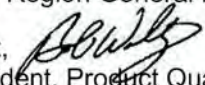


TOYOTA CUSTOMER SERVICES

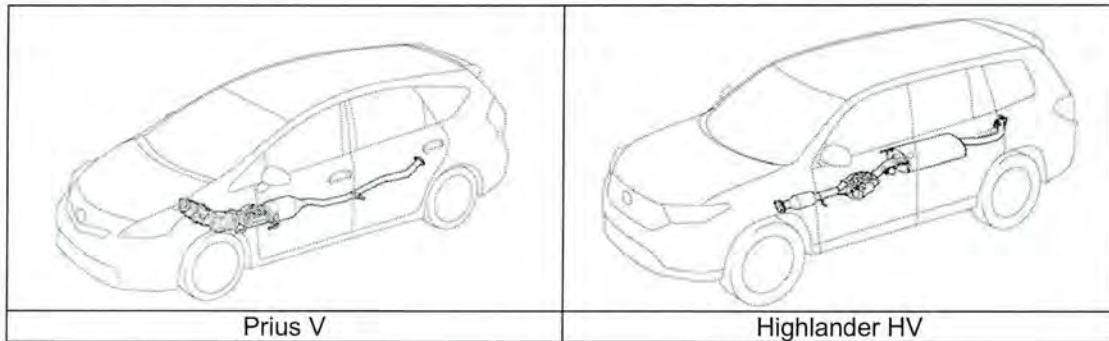
Volume: XIX
Number: TC12-011
Date: 4/23/2012
 Action
 Retain
 Information

INTEROFFICE MEMORANDUM



Update – 7/23/2012: Vehicle Applicability and Warranty sections have been updated to provide information regarding vehicles that had updated parts installed during vehicle manufacturing.
Previous versions of these documents should be discarded.

To: All Toyota Region General Managers/Vice Presidents
From: Bob Waltz, 
Vice President, Product Quality and Service Support
Subject: Limited Service Campaign C0F
Certain 2011 and 2012 MY Highlander HV and Certain 2012 MY Prius V Vehicles
Exhaust Gas Control Actuator Replacement

In our continuing efforts to assure the best in customer satisfaction, Toyota is launching a Limited Service Campaign to replace the Exhaust Gas Control Actuator on Certain 2011 and 2012 MY Highlander HV and Certain 2012 MY Prius V Vehicles.



Background

On certain 2011 and 2012 model year Highlander HV and certain 2012 model year Prius V vehicles, there is a possibility that the exhaust gas control actuator may develop a coolant leak. If a coolant leak occurs, the Water Temp Indicator Lamp* () and Check Engine Lamp () will illuminate.

* For Highlander HV the Water Temp Indicator Lamp will illuminate when the needle for the engine coolant temperature gauge enters the red zone.

If the above warning lamps illuminate, the driver should pull over, and contact an authorized Toyota dealer for diagnosis and repair. Continued operation of the vehicle with insufficient levels of coolant will cause the engine to overheat.

Limited Service Campaign (LSC) Remedy

Toyota dealers are requested to replace the Exhaust Gas Control Actuator at **NO CHARGE** to the customer.

All terms of the New Vehicle Limited Warranty will remain intact regardless of whether or not the customer takes advantage of this Limited Service Campaign. Additional details on the vehicle's New Vehicle Limited Warranty coverage can be found in the Owner's Warranty and Service Guide booklet.

The following vital information is provided to inform you and your staff of the owner notification timing and your degree of involvement.

1. Dealer Letter Mailing Date

The attached Dealer Letter will be sent to all Toyota dealers in Late April, 2012.

2. Owner Notification Mailing Date

The owner notification will commence in Late April, 2012, shortly after the dealer notification.

Please note that only owners of the covered vehicles will be notified. If a dealer is contacted by an owner who has not yet received a notification, please instruct them to **verify eligibility by confirming through Dealer Daily/TIS prior to performing repairs**. Dealers should perform the repair as outlined in the Technical Instructions found on TIS.

3. Vehicle Applicability

This Limited Service Campaign will be available at **NO CHARGE** to vehicle owners until **May 31, 2015**. All terms of the covered vehicle's applicable New Vehicle Limited Warranty will remain intact regardless of whether or not the customer takes advantage of the Limited Service Campaign.

There are a small number of vehicles (approximately 200) that had an updated center exhaust pipe assembly and exhaust gas control actuator installed during vehicle manufacturing. The kit parts used for this campaign cannot be installed on these exhaust pipes due to design changes on the exhaust pipe. There is no need to replace the actuator on these vehicles. If a dealer contacts the region with one of these vehicles, confirm the vehicle's condition and provide them the appropriate opcode.

4. New and Used Vehicles in Dealership Inventory (In-Stock Vehicles)

To ensure customer satisfaction Toyota request that dealers perform the Limited Service Campaign Remedy on any New or Used Vehicle in dealer inventory that is covered by this Limited Service Campaign prior to customer delivery.

5. Toyota Rent-A-Car (TRAC) Vehicles

Toyota requests that dealers verify whether their TRAC vehicles are covered by Limited Service Campaign C0F. If a vehicle is covered, please perform the Limited Service Campaign prior to renting the vehicle to a customer.

6. Implementation at Dealerships

The Limited Service Campaign dealer package, which will be sent in Mid-April 2012, contains the warranty claim procedure and parts order information. All dealership associates who are involved in this campaign should be familiar with its contents.

7. Number and Identification of Covered Vehicles

There are approximately 5,600 certain 2011 and 2012 Model Year Highlander HV Vehicles and approximately 18,000 Certain 2012 Model Year Prius V vehicles covered by this Limited Service Campaign in the U.S.

8. Region/District Summary Reports

We have enclosed the following Limited Service Campaign C0F Summary Reports in the Region/Private Distributor (PD) Service Manager/Customer Service Operations Manager/Director of Service package:

- Region/PD Summary Report that provides an overview of the entire Region/PD for this Limited Service Campaign.
- A District Summary Report that indicates the number of covered vehicles per dealership in each district for this Limited Service Campaign.
- Dealer Summary Reports, containing the number of covered vehicles in each dealership's primary marketing area.

9. Warranty Reimbursement Procedure

Only provide these operation codes to dealers who have encountered a vehicle that had updated parts installed during vehicle manufacturing.

| LSC | Model | Op. Code | Description | Flat Rate Hour |
|-----|--------------------------|----------|---|----------------|
| C0F | Prius V Highlander HV | 2606DH | Confirm vehicle has updated (metal) actuator prior to vehicle disassembly | 0.4 hr/vehicle |
| | Prius V | 2606DK | Confirm vehicle has updated (metal) actuator after removing exhaust pipe | 2.1 hr/vehicle |
| | Highlander HV | 2606DL | Confirm vehicle has updated (metal) actuator after removing exhaust pipe | 1.9 hr/vehicle |

- The above operation codes include 0.1 hour for administrative cost per unit for the dealership.
- The cost of 50% Premix Super Long Life Coolant (00272-SLLC2) can be claimed up to 1 liter at a maximum of \$7.00 per vehicle as sublet type "OF" under Op. Codes 2606DK and 2606DL.
- Prius V Rental Car: Use "RT" sublet type for Op. Code 2606DK. A customer rental car through the Toyota-Rent-A-Car (TRAC) program is available for a maximum of 1 day at a maximum rate of \$35 per day.
- Highlander HV Rental Car: Use "RT" sublet type for Op. Code 2606DL. A customer rental car through the Toyota-Rent-A-Car (TRAC) program is available for a maximum of 2 days at a maximum rate of \$35 per day.
- Towing Sublet: If the customer's vehicle required towing to the dealership, use "TW" sublet type under Op. Codes 2606DK and 260DL.

The attached Dealer Notification Letter contains additional details.

Please review this remedy notification with your staff to assure that all relevant personnel have been briefed regarding this subject.

Thank you for your cooperation.

Enclosures

cc: Region/Private Distributor Assistant General Managers
Region/Private Distributor Customer Service Operations Managers
Region/Private Distributor Service Managers/Directors/VPs
Region/Private Distributor Parts Managers/Directors/VPs
Region/Private Distributor Customer Services Field Managers
Region/Private Distributor Technical Services and Training Managers
Region/Private Distributor District Service and/or Parts Managers
Region/Private Distributor Customer Relations Managers
Region/Private Distributor PDC Managers
Region/Private Distributor Field Technical Specialists
Region/Private Distributor Service Training Specialists
Region/Private Distributor Vehicle Operations Managers
All NAPC General Managers
All TMS Sales Administration Managers
All TMS Product Quality & Service Support Managers
All Field Product Engineers

G. Borst
R. Broughman
G. Bryan
W. Burns
D. Camden
B. Carter
G. Christoff
J. Colon
B. Cooper
R. Daly
F. Davidson
T. Doi
D. Esmond
W. Fay
F. Fontanella
H. Fukui
S. Haag

J. Hanson
K. Higgins
C. Hostetter
M. Hosoe
Y. Inaba
K. Ito
M. King
K. Kusakawa
J. Lang
J. Lentz
E. Matsuda
M. Michels
T. Morrison
T. Nakagami
D. Pettitt
R. Pflughaupt
C. Reynolds

C. Roberts
R. Sakai
M. Setta
R. Specht
J. Stempkowski
S. Sugawara
M. Templin
J. Tetherow
P. Turner
K. Ura
P. Uribe
A. Vaish
R. Waltz
S. Watanabe
M. Yamanami
H. Yoshihashi
D. Zellers

TOYOTA

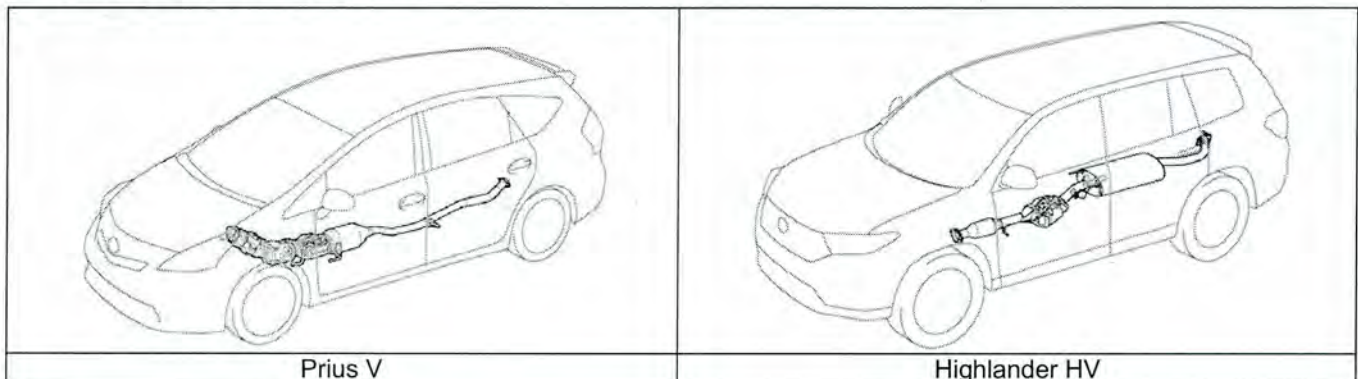
Toyota Motor Sales, U.S.A., Inc.
19001 South Western Avenue
Torrance, CA 90501
(310) 468-4000

Update – 7/23/2012: Vehicle applicability section has been updated to provide information regarding vehicles that had updated parts installed during vehicle manufacturing.



Previous versions of these documents should be discarded.

To: All Toyota Dealer Principals, Service Managers, and Parts Managers
Subject: Limited Service Campaign C0F
Certain 2011 and 2012 MY Highlander HV and Certain 2012 MY Prius V Vehicles
Exhaust Gas Control Actuator Replacement

In our continuing efforts to assure the best in customer satisfaction, Toyota is launching a Limited Service Campaign to replace the Exhaust Gas Control Actuator on Certain 2011 and 2012 MY Highlander HV and Certain 2012 MY Prius V Vehicles.



Background

On certain 2011 and 2012 model year Highlander HV and certain 2012 model year Prius V vehicles, there is a possibility that the exhaust gas control actuator may develop a coolant leak. If a coolant leak occurs, the Water Temp Indicator Lamp* (), and Check Engine Lamp () will illuminate.

* For Highlander HV the Water Temp Indicator Lamp will illuminate when the needle for the engine coolant temperature gauge enters the red zone.

If the above warning lamps illuminate, the driver should pull over, and contact an authorized Toyota dealer for diagnosis and repair. Continued operation of the vehicle with insufficient levels of coolant will cause the engine to overheat.

Limited Service Campaign (LSC) Remedy

Toyota dealers are requested to replace the Exhaust Gas Control Actuator at **NO CHARGE** to the customer.

All terms of the New Vehicle Limited Warranty will remain intact regardless of whether or not the customer takes advantage of this Limited Service Campaign. Additional details on the vehicle's New Vehicle Limited Warranty coverage can be found in the Owner's Warranty and Service Guide booklet.

The following vital information is provided to inform you and your staff of the owner notification timing and your degree of involvement.

1. Owner Notification Letter Mailing Date

The owner notification will commence in Late April, 2012, shortly after the dealer notification.

Please note that only owners of the covered vehicles will be notified. If a dealer is contacted by an owner who has not yet received a notification, please instruct them to **verify eligibility by confirming through Dealer Daily/TIS prior to performing repairs**. Dealers should perform the repair as outlined in the Technical Instructions found on TIS.

Toyota tries very hard to obtain current customer name and address information when mailing owner letters. In the event your dealership receives a notice for a vehicle that was sold prior to the Limited Service Campaign announcement, it is the dealership's responsibility to forward the owner letter to the customer who purchased the vehicle.

2. Vehicle Applicability

This Limited Service Campaign will be available at **no charge** to vehicle owners until **May 31, 2015**. All terms of the covered vehicle's applicable New Vehicle Limited Warranty will remain intact regardless of whether or not the customer takes advantage of the Limited Service Campaign.

There are a small number of vehicles (approximately 200) that had an updated center exhaust pipe assembly and exhaust gas control actuator installed during vehicle manufacturing. The kit parts used for this campaign cannot be installed on these exhaust pipes due to design changes on the exhaust pipe. There is no need to replace the actuator on these vehicles. If a vehicle that appears to be in this condition arrives at the dealer, confirm the vehicle's condition and contact your regional representative for further information.

3. New and Used Vehicles in Dealership Inventory (In-Stock Vehicles)

To ensure customer satisfaction Toyota request that dealers perform the Limited Service Campaign Remedy on any New or Used Vehicle in dealer inventory that is covered by this Limited Service Campaign prior to customer delivery.

4. Toyota Rent-A-Car (TRAC) Vehicles

Toyota requests that dealers verify whether their TRAC vehicles are covered by Limited Service Campaign C0F. If a vehicle is covered, please perform the Limited Service Campaign prior to renting the vehicle to a customer.

5. Dealer Summary Reports

Summary Reports, containing the number of covered vehicles in your dealership's primary marketing area, have been enclosed in the dealer package.

6. Number and Identification of Covered Vehicles

There are approximately 5,600 certain 2011 and 2012 Model Year Highlander HV Vehicles and approximately 18,000 Certain 2012 Model Year Prius V vehicles covered by this Limited Service Campaign in the U.S.

| Model | WMI | MY | VDS | START | FINISH |
|---------------|-----|------|-------|---------|---------|
| Highlander HV | JTE | 2011 | BC3EH | 2000105 | 2003975 |
| | | | DC3EH | 2000102 | 2003980 |
| | | 2012 | BC3EH | 2003982 | 2007095 |
| | | | DC3EH | 2003983 | 2007094 |

| Model | WMI | MY | VDS | START | FINISH |
|---------|-----|------|-------|---------|---------|
| Prius V | JTD | 2012 | ZN3EU | 3000105 | 3079570 |

Please note that **not all vehicles in the VIN range are covered** by this Limited Service Campaign. If a dealer is contacted by an owner who has not yet received the notification, please instruct the dealer to **verify coverage by confirming through Dealer Daily/TIS**. Dealers should perform the procedure as outlined in the Technical Instructions located on TIS.

A UIO matrix by state is provided to inform your dealership of the number of covered vehicles in your state.

| | | | | | | | | | |
|-------|------|-------|-----|-------|-----|-------|-----|-------|-----|
| STATE | UIO | STATE | UIO | STATE | UIO | STATE | UIO | STATE | UIO |
| AK | 28 | HI | 0 | MI | 281 | NV | 136 | UT | 104 |
| AL | 174 | IA | 158 | MN | 221 | NY | 963 | VA | 811 |
| AR | 129 | ID | 95 | MO | 237 | OH | 524 | VT | 68 |
| AZ | 400 | IL | 743 | MS | 57 | OK | 105 | WA | 762 |
| CA | 5014 | IN | 323 | MT | 39 | OR | 482 | WI | 349 |
| CO | 354 | KS | 122 | NC | 571 | PA | 724 | WV | 65 |
| CT | 259 | KY | 197 | ND | 28 | RI | 79 | WY | 19 |
| DC | 0 | LA | 109 | NE | 70 | SC | 214 | | |
| DE | 63 | MA | 673 | NH | 111 | SD | 33 | | |
| FL | 1158 | MD | 557 | NJ | 513 | TN | 272 | | |
| GA | 379 | ME | 84 | NM | 127 | TX | 898 | | |

7. Super Long Life Coolant

| Chemical Part No. | Chemical Name | Qty/Unit |
|-------------------|---|----------|
| 00272-SLLC2 | Toyota Genuine 50/50 Pre-Diluted Super Long Life Coolant (SLLC) | 1 Gal. |

Toyota Genuine 50/50 Pre-Diluted Super Long Life Coolant (SLLC) can be ordered through the Toyota Chemical Program and will be drop shipped from AMREP.

