

Aussie Pumps

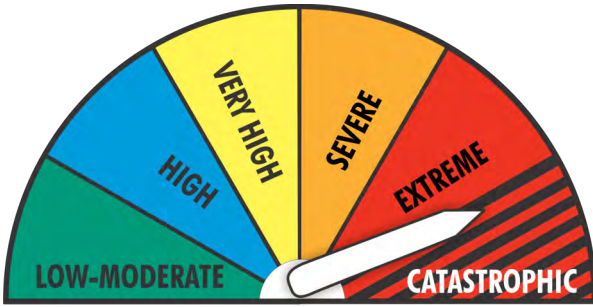
BUSHFIRE SURVIVAL GUIDE



READ, PLAN, PREPARE NOW
Don't wait for smoke on the horizon!

aussiepumps.com.au

2021



On days of catastrophic or extreme fire danger, even well prepared homes may not survive.

Leaving early is the safest option under these conditions.

If you decide to 'stay and defend' as part of your survival plan, your property must be suitably prepared.

This requires planning and preparation, including the installation of reliable equipment and regular maintenance.

When bushfires threaten, you can only protect your home if it has been well prepared!

Your home is at risk if it's close to

- bushland
- grasslands
- coastal scrub
- paddocks

Not all homes can be defended, and not everyone can cope with the stress of protecting their own home.

This guide aims to give you information on setting up a fire protection system that will give you the best chance of defending your property.

However, lives are more important and you should consider your family circumstances before deciding on your own survival plan.

BE PREPARED

Even if you plan to leave, a well prepared home is more likely to survive a bushfire. It will also be easier to defend & give better protection if you are caught at home with no way of leaving.

Essential requirements

- A property that is defensible and has been prepared ahead of a bushfire
- An adequate water supply (dam, pool, large storage tank, river or creek)
- A quality, high performance fire pump
- A well rehearsed bushfire plan



Over 1 million homes in the Urban Interface in extreme danger.



The Aussie Fire Chief is the world's best portable fire pump Designed for Australian conditions!

EXTREME FIRE DANGER ... ACT NOW

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FIGHT OR FLIGHT?

Some homes, due to their location, construction and design are not safe to defend.

Others are suitable and can be set up with an external sprinkler and fire pump system that can be used for protection from an ember attack or bushfire.

The success of the system lies with the pump and access to an **adequate water source** like a dam, pool, large storage tank or river.

Invest in a quality pump like the Aussie Fire Chief.

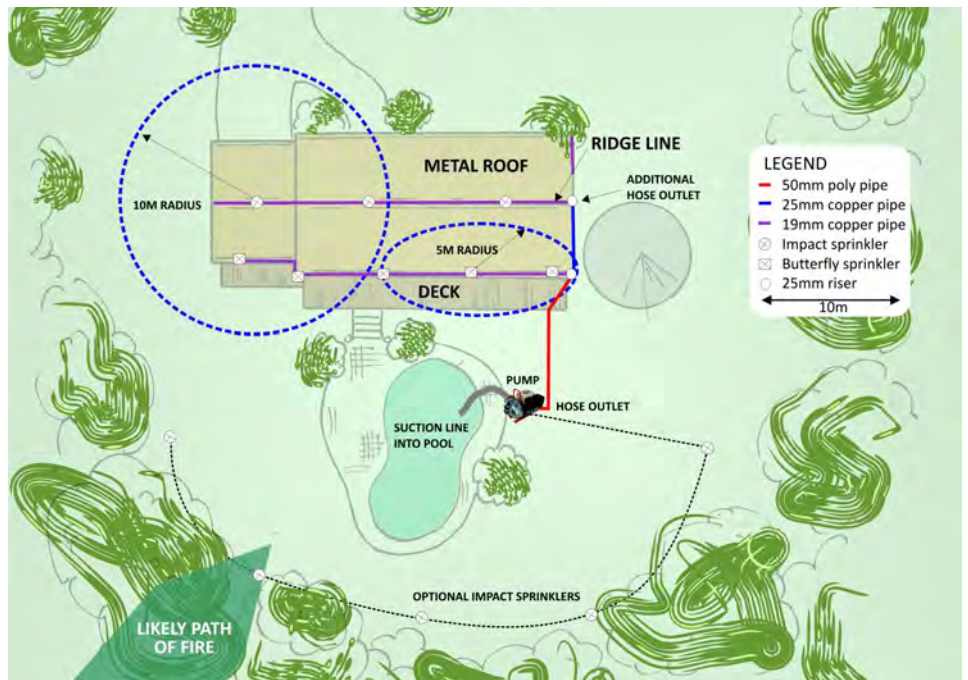
Before choosing a pump ask the following questions

