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GreenTRAP™ 300

**CARB Level 3 Verified DECS
for PM Control**

Installation Manual

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1 GreenTRAP™ 300 Warranty

1.1 Your Warranty Rights and Obligations

Nett Technologies Inc., warrants that the diesel emission control system in the application for which it is sold or leased to be free from defects in design, materials, workmanship, or operation of the diesel emission control system which cause the diesel emission control system to fail to conform to the emission control performance level it was verified to, or to the requirements in the California Code of Regulations, Title 13, Sections 2700 to 2706, and 2710, for the periods of time listed below, provided there has been no abuse, neglect, or improper maintenance of your diesel emission control system, vehicle or equipment, as specified in the owner’s manual. Where a warrantable condition exists, this warranty also covers the engine from damage caused by the diesel emission control system, subject to the same exclusions for abuse, neglect or improper maintenance of your vehicle or equipment. Please review your owner’s manual for other warranty information. Your diesel emission control system may include a core part (e.g., particulate filter) as well as hoses, connectors, a control system, and other emission related assemblies. Where a warrantable condition exists, Nett Technologies Inc. will repair or replace your diesel emission control system at no cost to you including diagnosis, parts, and labor.

Table 1: Minimum Warranty Period

| Engine Type | Engine Size | Warranty Period |
|------------------------------------------------------------------------|-------------------|-------------------------|
| Off-Road (Prime and Emergency Use Stationary Generator Sets and Pumps) | At or above 50 hp | 5 years or 4,200 hours* |

1.2 Warranty Coverage

For the engine size and applications listed above, the warranty period will be the corresponding years or hours of operation, whichever occurs first. If any emission-related part of your diesel emission control system is defective in design, materials, workmanship, or operation of the diesel emission control system thus causing the diesel emission control system to fail to conform to the emission control performance level it was verified to, or to the requirements in the California Code of Regulations, Title 13, Sections 2700 to 2706, and 2710, within the warranty period, as defined above, Nett Technologies Inc, will repair or replace the diesel emission control system, including parts and labor.

In addition, Nett Technologies Inc. will replace or repair the engine components to the condition they were in prior to the failure, including parts and labor, for damage to the engine proximately caused by the verified diesel emission control strategy. This also includes those relevant diagnostic expenses in the case in which a warranty claim is valid. Nett Technologies Inc. may, at its option, instead pay the fair market value of the engine prior to the time the failure occurs.

1.3 Owner’s Warranty Responsibility

As the equipment owner, you are responsible for performing the required maintenance described in your owner’s manual. Nett Technologies Inc. recommends that you retain all maintenance records and receipts for maintenance expenses for your vehicle, engine, or



equipment, and diesel emission control system. If you do not keep your receipts or fail to perform all scheduled maintenance, Nett Technologies Inc. may have grounds to deny warranty coverage. You are responsible for presenting your vehicle, equipment, or engine, and diesel emission control system to a Nett Technologies Inc. authorized dealer as soon as a problem is detected. The warranty repair or replacement should be completed in a reasonable amount of time, not to exceed 30 days. If a replacement is needed, this may be extended to 90 days should a replacement not be available, but must be performed as soon as a replacement becomes available.

If you have questions regarding your warranty rights and responsibilities, you should contact customer service at Nett Technologies Inc. at 1-800-361-6388 or the California Air Resources Board at 9528 Telstar Avenue, El Monte, California 91731, or (800) 363-7664, or electronic mail: helpline@arb.ca.gov

Installation Manual

2 GreenTRAP™ 300 Installation Warranty

The installer must supply the owner with a copy of the following statements:

2.1 Your Warranty Rights and Obligations

Nett Technologies Inc. and its designated representatives or installers warrant that the installation of the GreenTRAP™ 300 system is free from defects in workmanship or materials which cause the diesel emission control system to fail to conform to the emission control performance level it was verified to, or to the requirements in the California Code of Regulations, Title 13, Sections 2700 to 2706. The warranty period and the extent of the warranty coverage provided by Nett Technologies Inc. and its designated representatives or installers is the same as the warranty provided by the product manufacturer, and the same exclusions must apply.

2.2 Owner Warranty Responsibility

As the vehicle, engine, or equipment owner, you are responsible for presenting your vehicle, engine, or equipment, and diesel emission control system to Nett Technologies Inc. or its designated representatives or installers as soon as a problem with the installation is detected.

If you have questions regarding your warranty rights and responsibilities, you should contact Nett Technologies Inc. at 1-800-361-6388 or the California Air Resources Board at 9528 Telstar Avenue, El Monte, California 91731, or (800) 363-7664, or electronic mail: helpline@arb.ca.gov.

Under no circumstances should the vehicle operator or equipment owner attempt to re-install, repair, or modify the diesel emission control system without written prior approval from Nett Technologies as this may void warranty.

2.3 Warranty Registration

As an authorized installer or equipment owner, you are required to register your system with Nett Technologies to obtain Warranty coverage, and obtain certified training. The Installation Training and Warranty Registration Form (CA-TD) Form must be filled out and filed with Nett Technologies as soon as installation. The full form can be downloaded from: <http://www.nettinc.com/information/support-documents>. A copy must be given to the equipment owner/end-user. This form must be filled out/submitted for each installation.

