

HKS Exhaust System

User & Installation Manual



<31029-AN011>

<E65400-N22500-00>

"20230314,"

Ver.No2-1.1A

Confirm Before Installation

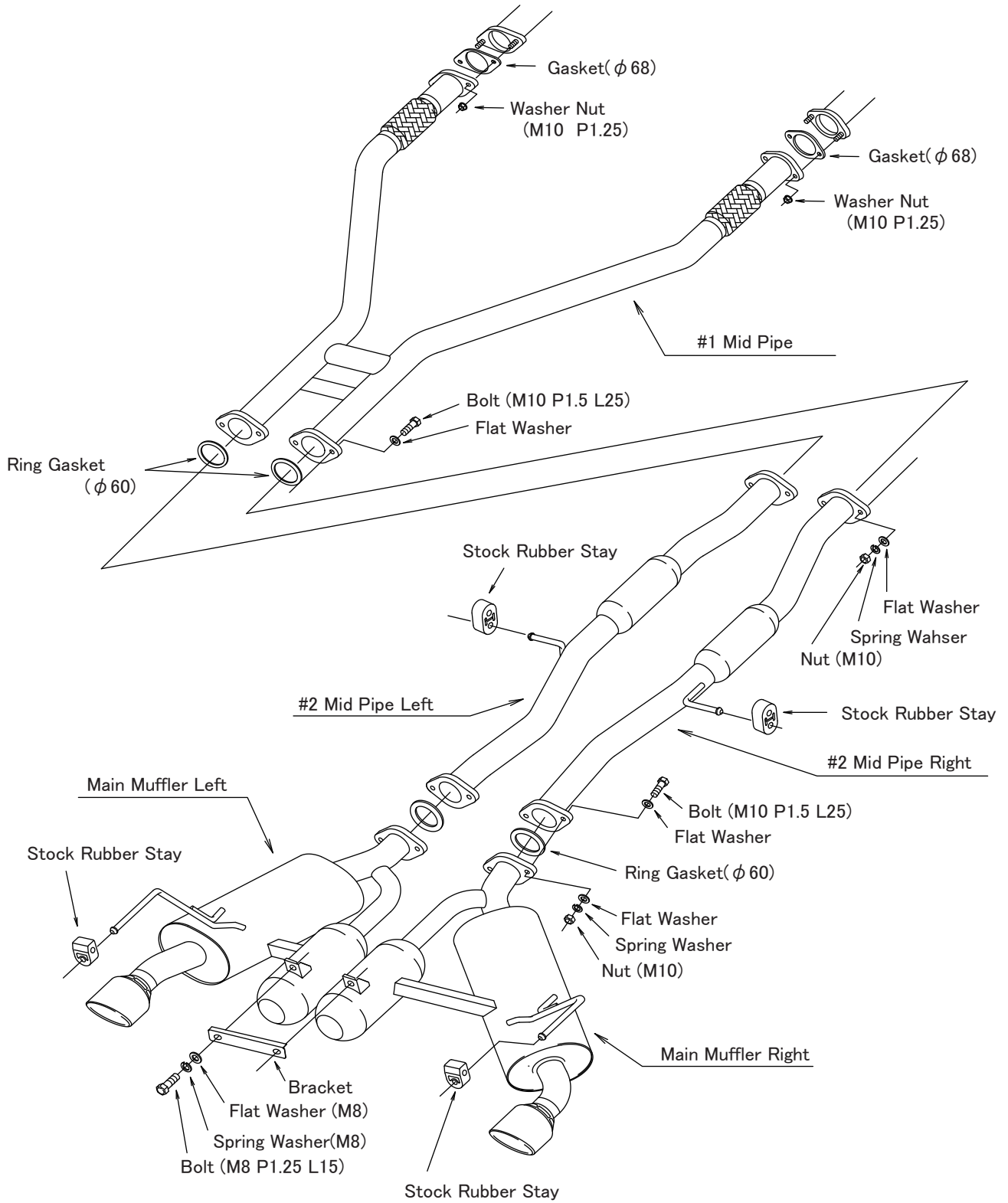
Part Number : 31029-AN011
 Name of Product : Super Turbo Muffler
 Application : NISSAN Z (2022~)

This product is only compatible with the stock catalyst .

- ★ 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.		Parts List / Hardware	QT.
①	#1 Mid Pipe	1	⑬	Washer Nut (M10)	4
②	#2 Mid Pipe Right	1	⑭	Bolt (M8 P1.25 L15)	2
③	#2 Mid Pipe Left	1	⑮	Flat Washer (M8)	2
④	Main Muffler Right	1	⑯	Spring Washer (M8)	2
⑤	Main Muffler Left	1	⑰	Heat shield (300X100)	1
⑥	Gasket (φ68)	2	⑱	Sticker	1
⑦	Ring Gasket (φ60)	4	⑲	Manual	1
⑧	Bracket	1			
⑨	Bolt (M10 P1.5 L25)	8			
⑩	Nut (M10 P1.5)	8			
⑪	Flat Washer (M10)	16			
⑫	Spring Washer (M10)	8			

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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 split 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



WARNING

Protect against injuries & burns.

