FRAC SHACK™

HAND OVER AGREEMENT	EG84/XP28/NGD23	DATE: Oct. 19, 2021
FRAC SHACK UNIT:	TRAILER: T74	PLATE: 5NJ7-87
GENERATOR UNIT:	TRAILER:	PLATE:
RT UNIT: RT-21	TRAILER: RT-21	PLATE: 6AM3-70
OTHER:	OTHER:	OTHER:

FROM: FRAC SHACK Inc	TO: FRAC SHACK International
Sine Najmeddine	Dustin Neubauer
RESPONSIBLE REPRESENTITIVE	RESPONSIBLE REPRESENTITIVE

✓	Production documentation provided by FSH	✓	Reviewed by FSI/FSA
✓	Initial demob documentation provided by FSH	✓	Reviewed by FSI/FSA
		✓	Demob verified by FSI/FSA
✓	Frac Shack unit visually inspected by FSH	✓	Visually inspected by FSI/FSH
N/A	Generator unit tested/visually inspected by FSH	N/A	Inspected by FSI/FSA
✓	NG Reel trailer inspected by FSH (if applicable)	✓	Inspected by FSI/FSA

NOTES AND DEFICIENCIES:

ACTIONS TAKEN OR REQUIRED:	
	COMPLETED
	COMPLETED
	COMPLETED
	COMPLETED

APPROVED FOR HAND-OVER

FSA APPROVAL STAMP OR	
SIGNATURE:	DATE: 10/20/21

FSI APPROVAL STAMP OR	
SIGNATURE:	DATE: 10/19/21

FRAC SHACK™

PA-6004

E-EG PRODUCTION AND ASSEMBLY CHECKLIST

UNIT NUMBER: EG84

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FRAC SHACK™

UNIT NUMBER: EG84

SKID DELIVERY AND INSPECTION RECORD

VISUAL CHECKLIST

- [x] 3" Butterfly valve on pump inlet is installed
- [x] 10HP Motor, Gearbox and Pump assembly mounted and aligned
- [x] Gear pinch point cover installed between pump and motor
- [x] 3/4" TOL for temperature switch is present on pipe spool between the pump and 3-way ball valve
- [x] 3 Port 2-Way ball valve installed on a pipe spool
- [x] Cimtek triple filter housing installed on pipe spool
- [x] 2 Winter Gauges 4" 300LB Pressure gauges mounted on pipe spool, one on each side of filter
- [x] 567LPM flow meter mounted, bolted to stand and facing towards the inside of the skid
- [x] Flow direction of flow meter confirmed to be correct and flowing towards fuel manifold
- [x] 3" Butterfly valve installed in pipe spool for each fuel rail manifold (one upper and one lower)
- [x] Upper and ~~lower~~ manifolds have 3" flange blinds installed on pipe spool
- [x] Hose reel guide brackets shipped with skid and have been placed on skid platform
- [x] Anti-slip coating present on flooring
- [x] Secondary containment ball valve is present, with handle installed.
- [x] Plug installed in the secondary containment valve.
- [x] Hose rack hanger brackets shipped with skid and placed on skid platform
- [x] 2 head holders and trays installed and mounted on stand supports

IF ANY OF THE ITEMS ABOVE ARE NON-CONFORMING AND THE ACTION ITEM DOES NOT OR WILL NOT CORRECT THE NON-CONFORMANCE, PLEASE NOTE THE ISSUE IN COMPLETE DETAIL BELOW AND INFORM YOUR SUPERVISOR FOR CORRECTION AND FOLLOW UP.

ASSEMBLER NOTES

INSPECTOR OR SUPERVISOR NOTES

FRAC SHACK™ UNIT NUMBER: EG84

	PHYSICAL CHECKLIST
☑	All nuts and studs on piping and manifold flanges have been checked for tightness with wrenches
☑	All threaded unions have been checked for tightness with pipe wrench
☑	Install 3" cap on pump inlet if not already present
☑	Install 2" cap on two-way ball valve if not already present
☑	Install plugs into all TOL ports on the fuel manifolds with thread tape and pipe dope
☑	Remove triple filter canisters to confirm filter elements have been installed
☑	Reset flow meter to all zeros.
☑	Apply pinch point decal to gear box/pump guard.

EQUIPMENT RECORD

Equipment	Manufacture	Model #	Serial #
Motor Record	MARATHON	D215TTF5652ZDRL	C0594630-04/02-03
Gearbox Record	UNABLE TO READ		
Pump Record	BLACKMER	2017274	440AG1S10000N
Flow Meter Record	TCS	700-254PRALD	832943
Exhaust Fan	UNABLE TO READ		
Gas Transmitter (EG)	NET SAFETY	MZI-AR-A	013927O
Gas Sensor (EG)	NET SAFETY	SC310A-100 ASSY	0135702
Fire Eye (EG)	ROSEMOUNT	97UF2A6S1A2	0130985

ASSEMBLER NOTES

RETRO FIT

INSPECTOR OR SUPERVISOR NOTES

Kurt Martin — Recorder Name (Print) | Signature | Oct. 13, 2021 — Date

KEVIN LEGAULT — Inspector Name (Print) | Signature | OCT 13 2021 — Date

FRAC SHACK™ UNIT NUMBER: EG84

REEL INSTALLATION RECORD

INSTALL CHECKLIST	1	2	3	4	5	6	7	8	9	10	11	12	INITIAL
No visible signs of damage on reel	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	KL
Reel spins/turns freely without contacting	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	KL
Swivel is not equipped with grease nipple	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	KL
Reel is equipped with left hand crank	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	KL
All bolts installed with a washer on each side and nylock nuts have been used	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	KL
Reel number label applied to reel on bottom left corner	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	KL

COMPONENT RECORDS

Line #	HANNAY REEL MODEL #	HANNAY REEL SERIAL #	INITIAL
Line 1	6038-37-24 LB	2698009	KL
Line 2	"	2698045	KL
Line 3	"	2699554	KL
Line 4	"	2699555	KL
Line 5	"	2699525	KL
Line 6	"	2699526	KL
Line 7	"	2698037	KL
Line 8	"	2698036	KL
Line 9	"	2699470	KL
Line 10	"	2699469	KL
Line 11	"	2698007	KL
Line 12	"	2698008	KL

N/A RETRO FIT
Assembler Name (Print) *Signature* *Date*

KEVIN LEGAULT Kevin Legault OCT 13 2021
Inspector Name (Print) *Signature* *Date*

FRAC SHACK™

UNIT NUMBER: EG84

FUEL RAIL BUILD AND INSTALLATION RECORD

BUILD CHECKLIST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	INITIAL
Thread tape & dope used on all threads	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Ball valve packing tightened, tested, and in the correct orientation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Solenoid valve arrows pointing in direction of flow	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Turbine meter arrows pointing in direction of flow	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Fuel rail has been installed, tightened, and numbered	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Serial numbers and K factors recorded in Fuel rail build sheet.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Flow meter sheets are hole punched and in binder	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

COMPONENT RECORDS			
Line #	Turbine Serial #	Calibration Factor	Initial
Line 1	130281	852.94	KZ
Line 2	151265	847.05	KZ
Line 3	131178	853.09	KZ
Line 4	~~131595~~ 131266	~~863.80~~ 878.54	KZ
Line 5	131595	863.80	KZ
Line 6	131175	854.25	KZ
Line 7	129702	841.53	KZ
Line 8	131075	872.15	KZ
Line 9	131157	869.74	KZ
Line 10	131161	878.18	KZ
Line 11	131158	887.36	KZ
Line 12	131156	883.21	KZ
Line 13	134687	851.02	KZ
Line 14	134502	871.23	KZ

N/A RETRO FIT
Assembler Name (Print)

Signature

Date

KEVIN LEGAULT
Inspector Name (Print)

Signature

OCT 13 2021
Date

FRAC SHACK™ UNIT NUMBER: EG84

FUEL RAIL BUILD AND INSTALLATION RECORD

BUILD CHECKLIST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	INITIAL
Thread tape & dope used on all threads	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Ball valve packing tightened, tested, and in the correct orientation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Solenoid valve arrows pointing in direction of flow	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Turbine meter arrows pointing in direction of flow	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Fuel rail has been installed, tightened, and numbered	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Serial numbers and K factors recorded in Fuel rail build sheet.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Flow meter sheets are hole punched and in binder	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

COMPONENT RECORDS

Line #	Turbine Serial #	Calibration Factor	Initial
Line 1	130281	852.94	KZ
Line 2	151265	841.05	KZ
Line 3	131178	853.09	KZ
Line 4	~~131595~~ 131266	~~863.80~~ 878.54	KZ
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Line 9	131157	869.74	KZ
Line 10	131161	878.18	KZ
Line 11	131154	887.36	KZ
Line 12	131156	883.21	KZ
Line 13	139687	851.02	KZ
Line 14	139502	871.23	KZ

N/A RETRO FIT _____ _____
Assembler Name (Print) Signature Date

KEVIN LEGAULT _____ OCT 13 2021
Inspector Name (Print) Signature Date

FRAC SHACK™ UNIT NUMBER: EG84

HOSE INSTALLATION RECORD

INSTALL CHECKLIST													
TASK LIST	1	2	3	4	5	6	7	8	9	10	11	12	INITIAL
Install 1" to ¾" bushing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Install ¾" hose swivel fitting into reel bushing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Reel 250ft of ¾" BC Cold flex hose on to each hose reel.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Install ¾" male DNP fitting on the end of each line.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
All connections were completed, using thread tape and pipe dope	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Ensure the reel number label is applied to the reel identifying the reel number in lower left-hand corner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Use grease / paint marker/etcher to label hose end and quick connect identifying the line/reel number.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

Line #	13	14	INITIAL
Spool end removed from inside spool	☑	☑	KL
All connections made with tape and dope	☑	☑	KL
Install ¾" DNP Female and Male ends to each end of hose	☑	☑	KL

N/A RETRO FIT		
Assembler Name (Print)	*Signature*	*Date*
KEVIN LEGAULT	Kevin Legault	OCT 13 2021
Inspector Name (Print)	*Signature*	*Date*

FRAC SHACK™ UNIT NUMBER: EG84

WALL STRUCTURE ASSEMBLY RECORD

	BUILD CHECKLIST
☐	Bottom "C "channel installed with self-tapping screws used every 8 inches into skid floor.
☐	Excess screw threads removed with grinder, leaving no sharp edges.
☐	Vertical panels secured in bottom channel every 6 inches with rivets.
☐	All wall panels installed between tongue and grooves and secured to each other on the seams every 8 inches with self sealing rivets on exterior.
☐	Wall panels secured to each other on the seams every 8 inches on interior with self-sealing rivets.
☐	Corner flashing installed on each corner between panels and secured to panels on each side every 8 inches with self-sealing rivets.
☐	Roof flashing fastened to walls every 6 inches with self-sealing rivets.
☐	Roof flashing fastened to roof panels every 8 inches with self-sealing rivets.
☐	Roof panels secured to each other on seams every 8 inches ***except for centre 3 ft*** with self-sealing rivets.
☐	Seam tape applied and rolled securely on to all roof panel seems and flashing edges.
☐	Doorway cut out **(verify cut-out size and location by reviewing equipment drawings)**
☐	Door mounted in door frame
☐	Door check chain outfitted with clip for quick disconnection
☐	Door handle hardware installed and tested

	CUTOUTS		
☐	Four cut outs for exterior light fixtures	☐	One cut out for 3" line inlet
☐	One cut out for exhaust fan	☐	Three hose distribution cut outs
☐	One power receptacle cut out	☐	One vent cut out
☐	One operator window cut out	☐	One door window cut out
(verify cut-out size and location for all above by reviewing equipment drawings)			

	COMPONENT MOUNTING
☐	Exhaust fan unit has been installed
☐	Four exterior light fixture housings have been installed and sealed with caulking on exterior
☐	Fresh air vent louvres installed and sealed with caulking on exterior
☐	Operator window installed and sealed with silicone and flashed/Screen on emergency ladder side
☐	Door window Installed and sealed with silicone
☐	Sensor head holders mounted on brackets

	FLASHING
☐	All cut-outs have been flashed
☐	Man door cut out has been flashed
☐	Both operator and door windows have been flashed
☐	Four exterior light fixtures have been flashed on the interior to cover bottom gap
☐	Exhaust fan cut out has been flashed on exterior
☐	Interior vent cut out have been flashed on interior side

	SEALING / CAULKING
☐	Exterior light fixtures have been caulked on the interior of building
☐	Exterior holes have been filled with duct seal
☐	Exterior of exhaust fan has been caulked
☐	Exterior and Interior of vent cut-out has been caulked

	ACCESS DOORS
☐	3" Inlet access door has been built, flashed and installed with barrel bolt and rubber tie
☐	3 x Hose distribution access doors have been built, flashed and installed with barrel bolts and ties

ASSEMBLER NOTES	DATE:

NA RETRO FIT		
Assembler Name (Print)	Signature	Date
KEVIN LEGAULT		OCT 13 2021
Inspector Name (Print)	Signature	Date

FRAC SHACK™ UNIT NUMBER: EG84

ROOF COATING

TASKS	INITIAL	DATE / TIME
Roof has been sanded, all rivet stems and other pieces swept off.		
Roof Tape Applied		
First coat of Liquid rubber or another Roof coating applied		
Second coat of Liquid rubber or another Roof coating applied		
Third coat of Liquid rubber or another Roof coating applied		

NOTES

NA RETRO FIT — Assembler Name (Print) | Signature | Date

KEVIN LEGAULT — Inspector Name (Print) | Signature | OCT 13 2021 — Date

FRAC SHACK™ UNIT NUMBER: EG84

FILLER HEAD ASSEMBLY RECORD

FILLER COMPONENTS			
Each Patented fuel filler head contains			
☐	3" Machined Filler Head	☐	Breather with 90° elbow
☐	Ball Valve to 45° elbow for fill inlet	☐	Male Camlock ¾" on Breather
☐	Female Dry-disconnect	☐	48" Fuel Overflow / Vent Hose "Spit Tube"
☐	Fuel Stinger Hose		

BUILD CHECKLIST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	INITIAL
Thread tape & dope used on all threads	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Ball valve packing tightened and tested	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Ball valve is facing up towards operator and the handle points down when open	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Accutech sensors installed and programmed appropriately based on shack unit number	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Fuel head labelled with shack number and unit ID number	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

RETRO

COMPONENT RECORDS

Line #	Accutech Serial #	Initial	Line #	Accutech Serial #	Initial
LINE 1	S267319	KL	LINE 9	S257602	KL
LINE 2	S267322	KL	LINE 10	S257621	KL
LINE 3	S210124	KL	LINE 11	S266341	KL
LINE 4	S267317	KL	LINE 12	S258407	KL
LINE 5	S292655	KL	LINE 13	S266960	KL
LINE 6	S267325	KL	LINE 14	S262180	KL
LINE 7	S267321	KL	SPARE	S276510	KL
LINE 8	S267320	KL	DAYTANK	S292656	KL

NA RETRO FIT — Assembler Name (Print) | Signature | Date

KEVIN LEGAULT — Inspector Name (Print) | Signature | OCT 13 2021 — Date

ELECTRICAL INSPECTION RECORD

Electrical installation is to be performed by a journeyman electrician or registered apprentice working off the electrical drawings and design layout as work instructions. This is a mandatory trade subject to external regulations and requirements outside the scope of this check list. Work instructions for the electricians are provided by the electrical drawings for each project. The below are items to be inspected after the electrical installation has been completed for quality assurance only.

