



Note 24B

Other Configurations

Doubling-up engines by gearing their crankshafts together inside a common crankcase was tried by FIAT with their type 406 in 1927. This had 2 x IL6 750 cc vertical blocks to give 1.5L, MSC. It was a 3 overhead camshaft engine, the inner inclined rows of valves being operated by a single central shaft (see Fig. N24B-A). It showed promise by winning a short Monza race but the firm then withdrew from motor-racing to concentrate on the Schneider Trophy.

The same 2-crank configuration was built by Alfa Romeo in 1938 as the type 316, using 2 x IL8 1.5L type 158 MSC blocks at 60° to give 3L. The cars secured 2nd and 4th places in the Italian GP.

The 1938 French SEFAC project had 2 vertical 1.5L blocks = 3L but it only appeared unsuccessfully a few times.

Twin engines in a chassis have also raced in *Formule Libre* events. Over 1929 to 1932 Maserati types V4 and V5 had 2 x IL8 totalling 4L and 5L. In 1931 the Alfa Romeo type A had 2 x IL6 1,750 cc engines to give 3.5L. These cars had side-by-side engines. A *tandem* arrangement was the Alfa Romeo "*Bimotore*" of 1935 with 2 x IL8 2.9L = 5.8L and later 6.3 L. The engine technology in these cases was within that described in the main text.

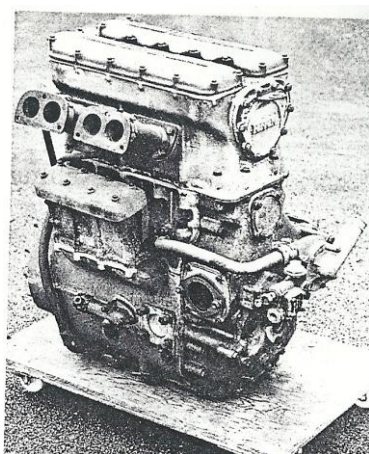
Probably the most surprising configuration ever conceived for Grand Prix racing was the 1955 Ferrari type 116 IL2 2.5L, designed by Aurelio Lampredi, which produced 70 HP/L on test (8) but was never raced because of its terrible vibration (see Fig. N24B-B).

Transversely-mid-mounted engines have been used on two occasions:-

- The 1956 Bugatti type 251 IL8 2.5L designed by Gioacchino Colombo, which raced once;
- The 1964 – 1965 Honda types RA271/272 60V12 1.5L which won the last race of the 1.5L formula.

Maserati also built a 60V12 1.5L intended for transverse mounting in 1963, type 8F1, but it was never installed in a chassis.

1927 FIAT T406
U12 (2 x IL6 geared) 50/63 = 0.794 1,484 cc
MSC 187 HP @ 8,500 RPM
DASO 66 & 938



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Fig. N24B-A

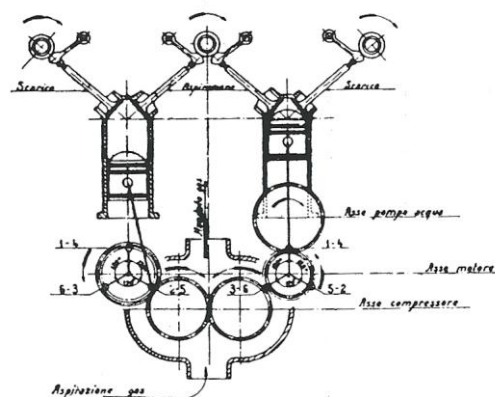


Fig. N24B-B

1955 Ferrari 116
IL2 118/114 = 1.035 2,493 cc
NA 174 HP @ 4,800 RPM
4 v/c