

N - REMOVE/INSTALL/OVERHAUL

1992 Subaru SVX

1992 ENGINE PERFORMANCE
Subaru Removal, Overhaul & Installation

Justy, Legacy, Loyale, SVX

INTRODUCTION

Removal, overhaul and installation procedures are covered in this article. If component removal and installation is primarily an unbolt and bolt-on procedure, only a torque specification may be furnished.

IGNITION SYSTEM

DISTRIBUTOR

NOTE: See Figs. 1, 2 or 3 for exploded view of distributor.

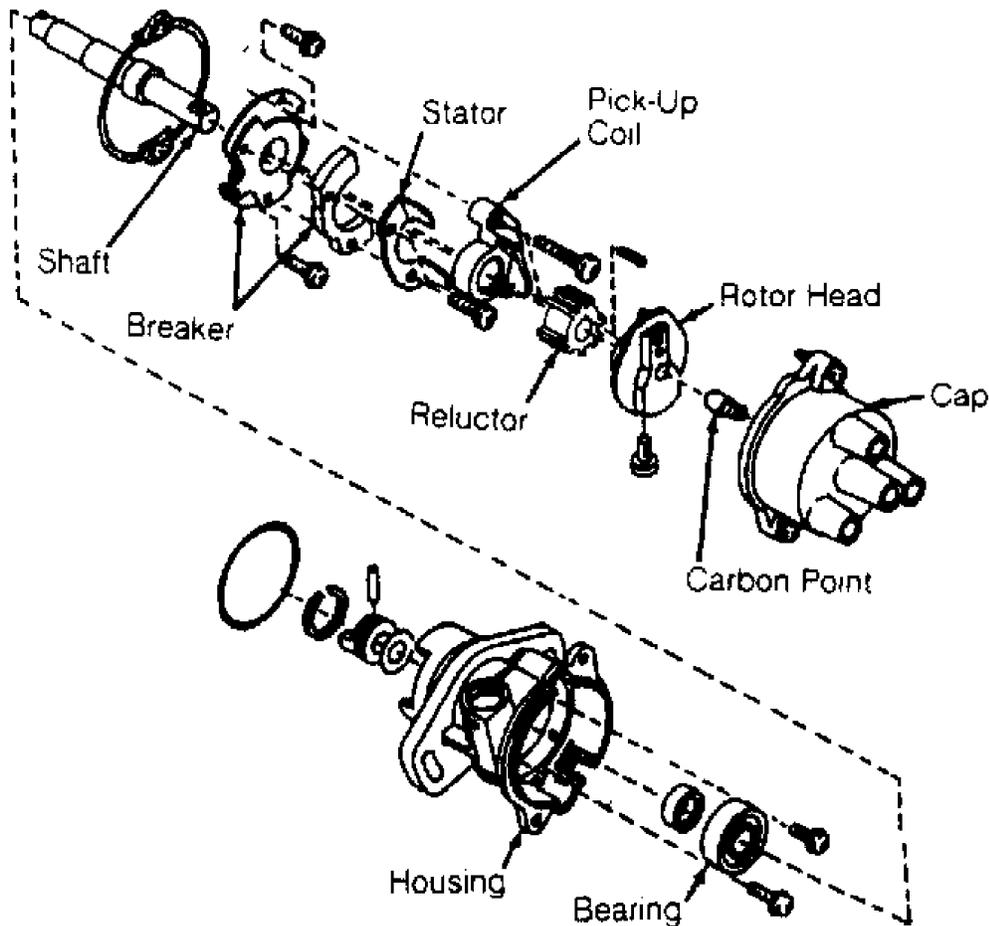


Fig. 1: Exploded View Of Distributor (Justy 1.2L Carbureted)
Courtesy of Subaru of America, Inc.

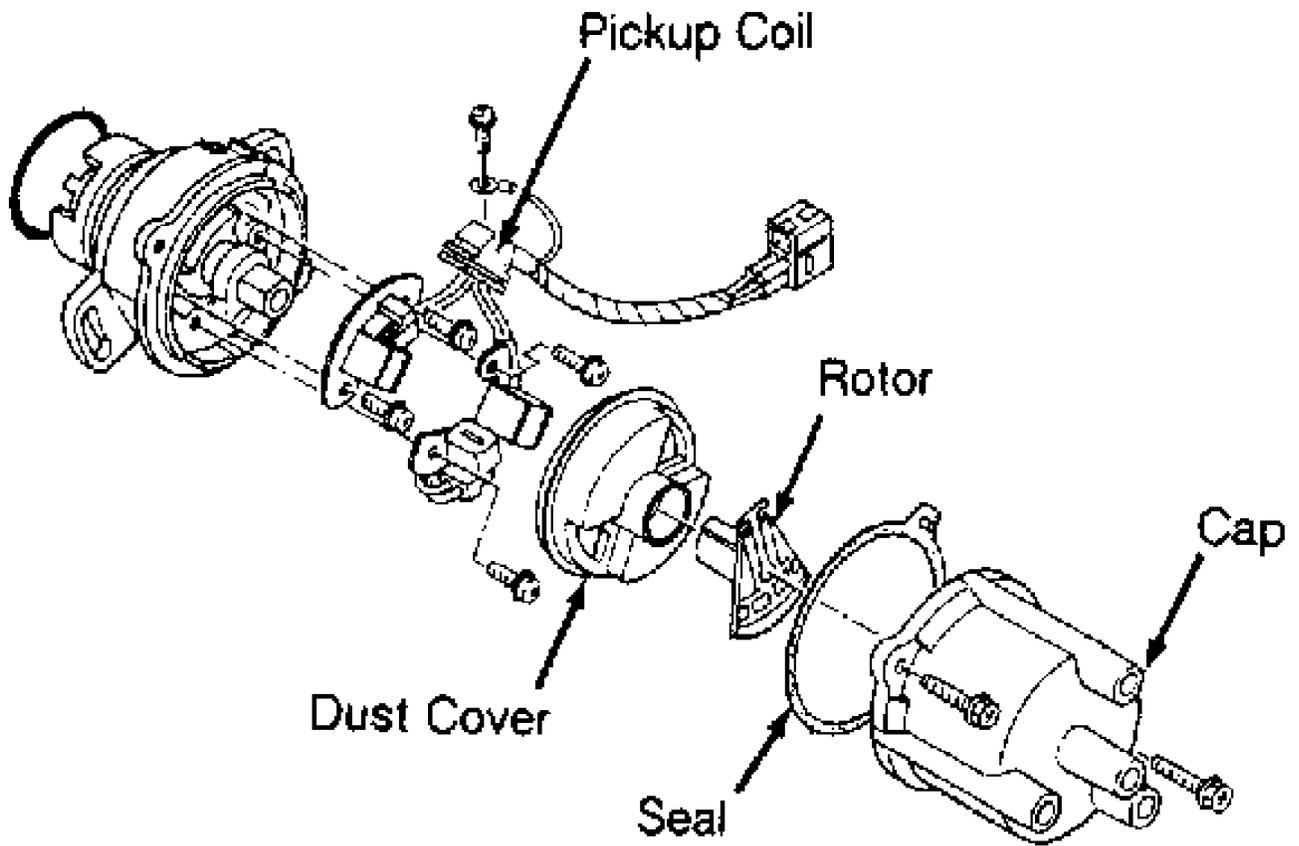
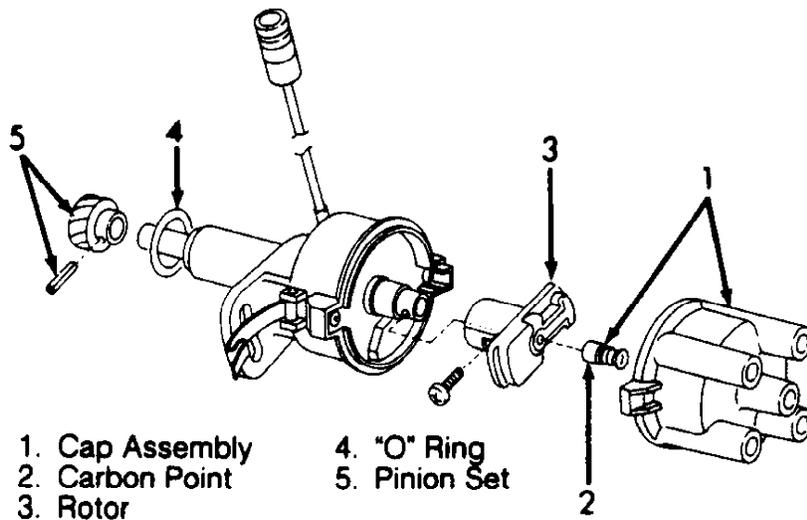