ELECTRICIAN SIGN OFF	INITIALS	
	Installer	Inspector
All conduits/flexes/cables are properly installed (5 threads) and straight	KZ	KW
All conduit/flex/cable straps are tight and within proper distance	KZ	KW
All terminations in CP are tight and properly tagged	KZ	KW
All terminations in Distribution panel are tight and properly tagged	KZ	KW
All terminations in devices are tight and properly tagged	KZ	KW
Screw-on fittings and covers are properly lubricated with STL or HTL	KZ	KW
Lamacoids on CP and VFD panels installed with proper shack name	KZ	KW
Lock installed on AC/Heater transfer switch NA		

EG ONLY	INITIALS	
	Installer	Inspector
All terminations in ESD panel are tight and properly tagged	KZ	KW
ESD panel has all bolts in place and tightened	KZ	KW
Screen & lens on LEL detector is free from cracks, scratches, and damage	KZ	KW
Lens on Fire Eye is free from cracks, scratches, and damage	KZ	KW
Sealing fitting for sounder is packed, poured, and plugged	KZ	KW
Secondary seals for gas detection are packed, poured, and plugged (2)	KZ	KW
Secondary seals for fire detection are packed, poured, and plugged (2)	KZ	KW
Secondary seals into ESD panel are packed, poured, and plugged (4)	KZ	KW
Fire Detection functions properly and is aimed appropriately	KZ	KW
Gas Detection functions properly	KZ	KW
15 Amp NG Control Panel breaker installed	KZ	KW

VISUAL ELECTRICAL INSPECTION	INITIALS	
	Installer	Inspector
2 Interior lights installed and functional	KZ	KW
4 Exterior lights installed and functional	KZ	KW
Service Receptacle installed and wired properly	KZ	KW
All panels hung properly and are secured	KZ	KW
Exterior ESD button installed	NA	KZ
Interior ESD button installed	NA	KZ
All devices installed correctly and secured	KZ	KW
All conduit/flex/cable connectors, fittings, and hubs are tight	KZ	KW
All fittings have covers installed and tightened	KZ	KW
No visible scarring or damage to cables, wires, or conduits	KZ	KW
Holes around conduits and fittings exiting shack are sealed	KZ	KW
Breaker panel (load center) secured to wall with cover installed	KZ	KW
60AMP 3 POLE VFD breaker installed	KZ	KW
20AMP 3 POLE Heater breaker installed	KZ	KW
15AMP Exhaust fan breaker installed	KZ	KW
15AMP Receptacle breaker installed	KZ	KW

FRAC SHACK™ UNIT NUMBER: EG84

VISUAL ELECTRICAL INSPECTION	INITIALS	
	Installer	Inspector
15AMP Control Panel breaker installed	KZ	KW
15AMP Lighting breaker installed **(E-series Only)**	KZ	KW
Spare 15A breakers installed	KZ	KW
All breakers are properly labeled.	KZ	KW
Tray installed, secure and covered	KZ	KW
Main Flow Meter installed and properly wired	NA	KZ

COMPONENT POWER UP	INITIALS	
	Installer	Inspector
Power to UPS	KZ	KW
UPS Battery Charging System OK	KZ	KW
Power to PLC	KZ	KW
Power to BR20	KZ	KW
Power to Base Engineering unit	KZ	KW
Power to CP Ventilation fan and thermostat set to 20C	KZ	KW
Power to VFD	KZ	KW
Heater functions properly (correct rotation and provides heat)	KZ	KW
Exhaust Fan's Manual/Auto switch functions properly and fan operates in correct rotation **(Manual Switch Only if E-Series)**	KZ	KW
Manual Interior light switch installed and functioning properly (E-Series Only)	NA	NA
Utility GFCI receptacle functions properly and protects both receptacles	KZ	KW
Power to air conditioning unit and proper function NA		

GROUND CONNECTIVITY TESTING

☑	Performed on hoses	☑	Performed on Bonding Bar
☑	Performed on Reels	☐	Bonding conductor installed between XP and E/EG

ACCESSORIES

☑ Included Electrical Service Kit consisting of:

- 5 x ATM 10A Fuses
- 5 x GMA 1A Fuses
- 5 x GMA 6A Fuses
- 1 x Terminating Screwdriver
- 2 x Battery Blade Fuses
- 10 x GMA 100mA Fuses
- 5 x GMA 2A Fuses
- 1 x Suppressor Gas Fuse
- 1 x Philips Screwdriver
- 10 x GMA 500mA Fuses
- 10 x 5A Fuses
- 1 x Multimeter
- 5 x GMA 250 mA Fuses

KEVIN LEGAULT		Oct 18 2021
Electrical Name (Print)	*Signature*	*Date*
Kurt Neath		Oct. 18, 2021
Inspector Name (Print)	*Signature*	*Date*

FRAC SHACK™ UNIT NUMBER: EG84

AUXILIARY INTERCONNECT BOX INSTALLATION RECORD

UNIT JUNCTION BOX IS MOUNTED TO	INITIALS	
	Installer	Inspector
Junction box is installed and easily accessible to attach cables from exterior	KL	CP
Military-style connector installed on junction box for Actuated Valve control	KL	CP
Military-style connector installed on junction box for Sidekick communications	KL	CP
Military-style connector installed on junction box for Rear NG ESD	KL	CP
Military-style connector installed on junction box for Rear NG Ethernet	KL	CP
Military-style connector installed on junction box for Rear NG Power	KL	CP
All cabling and components are free of damage, cuts, and scrapes	KL	CP
Junction box securely mounted on rear of FracShack	KL	CP
Properly sized cable, flex, or conduit installed in junction box and ran back to CP	KL	CP
All terminations are soldered inside box and properly tagged	KL	CP
All devices and panels wired correctly as per electrical drawings	KL	CP
Box sealed on exterior of FracShack with flap cover installed and latch.	KL	CP

ACTION ITEMS	COMPLETE DATE	INITIAL

Installer Name (Print)	Signature	Date
KEVIN LEGAULT		OCT 13 2021

Inspector Name (Print)	Signature	Date
Chris Phillips		Oct. 13 2021

PROGRAMMING

☒ PLC Programmed and functional	INITIAL: RW
Version: 1.34	

☒ HMI Programmed and functional	INITIAL: RW
Version: D-SK_NOV-30_20	

☐ BR20 DIP switches properly set and communicating with PLC
☐ BR20 Radio Programmed and functional
☐ VFD Programmed and functional
☒ Modem installed and functional
☐ Modem firmware updated to CAT12 and build 1.5.0 Revision 1032
☐ Modem configuration file uploaded
☒ Modem IP set to shack number (128.1.XX.10)
☒ Modem connected to internet
☐ Information Labels Affixed to inside of Cabinet
☒ HMI's IP, Subnet, Gateway, and DNS address set

HPXi INSTALLATION RECORD

CHECKLIST

☒ Windows 10 update, and fresh install completed?
☒ User accounts created? Operations; ADMIN
☒ Autologin set for Operations?
☒ PC name has been changed to shack name with prefix "SHK-"?
☒ HMI IP address set? Power Settings set? Correct date and time?
☒ Windows 10 Pen mount driver installed?
☒ SQL instance installed and Named Correctly?
☒ SSMS installed? (SQL SERVER MANAGEMENT STUDIO).
☒ "Newest HPXi version installed?" VERSION: 6.0.2.14
☒ "Newest HPXi Project/s installed?" VERSION:
☒ "Newest HPXi Datasync installed?" VERSION: 3.0.0.3

FRAC SHACK™

UNIT NUMBER EG-84

PA-6004 – E/EG PRODUCTION AND ASSEMBLY CHECKLIST

☒ "Splashtop", Has Splashtop been setup? Has remote been copied onto desktop? Has Splashtop ID been set to the unit it is installed on (E/XPX combo).
☒ Firefox; VMware; Atera; 7zip; Apple tether drivers Installed?
☒ HMI Personalization been completed following instructions?
☒ Azure active directory has been linked and synced with the correct profile? With company portal installed?
IF ANY OF THE ITEMS ABOVE ARE NON-CONFORMING AND THE ACTION ITEM DOES NOT OR WILL NOT CORRECT THE NON-CONFORMANCE, PLEASE NOTE THE ISSUE IN COMPLETE DETAIL BELOW AND INFORM YOUR SUPERVISOR FOR CORRECTION AND FOLLOW UP.

INSTALLER NOTES

INSPECTOR OR SUPERVISOR NOTES

Ryan Macias		9/30/21
Programmer Print	Programmer Signature	Date
Kurt Nash		Oct. 18, 2021
Inspector Print	Inspector Signature	Date

FINAL PREPARATION

BASIC FUNCTION TESTING	
☑	Solenoid function testing via HMI (Line 1, Activates Solenoid 1, etc.)
☑	Pump turns on and operates with correct rotation
☑	Pump remote control functions and activates pump
☑	BR20 reports all heads online, all heads reporting online on HMI
☑	Interior and Exterior ESD buttons function properly
☑	HMI soft ESD button functions properly

ADVANCED FUNCTION TESTING	
☑	Modem remote connectivity tested
☑	Remote connectivity to PLC tested
☑	Remote connectivity to HMI tested
☑	Manual remote pump operation tested (Base engineering receiver) (Min 100 ft away)
☑	Main flow meter reads and functions properly
☑	Distance test on sensor heads (Min 200ft away, through obstructions example go to front of building with all sensor heads)

SHACK PREPARATION	
☐	Day tank fill and suction camlock installed, complete with caps NA
☑	3" Female camlock installed on inlet with cap
☐	3" double female short fuel hose from day tank to shack cut to fit complete with plugs NA
☑	20' 3" fuel line with male/female ends complete with caps and plugs
☑	2" male camlock installed on 3 port 2-way ball valve with cap
☑	Verify all holes in piping and manifold are filled / plugged
☑	4 x BC Cold Flex 75ft extensions in shack, complete with male and female disconnects
☑	Verify all hose lines have ¾" dry disconnect male ends installed
☑	Verify all lines are clearly labelled and easy to identify (Line 1, Line 2, Line 3, etc.)
☑	2 x Fuelling nozzles with 3/4" female dry disconnect
☑	20 lb. Fire Extinguisher Installed in Bracket (ABC)
☑	First Aid Kit installed
☑	Eyewash Station installed
☑	Exterior antenna plate has been mounted
☑	Fire resistant, insulated operator curtain installed
☑	Ear plug dispensing station installed
☑	Waterless hand soap station installed
☑	Operational sticker been put on Left hand side of control panel.
☑	Door handles and locks are installed properly and functional
☑	Sensor head holders mounted on brackets

SENSOR HEAD CHECK	
☑	Spare sensor Serial number recorded on build sheet and is in demob, checked for it functions
☑	Day tank sensor built, and serial number recorded ready to be tested

TANK PREPARATION	
☐	Check ladder for functionality
☐	Check ladder cage for functionality
☐	Safety bar present on top of walking platform
☐	All ports are labelled
☐	Check Interstitial space for dryness
☐	Vent pipe present and installed for testing
☐	Draw pipe for compatibility with pump line and valve operation
☐	Fill pipe for valve operation
☐	Rollup door for functionality, ensure it can be locked up and down

NA

FRAC SHACK™ UNIT NUMBER: EG84

TANK PREPARATION	
☐	Ensure that the Tank Sensor has the correct adapter and fits properly on the tank
☐	Ensure that dip chart conversion from liters to gallons supplied
☐	Check during operational testing with fuel, to listen for air leaks or fuel leaks N/A
☐	XP and 3" port adapter installed

EXTERIOR INSPECTION	
☑	Frac Shack™ Logo and FracFueller™ Logo on both Diesel unit and daytank
☑	Correct telephone number if shack is for US/Canada – If unknown, left blank
☑	Canadian, US and Australian patent decal present
☑	Unit Number
☐	**1202** Decals on all four sides of tank N/A
☐	Trailer Plates and Registration/Insurance in Document Tube
☑	Emergency Ladder – check operation
☐	Lexan Window with Screen closest to Emergency Ladder

INSTALLER NOTES

Assembler Name (Print)	Signature	Date
RETRO FIT		
Inspector Name (Print)	**Signature**	**Date**
KEVIN LECHOLT	Kevin Lecholt	OCT 14 2021

ACCUTECH SENSOR HEAD TESTING

*** See COMMISION TEST PROCEDURE 2.0 for full detail and procedure*

LINE 1	LINE 2	LINE 3	LINE 4	LINE 5	LINE 6	Line 7
CP	CP	CP	CP	KL	CP	CP

LINE 8	LINE 9	LINE 10	LINE 11	LINE 12	LINE 13	Line 14	DAYTANK
CP	CP	CP	CP	CP	KL	KL	NA

DIESEL PRESSURE/FLOW TEST

OPERATING PRESSURE	Before Filter:	After Filter:	DEADHEAD PRESSURE	Before Filter:	After Filter:
	75	77		80	80

LINE	FLOW/METER L/PM	HMI K-FACTORS AFTER CALIBRATION	FUEL METER ACCURACIES	
			FLOW METER	TURBINE METER
1	40.2	0.00427416	~~100~~ 100	~~100~~ 100.4
2	42.4	0.00427416	100	100
3	44.61	0.00432691	~~100~~ 100	~~100~~ 100.2
4	41.72	0.00420929	100	99.4
5	40.41	0.00424809	100	100.1
6	39.62	0.00438061	100	100.80
7	39.10	0.00429621	100	99.2
8	40.67	0.00427416	100	100.9
9	39.10	0.00427416	100	100
10	38.83	0.00416846	100	99.2
11	43.13	0.00402617	100	100.4
12	45.1	0.00409335	100	99.9
13	35.42	0.00432546	100	100.5
14	39.10	0.00417803	100	100.2

FRAC SHACK™ UNIT NUMBER: EG84

FUNCTION TEST

*** See FUNCTION TEST 6.0 for full detail and procedure*

HH – HIHI Level (Overfill)
LL – LOLO Level (Fill)

H – HI Level (Stop)
M – Manual Mode Test

LINE 1	
HH	✓
H	✓
LL	✓
M	✓

LINE 2	
HH	✓
H	✓
LL	✓
M	✓

LINE 3	
HH	✓
H	✓
LL	✓
M	✓

LINE 4	
HH	✓
H	✓
LL	✓
M	✓

LINE 5	
HH	✓
H	✓
LL	✓
M	✓

LINE 6	
HH	✓
H	✓
LL	✓
M	✓

LINE 7	
HH	✓
H	✓
LL	✓
M	✓

LINE 8	
HH	✓
H	✓
LL	✓
M	✓

LINE 9	
HH	✓
H	✓
LL	✓
M	✓

LINE 10	
HH	✓
H	✓
LL	✓
M	✓

LINE 11	
HH	✓
H	✓
LL	✓
M	✓

LINE 12	
HH	✓
H	✓
LL	✓
M	✓

LINE 13	
HH	✓
H	✓
LL	✓
M	✓

LINE 14	
HH	✓
H	✓
LL	✓
M	✓

☑ Tested both manual fueling nozzles for operation.
☑ All Four extensions tested pressure tested by hooking into a line during pressure test.

Tester Name (Print)	Signature	Date
Kevin Legault	K Legault	Oct 14 2021
Inspector Name (Print)	Signature	Date
Chris Phillips		Oct 14 2021

FRAC SHACK™ UNIT NUMBER: EG84

JOB SETUP

See **Commission Test Procedure 1.0** for detail and procedure.
☑ This process followed appropriately as set out in instructions.

ACCUTECH SENSOR HEAD TESTING

See **Commission Test Procedure 2.0** for detail and procedure.
☑ This process followed appropriately as set out in instructions.

PRIME FUEL PUMP

See **Commission Test Procedure 3.0** for detail and procedure.
☑ This process followed appropriately as set out in instructions.

PRESSURE AND LEAK TEST

See **Commission Test Procedure 4.0** for detail and procedure.
☑ This process followed appropriately as set out in instructions.

METER CALIBRATION

See **Commission Test Procedure 5.0** for detail and procedure.
☑ This process followed appropriately as set out in instructions.

FUNCTION TESTING

See **Commission Test Procedure 6.0** for detail and procedure.
☑ This process followed appropriately as set out in instructions.
☑ The buzzer is working correctly with all alarms

TESTING MANUAL FUELING NOZZLES

See **Commission Test Procedure 7.0** for detail and procedure.
☐ This process followed appropriately as set out in instructions.
☐ The buzzer is working correctly with all alarms

JOB COMPLETION

See **Commission Test Procedure 8.0** for detail and procedure.
☑ This process followed appropriately as set out in instructions.
☑ The buzzer is working correctly with all alarms

INSTALLER NOTES

Kevin Legault		Oct 18 2021
Tester Name (Print)	***Signature***	***Date***
Kurt Newton		Oct. 18, 2021
Inspector Name (Print)	***Signature***	***Date***

FRAC SHACK™ UNIT NUMBER: EG84

INVENTORY PACKING / DEMOB

☑ E/EG Supply Skid Packed into unit
☑ Attached completed demob at the end of this document
☐
☐
☐
☐
☐
☐
☐

MANUALS & FORMS	

Kiara Holewa — Demob Completed By (Print)

Signature

Oct 13 2021 — Date

HANDOVER AND DOCUMENT PACKAGE

☑ Reviewed production checklist for completeness and accuracy
☑ Completed hand over document (PA-6012) to transfer equipment to operating company

Form PA-6012 Handover

SHACK ISSUES / DELAY'S TRACKER

NOTES

COMMISSION TEST PROCEDURES

1.0 JOB SETUP

1. Select Parent skid in drop down menu in top left of HPXi application.
2. Login as "Prod" user to start testing procedure.
3. Click "Site Setup" and enter in correct job info for Production.
    a. Country: Frac Shack Inc (ADMIN USE ONLY)
    b. STATE/PROVINCE: Alberta
    c. REGION: FSH
    d. ENERGY PRODUCER: Frac Shack
    e. SERVICE PROVIDER: Frac Shack
    f. FUEL PROVIDER: Frac Shack
    g. WHO IS DISTRIBUTING NG ON THIS SITE: Frac Shack
    h. JOB ID: 1010000001765
    i. SITE NAME OR LSD: "SHACK ID" BOL or Retrofit.
    (Site name is dependant on which shack you are currently testing if it is a new build or a retrofit.)
    j. Press Start job.
    k. Enter Well information.
    l. A confirmation will populate and will require you to enter the JOD ID, and SITENAME OR LSD again, be aware of order it asks for information.
    m. Confirm Start.
4. Touch "Diesel" on menu bar.
5. Select line 1 and enter in DIESEL PUMP and serial number for the line. (Line 1 = 1) etc
6. Repeat for all remaining lines.
7. Touch "New Stage" enter in WELL: 1 and STAGE: 1. (This is for Priming the pump, and Pressure testing.)

2.0 ACCUTECH SENSOR HEAD TESTING

1. Turn "ON" Accutech sensor heads one at a time, starting with number 1.
2. Look at the HMI to ensure line 1 on the screen becomes enabled and shows online.
3. If correct, install sensor head into the test tank as required and repeat for the next head.
4. Continue procedure until all heads are online and tested as operational.
5. When successful and all heads are functioning as expected, initial each line number below.
6. Load all Sensor heads onto a pallet and take them 200ft minimum and have obstacles such as going to the other side of a building, Check screen while sensor heads are away from shack ensure they still read on the HMI. If no signal inform supervisor, or manager and have electrician trouble shoot.

