THERMO KING

Thermo King Corporation
World Headquarters
314 West 90th Street
Bloomington, Mn 55420-3693

(952) 887-2200
(952) 887-2615 Fax
www.thermoking.com

November 5, 2012

SAFETY RECALL NOTICE

VOLUNTARY SAFETY RECALL CAMPAIGN #12E-041

Dear Thermo King Customer:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Thermo King Corp. has decided that a defect which relates to motor vehicle safety exists inTK486 series diesel engines used in certain Thermo King climate control units for cargo trailers and generator sets. Cracks in the fuel delivery guides of these engines may result in fuel leakage, creating a potential fire hazard.

This recall affects TK486 series diesel engines used in the following Thermo King climate control units for cargo trailers and generator sets: SB-130, SB-230, SB-330, Spectrum SB-30, Spectrum SB-50, Spectrum DE, SB-200TG, SB-400, and SGCM-3000. Thermo King manufactured these units between December 9, 2011 and April 3, 2012.

Your authorized Thermo King dealer will replace the fuel delivery guides in the TK486 engines. We estimate that this replacement, which will be made at no cost to you, will take about 1 hour. Please contact your authorized Thermo King dealer on or after October 22, 2012 to schedule an appointment to have this replacement performed.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of the notice to the vehicle lessee within ten days.

You may submit a complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Ave., SE, Washington, D.C. 20590 or call the toll-free Vehicle Safety Hotline at 1-888-327-4236 (TTY: 1-800-429-9153) or go to http://www.safercar.gov, if you believe that Thermo King has failed or is unable to remedy your equipment without charge.

Thermo King regrets any inconvenience this voluntary recall may cause you. If you have any questions regarding this recall, you may call Thermo King at **(866) 776-2708.**

Sincerely,

Thermo King Corporation

THERMO KING

Campaign Bulletin

Date: November 5, 2012

Subject: **TK486 Engines - Fuel Delivery Guides** - Safety Recall Campaign #12E-041

Bulletin Location: TSA Info Central\Bulletins\Campaign Bulletins

CB570

Thermo King Corp. has decided that a defect which relates to motor vehicle safety exists in TK486 series diesel engines used in certain Thermo King climate control units for cargo trailers and generator sets. Cracks in the fuel delivery guides of these engines may result in fuel leakage, creating a potential fire hazard.

Customer Notification, Time Frame and Record Keeping

You should immediately notify all your customers who operate the Thermo King products listed below to schedule an appointment with an authorized Thermo King dealer to have this safety recall performed without charge to the customer. You must use the enclosed owner notification letter and envelopes for this purpose.

Each dealer should keep a copy of all correspondence relating to this recall, together with any written responses from customers. In addition, when requested by Thermo King Service or Warranty Departments, a dealer should forward copies of all correspondence to Thermo King so that Thermo King can monitor the success of this recall.

The target date for completion of this work and the filing of claims is October 22, 2013.

NOTE: It is a violation of federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment covered by this notice under a sale or lease until the defect has been remedied.

Units Covered:

This recall affects TK486 series diesel engines used in the following Thermo King climate control units for cargo trailers and generator sets: SB-130 (TK486V), SB-230 (TK486V), SB-330 (TK486VH), Spectrum SB-30 (TK486V), Spectrum SB-50 (TK486V), Spectrum DE (TK486V), SB-200TG (TK486V), SB-400 (TK486V), SGCM-3000 (TK486VG2). Thermo King manufactured these units between December 9, 2011 and April 3, 2012. The recall also covers TK486V and TK486VH engines which Thermo King sold as replacement engines between January 3, 2012 and June 27, 2012.

Engine serial numbers covered by this recall are shown in the attached list.

Labor Hours: 1 Hour

Description: The fuel delivery guides in the affected TK486 engines will be replaced.

Parts List:

Quantity	Part Number	Description
1	017087	Kit, Fuel Pump Delivery Guide

Procedure:

Replace fuel delivery guide in affected TK486 engines.

Filing Your Claim:

In "Claim Type" use "Field Modification"

Input the "Unit Serial Number". If "Unit Serial Number" is not recognized in TAVANT as being qualified for this Campaign, contact the Thermo King Warranty Department to ensure the "Engine Serial Number" is registered to the unit being repaired.

Select the appropriate Field Modification number if not populated

Input your "Dealer Reference Number" in the "Work order Number" field

Input the "Hours In Service/Energy Units"

Input the "Repair date" this is the repair completion date

Leave the SMR and Commercial Policy boxes UNCHECKED

Depress "Continue"

Double check all the parts are accurate

Fill in the "Condition Found" and "Work Performed"

Attach any pertinent documents

The rest of this page will be completed automatically. The claim is complete and ready to validate and submit.

Attachments:

List of affected serial numbers

Delivery Valve Replacement on Field Units (Dated: October 15, 2012)

Attachment Engine Serial No. Range: (Trailer, Gen Set or Aftermarket ID; non-sequential)

- Between K82651 and K85256 -or-
- Between S06141 and S06176 -or-
- Between T70444 and T71586 -or-
- Between V95680 and V95975.

TK SN Range: (Used for Trailer or Gen Set ID)

- Trailer: Between 6001106078 and 6001114436 (non-sequential)
- Gen Set: (Exact; Sequential)

Between AKA1000972 and AKA1000975 -or-

Between AKA1000980 and AKA1000983 -or-

Between AKA1000988 and AKA1001006 -or-

Between AKA1001010 and AKA1001013 -or-

Between AKA1001019 and AKA1001049 -or-

Between AKA1001058 and AKA1001097

Delivery Valve Replacement on Field Units
Date: October 15, 2012

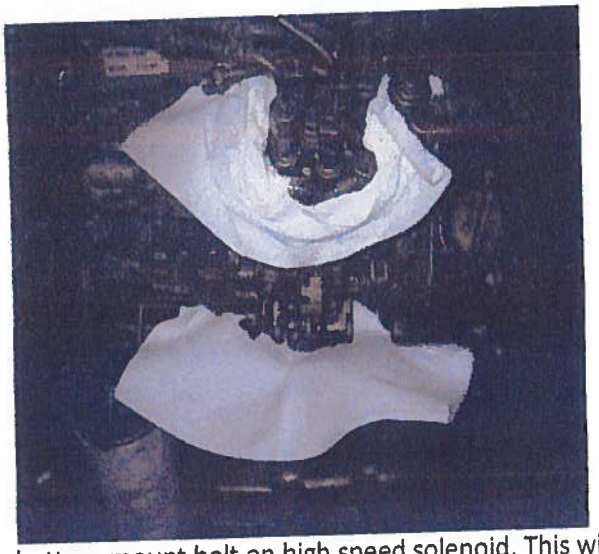
ırpose: This document was created to instruct a field technician on how to replace four delivery valves in a Yanmar injection ımp. The delivery valve guides installed in the injection pump have the potential to crack and cause a fuel leak.

ote: If the unit serial number does not fall into the range listed this procedure should not be preformed

arts Required: 1 kit P/N 017087per engine
4 Delivery valve assemblies
4 Copper sealing washers

ontact service parts to procure these parts.

