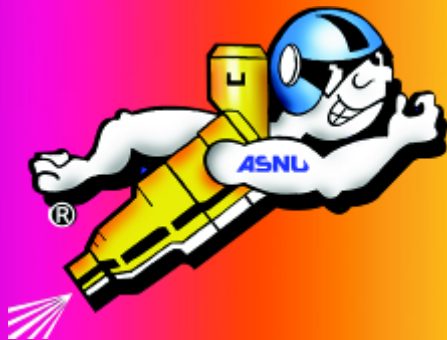




Performance Injector Catalogue 2015 / 2016



Welcome to ASNU Performance Injectors 2

We hope you find this catalogue informative and of interest and you find what you are looking for. This catalogue will have additions as we expand our product range, so please either visit our web site @ www.asnu.com or contact your nearest ASNU Performance

Injectors Stockist.

If you have any specific requirements, please feel free to contact us with the details and we would be pleased to assist you if possible.

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ASNU are the world leaders in Testing & Servicing gasoline injectors with distribution in over 60 countries and more than 25 years experience in their market. ASNU have experience in every type of gasoline injector from the various injector manufacturers around the world. With tens of thousands of injectors being tested and serviced in Aftermarket and Motorsport worldwide every year, our experience is unrivalled by anyone, anywhere else in the world. This gives ASNU the greater experience and understanding when it comes to developing a range of Performance Injectors that allow the user to achieve the perfection that Tuners and Owners are both looking for.



The ASNU range of Performance Injectors offer a purpose designed and built injector with the ideal spray pattern to match the flow required. Based on ASNU's experience, these injectors are designed to meet the varied demands of the Racing & Performance markets. All of ASNU's Performance Injectors have a multi-hole orifice cap, cut using the latest Laser technology for greater accuracy and repeatability. Using this technology allows ASNU to produce injectors with specific spray patterns and flow rates to meet the Performance customers' exact requirements.



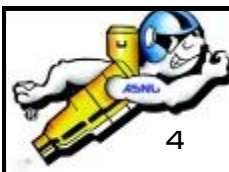
All ASNU injectors are fitted with easy to see Flow Rate and Spray Pattern Identification Rings. Each spray angle option is matched to the flow rate to ensure optimum usage of the fuel provided. This means that there is no more confusion over which injector you have and exactly what is expected of the selected injectors. The ASNU web site shows details of the colours and specifications, it will also show the technical data required by the tuner to accurately map the system.



Multi-hole Orifice Plates with Laser cut angled holes for greater accuracy and atomisation

ASNU's Injector Diagnostic Testing & Servicing System gives the ASNU Injector Distributors and their customers a worldwide guarantee and service that no other can match. Every injector is tested and matched for Fuel Delivery, Fuel Distribution & Atomisation before they are released to the customer. Flow Rates are checked and matched to within 1%, using the ASNU system. No more guess work about the performance of the injectors you are purchasing, you now have ASNU INJECTORS, you know they are right; *they are the best!*





Performance Injectors

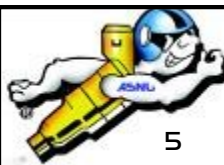
Flow Rates & Spray Cones

Part No	Description	Flow	Spray
ASNU90/300	300cc HIGH PERFORMANCE INJECTOR		10°
ASNU90/350	350cc HIGH PERFORMANCE INJECTOR		10°
ASNU90/400	400cc HIGH PERFORMANCE INJECTOR		20°
ASNU90/450	450cc HIGH PERFORMANCE INJECTOR		20°
ASNU90/500	500cc HIGH PERFORMANCE INJECTOR		20°
ASNU90/550	550cc HIGH PERFORMANCE INJECTOR		20°
ASNU90/600	600cc HIGH PERFORMANCE INJECTOR		20°
ASNU90/650	650cc HIGH PERFORMANCE INJECTOR		20°
ASNU90/700	700cc HIGH PERFORMANCE INJECTOR		20°
ASNU90/750	750cc HIGH PERFORMANCE INJECTOR		30°
ASNU90/800	800cc HIGH PERFORMANCE INJECTOR		30°
ASNU90/850	850cc HIGH PERFORMANCE INJECTOR		30°
ASNU90/900	900cc HIGH PERFORMANCE INJECTOR		30°
ASNU90/950	950cc HIGH PERFORMANCE INJECTOR		30°
ASNU90/1000	1000cc HIGH PERFORMANCE INJECTOR		30°
ASNU90/1050	1050cc HIGH PERFORMANCE INJECTOR		30°
ASNU90/1050/14	1050cc HIGH PERFORMANCE INJECTOR		30°
ASNU90/1050C/XL	1050cc XL HIGH PERFORMANCE INJECTOR		30°
ASNU90/1100	1100cc HIGH PERFORMANCE INJECTOR		30°
ASNU90/1300	1300cc HIGH PERFORMANCE INJECTOR		25°
ASNU90/1400	1400cc HIGH PERFORMANCE INJECTOR		25°
ASNU90/1500	1500cc HIGH PERFORMANCE INJECTOR		25°



If you should have a specific injector requirement, its possible we are able to produce to your own specification, providing specific spray angles and flow rates. Please e-mail us with your request to: enquiries@asnu.com

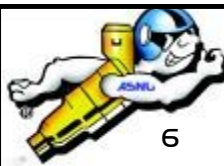
Performance Injector Harness Adapters











PART NO	DESCRIPTION	
ASNU90/HA001	WIRELESS CONNECTOR US CAR INJECTOR to BOSCH LOOM	
ASNU90/HA002	WIRELESS CONNECTOR BOSCH INJECTOR to US CAR LOOM	
ASNU90/HA003	BOSCH (with clip) WITH BOOTS & TAILS	
ASNU90/HA004	BOSCH to DENSO (NISSAN)	
ASNU90/HA005	BOSCH to DELPHI	
ASNU90/HA006	BOSCH to KEI HIN (HONDA)	
ASNU90/HA007	BOSCH INJECTOR to SUMITUMO (TOYOTA) LOOM	
ASNU90/HA008	BOSCH to BOSCH	
ASNU90/HA009	BOSCH to DENSO MK3 (NISSAN) No Clip	
ASNU90/HA010	BOSCH to DENSO MK3 (NISSAN) with clip	
ASNU90/HA011	WIRELESS CONNECTOR US CAR to SUMITUMO	
ASNU090/HA013	BOSCH to DENSO (TOYOTA) with clip	

If you should have a specific harness requirement, its possible we are able to produce to your own specification, providing specific plugs and length. Please e-mail us with your request to:
enquiries@asnu.com





Performance Injector Fuel Rail Adapters








Part Number	Description	
ASNU 90/FRCIOD	14.5mm to 10mm FUEL RAIL COUPLING FOR NISSAN	
ASNU 90/FRCIID	14.5mm to 11.0mm FUEL RAIL COUPLING FOR TOYOTA	
ASNU 90/FRCIOH	14.5mm to 11.0mm FUEL RAIL COUPLING FOR HONDA	
ASNU 90/FRCI4G	14.5mm to 14.5mm (Brown) FUEL RAIL COUPLING 14.5mm Suitable for GASOLINE	
ASNU 90/FRCI4M	14.5mm to 14.5mm (Green) FUEL RAIL COUPLING 14.5 Suitable for METHANOL	
ASNU 90/FRCI5	14.5mm to 15.0mm (Black) FUEL RAIL COUPLING Suitable for GASOLINE	
ASNU 90/MAI4	14.5mm MANIFOLD ADAPTER FOR MANIFOLDS WITH SHORT INJECTOR RECESS	
ASNU 90/MAJZ	MANIFOLD ADAPTER FOR TOYOTA 1/2JZ MANIFOLDS AND MORE	



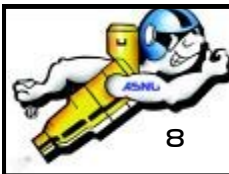
If you should have a specific Adapter requirement, its possible we are able to produce to your own specification.
Please e-mail us with your request to:
enquiries@asnu.com

Performance Injector Spare Parts



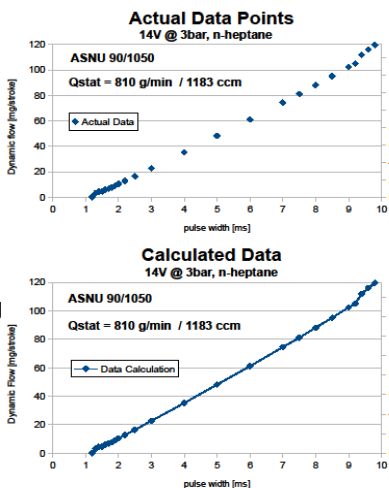
Part Number	Description	
ASNU 17	10mm O'RING FOR FRCIID FUEL RAIL COUPLING FOR NISSAN & TOYOTA	
ASNU 30	11.0mm O'RING FOR FRCIOH FUEL RAIL COUPLING FOR HONDA	
ASNU 08	15mm (Black) O'RING FOR FRCI5 FUEL RAIL COUPLING Suitable for GASOLINE	
ASNU 14	14.5mm O'RING FOR FRCI4G FUEL RAIL COUPLING Suitable for GASOLINE	
ASNU 08M	14.5mm (Green) O'RING FOR FRCI5 FUEL RAIL COUPLING Suitable for METHANOL	
ASNU 08C	BOTTOM O'RING FOR ASNU PERFORMANCE INJECTOR USE BELOW BOTTOM X RING ASNU 08X	
ASNU 08X	BOTTOM X RING FOR ASNU PERFORMANCE INJECTOR USE ABOVE BOTTOM O'RING ASNU 08C	





Performance Injector Mapping Off Set Data

This sheet shows the actual data points that the injector is tested at. The second graph shows the calculated data where the test points have been connected, allowing measurement between the test points. This shows the start of injection and the flow value.



