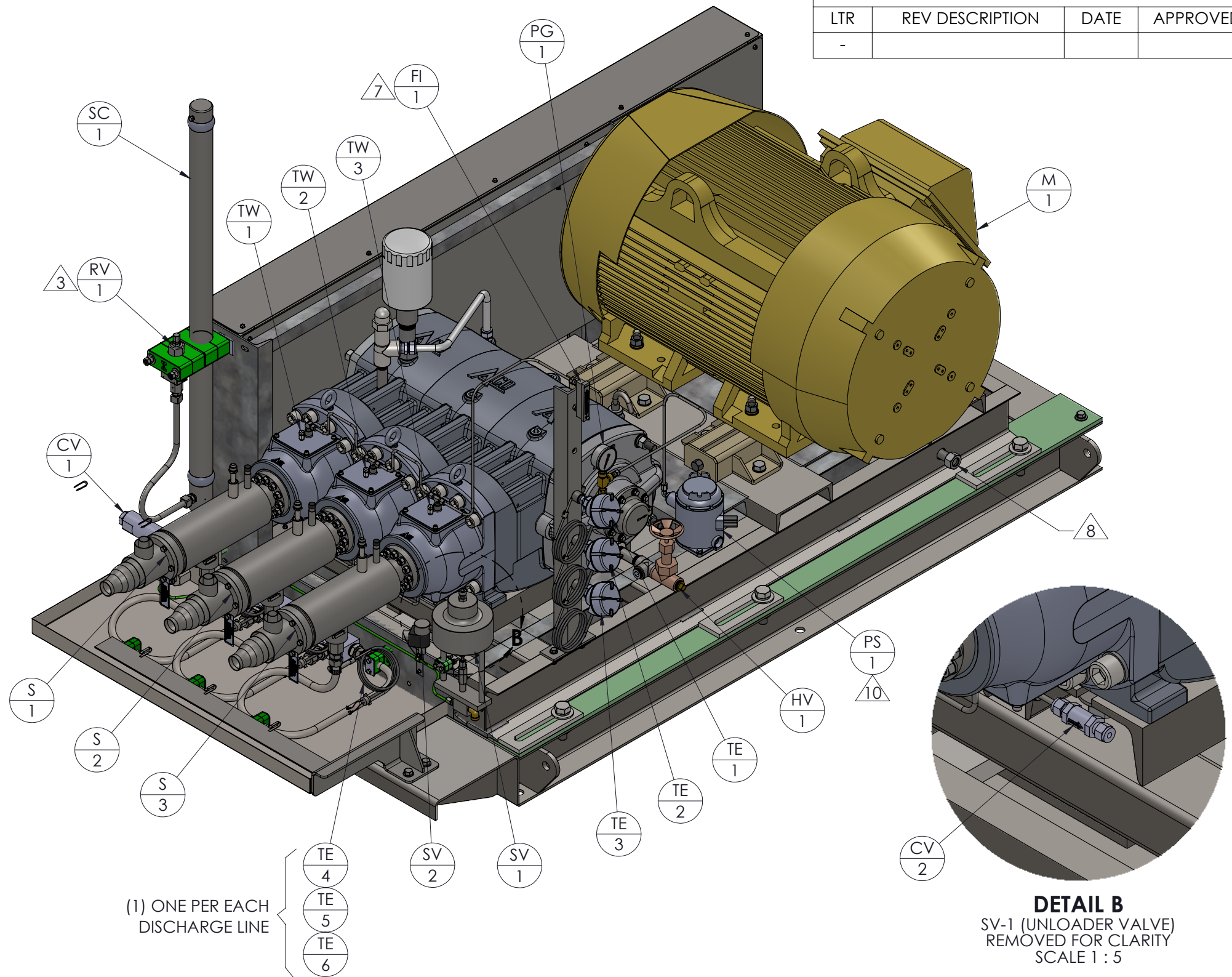




