

# CR PART

320D Injector 449-3315 Technical File

SKU:G1DS15004493315

320D  
INJECTOR



3264700 INJECTOR

**320D Injector 449-3315 Technical File**

# Content

1. 449-3315 Injector Introduction .....	1
1.1. 449-3315 Injector Basic Information .....	1
1.2. 449-3315 Injector Common Part Number .....	1
1.3. 449-3315 Injector Part Number Common Writing .....	1
1.4. 449-3315 Injector Parameter.....	1
1.5. 449-3315 Injector Specifications and Dimensions.....	1
1.6. 449-3315 Injector Quality Control.....	1
1.7. 449-3315 Injector Customized Service .....	2
1.8. 449-3315 Injector Packing List and Package Size.....	2
1.9. 449-3315 Injector Testing Standard and Certificate .....	4
1.10. 449-3315 Injector Warranty Instructions .....	4
1.11. 449-3315 Injector Manufacturer .....	5
2. 449-3315 Injector Technical Support.....	5
2.1. 449-3315 Injector Part Number Location .....	5
2.2. 326-4700 Injector Application Scenarios.....	6
2.3. 449-3315 Injector Installation .....	7
2.4. 449-3315 Injector Reasons of Not Working Normally.....	7
2.5. 449-3315 Injector Causes to Damage.....	8
2.6. 449-3315 Injector Technical Support Obtaining Methods.....	8
3. 449-3315 Injector Purchase and Delivery.....	9
3.1.449-3315 Injector Purchase Payment Term .....	9
3.2. 449-3315 Injector Main Sales Markets.....	9
3.3. 449-3315 Injector Declaration Requirements .....	9
3.4. 449-3315 Injector Shipping Ways .....	9
3.5. 326-4700 Injector Lead time.....	9
3.6.449-3315 Injector Logistics Time for Destination Out of China's Areas .....	9
3.7. 449-3315 Injector Packing .....	10
4. 449-3315 Injector Storage Standard.....	11
5. Company Information.....	12
5.1. Company Introduction.....	12
5.2. Contact Information .....	13
6. Copyright Statement.....	13

## 320D Injector 449-3315 Technical File

### 1. 449-3315 Injector Introduction

#### 1.1. 449-3315 Injector Basic Information

Title	China made new 320D injector 449-3315 fuel injector for C4.4 Engine
SKU 1	G1DS15004493315

#### 1.2. 449-3315 Injector Common Part Number

##### (1) Injector Exchange Information

Injector Part Number	Re-manufactured Part Number	Part	Replacement Number	OE Number
449-3315	/		/	/
4493315	/		/	/

##### (2) 449-3315 Matching Information

Car Model	Car Model	Car Model	Car Model	Car Model
/	/	/	/	/

#### 1.3. 449-3315 Injector Part Number Common Writing

449-3315, 449 3315, 4493315

#### 1.4. 449-3315 Injector Parameter

**Adaptation System:** Common Rail System

**Injector Series:** 320D C4.4 Series

**Injector Type:** Electromagnetic Injector

**Vehicle Configuration Information:** 320D Engines

#### 1.5. 449-3315 Injector Specifications and Dimensions

**Injector Size:** 20cm\* 10cm \*10cm =2000cm<sup>3</sup> (L\*W\*H=V)

**Injector Net Weight:** 0.5kg

**Injector Gross Weight:** 0.55kg

**Injector Quality:** China Made New

**Package Size:** 22 cm\* 13 cm \*13 cm = 3718 cm<sup>3</sup>

**Injector Type:** Diesel Common Rail Injector

**MOQ:** 4 Pieces

#### 1.6. 449-3315 Injector Quality Control

##### (1) Injector Testing

All injector spare parts are tested for electrical characteristics, accuracy, high temperature, low temperature, withstand voltage, leakage, durability, and various working conditions.

##### (2) Injector Assembling

And the quality control of the injector production and installation process, our company strictly follows the standard product installation data and product installation steps to install, such as injector stroke test, injector solenoid valve tightening torque, injector nozzle tightening torque.

##### (3) Injector Inspection

The factory inspection of the 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 no less than three times for factory inspection, and the fuel injector installation testing environment

are progressed in dust-free workshop.

**1.7. 449-3315 Injector Customized Service**

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

	
Injector nozzle engraving	Injector house lettering and QR code
	
Injector solenoid valve engraving	Injector box and label

**(2) Injector Customized Service Requirements:**

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




Customized injector packages no less than **1000 pieces**.