Fig. 2: Exploded View Of Distributor (Justy 1.2L PFI)
 Courtesy of Subaru of America, Inc.



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Fig. 3: Exploded View Of Distributor (Loyale 1.8L TBI)
 Courtesy of Subaru of America, Inc.

FUEL SYSTEM

WARNING: Always relieve fuel pressure before disconnecting any fuel injection-related component. DO NOT allow fuel to contact engine or electrical components.

FUEL SYSTEM PRESSURE RELEASE

Disconnect fuel pump connector. Start and run engine until it stalls. After engine stalls, crank starter for approximately 5 seconds. Turn ignition switch to OFF position.

CARBURETOR

Removal

1) Remove air cleaner. Disconnect fuel delivery, return and vent hoses. Disconnect hoses from main diaphragm, distributor advance, vacuum canister, idle solenoid valve, float bowl vent solenoid, and primary and secondary air bleed hoses.

2) Disconnect harness connector. Disconnect accelerator cable from throttle lever. Remove carburetor attaching nuts and remove carburetor.

NOTE: Keep disassembled parts in appropriate order for reassembly reference.

Disassembly

1) Remove throttle return spring. Remove pump lever shaft screw, pump lever, washer and spring washer. Separate accelerator pump rod and pump lever. Remove connecting rod, cotter pin and washer. See Fig. 4.

2) Disconnect vacuum hose from idle-up diaphragm. Remove choke chamber and gasket from air horn. Remove piston return spring, ball and injector weight from choke chamber. Remove anti-dieseling solenoid and spring.

3) Remove secondary diaphragm rod from secondary throttle valve shaft. Remove main body, throttle body and gasket. Carefully remove longest screw as it has a vacuum passage hole.

4) Remove accelerator pump piston and pump cover. Remove float shaft and needle valve assembly. Disconnect lead wires of duty solenoid valve from carburetor. Remove primary slow air bleed, secondary slow air bleed, switch vent solenoid valve and "O" ring.

5) Remove primary main air bleed, secondary main air bleed, primary plug and primary slow jet. Remove secondary slow jet, lock plate, float chamber drain plugs, and primary and secondary main jets. Remove idle speed screw and spring. Remove nut and throttle valve shaft assembly. Remove throttle adjusting screw and spring.

NOTE: DO NOT immerse synthetic parts, electrical components or diaphragm assemblies in carburetor cleaner.

Cleaning

Clean cast parts with carburetor cleaner. Clean jets, fuel passages and vacuum ports with compressed air. DO NOT use wire or pointed metal objects. Clean all other parts with solvent and soft brush.

Inspection

1) Inspect air horn, throttle body and main body for cracks, nicks or burrs on gasket surfaces. Inspect float for damage. Inspect needle valve for wear or improper seating, and inspect seat strainer for rust or breaks.

2) Inspect jets and air bleeds for clogged orifices or sliding portion and leather cup. Check spring for rust. Inspect

secondary diaphragm for wear or damage. Check throttle valves for smooth movement and shaft wear.

3) Check diaphragm assemblies for leaks and proper operation. Apply battery voltage to terminals of solenoid valves and electric switches. Listen for operating sound as terminals are connected and disconnected.

Reassembly

To reassemble, reverse disassembly procedure. See Fig. 4. Use new gaskets. Ensure primary and secondary barrel components are installed in original locations. Install piston return spring with hook facing downward.

Installation

To install, reverse removal procedure.

