


<div><div>HOSE CONNECTION</div><div>TIE-IN POINT</div><div>VENT TO ATMOSPHERE</div><div>VENT TO ATMOSPHERE c/w HYDRAULIC SEAL</div></div>		A	AH	AHL	AL	C	CV	DR	DV	E	FIC	G	GM	I	IC	IS	IT	K	L	Q	R	RC	RR	S	SC	SD	SDH	SDL	SE	SH	SL	SLL	SM	SO	SV	T	V	W	Y	
		ALARM	ALARM HIGH	ALARM HIGH/LOW	ALARM LOW	CONTROLLER	CONTROL VALVE	DIFFERENTIAL RECORDER	DEPRESSURIZING VALVE	PRIMARY ELEMENT	RATIO CONTROLLER	GAUGE GLASS	GAUGE MAGNETIC	INDICATOR	INDICATOR CONTROLLER	INDICATOR SWITCH	INDICATOR TRANSMITTER	MANUAL/AUTOMATIC (STATION)	STATUS LIGHT (NOT ALARM)	INTERGRATION (TOTALIZER)	RECORDER	RECORDER CONTROLLER	RATIO RECORDER	SWITCH	SWITCH CLOSED	SHUTDOWN	SHUTDOWN HIGH	SHUTDOWN LOW	SAFETY ELEMENT (RUPTURE DISK)	SWITCH HIGH	SWITCH LOW	SWITCH LOW LOW	SWITCH MIDDLE	SWITCH OPEN	SAFETY VALVE	TRANSMITTER	VALVE	THERMOWELL	RELAY COMPUTING SOLENOID VALVE	
A	ANALYSIS		AAH	AHL	AAL	AC	ACV	ADR		AE				AI	AIC		AIT				AR	ARC	ARR	AS			ASDH	ASDL		ASH	ASL		ASM				AT			AY
BJ	BURNER FAILURE	BJA												CI	CIC	CIS	CIT		CL		CR	CRC	CRR	CJ		BJSD										CT			CY	
C	CONDUCTIVITY		CAH	CHL	CAL	CC	CCV	CDR		CE				DI	DIC	DIS	DIT	DK	DL		DR	DRC	DRR	DS			CSDH	CSDL		CSH	CSL		CSM				DT			DY
D	DENSITY		DAH	DAHL	DAL	DC	DCV	DDR		DE		DG		DI	DIC	DIS	DIT		DL		DR	DRC	DRR	DS			DSDH	DSDL	DSE	DSH	DSL		DSM				DT			DY
dP	DIFFERENTIAL PRESSURE	dPA	dPAH	dPAHL	dPAL	dPC	dPCV	dPR						dPI	dPIC	dPIS	dPIT		dPL			dPRC		dPS		dPSD	dPSDH	dPSDL		dPSH	dPSL					dPT			dPY	
E	EMERGENCY																									ESD											ESDV		EY	
F	FLOW		FAH	FAHL	FAL	FC	FCV	FDR		FE	FFIC	FG		FI	FIC	FIS	FIT	FK	FL	FQ	FR	FRC	FRR	FS			FSDH	FSDL		FSH	FSL		FSM		FSV	FT			FY	
G	GAS DETECTION		GAH						GE																		GSDH			GSH										
H	HAND (MANUAL)					HC	HCV								HRC									HS													HV		HY	
J	POWER															JIC																				JT		JY		
K	TIME	KA				KC	KCV	KDR											KL	KQ				KS												KT	KV		KY	
L	LEVEL		LAH	LAHL	LAL	LC	LCV	LDR		LE		LG	LGM	LI	LIC	LIS	LIT		LL		LR	LRC	LRR	LS		LSD				LSH	LSL	LSLL	LSM		LT			LY		
M	MOISTURE		MAH	MAHL	MAL	MC	MCV	MDR		ME				MI	MIC	MIS	MIT		ML		MR	MRC	MRR	MS			MSDH	MSDL		MSH	MSL		MSM		MT			MY		
P	PRESSURE		PAH	PAHL	PAL	PC	PCV	PDR		PE				PI	PIC	PIS	PIT	PK	PL		PR	PRC	PRR	PS			PSDH	PSDL	PSE	PSH	PSL		PSM		PSV	PT			PY	
R	REMOTE																																				RSDV		RY	
S	SPEED		SAH	SAHL	SAL	SC	SCV	SDR		SE				SI	SIC	SIS	SIT	SK	SL		SR	SRC	SRR	SS			SSDH	SSDL		SSH	SSL		SSM			ST			SY	
T	TEMPERATURE		TAH	TAHL	TAL	TC	TCV	TDR		TE				TI	TIC	TIS	TIT	TK	TL		TR	TRC	TRR	TS			TSDH	TSDL	TSE	TSH	TSL		TSM		TT			TW	TY	
U	UNIT	UA							UDV										UL							USD														
V	VIBRATION		VAH			VC				VE				VI							VR			VS			VSDH			VSH							VT			
VI	VISCOSITY		VIAH	VIAHL	VIAL	VIC	VICV	VIDR		VIE				VII	VIIC	VIIS	VIIT		VIL		VIR	VIRC	VIIR	VIS		VISD				VISH	VISL		VISM			VIT			VIY	
X	FIRE DETECTION	XA								XE																	XSD			XSH										
Z	LIMIT OR POSITION		ZAH	ZAHL	ZAL					ZE						ZIS	ZIT		ZL						ZSC		ZSDH	ZSDL		ZSH	ZSL		ZSM	ZSO			ZT			ZY

