

Gear Ratio Calculator

Mittwoch, 29. Januar 2014 12:08

Ford E4OD

Step 1: Select transmission from the drop down list or, if it's not in the list and you know the gear ratios of your transmission, enter them below.

Number of forward gears

1st Gear 2.71
2nd Gear 1.54
3rd Gear 1.00
4th Gear 0.71

Step 2: Select transfer case from the drop down list or, if it's not in the list and you know the gear ratios of your transfer case, enter them below.

Borg Warner 1345

High Range 1.00
Low Range 2.72
STaK Range -

Step 4: Enter axle gear ratio.

3,54:1

Step 5: Select tire size.

Metric 245/75R16

The following chart lists the final drive ratio of all combined gears (transmission, transfer case, underdrive, axle) in all possible combinations

Final Drive Ratio						
Gear	Underdrive Hi			Underdrive Lo		
	Tcase Hi	Tcase Lo	STaK	Tcase Hi	Tcase Lo	STaK
1	8.13	22.11	-	-	-	-
2	4.62	12.57	-	-	-	-
3	3.00	8.16	-	-	-	-
4	2.13	5.79	-	-	-	-

The following chart lists the crawl speed you will be going while the engine is at a given RPM. Crawl speed is calculated based on the lowest low range (transfer case and underdrive in low range) available in your rig.

Crawl speed at given RPM in meters per minute and kilometers per hour

Gear	RPM	750	RPM	1500	RPM	2500
	MPM	KPH	MPM	KPH	MPM	KPH
1	82	4.95	165	9.90	275	16.50

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Step 2: Select transfer case from the drop down list or, if it's not in the list and you know the gear ratios of your transfer case, enter them below.

Borg Warner 1345

High Range 1.00
Low Range 2.72
STaK Range -

Step 4: Enter axle gear ratio.

4,11:1

Step 5: Select tire size.

Metric 315/75R16

The following chart lists the final drive ratio of all combined gears (transmission, transfer case, underdrive, axle) in all possible combinations

Final Drive Ratio						
Gear	Underdrive Hi			Underdrive Lo		
	Tcase Hi	Tcase Lo	STaK	Tcase Hi	Tcase Lo	STaK
1	10.84	29.48	-	-	-	-
2	6.16	16.76	-	-	-	-
3	4.00	10.88	-	-	-	-
4	2.84	7.72	-	-	-	-

The following chart lists the crawl speed you will be going while the engine is at a given RPM. Crawl speed is calculated based on the lowest low range (transfer case and underdrive in low range) available in your rig.

Crawl speed at given RPM in meters per minute and kilometers per hour

Gear	RPM	750	RPM	1500	RPM	2500
	MPM	KPH	MPM	KPH	MPM	KPH
1	70	4.22	141	8.43	234	14.05

2	145	8.71	290	17.42	484	29.03
3	224	13.41	447	26.83	745	44.71
4	315	18.89	630	37.79	1050	62.98

The following chart lists the road speed you will be going while the engine is at a given RPM. Road speed is calculated based on the transfer case and underdrive being in high range.

Road speed at given RPM in kilometers per hour	750	1500	2500
Gear	RPM	RPM	RPM
1	13	27	45
2	24	47	79
3	36	73	122
4	51	103	171

The following chart lists the RPMs your engine will be turning while driving at a given speed.

Road RPMs at given speed in kilometers per hour	50	100	120
Gear			
1	2785	5571	6685
2	1583	3166	3799
3	1028	2056	2467
4	730	1459	1751

2	124	7.42	247	14.84	412	24.73
3	190	11.42	381	22.85	635	38.08
4	268	16.09	536	32.18	894	53.63

The following chart lists the road speed you will be going while the engine is at a given RPM. Road speed is calculated based on the transfer case and underdrive being in high range.

Road speed at given RPM in kilometers per hour	750	1500	2500
Gear	RPM	RPM	RPM
1	11	23	38
2	20	40	67
3	31	62	104
4	44	88	146

The following chart lists the RPMs your engine will be turning while driving at a given speed.

Road RPMs at given speed in kilometers per hour	50	100	120
Gear			
1	3271	6541	7849
2	1859	3717	4460
3	1207	2414	2896
4	857	1714	2056