You will obtain a Certificate of Training after training completion.

3 Authorized Installer Requirements

3.1 Regulation Overview

As of October 1, 2013, California Air Resources Board (CARB) released an updated Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions for Diesel Engines in Title 13 of the California Code of Regulations (CCR) Sections 2700-2711. This code includes obligations and requirements for Diesel Emission Control Strategy (DECS) Manufacturers, Owners (End Users) as well as Authorized Installers/Distributors/Dealers. The main obligations/requirements as well as a list of reporting documents and reference publications can be found in your Operation Manual.

3.2 Pre-Installation Compatibility Assessment

3.2.1 General (Executive Order) Compatibility Requirements

The following checklist outlines the engine compatibility requirements as per the Executive Order (EO):

- The engine must be used in a stationary application associated with prime or emergency standby generators or pumps and rated greater than or equal to 50 hp
- The engine must be certified for use in California or certified by the US EPA and the engine must be in its original certified configuration
- The engine must be certified: 1) Tier 1, Tier 2 or Tier 3 with a rating at or above 50 hp; or 2) Tier 4i with a rated hp between 50-75 or over 750; or 3) Tier 4 Alt 20% NOx and PM, nonroad or stationary diesel engine, that meet the criteria listed herein
- The engine must be certified off-road engine meeting 0.2 g/bhp-hr diesel PM or less based on certification or in-use emissions testing (as tested on appropriate steady state certification cycle outlined in ARB off-road regulations - similar to ISO 8178 D2)
- The engine must be 4-stroke
- The engine can be turbocharged or naturally-aspired, mechanically or electronically controlled
- The engine must not employ exhaust gas recirculation (EGR)
- The engine must not have a pre-existing oxidation catalyst
- The engine must not have a pre-existing DPF
- The engine must not have a pre-existing SCR
- The product must not be operated with fuel additive(s), as defined in CCR, Title 13, Section 2701, unless explicitly verified for use with fuel additive(s)
- The product must not be used with any other systems or engine modifications without ARB and manufacturer approval
- The Manufacturer must review with the Installer/end-user the actual operation conditions (duty cycle, baseline emissions, exhaust temperature profiles and engine backpressure) and other pre-installation compatibility assessments (see the next section) prior to retrofitting the engine with the emission control system to ensure compatibility
- The engine must be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer
- The engine must operate at the load level required to achieve 400°C for a minimum of 30 minutes. Operation at lower temperatures is allowed, but only for a maximum of 300 consecutive minutes

- The fuel must be ULSD (less than or equal to 15ppm sulfur content) or biodiesel blend (biodiesel portion of the blend must comply with ASTM D6751, diesel portion with 13 CCR Sections 2281 and 2282 and the blend contains max. 20% biodiesel by volume)
- The filter has to be cleaned every 2000 hrs if ULSD is used
- The emission control strategy permits ten Cold Starts and ten 30 minute Idle Sessions before regeneration is required
- Any changes to the emission control device are not allowed without ARB approval
- The designated family name of the emission control strategy, **CA/NET/2009/PM3+/N00/ST/DPF01**, must be used in reference to this verification as part of the system labeling requirements. Labels attached to the system and the engine must be identical
- Proper engine maintenance is critical for the proper functioning of the diesel emission control strategy (DECS). The owner of the equipment on which the DECS is installed is strongly advised to adhere to all good engine maintenance practices. Failure to document proper engine maintenance, including keeping records of the engine oil consumption, may be grounds for denial of a warranty claim
- The terms and conditions of the EO must be satisfied regardless of where the system is sold in order for the system to be considered verified. Systems sold as verified, or which carry an ARB-approved label, must satisfy all the terms and conditions of the EO

3.2.2 Compatibility Requirements defined by Nett Technologies

Since the GreenTRAP™ 300 system is dependent on the exhaust temperature profile, the suitability of any candidate engine prior to retrofit requires exhaust temperature data logging.

The following list outlines the key technical aspects of a diesel retrofit candidate engine that must be checked prior to installation of a verified emission control device on a vehicle/equipment.

Table 2: Pre-installation check list

| Engine Characteristics and Maintenance History | Yes | No |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
| Do the candidate engine characteristics meet all terms and conditions of the verification letter (model year, engine family, engine configuration) for the retrofit device being considered? | | |
| Does the candidate engine meet the exhaust gas temperature requirements for successful operation of the diesel emission control strategy? | | |
| Does the diesel fuel used comply with terms and conditions of retrofit device verification letter (sulfur level, biodiesel specification, fuel additives)? | | |
| Does the engine oil consumption rate exceed the limit given by the manufacturer? | | |
| Is there a history of turbocharger replacements? More than two in past 3 years? | | |
| Is there a history of fuel injector replacements? More than two in past 3 years? | | |
| Is there a history of cylinder valve replacements? More than once in past 3 years? | | |
| Visual Inspection | Yes | No |
| Are there any visual integrity problems in the exhaust system (exhaust leaks – manifold to tailpipe)? | | |
| Are there any audible combustion problems? | | |
| Is the intake air filter in good condition? | | |
| Are there any indications of air intake system leaks (visible signs of leaks at seal connectors, visible cracks in the charge air cooler, audible turbo spooling problems, high tailpipe opacity)? | | |
| Are there any visible signs of engine oil or diesel fuel present in exhaust system? | | |
| Are there any visible signs of leaks from the turbocharger seals? | | |
| Are there any visible signs of excessive crankcase vent tube emissions or dripping oil at the vent tube? | | |
| Has the fuel pump and governor setting been tampered with? | | |
| Does the Engine Control Module show any active error codes? | | |
| Is there available space for the retrofit? | | |
| Is the smoke level within the specification of the engine Tier level? Is it under 20%?*** | | |
| If any of the shaded boxes have been checked, the engine/vehicle fails the pre-assessment and should not be retrofit without further consultation with the diesel retrofit device manufacturer. | | |

