

1997 - 1998 Corvette: Service Bulletin: Fuel Pump Noise Coming From Fuel Pump/Tank (Replace Fuel Pump Assembly)

Subject: FUEL PUMP NOISE COMING FROM FUEL PUMP OR FUEL TANK AREA (REPLACE FUEL PUMP ASSEMBLY)

Source: Chevrolet Dealer Technical Service Bulletin

Number: 83-63-10 - (04/28/1998)

Models: 1997-98 CHEVROLET CORVETTE BUILT PRIOR TO VIN BREAKPOINT 07561

IMPORTANT:

THIS SERVICE PROCEDURE CAN ONLY BE DONE USING SPECIAL TOOL J 42940, FUEL SENDER TORQUE TOOL.

PARTS FOR THIS REPAIR CAN ONLY BE OBTAINED BY CALLING CHEVROLET TECHNICAL ASSISTANCE AT 1-800-227-3175.

Condition:

SOME OWNERS MAY COMMENT ABOUT A NOISE COMING FROM THE FUEL PUMP OR FUEL TANK AREA.

Correction:

REPLACE THE FUEL PUMP ASSEMBLY. A NEW PARTS KIT (#12455734) HAS BEEN RELEASED TO CORRECT THIS CONDITION.

IMPORTANT: FOLLOW ALL OF THE INSTRUCTIONS STEP BY STEP.

ON-VEHICLE SERVICE -

IMPORTANT: PLACE A DRY CHEMICAL (CLASS B) FIRE EXTINGUISHER NEAR THE WORK AREA BEFORE ATTEMPTING ANY ON-VEHICLE SERVICE.

FUEL SENDER ASSEMBLY REPLACEMENT -

REMOVAL PROCEDURE

TOOLS REQUIRED:

- J 34730-1A FUEL PRESSURE GAUGE - J 37088-A TOOL SET, FUEL LINE QUICK CONNECT SEPARATOR - J 42940 FUEL SENDER TORQUE TOOL

CAUTION:

RELIEVE THE FUEL SYSTEM PRESSURE BEFORE SERVICING FUEL SYSTEM COMPONENTS IN ORDER TO REDUCE THE RISK OF FIRE AND PERSONAL INJURY. AFTER RELIEVING THE SYSTEM

PRESSURE, A SMALL AMOUNT OF FUEL MAY BE RELEASED WHEN SERVICING THE FUEL LINES OR CONNECTIONS. IN ORDER TO REDUCE THE CHANCE OF PERSONAL INJURY, COVER THE REGULATOR AND THE FUEL LINE FITTINGS WITH A SHOP TOWEL BEFORE DISCONNECTING. THIS WILL CATCH ANY FUEL THAT MAY LEAK OUT. PLACE THE TOWEL IN AN APPROVED CONTAINER WHEN THE DISCONNECTION IS COMPLETE.

CAUTION:

ALWAYS WEAR SAFETY GOGGLES WHEN WORKING WITH FUEL IN ORDER TO PROTECT THE EYES FROM FUEL SPLASH.

1. TURN THE IGNITION OFF.
2. LOOSEN THE FUEL FILLER CAP IN ORDER TO RELIEVE THE FUEL TANK VAPOR PRESSURE.
3. REMOVE THE LEFT FUEL RAIL COVER.
4. CONNECT THE J 34730-1A FUEL PRESSURE GAUGE TO THE FUEL RAIL SCHRADER VALVE FITTING. WRAP A SHOP TOWEL AROUND THE FITTING WHILE CONNECTING THE GAUGE IN ORDER TO AVOID SPILLAGE.
5. INSTALL THE BLEED HOSE OF THE GAUGE INTO AN APPROVED CONTAINER.
6. OPEN THE VALVE ON THE GAUGE TO BLEED THE SYSTEM PRESSURE.[loz]THE FUEL CONNECTIONS ARE NOW SAFE FOR SERVICING.
7. DRAIN ANY FUEL REMAINING IN THE GAUGE INTO AN APPROVED CONTAINER.
8. DISCONNECT THE FUEL RETURN HOSE (4) FROM THE FUEL RAIL (FIGURE 1).
9. ATTACH A LENGTH OF FLEXIBLE FUEL HOSE TO THE FUEL RAIL RETURN PIPE USING A SCREW TYPE CLAMP.
10. INSERT THE OTHER END OF THE FLEXIBLE FUEL HOSE INTO AN APPROVED DRAIN CONTAINER.
11. RUN THE ENGINE UNTIL THE ENGINE STALLS.
12. RECONNECT THE FUEL RETURN HOSE (4) TO THE FUEL RAIL (FIGURE 1).

