

**TO THE DATA! The Truth Shall Set your Friction Free!**

**Cost to Run per 10,000km - Road roading mixed conditions (based on wear rate data from main 5000km test with dry and wet contamination blocks)**

(NOTE - "I.P" = wear rate results impacted by significant initial penetration issues which resulted in very high wear rates in block 1 of test. Wear rate results + cost to run calcs can be much lower if initial penetration issue negated - ie via immersive application vs manufacturer application instructions. "D.A" = lubricant was re applied at double the rate vs standard test protocol intervals due to short treatment lifespan. In the case of immersive waxes, bags of wax used was not doubled, simply the number of re-waxes)

\*Note that the modelling may still be breaking down a bit for lubricants that performed very poorly in the main test, and as such the test may have stopped at end of block 2 or 3 due to already exceeding wear rate allowance. This means that the data for blocks 4, 5 and 6 are extrapolated from that point. Whilst using extrapolations based on the average for that lubricant type (wet or wax etc) - we are still extrapolating a) from a very high wear mark, and b) multiple block extrapolations compound accuracy concerns. Also, in reality it is unlikely any cyclist would be replacing chains / cassettes at the rate noted for those lubricants, what would really happen is they would use them to 1 or 2% wear - so their cost to run would not match the below, which is modelled on components being replaced at recommended wear replacement marks. As such this is a like for like comparison / benchmark of wear rate performance in cost to help highlight the difference - it is not what in reality would be the actual cost to run for the poor performing products which in reality will just be used well past the 0.5% test wear marks.