8. Parts Ordering (Dealer Ordering Solutions)

Orders can be placed through your dealership's facing PDC. The parts have been placed on Dealer Ordering Solutions and will be systematically released daily based on dealer ordering criteria.

Please refer to the table below and the Technical Instructions for part number information.

| Model | Part Number | Description | Qty |
|---------------|-------------|------------------------------------|-----|
| ALL | 16492-21050 | RING, O RADIATOR | 1 |
| Highlander HV | 04001-88131 | ACTUATOR SET, EXH PIPE GAS CONTROL | 1 |
| Prius V | 04001-88237 | ACTUATOR SET, EXH PIPE GAS CONTROL | 1 |

IMPORTANT PARTS ORDERING UPDATE

Effective January 1, 2012, All Future Safety Recall, Service Campaign (SSC/LSC) and Customer Support Program (CSP) parts will be eligible for the Monthly Parts Return Program. Please refer to PANT Bulletin 2011-087 for campaign parts that are currently returnable under the Monthly Parts Return Program and additional details.

Each dealer will receive specific dealer ordering criteria in an email from their facing PDC Manager based on Repair Order Volume x PDC Affected UIO. Therefore, it is vital that each dealership work with both Parts and Service to immediately file claims and coordinate appropriate kit orders. A sample of the Parts Allocation Report has been attached below for your reference.

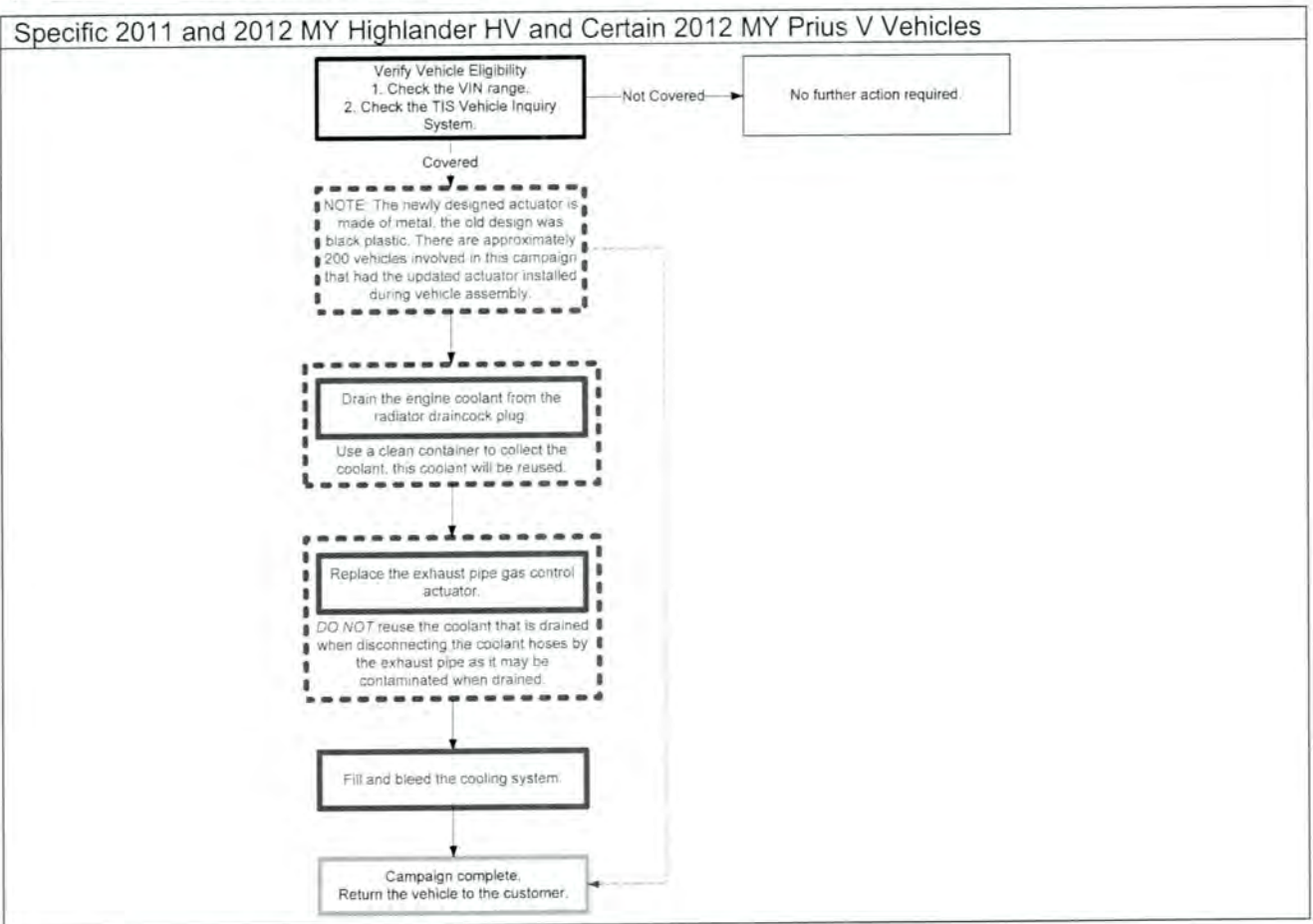
| TOYOTA | | | | | | |
|---|---------------------------|---------------------|----------------------|--------------------------|----------------------------|----------------|
| Parts Allocation Report | | | | | | |
| 99999 SAMPLE TOYOTA of NOWHERE | | | | | | |
| <small>The below matrix provides information for parts managed by NADP Dealer Ordering Solution (DOS) and illustrates updates to your current daily allocation quantities. Parts shipments, arrivals and inventory quantities at your local PDC will change daily as parts are received and shipped from NADP suppliers. Therefore, your daily allocation quantity is subject to change based on the parts in-stock availability as well as in-transit inventory to your facing PDC. This report is provided as needed when daily allocation changes for DOS parts.</small> | | | | | | |
| <small>Parts with recent changes will be illustrated from top to bottom with the most recent effective date.</small> | | | | | | |
| <small>If you have any questions or concerns, please contact your facing PDC Customer Support Leader, John Q Sample at (999) 999-9999.</small> | | | | | | |
| Part Number | Total Allocation Quantity | Allocation Quantity | Allocation Frequency | Total Allocation Shipped | Total Allocation Remaining | Effective Date |
| | | | | | | |
| | | | | | | |

9. Remedy Procedures

Please refer to TIS for Technical Instructions on vehicle repair.

Conduct all applicable, non-completed Safety Recall and Service Campaigns on the vehicle during the time of appointment.

10. Warranty Reimbursement Procedure



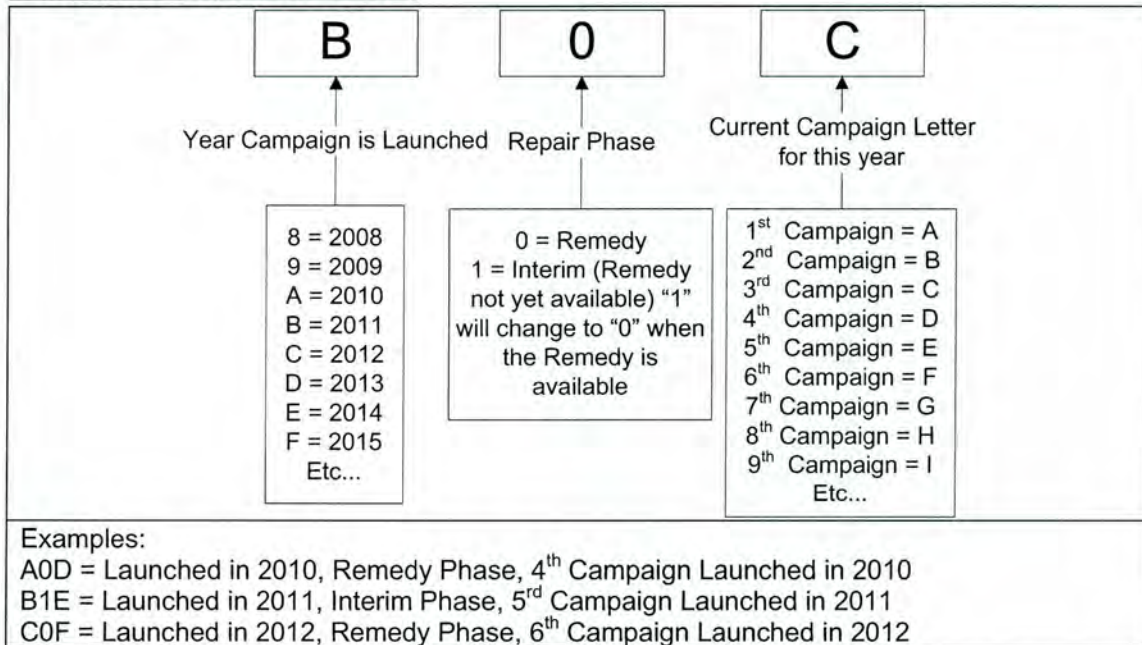
The operation codes to be used for this campaign are:

| LSC | Model | Op. Code | Description | Flat Rate Hour |
|-----|---------------|----------|--|----------------|
| C0F | Prius V | 2606DB | Confirm VIN and Perform Exhaust Gas Control Actuator Replacement | 2.3 hr/vehicle |
| | Highlander HV | 2606DC | Confirm VIN and Perform Exhaust Gas Control Actuator Replacement | 2.1 hr/vehicle |

- The above operation codes include 0.1 hour for administrative cost per unit for the dealership.
- The cost of 50% Premix Super Long Life Coolant (00272-SLLC2) can be claimed up to 1 liter at a maximum of \$7.00 per vehicle as sublet type "OF" under Op. Codes 2606DB and 2606DC.
- Prius V Rental Car: Use "RT" sublet type for Op. Code 2606DB. A customer rental car through the Toyota-Rent-A-Car (TRAC) program is available for a maximum of 1 day at a maximum rate of \$35 per day.
- Highlander HV Rental Car: Use "RT" sublet type for Op. Code 2606DC. A customer rental car through the Toyota-Rent-A-Car (TRAC) program is available for a maximum of 2 days at a maximum rate of \$35 per day.
- Towing Sublet: If the customer's vehicle required towing to the dealership, use "TW" sublet type under Op. Codes 2606DB and 2606DC.

NOTE: For operation codes covering vehicles that were updated during vehicle manufacturing contact your regional representative.

Campaign Designation Decoder



11. Repair Quality Confirmation

The repair quality of covered vehicles is extremely important to Toyota. To help ensure that all vehicles have the repair performed correctly, please designate at least one associate (someone other than the individual who performed the repair) to verify the repair quality of every vehicle prior to customer delivery.

12. Media Contacts

It is imperative that all media contacts (local and national) receive a consistent message. In this regard, all media contacts must be directed to Brian Lyons (310) 468-2552 in Toyota Corporate Communications. (Please do not provide this number to customers. Please provide this contact to only media associates.)

13. Customer Contacts

Customers who receive the owner letter may contact your dealership with questions regarding the letter and/or LSC remedy. Please welcome them to your dealership and answer any questions that they may have. A Q&A is provided to assure a consistent message is communicated.

Customers with additional questions or concerns are asked to please contact the Toyota Customer Experience Center (1-888-270-9371).

Please review this entire package with your Service and Parts staff to familiarize them with the proper step-by-step procedures required to implement this Limited Service Campaign.

Thank you for your cooperation.
TOYOTA MOTOR SALES, U.S.A., INC.

TECHNICAL INSTRUCTIONS
FOR
LIMITED SERVICE CAMPAIGN C0F
EXHAUST GAS CONTROL ACTUATOR REPLACEMENT
CERTAIN 2012 MODEL YEAR PRIUS V

UPDATED JULY 23, 2012

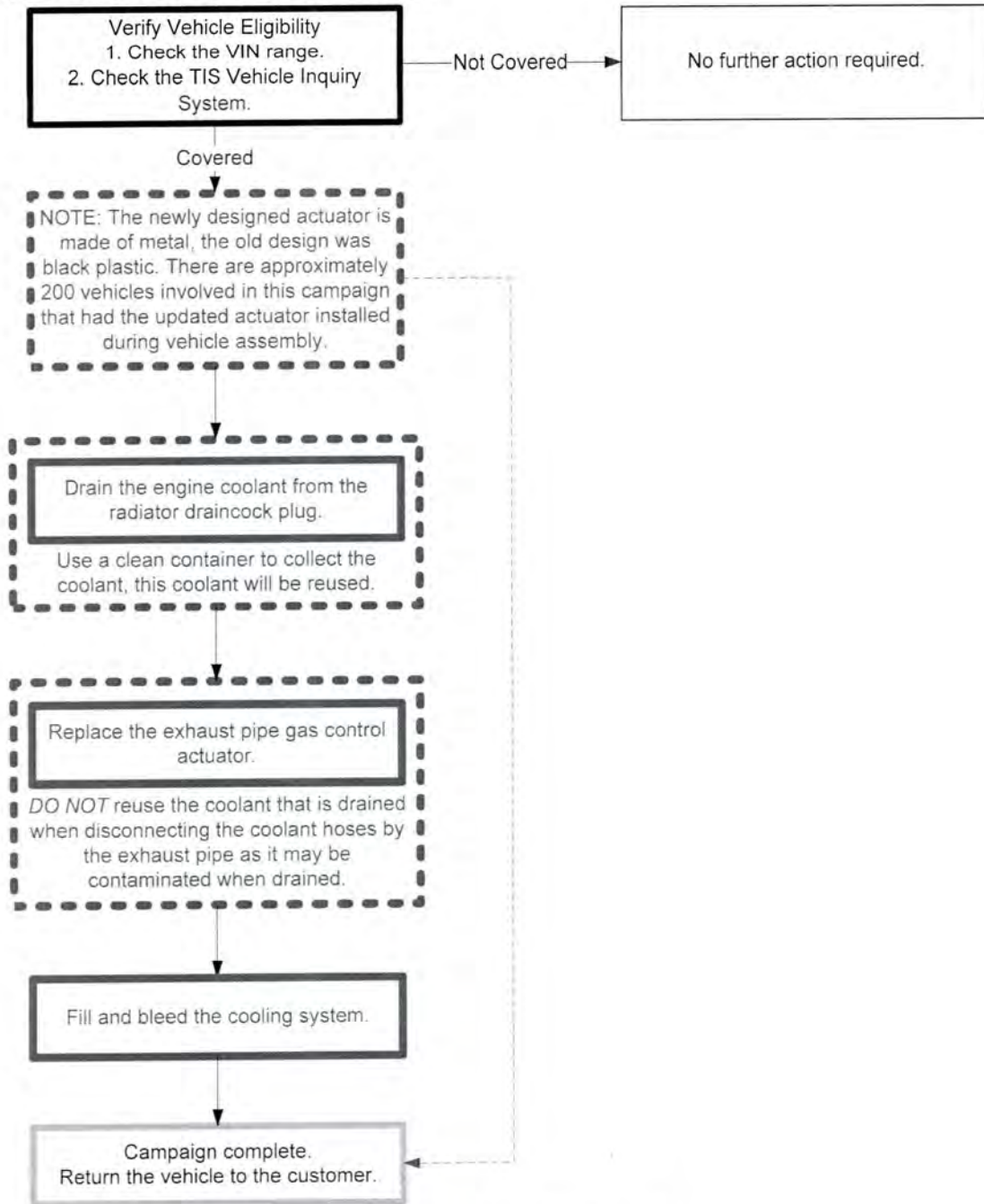
TECHNICAL INSTRUCTION UPDATE NOTICE:

Updated 7/23/12

- The operation flow chart has been updated (SECTION I)

Previous versions of these Technical Instructions should be discarded.

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. COVERED VIN RANGE

| WMI | Year | VDS Range | |
|-----|------|-----------|-----------------|
| | | VDS | Range |
| JTD | 2012 | ZN3EU | 3000105-3079570 |

NOTE:

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Limited Service Campaign, and that the campaign has not already been completed prior to dealer shipment or by another dealer.
- TMS warranty will not reimburse dealers for repairs conducted on vehicles that are not affected or were completed by another dealer.

