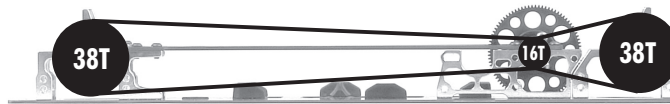


# GEAR CHARTS



## 38T/16T PULLEYES (ratio 2.375)

Final Drive Ratio (FDR) Chart

### SPUR GEAR 48 PITCH

| PINION SIZE | SPUR GEAR 48 PITCH |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             | 69                 | 70    | 71    | 72    | 73    | 74    | 75    | 76    | 77    | 78    | 79    | 80    | 81    | 82    | 83    | 84    | 85    |
| 12          | 13.66              | 13.85 | 14.05 | 14.25 | 14.45 | 14.65 | 14.84 | 15.04 | 15.24 | 15.44 | 15.64 | 15.83 | 16.03 | 16.23 | 16.43 | 16.63 | 16.82 |
| 13          | 12.61              | 12.79 | 12.97 | 13.15 | 13.34 | 13.52 | 13.70 | 13.88 | 14.07 | 14.25 | 14.43 | 14.62 | 14.80 | 14.98 | 15.16 | 15.35 | 15.53 |
| 14          | 11.71              | 11.88 | 12.04 | 12.21 | 12.38 | 12.55 | 12.72 | 12.89 | 13.06 | 13.23 | 13.40 | 13.57 | 13.74 | 13.91 | 14.08 | 14.25 | 14.42 |
| 15          | 10.93              | 11.08 | 11.24 | 11.40 | 11.56 | 11.72 | 11.88 | 12.03 | 12.19 | 12.35 | 12.51 | 12.67 | 12.83 | 12.98 | 13.14 | 13.30 | 13.46 |
| 16          | 10.24              | 10.39 | 10.54 | 10.69 | 10.84 | 10.98 | 11.13 | 11.28 | 11.43 | 11.58 | 11.73 | 11.88 | 12.02 | 12.17 | 12.32 | 12.47 | 12.62 |
| 17          | 9.64               | 9.78  | 9.92  | 10.06 | 10.20 | 10.34 | 10.48 | 10.62 | 10.76 | 10.90 | 11.04 | 11.18 | 11.32 | 11.46 | 11.60 | 11.74 | 11.88 |
| 18          | 9.10               | 9.24  | 9.37  | 9.50  | 9.63  | 9.76  | 9.90  | 10.03 | 10.16 | 10.29 | 10.42 | 10.56 | 10.69 | 10.82 | 10.95 | 11.08 | 11.22 |
| 19          | 8.63               | 8.75  | 8.88  | 9.00  | 9.13  | 9.25  | 9.38  | 9.50  | 9.63  | 9.75  | 9.88  | 10.00 | 10.13 | 10.25 | 10.38 | 10.50 | 10.63 |
| 20          | 8.19               | 8.31  | 8.43  | 8.55  | 8.67  | 8.79  | 8.91  | 9.03  | 9.14  | 9.26  | 9.38  | 9.50  | 9.62  | 9.74  | 9.86  | 9.98  | 10.09 |
| 21          | 7.80               | 7.92  | 8.03  | 8.14  | 8.26  | 8.37  | 8.48  | 8.60  | 8.71  | 8.82  | 8.93  | 9.05  | 9.16  | 9.27  | 9.39  | 9.50  | 9.61  |
| 22          | 7.45               | 7.56  | 7.66  | 7.77  | 7.88  | 7.99  | 8.10  | 8.20  | 8.31  | 8.42  | 8.53  | 8.64  | 8.74  | 8.85  | 8.96  | 9.07  | 9.18  |
| 23          | 7.13               | 7.23  | 7.33  | 7.43  | 7.54  | 7.64  | 7.74  | 7.85  | 7.95  | 8.05  | 8.16  | 8.26  | 8.36  | 8.47  | 8.57  | 8.67  | 8.78  |
| 24          | 6.83               | 6.93  | 7.03  | 7.13  | 7.22  | 7.32  | 7.42  | 7.52  | 7.62  | 7.72  | 7.82  | 7.92  | 8.02  | 8.11  | 8.21  | 8.31  | 8.41  |
| 25          | 6.56               | 6.65  | 6.75  | 6.84  | 6.94  | 7.03  | 7.13  | 7.22  | 7.32  | 7.41  | 7.51  | 7.60  | 7.70  | 7.79  | 7.89  | 7.98  | 8.08  |
| 26          | 6.30               | 6.39  | 6.49  | 6.58  | 6.67  | 6.76  | 6.85  | 6.94  | 7.03  | 7.13  | 7.22  | 7.31  | 7.40  | 7.49  | 7.58  | 7.67  | 7.76  |
| 27          | 6.07               | 6.16  | 6.25  | 6.33  | 6.42  | 6.51  | 6.60  | 6.69  | 6.77  | 6.86  | 6.95  | 7.04  | 7.13  | 7.21  | 7.30  | 7.39  | 7.48  |
| 28          | 5.85               | 5.94  | 6.02  | 6.11  | 6.19  | 6.28  | 6.36  | 6.45  | 6.53  | 6.62  | 6.70  | 6.79  | 6.87  | 6.96  | 7.04  | 7.13  | 7.29  |
| 29          | 5.65               | 5.73  | 5.81  | 5.90  | 5.98  | 6.06  | 6.14  | 6.22  | 6.31  | 6.39  | 6.47  | 6.55  | 6.63  | 6.72  | 6.80  | 6.88  | 6.96  |
| 30          | 5.46               | 5.54  | 5.62  | 5.70  | 5.78  | 5.86  | 5.94  | 6.02  | 6.10  | 6.18  | 6.25  | 6.33  | 6.41  | 6.49  | 6.57  | 6.65  | 6.73  |
| 31          | 5.29               | 5.36  | 5.44  | 5.52  | 5.59  | 5.67  | 5.75  | 5.82  | 5.90  | 5.98  | 6.05  | 6.13  | 6.21  | 6.28  | 6.36  | 6.44  | 6.51  |
| 32          | 5.12               | 5.20  | 5.27  | 5.34  | 5.42  | 5.49  | 5.57  | 5.64  | 5.71  | 5.79  | 5.86  | 5.94  | 6.01  | 6.09  | 6.16  | 6.23  | 6.31  |
| 33          | 4.97               | 5.04  | 5.11  | 5.18  | 5.25  | 5.33  | 5.40  | 5.47  | 5.54  | 5.61  | 5.69  | 5.76  | 5.83  | 5.90  | 5.97  | 6.05  | 6.12  |
| 34          | 4.82               | 4.89  | 4.96  | 5.03  | 5.10  | 5.17  | 5.24  | 5.31  | 5.38  | 5.45  | 5.52  | 5.59  | 5.66  | 5.73  | 5.80  | 5.87  | 5.94  |

Rubber Tire Rollout Chart (63mm diameter)

