Norton Commando Gearing

This page lists the speeds at various RPMs for a stock Commando using various gearbox sprockets and a standard 19" rear wheel. Many factors affect the top speed in each case - this lists the mathematical potential. Tire size can have an effect as well. The formula is round(RPM/Overall Gear Ratio/13.42,0). Note that the 850 MK1A/MK2A/MK3 have a different 2nd gear ratio from the 750/850 MK1/2 so there are two 2nd gear sections.

Engine (Crank) Teeth	26
Clutch Basket Teeth	57
Primary Drive Ratio	2.192

Rear Sprocket Teeth	42						
Secondary Drive Ratio	2.333	2.211	2.100	2.000	1.909	1.826	1.750

In Fourth Gear (1:1)(Layshaft teeth: 14, Mainshaft teeth: 23):

Front Sprocket Teeth:	18	19	20	21	22	23	24
Overall Gear Ratio:	5.114	4.847	4.603	4.384	4.185	4.003	3.836
3000	44	46	49	51	53	56	58
3500	51	54	57	59	62	65	68
4000	58	61	65	68	71	74	78
4100	60	63	66	70	73	76	80
5000	73	77	81	85	89	93	97
5500	80	85	89	93	98	102	107
6000	87	92	97	102	107	112	117
6500	95	100	105	110	116	121	126
7000	102	108	113	119	125	130	136
7500	109	115	121	127	134	140	146

Unlikely to achieve with stock equipment!

In Third Gear (1.21:1)(Layshaft teeth: 20, Mainshaft teeth: 21):

Front Sprocket Teeth:	18	19	20	21	22	23	24
Overall Gear Ratio:	6.19	5.86	5.57	5.30	5.06	4.84	4.64
3000	36	38	40	42	44	46	48
3500	42	44	47	49	52	54	56
4000	48	51	54	56	59	62	64
4500	54	57	60	63	66	69	72
5000	60	64	67	70	74	77	80
5500	66	70	74	77	81	85	88
6000	72	76	80	84	88	92	96
6500	78	83	87	91	96	100	104
7000	84	89	94	98	103	108	112
7500	90	95	100	105	110	115	120

Unlikely to achieve!

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In Second Gear(1.7:1)(Layshaft teeth: 24, Mainshaft teeth: 18), 750's and 850 MK1/MK2:

Front Sprocket Teeth:	18	19	20	21	22	23	24
Overall Gear Ratio:	8.69	8.24	7.83	7.45	7.11	6.81	6.52
3000	26	27	29	30	31	33	34
3500	30	32	33	35	37	38	40
4000	34	36	38	40	42	44	46
4500	39	41	43	45	47	49	51
5000	43	45	48	50	52	55	57
5500	47	50	52	55	58	60	63
6000	51	54	57	60	63	66	69
6500	56	59	62	65	68	71	74
7000	60	63	67	70	73	77	80
7500	64	68	71	75	79	82	86

In Second Gear(1.614:1)(Layshaft teeth: 23, Mainshaft teeth: 18), 850 MK1A/MK2A/MK3:

Front Sprocket Teeth:	18	19	20	21	22	23	24
Overall Gear Ratio:	8.25	7.82	7.43	7.08	6.75	6.46	6.19
3000	27	29	30	32	33	35	36
3500	32	33	35	37	39	40	42
4000	36	38	40	42	44	46	48
4500	41	43	45	47	50	52	54
5000	45	48	50	53	55	58	60
5500	50	52	55	58	61	63	66
6000	54	57	60	63	66	69	72
6500	59	62	65	68	72	75	78
7000	63	67	70	74	77	81	84
7500	68	71	75	79	83	87	90

In First Gear(2.56:1)(Layshaft teeth: 28, Mainshaft teeth: 14):

Front Sprocket Teeth:	18	19	20	21	22	23	24
Overall Gear Ratio:	13.09	12.41	11.78	11.22	10.71	10.25	9.82
3000	17	18	19	20	21	22	23
3500	20	21	22	23	24	25	27
4000	23	24	25	27	28	29	30
4500	26	27	28	30	31	33	34
5000	28	30	32	33	35	36	38
5500	31	33	35	37	38	40	42
6000	34	36	38	40	42	44	46
6500	37	39	41	43	45	47	49
7000	40	42	44	46	49	51	53
7500	43	45	47	50	52	55	57

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