AV-CCII
Manual

Hours of Operation
7:30AM to 4:00PM Mon. – Fri. Eastern Standard Time

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Form: MM-Auto Vibe Revised 08/13/2021

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Limited Warranty, Disclaimer and Remedies

Supplier warrants to Customer that the Services shall be provided in a workmanlike manner and that the Goods shall be free from defects in material and workmanship at the date of shipment from Supplier's facility. This warranty shall not run to any person other than Customer.

All claims under this warranty must be made in writing and delivered to Supplier prior to the expiration of one (1) year after the Goods have been delivered (or, if applicable, within one (1) year after the Services have been performed) or be forever barred. Supplier will repair or replace Goods or parts recognized and acknowledged by Supplier as being defective at the time of delivery without charge. However, Supplier will bill Customer for Goods and/or Services not covered by the warranty, including travel expenses incurred while performing warranty service calls. EQUIPMENT, COMPONENTS OR OTHER GOODS FURNISHED THAT ARE NOT MANUFACTURED BY SUPPLIER ARE ONLY COVERED TO THE EXTENT OF THE ORIGINAL MANUFACTURER'S WARRANTY, WHICH MAY VARY FROM THE ABOVE. Further, the above warranty shall not apply to any hardware or software that has been repaired or altered without Supplier's written permission by anyone other than Supplier's personnel. The foregoing states the sole and exclusive remedy for any breach of warranty or for any other claim based on any defect in, or nonperformance of, the Goods or Services, whether based upon contract, warranty, negligence, tort (including strict liability) or otherwise.

NO EXPRESS WARRANTIES AND NO IMPLIED WARRANTIES, WHETHER OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR WEAR CAPACITY, OR OTHERWISE, SHALL APPLY TO THE GOODS AND SERVICES. SUPPLIER SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER EXPRESS AND IMPLIED WARRANTIES. NO WAIVER, ALTERATION, ADDITION OR MODIFICATION OF THE FOREGOING SHALL BE VALID UNLESS MADE IN WRITING AND SIGNED BY AN EXECUTIVE OFFICER OF SUPPLIER. IN NO EVENT WILL SUPPLIER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

SECTION ONE
System Set-up and Components

1.0 Overview

The Minnich Monitor system works on a CANBUS communication system.

Each vibrator is equipped with a sensor that monitors the speed of the vibrator it is installed in.

Each sensor is then connected to a sensor adapter that has a unique ID that the monitor recognizes. The sensor adapter takes that signal from the sensor and attaches an identity code to it, so the monitor will know which vibrator it is reading. The ground speed wheel and temperature/relative humidity sensor, work in the same manner.

Valve controllers can also be used with the AV-CC System. These work in the same manner as the sensor adaptors. In the case of the Auto Vibe III the controller will adjust the vibrator speed based on the set point for the vibrator automatically, by adjusting proportional flow controls that power the vibrators.

The monitor is also equipped with programmable VPM alarm ranges. Once set to the desired operating range, the monitor will let the operator know if one of the vibrators leaves this range.

⚠ WARNING : The system is a 24V system and is intended to be wired accordingly.

⚠ WARNING : The Real Time Clock module must stay connected to power. If the system is disconnected from power, the time/date, and log setting must be checked/set.

2.0 Set-Up

2.1 System Installation

It is IMPORTANT to identify which vibrator you want to be #1, #2, and so on. This is because the order that you learn the sensor adapters/valve controllers corresponds to their number on the monitor.

We recommend that you start at one end of the machine (right or left) and work your way to the other end.

1. Locate/hang the Control Box Hanger Assembly A13526-00010 (1 Hanger per 24 vibes) on a free/clear location on the Paver railing.

2. Locate/attach the Monitor Enclosure w/ Monitor A12440-00001 on a free/clear location near the operator control panel with the RAM Mount System included.

3. Locate the (2) Monitor Connection Harnesses (ORANGE) 012440-00007 or 5567 & 012440-00008 or 5568.

4. Plug MD4 Display Harness 012440-00008 or 5568 (2-plug, Black & Gray) into the back of the MD4 Display Module Assembly A12440-1.

5. Plug opposite end of MD4 Display Harness 012440-00008 or 5568 (ORANGE) into 012440-00007 Display/Master Harness or 5567 (ORANGE).

6. Plug Display/Master Harness 012440-00007 or 5567 (ORANGE) into C1 Master Harness 010280-00010 or 5572 (ORANGE).

7. Plug G11 Module (BROWN) 012440-00002 directly into C1 Master Harness 010280-00010 or 5572 (BROWN).

8. The (2) Power Cables 010280-00006 or 5562 (RED) need to be connected to POWER connectors on both 010280-00010 or 5572 and 010280-00017 or 5780, and the leads on the other end need to connect directly to Key Switch Solenoid (24V).

9. REAL TIME CLOCK Module 012440-00005 (RTC) is plugged directly to RTC Harness on C2 Master Harness (GREEN) 010280-00011 or 5573.

10. Plug RTC Power Harness 010280-00020 or 5836 (GREEN) to C2 Master Harness 010280-00011 or 5573 (GREEN), and other end directly to battery (24V).

11. Plug Master C1 10280-00010 or 5572 (WHITE) directly into Master C2 10280-00011 or 5573 (WHITE).

12. Plug Jumper Harness 010280-00019 or 5808 (BLUE) into Master C1 10280-00010 or 5572 (BLUE) and the opposite end into Driver C1 010280-00017 or 5780 (BLUE).

13. AV-CC48 Systems ONLY, plug 010280-00005 or 5561 (GREY) into Master C1 010280-00010 or 5572 (GREY) and opposite end into C1 Driver **#2** Module on **second** Hanger Assembly on C1 010280-00017 or 5780 (**BLUE**).

14. (OPTIONAL) Plug Travel Speed Harness 010280-00008 or 5565 (PURPLE) into C1 Master Harness (PURPLE) 010280-000010 or 5572 and the other end to the Speed Wheel Assembly (PURPLE).

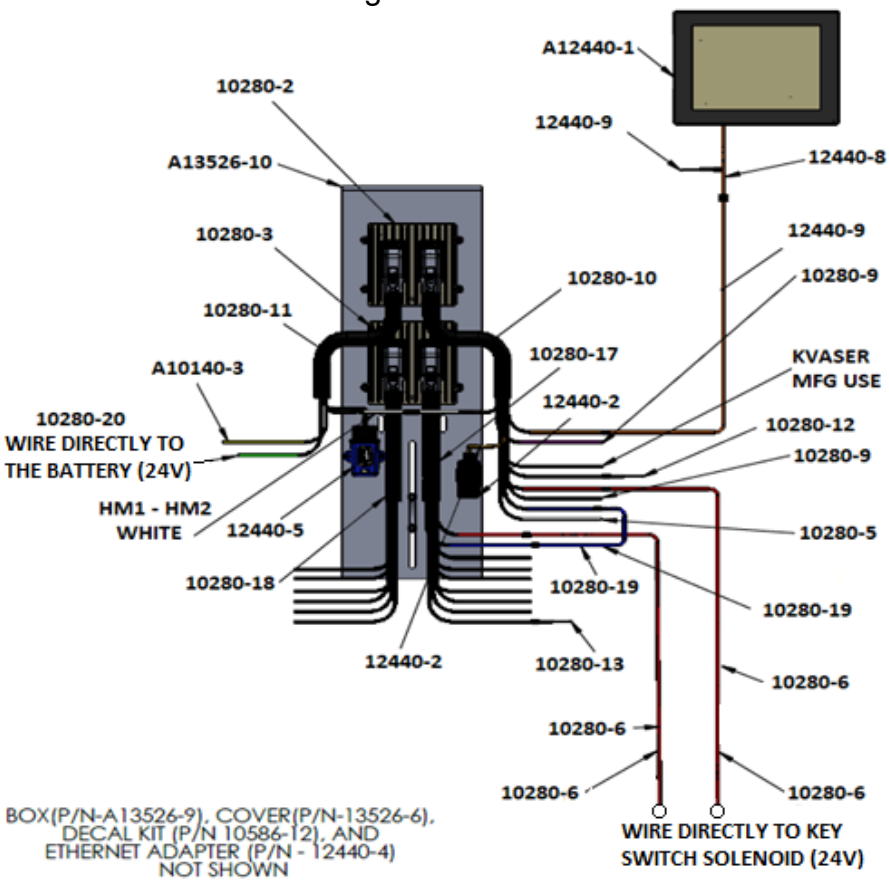
15. (OPTIONAL) The Speed Wheel Assembly should be mounted either over one of the tracks or where it can run in the track path. NOTE: It is advisable to place the wheel where it will be protected, as well as where there will be minimum build up of residue (mud, concrete, etc) on the tread. The lead for the speed wheel should be connected to the special sensor adapter for it.

    NOTICE: Direction of rotation is labeled by an arrow.

16. (OPTIONAL) Plug Temp/Humidity Sensor (YELLOW) 0A9447-00003 into C2 Master Harness (YELLOW) on 010280-00011 or 5573 OR into optional A10140-00003 Mount Assembly (YELLOW).

    NOTICE: Remove plastic protective cover during use. Sensor should be pointed in downward facing direction.

17. The KVASER Plug on 010280-00010 or 5572 is for manufacturing purposes ONLY.

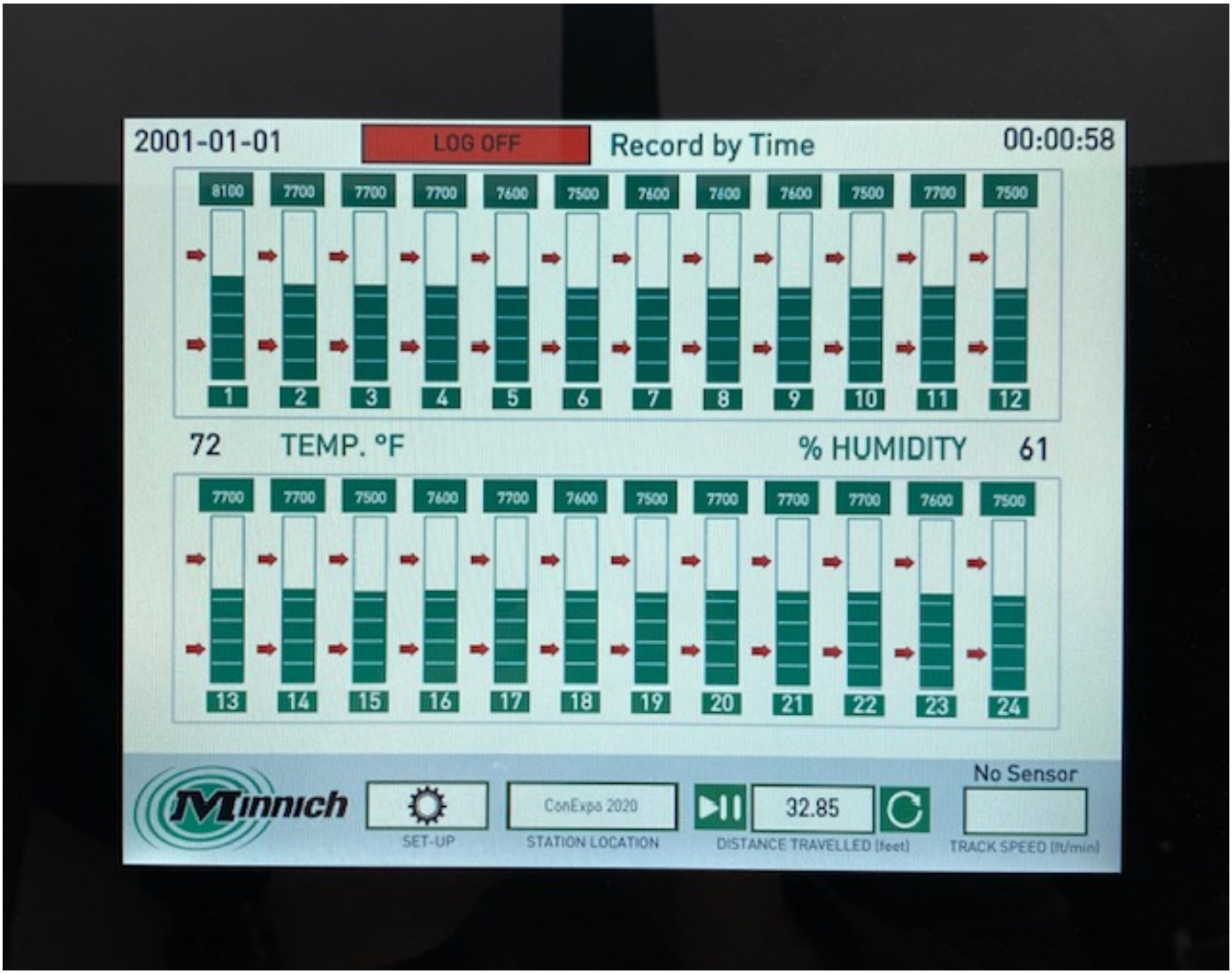


COLOR CODE KEY:
RED - POWER
ORANGE - MONITOR
BLUE - M-C1 JUMPER D-C1
WHITE - M-C1 JUMPER M-C2
GREEN - REAL TIME CLOCK
PURPLE - TRAVEL/SPEED
YELLOW - TEMP/HUMIDITY
BROWN – G11 BLUETOOTH
GRAY - M-C1 JUMPER D2-C1

2.2 SCREEN INFORMATION

1. There is no power button. Once the system is connected to power, the monitor will power on.

MAIN SCREEN:



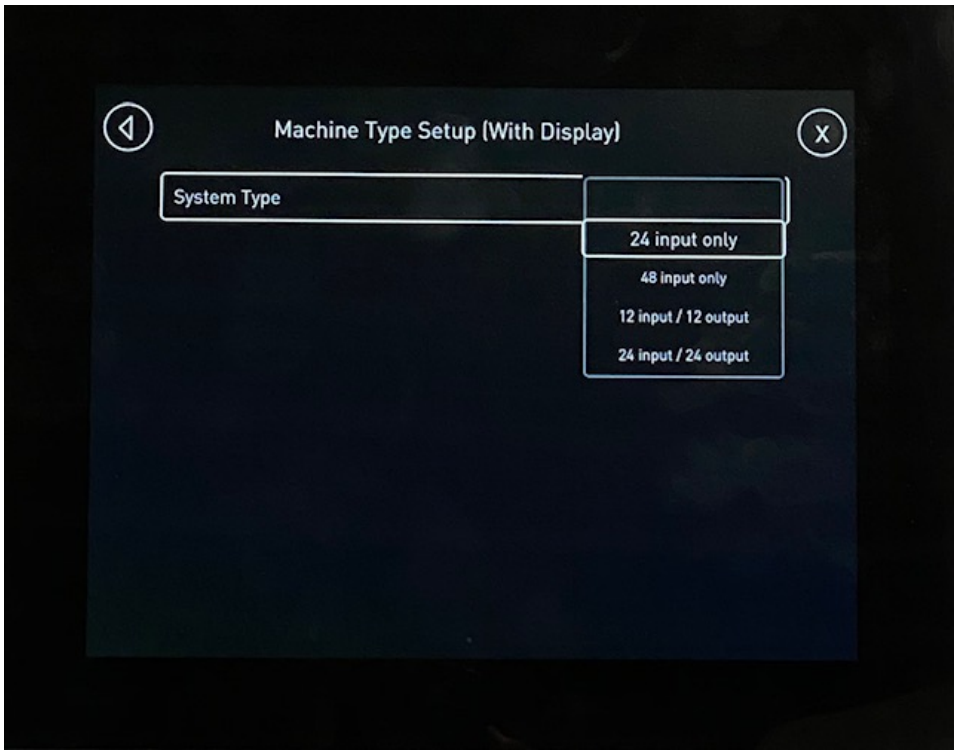
I. OTHER MAIN SCREEN INFORMATION:
   a. Temperature: Once Temp/Humidity connected temp will be displayed.
   b. Humidity: Once Temp/Humidity connected temp will be displayed.
   c. Track Speed: Once speed wheel is installed; speed will be displayed.
   d. Station Location: Click to define your station location(s).
   e. 48 Vibe System: Once selected, will have button to navigate to page 2.

2. Choose the **SET-UP** button located at the bottom of the screen. 

This will bring up the **MENU SCREEN**:

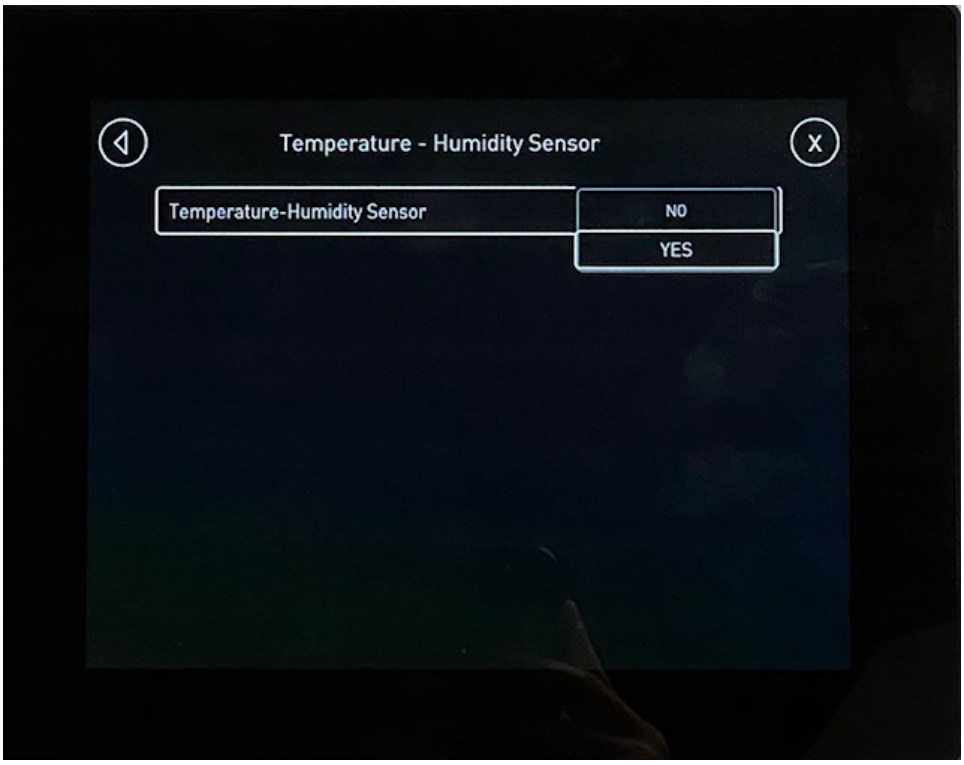
2.3 MENU SCREEN:

3. **MACHINE TYPE**:
    I. This is where the type of system being used is selected.
        I. **24 INPUT ONLY**: AVII System for up to 24 Vibes.
        II. **48 INPUT ONLY**: AVII System for up to 48 Vibes.
        III. **12 INPUT/12 OUTPUT**: AVIII System for up to 12 Vibes.
        IV. **24 INPUT/24 OUTPUT**: AVIII System for up to 24 Vibes.

