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Installation Instructions SUPERCHARGER

94-01 Acura Integra GS-R B18C1

PART # 989-500
C.A.R.B. E.O. D-344-8

READ THESE INSTRUCTIONS THOROUGHLY!

Follow the instructions STEP-BY-STEP, and your installation will be trouble free. If in doubt, **CALL 1-888-888-4079**. We suggest that as you proceed through the installation, you should read a few steps ahead in the instructions so you are certain to catch all notes and warnings.

ATTENTION SUPERCHARGER INSTALLER!

Before proceeding with the installation, it is important to know that to validate the 2 year, 100K warranty on your new J/R supercharger, you must completely fill out the Moss Motors / Jackson Racing warranty card that comes in every kit, including serial number which is on a small white 'bar code' label on the body of the supercharger. Write down all of the numbers which appear on that label in the appropriate space on the warranty card. Be certain to do this now because once your supercharger is installed, it may be almost impossible to retrieve that serial number.

SPECIAL NOTE: We do recommend you buy a new intake gasket or throttle body gasket from your local Honda dealer before starting installation. A shop manual will also be useful. If there is more than 15,000 miles on the fuel filter, a replacement fuel filter is required. A new fuel filter should be available at your local Honda dealer. Always use genuine Honda parts whenever possible. Now is a good time to change your oil and filter, as the oil filter must be removed for installation of the supercharger.

Jackson Racing Supercharger Systems are

designed to be installed by individuals with good mechanical sense and with the proper tools. Use your discretion--if you are not a competent mechanic, do not attempt this installation.

TOOLS NEEDED: Most of these tools are available at your local hardware or auto parts store.

8, 10, 11, 12, 14, 17, 22, and 30-mm socket and wrenches
8-mm allen wrench
Phillips and straight blade screwdrivers
Vice grip pliers
Timing light

A soldering gun is not required for the few wiring details, as we supply crimp connectors, but soldering has a better long-term serviceability.

WARNING: Once the installation is complete, **CHECK AND RECHECK ALL** fuel system connections for possible leaks before operating the vehicle. Premium fuel (91 octane or higher) is required in a supercharged motor. Please use **only** hi-grade premium gasoline.

During this installation process, you will reuse some parts or hardware and not reinstall others. It is recommended that you make space for those that you will reuse, and a separate space for those that you will not reinstall. In addition, you should save the parts that will not get reused in case you ever have reason to convert the engine back to stock.

Enclosed is a set of labels that we suggest you use to label the electrical connectors that you will be unplugging.

Supercharger Installation Instructions

INSTALLATION INSTRUCTIONS

1. VERY IMPORTANT! Disconnect the negative battery cable from the negative terminal on the battery.

2. Put your car on jack stands. **NEVER WORK UNDER A CAR NOT SUPPORTED BY JACKSTANDS OR RAMPS.**

3. Drain the cooling system as you will be replacing some hoses and the intake manifold.

4. Remove the large diameter rubber hose between the air box and throttle body. Loosen the clamp at the throttle body with a phillips head screwdriver and slide it off. Disconnect the double metal pipe assembly by removing the pinch clamp.

5. Remove the other end of the double metal pipe assembly by disconnecting it from the top of the valve cover. This hose will get replaced by a 4" piece of vent hose. The two other lines connected to the assembly are water hoses. Leave these attached until a later step.

6. Remove the small bracket on the driver's fenderwell that secures the main wiring harness.

7. Remove the gray plugs and wiring harness from the area near the base of the windshield on the driver's side.

Illustration 1

8. For power steering equipped cars, you can work around the power steering hose if you wish, but we recommend that you disconnect it from the main pump. First, clamp the supply line that connects the power steering reservoir to the pump. To clamp the supply line, gently squeeze it closed with a pair of vice grips type pliers or a clamp. Remove the two 10-mm bolts that connect the power steering hose to the pump. You will need to wrap

a protective cloth around the end of the power steering hose when you remove it from the pump. Once disconnected, lay the hose out of the way near the driver's side hood pivot.

9. To disconnect the throttle cable, loosen the 12-mm nut on the throttle cable and remove it from the bracket. Pull the throttle body wide open and push the small cylinder at the end of the throttle cable out the side of the throttle control thus disconnecting the throttle cable. Pull the throttle cable and lay it out of the way.

10. Disconnect the power brake hose from the back of the intake manifold.

11. Unplug the Air Temperature (T/A) sensor harness from the T/A sensor on the intake manifold. Disconnect the retainer clip from the metal bracket with needle nose pliers to release the T/A wiring harness. The T/A sensor is fragile, so be careful. The wire colors are green with a blue stripe and red with a yellow stripe. Apply a label to this wiring harness.

12. Unplug the Purge Cut Solenoid Valve harness from the Purge Cut Solenoid Valve located on the passenger side ('94-'95), or on top of the intake manifold ('96-'99). Identify the valve by locating the vacuum hose coming from the charcoal canister and the other hose going to the intake manifold. The wire colors are yellow with a black stripe and solid red. Apply a label to this wiring harness. Note: You will be using the yellow with black stripe wire for a 12-volt switched power source for the Jackson Racing Fuel Enrichment Electronics later in the installation.

13. Disconnect the charcoal canister hose from the top of the throttle body. It, like the Purge Cut Solenoid Valve, has a hose from the charcoal canister, except this hose goes to the throttle body instead of the Purge Cut Solenoid Valve.

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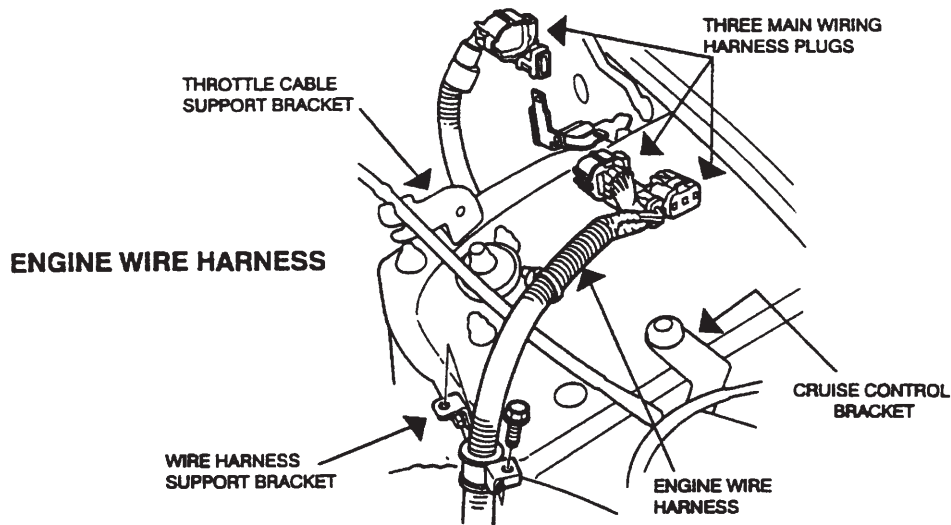


Illustration 1

14. Unplug the Manifold Absolute Pressure (MAP) sensor harness mounted directly on top of the throttle body. The wire colors are green with a white stripe, white with a yellow stripe, and yellow with a white stripe. Apply a label to this wiring harness.

15. Unplug the Throttle Position Switch (TPS) harness from the throttle body. The wire colors are yellow with a blue stripe, red with a black stripe, and green with a blue stripe. Apply a label to this wiring harness. This plug and the MAP plug can be mistakenly interchanged. Always double check your wire colors.

