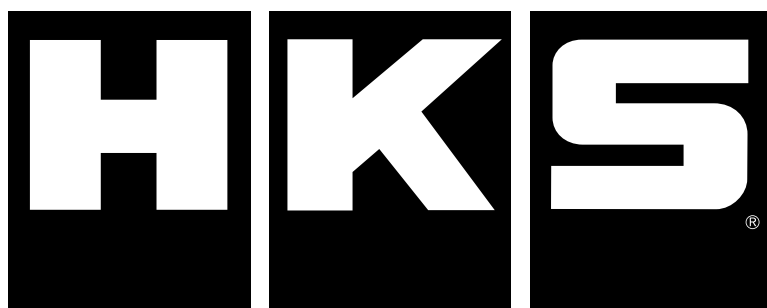


HKS Exhaust System

User & Installation Manual



<31006-KH001>

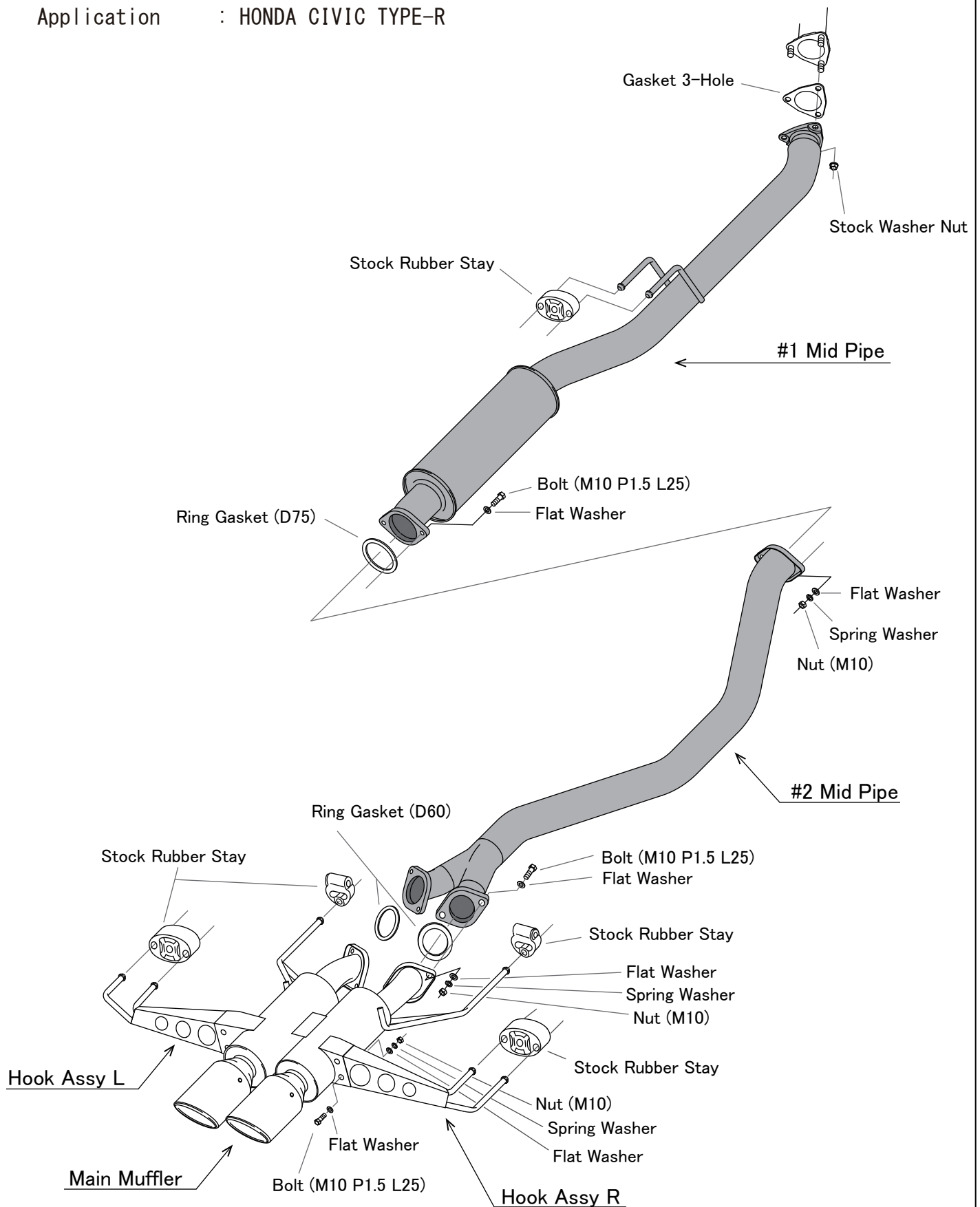
Confirm Before Installation

Part Number : 31006-KH001
Name of Product : Hi-Power Muffler
Application : HONDA CIVIC TYPE-R

- ★ Please make sure that the kit has all the provided parts listed below.
- ★ Be careful when handling this product; avoid dropping or giving it excessive impact. Otherwise, it may result in product damage or improper installation.

