

DESCRIPTION	PART NO.	SHEETS
FLUSH MOUNT APX-SW1	98-03340-00	1,2,3
DISPLAY MOUNT APX-SW1	98-03340-01	2,3
FLUSH MOUNT APX-SW8	98-03340-02	1,4,5
DISPLAY MOUNT APX-SW8	98-03340-03	4,5

APX REMOTE DISPLAY PANEL INSTALLATION INSTRUCTIONS

FOR ALL AMERICAN-MADE X4 AND VECTOR MODELS

FLUSH MOUNT INSTALLATION -00,-02

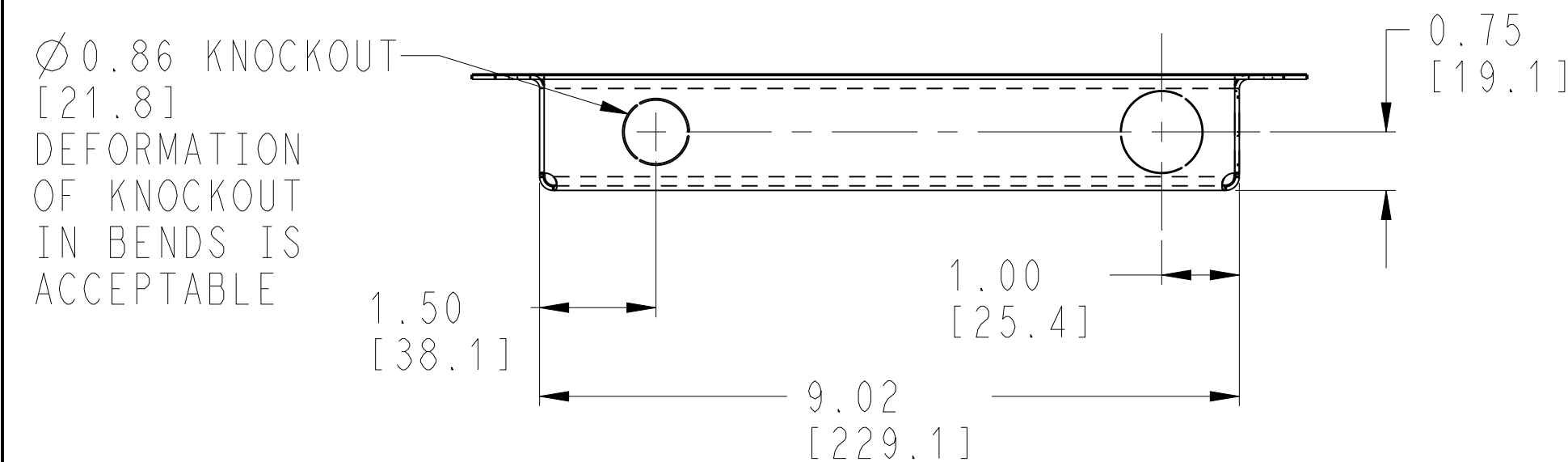
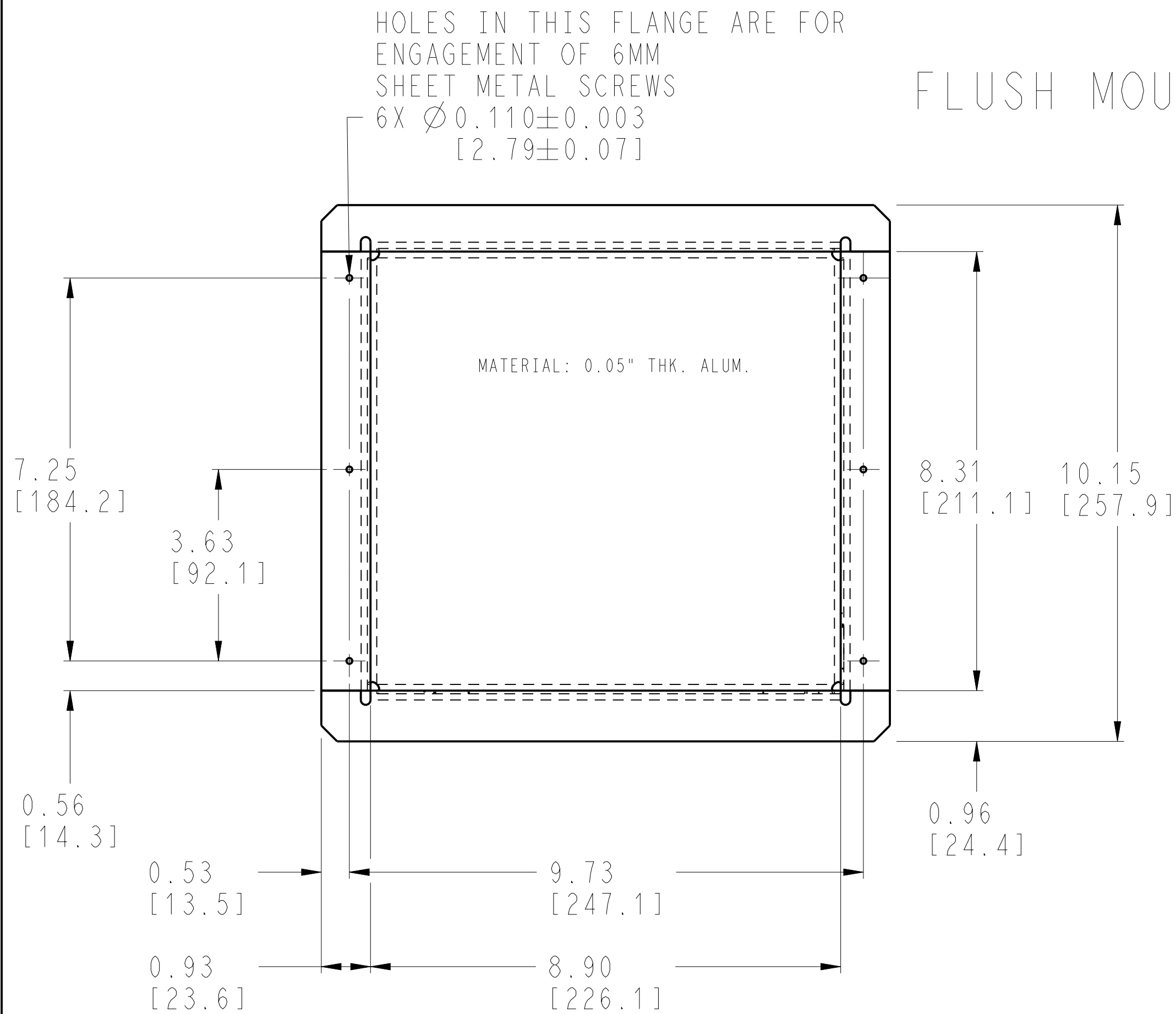


