FAULT FINDING CHART.

- **ENGINE WILL NOT START**
  - Controls sticking
  - Incorrect timing
  - Air leakage
  - Carburettor floods on depressing float needle
    - Spark at plug
      - Spark too weak to fire under compression
      - Short in plug, terminal or lead
    - No spark at plug
      - Spark at terminal
        - Faulty plug
        - Sooted plug points
        - Weak spark
        - Short circuit
      - No spark at terminal
        - Breaker arm sticking
        - Magneto contact Breaker arm free
          - Dirty platinum points
          - Faulty contacts
          - Failure in magneto insulation
          - Broken carbon brushes
  - No petrol at carburettor
    - Petrol tap closed
    - Petrol tap open
      - Choked Pipe
      - Pipe clear
        - Dirt in jet
        - Air lock pipe
        - Float needle sticking
        - No air vent to tank
- **ENGINE RUNS IMPERFECTLY**
  - Lacks power
    - Constantly
      - Controls out of order
      - Controls in order
        - Poor compression
        - Valves need grinding
        - Valve spring weak
        - Stretched exhaust valve
        - Choked silencer
        - Incorrect valve timing
        - Ignition too far retarded
        - Gear too high
        - Bad air adjustment
        - Obstruction in petrol pipe
        - Excessive carbon deposit
    - At intervals
      - Partial obstruction of petrol
      - Carburettor too sensitive
      - Sticking valve
  - Engine knocks
    - Pre-ignition
    - Overheating
  - Misses fire
    - Spark irregular
      - Sooted plug
      - Dirty magneto breaker points
      - Occasional short
    - Spark regular
      - Mixture too weak
      - Water in petrol
      - Starved carburettor
      - No air vent to petrol tank
- Fails on hills
  - Too high a gear
  - Correct gear ratio
    - Engine carbonized
    - Engine clean
      - Stretched valve
      - Sooted plug
      - Ignition too far advanced
      - Too much air
- Fails, and after a momentary rest will re-start quite well
  - UNSUITABLE TYPE OF SPARKING PLUG.
- **ENGINE STOPS**
  - No petrol, or tap turned off
  - Petrol
    - Spark at plug points
      - Compression
        - Carburettor working
          - Broken valve remaining on seat
          - Broken valve spring
          - Controls not working
          - Overheating
          - Insufficient lubrication
          - Air leakage
          - Stripped timing gears
        - Carburettor not working
          - Choked jet or pipe
          - Punctured float
          - Flooded float chamber
          - Air lock
          - Binding needle
      - No Compression
        - Broken valve
        - Broken piston rings
        - Piston ring slots in line
        - Piston rings gummed
        - Valve sticking in guide
        - Broken piston, connecting rod or crankshaft
        - Burnt valve face
    - No spark at plug points
      - No spark at magneto
        - Sticking breaker arm
        - Breaker arm free
          - Platinums require attention
          - Broken brushes
          - Failure in condenser
          - Internal shorting due to wet
          - Failure of insulation
          - Dirty contacts
      - Spark at magneto
        - Faulty wiring
        - Dirty plug
        - Broken plug
        - Wrong timing