

E1/E3/ SMART Series

D097 CRDI Injector Nozzle Technical Data

SKU: G1X900000D097



EUI NOZZLE Diesel Injector Parts



D097 CRDI Injector Nozzle Technical Data

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D097 CRDI Injector Nozzle Technical Data

1. D097 CRDI Injector Nozzle Introduction

1.1. D097 CRDI Injector Nozzle Basic Information

Title	Common Rail D097 CRDI Injector Nozzle	Quality
SKU	G1X900000D097	China Made New

1.2. D097 CRDI Injector Nozzle Common Written Part Number

	CRDI Injector Nozzle OE Number	CRDI Injector Nozzle Engraved Number
14		D097

1.3. D097 CRDI Injector Nozzle Application Information for Injectors (1) D097 CRDI Injector Nozzle Applicable Injectors Part Number

Injector Part Number	•		Alternative Part Number	OEM
R00901Z	R00901Z R01901Z R02301Z R02801D		R02801D	33800-4X500
R01901Z	R00901Z	R02301Z	R02801D	33800-4X500
R02301Z	R00901Z	R01901Z	R02801D	33800-4X500
R03601D	R02801D	0 1		33801-4X510
R02801D	R03601D	1		33800-4X500

(2) D097 CRDI Injector Nozzle Car Model Matching Information

Vehicles/equipment where components are installed for the first time	Manufacturer
KIA/HYUNDAI COMMON RAIL KJ 2.9L TCI	KIA
KIA/HYUNDAI COMMON RAIL KJ 2.9L TCI	KIA
KIA/HYUNDAI COMMON RAIL KJ 2.9L TCI	KIA
KIA/HYUNDAI	HYUNDAI
KIA/HYUNDAI COMMON RAIL KJ 2.9L TCI	KIA

(3) **D097 CRDI Injector Nozzle Part Number Common Writing** D097, L097PBC, 097PBC, 097, L097

1.4. D097 CRDI Injector Nozzle Specifications and Dimensions Parameters CRDI Injector Nozzle Size: 6 cm*1.5cm *1.5 cm CRDI Injector Nozzle Barrel Dimensions: 7 cm *2 cm *2 cm

Single CRDI Injector Nozzle Weight: 0.03kg

CRDI Injector Nozzle 10 PCS Per Box: 10 cm *8 cm *4cm

CRDI Injector Nozzle Weight 10 PCS Per Box : 0.3kg

CRDI Injector Nozzle Quality: China Made New

CRDI Injector Nozzle MOQ: 10 PCS



1.5. D097 CRDI Injector Nozzle Packing List CRDI Injector Nozzle Spare Parts List

No.	1	2	3
Image			共轨喷油嘴 Common Rail Injuctor Kozalie ショー 次马共弘 20 公型電路 20
Name	CRDI Injector Nozzle Assy	Nozzle Tube	CRDI Injector Nozzle Box
Description	CRDI Injector Nozzle Part Number D097	Prevent Nozzle Rusting and Damaging From Collision	10 PCS/Box

Minors are prohibited to use fuel CRDI injector nozzle assembly, nozzle packing box to avoid injury.

- **CRDI** injector nozzle box is recyclable and can be reused.
- **A** CRDI injector nozzle barrels is non-degradable material, please dispose of it properly after use.

1.6. D097 CRDI Injector Nozzle Customized Service

(1) CRDI Injector Nozzle Customized Service: Meet the customized needs of OEM manufacturers for shell lettering (logo, nozzle part number, date and series number), nozzle without lettering, nozzle tube, nozzle box customized etc.



(2) CRDI Injector Nozzle Customized Service Quantity Requirements:

The purchased of customized CRDI injector nozzle shell lettering or without lettering are no less than 100 pieces.

The purchased of customized CRDI injector nozzle tubes are no less than 2000-3000 pieces.

The purchased of customized CRDI injector nozzle boxes are 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 data.

• Once the customized CRDI injector nozzle is sold, it can't be returned or exchanged if there is no quality problems.



1.7. D097 CRDI Injector Nozzle Quality Control

(1) CRDI Injector Nozzle Testing

All the CRDI injector nozzles are subjected to precision testing, high temperature testing, low temperature testing, withstand pressure testing, leakage testing, durability testing, and various working conditions testing.

(2) CRDI Injector Nozzle Inspection

The factory inspection of the CRDI injector nozzle is undergone full inspection, random inspection, and batch inspection three inspections. Different brands of test benches are used to test the same CRDI injector nozzle 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.

(3) CRDI Injector Nozzle Installation

When matching the CRDI injector nozzle body and nozzle needle, Shumatt strictly complies with the standard of CRDI injector nozzle body and nozzle needle clearance technical indicators to ensure that each CRDI injector nozzle meets the factory standards and use standards.