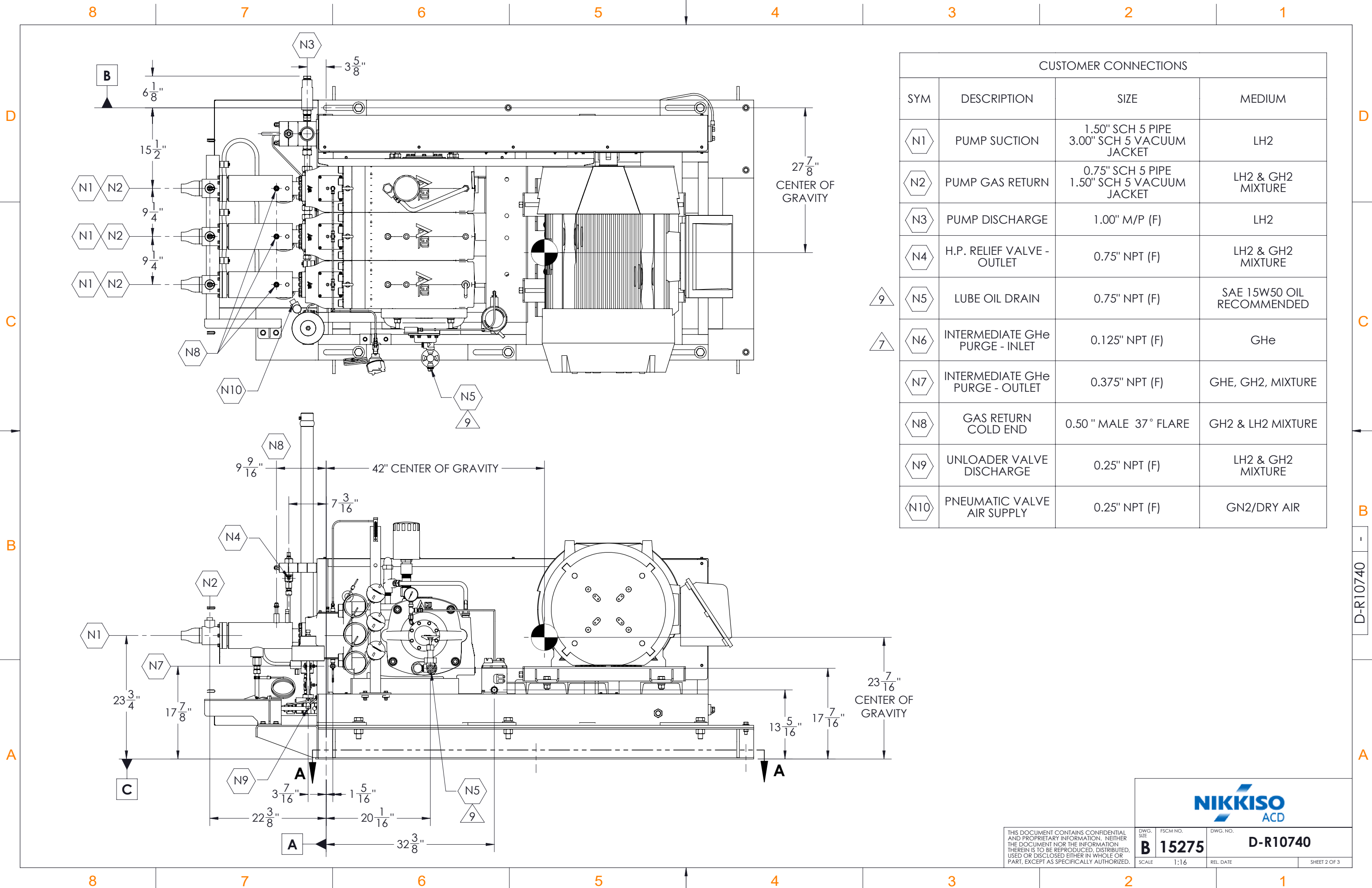
NOTES: UNLESS OTHERWISE SPECIFIED.