										<div> <div>  </div> <div> YPFB TRANSPORTE, S.A. 440 </div> </div>		East Lake Road, Airdrie, Alberta Canada T4A 2J8	
										SICA SICA STATION LEGEND MECHANICAL FLOWSHEET			
										APPROVED MECH./STRUCT. BY M. FANG DATE 10/04/12 ELECTRICAL CHECKED DATE C. ANDREWS PROJECT BY C. ANDREWS DATE 10/07/21			
										DRAWN BY M. FANG DATE 10/04/12 CHECKED BY C. ANDREWS DATE 10/07/21			
										Dwg. No.: D-MFS-108432-100		SHT. 1 OF 8	
										REV. 2			

OF PROPAC

TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY WRITTEN CONSENT

THE DESIGN IT COVERS ARE CONFIDENTIAL AND THE PROPERTY OF PROPAC SYSTEMS LTD., AND SHALL NOT BE DISCLOSED

THIS DRAWING AND

GENERAL SPECIFICATIONS

CLASS	TYPICAL SERVICE	TEMP. RANGE (°F)	PRESS. RATING (ANSI)
A	SWEET HYDROCARBON, PROPANE REFRIGERANT, FUEL GAS AND FLARE GAS	-20°F TO 500°F	150 # RF
B	SWEET HYDROCARBON, PROPANE REFRIGERANT, FUEL GAS AND FLARE GAS	-20°F TO 500°F	300 # RF
C	SWEET HYDROCARBON, PROPANE REFRIGERANT, FUEL GAS AND FLARE GAS	-20°F TO 500°F	600 # RF
H	COMPRESSED AIR AND UTILITY WATER	32°F TO 100°F	150 # RF
J	DRAIN SYSTEM PIPING	41°F TO 200°F	150 # RF
K	GLYCOL	175 PSIG @ 351°F	150 # RF TO 1500 # RF
AS	SOUR HYDROCARBON, RICH AMINE AND SOUR WATER	-20°F TO 500°F	150 # RF
BS	SOUR HYDROCARBON, RICH AMINE AND SOUR WATER	-20°F TO 500°F	300 # RF
CS	SOUR HYDROCARBON, RICH AMINE AND SOUR WATER	-20°F TO 500°F	600 # RF
AL	SWEET HYDROCARBON, PROPANE REFRIGERANT	-50°F TO 151°F	150 # RF
BL	SWEET HYDROCARBON, PROPANE REFRIGERANT	-50°F TO 151°F	300 # RF
CL	SWEET HYDROCARBON, PROPANE REFRIGERANT	-50°F TO 151°F	600 # RF
AC	SWEET HYDROCARBON	-300°F TO 151°F	150 # RF
BC	SWEET HYDROCARBON	-300°F TO 151°F	300 # RF
CC	SWEET HYDROCARBON	-300°F TO 151°F	600 # RF

GENERAL NOTES (ABBREVIATIONS)