- Will the pump deliver enough pressure and flow to feed the sprinklers and a couple of fire hoses?
- Will it draw water from the dam even when the level drops?

- Will it prime fast ?
- Will it start first time every time?
- Should I choose a petrol or diesel powered pump?
- What's the pump warranty and will I be able to get replacement parts?

Take a scaled drawing of your property to an Aussie Pump shop. They will advise you on what you need for an external sprinkler and fire protection system.

Check online for your nearest Aussie distributor
www.aussiepumps.com.au



WATER TANKS



Rapid Plas water storage tank

Water allocated for fire-fighting can be stored in a separate water tank reserved for that sole purpose, or stored together with water allocated for normal household under certain circumstances.

The tanks should be non combustible and ideally installed below ground. Under extreme bushfire conditions

above-ground poly tanks can melt & distort while steel tanks can loose their structural integrity.

Tanks should be fitted with appropriate hose connections so local fire fighters can attach their hoses.

Talk to Rapid Plas or your local tank supplier for full details.

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PROPERTY FIRE PROTECTION

LOCATION

Build your system around whatever water supply is readily available. This may be a swimming pool, pond, dam, well or large water storage tank.

Position your **Aussie** high pressure fire pump close to the water source to minimise suction lift. Generally speaking, with any engine drive pump, the less suction lift the more pressure the pump will deliver.

Ensure your pump has sufficient capacity for the size of the job involved (see page 9, Pump Selection Guide).

HOSES & NOZZLES

Make sure your firefighting hose is long enough to be able to cover the property.

The **Aussie Fire Chief** fire pump has a three-way outlet to connect two 1" hoses with fire nozzles. The 1½" outlet should be used with a 1½" fire

hose when maximum capacity is needed. It is not advisable to run all 3 discharge ports simultaneously.

Please note, the pump's maximum capacity is approximately 400 litres per minute using the 1½" outlet. Using a 1" delivery hose, the pump will deliver less water, i.e. around 150 litres per minute. Relate that flow rate to the size of water resource to determine how long you will be able to run your pump in an emergency.

BE READY

Always ensure your pump is primed and ready to go.

The **Aussie Fire Chief** will vertically lift from depths of 7.6m. Priming is simple. Remove the priming plug on the top of the pump, fill the pump bowl with approximately a litre of water, replace priming plug and start the engine.

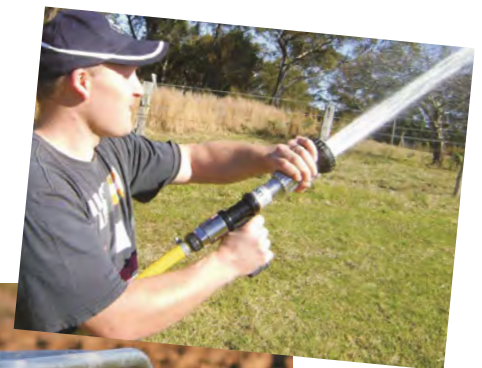
Ensure suction hose has no air leaks at the coupling and make sure

suction strainer is fully immersed.

Air leaks in the suction line are the number 1 reason a pump doesn't prime. Ensure coupling to pump contains its rubber gasket.

RETICULATION OPTION

One of the 1" outlets on the top of the pump can be permanently plumbed into sprinklers mounted on the roof of the house and immediate area. In bushland settings this is a wise precaution but care should be taken to select a pump with sufficient capacity to run both a mop up hose and a roof mounted sprinkler system. Consult your local Aussie Pump Shop for technical guidance in setting up your system.



