



## **1994 - 1997 MAZDA MIATA MX 5 Cold Air Induction Kit #901-980**

*Thank you for choosing Jackson Racing for your Miata performance parts. You will find the Jackson Racing Cold Air Induction™ Kit easy to install. Stock components removed should be placed in boxes or plastic bags and marked for easy identification. Access to a Mazda service manual is always helpful when working on your Miata. (Miata Enthusiast Manual, #211-505.)*

*This system was designed for use only on the Mazda Miata MX-5. The engine should be in good running condition prior to installation. It is a good time to install new spark plugs (#971-050) and check the timing. Set ignition timing to 14 degrees BTDC. **NOTE: This should be done before the C.A.I. is installed as the Air box blocks visual access to the timing marks.** Refer to a Mazda service manual for specific instructions on setting ignition timing.*

*The air filter provided is washable and reusable. Use a maintenance kit for foam air filters (#901-970). Do not use a K&N cleaning kit as it is designed for cotton filters only.*

*\*Please read these instructions completely before installation. You should be able to install the Cold Air Induction Kit using normal tools. You will need a small amount of antifreeze on hand as you will see in the instructions.*

**If there are any questions, please call our staff at 1-800-642-8295**

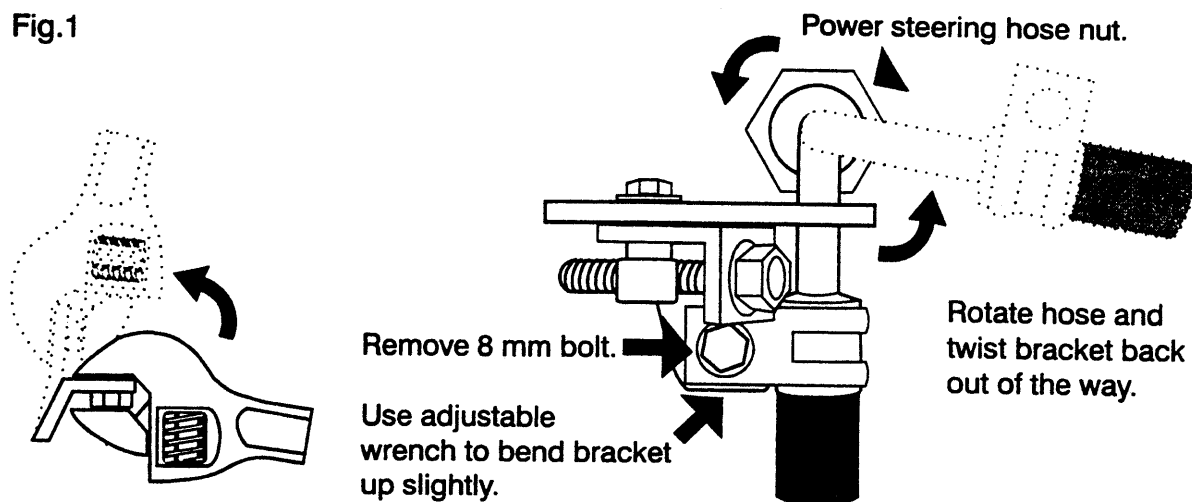
**Distributed by:**  
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440 Rutherford St.  
Goleta, CA 93117

## Remember before you start...

If you want to change your ignition timing, now is the time to do it. Set the ignition timing to 14 degrees BTDC, but remember, if you do this, your car will not pass a smog test in California. It is not necessary to reset the ignition timing, only recommended. Because of all the information from Miata Magazine and the Internet regarding ignition timing settings, we thought we should forewarn you that the cold air induction box will get in the way of your timing marks. Keep in mind, that once you have set the timing, it will not need to be adjusted ever again. It is fully electronic and does not need to be reset. Also, very important, your Miata's ignition fires an electrical spark every engine revolution instead of every other revolution like most other 4 cylinder engines. To properly set the ignition timing, you will need a high-quality timing light. If you do not have access to a high-quality timing light, you will get an improper reading. Poor quality lights cannot recharge their bulbs fast enough to send a proper signal. The result is, your ignition timing will actually be retarded from where you think you set it.

