

Dr. John's SPEED vs. TIRE DIAMETER vs. TOTAL GEAR RATIO Table

NUMBERS IN THE COLUMN UNDER *TIRE DIAMETER*
CORRESPOND TO max. **SPEED (mph) AT 6000 RPM**

TOTAL Gear Ratio	Tire Diameter 24 inch	Tire Diameter 25 inch	Tire Diameter 26 inch	Tire Diameter 27 inch	Tire Diameter 28 inch	Tire Diameter 29 inch	Tire Diameter 30 inch	Tire Diameter 31 inch	Tire Diameter 32 inch	Tire Diameter 33 inch
3.5	122.3	127.4	132.5	137.6	142.7	147.8	152.9	158.0	163.1	168.2
3.6	118.9	123.9	128.8	133.8	138.8	143.7	148.7	153.6	158.6	163.5
3.7	115.7	120.5	125.4	130.2	135.0	139.8	144.6	149.5	154.3	159.1
3.8	112.7	117.4	122.1	126.8	131.5	136.1	140.8	145.5	150.2	154.9
3.9	109.8	114.4	118.9	123.5	128.1	132.7	137.2	141.8	146.4	151.0
4	107.0	111.5	116.0	120.4	124.9	129.3	133.8	138.3	142.7	147.2
4.1	104.4	108.8	113.1	117.5	121.8	126.2	130.5	134.9	139.2	143.6
4.2	101.9	106.2	110.4	114.7	118.9	123.2	127.4	131.7	135.9	140.2
4.3	99.6	103.7	107.9	112.0	116.2	120.3	124.5	128.6	132.8	136.9
4.4	97.3	101.4	105.4	109.5	113.5	117.6	121.6	125.7	129.7	133.8
4.5	95.1	99.1	103.1	107.0	111.0	115.0	118.9	122.9	126.9	130.8
4.6	93.1	97.0	100.8	104.7	108.6	112.5	116.3	120.2	124.1	128.0
4.7	91.1	94.9	98.7	102.5	106.3	110.1	113.9	117.7	121.5	125.3
4.8	89.2	92.9	96.6	100.4	104.1	107.8	111.5	115.2	118.9	122.7
4.9	87.4	91.0	94.7	98.3	101.9	105.6	109.2	112.9	116.5	120.1
5	85.6	89.2	92.8	96.3	99.9	103.5	107.0	110.6	114.2	117.7
5.1	84.0	87.5	90.9	94.4	97.9	101.4	104.9	108.4	111.9	115.4
5.2	82.3	85.8	89.2	92.6	96.1	99.5	102.9	106.4	109.8	113.2
5.3	80.8	84.2	87.5	90.9	94.2	97.6	101.0	104.3	107.7	111.1
5.4	79.3	82.6	85.9	89.2	92.5	95.8	99.1	102.4	105.7	109.0
5.5	77.8	81.1	84.3	87.6	90.8	94.1	97.3	100.6	103.8	107.0
5.6	76.5	79.6	82.8	86.0	89.2	92.4	95.6	98.8	101.9	105.1
5.7	75.1	78.2	81.4	84.5	87.6	90.8	93.9	97.0	100.2	103.3
5.8	73.8	76.9	80.0	83.0	86.1	89.2	92.3	95.4	98.4	101.5
5.9	72.6	75.6	78.6	81.6	84.7	87.7	90.7	93.7	96.8	99.8
6	71.4	74.3	77.3	80.3	83.3	86.2	89.2	92.2	95.1	98.1
6.1	70.2	73.1	76.0	79.0	81.9	84.8	87.7	90.7	93.6	96.5
6.2	69.1	71.9	74.8	77.7	80.6	83.4	86.3	89.2	92.1	95.0
6.3	68.0	70.8	73.6	76.5	79.3	82.1	85.0	87.8	90.6	93.4
6.4	66.9	69.7	72.5	75.3	78.1	80.8	83.6	86.4	89.2	92.0
6.5	65.9	68.6	71.4	74.1	76.8	79.6	82.3	85.1	87.8	90.6
6.6	64.9	67.6	70.3	73.0	75.7	78.4	81.1	83.8	86.5	89.2
6.7	63.9	66.6	69.2	71.9	74.6	77.2	79.9	82.5	85.2	87.9
6.8	63.0	65.6	68.2	70.8	73.5	76.1	78.7	81.3	84.0	86.6
6.9	62.1	64.6	67.2	69.8	72.4	75.0	77.6	80.2	82.7	85.3
7	61.2	63.7	66.3	68.8	71.4	73.9	76.5	79.0	81.6	84.1
7.1	60.3	62.8	65.3	67.8	70.4	72.9	75.4	77.9	80.4	82.9
7.2	59.5	61.9	64.4	66.9	69.4	71.9	74.3	76.8	79.3	81.8
7.3	58.7	61.1	63.5	66.0	68.4	70.9	73.3	75.8	78.2	80.6
7.4	57.9	60.3	62.7	65.1	67.5	69.9	72.3	74.7	77.1	79.6