Part number: ASNU 90/1050c



Pulse Width [ms]	Dynamic Flow [mg/stroke]	[cc]
1.2	0.04	0.06
1.3	3.12	4.55
1.4	4.40	6.51
1.5	4.65	6.79
1.6	6.17	9.01
1.7	9.7	9.78
1.8	7.71	11.26
1.9	9.13	13.33
2	10.49	15.31
2.1		
2.2	12.79	18.67
2.3		
2.4		
2.5	16.41	23.96
3	22.65	33.07
4	35.19	51.31
5	48.15	70.29
6	61.08	89.17
7	74.43	108.66
7.5	81.09	118.38
8	88.1	128.61
9	102.38	149.46
9.2	102.38	149.46
9.4	111.8	163.21
9.6	116.04	169.40
9.7		
9.8	119.51	174.47

voltage: 14V
Temp.: 20°C
fluid: n-heptane
cycle time: 10ms
Pressure: 3 bar

Qstat @ 3 bar
810.4 g/min
107.20 lb/h
1182.5 cc

Qdyn @ 2.5ms
16.41 mg/stroke
23.96 cc

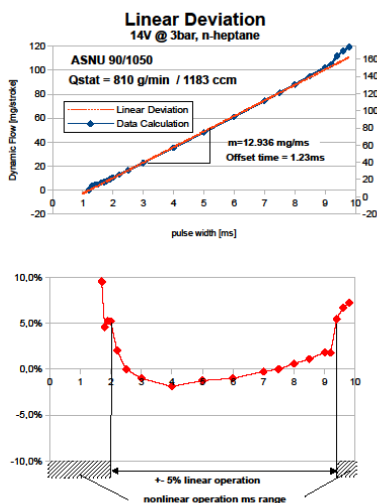
bold numbers: linear range of injector
(less than +5% deviation to ideal injector)

Here is an example of the 1050cc ASNU Performance Injector Off-Set Technical Data; the information required for correct mapping of the engine's ECU.

For all the Off Set Technical Data on the complete range of ASNU Performance Injectors, please visit our web site: www.asnu.com

This sheet shows the Linear performance of the injector.

This data helps the tuner to map the system within the limits of the injector, ensuring that he only uses the range that is available from the injector.



Part number: ASNU 90/1050



Pulse Width Linear Deviation [ms]	[%]
1.4	51.11%
1.5	25.29%
1.6	22.73%
1.7	9.53%
1.8	4.61%
1.9	5.27%
2	5.22%
2.2	2.04%
2.5	0.00%
3	-1.01%
4	-1.83%
5	-1.25%
6	-0.99%
7	-0.26%
7.5	0.00%
8	0.62%
9	1.84%
9.2	1.81%
9.4	5.48%
9.6	0.71%
9.7	
9.8	7.25%

voltage: 14V
temp.: 20°C
fluid: n-heptane
cycle time: 10ms
pressure: 3 bar

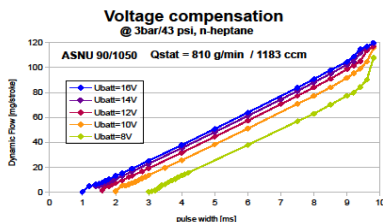
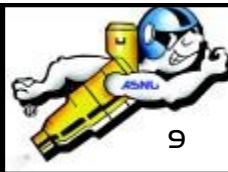
+ 5% linear operation:

t_lmin = 2.2 ms
t_lmax = 9.2 ms
q_{dyn} @ 2.2ms: 18.67 cc
q_{dyn} @ 9.2ms: 149.46 cc

bold numbers: linear range of injector
(less than +5% deviation to ideal injector)



Performance Injector Mapping Off Set Data



Flow calculation data @ 3bar/43psi, n-heptane:

Ubat [V]	T offset [ms]	slope m [mg/stroke per ms] [cc per ms]	T, linear min [ms]	T, linear max [ms]	ms add-on* [ms]
8 V	2,959	12,667	18,491	3,6	1,73
10 V	1,952	12,758	18,625	2,5	0,72
12 V	1,543	13,022	19,010	2,5	0,31
14 V	1,231	12,936	18,685	2,2	0,00
16 V	1,058	13,004	18,984	2	-0,17

* reference: 14V

Part number: ASNU 90/1050



battery voltage = variable, see chart
temperature: 20°C
fluid: n-heptane cycle time: 10ms

Qstat = 810 g/min / 1183 cc

dyn. Flow = (ms - T offset) * slope m

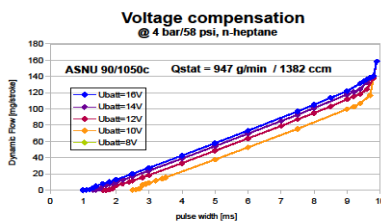
example: flow @14V, 3 bar for 8ms ?

dyn. Flow = (8ms - 1,231ms) * 18,885 cc/ms
= 127,83 cc

This sheet shows the Off Set data for a 3 bar pressure setting, with the results at different voltage settings.

These setting are using N-Heptane at 20°C, matching the data as provided by Robert Bosch

This sheet shows the Off Set data for a 4 bar pressure setting. You can see that at 8V there was no flow from the injector and that the Off Set data has changed.



Flow calculation data @ 4bar/58psi, n-heptane:

Ubat [V]	T offset [ms]	slope m [mg/stroke per ms] [cc per ms]	T, linear min [ms]	T, linear max [ms]	ms add-on* [ms]
8 V	no flow				
10 V	2,469	14,973	21,898	3,2	1,031
12 V	1,798	15,284	22,312	2,7	0,361
14 V	1,437	15,238	22,245	2,4	0,000
16 V	1,221	15,378	22,450	2,2	-0,216

* reference: 14V

Part number: ASNU 90/1050c



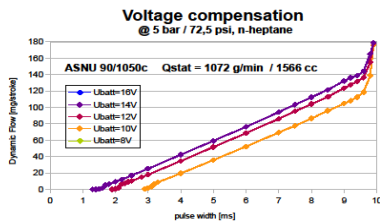
battery voltage = variable, see chart
temperature: 20°C
fluid: n-heptane cycle time: 10ms

Qstat = 947 g/min / 1382 cc

dyn. Flow = (ms - T offset) * slope m

example: flow @14V, 4 bar for 8ms ?

dyn. Flow = (8ms - 1,437ms) * 22,245 cc/ms
= 145,99 cc



Flow calculation data @ 5 bar / 72,5 psi, n-heptane:

Ubat [V]	T offset [ms]	slope m [mg/stroke per ms] [cc per ms]	T, linear min [ms]	T, linear max [ms]	ms add-on* [ms]
8 V	no flow				
10 V	2,890	16,765	24,474	3,4	0,887
12 V	1,363	17,220	25,139	2,7	0,419
14 V	1,545	17,268	25,209	2,3	0,000
16 V	no data				

* reference: 14V

Part number: ASNU 90/1050



battery voltage = variable, see chart
temperature: 20°C
fluid: n-heptane cycle time: 10ms

Qstat = 1072 g/min / 1566 cc

dyn. Flow = (ms - T offset) * slope m

example: flow @14V, 5 bar for 8ms ?

dyn. Flow = (8ms - 1,545ms) * 25,209 cc/ms
= 162,73 cc

This sheet shows the Off Set data at 5 bar pressure setting,. You can see that at 8V and 16V there is no flow at either of these voltages, therefore this needs to be calculated in to the map of the engine.





Performance Injector Solutions

Manifold Applications



Japanese Side Feed Conversion Plugs with ASNU Adapter Caps

The ASNU Performance Injectors can be supplied with the specific manifold fitment to suit your manifold or throttle body application. Together with the ASNU SC Range of injectors (see pages 24-25), ASNU offer the most comprehensive range of Performance Injectors available in the world today, giving you the user, the choice of fitment and flow rate together with a matching spray pattern, ensuring the best injector performance for your engine. (see our web site for Cap to Vehicle Application)



ASNU also offer a range of conversion kits from Side Feed to Top Feed Injectors, allowing the vehicle owner to increase his choice of injector for his Performance Engine. Please contact us for any special requirements.

Performance Injector Solutions



ASNU 2000 Range



The ASNU 2000 range of injectors offers the Performance tuner the option to supply the optimal amount of fuel to the engine in an atomised format that creates a balanced combustion rather than a high flow JET spray that restricts the burning quality of the fuel that causes the under or over fuelling issues they usually have to work with. All the ASNU 2000 Range have Multi-hole Orifice spray plates to create the correct fuel spray distribution angle and fuel fine atomisation, a feature all the ASNU injectors have become known for. Together with our range of fuel rail and manifold adapters, the ASNU Injectors gives the user the widest range of purpose built performance injectors available anywhere in the world today. If you should have a specific requirement then please contact us.

Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

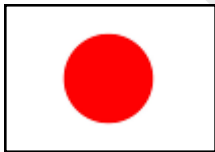
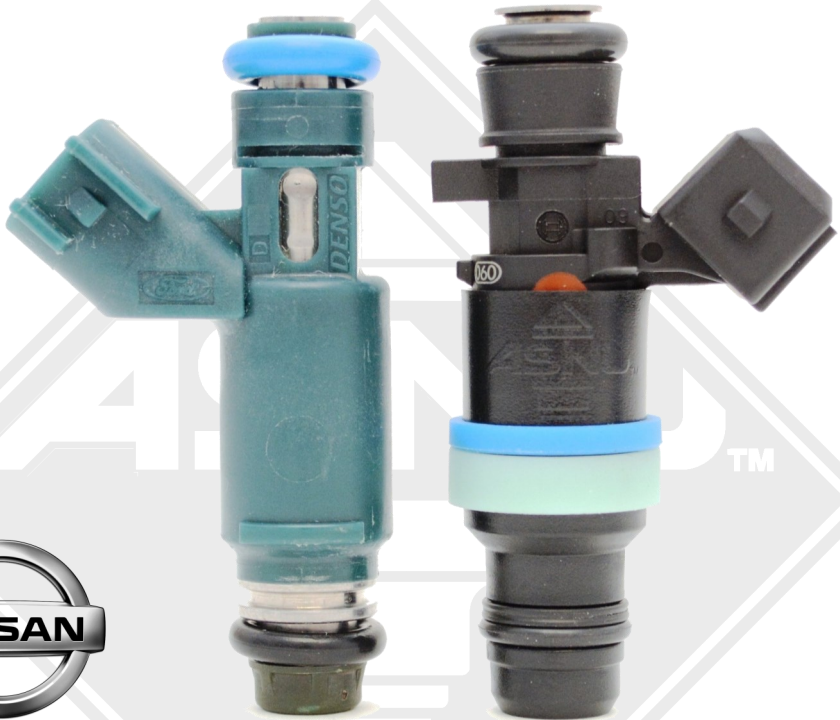
Connector: Bosch Mini Timer.





Performance Injector Solutions

Nissan - Asian



Various Applications

This injector is designed as a direct Performance for an original Denso Nissan injector.



Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

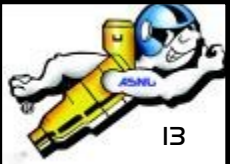
Resistance: 12 OHMS

Operating Voltage: 13.8v.

Connector: Bosch Mini Timer.

Harness Adapter: ASNU90/HA010

Performance Injector Solutions



Nissan



Nissan GTR 35

This injector is designed as a direct replacement for an original Denso Nissan injector.

Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

Connector: Bosch Mini Timer.

Harness Adapter: ASNU90/HA010





Performance Injector Solutions

Ford



Ford Focus Sti

This injector is designed as a direct replacement for an original Siemens Ford injector.



Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

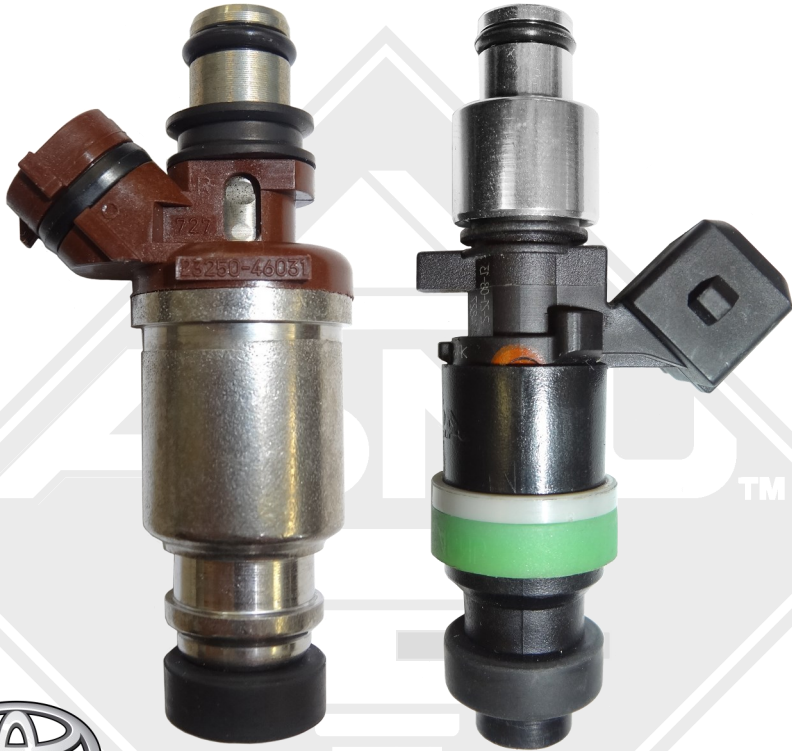
Connector: Bosch Mini Timer.

Harness Adapter: ASNU90/HA001

Performance Injector Solutions



Toyota - Asian



TOYOTA

Toyota JZX

This injector is designed as a direct replacement for an original top feed injector for the IJZ VVTI.

Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

Connector: Bosch Mini Timer.

Harness Adapter: ASNU90/HA013





Performance Injector Solutions

HONDA



Honda—Kei Hin

This injector is designed as a direct replacement for an original Kie Hin Honda injector.



Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

Connector: Bosch Mini Timer.

Harness Adapter: None Required

Performance Injector Solutions



HONDA



Honda—Kei Hin

This injector is designed as a direct replacement for an original Kei Hin Honda injector.

Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

Connector: Bosch Mini Timer.

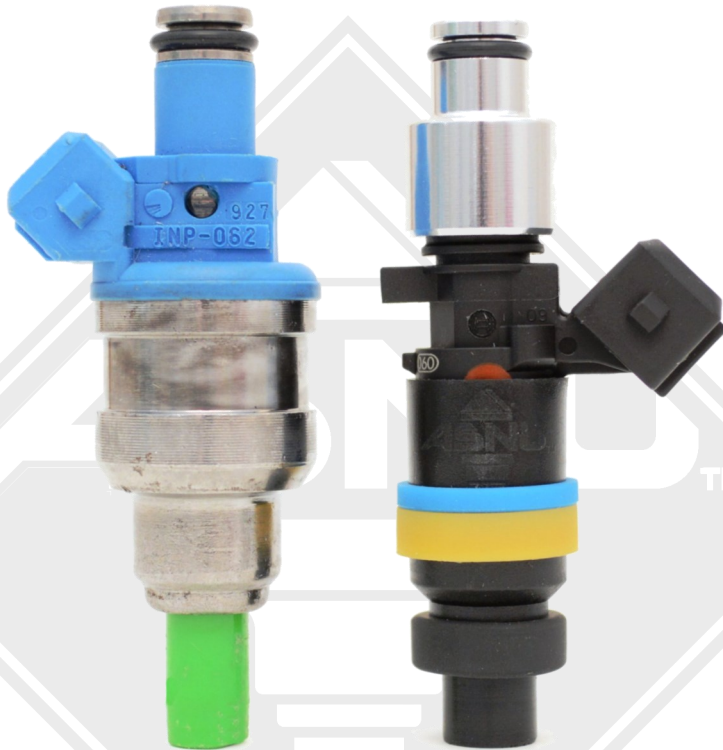
Harness Adapter: ASNU90/HA010





Performance Injector Solutions

MITSUBISHI



Mitsubishi EVO 5- 9

This injector is designed as a direct replacement for an original Mitsubishi injector.



Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

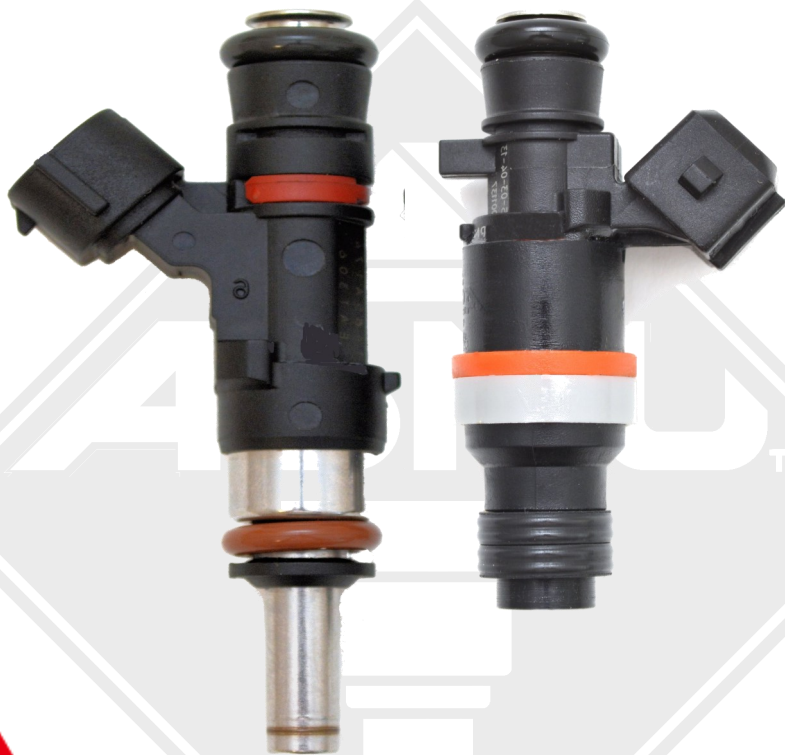
Connector: Bosch Mini Timer.

Harness Adapter: None Required

Performance Injector Solutions



MITSUBISHI



Mitsubishi EVO 10

This injector is designed as a direct replacement for an original Mitsubishi injector.

Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

Connector: Bosch Mini Timer.

Harness Adapter: ASNU90/HA010





Performance Injector Solutions

BOSCH - EVI



BOSCH

Universal EVI

This injector is designed as a direct replacement for an original Bosch EVI Type injector



Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

Connector: Bosch Mini Timer.

Harness Adapter: None Required

Performance Injector Solutions



BOSCH - EV6



BOSCH

Jenvey - EV6

This injector is designed as a direct replacement for an original Bosch EV6 injector. Also suitable for Jenvey manifolds.

Specifications:

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

Connector: Bosch Mini Timer.

Harness Adapter: None Required





Performance Injector Solutions

SUBARU



Subaru Impreza



This injector is designed as a direct replacement for an original Denso Subaru injector.

**Specifications:**

Suitable for Fuels: All Gasoline & Oxygenated Fuels

Resistance: 12 OHMS

Operating Voltage: 13.8v.

Connector: Bosch Mini Timer.