| Dura Ace 11spd Components                             | Total Cost Per 10,000km | Lubricant Cost | Number of chains worn | Chains Cost | Number of Cassettes Worn | Cassettes Cost | Chainrings Worn | Chain rings cost |
|---|-------------------------|----------------|-----------------------|-------------|--------------------------|----------------|-----------------|------------------|
| Molten Speed Wax New Formula                          | \$ 255.90               | \$ 59.90       | 0.40                  | \$ 36.00    | 0.40                     | \$ 132.00      | 0.07            | \$ 28.00         |
| Silica Hot Melt                                       | \$ 275.90               | \$ 79.90       | 0.40                  | \$ 36.00    | 0.40                     | \$ 132.00      | 0.07            | \$ 28.00         |
| Rex Black Diamond Wax - 11+1 blend                    | \$ 285.90               | \$ 89.90       | 0.40                  | \$ 36.00    | 0.40                     | \$ 132.00      | 0.07            | \$ 28.00         |
| Rex Black Diamond Wax - 4+1 blend                     | \$ 446.35               | \$ 269.70      | 0.42                  | \$ 37.80    | 0.42                     | \$ 138.60      | 0.07            | \$ 0.25          |
| Effetto Mariposa Flower Power wax                     | \$ 498.83               | \$ 22.43       | 0.98                  | \$ 88.20    | 0.98                     | \$ 323.40      | 0.16            | \$ 64.80         |
| Silica Hot Wax X                                      | \$ 565.19               | \$ 289.99      | 0.56                  | \$ 50.40    | 0.56                     | \$ 184.80      | 0.10            | \$ 40.00         |
| Ceramic Speed UFO Drip New Formula                    | \$ 626.43               | \$ 84.43       | 1.10                  | \$ 99.00    | 1.10                     | \$ 363.00      | 0.20            | \$ 80.00         |
| Silica SS Drip  | \$ 810.92               | \$ 80.92       | 1.50                  | \$ 135.00   | 1.50                     | \$ 495.00      | 0.25            | \$ 100.00        |
| Tru Tension Tungsten All Weather (I.P)                | \$ 902.00               | \$ 68.00       | 1.70                  | \$ 153.00   | 1.70                     | \$ 561.00      | 0.30            | \$ 120.00        |
| Silica Synergetic                                     | \$ 925.46               | \$ 49.46       | 1.80                  | \$ 162.00   | 1.80                     | \$ 594.00      | 0.30            | \$ 120.00        |
| Rex Black Diamond                                     | \$ 960.79               | \$ 17.99       | 1.94                  | \$ 174.60   | 1.94                     | \$ 640.20      | 0.32            | \$ 128.00        |
| Smooove (I.P)   | \$ 1,134.20             | \$ 25.00       | 2.26                  | \$ 203.40   | 2.26                     | \$ 745.80      | 0.40            | \$ 160.00        |
| Rex Domestique  | \$ 1,161.00             | \$ 35.00       | 2.32                  | \$ 208.80   | 2.32                     | \$ 765.60      | 0.38            | \$ 152.00        |
| Tru Tension Tungsten Race (D.A)                       | \$ 1,191.84             | \$ 399.84      | 1.60                  | \$ 144.00   | 1.60                     | \$ 528.00      | 0.30            | \$ 120.00        |
| Session Components S-Wax (I.P)                        | \$ 1,201.10             | \$ 49.90       | 2.4                   | \$ 212.40   | 2.4                      | \$ 778.80      | 0.4             | \$ 160.00        |
| Allied Grax (I.P)                                     | \$ 1,247.00             | \$ 29.00       | 2.50                  | \$ 225.00   | 2.50                     | \$ 825.00      | 0.40            | \$ 168.00        |
| Nix Frix Shun   | \$ 1,278.85             | \$ 14.85       | 2.60                  | \$ 234.00   | 2.60                     | \$ 858.00      | 0.43            | \$ 172.00        |
| Squirt - (I.P)  | \$ 1,378.75             | \$ 18.75       | 2.80                  | \$ 252.00   | 2.80                     | \$ 924.00      | 0.46            | \$ 184.00        |
| Boeshield T-9 Aerosol                                 | \$ 1,497.49             | \$ 37.49       | 3.00                  | \$ 270.00   | 3.00                     | \$ 990.00      | 0.50            | \$ 200.00        |
| Revolubes   | \$ 1,530.20             | \$ 45.00       | 3.06                  | \$ 275.40   | 3.06                     | \$ 1,009.80    | 0.50            | \$ 200.00        |
| Silica Synerg-E                                       | \$ 1,635.38             | \$ 24.98       | 3.32                  | \$ 298.80   | 3.32                     | \$ 1,095.60    | 0.54            | \$ 216.00        |
| Wend wax 2 (Extrapolated Data)                        | \$ 1,738.00             | \$ 112.00      | 3.30                  | \$ 297.00   | 3.30                     | \$ 1,089.00    | 0.60            | \$ 240.00        |
| Finish Line Dry (red top bottle)                      | \$ 1,741.98             | \$ 39.98       | 3.50                  | \$ 315.00   | 3.50                     | \$ 1,155.00    | 0.58            | \$ 232.00        |
| Rock N Roll Dry                                       | \$ 1,798.07             | \$ 67.10       | 3.55                  | \$ 319.50   | 3.55                     | \$ 1,171.50    | 0.60            | \$ 240.00        |
| Cycle Star Gold (Extrapolated Data)                   | \$ 1,850.00             | \$ 140.00      | 3.50                  | \$ 315.00   | 3.50                     | \$ 1,155.00    | 0.60            | \$ 240.00        |
| AB Graphene Wax (Extrapolated Data)                   | \$ 2,155.90             | \$ 49.90       | 4.20                  | \$ 378.00   | 4.20                     | \$ 1,386.00    | 0.70            | \$ 280.00        |
| Wolf Tooth WT-1 (Extrapolated Data)                   | \$ 2,354.50             | \$ 18.50       | 4.80                  | \$ 432.00   | 4.80                     | \$ 1,584.00    | 0.80            | \$ 320.00        |
| White Lightning Epic Ride (Heavily Extrapolated Data) | \$ 2,454.00             | \$ 118.00      | 4.80                  | \$ 432.00   | 4.80                     | \$ 1,584.00    | 0.80            | \$ 320.00        |
| Dumonde Tech Lite (Heavily Extrapolated Data)         | \$ 2,519.39             | \$ 32.99       | 5.12                  | \$ 468.00   | 5.12                     | \$ 1,689.00    | 0.84            | \$ 336.00        |
| Muc Off C3 Ceramic dry (Heavily Extrapolated Data)    | \$ 2,557.99             | \$ 29.99       | 5.20                  | \$ 468.00   | 5.20                     | \$ 1,716.00    | 0.86            | \$ 344.00        |
| Muc Off Ludicrous AF (Heavily extrapolated data)      | \$ 3,509.00             | \$ 297.00      | 6.60                  | \$ 594.00   | 6.60                     | \$ 2,178.00    | 1.10            | \$ 440.00        |
| Prestacycle One (Heavily Extrapolated Data)           | \$ 3,853.95             | \$ 49.95       | 7.80                  | \$ 702.00   | 7.80                     | \$ 2,574.00    | 1.32            | \$ 528.00        |
| Muc Off Hydro Dynamic (Heavily extrapolated data)     | \$ 4,271.00             | \$ 99.75       | 8.60                  | \$ 774.00   | 8.60                     | \$ 2,838.00    | 1.40            | \$ 560.00        |
| Muc Off Nano Lube (Heavily extrapolated data)         | \$ 4,830.00             | \$ 200.00      | 9.50                  | \$ 855.00   | 9.50                     | \$ 3,135.00    | 1.60            | \$ 640.00        |
| Ab Graphene lube - TEST RESULTS LOCKED BY NDA         |                         |                |                       |             |                          |                |                 |                  |

