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## NLGI Grease Consistency Numbers

The National Lubricating Grease Institute has established a grease consistency category based on ASTM D217 Worked Penetration characteristics. Worked Penetration is defined as the distance that an ASTM cone under a specified load, at 25°C (77°F), penetrates in 5 seconds the smooth surface of a grease sample that has been subjected to 60 strokes in a grease worker.

The greater the number defined in terms of the cone penetration, the softer the grease and the lower the NLGI number. Since the penetration scale is not continuous with the NLGI scale, i.e., there are lapses of 15 tenths of a millimeter between NLGI numbers, it is possible to design greases to fall between NLGI numbers. When this is done, unofficial half NLGI numbers are sometimes used.

<b>NLGI Consistency Number</b>	<b>ASTM D217-94 Worked (60 Strokes) Penetration at 25°C(77°F), tenths of a millimeter</b>
000	445 to 475
00	400 to 430
0	355 to 385
1	310 to 340
2	265 to 295
3	220 to 250
4	175 to 205
5	130 to 160
6	85 to 115

The results of two laboratories are considered different if they vary by more than 20 units.