Supplementary Table 3. Muscle force values (10 N first molar loading) for rotations of the proximal segment on balancing side

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Yawb [o] | SMw | DMw | MPw | ATw | MTw | PTw | SMb | DMb | MPb | ATb | MTb | PTb |
| -5 | 2,685 | 1,139 | 2,744 | 2,325 | 1,269 | 0,819 | 2,283 | 0,943 | 1,960 | 1,798 | 1,252 | 0,528 |
| -4 | 2,677 | 1,136 | 2,736 | 2,318 | 1,265 | 0,817 | 2,280 | 0,947 | 1,955 | 1,803 | 1,256 | 0,530 |
| -3 | 2,669 | 1,133 | 2,728 | 2,311 | 1,262 | 0,814 | 2,277 | 0,951 | 1,949 | 1,808 | 1,260 | 0,531 |
| -2 | 2,662 | 1,130 | 2,721 | 2,305 | 1,258 | 0,812 | 2,274 | 0,954 | 1,944 | 1,813 | 1,264 | 0,532 |
| -1 | 2,655 | 1,127 | 2,713 | 2,299 | 1,255 | 0,810 | 2,271 | 0,958 | 1,939 | 1,817 | 1,267 | 0,533 |
| 0 | 2,648 | 1,124 | 2,707 | 2,294 | 1,252 | 0,808 | 2,268 | 0,962 | 1,934 | 1,821 | 1,271 | 0,534 |
| 1 | 2,642 | 1,122 | 2,700 | 2,288 | 1,249 | 0,806 | 2,266 | 0,966 | 1,929 | 1,824 | 1,274 | 0,535 |
| 2 | 2,637 | 1,119 | 2,694 | 2,283 | 1,246 | 0,804 | 2,263 | 0,970 | 1,925 | 1,827 | 1,277 | 0,536 |
| 3 | 2,631 | 1,117 | 2,689 | 2,278 | 1,244 | 0,803 | 2,261 | 0,974 | 1,921 | 1,830 | 1,280 | 0,537 |
| 4 | 2,626 | 1,115 | 2,684 | 2,274 | 1,241 | 0,801 | 2,258 | 0,978 | 1,918 | 1,832 | 1,283 | 0,538 |
| 5 | 2,622 | 1,113 | 2,679 | 2,270 | 1,239 | 0,800 | 2,256 | 0,982 | 1,914 | 1,833 | 1,285 | 0,539 |
| Rollb [o] | SMw | DMw | MPw | ATw | MTw | PTw | SMb | DMb | MPb | ATb | MTb | PTb |
| -5 | 2,663 | 1,130 | 2,722 | 2,306 | 1,259 | 0,813 | 2,243 | 0,930 | 1,944 | 1,834 | 1,292 | 0,541 |
| -4 | 2,659 | 1,129 | 2,718 | 2,303 | 1,257 | 0,811 | 2,249 | 0,937 | 1,942 | 1,831 | 1,288 | 0,539 |
| -3 | 2,656 | 1,127 | 2,715 | 2,300 | 1,255 | 0,810 | 2,255 | 0,943 | 1,939 | 1,828 | 1,283 | 0,538 |
| -2 | 2,653 | 1,126 | 2,712 | 2,298 | 1,254 | 0,810 | 2,260 | 0,949 | 1,937 | 1,825 | 1,279 | 0,537 |
| -1 | 2,651 | 1,125 | 2,709 | 2,295 | 1,253 | 0,809 | 2,265 | 0,956 | 1,936 | 1,823 | 1,275 | 0,535 |
| 0 | 2,648 | 1,124 | 2,707 | 2,294 | 1,252 | 0,808 | 2,268 | 0,962 | 1,934 | 1,821 | 1,271 | 0,534 |
| 1 | 2,647 | 1,123 | 2,705 | 2,292 | 1,251 | 0,808 | 2,272 | 0,968 | 1,933 | 1,819 | 1,267 | 0,533 |
| 2 | 2,645 | 1,123 | 2,703 | 2,291 | 1,250 | 0,807 | 2,275 | 0,975 | 1,932 | 1,817 | 1,263 | 0,532 |
| 3 | 2,644 | 1,122 | 2,702 | 2,290 | 1,250 | 0,807 | 2,277 | 0,981 | 1,931 | 1,816 | 1,259 | 0,531 |
| 4 | 2,643 | 1,122 | 2,702 | 2,289 | 1,249 | 0,807 | 2,278 | 0,987 | 1,930 | 1,815 | 1,256 | 0,530 |
| 5 | 2,643 | 1,122 | 2,701 | 2,289 | 1,249 | 0,806 | 2,280 | 0,993 | 1,930 | 1,814 | 1,252 | 0,529 |
| Pitchb [o] | SMw | DMw | MPw | ATw | MTw | PTw | SMb | DMb | MPb | ATb | MTb | PTb |
| -5 | 2,678 | 1,137 | 2,737 | 2,319 | 1,266 | 0,817 | 2,250 | 0,988 | 1,955 | 1,819 | 1,266 | 0,517 |
| -4 | 2,671 | 1,134 | 2,730 | 2,313 | 1,263 | 0,815 | 2,254 | 0,984 | 1,951 | 1,820 | 1,267 | 0,521 |
| -3 | 2,665 | 1,131 | 2,724 | 2,308 | 1,260 | 0,813 | 2,258 | 0,979 | 1,946 | 1,820 | 1,268 | 0,524 |
| -2 | 2,659 | 1,129 | 2,718 | 2,303 | 1,257 | 0,811 | 2,261 | 0,973 | 1,942 | 1,821 | 1,269 | 0,527 |
| -1 | 2,654 | 1,126 | 2,712 | 2,298 | 1,254 | 0,810 | 2,265 | 0,968 | 1,938 | 1,821 | 1,270 | 0,531 |
| 0 | 2,648 | 1,124 | 2,707 | 2,294 | 1,252 | 0,808 | 2,268 | 0,962 | 1,934 | 1,821 | 1,271 | 0,534 |
| 1 | 2,644 | 1,122 | 2,702 | 2,290 | 1,250 | 0,807 | 2,272 | 0,956 | 1,931 | 1,821 | 1,271 | 0,538 |
| 2 | 2,640 | 1,120 | 2,698 | 2,286 | 1,248 | 0,805 | 2,276 | 0,950 | 1,928 | 1,820 | 1,272 | 0,541 |
| 3 | 2,636 | 1,119 | 2,694 | 2,283 | 1,246 | 0,804 | 2,279 | 0,943 | 1,925 | 1,820 | 1,272 | 0,544 |
| 4 | 2,633 | 1,117 | 2,690 | 2,280 | 1,244 | 0,803 | 2,283 | 0,936 | 1,922 | 1,819 | 1,272 | 0,548 |
| 5 | 2,630 | 1,116 | 2,688 | 2,277 | 1,243 | 0,802 | 2,286 | 0,929 | 1,920 | 1,818 | 1,272 | 0,551 |