**Cost to Run per 10,000km - Gravel / MTB / CX - Dry dusty conditions - based on wear rate data from dry contamination test block**

(NOTE - "I.P" = wear rate results impacted by significant initial penetration issues which resulted in very high wear rates in block 1 of test. Wear rate results + cost to run calcs can be much lower if initial penetration issue negated - ie via immersive application vs manufacturer application instructions. "D.A" = lubricant was re applied at double the rate vs standard test protocol intervals due to short treatment lifespan. In the case of immersive waxes, bags of wax used was not doubled, simply the number of re-waxes)

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| GRX 810 Components - Dry gravel / Mtb / Cx            | Total Cost Per 10,000km | Lubricant Cost | Number of chains worn | Chains Cost | Number of Cassettes Worn | Cassettes Cost | Chainrings Worn | Chain rings cost |
|---|-------------------------|----------------|-----------------------|-------------|--------------------------|----------------|-----------------|------------------|
| Effetto Mariposa Flower Power wax                     | \$ 119.77               | \$ 33.64       | 0.6                   | \$ 28.75    | 0.3                      | \$ 37.38       | 0.1             | \$ 20.00         |
| Mspeedwax New Formula                                 | \$ 164.85               | \$ 89.85       | 0.5                   | \$ 25.00    | 0.25                     | \$ 32.50       | 0.1             | \$ 25.00         |
| Session Components S-Wax                              | \$ 180.35               | \$ 74.85       | 0.7                   | \$ 35.00    | 0.4                      | \$ 45.50       | 0.1             | \$ 25.00         |
| Silica SS Drip  | \$ 180.47               | \$ 91.72       | 0.6                   | \$ 31.25    | 0.25                     | \$ 32.50       | 0.1             | \$ 25.00         |
| Silica Synerg-E                                       | \$ 187.46               | \$ 37.46       | 1.0                   | \$ 50.00    | 0.5                      | \$ 65.00       | 0.2             | \$ 35.00         |
| Silica Hot Melt                                       | \$ 202.35               | \$ 119.85      | 0.5                   | \$ 25.00    | 0.25                     | \$ 32.50       | 0.1             | \$ 25.00         |
| Rex Black Diamond Wax - 11+1 blend                    | \$ 209.85               | \$ 134.85      | 0.5                   | \$ 25.00    | 0.25                     | \$ 32.50       | 0.1             | \$ 25.00         |
| Ceramic Speed UFO Drip New Formula                    | \$ 236.65               | \$ 115.40      | 0.8                   | \$ 37.50    | 0.4                      | \$ 48.75       | 0.1             | \$ 25.00         |
| Rex Black Diamond                                     | \$ 238.48               | \$ 26.98       | 1.4                   | \$ 68.75    | 0.7                      | \$ 87.75       | 0.2             | \$ 45.00         |
| Tru Tension Tungsten All Weather                      | \$ 289.75               | \$ 96.00       | 1.3                   | \$ 62.50    | 0.6                      | \$ 81.25       | 0.3             | \$ 50.00         |
| Smooove   | \$ 361.50               | \$ 35.00       | 2.1                   | \$ 106.25   | 1.1                      | \$ 146.25      | 0.4             | \$ 75.00         |
| Silica Synergetic                                     | \$ 366.72               | \$ 32.97       | 2.3                   | \$ 112.50   | 1.1                      | \$ 146.25      | 0.4             | \$ 75.00         |
| Allied Grax   | \$ 377.25               | \$ 43.50       | 2.3                   | \$ 112.50   | 1.1                      | \$ 146.50      | 0.4             | \$ 75.00         |
| Molten Speed Wax                                      | \$ 390.08               | \$ 167.58      | 1.5                   | \$ 75.00    | 0.8                      | \$ 97.50       | 0.3             | \$ 50.00         |
| Squirt  | \$ 443.25               | \$ 27.00       | 2.2                   | \$ 137.50   | 1.4                      | \$ 178.75      | 0.5             | \$ 100.00        |
| Rex Black Diamond Wax - 4+1 blend                     | \$ 479.55               | \$ 404.55      | 0.5                   | \$ 25.00    | 0.25                     | \$ 32.50       | 0.1             | \$ 17.50         |
| Silica Hot Wax X                                      | \$ 509.99               | \$ 434.99      | 0.5                   | \$ 25.00    | 0.25                     | \$ 32.50       | 0.1             | \$ 20.00         |