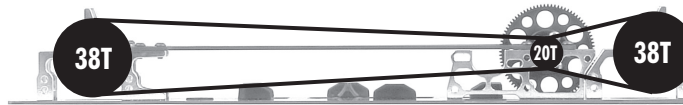
### SPUR GEAR 48 PITCH

| PINION SIZE | SPUR GEAR 48 PITCH |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             | 69                 | 70    | 71    | 72    | 73    | 74    | 75    | 76    | 77    | 78    | 79    | 80    | 81    | 82    | 83    | 84    | 85    |
| 12          | 14.49              | 14.28 | 14.08 | 13.88 | 13.69 | 13.51 | 13.33 | 13.15 | 12.98 | 12.81 | 12.65 | 12.49 | 12.34 | 12.19 | 12.04 | 11.90 | 11.76 |
| 13          | 15.69              | 15.47 | 15.25 | 15.04 | 14.83 | 14.63 | 14.44 | 14.25 | 14.06 | 13.88 | 13.71 | 13.54 | 13.37 | 13.20 | 13.05 | 12.89 | 12.74 |
| 14          | 16.90              | 16.66 | 16.42 | 16.20 | 15.97 | 15.76 | 15.55 | 15.34 | 15.14 | 14.95 | 14.76 | 14.58 | 14.40 | 14.22 | 14.05 | 13.88 | 13.72 |
| 15          | 18.11              | 17.85 | 17.60 | 17.35 | 17.11 | 16.88 | 16.66 | 16.44 | 16.23 | 16.02 | 15.82 | 15.62 | 15.42 | 15.24 | 15.05 | 14.87 | 14.70 |
| 16          | 19.31              | 19.04 | 18.77 | 18.51 | 18.26 | 18.01 | 17.77 | 17.54 | 17.31 | 17.09 | 16.87 | 16.66 | 16.45 | 16.25 | 16.06 | 15.87 | 15.68 |
| 17          | 20.52              | 20.23 | 19.94 | 19.67 | 19.40 | 19.13 | 18.88 | 18.63 | 18.39 | 18.15 | 17.92 | 17.70 | 17.48 | 17.27 | 17.06 | 16.86 | 16.66 |
| 18          | 21.73              | 21.42 | 21.12 | 20.82 | 20.54 | 20.26 | 19.99 | 19.73 | 19.47 | 19.22 | 18.98 | 18.74 | 18.51 | 18.28 | 18.06 | 17.85 | 17.64 |
| 19          | 22.94              | 22.61 | 22.29 | 21.98 | 21.68 | 21.39 | 21.10 | 20.82 | 20.55 | 20.29 | 20.03 | 19.78 | 19.54 | 19.30 | 19.07 | 18.84 | 18.60 |
| 20          | 24.14              | 23.80 | 23.46 | 23.14 | 22.82 | 22.51 | 22.21 | 21.92 | 21.63 | 21.36 | 21.09 | 20.82 | 20.57 | 20.32 | 20.07 | 19.83 | 19.60 |
| 21          | 25.35              | 24.99 | 24.64 | 24.29 | 23.96 | 23.64 | 23.32 | 23.02 | 22.72 | 22.42 | 22.14 | 21.86 | 21.59 | 21.33 | 21.07 | 20.82 | 20.58 |
| 22          | 26.56              | 26.18 | 25.81 | 25.45 | 25.10 | 24.76 | 24.43 | 24.11 | 23.80 | 23.49 | 23.20 | 22.91 | 22.62 | 22.35 | 22.08 | 21.81 | 21.56 |
| 23          | 27.76              | 27.37 | 26.98 | 26.61 | 26.24 | 25.89 | 25.54 | 25.21 | 24.88 | 24.56 | 24.25 | 23.95 | 23.65 | 23.36 | 23.08 | 22.81 | 22.54 |
| 24          | 28.97              | 28.56 | 28.16 | 27.76 | 27.38 | 27.01 | 26.65 | 26.30 | 25.96 | 25.63 | 25.30 | 24.99 | 24.68 | 24.38 | 24.08 | 23.80 | 23.52 |
| 25          | 30.18              | 29.75 | 29.33 | 28.92 | 28.52 | 28.14 | 27.76 | 27.40 | 27.04 | 26.70 | 26.36 | 26.03 | 25.71 | 25.39 | 25.09 | 24.79 | 24.50 |
| 26          | 31.39              | 30.94 | 30.50 | 30.08 | 29.67 | 29.26 | 28.87 | 28.49 | 28.12 | 27.76 | 27.41 | 27.07 | 26.74 | 26.41 | 26.09 | 25.78 | 25.48 |
| 27          | 32.59              | 32.13 | 31.67 | 31.23 | 30.81 | 30.39 | 29.99 | 29.59 | 29.21 | 28.83 | 28.47 | 28.11 | 27.76 | 27.43 | 27.10 | 26.77 | 26.46 |
| 28          | 33.80              | 33.32 | 32.85 | 32.39 | 31.95 | 31.52 | 31.10 | 30.69 | 30.29 | 29.90 | 29.52 | 29.15 | 28.79 | 28.44 | 28.10 | 27.76 | 27.44 |
| 29          | 35.01              | 34.51 | 34.02 | 33.55 | 33.09 | 32.64 | 32.21 | 31.78 | 31.37 | 30.97 | 30.58 | 30.19 | 29.82 | 29.46 | 29.10 | 28.76 | 28.42 |
| 30          | 36.21              | 35.70 | 35.19 | 34.71 | 34.23 | 33.77 | 33.32 | 32.88 | 32.45 | 32.04 | 31.63 | 31.23 | 30.85 | 30.47 | 30.11 | 29.75 | 29.40 |
| 31          | 37.42              | 36.89 | 36.37 | 35.86 | 35.37 | 34.89 | 34.43 | 33.97 | 33.53 | 33.10 | 32.68 | 32.28 | 31.88 | 31.49 | 31.11 | 30.74 | 30.38 |
| 32          | 38.63              | 38.08 | 37.54 | 37.02 | 36.51 | 36.02 | 35.54 | 35.07 | 34.62 | 34.17 | 33.74 | 33.32 | 32.91 | 32.50 | 32.11 | 31.73 | 31.36 |
| 33          | 39.84              | 39.27 | 38.71 | 38.18 | 37.65 | 37.14 | 36.65 | 36.17 | 35.70 | 35.24 | 34.79 | 34.36 | 33.93 | 33.52 | 33.12 | 32.72 | 32.34 |
| 34          | 41.04              | 40.46 | 39.89 | 39.33 | 38.79 | 38.27 | 37.76 | 37.26 | 36.78 | 36.31 | 35.85 | 35.40 | 34.96 | 34.54 | 34.12 | 33.71 | 33.32 |

Foam Tire Rollout Chart (116 Tooth 64P Spur)

### TIRE DIAMETER

| PINION SIZE | TIRE DIAMETER |       |       |       |       |       |       |       |       |       |       |  |  |
|-------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
|             | 53            | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63    |  |  |
| 18          | 10.87         | 11.08 | 11.28 | 11.49 | 11.69 | 11.90 | 12.10 | 12.31 | 12.51 | 12.72 | 12.92 |  |  |
| 19          | 11.48         | 11.69 | 11.91 | 12.13 | 12.34 | 12.56 | 12.78 | 12.99 | 13.21 | 13.43 | 13.64 |  |  |
| 20          | 12.08         | 12.31 | 12.54 | 12.77 | 12.99 | 13.22 | 13.45 | 13.68 | 13.90 | 14.13 | 14.36 |  |  |
| 21          | 12.69         | 12.92 | 13.16 | 13.40 | 13.64 | 13.88 | 14.12 | 14.36 | 14.60 | 14.84 | 15.08 |  |  |
| 22          | 13.29         | 13.54 | 13.79 | 14.04 | 14.29 | 14.54 | 14.79 | 15.04 | 15.30 | 15.55 | 15.80 |  |  |
| 23          | 13.89         | 14.16 | 14.42 | 14.68 | 14.94 | 15.20 | 15.47 | 15.73 | 15.99 | 16.25 | 16.51 |  |  |
| 24          | 14.50         | 14.77 | 15.04 | 15.32 | 15.59 | 15.87 | 16.14 | 16.41 | 16.69 | 16.96 | 17.23 |  |  |
| 25          | 15.10         | 15.39 | 15.67 | 15.96 | 16.24 | 16.53 | 16.81 | 17.10 | 17.38 | 17.67 | 17.95 |  |  |
| 26          | 15.71         | 16.00 | 16.30 | 16.59 | 16.89 | 17.19 | 17.48 | 17.78 | 18.08 | 18.37 | 18.67 |  |  |
| 27          | 16.31         | 16.62 | 16.93 | 17.23 | 17.54 | 17.85 | 18.16 | 18.46 | 18.77 | 19.08 | 19.39 |  |  |
| 28          | 16.91         | 17.23 | 17.55 | 17.87 | 18.19 | 18.51 | 18.83 | 19.15 | 19.47 | 19.79 | 20.11 |  |  |
| 29          | 17.52         | 17.85 | 18.18 | 18.51 | 18.84 | 19.17 | 19.50 | 19.83 | 20.16 | 20.49 | 20.82 |  |  |
| 30          | 18.12         | 18.46 | 18.81 | 19.15 | 19.49 | 19.83 | 20.17 | 20.52 | 20.86 | 21.20 | 21.54 |  |  |
| 31          | 18.73         | 19.08 | 19.43 | 19.79 | 20.14 | 20.49 | 20.85 | 21.20 | 21.55 | 21.91 | 22.26 |  |  |
| 32          | 19.33         | 19.69 | 20.06 | 20.42 | 20.79 | 21.15 | 21.52 | 21.88 | 22.25 | 22.61 | 22.98 |  |  |
| 33          | 19.93         | 20.31 | 20.69 | 21.06 | 21.44 | 21.81 | 22.19 | 22.57 | 22.94 | 23.32 | 23.70 |  |  |
| 34          | 20.54         | 20.93 | 21.31 | 21.70 | 22.09 | 22.48 | 22.86 | 23.25 | 23.64 | 24.03 | 24.41 |  |  |
| 35          | 21.14         | 21.54 | 21.94 | 22.34 | 22.74 | 23.14 | 23.54 | 23.93 | 24.33 | 24.73 | 25.13 |  |  |
| 36          | 21.75         | 22.16 | 22.57 | 22.98 | 23.39 | 23.80 | 24.21 | 24.62 | 25.03 | 25.44 | 25.85 |  |  |
| 37          | 22.35         | 22.77 | 23.19 | 23.62 | 24.04 | 24.46 | 24.88 | 25.30 | 25.72 | 26.15 | 26.57 |  |  |
| 38          | 22.95         | 23.39 | 23.82 | 24.25 | 24.69 | 25.12 | 25.55 | 25.99 | 26.42 | 26.85 | 27.29 |  |  |