3.0 PRIMING THE PUMP

1. Connect the fuel lines to the appropriate sensor heads (filler heads) E.G.: Line 1 to head 1, line 2 to head 2, etc.
2. Fill inlet hose to the pump with diesel from a Jerry can or other source as applicable. Pay close attention to not over fill the hose and have spill containment and absorbent pads near by.
3. Once you have put diesel in the inlet hose, pull the hose up to diesel the fuel into the pump. This will help lubricate the pump, vanes, and seals. This helps the pump create suction and be able to pull fuel out of the daytank.
4. Carefully reconnect the inlet hose to the daytank suction port.
5. Ensure the suction valve is open, the pump inlet valve is open, manifold valves are open and the valve on sensor head 1 is open.
6. Put the shack into "Manual Mode" and enable line one.
7. Activate pump with the remote control to allow the pump to start sucking fuel from the daytank, this may take up to a minute until you have a smooth fuel flow.
8. Once the pump and line is primed, stop the pump.
9. Repeat for all lines.
10. Repeat for XP Unit (if Applicable)

4.0 PRESSURE AND LEAK TESTS

1. Put shack into "MANUAL" mode and enable line 1.
2. Press the start button on the remote to begin fueling.
3. Once steady flow is established.
    a. Note the flow rate of the fuel line from the HMI and record it on the table below. **IF BELOW 45L/M INFORM SUPERVISOR.**
    b. Note the operating pressure on the pressure gauges by the flow meter and record it on the table below.
4. Have an assistant close the sensor head valve on line 1.
    a. Note the "Deadhead" pressure on the pressure gauges by the flow meter and record it on the table.
5. Close the valve on the fuel rail of line 1.
6. Press the stop button on the remote to stop the pump. You have now pressurized the fuel rail, reel, and hose assembly.
7. Repeat this process (steps 1 – 5) on all remaining lines until every line has been completed and is pressurized, add the extensions that are to be shipped with shack into system by connecting them into the main fuel line and to the sensor head. It can be done through different lines or on one line.
8. Carefully look for leaks starting at the fuel rails for each line, check the reels and hose for leaks and then inspect the fuel sensor heads (filler heads).
9. Make a note of all issues found below, including as many details as you can then release the pressure by opening all the valves on the fuel rails and at the sensor heads.
10. Make repairs to the lines as necessary, noting the repairs made below and retest the faulty line(s) as required. Use the same procedure above until all lines are functional without any leaks.
11. Repeat on XP (if Applicable)

5.0 METER CALIBRATION

1. Enter a new stage for Meter Calibration.
2. Select Well 1, Stage 2, press "SUBMIT"
3. On HMI go to "Diagnostics" then "*Administration" ensure all tanks are set to default set points.

URV 30.0	HH 17.0	STOP 15.0	START 11.0	LL 9.0	LRV 0.0

4. Select the correct number of lines for the shack. (E=12, EG=14, XP=8, H=28)
5. Press "Initialize"
6. Select Correct "UOM"
7. Press "Diagnostics" on menu bar then "METER CALIBRATION (LEAD)".
8. In bottom left corner enter the "MAIN METER" Serial number. This is located on the flow meter itself; this is a 6-digit serial number.
9. Once entered it will ask you to confirm the serial number.
10. Ensure the test trailer tanks are empty, if not pump out the tanks and turn off the pump.
11. Select line 1, and enter in NEW K factor and New Serial, press start.
    a. Allow for test to complete.
    b. If test has failed system will suggest new k factor, keep repeating until line passes.
    c. Repeat for all lines on shack.
12. Repeat on XP (if Applicable)

6.0 FUNCTION TESTING

1. Once you have completed Meter Calibration, End stage and enter in New Stage for Next step
2. Press "Diesel" on menu bar.
3. Press on the pump and select "AUTO".
4. Drain test tanks below 9"
5. Enable All lines.
6. You should see a "LO" alarm and the pump will kick in and begin filling.
7. Once the line hits 15" ensure lines shuts down.
8. Drain the test trailer tanks again, allow for diesel to drop below 11" and lines automatically start as they drop below the start limit. If they, do you can disable line.
9. While filling test tanks the levels should increase to the HIHI alarm due to their design. If the line does achieve this level enable overfill mode on that line and continue testing remaining lines.
10. When lines hit the HH level (17") you will receive an HH alarm, and the pump will shut down.
11. Record the testing results on the table.
12. Ensure TOP UP TANKS button and SYSTEM PAUSE button work on diesel screen.
13. Ensure running diesel but bypassing main flow meter sends system into alarm.
14. Switch mode to PUMP out and ensure PUMP out works correctly.
15. Disable HANDHELD remote and test the start and stop function on screen.
16. End stage and select Well: 2, STAGE: 1. If testing an Expansion unit like an XP (if applicable)
    a. Repeat steps above starting from step 4 to step 14.
17. Move job to the next stage and then end the job (after XP is tested if applicable)
18. Drain fuel tanks below preset High High level of 17".
    In manual mode use demob manual nozzle to fill tank until High High alarm sounds. And all lines show HIHI alarm. This will complete Step 8.0

7.0 TESTING MANUAL FUELING NOZZLES

1. Have pump disabled before disconnecting any connections
2. Disconnect Head from its fuel line connect manual fueling nozzle
3. Turn on pump Confirm there is no leaks in nozzle connections and no flow out of end of nozzle
4. Put nozzle into port in test tank at an angle that you can see flow and wont spray diesel anywhere
5. Pull handle to allow flow and ensure opens fully and allows good flow, if it does not work tag out and talk to supervisor on getting it fixed or replaced.

8.0 JOB COMPLETION

1. Once testing has been completed you need to end the job.
2. This is done by pressing "Site Setup" and pressing "FINISH JOB"
3. Inform supervisor that the job has been completed. Do not shut shack down until you receive confirmation that the report has been synced and the data is available.

Factory Acceptance Test

EG84

Ultra-Fast Ultraviolet Infrared Flame Detector

Model No.: **975UF2A6S1A2** Serial No.: **21SHYA0130985**

	18V	24V	32V
Stand-by Current with heater, 110 mA Max	OK	***	OK
Alarm Current with heater, 160 mA Max	OK	***	OK
Indication LED	OK	OK	OK
Contact Relays Ratings	OK	OK	OK

Relays	Type	Normal Position	Maximum Ratings
Alarm	SPDT	N.O., N.C.	2A at 30 VDC
Auxiliary	SPST	N.O.	2A at 30 VDC
Fault	SPST	N.C. or N.O.	2A at 30 VDC

Alarm sensitivity to 1 ft² (0.1m²) Gasoline pan-fire @ 65 ft (20m)		OK
Warning sensitivity to 1 ft² (0.1m²) Gasoline pan-fire @ 72 ft (22m)		OK
Field of View:	Vertical 32 ft (10m) @ ±45°	OK
	Horizontal 32 ft (10m) @ ±50°	OK
4-20 mA Current Output Levels		OK
Fault outputs @ 0 & 2 mA	Normal operation @ 4 mA	
Warning alarm @ 16 mA	Alarm output @ 20 mA	
Hart Communication Test		OK
RS485 Communication Output		OK
Window Heater Test		OK
Functional Modes		OK
Alarm Delay Test		OK
Manual and Automatic BIT		OK
Dielectric Test, 1000V AC		OK
Pressure Test at 19 bar for at least 10 secs		OK

IMMUNITY TO FALSE ALARM

Sun - IAD	OK
Lamp 100W - IAD	OK
Halogen lamp 750W > 26 ft (8m)	OK
Heater 1500W - IAD	OK
Arc Welding 240A > 10 ft (3m)	OK
Match, wood > 3 ft (1m)	OK

IAD – Immune at Any Distance

APPROVALS

FM Approved for Hazardous Location
Class I, Div.1 Groups B, C & D / T5 Ta=85°C-6P/IP66+IP67
Class II & III, Div.1 Groups E, F & G / T5 Ta=85°C

FM Id.
3029553

SIL 2 (Safety Integrity Level) approved per IEC 61508 1-7:2010, EN 50130-4:2011, EN 54-10:2002+A1:2005

TUV No.
968/FSP 1223.01/17

EN 54-10 Approved per EN 54-10:2002 and A1:2005, VdS 2344:2014-07 and VdS 2504:1996-12/5.6

VdS No.
G215092
0786-CPR-21490

Approved By: INSPECTION QUALITY

Date: Feb 22, 2021

FRAC SHACK™

PA-6005

XP PRODUCTION AND ASSEMBLY CHECKLIST

UNIT NUMBER: XP28

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FRAC SHACK™ UNIT NUMBER: XP28

SKID DELIVERY AND INSPECTION RECORD

VISUAL CHECKLIST	
☑	2" Butterfly valve on pump inlet is installed
☑	10HP Motor, Gearbox and Pump assembly mounted and aligned
☑	Gear pinch point cover installed between pump and motor
☑	3/4" TOL for temperature switch is present on pipe spool between pump and flow meter
☑	3 Port 2-Way ball valve installed on pipe spool after flow meter
☑	Cimtek triple filter housing installed on pipe spool
☑	2x 4" Winter 300LB Pressure gauges mounted on pipe spool, one on each side of flow meter
☑	567LPM flow meter mounted, bolted to stand and facing towards the inside of the skid
☑	Flow direction of flow meter confirmed to be correct and flowing towards fuel manifolds
☑	2" Butterfly valves installed in pipe spool for each fuel rail manifold (left manifold and right manifold)
☑	Hose roller guides mounted on the bottom of the reel rack (2 for each side Left/Right)
☑	Anti-slip coating present on flooring
☑	Plug is present in the secondary containment valve.
☑	Control panel mounting bracket is installed, welded to skid and welded to reel rack for support

IF ANY OF THE ITEMS ABOVE ARE NON-CONFORMING AND THE ACTION ITEM DOES NOT OR WILL NOT CORRECT THE NON-CONFORMANCE, PLEASE NOTE THE ISSUE IN COMPLETE DETAIL BELOW AND INFORM YOUR SUPERVISOR FOR CORRECTION AND FOLLOW UP.

ASSEMBLER NOTES

RETROFIT

INSPECTOR OR SUPERVISOR NOTES

FRAC SHACK™ UNIT NUMBER: XP28

PHYSICAL CHECKLIST	
☑	All nuts and studs on piping and manifold flanges have been checked for tightness with wrenches
☑	All threaded unions have been checked for tightness with pipe wrench
☑	Install 2" cap on pump inlet if not already present
☑	Install 2" cap on two-way ball valve if not already present
☑	Install plugs into all TOL ports on the fuel manifolds with thread tape and pipe dope
☑	Remove triple filter canisters to confirm filter elements have been installed
☑	Reset flow meter to all zeros.
☑	Apply pinch point decal to gear box/pump guard.

EQUIPMENT RECORD

Equipment	Manufacturer	Model #	Serial #
Motor Record	Marathon Electric	SYE215TTFS6527ADRL	C050011-05/16-03
Gearbox Record	BONFIGLIOLI		0417000833892003
Pump Record	Blackmer/GE	02.5A	1134345
Flow Meter Record	TCS	700-25SPA2AL	829984

ASSEMBLER NOTES

RETROFIT

INSPECTOR OR SUPERVISOR NOTES

NA		
Recorder Name (Print)	Signature	Date
Chris Phillips		Oct 13 2021
Inspector Name (Print)	Signature	Date

FRAC SHACK™ UNIT NUMBER: XP28

REEL INSTALLATION RECORD

INSTALL CHECKLIST	REELS							
	1	2	3	4	5	6	7	8
No visible signs of damage on reel	☑	☑	☑	☑	☑	☑	☑	☑
Reel spins/turns freely without contacting	☑	☑	☑	☑	☑	☑	☑	☑
Swivel is not equipped with grease nipple	☑	☑	☑	☑	☑	☑	☑	☑
Reel is equipped with left hand crank	☑	☑	☑	☑	☑	☑	☑	☑
All bolts installed with a washer on each side and nylock nuts have been used	☑	☑	☑	☑	☑	☑	☑	☑
Reel number label applied to reel on bottom left corner	☑	☑	☑	☑	☑	☑	☑	☑

COMPONENT RECORDS

#	HANNAY REEL MODEL #	HANNAY REEL SERIAL #
Line 1	6018-33-34 LB	2624824
Line 2	6018-33-34 LB	2624809
Line 3	6018-33-34 LB	2624833
Line 4	6018-33-34 LB	2624830
Line 5	6018-33-34 LB	2627833
Line 5	6018-33-34 LB	2627832
Line 7	6018-33-34 LB	2624852
Line 8	6018-33-34 LB	2624853

NOTES

RETROFIT

Assembler Name (Print)	Signature	Date
NA		
Inspector Name (Print)	Signature	Date
Chris Phillips		Oct 13 2021

FRAC SHACK™ UNIT NUMBER: XP28

FUEL RAIL BUILD AND INSTALLATION RECORD

INSTALL CHECKLIST	LINES 1	2	3	4	5	6	7	8
Thread tape & dope used on all threads	☑	☑	☑	☑	☑	☑	☑	☑
Ball valve packing tightened, tested, and in the correct orientation	☑	☑	☑	☑	☑	☑	☑	☑
Solenoid valve arrows pointing in direction of flow	☑	☑	☑	☑	☑	☑	☑	☑
Turbine meter arrows pointing in direction of flow	☑	☑	☑	☑	☑	☑	☑	☑
Fuel rail has been installed, tightened and numbered	☑	☑	☑	☑	☑	☑	☑	☑
Serial numbers and K factors recorded in Fuel rail build sheet.	☑	☑	☑	☑	☑	☑	☑	☑
Flow meter sheets are hole punched and in binder	☑	☑	☑	☑	☑	☑	☑	☑

COMPONENT RECORDS

#	Turbine Serial #	Calibration Factor	Initial
Line 1	125892	856.76	
Line 2	125773	851.35	
Line 3	125913	814.00	
Line 4	125931	845.14	
Line 5	125905	852.53	
Line 6	125911	844.40	
Line 7	125886	849.19	
Line 8	125916	854.24	

NOTES

RETROFIT

NA		
Assembler Name (Print)	Signature	Date
Chris Phillips		Oct. 13 2021
Inspector Name (Print)	Signature	Date

FRAC SHACK™ UNIT NUMBER: XP28

HOST INSTALLATION RECORD

INSTALL CHECKLIST	LINES								
	1	2	3	4	5	6	7	8	Initial
Install 1" to ¾" bushing	☐	☐	☐	☐	☐	☐	☐	☐	
Install ¾" hose swivel fitting into reel bushing	☐	☐	☐	☐	☐	☐	☐	☐	
Reel 250ft of ¾" BC Cold flex hose on to each hose reel.	☐	☐	☐	☐	☐	☐	☐	☐	
Install ¾" male DNP fitting on the end of each line.	☐	☐	☐	☐	☐	☐	☐	☐	
All connections were made using thread tape and pipe dope	☐	☐	☐	☐	☐	☐	☐	☐	
Ensure the reel number label is applied to the reel identifying the reel number in lower left-hand corner.	☐	☐	☐	☐	☐	☐	☐	☐	
Use grease / paint marker to label hose end and quick connect identifying the line/reel number.	☐	☐	☐	☐	☐	☐	☐	☐	

NOTES

RETROFIT

Assembler Name (Print)	Signature	Date
NA		
Inspector Name (Print)	Signature	Date
Chris Phillips		Oct. 13 2021

FRAC SHACK™ UNIT NUMBER: XP28

WALL STUCTURE ASSEMBLY RECORD

BUILD CHECKLIST	
☐	Bottom "C "channel installed with self-tapping screws used every 6 inches into skid floor.
☐	Vertical panels secured in bottom channel every 8 inches with self-sealing rivets.
☐	All wall panels installed between tongue and grooves and secured to each other on the seams every 8 inches with self-sealing rivets on exterior.
☐	Wall panels secured to each other on the seams every 8 inches on interior with self-sealing rivets.
☐	Corner flashing installed on each corner between panels and secured to panels on each side every 8 inches with self-sealing rivets.
☐	Roof flashing fastened to walls every 8 inches with self-sealing rivets.
☐	Roof flashing fastened to roof panels every 8 inches with self-sealing rivets.
☐	Roof panels secured to each other on seams every 8 inches ***except for centre 3 ft*** with self-sealing rivets
☐	Seam tape applied and rolled securely on to all roof panel seems and flashing edges.
☐	First coating of liquid rubber applied in a thick, heavy coating using one full bucket.
☐	Doorway cut out **(verify cut-out size and location by reviewing equipment drawings)**
☐	Door mounted in door frame
☐	Door check chain outfitted with clip for quick disconnection
☐	Door handle hardware installed and tested

RETROFIT

CUT OUTS			
☐	Four cut outs for exterior light fixtures	☐	One cut out for 2" line inlet
☐	One cut out for control panel door	☐	Two hose distribution cut outs
☐	One power receptacle cut out		

(Verify cut-out size and location for all above by reviewing equipment drawings)

COMPONENT MOUNTING	
☐	Four exterior light fixture housings have been installed and sealed with caulking on exterior
☐	Exterior antenna's have been mounted (Base Engineering and Schneider Electric)
☐	Exterior IP67 Modem mounted
☐	Sensor head mounting system installed