1. Disconnect the negative side of the battery (-) Please note radio security code before disconnecting.
2. Remove the 4 screws securing the plastic cover in front of the radiator support frame. This will not be reinstalled.
3. Loosen hose clamps at each end of stock air intake tube which runs across the top of the radiator.
4. Remove the crankcase ventilation and idle bypass hoses from the base of the throttle body and the intake tube. Remove the intake assembly.
5. Disconnect the two wiring harnesses from the throttle body and set harnesses back out of harms way.
6. Remove 8 mm bolt (12mm hex) from the bracket which holds the power steering hose support bracket. (See Fig.1)
7. Loosen the power steering hose nut just enough to allow the hose to be rotated about 30 degrees counter clockwise. Re tighten and clean up any leaked power steering fluid.
8. To allow clearance for the new C.A.I.™ airbox, the power steering hose support bracket will need to be bent up slightly to prevent contact with the airbox. (See Fig.1) The support bracket will not be re connected. Rotate the bracket which is still attached to the power steering hose back out of the way.
9. Loosen the hose clamp on the intake tube at the rear of the stock airbox. Remove the 10mm headed bolt on the drivers side inner fender, and remove the tube.
10. Disconnect wiring harness from air mass sensor and set back out of harm's way.
11. Remove (2), 6 mm (10mm hex) bolts locating air mass sensor to the air filter box (save these for use

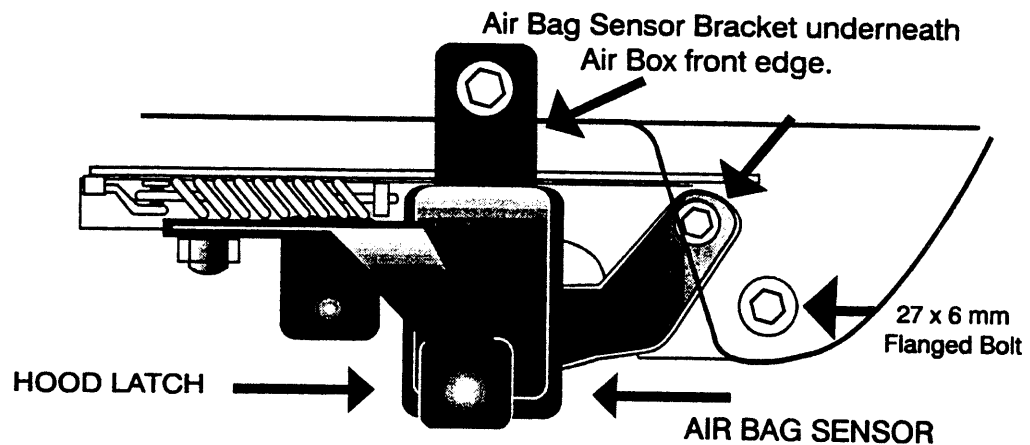
Fig.1



later). Carefully remove air mass sensor.

12. Remove (2), 8 mm (12mm hex) retaining bolts and (1) 8 mm nut and remove the stock airbox. If your car is equipped with cruise control you will want to remove the cruise control servo assembly first. After removing the stock airbox, remove the spacer sleeve, the one that was held down by the 8 mm nut, from the stock air box and install it onto the stud it was removed from, and reinstall the cruise control servo assembly. Reinstall the 8 mm nut.
13. Depending on the country of origin, some 95 and later cars do not have the air bag sensor mounted to the front of the car near the hood latch. Disregard this instruction if you have a 95 and later U.S. car. Locate the air bag sensor (See Fig.2). It is in front of the radiator and to the side of the hood latch. The air bag sensor harness will be rerouted below the radiator cowl instead of above the cowl. Remove the plastic air bag sensor cover. (This will not be reused). Unbolt the air bag sensor. Follow air bag sensor wiring harness to the drivers side of the engine bay, and unplug the air bag sensor plugs. They are identified by the orange and blue coloring on the plugs. Route the harness under the radiator frame to the right of the headlight motor knob (Looking from the front of the car) Reconnect to the original plugs on the drivers side of the engine bay. Important! The harness must not interfere with the headlight opening and closing. Reinstall Air bag sensor using stock bolts.

Fig. 2



It now time to install the new Jackson Racing Cold Air Induction™ System. The new airbox and airflow meter adapter have been supplied already sealed and assembled.