A petrol powered pump is more affordable, lighter weight & therefore more portable

Aussie Fire Chief

Aussie Fire Captain Plus (Kubota Diesel)

Diesel drive pumps have lower running costs & are safer to refuel in a bushfire emergency

EXTREME FIRE DANGER ... ACT NOW



PREPARATION CHECK LISTS

On the house ...

- Clear gutters** & fit gutter guards.
- Check roof** is ember proof & ensure roofing is firmly fixed. **Check vents** into roof space are screened with fine wire mesh.
- Check walls** & cladding, seal any gaps.
- Fit metal screens** or shutters on windows and weather strips on doors.
- Under-floor areas** should be enclosed. If not, ensure access to put out spot fires.
- Flammable items need to be removed** from around the house, e.g. woodpile & flammable materials such as newspapers, boxes, crates, hanging baskets, wooden garden furniture, door mats.
- Move garden beds away** from the house & use stones instead of wood mulch.
- Plant fire resistant plants** around your property.
- Remove vines** & creepers from walls, cut back overhanging trees or shrubs.
- Replace wooden fences** close to the house with metal fences
- LPG gas tanks** are vented away from house.
- Ensure fuels like diesel & petrol are stored away** from the house.
- Keep emergency numbers** at hand.

On the property

- Firebreaks prepared.** A well watered lawn is a firebreak.
- Ensure that a **fire truck** can access your property.
- Remove overhanging branches** from power lines
- Clear fire breaks** around paddocks
- Keep water tanks full** and connected to a pump.
- Run water pipework from tanks & dams underground** and install a pump at the house.
- Keep farm equipment clean**, well maintained and free from grease or debris that may catch a spark.

Emergency Equipment

- Buckets** (preferably metal), mops, spray backpack units, rakes and shovels.
- Battery operated** radio and torches in case of electricity failure, & spare batteries.
- Ladders** for ready access to roof spaces
- Personal protective** clothing (see page 11)



FIREFIGHTING GEAR

- An engine drive **fire pump**, located close to a water source, fueled and primed with hoses connected. Remember that power to the home can fail before and during a bushfire. **Do not rely on electric powered pumps.**
- Hoses long enough to reach all sides of house (attached to taps if no fire pump available.)
- Water supply from tank, dam or swimming pool, if available. Mains water will be in high demand and the pressure will drop. Try to store water during winter months.
- A garden or roof **sprinkler system** in full working order.



On days of catastrophic or extreme fire danger, even well prepared homes may not survive.

Leaving early is the safest option under these conditions.



EFFECTIVE SPRINKLER SYSTEMS

One of the best methods to protect your home is with a well thought out sprinkler system.

A sprinkler system is not stand alone protection but will additionally safeguard a well prepared property in conjunction with the methods outlined in this booklet.

A correctly designed sprinkler system will completely cover the house with a water mist as well as dampen the surrounding vegetation. With an adequate water supply and a well chosen pump, it can be used to actively defend your property during a bushfire. Apart from sprinkler heads, firefighting hose outlets can also be incorporated into the system. Fire hoses can then be attached and used to put out spot fires **before they spread**.

When bushfire approaches your home it is important that you are as prepared as possible. Unless instructed to evacuate by Emergency Services, it is important that you remain on your property to start the sprinkler system and, if necessary, quench spot fires.

The fire trucks will not always be around and you should plan to be self-reliant.

Computerised, automatic sprinkler systems often fail in a bushfire emergency because of the loss of power. If you have an existing system, consider installing a connection point for an engine drive fire pump as a back up.

When designing an effective sprinkler system consider the following . . .

An independent water supply

Mains water pressure is likely to drop significantly during bushfires due to excessive demand and loss of power. An independent water supply should be used. Consider using your swimming pool, rainwater tank or dam. To be effective at least 22,000 litres of water should be available.