FLASHING	
☐	All cut-outs have been flashed
☐	Man door cut out has been flashed
☐	Four exterior light fixtures have been flashed on the interior to cover bottom gap

SEAL / CAULKING	
☐	Exterior light fixtures have been caulked on the interior of building
☐	Exterior holes have been filled with duct seal

ACCESS DOORS	
☐	2" Inlet access door has been built, flashed and installed with barrel bolt and rubber tie
☐	2 x Hose distribution access doors have been built, flashed, and installed with barrel bolts, handles and ties

Main Assembler Name (Print)	Signature	Date
NA		
Secondary Assembler Name (Print)	**Signature**	**Date**
N/A		

FRAC SHACK™ UNIT NUMBER: XP28

ROOF RECORD

CUT OUTS	INITITAL	DATE / TIME
Roof has been sanded, All rivet stems and other pieces swept off.		
Roof Tape Applied		
First coat of Liquid rubber or another Roof coating applied		
Second coat of Liquid rubber or another Roof coating applied		
Third coat of Liquid rubber or another Roof coating applied		

NOTES

RETROFIT

Assembler Name (Print)	Signature	Date
NA		
Inspector Name (Print)	Signature	Date
Chris Phillips		Oct. 13 2021

FRAC SHACK™ UNIT NUMBER: XP28

FILLER HEAD ASSEMBLY RECORD

FILLER COMPONENTS			
EACH PATENTED FUEL FILLER HEAD CONTAINS			
☑	3" Machined Filler Head	☑	Breather with 90° elbow
☑	Ball Valve to 45° elbow for fill inlet	☑	Male Camlock ¾" on Breather
☑	Female Dry-disconnect	☑	48" Fuel Overflow / Vent Hose "Spit Tube"
☑	24" Fuel Stinger Hose		

BUILD CHECKLIST	LINES							
	1	2	3	4	5	6	7	8
Thread tape & dope used on all threads	☑	☑	☑	☑	☑	☑	☑	☑
Ball valve packing tightened and tested	☑	☑	☑	☑	☑	☑	☑	☑
Ball valve is facing up towards operator and the handle points down when open	☑	☑	☑	☑	☑	☑	☑	☑
Accutech sensors installed and programmed appropriately based on shack unit number	☑	☑	☑	☑	☑	☑	☑	☑
Fuel head labelled with shack number and unit ID number	☑	☑	☑	☑	☑	☑	☑	☑

COMPONENTS RECORDS					
LINE #	ACCUTECH SERIAL #	INITIAL	LINE #	ACCUTECH SERIAL #	INITIAL
LINE 1	S252347	CP	LINE 5	S197523	CP
LINE 2	S230171	CP	LINE 6	S252348	CP
LINE 3	S252346	CP	LINE 7	S252345	CP
LINE 4	S252341	CP	LINE 8	S108143	CP

NA		
Assembler Name (Print)	Signature	Date
Chris Phillips		Oct-13 2021
Inspector Name (Print)	Signature	Date

FRAC SHACK™ UNIT NUMBER: XP28

ELECTRICAL INSPECTION AND PROGRAMMING

Electrical installation is to be performed by a journeyman electrician or registered apprentice working off of the electrical drawings and design layout as work instructions. This is a mandatory trade subject to external regulations and requirements outside the scope of this check list. The below are items to be inspected after the electrical installation has been completed for quality assurance only.

	ELECTRICIAN SIGN OFF	INITIALS Installer	INITIALS Inspector
☑	All conduits/flexes/cables are properly installed (5 threads) and straight	X	CP
☑	All conduit/flex/cable straps are tight and within proper distance		CP
☑	All terminations in CP are tight and properly tagged		CP
☑	All terminations in Power Disconnect panel are tight		CP
☑	All terminations in devices are tight and properly tagged		CP
☑	Screw-on fittings and covers are properly lubricated with STL or HTL		CP
☑	Bonded and interconnected to E-Unit where applicable		CP

	VISUAL ELECTRICAL INSPECTION	INITIALS Installer	INITIALS Inspector
☑	XP Lights (interior and exterior) installed and functional (4 ext., 1 int.)		CP
☑	All panels hung properly and are secured	X	CP
☑	All devices installed correctly and secured		CP
☑	All conduit/flex/cable connectors, fittings, and hubs are tight		CP
☑	All fittings have covers installed and tightened		CP
☑	No visible scarring or damage to cables, wires, or conduits		CP
☑	Holes around conduits and fittings exiting shack are sealed		CP

	COMPONET POWER UP	INITIALS Installer	INITIALS Inspector
☑	Power to UPS		CP
☑	UPS Battery Charging System OK		CP
☑	Power to PLC		CP
☑	Power to BR20		CP
☑	Power to Base Engineering unit		CP
☑	Power to CP Ventilation fan and thermostat set to 20C (blows out)	X	CP
☑	Power to CP Heater and thermostat set to 5C		CP
☑	Power to VFD		CP
☑	Power to Shack Heater and thermostat set to 5C		CP

	GROUND CONNECTIVITY TESTING	INITIALS Installer	INITIALS Inspector
☑	Performed on Hoses	X	CP
☑	Performed on Bonding Bar		CP
☑	Performed on Reels		CP
☑	Performed on Grounding		CP

FRAC SHACK™ UNIT NUMBER: XP28

ACCESSORIES	
☑	3 X Disconnect fuses (in disconnect)
☑	Included Electrical Service Kit consisting of: • 5 x ATM 10A Fuses • 10 x GMA 1A Fuses • 5 x GMA 6A Fuses • 1 x Terminating Screwdriver • 2 x Battery Blade Fuses • 10 x GMA 100mA Fuses • 5 x GMA 2A Fuses • 1 x Suppressor Gas Fuse • 1 x Philips Screwdriver • 5 x GMA 500mA Fuses • 10 x 5A Fuses • 1 x Multimeter • 5 x GMA 250 mA Fuses

NOTES

UNIT #: XP28
INSTALL DATE: September 9, 2021
SIM: 89302690100001889457
WAN: 70.25.150.114

Electrician Name (Print)	Signature	Date
NA		
Inspector Name (Print)	**Signature**	**Date**
Chris Phillips		Oct 13 2021

FRAC SHACK™

UNIT NUMBER XP-28

PR-6005 – XP PRODUCTION AND ASSEMBLY CHECKLIST

PROGRAMMING

☒ PLC Programmed and functional	INITIAL: RW
Version: 1.34	

☒ HMI Programmed and functional (STANDALONE ONLY)	INITIAL: RW
Version: D_SK_NOV_30_20	

☑ BR20 DIP switches properly set and communicating with PLC
☑ BR20 Radio Programmed and functional – Channel _____
☑ VFD Programmed and functional
☑ Modem installed and functional
☑ Modem firmware updated to CAT12 and build 1.5.0 Revision 1032
☑ Modem configuration file uploaded
☑ Modem IP set to shack number (128.1.XX.32)
☑ Modem connected to internet
☑ Information Labels Affixed to inside of Cabinet
☑ HMI's IP, Subnet, Gateway, and DNS address set

HPXi INSTALLATION RECORD (STANDALONE ONLY)

N/A

CHECKLIST

☐ Windows 10 update, and fresh install completed?
☐ User accounts created? Operations; ADMIN;
☐ Autologin set for Operations?
☐ PC name has been changed to shack name with prefix "SHK-"?
☐ HMI IP address set? Power Settings set? Correct date and time?
☐ Windows 10 Pen mount driver installed?
☐ SQL instance installed and Named Correctly?
☐ SSMS installed? (SQL SERVER MANAGEMENT STUDIO).
☐ "Newest HPXi version installed?" VERSION:
☐ "Newest HPXi Project/s installed?"

FRAC SHACK™

UNIT NUMBER XP-28

PR-6005 – XP PRODUCTION AND ASSEMBLY CHECKLIST

☐ "Newest HPXi Datasync installed?" VERSION: N/A
☐ "Splashtop", Has Splashtop been setup? Has remote been copied onto desktop? Has Splashtop ID been set to the unit it is installed on (E/XP combo).
☐ Firefox; VMware; Apple tether drivers Installed?
☐ HMI Personalization been completed following instructions?
☐ Azure active directory has been linked and synced with the correct profile? With company portal installed?
IF ANY OF THE ITEMS ABOVE ARE NON-CONFORMING AND THE ACTION ITEM DOES NOT OR WILL NOT CORRECT THE NON-CONFORMANCE, PLEASE NOTE THE ISSUE IN COMPLETE DETAIL BELOW AND INFORM YOUR SUPERVISOR FOR CORRECTION AND FOLLOW UP.

INSTALLER NOTES

RETROFIT

INSPECTOR OR SUPERVISOR NOTES

Programmer Name	Signature	Date
Ryan Macias		9/30/21
Inspector Name	**Signature**	**Date**
Chris Phillips		Oct. 13/21

FRAC SHACK™ UNIT NUMBER: XP28

BASIC FUNCTION TESTING

CHECKLIST	
☑	Solenoid function testing via HMI (Line 1, Activates Solenoid 1, etc.)
☐	Pump turns on and operates with proper rotation
☑	Pump remote control functions and activates pump
☑	BR20 reports all heads online, all heads reporting online on HMI
☑	Panel ESD button function properly
☑	Level switch functions properly (sump)
☑	Temperature switch functions properly

ADVANCED FUNCTION TESTING

CHECKLIST	
☑	Modem remote connectivity tested
☑	Remote connectivity to PLC tested
☑	Remote connectivity to HMI tested
☑	Manual remote pump operation tested (Base engineering receiver) (Min 100 ft away)
☑	Main flow meter reads and functions properly
☑	Distance test on sensor heads (Min 200ft away, through obstructions example go to front of building with all sensor heads)

SHACK PREPARATION

CHECKLIST	
☐	Day tank fill and suction camlock installed, complete with caps N/A
☑	2" Female camlock installed on inlet with cap
☐	33" double female fuel hose from day tank to shack cut to fit complete with plugs N/A
☑	2" female camlock installed on 3 port 2-way ball valve with cap
☑	Verify all holes in piping and manifold are filled / plugged
☑	4 x BC Cold Flex 75ft extensions in shack, complete with male and female disconnects
☑	Verify all hose lines have ¾" dry disconnect male ends installed
☑	Verify all lines are clearly labelled and easy to identify (Line 1, Line 2, Line 3, etc.)
☑	Door handles and locks are installed properly and functional
☑	Sensor head holders mounted on brackets

EXTERIOR INSPECTION

CHECKLIST	
☑	Frac Shack™ Logo and FracFueller™ Logo on XP unit
☑	Correct telephone number if shack is for US/Canada – If unknown, left blank
☑	Canadian, US and Australian patent decal present
☑	Unit Number and ~~"Best Managed Company"~~ decals present

Programmer Name (Print)	Programmer Signature	Date
N/A		
Inspector Name (Print)	**Inspector Signature**	**Date**
KEVIN LEGAULT		OCT 18 2021

FRAC SHACK™ UNIT NUMBER: XP28

ACCUTECH SENSOR HEAD TESTING

** See COMMISION TEST PROCEDURES 2.0 for full detail and procedure			
☑ Line 1	☑ Line 2	☑ Line 3	☑ Line 4
☑ Line 5	☑ Line 6	☑ Line 7	☑ Line 8

DIESEL PRESSURE / FLOW TEST

OPERATING PRESSURE	BEFORE FILTER	AFTER FILTER	DEADHEAD PRESSURE	BEFORE FILTER	AFTER FILTER
	50	52		55	55

LINE	FLOWMETER L/PM	HMI K-FACTORS AFTER CALIBRATION	FUEL METER ACCURACIES	
			FLOW METER	*TURBINE METER*
1	44.61	0.00421467	100.0	100.9
2	43.3	0.00414787	100.0	99.6
3	43.3	0.00433462	100.0	100.6
4	45.13	0.00421462	100.0	100.1
5	46.18	0.00407921	100.0	99.2
6	44.61	0.00421698	100.0	100.3
7	46.2	0.00410608	100.0	99.5
8	45.13	0.00416807	100	99.5

FRAC SHACK™ UNIT NUMBER: XP28

ACCUTECH SENSOR HEAD TESTING

*** See COMMISION TEST PROCEDURES 5.0 for full detail and procedure***
*** REMINDER: Set Time/Date and Start New Project in Site/Config.***

HH – HIHI Level (Overfill)
LL – LOLO Level (Fill)
H – HI Level (Stop)
M – Manual Mode Test

LINE		
1	HH	✓
	H	✓
	LL	✓
	M	✓

LINE		
2	HH	✓
	H	✓
	LL	✓
	M	✓

LINE		
3	HH	✓
	H	✓
	LL	✓
	M	✓

LINE		
4	HH	✓
	H	✓
	LL	✓
	M	✓

LINE		
5	HH	✓
	H	✓
	LL	✓
	M	✓

LINE		
6	HH	✓
	H	✓
	LL	✓
	M	✓

LINE		
7	HH	✓
	H	✓
	LL	✓
	M	✓

LINE		
8	HH	✓
	H	✓
	LL	✓
	M	✓

- [✓] Tested both manual fueling nozzles for operation.
- [✓] All Four extensions tested pressure tested by hooking into a line during pressure test.

TESTING NOTES

KEVIN LECLAIR	[signature]	OCT 14 2021
Tester Name (Print)	*Signature*	*Date*
R Chris Phillips	[signature]	Oct 14 2021
Inspector Name (Print)	*Signature*	*Date*

JOB SETUP

** See COMMISION TEST PROCEDURE 1.0 for full detail and procedure	
☑	This process followed appropriately as set out in instructions.

ACCUTECH SENSOR HEAD TESTING

** See COMMISION TEST PROCEDURE 2.0 for full detail and procedure	
☑	This process followed appropriately as set out in instructions.

PRIME FUEL PUMP

** See COMMISION TEST PROCEDURE 3.0 for full detail and procedure	
☑	This process followed appropriately as set out in instructions.

PRESSURE AND LEAK TEST

** See COMMISION TEST PROCEDURE 4.0 for full detail and procedure	
☑	This process followed appropriately as set out in instructions.

METER CALIBRATION

** See COMMISION TEST PROCEDURE 5.0 for full detail and procedure	
☑	This process followed appropriately as set out in instructions.

FUNCTION TESTING

** See COMMISION TEST PROCEDURE 6.0 for full detail and procedure	
☑	This process followed appropriately as set out in instructions.
☑	The buzzer is working correctly with all alarms

TESTING MANUAL FUELING NOZZLES

** See COMMISION TEST PROCEDURE 7.0 for full detail and procedure	
☑	This process followed appropriately as set out in instructions.
☑	The buzzer is working correctly with all alarms

JOB COMPLETION

** See COMMISION TEST PROCEDURE 8.0 for full detail and procedure	
☑	This process followed appropriately as set out in instructions.
☑	The buzzer is working correctly with all alarms
☑	Red-line/As-built drawings that deviate from official drawings are put in the shack's folder on the Production site

FRAC SHACK™ UNIT NUMBER: XP28

TESTING NOTES

NA		
Assembler Name (Print)	Signature	Date
KEVIN LEGAULT		OCT 14 2021
Inspector Name (Print)	Signature	Date

INVENTORY PACKING / DEMOB

☑	XP Supply Skid Packed into unit
☑	Attached completed demob at the end of this document

MANUALS AND FORMS

Klara Holewa		Oct 13 2021
Demob Completed by (Print)	Signature	Date

HANDOVER AND DOCUMENT PACKAGE

☑	Review Production Checklist for completeness and accuracy
	Completed hand over document (PA-6012) to transfer equipment to operating company

Form PA-6012 Handover

SHACK ISSUES / DELAY'S TRACKER

NOTES

COMMISSION TEST PROCEDURES

1.0 JOB SETUP

1. Select Parent skid in drop down menu in top left of HPXi application.
2. Login as "Prod" user to start testing procedure.
3. Click "Site Setup" and enter in correct job info for Production.
    a. Country: Frac Shack Inc (ADMIN USE ONLY)
    b. STATE/PROVINCE: Alberta
    c. REGION: FSH
    d. ENERGY PRODUCER: Frac Shack
    e. SERVICE PROVIDER: Frac Shack
    f. FUEL PROVIDER: Frac Shack
    g. WHO IS DISTRUBUTING NG ON THIS SITE: Frac Shack
    h. JOB ID: 1010000001765
    i. SITE NAME OR LSD: "SHACK ID" BOL or Retrofit.
    (Site name is dependant on which shack you are currently testing if it is a new build or a retrofit.)
    j. Press Start job.
    k. Enter Well information.
    l. A confirmation will populate and will require you to enter the JOD ID, and SITENAME OR LSD again, be aware of order it asks for information.
    m. Confirm Start.
4. Touch "Diesel" on menu bar.
5. Select line 1 and enter in DIESEL PUMP and serial number for the line. (Line 1 = 1) etc
6. Repeat for all remaining lines.
7. Touch "New Stage" enter in WELL: 1 and STAGE: 1. (This is for Priming the pump, and Pressure testing.)

