

Mustang Electric Motor Replacement Scenarios
9/19/2019

Being considered:

Scenario	Description	technology	cost	warranty	weight lb	case length in	efficiency	regen	brushes	rare earths	factory	in business	support	design age	usage in EV conversions	motor input continuous current, amps DC or RMS	motor temp cutback	max torque, ft-lb	continuous HP	nominal voltage
1	Continue to repair existing Advanced DC FB1-4001 motor	series DC	\$1,000	none	150	15.75	poor	no	yes	no	Syracuse, NY	no	poor	1980s	high	170	no	70	28.5	144
2	Buy John Palmerlee's used Netgain Warp9	series DC	\$1,000	none	156	15.9	poor	no	yes	no	Lockport, IL	yes	good for now	2009	high	200	possible	100	34	144
3	Buy new Netgain Warp9	series DC	\$2,074	1 year	156	15.9	poor	no	yes	no	Lockport, IL	yes	good for now	2009	high	200	possible	100	34	144
4	Buy new Netgain Warp11	series DC	\$3,190	1 year	223	17	poor	no	yes	no	Lockport, IL	yes	good for now	2009	medium	>200?	possible	135	32	144
6	Buy new Netgain Hyper9	synchronous reluctance internal permanent magnet	\$4,300	6 months	120	13.75	good	yes	no	some	Lockport, IL	yes	unknown	2009	low	250	yes?	162	38	100
5	Buy new HPEVS AC-51	AC induction	\$4,615	2 years	115	13.8	fair	yes	no	no	Ontario, CA	yes	good	2018	medium	250	yes	108	32	144

Not being considered:

- 7 Nissan Leaf salvage motor not being considered due to complexity to adapting FWD to RWD and lack of direct hobbyist support.
- 8 Selling Mustang and buying a Bolt, because I enjoy the hobby and feel like we can share one long range EV and rent a car on the rare occasion where that doesn't work.