	Parts List / Hardware	QT.
①	Main Muffler	1
②	#1 Mid Pipe	1
③	#2 Mid Pipe	1
④	Hook Assy L	1
⑤	Hook Assy R	1
⑥	Actuator	1
⑦	Gasket 3-Hole	1
⑧	Ring Gasket (D75)	1
⑨	Ring Gasket (D60)	2
⑩	Bolt (M10 P=1.5 L=25)	12
⑪	Nut (M10 P=1.5)	10
⑫	Spring Washer (M10)	12
⑬	Flat Washer (M10)	22
⑭	Flange Nut (M10)	2
⑮	Cap Bolt (M5)	3
⑯	Sticker	1
⑰	Manual	1

Part Number : 31006-KH001
 Name of Product : Hi-Power Muffler
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Thank you for purchasing HKS exhaust system. Please read this User & Installation Manual thoroughly before using this product so that you will understand and use product correctly. Please confirm that the contents are correct before installation on the vehicle.

Foreword

- Replacing exhaust systems entails dangerous work that only mechanics with specialized training should perform in an automobile service shop with adequate facilities. For untrained customers to install an unfamiliar product could be dangerous as it could result in injury and/or severe burns. Please request a specialist service shop to do the installation.
- Do not perform any illegal modifications on this product, such as cutting the pipe and/or removing the internal components of the muffler.
- Our company shall not bear any responsibility should you, the customer, or a third-party cause a breakdown of the product and its auxiliary product through modification or disassembly, or for damages caused by problems resulting from its misuse.
- This product and its parts may be revised without warning to the customer.
- Due to regulations, it is not legal to drive any vehicle with the catalytic converter or any other emission device removed or modified (Unless specified by local regulations).

Product Precautions

- When the engine is turned on or immediately after it is stopped, the exhaust manifold, exhaust pipe, catalyst and muffler are extremely hot. Be extra careful not to touch the section that exits the rear of the vehicle. You may suffer burns if you touch this or any section of the exhaust system. Please note that when you load or unload items from the trunk, your clothing could burn or melt if it touches the tail pipe. Please take caution around the surroundings when you stop or park the car.
- Oil or brake fluid spilt on the exhaust manifold could burst into flames.
- Exhaust gases contain toxic substances. There is always a danger of carbon monoxide poisoning if you continue to work in a poorly ventilated garage or warehouse with the engine running. Always turn off the engine and check for adequate ventilation before working in an enclosed space. Be especially careful when pets and children are near the installation site. Take note of wind direction when running a vehicle near people.
- This aftermarket exhaust improves exhaust efficiency and enhances the performance characteristics of the vehicle. Make certain that the brakes have been serviced completely and verify the brake performance and safety check all under carriage components.
- This exhaust system is designed to have a safe clearance from the road surface with the vehicle at standard (stock) height. Therefore, if the vehicle is modified and body height is lowered to an extremely low level, the muffler could become damaged or may damage other objects when it comes in contact with the road surface or protruding objects. Please do not lower the height of the vehicle to extreme levels because exhaust gas could leak from a damaged exhaust system.
- Even if parts in the emission system are used correctly, there is the possibility of deteriorating sound muffling performance from toxic substances in the exhaust gases or corrosion causing holes in the product depending on the usage of the automobile. If this is the case, please consult promptly with your dealer or service shop. If the product had lost its original capabilities, please have it exchanged with the same product. If corrosion is left untended, this could cause fire from leakage of exhaust gas under the lower part of the chassis. Moreover, the driver could be fined for driving a poorly maintained vehicle.
- It is the legal responsibility of the driver to safely upkeep his/her car. Periodic inspection and service is essential for safety and to prevent pollution. Be certain that routine inspections are made as well as periodic inspections and parts replacement if necessary.

