

WHY TSS FAILS AND HOW **NTS** FIXES IT

A quick reference on why Training Stress Score under-reads real physiological load — and how FitLogic's Normalized Training Stress (NTS), built into TriDot & RunDot, corrects for it.

Source: fitlogic.tech — FitLogic Normalized Training Stress

WHERE TSS BREAKS DOWN — AND WHAT NTS DOES INSTEAD

ISSUE	TSS	NTS
INTENSITY SCALING	FAILS Assumes stress rises linearly with intensity — a 10% harder effort reads as 10% more stress. At 125% FTP for 20 minutes, TSS reads as only ~25% harder than threshold, even though that effort is physiologically impossible to sustain for most athletes.	FIXED Models the true exponential relationship between intensity and physiological stress, using dynamic intensity-weighting so hard efforts are scored the way the body actually experiences them.
SESSION COMPOSITION	FAILS Scores by average intensity, so a steady 60-minute Zone 2 ride and a 42-minute session hiding 12 minutes of Zone 5 intervals can land on the same number — despite very different physiological cost.	FIXED Reads the composition of a session across four independent stress types — aerobic, threshold, muscular and neural — each with its own recovery timeline, instead of collapsing effort into one average.
INDIVIDUALISATION	FAILS Leaves athletes and coaches to fall back on generic rules of thumb — “never increase volume more than 10% a week” — that ignore each athlete's recovery capacity, environment and life stress.	FIXED Enables genuinely individualised load management — accounting for personal recovery capacity, environmental stress, travel, life stress and age — in place of one-size-fits-all rules.

EXHIBIT — THE SAME 15-MINUTE EFFORT, SCORED TWO WAYS

WHAT THE NUMBERS SHOW

Run the same 15-minute effort through both models and the gap compounds with intensity. TSS treats Zone 6 as only ~3x harder than Zone 2. NTS scores it over 20x harder — in line with how the body actually responds.

At Zone 6, TSS reads **39**. NTS reads **151**. That gap is the difference between a training plan that under-doses the hardest work and one that manages it correctly.

ZONE	TSS	NTS
Zone 2	12	7
Zone 4	25	23
Zone 5	33	72
Zone 6	39	151