



<http://www.extremecmt.com/>

Gearbox (TR T6060) Extreme CMT treatment, Momentary Racing Viper ACR GT-2 race car.

HOW TO READ THE CHARTS:

Linear histograms represent distribution of upshift and downshift times across 8 time “bins”. Median time for each bin is listed on the horizontal axis.

Vertical axis represents proportion of all data points allocated into a given bin.

ANALYSIS SUMMARY:

Prior to treatment, and on the first heat cycle after treatment (red and white traces), approx. 10% of all downshifts were in 2.3sec-3.5sec range, due to difficulties with engaging 3rd gear during hard deceleration.

Blue and green traces on the downshift chart clearly demonstrate that such issue no longer occur, with up to 90% of all downshifts now falling into 1.2-2.3sec range (as opposed to 75-80% prior).

Lower chart shows clear trend toward higher number of upshifts falling within 0.47sec bin – from 35% prior to treatment, up to 50%. Similarly to the Downshift chart, it also shows great reduction in “slow” shifts (visible as a “tail” on the right side of main peak) – from 18% prior to treatment, down to under 5%.

Another way to put it, is that there is 72% reduction to a number of “slow” upshifts, 43% increase in the number of “moderately quick” upshifts, and nearly doubling in the number of “really quick” (0.38sec bin) upshifts.

CONCLUSIONS:

Extreme CMT Treatment has improved performance and usability of the gearbox, especially in conditions when it would normally require extra care when shifting (i.e. before it comes up to normal running temperatures). Performance has steadily improved following treatment, with the most significant gains being observed after approximately 2 hours of operation in race conditions.

DATA COLLECTION AND SCOPE:

The data was collected from 4 sessions (3 competition events and one test session), with at least 10 laps’ worth of data from each session.

ANALYSIS METHODOLOGY:

Math channels detecting upshifts and downshifts were created, following proprietary Momentary Racing algorithms. Using GPS-based timer, the period between disengaging the clutch, and re-establishing full driveline/engine engagement was calculated for each gear change. MoTeC I2Pro software was used to process the data, and to build histogram visualization.

Source data is available on request.





<http://www.extremecmt.com/>