III. PREPARATION

A. PARTS

| Part Number | Part Description | Quantity |
|--|---|----------|
| 16492-21050 | Radiator Draincock O-Ring | 1 |
| 04001-88237 | Actuator Set, Exhaust Pipe Gas Control Kit* | 1 |
| *The kit above includes the following parts: | | |
| Part Number | Part Description | Quantity |
| 17046-37050 | Acuator Sub-Assy, Exhaust Pipe Gas Control | 1 |
| 17146-37020 | Pipe, Exhaust Bypass | 1 |
| 17537-37010 | Plate, Exhaust Pipe | 1 |
| 17552-37020 | Insulator, Exhaust Pipe Heat No. 2 | 1 |
| 17457-37010 | Bolt (14mm) | 2 |
| 90105-06335 | Bolt (20mm) | 3 |
| 17451-28040 | Gasket, Exhaust Pipe | 1 |
| 17451-23042 | Gasket, Exhaust Pipe No. 2 | 1 |

B. TOOLS & EQUIPMENT

- Standard hand tools
- Clean drain bucket
- Techstream

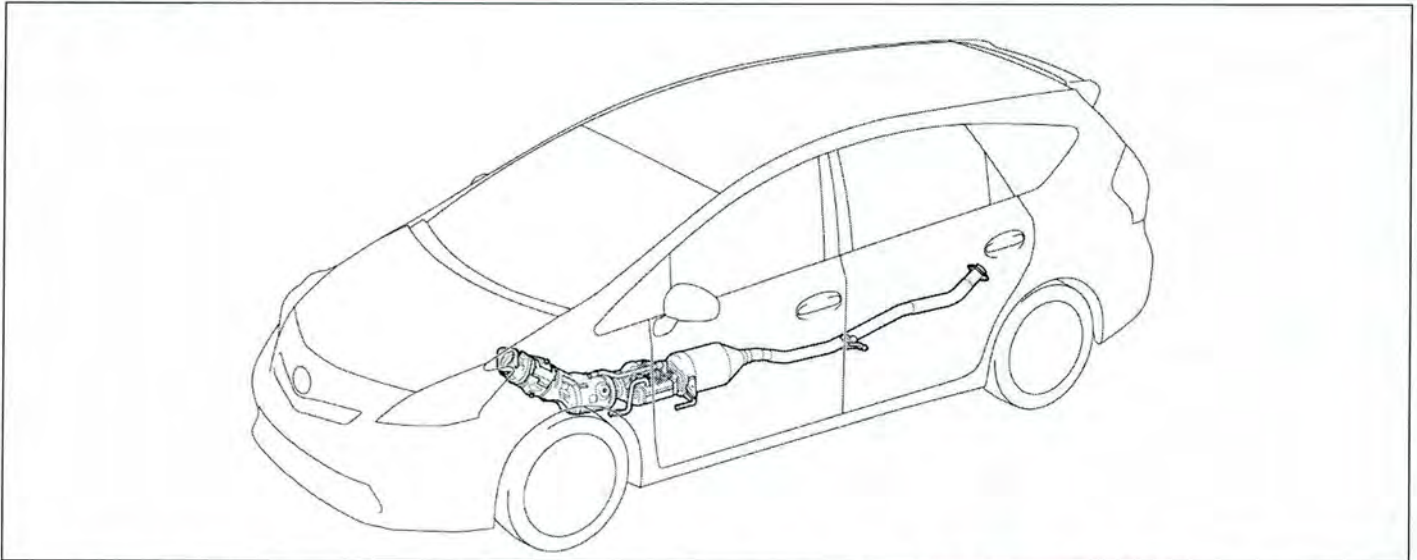
C. SUPPLIES

| Part Name | Quantity |
|---------------------------------------|-----------------------|
| Toyota Genuine 50/50 Pre-Diluted SLLC | Approximately 1 quart |

NOTE:

- The coolant drained from the radiator **MUST** be reused.
- Because some coolant will be lost when disconnecting the hoses by the exhaust pipe, a small amount of coolant will be needed.

IV. BACKGROUND

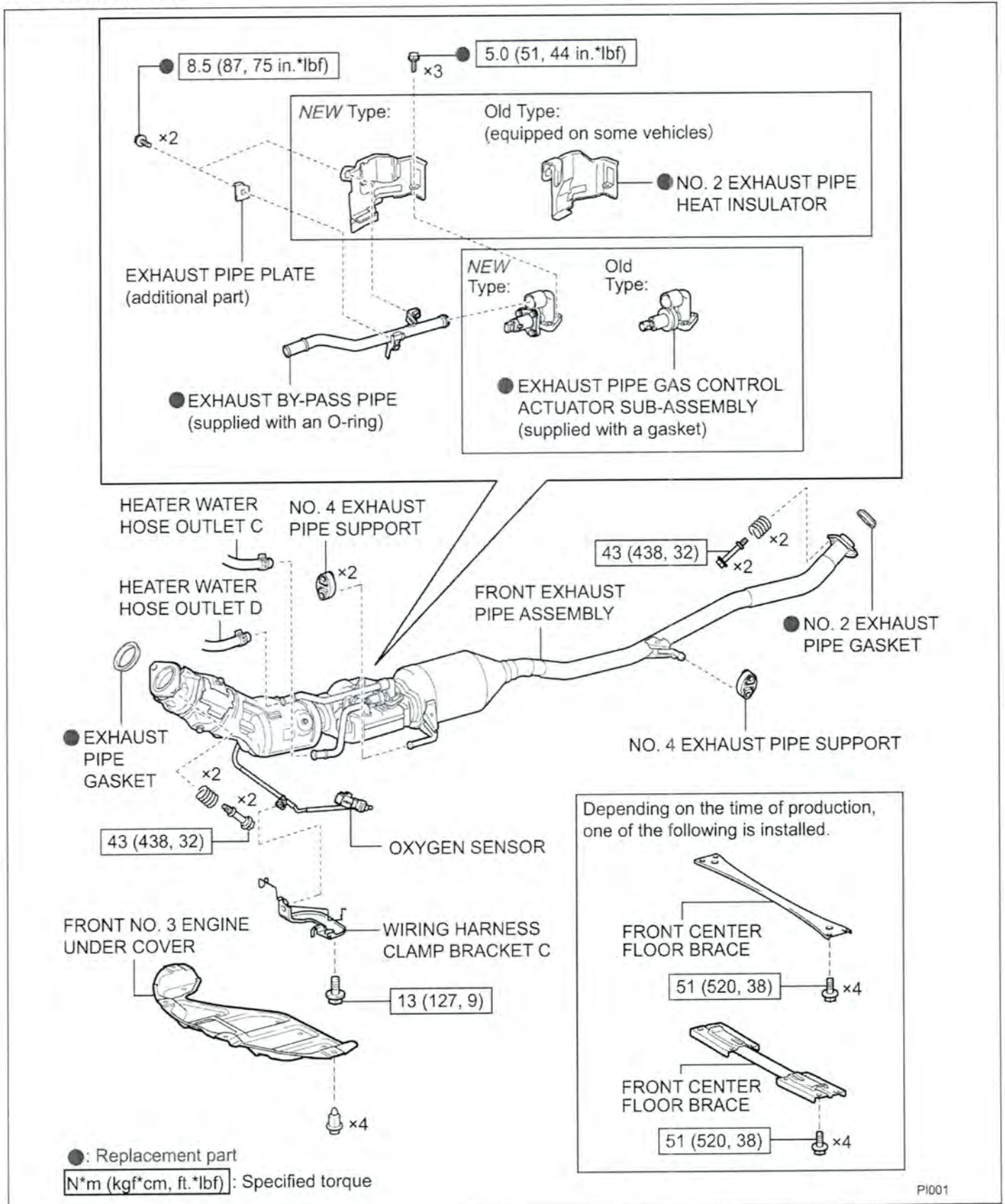


On certain 2011 and 2012 model year Highlander HV and certain 2012 model year Prius V vehicles, there is a possibility that the exhaust gas control actuator may develop a coolant leak. If a coolant leak occurs, the Water Temp Indicator Lamp* (ⓘ), and Check Engine Lamp (ⓘ) will illuminate.

If the above warning lamps illuminate, the driver should pull over, and contact an authorized Toyota dealer for diagnosis and repair. Continued operation of the vehicle with insufficient levels of coolant will cause the engine to overheat.

V. WORK PROCEDURE

A. COMPONENTS



PI001

B. FRONT EXHAUST PIPE ASSEMBLY REMOVAL

1. CHECK FOR DTCs

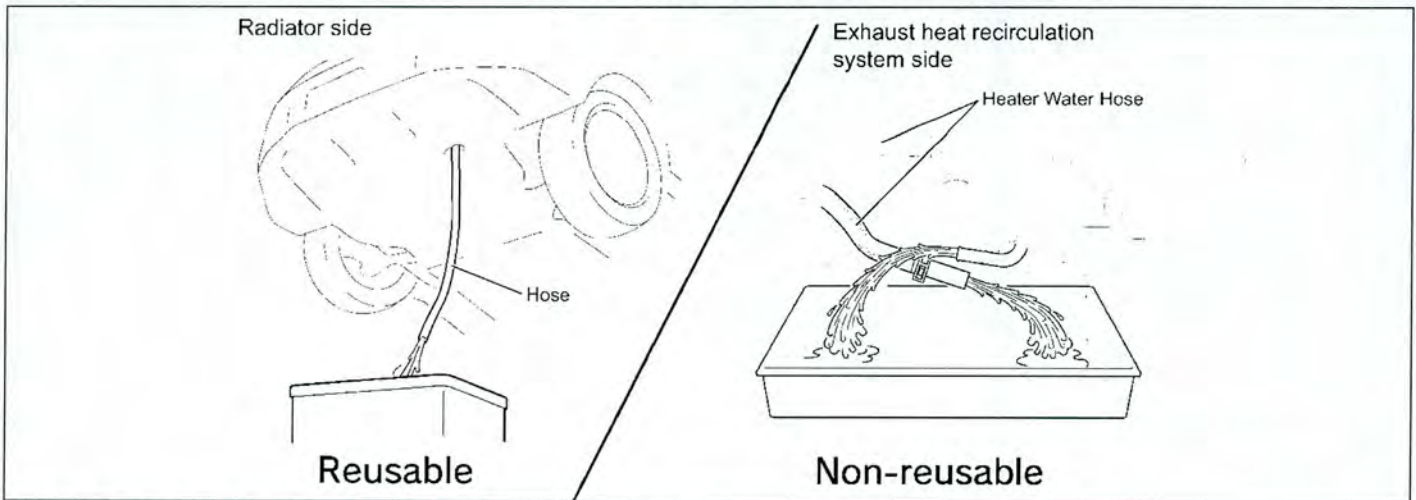
- Check and record any DTCs and freeze-frame data that may be present.

2. DRAIN THE ENGINE COOLANT

- Prepare a clean container.
- Connect a clean hose to the radiator draincock and drain the coolant into a clean container.
- When the coolant is drained completely, replace the draincock o-ring.

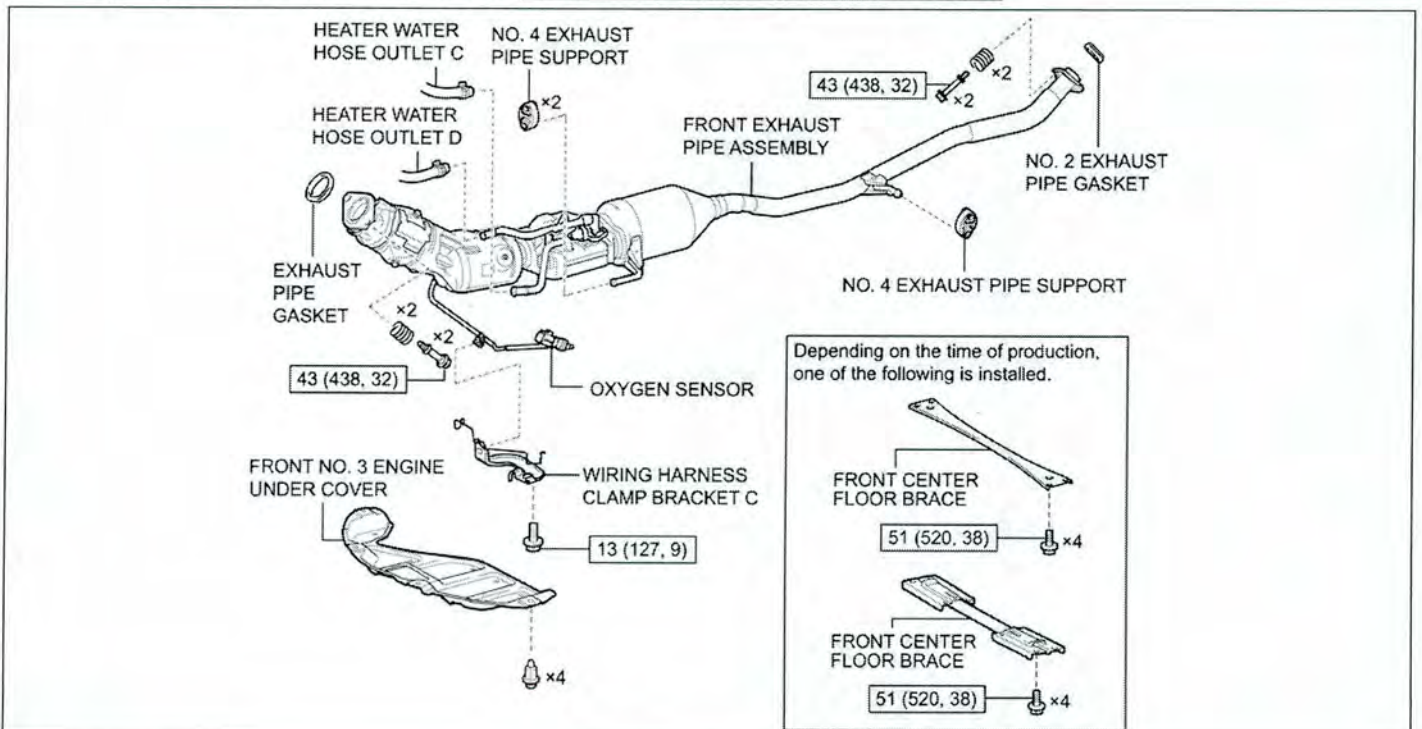


- Confirm the cooling system is sufficiently cool before beginning any work.
- The coolant drained from the radiator **MUST** be reused, confirm that a clean container is used when draining the coolant.
- DO NOT** reuse any coolant that is drained when disconnecting the coolant hoses by the exhaust gas control actuator, this coolant may be contaminated when drained.
- DO NOT** mix the coolant drained from the radiator with the coolant drained from the hoses.

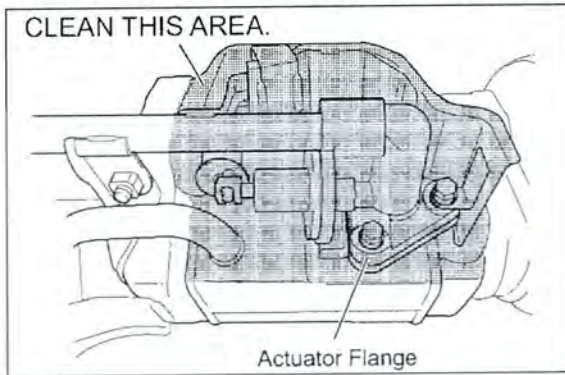


3. REMOVE THE FRONT EXHAUST PIPE ASSEMBLY

- Refer to TIS for instructions on front exhaust pipe assembly removal.



C. EXHAUST GAS CONTROL ACTUATOR REPLACEMENT



1. CLEAN THE AREA AROUND THE EXHAUST GAS CONTROL ACTUATOR SUB-ASSEMBLY

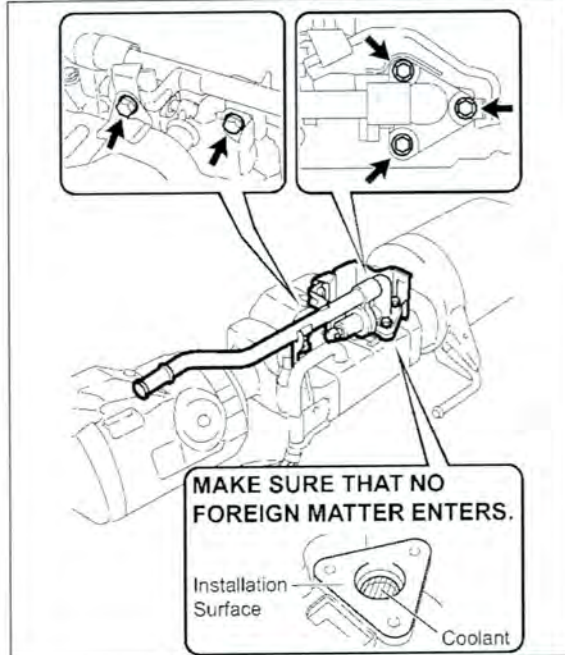
- a) Clean the area shaded in the illustration to prevent foreign material from entering the cooling system.

2. REMOVE THE EXHAUST GAS CONTROL ACTUATOR SUB-ASSEMBLY

- a) Remove the 5 bolts then the actuator and bypass pipe.



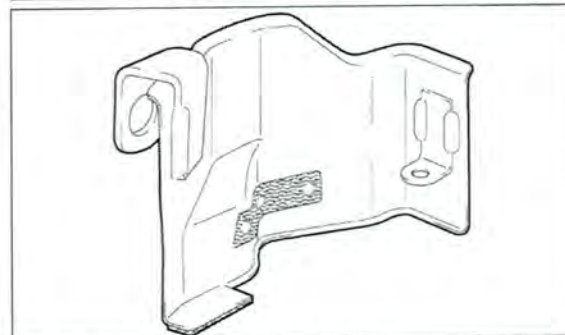
Confirm that no foreign material enters the cooling system when the actuator is removed.