2.0 ACCUTECH SENSOR HEAD TESTING

1. Turn "ON" Accutech sensor heads one at a time, starting with number 1.
2. Look at the HMI to ensure line 1 on the screen becomes enabled and shows online.
3. If correct, install sensor head into the test tank as required and repeat for the next head.
4. Continue procedure until all heads are online and tested as operational.
5. When successful and all heads are functioning as expected, initial each line number below.
6. Load all Sensor heads onto a pallet and take them 200ft minimum and have obstacles such as going to the other side of a building, Check screen while sensor heads are away from shack ensure they still read on the HMI. If no signal inform supervisor, or manager and have electrician trouble shoot.

3.0 PRIMING THE PUMP

1. Connect the fuel lines to the appropriate sensor heads (filler heads) E.G.: Line 1 to head 1, line 2 to head 2, etc.
2. Fill inlet hose to the pump with diesel from a Jerry can or other source as applicable. Pay close attention to not over fill the hose and have spill containment and absorbent pads near by.
3. Once you have put diesel in the inlet hose, pull the hose up to diesel the fuel into the pump. This will help lubricate the pump, vanes and seals. This helps the pump create suction and be able to pull fuel out of the daytank.
4. Carefully reconnect the inlet hose to the daytank suction port.
5. Ensure the suction valve is open, the pump inlet valve is open, manifold valves are open and the valve on sensor head 1 is open.

6. Put the shack into "Manual Mode" and enable line one.
7. Activate pump with the remote control to allow the pump to start sucking fuel from the daytank, this may take up to a minute until you have a smooth fuel flow.
8. Once the pump and line is primed, stop the pump.
9. Repeat for all lines.

4.0 PRESSURE AND LEAK TESTS

1. Put shack into "MANUAL" mode and enable line 1.
2. Press the start button on the remote to begin fueling.
3. Once steady flow is established;
   a. Note the flow rate of the fuel line from the HMI and record it on the table below. **IF BELOW 45L/M INFORM SUPERVISOR.**
   b. Note the operating pressure on the pressure gauges by the flow meter and record it on the table below.
4. Have an assistant close the sensor head valve on line 1.
   a. Note the "Deadhead" pressure on the pressure gauges by the flow meter and record it on the table.
5. Close the valve on the fuel rail of line 1.
6. Press the stop button on the remote to stop the pump. You have now pressurized the fuel rail, reel and hose assembly.
7. Repeat this process (steps 1 – 5) on all remaining lines until every line has been completed and is pressurized, add the extensions that are to be shipped with shack into system by connecting them into the main fuel line and to the sensor head. It can be done through different lines or on one line.
8. Carefully look for leaks starting at the fuel rails for each line, check the reels and hose for leaks and then inspect the fuel sensor heads (filler heads).
9. Make a note of all issues found below, including as many details as you can then release the pressure by opening all the valves on the fuel rails and at the sensor heads.
10. Make repairs to the lines as necessary, noting the repairs made below and retest the faulty line(s) as required. Use the same procedure above until all lines are functional without any leaks.

5.0 METER CALIBRATION

1. Enter a new stage for Meter Calibration.
2. Select Well 1, Stage 2, press "SUBMIT"
3. On HMI go to "Diagnostics" then "*Administration" ensure all tanks are set to default set points.

URV 30.0	HH 17.0	STOP 15.0	START 11.0	LL 9.0	LRV 0.0

4. Select the correct number of lines for the shack. (E=12, EG=14, XP=8, H=28)
5. Press "Initialize"
6. Select Correct "UOM"
7. Press "Diagnostics" on menu bar then "METER CALIBRATION (LEAD)".
8. In bottom left corner enter the "MAIN METER" Serial number. This is located on the flow meter itself; this is a 6-digit serial number.
9. Once entered it will ask you to confirm the serial number.
10. Ensure the test trailer tanks are empty, if not pump out the tanks and turn off the pump.
11. Select line 1, and enter in NEW K factor and New Serial, press start.
    a. Allow for test to complete.
    b. If test has failed system will suggest new k factor, keep repeating until line passes.
    c. Repeat for all lines on shack.

6.0 FUNCTION TESTING

1. Once you have completed Meter Calibration, End stage and enter in New Stage for Next step
2. Press "Diesel" on menu bar.
3. Press on the pump and select "AUTO".
4. Drain test tanks below 9"
5. Enable All lines.
6. You should see a "LO" alarm and the pump will kick in and begin filling.
7. Once the line hits 15" ensure lines shuts down.
8. Drain the test trailer tanks again, allow for diesel to drop below 11" and lines automatically start as they drop below the start limit. If they do you can disable line.
9. While filling test tanks the levels should increase to the HIHI alarm due to their design. If the line does achieve this level enable overfill mode on that line and continue testing remaining lines.
10. When lines hit the HH level (17") you will receive an HH alarm, and the pump will shut down.
11. Record the testing results on the table.
12. Ensure TOP UP TANKS button and SYSTEM PAUSE button work on diesel screen.
13. Switch mode to PUMP out and ensure PUMP out works correctly.
14. Disable HANDHELD remote and test the start and stop function on screen.
15. End stage and select Well: 2, STAGE: 1. If testing an Expansion unit like an XP (if applicable)
    a. Repeat steps above starting from step 4 to step 14.
16. Move job to the next stage and then end the job (after XP is tested if applicable)
17. Drain fuel tanks below preset High High level of 17".
    In manual mode use demob manual nozzle to fill tank until High High alarm sounds. And all lines show HIHI alarm. This will complete Step 8.0

7.0 TESTING MANUAL FUELING NOZZLES

1. Have pump disabled before disconnecting any connections
2. Disconnect Head from its fuel line connect manual fueling nozzle
3. Turn on pump Confirm there is no leaks in nozzle connections and no flow out of end of nozzle
4. Put nozzle into port in test tank at an angle that you can see flow and will not spray diesel
5. Pull handle to allow flow and ensure opens fully and allows good flow, if it does not work tag out and talk to supervisor on getting it fixed or replaced.

8.0 JOB COMPLETION

1. Once testing has been completed you need to end the job.
2. This is done by pressing "Site Setup" and pressing "FINISH JOB"
3. Inform supervisor that the job has been completed. Do not shut shack down until you receive confirmation that the report has been synced and the data is available.

FRAC SHACK™

PA-6006

NG PRODUCTION AND ASSEMBLY CHECKLIST

UNIT NUMBER: NGD23

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FRAC SHACK™ UNIT NUMBER: NGD23

NG SKID DELIVERY

VISUAL CHECKLIST	
☑	Port for manual manifold bleed present
☑	Manual Isolation valve bolted up with handle
☑	Port present on inlet for PIT100
☑	Port present for N2 Purge inlet
☑	ESD Valve bolted up with position switch
☑	Y Strainer bolted up
☑	Filter pot bolted up
☑	Port for heater fuel bolted up
☑	SS PSV bolted up
☑	10" diameter "bulge tank" pressure vessel bolted up (pipe bolted up in NGD units)
☑	2 Ports in pressure vessel present for PIT101 and TIT101
☑	Both manifold headers bolted up
☑	Purge line with actuator and position switch present
☑	Purge header bolted up
☑	Anti-slip coating present on flooring
☑	Port for manual manifold bleed present

PHYSICAL CHECKLIST	
☑	Review all flange connections for all bolts, nuts and gaskets.
☑	Re-torque all bolts to 80ft/lbs, mark with paint marker.
☑	Install 10 micron filter element into filter pot and re-torque bolts to 80ft/lbs

NOTES / OBSERVATIONS:

Chris Phillips — *Inspector Name (Print)*

Signature

Oct 13/21 — *Date*

FRAC SHACK™ UNIT NUMBER: NGD23

NG ASSEMBLY RECORD

STATION LINE ASSEMBLY CHECKLIST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Install SS flex gasket between header and valve.	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Bolt valve to header using 5/8" x 3-1/2" B7 alloy studs to 80ft/lbs torque spec. with 2H hex nuts.	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Install SS flex gasket between valve and line meter	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Bolt meter to valve using 5/8" x 2-1/2" B7 alloy studs to 80ft/lbs torque spec. with 2H hex nuts.	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Install SS flex gasket between meter and supply line pipe spool.	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Bolt pipe spool to meter using 5/8" x 2-1/2" B7 alloy studs to 80ft/lbs torque spec. with 2H hex nuts.	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Install Mantek dry disconnect male ends with NG thread tape and Loctite pipe dope sealant.	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑

PURGE LINE ASSEMBLY CHECKLIST	
Install Mantek dry disconnect male ends with NG thread tape and Loctite pipe dope sealant on purge lines 1-4	☑

NOTES / OBSERVATIONS:

Chris Phillips — *Inspector Name (Print)*

Signature

Oct 13 2021 — *Date*

FRAC SHACK™ UNIT NUMBER: NGD23

NG EQUIPMENT RECORD

0308635-8-1-1

VALVE RECORD	ACTUATOR SERIAL NUMBER	POSITION SWITCH SERIAL NUMBER	Initial
ESD Valve	~~0308635-16-20-7~~	EW20111092 181	W.S
Blow Down Valve			
Purge Valve			
Line 1	0308635-16-20-7	EW20080836 04 154	W.S
Line 2	0308635-16-20-2	EW20080836 04 156	W.S
Line 3	0308635-16-20-4	EW20080836 04 159	W.S
Line 4	0308635-16-20-6	EW20080836 04 157	W.S
Line 5	0308635-16-20-11	EW20080836 04 186	W.S
Line 6	0308635-16-20-9	EW20080836 04 149	W.S
Line 7	0308635-16-20-8	EW20080836 04 144	W.S
Line 8	0308635-16-20-17	EW20080836 04 158	W.S
Line 9	0308635-16-20-14	EW20080836 04 192	W.S
Line 10	0308635-16-20-5	EW20080836 04 160	W.S
Line 11	0308635-16-20-16	EW20080836 04 196	W.S
Line 12	0308635-16-20-12	EW20080836 04 197	W.S
Line 13	0308635-16-20-10	EW20080836 04 185	W.S
Line 14	0308635-16-20-18	EW20080836 04 190	W.S
Line 15	0308635-16-20-13	EW20080836 04 198	W.S
Line 16	0308635-16-20-19	EW20080836 04 191	W.S
Line 17	0308635-16-20-3	EW20080836 04 150	W.S
Line 18	0308635-16-20-1	EW20080836 04 161	W.S
Line 19	0308635-16-20-20	EW20080836 04 179	W.S
Line 20	0308635-16-20-15	EW20080836 04 180	W.S

METER RECORD	SERIAL NUMBER	Initial
Line 1	21070544	W.S
Line 2	21070551	W.S
Line 3	21070559	W.S
Line 4	21070561	W.S
Line 5	21070534	W.S
Line 6	21070562	W.S
Line 7	21076553	W.S
Line 8	21070512	W.S
Line 9	21070557	W.S
Line 10	21070524	W.S
Line 11	21070556	W.S
Line 12	21070511	W.S
Line 13	21070527	W.S
Line 14	21070536	W.S
Line 15	21070540	W.S
Line 16	21070505	W.S
Line 17	21070543	W.S
Line 18	21070534	W.S
Line 19	21070532	W.S
Line 20	21070555	W.S

SOLENOID RECORD	SERIAL NUMBER	Initial
ESD Solenoid	T26650522	CP
Blow Down Solenoid	T26543221	CP
Purge Solenoid	T26543221	CP

FRAC SHACK™

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SOLENOID RECORD	SERIAL NUMBER	Initial
Line 1 Solenoid	T26352922	W.S
Line 2 Solenoid	T26744081	W.S
Line 3 Solenoid	T2635 2922	W.S
Line 4 Solenoid	T2635 2922	W.S
Line 5 Solenoid	T26748073	W.S
Line 6 Solenoid	T26748673	W.S
Line 7 Solenoid	T26748673	W.S
Line 8 Solenoid	T26352922	W.S
Line 9 Solenoid	T26748673	W.S
Line 10 Solenoid	T26543221	W.S
Line 11 Solenoid	T26650522	W.S
Line 12 Solenoid	~~T26650522~~ T24154854	W.S
Line 13 Solenoid	~~T26~~ T26543221	W.S
Line 14 Solenoid	T26543221	W.S
Line 15 Solenoid	T26543221	W.S
Line 16 Solenoid	T26543221	W.S
Line 17 Solenoid	~~T26650522~~ T26650522	W.S
Line 18 Solenoid	T26543221	W.S
Line 19 Solenoid	T26748673	W.S
Line 20 Solenoid	T26543221	W.S

TRANSMITTER RECORD	MANUFACTURER	MODEL #	SERIAL #
ESD Pressure Transmitter (PIT100)	Schneider	IGP05S-T52FICD	21090461
Line Pressure Transmitter (PIT101)	Schneider	IGP05S-T52FICD	21090403
Temperature Transmitter (TIT101)	Schneider	RTT15S-T1SA1ONACD	20490610
N2 Bottle Pressure Transducer (PT102)	Pti-Com	AST4000A-05000P4V1000	305-2223
Gas Transmitter	NET SAFETY	M22-AR-A	0068800
LEL Sensor	NET SAFETY	JB-MPD-A	0137158
H2S Sensor	NET SAFETY	JB-MPD-A	0132789
Fire Eye	ROSEMOUNT	975UF2A6S1A2	0126206

PRESSURE EQUIPMENT	MANUFACTURER	MODEL #	SERIAL #	CRN
Filter Pot	Shawndra	RC-3126-R-1	6727	24658.2
Crosby PSV Valve	CROSBY	3K4JOS-E15CTJ	1101-2012-890099	06154994.5CL
Pressure Vessel (if applicable)	N/A	N/A	N/A	~~06154994.5CL~~ N/A

NOTES / OBSERVATIONS:

LEVEL SWITCH - VEGASWING SN# 54310810

Recorder Name (Print)	Signature	Date
KWA NeuAr		Oct. 18, 2021

ELECTRICAL INSPECTION AND PROGRAMMING

Electrical installation is to be performed by a journeyman electrician (or apprentice working under the supervision of a journeyman) off the electrical drawings and design layout as work instructions. This is a mandatory trade subject to external regulations and requirements thus outside the scope of this check list. Work instructions for the electricians are provided by the electrical drawings for each project. The below are items to be inspected after the electrical installation has been completed for quality assurance only.

ELECTRICIAN SIGN OFF	INITIALS	
	Installer	Inspector
N2 Solenoids wired in with C1D2 conduit cover, armored cable and properly connected	CP	KW
All conduits/flexes/cables are properly installed (5 threads) and straight	CP	KW
All conduit/flex/cable connectors, fittings, and hubs are tight	CP	KW
All conduit/flex/cable straps are tight and within proper distance	CP	KW
All fittings have covers installed and tightened	CP	KW
All terminations in CP are tight and properly tagged	CP	KW
All terminations in devices are tight and properly tagged	CP	KW
Screw-on fittings and covers are properly lubricated with STL or HTL	CP	KW
Splices in areas with vibrations are soldered and heat shrunk, or wire nuts (marrettes) are taped	CP	KW
All applicable components rated for Class 1 Div 2	CP	KW
N2 Bottle pressure transducer (PIT102) installed, wired with armored cable and properly connected	CP	KW
Pressure transmitter (PIT100) installed, wired with armored cable and properly connected	CP	KW
ESD Limit switch installed, wired armored cable, and properly connected	CP	KW
Gas transmitter installed, wires with armored cable and properly connected	CP	KW
LEL sensor installed, wired with armored cable, and properly connected	CP	KW
H2S sensor installed, wired with armored cable, and properly connected	CP	KW
Fire eye installed wired with armored cable and properly connected	CP	KW
Pressure transmitter (PIT101) installed, wired with armored cable, and properly connected	CP	KW
NG Temperature transmitter (TIT101) installed, wired with armored cable, and properly connected	CP	KW
Blow down valve limit switch installed, wired with armored cable, and properly connected	CP	KW
Purge valve limit switch installed, wired with armored cable, and properly connected	CP	KW
Limit switches on Lines 1 – 20 installed, wired with armored cable and properly connected	CP	KW
Modbus connection on Lines 1 – 20 installed and wired properly	CP	KW
All cable properly secured and connected to NG control panel using proper connectors	CP	KW
Power over ethernet (POE) connected to 24VDC circuit	CP	KW
N2 Solenoid Panel Mounted and secure	CP	KW
All N2 solenoid conduit covers are tightened securely	CP	KW
Control panel hung properly and are secured	CP	KW
All devices installed correctly and secured	CP	KW
No visible scarring or damage to cables, wires, or conduits	CP	KW
Holes around conduits and fittings exiting shack are sealed	KW	KW
Screen & lens on Gas Detector is free from cracks, scratches, and damage	CP	KW
Lens on Fire Eye is free from cracks, scratched, and damage	CP	KW
Power, ESD, and communication (ethernet) interconnects installed	CP	KW
Heater installed and functional with switch	CP	KW