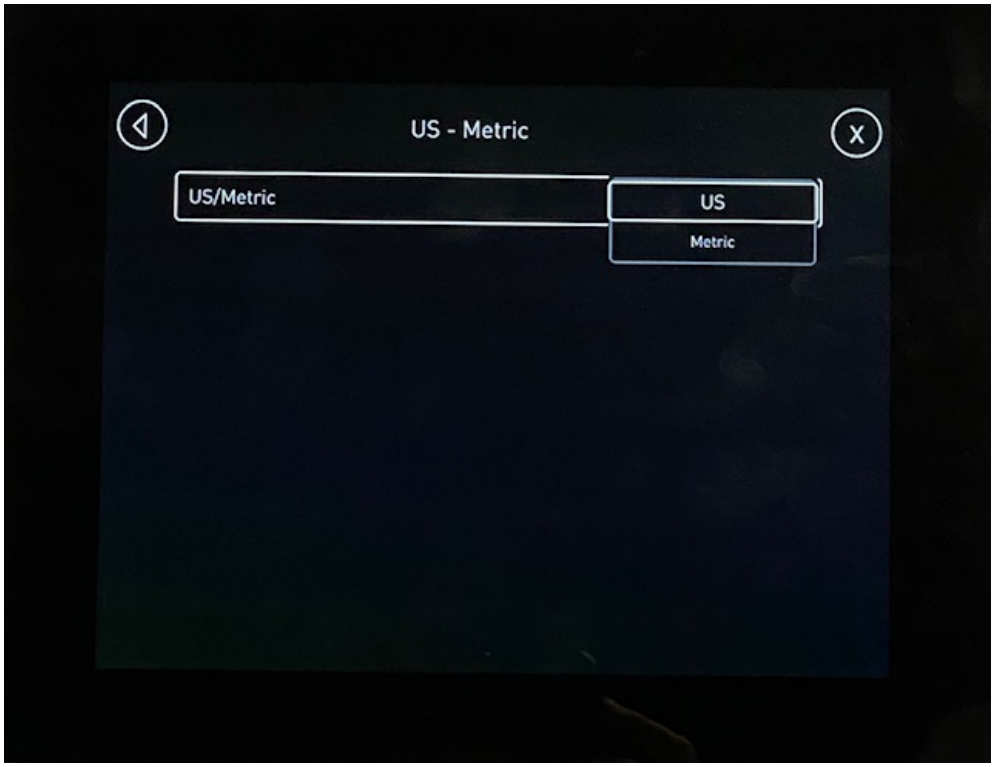


4. **AV SYSTEM S/N**: This is a manufacturer input and users are locked out of this, this is a factory issued serial number.

5. **TEM/HUMIDITY READING**:
    a. This is where you will turn on/off temperature/humidity sensor based on if the system is using that device.

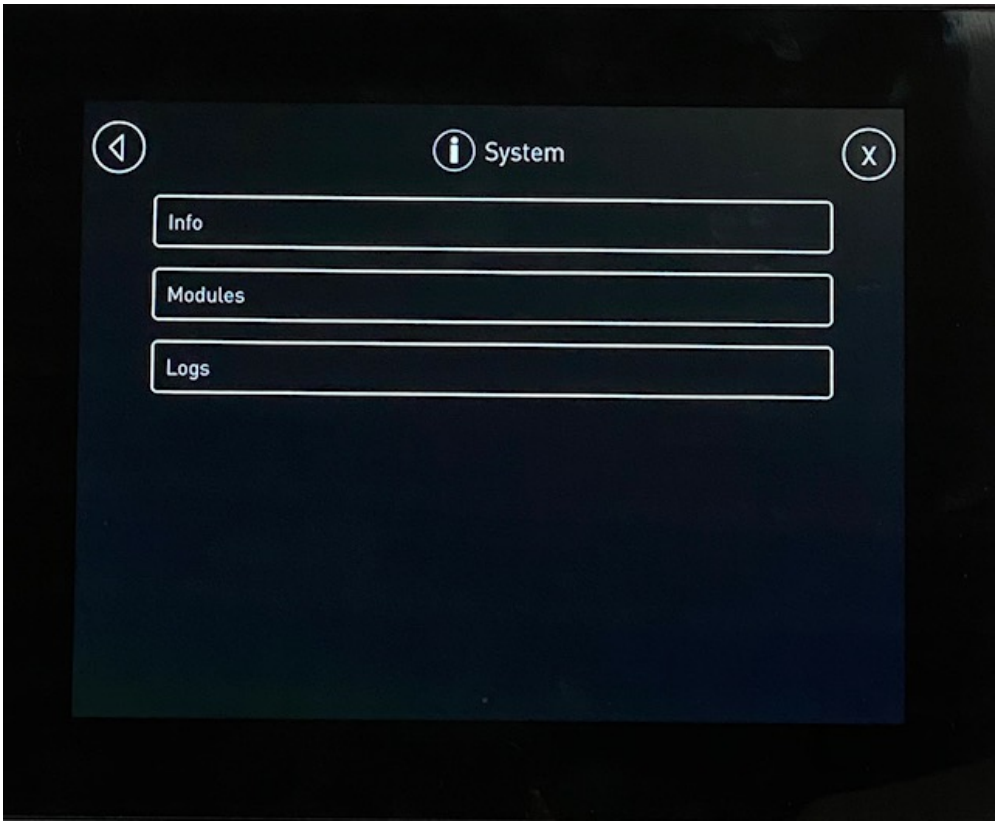


6. **US -- METRIC SYSTEM**:
    I. Choose either a US standard or Metric version



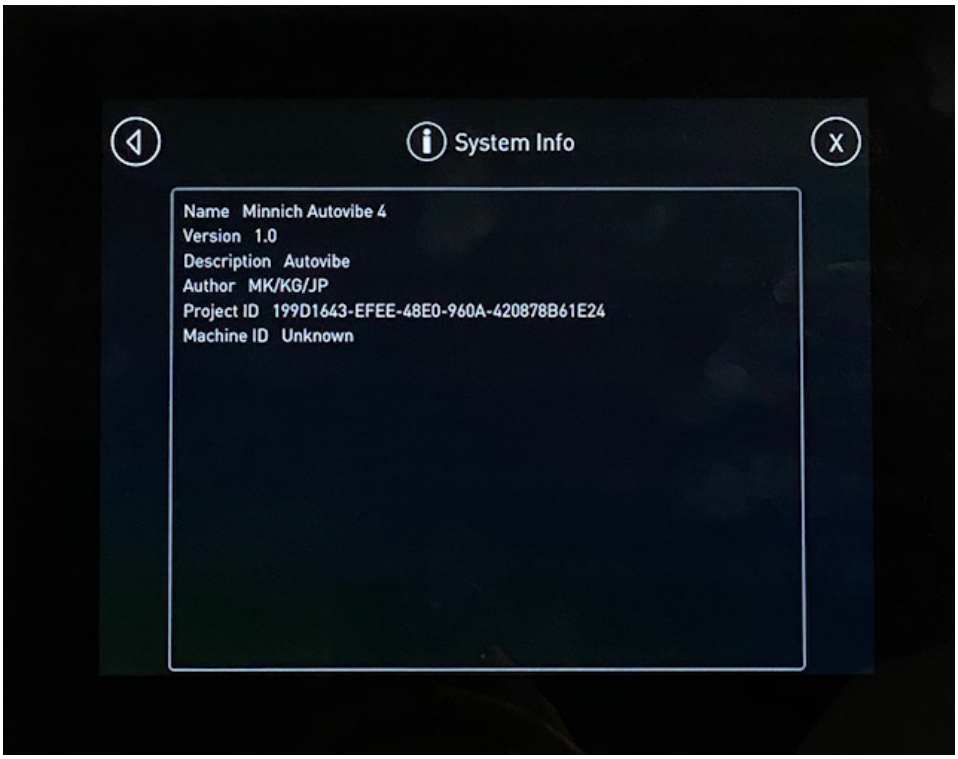
7. **DISPLAY – SCREEN INFO**:

7.1 SYSTEM:



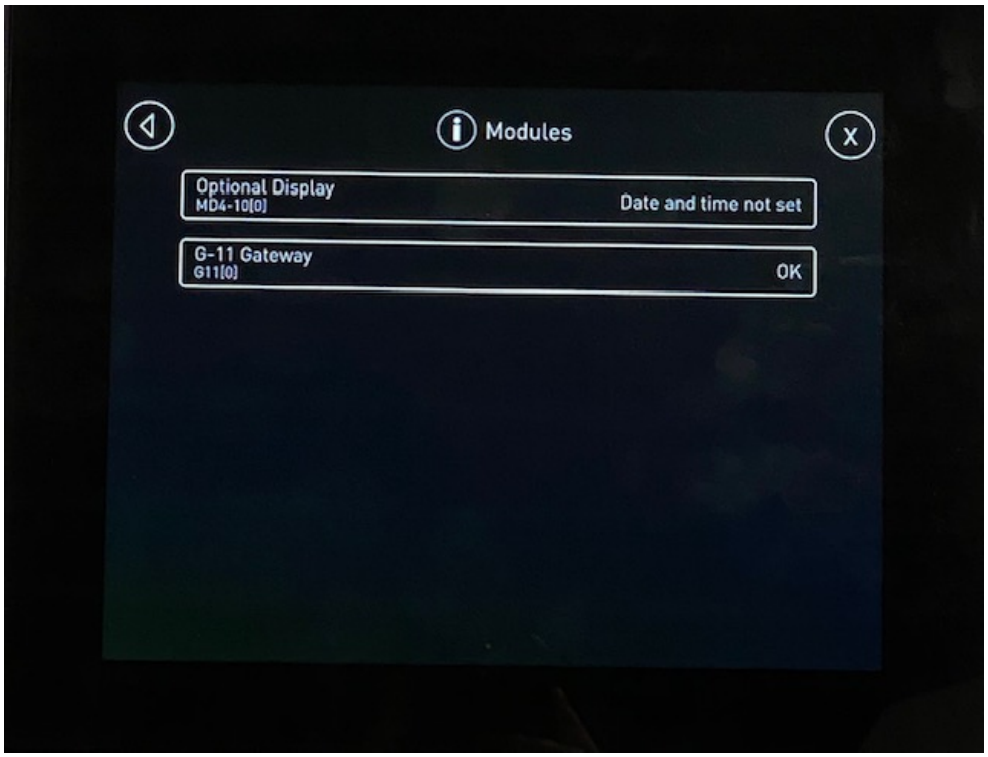
7.1.1 INFO:

1. This section lists all of the system information (Name, Software Version, Description, Software Author, Project ID, and Machine ID).



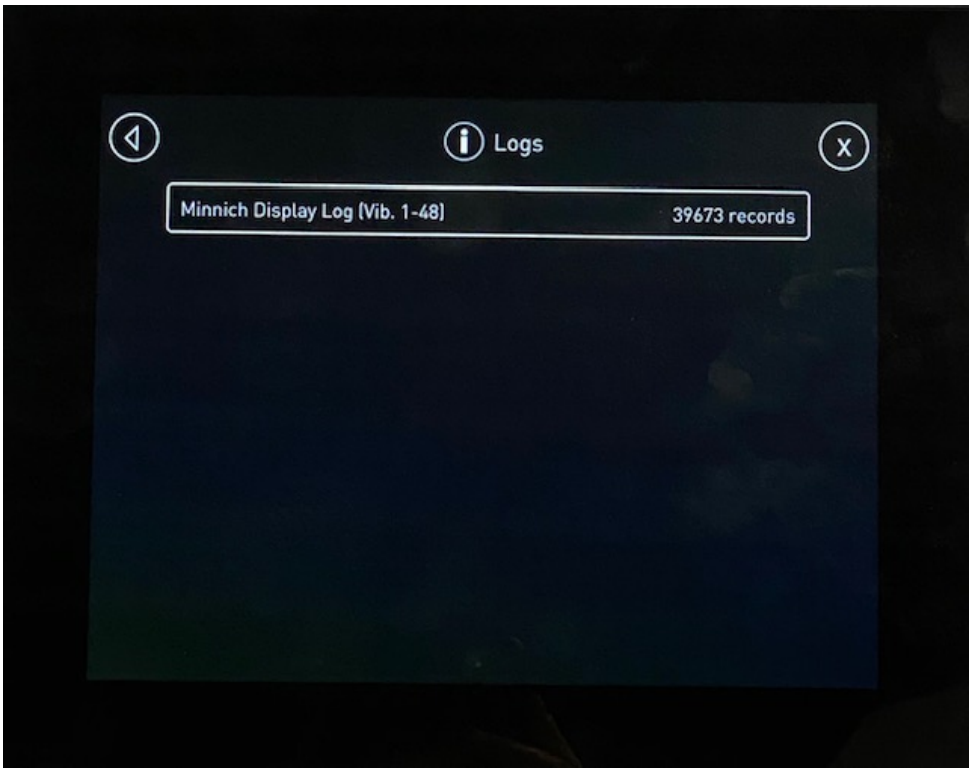
7.1.2 MODULES:

2. Displays a listing of what modules are connected to the system.

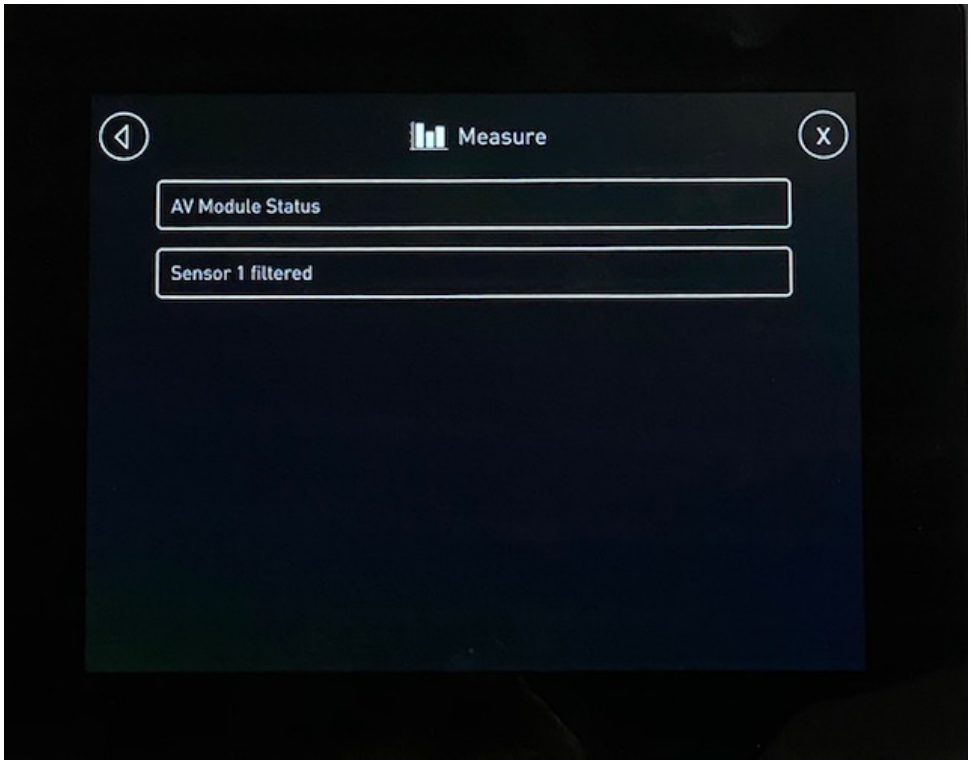


7.1.3 **LOGS**:

a. Displays the number of recorded logs in memory along with the date and the time of the recordings.

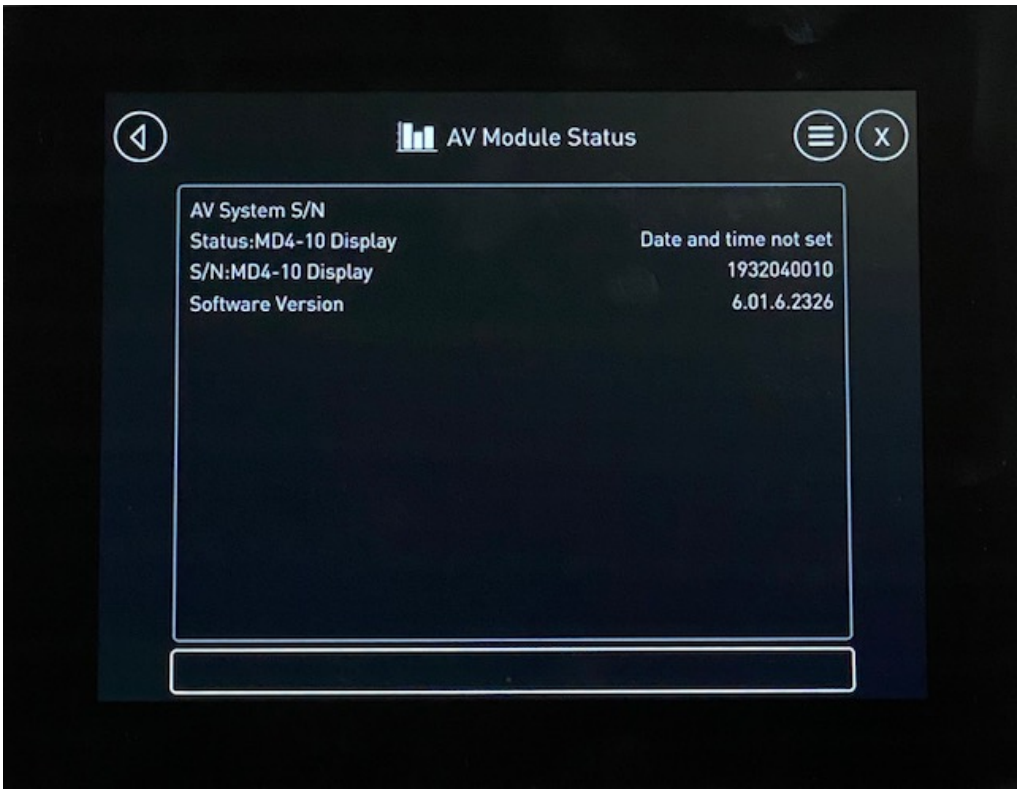


7.2 **MEAUSURE**:



7.2.1 AV MODULE STATUS:

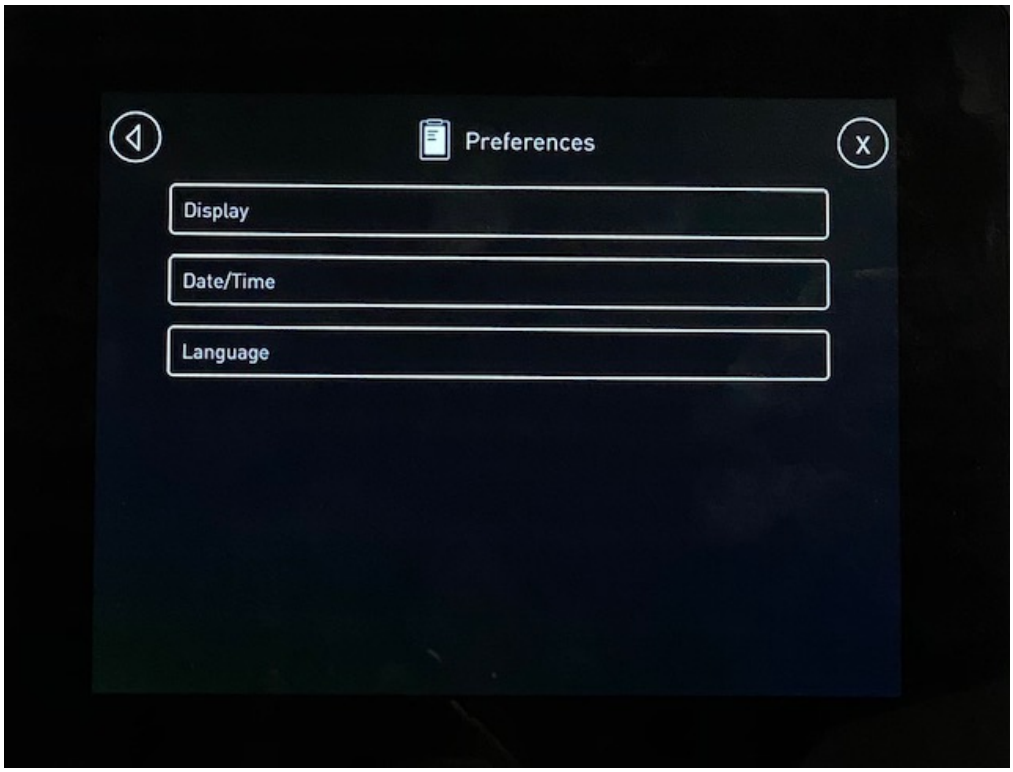
a. Informational screen showing status of online modules, along with software versions and serial numbers.



