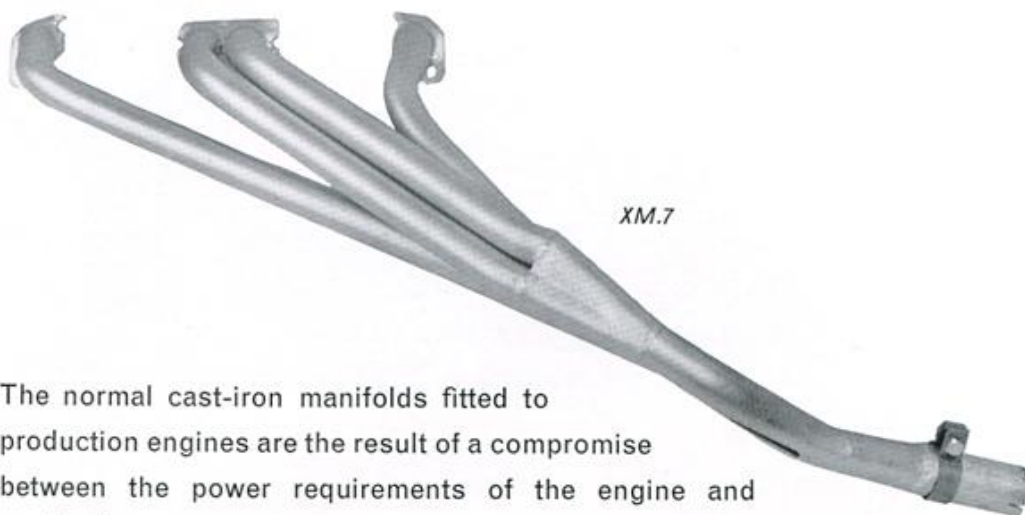


# EXHAUST MANIFOLDS

**SPEEDWELL****EXHAUST SYSTEMS**

The normal cast-iron manifolds fitted to production engines are the result of a compromise between the power requirements of the engine and production economy.

Racing experience has shown that remarkable power gain can be obtained from exhaust system modifications. A great deal of research by Speedwell Engineers in the application of these principles for road use has shown several interesting facts.

Firstly the exhaust system must be cleared of everything which would interfere with its resonance — sharp corners, roughness, bad joints etc., anything that would impair the free flow of the steady gas stream. Tubular steel manifolds are the obvious choice because of good internal finish and the ease of manufacturing a system having long gentle curves.

It is seldom that the largest pipe diameter is the most efficient, in fact dynamometer test proves that in many cases it can be as small as 1.125"



XM.5

Coupling of the individual pipes can, however be a critical matter. Normal principle is to join the pipes into even firing sets. e.g. 1 & 4 and 2 & 3 on four cylinder engines, 1, 2, 3, and 4, 5, 6, on a six cylinder engine. These are then joined into single pipes further down the system. The positions of the pairing can only be determined by experiments together with the arm length of the manifold and the dimension of the rest of the exhaust system. Manufactured of the highest quality steel tubing each manifold is assembled and checked on accurate jigs to ensure easy fitting.