Honda Performance Development, Inc.

Issue Date:
Issued by: A. Salzano

HPD F4 Engine Power Verification Protocol
Technical Bulletin # F4-2021-EN002-00

Approval



Overview

Any team is allowed to request that their HPD F4 engine be dyno tested at any time to verify the power output is within the FIA required range.

At track protocol:

Any down on power claims at an official event should be reported to the onsite HPD representative. These claims must be presented with appropriate accompanying GEMS data. Video evidence alone cannot be considered and must be supplemented with GEMS data. Comparison of multiple laps and confirmation of drafting is required.

Should HPD find any issue in the engine operation data, the team will be notified of the appropriate repair or part replacement to bring the engine back into normal operation.

Should HPD not find any issue in the engine operation data, the team will be notified as such and will be given recommendations of additional items to check to verify engine health. If there is any additional concern, the team is allowed to arrange engine dyno verification after the event. HPD cannot confirm engine power without dyno measurement and therefore will not replace engines at the track for power complaints under any circumstance.

Any engine changes performed at an event due to a power concern is at the sole discretion of the team. It is recommended that the team read and understand the Sporting Regulations regarding engine changes so that the best decision can be made for the team and driver.

Dyno Verification Request:

Dyno verification requests must be made using the standard “HPD Engine Service Request Form” available on the series website. All required information (including accurate mileage) must be provided to avoid delays. The team will be responsible for arranging shipment and must place a $1,500 deposit with HPD for dyno verification before the engine is measured. After the engine is measured on the dyno, HPD will inform the team of the findings. HPD, by policy, will not provide the dyno sheet.

Resolution:

If the engine is within the required power range:

The team has the option of receiving the engine back as-is or requesting a service, if desired. The team is responsible for all costs incurred with either option. The initial deposit is not refunded.

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If the engine is <u>outside</u> of the required power range:

<u>For leased engines with less than 10,000km</u>:
Per the lease agreement, if the engine is down on power through no influence of parts outside the engine homologation perimeter nor by error in team operation as determined by HPD, the deposit will be refunded, and the engine will be returned to the proper performance level by HPD.

<u>For team-owned engines with less than 10,000km</u>:
If the engine is down on power based on an issue with parts inside the engine homologation perimeter <u>and</u> HPD determines that all operational guidelines have been followed, the deposit will be refunded and HPD will return the engine to the required power level.

If the engine is down on power based on a problem determined to be caused by a part outside of the engine homologation perimeter or by operation of the engine outside of the guidelines, the deposit will not be refunded. The team will have the option to have the engine returned to the proper performance level or keep the engine as-is. All costs of either option will be incurred by the team.

<u>For team owned engines with greater than 10,000km</u>:
HPD will recommend a rebuild for any engine over 10,000km regardless of the power output. All costs are incurred by the team should the team choose to have the engine rebuilt.

<u>FIA F4 1st Gen Power Output Requirements (reference):</u>
The performance criteria between new Power Units must stay within +/- 1.5% on the RPM operating range defined by the FIA, compared to the reference power curve declared by the engine manufacturer during the homologation.
The Power Unit manufacturer must declare the performance tolerance over a lifetime of 10.000km considering ideal conditions (engine dyno). The Power Unit performance has to stay within a band of 2.0% on the RPM operating range defined by the FIA, compared to the reference power curve declared by the Power Unit manufacturer during the homologation.

Engine parity is at the top of HPD's priorities and meeting the FIA performance range is a requirement per the regulations. HPD would like to remind teams that while the engine is often the central focus of acceleration and top speed, there are many other factors which influence the ultimate performance of the car. It is recommended to follow all maintenance and assembly guidelines for all components of the vehicle to ensure the best possible result.

If you have any questions regarding the content of this bulletin, please contact Andrew Salzano at asalzano@hra.com or GRMS Admin at GRMSAdmin@hra.com.

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