Harness Adapter: ASNU90/HAO10

Performance Injector Solutions



BRZ - GT86 - FR-S

The 93/SC series injector is designed as an injector upgrade specifically for the **Subaru BRZ**, the **Toyota GT86** and the **Scion FR-S**.



TM



This is a straight replacement with the aid of the 90/HA010 Harness Adapter and is available in flow rates up to 1300cc. Unlike other upgrade options, the 93/SC series injector tip reaches the end of the manifold without any space around it. The Laser cut multi-hole orifice plate provides a perfectly atomised spray pattern without hitting any of the manifold walls. This gives an excellent air/fuel mix, maximum combustion and performance with the minimum pollution.

Part No: ASNU93/**





Bespoke Classic Injector Solutions

EVI4 Type - SC Range



Straight



Cone



Offset

As shown with the examples above, we can provide a variety of different spray patterns to suit your requirements.

Universal Applications[™]



Using a 12 OHMS quality Bosch core Injector, ASNU can supply bespoke injectors to meet your own requirements including specific spray pattern and flow rates up to 1000cc. Using our Laser technology, the spray pattern can be of any design in the number of holes and spray angles that can be produced to meet the flow rates required in your specific requirements.



Bespoke Classic Injector Solutions



EVI Type — SC Range

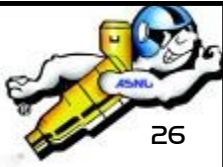


As shown with the examples above, we can provide a variety of different spray patterns to suit your requirements.

Universal Applications

Using a Bosch core Injector with the OHMS rating as close as we can match, ASNU can supply matched replacement injectors for your obsolete or damaged Bosch / Marelli / Rochester / Denso / Siemens EVI type injectors. These injectors can be modified using our Laser technology and Adapter Cap Programme to reproduce injectors to your own specifications. Using our ASNU Injector Testing & Servicing System, we can also flow match to the injector you provide as a sample. These injectors are only sold in a set and can be colour coded to match the original injectors.





Bespoke Classic Injector Solutions

Hose Fitted Injectors



Universal Applications

Using a Bosch core Injector with the OHMS rating as close as we can match, ASNU can supply matched replacement injectors for your obsolete or damaged EVI type injectors. These injectors can be modified using Laser technology and our Hose Adapter Cap Programme to reproduce injectors to your own flow specifications. We can also adapt the EVI4 type injector for use where the obsolete EVI type injectors are no longer available.



Bespoke Classic Injector Solutions



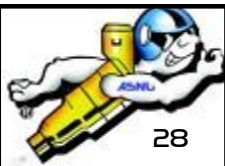
Hose Fitted Injectors



Universal Applications

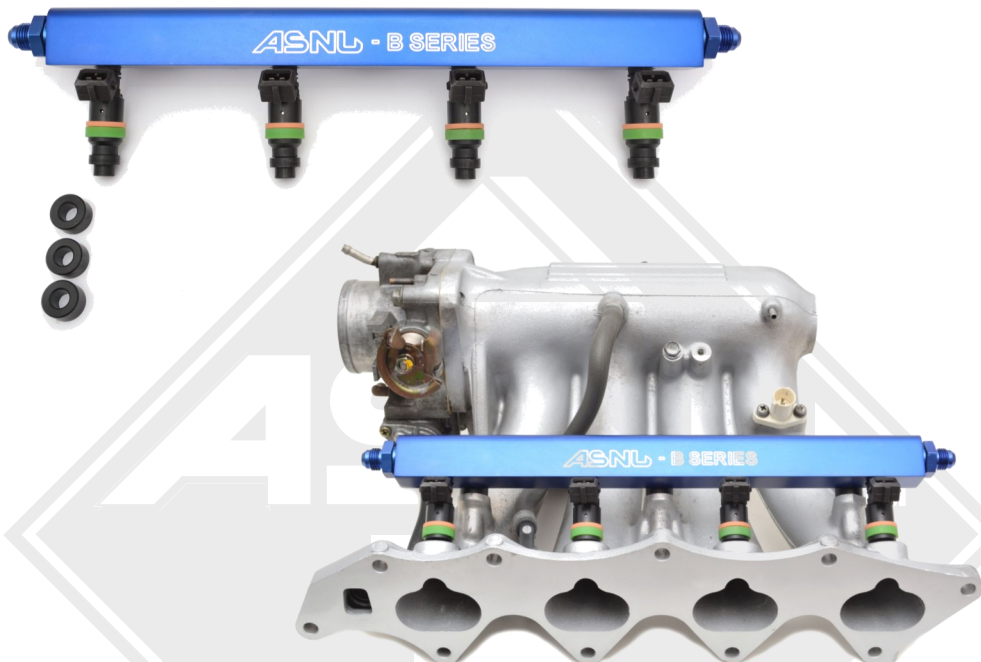
Using a Bosch core Injector with the OHMS rating as close as we can match, ASNU can supply matched replacement injectors for your obsolete or damaged EVI type injectors. These injectors can be modified using Laser technology and our Hose Adapter Cap Programme to reproduce injectors to your own flow specifications. We can also adapt the EVI4 type injector for use where the obsolete EVI type injectors are no longer available.





Fuel Rail & Injectors “Plug & Play” Kits

HONDA—ASNU 92/B SERIES



ASNU 92/B SERIES

This kit is for the Honda B series engines including PGFM Systems. This is a very straight forward fit and allows the user to pick from a range of ASNU Performance injectors, to meet the needs of the Hi Revving Honda engines.

ASNU Performance Injectors are available with Static Flow Rates from 250 cc to 1300 cc in N-HEPTANE.

The kit is complete with fuelling couplings and manifold to rail machined spacers.



Fuel Rail & Injectors

"Plug & Play" Kits



ASNU 92/WRX-I

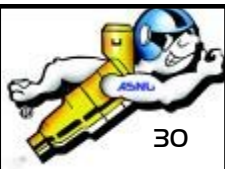


ASNU 92/WRX—I

Our new Subaru WRX-I rail allows you to convert your EJ20 Phase I, I.5, or 2 engine from its stock side feed rails to more desirable top feed injectors that are available with static flow rates from 300cc to 1300cc in N-Heptane, allowing up to 1000 HP to be supported. It is specifically designed to operate with the OE manifold. It is designed to have minimum height from the cylinder head and reduced length on the rearward end of the rail to improve clearance on the intake housing for a large turbo. The kit comes with two fuel rails, inlet manifold adaptors, rail to manifold spacers & fixing bolts.

Due to the improved flow of the rails beyond the capability of the OE regulator, our rails require the use of an up-rated remote mount fuel pressure regulator.





Fuel Rail & Injectors “Plug & Play” Kits

MITSUBISHI—ASNU 92/4G63



ASNU 92/4G63

This kit is for the very popular Mitsubishi EVO 6 4G63 type engine. It allows a much higher volume of fuel to be delivered to the injectors, especially if you are using high delivery injectors you need to keep a high volume of fuel in the rail at all times. ASNU Performance Injectors with their incredible atomisation and delivery rates are best matched with this fuel rail. The ASNU Performance Injector Range offer a Static Flow from 250 cc to 1300 cc in N-HEPTANE.

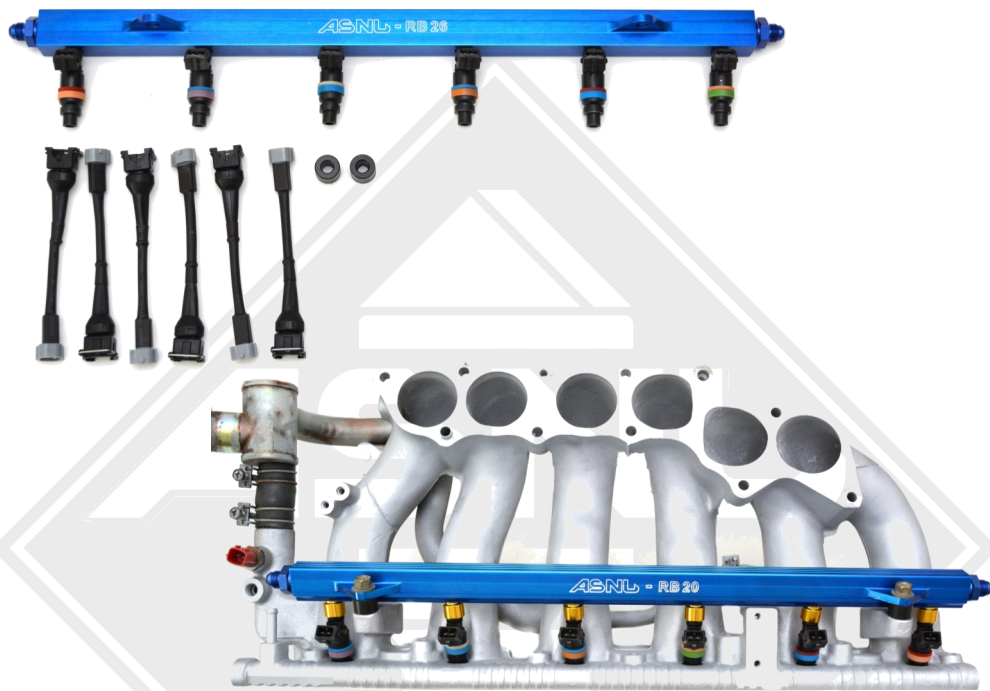
This easily installed plug and play kit comes complete with fuel rail, injector couplings, rail to manifold spacers and fuel supply connectors



Fuel Rail & Injectors “Plug & Play” Kits



NISSAN—ASNU 92/RB20



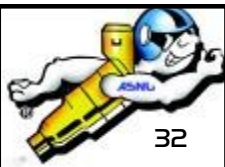
ASNU 92/RB20

This kit is for the Nissan Skyline R32 GTST RB20 DET engine and gives the user a choice of ASNU Top Feed Performance injectors.

