

TOYOTA UPGRADE

Important: The installation of this Upgrade Kit should be performed by trained and experienced service technicians. Proper tools and equipment should be used to prevent injury to the servicing technician, property or system components. Service repairs should always be performed in a safe environment and the technician should always wear protective clothing to prevent injury. Refer to page 10 for additional information.



REMOVE OLD CARBURETOR

1. Purge the fuel system by closing the fuel tank valve.
Run the engine until it stops.



2. Disconnect the battery negative cable.



3. Remove the crankcase vent and governor air hose from the air plenum.



4. Remove the air plenum from the carburetor.



5. Disconnect the fuel vapor hose from the carburetor.



6. Disconnect the two vacuum hoses from the carburetor that lead to the governor plate.



7. Cap the two vacuum ports from the where the lines were removed.



8. Disconnect the throttle cable. Remove the carburetor and gasket from the governor.



INSTALL IMPCO UPGRADE CARBURETOR

1. Install the new gasket.



2. Install the IMPCO carburetor and fasteners. Tighten the nuts to 17 lb. ft. (23 N·m).



3. Reconnect the throttle cable.



4. Install the air plenum.



5. Reconnect the governor and crankcase vent hoses and bolts.



6. Tighten the plenum bolts to 11 lb. ft. (14.9 N•m)

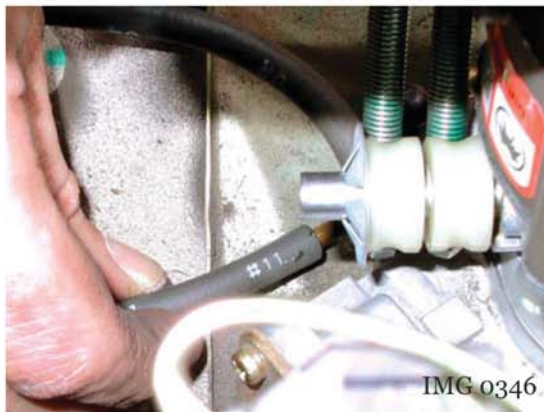


REMOVE OLD REGULATOR ASSEMBLY

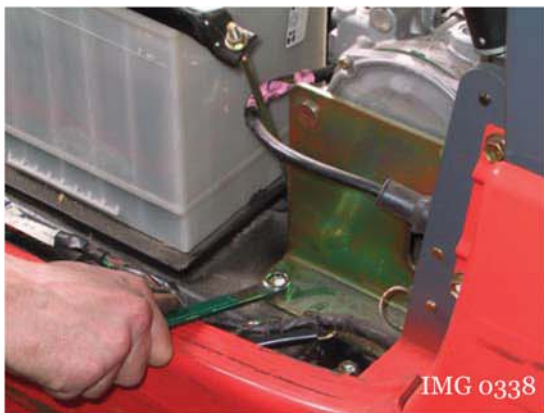
1. Disconnect the electric fuel lock-off connector.



2. Disconnect the fuel line from regulator assembly.



3. Disconnect the vacuum line from the regulator to governor plate, and plug the governor plate fitting with the supplied vacuum cap.



4. Remove the regulator assembly bracket bolts.



5. Place a drain pan under the lift to catch coolant when hoses are disconnected from the engine.



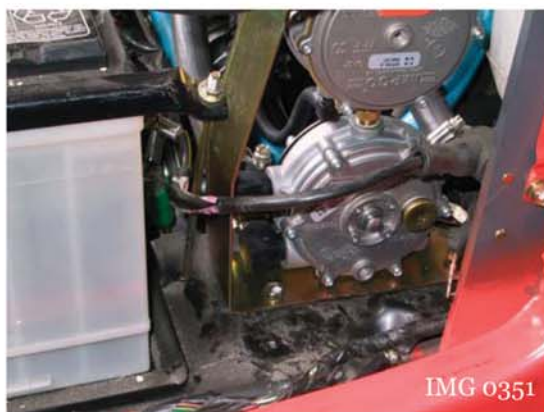
6. Disconnect coolant hoses from engine.



7. Remove vapor and vacuum hose from hold down straps.



8. Remove the regulator assembly.

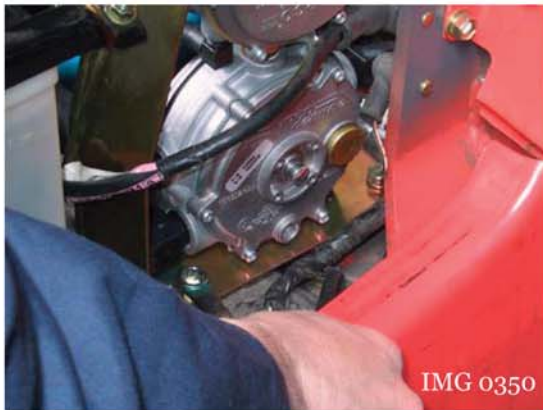


INSTALL IMPCO UPGRADE REGULATOR/LOCK-OFF ASSEMBLY

1. Place new IMPCO regulator assembly into position using the two bolt holes on the inboard side of the lift. If this is a new LPG conversion, use the two supplied bolts and lock washers. Install the two bolts, do not tighten.



