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President's Message

Small engine emissions standards will be the biggest single change to our industry for a generation. It begs for your attention and energy. Every person working in our industry; products development, marketing, technical and administration need to be aware of the changes in the pipeline. This message needs to be circulated to all dealers and their staff; discussed at meetings and conferences so our Industry can meet the challenge together.

Gareth Taylor, OPEA President

Engine Emission Standards are on the way: - what, when and why?

By Rob Baker and Gary Fooks

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We have been hearing for a long time now that emission standards for non-road petrol engines were on the way. In fact for so long that, like the boy who cried wolf some villagers don't believe it anymore. We also had our doubts too. But it's now firmly back on the agenda and we explain the what, when and why.

What will be regulated?

All small non-road petrol engines will fall under the new emissions standards. That includes lawn mowers, brush cutters, chain saws, and generators, all up to 19kw (about 25hp). It also includes marine engines of any size, including outboards, inboards and personal watercraft such as jet skis.

Diesel standards will come later, we are hoping in the next three years.

The standards are pragmatic and are harmonized to product types. No surprise there, as the practicalities have been ironed out over the past 15 years under the USA EPA Standards. This means that handheld power equipment like chainsaws will be subject to different emissions limits to push behind products like lawn mowers. Likewise marine engines have their own testing regime and standards.

To clarify the definition of *Hand Held* is:

The engine must be used in a piece of equipment that is carried by the operator throughout the performance of its intended function(s); The engine must be used in a piece of equipment that must operate multipositionally, such as upside down or sideways, to complete its intended function(s); The engine must be used in a piece of equipment for which the combined engine and equipment dry weight is under 14 kilograms, no more than two wheels are present on the equipment (USA EPA regulation definitions).

What Emissions?

Emissions are not limited to Hydrocarbons (HC - chemical smog, seen as blue smoke) and Nitrous Oxides (NO_x – a health risk and linked to acid rain), but also include Carbon Monoxide (CO – a poison). The standards are designed to reduce all of these gases.

For the 50% of Australians who buy compliant products now, there will be no additional cost to purchase powered garden equipment after regulation is implemented. Nothing!

There will be no additional costs because the compliant products we are buying right now already meet the standard. No changes, modifications – nothing needs to be invented or developed.

For those who haven't been buying low emission compliant products, converting to clean engines will reap benefits including fuel savings; a longer working life; quieter operation; compliance with overseas safety standards; and a higher resale value.

Change is always a challenge, but talking to members and the public over the last ten years it seems that most people agree the change is necessary or inevitable.

The bottom line: this is not new as we have heard the same government briefings for more than a decade, and have seen the overseas trends develop for longer. So the writing has been on the wall.

Fuel systems will also change

The US EPA Phase III Regulations have a requirement to reduce fuel vapour adding to smog levels. The Australian Standard will need to meet the fuel evaporative standard. These standards that have been on cars for a decade and will also come into effect for power equipment. For large installations like a boat this will apply to: low permeable hoses; fuel tank expansion capacity; and a carbon canister on the vent line.

Garden equipment will need to meet some of these requirements. Fuel tanks and hoses will be tested to ensure they comply with strict permeation limits i.e., the ability of the fuel and its vapours to reach the atmosphere is restricted. We will have more technical details in the third article in this series, but please contact OPEA if you need to know sooner.

The Timetable for Emissions Standards

Environment Minister Greg Hunt made an announcement in February 2015 that clears the path for a final statement at the next Ministers' meeting in mid-2015, and then the process of drafting the laws begins.

During the June/July 2015 meeting a final decision on whether the way forward is through self-regulation, co-regulation, or government regulation will be made. A decision has already been made to reduce emissions now we need to decide on the regulatory framework. Self-regulation and co-regulation work best when there are a few very large importers, but when there are many small businesses, Government regulation is the fairest option.

Most industry observers are reluctant to make predictions – but we feel that the Outdoor Power Industry needs our educated guesses, so no member is planning in the dark.

Our safest prediction is that we will have regulations that are a mirror copy of the USA regulations. After all, that's the only plan that has been considered in the 2007 Expert Panel's report, the Cost Benefit Analysis in 2008, in the public consultation in 2010, and in every conversation we have had with Government, as recently as last month.

Mirroring the US standard is a good thing. It means that Australians get access to the full range of products sold in the USA market, without the need for costly re-certification to some unique Australian standard. It also helps Aussie exporters when they can say "our product meets USEPA".

The US EPA small engine emissions standard is the de-facto world standard. It has been adopted by Canada and Japan with Europe and China harmonising their standard toward the same approach.

In 2010, OPEA recommended Australia adopts an averaging banking and trading scheme (ABT), to allow a mix of low emission and non-compliant engines during the phase in. But this scheme is very expensive to administer for both Industry and Government: balancing up how many of each type of engine and their emissions level would be like doing a tax return every quarter.

One alternative under consideration is that if a 'stepped-in approach' can be agreed. This would be cheaper and simpler while achieving the same result for industry and the environment. That could mean that we will move directly to Phase II of the Standard within a year and Phase III within the following two years.

In practice that will mean the current brands with the US or EU certification labels (the grams per kW per hr limits are the same) will remain, and the non-compliant engines disappear off the shelf.

