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Optimization of Tracked Vehicles Performance Characteristics

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Performance of tracked vehicles is evaluated through number of characteristics. These characteristics evaluate vehicle capabilities such as the maximum slope the vehicle can overcome, acceleration time, and minimum radius of turning, etc. Vehicles upgrade disturbs their performance characteristics due the additional forces and weights resulting from increase of their fire power and degree of protection. In this paper dynamic, acceleration, and steering characteristics are carried out for a medium weight tracked vehicles in order to evaluate their performance. The change of performance characteristics due to variation of vehicle specifications is also evaluated in order to find the degree of change in vehicle capabilities. It was found that to maintain the same capabilities and technical specifications of the vehicle with increasing of fire power and degree of protection, a corresponding increase of engine power and suspension system must be taken into consideration.