An engine powered pump

- For a gravity fed system, the water supply will need to be at least 25 metres above the highest sprinkler. If your water

supply is less than this you will need a pump such as the petrol or diesel powered **Aussie Fire Chief**.

- Power is likely to be cut during bushfires. It is unsafe to depend on an electric pump unless you have a generator. It is more reliable to use a petrol or diesel powered pump such as the **Aussie Fire Chief**.
- Position the pump as close as possible to the water supply. Avoid placing the pump below the water level as the pump can create an airlock and cause pump priming problems.
- Use a 50mm flame-resistant suction hose with an end strainer. **Aussie Pumps** supply complete fire hose kits which include firefighting nozzles.
- Ensure your pump is protected from the weather and also from the radiant heat of the fire.
- Your local **Aussie Pump Shop** will be happy to advise you on the right pump for your needs.



Living on the Edge

An example of a reticulation system, see it in action.



EXTREME FIRE DANGER ... ACT NOW



SPRINKLER SYSTEM INSTALLATION

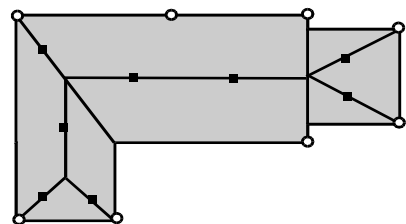
Determine the most likely approach of the fire and position sprinklers accordingly

- There are two types of suitable sprinklers available. Metal impact and butterfly sprinklers used in irrigation systems are effective.
- The spray from the sprinkler heads should **overlap** the adjoining sprinklers to allow for wind and sprinkler blockages.
- Metal impact** sprinklers should be used on the ridge of the house. They can also be placed in the garden facing the direction from which the bushfire is most likely to approach.

Metal impact sprinklers have a 10m radius and use 18 lit/min.



Sprinkler heads located so spray overlaps for continuous protection



- Metal butterfly sprinklers (5m radius)
- Metal impact sprinklers (10 m radius)

- Metal butterfly** sprinklers should be fixed to the eaves. The butterfly heads should spray in front of the windows, doors and walls.



Butterfly sprinklers cover a 5 metre radius and use about 12 litres of water per minute.

Install correct piping to ensure pressure and volume of water

- Bury the pipe** supplying water from the pump to the sprinkler system at least 375mm below ground. 50mm diameter polyethylene pipe (poly pipe) is suitable. You will need 50mm metric compression fittings for pipe and pump connections.
- Use copper pipe** or galvanised steel for all exposed piping as it

will withstand high temperatures and radiant heat. Copper is generally easier to install than galvanised steel.

- Be aware that 'soft soldered' joints could fail if exposed to high temperatures due to its low melting point. For copper pipes **use compression fittings** or silver soldered joints.
- The volume and pressure of water delivered to the sprinkler heads and hoses is determined by the diameter of the delivery pipes & pump size. **Don't undersize hose or pipes** as this will choke the pump.
- Install ball valves** strategically to enable you to redirect water to areas where it is needed most. Hose connection points with ball valves along your supply lines will give you the ability to move your hoses closer to spot fires that need attention.

Remember to protect your pump from embers & radiant heat



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FAMILY FIRE DRILL

Regularly test your system before and during the bushfire season and make sure everyone is familiar with the equipment.

1. Insect nests, spider webs, dust, garden soil and even weeds can be a problem in sprinkler heads and regular flushing is necessary.
2. Well before the bushfire season test the pump and sprinklers.
3. From then on start the pump for one minute each week during the season to check the pump is primed and easy to start.
4. If you depend on tank water it is important that, when testing your sprinkler system, you don't contaminate your drinking water with pool water. Block stormwater pipes or divert run off water away from tanks if possible.
5. If you are drawing water from a swimming pool, wash down the roof and house with town or tank water after testing your system. Otherwise staining or corrosion may occur. Flush out the pump too.



PUMP MAINTENANCE CHECK LIST

Regular maintenance will ensure that the pump will perform as required.