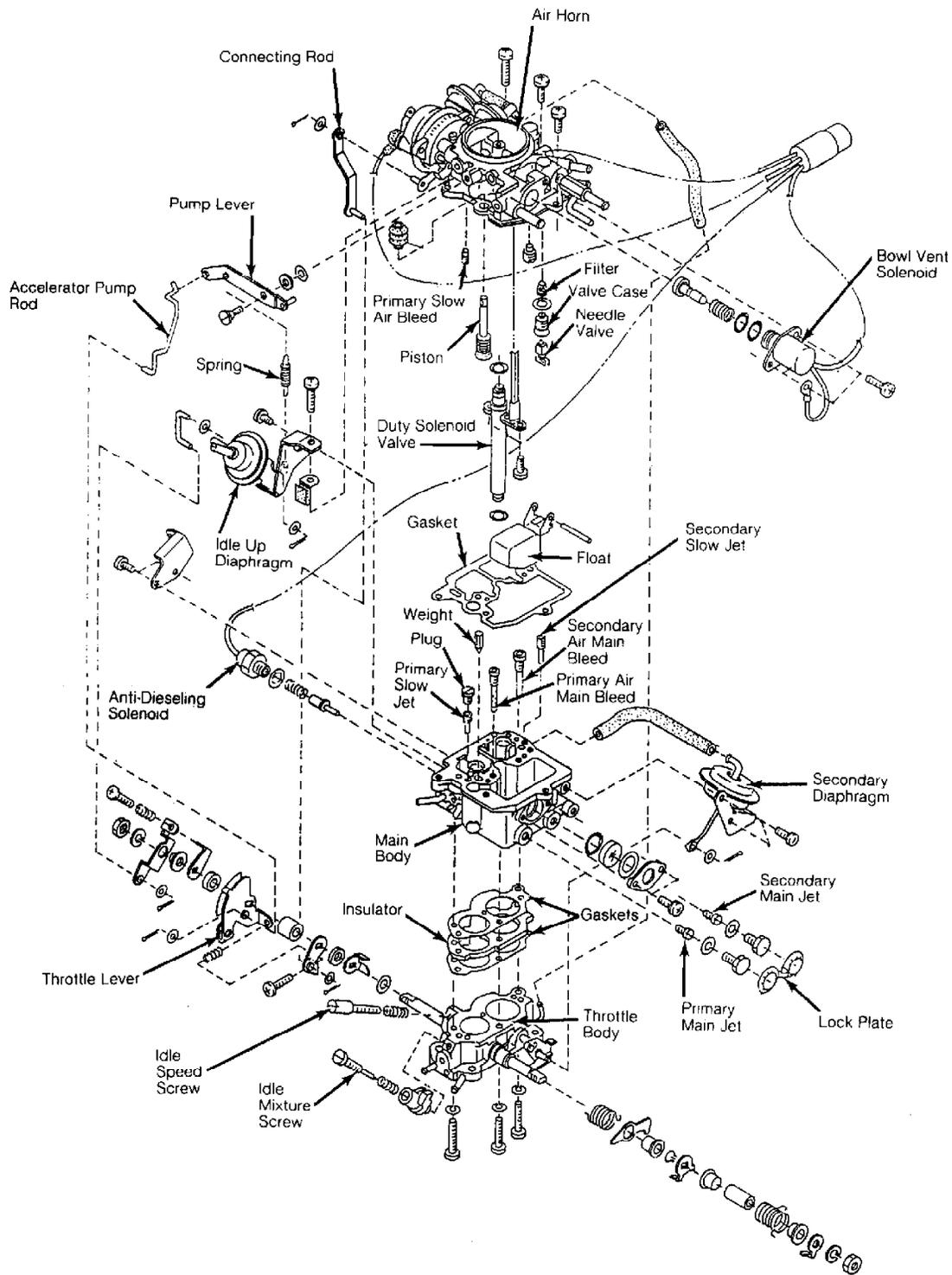


Fig. 4: Exploded View Of Carburetor (Justy)
 Courtesy of Subaru of America, Inc.

NOTE: For all on-vehicle adjustment procedures not covered in this article, see D - ADJUSTMENTS article in the ENGINE

PERFORMANCE Section.

NOTE: If fuel is not within mark on float chamber sight glass with engine idling, remove air horn and adjust using following procedures.

Float Level Adjustment

Invert air horn. Let float hang by its own weight and measure distance between float and air horn gasket surface (gasket removed). If necessary, bend tab "A" to adjust. See Fig. 5. See CARBURETOR ADJUSTMENT SPECIFICATIONS table.

CARBURETOR ADJUSTMENT SPECIFICATIONS TABLE

Application	In. (mm)
Fast Idle Valve	
Man. Trans.0303 (.789)
Auto. Trans.0339 (.861)
Float Level437 (11.00)
Float Drop	1.836 (46.60)
Secondary Throttle Valve236 (6.00)
Vacuum Break063 (1.60)

