

21st Century Automotive Challenge 2008

Electric Vehicle Event Summary

6/21/2008 18:21

600 Pts Max

Car #	Car Name	TOTAL SCORE	Position	Tech Test	Braking		Acceleration		AutoCross			Effic Mi/kWh		Effic Payload		Range	
				90 pts max	10 pts max		100 pts max		100 pts max			100 pts max		100 pts max			
				Score	Decel m/sec2	Score	Accel m/s2	Score	Best Time	With Penalty	Score	Effic Wh/Mile	Effic Score	Payload Index Mi-Lb-MPH/Wh	Payload Score	Odo Total	Score
14	Lorax	273	3		5.06	7.2	1.1	27.2	34.6	34.6	27.6	220.2	71.2	16.6	36.0	48.0	97.0
56	StMarks	290	2		5.99	10.0	3.1	56.7	32.3	32.3	40.6	209.6	78.1	41.1	76.8	7.5	36.3
"007"	RabbitPickup	383	1		5.24	7.7	3.7	65.9	30.8	40.8	-9	191.5	91.6	51.7	94.5	38.3	82.5
16	ElecTecs/Cinn	272	4		2.77	0.3	5.8	96.4	29.8	29.8	55.2	296.2	36.3	15.8	34.7	33.0	74.5

21ST CENTURY AUTOMOTIVE CHALLENGE 2008

Braking Event

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Car #	Car Name	Time (sec)	Calc MPH	ODO MPH	MPH Value	Brake Distance Feet	Speed M/s	Distance Meters	Decel m/sec2	Score	Best Score	Rank
14	Lorax	1.93	14.3	20	14.3	13.3	6.4	4.0	5.06	7.2	7.2	3
56	StMarks	1.54	19.7	23	19.7	21.2	8.8	6.5	5.99	10.0	10.0	1
"007"	RabbitPickup	1.37	23.5	25	23.5	34.6	10.5	10.5	5.24	7.7	7.7	2
16	ElecTecs/Cinn	1.65	17.8	20	17.8	37.4	8.0	11.4	2.77	0.3	5.8	4
"007"	RabbitPickup	1.43	22.0	25	22.0	34.4	9.8	10.5	4.61	5.8		
56	StMarks	1.60	18.6	22	18.6	46.6	8.3	14.2	2.43	-1		
16	ElecTecs/Cinn	1.48	20.9	20	20.9	36.8	9.3	11.2	3.88	3.6		

BrakeBest	6.0	m/sec2	$Accel=Vo^2/2X$	Max	5.99	10.0
BrakeWorst	3.5	m/sec2		Min	2.43	-1
BrakeValRange	2.5	m/sec2				
BrakeMaxScore	10.0	Points	Timed Dist	30.0	feet	
BrakeMinScore	2.5	Points	FeetPerMeter	3.3	Feet	
BrakePointRange	7.5	Points	MPH2M_S	0.4	factor	
			Toffset	0.5	Secs	

21ST CENTURY AUTOMOTIVE CHALLENGE 2008 RANGE EVENT

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Car #	Car Name	Short Laps	Long Laps	Total Miles	Odo Total	Score	Rank
14	Lorax	8		44	48	97.0	1
56	StMarks	1		5.5	7.5	36.3	4
"007"	RabbitPickup	7		38.5	38.3	82.5	2
16	ElecTecs/Cinn	5		27.5	33	74.5	3

RangeBest 50.0 **Miles** **ShortLap** 5.5 **Miles**
RangeWorst 0.0 **Miles** **LongLap** 24.3 **Miles**
RangeValRange 50.0 **Miles**

RangeMaxScore 100.0 **Points** *Range includes efficiency laps*
RangeMinScore 25.0 **Points**
RangePointRange 75.0 **Points**

21ST CENTURY AUTOMOTIVE CHALLENGE 2008

Acceleration Event

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Car #	Car Name	Time1 (sec)	Time2 (sec)	Time3 (sec)	Best Time	Calc MPH	Accel m/s2	Score	Rank
14	Lorax	5.16			5.16	13.2	1.14	27.2	4
56	StMarks	3.13			3.13	21.8	3.11	56.7	3
"007"	RabbitPickup	2.86	3.13		2.86	23.8	3.73	65.9	2
16	ElecTecs/Cinn	2.30	3.19	3.13	2.30	29.6	5.76	96.4	1

