



November 3, 2017

VIA EXPRESS MAIL

Mr. Bruce York, Chief
Medium and Heavy Duty Vehicle Division
Office of Defects Investigation
U.S. Department of Transportation
National Highway Traffic Safety Administration
1200 New Jersey SE
Washington, D.C. 20590

Re: **EA16-001**
NEF-106kmb

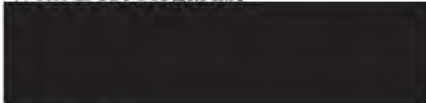
Dear Mr. York:

On behalf of the Volvo Group, I am responding to the questions in your letter dated August 9, 2017.

As the documents contain confidential information, the documents were sent to NHTSA's Chief Counsel Office.

Please feel free to give me a call if you have any questions

With Best Regards,



Tim L. LaFon
Vice President, Regulatory Affairs
Telephone: (336) 393-2233
Fax: (336) 393-2444
Email: timothy.lafon@volvo.com

1. State the number of subject vehicles manufactured to date, grouped by vehicle model and model year. Also, for each vehicle model and model year grouping, state the number of subject vehicles where Volvo installed the subject component(s) as original equipment.

Response: The information is provided in the table below.

Make	Model	MY	# CNG vehicles manufactured	# vehicles with tanks installed by Volvo Group
Mack	Pinnacle (CXU)	2014	44	2
Mack	Pinnacle (CXU)	2015	444	362
Mack	Pinnacle (CXU)	2016	24	15
Mack	Pinnacle (CXU)	2017	53	0
Mack	Pinnacle (CXU)	2018	7	0
Mack	TerraPro (LEU)	2011	71	0
Mack	TerraPro (LEU)	2012	176	0
Mack	TerraPro (LEU)	2013	262	0
Mack	TerraPro (LEU)	2014	376	0
Mack	TerraPro (LEU)	2015	314	0
Mack	TerraPro (LEU)	2016	374	0
Mack	TerraPro (MRU)	2011	59	0
Mack	TerraPro (MRU)	2012	115	0
Mack	TerraPro (MRU)	2013	173	0
Mack	TerraPro (MRU)	2014	233	0
Mack	TerraPro (MRU)	2015	217	0
Mack	TerraPro (MRU)	2016	358	0
Mack	TerraPro (MRU)	2017	103	0
Mack	TerraPro (MRU)	2018	79	0
Mack	LR	2015	1	0
Mack	LR	2016	12	0
Volvo	VNL	2013	4	0
Volvo	VNL	2014	263	0
Volvo	VNL	2015	314	0
Volvo	VNL	2016	237	0
Volvo	VNL	2017	190	0
Volvo	VNL	2018	69	0
Volvo	VNM	2012	12	0
Volvo	VNM	2013	25	0
Volvo	VNM	2014	110	0
Volvo	VNM	2015	1	0
Volvo	VNM	2016	34	0
Volvo	VNM	2017	0	0
Volvo	VNM	2018	20	0

The information was last collected on October 12, 2017 and the source is Volvo and Mack Trucks production records. Note: the tanks identified as installed by Volvo Group were actually installed in most cases by the 3rd party CNG system/ tank supplier. They are identified as installed by the Volvo Group because we contracted the CNG system supplier to install the system and the work was conducted at our facility.

2. State the number of subject vehicles Volvo is aware of, that have experienced Level 3 damage to one or more subject components, grouped by vehicle make, model and model year. Multiple incidents involving the same vehicle are to be counted together as one.

Response: Volvo is aware of four (4) reports where Level 3 damage occurred to the subject components. The information was last collected on October 16, 2017. The source of the information is the Volvo Group North America Regulatory Affairs and Legal Department files,

Vehicle Make	Vehicle Model	Vehicle Model Year	Number per category
Mack	TerraPro (MRU)	2014	One (1)
Mack	TerraPro(MRU)	2016	One (1)
Volvo	VNL	2015	Two(2)

3. State the number of subject components Volvo has installed as original equipment on subject vehicles, sold for service replacement and/or aftermarket installation to date, grouped by calendar year of vehicle production (for original equipment) or calendar year of fuel container sale (for service replacement and/or aftermarket installation), and by fuel container designation (Type 1, Type 2, Type 3 or Type 4).

Response:

Calendar Year	Tank Type	Original Equipment	Service Replacement/ Aftermarket Installation
2010	4	0	0
2011	4	0	0
2012	4	0	0
2013	4	2	0
2014	4	362	0
2015	4	15	0
2016	4	0	0
2017	4	0	0

The information was last collected on October 12, 2017 and the source is Volvo and Mack Trucks production records. Note: the tanks identified as installed by Volvo Group were actually installed in most cases by the 3rd party CNG system/ tank supplier. They are identified as installed by the Volvo Group because we contracted the CNG system supplier to install the system and the work was conducted at our facility.

4. State the number of subject components Volvo is aware of, that have experienced Level 3 damage. For each such container, please provide :
- Calendar year of vehicle production (for original equipment) or calendar year of fuel container sale (for service replacement and/or aftermarket installation);
 - End-of-life date;
 - Calendar year the fuel container was condemned;
 - Fuel container designation (Type 1, Type 2, Type 3 or Type 4); and
 - Summary description of damage that condemned the cylinder (i.e. object impact or abrasion; fire exposure; chemical exposure; improper repair attempt).

Response:

	<i>Incident 1</i>	<i>Incident 2</i>	<i>Incident 3</i>	<i>Incident 4</i>
<i>a. Calendar Year of vehicle production</i>	2013	2014	2014	2015
<i>b. End-of-life date</i>	unknown	unknown	unknown	unknown
<i>c. Calendar year the fuel container was condemned</i>	2016	2015	2016	2017
<i>d. Fuel container designation</i>	4	4	4	4
<i>e. Summary description of damage</i>	Fire Exposure	Fire Exposure	Fire Exposure	Fire Exposure

The information was last collected on October 16, 2017. The source of the information is the Volvo Group North America Regulatory Affairs and Legal Department files,

5. State the number of each of the following, received by Volvo, or of which Volvo is otherwise aware, which relate to, or may relate to, the integrity of the subject components:
- Reports involving a crash;
 - Reports involving a fire or explosion;
 - Reports involving injury or fatality;
 - Property damage claims;
 - Third-party arbitration proceedings where Volvo is or was a party to the arbitration; and
 - Lawsuits, both pending and closed, in which Volvo is or was a defendant or codefendant.
- For subparts "a" through "f," state the total number of each item (e.g., crash reports, injury reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a crash report and an injury report involving the same incident in which a crash occurred are to be counted as a crash report, an injury report and a lawsuit report).
- In addition, for each incident related to items "a" through "f," provide a summary description of the alleged problem and causal and contributing factors and Volvo's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "e" and "f," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Response:

a. Reports Involving Crash	0
b. Reports involving fire or explosion	4
c. Reports involving injury or fatality	1 injury reported
d. Property damage claims	2
e. Third-Party Arbitrations	0
f. Lawsuits	2

Summary description of the alleged problem and causal and contributing factors and Volvo's assessment of the problem, with a summary of the significant underlying facts and evidence:

Incident 1, [REDACTED] VIN 1M2AV17C3EM [REDACTED], 2014 Mack TerraPro:

- *Summary of Alleged Problem:* According to the compliant, "On June 22, 2016, [REDACTED] was at work getting ready to was a [Republic Services] trash truck, when he was severely burned as a result of a violent explosion that was caused by a failure of a component part of the compressed natural gas system attached to the truck."
- *Causal and Contributing factors and Volvo's Assessment:* Volvo has not formulated a conclusion (i.e. assessment) at this time.

Incident 2, [Kane Motor Freight, VIN 4V5NC9UG7FN [REDACTED] (2015 Volvo VNL):

- *Summary of Alleged Problem:* Vehicle fire that was alleged to start at the exhaust.
- *Causal and Contributing factors and Volvo's Assessment:* Volvo thoroughly investigated the matter, but was not able to determine the cause

Incident 3, [Werner Atlanta, VIN 4V5NC9UG7FN [REDACTED] (2015 Volvo VNL):

- *Summary of Alleged Problem:* Vehicle fire involving a CNG vehicle.
- *Causal and Contributing factors and Volvo's Assessment:* Volvo has not formulated a conclusion (i.e. assessment) at this time.

Incident 4, [Waste Connections: VIN 1M2AV17C4GM [REDACTED] (2016 Mack TerraPro):

- *Summary of Alleged Problem:* Vehicle fire involving a CNG vehicle.
- *Causal and Contributing factors and Volvo's Assessment:* Volvo has not formulated a conclusion (i.e. assessment) at this time.

	Incident 1	Incident 2
Parties to the Action	See Below	See Below
Caption	██████████ vs. Republic Services, Motion Industries, Inc., Agility Fuel Solutions LLC a/k/a Agility Fuel Systems, LLC, Agility Fuel Solutions Holdings, Inc., MACK TRUCKS, INC. and The Heil Co. d/b/a Heil Environmental Company	Kane Freight Lines, Inc., Zurich North American Insurance Company, Westchester Fire Insurance Co vs. VOLVO GROUP NORTH AMERICA, LLC, Cummins Westport Inc., Agility Fuel Systems, Inc.
Court	Court of Common Pleas, Philadelphia County Pennsylvania	UNITED STATES DISTRICT COURT FOR THE MIDDLE DISTRICT OF PENNSYLVANIA
Docket number	██████████	██████████
Date filed	February 15, 2017	July 31, 2015

The information was last collected on November 3, 2017. The source of the information is the Volvo Group North America Legal Department files.

- 6 Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the integrity of the subject components or the fuel systems they are part of, that have been conducted, are being conducted, are planned, or are being planned by, or for, Volvo. For each such action, provide the following information:
- Action title or identifier;
 - The actual or planned start date;
 - The actual or expected end date;
 - Brief summary of the subject and objective of the action;
 - Engineering group(s), supplier(s) and/or third-party provider(s) responsible for designing and for conducting the action; and
 - A brief summary of the findings and/or conclusions resulting from the action.

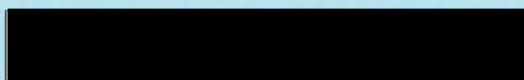
For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

Response: See enclosed folder labeled Response to Question 6.

The information was last collected on November 3, 2017. The source of the information is the Volvo Group North America Legal Department.

Table of Contents:

- I. Pictures for Question 6 (Confidential – All pictures included in the files are confidential)
 - a. [REDACTED]
 - b. Kane
 - c. Werner ATL N927680 Photos
- II. Question 6 ledger redacted



Lafon Tim (othy)

From: Kerry Parrott <Kerry.Parrott@stahl-engineering.com>
Sent: Tuesday, September 06, 2016 2:21 PM
To: Reavis Randall
Cc: Dawn Mault
Subject: FW: Republic Services CNG Vehicle Fire - [REDACTED] Mt. Laurel, NJ; Destructive Exam Protocol
Attachments: [REDACTED] Mount Laurel NJ - Fire Investigation Protocol.pdf

Randy:

We just received this proposed protocol for the collection of all the artifacts from the burned Republic Garbage truck in Mt. Laurel, NJ. We see no issues with this proposal. If you agree, I will contact Neil Wu at Exponent and let him know. Thank you for your help.

Kerry
StahlEngineering
& FAILURE ANALYSIS, LLC

From: Neil Wu [<mailto:nwu@exponent.com>]
Sent: Friday, September 2, 2016 2:52 PM
To: dgverlaan@engsys.com; Kerry Parrott [REDACTED] johnwalker@walkerfire.net
Cc: amauro@cmmattomeys.com
Subject: Republic Services CNG Vehicle Fire - [REDACTED] Mt. Laurel, NJ; Destructive Exam Protocol

All-

Attached is a destructive exam protocol for your review and comment. Please have any comments/suggestions back to me no later than September 12, 2016 at COB. A date and time for this proposed site inspection will be provided shortly. Regards,

Neil P. Wu, P.E., IAAI-CFI, CBO
Senior Managing Engineer

Exponent, Inc.
17000 Science Drive, Ste. 200
Bowie, MD 20715

[REDACTED]
(f) 301-291-2599
(m) 301-275-6359

Fire Scene Examination Protocol

██████████
Mount Laurel, NJ

DOL: June █████ 2016

Objectives

1. The primary objective of this scene examination protocol is to provide for the systematic and orderly examination of the fire scene and preservation of evidence in an effort to determine the origin and cause of the fire.
2. The fire scene examination will be conducted in accordance with the accepted practices and recommendations as outlined in Chapter 4 of NFPA 1033, *Standard for Professional Qualifications for Fire Investigator*, 2014 edition, and in NFPA 921, *Guide for Fire and Explosion Investigations*, 2014 edition.
3. This protocol will establish the procedures for the management and coordination of investigative activities among multiple interested parties.

Control of Scene and Management of the Examination

During the course of the fire scene examination, a briefing with all of the experts shall take place in the morning prior to any work, and at the end of the work day, at the designated area as established by the Exponent personnel.

It is understood that the fire scene and its contents were secured by Republic Services on the day of the incident and have remained under their security since.

It is understood that an initial nondestructive fire scene examination was performed by all interested parties in or around August 2016. Due to the destructive nature of this proposed examination, requests were made to all interested parties to solicit input for the development of this evidence exam protocol. Any such input has been considered and incorporated, where appropriate.

The examination may be suspended to allow previously unidentified interested parties to join the investigation.

It is intended that additional detailed and destructive examinations of individual artifacts and debris will occur at a future date.

Artifact Collection and Debris Removal

The proposed activities are destructive in nature and will involve modification, alternation, and/or movement of artifacts. All parties will be provided an opportunity to visually document the fire scene and contents in its current state. 3D scanning will be performed of the debris field prior to the destructive examination.

Pickup Truck

1. Remove/open hood of vehicle to expose engine compartment.
2. Remove loose ground debris and retain, as needed.
3. Remove vehicle and components and retain, as needed.

Trailer

1. Trace deployed wash equipment hoses to source.
2. Collect ground debris beneath the trailer and retain.
3. Open four fuel containers to confirm contents and mark fill level.
4. Disconnect trailer from pickup truck hitch.
5. Remove and retain trailer and contained equipment.

Refuse Vehicle (#1052)

1. Secure loose fuel hoses in the engine compartment and beneath the chassis.
2. Install a hollow mock CNG regulator enclosure on the existing brackets.
3. Reconstruct and document the flexible high pressure, braided steel fuel hose (HP hose) to the pressure regulator assembly enclosure (red arrows in Figure 1).

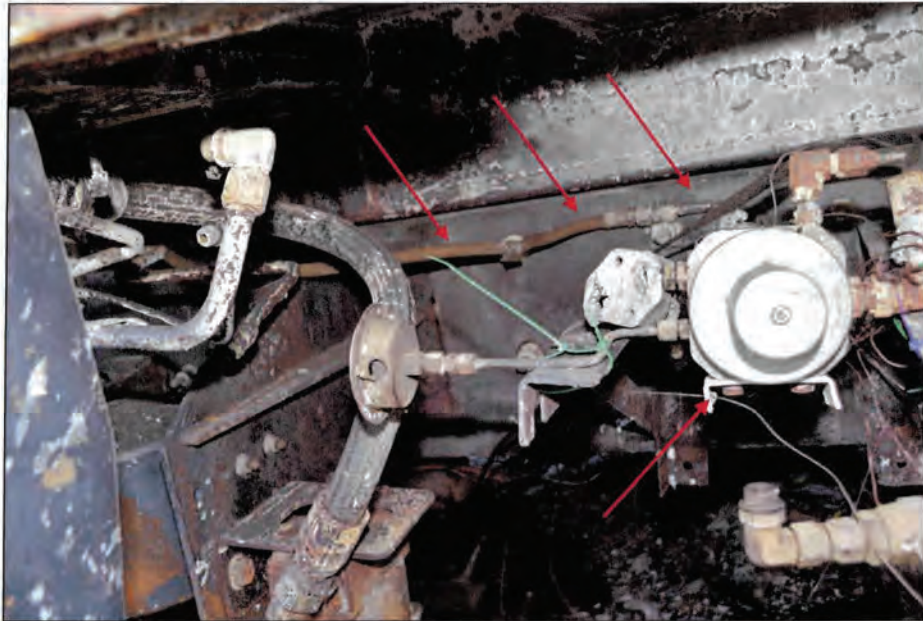


Figure 1 Location of HP hose and regulator components to be removed and retained

4. Mark and cut the stainless steel high pressure CNG tubing at the forward bulkhead of the body.
5. Remove and retain the HP hose with the attached regulator components.
6. Establish 1-foot square grid in debris field.
7. Lift refuse vehicle.
8. Remove tire and cab door remains and retain, as needed.
9. Collect ground debris and store in container corresponding to grid cell.

All retained artifacts, including the previously collected refuse vehicle components altered by the fire department (1 bag) and clothing remains worn by the mobile car wash staff (1 bag), will be transferred to the evidence collection contractor. The evidence collection contractor will be responsible for debris removal, as needed, and collection, transport, and storage of artifacts retained from the fire scene.

Kane Motor Freight

Date: 1/2/15 HVFC Fire Report HVFC # 2 County # 15

Township: Hartford

Location: [REDACTED] I 81 [REDACTED]

Owner / Occupants: Kane is Able

Address: Keyser Ave Scranton

State: PA Zip Code: _____ Telephone #: 570 344-9801

Type: Structure _____ Vehicle X Brush _____ Chimney _____ MVA _____ Haz-mat _____ LZ _____ Other _____

Mutual Aid: To _____ From X Clifford X Hop Bottom _____ New Milford X PSP X PA DOT X

Other Greenfield Great Bend EMA _____ Other _____

Dispatch	<u>18:50</u>	H-11	<u>✓</u>
Responding	<u>18:55</u>	H-12	<u>✓</u>
On Scene	<u>19:02</u>	H-13	<u>✓</u>
Available	<u>21:24</u>	H-14	_____
		H-15	_____
		H-16	_____
		H-17	<u>✓</u>

Hose ft:	Rescue	Haz-mat	Ladders	Chain saw:	Apparatus	Operator
1 1/2"	Flares #:	Speedy dry	14' roof:	Vent saw:	Engine 1	_____
2"	Hyd. Tools:	pads/booms	16' roof:	Vent fan:	Engine 4	<u>B. Moser</u>
2 1/2"	Hand Tools:	Gas meter:	24' ext.:	Pike Poles:	Tanker 3	<u>C. Batzel</u>
3"	Saw-all:	Cribbing:	35' ext.:	T.I. Camera:	Brush 6	_____
5"	Air Chisel:	Lighting:	10' attic:	Generator:	Amb. 2	_____
Junk Yard Dogs:	Gals./Foam:	Lit. Giant:	Porta pump:		Amb. 5	<u>C. Banay</u>

Pack#	SCBA User
1)	_____
2)	_____
3)	_____
4)	_____
5)	_____
6)	_____
7)	_____
8)	_____
9)	_____
10)	_____
11)	_____
12)	_____
13)	_____
RIT Pack _____	

Driver's name: <u>Scott Gonzales</u>	Driver's name: _____
Owner's name: <u>Kane Freightlines</u>	Owner's name: _____
Address: <u>Keyser Ave</u>	Address: _____
<u>Scranton PA</u>	_____
Insurance Co. Info: _____	Insurance Co. Info: _____
Policy #: _____	Policy #: _____
Vin: _____	Vin: _____
Yr./Make/Model: _____	Yr./Make/Model: _____
PLATE: _____	PLATE: _____

570-344-9801
to call

Narrative

Dispatched to Truck Fire I-81 [REDACTED] Truck powered by CNG.

Fire around Exhaust. Arrived on Scene Truck & Front of Trailer Fully involved

CNG Tank had vented Gas was Fueling Fire. Driver stated started around Exhaust under Cab

Other Information/Injuries

Tim Ransom - laceration/evulsion to left thumb
Treated on Scene by EMS.

Eric Allen		John Michaels	
Debbie Ball		Rick Moser	✓
Nicole Ball		Allan Phelps	
Randy Ball		Bonnie Phelps	
Cindy Bancey	✓	Doug Phelps	
Chad Batzel	✓	Keith Poff	
A'Leia Cable		Tim Ransom	
Jason Cable		Mike Sedelnick	
Barbie Chidester	✓	Morgan Sedelnick	
Chip Chidester	✓	Rhonda Smith	
Susie Chidester		Steve Smith	✓
Gus Ferrara		Terry VanGorden	
Dan Frederici		Chris Ward	
Wayne Frederici		Jimmer Warren	
Jamie Halstead		Jan Winemiller	
Connie Kershaw		Jeff Winemiller	
Julie Kesten		Sandy Yushinski	
Teresa Lamberson		Terry Yushinski	
Michael Lamberson		Tom Yushinski	
Brad Marcho		Bobby Zupanovich	
		Kari Zupanovich	✓

From: Bio Frank
Sent: Monday, January 5, 2015 11:43 AM
To: Smith Gregory; Lafon Tim (othy); Sievers Mikael; Jolin Elizabeth; Mowen Jairid; Newton Jeremy
Cc: Galea Joe; Gossler Chris; Meyers Edward; Ostrowsky Eric
Subject: RE: Serious incident notice

Whatever you think is appropriate.

For The Customer

FABio
336-393-3378 (b)
[REDACTED]

From: Smith Gregory
Sent: Monday, January 05, 2015 11:42 AM
To: Bio Frank; Lafon Tim (othy); Sievers Mikael; Jolin Elizabeth; Mowen Jairid; Newton Jeremy
Cc: Galea Joe; Gossler Chris; Meyers Edward; Ostrowsky Eric
Subject: RE: Serious incident notice

Hi Frank,
We have Kerry Parrot (fire investigator) and Ed Meyers (TSM) scheduled to visit the truck on Wednesday of this week. I think it would be best for us to investigate this so we understand what really happened before we reach out to any vendors. I will follow up with you as soon as I get an update.
Thanks
Greg Smith

From: Bio Frank
Sent: Monday, January 05, 2015 11:14 AM
To: Lafon Tim (othy); Smith Gregory; Sievers Mikael; Jolin Elizabeth; Mowen Jairid; Newton Jeremy
Cc: Galea Joe; Gossler Chris; Meyers Edward; Ostrowsky Eric
Subject: RE: Serious incident notice

Any plans to contact Cummins for the visit or communication?

For The Customer

FABio
336-393-3378 (b)
[REDACTED]

From: Lafon Tim (othy)
Sent: Monday, January 05, 2015 10:56 AM
To: Smith Gregory; Sievers Mikael; Jolin Elizabeth; Mowen Jairid; Newton Jeremy
Cc: Galea Joe; Gossler Chris; Bio Frank; Meyers Edward; Ostrowsky Eric
Subject: RE: Serious incident notice

Thanks Greg!!

From: Smith Gregory
Sent: Monday, January 05, 2015 10:46 AM
To: Sievers Mikael; Lafon Tim (othy); Jolin Elizabeth; Mowen Jairid; Newton Jeremy
Cc: Galea Joe; Gossler Chris; Bio Frank; Meyers Edward; Ostrowsky Eric
Subject: RE: Serious incident notice

Thank you Mikael, but being this is a Cummins issue I think it would be best if we go with our team (TSM and reliability) for the investigation.

Elizabeth will be contacting our independent investigator, Kerry Parrot to see what his schedule looks like for this week, if he is not available then we will send out TSM (Ed Meyers) and a representative from Reliability this week to follow up on the remaining trucks that are parked. More updates to follow.

Thanks
Greg Smith

From: Sievers Mikael
Sent: Monday, January 05, 2015 10:37 AM
To: Lafon Tim (othy); Jolin Elizabeth; Mowen Jairid; Smith Gregory; Newton Jeremy
Cc: Galea Joe; Gossler Chris; Bio Frank
Subject: RE: Serious incident notice

Hello

We can support with a Service Engineer (Jeremy Newton) for this inspection if needed – please note we have somewhat limited knowledge of Cummins CNG's engines.

Regards...Mikael

From: Lafon Tim (othy)
Sent: Monday, January 05, 2015 10:09
To: Jolin Elizabeth; Mowen Jairid; Sievers Mikael; Smith Gregory
Cc: Galea Joe; Gossler Chris; Bio Frank
Subject: RE: Serious incident notice
Importance: High

Dear All,

I spoke with Lawrence (Larry) Catanzaro of Kane Freight Lines out of Scranton PA. Larry informed that they have had a fire on vehicle 4V5NC9UG7FN [REDACTED] and have grounded the other 6 vehicles pending an investigation by Volvo. Larry is reporting that they have a concern about the radiant heat from the exhaust elbow and they believe that this may have caused the issue. For the vehicle involved in the fire, I plan to send Local DSM, Ed Meyers?, with an independent investigator, probably Kerry Parrot.

Larry has also requested that we visit their Scranton PA location this week to look at the other vehicles to determine whether they are safe to operate. I would suggest that we send someone from Engineering and/or reliability along with the local DSM, Ed Meyers?, to examine the vehicles. Regarding the accusation on radiant heat, we can examine the vehicles for melting or charring of components in and around the exhaust system and check for required clearances established in our Volvo TRs. Can you, Elizabeth/ Jairid/ Mikael/ Greg (Ed?) please work together to coordinate a visit for this week to Kane's facility in Scranton PA and advise Larry when you will be there?

Please note that this is a CNG vehicle and this requires immediate attention.

Thanks and Best Regards,
Tim

From: Bio Frank
Sent: Monday, January 05, 2015 9:00 AM
To: Lafon Tim (othy)
Cc: Galea Joe; Gossler Chris
Subject: RE: Serious incident notice

Tim,

Per our conversation this morning, below is the correspondence with respect to the natural gas chassis thermal event.

For The Customer

FABio
336-393-3378 (b)
[REDACTED]

From: Gossler Chris
Sent: Monday, January 05, 2015 8:11 AM
To: Bio Frank
Cc: Galea Joe
Subject: FW: Serious incident notice

Frank,
Joe Galea has alerted Greg Smith, NE Regional Service Director, of the below fire to Kane unit. Any other suggestions??

Thanks,
Chris Gossler

From: Galea Joe
Sent: Saturday, January 03, 2015 11:08 AM
To: Gossler Chris; Smith Gregory
Subject: Fwd: Serious incident notice

Chris & Greg- FYI

I had Larry Catanzaro call 80052VOLVO last night to open a case. Per Larry, they opened it and closed it without taking any notes on the incident.

Kane has parked the 6 remaining CNG trucks pending an investigation into the cause of the fire. See driver's comments below on what he believes caused the fire.

Regards,
Joe

Sent from my iPad

Begin forwarded message:

From: Lawrence Catanzaro <Lawrence.Catanzaro@kaneisable.com>
Date: January 2, 2015 at 10:50:11 PM EST
To: Galea Joe <joseph.galea@volvo.com>
Subject: Fw: Serious incident notice

Vin info below.

Lawrence Catanzaro
Sr. Director of Transportation
Kane Is Able
Dependable People. Exceptional Logistics.

www.kaneisable.com

◆ (O) 570 558 5077 [REDACTED] ◆ P.O. Box 931, Scranton PA 18501

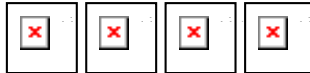
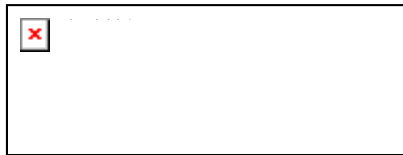
From: Lawrence Catanzaro
Sent: Friday, January 2, 2015 10:00:32 PM
To: Dan Volpe
Subject: RE: Serious incident notice

Tractor and Trailer information below.





Lawrence Catanzaro ♦ Sr. Director of Transportation ♦ Kane Is Able ♦ *Dependable People. Exceptional Logistics.*
www.kaneisable.com ♦ (O) 570-558-5077 [REDACTED] ♦ P.O. Box 931 ♦ Scranton PA 18501



From: Dan Volpe
Sent: Friday, January 02, 2015 8:15 PM
To: Lawrence Catanzaro
Cc: Shane Morgan
Subject: Re: Serious incident notice

Larry

Can someone provide us vehicle information and vin's to enter a claim? I would assume we will have an investigator involved from GB

Regards;
Dan Volpe

On Jan 2, 2015, at 7:38 PM, Lawrence Catanzaro <Lawrence.Catanzaro@kaneisable.com> wrote:

See below

Lawrence Catanzaro
Sr. Director of Transportation
Kane Is Able
Dependable People. Exceptional Logistics.
www.kaneisable.com

◆ (O) 570 558 5077 [REDACTED] ◆ P.O. Box 931, Scranton PA 18501

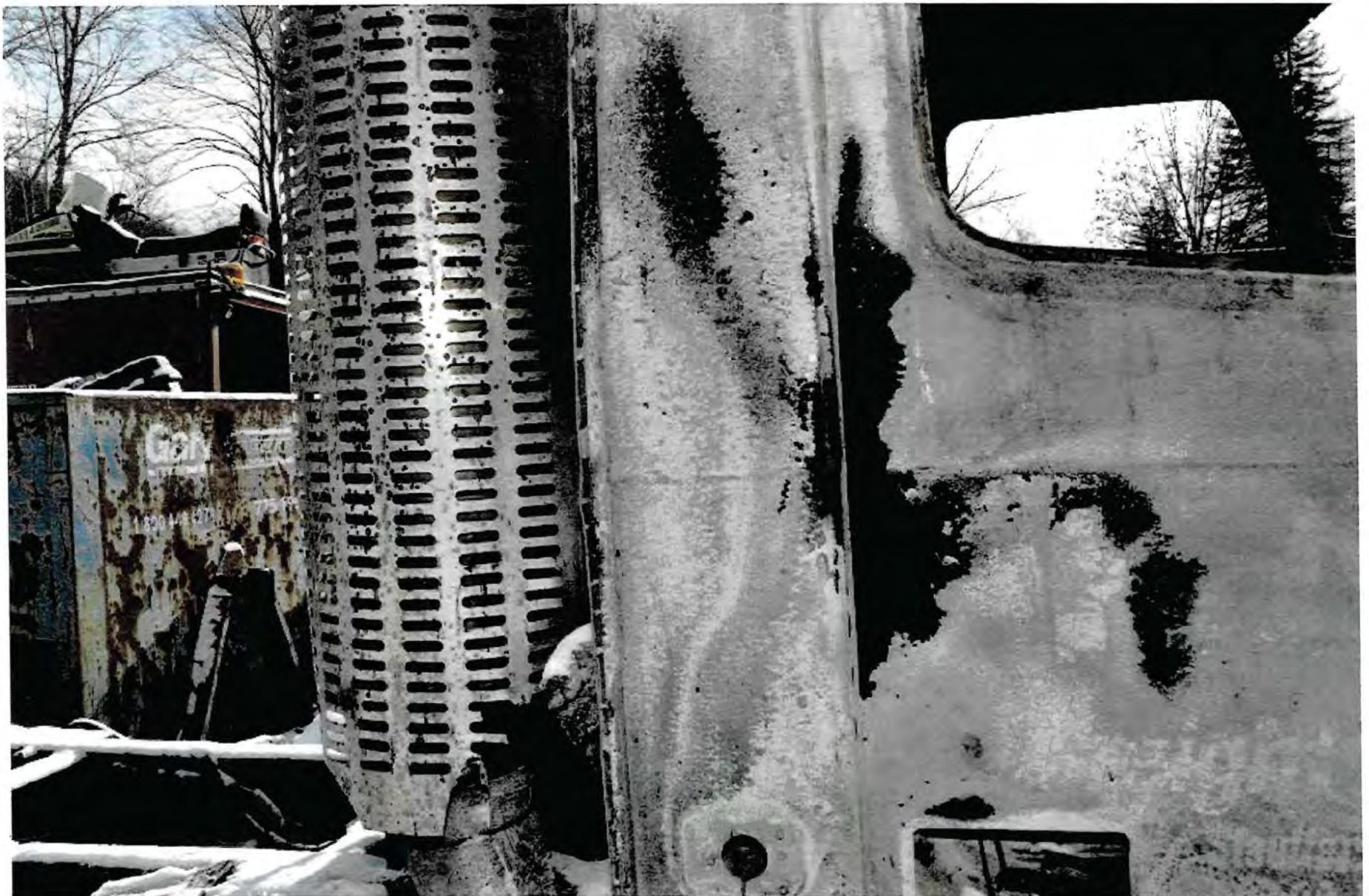
From: Lawrence Catanzaro
Sent: Friday, January 2, 2015 7:32:34 PM
To: Peter Westermann; Lou Houck; Veronica Donchez; Gary Griffith; Jim McMurphy
Subject: Serious incident notice

Our driver (Scott Heller) has reported his new Volvo CNG truck has caught fire on route 81 [REDACTED] near [REDACTED]. He was in route to [REDACTED] delivery, noticed glare, pulled over and saw flames. Grabbed little from the cab and ran across roadway. Tractor totaled, brand new trailer totaled, load likely a full loss.

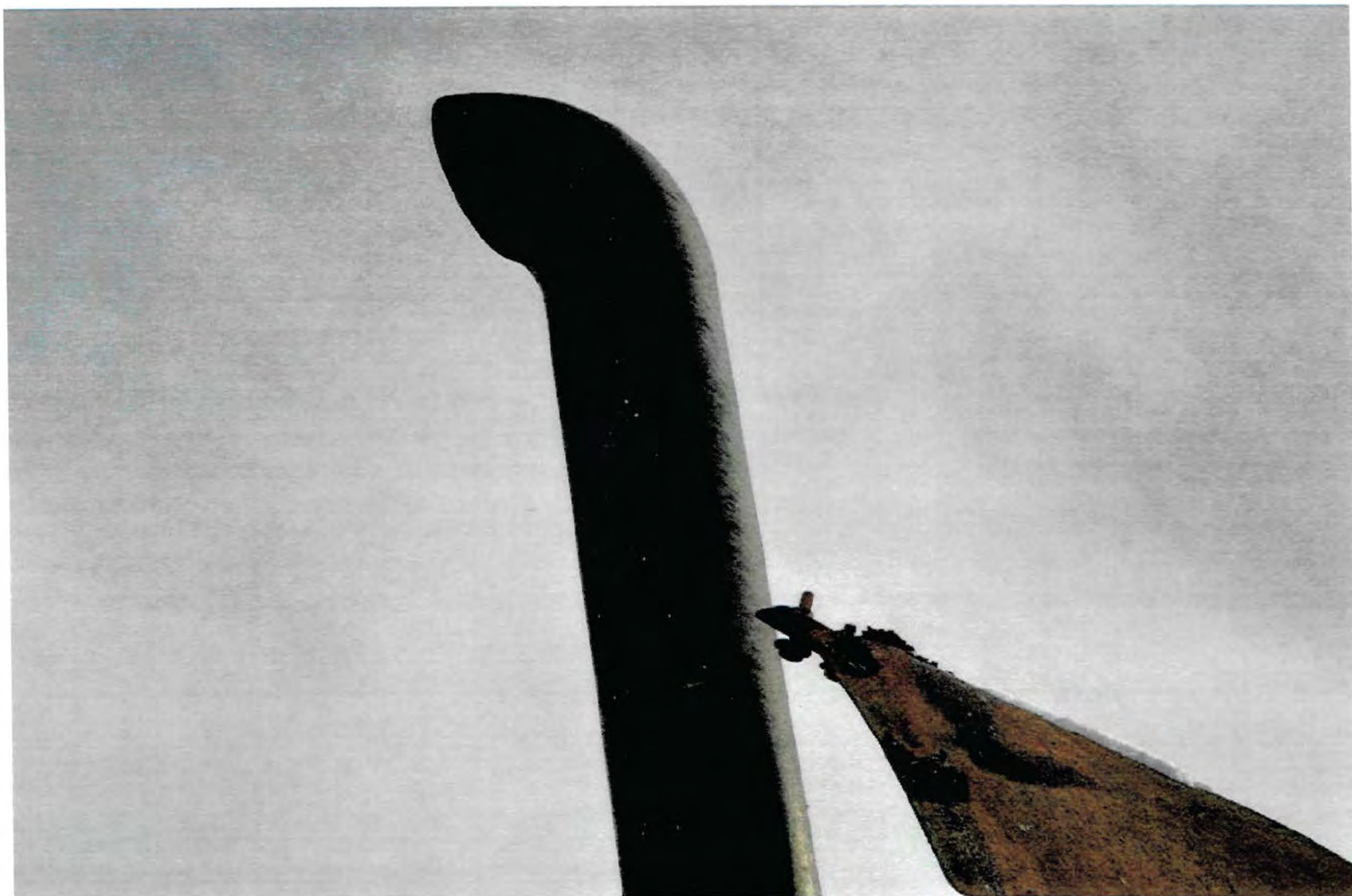
Scott thinks it origin instead along the exhaust where insulation is. I am going to deadline all CNG trucks pending further investigation.

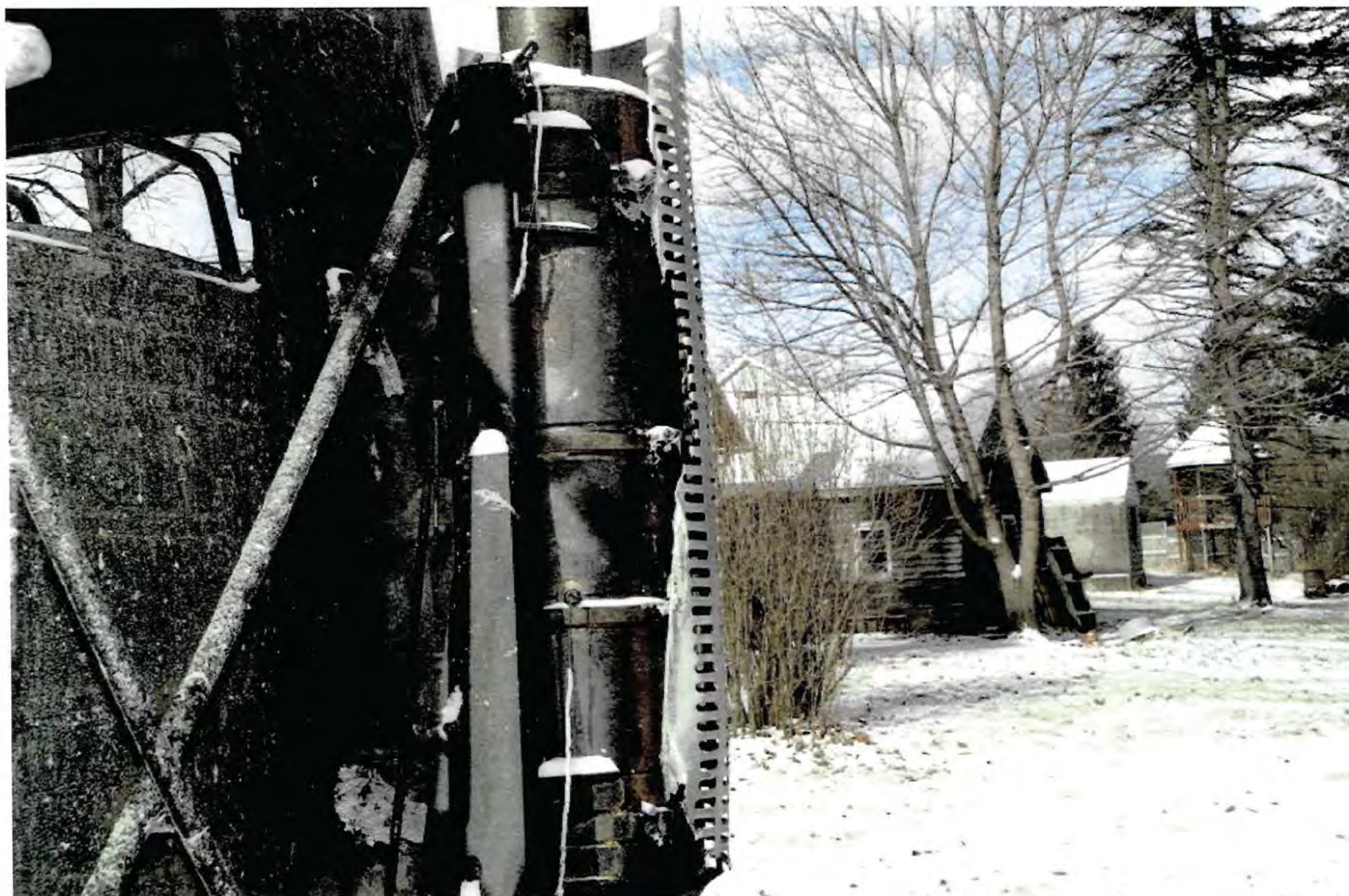
Lawrence Catanzaro
Sr. Director of Transportation
Kane Is Able
Dependable People. Exceptional Logistics.
www.kaneisable.com

◆ (O) 570 558 5077 [REDACTED] ◆ P.O. Box 931, Scranton PA 18501









From: Kerry Parrott <Kerry.Parrott@stahl-engineering.com>
Sent: Wednesday, January 7, 2015 8:52 PM
To: Lafon Tim (othy); Meyers Edward
Subject: Cummins ISX 12 G ESN S75028775
Attachments: Cold-Weather-Operation-for-ISX12-G-and-ISL-G_JAN-2014_FINAL_r2.pdf; CWI Product Information Bulletin - ISX12 G Maintenance Interval Update.pdf; Service bulletin 4332709.pdf

Tim/Ed:

ESN [REDACTED] is the serial number for the engine in the Kane truck we looked at today. I looked up this on the Cummins web site, and it looks like this engine was built on April 25, 2014. This date is important because the recall they issued last year is for engines built between Feb 2013 to Feb. 2014.

The screenshot shows a web browser window with the URL <https://quickservice.cummins.com/qs3/portal/parts/index.html>. The browser's address bar and tabs are visible. The website's navigation bar includes links for "Parts Catalog" and "Dataplate". A red sidebar on the left contains links for "How do I locate my ESN?", "Part Number Supersessions", "VIN To ESN Reference", "Information", "Edit Shopping Cart", "Feedback / Help", "My QSOL Help Tickets", "Frequently Asked Questions", "Publications Catalog", "Translations", "Training", and "My Applications". The main content area displays the "Engine Dataplate - (Original) VIN:" for ESN 75028775. A "PRINT ENGINE DATAPLATE" button is located above the table. The table contains the following information:

Engine Dataplate - (Original) VIN:	
Marketing Model Name	Service Model Name
ISX12 G 400	ISX12 G CM2180 EJ
Shop Order	Build Plant
S039633	JEP - JAMESTOWN ENGINE PLANT
Warranty Start Date	ECM Code
22 Jul 2014	[REDACTED]
Fuel Pump Calibration	Engine Configuration #
PX01	D0L3001BB01
Customer Number	Customer Name
1950	Not Available

I am also attaching for your reference several documents I have regarding the cold weather operation of these engines.

Kerry Parrott

Sr. Engineer/Fire Analyst

260-407-1769 [direct](#) [REDACTED]

Kerry.Parrott@Stahl-Engineering.com

StahlEngineering
& FAILURE ANALYSIS, LLC

3201 Stelhorn Road, Suite C149

Fort Wayne, IN 46815-4697

Cummins Westport
The Natural Choice



ISX12 G & ISL G Cold Weather Operation

January 2014



ISX12 G and ISL G

Cold Weather Operation

- Cold weather affects CEGR SI natural gas engines differently compared to CEGR CI diesel engines
- Natural gas engines are susceptible to sub-freezing intake air
- Too cold intake air forms condensation in charge air coolers and freezes intake components
- Measures **MUST** be taken to insure adequate intake air temperatures are maintained

Cold Weather Concerns

- Throttle Plate
 - Check/Stop engine lamp and possible shutdown
 - Fault Codes: 2758 & 2759
- Frozen Intake Manifold Pressure/Temperature Sensor
 - Check engine light and poor engine performance
 - Fault Codes: 124 & 125
- Ice build up in Low Pressure Regulator
 - Check engine light for low fuel pressure
 - Fault Codes: 2991 & 2776

Throttle Plate

Fault Codes 2758 & 2759

- Issue
 - Faults are caused by ice forming on and around the throttle plate
 - Moisture from charge air cooler (CAC) is forming the ice
- Solution
 - Block air flow across CAC using winter front or similar device
 - Warm intake air ahead of CAC



Frozen Intake Manifold Pressure / Temperature Sensor Fault Codes 124 & 125

■ Issue

- Condensation collects on sensor and freezes while engine is not running
- Intake manifold pressure sensor is failed low (in range) and the ECM calculates low air flow
- Causes low power and fault codes



■ Solution

- Replace sensor or dry current sensor
- Block air flow across CAC using winter front or similar device
- Supply warm intake air ahead of CAC
- Prevent sensor freezing using a heater if parked over night
- Remove sensor from engine if heater not available

Ice build up in Low Pressure Regulator Fault Codes 2991 & 2776

■ Issue

- Condensation from air flow collects in low pressure regulator and freezes
- Regulator can not adjust fuel pressure



■ Solution

- Block air flow across CAC using winter front or similar device
- Warm intake air ahead of CAC



Cummins Westport
The Natural Choice



Cold Weather Operation ISX12 G and ISL G



Cold Weather Operation

- It is possible to operate engines in extremely cold environments if they are properly prepared and maintained.
- Cold weather preparation and operation procedures for Cummins Westport natural gas engines are similar to diesel engines (block heater, coolant heater, battery warmer, radiator shutters etc.).

Cold Weather Operation

- **The correct engine coolant lubricating oil and fuels must be used for the cold weather range in which the engine is being operated:**
- **Ambient Temperature 0 to -32°C (32 to -25°F)**
 - Use 50% ethylene glycol antifreeze and 50% water for the engine coolant mixture.
- **Ambient Temperature -32° to -54°C (-25 to -65°F)**
 - Use 60% ethylene glycol antifreeze and 40% water for the engine coolant mixture.
- Refer to Section V (Lubricating Oil Recommendations) of the Cummins Owners Manual for correct specifications
- Engine intake manifold temperature must be maintained above a minimum of 0 (32 ° F), and coolant temperature must be above 60°C (140° F) in thermostat housing at idle

Lubricating Oil

**Petro-Canada
TechData**



SENTRON™ FLEET NATURAL GAS ENGINE OIL

Introduction

Petro-Canada's SENTRON™ FLEET 0W-30 and 10W-40 are low ash natural gas engine oils (NGEOs) providing extended protection to natural gas fuelled engines in heavy oil extraction where an oil having increased zinc additive is required to control valve train wear. SENTRON FLEET 10W-40 is designed to aid starting in cold winters while retaining protection in severe service in hot weather. SENTRON FLEET 0W-30 is especially designed to provide low temperature performance in extreme cold winter conditions faced by engines that are in unheated areas. It can also provide all season reliability in lower cold engines resulting in product reliability and inventory consolidation.

SENTRON FLEET natural gas engine oil is formulated with Petro-Canada's ultra pure HT Severely Hydrocracked base oils and advanced additive technology to provide customers with extended drain intervals, reduced oil consumption, prolonged wear protection at a wide range of temperatures, which all leads to reduced overall operating costs.

Features and Benefits

- **Potential to extend drain intervals and lower oil consumption which may reduce maintenance costs and provide customer savings**
 - SENTRON FLEET 10W-40 has robust high shear rate viscosity at 150°C to reduce wear
 - Low volatility to control oil consumption
- **Wide operating temperature range controls operating cost**
 - Allows low temperature starting to reduce lost production time

Applications

SENTRON FLEET 10W-40 is recommended for use in natural gas fuelled engines in heavy oil extraction, irrigation and mobile applications that require high zinc for excellent wear control. Sentron Fleet 10W-40 conforms to the Cummins CES 20074 engine oil specification.

SENTRON FLEET 0W-30 formulation is specifically designed as an all season solution for lower load, small to mid-sized engines that are difficult to start in severe cold weather conditions. It provides low temperature performance down to -35°C as well as excellent cleanliness and control of valve deposits.

Operational Considerations

SENTRON FLEET 0W-30 and 10W-40 with excellent control of wear provide worry-free operation and reduced cost to customers under recommended conditions. They are not recommended for catalyst service. Actual oil life is dependent upon system design and operating practices. Petro-Canada's No Nonsense Lubricants Warranty applies.

What is the HT difference?

Hydrocracked means that the process of HT early process to produce extremely clean, ultra pure base oils. This results in a range of benefits, including better oil quality and longer oil life.



- Reduces seasonal change-outs to lower inventory carrying costs.
- SENTRON FLEET 0W-30 allows low temperature starting down to -35°C.
- **Outstanding anti-wear protection**
 - Excellent high and low temperature wear control to protect equipment.
 - Optimized oil ash content to improve spark plug and head life.

Example of a winter 10W30 engine oil that meets CES20074 specification

Cold Weather Operating Aids

Temperature	Coolant Heater	Oil Heater	Under-hood Air	Battery Heater	Radiator Shutters	Engine Enclosure	Thermostatic Fan
50 to 32°F 10 to 0°C					0°C [32°F]		Suggested
32 to -10°F 0 to -23°C	↑ -12°C [11°F]	↑ -12°C [11°F]	↑ -9°C [15°F]	↑ -9°C [15°F]	↑	↑ -19°C [-2°F]	↑ -19°C [-2°F]
-10 to -25°F -23 to -32°C	Required	Required*	Required	Required	Required	Required	Required
-25 to -65°F -32 to -54°C	↓	↓	↓	↓	↓	↓	↓

* Required dependent upon viscosity/pour point.

00200040

Excerpt from ISL G Owners manual.

Coolant, Oil and Battery Heaters, Warm Intake Air, as well as Radiator Shutters/Winter Fronts are required for engine operation below 11 F (-12 C)

Starting Fluid

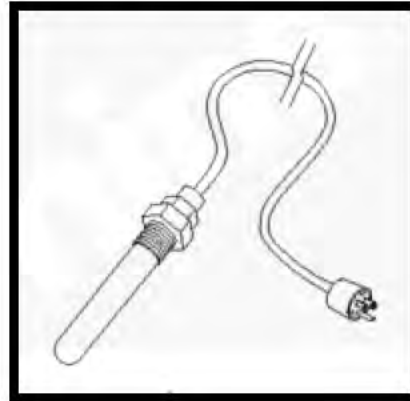
- Due to potential engine damage, starting fluid should not be used.
- The use of starting fluid in a gaseous fueled engine has no practical purpose.

