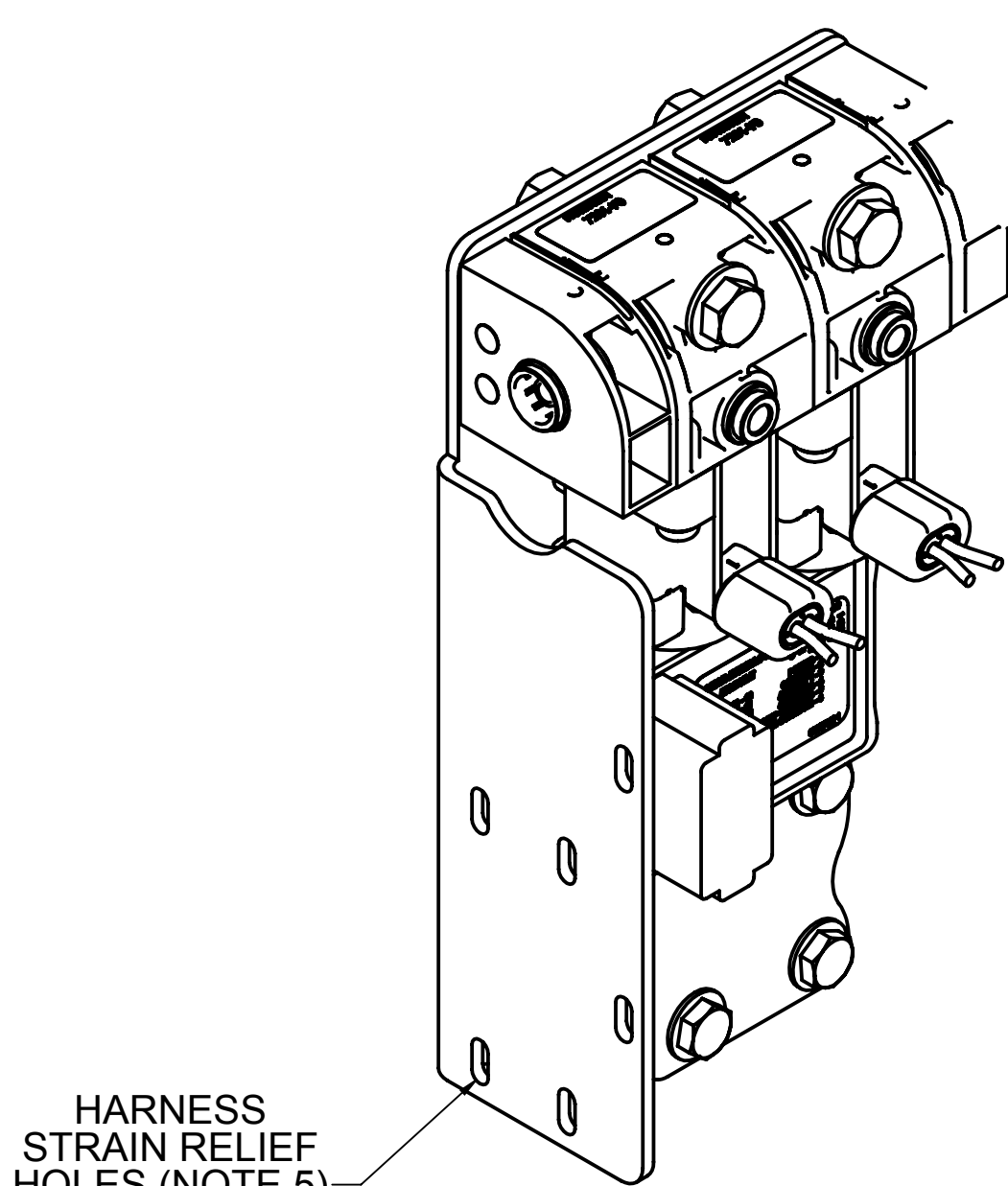
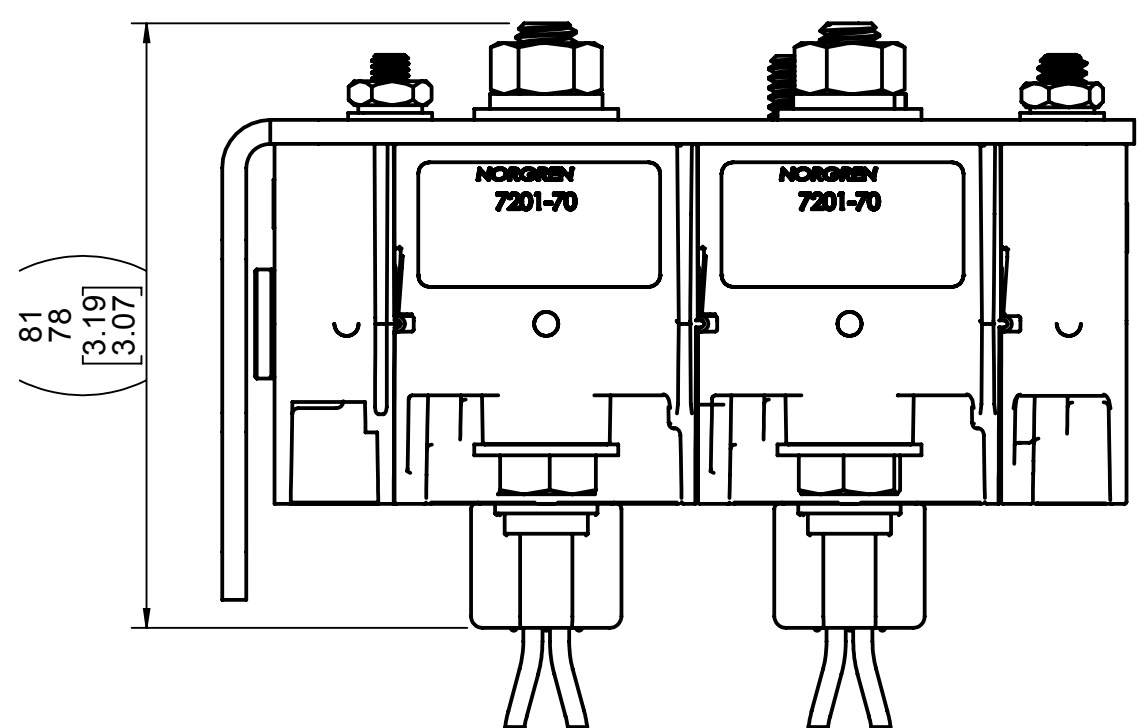
