

2010 DECEMBER
1974 PORSCHE 914

ELECTRIC VEHICLE CALCULATIONS
PREPARED BY
ELECTRIC VEHICLES OF AMERICA, INC
(603) 569-2100

VEHICLE DESCRIPTION

INITIAL CURB WEIGHT (LB) 2100
FINISHED VEHICLE WEIGHT (LB) 3387
DRAG COEFFICIENT 0.35
FRONTAL AREA (SQ FT) 18

TIRE SIZE
RR RADIAL TIRE 0.01
REV/MILE (HIGH GEAR) 900

SYSTEM DESIGN

1. MOTOR WarP 11
2. CELL TSLYP200A+
NO. OF CELLS 72
NO. OF PACKS 1
3. CA RATE 200
CONT CURRENT 600
4. VOLTAGE 237.6
5. MOTOR EFF 0.88
6. DRIVE EFF 0.9

RESULTS OF CALCULATION (BASED ON 60 MPH - 2% GRADE)	HP REQUIRED		ESTIMATE MIN	RANGE AVG	(MILES) MAX

	28		107	135	185
SPEED (MPH)	40	50	55	60	65
DRAG (LBS)	26	40	49	58	68
ROLLING RESISTANCE (RR)	34	34	34	34	34
TRACTIVE FORCE (0% GRADE)	60	74	83	92	102
GRADE FORCE + Tf					
0% GRADE	60	74	83	92	102
1% GRADE	94	108	116	126	136
2% GRADE	127	142	150	160	170
5% GRADE	229	244	252	261	271
WHEEL TORQUE, FT-LBS					
0% GRADE	56	69	77	86	95
1% GRADE	87	101	109	117	127
2% GRADE	119	132	140	149	158
5% GRADE	214	227	235	244	253
REQUIRED MOTOR HP					
0% GRADE	7	11	13	16	20
1% GRADE	11	16	19	22	26
2% GRADE	15	21	25	28	33
5% GRADE	27	36	41	46	52
CURRENT REQUIRED (AMPS) /PACK					
0% GRADE	25	39	48	58	70
1% GRADE	40	57	68	80	93
2% GRADE	54	75	87	101	117
5% GRADE	97	129	146	166	186
AVAILABLE MOTORING TIME (MINUTES)					
0% GRADE	428	276	225	185	154
1% GRADE	273	189	159	135	116
2% GRADE	200	144	124	107	93
5% GRADE	112	84	74	65	58
CALCULATED RANGE(MILES)					
0% GRADE	285	230	206	185	167
1% GRADE	182	158	146	135	125
2% GRADE	134	120	113	107	100
5% GRADE	74	70	68	65	63

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