Breathe Safe

Parts and Service Manual

Kit Number: 701058

JOHN DEERE EXCAVATOR
E140LC / E210-II / E380LC

BreatheSafe

Contents

Operator Breathing Zone

1. External Dusty Air
2. HEPA Air Pressuriser
3. Cabin HVAC System
4. HEPA Recirculation Filter
5. Internal Dusty Air

COMPONENTS

Components

HEPA Variable Speed Pressuriser

HEPA Return Air Filter

Custom Install Kit

Air Quality Controller
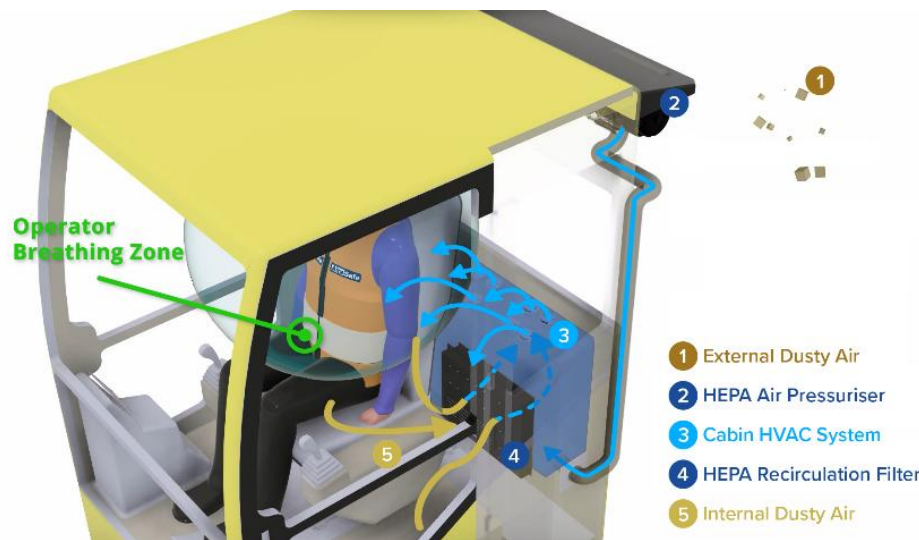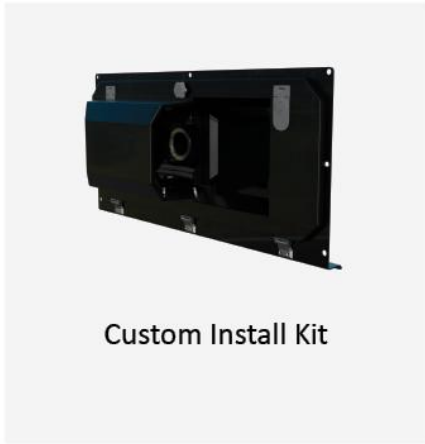
WARNING

The pressurisation system described in this manual has the following areas which may be dangerous if not treated with great care.

Qualified staff must wear the correct personal protective equipment when cleaning and servicing this unit due to dust and fibres which may be caught by the stages of air filtration during normal unit operation.

The electrical power system is supplied by 12V DC or 24V DC, and no work should be carried out on the pressuriser system without the correct safe work procedures and electrical safety measures being taken, and all relevant circuit breakers opened to isolate the circuit.

The air filtration system may have several types of high-speed rotating equipment installed with very sharp edges. Ensure all safety guards are in place while the system is running.

Please be aware that HEPA filters cannot be cleaned and must be replaced at the end of their lifecycle or if the filter media has been damaged.

Particulate Behaviour

This is the length of time it takes for a particle to drop from a height of 1.5m in **STILL** air.

20µm	10µm	5µm	2µm	1µm	0.5µm
3.6 mins	8.3 mins	35.7 mins	2.8 hrs	12hrs	41.7hrs
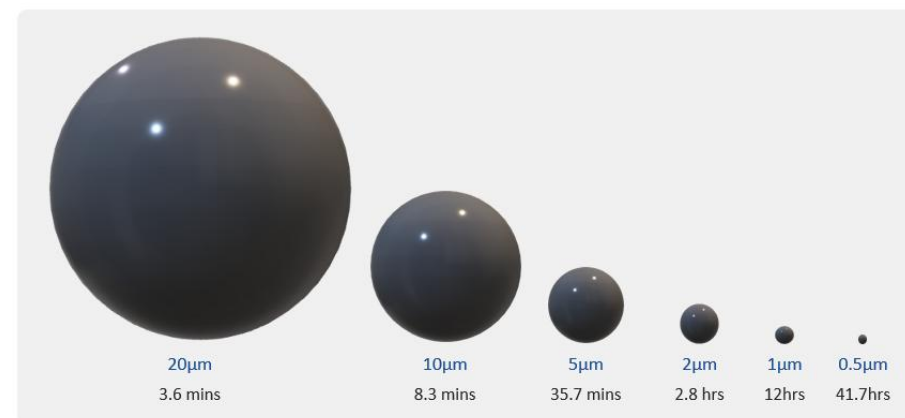
Warehouses and workshops do not have still air, so hazardous airborne particulates may remain in air for longer, increasing chance for workers to breathe in dust. Ensure PPE is worn when installing this system.

This air quality system is designed to protect operators from harmful airborne contaminants. Keep the doors and windows closed at all times.

JOHN DEERE EXCAVATOR
E140LC / E210-II / E380LC

BreatheSafe

Maintenance Schedule

The following tables show our suggested maintenance schedule for all units. Please note that site conditions may alter this. Excludes high corrosion environments.

Data download is required to claim the 3-year warranty on Brushless Blower Motor.

Inspect every 500 Hours and replace when filter is full*

| Component / System	Action Required
Turbo Pre-cleaner	Check operation of the Turbo Pre-Cleaner.
Pressuriser Blower	Ensure blower is operational.
HEPA Primary Filter p/n: **500000**	Inspect filter capacity indicator. Replace HEPA filter when 80% or greater. Vacuum out housing before replacing the filter elements.
HEPA Return Air Filter P/N: **500019**	Vacuum inside cabin floor before replacing filter.
Filter Frame Assembly, Mounts, Seals and Filter Housing.	Check door seals, all bolts, screws, and all mounts are secure. Check the filter canister & ensure it is correctly fitted. Check latches are operational and in good order. Replace / Re-tension fixtures and fittings required.

15,000 Hours / 36 months*

Component / System	Action Required
500 Hour Inspection	All 500-hour inspection actions.
Pressuriser's Blower **200002**	Replace BRUSHLESS Pressuriser blower.

Critical Parts

Item	Part Number	Qty.	Description	Service Interval
1	500000	1	Fresh Air HEPA H14 Filter (Tested as per EN1822)	1000* Hours (>80% fan capacity)
2	500019	1	HEPA Return Air Filter	500* Hours
3	200002	1	Brushless Blower Motor – 24V	15,000 Hours
4	200027	1	BreatheSafe Digital Display – Data Recorder (INPRESS TS)	

*Filter service hours are subject to cab sealing efficiency, site conditions and correct system use.

Suggested Schedule Servicing*

8:30   22/04/2023   100%
Cabin Pressure   27Pa
CO2 Level   200 PPM
BreatheSafe
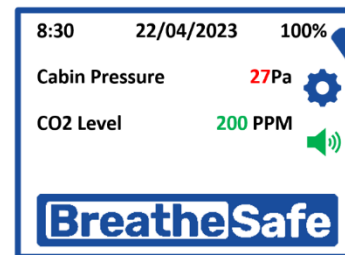
Fan Capacity Indicator

The filter is serviceable if the motor capacity is between 10% & 80%. We recommend that the filter is changed if the capacity is over 80%.

*Site dependent

| OPERATORS CHECKLIST	
PRE-START	
1.	Visually inspect the BreatheSafe system for any damage.
2.	Visually inspect the cabin for any damage to doors, windows, seals.
3.	Please remove dust & debris from shoes and clothes before entering the cabin.
4.	Ensure door(s) and windows are closed correctly.
5.	Start engine and turn HVAC on to speed 2 (medium speed).
6.	After fixed speed delay, the BreatheSafe display will show 50 Pascals or pre-set value.
The system is working correctly when the pascal value is green.	
>> There is no further action required <<	

NORMAL OPERATING CONDITION

Cab Air Conditioning

BreatheSafe recommends OEM air conditioning fan is set at mid speed or greater to circulate air around the breathing zone and minimise CO_2.

Acceptable operating range for BreatheSafe fan 10-80%. >80% recommend maintenance.
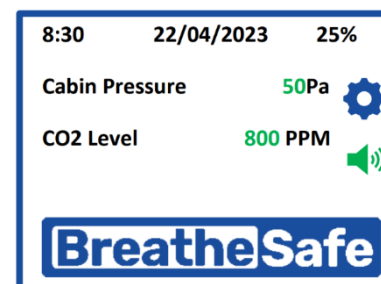
ALERTS

Fixed Fan Start Delay
- Allows the operator to carry out pre-start checks – limiting at 30% fan speed, press the red text to disable.

CO_2 Level Alert (if equipped)
- Ensure air conditioning fan is set at mid speed or greater to circulate air and minimise CO_2.

Low Pressure Alarm
- Cabin is not maintaining positive pressure – check doors and windows are closed correctly.
- Refer to maintenance department to check filters and cabin sealing. Ensure filters are serviceable.

Check Filter
- Reminder to inspect or replace filter. Service hour meter requires re-set.
- Refer to maintenance department.