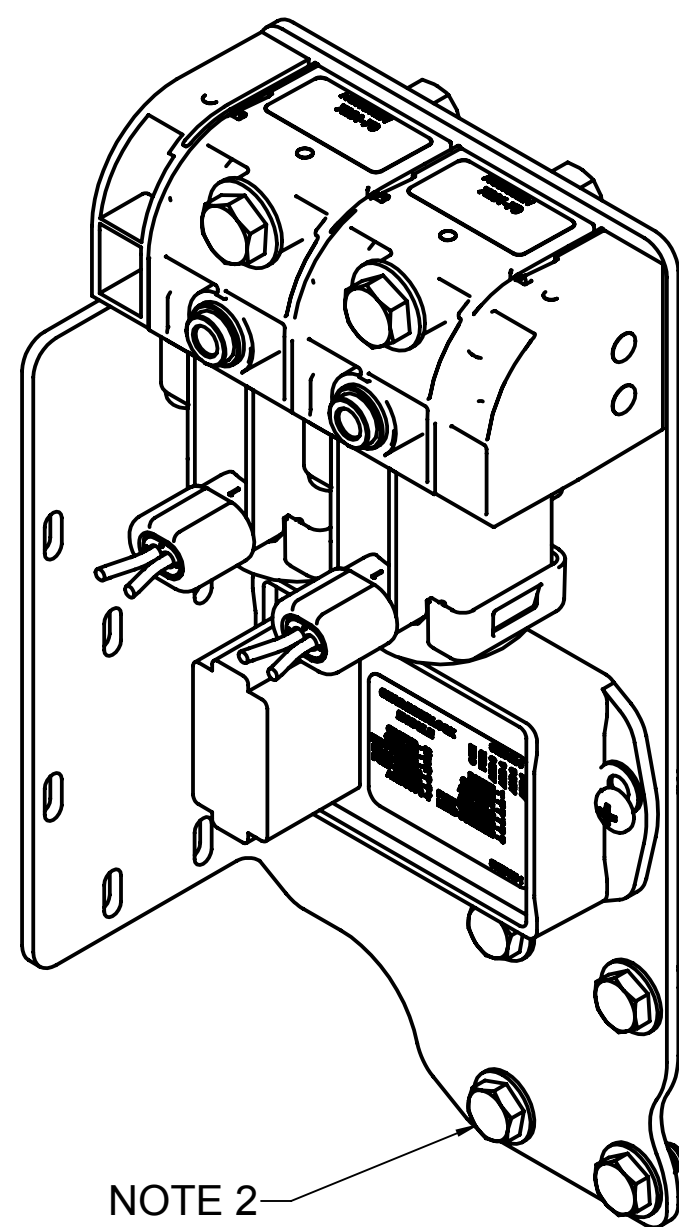