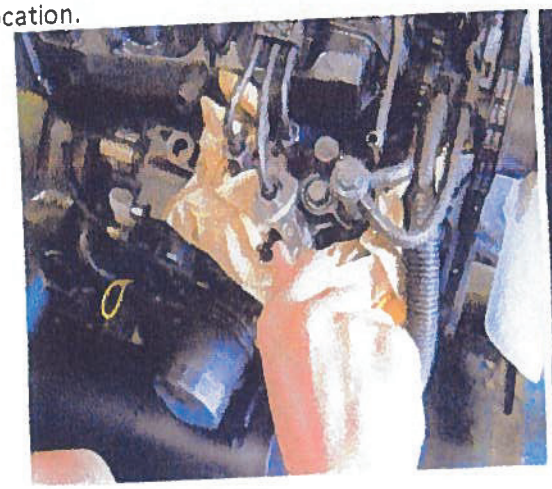
ngine Parts removal:
tep 1: Use compressed air/blow gun to clean sand/debris from around injection pump and fuel injector high pressure lines.
tep 2: Place rags on Injection pump to catch any dripping fuel during disassembly



Step 3: Remove top three bolts and loosen bottom mount bolt on high speed solenoid. This will allow enough room to remove the high pressure injection lines.

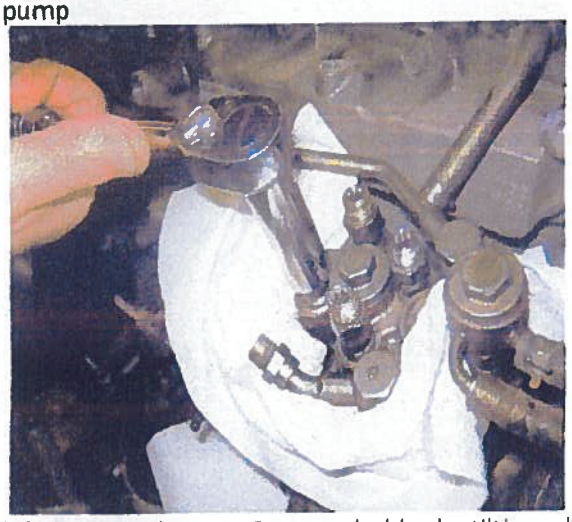
Step 4: Remove the breather pipe from the valve cover. Bend it out of the way so the injector lines can be accessed for removal.

tep 5: Remove the high pressure injection lines. Loosen the 17mm nuts at injection pump and at nozzle. Place the injection line ssembly in a safe, clean location.

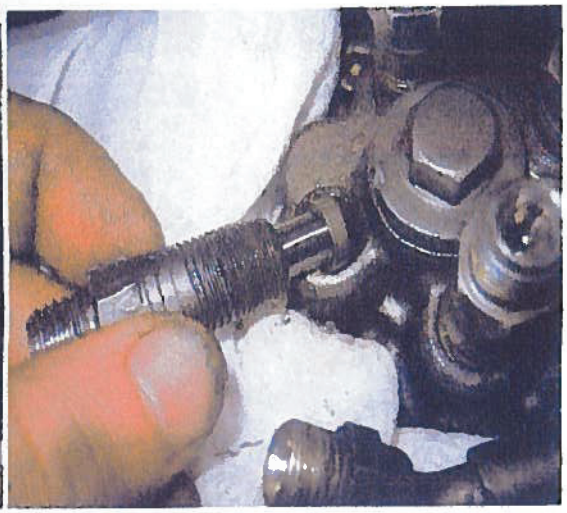


Delivery Valve Replacement:

Step 1: Use a 14mm deep well socket to loosen delivery valve holder. Loosen holders 2 turns each then carefully clean up any paint chips/debris from top of injection pump



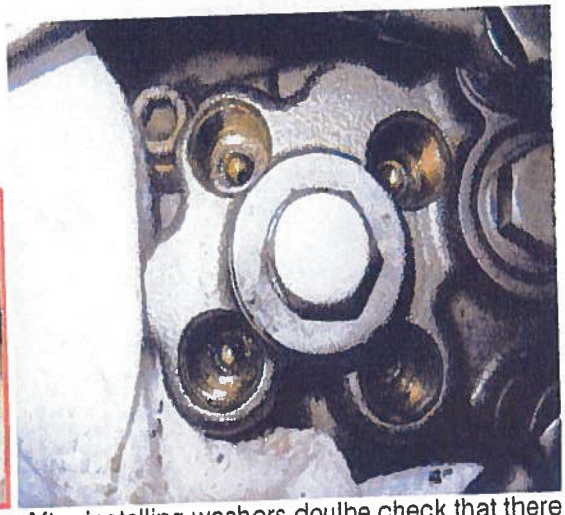
Step 2: Loosen delivery valve holder with fingers one by one. Remove holder by tilting a little so the delivery valve assembly stays in holder when removed.



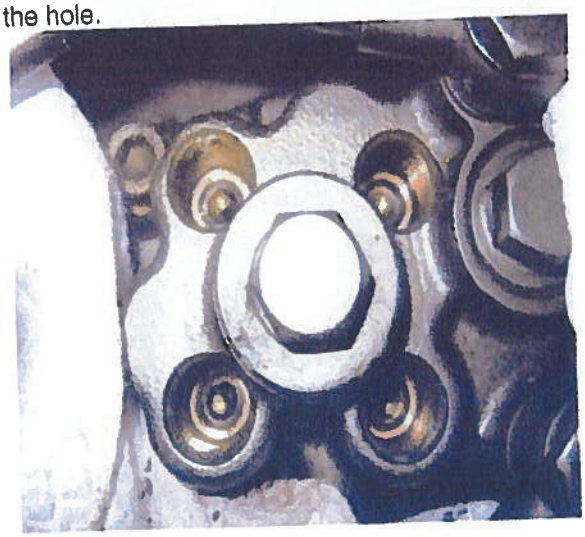
Step 3: Remove copper sealing washer from hydraulic head using 90° pick.

Step 4: Remove old delivery valve assembly from delivery valve holder and place in bag with copper sealing washer. Please provide pump number, engine serial number, and replacement date, inside of bag with used parts. Return removed parts to Thermo King Warranty. Top spring will be re-used with new delivery valves.

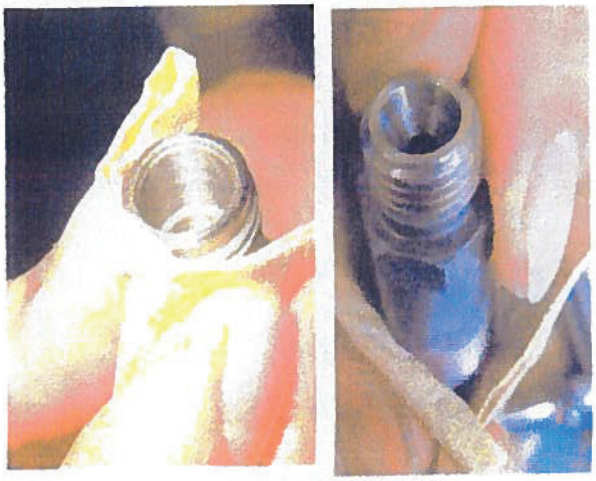
Step 5: Visually inspect delivery valve mounting hole. If there is and debris/paint chips or any kind of foreign material carefully emove. A pair of tweezers may work the best.