- Check the engine oil level.
- Ensure the air and oil filters are clean.
- Flush out stale fuel. Petrol has a limited shelf life and should be replaced every month.
- Ensure the engine starts easily.
- Check the condition of the suction and delivery hoses. Check for air leaks in the suction hose.
- Ensure the pump is primed. Check pump for leaks and replace seals if necessary.
- Check suction filter on supply hose is fitted and clear.

NEIGHBOURS

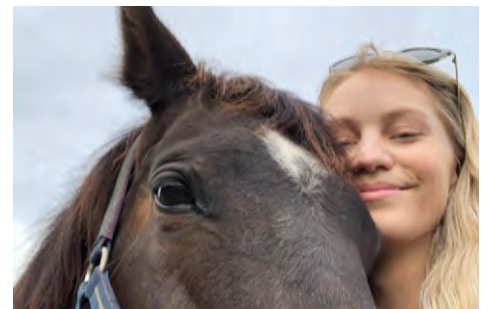
Discuss your survival plan and protection system with neighbours. You may be able to pool resources, share ideas and assist each other in an emergency. If possible, consider running a fire drill together.

If you have a large area to cover or remote outhouses, consider setting up a mobile response unit.

A water trailer with a fire pump fitted or even a tank and pump on the back of a ute, will enable you to move quickly across your property to areas at risk

STOCK PROTECTION MINIMISE THE RISK

1. Choose a suitable **lower risk area** with a low fuel load, preferably protected by a fire break. For example, a well grazed field away from scrub or bushland, with space for stock to move away from fire if needed.
2. Ensure there is **adequate water & food** as stock may need to remain in the area for long periods.
3. **Don't open gates** that allow stock to access public roadways.
4. **Move stock early** ... well ahead of the danger, preferably before an 'extreme' fire danger day.
5. **Horses should be moved** to an open paddock with minimal vegetation so they can move freely. Remove rugs and halters with plastic or metal fittings. Consider using a rope halter for handling.
6. **If possible identify** your stock, horses or pets. (for example paint spray your mobile number on their coat)



QUICK PUMP TROUBLESHOOTING

Engine not starting

Top 3 reasons No fuel, low oil, pump not level. Consult engine manual for further assistance

EMERGENCY USE ONLY ...

Low oil cut-out on Honda engines can be disabled by disconnecting the yellow wire that leads to the starter.
WARNING This may lead to engine damage.

Pump not priming

The pump will take a few minutes to prime from set up depending on length of lines.

Before starting the pump ensure the pump body is filled with water. If pump fails to prime it is usually because there is either an air leak in suction hose or the strainer is blocked. Check hose connectors have seals in place. Consult pump manual for further assistance.

Reduced performance

Pump set up too high above water level, obstruction in suction line or impeller, or small leak in suction line. Consult pump manual for more details.

EXTREME FIRE DANGER ... ACT NOW

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AUSSIE PUMP SELECTION GUIDE

Check the table below to determine the right fire pump for you. If in doubt your Aussie Pump Shop will be happy to advise you. Pump performance parameters are easy to calculate and will ensure you get the protection your property needs.

Aussie self priming, centrifugal, firefighting pumps embody advantages in performance and features that make them the ideal home fire fighting choice. All Aussie QP fire fighting pumps come with a unique **FIVE YEAR WARRANTY**.

Aussie diesel drive versions are safer to refuel in a bushfire emergency. Available with **Hatz, Kubota & Yanmar** diesel engines .

Contact your Aussie Pump shop for details or check online.

Aussie Ultralite (QP1 & QP154SX)

Low cost, **lightweight**, self-priming pumps producing up to 210 litres per minute flow and up to 100 psi pressure.

Weights start from only 5.3kg so the pump can be moved easily in an emergency. Ideal for filling gutters or light mop-up firefighting duties. Pumps will run 1" high pressure hose assembly with firefighting nozzle.

Aussie Fire Chief & Fire Captain

Powered by either 5.5hp or 6.5hp engines, the Fire Chief & Fire Captain provide exceptional performance & use top quality components.

Used by RFS & NSW National Parks and Wildlife Service , the **Aussie Fire Chief** is the choice of professional firefighters! Ideal for all household fire protection duties.

