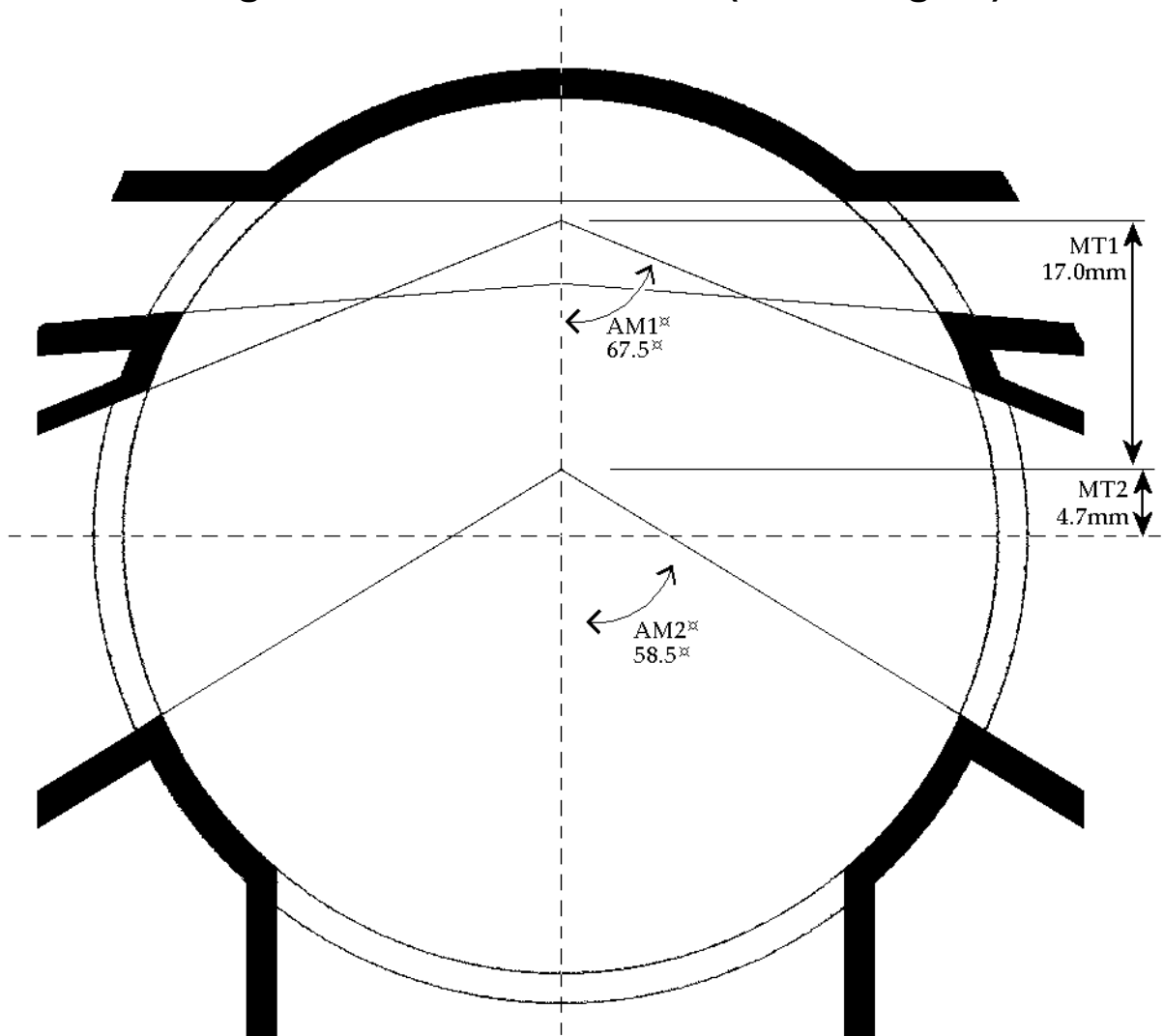


Transfer angles of Kawasaki H1 500 (stock engine)



According to G.P.Blair (Design and simulation of two-stroke engines, page 265) the following is found in successful cylinder designs:

- The value of AM2 is usually between 50 and 55 degrees. The H1 cylinder has 58.5 degrees.
- The target point for MT2 is usually between 10% and 15% of the cylinder bore. In this case 10-15% of the bore (60 mm) is 6-9 mm. MT2 is however 4.7 mm.
- The target point for MT1 is usually at the edge of the cylinder bore. In the H1 cylinder it is $(60/2) - (17 + 4.7) = 8.3$ mm from the edge of the bore.
- The main port is tapered to provide accelerating flow. AM1 is greater than AM2, and AM1 is between 50 and 70 degrees. In this case AM1 is 67.5 degrees.
- In multiple transfer port layouts it is possible to have AM1 = AM2. This is not the case in the H1 cylinder, although it has multiple transfer ports.
- The side nearest to the main port of the side ports can have the same slope, AM1. They can also have straight sides, i.e. 90 degrees. The H1 cylinder has about 86 degrees.
- The upswep angle of the main port, is rarely larger than 10 degrees. In the H1, it is at least 4 degrees near the port opening, but becomes larger immediately.
- The upswep angle of the side ports should be between 15 and 25 degrees. In the H1 cylinder it is about 14 degrees.