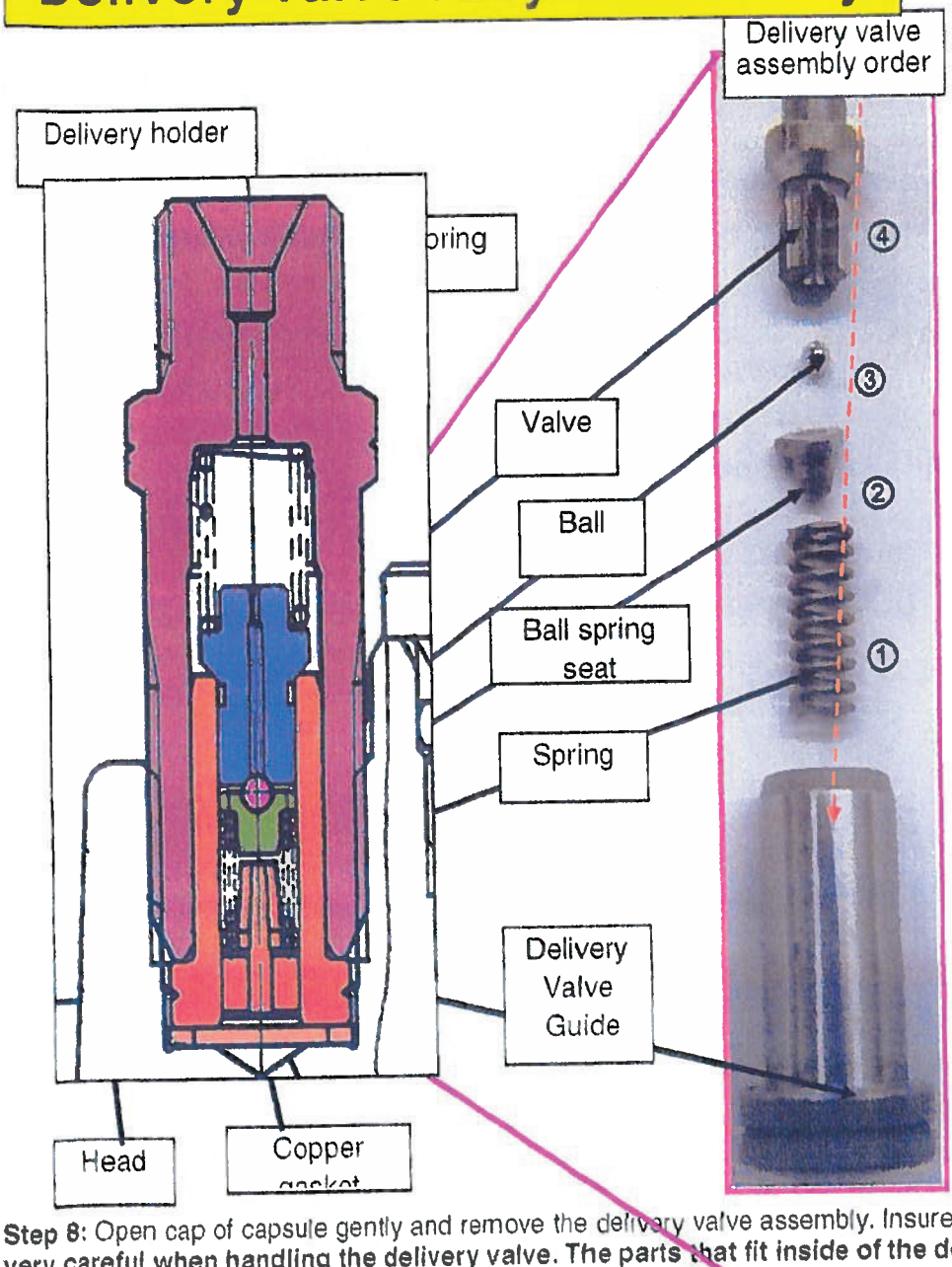
Step 6: Install 1 new copper sealing washer in each hole. After installing washers doulbe check that there is 1 washer per hole and that they are laying flat in the bottom of the hole.



Step 7: Carefully clean and inspect the delivery valve holder. Note: if the delivery valve guide was cracked there is a chance that the delivery valve holder is damaged. Inspect end (2) for scratches/nicks. If damage is found replace holder.