Customized products involve the need of specify logo, the OEM manufacturer needs 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. 449-3315 Injector Packing List and Package Size**

**(1) Injector Spare Parts List**

No.	1	2	3
<b>Image</b>			
<b>Name</b>	Fuel Injector	O-Ring	Nozzle Protective Cover Cap
<b>Description</b>	Fuel injector part number <b>449-3315</b>	Ensure to meet the standard of the sealing performance between the injector and the engine	Protect nozzle holes from being polluted and blocked
No.	4	5	6

<b>Image</b>			
<b>Name</b>	Injector Oil Inlet Tube Cap	Solenoid valve protective cover	VCI Anti-rust Bag
<b>Description</b>	Protect oil inlet from being polluted and blocked	Protect the solenoid body and terminal posts from external forces	Prevent fuel injector from rusting
<b>No.</b>	7	8	9
<b>Image</b>			
<b>Name</b>	Bubble Bag	Injector Packing Box	Nozzle Gasket
<b>Description</b>	Prevent the injector from being damaged by external forces	Package for injector and injector accessories	Used to ensure the tight fit between the tight cap end of the 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 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 injector and the installation parts should be coated with appropriate sealing oil during installation.

## (2) Injector Box Size





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

**1.9. 449-3315 Injector Testing Standard and Certificate**

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



**1.10. 449-3315 Injector Warranty Instructions**

**(1) Product Warranty Conditions and Instructions**

It is necessary to provide pictures, videos, or test reports detected by the injector inspection equipment when the injector is abnormal during use as evidence to feed back to the salesman. 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) Injector Warranty Coverage**

Within 15 days after customer receives the **449-3315** injector, if there is a performance failure and the product has no appearance damage, customer can choose to replace it or repair it;

If the **449-3315** 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;

If the 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 paid maintenance services. For products after paid repaired, the same performance problem will have a free warranty period within 3 months from the date of repairing.**

### **(3) Injector Out of Warranty Coverage**

The warranty period has expired.

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

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

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

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

Injector failure due to system pressure exceeding system approved pressure.

Injector failure caused by system voltage exceeding approved voltage.

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

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).

Injector failure caused by not following the installation angle specified in the vehicle engine maintenance manual.

Injector failure caused by not following the cleaning requirements specified in the vehicle engine maintenance manual.

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

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.

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.

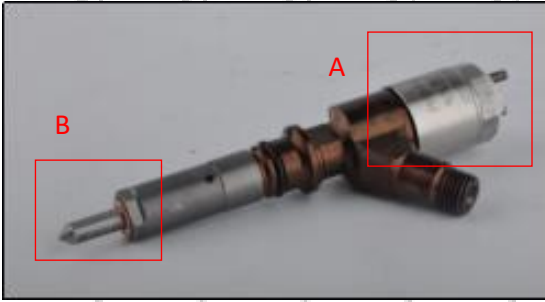
#### **1.11. 449-3315 Injector Manufacturer**