Final Drive Ratio (FDR) Chart

## SPUR GEAR 48 PITCH

|             |      | 69    | 70    | 71    | 72    | 73    | 74    | 75    | 76    | 77    | 78    | 79    | 80    | 81    | 82    | 83    | 84    | 85    | 86    | 87    |
|-------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PINION SIZE | 12   | 10.93 | 11.08 | 11.24 | 11.40 | 11.56 | 11.72 | 11.88 | 12.03 | 12.19 | 12.35 | 12.51 | 12.67 | 12.83 | 12.98 | 13.14 | 13.30 | 13.46 | 13.62 | 13.78 |
|             | 13   | 10.08 | 10.23 | 10.38 | 10.52 | 10.67 | 10.82 | 10.96 | 11.11 | 11.25 | 11.40 | 11.55 | 11.69 | 11.84 | 11.98 | 12.13 | 12.28 | 12.42 | 12.57 | 12.72 |
|             | 14   | 9.36  | 9.50  | 9.64  | 9.77  | 9.91  | 10.04 | 10.18 | 10.31 | 10.45 | 10.59 | 10.72 | 10.86 | 10.99 | 11.13 | 11.26 | 11.40 | 11.54 | 11.67 | 11.81 |
|             | 15   | 8.74  | 8.87  | 8.99  | 9.12  | 9.25  | 9.37  | 9.50  | 9.63  | 9.75  | 9.88  | 10.01 | 10.13 | 10.26 | 10.39 | 10.51 | 10.64 | 10.77 | 10.89 | 11.02 |
|             | 16   | 8.19  | 8.31  | 8.43  | 8.55  | 8.67  | 8.79  | 8.91  | 9.03  | 9.14  | 9.26  | 9.38  | 9.50  | 9.62  | 9.74  | 9.86  | 9.98  | 10.09 | 10.21 | 10.33 |
|             | 17   | 7.64  | 7.78  | 7.92  | 8.06  | 8.20  | 8.34  | 8.48  | 8.62  | 8.76  | 8.90  | 9.04  | 9.18  | 9.32  | 9.46  | 9.60  | 9.74  | 9.88  | 10.01 | 10.15 |
|             | 18   | 7.28  | 7.39  | 7.49  | 7.60  | 7.71  | 7.81  | 7.92  | 8.02  | 8.13  | 8.23  | 8.34  | 8.44  | 8.55  | 8.66  | 8.76  | 8.87  | 8.97  | 9.08  | 9.18  |
|             | 19   | 6.90  | 7.00  | 7.10  | 7.20  | 7.30  | 7.40  | 7.50  | 7.60  | 7.70  | 7.80  | 7.90  | 8.00  | 8.10  | 8.20  | 8.30  | 8.40  | 8.50  | 8.60  | 8.70  |
|             | 20   | 6.56  | 6.65  | 6.75  | 6.84  | 6.94  | 7.03  | 7.13  | 7.22  | 7.32  | 7.41  | 7.51  | 7.60  | 7.70  | 7.79  | 7.89  | 7.98  | 8.08  | 8.17  | 8.27  |
|             | 21   | 6.24  | 6.33  | 6.42  | 6.51  | 6.60  | 6.70  | 6.79  | 6.88  | 6.97  | 7.06  | 7.15  | 7.24  | 7.33  | 7.42  | 7.51  | 7.60  | 7.69  | 7.78  | 7.87  |
|             | 22   | 5.96  | 6.05  | 6.13  | 6.22  | 6.30  | 6.39  | 6.48  | 6.56  | 6.65  | 6.74  | 6.82  | 6.91  | 7.00  | 7.08  | 7.17  | 7.25  | 7.34  | 7.43  | 7.51  |
|             | 23   | 5.70  | 5.78  | 5.87  | 5.95  | 6.03  | 6.11  | 6.20  | 6.28  | 6.36  | 6.44  | 6.53  | 6.61  | 6.69  | 6.77  | 6.86  | 6.94  | 7.02  | 7.10  | 7.19  |
|             | 24   | 5.46  | 5.54  | 5.62  | 5.70  | 5.78  | 5.86  | 5.94  | 6.02  | 6.10  | 6.18  | 6.25  | 6.33  | 6.41  | 6.49  | 6.57  | 6.65  | 6.73  | 6.81  | 6.89  |
|             | 25   | 5.24  | 5.32  | 5.40  | 5.47  | 5.55  | 5.62  | 5.70  | 5.78  | 5.85  | 5.93  | 6.00  | 6.08  | 6.16  | 6.23  | 6.31  | 6.38  | 6.46  | 6.54  | 6.61  |
|             | 26   | 5.04  | 5.12  | 5.19  | 5.26  | 5.33  | 5.41  | 5.48  | 5.55  | 5.63  | 5.70  | 5.77  | 5.85  | 5.92  | 5.99  | 6.07  | 6.14  | 6.21  | 6.28  | 6.36  |
|             | 27   | 4.86  | 4.93  | 5.00  | 5.07  | 5.14  | 5.21  | 5.28  | 5.35  | 5.42  | 5.49  | 5.56  | 5.63  | 5.70  | 5.77  | 5.84  | 5.91  | 5.98  | 6.05  | 6.12  |
|             | 28   | 4.68  | 4.75  | 4.82  | 4.89  | 4.95  | 5.02  | 5.09  | 5.16  | 5.23  | 5.29  | 5.36  | 5.43  | 5.50  | 5.56  | 5.63  | 5.70  | 5.77  | 5.84  | 5.90  |
|             | 29   | 4.52  | 4.59  | 4.65  | 4.72  | 4.78  | 4.85  | 4.91  | 4.98  | 5.04  | 5.11  | 5.18  | 5.24  | 5.31  | 5.37  | 5.44  | 5.50  | 5.57  | 5.63  | 5.70  |
|             | 30   | 4.37  | 4.43  | 4.50  | 4.56  | 4.62  | 4.69  | 4.75  | 4.81  | 4.88  | 4.94  | 5.00  | 5.07  | 5.13  | 5.19  | 5.26  | 5.32  | 5.38  | 5.45  | 5.51  |
|             | 31   | 4.23  | 4.29  | 4.35  | 4.41  | 4.47  | 4.54  | 4.60  | 4.66  | 4.72  | 4.78  | 4.84  | 4.90  | 4.96  | 5.03  | 5.09  | 5.15  | 5.21  | 5.27  | 5.33  |
| 32          | 4.10 | 4.16  | 4.22  | 4.28  | 4.33  | 4.39  | 4.45  | 4.51  | 4.57  | 4.63  | 4.69  | 4.75  | 4.81  | 4.87  | 4.93  | 4.99  | 5.05  | 5.11  | 5.17  |       |
| 33          | 3.97 | 4.03  | 4.09  | 4.15  | 4.20  | 4.26  | 4.32  | 4.38  | 4.43  | 4.49  | 4.55  | 4.61  | 4.66  | 4.72  | 4.78  | 4.84  | 4.89  | 4.95  | 5.01  |       |
| 34          | 3.86 | 3.91  | 3.97  | 4.02  | 4.08  | 4.14  | 4.19  | 4.25  | 4.30  | 4.36  | 4.41  | 4.47  | 4.53  | 4.58  | 4.64  | 4.69  | 4.75  | 4.81  | 4.86  |       |