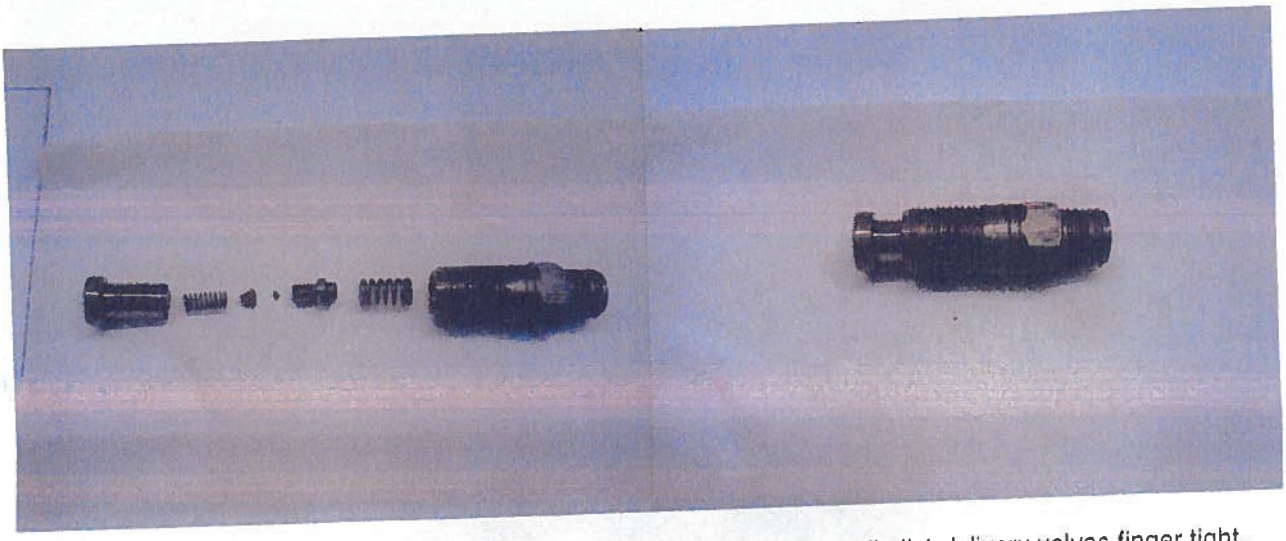


Delivery valve assy. Assembly

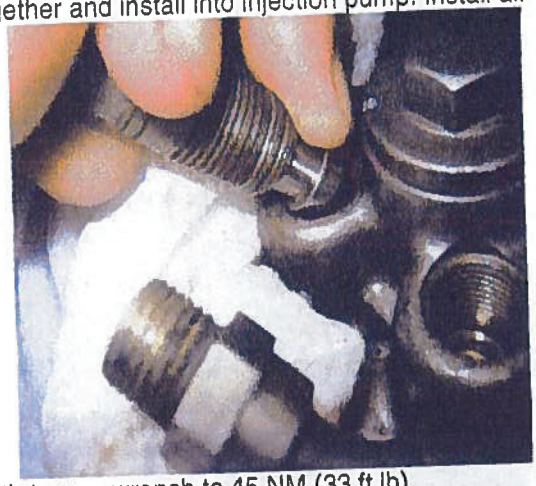


Step 8: Open cap of capsule gently and remove the delivery valve assembly. Insure it is assembled as in the picture below. **Be very careful when handling the delivery valve. The parts that fit inside of the delivery valve guide are very small.** Insert the new delivery valve assembly into the holder.

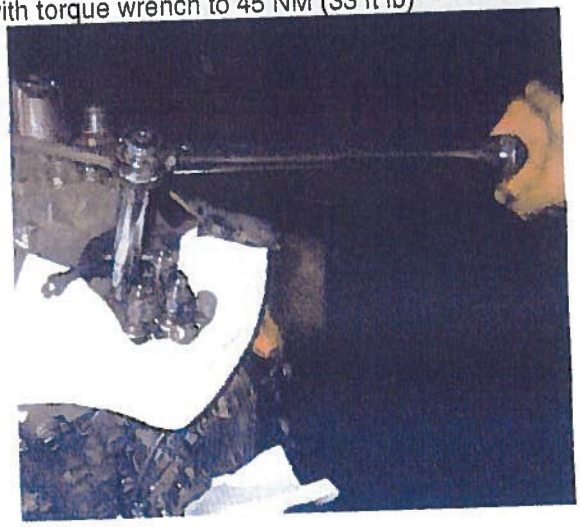
*Note: If you do not feel spring action on the delivery valve guide it has been assembled incorrectly



tep 9: Hold delivery valve and holder together and install into injection pump. Install all 4 delivery valves finger tight.

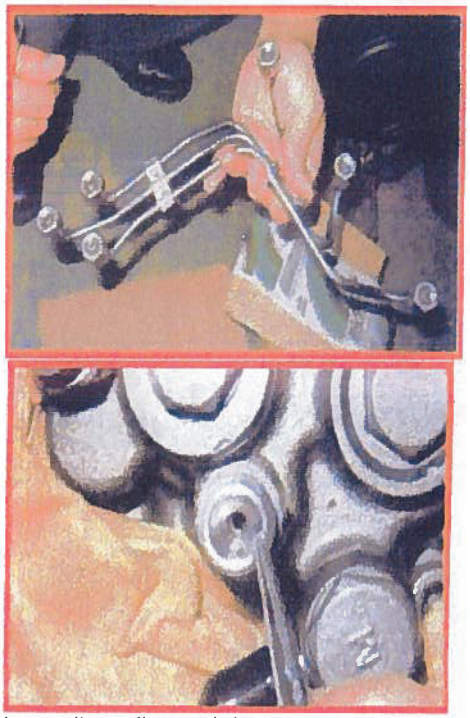


Step 10: Tighten delivery valve holder with torque wrench to 45 NM (33 ft lb)



Engine Parts Re-install:

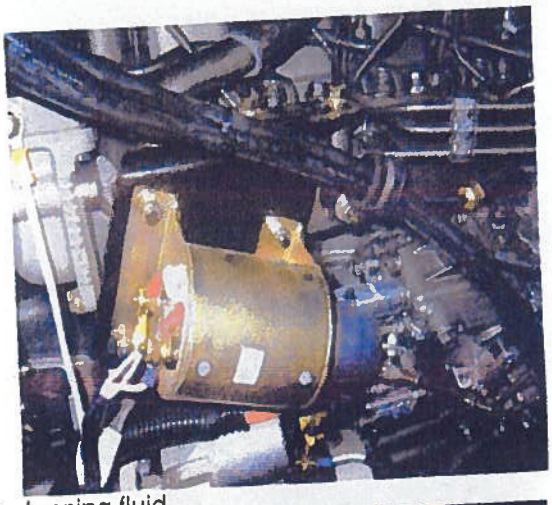
Step 1: Check mating surfaces of high pressure pipe, delivery valve holder, and injectors. Make sure these surfaces are clean so the high pressure lines will seal when tightened.



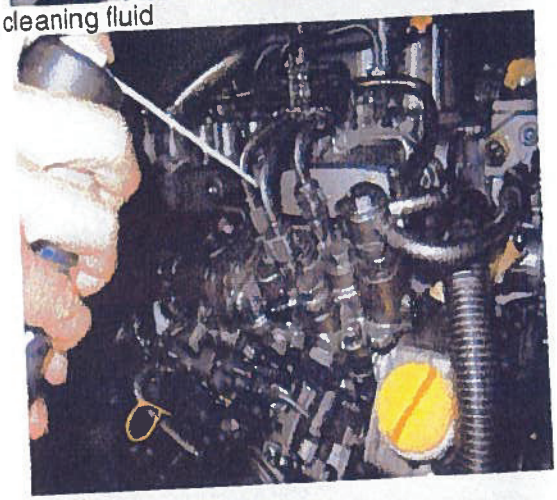
Step 2: Tighten both ends of high pressure injector lines finger tight to ensure they are not cross threaded. Torque injector lines to 29 to 34 NM (22 to 25 ft lbs)

Step 3: Re-install the breather pipe to the to the valve cover

Step 4: Re-Install and tighten the high speed solenoid mounting bolts.

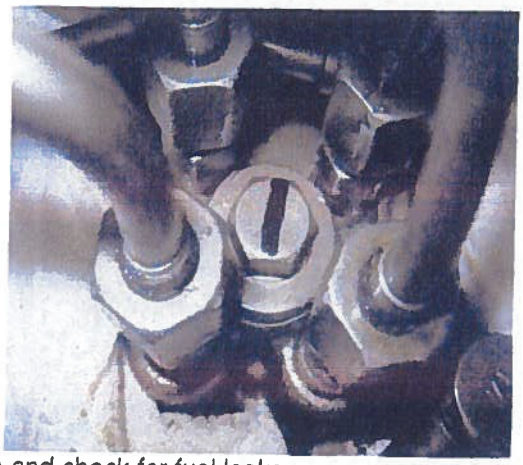


tep 5: Degrease pump and engine with cleaning fluid



Step 6: re-paint surfaces that are missing paint

Step 7: Use a marker to put a line on the top of the distribution shaft plug to indicate the rework has been completed



Step 8: Start unit to verify proper operation and check for fuel leaks.