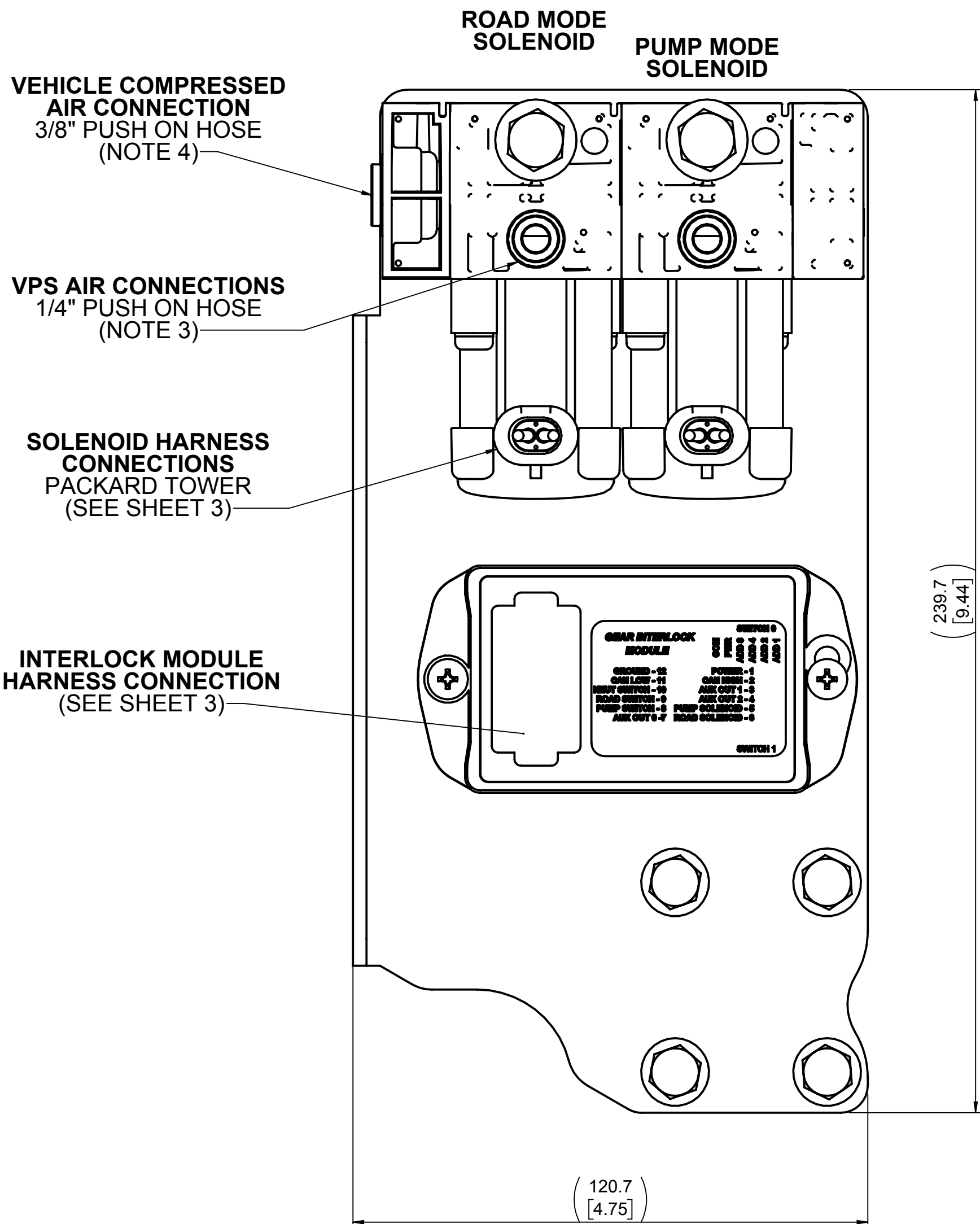
