

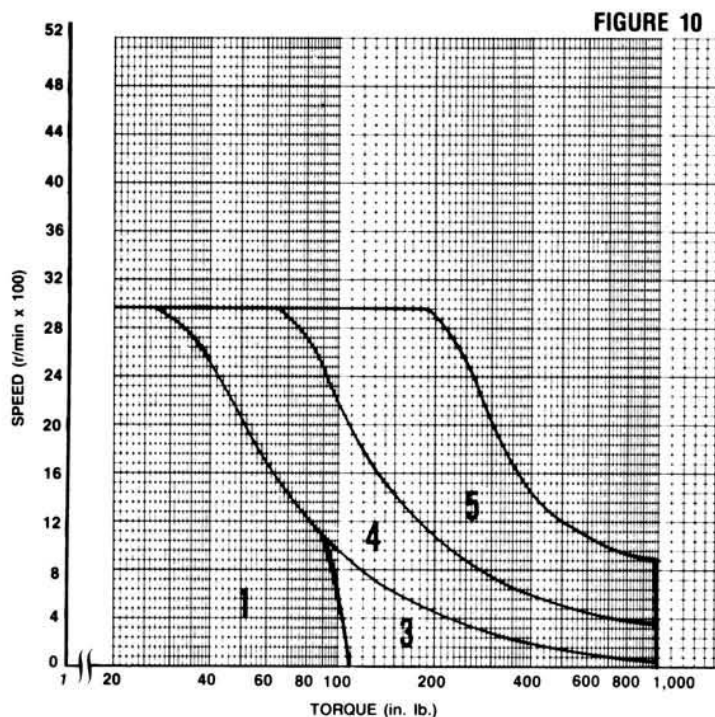
Motor Specifications

Typical at 25°C			7" Diameter Motors								
	Symbol	Unit	M131 M231	M132 M232	M133 M233	M134 M234	M135 M235	M136 M236	M137 M237	M138 M238	M139
Operating Parameters											
Continuous Rated Torque at stall (TENV)	T _s	lb-in	105	108	115	200	222	240	299	335	400
Continuous Rated RMS Current at Stall (TENV)	I _c	ampere	33	17	24	60	33	24	60	33	60
Maximum Winding Temperature by Resistance	Θ _a	°C	195	195	195	195	195	195	195	195	195
Absolute Maximum Peak Current before Demagnetization	I _m	ampere	350	174	235	700	350	235	700	350	700
Mechanical Parameters											
Rotor Inertia	J _m	lb-in-sec ²	0.173	0.173	0.173	0.332	0.289	0.289	0.437	0.395	0.566
Maximum Theoretical Acceleration at Stall	Θ̈ _{max}	rad/sec ²	5860	5740	5850	6340	7320	7400	7190	8090	8675
Mechanical Time Constant	t _m	second	0.022	0.021	0.018	0.016	0.013	0.010	0.013	0.010	0.012
Thermal Time Constant	t	minute	100	100	100	105	105	105	110	110	115
Static Friction	T _f	lb-in	6	6	6	10	6	6	10	6	10
Weight		lb	55	55	55	85	80	80	110	105	145
Electrical Parameters											
Back EMF Constant ±10%	K _e	v/1000 r/min	37.8	75	56.6	39.5	79.5	120	59	120	79
	K _v	v-sec/rad	0.36	0.72	0.54	0.38	0.76	1.15	0.56	1.15	0.754
Torque Constant ±10%	K _t	lb-in/amp	3.20	6.34	4.78	3.34	6.72	10.14	4.99	10.14	6.68
Armature DC Resistance: (less brushes) ±10% (including brushes)	R _a	Ohm	0.11	0.45	0.21	0.05	0.18	0.34	0.07	0.25	0.086
	R _m		0.15	0.54	0.27	0.06	0.23	0.40	0.08	0.30	0.105
Armature Inductance	L _a	mH	0.50	1.80	1.10	0.20	0.76	1.8	0.30	1.16	0.38
Electrical Time Constant	t _e	ms	3.3	3.3	4.0	3.2	3.4	4.4	3.7	3.9	4.0
Viscous Damping Coefficient (Zero Z Source)	F _o	lb-in-sec/rad	7.68	8.43	9.49	20.15	22.63	28.87	34.90	39.34	48.2

