

8.1.1 Test results and observations

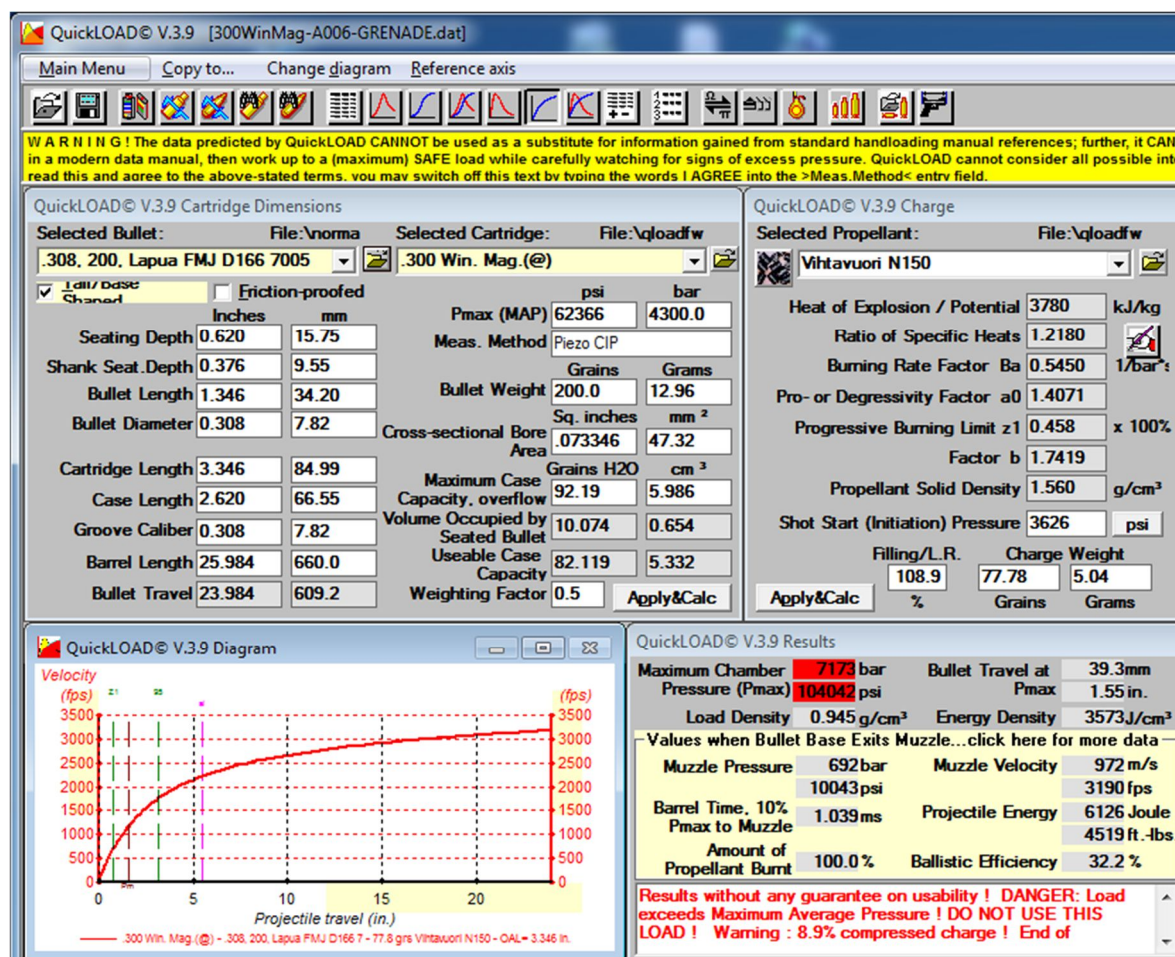
Fired 5 rounds of the load. The barrel has been attached to the receiver so that a .300 Win Mag No-go gauge (PTG manufactured CIP version) in the chamber would let the bolt to be closed but the last half of the handle turn is really tight. This acts as a reference point for the measurements as the cartridge chamber is reamed near to a CIP maximum head space measure. The reason for using the near maximum head space is to get the maximum strain for the action when firing over pressure cartridges and easily measure with the no go gauge when there is a change in the head space.

After every fired round, the action was inspected for any change in the parts or measurements. After every round the bolt was easily opened. Go-gauge has given the exact result and feel for the bolt closing as before any rounds were fired. The bolt lugs carried the pressure evenly all around. A new factory cartridge case stretches 0.13 mm which is completely normal with proof loads. This test shows that the action fulfills the safety requirements for commercial sales in any country following C.I.P standards.

8.2 Over pressure cartridges - A006

Cartridges going over C.I.P specification and causing extremely dangerous pressure.