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November 5, 2012

Safety Recall Notice – TK486 Engines - Fuel Delivery Guides
NHTSA Recall #12E-041

Dear Customer:

Thermo King Corp. has decided that a defect which relates to motor vehicle safety exists in TK486 series diesel engines used in certain Thermo King climate control units for cargo trailers and generator sets. Cracks in the fuel delivery guides of these engines may result in fuel leakage, creating a potential fire hazard.

This recall affects TK486 series diesel engines used in the following Thermo King climate control units for cargo trailers and generator sets: SB-130, SB-230, SB-330, Spectrum SB-30, Spectrum SB-50, Spectrum DE, SB-200TG, SB-400, and SGCM-3000. Thermo King manufactured these units between December 9, 2011 and April 3, 2012.

Although our records do not show any sales of these units by your dealership, owners of these units may call upon you, as an authorized Thermo King dealership, to carry out the repairs described in the attached bulletin and owner letter. Please perform these repairs, as instructed in the attached bulletin.

If your records do show any sales of these units to customers of your dealership, you should send them the enclosed owner letter in the envelopes provided.

We apologize for any inconvenience this may cause.

Sincerely,

Thermo King Corporation

BY:

Thomas W. King

Enclosure

THERMO KING

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November 5, 2012

SAFETY RECALL NOTICE

VOLUNTARY SAFETY RECALL CAMPAIGN #12E-041

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Sincerely,

Thermo King Corporation

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Campaign Bulletin

Date: November 5, 2012

Subject: **TK486 Engines - Fuel Delivery Guides** - Safety Recall Campaign #12E-041

Bulletin Location: TSA Info Central\Bulletins\Campaign Bulletins

CB570

Thermo King Corp. has decided that a defect which relates to motor vehicle safety exists in TK486 series diesel engines used in certain Thermo King climate control units for cargo trailers and generator sets. Cracks in the fuel delivery guides of these engines may result in fuel leakage, creating a potential fire hazard.

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The target date for completion of this work and the filing of claims is October 22, 2013.

NOTE: It is a violation of federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment covered by this notice under a sale or lease until the defect has been remedied.

Units Covered:

This recall affects TK486 series diesel engines used in the following Thermo King climate control units for cargo trailers and generator sets: SB-130 (TK486V), SB-230 (TK486V), SB-330 (TK486VH), Spectrum SB-30 (TK486V), Spectrum SB-50 (TK486V), Spectrum DE (TK486V), SB-200TG (TK486V), SB-400 (TK486V), SGCM-3000 (TK486VG2). Thermo King manufactured these units between December 9, 2011 and April 3, 2012. The recall also covers TK486V and TK486VH engines which Thermo King sold as replacement engines between January 3, 2012 and June 27, 2012.

Engine serial numbers covered by this recall are shown in the attached list.

Labor Hours: 1 Hour

Description: The fuel delivery guides in the affected TK486 engines will be replaced.

Parts List:

Quantity	Part Number	Description
1	017087	Kit, Fuel Pump Delivery Guide

Procedure:

Replace fuel delivery guide in affected TK486 engines.

Filing Your Claim:

In "Claim Type" use "Field Modification"

Input the "Unit Serial Number". If "Unit Serial Number" is not recognized in TAVANT as being qualified for this Campaign, contact the Thermo King Warranty Department to ensure the "Engine Serial Number" is registered to the unit being repaired.

Select the appropriate Field Modification number if not populated

Input your "Dealer Reference Number" in the "Work order Number" field

Input the "Hours In Service/Energy Units"

Input the "Repair date" this is the repair completion date

Leave the SMR and Commercial Policy boxes UNCHECKED

Depress "Continue"

Double check all the parts are accurate

Fill in the "Condition Found" and "Work Performed"

Attach any pertinent documents

The rest of this page will be completed automatically. The claim is complete and ready to validate and submit.

Attachments:

List of affected serial numbers

Delivery Valve Replacement on Field Units (Dated: October 15, 2012)

Attachment Engine Serial No. Range: (Trailer, Gen Set or Aftermarket ID; non-sequential)

- Between K82651 and K85256 -or-
- Between S06141 and S06176 -or-
- Between T70444 and T71586 -or-
- Between V95680 and V95975.

TK SN Range: (Used for Trailer or Gen Set ID)

- Trailer: Between 6001106078 and 6001114436 (non-sequential)
- Gen Set: (Exact; Sequential)

☐ Between AKA1000972 and AKA1000975 -or-

☐ Between AKA1000980 and AKA1000983 -or-

☐ Between AKA1000988 and AKA1001006 -or-

☐ Between AKA1001010 and AKA1001013 -or-

☐ Between AKA1001019 and AKA1001049 -or-

☐ Between AKA1001058 and AKA1001097

Delivery Valve Replacement on Field Units
Date: October 15, 2012

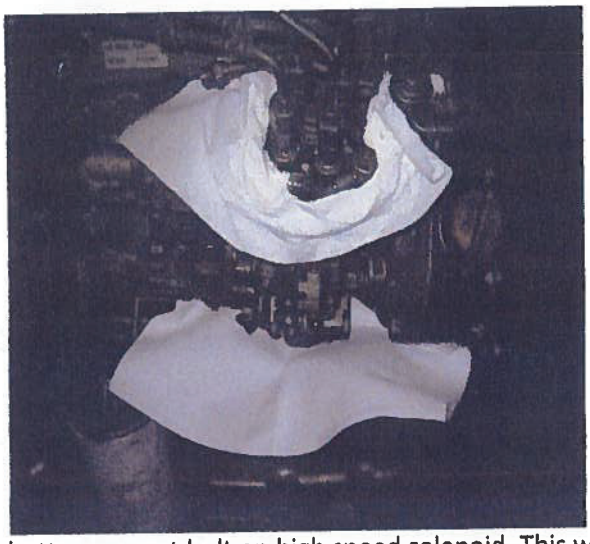
Purpose: This document was created to instruct a field technician on how to replace four delivery valves in a Yanmar injection pump. The delivery valve guides installed in the injection pump have the potential to crack and cause a fuel leak.

Note: If the unit serial number does not fall into the range listed this procedure should not be preformed

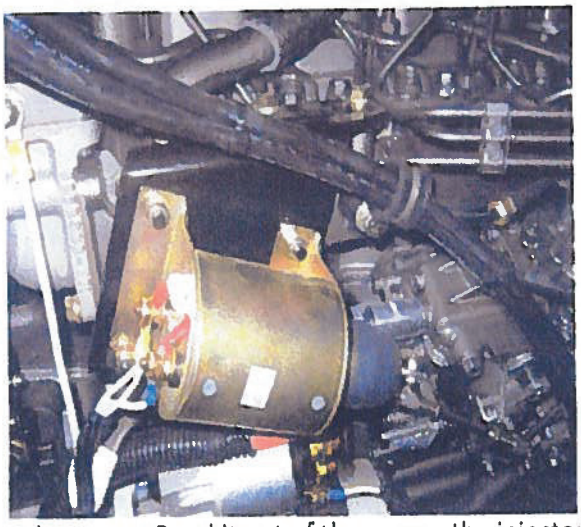
Parts Required: 1 kit P/N 017087per engine
4 Delivery valve assemblies
4 Copper sealing washers

Contact service parts to procure these parts.