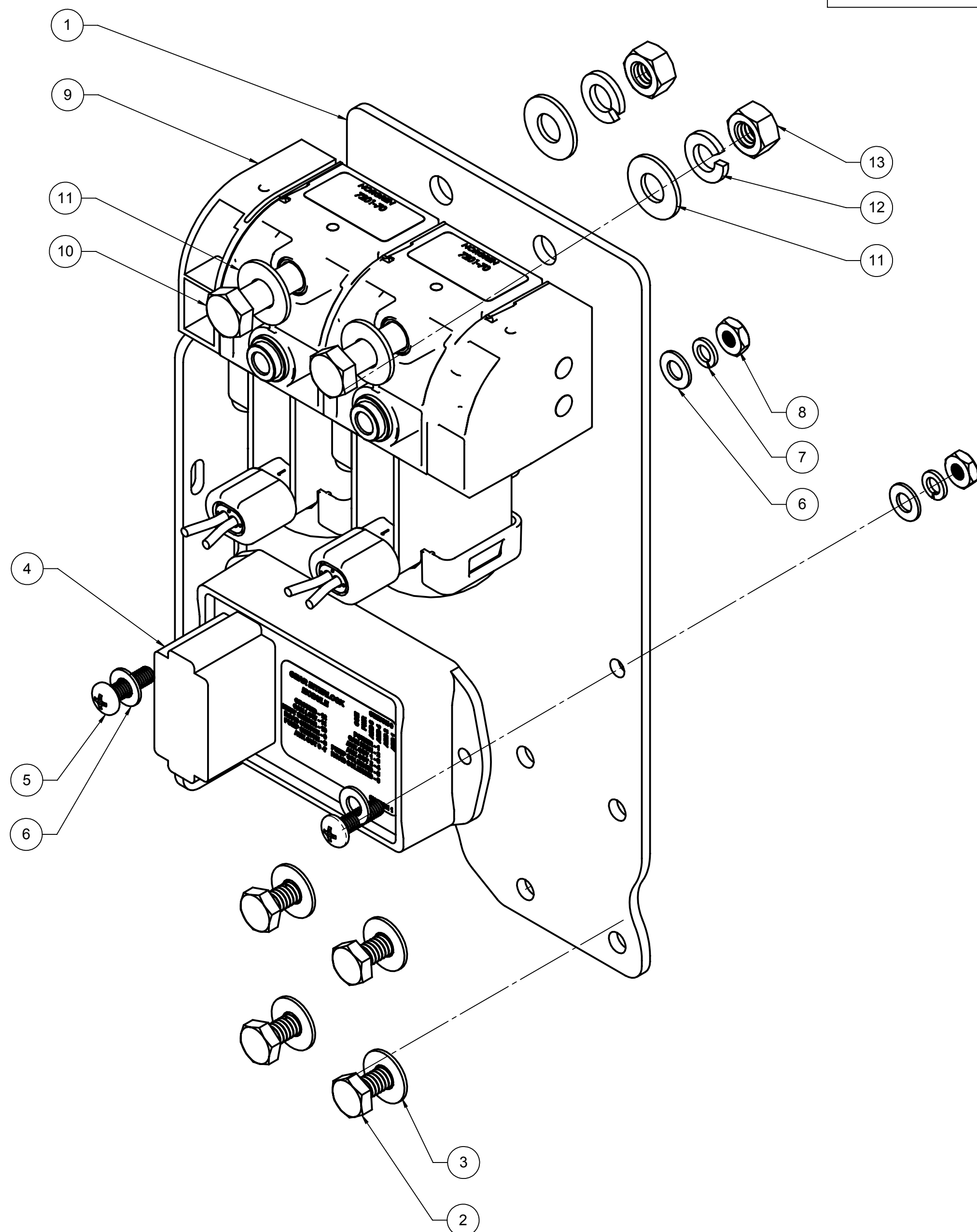
PROJECTION:



