

**A NOTE ON PRESERVATION OF THE GENERALIZED TTT TRANSFORM
ORDER**

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Abstract: The generalized total time on test (GTTT) transform with respect to the nonnegative function was introduced by Li and Shaked (2007). Comparing GTTT transforms of two distributions is useful in reliability theory and actuarial science, see, e.g., Li and Shaked (2007), Shaked et al. (2010). In 2009, Bartoszewicz and Benduch formulated the preserving theorem for some orders under the GTTT transform. We complete it with result for the GTTT transform order with respect to the nonnegative function. We give also some conditions for preservation under mixtures of exponential distributions and extend the theorem proved by Bartoszewicz and Skolimowska (2006).

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