CAUTION:

BEFORE SERVICING ANY ELECTRICAL COMPONENT, THE IGNITION KEY MUST BE IN THE OFF OR LOCK POSITION AND ALL ELECTRICAL LOADS MUST BE OFF, UNLESS INSTRUCTED OTHERWISE IN THESE PROCEDURES.[loz]IF A TOOL OR EQUIPMENT COULD EASILY COME IN CONTACT WITH A LIVE EXPOSED ELECTRICAL TERMINAL, ALSO DISCONNECT THE NEGATIVE BATTERY CABLE. FAILURE TO FOLLOW THESE PRECAUTIONS MAY CAUSE PERSONAL INJURY AND/OR DAMAGE TO THE VEHICLE OR ITS COMPONENTS.

13. DISCONNECT THE NEGATIVE BATTERY CABLE.

CAUTION:

TO AVOID ANY VEHICLE DAMAGE, SERIOUS PERSONAL INJURY OR DEATH WHEN COMPONENTS ARE REMOVED FROM THE VEHICLE AND THE VEHICLE IS SUPPORTED BY A HOIST, PERFORM THE FOLLOWING STEPS:

- CHAIN THE VEHICLE TO THE HOIST AT THE SAME END AS THE COMPONENTS THAT ARE BEING REMOVED.

- SUPPORT THE VEHICLE AT THE OPPOSITE END FROM WHICH THE COMPONENTS ARE BEING REMOVED.

14. RAISE AND SUPPORT THE VEHICLE.

15. REMOVE THE LEFT REAR WHEEL NUT CAPS.

16. REMOVE THE LEFT REAR WHEEL NUTS.

17. MARK THE LOCATION OF THE TIRE AND WHEEL ASSEMBLY TO THE HUB ASSEMBLY.

18. REMOVE THE LEFT REAR TIRE AND WHEEL ASSEMBLY.

19. CLEAN ALL OF THE FUEL CONNECTIONS AND THE SURROUNDING AREAS BEFORE DISCONNECTING THE FUEL PIPES IN ORDER TO AVOID POSSIBLE CONTAMINATION OF THE FUEL SYSTEM.

20. MARK OR IDENTIFY EACH FUEL PIPE IN ORDER TO AID IN INSTALLING THE PIPES IN THEIR ORIGINAL POSITIONS.

21. DISCONNECT THE QUICK-CONNECT FITTINGS FROM THE FUEL SENDER.

A. SLIDE THE DUST COVER FROM THE QUICK-CONNECT FITTING.

CAUTION:

WEAR SAFETY GLASSES WHEN USING COMPRESSED AIR, AS FLYING DIRT PARTICLES MAY CAUSE EYE INJURY.

B. BLOW DIRT OUT OF THE FITTING USING COMPRESSED AIR.

C. CHOOSE THE CORRECT TOOL FROM J 37088 TOOL SET FOR THE [1oz] SIZE OF THE FITTING. INSERT THE TOOL INTO THE FEMALE [1oz] CONNECTOR, THEN PUSH INWARD TO RELEASE THE LOCKING TABS.

D. PULL THE CONNECTION APART.

22. CAP ALL OF THE FUEL PIPES.

23. DISCONNECT THE FUEL SENDER ELECTRICAL CONNECTOR.

24. REMOVE THE FUEL TANK STRAP/SHIELD.

25. SUPPORT THE FUEL TANK.

26. REMOVE THE FUEL SENDER ATTACHING BOLTS.

27. CAREFULLY REMOVE THE FUEL SENDER WITH THE GASKET.

28. DISCARD THE FUEL SENDER GASKET.

29. DISCARD THE FUEL SENDER ATTACHING BOLTS.

30. CLEAN THE GASKET SEALING SURFACES.

INSTALLATION PROCEDURE -

CAUTION:

IN ORDER TO REDUCE THE RISK OF FIRE AND PERSONAL INJURY THAT MAY RESULT FROM A FUEL LEAK, ALWAYS REPLACE THE FUEL SENDER GASKET AND THE FUEL SENDER ATTACHING BOLTS WHEN REINSTALLING THE FUEL SENDER ASSEMBLY.

1. REMOVE THE FLOAT ARM RETAINING CLIP AND THE FLOAT ARM FROM THE FUEL SENDER ASSEMBLY.

2. INSTALL A NEW FUEL SENDER GASKET ON THE FUEL SENDER.

3. FOLD THE STRAINER THREE TIMES SO THAT THE AMOUNT OF SPACE OCCUPIED BY THE STRAINER IS ABOUT EQUIVALENT TO THE DIAMETER OF THE FUEL SENDER RESERVOIR (FIGURE 2).

