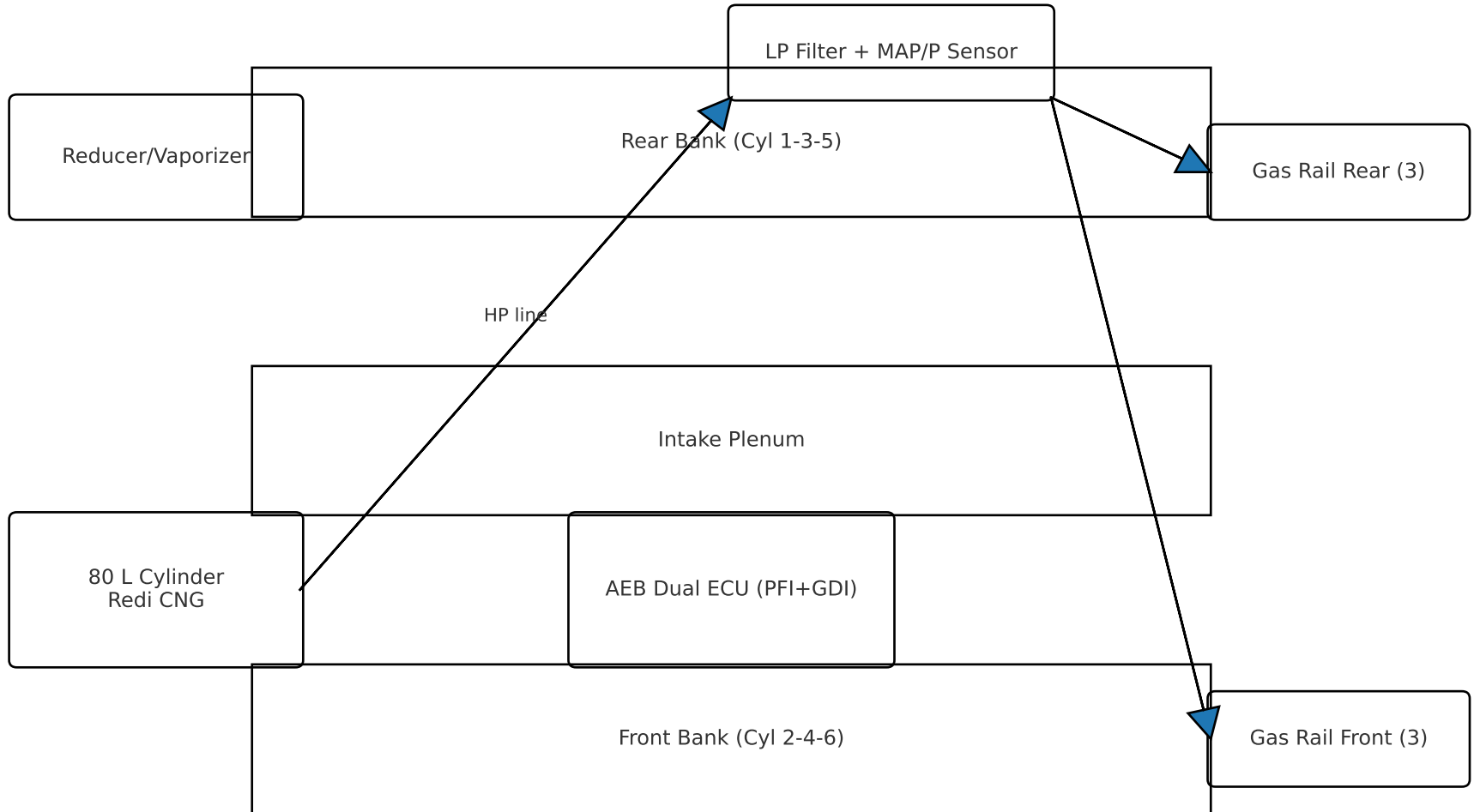
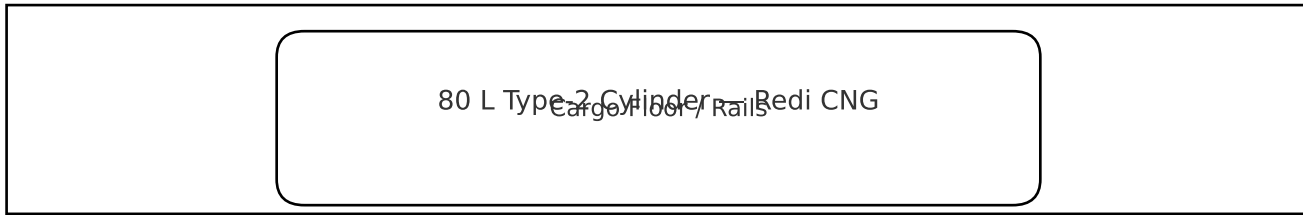