1.8. D097 CRDI Injector Nozzle Warranty Instructions

(1) CRDI Injector Nozzle Warranty Conditions And Instructions

It is necessary to provide pictures, videos, or test reports detected by the CRDI injector nozzle inspection equipment when the CRDI injector nozzle 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) CRDI Injector Nozzle Warranty Coverage

Within 15 days after customer receives the D097 CRDI injector nozzle if there is a performance failure and the product has no appearance damage, customer can choose to replace it or repair it;

If the D097 CRDI injector nozzle 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.

(3) CRDI Injector Nozzle Out of Warranty Coverage

① The warranty period has expired.

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

③ CRDI injector nozzle damage caused by man-made reasons (throwing, strong magnetic field magnetization, set fire).

④ CRDI injector nozzle failure or injector damage caused by non-injector design, technology, manufacturing, quality and other issues.

- ⑤ CRDI injector nozzle failure due to system pressure exceeding system approved pressure.
- 6 CRDI injector nozzle failure caused by system voltage exceeding approved voltage.

⑦ CRDI injector nozzle failure caused by impurities (water, lead, aluminum powder, iron powder, sulfide) in the system fuel exceeding the standard requirements.

8 CRDI injector nozzle 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).

(9) CRDI injector nozzle failure caused by not following the installation angle specified in the injector maintenance manual.

(1) CRDI injector nozzle failure caused by not following the cleaning requirements specified in the injector maintenance manual.

11 CRDI injector nozzle failure caused by failure to replace consumable parts as specified in the injector maintenance manual.

1.9. D097 CRDI Injector Nozzle Manufacturer



CRDI Injector Nozzle Manufacturer: Shenzhen Shumatt Technology Co., Ltd

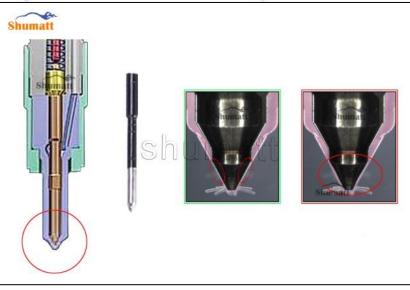
2. D097 CRDI Injector Nozzle Technical Support

2.1. D097 CRDI Injector Nozzle Installation Precautions

- (1) Clean the CRDI injector nozzle in an ultrasonic cleaner for 3-5 minutes before installation, so as to make the stains, dust, rust-proof oil oxides, paraffin base, naphthenic base, intermediate base, salt, lead naphthenate, zinc naphthenate, sodium petroleum sulfonate, barium petroleum sulfonate, calcium petroleum sulfonate, tallow diamine trioleate, rosinamine on the surface of the CRDI injector nozzle fall off.
- (2) Use compressed air to clean the cleaning fluid attached to the surface of the CRDI injector nozzle after cleaning, and clean it up to the standard of use.

2.2. D097 CRDI Injector Nozzle Inspection

(1) Check whether there is deformation, cracking, thread damage, quenching, leakage and rust in the guide sleeve, spring, gasket and tight cap of the nozzle. The tight cap of the nozzle must be replaced after being disassembled for more than 5 times, as shown in the following.



Pic No.1

- (2) Replace the tight cap of the nozzle and the copper gasket of the CRDI injector nozzle.
- (3) Check whether the gap between the nozzle needle and the nozzle shell is within the standard range and whether it reaches the standard for use.

All parts should be examined for wear under a microscope at least 20 times larger.

Nozzle tight cap deformation, cracking, thread damage, quenching, leakage, will lead to black smoke vehicle cap, fuel injector damage.

A Injector opening pressure greater than or less than the specified range may cause injector damage.

A Failure to replace wearing parts in time during maintenance may lead to fuel injector damage.

2.3. D097 CRDI Injector Nozzle Test Measurement

(1) Nozzle opening pressure test

Test whether the opening pressure range of the nozzle is within the range specified in the injector maintenance manual (to be verified), if not within the normal range, adjust the nozzle spring to adjust the gasket

If the value is greater than normal, reduce the oil nozzle spring adjusting gasket; if the value is less than normal, increase the oil nozzle spring adjusting gasket.

(2) Stroke Measurement of Nozzle Needle Valve

Use a measuring tool to measure whether the stroke of the nozzle needle valve is within the range (<mark>15-</mark> <mark>45um</mark>) specified in the injector maintenance manual. If not, adjust the stroke of the nozzle to adjust the gasket.





Pic No.2

If the value is greater than normal, thicken the gasket for oil-nozzle needle valve lift adjustment; if the value is less than normal, reduce the gasket for oil-nozzle needle valve lift adjustment.