HARNESS
STRAIN RELIEF
HOLES (NOTE 5)



NOTE 2



INSTALLATION INSTRUCTIONS:

1. INSTALL COMPONENTS ORIENTED AS SHOWN.
2. INSTALL THE BRACKET TO THE VPS HOUSING USING THE (4) 1/4-20 X 1/2 LG HEX HEAD SCREWS. APPLY LOCTITE 242 OR EQUAL TO THREADS.
3. SIZE TO LENGTH AND INSTALL 1/4" AIR BRAKE TUBING FROM THE SOLENOIDS TO THE VPS HOUSING FITTINGS SHOWN ON SHEET 2.
4. SIZE TO LENGTH AND INSTALL 3/8" AIR BRAKE TUBING FROM THE VEHICLE COMPRESSED AIR SYSTEM TO THE FITTING AS SHOWN. MINIMUM INLET SUPPLY OF 6 SCFM @ 75 PSI OF CLEAN, DRY AIR FOR RELIABLE OPERATION OF THE VPS SYSTEM.
5. CONNECT THE INTERLOCK HARNESS (513-00103-000) TO THE GEAR INTERLOCK MODULE & SOLENOIDS (WIRE & CONNECTORS NOT SHOWN IN DRAWING VIEW ABOVE). LOOP AND WIRE TIE THE HARNESS WITH STRAIN RELIEF USING THE HOLES AS SHOWN. SEE SHEET 3 FOR WIRING INSTALLATION OPTIONS.

WARNINGS:

6. CHECK THAT ALL 1/4" OR 3/8" AIR BRAKE TUBING DO NOT HAVE ANY KINKS OR SHARP CORNERS WHEN INSTALLED. THIS MAY INCREASE AIR PRESSURE AND RUPTURE TUBING, DAMAGING ADJACENT COMPONENTS.
7. CHECK THAT ALL COMPONENTS CLEAR MOVING GEARBOX PARTS.
8. DO NOT USE ASSEMBLY FOR VACUUM APPLICATIONS.
9. ALL WIRING AND INSTALLATION DETAILS MUST CONFORM TO ALL APPLICABLE NFPA, SAE, AND DOT STANDARDS.
10. VERIFY OPERATION OF PUMP ENGAGED INDICATOR LIGHTS AND ALL INTERLOCKS BEFORE PLACING APPARATUS IN SERVICE.

CAUTION:

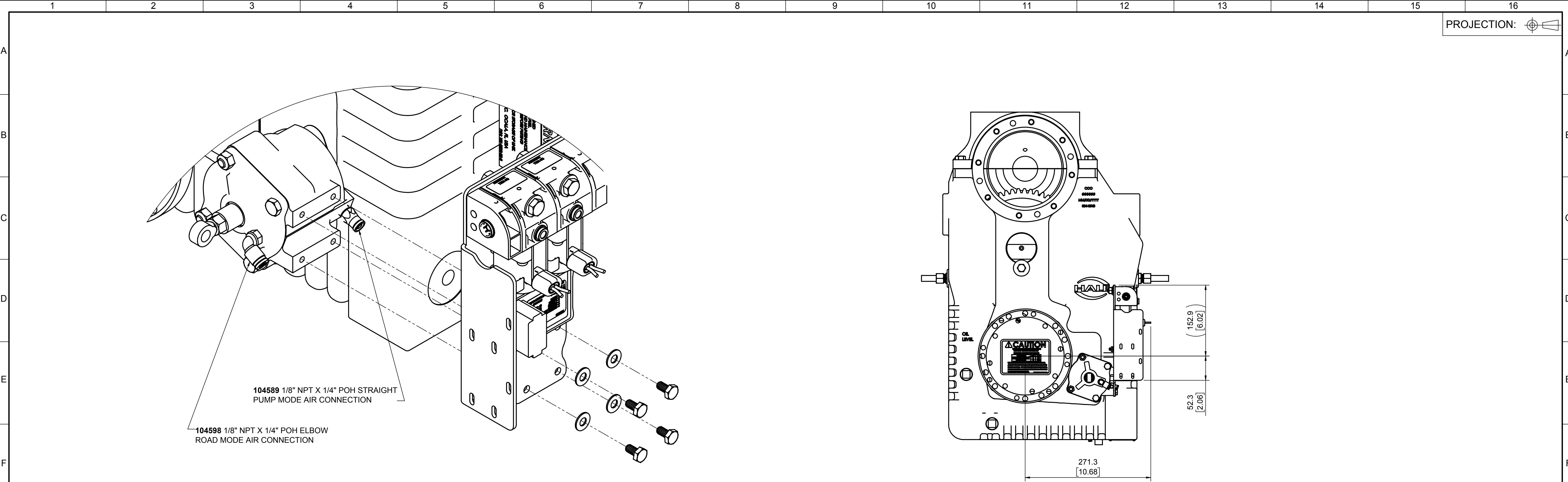
11. PROTECT AIR BRAKE TUBING AND WIRING FROM PAINT, KINKING, VIBRATION, ETC., WHICH MAY DAMAGE THEM.