**Injector manufacturer:** Shenzhen Shumatt Technology Co., Ltd

## **2. 449-3315 Injector Technical Support**

### **2.1. 449-3315 Injector Part Number Location**

1) E.g.: The injector part number see as follows

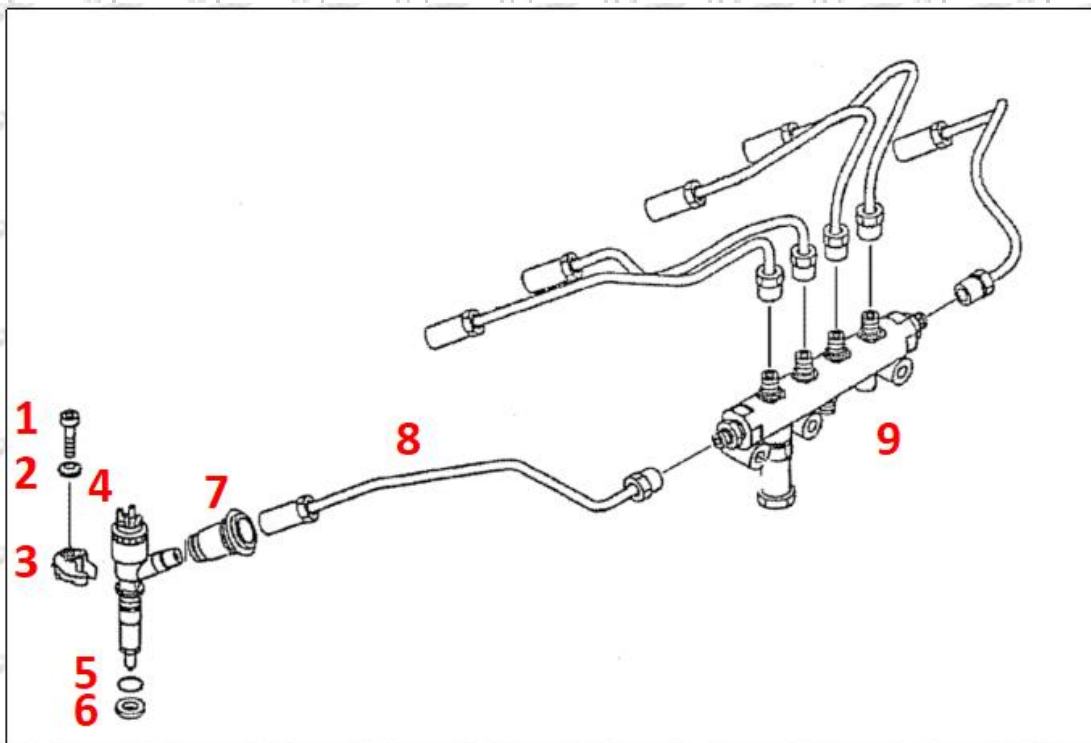


No.	Name
A	brand, logo, part number, series number
B	nozzle part number

### 2.2. 326-4700 Injector Application Scenarios



Matching Car Model: **Caterpillar 320D excavator**



Pic No. 1



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

### 2.3. 449-3315 Injector Installation

#### (1) 449-3315 Injector Installation Precautions:

- ⚠ 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;
- ⚠ Replacement of wearing parts of the fuel system, cleaning requirements for the connection between the fuel system and the injector, the fitting clearance of the fuel injector connection, the installation angle and tightening torque of the 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 injector.
- ⚠ 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.
- ⚠ Before installing, check whether the fuel injector nozzle gasket has been replaced and installed on the fuel injector.
- ⚠ When installing the fuel injector, apply lubricant between the fuel injector, fuel nozzle sealing gasket and O-ring.
- ⚠ Without replacing new gasket can 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.
- ⚠ When installing the injector on the engine, please carefully check the components related to the installation of the injector, such as the injector pressure plate, screw, injector rod and other accessories are not deformed, and install it in strict accordance with the operation steps of the engine maintenance manual.
- ⚠ It is forbidden to operate the bare injector for a long time in an environment with serious dust pollution and corrosion to iron products.
- ⚠ It is forbidden to operate the bare injector for a long time in a strong magnetic field environment.

### 2.4. 449-3315 Injector Reasons of 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 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. 449-3315 Injector Causes to Damage

- (1) Don't operate properly according to engine maintenance manual during dis-assembly or installation, resulting in damage to the injector .
- (2) The fuel oil used for the vehicle does not meet the standard cause damage to the 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 injector.
- (4) The abrasion of the oil pump produces iron powder and aluminum powder enter the fuel injector and cause damage to the 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 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 injector will be damaged naturally at the end of its working life.
- (9) The injector is magnetized (injector parts' magnetic exceeded) causing the 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. 449-3315 Injector Technical Support Obtaining Methods

- (1) Injector Technical File, visit <http://shumatt.com> to get the technical file.
- (2) Injector Technical Videos

**Facebook:** Visit <https://www.facebook.com/hison.li> to get the technical videos, constantly follow can get more information.

**YouTube:** [https://www.youtube.com/channel/UCByvYBx7VjV\\_mAfxh\\_Hu-aw](https://www.youtube.com/channel/UCByvYBx7VjV_mAfxh_Hu-aw) to get the technical videos,

constantly follow can get more information.

**Shumatt:** Visit <http://shumatt.com> to get the technical videos.

(3) Injector Information Query Software

TruckBook Parts EPC APP, Android/Apple App Store download and install, visit <http://shumatt.com> to get the download and installation tutorial.

(4) Search The fuel injector test data through TruckBook Parts EPC APP.

### 3. 449-3315 Injector Purchase and Delivery

#### 3.1.449-3315 Injector Purchase Payment Term

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

Please contact our salesmen for specific payment information.