BreatheSafe

| Item No.	Qty.	Description	Part No.
1	1	Pre-cleaner Hood & Rotor Assy	200004
2	4	Pre-cleaner Injector Ring	200005
3	1	TL Fan Blade (inc. in #7)	200006
4	1	TL Nose Cone / Pre-cleaner	200007
5	1	TL Motor Housing	200008
6	1	TL Filter Housing	200009
7	1	24v DC Brushless VSD Motor & TL Fan Blade	200002
8	1	O Ring Seal Kit 2 Parts	200010
9	1	Included in 8	200011
10	1	Wiring Sleeve	200012
11	1	HEPA H14 Filter	500000
12	3	M6 Nyloc Nut	300218
13	3	M6 x 55mm Hex Bolt	300982
14	4	M8 x 190 Hex Bolt	301136
15	8	M8 x 22mm O/D HD Washer	300230
16	4	M8 Nyloc Nut	300249
17	5	M4 x 75mm Pan Head Phillips Screw	300162

Specifications – High-Capacity HEPA Pressuriser	
Blower	High RPM Brushless VSD
Protection	Locked rotor, under/over voltage, under/over current & over temperature
Voltage	24VDC
Current Draw	11 A maximum. Blower programmed with slow start to stop excessive in-rush current
Air Flow	30-300 m3 /hr (50-215 CFM)
Pre-Cleaner	Integrated VLR (Very Low Restriction) mechanical pre-cleaner
Filter Element	BreatheSafe HEPA H14 Primary Filter (99.995% @ MPPS)
Connector	Mining Spec. Deutsch electrical connectors as standard
Materials	High strength composite
Serviceability	Single part filter assembly with twist-lock (TL) cap
Mounting	Heavy duty adjustable mounting brackets
Design	100% designed by BreatheSafe engineering

BreatheSafe
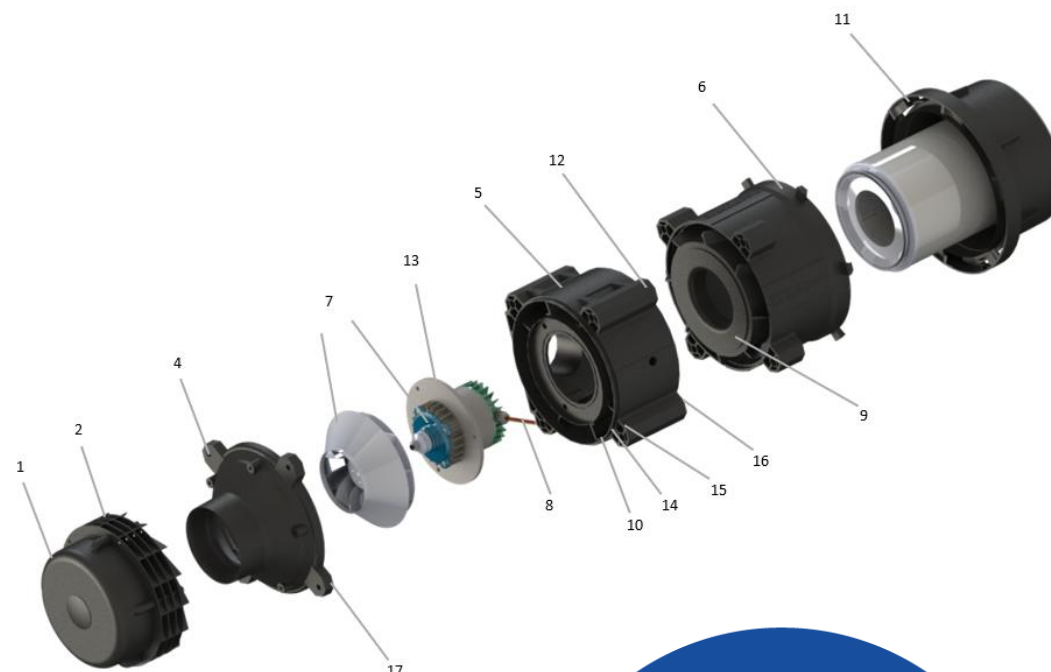
ISO 23875 Compliant.

Handle with care. Do **NOT** touch filter media.
HEPA filters cannot be cleaned.

Filter Information

HEPA H14 Glass Fibre Filter
Test Method: EN1822
Efficiency: 99.995% @ 0.3 Microns

PN: 500000

US: +1 800 359 1704 | AU: +61 7 3276 7833
sales@breathe-safe.com | breathe-safe.com

BreatheSafe

Item No.	Part No.	Rev	Description	Qty	Colour	Category
1	100877A01	0	High Pressure Unit Module	1	Charcoal Satin 27288351	Module
2	100877F01	1	Fresh Air Module	1	Charcoal Satin 27288351	Module
3	100877P01	0	Pipework Module	1	Charcoal Satin 27288351	Module
4	100877R01	0	Return Air Module	1	Charcoal Satin 27288351	Module
5	100048M01	0	Monitor Mount Module	1	Charcoal Satin 27288351	Module
6	100877X01	0	Miscellaneous	1	Charcoal Satin 27288351	Module

PARTS LIST GA

COMPLETE ASSEMBLY No: 701058

Kit Part Number: 701058
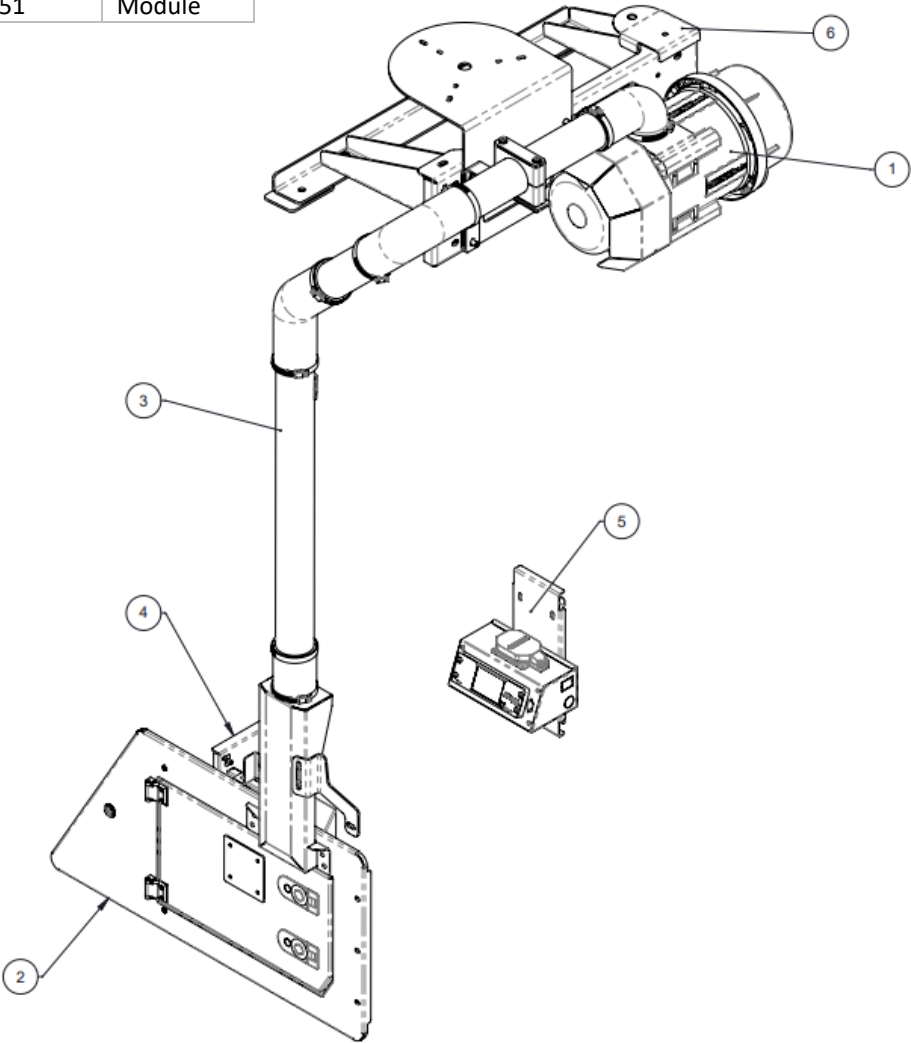
PARTS LIST – PRESSURISER MODULE