Cold Weather Operating Aids Examples

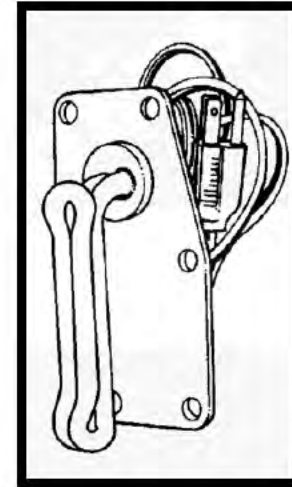
- Winter Fronts



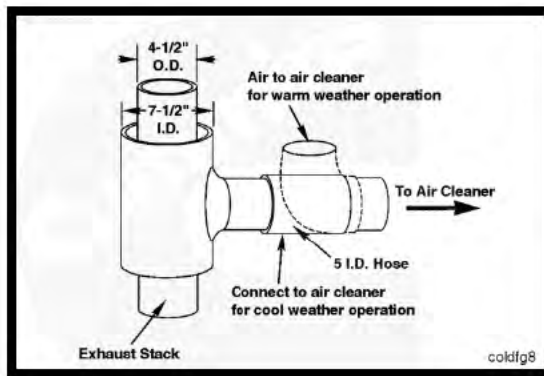
- Oil Heaters



- Coolant Heaters

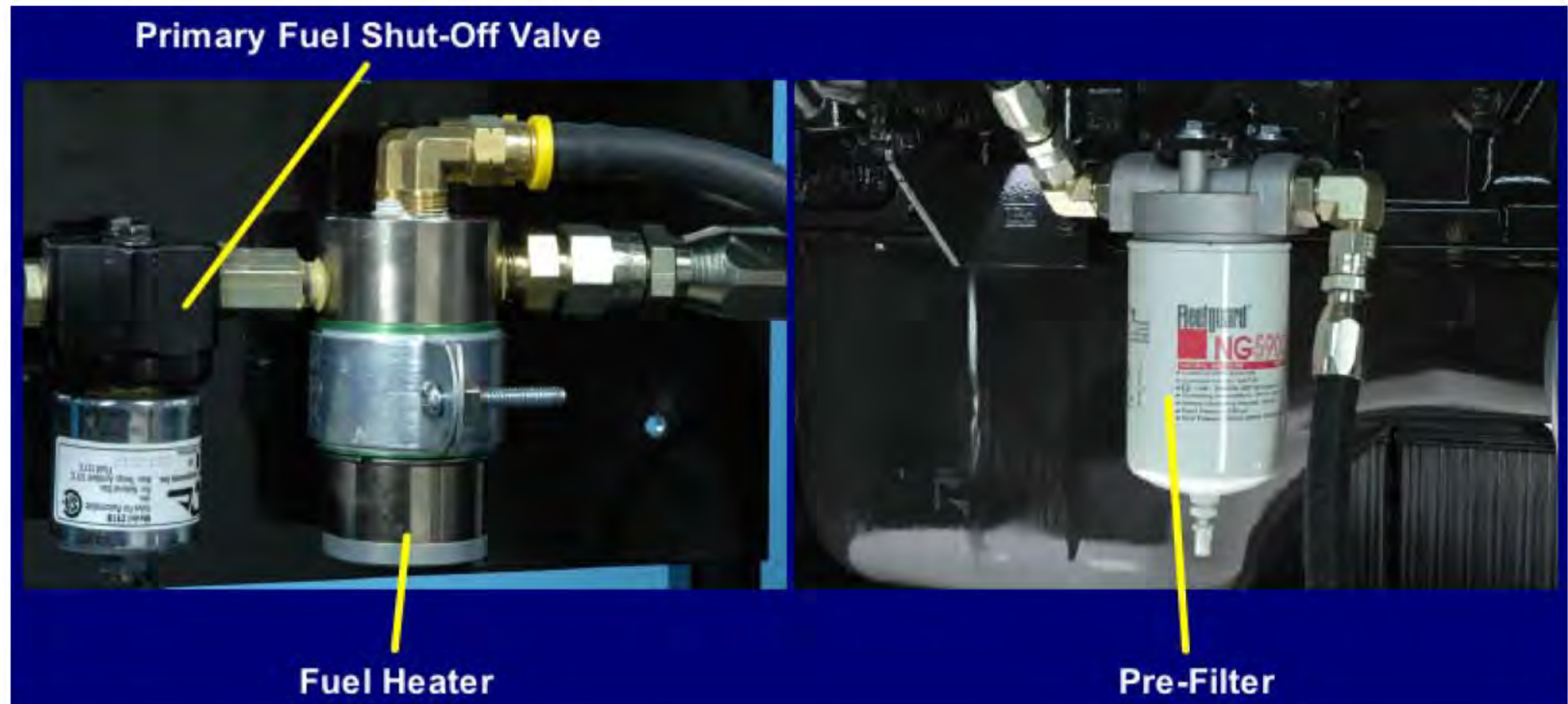


- Warm Underhood Intake Air



OEM Supplied Fuel System Components

(Both CNG and LNG Systems)



- Mounted on the vehicle
- Regulates fuel storage pressure (3,000 psi) down to engine pressure (70-150 psi)
- Fuel heater supplied with warm engine coolant to prevent freezing
- Fuel pre-filter mounted near engine has a daily drain requirement

Fuel Management Module (FMM)



Low & High Pressure Gauges

- Indicates incoming fuel pressure downstream of the fill receptacle and storage cylinders and upstream of the final engine plumbing circuit.
- Indicates cylinder fuel level and pre-regulator pressure reading.

¼ turn Main Shut Off Valve

- Isolates components downstream including those enclosed inside the Fuel Management Module to manually shut off fuel supply to the engine and filter/regulator assembly components.



Install information

- Water Volume in Liters
- Agility Install Location
- Date of Installation
- Tank Expiration Date

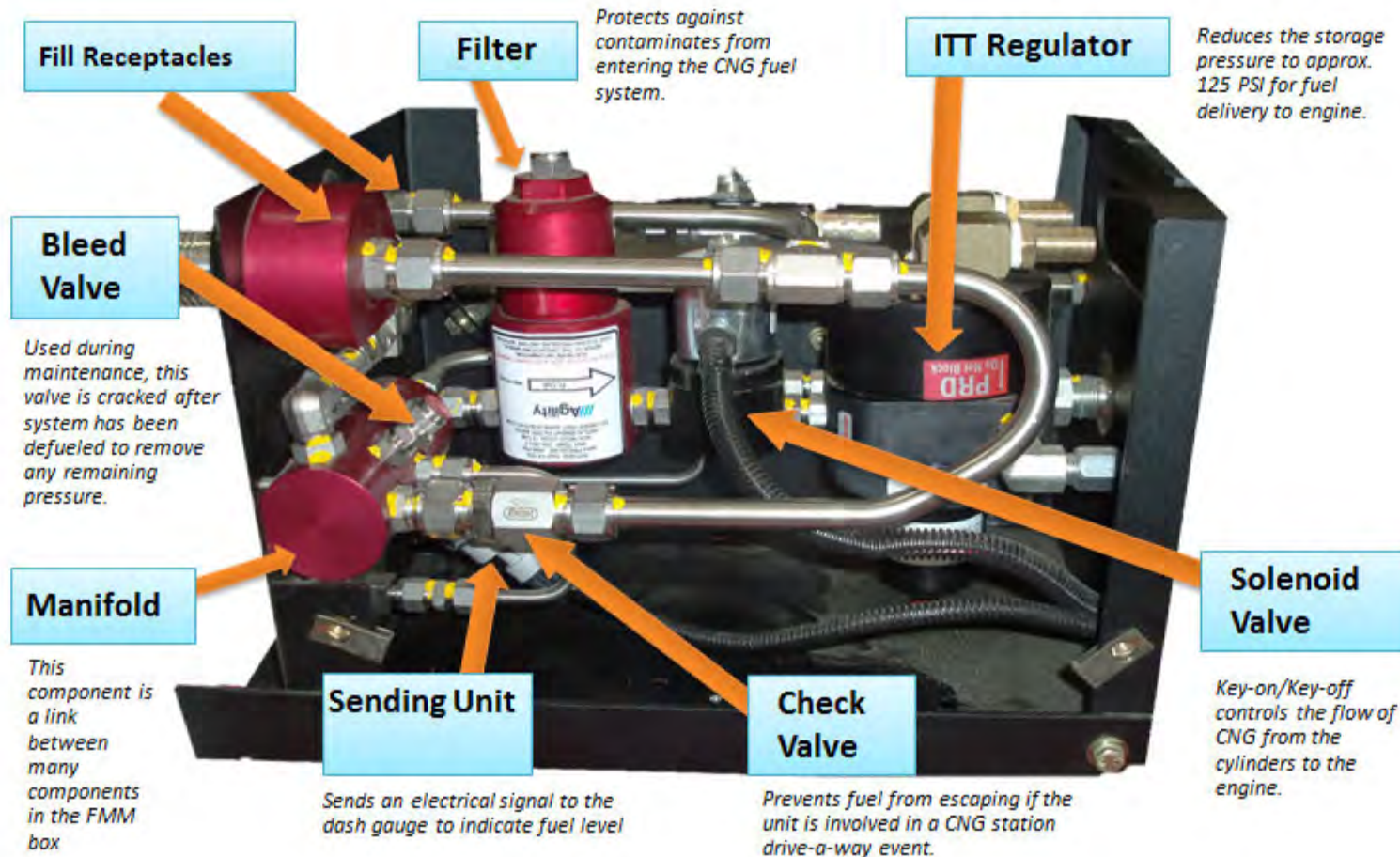
The service pressure is 3,600 PSI.

Two Fill Receptacles on this FMM

- Fuel travels through the main shut-off valve into the main fill line and fuel cylinders.
- Contains an internal check valve to prevent fuel loss during coupling and uncoupling the fill nozzle



Fuel Management Module



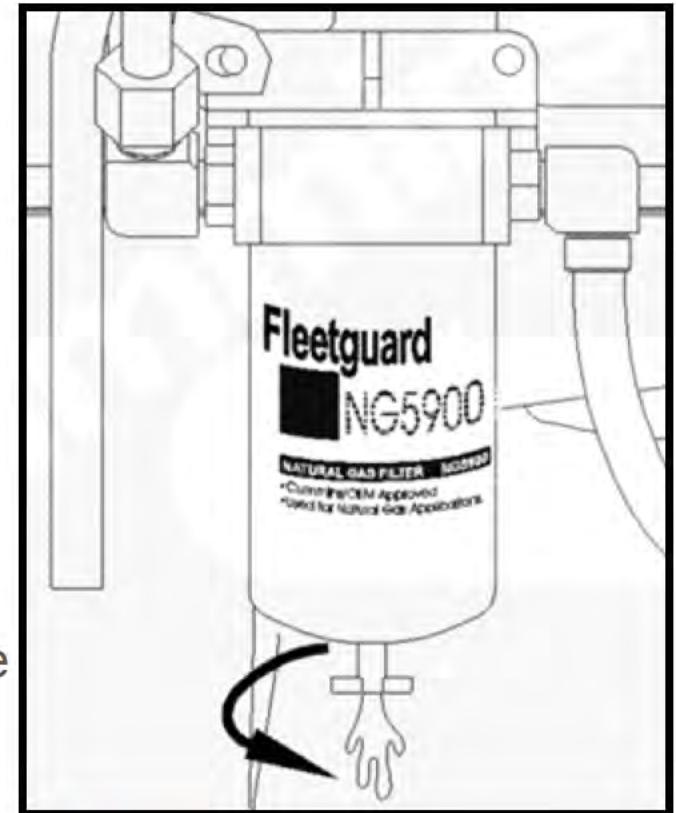
Service high pressure fuel filter per OEM requirements

Cold Weather Tips

- Natural gas fuel system pressure regulator is kept from freezing with a supply of warm engine coolant
 - **In cold weather, it is important to allow the engine to warm to operating temperature before operating under load to prevent possible fuel system freezing and other potential engine shut down issues (i.e. low oil pressure)**
- For cold weather starting, it is also important to minimize parasitic load on the engine at start by turning off PTO accessories like hydraulic pumps, etc
- For proper engine operation, engine intake manifold temperature must be maintained above a minimum of 0 (32° F), and coolant temperature must be above 60° C (140 ° F) in thermostat housing at idle

Fuel Filter (Spin-on Type) - Drain

- Shut off the engine.
Use your hand to open the drain valve. Turn the valve counterclockwise approximately 1-1/2 to 2 turns until draining occurs.
- Drain the oil from the fuel filter
- When closing the drain valve, do not over tighten the valve. Over tightening can damage the threads. Turn the valve drain valve.



- **No more than one ounce of oil in the fuel filter**

Fuel Filter Draining Oil



Cold Weather Tips

- Dry fuel is an important consideration for cold weather operation.
- **Water/oil captured in fuel filter can freeze and affect engine performance.**
- CNG filling stations should include a dryer to remove moisture from the natural gas.
- If daily fuel filter check drain reveals more than 1 ounce of water/oil, contact your fuel station provider.

Resources

- **Cold weather requirements for Cummins diesel and natural gas engines are the same**
- **Guidelines** are published in ISL G CM2180 and ISX12 G CM2180 Owners Manual and Operation and Maintenance manuals
- **Cummins AEB 174.04 – Cummins internal**
 - Guidelines for *Cold Weather Engine Operation for All Automotive and Industrial Engines*
- Cummins Technical Service Bulletin (TSB) 3379009
 - *Operation of Diesel Engines in Cold Climates*
- Cummins Technical Service Bulletin (TSB) 4332709
 - *Operation of Natural Gas Engines in Cold Climates*
- Cummins Technical Service Bulletin (TSB) 140013 (coming soon)
ISL G & ISX12 G Fault codes while Operating in Low Ambient Temps below Freezing

Product Information Bulletin

ISX12 G Updated Maintenance Intervals

August 2014

The Cummins Westport ISX12 G is a 12 litre heavy duty natural gas engine suitable for a variety of heavy-duty vehicles, including line haul / regional-haul truck/tractor, vocational, and refuse applications.

Cummins Westport recently updated its maintenance interval guidelines for the ISX12 G. These maximum intervals assume a normal truck line haul duty cycle based on 50 mph (80 kph) average speed.

Maintenance intervals must be reduced for slower average speed applications.

The default interval is the hours stated. Use whichever comes first – hours, miles/kilometers, or time.

Note: 50 mph (80 kph) Average Speed	Hours	Miles	Kilometers	Months
Spin-on Fuel Filter	Daily Check			
Oil & Filter*	500	25,000	40,000	6
Coolant Filter*	1,500	75,000	120,000	12
Spin-on Fuel Filter*	1,000	50,000	80,000	9
Spark Plugs*	1,500	75,000	120,000	12
Overhead Adjustment*	1,500	75,000	120,000	12
Engine Brake (Adjust)	6,000	300,000	480,000	24
Standard Coolant	6,000	300,000	480,000	24
Air Cleaner/Element	Follow vehicle manufacturers published recommendations			

Keys to Success:

- Follow Cummins maintenance intervals and procedures outlined on QuickServe Online or in your Operation and Maintenance manual
- Use Cummins Authorized parts
- Set service intervals based on average fleet speed
- Use only natural gas engine oil that meets Cummins Specification (CES 200074)
- Use only OEM approved air filters
- Check/drain fuel filter daily
- Visually check coolant recovery tank level daily.

For best reliability and durability, the recommended maximum GVW for the ISX12 G is 80,000 lb (36,287 kg). For further information on application guidelines, refer to the Intended Use Guidelines Product Information Bulletin. For more information on the ISX12 G, visit www.cumminswestport.com

Regards,
Jeff Campbell - Director, Marketing
Cummins Westport Inc.
604-718-8100





Service Bulletin Number	Date
4332709	05-FEB-2013



Service Bulletin

Operation of Automotive Natural Gas Engines in Cold Climates

Satisfactory performance of a natural gas engine in cold and arctic climates requires modification to the engine support systems, operating practices, and maintenance procedures. Everyone involved with equipment in these climates **must** address the fact that cold climates will have an effect on the starting, performance, and reliability of the equipment as well as the engine. The reliability of the engine and equipment will be seriously impaired if **not** properly prepared for the environment in which it is operating. To winterize equipment there are three objectives:

1. Reasonable starting characteristics followed by practical and dependable warm-up of engine and equipment.
2. A unit or installation needs to be as independent as possible from other external influences.
3. Modifications which maintain satisfactory engine operating temperatures with a minimum increase in maintenance of the equipment and accessories.

As the operating climate becomes colder, an increasing amount of equipment modification is required for satisfactory performance. The engines **must** be capable of operating in all climate extremes with satisfactory performance and durability. Some cold climate problems are listed below. While this list contains problems resulting from cold temperatures, it **must** be stressed that additional problems can occur.



Do not use ether as engine damage can occur.

Engine Idle

It is **not** recommended that the engine be operated at an idle, no load condition for prolonged periods (above 15 minutes) of time. Operating engines at idle (700 to 900 rpm) in cold ambient temperatures wastes fuel, accelerates wear, and can result in serious engine damage. At low idle (700 to 800 rpm) there will be insufficient coolant flow and coolant temperature at the cab heater to maintain adequate cab heat. In low ambient temperatures, if radiant and convection heat losses are **not** prevented, the engine will **not** consume an adequate amount of fuel to maintain coolant and combustion temperatures. Sufficient support systems are recommended to preclude the necessity to idle engines for prolonged periods.

It is recognized that regardless of recommendations, operators will idle engines for prolonged periods, especially if the driver is sleeping in the cab compartment of the chassis. If the operator insists on prolonged idling, it is recommended that the engine be idled at an rpm which is adequate to maintain coolant temperatures above 60°C [140°F]. In -18°C [0°F], the engine will need to be idled above 1200 rpm. For this type of operation, a full on-off type fan and winter front **must** be used. The thermostat, thermostat seal, and the deaerating system **must not** allow coolant leakage through the radiator core with the thermostat in the closed position.

In 0°C [32°F] temperature, on the ISX12 G CM2180 EJ engine, wrap insulation on the breather inlet tube, outlet tube, and the breather housing. The insulation wrap is available as Cummins® Part Number 2878268.

Electrical Systems

The normal source of energy used to crank an engine is a battery. As the battery temperature decreases, the battery's capacity to produce power is lowered and its ability to recover power is slower. The engine's cranking load increases as the ambient temperature decreases, compounding the battery power loss problem.

Engine manufacturers normally recommend battery and electrical system capacity for specific engine families to provide an adequate start at -18°C [0°F]. For satisfactory operation in colder ambient conditions, the batteries need to be heated to restore their original cranking capacity, or more batteries need to be added. Inadequate battery capacity results in low cranking speed. Cranking speed continues to slow down during the cranking cycle and can progress to the point where the engine will **not** start.

The wire size, length and connections of the starter circuit determine the ability of the battery to freely transmit power to the starter. Undersized wire acts as a restriction to flow of electrical power. Loose or corroded wires and connections can consume up to 50 percent more of the available battery power before it gets to the starter.

An electric starter simply receives electrical energy and converts it to mechanical energy. The peak efficiency of the starter occurs at engine cranking speeds of between 100 to 150 rpm. At lower speeds the efficiency drops off and current flow increases. If the starter is allowed to stall, and the engine will **not** start, 100 percent of the electrical energy turns to

heat and will damage the starter and wiring. If cranking speeds are continuously low, either more energy (battery capacity), higher starter torque, or less cranking load is required.

Fuels

Compressed Natural Gas (CNG)

Natural gas in the tanks will increase in pressure as the ambient temperature rises or decrease in pressure as the temperature falls. The magnitude of the change in pressure is a function of the size of temperature change, starting pressure, and the gas composition.

Liquefied Natural Gas (LNG)

Liquefied Natural Gas (LNG) is produced by purifying natural gas and cooling it to -162°C [-260°F] to turn it into a liquid. Because it must be kept at cold temperatures, LNG is stored in double-walled, vacuum-insulated pressure vessels. LNG is an acceptable fuel, provided the on-board fuel storage and supply system delivers proper pressure, temperature, and complete vaporization to the engine fuel system inlet. The most common way of vaporizing the LNG supply to the engine is through the use of an evaporator, which uses coolant from the engine to convert the LNG to CNG and warm it to acceptable temperatures. If the cooling system does not reach operating temperatures, then the performance of the evaporator may be compromised.

Lubricating Oils

Two physical properties, viscosity and pour point, are vital to the lubrication of the engine during cold start up. Viscosity is the **most** important. The lubricating oil **must** pour freely from its containers and it **must** circulate freely throughout the engine. Although it is possible to start an engine when the oil has solidified in the crankcase, doing so can result in catastrophic engine shutdown due to lack of lubrication. There are cold climate operation lubricating oils with a sufficiently low pour point available that will remain in a liquid state at the minimum expected temperatures.

The viscosity of the oil controls engine friction and oil circulation. Oil viscosity influences the following performance factors.

1. Starting and warm up
2. Power output
3. Fuel consumption
4. Engine cooling
5. Starting wear
6. Oil consumption
7. Engine cooling
8. Engine noise.

The first five performance factors are improved by using a low viscosity oil, while the last three factors are improved with a high viscosity oil.

Lubricating oil viscosity is one of the most critical factors in engine startability. If the viscosity is too high, the resistance to cranking ability is too high for the engine to reach an acceptable cranking speed.

It is necessary to heat the engine lubricant before starting the engine if the lubricant that is used does **not** have the proper pour point or viscosity. Heating the lubricant will decrease its viscosity, therefore, increasing lubrication and reducing friction during cranking. All filters **must** be located within the confines of the engine compartment so the heat of the engine can be used to prevent gelling of the lubricants.

NOTE: White, tan, or brown foam or froth is sometimes found on the underside of the oil fill cap and inside the valve cover. This foam is normal and will not affect the function of the engine.

Air Intake System

There are two aspects of intake air which **must** be taken into consideration when winterizing a vehicle. These considerations are air density and temperature.

Air Temperature

There is a direct correlation between intake air temperature and combustion temperature. One of the end results of a natural gas engine with cold intake temperatures is that combustion temperatures will be reduced.

Below 0°C [32°F], it is recommended that intake air come from inside the engine enclosure. This will provide warm air to the intake and reduce engine heat loss. If the air cleaner is **not** located within the engine compartment enclosure, then ducting **must** be routed from the engine compartment to the air cleaner inlet. Adequate sealing of the engine compartment is necessary. Side curtains alone are **not always** satisfactory. If there are openings around the radiator cowl and underneath the engine, these areas **must** also be sealed. Depending on ambient temperature and engine compartment size, heat the air within the engine compartment to maintain combustion temperatures. An aftercooled engine will perform well in these conditions, as the cooler element, which normally cools heated air down to near the level of the coolant temperature, will warm cold intake air up to near the coolant temperature. It is extremely beneficial to provide a temperature controlled on-off type fan so the radiant and convection heat within the engine compartment is **not** dissipated by air flow.

Cooling System

Coolant within a natural gas engine is primarily used as a heat transfer medium and is subject to freezing in cold and arctic climates. On LNG fuel system, the coolant is used to vaporize and heat the liquefied natural gas to the necessary temperature and pressure to operate the engine.

The lowest freezing temperature that can be provided for the coolant is obtained by using a solution of approximately 60 percent ethylene glycol and 40 percent water. This mixture will turn to slush at about -50°C [-60°F].

There are three basic types of coolant heaters available in the marketplace. The heaters selected **must** maintain the coolant temperature to a minimum of 50°C [120°F] in any temperature encountered.

- Immersion Heaters
 - Immersion heaters have a heating element immersed within the confines of the engine coolant passage. Heat is transferred to the cylinder liners and block via the coolant. Due to space limitations, the wattage is limited to 2500 watts each or less. An external electrical source is required to operate the heaters.
- Tank Type Heaters
 - Tank type heaters function on the convection principal. That is, a volume of coolant is heated within a small tank and then the heated coolant is circulated through the engine via the hose connections (similar to a percolator coffee pot). There are heaters available from 1000 to 4000 watts. An external electrical source is required for this type of heat. There are also tank type heaters with recirculating pumps which continuously circulate the heated coolant through the engine systems.
- Fuel Burning Coolant Heaters
 - Fuel burning coolant heaters are designed to burn liquid/vapor type fuels and some will operate on a mixture of fuels. The most common fuel burning heaters normally use diesel fuel, propane or gasoline. These are furnace gun type heaters where fuel is ignited via an igniter and the fuel is then sprayed on a transfer medium such as a porous ceramic disc. This flame then heats the coolant via coils contained within the heater and transferred to the engine either by convection or by recirculating pumps incorporated into the heaters. These types of heaters are available in sizes from 6000 to 82000 BTU. Exhaust gases from these heaters can be used to heat engine compartments and accessories such as batteries.

Coolant Flow

The minimum amount of coolant that has to be heated for maximum efficiency of the heaters is the volume of coolant in the block and accessories in the coolant bypass system. To achieve this condition, the thermostats and thermostat seals **must not** allow coolant to flow through the radiator when the thermostat is closed. To check for coolant leakage past the thermostat seal and/or thermostat:

1. Remove the engine outlet hose at the thermostat housing. Hold the hose in the air above the radiator baffle level and run the engine against the governor. If water comes out of the water outlet connection, the thermostat and/or seal is leaking; ninety-seven percent of the time, it is the seal or debris keeping the thermostat open.
2. If the coolant does **not** reach thermostat opening temperature, changing the thermostat will **not** correct the problem.

The second critical area for cold operating engines is coolant flow through the radiator core when the thermostat is in the closed position. A properly functioning deaeration system **must** be incorporated and there **must** be no reverse flow of coolant through either the fill

line or the radiator. The deaeration baffle **must not** leak and **must not** have vent holes. To check for this condition:

1. Drain the cooling system.
2. Remove the make up (fill line) at the water pump and plug the end.
3. Fill the area above the baffle with coolant. If water leaks through the drain cock of the radiator, remove the tank and repair. Coolant can be leaking through the core vent tube which needs to be extended in the expansion area.

Radiator Shutters

When they are closed, radiator shutters prevent air flow across the radiator core as well as the engine. Air flow across the engine can extend warm-up time and prevent the coolant from reaching minimum operating temperatures in extremely cold ambient temperatures. The two most commonly used terms associated with the preparation of equipment for low temperature operation are Winterization and Arctic Specifications. Winterization of the engine and/or components so starting and operation are possible in the lowest temperature to be encountered requires:

1. Use of correct materials (Some materials get brittle and fail at low temperatures.)
2. Proper lubrication, low temperature lubricating oils.
3. Protection from the low temperature air (The metal temperature does **not** change as a result of air flow, but the rate of heat dissipation is significantly increased by the flow of cold air over the exposed surfaces.)
4. Proper external heating source available
5. Electrical equipment capable of operating in lowest expected temperature.

Arctic Specifications reference the design material and specifications of components necessary for satisfactory engine operation in extremely low temperatures to -54°C [-65°F]. Contact Cummins Inc., or the equipment manufacturer, to obtain the special items required. The Arctic Specifications listed on the following pages are only general guidelines.

Fan Drive

A temperature controlled fan drive can be used to reduce cold air circulation at the engine to help conserve compartment heat. These devices function by completely or partially disconnecting the fan from its drive source at a specified temperature. Several types of fan drives are commonly available: viscous, thermatic, and thermo-modulating.

Equipment Preparation

The amount of modification varies as the temperature changes. Therefore, the following tabulation of recommended equipment is grouped into three temperature ranges. When equipment heaters are required as recommended in this bulletin, it is suggested that all system heaters (coolant, oil and intake air) be used. The following recommendations apply to all engine models, except as noted.

Winterize 0 to -23°C [32 to -10°F]

- Use ethylene glycol antifreeze to protect to -29°C [-20°F]
- Radiator shutters
- System to provide a recommended 150 rpm cranking speed at -23°C [-10°F]
- Provide for warmed intake air from engine compartment in temperatures below -12°C [10°F]
- Shorten breather tube to at least 12 inches above oil pan flange on highway applications for operations below -18°C [0°F]
- For the ISX12 G CM2180 EJ engine, wrap insulation on the breather inlet tube, outlet tube, and the breather housing. The insulation wrap is available as Cummins® Part Number 2878268.
- Coolant heaters
- Oil heaters

Winterize -23 to -32°C to [-10 to -25°F]

- Use ethylene glycol antifreeze 50 percent, water 50 percent.
- Radiator shutters sealed around edge and adjusted to close tight or shutters plus radiator cover.
- Winterized heavy duty 24 volt cranking system to provide a recommended 150 rpm cranking speed at -32°C [-25°F] after preheat.
- Heated intake air using intercooler manifold, engine compartment enclosures with air cleaner intake air drawn from engine compartment
- Dry type air cleaner
- Shorten breather tube to at least 30 cm [12 in] above oil pan flange.
- For the ISX12 G CM2180 EJ engine, wrap insulation on the breather inlet tube, outlet tube, and the breather housing. The insulation wrap is available as Cummins® Part Number 2878268.
- Coolant heaters
- Oil heaters
- OFF/ON type fan
- Oil pan shield for on-highway units.
- Battery warmer
- Heavy duty arctic-type batteries
- Battery cables size per Table 8
- All filters to be mounted in the engine compartment. Before exposing the equipment to the low temperature, change all filters, drain the systems, and flush thoroughly with arctic lubricants.
- Insulate all coolant and oil lines exposed to the elements.

Arctic Specifications -32 to -54°C [-25 to -65°F]

- Use ethylene glycol antifreeze 60 percent, water 40 percent mixture.
- Tight winter front cover for radiator in front of shutters
- Winterized heavy duty 24 volt cranking system to provide a recommended 150 rpm cranking speed at -32°C [-25°F] after preheat.
- Provide for heated intake air using intercooler manifold, engine compartment enclosures with air cleaner intake air drawn from the engine compartment
- Dry type air cleaner. Install in engine compartment

- Shorten breather tube to at least 30 cm [12 in] above oil pan flange
- For the ISX12 G CM2180 EJ engine, wrap insulation on the breather inlet tube, outlet tube, and the breather housing. The insulation wrap is available as Cummins® Part Number 2878268.
- Coolant heaters
- Oil heaters
- OFF/ON type fan
- Insulated cover for lower part of the engine compartment including oil pan shields.
- Battery warmer
- Heavy duty arctic type batteries.
- Battery cables size per Table 8. Hold circuit wiring short as possible
- All filters to be mounted in the engine compartment. Before exposing the equipment to the low temperature, change all filters, drain the systems, and flush thoroughly with arctic lubricants. Replace the filter a second time after the flushing operation.
- Repack fan hub and water pump with arctic grease.
- Winterize mechanical controls and instruments:
 - Tachometer
 - Tachometer cable
 - Starting aid control cable
 - Pressure gauges
 - Temperature gauges.
- All regular lubricants for cables to be removed and left dry or replaced with arctic type lubricants.
- Provide auxiliary engine compartment space heat sufficient to bring engine temperature to -32°C [-25°F].
- Use -54°C [-65°F] electrical equipment and wiring
- Use -54°C [-65°F] hose
- Use -54°C [-65°F] rubber in the filter and dipstick expanders
- Use -54°C [-65°F] belts
- Insulate all coolant and oil lines exposed to the elements. Insulate or cover with heat strip tape all coolant and oil lines exposed to the elements.



Anti-leak antifreezes are not recommended for use in Cummins® engines. Although these antifreezes are chemically compatible with DCA water treatment, the anti-leak agents can clog the coolant filters, oil coolers and radiators, making them ineffective.

Maintenance

The accessory equipment used for low temperature operation and starting require maintenance on a regular schedule like other components on the engine. Poor or unscheduled maintenance **always** results in loss of productive time. Normal maintenance practices **must** be followed on all components. Maintenance suggestions for all engines are:

Winterize 0 to -23°C [32 to -10°F]

- Adhere to a lubricating oil change schedule necessary to maintain clean oil.
- Check electrical systems daily.
- Check cold weather support systems weekly.

Winterize -23°C to -32°C [-10°F to -25°F]

- Adhere to an oil change schedule necessary to maintain clean oil. Check level every two hours.
- Check electrical systems daily.
- Check cold weather support systems weekly.
- Check temperature controls, thermostat, and shutters weekly.

Arctic Specifications -32 to -54°C [-25 to -65°F]

- Adhere to an oil change schedule necessary to maintain clean oil. Check level every two hours.
- Check electrical systems daily.
- Check cold weather support systems weekly.
- Check temperature controls, thermostat, winter front, space heaters starters, and starter electrical system weekly.

NOTE: All Temperature Categories: In areas of blowing snow, it will be necessary to remove the air cleaner element and remove packed snow if the air cleaner inlet is located outside the engine compartment

Accessory Equipment

Coolant Heaters

Electric or fuel fired coolant heaters are an excellent starting aid. Warm coolant creates a more satisfactory starting condition by reducing cylinder to piston friction, where most cold weather cranking drag occurs. Also, more complete combustion occurs when the combustion chamber is warmed.

Electric Coolant Heaters

There are two types of electric coolant heaters, direct immersion and external tank. Figure 1 shows a typical direct immersion type coolant heater. Figure 2 shows a typical external tank type heater.

Tank Type Heaters



Do not operate the external type heaters with the engine running.



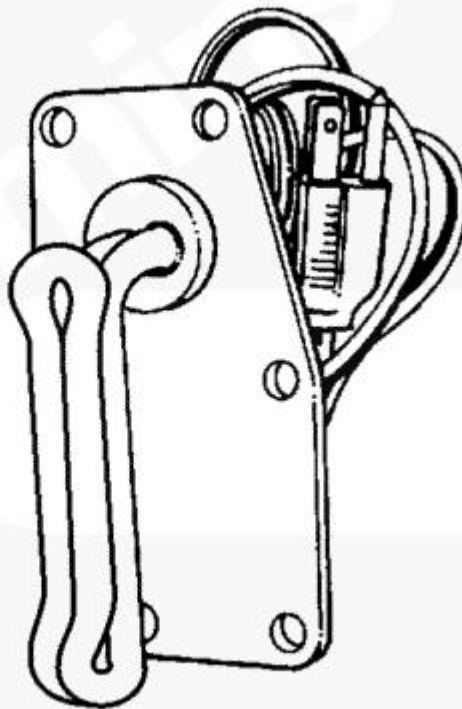
Circuit breakers and fuses are slow to act in extreme low temperatures; therefore, electrical accessories must have adequate size wiring and equipment.

NOTE: Some tank type coolant heater assemblies include a check valve and thermostat. An oil pressure switch for automatic cutoff of the heating element must be used with all heater assemblies. An appropriate pressure switch and relay assembly is included with the 460 volt or 3 phase supply system.

Some tank type coolant heaters are of the external type, mounted horizontally. The Kim Hot Start models have an exclusive flapper type reinforced neoprene check valve. The valve forces the heated coolant to move in only one (outlet) direction, and also stops a bypass to normal coolant circulation while the engine is running.

Figure 2 illustrates a tank type external coolant heater that can be applied to all engines. Connect the heater inlet to the lowest point of coolant (water pump or lower radiator tank) and the heater outlet to a point on the engine block higher than the heater inlet to obtain the best thermo-syphon water flow.

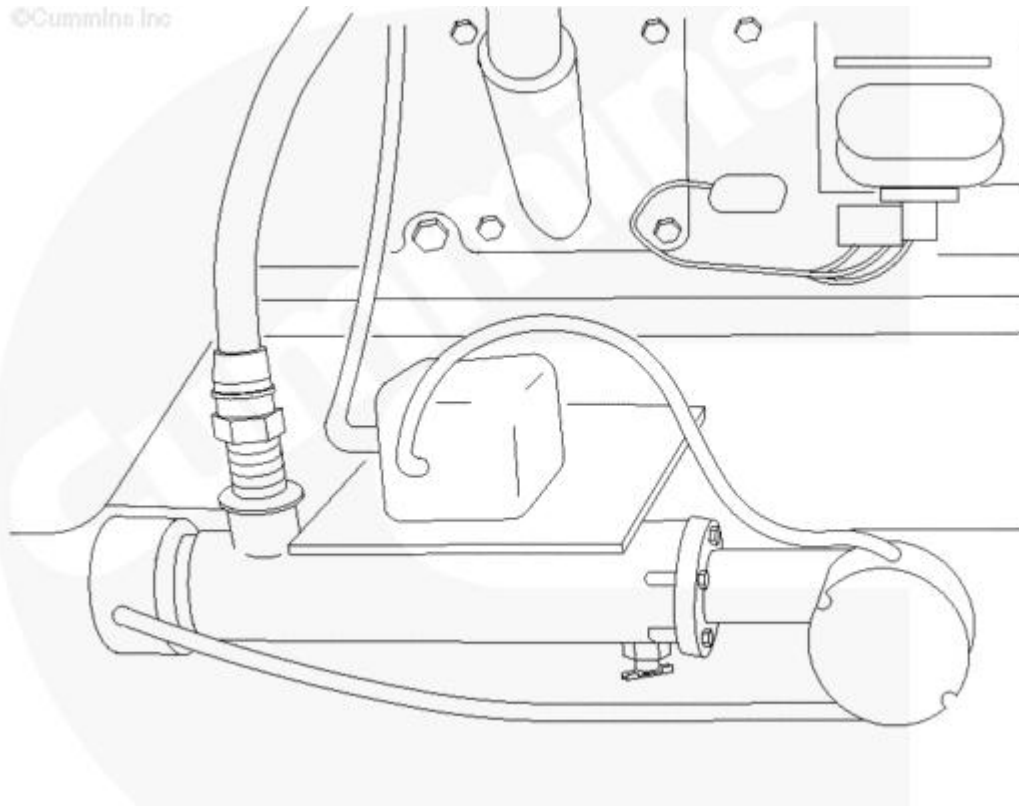
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coldfg1

Figure 1: Direct immersion electric coolant heater.

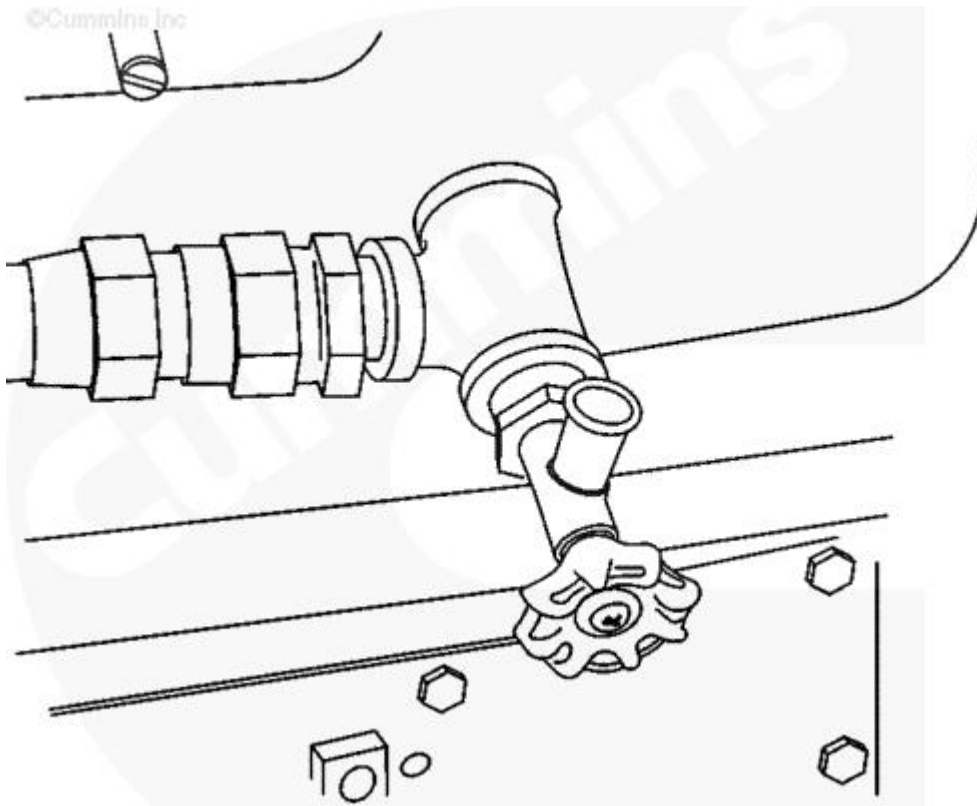
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coldfg2

Figure 2: External tank type electric coolant heater.

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coldfg3

Figure 3: Coolant heater outlet to cylinder block.

These heaters are versatile because they can be used for space heating of the engine compartment, the battery, or the cab, in addition to the coolant housing.

Table 1: Immersion Type Coolant Heaters				
Engine Model	Option	Part Number	Description	Wattage/Voltage
B Gas, BLPG	CH 9010	3905113	Cable, Engine Heater	1000/120
		3918597	Heater, Engine	
	CH 9042	3923050	Cable, Engine Heater	750/120
		3975628	Heater, Engine	
	CH 9045	3913112	Cable, Engine Heater	750/120
		3975629	Heater, Engine	
	CH 9046	3913106	Cable, Engine Heater	750/120
		3975628	Heater, Engine	
	CH 9048	3905114	Cable, Engine Heater	750/240
		3975629	Heater, Engine	
B Gas Plus, B LPG Plus	CH 9010	3905113	Cable, Engine Heater	1000/120
		3918597	Heater, Engine	
	CH 9045	3913112	Cable, Engine Heater	750/120
		3975629	Heater, Engine	
C Gas, C Gas Plus	CH 9010	3905113	Cable, Engine Heater	1000/120
		3918597	Heater, Engine	
C Gas Plus - International	CH 9068	3905113	Cable, Engine Heater	1000/120
		4935057	Heater, Engine	
L Gas Plus	CH 9068	3905113	Cable, Engine Heater	1000/120
		4935057	Heater, Engine	

Table 1: Immersion Type Coolant Heaters				
Engine Model	Option	Part Number	Description	Wattage/Voltage
	CH 9068	3905113	Cable, Engine Heater	1000/120
		4935057	Heater, Engine	
L10GI	CH 2001	3027513	Element, Heating	1500/120
		3026156	Washer, Plain	
	CH 2013	3819413	Element, Heating	1500/120
		3905113	Cable, Engine Heater	
L10GII, L10GIII	CH 2001	3027513	Element, Heating	1500/120
ISLG	CH 9068	3905113	Cable, Engine Heater	1000/120
		4935057	Heater, Engine	
	CH 9095	4935057	Heater, Engine	1000/120
ISX12 G		3681360	Cable, Engine Heater	
	CH 2043	3903990	Screw, Hex Flange Head C	1500/120
		4965497	Heater, Engine TLA	
Replacement elements are available through Cummins Filtration™.				

Table 2: Tank Type Coolant Heaters without Electrical Junction Box, Thermostat, and Check Valve		
Heater Cummins Filtration™ Part Number	Voltage	Wattage
259269	115	1000
259270	115	1000
259271	230	1000
259272	230	1000
259288	230	4000
259289	460	4000

Table 3: Thermostat for Heaters Listed in Table 2	
Cummins Filtration™ Part Number	Temperature
259290	27° to 38° C [80° to 100° F]
259290	38° to 49° C [100° to 120° F]

Table 3: Thermostat for Heaters Listed in Table 2	
Cummins Filtration™ Part Number	Temperature
259293	49° to 60° C [120° to 140° F]
259294*	49° to 60° C [120° to 140° F]
259295	60° to 71° C [140° to 160° F]
259296*	27° to 38° C [80° to 100° F]
259368*	60° to 71° C [140° to 160° F]
* Explosion Proof	

Table 4: Tank Type Coolant Heater with Electrical Junction Box, Thermostat, and Check Valve				
Cummins® Part Number	Voltage	Wattage	Wiring Diagram Number	Low Oil Pressure Switch
212021	120	1000	1	196074
212022	240	1000	2	196074
213730	120	1500	1	196074
212023	120	2500	1	196074
212024	240	2500	2	196074
217243	480	2500	3	—
212026	240	4000	2	196074
217244	480	4000	3	—
217245	240 (3-phase)	3750	4	—

Use a minimum hose size Number 16. For increased coolant flow and greater heater efficiency, use Number 20 hose.



Use Teflon™ type hose.

Table 5: Suggested Wattage for Water and Oil Heaters		
Temperature Range	Medium Duty	Heavy Duty
0 to -18°C [32 to 0°F]		

Table 5: Suggested Wattage for Water and Oil Heaters		
Temperature Range	Medium Duty	Heavy Duty
	750 or 1000 watt immersion, 1000 watt coolant tank type, 150 watt oil immersion	1000 watt coolant immersion, 1500 watt coolant tank type, 150 watt oil immersion
-18 to -32°C [0 to -25°F]	1000 watt coolant immersion, 1000 watt coolant tank type, 150 watt oil immersion	1500 watt coolant immersion, 2000 watt coolant tank type, 300 watt oil immersion
-32 to -51°C [-25 to -60°F]	1500 watt coolant immersion, 1500 watt coolant tank type, 300 watt oil immersion	2250 watt or 2500 watt coolant tank type, 300 watt oil immersion

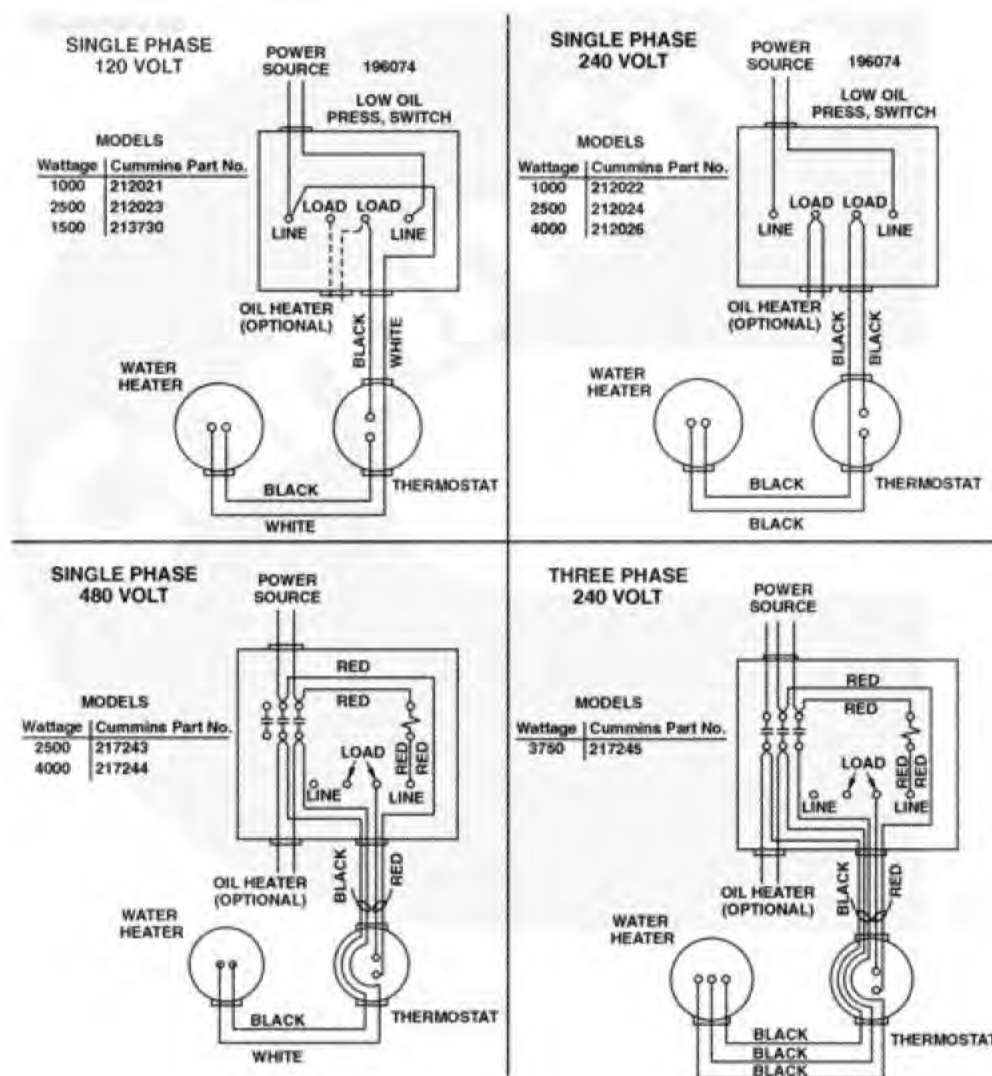


Figure 4: Wiring diagram for tank type coolant heater.

Fuses for Coolant Heaters

- 115 Volts
 - 20 ampere fuse - maximum wattage 2250
 - 25 ampere fuse - maximum wattage 2875
 - 30 ampere fuse - maximum wattage 3450
- 230 Volts
 - 20 ampere fuse - maximum wattage 4600
 - 25 ampere fuse - maximum wattage 5750
 - 30 ampere fuse - maximum wattage 6900

Battery Box Heating - All Applications

Battery heating can be accomplished with electrical power or hot fresh air from such sources as the cab, fuel fired cab heater, hot exhaust air, and hot liquid from the engine coolant system.

