

USE OF ADAPTORS, EXTENSIONS AND UNIVERSALS

Torque is force applied at a distance.

The torque wrench's micrometer scale setting is always torque wrench square drive torque (fig 4).

Anytime an adaptor, extension or universal is used with a torque wrench in such a way that the fastener torque distance is different than the torque wrench square drive distance, an adjustment to set torque is required to get proper fastener torque. Note that units of distance and force must be consistent throughout an adjustment calculation (figs. 4 - 9),

Fig. 4

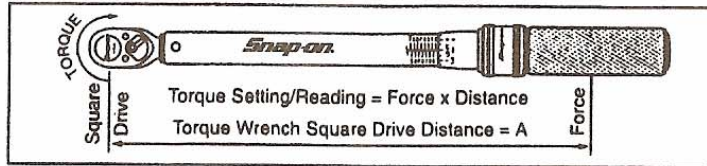


Fig. 5 – Fastener torque equals torque wrench square drive torque.

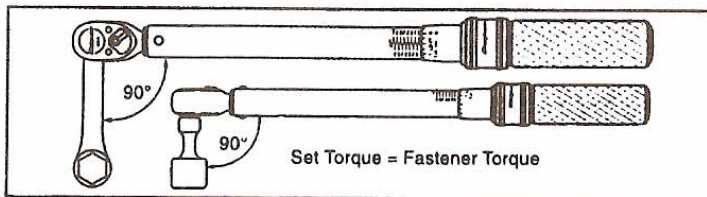


Fig. 6 – Using wobble extensions/ universals with torque wrenches.

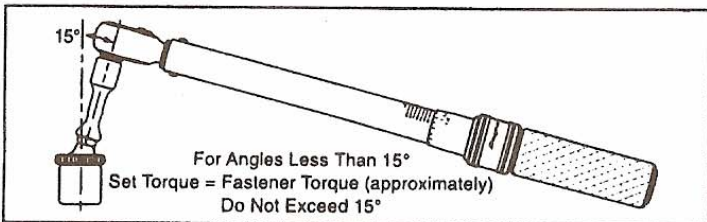


Fig. 7 – Fastener torque is greater than torque wrench square drive torque.

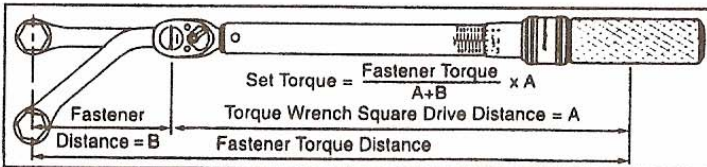


Fig. 8 – Fastener torque is greater than torque wrench square drive torque.

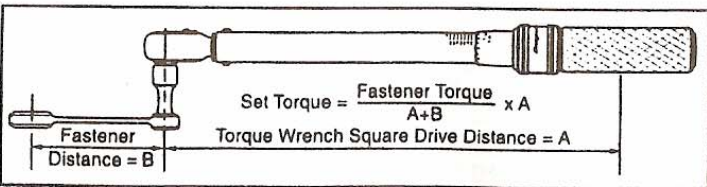
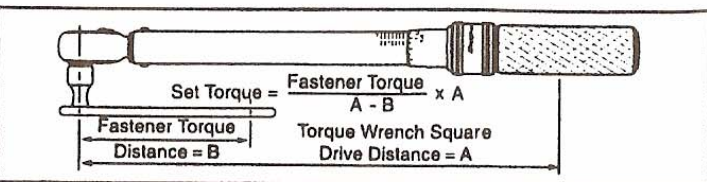


Fig. 9 – Fastener torque is less than torque wrench square drive torque.



CONVERSION TABLE

To Convert From	To	Multiply By	To Convert From	To	Multiply By
lb. in.	oz. in.	16	oz. in.	lb. in.	.0625
lb. in.	lb. ft.	.08333	lb. ft.	lb. in.	12
lb. in.	kg.cm.	1.1519	kg.cm.	lb. in.	.8681
lb. in.	kg.m.	.011519	kg.m.	lb. in.	86.81
lb. in.	N-m.	.113	N-m.	lb. in.	8.85
lb. in.	dN-m.	1.13	dN-m.	lb. in.	.885
lb. ft.	kg.m.	.1382	kg.m.	lb. ft.	7.236
lb. ft.	N-m.	1.356	N-m.	lb. ft.	.7376
N-m.	dN-m.	10	dN-m.	N-m.	.10
N-m.	kg.cm.	10.2	kg.cm.	N-m.	.09807
N-m.	kg.m.	.102	kg.m.	N-m.	9.807