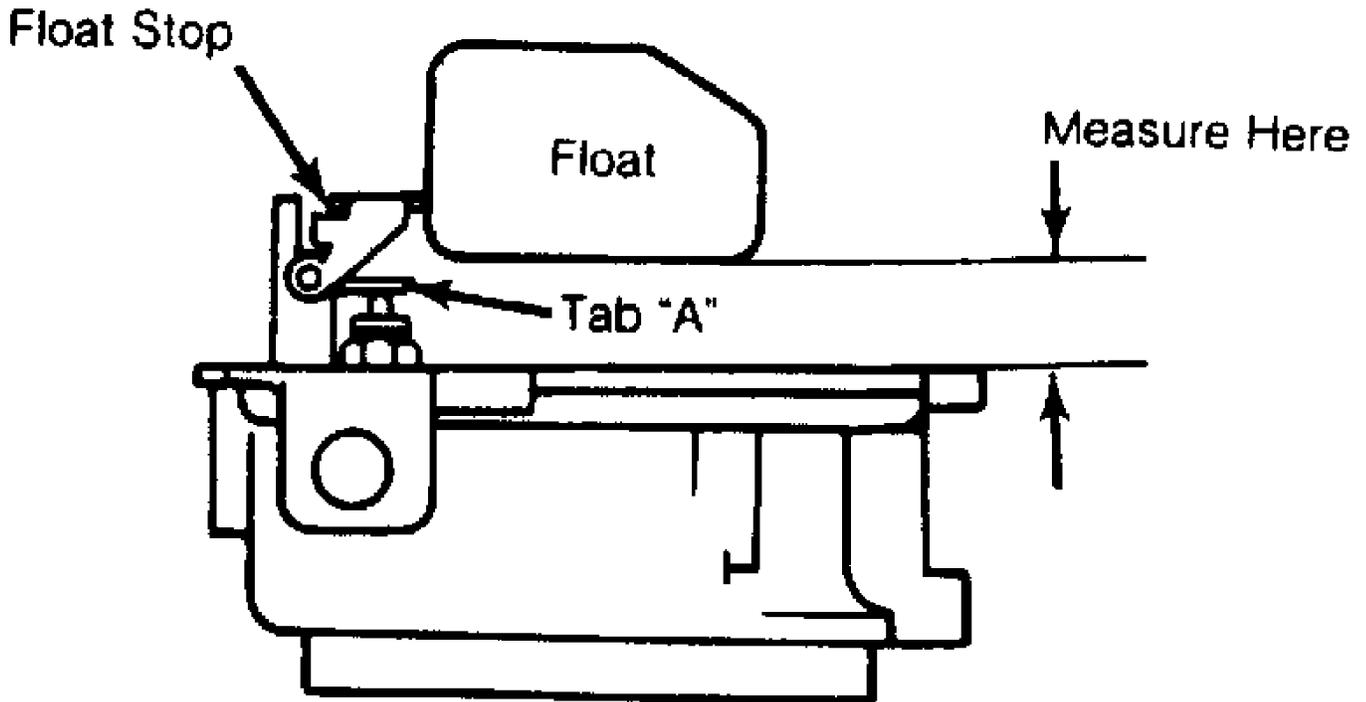


Fig. 5: Adjusting Float Level
Courtesy of Subaru of America, Inc.

Float Drop Adjustment

After checking float level, gently lift float until float stop contacts air horn projection. Hold float in this position. Measure clearance between float tab and needle valve. Adjust by bending float stop. See Fig. 6. See CARBURETOR ADJUSTMENT SPECIFICATIONS table.

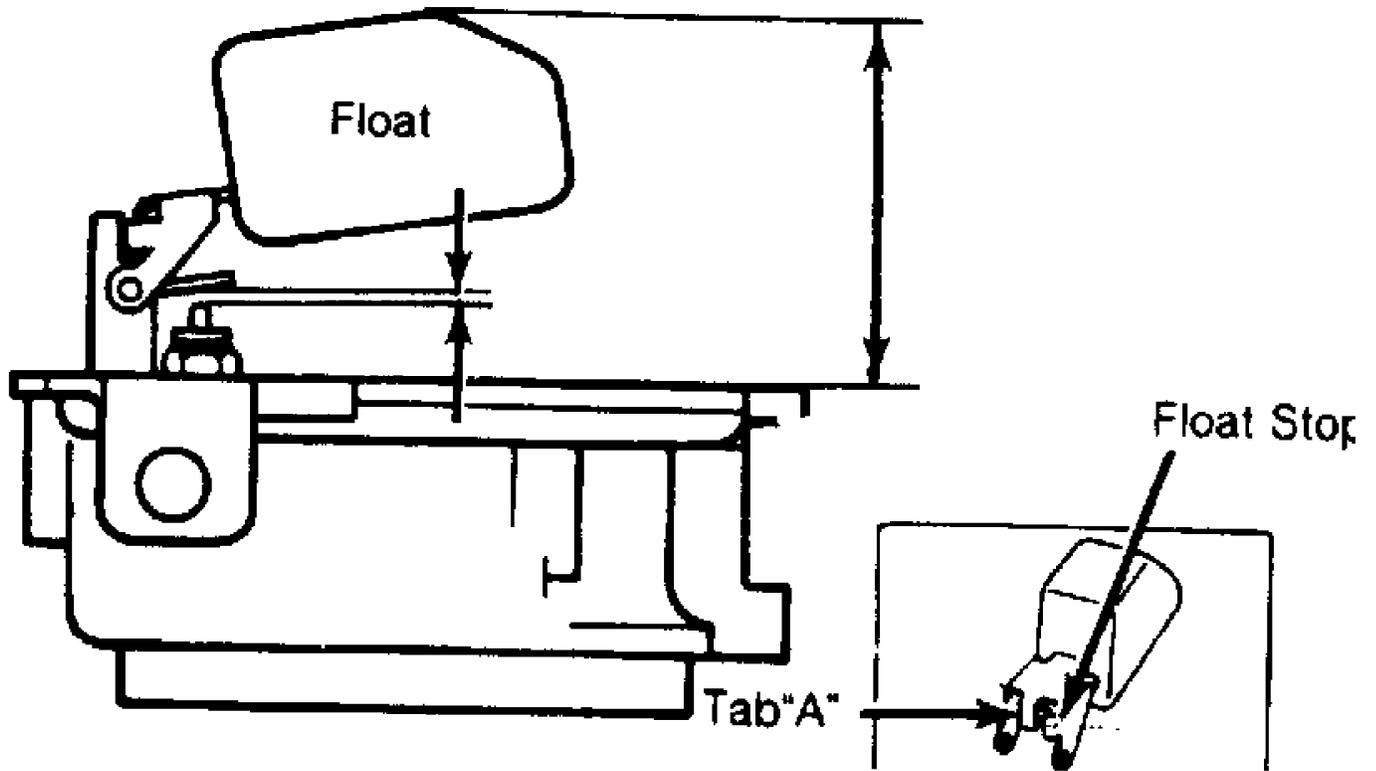


Fig. 6: Adjusting Float Drop
 Courtesy of Subaru of America, Inc.

Fast Idle Bench Adjustment

Close choke valve. Position fast idle lever on first (high) step of fast idle cam. Measure clearance between primary throttle valve and wall of throttle chamber. See Fig. 7. See CARBURETOR ADJUSTMENT SPECIFICATIONS table. If value is not as specified in table, adjust using fast idle speed adjusting screw.