※ "stock parts" in this manual refers to the manufacturer's genuine parts.

NOTE

- Do not reuse the gasket.
- All rubber stays for hanging should be reused in the stock parts.

1. Remove Stock parts

(1) Remove stock #1 mid pipe and #2 mid pipe, main muffler.

NOTE

Please follow the automobile manufacturer's work procedures when removing stock parts.

2. Heat Insulation of Diff Oil Temp Sensor Harness (Only for vehicles with stock LSD)

(1) For vehicles with a diff oil temp sensor (Vehicle with stock LSD), cut out the attached heat shield and wrap it around the oil temp sensor harness within the area shown in Fig.1 for heat insulation.

NOTE

Please clean and degrease the area where heat shield is wrapped beforehand.

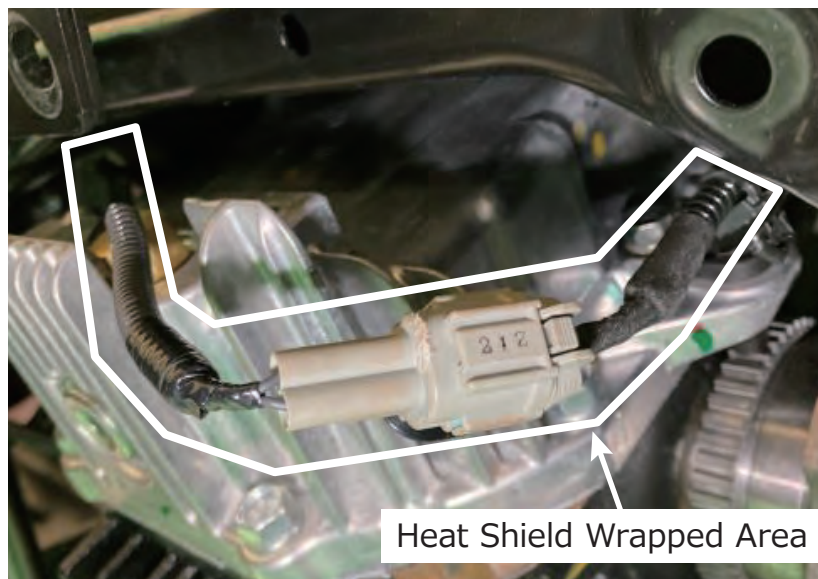


Fig.1 Heat Shield Wrapped Area of Diff Oil Temp Sensor Harness

NOTE

Failure to follow this procedure may result in damage to the diff oil temp sensor harness due to heat from the exhaust when using the product.

(2) After wrapping heat shield, bind it with a stainless steel wire.
(about dia0.6 mm to dia1.0 mm)

NOTE

- Failure to follow this procedure may cause the heat shield wrapped on the diff oil temp sensor harness peel off when the product is in use, and the oil temp sensor harness may be damaged by the heat from the exhaust.
- Over-tightening the heat shield when binding it with a wire may damage the diff oil temp sensor harness or break the wire.

- (3) Make the oil temp sensor harness with heat insulation securely fix on the vehicle by using the stock harness bracket.



Fig.2 Diff Oil Temp Sensor Harness with Heat Insulation

NOTE

If the diff oil temp sensor harness is not securely fixed on the vehicle, the diff oil temp sensor harness may interrupt the axle shaft or exhaust, resulting in damage or disconnection.

3. Heat Insulation of EVAP Canister

- (1) Check the shape of the EVAP canister on your vehicle.

Follow procedure (2) if your EVAP canister has the same shape in Fig. 3.

Follow procedure (3) if your EVAP canister has the same shape in Fig. 4.



Fig.3 EVPA canister shape #1



Fig.4 EVPA canister shape #2

- (2) Please note that some parts become narrow between the main muffler on the right side and the EVAP canister when assembling the product by the shape of Fig. 3. (See the red circle in figure 5.)
Process the heat shield treatment within the area in Fig. 6 by wrapping the provided heat shield.

NOTE

Please clean and degrease the area where heat shield is wrapped beforehand.