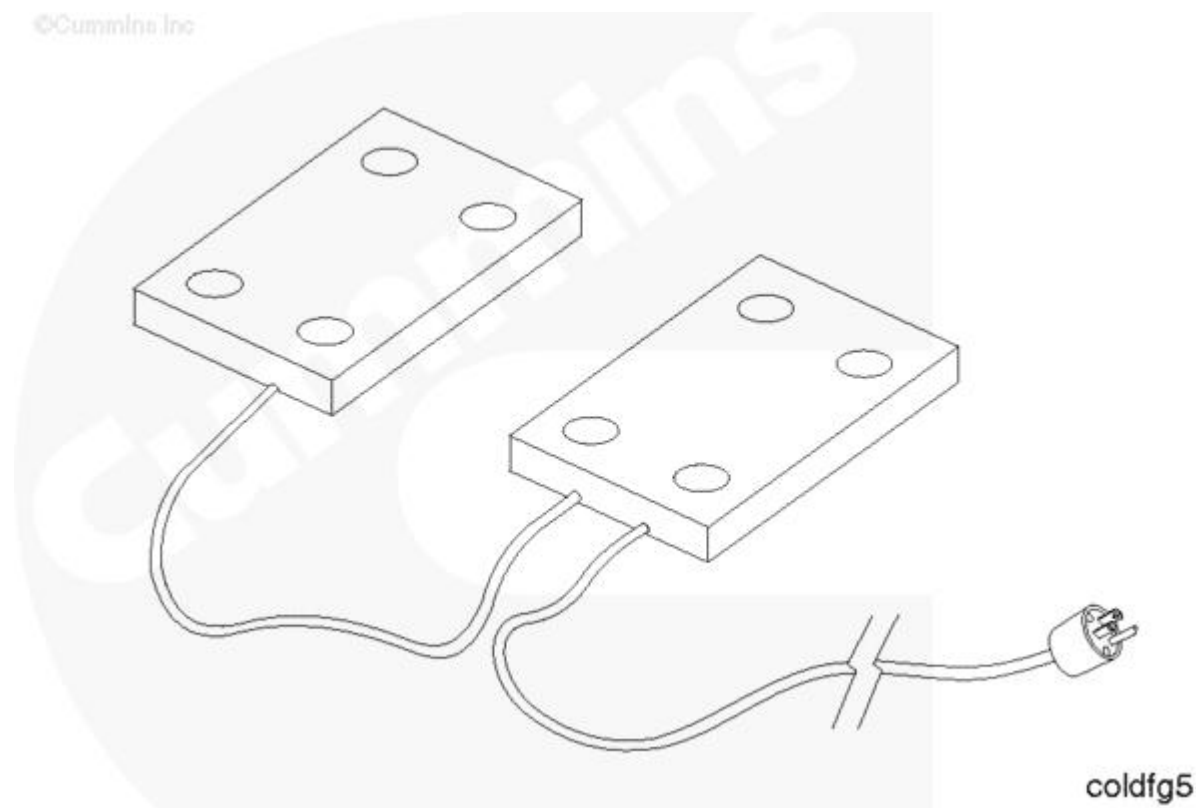


Figure 5: Electric battery warmer.

Electric Battery Heaters

Heat resistor strips can be mounted to the side of the battery box. The elements should be arranged to distribute heat around the batteries, avoiding hot spots. This strip heater is available as Cummins® Part Number 143519, rated at 120 volts, 285 watts. Part Number 143519 can be obtained from Cummins Inc., Columbus, Indiana, U.S.A. 47201.

A typical battery warmer pad is available as Cummins Filtration™ Part Number 259262, rated at 150 volts, 200 watts. See Figure 5. Part Number 259262 can be obtained from Cummins Filtration™ Division, Cummins Inc., Cookville, Tennessee, 38501.

Battery temperature **must not** exceed 58°C [125°F]. Use external electrical power as available; this type load on the batteries would soon drain them.

NOTE: In all types of heaters, an automatic thermostat control must be provided to prevent overheating of the battery.

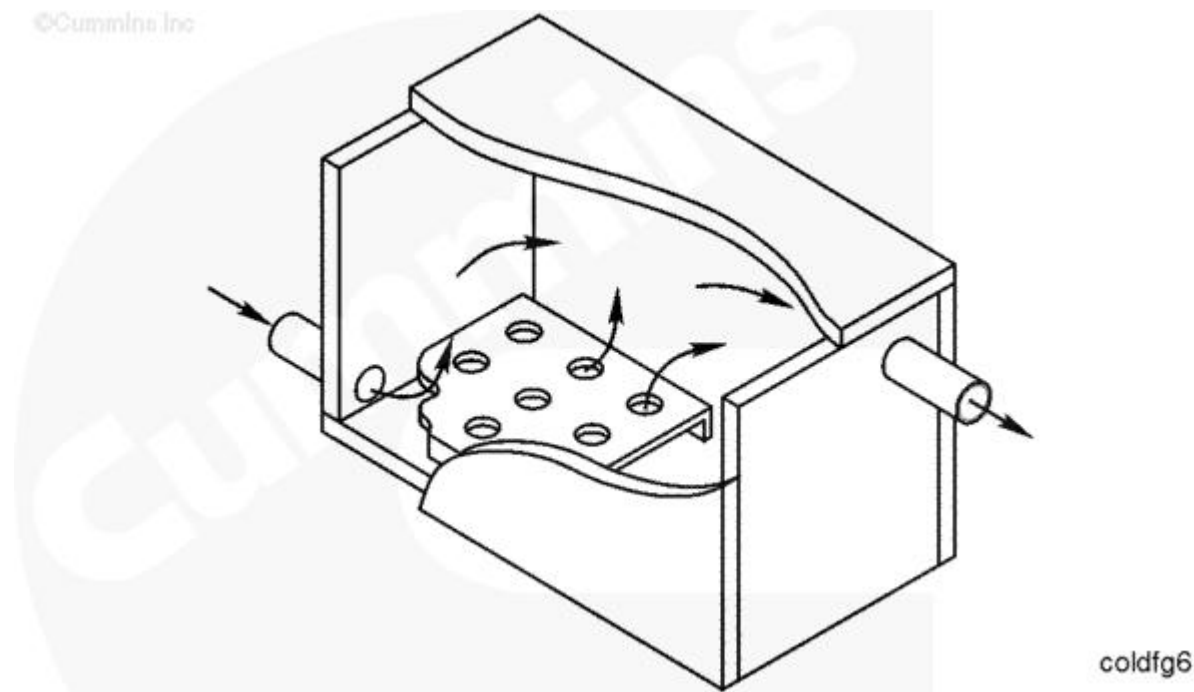


Figure 6: Heated battery box.

Hot Fresh Air Heating

The battery box can be heated by warm air from the cab or from a fuel-fired cab heater. The warm air is piped into the lower part of one side of the battery box and discharged at the upper part of the other side of the box. It is advisable to provide 25.4 mm to 50.8 mm [1 in to 2 in] clearance on each side of the battery for circulation. Further aid to heating can be provided by mounting the battery off the floor of the box through use of a corrugated or perforated support to permit circulation of warm air on all sides of the battery. Insulate the box.

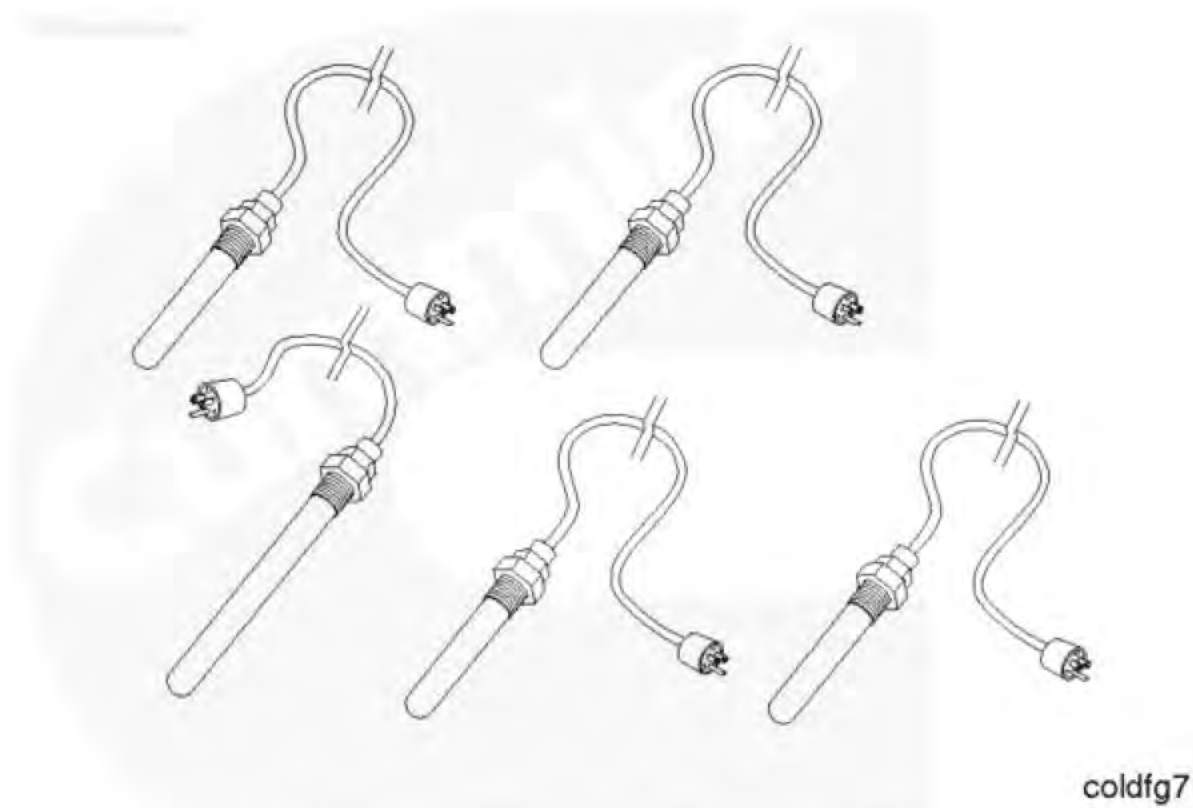


Figure 7: Shielded type lubricating oil heaters.

Lubricating Oil Heaters

Lubricating oil heating is generally accomplished with immersion type electrically powered heaters. Typical shielded type lubricating oil heaters are shown in Figure 7. All models have stainless steel sheath elements inserted into separate aluminum wells.

NOTE: Installation instructions are supplied for mounting and wiring each unit.

Table 6: Oil Immersion Heater Applications					
Oil Immersion Heaters Part Number	Voltage	Wattage	Length of Heating Element	Hole Diameter	Oil System Capacity
251920	115	150	194 mm [7-5/8 in]	25 mm [1 in]	7.6 to 15 liters [2 to 4 Gal]
256855	115	150	194 mm [7-5/8 in]	12.7 mm [1/2 in]	7.6 to 15 liters [2 to 4 Gal]
259254*	115	150	133 mm [5-1/4 in]	12.7 mm [1/2 in]	7.6 to 15 liters [2 to 4 Gal]
259254*	230	150	133 mm [5-1/4 in]	12.7 mm [1/2 in]	7.6 to 15 liters [2 to 4 Gal]

Table 6: Oil Immersion Heater Applications					
Oil Immersion Heaters Part Number	Voltage	Wattage	Length of Heating Element	Hole Diameter	Oil System Capacity
251921	230	200	194 mm [7-5/8 in]	25 mm [1 in]	15 to 30 liters [4 to 8 Gal]
259256*	115	300	133 mm [5-1/4 in]	12.7 mm [1/2 in]	15 to 30 liters [4 to 8 Gal]
259257*	230	300	133 mm [5-1/4 in]	12.7 mm [1/2 in]	15 to 30 liters [4 to 8 Gal]
259258*	115	450	216 mm [8-1/2 in]	12.7 mm [1/2 in]	30 to 45 liters [8-12 Gal]
259259*	230	450	216 mm [8-1/2 in]	12.7 mm [1/2 in]	30 to 45 liters [8-12 Gal]
* These heaters are supplied with an adapter for brazing into a one (1) inch hole.					

Table 6A: Optional Thermostat Part Number	
Part Number	Fits the Following Oil Immersion Heaters
259261**	259254, 259256, 259258
3009521	259255, 259257, 259259
** Thermostat recommended in moderate temperature areas if wattage exceeds 10 watts/quart of oil in the lubricating system.	

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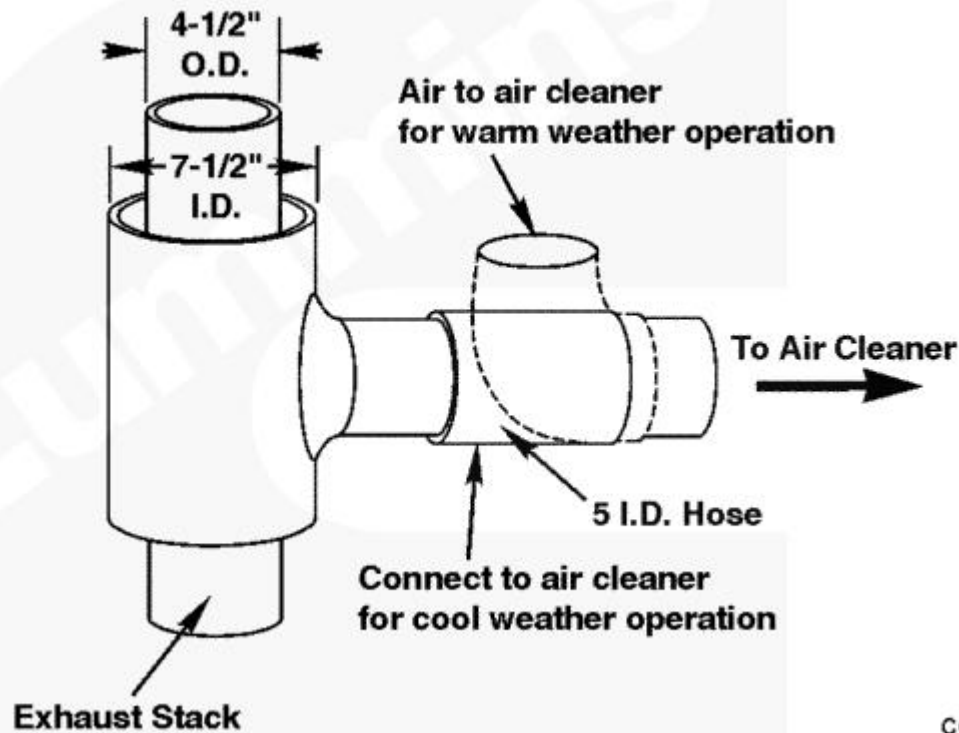


Figure 8: Utilizing exhaust heat to warm intake air.

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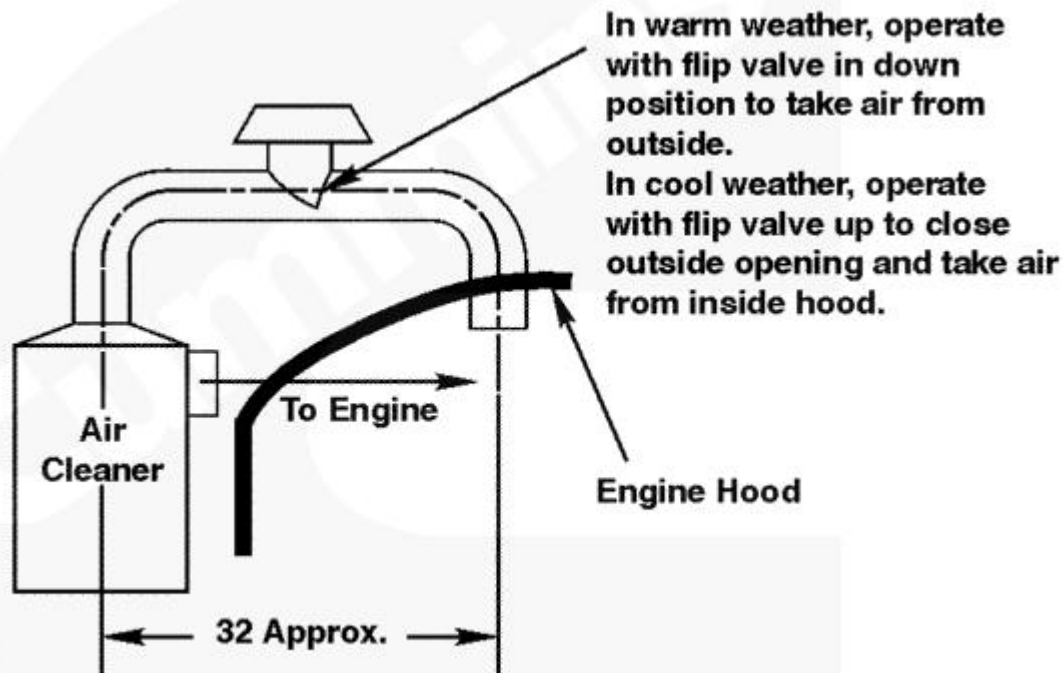


Figure 9: Exterior mounted air cleaner with flip valve.

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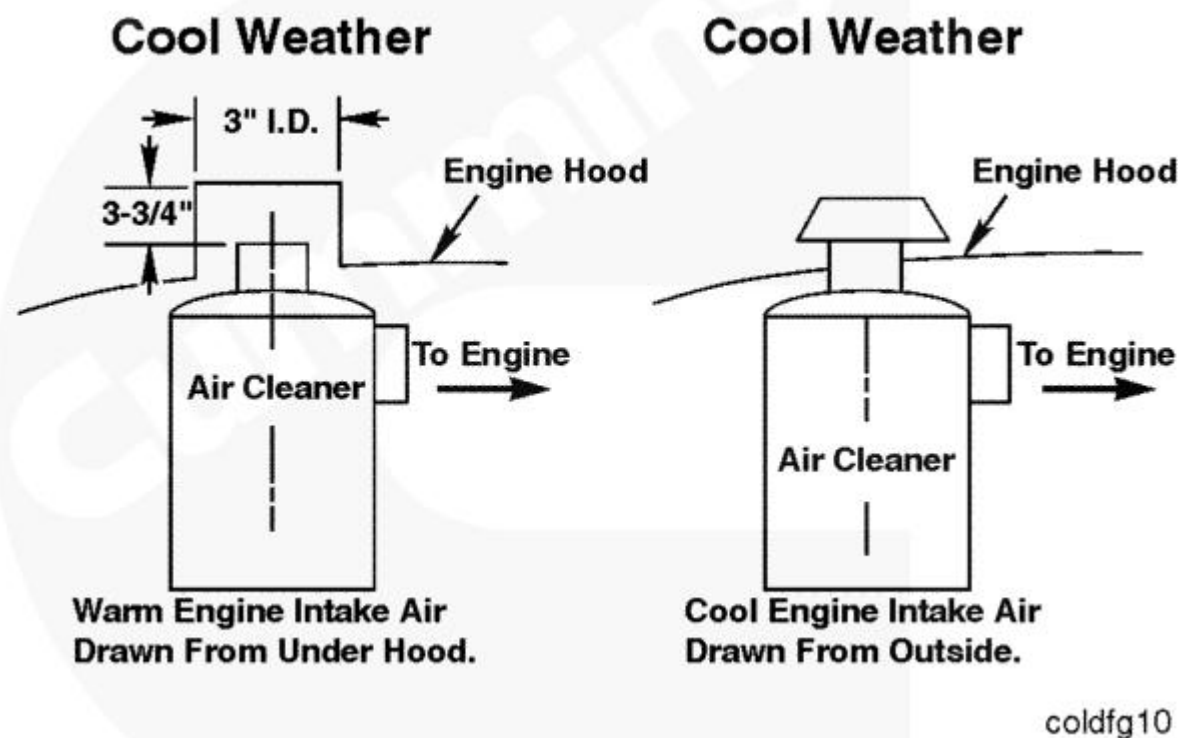


Figure 10: Utilizing engine heat to warm intake air.

Engine Intake Air Heating

Engine intake air heating can be accomplished by pulling air from around the exhaust pipe (Figure 8), out of the engine compartment (Figures 9 and 10), or through an aftercooler. It is **always** desirable and necessary under constant operation in ambient temperatures below -32°C [-25°F] to preheat the air, especially at lighter loads to provide conditions leading to complete combustion. Normally, air pulled from the enclosed engine compartment will be preheated sufficiently for operation to approximately -32°C [-25°F]. At lower temperatures, build a compartment. (Figure 8) around the exhaust stack and pull air through the jackets to the air cleaner. Regardless of the type of arrangement used to pull air from the engine compartment and/or exhaust jacket, provision **must** be made to pull outside air into the engine intake for operation at higher temperatures. This recommendation applies to all engine models.

NOTE: In heavy snow and ambient temperatures below -12°C [10°F], use the intake design shown in Figure 9 and Figure 10 to pull air from under the hood to prevent plugging of the air filter

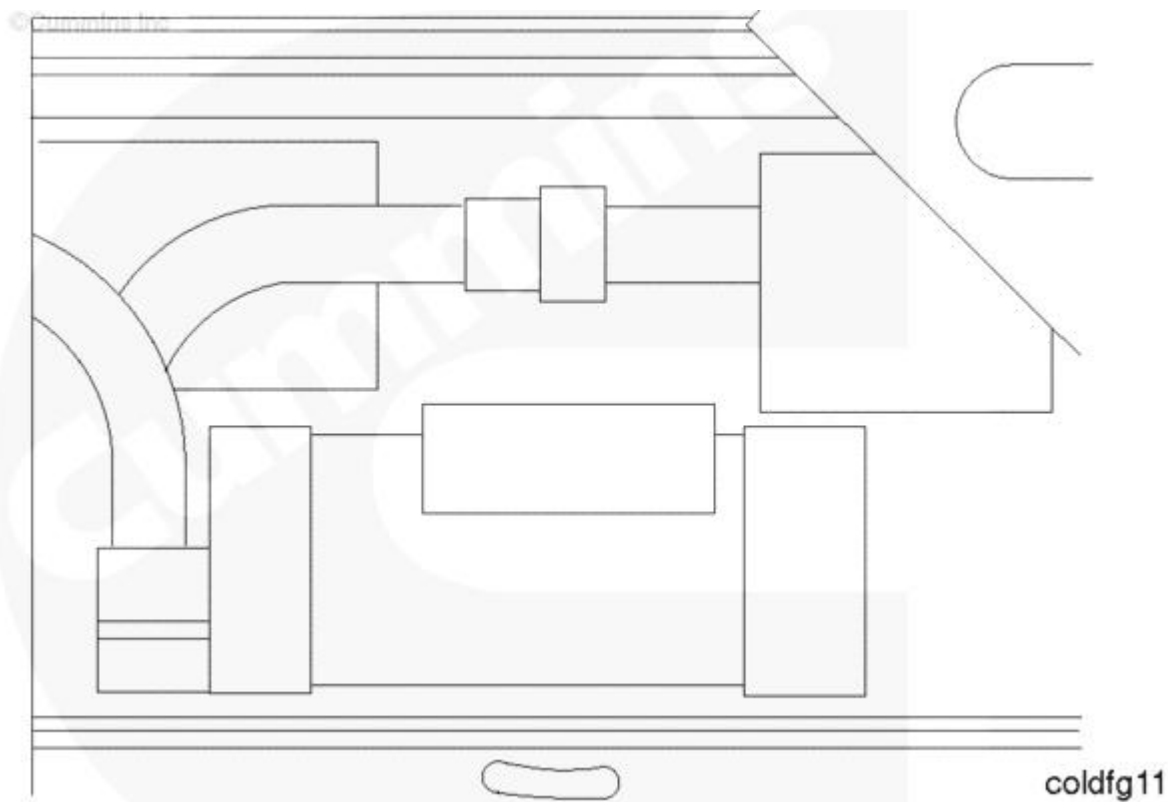


Figure 11: Typical space heater for engine compartment enclosure.

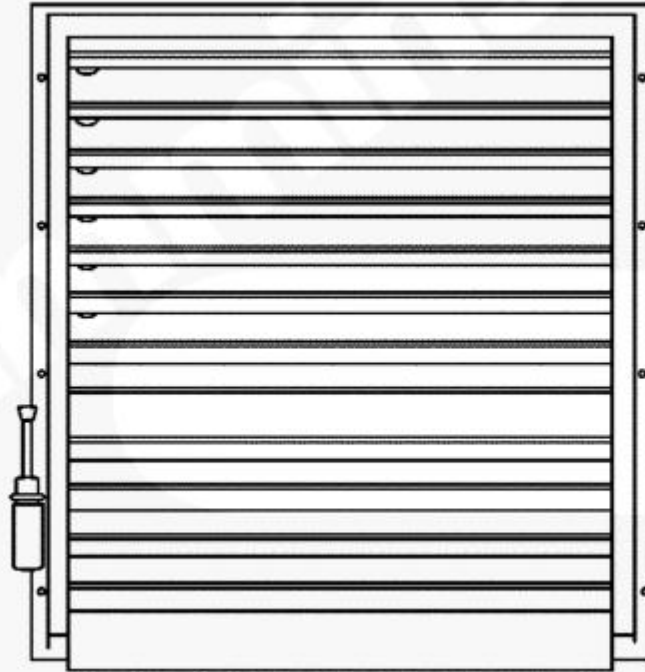
Engine Compartment Heaters

When the temperature drops below -32°C [-25°F], it is desirable to add heat to the engine compartment in addition to the coolant, batteries and lubricating oil, to bring the engine temperature up to a minimum of -32°C [-25°F] so satisfactory starting is realized. A typical space heater, applicable to all engine models, is shown in Figure 11.



Ether or ether starting aids must never be used on natural gas engines.

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coldfg16

Figure 12: Radiator cover with variable opening.

Insulation Materials

The engine compartment requires consideration because the walls and panels **must** be sealed and insulated so no interference is created with engine components. It **must** be fire safe and permit sufficient air entrance so the engine intake air restriction is under 38 cm [15 in] water with a clean air filter. The air feed to the compartment **must** be in an area of clean air and as far away from engine air intake ducting as possible. The insulation material **must** be oil impervious to provide fire proof protection. Suitable materials are available in strips or sheets for this application. Use approximately 25.40 to 38.10 mm [1 to 1 1/2 in] thickness insulation mounted securely by straps so it can **not** fall on the engine or into the fan. Gypsum, glass foam, or mineral wool will furnish sufficient insulation protection.

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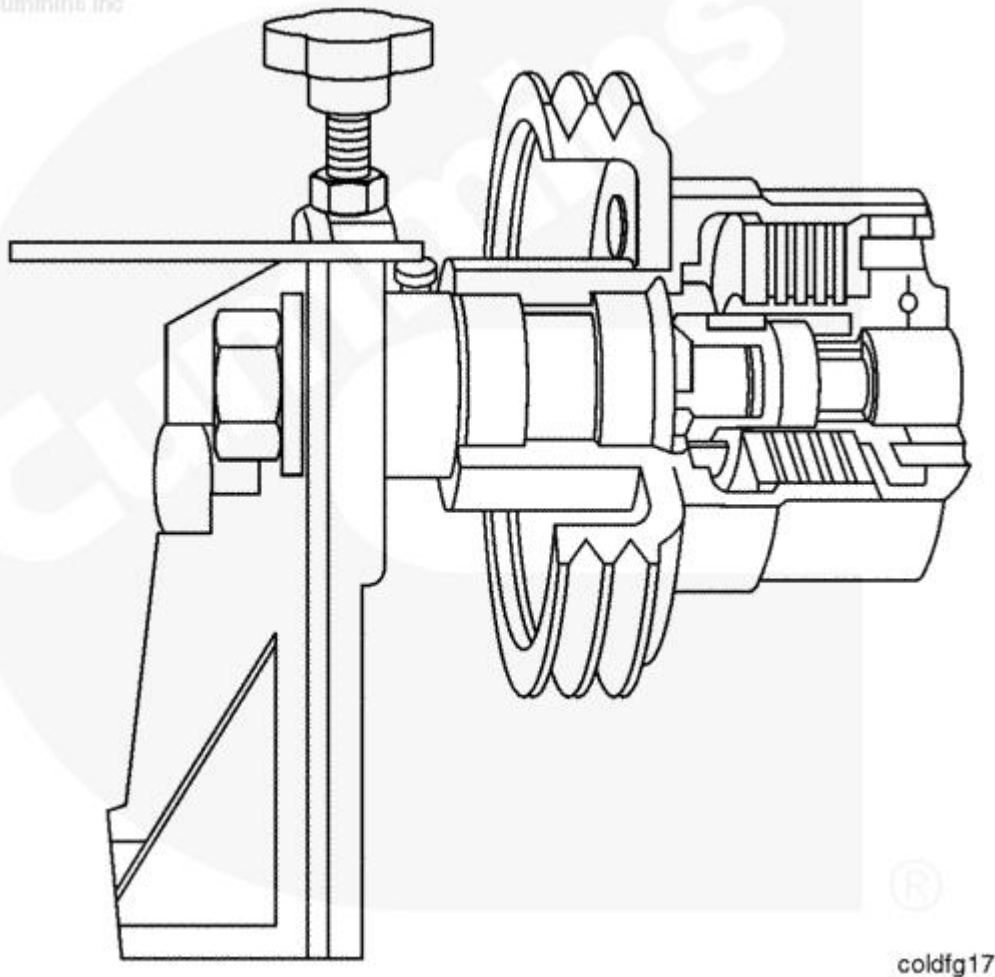


Figure 13: Thematic fan drive.

Fan Drive

A temperature controlled fan drive will reduce air circulation at the engine and help conserve compartment heat. These devices function by disconnecting the fan from its drive source at a specified temperature. Several types of drives are available. The thermo-modulating drive is air operated and provides gradual engagement depending on coolant temperature. The viscous drive utilizes a fluid coupling and will vary fan speed between 40 percent and 90 percent of its drive source speed.

NOTE: At low idle and in cold ambient temperatures the viscous fan drive can stay engaged due to the viscosity of the fluid.

Radiator Covers

A winter front cover, which is more air tight than shutters, is used to seal off the engine compartment and radiator at -32°C [-25°F] or lower temperatures. Winter front covers are available from most automotive supply stores. Kysor and Cadillac, radiator shutter

manufacturers, can supply special front covers. Generally these are custom made to fit the application and **must** be air tight. The cover opening is adjusted manually, depending on the ambient temperature and operation of the shutters providing control of air to the radiator.

Oil Pan Covers

Waterproof covered insulation or a heavy canvas blanket can be suspended under the engine or the cover can be a metal plate. These parts are available from any canvas or sheet metal shop and **must** be custom fit to the vehicle.

Electrical Equipment

Cranking Motor

The cranking motor **must** be of heavy duty construction to withstand the longer cranking periods at higher amperage loads and **not** overheat; use 24 volts or 32 volts. All starters **must** have the positive pinion engagement feature and **must** be winterized for lowest expected temperatures.

Cranking Motor Cables

Use starting system cable size and length as specified in Table 7. If a frame ground is used, scrape paint and grease from the point of cable connection, and tighten securely to provide good electrical connection.

Table 7: Cable Sizes (Total Length Allowable in Cranking Motor Circuit - AWG Gauge)						
Circuit Voltage	Maximum Voltage Drop	Maximum Resistance	Number 00	Number 000	Number 0000 or Two Number 0	Two Number 00
12-VDC	0.12V/100 amps	0.0012 Ohm	Up to 3.6 m [up to 12 ft]	3.6 to 4.8 m [12 to 16 ft]	4.8 to 6 m [16 to 20 ft]	6 to 7.6 m [20 to 25 ft]
12-VDC High Output Starting Motor	0.075V/100 amps	0.00075 Ohm	Up to 2 m [up to 7 ft]	2 to 2.7 m [7 to 9 ft]	2 to 2.7 m [7 to 9 ft]	3.6 to 4.2 m [12 to 14 ft]
24-VDC to 32-VDC	24-VDC to 32-VDC	0.002 Ohm	Up to 6 m [up to 20 ft]	6 to 8.2 m [20 to 27 ft]	6 to 8.2 m [20 to 27 ft]	10.6 to 13.7 m [35 to 45 ft]

NOTE: Two strands of Number 0 cable can be used in place of one Number 0000 cable provided that all connections are carefully made, so current in each parallel cable will be equal.

NOTE: The cross sectional circular mil area of Number 0000 cable is double that of Number 0 cable.

As a final check, measure the voltage drop and ampere flow in the system while cranking the engine for circuit resistance.

Table 8: Wire Sizes	
Circuit Description	AWG Gauge Size
Battery - Starter cables	See Table Number 0
Battery charging generator/alternator output leads (total length of output leads to be under 4.8 m [16 ft]); See sheet 3 of diagram 194076	—
Sensing lead battery voltage-regulator (alternator only)	10
All control circuit wiring, including generator/alternator field lead, in diagram 194076.	14
Accessory lead	As required by load

Batteries

Heavy duty construction with ample reserve power **must** be specified for all batteries used under low temperature starting conditions.

SAE J573h Battery Ratings

Cold Cranking Ampere Rating (CCA); the requirements for this standard are that the battery be cold soaked until the center of the cell reaches -18°C [0°F] and then discharged for 30 seconds at the rate which will provide at least 1.2 volts for each cell at the end of this time. This discharge rate is the cold cranking amperes. See Table 9 and 10. Use 1,280 specific gravity electrolyte (Federal specifications O-S-801) in all 6TN and 8TN batteries used in low temperatures.

Minimum Battery Capacity for Cummins® Engines

Waterproof covered insulation or a heavy canvas blanket can be suspended under the engine or the cover can be a metal plate. These parts are available from any canvas or sheet metal shop and **must** be custom fit to the vehicle.

Table 9: Minimum Battery Capacity for Cummins Engines in Winter Climate; -18°C [0°F] Minimum Engine Temperature

		12-VDC		24-VDC		30-VDC	32-VDC
Engine Series	Engine Displacement (Liters)	Cold Cranking Amperes -18°C [0°F]	Reserve Capacity	Cold Cranking Amperes -18°C [0°F]	Reserve Capacity	Cold Cranking Amperes -18°C [0°F]	Cold Cranking Amperes -18°C [0°F]
B	5.88	1280	480	640	240	–	–
C	8.3	1800	640	900	320	645	–
L	8.9	1280	480	640	240	–	–
L10	10	1800	640	900	320	800	780
ISL	8.9	1280	480	640	240	–	–
ISX	11.9	1800	640	900	320	800	780

Table 10: Minimum Battery Capacity for Cummins Engines in Mild Climate; 0°C [32°F] Minimum Engine Temperature

		12-VDC		24-VDC		30-VDC	32-VDC
Engine Series	Engine Displacement (Liters)	Cold Cranking Amperes 0°C [32°F]	Reserve Capacity	Cold Cranking Amperes 0°C [32°F]	Reserve Capacity	Cold Cranking Amperes 0°C [32°F]	Cold Cranking Amperes 0°C [32°F]
B	5.88	1280	480	640	240	–	–
C	8.3	1280	480	640	240	475	–
L	8.9	1280	480	640	240	–	–
L10	10	1280	480	640	240	475	455
ISL	8.9	1280	480	640	240	–	–
ISX	11.9	1280	480	640	240	945	520

Hydraulic or Air Cranking Motors

Hydraulic or air cranking motors can be used where the oil or air reservoirs and pressures are available.



Due to the initially high cranking speeds from these type cranking motors, always prelubricate the engine and/or turbocharger in temperatures below -12°C [10°F].

Personnel Protection

The wind chill chart, Table 11, is included in this bulletin to emphasize the protection required for the operator working under low temperature conditions. They **must** be protected adequately to correctly perform the task of starting and operating the equipment. Wind chill affects humans more than metals, since it is actually a measure of evaporation. The sensation to the skin is a lower temperature as given on the chart. As an example, assume an ambient temperature of -32°C [-25°F] with a 48.27 km [30 mile]/hour wind, the equivalent chill temperature is -61°C [-77°F] or it is equivalent to -61°C [-77°F] with no wind velocity. Temperature in this range will freeze exposed human flesh in less than one minute. Metal would remain at -32°C [-25°F].

Table 11: Wind Chill Rate																
Wind Velocity mph	Temperature °F															
0	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
10	20	14	8	2	-4	-10	-15	-21	-27	-33	-39	-45	-50	-56	-62	-68
15	13	7	0	-6	-12	-18	-25	-31	-38	-44	-50	-57	-63	-69	-75	-81
20	9	2	-5	-12	-19	-25	-32	-39	-45	-52	-59	-66	-72	-79	-85	-92
25	5	-2	-9	-17	-24	-30	-37	-44	-51	-58	-65	-72	-78	-86	-93	-99
30	3	-5	-12	-20	-27	-33	-41	-48	-55	-63	-70	-77	-83	-91	-98	-104
35	0	-7	-14	-22	-29	-36	-44	-51	-58	-66	-73	-81	-87	-95	-102	-109
40	-1	-9	-16	-24	-31	-38	-46	-53	-61	-69	-76	-84	-91	-98	-105	-112
Temperature and wind velocity related in terms of wind chill showing equivalent temperature under still conditions. (Values are approximate and do not allow for varying humidity.)																

Highway Operation

The following equipment or equivalent protection **must** be provided for highway applications operating in arctic climates. See Pages 1, 2 and 3.

- Provide for warm intake air in ambients below -12°C [10°F].
- Use a cover over the radiator such as a winter front.
- Shield oil pan and lower engine compartment from air blasts created by velocity of vehicles.
- Use a thermatic controlled fan.
- Heat the lubricating oil when the engine is **not** operating.

- Heat the coolant when the engine is **not** operating.
- Exposed lines **must** be insulated.
- Filters, pumps or reservoirs outside the engine compartment **must** be insulated to protect against ambients and air velocity.
- Provide a separate heater directed to operator's feet to maintain driver and cab temperatures.
- Warm the batteries.
- Use an alcohol vaporizer to protect compressed air system.
- If the engine is exposed behind the cab, a cover **must** be provided to enclose the engine in the compartment.

Last Modified: 26-Jul-2013

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From: Kerry Parrott <Kerry.Parrott@stahl-engineering.com>
Sent: Thursday, January 8, 2015 6:24 PM
To: Lafon Tim (othy)
Cc: Cheryl McCormick; BROWN CHERYL
Subject: Selected Kane Photos
Attachments: DSC_0066.jpg; DSC_0016.jpg; DSC_0051.jpg; DSC_0056.jpg

Tim:

Selected photos from yesterdays Kane inspection as requested. Please let me know if you need anything else.

Thanks,

Kerry
Stahl Engineering









Service Request Detail Report

SR #
SR Info
SR Type: Service issues - Incident

SR Area: Applications

App/Service: Complaint

Sub Area: Vehicle Functionality

Sub Area 2:
Sub Area 3:
Argus Company: VTNA Trucks

SR Classification
Source: Visit

Func. Group: 2009-miscellaneous

Severity: 2-High

Status: Closed

Sub-Status: Resolved

SR Owner Ship
SR Owner: EDWARD MEYERS

SR Group: VTNA - Field Service
Region NorthEast

SR Opened: 2015-01-09 19:20:09

SR Closed: 2015-08-20 20:53:52

Created By: ED MEYERS

Created By Group: VTNA - Field Service
Region NorthEast

Customer / Repairing Dealer Info
Call Back Name: EDWARD MEYERS

Call Back #: 2155473531

Contact First Name: ED

Contact Last Name: MEYERS

Dealer ID: XI000009

District #: 7557

Customer #: 5100D

Dealer Name: VOLVO TRUCKS NORTH AMERICA

Main Phone #: +9999

Main FAX #:
Street Address 1: 7900 NATIONAL SERVICE RD

Street Address 2:
City: GREENSBORO

State / ZIP: NC / 27409

Country: UNITED STATES

Selling Dealer Info
Selling Dealer ID: 0DACT

District #:
Customer #:
Selling Dealer: *DUMMY ACCOUNT
FRANCE*

Main Phone #:
Main FAX #:
Street Address 1: DUMMY ACCOUNT

Street Address 2:
City: DUMMY ACCOUNT

State / ZIP:
Country: HONDURAS

Owner Info
Buyer Info
Buyer ID: 827391

Buyer Name: KANE FREIGHT LINES INC

Main Phone #:
Main FAX #:
Street Address 1: PO BOX 931

Street Address 2:
City: SCRANTON

State / ZIP: PA / 185010931

Country: UNITED STATES

Vehicle / Unit
Chassis Series: N

Chassis Number:
Registration #:
VIN / Serial #: 4V5NC9UG7FN

Model: VNL64T N

Product Type: VNL6

Vehicle / Unit Info
Cab version: L1H1

Cab Size: 300

Engine Make: CUMMINS

Engine Model: ISX12

Rear axle load: RAL17

Rear axle installation: RADD-A4V

Front axle load: FAL6.0

Engine: CU12A400

HP Description: 400

Emission level: EM-USA10

Rear axle: RTS1857C

Gearshifting system: GSS-R

Transmission or Gearbox: F14210CO

Rear axle ratio: RAT3.70
 Truck Model Year: 2015
 Brake system: BSYS-CON

Other Details

Part #:
 Misc Part #:
 Error Code #:

Application

User ID: UT1440X
 Client ID:
 Digipass ID:

Summary

Reported vehicle fire Kane trucking [REDACTED]

Desc./Compl.

Contacted Monday 1/5/2015 by the dealer and Corp legal dept. about a vehicle that was involved in a fire Friday evening 1/2/15 at approx. 1700 hours involving a CNG vehicle owned and operated by Kane Freight lines location Scranton Pa Stauffer industrial park phone # 570-558-5213 Contact person is Dan Volpe or Shane Morgan.

Response

NA

Travel to customer location in Scranton to review the other 6 vehicles

[REDACTED] Reviewed and inspected and found that the exhaust pipe is laying on top of the fuel tanks on the right side with no clearance. While on site I used a thermal gun to record heat levels at the flex pipe and elbow going into the muffler. Ran vehicle for fifteen minutes at high idle and notice smoke coming out from under the vehicle right at the pipe laying on the fuel tank cover which is CNG TEMP, RANGED FROM 350F TO 850 degrees on vehicle [REDACTED] outside air temp on this day was 12 degrees F.

1/7/15 Picked up Kerry Parrott from Stahl Engineering travel to the location housing the destroyed vehicles in Hallstead Pa, Inspected vehicles recorded any and all information. Pictures, statements, etc. I did stop any rumors that were flying around by some folks that saw some things but did not have true information or facts of the case. Police reports and fire reports are not completed at t

Translation

Completed and gather as much information as possible at this time further investigation into this fire is required by other parties, Cummins engine group, along with the Agility Fuel systems,

Questions – who installed the tanks, sources at the dealership Laflin truck center Wilkes Barre Pa has indicated that Blue Mountain truck center installed these tanks for Agility supplier, Cummins engine questionable if the sensor mounted in the intake could have been at fault there is a active or was an active recall on this sensor (CL 1461) Service bulletin 4332709 I have attached all e mails from the dealer to Cummins inquiring about this sensor all will be sent to the legal dept. attn. Tim LaFon

Tim, so you are aware that the remaining vehicles (6) have been put out of service pending our investigation. The clearance issues are a major concern, and are they safe to drive.

They are in 6 rental vehicles that we discussed earlier this vehicle.

The vehicles are away from the rest of the fleet and tanks have been vented and fuel valves have been shut off.

Activity Notes

Created	Created By	Audience	Activity Type	Comments
2015-08-19 21:02:17	ED MEYERS	Internal	Investigation	Dear Ed, After extensive investigation, we were unable to identify any defect in the design, materials, or manufacturing in any of the components installed by Volvo. The Argus case should be closed as we have completed the investigation. Best Regards, Tim
2015-07-19 12:00:23	ED MEYERS	Internal	Documentation	Stacey, See attached invoice dated 7/7/15. Vehicle was towed to test center as part of an investigation associated with another Mack vehicle. Towing and Fuel charges. Cross charge the following: Acct.#699101 and Cost/Profit Ctr. 11060. Thank-you, Cheryl L. Brown for Mr. Timothy LaFon, VP
2015-07-19 11:59:27	ED MEYERS	Internal	Documentation	Since March 2015 Volvo Group Trucks has paid a total of \$72,564.70 for tractor rental fee re-imbursement. Cheryl L. Brown Volvo Group Trucks Sales & Marketing Americas Administrative Assistant Regulatory Affairs CC2/28 7900 National Service Road Greensboro, NC 27409

2015-06-10 13:45:21	ED MEYERS	Internal	Investigation	case is still under investigation as of 6/10/15
2015-05-14 12:25:33	ED MEYERS	Internal	Investigation	CASE IS PENDING FURTHER LEGAL ACTION
2015-05-14 12:25:08	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Marv's Invoice' has been added.
2015 05 14 12 24 51	ED MEYERS	Internal	Documentation	CASE MUST REMAIN OPEN UNTIL CONCLUDED BY COUNCIL
2015-05-14 12:23:02	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Evidence Log 5-12-2015 Claim # [REDACTED] Kane Is Able 15-001' has been added.
2015 05 14 12 10 30	ED MEYERS	Internal	Documentation	Inspection was held again for this vehicle on 5/12/15 with Council, Cummins engine and Kane group legal rep, The engine was inspected and disassemble Head was taken off, turbo charger was removed Mixing chamber was removed and DPF Filtering system remove and all parties inspected these item and where signed into evindenced with the Peter Davis group, on site from Volvo was Tim Lafon, Kerry Parrott and Ed Meyers, No conclusion on this case as of this date. A brief meeting was held at the Kane group preceeding the inspection with upper management ubitl Tim Lafon can speak and intervire the drive case is on hold NOTE i have made to attemptts to Interview this driver in the past and my REQUEST WHERE DENIED BY DAN VOLPE FOR KANE
2015-02-10 22:23:02	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Kane4_508' has been added.
2015 02 10 22 18 58	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Kane2~2' has been added.
2015-02-10 22:15:54	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Kane 6~2' has been added.
2015-02-10 22:15:53	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Kane 5 2' has been added
2015-02-10 22:14:52	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Kane 3~2' has been added.
2015 02 10 22 14 52	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Kane 1~2' has been added.
2015-02-10 22:13:51	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Idealease M3463 (2)' has been added.
2015-02-10 22:12:49	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Kane invoices 2 6 15' has been added
2015-02-10 21:55:07	ED MEYERS	Internal	Documentation	Travel to Kane Trucking to meet Cummins Fire Investigator sea Kevin Keaton for Cummins power system inspected 6 remaining vehicles at Kanes from 9:00am till 11:00 am pictures where taken chassis numbers etc, Waited on Agility Fuel systems to arrive Daniel Bernal for his investigation to take place, Inspected and departed for Hallstead Pa Marves towing Great Bend Pa . meet up with Christopher Matheis from Cummins Westport for his inspection. Also in attendance was Kerry Parrot Stahle tech, and Shane Morgan from Kane. Questions about fuel system and sensors as well as exhaust temps at idle. Question to cummins where left unanswered pending there legal group approval. Cummins people did question the Fire Chief from Harford Pa this dept was involved in the incident and where called out by the Stae Police to extinguish the fire. question by Chistopher Matheis to gain facts as report by the chief in his report. line of questioning from Ed Meyers needed direction from cummins where left unanswered pending approval from There legal dept, to date 2/10/15 all question have been left unanswerd and pending 6 vehicles remain parked and are out of service for Kane trucking till further notice... Heavy snow and ice both days 2/9/ 2/10 made traveling a little difficult all parties travel saftley back to there hotels
2015 01 12 15 01 57	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Agility Invoices for Tanks and Installation' has been added
2015-01-09 19:32:41	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0650' has been added.
2015-01-09 19:32:41	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG 2160' has been added
2015-01-09 19:32:40	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0648' has been added.
2015 01 09 19 32 40	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0649' has been added.
2015-01-09 19:31:39	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0647' has been added.
2015-01-09 19:31:39	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG 0646' has been added
2015-01-09 19:31:38	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0644' has been added.
2015 01 09 19 31 38	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0642' has been added.
2015-01-09 19:31:38	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0645' has been added.
2015-01-09 19:30:37	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG 0643' has been added
2015-01-09 19:30:36	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0641' has been added.

2015-01-09 19:30:35	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0640' has been added.
2015-01-09 19:21:18	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Kane Fire [REDACTED] # 100 1' has been added.

From MARV'S Service Center
Kane Burnt truck

Fax 570 879-4877

Phone 570-879-2812

Storage Fees As of 4/17/15 - 150.00 - B.R.D.M. - 17250 -

Recovery + Cleanup + Remove Freight/H.P. 15,700.65

GRAYARC 1-800-243-5250

REPAIR ORDER

F912



MARV'S SERVICE CENTER

P.O. Box 261

HALLSTEAD, PA 18822

Days (570) 879-2812 • Nights (570) 879-4409

Fax (570) 879-4877

NAME Kane

ADDRESS

CITY

DATE 4-2-15 CUST. ORDER NO. WHEN PROMISED PHONE

YEAR & MAKE OF CAR-TYPE OR MODEL SERIAL NO. / VIN#

MOTOR NO.

LICENSE NO. MILEAGE WRITTEN BY

DESCRIPTION OF WORK AMOUNT

Labor For Recovery + Cleanup 5 men 6 hrs 2900.00
Labor For Cargo Removal 3 men 4 hrs 960.00

GAS, OIL & GREASE CHECK BELOW

LUBRICATE LABOR ONLY 3360.00

CHANGE ENGINE OIL PARTS 15700.65

QTS. OIL TRANSMISSION

LBS. GREASE DIFFERENTIAL

HAZARDOUS WASTE DISP. WASH

POLISH

TOTAL GAS, OIL & GREASE TOTAL SERVICE TAX

AUTHORIZED BY TOTAL

SEE BACK FOR
ADDITIONAL PARTS

TOTAL PARTS ▶ 15700.65

ACCESSORIES—TIRES AND TUBES

Storage for Tractor 50th per day

Storage for Burnt debris 50th per day

Storage for Trailer 50th per day

TOTAL ACCESSORIES ▶

ESTIMATES ARE FOR PARTS
AND LABOR

I HEREBY AUTHORIZE THE ABOVE REPAIR WORK TO BE DONE ALONG WITH NECESSARY MATERIALS. YOU AND YOUR EMPLOYEES MAY OPERATE ABOVE VEHICLE FOR PURPOSES OF TESTING, INSPECTION OF DELIVERY AT MY RISK. AN EXPRESS MECHANIC'S LIEH IS ACKNOWLEDGED ON ABOVE VEHICLE TO SECURE THE AMOUNT OF REPAIRS T-RETO. IT IS UNDERSTOOD THAT THIS COMPANY ASSUMES NO RESPONSIBILITY FOR LOSS OR DAMAGE BY THEFT OR FIRE TO VEHICLES PLACED WITH THEM FOR STORAGE, SALE, REPAIR OR WHILE ROAD TESTING.

