

GT Spec Intercooler

MAZDA RX-7

93-95

534-Z001

FD3S7

13BT-REW

NOTICE

- A #B19R car battery will become necessary after installation of this product. Please prepare appropriate battery terminals as well. (This product may not be installed with any other battery size unless the battery is relocated to another area of the car.)
- Please prepare approximately 8.8 liters of replacement coolant for the radiator. Repositioning of the radiator will require removal of coolant.
- Modifications to the under cover of the vehicle will become necessary after installation of this product.

Preface

Thank you for purchasing the A'PEX GT-SPEC Intercooler Kit. In order to properly use this unit, please read this instruction manual carefully. Please store this manual inside of the vehicle for reference. Please be sure to include this manual and warranty card with the unit when exchanging ownership.

To Begin

- This product has been specifically designed for the vehicle listed above and may NOT fit any other type of vehicle. APEX is not responsible for any damage claim of any type resulting from the installation of this product on a different type of vehicle.
- This product has been designed to fit the vehicle listed above in FACTORY stock trim. This product may not fit properly on vehicles that have had modifications.
- Please thoroughly read this manual before attempting installation.
- Please check the contents of this product before installation to ensure that all of the parts in the PARTS LIST section have been properly included. If there is a discrepancy in parts, kindly repackage the unit and return it to the place of purchase.
- We are not responsible for any damages, or injuries incurred from the installation process.
- Be sure to place a fender cover over the vehicle fenders to prevent scratches and other damage.
- Be sure to use proper tools and specific equipment to prevent damage to the nuts and bolts.
- Be sure to prevent dust and dirt from entering the engine during installation.
- Be sure to cover all openings such as intake pipe, turbo, and intercooler with a terry cloth or tape to prevent anything from dropping inside the pipe.
- Be sure to keep all factory parts after installation of this product for future use.
- Be sure to have the vehicle properly inspected after installation.
- The product and packaging of this product may change without prior notification. We are not responsible for any problem or claim related to product changes.
- Obey all of the rules and regulations of the highway.

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Glossary

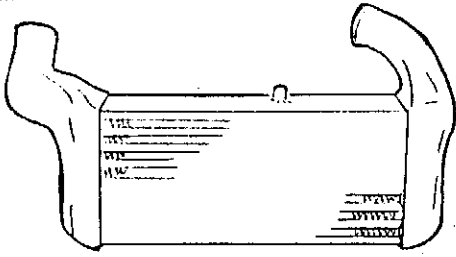
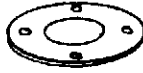


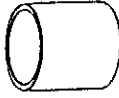
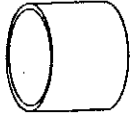
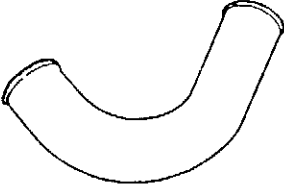


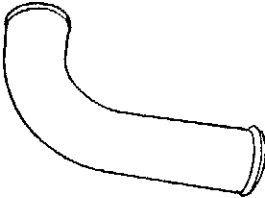


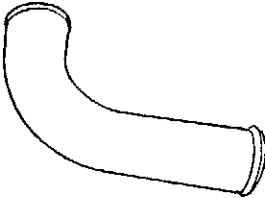


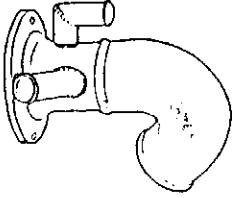
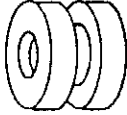
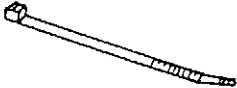
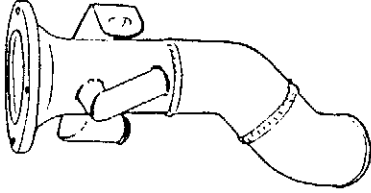
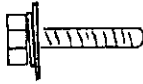
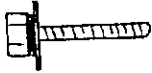
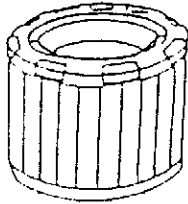
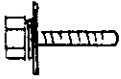

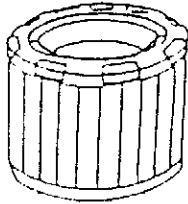


* This instruction manual is intended to help the user install this product safely and without harm to others. It is written with the intent that the user will be able to properly utilize all of the functions contained within this unit.

The glossary list is below. Please be sure you understand the proper definition of each key word before proceeding with the installation.

KEY WORD	DEFINITION
DANGER	Failure to obey this warning will likely result in DEATH or severe injury to the user.
WARNING	Failure to obey this warning may cause DEATH or severe injury to the user.
CAUTION	Failure to obey this warning may result in light injury to the user, product damage, or damage to the surrounding area.
NOTES	Failure to obey this warning may result in product failure or inability to use all of the functions of this product.

Parts List

- Please be sure to check the package to ensure that all of the parts have been properly included before proceeding with installation.

 <p style="text-align: right;">× 1</p>	 <p style="text-align: right;">× 2</p>	 <p style="text-align: right;">× 1</p>
 <p style="text-align: right;">× 1</p>	 <p style="text-align: right;">φ 60 × 1</p>	 <p style="text-align: right;">φ 70 × 5</p>
 <p style="text-align: right;">× 1</p>	 <p style="text-align: right;">φ 60 - φ 65 × 1</p>	 <p style="text-align: right;">HS12 × 6</p>
 <p style="text-align: right;">× 1</p>	 <p style="text-align: right;">HS36 × 4</p>	 <p style="text-align: right;">HS40 × 1</p>
 <p style="text-align: right;">× 1</p>	 <p style="text-align: right;">HS44 × 10</p>	 <p style="text-align: right;">× 2</p>
 <p style="text-align: right;">× 1</p>	 <p style="text-align: right;">× 5</p>	 <p style="text-align: right;">× 10</p>
 <p style="text-align: right;">× 1</p>	 <p style="text-align: right;">× 3</p>	 <p style="text-align: right;">L=30 × 4</p>
 <p style="text-align: right;">× 2</p>	 <p style="text-align: right;">L=20 × 3</p>	 <p style="text-align: right;">L=16 × 14</p>
 <p style="text-align: right;">× 2</p>	 <p style="text-align: right;">× 2</p>	 <p style="text-align: right;">× 2</p>

To the Installer

- Be sure to read -

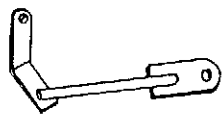

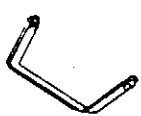





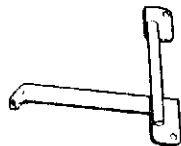
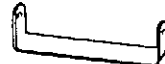


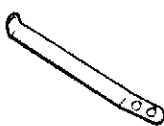
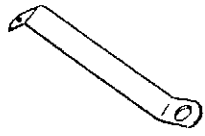
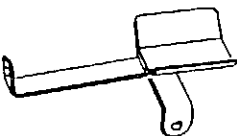

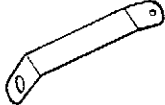
- Be sure to read this manual thoroughly before proceeding with installation
- We are not responsible for any damage incurred to the vehicle or parts associated with installation.
- Be sure to place a fender cover over the vehicle fenders to prevent scratches and other damage.
- Be sure to use proper tools and specific equipment to prevent damage to the nuts and bolts.
- Be sure to prevent dust and dirt from entering the engine during installation.
- Do not use excessive force when removing the lights and side lenses.
- Be sure to store the lights and lenses in a location where they will not get scratched.
- Be sure to cover all openings such as intake pipe, turbo, and intercooler with a terry cloth or tape to prevent anything from dropping inside the pipe.
- Be sure to double check clearance levels for all parts (pipes, hoses, clamps) when installing this product on a vehicle with a bent frame or prior accident damage. The product may not fit on some vehicles with extensive damage. We are not responsible for fitment problems on these types of vehicles.
- We have taken extra steps to finish the product to a high level of quality. Please be sure to check, once again, the inside of the pipes to ensure that there is no dirt or grime stuck inside.
- We are not responsible for any damages or injuries resulting from the installation and use of this product on a vehicle with prior accident damage.
- Some vehicles will require minor grinding and cutting of the under cover, front bumper depending upon the make, model, and grade of the vehicle. Also, some vehicle models may require the fog lights to be removed.
- Always keep the factory parts in a safe place for storage.

