

19-+ ECO EGR INSTRUCTIONS

Installation Guide

Read the complete guide before beginning. Keep removed hardware organized, follow all safety precautions, and verify all connections before operating the vehicle.



— D I E S E L S —

REQUIRED TOOLS TORQUE SPECS CARE INSTRUCTIONS STEP 1: CHECK KIT CONTENTS STEP 2: BATTERY STEP 3: REMOVE ENGINE COVER AND INTAKE STEP 4: REMOVE INTAKE HORN STEP 6: INSTALL LOW PRESSURE EGR DELETE KIT STEP 7: REMOVE INTERCOOLER TUBE STEP 8: REMOVE FOAM SHIELD STEP 9: REMOVE INTAKE TUBE AND INSTALL BLOCKER STEP 10: REMOVE EGR EXHAUST TUBE STEP 11: UNDO EGR COOLER BOLTS STEP 12: DISCONNECT FUEL RETURN LINE STEP 13: REMOVE EGR COOLER STEP 14: INSTALL THE EXHAUST BLOCKER STEP 15: REMOVE EGR COOLER MOUNT STEP 16: INSTALL NEW BRACKET STEP 17: INSTALL NEW BRACKET STEP 18: INSTALL COOLANT HOSE STEP 19: REINSTALL SENSORS AND FUEL LINE

STEP 20

FINISHING TOUCHES STEP 18: REINSTALL BATTERY STEP 19: COMPLETE

REQUIRED TOOLS

- RATCHET - 10MM SOCKET - 13MM SOCKET - 10MM WRENCH - 5MM ALLEN KEY - T30 SOCKET - SMALL AND MEDIUM FLAT HEAD SCREWDRIVERS - VARIOUS PLIERS

TORQUE SPECS

CARE INSTRUCTIONS

- N/A

- THIS KIT IS MAINTENANCE FREE

STEP 1

CHECK KIT CONTENTS

Before starting, please check the contents of your kit:

QUANTITY PART NUMBER DESCRIPTION

P051-0995 COOLANT ADAPTER

P051-0996 INTAKE DELETE PLATE

P051-0997 INTAKE SUPPORT BRACKET

P051-0998 COOLANT HOSE CONNECTOR

- M6 FLANGE HEAD NUT

- M6 X 25MM LONG ALLEN BOLTS

- 8MM NIPPLE PLUG

P023-0129 3.0 ECOBOOST EGR DELETE INTAKE BOP

P023-0130 3.0 ECOBOOST EXHAUST BOP

P051-1004 ECODIESEL STAND PIPE SUPPORT

- M6 x 20MM FLANGE HEAD HBOLT

#8 (5/8 TO 15/16IN) LINED STAINLESS STEEL HOSE CLAMP

-

M6 FLANGE NUT TOP LOCK DEFORMED

-

THREAD

- 1/8IN NPT MALE SHCS PLUG

- 1/8IN NPT MALE TO 3/16IN BARB

- 1/8IN ID VACUUM HOSE CAP

- M6 FLANGE HBOLT x 25MM

- 8IN NYLON CABLE TIES

- M6 x 12MM FLANGE HEAD HBOLT

- 3/4IN ID HEATER HOSE

- #12 LINED STAINLESS STEEL HOSE CLAMP

- M10x 20MM GR8.8 BOLT

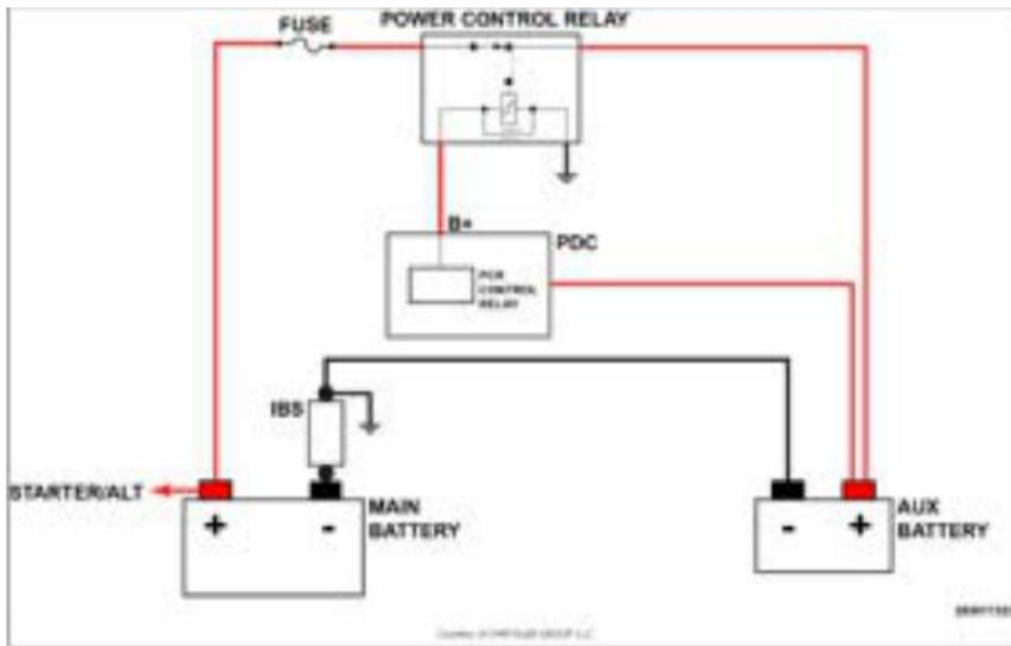
- 117 O-RING (13/16 ID x 3/32 THK IN)

