

DFE1.4 – Short take-off and landing			A2.5 & A4.5 Short take-off and landing for nose-wheel
JUELG Email 1/11/18	COMMENTS	PILKINGTON 2014	
for perform short take-off as follows, demonstrate the following:	1. Why is it so different and more onerous than the aeroplane rating standards of A2.5?	<i>for short take-off, demonstrate the following:</i>	<b>A2.5 – Take-off aeroplane from ‘short field’</b>
(i) calculate take-off performance	2. OK – I note the new Part 91 draft is very specific on the source of performance charts or tables.	<i>(i) calculate take-off performance</i>	(a) calculate take-off and landing performance in accordance with the aeroplane’s performance charts;
(ii) perform conduct pre- and after-take-off, line-up and after-landing checks	3. Extra to A2.5?	<i>(ii) perform pre- and after-take-off, line-up and after-landing checks;</i>	
(iii) line up aeroplane to use maximum runway length	4. Extra to A2.5?	<i>(iii) line up aeroplane to use maximum runway length</i>	
(iv) apply take-off power fully before brakes (where fitted) are released and rotate aeroplane at manufacturer’s recommended speed;	5. OK, in the Super Decathlon rotate below the stall speed 6. But why not similar to A2.5?	<i>(iv) perform take-off to achieve the minimum length take-off performance</i>	b) perform take-off aeroplane to achieve the minimum length take-off performance
(v) set nominated climb speed appropriate to meet obstacle clearance requirements	7. OK, but why is it different from A2.5?	<i>(v) set nominated climb speed appropriate to obstacle clearance requirements</i>	(c) perform take-off aeroplane to achieve the obstacle clearance parameters.
(b) for perform short landing, demonstrate the following	8. Why is it so different and more onerous than the aeroplane rating standards of A4.5?	<i>for short landing, demonstrate the following</i>	<b>A4.5 – Short landing</b>
(i) calculate landing performance	9. OK, as in A2.5	<i>(i) calculate landing performance</i>	
(ii) land the aeroplane at the nominated touchdown point at minimum speed and apply maximum braking	10. A4.5 (e) states apply maximum braking without locking up the wheels so why does this state maximum braking without regard for the consequences? 11. Super Decathlon manual states: “Brake as required. WARNING As	<i>(ii) land the aeroplane at the nominated touchdown point at minimum speed</i>	(a) land aeroplane at nominated touchdown point at minimum speed;

	<p>speed decreases, braking must be moderated to prevent possible nose-over.”</p> <p>12. The manual explains that WARNING means “An operating condition, practice or condition, etc which may result in injury or fatality, if not carefully observed or followed.”</p>		
(iii) touchdown simultaneously on main wheels and tail wheel;	13. OK	<b><i>(iii) touchdown simultaneously on main wheels and tail wheel</i></b>	(b) control ballooning during flare
			(c) control bouncing after touchdown
(iv) control the direction of the aeroplane on the ground	14. OK	<b><i>(iv) control the direction of the aeroplane on the ground;</i></b>	(d) maintain direction after touchdown
			(e) apply maximum braking without locking up wheels
(v) stop aeroplane within calculated landing distance;	<p>15. Why is this more onerous than A4.5? Why the requirement to stop in a shorter distance than is calculated when calculated distances are not achievable safely by the average pilot as explained below?</p> <p>16. Super Decathlon landing distance is based on:</p> <ol style="list-style-type: none"> <li>Approach speed very much less than the 1.3Vs of current standards</li> <li>Nil additional margin – the usual 15%</li> <li>“maximum airplane capability” so the test pilot did his best so not</li> </ol>	<b><i>(v) stops aircraft within landing distance available</i></b>	(f) stops aircraft within landing distance available.

	<p>the later FAR23 where pilots of average skill were provided for</p> <p>d. "at speeds shown" so unless those exact speeds are achieved it is impossible to stop within the calculated distance.</p>		
(vi) perform after-landing checks correctly	17. Why is it different from A4.5?	<b><i>(vi) perform after-landing checks correctly</i></b>	