519-01886-012 (12V) & 519-01886-024 (24V)			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	019-01886-000	INTERLOCK BRACKET	1
2	107884	CSW HH 1/4-20 X 0.50 SS	4
3	097-0020-02-0	WASHER,FLAT,SS,1/4"	4
4	610-00042	GEAR INTERLOCK MODULE	1
5	102561	SCREW, PAN PH 10-32 X 0.63 SS	2
6	097-0750-01-0	WASHER, FLAT#10, SS	4
7	101662	WASHER, LOCK #10 SS	2
8	102537	NUT, HEX 10-32 SS	2
9	538-00052-012 538-00052-024	VALVE SOLENOID ASY ASAP 12V VALVE SOLENOID ASY ASAP 24V	1
10	018-1422-12-0	SCREW HHCS 5/16"-18 x 2.25" 18-8 SST	2
11	097-00011-106	WASHER 5/16 18-8 SST	4
12	097-0560-02-0	WASHER, LOCK 0.31 SS	2
13	110-1400-06-0	NUT HEX 5/16-18 18-8 SST	2

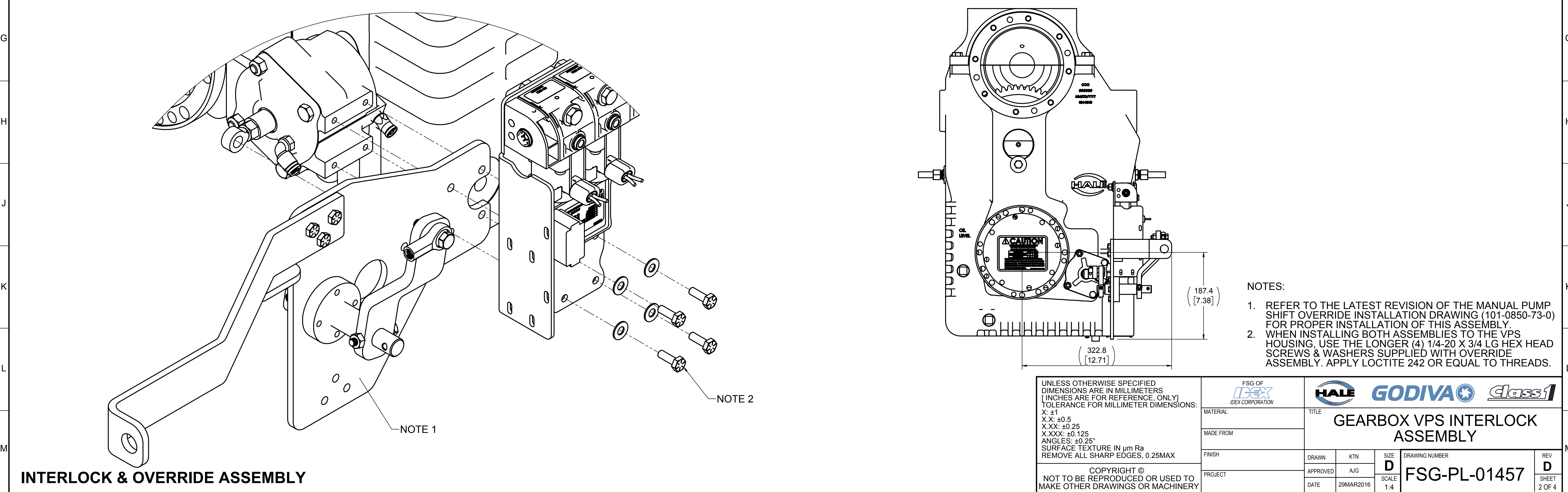
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS [INCHES ARE FOR REFERENCE, ONLY] TOLERANCE FOR MILLIMETER DIMENSIONS: X: ±1 X.X: ±0.5 X.XX: ±0.25 X.XXX: ±0.125 ANGLES: ±0.25° SURFACE TEXTURE IN µm Ra REMOVE ALL SHARP EDGES, 0.25MAX		FSG OF IDEX IDEX CORPORATION		HALE GODIVA Class1	
MATERIAL		MADE FROM		TITLE GEARBOX VPS INTERLOCK ASSEMBLY	
FINISH		PROJECT		DRAWN KTN	REV D
NOT TO BE REPRODUCED OR USED TO MAKE OTHER DRAWINGS OR MACHINERY		APPROVED AJG		DATE 29MAR2016	SCALE 1:1
COPYRIGHT © NOT TO BE REPRODUCED OR USED TO MAKE OTHER DRAWINGS OR MACHINERY		DRAWING NUMBER D FSG-PL-01457		SHEET 1 OF 4	

