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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

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

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

PTO Horsepower	Torque (ft/lbs) @ 1000 rpm	Torque @ 50% torque rise
100	525	788
125	657	985
150	788	1182
175	919	1379
200	1050	1576
225	1182	1773
250	1313	1970
275	1444	2166
300	1576	2363
325	1707	2560
350	1838	2757
375	1970	2954
400	2101	3151

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

NEB200 – 1000 ft/lbs for a quick test, 825 ft/lbs for continuous load

NEB400 – 2000 ft/lbs for a quick test, 1650 ft/lbs for continuous load

NEB600 – 3000 ft/lbs for a quick test, 2500 ft/lbs for continuous load