STEP 2

BATTERY

DUAL BATTERY: WHEN DISCONNECTING A DUAL BATTERY SYSTEM, BOTH BATTERIES MUST BE PROPERLY DISCONNECTED AND ISOLATED IN ORDER TO PREVENT WIRING DAMAGE

OR AIRBAG DEPLOYMENT UPON RECONNECTING. PLEASE USE CAUTION.



Installation reference - page 4

1. TURN THE IGNITION OFF. 2. WAIT AT LEAST 5 MINUTES FOR THE MAIN MODULES TO GO TO SLEEP.
3. DISCONNECT AND ISOLATE THE AUXILIARY BATTERY NEGATIVE CABLE FROM

THE MAIN BATTERY NEGATIVE CABLE END. THIS WILL ISOLATE THE AUX BATTERY GROUND. 4. DISCONNECT THE MAIN BATTERY GROUND CABLE FROM THE NEGATIVE

TERMINAL. 5. DISCONNECT BOTH BATTERY POSITIVE TERMINALS AND REMOVE BATTERY

FROM VEHICLE.

SINGLE BATTERY: 1. TURN THE IGNITION OFF. 2. WAIT AT LEAST 5 MINUTES FOR THE MAIN MODULES TO GO TO SLEEP. 3. DISCONNECT THE MAIN BATTERY GROUND CABLE FROM THE NEGATIVE

TERMINAL. 4. DISCONNECT MAIN BATTERY POSITIVE TERMINAL AND REMOVE BATTERY

FROM VEHICLE.

STEP 3

REMOVE ENGINE COVER AND INTAKE

REMOVE (2) 10MM BOLTS FROM ENGINE DRESS COVER. LIFT COVER UP AND PULL

FORWARD TO REMOVE 2 PUSH LOCK PINS AT THE REAR. REMOVE COVER FROM

ENGINE BAY.



Installation reference - page 5

LOOSEN INTAKE HOSE CLAMP AT TURBO INLET ELBOW USING A FLAT HEAD SCREWDRIVER. LOOSEN PCV HOSE CLAMP FROM INTAKE PIPE AND REMOVE PCV TUBE FROM INTAKE. REMOVE MAF SENSOR PLUG FROM INTAKE PIPE. TO REMOVE, PULL BACK GREY LOCK TAB (USE A SMALL SCREWDRIVER GENTLY IF TIGHT), THEN

DEPRESS TAB AND PULL PLUG BACK TO REMOVE CONNECTOR. LIFT UP ON AIRBOX TO RELEASE 2 PUSHLOCK PINS, THEN REMOVE INTAKE SYSTEM FROM

VEHICLE.



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REMOVE (2) 10MM BOLTS RETAINING FOAM COVER ON TOP OF THE VALVE COVER. GENTLY REMOVE THE FOAM INSERT AND PLACE ASIDE FOR LATER.



Installation reference - page 6

REMOVE (2) 10MM NUTS HOLDING THE COOLANT RESERVOIR TO THE ENGINE BAY

COWEL. USING A FLATHEAD SCREWDRIVER, DISCONNECT HARDLINE FROM RETAINING CLIP ATTACHED TO THE RESERVOIR. PULL UP ON RESERVOIR TO DISCONNECT FROM 1 PUSHLOCK FITTING UNDERNEATH, AND SWING RESERVOIR

TO THE FRONT OF THE VEHICLE TO GIVE ACCESS TO THE EGR SYSTEM.