AG - AIR CLOSURE
AO - AIR OPENS
AVT - AUTOVENT TRAP
BD - BLOWDOWN
BF - BLIND FLANGE
CBD - CONTINUOUS BD
CD - CLOSED DRAIN
CO - CHAIN OPERATED
CSC - CAR SEAL CLOSED
CSO - CAR SEAL OPEN
DC - DRAIN CONNECTION
EBD - EMERGENCY BD
ESD - EMERGENCY SHUTDOWN
ET - ELECTRICAL HEAT TRACE
FO - FAIL OPEN
FC - FAIL CLOSED
FP - FULL PORT
GT - GLYCOL HEAT TRACE
HH - HAND HOLE
HC - HOSE CONNECTION
L - LOW
LC - LOCK CLOSED
LO - LOCK OPEN
ML - MANUAL LOADING
MW - MANWAY
NC - NORMALLY CLOSED
NE - NORMALLY ENERGIZED UNDER OPER. COND.
NO - NORMALLY OPEN
ND - NORMALLY DE-ENERGIZED UNDER OPER. COND.
PC - PISTON CHECK VALVE
PO - PUMPOUT
PP - PERSONNEL PROTECTION
QO - QUICK OPENING
SC - SAMPLE CONNECTION
SO - STEAM OUT
SP - SET POINT
ST - STEAM HEAT TRACE
UG - UNDERGROUND
VB - VACUUM BREAKER
VFD - VARIABLE FREQUENCY DRIVE
WC - WATER COLUMN

TYPICAL VALVE IDENTIFICATION

VALVE TYPE

GA - GATE
GL - GLOBE
CH - CHECK
PL - PLUG
BA - BALL
NE - NEEDLE
BU - BUTTERFLY
ST - STRAINER

VALVE SIZE

O.D.
(INCH.)

1" GA
808X

ANSI RATING

1 - 150
3 - 300
6 - 600
8 - 800 API
9 - 900
15 - 1500
25 - 2500
60 - 6000

STEAM TRAP TRIM

0 - THERMODYNAMIC
1 - BALANCED PRESSURE
2 - INVERTED BUCKET
3 - THERMOSTATIC
4 - BALL FLOAT
5 - AIR/GAS VENT

SPECIAL DESIGNATORS

END CONNECTIONS

GATE, GLOBE, BALL OR BUTTERFLY VALVE
0 - RAISED FACE (HANDWHEEL OR LEVER)
1 - RAISED FACE (GEAR OPERATOR)
2 - RING JOINT (HANDWHEEL OR LEVER)
3 - RING JOINT (GEAR OPERATOR)
4 - BUTTWELD (HANDWHEEL OR LEVER)
5 - BUTTWELD (GEAR OPERATOR)
6 - SOCKET WELD
7 - SOCKET WELD x THREADED
8 - THREADED

END CONNECTIONS

CHECK VALVES
0 - RAISED FACE SWING
1 - RAISED FACE TILT DISK
2 - RAISED FACE PISTON
3 - RING JOINT SWING
4 - RING JOINT TILT DISK
5 - RING JOINT PISTON
6 - SOCKET WELD SPRING LOADED PISTON
7 - SOCKET WELD x THREADED SPRING LOADED PISTON
8 - THREADED (HORIZ. FLOW)
9 - THREADED (VERT. FLOW)
S - BUTTWELD SWING
T - BUTTWELD TILT DISK
P - BUTTWELD PISTON

VALVE TRIM

0 - STANDARD
1 - SOUR
2 - CORROSIVE
3 - LOW TEMPERATURE
4 - LOW TEMP. SOUR
5 - LOW TEMP. CORROSIVE
6 - STEAM SERVICE
7 - CRYOGENIC ABOVE -150°F
8 - CRYOGENIC ABOVE -300°F
9 - STAINLESS STEEL BODY W/ CORROSIVE TRIM

-22°F TO -51°F

COMMODITY (ABBREVIATIONS)

