

This document is intended to be information for IPRA regarding engine blocks. Its intent is to help explain the request by the CEC in 2019 for IPRA to *"review this determination and if required the regulations"*.

In November 1999, the CEC determined that the Ford Boss 302 engine block was Eligible under the current regulations. That decision is not in question here. The CEC are the final arbiters of eligibility, and their decision is final. The eligibility of this engine block is not being questioned by the CEC, the AMRC or Motorsport Australia. No change to the CEC decision is being requested by any person or body (nor is it possible).

The CEC have asked IPRA to review their regulations, based on the implications that this decision may have to the wider IPRA community. The CEC want to know that if, when you apply CEC decision ruling across all engine blocks, this is what IPRA would like their engine rules to be. This document is intended to explain why the CEC decision was asked for and what it would mean to approved engine blocks for IPRA.

The 2019 CEC Meeting

The Ford Boss 302 engine eligibility was asked of Motorsport Australia by IPRA Aus in late 2019, a few weeks before the IPRA Nationals in Baskerville. At the time, the general consensus was that the engine had been deemed eligible by the CEC back in 2009. When Motorsport Australia were asked to investigate the outcome of the 2009 CEC for IPRA Aus, this was found in the 2009 CEC minutes:

"Based on the information available, the Eligibility Committee was unable to determine that the Ford Motorsport block was eligible"

This wording was felt by Motorsport Australia to be slightly ambiguous. Motorsport Australia was not sure if the engine had definitively been ruled ineligible or not. It is for this reason that a request for a 2nd Eligibility Meeting was made. The CEC meeting in November 2019 was asked to make a determination on the eligibility on the Ford Performance Boss 302 engine.

It was put forward to the CEC that the engine was derived from the 302 engine in the "Fox Mustang" Group A document 5266.

The CEC determined that the engine was Eligible for these reasons:

4.2 BLOCK

(a) The block must have the same number of cylinders/rotors and the same configuration as was standard or available as a manufacturer's option for that particular model (e.g. in line, horizontally opposed).

The engine block met these criteria, as it was a V8, and the Fox mustang was also a V8

(b) The block must be from the same manufacturer (e.g. Ford, GMH, and Nissan) as the original Automobile.

The Ford Performance engine is a Ford engine as Ford Performance is owned by Ford. It therefore it can be taken that any engine made by Ford Performance can be considered a Ford engine.

(c) The cylinder block must either be:

(i) derived from an eligible Automobile as detailed in Article 1.1; or

The vehicle in question was the Group A Fox Mustang, document 5266. The document was examined to look at what information was given about the engine in that document. The document contained very little information about the engine, nor any useful photos. There was some information that described these details about the engine:

- Position: Front, longitudinal, Vertical
- Material of block: Cast Iron
- Bore: 101.73
- Stroke: 76.4
- Cylinder capacity / size: 621 / 4999
- Cooling system type: Liquid

The Group A document also contained 2 photos of the engine outside the car, and one in the engine bay. That is the total of all of the information regarding the block provided by the document.

The Cams Eligibility Committee then started discussing this final statement

[derived from an eligible Automobile as detailed in Article 1.1](#)

From here, the main point was to discuss the definition of the word Derived. As noted in the meeting minutes from this is the definition to be used for the word derived:

Source: Macquarie Dictionary

Derive /dɛˈraɪv/, v., -rived, -riving.

1. to receive, obtain, take, or trace (something) from a source or origin: *He derives his good looks from his father.*
2. to obtain by reasoning; deduce.
3. *Chem.* to make (a compound) from another one by chemical substitution, etc.
4. to come or originate (fol. by *from*): *His good looks derive from his father.*

That definition of derived was used to determine if the engine was derived from the Fox Mustang engine.

