

EXP #	Route Followed	Start Location	Destination	Elevation Change (ft)	Road Conditions
1A	Highways 91-2-395	Northampton	New London Mobil	-165	Consistently Damp
1B	Highways 91-2-395	Northampton	New London Mobil	-75	Dry
2A	Highways 395-2-91	New London CC	Northampton Citgo	75	Dry w/occasional melt spots
2B	Highways 395-2-91	New London CC	Northampton Citgo	75	Substantial standing water on the roadways
3A	Rt. 2 East on 12-12-02	Gill Mobil (180ft)	Orange (615ft)	435	Wet, approx. 1/2" standing
3A	Rt. 2 West on 12-13-02	Orange (615)	NESEA (195)	-420	Consistently Damp/some ice/high conc. Of sand and salt
3A	Rt. 2 East On 12-13-02	NESEA	Orange	420	Damp no standing water
3A	Rt. 2A East 12-13-02	Orange	Athol (675)	60	Damp no standing water
3A	Rt 2A West 12-13-02	Athol	Orange	-60	Damp no standing water
3A	Rt. 2 West 12-15-02	Orange	Gill Mobil	-435	Partially damp, partially dry
3B	Rt. 2 East	Gill Mobil	Orange	435	dry
3B	Rt.2 West	Orange	NESEA	-420	Slightly damp.
3B	Rt. 2 East + 2A East	NESEA	Athol	480	Partially dry
3B	Rt. 2A West	Athol	Orange	-60	Partially dry
3B	Rt. 2A East	Orange	Athol	60	High conc. Of sand, salt, some standing water
3B	Rt. 2A East	Athol (YMCA)	Athol (DD) 750ft	75	High conc. Of sand, salt, some standing water
3B	Rt. 2A West	Athol (DD)	Orange	-135	High conc. Of sand, salt, some standing water
3B	Rt. 2 West	Orange	Gill Mobil	-435	West, minimal standing water
4A	91 Southbound	Greenfield (North of Exit 26) 165ft	Whately (exit 24) 180 ft	15	Dry with occasional damp areas
4B	91 Southbound	Greenfield (North of Exit 26)	Whately (exit 24)	15	Dry with occasional damp areas
4C	91 Southbound	Greenfield (North of Exit 26)	Whately (exit 24)	15	Dry with occasional damp areas
4D	91 Southbound	Greenfield (North of Exit 26)	Whately (exit 24)	15	Dry
4E	91 Southbound	Greenfield (North of Exit 26)	Whately (exit 24)	15	Dry
5A	91 Northbound	Whately (exit 25) 188ft	Greenfield Exit for Rt. 2 270ft	82	Dry with occasional damp areas
5B	91 Northbound	Whately (exit 25)	Greenfield Exit for Rt. 2	82	Dry with occasional damp areas
5C	91 Northbound	Whately (exit 25)	Greenfield Exit for Rt. 2	82	Dry with occasional damp areas
5D	91 Northbound	Whately (exit 25)	Greenfield Exit for Rt. 2	82	Dry
5E	91 Northbound	Whately (exit 25)	Greenfield Exit for Rt. 2	82	Dry
6A	City of Greenfield	Off ramp from RT 2 (180ft)	NESEA (195ft)	15	Dry
6B	City of Greenfield	Off ramp from RT 2	NESEA	15	Dry
7A	Route 2 East	Exit 15 (555ft)	Exit 19 (945ft)	390	Dry with occasional damp areas
7B	Route 2 East	Exit 15	Exit 19	390	Dry with occasional damp areas
7C	Route 2 West	Exit 19	Exit 15	-390	Dry with occasional damp areas
7D	Route 2 West	Exit 19	Exit 15	-390	Dry with occasional damp areas
8A	Route 5+10	Deerfield (188ft)	Greenfield (141)	-47	Dry
8B	Route 5+10	Greenfield	Deerfield	47	Dry