16. Remove the Purge Cut Solenoid Valve from the intake manifold. On '94-'95 models, the two vacuum hoses connected are vacuum hose #7 coming in and vacuum hose #12 exiting to the intake manifold. Remove vacuum hose #12. It will not get reused. On '96-'99 models the Purge Cut Solenoid Valve hoses are not identified.

17. Lay the Purge Cut Solenoid Valve and the charcoal canister hose out of the way.

WARNING! Do not smoke during these procedures.

18. Remove the gas cap to relieve any fuel pressure, then reinstall.

19. From the driver's side of the manifold, remove the fuel return line from the factory fuel pressure regulator located on the fuel rail.

20. Remove the fuel return line from its stabilizer bracket on the lower part of the intake manifold.

21. Disconnect the vacuum line from the fuel pressure regulator.

22. Remove the factory fuel pressure regulator by removing the two 10-mm bolts. The factory fuel pressure regulator will be reinstalled later using an adapter. Remove the small stabilizer bracket that connects the fuel rail to the intake manifold. The stabilizer bracket will not be reused.

23. Remove the two 10-mm nuts that hold the plastic fuel injector wiring harness cover to the fuel rail. These two 10-mm nuts and cover will not be reinstalled.

24. Disconnect the four injector plugs from the fuel injectors and pull the harness out of the way.

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25. Disconnect the high-pressure fuel supply hose from the passenger side of the fuel rail CAREFULLY! The hose may still be under high pressure. Disconnect the hose by unscrewing the 22-mm nut on the end of the fuel rail. Do NOT lose the two aluminum crush washers on either side of the fuel line “banjo” fitting.

26. Remove the fuel rail from the intake manifold by removing the three 10-mm hex nuts. Then remove the fuel injectors from the fuel rail and put the injectors back in the injector holes in the engine block to prevent debris from going into the engine.

27. Remove the three brown phenolic spacers that are located between the fuel rail and the intake manifold and save them for reinstallation. NOTE: Some countries and year models do not have these spacers. Three new ones are supplied with the kit for '96 and later models.

28. Disconnect the one inch coolant hose from the intake manifold on the passenger side, near the cylinder head's #4 intake port.

29. Next to the one inch hose is a smaller coolant hose. That hose connects to the fast idle valve at the bottom of the throttle body. Remove that hose. It will not be reused. NOTE: Some countries and year models ('98-'99 USA) do not have this hose. There is an 1/8 NPT plug supplied in this kit to plug the hole in the new manifold where a 5/16" fitting is normally installed.

30. Unbolt the throttle body by removing the two 12-mm bolts and the two 12-mm nuts. The two bolts will be reinstalled. The nuts will not be reused.

31. Disconnect the coolant hose on the driver's side of the IAC (Idle Air Control) valve. The IAC valve is located next to the throttle body, on the backside of the intake valve. It has a coolant hose that connects it to the throttle body. Leave the hose to the throttle body connected.

32. Unplug the IAC valve. The wire colors are yellow with a black stripe and black with a blue stripe. Apply a label to this wiring harness.

33. Remove the IAC valve and the throttle body as a unit by removing the two 12-mm bolts that hold the IAC valve to the back of the intake manifold. The two bolts will be reinstalled in step 114.

34. We now move under the car. Note: Removing the catalytic converter and head pipe “A” will make access to the bottom of the intake manifold easier but it is not required.

35. Unplug the O₂ sensor and remove the catalytic converter. Apply penetrating oil to the nuts of the catalytic converter to ease removal.

36. Remove the oil filter if you have not done so already. Have a drain pan available, as some oil will drip out.

37. Remove the exhaust pipe support bracket by removing the two 14-mm hex nuts that hold the bracket to the pipe and the two 14-mm hex bolts that hold the bracket to the block. One of these bolts also holds the oil separator box in place.

38. Remove the black oil separator box by pulling it away from the engine block and disconnecting the PCV fitting and the vent hose on top of the separator box.

39. Remove the two 10-mm hex bolts from the bottom of the intake manifold bracket that holds the steel water pipe for the heater hose.

40. Remove the intake manifold support bracket by removing the four 12-mm bolts. Remove the brown zip tie holding the main wiring harness to the support bracket. Then remove the fifth 12-mm bolt. The fifth bolt is difficult to access from under the car since it is directly above the rear engine mount. You will have better access from above the car.

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41. Remove the oil cooler from the engine block with a 30-mm (1 3/16") socket. Note the location of the coolant fittings on the oil cooler. They will be moved from a 12 o'clock position to a 9 o'clock position later. **NOTE:** Some countries and year models (98-99 USA) do not have oil coolers. Disregard any instructions regarding oil coolers if your vehicle is not equipped with an oil cooler.

42. Unplug the oil pressure switch, which is at the 9 o'clock position.

43. Disconnect the two oil cooler hoses from the engine block and the water pipe. **NOTE:** Some coolant may spill out. Be careful.

44. With the oil cooler, oil separator box, and oil filter removed, the lower intake manifold nuts are accessible.

45. We will now remove the factory intake manifold. There are five 12-mm nuts on the bottom of the intake manifold. From beneath the car, remove four of the nuts starting from the driver's side. The fifth nut on the bottom of the intake manifold, closest to the passenger side, will be removed from above the car.

46. Remove the five 12-mm nuts in the top of the intake manifold.

47. Unplug the IAB (Intake Air Bypass) control valve harness going to the vacuum reservoir located on the underside of the intake manifold. The wire colors are yellow with a black stripe and pink with a blue stripe. Apply a label to this wiring harness. **Illustration 2**

48. Remove the intake manifold by sliding it off the ten studs. The factory intake manifold will not be reinstalled.

49. Remove the fuel return line from the base of the firewall. Connect the 1/4" x 20" fuel return line supplied in the kit. The free end will be connected later.

50. Locate the IAC valve wiring harness

with wire colors yellow with a black stripe and black with a blue stripe. Get the extension wire with same wire colors from the kit. Cut the wire to the IAC valve and solder or crimp connect in the extension provided in the kit.

51. Remove the one inch O.D. heater hose that has the metal pipe section in the middle. **NOTE:** Where this hose connects at the firewall, the fitting is thin-walled copper and will deform if squeezed. To remove the hose, slice it longitudinally along the hose to the end of the fitting and slip the hose off the fitting. This assembly will not be reinstalled.

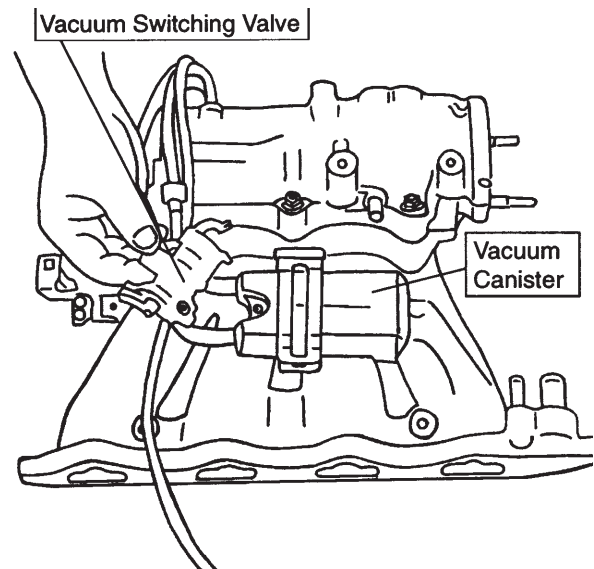


Illustration 2

52. Install the new 5/8" x 18" heater hose from the fitting on the engine to the fitting on the firewall. Clamp the hose ends with two new #10 clamps provided. **Illustration 3**

53. The oil cooler fitting in the main water pipe needs to be pointed in a horizontal direction back towards the firewall. On some models we have found that the fitting points above horizontal, slightly uphill. If your fitting points above horizontal, **CAREFULLY** insert a large punch or screwdriver into the fitting and gently apply pressure until the water pipe is at least horizontal. If the oil cooler fitting is pointing a little downhill, that is acceptable.