- While the product of our company uses carefully selected materials, and the product is manufactured under strict quality control standards in consideration of durability, the product could corrode and develop holes at an unexpectedly early stage if the vehicle is driven under adverse conditions. Moreover, the product could be hit by small rock and other road debris that may damage or cause holes in the product. Please be very careful because this could cause leakage of exhaust gases.
- The law prohibits the removal of the catalytic converter or removing the interior components of it. Please refrain from such action as this could lead to environmental pollution.
- Exhaust components on automobiles sometimes reach very high temperatures. Do not leave the vehicle over dry grass or other flammable materials with the engine running or even after immediately turning off the engine.
This could cause a fire. Please stop or park your vehicle in an area where there are no flammable objects under the vehicle.
- When using your vehicle, refrain from revving or idling the engine for extended periods of time. This could cause deterioration of the sound muffling material in the muffler. The heat from stagnant exhaust could cause breakdowns of electrical parts and auxiliary parts in the engine compartment.
- Do not store or leave vehicle in humid areas or where salt is prevalent. This could cause deterioration and corrosion of parts.
- Please understand that using your vehicle in various types of races, circuit runs and other special use could markedly lower the durability of the product.

Installation Precautions

- When installing the product, make sure all instructions are followed precisely. Use a torque wrench and tighten the screws to the regulation (factory) torque so as to prevent the screws from loosening while the vehicle is in operation.
- Exhaust manifolds and catalytic converters can become extremely hot during usage. Coming in contact with a hot exhaust system may result in severe burns. Only work on the vehicle after it cools down. Please use heat-resistant gloves during service to prevent burns.
- Rust may make it difficult to loosen the nuts and bolts on the exhaust system. Use a spray-type lubricant and the correct tools to loosen the nuts and bolts and refrain from using excessive force that may cause the nuts and bolts to break. Always use heat-resistant gloves to prevent injury to hands.
- Exhaust system replacements are usually performed underneath of the vehicle. It is dangerous to replace the system if the lifted vehicle is in an unstable condition. Be certain to work safely by using a specified lifting machine for vehicles. Never work underneath of the vehicle lifted only by a standard car jack, as this could be extremely dangerous.
- Replacing of an exhaust system entails simultaneous tightening of nuts and bolts located separately, and working in situations where a heavy system is supported from below. Therefore, working alone could be very dangerous. Always work with two or more persons.
- Be careful to maintain the proper clearance when installing a new exhaust system. Please be particularly careful when working near brakes, fuel line, drivetrain and electrical systems.
- If you find cracks and other deterioration in the rubber exhaust hangers, replace them with the vehicle manufacturer's new standard parts.
- After the standard (stock) exhaust system is removed, disassemble them into shortest possible pieces and store them horizontally to allow for and moisture dissipation.
- In some instances it may be necessary to cut the stock exhaust into two pieces to remove it. The stock exhaust was installed before the rear suspension was installed on the vehicle.
The replacement HKS exhaust system will bolt directly on and does not require any modification (to the vehicle or the exhaust system).

Installation Procedure

- ※ Please follow the automobile manufacturer's work procedures when removing stock parts.
※ "stock parts" in this manual refers to the manufacturer's genuine parts.



WARNING

Do not apply lubricant, etc. to the rubber stays.
If lubricant, etc. is used when removing and installing the rubber stays, be sure to clean the stays to remove any oil or grease.
If oil or grease remains on the stay, it may cause a serious accident such as coming off while driving.

NOTE

- Do not reuse the gasket.
- All rubber stays for hanging should be reused in the stock parts.
- Do not turn IG ON during the replacement work, otherwise DTC error codes are recorded. If IG ON is turned on during the work, use the diagnostic scanner to clear the recorded.

1. Remove stock parts

- (1) Remove the stock rear undercover, mid pipe, and main muffler according to the automobile manufacturer's instructions.

2. Installation of the Actuator

NOTE

The supplied actuator must be used.

If the stock motor runs dry or is removed, an error code is recorded.
The supplied actuator reproduces the mechanism of the stock valve, and using it will avoid the error code.

- (1) Remove the stock motor (Fig. 1) from the stock muffler.
Do not remove the spring attached to the motor as it will be reused.