Rubber Tire Rollout Chart (63mm diameter)

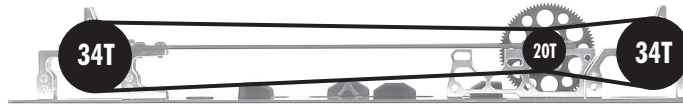
## SPUR GEAR 48 PITCH

|             |    | 69    | 70    | 71    | 72    | 73    | 74    | 75    | 76    | 77    | 78    | 79    | 80    | 81    | 82    | 83    | 84    | 85    | 86    | 87    |
|-------------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PINION SIZE | 12 | 18.11 | 17.85 | 17.60 | 17.35 | 17.11 | 16.88 | 16.66 | 16.44 | 16.23 | 16.02 | 15.82 | 15.62 | 15.42 | 15.24 | 15.05 | 14.87 | 14.70 | 14.53 | 14.36 |
|             | 13 | 19.62 | 19.34 | 19.06 | 18.80 | 18.54 | 18.29 | 18.05 | 17.81 | 17.58 | 17.35 | 17.13 | 16.92 | 16.71 | 16.51 | 16.31 | 16.11 | 15.92 | 15.74 | 15.56 |
|             | 14 | 21.12 | 20.82 | 20.53 | 20.24 | 19.97 | 19.70 | 19.43 | 19.18 | 18.93 | 18.69 | 18.45 | 18.22 | 18.00 | 17.78 | 17.56 | 17.35 | 17.15 | 16.95 | 16.75 |
|             | 15 | 22.63 | 22.31 | 22.00 | 21.69 | 21.39 | 21.10 | 20.82 | 20.55 | 20.28 | 20.02 | 19.77 | 19.52 | 19.28 | 19.05 | 18.82 | 18.59 | 18.37 | 18.16 | 17.95 |
|             | 16 | 24.14 | 23.80 | 23.46 | 23.14 | 22.82 | 22.51 | 22.21 | 21.92 | 21.63 | 21.36 | 21.09 | 20.82 | 20.57 | 20.32 | 20.07 | 19.83 | 19.60 | 19.37 | 19.15 |
|             | 17 | 25.52 | 25.23 | 24.94 | 24.67 | 24.40 | 24.13 | 23.88 | 23.63 | 23.39 | 23.15 | 22.92 | 22.70 | 22.48 | 22.27 | 22.06 | 21.86 | 21.66 | 21.46 | 21.28 |
|             | 18 | 27.16 | 26.77 | 26.40 | 26.03 | 25.67 | 25.33 | 24.99 | 24.66 | 24.34 | 24.03 | 23.72 | 23.43 | 23.14 | 22.85 | 22.58 | 22.31 | 22.05 | 21.79 | 21.54 |
|             | 19 | 28.67 | 28.26 | 27.86 | 27.48 | 27.10 | 26.73 | 26.38 | 26.03 | 25.69 | 25.36 | 25.04 | 24.73 | 24.42 | 24.12 | 23.83 | 23.55 | 23.27 | 23.00 | 22.74 |
|             | 20 | 30.18 | 29.75 | 29.33 | 28.92 | 28.52 | 28.14 | 27.76 | 27.40 | 27.04 | 26.70 | 26.36 | 26.03 | 25.71 | 25.39 | 25.09 | 24.79 | 24.50 | 24.21 | 23.93 |
|             | 21 | 31.69 | 31.23 | 30.79 | 30.37 | 29.95 | 29.55 | 29.15 | 28.77 | 28.40 | 28.03 | 27.68 | 27.33 | 26.99 | 26.66 | 26.34 | 26.03 | 25.72 | 25.42 | 25.13 |
|             | 22 | 33.20 | 32.72 | 32.26 | 31.81 | 31.38 | 30.95 | 30.54 | 30.14 | 29.75 | 29.37 | 28.99 | 28.63 | 28.28 | 27.93 | 27.60 | 27.27 | 26.95 | 26.63 | 26.33 |
|             | 23 | 34.71 | 34.21 | 33.73 | 33.26 | 32.80 | 32.36 | 31.93 | 31.51 | 31.10 | 30.70 | 30.31 | 29.93 | 29.56 | 29.20 | 28.85 | 28.51 | 28.17 | 27.84 | 27.52 |
|             | 24 | 36.21 | 35.70 | 35.19 | 34.71 | 34.23 | 33.77 | 33.32 | 32.88 | 32.45 | 32.04 | 31.63 | 31.23 | 30.85 | 30.47 | 30.11 | 29.75 | 29.40 | 29.06 | 28.72 |
|             | 25 | 37.72 | 37.18 | 36.66 | 36.15 | 35.66 | 35.17 | 34.71 | 34.25 | 33.80 | 33.37 | 32.93 | 32.54 | 32.13 | 31.74 | 31.36 | 30.99 | 30.62 | 30.27 | 29.92 |
|             | 26 | 39.23 | 38.67 | 38.13 | 37.60 | 37.08 | 36.58 | 36.09 | 35.62 | 35.16 | 34.71 | 34.27 | 33.84 | 33.42 | 33.01 | 32.61 | 32.23 | 31.85 | 31.48 | 31.12 |
|             | 27 | 40.74 | 40.16 | 39.59 | 39.04 | 38.51 | 37.99 | 37.48 | 36.99 | 36.51 | 36.04 | 35.58 | 35.14 | 34.71 | 34.28 | 33.87 | 33.47 | 33.07 | 32.69 | 32.31 |
|             | 28 | 42.25 | 41.65 | 41.06 | 40.49 | 39.93 | 39.40 | 38.87 | 38.36 | 37.86 | 37.37 | 36.90 | 36.44 | 35.99 | 35.55 | 35.12 | 34.71 | 34.30 | 33.90 | 33.51 |
|             | 29 | 43.76 | 43.13 | 42.53 | 41.94 | 41.36 | 40.80 | 40.26 | 39.73 | 39.21 | 38.71 | 38.22 | 37.74 | 37.28 | 36.82 | 36.38 | 35.94 | 35.52 | 35.11 | 34.71 |
|             | 30 | 45.27 | 44.62 | 43.99 | 43.38 | 42.79 | 42.21 | 41.65 | 41.10 | 40.56 | 40.04 | 39.54 | 39.04 | 38.56 | 38.09 | 37.63 | 37.18 | 36.75 | 36.32 | 35.90 |
|             | 31 | 46.78 | 46.11 | 45.46 | 44.83 | 44.21 | 43.62 | 43.03 | 42.47 | 41.92 | 41.38 | 40.86 | 40.34 | 39.85 | 39.36 | 38.89 | 38.42 | 37.97 | 37.53 | 37.10 |
|             | 32 | 48.29 | 47.60 | 46.93 | 46.27 | 45.64 | 45.02 | 44.42 | 43.84 | 43.27 | 42.71 | 42.17 | 41.65 | 41.13 | 40.63 | 40.14 | 39.66 | 39.20 | 38.74 | 38.30 |
|             | 33 | 49.79 | 49.08 | 48.39 | 47.72 | 47.07 | 46.43 | 45.81 | 45.21 | 44.62 | 44.05 | 43.49 | 42.95 | 42.42 | 41.90 | 41.40 | 40.90 | 40.42 | 39.95 | 39.49 |
|             | 34 | 51.30 | 50.57 | 49.86 | 49.17 | 48.49 | 47.84 | 47.20 | 46.58 | 45.97 | 45.38 | 44.81 | 44.25 | 43.70 | 43.17 | 42.65 | 42.14 | 41.65 | 41.16 | 40.69 |

Foam Tire Rollout Chart (116 Tooth 64P Spur)