#### 3.2. 449-3315 Injector Main Sales Markets

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

#### 3.3. 449-3315 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. 449-3315 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. 326-4700 Injector Lead time

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

#### 3.6.449-3315 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. 449-3315 Injector Packing

**Domestic express packaging:** Usually wrapped in waterproof scotch tape, such as picture No.2.

**International express packaging:** Wrapped with waterproof yellow tape After wrapping the black protective film, such as picture No. 3.

**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. 4,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. 2

**Domestic express packaging:**  
 Wrapped by Transparent tape



Pic No. 3

**International express packaging:**  
 Wrapped with yellow tape after wrapping black protective film



Pic No. 4

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

#### 4. 449-3315 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 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.

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 injector is exposed to rain, the corrosion rate will increase significantly. The purpose of sealing is to isolate the 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 injector exposed in the air for a long time.**



⚠ It is forbidden to store acid, alkali, salt and other substances together with the injector.

⚠ The unpacked fuel injector must be rust-proof during secondary storage.

## 5. Company Information



📍 Office Locations

● Global Exhibitions

### 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](mailto:ruby@shumatt.com)

🌐 **Website:** [www.shumatt.net](http://www.shumatt.net)

📍 **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:** Room 428-430, Building B, Huafeng Zhigu Technology Industrial Park, Exit B, Fuyong Metro Station, Bao'an District, Shenzhen, China's 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. 326-4700 Injector Warranty Instructions](#) )

## 5.2. Contact Information

No.	Name	WeChat/ WhatsApp	Email	Facebook	YouTube
1	Ruby	+86-13410541523	<a href="mailto:ruby@shumatt.com">ruby@shumatt.com</a>	Hison Li	Hison Li
2	Ivy	+86-18025309821	<a href="mailto:sales@shumatt.com">sales@shumatt.com</a>	Ivy Shumatt	Shumatt IVY
3	Rebecca	+86-18025349821	<a href="mailto:sales01@shumatt.com">sales01@shumatt.com</a>	Rebecca SHUMATT	SHUMATT Rebecca
4	Janny	+86-18028749821	<a href="mailto:sales02@shumatt.com">sales02@shumatt.com</a>	Janny shumatt	Janny Shumatt
5	Sam	+86-13316859821	<a href="mailto:Sales8@shumatt.com">Sales8@shumatt.com</a>	Shumatt Sam	Sam Shumatt
6	Natalie	+86- 18938945856	<a href="mailto:sales15@shumatt.com">sales15@shumatt.com</a>	Shumatt Natalie	Lin Natalie
7	Ada	+86-1342286353	<a href="mailto:sales5@shumatt.com">sales5@shumatt.com</a>	Shumatt Ada	Ada Shumatt
8	Hison Li	+86-18318811871	<a href="mailto:web@shumatt.com">web@shumatt.com</a>	Hison Li	Hison Li
9	Mecca	+86-18938948618	<a href="mailto:sales11@shumatt.com">sales11@shumatt.com</a>	Shumatt Mecca	Shumatt Mecca
10	Eric	+86 18319033618	<a href="mailto:sales3@shumatt.com">sales3@shumatt.com</a>		
11	Wayne ( Joaquín en español )	+86-13316959821	<a href="mailto:wayne@shumatt.com">wayne@shumatt.com</a>	shumattwayne	Wayne Shumatt
12	Sylvia	+86 18312499884	<a href="mailto:sales6@shumatt.com">sales6@shumatt.com</a>		

Visit <http://shumatt.com> to obtain the latest information of salesmen  
PS: Shumatt's sales-men's emails are all end with [@shumatt.com](mailto:@shumatt.com)

## 6. Copyright Statement

The copyright of any contents (including but not limited to parameters, data, text, charts, images, sounds or videos, etc.) provided in “ **320D Injector 449-3315 Technical File**” belong to Shenzhen Shumatt Technology Co., Ltd. Without the prior written permission of Shenzhen Shumatt Technology Co., Ltd., you are not allowed to modify any contents in “ **320D Injector 449-3315 Technical File**” in any way. At the same time, any conditions to spread, re-post, display the contents of “ **320D Injector 449-3315 Technical File**” should indicate that the cited article is from Shenzhen Shumatt Technology Co., Ltd., Any actions failure to follow above conditions to use “ **320D Injector 449-3315 Technical File**” will violate the “*Copyright Law of the People's Republic of China*” and other laws and regulations and the provisions of relevant international conventions.