Item No.	Part No.	Rev	Description	Qty	Material	Thickness	Colour	Category
1	100048A02	1	L Brkt Weldment	2	-	-	Charcoal Satin 27288351	Weld Assy
2	100048A03	1	Mounting Channel Assy	1	-	-	Charcoal Satin 27288351	Weld Assy
3	100048A04	0	Top FOPS Clamp	2	-	-	Charcoal Satin 27288351	Weld Assy
4	100048A05	0	Mounting Angle Assy	1	-	-	Charcoal Satin 27288351	Weld Assy
5	100877A08	0	Clamp Plate Weldment	2	-	-	Charcoal Satin 27288351	Weld Assy
6	100877A082	0	Beacon Angle	1	G250	5	Charcoal Satin 27288351	-
7	250007	0	TL Mount Brkt 56.5mm	1	Steel	3	(As Req'd)	Stock Item
8	200000	[*]	HPAFU 24VDC VSD TL4	1	N/A	-	-	-
9	250068	0	TL WC Guard Short	1	-	-	(As Req'd)	-
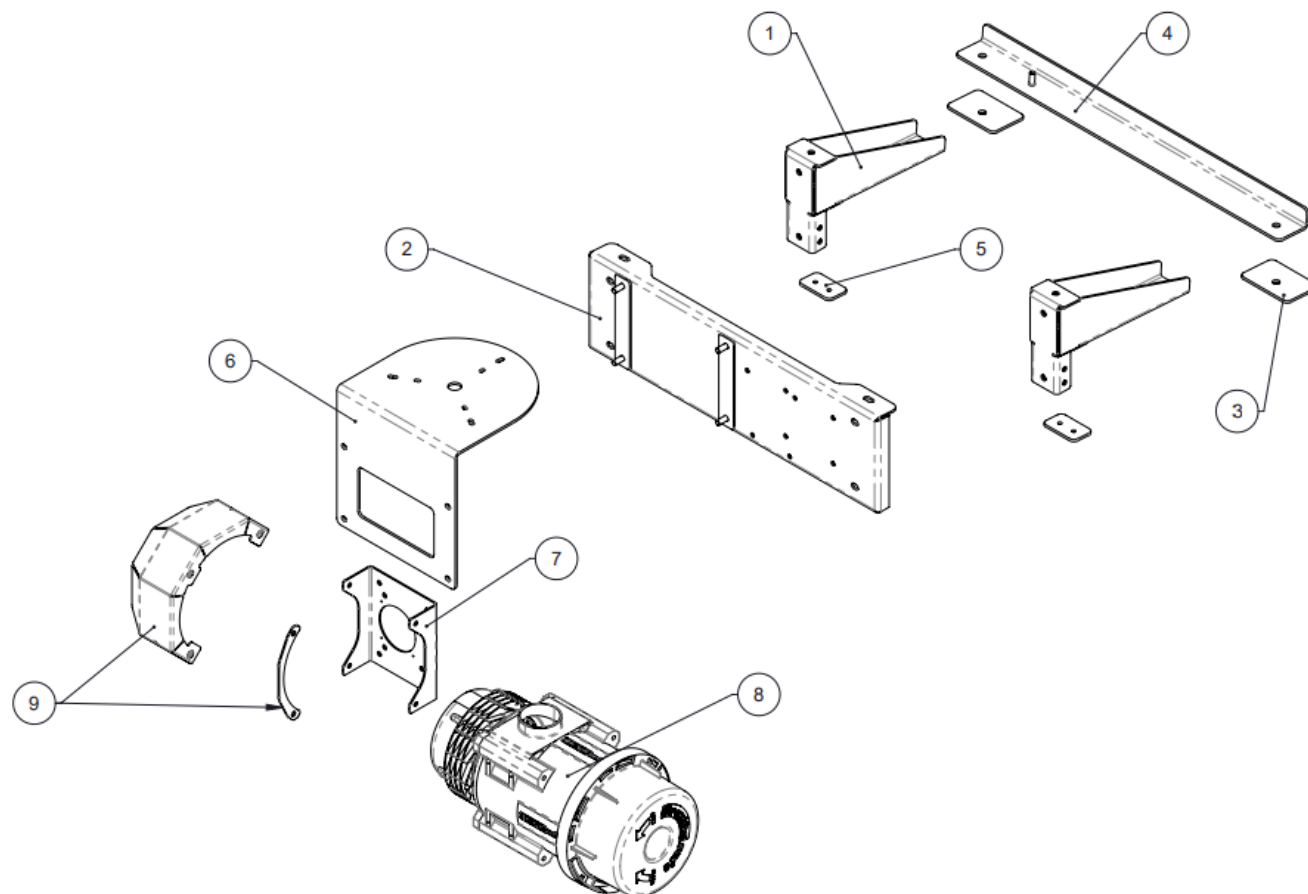
Item No.	Part No.	Rev	Description	Qty	Material	Thickness	Colour	Category
1	100048F02	0	Fresh Air Panel	1	-	-	Charcoal Satin 27288351	Weld Assy
2	100048F04	0	Access Door Weldment	1	-	-	Charcoal Satin 27288351	Weld Assy
3	100048F05	0	Door Assy Clamp	2	-	-	Charcoal Satin 27288351	Assembly
4	100048F06	0	Duct Weldment	1	-	-	Charcoal Satin 27288351	Weld Assy
5	100048F823	0	Duct Bracket	1	Mild Steel	4	Charcoal Satin 27288351	Part
6	100877F803	0	Blanking Plate	1	G250	3	Charcoal Satin 27288351	Part
7	300005	-	Hinge Surf Mnt Offset	2	-	-	-	Hardware
8	-	-	N/Lock Latch	2	-	-	-	-
9	-	0	Pinch Weld 66-005	1	Silicon	-	-	-
10	-	-	SS Quarter Turn Lock	1	SS	-	-	-
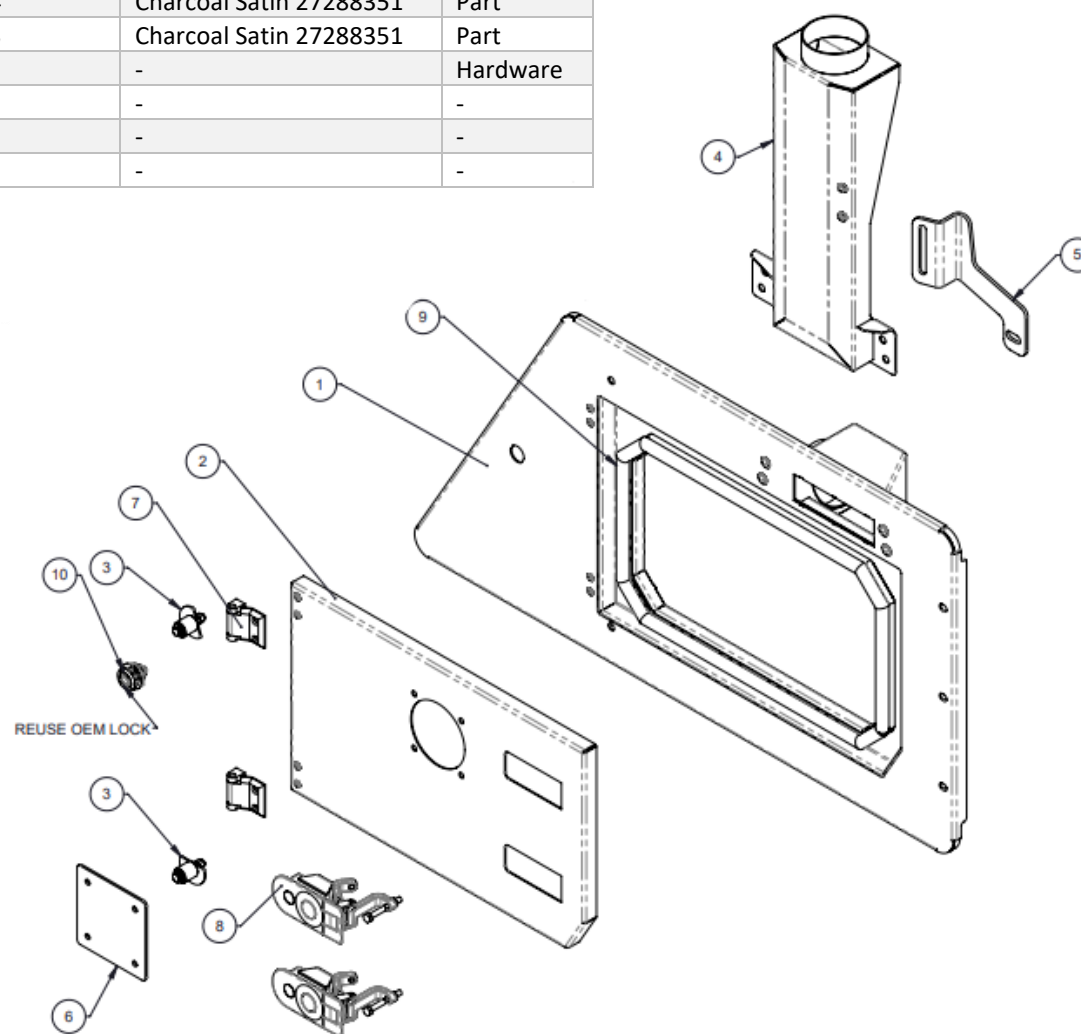
REUSE OEM LOCK