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STEP 4

REMOVE INTAKE HORN

REMOVE (2) T30 BOLTS BETWEEN THE EGR PIPE AND THE THROTTLE BODY.



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Installation reference - page 7

REMOVE (2) 5MM ALLEN BOLTS BETWEEN THE THROTTLE BODY AND THE TURBO INLET ELBOW.



Installation reference - page 7

REMOVE (1) 10MM NUT AND (1) 10MM BOLT HOLDING THE ELECTRIC CABLE TO THE TURBO ELBOW.
REMOVE (1) 10MM STUD HOLDING CONTROL VALVE TO INTAKE ELBOW



Installation reference - page 8

DISCONNECT AND REMOVE HOSE FROM CONTROL VALVE WHERE CONNECTED TO

INTAKE ELBOW. REMOVE INTAKE ELBOW FROM ENGINE.

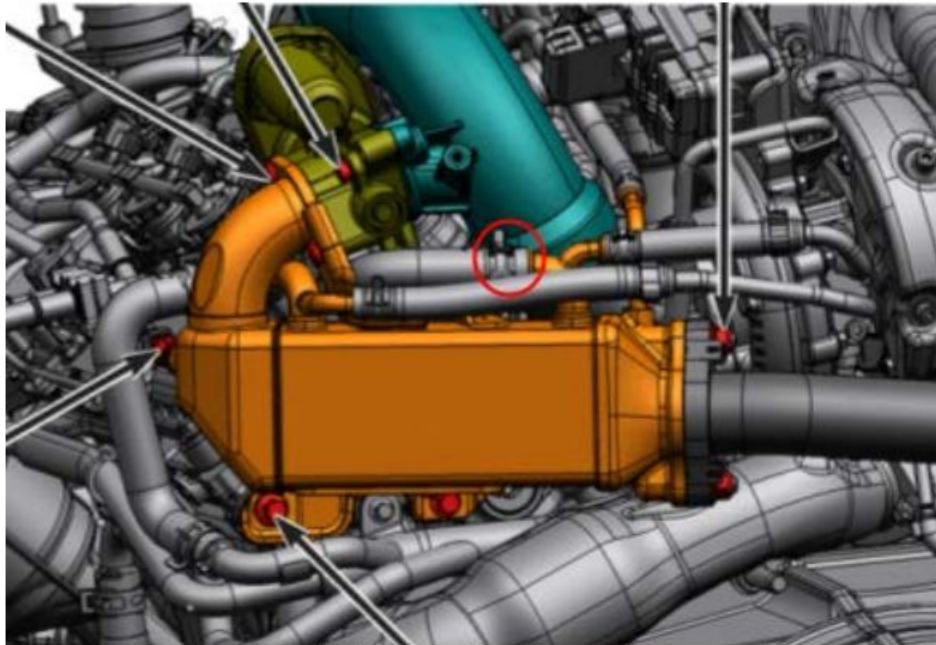
MAKE SURE TO PLUG TURBO INLET TO PREVENT DEBRIS FALLING IN DURING INSTALL.



Installation reference - page 8

**MOVE HOSE CLAMP AND REMOVE HOSE FROM EGR COOLER AS BELOW.
HAVE A**

CATCH PAN READY FOR ANY COOLANT THAT WILL DRAIN OUT.