- DIMENSIONS ARE IN INCHES, [XXX] DIMENSIONS ARE IN MILLIMETERS.
- TOLERANCE ON ALL INTERFACE DIMENSIONS IS $\pm 1/4"$ [6].
- ALL RELIEVING DEVICES TO BE PIPED TO CUSTOMER SPECIFIED LOCATION.
- THIS DIMENSION VARIES WITH DIFFERENT TYPES OF RELIEF VALVES.
- REFERENCE DRAWINGS:
SYSTEM ASSEMBLY: R10740
- FOR LIQUID HYDROGEN SERVICE ALL ELECTRO-MECHANICAL COMPONENTS, INCLUDING ELECTRIC MOTOR, MUST BE PER NATIONAL ELECTRIC CODE.
- REQUIRES A POSITIVE PRESSURE OF 2-3 INCHES OF WATER AND A FLOW OF 1-2 SCFM. SUPPLY PRESSURE TO BE 5 PSI MAXIMUM. REFERENCE PUMP IOM MANUAL FOR PURGE INSTRUCTION.
- RETRACTING THE SKID REQUIRES A 1-5/8" SOCKET TO OPERATE THE SPUR GEAR AFTER LOOSENING THE RETENTION BOLTS USING A 1-5/16" SOCKET (6 PLACES).
- SEE IOM MANUAL FOR RECOMMENDED OIL SPECIFICATIONS.
- SET PRESSURE SWITCH TO TRIP AT 60 PSI ON DECREASING PRESSURE.

PART/INSTRUMENT LIST		
SYM	TYPE	DESCRIPTION
CV-1	CHECK VALVE	PUMP DISCHARGE
CV-2	CHECK VALVE	INTERMEDIATE PURGE
S-1	STRAINER	SUCTION LINE (INTERNAL TO MANIFOLD)
S-2	STRAINER	SUCTION LINE (INTERNAL TO MANIFOLD)
S-3	STRAINER	SUCTION LINE (INTERNAL TO MANIFOLD)
FI-1	FLOW INDICATOR	INTERMEDIATE PURGE
HV-1	VALVE	LUBE OIL DRAIN
M-1	MOTOR	INVERTER-DUTY MOTOR, TEFC
PG-1	PRESSURE GAUGE	LUBE OIL PRESSURE
PS-1	PRESSURE SWITCH	LOW OIL PRESSURE
RV-1	RELIEF VALVE	PUMP DISCHARGE
SC-1	SURGE CHAMBER	PUMP DISCHARGE
SV-1	PNEUMATIC VALVE	UNLOADER/PRIMING VALVE
SV-2	SOLENOID VALVE	ACTUATING VALVE (FOR SV-1)
TE-1	THERMOCOUPLE	SEAL LEAK DETECTION
TE-2	THERMOCOUPLE	SEAL LEAK DETECTION
TE-3	THERMOCOUPLE	SEAL LEAK DETECTION
TE-4	THERMOCOUPLE	LOSS OF PRIME/CAVITATION
TE-5	THERMOCOUPLE	LOSS OF PRIME/CAVITATION
TE-6	THERMOCOUPLE	LOSS OF PRIME/CAVITATION
TW-1	THERMOWELL	SEAL LEAK DETECTION
TW-2	THERMOWELL	SEAL LEAK DETECTION
TW-3	THERMOWELL	SEAL LEAK DETECTION