CAUTION

- Be sure to disconnect the negative terminal of the battery before attempting installation
- Be sure to have the vehicle inspected after installation. Loose pipes and hoses MAY cause improper operation and lead to accidents and damage to the vehicle.

WARNING

- Be sure to use secure jack stands when working on the vehicle with a car jack. Do not use the factory style jack as it is very unstable and may lead to serious injury.

 S 1 × 1	 I 1 × 1	 P 1 × 1	 P 2 × 1
 I 2 × 1	 I 3 × 1	 C 1 × 1	 C 2 × 1
 B 1 × 1	 B 2 × 1	 C 3 × 1	 C 4 × 1
 R 1 × 1	 R 2 × 1	 C 5 × 1	
 R 3 × 1	 R 4 × 1	<ul style="list-style-type: none"> ・ 保証書 × 1 ・ 取扱説明書 × 1 ・ ステッカー × 2 	

Removing the Factory Intercooler

1. Removing the Battery and Undercover

1. Remove the battery bracket, the negative terminal of the battery, and the positive terminal of the battery in that order. Remove the battery.

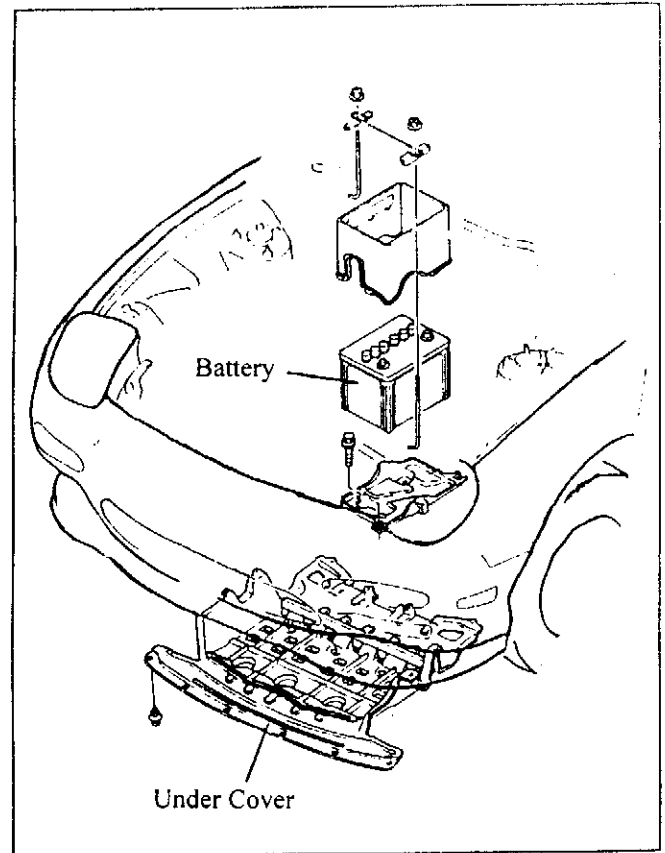
CAUTION

- Be sure to cover the battery terminals with electrical tape.

2. Refer to the diagram on the left. Remove the battery box. Loosen and remove the 3 bolts holding the battery tray. Remove the battery tray.

CAUTION

- Be sure that the engine has cooled down before attempting installation. Failure to do so may result in severe burns.

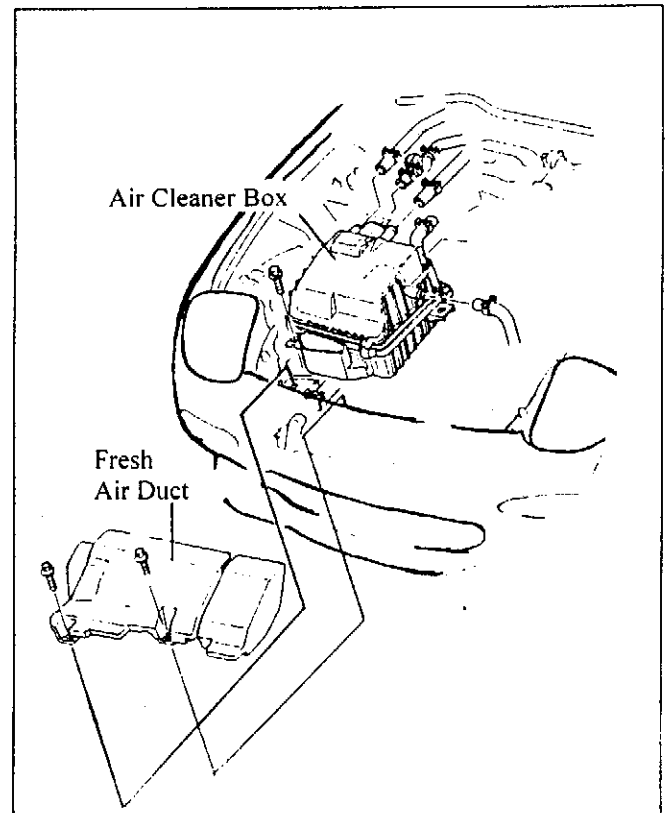


2. Fresh Air Duct/ Air Cleaner Box Removal

1. Remove the 2 bolts holding the fresh air duct, and remove the Fresh Air Duct.
2. Remove the Upper Air Box by: Loosening 2 bolts and loosening the air hoses connected to the Air Box.
3. Remove the air cleaner and loosen the 3 bolts on the Lower Air Cleaner Box. Remove the Lower Air Cleaner Box.

CAUTION

- Be sure to use a terry cloth to cover up the air intake hose.

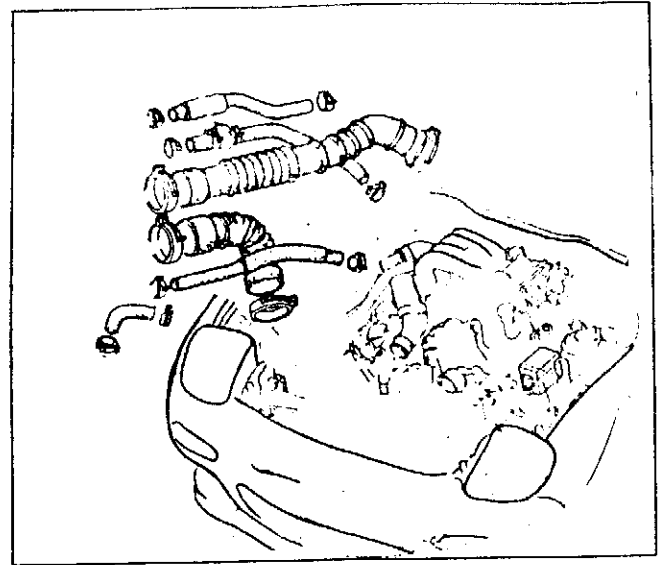


3. Removing the Air Hoses

1. Loosen and remove all of the clamps and air hoses that are connected to the turbos.
2. Disconnect the ENGINE side of the air hose connected to the air bypass valve and air pump.

CAUTION

- Be sure to use a clean rag to cover up the air intake hose.