FIGURE 1 - FLUSH MOUNT REMOTE PANEL MOUNTING PATTERN

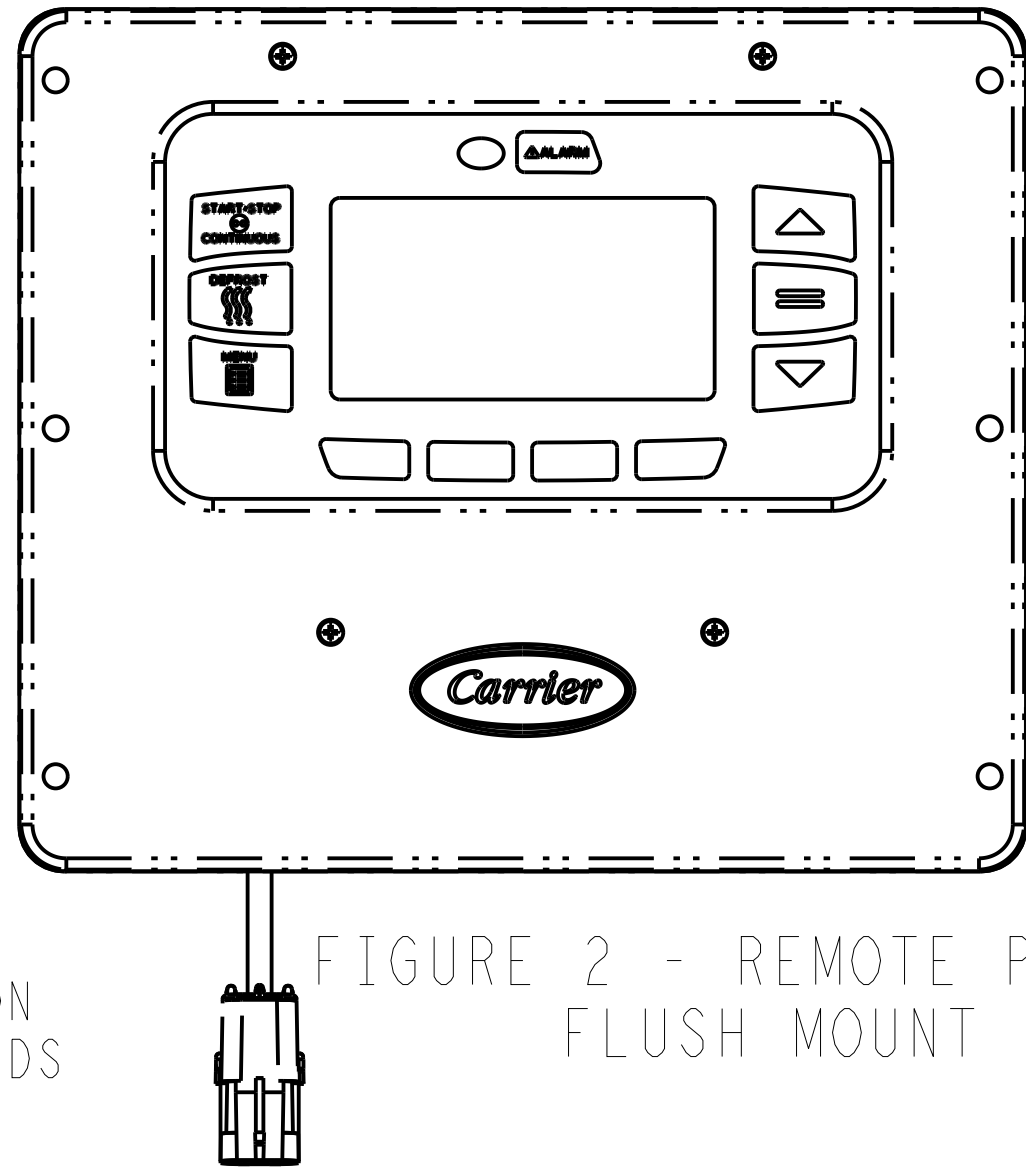


FIGURE 2 - REMOTE PANEL,
FLUSH MOUNT

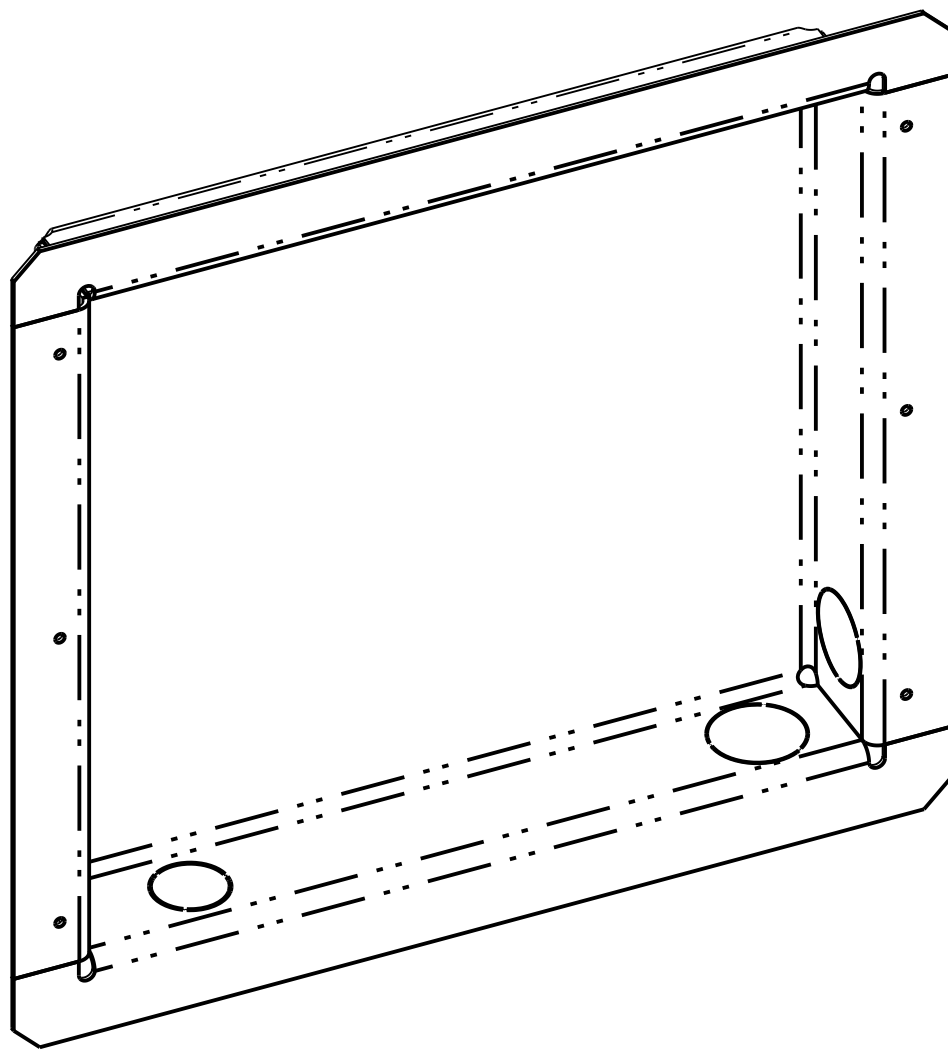
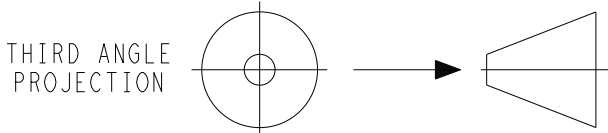


FIGURE 3 - REAR PROTECTIVE COVER
(KIT 76-02035-01) OPTIONAL,
ORDERED SEPARATELY
(TYPICALLY INSTALLED BY TRAILER OEM)

PANEL INSTALLATION:

- 1.0 PREPARATION; READ THIS ENTIRE NOTE BEFORE PROCEEDING - THE APX REMOTE PANEL CAN BE INSTALLED EITHER INSIDE OR OUTSIDE THE TRAILER. SELECT LOCATION FOR MOUNTING AND PREPARE THE SURFACE PER THE DIMENSIONS ABOVE. FOR TRAILER MANUFACTURER PREPARATION, FOR THE FLUSH MOUNT TYPE THERE IS ALSO A REAR PROTECTIVE COVER AVAILABLE FOR INSTALLATION BEFORE THE REMOTE PANEL IS INSTALLED (SEE FIGURE 3).
- CAUTION**
WHEN USING THE SHEETMETAL REAR COVER, CUT THE OPENING IN THE TRAILER WALL AS CLOSE TO THE DIMENSIONS REQUIRED AS POSSIBLE, OPENINGS THAT ARE TOO LARGE CAN CAUSE INADEQUATE WALL MATERIAL FOR THE PANEL MOUNTING SCREWS OR SEALING IT TO THE WALL. INSTALLATIONS NOT USING THE SHEETMETAL POCKET SHOWN HERE: AN OPENING SLIGHTLY SHORTER IN HEIGHT CAN BE USED. FOR BEST FIT AND PROPER SEALING ACROSS THE TOP OF THE REMOTE PANEL, USE THE REMOTE PANEL AS A TEMPLATE BY LOCATING IT IN THE CUT OPENING AS HIGH AS IT WILL GO, THEN MARKING THROUGH THE MOUNTING HOLES ONTO THE WALL FOR DRILLING.
- 2.0 DRAIN TUBE - ROUTE A 1/2" PVC DRAIN TUBE FROM THE BOTTOM OF THE REMOTE PANEL CUT-OUT AREA DOWN OUT OF THE BOTTOM OF THE TRAILER. IF THE SHEETMETAL POCKET (CTD P/N 86-05098-00) IS USED INSIDE THE WALL, A 0.86" DIA. KNOCKOUT IS PROVIDED IN THE LOWER LEFT BOTTOM OF THE POCKET FOR A 1/2" CONDUIT FITTING & NUT. THE FITTING THREADED LENGTH INTO THE POCKET SHOULD BE SHORTENED TO ASSURE REASONABLE WATER DRAINAGE.
- CAUTION**
DO NOT TIE WRAP OR SECURE WIRING OR CABLES TO FUEL LINES OR HIGH VOLTAGE WIRING (VECTOR MODELS). FIRE OR ELECTRICAL SHOCK CAN OCCUR.
- CAUTION**
WHEN INSTALLING CABLE BETWEEN REEFER UNIT AND REMOTE PANEL, ROUTE IN CONDUIT, OR SECURE CABLE WITH TIE WRAPS, ETC. TO AVOID CHAFING, PINCH POINTS, AND ROAD DEBRIS. ALWAYS USE RUBBER GROMMETS TO PROTECT BARE CABLES THROUGH METAL HOLES.
- CAUTION**
DO NOT ROUTE THE CABLE THROUGH THE EVAPORATOR POD EITHER BY DRILLING OR DISRUPTING THE WIRING GROMMET THROUGH THE POD. THE WIRING CONSISTS OF BOTH HIGH AND LOW VOLTAGE WIRING, WHICH IS UNPROTECTED WITHIN THE GROMMET TO ASSURE SEALING AROUND THE WIRES. FIRE OR ELECTRICAL SHOCK CAN OCCUR.
- 3.0 CONDUIT ROUTING - THE CABLE IS 0.50" DIA, USE 1/2" CONDUIT OR LARGER. ROUTE IT FROM EITHER THE BOTTOM OR SIDE OF THE REMOTE PANEL CUT-OUT AREA ALONG INSIDE THE TRAILER WALL (TRAILER OEM) TO AND THROUGH THE FRONT WALL OF THE TRAILER OR OUT THE BOTTOM AND UNDER THE TRAILER TO THE FRONT WALL. THE REMOTE PANEL CONNECTOR AT THE UNIT IS AT THE LOWER ROADSIDE, BEHIND THE MAIN DISPLAY (SEE FIGURE 4). IF THE SHEETMETAL POCKET IS USED INSIDE THE WALL, TWO 1.06" DIA. KNOCKOUTS ARE PROVIDED IN THE LOWER RIGHT SIDE AND BOTTOM OF THE POCKET FOR A 3/4" CONDUIT, FITTING AND NUT.
- 4.0 CABLE ROUTING - ONE END OF THE CABLE HAS 2 - 2-PIN CONNECTORS, THOSE CONNECTORS MUST BE AT THE REEFER UNIT END OF THE CABLE. SO ROUTE THE CABLE BLUNT END FROM TRAILER FRONT FACE TO THE REMOTE PANEL OPENING.
- CAUTION**
REMOTE PANEL MUST BE INSTALLED USING A QUALITY SEALANT BETWEEN IT AND THE TRAILER WALL TO ASSURE NO MOISTURE CAN PENETRATE INTO THE WALL CAVITY.
- 6.0 LAY THE REMOTE PANEL DOWN ON A FLAT SURFACE, FACE DOWN. APPLY A BEAD OF QUALITY SILICONE SEALANT (SIKAFLEX 221 IS RECOMMENDED) AROUND THE PERIPHERY OF THE BACK OF THE FACE PLATE AND MOUNTING HOLES, FOR SEALING TO WALL.
- 7.0 CONNECT THE CABLE CONNECTOR TO THE REMOTE PANEL CONNECTOR, AND INSTALL THE PANEL INTO THE TRAILER WALL; THE REMOTE PANEL SHOULD BE SECURED IN ITS MOUNTED POSITION WITH (6) 6MM SELF TAPPING STAINLESS STEEL SCREWS.
- 8.0 ONCE INSTALLED, CLEAN AROUND PERIPHERY OF THE REMOTE PANEL TO REMOVE ANY EXCESS SEALANT, WHILE ASSURING THE EDGE SEAM TO THE MOUNTING SURFACE IS SEALED COMPLETELY AROUND THE PANEL EDGES.

H	VOIDED -01 & -03. ADDED VOID NOTE. IN TABLE: UPDATED DESCRIPTION & SHEETS. UPDATED VIEW LABELS, NOTE & MOVED PANEL INSTRUCTION 5.0 TO SHEET 3, ADDED NOTE 5.0. ADDED SHEET 4. REM'D SHEET 2; UPDATED SHEET INDEX. SEE ALL SHEETS.	20 DEC 2022	LT-SH/ZMG	RC		ECN1152730
SYM	REVISION RECORD	DATE	BY	ENGR.	M.E.	NPCA NO.



IMPERIAL INCH FORMAT:
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES WITH
METRIC CONVERSIONS IN [MILLIMETERS]

TITLE
INSTALLATION INSTRUCTION
APX REMOTE DISPLAY PANEL

DRAWING NO.
98-03340
SHEET 1 of 5

REV
H

SUPERSEDES:

PART CLASSIFICATION: US EAR99

DRAWING CLASSIFICATION: US EAR99

COMM MODULE INSTALLATION FOR UNITS WITH APX-SW1 CONTROLS (-00 & -01)

