

321-0990 Fuel Injector Technical File

320D

INJECTOR AND SPARE PART

SKU1: G1DS15003210990

SKU2: Z1K30003210990



Common Rail
320D Fuel Injector

320D

Injector Spare Part



321-0990 Fuel Injector Technical File

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321-0990 Fuel Injector Technical File

1. 321-0990 Fuel Injector Introduction

1.1. 321-0990 Fuel Injector Basic Information

Title	Common Rail 320D Fuel Injector 321-0990 China Made New
SKU1	G1DS15003210990
SKU2	Z1K30003210990

1.2. 321-0990 Fuel Injector Common Part Number

Fuel Injector Exchange Information

Fuel Injector Part Number	Re-manufactured Part Number	Replacement Number	OE Number
321-0990	10R-7668	276-8290	2645A743
3210990	10R7668	2768290	2645A705
/	/	293-9590	2645A709
/	/	2939590	2645A731
/	/	282-0490	/
/	/	2820490	/
/	/	289-7501	/
/	/	2897501	/

1.3. 321-0990 Fuel Injector Part Number Common Writing

321-0990, 321 0990, 3210990, 10R-7668, 10R 7668, 10R7668, 276-8290, 276 8290, 2768290, 293-9590, 293 9590, 2939590, 282-0490, 282 0490, 2820490, 289-7501, 289 7501, 2897501, 2645 A743, 2645A 743, 2645 A 743, 2645A743, 2645 A705, 2645A 705, 2645 A 705, 2645A705, 2645 A709, 2645A 709, 2645 A 709, 2645A709, 2645 A731, 2645A 731, 2645 A 731, 2645A731

1.4. 321-0990 Fuel Injector Parameter

Adaptation System: Common Rail System

Fuel Injector Series: 320D C6.6 Series

Fuel Injector Type: Electromagnetic Fuel Injector

Vehicle Configuration Information: 320D Engines

1.5. 321-0990 Fuel Injector Specifications and Dimensions

Fuel Injector Size: 20cm* 10cm *10cm=2000 cm³ (L*W*H=V)

Fuel Injector Net Weight: 0.5kg

Fuel Injector Gross Weight: 0.55kg

Fuel Injector Quality: China Made New

Package Size: 22 cm* 13 cm *13 cm=3718 cm³

Fuel Injector Type: Common Rail Fuel Injector

MOQ: 4 Pieces

1.6. 321-0990 Fuel Injector Quality Control

(1) Fuel Injector Testing

All fuel injectors are tested for electrical characteristics, accuracy, high temperature, low temperature,

withstand voltage, leakage, durability, and various working conditions.

(2) Fuel Injector Assembling

For quality control during the production and installation process of injectors, our company strictly follows the standard product installation data and product installation steps for installation and testing, such as injector stroke test, injector solenoid valve tightening torque test, injector nozzle tightening torque test, etc.

(3) Fuel Injector Inspection

The factory inspection of the fuel injector is undergone full inspection, random inspection, and batch inspection three inspections. Different brands of test benches are used to test the same fuel injector for a total of more than three times for factory inspection, and the fuel injector installation testing environment are progressed in dust-free workshop.

1.7. 321-0990 Fuel Injector Customized Service

(1) Fuel Injector Customized Service: Meet the customized needs of OEM manufacturers for shell lettering, logo engraving, fuel injector internal packaging, fuel injector external packaging and labels customized, etc.

No.	1	2
Image		
Name	Fuel Injector Nozzle Engraving	Fuel Injector House Lettering And QR Code
No.	3	4
Image		
Name	Fuel Injector Solenoid Valve Engraving	Fuel Injector Box And Label

(2) Fuel Injector Customized Service Requirements:

The purchase of customized **fuel injector** are not less than **10 pieces**.

The purchase of customized **fuel injector packages** are no less than **1000 pieces**.

When the Customized products involve the need of specify logo, the OEM manufacturer is asked to provide trademark authorization and the sample of logo image file.