***As a general rule of thumb, a Smoke Opacity test must be performed if black smoke is emitted at any time from the smoke stack during normal engine operation. The smoke test must be performed according to the SAE J1667 Standard. Please see <http://www.arb.ca.gov/enf/hdvp/saej1667.pdf> for more information. A list of Smoke Test Facilities recommended by CARB can be found in <http://www.arb.ca.gov/enf/hdvp/smoketestlist.pdf>.

4 Installation Preparation

4.1 Before Working on the Machine



- Verify all GreenTRAP™ 300 DPF system components were received and inspect for any damage. Notify carrier immediately if any parts are damaged
- Park the machine on a flat level surface and lower all equipment to the ground
- Stop engine and operate hydraulic controls to relieve hydraulic system pressure
- Hang a “DO NOT OPERATE” sign in front of the operator station
- Turn battery disconnect switch to OFF or disconnect the battery ground strap (when performing electrical installation)
- Ensure engine and exhaust components have cooled before handling



Should you require assistance or have any questions during the installation process, please contact Nett Customer Service toll free at 1-800-361-6388 or direct at 905-672-5453.

4.2 System Components

The major components of the GreenTRAP™ 300 DPF system including a full list of DPF filter models as are listed below.

Table 3: GreenTRAP™ 300 DPF Major System Components

| Item | Description | Part Number | Quantity |
|------|----------------------------------------|-------------------------------------------------------|----------|
| 1 | Diesel Particulate Filter (DPF) | See Below for Model Numbers | 1 |
| 2 | PTLOG™ (see Monitoring System Section) | PT-00150-KT-PTLOG-00010 or PT-00270-KT-PTLOG-00060 | 1 |
| 3 | Gaskets* | Call Nett | 2 |
| 4 | Clamps* | Call Nett | 2 |

*Not covered under warranty.

Table 4: GreenTRAP™ 300 DPF Filter Model Numbers and Dimensions

| Diameter (in.) x Length (in.) | Volume (L) | Model Numbers |
|----------------------------------|------------|-------------------------------------------------|
| 5.66 x 6.00 | 2.47 | SA502 |
| 7.50 x 8.00 | 5.79 | SA705 |
| 7.50 x 12.00 | 8.69 | SA709 |
| 9.00 x 12.00 | 12.5 | SA913 |
| 10.50 x 12.00 | 17.0 | SA1017 |
| 11.25 x 12.00 | 19.5 | SA1120 |
| 11.25 x 14.00 | 22.8 | SA1123 |
| 12.00 x 12.00 | 22.2 | SA1222 |
| 12.00 x 15.00 | 27.8 | SA1228 |
| 15.00 x 15.00 | 43.4 | SA1543 |
| 20.00 x 15.00 | 77.2 | SA2077 |
| Square Side (in.) x Length (in.) | Volume (L) | Model Numbers |
| 5.91 x 10 | 5.72 | Call Nett |
| 11.82 x 10 (filters only) | 22.9 | 4-in-1(4 filters in one SS housing – Call Nett) |

4.3 Installation Procedure

The GreenTRAP™ 300 DPF replaces existing muffler or silencer of the engine on which it is installed.

1. Remove the existing muffler or silencer:
 - a. Loosen the inlet and outlet flanges
 - b. Remove the existing muffler/silencer and gaskets
 - c. Make sure existing flange faces are clean and free of any dirt that might interfere with a good seal. Replace gaskets that show any wear or are torn in this process

NOTE: Please recycle the old muffler/silencer according to all City, County, State, and Federal Regulations.

2. Install the GreenTRAP™ 300 DPF:
 - a. The filter should be installed such that the NPT back pressure port is on the inlet end. Since the DPF design is unidirectional, it prevents the system from being installed in the reverse position. Mount the filter housing such that it is free of obstruction and accessible for inspection and service. The monitoring ports must also be kept free of obstruction. These ports accommodate the connection for a differential pressure switch/gauge transmitter (and temperature gauge, if applicable; see next section)
 - b. Ensure that the exhaust flange gasket that fits between the filter housing flange and the engine exhaust pipe flange is the correct size. The flange face must be