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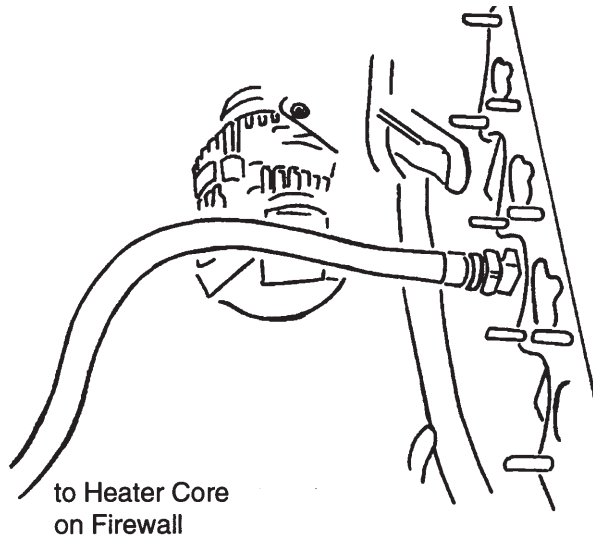


Illustration 3

54. Loosen the power steering pump. Remove the belt. This belt will be reinstalled.
55. Loosen the tension pulley for the air conditioning belt and remove the belt. This belt will be reinstalled.
56. Remove the factory, 785-mm alternator belt. This belt will not be reinstalled and will be replaced by the 800-mm belt supplied in the kit.
57. Install the 800-mm belt supplied in the kit over the crank pulley only.
58. Remove the 12-mm top bolt holding the alternator on its upper bracket.
59. Remove the 14-mm bottom nut holding the alternator pivot bolt on its lower bracket.
60. Remove the alternator from its bracket. Do not disconnect any wiring harnesses at this time.
61. Remove the 22-mm nut holding the alternator pulley to the alternator using an impact gun. Remove the pulley. This factory alternator pulley will not be reinstalled.
62. Install the double alternator pulley, supplied in the kit, with the 22-mm nut just removed, using an impact gun.

63. Remove the three 14-mm headed bolts and the lower alternator bracket. The stock bracket will not be reused but the bolts and spacer will be reused. One of the three 14-mm bolts will require a thin wall socket to bolt the new cast alternator bracket back to the block.

64. Remove the pilot spacer directly under the pivot nut from the original bracket. Install it in the new alternator mount casting.

65. Loosely attach the supercharger support bracket to the lower alternator mount casting using the M8 x 25 flange bolt supplied. The slotted end of the support bracket will be attached to the supercharger later in the installation.

66. Install the lower alternator mount casting and support bracket onto the engine block. Fully tighten the three alternator mount bolts. Leave the flange bolt for the support bracket hand tight with the support bracket laying down out of the way. **Illustration 4** (support bracket not shown)

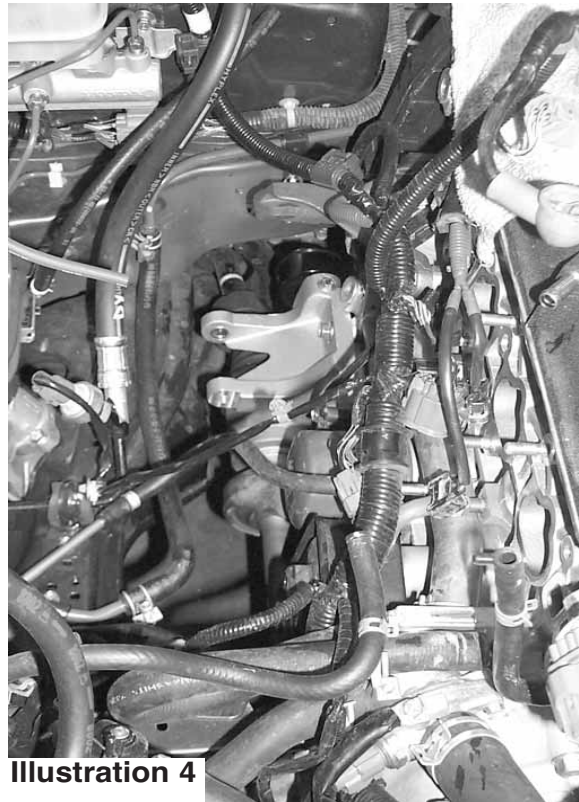


Illustration 4

Supercharger Installation Instructions

67. With the alternator removed, it is a good time to modify the power steering metal pipe where it goes past the alternator. This metal pipe is the low-pressure return line from the steering rack. It has a rubber hose connected to it. To straighten, gently push the end of the pipe, nearest the firewall, with the butt end of a mallet. The pipe will give under pressure. It is important to move the pipe back as the supercharger belt will be routed through this area. **Illustration 5**

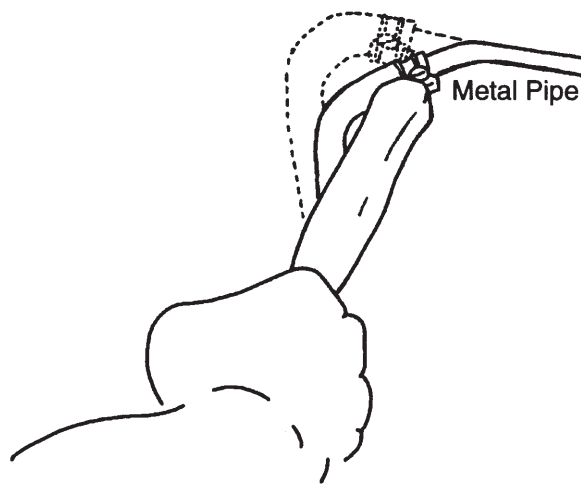


Illustration 5

68. Reinstall the alternator with the factory bottom mounting bolt. The bolt is long and square-headed. Make sure the square head is on the passenger side and that it is positioned so that it will not turn when the nut is tightened.

69. Release the plastic clamp, which holds the main power lead to the alternator (large white wire).

70. Disconnect the white wire from the alternator. The wire will be rerouted.

71. Release the brown plastic clamp, which holds the power steering pressure switch harness to the power steering hose. Remove the brown clamps from the hose once released.

72. Unplug the power steering pressure switch and reroute the pressure switch harness behind the brake line that comes through the driver's side fender well, back towards the firewall, and plug it back into the pressure switch. Make sure the wiring harness is out of harms way.

73. If the car is ABS equipped, put a zip tie around the ABS power lead. It has an orange plug that passes through the driver's fender. The zip tie holds the ABS power lead, with the orange plug, to the main wiring harness. These last two operations ensure that the supercharger drive belt does not interfere with the wiring.