AG - ACID GAS
AGF - ACID GAS FLARE
AMD - AMINE DRAIN
AV - ATMOSPHERIC VENTS
BD - BLOWDOWN
C - CAUSTIC
CCD - CLOSED CRYOGENIC DRAIN
CHD - CLOSED HYDROCARBON DRAIN
CSD - CLOSED SOUR DRAIN
CV - CRYOGENIC VENT
CWD - CLOSED WATER DRAIN
DR - DRAIN (ATMOSPHERIC)
EQL - EQUALIZING
FG - FUEL GAS
FL - FLARE
FO - FUEL OIL
FW - FIRE WATER
GD - GLYCOL DRAIN
GL - GLYCOL
HC - HIGH PRESSURE STEAM CONDENSATE
HCL - HYDROCARBON LIQUIDS
HCV - HYDROCARBON VAPOUR
HM - HEAT MEDIUM
HPF - HIGH PRESSURE FLARE
HS - HIGH PRESSURE STEAM
I/A - INSTRUMENT AIR
I/G - INSTRUMENT GAS
I/S - INSTRUMENT SUPPLY
JW - JACKET WATER
K - CHEMICALS
LAM - LEAN AMINE
LC - LOW PRESSURE STEAM CONDENSATE
LO - LUBE OIL
LOD - LUBE OIL DRAIN
LPF - LOW PRESSURE FLARE
LPG - LOW PRESSURE GAS
LS - LOW PRESSURE STEAM
MC - MEDIUM PRESSURE STEAM CONDENSATE
MS - MEDIUM PRESSURE STEAM
P - PROCESS GAS/LIQUID
PDW - PRODUCED WATER
POD - PACKING OIL DRAIN/VENT
POW - POTABLE WATER
PS - SOUR PROCESS GAS
PSW - SOUR PROCESS WATER
PW - PROCESS WATER
RAM - RICH AMINE
RLRV - REFRIG. LIQUID, REFRIG. VAPOUR
ROD - REFRIG. OIL DRAIN
SO - SEAL OIL
SOD - SEAL OIL DRAIN
UW - UTILITY WATER

TUBING SIZES

METRIC O.D. (mm)	IMP O.D. (INCH.)	IMP NPS (INCH.)
3	1/8"	1/4"
6	1/4"	3/8"
9	3/8"	1/2"
13	1/2"	3/4"
19	3/4"	1"
25	1"	1-1/2"

PIPE SIZES

METRIC O.D. (mm)	METRIC DIN (mm)
14	8
17	10
21	15
27	20
33	25
48	40
60	50
89	80
114	100
168	150
219	200
273	250
324	300
356	350
406	400
457	450
508	500
610	600
914	900
1067	1050

TYPICAL PIPE FLAGS

PIPE SIZE

1"

SKID EDGE

ASSOCIATED MECHANICAL FLOWSHEET SERIES #

300
04

E-300

EQUIPMENT NUMBER

ASSOCIATED MECHANICAL FLOWSHEET SHT. # FROM ANOTHER SERIES

FLANGE SIZE AND RATING

PIPE SIZE

2"

2"-150

SKID EDGE

EQUIPMENT NUMBER

ASSOCIATED MECHANICAL FLOWSHEET SHT # WITHIN SAME SERIES

04

E-300

TYPICAL PIPE IDENTIFICATION

COMMODITY

PIPE AREA

PIPE NUMBER

P-0860-AS-1-1/2"-1-1/2"H

INSULATION

PIPE SIZE

MODIFIER (OPTION)

S - SOUR
L - LOW TEMP.
C - CRYOGENIC

PIPING CLASS

A, B, C, H, J, K,
AS, BS, CS,
AL, BL, CL,
AC, BC, CC.

TYPICAL EQUIPMENT IDENTIFICATION

TAG No:

DESCRIPTION:

MAKE AND MODEL:

DIMENSIONS:

DESIGN PRESSURE @ DESIGN TEMP., CORROS. ALLOWANCE:

GAS FLOW RATES:

LIQUID FLOW RATES:

DUTIES:

MOTOR POWER:

STRESS RELIEVING AND X-RAY:

T-820
DEETHANIZER

...
...
... psig @ ... °F, ...inches C.A.
... MMscfd
... USgpm
... btu/h
... hp @ V/ø/Hz
S.R.: YES/NO, X-RAY: FULL/100%/SPOT

APPROVED

MECH./STRUCT.

DATE

ELECTRICAL

DATE

PROJECT

DATE

C. ANDREWS

10/07/21

DRAWN

BY

DATE

CHECKED

BY

DATE

C. ANDREWS

10/07/21

SCALE

YFPB TRANSPORTE, S.A.

SICA SICA STATION
LEGEND
MECHANICAL FLOWSHEET

DWG. No.: D-MFS-108432-100

SHT. 2 OF 8

REV. 2

GENERAL NOTES

DATE: 2010/09/15 01:35 PM J:\JOBS\10\108432\20-DRAWINGS\FLWMMFS-108432-100-02.DWG lyu

GENERAL NOTES

No.