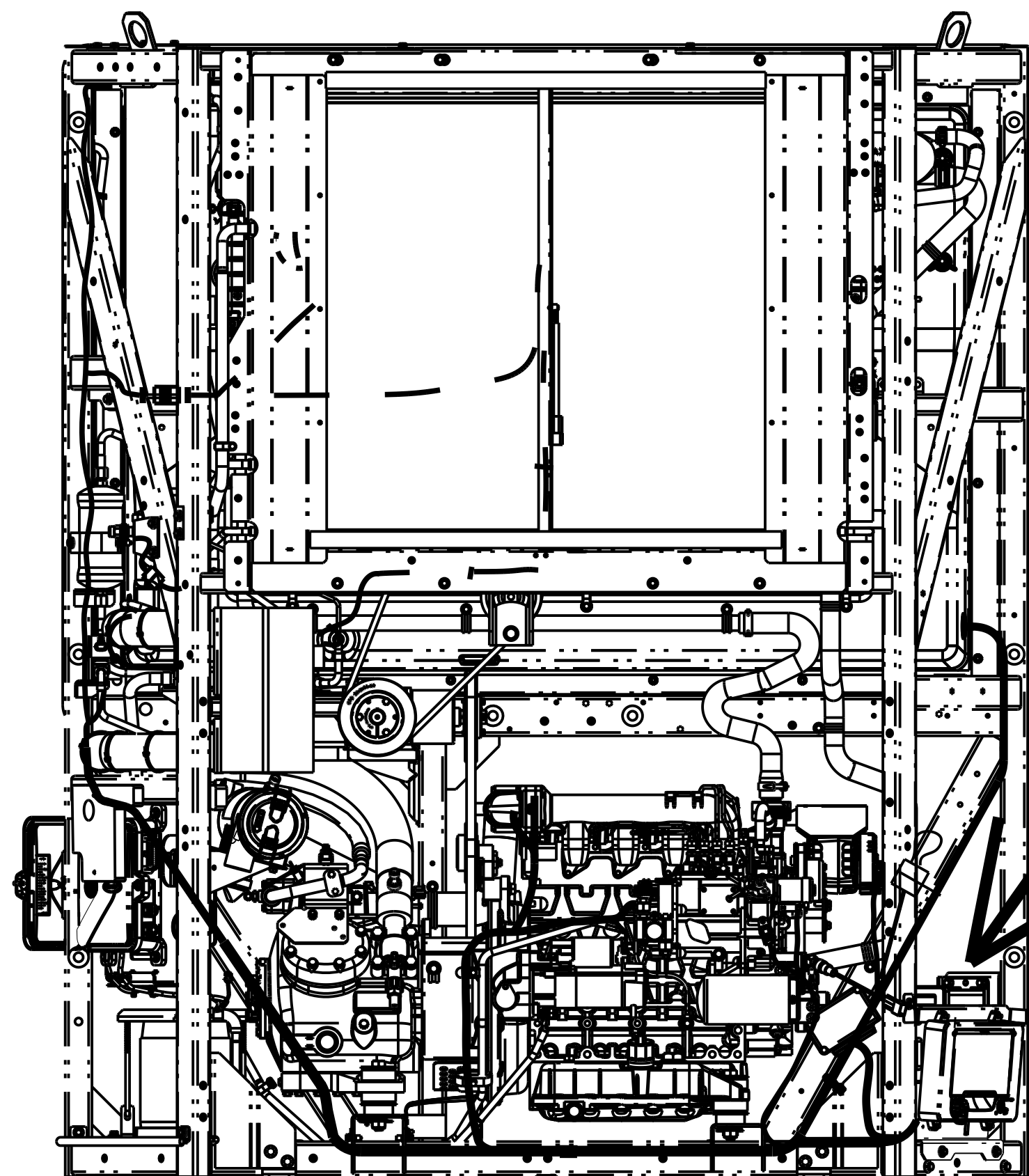
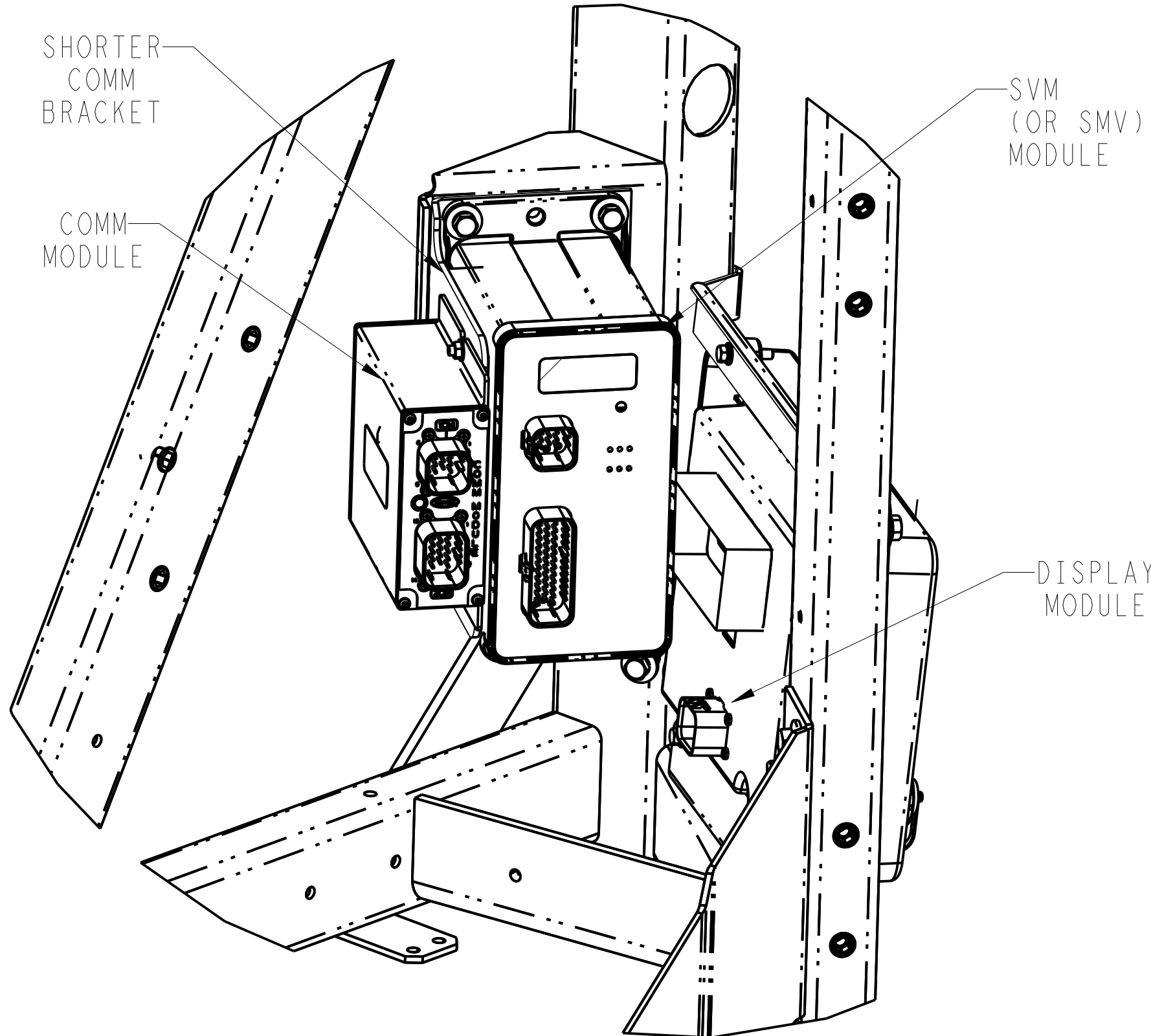
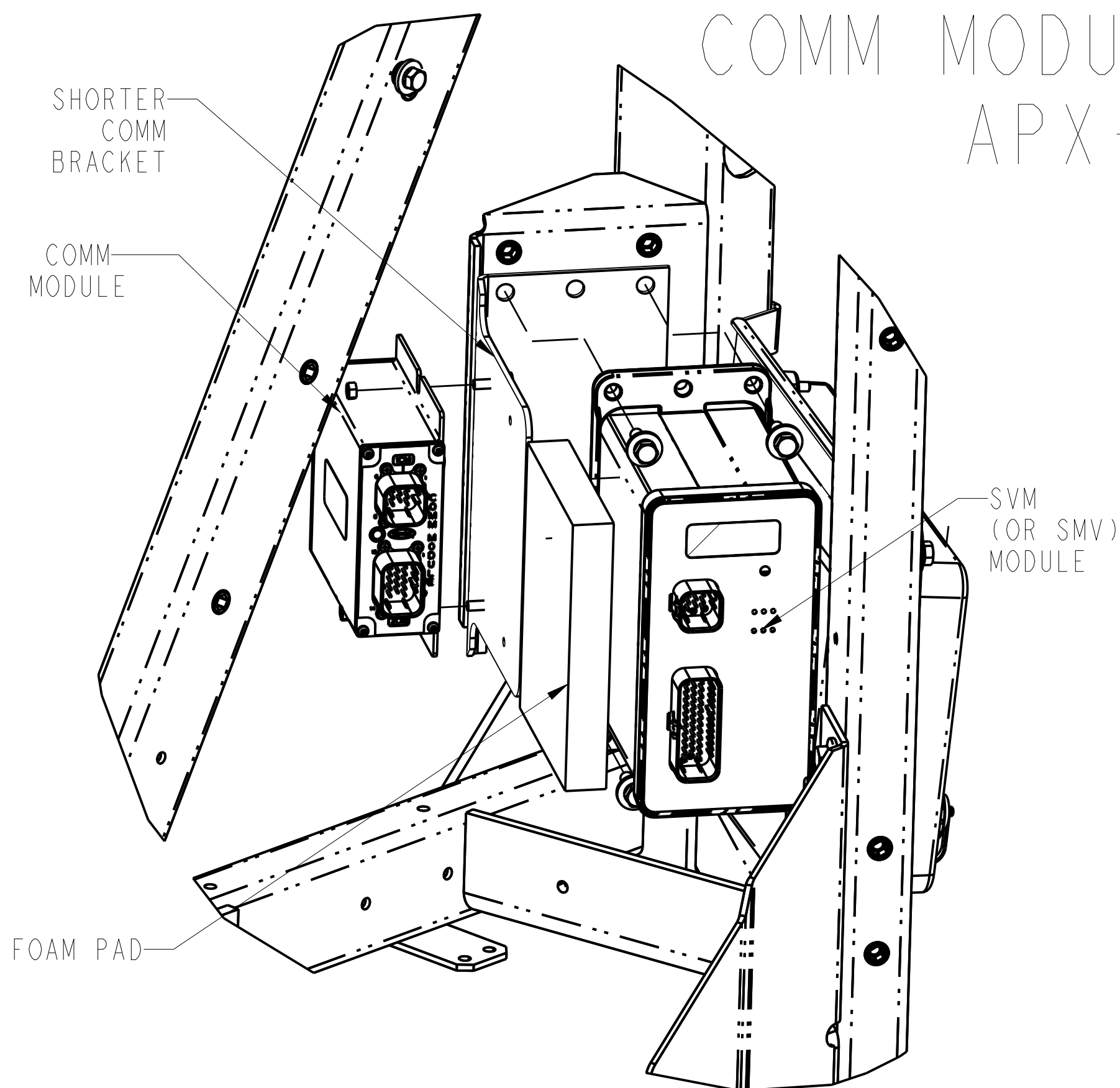
