



KPV 100cc Piston Port Engine

1. Carburetor: Waldron WB3A will be the only carburetor allowed.
 - Diaphragms are a non-tech item
 - Both internal screens need to be intact and present.
 - Carburetor Inlet Track Length should be measured at 2.600" at its minimum and its maximum can't be over 2.800". Inlet track length is measured from the face of the piston to the surface on of which the carburetor mates with.

 - Machining of the throttle shaft is not allowed.
 - All components not specified here must be stock appearing
 - WB3A bore must be "as cast" and will not exceed 1.010" (25.65mm) at any point.
 - The Diaphragms are open.
 - Shimming of the inlet spring is allowed & inlet spring are open • Fuel must go through the internal OEM passages only
 - The two internal screens must be installed. Single screen isn't allowed.
 - Throttle shaft can not and machined.
 - All components not specified here must be stock appearing
 - WA55B bore has to be "as cast" and can not exceed 0.630"
 - Carburetor base gasket should be removed for tech.
 - Carburetor mounting plate and spacer must be straight bore.
 - No external fuel pumps allowed.

Carburetor/Throttle Adapter

We only allow KPV aluminum carburetor adapter as the only legal metallic adapter. The adapter maximum inner diameter can not be over 0.630".

If Non-metallic carburetor and throttle insulator is to be used, than the diameter range should be measured at more than 1.000" and less than 1.050".

With the non-metallic insulator installed, the minimum inlet tract measured from the carburetor-mounting adapter to the face of the piston is to be over 2.9000, but under 3.000" –both with the carburetor base gasket removed.

Air-box/filter Adapter cannot be “velocity stacked” or shaped to act as a “ram air” tube. For JR 1 Walbro WA55B carburetors, the minimum inlet hole size is 0.750”.

2. Piston

KPV OEM factory pistons and rings are the only ones approved.

The mold number and the name of piston will be cast on the inside skirt surface. The bottom of the piston is allowed to be machined for port timing adjustment purpose; however, it has to be kept a 90 degree profile to the sides of the piston and has to be symmetrical front and back. The top of the piston should be dome shape. Chamfering of the bottom of the piston is legal up to .030” from the bottom of the piston to the sidewall of the piston.

3. Bore & Stroke -Maximum Bore: 2.085” (52.96mm) Maximum Stroke: 1.816” (46.13mm)

Piston Wrist Pins

Must be KPV OEM type, steel. ID maximum: .410”. OD .550” minimum and .552” maximum. Minimum length is 1.565”

Connecting Rod

Must be KPV OEM. The connecting rod length, center-to-center, is 3.774”-3.786” minimum.

Crankshaft

Must be KPV OEM. Shot peening and polishing is allowed.

4. Cylinder Head

Any machining of the cylinder head to fit a sealing device isn’t permitted.

The spark-plug hole, combustion chamber, and squish band must have a common axis (concentric) to the head bolt circle within 0.020”.

5. Combustion Chamber Volume

Test is only to be performed after the engine has cooled to ambient temperature. Cleaning of piston head isn’t allowed.

Volume should be measured at 11cc as an LAD CC tool. LAD spark plug hole tool, and Marvel Mystery Oil.

6. Ports (intake, exhaust, and transfer):

They must maintain original design (shape). The aluminum and cast iron finish of intake and exhaust ports are non tech items. ; however, they must fit stated dimensions. Transfer ports are to remain “as cast”. There should be no removal or addition of materials in the transfer passage areas, except minor amount of grinding allowed at the junction of blending of cast iron and aluminum.

7: Intake Port

It should have a maximum width of 1.380" and height is maximum of 0.775" to the bottom of the port from TDC.

8.Exhaust Port

It's height is a maximum dimension of 1.155" at TDC.

9.Ignition

Both the PVL 458 coil, rotor, and stator and Selettra P3356 ignition with black or blue P3356 coil are legal.

10. Piston Wrist Pins

Must be KPP OEM, steel. ID maximum: .410". OD .550" minimum and .552" maximum. Minimum length: 1.565"

11.Connecting Rod

Must be KPP OEM. Minimum connecting rod length, center-to-center, is 3.774"-3.786".

12. Clutch

KPV spec drum with the 3 factory installed external cooling holes on the outside of the drum face, this is the only legal drum. No modifications of any kind are allowed; must be used as manufactured: no removal of material from any surface. No oiling or greasing of clutch is allowed.

Clutch Stall Check

Test stall limit is 5,000 RPM with driver in kart.

Place in front of rear wheel a 3/4" x 3/4" bar.

Start the kart & driver must run over the bar with the clutch engaging under 5,000 RPM to be legal.

13.Air Filter /Airbus Adaptor

Mounting adapter for air filter /air box cannot be velocity stacked- shaped.

14. Exhaust Pipes

Exhaust Pipe for KPV 2

"Horstsman" HPV-2 pipe with removal end cap allowed. Flex length is 10" minimum, no maximum.

"Horstsman" HPV-2 pipe with welded on end cap allowed. Flex length is 10" minimum, no maximum.

"K-2" stamped pipe allowed. Flex length is 10" minimum, no maximum.

Exhaust Pipe for KPV 3:

"Horstsman" HPV-3 pipe with removal end cap allowed. Flex length is 12" - 12.5"

"Horstsman" HPV-3 pipe with welded on end cap allowed. Flex length is 11.875"-12.375"

R.L.V. 3 pipe allowed. Flex length is 9.375" - 9.875"

Exhaust Pipe for KPV 4:

"Horstman" stamped HPV-4 pipe with flex length of 10"-10.5"

"H-4" stamped KPV-4 pipe with flex length of 9.875"- 10.375"

Carburetor: Walbro WB-3A

Flex

Flex must be a solid pipe. Length of the flex, measured from the backside of the piston to the outer end of the flex pipe is: 12-12.5" for Sportsman and Junior Classes and 10 minimum for Senior Classes.