14. Remove the two 6 mm bolts (10mm hex) at the front of the cowling. These will be replaced with 2-27mm x 6mm (10mm hex) flanged bolts to locate the air box. See Fig.2.
15. For Miatas equipped with anti-lock brakes, you will need to move the filler neck for the windshield wiper fluid. The top sticks through a frame hole to the drivers side of the radiator support. You will need to loosen the support bracket nut and slide the filler tube to the furthest position away from the bracket bolt. Now, tighten the bracket nut. This will make room for the new air box and provide access to the washer bottle
16. The air filter, airbox and air mass sensor adapter may now be installed. Standing at the front of the vehicle, carefully arc the assembly down to the left and under the thermostat housing between the radiator frame and the front of the engine. **A special note about installing the air box and aluminum adapter.** To accommodate the 1.8 liter engine (which is longer than the 1.6), we had to narrow up the air box and deepen it to achieve the high flow we require for outstanding performance. You will notice that the airbox is much narrower than the aluminum air mass sensor adapter. The stock Miata air mass sensor is actually bigger in outside diameter than the area between the cooling fans and the engine.

Consequently, when you are installing the air box and aluminum adapter, you must give the air box a good push to get it past the cooling fans and the engine. If you remove the aluminum adapter from the airbox and install it after the air box is in place, you will not have this problem. However, most people working at home, do not have small universal sockets for reaching down to the bottom of our air box to reinstall the aluminum adapter mounting bolts. So, even though it looks like it will not fit... it will, just give the airbox assembly a good push. It will fit just fine once it gets past the cooling fans and thermostat housing. Install using the 2-27mm x 6mm flanged bolts (10mm hex) and the 2 rubber/metal washers supplied, between the air box and the flanged bolts, rubber side to airbox. Install the air filter with the Jackson Racing logo facing up. Install the airbox lid.

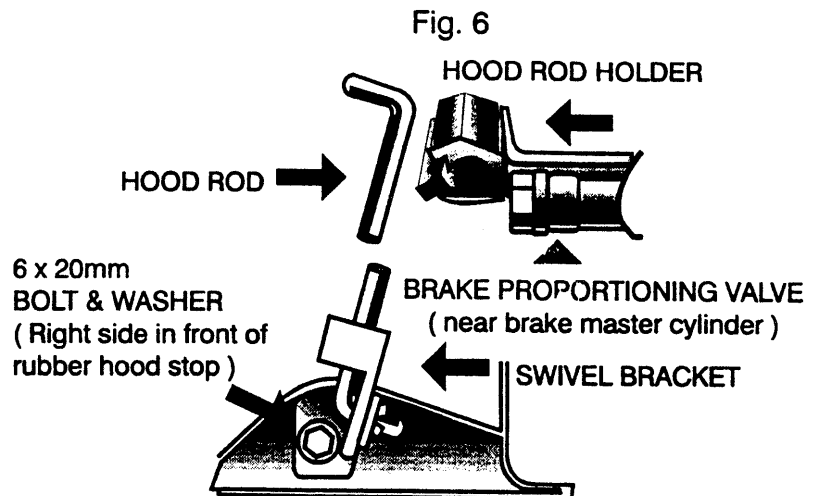
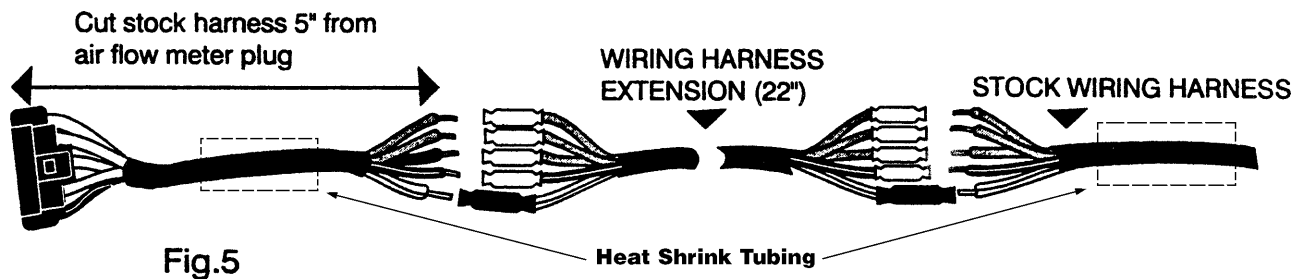
17. Apply a small amount of lubricant to the rubber bellows on the air mass sensor and rotate the unit into the alloy air mass sensor adapter. Install the steel air mass sensor bracket onto the alloy air mass sensor adaptor using the 2 provided countersunk phillips head screws. install 1 of the original 6mm air mass sensor bolts through the bracket and into the air mass sensor. Leave the last bolt hole at the left hand end of air mass sensor empty at this stage. The remaining stock bolt will be used later to attach a cable tie loop to secure the small coolant bypass hose. (See illustration Fig.3 & 4)
18. Attach the airbox support bracket to the right rear corner of the airbox using the third rubber washer between the bracket and air box. Mount to the chassis at the forward stock airbox locating point using the supplied 8 mm bolt (12mm hex).
19. Attach the flex hose to the bottom end of the rotomolded elbow tube and fit to the air mass sensor using the two 3" hose clamps provided. Make sure the flex hose is compressed as much as possible when installed (See illustration Fig.3). This will allow the engine to move during acceleration and deceleration.
20. Fit the other end of the cast elbow tube to the throttle body using the short rubber connecting hose supplied. Secure with the (2) 3" hose clamps provided.
21. Cut the stock idle bypass hose to form a right angle. Fit one end of the hose to the cast elbow fitting and the other end to the stock outlet at the base of the throttle body. Secure both ends with the stock clamps.
22. Fit crank case ventilation tube to the brass barb fitting on the top of the cast aluminum elbow tube.
23. Re connect the two wiring harnesses to the throttle body. Make sure they snap into place correctly.
24. Now use the rubber insulated clamp supplied, to secure the small coolant bypass hose to the air mass sensor using the remaining stock 6 mm bolt (10mm hex). Make sure the hose is secured away from the water pump pulley (See illustration Fig.4).