Engine Parts removal:
Step 1: Use compressed air/blow gun to clean sand/debris from around injection pump and fuel injector high pressure lines.
Step 2: Place rags on Injection pump to catch any dripping fuel during disassembly



Step 3: Remove top three bolts and loosen bottom mount bolt on high speed solenoid. This will allow enough room to remove the high pressure injection lines.

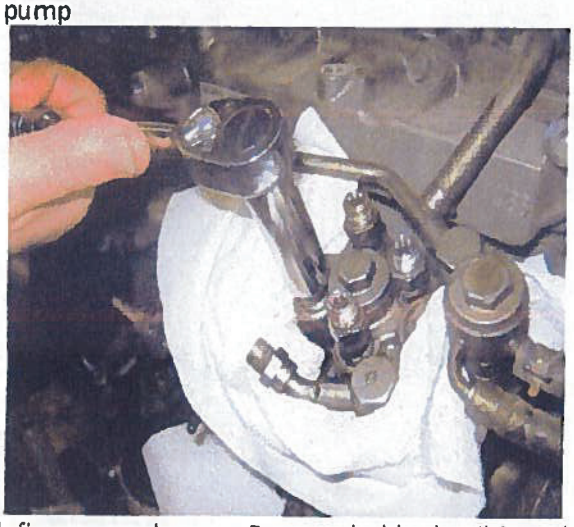


Step 4: Remove the breather pipe from the valve cover. Bend it out of the way so the injector lines can be accessed for removal.

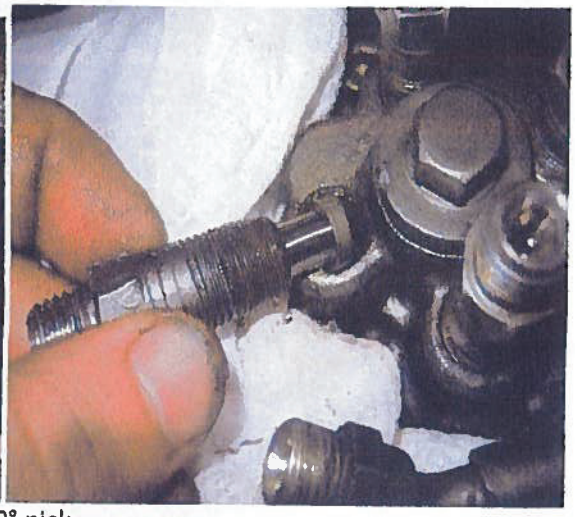
Step 5: Remove the high pressure injection lines. Loosen the 17mm nuts at injection pump and at nozzle. Place the injection line assembly in a safe, clean location.

Delivery Valve Replacement:

Step 1: Use a 14mm deep well socket to loosen delivery valve holder. Loosen holders 2 turns each then carefully clean up any paint chips/debris from top of injection pump



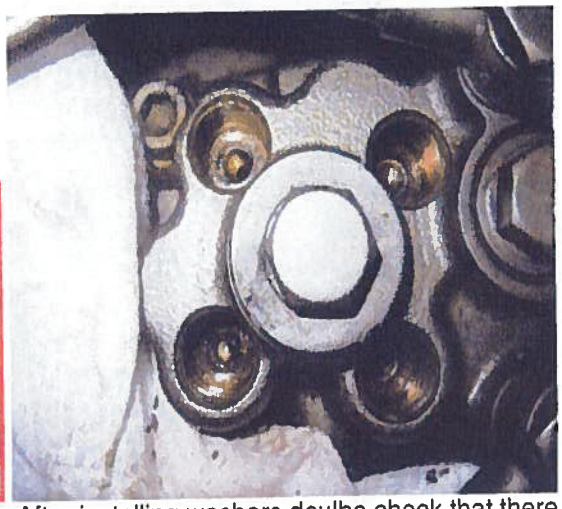
Step 2: Loosen delivery valve holder with fingers one by one. Remove holder by tilting a little so the delivery valve assembly stays in holder when removed.



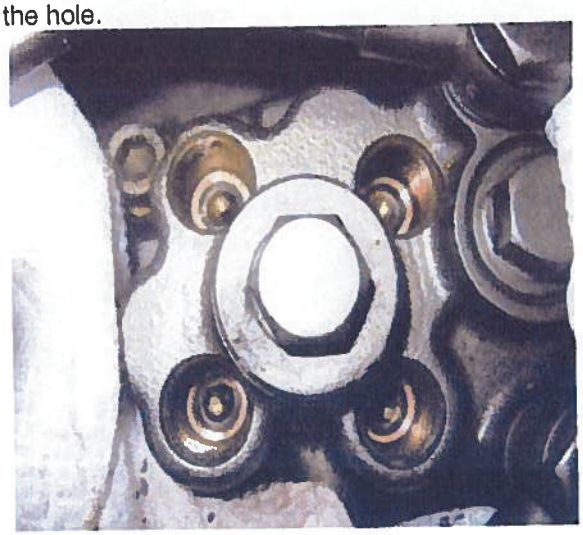
Step 3: Remove copper sealing washer from hydraulic head using 90° pick.

Step 4: Remove old delivery valve assembly from delivery valve holder and place in bag with copper sealing washer. Please provide pump number, engine serial number, and replacement date, inside of bag with used parts. Return removed parts to Thermo King Warranty. Top spring will be re-used with new delivery valves.

Step 5: Visually inspect delivery valve mounting hole. If there is and debris/paint chips or any kind of foreign material carefully remove. A pair of tweezers may work the best.