PAY THIS
AMOUNT

Chain of Custody Report

Insurance Evidence Services

548 Silk Street

Jim Thorpe, PA 18229

5/13/2015 9:05:18 AM

Claim #: [REDACTED]

Loss Date: 01/17/2015
 Type of Loss: Fire
 Offense Description:
 Loss Location:
 Case Officer: Donald Putt

Persons: Kane Is Able (Property Owner)
 Michael Zazula (Engineer)
 Peter Davis (Origin & Cause Investigator)

Item ID: 1

Category: Other
 Description: Pallet containing oil pan, 3 cans oil, plastic tub with bolts turbo cylinder head components. NOTE: During transport one of the oil cans spilled
 Item Submitted By: Donald Putt

Time Received: 05/12/2015 05:00:00 PM
 Reason Taken: Evidence
 Location Stored: Interior
 Recovered By: Peter Davis
 Transported By: IES
 Officer in Charge:
 Current Status: **IN**
 Evidence Room Loc: Insurance Evidence Services
 => Area D => Shelf 1

	Date	Issued From	Issued To	Room Loc/Reason out
In	05/13/2015 08:53:19 AM	Donald Putt	[TO SYSTEM]	Location: Insurance Evidence Services => Area D => Shelf 1

Item ID: 2

Category: Other
 Description: Pallet containing cylinder head and components
 Item Submitted By: Donald Putt

Time Received: 05/12/2015 05:00:00 PM
 Reason Taken: Evidence
 Location Stored: Interior
 Recovered By: Peter Davis
 Transported By: IES
 Officer in Charge:
 Current Status: **IN**
 Evidence Room Loc: Insurance Evidence Services
 => Area D => Shelf 1

	Date	Issued From	Issued To	Room Loc/Reason out
In	05/13/2015 08:54:12 AM	Donald Putt	[TO SYSTEM]	Location: Insurance Evidence Services => Area D => Shelf 1

Item ID: 3

Category: Other
 Description: Pallet containing exhaust from turbo to CAT sections and exhaust stack
 Item Submitted By: Donald Putt

Time Received: 05/12/2015 05:00:00 PM
 Reason Taken: Evidence
 Location Stored: Interior
 Recovered By: Peter Davis
 Transported By: IES
 Officer in Charge:
 Current Status: **IN**
 Evidence Room Loc: Insurance Evidence Services
 => Area D => Shelf 1

	Date	Issued From	Issued To	Room Loc/Reason out
In	05/13/2015 08:55:15 AM	Donald Putt	[TO SYSTEM]	Location: Insurance Evidence Services => Area D => Shelf 1

Item ID: 4

Category: Other
 Description: Small oil sample bottle
 Item Submitted By: Donald Putt

Time Received: 05/12/2015 05:00:00 PM
 Reason Taken: Evidence
 Location Stored: Interior
 Recovered By: Peter Davis
 Transported By: IES
 Officer in Charge:
 Current Status: **IN**
 Evidence Room Loc: Insurance Evidence Services
 => Area D => Shelf 1

	Date	Issued From	Issued To	Room Loc/Reason out
--	------	-------------	-----------	---------------------

In 05/13/2015 08:55:40 AM Donald Putt

[TO SYSTEM]

Location:

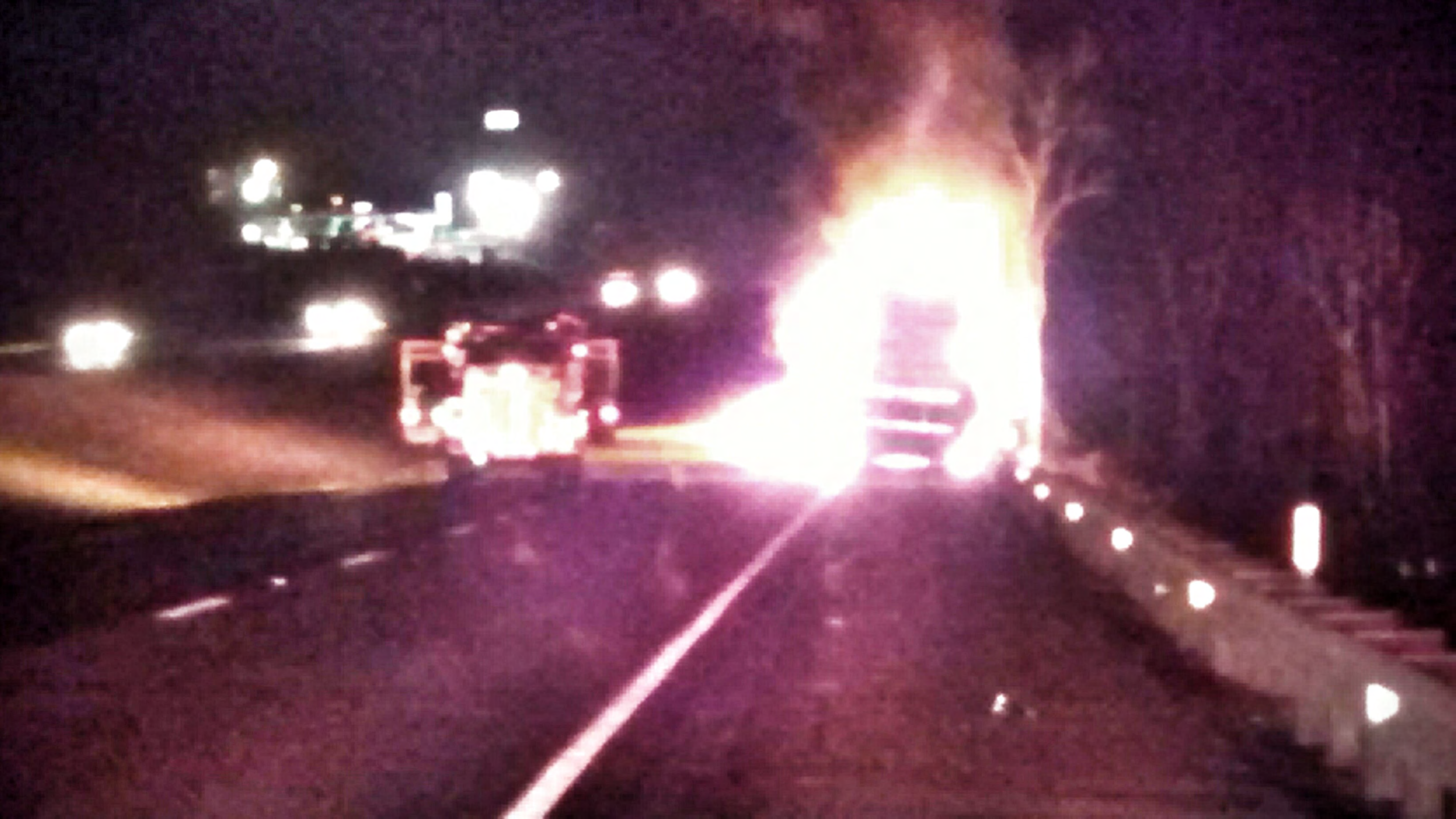
Insurance Evidence Services => Area D =>
Shelf 1













IDEALEASE OF CENTRAL NEW YORK

13 Terminal Road

Liverpool, NY 13088

one 13151701-3090

ax (315) 701-3094

L42051

IECflWELL FEB 03 2015.

INVOICE # [REDACTED]

FLMI

KANE FREIGHT LINES, INC

PO BOX 931

SCRANTON, PA 18501

INV DATE 01/29/2015

PAGE 1

REFERENCE VEHICLE

FIXED 2812

DESCRIPTION

BASIC RENTAL REVENUE

AMOUNT

1,142.35

FIXED	2814	FIXED RATE FOR UNIT 2812 FOR OF 01/16/2015 TO 01/31/2015 BASIC RENTAL REVENUE	THE PERIOD
FIXED	2815	FIXED RATE FOR UNIT 2814 FOR OF 01/14/2015 TO 01/31/2015 BASIC RENTAL REVENUE	THE PERIOD
FIXED	2816	FIXED RATE FOR UNIT 2815 FOR OF 01/19/2015 TO 01/31/2015 BASIC RENTAL REVENUE	THE PERIOD
FIXED	2817	FIXED RATE FOR UNIT 2816 FOR OF 01/19/2015 TO 01/31/2015 BASIC RENTAL REVENUE	THE PERIOD
FIXED	2818	FIXED RATE FOR UNIT 2817 FOR OF 01/19/2015 TO 01/31/2015 BASIC RENTAL REVENUE	THE PERIOD
FIXED		FIXED RATE FOR UNIT 2818 FOR	THE PERIOD

NON TAX

TOTAL DUE

OF 01/21/2015 TO 01/31/2015

\$ 0.00

\$ 6,708.70

PLEASE CONTACT KIM OR CHERYL WITH ANY INVOICE QUESTIONS

PLEASE REMIT PAYMENT TO IDEALEASE LOCATION AT TOP OF INVOICE

CUSTOMER COPY

1,350.05

1,038.50

1,308.50

1,038.50

830.80

Date(s): 01/01/2015 -01/31/2015

Work Order Detail

idealease

VIN:

License Plate:

Miles: 250753.0

Location: Kane Freight Lines Inc

Department: 140-KFL Drivers

WO #	Open Date	Close Date	Status	Downtime	Accident
	01/28/2015			0.00	

Description: mehcanical

Comments: Install qualcomm 1 hour per truck
 Install fuel master 2 hours per truck
 Fuel master parts per truck \$153.00
 Labor Rate \$85 per hour

\$ 595.00 labor to install qualcom in 7 rental trucks

\$ 1190.00 labor to install fuel master in 7 rental trucks

\$ 1071.00 fuel master parts for 7 rental trucks

Detail	Discounts	Parts	Labor	Tires	Other	Total
030-000-000-Electrical Group		\$1,071.00	\$1,785.00		\$0.00	\$2,856.00
Repair Comments:Install qualcomm 1 hour per truck						
Miscellaneous Parts		\$1,071.00				
Miscellaneous Labor			\$1,785.00			
	\$0	\$1,071.00	\$1,785.00	\$0	\$0	<u>\$2,856.00</u>

Grand Total:	\$0.00	\$1,071.00	\$1,785.00	\$0.00	\$0.00	<u>\$2,856.00</u>
--------------	--------	------------	------------	--------	--------	-------------------

John Cecere

From: Irene Chuaseco [IChuaseco@agilityfs.com]
Sent: Tuesday, September 23, 2014 1:46 PM
To: john@wilkesbarretruck.com
Cc: byronmiles@wilkesbarretruck.com
Subject: WILKES-BARRE TRUCKS- INVOICE COPIES FOR PO# V0422
 Hi,

Attached are invoice copies for your Purchase Order NO. V0422 as per below-mentioned statement:

INVOICE NO	PO #		VIN#	INVOICE DATE	DUE DATE	TERMS	INVOICE AMOUNT
		Wilkes-Barre Truck Center		8/31/2014	9/30/2014	30	36,669.
		Wilkes-Barre Truck Center		8/31/2014	9/30/2014	30	36,669.
		Wilkes-Barre Truck Center		8/31/2014	9/30/2014	30	36,669.
		Wilkes-Barre Truck Center		8/31/2014	9/30/2014	30	36,669.
		Wilkes-Barre Truck Center		8/31/2014	9/30/2014	30	36,669.
		Wilkes-Barre Truck Center		8/31/2014	9/30/2014	30	36,669.
		Wilkes-Barre Truck Center		8/31/2014	9/30/2014	30	36,669.
							\$
							<u>256,683.</u>

Should you have any questions, please feel free to email or call me.

Thanks and have a wonderful day!!

Pd CK # [REDACTED]
7/30/14

Best Regards,

Irene Chuaseco
 AR Manager
 Agility Fuel Systems
 1815 Carnegie St.
 Santa Ana, Ca. 92705
 Tel: 949 396 7413
 Fax: 714 242 1385
 Email: ichuaseco@agilityfs.com

9/23/2014

**Invoice****ORIGINAL**

Invoice Date
8/31/14
Order Date
2/26/14
Customer Number
11140

Invoice Number
[REDACTED]
Order Number
[REDACTED]
Your Reference

Agility Fuel Systems Inc

Our Reference

Tax Identity

Brian MacNeil

Ship To:

Transedge

247 Pennsylvania 61

Schuylkill Haven PA 17972

UNITED STATES

Invoice Address

Wilkes-Barre Truck Center

525 E Main St

Wilkes-Barre PA 18702-6944

UNITED STATES

Ship Via

Best Way

Terms of Delivery

Free on Board

Delivery Location

Agility Fuel Systems

Forward Agent

Latest Delivery Date

Due Date

9/19/14

9/30/14

-- See invoice lines --

Terms of Payment

30 Days Net

Label Note

DEFER UNTIL INSTALL

Purchase Order Number

[REDACTED]

Payment Reference

Pos	Part No	Description	Sales Qty	Unit
1	23744001	Side Mount, 45 DGE, 25x90 Tank, RHS, No FMM, Steps	1	EA

Actual Ship Date

Sales Qty

Sep 19, 2014

1.00

Id: 252

Configuration for 23744001

VIN:

Serial No: 14-13767

Characteristic

Characteristic Value

Unit

Quantity

Configuration, SM-STEP-GEN3-91

Agility Supplied 90 inch Step & Step Bracket

2	23746011	Side Mount, 45 DGE, 25x90 Tank, LHS, FMM, Steps	1	EA
---	----------	---	---	----

Actual Ship Date

Sales Qty

Sep 19, 2014

1.00

Id: 253

Configuration for 23746011

VIN:

Serial No: 14-13767

Characteristic

Characteristic Value

Unit

Quantity

Configuration, SM-STEP-GEN3-81

Agility Supplied 81inch Step & Step Bracket

LHS FMM (243)

24364000, Elec: 24300089, Gauge:

Volvo/Mack, Chassis: Any Volvo, Gran. &

Physical Address

Agility Fuel Systems (US)
1815 E. Carnegie Avenue
Santa Ana, CA, 92705
USA

Remit Payment To

Agility Fuel Systems, Inc.
PO Box 102365
Atlanta, GA 30368-2365
USA

Phone

(949)230-5520

Fax

(949)242-2842

Website

www.agilityfuelsystems.com

Invoice**ORIGINAL**

Invoice Date

8/31/14

Invoice Number

Order Date

2/26/14

Order Number

Customer Number

11140

Your Reference

Agility Fuel Systems Inc

Purchase Order Number

Our Reference

Tax Identity

Brian MacNeil

Pos	Part No	Description	Sales Qty	Unit
	Characteristic	Characteristic Value	Unit	Quantity
		Pinn. Mack, 2 Reed, 0 Kill		
3	24100007	Install Kit, SM CNG, Two Tanks (Gen 3 or Gen 4 System)	1	EA

Supplier Delivery Note Reference(s): 446

Actual Ship Date

Sep 9, 2014

Sales Qty

1.00

Id: 118 : Configuration for 24100007

VIN:

Serial No: *

Characteristic	Characteristic Value	Unit	Quantity
AUX-FILL-KIT-FRONT	None		
AUX-FILL-KIT-REAR	None		
AUX-FILL-KIT-SIDE	None		
CHASSIS-KIT	Install kit, Chassis Kit, two side mounts, Volvo/Mack Day Cab, with DAP		
DEFUEL-HOSE	None		
FUEL	None		
FUEL-DEL-HOSE-HP	None		
FUEL-DEL-HOSE-LP	None		
IN-CAB-GAUGE	None		
KILL-CAP	None		
LOW-FP-LIGHT	None		
Indicates the Install location	No Installation Required		
METH-DETECT-KIT	None		
FMM Install Location on Truck	Street-Side (Left Hand Side/Driver's Side)		

Sub Total Amount	36,669.00
------------------	-----------

Total Exclusive Tax	36,669.00
---------------------	-----------

Total Tax	0.00
-----------	------

Invoice Amount	36,669.00
----------------	-----------

Tax Totals

Tax Code	Description	%	Total Amount	Total Discount	Tax Base Amount	Tax Amount	Gross Amount In Curr
RESALE	Resale 0% Sales Tax	0	35,669.00	0.00	36,669.00	0.00	36,669.00

Physical Address

Agility Fuel Systems (US)
1815 E. Carnegie Avenue
Santa Ana, CA, 92705
USA

Remit Payment To

Agility Fuel Systems, Inc.
PO Box 102365
Atlanta, GA 30368-2365
USA

Phone

(949)236-5520

Fax

(949)242-2842

Website

www.agilityfuelsystems.com

**Invoice****ORIGINAL**

Invoice Date
8/31/14
Order Date
2/26/14
Customer Number
11140

Invoice Number
[REDACTED]
Order Number
[REDACTED]
Your Reference

Agility Fuel Systems Inc

Our Reference

Tax Identity

Brian MacNeil

Ship To:

Transedge

247 Pennsylvania 61

Schuylkill Haven PA 17972

UNITED STATES

Invoice Address

Wilkes-Barre Truck Center

525 E Main St

Wilkes-Barre PA 18702-6944

UNITED STATES

Ship Via

Best Way

Terms of Delivery

Free on Board

Delivery Location

Agility Fuel Systems

Forward Agent

Latest Delivery Date

Due Date

9/19/14

9/30/14

-- See invoice lines --

Terms of Payment

30 Days Net

Label Note

DEFER UNTIL INSTALL

Purchase Order Number

V0422

Payment Reference

Pos	Part No	Description	Sales Qty	Unit
1	23744001	Side Mount, 45 DGE, 25x90 Tank, RHS, No FMM, Steps	1	EA
Actual Ship Date: Sep 19, 2014 Id: 252 ; Configuration for 23744001 VIN: [REDACTED] Serial No: 14-13768 Characteristic: Configuration, SM-STEP-GEN3-91 Characteristic Value: Agility Supplied 90 inch Step & Step Bracket				
2	23746011	Side Mount, 45 DGE, 25x90 Tank, LHS, FMM, Steps	1	EA

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 253 ;

Configuration for 23746011

VIN:

Serial No: 14-13768

Characteristic

Characteristic Value

Unit

Quantity

Configuration, SM-STEP-GEN3-81

Agility Supplied 81inch Step & Step Bracket

LHS FMM (243)

24364000, Elec: 24300089, Gauge:

Volvo/Mack, Chassis: Any Volvo, Gran. &

Physical Address

Agility Fuel Systems (US)
1815 E. Carnegie Avenue
Santa Ana, CA, 92705
USA

Remit Payment To

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PO Box 102365
Atlanta, GA 30368-2365
USA

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(949)236-5520

Fax

(949)242-2842

Website

www.agilityfuelsystems.com

Invoice**ORIGINAL**

Invoice Date

8/31/14

Invoice Number

Order Date

2/26/14

Order Number

Customer Number

11140

Your Reference

Agility Fuel Systems Inc

Purchase Order Number

Our Reference

Tax Identity

Brian MacNeil

Pos	Part No	Description	Sales Qty	Unit
3	24100007	Install Kit, SM CNG, Two Tanks (Gen 3 or Gen 4 System)	1	EA

Supplier Delivery Note Reference(s): 446

Actual Ship Date

Sep 9, 2014

Sales Qty

1.00

Id: 118

Configuration for 24100007

VIN:

Serial No: *

Characteristic	Characteristic Value	Unit	Quantity
AUX-FILL-KIT-FRONT	None		
AUX-FILL-KIT-REAR	None		
AUX-FILL-KIT-SIDE	None		
CHASSIS-KIT	Install kit, Chassis Kit, two side mounts, Volvo/Mack Day Cab, with DAP		
DEFUEL-HOSE	None		
FUEL	None		
FUEL-DEL-HOSE-HP	None		
FUEL-DEL-HOSE-LP	None		
IN-CAB-GAUGE	None		
KILL-CAP	None		
LOW-FP-LIGHT	None		
Indicates the Install location	No Installation Required		
METH-DETECT-KIT	None		
FMM Install Location on Truck	Street-Side (Left Hand Side/Driver's Side)		

Sub Total Amount	36,669.00
------------------	-----------

Total Exclusive Tax	36,669.00
---------------------	-----------

Total Tax	0.00
-----------	------

Invoice Amount	36,669.00
----------------	-----------

Tax Totals

Tax Code	Description	%	Total Amount	Total Discount	Tax Base Amount	Tax Amount	Gross Amount In Curr
RESALE	Resale 0% Sales Tax	0	36,669.00	0.00	36,669.00	0.00	36,669.00

Physical Address

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Website

www.agilityfuelsystems.com

**Invoice**

Invoice Date
8/31/14
Order Date
2/26/14
Customer Number
11140

Invoice Number
[REDACTED]
Order Number
[REDACTED]
Your Reference

ORIGINAL**Agility Fuel Systems Inc**

Our Reference

Tax Identity

Brian MacNeil

Ship To:

Transedge

247 Pennsylvania 61

Schuylkill Haven PA 17972

UNITED STATES

Invoice Address

Wilkes-Barre Truck Center

525 E Main St

Wilkes-Barre PA 18702-6944

UNITED STATES

Ship Via

Best Way

Terms of Delivery

Free on Board

Delivery Location

Agility Fuel Systems

Forward Agent

Latest Delivery Date

Due Date

9/19/14

9/30/14

-- See invoice lines --

Terms of Payment

30 Days Net

Label Note

DEFER UNTIL INSTALL

Purchase Order Number

V0422

Payment Reference

Pos	Part No	Description	Sales Qty	Unit
1	23744001	Side Mount, 45 DGE, 25x90 Tank, RHS, No FMM, Steps	1	EA

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 252 : Configuration for 23744001

VIN: [REDACTED]

Serial No: [REDACTED]

Characteristic

Characteristic Value

Unit

Quantity

Configuration, SM-STEP-GEN3-91

Agility Supplied 90 inch Step & Step Bracket

2	23746011	Side Mount, 45 DGE, 25x90 Tank, LHS, FMM, Steps	1	EA
---	----------	---	---	----

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 253 : Configuration for 23746011

VIN: [REDACTED]

Serial No: [REDACTED]

Characteristic

Characteristic Value

Unit

Quantity

Configuration, SM-STEP-GEN3-81

LHS FMM (243)

Agility Supplied 81inch Step & Step Bracket

24364000, Elec: 24300089, Gauge:

Volvo/Mack, Chassis: Any Volvo, Gran. &

Physical Address

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Invoice**ORIGINAL**

Invoice Date

8/31/14

Invoice Number

Order Date

2/26/14

Order Number

Customer Number

Agility Fuel Systems Inc

Purchase Order Number

Your Reference

Our Reference

Tax Identity

Brian MacNeil

Pos	Part No	Description	Sales Qty	Unit
		Characteristic		Quantity
		Characteristic Value		
		Pinn. Mack, 2 Reed, 0 Kill		
3	24100007	Install Kit, SM CNG, Two Tanks (Gen 3 or Gen 4 System)	1	EA

Supplier Delivery Note Reference(s): 446

Actual Ship Date

Sep 9, 2014

Sales Qty

1.00

Id: 118 ; Configuration for 24100007

VIN:

Serial No: *

Characteristic	Characteristic Value	Unit	Quantity
AUX-FILL-KIT-FRONT	None		
AUX-FILL-KIT-REAR	None		
AUX-FILL-KIT-SIDE	None		
CHASSIS-KIT	Install kit, Chassis Kit, two side mounts, Volvo/Mack Day Cab, with DAP		
DEFUEL-HOSE	None		
FUEL	None		
FUEL-DEL-HOSE-HP	None		
FUEL-DEL-HOSE-LP	None		
IN-CAB-GAUGE	None		
KILL-CAP	None		
LOW-FP-LIGHT	None		
Indicates the Install location	No Installation Required		
METH-DETECT-KIT	None		
FMM Install Location on Truck	Street-Side (Left Hand Side/Driver's Side)		

Sub Total Amount	36,669.00
------------------	-----------

Total Exclusive Tax	36,669.00
---------------------	-----------

Total Tax	0.00
-----------	------

Invoice Amount	36,669.00
----------------	-----------

Tax Totals

Tax Code	Description	%	Total Amount	Total Discount	Tax Base Amount	Tax Amount	Gross Amount In Curr
RESALE	Resale 0% Sales Tax	0	36,669.00	0.00	36,669.00	0.00	36,669.00

Physical Address

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**Invoice**

Invoice Date
8/31/14
Order Date
2/26/14
Customer Number
11140

Invoice Number
[REDACTED]
Order Number
[REDACTED]
Your Reference

**ORIGINAL
DUPLICATE**

Date Of Duplicate
9/23/14

Agility Fuel Systems Inc

Our Reference

Tax Identity

Brian MacNeil

Ship To:

Transedge

247 Pennsylvania 61

Schuykill Haven PA 17972

UNITED STATES

Invoice Address

Wilkes-Barre Truck Center

525 E Main St

Wilkes-Barre PA 18702-6944

UNITED STATES

Ship Via

Best Way

Terms of Delivery

Free on Board

Delivery Location

Agility Fuel Systems

Forward Agent

Latest Delivery Date

Due Date

9/19/14

9/30/14

-- See invoice lines --

Terms of Payment

30 Days Net

Label Note

DEFER UNTIL INSTALL

Purchase Order Number

V0422

Payment Reference

Pos	Part No	Description	Sales Qty	Unit
1	[REDACTED]	Side Mount, 45 DGE, 25x90 Tank, RHS, No FMM, Steps	1	EA

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 252 ; Configuration for 23744001

VIN: [REDACTED]

Serial No: [REDACTED]

Characteristic	Characteristic Value	Unit	Quantity
Configuration, SM-STEP-GEN3-91	Agility Supplied 90 inch Step & Step Bracket		

2	23746011	Side Mount, 45 DGE, 25x90 Tank, LHS, FMM, Steps	1	EA
---	----------	---	---	----

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 253 ; Configuration for 23746011

VIN: [REDACTED]

Serial No: [REDACTED]

Characteristic	Characteristic Value	Unit	Quantity
Configuration, SM-STEP-GEN3-81	Agility Supplied 81inch Step & Step Bracket		
LHS FMM (243)	24364000, Elec: 24300089, Gauge: Volvo/Mack, Chassis: Any Volvo, Gran. &		

Physical Address

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Fax

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Website

www.agilityfuelsystems.com

Invoice

Invoice Date
8/31/14
Order Date
2/26/14
Customer Number
11140
Your Reference

Invoice Number
C [REDACTED]
Order Number
E [REDACTED]

ORIGINAL**DUPLICATE**

Date Of Duplicate
9/23/14

Agility Fuel Systems Inc

Purchase Order Number

[REDACTED]

Our Reference

Tax Identity

Brian MacNeil

Pos	Part No	Description	Sales Unit	Unit Qty
-----	---------	-------------	------------	----------

Characteristic	Characteristic Value	Unit	Quantity
Pinn. Mack, 2 Reed, 0 Kill			

3	24100007	Install Kit, SM CNG, Two Tanks (Gen 3 or Gen 4 System)	1	EA
---	-----------------	--	---	----

Supplier Delivery Note Reference(s): 446

Actual Ship Date
Sep 9, 2014

Sales Qty
1.00

Id: 118 : Configuration for 24100007

VIN:

Serial No: *

Characteristic	Characteristic Value	Unit	Quantity
AUX-FILL-KIT-FRONT	None		
AUX-FILL-KIT-REAR	None		
AUX-FILL-KIT-SIDE	None		
CHASSIS-KIT	Install kit, Chassis Kit, two side mounts, Volvo/Mack Day Cab, with DAP		
DEFUEL-HOSE	None		
FUEL	None		
FUEL-DEL-HOSE-HP	None		
FUEL-DEL-HOSE-LP	None		
IN-CAB-GAUGE	None		
KILL-CAP	None		
LOW-FP-LIGHT	None		
Indicates the Install location	No Installation Required		
METH-DETECT-KIT	None		
FMM Install Location on Truck	Street-Side (Left Hand Side/Driver's Side)		

Sub Total Amount	36,669.00
------------------	-----------

Total Exclusive Tax	36,669.00
---------------------	-----------

Total Tax	0.00
-----------	------

Invoice Amount	36,669.00
----------------	-----------

Physical Address
Agility Fuel Systems (US)
1815 E. Carnegie Avenue
Santa Ana, CA, 92705
USA

Remit Payment To
Agility Fuel Systems, Inc.
PO Box 102365
Atlanta, GA 30368-2365
USA

Phone
(949)236-5520

Fax
(949)242-2842

Website
www.agilityfuelsystems.com

**Invoice**

Invoice Date
8/31/14
Order Date
2/26/14
Customer Number
[REDACTED]

Invoice Number
[REDACTED]
Order Number
[REDACTED]
Your Reference
[REDACTED]

**ORIGINAL
DUPLICATE**
Date Of Duplicate
9/23/14

Agility Fuel Systems Inc

Our Reference

Tax Identity

Brian MacNeil

Ship To:

Transedge

247 Pennsylvania 61

Schuylkill Haven PA 17972

UNITED STATES

Invoice Address

Wilkes-Barre Truck Center

525 E Main St

Wilkes-Barre PA 18702-6944

UNITED STATES

Ship Via

Best Way

Terms of Delivery

Free on Board

Delivery Location

Agility Fuel Systems

Forward Agent

Latest Delivery Date

Due Date

9/19/14

9/30/14

-- See invoice lines --

Terms of Payment

30 Days Net

Label Note

DEFER UNTIL INSTALL

Purchase Order Number

V0422

Payment Reference

Pos	Part No	Description	Sales Qty	Unit
1	23744001	Side Mount, 45 DGE, 25x90 Tank, RHS, No FMM, Steps	1	EA

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 252 : Configuration for 23744001

VIN: [REDACTED]

Serial No: [REDACTED]

Characteristic	Characteristic Value	Unit	Quantity
Configuration, SM-STEP-GEN3-81	Agility Supplied 90 inch Step & Step Bracket		

2	23746011	Side Mount, 45 DGE, 25x90 Tank, LHS, FMM, Steps	1	EA
---	----------	---	---	----

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 253 : Configuration for 23746011

VIN: [REDACTED]

Serial No: [REDACTED]

Characteristic	Characteristic Value	Unit	Quantity
Configuration, SM-STEP-GEN3-81	Agility Supplied 81inch Step & Step Bracket		
LHS FMM (243)	24364000, Elec: 24300089, Gauge: Volvo/Mack, Chassis: Any Volvo, Gran. &		

Physical Address

Agility Fuel Systems (US)
1815 E. Carnegie Avenue
Santa Ana, CA, 92705
USA

Remit Payment To

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PO Box 102365
Atlanta, GA 30368-2365
USA

Phone

(949)236-5520

Fax

(949)242-2842

Website

www.agilityfuelsystems.com

Invoice

Invoice Date
8/31/14
Order Date
2/26/14
Customer Number
[REDACTED]
Your Reference

Invoice Number
[REDACTED]
Order Number
[REDACTED]

ORIGINAL**DUPLICATE**

Date Of Duplicate
9/23/14

Agility Fuel Systems Inc

Purchase Order Number

Tax Identity

Our Reference

Brian MacNeil

Pos	Part No	Description	Sales Qty	Unit
-----	---------	-------------	-----------	------

Characteristic	Characteristic Value	Unit	Quantity
Pinn. Mack, 2 Reed, 0 Kill			

3	24100007	Install Kit, SM CNG, Two Tanks (Gen 3 or Gen 4 System)	1	EA
---	----------	--	---	----

Supplier Delivery Note Reference(s): 446

Actual Ship Date
Sep 9, 2014
Sales Qty
1.00

Id: 118 : Configuration for 24100007

VIN:

Serial No: *

Characteristic	Characteristic Value	Unit	Quantity
AUX-FILL-KIT-FRONT	None		
AUX-FILL-KIT-REAR	None		
AUX-FILL-KIT-SIDE	None		
CHASSIS-KIT	Install kit, Chassis Kit, two side mounts, Volvo/Mack Day Cab, with DAP		
DEFUEL-HOSE	None		
FUEL	None		
FUEL-DEL-HOSE-HP	None		
FUEL-DEL-HOSE-LP	None		
IN-CAB-GAUGE	None		
KILL-CAP	None		
LOW-FP-LIGHT	None		
Indicates the Install location	No Installation Required		
METH-DETECT-KIT	None		
FMM Install Location on Truck	Street-Side (Left Hand Side/Driver's Side)		

Sub Total Amount	36,669.00
------------------	-----------

Total Exclusive Tax	36,669.00
---------------------	-----------

Total Tax	0.00
-----------	------

Invoice Amount	36,669.00
----------------	-----------

Physical Address
Agility Fuel Systems (US)
1815 E. Carnegie Avenue
Santa Ana, CA, 92705
USA

Remit Payment To
Agility Fuel Systems, Inc.
PO Box 102365
Atlanta, GA 30368-2365
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Phone
(949)236-5520

Fax
(949)242-2842

Website
www.agilityfuelsystems.com

**Agility Fuel Systems Inc**

Our Reference

Brian MacNeil

Ship To:

Transedge

247 Pennsylvania 61

Schuylkill Haven PA 17972

UNITED STATES

Tax Identity

Invoice

Invoice Date

8/31/14

Order Date

2/26/14

Customer Number

Invoice Number

Order Number

Your Reference

ORIGINAL**DUPLICATE**

Date Of Duplicate

9/23/14

Invoice Address

Wilkes-Barre Truck Center

525 E Main St

Wilkes-Barre PA 18702-6944

UNITED STATES

Ship Via

Best Way

Terms of Delivery

Free on Board

Delivery Location

Agility Fuel Systems

Forward Agent

Latest Delivery Date

9/19/14

Due Date

9/30/14

Label Note

DEFER UNTIL INSTALL

Purchase Order Number

V0422

-- See invoice lines --

Terms of Payment

30 Days Net

Payment Reference

Pos	Part No	Description	Sales Qty	Unit
1		Side Mount, 45 DGE, 25x90 Tank, RHS, No FMM, Steps	1	EA

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 252

Configuration for 23744001

VIN:

Serial No:

Characteristic

Characteristic Value

Unit

Quantity

Configuration, SM-STEP-GEN3-91

Agility Supplied 90 inch Step & Step Bracket

2	23746011	Side Mount, 45 DGE, 25x90 Tank, LHS, FMM, Steps	1	EA
---	----------	---	---	----

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 253

Configuration for 23746011

VIN:

Serial No:

Characteristic

Characteristic Value

Unit

Quantity

Configuration, SM-STEP-GEN3-81

Agility Supplied 81inch Step & Step Bracket

LHS FMM (243)

24364000, Elec: 24300089, Gauge:

Volvo/Mack, Chassis: Any Volvo, Gran. &

Physical Address

Agility Fuel Systems (US)
1815 E. Carnegie Avenue
Santa Ana, CA, 92705
USA

Remit Payment To

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USA

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(949)236-5520

Fax

(949)242-2842

Website

www.agilityfuelsystems.com

Invoice**ORIGINAL****DUPLICATE**

Invoice Date

8/31/14

Invoice Number

C

Order Date

2/26/14

Order Number

E

Date Of Duplicate

9/23/14

Agility Fuel Systems Inc

Purchase Order Number

Customer Number

Your Reference

Our Reference

Tax Identity

Brian MacNeil

Pos	Part No	Description	Sales Qty	Unit
-----	---------	-------------	-----------	------

Characteristic	Characteristic Value	Unit	Quantity
	Pinn, Mack, 2 Reed, 0 Kill		

3	24100007	Install Kit, SM CNG, Two Tanks (Gen 3 or Gen 4 System)	1	EA
---	----------	--	---	----

Supplier Delivery Note Reference(s): 446

Actual Ship Date

Sep 9, 2014

Sales Qty

1.00

Id: 118 : Configuration for 24100007

VIN:

Serial No: *

Characteristic	Characteristic Value	Unit	Quantity
AUX-FILL-KIT-FRONT	None		
AUX-FILL-KIT-REAR	None		
AUX-FILL-KIT-SIDE	None		
CHASSIS-KIT	Install kit, Chassis Kit, two side mounts, Volvo/Mack Day Cab, with DAP		
DEFUEL-HOSE	None		
FUEL	None		
FUEL-DEL-HOSE-HP	None		
FUEL-DEL-HOSE-LP	None		
IN-CAB-GAUGE	None		
KILL-CAP	None		
LOW-FP-LIGHT	None		
Indicates the Install location	No Installation Required		
METH-DETECT-KIT	None		
FMM Install Location on Truck	Street-Side (Left Hand Side/Driver's Side)		

Sub Total Amount	36,669.00
------------------	-----------

Total Exclusive Tax	36,669.00
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Total Tax	0.00
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Invoice Amount	36,669.00
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Physical Address

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**Invoice**

Invoice Date
8/31/14
Order Date
2/26/14
Customer Number
[REDACTED]

Invoice Number
[REDACTED]
Order Number
[REDACTED]
Your Reference
[REDACTED]

ORIGINAL
DUPLICATE
Date Of Duplicate
9/23/14

Agility Fuel Systems Inc

Our Reference

Tax Identity

Brian MacNeil

Ship To:

Transedge
247 Pennsylvania 61
Schuylkill Haven PA 17972
UNITED STATES

Invoice Address

Wilkes-Barre Truck Center
525 E Main St
Wilkes-Barre PA 18702-6944
UNITED STATES

Ship Via

Best Way

Terms of Delivery

Free on Board

Delivery Location

Agility Fuel Systems

Forward Agent

Latest Delivery Date Due Date
9/19/14 9/30/14

-- See invoice lines --

Terms of Payment

30 Days Net

Label Note

DEFER UNTIL INSTALL

Purchase Order Number

V0422

Payment Reference

Pos	Part No	Description	Sales Qty	Unit
1	23744001	Side Mount, 45 DGE, 25x90 Tank, RHS, No FMM, Steps	1	EA

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 252 ; Configuration for 23744001

VIN:

Serial No: 14-13773

Characteristic	Characteristic Value	Unit	Quantity
Configuration, SM-STEP-GEN3-91	Agility Supplied 90 inch Step & Step Bracket		

2	23746011	Side Mount, 45 DGE, 25x90 Tank, LHS, FMM, Steps	1	EA
---	----------	---	---	----

Actual Ship Date

Sep 19, 2014

Sales Qty

1.00

Id: 253 ; Configuration for 23746011

VIN:

Serial No: 14-13773

Characteristic	Characteristic Value	Unit	Quantity
Configuration, SM-STEP-GEN3-81	Agility Supplied 81inch Step & Step Bracket		
LHS FMM (243)	24364000, Elec: 24300089, Gauge: Volvo/Mack, Chassis: Any Volvo, Gran. &		

Physical Address

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Fax

(949)242-2842

Website

www.agilityfuelsystems.com

Invoice

Invoice Date

8/31/14

Order Date

2/26/14

Customer Number

Your Reference

Invoice Number

C [REDACTED]

Order Number

E [REDACTED]

ORIGINAL**DUPLICATE**

Date Of Duplicate

9/23/14

Agility Fuel Systems Inc

Purchase Order Number

[REDACTED]

Our Reference

Brian MacNeil

Tax Identity

Pos	Part No	Description	Sales Unit	Qty
-----	---------	-------------	------------	-----

Characteristic	Characteristic Value	Unit	Quantity
	Pinn. Mack, 2 Reed, 0 Kill		

3	24100007	Install Kit, SM CNG, Two Tanks (Gen 3 or Gen 4 System)	1	EA
---	----------	--	---	----

Supplier Delivery Note Reference(s): 446

Actual Ship Date

Sep 9, 2014

Sales Qty

1.00

Id: 118 : Configuration for 24100007

VIN:

Serial No: *

Characteristic	Characteristic Value	Unit	Quantity
AUX-FILL-KIT-FRONT	None		
AUX-FILL-KIT-REAR	None		
AUX-FILL-KIT-SIDE	None		
CHASSIS-KIT	Install kit, Chassis Kit, two side mounts, Volvo/Mack Day Cab, with DAP		
DEFUEL-HOSE	None		
FUEL	None		
FUEL-DEL-HOSE-HP	None		
FUEL-DEL-HOSE-LP	None		
IN-CAB-GAUGE	None		
KILL-CAP	None		
LOW-FP-LIGHT	None		
Indicates the Install location	No Installation Required		
METH-DETECT-KIT	None		
FMM Install Location on Truck	Street-Side (Left Hand Side/Driver's Side)		

Sub Total Amount	36,669.00
------------------	-----------

Total Exclusive Tax	36,669.00
---------------------	-----------

Total Tax	0.00
-----------	------

Invoice Amount	36,669.00
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Physical Address

Agility Fuel Systems (US)
1815 E. Carnegie Avenue
Santa Ana, CA, 92705
USA

Remit Payment To

Agility Fuel Systems, Inc.
PO Box 102365
Atlanta, GA 30368-2365
USA

Phone

(949)236-5520

Fax

(949)242-2642

Website

www.agilityfuel.com

Date: Thu, 3 Jul 2014 13:05:15 +0000 [08:05:15 AM CDT]

From: Clark Marlina J <marlena.clark@volvo.com>

To: joekalie@wilkesbarretruck.com <joekalie@wilkesbarretruck.com>

Cc: Wukich Vickie <vickie.wukich@volvo.com>

Subject: RE: RE:

Joe,

Per our conversation, 4 qty. p/n 84172242 will be shipped to the following address for serial numbers [REDACTED]

Blue Mountain Mack
Rt. 61
Schuylkill Haven, PA 17972
Attn: Mike Kubeika

Vehicle Claim Request # [REDACTED] has been approved and finalized. The following information may be used to submit a claim in E-Warranty for labor to install the parts being provided: Case # [REDACTED]
Case Source: Misbuild, Authorization VMIS1.

Best Regards,

Marlena Clark
Order Administrator
Order Engineering Department
New River Valley Plant
Volvo Group Trucks Sales & Marketing Americas
Phone: +1 540 674 7267
E-mail: marlena.clark@volvo.com

-----Original Message-----

From: Wukich Vickie
Sent: Wednesday, July 02, 2014 4:53 PM
To: joekalie@wilkesbarretruck.com
Cc: Clark Marlina J
Subject: RE: RE:

Joe, production is researching this issue, however, you will need to file a misbuild for the missing parts below.

Vickie Wukich
Sales Administrator
Order Engineering Department
New River Valley Plant

Volvo Group Trucks Sales & Marketing Americas
4881 Cougar Trail Road
P.O. Box 1126
Dublin, VA 24084 (USA)

Phone: +1 540 674 7249
E-mail: vickie.wukich@volvo.com

-----Original Message-----

From: joekalie@wilkesbarretruck.com [mailto:joekalie@wilkesbarretruck.com]
Sent: Wednesday, July 02, 2014 10:32 AM
To: Wukich Vickie
Subject: RE:

Hi Vickie, #'s are:

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. [REDACTED]

JK

Quoting Wukich Vickie <vickie.wukich@volvo.com>:

Joe, do you have the truck serial numbers?

Vickie Wukich
Sales Administrator
Order Engineering Department
New River Valley Plant

Volvo Group Trucks Sales & Marketing Americas
4881 Cougar Trail Road
P.O. Box 1126
Dublin, VA 24084 (USA)

Phone: +1 540 674 7249
E-mail: vickie.wukich@volvo.com

-----Original Message-----

From: joekalie@wilkesbarretruck.com [mailto:joekalie@wilkesbarretruck.com]
Sent: Tuesday, July 01, 2014 3:23 PM
To: Wukich Vickie
Subject:

Hi Vickie, Just got a call from Transedge who is installing the CNG fuel tanks for agility and they tell me there is a part missing on 4 of the trucks that is necessary for the installation. Three trucks have the part and four do not. The part # is 84172242. It is a front fender to fuel tank step support or bracket.

We need them this wk. to complete the tank installation.
Please help.

Thanks,
Joe Kalie
(570)332-6556

TANK BRACKETInstalled By
Blue Mt. MACK

New Message

SEND MESSAGE

SAVE DRAFT

CANCEL MESSAGE

Identity joekalie@wilkesbarretruck.com (Default Identity)

To vickie.wukich@volvo.com

Cc

Bcc

Subject

Charset Western (ISO-8859-1)

Address Book

Check Spelling ▾

Special Characters

Attachments

☒ Save a copy in "Sent"☐ Request a Read Receipt☒ Switch to HTML composition

Text

Hi Vickie, Just got a call from Transedge who is installing the CNG fuel tanks for agility and they tell me there is a part missing on 4 of the trucks that is necessary for the installation. Three trucks have the part and four do not. The part # is 84172242. It is a front fender to fuel tank step support or bracket. We need them this wk. to complete the tank installation. Please help.
Thanks,

SEND MESSAGE

SAVE DRAFT

CANCEL MESSAGE

☐ Attach your contact information to the message?

Attachments

File 1:

Browse...

Attachment

UPDATE

(Maximum Attachment Size: 41,943,040 bytes)

Save Attachments with message in sent-mail folder? No

Link Attachments? No























Contacted Monday 1/5/2015 by the dealer and Corp legal dept. about a vehicle that was involved in a fire Friday evening 1/2/15 at approx. 1700 hours involving a CNG vehicle owned and operated by Kane Freight lines location Scranton Pa Stauffer industrial park phone # 570-558-5213 Contact person is Dan Volpe or Shane Morgan.

Travel to customer location in Scranton to review the other 6 vehicles

██████████ Reviewed and inspected and found that the exhaust pipe is laying on top of the fuel tanks on the right side with no clearance. While on site I used a thermal gun to record heat levels at the flex pipe and elbow going into the muffler. Ran vehicle for fifteen minutes at high idle and notice smoke coming out from under the vehicle right at the pipe laying on the fuel tank cover which is CNG TEMP, RANGED FROM 350F TO 850 degrees on vehicle ██████████ outside air temp on this day was 12 degrees F.

1/7/15 Picked up Kerry Parrott from Stahl Engineering travel to the location housing the destroyed vehicles in Hallstead Pa, Inspected vehicles recorded any and all information. Pictures, statements, etc. I did stop any rumors that were flying around by some folks that saw some things but did not have true information or facts of the case. Police reports and fire reports are not completed at this time repeated calls to the State Police and Fire chief have gone unreturned at this time 1/9/15. Vehicle in question appears that the fire did start right hand corner at the exhaust pipe and or exhaust elbow going into the muffler. Extreme heat in this area based on the burn pattern. CNG TANKS did not explode as reported and where in fact intact. Exhaust muffler and stack are very BLUED FROM THE ELBOW UP TO AND INCLUDING THE MUFFLER AREA.

Completed and gather as much information as possible at this time further investigation into this fire is required by other parties, Cummins engine group, along with the Agility Fuel systems,

Questions – who installed the tanks, sources at the dealership Laflin truck center Wilkes Barre Pa has indicated that Blue Mountain truck center installed these tanks for Agility supplier, Cummins engine questionable if the sensor mounted in the intake could have been at fault there is a active or was an active recall on this sensor (CL 1461) Service bulletin 4332709 I have attached all e mails from the dealer to Cummins inquiring about this sensor all will be sent to the legal dept. attn. Tim Lafon

Tim, so you are aware that the remaining vehicles (6) have been put out of service pending our investigation. The clearance issues are a major concern, and are they safe to drive. They are in 6 rental vehicles that we discussed earlier this vehicle.

The vehicles are away from the rest of the fleet and tanks have been vented and fuel valves have been shut off.

Customer contact information

Dan Volpe Safety & Compliance dan.volpe@kaneisable.com cell [REDACTED]

Shane Morgan Safety manager shane.morgan@kaneisable.com cell [REDACTED] Kane : 3 Stauffer

Industrial Park, Scranton, Pa 18501

From: Lafon Tim (othy)
Sent: Thursday, January 15, 2015 4:02 PM
To: mark.l.wilson@cummins.com
Cc: tara.d.johnson@cummins.com
Subject: FW: Kane Fire
Attachments: KaneDetail fire Report.pdf; DSC_0066.jpg; DSC_0016.jpg; DSC_0051.jpg; DSC_0056.jpg; sn [REDACTED].pdf; e mails from dealer .pdf

Importance: High

Dear Mark,

Attached is the vehicle fire report on the new Volvo truck that burned. There are some allegations that a suspect sensor may have been used on these vehicles/ engines which are not part of Cummins recall C1461 OR 1462. I attached the product information for both units that has the engine serial numbers. Neither of these engines are in the recall according to our records.

Can Cummins please support us by:

- 1) Send a Cummins person out to look at the vehicles at Kane's location (5 trucks are parked and we have provided rentals for the time being) and tell us whether these have correct sensors.
- 2) If suspect parts are on the engines, we need a quick assessment of why these were not included in the recall and whether there are other's potentially affected.

I ask that you please address item 1 no later than Monday, January 19th and report back your findings.

I sent out a professional investigator, Kerry Parrot of Stahl Engineering, and our DSM, Ed Meyers, who is a certified fire investigator to collect photos, information, and to secure the vehicle. We will need Cummins to support a joint inspection in the near future to help us determine the cause.

Thanks for your help and best regards,
Tim LaFon
Vice President, Regulatory Affairs
Volvo Group North America LLC
Office Phone: (336) 393-2233
Mobile: (336) 457 -2263

Kane's Location and Contact Information:

Lawrence Catanzaro
Sr. Director of Transportation
Kane Is Able
Dependable People. Exceptional Logistics.
www.kaneisable.com

◆ (O) 570 558 5077 [REDACTED] ◆ P.O. Box 931, Scranton PA 18501 (3 Stauffer Industrial Park, Taylor, PA 18517)

Attachments:

Kane Detail Fire Report – Information from Initial Non-destructive inspection/ visit to customer site.
4 pictures: Select pictures sent by Kerry Parrot.

Sn [REDACTED] – Excerpt from Volvo Warranty System that shows engine serial number for the vehicle that was involved in the fire
e-mails from dealer – information collected by DSM when investigating that is regarding an email exchange between the dealer and Cummins regarding Kane Vehicles in 2014.