'Mr T' Twin Impeller

Designed for applications involving super high pressure and high flow requirements, the 'Mr T' fire pump will provide a high level of protection to large properties. With 150psi pressure and 500 litres per minute flow 'Mr T' twin impeller pump can run a series of sprinklers around or on top of the property and a fire fighting nozzle as well.



Mr T Twin impeller pump with 16 litre fuel tank option runs for up to 4.5 hrs without refuelling

Model	Engine			HP	Max Head (m)	Max Flow (lpm)	Suction port	Discharge ports	Self primes to (m)
QP1	Honda	Petrol	GX25 (4 stroke)	1	40	120	1"	1"	7.6
QP154SX	Honda	Petrol	GXH50	2.5	60	210	1.5"	1.5"	8
Aussie Fireman (QP-2S)	Honda	Petrol	GP160	5.5	60	470	2"	2x1", 1x1½"	7
*Fire Chief (QP205SE)	Honda	Petrol	GX160	5.5	75	450	2"	2x1", 1x1½"	7.6
*Fire Captain (QP205SEFF)	Honda	Petrol	GX160	5.5	75	450	2"	2x1", 1x1½"	7.6
*Fire Captain Plus (QP205SL)	Honda	Petrol	GX200	6.5	75	450	2"	2x1", 1x1½"	7.6
*Mr T Twin impeller	Honda	Petrol	GX270 or GX390	9, 13	95	480	2"	2x1", 1x1½"	7.6

*diesel drive and electric start options available

For more details check out Aussie QP Fire Pumps spec sheets on the website.

TRUST AUSSIE STAY SAFE



Aussie Brigade Boss ... village fire protection pumps

If you have a dam or river to draw from, Aussie has 3" & 4" high pressure fire pumps for large fire protection systems. These pumps prime from 8 metres and deliver up to 1450 lpm and heads to 70 metres.



Model	Engine	HP	Max Head (m)	Max Flow (lpm)	Suction/ Discharge ports	Self primes to (m)
QP310SL	Honda	13	50	1200	3" x 3"	8m
QP402SL	Honda	13	50	1450	4" x 4"	8m
QP310SX	Honda	13	70	1050	3" x 3"	8m
QP402SX	Honda	13	70	1050	4" x 4"	8m

NEW SALTWATER FIRE PUMP

The **NEW Aussie Sea Skipper** series of fire pumps is designed to handle saltwater. These are ideally suited for areas with high salinity or if pumping from estuaries or coastal lakes. A normal pump in these conditions will corrode internally and seize if water is left inside.

The **Aussie Sea Skipper** range feature bronze impellers and volutes, and the pump casings have a corrosion resistant treatment, inside & out.

Ask your Aussie Pump Shop for more details.



NEW Aussie Sea Skipper
Corrosion resistant fire pumps

AUSSIE FIRE HOSE KITS

Select your firefighting hose kit with care. The hose kit needs to reflect the requirements of the job.

- Suction hose will reach to water source even when the level drops.
- Strainer fitted to suction hose to prevent debris blocking pump impeller.
- Easy to use couplings.
- Hose lengths suitable to reach around your property.
- Hoses in A1 condition, leaks will cause pump problems.
- If using a 'sudden stop' gun fit a pressure relief valve to the pump for spike protection.



Check your hose lengths ...
Don't get caught short!



Percolating hose is fire resistant but must be thoroughly dried after use



A relief valve protects pump against pressure spikes

AUSSIE FIRE RANGER

For mobile fire fighting applications including dousing spot fires and defending against ember attacks use an Aussie Fire Ranger.

This self contained fire fighting unit fits on a dual cab ute. Other sizes also available.



EXTREME FIRE DANGER ... ACT NOW

STAY & DEFEND

Only stay and defend if you and your property are fully prepared.

PERSONAL PROTECTION

- ⇒ **Dress** in protective clothing (made from cotton or wool, NOT synthetics)
- ⇒ **Cover up** ... wear a wide brimmed hat, long sleeved shirt & long pants for maximum coverage
- ⇒ **Sturdy footwear**
- ⇒ A **face mask** or a damp cloth ready to cover your nose and mouth
- ⇒ Gloves & eye protections

DEFENDING YOUR PROPERTY

Before the fire arrives.....