Installation reference - page 9

**REMOVE (1) 10MM BOLT FROM BACK OF THROTTLE BODY. RELEASE
YELLOW LOCK**

**TAB ON THROTTLE CONNECTOR BY PULLING IT BACK, THEN DEPRESS AND
REMOVE CONNECTOR. REMOVE THROTTLE BODY FROM ENGINE.**

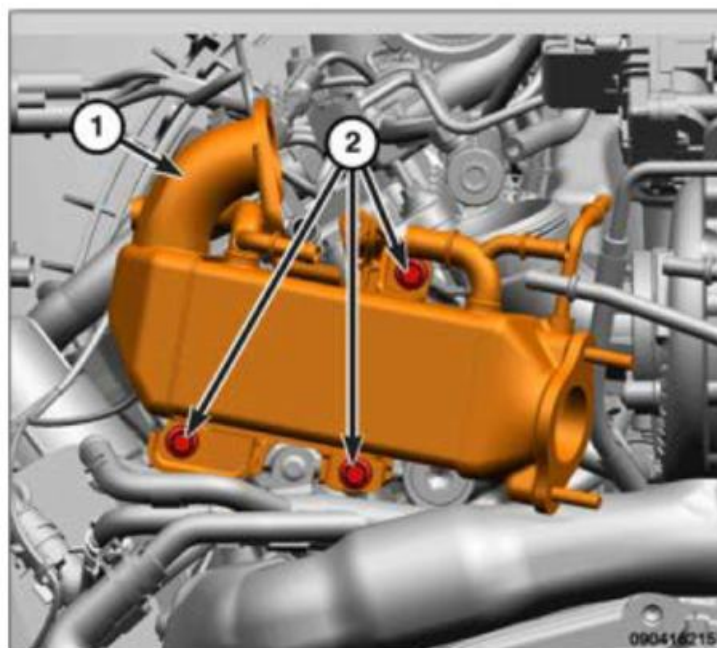


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STEP 5

REMOVE EGR COOLER

REMOVE (3) 10MM EGR COOLER BOLTS. SEE DIAGRAM BELOW FOR BOLT LOCATIONS.

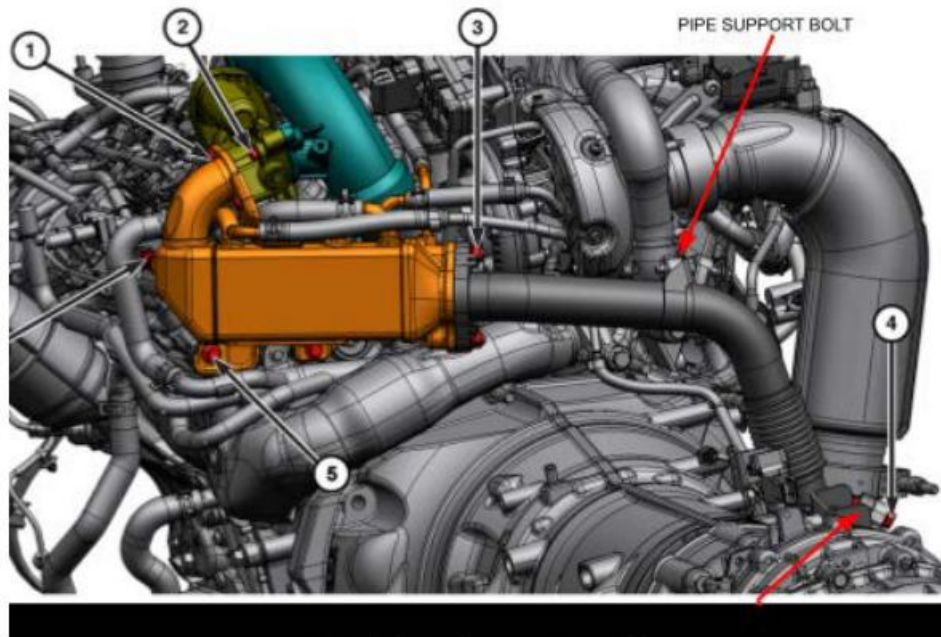


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REMOVE (1) 10MM BOLT FROM EGR PIPE SUPPORT BRACKET. ACCESS IS BEST FROM

THE PASSENGER SIDE. REMOVE (2) 13MM NUTS FROM THE EGR PIPE TO THE DPF

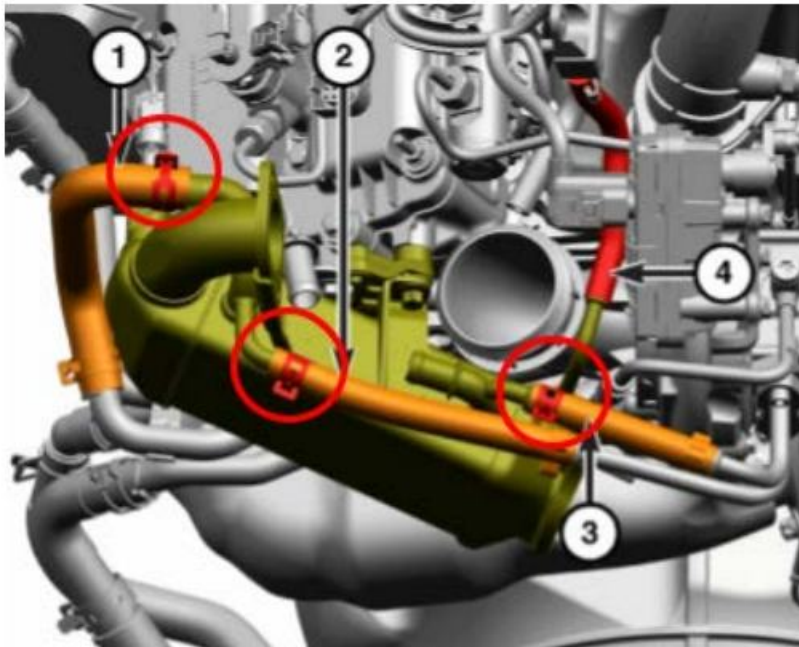
OUTLET ON THE EXHAUST IF NOT DONE SO ALREADY.