From: Meyers Edward
Sent: Friday, January 09, 2015 2:39 PM
To: Lafon Tim (othy)
Cc: BROWN CHERYL; Smith Gregory
Subject: Kane Fire

Tim

Please review case file pictures, video, and statements are in the FEDXE for first delivery Monday morning

Ed Meyers
Technical Service Manager
Customer Satisfaction
Northeast Region

Edward.meyers@volvo.com [REDACTED]
[REDACTED]

Service Request Detail Report

SR # [REDACTED]

SR Info	SR Classification	SR Ownership
SR Type: Service issues - Incident	Source: Visit	SR Owner: EDWARD MEYERS
SR Area: Applications	Func. Group: 2009-miscellaneous	SR Group: VTNA - Field Service Region NorthEast
App/Service: Complaint	Severity: 2-High	SR Opened: 2015-01-09 14:20:09
Sub Area: Vehicle Functionality	Status: Accepted	SR Closed:
Sub Area 2:	Sub-Status: In progress	Created By: EDWARD MEYERS
Sub Area 3:		Created By Group: VTNA - Field Service Region NorthEast
Argus Company: VTNA Trucks		

Customer / Repairing Dealer Info	Selling Dealer Info
Call Back Name: EDWARD MEYERS	Selling Dealer ID: 0DACT
Call Back #: 2155473531	District #:
Contact First Name: EDWARD	Customer #:
Contact Last Name: MEYERS	Selling Dealer: DUMMY ACCOUNT
Dealer ID: XI000009	Main Phone #:
District #: 9999	Main FAX #:
Customer #: 5100D	Street Address 1: DUMMY ACCOUNT
Dealer Name: VOLVO TRUCKS NORTH AMERICA	Street Address 2:
Main Phone #: +999	City: DUMMY ACCOUNT
Main FAX #:	State / ZIP:
Street Address 1: Corporate Account for Veh Reg	Country: UNITED KINGDOM
Street Address 2: 7900 National Service Rd	
City: Greensboro	
State / ZIP: 27409	
Country: UNITED STATES	

Owner Info	Buyer Info
	Buyer ID: 827391
	Buyer Name: KANE FREIGHT LINES INC
	Main Phone #:
	Main FAX #:
	Street Address 1: PO BOX 931
	Street Address 2:
	City: SCRANTON
	State / ZIP: PA / 185010931
	Country: UNITED STATES

Vehicle / Unit	Vehicle / Unit Info
Chassis Series: N	Cab version: L1H1
Chassis Number: [REDACTED]	Cab Size: 300
Registration #:	Engine Make: CUMMINS
VIN / Serial #: 4V5NC9UG7FN [REDACTED]	Engine Model: ISX12
Model: VNL64T N	Rear axle load: RAL17
Product Type: VNL6	Rear axle installation: RADD- A4V
	Front axle load: FAL6.0
	Engine: CU12A400
	HP Description: 400

Emission level: EM-USA10
Rear axle: RTS1857C
Gearshifting system: GSS-R
Transmission or Gearbox: F14210CO
Rear axle ratio: RAT3.70
Truck Model Year: 2015
Brake system: BSYS-CON

Other Details

Part #:
Misc Part #:
Error Code #:

Application

User ID: UT1440X
Client ID:
Digipass ID:

Summary

Reported vehicle fire Kane trucking [REDACTED]

Desc./Compl.

Response

Contacted Monday 1/5/2015 by the dealer and Corp legal dept. about a vehicle that was involved in a fire Friday evening 1/2/15 at approx. 1700 hours involving a CNG vehicle owned and operated by Kane Freight lines location Scranton Pa Stauffer industrial park phone # 570-558-5213 Contact person is Dan Volpe or Shane Morgan.

Travel to customer location in Scranton to review the other 6 vehicles [REDACTED] Reviewed and inspected and found that the exhaust pipe is laying on top of the fuel tanks on the right side with no clearance. While on site I used a thermal gun to record heat levels at the flex pipe and elbow going into the muffler. Ran vehicle for fifteen minutes at high idle and notice smoke coming out from under the vehicle right at the pipe laying on the fuel tank cover which is CNG TEMP, RANGED FROM 350F TO 850 degrees on vehicle [REDACTED] outside air temp on this day was 12 degrees F.
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Translation

Completed and gather as much information as possible at this time further investigation into this fire is required by other parties, Cummins engine group, along with the Agility Fuel systems, Questions – who installed the tanks, sources at the dealership Lafin truck center Wilkes Barre Pa has indicated that Blue Mountain truck center installed these tanks for Agility supplier, Cummins engine questionable if the sensor mounted in the intake could have been at fault there is a active or was an active recall on this sensor (CL 1461) Service bulle in 4332709 I have attached all e mails from the dealer to Cummins inquiring about this sensor all will be sent to the legal dept. attn. Tim Lafon

Tim, so you are aware hat the remaining vehicles (6) have been put out of service pending our investigation. The clearance issues are a major concern, and are they safe to drive. They are in 6 rental vehicles that we discussed earlier this vehicle.
The vehicles are away from the rest of the fleet and tanks have been vented and fuel valves have been shut off.

Activity Notes

Created	Created By	Audience	Activity Type	Comments
01/09/2015 14:32:41	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_2160' has been added.
01/09/2015 14:32:41	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0650' has been added.
01/09/2015 14:32:40	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0648' has been added.
01/09/2015 14:32:40	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0649' has been added.
01/09/2015 14:31:39	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0646' has been added.
01/09/2015 14:31:39	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0647' has been added.
01/09/2015 14:31:38	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0644' has been added.
01/09/2015 14:31:38	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0642' has been added.

01/09/2015 14:31:38	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0645' has been added.
01/09/2015 14:30:37	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0643' has been added.
01/09/2015 14:30:36	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0641' has been added.
01/09/2015 14:30:35	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'IMG_0640' has been added.
01/09/2015 14:21:18	SIEBEL ADMINISTRATOR	Internal	Notes	An attachment with filename 'Kane Fire [REDACTED] # 100 1' has been added.







From: Brian Lundy <BLundy@agilityfs.com>
Sent: Wednesday, January 28, 2015 4:15 PM
To: Lafon Tim (othy)
Cc: Todd Sloan; Kurt Nielsen; Yoshio Coy
Subject: RE: Truck Fire - CNG System Details
Attachments: Joint Inspection

Hi Tim:

We contracted Transedge for the installation, it's not obvious from the invoicing as the install is included in the price.

I'm cc'ing Yosh Coy as well, he is our Director of Product Support and will be the key contact for supporting the investigation. I believe he is travelling this week but Todd has reached out to him relative to your other email which I've enclosed.

Regards,

Brian Lundy,
Sr. Program Manager
Agility Fuel Systems
Tel: +1 (250) 765-1777 x6515
Toll Free: +1 (877) 765-1778

From: Lafon Tim (othy) [mailto:timothy.lafon@volvo.com]
Sent: Wednesday, January 28, 2015 11:53 AM
To: Brian Lundy
Cc: Todd Sloan; Kurt Nielsen
Subject: RE: Truck Fire - CNG System Details
Importance: High

Dear Brian,

Thank you for this information. One additional question, do you know who contracted Transedge/ Wilkes-Barre to install the tanks. Was this Agility?

Attached is some documents that were collected that I am trying to decipher.

Thanks in advance,
Tim

From: Brian Lundy [mailto:BLundy@agilityfs.com]
Sent: Wednesday, January 28, 2015 1:46 PM
To: Lafon Tim (othy)
Cc: Todd Sloan; Kurt Nielsen
Subject: Truck Fire - CNG System Details

Hi Tim

We looked into the VIN you provided and the CNG system is indeed ours. Here are the details:

- Agility order No: [REDACTED]
- 3rd Party installer: Transedge, Schuylkill Haven, PA.
- Install Date: July 2014
- Dealer: Wilkes-Barre Truck Center
- End user: Kane is Able Transport, Scranton, PA
- System: 90 DGE Side Mounts (Dual 45DGE)
- Agility Part Numbers: 23744001 & 23746011 (Gen 3 with composite covers)

Regards,

Brian Lundy,
Sr. Program Manager



2092 Enterprise Way, Unit 100
Kelowna, BC, V1Y 6H7
Phone: (250) 765-1777 x6515
Email: blundy@agilityfs.com
Website: www.agilityfs.com

From: Amit Bhakta <ABhakta@agilityfs.com>
Sent: Friday, February 20, 2015 2:12 PM
To: Lafon Tim (othy); Yoshio Coy; Brian Lundy
Cc: Todd Sloan; Kurt Nielsen; Joseph Orona
Subject: RE: Truck Fire - CNG System Details

Hi Tim

As requested, Agility Fuel Systems has conducted a preliminary investigation of the CNG fuel system that was involved in a fire incident as well the fuel systems on the remaining six CNG vehicles in Kane Able's fleet. Based on information currently available to us from that preliminary investigation, the CNG fuel system appears to have vented the CNG cylinders in the fire and otherwise responded as the fuel system was designed. Our investigation does not indicate that the fuel system either caused or contributed to the vehicle fire, including the location of the exhaust system relative to the fuel system was mentioned as a possible concern at our on-site meeting on February 9. Agility's engineer examined the other CNG vehicles for any signs of damage or degradation near the exhaust area and found no visible signs of such damage or degradation.

Please note that we would like to conduct additional investigation of the vehicles per our phone conversation.

If you have any additional questions or concerns please don't hesitate to reach out to me.

Regards,

Amit Bhakta
Lead Engineer, Product Support
Agility Fuel Systems


From: Lafon Tim (othy) [mailto:timothy.lafon@volvo.com]
Sent: Wednesday, February 18, 2015 3:59 PM
To: Amit Bhakta; Yoshio Coy; Brian Lundy
Cc: Todd Sloan; Kurt Nielsen; Joseph Orona
Subject: RE: Truck Fire - CNG System Details

Thanks Amit.

Much Appreciated!

From: Amit Bhakta [mailto:ABhakta@agilityfs.com]
Sent: Wednesday, February 18, 2015 5:30 PM
To: Lafon Tim (othy); Yoshio Coy; Brian Lundy
Cc: Todd Sloan; Kurt Nielsen; Joseph Orona
Subject: RE: Truck Fire - CNG System Details

Tim,

We are drafting a response and will send it to you no later than Friday morning.

Thanks,

Amit

From: Lafon Tim (othy) [<mailto:timothy.lafon@volvo.com>]
Sent: Wednesday, February 18, 2015 2:28 PM
To: Yoshio Coy; Brian Lundy
Cc: Todd Sloan; Kurt Nielsen; Joseph Orona; Amit Bhakta
Subject: RE: Truck Fire - CNG System Details
Importance: High

Dear Coy,

Just following-up. Need a response back on the installation of the tank and whether this is according to Agility's specification. Need no later than Friday morning.

Thanks and Best Regards,
Tim

From: Yoshio Coy [<mailto:YCoy@agilityfs.com>]
Sent: Tuesday, February 10, 2015 1:44 PM
To: Lafon Tim (othy); Brian Lundy
Cc: Todd Sloan; Kurt Nielsen; Joseph Orona; Amit Bhakta
Subject: RE: Truck Fire - CNG System Details

Tim,
Thanks! Got the mystery figured out on our end. Amit Bhakta was coordinating and I was out of the loop. Sorry for the confusion with my email.

Daniel will be back to the office this afternoon and we will review his findings and provide a confirmation on the remainder of the trucks or propose an action plan. We should be able to provide this confirmation before the end of the week, most likely much sooner.

If you have any questions, please let me know.

Thanks,

Yosh Coy
Director of Product Support
Agility Fuel Systems
1815 Carnegie Ave
Santa Ana, CA 92705-5527

(949) 265-6849 Office
(949) 267-7745 Product Support Hotline

From: Lafon Tim (othy) [<mailto:timothy.lafon@volvo.com>]
Sent: Tuesday, February 10, 2015 10:37 AM
To: Yoshio Coy; Brian Lundy

Cc: Todd Sloan; Kurt Nielsen; Joseph Orona

Subject: RE: Truck Fire - CNG System Details

Dear Coy,

According to the Volvo people that participated, there was an Agility rep there. His name is Daniel Bernal.

Best Regards,

Tim

From: Lafon Tim (othy)

Sent: Tuesday, February 10, 2015 12:25 PM

To: 'Yoshio Coy'; Brian Lundy

Cc: Todd Sloan; Kurt Nielsen; Joseph Orona

Subject: RE: Truck Fire - CNG System Details

Importance: High

Dear Coy,

I believe someone from Agility was there.

What I need from Agility asap is review and approval that the installation for the Agility components is correct with the appropriate clearances such as between the fuel tank and the exhaust. Is this something that we can get resolved this week? We are incurring rental expenses as the trucks have been downed. The question on installation and clearance is required before placing the vehicles back in service.

Thanks and Best regards,

Tim

From: Yoshio Coy [<mailto:YCoy@agilityfs.com>]

Sent: Monday, February 09, 2015 7:50 PM

To: Lafon Tim (othy); Brian Lundy

Cc: Todd Sloan; Kurt Nielsen; Joseph Orona

Subject: RE: Truck Fire - CNG System Details

Hi Tim,

I am just now realizing that mixed up the dates on our end and didn't have someone onsite today, as we discussed. I just talked with Marv this evening and realize that you were onsite along with Cummins, so I am really very sorry for the mix up. We have a resource in the area that we can get to Marv's facility tomorrow to inspect this unit or to inspect other grounded units. Would that be helpful at this point?

Again, very sorry. Let me know.

Thanks,

Yosh Coy

Director of Product Support

Agility Fuel Systems

1815 Carnegie Ave

Santa Ana, CA 92705-5527


(949) 265-6849 Office

(949) 267-7745 Product Support Hotline

From: Lafon Tim (othy) [<mailto:timothy.lafon@volvo.com>]
Sent: Thursday, February 05, 2015 12:44 PM
To: Brian Lundy
Cc: Todd Sloan; Kurt Nielsen; Yoshio Coy
Subject: RE: Truck Fire - CNG System Details

Thanks Brian for the clarification and support! We are still on for the February 9th inspection.

From: Brian Lundy [<mailto:BLundy@agilityfs.com>]
Sent: Wednesday, January 28, 2015 4:15 PM
To: Lafon Tim (othy)
Cc: Todd Sloan; Kurt Nielsen; Yoshio Coy
Subject: RE: Truck Fire - CNG System Details

Hi Tim:

We contracted Transedge for the installation, it's not obvious from the invoicing as the install is included in the price.

I'm cc'ing Yosh Coy as well, he is our Director of Product Support and will be the key contact for supporting the investigation. I believe he is travelling this week but Todd has reached out to him relative to your other email which I've enclosed.

Regards,

Brian Lundy,
Sr. Program Manager
Agility Fuel Systems
Tel: +1 (250) 765-1777 x6515
Toll Free: +1 (877) 765-1778

From: Lafon Tim (othy) [<mailto:timothy.lafon@volvo.com>]
Sent: Wednesday, January 28, 2015 11:53 AM
To: Brian Lundy
Cc: Todd Sloan; Kurt Nielsen
Subject: RE: Truck Fire - CNG System Details
Importance: High

Dear Brian,
Thank you for this information. One additional question, do you know who contracted Transedge/ Wilkes-Barre to install the tanks. Was this Agility?

Attached is some documents that were collected that I am trying to decipher.

Thanks in advance,
Tim

From: Brian Lundy [<mailto:BLundy@agilityfs.com>]
Sent: Wednesday, January 28, 2015 1:46 PM
To: Lafon Tim (othy)

Cc: Todd Sloan; Kurt Nielsen

Subject: Truck Fire - CNG System Details

Hi Tim

We looked into the VIN you provided and the CNG system is indeed ours. Here are the details:

- Agility order No: BMV4022
- 3Rd Party installer: Transedge, Schuylkill Haven, PA.
- Install Date: July 2014
- Dealer: Wilkes-Barre Truck Center
- End user: Kane is Able Transport, Scranton, PA
- System: 90 DGE Side Mounts (Dual 45DGE)
- Agility Part Numbers: 23744001 & 23746011 (Gen 3 with composite covers)

Regards,

Brian Lundy,
Sr. Program Manager



2092 Enterprise Way, Unit 100
Kelowna, BC, V1Y 6H7
Phone: (250) 765-1777 x6515
Email: blundy@agilityfs.com
Website: www.agilityfs.com



February 19, 2015

Sent via Email

Tim LaFon
Volvo Group North America LLC
7900 National Service Rd
Greensboro, NC 27409

Re: Kane Freight Lines Truck Fire / Unit# 100
Volvo VNL64TN (VIN#4V5NC9UG7FN [REDACTED])

Dear Mr. LaFon:

Cummins Inc. ("Cummins") is in receipt of your January 15, 2015 email regarding a fire involving a Volvo VNL64TN Truck owned by Kane Freight Lines containing ISX12 (ESN:75028875).

Cummins investigators conducted an inspection on 2/9/15 and concluded that there is a need for an additional exam to be performed with all parties present to conduct a destructive evidence examination. At least one exemplar vehicle should be included along with the availability to interview the operator of the subject vehicle at the time of the event. Accordingly, please provide available dates in March for this 2nd inspection so we can schedule with our investigators.

Sincerely,

[REDACTED]
Kelly Liddy-Alderson
Corporate Paralegal

From: Microsoft Outlook on behalf of +1 (317) 914-5682
Sent: Thursday, March 19, 2015 8:48 AM
To: Lafon Tim (othy)
Subject: Voice Mail from +1 (317) 914-5682 (51 seconds)
Attachments: +1 (317) 914-5682 (51 seconds) Voice Mail.mp3

You received a voice mail from [REDACTED]

[REDACTED]

[REDACTED]

Voicemail Response

From: Kelly Liddy-Alderson <kelly.liddy-alderson@cummins.com>
Sent: Sunday, March 22, 2015 11:50 AM
To: Lafon Tim (othy)
Subject: RE: Kane Transport - 6 Unit ECM Download / Scranton, PA

Hi Tim – I left you a voicemail regarding this matter last week.

Kelly Liddy-Alderson
Corporate Paralegal
Cummins Inc.
1800 One American Square
Indianapolis, IN 46282
Office: 317-610-4177
[REDACTED]

From: Lafon Tim (othy) [mailto:timothy.lafon@volvo.com]
Sent: Friday, March 20, 2015 12:08 PM
To: Kelly Liddy-Alderson
Subject: RE: Kane Transport - 6 Unit ECM Download / Scranton, PA
Importance: High

Hi Kelly,
Did the inspection occur and if so can you please provide the results?

Thanks and Best Regards,
Tim

From: Kelly Liddy-Alderson [mailto:kelly.liddy-alderson@cummins.com]
Sent: Monday, March 16, 2015 1:58 PM
To: Dan Volpe; Lafon Tim (othy)
Subject: RE: Kane Transport - 6 Unit ECM Download / Scranton, PA

7 a.m. Tuesday 3/17/15.

Kelly Liddy-Alderson
Corporate Paralegal
Cummins Inc.
1800 One American Square
Indianapolis, IN 46282
Office: 317-610-4177
[REDACTED]

From: Dan Volpe [mailto:dan.volpe@kaneisable.com]
Sent: Monday, March 16, 2015 12:17 PM
To: Kelly Liddy-Alderson; Lafon Tim (othy)
Subject: RE: Kane Transport - 6 Unit ECM Download / Scranton, PA

Hello Kelly

Any idea of time of arrival?

Regards;
Dan

Dan Volpe ♦ Senior Manager Safety & Compliance ♦ Kane Is Able ♦ *Dependable People. Exceptional Logistics*
<http://www.kaneisable.com> ♦ O: 570.558.5213 ♦ [REDACTED] ♦ P.O. Box 931 ♦ Scranton PA 18501



From: Kelly Liddy-Alderson [<mailto:kelly.liddy-alderson@cummins.com>]
Sent: Monday, March 16, 2015 12:11 PM
To: Dan Volpe; Lafon Tim (othy)
Subject: RE: Kane Transport - 6 Unit ECM Download / Scranton, PA

Mr. Volpe – Please be advised that Cummins will send a technician tomorrow morning to conduct the downloads. A copy of the ECM downloads will be provided to you at a later date.

Kelly Liddy-Alderson
Corporate Paralegal
Cummins Inc.
1800 One American Square
Indianapolis, IN 46282
Office: 317-610-4177
[REDACTED]

From: Dan Volpe [<mailto:dan.volpe@kaneisable.com>]
Sent: Monday, March 16, 2015 11:33 AM
To: Lafon Tim (othy); Lawrence Catanzaro
Cc: Kate Jackson; Kelly Liddy-Alderson; Meyers Edward; BROWN CHERYL; Shane Morgan
Subject: RE: Kane Transport - 6 Unit ECM Download / Scranton, PA

Good morning Tim

We can proceed with the request.

I will be the contact person, and all my information is below.

Regards;
Dan

Dan Volpe ♦ Senior Manager Safety & Compliance ♦ Kane Is Able ♦ *Dependable People. Exceptional Logistics*



From: Lafon Tim (othy) [<mailto:timothy.lafon@volvo.com>]
Sent: Monday, March 16, 2015 9:22 AM
To: Dan Volpe; Lawrence Catanzaro
Cc: Kate Jackson; Kelly Liddy-Alderson; Meyers Edward; BROWN CHERYL
Subject: RE: Kane Transport - 6 Unit ECM Download / Scranton, PA
Importance: High

Dear Dan and Lawrence,

See below email from Kelly Liddy-Alderson of Cummins. We would like to come out this week and conduct an ECM download on the trucks that are parked. Can you please confirm in writing back to Kelly that the Cummins Technician has your permission to have access to the trucks and download the information? Also, can you please provide a contact number for the person that they should contact to get this set-up?

Thanks and Best Regards,
Tim

From: Kelly Liddy-Alderson [<mailto:kelly.liddy-alderson@cummins.com>]
Sent: Friday, March 13, 2015 2:37 PM
To: Lafon Tim (othy)
Cc: Kate Jackson
Subject: Kane Transport - 6 Unit ECM Download / Scranton, PA

Tim – Pursuant to the discussion earlier this week with our corporate counsel, we have arranged to send a Cummins technician as early as next week to conduct the ECM downloads to the 6 Kane Transport trucks referenced in your January 15th email. We would like written confirmation from Kane that our technician has permission to extract ECM downloads from each of the vehicles listed below.

ESN# 75029323
ESN# 75029377
ESN#75029133
ESN#75029283
ESN#75029376
ESN#75029322

Please forward the confirmation from Kane Transport and we can get this scheduled soon.

Let me know if you have any additional questions or concerns.

Kelly

Kelly Liddy-Alderson
Corporate Paralegal
Cummins Inc.
1800 One American Square

Indianapolis, IN 46282

Office: 317-610-4177

From: Lafon Tim (othy) [<mailto:timothy.lafon@volvo.com>]

Sent: Wednesday, March 4, 2015 1:22 PM

To: Kelly Liddy-Alderson

Cc: Reavis Randall

Subject: RE: Conversation on Kane today

Hi Kelly,

Randy's phone number is 336-812-5753.

Best Regards,

Tim

From: Kelly Liddy-Alderson [<mailto:kelly.liddy-alderson@cummins.com>]

Sent: Wednesday, March 04, 2015 10:30 AM

To: Lafon Tim (othy)

Subject: RE: Conversation on Kane today

Hi Tim –

Kate Jackson is the attorney handling this matter and she is on vacation this week. If you forward Randy's phone number I will ask her to call him when she returns to the office on Monday.

Kelly Liddy-Alderson

Corporate Paralegal

Cummins Inc.

1800 One American Square

Indianapolis, IN 46282

Office: 317-610-4177

From: Lafon Tim (othy) [<mailto:timothy.lafon@volvo.com>]

Sent: Wednesday, March 4, 2015 10:18 AM

To: Kelly Liddy-Alderson

Subject: Conversation on Kane today

Importance: High

Hi Kelly,

Is the Cummins' attorney handling the Kane file available for a quick discussion with Randy Reavis, our in-house attorney today?

Randy is available from 1-3 pm est.

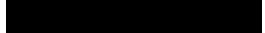
Thanks and Best Regards,

Tim

Tim LaFon

Vice President, Regulatory Affairs
Volvo Group North America LLC
Regulatory Affairs
Mail Stop: CC2-28

Telephone: (336) 393-2233



Telefax: (336) 393-2009

E-mail: timothy.lafon@volvo.com

This email has been scanned for Malware.

This email has been scanned for Malware.

This email has been scanned for Malware.

This email has been scanned for Malware.

This email has been scanned for Malware.

April 7, 2015

Tim LaFon
Vice President, Regulatory Affairs
Volvo Group North America, LLC
timothy.lafon@volvo.com

Re: Kane Freight Lines, Inc.
Unit #100 Inspection

The following protocol is presented as a proposal only and may be adjusted during or before the inspection process. The protocol will be for the visual, photographic, mechanical, and potentially destructive disassembly of Unit #100, VIN 4V5NC9UG7FN [REDACTED]. The purpose of this inspection is to help determine the root cause of the fire that occurred in this vehicle on January 2, 2015.

DATE – TIME – LOCATION

The examination will be held on April 16 starting at 9am and continuing until the 17 if necessary. The truck is located at 2015 at Marv's Towing, Marv's Service Center, 81 Great Bend, Hallstead, PA 18822. The vehicle will be brought inside the shop, lifted for access, and a technician from Marv's Service Center will be available to help with the disassembly as required.

BASICS

- 1) All attendees will be required to fill out their contact information on a sign-in sheet prior to the examination.
- 2) All parties will be given time to conduct their own photography and documentation.
- 3) All attendees are responsible for their own personal safety equipment.
- 4) No attendee shall manipulate or handle the evidence in any manner that has the potential for reducing the information that can be drawn from the evidence. In order to do so, all attendees must notify the others of their planned action and receive their consent.
- 5) During the examination, all parties will be provided the opportunity to examine and photograph the evidence before, during, and after each agreed upon task.
- 6) Mechanical disassembly will be conducted by Marv's technicians.
- 7) We encourage comments, requests, and discussion prior to the examination so that the day of the examination runs efficiently and smoothly.

- 8) At the conclusion of the group examination, all pertinent evidence will be retained by James Valentine & Associates unless all parties agree otherwise.

GENERAL GUIDELINES FOR THE EXAMINATION

- 1) Electrical Examination: Trace and document all cranking and charging circuits within the engine compartment.
- 2) Mechanical Examination: Check the engine oil level and verify by draining the oil pan. Remove the oil pan to check the condition of the cylinders and pistons, remove the turbocharger and inspect for oil leaks, remove the exhaust manifold, and remove the natural gas mixing chamber from the intake. Check and document the condition of the crankcase ventilation system
- 3) Additional Items: Check and document any additional items identified during the inspection as needed provided all parties agree.

The evidence examination protocol will be open for discussion and input by all parties before and during the examination. All attendees will have the opportunity to provide input into the examination protocol and process and may request additional tasks as deemed appropriate by the group. Please reply to all participants by 12:00 Noon, April 10, 2015 if any changes or additions are required.

A

Kerry Parrott BSME, CFI, CFEI, CVFI
Fire Investigation Analyst
Kerry.Parrott@Stahl-Engineering.com

From: Lafon Tim (othy)
Sent: Wednesday, April 15, 2015 2:07 PM
To: John Campbell
Cc: Amanda Erb (Amanda_Erb@gbtpa.com); dan.volpe@kaneisable.com; Eric Sandoe; Ken Johnson (Atlanta); Reavis Randall
Subject: RE: Kane is Able Truck Fire; Date of Loss: 1/2/15

Dear John,
See below responses to your questions.

Best Regards,
Tim

Timeline of Events:

- Jan [REDACTED] – Date of accident
- Jan 2nd – Accident reported to Volvo
- Jan 7th – Volvo sent independent fire investigator and DSM to support review with Kane personnel
- Jan 15th – Volvo contacted Cummins and Agility to inform of accident and request support
- During January, Volvo supported Kane to establish joint inspection with all parties (Cummins, Agility, Kane Insurance Provider etc.)
- Feb. 9th - Joint inspection occurs
- Feb 9th - Agility reviewed their installation on the parked trucks. No issues found
- Feb. 19th – Cummins sent letter to Volvo requesting an additional inspection.
- Mar 3rd – Volvo contacted Kane (Dan Volpe) and Kane's Insurance provider(Amanda Erb of GBTPA) and proposes April 6th and 7th for 2nd inspection
- Mar 4th – further correspondence with Amanda regarding 2nd inspection as April 6 and 7 will not work for one of the parties
- Mar 16th – Volvo requested access to vehicles that are parked to confirm that engine software is correct. Email sent to Dan Volpe and Lawrence Catanzaro. Approval given.
- Mar 17th – Cummins Technician on site to examine parked trucks; no issues found.
- Mar 26th – Second inspection confirmed for April 16th and 17th with Amanda and other parties. Protocol requested.
- April 7th – Draft Protocol released by investigator representing Volvo.
- April 14th – Kane informed Volvo that *"Our insurer has advised us that we are cancelling the upcoming inspection for all parties involved. We are now awaiting assignment of an attorney who will be in contact with you. Please cancel all parties for the upcoming inspection at Marv's."*

In addition to the above, I have had phone conversations with both Dan Volpe and Lawrence Catanzaro to keep them informed of our progress. Volvo has also supported Kane with rentals since January for the trucks that are parked and the one involved in the accident.

Volvo has not put Cummins or Agility on notice as we have not received a claim. We have put Cummins and Agility on notice of the accident and have been receiving their support. Our focus has been to identify root

cause(s) and then take appropriate actions based on the cause/ facts including addressing reasonable expenses for Kane's loss.

I did share with Dan Volpe that we have found no issues with the parked trucks and our position is that they can be placed back in service and that we will continue to support them with the rentals through May 15th for the results of the second inspection.

Best Regards,
Tim LaFon
VP, Regulatory Affairs
Volvo Group North America LLC
7900 National Service Rd.
Greensboro, NC 27409

Cc: Randy Reavis, Sr. Products Counsel Volvo Group North America

From: John Campbell [mailto:JCampbell@yosttretta.com]
Sent: Tuesday, April 14, 2015 4:30 PM
To: Lafon Tim (othy)
Cc: Amanda Erb (Amanda_Erb@gbtpa.com); dan.volpe@kaneisable.com; Eric Sandoe; Ken Johnson (Atlanta)
Subject: Kane is Able Truck Fire; Date of Loss: 1 [REDACTED] 15

Tim:

This will confirm our telephone conversation this afternoon regarding the above referenced matter. As I advised, I have been retained by Kane is Able to coordinate the investigation relating to the truck fire of January 2, 2015 and pursue recovery of any losses it has sustained as a result.

I would appreciate any information that you can forward relating to the timeline of events and the investigation you have undertaken to date. Also, please provide me with any information as to the recent inspection and/or service performed on the out of service vehicles at the Kane yard.

This will confirm that you have placed both Cummins and Agility on notice of the loss and that both companies will be involved in any inspection. As discussed, I will provide you with any comments or suggested changes to the testing protocol that I receive from my expert and will provide you with potential dates by early next week.

Thank you for your attention to this matter and I look forward to working with you.

John

John M. Campbell
Yost & Tretta, LLP

jcampbell@yosttretta.com

Two Penn Center Plaza, Suite 610
1500 John F. Kennedy Blvd.
Philadelphia, PA 19102

Telephone: (215) 972-6600
Fax: (215) 972-6609

228 Kings Highway, East
Haddonfield, NJ 08033
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Fax: (856) 428-9325

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From: Lafon Tim (othy)
Sent: Wednesday, May 27, 2015 10:12 PM
To: John Campbell
Cc: Reavis Randall; BROWN CHERYL
Subject: RE: Kane Tractor Testing
Attachments: Example of Sensor.pdf

Hi John,

See answers to questions below. I had planned to review protocol in detail tomorrow afternoon at the test facility. Would it be possible for your expert to participate in a conference call tomorrow afternoon?

Thanks and Best Regards,
Tim

From: John Campbell [mailto:JCampbell@yosttretta.com]
Sent: Wednesday, May 27, 2015 9:05 PM
To: Lafon Tim (othy)
Cc: Reavis Randall; BROWN CHERYL
Subject: Kane Tractor Testing

Hi Tim:

My expert has relayed the following questions regarding the testing:

- **How will they simulate the load on the tractor?** Answer: the drag on the rollers that the drive tires set on can be adjusted to increase the load. Same principle as bike/ cycle trainer
- **How is load determined and calculated?** Answer: TitanX can answer this. Keep in mind that this is sophisticated equipment used by a professional group that specializes in this type of testing.
- **What is the equation?** Answer: Same as above.
- **How do they know the terrain (uphill/downhill) the tractor traveled prior to the fire?** Answer: items such as grade should not be a concern as we are testing in a closed test cell with an ambient temperature much higher than the temperature of the day of the incident. Also loading or drag on the drive tires can be adjusted.
- **How is that factored into the testing?** Answer: The cold test will simulate colder ambient temperature close to the temperature of the incident date. We also test at 100 degrees F, which is more severe as a second data point.
- **where and how will the sensors be placed?** Answer: Attached an example of how the sensors will be affixed. I will select the initial sensor placements which can be adjusted with input from your expert.
- **What is the interval/capability for data logging?** Answer: I will ask TitanX
- **Temperature differential?** Answer: We plan to test at a low temperature (can you provide the temperature based on the conditions described by the driver) and 100 degrees F.

Can you have someone from your end or TitanX provide responses to these questions?

Also, have you been able to resolve my time issue?

Please let me know when you get a chance. Thanks.

John

John M. Campbell
Yost & Tretta, LLP

jcampbell@yosttretta.com

Two Penn Center Plaza, Suite 610
1500 John F. Kennedy Blvd.
Philadelphia, PA 19102
Telephone: (215) 972-6600
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From: craig.sundlov@titanx.com
Sent: Thursday, May 28, 2015 4:17 PM
To: Lafon Tim (othy)
Cc: Meyers Edward; John Campbell; michael.zazula@gmail.com; hx884@cummins.com; Kerry.Parrott@
Subject: RE: sensor placement photo
Attachments: 1722a Instrumentation.pdf; DSCF7066.JPG

Tim.....yes, we have a thermocouple at that location identified as #12 on the attached strategy list. Also attached is the engine data tag.

(See attached file: 1722a Instrumentation.pdf) (See attached file: DSCF7066.JPG)

Craig SUNDLOV
Product Validation Group Manager

TitanX Engine Cooling
233 Blackstone Ave.
Jamestown, NY 14701

Phone: (716) 665-7166
Mobile:
FAX: (716) 665-7184
Email: craig.sundlov@titanx.com
Internet: www.titanx.com

▼ "Lafon Tim (othy)" ---05/28/2015 03:46:03 PM---Hi Craig, Please see below picture from Kane and confirm that sensors are placed in this area.

"Lafon Tim (othy)" <timothy.lafon@volvo.com>

05/28/2015 03:45 PM

To "craig.sundlov@titanx.com" <craig.sundlov@titanx.com>, Meyers Edward <edward.meyers@volvo.com>

cc [REDACTED] >, John Campbell <JCampbell@yosttretta.com>

Subject RE: sensor placement photo

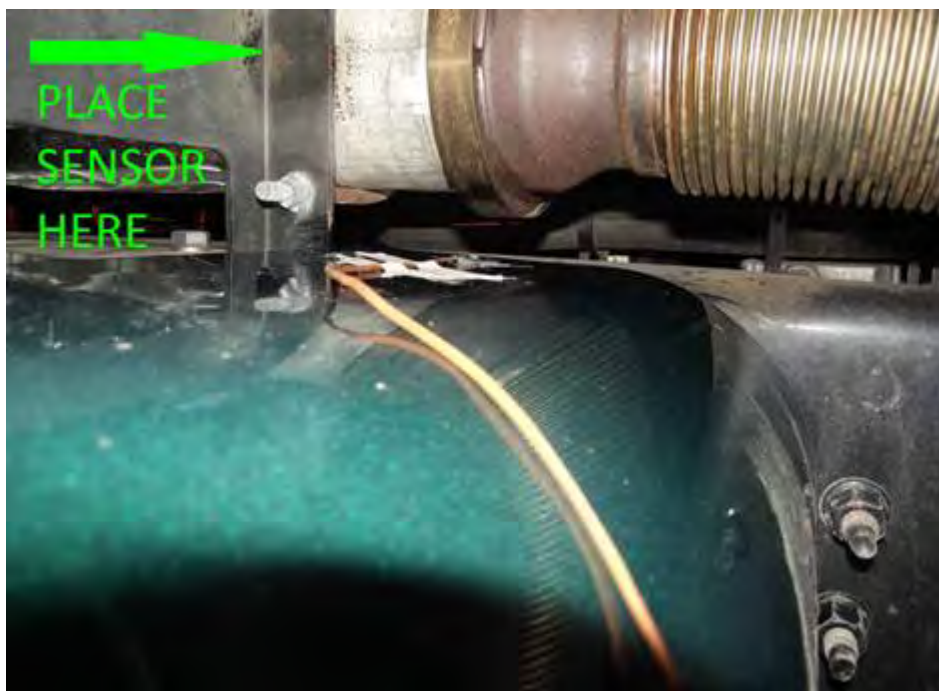
Hi Craig,
Please see below picture from Kane and confirm that sensors are placed in this area.

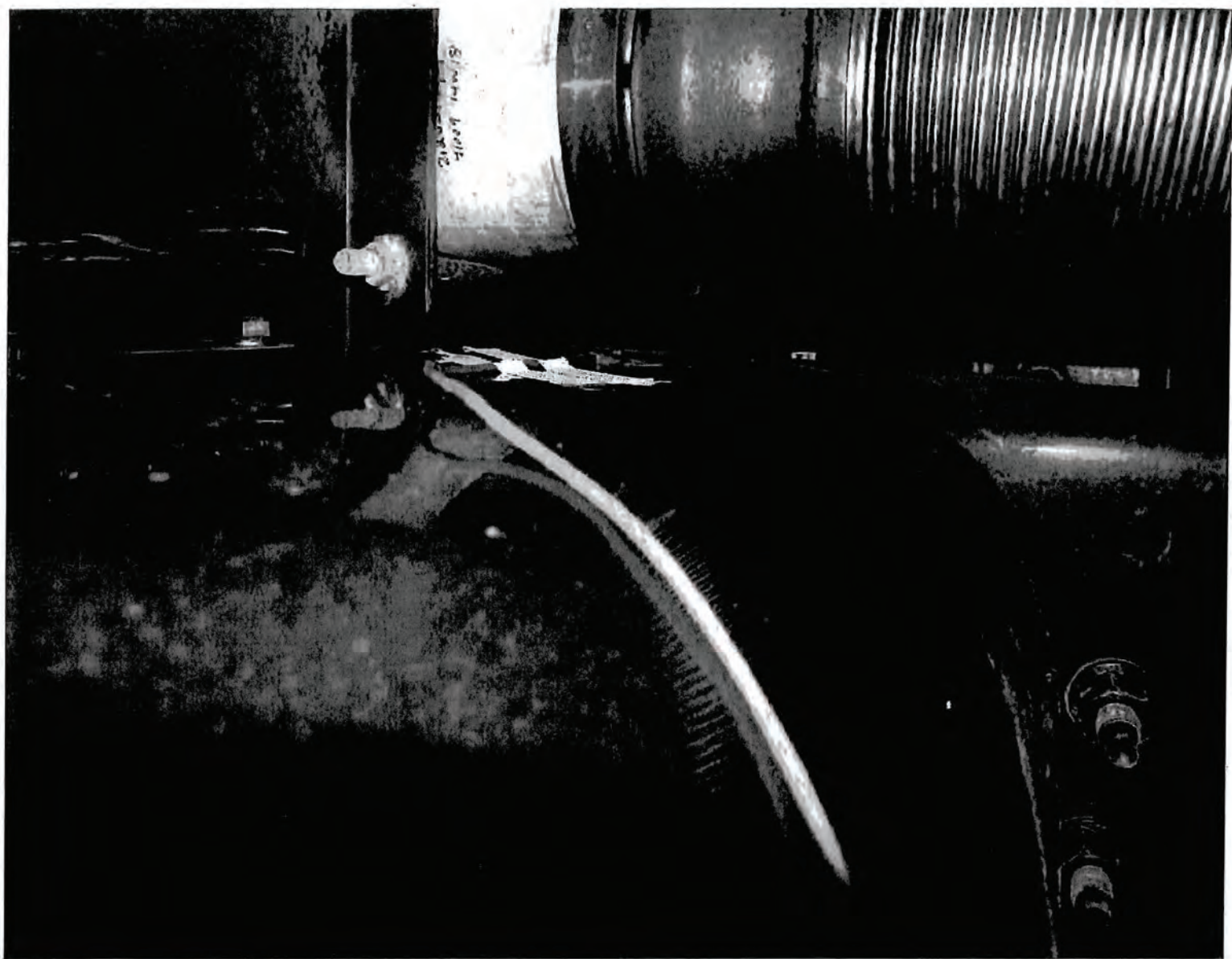
Thanks and Best Regards,
Tim

From: John Campbell [<mailto:JCampbell@yosttretta.com>]
Sent: Thursday, May 28, 2015 3:24 PM

To: Lafon Tim (othy)
Cc: [REDACTED]
Subject: FW: sensor placement photo

From: Michael Zazula, IEI Consulting, Inc. [<mailto:michael.zazula@gmail.com>]
Sent: Thursday, May 28, 2015 10:59 AM
To: John Campbell
Subject: sensor placement photo







VEHICLE #1722
STRATEGY 1722a

Thu 5/28/15
4:06 PM

Coolant Thermostat		Coolant	50 / 50	Water	Pressure Cap		As Rec'd	Full P.	Part P.
Oper.	Blocked				Requested	As Rec'd			
Requested		Requested			Requested				
As Received		As Received			As Received				
As Tested		As Tested			As Tested				
As Shipped		As Shipped			As Shipped				

Fan Drive		Fans & Blowers	Vehicle	External
Oper.	Out Clip			
Requested		Cooling Fans		
As Received		Front Blower		
As Tested		Rear Blower		
As Shipped				

Temperature Grid Identification

Condenser		Charge Air Cooler		Radiator		Aux. Trans Cooler	
In	Out	In	Out	In	Out	In	Out

Coolant Protection (deg F) or Rust Inhibitor Added to Water (chk box).....

A/C Press. Check	As Tested	☐
Cnt. Press. Check	As Tested	☐ As Shipped ☐
Cnt. Sight Glass?	Installed	☐ Removed ☐
Oil Catch Can	Installed	☐ Removed ☐
Vehicle Ground Wire	Installed	☐ Removed ☐
Locks (MUST be Disabled)	Disabled	☐ Restored ☐
Close H.T. Heater Loop	Closed	☐ Restored ☐
Vehicle Drive Shaft	Removed	☐ Installed ☐
Rear Axle Cooler	Installed	☐ Removed ☐
Suspension Airbags	Lowered	☐ Operational ☐
Diesel Exhaust Fluid	As Tested	☐ As Shipped ☐

Tunnel Parameters

Tag Name	Col.	Description
Roll HP	GL	Dyno Load
RollSpeed	GM	Vehicle Speed
WindVel	IT	Wind Speed
AirTemp1	GN	Tunnel Temp #1
AirTemp2	GO	Tunnel Temp #2
AirTempAvg	IR	Tunnel Air Temp Average
WallTemp	IV	Wall Temp
Humidity	IU	Relative Humidity
Barometer	GT	Barometer

Vehicle Ready to Install ☐

Vehicle Ready for Return ☐

Vehicle Thermocouples

Tag Name	Wire #	Type	Col.	Description	In	Out	Comments
BrktNrExhBr	1	K	B	Painted Brkt Near Exh Brkt			
TnkCvrExhWr	2	K	C	Painted Tank Cover at Exh Wrap			
TankCap	3	K	D	Painted Tank Cap			
ExhaustWrap	4	K	E	Exhaust Wrap			
TnkCvrExWr5	5	K	F	Tank Cover Under Exh Wrap 5			
TnkCvrExWr6	6	K	G	Tank Cover Under Exh Wrap 6			
TnkCvrExWr7	7	K	H	Tank Cover Under Exh Wrap 7			
AirBagFacExh	8	K	I	Air Bag Facing Exh			
BHNearPntdBr	9	K	J	Bolt Head Near Painted Brkt			
FrgExBlktAmb	10	K	K	Side Fairing Exhblanket Ambient Temp			
ShldUndExhW	11	K	L	Shield Under Exh Wrap Half Back			
FlxSolidPBkt	12	K	M	Flex to Solid Pipe Brkt			
CvrBlwSideFrg	13	K	N	Plastic Cover Below Side Fairing			
SideFrgBrktB	14	K	O	Side Fairing Brkt Bolt			
FrTkBrktNrEx	15	K	P	FTank Brkt Near Exhaust			
CabRrNrCtlyst	16	K	Q	Cab Rear Near Catalyst			
SpareH	17	K	R				
SpareI	18	K	S				

Miscellaneous

Tag Name	Wire #	Col.	Description	In	Out
CupAnemWind		GR	Cup Anemometer		
CupAnemAmb	142	GW	Cup Anemometer Temp		

RPM

Tag Name	Wire #	Col.	Description	In	Out
EngineRPM	133	EX	Engine RPM		
DrvShftRPM	134	EZ	Driveshaft RPM		

From: craig.sundlov@titanx.com
Sent: Monday, June 1, 2015 3:40 PM
To: Lafon Tim (othy)
Cc: BROWN CHERYL; John Campbell
Subject: RE: Kane Volvo Testing
Attachments: 1722a002.xls; 1722a003.xls; 1722alogsheet.pdf

Hello Tim,

We provided either hard copy data, electronic data, or both as dictated by the on-site representatives. Attached is the electronic data as requested.

(See attached file: 1722a002.xls)(See attached file: 1722a003.xls)(See attached file: 1722alogsheet.pdf)

Craig SUNDLOV
Product Validation Group Manager

TitanX Engine Cooling
233 Blackstone Ave.
Jamestown, NY 14701

Phone: (716) 665-7166
Mobile:
FAX: (716) 665-7184
Email: craig.sundlov@titanx.com
Internet: www.titanx.com

▼ "Lafon Tim (othy)" ---06/01/2015 02:56:16 PM---Dear Craig, As we discussed, can you please send an electronic copy of the data collected from last Friday's test to both Joh

"Lafon Tim (othy)" <timothy.lafon@volvo.com>

06/01/2015 02:56 PM

To	"craig.sundlov@titanx.com" <craig.sundlov@titanx.com>
cc	John Campbell <JCampbell@yosttretta.com>, BROWN CHERYL <cheryl.brown@volvo.com>
Subject	RE: Kane Volvo Testing

Dear Craig,
As we discussed, can you please send an electronic copy of the data collected from last Friday's test to both John and me?

Thanks and Best Regards,

Tim LaFon
Vice President, Regulatory Affairs

Volvo Group North America LLC

Office: (336) 393-2233

[REDACTED]

Fax: (336) 393-2009

TitanX Engine Cooling Vehicle Wind Tunnel

Test Name	Rated Power				
Veh #	1722a	Engine	400 HP	Test Start	5/29/15 9:45 AM
Year	2014	Transmission	Eaton Manual	Spec	A
Make	Volvo	Axle Ratio		Test Weight	
Model	Day Cab CNG	CdA		Tester	JJP/SC

Spec Desc. Production components

Comments CNG cold test.

		1800 RPM				
Parameter	Units	Max	Min	6 Scan Avg		
Roll HP	HP	106.8	-446.51	-0.71		
RollSpeed	MPH	60.1	-0.06	-0.01		
WindVel	MPH	23.1	6.2	6.8		
AirTemp1	DegF	27.6	21.1	27.2		
AirTemp2	DegF	27.5	20.4	26.4		
AirTempAvg	DegF	27.5	21.0	26.8		
WallTemp	Deg F	37.6	33.0	33.9		
Humidity	%	60.7	33.4	51.7		
Barometer	mBar	986.5	977.1	978.2		
CupAnemWind	MPH	16.6	4.2	4.3		
CupAnemAmb	Deg F	28.1	20.2	26.1		
BrktNrExhBr	Deg F	460.8	49.2	292.3		
TnkCvrExhWr	Deg F	79.5	31.0	71.5		
TankCap	Deg F	99.4	31.8	91.1		
ExhaustWrap	Deg F	540.3	56.4	398.5		
TnkCvrExWr5	Deg F	103.8	31.8	74.6		
TnkCvrExWr6	Deg F	84.5	31.0	72.2		
TnkCvrExWr7	Deg F	135.8	30.6	129.8		
AirBagFacExh	Deg F	94.0	28.6	81.1		
BHNearPntdBr	Deg F	133.6	37.2	111.3		
FrgExBlktAmb	Deg F	195.6	27.4	148.7		
ShldUndExhWrp	Deg F	100.7	31.7	91.6		
FlxSolidPBkt	Deg F	432.4	45.1	255.6		
CvrBlwSideFrg	Deg F	281.2	37.4	175.3		
SideFrgBrktB	Deg F	85.2	28.2	85.1		
FrTkBrkNrEx	Deg F	167.3	34.6	116.1		
CabRrNrCtlyst	Deg F	96.7	26.1	87.5		
SpareH	Deg F	0.00	0.00	#DIV/0!		
SpareI	Deg F	0.00	0.00	#DIV/0!		
EngineRPM	RPM	1893	-0.68	0.19		
DryShftRPM	RPM	1893	-0.90	0.12		

5/29/15 9:45 AM

TitanX Engine Cooling Vehicle Wind Tunnel

Test Name	Rated Power				
Veh #	1722a	Engine	400 HP	Test Start	5/29/15 11:59 AM
Year	2014	Transmission	Eaton Manual	Spec	A
Make	Volvo	Axle Ratio		Test Weight	
Model	Day Cab CNG	CdA		Tester	JJP/SC

Spec Desc. Production components

Comments CNG HOT test.

