Tech Tips
Carl Crank Porting Specs for 100 and 125cc Sachs Cylinders

The following information is reproduced from a letter dated February 26, 1973 from Carl Cranke who was Service Manager at Penton West in California. The cover letter, diagrams, and instructions were provided to me by Victor Monz (CA). A METTCO dyno chart (not shown) was also included which shows 19.0 horsepower at 8,000 RPM after modification for a 100cc Penton.

Alan Buehner

February 26, 1973

Gentlemen:

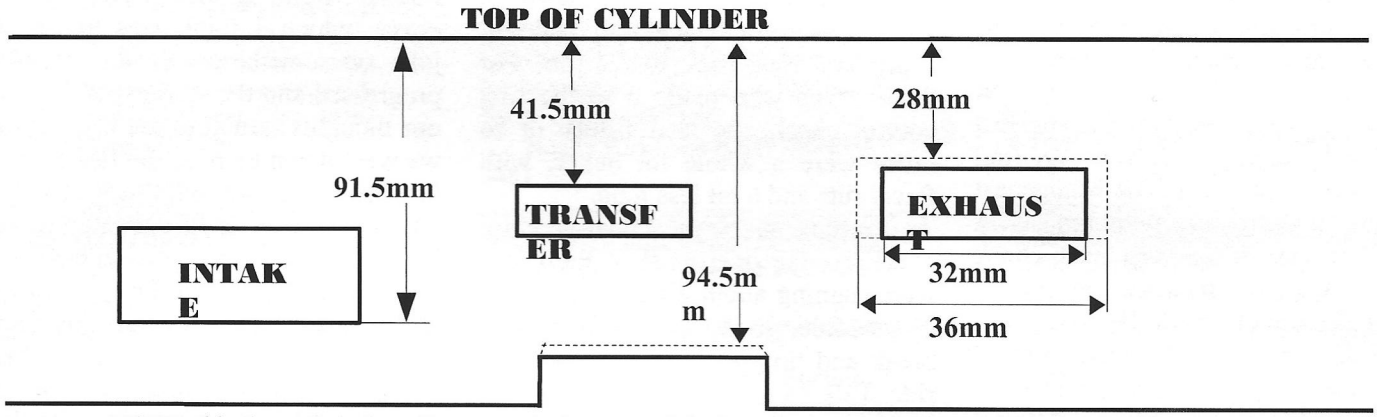
The following are modifications that we have found to be advantageous in track and moto-cross competition. Bear in mind they are strictly experimental and there are no guaranteed results due to the many variables involved. If performed in an accurate and workmanship like manner, we are sure you will realize good results. After modification we have found the engines reasonably reliable but remember – nothing is free – the price you pay will be longevity.

Carl Cranke, Service Manager

PORT DIMENSIONS FOR 100 AND 125cc

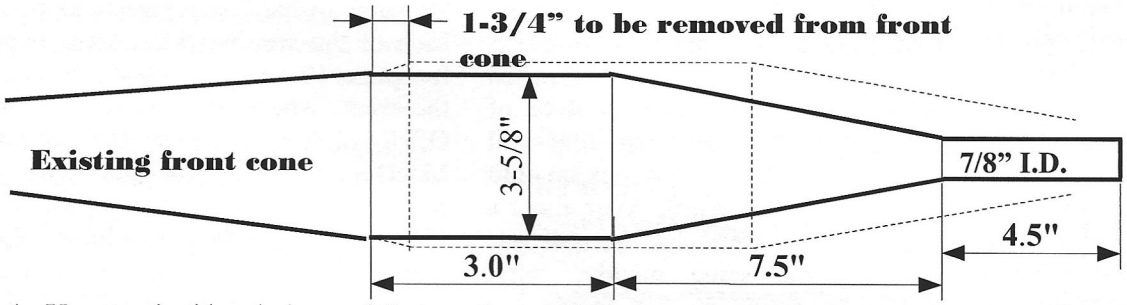
1. Grind cylinder to dimensions shown on drawing.
2. Cut 2mm from inlet side of piston skirt.
3. Grind inlet spigot to 28mm diameter and blend into port
4. Machine cylinder head .050 and re-contour squish band to 48.0mm for 100cc and 54.0mm for 125cc at a 14 degree angle
5. Chamfer all port edges with a smooth radius.
6. We use a 27mm Bing on the 100cc
   - 135 Main Jet
   - 2.76 Needle Jet
   - 35 Pilot Jet
7. We use the new 28mm Bing on the 125cc
   - 140 – 145 Main Jet
   - 2.76 Needle Jet
   - 35 or 40 Pilot Jet
8. On the 125cc we use the standard exhaust pipe with the rear shielding cut off and a silencer installed on the existing stinger.
9. For the 100cc pipe, see bottom drawing.

PORT DIMENSIONS FOR 100 AND 125CC



NOTE: this drawing is for reference only (not to scale). Actual corners of ports are rounded (radiused).

100cc EXHAUST PIPE MODIFICATIONS



1. Use standard head pipe and first portion of first cone.
2. Cut first cone 1-3/4" back of original first seam of center section
3. Construct new center and rear cone to above specifications and weld on.
4. Install stinger and silencer.

*** NOTE: Dotted line indicates original expansion chamber.**