

# CLARK®



## 1/2" DRIVE TORQUE WRENCH

MODEL NO: PRO414

PART NO: 1700820

## USER INSTRUCTIONS

ORIGINAL INSTRUCTIONS

DL1123 Rev 1

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## INTRODUCTION

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Thank you for purchasing this CLARKE Torque Wrench supplied with extension shaft and adaptor.

This torque wrench is designed to tighten nuts with precision. It should NOT be used for UNDOING nuts, as severe damage could occur. With correct use, this tool will produce an accuracy of plus or minus 4%. You can hear and feel when the desired torque setting has been reached. With careful and considerate use, the wrench will give years of reliable service.

## LIFETIME GUARANTEE

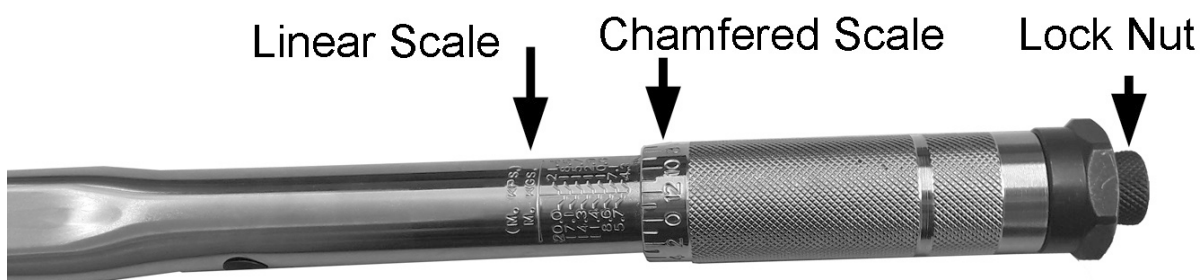
The lifetime guarantee covers defects in manufacture or materials during the lifetime of the tool, however this guarantee does not apply to the ratchet mechanism. Please keep your receipt which will be required as proof of purchase. This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for its intended purpose. Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission. This guarantee does not effect your statutory rights.

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## OPERATING THE TORQUE WRENCH

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### TORQUE SETTING ADJUSTMENT



The main body is marked in both Newton/Metres (N/m), and Metre Kilograms (Mkg). The barrel is marked with 13 graduations, one graduation = 1N/m or 0.14 Mkg.

Example: To set the torque to 90N/m

1. Ensure the lock nut is loosened, by turning it anti-clockwise. Turn the knurled handle until the zero mark on the vertical scale is in line with the 84 mark on the horizontal scale.
2. Continue to turn the knurled handle until the 6 mark is in line with the centre line.
3. Tighten the lock nut to secure the setting.

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## METHOD OF USE

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**NOTE:** Preferably, DO NOT use knuckle or universal joints, as these could result in incorrect torque settings.

1. Place the square drive on to the socket or extension bar, perpendicular to the nut/bolt to be tightened.
2. Gripping the knurled handle with the right hand, whilst steadying the 1/2" square drive end with the left, gently but firmly, pull the handle (i.e. in a clockwise direction) until a click is heard, and a slight 'break' in the handle is felt. DO NOT turn any further.
  - Apply even pressure throughout the operation. DO NOT jerk the torque wrench when tightening a nut or bolt. This is a precise measuring instrument and should be treated as such.
  - Release the wrench immediately the click is heard/felt.
  - Note that the 'click' becomes weaker with the lower torque settings.

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## CARE & MAINTENANCE

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Each torque wrench has been lubricated before leaving the factory. If the wrench has not been used for some time, operate it several times allowing the lubricant to re-coat the internal working parts.

- After use, keep adjustment at lowest torque setting.
- DO NOT turn handle below lowest torque setting.
- Clean wrench by wiping. Never immerse in any type of cleaning fluid.
- The wrench may occasionally require servicing/recalibration in order to ensure accurate readings, in which case, contact your CLARKE dealer.

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## CONVERSION FORMULAE

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1kg cm=	13.887 oz/in	1Nm =	14.161oz/in
1kg cm=	0.08677 lbf /in	1Nm =	8.8507 lbf/in
1kg/m =	7.233 lbf/ft	1Nm =	0.73756 lb/ft
1kg cm=	0.098 N/m	1kgm =	9.80665 N/m

## CONVERSION TABLES

Pound/ Feet (lbf.ft)	Kilogram Metres kg/m	Newton Metres Nm	Newton Metres Nm	Pound/ Foot (lbf.ft)	Kilogram Metres (kg/m)	Kilogram Metres kg/m	Newton Metres Nm	Pounds /Feet (lbf.ft)
5	0.69	6.78	10	7.38	1.02	1	9.81	7.23
10	1.38	13.56	20	14.75	2.04	2	19.61	14.47
15	2.07	20.34	30	22.13	3.06	3	29.42	21.70
20	2.76	27.12	40	29.50	4.08	4	39.23	28.93
25	3.46	33.90	50	36.88	5.10	5	36.17	36.17
30	4.15	40.68	60	44.26	6.12	6	58.84	43.40
35	4.84	47.46	70	51.63	7.14	7	68.65	50.63
40	5.53	54.24	80	59.01	8.16	8	78.46	47.87
45	6.22	61.02	90	66.38	9.18	9	88.26	65.10
50	6.91	67.80	100	73.76	10.20	10	98.07	72.33
55	7.60	74.58	110	81.14	11.22	11	107.88	79.57
60	8.29	81.36	120	88.51	12.24	12	117.68	86.80
65	8.98	88.14	130	95.89	13.26	13	127.49	94.03
70	9.67	94.92	140	103.26	14.28	14	137.30	101.27
75	10.37	101.70	150	110.64	15.30	15	147.11	108.50
80	11.06	108.48	160	118.02	16.32	16	156.91	115.74
85	11.75	115.26	170	125.39	17.34	17	166.72	122.97
90	12.44	122.04	180	132.77	18.36	18	176.53	130.20
95	13.13	128.82	190	140.14	19.38	19	186.33	137.43
100	13.82	135.60	200	147.52	20.40	20	196.14	144.67
105	14.51	142.38	210	154.90	21.42	21	205.95	151.90
110	15.20	149.16	220	162.27	22.44	22	215.75	159.13
115	15.89	155.94	230	169.65	23.46	23	225.37	166.37
120	16.58	162.72	240	177.02	24.48	24	235.37	173.60
125	17.28	169.50	250	184.40	25.50	25	245.18	180.84
130	17.97	176.28	260	191.78	26.52	26	254.98	188.08
135	18.66	183.06	270	199.15	27.54	27	264.79	195.30
140	19.35	189.84	280	206.53	28.56	28	274.60	202.54
145	20.04	196.62	290	213.91	29.58	29	284.41	209.77
150	20.73	203.40	300	221.29	30.60	30	294.22	217.00
155	21.42	210.18	310	228.67	31.62	31	304.03	224.23
160	22.11	216.96	320	236.05	32.64	32	313.84	231.46