Parameter	Units	1800 RPM				
		Max	Min	6 Scan Avg		
Roll HP	HP	83.2	-379.05	-0.71		
RollSpeed	MPH	56.6	-0.06	-0.01		
WindVel	MPH	22.8	5.9	6.5		
AirTemp1	DegF	103.4	96.2	98.9		
AirTemp2	DegF	103.9	93.8	99.4		
AirTempAvg	DegF	103.3	95.1	99.1		
WallTemp	Deg F	91.8	88.0	91.4		
Humidity	%	23.4	18.7	21.5		
Barometer	mBar	986.1	975.6	977.4		
CupAnemWind	MPH	17.8	4.1	4.3		
CupAnemAmb	Deg F	104.4	94.7	100.1		
BrktNrExhBr	Deg F	450.6	100.1	318.9		
TnkCvrExhWr	Deg F	209.3	95.8	176.3		
TankCap	Deg F	227.8	96.6	195.2		
ExhaustWrap	Deg F	500.0	104.4	411.6		
TnkCvrExWr5	Deg F	200.9	96.5	163.6		
TnkCvrExWr6	Deg F	212.6	96.1	185.9		
TnkCvrExWr7	Deg F	242.1	96.4	237.1		
AirBagFacExh	Deg F	213.2	97.7	166.6		
BHNearPntdBr	Deg F	211.5	90.2	191.6		
FrgExBlktAmb	Deg F	254.2	99.5	239.3		
ShldUndExhWrp	Deg F	218.3	95.9	207.1		
FlxSolidPBrkt	Deg F	435.0	96.4	305.7		
CvrBlwSideFrg	Deg F	325.1	93.8	232.6		
SideFrgBrktB	Deg F	178.6	98.4	165.9		
FrTkBrkNrEx	Deg F	215.6	92.4	193.7		
CabRrNrCtlyst	Deg F	184.1	97.8	167.5		
SpareH	Deg F	0.00	0.00	#DIV/0!		
SpareI	Deg F	0.00	0.00	#DIV/0!		
EngineRPM	RPM	1807	-0.83	0.03		
DrvShftRPM	RPM	1803	-0.92	-0.12		

5/29/15 11:59 AM

Vehicle# / File

Desc.: 2014 Volvo - Day Cab

Sheet 1 Date: 5/29/2015

TitanX Vehicle Wind Tunnel Test Log

CNG (refer to PCD-1860)

Heavy Truck & dyng Set Points

15 MPH @ Cup: 38.6

30 MPH @ Cup: 3

Cup Distance to Grille: 3

ATB: Fan ratio:

TEST #	Sgmn	TEST DESCRIPTION	LENGTH (MIN)	START TIME LOG RATE	TUNNEL TEMP	REL. HUM.	SPEED / CUP	ENGINE RPM	HP REQ	HP SET	GEAR	SOLAR LOAD	FAN DRIVE STATUS	Vehicle Wt.	Trailer Wt.	Trailer Fr. Area	FILE #	
1	1	1800 RPM			25°F	20%	1.15	1800	Speed		9							01
	2								mode									
	3																	
COMMENTS/CHANGES: A																		
SPEC. A																		
ABORT - repair engine fiber optic																		

TEST #	Sgmn	TEST DESCRIPTION	LENGTH (MIN)	START TIME LOG RATE	TUNNEL TEMP	REL. HUM.	SPEED / CUP	ENGINE RPM	HP REQ	HP SET	GEAR	SOLAR LOAD	FAN DRIVE STATUS	Vehicle Wt.	Trailer Wt.	Trailer Fr. Area	FILE #	
1	1	1800 RPM	35	09:45	25°F	20%	56.2/15	1800	Speed		9		0 oper.					02
	2								mode									
	3			3														
COMMENTS/CHANGES: Set 38.1 % wind speed for 15 mph @ cup @ 25°F.																		
SPEC. A Key off @ 30 minutes, continue logging to 35 minutes.																		

TEST #	Sgmn	TEST DESCRIPTION	LENGTH (MIN)	START TIME LOG RATE	TUNNEL TEMP	REL. HUM.	SPEED / CUP	ENGINE RPM	HP REQ	HP SET	GEAR	SOLAR LOAD	FAN DRIVE STATUS	Vehicle Wt.	Trailer Wt.	Trailer Fr. Area	FILE #	
2	1	Rated lower 1800 RPM		11:59	100°F	20%	56.4/15	1800	Speed		9		0 oper.					03
	2								mode									
	3			3														
COMMENTS/CHANGES: Set 38.5 % wind speed for 15 mph @ cup @ 100°F.																		
SPEC. A coast down @ 24 minutes, Key off @ 30 minutes, stop logging @ 35 minutes.																		

TEST #	Sgmn	TEST DESCRIPTION	LENGTH (MIN)	START TIME LOG RATE	TUNNEL TEMP	REL. HUM.	SPEED / CUP	ENGINE RPM	HP REQ	HP SET	GEAR	SOLAR LOAD	FAN DRIVE STATUS	Vehicle Wt.	Trailer Wt.	Trailer Fr. Area	FILE #
	1																
	2																
	3																
COMMENTS/CHANGES:																	
SPEC.																	

TEST #	Sgmn	TEST DESCRIPTION	LENGTH (MIN)	START TIME LOG RATE	TUNNEL TEMP	REL. HUM.	SPEED / CUP	ENGINE RPM	HP REQ	HP SET	GEAR	SOLAR LOAD	FAN DRIVE STATUS	Vehicle Wt.	Trailer Wt.	Trailer Fr. Area	FILE #
	1																
	2																
	3																
COMMENTS/CHANGES:																	
SPEC.																	

From: John Campbell <JCampbell@yosttretta.com>
Sent: Wednesday, June 24, 2015 8:29 AM
To: Lafon Tim (othy)
Cc: dan.volpe@kaneisable.com; lawrence.catanzaro@kaneisable.com; John Hurst; Lou.Houck@kaneisable.com; Amanda Erb (Amanda_Erb@gbtpa.com); Eric Sandoe (esandoe@ecbm.com); Ken Johnson (Atlanta) (Ken_Johnson@artextrisk.com)
Subject: Kane CNG Vehicle Fire

Tim:

I have been informed by Marv's Towing that Volvo has paid a portion of its towing and recovery charges in connection with the above vehicle fire. Ed Meyers has also informed Marv's that Volvo will not be paying any of the \$45K in storage charges that have been accumulated since the fire. This information is contrary to your representations at the conclusion of the vehicle inspection on May 12th. At that time, you informed me that you would be taking care of Marv's charges. You did not limit that statement to towing charges. In any event, why would Volvo accept responsibility for towing and not storage? These storage charges have been accumulating as a result of Volvo and/or Cummins' need for inspection and/or testing of the vehicle. Two inspections and one lab test later, Volvo has not provided a viable alternative cause of the fire, nor has Volvo certified that the other vehicles purchased by Kane at the same time are safe to drive. I would like to remove the burned vehicle to Kane's lot and stop the storage charges, but the vehicle will not be released until the storage charges are paid.

More disturbing is the lack of communication from Volvo following the most recent vehicle testing. After the vehicle inspection in May, you informed me that you would be forwarding questions for the driver. I just received those this morning. Accompanying those questions are photos of items burned in the fire. Apparently, Volvo is intent on blaming the driver and/or Kane for a fire that was obviously caused by the excessive heat surrounding the exhaust system. I will have Mr. Gonzalez answer the questions, only because I agreed to previously.

Interestingly, I understand that Ed Meyers interviewed a witness to the fire and obtained a copy of a video of the fire taken by the witness' son. Despite our efforts to keep the lines of communication open, I was never informed of this fact by Volvo or provided a copy of the video. The witness and the video apparently confirm that the fire started in the area of the exhaust as the driver previously reported. Instead, Ed Meyers has told individuals at Marv's that the driver was a smoker and that the fire may have started in the cab. Apparently, Mr. Meyers was recently caught digging around the fire scene by State Police. It is my understanding that Mr. Meyers is not a fire cause and origin expert. Volvo's time and efforts would be better spent determining how to deal with this potential fire hazard. By the way, Mr. Gonzalez is not, and has never been a smoker. The items in your photographs were victims of the fire. Luckily, Mr. Gonzalez was not.

The vehicle inspections and the dyno testing showed sufficient evidence of excessive heat in the area of the fire origin to establish that the exhaust heat caused the fire. Regardless, of the ignition source, a vehicle with 3,000 miles on it should not burn itself up. Volvo has sufficient evidence to satisfy the warranty and pay Kane's direct and consequential damages.

During our meeting at Kane, you agreed that you were going to "work out" the damage claim, including the trailer and cargo loss and related charges. You also told me that Kane did not have to worry about the warranty deadline. It appears now that we cannot rely on those statements. At this point, I see no alternative than to file suit on the warranty and strict liability claims and to pursue any and all costs available to my client.

If you wish to discuss the immediate resolution of this claim, please contact me. If Kane does not receive an acceptable resolution to this claim within the next ten (10) days, I will be forced to file suit in federal court.

Thank you for your attention to this matter.

John Campbell

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From: Lafon Tim (othy)
Sent: Wednesday, July 1, 2015 4:22 PM
To: John Campbell
Cc: Reavis Randall; BROWN CHERYL
Subject: RE: Kane is Able - Volvo CNG Truck Fire
Attachments: kane.Gonzales.answers.2537_001.pdf

Hi John,

Thank you for the information. We will review this and be in contact next week to further discuss the case.

Best Regards,

Tim LaFon
Vice President, Regulatory Affairs
Volvo Group North America LLC

Office: (336) 393-2233



Fax: (336) 393-2009

From: John Campbell [mailto:JCcampbell@yosttretta.com]
Sent: Wednesday, July 01, 2015 3:42 PM
To: Lafon Tim (othy)
Subject: Kane is Able - Volvo CNG Truck Fire

Tim:

As requested, I have attached the answers of the Kane driver, Scott Gonzales, to the questions you posed.

Once you have had a chance to review, please contact me to discuss this case. Thank you.

John

John M. Campbell
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RE: Kane is Able - Volvo CNG Tractor Fire
Date of Loss – January 2, 2015
Questions to Driver, Scott Gonzales

- 1) Can you please give a detailed description of the events of the day of the accident from before your pre-trip inspection to the time you identified that there was an issue? Items such as when did you start your shift, stops made, approximate time in operation before the accident occurred. Not sure what time I started. Did pretrip in yard, did not notice anything unusual during the pretrip. Left Scranton with a load destined for Golub in Schenectady, NY. After delivering picked up load at Horizon Milling in Albany, NY. Truck was not running during loading at Horizon. Once loaded, started truck, did not notice anything unusual. Stopped for CNG refill in Kirkwood, NY. While travelling on RT 81S notice glow out of back window area. Pulled over, sensed something was wrong. Walked to front of vehicle and looked down the passenger side and saw the flames protruding. Flames appeared to be coming from the exhaust area under the passenger side of the cab near fire wall (under passenger door area). Immediately called 911. Truck was parked on top of the white line almost against the guard rail leaving little room between truck and guard rail.
- 2) Did you conduct a pre-trip inspection and if so where there any issues noted? Did conduct pretrip, no issues detected.
- 3) Did you fuel the truck on the date of the accident? Yes If yes, about how long prior to the accident, was the fueling done by you or someone else, where was the truck fueled? 45 minutes prior at a self serve station in Kirkwood, NY owned by Trilogy.
- 4) Is the truck assigned to you? Yes
- 5) Had you operated this truck prior to the date of the accident and if so approximately how many times? Had the truck for approximately three weeks. Had you seen any issues before if you operated the truck before? No
- 6) Did you operate this truck the day before? Yes.
- 7) Can you please describe how you first notice that there was an issue and the actions taken once you saw that there was a fire? See question 1.
- 8) Can you please describe where on the truck that you first saw smoke or flames? See question 1
- 9) About how long did it take for the fire department to arrive? Estimating 45 minutes
- 10) Did you have personal items in the cab? Yes If yes, can you please describe what was in the cab? Various items reimbursed by Kane including IPAD and car keys.
- 11) Do you smoke? No If yes, did you smoke in the cab on the day of the accident? N/A
- 12) There are some materials in the cab that we have provided pictures of. 008 is a close up of the material in pic 009. Can you review these pictures and provide information on what these items are? Orange polish, air brake antifreeze, plastic tube to take off lug nuts, broom and clipboard.

13) What do you believe caused the fire? Exhaust on the CNG trucks seem to get very hot.

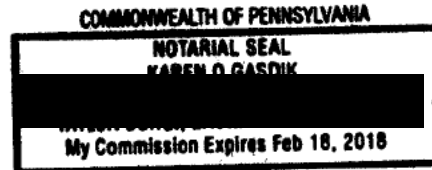
[REDACTED]

Scott Gonzales

On this 29th day of June, 2015, before me
personally appeared Scott Gonzales,
known to me to be the person who executed the foregoing instrument, and acknowledged that he
executed the same as his free act and deed.
My Commission Expires: 2-18-18

[REDACTED]

Notary Public





July 21, 2015

John M. Campbell
Yost & Tretta, LLP
Two Penn Center Plaza, Suite 610
1500 John F. Kennedy Blvd.
Philadelphia, PA 19102

RE: Kane Transport, Incident occurring on January [REDACTED] 2015

Dear John,

I am writing to follow up on our prior discussions regarding the Jan. [REDACTED] 2015, fire involving a 2015 model VNL. Volvo has supported the investigation of this incident by providing an expert independent forensic investigator, paying for testing to evaluate the temperatures, having suppliers, Agility and Cummins, support the investigation and inspection of the parked trucks, and by providing rental trucks to Kane while the investigation was pending.

After having completed its investigation of this incident, Volvo has been able to identify no defect in design, materials, or manufacturing in any of the components installed by Volvo. Furthermore, Volvo is not aware of any defects relating to the CNG system; the tanks, pressure relief valves, and lines that were installed by Agility. Based on these findings, Volvo believes that the trucks that have been parked by Kane pending the outcome of this investigation may be returned to service.

Volvo's position is that Kane should file a claim with its insurance company for reimbursement of losses associated with this accident if it has not already done so. Volvo will discontinue financial support to Kane and will cease paying for rental trucks as of the end of July 2015.

Should you have any questions regarding Volvo's position, please let me know.

Best Regards,

[REDACTED]

Tim LaFon
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[REDACTED]

Email: timothy.lafon@volvo.com

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From: Lafon Tim (othy)
Sent: Thursday, July 23, 2015 10:56 AM
To: Reavis Randall
Cc: Billings Terry; BROWN CHERYL; Nyberg Goran; Pickett Therence
Subject: FW: Kane is Able Truck Fire, 1/2/15
Attachments: kane.volvo.purchase.agre_20150722161940.pdf; KANE LTR_JULY 21 2015.doc

Privileged and Confidential

Hi Randy,
As we discussed, see Kane's response below to our letter of July 21st.

In regards to some of the statements made below, I offer the following:

- The statement referring to a recall is a Cummins recall that affected ISX Gas engines where "ice from condensation may form in or around the intake manifold temperature/pressure sensor on engines operating in sub-freezing ambient temperatures without cold weather aids." The potential result is over fueling resulting in elevated temperatures in the exhaust. According to Cummins, the engine had the correct parameters and is not subject to the recall. Cummins also reviewed the other 6 trucks owned by Kane, and confirmed that they are not affected by the recall.
- Regarding the reference to previous representations, I shared with Kane and their attorney that considering the age of the vehicle that the fire is more likely associated with some sort of product defect than a service related issue.
- Regarding the reference to NHTSA, NHTSA is aware of the incident and they were kept informed as we investigated the matter.

I will have Cheryl load all of the investigation material to CMD and hand this over to you for further handling.

Best Regards,

Tim LaFon
Vice President, Regulatory Affairs
Volvo Group North America LLC

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From: John Campbell [mailto:JCampbell@yosttretta.com]
Sent: Wednesday, July 22, 2015 5:22 PM
To: Lafon Tim (othy)
Cc: lawrence.catanzaro@kaneisable.com; dan.volpe@kaneisable.com; John Hurst (John.Hurst@kaneisable.com); Lou.Houck@kaneisable.com; Thomas Paciga (Thomas.Paciga@kaneisable.com); Eric Sandoe (esandoe@ecbm.com); Ken Johnson (Atlanta) (Ken_Johnson@artextrisk.com); Amanda Erb (Amanda_Erb@gbtpa.com); Dunn, Timothy K

(Timothy.Dunn@esis.com)

Subject: Kane is Able Truck Fire, 1/2/15

Tim:

I have relayed your letter of July 21st to Kane is Able management and will be filing suit against Volvo, Cummins and Agility shortly.

I am frankly surprised at Volvo's position given your statement last week that Volvo is unable to exclude this fire as a recall related issue. Certainly, Volvo's inability to determine the cause of the fire does not bode well in the litigation that will ensue. During our discussions throughout this process, including our discussions in Kane's boardroom in May, you stated that this is a "customer issue" and that Volvo will take care of the loss, given the young age of the tractor. Your present position is completely contrary to your previous representations.

It is interesting that Volvo would jeopardize its reputation within the trucking industry by failing to honor a warranty on a 3,000 mile old tractor that burned itself up during normal operation, especially in light of the recent fire recall on the same type of vehicle. The video of the fire only accentuates Volvo's bad faith in the handling of this warranty claim and should cause concern to other potential customers from an economic and safety standpoint.

Please be advised that Kane will seek all damages to which it is entitled, including punitive damages and attorney's fees. I also intend to notify NHTSA of the fire and Volvo's position, and will subpoena any and all information relating to the previous recall. I will also assert a spoliation claim against Volvo, Cummins and Agility for tampering with the unused vehicles on Kane's premises.

Finally, please also accept this letter as notice from Kane that it intends to pursue all avenues of recovery available under the warranties issued in connection with the seven CNG units purchased from Volvo in 2014 (see purchase agreement attached).

Thank you.

John

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From: Lafon Tim (othy)
Sent: Monday, February 22, 2016 11:27 AM
To: Billings Terry
Cc: Bio Frank; Reavis Randall
Subject: RE: Kane Information

Dear Terry,
As we discussed.

Proposed Protocol

1. Volvo to send representatives from Professional Analysis and Consulting, <https://www.proaaci.com/>, to document (i.e. take photographic record of all six vehicles) and collect samples of material (section of chassis fairing) for further testing to determine the self-ignition temperature of the material.
2. Establish joint inspection dates of all six vehicles (at Kane facility in Scranton)
3. Inspection will require,
 - a. Standard level 1 inspection for the tractor according to the Commercial Vehicle Safety Alliance inspection procedure. This includes: lighting (e.g. headlights, turn signals, etc.), windshield wiper system, tires and wheels, fuel system, brakes etc.
 - b. Inspect Cummins related items such as the sensor that control the fuel to air ratio to confirm that they are correct, and run a diagnostic on the engine and engine control system using Cummins diagnostic tools.
 - c. Examination of Agility designed and installed components to ensure that they are correct. Items to be inspected include pressure relief valves, fueling coupling, pressure gauges and tanks and pipes for leaks.
 - d. Examination of the Volvo installed components, exhaust for leaks, heat shields, and exhaust wrap. The exhaust wrap will be removed in order to inspect for any leaks and reinstalled.

Each vehicle will have a worksheet that will be checked of and any issues noted with representatives signatures for areas that they are responsible for. For Example, Cummins will sign that sensors are correct, Volvo for the exhaust, and Agility for the tanks, lines and pressure relief valves.

A test drive will be made (approximately 50 – 100 miles) after a – d are complete and a post trip walk around inspection done.

4. Review of the results of the physical inspection and review of test results from Professional Analysis to establish the self-ignition temperature of the side fairing, which will be compared to temperature measurements taken on May 29th by TitanX.

I have a commitment from Professional Analysis to support the work. They can have someone on site as early as Friday, February 26th.

We will have to contact Agility and Cummins to secure their participation.

Please let me know if you have any questions.

Tim LaFon
Vice President, Regulatory Affairs
Volvo Group North America LLC

From: Lafon Tim (othy)
Sent: Friday, February 19, 2016 3:12 PM
To: Billings Terry
Cc: Bio Frank; Reavis Randall
Subject: Kane Information

Dear Terry,

Provided below is a summary what we have done thus far and some potential additional areas that can be further evaluated on the Kane trucks.

Actions include:

Inspections/ Testing Performed.

- a. January 7, 2015: Volvo sends independent fire investigator, Kerry Parrott of Stahl Engineering, to conduct a visual non-destructive visual inspection
- b. February 9, 2015: Volvo organizes/ attends a joint vehicle inspection with Cummins WestPort and Agility. Ed Meyer and Kerry Parrott attended on Volvo's behalf
- c. March 17, 2015: At Volvo's request, Cummins travels to Scranton PA and confirms that the engines have the updated software, not subject to the Cummins Recall where ice may interfere with the proper operation of the pressure sensor function of the intake manifold temperature pressure sensor. Build date from Cummins showed that the engines were not subject to the recall, and Cummins confirms on March 17, 105 that the software is correct.
- d. May 12, 2015 (original request by Volvo to Kane was on March 16, 2015): Volvo coordinates and participates in joint inspection and engine disassembly. Representatives from Kane, Cummins, and Volvo are present. Representatives from Volvo included Tim LaFon, John Bartel (Chief Engineer Volvo Powertrain), Ed Meyers, and Kerry Parrott.
- e. May 29, 2015: Testing at TitanX facility in Jamestown NY (paid for by Volvo). Testing involved adding thermocouples to measure temperatures along the exhaust on one of the Kane CNG trucks (one of the sister trucks grounded by Kane). The test was performed at peak engine horsepower on a roller dyno in TitanX's climatic chamber which has a range of 0 to 100 degrees Fahrenheit. See attached results. Link to TitanX can be found [REDACTED] Representatives from Kane, Cummins and Volvo were present. Volvo's participants were Ed Meyers and Kerry Parrott.
- f. July 21, 2015, Volvo position provided to Kane's attorney.

In regards to potential additional investigations items, I would propose that we do a go over of the trucks with Cummins and Agility due to the amount of time that they have been setting. The inspection would involve a review of the Cummins engine sensors that control the gas to air mixture (I believe that this was a concern expressed by Kane), and review of the exhaust to confirm there are no leaks (Volvo installed the exhaust pipe), a re-review of the Agility CNG System, and a standard DOT type inspection for tires, brakes, steering etc. I have attached an inspection template from the Commercial Vehicle Safety Alliance's handbook that is used by enforcement officers and would service as the template for the DOT inspection.

Also, would suggest that we take one of the vehicle side fairing that is designed and installed by Agility and have an analysis done to determine the self ignition point of the material, which can be compared to the temperature measurements made by TitanX.

Please let me know if you have any questions.

Bes Regards,

Tim LaFon
Vice President, Regulatory Affairs
Volvo Group North America LLC

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Kane is Able Log of Events

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Wilkes Barre, PA 18702-6944

Christopher Matheis

Westport Cummins Westport Inc.
Field Support Leader
christopher.matheis@cummins.com
500 Jackson Street
Columbus, Indiana 47201
USA
www.cumminswestport.com

[Kane is Able] Log of Events

4/25/2016

[Mike] brought up the concern that exhaust mounting bracket was painted on some trucks.

912135 - Slight leak on LH side line from shutoff valve to first connection - red tagged

Leak at Cummins mixing chamber

912136 - Few NG leaks. Bellows pipe rusted and should be replaced (was next day). Flex pipe to muffler elbow (one gasket missing). Need to replace all V-clamps (done on each truck) and pipe blanket wrap (will be done on each truck).

912131 - leak at mixing chamber - leak at front of engine near a liquid line

912134 - engine crankcase (oil fill) leaking. 90 degree fittings on tanks

Called [Hugh Donnell] to get a Cummins person to ask why NG in crankcase (Oil fill tube) and mixing module. [Chris Matheis] called back, said he would need to discuss with Cummins legal because they are in a law suit, I explained it was part of the agreement. He said he would call back tomorrow (4/26)

4/26/2016

Updated all engines with latest Cummins software [Tim] wrote the current and new versions of software on the signature sheet.

912133 - Exhaust reinstalled

Called [C Matheis] back at 3:00 PM - went to voicemail. Explained we wanted to know if we should be getting gas in the crankcase (Oil fill).

4/27/2016

Unit #105 worked. [Andy and John] have been making exhaust reworks to all the trucks. Plan today is to complete exhaust reworks on 4 trucks. Because of the numerous NG leaks [Ed Meyers] decided it would be safer to tow all truck to Blue Mountain location and have the fuel leaks addressed by Blue Mountain, since they installed the tanks.

#104 had a water leak through the sun visor bolt. Exhaust complete.

#105 - towed @10:00 AM

Note: [Larry] asked if the new exhaust wrap would be different than the ones being used. Answer - "not to my knowledge". His concern is that if the other ones showed signs of being ignited (Velcro fasteners), wouldn't the new ones.

#101 - new bellows - being worked. New issue- Muffler loose also LH tank front hanger bolts (4) are loose

I travelled to Blue Mountain location today - Arrived 3:00~. Trucks parked outside 4, others in route.

5/2/2016 - Checked with [Mike Kubeika] and he said he was contacting Dave Wirth to get OK to go forward but needed some clarification from [Ed Meyers].

5/4/2016

Called and emailed [Mike K.]. He sent email back that he was waiting on Agility and had not heard back from Cummins. I sent emails to both in AM.

[Wayne Acheson] at Agility called back and said he will be in contact with [Barry Peoples]. They could send someone.

[Mike K.] sent a note that [Tim Boyer] (Cummins Tech and Agility tank installer) is on vacation next week (May 9-13, 2016)

Spoke with [Tara Johnson], explained we need an answer and she said she would assist.

Sent email to Agility asking they coordinate with [Ed Meyers] for a review and repair at Blue Mountain

[Kane is Able] Log of Events

5/23/2016

Spoke with [Mike] and he believes he will have a least two there in the morning (Thursday) and possible one in the afternoon.

Called [Larry] and left message about me coming in tomorrow, wanting to start test drives in the afternoon. Waiting for a call back.

Spoke with [Andrew at Kane] explained two trucks should be there Tuesday morning, I told him I would need a trailer, I said he could have a driver with me. Plan is to drive one in afternoon, one in morning (Wednesday), one in afternoon. Two will be driven on Thursday morning, one Thursday afternoon.

5/24/2016

Unit 104, [Andy] and ran 81N estimated 44K Payload+trailer+tractor, performed well, no noise as other trucks, poor engine brake. Passenger floor warm, bracket and seat box. Warm to the hand. Bellows pipe 170 degrees after run. Plastic next to the exhaust pipe also about 170. Other pipe temp 140, fuel at 1900 after run.

5/25/2016

Ran unit 101

I drove to BM and picked up unit 106, arrived back at 5:30. This truck had a throttle response failure and was reprogrammed before I picked it up. Expected to run 3 units Thursday.

5/26/2016

Truck (106) ready and trailer, no driver till 10:00 but didn't show till after [Ed] arrived. [Larry] said it would be OK if Ed and I drive.

Contacted [Jack] and scheduled him for Tuesday - Wednesday, next week.

Began run before lunch. Stopped by local truck enforcement officers and turned around to different route to 81N. Truck ran the same as other with no difference in heat readings.

Went back to BM. They were still working on one truck and other truck not touched. Drove back to [Kane], 106 was connected to trailer and in the garage (door open). Recorder mileage and tank pressure for tomorrow. We will run Unit 103 in the morning [Ed] expected about 8:00 AM. The truck they were working on expected tomorrow midmorning (10:00). We'll run that one upon return of 103. Final truck will expected Tuesday AM.

Went back to BM to pick up rental car; one more expected completed and should be at [Kane] in the morning.

5/30/2016 - Memorial Day Holiday

5/31/2016

I arrived at about 12:00 noon.

[Jack Steponz] Certified CNG Inspector arrived.

Tank inspection

- Unit 102; passenger side PRD lines are too close to tank. Will need to remove tank to relocate. Driver side forward, back side of tank, near PRD, sniffer indication. Will remove tank and inspect.
- Unit 106; Passenger side PRD lines are too close to tank.
- Units 101, 103, 104 and 105 clearances on both sides look fine
- Unit 105 driven [Andy and I] - operated fine, like all others, except a fault code appeared twice - O₂ sensor fault code. Cleared both times.

[Kane is Able] Log of Events

Appendix A – Test drives

Item 5). After the aforementioned steps, Volvo will perform test drives of approximately 100 miles while running diagnostic testing, and conduct post trip walk around.

Each test drive was conducted after the CNG Inspector completed his work, the truck was equipped with a loaded trailer, provided by [Kane] and usually driven [redacted] on 81N to at least exit [redacted] (last one in Pennsylvania). One truck was driven south to [redacted] and back. During all the runs except the first (unit 104) heat measurements were taken, using and infrared gun supplied by [Kane] at the passenger seat mounting forward bolt closest to the driver, at the center of the angle mounting and about 3-4" inches above the seat mounting angle (on the box). At [redacted] the one stop for each truck (with the exception of 102 because it was run on 81S), I also measure the pipe after the bellows, and on the tank cover directly below the pipe after the bellows. I also measured the exhaust wrap about 6" from the start of the wrap, at the front and on the tank cover, below the wrap.

On June 2 [Tim Boyer] from the Blue Mountain location checked and cleared engine codes. He is expected to send those after printing them out sometime in the second or third week of June. He verbally reported, he didn't see anything unusual in the codes. Some were a result of turning the gas off and running the engine out of fuel or turning the battery disconnect switch on/off.

The following is data includes those measurements as well as additional information recorded for each final test run:

	At start				End
Unit #	101				
Date	5/25/2016				
Start time	9:00 AM				
Start miles	22,484				
FA weight	11,700				
RA weight	30,480				
TR tandem weight	32,680				
Payload	42,260				
Total	74,860				
Tank pressure start	2500				
Bolt temp	96	130	135	140	130
Bracket temp	87	106	109	109	109
Seat box temp	81	93	97	97	96
Pipe – after bellows	156	675			379
Below pipe after bellows	102	115			133
Exhaust wrap	-	157			200
Below exhaust wrap	-	164			184
End miles	22,579				
Tank pressure end	1800				
End time	-				
Additional notes:	(none)				

Kane is Able Log of Events

	At start				End
Unit #	105				
Date	5/31/2016				
Start time	1:15 PM				
Start miles	10,334				
FA weight					
RA weight					
TR tandem weight					
Payload	43968				
Total					
Tank pressure start	2450				
Bolt temp	110/130/150	145	143/148	150	
Bracket temp	108/103/112	113	111/114	116	
Seat box temp	106/90/100	103	100/108	104	
Pipe - after bellows		625			
Below pipe after bellows		250			
Exhaust wrap		199			
Below exhaust wrap		158			
End miles	10,426				
Tank pressure end		1550			
End time					
Additional notes:	Check engine light on after we left, now off (MM205). Check engine light back on at MM198				

	At start				End
Unit #	106				
Date	5/26/2016				
Start time	11:20 AM				
Start miles	23657				
FA weight					
RA weight					
TR tandem weight					
Payload					
Total					
Tank pressure start	2400				
Bolt temp	88/137	136	133	140	
Bracket temp	87/105	109	104	109	
Seat box temp	77/90	91	86	94	
Pipe - after bellows		664			
Below pipe after bellows		270			
Exhaust wrap		215			
Below exhaust wrap		163			
End miles	23765				
Tank pressure end	1500				
End time					
Additional notes:					

[Kane is Able] Natural Gas Trucks

VIN	[Kane is Able] Unit Number	Cummins Engine S/N	Miles 4/25/2016	Engine software initial version
				Engine software new version
[4V5NC9UG7FM [REDACTED]]	101	S75029133	23,297	DH 10001.10
				DH 10001.16
[4V5NC9UG7FM [REDACTED]]	102	S75029283	6,696	DH 10001.10
				DH 10001.16
[4V5NC9UG7FM [REDACTED]]	103	S75029322	1,121	DH 10001.10
				DH 10001.16
[4V5NC9UG7FM [REDACTED]]	104	S75029323	768	DH 10001.12
				DH 10001.16
[4V5NC9UG7FM [REDACTED]]	105	S75029377	10,266	DH 10001.10
				DH 10001.16
[4V5NC9UG7FM [REDACTED]]	106	S75029376	23,555	DH 10001.10
				DH 10001.16

Volvo Trucks Inspection Protocol Verification Document for Kane is Able

Model Year	VIN	Engine S/N
2015	4V5NC9UG7FN	75029133

1). Volvo will arrange for a Cummins certified natural gas dealer to confirm the latest sensor updates, the latest sensor software, and the proper sensor placements/locations within the engines and the Intake manifolds.

Cummins certified natural gas dealer name:		Transedge Truck Centers - Blue Mountain	
Address:		247 Route 61 S, Schuylkill Haven, PA, 17972	
[Signature]	4/26/16	Tim Boyer	Technician
Signature	Date	Name	Title

2). Volvo will secure the services of an independent Certified Natural Gas Inspector trained by the Natural Gas Vehicle Institute (NGVI) to perform tank and fuel system inspections, including proper pressure release valves/devices on the fuel tanks.

Independent Certified Natural Gas Inspector name:			
Address:		108 HARRISON CIR LOCUST GROVE, VA 22508	
[Signature]	6/2/2016	JOHN STEPONGZI	OWNER/OPS MGR
Signature	Date	Name	Title

3). Volvo will examine/test all Volvo-Installed components.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[Signature]	5/27/17	Edward Meyers	Technical Service Manager
Signature	Date	Name	Title

4). Volvo will arrange for the exhaust wrap to be removed, inspected for leaks and/or defects, and reinstalled or replaced in accordance with Cummins Installation guidelines.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[Signature]	5/27/16	Edward Meyers	Technical Service Manager
Signature	Date	Name	Title

Volvo Trucks Inspection Protocol Verification Document for Kane is Able

Model Year	VIN	Engine S/N
2015	4V5NC9UG7FN [REDACTED]	75029253

1). Volvo will arrange for a Cummins certified natural gas dealer to confirm the latest sensor updates, the latest sensor software, and the proper sensor placements/locations within the engines and the intake manifolds.

Cummins certified natural gas dealer name:		Transedge Truck Centers - Blue Mountain	
Address:		247 Route 61 S, Schuylkill Haven, PA, 17972	
[REDACTED]	4/26/16	Tim Boyer	Technician
Signature	Date	Name	Title

2). Volvo will secure the services of an Independent Certified Natural Gas Inspector trained by the Natural Gas Vehicle Institute (NGVI) to perform tank and fuel system inspections, including proper pressure release valves/devices on the fuel tanks.

Independent Certified Natural Gas Inspector name:			
Address:		108 HARRISON CIR LOCUST GROVE, VA 22508	
[X] [REDACTED]		JOHN STEFONGZI	OWNER/DPS MGR
Signature	Date	Name	Title

3). Volvo will examine/test all Volvo-installed components.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[REDACTED]	5/27/16	Edward Meyers	Technical Service Manager
Signature	Date	Name	Title

4). Volvo will arrange for the exhaust wrap to be removed, inspected for leaks and/or defects, and reinstalled or replaced in accordance with Cummins installation guidelines.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[REDACTED]	5/27/16	Edward Meyers	Technical Service Manager
Signature	Date	Name	Title

Volvo Trucks Inspection Protocol Verification Document for [Kane is Able]

Model Year	VIN	Engine S/N
2015	4V5NC9UG7FN [REDACTED]	75029322

1). Volvo will arrange for a Cummins certified natural gas dealer to confirm the latest sensor updates, the latest sensor software, and the proper sensor placements/locations within the engines and the Intake manifolds.

Cummins certified natural gas dealer name:		Transedge Truck Centers - Blue Mountain	
Address:		247 Route 61 S, Schuylkill Haven, PA, 17972	
[REDACTED]	4/26/16	[Tim Boyer]	Technician
Signature	Date	Name	Title

2). Volvo will secure the services of an independent Certified Natural Gas Inspector trained by the Natural Gas Vehicle Institute (NGVI) to perform tank and fuel system inspections, including proper pressure release valves/devices on the fuel tanks.

Independent Certified Natural Gas Inspector name:			
Address:		108 HARRISON CIR LOCUST GROVE, VA 22508	
[REDACTED]	6/2/16	[JOHN STEPONCZ]	OWNER/OPS MGR
Signature	Date	Name	Title

3). Volvo will examine/test all Volvo-installed components.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[REDACTED]	5/27/16	[Edward Meyers]	Technical Service Manager
Signature	Date	Name	Title

4). Volvo will arrange for the exhaust wrap to be removed, inspected for leaks and/or defects, and reinstalled or replaced in accordance with Cummins installation guidelines.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[REDACTED]	5/27/16	[Edward Meyers]	Technical Service Manager
Signature	Date	Name	Title

Volvo Trucks Inspection Protocol Verification Document for Kane is Able

Model Year	VIN	Engine S/N
2015	4V5NC9UG7FN [REDACTED]	75029323

1). Volvo will arrange for a Cummins certified natural gas dealer to confirm the latest sensor updates, the latest sensor software, and the proper sensor placements/locations within the engines and the intake manifolds.

Cummins certified natural gas dealer name:		Transedge Truck Centers - Blue Mountain	
Address:		247 Route 61 S, Schuylkill Haven, PA, 17972	
[REDACTED] Signature	4/26/16 Date	Tim Boyer Name	Technician Title

2). Volvo will secure the services of an independent Certified Natural Gas Inspector trained by the Natural Gas Vehicle Institute (NGVI) to perform tank and fuel system inspections, including proper pressure release valves/devices on the fuel tanks.

Independent Certified Natural Gas Inspector name:			
Address:		108 HARRISON CIR LOCUST GROVE, VA 22508	
[REDACTED] Signature	6/2/16 Date	JOHN STEPONGER Name	OWNER/OPS MGR Title

3). Volvo will examine/test all Volvo-installed components.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[REDACTED] Signature	5/27/16 Date	Edward Meyers Name	Technical Service Manager Title

4). Volvo will arrange for the exhaust wrap to be removed, inspected for leaks and/or defects, and reinstalled or replaced in accordance with Cummins installation guidelines.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[REDACTED] Signature	5/27/16 Date	Edward Meyers Name	Technical Service Manager Title

Volvo Trucks Inspection Protocol Verification Document for Kane is Able

Model Year	VIN	Engine S/N
2015	4V5NC9UG7FN [REDACTED]	75029377

1). Volvo will arrange for a Cummins certified natural gas dealer to confirm the latest sensor updates, the latest sensor software, and the proper sensor placements/locations within the engines and the Intake manifolds.

Cummins certified natural gas dealer name:		Transedge Truck Centers - Blue Mountain	
Address:		247 Route 61 S, Schuylkill Haven, PA, 17972	
[REDACTED] Signature	4/26/16 Date	Tim Boyer Name	Technician Title

2). Volvo will secure the services of an independent Certified Natural Gas Inspector trained by the Natural Gas Vehicle Institute (NGVI) to perform tank and fuel system inspections, including proper pressure release valves/devices on the fuel tanks.

Independent Certified Natural Gas Inspector name:			
Address:		108 HARRISON CIR LOCUST GROVE, VA 22508	
[REDACTED] Signature	6/2/16 Date	JOHN STEPONGZI Name	OWNER/OPS MGR Title

3). Volvo will examine/test all Volvo-Installed components.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[REDACTED] Signature	5/27/16 Date	Edward Meyers Name	Technical Service Manager Title

4). Volvo will arrange for the exhaust wrap to be removed, inspected for leaks and/or defects, and reinstalled or replaced in accordance with Cummins Installation guidelines.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[REDACTED] Signature	5/27/16 Date	Edward Meyers Name	Technical Service Manager Title

Volvo Trucks Inspection Protocol Verification Document for Kane is Able

Model Year	VIN	Engine S/N
2015	4V5NC9UG7FN [REDACTED]	7502937C

1). Volvo will arrange for a Cummins certified natural gas dealer to confirm the latest sensor updates, the latest sensor software, and the proper sensor placements/locations within the engines and the Intake manifolds.

Cummins certified natural gas dealer name:		Transedge Truck Centers - Blue Mountain	
Address:		247 Route 61 S, Schuylkill Haven, PA, 17972	
[REDACTED] Signature	4/26/16 Date	Tim Boyer Name	Technician Title

2). Volvo will secure the services of an independent Certified Natural Gas Inspector trained by the Natural Gas Vehicle Institute (NGVi) to perform tank and fuel system inspections, including proper pressure release valves/devices on the fuel tanks.

Independent Certified Natural Gas Inspector name:		108 HARRISON CIR LOCUST GROVE, VA 22508	
Address:		JOHN STERNBERG	
[REDACTED] Signature	6/1/16 Date	JOHN STERNBERG Name	OWNER/OPS MGR Title

3). Volvo will examine/test all Volvo-installed components.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[REDACTED] Signature	5/27/16 Date	Edward Meyers Name	Technical Service Manager Title

4). Volvo will arrange for the exhaust wrap to be removed, inspected for leaks and/or defects, and reinstalled or replaced in accordance with Cummins installation guidelines.

Volvo Dealer name:		Volvo Trucks	
Address:		7900 National Service Road, Greensboro, NC	
[REDACTED] Signature	5/27/16 Date	Edward Meyers Name	Technical Service Manager Title

Bio Frank

From: Tara D Johnson <tara.d.johnson@cummins.com>
Sent: Friday, May 06, 2016 12:08 PM
To: Bio Frank
Cc: Reavis Randall; Christopher Matheis
Subject: RE: CNG Truck Repair Update

Good Afternoon Frank,

Thanks for the email. After looking into this, I understand that neither Cummins or Cummins Westport Inc. are parties to the Kane litigation. I also understand that the agreement you mention is between Volvo and Kane and that Cummins is not involved.

For those reasons, Cummins Inc. will not participate in the inspection on Monday and will not bear any costs incurred as part of the inspection. Regarding the inspection and proposed test drive, given that Cummins Inc. and Cummins Westport provide limited warranties with their products, there is no need for either to "sign off" on the engines.

Please don't hesitate to call me if you have any questions.

Warm Regards,

Tara D. Johnson
Senior Account Marketing Specialist
Cummins – Volvo/Mack
Phone 812-377-8875
Cell 812-314-9279

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From: Bio Frank [mailto:frank.bio@volvo.com]
Sent: Friday, May 06, 2016 10:03 AM
To: lawrence.catanzaro@kaneisable.com
Cc: Campbell@yosttretta.com; Meyers Edward <edward.meyers@volvo.com>; Billings Terry <terry.billings@volvo.com>; Reavis Randall <randall.reavis@volvo.com>; Christopher Matheis <christopher.matheis@cummins.com>; Tara D Johnson <tara.d.johnson@cummins.com>; bpeeple@agilityfs.com
Subject: CNG Truck Repair Update

Hi Larry,

Volvo Trucks is approaching these activities in accordance with the terms of the agreement reached in March between Volvo Trucks and Kane. We are working to complete the six steps on each of the six trucks and place them back in service.

I have contacted Agility and Cummins and waiting for their response as to the timing of repairs. I have expressed the sense of urgency in completing the repairs expeditiously and accurately. Ed Meyers is intending to visit the Blue Mountain location next week, May 9, with representatives of both parties present (Cummins and Agility). At that time, we will have clearer idea on when the repairs will be completed. As of this email, Agility has agreed to have a representative on site next week, and I await Cummins' response.

<image001.png> <image002.png> <image003.png> <image004.png> <image005.png>

TransEdge

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(610) 395-6801
(800) 982-9640

1501 BEAVER AVENUE
PITTSBURGH, PA 15233
(412) 237-6000
(888) 284-0083

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VOLVO



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WORK ORDER INVOICE
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Page 1
Time 9:12:04

der No. [REDACTED]
voice Date 5/31/16

VOLVO TRUCKS NORTH AMERICA
ATTN: FRANK BLO
7900 NATIONAL SERVICE RD
GREENSBORO, NC 27409

[4V5NC9UG8FN [REDACTED]]
Unit 106
Reading In 3304 0
Arrival 5/05/16
DELIVERY 0/00/00
PO# FRANK BLO
GVW
SW# 355

2015 VOL VNL64T
License
Reading Out
at 13:28

Terms A/R Charge

ist# 2767
(336) 210-1374

Equip
mer 2767 KANE FREIGHT LINES INC

****SHOP SUPPLIES & MATERIALS ARE FOR HAZ-MAT & ENVIRONMENTAL FEES****

S U M M A R Y

Description	Labor	Parts	Misc.	Total
1 ESN 75029376 COLOR COD	.00	.00	.00	.00
2 CHANGE CROSS OVER LINE	104.00	20.17	619.00	743.17
3 ISOLATE VENT LINE AWAY	728.00	11.21	111.69	850.90
4 REPAIR LEAK AT PRD VAL	2,080.00	25.65	153.00	2,258.65
5 RIGHT TANK REPLACE 90	52.00	.00	.00	52.00
6 INSTALL ALL SOFTWARE U	130.00	.00	20.00	150.00
7 CK MIXING CHAMBERS EXT	.00	.00	.00	.00
8 WHEN COMPLETE WITH NIT	52.00	.00	.00	52.00
9 PERFORM OIL CHANGE	52.00	146.86	.00	198.86
0 FUEL SHUT OFF, INTAKE P	52.00	692.34	30.00	774.34
1 mal-light no throttle	314.08	.00	.00	314.08
3 INSTALL EX. WRAPS	104.00	.00	.00	104.00

T O T A L S 3,668.08 896.23 933.69 5,498.00

Tax I.D.: MC 99567 Shop Supplies & Materials: 91.70
Sales Tax .00

*** PAY THIS AMOUNT *** CUSTOMER TOTAL 5,589.70

ESN 75029376 COLOR CODE LINES AND FITTING Code: MCK
SW# 357 KEITH KUNKEL

COMPLAINT "" WAS ADDED.

LABOR CHARGED: Labor Amount .00

DISCLAIMER OF WARRANTIES: Any warranties on the products sold hereby are made by the manufacturer. The Seller, ALLENTOWN TRUCK SALES, hereby expressly disclaims all warranties, either express or implied, including any implied warranty of merchantability or fitness for a particular purpose, and ALLENTOWN TRUCK SALES neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of said products.

No material to be returned without permission. Claims or returns must be made within ten days accompanied by this invoice. Returns are subject to a handling charge. No returns on electrical parts. Any freight charges on emergency special order parts are customer's responsibility. CORE CREDITS SUBJECT TO REVIEW BY MANUFACTURER.

TERMS: NET 15th. A late charge of up to 1.25% PER MONTH may be added to all Past Due Balances.