Fig. 1 Stock Motor

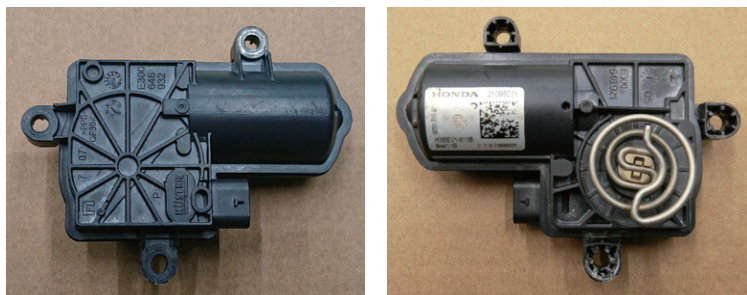
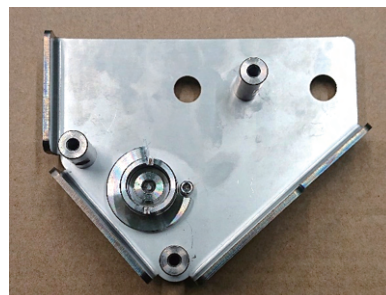


Fig. 2 Actuator



- (2) Align the spring of the stock motor with the spring slots on the actuator (Fig. 2) and attach the stock motor to the actuator using the supplied cap bolts (M5).

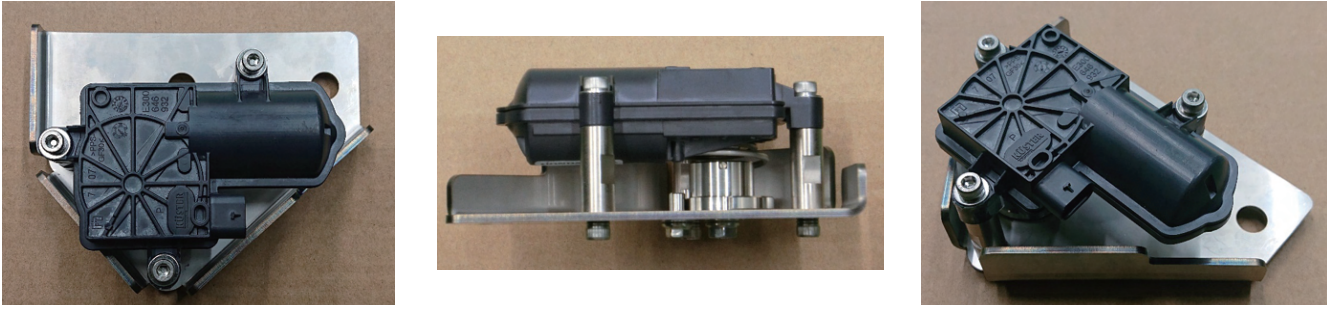
〔 Tightening Torque M5 $T = 3.0 \text{ N} \cdot \text{m}$ ($T = 0.3 \text{ kgf} \cdot \text{m}$) 〕



CAUTION

Be careful not to over-tighten the bolts, as tightening beyond the required torque may result in damage to the bolt fixing parts of the motor.

Fig. 3 After Actuator is assembled



- (3) Install the Actuator to the subframe using the supplied bolts (M10), spring washers, flat washers and flange nuts, referring to Fig. 4 and 5.

〔 Tightening Torque M10 $T = 29 \sim 34 \text{ N}\cdot\text{m}$ ($T = 3.0 \sim 3.5 \text{ kgf}\cdot\text{m}$) 〕

- (4) Route the wires and connect to the coupler as shown in Fig. 4 (enlarged figure) ①. After connecting the coupler, check that the connector is locked.

NOTE

- After connecting the coupler, check the motor's initial operation visually. Initial operation may take a few minutes. If it works, the motor can be used without any problem. If the motor does not operate, check the vehicle condition using a diagnostic equipment to see if there are any motor-related problems.