AccelBest 6.0 m/sec2
AccelWorst 1.0 m/sec2
AccelValRange 5.0 m/sec2

$a=Vf^2/2x$

AccelMaxScore 100.0 Points **Accel Distance** 50.0 feet
AccelMinScore 25.0 Points **FtperMeter** 3.3 Feet
AccelPointRange 75.0 Points **MPH2MS** 0.4 factor

21ST CENTURY AUTOMOTIVE CHALLENGE 2008

Autocross Event

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Car #	Car Name	Time 1 (sec)	Time 2 (sec)	Time 3 (sec)	Cones	Best Time	With Penalty	Score	Rank	Notes
ELECTRICS										
14	Lorax	54.21	37.51	34.55	0	34.55	34.55	27.6	3	
56	StMarks	32.30			0	32.30	32.30	40.6	2	
"007"	RabbitPickup	OC	OC	30.81	2	30.81	40.81	-9	4	Actually 3 Ocs
16	ElecTecs/Cinn	29.77	34.65		0	29.77	29.77	55.2	1	
HYBRIDS										
Prius	UEK-881	OC	36.80	33.12	0	33.12	33.12	35.8		
Prius	Hobot	31.47(1)	30.15	29.72(2)	0	30.15	30.15	53.0		
Prius	EKZ-2248	29.50	27.35		0	27.35	27.35	69.1		
VW-TD	W Phill - Sedan	25.50	24.10		0	24.10	24.10	87.9		
Insite		31.25			0	31.25	31.25	46.6		
VW-TD	St Marks	26.47	23.73		0	23.73	23.73	90.0		

AutoXBest 22.0 **sec**
AutoXWorst 35.0 **sec**
AutoXValRange 13.0 **sec**

AutoXMaxScore 100.0 **Points**
AutoXMinScore 25.0 **Points**
AutoXPointRange 75.0 **Points**
Cone Penalty 5.0 **Points**

"lower is better"

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Efficiency Event

Index	Car #	Car Name	DeltaT Hours	DeltaT Minutes
1	14	Lorax	0.29	17.6
2	56	StMarks	0.45	27.0
3	"007"	RabbitPickup	0.24	14.5
4	16	ElecTecs/Cinn	0.28	16.6

Odo Start	Odo End	Odo Miles	Value Used	Vav	Iav
3395.0	3401.0	6.0	5.5	152.80	27.00
45908.9	45914.9	6.0	5.5	131.40	19.50
168205.1	168210.5	5.4	5.5	117.50	37.10
47809.5	47815.2	5.7	5.5	144.80	40.70

Efficiency

Index	Car #	Car Name	Pav	Energy kWh	Effic Mi/kWh	Effic Wh/Mile	Effic Score	Rank
1	14	Lorax	4.13	1.21	4.54	220.2	71.2	3
2	56	StMarks	2.56	1.15	4.77	209.6	78.1	2
3	"007"	RabbitPickup	4.36	1.05	5.22	191.5	91.6	1
4	16	ElecTecs/Cinn	5.89	1.63	3.38	296.2	36.3	4

Vmax	Vmin
163.60	147.20
155.60	-31.20
124.00	106.00
152.00	133.20

Efficiency

Index	Car #	Car Name	Payload Lbs	Calc MPH	Pay. Ind. All25MPH	Payload Index Mi-Lb-MPH/Wh	Payload Score	Rank
1	14	Lorax	195	18.7	22.1	16.6	36.0	3
2	56	StMarks	705	12.2	84.1	41.1	76.8	2
3	"007"	RabbitPickup	435	22.8	56.8	51.7	94.5	1
4	16	ElecTecs/Cinn	235	19.9	19.8	15.8	34.7	4

50# extra

178# extra

Imax	Imin
137.20	0.00
125.20	-310.40
160.40	-136.80
173.60	0.40

Higher is better"

EfficBest	5.5	Mi/kWh
EfficWorst	3.0	Mi/kWh
EfficValRange	2.5	Mi/kWh

EfficMaxScore	100.0	Points
EfficMinScore	25.0	Points
EfficPointRange	75.0	Points

Higher is better"

PayloadBest	55.0	Index
PayloadWorst	10.0	Index
PayloadValRange	45.0	Index

PayloadMaxScore	100.0	Points
PayloadMinScore	25.0	Points
PayloadPointRang	75.0	Points