REVISION

BY

DATE

CKD

ENG

AS BUILT

1

ISSUED FOR CONSTRUCTION

MAF

10/07/21

CJA

CJA

RE-ISSUED FOR APPROVAL

B

ISSUED FOR APPROVAL

LDW

10/06/25

CJA

CJA

ISSUED FOR APPROVAL

A

ISSUED FOR APPROVAL

MAF

10/04/12

CJA

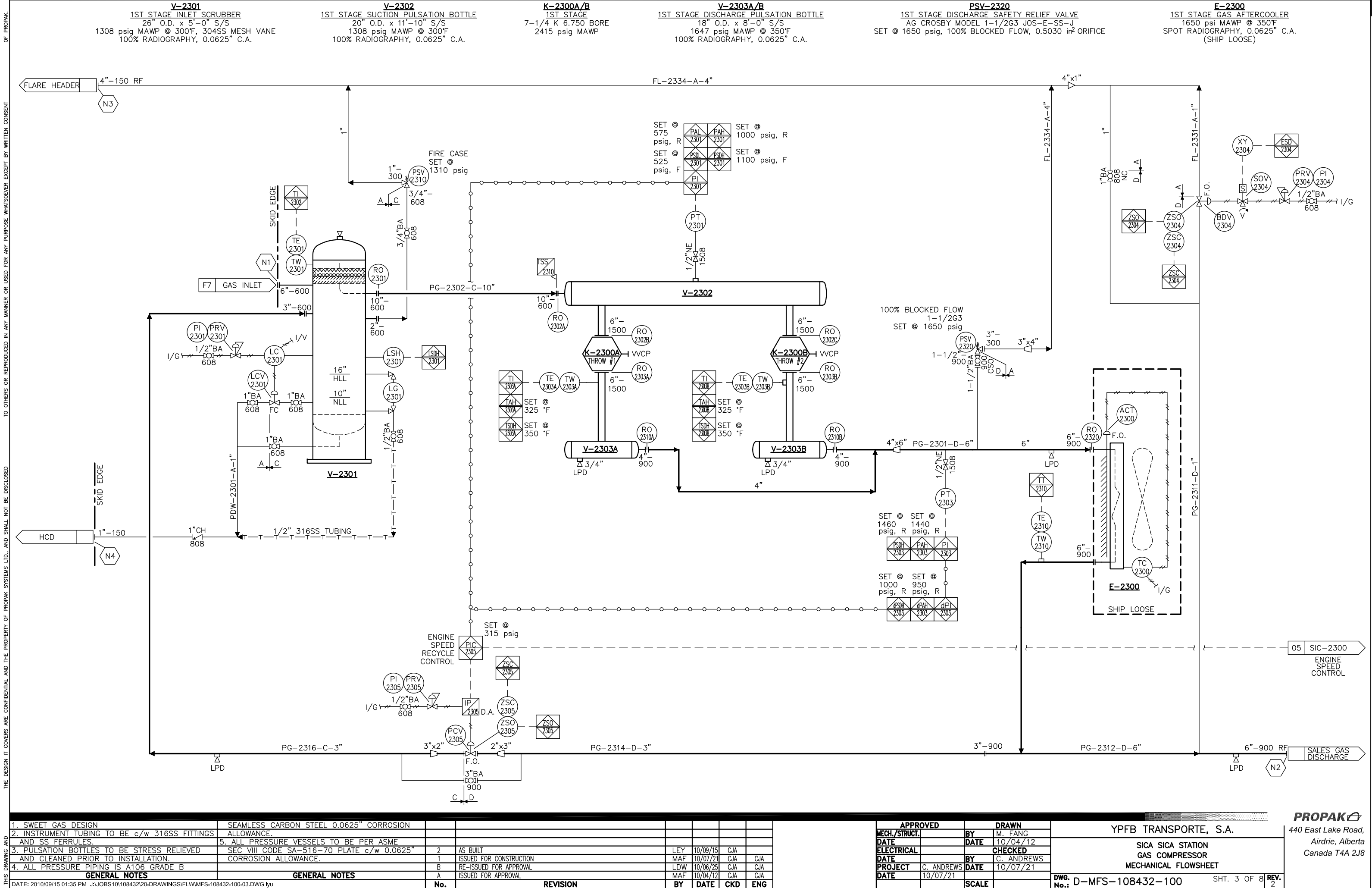
CJA

PROPAC

440 East Lake Road,
Airdrie, Alberta
Canada T4A 2J8

OF PROPAG. TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY WRITTEN CONSENT OF PROPAG. THE DESIGN IT COVERS ARE CONFIDENTIAL AND THE PROPERTY OF PROPAG SYSTEMS LTD., AND SHALL NOT BE DISCLOSED TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY WRITTEN CONSENT OF PROPAG.

