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WARNING: Since we have no control over equipment or data which may be used with this program, no responsibility is implied or assumed for results obtained through its use. Input data and results may be incorrect or wrong. Therefore the use of this data for loading ammunition can cause serious injury to personnell and material. The computer-results had to be checked against data available in current loading manuals. LOT-TO-LOT VARIATIONS OF POWDERS, PRIMER SUBSTITUTION AND COMPONENT CHANGE OFTEN RAISE PRESSURES TO UNSAFE LEVELS. THE USER MUST ASSUME THE ENTIRE RISK OF USING THIS DATA FOR LOADING PURPOSES. QuickLOAD® V3.6.02 #130542, @ Copyright 1987-2010 - H.Breemel, Babenhausen, Germany

User Data:	Date:9-Apr-2015		Time:18:34:02	File: xpert 303 epps	133gr.dat	
Cartridge / Caliber	.303 Epps Imp.		Bullet		.312, 133GR XPERT TARGET	
Maximum Average Pressure, allowed Groove Caliber Case Capacity, overflow Case Length Cartridge O.A. Length Shot Start / Init Pressure	49000 psi. 0.312 in. 63.01 gr. H2O 2.160 in. 2.874 in. 3625 psi.	3378 bar (Wild 7.92 mm 4.091 cm ³ 54.86 mm 73.0 mm 249.94 bar	lcat) Bullet Weight Bullet Length Bullet Seating De Barrel/Tube Lengt Cross Section Are	oth h a of Bore	with flatbase 133.0 gr. 1.236 in. 0.522 in. 24.0 in. 0.07451 in. ²	8.62 gm 31.39 mm 13.25 mm 609.6 mm 0.4807 cm ²
Propellant type	Somchem S335					
Charge Weight Heat of Explosion, Potential Propellant Solid Density Burning Rate Factor Ba Burning Function Limit Z1 Factor b	42.0 gr. 240.4 J/gr. 407.15 gr./in. ³ 0.624 1/s 0.35 1.666	2.722 gm 3710 J/gm 1.61 gm/cm³	Load Density Energy Density of Charge Used Ratio of Specific Heats cp/cv Weighting Factor Prog/ Degressivity Factor a0 Bulk Density		200.3 gr./in. ³ 48145 J/in. ³ 1.224 0.5 2.299 227.6 gr./in. ³	0.792 gm/cm ³ 2938 J/cm ³ 0.900 gm/cm ³
Calculated and Estimated Data:						
Bullet Shank Seating Depth Useable Case Capacity Loading Ratio("Density") / Filling	0.522 in. 0.2097 in.³ 88.0 %	13.25 mm 3.437 cm³	Capacity Displace Bullet Travel at Mu Charge Fraction B	d by Seated Bullet uzzle Exit surnt at Shot Start	0.0399 in.³ 22.36 in. 1.93 %	0.654 cm³ 567.99 mm
Predicted Data:						
Maximum Chamber Pressure	37862 psi.	2611 bar	Bullet Travel at Pr	nax	1.62 in.	41.3 mm
Bullet Velocity Bullet Energy Propellant Burnt	2654 fps. 2080 ft.lbs. 97.7 %	809.0 m/s 2821 Joule	Pressure at Muzzl Bullet Barrel Time Ballistic Efficiency	e	6380 psi. 1.277 ms 27.9 %	440 bar

Check Loading Manuals for Safe Minimum Charge Weight to Avoid Hazardous Ignition Conditions like Secondary Explosion Effects ! Real maximum (peak) of pressure is reached while bullet moves within barrel. End of combustion occurs after the bullet's base passes muzzle.