The definition of derived shown above has very few limitations on what can be considered derived. Using that definition of derived, a competitor would merely need to show that the engine **can trace something from a source or origin**, as the definition itself says. It does not create any limitations to the engine materials, it does not create any additional limitation on design nor on physical dimensions. For an engine to meet the definition of derived, it merely has to show that it can trace something from the source or origin block.

In this instance, it could easily be shown that the Ford Motorsport Boss engine can trace lineage from the Fox Mustang 302.

This is the reason for the determination. This reasoning can be read in the meeting minutes and is quite clear.

As you could expect, there was quite some discussion about the meaning of the word "derived", as it was the crux of the matter during the CEC meeting.

The question was asked what limits are created by the word derived, and with the definition above, it was agreed that there were few, if any limitations.

The flow on effect of the CEC decision

This decision has the outcome of broadening the list of eligible engines beyond what most people in IPRA may have expected.

If we were to use the same decision process, and look down the Holden path, we would expect to see this:

- 1) If we searched, we would expect to find a Group A Camaro with a Small Block Chevrolet engine in it, similar in age and description to the Fox Mustang
- 2) We would expect to find that a Chevrolet Performance engine is a GM engine as it is owned by the same parent company
- 3) Given the definition of Derived, we would come to the conclusion that most engines in the Chevrolet Performance catalogue would be able to be defined as derived from the Small Block Chev in the Group A document.

To take this to the extreme, could we use a current Nascar engine in IPRA under the current rules?

This is probably worse case scenario, but we might as well start there.

Would a current GM Nascar/Circle track race engine be eligible using the same definition used in this case?

4.2 BLOCK

(a) The block must have the same number of cylinders/rotors and the same configuration as was standard or available as a manufacturer's option for that particular model (e.g. in line, horizontally opposed).

Yes, it meets this criteria.

(b) The block must be from the same manufacturer (e.g. Ford, GMH, and Nissan) as the original Automobile.

Is it an engine from the same Manufacturer? The information below comes from the current Chevrolet Performance catalogue, so we can say that the block is from the same manufacturer under the same criteria used to accept the Boss 302 engine.

(c) The cylinder block must either be:

- (i) derived from an eligible Automobile as detailed in Article 1.1; or

Could we consider this engine as derived? Based on this definition:

Source: Macquarie Dictionary

Derive /dɛˈraɪv/, v., -rived, -riving.

1. to receive, obtain, take, or trace (something) from a source or origin: *He derives his good looks from his father.*

2. to obtain by reasoning; deduce.

3. *Chem.* to make (a compound) from another one by chemical substitution, etc.

4. to come or originate (fol. by *from*): *His good looks derive from his father.*

Well, if you follow the history of Nascar engines, you can trace a history from road car engines, to motorsport engines, through to this engine. I would suggest that with the same definition used by the CEC, that you could trace something from the source to the current Nascar engine.

The Chev race block shown below is listed under the sub topic of small block engines, showing a lineage of where it came from. Given this you would be expect that the engine shown below to be found to be eligible if tested. Using the CEC definition of derived, it would be difficult to suggest otherwise.

You could follow a similar path to check eligibility for numerous Chevrolet and Ford motorsport engines in their catalogues, including their alloy race engines, and you could expect to come out with the same result.



Short-Deck Race Block (bottom, front) **A**

A. 24502650

283 Main, 350 Bore Size Short-Deck Bowtie Race Block

- CNC cast-iron competition block designed for competition use or restricted oval track racing!
- 4-bolt steel mains, 20° splayed caps on center three mains
- 8.325" deck (standard deck blocks are 9.025") can be machined to 8.200" deck height
- Camshaft is raised .433" to 4.955"
- Cam bearing bores machined for 2.250" O.D. x 1.875 roller bearings
- 3.980" rough bore
- 4.185" max bore (minimum of .250" cylinder bore wall thickness)
- Integral oil restrictors
- Must use Big-Block water pump, must raise water pump with adapters for balancers larger than 6"
- Olds Aurora V-8 bell housing bolt pattern (12.25" max flywheel diameter)
- Lifter holes and cylinder head bolt holes are not drilled
- Will accept standard, SB2.2 and splayed valve lifter patterns
- Can be machined to accept any Small-Block Chevy cylinder head
- Shorter-than-production pushrods required
- Tested to over 800 horsepower!
- Water jacket core plugs are 1.5" press-in style
- Oil galley plugs are AN O-ring style

SMALL-BLOCK COMPONENTS

The options for IPRA

The CEC has asked IPRA to consider the implications of this decision. There are three basic options that IPRA would be expected to consider.

