

Solve the following Diophantine

$$\begin{aligned} \text{equation : } & 33 x_1 - 13 x_2 - 3 x_3 + 7 x_4 - 766 x_1^4 x_2 x_4^2 - 7 x_5 + (-674 x_3^9 + 203\,645 x_3^5 x_4) \times (-281 x_2^2 + 723\,044 x_1^6 x_4^7) \times (783 x_1 + 279\,300 x_3^7 x_4^7) \times (-275 x_1^5 + 10\,008 x_1^7 x_5^5) \times \\ & (489\,510 x_2^{14} + 6 x_5^8) \times (52\,923 x_2^8 x_3^6 + 184 x_5^9) \times (-858 x_4 - 194\,636 x_2^{10} x_5^9 - 868 x_5^{10}) - 14 x_6 - 18 x_7 - 6 x_8 + 2 x_9 + 3 x_{10} - 14 x_{11} - 4 x_{12} - 3 x_{13} + 11 x_{14} - 12 x_{15} + 10 x_{16} + 15 x_{17} + \\ & 15 x_{18} - 19 x_{19} - 576 x_6 x_9 x_{10} x_{12}^2 x_{16} x_{19} + 2 x_{20} + 3 x_{21} - 12 x_{22} - 8 x_{23} - 13 x_{24} + \\ & (-64 x_{16}^7 + 105\,301 x_8^8 x_{17}^8) \times (110 x_1^3 + 885 x_{13}^7 x_{17}^8) \times (-186\,660 x_3^4 x_{12}^6 + 553 x_{19}^4) \times (755 x_{15}^9 - 921\,591 x_2^7 x_{19}^9) \times (-273\,942 x_7^{10} x_9^6 - 196 x_{23}^2) \times (-789 x_7^3 + 41 x_{20}^9 + 368\,217 x_5^6 x_{23}^5) \times (-100 x_8 - 505\,180 x_6^{10} x_{24}^7) - \\ & 5 x_{25} + 13 x_{26} - 8 x_{27} - 8 x_{28} + 3 x_{29} + 2 x_{30} + 8 x_{31} - 5 x_{32} + 3 x_{33} + 3 x_{34} - x_{35} + 8 x_{36} + 5 x_{37} + 12 x_{38} - 3 x_{39} + 4 x_{41} - 9 x_{42} + 16 x_{43} + 12 x_{44} - 18 x_{45} - 5 x_{46} - 71 x_4 x_8 x_{11} x_{13} x_{23} x_{34} x_{46} + \\ & 8 x_{47} + 12 x_{48} + 9 x_{49} + (-261\,240 x_{21}^9 x_{31} - 615 x_{34}^3) \times (-997 x_2^9 + 331\,780 x_{22}^7 x_{38}^{10}) \times (280 x_{29}^{10} + 688\,160 x_{14}^6 x_{46}^9) \times (940 x_{20}^5 - 912\,975 x_{23}^6 x_{24}^8 - 663 x_{47}^2) \times (-595 x_{42}^3 + 33\,618 x_{31}^6 x_{48}^2) \times \\ & (-440\,271 x_{38}^9 x_{39}^6 - 802 x_{49}^3) \times (486 x_{43} - 301\,782 x_{10}^7 x_{49}^8) - 3 x_{50} + 3 x_{51} + 4 x_{52} + 9 x_{53} + 10 x_{54} + 4 x_{55} - 5 x_{56} - 6 x_{57} - 8 x_{58} + x_{59} - 6 x_{60} + 5 x_{61} + 3 x_{62} - 6 x_{63} + 5 x_{64} + 10 x_{65} - \\ & 9 x_{66} + 6 x_{67} + 9 x_{68} + 7 x_{69} + 3 x_{70} + 9 x_{71} + x_{72} + 4 x_{73} + 2 x_{74} - x_{75} + 6 x_{76} + x_{77} + 6 x_{78} - 5 x_{79} + 2 x_{80} - 10 x_{81} - 3 x_{82} + 9 x_{83} + x_{84} - 3 x_{85} - 9 x_{86} + x_{87} - 9 x_{88} + 5 x_{89} + 6 x_{90} - 10 x_{91} + \\ & 2 x_{92} - 7 x_{93} - 8 x_{94} + 5 x_{95} - 8 x_{96} + 9 x_{97} - x_{98} - 4 x_{99} + 6 x_{19} x_{26} x_{41} x_{90} x_{94} x_{99}^2 + \\ & (134\,960 x_4^2 x_{25}^2 + 377 x_{60}^5) \times (-763 x_{43}^7 + 229\,836 x_5 x_{66}^{10}) \times (-743 x_{52}^6 - 256 x_{55}^2 - 85\,434 x_{69}^3 x_{70}^3) \times (30 x_{33}^8 - 206\,180 x_{57}^6 x_{89}^2) \times (-824 x_{62}^7 + 312\,879 x_{44}^6 x_{93}^3) \times (302 x_{64}^9 + 178\,760 x_{50}^2 x_{98}^8) \times (2 x_{54}^{10} + 386\,622 x_{99}^5) - \\ & 7 x_{100} = 8\,472\,827\,925\,723\,497\,279\,079\,825\,725\,896\,743\,212\,537\,092\,151\,545\,454\,399\,977\,711\,146\,464\,646\,464\,645\,272\,151\,245\,423\,102\,640\,450\,424\,554\,210\,121\,024\,221\,004\,240\,012\,421\,214 \end{aligned}$$