JOHN DEERE EXCAVATOR
E140LC / E210-II / E380LC

BreatheSafe

Item No.	Part No.	Rev	Description	Qty	Material	Thickness	Colour	Category
1	100048P02	0	Downpipe Assy	1	-	-	Charcoal Satin 27288351	Weld Assy
2	100877P011	0	Stauff Mounting Angle	1	G250	5	Charcoal Satin 27288351	Part
3	300850	-	76 ID Silicone Hose @110L	1	Silicone	-	-	Pipework
4	300388-0550	-	76 SS Tube @550L	1	SS Tube	1.6	(As Req'd)	Pipework
5	300388-0350	-	76 SS Tube @350L	1	SS Tube	1.6	(As Req'd)	Pipework
6	300842-0150	-	76 ID Silicone Hose @150L	1	Silicone	-	-	Pipework
7	200305	-	Ø76.2 x 45LD Elb	1	Silicone	-	-	Pipework
8	200307	-	Ø76.2 x 90LD Elb	2	Silicone	-	-	Pipework
9	300848	-	Ø76.2 Cobra Neck	1	Silicone	-	-	Pipework
10	300001	-	65-89mm Hose Clamp	11	-	-	-	Pipework
11	300480	-	Stauff Shell GR7 76.1	2	-	-	-	Pipework
12	300481	-	Stauff GR7 Cover Plate	1	Zinc Plated	5	(As Req'd)	Pipework
13	300483	-	Stauff GR7 Weld Plate	1	Zinc Plated	5	(As Req'd)	Pipework
14	300182	-	Bolt SHCS M6x110L	2	Zinc Plated	-	-	Fasteners
15	300187	-	Washer Flat M6x16x2	2	Zinc Plated	-	-	Fasteners
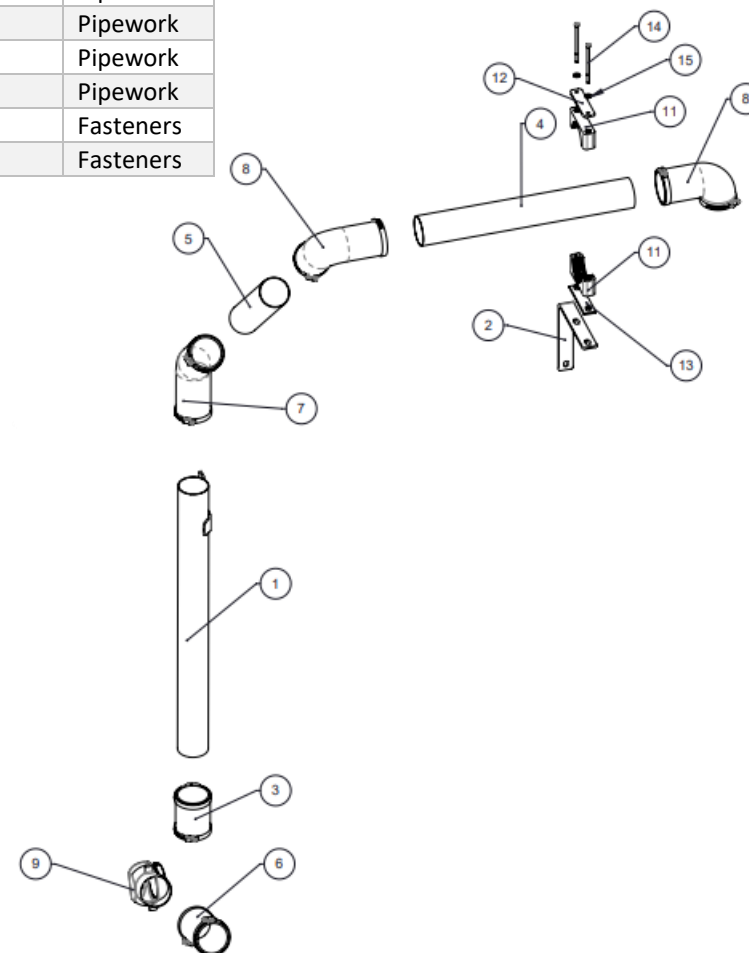
Item No.	Part No.	Rev	Description	Qty	Material	Thickness	Colour	Category
1	100048R02	0	Blanking Panel Assy	1	-	-	Charcoal Satin 27288351	Assembly
2	100877R04	0	Return Air Base Assy	1	-	-	Charcoal Satin 27288351	Weld Assy
3	100048R206	0	Filter Cover	1	Zinc	1.6	Charcoal Satin 27288351	Part
4	100048R208	0	Clamp	1	Zinc	2	Charcoal Satin 27288351	Part
5	100048R209	0	Clamp	1	Zinc	2	Charcoal Satin 27288351	Part
6	500019	0	HEPA Filter 295x145x50	1	N/A	-	-	HEPA Filter
7	300814	-	M6x20 Scallop Knob	2	-	-	-	Hardware
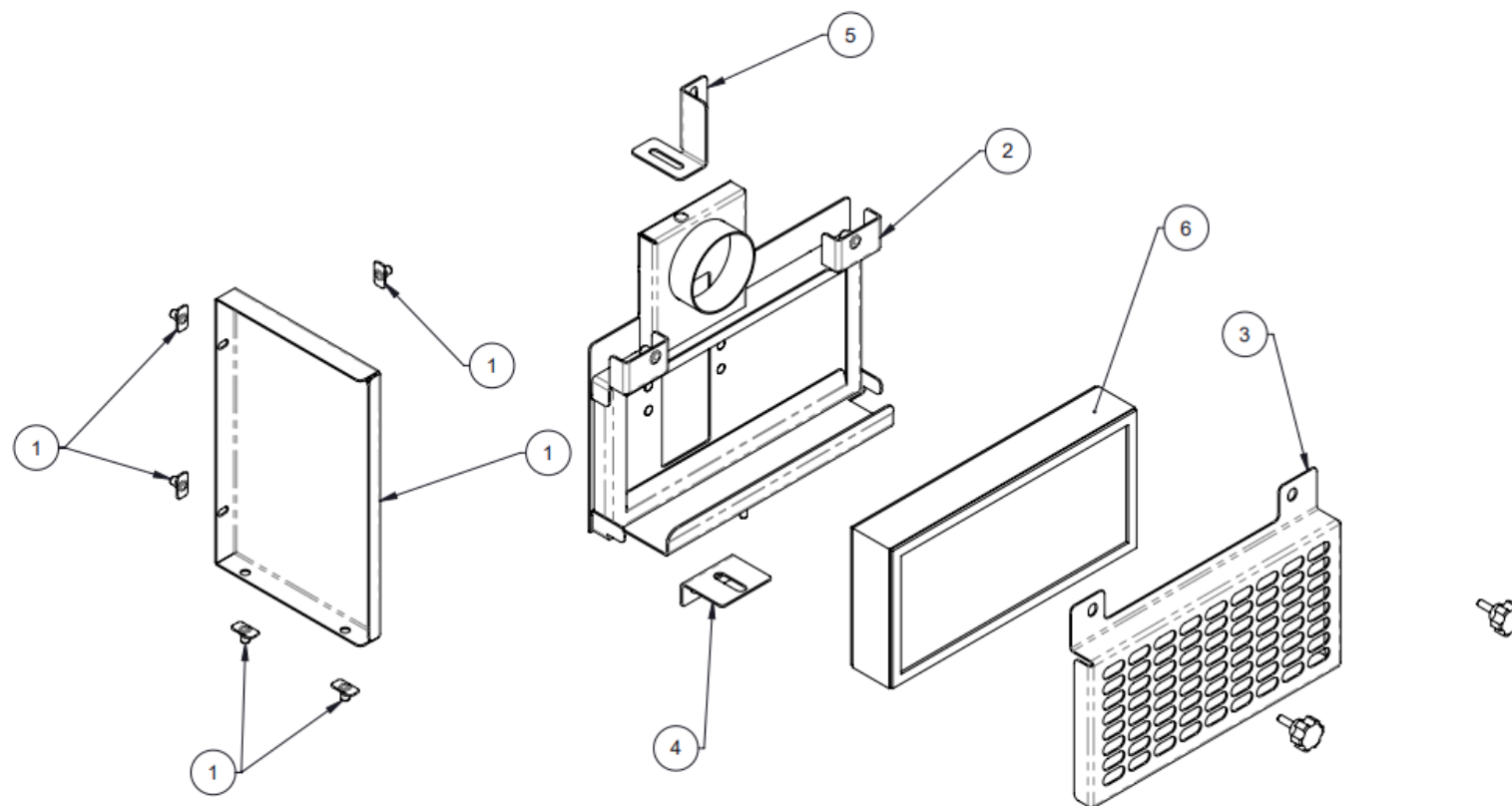
Item No.	Part No.	Rev	Description	Qty	Material	Thickness	Colour	Category
1	100048M02	0	Mount Plate Assy	1	-	-	Charcoal Satin 27288351	Assembly
2	100048M03	0	Clamp Assy	2	-	-	Charcoal Satin 27288351	Assembly
3	250101	1	Monitor Box, Large	1	-	-	(As Req'd)	Stock Item
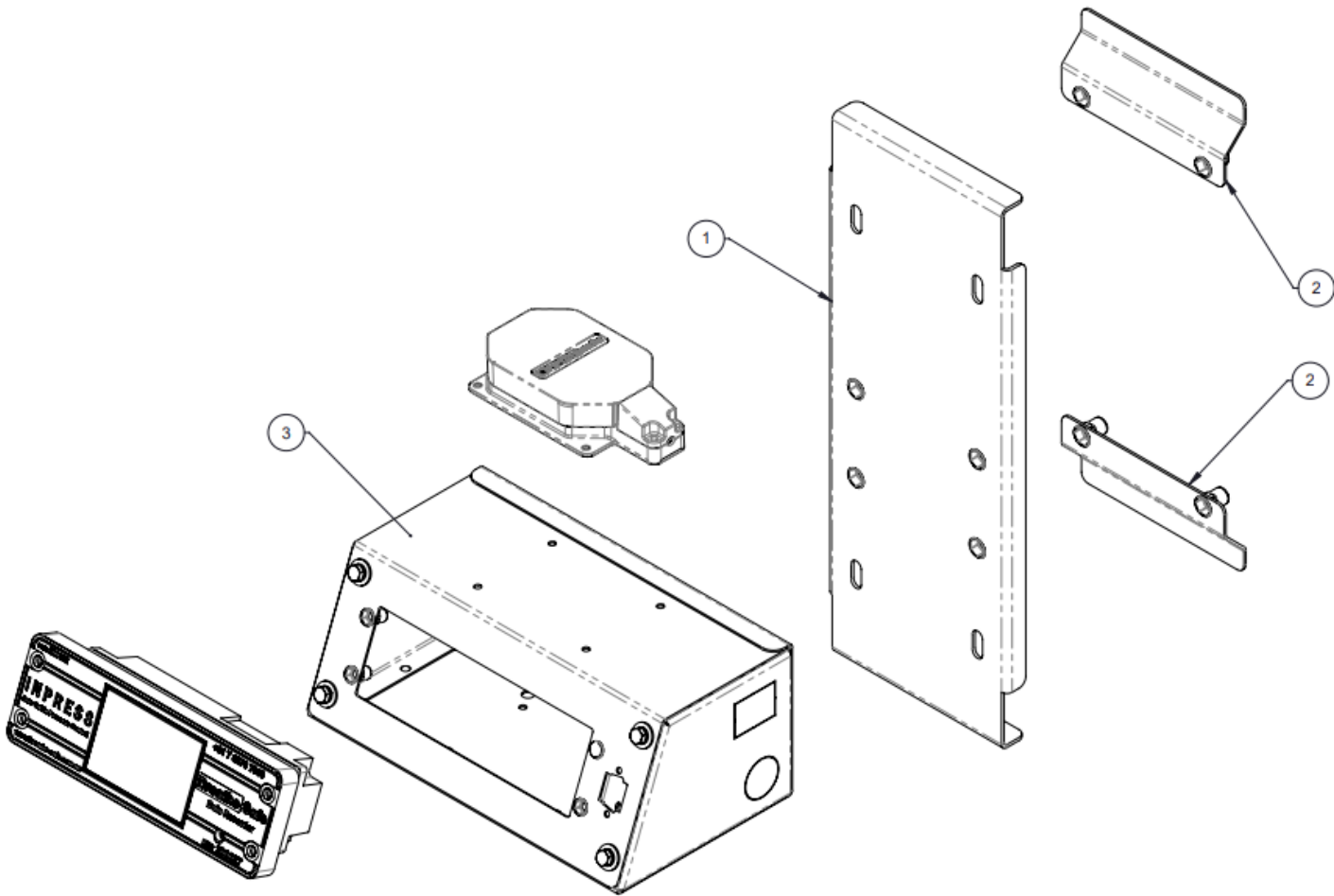
Display Key Features