PREPARE

- ⇒ **Move livestock** to well grazed or ploughed area away from house and wind
- ⇒ Ensure **water tanks** and pools are full.
- ⇒ Ensure your **pumps** are fully fuelled, primed and start easily. Stow fuel safely.
- ⇒ Connect and **test** all fire hoses.
- ⇒ **Turn off gas** mains and/or bottles.
- ⇒ **Move flammable items** away from the house.
- ⇒ Bring in **pets and confine to one room.**
- ⇒ Close all doors and windows. Block spaces under doors & windows with wet towels.
- ⇒ **Fill buckets**, baths and sinks with water to douse spot fires.

- ⇒ Bring in **ladders** so you can check your roof space for embers.
- ⇒ **Stay informed** using the radio, phone & apps.
- ⇒ Put on **protective clothing** & drink plenty of water.
- ⇒ **Patrol** outside putting out any spot fires or embers.
- ⇒ **Block downpipes** and fill gutters with water.
- ⇒ Dampen down **vegetation** around the perimeter of your home.
- ⇒ As fire approaches activate the **roof** and garden irrigation systems.

As the fire front passes ACT

- ⇒ Bring hoses and pumps **under cover** to protect them just before fire front passes.
- ⇒ Go inside and **shelter** in the room furthest from the approaching fire. It will be dark, noisy & hot.
- ⇒ **Check** inside the house & roof space for embers.
- ⇒ **Protect yourself** from the radiant heat.

After fire front passed ACT

- ⇒ **Keep checking** for embers in the roof space and under the house and decks, for up to 8 hours.
- ⇒ **Put out** any fires
- ⇒ Check on **pets** and animals
- ⇒ Check on your **neighbours**
- ⇒ Let your relatives & friends know you are safe

NATIONAL BUSHFIRE ALERT LEVELS



Advice

A fire has started, no immediate danger

Watch & Act

Conditions are changing, start taking action

Emergency Warning

You may be in danger & need to take action now

Aussie Pumps acknowledges the assistance of NSW Rural Fire Service publications.



Harry Bendick from NSW RFS on duty during Black Summer bushfires in 2019-20



Further reading

NSW Bushfire Survival Plan ...
www.rfs.nsw.gov.au

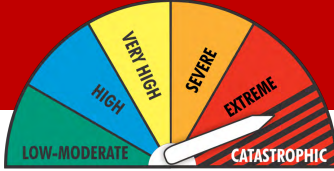
CFA Your Guide to Survival ...
www.cfa.vic.gov.au

QLD Fire & Emergency Services ...
www.ruralfire.qld.gov.au

WA Department of Fire & Emergency Services.... www.dfes.wa.gov.au

TAS Fire Service ...
www.fire.tas.gov.au

Aussie Pumps



HERE'S WHY AN AUSSIE IS BETTER

POWERED by **HONDA**



Genuine Honda GX series



Metal caps & chains

Separate replaceable suction flange

BIG 2" suction port

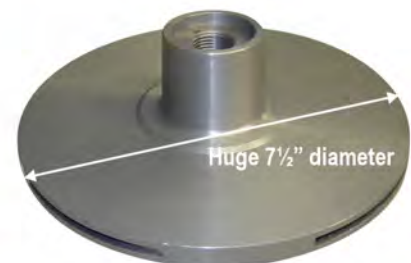
Big belly body means FAST priming

BIG drain plug

Steel skids with anti-vibration mounts



5 reasons to choose a Aussie Fire Chief



The biggest impeller in the business - 2.5 times heavier than competitors ... more water & more pressure

Performance... AUSSIE FIRE CHIEF

Max flow 450 lpm
Max head 75m
5.5HP Honda
Self primes FAST from 7.6m

AUSSIE MR T

Max flow 500 lpm
Max head 95m
9 & 13HP Honda
Self primes FAST from 7.6m



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