

4N6XPRT Systems

Expert System Software for Litigation

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La Mesa, CA 91942-9342

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The 4N6XPRT StifCalcs[®] program has contained a Force Balance module since its 2011 Update -

The Force Balance approach to Stiffness values is based on the concept of "Equal and Opposite Forces" in combination with the assumption that one of the vehicles involved has a good set of Stiffness values based on testing.

There are essentially only TWO requirements in order to use a Force Balance approach, and they are:

- You must have A-B values for one of the vehicles for the surface that was hit
- Both vehicles must have SOME damage

Beyond these two requirements, the QUALITY of your calculation results will be impacted by :

- The quality of the information you have on each vehicle (weight, pass/cargo load, etc.)
- The quality/accuracy of your crush measurements
- The quality of your A-B stiffness values

while the Force Balance analysis CAN be run with degraded information in the above three areas, the quality of the results will also be degraded, sometimes significantly so.

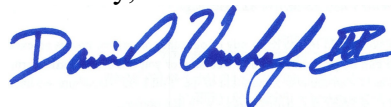
As an extension of our **I**ndividual **V**ehicle **D**ata **S**earch **S**ervice, in 2011 we added Force Balance Analysis runs to our services. An order form with pricing follows on the next page.

With respect to the Order Form -

- A) Please be SPECIFIC on the vehicle make and model, including drive wheels, bed length, etc.
- B) The Curb Weight used will come from Expert AutoStats unless you specify some other weight
- C) The PDOF Lever Arm default length is 0 inches
- D) The Angle of Collision Force to Normal Force default value is 0 degrees
- E) If no Crush Spacing is indicated, equal spacing will be used.

If you have any specific questions, please be sure to call.

Sincerely,



Daniel W. Vomhof III
General Manager/Technical Support

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FORCE BALANCE ORDER FORM

\$50 for the first "Run" / \$30 for each additional crush variation with same vehicles

Vehicle 1 (KNOWN Stiffness) - Year/Make/Model

Curb Weight (pounds) = _____
Occupant + Cargo Weight (pounds) = _____
Total Weight (pounds) = _____

Angle of Collision Force to Force Normal to
Collision Face (degrees) = _____
PDOF Lever Arm Distance (inches) = _____

Damage Length (inches) = _____

If Crush Depth measurements are equally spaced, you do not
need to fill in the distance between Crush measurements.

Crush Depth

Crush Spacing EQUAL?? Yes / No

C1 (inches) = _____ Distance C1 to C2 (inches) = _____
C2 (inches) = _____ Distance C2 to C3 (inches) = _____
C3 (inches) = _____ Distance C3 to C4 (inches) = _____
C4 (inches) = _____ Distance C4 to C5 (inches) = _____
C5 (inches) = _____ Distance C5 to C6 (inches) = _____
C6 (inches) = _____ Distance C6 to C7 (inches) = _____
C7 (inches) = _____ Distance C7 to C8 (inches) = _____
C8 (inches) = _____ Distance C8 to C9 (inches) = _____
C9 (inches) = _____ Distance C9 to C10 (inches) = _____
C10 (inches) = _____

Vehicle 2 - Year/Make/Model

Curb Weight (pounds) = _____
Occupant + Cargo Weight (pounds) = _____
Total Weight (pounds) = _____

Angle of Collision Force to Force Normal to
Collision Face (degrees) = _____
PDOF Lever Arm Distance (inches) = _____

Damage Length (inches) = _____

If Crush Depth measurements are equally spaced, you do not
need to fill in the distance between Crush measurements.

Crush Depth

Crush Spacing EQUAL?? Yes / No

C1 (inches) = _____ Distance C1 to C2 (inches) = _____
C2 (inches) = _____ Distance C2 to C3 (inches) = _____
C3 (inches) = _____ Distance C3 to C4 (inches) = _____
C4 (inches) = _____ Distance C4 to C5 (inches) = _____
C5 (inches) = _____ Distance C5 to C6 (inches) = _____
C6 (inches) = _____ Distance C6 to C7 (inches) = _____
C7 (inches) = _____ Distance C7 to C8 (inches) = _____
C8 (inches) = _____ Distance C8 to C9 (inches) = _____
C9 (inches) = _____ Distance C9 to C10 (inches) = _____
C10 (inches) = _____

Name _____
Company _____
Address _____
City/State/Zip _____
Phone _____
Case Reference _____

Visa/MasterCard/American Express
Card Number _____
Expiration _____ / _____
Security Code _____
Card Billing Address _____
City/State/Zip _____

E-Mail _____