Installation reference - page 10

REMOVE (3) REMAINING COOLANT HOSES FROM EGR COOLER. REMOVE EGR COOLER SPACER BRACKET BETWEEN EGR AND ENGINE. REMOVE ACTUATOR HOSE

FROM COOLER (#4 IN PIC) AND UNPLUG AND REMOVE ACTUATOR FROM ENGINE.



Installation reference - page 11



Installation reference - page 11

COMPRESS WHITE TABS ON COOLANT HOSE QUICK RELEASE ON THE DRIVER SIDE

OF THE ENGINE. PULL UP TO REMOVE COOLANT LINE. THIS WILL GIVE EXTRA

ROOM WHEN REMOVING THE EGR COOLER.



Installation reference - page 11

**GENTLY REMOVE EGR COOLER AND EGR PIPE FROM BEHIND THE ENGINE.
THIS WILL**

COME OUT THE TOP SIDE OF THE ENGINE BAY. YOU MAY NEED TO REMOVE THE (2) 13MM NUTS
HOLDING THE EGR PIPE TO THE INLET OF THE EGR COOLER ONCE THE

ASSEMBLY IS HALF OUT TO BE ABLE TO MANIPULATE THE EGR PIPE OUT THE REST OF THE WAY.
THESE ARE ALL THE LOW PRESSURE EGR SYSTEM PARTS THAT SHOULD

NOW BE REMOVED FROM THE ENGINE.

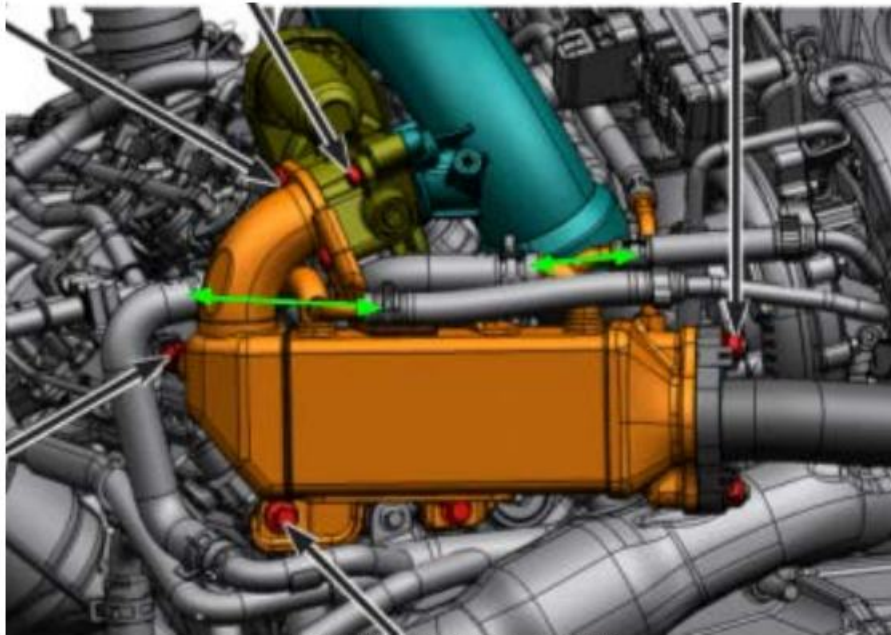


Installation reference - page 12

STEP 6

INSTALL LOW PRESSURE EGR DELETE KIT

**INSTALL 2 NEW COOLANT HOSE ADAPTERS TO THE EGR COOLANT LINES
PER THE PHOTO BELOW**



Installation reference - page 12



Installation reference - page 12

INSTALL NEW INTAKE SUPPORT BRACKET AND BLOCK OFF PLATE TO INTAKE ELBOW PER THE PICTURE BELOW WITH SUPPLIED 5MM ALLEN BOLTS. INSTALL

NIPPLE PLUG ONTO INLET ELBOW BUNG.