- Digital cabin pressure monitoring system
- Automatic cabin pressure control
- Intelligent fan speed output
- Data logger
- Alarm for low-pressure (RS20)
- Light sensor for automatic dimming of the screen
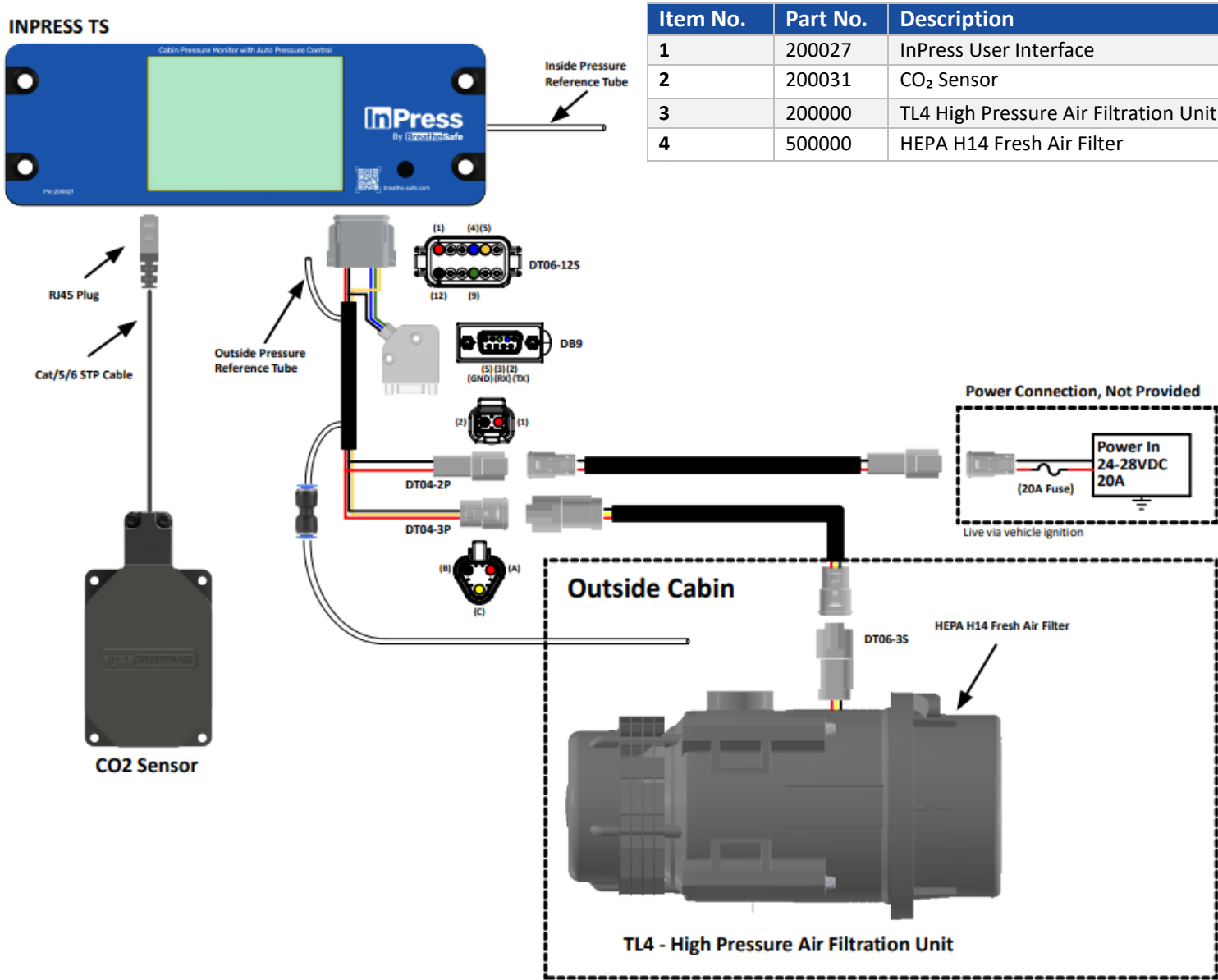
CO2 Sensor

- CO2 Sensor Type is NDIR (Non-Dispersive Infrared)
- Sample Rate is every 2 seconds
- 12-30V DC Operating Voltage
- Automatic Altitude Compensation
- Alarm Set points are adjustable
- No setup required

184.5mm · 61.8mm · 54.6mm

65 mm · 27 mm · 120 mm

Time	Date	Actual Motor Capacity %
		Settings Button
Cabin Pressure	Actual measured cabin pressure pascals	
CO2 Concentration*	Actual measured CO2 concentration ppm	Alarm Mute Button
Temperature *	Actual measured Temperature in ℃	

Settings button

Alarm button

Light Sensor

MAIN SCREEN
Options* when fitted

JOHN DEERE EXCAVATOR
E140LC / E210-II / E380LC

BreatheSafe

Wiring Diagram – InPress Controller

Item No.	Part No.	Description	Qty
1	200027	InPress User Interface	1
2	200031	CO₂ Sensor	1
3	200000	TL4 High Pressure Air Filtration Unit	1
4	500000	HEPA H14 Fresh Air Filter	1

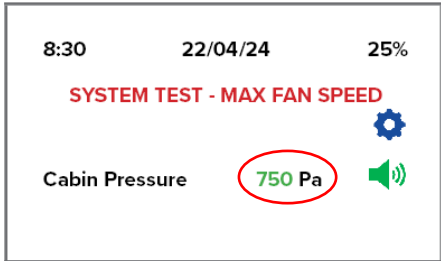| Cabin Sealing Efficiency Test Procedure	
1	New replacement filter is required to perform this check. Start engine (pressuriser ON) and ensure all windows & door(s) are CLOSED correctly (no cabin pressure leaks).
5	Pressure target is **250 Pa or greater** with a new filter. Less than 250 Pa requires cabin sealing improvements.

InPress
(Touch Screen)

8:30   22/04/24   25%

Cabin Pressure   50Pa
CO2 Level   200PPM
Temperature   20°C

2. Press the settings cog.

BACK   Settings

SYSTEM CHECK   VIEW GRAPH

EVENT LOG   SITE ACCESS MENU
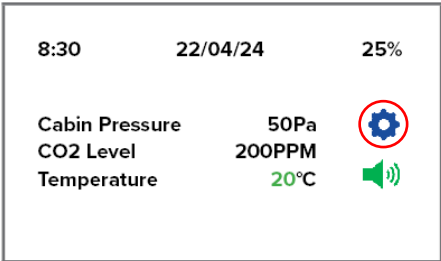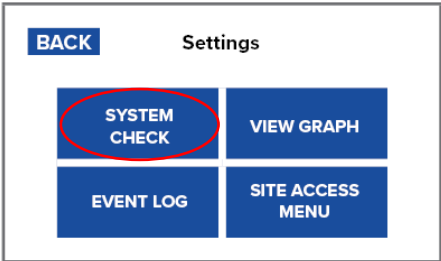
3. Press 'SYSTEM CHECK SET MAX' button.

8:30   22/04/24   25%

SYSTEM TEST - MAX FAN SPEED

Cabin Pressure   750 Pa

4. Record results. Repeat steps 1 & 2 to finish test.

Hand-Held Differential Pressure Monitor (HHDPM) Leakage Test

Test enclosure for air leakage using the HHDPM.

Cabin Pressure: Sensor outside the cabin

The cabin pressure test can also be carried out with the service technician outside the cabin.
*Not recommended due to the possibility of HVAC airflow affecting the reading.

1. With the door open, turn on the HHDPM and observe the pressure reading. Confirm it is reading zero.
2. Connect the pressure reference tube to 'Positive' (top port) place the other end of the tube on the operator seat, away from HVAC vents and any other direct airflow.
3. Turn on the machine's HVAC and pressurisation system (if present). Ensure HVAC is set to fresh air and not recirculation.
4. Close the door, make sure the tube isn't kinked.
5. Observe the pressure reading and allow it to stabilise. The handheld differential pressure monitor & cabin pressure monitor should read within 5 Pa of each other.
6. Feel around the enclosure for any pressure leaks. Seal enclosure where leaks are present and monitor pressure changes.