7.3 ADJUST:

In the ADJUST screen: There are all of the screen buttons in one location.

7.4 PREFERENCES:



7.4.1 DISPLAY: Ability to adjust the brightness.
7.4.2 DATE/TIME: Ability to adjust the date and time of day.
7.4.3 LANGUAGE: Ability to select different languages.

8.0 VIBRATOR ALARM SETTINGS

8.1.1 ALARMS ON/OFF: Ability to turn on or off set vibration alarms across the paving system.
8.1.2 HIGH ALARM: Ability to set the high side vibration alarm.
8.1.3 LOW ALARM: Ability to set the low side vibration alarm.

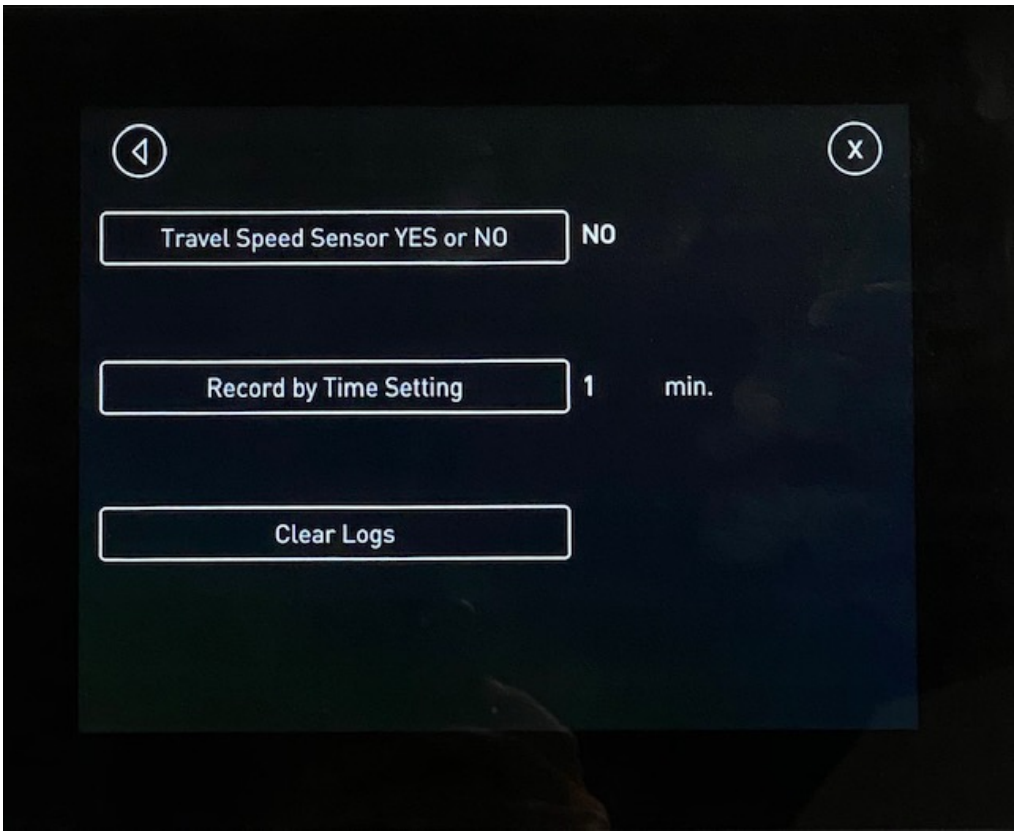
9.0 SENSOR MV ADJUST: This is a manufacturer only designated area. NO ACCESS.

10.0 CLOSE: This closes the MENU SCREEN

11.0 Back Button: Any time you see a  this will take you back one screen.

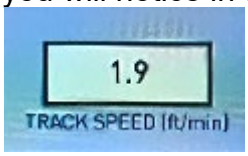
12.0 "X" or Close Button: Any time you see a  this will close the screen and take you back to the MENU SCREEN.

13.0 DATA LOG SETUP:

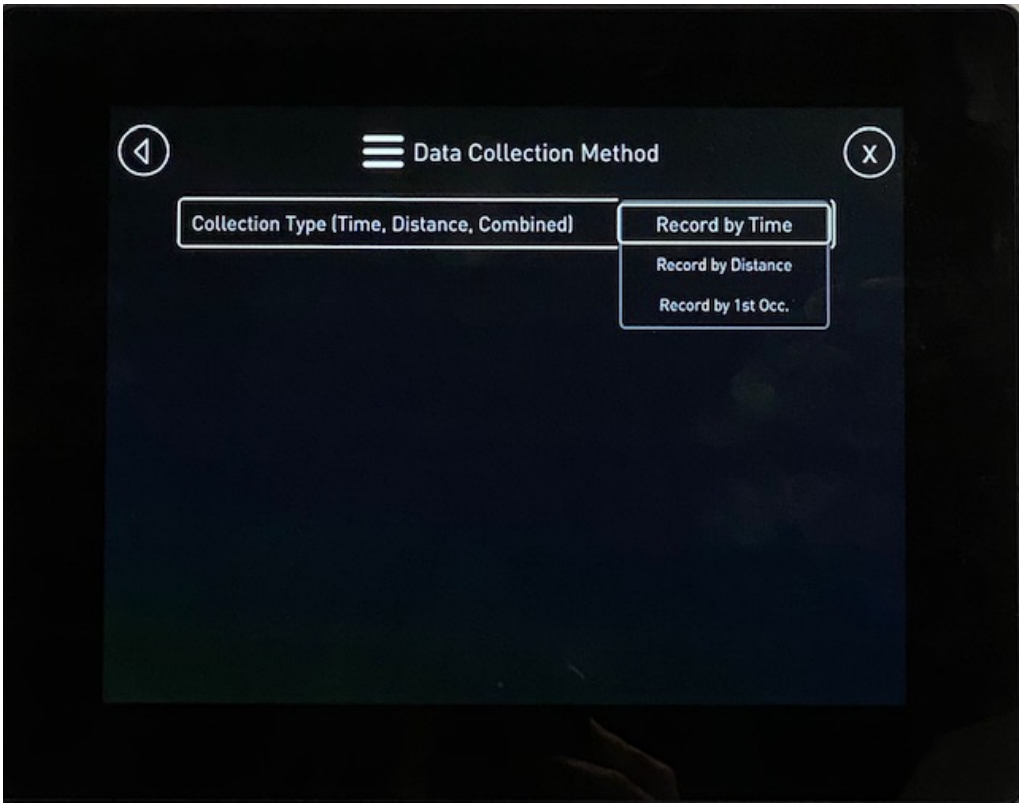


13.1 TRAVEL (SPEED WHEEL): If the system is equipped with a Travel Speed Wheel, this is where you turn that feature on.

a. Once TRAVEL SPEED WHEEL is connected, on the MAIN SCREEN, you will notice in the bottom right corner the travel speed.



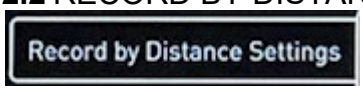
13.2 Click on the RECORD BY… middle button. This will allow you to choose record options:



13.2.1 RECORD BY TIME:

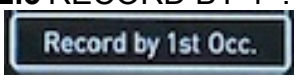
a. Record by Time Setting Click to choose time.

13.2.2 RECORD BY DISTANCE

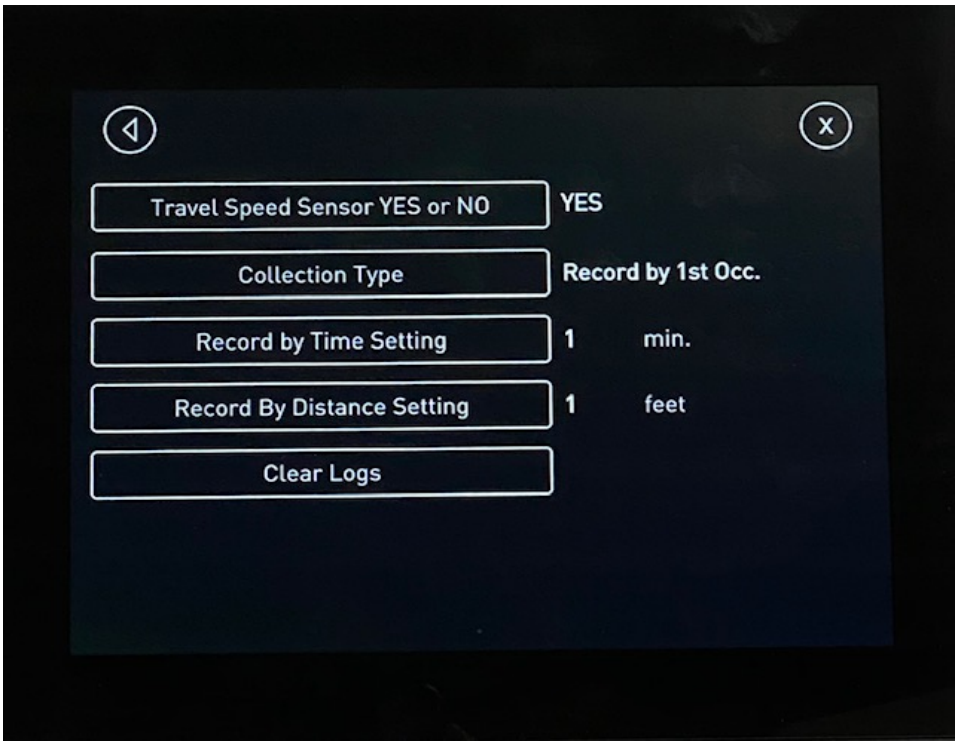
a. 

Click to choose distance.

13.2.3 RECORD BY 1st. OCC.

a. 

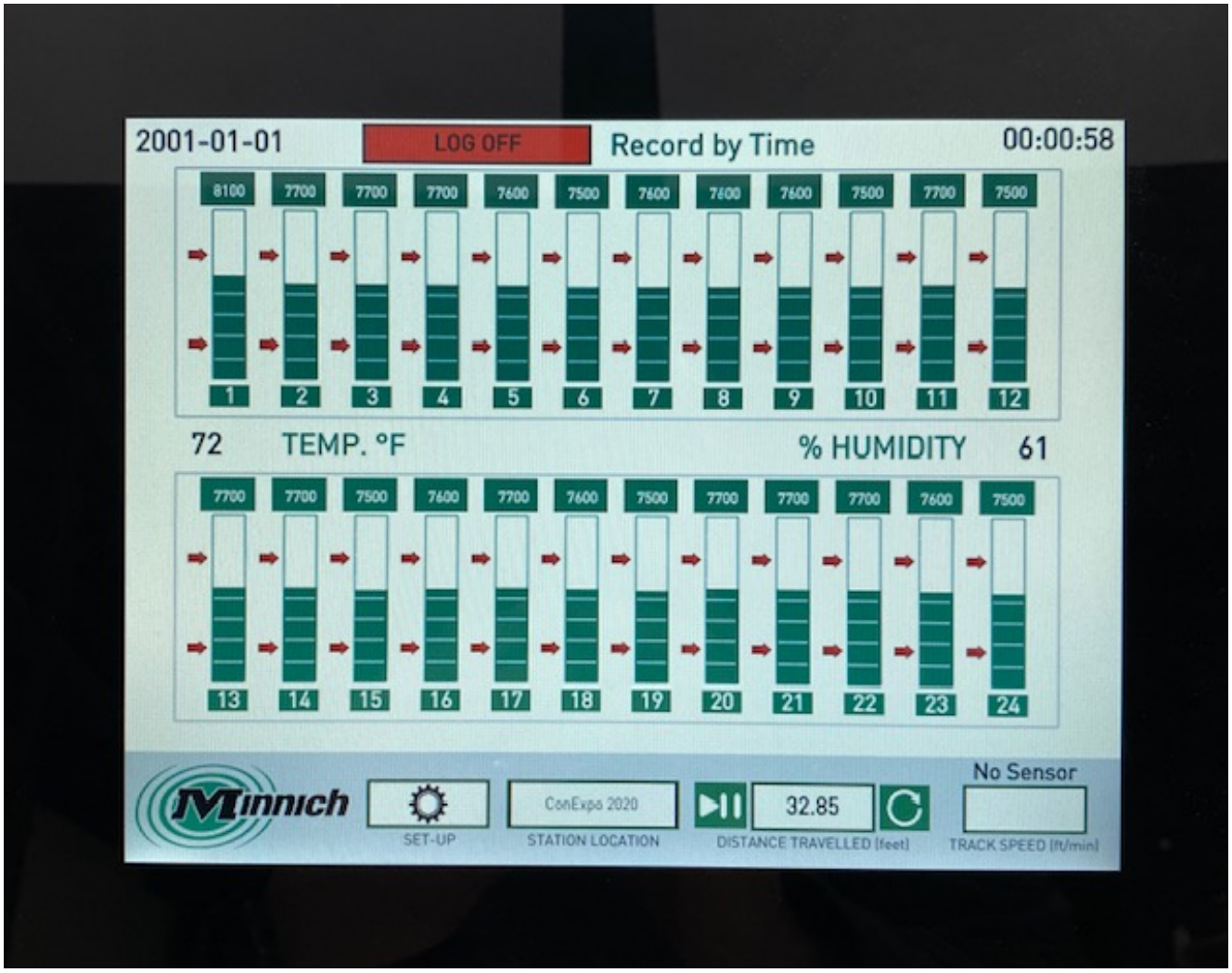
Click to choose 1st occurrence (distance or time). Once this is selected, these two options will be available.



Once all of the collection methods required are set up, the system will save it this way.
Go back to the MAIN SCREEN.
Notice that the record method should match what was selected. In this screen shot below, it is set to RECORD BY TIME. Record by Time

Click on the LOG OFF button in red. LOG OFF

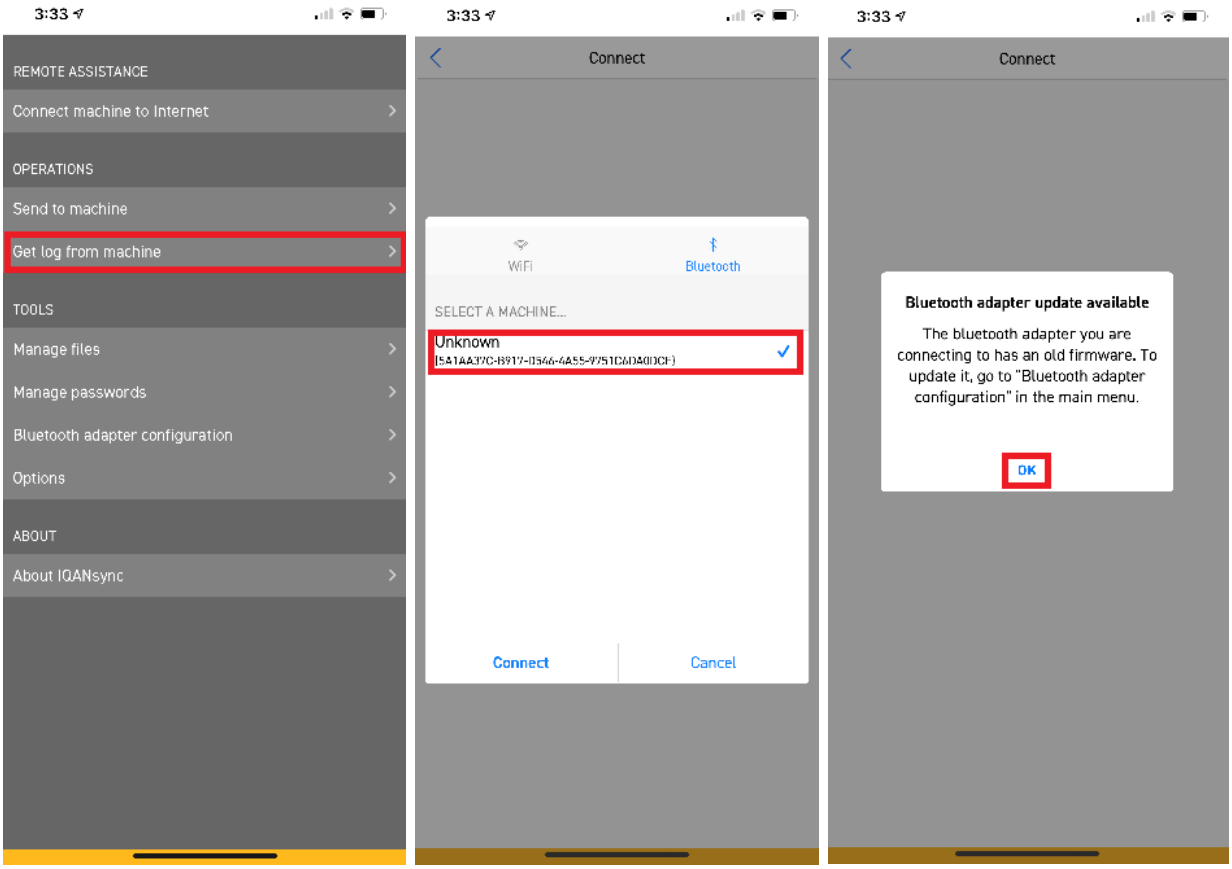
This will turn the button to LOG ON in green LOG ON
Once it is green, the logs are being recorded.