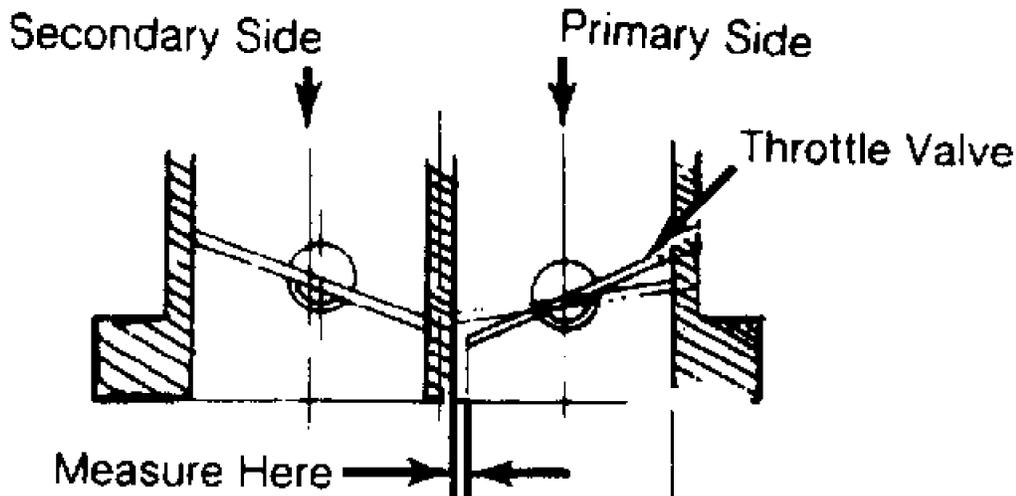


Fig. 7: Adjusting Fast Idle Speed
 Courtesy of Subaru of America, Inc.

Vacuum Break Adjustment

- 1) Hold choke valve closed and move throttle lever. Release

choke valve and ensure it is fully closed. With choke valve closed, apply vacuum to vacuum break diaphragm until diaphragm shaft moves.

2) Measure distance while lightly holding choke valve with hand. See Fig. 8. If clearance is not to specification, adjust by bending pawl at tip of lever. See CARBURETOR ADJUSTMENT SPECIFICATIONS table.

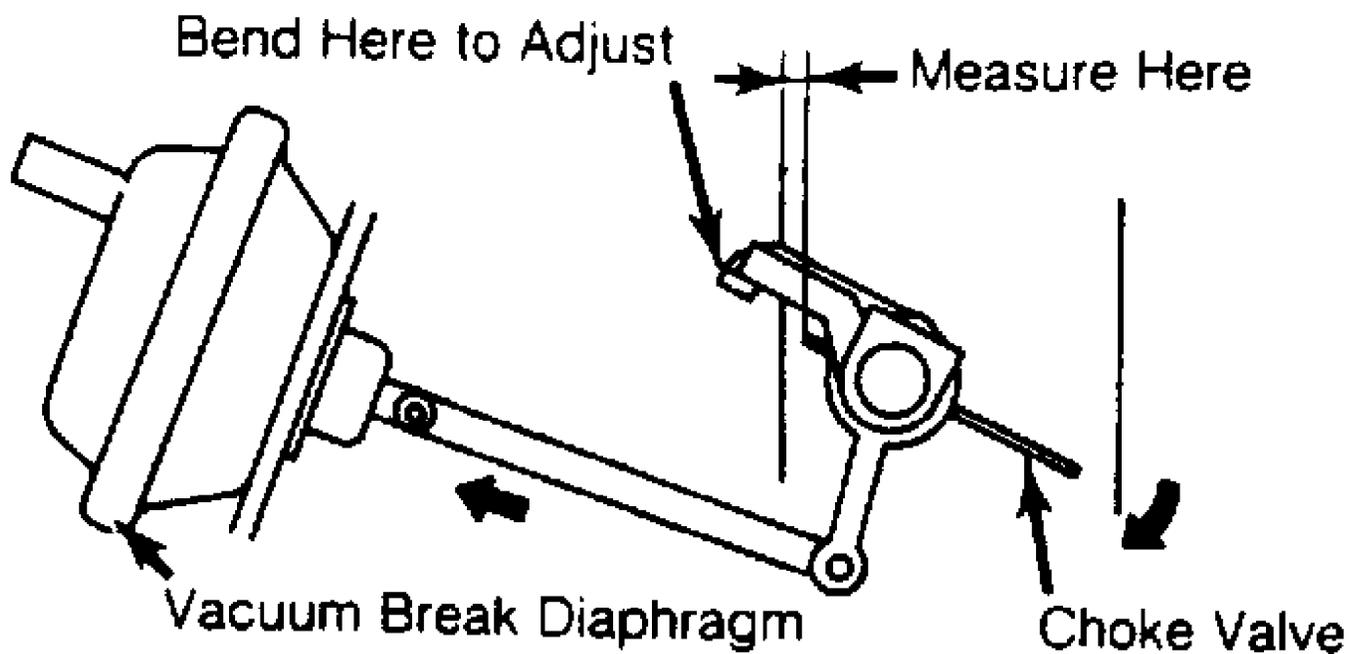


Fig. 8: Adjusting Vacuum Break
Courtesy of Subaru of America, Inc.

Secondary Throttle Valve Clearance Adjustment

Secondary throttle valve starts to open when primary throttle valve opens 43 degrees. As secondary throttle valve begins to open, measure clearance between primary throttle valve and wall of throttle chamber. Clearance should be .236" (6.00 mm). Rotate plate to adjust as necessary. See Fig. 9.

