

A DOUBLE ACCEPTANCE SAMPLING PLAN FOR TYPE II GENERALIZED HALF LOGISTIC DISTRIBUTION WITH KNOWN SHAPE PARAMETER

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SUMMARY

This paper considers the Type II generalized half-logistic distribution (GHLD) when shape parameter is known in developing double acceptance sampling plan based on truncated life test. The zero and one failure scheme is considered, where the lot is accepted if no failures are observed from the first sample and is rejected if two or more failures observed. When there is exactly one failure from the first sample, the second sample is selected and tested for the same duration as the first sample. The minimum sample sizes of the first and second samples are determined to ensure that the true median life is longer than the given life at the specified consumer's confidence level. The operating characteristics of the proposed sampling plan are analysed according to various ratios of the true median life to the specified life. The minimum such ratios are also obtained such that to lower the producer's risk at the specified level. The results are illustrated with suitable data set.

Keywords and phrases: Type II generalized half-logistic distribution, double sampling plans, Average sampling number, consumer's risk, producer's risk.

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