14.0 Retrieving Log Files:

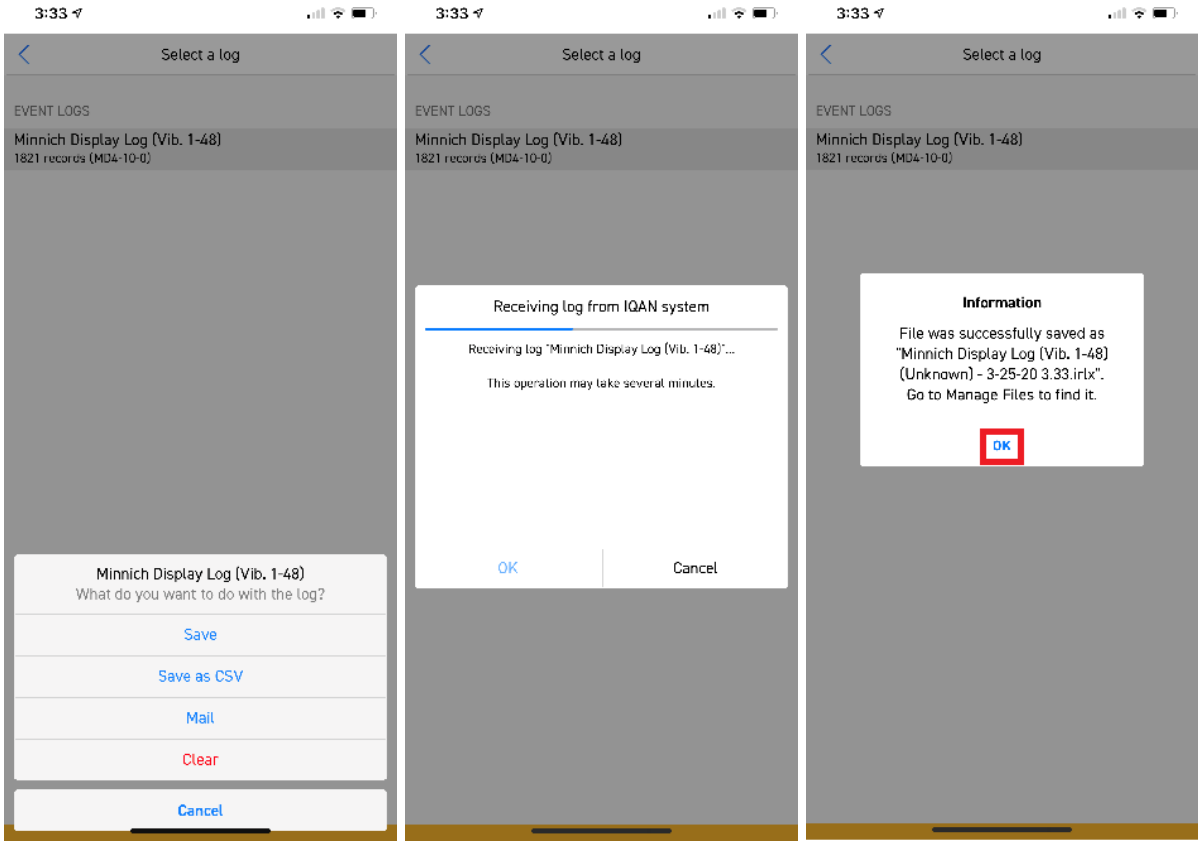
1.0 Download the Parker IQAN app from the iOS or Android store.

2.0 Open the IQAN Sync App and click GET LOG FROM MACHINE
3.0 Select the machine from the listing
4.0 Click “OK” to the Bluetooth update available.

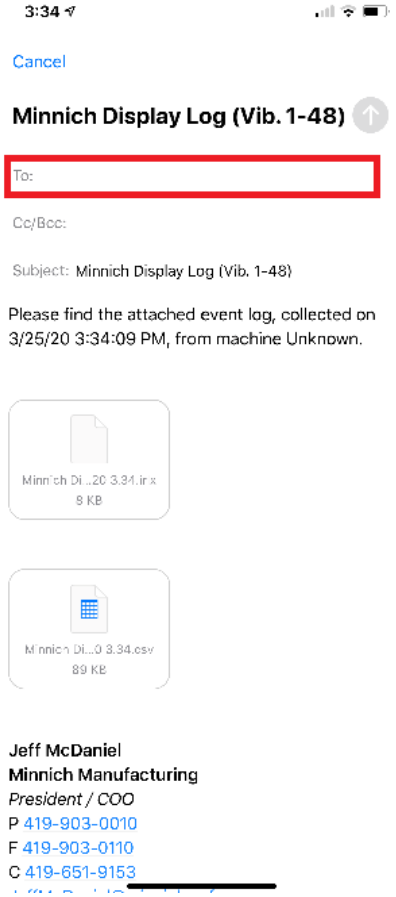


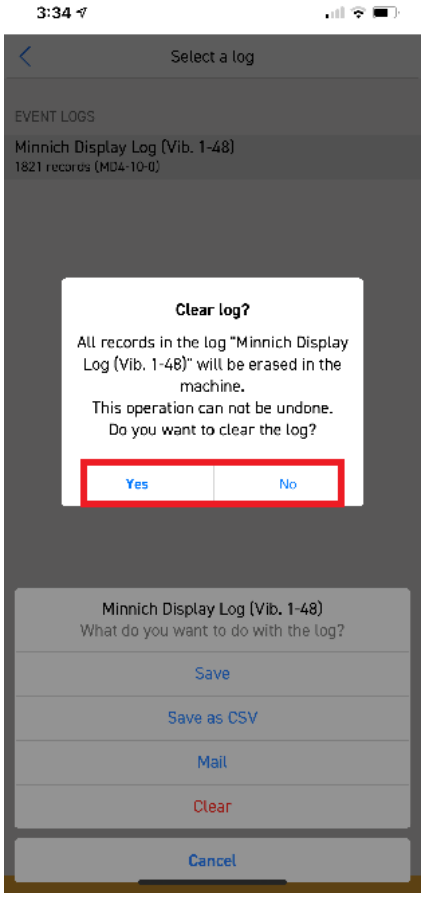
5.0 Click on the log file from the listing

6.0 Click on the option on what you want to do with this log file and wait for the file to download. Should get successful download message, click OK.



7.0 Once file is saved to phone, you can still choose to email it.
8.0 If the option of email is initially chosen, the App will automatically bring up the email screen with the attachment. Standard email procedure from this point.
9.0 The final option in red is to CLEAR the logs, you will get a warning confirming.

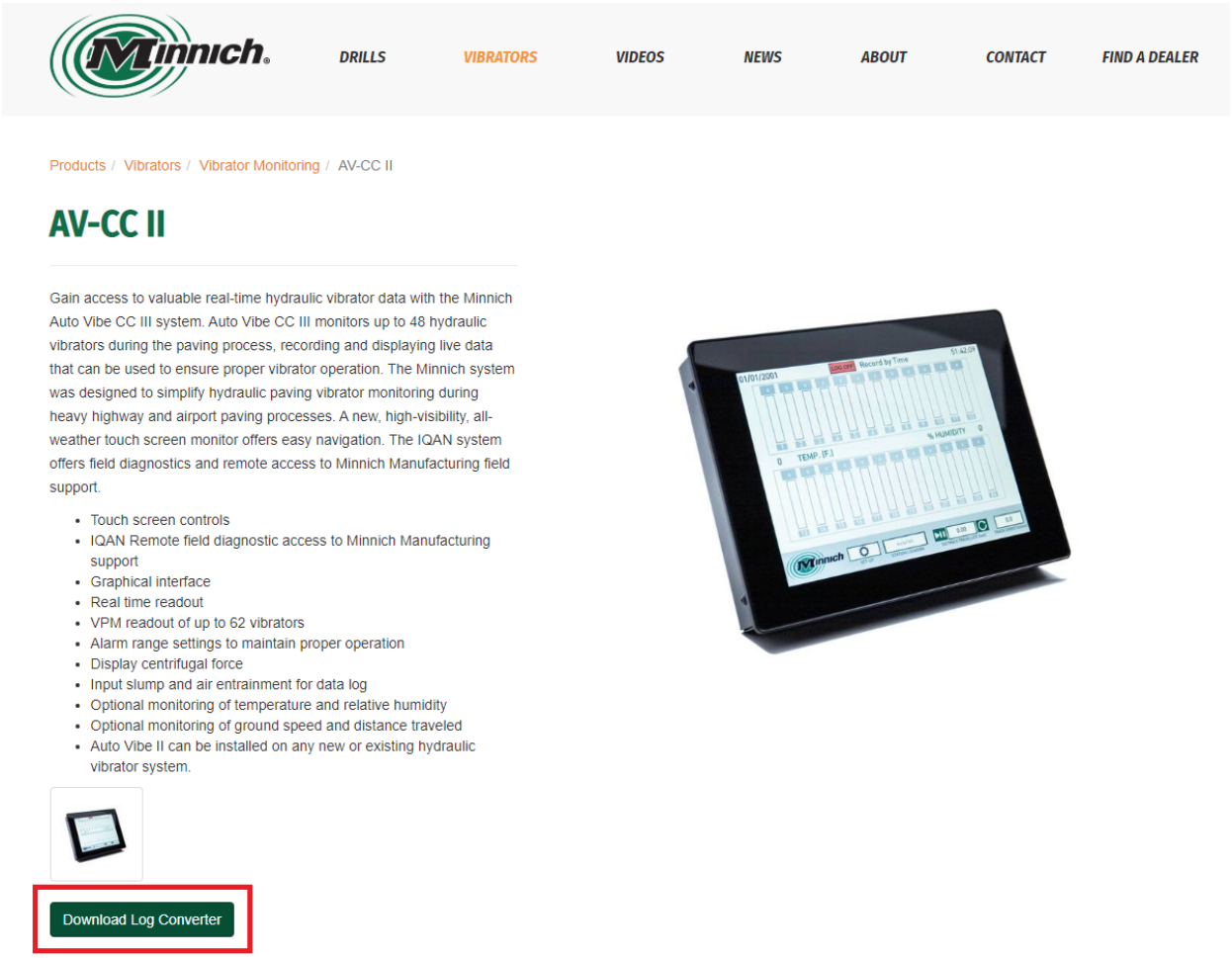




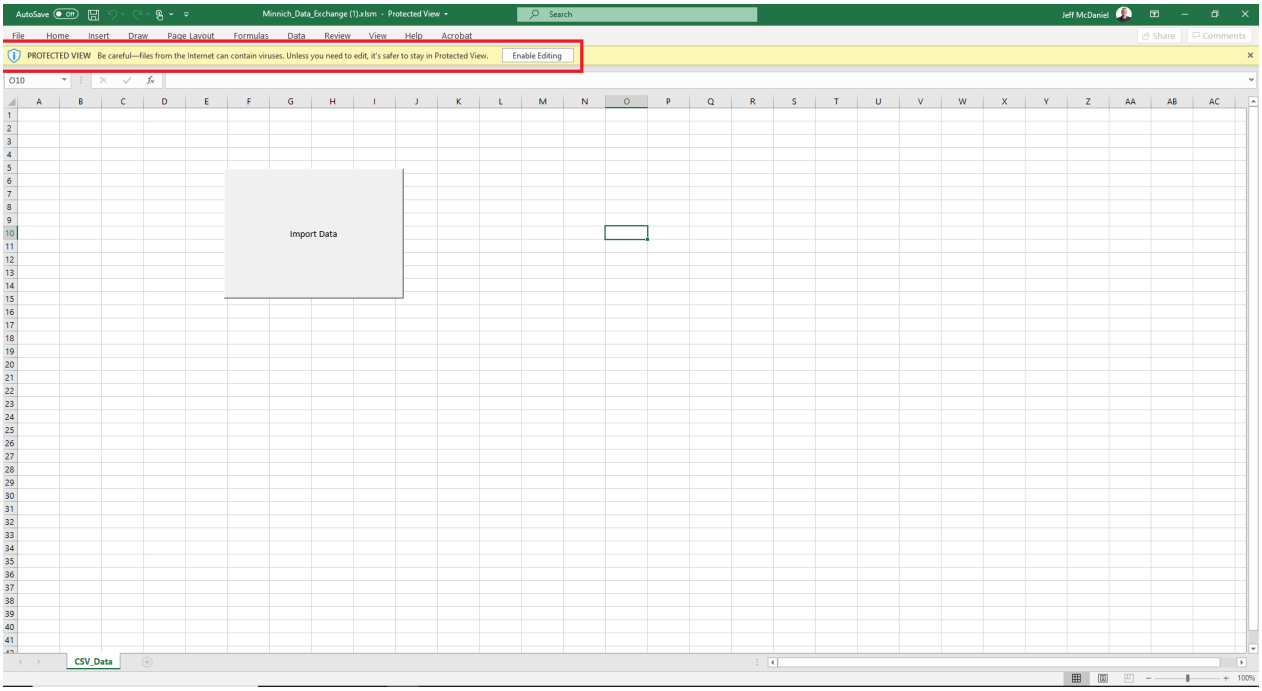
⚠ WARNING : Clicking YES will permanently delete the logs from the system entirely.

10.0 To view the document that is now pulled from the machine. Email it to a laptop or a PC/Desktop. Save the file to a “AV-CC Log” location.
11.0 Go to www.minnich-mfg.com

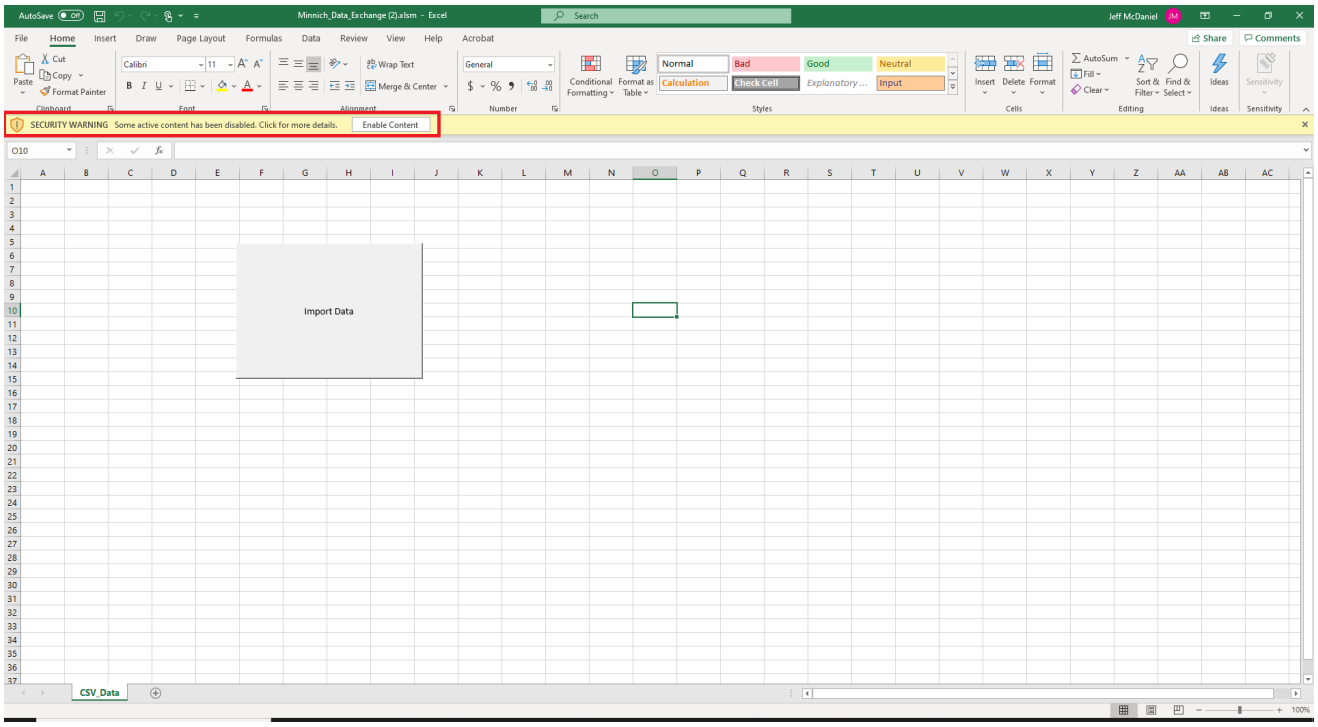
12.0 Under VIBRATION > AV-CCII or AV-CCIII, you will see DOWNLOAD LOG CONVERTER



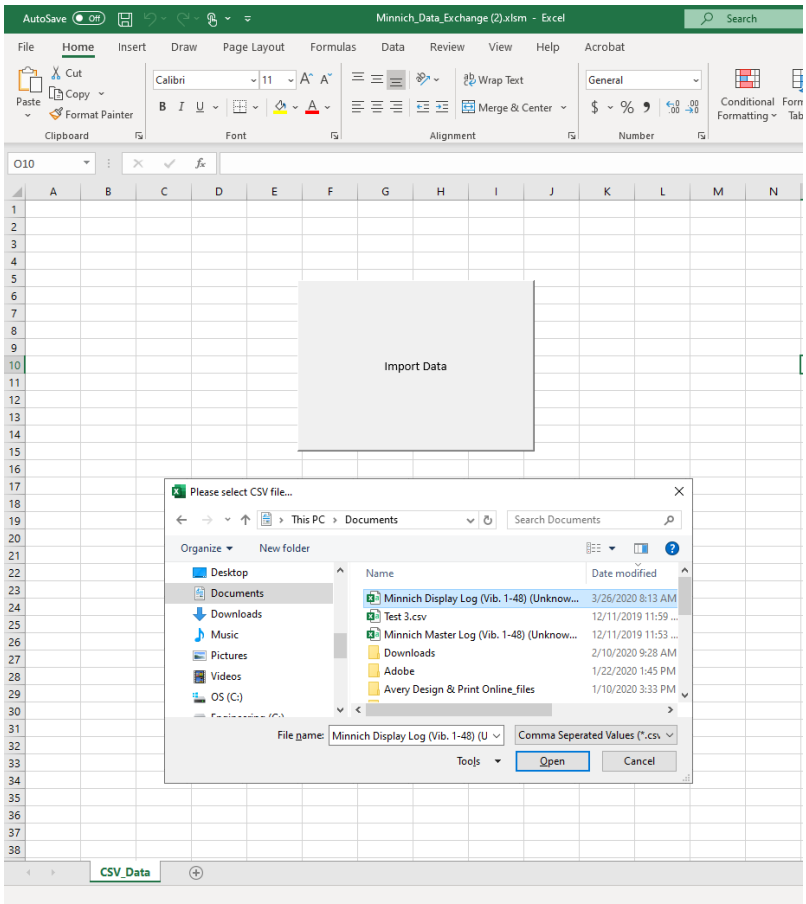
13.0 Open the downloaded Log Converter (PC ONLY)
14.0 Click Enable Editing