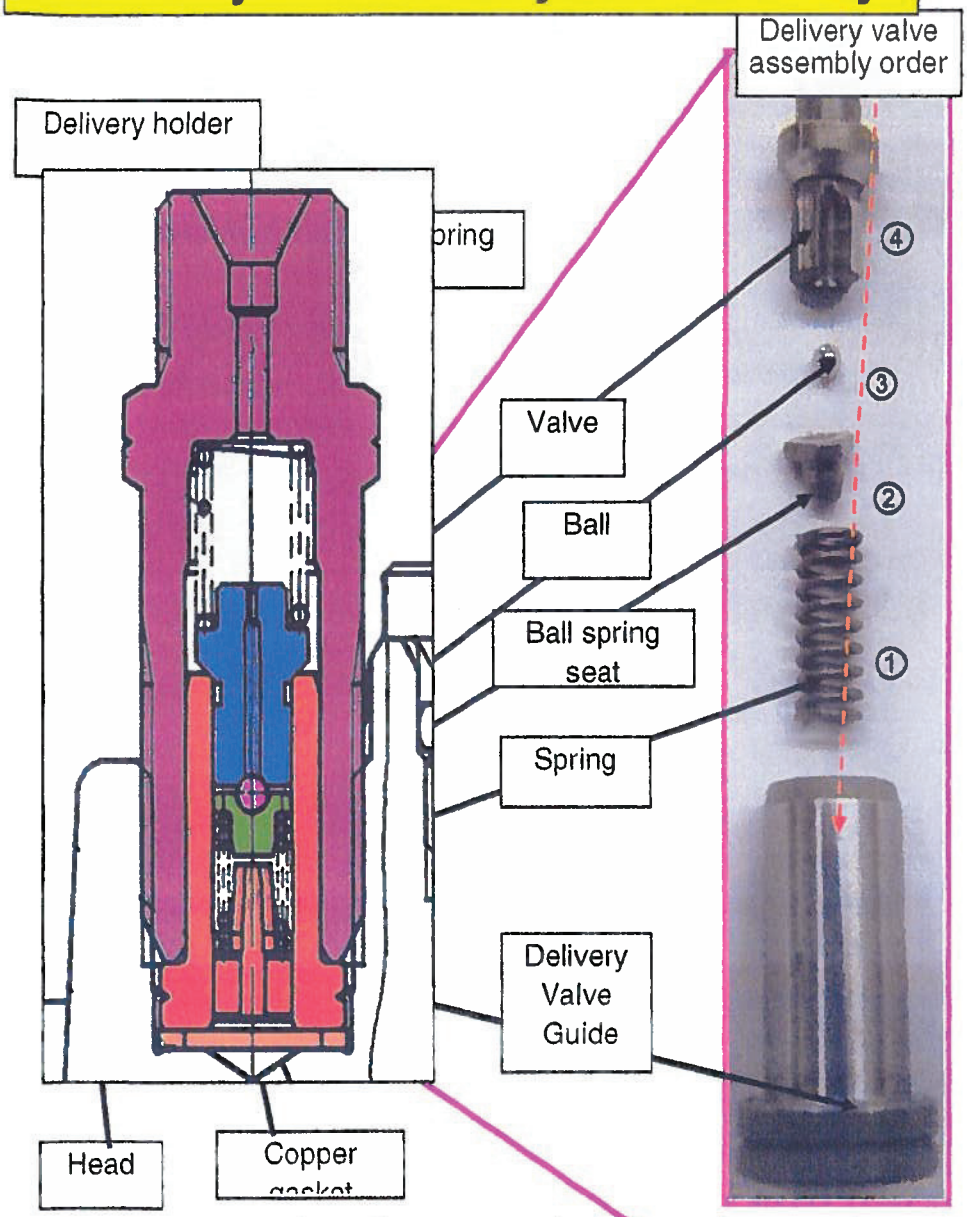


Step 6: Install 1 new copper sealing washer in each hole. After installing washers doulbe check that there is 1 washer per hole and that they are laying flat in the bottom of the hole.



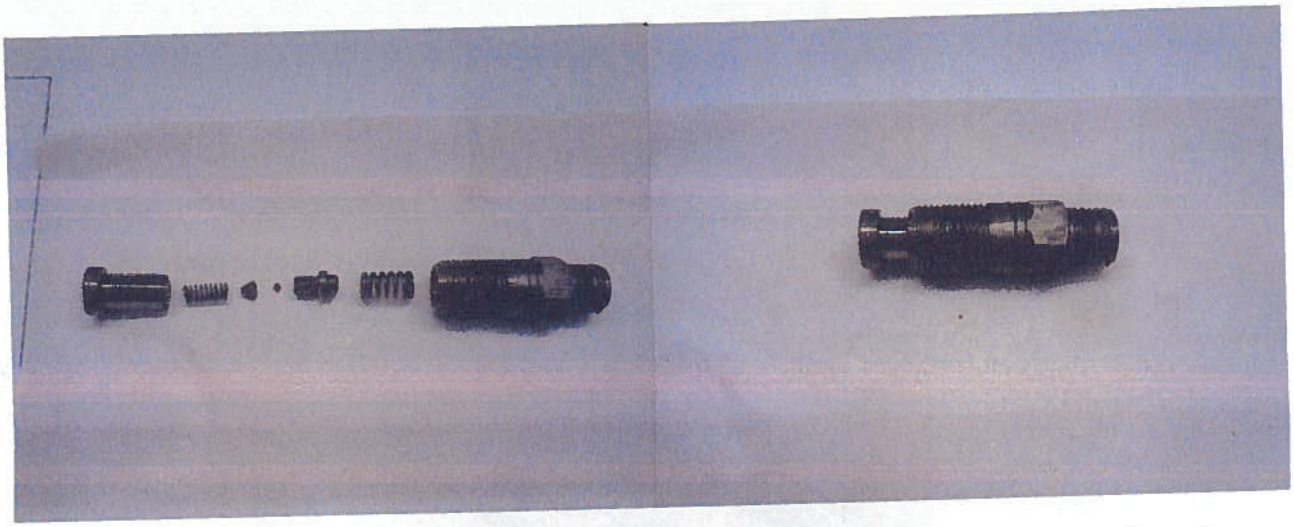
Step 7: Carefully clean and inspect the delivery valve holder. Note: if the delivery valve guide was cracked there is a chance that the delivery valve holder is damaged. Inspect end (2) for scratches/nicks. If damage is found replace holder.

Delivery valve assy. Assembly

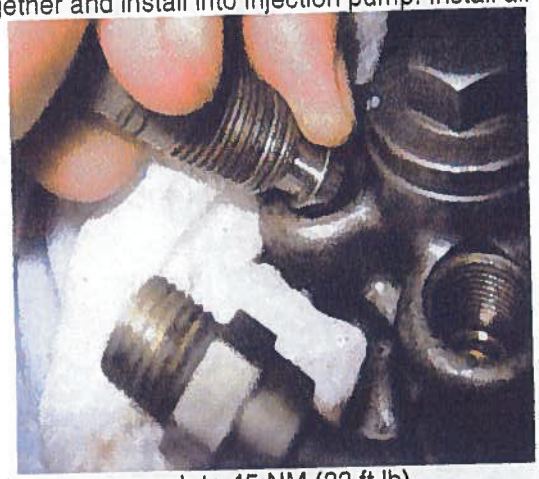


Step 8: Open cap of capsule gently and remove the delivery valve assembly. Insure it is assembled as in the picture below. **Be very careful when handling the delivery valve. The parts that fit inside of the delivery valve guide are very small.** Insert the new delivery valve assembly into the holder.

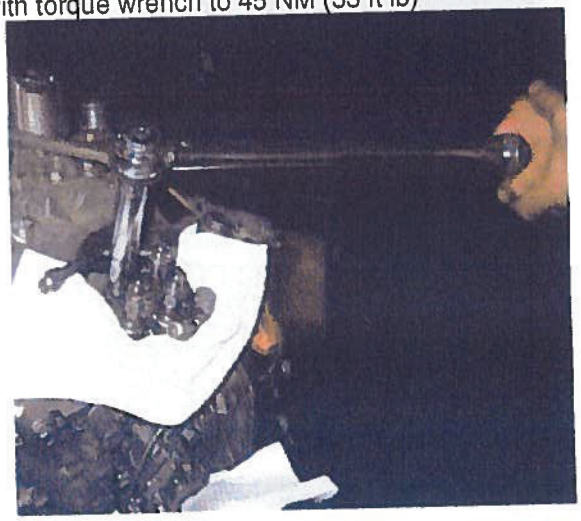
*Note: If you do not feel spring action on the delivery valve guide it has been assembled incorrectly



Step 9: Hold delivery valve and holder together and install into injection pump. Install all 4 delivery valves finger tight.