## TIRE DIAMETER

|             |       | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63    |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PINION SIZE | 18    | 13.59 | 13.85 | 14.10 | 14.36 | 14.62 | 14.87 | 15.13 | 15.39 | 15.64 | 15.90 | 16.16 |
|             | 19    | 14.35 | 14.62 | 14.89 | 15.16 | 15.43 | 15.70 | 15.97 | 16.24 | 16.51 | 16.78 | 17.05 |
|             | 20    | 15.10 | 15.39 | 15.67 | 15.96 | 16.24 | 16.53 | 16.81 | 17.10 | 17.38 | 17.67 | 17.95 |
|             | 21    | 15.86 | 16.16 | 16.46 | 16.75 | 17.05 | 17.35 | 17.65 | 17.95 | 18.25 | 18.55 | 18.85 |
|             | 22    | 16.61 | 16.93 | 17.24 | 17.55 | 17.87 | 18.18 | 18.49 | 18.81 | 19.12 | 19.43 | 19.75 |
|             | 23    | 17.37 | 17.69 | 18.02 | 18.35 | 18.68 | 19.01 | 19.33 | 19.66 | 19.99 | 20.32 | 20.64 |
|             | 24    | 18.12 | 18.46 | 18.81 | 19.15 | 19.49 | 19.83 | 20.17 | 20.52 | 20.86 | 21.20 | 21.54 |
|             | 25    | 18.88 | 19.23 | 19.59 | 19.95 | 20.30 | 20.66 | 21.01 | 21.37 | 21.73 | 22.08 | 22.44 |
|             | 26    | 19.63 | 20.00 | 20.37 | 20.74 | 21.11 | 21.48 | 21.85 | 22.23 | 22.60 | 22.97 | 23.34 |
|             | 27    | 20.39 | 20.77 | 21.16 | 21.54 | 21.93 | 22.31 | 22.70 | 23.08 | 23.46 | 23.85 | 24.23 |
|             | 28    | 21.14 | 21.54 | 21.94 | 22.34 | 22.74 | 23.14 | 23.54 | 23.93 | 24.33 | 24.73 | 25.13 |
|             | 29    | 21.90 | 22.31 | 22.72 | 23.14 | 23.55 | 23.96 | 24.38 | 24.79 | 25.20 | 25.62 | 26.03 |
|             | 30    | 22.65 | 23.08 | 23.51 | 23.93 | 24.36 | 24.79 | 25.22 | 25.64 | 26.07 | 26.50 | 26.93 |
|             | 31    | 23.41 | 23.85 | 24.29 | 24.73 | 25.17 | 25.62 | 26.06 | 26.50 | 26.94 | 27.38 | 27.82 |
|             | 32    | 24.16 | 24.62 | 25.07 | 25.53 | 25.99 | 26.44 | 26.90 | 27.35 | 27.81 | 28.27 | 28.72 |
|             | 33    | 24.92 | 25.39 | 25.86 | 26.33 | 26.80 | 27.27 | 27.74 | 28.21 | 28.68 | 29.15 | 29.62 |
|             | 34    | 25.67 | 26.16 | 26.64 | 27.13 | 27.61 | 28.09 | 28.58 | 29.06 | 29.55 | 30.03 | 30.52 |
|             | 35    | 26.43 | 26.93 | 27.43 | 27.92 | 28.42 | 28.92 | 29.42 | 29.92 | 30.42 | 30.92 | 31.41 |
|             | 36    | 27.18 | 27.70 | 28.21 | 28.72 | 29.23 | 29.75 | 30.26 | 30.77 | 31.29 | 31.80 | 32.31 |
|             | 37    | 27.94 | 28.47 | 28.98 | 29.52 | 30.03 | 30.57 | 31.10 | 31.63 | 32.16 | 32.68 | 33.21 |
| 38          | 28.69 | 29.23 | 29.78 | 30.32 | 30.86 | 31.40 | 31.94 | 32.48 | 33.02 | 33.57 | 34.11 |       |



|             |    | Final Drive Ratio (FDR) Chart |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|----|-------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             |    | SPUR GEAR 48 PITCH            |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|             |    | 69                            | 70   | 71    | 72    | 73    | 74    | 75    | 76    | 77    | 78    | 79    | 80    | 81    | 82    | 83    | 84    | 85    | 86    | 87    |
| PINION SIZE | 12 | 9.78                          | 9.92 | 10.06 | 10.20 | 10.34 | 10.48 | 10.63 | 10.77 | 10.91 | 11.05 | 11.19 | 11.33 | 11.48 | 11.62 | 11.76 | 11.90 | 12.04 | 12.18 | 12.33 |
|             | 13 | 9.02                          | 9.15 | 9.28  | 9.42  | 9.55  | 9.68  | 9.81  | 9.94  | 10.07 | 10.20 | 10.33 | 10.46 | 10.59 | 10.72 | 10.85 | 10.98 | 11.12 | 11.25 | 11.38 |
|             | 14 | 8.38                          | 8.50 | 8.62  | 8.74  | 8.86  | 8.99  | 9.11  | 9.23  | 9.35  | 9.47  | 9.59  | 9.71  | 9.84  | 9.96  | 10.08 | 10.20 | 10.32 | 10.44 | 10.56 |
|             | 15 | 7.82                          | 7.93 | 8.05  | 8.16  | 8.27  | 8.39  | 8.50  | 8.61  | 8.73  | 8.84  | 8.95  | 9.07  | 9.18  | 9.29  | 9.41  | 9.52  | 9.63  | 9.75  | 9.86  |
|             | 16 | 7.33                          | 7.44 | 7.54  | 7.65  | 7.76  | 7.86  | 7.97  | 8.08  | 8.18  | 8.29  | 8.39  | 8.50  | 8.61  | 8.71  | 8.82  | 8.93  | 9.03  | 9.14  | 9.24  |
|             | 17 | 6.90                          | 7.00 | 7.10  | 7.20  | 7.30  | 7.40  | 7.50  | 7.60  | 7.70  | 7.80  | 7.90  | 8.00  | 8.10  | 8.20  | 8.30  | 8.40  | 8.50  | 8.60  | 8.70  |
|             | 18 | 6.52                          | 6.61 | 6.71  | 6.80  | 6.89  | 6.99  | 7.08  | 7.18  | 7.27  | 7.37  | 7.46  | 7.56  | 7.65  | 7.74  | 7.84  | 7.93  | 8.03  | 8.12  | 8.22  |
|             | 19 | 6.17                          | 6.26 | 6.35  | 6.44  | 6.53  | 6.62  | 6.71  | 6.80  | 6.89  | 6.98  | 7.07  | 7.16  | 7.25  | 7.34  | 7.43  | 7.52  | 7.61  | 7.69  | 7.78  |
|             | 20 | 5.87                          | 5.95 | 6.04  | 6.12  | 6.21  | 6.29  | 6.38  | 6.46  | 6.55  | 6.63  | 6.72  | 6.80  | 6.89  | 6.97  | 7.06  | 7.14  | 7.23  | 7.31  | 7.40  |
|             | 21 | 5.59                          | 5.67 | 5.75  | 5.83  | 5.91  | 5.99  | 6.07  | 6.15  | 6.23  | 6.31  | 6.40  | 6.48  | 6.56  | 6.64  | 6.72  | 6.80  | 6.88  | 6.96  | 7.04  |
|             | 22 | 5.33                          | 5.41 | 5.49  | 5.56  | 5.64  | 5.72  | 5.80  | 5.87  | 5.95  | 6.03  | 6.10  | 6.18  | 6.26  | 6.34  | 6.41  | 6.49  | 6.57  | 6.65  | 6.72  |
|             | 23 | 5.10                          | 5.17 | 5.25  | 5.32  | 5.40  | 5.47  | 5.54  | 5.62  | 5.69  | 5.77  | 5.84  | 5.91  | 5.99  | 6.06  | 6.13  | 6.21  | 6.28  | 6.36  | 6.43  |
|             | 24 | 4.89                          | 4.96 | 5.03  | 5.10  | 5.17  | 5.24  | 5.31  | 5.38  | 5.45  | 5.53  | 5.60  | 5.67  | 5.74  | 5.81  | 5.88  | 5.95  | 6.02  | 6.09  | 6.16  |
|             | 25 | 4.69                          | 4.76 | 4.83  | 4.90  | 4.96  | 5.03  | 5.10  | 5.17  | 5.24  | 5.30  | 5.37  | 5.44  | 5.51  | 5.58  | 5.64  | 5.71  | 5.78  | 5.85  | 5.92  |
|             | 26 | 4.51                          | 4.58 | 4.64  | 4.71  | 4.77  | 4.84  | 4.90  | 4.97  | 5.03  | 5.10  | 5.17  | 5.23  | 5.30  | 5.36  | 5.43  | 5.49  | 5.56  | 5.62  | 5.69  |
|             | 27 | 4.34                          | 4.41 | 4.47  | 4.53  | 4.60  | 4.66  | 4.72  | 4.79  | 4.85  | 4.91  | 4.97  | 5.04  | 5.10  | 5.16  | 5.23  | 5.29  | 5.35  | 5.41  | 5.48  |
|             | 28 | 4.19                          | 4.25 | 4.31  | 4.37  | 4.43  | 4.49  | 4.55  | 4.61  | 4.68  | 4.74  | 4.80  | 4.86  | 4.92  | 4.98  | 5.04  | 5.10  | 5.16  | 5.22  | 5.28  |
|             | 29 | 4.04                          | 4.10 | 4.16  | 4.22  | 4.28  | 4.34  | 4.40  | 4.46  | 4.51  | 4.57  | 4.63  | 4.69  | 4.75  | 4.81  | 4.87  | 4.92  | 4.98  | 5.04  | 5.10  |
|             | 30 | 3.91                          | 3.97 | 4.02  | 4.08  | 4.14  | 4.19  | 4.25  | 4.31  | 4.36  | 4.42  | 4.48  | 4.53  | 4.59  | 4.65  | 4.70  | 4.76  | 4.82  | 4.87  | 4.93  |
|             | 31 | 3.78                          | 3.84 | 3.89  | 3.95  | 4.00  | 4.06  | 4.11  | 4.17  | 4.22  | 4.28  | 4.33  | 4.39  | 4.44  | 4.50  | 4.55  | 4.61  | 4.66  | 4.72  | 4.77  |
|             | 32 | 3.67                          | 3.72 | 3.77  | 3.83  | 3.88  | 3.93  | 3.98  | 4.04  | 4.09  | 4.14  | 4.20  | 4.25  | 4.30  | 4.36  | 4.41  | 4.46  | 4.52  | 4.57  | 4.62  |
|             | 33 | 3.55                          | 3.61 | 3.66  | 3.71  | 3.76  | 3.81  | 3.86  | 3.92  | 3.97  | 4.02  | 4.07  | 4.12  | 4.17  | 4.22  | 4.28  | 4.33  | 4.38  | 4.43  | 4.48  |
|             | 34 | 3.45                          | 3.50 | 3.55  | 3.60  | 3.65  | 3.70  | 3.75  | 3.80  | 3.85  | 3.90  | 3.95  | 4.00  | 4.05  | 4.10  | 4.15  | 4.20  | 4.25  | 4.30  | 4.35  |