- clean to ensure a tight seal. Cross bolt tightening pattern is the preferred procedure for securing flanges
- c. Ensure that the entire weight of the filter system is supported independently of the engine exhaust connection. A flexible exhaust connector must be used between the engine and the filter. Some extra brackets and supports for the exhaust piping and the filter itself may be necessary. Welding to the filter center body is not permitted and will void the warranty
 - d. Thermal insulation of the inlet exhaust pipe and the filter body is recommended
 - e. Install the Nett PTLOG™ temperature/pressure on-board monitoring and alarm system as explained in the next section
3. Test the GreenTRAP™ 300 DPF:
- a. Reconnect the battery or turn battery disconnect switch to ON (if applicable)
 - b. The installer must record the following information in the SERVICE LOG:
 - i. Date of installation (day/month/year)
 - ii. Engine hours at start-up
 - iii. GreenTRAP™ 300 DPF serial number
 - iv. Engine exhaust backpressure (and temperature, if applicable) at different conditions (see below). This recorded data will be used as a baseline
 - c. Run the engine and measure the engine exhaust backpressure (and temperature, if applicable) at idle, 50% load and 100% load. Ensure that the readings are within the engine manufacturer's recommendations. Field data for the GreenTRAP™ DPF shows that the backpressure imposed on the engine ranges from 15 - 25" of water
 - d. Carefully inspect the installation for exhaust gas leaks and secure mounting of the filter and exhaust system
 - e. The DPF system must be regenerated after ten consecutive cold engine starts or ten 30 minute idle sessions. The engine can never be operated at idle for than 300 consecutive minutes. To achieve filter regeneration, the engine must run until the exhaust temperature exceeds 400°C for a minimum of 30 minutes and the backpressure monitoring system indicates a normal backpressure reading

5 Nett GreenTRAP™ On-board Monitoring and Alarm System Installation

5.1 PTLOG™ 150 Exhaust Backpressure Monitor & Alarm

5.1.1 PTLOG™ 150 System Components

The components included in the PTLOG™ 150 engine exhaust backpressure monitor and alarm system kit PT-00150-KT-PTLOG-00010 are listed in Table 5 and depicted in Figure 1:

Table 5: PTLOG™ 150 Items List

| Item | Description | Part Number | Quantity |
|------|-----------------------------------------------------------------|-------------|-----------|
| 1 | Technical Manual, PTLOG150 | | 1 |
| 2 | Control module, PTLOG150 | 119038 | 1 |
| 3 | Wiring harness, PTLOG150 | 119039 | 1 |
| 4 | Compression tube fitting, Adapter, 1/4" tube x1/8"NPT(M), brass | 119029 | 1 |
| 5 | Compression tube fitting, Adapter, 1/4" tube x1/8"NPT(F), brass | 119035 | 1 |
| 6 | 3/16" hose to 1/8" NPT barbed hose fitting | 119589 | 1 |
| 7 | ø1/4" O.D. x 2' copper tube, PTLOG150 | 119040 | 1 |
| 8 | Ø3/16" x 4" rubber hose, PTLOG150 | 119041 | 1 |
| 9 | Water separator, assembly, PTLOG150 (optional) | 119413 | Call Nett |