CUSTOMER SIGNATURE X

TransEdge

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(800) 826-2583

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VOLVO



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Page 2
Time 9:12:04

Order No. [REDACTED]
Date 5/31/16
Segment 01 continued

TOTAL PARTS .00
SEGMENT SUBTOTAL .00

2 CHANGE CROSS OVER LINES TANK TO TANK

Code: MCK
SW# 357 KEITH KUNKEL

Labor
Amount
104.00

LABOR CHARGED:

Parts	Part Number	Description	N T Stock	Unit Price	List Price	Extended Amount
1	3815X12	TAPE	R X #	11.08	15.94	11.08
3	85136150	PROTECTIN	N 100	3.03	4.35	9.09

TOTAL PARTS 20.17

Miscellaneous Charges
by/Keyword/Description

N T Stock	Unit Price	List Price	Extended Amount
R X #			
2 CROSS OVE Y N	188.00	188.00	376.00
1 FITTINGS Y N	243.00	243.00	243.00

TOTAL MISC. 619.00
SEGMENT SUBTOTAL 743.17

3 ISOLATE VENT LINE AWAY FROM CROSS MEMBER

Code: MCK
SW# 357 KEITH KUNKEL

Labor
Amount
728.00

LABOR CHARGED:

Parts	Part Number	Description	N T Stock	Unit Price	List Price	Extended Amount
1	20800234	BRACKET	R X #	3.40	4.89	3.40
1	25090852	CLAMP	N 100	2.71	3.90	2.71
1	25091987	CLAMP	N 100	2.58	3.70	2.58
6	3679 18106X	CABLE TIE	N 300	.09	.18	.54
6	3679 18108X	CABLE TIE	N 300	.15	.27	.90
4	3679 39605	BR. 8 HEX	N 300	.16	.28	.64
4	3679 39728	BOWMALLOW	N 300	.11	.20	.44

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Order No. [REDACTED]
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TOTAL PARTS 11.21

Miscellaneous Charges Qty/Keyword/Description		N T Stock R X #	Unit Price	List Price	Extended Amount
4 SUBLET SERVICE	3/4 X 16	Y N	25.36	25.36	101.44
1 SUBLET SERVICE	SEAMLESS	Y N	10.25	10.25	10.25

TOTAL MISC. 111.69
SEGMENT SUBTOTAL 850.90

REPAIR LEAK AT PRD VALVES

Code: MCK
SW# 357 [KEITH KUNKEL]

LABOR CHARGED:

Labor
Amount
2,080.00

Parts Qty Part Number	Descript	N T Stock R X #	Unit Price	List Price	Extended Amount
2 3679 36750	HARDENED	N 300	.04	.08	.08
2 3679 39725	BOWMALLOW	N 300	.06	.10	.12
1 4028 1556040	HI TEMP A	N 300	25.45	41.25	25.45

TOTAL PARTS 25.65

Miscellaneous Charges Qty/Keyword/Description		N T Stock R X #	Unit Price	List Price	Extended Amount
1 OS	OPERATING	N N	25.00	25.00	25.00
1 SUBLET SERVICE	SEAMLESS	Y N	40.00	40.00	40.00
4 SUBLET SERVICE	STR THREA	Y N	22.00	22.00	88.00

TOTAL MISC. 153.00
SEGMENT SUBTOTAL 2,258.65

RIGHT TANK REPLACE 90 DEGREE WITH BETTER

Code: MCK
SW# 357 [KEITH KUNKEL]

LABOR CHARGED:

Labor
Amount
52.00

TOTAL PARTS .00

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SEGMENT SUBTOTAL 52.00

3 INSTALL ALL SOFTWARE UPDATES

Code: MCK
SW# 357 [KEITH KUNKEL]

Labor
Amount
130.00

LABOR CHARGED:

Miscellaneous Charges by/Keyword/Description	N T Stock R X *	Unit Price	List Price	Extended Amount
1 ROAD	XROAD SER N N	20.00	20.00	20.00

TOTAL MISC. 20.00
SEGMENT SUBTOTAL 150.00

7 CK MIXING CHAMBERS EXTERNAL & INTERNAL

Code: MCK
SW# 357 [KEITH KUNKEL]

Labor
Amount
.00

LABOR CHARGED:

TOTAL PARTS .00
SEGMENT SUBTOTAL .00

9 WHEN COMPLETE WITH NITROGEN CK FOR LEAKS

Code: MCK
SW# 357 [KEITH KUNKEL]

Labor
Amount
52.00

LABOR CHARGED:

TOTAL PARTS .00
SEGMENT SUBTOTAL 52.00

9 PERFORM OIL CHANGE

Code: MCK 001 1
SW# 357 [KEITH KUNKEL]

Labor
Amount
52.00

LABOR CHARGED:

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Part Number	Description	N T Stock	Unit	List Price	Extended Amount
2 VV70521	PREM BLUE	R X # N 950	73.43	78.73	146.86
TOTAL PARTS					146.86
SEGMENT SUBTOTAL					198.86

1 FUEL SHUT OFF, INTAKE PRESSURE&TEMP.

Code: MCK 001 1
SW# 357 KEITH KUNKEL

Labor Amount
52.00

LABOR CHARGED:

Part Number	Description	N T Stock	Unit	List Price	Extended Amount
1 2883323	VALVE, FUE	R X # N 950	427.14	536.98	427.14
1 4921483	SENSOR, PR	R X # N 950	265.20	336.72	265.20
TOTAL PARTS					692.34

Miscellaneous Charges
1 FREIGHT-A

Keyword/Description	N T Stock	Unit	List Price	Extended Amount
X Y N		30.00	30.00	30.00

TOTAL MISC. 30.00
SEGMENT SUBTOTAL 774.34

mal-light no throttle response

Code: MCK 001 1
SW# 355 Michael K Kubeika

Labor Amount
314.00

LABOR CHARGED:

TOTAL PARTS .00
SEGMENT SUBTOTAL 314.00

1 INSTALL EX. WRAPS

Code: MCK 001 1
SW# 357 KEITH KUNKEL

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Segment 13 continued

LABOR CHARGED:

Labor
Amount
104.00

TOTAL PARTS .00
SEGMENT SUBTOTAL 104.00

*** PAY THIS AMOUNT *****

CUSTOMER TOTAL 5,589.70

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Order No. [REDACTED]
Invoice Date 5/31/16

VOLVO TRUCKS NORTH AMERICA
ATTN: FRANK BLO
7900 NATIONAL SERVICE RD
GREENSBORO, NC 27409

4V5NC9UG0FM [REDACTED]
Unit 102
Reading In 6696 0
Arrival 5/05/16
DELIVERY 0/00/00
PO# FRANK BLO
GVW
SW# 355

2015 VOL VNL64T
License
Reading Out
at 13:17

Est# 2767
(336) 210-1374

Terms A/R Charge

Equip
Owner 2767 KANE FREIGHT LINES INC

****SHOP SUPPLIES & MATERIALS ARE FOR HAZ-MAT & ENVIRONMENTAL FEES****

S U M M A R Y

Eq Description	Labor	Parts	Misc.	Total
2" ESN 75029283 COLOR COD	.00	.00	.00	.00
CHANGE CROSS OVER LINE	104.00	9.09	619.00	732.09
33 ISOLATE VENT LINE AWAY	728.00	10.77	141.44	880.21
34 REPAIR LEAK AT PRD VAL	2,080.00	.00	153.00	2,233.00
35 RIGHT TANK REPLACE 90	52.00	.00	.00	52.00
36 INSTALL ALL SOFTWARE U	130.00	.00	20.00	150.00
37 CK MIXING CHAMBERS EXT	.00	.00	.00	.00
38 WHEN COMPLETED WITH NI	52.00	.00	10.25	62.25
39 PERFORM OIL CHANGE	52.00	146.86	.00	198.86
40 FUEL SHUT OFF, INTAKE P	52.00	692.34	30.00	774.34
41 FUEL TRUCK	.00	.00	495.00	495.00
42 INSTALL EX. WRAPS	104.00	.00	.00	104.00

T O T A L S 3,354.00 859.06 1,468.69 5,681.75

Tax I.D.# MC 99567 Shop Supplies & Materials: 83.85
Sales Tax : .00

*** PAY THIS AMOUNT *** CUSTOMER TOTAL : 5,765.60

1 ESN 75029283 COLOR CODE LINES AND FITTING Code: MCK
SW# 357 KEITH KUNKEL

LABOR CHARGED: Labor Amount .00

TOTAL PARTS .00

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SEGMENT SUBTOTAL .00

2 CHANGE CROSS OVER LINES TANK TO TANK

Code: MCK
SW# 357 KEITH KUNKEL

Labor
Amount
104.00

LABOR CHARGED:

Parts	Part Number	Description	N T Stock	Unit	List Price	Extended Amount
	3 85136150	PROTECTIN	R X #	100	3.03	9.09
TOTAL PARTS						9.09

Parts	Part Number	Description	N T Stock	Unit	List Price	Extended Amount
	2	SUBLET SERVICE	Y N		188.00	376.00
	1	SUBLET SERVICE	Y N		243.00	243.00
TOTAL MISC.						619.00
SEGMENT SUBTOTAL						732.09

3 ISOLATE VENT LINE AWAY FROM CROSS MEMBER

Code: MCK
SW# 357 KEITH KUNKEL

Labor
Amount
728.00

LABOR CHARGED:

Parts	Part Number	Description	N T Stock	Unit	List Price	Extended Amount
	1 20800234	BRACKET	N 100	3.40	4.89	3.40
	1 25090552	CLAMP	N 100	2.71	3.90	2.71
	1 25091987	CLAMP	N 100	2.58	3.70	2.58
	6 3679 18106X	CABLE TIE	N 300	.09	.18	.54
	6 3679 18108X	CABLE TIE	N 300	.15	.27	.90
	4 3679 39605	BR. 8 HEX	N 300	.16	.28	.64
TOTAL PARTS						10.77

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Miscellaneous Charges Qty/Keyword/Description	N T Stock R X #	Unit Price	List Price	Extended Amount
4 SUBLET SERVICE	3/4 X 16 Y N	25.36	25.36	101.44
1 SUBLET SERVICE	SEAMLESS Y N	40.00	40.00	40.00
TOTAL MISC.				141.44
SEGMENT SUBTOTAL				880.21

4 REPAIR LEAK AT PRD VALVES

Code: MCK
SW# 357 [KEITH KUNKEL]

LABOR CHARGED:

Labor
Amount
2,080.00

Miscellaneous Charges Qty/Keyword/Description	N T Stock R X #	Unit Price	List Price	Extended Amount
1 OS	OPERATING N N	25.00	25.00	25.00
1 SUBLET SERVICE	SEAMLESS Y N	40.00	40.00	40.00
4 SUBLET SERVICE	STR THREA Y N	22.00	22.00	88.00
TOTAL MISC.				153.00
SEGMENT SUBTOTAL				2,233.00

5 RIGHT TANK REPLACE 90 DEGREE WITH BETTER

Code: MCK
SW# 357 [KEITH KUNKEL]

LABOR CHARGED:

Labor
Amount
52.00

TOTAL PARTS .00
SEGMENT SUBTOTAL 52.00

6 INSTALL ALL SOFTWARE UPDATES

Code: MCK
SW# 357 [KEITH KUNKEL]

LABOR CHARGED:

Labor
Amount
130.00

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Miscellaneous Charges by/Keyword/Description	N T Stock R X #	Unit Price	List Price	Extended Amount
1 ROAD	XROAD SER N N	20.00	20.00	20.00

TOTAL MISC. 20.00
SEGMENT SUBTOTAL 150.00

CK MIXING CHAMBERS EXTERNAL & INTERNAL

Code: MCK
SW# 357 KEITH KUNKEL

LABOR CHARGED:

Labor
Amount
00

TOTAL PARTS 00
SEGMENT SUBTOTAL 00

WHEN COMPLETED WITH NITROGEN CK FOR LEAK

Code: MCK
SW# 357 KEITH KUNKEL

LABOR CHARGED:

Labor
Amount
52.00

Miscellaneous Charges by/Keyword/Description	N T Stock R X #	Unit Price	List Price	Extended Amount
1 SUBLET SERVICE	LEAK DETE Y N	10.25	10.25	10.25

TOTAL MISC. 10.25
SEGMENT SUBTOTAL 62.25

PERFORM OIL CHANGE

Code: MCK 001 1
SW# 357 KEITH KUNKEL

LABOR CHARGED:

Labor
Amount
52.00

Parts by Part Number	Descript	N T Stock R X #	Unit Price	List Price	Extended Amount
2 VV70521	PREM BLUE	N 950	73.43	78.73	146.86

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TOTAL PARTS 145.86
SEGMENT SUBTOTAL 198.86

1 FUEL SHUT OFF, INTAKE PRESSURE&TEMP.

Code: MCK 001 1
SW# 357 KEITH KUNKEL

Labor
Amount
52.00

LABOR CHARGED:

Parts	Part Number	Description	N T Stock	Unit	List Price	Extended Amount
1	2803323	VALVE, FUE	R X #	Price	536.98	427.14
1	4921483	SENSOR, PR	N 950	265.20	336.72	265.20

TOTAL PARTS 692.34

Miscellaneous Charges
by/Keyword/Description
1 FREIGHT-A

N T Stock	Unit	List Price	Extended Amount
R X #	Price	Price	Amount
Y N	30.00	30.00	30.00

TOTAL MISC. 30.00
SEGMENT SUBTOTAL 774.34

2 FUEL TRUCK

Code: MCK 001 1
SW# 335 LEIBY, SHARON, E.

Labor
Amount
.00

LABOR CHARGED:

Miscellaneous Charges	by/Keyword/Description	N T Stock	Unit	List Price	Extended Amount
1 DRIVER	X	Y N	40.00	40.00	320.00
1 FUEL	X	Y N	175.00	175.00	175.00

TOTAL MISC. 495.00
SEGMENT SUBTOTAL 495.00

3 INSTALL EX. WRAPS

Code: MCK 001 1
SW# 357 KEITH KUNKEL

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Order No. [REDACTED]
Date 5/31/16
Segment 12 continued

LABOR CHARGED:

Labor
Amount
104.00

TOTAL PARTS .00
SEGMENT SUBTOTAL 104.00

*** PAY THIS AMOUNT ***

CUSTOMER TOTAL 5,765.60

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VOLVO



Order No. [REDACTED]
Invoice Date 5/31/16

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VOLVO TRUCKS NORTH AMERIC
ATTN: FRANK BIO
7900 NATIONAL SERVICE RD
GREENSBORO, NC 27409

4V5NC9U02FN [REDACTED]
Unit 103
Reading In 1121 0
Arrival 5/05/16
DELIVERY 0700/00
PO# FRANK BIO
GVW
SW# 355

2015 VOL VNL64T
License
Reading Out
at 13:31

Est# 75150
(336) 210-1374

Terms A/R Charge

****SHOP SUPPLIES & MATERIALS ARE FOR HAZ-MAT & ENVIRONMENTAL FEES****

S U M M A R Y

Description	Labor	Parts	Misc.	Total
01 ESN 75029322 COLOR COD	.00	.00	.00	.00
02 CHANGE CROSS OVER LINE	104.00	9.09	619.00	732.09
ISOLATE VENT LINE AWAY	728.00	10.77	151.69	890.46
04 REPAIR LEAK AT PRD VAL	2,080.00	.00	153.00	2,233.00
05 RIGHT TANK REPLACE 90	52.00	.00	.00	52.00
06 INSTALL ALL SOFTWARE U	130.00	.00	20.00	150.00
07 CK MIXING CHAMBERS EXT	.00	.00	.00	.00
08 WHEN COMPLETE WITH NIT	52.00	.00	.00	52.00
09 PERFORM OIL CHANGE	52.00	146.86	.00	198.86
10 FUEL SHUT OFF, INTAKE P	52.00	692.34	30.00	774.34
11 FUEL TRUCK	.00	.00	495.00	495.00
12 INSTALL EX. WRAPS	104.00	.00	.00	104.00
TOTALS	3,354.00	859.06	1,468.69	5,681.75

Tax I.D.: Shop Supplies & Materials: 83.85
Sales Tax: .00

*** PAY THIS AMOUNT *** CUSTOMER TOTAL: 5,765.60

ESN 75029322 COLOR CODE LINES AND FITTING

Code: MCK
SW# 357

KEITH KUNKEL

Labor
Amount
.00

TOTAL PARTS
SEGMENT SUBTOTAL
.00

CHANGE CROSS OVER LINES TANK TO TANK

Code: MCK

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Material to be returned with original invoice. Claims for returns must be made within ten days accompanied by this invoice. Returns are subject to a handling charge. No returns on electrical parts. Any freight charges on emergency/special order parts are customer's responsibility.
CORE CREDITS SUBJECT TO REVIEW BY MANUFACTURER.
TERMS: NET 15th. A late charge of up to 1.25% PER MONTH may be added to all Past Due Balances.

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SW# 357 KEITH KUNKEL

Labor
Amount
104.00

LABOR CHARGED:

Parts	Part Number	Descript	N T Stock	Unit	List	Extended
		R X #		Price	Price	Amount
	3 85136150	PROTECTIN	N 100	3.03	4.35	9.09
TOTAL PARTS						9.09

Miscellaneous Charges	Keyword/Description	N T Stock	Unit	List	Extended
		R X #	Price	Price	Amount
	2 SUBLET SERVICE	CROSS QVE Y N	188.00	188.00	376.00
	3 SUBLET SERVICE	FITTINGS Y N	243.00	243.00	243.00
TOTAL MISC.					619.00
SEGMENT SUBTOTAL					732.09

3 ISOLATE VENT LINE AWAY FROM CROSS MEMBER Code: MCK
SW# 357 KEITH KUNKEL

Labor
Amount
728.00

LABOR CHARGED:

Parts	Part Number	Descript	N T Stock	Unit	List	Extended
		R X #		Price	Price	Amount
	1 20800234	BRACKET	N 100	3.40	4.89	3.40
	1 25090852	CLAMP	N 100	2.71	3.90	2.71
	1 25091987	CLAMP	N 100	2.58	3.70	2.58
	6 3679 18106X	CABLE TIE	N 300	.09	.18	.54
	6 3679 18108X	CABLE TIE	N 300	.15	.27	.90
	4 3679 39605	GR. B HEX	N 300	.16	.28	.64
TOTAL PARTS						10.77

Miscellaneous Charges	Keyword/Description	N T Stock	Unit	List	Extended
		R X #	Price	Price	Amount
	4 SUBLET SERVICE	3/4 X 16 Y N	25.36	25.36	101.44
	SUBLET SERVICE	LEAK DETE Y N	10.25	10.25	10.25
	SUBLET SERVICE	SEAMLESS Y N	40.00	40.00	40.00

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TOTAL MISC. 151.69
SEGMENT SUBTOTAL 890.46

4 REPAIR LEAK AT PRD VALVES

Code: MCK
SW# 357 KEITH KUNKEL

COMPLAINT "" WAS ADDED.

LABOR CHARGED:

Labor
Amount
2,080.00

Miscellaneous Charges Qty/Keyword/Description	N T Stock R X #	Unit Price	List Price	Extended Amount
1 OS OPERATING	N N	25.00	25.00	25.00
SUBLET SERVICE SEAMLESS	Y N	40.00	40.00	40.00
+ SUBLET SERVICE STR THREA	Y N	22.00	22.00	88.00

TOTAL MISC. 153.00
SEGMENT SUBTOTAL 2,233.00

5 RIGHT TANK REPLACE 90 DEGREE WITH BETTER

Code: MCK
SW# 357 KEITH KUNKEL

LABOR CHARGED:

Labor
Amount
52.00

TOTAL PARTS .00
SEGMENT SUBTOTAL 52.00

6 INSTALL ALL SOFTWARE UPDATES

Code: MCK
SW# 357 KEITH KUNKEL

LABOR CHARGED:

Labor
Amount
130.00

Miscellaneous Charges Qty/Keyword/Description	N T Stock R X #	Unit Price	List Price	Extended Amount
1 ROAD XROAD SER	N N	20.00	20.00	20.00

TOTAL MISC. 20.00
SEGMENT SUBTOTAL 150.00

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7 CK MIXING CHAMBERS EXTERNAL & INTERNAL

Code: MCK
SW# 357 KEITH KUNKEL

Labor
Amount
.00

LABOR CHARGED:

TOTAL PARTS .00
SEGMENT SUBTOTAL .00

8 WHEN COMPLETE WITH NITROGEN CK FOR LEAKS

Code: MCK
SW# 357 KEITH KUNKEL

Labor
Amount
52.00

LABOR CHARGED:

TOTAL PARTS .00
SEGMENT SUBTOTAL 52.00

9 PERFORM OIL CHANGE

Code: MCK 001 1
SW# 357 KEITH KUNKEL

Labor
Amount
52.00

LABOR CHARGED:

Part Number	Description	N T Stock	Unit Price	List Price	Extended Amount
2 VV70521	PREM BLUE	N 950	73.43	78.73	146.86
TOTAL PARTS					146.86
SEGMENT SUBTOTAL					198.86

10 FUEL SHUT OFF, INTAKE PRESSURE&TEMP.

Code: MCK 001 1
SW# 357 KEITH KUNKEL

Labor
Amount
52.00

LABOR CHARGED:

Part Number	Description	N T Stock	Unit Price	List Price	Extended Amount
2883323	VALVE, FUE	N 950	427.14	536.98	427.14

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Parts	NT Stock	Unit	List	Extended
Qty Part Number	R X #	Price	Price	Amount
1 4921483	SENSOR, PR N 950	265.20	336.72	265.20
TOTAL PARTS				692.34

Miscellaneous Charges	NT Stock	Unit	List	Extended
Qty/Keyword/Description	R X #	Price	Price	Amount
1 FREIGHT-A	X Y N	30.00	30.00	30.00
TOTAL MISC.				30.00
SEGMENT SUBTOTAL				774.34

FUEL TRUCK

Code: MCK 001 1
SW# 335 LEIBY, SHARON, E.

Labor
Amount
.00

LABOR CHARGED:

Miscellaneous Charges	NT Stock	Unit	List	Extended
Qty/Keyword/Description	R X #	Price	Price	Amount
8 DRIVER	X Y N	40.00	40.00	320.00
1 FUEL	X Y N	175.00	175.00	175.00
TOTAL MISC.				495.00
SEGMENT SUBTOTAL				495.00

INSTALL EX. WRAPS

Code: MCK 001 1
SW# 357 KEITH KUNKEL

Labor
Amount
104.00

LABOR CHARGED:

TOTAL PARTS .00
SEGMENT SUBTOTAL 104.00

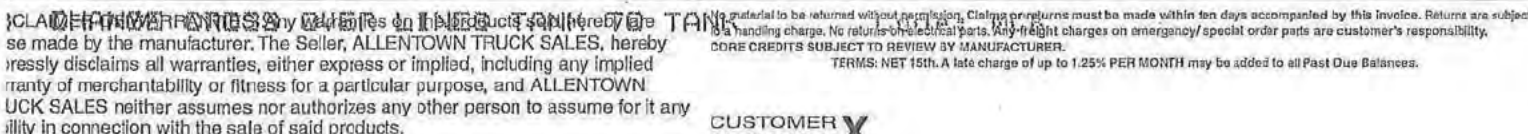
*** PAY THIS AMOUNT *****

CUSTOMER TOTAL 5,765.60

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SW# 357 [KEITH KUNKEL]

Labor
Amount
104.00

LABOR CHARGED:

Parts	Part Number	Descript	N T Stock	Unit Price	List Price	Extended Amount
	3 85136150	PROTECTIN	R X # N 100	3.03	4.35	9.09
TOTAL PARTS						9.09

Miscellaneous Charges	Keyword/Description	Descript	N T Stock	Unit Price	List Price	Extended Amount
	1 SUBLET SERVICE	FITTINGS	R X # Y N	243.00	243.00	243.00
TOTAL MISC.						243.00
SEGMENT SUBTOTAL						356.09

3 ISOLATE VENT LINE AWAY FROM CROSS MEMBER Code: MCK
SW# 357 [KEITH KUNKEL]

Labor
Amount
728.00

LABOR CHARGED:

Parts	Part Number	Descript	N T Stock	Unit Price	List Price	Extended Amount
	1 20800234	BRACKET	R X # N 100	3.40	4.89	3.40
	1 2191 P206411	CLAMP GUI	N 300	4.46	5.43	4.46
	1 25090852	CLAMP	N 100	2.71	3.90	2.71
	1 25091987	CLAMP	N 100	2.58	3.70	2.58
	6 3679 18106X	CABLE TIE	N 300	.09	.18	.54
	6 3679 18108X	CABLE TIE	N 300	.15	.27	.90
	2 3679 33833	HEX HD DR	N 300	.08	.15	.16
	4 3679 39605	GR. 8 HEX	N 300	.16	.28	.64
	4 3679 39728	BOWMALLOW	N 300	.11	.20	.44
TOTAL PARTS						15.83

Miscellaneous Charges	Keyword/Description	Descript	N T Stock	Unit Price	List Price	Extended Amount
	1 SUBLET SERVICE	3/4 X 16	R X # Y N	25.36	25.36	101.44

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Miscellaneous Charges by/Keyword/Description	N T Stock R X #	Unit Price	List Price	Extended Amount
1 SUBLET SERVICE	LEAK DETE Y N	10.25	10.25	10.25
1 SUBLET SERVICE	SEAMLESS Y N	40.00	40.00	40.00
TOTAL MISC.				151.69
SEGMENT SUBTOTAL				895.52

4 REPAIR LEAK AT PRD VALVES

Code: MCK
SW# 357 [KEITH KUNKEL]

LABOR CHARGED:

Labor
Amount
2,050.00

Miscellaneous Charges by/Keyword/Description	N T Stock R X #	Unit Price	List Price	Extended Amount
1 OS	OPERATING N N	25.00	25.00	25.00
1 SUBLET SERVICE	SEAMLESS Y N	40.00	40.00	40.00
4 SUBLET SERVICE	STR THREA Y N	22.00	22.00	88.00
TOTAL MISC.				153.00
SEGMENT SUBTOTAL				2,233.00

5 RIGHT TANK REPLACE 90 DEGREE WITH BETTER

Code: MCK
SW# 357 [KEITH KUNKEL]

LABOR CHARGED:

Labor
Amount
52.00

TOTAL PARTS .00
SEGMENT SUBTOTAL 52.00

5 INSTALL ALL SOFTWARE UPDATES

Code: MCK
SW# 357 [KEITH KUNKEL]

LABOR CHARGED:

Labor
Amount
130.00

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CUSTOMER X

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Miscellaneous Charges by/Keyword/Description	N T Stock R X #	Unit Price	List Price	Extended Amount
1 ROAD	XROAD SER N N	20.00	20.00	20.00
TOTAL MISC.				20.00
SEGMENT SUBTOTAL				150.00

7 CK MIXING CHAMBERS EXTERNAL & INTERNAL	Code: MCK SW# 357	KEITH KUNKEL	Labor Amount .00
LABOR CHARGED:			
TOTAL PARTS			.00
SEGMENT SUBTOTAL			.00

3 WHEN COMPLETE WITH NITROGEN CK FOR LEAKS	Code: MCK SW# 357	KEITH KUNKEL	Labor Amount 52.00
LABOR CHARGED:			
TOTAL PARTS			.00
SEGMENT SUBTOTAL			52.00

3 PERFORM OIL CHANGE	Code: MCK 001 1 SW# 357	KEITH KUNKEL	Labor Amount 52.00
LABOR CHARGED:			

Parts by Part Number	N T Stock R X #	Unit Price	List Price	Extended Amount
2 VV70521	PREM BLUE N 950	73.43	78.73	146.86
TOTAL PARTS				146.86
SEGMENT SUBTOTAL				198.86

2 FUEL SHUT OFF, INTAKE PRESSURE&TEMP.	Code: MCK 001 1 SW# 357	KEITH KUNKEL	
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LABOR CHARGED: Labor Amount 52.00

Parts	Part Number	Descript	R	X	N	T	Stock	Unit	List	Extended
							#	Price	Price	Amount
	1 2883323	VALVE, FUE			N		950	427.14	536.98	427.14
	1 4921483	SENSOR, PR			N		950	265.20	336.72	265.20
TOTAL PARTS										692.34

Miscellaneous Charges	Keyword/Description	R	X	N	T	Stock	Unit	List	Extended	
						#	Price	Price	Amount	
	1 FREIGHT-A	X			Y	N		30.00	30.00	30.00
TOTAL MISC.										30.00
SEGMENT SUBTOTAL										774.34

FUEL TRUCK & DELIVER

Code: MCK 001 1
SW# 335 LEIBY, SHARON, E.

LABOR CHARGED: Labor Amount .00

Miscellaneous Charges	Keyword/Description	R	X	N	T	Stock	Unit	List	Extended	
						#	Price	Price	Amount	
	8 DRIVER	X			Y	N		40.00	40.00	320.00
	1 FUEL	X			Y	N		175.00	175.00	175.00
TOTAL MISC.										495.00
SEGMENT SUBTOTAL										495.00

INSTALL EX. WRAPS

Code: MCK 001 1
SW# 357 KEITH KUNKEL

LABOR CHARGED: Labor Amount 104.00

TOTAL PARTS .00
SEGMENT SUBTOTAL 104.00

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CUSTOMER V



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*** PAY THIS AMOUNT *****

CUSTOMER TOTAL

5,394.66

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CORE CREDITS SUBJECT TO REVIEW BY MANUFACTURER.

TERMS: NET 15th. A late charge of up to 1.25% PER MONTH may be added to all Past Due Balances.

CUSTOMER SIGNATURE X

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VOLVO



Order No. [REDACTED]
Invoice Date 5/31/16

WORK ORDER INVOICE
Customer Copy

Page 1
Time 16:56:15

VOLVO TRUCKS NORTH AMERICA
ATTN: FRANK BLO
7900 NATIONAL SERVICE RD
GREENSBORO, NC 27409

4V5NC9U64FN [REDACTED]
Unit 104
Reading In 768 0
Arrival 5/05/16
DELIVERY 0/00/00
PO# FRANK BLO
GVW
SW# 355

2015 VOL VNL64T
License
Reading Out
at 13:40

Est# 75150
(336) 210-1374

Terms A/R Charge

****SHOP SUPPLIES & MATERIALS ARE FOR HAZ-MAT & ENVIRONMENTAL FEES****

S U M M A R Y

Description	Labor	Parts	Misc.	Total
1 ESN 75029323 COLOR COD	.00	.00	.00	.00
2 CHANGE CROSS OVER LINE	104.00	9.09	243.00	356.09
ISOLATE VENT LINE AWAY	728.00	.00	239.69	967.69
4 REPAIR LEAK AT PRD VAL	2,080.00	11.46	153.00	2,244.46
5 RIGHT TANK REPLACE 90	52.00	.00	.00	52.00
6 INSTALL ALL SOFTWARE U	130.00	.00	20.00	150.00
7 CK MIXING CHAMBERS EXT	.00	.00	.00	.00
8 WHEN COMPLETE WITH NIT	52.00	.00	.00	52.00
9 PERFORM OIL CHANGE	52.00	146.86	.00	198.86
0 FUEL SHUT OFF, INTAKE P	52.00	692.34	30.00	774.34
1 FUEL TRUCK AND DELIVER	.00	.00	495.00	495.00
2 INSTALL EX. WRAPS	104.00	.00	.00	104.00

TOTALS 3,354.00 859.75 1,180.69 5,394.44

Tax I.D.:

Shop Supplies & Materials: 83.85
Sales Tax .00

*** PAY THIS AMOUNT ***

CUSTOMER TOTAL 5,478.29

ESN 75029323 COLOR CODE LINES AND FITTING

Codes: MCK
SW# 357

KEITH KUNKEL

Labor
Amount
.00

TOTAL PARTS .00
SEGMENT SUBTOTAL .00

CHANGE CROSS OVER LINES TANK TO TANK

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Order No. [REDACTED]
Date 5/31/16
Segment 02 continued

WORK ORDER INVOICE
Customer Copy

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Time 16:56:15

SW# 357 [KEITH KUNKEL]

Labor
Amount
104.00

LABOR CHARGED:

Parts	NT Stock	Unit	List	Extended
Qty Part Number	R X #	Price	Price	Amount
3 85136150	PROTECTIN N 100	3.03	4.35	9.09
TOTAL PARTS				9.09

Miscellaneous Charges	NT Stock	Unit	List	Extended
Qty/Keyword/Description	R X #	Price	Price	Amount
1 SUBLET SERVICE	FITTINGS Y N	243.00	243.00	243.00
TOTAL MISC.				243.00
SEGMENT SUBTOTAL				356.09

3 ISOLATE VENT LINE AWAY FROM CROSS MEMBER Code: MCK
SW# 357 [KEITH KUNKEL]

LABOR CHARGED:

Labor
Amount
728.00

Miscellaneous Charges	NT Stock	Unit	List	Extended
Qty/Keyword/Description	R X #	Price	Price	Amount
4 SUBLET SERVICE	3/4 X 16 Y N	22.00	22.00	88.00
1 SUBLET SERVICE	LEAK DETE Y N	10.25	10.25	10.25
1 SUBLET SERVICE	SEAMLESS Y N	40.00	40.00	40.00
4 SUBLET SERVICE	ST THREAD Y N	25.36	25.36	101.44
TOTAL MISC.				239.69
SEGMENT SUBTOTAL				967.69

4 REPAIR LEAK AT PRD VALVES Code: MCK
SW# 357 [KEITH KUNKEL]

LABOR CHARGED:

Labor
Amount
2,080.00

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Order No. [REDACTED]
Date 5/31/16
Segment 04 continued

WORK ORDER INVOICE
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Parts	NT Stock	Unit	List	Extended
by Part Number	R X #	Price	Price	Amount
1 20800234	BRACKET N 100	3.40	4.89	3.40
1 25090852	CLAMP N 100	2.71	3.90	2.71
1 25091987	CLAMP N 100	2.58	3.70	2.58
6 3679 18106X	CABLE TIE N 300	.09	.18	.54
6 3679 18108X	CABLE TIE N 300	.15	.27	.90
1 3679 36705	HARDENED N 300	.25	.45	.25
4 3679 39605	GR. 8 HEX N 300	.16	.28	.64
4 3679 39728	BOWMALLOW N 300	.11	.20	.44

TOTAL PARTS 11.46

Miscellaneous Charges	NT Stock	Unit	List	Extended
by Keyword/Description	R X #	Price	Price	Amount
1 OS	OPERATING N N	25.00	25.00	25.00
1 SUBLET SERVICE	SEAMLESS Y N	40.00	40.00	40.00
4 SUBLET SERVICE	STR THREA Y N	22.00	22.00	88.00

TOTAL MISC. 153.00
SEGMENT SUBTOTAL 2,244.46

5 RIGHT TANK REPLACE 90 DEGREE WITH BETTER Code: MCK
SW# 357 KEITH KUNKEL
LABOR CHARGED: Labor Amount 52.00

TOTAL PARTS .00
SEGMENT SUBTOTAL 52.00

5 INSTALL ALL SOFTWARE UPDATES Code: MCK
SW# 357 KEITH KUNKEL
LABOR CHARGED: Labor Amount 130.00

Miscellaneous Charges	NT Stock	Unit	List	Extended
by Keyword/Description	R X #	Price	Price	Amount
ROAD	XROAD SER N N	20.00	20.00	20.00

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VOLVO



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Date 5/31/16
Segment 06 continued

WORK ORDER INVOICE
Customer Copy

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TOTAL MISC. 20.00
SEGMENT SUBTOTAL 150.00

7 CK MIXING CHAMBERS EXTERNAL & INTERNAL

Code: MCK
SW# 357 [KEITH KUNKEL]

Labor
Amount
.00

LABOR CHARGED:

TOTAL PARTS .00
SEGMENT SUBTOTAL .00

8 WHEN COMPLETE WITH NITROGEN CK FOR LEAKS

Code: MCK
SW# 357 KEITH KUNKEL

Labor
Amount
52.00

LABOR CHARGED:

TOTAL PARTS .00
SEGMENT SUBTOTAL 52.00

9 PERFORM OIL CHANGE

Code: MCK 001 1
SW# 357 [KEITH KUNKEL]

Labor
Amount
52.00

LABOR CHARGED:

Parts	Part Number	Description	R X	Stock #	Unit Price	List Price	Extended Amount
2	VV70521	PREM BLUE	N	950	73.43	78.73	146.86
TOTAL PARTS							146.86
SEGMENT SUBTOTAL							198.86

0 FUEL SHUT OFF, INTAKE PRESSURE&TEMP.

Code: MCK 001 1
SW# 357 [KEITH KUNKEL]

Labor
Amount
52.00

LABOR CHARGED:

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VOLVO



Order No. [REDACTED]
Date 5/31/16
Segment 10 continued

WORK ORDER INVOICE
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Parts		N T Stock	Unit	List	Extended
Qty Part Number	Descript	R X #	Price	Price	Amount
1 2883323	VALVE, FUE	N 950	427.14	536.98	427.14
1 4921483	SENSOR, PR	N 950	265.20	336.72	265.20
TOTAL PARTS					692.34

Miscellaneous Charges		N T Stock	Unit	List	Extended
Qty/Keyword/Description		R X #	Price	Price	Amount
1 FREIGHT-A	X	Y N	30.00	30.00	30.00
TOTAL MISC.					30.00
SEGMENT SUBTOTAL					774.34

FUEL TRUCK AND DELIVER

Code: MCK 001 1
SW# 335 LEIBY, SHARON, E.

Labor
Amount
.00

LABOR CHARGED:

Miscellaneous Charges		N T Stock	Unit	List	Extended
Qty/Keyword/Description		R X #	Price	Price	Amount
8 DRIVER	X	Y N	40.00	40.00	320.00
1 FUEL	X	Y N	175.00	175.00	175.00
TOTAL MISC.					495.00
SEGMENT SUBTOTAL					495.00

INSTALL EX. WRAPS

Code: MCK 001 1
SW# 357 KEITH KUNKEL

Labor
Amount
104.00

LABOR CHARGED:

TOTAL PARTS	.00
SEGMENT SUBTOTAL	104.00

*** PAY THIS AMOUNT *****

CUSTOMER TOTAL 5,478.29

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VOLVO



Order No. [REDACTED]
Invoice Date 5/31/16

WORK ORDER INVOICE
Customer Copy

Page 1
Time 16:56:29

VOLVO TRUCKS NORTH AMERICA
ATTN: FRANK BLO
7900 NATIONAL SERVICE RD
GREENSBORO, NC 27409

4V5NC9U66 [REDACTED]
Unit 105
Reading In 10266 0
Arrival 5/05/16
DELIVERY 0/00/00
PO# FRANK BLO
GVW
SW# 355

2015 VOL VNL64T
License
Reading Out
at 13:36

Est# 75150
(336) 210-1374

Terms A/R Charge

SHOP SUPPLIES & MATERIALS ARE FOR HAZ-MAT & ENVIRONMENTAL FEES

S U M M A R Y

Description	Labor	Parts	Misc.	Total
1 ESN 75029377 COLOR COD	.00	.00	.00	.00
2 CHANGE CROSS OVER LINE	104.00	9.09	243.00	356.09
ISOLATE VENT LINE AWAY	728.00	10.77	151.69	890.46
4 REPAIR LEAK AT PRD VAL	2,080.00	1.18	153.00	2,234.18
5 RIGHT TANK REPLACE 90	52.00	.00	.00	52.00
6 INSTALL ALL SOFTWARE U	130.00	.00	20.00	150.00
7 CK MIXING CHAMBERS EXT	.00	.00	.00	.00
8 WHEN COMPLETE WITH NIT	52.00	.00	.00	52.00
9 PERFORM OIL CHANGE	52.00	146.86	.00	198.86
0 FUEL SHUT OFF, INTAKE P	52.00	692.34	30.00	774.34
1 INSTALL EX. WRAPS	104.00	.00	.00	104.00
2 FUEL TRUCK AND DELIVER	182.00	.00	666.00	848.00

TOTALS 3,536.00 860.24 1,263.69 5,659.93

Tax I.D.: Shop Supplies & Materials: 88.40
Sales Tax : .00

*** PAY THIS AMOUNT *** CUSTOMER TOTAL : 5,748.33

ESN 75029377 COLOR CODE LINES AND FITTING

Code: MCK
SW# 357 [REDACTED]

BOR CHARGED:

Labor
Amount
.00

TOTAL PARTS .00
SEGMENT SUBTOTAL .00

CHANGE CROSS OVER LINES TANK TO TANK
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VOLVO



Order No. [REDACTED]
Date 5/31/16
Segment 02 continued

WORK ORDER INVOICE
Customer Copy

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SW# 357 KEITH KUNKEL

Labor
Amount
104.00

LABOR CHARGED:

Parts	Part Number	Descript	N	T	Stock	Unit	List	Extended
			R	X	#	Price	Price	Amount
	3 85136150	PROTECTIN	N		100	3.03	4.35	9.09
TOTAL PARTS								9.09

Miscellaneous Charges	Part Number	Descript	N	T	Stock	Unit	List	Extended
			R	X	#	Price	Price	Amount
	1 SUBLET SERVICE	FITTINGS	Y	N		243.00	243.00	243.00
TOTAL MISC.								243.00
SEGMENT SUBTOTAL								356.09

ISOLATE VENT LINE AWAY FROM CROSS MEMBER Code: MCK
SW# 357 KEITH KUNKEL

Labor
Amount
728.00

LABOR CHARGED:

Parts	Part Number	Descript	N	T	Stock	Unit	List	Extended
			R	X	#	Price	Price	Amount
	1 20800234	BRACKET	N		100	3.40	4.89	3.40
	1 25090852	CLAMP	N		100	2.71	3.90	2.71
	1 25091987	CLAMP	N		100	2.58	3.70	2.58
	6 3679 18106X	CABLE TIE	N		300	.09	.18	.54
	6 3679 18108X	CABLE TIE	N		300	.15	.27	.90
	4 3679 39605	GR. 8 HEX	N		300	.16	.28	.64
TOTAL PARTS								10.77

Miscellaneous Charges	Part Number	Descript	N	T	Stock	Unit	List	Extended
			R	X	#	Price	Price	Amount
	4 SUBLET SERVICE	3/4 X 16	Y	N		25.36	25.36	101.44
	1 SUBLET SERVICE	LEAK DETE	Y	N		10.25	10.25	10.25
	1 SUBLET SERVICE	SEAMLESS	Y	N		40.00	40.00	40.00

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VOLVO



Order No. [REDACTED]
Date 5/31/16
Segment 03 continued

WORK ORDER INVOICE
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TOTAL MISC. 151.69
SEGMENT SUBTOTAL 890.46

REPAIR LEAK AT PRD VALVES

Code: MCK
SW# 357 KEITH KUNKEL

LABOR CHARGED:

Labor
Amount
2,080.00

Qty	Part Number	Description	N T Stock	Unit Price	List Price	Extended Amount
2	3679 D39054	GR.8HXCAP	N 300	.16	.28	.32
1	3679 D39081	GR.8HXCAP	N 300	.32	.58	.32
2	3679 32580	FENDER WA	N 300	.13	.23	.26
	3679 39727	BOWMALLOW	N 300	.07	.13	.14
1	3679 39729	BOWMALLOW	N 300	.14	.25	.14

TOTAL PARTS 1.18

Qty/Keyword/Description	N T Stock	Unit Price	List Price	Extended Amount
1 DS OPERATING	N N	25.00	25.00	25.00
1 SUBLET SERVICE SEAMLESS	Y N	40.00	40.00	40.00
4 SUBLET SERVICE ST THREAD	Y N	22.00	22.00	88.00

TOTAL MISC. 153.00
SEGMENT SUBTOTAL 2,234.18

RIGHT TANK REPLACE 90 DEGREE WITH BETTER

Code: MCK
SW# 357 KEITH KUNKEL

LABOR CHARGED:

Labor
Amount
52.00

TOTAL PARTS .00
SEGMENT SUBTOTAL 52.00

INSTALL ALL SOFTWARE UPDATES

Code: MCK
SW# 357 KEITH KUNKEL

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VOLVO



Order No. [REDACTED]
Date 5/31/16
Segment 06 continued

WORK ORDER INVOICE
Customer Copy

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LABOR CHARGED: Labor Amount 130.00

Miscellaneous Charges Qty/Keyword/Description	N T Stock R X #	Unit Price	List Price	Extended Amount
1 ROAD	XROAD SER N N	20.00	20.00	20.00
TOTAL MISC.				20.00
SEGMENT SUBTOTAL				150.00

7 CK MIXING CHAMBERS EXTERNAL & INTERNAL Code: MCK
SW# 357 [KEITH KUNKEL] Labor Amount .00

LABOR CHARGED: Labor Amount .00

TOTAL PARTS .00
SEGMENT SUBTOTAL .00

1 WHEN COMPLETE WITH NITROGEN CK FOR LEAKS Code: MCK
SW# 357 [KEITH KUNKEL] Labor Amount 52.00

LABOR CHARGED: Labor Amount 52.00

TOTAL PARTS .00
SEGMENT SUBTOTAL 52.00

0 PERFORM OIL CHANGE Code: MCK 001 1
SW# 357 [KEITH KUNKEL] Labor Amount 52.00

LABOR CHARGED: Labor Amount 52.00

Parts Qty Part Number	Description	N T Stock R X #	Unit Price	List Price	Extended Amount
2 VV70521	PREM BLUE	N 950	73.43	78.73	146.86
TOTAL PARTS					146.86
SEGMENT SUBTOTAL					198.86

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TERMS: NET 15th. A late charge of up to 1.25% PER MONTH may be added to all Past Due Balances.

CUSTOMER SIGNATURE X

TransEdge

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(570) 385-2540
(800) 826-2583

PLEASE REMIT TO:
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ALLENTOWN, PA 18104
(610) 395-6801
(800) 982-9640

1501 BEAVER AVENUE
PITTSBURGH, PA 15233
(412) 237-6000
(888) 284-0083

www.TransEdgeTruck.com



VOLVO



Order No. [REDACTED]
Date 5/31/16
Segment 09 continued

WORK ORDER INVOICE
Customer Copy

Page 5
Time 16:56:29

FUEL SHUT OFF, INTAKE PRESSURE&TEMP.

Code: MCK 001 1
SW# 357 KEITH KUNKEL

LABOR CHARGED:

Labor
Amount
52.00

Parts	Part Number	Descript	N T Stock	Unit	List	Extended
			R X #	Price	Price	Amount
	1 2883323	VALVE, FUE	N 950	427.14	536.98	427.14
	1 4921483	SENSOR, PR	N 950	265.20	336.72	265.20
TOTAL PARTS						692.34

Miscellaneous Charges	Keyword/Description	N T Stock	Unit	List	Extended
		R X #	Price	Price	Amount
	1 FREIGHT-A	X Y N	30.00	30.00	30.00
TOTAL MISC.					30.00
SEGMENT SUBTOTAL					774.34

INSTALL EX. WRAPS

Code: MCK 001 1
SW# 357 KEITH KUNKEL

LABOR CHARGED:

Labor
Amount
104.00

TOTAL PARTS .00
SEGMENT SUBTOTAL 104.00

FUEL TRUCK AND DELIVER

Code: MCK 001 1
SW# 335 LEIBY, SHARON, E.

LABOR CHARGED:

Labor
Amount
182.00

Miscellaneous Charges	Keyword/Description	N T Stock	Unit	List	Extended
		R X #	Price	Price	Amount
	8 DRIVER	X Y N	40.00	40.00	320.00
	1 FUEL	X Y N	71.00	71.00	71.00
	OWING	TOW TO FU Y N	275.00	275.00	275.00

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TERMS: NET 15th. A late charge of up to 1.25% PER MONTH may be added to all Past Due Balances.

CUSTOMER SIGNATURE X

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(570) 385-2540
(800) 826-2583

PLEASE REMIT TO:

1407 BULLDOG DRIVE
ALLENTOWN, PA 18104
(610) 395-6801
(800) 982-9640

www.TransEdgeTruck.com

VOLVO

1501 BEAVER AVENUE
PITTSBURGH, PA 15233
(412) 237-6000
(888) 284-0083



Order No. [REDACTED]
Date 5/31/16
Segment 12 continued

WORK ORDER INVOICE
Customer Copy

Page 6
Time 16:56:29

TOTAL MISC.	666.00
SEGMENT SUBTOTAL	848.00

**** PAY THIS AMOUNT ****

CUSTOMER TOTAL	5,748.33
----------------	----------

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CORE CREDITS SUBJECT TO REVIEW BY MANUFACTURER.
TERMS: NET 15th. A late charge of up to 1.25% PER MONTH may be added to all Past Due Balances.