3. REMOVE THE HEAT INSULATOR

- a) If an old-style heat insulator is present, remove and discard this part.

NOTE: Depending on the vehicle production date, some vehicles will be equipped with this insulator and some will not.



4. CLEAN THE ACTUATOR CONTACT SURFACE

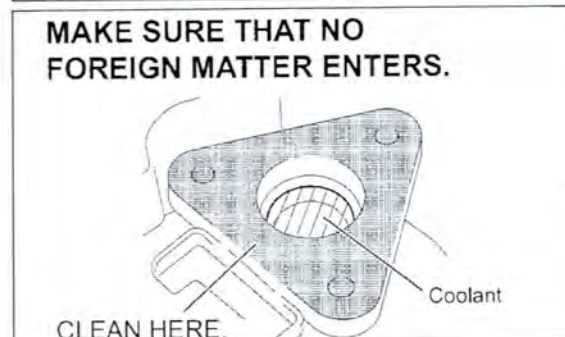
- a) Use a shop cloth to clean the contact surface.

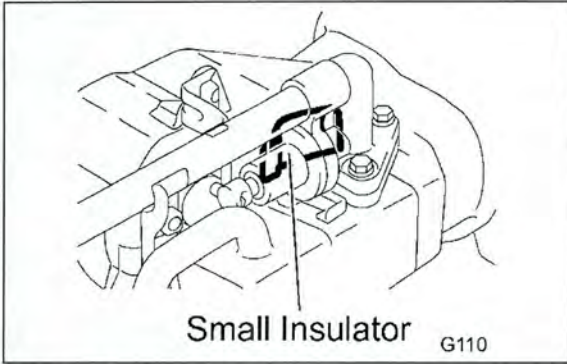
NOTE: Clean from the inside of the flange toward the outside edge to prevent foreign material from entering the cooling system.

5. ADD COOLANT UP TO THE EDGE OF THE FLANGE

- a) To limit the amount of air in the cooling system, add coolant.

NOTE: If a large amount of air enters the cooling system, the load on the water pump will increase.





6. INSPECT FOR WELDED INSULATOR

| INSPECTION RESULT | ACTION REQUIRED |
|-----------------------------|---|
| Equipped with insulator | Perform STEP 7 a) through e) |
| Not equipped with insulator | Perform STEP 7 c) and d) ONLY |

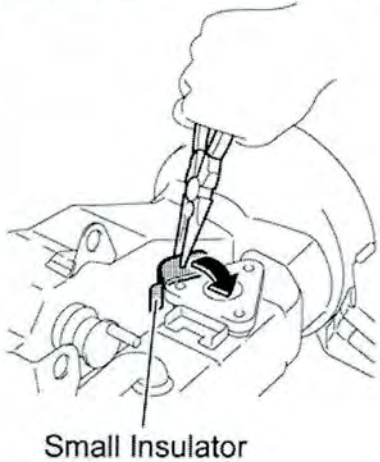
NOTE: Depending on the date of vehicle production, some vehicles are not equipped with the welded insulator.

7. LOOSELY INSTALL THE No.2 INSULATOR

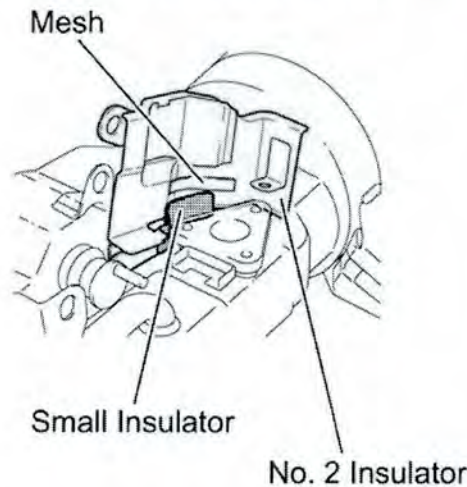
- Tilt the welded insulator toward the actuator contact flange.
- Install the **NEW** No.2 insulator behind the welded insulator.
- Install the No.2 insulator bracket behind the exhaust pipe bracket.

NOTE: If the vehicle is not equipped with the welded insulator perform **STEP 7 c)** and d) **ONLY**.

a) SLIGHTLY TILT THE SMALL INSULATOR FORWARD.

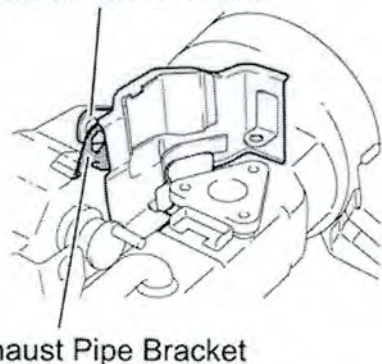


b) INSERT THE LOWER PART OF THE NO. 2 INSULATOR BEHIND THE SMALL INSULATOR.



c) INSERT THE NO. 2 INSULATOR BRACKET BEHIND THE EXHAUST PIPE BRACKET.

No. 2 Insulator Bracket



NOTE: The mesh on the new No.2 insulator is used to prevent rattle and vibration noise.

- d) Confirm the new No.2 insulator is installed in the correct position.
- e) Tilt the welded insulator back toward the No.2 insulator.

NOTE: If the vehicle is not equipped with the welded insulator perform STEP 7 c) and d) ONLY.

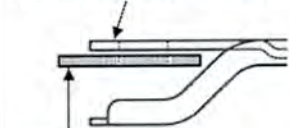
d) CONFIRM THAT THE NO. 2 INSULATOR RELATED PARTS ARE INSTALLED IN THE CORRECT POSITION.

Top View:

MAKE SURE TO INSTALL THEM IN THE CORRECT POSITION.

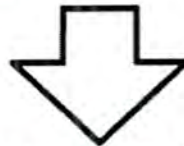
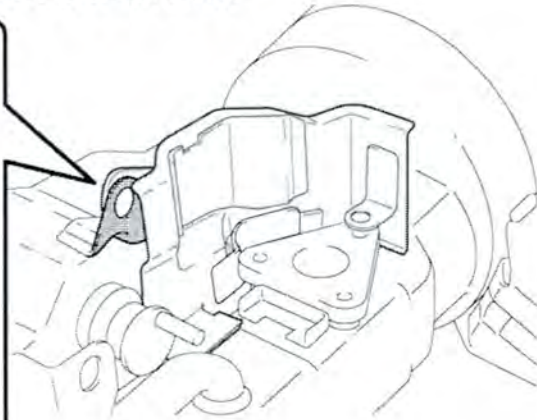
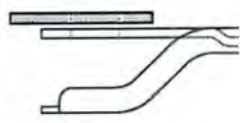
OK

No. 2 Insulator Bracket

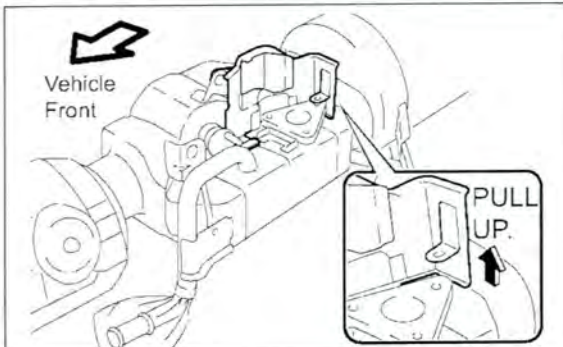
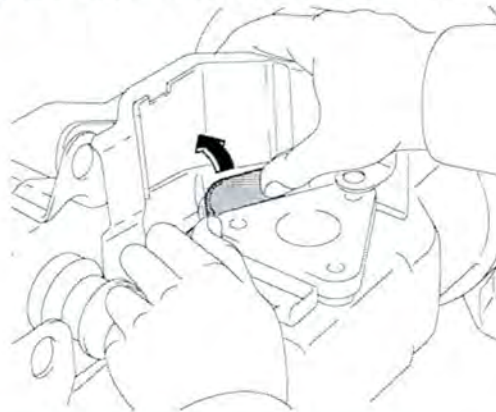


Front Exhaust Pipe Assembly Bracket

NG



e) RETURN THE SMALL INSULATOR TO A POSITION IN WHICH IT WILL NOT CONTACT THE ACTUATOR.

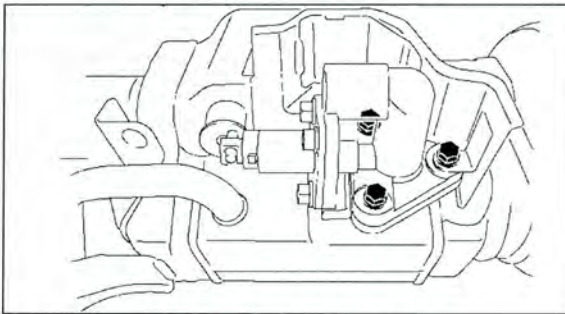
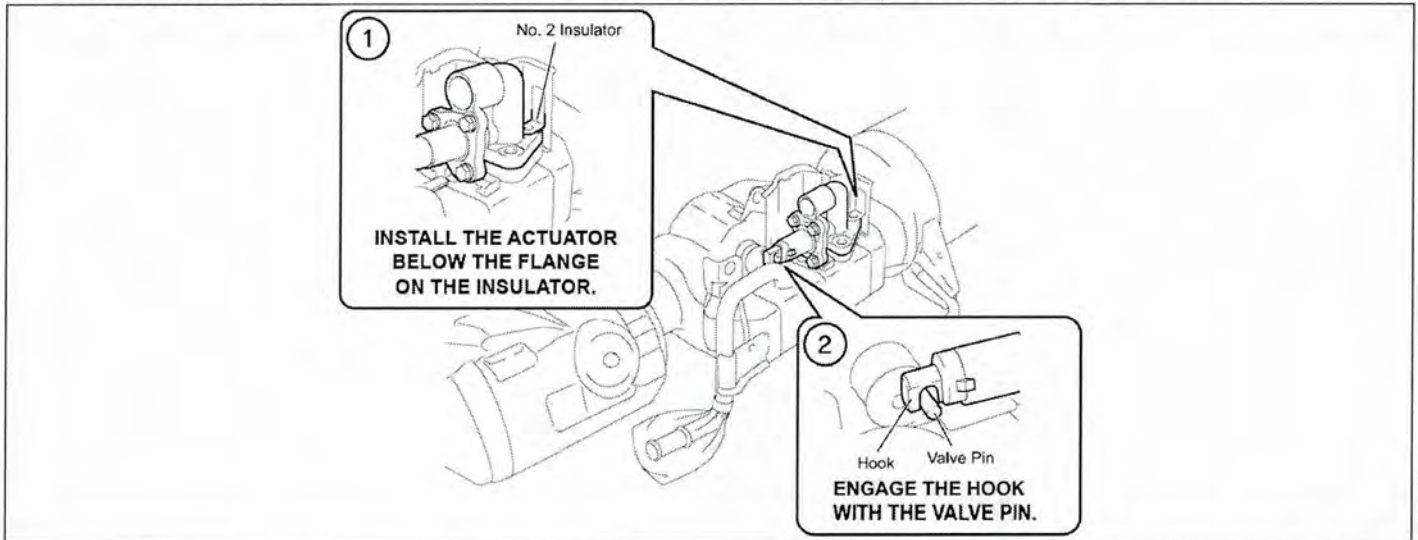


8. LOOSELY INSTALL THE EXHAUST GAS CONTROL ACTUATOR

- a) Lift the rear side of the No.2 insulator to allow the actuator to be installed below the flange on the insulator.

- b) Loosely install the **NEW** actuator, confirm the actuator is installed below the flange on the insulator and that the hook is engaged with the valve pin.

NOTE: Confirm no foreign material is present in the coolant prior to installing the actuator.



- c) Loosely install the 3 **NEW** black bolts several threads.

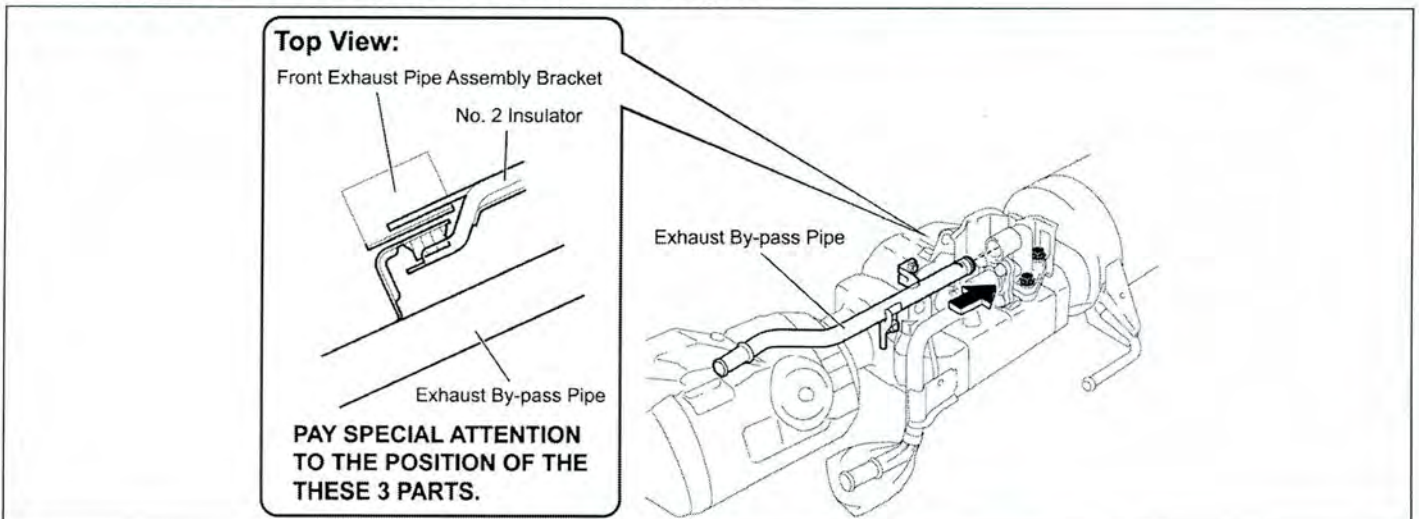
NOTE: **DO NOT** tighten these bolts at this time as the actuator will need to be adjusted.

9. CONNECT THE BYPASS PIPE

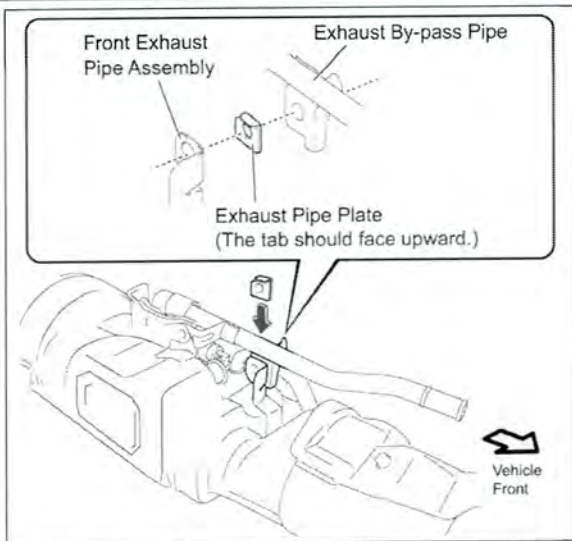
- Apply clean coolant to the o-ring on the **NEW** bypass pipe to ease installation.
- Insert the bypass pipe into the actuator as far as possible.
- Confirm the bypass pipe and No.2 insulator are positioned correctly.

NOTE:

- DO NOT** damage the o-ring or allow it to become contaminated before installation.
- Confirm the bypass pipe is installed completely, there may be a yellow mark on the new bypass pipe, **DO NOT** use this mark as an installation guide.




THE FOLLOWING STEPS ARE VITAL. CONFIRM THESE STEPS ARE FOLLOWED CLOSELY IF THESE STEPS ARE NOT FOLLOWED A COOLANT LEAK COULD DEVELOP.



10. TEMPORARILY INSTALL THE BYPASS PIPE

- a) Insert the **NEW** exhaust pipe plate between the bypass pipe bracket and exhaust bracket that is positioned towards the front of the vehicle.