EXP #	Weather Conditions	Temperature	Time (hours)	Miles	Ave Speed	Gas Used (gal)	mpg	Variable Factor
1A	Cloudy, no ppt	25-30		1.47	87.9	58.6	2.919	30.113 Flux the Tachometer
1B	Clear, Sunny		38	1.52	83	54.6	2.817	29.464 Flux the Tachometer + 200lbs.
2A	Cloudy, no ppt		36	1.85	108.1	65.1	4.046	26.718 Steady Tachometer (cruise)
2B	Heavy Rain, Strong wind gusts, constant for entire trip		40	1.55	91.9	59.3	2.477	37.101 Steady Tachometer (cruise) + 200lbs
3A	Partly Cloudy, heavy fog		42	0.367	15.7	42.8 ACCUMULATED		Steady Tachometer <=/= 2400RPM
3A	Clear skies in Orange, Heavy Fog after French King Bridge.		29	0.55	19.7	35.8 ACCUMULATED		Steady Tachometer <=/= 2400RPM
3A	Heavy Fog		35	0.55	19.9	36.2 ACCUMULATED		Steady Tachometer <=/= 2600RPM
3A	Cloudy		35	0.2	4.9	24.5 ACCUMULATED		Steady Tachometer <=/= 2400RPM
3A	Cloudy		33	0.18	4.9	27.3 ACCUMULATED		Steady Tachometer <=/=2400RPM
3A	Partly Cloudy, no ppt		38	0.35	15.8	45.1 ACCUMULATED		Steady Tachometer <=/=2700RPM
					80.9		2.839	28.496
3B	partly sunny, no ppt		33	0.367	15.7	42.8 ACCUMULATED		Tach >/= 2800RPM
3B	Cloudy, no ppt		15	0.5	19.7	39.4 ACCUMULATED		Warm up 10 mins Max defrost
3B	Cloudy		30	0.683	25.5	37.2 ACCUMULATED		steady Tach <=/=2700RPM
3B	Cloudy		27	0.167	5	29.9 ACCUMULATED		steady Tach <=/=24000RPM
3B	Cloudy with consistent light rain		40	0.216	5.3	24.5 ACCUMULATED		Warm up 10 mins Max defrost
3B	Cloudy with consistent light rain		40	0.067	1.5	22.3 ACCUMULATED		steady Tach <=/=24000RPM
3B	Cloudy with consistent light rain		40	0.283	7.5	26.5 ACCUMULATED		steady Tach <=/=24000RPM
3B	Heavy Fog, light ppt.		35	0.4	16.5	41.2 ACCUMULATED		Warm up 10 mins Max defrost
					96.7		3.424	28.241
4A	Partly cloudy, no ppt		36		9.2 Approx.	55 HEV		60.9 No Cruise Control steady 55mph +/-3-4
4B	Partly cloudy, no ppt		36		10.2 Approx	65 HEV		57.1 No Cruise Control steady 65mph +/-3-4
4C	Partly cloudy, no ppt		36	0.15	9.5	63.33 HEV		55.2 Cruise Control ON 65mph
4D	Clear, Sunny		37	0.092	6.2	67.64 HEV		48 Cruise Control ON 70mph + 200lbs
4E	Partly Sunny, Dusk		33	0.133	9.5	71.27 HEV		49.2 Cruise Control ON 70mph No weight
5A	Partly cloudy, no ppt		36		9 Approx.	55 HEV		57.1 No Cruise Control steady 55mph +/-3-4
5B	Partly cloudy, no ppt		36	0.15	9.2	61.3 HEV		45.4 No Cruise Control steady 65mph +/-3-4
5C	Partly cloudy, no ppt		36	0.15	8.9	59.33 HEV		45.4 Cruise Control ON 65mph
5D	Clear		37	0.133	8.7	65.25 HEV		50.3 Cruise Control ON 65mph + 200lbs
5E	partly sunny, Dusk		32	0.117	8.2	70.09 HEV		50.3 Cruise Control ON 70 mph No weight
6A	Clear		37	0.4	6.3	15.75 HEV		48.8 Smooth City driving + 200lbs.
6B	partly cloudy		31	0.4	5.4	13.5 HEV		47.3 Smooth City driving no weight
7A	Partly cloudy, no ppt	20s		0.183	9.3	55 HEV		41.2 No cruise control, steady 55
7B	Partly cloudy, no ppt	20s		0.15	9.3	60 HEV		38.7 No cruise control, steady 60
7C	Partly cloudy, no ppt	20s		0.183	9.3	55 HEV		62.4 No cruise control, steady 55
7D	Partly cloudy, no ppt	20s		0.15	9.3	60 HEV		59 No cruise control, steady 60
8A	Partly cloudy, no ppt		31	0.133	4.7 Approx	45 HEV		71.9 Cruise Control ON 45
8B	Partly cloudy, no ppt		31	0.117	4.1 Approx	45 HEV		65.4 Cruise Control ON 45
						AVE: 68.7		

EXP #	Percentage Improvement in gas mileage	Notes
1A	2.2% Improvement without excess weight in the trunk	
1B		Hit Heavy traffic in Hartford, steady, stop and go driving over a distance of approximately 5-8 miles/15 mins.
2A		
2B	28.0% Improvement with excess weight AVE. 12.9% improvement with extra weight	Wind shield wipers on max frequency for the duration of the trip, it never once stopped raining hard.
3A		
3A		
3A		
3A		
3A		
3B		Forget about fifth gear, duration of travel in 4th.
3B		Idle 4X defrost for 4 mins, + first 3 miles of driving
3B		
3B		
3B		Idle 4X defrost for 6 mins, + first 4mins of driving
3B		
3B		
3B		Idle 4X defrost for 2 mins 8 mins driving
	0.89% improvement with less engine load.	
4A	55:65 = 6.24% improvement driving at 55mpH	
4B	65:65(cruise) = 3.33% improvement without cruise	
4C	65:70 (cruise) = 10.9% improvement cruising at 65	
4D	70:70+200lbs = 2.44% improvement with extra weight	
4E	55:70 = 19.2% improvement driving at 55mpH	
5A	55:65 = 20.5% improvement driving at 55mpH	
5B	65:65(cruise) = No difference	
5C	65:70(cruise) = 9.74% improvement driving at 70mpH	
5D	65:65+200lbs = 9.74% improvement with extra weight	
5E	55:70(cruise) = 11.9% driving at 55mpH AVE: 55:65 = 13.4% improvement driving at 55mpH AVE: 55:70 = 15.6% improvement driving at 55mpH	
6A	City:City+200lbs = 3.1% improvement with extra weight	Followed repeated route through the center of town traveling < 30mpH for the duration of the test.
6B		
7A	55:60 Incline = 6.07% improvement driving at 55mpH	Eastward direction climbing a grade of 41.9ft/mile for 9.3 miles
7B	60 Incline:60 Decline = 34.4% improvement driving downhill	
7C	55 Incline: 55 Decline = 34% improvement downhill	Westward direction descending same grade 41.9ft/mile
7D	55:60 Decline = 5.45% Improvement driving at 55mpH AVE: 55:60 = 5.8% improvement driving at 55mpH	
8A		
8B		