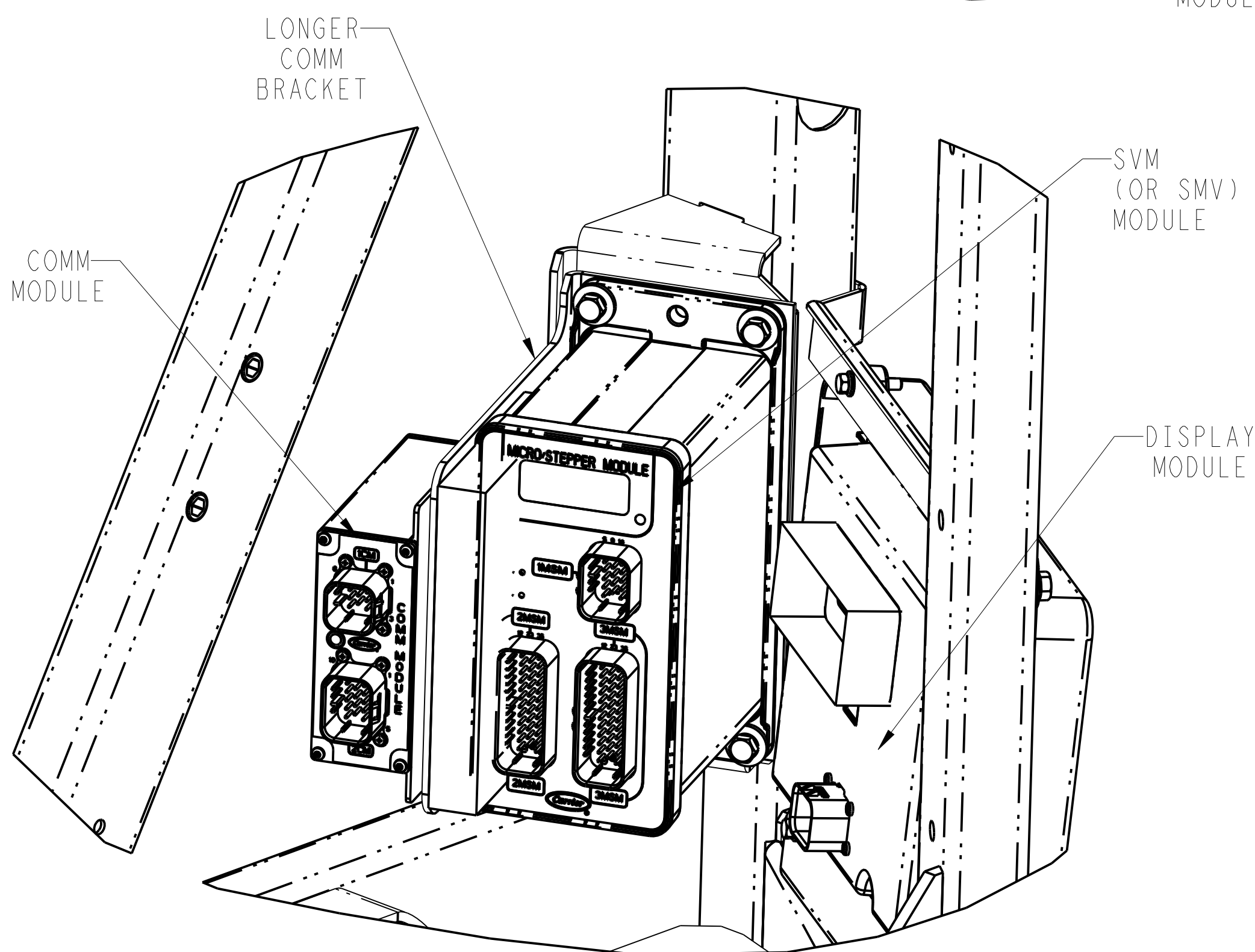
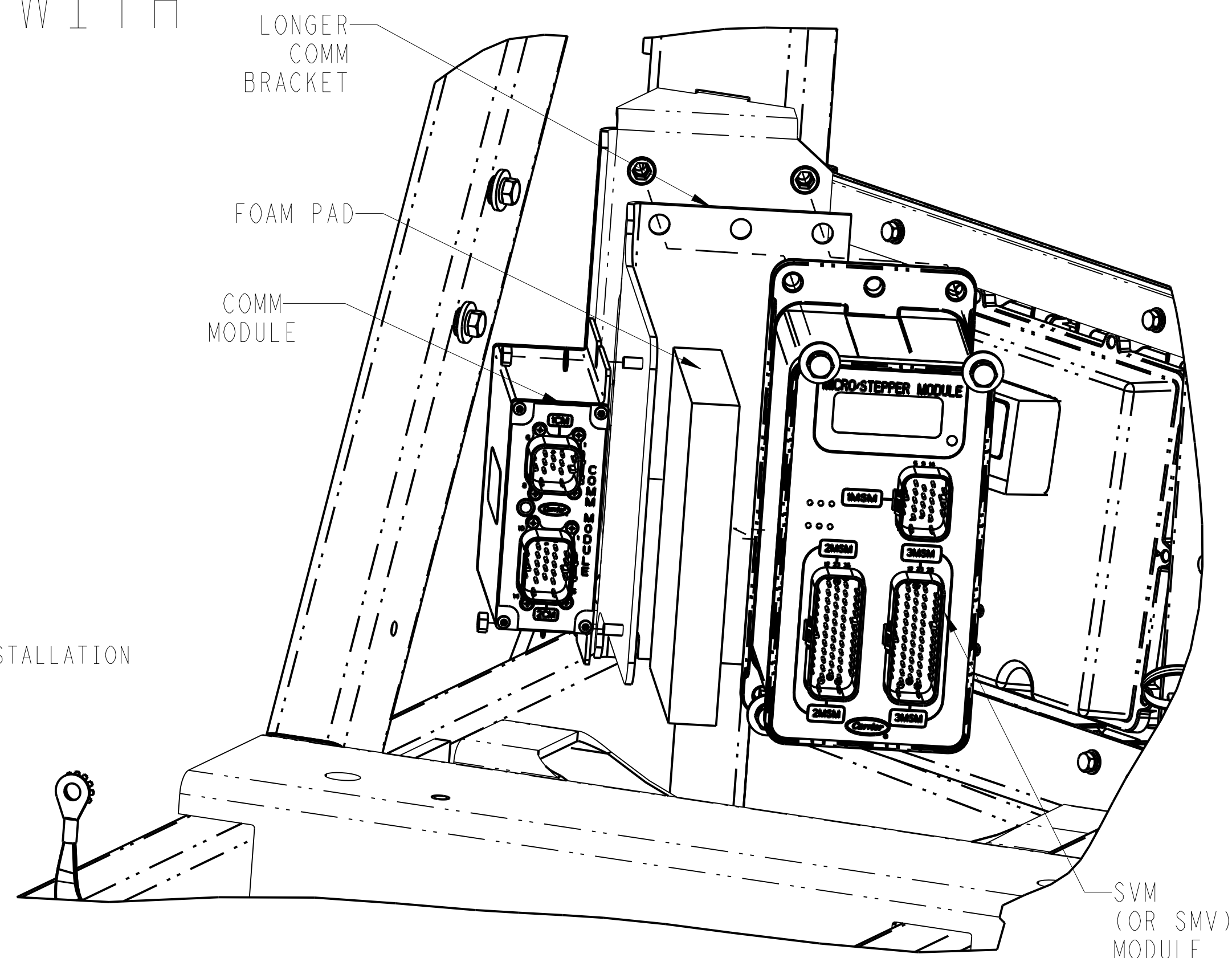


