

West Yorkshire Fire Engine's Speedy Repair



To most people, plastic sounds like a dirty word, something we should be using less of, however, there are definitely exceptions when it comes to using plastic

Fire engines swapped their fibreglass/aluminium interior for plastic some time ago, due to all the benefits that come with plastic. And it has been proven to be a positive change over and over again.

Here at Barkston Plastic, one of our specialties is [truck body building](#) and commercial body building. This includes fire engine bodies.

And we were recently asked by West Yorkshire Fire, to help them with a problem they have been having with one of their trucks.

The fire engine came in on the 9th of November, with a leak in the water tank. And on the 11th of November it was collected, all fixed and ready for duty. This is just one of the benefits of plastic, the speed of making repairs compared to the fibreglass or aluminium constructions.

Before it came in, the fire brigade emptied the tank, so our engineers had full access to it. They needed to pull out the lockers and go into a void behind them to get to the tank.

The water tank is made of polypropylene copolymer, which in layman's terms, is plastic, but I will go into more detail about that in a moment.

Our engineers used extrusion welding, which is a technique used to join thermoplastics and composites. The welding machine heats and melts the rod whilst also heating the base material to be welded. The molten rod is then extruded from the machine onto the base material, where they then form a permanent bond.

Plastic is used on fire engines for many reasons, its lightweight, sustainable, recyclable, and robust. It is also a more cost-effective material than what has been previously used.

It is important for fire engines to be lightweight, the first reason being, they can carry more equipment without adding to the overall weight. It also means that it will be easier to accelerate faster, getting them to an emergency quicker.

With the truck being lighter it will have better fuel economy, which will then improve energy efficiency and CO2 emissions, which will help save money on fuel. Also, using metal, means that it will rust overtime, meaning that it will eventually need to be replaced, with plastic this won't happen.

Polypropylene is extremely tough and has good impact strength, making it hard to damage, unlike metal. Also due to its durability, you will save money on repairs.

It is also... widely recyclable! This amazing material does all of those things AND can be recycled into other objects, making it much more sustainable than other plastics.

We are so proud that our company can take part in helping the community and our emergency services in this way. And so pleased we can make a small difference with the materials we use.