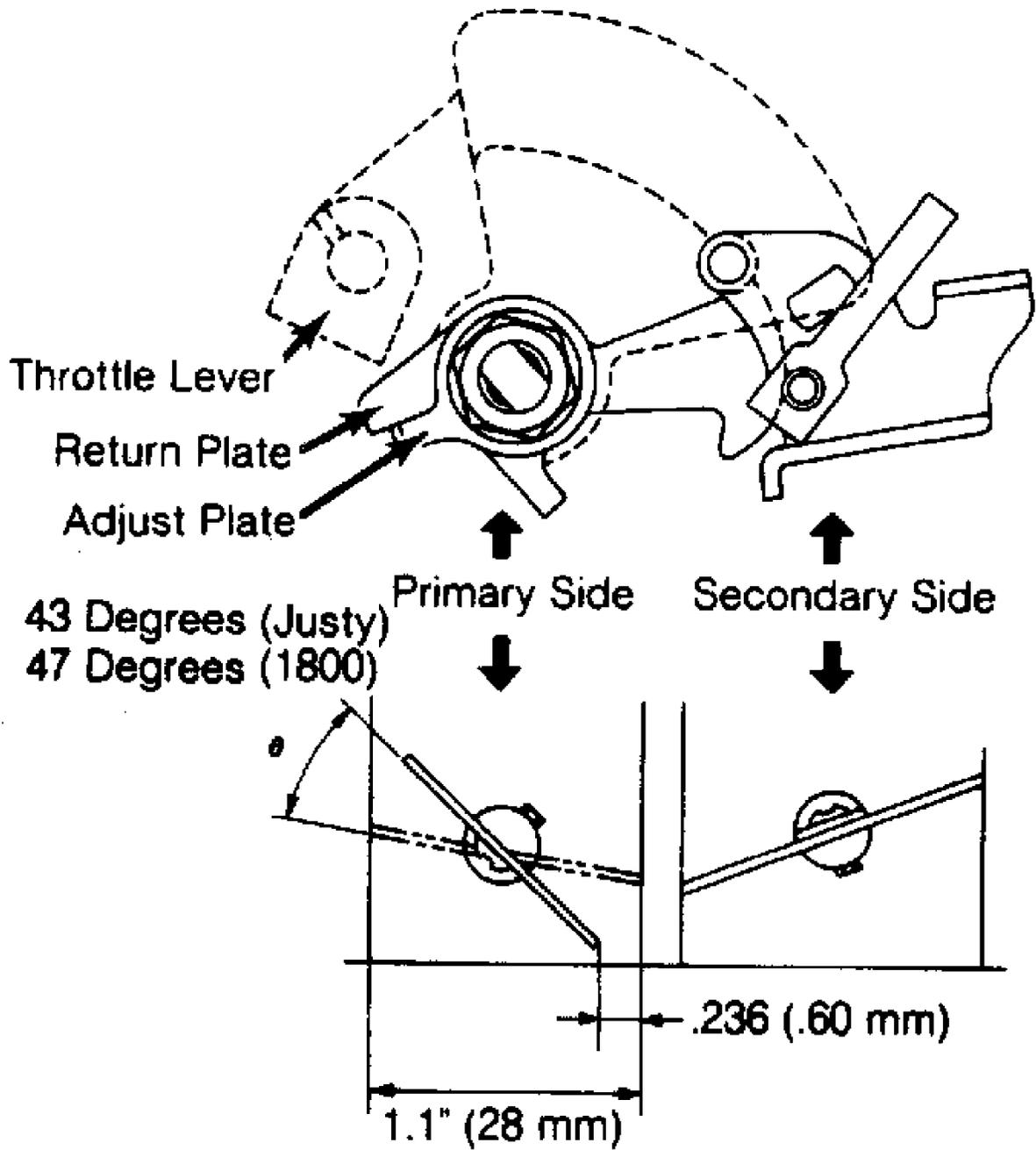
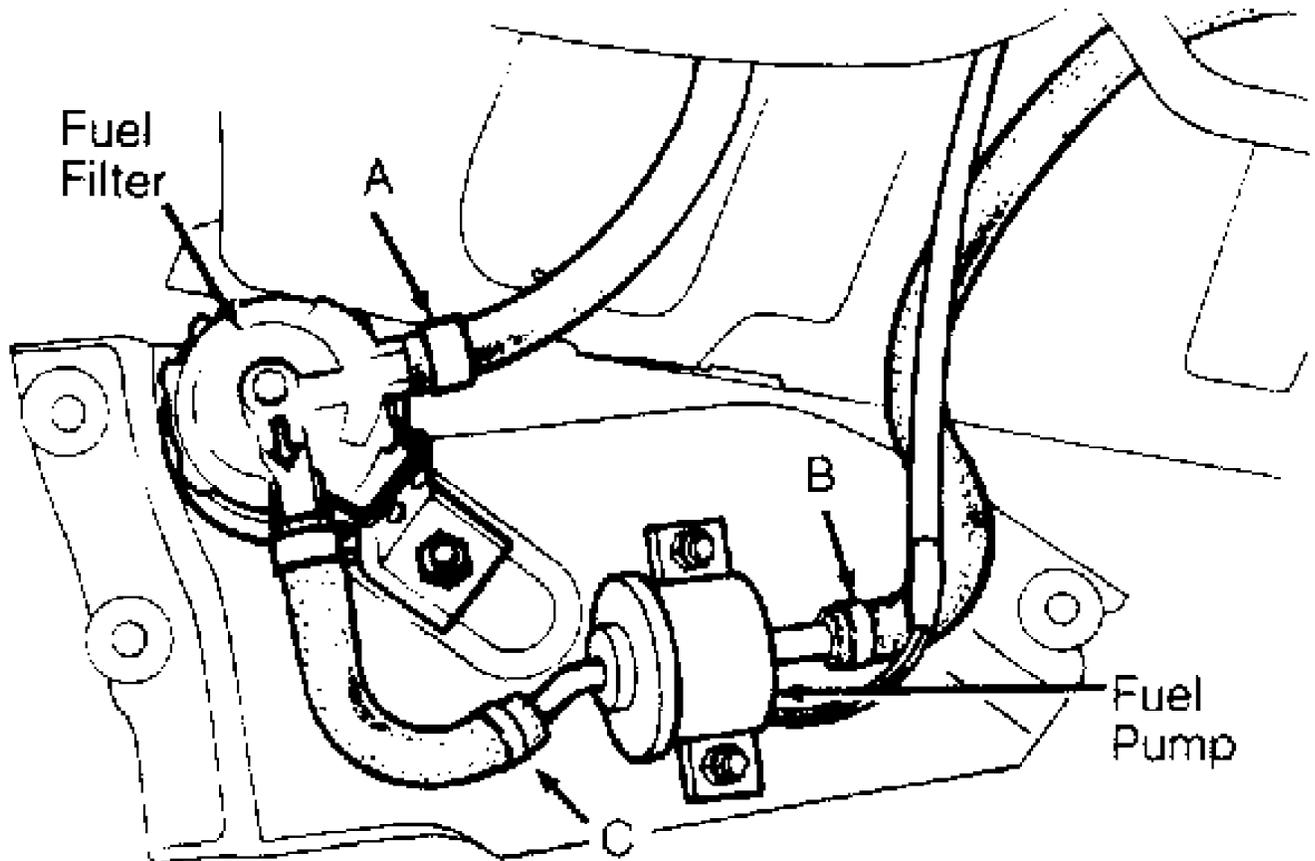


Fig. 9: Adjusting Secondary Throttle Clearance
 Courtesy of Subaru of America, Inc.