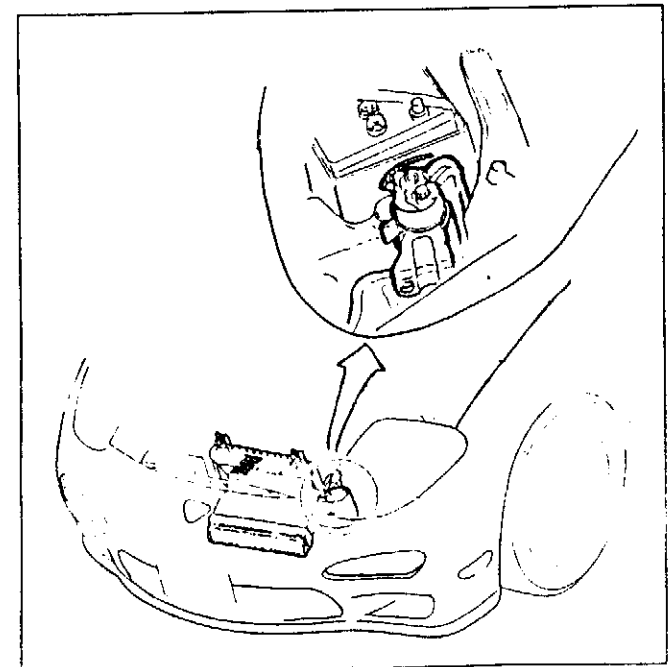
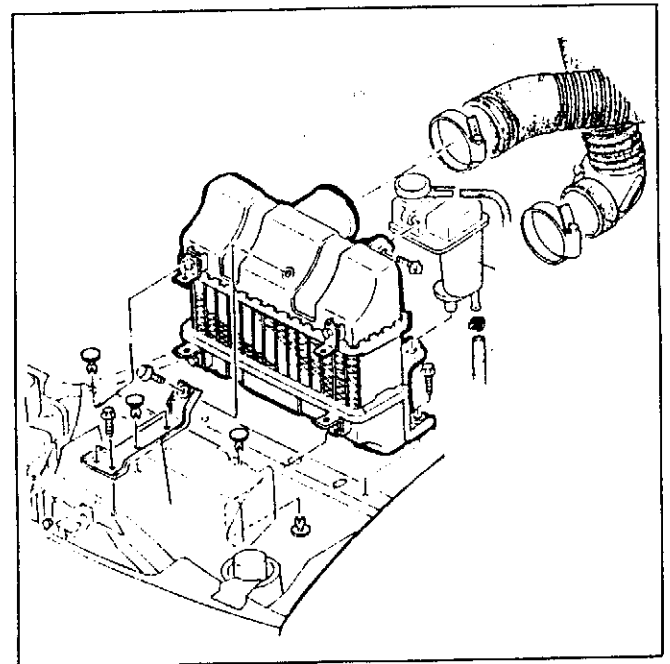


4. Removing the Factory Intercooler

1. Loosen and remove the 2 hose clamps connected to the factory intercooler.
2. Disconnect the 1 bolt for the air separation tank and remove.
3. Refer to the diagram on the left and remove the 3 bolts from the bracket as well as the 2 bolts from the dryer bracket.
4. Loosen the 4 bolts from the factory intercooler and air duct and remove the factory intercooler.
5. Disconnect the coupler next to the dryer and SLOWLY lift the dryer diagonally upwards to remove the air duct. Be sure not to put excessive pressure or strain dryer, hoses on any related components.
6. Retighten the 1 bolt for the dryer bracket and secure in place.

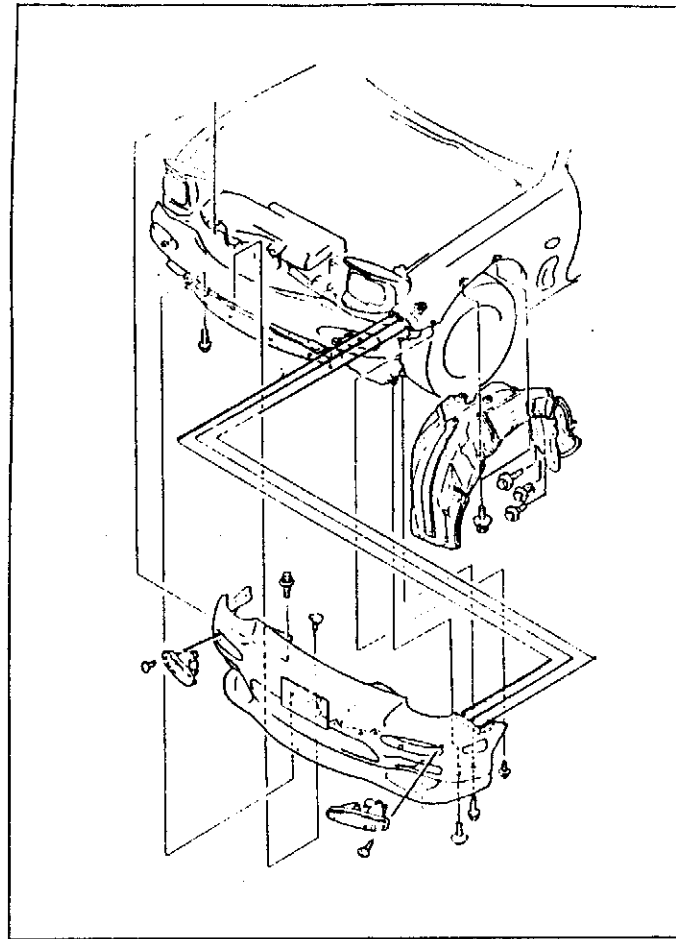
CAUTION

- Use EXTRA caution when moving the dryer. Rough handling of the dryer may result in damage to the unit preventing the air conditioning system from functioning properly.
- Cover the openings of the intercooler with tape to prevent foreign objects from entering the pipes.
- Be sure to cover all openings to prevent foreign objects from entering the pipes.