Part Number: 200142

1. Positive Pressure Port
2. Ambient Pressure Port
3. Charging LED
4. Charging Port
5. Re-Zero Button
6. Power Button
7. Display

Typical Seal Locations:
- Lower pillar openings
- Upper pillar openings where necessary
- Cabin frame
- Floor plates either internal or external – foam tape etc.
- Door seals
- Window seals
- Exterior access panels
- Hydraulic hose entrance points

JOHN DEERE EXCAVATOR
E140LC / E210-II / E380LC

BreatheSafe

BREATHESAFE SYSTEM TROUBLE SHOOTING GUIDE *TOUCH CONTROL		
FAULT	**POSSIBLE CAUSE**	**SOLUTION**
***ERR error code**	Poor sensor connection	Remove & refit pod connection cable
	Corrupted coding	Contact support for default reset pin
***Check filter alarm**	Service hour timeout	Access *Check Runtime* menu - reset hours via 7597 code
Temperature / CO2 error	Sensor not connected	Fit sensor or disable via site access CO2 & or temperature menu
Pressuriser running at full speed/noisy	Filter blocked	Service filter
	Door or window open	Ensure doors & windows securely shut
	Cabin sealing capacity not adequate	Perform pressure test procedure & seal leak points as required
	Sense pipe blocked	Ensure clear & not bent
	Internal sensor damaged	Replace controller
		No need to change setpoint
Filter blocking quickly	Defective cabin sealing	Perform pressure test procedure & seal leak points as required
	Pre-cleaner failed	Check operation & replace if necessary
Display blank	Poor power supply	Check mains supply fuse & correct voltage
		Check voltage & 20AMP supply/connections at pin **1** @ monitor
		Check earth continuity at controller pin **12**
	Failed controller	Replace monitor
Controller showing 0.0 pressure	Fresh air filter blocked	Check filter condition & replace if required.
Low pressure alarm	Door or window open	Ensure doors & windows securely shut
	Cabin sealing capacity not adequate	Perform pressure test procedure & rectify cab sealing
	Pressuriser not operating	Ensure correct voltage 12v or 24v to pressuriser motor pin **A**
		Check 1.6V - 10V present at motor Pin **C**
		Check 20A Supply fuse
		Check earth continuity Pin **B**
	Pressure sense tube blocked	Unplug at monitor & ensure clear flow to external of cabin
		Ensure pressure tube fitted correct port **A**
		No need to change setpoint
Pressuriser not working	Poor power supply	Check 20A mains fuse & correct voltage
		Ensure adequate wire size & no voltage drop
		Ensure correct voltage 12v or 24v to pressuriser motor pin **A**
		Check 1.6V - 10V present at motor Pin **C**
	Poor earth	Check earth continuity @ motor pin **B**
	Motor faulty	Replace TL4M
Access Codes:	**Site Access: 7597**	**Contact Support for Factory Setup Pin**

BreatheSafe

User Settings Instructions

ENTER SET UP MODE

Start-Up Screen > Main Screen > Settings Button > Settings Screen > Site Access Button > Insert Pin > Site Menu

To enter the Setup mode, press the SETTING button.

Then enter SITE ACCESS MENU. Type in 4-number pin and press ENTER.

Insert Pin = 7597

BACK		**Enter Pin**
	1	2	3
	4	5	6
	7	8	9
7597	CLEAR	0	ENTER

SET UP PARAMETERS

Placing the BreatheSafe 200027 unit into Setup mode allows the adjustment of the following parameters:

- Time (hours/minutes/seconds)
- Date (day/month/year)
- Pressure alarm setpoint
- Preferred cabin pressure
- Alarm delay/ intervals of alarm
- Calibration and system settings
- Resetting of the data logging
- Service reminders interval gap
- Reset current runtime between services
- CO2 settings and alarms

Settings

BACK	Settings
SYSTEM CHECK	VIEW GRAPH
EVENT LOG	SITE ACCESS MENU

BreatheSafe

BACK	Settings Page 1	NEXT
STARTUP OPTIONS	DOOR WINDOW SETTING	PRESSURE SETPOINT
CHECK RUNTIME	DATE / TIME	CO2 SETTING

BreatheSafe

BACK	Settings Page 2	
ALARM MUTE RESET	ZERO SENSOR	TEMP SETTING
BUZZER SETTINGS	LOG SETTINGS	FACTORY SETUP

BreatheSafe

PRESSURE SETPOINT

The pressure setpoint changes the pressure that the cabin will be maintained. INPRESS TS maintains the pre-set pressure within the cabin compared to outside.

Enter Setup mode and select ADJUST SETPOINT button. Then, use the onscreen UP and DOWN buttons to change the corresponding fields.

1

8:30	22/04/23	25%
Cabin Pressure	50Pa	⚙
CO2 Level	200 PPM	🔊
Temperature	20°C	

BreatheSafe

2

BACK | Settings

SYSTEM CHECK | VIEW GRAPH
EVENT LOG | SITE ACCESS MENU

BreatheSafe

3

BACK | Enter Pin

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER

4

BACK | Settings Page 1 | NEXT

STARTUP OPTIONS | DOOR WINDOW SETTING | PRESSURE SETPOINT
CHECK RUNTIME | DATE / TIME | CO2 SETTING

BreatheSafe

5

BACK | Pressure Settings

PRESSURE UNITS = | Pascals

Alarm Set Point	Pressure Set Point	Pressure Alarm Delay
20	50	5 mins

🔽🔼 🔽🔼 🔽🔼

BreatheSafe

PRESSURE ALARM SETTING

The mining industry benchmark for cabin pressure is 50 pascals and low-pressure is set at 20 pascals.

After a delay the alarm will activate if cabin pressure remains below the pre-set value. Enter Setup mode and select ADJUST SETPOINT button. Then, use the onscreen UP and DOWN buttons to change the corresponding fields.

1

8:30	22/04/23	25%
Cabin Pressure	50Pa	⚙
CO2 Level	200 PPM	🔊
Temperature	20°C	

BreatheSafe

2

BACK | Settings

SYSTEM CHECK | VIEW GRAPH
EVENT LOG | SITE ACCESS MENU

BreatheSafe

3

BACK | Enter Pin

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER

4

BACK | Settings Page 1 | NEXT

STARTUP OPTIONS | DOOR WINDOW SETTING | PRESSURE SETPOINT
CHECK RUNTIME | DATE / TIME | CO2 SETTING

BreatheSafe

5

BACK | Pressure Settings

PRESSURE UNITS = | Pascals

Alarm Set Point	Pressure Set Point	Pressure Alarm Delay
20	50	5 mins

🔽🔼 🔽🔼 🔽🔼

BreatheSafe

BreatheSafe

SERVICE INTERVAL

Use the onscreen UP and DOWN buttons to change the service interval setpoint.

To reset the current runtime to zero, press the RESET CURRENT RUNTIME button and enter the site access pin.

DATE & TIME SETTINGS

Change the recorded date displayed and measured by the INPRESS TS.

USER SETTINGS INSTRUCTIONS

SERVICE INTERVAL

1

8:30	22/04/23	25%
Cabin Pressure	50Pa	⚙
CO2 Level	200 PPM	🔊
Temperature	20°C	

BreatheSafe

2

BACK — Settings

SYSTEM CHECK	VIEW GRAPH
EVENT LOG	SITE ACCESS MENU

BreatheSafe

3

BACK — Enter Pin

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER

4

BACK — Settings Page 1 — NEXT

STARTUP OPTIONS	DOOR WINDOW SETTING	PRESSURE SETPOINT
CHECK RUNTIME	DATE / TIME	CO2 SETTING

BreatheSafe

5

BACK — Pressure Settings

PRESSURE UNITS = Pascals

CURRENT RUNTIME	SET SERVICE INTERVAL
700	1000

🔼 🔽

BreatheSafe

DATE & TIME SETTINGS

1

8:30	22/04/23	25%
Cabin Pressure	50Pa	⚙
CO2 Level	200 PPM	🔊
Temperature	20°C	

BreatheSafe

2

BACK — Settings

SYSTEM CHECK	VIEW GRAPH
EVENT LOG	SITE ACCESS MENU

BreatheSafe

3

BACK — Enter Pin

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER

4

BACK — Settings Page 1 — NEXT

STARTUP OPTIONS	DOOR WINDOW SETTING	PRESSURE SETPOINT
CHECK RUNTIME	DATE / TIME	CO2 SETTING

BreatheSafe

5

BACK — Date/Time Settings — NEXT

PRESSURE UNITS = Pascals

HOUR	MIN	DAY	MON	YEAR
🔼	🔼	🔼	🔼	🔼
4 :	10	22 /	04 /	2023
🔽	🔽	🔽	🔽	🔽

PRESSURE ALARM BUZZER SETTING

To disable the buzzer, toggle through to the ENABLED and DISABLED buttons.

ALARM BUZZER SETTINGS

CALIBRATE ZERO SENSOR

Over long runtime, the 200027 may need recalibration. This screen allows the sensor to be recalibrated if more than 5 Pascals are out. To recalibrate, open windows and doors, turn off air conditioning, and any other device that may alter cabin pressure. Then, press the AUTO ZERO SENSOR button and leave the cabin while measuring. This process will reset the Zero Pressure.

1

8:30	22/04/23	25%
Cabin Pressure	50Pa	
CO2 Level	200 PPM	
Temperature	20°C	

BreatheSafe

2

BACK — Settings

SYSTEM CHECK	VIEW GRAPH
EVENT LOG	SITE ACCESS MENU

BreatheSafe

3

BACK — Enter Pin

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER

4

BACK — Settings Page 1 — NEXT

STARTUP OPTIONS	DOOR WINDOW SETTING	PRESSURE SETPOINT
CHECK RUNTIME	DATE / TIME	CO2 SETTING

BreatheSafe

5

BACK — Settings Page 2

ALARM MUTE RESET	ZERO SENSOR	TEMP SETTING
BUZZER SETTINGS	LOG SETTINGS	FACTORY SETUP

BreatheSafe

6

BACK — Alarm Buzzer Settings

ENABLED	ENABLED	DISABLED
PRESSURE BUZZER	CO2 PRIMARY BUZZER	TEMPERATURE BUZZER
ENABLED	DISABLED	
WINDOW BUZZER	DOOR BUZZER	

BreatheSafe

1

8:30	22/04/23	25%
Cabin Pressure	50Pa	
CO2 Level	200 PPM	
Temperature	20°C	

BreatheSafe

2

BACK — Settings

SYSTEM CHECK	VIEW GRAPH
EVENT LOG	SITE ACCESS MENU

BreatheSafe

3

BACK — Enter Pin

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER

4

BACK — Settings Page 1 — NEXT

STARTUP OPTIONS	DOOR WINDOW SETTING	PRESSURE SETPOINT
CHECK RUNTIME	DATE / TIME	CO2 SETTING

BreatheSafe

5

BACK — Settings Page 2

ALARM MUTE RESET	ZERO SENSOR	TEMP SETTING
BUZZER SETTINGS	LOG SETTINGS	FACTORY SETUP

BreatheSafe

6

BACK — Zero Sensor Adjustment

AUTO ZERO SENSOR	Zero Pressure Adjust
	_____ Pa

BreatheSafe

CO2 MODULE ENABLE/DISABLE

Enable or disable to CO2 module used for measuring CO2 levels within the cabin.