▲ **Once the customized fuel injector is sold, it cannot be returned or exchanged if there is no quality problems.**

1.8. 321-0990 Fuel Injector Packing List and Package Size

(1) Fuel Injector Spare Parts List

No.	1	2	3
Image			
Name	Fuel Injector	O-Ring	Nozzle Protective Cover Cap
Description	Fuel injector part number 321-0990	Ensure to meet the standard of the sealing performance between the fuel injector and the engine	Protect nozzle holes from being polluted and blocked
No.	4	5	6
Image			
Name	Fuel Injector Oil Inlet Tube Cap	Solenoid Valve Protective Cover	VCI Anti-Rust Bag
Description	Protect oil inlet from being polluted and blocked	Protect the solenoid body and terminal posts from external forces	Prevent fuel injector from rusting
No.	7	8	9
Image			
Name	Bubble Bag	Fuel Injector Packing Box	Nozzle Gasket
Description	Prevent the fuel injector from being damaged by external forces	Package for fuel injector and fuel injector accessories	Used to ensure the tight fit between the tight cap end of the fuel injector and the engine

⚠ Minors are forbidden to use the fuel injector assembly, O-ring, gasket, nozzle protective cover, fuel injector house protective cover, solenoid valve protective cover, VCI anti-rust bag, and air bubble bag to avoid personal injury.

⚠ O-ring and gasket are disposable installation accessories, and need to be replaced for re-installation.

⚠ The nozzle protective cover, the fuel injector house protective cover, and the solenoid valve protective cover are recyclable accessories that can be reused.

⚠ VCI anti-rust bags and bubble bags are non-degradable materials, please dispose of them properly after using.

⚠ The fuel injector and the installation parts should be coated with appropriate sealing oil during installation.

(2) Fuel Injector Box Size



Pic No. 1

No.	Name	Fuel Injector Package Size (cm)
1	Fuel Injector Box	22*13*13

1.9. 321-0990 Fuel Injector Testing Standard and Certificate

We can provide the factory quality inspection test report of each fuel injector to ensure that each fuel injector delivered meets the engine performance indicators.

BOTEN		测试报告		4.05.2019 10:42:09	
申请企业: _____					
电话: _____		地址: _____			
传真: _____		检测人: _____			
客户地址: _____		检测单位: _____			
电话: _____		客户姓名: _____			
检测地址: _____					
检测名称: 喷射器					
型号-零件号: _____					
检测日期: _____					
检测结果					
检测项目	检测结果	检测标准	检测结果	检测结果	
LEAK TEST:	0.0	0.0	0.0	0.0	✓
Back:	0.0	0.0	0.0	0.0	✓
WAFER:	0.0	0.0	0.0	0.0	✓
Mass:	0.15	0.15	0.15	0.15	✓
TL:	0.0	0.0	0.0	0.0	✓
UL:	0.0	0.0	0.0	0.0	✓
VE:	0.0	0.0	0.0	0.0	✓
检测员: _____					
检测日期: _____					
检测地点: _____					

Pic No. 2

1.10. **321-0990 Fuel Injector Warranty Instructions**

(1) Product Warranty Conditions and Instructions

It is necessary to provide pictures, videos, or test reports detected by the fuel injector inspection equipment as evidence to feed back to the salesman when the fuel injector is abnormal during using.

Abnormal conditions are properly explained such as: 1.Smoke, 2. Engine shake, 3. Difficulty starting the engine, 4. Engine noise, 5. oil leakage etc.

(2) Fuel Injector Warranty Coverage

① Within 15 days after customer receives the **321-0990** fuel injector, if there is a performance failure and the product has no appearance damage, customer can choose to replace it or repair it;

② If the **321-0990** fuel injector has performance problems during the warranty period (6-12 months), and it is confirmed that it is product's problems after testing, you can contact our salesmen to replace the same model or a reworked product with the same performance for free;

③ If the fuel injector house has obvious scratches, it can only be repaired and it will be returned as it is if the product is confirmed to be fault-free.

⚠ Tips: For products not covered by warranty, our company can provide maintenance services with charging according to the different level of repairs. For products after paid repaired, the same performance problem will have a free warranty period within 3 months from the date of repairing.

(3) Fuel Injector Out of Warranty Coverage

① The warranty period has expired.

② Fuel injector failure caused by high temperature, high pressure, humidity, rain and snow, saline-alkali land, earthquake, and used in abnormal environment.

③ Customer disassembles or repairs the fuel injector personally resulting in damage to the fuel injector.

④ Fuel injector damage caused by man-made reasons (throwing, strong magnetic field magnetization, set fire).

⑤ Fuel injector failure or Fuel Injector damage caused by non-fuel injector design, technology, manufacturing, quality and other issues.

⑥ Fuel injector failure due to system pressure exceeding system approved pressure.