REVISIONS

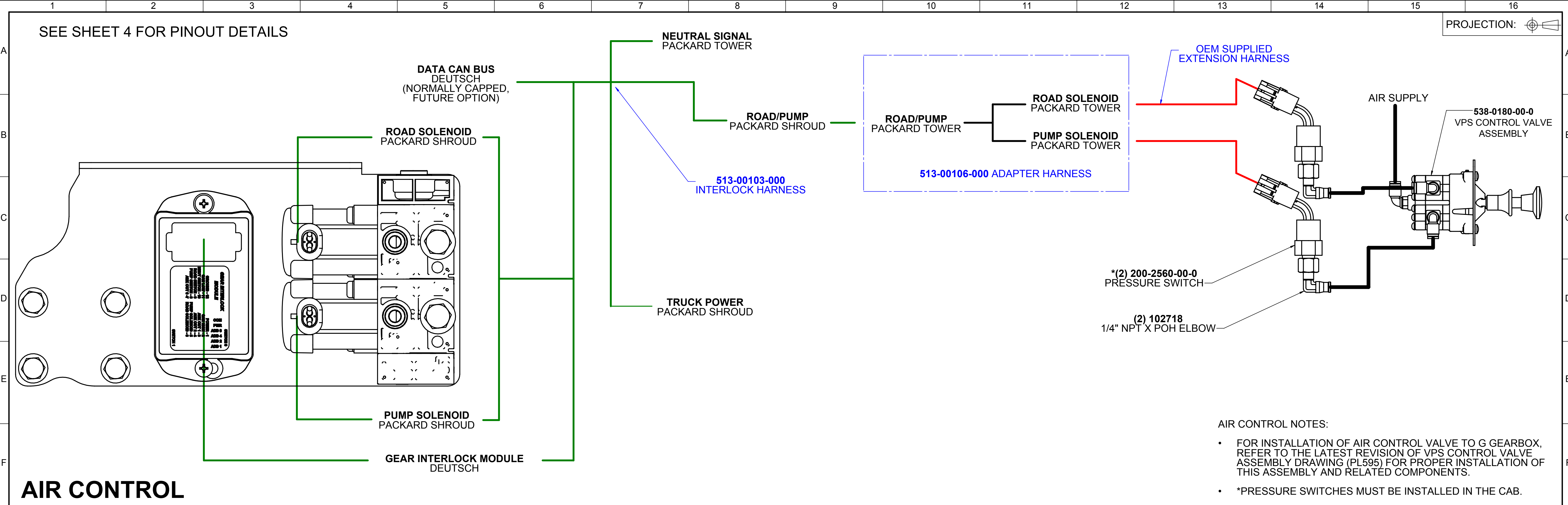
ECN	REV	ZONE	CHANGED FROM	BY	DATE	APVD
3673	B		INDIVIDUAL SOLENOIDS TO SOLENOID BANK	DMB	04AUG2016	AJG
3815	C		ADDED PINOUT DETAILS TO SHEET 4	DMB	15SEP2016	AJG
3938	D		EXTENSION HARNESS DETAILS ADDED	NG	06FEB2017	JLS