|             |    | Rubber Tire Rollout Chart (63mm diameter) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|----|-------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             |    | SPUR GEAR 48 PITCH                        |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|             |    | 69                                        | 70    | 71    | 72    | 73    | 74    | 75    | 76    | 77    | 78    | 79    | 80    | 81    | 82    | 83    | 84    | 85    | 86    | 87    |
| PINION SIZE | 12 | 20.24                                     | 19.95 | 19.67 | 19.39 | 19.13 | 18.87 | 18.62 | 18.37 | 18.13 | 17.90 | 17.68 | 17.45 | 17.24 | 17.03 | 16.82 | 16.62 | 16.43 | 16.24 | 16.05 |
|             | 13 | 21.92                                     | 21.61 | 21.31 | 21.01 | 20.72 | 20.44 | 20.17 | 19.90 | 19.65 | 19.39 | 19.15 | 18.91 | 18.68 | 18.45 | 18.23 | 18.01 | 17.80 | 17.59 | 17.39 |
|             | 14 | 23.61                                     | 23.27 | 22.95 | 22.63 | 22.32 | 22.01 | 21.72 | 21.44 | 21.16 | 20.89 | 20.62 | 20.36 | 20.11 | 19.87 | 19.63 | 19.39 | 19.17 | 18.94 | 18.73 |
|             | 15 | 25.30                                     | 24.94 | 24.58 | 24.24 | 23.91 | 23.59 | 23.27 | 22.97 | 22.67 | 22.38 | 22.09 | 21.82 | 21.55 | 21.29 | 21.03 | 20.78 | 20.53 | 20.30 | 20.06 |
|             | 16 | 26.98                                     | 26.60 | 26.22 | 25.86 | 25.50 | 25.16 | 24.82 | 24.50 | 24.18 | 23.87 | 23.57 | 23.27 | 22.99 | 22.71 | 22.43 | 22.16 | 21.90 | 21.65 | 21.40 |
|             | 17 | 28.67                                     | 28.26 | 27.86 | 27.48 | 27.10 | 26.73 | 26.38 | 26.03 | 25.69 | 25.36 | 25.04 | 24.73 | 24.42 | 24.12 | 23.83 | 23.55 | 23.27 | 23.00 | 22.74 |
|             | 18 | 30.36                                     | 29.92 | 29.50 | 29.09 | 28.69 | 28.30 | 27.93 | 27.56 | 27.20 | 26.85 | 26.51 | 26.18 | 25.86 | 25.54 | 25.24 | 24.94 | 24.64 | 24.36 | 24.08 |
|             | 19 | 32.04                                     | 31.58 | 31.14 | 30.71 | 30.29 | 29.88 | 29.48 | 29.09 | 28.71 | 28.35 | 27.99 | 27.64 | 27.30 | 26.96 | 26.64 | 26.32 | 26.01 | 25.71 | 25.41 |
|             | 20 | 33.73                                     | 33.25 | 32.78 | 32.32 | 31.88 | 31.45 | 31.03 | 30.62 | 30.22 | 29.84 | 29.46 | 29.09 | 28.73 | 28.38 | 28.04 | 27.71 | 27.38 | 27.06 | 26.75 |
|             | 21 | 35.42                                     | 34.91 | 34.42 | 33.94 | 33.47 | 33.02 | 32.58 | 32.15 | 31.74 | 31.33 | 30.93 | 30.55 | 30.17 | 29.80 | 29.44 | 29.09 | 28.75 | 28.41 | 28.09 |
|             | 22 | 37.10                                     | 36.57 | 36.06 | 35.56 | 35.07 | 34.59 | 34.13 | 33.68 | 33.25 | 32.82 | 32.41 | 32.00 | 31.61 | 31.22 | 30.84 | 30.48 | 30.12 | 29.77 | 29.43 |
|             | 23 | 38.79                                     | 38.23 | 37.70 | 37.17 | 36.66 | 36.17 | 35.69 | 35.22 | 34.76 | 34.31 | 33.88 | 33.45 | 33.04 | 32.64 | 32.25 | 31.86 | 31.49 | 31.12 | 30.76 |
|             | 24 | 40.47                                     | 39.90 | 39.33 | 38.79 | 38.26 | 37.74 | 37.24 | 36.75 | 36.27 | 35.80 | 35.35 | 34.91 | 34.48 | 34.06 | 33.65 | 33.25 | 32.86 | 32.47 | 32.10 |
|             | 25 | 42.16                                     | 41.56 | 40.97 | 40.40 | 39.85 | 39.31 | 38.79 | 38.28 | 37.78 | 37.30 | 36.82 | 36.36 | 35.92 | 35.48 | 35.05 | 34.63 | 34.22 | 33.83 | 33.44 |
|             | 26 | 43.85                                     | 43.22 | 42.61 | 42.02 | 41.44 | 40.88 | 40.34 | 39.81 | 39.29 | 38.79 | 38.30 | 37.82 | 37.35 | 36.90 | 36.45 | 36.02 | 35.59 | 35.18 | 34.78 |
|             | 27 | 45.53                                     | 44.88 | 44.25 | 43.64 | 43.04 | 42.46 | 41.89 | 41.34 | 40.80 | 40.28 | 39.77 | 39.27 | 38.79 | 38.32 | 37.85 | 37.40 | 36.96 | 36.53 | 36.11 |
|             | 28 | 47.22                                     | 46.55 | 45.89 | 45.25 | 44.63 | 44.03 | 43.44 | 42.87 | 42.31 | 41.77 | 41.24 | 40.73 | 40.22 | 39.73 | 39.26 | 38.79 | 38.33 | 37.89 | 37.45 |
|             | 29 | 48.91                                     | 48.21 | 47.53 | 46.87 | 46.23 | 45.60 | 44.99 | 44.40 | 43.83 | 43.26 | 42.72 | 42.18 | 41.66 | 41.15 | 40.66 | 40.17 | 39.70 | 39.24 | 38.79 |
|             | 30 | 50.59                                     | 49.87 | 49.17 | 48.49 | 47.82 | 47.17 | 46.55 | 45.93 | 45.34 | 44.76 | 44.19 | 43.64 | 43.10 | 42.57 | 42.06 | 41.56 | 41.07 | 40.59 | 40.13 |
|             | 31 | 52.28                                     | 51.53 | 50.81 | 50.10 | 49.42 | 48.75 | 48.10 | 47.46 | 46.85 | 46.25 | 45.66 | 45.09 | 44.53 | 43.99 | 43.46 | 42.94 | 42.44 | 41.95 | 41.46 |
|             | 32 | 53.97                                     | 53.20 | 52.45 | 51.72 | 51.01 | 50.32 | 49.65 | 49.00 | 48.36 | 47.74 | 47.14 | 46.55 | 45.97 | 45.41 | 44.86 | 44.33 | 43.81 | 43.30 | 42.80 |
|             | 33 | 55.65                                     | 54.86 | 54.09 | 53.33 | 52.60 | 51.89 | 51.20 | 50.53 | 49.87 | 49.23 | 48.61 | 48.00 | 47.41 | 46.83 | 46.27 | 45.71 | 45.18 | 44.65 | 44.14 |
|             | 34 | 57.34                                     | 56.52 | 55.72 | 54.95 | 54.20 | 53.46 | 52.75 | 52.06 | 51.38 | 50.72 | 50.08 | 49.46 | 48.84 | 48.25 | 47.67 | 47.10 | 46.55 | 46.00 | 45.48 |