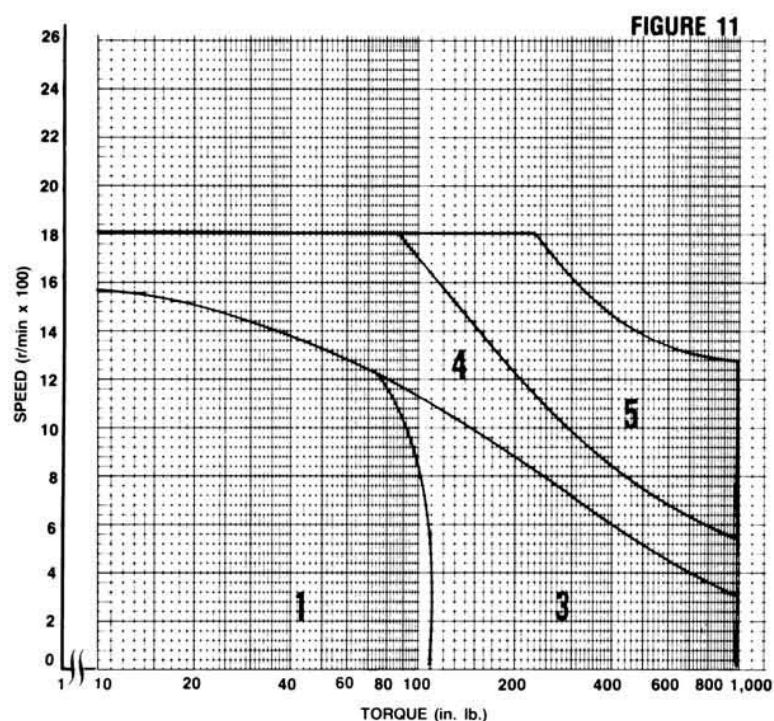
* This data is intended to aid you in making motor application decisions. Should you desire assistance in interpretation of data, please consult a Gettys application specialist.