In the handheld market in particular, we will see a mix of new generation two cycle and four cycle technologies, using modern cutting edge developments to achieve compliance. In the walk behind and stationary engine segments, modern, compliant four stroke engines will continue to represent the majority of the market.

What Australians own now, will not be banned.

The laws will only affect new imports after a certain date, so stock already at dealerships and warehouses won't be affected. Australian manufacturers will be treated fairly too. Just as importers will be allowed to clear their stocks, manufacturers will be given time to clear their inventory of components.

Industry will have to play fair too. At a meeting with Government in February 2015 it was made clear that stockpiling a warehouse full of non-compliant product the month before regulation commences is not acceptable.

What date will regulations start?

Here is where the crystal ball gets cloudy, so please don't make any irrevocable business decisions on what follows, but make sure your business can cope with any change required. [see Four Step Plan for Managers]

No one has yet decided when regulations would start if they are approved in July 2015. There are no secrets, just a process to go through.

As we mentioned earlier - in February 2015 Environment Minister Hunt announced that we will see a final agreement on the Decision Regulatory Impact Statement by mid-2015. So that's the agreement of Ministers and the final green light. Assuming the only rational choice is regulation (and not self-regulation) what follows is the drafting of legislation, and the ascent into law through Parliament, a process that may take as long as six months. The process will mean further consultation on the details of the new Regulations, before final drafting. OPEA is well prepared for those discussions.

With the National Clean Air Agreement planned for 1 July 2016, it would be no surprise if that was the target date for commencement of non-road engine emissions regulations, meaning six months clear notice from December legislation to July implementation. That's very tidy, but as someone in politics once said "if I tell you a date, it's guaranteed to be wrong".

Given that the next Federal Election can be no later than 17th January 2017, the Minister will want to complete the process before the election commences. So that also fits with a 1 July 2016 launch date.

Why do we need emissions standards?

Australians buy about 2 million petrol engines a year. Half of these are in cars which have had emissions standards since the 1970's. The other million engines we buy each year are non-road engines - from mowers to outboards and they have been completely uncontrolled in Australia, however standards are used overseas.

The US Environment Protection Agency has regulated small engine emissions since 1997, while the European Commission introduced the first comprehensive emission standards in 2003. China introduced small engine emission standards in 2010 followed by India in 2012.

"But the small non-compliant engines are too small. They don't pollute much... do they?"

Sorry, but they do. No non-road engine, even the cleanest, is as good as the equivalent car. For a start there are no catalytic converters, not yet anyway though there is a push to overcome the technical issues for large engines. Inboard marine engines have already started to appear with Catalysts.

A non-complaint engine pushes out about 11 times the emissions of a Stage III engine. The HC+NO_x numbers tell the tale. So while a compliant engine will have emission numbers of 11 or 13 g/kW/hr of HC+NO_x, a simple, old, non-compliant engine will have a rating of say, 132.

With numbers like this, it is no wonder we need to catch up to the rest of the world and limit what we are pushing into local air systems.

What took so long?

The road to Australian standards started way back in 2003, but escalated with expert panels in 2006. The writers sat on one of those panels and contributed to the report that came out in 2007. What followed were further studies, a Cost Benefit Analysis and a Public Consultation in 2010 that suggested regulations in 2012. Then progress stalled.

Following a change of government, the new Federal Environment Minister Greg Hunt got the process started again. In April 2014 he ordered that the report stalled in 2010 be completed within 6 months. That happened, and at the Ministers' meeting last month the National Clean Air plan was launched with an implementation date of 1 July 2016.

In the fine print on page one is a statement under Finalising Existing Work Streams – 'Under the Agreement, Governments will complete work by mid-2015 to develop emissions control measures for: wood heaters; non-road spark ignition engines; and equipment'.

Non-road spark ignition engines include lawnmowers, brush cutters, chainsaws, and pumps ... to generators up to 19kW.

So the writing is on the wall, and not in pencil. This time it is written in ink.

Want to read more?

<http://www.scew.gov.au/consultation/ephc-archive-spark-ignition-consultation>

<http://www.environment.gov.au/protection/air-quality/national-clean-air-agreement>

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Four Step Plan for Managers

Read this story and pass it on. Send it out with staff and dealer newsletters and make it a topic at your next management meeting and dealer conference.

Appoint an “A Team”, perhaps one manager from marketing/sales and one from technical/service whose role is to get up to speed on the details, and to lead the planning for change. Make this one of their objectives when it comes to annual staff reviews.

Undertake a Gap Analysis lead by your “A team”. What will our business look like in three years’ time vs what it looks like now? What are the steps we need to take to get from A to B? e.g.:

Who will be appointed Compliance officer to administer the new laws?

What training and resources will they need?

Which of our current engines comply with USA EPA and carry a sticker? Where can we get a copy of the US Certification documents?

What other components need to change? e.g.: low permeable fuel hose – can we source that from our supplier? Do we need to run down stocks of old hose?

What about current products that won’t meet compliance? Do we need to run down stocks and avoid entering into long term supply commitments? For how many years are we obliged to hold spare parts for old models?

Watch for announcements so you get the news when it’s fresh. Anticipate an announcement in late April, and a Minister’s decision in June/ July. Following that there may be consultation and this is the time to have your say on the details directly or through OPEA.