Toyota Highlander 2020 V6 Dual (PFI+GDI) Redi CNG Layout

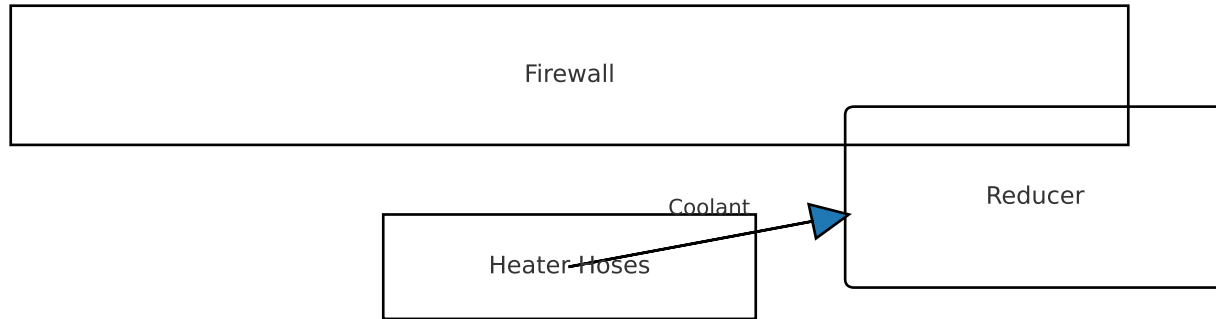


Step 1 – 80 L Cylinder Placement



- Vent PRD outside
- Label 'Redi CNG'
- Saddles to rails

Step 2 Reducer Placement



- Continuous coolant
- Upright mount
- HP solenoid before reducer

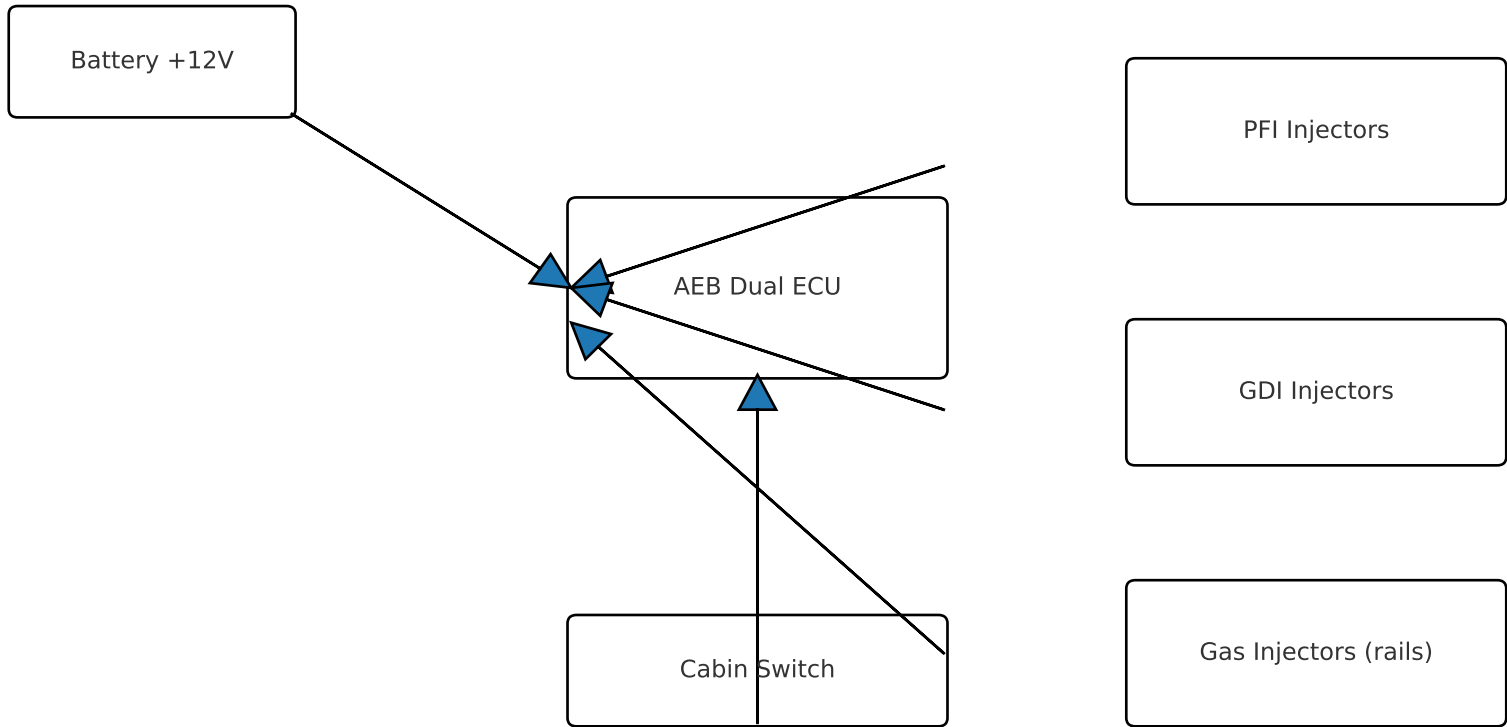
Step 3 — Gas Rails & Runner Nozzles



- Equal hose lengths
- Drill ~70 mm upstream
- Avoid swarf entering manifold



Step 4 — ECU & Wiring (Dual System)



- ECU manages both petrol systems
- CNG injectors add bulk fuel
- Switch in cabin

Step 5 - Calibration

Dual injection done

- 1) Engine: 6-cyl Dual (PFI+GDI)
- 2) Set reducer pressure & nozzle size
- 3) Idle & mid-load autocalibration
- 4) Road test under different loads
- 5) Adjust blend: ~60-80% CNG, 20-40% petrol
- 6) Monitor both PFI & GDI trims
- 7) Set cutoffs: low gas, RPM loss, injector fault

Step 6 - Leak Test & Safety

Final checks before handover

- HP & LP leak spray tests
- Verify PRD vent routing
- Test solenoid & shutoff
- Switchover smooth (petrol↔CNG)
- Train driver: always blended fuel
- Service: LP filter 15k km; HP filter 60k km
- Inspect HP fuel pump at intervals