



ALWAYS BE PREPARED

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SMARTBAR ARB

Prepare your Firefighter unit now, before a fire is imminent!

Every year fire authorities across the country urge people living in fire prone regions to be prepared. The SmartBar Fire Fighter units with Davey Fire Fighter pumps are the leading portable, high pressure, engine driven Firefighting units in the Australian market. They are Australian designed and built.

Both SmartBar and Davey has long earned reputation for dependability, so it's very important to us that the pumps fitted to our Firefighter units are also the most dependable available. At SmartBar we don't believe in taking chances with people's life or property by offering pumps that may or may not work when needed – it's just not worth the risk!

Even with the best equipment, other things need to be considered at the start of every fire season to ensure the pump unit and associated equipment is ready if needed. Here's a checklist for your pump and equipment.

Practice

Simply having the best golf clubs does not guarantee outstanding performance around the links. The same rules apply to your fire plan. Make sure you and all your team are competent in the use of the equipment:

- Can they start and correctly operate your pump unit?
- Can they operate the hoses correctly?
- Do they have a clear understanding of risks and what to do to ensure safety?
- Do you have protective clothing, goggles etc. for everyone likely to be at home?
- Do you have a well rehearsed fire plan that includes backup survival options should your primary plan fail?

Run drills; practice and make sure everyone understands the fire plan and their part in that plan.

Fuel - Petrol

Most people are unaware that petrol has a limited life, it loses its volatility or quite simply it goes "stale". This may mean that if you have a petrol driven Firefighter fully fuelled and ready to go in September, by February it may not start. There are some important procedures to follow to ensure your petrol engine is ready to start and operate correctly.

Change your fuel every two months: While in perfect conditions the shelf life should be at least three months, are you prepared to take the chance? Changing the fuel over can be by using the Firefighter or by draining the fuel from the engine. It also applies to fuel you have stored, even in approved containers.

Use a fuel stabiliser to extend the storage life of the fuel: Both Honda® and Briggs & Stratton® offer fuel additives or stabilisers which dramatically extend the shelf life of petrol. These additives must be added at the time of purchase of the fuel, and they work on two stroke fuel as well. However, they will NOT renew already stale fuel.

Fuel - Diesel

While diesel fuel has a longer shelf life than petrol fuel, it is still limited, contrary to some false beliefs.

BP Australia recommends that; under normal storage conditions diesel fuel can be expected to stay in a useable condition for:

- 12 months or longer at an ambient of 20°C.

- 6-12 months at an ambient temperature higher than 30°C.

Keeping stored diesel fuel at lower temperatures in containers free of air and water, and out of contact with zinc or copper (or alloys including them) can help extend the storage time. The main problem is the settling of sediments and gums, which in the case of small diesel engines can be a very serious issue and can do major harm to the engine.

Another very important thing to remember with diesel fuel is cleanliness; dirt in the fuel can do serious damage to fuel injection pumps, and in prolonged situations can lead to complete engine failure. Correct fuel filtration on the engine's fuel tank is absolutely critical.

For more information on keeping your diesel fuel longer refer to the following BP website:

http://www.bp.com/liveassets/bp_internet/australia/corporate_australia/STAGING/local_assets/downloads_pdfs/f/Long_Term_Storage_ADF.pdf

Engine Oil

The use of good quality, correctly rated engine oil is very important to the long term dependability of your engine, especially when you need it most. Check the manufacturer's recommendations for the correct grade of oil and stick to their recommendations. Do not use a synthetic, multigrade motor vehicle oil in your small engine, it simply is the wrong oil for this type of engine.

Diesel engines require specific oils designed for diesel, and the diesel engine on your pump will need a different oil to that used for truck or motor vehicle engines. Honda®, Briggs & Stratton® and Yanmar® all offer their own branded specialty oils to suit their engines best, but no matter who makes the oil, use the right grades and stick to trusted brands.

Running the engine regularly will help ensure the oil is distributed around the engine, thus providing the best lubrication and longer engine life.

Air Cleaners

In a fire emergency you need every ounce of performance from your pump unit to be available, and poorly maintained air cleaners won't help you. Adequate clean air flowing into the engine at the right speed and temperature is vital for efficient combustion:

- Follow the engine manufacturers' schedule and instructions for the correct maintenance of the air cleaner.
- Ensure your engine has access to ample clean fresh air.
- Be careful changing the air cleaner from the engine manufacturers' original equipment as these are specially designed for each engine.

Engine Cooling

The temperature at which an engine operates has a dramatic effect on the power it can deliver – the higher the ambient or surrounding heat and the more radiant heat the engine is exposed to, the lower the performance:

1. Protect the engine from radiant heat: Install the engine in a flame proof enclosure which has some degree of insulating characteristic. Materials such as fibre cement sheeting, autoclaved aerated concrete or even concrete bricks provide good fire resistance and thermal insulation. Any enclosure must allow for adequate flow of clean air, while still protecting the pump from radiant heat. Make sure the exhaust is correctly routed out of the enclosure.

2. Add a mist spray or sprays around the pump enclosure to both protect the area from embers, and to aid cooling and humidify the air.
3. Make sure the enclosure is easily accessible for engine refuelling and pump servicing.

General Engine Maintenance

Sometimes it's the little things that lead to problems, but they are often easy to see if you know what to look for:

Fuel lines: Check to ensure there is no water in the carburettor bowl. Make sure any fuel lines have not degraded over time.

Recoil (hand) starters: Ensure they work smoothly. Check the recoil rope for any signs of wear. If uncertain, replace them.

Service schedules: Small engines are often not treated as well as they deserve, oil changes are the most common item neglected.

Pump and Pipework

- Run the pump every week or so during the fire season to ensure it and associated pipework etc is in good working order. This will also help to turnover the fuel and make sure the lubricating oil is circulated around the engine.
- Ensure the water source is free of leaves and sticks etc which may block inlet strainers and obstruct the water flow to the pump. Consider fitting a large capacity outlet filter to the pump if sourcing water from a dam or water course.
- Check for pipe leaks and the correct operation of all valves connecting the pump to the water source and to the discharges.
- Air leaks on the suction line are the number one cause of pump problems, make sure all rubber gaskets and seals are in good order.
- Especially in permanent installations, consider using a foot valve and strainer at the end of the suction line.
- Consider utilising a buried main or ring main with hydrant or standpipe outlets strategically positioned around the property. This allows for the use of shorter hoses which are less therefore exposed to ember attack.

Conclusion

The age old motto is "be prepared"! Your pump and pipework is an important part of fire protection, but so are many other things to make sure you are truly ready.

Work through your fire plan and make sure it's able to work under a realistic assessment of the worst possible situation. This fire season is looking like being just that – the worst possible situation.

Start with the best equipment like market leading SmartBar Firefighter Units with Davey Firefighter pumps powered by genuine Honda engines.