74. Install the 620-mm belt supplied with the kit on the alternator pulley around the set of ribs closest to the alternator.

75. Slide the 800-mm belt previously looped around crank pulley over the outer set of ribs on the alternator pulley. Note: Make sure the belt goes over the top of the idler pulley.

76. Install the aluminum supercharger belt tensioner bracket with the two studs sticking out of it. Slide the two threaded studs through the original upper alternator bracket adjustment slot. Install the bracket studs from the outside of the original bracket slot facing in towards the engine.

77. Install the two 1/8" steel spacers on the stud closest to firewall.

78. On the stud closest to the engine block, install one 8-mm flange nut. Only hand tighten this nut at this time.

79. Install the small upper support bracket ("L" shaped) to the supercharger belt tensioner bracket. Install the "L" shaped bracket on the passenger side of the supercharger bracket using the 8 x 1.25-mm nut and a 8 x 30-mm bolt supplied with the kit. **Illustration 6**

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Illustration 6

80. Install the 10 x 20-mm bolt supplied with the kit to attach the “L” shaped bracket to the cylinder head. **Illustration 6**

81. Using a new 8 x 40-mm bolt supplied with the kit, install it through the alternator upper stabilizer bracket (short steel bracket with two holes supplied with the kit) and install it through the upper alternator mounting hole. Install an 8 x 1.25-mm nut, supplied with the kit, onto this upper alternator mounting bolt.

82. Take the other end of the alternator stabilizer bracket and install it on to the stud closest to the firewall that we had previously installed the two 1/8" steel spacers on and secure it with the nut supplied in the kit. These operations will hold the alternator in a secure, preset location. The alternator will no longer act as an adjuster.

83. Wedge the bracket back towards the firewall while torquing all the nuts. Torque all the 8-mm nuts on the belt drive/alternator stabilizer bracket to 16 ft-lbs. Then tight-

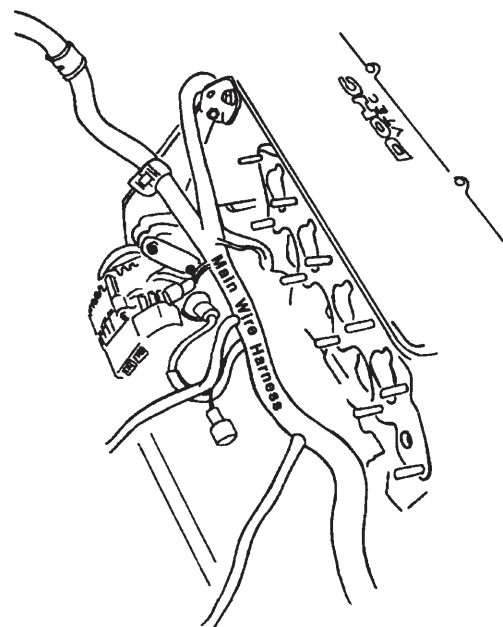
en the lower alternator pivot nut on the square headed bolt. This is easier from under the car.

84. Plug in the knock sensor if it was unplugged. The wire color is red with a blue stripe.

85 . Run the main wiring harness along the back of the engine block, over the top of the main water pump supply pipe, and locate it behind and around the thermostat housing and under the 90° hose to oil separator. This will allow the wiring harness and intake manifold to co-exist without interference. **Illustration 7**

86. Locate the original vacuum canister on the under side of the factory intake manifold. Remove the black vacuum switching (IAB) valve from the vacuum canister. This switching valve will not serve any function, as there will be no vacuum hoses attached, but **MUST** be plugged in. Plug the switching valve back into the main wiring harness and zip tie it to the main wiring harness toward driver's fender out of the way.

WARNING! Do not smoke during these procedures.



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Illustration 7

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87. Remove the fuel filter from the fire-wall. First disconnect the hard fuel line. Do NOT move or bend the hard fuel line. Remove the two 10-mm bolts and the one 10-mm nut holding the fuel filter bracket to the firewall. Remove the fuel filter and bracket assembly. The fuel filter and bracket will be reinstalled.

88. Remove the throttle cable stabilizer bracket mounted on the center of the fire-wall by removing the 10-mm headed bolt. The previous two instructions will provide room to insert the supercharger down into the engine compartment once the supercharger intake manifold is in place.

89. Locate the air temperature sensor on the factory intake manifold and install it on the Jackson Racing intake manifold.

90. Locate the pressure switch supplied with the kit. Wrap the threads of the pressure switch in teflon tape. Install it on the Jackson Racing intake manifold supplied with the kit.

91. These next operations are best done with two people, one on each side of the car. It makes handling the supercharger much easier.

NOTE: Lay the supercharger assembly down into the back of the engine compartment and allow it to rest on top of the alternator. **Illustration 8**

92. Slide the new intake manifold on the studs on the back of the cylinder head and tighten the ten 12-mm nuts to 16 ft-lbs.

93. Prior to bolting the supercharger to the intake manifold, wrap the supercharger drive belt around the supercharger nose behind the drive pulley. This will give you the most slack in the belt.

94. Center the supercharger gasket supplied with kit on the flat lip, square hole, of the supercharger. Lube the bypass hose with WD40 for easier installation.

95. Lift the supercharger into place while placing the free end of the bypass hose over the nipple on the supercharger inlet manifold.

96. Secure the supercharger to the intake manifold using the four allen bolts supplied in the kit. The two bolts nearest the engine block need a small amount of blue Loctite prior to installation. The Loctite will dry quickly so install the bolts expeditiously, however, be VERY careful not to drop bolts into manifold runners! Tighten all four bolts to 16 ft-lbs. It is this operation that requires one person to hold the supercharger in place while the other person starts and then tightens all the bolts.

97. Wrap the pipe plugs provided in the kit with teflon tape and screw them into the top of the intake manifold covering the two allen bolts just installed.



Illustration 8

Supercharger Installation Instructions

98. Looking up from under the car, check that all the hoses and wires are routed so they will not be chaffed by the supercharger. Also make sure that everything is clear of the oil filter so that it can be easily removed for oil changes.

99. Wrap the 1/8 NPT x 3/8" barbed pipe fitting with Teflon tape. Then screw it into the bottom of the supercharger/throttle body inlet manifold. This hose barb is for the PCV valve hose and, on 96-99 models, the Purge Cut Solenoid Valve "Tee" and hose.

100. Get the PCV valve that came out of the oil separator box and get the 18-inch long, 3/8-inch diameter hose. Connect them together before installing. Insert the PCV valve into the oil separator box. Route the hose out of the oil separator box toward the driver's side and down the side of the oil separator box.

101. From under the car reinstall the oil separator box to the back of the engine block. From the passenger fender, reconnect the original oil separator hose back onto the engine block fitting.

102. Get the 3/8-inch hose that was routed from the PCV valve along the side of the oil separator box. Connect it to the inlet fitting on the bottom of the throttle body inlet manifold. If you have a 96-99 model, you will be installing a 3/8" vacuum "Tee" in this hose. One end of the "Tee" will supply manifold vacuum to the oil separator. The other end will connect to the "Purge Cut" valve supply fitting.

NOTE: Disregard instructions 101, 102, and 103 if your vehicle is not equipped with an oil cooler (98-99 USA).

103. Reinstall the oil cooler with one coolant hose fitting on each side of the oil pressure switch. The two coolant hose fittings on the oil cooler should be in a 9 o'clock position relative to the previously

mentioned factory 12 o'clock position. Install the oil cooler with the factory 30-mm (1 3/16") bolt. Make sure the "O" ring on the back of the oil cooler does not fall out. Apply a small amount of grease to the "O" ring to hold it in place.