UNLESS OTHERWISE SPECIFIED: A.) INTERPRET DRAWING PER ANSI Y14.5 B.) REMOVE ALL BURRS AND SHARP EDGES C.) SURFACE ROUGHNESS $125 \sqrt{\text{PER ANSI B46.1}}$ D.) THREADS PER ANSI B1.1 FOR UNIFIED SCREW THREADS ANSI B2.1 FOR PIPE THREADS E.) MACHINED FILLET RADII: R .005/.015 F.) WELD SYMBOLS PER AWS A2.4		UNLESS OTHERWISE SPECIFIED DIMENSION ARE IN INCHES TOLERANCES ON: <table><tr><th>FRACTIONS</th><th>DECIMALS</th><th>ANGLES</th></tr><tr><td>$\pm 1/8"$</td><td>$\pm .10$ $\pm .03$ $\pm .010$</td><td>$\pm 1^\circ$</td></tr></table>		FRACTIONS	DECIMALS	ANGLES	$\pm 1/8"$	$\pm .10$ $\pm .03$ $\pm .010$	$\pm 1^\circ$	THIRD ANGLE PROJECTION 			
FRACTIONS	DECIMALS	ANGLES											
$\pm 1/8"$	$\pm .10$ $\pm .03$ $\pm .010$	$\pm 1^\circ$											
EST. WT. 8,442 LBS		ACT. WT.		DRAWN J.GONZALEZ		DATE 01-25-23							
THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION. NEITHER THE DOCUMENT NOR THE INFORMATION THEREIN IS TO BE REPRODUCED, DISTRIBUTED, USED OR DISCLOSED EITHER IN WHOLE OR PART, EXCEPT AS SPECIFICALLY AUTHORIZED.		DO NOT SCALE DRAWING		CHECKED S.DANNA		01-25-23							
		TREATMENT		DESIGN H.HARARA		01-25-22							
		FINISH		STRESS									
		AERODYN./HYDR											
SIMILAR TO D-R10295/D-R10725		PARENT DWG. NO.		PROJECT M.PARRA		01-25-22							
				DESIGN ACTIVITY									
				MGF. ENGRG.									
				QA									
SCALE 1:12		REL. DATE		DWG. REV B 15275		FSCM NO. D-R10740							
DWG. NO. B 15275		DWG. NO. D-R10740		TITLE INSTALLATION PUMP SKID ASSY, 3-MP-100, 50MM (1.97") DIA, LH2, 8000 PSI (550 BAR) MAX WP									
SHEET 1 OF 3													



CUSTOMER CONNECTIONS			
SYM	DESCRIPTION	SIZE	MEDIUM
N1	PUMP SUCTION	1.50" SCH 5 PIPE 3.00" SCH 5 VACUUM JACKET	LH2
N2	PUMP GAS RETURN	0.75" SCH 5 PIPE 1.50" SCH 5 VACUUM JACKET	LH2 & GH2 MIXTURE
N3	PUMP DISCHARGE	1.00" M/P (F)	LH2
N4	H.P. RELIEF VALVE - OUTLET	0.75" NPT (F)	LH2 & GH2 MIXTURE
N5	LUBE OIL DRAIN	0.75" NPT (F)	SAE 15W50 OIL RECOMMENDED
N6	INTERMEDIATE GHe PURGE - INLET	0.125" NPT (F)	GHe
N7	INTERMEDIATE GHe PURGE - OUTLET	0.375" NPT (F)	GHE, GH2, MIXTURE
N8	GAS RETURN COLD END	0.50 " MALE 37° FLARE	GH2 & LH2 MIXTURE
N9	UNLOADER VALVE DISCHARGE	0.25" NPT (F)	LH2 & GH2 MIXTURE
N10	PNEUMATIC VALVE AIR SUPPLY	0.25" NPT (F)	GN2/DRY AIR