ASNU Performance Injectors are available with Static Flow Rates from 250 cc to 1300 cc in N-HEPTANE.

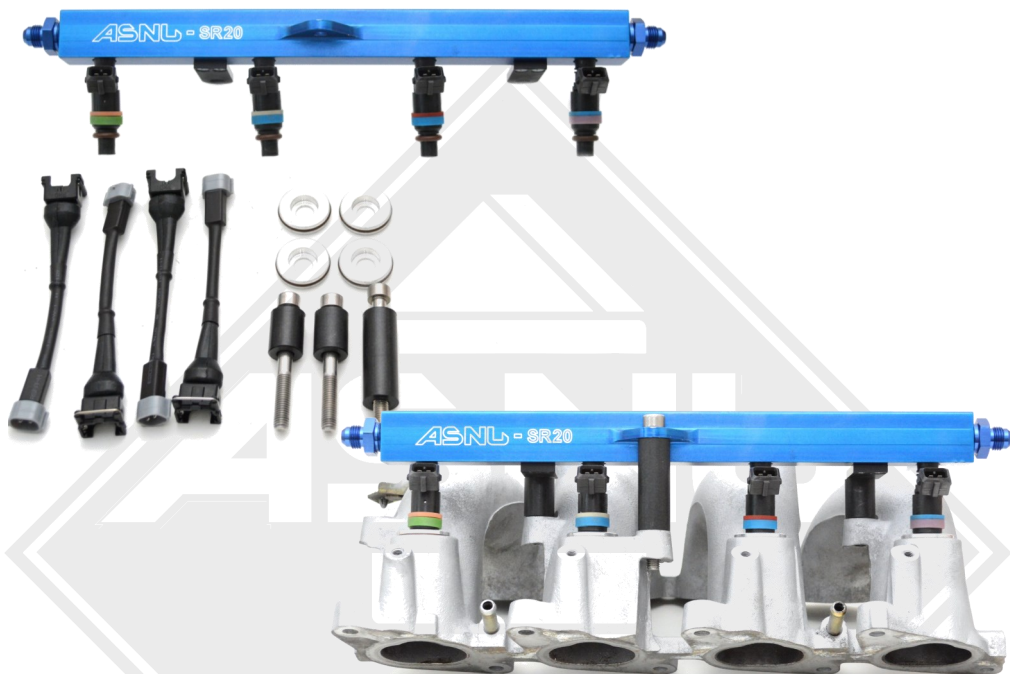
The kit comes complete with fuel rail fitted with fuel rail to injector adaptors, manifold fixing spacers and 6 off wiring harness adaptors.





Fuel Rail & Injectors “Plug & Play” Kits

NISSAN—ASNU 92/SR20



ASNU 92/SR20

This kit is for the Nissan Silvia, I80SX, S13 SR20 DET non VVT (Japanese Import only) to convert from side feed to top feed, giving the user options on using any of the ASNU Performance Injectors to suit their requirement. ASNU Performance Injectors are available with Static Flow Rates from 250 cc to 1300 cc in N-HEPTANE.

The kit comes complete with Fuel Rail fitted with fuel supply connectors, fixing brackets, spacers & bolts, 4 off manifold to injector adapters and 4 off wiring harness adapters.



Fuel Rail & Injectors

“Plug & Play” Kits



NISSAN—ASNU 92/SR20DET VVT

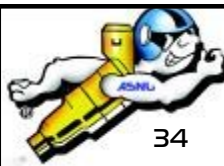


ASNU 92/SR20 DET

This kit is for the Nissan 200SX S14/S15 SR20 DET with VVT. The 2nd generation SR20DET top feed conversion rail has some significant improvements over our original design. This system allows for the conversion to top feed injectors without having to remove the idle speed control valve and keeping the original pipework. The rail is manufactured from 6082 aluminium and unlike our 1st generation rail, the new rail is machined from one piece and has standard –6 fittings either end. ASNU Performance Injectors are available with Static Flow Rates from 250 cc to 1300 cc in N-HEPTANE.

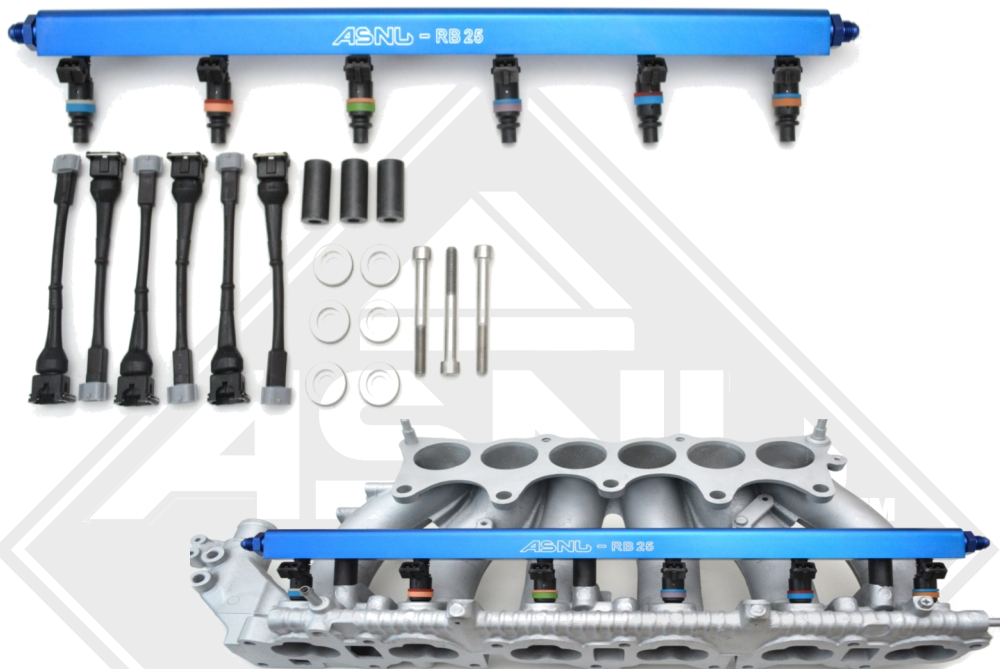
The rail is supplied complete with manifold seals for the stock inlet (aftermarket manifold fitment is available at extra cost), bolts to attach to the manifold and a BMRS PTFE with stainless overbraid link pipe, along with wiring harnesses with tails.





Fuel Rail & Injectors “Plug & Play” Kits

NISSAN—ASNU 92/RB25



ASNU 92/RB25

This kit is for the Nissan Skyline R33 GTST fitted with the RB25 DET engine and converts from side feed to top feed, giving the user options on using any of the ASNU Performance Injectors to suit their requirements.

ASNU Performance Injectors are available with Static Flow Rates from 250 cc to 1300 cc in N-HEPTANE.

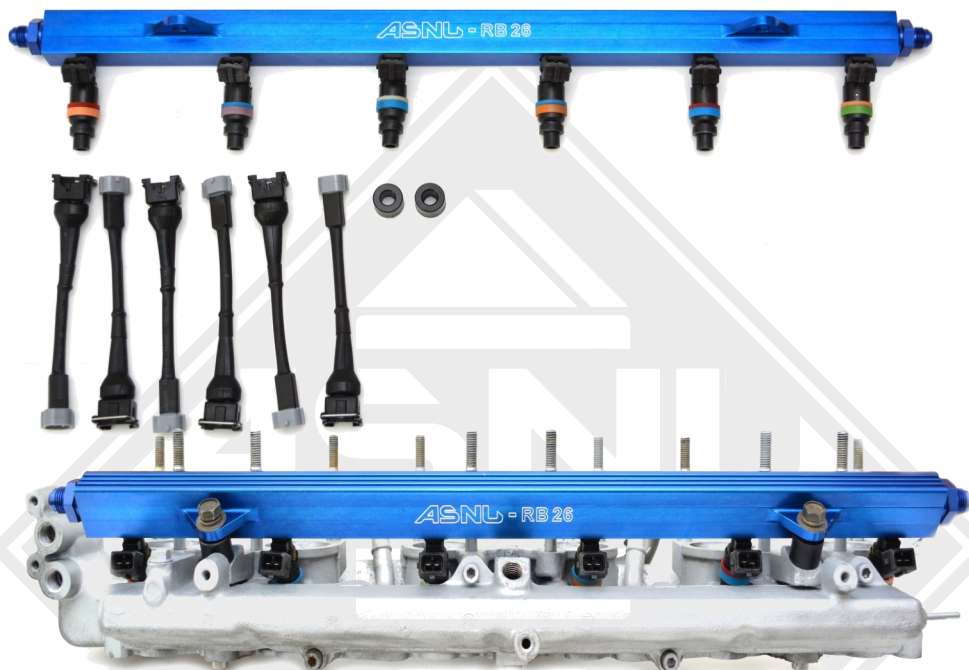
The kit comes complete with Fuel Rail fitted with fuel supply connectors, manifold fixing spacers, manifold to injector adapters and 6 off wiring harness adapters.



Fuel Rail & Injectors “Plug & Play” Kits



NISSAN—ASNU 92/RB26



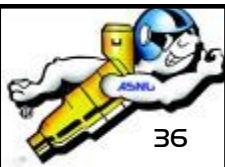
ASNU 92/RB26

This kit is for the Nissan Skyline R32, R33 and R34 GTR models fitted with the RB26 DETT engine & replaces the existing top feed injectors with the latest injector technology to improve performance, giving the user a choice of ASNU Performance injectors .

ASNU Performance Injectors are available with Static Flow Rates from 250 cc to 1300 cc in N-HEPTANE.