### **Wiring harness modification**

25. Because we have moved the position of the air mass sensor, it is necessary to add an extension to the air mass sensor wiring harness.

First, measure back 5 inches from the stock air mass sensor plug. Carefully cut through the harness protective sheathing to expose the wires. Cut the wires at that point and strip all of the ends back 1/4" (Note: make sure that all of the gray shielding on the red wire is stripped back and does not make contact anywhere within the butt connector. This gray shielding does not exist on all models). Slip the two 4" lengths of shrink tubing (supplied) onto the wiring harness, these will be heat shrunk over the butt connections when all joints are completed **AFTER** you have made sure the car runs correctly. Connect the new harness extension using the butt connectors provided. The new extension wire colors correspond with the factory harness (See illustration Fig.5). Slip the stock wires into the butt connectors with the corresponding colors on the extension harness and crimp securely. Apply heat to newly crimped connectors using a Heat gun or Hair drier. This will seal the plastic coating around the butt connector.

26. Route the new harness to the air mass sensor and plug in securely.
27. Tie wrap the harness out of harms way along the crank case ventilation pipe in front of the cam cover using the wire ties supplied.
28. Check that all fittings and hose clamps are secure. **WARNING!** Ensure the flex hose between air mass sensor and cast aluminum elbow has adequate crush when in the installed position. If this is not installed correctly, damage to your C.A.I.™ Airbox system can result.
29. Relocate the hood rod using the swivel/bracket #9003 and the rod holder supplied. Locate as illustrated. If your car is equipped with cruise control, it will be necessary to remove the cruise control cable mounting clip that uses the square slot and tie wrap the cruise control cable to the throttle cable.
30. Reconnect the negative terminal to the battery.
31. Start your engine!



