data generated is also being turned into meaningful, actionable insights where producers can look quickly and easily to make quick management decisions.

There are numerous animal ID technologies available to livestock producers. Radio frequency identification is used to identify cattle. These devices have an electronic number that will be unique for an individual animal and link that animal to the database. Electronic ear tags, injectable transponders and boluses with a transponder, inside in the reticulum are the latest technology for animal identification technology.

Another technology which is very useful for farmers is electronic weighing system. An easy and powerful electronic weighing system accurately measures cattle weight. Farmers can monitor cattle performance easily and continuously. These systems established on the road the waterer or cattle squeeze. Stored information sends to the main computer for evaluation.

The benefits of new technology are plentiful and include increased cost efficiency, improved animal welfare, improved working conditions, better production monitoring (e.g. remote monitoring, access to real-time data) and improved provision of important production data. The new technology means producers can work easier and improve cattle welfare, production efficiency, and profitability.

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HYDROGEN CARBON CLEAN: OPTIMIZING ENGINE PERFORMANCE

Students – Vasiliuk M.V., 44 ts, 1st year, TSF;
Levaniuk V.S., 15 mpt, 1st year, AMF
Scientific supervisor– Goroshchenia Z.M., senior teacher
EI «Belarusian State Agrarian Technical University», Minsk, the Republic of Belarus

Abstract. The article describes the essence, causes and benefits of hydrogen carbon clean of internal combustion engines.

Keywords: engine, hydrogen, cleaning, carbon deposits, vehicle, fuel efficiency.

Carbon deposits have been a problem for the internal combustion engine since it was invented. It is a known fact that carbon deposits in internal combustion engines reduce engine performance, reduce fuel efficiency, shorten engine/equipment/parts life and increase engine out emissions. Routine carbon cleaning tends to prevent these problems, and remedial cleaning removes more severe deposits that have already formed. The use of hydrogen engine cleaning is in the quest to improve engine performance, reduce pollutants in the atmosphere and increase engine fuel efficiency.

Many technicians and managers are well aware that severe combustion chamber carbon build up can create significant drivability issues with today's engines. It's all too rare, however, for them to focus on the fact that carbon build up and slowly deteriorating injector performance is a gradual process that not only affects engine performance but fuel economy as well. Despite this info, the vast majority of these potential issues remain unsolved.

Engine carbon cleaning is a process where a machine equipped with a Hydrogen Generator, and by the use electrolysis of distilled water, creates Oxy-Hydrogen Gas (HHO, consisting of H_2 and O_2 in 2:1). Once the hydrogen gas is produced, it is simply transferred into the engine through a tube into the air intake of the vehicle being cleaned. The increased internal oxygen proportion improves combustion and at the same time the catalytic properties of hydrogen make it possible for the combustion carbon to be gradually broken down to clear the internal carbon deposits. As it passes through the induction system, combustion chamber, exhaust etc., the hydrogen reacts with the carbon deposits turning the carbon into hydrocarbons, this lifts the carbon deposits from the engine and the resulting gas exits the engine via the exhaust system.

Using no harsh chemicals the treatment returns your engine to a state of cleanliness. You regain power and performance, restore lost MPG (miles per gallon) and drastically cut emissions. After treatment, there is no need to change engine oil or any type of filter. The machine acts to restore the optimum performance of your engine. Using hydrogen technology, carbon deposits are removed from the inner workings of the engine, which naturally build up during the lifetime of the vehicle.

By removing unwanted carbon build up, further engine deterioration and damage can be avoided. This will keep your engine working more effectively and smoothly for longer, creating an enhanced driving experience. The technology works with all types of vehicles – from motorbikes to planes if it has a combustion engine then it can be cleaned. Both petrol and diesel and LPG (liquefied petroleum gas) engines will show improvements irrespective of vehicle age and/or value.

The effect of carbon cleaning on your engine is dependent on how "dirty" the engine is. This is down to a number of different things, driving style, mileage, fuel used etc.

The below list will give you an idea of when you would be likely to benefit from carbon cleaning:

1) constant low rev driving;

2) short journeys;
3) lots of stop-start journeys;
4) long idling;
5) poor quality fuel.

So, if the engine doesn't get worked hard and hot, and then yes it will most likely have more carbon build up. Farm tractors are worst as they are sat idling and often short stop-start journeys at low MPH (miles per hour)/revs.

If your vehicle is suffering reduced MPG and if the cause is carbon build up then yes the engine clean should recover/reclaim that MPG lost due to the systems being dirty.

If any aspect of your cars performance (noise, roughness, idling, hunting, MPG lower, emissions, flat spots, throttle response, sticking EGR (exhaust gas recirculation)/throttle body/swirl flaps) are affected from carbon build up then the carbon cleaning will have a positive effect.

Of course, if any mechanical aspect (swirl flaps for example or EGR valve, turbo) has seized/blocked completely or broken then no amount of carbon cleaning will sort it. Carbon cleaning can't fix things that are fully blocked or broken these would need to be replaced, stripped and cleaned, fixed. However, this cleaning can extend the life of the engine for a long time. It will also help to reduce fuel costs, because after this cleaning, the car consumes less fuel by 5-7%.

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ELECTRIC TRACTORS IN AGRICULTURE

Students – Dirko N.V., 45 ts, 1st year, TSF;
Yemelyanov V.A., 97 e, 1st year, APF
Scientific supervisor – Misiuk S.V., senior teacher
EI «Belarusian State Agrarian Technical University», Minsk, the Republic of Belarus

Abstract. Electric tractors begin to appear on the world market bringing significant ecological benefits for mankind.