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C1D2 SEAL POUR/CHECK	INITIALS	
	Installer	Inspector
NG sealing connectors for gas sensors (LEL and H2S) are packed, poured, and tight (2)	CP	KW
NG sealing connectors for gas detection transmitter is packed, poured, and tight (3)	CP	KW
NG sealing connector for fire detection is packed, poured, and tight	CP	KW
NG sealing connectors for heater cables (incl. switch) are packed, poured, and tight (3)	CP	KW
NG sealing connector for ACT100 is packed, poured, and tight	CP	KW
NG sealing connector for ACT101 is packed, poured, and tight	CP	KW
NG sealing connector for ACT102 is packed, poured, and tight	CP	KW
NG sealing connector for ACT103 is packed, poured, and tight	CP	KW
NG sealing connector for ACT104 is packed, poured, and tight	CP	KW
NG sealing connector for ACT105 is packed, poured, and tight	CP	KW
NG sealing connector for ACT106 is packed, poured, and tight	CP	KW
NG sealing connector for ACT107 is packed, poured, and tight	CP	KW
NG sealing connector for ACT108 is packed, poured, and tight	CP	KW
NG sealing connector for ACT109 is packed, poured, and tight	CP	KW
NG sealing connector for ACT110 is packed, poured, and tight	CP	KW
NG sealing connector for ACT111 is packed, poured, and tight	CP	KW
NG sealing connector for ACT112 is packed, poured, and tight	CP	KW
NG sealing connector for ACT113 is packed, poured, and tight	CP	KW
NG sealing connector for ACT114 is packed, poured, and tight	CP	KW
NG sealing connector for ACT115 is packed, poured, and tight	CP	KW
NG sealing connector for ACT116 is packed, poured, and tight	CP	KW
NG sealing connector for ACT117 is packed, poured, and tight	CP	KW
NG sealing connector for ACT118 is packed, poured, and tight	CP	KW
NG sealing connector for ACT119 is packed, poured, and tight	CP	KW
NG sealing connector for ACT120 is packed, poured, and tight	CP	KW
NG sealing connector for ACT122 (Blowdown) is packed, poured, and tight	CP	KW
NG sealing connector for ACT123 (Purge) is packed, poured, and tight	CP	KW

Chris Phillips — *Electrician Name (Print)*

Signature

Oct. 1 2021 — *Date*

Kurt Mantz — *Inspector Name (Print)*

Signature

Oct. 13 2021 — *Date*

FRAC SHACK™

UNIT NUMBER: NGD-23

PA-6006 – NG PRODUCTION AND ASSEMBLY CHECKLIST

PROGRAMMING

☒ PLC Programmed and functional	INITIAL: PW
Version: 14.08	

☒ HMI Programmed and functional (STANDALONE ONLY)	INITIAL: PW
Version: NG_LowRes_Jan_04_21	

☑ Modem installed and functional
☑ Modem firmware updated to CAT12 and build 1.5.0 Revision 1032
☑ Modem configuration file uploaded
☑ Modem IP set to shack number (128.1.XX.22)
☑ Modem connected to internet
☑ Information Labels Affixed to inside of Cabinet
☑ HMI's IP, Subnet, Gateway, and DNS address set (if applicable) N/A
☑ SICK meters programmed with proper parameters
☑ SICK meters are configured for proper modbus slave addresses

HPXi INSTALLATION RECORD

N/A

☐ Windows 10 update, and fresh install completed?
☐ User accounts created? Operations; ADMIN; FSI; FSA; E##.
☐ Autologin set for Operations? Using netplwiz?
☐ PC name has been changed to shack name with prefix "SHK-"?
☐ HMI IP address set? Power Settings set? Correct date and time?
☐ Windows 10 Pen mount driver installed?
☐ SQL instance installed and Named Correctly?
☐ SQL reporting services installed and configured?
☐ SSMS installed? (SQL SERVER MANAGEMENT STUDIO).
☐ "Newest HPXi version installed?" VERSION:

FRAC SHACK™

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PA-6006 – NG PRODUCTION AND ASSEMBLY CHECKLIST

N/A

☐ "Newest HPXi Project/s installed?" VERSION:
☐ "Newest HPXi Datasync installed?" VERSION:
☐ "Splashtop", Has Splashtop been setup? Has remote been copied onto desktop? Has Splashtop ID been set to the unit it is installed on (E/XPX combo).
☐ Firefox; VMware; Atera; 7zip; Apple tether drivers Installed?
☐ HMI Personalization been completed following instructions?
☐ Azure active directory has been linked and synced with the correct profile? With company portal installed?
IF ANY OF THE ITEMS ABOVE ARE NON-CONFORMING AND THE ACTION ITEM DOES NOT OR WILL NOT CORRECT THE NON-CONFORMANCE, PLEASE NOTE THE ISSUE IN COMPLETE DETAIL BELOW AND INFORM YOUR SUPERVISOR FOR CORRECTION AND FOLLOW UP.

INSTALLER NOTES

INSPECTOR OR SUPERVISOR NOTES

Programmer Print	Programmer Signature	Date
Ryan Macias		9/30/21

Inspector Print	Inspector Signature	Date
Kyle Nantz		Oct. 18, 2021

FRAC SHACK™ UNIT NUMBER: NGD23

PNEUMATIC TUBING

VISUAL CHECKLIST	SIZE	INITIALS	
		Installer	Inspector
Tubing installed from high pressure panel to pressure transducer PT-102	3/8"	DN	KW
Tubing installed from high pressure panel to nitrogen purge solenoid	1/2"	DN	KW
Nitrogen purge line tubed into main gas manifold downstream from ESD valve	1/2"	DN	KW
Tubing installed from high pressure panel to N2 manifold(s)	1/2"	DN	KW
PSVs installed before N2 manifold(s) and after N2 purge solenoid	N/A	DN	KW
PSVs vent to atmosphere above shack	1/2"	DN	KW
Main gas manifold equipped with valve upstream from ESD and vents to atmosphere above shack	1/2"	DN	KW
Solenoid ~~100~~ (ESD) tubed to actuator ~~100~~ (ESD) 200	3/8"	DN	KW
Solenoid ~~101~~ tubed to actuator ~~101~~ 201	3/8"	DN	KW
Solenoid ~~102~~ tubed to actuator ~~102~~ 202	3/8"	DN	KW
Solenoid ~~103~~ tubed to actuator ~~103~~ 203	3/8"	DN	KW
Solenoid ~~104~~ tubed to actuator ~~104~~ 204	3/8"	DN	KW
Solenoid ~~105~~ tubed to actuator ~~105~~ 205	3/8"	DN	KW
Solenoid ~~106~~ tubed to actuator ~~106~~ 206	3/8"	DN	KW
Solenoid ~~107~~ tubed to actuator ~~107~~ 207	3/8"	DN	KW
Solenoid ~~108~~ tubed to actuator ~~108~~ 208	3/8"	DN	KW
Solenoid ~~109~~ tubed to actuator ~~109~~ 209	3/8"	DN	KW
Solenoid ~~110~~ tubed to actuator ~~110~~ 210	3/8"	DN	KW
Solenoid ~~111~~ tubed to actuator ~~111~~ 211	3/8"	DN	KW
Solenoid ~~112~~ tubed to actuator ~~112~~ 212	3/8"	DN	KW
Solenoid ~~113~~ tubed to actuator ~~113~~ 213	3/8"	DN	KW
Solenoid ~~114~~ tubed to actuator ~~114~~ 214	3/8"	DN	KW
Solenoid ~~115~~ tubed to actuator ~~115~~ 215	3/8"	DN	KW
Solenoid ~~116~~ tubed to actuator ~~116~~ 216	3/8"	DN	KW
Solenoid ~~117~~ tubed to actuator ~~117~~ 217	3/8"	DN	KW
Solenoid ~~118~~ tubed to actuator ~~118~~ 218	3/8"	DN	KW
Solenoid ~~119~~ tubed to actuator ~~119~~ 219	3/8"	DN	KW
Solenoid ~~120~~ tubed to actuator ~~120~~ 220	3/8"	DN	KW
Solenoid ~~122~~ (Blowdown) tubed to actuator ~~122~~ (Blowdown) 222	3/8"	DN	KW
Solenoid ~~123~~ (Purge) tubed to actuator ~~123~~ (Purge) 223	3/8"	DN	KW
Drain out bottom of filter pot tubed to outside of shack with valve	3/8"	KW	KW
Heater's thermostat, regulator, and thermocouple installed and accessible from outside hose door	N/A	DN	KW
Main gas manifold tubed to inlet of heater's regulator	3/8"	DN	KW
Outlet of heater's regulator tubed to inlet of heater's thermostat	3/8"	DN	KW
Outlet of heater's thermostat tubed to heater	3/8"	DN	KW
All tubing connections and couplings are plainly visible from inside the shack (none hidden)	N/A	DN	KW

SEAL OF CONNECTIONS	INITIALS	
	Installer	Inspector
All compression fittings are gap-checked with gapping tool	DN	KW
All tubing is straight going into connectors/couplings	DN	KW
Once seal is confirmed, all fittings marked for torque and position	DN	KW

DARCY NZEIFORUE — Installer Name (Print) | Signature | SEPT. 10/21 — Date

KURT MARTIN — Inspector Name (Print) | Signature | OCT. 13, 2021 — Date

FRAC SHACK™ UNIT NUMBER: NGD23

WALL STRUCTURE ASSEMBY RECORD

BUILD CHECKLIST	
☑	All wall panels secured in frame every 8 inches
☑	All roof panels secured in frame every 8 inches
☑	Corner flashing installed on each corner between panels and secured to panels on each side every 8 inches
☑	Roof flashing fastened to panels every 8 inches with self-sealing rivets.
☑	Excess screw threads tips covered with caulking, leaving no sharp edges.
☑	Man door mounted in door frame
☑	Control Panel door mounted in door frame complete with Plexiglas
☑	Outlet/access doors mounted in door frame
☑	Door latch hardware installed and tested on all doors
N/A	**If equipped with bi-fold door,** Check function of access door for supply and purge connection points. Open first flap, open second flap, close and secure second flap, close and secure first flap. Ensure handles and pull straps function easily.
☑	**If equipped with single doors,** Check function of access door for supply and purge connection points. Ensure hydraulics hold doors open and locking bar engages properly. Ensure pull straps are installed and latches hold doors closed
☑	Cut-out for exterior light beside man door is present with proper placement

FLASHING	
☑	All walls and roof pieces have been flashed
☑	Collars installed around all exterior pipes

SEAL / CAULKING	
☑	Exterior light fixtures have been caulked on the interior of building
☑	All roof panels caulked and sealed
☑	Seams on wall panels caulked and sealed
☐	Weather stripping installed on all door frames

INSTALLER NOTES	DATE:

Sorby	[signature]	Sept 29/21
Assembler Name (Print)	*Signature*	*Date*
Kurt Newton	[signature]	Sept. 29, 2021
Inspector Name (Print)	*Signature*	*Date*

NG COMMISION TESTING

VISUAL CHECKLIST	INITIALS	
	Tester	Inspector
Unit is decaled, complete with unit number.	KW	CP
Exterior light installed and functional.	CP	KW
Interior light installed and functional.	CP	KW
Unit is mounted securely on to trailer using temporary, removable mounts. Mounts are painted for clean and neat appearance.	KW	KZ
Interior and Exterior door handles are tested and functional.	KW	CP
Ensure Fire Eye is powered up and online (functional)	CP	KW
Ensure Gas Detection and sensors are powered up and online (functional)	CP	KW
Ensure fisher regulator is installed in catadyne heater line.	KW	CP

PHYSICAL CHECKLIST	INITIALS	
	Tester	Inspector
Check function of manifold manual bleed valve (open/close) leave closed.	KW	CP
Check function of manifold N2 purge valve (open/close) leave closed.	KW	CP
Check function of manual isolation valve (open/close).	KW	CP
Check function of valve for catadyne heater supply valve (open/close).	KW	CP
Ensure pressure transmitter (PIT100) block and bleed valve is closed to atmosphere but open to block (sensor).	KW	CP
Ensure pressure transmitter (PIT101) block and bleed valve is closed to atmosphere but open to block (sensor).	KW	CP
Check that female Mantek fittings can be fully and safely connected to all supply lines (1-20) and all purge lines without causing a pinch hazard to operator and no clearance issues exist.	KW	CP
Turn on electrical power to catadyne heater, leave on for ten minutes and check that the heater is warm at the bottom middle of heater unit. Shut off electrical supply.	KW	KZ
Drain tube from filter pot to exterior is installed and locking valve tested.	KW	CP

PRE-OPERATION CHECKLIST	INITIALS	
	Tester	Inspector
Calibrate LEL and H2S sensors inside NG shack	CP	KW
Bump test LEL sensor to 20% LEL, ensure alarm activates on parent shack HMI	CP	KW
Bump test LEL sensor to 40% (or above) LEL and ensure alarm sounds and shack enters "MODE 1 SHUTDOWN" and all power is cut and blow down function activates.	CP	KW
Bump test H2S sensor to ensure it is properly relaying ppm back to transmitter	CP	KW
Test fire eye to ensure operation. Verify parent shack HMI shows fire alarm and goes into "MODE 1 SHUTDOWN" and all power is cut and blow down function activates.	CP	KW

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PRE-OPERATION PRESSURE TEST

Power up NG unit, close purge valve, close blow down valve and open all lines (1-20). Apply 200PSI to manifold system and close manual isolation valve and then ESD valve. Perform a snoop (leak) test on entire manifold, flanges, instruments and valves. Monitor for at least one hour, ensure the pressure does not drop more than 5% over one hour and no leaks are found.

PRESSURE TEST		
Pressurized manifold at:	199.5	PSI
Pressure held for:	1	Hour(s)
Manual Isolation valve pressure after test duration complete:	197.00	PSI
Manifold pressure after test duration complete:	199.07	PSI
Was pressure test successful? ☑ YES ☐ NO *(if NO, add details below, fix and retest)*		
NOTES/OBSERVATIONS		
Re-pressure test required? ☐ YES ☑ NO		

PRESSURE TEST *(ONLY IF FIRST TEST FAILED)*	
Pressurized manifold at:	PSI
Pressure held for:	Hour(s)
Manual Isolation valve pressure after test duration complete:	PSI
Manifold pressure after test duration complete:	PSI
Was pressure test successful? ☐ YES ☐ NO *(if NO, add details below, fix and retest)*	
NOTES/OBSERVATIONS	
Re-pressure test required? ☐ YES ☐ NO	

PRESSURE TEST APPROVED BY TESTER AND INSPECTOR

Chris Phillips		cp
Assembler Name (Print)	*Signature*	*Date*
Kurt Mantz		Oct. 13, 2021
Inspector Name (Print)	*Signature*	*Date*

FRAC SHACK™

UNIT NUMBER: NGD23

@100 psi

VALVE OPERATION	OPEN	CLOSE	HIGH FLOW	LOW FLOW
ESD Valve	✓	✓	---NA---	---NA---
Blow Down Valve	✓	✓	---NA---	---NA---
Purge Valve	✓	✓	---NA---	---NA---
Line 1	✓	✓	57.0	6.3
Line 2	✓	✓	53.0	0.5
Line 3	✓	✓	53.6	1.6
Line 4	✓	✓	52.3	4.1
Line 5	✓	✓	54.8	6.4
Line 6	✓	✓	53.1	4.5
Line 7	✓	✓	51.2	0.5
Line 8 @130 psi	✓	✓	60.0	2.0
Line 9	✓	✓	55.2	0.6
Line 10	✓	✓	52.0	3.0
Line 11 (@130 psi → +30 psi more)	✓	✓	63.5	1.5
Line 12	✓	✓	56.5	8.2
Line 13	✓	✓	54.1	8.5
Line 14	✓	✓	52.1	6.7
Line 15	✓	✓	52.6	9.4
Line 16 @130 psi	✓	✓	64.7	3.9
Line 17	✓	✓	52.2	5.3
Line 18	✓	✓	53.9	5.3
Line 19	✓	✓	52.4	7.7
Line 20	✓	✓	51.7	0.5

ACTIONS REQUIRED:	ACTION COMLETED (MM/DD/YYYY)
Meters 8 + 16 gave erratic readings + needed cleaning	KN 09/18/2021

FRAC SHACK™ UNIT NUMBER: NGD23

PRESSURE ALARM TEST	INITIALS	
	Tester	Inspector
Increase manifold pressure to above 100PSI (105PSI max) and verify the over pressure alarm activates and goes into "Mode 2 Shutdown"	KW	CP

N2 SYSTEM TEST – NO MORE THAN 5% LEAK OVER 1 HOUR 1078 @ 1:48 1058 @ 3:01	INITIALS	
	Tester	Inspector
Spray N2 bottle connection, high pressure lines and high pressure (exterior) N2 panel with snoop and check for leaks	KW	CP
Spray N2 low pressure (solenoid) panel and check for leaks	KW	CP
Spray N2 tubing connections along lines to actuators and spray connections on actuators and check for leaks	KW	CP
Nitrogen system <5%/Hour leak with all lines open at solenoids	KW	CP

ACTIONS REQUIRED:	ACTION COMLETED (MM/DD/YYYY)

Kurt Newton — Inspector Name (Print)

Signature

Oct. 18, 2021 — Date

FRAC SHACK™ UNIT NUMBER: NGD23

INVENTORY PACKING / DEMOB

☑	NG Supply Skid Packed into Unit
☑	Attached completed demob at the end of this document
☐	
☐	
☐	
☐	
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☐	
☐	
☐	

MANUALS & FORMS

Kiara Holewa — *Demob Completed By (Print):*

Signature

Oct 13 2021 — *Date*

HAND OVER AND DOCUMENT PACKAGE

☐ Reviewed production checklist for completeness and accuracy

☐ Completed hand over document (PA-6012) to transfer equipment to operating company

Form PA-6012 Handover

Factory Acceptance Test

Ultra-Fast Ultraviolet Infrared Flame Detector

Model No.: **975UF2A6S1A2** Serial No.: **20SHYA0126206**

	18V	24V	32V
Stand-by Current with heater, 110 mA Max	OK	***	OK
Alarm Current with heater, 160 mA Max	OK	***	OK
Indication LED	OK	OK	OK
Contact Relays Ratings	OK	OK	OK