A. FOLD THE LONG SIDE OF THE STRAINER OVER (1 OVER 2).

B. FOLD 3 OVER 4 AND HOLD THE STRAINER IN THE FOLDED [loz] POSITION.

4. INSERT THE FUEL SENDER THROUGH THE FUEL TANK OPENING.

5. RELEASE THE STRAINER ONCE THE STRAINER IS IN THE FUEL TANK. THE STRAINER WILL SPRING BACK TO ITS FULL POSITION.

6. CONTINUE INSERTING THE FUEL SENDER THROUGH THE FUEL TANK OPENING. IT MAY BE NECESSARY TO ROTATE THE FUEL SENDER IN ORDER TO FACILITATE THE INSTALLATION.

A. LOOK THROUGH THE FUEL TANK OPENING TO ENSURE THAT THE [loz] LONG SIDE OF THE STRAINER IS VISIBLE.

B. IF THE STRAINER IS NOT VISIBLE, ROTATE THE FUEL SENDER [loz] CLOCKWISE AND COUNTER CLOCKWISE ABOUT 90 DEGREES. [loz] ROTATING THE FUEL SENDER WILL FREE UP THE STRAINER. [loz] THE STRAINER SHOULD BECOME VISIBLE AT THE TANK [loz] OPENING.

IMPORTANT:

DO NOT BEND OR TWIST THE FLOAT ARM.

7. INSERT THE FLOAT AND THE FLOAT ARM INTO THE FUEL TANK OPENING.

8. INSTALL THE FLOAT ARM ON THE FUEL SENDER.

9. INSTALL THE FLOAT ARM RETAINING CLIP.

10. ALIGN THE FUEL SENDER GASKET TAB (1) WITH THE FUEL SENDER COVER MARK (2). (FIGURE 3)

11. ALIGN THE FUEL SENDER COVER MARK (2) WITH THE FUEL TANK MARK. (FIGURE 3)

CAUTION:

OVER OR UNDER TORQUING OF THE FUEL SENDER ATTACHING BOLTS MAY ALLOW A FUEL LEAK WHICH COULD INCREASE THE RISK OF FIRE AND PERSONAL INJURY. THE FUEL SENDER TORQUE TOOL (J 42940) IS THE ONLY TOOL ACCEPTABLE FOR STEP 12. TORQUE WRENCHES ARE NOT ACCEPTABLE DUE TO EXCESSIVE VARIATION.

12. HAND TIGHTEN THE FUEL SENDER ATTACHING BOLTS UNTIL FINGER TIGHT. USING THE FUEL SENDER TORQUE TOOL (J 42940), TIGHTEN THE FUEL SENDER ATTACHING BOLTS TO 3 N.M IN THE SEQUENCE SHOWN IN (FIGURE 3). J 42940 WILL RATCHET WHEN THE PROPER TORQUE IS ATTAINED.

IMPORTANT:

ONLY TORQUE EACH BOLT ONE TIME. DO NOT TORQUE BOLTS A SECOND TIME.

CAUTION:

IN ORDER TO REDUCE THE RISK OF FIRE AND PERSONAL INJURY, BEFORE CONNECTING FUEL PIPE FITTINGS, ALWAYS APPLY A FEW DROPS OF CLEAN ENGINE OIL TO THE MALE PIPE ENDS. THIS WILL ENSURE PROPER RECONNECTION AND PREVENT A POSSIBLE FUEL LEAK. DURING NORMAL OPERATION, THE O-RINGS LOCATED IN THE FEMALE CONNECTOR WILL SWELL AND MAY PREVENT PROPER RECONNECTION IF NOT LUBRICATED.

13. CONNECT THE FUEL SENDER FUEL FEED PIPE (JET PUMP TO LEFT TANK), THE FUEL RETURN REAR PIPE AND THE FUEL FEED REAR PIPE.

A. APPLY A FEW DROPS OF CLEAN ENGINE OIL TO THE MALE [loz] PIPE END.

B. PUSH BOTH SIDES OF THE FITTING TOGETHER TO CAUSE [loz] THE RETAINING TABS TO SNAP INTO PLACE.

C. ONCE INSTALLED, PULL ON BOTH SIDES OF THE FITTING [loz] TO MAKE SURE THE CONNECTION IS SECURE.

D. RE-POSITION THE DUST COVER OVER THE QUICK-CONNECT [loz] FITTING.

14. CONNECT THE FUEL SENDER ELECTRICAL CONNECTOR.

15. VISUALLY INSPECT THE FUEL TANK STRAP/SHIELD MATING SURFACES (RIBS) FOR NOTICEABLE SIGNS OF UNUSUAL WEAR OR CONTACT WITH THE FUEL TANK. IF THIS CONDITION EXISTS, IT MAY HAVE BEEN CAUSED BY THE IMPROPER PLACEMENT OF ISOLATION TAPE(S) LOCATED ON THE BOTTOM OF THE FUEL TANK. IF THIS CONDITION EXISTS, USE THE FOLLOWING METHOD FOR ISOLATION TAPE REPLACEMENT.