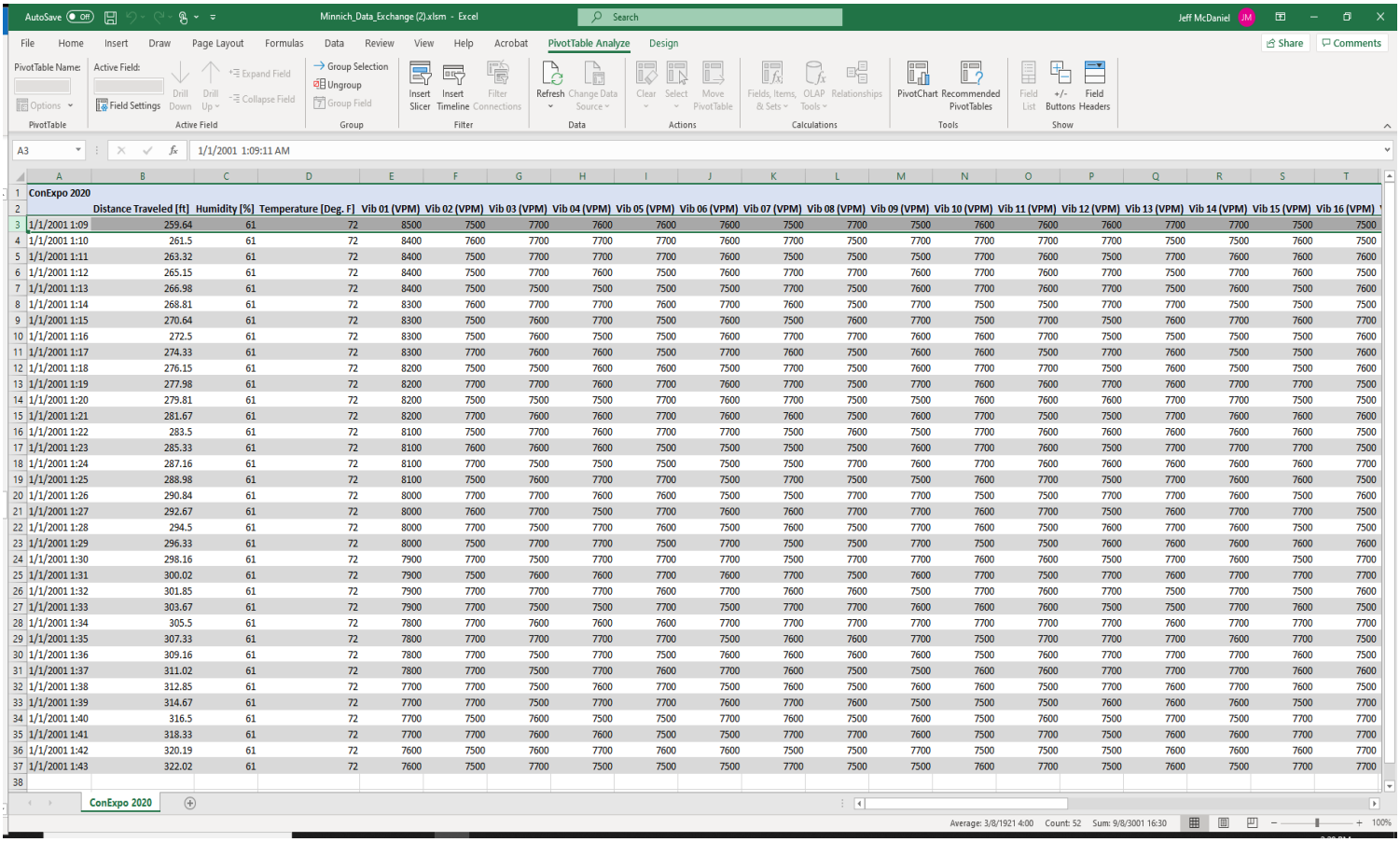
15.0 Click Enable Content



16.0 Click Import Data and choose the file location



17.0 Highlight the file and click OPEN

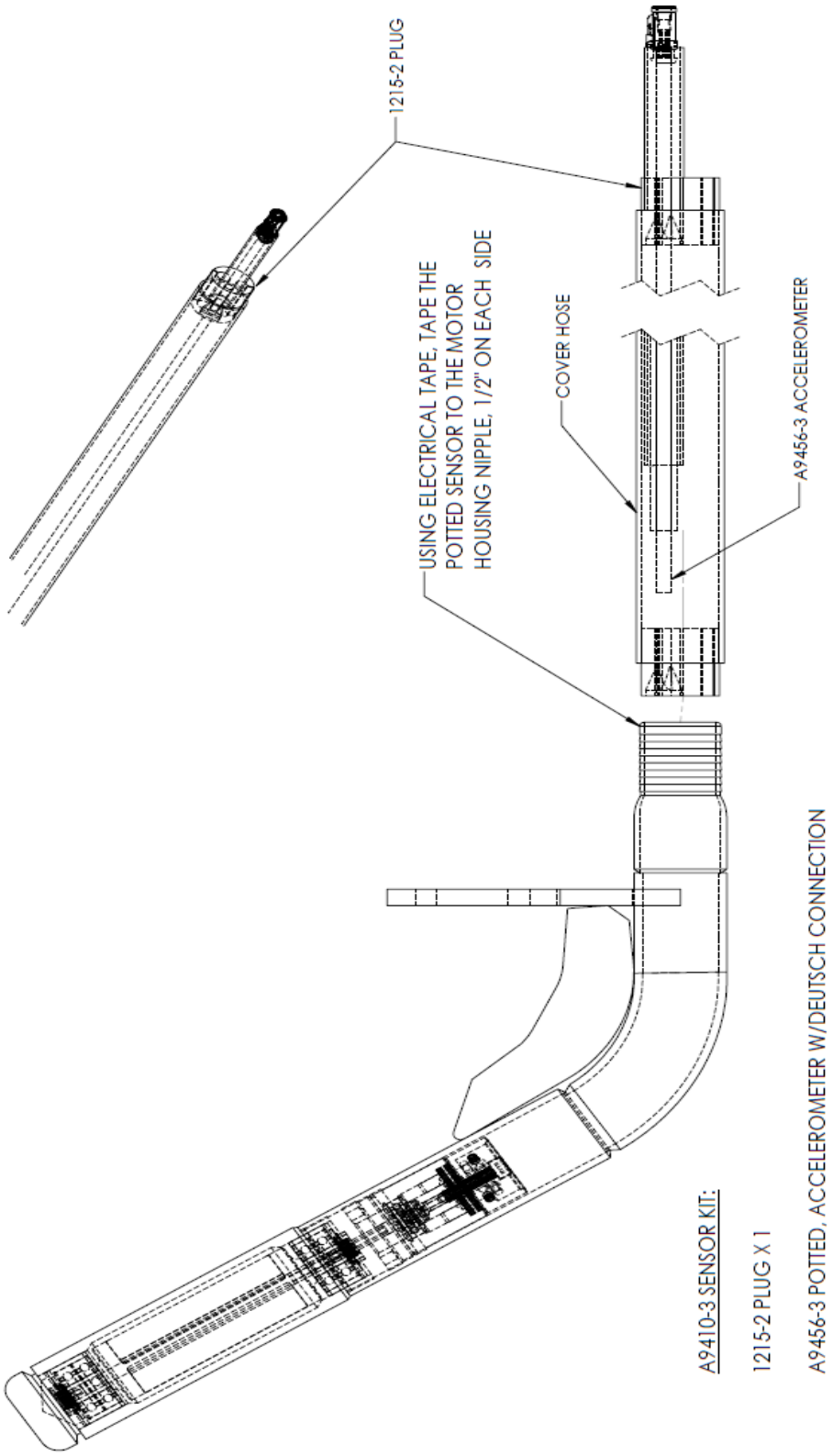


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	ConExpo 2020																			
2		Distance Traveled [ft]	Humidity [%]	Temperature [Deg. F]	Vib 01 (VPM)	Vib 02 (VPM)	Vib 03 (VPM)	Vib 04 (VPM)	Vib 05 (VPM)	Vib 06 (VPM)	Vib 07 (VPM)	Vib 08 (VPM)	Vib 09 (VPM)	Vib 10 (VPM)	Vib 11 (VPM)	Vib 12 (VPM)	Vib 13 (VPM)	Vib 14 (VPM)	Vib 15 (VPM)	Vib 16 (VPM)
3	1/1/2001 1:09	259.64	61	72	8500	7500	7700	7600	7600	7600	7500	7700	7500	7600	7600	7600	7700	7700	7500	7500
4	1/1/2001 1:10	261.5	61	72	8400	7600	7700	7700	7700	7600	7700	7500	7700	7700	7700	7700	7500	7500	7600	7500
5	1/1/2001 1:11	263.32	61	72	8400	7500	7700	7700	7700	7600	7500	7500	7500	7700	7600	7500	7700	7600	7600	7600
6	1/1/2001 1:12	265.15	61	72	8400	7500	7700	7600	7500	7600	7700	7700	7600	7700	7600	7700	7500	7700	7600	7500
7	1/1/2001 1:13	266.98	61	72	8400	7500	7500	7500	7500	7500	7700	7500	7600	7700	7600	7700	7500	7600	7500	7600
8	1/1/2001 1:14	268.81	61	72	8300	7600	7700	7700	7600	7700	7600	7500	7700	7500	7500	7700	7700	7500	7500	7500
9	1/1/2001 1:15	270.64	61	72	8300	7500	7600	7700	7500	7600	7500	7600	7700	7500	7700	7500	7600	7700	7600	7700
10	1/1/2001 1:16	272.5	61	72	8300	7500	7600	7500	7500	7600	7700	7700	7600	7600	7700	7500	7500	7500	7500	7600
11	1/1/2001 1:17	274.33	61	72	8300	7700	7600	7600	7500	7700	7600	7500	7600	7600	7500	7700	7600	7500	7500	7600
12	1/1/2001 1:18	276.15	61	72	8200	7500	7500	7600	7600	7500	7700	7500	7600	7700	7700	7500	7600	7500	7500	7600
13	1/1/2001 1:19	277.98	61	72	8200	7700	7700	7600	7700	7600	7700	7500	7700	7600	7600	7700	7600	7700	7700	7500
14	1/1/2001 1:20	279.81	61	72	8200	7500	7500	7500	7700	7600	7700	7500	7500	7600	7600	7600	7700	7700	7500	7500
15	1/1/2001 1:21	281.67	61	72	8200	7700	7600	7600	7700	7600	7600	7500	7600	7700	7500	7500	7700	7600	7600	7600
16	1/1/2001 1:22	283.5	61	72	8100	7500	7700	7600	7700	7700	7500	7600	7500	7700	7600	7600	7600	7600	7600	7500
17	1/1/2001 1:23	285.33	61	72	8100	7600	7600	7600	7500	7500	7500	7500	7600	7700	7600	7500	7700	7700	7700	7500
18	1/1/2001 1:24	287.16	61	72	8100	7700	7500	7500	7500	7500	7500	7700	7600	7700	7600	7600	7600	7600	7600	7700
19	1/1/2001 1:25	288.98	61	72	8100	7500	7600	7700	7700	7500	7700	7500	7500	7600	7700	7500	7700	7600	7600	7500
20	1/1/2001 1:26	290.84	61	72	8000	7700	7700	7600	7600	7500	7500	7700	7700	7500	7500	7700	7700	7600	7500	7600
21	1/1/2001 1:27	292.67	61	72	8000	7600	7700	7500	7700	7600	7600	7700	7700	7600	7700	7500	7600	7700	7700	7500
22	1/1/2001 1:28	294.5	61	72	8000	7700	7500	7700	7600	7500	7600	7500	7700	7600	7500	7600	7700	7600	7500	7500
23	1/1/2001 1:29	296.33	61	72	8000	7500	7700	7700	7500	7700	7500	7500	7700	7500	7500	7600	7600	7600	7600	7600
24	1/1/2001 1:30	298.16	61	72	7900	7700	7500	7700	7700	7700	7500	7700	7700	7600	7600	7500	7700	7600	7500	7700
25	1/1/2001 1:31	300.02	61	72	7900	7500	7600	7600	7700	7600	7700	7500	7600	7700	7500	7700	7600	7700	7700	7700
26	1/1/2001 1:32	301.85	61	72	7900	7700	7700	7700	7600	7700	7600	7600	7500	7700	7600	7700	7500	7700	7500	7600
27	1/1/2001 1:33	303.67	61	72	7900	7700	7500	7500	7700	7500	7700	7700	7600	7600	7600	7500	7500	7700	7600	7500
28	1/1/2001 1:34	305.5	61	72	7800	7700	7600	7600	7600	7700	7700	7700	7700	7700	7700	7600	7700	7700	7700	7700
29	1/1/2001 1:35	307.33	61	72	7800	7700	7700	7700	7700	7500	7600	7600	7700	7500	7700	7700	7700	7600	7700	7500
30	1/1/2001 1:36	309.16	61	72	7800	7700	7500	7700	7500	7600	7600	7600	7600	7500	7600	7700	7700	7700	7600	7500
31	1/1/2001 1:37	311.02	61	72	7800	7700	7500	7700	7600	7700	7600	7500	7500	7600	7600	7700	7700	7700	7600	7600
32	1/1/2001 1:38	312.85	61	72	7700	7700	7500	7600	7700	7500	7600	7500	7600	7600	7500	7700	7600	7700	7600	7500
33	1/1/2001 1:39	314.67	61	72	7700	7700	7500	7700	7700	7600	7700	7600	7500	7500	7500	7600	7600	7600	7500	7700
34	1/1/2001 1:40	316.5	61	72	7700	7500	7600	7500	7500	7700	7600	7500	7600	7500	7600	7500	7700	7500	7700	7700
35	1/1/2001 1:41	318.33	61	72	7700	7700	7600	7600	7500	7500	7700	7700	7600	7500	7700	7500	7600	7600	7700	7700
36	1/1/2001 1:42	320.19	61	72	7600	7500	7600	7700	7600	7600	7500	7500	7700	7500	7500	7500	7600	7600	7600	7700
37	1/1/2001 1:43	322.02	61	72	7600	7500	7700	7500	7500	7500	7700	7500	7500	7600	7700	7500	7600	7500	7700	7700
38																				

18.0 Here is an example of the log file.

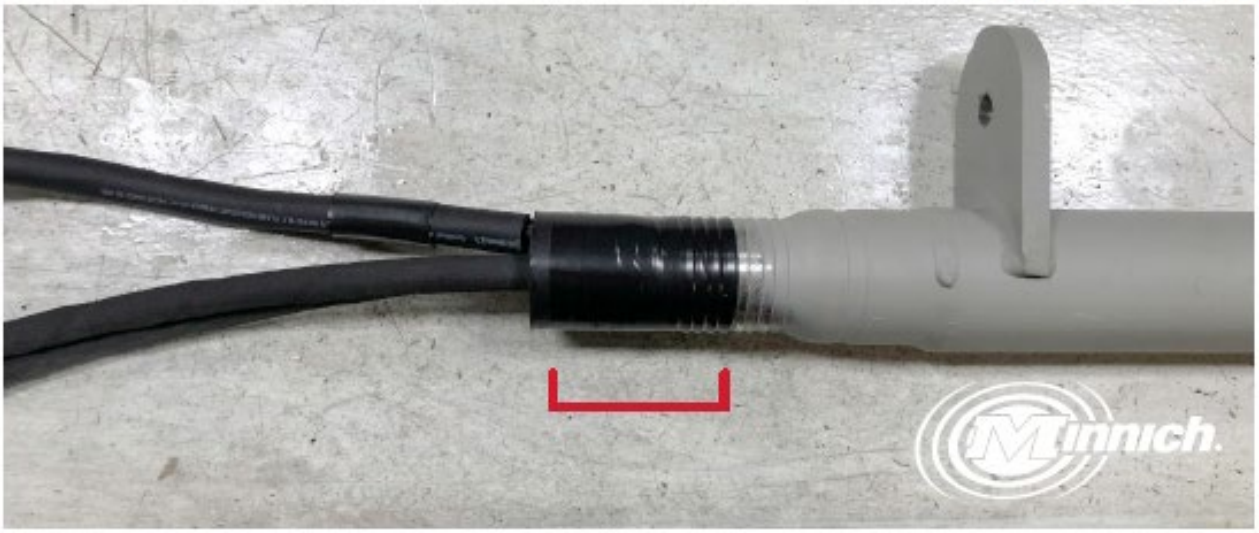
NOTICE : Please visit WWW.MINNICH-MFG.COM for instructional videos on the new AV-CC system, including videos on installation, monitor settings, and IQANsync log downloads.

15.0 Hydraulic Vibe Sensor Placement



POTTED SENSOR KIT INSTALLATION

0A9410-00003



STEP ONE

Remove cover, protector hose, clamps, and stopper from vibrator. It should look like picture above when finished.

STEP TWO

Place 0A9456-00001 potted accelerometer assembly on the hydraulic hoses, pushing it firmly up to the base of the barbed nipple of the vibrator motor housing.

STEP THREE

To secure potted sensor, tape the potted sensor (0A9456-00001) to the motor housing nipple. Approximately 1½" on each side.

STEP FOUR

Replace cover hose, protector hose, clamps, and stopper.

Note: Before replacing stopper, loop 8" of sensor cord into the cover hose. This will allow for some forgiveness.

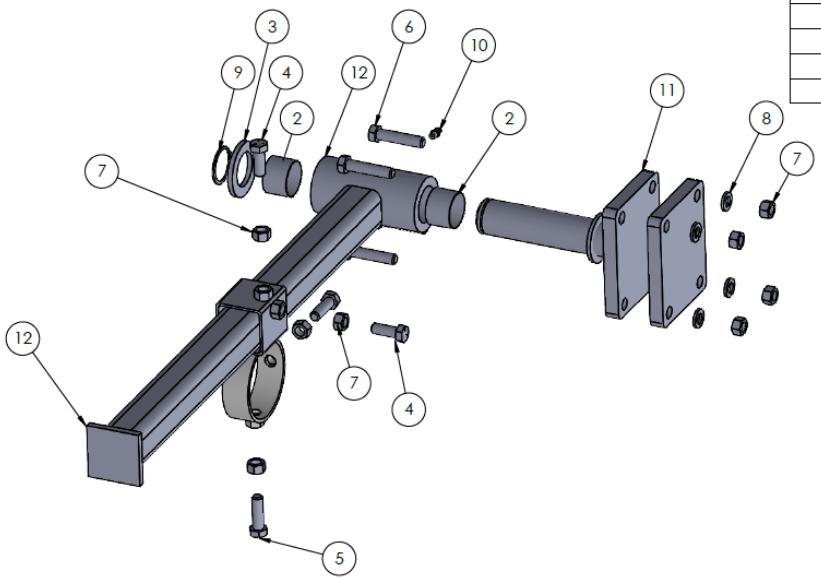
Note: Be sure to use the proper sealant on all stoppers and motor housings.