⑦ Fuel injector failure caused by system voltage exceeding approved voltage.

⑧ Fuel injector failure caused by impurities (water, lead, aluminum powder, iron powder, sulfide) in the system fuel exceeding the standard requirements.

⑨ Fuel injector failure caused by not installing according to the tightening torque specified in the vehicle engine maintenance manual (the tightening torque is too large or too small).

⑩ Fuel injector failure caused by not following the installation angle specified in the vehicle engine maintenance manual.

11 Fuel injector failure caused by not following the cleaning requirements specified in the vehicle engine maintenance manual.

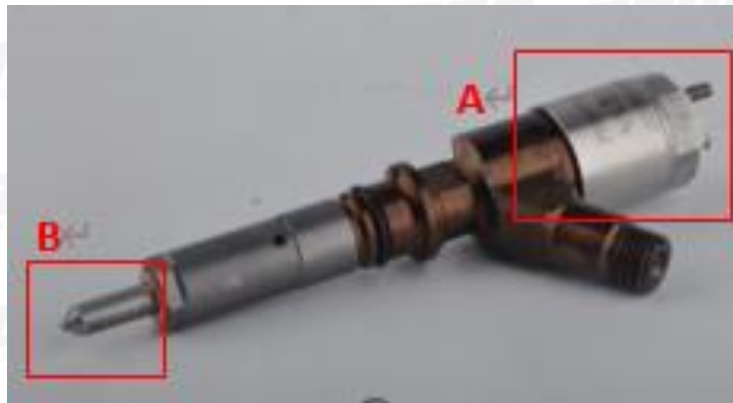
12 Fuel injector failure caused by failure to replace consumable parts as specified in the vehicle engine maintenance manual.

13 Fuel injector failure caused by not complying with the intake system fit clearance and exhaust system fit clearance requirements specified in the vehicle engine maintenance manual.

14 Failure to replace the consumable parts and the fitting clearance of the oil inlet system pipeline and the fuel injector connection in accordance with the fuel intake system specified in the vehicle engine maintenance manual.

1.11. 321-0990 Fuel Injector Manufacturer**Fuel Injector Manufacturer:** Shenzhen Shumatt Technology Co., Ltd**2. 321-0990 Fuel Injector Technical Support****2.1. 321-0990 Fuel Injector Part Number Location**

E.g.: See the fuel injector part number as follows:



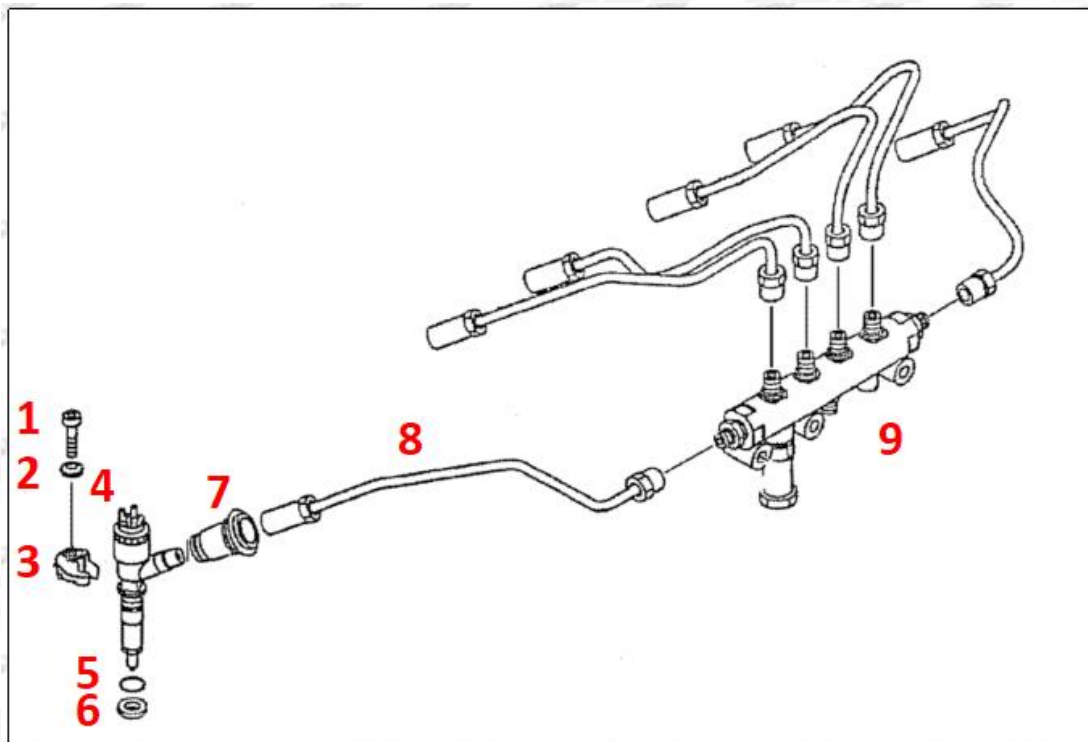
Pic No. 3

No.	Name
A	brand, logo, part number, series number
B	nozzle part number

2.2. 321-0990 Fuel Injector Application Scenarios

Pic No. 4

Matching Car Model: **320D excavator**



Pic No. 5

No.	Name	No.	Name	No.	Name
1	Adaptor Fixing Bolt	2	Gasket	3	Fuel Injection Adaptor
4	Fuel Injector	5	Fuel Injector O-Ring	6	Fuel Injector Nozzle Gasket
7	Intake Gasket	8	Intake	9	High Pressure Common Rail Pipe

2.3. 321-0990 Fuel Injector Installation

321-0990 Fuel Injector Installation Precautions:

- (1) The replacement of the fuel injector must strictly follow the electrical system, the approved pressure of the low-pressure fuel intake system, the approved pressure of the high-pressure fuel circuit system, and fuel system replacement consumables requirements (including the low-pressure fuel circuit system filter and the high-pressure fuel circuit) specified in the vehicle engine maintenance manual;
- (2) Replacement of wearing parts of the fuel system, cleaning requirements for the connection between the fuel system and the fuel injector, the fitting clearance of the fuel injector connection, the installation angle and tightening torque of the fuel injector, the fitting clearance of the intake system, and the fitting clearance of the exhaust system to ensure the service life of the engine and the normal operation of the fuel injector.
- (3) When installing the fuel injector on the engine, it is necessary to clean the engine block, cylinder head and other parts connected to the fuel injector, and ensure that there is no dust, carbon deposits, water, rust spots, etc.

- (4) Before installing, check whether the fuel injector nozzle gasket has been replaced and installed on the fuel injector.
- (5) When installing the fuel injector, apply lubricant between the fuel injector, fuel nozzle sealing gasket and O-ring.
- (6) Failure to replace the gasket with a new one may lead to: deformation of the tight cap of nozzle, deformation of nozzle, deformation of nozzle orifice, oil leakage and air leakage, which will cause serious damage to the fuel injector and nozzle to break and cause damage to the engine.
- (7) When installing the fuel injector on the engine, please carefully check the components related to the installation of the fuel injector, such as the Fuel Injector pressure plate, screw, fuel injector rod and other accessories are not deformed, and install it in strict accordance with the operation steps of the engine maintenance manual.
- (8) It is forbidden to operate the bare fuel injector for a long time in an environment with serious dust pollution and corrosion to iron products.
- (9) It is forbidden to operate the bare fuel injector for a long time in a strong magnetic field environment.

2.4. Reasons of 321-0990 Fuel Injector Not Working Normally

- (1) There is air in the oil circuit of the engine fuel system.
- (2) Vehicle oil pump oil supply system is not normal.
- (3) Engine common rail system oil leakage or pressure limiting valve damage.
- (4) There is a short circuit, cutting out and poor contact in the wiring harness connected to the fuel injector of the vehicle.
- (5) The long-term placement of the fuel injector causes the anti-rust oil to solidify, and the internal components are stuck or the oil holes are blocked.

⚠ Before installing, carefully check whether other components in the common rail system except the fuel injector are damaged so as to prevent the fuel injector from not working properly after being replaced.