Installation reference - page 13

REMOVE TURBO INLET PLUG AND REINSTALL INTAKE ELBOW, THE ELBOW IS JUST

A PUSH FIT O-RING SEAL ON THE COMPRESSOR INLET. ALIGN THE SUPPORT BRACKET SLOT OVER THE APPROPRIATE VALVE COVER STUD. SECURE BRACKET

TO STUD WITH SUPPLIED 6MM HEX NUT.



Installation reference - page 13

INSTALL FOAM INSERT OVER VALVE COVER AND SECURE WITH (2) 10MM BOLTS. REATTACH COOLANT RESERVOIR TO COWEL AND SECURE IN BOTTOM PUSH LOCK

BEFORE SECURING (2) 10MM NUTS UP TOP. REATTACH HARDLINE TO RETAINING

CLIP. REINSTALL INTAKE TUBE AND AIRBOX TO VEHICLE. ENSURE AIRBOX IS SECURED IN PUSH LOCKS CORRECTLY. REATTACH PCV LINE AND MAF CONNECTOR. SECURE ALL

CLAMPS.



Installation reference - page 14

THE LOW PRESSURE SIDE IS NOW DONE!

REMOVE HIGH PRESSURE EGR SYSTEM

STEP 7

REMOVE INTERCOOLER TUBE

REMOVE THE PASSENGER SIDE INTERCOOLER TUBE



Installation reference - page 15

STEP 8

REMOVE FOAM SHIELD

THE BRACKET THAT HOLDS THE FOAM ON IS JUST ALONG THE SIDE OF THE

ENGINE. YOU CAN JUST MAKE OUT THE 10MM SOCKET AND RATCHET ON THE SIDE THERE.



Installation reference - page 15

STEP 9

REMOVE INTAKE TUBE AND INSTALL

BLOCKER

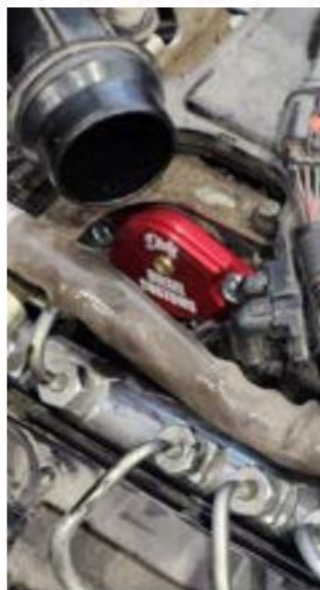
USING AN 8MM SOCKET, REMOVE THE BOLTS ON BOTH SIDES OF THE EGR INTAKE

TUBE. INSTALL THE RED BLOCKER PLATE WITH (2) M6 x 16MM FLANGE HEAD

HBOLT.



Installation reference - page 16



Installation reference - page 16

STEP 10

REMOVE EGR EXHAUST TUBE

UNDO THE EXHAUST TUBE ON THE EGR COOLER SIDE. GENTLY BEND IT OUT OF THE

WAY AS REQUIRED. IT WILL LIKELY BE EASIER TO WAIT UNTIL AFTER THE NEXT

STEP TO REMOVE THE TURBO SIDE OF THIS PIPE, SO FEEL FREE TO LEAVE IT

THERE.



Installation reference - page 16

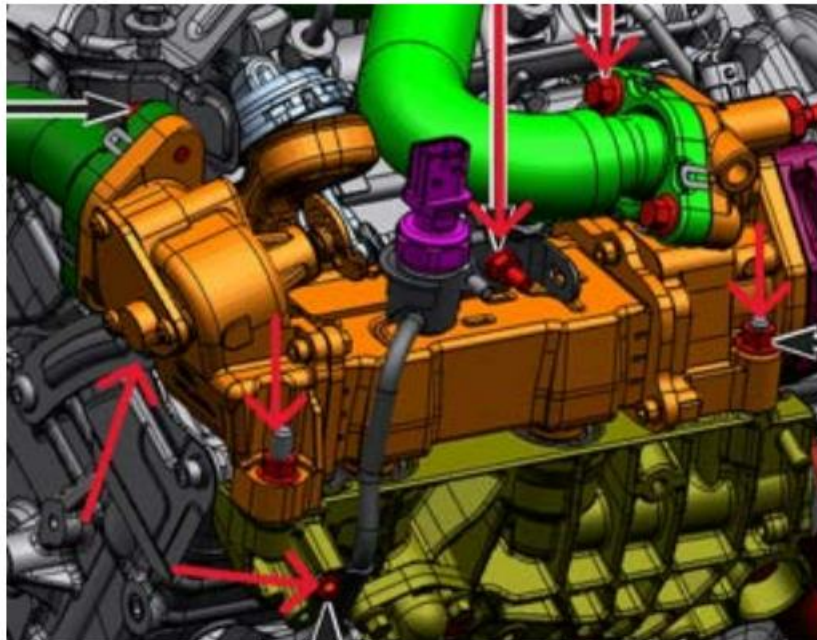
STEP 11

UNDO EGR COOLER BOLTS

REMOVE TWO NUTS ON TOP OF THE COOLER. A SENSOR NEEDS TO BE MOVED OUT OF THE WAY AS WELL, VERY GENTLY BEND IT OUT OF THE WAY ONCE BOTH THE TOP