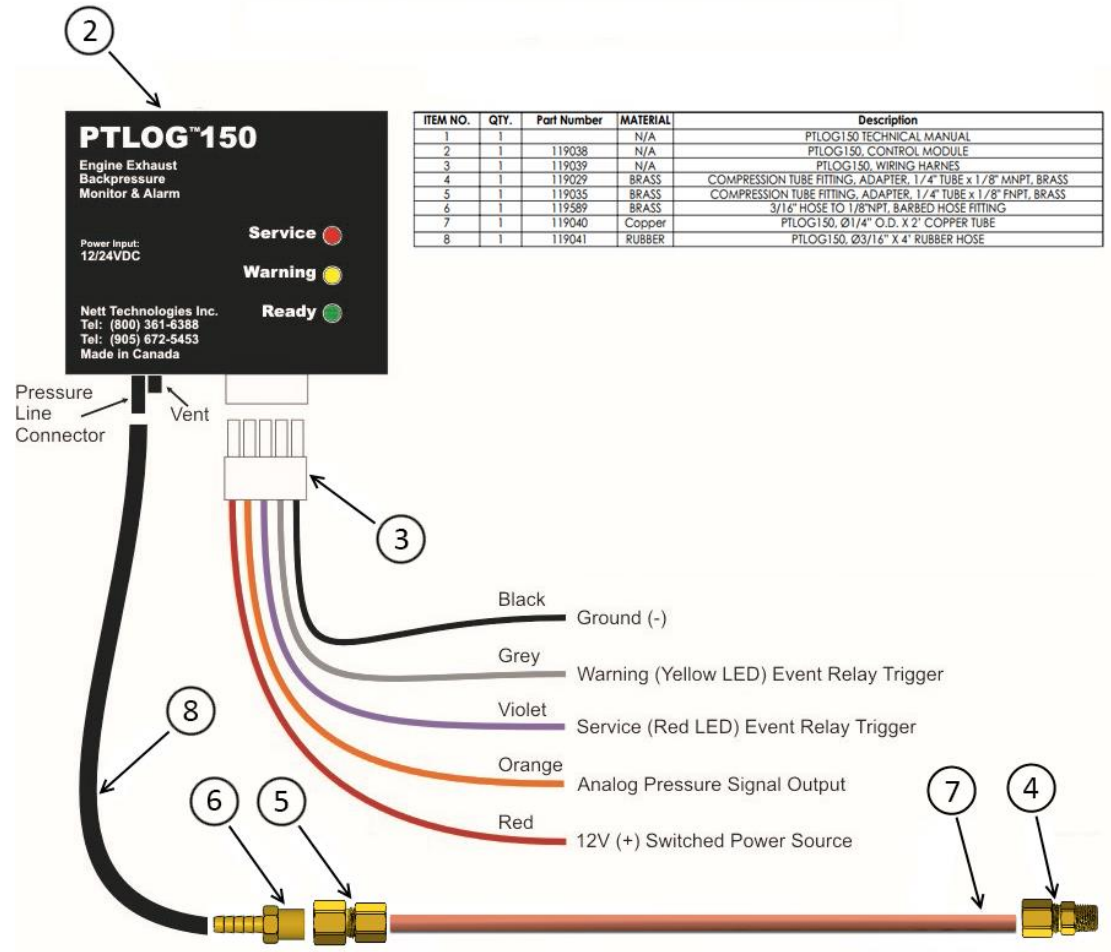


Figure 1: PTLOG™ 150 Wiring Diagram and Parts List

Please see the Operation Manual for PTLOG™150 system description, operation and troubleshooting steps.

5.1.2 PTLOG™ 150 Installation Procedure

Step 1: Install the Electronic Control Module

An ignition switched +12V or +24V power source is required for the PTLOG™150 electronic control module. The PTLOG™150 control module (2) should be mounted in a location which is visible to the operator. If this is not feasible, additional lamps and/or audible alarms should be connected to the yellow and red event relay triggers and installed in a location visible to the operator.

The module mounting location should permit the wiring harness to reach the application's electrical system and the pressure line to reach the diesel particulate filter or 1/8" N.P.T. fitting in the exhaust system. The module must be mounted above the exhaust system and away from heat sources. The two tubes (pressure line connector & vent) on the bottom of the module should point downwards to minimize moisture and dirt contamination.



Caution: Exposure to high temperatures can damage the module. If mounted in the engine compartment, the unit should be installed in a reasonably cool location, away from the exhaust manifold and at least 30 cm (12”) away from the exhaust piping.

Step 2: Install the Pressure Line

The pressure line connects the exhaust system backpressure to the pressure sensor located inside the PTLOG™ 150 module. Care should be taken to ensure the copper tube (7) and rubber pressure hose (8) are routed so that they are not kinked or pinched, impeding the pressure signal from reaching the module.

Assemble the coupler (5) and barbed fitting (6) to one end of the copper tube (7). Tighten securely.

Install the assembly (4,5,6,7) into the 1/8” N.P.T. port on the diesel filter or exhaust system. The copper tube is flexible and may be bent to avoid obstacles.

Connect the rubber pressure hose (8) to the barbed fitting (6) and route it to the control module (2). The rubber pressure hose may be cut to length as required. There are two tubes present on the bottom of the module, the longer tube is the pressure line connector, to which the rubber pressure hose (8) is connected. The shorter tube is atmospheric port which must be left open and unobstructed.

Step 3: Connect the Wiring

Connect the black wire from the PTLOG™ 150 wiring harness to the negative (-) terminal of the battery in order to ensure a ground connection before any other connections are made.

Connect the red wire to an ignition switched (+12V/+24V DC) power source (power on only when ignition switch is turned on).

The orange wire carries an analog pressure signal which can be monitored with a high impedance receiver (>10K Ohms). The voltage varies with exhaust system backpressure; the output at 0” H₂O is a nominal 0.5V (DC) and the output at 138 ”H₂O (34.3 kPa) is 4.5V (DC). If the analog pressure signal is not used, it is recommended that the wire be cut off and discarded.

Optional – use the grey and violet relay trigger wires to activate additional lamps, audible alarms or other 3rd party devices to provide additional warning (or other function) for a yellow or red LED event (high exhaust backpressure). These are switched grounds designed to drive a standard automotive style relay. Connect one end of the relay coil to the +12/24V DC power source and the other to the appropriate relay trigger wire.

5.2 PTLOG™ 270 DPF Exhaust Backpressure & Temperature Monitor, Alarm & Logger System

5.2.1 PTLOG™ 270 DPF System Comp

As illustrated in the schematic below, the PTLOG™ 270 DPF system is capable of logging the DPF inlet, outlet temperatures and backpressure sensor. The system is also able to connect to the engine CAN network (if available) to record engine parameters in order to determine the DPF status under all operating conditions. The components included in the system are listed and depicted in Table 6 and Table 7.