104. Reusing the oil cooler hose that has widest radius "U" bend, connect it to the lower of the two oil cooler fittings and up to the main water pipe fitting directly above the oil cooler. Secure the hose with the original hose clamps.

Illustration 9



Illustration 9

105. Using the 18" length, 1/2" diameter hose supplied in the kit, attach it to the upper oil cooler fitting and make a soft loop attaching the other end to the coolant fitting on the engine block, not the water pipe, closest to the oil cooler. Tighten with the hose clamps supplied with the kit on both ends. **Illustration #10**

106. Plug the oil pressure switch back in.



Illustration 10

107. Attach the supercharger support bracket to the triangular upper support bracket using the M8x40 bolt, one thick spacer, one 8mm flat washer, and one M8 Nyloc Nut supplied. Fully tighten both of the upper and lower support bracket bolts. The supercharger support bracket must NOT contact the alternator. If it does or if it is not straight, remove the Flat Strap Bracket and reinstall it correctly.

Illustration 10

108. Reinstall the oil filter or install a new oil filter.

109. Reinstall the catalytic converter if it was removed.

110. Reinstall the down pipe and support bracket.

111. Reconnect the O₂ sensor.

112. From above the car, connect the original large diameter coolant hose to the large brass fitting on the passenger end of the intake manifold. Secure it with a new #10 clamp.

113. Install the throttle body with the two 12-mm bolts hex bolts supplied in the kit and two original bolts.

114. Attach the IAC valve to the manifold with two 12-mm bolts of different lengths that were removed in step 33.

115. Find the factory IAC hose from the water supply pipe and connect it to the IAC valve. Reconnect the IAC plug with the new extension. The wire colors are yellow with a black stripe and black with a blue stripe.

116. Take the 12-inch long by 5/16" diameter coolant hose supplied with the kit and connect the hose from the vacant fitting on the intake manifold near the #4 cylinder. Connect the other end to the fast idle valve mounted on the bottom of throttle body. On '98-'99 models, disregard this operation. Instead, install an 1/8" NPT plug above the #4 cylinder. On the '98-'99 models, reconnect the original hose from the cylinder head, near the distributor, back onto the bottom of the throttle body's Fast Idle Valve.

117. Reinstall the double metal hoses by reconnecting them to the coolant thermostat, the new 4" long valve cover vent hose, and the coolant hose coming from the fitting on the engine block next to the top radiator hose. The final open pipe will be connected to the large rubber hose from the air box when it is reinstalled.

118. If the vehicle has over 15,000 miles on the fuel filter, replace the fuel filter now. A new fuel filter should be available at your local Acura dealer. Always use genuine Acura filters when possible.

119. Reinstall the fuel filter and bracket.

120. Reconnect the charcoal canister hose from the canister to the vacuum fitting next to the Manifold Absolute Pressure (MAP) sensor on the throttle body.

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121. Attach the Purge Cut Solenoid Valve to the intake manifold mounting boss, on the passenger side of manifold, with its phillips head screw.

122. One of the remaining empty fittings above the throttle body should have the vacuum hose for the supercharger bypass valve hose connected to it, the other will have the Purge Valve ('94-'95) connected to it. If you have a '96-'99 model, you will need to tee into the PCV hose that was connected in step 102, to make the Purge Valve work. Then cap the small fitting next to the bypass hose with the vacuum plug supplied.

123. Reconnect the Manifold Absolute Pressure (MAP) and Throttle Position Switch (TPS) harnesses. Check the color-codes for proper connections.

124. Reinstall the throttle cable support bracket in the middle of the firewall. Reconnect the throttle cable to the throttle body and secure the throttle cable in the support bracket. Check for full throttle operation and for the throttle to come back to the idle stop screw.

125. Reconnect the large diameter rubber hose that connects the throttle body to the air box. Secure the hose with the original clamps.

126. Connect the remaining double metal hose fitting into the large diameter rubber hose.

127. Make sure all the belts are correctly aligned on the ribs and pulleys.

128. Adjust the alternator belt tension by loosening the idler pinch bolt on the lower idler and adjusting with the tensioner screw. Tighten until 90 -120 lbs. of belt tension is available. (Plan on retightening the belt after 5-15 minutes). Ninety pounds of tension can be estimated by when a foot long stretch of belt has a 3/8" perpendicular deflection.

129. Do not over tighten the belt as it will create excess load on the idler bearings and shorten belt life. If you are not familiar with belt tension, or you do not have a belt tension gauge, refer to your factory manual for proper belt tension sequence. Complete by tightening the pinch bolt of the idler from underneath car.

130. Finalize the supercharger belt tensioning by installing the belt under the idler pulley and attached slotted bracket. Tighten the tension of the belt to ONLY 35 lbs. of belt tension by tightening the 10-mm headed tensioner bolt from the slotted bracket. When the belt tension is proper, tighten the two 12-mm headed adjustment bolts and the 10-mm jam nut on the tensioner bolt. This belt is very short and does not need much tension as it has very little area of rubber to stretch. Longer belts stretch more than shorter belts. Do not over-tighten either belt.

131. Reinstall the power steering and air conditioning belts. Tighten the tension in the power steering belt with the wing-nut bolt. Tighten the two 12-mm bolts holding the power steering pump. Tighten the tension in the air conditioning belt. Tighten the tension in these belts to 90-120 lbs.

132. Install the fuel injectors into the fuel rail.

133. Reinstall the three phenolic spacers, or install the new ones provided in the kit, over the holes for the bolts that hold the fuel rail to the intake manifold. **NOTE:** To help keep the spacers from falling off the intake manifold holes, put a small amount of grease on one side of the spacer and then put that side down on the intake manifold.

134. Reinstall the fuel rail and injectors. Note: Be VERY careful not to knock anything into the fuel injector holes! Tighten the three 10-mm bolts supplied with the kit securing the fuel rail to the intake manifold.

135. Install the fuel pressure regulator adapter on the fuel rail with the “O” ring supplied and two allen head bolts. Install the fuel pressure regulator using the two original 6 x 20-mm bolts and original “O” ring. Attach a vacuum line to one of the two barb fittings on the back of the intake manifold.

136. Install the high pressure fuel hose from the fuel filter to the fuel rail.

137. Clip the fuel injector plugs back on the proper injector.

138. To install the Jackson Racing fuel pressure regulator (Fuel Management Unit or FMU), pull the small plastic tab out of the firewall next to throttle cable support bracket. Then screw a 10-mm headed bolt supplied through the regulator clamp and into the firewall leaving the fittings facing the drivers fender in a horizontal position.

139. Connect the CENTER fitting of the regulator to the fuel return line from the base of the firewall.

140. Connect the OUTER fitting on the regulator to the original factory fuel pressure regulator using the fuel hose supplied. Clamp the hose with the new clamps provided.

141. Reconnect the wiring harness’ gray plugs in the corner of engine bay nearest driver’s door. Make sure the harness will not come into contact with any moving parts. Refer to **Illustration 1**

142. Attach the vacuum line from the Jackson Racing fuel pressure regulator to the lower vacuum fitting on the back of the intake manifold. Reinstall the brake booster vacuum hose.