AND SIDE FASTENERS ARE LOOSE. THE BRACKET ON THE BACK REQUIRES A T40 BIT. IF IT STRIPS, THERE IS ROOM TO

USE A SAWZALL To CUT THE BRACKET IN HALF



Installation reference - page 17

STEP 12

DISCONNECT FUEL RETURN LINE

BEFORE YOU TRY TO REMOVE THE COOLER, IT IS HIGHLY RECOMMENDED THAT YOU DISCONNECT THE FUEL QUICK CONNECT FITTINGS ON TOP OF THE INJECTORS. THEY ARE EASY TO REMOVE, BUT EVEN EASIER TO ACCIDENTALLY BREAK DURING COOLER

REMOVAL. COVER THESE PORTS WITH SOMETHING.



Installation reference - page 17

STEP 13

REMOVE EGR COOLER

EVERYTHING SHOULD BE SEPARATED FROM THE UPPER PART OF THE EGR COOLER NOW. YOU MAY HAVE TO BEND A HEAT SHIELD OUT OF THE WAY, AND SQUISH SOME

WIRES OUT OF THE WAY. PULL IT STRAIGHT UP TO REMOVE IT. PREPARE FOR SOME

COOLANT TO SPILL.

STEP 14

INSTALL THE EXHAUST BLOCKER

AFTER COMPLETE REMOVAL OF THE EXHAUST EGR TUBE, USE THE SUPPLIED (3) M6 x 20MM FLANGE HEAD HBOLT, INSTALL THE SS PLATE WITH THE OEM GASKET. ALTERNATIVELY, WAIT TO DO THIS AFTER STEP 12 FOR A BIT MORE ROOM.