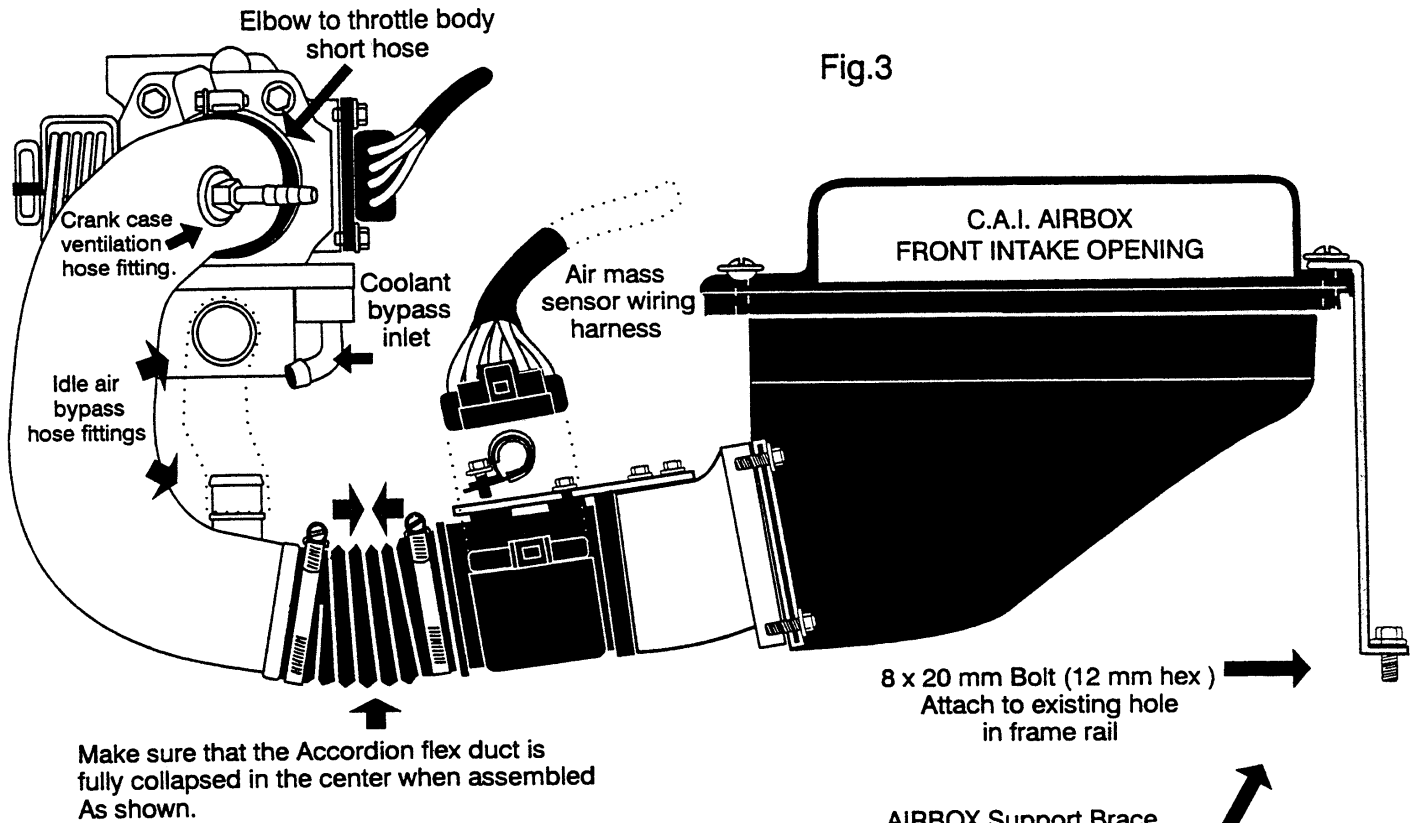


Fig.3

Make sure that the Accordion flex duct is fully collapsed in the center when assembled As shown.

8 x 20 mm Bolt (12 mm hex)  
Attach to existing hole in frame rail

AIRBOX Support Brace.  
( Black )