2. Connect the fuel line to the lock-off and torque to 20 lb. ft. (27 N•m).



3. Tighten the regulator assembly bracket bolts to 17 lb. ft. (23 N•m).



4. Connect and clamp the coolant hoses to the engine. Either hose can be connected to either engine coolant connector.

- To prevent kinks, cut the hoses to the correct length if necessary.



5. Route the fuel vapor hose and lock-off vacuum line to the carburetor along the path of the old hose. Secure in place with tie straps.



6. Connect the fuel vapor hose and clamp to the carburetor fitting and tighten.



7. Connect the fuel lock vacuum hose to the large brass vacuum port on the carburetor.



FINAL PROCEDURES

1. Open the fuel tank valve and perform leak checks at carburetor and regulator assembly fuel line and vapor hose connections using a commercially available liquid leak detector or an electronic leak detector. If leaks are detected, make repairs.



2. Connect the battery negative cable.



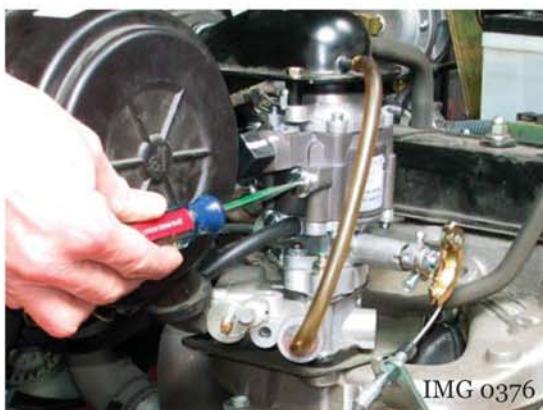
3. Fill the radiator with coolant as necessary.
4. Start the engine and perform a second leak check at the carburetor, regulator assembly fuel line and vapor hose connections. Repair leaks as necessary. Open the bleed valve to remove air from the coolant system.
5. Run the engine to full operating temperature.



6. Use an engine exhaust gas analyzer and tachometer to:



7. Set the engine idle speed at the carburetor to 800 RPM in neutral.



8. Set the idle fuel mixture to .80 CO%.



9. Set the power adjustment on the carburetor. With the wheels blocked parking brake on and foot on the brake pedal. In drive, depress accelerator to full throttle position. Set CO% to .80 CO% .



SPECIAL NOTES

On some early model lift trucks the distributor spark advance port may not be available at the governor plate. In this case use the distributor spark advance port located on the IMPCO carburetor as shown.

WARNING: IMPROPER INSTALLATION OR USE OF THIS PRODUCT MAY CAUSE SERIOUS INJURY AND/OR PROPERTY DAMAGE.

THE FOLLOWING IS SPECIFIC TO USA AND CANADA. IF INSTALLED, REPAIRED OR MAINTAINED OUTSIDE OF THE USA OR CANADA, REFER TO LOCAL STANDARDS AND LAWS GOVERNING THIS AND RELATED PRODUCTS. **CANADA:** REFER TO CAN/CGA PROPANE INSTALLATION CODES.

SERVICE TECHNICIANS AND USERS

SHOULD CAREFULLY READ AND ABIDE BY THE PROVISIONS SET FORTH IN NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #37 FOR STATIONARY ENGINES, #52 FOR CNG VEHICULAR FUEL SYSTEMS OR #58 FOR LPG SYSTEMS.

INSTALLERS

LPG INSTALLATIONS IN THE UNITED STATES MUST BE DONE IN ACCORDANCE WITH FEDERAL STATE OR LOCAL LAW, WHICHEVER IS APPLICABLE AND NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #58, STANDARD FOR STORAGE AND HANDLING OF LIQUEFIED PETROLEUM GASES TO THE EXTENT THESE STANDARDS ARE NOT IN VIOLATION WITH FEDERAL, STATE OR LOCAL LAW. **CANADA:** REFER TO CAN/CGA PROPANE INSTALLATION CODES.

CNG INSTALLATIONS IN THE UNITED STATES/CANADA

MUST BE DONE IN ACCORDANCE WITH FEDERAL STATE OR LOCAL LAW AND NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #52, COMPRESSED NATURAL GAS (CNG) VEHICULAR FUEL SYSTEMS TO THE EXTENT THESE STANDARDS ARE NOT IN VIOLATION WITH FEDERAL, STATE OR LOCAL LAW. **CANADA:** REFER TO CAN/CGA CNG INSTALLATION CODES.

LPG AND/OR NATURAL GAS INSTALLATIONS ON STATIONARY ENGINES

MUST BE DONE IN ACCORDANCE WITH FEDERAL, STATE OR LOCAL LAW AND NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #37, STATIONARY COMBUSTION ENGINES AND GAS TURBINE ENGINES, TO THE EXTENT THESE STANDARDS ARE NOT IN VIOLATION WITH FEDERAL, STATE OR LOCAL LAW. FAILURE TO ABIDE BY THE ABOVE WILL VOID ANY IMPCO WARRANTY ON THE PRODUCTS AND MAY CAUSE SERIOUS INJURY OR PROPERTY DAMAGE. DUE TO THE INHERENT DANGER OF GASEOUS FUELS THE IMPCO PRODUCTS SHOULD NOT BE INSTALLED OR USED BY PERSONS NOT KNOWLEDGEABLE OF THE HAZARDS ASSOCIATED WITH THE USE OF GASEOUS FUELS.