

Qty	Part No.	Part Description
1	B. TAG	STAMPED ROUND TAG

Comments

CRN #0G8326.52

Date Completed

Ship via

Assembled by

Tested By

14-May-09

Scott W/CVS

DK

TH

Initials

THA

Central Valve Service

Site 5, Box 1, RR1, Sylvan Lake, AB, T4S 1X6

GST 839209350RT0001

Service Report

PSV Tag # 6011-4

SR # Invoice No.

40531 PSV 10619

Date In Customer Name

13-May-09 MAXFIELD INC.

Location/Area

Ordered By

Shipped in Via

JOB #15-0895 CROSSFIELD RHONDA JOHN W/CVS

Code

Valve ID

Serial No.

Vessel ID

Vessel

60114 A#505788

Make

Orifice

Inlet

Outlet

Type

Connection

Tag #

Rego 2.5 3.5 A3149 Thread 6011-4

Preliminary Inspection and Service Required

Required Service

Turn Around Time

Seal

Condition

Recon & Reset Normal Unbroken Traces of Oil or Product

Service Details

Disc Seat

Nozzle Seat

Spring

Spring #

Spring Type

OK OK OK OK

Stem

Bellows

Bellows Tes

Bubble Test

Medium

OK N/A N/A OK Air

Tag Set Pressure

Back Pressur

Temp. Correctio

Actual Set Pressure (psi)

Capacity

Units

358 0 0 358 11601 SCFM

Parts Used

Qty	Part No.	Part Description
1	B. TAG	STAMPED ROUND TAG

Comments

CRN #0G8326.52

Date Completed

Ship via

Assembled by

Tested By

14-May-09

Scott W/CVS

DK

TH

Initials

TH