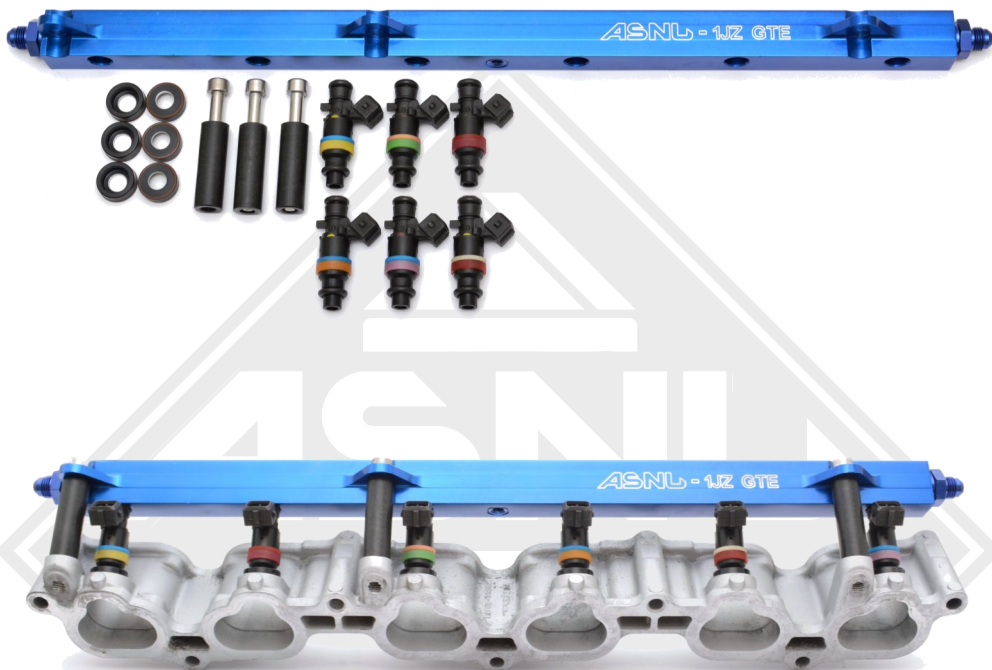
The kit comes complete with fuel rail to injector adaptors and manifold fixing spacers. The injectors will plug directly into the stock loom.





Fuel Rail & Injectors “Plug & Play” Kits

TOYOTA—ASNU 92/IJZ



ASNU 92/I JZ

This rail kit is for the Toyota Supra IJZ (Non VVT) engine and allows the user to select larger injectors to replace the side feed system. The larger internal diameter of the fuel rail allows full flow delivery to the injectors, with the ASNU Performance Injectors.

ASNU Performance Injectors are available with Static Flow Rates from 250 cc to 1300 cc in N-HEPTANE.

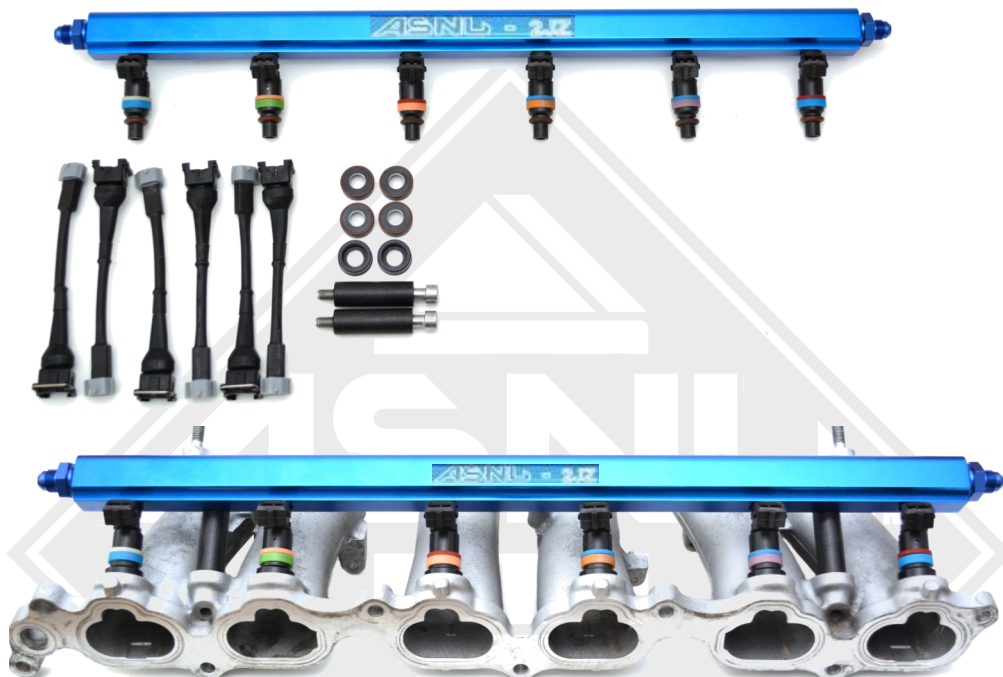
The kit comes complete with all fixings including side feed conversion plugs and manifold mounting spacers.



Fuel Rail & Injectors “Plug & Play” Kits



TOYOTA—ASNU 92/2JZ

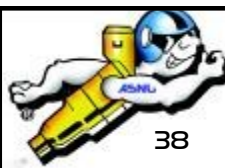


ASNU 92/2JZ

This fuel rail kit is for the Toyota Supra 2JZ model and allows the user to select larger injectors to replace the side feed system. The larger internal diameter of the fuel rail allows full flow delivery to the injectors with the ASNU range of Performance Injectors. ASNU Performance Injectors are available with Static Flow Rates from 250 cc to 1300 cc in N-HEPTANE.

The kit comes complete with all fixings including side feed conversion plugs and manifold mounting spacers.





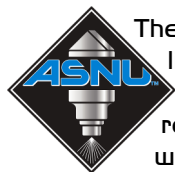
Fuel Rail & Injectors “Plug & Play” Kits

NISSAN—R35 GTR Fuel Rails



ASNU 92/R35 RAIL KIT

The new ASNU R35 GTR fuel rail is designed for ultra high performance engines looking for that something extra to give you the edge. Our rail allows for the retention of your stock rail mounted fuel damper which is required to reduce fuel rail pressure pulses when running large injectors with non standard pump systems. The rail also retains the OE injector harness mounting tabs for a professional appearance. Boasting an internal bore of 17mm, and an impressive capacity of 170cc (over 11 times that of the stock rail) this gives the rail the capacity to supply even the largest of injectors.



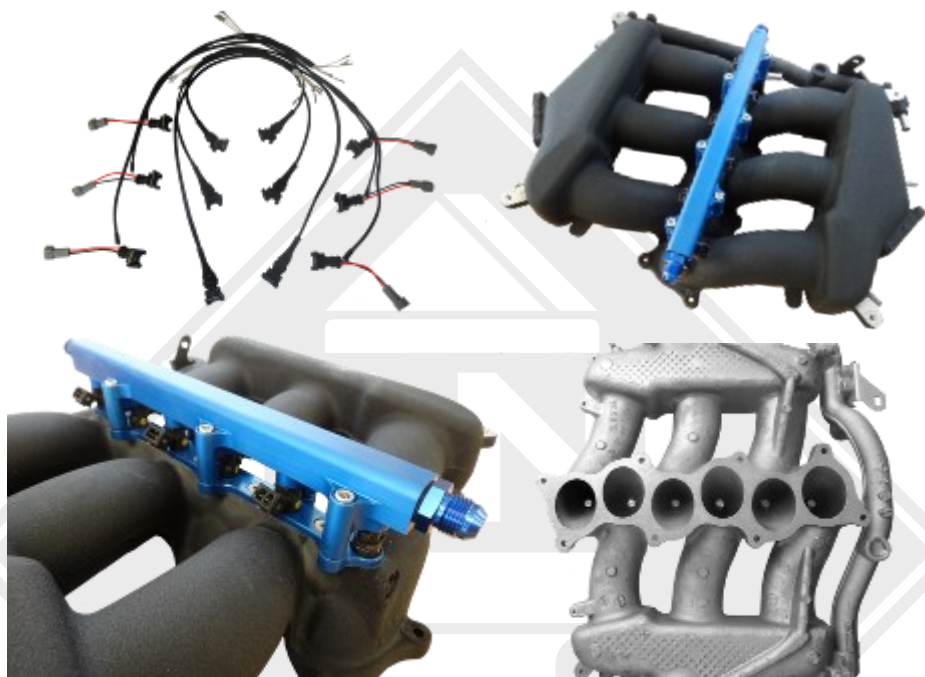
The rail is supplied with -BAN feed & -BAN return fittings and a high flow & lightweight transfer hose from BMRS. Machined from grade T6063 aluminium and finished in a hard anodised coating, this rail will meet the requirements of top tuning specialists both specification and aesthetics wise.

Fuel Rail & Injectors

“Plug & Play” Kits



R35 GTR I2-Injector Conversion

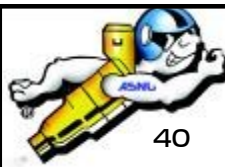


ASNU 92/R35GTR C/KIT

The conversion kit for the R35 GTR allows an additional 6 injectors to be fitted to the stock manifold. The new set-up utilises a stock (exchange) manifold that is inspected, cleaned then powder coated before being machined. The conversion parts are then bolted and bonded in place before the fuel resistant epoxy is oven cured to ensure maximum strength and durability.

Upper fuel rail and lower mounting plates are manufactured from aircraft grade T6082 billet aluminium then anodised. The injectors for this application are the ASNU SC family that flow between 300 and 1300cc static flow at 3 bar. This is on top of your existing injector flow and if run in conjunction with an ASNU I050/I4 in the primary injector location, it will allow a total of over 2600cc of fuel at 3bar fuel pressure per cylinder.