THIS DRAWING AND ANY ATTACHED APPENDICES ARE THE PROPERTY OF PROPAG SYSTEMS LTD., AND SHALL NOT BE DISCLOSED TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY WRITTEN CONSENT OF PROPAG.



1. SWEET GAS DESIGN	SEAMLESS CARBON STEEL 0.0625" CORROSION ALLOWANCE.								
2. INSTRUMENT TUBING TO BE c/w 316SS FITTINGS AND SS FERRULES.	5. ALL PRESSURE VESSELS TO BE PER ASME SEC VIII CODE SA-516-70 PLATE c/w 0.0625" CORROSION ALLOWANCE.								
3. PULSATION BOTTLES TO BE STRESS RELIEVED AND CLEANED PRIOR TO INSTALLATION.		2	AS BUILT	LEY	10/09/15	CJA			
4. ALL PRESSURE PIPING IS A106 GRADE B		1	ISSUED FOR CONSTRUCTION	MAF	10/07/21	CJA	CJA		
		B	RE-ISSUED FOR APPROVAL	LDW	10/06/25	CJA	CJA		
		A	ISSUED FOR APPROVAL	MAF	10/04/12	CJA	CJA		
GENERAL NOTES		No.	REVISION	BY	DATE	CKD	ENG		
DATE: 2010/09/15 01:35 PM J:\JOBS\10108432\20-DRAWINGS\FLWMF5-108432-100-03.DWG lyu									

APPROVED		DRAWN	
MECH./STRUCT.		BY	M. FANG
DATE		DATE	10/04/12
ELECTRICAL		CHECKED	
DATE		BY	C. ANDREWS
PROJECT	C. ANDREWS	DATE	10/07/21
DATE	10/07/21	SCALE	

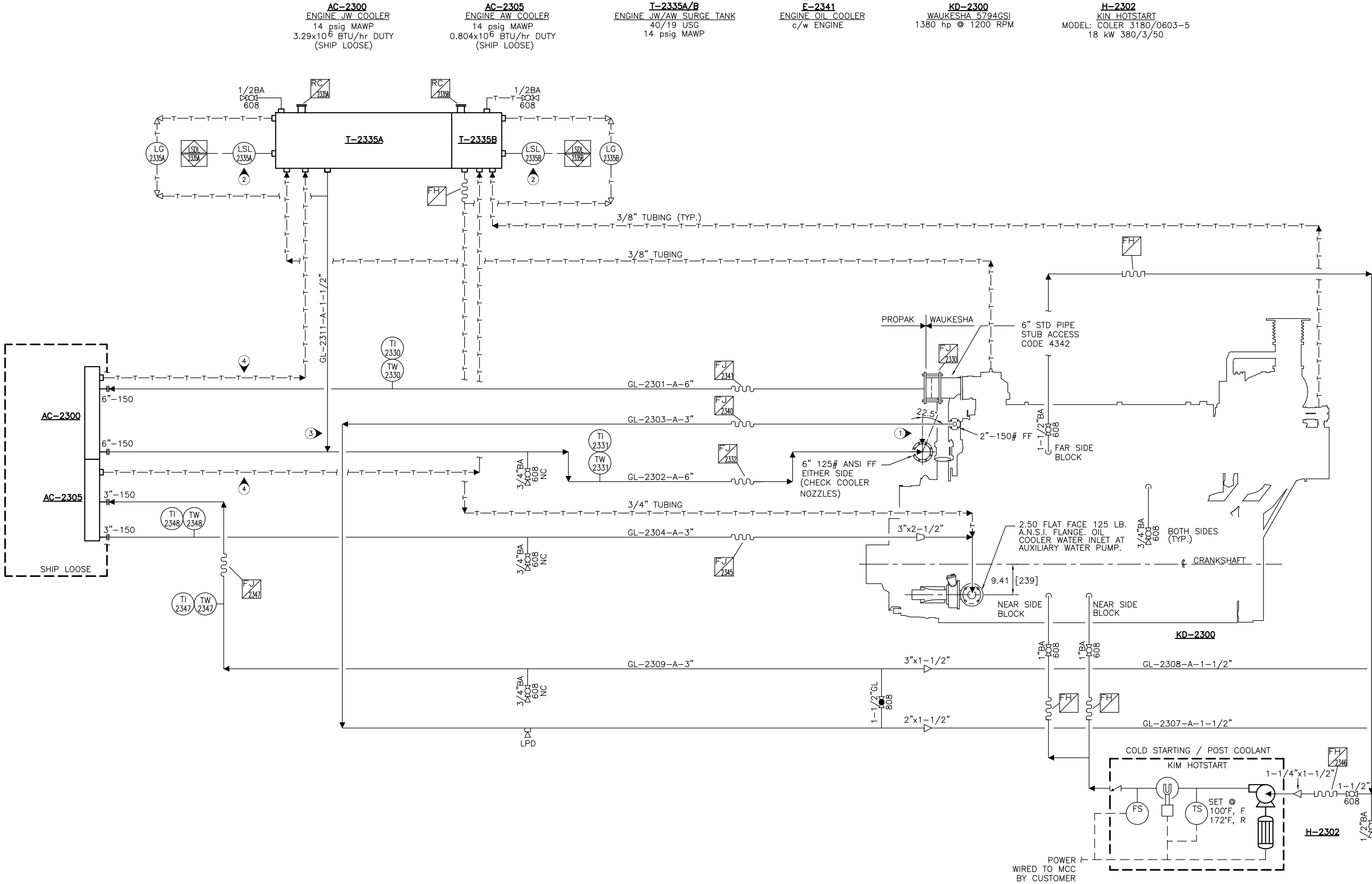
YFPB TRANSPORTE, S.A.	
SICA SICA STATION GAS COMPRESSOR MECHANICAL FLOWSHEET	
DWG. No.: D-MFS-108432-100	SHT. 3 OF 8
REV. 2	