143. Reconnect the air temperature sensor.

144. Connect the Jackson Racing Fuel Enrichment Relay supplied with the kit. Locate the wiring harness and plug that was plugged into the T/A (air temperature) sensor. Cut the red wire with the yellow stripe approximately 2 inches from the plug. Connect the two new wiring harness’ red/yellow wires to the original red wire with yellow stripe that was cut in half. Route the remaining wires and relay to the inner fender on the passenger side of the engine compartment. Use a plastic wire tie to secure the relay to the positive battery cable where it is secured to a wiring bracket mounted on the passenger side inner fenderwell. Route the loose wire, with the female spade connector, to the pressure switch. Route the remaining yellow/black wire up to the Purge Cut Solenoid Valve wire harness. Using a “T-Tap,” connect it to the yellow wire with black stripe.

145. Refill the engine oil and coolant.

146. Reattach the negative ground to the negative battery terminal.

147. Enter the alarm and radio codes to activate each.

148. To ensure proper belt tension, run the vehicle until it warms up. Recheck the belt tension and readjust the tension back to the proper level.

149. Check the tension in the belts every 10,000 miles.

150. While the engine is warmed up, reset the ignition timing to 10° BTDC for 93 octane fuel, 7° BTDC for 92 octane fuel.

Supercharger Installation Instructions

TIPS:

Now that you have added substantial power to your Honda, here are some tips for best performance and long life. Allow the engine to warm up for at least 3-5 miles before you start working the engine hard, longer in extremely cold conditions as it will take a substantial amount of time to get the oil warmed completely to operating temperature. Running an engine without the oil being up to operating temperature is very hard on your engine. Install a good oil cooler to keep your oil from getting too hot and from breaking down prematurely. It makes sense that with the additional power you are now generating from your supercharger, ordering one of our oil cooler kits will help maintain long engine life and provide additional power.

Install one of our "Power Foam" air filters as a "drop-in" to your stock air box. It will improve air volume and will keep the air extremely clean. In supercharged engines, the cleaner the air flows in, the better power it will make. The one thing you do not want to do is make the supercharger have to pull hard to get air.

Although the stock Honda exhaust system is very good, a good header and cat-back system will help relieve any back pressure. Keep in mind, in a supercharged engine, as the air gets through the engine better, the boost will actually go DOWN, but the power will go UP! So, don't be surprised if you start improving the intake air and exhaust system and your boost actually starts reading slightly lower than it did when it was all stock. Conversely, if your catalytic converter is starting to deteriorate, you will see higher boost than normal, but, your engine will perform poorly.

Keep your cooling system in good shape. Never run more than 50% anti-freeze coolant to water ratio in the engine, if possible. Water cools better than coolant but does not have the high resistance to boiling or ability to resist freezing. If you haven't replaced your thermostat and your car has over 30,000 miles on it, order one of our 160°F, low temperature thermostat. It will keep the operating temperature lower allowing better power and resistance to detonation.

If your car has 70,000 miles or 7 years on it, you might want to think about replacing your old radiator with a new one from Honda. We have found that the

calcium deposit (from hard water) that collects on the internal cooling tubes of old radiators will actually insulate the hot coolant from the outside air, even though the radiator still has good coolant flow. More importantly, your stock coolant temperature gauge in your car will move to normal when the coolant temperature reaches a temperature near 160°F, but your stock gauge will not show any change or movement in temperature until the engine coolant temperature reaches nearly 220°F. This means that you could be trying to operate your supercharged engine in a hostile environment that is 60° hotter than is ideal.

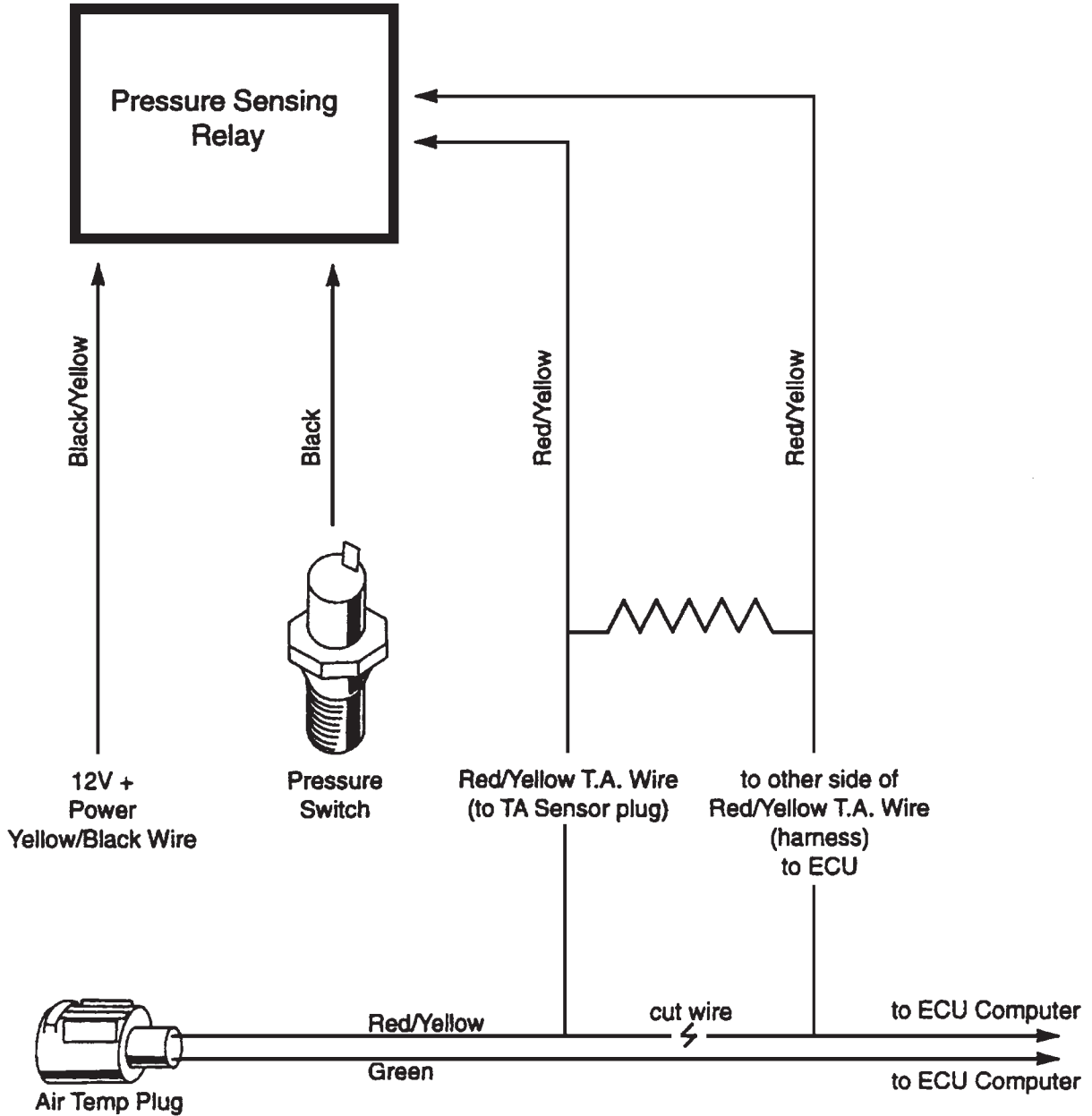
Order a set of our colder spark plugs for summer use. This, like the thermostat, will lower the combustion chamber temperature allowing better power and less chance of detonation in hot climates.

