Alan Harding AHS Motorsport

TECHNICAL CASE STUDY

Racing & Classic fuels using sustainable components.

SUSTAIN

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Single Port 1,300cc air-cooled VW Type-One to AHS Motorsports Formula Vee Class 2 specification

TEST 1

Run existing fuel taking readings on max power, max advance, minimum advance, temp of engine and fuel.

TEST 2

Reduce fuel flow by means of fitting smaller main jets in the carburettor to a point of power loss at specific rpm throughout the useful rev band of the selected engine.

TEST 3

Increase fuel flow to the point of significant loss of power.

TEST 4

Return to lowest mid and top mixture points and plot effects of ignition low to high levels of advance.

Once this information was gained and rechecked by rerunning the critical points again, the fuel was changed and SUSTAIN Racing C70 was used to complete the above tests again.

TEST 9

Ascertain if the inlet track lengths affected each fuel in any significant way (which was not expected) and proved to be true.

TEST 10

Take the same car to Croft Circuit to test the SUSTAIN Racing C70 on track. Our primary interest was to ascertain if this fuel behaved better or inferior to our current fuel. This test was to be conducted with jetting and advanced ignition settings best indicated on the previous tests.

TEST 11

Test to destruction, this test was to ascertain how lean we could run the air/fuel mixture before damage was evident and what damage would result.

CONCLUSION

The SUSTAIN Racing C70 appears to have a wide range of useful operational parameters. By this we were able to run considerable amounts of ignition advance before knock was detected. This fuel would perform well even when the mixture was reduced beyond the operational window of our previous fuel. Although the temperature of the fuel did affect the performance, we were surprised by how little the effect was compared to the other fuel.

The SUSTAIN fuel was better suited to our engine on test throughout the range of tests taken.