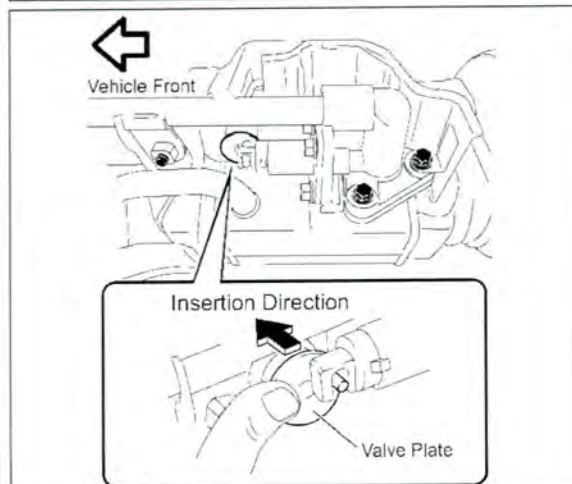
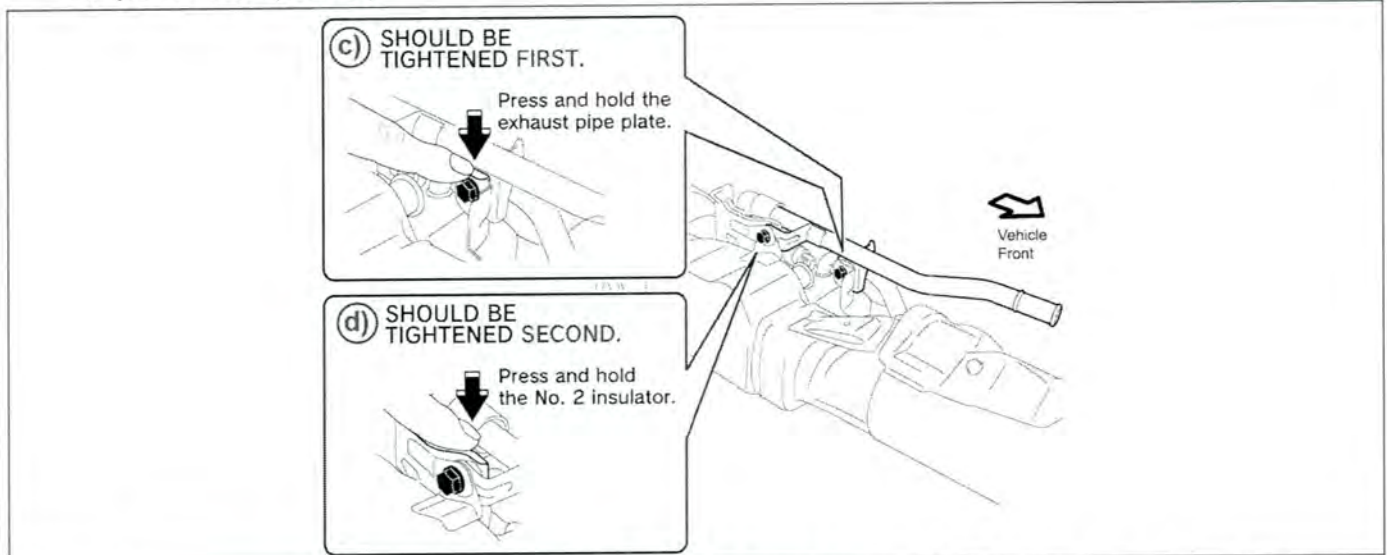


Confirm the plate is installed in the correct direction, with the tab facing upward.

- b) Loosely install 2 **NEW** black bolts.

- c) While pressing down on the newly installed exhaust pipe plate tighten the bolt.
- d) While pressing down on the newly installed No.2 insulator tighten the bolt.

Torque: 75in.lbf (8.5N·m)

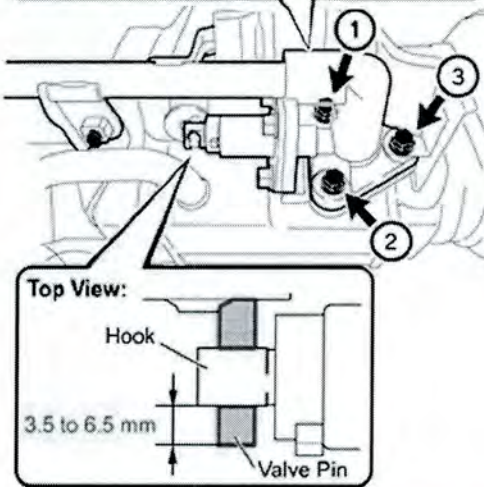
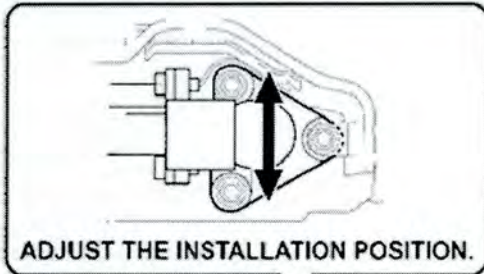


11. INSTALL THE EXHAUST GAS CONTROL ACTUATOR

- a) Confirm the valve plate is positioned correctly by pressing the plate.

NOTE: If the valve plate is not positioned correctly, the final actuator position may be difficult to achieve.

VITAL STEPS CONTINUED



- b) Position the actuator so that approximately 4.5mm of the valve pin is protruding past the actuator hook.
- c) Tighten the 3 bolts evenly following the torque sequence shown in the illustration.

Torque: 44 in.lbf (5.0N·m)

- d) Measure the length of the valve pin that protrudes beyond the actuator hook.

Specification: 3.5 – 6.5mm

If the protruding pin length is not within specification, the 3 actuator bolts **MUST** be loosened and **ALL** of STEP 11 **MUST** be repeated.

12. SETTLE THE BYPASS PIPE O-RING

- a) Loosen the 2 bypass pipe bolts slightly. **DO NOT** remove the bolts.
- b) Move the bypass pipe up and down to properly settle the o-ring.

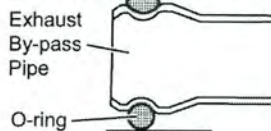


If this step is not performed, a coolant leak **WILL** develop.

a) BEFORE ADJUSTMENT

Upper part of the O-ring is deformed.

Exhaust Pipe Gas Control Actuator



LOOSEN THE BOLTS.

Vehicle Front

aACT122

b) AFTER ADJUSTMENT

Even

Even

SETTLE THE O-RING.

MOVE UP AND DOWN.

aACT112

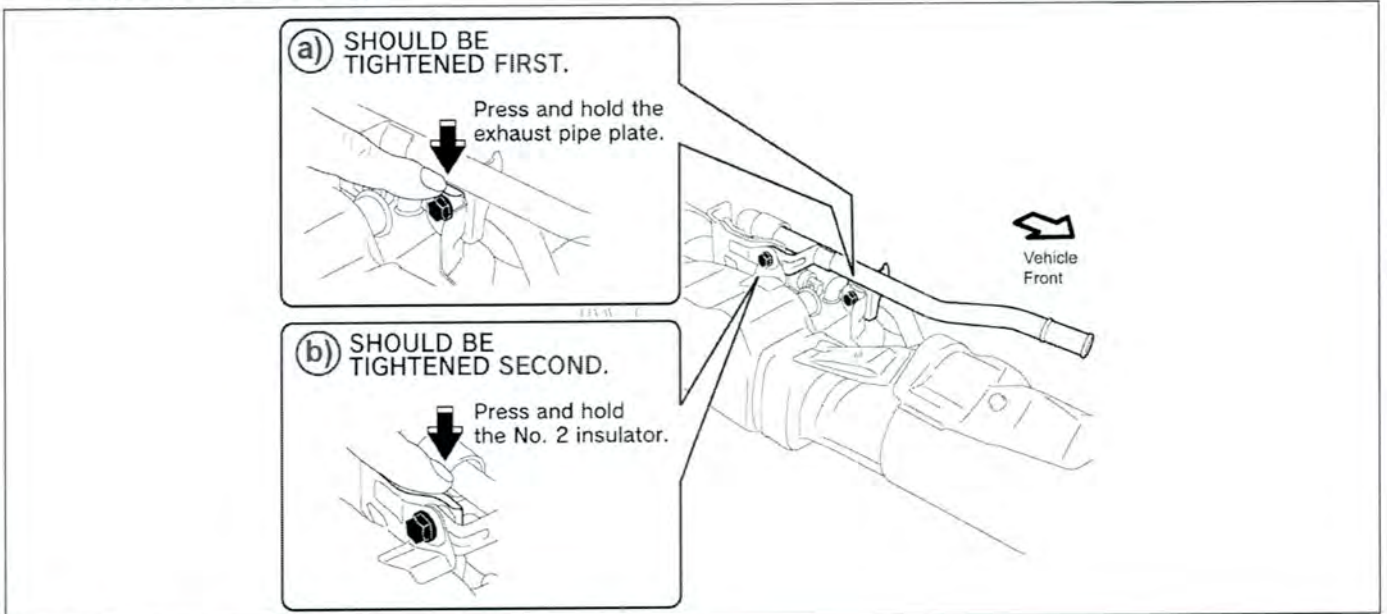
13. TIGHTEN THE BYPASS PIPE BOLTS



- **DO NOT** press down on the bypass pipe when tightening the bolts, this may cause a coolant leak.
- It is critical that step a) be performed before b), if these steps are completed in the incorrect order a coolant leak may develop.

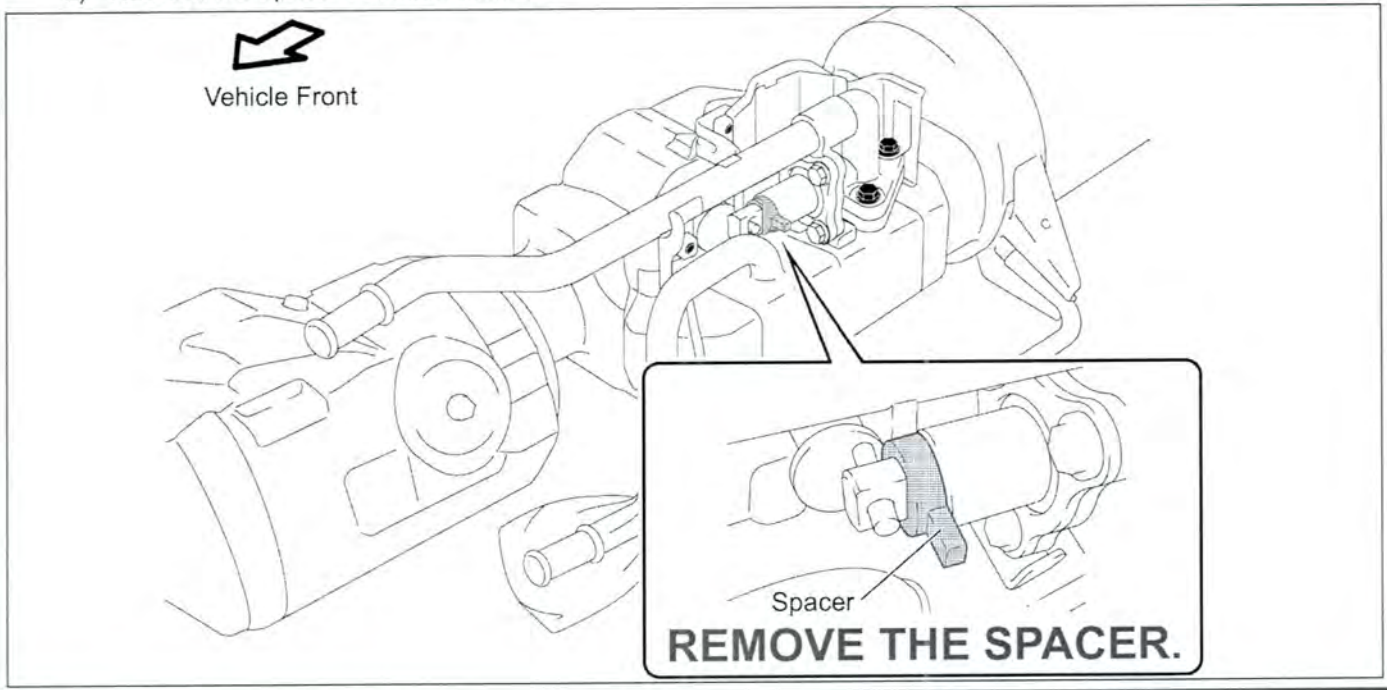
- While pressing down on the newly installed exhaust pipe plate tighten the bolt.
- While pressing down on the newly installed No.2 insulator tighten the bolt.

Torque: 75in.lbf (8.5N·m)



14. REMOVE THE SPACER

- Remove the spacer from the actuator.



D. FRONT EXHAUST PIPE ASSEMBLY INSTALLATION

1. INSTALL THE FRONT EXHAUST PIPE ASSEMBLY

- a) Refer to TIS for instructions on front exhaust pipe assembly installation.

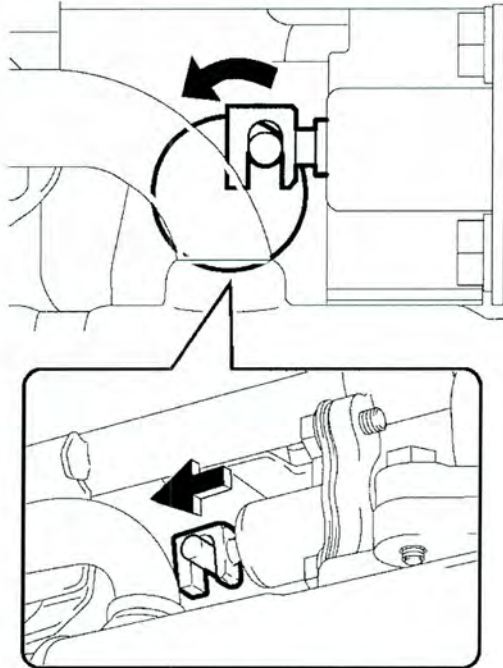


- Confirm the **NEW** exhaust pipe gaskets included in the parts kit are used.
- Confirm the coolant drained from the radiator is reused.
- Confirm the coolant is filled and the system is properly bled.

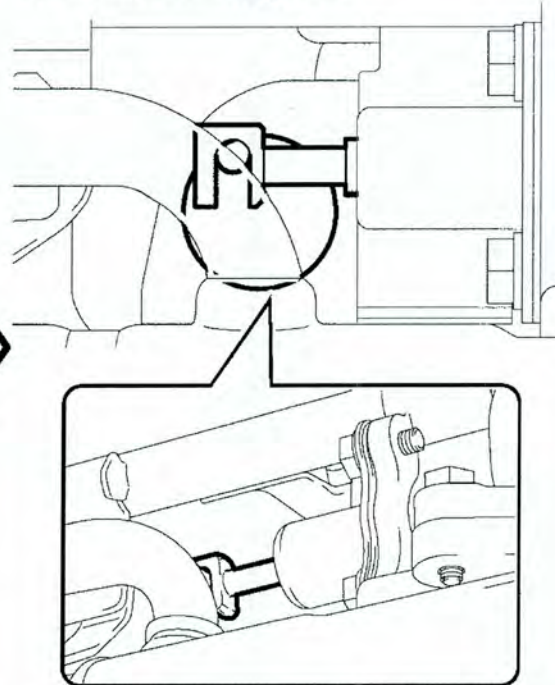
2. INSPECT THE OPERATION OF THE EXHAUST GAS CONTROL ACTUATOR

- a) Place the vehicle in 'Inspection Mode' and warm the engine to normal operating temperature.
b) Confirm the hook of the actuator is fully extended.

With cold engine:



With warm engine:



CONFIRM THAT THE HOOK IS EXTENDED.