2.5. Causes of 321-0990 Fuel Injector Being Damaged

- (1) Fail to operate properly according to engine maintenance manual during dis-assembly or installation, resulting in damage to the diesel injector.
- (2) The fuel oil used for the vehicle does not meet the standard cause damage to the fuel injector, such as: the water content in the fuel oil exceeds the standard, iron powder, aluminum powder, sulfide impurities exceed the standard, etc.
- (3) The engine is not regularly maintained according to the engine maintenance manual (please refer to the vehicle maintenance manual for the maintenance mileage). For example, failure to replace the lubricating oil of the engine system for a long time will cause abnormal wear of the engine, excessive exhaust gas volume or a large amount of carbon deposits inside the engine. The filter is not replaced during maintenance or the replaced filter cannot reach the original filter standard. all above reasons can cause damage to the fuel injector.
- (4) The abrasion of the oil pump produces iron powder and aluminum powder enter the fuel injector and cause damage to the fuel fuel injector.
- (5) The deformation and abrasion of fuel tank result in iron powder or aluminum powder entering the fuel injector and causing damage to the fuel injector.
- (6) The fuel injector is damaged due to replacement or adjustment of the relevant parts of the fuel injector.

For example, the valve clearance does not meet the standard after the engine is repaired, the replacement or modification of the wiring harness connected to the fuel injector fails to meet the original standard.

- (7) The engine is overheated and overloaded for a long time working results in damage to the fuel injector.
- (8) The fuel injector will be damaged naturally at the end of its working life.
- (9) The fuel injector is magnetized (fuel injector parts' magnetic exceeded) causing the fuel injector to not work properly.

⚠ Before replacing the fuel injector, please check the engine parts carefully according to the engine maintenance manual to avoid the fuel injector being damaged again after replacement.

2.6. 321-0990 Fuel Injector Technical Support Obtaining Methods

- (1) Fuel Injector Technical Data: <https://www.320dinjector.com/download/>
- (2) Fuel Injector Videos: <https://www.320dinjector.com/videos/>
- (3) Fuel Injector Encyclopedia: <https://www.320dinjector.com/category/news/encyclopedia/>

3. 321-0990 Fuel Injector Purchase and Delivery

3.1. 321-0990 Fuel Injector Purchase Payment Term

Payment Terms: T/T, PayPal, Alipay, WeChat

Please contact our salesmen for specific payment information.

3.2. 321-0990 Fuel Injector Main Sales Markets

Fuel Injector main sales markets: Asia, Europe, North America, South America, Africa etc.

3.3. 321-0990 Fuel Injector Declaration Requirements

Shumatt can assist customers to provide the following documents for import customs clearance: contract, invoice, packing list, bill of lading, insurance policy, certificate of origin, etc.

3.4. 321-0990 Fuel Injector Shipping Ways

Destination in China Areas: SF Express, Debon Express, the corresponding logistics company can be provided according to customer requirements in special cases.

Destinations out of China's Areas: DHL, UPS, FedEx, TNT air, ocean or other shipping methods required by customers.

3.5. 321-0990 Fuel Injector Lead time

Lead Time: Send out within 3 – 7 working days after receiving payment (Except for special products and special cases) .

3.6. 321-0990 Fuel Injector Logistics Time for Destination Out of China's Areas

DHL Logistics Time:

Country or Region of Departure	Hong Kong, China	Other Countries or Regions of Asia	Australia and New Zealand	Europe	America	Other Countries
China's Mainland	7 Days	7 Days	8 Days	8 Days	8-12 Days	7-10 Days

UPS Logistics Time: Country or Region of Departure: China's Mainland

Country of Destination	Estimated Arrival Time	Country of Destination	Estimated Arrival Time	Country of Destination	Estimated Arrival Time
Japan	3 Days	UK	5-7Days	Egypt	5-7 Days
Turkey	5-7 Days	Singapore	3 Days	Switzerland	5-7 Days
Bahrain	5-7 Days	Latvia	7-10 Days	New Zealand	7-10 Days
Sri Lanka	5-7 Days	Thailand	3 Days	Austria	5-7 Days
Romania	5-7 Days	Vietnam	3-5 Days	Estonia	5-7 Days
Malaysia	3-5 Days	Israel	5-7 Days	Mexico	7-10 Days
France	5-7 Days	America	5-7 Days	United Arab Emirates	5-7 Days
Italy	5-7 Days	Netherlands	5-7 Days	Bengal	7-10 Days
Lebanon	5-7 Days	Philippine	3-5 Days	Greece	7-10 Days
South Korea	3 Days	Spain	5-7 Days	Myanmar	5-7 Days
Canada	5-7 Days	Germany	5-7 Days	Saudi Arabia	7-10 Days
Portugal	5-7 Days	Australia	5-7 Days	South Africa	7-10 Days
Denmark	5-7 Days	Belgium	5-7 Days	Ukraine	7-10 Days
India	7-10 Days	Qatar	7-10 Days	Poland	5-7 Days
Indonesia	3-5 Days	Morocco	7-10 Days	Pakistan	7-10 Days
Kuwait	7-10 Days				

⚠ The logistics time is for reference only, subjects are according to the actual arrival.