|             |      | Final Drive Ratio (FDR) Chart |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|------|-------------------------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             |      | SPUR GEAR 64 PITCH            |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
|             |      | 100                           | 101  | 102  | 103  | 104  | 105  | 106   | 107   | 108   | 109   | 110   | 111   | 112   | 113   | 114   | 115   | 116   | 117   | 118   |
| PINION SIZE | 18   | 9.44                          | 9.54 | 9.63 | 9.73 | 9.82 | 9.92 | 10.01 | 10.11 | 10.20 | 10.29 | 10.39 | 10.48 | 10.58 | 10.67 | 10.77 | 10.86 | 10.96 | 11.05 | 11.14 |
|             | 19   | 8.95                          | 9.04 | 9.13 | 9.22 | 9.31 | 9.39 | 9.48  | 9.57  | 9.66  | 9.75  | 9.84  | 9.93  | 10.02 | 10.11 | 10.20 | 10.29 | 10.38 | 10.47 | 10.56 |
|             | 20   | 8.50                          | 8.59 | 8.67 | 8.76 | 8.84 | 8.93 | 9.01  | 9.10  | 9.18  | 9.27  | 9.35  | 9.44  | 9.52  | 9.61  | 9.69  | 9.78  | 9.86  | 9.95  | 10.03 |
|             | 21   | 8.10                          | 8.18 | 8.26 | 8.34 | 8.42 | 8.50 | 8.58  | 8.66  | 8.74  | 8.82  | 8.90  | 8.99  | 9.07  | 9.15  | 9.23  | 9.31  | 9.39  | 9.47  | 9.55  |
|             | 22   | 7.73                          | 7.80 | 7.88 | 7.96 | 8.04 | 8.11 | 8.19  | 8.27  | 8.35  | 8.42  | 8.50  | 8.58  | 8.65  | 8.73  | 8.81  | 8.89  | 8.96  | 9.04  | 9.12  |
|             | 23   | 7.39                          | 7.47 | 7.54 | 7.61 | 7.69 | 7.76 | 7.83  | 7.91  | 7.98  | 8.06  | 8.13  | 8.20  | 8.28  | 8.35  | 8.43  | 8.50  | 8.57  | 8.65  | 8.72  |
|             | 24   | 7.08                          | 7.15 | 7.23 | 7.30 | 7.37 | 7.44 | 7.51  | 7.58  | 7.65  | 7.72  | 7.79  | 7.86  | 7.93  | 8.00  | 8.08  | 8.15  | 8.22  | 8.29  | 8.36  |
|             | 25   | 6.80                          | 6.87 | 6.94 | 7.00 | 7.07 | 7.14 | 7.21  | 7.28  | 7.34  | 7.41  | 7.48  | 7.55  | 7.62  | 7.68  | 7.75  | 7.82  | 7.89  | 7.96  | 8.02  |
|             | 26   | 6.54                          | 6.60 | 6.67 | 6.73 | 6.80 | 6.87 | 6.93  | 7.00  | 7.06  | 7.13  | 7.19  | 7.26  | 7.32  | 7.39  | 7.45  | 7.52  | 7.58  | 7.65  | 7.72  |
|             | 27   | 6.30                          | 6.36 | 6.42 | 6.49 | 6.55 | 6.61 | 6.67  | 6.74  | 6.80  | 6.86  | 6.93  | 6.99  | 7.05  | 7.11  | 7.18  | 7.24  | 7.30  | 7.37  | 7.43  |
|             | 28   | 6.07                          | 6.13 | 6.19 | 6.25 | 6.31 | 6.38 | 6.44  | 6.50  | 6.56  | 6.62  | 6.68  | 6.74  | 6.80  | 6.86  | 6.92  | 6.98  | 7.04  | 7.10  | 7.16  |
|             | 29   | 5.86                          | 5.92 | 5.98 | 6.04 | 6.10 | 6.16 | 6.21  | 6.27  | 6.33  | 6.39  | 6.45  | 6.51  | 6.57  | 6.62  | 6.68  | 6.74  | 6.80  | 6.86  | 6.92  |
|             | 30   | 5.67                          | 5.72 | 5.78 | 5.84 | 5.89 | 5.95 | 6.01  | 6.06  | 6.12  | 6.18  | 6.23  | 6.29  | 6.35  | 6.40  | 6.46  | 6.52  | 6.57  | 6.63  | 6.69  |
|             | 31   | 5.48                          | 5.54 | 5.59 | 5.65 | 5.70 | 5.76 | 5.81  | 5.87  | 5.92  | 5.98  | 6.03  | 6.09  | 6.14  | 6.20  | 6.25  | 6.31  | 6.36  | 6.42  | 6.47  |
|             | 32   | 5.31                          | 5.37 | 5.42 | 5.47 | 5.53 | 5.58 | 5.63  | 5.68  | 5.74  | 5.79  | 5.84  | 5.90  | 5.95  | 6.00  | 6.06  | 6.11  | 6.16  | 6.22  | 6.27  |
|             | 33   | 5.15                          | 5.20 | 5.25 | 5.31 | 5.36 | 5.41 | 5.46  | 5.51  | 5.56  | 5.62  | 5.67  | 5.72  | 5.77  | 5.82  | 5.87  | 5.92  | 5.98  | 6.03  | 6.08  |
|             | 34   | 5.00                          | 5.05 | 5.10 | 5.15 | 5.20 | 5.25 | 5.30  | 5.35  | 5.40  | 5.45  | 5.50  | 5.55  | 5.60  | 5.65  | 5.70  | 5.75  | 5.80  | 5.85  | 5.90  |
|             | 35   | 4.86                          | 4.91 | 4.95 | 5.00 | 5.05 | 5.10 | 5.15  | 5.20  | 5.25  | 5.29  | 5.34  | 5.39  | 5.44  | 5.49  | 5.54  | 5.59  | 5.63  | 5.68  | 5.73  |
| 36          | 4.72 | 4.77                          | 4.82 | 4.86 | 4.91 | 4.96 | 5.01 | 5.05  | 5.10  | 5.15  | 5.19  | 5.24  | 5.29  | 5.34  | 5.38  | 5.43  | 5.48  | 5.53  | 5.57  |       |
| 37          | 4.59 | 4.64                          | 4.69 | 4.73 | 4.78 | 4.82 | 4.87 | 4.92  | 4.96  | 5.01  | 5.05  | 5.10  | 5.15  | 5.19  | 5.24  | 5.28  | 5.33  | 5.38  | 5.42  |       |
| 38          | 4.47 | 4.52                          | 4.56 | 4.61 | 4.65 | 4.70 | 4.74 | 4.79  | 4.83  | 4.88  | 4.92  | 4.97  | 5.01  | 5.06  | 5.10  | 5.14  | 5.19  | 5.23  | 5.28  |       |