3. CHECK FOR DTCs

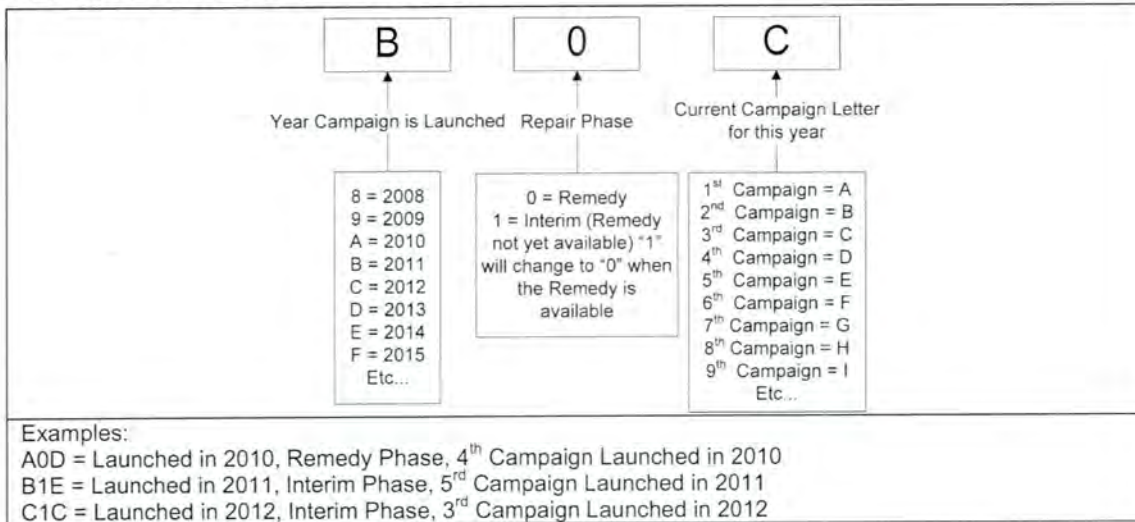
◀ VERIFY REPAIR QUALITY ▶

- Confirm the coolant is drained from the radiator using a clean container as this coolant **MUST** be reused
- Confirm the new actuator and bypass pipe are installed and aligned correctly
- Confirm the cooling system is refilled and bled correctly
- Confirm the actuator is working correctly by following the inspection in these instructions

If you have any questions regarding this campaign, please contact your regional representative

VI. APPENDIX

A. CAMPAIGN DESIGNATION DECODER



B. CAMPAIGN PARTS DISPOSAL

As required by Federal Regulations, please make sure all campaign parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, ***unless requested for parts recovery return.***

TECHNICAL INSTRUCTIONS
FOR
LIMITED SERVICE CAMPAIGN C0F
EXHAUST GAS CONTROL ACTUATOR REPLACEMENT
CERTAIN 2011 – 2012 MODEL YEAR HIGHLANDER HV

UPDATED JULY 23, 2012

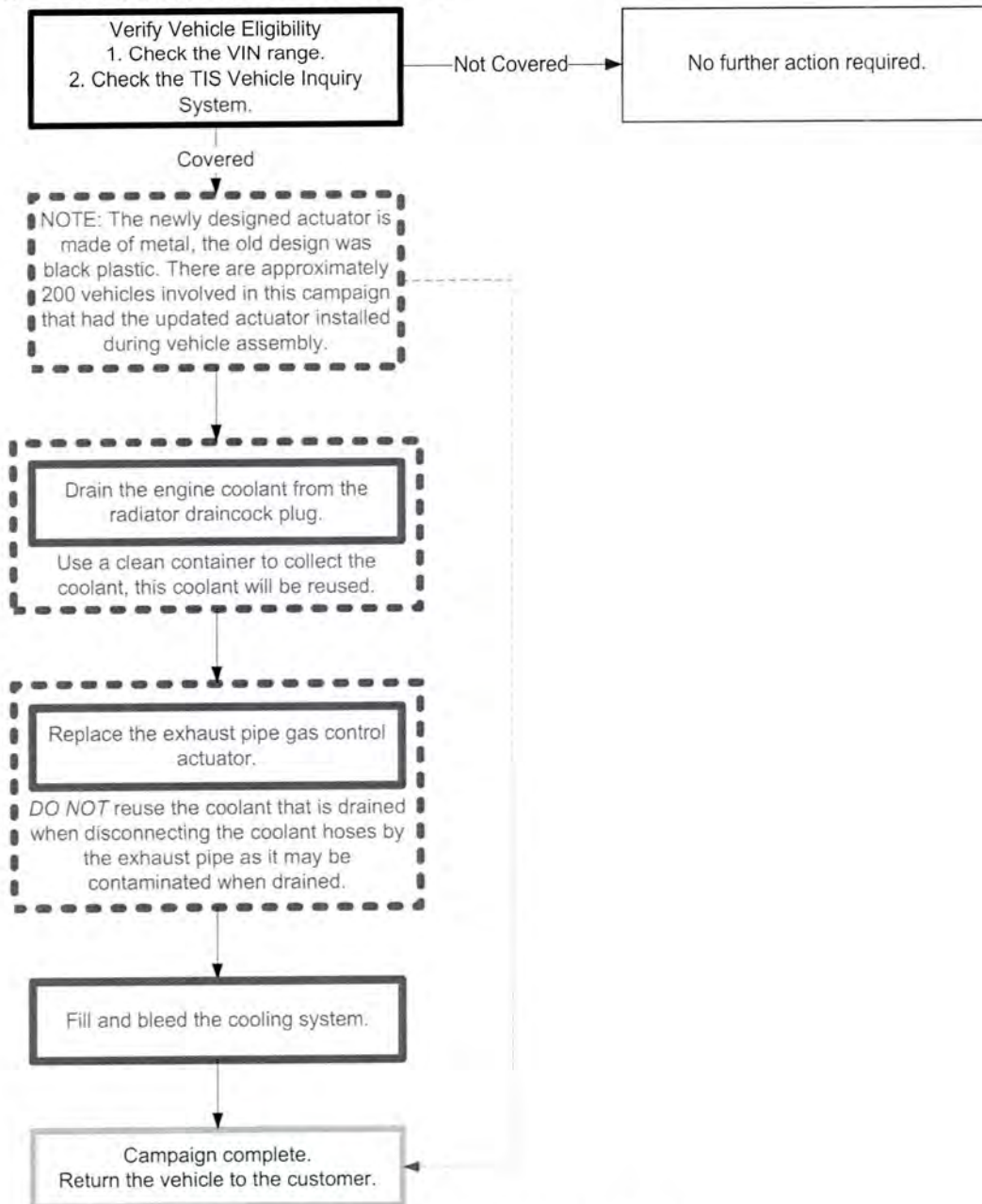
TECHNICAL INSTRUCTION UPDATE NOTICE:

Updated 7/23/12

- The operation flow chart has been updated (SECTION I)

Previous versions of these Technical Instructions should be discarded.

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. COVERED VIN RANGE

| WMI | Year | VIN Range | |
|-----|------|-----------|-----------------|
| | | VDS | Range |
| JTE | 2011 | BC3EH | 2000105-2003975 |
| | | DC3EH | 2000102-2003980 |
| | 2012 | BC3EH | 2003982-2007095 |
| | | DC3EH | 2003983-2007094 |

NOTE:

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Limited Service Campaign, and that the campaign has not already been completed prior to dealer shipment or by another dealer.
- TMS warranty will not reimburse dealers for repairs conducted on vehicles that are not affected or were completed by another dealer.

III. PREPARATION

A. PARTS

| Part Number | Part Description | Quantity |
|-------------|---|----------|
| 16492-21050 | Radiator Draincock O-Ring | 1 |
| 04001-88131 | Actuator Set, Exhaust Pipe Gas Control Kit* | 1 |

*The kit above includes the following parts:

| Part Number | Part Description | Quantity |
|-------------|--|----------|
| 17046-31070 | Acuator Sub-Assy, Exhaust Pipe Gas Control | 1 |
| 17402-31020 | Pipe, Exhaust Bypass | 1 |
| 17537-37010 | Plate, Exhaust Pipe | 1 |
| 90105-06335 | Bolt (20mm) | 3 |
| 17451-28040 | Gasket, Exhaust Pipe | 2 |

B. TOOLS & EQUIPMENT

- Standard hand tools
- Clean drain bucket
- Techstream

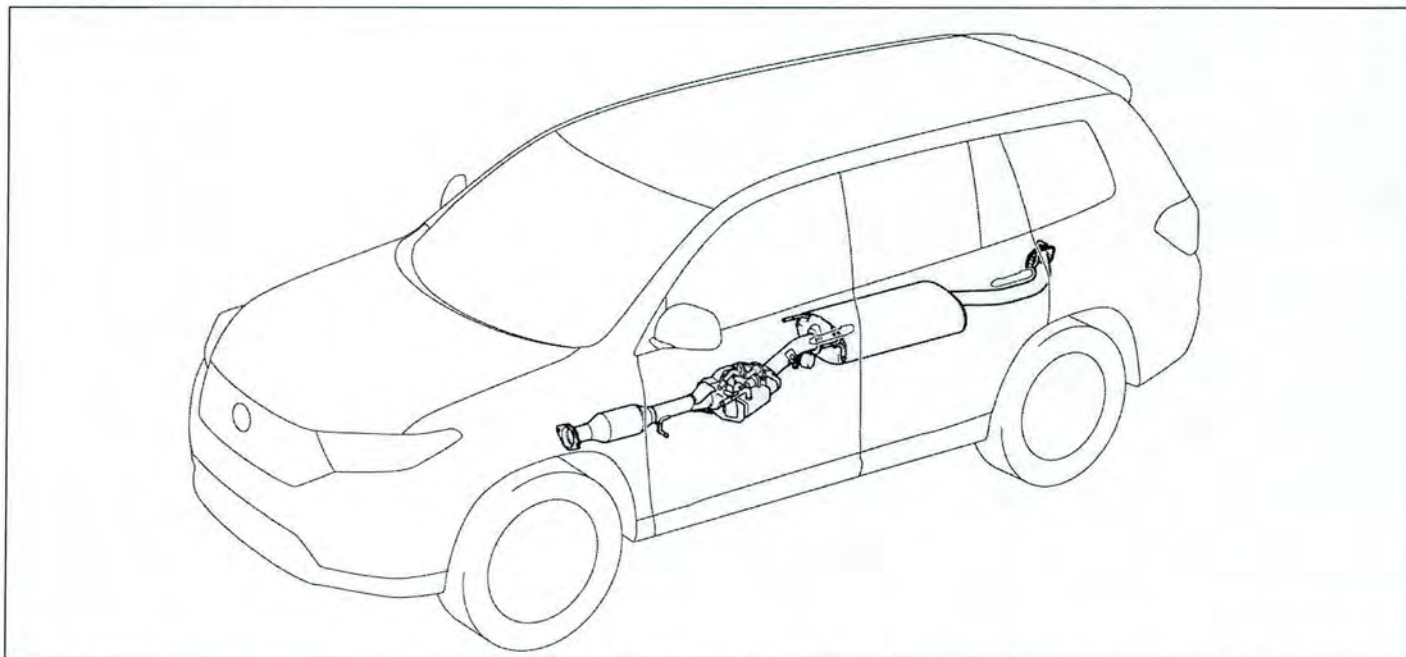
C. SUPPLIES

| Part Name | Quantity |
|---------------------------------------|-----------------------|
| Toyota Genuine 50/50 Pre-Diluted SLIC | Approximately 1 quart |

NOTE:

- The coolant drained from the radiator **MUST** be reused.
- Because some coolant will be lost when disconnecting the hoses by the exhaust pipe, a small amount of coolant will be needed.

IV. BACKGROUND

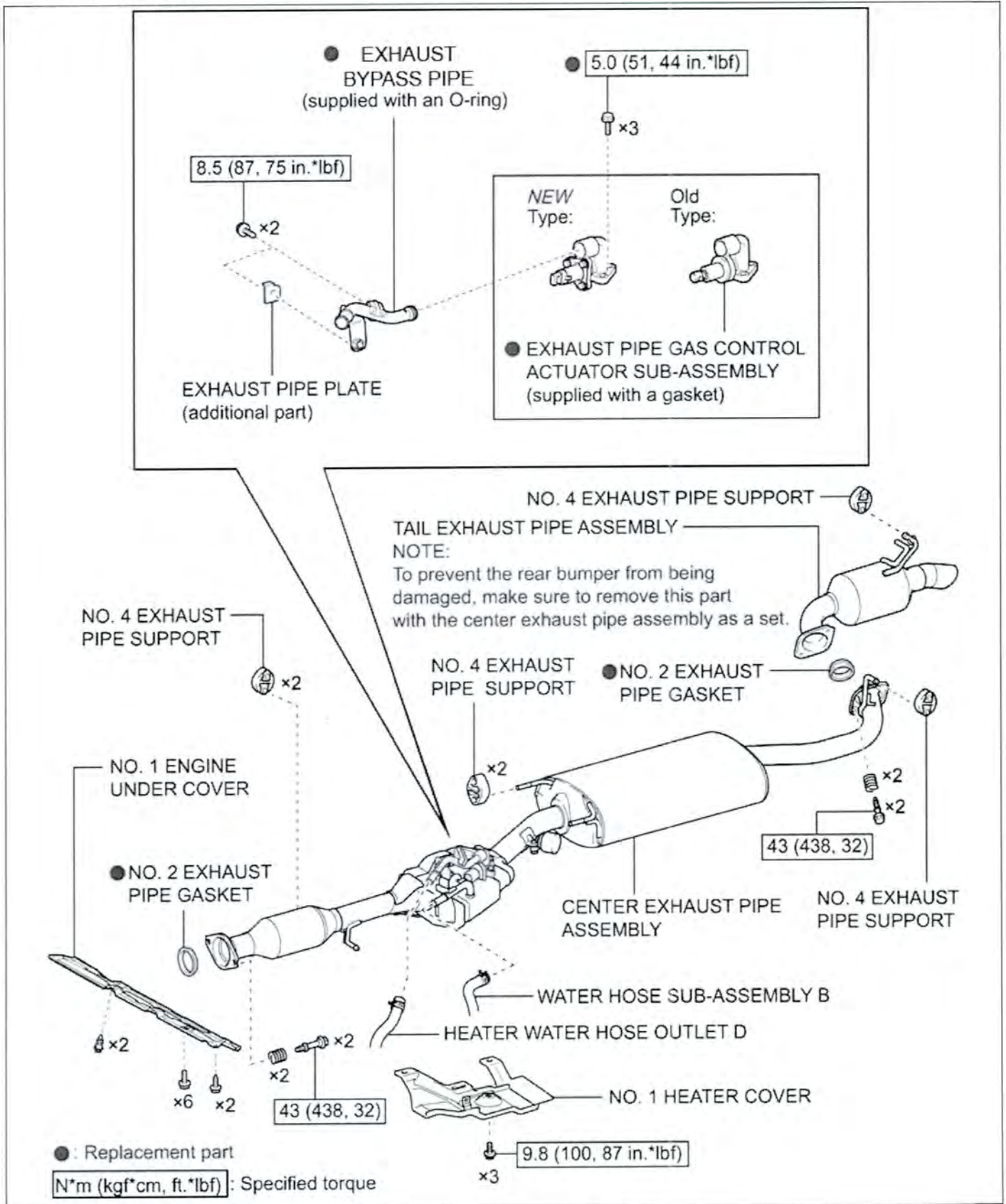


On certain 2011 and 2012 model year Highlander HV and certain 2012 model year Prius V vehicles, there is a possibility that the exhaust gas control actuator may develop a coolant leak. If a coolant leak occurs, the Water Temp Indicator Lamp* (🌡️), and Check Engine Lamp (🚗) will illuminate.

* For Highlander HV the Water Temp Indicator Lamp will illuminate when the needle for the engine coolant temperature gauge enters the red zone.

V. WORK PROCEDURE

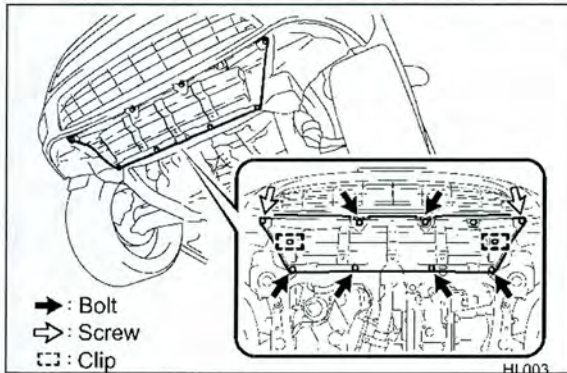
A. COMPONENTS



B. CENTER EXHAUST PIPE ASSEMBLY REMOVAL

1. CHECK FOR DTCs

- a) Check and record any DTCs and freeze-frame data that may be present.



2. DRAIN THE ENGINE COOLANT

- a) Remove the 6 bolts, 2 clips, 2 screws and the engine under cover.

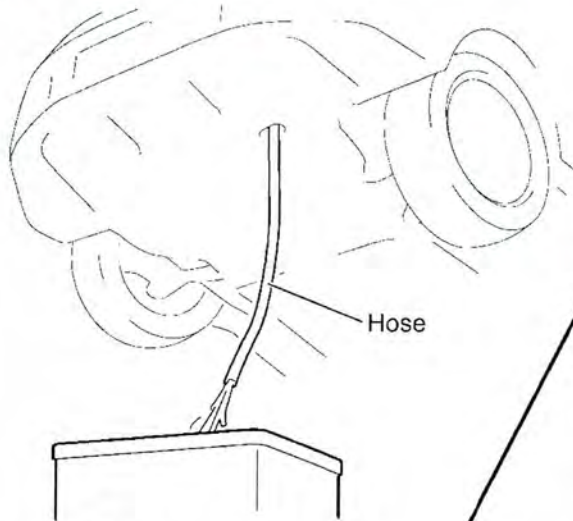
- b) Prepare a clean container.
- c) Connect a clean hose to the radiator draincock and drain the coolant into a clean container.
- d) When the coolant is drained completely, replace the draincock o-ring.

NOTE: Approximately 1.5 gallons of coolant will be drained.



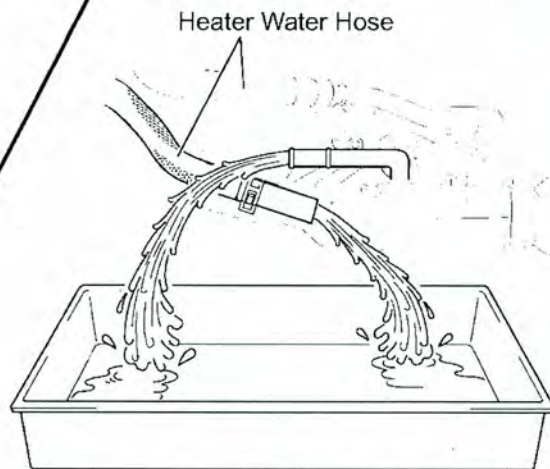
- Confirm the cooling system is sufficiently cool before beginning any work.
- The coolant drained from the radiator **MUST** be reused, confirm that a clean container is used when draining the coolant.
- **DO NOT** reuse any coolant that is drained when disconnecting the coolant hoses by the exhaust gas control actuator, this coolant may be contaminated when drained.
- **DO NOT** mix the coolant drained from the radiator with the coolant drained from the hoses.

