

## **Kinematic scheme and design of automatic planetary gear boxes based on a new module**

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### **Abstract**

© 2014 Ildar Ilgizarovich Salakhov et al. The author has carried out analysis of the existing and projected planetary gear boxes and regarded the prospects of their application and development. New planetary systems called an all-purpose multi-line differential gear train and covered by RF patent No2384773 were developed which possess the possibility to unite as more differential devices as possible in their mechanical diagram. A brassboard module of planetary system was fabricated and based thereon the mechanical diagrams of planetary gear boxes were developed. A mechanical diagram of eight-diameter stepped planetary gear box is presented and calculation of gear transmission ratio with the operation concept is stated. The design of a new eight-diameter stepped planetary gear box was produced.

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### **Keywords**

All-purpose all-round differential gear train, Friction brake, Friction lock-up clutch, Mechanical diagram, Planetary system