Motor Performance Information

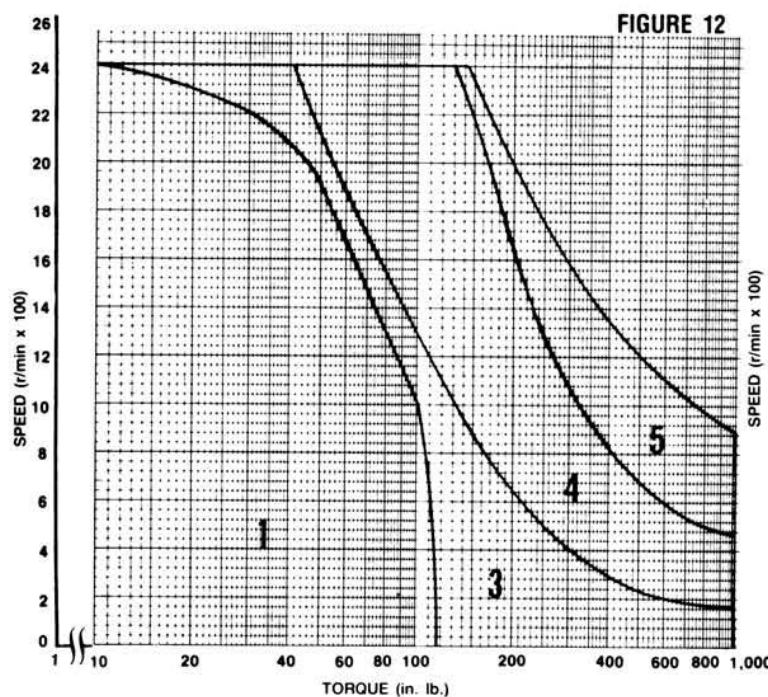
D.C. OPERATION FOR
M131, M231 MOTOR



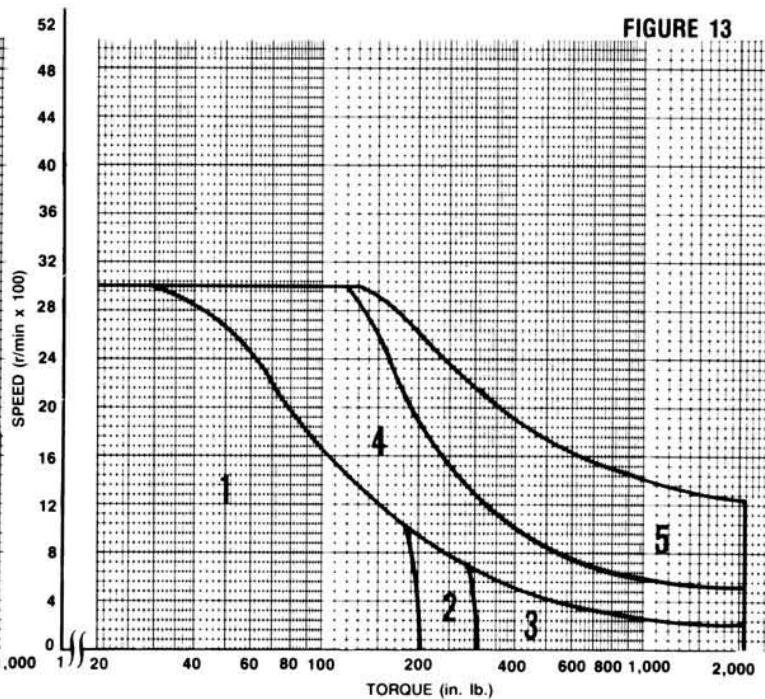
D.C. OPERATION FOR
M132, M232 MOTOR



D.C. OPERATION FOR
M133, M233 MOTOR

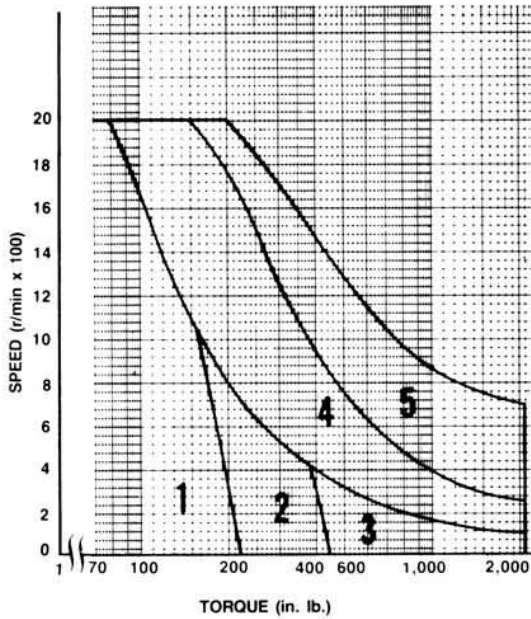


D.C. OPERATION FOR
M134, M234 MOTOR



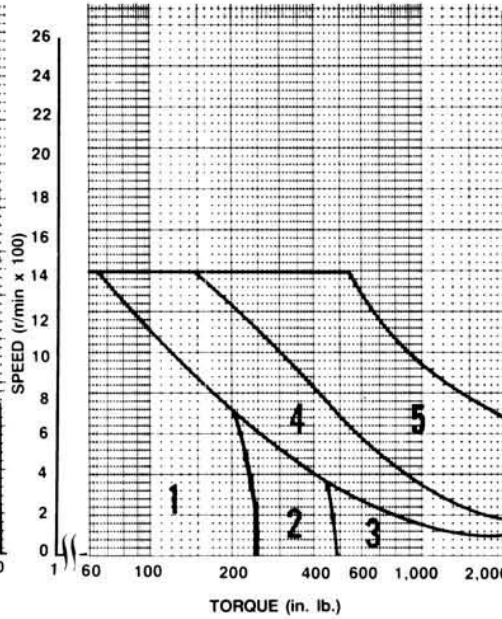
D.C. OPERATION FOR
M135, M235 MOTOR

FIGURE 14



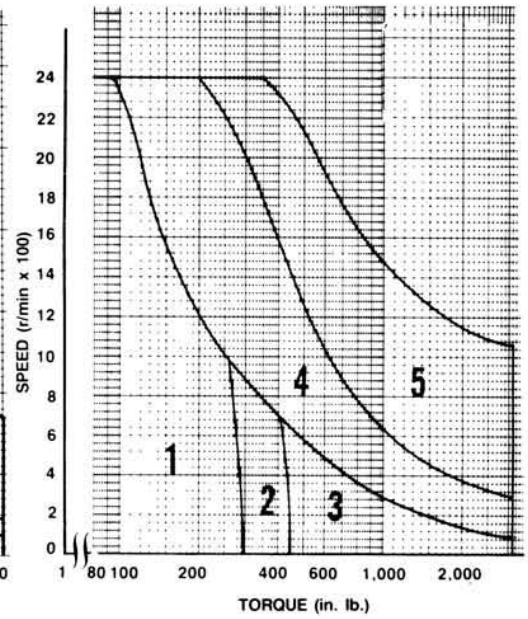
D.C. OPERATION FOR
M136, M236 MOTOR

FIGURE 15



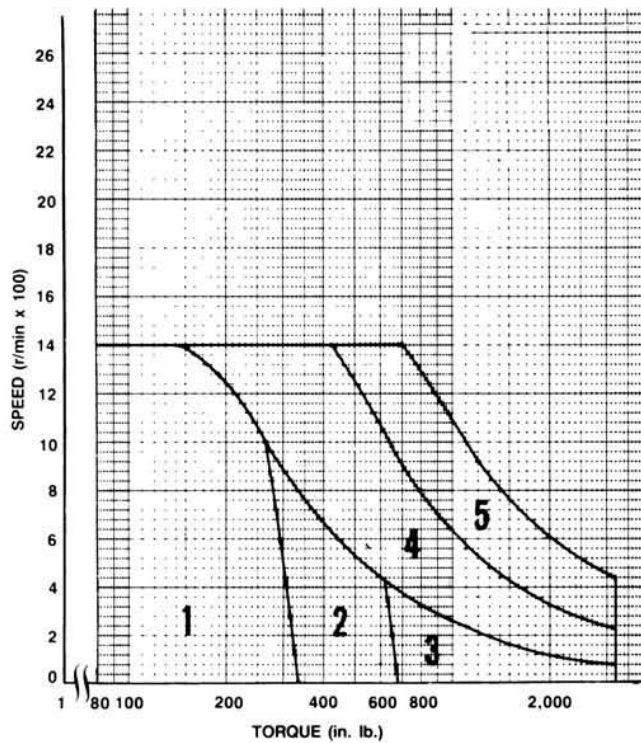
D.C. OPERATION FOR
M137, M237 MOTOR

FIGURE 16



D.C. OPERATION FOR
M138, M238 MOTOR

FIGURE 17



D.C. OPERATION FOR
M139 MOTOR

FIGURE 18