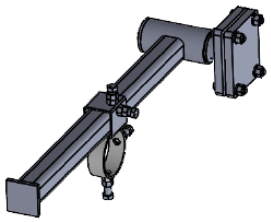
Note: Use 3M Super 88 1½" electrical tape to attach the potted sensor to the motor housing nipple. (See Photo)

17.0 SPEED WHEEL MOUNTING ASSEMBLY (STANDARD)

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	4463	PLATE, MOUNTING	1
2	4650-1	BEARING	2
3	4675	AXLE WASHER	1
4	6038-1.00	HHCS, 3/8"-16 X 1.00 GR.5	2
5	6038-1.25	HHCS 3/8" X 1.25" G5	2
6	6038-1.75	H.H.C.S. 3/8"-16 X 1.75	4
7	6072	HEX NUT 3/8-16 GR 5	8
8	6149	LOCK WASHER 3/8"	4
9	6377-5	RETAINING RING	1
10	6483-8	FITTING, LUB 1/4-28 TAPER STRAIGHT	1
11	A10095	ROTATION ARM WELDMENT	1
12	A11604	ARM WELDMENT	1





Drilled Hole Size	Tolerance
.0135 THRU .125	+.004/-.001
.1360 THRU .250	+.005/-.001
.2510 THRU .500	+.006/-.001
.5010 THRU .750	+.008/-.001
.7510 THRU 1.00	+.010/-.001
1.001 THRU 2.00	+.012/-.001

TOLERANCES (EXCEPT AS NOTED) X ± .060, .XX ± .030, .XXX ± .005, X/X ± 1/16°, < ± 1°

Dimension in accordance with ANSI Y14

RAW MATERIAL | STOCKSIZE

MINNICH MFG. CO., INC.

THIS INFORMATION SHOWN ON THIS DRAWING IS CONFIDENTIAL TO MINNICH MFG. & OUR CUSTOMERS & SHALL NOT BE DISTRIBUTED TO THIRD PARTIES WITHOUT WRITTEN PERMISSION OF MINNICH MFG.

DRAWN BY: AEB

DO NOT SCALE DRAWING

CHECKED BY:

APPROVED BY:

TITLE: ASSY, WHEEL MOUNTING ARM

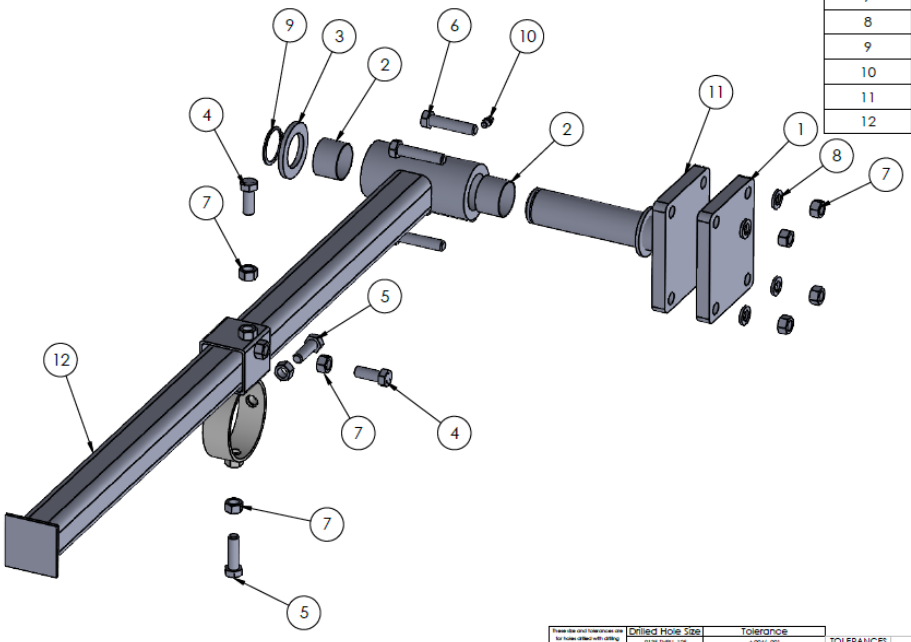
DRG DATE: 4/15/20

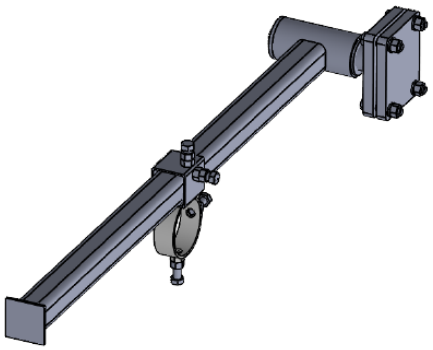
FIXTURE NO. | LOCATION | ROUTING NO | DRAWING NUMBER: A9448 | REV. LEVEL -

SPEED WHEEL MOUNTING ASSEMBLY (LONG ARM)

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	4463	PLATE, MOUNTING	1
2	4650-1	BEARING	2
3	4675	AXLE WASHER	1
4	6038-1.00	HHCS, 3/8"-16 X 1.00 GR.5	2
5	6038-1.25	HHCS 3/8" X 1.25" G5	2
6	6038-1.75	H.H.C.S. 3/8"-16 X 1.75	4
7	6072	HEX NUT 3/8-16 GR 5	8
8	6149	LOCK WASHER 3/8"	4
9	6377-5	RETAINING RING	1
10	6483-8	FITTING, LUB 1/4-28 TAPER STRAIGHT	1
11	A10095	ROTATION ARM WELDMENT	1
12	A11604-1	ARM WELDMENT	1





Drilled Hole Size	Tolerance
.0135 THRU .125	+.004/-.001
.1360 THRU .250	+.005/-.001
.2510 THRU .500	+.006/-.001
.5010 THRU .750	+.008/-.001
.7510 THRU 1.00	+.010/-.001
1.001 THRU 2.00	+.012/-.001

TOLERANCES (EXCEPT AS NOTED) X ± .060, .XX ± .030, .XXX ± .005, X/X ± 1/16°, < ± 1°

Dimension in accordance with ANSI Y14

RAW MATERIAL | STOCKSIZE

MINNICH MFG. CO., INC.

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DRAWN BY: AEB

DO NOT SCALE DRAWING

CHECKED BY:

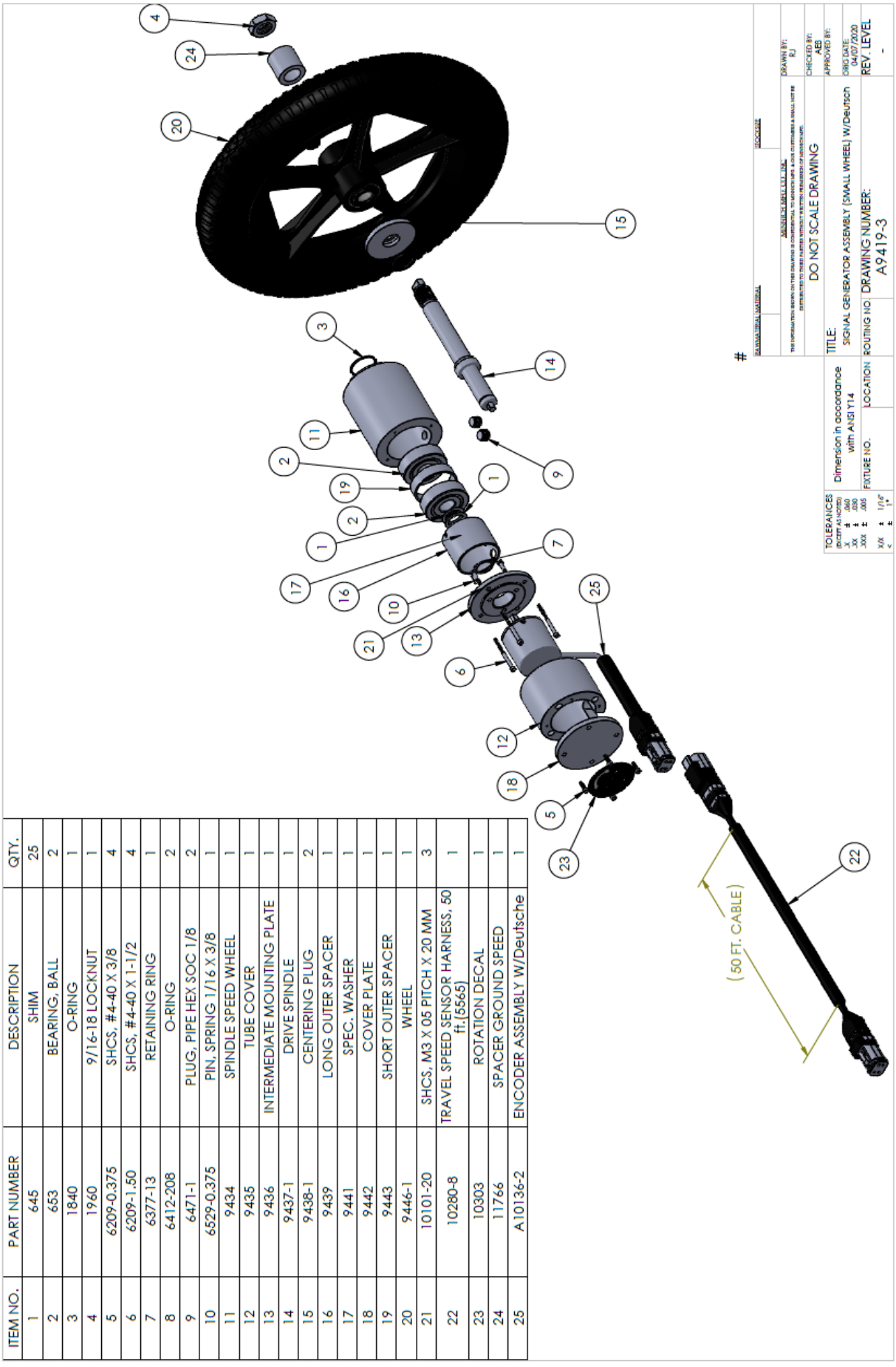
APPROVED BY:

TITLE: ASSY, WHEEL MOUNTING ARM

DRG DATE: 4/15/20

FIXTURE NO. | LOCATION | ROUTING NO | DRAWING NUMBER: A9448-1 | REV. LEVEL -

SPEED WHEEL ASSEMBLY

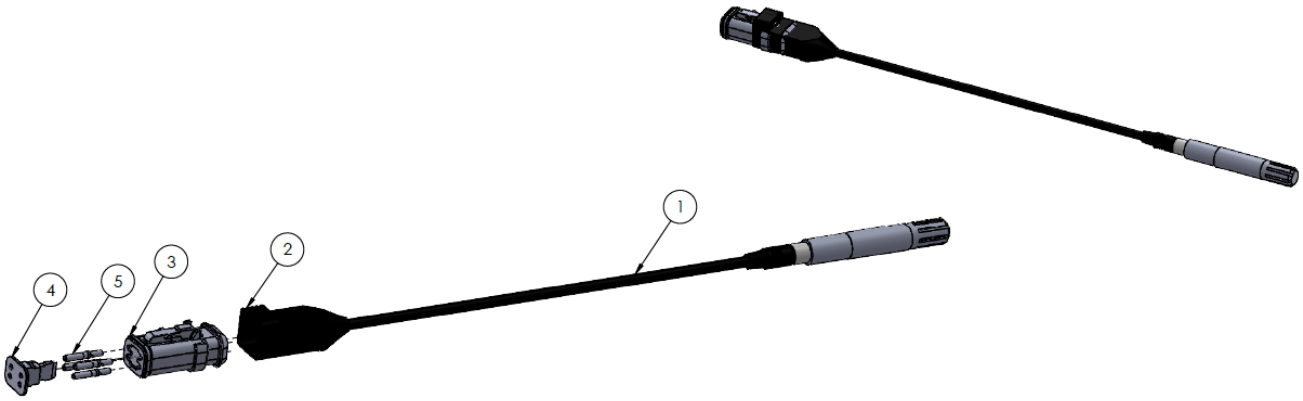


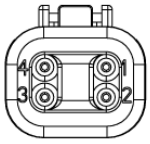
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	645	SHIM	25
2	653	BEARING, BALL	2
3	1840	O-RING	1
4	1960	9/16-18 LOCKNUT	1
5	6209-0.375	SHCS, #4-40 X 3/8	4
6	6209-1.50	SHCS, #4-40 X 1-1/2	4
7	6377-13	RETAINING RING	1
8	6412-208	O-RING	2
9	6471-1	PLUG, PIPE HEX SOC 1/8	2
10	6529-0.375	PIN, SPRING 1/16 X 3/8	1
11	9434	SPINDLE SPEED WHEEL	1
12	9435	TUBE COVER	1
13	9436	INTERMEDIATE MOUNTING PLATE	1
14	9437-1	DRIVE SPINDLE	1
15	9438-1	CENTERING PLUG	2
16	9439	LONG OUTER SPACER	1
17	9441	SPEC. WASHER	1
18	9442	COVER PLATE	1
19	9443	SHORT OUTER SPACER	1
20	9446-1	WHEEL	1
21	10101-20	SHCS, M3 X 05 PITCH X 20 MM	3
22	10280-8	TRAVEL SPEED SENSOR HARNESS, 50 ft.(5565)	1
23	10303	ROTATION DECAL	1
24	11766	SPACER GROUND SPEED	1
25	A10136-2	ENCODER ASSEMBLY W/Deutsche	1

18.0 Temperature/Relative Humidity Assembly (Standard w/ System) – IP65 Rated

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	9427-2	R-H TEMPERATURE SENSOR	1
2	10974-8	HEAT SHRINK	1
3	12454-1	4 WAY PLUG	1
4	12455-1	4 PIN WEDGE	1
5	12457-1	FEMALE CONTACT	4





1. WHITE
2. BLACK
3. BLUE
4. BROWN

Drilled Hole Size	Tolerance
.0135 THRU .125	+.004/-.001
.1360 THRU .250	+.005/-.001
.2810 THRU .500	+.006/-.001
.5010 THRU .750	+.006/-.001
.7510 THRU 1.00	+.0101/-.001
1.001 THRU 2.00	+.0121/-.001

TOLERANCES (EXCEPT AS NOTED): .X ± .060; .XX ± .030; .XXX ± .005; X/X ± 1/16°; < ± 1°

Dimension in accordance with ANSI Y14

#

RAW MATERIAL: STOCKSIZE:

MENNEKES MFG. CO., INC.

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DO NOT SCALE DRAWING

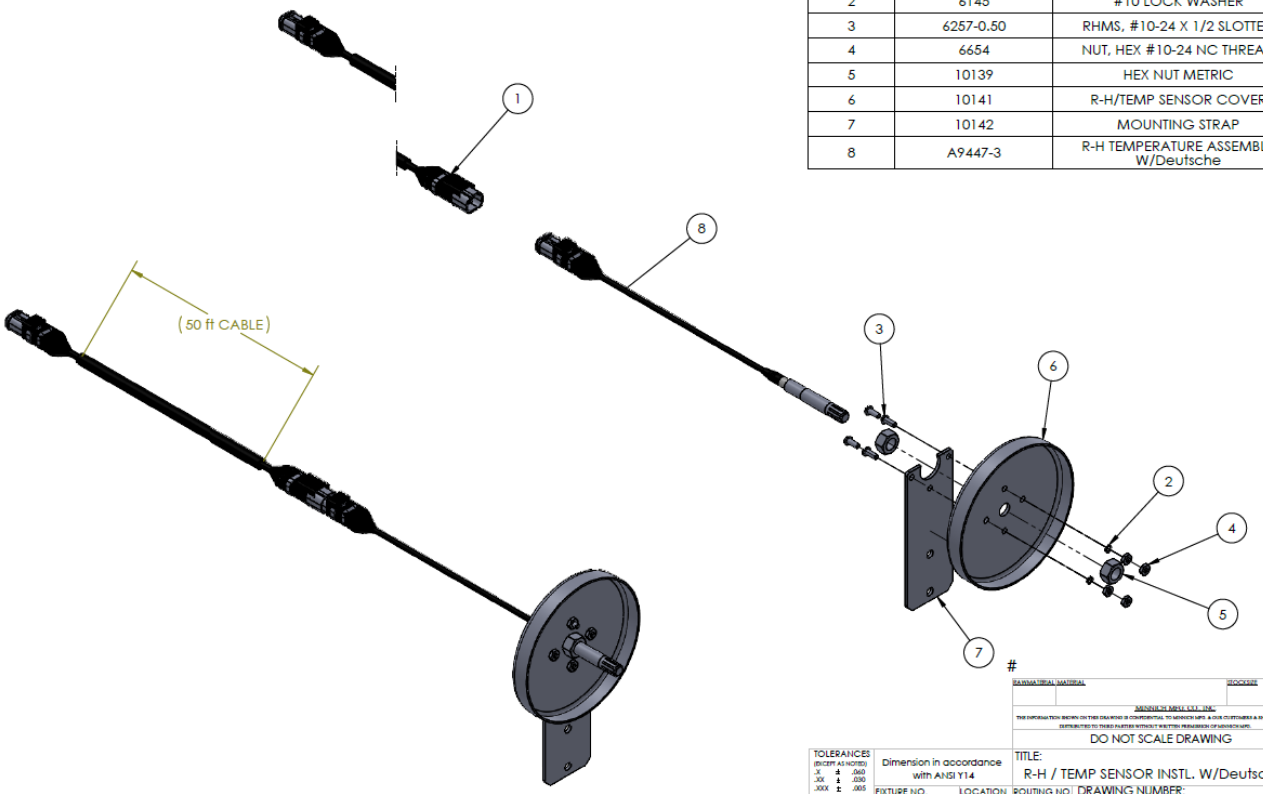
DRAWN BY: RJ
CHECKED BY: AEB
APPROVED BY:
ORIG DATE: 04/07/2020
REV. LEVEL: -

TITLE: R-H TEMPERATURE ASSEMBLY W/Deutsche

FIXTURE NO. | LOCATION | ROUTING NO. | DRAWING NUMBER: A9447-3

(OPTIONAL) Temperature/Relative Humidity Mounting Bracket w/ Extension

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	5564	TEMP/HUMIDITY SENSOR HARNESS, 50 ft.	1
2	6145	#10 LOCK WASHER	4
3	6257-0.50	RHMS, #10-24 X 1/2 SLOTTED	4
4	6654	NUT, HEX #10-24 NC THREAD	4
5	10139	HEX NUT METRIC	2
6	10141	R-H/TEMP SENSOR COVER	1
7	10142	MOUNTING STRAP	1
8	A9447-3	R-H TEMPERATURE ASSEMBLY W/Deutsche	1



TOLERANCES (EXCEPT AS NOTED): .X ± .060; .XX ± .030; .XXX ± .005; X/X ± 1/16°; < ± 1°

Dimension in accordance with ANSI Y14

#

RAW MATERIAL: STOCKSIZE:

MENNEKES MFG. CO., INC.

THE INFORMATION SHOWN ON THIS DRAWING IS CONFIDENTIAL TO MENNEKES MFG. & OUR CUSTOMERS & SHALL NOT BE DISTRIBUTED TO THIRD PARTIES WITHOUT WRITTEN PERMISSION OF MENNEKES MFG.

