

FAULT FINDING—D.2

fault finding chart

Fault	Possible Cause
Low cranking speed	1, 2, 3, 4.
Will not start	5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 31, 32, 33.
Difficult starting	5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 24, 29, 31, 32, 33.
Lack of power	8, 9, 10, 11, 12, 13, 14, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 31, 32, 33.
Misfiring	8, 9, 10, 12, 13, 14, 16, 18, 19, 20, 25, 26, 28, 29, 30, 32.
Excessive fuel consumption	11, 13, 14, 16, 18, 19, 20, 22, 23, 24, 25, 27, 28, 29, 31, 32, 33.
Black exhaust	11, 13, 14, 16, 18, 19, 20, 22, 24, 25, 27, 28, 29, 31, 32, 33.
Blue/white exhaust	4, 16, 18, 19, 20, 25, 27, 31, 33, 34, 35, 45, 56.
Low oil pressure	4, 36, 37, 38, 39, 40, 42, 43, 44, 53, 58.
Knocking	9, 14, 16, 18, 19, 22, 26, 28, 29, 31, 33, 35, 36, 45, 46, 59.
Erratic running	7, 8, 9, 10, 11, 12, 13, 14, 16, 20, 21, 23, 26, 28, 29, 30, 33, 35, 45, 59.
Vibration	13, 14, 20, 23, 25, 26, 29, 30, 33, 45, 47, 48, 49.
High oil pressure	4, 38, 41.
Overheating	11, 13, 14, 16, 18, 19, 24, 25, 45, 50, 51, 52, 53, 54, 57.
Excessive crankcase pressure	25, 31, 33, 34, 45, 55.
Poor compression	11, 19, 25, 28, 29, 31, 32, 33, 34, 46, 59.
Starts and stops	10, 11, 12.

Key to Fault Finding Chart

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| 1. Battery capacity low | 31. Worn cylinder bores |
| 2. Bad electrical connections | 32. Pitted valves and seats |
| 3. Faulty starter motor | 33. Broken, worn or sticking piston ring(s) |
| 4. Incorrect grade of lubricating oil | 34. Worn valve stems and guides |
| 5. Low cranking speed | 35. Overfull air cleaner or use of incorrect grade of oil |
| 6. Fuel tank empty. | 36. Worn or damaged bearings |
| 7. Faulty stop control operation | 37. Insufficient oil in sump. |
| 8. Blocked fuel feed pipe | 38. Inaccurate gauge |
| 9. Faulty fuel lift pump | 39. Oil pump worn |
| 10. Choked fuel filter | 40. Pressure relief valve sticking open |
| 11. Restriction in air cleaner or induction system | 41. Pressure relief valve sticking closed |
| 12. Air in fuel system | 42. Broken relief valve spring |
| 13. Faulty fuel injection pump | 43. Faulty suction pipe |
| 14. Faulty atomisers or incorrect type | 44. Choked oil filter |
| 15. Incorrect use of cold start equipment | 45. Piston seizure/pick up |
| 16. Faulty cold starting equipment | 46. Incorrect piston height |
| 17. Broken fuel injection pump drive | 47. Sea cock strainer or heat exchanger blocked |
| 18. Incorrect fuel pump timing | 48. Faulty engine mounting (Housing) |
| 19. Incorrect valve timing | 49. Incorrectly aligned flywheel housing, or flywheel |
| 20. Poor compression | 50. Faulty thermostat |
| 21. Blocked fuel tank vent | 51. Restriction in water jacket |
| 22. Incorrect type or grade of fuel | 52. Loose water pump drive belt |
| 23. Sticking throttle or restricted movement | 53. Gearbox or engine oil cooler choked |
| 24. Exhaust pipe restriction | 54. Faulty water pump |
| 25. Cylinder head gasket leaking | 55. Choked breather pipe |
| 26. Overheating | 56. Damaged valve stem oil deflectors (if fitted) |
| 27. Cold running | 57. Coolant level too low |
| 28. Incorrect tappet adjustment | 58. Blocked sump strainer |
| 29. Sticking valves | 59. Broken valve spring |
| 30. Incorrect high pressure pipes | |