Load ID: A006-GRENADE
 Caliber: .300 Win Mag
 Bullet: Lapua D166 200gr
 Powder: Vihtavuori N-150, 5,04g / 77.78 grains
 Primer: CCI 200LR
 Cartridge case: Sellier & Bellot
 C.O.A.L: 84,99mm
 Projected pressure: 7 173 bar / 104 042 psi



8.2.1 Test results and observations

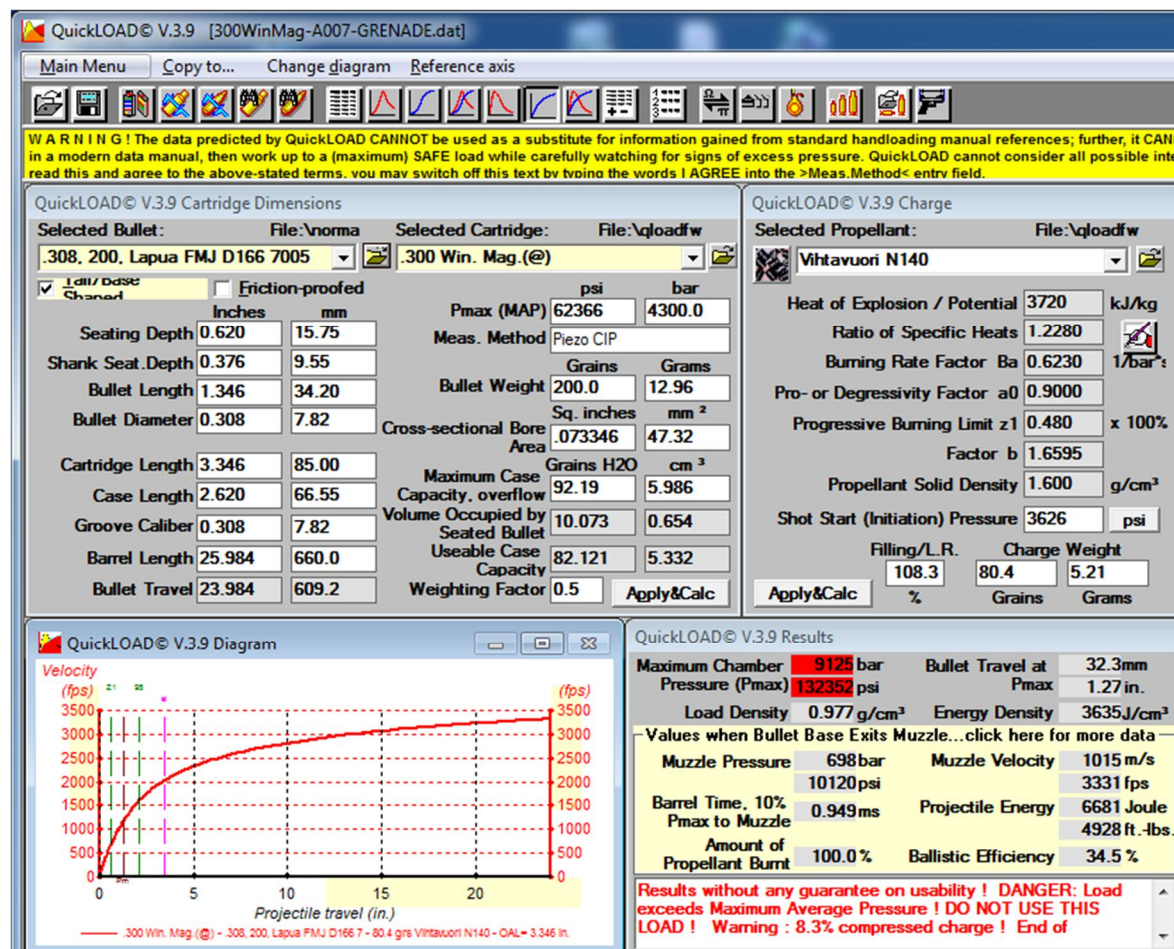
Fired 2 rounds of the loads. Action shows no signs of changes in any of the critical parts or in their dimensions. The cartridge case shows that the brass has backed away with the amount of headspace and packed itself in front of the belt of the case base. It is clearly seen without any measurements that the cartridge case has gained more length. Primer has dropped off from both of the cases. The primer hole is clearly