Removal & Installation (Justy Carbureted)

1) Fuel pump is located on crossmember under center floor. Loosen 3 flange bolts and lower fuel pump bracket. Disconnect fuel pump harness connector. Disconnect hoses at locations "A" and "B". See Fig. 10. Plug hoses to prevent fuel loss.

2) Disconnect hose at location "C". See Fig. 10. Loosen 3 flange nuts that attach pump to bracket. Remove pump. To install, reverse removal procedure.



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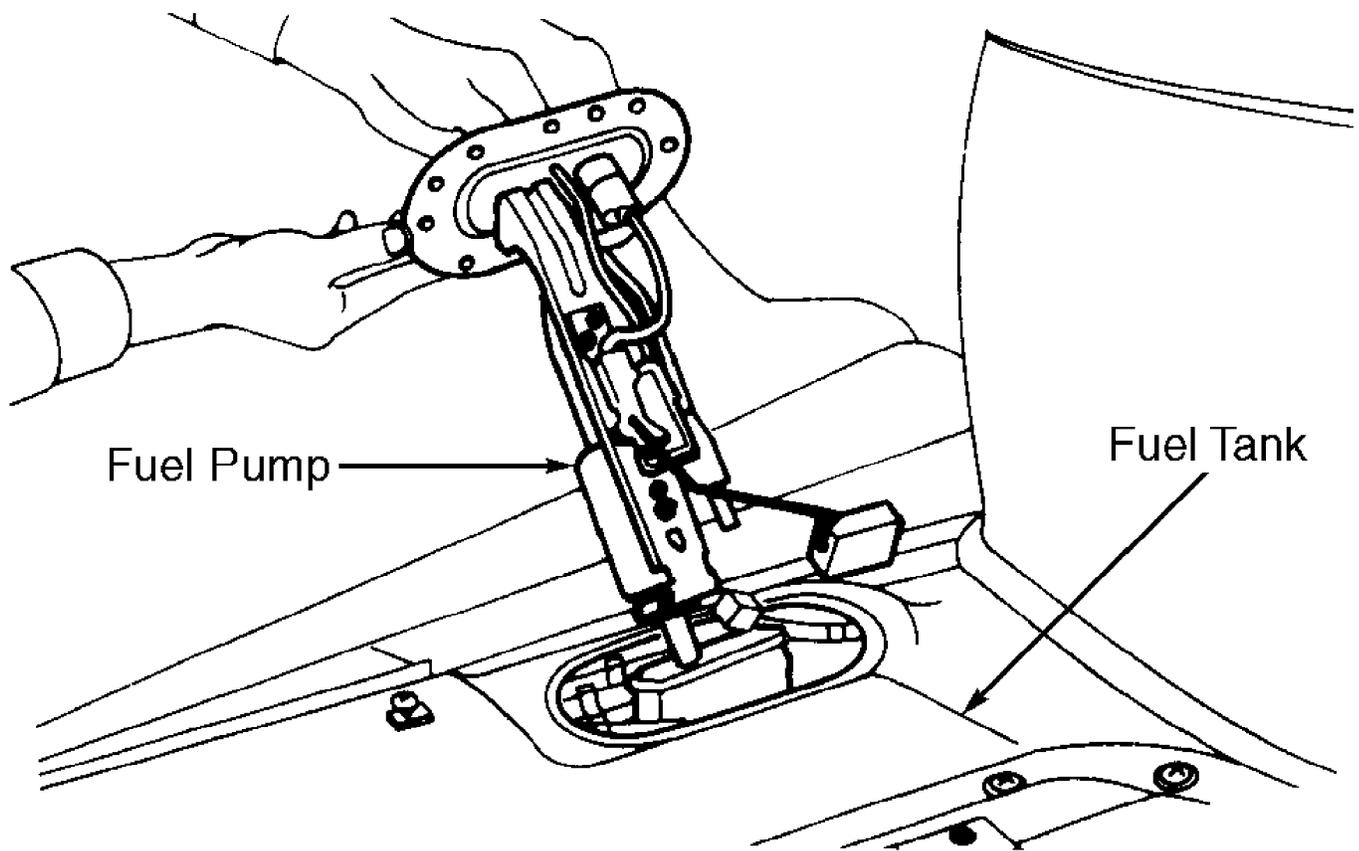
Fig. 10: Locating Fuel Pump (Justy Carbureted)
Courtesy of Subaru of America, Inc.

Removal & Installation (Justy PFI)

Fuel pump is located in fuel tank. Release fuel pressure. See FUEL SYSTEM PRESSURE RELEASE. Loosen clamp screw and disconnect fuel hose at fuel tank. Remove bolts retaining fuel pump assembly on fuel tank. Remove fuel pump. To install, reverse removal procedure.

Removal & Installation (Legacy & SVX)

Fuel pump is located in fuel tank. Release fuel pressure. See FUEL SYSTEM PRESSURE RELEASE. Remove floor mat from luggage compartment. Remove access hole lid. Disconnect fuel pump harness. Remove 8 nuts. Remove fuel pump assembly. See Fig. 11. To install, reverse removal procedure.



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Fig. 11: Locating Fuel Pump (Legacy & SVX)
 Courtesy of Subaru of America, Inc.

Removal & Installation (Loyale)

Fuel pump is located under rear of vehicle. See Fig. 12.
 Release fuel pressure. See FUEL SYSTEM PRESSURE RELEASE. Raise and support vehicle. To avoid fuel flowing from fuel tank, clamp middle portion of thick hose between pipe coupling and fuel pump.

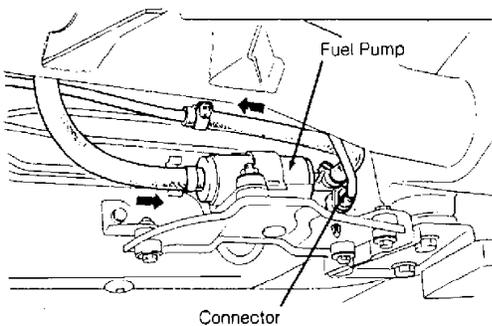


Fig. 12: Locating Fuel Pump (Loyale)
 Courtesy of Subaru of America, Inc.

