ASNU 2 Stroke GDI Box

This unit is designed to work with an ASNU Classic GDI / GDI Adaptor box. This unit will NOT work with any other ASNU systems or competitors' products.

The ASNU 2 Stroke GDI box is designed to allow E-tech and Ficht injectors to be tested correctly.

These injectors are commonly found in the following applications:

- Marine - Evinrude , Johnson outboards and Sea Doo jet skis
- Snow - Ski doo, and Polaris snowmobiles
- Land - Polaris and Bombardier ATV products

Setting-Up your ASNU 2 Stroke GDI Box

To operate the unit:

1.) Connect the mains power lead to the 2 Stroke GDI (2SGDI) box & directly to a mains power supply (NOT THROUGH AN EXTENSION CABLE)

2.) Connect the link harness to the 2 Stroke GDI box and to the ASNU Classic GDI / GDI Adaptor box.



3.) Exchange the display window from the ASNU Classic GDI / GDI Box and replace with new ASNU150M display window provided

4.) Insert Injector loom for relevant injector into the back of the 2SGDI box

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5.) Assemble injector to the mounting frame, with the fuel connections facing forward

6.) Fit fuel connections for the injector type and connect to the ASNU machine

7.) Operate 2SGDI via the ASNU Classic GDI / GDI Box main menu.

The 2SGDI box will only operate a single injector at a time no matter how many injectors are selected in the main menu.

The injection time is set in the main menu as normal:

- Prime - operates as normal
- Leak - operates as normal
- Inductance - not operable
- Dynamic Manual - operates as normal
- Dynamic Automatic - operates as normal
- Static flow - not operable
- Cleaning - operates as normal - see below:

Cleaning of the injectors:

E-Tec

The E-tec injector comprises of 3 separate parts that when assembled form the injector: the main solenoid pack, injector housing, and poppet nozzle. In between these separate components are a crush ring & sealing rings.

The main solenoid pack can be removed from its housing and cleaned as a separate part. A slide hammer is designed to be inserted into the threaded hole in the base of the injector; it is then removed from the housing. Between the housing and the solenoid there is a metal crush ring that also needs to be removed.

The poppet nozzle should now be removed from the solenoid - it is normally reasonably loose and can be removed with the use of a pair of smooth jawed grips by holding on the side of the poppet above the mounting joint to the solenoid pack and rotating carefully, if it cannot easily be removed then when cleaning the solenoid it is normally pumped free during the solenoid cleaning process.

Attached to the nozzle is a stainless mesh filter thimble with a plastic locating ring.

This should be inspected for damage and or clogging with debris. In extreme cases of clogging the filter can collapse due to the restriction in flow.

The filter can be removed from the poppet valve by gently inserting a small bladed screw driver between the shoulder of the poppet and the plastic retaining ring.

The filter can be cleaned in the ultrasonic bath - however it must be done in clean fluid

You are now left with the bare poppet with the spring assembly exposed.

Check the spring for corrosion and to ensure the centre section of the poppet is free to rotate

The poppet only lifts a very small amount - roughly 0. 002 to 0005 thou of an inch -

To clean this poppet, place the poppet nozzle into the cleaning holder (ASNU185PH)

The solenoid pack and filter can be cleaned mounted upside down in the specific cleaning tray 185T supplied with the kit. The filter element mounted around the middle of the injector should be completely immersed in cleaning fluid. The mesh filter screen on the solenoid pack is washed clean in situ during the cleaning cycle. The cleaning of the solenoid pack must be done in clean ultrasonic fluid.

If the nozzle has been removed before starting the cleaning cycle fill the recess where the nozzle was with fluid and cover the nozzle with the black square plastic cap provided.

If the nozzle is still in place in the solenoid the assembly will pump cleaning fluid through the injector. This will be expelled at high pressure in a fine mist until the poppet and therefore pressure is released, therefore the injector will need to be covered to retain the poppet and the cleaning fluid being pumped through the assembly.

To rebuild the injector, the o-rings around the body of the solenoid pack should be replaced and a new crush ring fitted. Refit the Teflon seal before reinstalling the poppet nozzle.

The crush ring is critical because it ensures that the correct clamping load is applied to the face between the cylinder and the injector making a gas tight seal.

Ficht

The nozzle can be cleaned for carbon on the tip as per a normal injector by placing the injector on an ASNU 97 cleaning tray - **do not pulse the injector when cleaning the tip.**

This injector has a removable injector nozzle with an integral filter. The filter cannot be removed but can be washed clean as it is a stainless wire type.

The nozzle is retained by an internal wire snap ring and can be removed with an ASNU 266 injector removal tool - take care on removal and refit not to crush or pierce the filter.

Attached to the nozzle is a stainless mesh filter thimble with a metal locating ring.

This should be inspected for damage and or clogging with debris. In extreme cases of clogging the filter can collapse due to the restriction in flow.

The filter can be cleaned in the ultrasonic bath - however it must be done in clean fluid.

On this unit there is a small non return valve mounted internally that can stick open through debris or wear. Failure of this valve will cause a significant reduction in injector flow and pressure spikes in the low pressure fuel feed to the injector. To clean this valve, immerse the body of the injector with the nozzle removed in the cleaning bath with clean fluid and start the cleaning program.

Injectors must not be left with cleaning fluid in them for any period of time and must be flushed & reflowed after cleaning. We advise flushing the injector in the prime mode 3 times before commencing the post clean testing phase.

It is good practice to collect this flushed fluid into an external container due to heavy contamination of the calibration fluid with Bioclean.

For more detailed diagnostics relating to faults at specific injector duties or engine speeds, the 2SGDI can be used in conjunction with the ASNU Remote control program that allows engine conditions such as speed and load to be replicated.

2 Stroke GDI Box Kit Contents:

• Two Stroke GDI Box	
• Display window	ASNU 150M
• Injector harness for E-Tec injector 2 Pin	ASNU 185E2
• Injector harness for E-Tec injector 3 Pin	ASNU 185E3
• Injector harness for Ficht injector	ASNU 185F
• Adapter box to ASNU connection cable	ASNU 125
• Ficht & E-Tec mounting frame	ASNU 185D
• Injector fuel connection & blanking plug for E-Tec injector	ASNU 185ETEC
• Injector fuel connection & blanking plug for Ficht injector	ASNU 185FICHT
• Cleaning Tray	ASNU 185T
• Mains power lead (country specific part)	ASNU 147
• Pintle Holder	ASNU 185PH
• E-TEC Seal Kit	ASNU 185SK

In addition to the supplied contents, you will also require:

- ASNU Classic GDI / GDI Box
- ASNU 266EXT Injector Extraction Tool
- ASNU 42 Flowrite
- ASNU 41 Bioclean

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