Calculations

Ratio i, calculating

Transmission ratio

Transmission ratio	=	No. of teeth driven gear	:	No. of teeth drive gear

Ratios			Formula
iG	=	gear ratio	ZG2 : ZG1
iA	=	axle ratio	ZA2 : ZA1
iov	=	overall ratio	iG x iA

Example:

	5th gear	Final drive
Drive gear	ZG1 = 37	ZA1 = 9
Driven gear	ZG2 = 31	ZA2 = 35

Calculations:

iG = 31 : 37 = 0.838

iA = 35 : 9 = 3.889

iov = (31 : 37) x (35 : 9) = 0.838 x 3.889 = 3.259

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Vehicle speed V, calculating

V	**=**	**n : iov x UA x 0.06**
n	=	Engine speed (RPM)
iov	=	Overall ratio
UA	=	Dynamic rolling circumference of tires (m)
V	=	Vehicle speed (km/h)

Example:

V = 1000 : 3.100 x 1.93 x 0.06 = 37 km/h

At an engine speed of 1000 RPM, the vehicle road speed in 5th gear is 37 km/h.