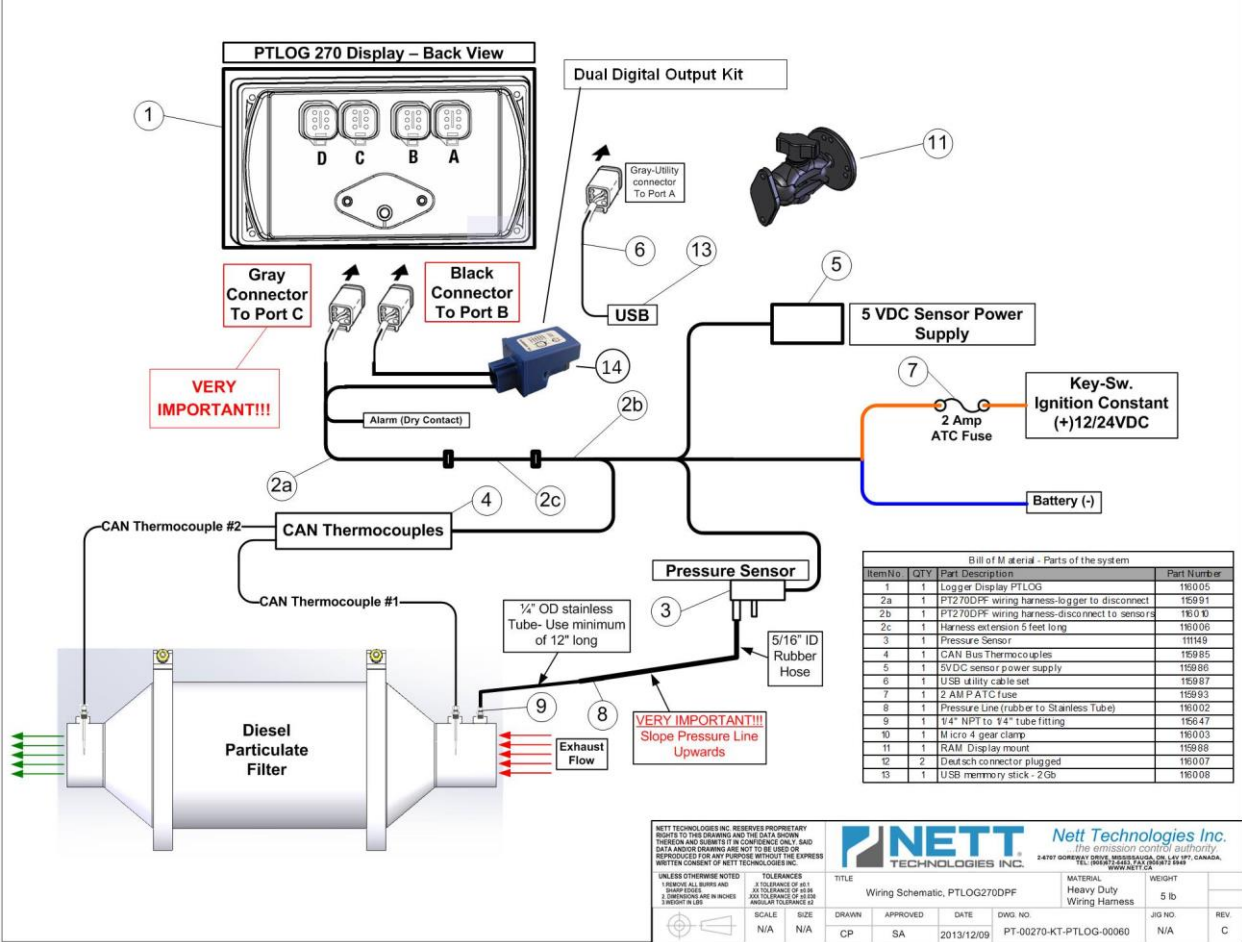








Figure 2: PTLOG™ 270 DPF Monitoring, Alarm and Logger System Schematic

Table 6: PTLOG™ 270 DPF Items List

| Item | Description | Part Number | Quantity |
|------|-----------------------------------------------|-------------|----------|
| 1 | Logger Display, PTLOG | 116005 | 1 |
| 2a | PT270DPF wiring harness-logger to disconnect | 115991 | 1 |
| 2b | PT270DPF wiring harness-disconnect to sensors | 116010 | 1 |
| 2c | Harness extension, 5 feet long | 116006 | 1 |
| 3 | Pressure sensor | 111149 | 1 |
| 4 | CAN Bus thermocouples | 115985 | 1 |
| 5 | 5VDC sensor power supply | 115986 | 1 |
| 6 | USB utility cable set | 115987 | 1 |
| 7 | 2 AMP ATC fuse | 115993 | 1 |
| 8 | Pressure line (rubber to stainless tube) | 116002 | 1 |
| 9 | 1/4" NPT to 1/4" tube fitting | 115647 | 1 |
| 10 | Micro 4 gear clamp | 116003 | 1 |
| 11 | RAM display mount | 115988 | 1 |
| 12 | Deutsch connector plugged | 116007 | 2 |
| 13 | USB memory stick, 2Gb | 116008 | 1 |
| 14 | Dual Digital Output Kit | 117577 | 1 |

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Table 7: PTLOG™ 270 DPF Main Components Depiction

| Component | Part | Qty. | Image |
|-------------------------------------|------------------|------|---------------------------------------------------------------------------------------|
| Screen / Controller | 116005 | 1 |  |
| Dual CAN Temperature Sensor | 115985 | 1 |  |
| Differential Pressure Sensor | 111149 | 1 |  |
| Universal Mount Kit | 115988 | 1 |  |
| Stainless Steel Tube to Rubber Hose | 116002 | 1 |  |
| Fitting Hose Clamps | 115647 116003 | 1 |  |

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|----------------------------|----------------------------|---|---------------------------------------------------------------------------------------|
| Harness | 115991 116010 116006 | 1 |  |
| Sensors Power Supply | 115986 | 1 |  |
| Interface / Download Cable | 115987 | 1 |  |
| USB Memory Stick | 116008 | 1 |  |
| Dual Digital Output Kit | 117577 | 1 |  |

Please see the Operation Manual for PTLOG™270 DPF system description, operation and troubleshooting steps.