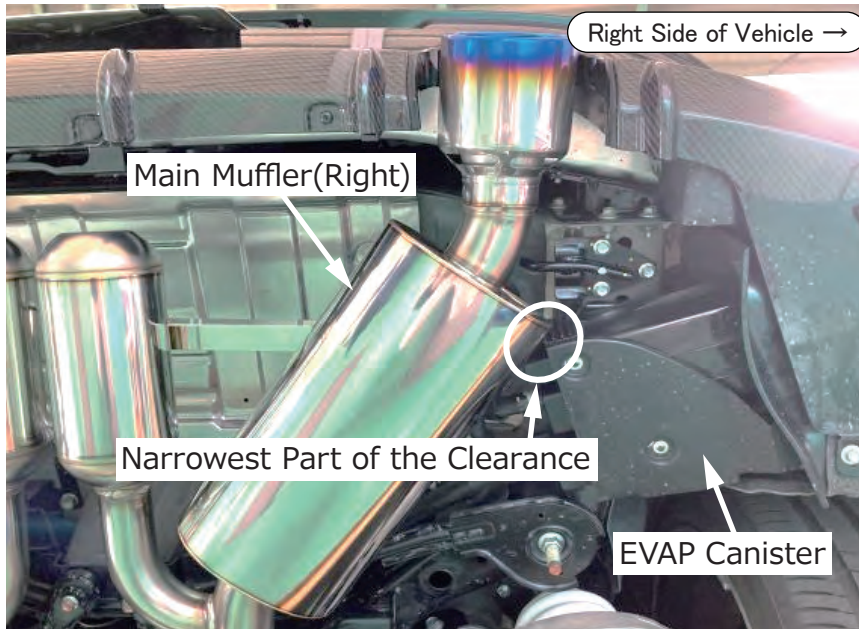


Fig.5 Position of the Main Muffler (Right) and EVAP Canister shape#1

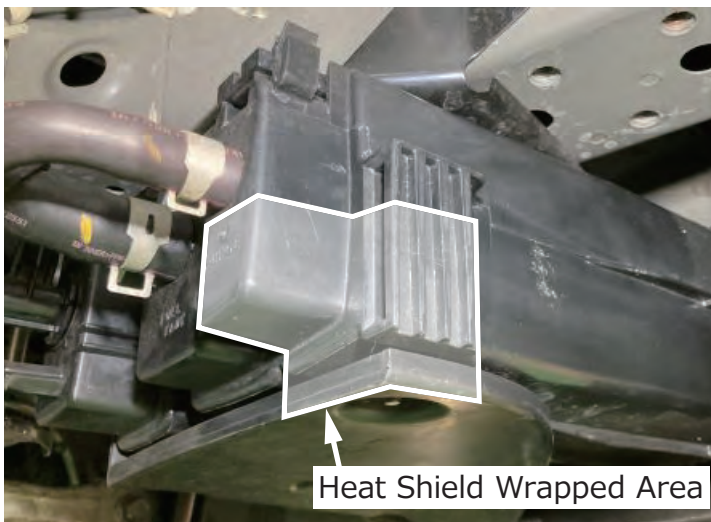


Fig.6 Heat Shield Wrapped Area for EVAP Canister shape#1



Fig.7 EVAP Canister shape#1 wrapped with the Heat Shield

WARNING

If you do not follow this procedure, in the worst case, it may lead to a vehicle fire by leaking the flammable gases from the damaged EVAP canister by heat from the muffler when using the product.

- (3) For the type of Fig. 4, cut out the provided heat shield and wrap it around the canister pressure sensor and harness within the area shown in Fig. 8. After wrapping the heat shield, bind it with a stainless steel wire. (about dia. 0.6 mm to dia. 1.0 mm)

NOTE

- Please clean and degrease the area where heat shield is wrapped beforehand.
- Failure to follow this procedure may result in damage to the canister pressure sensor and harness due to heat from the exhaust when using the product.

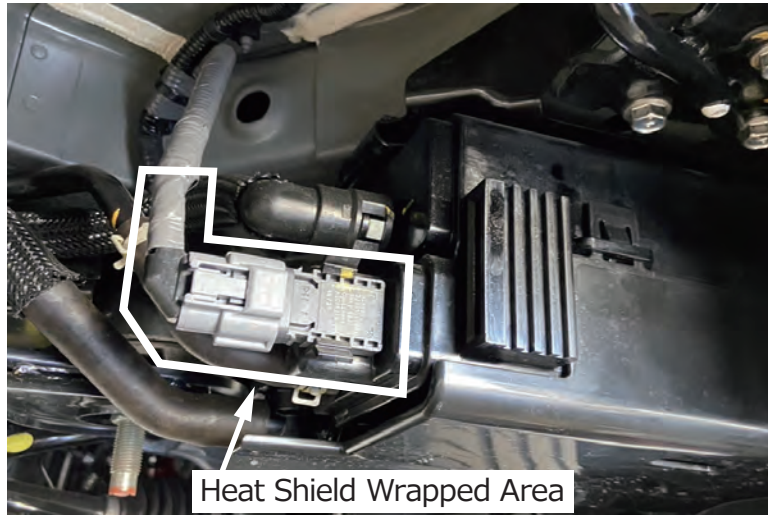


Fig.8 Heat shield wrapped area of canister pressure sensors and harnesses

NOTE

- If you do not follow this procedure, it may cause the wrapped heat shield to come off from the canister pressure sensors and harness. Therefore, it may damage the canister sensors and harnesses by heat from the muffler.
- Binding the stainless wire too tightly may damage or break the canister pressure sensor and harness.