CO2 PRIMARY ALARM POINT

The first alarm will sound when CO2 levels inside the enclosure reach this point.

CO2 SETTINGS

Left panel (CO2 Module Enable/Disable)

1.
8:30	22/04/23	25%
Cabin Pressure		50Pa
CO2 Level		200 PPM
Temperature		20°C

BreatheSafe

2. BACK — Settings
- SYSTEM CHECK
- VIEW GRAPH
- EVENT LOG
- SITE ACCESS MENU

BreatheSafe

3. BACK — Enter Pin

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER

4. BACK — Settings Page 1 — NEXT
- STARTUP OPTIONS
- DOOR WINDOW SETTING
- PRESSURE SETPOINT
- CHECK RUNTIME
- DATE / TIME
- CO2 SETTING

BreatheSafe

5. BACK — CO2 Sensor Alarm Setting — DISABLE CO2 SENSOR

CO2 ALARM DELAY SETTING	CO2 PRIMARY ALARM SETPOINT	CO2 CRITICAL ALARM SETPOINT
2 Min	1000 PPM	2500 PPM

ALARM MUTE DELAY

Right panel (CO2 Primary Alarm Point)

1.
8:30	22/04/23	25%
Cabin Pressure		50Pa
CO2 Level		200 PPM
Temperature		20°C

BreatheSafe

2. BACK — Settings
- SYSTEM CHECK
- VIEW GRAPH
- EVENT LOG
- SITE ACCESS MENU

BreatheSafe

3. BACK — Enter Pin

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER

4. BACK — Settings Page 1 — NEXT
- STARTUP OPTIONS
- DOOR WINDOW SETTING
- PRESSURE SETPOINT
- CHECK RUNTIME
- DATE / TIME
- CO2 SETTING

BreatheSafe

5. BACK — CO2 Sensor Alarm Setting — DISABLE CO2 SENSOR

CO2 ALARM DELAY SETTING	CO2 PRIMARY ALARM SETPOINT	CO2 CRITICAL ALARM SETPOINT
2 Min	1000 PPM	2500 PPM

ALARM MUTE DELAY

CO2 ALARM DELAY

After CO2 (concentration in ppm) within the cabin reaches the 1000 ppm setpoint, the alarm will sound after this designated amount of time. The Alarm Delay adjusts the time between the INPRESS TS measuring CO2 concentration and sounding the alarm. Use the onscreen ADJUST buttons to change the corresponding fields. For example, press to toggle through Disabled / 1 – 10 minutes.

CO2 CRITICAL ALARM MUTE RESET

The critical alarm is set at 2500 PPM and cannot be changed. The mute delay, however, can be configured.

CO2 SETTINGS

1

8:30	22/04/23	25%
Cabin Pressure	50Pa	⚙
CO2 Level	200 PPM	🔊
Temperature	20°C	

BreatheSafe

2

BACK   Settings

SYSTEM CHECK	VIEW GRAPH
EVENT LOG	SITE ACCESS MENU

BreatheSafe

3

BACK   Enter Pin

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER

4

BACK   Settings Page 1   NEXT

STARTUP OPTIONS	DOOR WINDOW SETTING	PRESSURE SETPOINT
CHECK RUNTIME	DATE / TIME	CO2 SETTING

BreatheSafe

5

BACK   CO2 Sensor Alarm Setting   DISABLE CO2 SENSOR

CO2 ALARM DELAY SETTING	CO2 PRIMARY ALARM SETPOINT	CO2 CRITICAL ALARM SETPOINT
2 Min	1000 PPM	2500 PPM

ALARM MUTE DELAY

1

8:30	22/04/23	25%
Cabin Pressure	50Pa	⚙
CO2 Level	200 PPM	🔊
Temperature	20°C	

BreatheSafe

2

BACK   Settings

SYSTEM CHECK	VIEW GRAPH
EVENT LOG	SITE ACCESS MENU

BreatheSafe

3

BACK   Enter Pin

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER

4

BACK   Settings Page 1   NEXT

STARTUP OPTIONS	DOOR WINDOW SETTING	PRESSURE SETPOINT
CHECK RUNTIME	DATE / TIME	CO2 SETTING

BreatheSafe

5

BACK   CO2 Sensor Alarm Setting   DISABLE CO2 SENSOR

CO2 ALARM DELAY SETTING	CO2 PRIMARY ALARM SETPOINT	CO2 CRITICAL ALARM SETPOINT
2 Min	1000 PPM	2500 PPM

ALARM MUTE DELAY

6

BACK   Critical Alarm Mute Timeout Adjustment

SET MUTE TIMEOUT MINUTES

10 Mins

BreatheSafe

**Data Download – Setting up RS232 Connection**

1. Plug the RS232/USB adaptor into a free USB port on your computer.

2. Open up TeraTerm software.

   (*TeraTerm* is an open-source software tool and easily accessible via online search)

3. Use the following settings in TeraTerm: Serial and choose the correct port connection.

   Hint:
   Click on the COMxx Port with the "USB serial Port" connection from the drop-down menu.

   Example:
   COM 4
   This connection may be different on your computer.
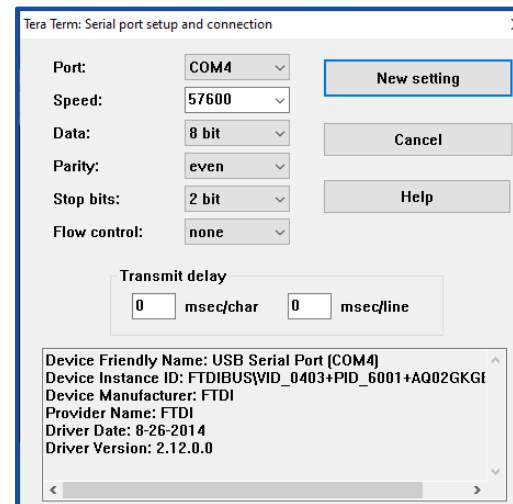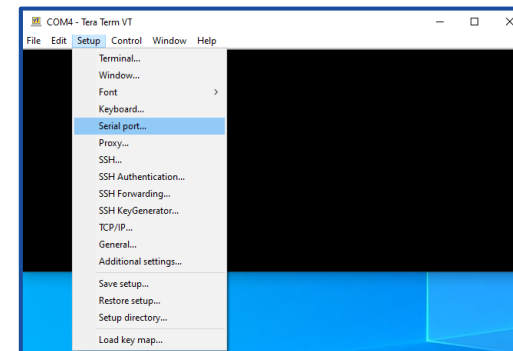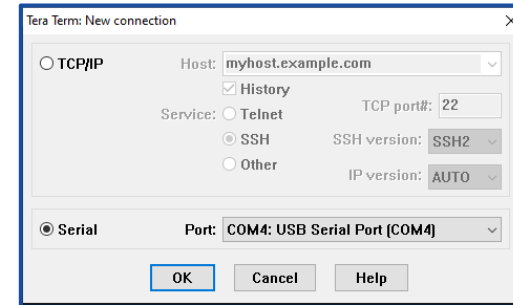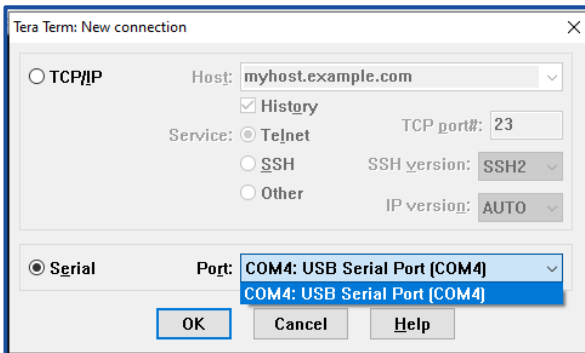
4. Click OK once the correct communication port has been identified.

5. Go to SETUP and click on Serial Port.

6. Change the COM ports to the following configuration:

   Baud

   Rate: 57600 Data: 8 bit

   Parity: EVEN

   Stop: 2 bit

   Flow Control: NONE

Data Download – Setting up RS232 Connection
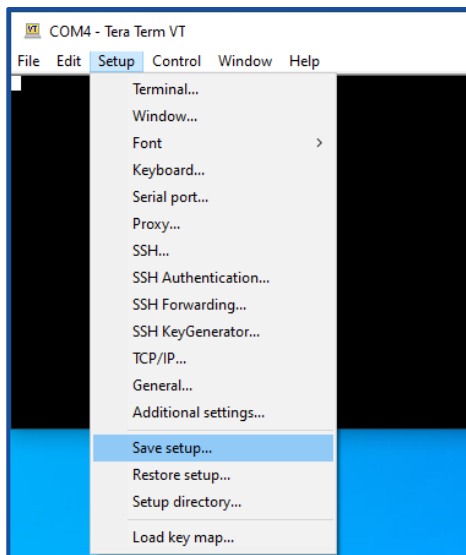
7   If required, you may choose to save the COM port settings. Go to Settings and click save the setup.

Hint: From the drop-down menu, click on the Save Setup.