If you are forcing more air into the engine, you want to ensure you have plenty of fuel. The stock fuel pump works great when new for highway use. However like a radiator, it can grow weak with age and run out of volume in high demand, sustained (racing) loads. Our high output fuel pumps are just the ticket. Our fuel pumps fit in the original in-tank bracket for ease of installation. The design is capable of sustained high demand without losing pressure.

Do not run "Upgrade Chips" in your supercharged engine. Most "chips" have a more aggressive ignition-timing curve. This is very counter-productive in supercharged engines.

Do not run an after market cam-shaft with a supercharger unless it has been specifically designed for supercharging. Most non-supercharged high performance camshafts depend on having both intake and exhaust valves open at the same time to help fill the cylinders. This, also, is counterproductive to superchargers. Anytime that both valves are open the boost goes out the exhaust port and will never be seen again.

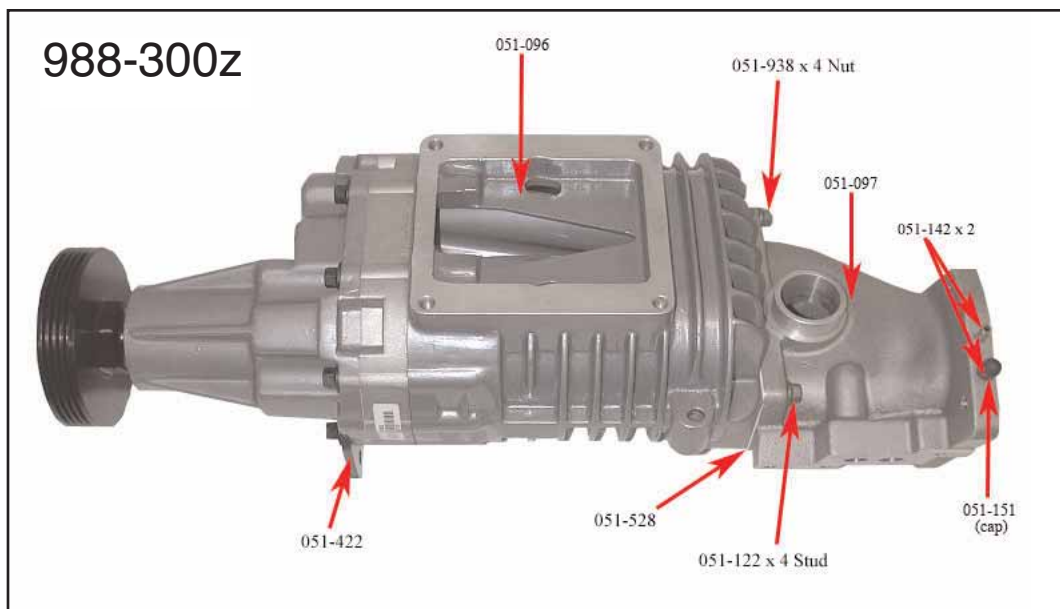
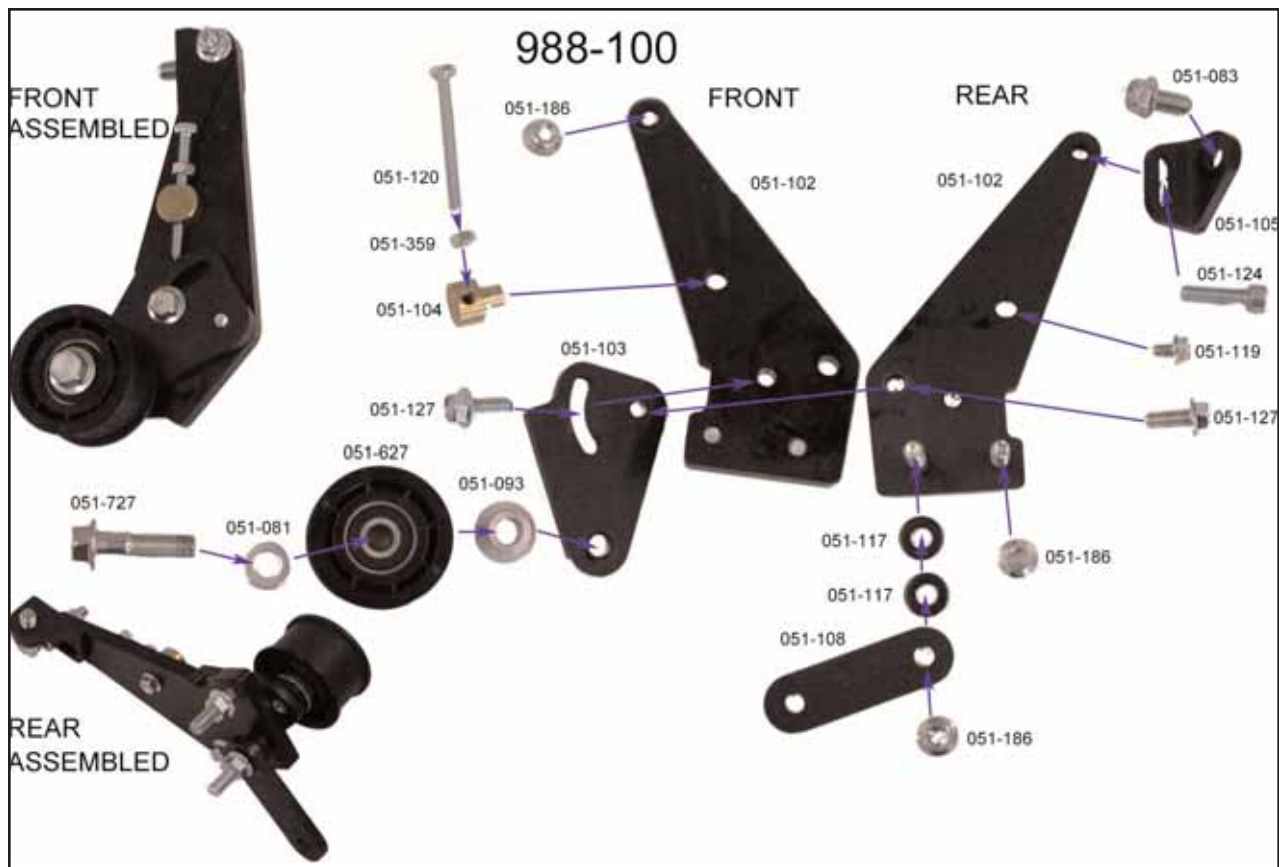
Relay Switch Wiring Schematic