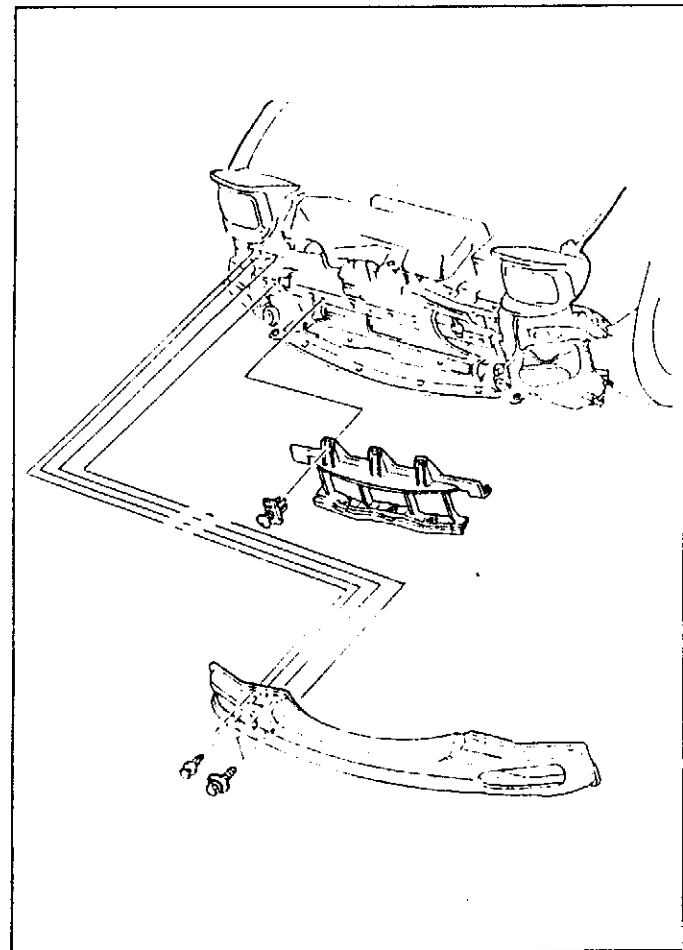
5. Removing the Front Bumper

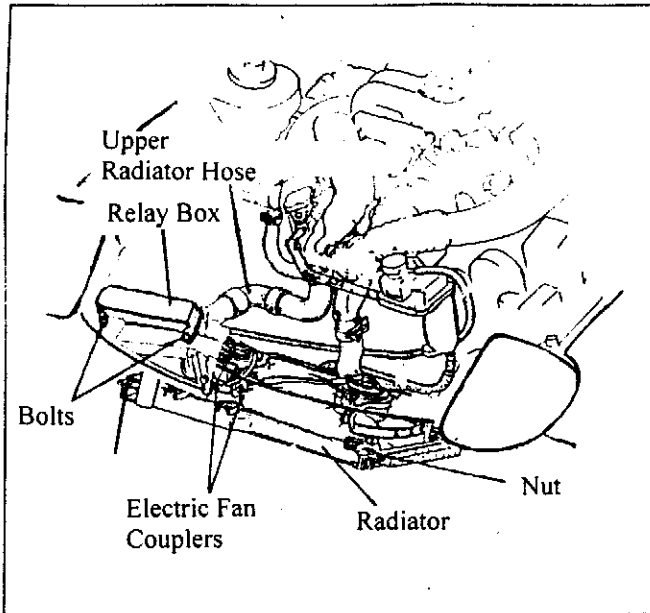
1. Remove the front turn signal lenses by removing the mounting screw and coupler.
2. Remove both the left and right Side Fender Under Covers by removing the 3 clips, and 2 bolts.
3. Remove the left and right mud guards according to the diagram.
4. Remove the 3 bolts to the side of the retractable lights.
5. Remove the bolts holding the front bumper and fenders in place.
6. Remove the clips and bolts holding the Center Upper Reinforcement
7. Remove the Center Lower Air Guide and 3 clips.
8. Remove the upper 4 bolts securing the Front Bumper and remove the Front Bumper



6. Removing the Reinforcement and Air Guide

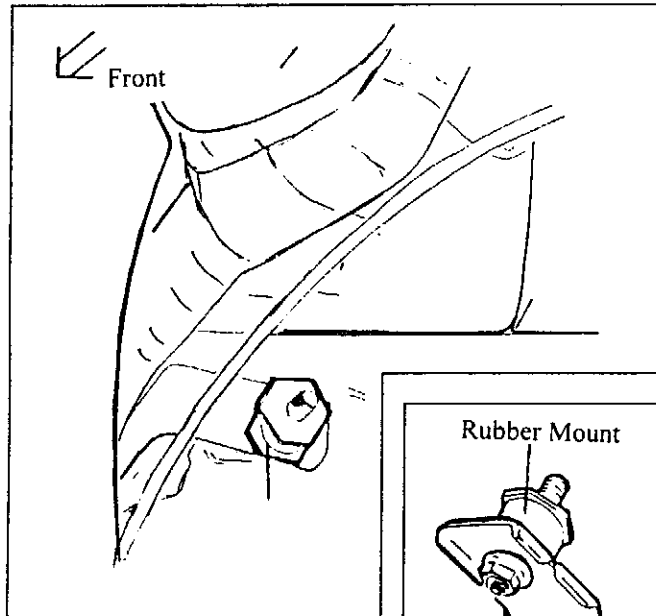
1. Remove the bolts and clips securing the Reinforcement.
2. Remove the outside air temperature connector and remove the reinforcement
3. Remove the mounting clips for the Air Guide and remove the air guide





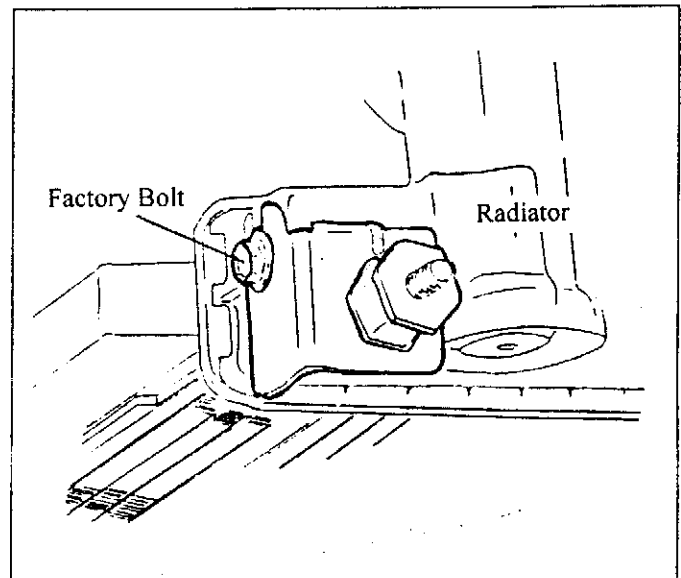
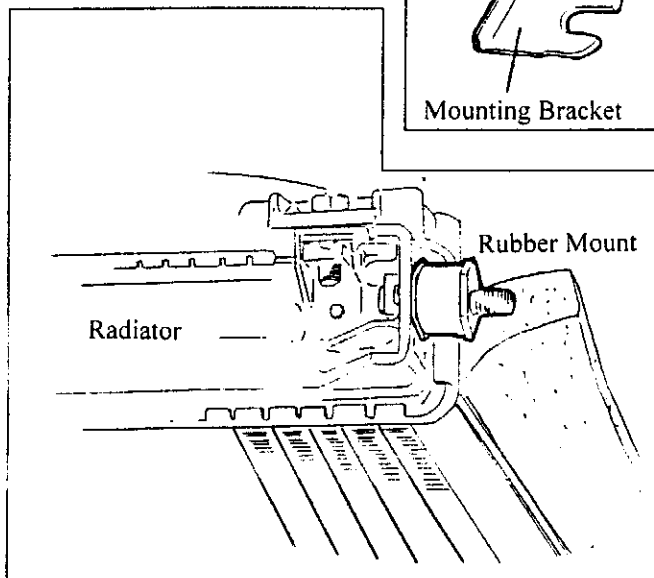
7. Removing the Relay Box and Radiator.

- Be sure to cover the fins of the radiator with cardboard to prevent damage to the radiator core.
1. Loosen the mounting screws to the relay box and move the relay box slightly forward.
 2. Loosen the upper radiator hose and remove the lower drain plug to remove the radiator coolant. Replace the drain plug after all the coolant has been removed.
 3. Be sure to label the radiator fan couplers with a LEFT or RIGHT label. Then remove the couplers.
 4. Remove the upper side mount nuts of the radiator and pull the radiator upwards.
 5. Disconnect the radiator hose and remove the radiator.
 - AT (automatic) vehicles may have the AT oil cooler connected to the radiator. Do not remove this hose, but use safety wire or to secure it to the engine.



8. Moving the Rubber Mounts

1. Remove the left and right rubber mounts for the radiator. Refer to left diagram.
2. Remove the side mounting brackets of the radiator. (Driver side and passenger side)
3. Mount the Rubber Mount from #1 to the driver side Bracket from #2.
4. Using the included Nut from left middle diagram, mount the bracket from #2 to the Rubber Mounts from #1.
5. Use the factory bolt to secure the piece from #4 to the Passenger side mount from #2.