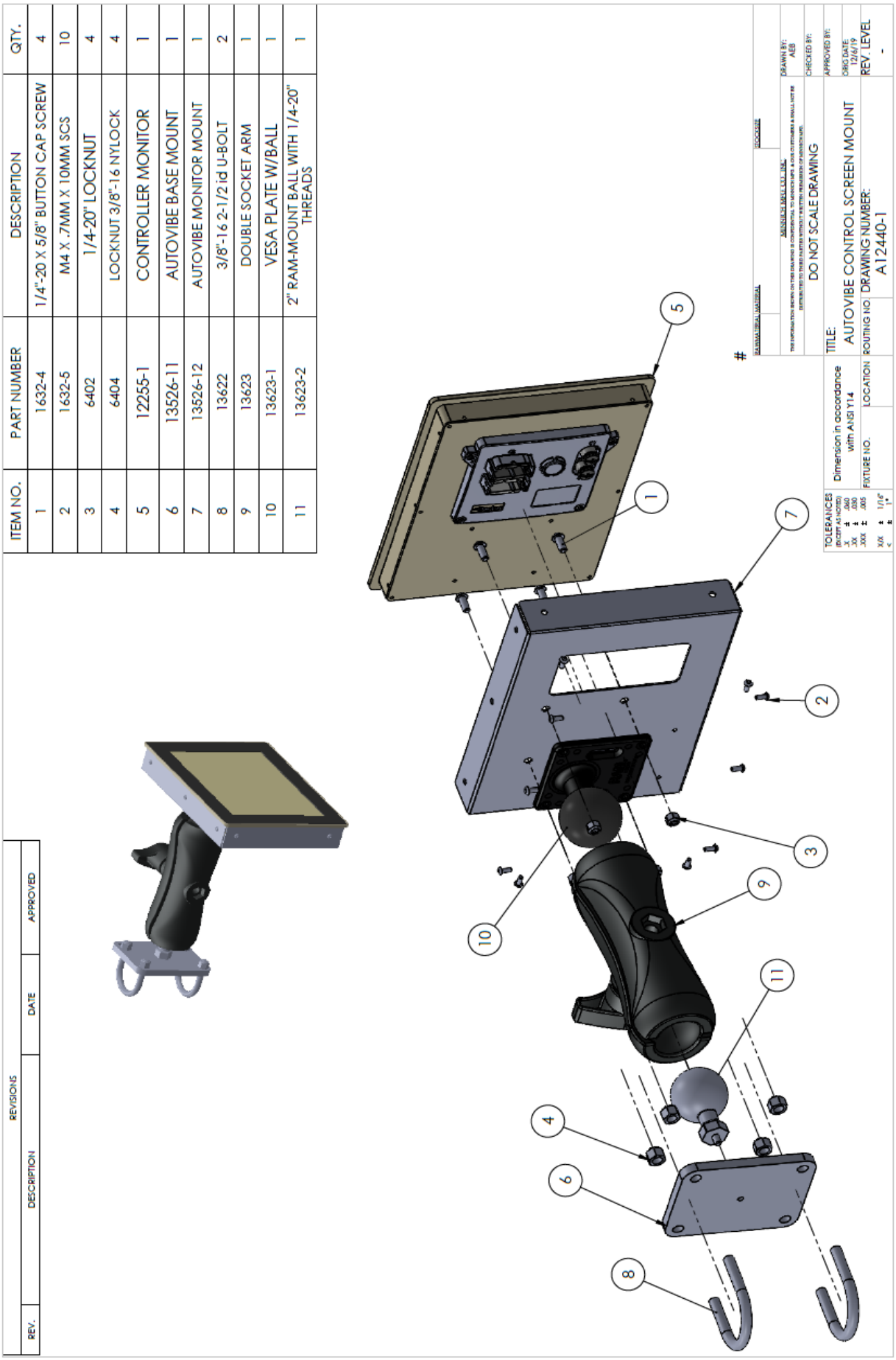
DO NOT SCALE DRAWING

DRAWN BY: RJ
CHECKED BY: AEB
APPROVED BY:
ORIG DATE: 04/02/2020
REV. LEVEL: -

TITLE: R-H / TEMP SENSOR INSTL. W/Deutsche

FIXTURE NO. | LOCATION | ROUTING NO. | DRAWING NUMBER: A10140-3

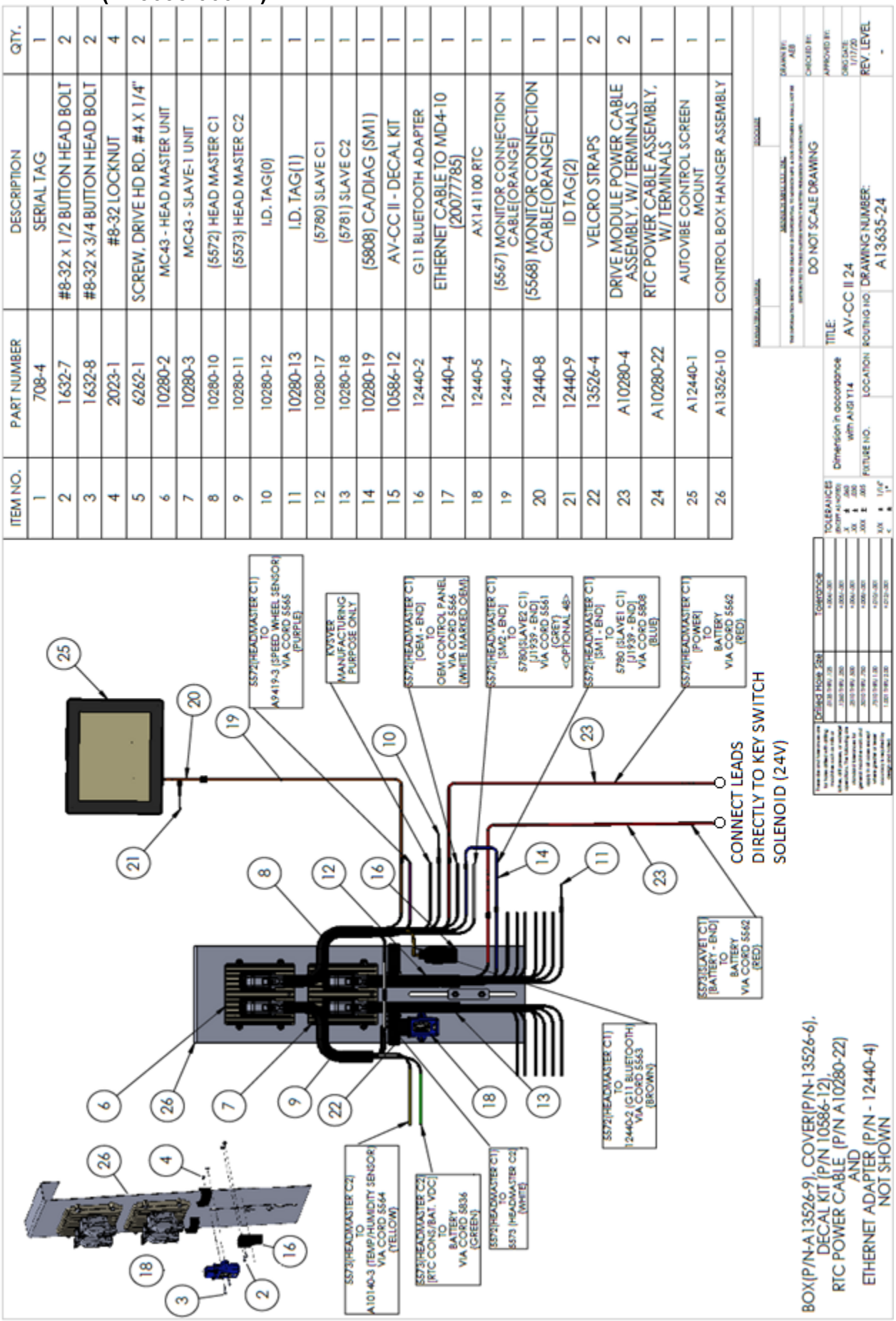
19.0 MONITOR ENCLOSURE



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1632-4	1/4"-20 X 5/8" BUTTON CAP SCREW	4
2	1632-5	M4 X .7MM X 10MM SCS	10
3	6402	1/4-20" LOCKNUT	4
4	6404	LOCKNUT 3/8"-16 NYLOCK	4
5	12255-1	CONTROLLER MONITOR	1
6	13526-11	AUTOVIBE BASE MOUNT	1
7	13526-12	AUTOVIBE MONITOR MOUNT	1
8	13622	3/8"-16 2-1/2 id U-BOLT	2
9	13623	DOUBLE SOCKET ARM	1
10	13623-1	VESA PLATE W/BALL	1
11	13623-2	2" RAM-MOUNT BALL WITH 1/4-20" THREADS	1

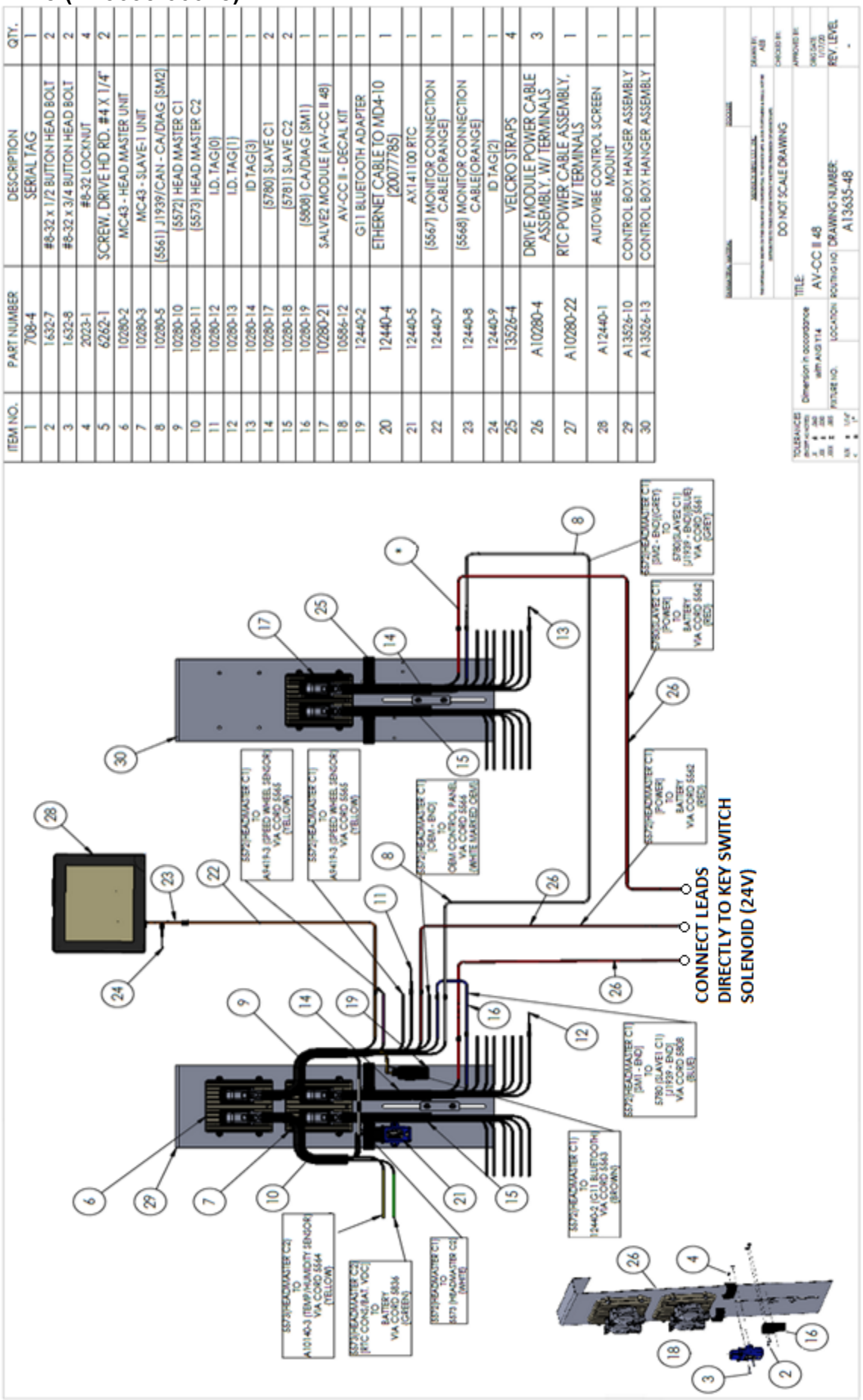
20.0 AV-CCII24 (A13635-00024)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	708-4	SERIAL TAG	1
2	1632-7	#8-32 x 1/2 BUTTON HEAD BOLT	2
3	1632-8	#8-32 x 3/4 BUTTON HEAD BOLT	2
4	2023-1	#8-32 LOCKNUT	4
5	6262-1	SCREW, DRIVE HD RD, #4 X 1/4"	2
6	10280-2	MC43 - HEAD MASTER UNIT	1
7	10280-3	MC43 - SLAVE-1 UNIT	1
8	10280-10	(5572) HEAD MASTER C1	1
9	10280-11	(5573) HEAD MASTER C2	1
10	10280-12	I.D. TAG(0)	1
11	10280-13	I.D. TAG(1)	1
12	10280-17	(5780) SLAVE C1	1
13	10280-18	(5781) SLAVE C2	1
14	10280-19	(5808) CA/DIAG (SM1)	1
15	10586-12	AV-CC II - DECAL KIT	1
16	12440-2	G11 BLUETOOTH ADAPTER	1
17	12440-4	ETHERNET CABLE TO MD4-10 (20077785)	1
18	12440-5	AX141100 RTC	1
19	12440-7	(5567) MONITOR CONNECTION CABLE(ORANGE)	1
20	12440-8	(5568) MONITOR CONNECTION CABLE(ORANGE)	1
21	12440-9	ID TAG(2)	1
22	13526-4	VELCRO STRAPS	2
23	A10280-4	DRIVE MODULE POWER CABLE ASSEMBLY, W/ TERMINALS	2
24	A10280-22	RTC POWER CABLE ASSEMBLY, W/ TERMINALS	1
25	A12440-1	AUTOVIBE CONTROL SCREEN MOUNT	1
26	A13526-10	CONTROL BOX HANGER ASSEMBLY	1



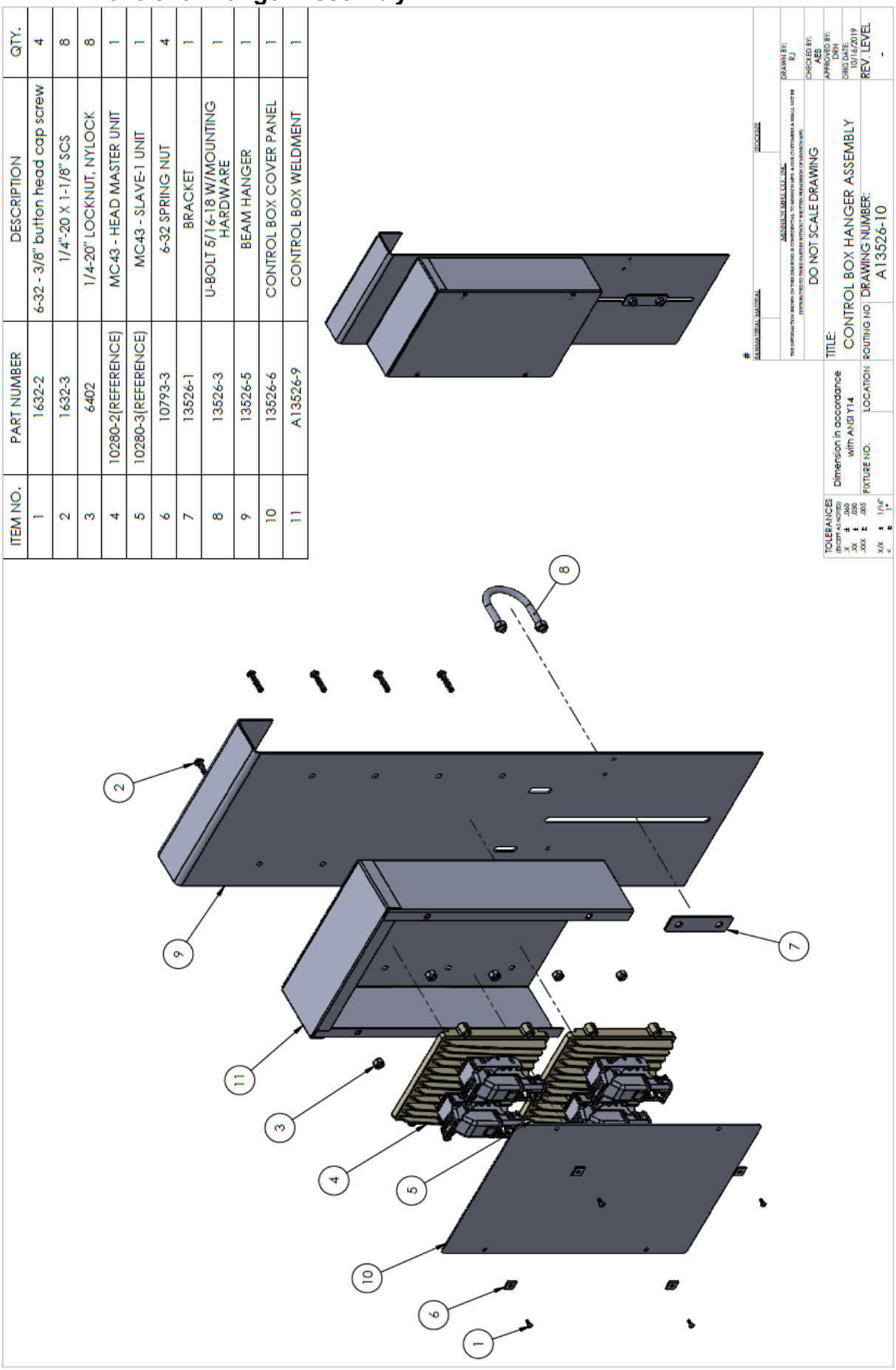
21.0 AV-CCII48 (A13635-00048)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	708-4	SERIAL TAG	1
2	1632-7	#8-32 x 1/2 BUTTON HEAD BOLT	2
3	1632-8	#8-32 x 3/4 BUTTON HEAD BOLT	2
4	2023-1	#8-32 LOCKNUT	4
5	6262-1	SCREW, DRIVE HD RD, #4 X 1/4"	2
6	10280-2	MC43 - HEAD MASTER UNIT	1
7	10280-3	MC43 - SLAVE-1 UNIT	1
8	10280-5	(5561) J1939/CAN - CA/DIAG (SM2)	1
9	10280-10	(5572) HEAD MASTER C1	1
10	10280-11	(5573) HEAD MASTER C2	1
11	10280-12	I.D. TAG(0)	1
12	10280-13	I.D. TAG(1)	1
13	10280-14	ID TAG(3)	1
14	10280-17	(5780) SLAVE C1	2
15	10280-18	(5781) SLAVE C2	2
16	10280-19	(5808) CA/DIAG (SM1)	1
17	10280-21	SALVE2 MODULE (AV-CC II 48)	1
18	10586-12	AV-CC II - DECAL KIT	1
19	12440-2	G11 BLUETOOTH ADAPTER	1
20	12440-4	ETHERNET CABLE TO MD4-10 (20077785)	1
21	12440-5	AX141100 RTC	1
22	12440-7	(5567) MONITOR CONNECTION CABLE(ORANGE)	1
23	12440-8	(5568) MONITOR CONNECTION CABLE(ORANGE)	1
24	12440-9	ID TAG(2)	1
25	13526-4	VELCRO STRAPS	4
26	A10280-4	DRIVE MODULE POWER CABLE ASSEMBLY, W/ TERMINALS	3
27	A10280-22	RTC POWER CABLE ASSEMBLY, W/ TERMINALS	1
28	A12440-1	AUTOVIBE CONTROL SCREEN MOUNT	1
29	A13526-10	CONTROL BOX HANGER ASSEMBLY	1
30	A13526-13	CONTROL BOX HANGER ASSEMBLY	1