A. REMOVE THE IMPROPERLY PLACED ISOLATION TAPE(S) FROM THE [loz] FUEL TANK.

B. CLEAN THE BOTTOM OF THE FUEL TANK STRAP/SHIELD RIB(S) WITH [loz] WAX AND GREASE REMOVER.

C. ALLOW THE FUEL TANK STRAP/SHIELD TO DRY.

D. CUT A NEW PIECE OF 3M(R) PART #051131-06356 SCOTCH SQUEAK [loz] REDUCTION TAPE, OR EQUIVALENT, TO COVER THE ENTIRE LENGTH [loz] OF RIB MATING SURFACE(S).

E. INSTALL THE TAPE TO THE CORRESPONDING RIB(S) OF THE FUEL [loz] TANK STRAP/SHIELD.

16. INSTALL THE FUEL TANK STRAP/SHIELD.

17. INSTALL THE FUEL TANK STRAP/SHIELD BOLTS (FIGURE 4).

A. INSTALL THE NET HOLE BOLT (3).

B. INSTALL THE SLOT LOCATION BOLT (1).

C. INSTALL THE REMAINING BOLTS (2 AND 5).

[loz] TIGHTEN THE FUEL TANK STRAP/SHIELD BOLTS TO [loz] 25.5 N.M (19 LB FT).

18. ALIGN THE LOCATING MARK OF THE TIRE AND WHEEL ASSEMBLY TO THE HUB ASSEMBLY.

19. INSTALL THE LEFT REAR WHEEL AND TIRE ASSEMBLY.

20. INSTALL THE LEFT REAR WHEEL NUTS.

TIGHTEN

TIGHTEN THE WHEEL NUTS IN SEQUENCE TO 140 N.M (100 LB FT).

21. INSTALL THE LEFT REAR WHEEL NUT CAPS.

22. LOWER THE VEHICLE.

23. REFILL THE FUEL SYSTEM.

24. INSTALL THE FUEL FILLER CAP.

25. CONNECT THE NEGATIVE BATTERY CABLE.

TIGHTEN THE NEGATIVE BATTERY CABLE BOLT TO 15 N.M (11 LB FT).

26. PROGRAM THE TRANSMITTERS.

A. TURN THE IGNITION TO ON.

B. TURN THE RADIO TO OFF.

C. PRESS THE RESET BUTTON IN ORDER TO CLEAR ANY [loz] IPC WARNING MESSAGES.

D. PRESS AND RELEASE THE OPTIONS BUTTON ON THE [loz] DIC TO SCROLL THROUGH THE DISPLAY OPTIONS UNTIL [loz] THE IPC DISPLAY IS BLANK.

E. PRESS AND HOLD THE RESET BUTTON FOR 3 SECONDS.

F. PRESS THE OPTIONS BUTTON UNTIL FOB TRAINING [loz] MESSAGE IS DISPLAYED.

IMPORTANT:

IF THE FOB TRAINING MESSAGE CANNOT BE DISPLAYED, CHECK IF THE BCM IS CONFIGURED WITH THE CORRECT RPO CODES.

G. PRESS THE RESET BUTTON IN ORDER TO BEGIN THE [loz] PROGRAMMING SEQUENCE.[loz]THE MESSAGE HOLD LK + UNLK [loz] 1ST FOB WILL BE DISPLAYED.

H. SIMULTANEOUSLY PRESS AND HOLD THE LOCK AND UNLOCK [loz] BUTTONS ON THE FIRST TRANSMITTER FOR 15 SECONDS. [loz] THE IPC WILL INDICATE WHEN THAT TRANSMITTER IS [loz] PROGRAMMED AND WHEN TO PROCEED TO THE NEXT. REPEAT [loz] THIS PROCEDURE FOR EACH ADDITIONAL TRANSMITTER OR [loz] PRESS THE OPTIONS BUTTON TO EXIT.

27. INSPECT FOR LEAKS.

TURN THE IGNITION SWITCH ON FOR 2 SECONDS.

TURN THE IGNITION SWITCH OFF FOR 10 SECONDS.

TURN THE IGNITION SWITCH ON.

CHECK FOR FUEL LEAKS.

28. INSTALL THE LEFT FUEL RAIL COVER.

Parts Information:

P/N DESCRIPTION

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2455734	MODULE, ASM, F/TANK F/PUMP
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PARTS FOR THIS REPAIR CAN ONLY BE OBTAINED BY CALLING CHEVROLET TECHNICAL ASSISTANCE AT 1-800-227-3175.

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