Installing the GT Spec Intercooler

1. Moving the Power Steering Cooler and Condenser

1. Use the included power steering cooler bracket and condenser bracket to remount the power steering cooler and condenser to a LOWER position.
 - Some vehicles, due to model variance, may have different power steering cooler lines and air conditioning line placement. Please use your hands to move the lines. Be sure not to apply excessive force to those lines when moving. Failure to do so may result in damage to the power steering system and air conditioning system.
 - Please use the following parts

For Power Steering Cooler Relocation

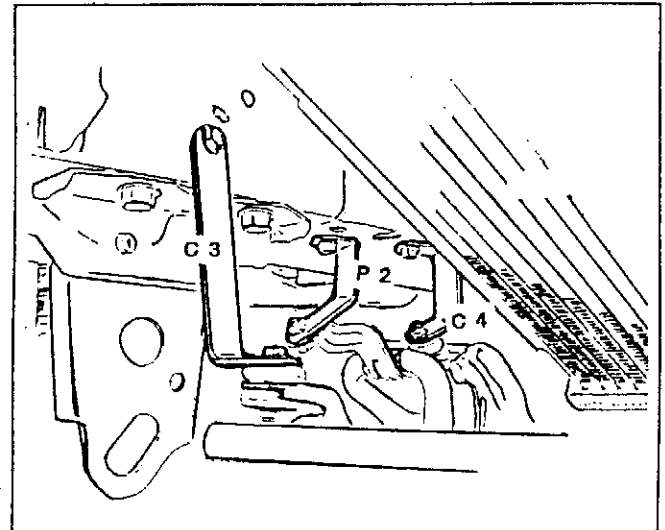
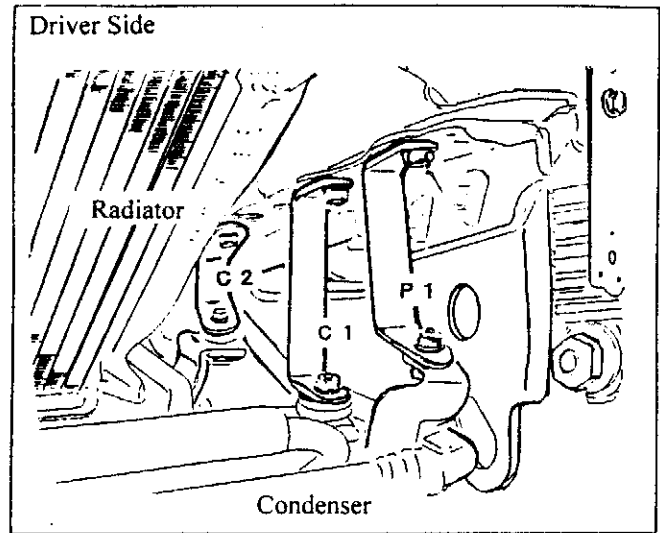
Frame Side-
Factory Bolt
Power Steering Cooler Side-
Included M6 L=16 Bolt

Included M6 nut

For Condenser Relocation

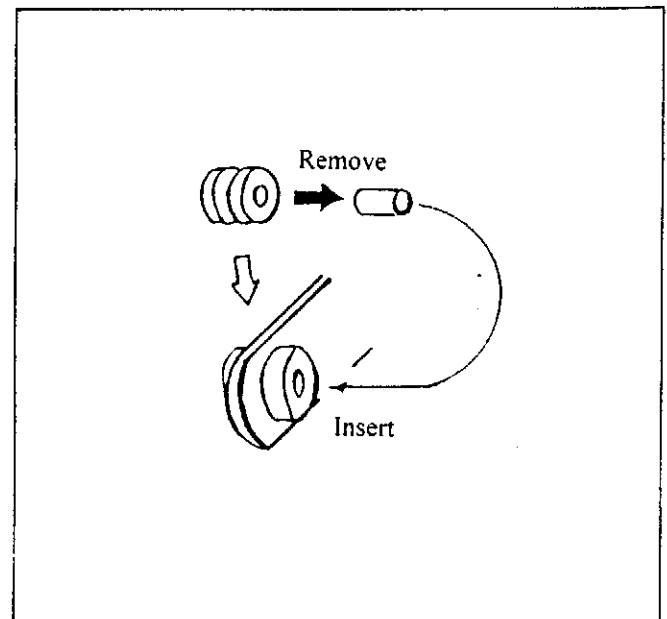
Frame Side-
Included M6 L=16 bolt
Condenser Side-
Factory Bolt

Included M6 Nut



2. Rubber Bushing assembly

1. Mount the Rubber Bushings shown to the left to the 14 mm hole in the Intake Adapter 2, Intercooler bracket (3 pcs.), and Intake Bracket.

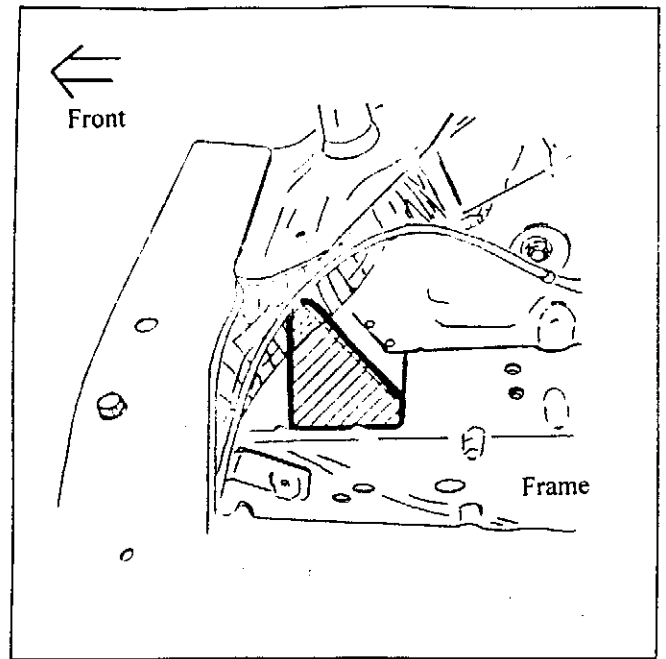


3. Engine Room Modification

1. Cut the shaded area in the diagram to the left keeping clear of all other parts.

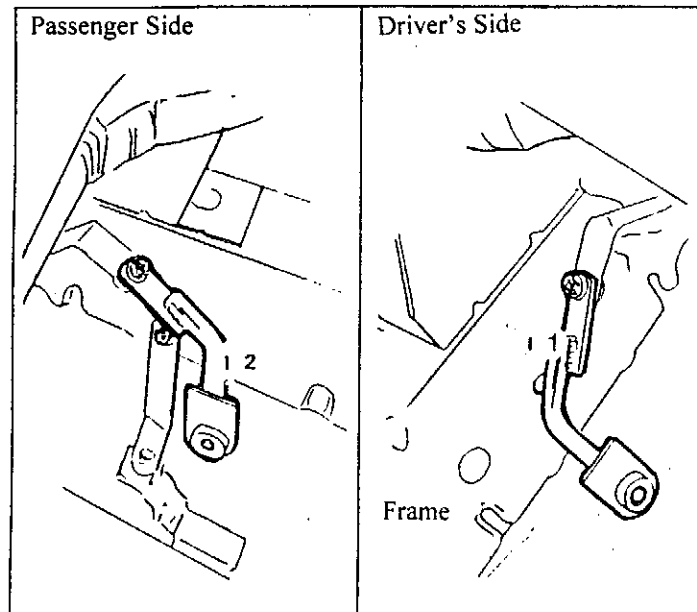
CAUTION

- All cutting should be done by an experienced professional. If attempting the cutting process on your own, be sure to read the warnings below and proceed with extreme caution.
- Be sure not to cut or scratch the wire cables and harnesses
- Be sure to cover up and smooth out all cut surfaces.