4. Temporary assembly of #1 Mid Pipe

- (1) Place the gasket (dia. 68) separately between the stock catalyst left and right flange and the front left and right flange of #1 Mid Pipe, after that, temporarily tighten them with washer nut (M10).

5. Temporary assembly of #2 Mid Pipe Right

- (1) Align the right side of #2 Mid Pipe in the proper position. Attach the stock rubber stay on the hanging hooks.
- (2) Place the ring gasket (dia.60) between the frontward flange of #2 Mid Pipe Right and the right rear flange of #1 Mid Pipe. Put the provided flat washer (M10) into the provided bolt (M10, L25) and pass it through the hole of the flange from the front side. And put the provided flat washer (M10), spring washer (M10), and nut (M10) following this order, and tighten it temporarily from the opposite side.

6. Temporary assembly of #2 Mid Pipe Left

- (1) Align the left side of #2 Mid Pipe in the proper position. Attach the stock rubber stay on the hanging hooks.
- (2) Place the ring gasket (dia.60) between the forward flange of #2 Mid Pipe Left and the left rear flange of #1 Mid Pipe.
Put the provided flat washer (M10) into the provided bolt (M10, L25) and pass it through the hole of the flange from the front side.
And put the provided flat washer (M10), spring washer (M10), and nut (M10) following this order, and tighten it temporarily from the opposite side.

7. Temporary assembly of Main Muffler Right

- (1) Align the Main Muffler Right in the proper position. Attach the stock rubber stay on the hanging hooks.
- (2) Place a ring gasket (dia.60) between the forward flange of the Main Muffler Right and the right rear flange of of #2 Mid Pipe Right.
Put the provided Flat washer (M10) into the provided bolt (M10, L25) and pass it through the hole of the flange from the front side.
And put the provided flat washer (M10), spring washer (M10), and nut (M10) following this order, and tighten it temporarily from the opposite side.
- (3) Put the provided spring washer (M8) and the flat washer (M8) following this order to the provided bolt (M8) and attach the Center Bracket temporarily on the top of the Main Muffler Right.

8. Temporary assembly of Main Muffler Left

- (1) Align the Main Muffler Left in the proper position. Attach the stock rubber stay on the hanging hooks.
- (2) Place a ring gasket (dia.60) between the forward flange of the Main Muffler Left and the left rear flange of of #2 Mid Pipe Left.
Put the provided flat washer (M10) into the provided bolt (M10, L25) and pass it through the hole of the flange from the front side.
And put the provided flat washer (M10), spring washer (M10), and nut (M10) following this order, and tighten it temporarily from the opposite side.
- (3) Put the provided spring washer (M8) and the flat washer (M8) following this order to the provided bolt (M8) and attach the Center Bracket temporarily on the top of the Main Muffler Left.

9. Assemble the entire system

- (1) Make sure all flanges fit firmly. Check the position and clearance between each pipes, muffler, underfloor, subframe, or other surrounding parts.
Tighten the bolt and nut that are temporarily assembled with specified torque in the order from the front side of the vehicle to the rear side.

Tightening Torque

M10	T= 29 ~ 34 N·m (T= 3.0 ~ 3.5 kgf·m)
M8	T= 19 ~ 24 N·m (T= 2.0 ~ 2.5 kgf·m)
Washer Nut (M10)	T= 52 N·m (T= 5.4 kgf·m)

- (2) Check whether the proper position of the tail pipe and the bumper and the clearance are maintained (Approx. 12 mm).
Tighten the bolt and nut again from the beginning if there are any problems.
Insufficient clearance may cause an abnormal sound or melts the resin-made bumper by the heat.
- (3) Check the clearance between Main Muffler Right and the hose connected to the EVAP canister or EVAP canister.
If there are areas with a clearance of less than 25 mm, wrap the provided heat shield to those areas for heat insulation.

NOTE

Please clean and degrease the area where heat shield is wrapped beforehand.

**WARNING**

Failure to follow this procedure may result in damage to the EVAP canister or hose due to heat from the muffler when the product is in use, causing leakage of flammable gas and a vehicle fire.

10. 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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