3.7. 321-0990 Fuel Injector Packing

Domestic Express Packaging: Usually wrapped in waterproof scotch tape, such as picture No.5.

International Express Packaging: Wrapped with waterproof yellow tape After wrapping the black protective film, such as picture No. 6.

Pallet Shipping: Use fumigation free and recycling trays that meet export requirements, and use white wrapping protective film to wrap and bind with cable ties for the outside, such as picture No. 7,also, the products can be packaged according to customers' requirements.

⚠ The packing tray is made of plastic and can be recycled.

⚠ Transparent tape, yellow tape, black wrapping protective film, white wrapping protective film are non-degradable materials, please dispose of them properly.

⚠ Minors are prohibited from using transparent tape, yellow tape, black wrapping protective film, and white wrapping protective film to avoid personal injury.



Pic No. 6

Domestic Express Packaging: Wrapped by Transparent tape



Pic No. 7

International Express Packaging: Wrapped with yellow tape after wrapping black protective film



Pic No. 8

Pallet Shipping: Use pallet that meet export requirements, and use white wrapping protective film to wrap and bind with cable ties

4. 321-0990 Fuel Injector Storage Standard

(1) Choose a Suitable Storage Place

The warehouse and cargo yard where the fuel injector is stored should be kept clean and dry, and away from the factory buildings that generate harmful gases and dust; do not mix with acid, alkali, salt and other substances; the storage place should have a good drainage system; the cargo yard should be flattened with gravel or furnace ash etc. to enhance the water permeability of the surface layer to keep the reservoir area dry.

(2) Strict Requirements of Warehousing

Strict inspections should be carried out when the fuel injectors are put into storage, the surface cleaning work should be done well to remove water traces, oil stains, ash and other dirt, remove the rust and do anti-rust treatment in time. Packaged fuel injectors must be protected from damage.

(3) Keep The Warehouse Dry And Preventing Moisture

The relative humidity is usually below 70% for the fuel injectors placed in the room, and the corrosion of the fuel injectors is significantly reduced.

Fuel injectors must be stored in the warehouse, and they are forbidden to store in the same warehouse with commodities with high water content.

(4) Stack Properly

After the fuel injector is exposed to rain, the corrosion rate will increase significantly. The purpose of sealing is to isolate the fuel injector from rainwater and humid air, so the warehouse window should be checked in time to avoid rainwater entering the warehouse.

If the fuel injector package is damaged, it should be repaired or replaced; when the package is damp, the packaging material should be dried; if the original anti-corrosion and oil applied at the factory is found to be damaged or dried up, it should be cleaned and re-applied oil in time.

- ⚠ It is forbidden to leave the fuel injector exposed in the air for a long time.
- ⚠ It is forbidden to store acid, alkali, salt and other substances together with the fuel injector.
- ⚠ The unpacked fuel injector must be rust-proof during secondary storage.

5. Company Information



Pic No. 9

5.1. Company Introduction

Chinese Name: 深圳市舒马特科技有限公司

English Name: Shenzhen Shumatt Technology Co., Ltd

 **Mob Phone/WeChat:** +86-13410541523

 **HK Telephone:** +852-67653519

 **Telephone:** +86-755-23215133

 **Email:** ruby@shumatt.com

 **Website:** www.shumatt.com

 **Shenzhen Office:** 11-12, Floor 14, Building 13, Qinchengda Building, Exit A, Honglang North Subway Station, Bao'an District, Shenzhen, China's Mainland

 **Shenzhen Office:** Exit C, Qiao Touxu Metro Station, NO. 66 Chongqing Road, Fuhai Avenue, Bao'an District, Shenzhen, China Mainland

 **Hong Kong Office:** Jianfa Street Industrial Zone, Tuen Mun, New Territories, Hong Kong, China

 **After-sales Service Address:** Please contact our salesmen to obtain and provide the corresponding product maintenance reasons (Reference: [1.10. 321-0990 Fuel Injector Warranty Instructions](#))

5.2. Contact Information

Name	WeChat/ WhatsApp	Email
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Ruby	+86-13410541523	hison@shumatt.com
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6. Copyright Statement

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