Performance Fuel “Plug & Play” Pumps

FP330E—E85 Fuel Pump



Direct replacement for Nissan GT-R R35

Part No: ASNU 92/FP330E

Please read first.

****Due to the dielectric properties of Alcohol fuel like E85, fuel pump service life will be reduced and filter maintenance increased. Be certain alcohol compatible filters are installed and frequently maintained.**

ASNU High Performance Fuel Pumps offer the quality and performance not always found in other pumps and are suitable for Pump Fuel; Race Fuel; Ethanol **E85****. The ASNU FP330E Performance Fuel Pump compliments the range of ASNU Performance Injectors and Fuel Rail Kits and together they will provide the user with the trouble free performance you desire from your Nissan GT-R R35.

This pump does not require any modifications to the system; you simply unplug the existing pump and replace with it with the FP330. This pump is a **DIRECT REPLACEMENT** for the OE pump.

These pumps flow 330Lph @ 3 Bar and all have Carbon Commutator & Carbon Graphite Bushes. All pumps are serial numbered to aid in warranty and traceability. This pump is suitable for use with various other applications using E85 fuels.



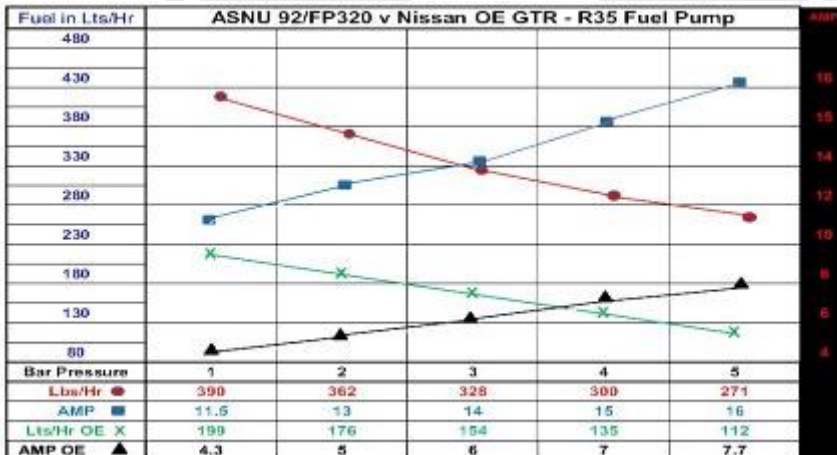
Performance Pumps Applications



FP330E - Vehicle Applications

Make	Model	Years
Acura	RSX	2002-2006
Ford	F150/F250	1997-2004
Ford	F150 Harley-Davidson Edition	2002-2003
Ford	Focus RS 15 Turbo	2009-2010
Ford	Mustang V6 and V8	1999-2004
Ford	Mustang V6 and V8 (exc. GT500)	2005-2010
Holden	Commodore VE	2007-2013
Honda	Civic	2006-2013
Honda	Civic	2001-2005
Mazda	MazdaSpeed3	2007-2012
Mazda	MazdaSpeed6	2006-2007
Mazda	MX5	2006-2013
Mitsubishi	EVO X	2008-2011
Nissan	R35 GTR *two pumps required	2008-2012
Pontiac	GTO	2004-2006
Scion	FR-S	2013+
Subaru	Legacy GT	2005-2009
Subaru	WRX/STi	2008-2012
Subaru	BRZ	2013+
Universal	Universal Fits most models	

** Universal pump kit includes 2"x2" sock, electrical connector, 4" of fuel line and miscellaneous hardware.





Performance Fuel “Plug & Play” Pumps

FP340 - Various Applications



Part No: ASNU 92/FP340/-

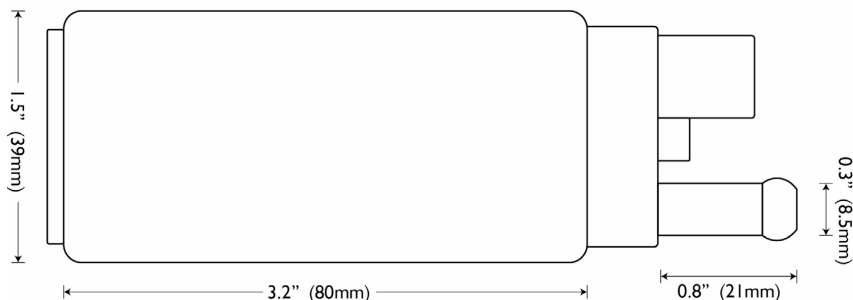
1 (Centre Inlet)

4 (Offset Inlet)

3 (Inline Inlet)

2 (GM Inlet)

4.7" (120mm)



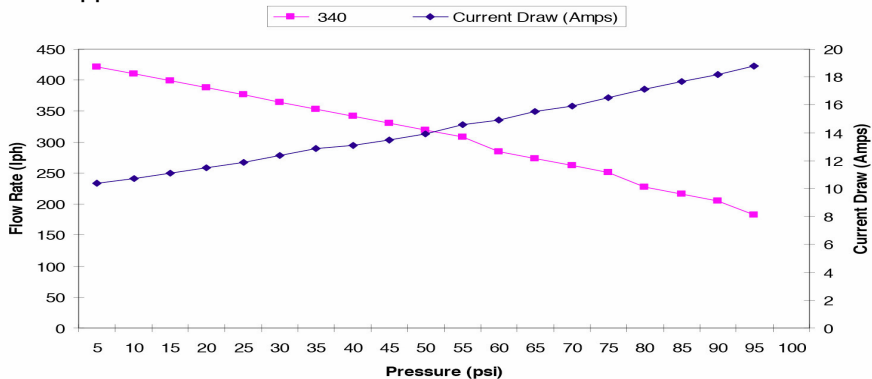
Performance Fuel “Plug & Play” Pumps



FP340 Technical Data

The 340 Fuel Pump is a high-output, in-tank, electric fuel pump that fits most popular EFI applications. The 340 is a compact, lightweight pump that bolts into many existing hanger assemblies. This pump is ideal for applications requiring more flow while retaining the factory lines and mounting provisions available in the Original Equipment (O.E.) configuration.

- Fits most vehicles (See Application List)
- Internal Check Valve.
- Includes universal filter sock.
- Designed for in-tank use only.
- Can be used in Carburetted or EFI applications.
- Turbine pump mechanism increases durability and can be used in pulse modulated applications.



Specifications

Weight: 355 grams

External Materials: Black Steel Body

Inlet Fitting Varies: (See left page)

Outlet Fitting: 9mm OD

Impeller Design: Regenerative Turbine

Terminal Post: Spade Terminal OE Fitment

Min Voltage: Input 6 vdc

Max Voltage: Input 18 vdc

Current Draw: (40 psi) 12 amps (13.8vdc)



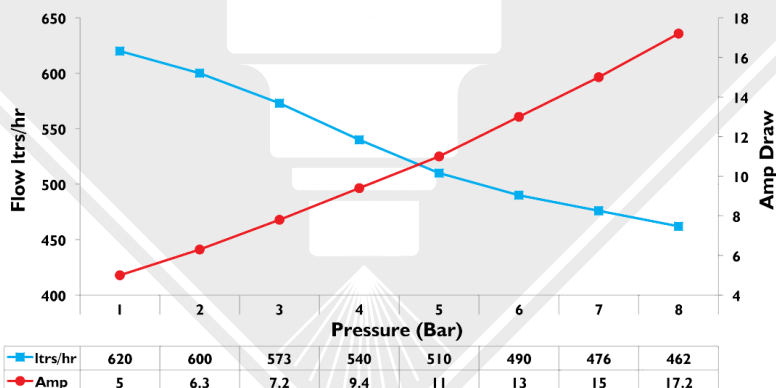


Performance Fuel “Plug & Play” Pumps

FP540 “Veyron” Technical Data

With the FP540, the system pressure can be up to 10bar and will flow more than 500 Lt/hr thanks to a higher number of revolutions per minute provided by the brushless motor. At the heart of the FP540 technology is an electronic unit that replaces the brushes of traditional fuel pumps. The electronics drive the stator which creates an electromagnetic field that spins and controls rotor speed. Communicating with the stator, the electronic driver controls fuel delivery and optimises performance of the fuel system by sending fuel only when needed, at the right pressure and flow.

Flow and pressure are adapted to the exact engine requirement. The fuel pump driver will compute the information from the engine control unit in order to adjust the pumping power to the engine request. Up to 0.2 litres of fuel per 100km are saved whereas with a standard pump the consumption is kept at a higher level even when the car is stopped or when driving slowly. Thus, although the FP540 is a high-power pump, it is not only dedicated to high-power engines, but also perfectly fits medium-power cars. Thanks to the electronic control, average efficiency is up to 40 to 50% at pressures between 1 and 10 bars; compared to 20 to 25% for a good standard pump. It delivers fuel faster for an even engine start at higher pressure and flow, compared to conventional electric fuel pumps. Overall operating efficiencies allow the FP540 brushless pump to reduce the electrical consumption on the automotive electrical system.



Traditional electric fuel pumps have brushes that supply current to the rotor. They usually suffer from wear and corrosion due to contact with the fuel. As there are no more sliding contacts in the electric motor, the FP540 has a much better resistance to contaminants (up to 600 microns). The resistance to bad fuels is increased, and its life span is almost doubled compared to the former models. It offers consistent and fine tuned pressure and flow with no deterioration in performance over time.

