

 Schematics

1. **Rear Navigation Lights** (2) Port & Starboard, with rear ballast eject through valve surround.

2. **Twin Hybrid, Vectored Thrust, Stratified Turbine Ramjets** with Afterburners (TurboBoost), each developing in excess of 19,000 lbsstatic thrust (total power output classified). **Ceramic Vectored Exhaust Nozzles** (rotatable)and interconnected via thrushaft **“Interlock®”** transverse driveshafts, gearbox and wastegatesin the event of engine failure. Contains oilinjectors for **Smoke Screen** deployment.

2.1 **APU (Auxiliary Power Unit)** & Highly Classified **EMH® (Electro-Magneto-Hydrodynamic)** 0.5 Megawatt Capacity Powerplant between Ramjets (dark red central unit) which cross feeds and “boosts” the Ramjets for Space Flight, and is a fully self-contained **Water Propulsion Unit.** Also used to electrically charge Supercar’s hull plating or send electrostatic charges via the Hi-Band Antenna - see 10.

3. **Vectored Flight Attitude Nozzles** controlling pitch and yaw movement (4).

4. **Ramjet Vectored Thrust Outlet Nozzle** from Ramjet Engines ducted through to Retro Jets and Adjustable VTOL Nozzles (4).

5. **Rear Ballast Tanks** with **Ram Intake Valves** (2), Port & Starboard.

6. **Rear Vectored VTOL Jet Nozzles** (2) interconnected to Fwd. VTOL Jet Nozzles (2), featuring **CAD (Cushion Augmentation Devices)** for added Roll, Pitch control and Ground Effect Mode. Independently computer controlled depending on selected Flight Mode and fed from main Ramjets & **EMH**® Powerplant.

7. **Main Fuel Feed Injector Lines** (6), Port & Starboard, to Ramjets with Emergency Cutoff Valves.

8. **Main Fuel Tank** containing Classified **AvGas**® and tapered to airflow ducting. Separate **Liquid Oxygen** & **Hydrogen Tanks** (Circular units) with built in refrigeration units for Spaceflight & Marine operation. **Auxiliary Fuel Tank** under Luggage Compartment - see also 15

9. **Retractable Wing Box Surround** & hydraulics.

10. Combined **Hi-Band UHF/VHF Antenna** and **ClearVu**® **Periscope Receptor** (detachable at top of aerial), with Electrostatic discharge coil from **EMH**® unit.

11. **Rear Ballistic Parachute Recovery Pack** (2), Port & Starboard, housed in wing nacelle cones (fired in unison with front mounted unit – see also 28.

12. **Wing Extenuator Engine Pump** & Backup.

13. **Oxygen Regenerators, Pressurisation & Airconditioning Pumps** (2), Port & Starboard, fedto main pressurised cabin through RearBulkhead “Firewall”.

14. **Wing Nacelle Multi-mode Avionic & Marine Sensor Probes** (2), Port & Starboard, connectedto **ClearVu**® Read outs. Includes **INS (Inertial Navigation System)** aerials for position fixing and ground terrain sensors for moving map display read-out.

15. **Split Luggage/Equipment Storage Bay** behind rear folding seats. (Auxiliary Fuel Tank under Luggage Compartment - see 8.

16. Electrically operated **Flexiglass**® **Canopy** Storage & lifters. (Top Canopy splits into twohalves and slides down tracks “inside” sidewindows). Entire Canopy removable formaintenance.

17. **Oxygen Bottles** and **Pressurisation** outlet & recirculation systems embedded into Front Seats, fed directly from Oxygen, Pressurisation and Airconditioning Units in rear - see also 13.

18. **Retro Jet Heat Extractor Vanes** (2) Port & Starboard, containing vectored thrust vents for sideways movement.

19. **Twin Retro Jets** (2), Port & Starboard, fed from main VTOL ducts with **EMH**® (Electro-Magneto- Hydrodynamic) accelerators giving enormous braking power.

20. Main Flight **Avionics Bay** and Marine instruments including triplicated Flight Computer Backups with built in Communication Array. Microphone is simply voice activated from pilot.

21. Multi-mode **ClearVu**® CRT instrumentation, flight data, and systems status read-out.

22. **Main Computer Core Processor Unit**.

23. **Fwd. Ballast Tanks** (2), Port & Starboard with Ram intake valves (front), and bleed pumps into main duct inlets. Closed at front when Ballast Tanks are operational allowing them to be “flooded”, drained and trimmed.

24. **Fwd. Pressure Bulkhead “Firewall”.**

25. Fwd. Mounted **Multi-Purpose Optional Equipment Bay**, (which can contain Removable Rocket Gun Mount and armament unit (under), additional Oxygen Supply for Space Flight, etc.).

26. **Navigation/Landing/Search lights** (2), Port & Starboard, with **ILS (Instrument Landing** **System)** sensor antennas.

27. **Main 24-volt Batteries** (2) with backup, insulated electronics and power coil. Used to initially start APU (which charges each engine).

28. **Fwd. Ballistic Parachute Recovery Pack** (hidden under flush panel).

29. **Main Sensor Probe Circuitry** and “**Remote**®” **Receiver**.

30. **Fwd. Ram Intake Valvegate** (for air or water feed) can be regulated (opened or closed) for ballast operation. Also cools Avionics Bay.

31. **Emergency Generator**, wind/water driven with folding turbine blades (retractable - shown in extended position, normally housed in centre unit). Used only if other electrical systems completely fail and if Supercar has forward motion in atmosphere or water.

32. **Main Radar/Sonar/Sensor Array** and “**Remote**®” pick-up connected to **ClearVu**® Read-out.

33. **Fwd. Flight Instrument** and **ClearVu® Pitot Boom Antenna.**

*Supercar was created by A.P. Film Studios in association with ITC (now ITC Studios).*

*Supercar internal schematic technical concept, text and drawings by Shane Pickering 1999 with technical assistance from Austin Tate. Original Supercar designed by Reg Hill of A.P. Films.*

*Supercar exterior based on Phil Rae Blueprints and 3-D model by Mick Imrie and Austin Tate.*

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