INTERLOCK ASSEMBLY ONLY



INTERLOCK & OVERRIDE ASSEMBLY



INTERLOCK HARNESS (P/N 513-00103-000)			
GEAR INTERLOCK MODULE			
PIN	CIRCUIT	DESCRIPTION	COLOR
1	SUPPLY (+)	(INPUT) - Battery voltage (+9VDC to +32VDC)	RED
2	CAN HIGH	(DATA) - SAE J13939 CAN 2.0B, 250Kbits/s	YELLOW
3	AUX OUTPUT 1	(OUTPUT) - Reserved - Plug	-----
4	AUX OUTPUT 2	(OUTPUT) - Reserved - Plug	-----
5	PUMP SOLENOID	(OUTPUT) - Output to pump solenoid	ORANGE
6	ROAD SOLENOID	(OUTPUT) - Output to pump solenoid	BROWN
7	AUX OUTPUT 3	(OUTPUT) - Reserved - Plug	-----
8	PUMP SWITCH	(INPUT) - Signal to shift to pump mode	BLUE
9	ROAD SWITCH	(INPUT) - Signal shift to road mode	VIOLET
10	NEUTRAL SWITCH	(INPUT) - Input for neutral interlock	WHITE
11	CAN LOW	(DATA) - SAE J1939 CAN 2.0B, 250 Kbits/s	GREEN
12	SUPPLY (-)	(INPUT) - Battery ground	BLACK
DATA CAN BUS			
POSITION	CIRCUIT	COLOR	
A	CAN HIGH	YELLOW	
B	CAN LOW	GREEN	
C	114017	-----	
PUMP SOLENOID			
POSITION	CIRCUIT	COLOR	
1	SUPPLY (+)	RED	
2	PUMP SOLENOID OUTPUT	ORANGE	
ROAD SOLENOID			
POSITION	CIRCUIT	COLOR	
1	SUPPLY (+)	RED	
2	ROAD SOLENOID OUTPUT	BROWN	
NEUTRAL			
POSITION	CIRCUIT	COLOR	
A	NEUTRAL SWITCH	WHITE	
ROAD/PUMP			
POSITION	CIRCUIT	COLOR	
A	SUPPLY (+)	RED	
B	PUMP SW INPUT	BLUE	
C	ROAD SW INPUT	VIOLET	
SUPPLY POWER			
POSITION	CIRCUIT	COLOR	
A	SUPPLY (+)	RED	
B	SUPPLY (-)	BLACK	

ADAPTER HARNESS (P/N 513-00106-000)		
ROAD/PUMP		
POSITION	CIRCUIT	COLOR
A	SUPPLY+	RED
B	PUMP SW INPUT	BLUE
C	ROAD SW INPUT	VIOLET
PUMP SOLENOID		
POSITION	CIRCUIT	COLOR
A	SUPPLY+	RED
B	PUMP SW INPUT	BLUE
ROAD SOLENOID		
POSITION	CIRCUIT	COLOR
A	SUPPLY+	RED
B	ROAD SW INPUT	VIOLET

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
[INCHES ARE FOR REFERENCE, ONLY]
TOLERANCE FOR MILLIMETER DIMENSIONS:
X: ±1
X.X: ±0.5
X.XX: ±0.25
X.XXX: ±0.125
ANGLES: ±0.25°
SURFACE TEXTURE IN µm Ra
REMOVE ALL SHARP EDGES, 0.25MAX

FSG OF
IDEX
IDEX CORPORATION

MATERIAL

MADE FROM

FINISH

PROJECT

HALE

GODIVA

Class1

TITLE

INTERLOCK HARNESS PINOUTS

DRAWN

APPROVED

DATE

KTN

AJG

29MAR2016

SIZE
D

SCALE
1:1

DRAWING NUMBER

FSG-PL-01457

REV
D

SHEET
4 OF 4