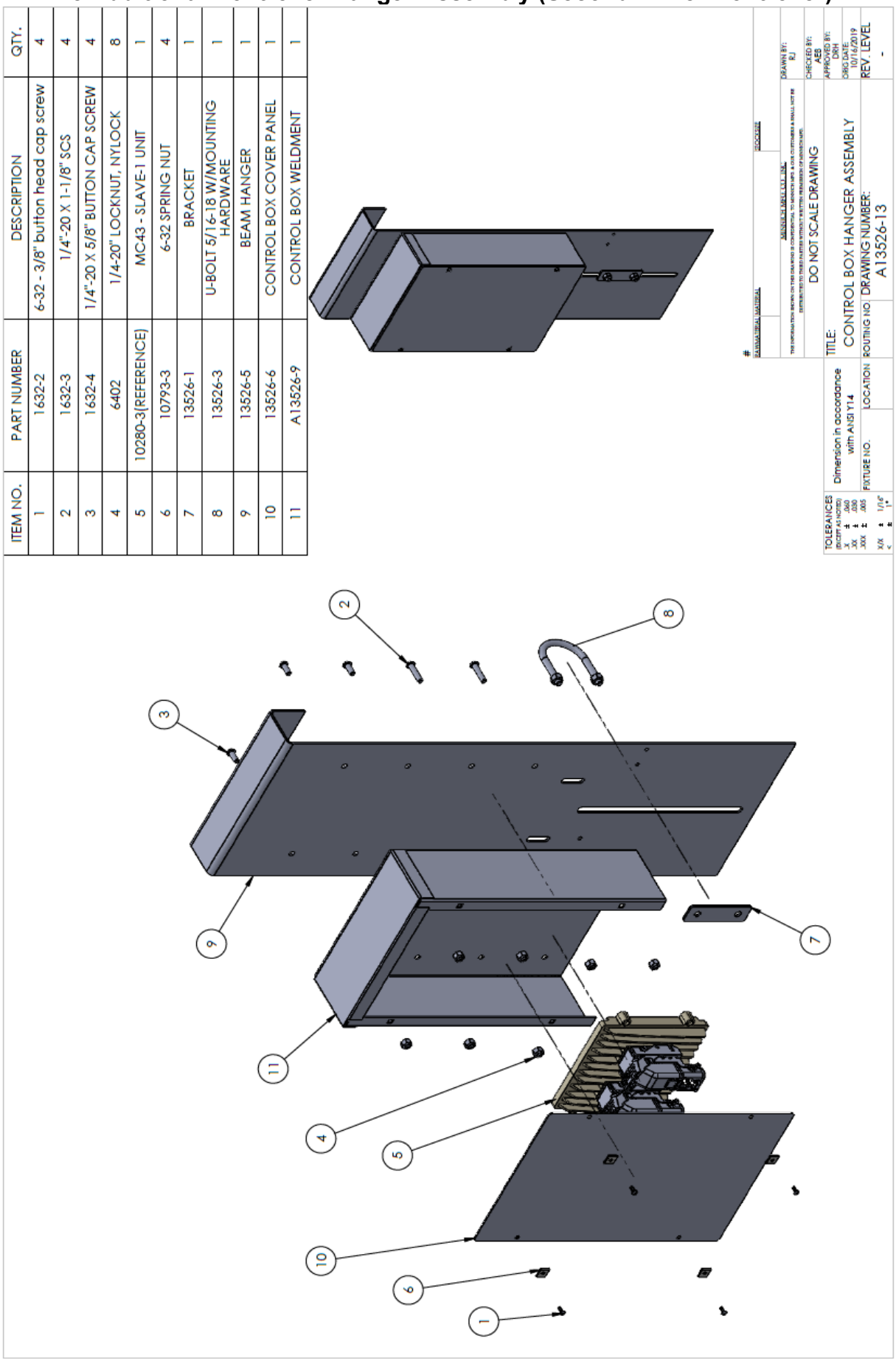
22.0 AV-CCII24 Controller Hanger Assembly

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1632-2	6-32 - 3/8" button head cap screw	4
2	1632-3	1/4"-20 X 1-1/8" SCS	8
3	6402	1/4-20" LOCKNUT, NYLOCK	8
4	10280-2(REFERENCE)	MC43 - HEAD MASTER UNIT	1
5	10280-3(REFERENCE)	MC43 - SLAVE-1 UNIT	1
6	10793-3	6-32 SPRING NUT	4
7	13526-1	BRACKET	1
8	13526-3	U-BOLT 5/16-18 W/MOUNTING HARDWARE	1
9	13526-5	BEAM HANGER	1
10	13526-6	CONTROL BOX COVER PANEL	1
11	A13526-9	CONTROL BOX WELDMENT	1



23.0 AV-CCII48 Additional Controller Hanger Assembly (Second Driver Controller)

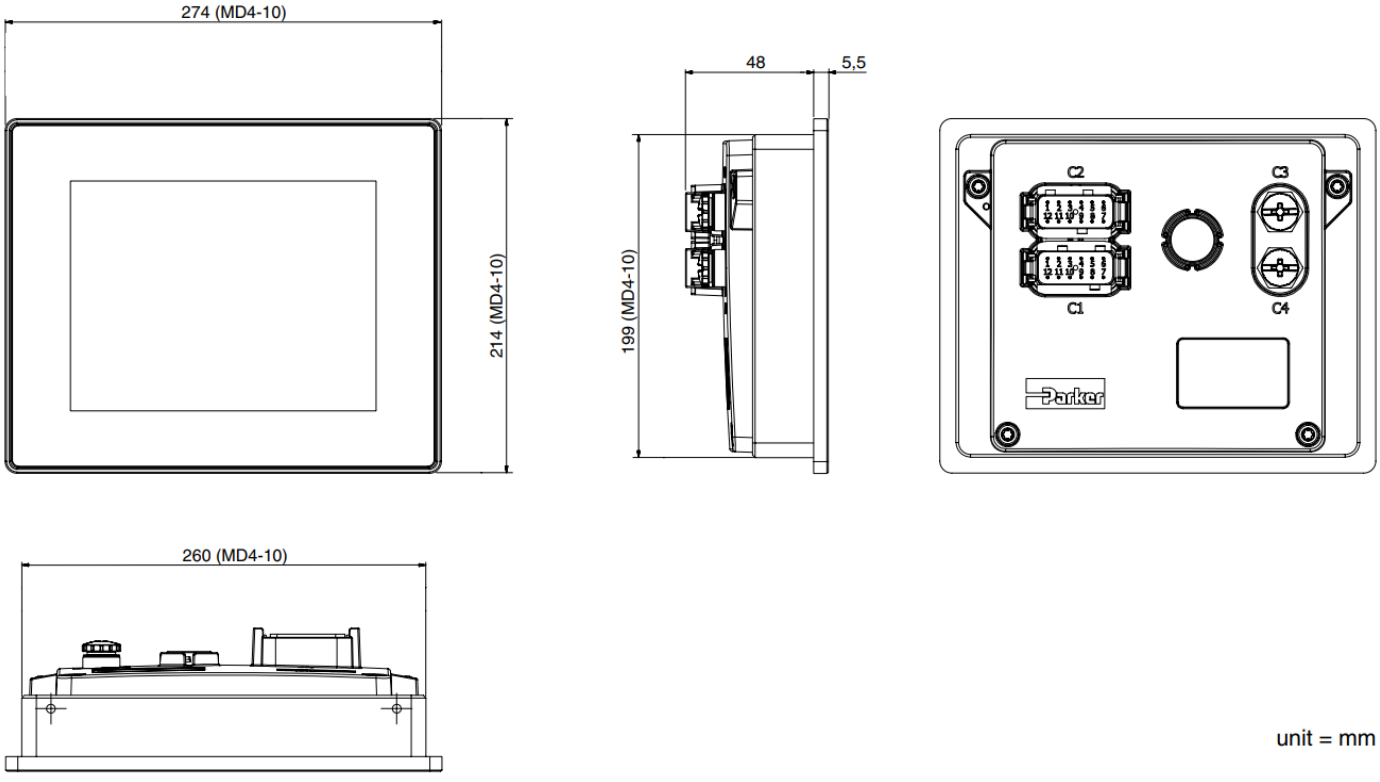
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1632-2	6-32 - 3/8" button head cap screw	4
2	1632-3	1/4"-20 X 1-1/8" SCS	4
3	1632-4	1/4"-20 X 5/8" BUTTON CAP SCREW	4
4	6402	1/4-20" LOCKNUT, NYLOCK	8
5	10280-3(REFERENCE)	MC43 - SLAVE-1 UNIT	1
6	10793-3	6-32 SPRING NUT	4
7	13526-1	BRACKET	1
8	13526-3	U-BOLT 5/16-18 W/MOUNTING HARDWARE	1
9	13526-5	BEAM HANGER	1
10	13526-6	CONTROL BOX COVER PANEL	1
11	A13526-9	CONTROL BOX WELDMENT	1



24.0 DISPLAY UNIT (IP65 Rated)

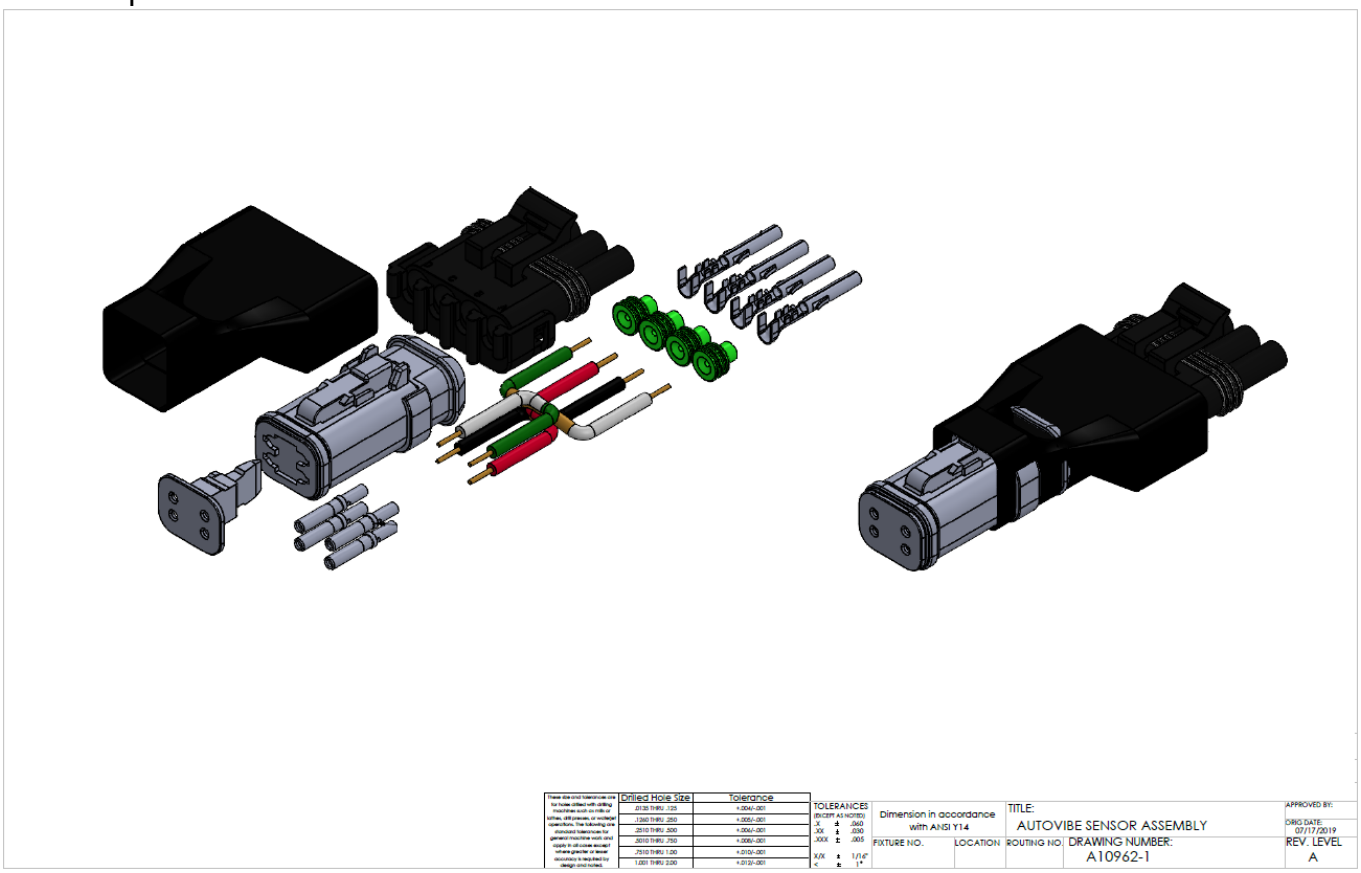
The Auto Vibe Monitor interacts with the user using a large touch screen. This section will discuss general operation. The monitor has one major screen with layered icons that control vibrator adjustment, logging, and setup information.

- The bar chart indicates the presence of a vibrator sensor and its RPM
- The zeros at the top of the screen will display Centrifugal Force and RPM

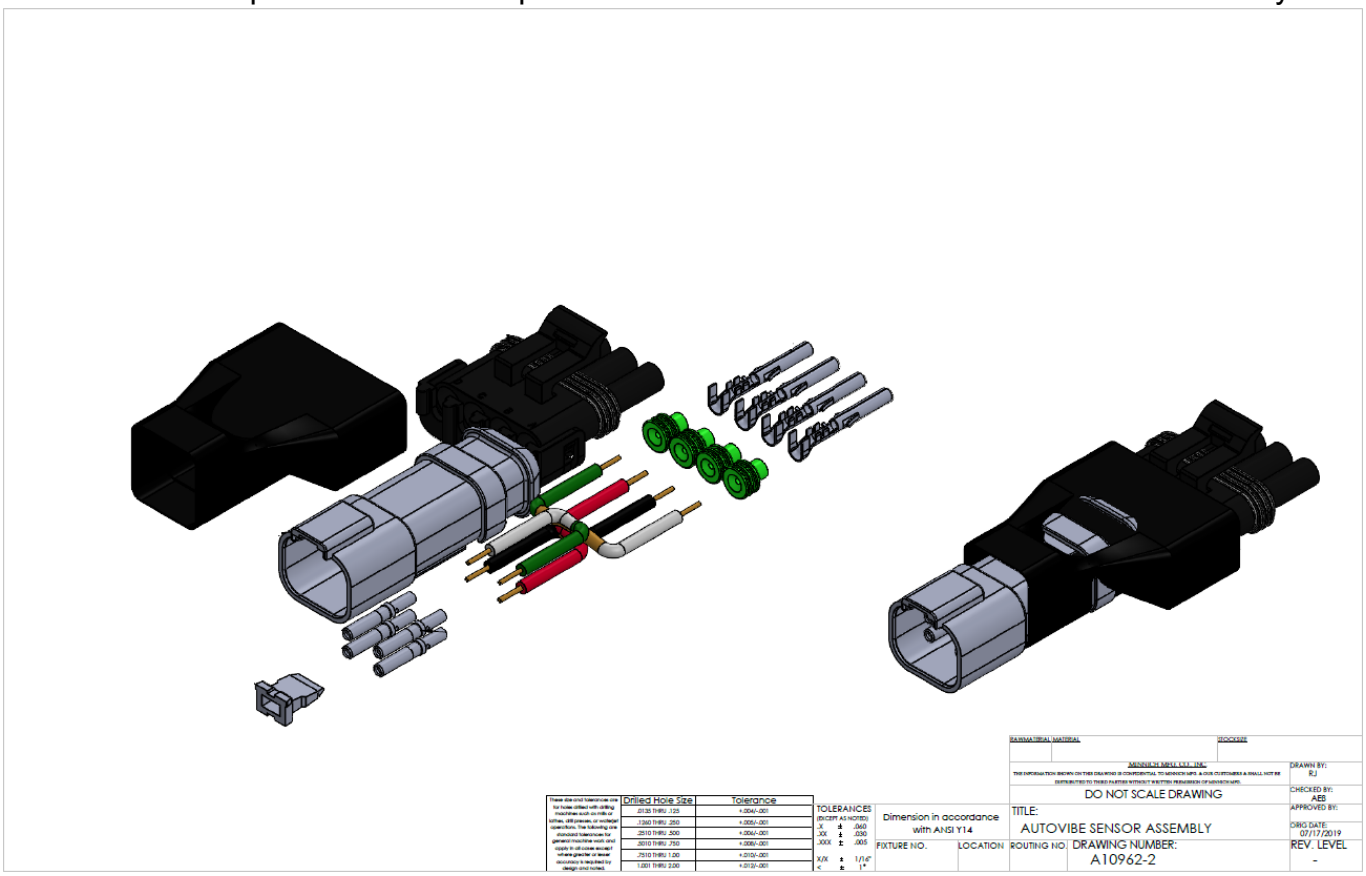


unit = mm

Sensor Adapter Parts



A10962-1 is the adapter needed to adapt 0A9410-00001 Sensor Asm. to the new AV-CCII System.
A10962-2 is the adapter needed to adapt 0A9410-00003 Sensor Asm. to the old Auto Vibe System.



Error codes, messages and actions

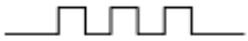
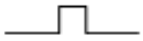
If one of the following error is detected, a message will be presented with an error code on the module. In some cases, the module will turn off or at least shut down the outputs, to increase safety.

WARNING

Don't use the machine if an error message or error code is activated.

LED indicator showing different MC4x modes

Status	Flash (yellow)
Normal operation	
Application not loaded	
No application available	
Waiting for restart	
Settings overflow	
Version mismatch	

Error code	Error	Primary Flash (red) Error category	Secondary Flash (yellow) Error description
1:1	Output		
1:2	Input		
1:3	VREF		
1:4	Expansion unit error		
2:1	Power supply		
2:2	Temperature		
3:1	CAN, no contact		
3:2	IDtag error		
3:3	System mismatch		
3:4	CAN error (bus off)		
4:1[a]	Stopped, critical		
4:2[b]	Stopped, critical		
4:3[c]	Stopped, critical		

a. Followed by a longer sequence of flashes, contact Parker.
b. Followed by a longer sequence of flashes. Possible causes include reverse feed on startup, critical under-voltage and critical temperature.
c. Followed by a longer sequence of flashes, contact Parker.