DWG. NO.
D-R10740

DWG. NO.
D-R10740

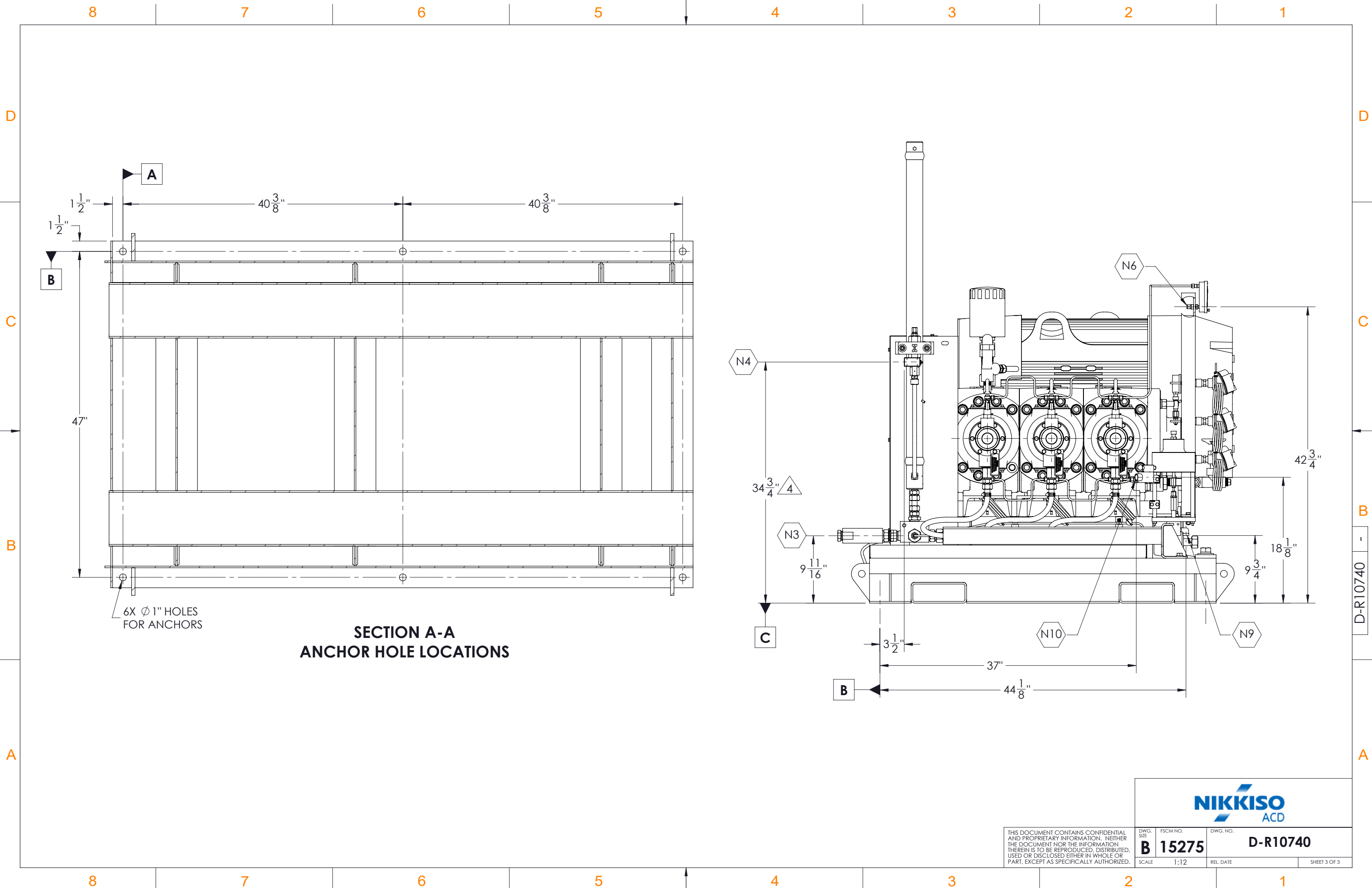
REL. DATE

SHEET 2 OF 3

DWG. NO.
B 15275

SCALE
1:16

THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION. NEITHER THE DOCUMENT NOR THE INFORMATION THEREIN IS TO BE REPRODUCED, DISTRIBUTED, USED OR DISCLOSED EITHER IN WHOLE OR PART, EXCEPT AS SPECIFICALLY AUTHORIZED.



THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION. NEITHER THE DOCUMENT NOR THE INFORMATION THEREIN IS TO BE REPRODUCED, DISTRIBUTED, USED OR DISCLOSED EITHER IN WHOLE OR PART, EXCEPT AS SPECIFICALLY AUTHORIZED.			DWG. NO. B 15275	REL. DATE	SHEET 3 OF 3
DWG. SIZE B	FSCM NO. 15275	SCALE 1:12	DWG. NO. D-R10740		