PROPAK
440 East Lake Road,
Airdrie, Alberta
Canada T4A 2J8

[illegible]

THE DESIGN IT COVERS ARE CONFIDENTIAL AND THE PROPERTY OF PROPAK SYSTEMS LTD., AND SHALL NOT BE DISCLOSED TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY WRITTEN CONSENT OF PROPAK.

THIS DRAWING AND



1. ENGINE CONNECTION INDEX SEE MFS-044242-100 SHT 3.									
2. LSL LEVEL SET AT BOTTOM OF TANK.									
3. GL-2311-A-1-1/2" TIES IN TO JW HEADER TOL.	2	AS BUILT	LEY	10/09/15	CJA				
4. ENGINE VENT TO BE TUBED & INSTALLED AT SITE.	1	ISSUED FOR CONSTRUCTION	MAF	10/07/21	CJA	CJA			
	B	RE-ISSUED FOR APPROVAL	LDW	10/06/25	CJA	CJA			
	A	ISSUED FOR APPROVAL	MAF	10/04/12	CJA	CJA			
GENERAL NOTES	No.	REVISION	BY	DATE	CKD	ENG			

APPROVED	BY	DRAWN
MECH./STRUCT.		M. FANG
DATE		10/04/12
ELECTRICAL		CHECKED
DATE		
PROJECT	C. ANDREWS	DATE
DATE	10/07/21	
	SCALE	

YFPB TRANSPORTE, S.A.
SICA SICA STATION
GLYCOL COOLING SYSTEM
MECHANICAL FLOWSHEET
DWG. No.: D-MFS-108432-100
SHT. 5 OF 8
REV. 2

PROPAK
440 East Lake Road,
Airdrie, Alberta
Canada T4A 2J8

[illegible]

OF PROPAC
TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY WRITTEN CONSENT
THE DESIGN IT COVERS ARE CONFIDENTIAL AND THE PROPERTY OF PROPAC SYSTEMS LTD., AND SHALL NOT BE DISCLOSED
THIS DRAWING AND