Radiator side



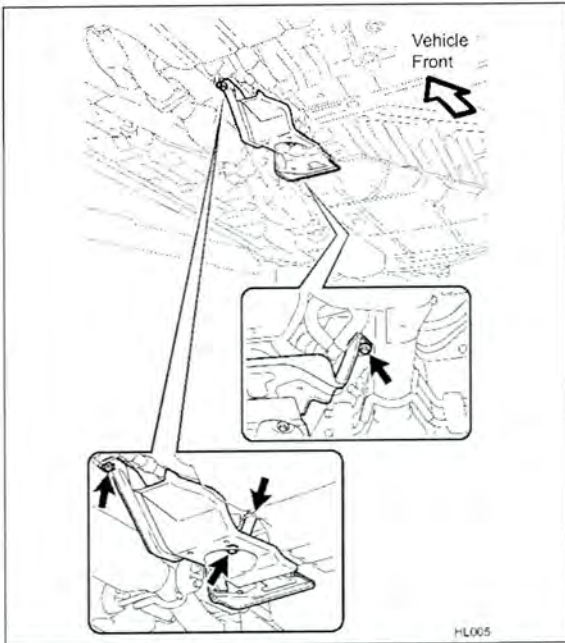
Reusable

Exhaust heat recirculation system side



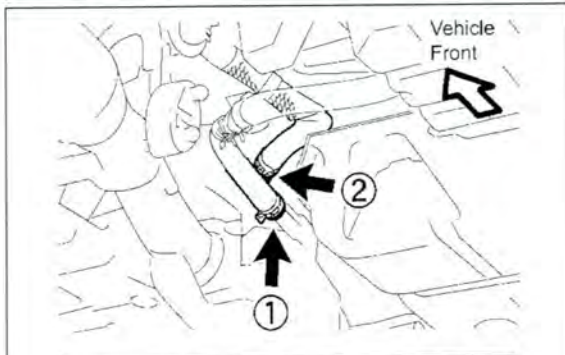
Non-reusable

HG005



3. REMOVE THE No.1 HEATER COVER

- a) Remove the 3 bolts, disconnect the clamp and remove the cover.



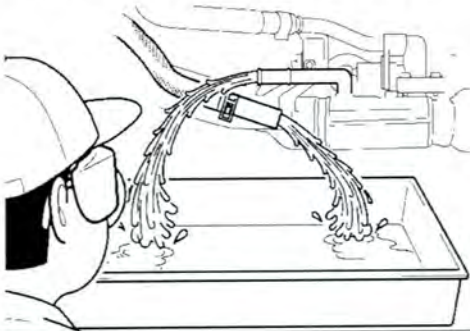
4. DISCONNECT THE EXHAUST HEAT RECIRCULATION HOSES

- a) Disconnect the 2 coolant hoses.



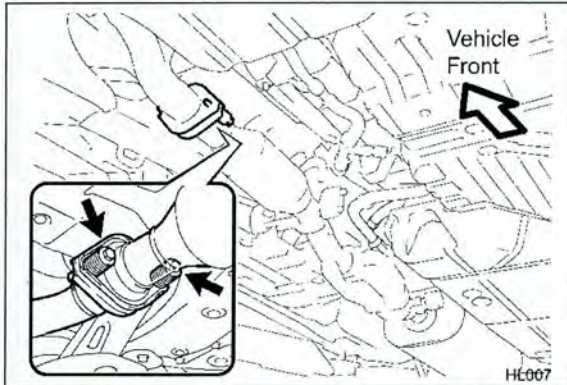
- Confirm the cooling system is sufficiently cool before beginning any work.
- **DO NOT** reuse any coolant that is drained when disconnecting the coolant hoses by the exhaust gas control actuator, this coolant may be contaminated when drained.
- **DO NOT** mix the coolant drained from the radiator with the coolant drained from the hoses.

COOLANT DRAINS OUT.



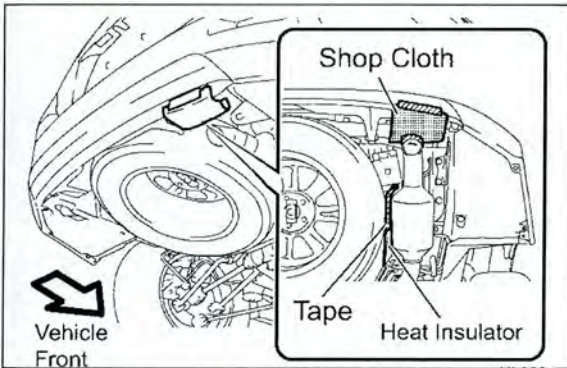
- b) Cover the hoses with bags to prevent coolant from dripping.





5. DISCONNECT THE FRONT OF THE CENTER EXHAUST PIPE ASSEMBLY

- a) Remove the 2 bolts and the 2 compression springs to disconnect the center exhaust pipe from the front No.3 exhaust pipe.



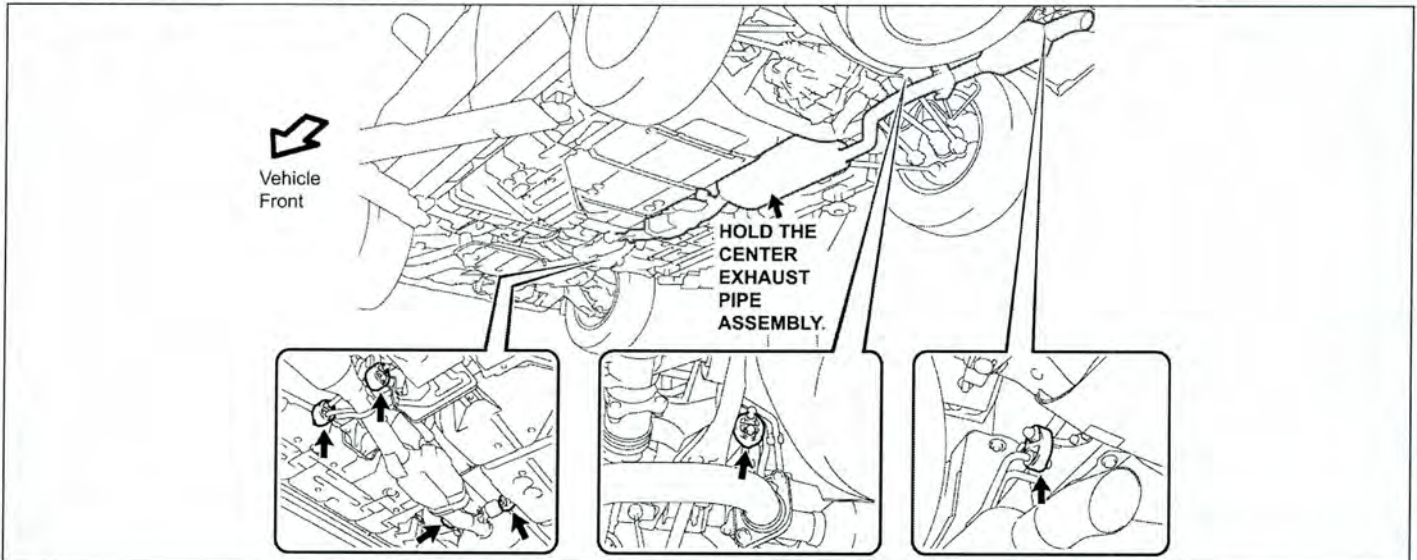
6. ATTACH A CLOTH TO THE UNDERSIDE OF THE BUMPER

- a) Attach a cloth to the underside of the bumper to protect the bumper during exhaust pipe removal.

7. REMOVE THE EXHAUST PIPE ASSEMBLY

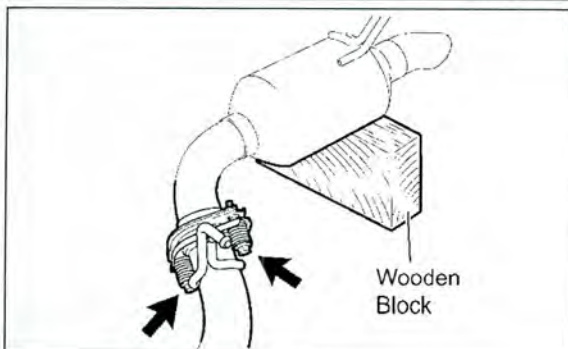
- a) Disconnect the 6 hangers and remove the exhaust pipe assembly.

NOTE: It may be necessary to work with an assistant to remove the exhaust pipe assembly.

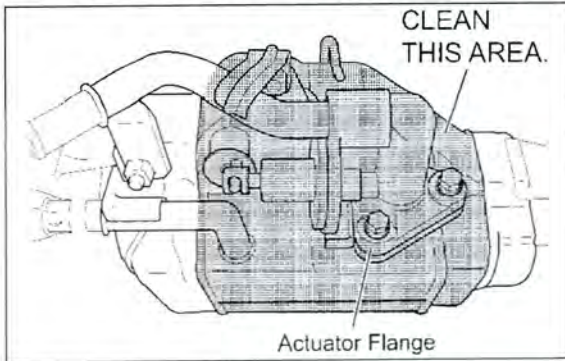


8. REMOVE THE TAIL EXHAUST PIPE ASSEMBLY

- a) Support the tailpipe assembly with a block of wood.
- b) Remove the 2 bolts and the 2 compression springs.

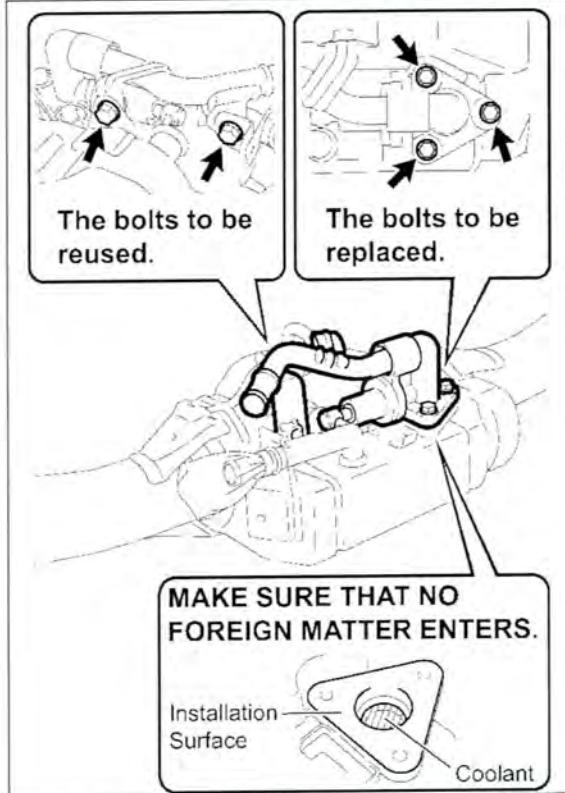


C. EXHAUST GAS CONTROL ACTUATOR REPLACEMENT



1. CLEAN THE AREA AROUND THE EXHAUST GAS CONTROL ACTUATOR SUB-ASSEMBLY

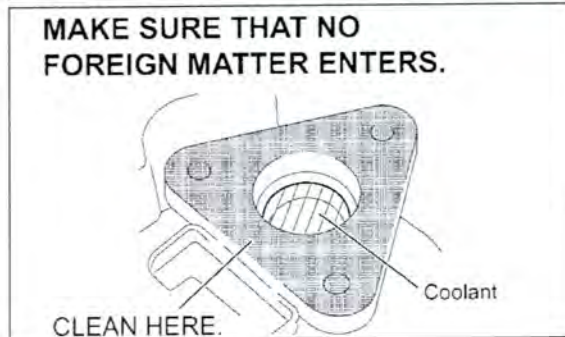
- a) Clean the area shaded in the illustration to prevent foreign material from entering the cooling system.



2. REMOVE THE EXHAUST GAS CONTROL ACTUATOR SUB-ASSEMBLY

- a) Remove the 5 bolts then the actuator and bypass pipe.

- Confirm that no foreign material enters the cooling system when the actuator is removed.
- **DO NOT** discard the 2 bolts that secure the bypass pipe, they will be reused.



3. CLEAN THE ACTUATOR CONTACT SURFACE

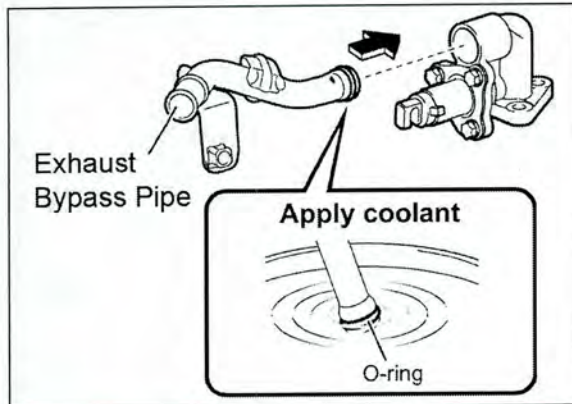
- a) Use a shop cloth to clean the contact surface.

NOTE: Clean from the inside of the flange toward the outside edge to prevent foreign material from entering the cooling system.

4. ADD COOLANT UP TO THE EDGE OF THE FLANGE

- a) To limit the amount of air in the cooling system, add coolant.

NOTE: If a large amount of air enters the cooling system, the load on the water pump will increase.

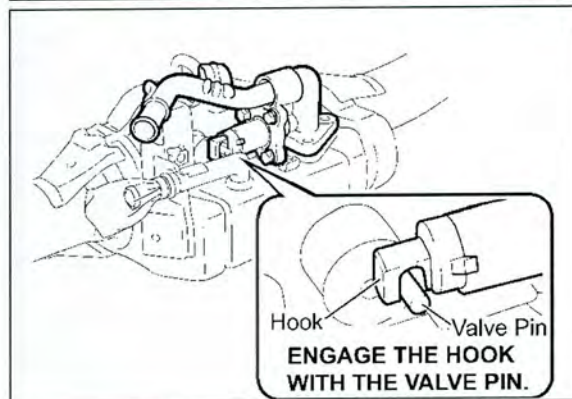


5. **CONNECT THE BYPASS PIPE TO THE EXHAUST PIPE GAS CONTROL ACTUATOR**

- a) Apply clean coolant to the o-ring on the **NEW** bypass pipe to ease installation.
- b) Insert the bypass pipe into the actuator as far as possible.

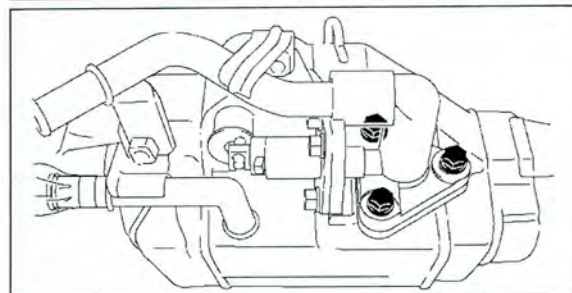
NOTE:

- **DO NOT** damage the o-ring or allow it to become contaminated before installation.
- Confirm the bypass pipe is installed completely, there may be a yellow mark on the new bypass pipe, **DO NOT** use this mark as an installation guide.



6. **LOOSELY INSTALL THE BYPASS PIPE AND ACTUATOR**

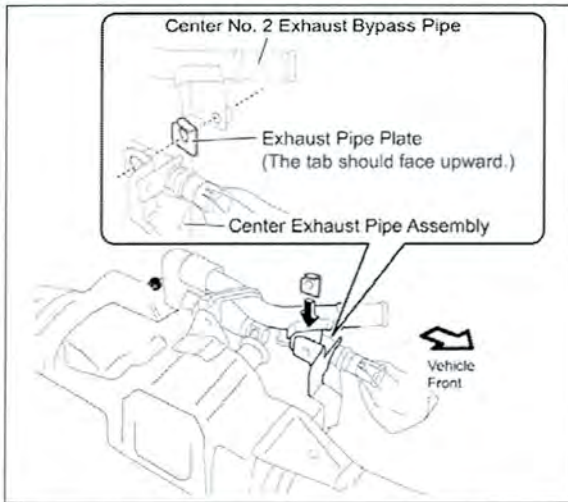
- a) Set the bypass pipe and actuator in place, confirm the actuator hook is engaged with the valve pin.



- b) Loosely install the 3 **NEW** actuator bolts several threads.

NOTE: DO NOT tighten these bolts at this time as the actuator will need to be adjusted.

THE FOLLOWING STEPS ARE VITAL. CONFIRM THESE STEPS ARE FOLLOWED CLOSELY IF THESE STEPS ARE NOT FOLLOWED A COOLANT LEAK COULD DEVELOP.



7. TEMPORARILY INSTALL THE BYPASS PIPE

- a) Insert the **NEW** exhaust pipe plate between the bypass pipe bracket and exhaust bracket that is positioned towards the front of the vehicle.