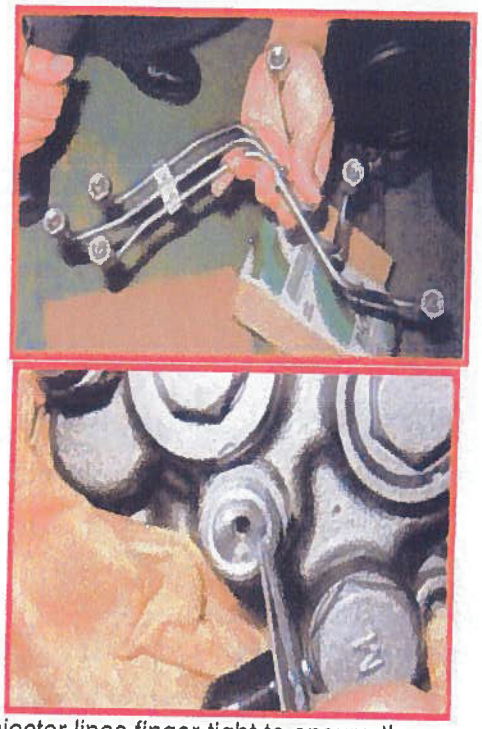


Step 10: Tighten delivery valve holder with torque wrench to 45 NM (33 ft lb)

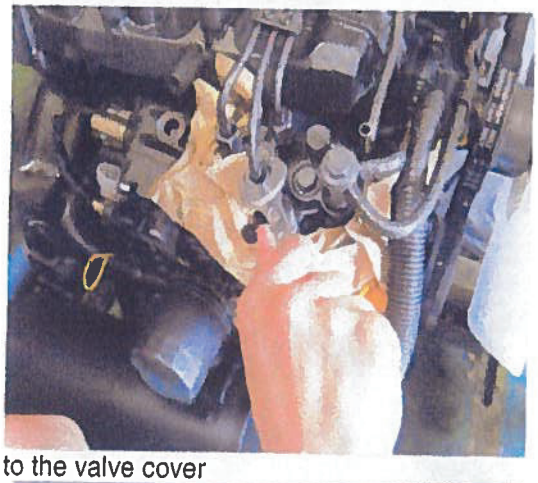


Engine Parts Re-install:

Step 1: Check mating surfaces of high pressure pipe, delivery valve holder, and injectors. Make sure these surfaces are clean so the high pressure lines will seal when tightened.

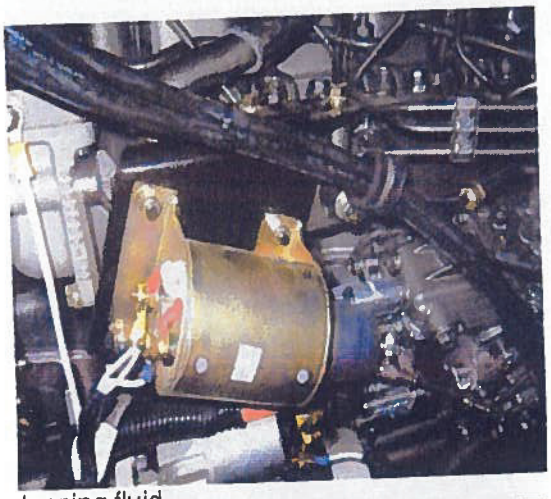


Step 2: Tighten both ends of high pressure injector lines finger tight to ensure they are not cross threaded. Torque injector lines to 29 to 34 NM (22 to 25 ft lbs)

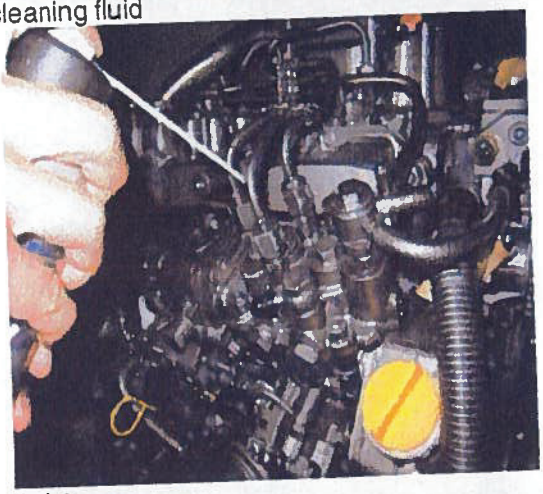


Step 3: Re-install the breather pipe to the to the valve cover

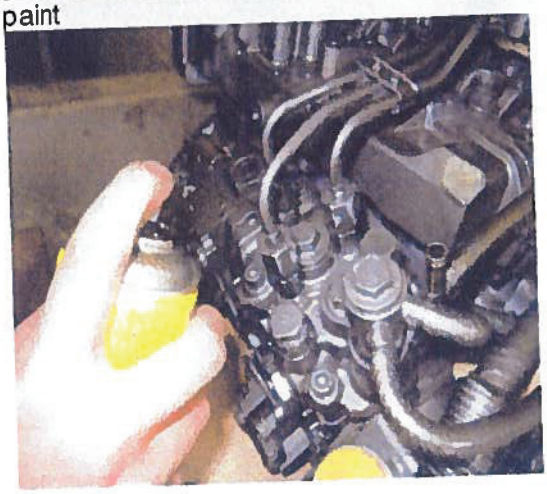
Step 4: Re-Install and tighten the high speed solenoid mounting bolts.



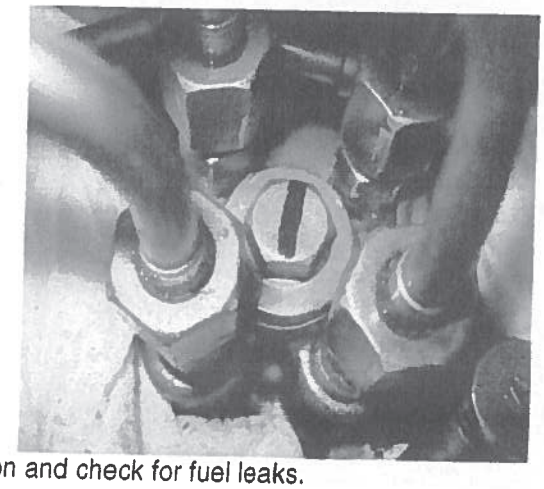
Step 5: Degrease pump and engine with cleaning fluid



Step 6: re-paint surfaces that are missing paint



Step 7: Use a marker to put a line on the top of the distribution shaft plug to indicate the rework has been completed



Step 8: Start unit to verify proper operation and check for fuel leaks.