**** CAN BUS operation required for speed control.**



Performance Fuel "Plug & Play" Pumps



FP540X "Veyron" Inline Pump

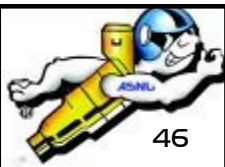
Brushless—Inline



- Mil Spec Hard Anodised billet housing.
- AN8 port fittings both Inlet and outlet.
- 1 yr warranty .
- Low amp draw. 10 amp @ 5 bar, 13.8vdc.
- Compatible with all race fuels, including, E100, M100.
- Compatible with Diesel and many known Bio fuels.
- Retrofit for the popular Bosch O44 pump, same diameter and length.
- Quiet running, proven screw pump mechanism.
- Supplied with AN8 Male inlet, AN6 male outlet as Std.
- Suitable for high pressure applications up to 10 bar (140 psi).
- MADE WITHIN THE EUROPEAN COMMUNITY

"The Veyron"
Simply The Best





Performance Fuel “Plug & Play” Pumps

FP540T “Veyron” In Tank Pump



The Veyron FP/540T In Tank Version

TM

- Brushless—In Tank
- Weight less than 2lbs.
- 1 yr warranty -AN8 port fittings both inlet and outlet.
- Suitable Mil Spec, Hard Anodised billet housing.
- Supplied with AN8 Male inlet, AN6 male outlet as Std.
- Low amp draw, 10 amp @ 5 bar, 13.8vdc.
- Compatible with all race fuels, including, E100, M100.
- Compatible with Diesel and many known Bio fuels.
- Retrofit for the popular Bosch O44 pump, same diameter and length.
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Performance Fuel “Plug & Play” Pumps



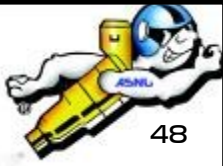
Battleship Modular Fuel System

Designed as direct replacements for stock fuel systems, the Battleship modular family are for cars needing to retain the stock tank in an unmodified form, but also need a high quality, high pressure & flow fuel system for high performance without compromise.

Using brushless screw compressor in tank Veyron pumps, the system can deliver up to 570 L/h or 1100HP in standard single pump format and up to 1140L/h or 2000HP in twin pump formats. The kits can also be uprated with lift pump kits for track work to ensure good fuel supply under high lateral G, or an additional pair of high pressure pumps to fuel up to 4000HP for drag usage.

Using the existing collection tray, the R35 system shown below comes in either single or twin pump format, with high flow stainless filter, tank lid & level sender mount, custom made pump speed controllers, relays and wiring loom and can also be upgraded if required for drag or circuit work.





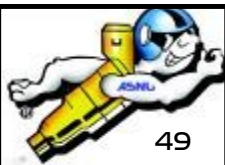
ASNU Classic GDI Injector Testing Equipment



The Classic GDI

Injector Diagnostic
Testing & Servicing System

ASNU Classic GDI Injector Testing Equipment



The ASNU Classic GDI

A complete system for the latest generation fuel injection

What is GDI?

GDI is an abbreviation for Gasoline Direct Injection, a process where the fuel is injected directly in to the combustion chamber. There are many variations of this process, with manufacturers preferring their own abbreviation of the system, here are some of the ones currently in use:

FSI = VW Audi (Fuel Stratified Injection)

SCI = Ford (Smart Charge Injection)

IDC = Renault (Injection Direct Essence)

JTS = Alfa Romeo (Jet Thrust Stoichiometric)

SIDI = Holden (Spark Ignition Direct Injection)

HPI = BMW (High Precision Injection)

HPDI = Porsche (High Pressure Direct Injection)

Ecotec = GM, Vauxhall, Opel

CGI = Mercedes Benz (Charged Gasoline Injection)

DISI = Ford/Mazda (Direct-Injection-Spark-Ignition)

GDI = Mitsubishi Peugeot Citroën, Hyundai, Volvo, (Gasoline Direct Injection)



The GDI Combustion Chamber



Bosch GDI Injectors
&
Fuel Pump



On a GDI system, the fuel is injected directly in to the combustion chamber at a much higher pressure than manifold systems, up to 200 bar.

These systems now require fuel pumps and injectors made of stainless steel and must be capable of performing at a much higher specification than ones seen on previous manifold injection systems.

Both designed to deliver very precise quantities of fuel at extremely high pressures and in short periods of time, in some cases for fractions of a millisecond.

To control these systems, the ECU is also of a higher specification and required to supply a higher current of up to 90v on some systems.

There are many manufacturers of this type of system, but Robert Bosch are recognised as one of the leaders in the development of the GDI Technology.

The GDI System has two running modes: Stratified & Homogeneous.

Stratified Charge Running Mode.

This mode is the economical combustion cycle, in some systems, the Air to Fuel ratio can be as high as 65 to 1.

In this mode the injector delivers a minimum amount of fuel in to the combustion chamber, just before the piston reaches the top and before the plug fires. This mode is used at idle and light throttle settings when the car is driven slowly.

Homogeneous Running Mode.

This mode is what would be called a normal combustion cycle, with an Air to Fuel ratio of 25 to 1.

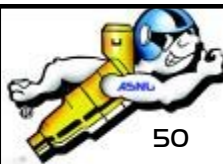
In this mode the injector delivers a normal amount of fuel in to the combustion chamber. This gives the engine the required performance as the car goes faster. The Engine Management System determines when the system needs to switch between the Stratified Charge Mode and the Homogeneous Running Mode.



Stratified Mode



Homogeneous Mode

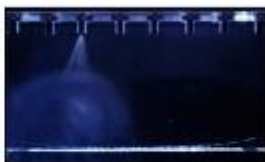


ASNU Classic GDI Injector Testing Equipment

Spray Pattern & Flow Rate Analysis

The ASNU system has been designed for comparing injector against injector at a safe operating level and is suitable for use by Apprentice Level Mechanics to Master Level Technicians.

To enable a safe and easy examination of the injector's performance, the ASNU system runs the injectors at a lower and safer operating fuel pressure of up to a maximum of 10 bar. On a vehicle fitted with a GDI system the fuel pressure will operate at a potentially dangerously high level for the inexperienced, reaching anywhere between 75 bar up to 200 bar on some systems.



The Engine Management System of a GDI is designed to open the injectors for short micro second durations, with a maximum opening duration of only 5 milliseconds, any visual analysis of the injectors spray pattern could be both difficult and dangerous. When mounted on the ASNU Classic GDI, the injectors are being supplied with the correct peak and hold currents and firing in sequential mode simulating those of the vehicles ECU.

The ASNU allows the user to safely examine the injectors spray pattern in greater detail for any discrepancies in the fuel distribution and atomisation.

In some operating modes, the ASNU system opens the injectors for a much longer duration, thus exaggerating the spray pattern and making it easier to examine the spray's performance.



GDI Injectors & Fuel Trims

The Distribution and Atomisation on a GDI Injector are critical to maintaining the correct Performance, Fuel Economy and Exhaust Emissions. They are now even more important than the quantity of fuel being delivered by the injector. The latest Adaptive Engine Management Systems have a Short and Long Term Fuel Trim Adjustment, adjusting the fuel delivery as compensation for any discrepancies in the C/O emissions. An adjustment of up to 15% can be made to the fuel delivery of each injector on some systems, but as there are a number of measurements that contribute to the Fuel Trim Adjustment, these measurements cannot adjust or correctly compensate for poor Fuel Distribution and Atomisation.

FUEL TRIM ADJUSTMENTS ARE NOT CORRECTING THE PROBLEM,



NONE OF THE CURRENT ENGINE MANAGEMENT SYSTEMS CAN MEASURE OR COMPENSATE FOR THE INJECTORS FUEL DISTRIBUTION AND ATOMISATION

A selection of GDI Injectors with discrepancies in the Distribution and Atomisation of the spray patterns

The ASNU system allows the user to visually examine the injectors on an individual cycle or in sequential mode, where they can compare the injectors performance under a range of simulated Millisecond & RPM driving cycles already programmed in to the ASNU system. The injectors can be operated at various RPM & Millisecond settings, restricted only by the number of injectors being tested in the sequential testing operation.

ASNU Classic GDI Injector Testing Equipment



The ASNU Classic GDI

Technical Specifications

Weight & Size: UnPacked: 30Kg Size: L55 W45 H70cm / Packed: 48Kg Size: L67 W57 H83cm Input Voltage: 96v ~265v

The ASNU Classic Features

- Backlit Viewing Window
- Multi Language Selection
- Digital Operational Display
- Membrane Key Pad
- Wide Range of Functions
- Injector Shot Counter Display
- Injector Shot Timer Display
- Duty Cycle Display
- Lbs per Hour to Milliliters Calculator
- Manual & Automatic Cleaning Cycles
- Suitable for Injected Motorcycles
- Suitable for Injected Marine Engines
- Suitable for LPG Injection
- For use on EVERY type of Manifold Injector
- Easy to Read LCD Screen

Classic GDI Standard Equipment

- High Pressure Fuel Pump
- High Pressure Fuel Rail
- Built In Ultrasonic Cleaning Bath

Top & Side Feed Service Tools



Additional GDI Features

- Suitable For All Types GDI Injectors
- Sequential and Simultaneous firing option for Standard Manifold Injectors
- Fast injector turn on and turn off circuits giving more repeatable results
- Injector Inductance Test - Checking Injector Electro Magnetic Circuit
- Peak & Hold Current Control with ECU matched current settings
- Single Injector Selection During Multi Injector Operation
- Sequential Injector Firing Operation for GDI injectors
- Simulates on-car Spray Patterns & Flow Rates
- Tests Up To 8 GDI/FSI Injectors at one time
- 18 Various M/S & RPM Test Settings
- Static and Dynamic Operation

Optional Extras

- USB Computer interface with adjustable settings for simulating ECU Peak & Hold Currents, Millisecond Pulse Widths and Engine RPM

GDI Service Tools



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