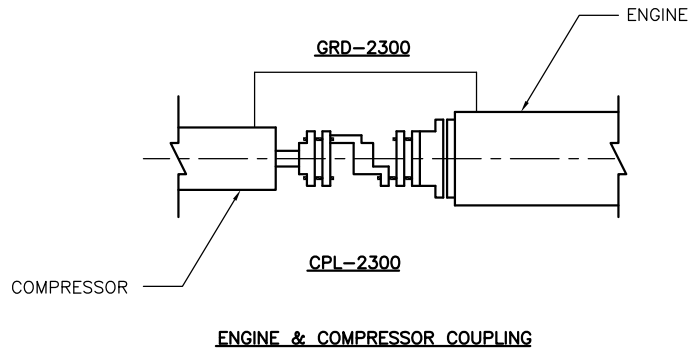
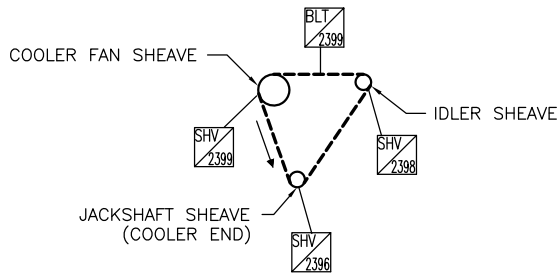
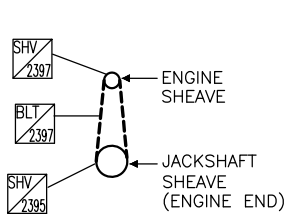
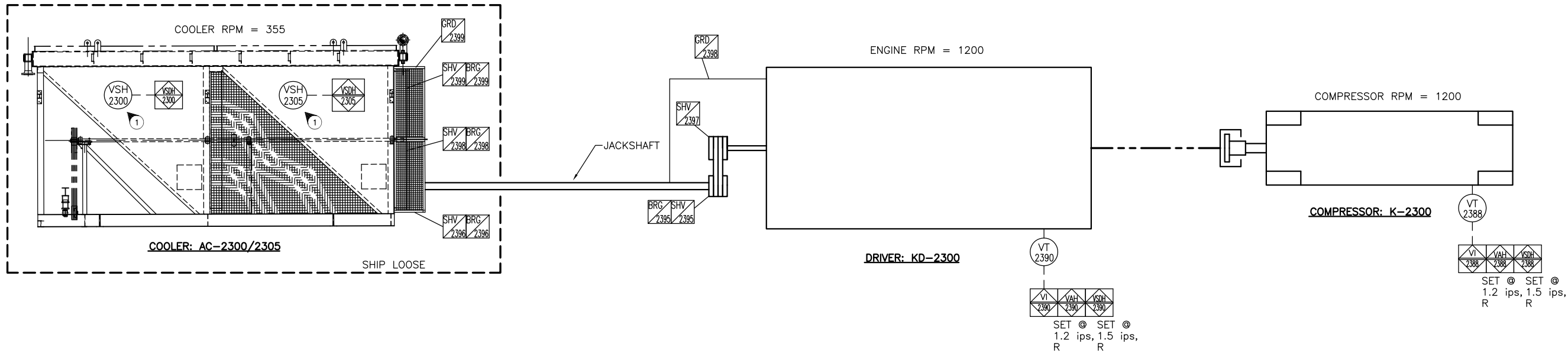
AC-2300/AC-2305
COOLER
AIR-X-CHANGERS M/N: 108-FF2

KD-2300
NATURAL GAS ENGINE
WAUKESHA 5794GSI
12 CYLINDER
1380 BHP @ 1200 RPM

K-2300
RECIPROCATING GAS COMPRESSOR
ARIEL JGK2

GRD-2300
COUPLING GUARD
PROPAK STANDARD
CARBON STEEL, REMOVABLE

CPL-2300
DRIVE COUPLING
TB WOODS GCF240-SS-28-GK2
c/w 3025 B.C. HD AND 1030 STEEL HUB



1. LOCATE VSH-2305/VSH-2300 CLOSE TO FAN
SHAFT ON BEARING SUPPORT. (BY AIR-X)

GENERAL NOTES		GENERAL NOTES		REVISION		BY	DATE	CKD	ENG
		2	AS BUILT	LEY	10/09/15	CJA			
		1	ISSUED FOR CONSTRUCTION	MAF	10/07/21	CJA	CJA		
		B	RE-ISSUED FOR APPROVAL	LDW	10/06/25	CJA	CJA		
		A	ISSUED FOR APPROVAL	MAF	10/04/12	CJA	CJA		

APPROVED		DRAWN	
MECH./STRUCT.	BY	M. FANG	
DATE	DATE	10/04/12	
ELECTRICAL	CHECKED		
DATE	BY	C. ANDREWS	
PROJECT	DATE	10/07/21	
DATE	10/07/21		
SCALE			

YFPB TRANSPORTE, S.A.	
SICA SICA STATION	
DRIVE TRAIN	
MECHANICAL FLOWSHEET	
DWG. No.: D-MFS-108432-100	SHT. 8 OF 8
REV. 2	

PROPAK
440 East Lake Road,
Airdrie, Alberta
Canada T4A 2J8