Relays	Type	Normal Position	Maximum Ratings
Alarm	SPDT	N.O., N.C.	2A at 30 VDC
Auxiliary	SPST	N.O.	2A at 30 VDC
Fault	SPST	N.C. or N.O.	2A at 30 VDC

Alarm sensitivity to 1 ft² (0.1m²) Gasoline pan-fire @ 65 ft (20m)		OK
Warning sensitivity to 1 ft² (0.1m²) Gasoline pan-fire @ 72 ft (22m)		OK
Field of View:	Vertical 32 ft (10m) @ ±45°	OK
	Horizontal 32 ft (10m) @ ±50°	OK
4-20 mA Current Output Levels		OK
Fault outputs @ 0 & 2 mA	Normal operation @ 4 mA	
Warning alarm @ 16 mA	Alarm output @ 20 mA	
Hart Communication Test		OK
RS485 Communication Output		OK
Window Heater Test		OK
Functional Modes		OK
Alarm Delay Test		OK
Manual and Automatic BIT		OK
Dielectric Test, 1000V AC		OK
Pressure Test at 19 bar for at least 10 secs		OK

IMMUNITY TO FALSE ALARM

Sun - IAD	OK
Lamp 100W - IAD	OK
Halogen lamp 750W > 26 ft (8m)	OK
Heater 1500W - IAD	OK
Arc Welding 240A > 10 ft (3m)	OK
Match, wood > 3 ft (1m)	OK

IAD – Immune at Any Distance

APPROVALS

FM Approved for Hazardous Location
Class I, Div.1 Groups B, C & D / T5 Ta=85°C-6P/IP66+IP67
Class II & III, Div.1 Groups E, F & G / T5 Ta=85°C

FM Id.
3029553

SIL 2 (Safety Integrity Level) approved per IEC 61508 1-7:2010, EN 50130-4:2011, EN 54-10:2002+A1:2005

TUV No.
968/FSP 1223.01/17

EN 54-10 Approved per EN 54-10:2002 and A1:2005, VdS 2344:2014-07 and VdS 2504:1996-12/5.6

VdS No.
G215092
0786-CPR-21490

Approved By:



Date: Dec 03, 2020

FRAC SHACK™

SHACK UNIT(S) #: EG 84 / XP28 / NGD23
DAYTANK UNIT #:

DATE (MM/DD/YY): OCT 19/21
REEL TRAILER UNIT #:

DEMOBILIZATION INVENTORY LIST

E-QTY	EB/C/D-QTY	EG-QTY	H-QTY	SK-QTY	AMT	REQ'D	ITEM DESCRIPTION	DETAIL - CODE
DAY TANK STORAGE								
1	1	1	0	0	—		3" X 4' FUEL LINES W/ END CAPS ***(Not required for Tankless Shacks)***	EDT1
1	1	1	0	0	1		3" X 20' FUEL LINES W/ END CAPS	EDT2
1	1	1	0	0	1		XP DAYTANK VALVE ASSEMBLY (IF APPLICABLE)	EDT4
2	2	2	4	0	2		HOSE RAMPS	EDT5
10	10	10	28	0	10		METAL DRIP TRAYS	EDT6
1	1	1	1	0	1		GROUND POUNDER	EDT7
2	2	2	2	0	2		GROUND CABLES W/ CONNECTORS	EDT8
1	1	1	1	0	—		DAY TANK DIPSTICK ***(Not required for Tankless Shacks)***	EDT9
1	1	1	2	0	1		SPILL KIT ☐ INVENTORY OK ☐ NEEDS RESTOCK - SPECIFY IN COMMENTS	EDT10
2	2	2	2	0	2		SPILL ABSORBANT MATERIAL	EDT11
1	1	1	1	0	1		DIESEL FUEL HAZARD SIGN	EDT12
0	0	1	0	1	1		NG FUEL HAZARD SIGN	EDT13
4	4	4	4	0	4		BOTTLE JACKS	EDT14
4	4	8	4	4	8		WOODEN OUTRIGGER PADS	EDT15
4	4	4	4	4	4		TRAILER WHEEL CHOCKS	EDT16
6	6	6	12	0	6		DIESEL HOSE STANDS	EDT17
0	0	12	0	0	12		NG HOSE STANDS	EGDT18
2	2	2	6	0	2		PYLONS	EDT19
1	1	1	1	0	1		FUNNEL	EDT20
1	1	1	1	0	1		5 GALLON 10W30 MOTOR OIL	EDT21
1	1	1	1	0	1		PAIL OIL PUMP	EDT22
1	1	1	1	0	1		MICRO BLAZE AND SPRAYER ☐ FULL ☐ NEED MICROBLAZE	EDT23
1	1	1	1	1	1		ALUMINUM SHOVEL	EDT24
1	1	1	1	1	1		FLOOR SCRAPER	EDT25
1	1	1	1	0	1		3LB SLEDGE HAMMER	EDT26
1	1	1	1	0	1		12LB SLEDGE HAMMER	EDT27
1	1	1	1	0	1		6' STEP LADDER	EDT28
1	1	1	1	0	1		3' STEP LADDER	EDT29
12	12	14	28	0	14		SPILL CONTAINMENTS (DUCK PONDS) ***(Not required in Canada)***	EDT30
1	1	1	1	0	1		SENSOR RECOVERY TOOL	EDT31
SHACK STORAGE								
12	12	14	28	0	14		ACCUTECH SENSOR HEADS WITH FUEL HEADS	ESS1
4	4	6	10	0	6		3/4" HOSE EXTENSIONS - 75'	ESS2
1	1	1	2	0	1		POWER CABLE	ESS3
1	1	1	1	0	1		OPERATOR CHAIR	ESS4
2	2	2	4	0	2		GREY/WHITE ABSORBANT SPILL PADS (BUNDLE)	ESS5
3	3	3	6	0	3		HOSE DOOR PILLOWS ☐ Small for H Series req'd ☐ Large for H Series req'd	ESS6
15	15	17	32	0	17		METAL SPILL CONTAINMENT PAILS	ESS7
15	15	17	32	0	17		PAIL GROUNDING WIRES	ESS8
14	0	16	30	0	16		VENT TUBES WITH 3/4" FEMALE COUPLER X HOSE SHANK	ESS9
0	14	0	0	0	—		VENT TUBES WITH 1" FEMALE COUPLER X HOSE SHANK	BSS10
1	1	1	1	0	1		AIR CONDITIONER	ESS11
1	1	1	2	1	1		BOX OF CLOTH RAGS	ESS12
1	1	1	1	1	1		CORN BROOM	ESS13
1	1	1	1	1	1		DUST PAN	ESS14
1	1	1	1	0	1		DECK SCRUB BRUSH	ESS15
1	1	1	1	0	1		VACUUM ☐ FILTER OK ☐ FILTER NEEDS REPLACEMENT	ESS16
2	2	2	0	0	—		E-SERIES GENERATOR FILTER KIT ***(USA ONLY)***	ESS17
2	2	2	0	0	2		WQ20 GENERATOR FILTER KIT	ESS18
0	0	0	2	0	—		WQ25 GENERATOR FILTER KIT	ESS19
1	1	1	1	0	1		18" PIPE WRENCH	ESS20

FRAC SHACK™

SHACK UNIT(S) #: _____ DATE (MM/DD/YY): _____

DAYTANK UNIT #: _____ REEL TRAILER UNIT #: _____

DEMOBILIZATION INVENTORY LIST								
E-QTY	EB/C/D-QTY	EG-QTY	H-QTY	SK-QTY	AMT	REQ'D	ITEM DESCRIPTION	DETAIL - CODE
1	1	1	1	0	1		24" PIPE WRENCH	ESS21
1	1	1	1	0	1		36" PIPE WRENCH	ESS22
1	1	1	1	0	1		10" CRESCENT WRENCH	ESS23
1	1	1	1	0	1		15" CRESCENT WRENCH	ESS24
1	1	1	1	0	1		18" CRESCENT WRENCH	ESS25
1	1	1	1	0	1		PRYBAR	ESS26
1	1	1	4	0	1		REEL CRANK	ESS27
0	0	2	0	0	2		LEL TEST KIT (2 BOTTLES 50% METHANE & AIR) ☐ FULL ☐ NEED BUMP GAS	EGSS28
0	0	1	0	1	1		N2 BOTTLE CART	EGSS29
1	1	1	1	1	1		GARBAGE BINS	EGSS30
0	0	0	1	0	—		H SERIES STAIRS	EGSS31
0	0	1	0	0	1		H2S TEST KIT (WICALKIT-50H2S)	EGSS32
							WALL MOUNTED	
1	1	1	1	1	1		FIRST AID KIT	EWM1
1	1	1	1	1	1		EYEWASH STATION W/ SOLUTION ☐ FULL ☐ NEED EYEWASH	EWM2
1	1	1	1	0	1		EAR PLUGS	EWM3
1	1	1	2	1	1		FIRE EXTINGUISHER ANNUAL INSPECTION DATE: _____	EWM4
1	1	1	1	0	1		WHITEBOARD	EWM5
1	1	1	1	1	1		LOCKOUT STATION	EWM6
5	5	5	5	5	5		LOCK OUT TAGS	EWM7
5	5	5	5	5	5		LOCK OUT CLAMPS	EWM8
4	4	4	4	4	4		BREAKER LOCKOUT	EWM9
							FILING CABINET / LEAD BOX	
1	1	1	1	0			HEALTH AND SAFETY MANUAL (HSE-1000)	EFCLB1
1	1	1	1	0			OPERATOR MANUAL (OPS-3000)	EFCLB2
1	1	1	1	0			CLIP BOARD	EFCLB4
1	1	1	1	0			MSDS	EFCLB5
2	2	2	2	0			OPERATIONS FLRA (OPS-1005)	EFCLB6
1	1	1	1	0			RIGGING IN-OUT FLRA (HSE-1006)	EFCLB7
2	2	2	2	0			PHYSICIAN PACKAGES (HSE-1019)	EFCLB8
2	2	2	2	0			WORK ORDER BOOKS (OPS-3005)	EFCLB9
5	5	5	5	0			INCIDENT - INJURY (HSE-1012)	EFCLB10
5	5	5	5	0			INCIDENT - EQUIPMENT DAMAGE (HSE-1015)	EFCLB11
5	5	5	5	0			INCIDENT - SPILL (HSE-1013)	EFCLB12
5	5	5	5	0			INVENTORY SHEETS (OPS-3002)	EFCLB13
5	5	5	5	0			TANK INSPECTIONS (FL-4012)	EFCLB14
5	5	5	5	0			WEEKLY SITE REPORTS (OPS-3012)	EFCLB15
2	2	2	2	0			FUEL SUMMARY SHEETS (PAD) (OPS-3011)	EFCLB16
1	1	1	1	0			NEAR MISS REPORTS (PAD) (HSE-1002)	EFCLB17
1	1	1	1	0			MANUAL FUELLING SHIFT REPORT (PAD) (OPS-3003)	EFCLB18
10	10	10	10	0			PER-SITE WORKPLACE INSPECTION FORMS (HSE-1003A)	EFCLB19
10	10	10	10	0			TRAILER INSPECTION FORMS (FL-4018)	EFCLB20
10	10	10	10	0			MOBILE GENERATOR INSPECTION FORMS (FL-4015)	EFCLB21
10	10	10	10	0			TOOLBOX TALK FORM (HSE-1011A)	EFCLB22
10	10	10	10	0			SCENARIO / DRILLS (OPS-3009)	EFCLB23
2	2	2	2	0			SHIFT INSPECTION SHEETS (PAD) (OPS-3013)	EFCLB24
1	1	1	1	0			EQUIPMENT REPAIR AND MAINTENANCE LOG BOOK (FL-4024)	EFCLB25
10	10	10	10	0			LOTO LOG BOOK (HSE-1025)	EFCLB26
10	10	10	10	0			BUMP TEST LOG (HSE-1030)	EFCLB27
							MISCELLANEOUS BIN	
2	2	2	4	0	2		MANUAL FUELLING NOZZLE	EMB1

FRAC SHACK™

SHACK UNIT(S) #: _____ DATE (MM/DD/YY): _____

DAYTANK UNIT #: _____ REEL TRAILER UNIT #: _____

DEMOBILIZATION INVENTORY LIST								
E-QTY	EB/C/D-QTY	EG-QTY	H-QTY	SK-QTY	AMT	REQ'D	ITEM DESCRIPTION	DETAIL - CODE
1	1	1	2	0	1		FIRE RETARDENT RAIN COAT	EMB2
1	1	1	2	0	1		FACE SHIELD BRACKET	EMB3
1	1	1	2	0	1		FACE SHIELD	EMB4
2	2	2	2	0	2		SAFETY GLASSES	EMB5
3	3	3	3	0	3		LEATHER GLOVES	EMB6
3	3	3	3	0	3		PETROLEUM GLOVES	EMB7
1	1	1	1	0	1		BOX OF NITRILE GLOVES	EMB8
1	1	1	2	0	1		EAR MUFFS	EMB9
1	1	1	1	0	1		HARD HAT	EMB10
1	1	1	2	1	1		SPRAY 9	EMB11
1	1	1	1	1	1		WD-40	EMB12
1	1	1	1	0	1		HAND CLEANER	EMB13
1	1	1	2	1	1		WINDEX	EMB14
1	1	1	1	1	1		GARBAGE BAGS	EMB15
1	1	1	1	0	1		DIESEL FUEL CONDITIONER	EMB16
3	3	3	9	0	3		HYDRASORB 30 MICRON FILTERS	EMB17
2	2	2	3	0	2		CARGO RATCHET STRAP	EMB18
1	1	1	1	0	1		JUMPER CABLES	EMB19
1	1	1	1	0	1		110V EXTENTION CORD	EMB20
1	1	1	2	0	1		LIQUID WRENCH	EMB21
1	1	1	1	0	1		HI-VIS VEST	EMB22
1	1	1	1	0	1		SAFETY GOGGLES	EMB23
1	1	1	1	0	1		BOX OF RESPIRATOR SANITARY WIPES	EMB24
0	0	0	4	0	—		CHAINS AND BOOMERS	EMB25
							SPARE PARTS BIN	
1	1	1	2	0	1		SPARE SENSOR	ESP1
1	1	1	2	0	—		ACCUTECH DAY TANK SENSOR	ESP2
1	1	1	2	0	1		1" HAND VALVE	ESP3
1	1	1	2	0	1		3/4" HAND VALVE	ESP4
2	2	2	4	0	2		MAGNETIC PICKUPS	ESP8
2	2	2	4	0	2		SOLENOID	ESP9
1	1	1	2	0	1		DIAPHRAGM VALVE WITH SOLENOID	ESP10
2	2	2	4	0	2		DIAPHRAGM REPAIR KIT	ESP11
4	4	4	6	0	4		DNP 3/4" FEMALE DRY DISCONNECT	ESP12
2	2	2	4	0	2		DNP 3/4" MALE DRY DISCONNECT	ESP13
2	2	2	4	0	2		SPARE DNP 3/4" DUST PLUGS	ESP14
2	2	2	4	0	2		SPARE DNP 3/4" DUST CAPS	ESP15
8	8	8	12	0	8		3/4" SWIVEL FITTINGS	ESP18
3	3	3	6	0	3		ACCUTECH BATTERIES	ESP20
2	0	2	4	0	2		3/4" FEMALE COUPLER X HOSE SHANK	ESP21
0	2	0	0	0	—		1" FEMALE COUPLER X HOSE SHANK	BSP22
12	12	12	12	0	12		3" CAMLOCK GASKETS	ESP23
0	6	0	0	0	—		1" CAMLOCK GASKETS	BSP24
4	4	4	6	0	4		3/4" FEMALE THREAD COUPLING	ESP25
1	1	1	2	0	1		GREASE GUN	ESP27
1	1	1	2	0	1		GREASE	ESP28
1	1	1	2	0	1		MOTOR / PUMP SLEEVE	ESP29
2	2	2	2	0	2		SPARE RAMP PINS	ESP30
1	1	1	1	0	1		7-1/2" CABLE TIES	ESP31
1	1	1	1	0	1		11" CABLE TIES	ESP32
1	1	1	1	0	1		15" CABLE TIES	ESP33