FIGURE 5 - LOCATION OF REMOTE PANEL CONNECTION IN REEFER UNIT BEHIND DISPLAY

COMM MODULE INSTALLATION:

- 1.0 ENSURE UNIT SROS SWITCH IS OFF AND DISCONNECT NEGATIVE BATTERY CABLE BEFORE PROCEEDING.
- 2.0 INSTALL THE COMM MODULE TO THE 2 STUDS ON ITS BRACKET USING THE WASHERS & LOCKNUTS PROVIDED. TORQUE TO 40 IN-LB.
- 3.0 VECTOR MODELS ONLY (8100, 8500, 8600) - APPLY FOAM PAD WITH ADHESIVE BACKING TO THE COMM MODULE BRACKET ON THE OPPOSITE SIDE OF THE COMM MODULE. WHEN INSTALLED, THE FOAM PAD WILL BE COMPRESSED BETWEEN THE COMM MODULE BRACKET AND THE SIDE OF THE SVM MODULE.
- 4.0 UNPLUG ALL CONNECTORS FROM THE SVM (OR SMV) STEPPER MODULE. THEN REMOVE THE 3 SCREWS MOUNTING THE MODULE & MOVE THE MODULE AWAY FROM ITS MOUNTING BRACKET.
- 5.0 LOCATE THE COMM MODULE BRACKET SO IT IS BETWEEN THE SVM AND THE FRAME, AND REINSTALL THE SVM USING THE 3 LONGER M6 SCREWS (PROVIDED). TORQUE TO 80 IN-LB.

TIPS: INSTALL THE BOTTOM SCREWS FIRST. USE A LONG EXTENSION TO START THE TOP SCREW. REMOVE THE DISPLAY MODULE FOR MORE ACCESS.



NOTE: LATE-MODEL APX-SW1 UNITS HAVE SVM MOUNTED LOWER AND ANGLED FURTHER AWAY FROM DISPLAY MODULE

NOTE: FOR EARLY-MODEL APX-SW1 ONLY

H	ADDED VIEWS & NOTES. MOVED PINOUT TABLES TO SHEET 3. MOVED ELECTRICAL CONNECTIONS TO SHEET 3. THIS SHEET 2 WAS 3.	20 DEC 2022	LT-SH/ZMG	RC		ECN1152730	THIRD ANGLE PROJECTION	IMPERIAL INCH FORMAT: UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES WITH METRIC CONVERSIONS IN [MILLIMETERS]	TITLE	INSTALLATION INSTRUCTION	DRAWING NO.	98-03340	REV	H
SYM	REVISION RECORD	DATE	BY	ENGR.	M.E.	NPCA NO.			APX REMOTE DISPLAY PANEL			SHEET 2 OF		
									SUPERSEDES:	PART CLASSIFICATION: US EAR99				

ELECTRICAL CONNECTIONS FOR
UNITS WITH APX-SW8 CONTROLS
(-02, -03)