- 1) Propose to the AMRC that IPRA rules are changed to more clearly permit any competitor to use aftermarket / motorsport engine blocks.
- 2) Propose to the AMRC that IPRA rules are changed to clearly limit engines to only engines that came directly (not derived) from a mass-produced vehicle.
- 3) Do nothing.

The important thing to consider is that Do Nothing still has an effect. The actual effect of doing nothing with the current rules is that Ford and Holden IPRA cars will be legally able to use almost any engine in their manufacturers, and their performance arms engine block range. This means that **do nothing** option makes manufacturer produced aftermarket and motorsport blocks legal in IPRA.

Ford and Holden cars would be permitted to use aftermarket and motorsport blocks, including NASCAR and V8 Supercar engines. No other brands of car used in IPRA could also do so due to the fact that no other brand that I can find offer aftermarket and motorsport blocks from a manufacturer owned company.

The Current Rule.

4.2 BLOCK

(a) The block must have the same number of cylinders/rotors and the same configuration as was standard or available as a manufacturer's option for that particular model (e.g. in line, horizontally opposed).

(b) The block must be from the same manufacturer (e.g. Ford, GMH, and Nissan) as the original Automobile.

(c) The cylinder block must either be:

(i) derived from an eligible Automobile as detailed in Article 1.1; **or**

(ii) derived from the same family of engines as an eligible Automobile using identical internal dimensions (with differences only in transmission mounting pattern, minor external casting differences etc.). The block type must be clearly identifiable, i.e. Nissan SR20DE, SR20DET, Holden Family II, Toyota 4AG series etc. The derived block must be identifiable as being from a mass produced Automobile, not exclusively developed for sporting evolution models produced for homologation purposes in small numbers for competition use only.

Motorsport Australia will be the final arbiter in determining the eligibility of a block.

(d) Motorsport Australia reserves the right to add any engine block at its discretion.

Some people may ask why are the limitations of 4.2 C (ii) not being considered, and surely, they were used in the case of the Ford Boss 302 engine. The answer is that the CEC did not consider 4.2 C (ii) in their decision. They did not need to, as at the end of the rule 4.2 C (i), there is an "**or**". This "**or**" means that if the engine complies with the (i), it does not need to comply with (ii).

Given that the engine complied with (i), there was, and is no need to consider (ii) at all, and hence it wasn't ever considered.

This distinction is important to understand. When you start looking at the application of this definition on other engines, such as the example above, it helps to realise that 4.2 c (ii) does not apply in limiting applicable engines.

Conclusion

At the end of most CEC meetings, the decision is made, and that is the end of the discussion. The only reason further action was taken in this case was due to the fact that the CEC specifically requested this to be done in the meeting, and noted in the minutes, as shown here:

"The CEC in delivering this determination is mindful that it may have ramifications for the Improved Production Racing Association (IPRA) and the CAMS Group 3J Improved Production Cars category. The CEC encourages the IPRA to engage with the CAMS administration to review this determination and if required the regulations specific to CAMS Group 3J Improved Production Cars to ensure that the regulations as intended can be applied effectively should there be a need to do so."

IPRA are not being asked by anyone to consider the eligibility of the Ford Boss engine. IPRA are being asked by the CEC to consider the ramifications of this decision to the rest of IPRA's engine eligibility list and to consider if it now applies in the way that is intended.