INJECTORS (PFI)

CAUTION: Do not pry on injectors with a screw driver or pinch injector pin with pliers during removal.

Removal & Installation

Release fuel pressure. See FUEL SYSTEM PRESSURE RELEASE.

Disconnect injector connector from injector. Remove fuel injector cover. Remove injector while turning injector from side to side. If injector removal is difficult by hand, remove injector and fuel pipe as a unit and push injector out from back side. To install, reverse removal procedure.

INJECTORS (TBI)

Removal & Installation

Remove injector cap and gasket. Hold injector with pliers and pull out injector from chamber. Remove injector and "O" ring from chamber assembly. DO NOT damage nozzle on injector point. To install, reverse removal procedure.

OXYGEN (O2) SENSOR

Removal

If O2 sensor is difficult to remove, use rust penetrant to avoid damaging exhaust threads.

Installation

If old sensor is reused, apply anti-seize compound to sensor threads. Ensure anti-seize compound is kept away from sensor body. New sensors are coated with anti-seize compound. DO NOT remove anti-seize compound from sensor. Tighten to 17-25 ft. lbs. (24-34 N.m).

THROTTLE POSITION SENSOR/SWITCH

Removal & Installation

Remove 2 throttle position sensor-to-throttle chamber screws. Remove throttle position sensor by pulling it in axial direction of throttle shaft. Note "O" ring attached to the throttle sensor mounting face of throttle chamber. To install, reverse removal procedure.

TURBOCHARGER (LEGACY)

Removal & Installation

Manufacturer does not provide removal and installation procedure. See Fig. 13. During turbocharger removal and installation, do not allow dirt and dust to enter inlet and outlet openings of turbine and blower. If foreign matter is allowed to enter, turbine and blower blades will be damaged. Turbocharger cannot be disassembled or adjusted.

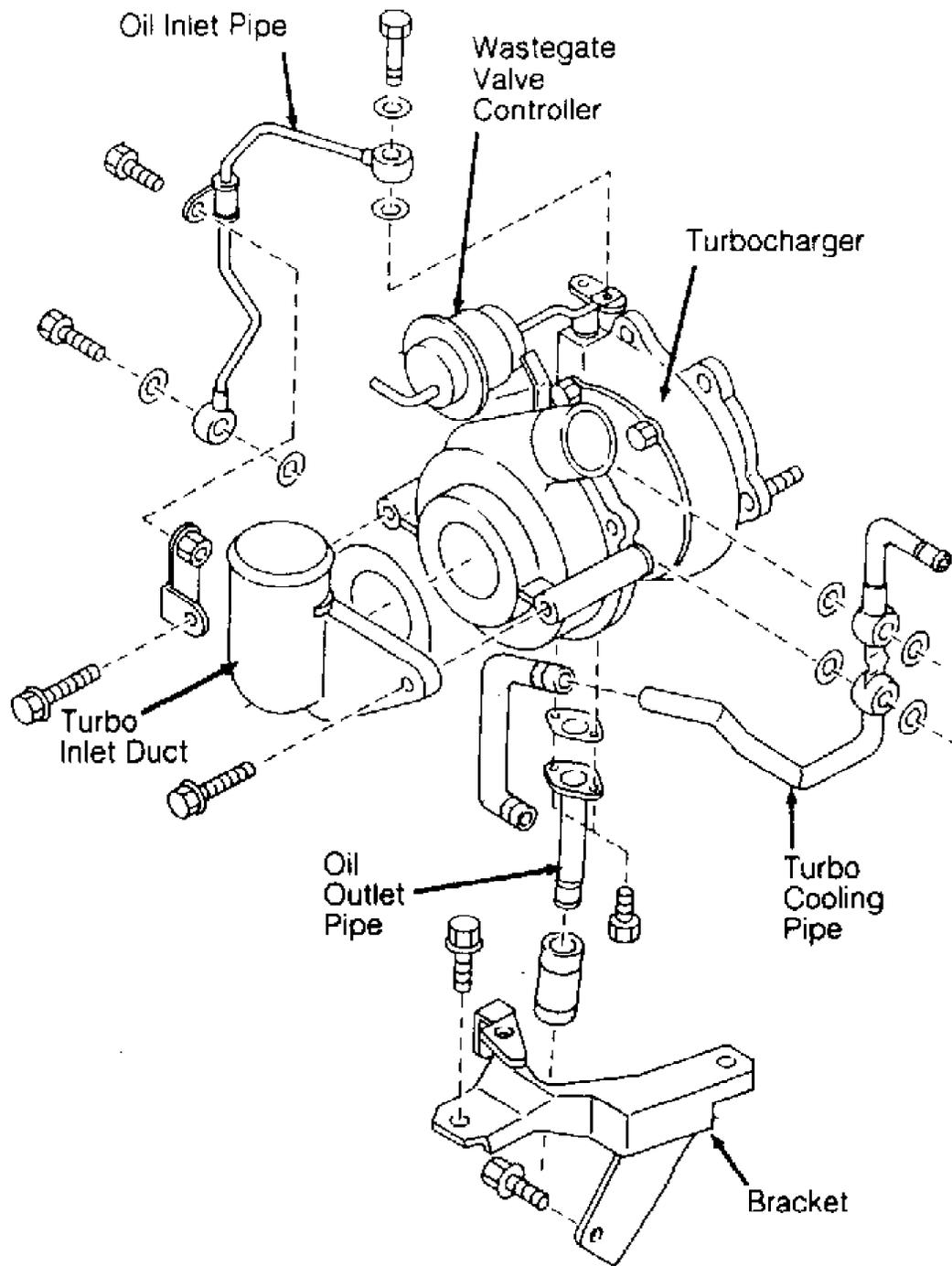


Fig. 13: Exploded View Of Turbocharger Assembly (Legacy)
Courtesy of Subaru of America, Inc.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS TABLE

Application	Ft. Lbs. (N.m)
Fuel Rail Bolts (Justy)	10-13 (14-17)
Oxygen Sensor	17-25 (24-34)
Throttle Body Mounting Bolts	
Justy	17-20 (24-26)
Loyale	13-15 (18-21)
Turbocharger Mounting Bolts (Legacy)	16-17 (22-24)