2.4. D097 CRDI Injector Nozzle Installation

(1) Tightening torque of CRDI Injector Nozzle

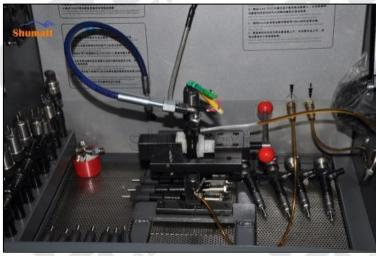
The torque lever and tightening moment specified in the injector maintenance manual must be installed when the CRDI injector nozzle is installed. (50Nm)



Pic No.3

The tightening torque of the nozzle cap must be installed in accordance with the tightening torque specified in the injector maintenance manual.

2.5. D097 CRDI Injector Nozzle Testing After Maintenance(1) After installation, it needs to be tested on the test bench.



Pic No.4

The correct injector type should be selected for testing

Website : www.crdiinjectornozzle.com © 2024 Shenzhen Shumatt Technology Co., Ltd



(2) The test results need to be ensured that the following items are within the standard data range of the test stand.

LEAK TEST: Test whether sealing test is up to standard or not

In this step, no injector collector should be installed at the nozzle during the test so as to observe whether the nozzle is dripping oil, meanwhile observe that all joints are no oil leaking.

The static oil return of the test should not exceed 8mm2/H, otherwise, you need to check whether the high-pressure sealing ring, valve assembly, and stroke parameters of the injector are within the standard range.

VL: Test whether full load oil (main injection, high speed) is up to standard or not

This step needs to be combined with vehicle driving conditions, such as power, fuel consumption and smoke as well as the maintenance of the engine, if there is situation of insufficient power, fuel consumption is high, thick black smoke and irregularly maintenance of the engine, the engine needs to be maintained according to the maintenance handbook at very first time.

Each of injector part needs to be adjusted and checked if there is any damage according to above situations to ensure the injector is normal. After make sure the injector works normal, you need to reduce the armature stroke if too much oil injection, and increase the armature stroke if too little oil injection.

The error of each injector should be controlled in 6mm3/HH when adjusting.

TL\EM: Test whether the torque point, emission point, exhaust limit, fuel supply reach standard or not Through this test, it is detected that when the oil injection is too little, the engine's acceleration is slow, vice versa, when the oil injection is too much, the engine's acceleration will produce black smoke and the engine excessive exhaust emissions.

CRDI injector nozzle spring force gasket, armature stroke, lift gasket and solenoid valve spring force gasket determine whether exhaust restriction and injector fuel supply reach standard

LL: Test if the idle fuel supply reaches the standard

This test detects oil injection is too much will cause engine idle smoke, otherwise if the oil injection too little will cause engine idling easy to stall, or difficult to start.

The uneven of oil injection causes the unstable rotation speed of engine , making noise, and increase the engine swing in the acceleration process.

Each injector error should be controlled within 2mm3/HH when adjusting.

Idle speed fuel supply quantity mainly by adjusting the nozzle spring force gasket.

VE: Test whether the pre-injection meets the standard

This test detects when oil injection is too much will cause cylinder knocking while the engine is working and the exhaust emissions is not up to standard (smoke).

While when oil injection is too little will cause big noise while the engine is working, the engine is difficult to start, the engine weak acceleration, slow response of injector.

Each injector error should be controlled within 0.5mm3/HH when adjusting.

2.6. D097 CRDI Injector Nozzle List of Tools Used During Measurement and Installation

Image	shut		shumatt		
SKU	CRT084	CRT084 CRT220			
Description	Torque wrench: 19-110nm 1/2 It is used to control tightening force and angle during installation	Fuel injector stroke measuring tool: is used to measure buffer stroke of fuel injector, armature stroke and remaining air gap	Micrometer: is used to measure gasket thickness		



9	Image			,	
	SKU	/	CRT281	/	
	Description	Ultrasonic cleaning machine: is used for cleaning fuel injector and parts	Common rail injector test bench: check the injector working condition		

2.7. Causes of D097 CRDI Injector Nozzle Being Damaged

- (1) Fuel CRDI injector nozzle failure caused by impurities (water, lead, aluminum powder, iron powder, sulfide) in fuel exceeding standard requirements.
- (2) The nozzle is normally worn due to long time working under high temperature.
- (3) Nozzle needle wear leads to oil hole blockage, insufficient fuel injection injector cannot work properly.

A Nozzle needle wear leads to oil hole blockage, insufficient fuel injection injector can't work properly.

The wear of the nozzle leads to the increase of fuel quantity, resulting in black smoke of the vehicle, and the fuel injector can't work properly when it is serious.