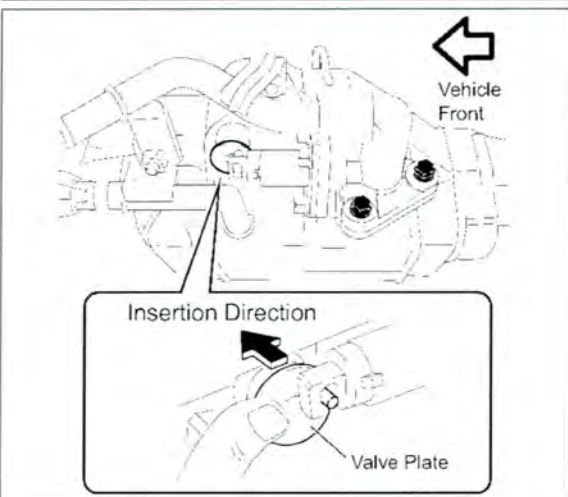
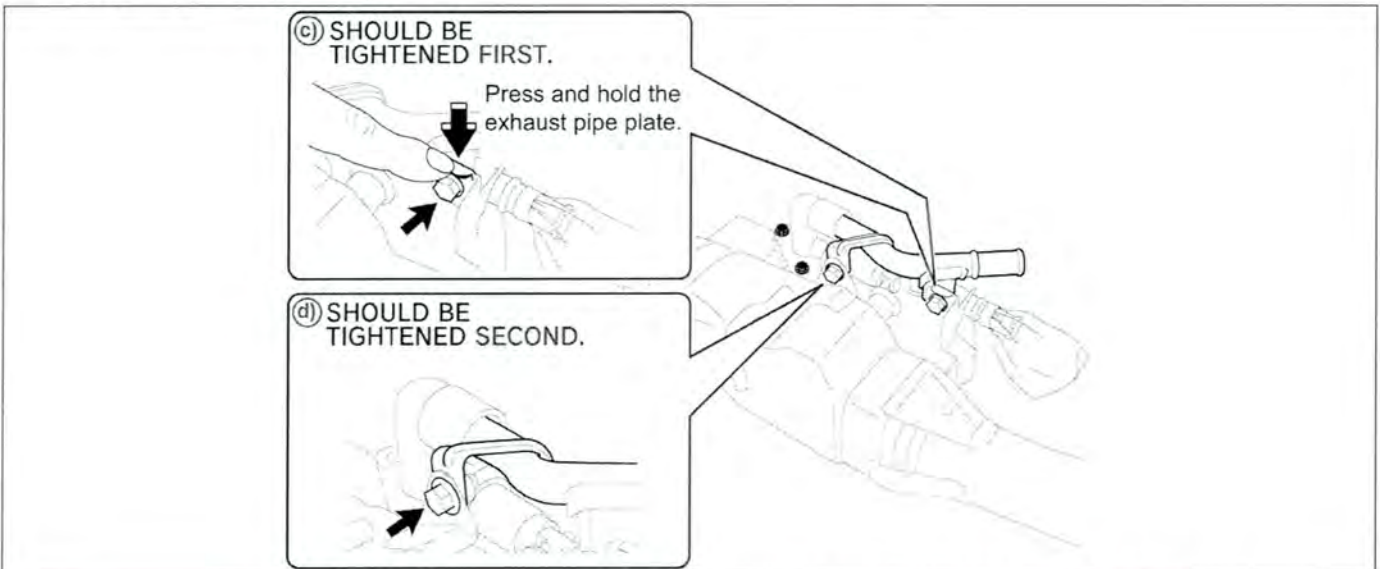


Confirm the plate is installed in the correct direction, with the tab facing upward.

- b) Loosely install 2 **NEW** black bolts.

- c) While pressing down on the newly installed exhaust pipe plate tighten the bolt.
d) While pressing down on the newly installed No.2 insulator tighten the bolt.

Torque: 75in.lbf (8.5N·m)

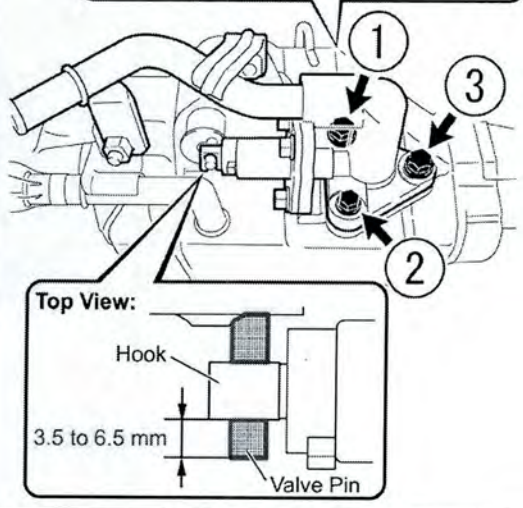
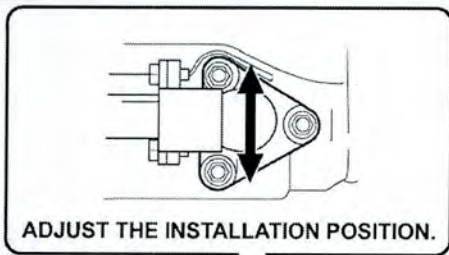


8. INSTALL THE EXHAUST GAS CONTROL ACTUATOR

- a) Confirm the valve plate is positioned correctly by pressing the plate.

NOTE: If the valve plate is not positioned correctly, the final actuator position may be difficult to achieve.

VITAL STEPS CONTINUED



- b) Position the actuator so that approximately 4.5mm of the valve pin is protruding past the actuator hook.
- c) Tighten the 3 bolts evenly following the torque sequence shown in the illustration.

Torque: 44 in.lbf (5.0N·m)

- d) Measure the length of the valve pin that protrudes beyond the actuator hook.

Specification: 3.5 – 6.5mm

If the protruding pin length is not within specification, the 3 actuator bolts **MUST** be loosened and **ALL** of STEP 11 **MUST** be repeated.

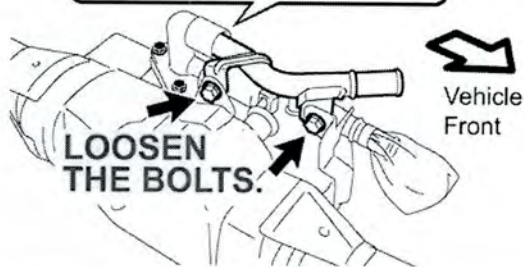
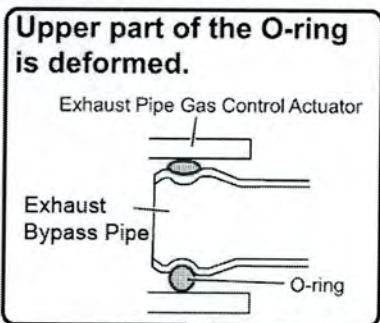
9. SETTLE THE BYPASS PIPE O-RING

- a) Loosen the 2 bolts slightly. **DO NOT** remove the bolts.
- b) Move the bypass pipe up and down to properly settle the o-ring.

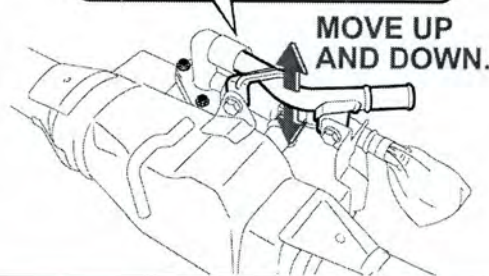
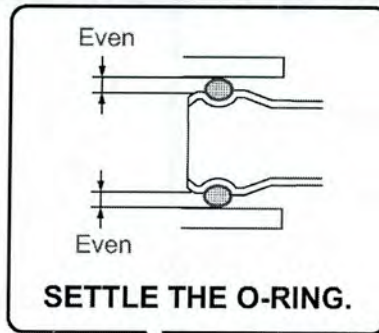


If this step is not performed, a coolant leak **WILL** develop.

a) BEFORE ADJUSTMENT



b) AFTER ADJUSTMENT



VITAL STEPS CONTINUED

10. TIGHTEN THE BYPASS PIPE BOLTS

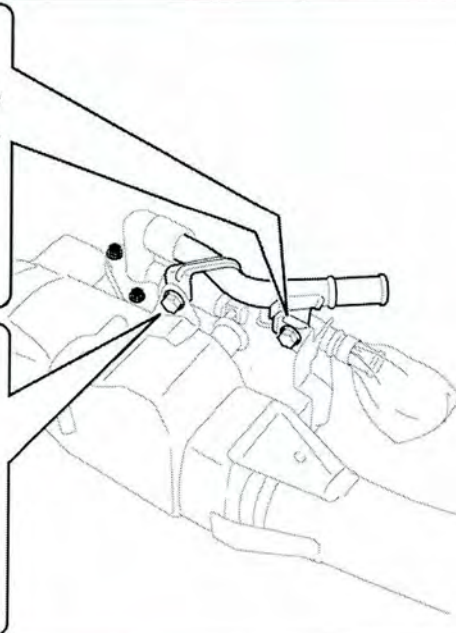
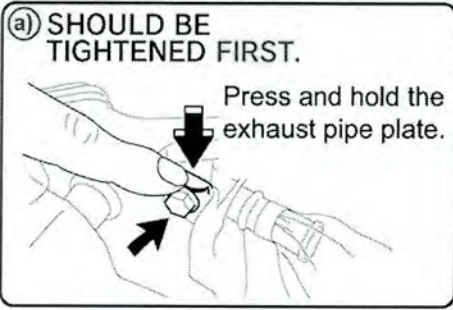


- **DO NOT** press down on the bypass pipe when tightening the bolts, this may cause a coolant leak.
- It is critical that step a) be performed before b), if these steps are completed in the incorrect order a coolant leak may develop.

a) While pressing down on the newly installed exhaust pipe plate tighten the bolt.

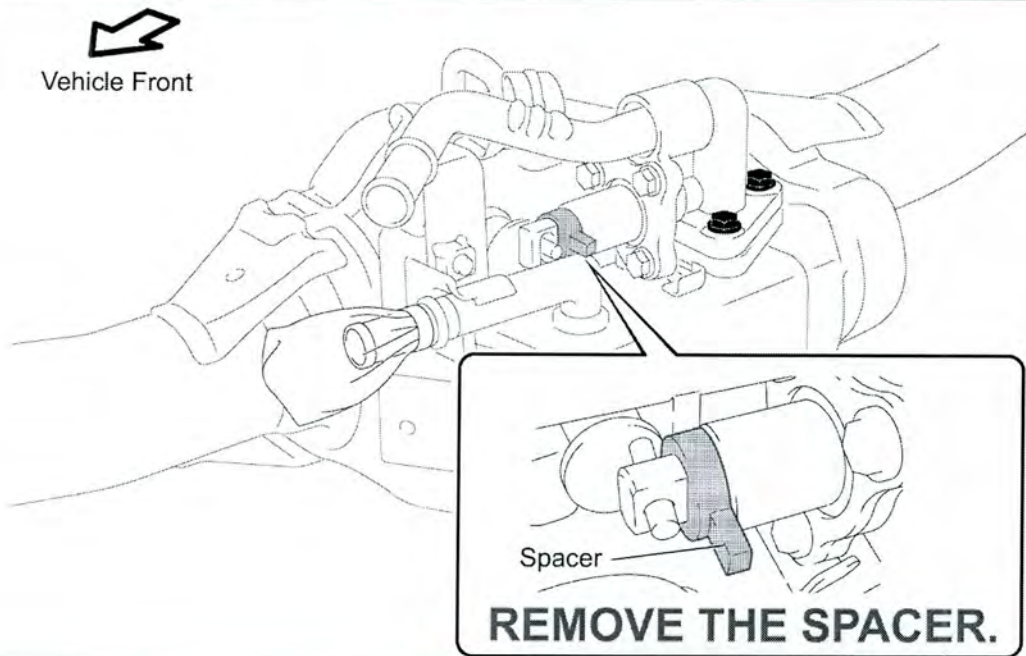
b) While pressing down on the newly installed No.2 insulator tighten the bolt.

Torque: 75in.lbf (8.5N·m)



11. REMOVE THE SPACER

- a) Remove the spacer from the actuator.



D. EXHAUST PIPE ASSEMBLY INSTALLATION

1. INSTALL THE EXHAUST PIPE ASSEMBLY

- a) Install the exhaust pipe assembly in the reverse order of removal, refer to TIS for instructions on exhaust pipe assembly installation.

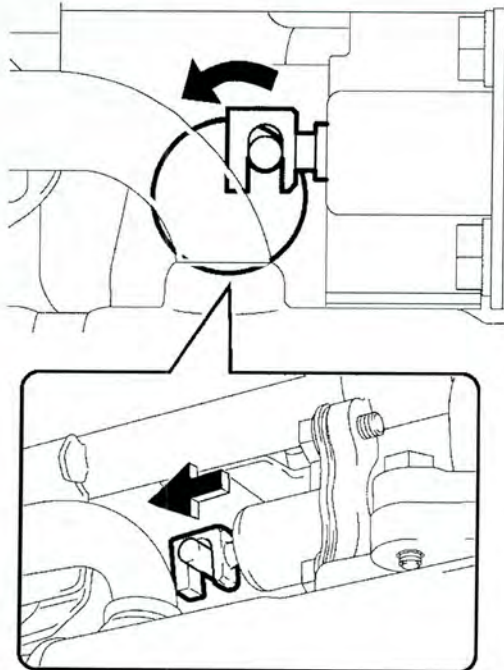


- Confirm the *NEW* exhaust pipe gaskets included in the parts kit are used.
- Confirm the cloth that was attached to the bumper during exhaust pipe removal is removed.
- Confirm the coolant drained from the radiator is reused.
- Confirm the coolant is filled and the system is properly bled.

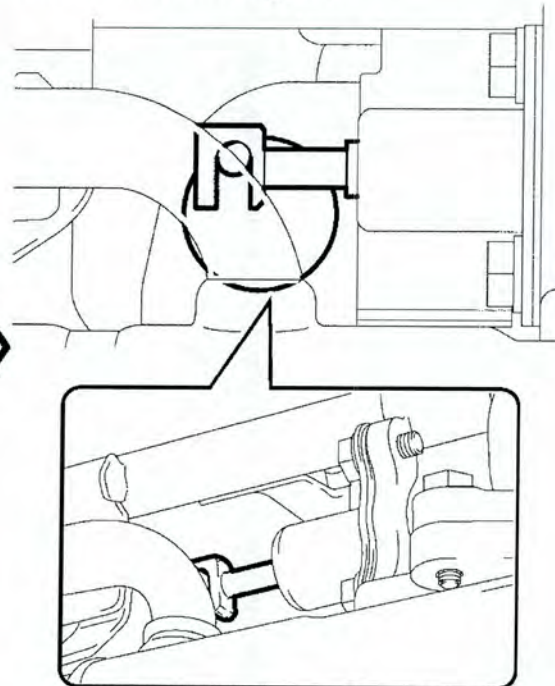
2. INSPECT THE OPERATION OF THE EXHAUST GAS CONTROL ACTUATOR

- a) Place the vehicle in 'Inspection Mode' and warm the engine to normal operating temperature.
b) Confirm the hook of the actuator is fully extended.

With cold engine:



With warm engine:



CONFIRM THAT THE HOOK IS EXTENDED.

3. CHECK FOR EXHAUST SYSTEM LEAKS
4. CHECK FOR DTCs

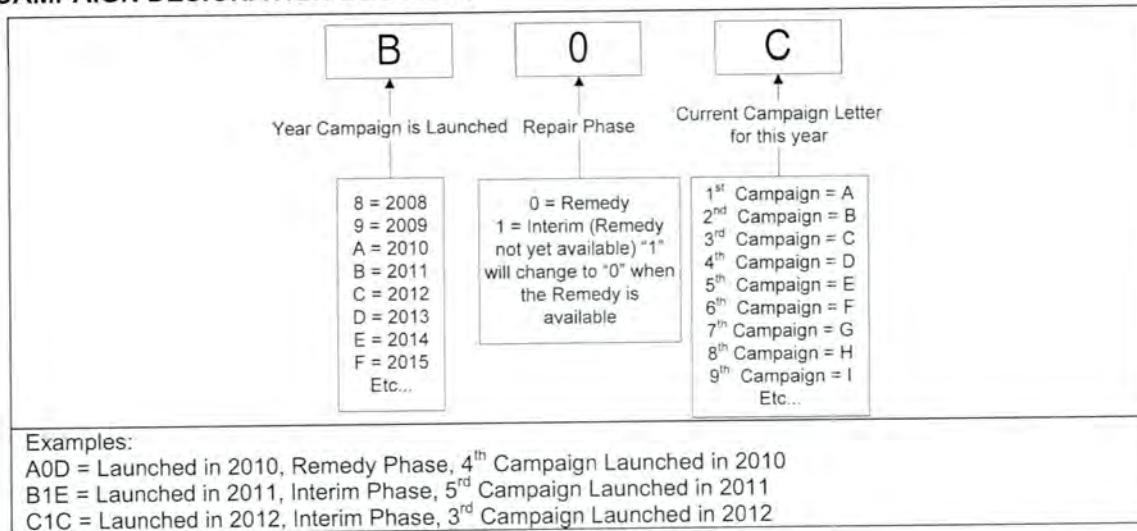
◀ VERIFY REPAIR QUALITY ▶

- Confirm the coolant is drained from the radiator using a clean container as this coolant *MUST* be reused
- Confirm the new actuator and bypass pipe are installed and aligned correctly
- Confirm the cooling system is refilled and bled correctly
- Confirm the actuator is working correctly by following the inspection in these instructions

If you have any questions regarding this campaign, please contact your regional representative

VI. APPENDIX

A. CAMPAIGN DESIGNATION DECODER



B. CAMPAIGN PARTS DISPOSAL

As required by Federal Regulations, please make sure all campaign parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, ***unless requested for parts recovery return.***