Fig. 4 Actuator mounting position

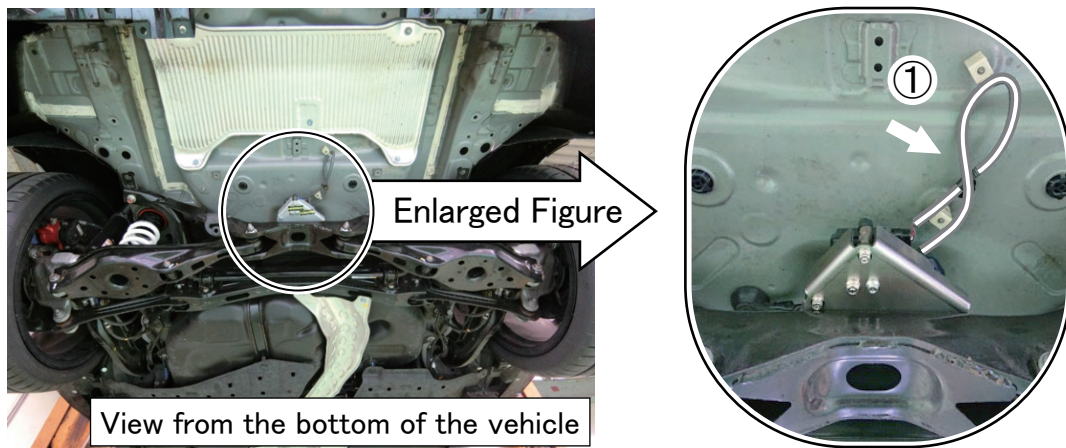
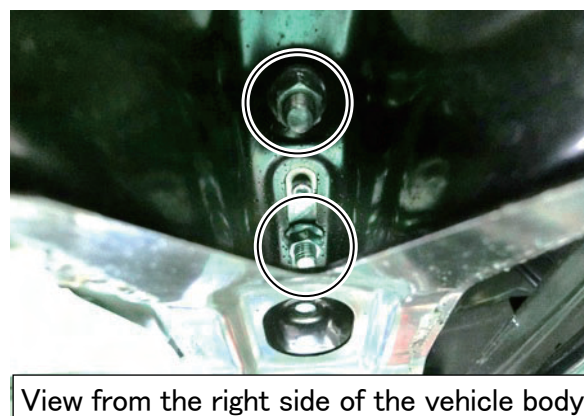


Fig. 5 M10Bolt, Flange nut mounting position



3. Temporary assembly of #1 Mid Pipe

- (1) Align the #1 mid pipe in the correct position, and insert the stock rubber stay into one of the hooks for hanging.
- (2) Insert the supplied gasket (3-Hole) between the rear flange of the stock front pipe and the front flange of the #1 mid Pipe. Install the stock flange nut from the opposite side and tentatively fitting it.

NOTE

- Reuse stock flange nuts.

4. Temporary assembly of #2 Mid Pipe

- (1) Align the #2 mid pipe with the proper position, place a ring gasket (D75) between the rear flange of the #1 mid pipe and the front flange of the #2 mid pipe, insert a flat washer into the attached bolt (M10) and pass it through from the front side, then from the opposite side install the attached flat washer, spring washer and nut in this order for tentatively fitting it.

5. Temporary assembly of Main Muffler

- (1) Temporarily assemble the Hook Assy L and Hook Assy R to the main muffler.
Put a flat washer in the supplied bolt and pass it through from the front side, then install the supplied flat washers, spring washers and nuts in this order from the opposite side and temporarily assemble.
- (2) Fit the stock rubber stays to the four hanging hooks on the Hook Assy.
- (3) Put the supplied ring gasket (D60) between the rear flange of the mid pipe and the front flange of the main muffler, insert a flat washer into the supplied bolt and pass it through from the front side, then install the supplied flat washer, spring washer and nut from the opposite side in this order for temporary assembly.

6. Assemble the entire system

- (1) Check the positional relationship of each pipe and muffler, the clearance with the floor, cross member, and other peripheral parts of the car, and the misalignment of the gasket between flanges, and tighten the temporarily tightened bolts and nuts in order from the front side of the car with the specified torque.

[Tightening Torque M10 $T = 29 \sim 34 \text{ N}\cdot\text{m}$ ($T = 3.0 \sim 3.5 \text{ kgf}\cdot\text{m}$)]

* The ring gasket cannot be reused because it will be deformed when tightened with the specified torque.

- (2) Install the stock rear undercover.
- (3) Check the alignment and clearance (approx. 14mm) between the tail pipe and the bumper. If there is any defect, retighten from the beginning. If insufficient clearance is left unchecked, abnormal noise may be heard, and resin bumpers may melt due to heat.

7. Verifying a Correct Installation

- (1) Check the clearance for each section by shaking the muffler after installing the product.
- (2) Start the engine, idle for a while, and rotate up to approx 2500 rpm. Then, inspect that there is no leaking of the exhaust air and abnormal sounds from the flange at each section.
- (3) Drive for a while, then inspect that there is no leaking of the exhaust air and abnormal sounds from the flange at each section.
- (4) If there are any problems found in the (1) to (3), install the product again from the beginning.



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