

Performance Data
1975 Arrow Glass Cheetah 17' 3" Trihull
1975 Johnson 115 HP, V4 twin carbs

October 19, 2009

I installed a Lowrance LMF 400 monitor on my Cheetah. With the price of fuel, I thought it would be interesting to plot performance. Plus I got this and the sensors at about ¼ cost in Cabela's Bargain Cave. This system uses a NMEA 2000 data link cable between ganged sensors and the LMF display.

The sensors are a fuel flow meter to measure fuel rate and a paddle wheel speed sensors. The paddle indicated a higher speed than the GPS so there is a graph for GPS speed correction.

The "Y" axis is logarithmic scale because there is such a spread in speed and the performance numbers.

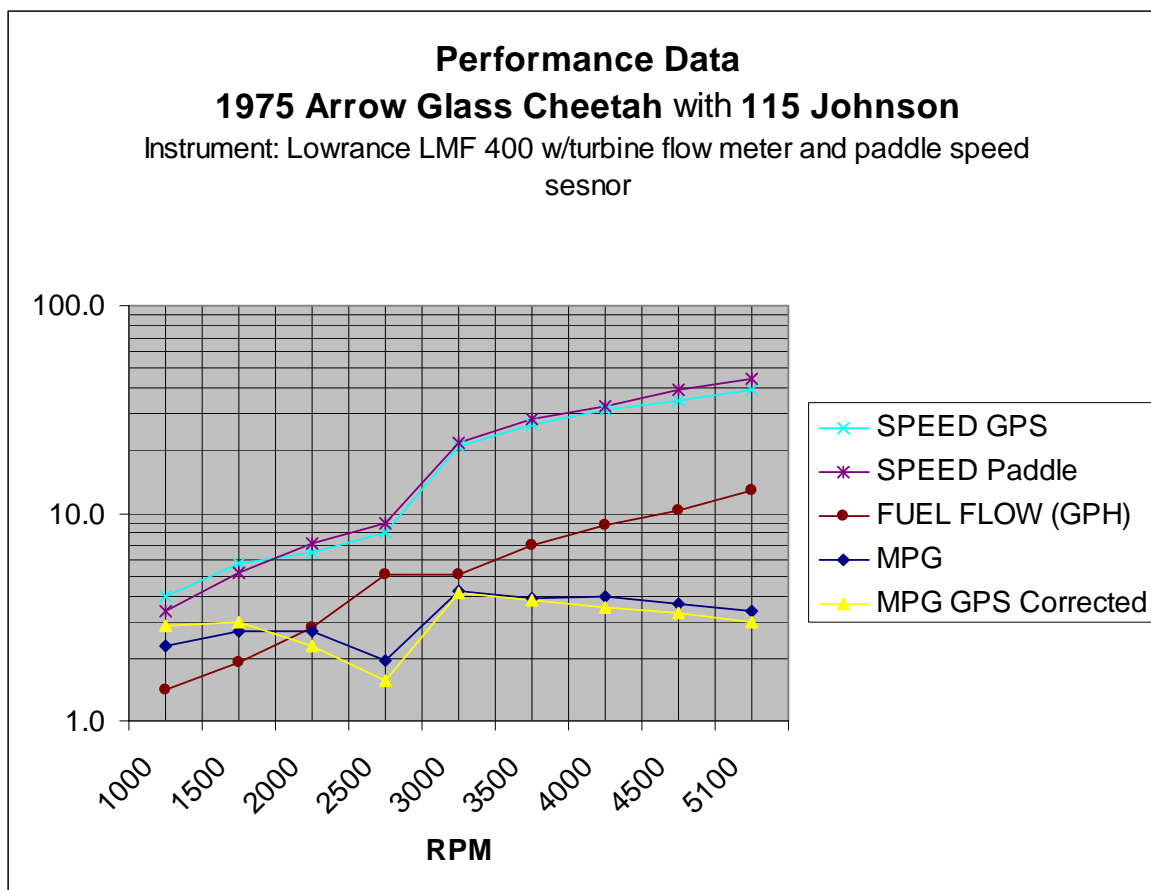
Between 2250 and 3250 RPM is the transition to plane and it was difficult in holding steady RPM to collect data. She wanted to pop right up on plane and increase speed and RPM at a constant throttle position. So it took some jockeying to rein her steady.

Data was collected at 500 RPM increments with 5100 being WOT. The test was done in a protected bayou and a one mile straight run to allow the numbers to settle. No current, wind or wave action.

I thought it was interesting that the best economy is on plane not in the displacement mode. The Evinrude ETEC web page has similar data but shows more economy at pre plane speeds. Maybe the difference is between new tech and carbureted engines.

Hope this data might have some bearing on your boat's performance.

Mike



RPM	SPEED GPS	SPEED Paddle	FUEL FLOW (GPH)	MPG	MPG GPS Corrected
	GPS	PADDLE			
1000	4.0	3.4	1.4	2.3	2.9
1500	5.7	5.2	1.9	2.7	3.0
2000	6.4	7.2	2.8	2.7	2.3
2500	8.0	9.0	5.1	2.0	1.6
3000	21.0	22.0	5.1	4.2	4.1
3500	26.8	28.3	7.0	3.9	3.8
4000	31.2	33.0	8.8	4.0	3.5
4500	34.7	39.1	10.4	3.7	3.3
5100	39.0	44.0	13.0	3.4	3.0