



Australasian Machinery Dealer Services P/L

303 Copland St, Wagga Wagga NSW 2650, Australia

Ph +61 2 6921 2011

email: equipment@amds.com.au website: www.amds.com.au

Torque Requirements of Dynamometers Today!

In the late 70's & early 80's when most agricultural dynos were sold in Australia, horsepower was pretty much the only measure to consider. Torque rises were minimal, most around 12-15% or even less.

Well, haven't things changed – the characteristics of the modern engine are very different from that era, huge torque rises, power bulges, etc. 50% plus torque rise on a modern engine now is very common.

Consider these equations & table to establish your current dynamometer requirements

Maximum Torque Ratings of the AW AG.X - NEB range (0-1000 rpm)

AG.2X (NEB400) – 1600 ft/lbs for a quick test, 1200 ft/lbs for continuous load

AG.3X (NEB600) – 3000 ft/lbs for a quick test, 2250 ft/lbs for continuous load

AG.4X (NEB800) – 4000 ft/lbs for a quick test, 3000 ft/lbs for continuous load

DO NOT TEST - THIS OUT OF RANGE FOR EQUIPMENT – REFERENCE ONLY

PTO Horsepower	Torque (ft/lbs) @ 540 rpm	Torque @ 50% torque rise	Torque (ft/lbs) @ 1000 rpm	Torque @ 50% torque rise
100	970	1460	525	790
125	1215	1825	655	985
150	1460	2190	788	1180
175	1700	2555	920	1380
200	1945	2915	1050	1575
225	2190	3280	1180	1775
250	2430	3645	1315	1970
275	2675	4010	1444	2165
300	2920	4375	1575	2365
325	3160	4740	1705	2560
350	3405	5105	1840	2755
375	3645	5470	1970	2955
400	3890	5835	2100	3150
425			2230	3350
450			2360	3545
475			2495	3740
500			2625	3940
550			2890	4330
600			3150	4725

Horsepower = Torque (ft/lb) x RPM divided by 5252

Torque (ft/lb) = HP x 5252 divided by RPM