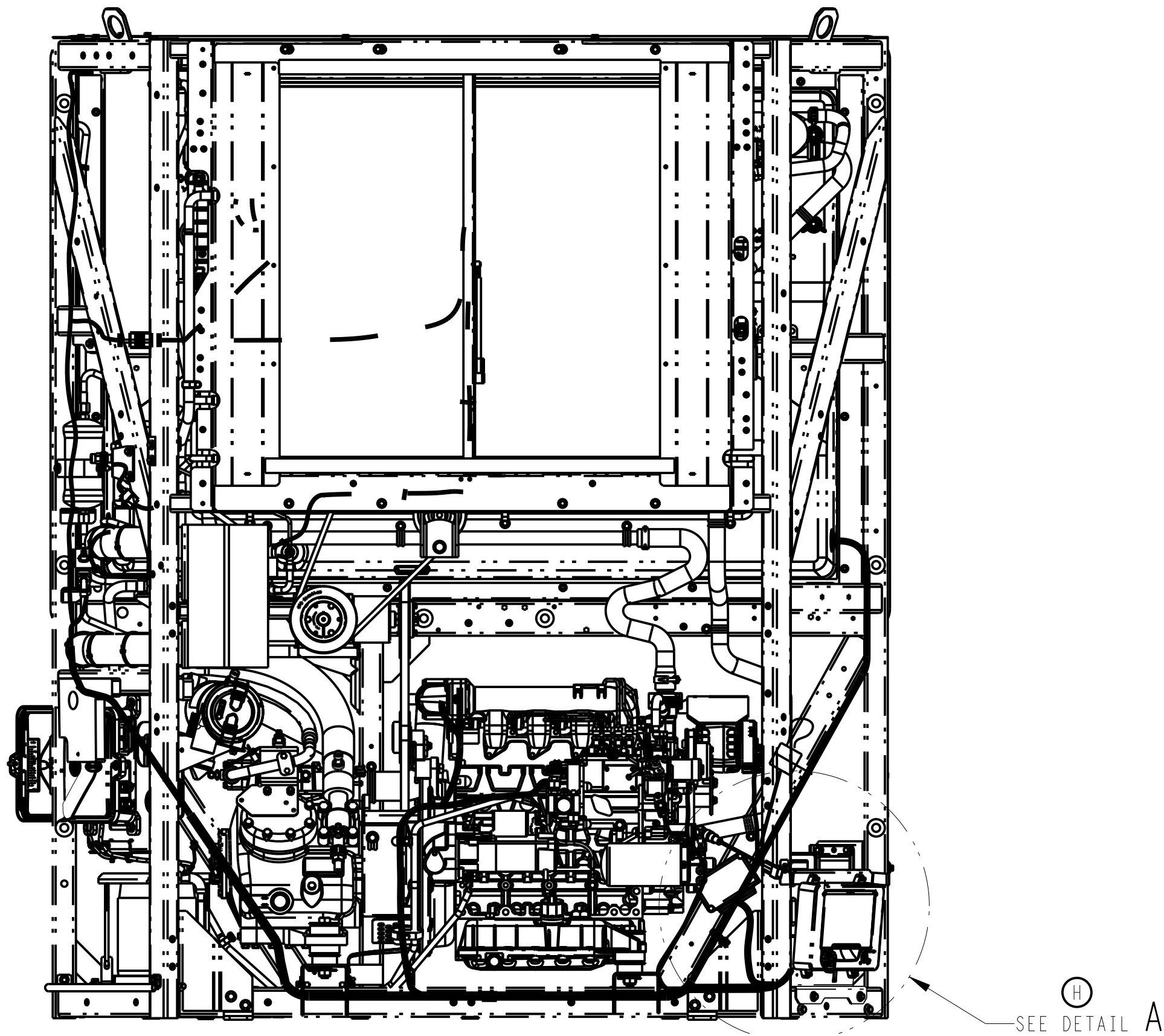
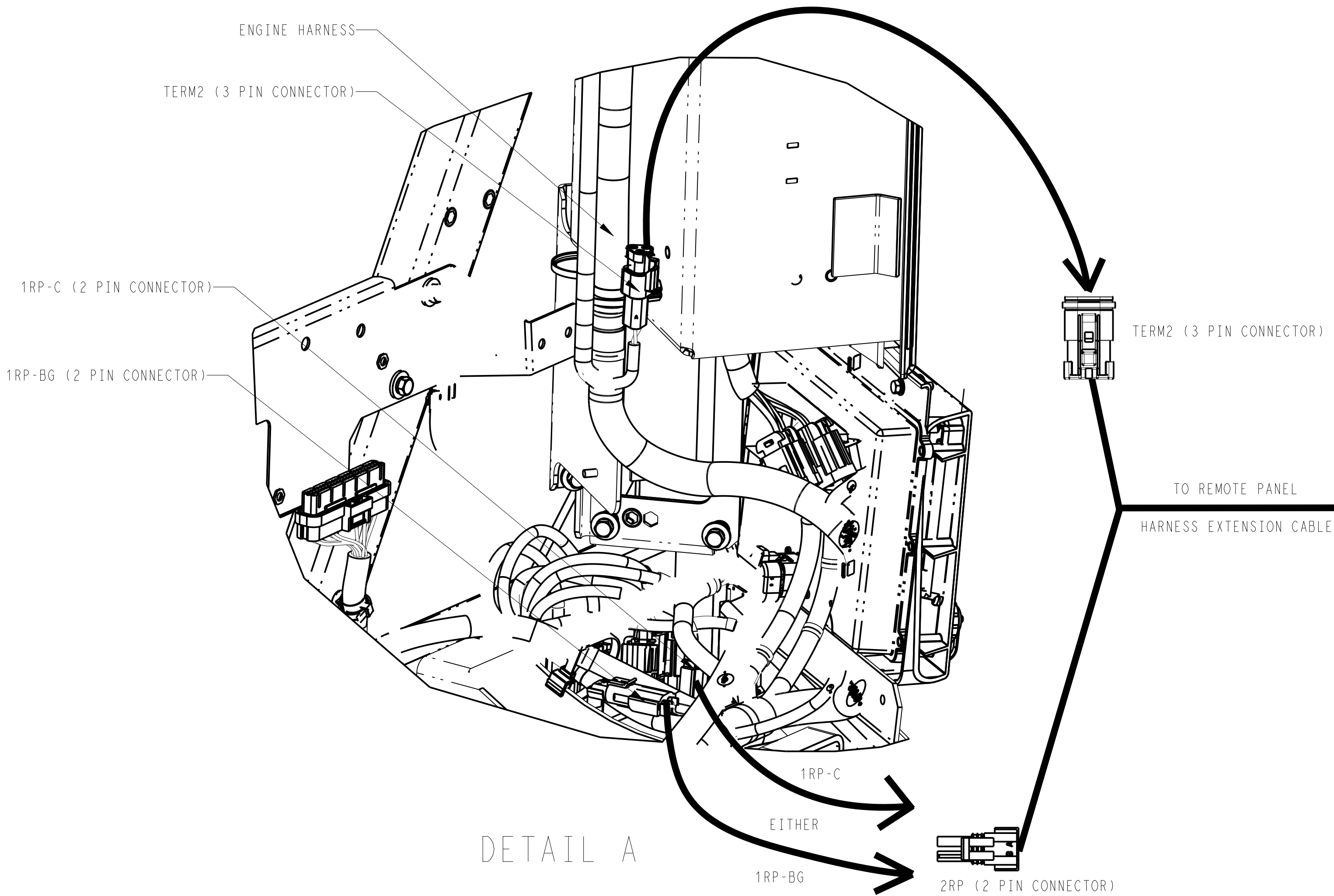


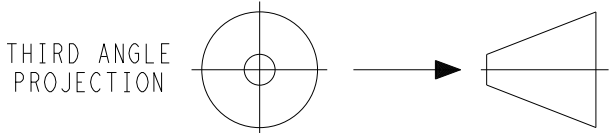
FIGURE 5 - LOCATION OF REMOTE PANEL
CONNECTION IN REEFER UNIT BEHIND DISPLAY



DETAIL A

LOCATIONS OF 1RP AND TERM2 ON ENGINE HARNESS
(REF. SHEET 5 FOR MORE DETAIL)
VECTOR 8611MT SHOWN
(ENGINE HIDDEN FOR CLARITY)

H	MOVED NOTES & PINOUT TABLES TO SHEET 5. UPDATED NOTES "TERM2 (3 PIN CONNECTOR) WAS "TERM-2 (3 PIN CONNECTOR)", "1 RP-BG (2 PIN CONNECTOR)" WAS "1RP (2 PIN CONNECTOR)", "2RP (2 PIN CONNECTOR)" WAS "6RP (2 PIN CONNECTOR)", "TERM2 (3 PIN CONNECTOR)" WAS "3RP (2 PIN CONNECTOR)" & "TO REMOTE PANEL" WAS "OUT TO TRAILER". REMOVED REMOTE PANEL SPLITTER HARNESS. ADDED NOTE "EITHER", "1 RP-C (2 PIN CONNECTOR)" & "1 RP-BG". THIS SHEET 4 WAS SHEET 5.	20 DEC 2022	LT-SH/ZMG	RC		ECN1152730
G	UPDATED CALLOUT TO POINTOUT THE CORRECT CONNECTOR	8/29/2019	LT-KFV	CK		72N0032P19
SYM	REVISION RECORD	DATE	BY	ENGR.	M.E.	NPCA NO.



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METRIC CONVERSIONS IN [MILLIMETERS]

TITLE
INSTALLATION INSTRUCTION
APX REMOTE DISPLAY PANEL

DRAWING NO.
98-03340
SHEET 4 OF
REV
H

SUPERSEDES:

