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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**
425	2232	**3348**
450	2363	**3545**

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

NEB200 – 1000 ft/lbs for a quick test, 750 ft/lbs for continuous load

NEB400 – 2000 ft/lbs for a quick test, 1500 ft/lbs for continuous load

NEB600 – 3000 ft/lbs for a quick test, 2250 ft/lbs for continuous load

NEB800 – 4000 ft/lbs for a quick test, 3000 ft/lbs for continuous load