Pass coolant bypass hose through plastic clamp as shown

Small slotted hole to TOP

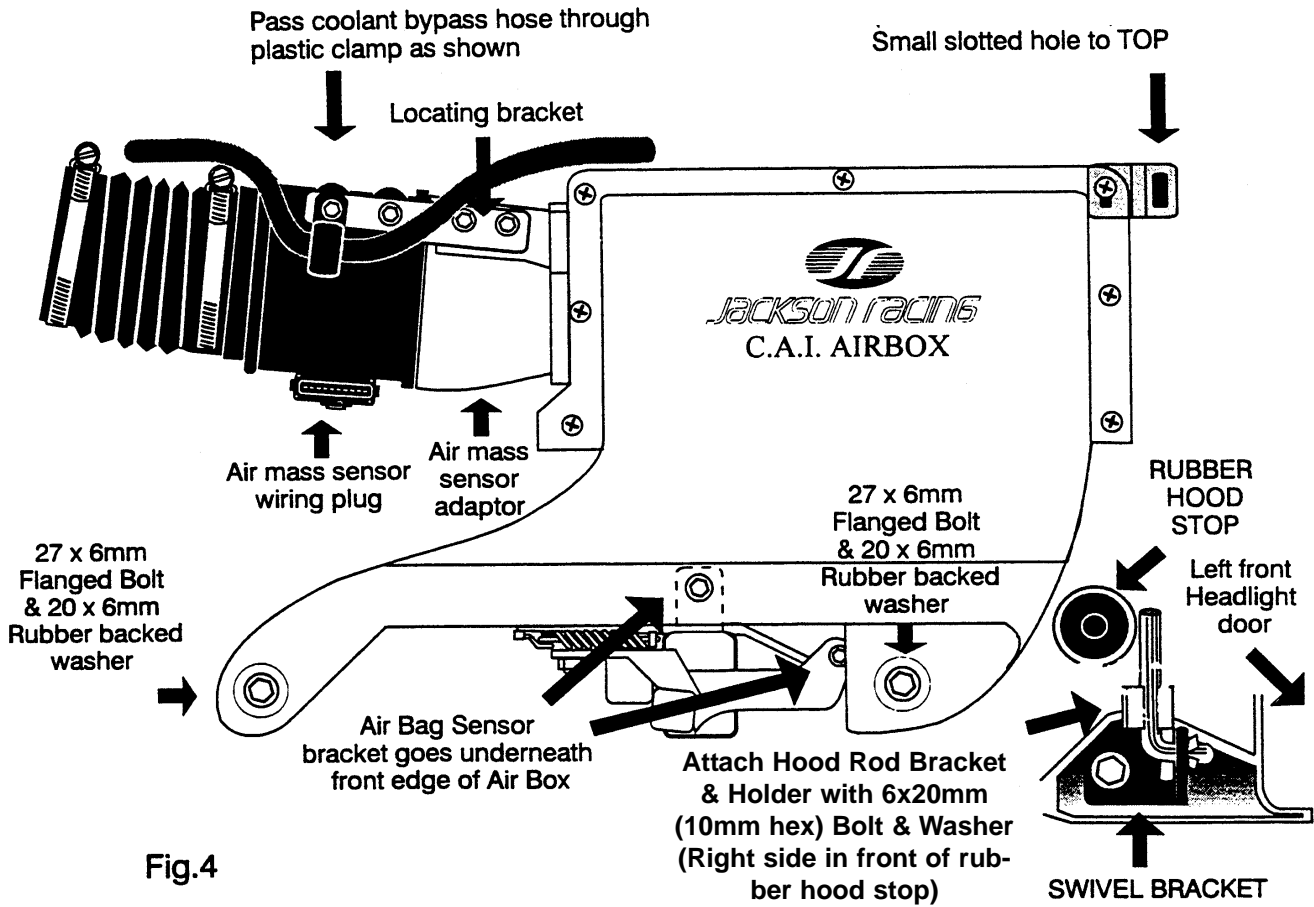


Fig.4



# JACKSON RACING

## PERFORMANCE PARTS

### 1994 - 1997 MAZDA MIATA MX 5 Cold Air Induction Kit #901-980 Parts List

PART #	DESCRIPTION	QTY.
<b>901-978</b>	<b>CAI HARDWARE 1.8 MIATA</b>	<b>1</b>
051-005	BOLT,HEX FLANGE,M6 X 1.00 X 25	2
051-009	BRACKET, HOOD	1
051-010	BRACKET REAR BOX	1
051-011	BRACKET, AIR MASS SENSOR	1
051-016	CABLE TIE	6
051-017	CLAMP, HOSE, SAE NO. 40	4
051-030	P-CLAMP, LOOM, 1/2IN. ID	1
051-032	HOSE, FLEX, 2.75 X 6	1
051-033	HOSE, SILICONE, 2.635 X 2	1
051-041	HOLDER, ROD	1
051-042	HOLDER, ROD	1
051-044	SCREW, MACHINE, M6 X 1.0 X 12	2
051-045	SHRINK TUBE, 3/4ID X 5 IN.	2
051-127	BOLT FLANGED 8X20X1.25	1
051-190	CLAMP,HOSE,#6	1
051-051	WASHER	2
<b>051-000</b>	<b>ADAPTER, METER</b>	<b>1</b>
<b>051-004</b>	<b>BOLT,HEX FLANGE,M6 X 1.00 X 15</b>	<b>4</b>
<b>051-034</b>	<b>LABEL, CARB EO</b>	<b>1</b>
<b>051-053</b>	<b>WIRE HARNESS</b>	<b>1</b>
<b>051-482</b>	<b>BOX. 21-3/8X15-5/8X9-1/2</b>	<b>1</b>
<b>051-695</b>	<b>AIRBOX, RAW</b>	<b>1</b>
<b>051-711</b>	<b>INSTRUCTIONS</b>	<b>1</b>
<b>051-922</b>	<b>ELBOW, AFM TO THROTTLE BODY</b>	<b>1</b>
<b>770-977</b>	<b>HOSE BARB, 1/8 NPT X 5/16</b>	<b>1</b>
<b>901-987</b>	<b>FILTER, AIR, CAI</b>	<b>1</b>

Indented items included in the above kit

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