SHEET1

**Regression Analysis: ΔL versus T0, T1, T2, T3, T4, T12, T13, T15**

**Regression Equation**

|  |  |  |
| --- | --- | --- |
| ΔL | = | -44.9 + 1.188 T0 + 0.727 T1 - 0.71 T2 + 0.21 T3 + 1.03 T4 - 0.936 T12 + 2.84 T13 - 3.122 T15 |

**Coefficients**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Term** | **Coef** | **SE Coef** | **T-Value** | **P-Value** | **VIF** |
| Constant | -44.9 | 25.3 | -1.77 | 0.081 |  |
| T0 | 1.188 | 0.567 | 2.10 | 0.040 | 129.93 |
| T1 | 0.727 | 0.592 | 1.23 | 0.223 | 136.80 |
| T2 | -0.71 | 1.20 | -0.60 | 0.554 | 256.78 |
| T3 | 0.21 | 1.81 | 0.11 | 0.909 | 544.66 |
| T4 | 1.03 | 1.83 | 0.56 | 0.575 | 399.88 |
| T12 | -0.936 | 0.618 | -1.52 | 0.134 | 1144.92 |
| T13 | 2.84 | 1.22 | 2.34 | 0.022 | 758.41 |
| T15 | -3.122 | 0.441 | -7.08 | 0.000 | 10.20 |

**Model Summary**

|  |  |  |  |
| --- | --- | --- | --- |
| **S** | **R-sq** | **R-sq(adj)** | **R-sq(pred)** |
| 0.882909 | 94.80% | 94.21% | 87.14% |

**Analysis of Variance**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source** | **DF** | **Adj SS** | **Adj MS** | **F-Value** | **P-Value** |
| Regression | 8 | 995.14 | 124.393 | 159.57 | 0.000 |
| T0 | 1 | 3.43 | 3.426 | 4.40 | 0.040 |
| T1 | 1 | 1.18 | 1.178 | 1.51 | 0.223 |
| T2 | 1 | 0.28 | 0.276 | 0.35 | 0.554 |
| T3 | 1 | 0.01 | 0.010 | 0.01 | 0.909 |
| T4 | 1 | 0.25 | 0.248 | 0.32 | 0.575 |
| T12 | 1 | 1.79 | 1.792 | 2.30 | 0.134 |
| T13 | 1 | 4.26 | 4.255 | 5.46 | 0.022 |
| T15 | 1 | 39.03 | 39.030 | 50.07 | 0.000 |
| Error | 70 | 54.57 | 0.780 |  |  |
| Total | 78 | 1049.71 |  |  |  |

**Fits and Diagnostics for Unusual Observations**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Obs** | **ΔL** | **Fit** | **Resid** | **Std Resid** |  |  |
| 1 | 0.000 | -1.012 | 1.012 | 3.30 | R | X |
| 2 | 0.932 | 1.149 | -0.217 | -0.36 |  | X |
| 4 | 3.931 | 3.692 | 0.239 | 0.34 |  | X |
| 6 | 6.720 | 8.593 | -1.873 | -2.35 | R |  |
| 23 | 16.598 | 14.502 | 2.096 | 2.40 | R |  |
| 28 | 17.117 | 15.353 | 1.764 | 2.08 | R |  |
| 29 | 17.117 | 15.439 | 1.677 | 2.01 | R |  |
| 31 | 17.117 | 15.368 | 1.749 | 2.03 | R |  |
| 60 | 14.355 | 16.074 | -1.719 | -2.01 | R |  |

*R  Large residual  
X  Unusual X*