CUSTOMER
SIGNATURE X

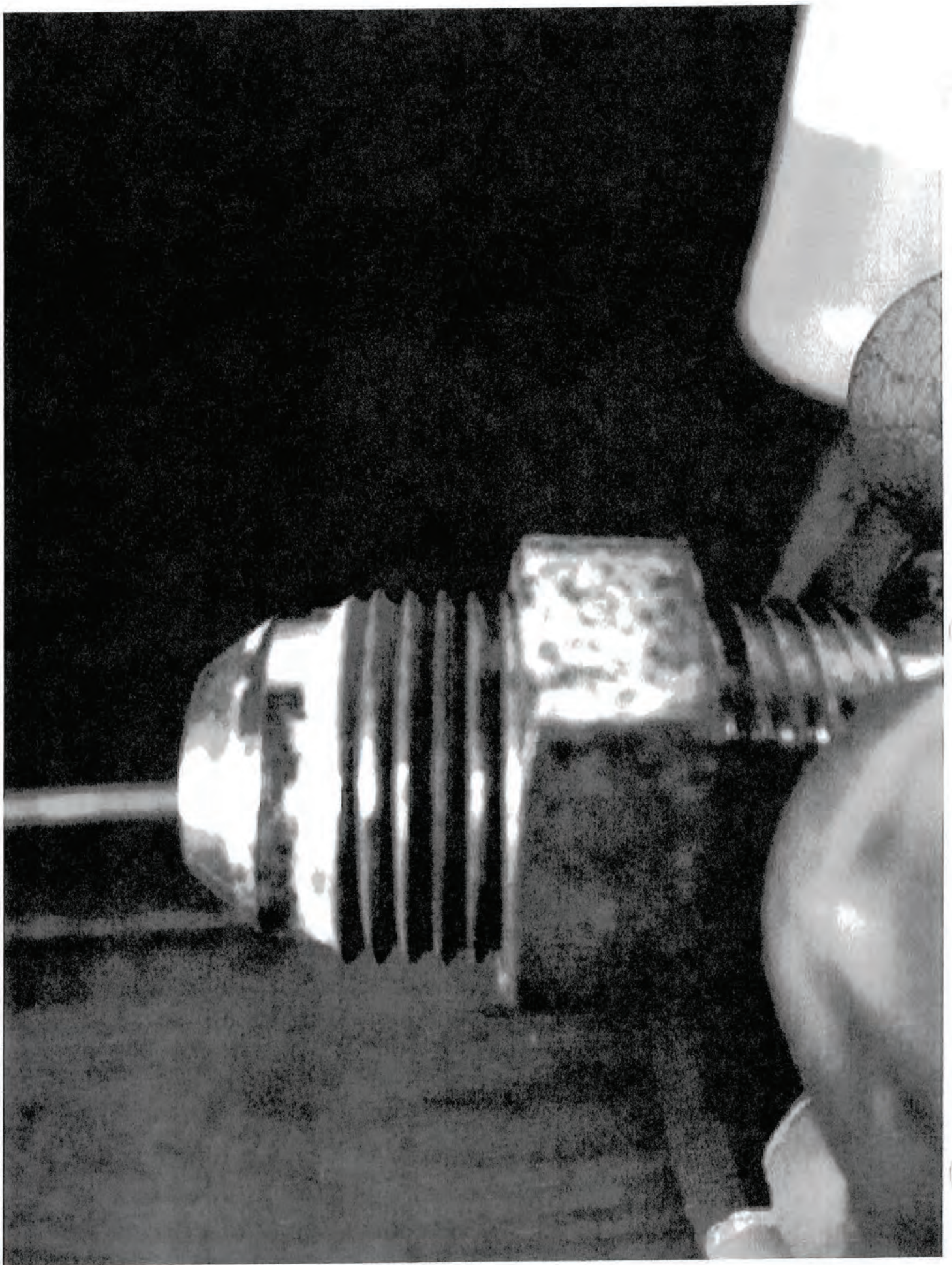
Bio Frank

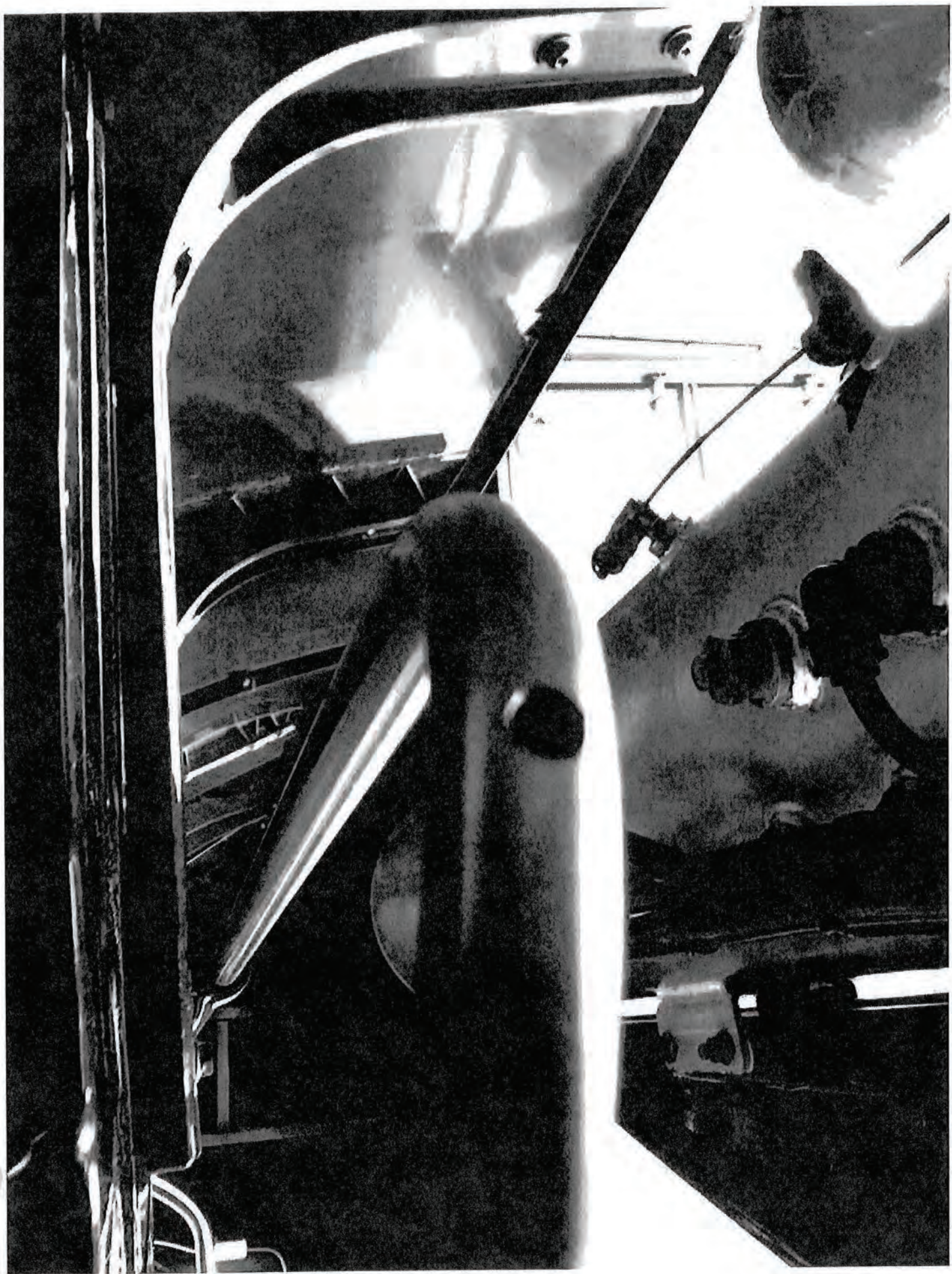
From: Meyers Edward
Sent: Tuesday, May 10, 2016 6:28 PM
To: Bio Frank; Lafon Tim (othy); Reavis Randall
Subject: Kane vehicle
Attachments: IMG_0606.JPG; ATT00001.txt; IMG_0607.JPG; ATT00002.txt; IMG_0609.JPG; ATT00003.txt; IMG_0605.JPG; ATT00004.txt; IMG_0604.JPG; ATT00005.txt

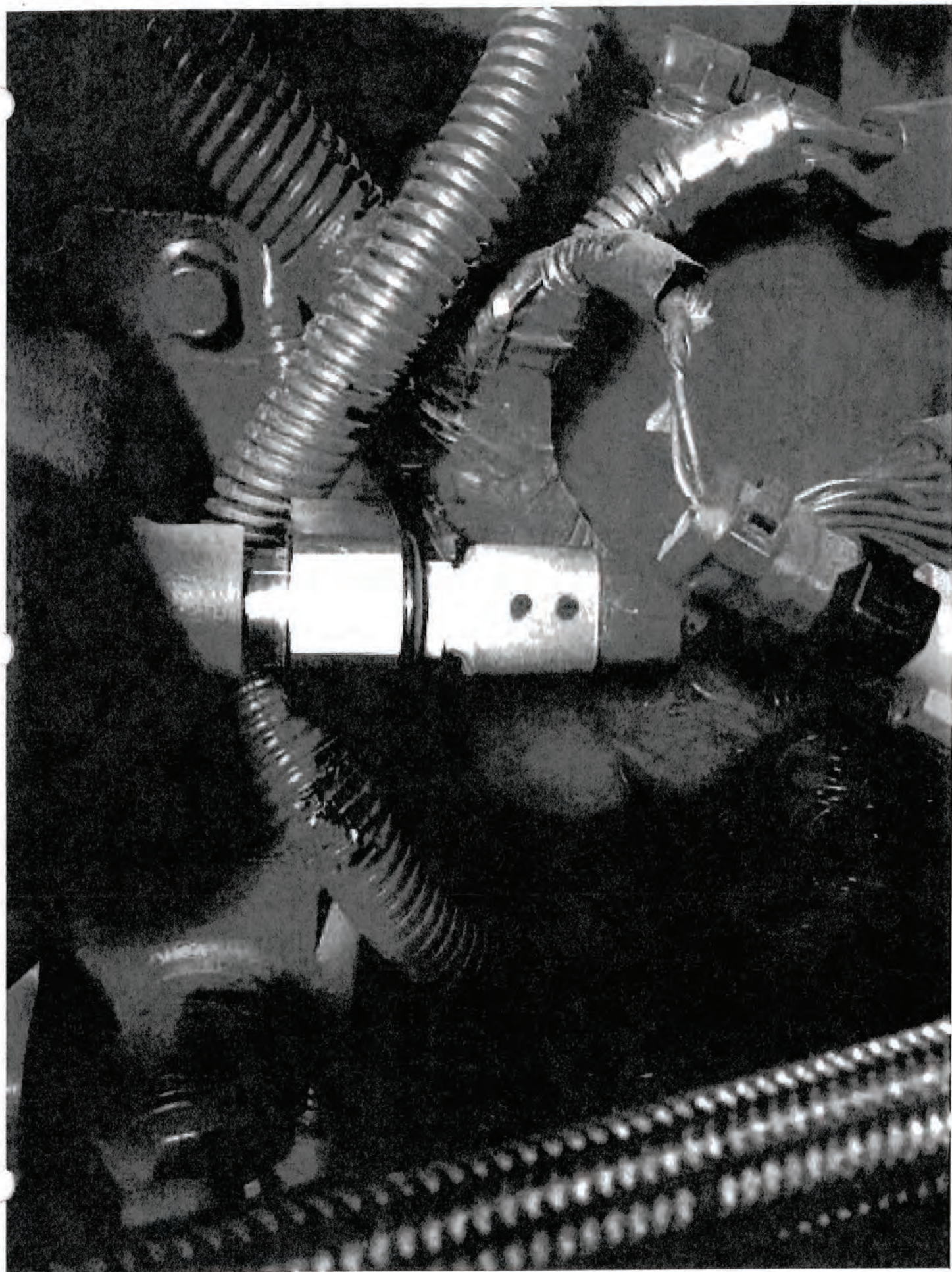
Gents.

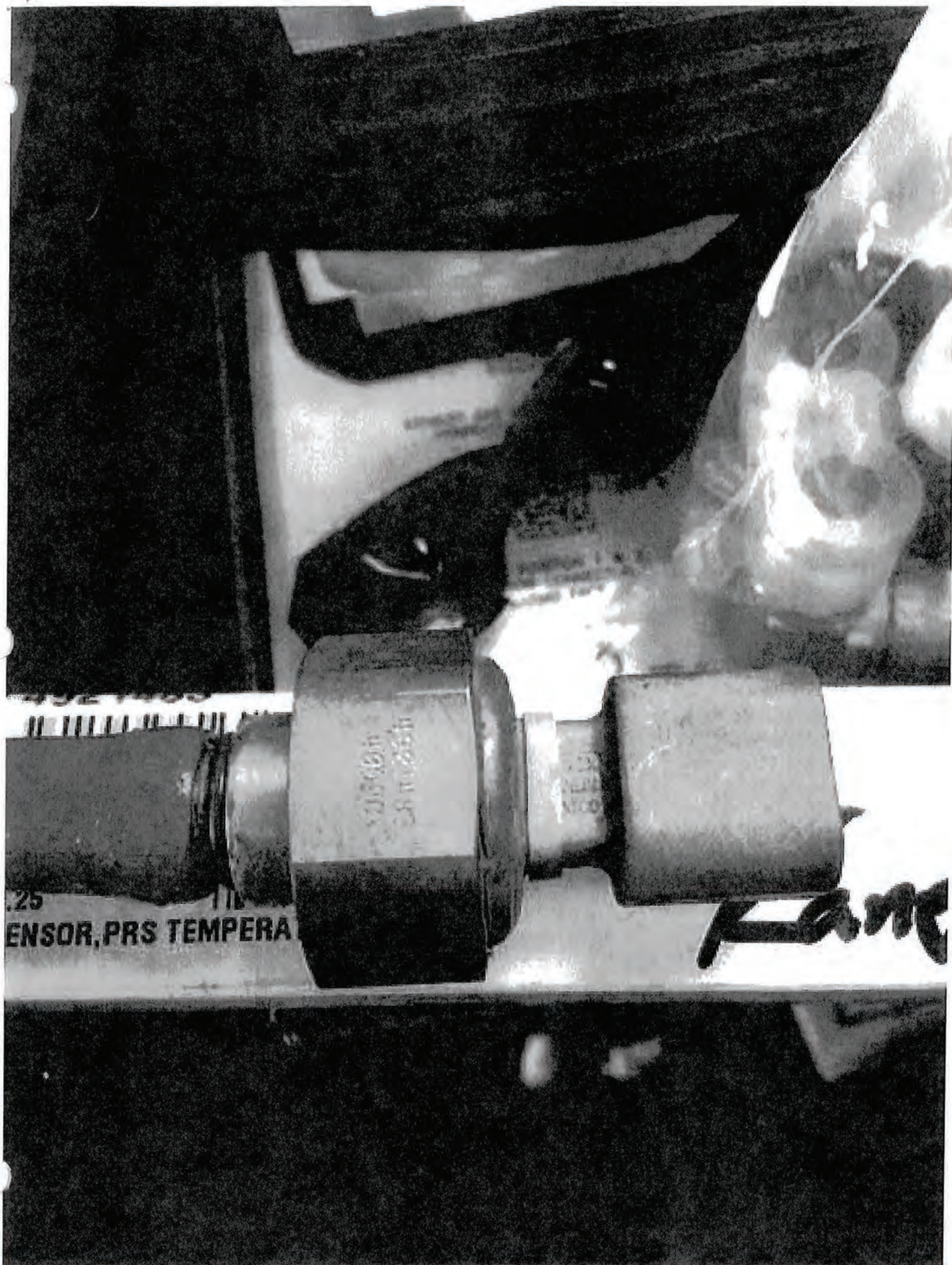
After work with agility most of the day we have found the issue with these natural gas vehicles. Appears that

- 1) the PRD valves are defective and allowing gas to flow up the vent tube
 - 2) there is a drain hole on the bottom of the vent tube which makes a loop to collect water. Good idea BUT see the hole on the vent tube. Well when the PRD fails we exhaust CNG out and right at the exhaust system on the right side.
 - 3) replace the air fuel mixture sensor notice the two dots on a new one and notice no dots on the old one. any way to put these vehicles back to running order we need to do the following.
Replace all 24 PRD valves there in order
Secure the vent lines away from the exhaust system
Replace 2 fittings on the gas system to stainless steel as instructed by the tank manufacture.
- The solenoid on mixer chamber is allowing gas to enter the crank case if you shut the gas off and vent the engine the problem goes away. Turn the gas back on the problem comes back quickly so this isn't going to be cheap and labor intense I think we should all talk about this parts are ordered









101

Faults Information

Engine Serial Number : 75029133
Customer Unit Number : BBBB BBBB
Work Order Name : NA

INSITE 8.1.3.174
Company Name : Cummins Inc.
ECM Image Name : NA
Customer Name : Kane

FaultCode	Status	Count	Lamp	Description	PID	SID	J1587 FMI	J1939 FMI	SPN
	Fault Parameters	First	Last	Units					
☐ CM2180A	ECM Time (Key On Time)	000585:45:04		HHHHHH:MM:SS					
	Engine Hours	000571:29:49		HHHHHH:MM:SS					
	Keyoffs	33							
☒ 1117	Inactive	4	None	Power Supply Lost With Ignition On - Data Erratic, Intermittent, or Incorrect		251	2	2	3597

102

Engine Serial Number : 75029283
 Customer Unit Number : BBBB BBBB
 Work Order Name : NA

Faults Information

INSITE 8.1.3.174
 Company Name : Cummins Inc.
 ECM Image Name : NA
 Customer Name : Kane

Fault Code	Status	Count	Lamp	Description	PID	SID	J1587 FMI	J1939 FMI	SPN
	Fault Parameters	First	Last	Units					
CM2180A	ECM Time (Key On Time)	000232:22:15		HHHHHH:MM:SS					
	Engine Hours	000202:39:52		HHHHHH:MM:SS					
	Keyoffs	26							
2725	Inactive	2	Amber	Gas Supply Pressure (Regulated) - Data Valid But Below Normal Operating Range - Moderately Severe Level	159		1	18	159
1864	Inactive	1	Amber	Aftertreatment Outlet Oxygen Sensor - Data Erratic, Intermittent, or Incorrect			2	2	3227
1117	Inactive	6	None	Power Supply Lost With Ignition On - Data Erratic, Intermittent, or Incorrect		251	2	2	3597

1041

Faults Information

Engine Serial Number : 75029323
Customer Unit Number : BBBB BBBB
Work Order Name : NA

INSITE 8.1.3.174
Company Name : Cummins Inc.
ECM Image Name : NA
Customer Name : Kane

Fault Code	Status	Count	Lamp	Description	PID	SID	J1587 FMI	J1939 FMI	SPN
	Fault Parameters	First	Last	Units					
CM2180A	ECM Time (Key On Time)	000052:47:34		HHHHHH:MM:SS					
	Engine Hours	000041:03:50		HHHHHH:MM:SS					
	Keyoffs	29							
1117	Active	3	None	Power Supply Lost With Ignition On - Data Erratic, Intermittent, or Incorrect	251	2	2		3597

106

Faults Information

Engine Serial Number : 75029376
Customer Unit Number : BBBB BBBB
Work Order Name : NA

INSITE 8.1.3.174
Company Name : Cummins Inc.
ECM Image Name : NA
Customer Name : g??????2x??BB

Fault Code	Status	Count	Lamp	Description	PID	SID	J1587 FMI	J1939 FMI	SPN
	Fault Parameters	First	Last	Units					
0285	Inactive	1	Amber	SAE J1939 Multiplexing PGN Timeout Error - Abnormal Update Rate		231	9	9	639
2725	Inactive	2	Amber	Gas Supply Pressure (Regulated) - Data Valid But Below Normal Operating Range - Moderately Severe Level	159		1	18	159

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VOLVO



** DUPLICATE INVOICE REPRINTED **

Order No. [REDACTED]
Invoice Date 9/30/16

WORK ORDER INVOICE
Customer Copy

Page 1
Time 9:56:05

B KANE FREIGHT LINES INC
I PO BOX 931
L SCRANTON, PA 18501

4V5NC9UG0FN [REDACTED]
Unit 102
Reading In 7500 0
Arrival 9/13/16
DELIVERY 0/00/00
PO# DEC000007310938
GVW
SW# 355

2015 VOL VNL64T
License
Reading Out
at 16:00

Cust# 2767
(570) 344-9801

Terms A/R Charge

S U M M A R Y

Seg Description	Labor	Parts	Misc.	Total
01 GAS LEAK	1,626.56	626.76	698.96	2,942.28
TOTALS	1,626.56	626.76	698.96	2,942.28

Tax I.D.: MC 99567

Shop Supplies & Materials: 40.66
Sales Tax : .00

*** PAY THIS AMOUNT ***

CUSTOMER TOTAL : 2,982.94

01 GAS LEAK

Code: MCK

SW# 355 [Michael K Kubeika]

CONDITION:

POSSIBLE CNG FUEL LEAK.

CAUSE:

THE TECHNICIAN CHECKED THE SYSTEM AND FOUND THE DEFUEL VALVE WAS TURNED ON, HE TURNED THE VALVE TO THE OFF POSITION. THE GAS VALVE WAS OPENED, THERE IS 1,000 PSI IN THE TANK WITH NO LEAKS.

** FUEL LEAKING AT 90 DEGREE ELBOW FOR PRD.

CORRECTION:

A NEW DE-FUEL VALVE & AN ELBOW FITTING WAS INSTALLED FOR THE PRD VALVE. THE HIGH SIDE PRESSURE LINES WERE TESTED, NO LEAKS FOUND.

**NOTE: THIS DOES NOT INCLUDE THE PRD LINE.

THE TANK WAS REFUELED & THE SYSTEM WAS CHECKED FOR LEAKS AGAIN.

A LEAK WAS FOUND AT THE COMPRESSION FITTING FOR THE PRD LINE.

THE TANK WAS DRAINED AND THE COVERS WERE REMOVED TO ACCESS THE PRD LINE AND FITTING.

** A NEW PRD LINE WAS INSTALLED AND PRESSURE TESTED. NO LEAKS FOUND.

THE FUEL TANK WAS REINSTALLED, FUEL LINES AND COVERS. FUEL WAS TRANSFERRED FROM THE RIGHT SIDE TANK TO CHECK FOR LEAKS.

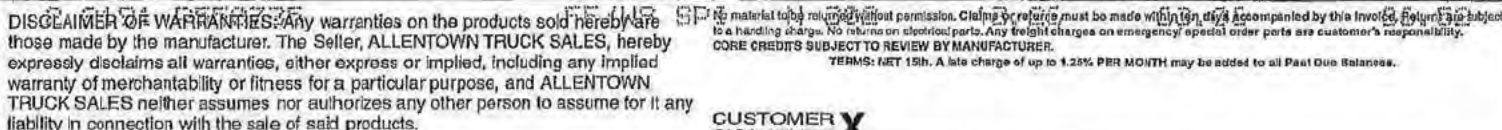
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TERMS: NET 15th. A late charge of up to 1.25% PER MONTH may be added to all Past Due Balances.

CUSTOMER SIGNATURE X



Werner Atlanta

From: Lafon Tim (othy)
Sent: Wednesday, June 29, 2016 1:44 PM
To: Brown Cheryl; Reavis Randall; Brown Jennifer
Subject: RE: Volvo Tractor Fire -- Werner Unit # 65311 VIN: 4V5NC9UG7FN [REDACTED]

[REDACTED]

Tim LaFon
Vice President, Regulatory Affairs
Volvo Group North America LLC

Office: (336) 393-2233

Mobile: (336) 457-2263

Fax: (336) 393-2009

From: Popham Richard
Sent: Wednesday, June 29, 2016 1:38 PM
To: Lafon Tim (othy); Keen Rick
Cc: Brown Cheryl; Reavis Randall; Brown Jennifer; Marsh Wes (ley)
Subject: RE: Volvo Tractor Fire -- Werner Unit # 65311 VIN: 4V5NC9UG7FN [REDACTED]

Tim,

The only info I had – it occurred in Augusta GA, [REDACTED]

Rich

From: Lafon Tim (othy)
Sent: Wednesday, June 29, 2016 10:15 AM
To: Keen Rick
Cc: Brown Cheryl; Reavis Randall; Brown Jennifer; Marsh Wes (ley); Popham Richard
Subject: RE: Volvo Tractor Fire -- Werner Unit # 65311 VIN: 4V5NC9UG7FN [REDACTED]

Hi Rick,

Have they set a specific date and time. The attached email says "At this time, a date for the inspection has not been set. We anticipate that it will occur next week, June 27 - July 1 ."

We would be glad to support but need more information such as date and time. Also, I was not able to find the incident on the internet. Can you please ask Werner to supply pictures/ link?

Thanks and Best Regards,

Tim LaFon
Vice President, Regulatory Affairs
Volvo Group North America LLC

Office: (336) 393-2233

Mobile: (336) 457-2263

Fax: (336) 393-2009

From: Keen Rick
Sent: Friday, June 24, 2016 11:52 AM
To: Lafon Tim (othy); Marsh Wes (ley)
Subject: Fwd: Volvo Tractor Fire -- Werner Unit # 65311 VIN: 4V5NC9UG7FN [REDACTED]

Tim
This is the truck I referenced in an email to you last week
Werner CNG truck
Rick keen

Sent from my iPhone

Begin forwarded message:

From: Popham Richard <richard.popham@volvo.com>
Date: June 24, 2016 at 11:37:56 AM EDT
To: "anelson@werner.com" <anelson@werner.com>, Keen Rick <richard.keen@volvo.com>
Cc: "sreed@werner.com" <sreed@werner.com>
Subject: RE: Volvo Tractor Fire -- Werner Unit # 65311 VIN: 4V5NC9UG7FN [REDACTED]

Allen,

Thanks, I have forwarded to Rick Keen, your Fleet Service Manager as he will manage and elevate through the proper channels within Volvo. His contact information is:

From: Simpson Herb
Sent: Sunday, July 9, 2017 10:24 AM
To: Lafon Tim (othy)
Subject: FW: atlanta burn unit
Attachments: DSC00874.JPG; DSC00883.JPG

Tim,
More Werner information that Rick Keen reported from either 2015 or 2016, this one was in Atlanta.

Thank you,
Wayne

From: Keen Rick
Sent: Friday, July 07, 2017 1:31 PM
To: Simpson Herb
Subject: RE: atlanta burn unit

From: Keen Rick
Sent: Friday, July 07, 2017 2:27 PM
To: Simpson Herb
Subject: atlanta burn unit

Email 1 from Atlanta truck fire Lafon is aware of this one and has Paul beachum on site
More to come

Rick Keen
Fleet Service Manager
Mack Trucks Inc.
Concrete Pump Support Line 877-893-3007
336-895-5293 office
Cell 336-210-6996
richard.keen@volvo.com



VERNER

U.S. DOT 3367
FMVSS 225
COLD PUG 7575-1

67090

WINDO ENTERPRISES

REIGHTY



From: Simpson Herb
Sent: Sunday, July 9, 2017 10:22 AM
To: Lafon Tim (othy)
Subject: FW: atlanta burn unit
Attachments: Werner sn 927680.pdf; Incident 16-7944.PDF; 16-054 tractor data.pdf; 16-054 joint exam attendees.pdf

Tim,
Information from Rick Keen on another Werner truck with a failure similar to the one in Dallas reported last Friday.

Thank you,
Wayne

From: Keen Rick
Sent: Friday, July 07, 2017 1:27 PM
To: Simpson Herb
Subject: atlanta burn unit

Email 1 from Atlanta truck fire Lafon is aware of this one and has Paul beachum on site
More to come

Rick Keen
Fleet Service Manager
Mack Trucks Inc.
Concrete Pump Support Line 877-893-3007
336-895-5293 office
Cell 336-210-6996
richard.keen@volvo.com

View repair history

Search

Vehicle

Registration number

Chassis Id *

n - 927680

VIN

Brand

Marketing Type

Chassis no.

Brand

Unit no

Search

Search result

Vehicle history

Chassis Id N-927680 **Delivering dealer** 999634 **Using customer** 6512385993-WERNER ENTERPRISES, INC. **Marketing Type** VNL64T N **Vehicle operation**
Registration number **Delivering importer** 7554 **Mileage (km)** 22 (10/02/15) **Unit no** **Vehicle operation**
Delivering date 18/02/15 **Age** 18 **Operating hours** **Delivery mileage**

Repair date	Rep. importer	Rep. dealer	Ref. no. - job no	Repair order no	Mileage (km)	Operating hours	Age	Main op	Causal part
10/02/15	7554	5391D			22	0	0	2341-12-99-99	VO 22188820
10/02/15	7554	5391D			22	0	0	1711-06-02-01	

< Previous

Next >

Number of items: 2

Claim job

[Save claim job](#) [Release claim job](#)Header
1

Repair header information

Importer	7554	Repair order number		Chassis Id	N-927680	Using Customer	0 -	View repair history	View vehicle cost hi
Dealer	5391D	Repair date	10/02/15	Mileage(miles)	14	Operating hours	0	View technical data	View GDR
Reference number		Registration date	19/02/15	Age	0	Marketing type	VNL64T N	View coverage	View printable vers
								View campaign	

Claim job information [Labour](#) [Material](#) [Other costs](#) [Remarks](#) [History](#)

Information

Status	Credited	Force claim job	
Type	Service claim job	TMA decision	
Scenario code	24 Dealer, service, no debit	Follow up code	
		MI name	Scrap parts
		Case no source	
		Case no	

Main operation	Causal part	Func. group	New part
1711-06-02-01 Pre-Delivery Inspection		1710	

Summary	Net(USD)	Hours	Approved	Rejected	Rejected code	Description
Labour				0.00		
Material	0.00		0.00	0.00		
Other costs	0.00		0.00	0.00		
Grand total				0.00		

Pre-Delivery Insp.

Claim job

[Save claim job](#) [Release claim job](#)

Header

1

Repair header information

Importer	7554	Repair order number	██████	Chassis Id	N-927680	Using Customer	0 -	View repair history	View vehicle cost hi
Dealer	5391D	Repair date	10/02/15	Mileage(miles)	14	Operating hours	0	View technical data	View GDR
Reference number	██████	Registration date	19/02/15	Age	0	Marketing type	VNL64T N	View coverage	View printable versi
								View campaign	

Claim job information [Labour](#) [Material](#) [Other costs](#) [Remarks](#) [History](#)

Information

Status	Credited	Force claim job	
Type	Commercial goodwill claim job	TMA decision	
Scenario code	26 Dealer, commercial goodwill, no debit	Follow up code	
		MI name	Scrap parts
		Case no source	1 - Inspector Report
		Case no	116

Main operation	Causal part	Func. group	New part
2341-12-99-99 FUEL & DELIVER	22188820 FUEL FILTER HOUSIN	2334	

Summary	Net(USD)	Hours	Approved	Rejected	Rejected code	Description
Labour	0.00	0	0.00	0.00		
Material	0.00		0.00	0.00		
Other costs	250.00		250.00	0.00		
Grand total	250.00		250.00	0.00		

Add Fuel
And Deliver to
Customer

A		FDID 12102 *		State GA *		Incident Date MM 06 DD 06 YYYY 2016 *		Station 08		Incident Number [REDACTED] *		Exposure 000 *		☐ Delete ☐ Change ☐ No Activity		NFIRS -1 Basic	
B Location*		☐ Check this box to Indicate that the address for this incident is provided on the Wildland Fire Census Tract Module In Section B "Alternative Location Specification". Use only for Wildland fires.															
		☐ Street address ☐ Intersection ☐ In front of ☐ Rear of ☒ Adjacent to ☐ Directions															
C Incident Type *		Incident Type 132 Road freight or transport vehicle fire Check boxes if dates are the same as Alarm Date.															
		Incident Type 132 Road freight or transport vehicle fire Check boxes if dates are the same as Alarm Date.															
D Aid Given or Received *		E1 Date & Times Midnight is 0000 Alarm * 06 06 2016 06:36:11 Arrival * 06 06 2016 06:44:18 Controlled ☐ Last Unit Cleared 06 06 2016 16:51:07															
		E2 Shift & Alarms Local Option Shift or Platoon B Alarms 5 District 5															
F Actions Taken *		E3 Special Studies Local Option Special Study ID# [REDACTED] Special Study Value [REDACTED]															
		G1 Resources * ☒ Check this box and skip this section if an Apparatus or Personnel form is used. Apparatus 0012 Personnel 0023 EMS [REDACTED] Other [REDACTED] ☐ Check box if resource counts include aid received resources.															
G2 Estimated Dollar Losses & Values		LOSSES: Required for all fires if known. Optional for non fires. None Property \$ [REDACTED] , 000 , 000 ☒ Contents \$ [REDACTED] , 000 , 000 ☒ PRE-INCIDENT VALUE: Optional Property \$ [REDACTED] , 000 , 000 ☐ Contents \$ [REDACTED] , 000 , 000 ☐															
		Completed Modules ☒ Fire-2 ☐ Structure-3 ☐ Civil Fire Cas.-4 ☐ Fire Serv. Cas.-5 ☐ EMS-6 ☐ HazMat-7 ☐ Wildland Fire-8 ☒ Apparatus-9 ☒ Personnel-10 ☐ Arson-11															
H1* Casualties ☐ None		H3 Hazardous Materials Release ☐ None 1 ☐ Natural Gas: slow leak, no evaluation or HazMat actions 2 ☐ Propane gas: <21 lb. tank (as in home BBQ grill) 3 ☐ Gasoline: vehicle fuel tank or portable container 4 ☐ Kerosene: fuel burning equipment or portable storage 5 ☐ Diesel fuel/fuel oil: vehicle fuel tank or portable 6 ☐ Household solvents: home/office spill, cleanup only 7 ☐ Motor oil: from engine or portable container 8 ☐ Paint: from paint cans totaling < 55 gallons 9 ☐ Other: Special HazMat actions required or spill > 55gal., Please complete the HazMat form															
		I Mixed Use Property NN ☐ Not Mixed 10 ☐ Assembly use 20 ☐ Education use 33 ☐ Medical use 40 ☐ Residential use 51 ☐ Row of stores 53 ☐ Enclosed mall 58 ☐ Bus. & Residential 59 ☐ Office use 60 ☐ Industrial use 63 ☐ Military use 65 ☐ Farm use 00 ☐ Other mixed use															
J Property Use*		Structures 131 ☐ Church, place of worship 161 ☐ Restaurant or cafeteria 162 ☐ Bar/Tavern or nightclub 213 ☐ Elementary school or kindergarten 215 ☐ High school or junior high 241 ☐ College, adult education 311 ☐ Care facility for the aged 331 ☐ Hospital Outside 124 ☐ Playground or park 655 ☐ Crops or orchard 669 ☐ Forest (timberland) 807 ☐ Outdoor storage area 919 ☐ Dump or sanitary landfill 931 ☐ Open land or field															
		341 ☐ Clinic, clinic type infirmary 342 ☐ Doctor/dentist office 361 ☐ Prison or jail, not juvenile 419 ☐ 1-or 2-family dwelling 429 ☐ Multi-family dwelling 439 ☐ Rooming/boarding house 449 ☐ Commercial hotel or motel 459 ☐ Residential, board and care 464 ☐ Dormitory/barracks 519 ☐ Food and beverage sales 936 ☐ Vacant lot 938 ☐ Graded/care for plot of land 946 ☐ Lake, river, stream 951 ☐ Railroad right of way 960 ☐ Other street 961 ☒ Highway/divided highway 962 ☐ Residential street/driveway															
K Property Use*		539 ☐ Household goods, sales, repairs 579 ☐ Motor vehicle/boat sales/repair 571 ☐ Gas or service station 599 ☐ Business office 615 ☐ Electric generating plant 629 ☐ Laboratory/science lab 700 ☐ Manufacturing plant 819 ☐ Livestock/poultry storage(barn) 882 ☐ Non-residential parking garage 891 ☐ Warehouse 981 ☐ Construction site 984 ☐ Industrial plant yard Lookup and enter a Property Use code only if you have NOT checked a Property Use box: Property Use 961 Highway or divided highway															
		NFIRS-1 Revision 03/11/99															

FDID 12102 *	State * GA	MM 6	DD [REDACTED]	YYYY 2016	Station 08	Incident Number * [REDACTED]	Exposure * 000	Complete Narrative
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Narrative:

Engine 9 responded to a tractor trailer on fire [REDACTED] on ramp [REDACTED] arrived on scene with fire showing. Requested haz mat and Batt 2 -- had a hissing sound coming from the cab and E-9 crew backed off until which time they could verify what the unknown noise and large amount of fire was coming from. Batt 2 requested additional units for water shuttle and man power. I Batt 2 arrived On scene and spoke with the driver to fine he had Natural Gas Tanks in the rear of the cab that powered the truck, the load was dippers. By this time the fire had died down and we confirmed the source and made attack on vehicle and trailer and rotated engine companies for water source and call the company to get some cleaner up crews and transport vehicles to move the burned tractor and off load the trailer.

RCSO had the road blocked and secure and GDOT was on site . Brome and Chancery came to do towing and clean up.

Vehicle owner = Warner Enterprize 1777 Blair's Bridge Rd. Lothia Springs Ga 1-800-859-4858
Home Office = Warner Enterprize Inc P O Box 37308, Omaha NE 681137 402-895-6847

Trailer No = 44879

Driver = Antwon Caren [REDACTED] Forest Park Ga [REDACTED] [REDACTED]

GDOT Rep = Michael McGrotha he oversaw the operation.
A&D Environmental came out and checked environmental issues.

This call lasted into the following shift up to about 1700 hrs. additional narratives maybe added.

Units on scene

Batt 2 command

Dep Chief

Eng 9-8-13-18 & haz mat T-5 - R-1 E-15 command change about 0930

Tractor Record Inquiry

Unit Number.....	65311	Tractor Weight....	15,281
Type Power.....	N	Declare Weight....	80,000
Year.....	2015	Division Code: CE	Cab Type: AV
Make.....	VOL	Engine Type...: CNC	Eng Year: 2015
Model.....	VNL64T	Engine Horsepower:	000
Serial Number....	4V5NC9UG7FN	Engine Serial.....	S75035959
Date Purchased...	1/22/2015	Eng. Warranty.....	
Tractor Status...	MT	Type of Trans.....	
In Service Date...	3/10/2015	Trans. Serial.....	P0829698
Last Trlr Hauled:		Rear End Ratio....	355
Last ECM Date....	6/13/2016	Fuel Capacity.....	
Last ECM Miles...	295,620	Front Rear Serial:	SFOR03016355
# Axles.....	3	Rear Rear Serial..	SFOR03016356
Current Tr MGR...	ZV	Arrangement#.....	
First Driver.....		Key No.....	1378
Second Driver....		Depreciation Mths:	036
Team/Student.....			
Owner.....	WERNER ENTERPRISES		

Cmd: 2-Previous 3-Exit 14-Addl Eq

FEH PROJECT: 16-054 Werner Volvo CNG

DATE: 7/26/2016

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Representing:

Cummins

Representing:

Representing:



Waste Connections

From: Lafon Tim (othy)
Sent: Wednesday, June 29, 2016 1:44 PM
To: Brown Cheryl; Reavis Randall; Brown Jennifer
Subject: RE: Volvo Tractor Fire -- Werner Unit # 65311 VIN: 4V5NC9UG7FN [REDACTED]

[REDACTED]

Tim LaFon
Vice President, Regulatory Affairs
Volvo Group North America LLC

Office: (336) 393-2233

Mobile: (336) 457-2263

Fax: (336) 393-2009

From: Popham Richard
Sent: Wednesday, June 29, 2016 1:38 PM
To: Lafon Tim (othy); Keen Rick
Cc: Brown Cheryl; Reavis Randall; Brown Jennifer; Marsh Wes (ley)
Subject: RE: Volvo Tractor Fire -- Werner Unit # 65311 VIN: 4V5NC9UG7FN [REDACTED]

Tim,

The only info I had – it occurred in Augusta GA, [REDACTED] Exit

Rich

From: Lafon Tim (othy)
Sent: Wednesday, June 29, 2016 10:15 AM
To: Keen Rick
Cc: Brown Cheryl; Reavis Randall; Brown Jennifer; Marsh Wes (ley); Popham Richard
Subject: RE: Volvo Tractor Fire -- Werner Unit # 65311 VIN: 4V5NC9UG7FN [REDACTED]

Hi Rick,

Have they set a specific date and time. The attached email says "At this time, a date for the inspection has not been set. We anticipate that it will occur next week, June 27 - July 1 ."

We would be glad to support but need more information such as date and time. Also, I was not able to find the incident on the internet. Can you please ask Werner to supply pictures/ link?

Thanks and Best Regards,

Tim LaFon
Vice President, Regulatory Affairs
Volvo Group North America LLC

Office: (336) 393-2233

Mobile: (336) 457-2263

Fax: (336) 393-2009

From: Keen Rick
Sent: Friday, June 24, 2016 11:52 AM
To: Lafon Tim (othy); Marsh Wes (ley)
Subject: Fwd: Volvo Tractor Fire -- Werner Unit # 65311 VIN: 4V5NC9UG7FN [REDACTED]

Tim
This is the truck I referenced in an email to you last week
Werner CNG truck
Rick keen

Sent from my iPhone

Begin forwarded message:

From: Popham Richard <richard.popham@volvo.com>
Date: June 24, 2016 at 11:37:56 AM EDT
To: "anelson@werner.com" <anelson@werner.com>, Keen Rick <richard.keen@volvo.com>
Cc: "sreed@werner.com" <sreed@werner.com>
Subject: RE: Volvo Tractor Fire -- Werner Unit # 65311 VIN: 4V5NC9UG7FN [REDACTED]

Allen,

Thanks, I have forwarded to Rick Keen, your Fleet Service Manager as he will manage and elevate through the proper channels within Volvo. His contact information is:

From: Simpson Herb
Sent: Sunday, July 9, 2017 10:24 AM
To: Lafon Tim (othy)
Subject: FW: atlanta burn unit
Attachments: DSC00874.JPG; DSC00883.JPG

Tim,
More Werner information that Rick Keen reported from either 2015 or 2016, this one was in Atlanta.

Thank you,
Wayne

From: Keen Rick
Sent: Friday, July 07, 2017 1:31 PM
To: Simpson Herb
Subject: RE: atlanta burn unit

From: Keen Rick
Sent: Friday, July 07, 2017 2:27 PM
To: Simpson Herb
Subject: atlanta burn unit

Email 1 from Atlanta truck fire Lafon is aware of this one and has Paul beachum on site
More to come

Rick Keen
Fleet Service Manager
Mack Trucks Inc.
Concrete Pump Support Line 877-893-3007
336-895-5293 office
Cell 336-210-6996
richard.keen@volvo.com





From: Simpson Herb
Sent: Sunday, July 9, 2017 10:22 AM
To: Lafon Tim (othy)
Subject: FW: atlanta burn unit
Attachments: Werner sn 927680.pdf; Incident 16-7944.PDF; 16-054 tractor data.pdf; 16-054 joint exam attendees.pdf

Tim,
Information from Rick Keen on another Werner truck with a failure similar to the one in Dallas reported last Friday.

Thank you,
Wayne

From: Keen Rick
Sent: Friday, July 07, 2017 1:27 PM
To: Simpson Herb
Subject: atlanta burn unit

Email 1 from Atlanta truck fire Lafon is aware of this one and has Paul beachum on site
More to come

Rick Keen
Fleet Service Manager
Mack Trucks Inc.
Concrete Pump Support Line 877-893-3007
336-895-5293 office
Cell 336-210-6996
richard.keen@volvo.com

View repair history

Search

Vehicle

Registration number

Chassis Id *

n

- 927680

VIN

Brand

Marketing Type

Chassis no.

Brand

Unit no

Search

Search result

Vehicle history

Chassis Id N-927680 **Delivering dealer** 999634 **Using customer** 6512385993-WERNER ENTERPRISES, INC. **Marketing Type** VNL64T N **Vehicle operation**
Registration number **Delivering importer** 7554 **Mileage (km)** 22 (10/02/15) **Unit no** **Vehicle operation**
Delivering date 18/02/15 **Age** 18 **Operating hours** **Delivery mileage**

Repair date	Rep. importer	Rep. dealer	Ref. no. - job no	Repair order no	Mileage (km)	Operating hours	Age	Main op	Causal part
10/02/15	7554	5391D			22	0	0	2341-12-99-99	VO 22188820
10/02/15	7554	5391D			22	0	0	1711-06-02-01	

< Previous

Next >

Number of items: 2

Claim job

[Save claim job](#) [Release claim job](#)Header
1

Repair header information

Importer	7554	Repair order number		Chassis Id	N-927680	Using Customer	0 -	View repair history	View vehicle cost hi
Dealer	5391D	Repair date	10/02/15	Mileage(miles)	14	Operating hours	0	View technical data	View GDR
Reference number		Registration date	19/02/15	Age	0	Marketing type	VNL64T N	View coverage	View printable vers
								View campaign	

Claim job information [Labour](#) [Material](#) [Other costs](#) [Remarks](#) [History](#)

Information

Status	Credited	Force claim job	
Type	Service claim job	TMA decision	
Scenario code	24 Dealer, service, no debit	Follow up code	
		MI name	Scrap parts
		Case no source	
		Case no	

Main operation	Causal part	Func. group	New part
1711-06-02-01 Pre-Delivery Inspection		1710	

Summary	Net(USD)	Hours	Approved	Rejected	Rejected code	Description
Labour				0.00		
Material	0.00		0.00	0.00		
Other costs	0.00		0.00	0.00		
Grand total				0.00		

Pre-Delivery Insp.

Claim job

[Save claim job](#)
[Release claim job](#)

Header

1

Repair header information

Importer	7554	Repair order number	██████	Chassis Id	N-927680	Using Customer	0 -	View repair history	View vehicle cost hi
Dealer	5391D	Repair date	10/02/15	Mileage(miles)	14	Operating hours	0	View technical data	View GDR
Reference number	██████	Registration date	19/02/15	Age	0	Marketing type	VNL64T N	View coverage	View printable versi
								View campaign	

[Claim job information](#)
[Labour](#)
[Material](#)
[Other costs](#)
[Remarks](#)
[History](#)

Information

Status	Credited	Force claim job
Type	Commercial goodwill claim job	TMA decision
Scenario code	26 Dealer, commercial goodwill, no debit	Follow up code
		MI name
		Scrap parts
		Case no source
		1 - Inspector Report
		Case no
		116

Main operation	Causal part	Func. group	New part
2341-12-99-99 FUEL & DELIVER	22188820 FUEL FILTER HOUSIN	2334	

Summary	Net(USD)	Hours	Approved	Rejected	Rejected code	Description
Labour	0.00	0	0.00	0.00		
Material	0.00		0.00	0.00		
Other costs	250.00		250.00	0.00		
Grand total	250.00		250.00	0.00		

Add Fuel
And Deliver to
Customer

A		FDID 12102 *		State GA *		Incident Date MM 06 DD 06 YYYY 2016 *		Station 08		Incident Number [REDACTED] *		Exposure 000 *		☐ Delete ☐ Change ☐ No Activity		NFIRS -1 Basic	
		☐ Check this box to Indicate that the address for this incident is provided on the Wildland Fire Census Tract Module In Section B "Alternative Location Specification". Use only for Wildland fires.															
B Location*		☐ Street address ☐ Intersection ☐ In front of ☐ Rear of ☒ Adjacent to ☐ Directions															
		Number/Milepost I520 Prefix Street or Highway Street Type Suffix Apt./Suite/Room City Augusta State GA Zip Code [REDACTED] Cross street or directions, as applicable I20															
C Incident Type *		132 Road freight or transport vehicle fire Incident Type															
		D Aid Given or Received * 1 ☐ Mutual aid received 2 ☐ Automatic aid rcv. 3 ☐ Mutual aid given 4 ☐ Automatic aid given 5 ☐ Other aid given N ☒ None															
E1 Date & Times		Midnight is 0000 Check boxes if dates are the same as Alarm Date. ALARM always required Alarm * 06 [REDACTED] 2016 06:36:11 ARRIVAL required, unless canceled or did not arrive ☒ Arrival * 06 [REDACTED] 2016 06:44:18 CONTROLLED Optional, Except for wildland fires ☐ Controlled LAST UNIT CLEARED, required except for wildland fires ☒ Last Unit Cleared 06 [REDACTED] 2016 16:51:07															
		E2 Shift & Alarms		Local Option B [REDACTED] 5 Shift or Platoon Alarms District													
E3 Special Studies				Local Option Special Study ID# [REDACTED] Special Study Value [REDACTED]													
		F Actions Taken *		11 Extinguishment by fire service personnel Primary Action Taken (1) Additional Action Taken (2) Additional Action Taken (3)													
G1 Resources *				☒ Check this box and skip this section if an Apparatus or Personnel form is used. Apparatus 0012 Personnel 0023 EMS Other ☐ Check box if resource counts include aid received resources.													
		G2 Estimated Dollar Losses & Values		LOSSES: Required for all fires if known. Optional for non fires. None Property \$ [REDACTED] , [REDACTED] , [REDACTED] ☒ Contents \$ [REDACTED] , [REDACTED] , [REDACTED] ☒ PRE-INCIDENT VALUE: Optional Property \$ [REDACTED] , [REDACTED] , [REDACTED] ☐ Contents \$ [REDACTED] , [REDACTED] , [REDACTED] ☐													
Completed Modules				H1* Casualties ☐ None Deaths Injuries Fire Service [REDACTED] [REDACTED] Civilian [REDACTED] [REDACTED] H2 Detector Required for Confined Fires. 1 ☐ Detector alerted occupants 2 ☐ Detector did not alert them U ☐ Unknown													
		H3 Hazardous Materials Release		N ☐ None 1 ☐ Natural Gas: slow leak, no evaluation or HazMat actions 2 ☐ Propane gas: <21 lb. tank (as in home BBQ grill) 3 ☐ Gasoline: vehicle fuel tank or portable container 4 ☐ Kerosene: fuel burning equipment or portable storage 5 ☐ Diesel fuel/fuel oil: vehicle fuel tank or portable 6 ☐ Household solvents: home/office spill, cleanup only 7 ☐ Motor oil: from engine or portable container 8 ☐ Paint: from paint cans totaling < 55 gallons 0 ☐ Other: Special HazMat actions required or spill > 55gal., Please complete the HazMat form													
I Mixed Use Property				NN ☐ Not Mixed 10 ☐ Assembly use 20 ☐ Education use 33 ☐ Medical use 40 ☐ Residential use 51 ☐ Row of stores 53 ☐ Enclosed mall 58 ☐ Bus. & Residential 59 ☐ Office use 60 ☐ Industrial use 63 ☐ Military use 65 ☐ Farm use 00 ☐ Other mixed use													
		J Property Use* Structures		131 ☐ Church, place of worship 161 ☐ Restaurant or cafeteria 162 ☐ Bar/Tavern or nightclub 213 ☐ Elementary school or kindergarten 215 ☐ High school or junior high 241 ☐ College, adult education 311 ☐ Care facility for the aged 331 ☐ Hospital Outside 124 ☐ Playground or park 655 ☐ Crops or orchard 669 ☐ Forest (timberland) 807 ☐ Outdoor storage area 919 ☐ Dump or sanitary landfill 931 ☐ Open land or field													
				341 ☐ Clinic, clinic type infirmary 342 ☐ Doctor/dentist office 361 ☐ Prison or jail, not juvenile 419 ☐ 1-or 2-family dwelling 429 ☐ Multi-family dwelling 439 ☐ Rooming/boarding house 449 ☐ Commercial hotel or motel 459 ☐ Residential, board and care 464 ☐ Dormitory/barracks 519 ☐ Food and beverage sales 936 ☐ Vacant lot 938 ☐ Graded/care for plot of land 946 ☐ Lake, river, stream 951 ☐ Railroad right of way 960 ☐ Other street 961 ☒ Highway/divided highway 962 ☐ Residential street/driveway													
				539 ☐ Household goods, sales, repairs 579 ☐ Motor vehicle/boat sales/repair 571 ☐ Gas or service station 599 ☐ Business office 615 ☐ Electric generating plant 629 ☐ Laboratory/science lab 700 ☐ Manufacturing plant 819 ☐ Livestock/poultry storage(barn) 882 ☐ Non-residential parking garage 891 ☐ Warehouse 981 ☐ Construction site 984 ☐ Industrial plant yard Lookup and enter a Property Use code only if you have NOT checked a Property Use box: Property Use 961 Highway or divided highway													

NFIRS-1 Revision 03/11/99

FDID	12102 *	State	GA *	MM	DD	YYYY	08	Station	Incident Number	000 *	Exposure	*
				6		2016						

Complete
Narrative

Narrative:

Engine 9 responded to a tractor trailer on fire [REDACTED] on ramp [REDACTED] arrived on scene with fire showing. Requested haz mat and Batt 2 -- had a hissing sound coming from the cab and E-9 crew backed off until which time they could verify what the unknown noise and large amount of fire was coming from. Batt 2 requested additional units for water shuttle and man power. I Batt 2 arrived On scene and spoke with the driver to fine he had Natural Gas Tanks in the rear of the cab that powered the truck, the load was dippers.

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Home Office = Warner Enterprize Inc P O Box 37308, Omaha NE 681137 402-895-6847

Trailer No = 44879

Driver = Antwon Caren [REDACTED] Forest Park Ga [REDACTED]

GDOT Rep = Michael McGrotha he oversaw the operation.

A&D Environmental came out and checked environmental issues.

This call lasted into the following shift up to about 1700 hrs. additional narratives maybe added.

Units on scene
Batt 2 command

Dep Chief

Eng 9-8-13-18 & haz mat T-5 - R-1 E-15 command change about 0930

VMITRCIQ

** GRAGAR **

09:59:26 6/27/2016

Tractor Record Inquiry

Unit Number.....: 65311	Tractor Weight....: 15,281
Type Power.....: N	Declare Weight....: 80,000
Year.....: 2015	Maint Eq Code...: U5
Make.....: VOL	Model...: VNL64T
Serial Number...: 4V5NC9UG7FN	Division Code: CE
Date Purchased...: 1/22/2015	Cab Type: AV
Tractor Status...: MT	Engine Type...: CNC
In Service Date...: 3/10/2015	Eng Year: 2015
Last Trlr Hauled:	Engine Horsepower: 000
Last ECM Date...: 6/13/2016	Engine Serial....: S75035959
Last ECM Miles...: 295,620	Eng. Warranty....:
# Axles.....: 3	Type of Trans....:
Current Tr MGR...: ZV	Trans. Serial....: P0829698
First Driver....:	Rear End Ratio...: 355
Second Driver....:	Fuel Capacity....:
Team/Student....:	Front Rear Serial: SFOR03016355
Owner.....: WERNER ENTERPRISES	Rear Rear Serial.: SFOR03016356
	Arrangement#.....:
	Key No.....: 1378
	Depreciation Mths: 036

Cmd: 2-Previous 3-Exit 14-Addl Eq

FEH PROJECT: 16-054 Werner Volvo CNG

DATE: 7/26/2016

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