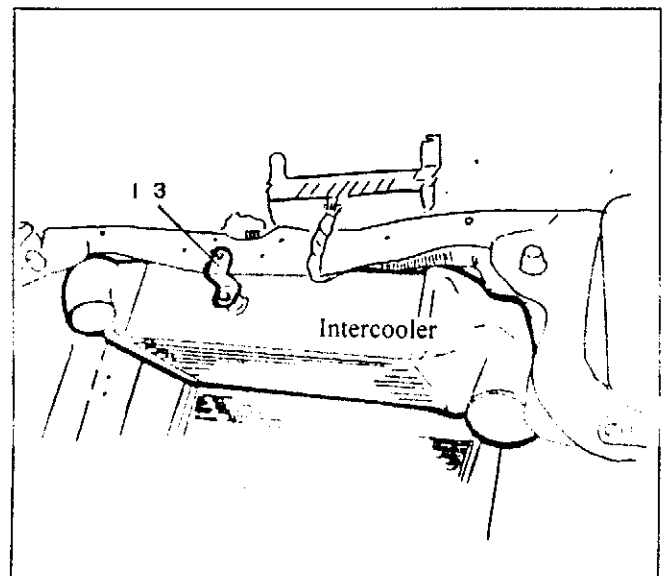
4. Mounting the Intercooler Brackets

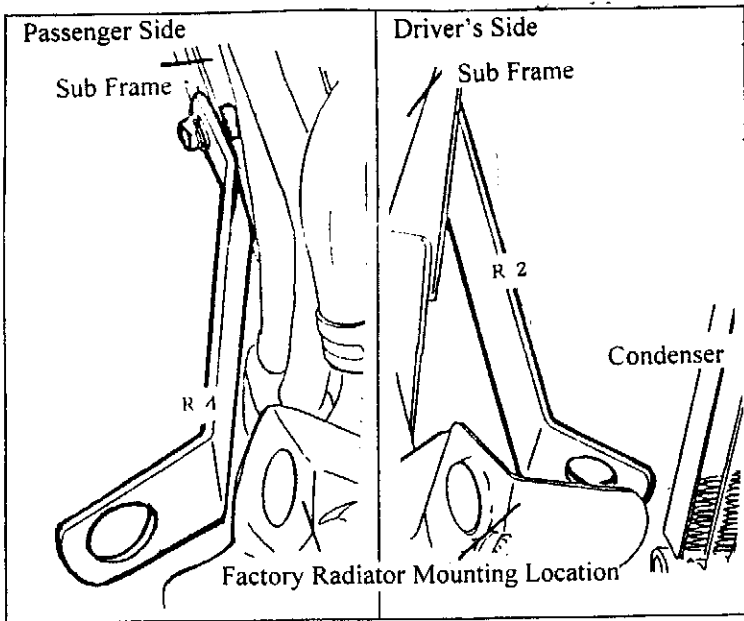
1. Refer to the diagram on the left and lightly secure intercooler brackets I2 and I3 with the included M6 L=16 bolts.



5. Mounting the Intercooler

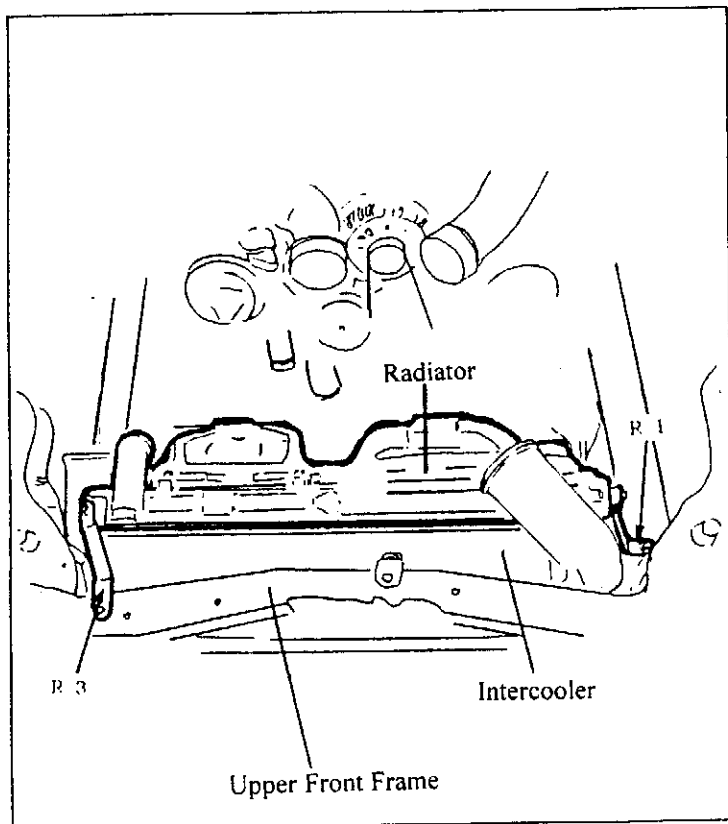
1. Position the intercooler according to the diagram on the left and mount the intercooler using the included M8 bolts.
2. Connect the intercooler bracket I3 using the factory bolt from the Intercooler Air Duct Bracket and the included M8 Bolt.
3. Position the intercooler in its final position and tighten all of the bolts.





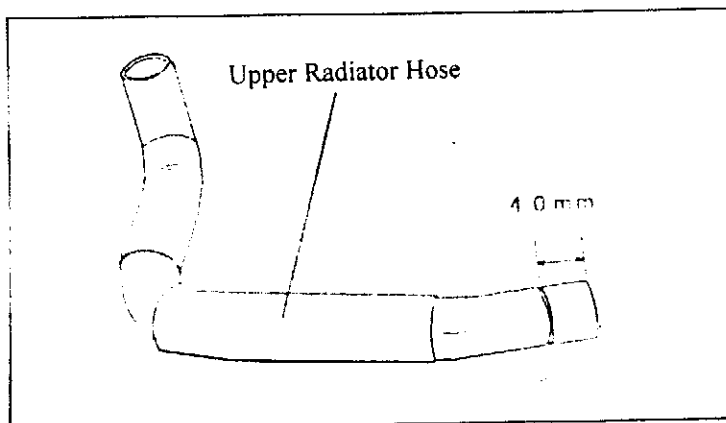
6. Mounting the Radiator (1)

1. Mount the Radiator Brackets R2 and R4 by using the M6 L=16 and M6 nut for the Passenger side, and M6 L=20 for the Driver side.



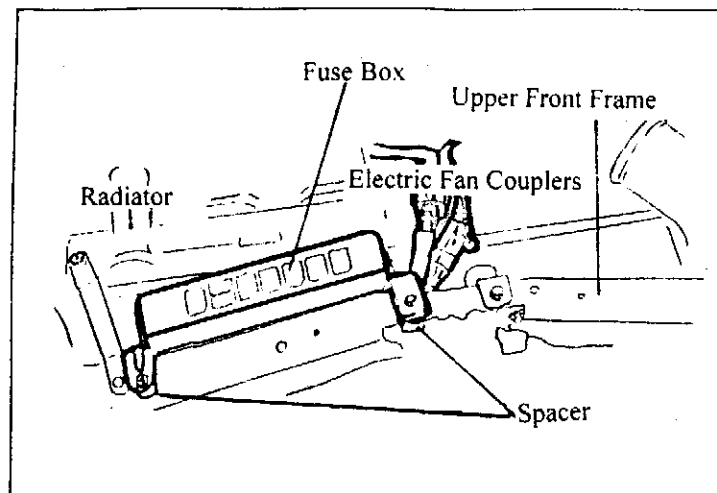
7. Mounting the Radiator (2)

1. Disconnect the SUBFRAME portion and FRONT side of the Air Cleaner Box Mounting Bracket. (Leave the BACK side of the bracket. It will be used.)
2. Remove the cardboard protective piece covering the radiator core. Insert the rubber grommets on the bottom of the radiator into the Lower Radiator Brackets installed previously. At this time, remove the 2 Hose Clips from the subframe that interfere.
3. Replace all radiator hoses EXCLUDING the Upper Radiator Hose.
4. Lightly fasten the Radiator Bracket R1 and R3 by using;
 - R1- Factory Nut and Included M6 L=20 Bolt.
 - R3- Factory Nut and Factory Bolt (Fuse Box Bolt)
5. Cut the Upper Hose according to the diagram to the left
6. Connect the Upper Radiator Hose and recheck all connections



8. Mounting the Fuse Box

1. Mount the Fuse Box by using the included M6 L=30 bolts and included spacer. Refer to diagram.
2. Connect the electrical fan couplers. Be sure to connect the left side and right side properly. If the coupler harness does not reach, disconnect the coupler from the Fan Cover side, and reconnect.
3. Use zipties to secure the harness and wires away from any moving fan parts.