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STEP 15

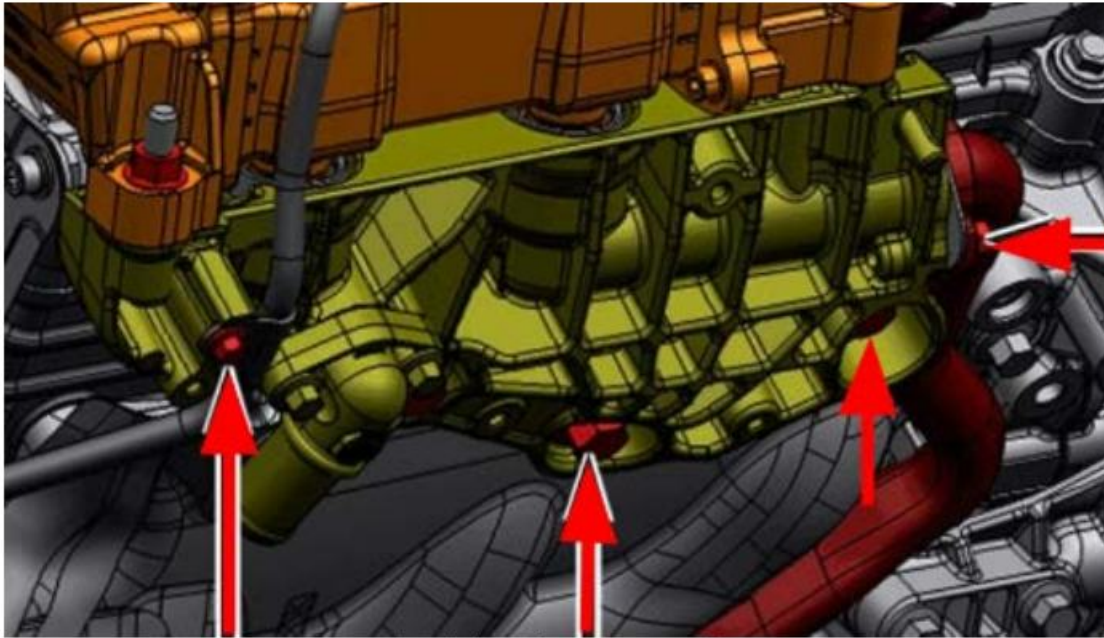
REMOVE EGR COOLER MOUNT

REMOVE THE M6 BOLT HOLDING THE SENSOR TUBE NEAR THE FIREWALL ONTO THE

BRACKET. VERY GENTLY BEND THIS TUBE OUT OF THE WAY. REMOVE THE M6 BOLTS

HOLDING THE COOLANT STANDPIPE ONTO THE FRONT OF THE BRACKET. FINALLY REMOVE ALL THE M10 BOLTS HOLDING THE BRACKET TO THE BLOCK. PREPARE FOR

SOME COOLANT TO SPILL.



Installation reference - page 19

STEP 16

INSTALL NEW BRACKET

USING THE SUPPLIED M10 BOLTS, INSTALL THE TWO BEND BRACKET IN THE FORWARD TWO HOLES PREVIOUSLY USED TO HOLD THE EGR COOLER BRACKET. THE

STANDPIPE SHOULD LINE UP PRETTY CLOSE TO IT.

ENSURE THE O-RING IS PROPERLY SEATED IN THE COOLANT ADAPTER, NOW ALIGN

THE BRACKET, STANDPIPE, AND COOLANT ADAPTER, FROM FRONT TO BACK AS

SHOWN BELOW



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STEP 17

INSTALL NEW BRACKET

THE SENSOR TUBE YOU UNBOLTED PREVIOUSLY CAN NOW BE -VERY- GENTLY FORMED TO MOUNT ONTO THE SUPPLIED BRACKET. RIGHT NEAR THE SENSOR,

THE 90 DEGREE TAB NEEDS TO BE STRAIGHTENED OUT. VERY METHODICALLY USE PLIERS TO ACHIEVE THIS. YOU SHOULD USE VISE GRIPS TO HOLD ONTO THE

TAB AT THE BASE. DO NOT APPLY ANY FORCE TO THE TUBE OR THE WELD HOLDING THE TAB ONTO THE SENSOR BLOCK.



Installation reference - page 20

ONCE THE TAB IS STRAIGHTENED OUT, THE TUBE CAN BE MOUNTED ONTO THE SUPPLIED BRACKET USING AN M6 BOLT AND NUT

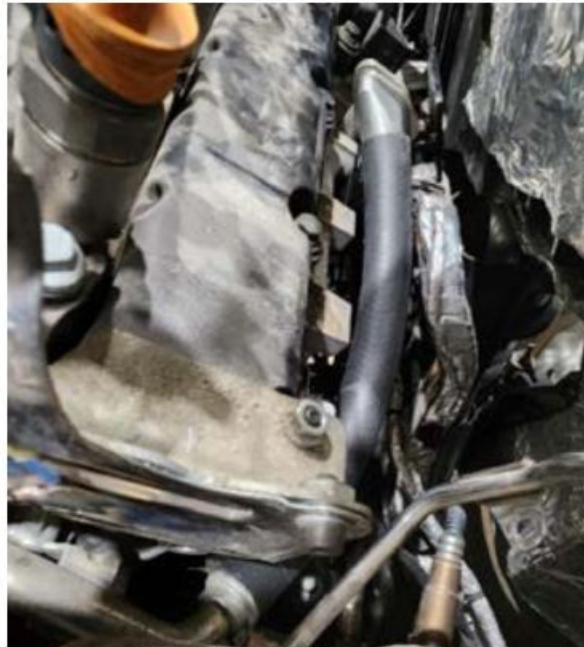


Installation reference - page 20

STEP 18

INSTALL COOLANT HOSE

USING THE #12 HOSE CLAMPS, INSTALL THE PRE-CUT HOSE ONTO THE OPEN COOLANT PORTS.



Installation reference - page 21.

STEP 19

REINSTALL SENSORS AND FUEL LINE

REINSTALL THE SENSOR WIRES, THE RETURN FUEL LINE QUICK CONNECTS, AND ANY OTHER BITS YOU MAY HAVE REMOVED TO GET TO THIS POINT.

STEP 20

FINISHING TOUCHES

REINSTALL ENGINE DRESS COVER AND SECURE WITH 2 PUSH LOCKS AND (2) 10MM BOLTS.



Installation reference - page 22

STEP 18

REINSTALL BATTERY

STEP 19

COMPLETE

ENJOY YEARS OF EGR RELIABILITY, POWER AND EFFICIENCY!

— DIESELS —