5.2.2 PTLOG™ 270 DPF Display Specification

- Screen size: 4.3 inch TFT color screen for daylight visibility
- Resolution: WQVGA 480 x 272 pixels, 16-bit Color
- Dimensions: 7.4 x 3.8 x 1.94 in. (186.9 x 96.5 x 49.4 mm)
- Protection: IP66 (NEMA 4) front and IP67 (NEMA 6) back
- Case material: Polycarbonate back case
- Power supply: 6 to 35 VDC, reverse polarity and load-dump protected
- Power: 10w full backlight
- Temp Range: -40 to +85°C (Operating) / -40 to +85°C (Storage)
- User input keys: 8 sealed momentary tactile buttons

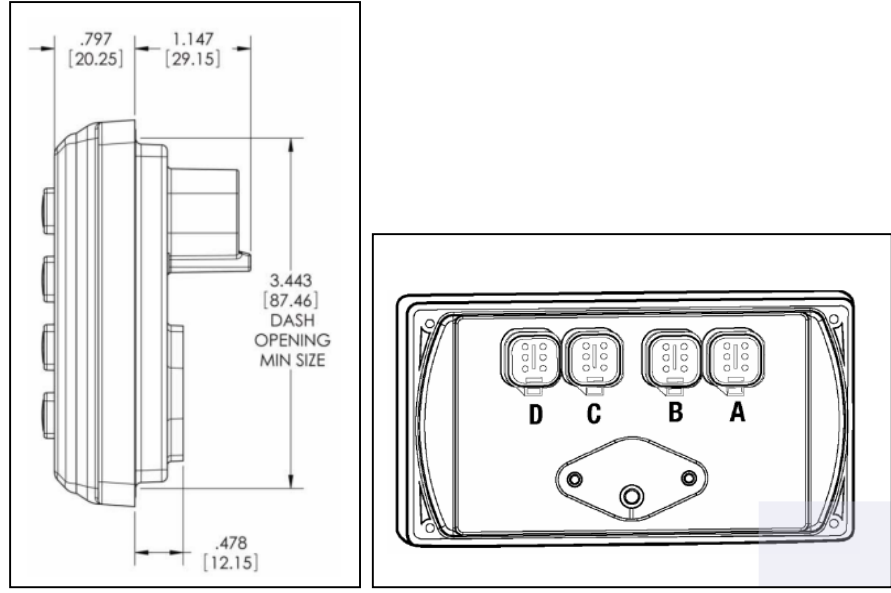


Figure 3: PTLOG™ 270 DPF Display

- Interface: 2x Ports, CAN 2.0B - SAE J1939 standard
- Memory: 128Mbyte - 256 MB Flash Memory
SD storage (optional)
- Protocols: 2 x CAN 2.0B
- Connections: 4 Deutsch DT IP69K (NEMA PW12) 6-pin connectors
- Vibration: Random vibration, 7.86 G/rms (5-2000 Hz), 3 axis
- Shock: +/- 50G in 3 axis

5.2.3 PTLOG™ 270 DPF Installation Procedure

Step 1: Install the Electronic Control Module (See Schematic)

- The PTLOG™270 Screen / Controller (1) (see Schematic, Figure 2) should be mounted in a location which is visible to the operator
- The Screen / Controller unit can be mounted either in the dash board by cutting an opening in the dash front or mounting it on the dash by using the Universal Mount (11)



Caution: Avoid Exposure to direct sun and high temperatures that can affect and/or damage the Screen / Controller unit.

Step 2: Install the Pressure Line (See Schematic)

The pressure line connects the exhaust system backpressure to the pressure sensor. Care should be taken to ensure the stainless steel tube and rubber hose (8) are routed so that they are not looped, kinked or pinched, impeding the pressure signal from reaching the module.

- Mount and rigidly secure the pressure sensor (3) on the frame with its ports pointing DOWN and at a HIGHER level than the backpressure port on the exhaust system
- Connect the stainless steel tube (8) to the backpressure port using a coupler (9). Use a minimum of 12" long stainless steel tube and support it by attaching to the DPF mounting brackets
- Connect adequate length of the rubber hose between the open end of the copper tube and the pressure sensor high pressure port (one with larger diameter) using a supplied micro clamp (10)



Note: Ensure the pressure line is straight and not looped to allow all condensation to flow back into the exhaust system.

