1. Convert the date to the number of days since Jan 1st, 2000. For example, Jan 1st, 2000 will be 0; Feb 2nd, 2000 will be 32; Jan 1st, 2001 will be 366. By doing so, each date is guaranteed to have a unique hash value.

2. Since the 4th to 10th characters are random, we can manipulate those random characters. Use the 4th to 6th characters as a 3-digit integer and 11-16th characters as a 6-digit number. Then for each of the letter at the 7th to 10th position, use its corresponding number in 1-26, with A=1, B=2 and so on, and raise it to the power of (its position in VIN - 6). For example, if X is the 8th character in the VIN, it will become number 24 and raised to the power of (8-6), producing the result 24^2 = 576. Finally, sum all numbers together.

Example: 2BD117XQZR000001-> [117, 24, 17, 26, 18, 1] -> [117, 24, 289, 17576, 104976, 1] -> sum([117, 24, 289, 17576, 104976, 1]) -> 122983
By raising each digit to the nth power, we can make sure different combinations of the same letters (e.g. “ABCD” and “DCBA”) will not produce the same hash value.