

VEHICLE TECHNOLOGIES PROGRAM

PHEV Accelerated Testing Results – Jan. 2009

Advanced Vehicle Testing Activity



2007 Hymotion Escape

VIN #
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A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

Accelerated testing was completed in September 2008 and the final results can be found in the table to the right. The Hymotion Escape averaged 42.5 mpg over the 5,572 miles of testing (5,440-mile goal). Based on an electricity cost of 10 cents per kWh and a gasoline cost of \$3.00 per gallon, the fuel cost was 1.56 cents per mile for electricity and 7.05 cents per mile for gasoline, for a total fuel cost of 8.61 cents per mile for the Hymotion Escape PHEV. The Escape HEVs tested by the AVTA averaged 27 mpg, so the conventional HEV Ford Escape fuel cost would average 11.11 cents per mile.

If the Hymotion Escape PHEV were operated for 100,000 miles at 42.5 mpg, it would use 2,353 gallons of gasoline while the HEV Escape would use 3,704 gallons of gasoline over 100,000 miles at 27 mpg – 57% more gasoline than the Hymotion Escape PHEV.

This testing also documented over 50+ mpg testing results when the Hymotion Escape PHEV is driven in urban applications, so depending how this vehicle is operated, actual petroleum savings can be much greater.

Hymotion Escape – Accelerated Testing

Cycle	Urban	Highway	Charge	Reps	Total	Electricity	Gasoline	
(mi)	(10 mi)	(10 mi)	(hr)	(N)	(mi)	AC kWh	Gals	MPG
10	1	0	4	60	600	198.93	11.52	53.1
20	1	1	8	30	600	163.29	13.51	45.7
40	4	0	12	15	600	57.51	14.91	41.1
40	2	2	12	15	600	76.29	15.99	38.7
40	0	4	12	15	600	114.14	11.92	51.5
60	2	4	12	10	600	97.18	13.70	45.3
80	2	6	12	8	640	77.69	16.05	41.3
100	2	8	12	6	600	58.64	15.69	39.8
200	2	18	12	3	600	26.09	17.72	33.5
Total	2340	3100	1344	162	5440	Weighted Average		42.5

Each total distance slightly greater than 600 miles. HEV version = 27 mpg



For more information contact:
EERE Information Center
1-877-EERE-INF (1-877-337-3463)
www.eere.energy.gov
Or <http://avt.inl.gov>



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