# QUICK REFERENCE TABLE

| Key Guide                              |              | <div><div></div>Harder / Increase / Higher / Lengthen / Do not Use</div> <div><div></div>Softer / Decrease / Lower / Shorten / Use</div> <div><div>1</div>Order of importance</div> |  | FRONT        |             |           |        |        |             |     |             |               |       |               |               |                |                    |                  | REAR               |           |        |             |             |               |       |               |               |                |                   |                 |              |
|----------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------|-------------|-----------|--------|--------|-------------|-----|-------------|---------------|-------|---------------|---------------|----------------|--------------------|------------------|--------------------|-----------|--------|-------------|-------------|---------------|-------|---------------|---------------|----------------|-------------------|-----------------|--------------|
|                                        |              |                                                                                                                                                                                     |  | Off-Throttle | On-Throttle | Downstops | Camber | Caster | Ride Height | Toe | Roll Center | Anti-Roll bar | Tires | Shock Springs | Shock Damping | Shock Position | One-Way Front Axle | Solid Front Axle | Front Differential | Downstops | Camber | Ride Height | Roll Center | Anti-Roll bar | Tires | Shock Springs | Shock Damping | Shock Position | Rear Differential | Solid Rear Axle | Gurney Strip |
|                                        |              |                                                                                                                                                                                     |  |              |             |           |        |        |             |     |             |               |       |               |               |                |                    |                  |                    |           |        |             |             |               |       |               |               |                |                   |                 |              |
| How to get rid of UNDERSTEER           | Corner Entry |                                                                                                                                                                                     |  | 5            | 6           | 4         | 5      | 5      | 3           | 1   | 1           | 3             | 3     | 4             | 5             | 5              | 6                  | 3                | 6                  | 5         | 2      | 1           | 3           | 3             | 3     | 4             | 4             | 3              | 3                 |                 |              |
|                                        |              |                                                                                                                                                                                     |  | 2            | 6           | 3         | 5      | 8      | 2           | 1   | 3           | 4             | 3     | 4             | 5             | 5              | 6                  | 7                | 5                  | 5         | 2      | 1           | 1           | 3             | 3     | 4             | 4             | 3              | 3                 |                 |              |
|                                        | Mid Corner   |                                                                                                                                                                                     |  | 5            | 6           | 4         | 5      | 8      | 3           | 1   | 1           | 3             | 5     | 4             | 5             | 5              | 6                  | 7                | 6                  | 5         | 2      | 1           | 3           | 3             | 5     | 4             | 4             | 5              | 3                 |                 |              |
|                                        |              |                                                                                                                                                                                     |  | 2            | 6           | 3         | 5      | 8      | 2           | 1   | 3           | 4             | 5     | 4             | 5             | 5              | 6                  | 8                | 5                  | 5         | 2      | 1           | 1           | 3             | 5     | 4             | 4             | 3              | 3                 |                 |              |
|                                        | Corner Exit  |                                                                                                                                                                                     |  | 2            | 6           | 3         | 5      | 7      | 2           | 1   | 3           | 4             | 3     | 4             | 5             | 5              | 6                  | 8                | 5                  | 5         | 2      | 1           | 1           | 4             | 2     | 3             | 4             | 3              | 3                 |                 |              |
|                                        | Braking      |                                                                                                                                                                                     |  | 6            | 6           | 4         | 5      | 7      | 4           | 2   | 4           | 4             | 5     | 4             | 3             | 3              | 4                  | 3                | 4                  | 5         | 2      | 1           | 1           | 3             | 3     | 3             |               |                | 3                 |                 |              |
| How to get rid of OVERSTEER            | Corner Entry |                                                                                                                                                                                     |  | 5            | 6           | 4         | 5      | 5      | 3           | 1   | 1           | 3             | 3     | 4             | 5             | 5              | 6                  | 3                | 6                  | 5         | 2      | 1           | 3           | 3             | 3     | 4             | 4             | 3              | 3                 |                 |              |
|                                        |              |                                                                                                                                                                                     |  | 2            | 6           | 3         | 5      | 8      | 2           | 1   | 3           | 4             | 3     | 4             | 5             | 5              | 6                  | 7                | 5                  | 5         | 2      | 1           | 1           | 3             | 3     | 4             | 4             | 3              | 3                 |                 |              |
|                                        | Mid Corner   |                                                                                                                                                                                     |  | 5            | 6           | 4         | 5      | 8      | 3           | 1   | 1           | 3             | 5     | 4             | 5             | 5              | 6                  | 7                | 6                  | 5         | 2      | 1           | 3           | 3             | 5     | 4             | 4             | 5              | 3                 |                 |              |
|                                        |              |                                                                                                                                                                                     |  | 2            | 6           | 3         | 5      | 8      | 2           | 1   | 3           | 4             | 5     | 4             | 5             | 5              | 6                  | 8                | 5                  | 5         | 2      | 1           | 1           | 3             | 5     | 4             | 4             | 3              | 3                 |                 |              |
|                                        | Corner Exit  |                                                                                                                                                                                     |  | 2            | 6           | 3         | 5      | 7      | 2           | 1   | 3           | 4             | 3     | 4             | 5             | 5              | 6                  | 8                | 5                  | 5         | 2      | 1           | 1           | 4             | 2     | 3             | 4             | 3              | 3                 |                 |              |
|                                        | Braking      |                                                                                                                                                                                     |  | 6            | 6           | 4         | 5      | 7      | 4           | 2   | 4           | 4             | 5     | 4             | 3             | 3              | 4                  | 3                | 4                  | 5         | 2      | 1           | 1           | 3             | 3     | 3             |               |                | 3                 |                 |              |
| How to get rid of TRACTION ROLL        | Corner Entry |                                                                                                                                                                                     |  |              | 8           | 2         | 1      |        | 2           | 1   | 1           | 2             | 3     | 4             | 4             | 4              | 5                  | 3                | 6                  | 1         | 2      | 1           | 1           | 3             | 4     | 5             | 2             | 2              | 3                 |                 |              |
|                                        |              |                                                                                                                                                                                     |  | 6            | 8           | 2         | 1      |        | 2           | 1   | 1           | 3             | 4     | 5             | 4             | 4              | 5                  | 5                | 6                  | 1         | 2      | 1           | 1           | 2             | 3     | 4             | 2             | 2              | 3                 |                 |              |
|                                        | Mid Corner   |                                                                                                                                                                                     |  | 6            | 8           | 2         | 1      |        | 2           | 1   | 1           | 2             | 5     | 5             | 4             | 4              | 5                  | 5                | 6                  | 1         | 2      | 1           | 1           | 2             | 5     | 5             | 5             | 5              | 3                 |                 |              |
|                                        |              |                                                                                                                                                                                     |  | 6            | 8           | 2         | 1      |        | 2           | 1   | 1           | 3             | 4     | 5             | 4             | 4              | 5                  |                  | 6                  | 1         | 2      | 1           | 1           | 2             | 3     | 4             | 2             | 2              | 3                 |                 |              |
|                                        | Corner Exit  |                                                                                                                                                                                     |  | 6            | 8           | 2         | 1      |        | 2           | 1   | 1           | 2             | 3     | 4             | 5             | 4              | 4                  | 5                |                    | 6         | 1      | 2           | 1           | 1             | 2     | 3             | 4             | 2              | 2                 | 3               |              |
|                                        | Braking      |                                                                                                                                                                                     |  |              | 8           | 2         | 1      |        | 2           | 1   | 1           | 2             | 3     | 4             | 4             | 4              | 5                  | 3                | 6                  | 1         | 2      | 1           | 1           | 3             | 4     | 5             | 2             | 2              | 3                 |                 |              |
| STRAIGHT LINE STABILITY To make Better |              |                                                                                                                                                                                     |  | 7            | 5           | 3         | 7      | 4      | 7           | 5   | 3           | 8             | 4     | 8             | 8             | 8              | 8                  |                  | 5                  | 6         | 7      | 7           | 3           | 8             | 4     | 8             | 6             | 6              | 2                 |                 |              |
| STEERING RESPONSE To make Faster       |              |                                                                                                                                                                                     |  |              | 6           | 4         | 4      | 5      | 1           | 2   | 4           | 2             | 1     | 4             |               |                |                    |                  |                    | 4         | 2      | 3           | 4           | 4             | 3     | 4             |               |                | 4                 |                 |              |