Name the file and save it.
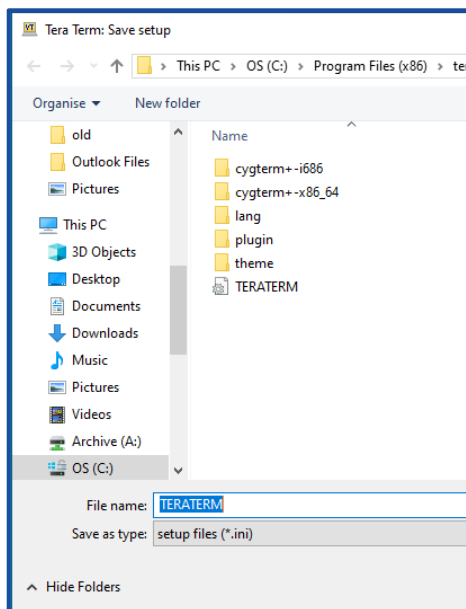
8   The next time a download is required, you may restore the setup, and the required COM PORT settings will be loaded, ready to download the data file from the 200027 unit.
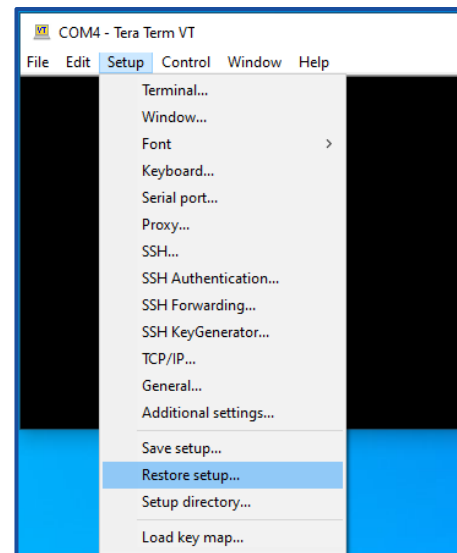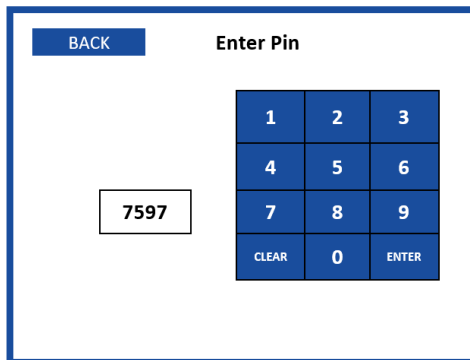

9   From the drop-down menu, click on Restore setup.
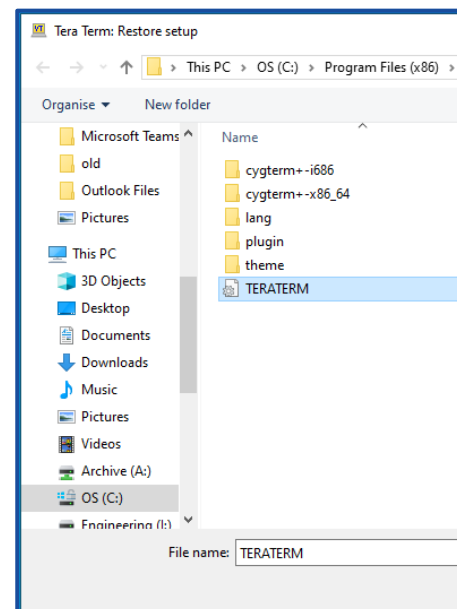
10   Choose the file name you have already saved.

INPRESS Controller Set Up

Settings
BACK

SYSTEM CHECK	VIEW GRAPH
EVENT LOG	SITE ACCESS MENU

BreatheSafe

1. Press 'SITE ACCESS MENU'.

Enter Pin
BACK

7597

1	2	3
4	5	6
7	8	9
CLEAR	0	ENTER
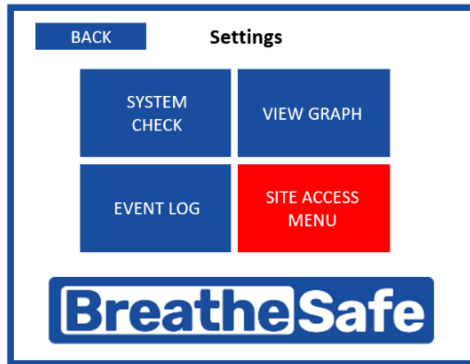
2. Enter the access pin '7597'.

Settings Page 1
BACK   NEXT

STARTUP OPTIONS	DOOR WINDOW SETTING	PRESSURE SETPOINT
CHECK RUNTIME	DATE / TIME	CO2 SETTING

BreatheSafe

3. Press 'NEXT'.

Settings Page 2
BACK

ALARM MUTE RESET	ZERO SENSOR	TEMP SETTING
BUZZER SETTINGS	LOG SETTINGS	FACTORY SETUP

BreatheSafe

4. Press 'LOG SETTINGS'.

Log Settings
BACK

SET LOG INTERVAL MINUTES
60

DOWNLOAD LOG FILE   GET REAL TIME LOG

BreatheSafe
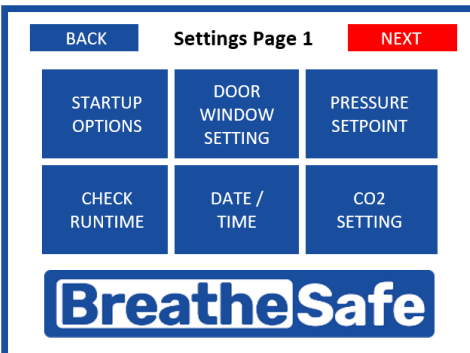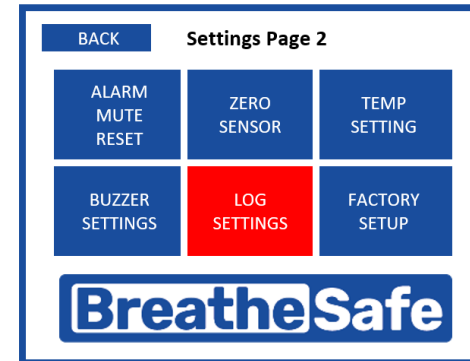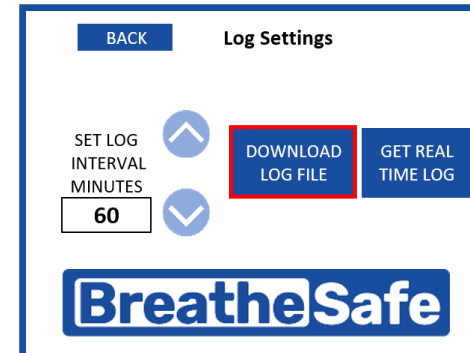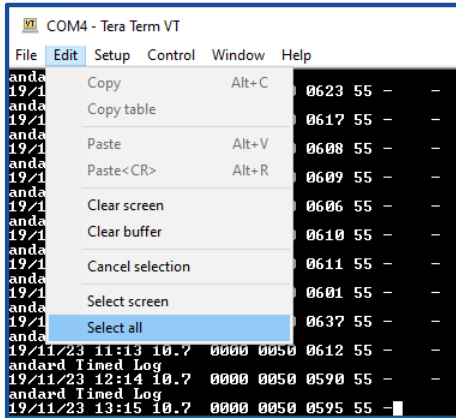
5. Press 'DOWNLOAD LOG FILE'.

DOWNLOADING LOG FILE

BreatheSafe
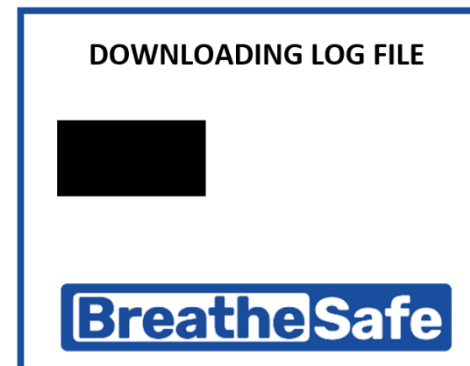
6. Data is now downloading from controller to terminal open on the computer (TeraTerm in this example).

BreatheSafe

Data Download – Copying Contents from Terminal to Spreadsheet

12   From the drop-down menu, click on the Edit menu function.

13   Press "Select All".

14   Select "Copy table".

15   Open a blank excel document and click on the page. Then, right-click to paste the copied table.

16   Fields are:
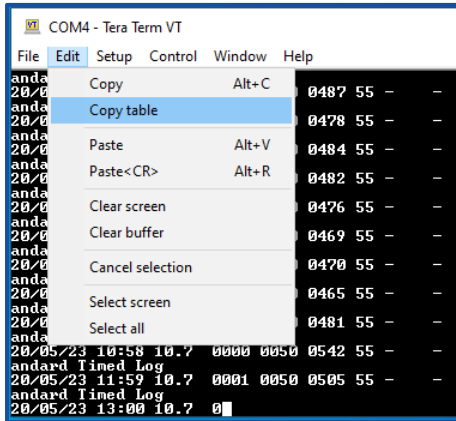
   Date, time, motor (volts) output (e.g. 5.5 = 55%), cabin pressure (Pa), cabin pressure pre-set (Pa), CO2 sensor.

Excel Data Instructions – Unformatted

Open an Excel sheet and select the first cell A-1. Next, press and hold down the CTRL button on your keyboard and then press the letter V on the keyboard.

This procedure will paste the copied data onto that Excel sheet. Once that data has been pasted onto the Excel sheet, click on 'DATA' on the pull-down menu, followed by 'Text to Columns'. Next, select 'Delimited' on the newly opened window and click on Next.

Only select the 'Comma' button in the next window and then click 'Finish'. Then, the Excel fields will update such that each piece of data is placed in the correct columns.

The data is now ready for archiving.

Data Logging Formats

BU No: xxxxxx (the device number unique to each unit and used for identification – format = 000000)

Time: [09:25]

Date: [25/07/12]

Pressure: 32 (Pascals) as an example.

Alarm Type	
0	= No alarm
1	= Low-pressure alarm
2	= Window open
3	= Door open

BreatheSafe

Audit Your System Here: Audit Registry (https://atreg.breathe-safe.com.au/audits)

BreatheSafe Warranty: Warranty - BreatheSafe (www.breathe-safe.com.au/warranty/)