A If the nozzle needle can't move smoothly stuck may cause serious damage to the CRDI injector nozzle

A The rusting of the nozzle spring leads to spring fracture and black smoke from the vehicle.

The opening pressure of the nozzle decreases, and the oil quantity of the injector increases, leading to black smoke of the vehicle, and the injector can't work properly when it is serious.

Oil-nozzle needle valve lift adjustment gasket wear oil-nozzle needle valve stroke becomes larger, the fuel injector oil quantity becomes larger, resulting in black smoke of vehicles, resulting in the fuel injector can't work properly when serious.

A The cracking of the nozzle cap is caused by high intensity work under high temperature.

2.8. D097 CRDI Injector Nozzle Technical Support Obtaining Methods

(1) CRDI Injector Nozzle Technical Data: https://www.crdiinjectornozzle.com/download/

(2) CRDI Injector Nozzle Videos: https://www.crdiinjectornozzle.com/videos/

(3) CRDI Injector Nozzle Encyclopedia: https://www.crdiinjectornozzle.com/category/news/encyclopedia/

(4) CRDI Injector Nozzle 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.

3. D097 CRDI Injector Nozzle Purchase and Delivery

3.1. D097 CRDI Injector Nozzle Purchase Payment Methods

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

A Please **c**ontact our salesmen for specific payment information.

3.2. D097 CRDI Injector Nozzle Main Sales Market

CRDI Injector Nozzle Main Sales Markets: Asia, Europe, North America, South America, Africa etc.

3.3. D097 CRDI Injector Nozzle 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. D097 CRDI Injector Nozzle 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. D097 CRDI Injector Nozzle Lead Time

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

3.6. D097 CRDI Injector Nozzle Logistics Time for Destination Out of China's Areas DHL Logistics Time:

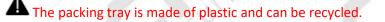
Country or Regi Departure		Hong Kong, China	Other Countries or Regions of Asia	Australia and Zealand	New	Europe	America	Other Countries
China's Mainl	and	7 Days	7 Days	8 Days		8 Days	8- 12 Days	7-10 Days
PS Logistics T			Region of Departure	: China's Mai	inland	l <u> </u>		
Country of Destination		mated al Time	Country of Destination	Estimated Arrival Time	Cou	intry of Desti	nation	Estimated Arrival Time
Japan	3	Days	UK	5-7 Days		Egypt		5-7 Days
Turkey	5-7	Days	Singapore	3 Days		Switzerlan	d	5-7 Days
Bahrain	5-7	Days	Latvia	7-10 Days	1	New Zealar	nd	7-10 Days
Sri Lanka	5-7	Days	Thailand	3 Days		Austria	or	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	Uni	ted Arab Em	irates	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 Arabi	ia	7-10 Days
Portugal	5-7	Days	Australia	5-7 Days		South Afric	а	7-10 Days
Denmark	5-7	Days	Belgium	5-7 Days		Ukraine	1 e	7-10 Days
India	7-10) Days	Qatar	7-10 Days		Poland	01	5-7 Days
Indonesia	3-5	Days	Morocco	7-10 Days		Pakistan		7-10 Days
Kuwait	7-10) Days	221	/	<u>.</u>	221		/

A The logistics time is for reference only and is subject to the actual arrival.

3.7. D097 CRDI Injector Nozzle 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.





🕰 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.5 **Domestic Express Packaging:** Wrapped by Transparent tape





Pic No.6 **International Express Packaging:** Wrapped with yellow tape after wrapping black protective film

Pic No.7

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

4. D097 CRDI Injector Nozzle Storage Standard

(1) Choose a Suitable Storage Place

The warehouse and cargo yard where the CRDI injector nozzles are 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 CRDI injector nozzles 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 nozzles must be protected from damage.

(3) Keep The Warehouse Dry And Preventing Moisture

The relative humidity is usually below 70% for the CRDI injector nozzles placed in the room, and the



corrosion of the CRDI injector nozzles is significantly reduced.

CRDI injector nozzles 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 CRDI injector nozzle 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 CRDI injector nozzle 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.

A It is forbidden to leave the CRDI injector nozzle exposed in the air for a long time.

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

A The unpacked diesel CRDI injector nozzle must be rust-proof during secondary storage.

5. Company Information

- Office Locations
- Global Exhibitions

Pic No.8

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

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HK Telephone: +852-67653519

Telephone: +86-755-23215133

Email: ruby@shumatt.com

Website: www.shumatt.com



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Shenzhen Office: Exit C, Qiao Touxi 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: <u>1.8. D097 Injector Warranty Instructions</u>)

5.2. Contact Information

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

6. Copyright Statement

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