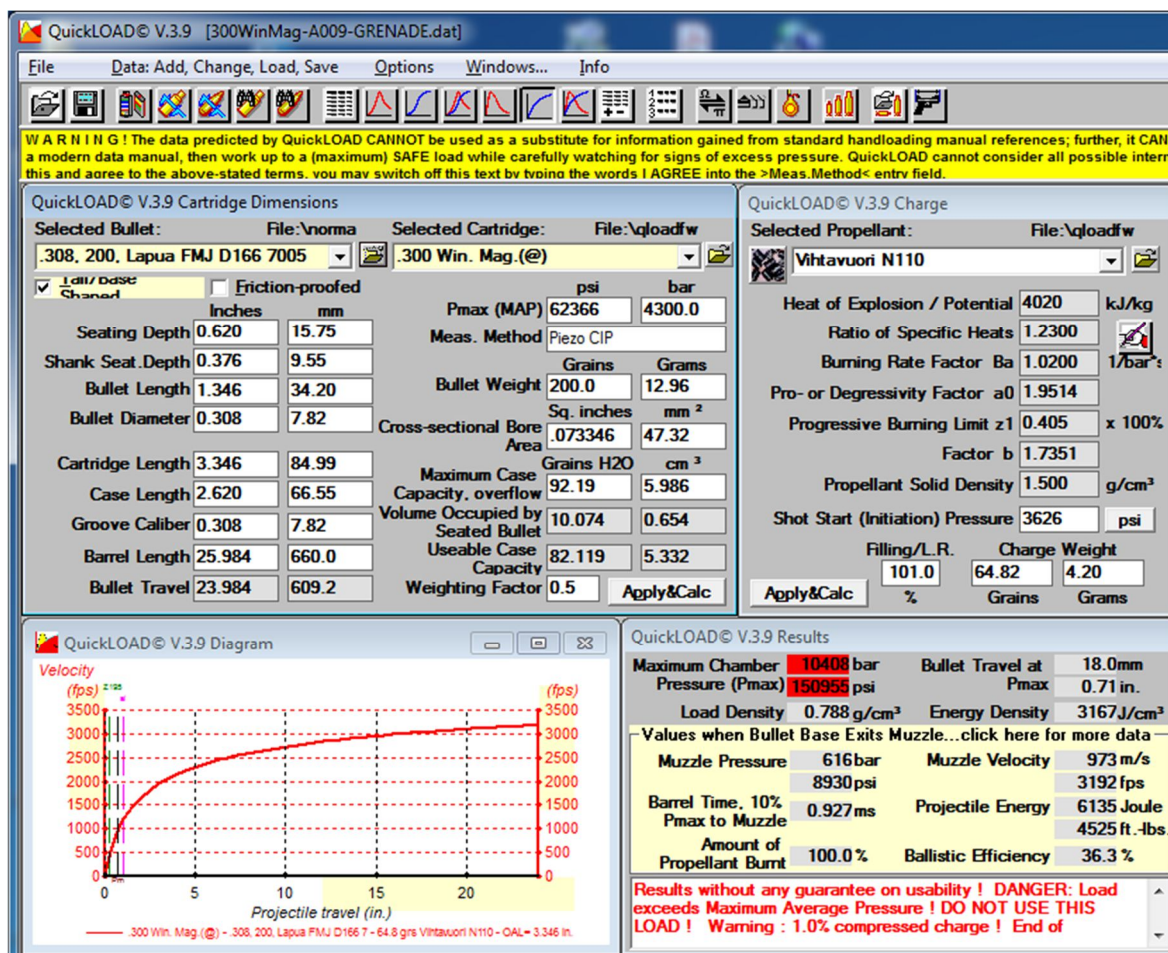
deformed to an almost square shape. Both bolt plungers have made a heavy stamp on the cartridge case head. Brass from the case can be found under the extractor. The bolt got stuck because of the loose brass from the case and the primer. Bolt was opened by gently tapping with a small hammer. The action worked as usual after the loose primers and brass was removed.

8.3 Over pressure cartridges - A007

Cartridges going over C.I.P specification and causing extremely dangerous pressure.

Load ID: A007-GRENADE
 Caliber: .300 Win Mag
 Bullet: Lapua D140 200gr
 Powder: Vihtavuori N-140, 5,21g / 80.4 grains
 Primer: CCI 200LR
 Cartridge case: Sellier & Bellot
 C.O.A.L: 85,00mm
 Projected pressure: 9 125 bar / 132 352 psi





8.4.1 Test results and observations

When firing the first round of this load, the head space was measured to be slightly over the maximum as the bolt could be closed with a No-Go gauge.

Fired one round of the load. The bolt could not be opened by hand. All the action parts are still in place and it seems nothing has been broken. Even with over 10 000 bars projected pressure, the action is still safe for the operator.

The receiver had to be cut open from the side so that the barrel could be removed from the receiver. The pressure had pushed a ring around the cartridge chamber with a +0.05 mm radius. The base of the cartridge case has been cut clean off from the Magnum cartridge case used. The bolt is still intact with all the small parts in their own places. When measured, the bolt lugs have retracted by 0.0023. The firing pin assembly is still intact and works. There is a big chunk of brass under the extractor, but the extractor is intact and still works after the brass chunk is removed. The plunger holes are filled with brass.