



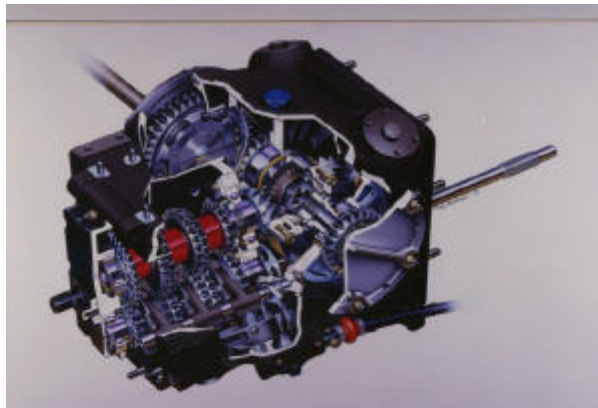
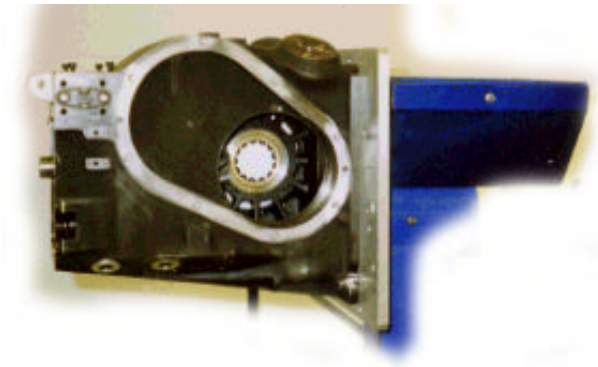
Ralt, for the last few years has only been involved in racing in the U.S.A. After winning the Toyota Atlantic Championship for what must be the 12<sup>th</sup> or 13<sup>th</sup> time since the series started, they were faced with major changes which made Atlantic a Spec.Series for the Swift marque.

In the '80's and early '90's Ralt dominated F3. After an absence of 6 years the FIA Regulation changes for 1999 seemed like the right time to re-enter the world of Formula 3, especially now the series is starting in the U.S.A.

A 40% scale model was made and testing at the MIRA Wind-tunnel facility began. Once the prototype car was built, tests were carried out and windtunnel figures verified showing the accuracy of the MIRA facility and the model against the full size car. Ongoing testing has been carried out throughout 1998/9.



A carbon fibre monocoque, some 50% stiffer than the Ralt Atlantic car has been made, incorporating all latest FIA safety requirements around the cockpit area.



The 1999/2000/2001 car features a new transmission designed by Ralt. Gearboxes are an area, which have remained virtually unchanged for the last 20 years, and this situation has been addressed resulting in a lightweight, super stiff, ultra small casing fitted with purpose designed 10mm wide gears and bigger gear centre distance. A smaller, lighter LSD unit has been utilized with 130mm diameter crown wheel again specifically designed for this application. Driveshafts are horizontal so there is no power loss through the normally acute angled tripod joints associated with a normal F3 installation.

The overall length of the gearbox is some 200mm shorter than a conventional Hewland Dallara unit. This in turn has put the weight further forward towards the centre of the car for improved weight distribution and handling. All hubs, dog rings and selectors are on the primary shaft, keeping the weight low down. Ratio changes are so simple requiring only the removal of the rear cover which is retained by 10 off 5/16"UNF nuts. Gears simply slide off the pinion and layshaft. All 3 selector forks are interchangeable, located on a single shaft and 1st gear is not an integral part of the layshaft, making it a "real" 5-speed gearbox. There are no big locknuts or old fashioned split pins to remove! 5th gear is overdriven so that a wide range of ratios are available for the perfect top speed-engine rpm match. The gear change is ultra smooth with only minimal movement required between each shift position. There is an oil pump fitted as standard equipment.



The shorter gearbox has enabled us to make a very efficient diffuser which can be easily adjusted for low downforce to high downforce set-ups and an inclined engine cover with similar lines to the majority of today's F1 cars. The central exit tunnel is a continuous radius without the need for the inclusion of a bulge to cover the back of the normal type gearbox. This was found to give a significant improvement in downforce with no increase in drag.

The gearbox is designed so that it can be adapted for other formulae such as Atlantic, Hillclimb and 2 litre Sportscars.

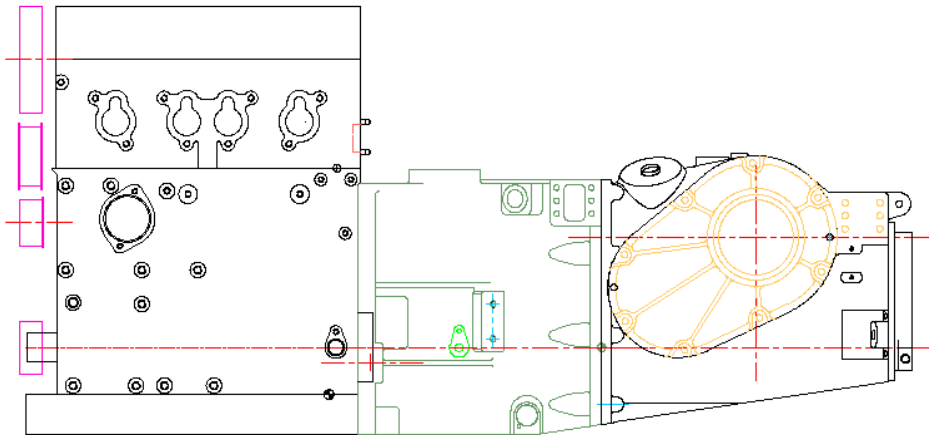
Conventional pushrod/rocker twin dampers are employed at the rear with 'T' bar type multi-adjustable anti-roll bar with a 3rd spring if required.

Front suspension is similar although a monoshock arrangement is available.

Various track and wheelbase configurations are being tested. Common wishbone to chassis mounts are used on 10 of the 16 pickup points.

Brakes are latest lightweight Brembo or AP type with 16mm vented discs, mounted on magnesium uprights. Speedline wheels are supplied as standard.

A downswept exhaust system is used, keeping heat well away from dampers and weight low down.



This car is the simplest, neatest Ralt ever made, with the emphasis on quality rather than quantity.

Our previous successes speak for themselves.

## OVERALL DIMENSIONS AND SPECIFICATIONS

WHEELBASE	2612mm	OR	2692mm
FRONT TRACK	1475mm	OR	1525mm
REAR TRACK	1425mm		
OVERALL WIDTH	1720mm	OR	1770mm
OVERALL LENGTH	3988mm	OR	4003mm
FRONT SUSPENSION	DOUBLE WISHBONES PUSHROD OPERATED MONODAMPER OR TWIN DAMPERS		
REAR SUSPENSION	DOUBLE WISHBONES PUSHROD OPERATED TWIN DAMPERS		