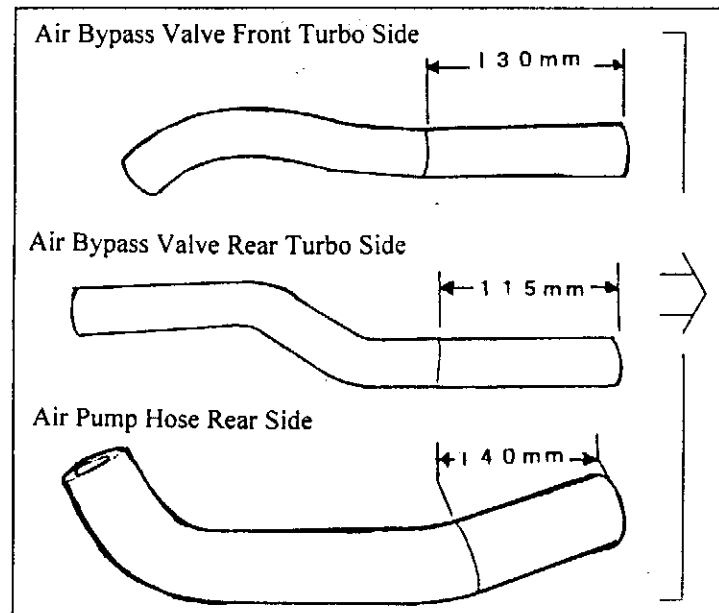


9. Cutting the Air Bypass Valve Hose and Air Pump Hose

1. Refer to the diagram to the left to cut the Air Bypass Valve Hoses x2 and the rear end of the Air Pump Hose.

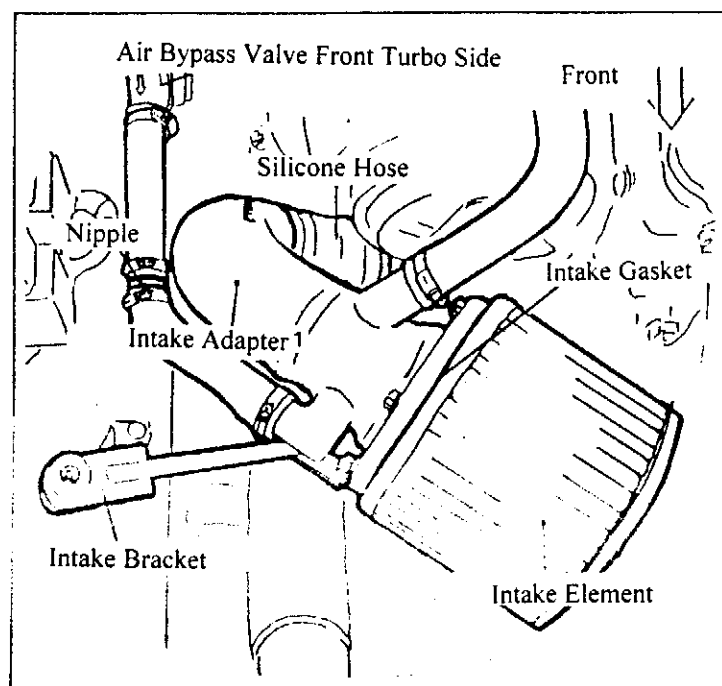
CAUTION

- Use extreme caution when performing the cutting on your own.



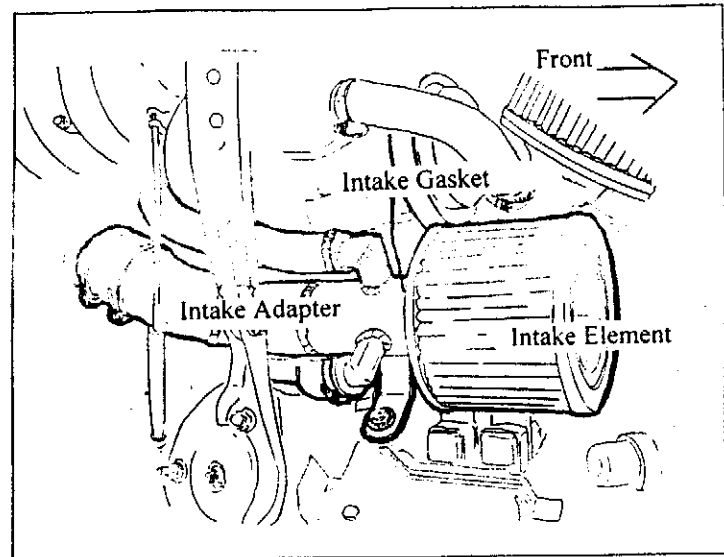
10. Installing the Intake Adapter (1)

1. Lightly fasten the Intake Adapter 1 by using the silicone hose and hose clamp #40 x1 and #36 x1.
2. Mount the Intake Bracket to the Factory Air Cleaner Box Mounting Bracket by using the M6 L=30 bolt and washer.
Bracket Tightening Area = M6 L=20
Other = M6 L=16
3. While referring to the diagram to the left, lightly fasten the Intake Element by using the included gasket and bolts.
4. Use the included nipple to connect the rear section of the Air Bypass Valve Hose (rear) with the Front section of Air Bypass Valve Hose (front.) Use the #12 Hose Clamp to securely fasten.
5. Connect the front side of the Air Pump Hose to the Air Intake Adapter by using the #12 hose clamp.
6. Check for ample clearance in all of the connections and tighten all clamps and hoses.



11. Installing the Intake Adapter (2)

1. Lightly fasten the Intake Adapter 2, Silicone hose, and Hose clamps HS36.
2. Use the included M6 L=30 bolts and washer to lightly fasten the bracket to the electrical fan relay mount.
3. Refer to the diagram on the left, lightly fasten the Intake Element by using the Intake Gasket and Bolts.
4. Refer to the diagram on the left, Use the #12 hose clamp to connect the Air Bypass Valve Hose to the Intake Adapter
5. Connect the air hose on the rear side of the air pump to the Intake Adapter.
6. Check to make sure that there is enough clearance and tighten all hose clamps and bolts.

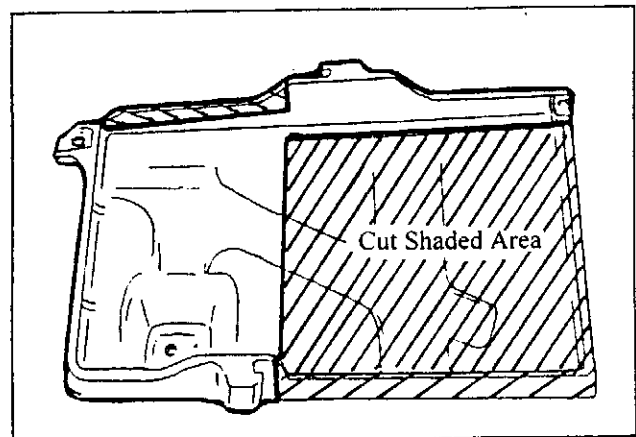


12. Modifying the Battery Tray

1. Please modify the Battery Tray according to the diagram to the left.

CAUTION

- Please use extreme caution when cutting the tray.
1. Insert Battery Bracket B2 between the Battery Tray and the Sub-Frame, then take the M6 bolt holding down Radiator Bracket R2, an included M6 Bolt, and a factory Bolt and secure the Battery Tray.
 2. Securely tighten the Radiator Bracket.