Bill of Materials GSR 989-500

| | | | | | |
|---------|--------------------------------|---|---------|------------------------------|---|
| 051-696 | BADGE, JACKSON RACING | 2 | 051-422 | BRACKET, UPPER S/C BRACE | 1 |
| 051-109 | PULLEY,ALT,DBL BELT | 1 | 051-528 | GASKET,GEN3 S/C-TB ADAPTOR | 1 |
| 988-043 | S/C SUPPORT BRACKET KIT | 1 | 988-400 | HOSE BAG | 1 |
| 051-074 | WASHER FLAT M8 | 1 | 051-091 | CLAMP 5/8 HOSE | 4 |
| 051-135 | BOLT FLNG M8X40X1.25 FULL THRD | 1 | 051-231 | HOSE, COOLANT, 5/16 X 18 | 1 |
| 051-186 | NUT, HEX FLANGE M8-1.25 | 1 | 051-137 | HOSE PCV 3/8X4IN | 1 |
| 051-495 | SPACER 21/64 X 1 X 0.5 | 1 | 051-138 | HOSE FUEL,HP 1/4X20IN | 2 |
| 051-505 | BOLT FLANGED M8X25X1.25 12 AF | 1 | 051-139 | HOSE VACUUM 5/32X16IN | 2 |
| 051-421 | BRKT ENGINE TO S/C BRACE | 1 | 051-140 | HOSE HEATER 5/8IDX18IN | 1 |
| 988-100 | TENS,ASSY,UPPER | 1 | 051-143 | HOSE HEATER 1/2X18INCH | 1 |
| 051-081 | WASHER FLAT M10 | 1 | 051-152 | HOSE PCV 3/8X18INCH | 2 |
| 051-093 | SPACER .450 | 1 | 051-190 | CLAMP,HOSE,#6 | 1 |
| 051-102 | UPPER STRUT BELT DRIVE | 1 | 051-191 | CLAMP,HOSE,MINI,#4 | 4 |
| 051-103 | ADJ PLATE, UPPER BELT | 1 | 988-500 | ELECTRIC CONN KIT | 1 |
| 051-104 | PIVOT NUT UPPER ADJ | 1 | 051-493 | PRESSURE SWITCH 1 PSI | 1 |
| 051-105 | ENG STRUT BRKT CYL HEAD | 1 | 051-101 | RELAY VARIOUS | 1 |
| 051-108 | STAB BRKT ALT UPPER | 1 | 161-615 | FEMALE SPADE CONN, 16-14 GA | 1 |
| 051-627 | PULLEY, IDLER, 2.0IN ASSEMBLED | 1 | 161-620 | MALE SPADE CONN, 16-14 GA. | 1 |
| 051-117 | SPACER ALT STAB BRK | 2 | 161-630 | T-TAP, 22-18 GAUGE WIRE | 1 |
| 051-119 | BOLT,FLANGE,M6X1.0X10 | 1 | 356-525 | HONDA WIRING LOOM | 1 |
| 051-120 | BOLT HEXM6X1.0X60 | 1 | 051-497 | TERMINAL ADAPTOR | 1 |
| 051-184 | STUD,SHOULDERED,8X40 | 1 | 051-192 | EXTENSION FOR IAC WIRES | 1 |
| 051-124 | SKT HD CAP SCW 8X30X1.25 | 1 | 988-600 | FUEL ACCESS KIT | 1 |
| 051-185 | STUD,SHOULDRD,8X50X1.25 | 1 | 989-505 | AFPR - GSR/TYP R | 1 |
| 051-127 | BOLT FLANGED 8X20X1.25 | 2 | 051-121 | AHCS M6X1.0X16 | 2 |
| 051-186 | NUT,FLANGED,8X1.25,12AF | 3 | 051-146 | ADAPTER BD FUEL REG | 1 |
| 051-083 | BOLT FLANGED M10X1.25X20 | 1 | 051-193 | O-RING,M10X2.5 | 1 |
| 051-359 | NUT,STD,M6X1.0 | 1 | 988-702 | GASKETS - LOCTITE - ZIP TIES | 1 |
| 051-727 | BOLT, HEX FLANGE M10-1.25 X 40 | 1 | 051-016 | CABLE TIE | 8 |
| 988-101 | TENS, ASSY, LOWER | 1 | 220-136 | REMOVABLE THREADLOCKER | 1 |
| 051-080 | NUT NYLOC M10X1.5 | 1 | 051-527 | GASKET, M62 S/C-MANIFOLD | 1 |
| 051-215 | SHOULDER SPACER | 1 | 988-800 | INSTRUCTIONS & STICKERS | 1 |
| 051-106 | CASTING ALT MOUNT | 1 | 051-194 | INSTRUCTIONS,ACURA GSR | 1 |
| 051-107 | ADJ BOLT, LOWER IDLER | 1 | 052-010 | STICKER, 92 OCTANE | 1 |
| 051-116 | SPACER IDLER STD .680 | 1 | 051-723 | CARB EO STICKER | 1 |
| 051-206 | BOLT HEX M6X1.0X70 | 1 | 051-198 | STICKER,IAB VALVE | 2 |
| 051-187 | WASHER FLAT 6MM | 1 | 051-200 | STICKER,KNOCK SENSOR | 2 |
| 051-628 | PULLEY, 2.5IN IDLER, PLASTIC | 1 | 051-201 | STICKER,THROTTLE POS | 2 |
| 988-200 | MANIFOLD ASSY, INTAKE | 1 | 051-202 | STICKER, MAP SENSOR | 2 |
| 051-001 | HOSE BARB 1/8NPT X5/16 | 1 | 051-473 | JR WARRANTY CARD | 1 |
| 051-095 | INTAKE MANIFOLD, GSR | 1 | 051-196 | STICKER,AIR TEMP SENSOR | 2 |
| 051-098 | JR BYPASS VALVE | 1 | 051-197 | STICKER,IAC VALVE | 2 |
| 051-121 | AHCS M6X1.0X16 | 4 | 051-199 | STICKER,PURGE CUT SOL | 2 |
| 051-132 | BARB 5/8 3/8NPT | 1 | 988-900 | PARTS KIT | 1 |
| 051-141 | BARB HOSE 90 1/4NPTX3/8 | 1 | 051-133 | BARB 3/8 1/8NPT | 1 |
| 051-142 | HOSE BARB. 7/32 VACUUM | 2 | 051-134 | VACUUM TEE 3/8 | 1 |
| 051-144 | HOSE, SILICONE, 1.5 ID X 1.25 | 1 | 051-135 | BOLT FLANGED 8X40X1.25 | 1 |
| 051-147 | BOLT BYPASS 8X16X1.25 | 2 | 051-203 | PLUG,PIPE,1/8 | 1 |
| 051-189 | CLAMP, HOSE, MINI, 2INCH | 2 | 051-204 | SPACER, PHENOLIC | 3 |
| 051-503 | BOLT M 8 X .075 X 10 WI PLUG | 1 | 051-205 | L-BRACKET | 1 |
| 051-553 | CLIP RETAINING 7/32 VACUUM | 1 | 051-066 | SCREW PHILLIPS M5X0.8X10 | 1 |
| 051-554 | HOSE VACUUM 7/32X9IN. | 1 | 988-950 | MANIFOLD HARDWARE | 1 |
| 051-529 | GASKET, JR BYPASS-MANIFOLD | 1 | 051-118 | FLANGED BOLT 6X30X1.0 | 3 |
| 988-300 | THROTTLE BDY INTAKE ASSY | 1 | 051-131 | PIPEPLUG SCT HD 3/8 NPT | 2 |
| 051-096 | S/C GEN3 M62CCW 4.0-4R | 1 | 051-135 | BOLT FLANGED 8X40X1.25 | 2 |
| 051-097 | TB ADAPTOR, GSR & TYPE R | 1 | 051-207 | AHCS M8X1.25X25 | 4 |
| 051-122 | STUD 8X40X1.25 | 4 | 051-110 | BELT 4PK800 | 1 |
| 051-938 | SPECIAL NUT 8X1.25 | 4 | 051-263 | BELT 4PK620 | 1 |
| 051-142 | HOSE BARB. 7/32 VACUUM | 2 | | | |
| 051-151 | VACUUM CAP 5/32 | 1 | | | |

All parts indented come with the item above.



988-200

