

## Note 110



### Notable small mistakes with serious consequences

- 1912 French Grand Prix. Eg. 4. Two-thirds of the FIAT and Peugeot teams suffered broken fuel lines, almost certainly due to their not being sufficiently insulated from 4-cylinder vibrations. One of the FIATs was leading at the time.
  - 1924 French Grand Prix. Sunbeam. See under Eg. 10. The team of supercharged cars had the speed to win but were all fitted with new, untested magnetos on the night before the race. These had partial failures which caused misfiring.
  - 1936. Velocette 500 cc. Single-cylinder engine vibration caused frothing in the carburettor float chamber and power loss. The motorcycle, ridden by the ace Stanley Woods, lost the Senior TT by 18 seconds in a 3 hour race. Subsequently the float chamber was mounted remotely from the engine.
  - 1939. Eg.25. Mercedes-Benz. The supplementary carburettor choke for maximum power had the throttle valve stick open in the French and German GPs, when Hermann Lang was leading. The super-rich mixture resulting at lower RPM ruined the engines.
  - 1954. Maserati. The oil tank on this type was moved from the engine bay to the tail to keep the oil cooler. When Stirling Moss was leading the Italian GP one of the long pipes connecting to the rear tank broke because it was badly supported and the engine seized.
  - 1955. Eg. 35. Mercedes-Benz. All 3 engines broke at Monaco because a screw in the newly-modified desmodromic valve gear broke in fatigue. Two of the cars retired in succession while leading.
  - 1955 – early 1957. Eg. 37. Vanwall. Many retirements were caused by fuel injection pipe or throttle linkage failures in fatigue from 4-cylinder vibrations. The cures were flexible pipes in the injection system and a portion of the same hose inserted into the linkage.
  - 1970. Eg. 49. Cosworth. Many failures occurred because an outside supplier ground through the Nitriding on the crank pins into the corner fillets.
  - 2000. Ilmor. Failure of a filter on the air pump used to pressurise the pneumatic valve-return system led to 2 engine failures in practice for the Australian GP and 2 more in the race.
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