7.5	57.1	59.5	61.8	64.2	66.6	69.0	71.4	73.7	76.1	78.5
7.6	56.3	58.7	61.0	63.4	65.7	68.1	70.4	72.8	75.1	77.5
7.7	55.6	57.9	60.2	62.6	64.9	67.2	69.5	71.8	74.1	76.5
7.8	54.9	57.2	59.5	61.8	64.0	66.3	68.6	70.9	73.2	75.5
7.9	54.2	56.5	58.7	61.0	63.2	65.5	67.7	70.0	72.3	74.5
8	53.5	55.8	58.0	60.2	62.4	64.7	66.9	69.1	71.4	73.6
8.1	52.9	55.1	57.3	59.5	61.7	63.9	66.1	68.3	70.5	72.7
8.2	52.2	54.4	56.6	58.7	60.9	63.1	65.3	67.4	69.6	71.8
8.3	51.6	53.7	55.9	58.0	60.2	62.3	64.5	66.6	68.8	70.9
8.4	51.0	53.1	55.2	57.3	59.5	61.6	63.7	65.8	68.0	70.1
8.5	50.4	52.5	54.6	56.7	58.8	60.9	63.0	65.1	67.2	69.3
8.6	49.8	51.9	53.9	56.0	58.1	60.2	62.2	64.3	66.4	68.5
8.7	49.2	51.3	53.3	55.4	57.4	59.5	61.5	63.6	65.6	67.7
8.8	48.7	50.7	52.7	54.7	56.8	58.8	60.8	62.8	64.9	66.9
8.9	48.1	50.1	52.1	54.1	56.1	58.1	60.1	62.1	64.1	66.1
9	47.6	49.6	51.5	53.5	55.5	57.5	59.5	61.4	63.4	65.4
9.1	47.1	49.0	51.0	52.9	54.9	56.9	58.8	60.8	62.7	64.7
9.2	46.5	48.5	50.4	52.4	54.3	56.2	58.2	60.1	62.1	64.0
9.3	46.0	48.0	49.9	51.8	53.7	55.6	57.5	59.5	61.4	63.3
9.4	45.5	47.4	49.3	51.2	53.1	55.0	56.9	58.8	60.7	62.6
9.5	45.1	46.9	48.8	50.7	52.6	54.5	56.3	58.2	60.1	62.0
9.6	44.6	46.5	48.3	50.2	52.0	53.9	55.8	57.6	59.5	61.3
9.7	44.1	46.0	47.8	49.7	51.5	53.3	55.2	57.0	58.9	60.7
9.8	43.7	45.5	47.3	49.2	51.0	52.8	54.6	56.4	58.3	60.1
9.9	43.2	45.1	46.9	48.7	50.5	52.3	54.1	55.9	57.7	59.5
10	42.8	44.6	46.4	48.2	50.0	51.7	53.5	55.3	57.1	58.9
10.1	42.4	44.2	45.9	47.7	49.5	51.2	53.0	54.8	56.5	58.3
10.2	42.0	43.7	45.5	47.2	49.0	50.7	52.5	54.2	56.0	57.7
10.3	41.6	43.3	45.0	46.8	48.5	50.2	52.0	53.7	55.4	57.2
10.4	41.2	42.9	44.6	46.3	48.0	49.7	51.5	53.2	54.9	56.6
10.5	40.8	42.5	44.2	45.9	47.6	49.3	51.0	52.7	54.4	56.1
10.6	40.4	42.1	43.8	45.4	47.1	48.8	50.5	52.2	53.9	55.5
10.7	40.0	41.7	43.3	45.0	46.7	48.4	50.0	51.7	53.4	55.0
10.8	39.6	41.3	42.9	44.6	46.3	47.9	49.6	51.2	52.9	54.5
10.9	39.3	40.9	42.6	44.2	45.8	47.5	49.1	50.7	52.4	54.0
11	38.9	40.5	42.2	43.8	45.4	47.0	48.7	50.3	51.9	53.5
11.1	38.6	40.2	41.8	43.4	45.0	46.6	48.2	49.8	51.4	53.0
11.2	38.2	39.8	41.4	43.0	44.6	46.2	47.8	49.4	51.0	52.6
11.3	37.9	39.5	41.0	42.6	44.2	45.8	47.4	48.9	50.5	52.1
11.4	37.6	39.1	40.7	42.3	43.8	45.4	46.9	48.5	50.1	51.6
11.5	37.2	38.8	40.3	41.9	43.4	45.0	46.5	48.1	49.6	51.2
11.6	36.9	38.4	40.0	41.5	43.1	44.6	46.1	47.7	49.2	50.8
11.7	36.6	38.1	39.6	41.2	42.7	44.2	45.7	47.3	48.8	50.3
11.8	36.3	37.8	39.3	40.8	42.3	43.8	45.4	46.9	48.4	49.9
11.9	36.0	37.5	39.0	40.5	42.0	43.5	45.0	46.5	48.0	49.5
12	35.7	37.2	38.7	40.1	41.6	43.1	44.6	46.1	47.6	49.1

SPEEDS AT OTHER RPMs ARE GIVEN BY TABLE SPEED x RPM/6000

$$\text{SPEED (mph)} = 0.002974 \times \text{RPM} \times \text{tire diameter (inch)} / \text{total gear-ratio}$$