FRAC SHACK™

SHACK UNIT(S) #: _____ DATE (MM/DD/YY): _____

DAYTANK UNIT #: _____ REEL TRAILER UNIT #: _____

DEMOBILIZATION INVENTORY LIST								
E-QTY	EB/C/D-QTY	EG-QTY	H-QTY	SK-QTY	AMT	REQ'D	ITEM DESCRIPTION	DETAIL - CODE
1	1	1	1	0	1		30-MICRON FILTER HOUSING	ESP34
							FITTINGS BIN	
12	12	14	28	0	14		3" FEMALE COUPLER X FEMALE NPT (NORSTAR)	EFB1
12	12	14	28	0	14		PETERBUILT SLEEVE (SCHLUMBERGER)	EFB2
12	12	14	28	0	14		3" FEMALE COUPLER W/ 2" FEMALE NPT (HALIBURTON)	EFB3
6	6	6	12	0	6		3" FEMALE COUPLER W/ 4" FEMALE NPT	EFB4
6	6	6	12	0	6		3" FEMALE COUPLER W/3" FEMALE STRAIGHT CUT (KENWORTH)	EFB5
12	12	14	28	0	14		3" RUBBER FITTINGS	EFB6
12	12	14	28	0	14		3" x 2" RUBBER FITTINGS	EFB7
4	4	64	8	0	64		WHIP CHECKS	EFB8
							TOOLBOX STORAGE	
1	1	1	1	0	1		BOX WRENCH SET	ETS1
0	0	1	0	0	1		EXTRA 1-1/16" WRENCH	EGTS2
0	0	1	0	0	1		1/2" TORQUE WRENCH	EGTS3
1	1	1	1	0	1		3/8" SOCKET SET	ETS4
1	1	1	1	0	1		1/2" SOCKET SET	ETS5
1	1	1	1	0	1		SCREW DRIVER SET	ETS6
1	1	1	1	0	1		MULTI-BIT SCREWDRIVER	ETS7
1	1	1	2	0	1		WIRE BRUSH	ETS8
1	1	1	1	0	1		HACK SAW AND BLADES	ETS9
1	1	1	1	0	1		SAE HEX KEYS	ETS10
1	1	1	1	0	1		METRIC HEX KEYS	ETS11
1	1	1	1	0	1		VICE GRIP	ETS12
1	1	1	1	0	1		NEEDLE NOSE VICE GRIP	ETS13
1	1	1	1	0	1		OIL FILTER WRENCH	ETS14
1	1	1	1	0	1		SIDE CUTTER	ETS15
1	1	1	1	0	1		WIRE CRIMPER/STRIPPER	ETS16
1	1	1	1	0	1		CHANNEL LOCK PLIERS	ETS17
1	1	1	1	0	1		8" SLIP JOINT PLIERS	ETS18
1	1	1	1	0	1		NEEDLE NOSE PLIERS	ETS19
1	1	1	1	0	1		CLAW HAMMER	ETS20
1	1	1	1	0	1		TAPE MEASURE	ETS21
3	3	3	3	0	3		DIESEL TEFLON TAPE (WHITE)	ETS22
0	0	12	0	0	12		GAS TEFLON TAPE (YELLOW)	EGTS23
1	1	1	2	0	1		GASOILA WATER FINDING PASTE	ETS24
1	1	1	2	0	1		DIESEL PIPE DOPE	ETS25
0	0	2	0	0	2		NG PIPE DOPE (LOCTITE 567)	EGTS26
1	1	1	1	0	1		PUMPER PAINT MARKER	ETS27
1	1	1	1	0	1		FLASHLIGHT	ETS28
2	2	2	2	0	2		D BATTERIES (FLASHLIGHT)	ETS29
1	1	1	1	0	1		ELECTRICAL TAPE	ETS30
2	2	2	2	0	2		DUCT TAPE	ETS31
1	1	1	1	0	1		BOX OF DRY ERASE MARKERS	ETS34
1	1	1	1	0	1		BOX OF PENS	ETS35
							FUSE KIT (IN CONTROL PANEL)	
5	5	5	5	0	5		BATTERY FUSE KLM10	EFK1
10	10	10	10	0	10		FUSE GMA100R	EFK2
5	5	5	5	0	5		FUSE GMA250R	EFK3
10	10	10	10	0	10		FUSE GMA500R	EFK4
5	5	5	5	0	5		FUSE GMA1R	EFK5
5	5	5	5	0	5		FUSE GMA2R	EFK6

FRAC SHACK™

SHACK UNIT(S) #: _____ DATE (MM/DD/YY): _____

DAYTANK UNIT #: _____ REEL TRAILER UNIT #: _____

DEMOBILIZATION INVENTORY LIST								
E-QTY	EB/C/D-QTY	EG-QTY	H-QTY	SK-QTY	AMT	REQ'D	ITEM DESCRIPTION	DETAIL - CODE
10	10	10	10	0	10		FUSE GMA5R	EFK7
5	5	5	5	0	5		FUSE GMA6R	EFK8
2	2	2	2	0	2		BLADE FUSE 0287030.L	EFK9
1	1	1	1	0	1		FUSE TESTER	EFK10
1	1	1	1	0	1		PHILLIPS SCREWDRIVER	EFK11
1	1	1	1	0	1		TERMINATING SCREWDRIVER	EFK12
1	1	1	1	0	1		MULTIMETER	EFK13
1	1	1	1	0	1		SUPRESSOR COIL	EFK14
XP FITTINGS BIN (IF APPLICABLE)								
8	8	8	0	0	8		3" FEMALE COUPLER X FEMALE NPT (NORSTAR)	EXPFB1
8	8	8	0	0	8		PETERBUILT SLEEVE (SCHLUMBERGER)	EXPFB2
8	8	8	0	0	8		3" FEMALE COUPLER W/ 2" FEMALE NPT (HALIBURTON)	EXPFB3
6	6	6	0	0	6		3" FEMALE COUPLER W/3" FEMALE STRAIGHT CUT (KENWORTH)	EXPFB4
8	8	8	0	0	8		3" RUBBER FITTINGS	EXPFB5
8	8	8	0	0	8		3" x 2" RUBBER FITTINGS	EXPFB6
4	4	4	0	0	4		2" CAMLOCK GASKET	EXPFB7
8	8	8	0	0	8		3" CAMLOCK GASKET	EXPFB8
4	4	4	0	0	4		DNP 3/4" FEMALE DRY DISCONNECT	EXPFB9
2	2	2	0	0	2		DNP 3/4" MALE DRY DISCONNECT	EXPFB10
2	2	2	0	0	2		WHIP CHECKS	EXPFB11
3	3	3	0	0	3		HYDRASORB 30 MICRON FILTERS	EXPFB12
8	8	8	0	0	8		SPILL CONTAINMENTS (DUCK PONDS) ***(NOT REQUIRED IN CANADA)***	EXPFB13
XP SHACK STORAGE (IF APPLICABLE)								
2	2	2	0	0	2		HOSE DOOR PILLOWS	EXPSS1
4	4	4	0	0	4		3/4" HOSE EXTENSIONS - 75'	EXPSS2
1	1	1	0	0	1		33' 2" FUEL LINE W/ END CAPS	EXPSS3
1	1	1	0	0	1		POWER CABLE	EXPSS4
8	8	8	0	0	8		METAL DRIP TRAYS	EXPSS5
8	8	8	0	0	8		ACCUTECH SENSOR HEADS WITH FUEL HEADS	EXPSS6
8	8	8	0	0	8		METAL SPILL CONTAINMENT PAILS	EXPSS7
8	8	8	0	0	8		PAIL GROUNDING WIRES	EXPSS8
8	8	8	0	0	8		VENT TUBES WITH 3/4" FEMALE COUPLER X HOSE SHANK	EXPSS9
1	1	1	0	0	1		XP STAIRS	EXPSS10
1	1	1	0	0	1		SPARE SENSOR S276510	EXPSS11
3	3	3	0	0	3		ACCUTECH BATTERIES	EXPSS12
XPX FITTINGS BIN (IF APPLICABLE)								
12	12	12	0	0			3" FEMALE COUPLER X FEMALE NPT (NORSTAR)	EXPXFB1
12	12	12	0	0			PETERBUILT SLEEVE (SCHLUMBERGER)	EXPXFB2
12	12	12	0	0			3" FEMALE COUPLER W/ 2" FEMALE NPT (HALIBURTON)	EXPXFB3
6	6	6	0	0			3" FEMALE COUPLER W/3" FEMALE STRAIGHT CUT (KENWORTH)	EXPXFB4
12	12	12	0	0			3" RUBBER FITTINGS	EXPXFB5
12	12	12	0	0			3" x 2" RUBBER FITTINGS	EXPXFB6
4	4	4	0	0			2" CAMLOCK GASKET	EXPXFB7
12	12	12	0	0			3" CAMLOCK GASKET	EXPXFB8
4	4	4	0	0			DNP 3/4" FEMALE DRY DISCONNECT	EXPXFB9
2	2	2	0	0			DNP 3/4" MALE DRY DISCONNECT	EXPXFB10
2	2	2	0	0			WHIP CHECKS	EXPXFB11
6	6	6	0	0			3" FEMALE COUPLER W/ 4" FEMALE NPT	EXPXFB12
3	3	3	0	0			HYDRASORB 30 MICRON FILTERS	EXPXFB13
12	12	12	0	0			SPILL CONTAINMENTS (DUCK PONDS) ***(NOT REQUIRED IN CANADA)***	EXPXFB14

FRAC SHACK™

SHACK UNIT(S) #: _____ DATE (MM/DD/YY): _____

DAYTANK UNIT #: _____ REEL TRAILER UNIT #: _____

DEMOBILIZATION INVENTORY LIST								
E-QTY	EB/C/D-QTY	EG-QTY	H-QTY	SK-QTY	AMT	REQ'D	ITEM DESCRIPTION	DETAIL - CODE
XPX SHACK STORAGE (IF APPLICABLE)								
2	2	2	0	0			HOSE DOOR PILLOWS	EXPXSS1
4	4	4	0	0			3/4" HOSE EXTENSIONS - 75'	EXPXSS2
1	1	1	0	0			33' 2" FUEL LINE W/ END CAPS	EXPXSS3
1	1	1	0	0			POWER CABLE	EXPXSS4
12	12	12	0	0			METAL DRIP TRAYS	EXPXSS5
12	12	12	0	0			ACCUTECH SENSOR HEADS WITH FUEL HEADS	EXPXSS6
12	12	12	0	0			METAL SPILL CONTAINMENT PAILS	EXPXSS7
12	12	12	0	0			PAIL GROUNDING WIRES	EXPXSS8
12	12	12	0	0			VENT TUBES WITH 3/4" FEMALE COUPLER X HOSE SHANK	EXPXSS9
1	1	1	0	0			XP STAIRS	EXPXSS10
1	1	1	0	0			SPARE SENSOR	EXPXSS11
3	3	3	0	0			ACCUTECH BATTERIES	EXPXSS12
NGC HARDWARE BIN (IF APPLICABLE)								
0	0	14	0	0			3" 150# RF FLANGE TO 2" NPT	EGHB1
0	0	14	0	0			2" 150# RF FLANGE TO 2" NPT	EGHB2
0	0	1	0	0			3" 150# RF BLIND FLANGE	EGHB3
0	0	30	0	0			3" 150# 316SS FLEX GASKETS	EGHB4
0	0	30	0	0			2" 150# 316SS FLEX GASKETS	EGHB5
0	0	70	0	0			B7 FLANGE STUDS - GRADE 8 5/8" X 3-3/4"	EGHB6
0	0	140	0	0			2H FLANGE NUTS - 5/8"	EGHB7
0	0	32	0	0			2" NPT PIPE NIPPLES	EGHB8
0	0	1	0	0			3" ANSI FLANGE TO 2" ANSI FLANGE REDUCER	EGHB9
0	0	1	0	0			INLET CONE STRAINER (WITCH'S HAT)	EGHB10
0	0	1	0	0			NG POD FILTER	EGHB11
0	0	2	0	0			NG HOSE DOOR PILLOWS	EGHB12
0	0	14	0	0			2" MALE MANNTEK DRY GAS COUPLINGS	EGHB13
0	0	14	0	0			3" NPT SS SLEEVE X 2" NPT NIPPLE (SCHLUMBERGER)	EGHB14
0	0	1	0	0			NG PLATFORM/STAIRS	EGRT10
NGD HARDWARE BIN (IF APPLICABLE)								
0	0	20	0	0	20		3" 150# RF FLANGE TO 2" NPT	EGHB1
0	0	20	0	0	20		2" 150# RF FLANGE TO 2" NPT	EGHB2
0	0	1	0	0	1		4" 150# BLIND FLANGE	EGHB15
0	0	1	0	0	1		4" 150# RF FLANGE TO 3" 150# RF FLANGE REDUCER	EGBH16
0	0	60	0	0	60		3" 150# 316SS FLEX GASKETS	EGHB4
0	0	60	0	0	60		2" 150# 316SS FLEX GASKETS	EGHB5
0	0	140	0	0	140		B7 FLANGE STUDS - GRADE 8 5/8" X 3-3/4"	EGHB6
0	0	280	0	0	280		2H FLANGE NUTS - 5/8"	EGHB7
0	0	64	0	0	64		2" NPT PIPE NIPPLES	EGHB8
0	0	1	0	0	1		3" ANSI FLANGE TO 2" ANSI FLANGE REDUCER	EGHB9
0	0	1	0	0	1		INLET CONE STRAINER (WITCH'S HAT)	EGHB10
0	0	1	0	0	1		NG POD FILTER COALESENT ?✓	EGHB11
0	0	2	0	0	2		NG HOSE DOOR PILLOWS	EGHB12
0	0	20	0	0	20		2" MALE MANNTEK DRY GAS COUPLINGS	EGHB13
0	0	20	0	0	20		3" NPT SS SLEEVE X 2" NPT NIPPLE (SCHLUMBERGER)	EGHB14
0	0	1	0	0	1		NG PLATFORM/STAIRS	EGRT10
GAS LEAK DETECTION (IF APPLICABLE)								
0	0	1	0	0	1		GT-41 SNIFFER CALIBRATION DATE: _____	EGSK1
0	0	1	0	0	1		REPLACEMENT DUST FILTERS	EGSK2
0	0	2	0	0	2		REPLACEMENT HYDROPHOBIC FILTERS	EGSK3
0	0	3	0	0	3		C BATTERIES	EGSK4

FRAC SHACK™

SHACK UNIT(S) #: _____ DATE (MM/DD/YY): _____

DAYTANK UNIT #: _____ REEL TRAILER UNIT #: _____

E-QTY	EB/C/D-QTY	EG-QTY	H-QTY	SK-QTY	AMT	REQ'D	ITEM DESCRIPTION	DETAIL - CODE
DEMOBILIZATION INVENTORY LIST								
0	0	1	0	0	1		QUICK OPERATING GUIDE SHEET	EGSK5
0	0	2	0	1	2		SNOOP (SUPER COOL - 1 GALLON)	EGSK6
0	0	1	0	1	1		SNOOP SPRAY APPLICATOR BOTTLE	EGSK7
12 LINE HOSE REEL TRAILER (IF APPLICABLE)								
0	0	12	0	0			NG REELS WITH 250' HOSE	EGRT1
0	0	24	0	0			2" FEMALE MANNTEK DRY GAS COUPLINGS	EGRT2
0	0	12	0	0			2" RATCHET STRAPS	EGRT3
0	0	24	0	0			1" RATCHET STRAPS	EGRT4
0	0	4	0	0			WHEEL CHOCKS	EGRT5
0	0	3	0	0			OUTRIGGER PADS	EGRT6
0	0	2	0	0			N2 BOTTLES	EGRT7
0	0	2	0	0			N2 BOTTLE STRAPS	EGRT8
0	0	24	0	0			HOSE END COVERS	EGRT9
0	0	10	0	0			REEL TRAILER PRE/POST TRIP CHECKLIST (FL-4028)	EGRT11
0	0	2	0	0			N2 BOTTLE HOLDERS	EGRT12
20 LINE HOSE REEL TRAILER (IF APPLICABLE)								
0	0	20	0	0			NG REELS WITH 250' HOSE	EGRT1
0	0	40	0	0			2" FEMALE MANNTEK DRY GAS COUPLINGS	EGRT2
0	0	4	0	0			1" RATCHET STRAPS	EGRT4
0	0	4	0	0			WHEEL CHOCKS	EGRT5
0	0	3	0	0			OUTRIGGER PADS	EGRT6
0	0	2	0	0			N2 BOTTLES	EGRT7
0	0	2	0	0			N2 BOTTLE STRAPS	EGRT8
0	0	40	0	0			HOSE END COVERS	EGRT9
0	0	10	0	0			REEL TRAILER PRE/POST TRIP CHECKLIST	EGRT11
0	0	2	0	0			N2 BOTTLE HOLDERS	EGRT12
SIDEKICK								
0	0	0	0	1			2" 600# RF BLIND FLANGE	SK1
0	0	0	0	2			3" 150# RF BLIND FLANGE	EGHB3
0	0	0	0	6			3" 150# 316SS FLEX GASKETS	EGHB4
0	0	0	0	6			2" 600# 304SS FLEX GASKETS	SK2
0	0	0	0	24			B7 FLANGE STUDS - GRADE 8 5/8" X 3-3/4"	EGHB6
0	0	0	0	32			B7 FLANGE STUDS - GRADE 8 5/8" X 4-1/4"	SK3
0	0	0	0	112			2H FLANGE NUTS - 5/8"	EGHB7
0	0	0	0	1			FILTER	SK4
0	0	0	0	1			AIRGAS Y80DAN1510 GAS REGULATOR	SK5
0	0	0	0	1			PRAXAIR PROSTAR PRS20129301 GAS REGULATOR	SK6
0	0	0	0	1			ROSEMOUNT 2088 PRESSURE TRANSMITTER	SK7
0	0	0	0	1			2" X 10' BRAIDED FLEX HOSE WITH 2" 600# RF FLANGES (90° ON ONE END)	SK8
0	0	0	0	1			3" X 10' BRAIDED FLEX HOSE WITH 3" 150# RF FLANGES (90° ON ONE END)	SK9
COMMENTS								

HEATHER LYSAK

INVENTORY COMPLETED BY (NAME & SIGNATURE)

LEAD SIGNOFF (NAME & SIGNATURE)