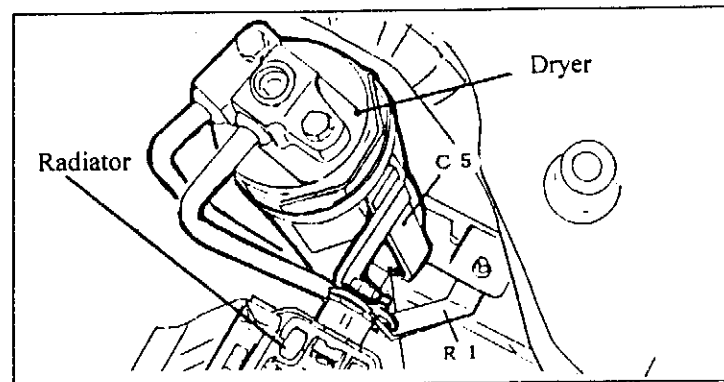


13. Mounting the Dryer

1. Attach the Condenser Bracket C5 to the Radiator Bracket R1 by using the included M6 L=16 bolt and M6 nut.
2. Use the hose clamp #36 (1 pc.) to secure the Dryer to the Condenser Bracket C5.

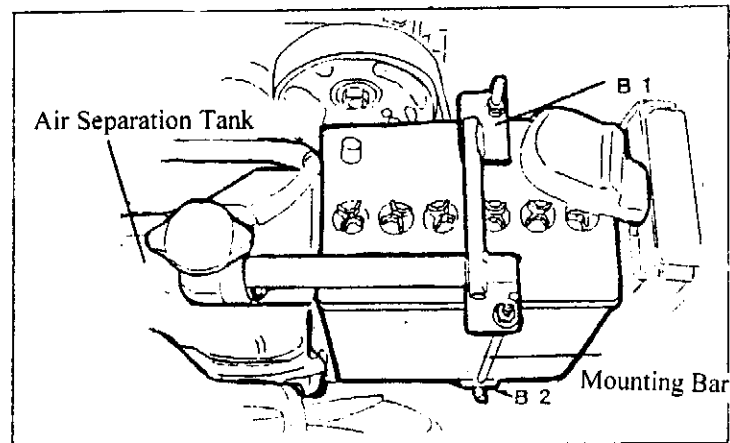
CAUTION

- Please use extreme care when handling the Dryer. Failure to do so may cause damage to the Dryer and prevent the air conditioning from functioning properly.



14. Mounting the Battery and Air Separation tank

1. Refer to the diagram to the left and take the Battery and mount as shown. Use the factory Battery Mounting Bar and bolts and attach to Battery Bracket B1 and B2.
2. Attach the Air separation Tank to the Battery Bracket B1 using the factory mounting bolts.
3. Use Zip Ties to secure the hose connected to the Air Separation Tank. Be sure to keep the hose clear of all moving objects.



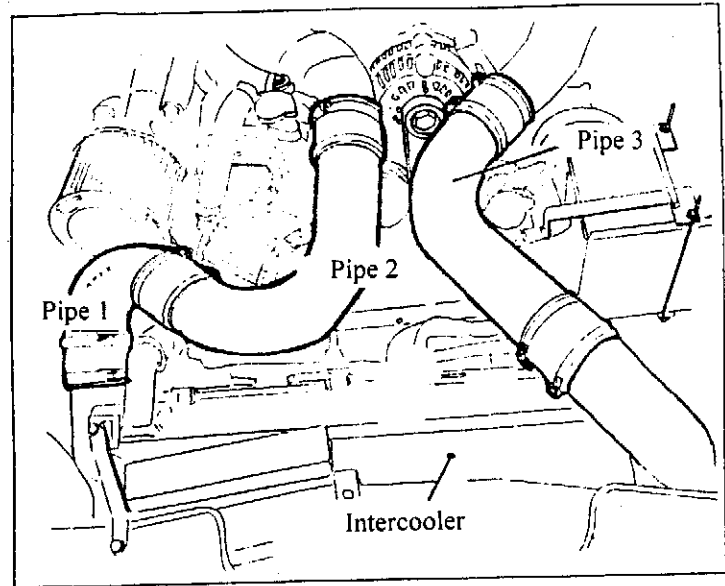
15. Installing the Intercooler Pipes

1. Connect the pipes as shown in the diagram to the left.

Parts:

Pipe 1, Pipe 2, Pipe 3	1 Pc
Hose Clamp #44	10 Pcs
Silicone Hose 70 mm	5 Pcs

2. Make sure that all clamps are tight and that there are no leaks.

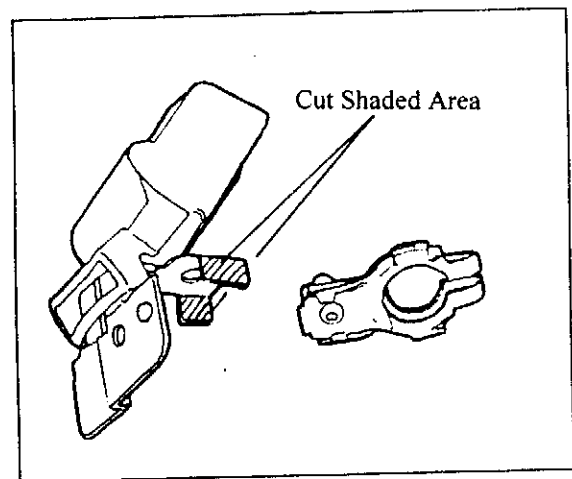


16. Battery Terminal Connection

CAUTION

- THIS IS A MODIFICATION SECTION. DO NOT RECONNECT THE BATTERY TERMINAL YET.

1. Cut the existing factory negative terminal of the battery off and attach the new Battery terminal. (Attaching the new battery terminal to the negative side will differ according to what kind of new terminal purchased)
2. Loosen the terminal of the Positive cable and remove the terminal.
3. Modify and cut the positive terminal of the battery cable as shown in the diagram to the left
4. Attach the new terminal to the positive battery cable. (Attaching the new battery terminal to the positive side will differ according to what kind of new terminal purchased).

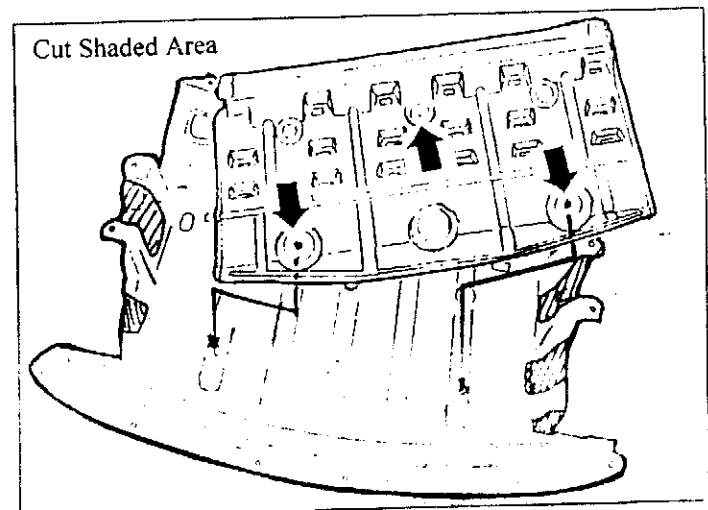


17. Installing the Factory Pieces

1. Air Guide
2. Atmospheric Temperature Sensor and Reinforcement
3. Front Bumper and Turn Signals
4. Mud Guards and Side Under Cover
Install in reverse order from removal process.

18. Under Cover Modification

1. Drill a hole in the riveted areas designated by the black arrow and remove the top piece from the bottom. (The top piece will not be used).
2. Refer to the diagram on the left and cut the shaded areas
 - Be sure to cut the shaded areas while matching it to the vehicle
 - Be sure not to cut the Mounting Holes
3. Attach the Under Cover to the vehicle when done.



19. Reconnect the Battery Terminals

20. Be sure to properly bleed the Coolant

21. Installation is complete.