Step 3: Connect the Wiring (See Schematic and Figure 4 below)

- Run the harness (2a)-(2c) starting from the back of the Screen/Controller past the temperature and pressure sensors and to the battery power. It is recommended to attach the harness to the frame and fire wall avoiding areas in proximity to hot surfaces, heat sources and engine fluids
- Connect the **GRAY** Connector to **Port C** on the back of Screen/Controller unit (1)
- Connect the **BLACK** Connector from the dual digital output kit to **Port B** on the back of Screen/Controller unit (1)
- Connect the **BLACK** Connector from the main harness to **GRAY** port in the dual digital output kit (14)
- Connect to pressure sensor (3)
- Connect to temperature sensors (4)
- Mount and connect the temperature sensor power supply (5)
- Connect the red wire to an ignition switched (+12V/+24V DC) power source
- Connect Blue (-) and Fused (7) Red (+) to Main Power Input
- Loop and secure any harness extra length (2c) away from vehicle moving parts
- The USB memory stick (13) can be connected to the display unit Port A using a utility cable set (6). Use Deutsch connector plugs (12) for Ports A and D when not in use

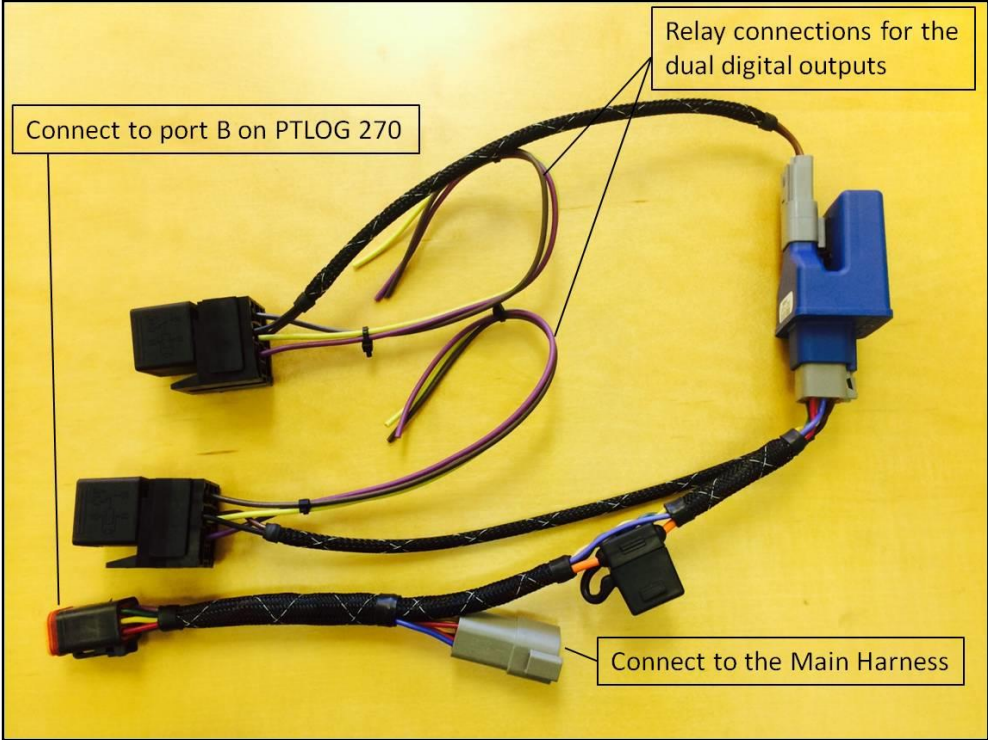


Figure 4: PTLOG™ 270 Harness Connections

6 GreenTRAP™ 300 DPF Maintenance, Troubleshooting and Component Swapping

As the equipment owner, you are responsible for performing the required maintenance on your Nett GreenTRAP™ 300 DPF. Nett Technologies recommends that you retain all maintenance records and receipts of maintenance expenses and urea purchases. If you do not keep your receipts or fail to perform recommended scheduled maintenance, Nett Technologies may have grounds to deny warranty coverage. Please see your Operation Manual for a full list of maintenance requirements, including DPF cleaning procedure.

Please consult your Operation manual for Troubleshooting steps as well as Components Swapping and Re-designation provisions.

7 Service Documents

7.1 Service Report

| Location | | | |
|-------------------------------|---------------------------|--------------------------|--|
| Customer Name: | Location: | Address: | |
| Vehicle Information | | | |
| Equipment Make: | Equipment Model and Type: | Equipment Serial Number: | |
| Engine Make: | Engine Model: | Engine Serial Number: | |
| Emission Control Technology | | | |
| Model: | Description: | | |
| Date of Installation: | Comments: | | |
| Repair Description | | | |
| Date: | | | |
| Technician Name: | | | |
| Hour Meter Reading: | | Error Code: | |
| Description of Problem | | | |
| <hr/> <hr/> <hr/> <hr/> <hr/> | | | |
| Corrective Action | | | |
| <hr/> <hr/> <hr/> <hr/> <hr/> | | | |
| Comments | | | |
| <hr/> <hr/> <hr/> | | | |

| Location | | |
|----------------|-----------|----------|
| Customer Name: | Location: | Address: |

| Vehicle Information | | |
|---------------------|---------------------------|--------------------------|
| Equipment Make: | Equipment Model and Type: | Equipment Serial Number: |
| Engine Make: | Engine Model: | Engine Serial Number: |

| Emission Control Technology | |
|-----------------------------|--------------|
| Model: | Description: |
| Date of Installation: | Comments: |

| Log | | | | | |
|-------|---------------------------|-------------|-------------------------|--------------------------|-----------|
| Date: | Hour Meter Reading (Hrs): | Error Code: | Description of Problem: | Corrective Action Taken: | Comments: |
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