PART CLASSIFICATION: US EAR99

DRAWING CLASSIFICATION: US EAR99

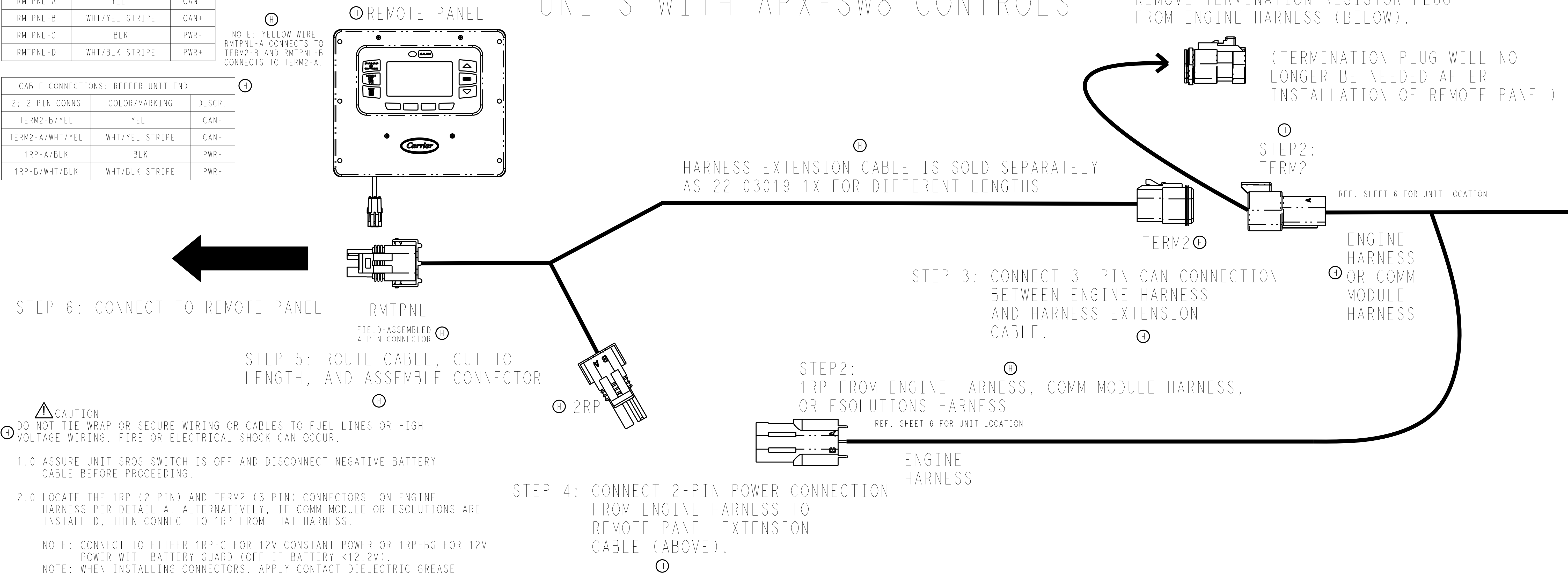
HARNESS EXTENSION CABLE CONNECTIONS:

CABLE CONNECTIONS: PANEL END		
4-PIN CONN.	COLOR/MARKING	DESCR.
RMPNL-A	YEL	CAN-
RMPNL-B	WHT/YEL STRIPE	CAN+
RMPNL-C	BLK	PWR-
RMPNL-D	WHT/BLK STRIPE	PWR+

NOTE: YELLOW WIRE
RMPNL-A CONNECTS TO
TERM2-B AND RMPNL-B
CONNECTS TO TERM2-A.

CABLE CONNECTIONS: REEFER UNIT END		
2; 2-PIN CONNS	COLOR/MARKING	DESCR.
TERM2-B/YEL	YEL	CAN-
TERM2-A/WHT/YEL	WHT/YEL STRIPE	CAN+
1RP-A/BLK	BLK	PWR-
1RP-B/WHT/BLK	WHT/BLK STRIPE	PWR+

FIGURE 7 - WIRING DIAGRAM (-02, -03)
UNITS WITH APX-SW8 CONTROLS



CAUTION
DO NOT TIE WRAP OR SECURE WIRING OR CABLES TO FUEL LINES OR HIGH VOLTAGE WIRING. FIRE OR ELECTRICAL SHOCK CAN OCCUR.

- 1.0 ASSURE UNIT SROS SWITCH IS OFF AND DISCONNECT NEGATIVE BATTERY CABLE BEFORE PROCEEDING.
- 2.0 LOCATE THE 1RP (2 PIN) AND TERM2 (3 PIN) CONNECTORS ON ENGINE HARNESS PER DETAIL A. ALTERNATIVELY, IF COMM MODULE OR ESOLUTIONS ARE INSTALLED, THEN CONNECT TO 1RP FROM THAT HARNESS.

NOTE: CONNECT TO EITHER 1RP-C FOR 12V CONSTANT POWER OR 1RP-BG FOR 12V POWER WITH BATTERY GUARD (OFF IF BATTERY <12.2V).

NOTE: WHEN INSTALLING CONNECTORS, APPLY CONTACT DIELECTRIC GREASE (IT. 1) ACROSS CONNECTOR CONTACT SURFACE TO PREVENT MOISTURE INGRESSION.

- CAUTION**
WHEN INSTALLING WIRING BETWEEN REEFER UNIT AND REMOTE PANEL, ROUTE AND SECURE CABLE AND HARNESSING TO AVOID CHAFING, PINCH POINTS, AND ROAD DEBRIS. ALWAYS USE RUBBER GROMMETS TO PROTECT BARE CABLE THROUGH HOLES IN METAL.
- 3.0 CONNECT THE 3-PIN TERM2 CONNECTORS TOGETHER FOR CAN COMMUNICATION AS SHOWN IN DETAIL A.
 - 4.0 CONNECT THE 2-PIN 1RP AND 2RP CONNECTORS TOGETHER FOR 12V POWER AS SHOWN IN DETAIL A.
 - 5.0 CUT THE CABLE TO LENGTH WITH APPROXIMATELY 1 FOOT EXTRA. STRIP THE CABLE CASING BACK SO THAT THE WIRE MARKINGS ARE VISIBLE. NOTE THAT THE CABLE CONTAINS 2 TWISTED PAIRS, BOTH CONTAINING A BLACK AND A WHITE WIRE, SO FOLLOW THE MARKINGS ON THE WIRES AND TAKE CARE NOT TO MIX UP THE WIRES WHILE TERMINATING. STRIP WIRE ENDS THEN CRIMP SEALS AND TERMINALS WITH APPROPRIATE TOOLS. ASSEMBLE TERMINALS IN 4-PIN RMPNL CONNECTOR PER PINOUT TABLE.

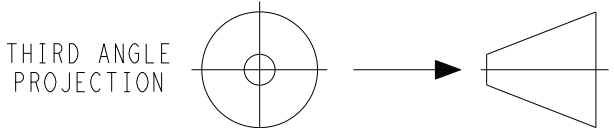
- STEP 4: CONNECT 2-PIN POWER CONNECTION FROM ENGINE HARNESS TO REMOTE PANEL EXTENSION CABLE (ABOVE).

- 6.0 CONNECT ASSEMBLED 4-PIN RMPNL CONNECTOR TO REMOTE PANEL AND COMPLETE CABLE ROUTING.

- 7.0 **CAUTION** NOTICE: VERIFY ALL WIRE CONNECTIONS BEFORE RE-CONNECTING NEGATIVE BATTERY CABLE. FAILURE TO CONNECT WIRES CORRECTLY MAY CAUSE DAMAGE TO THE REMOTE PANEL OR OTHER COMPONENTS.

- 8.0 RE-CONNECT NEGATIVE BATTERY TERMINAL AND TEST OPERATION OF THE REMOTE PANEL BY TURNING ON THE REEFER UNIT SROS SWITCH. THE REMOTE PANEL SHOULD ILLUMINATE ALONG WITH THE MAIN DISPLAY, AND THE UNIT ENGINE SHOULD START AFTER THE NORMAL DELAYS. IF THE UNIT WILL NOT START, THE CURRENT SYSTEM SOFTWARE VERSION SHOULD BE LOADED (WITH THE REMOTE PANEL CONNECTED). THE UNIT AND REMOTE PANEL SHOULD THEN OPERATE NORMALLY.

H	ADDED NOTES "REMOTE PANEL", "RMPNL", "FIELD-ASSEMBLED 4-PIN CONNECTOR" & "UNITS WITH APX-SW8 CONTROLS". UPDATED CONNECTORS NAME "TERM2" WAS "RPCAN", "2RP" WAS "6RP" & "TERM2" WAS "TERM-2". REMOVED SPLITTER HARNESS. REMOVED NOTES AND UPDATED NOTES. ADDED NOTES & PINOUT TABLES FROM SHEET 4. THIS SHEET 5 WAS SHEET 6.	20 DEC 2022	LT-SH/ZMG	RC		ECN1152730
E	NEW SHEET	7/17/2018	BSL	CK		72N0031P18
SYM	REVISION RECORD	DATE	BY	ENGR.	M.E.	NPCA NO.



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APX REMOTE DISPLAY PANEL

DRAWING NO.
98-03340
SHEET 5 OF
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SUPERSEDES:

PART CLASSIFICATION: US EAR99

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