| Nix Frix Shun   | \$ 541.05               | \$ 19.80       | 3.4                   | \$ 168.75   | 1.8                      | \$ 227.50      | 0.6             | \$ 125.00        |
| Rock N Roll Gold                                      | \$ 627.69               | \$ 93.94       | 3.6                   | \$ 181.25   | 1.8                      | \$ 227.50      | 0.6             | \$ 125.00        |
| Tru Tension Tungsten Race (D.A)                       | \$ 642.28               | \$ 559.78      | 0.5                   | \$ 25.00    | 0.3                      | \$ 32.50       | 0.1             | \$ 25.00         |
| Boeshield T-9 Aerosol                                 | \$ 651.23               | \$ 56.23       | 4.0                   | \$ 200.00   | 2.0                      | \$ 260.00      | 0.7             | \$ 135.00        |
| Finish Line Dry (Red top bottle)                      | \$ 712.22               | \$ 59.97       | 4.4                   | \$ 221.25   | 2.2                      | \$ 286.00      | 0.73            | \$ 145.00        |
| Cycle Star Gold                                       | \$ 758.50               | \$ 196.00      | 4.0                   | \$ 193.75   | 1.9                      | \$ 243.75      | 0.6             | \$ 125.00        |
| AB Graphene Wax                                       | \$ 790.18               | \$ 83.93       | 4.8                   | \$ 237.50   | 2.4                      | \$ 308.50      | 0.8             | \$ 160.00        |
| Wend wax 2  | \$ 792.75               | \$ 154.00      | 4.3                   | \$ 212.50   | 2.1                      | \$ 276.25      | 0.8             | \$ 150.00        |
| White Lightning Epic Ride (Heavily extrapolated data) | \$ 794.75               | \$ 166.00      | 4.3                   | \$ 212.50   | 2.1                      | \$ 276.25      | 0.7             | \$ 140.00        |
| Rex Domestique  | \$ 797.50               | \$ 52.50       | 5.0                   | \$ 250.00   | 2.5                      | \$ 325.00      | 0.9             | \$ 170.00        |
| Revolubes (Extrapolated Data)                         | \$ 812.50               | \$ 67.50       | 5.0                   | \$ 250.00   | 2.5                      | \$ 325.00      | 0.9             | \$ 170.00        |
| Wolf Tooth WT-1 (Heavily extrapolated data)           | \$ 995.24               | \$ 27.74       | 6.5                   | \$ 325.00   | 3.3                      | \$ 422.50      | 1.1             | \$ 220.00        |
| Muc Off C3 Ceramic dry (Heavily Extrapolated Data)    | \$ 1,186.23             | \$ 44.98       | 7.8                   | \$ 387.50   | 3.9                      | \$ 503.75      | 1.3             | \$ 250.00        |
| Dumonde Tech Lite (Heavily Extrapolated Data)         | \$ 1,311.99             | \$ 49.49       | 8.5                   | \$ 425.00   | 4.3                      | \$ 552.50      | 1.4             | \$ 285.00        |
| Prestacycle One (Heavily extrapolated data)           | \$ 1,826.18             | \$ 74.93       | 11.8                  | \$ 587.50   | 5.9                      | \$ 763.75      | 2.0             | \$ 400.00        |
| Muc Off Ludicrous AF (Heavily extrapolated data)      | \$ 1,898.00             | \$ 445.50      | 9.9                   | \$ 493.75   | 4.9                      | \$ 633.75      | 1.6             | \$ 325.00        |
| Muc Off Hydro Dynamic (Heavily extrapolated data)     | \$ 1,955.00             | \$ 140.00      | 12.4                  | \$ 618.75   | 6.1                      | \$ 796.25      | 2.0             | \$ 400.00        |
| Muc Off Nano Lube (Heavily extrapolated data)         | \$ 2,738.50             | \$ 280.00      | 17.7                  | \$ 708.00   | 8.9                      | \$ 1,150.00    | 3.0             | \$ 600.00        |
| Ab Graphene lube - TEST RESULTS LOCKED BY NDA         |                         |                |                       |             |                          |                |                 |                  |

**Cost to Run per 10,000km - Gravel / MTB / CX - Wet abrasive conditions - based on wear rate data from wet contamination test block**

(NOTE - "I.P" = wear rate results impacted by significant initial penetration issues which resulted in very high wear rates in block 1 of test. Wear rate results + cost to run calcs can be much lower if initial penetration issue negated - ie via immersive application vs manufacturer application instructions. "D.A" = lubricant was re applied at double the rate vs standard test protocol intervals due to short treatment lifespan. In the case of immersive waxes, bags of wax used was not doubled, simply the number of re-waxes)

