

Cost-effective Rollover Protective Structure (CROPS)

for Wheeled Agricultural Tractors

Ford 3000 SERIES

TESTING INFORMATION



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Static testing of a fully assembled NIOSH CROPS was performed at the NIOSH Division of Safety Research laboratories in Morgantown, West Virginia, and in accordance with testing criteria outlined in SAE J2194. The main purpose of the static laboratory testing was to simulate field upset in a controlled and repeatable environment (SAE J2194). The static loading sequence consisted of four tests: (1) longitudinal loading, (2) 1st vertical crush loading, (3) transverse loading, and (4) 2nd vertical crush loading. During any of the four phases of static testing, the CROPS cannot be altered (e.g., bolts tightened, material repairs) and cannot touch or enter the operator clearance zone.

During the static laboratory testing, the loads were applied slowly over time, with the applied force and corresponding displacement collected. From these measurements, the energy absorbed by the CROPS was calculated (see graphs).

The photos show the condition of the tested CROPS at the beginning and the end of each of the four static tests.

Ford 3000 Longitudinal Test



Before

Ford 3000 Longitudinal Test

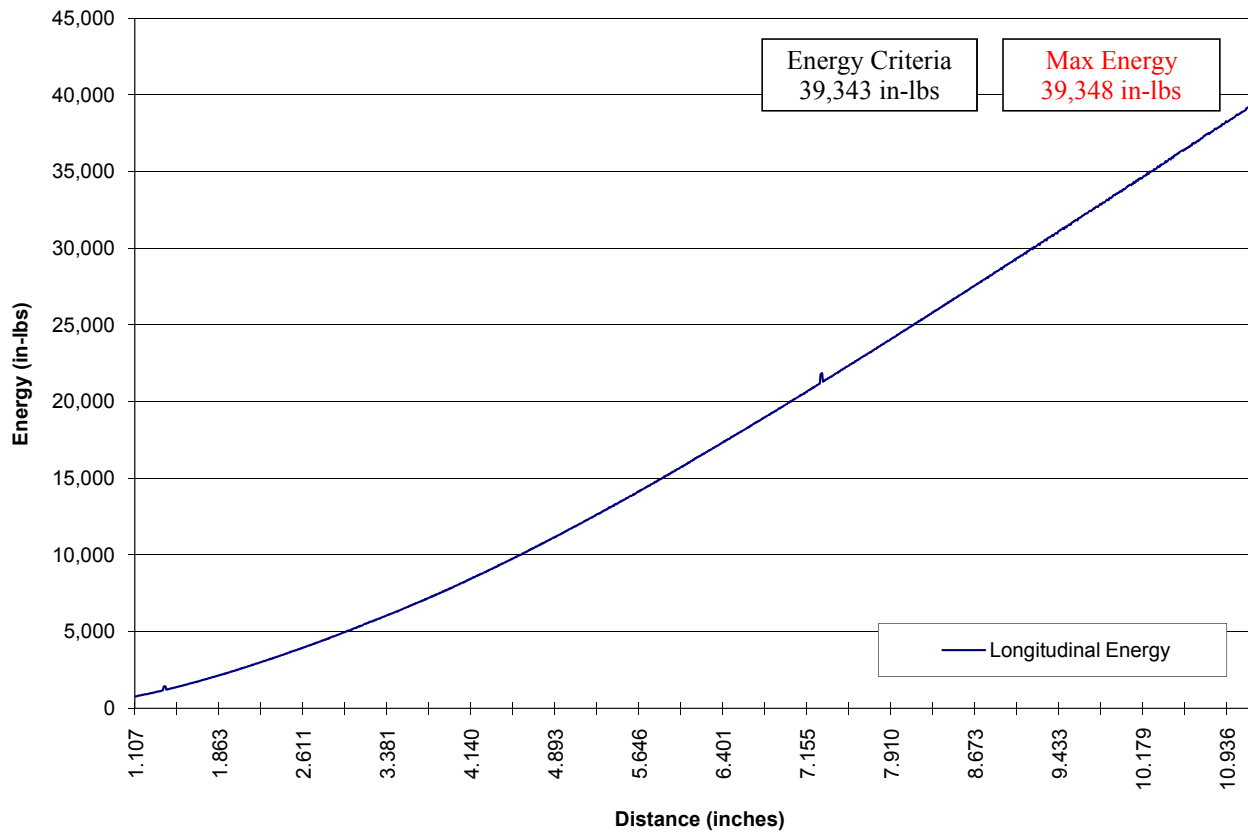


After

CROPS Testing Information, Ford 3000 Series

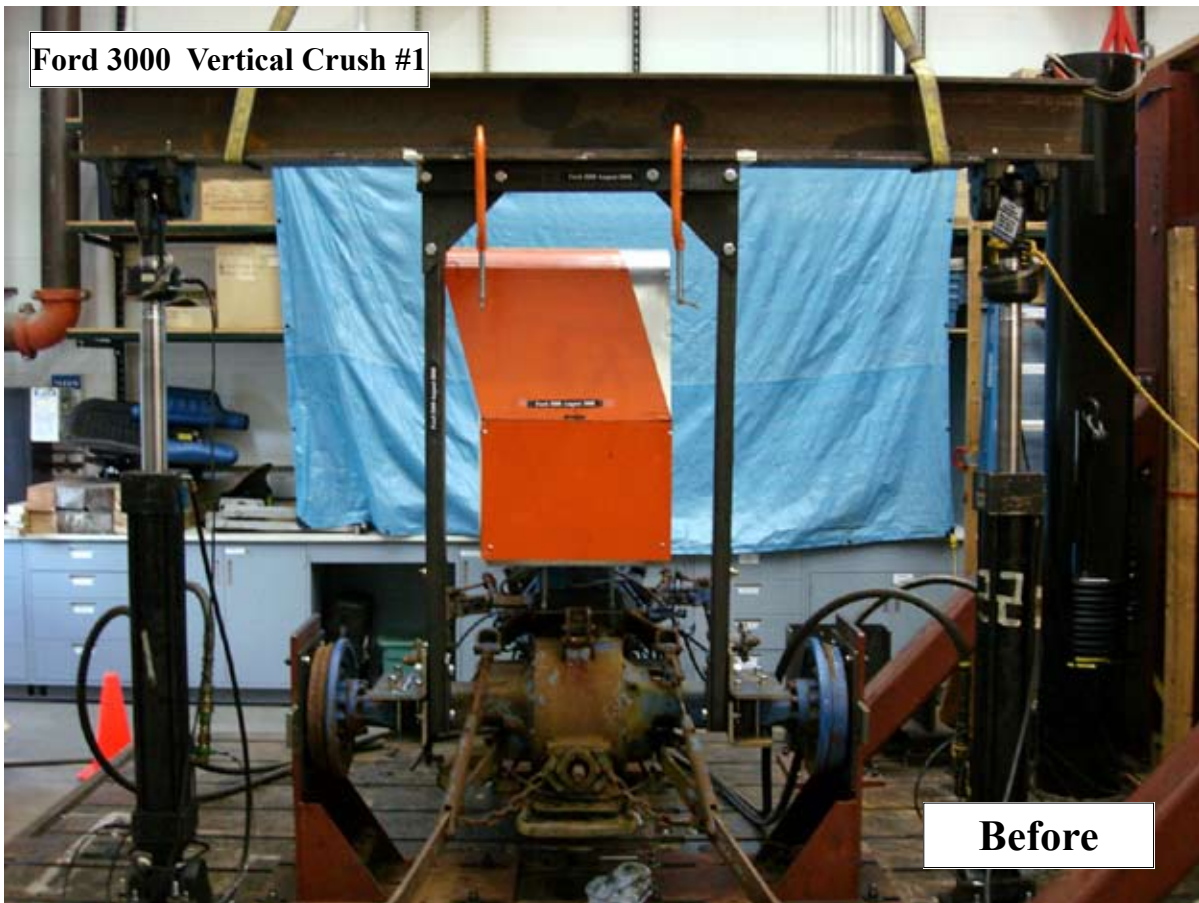
CROPS Lab Testing August 2008 Ford 3000 Series

Ford 3000 Longitudinal Test



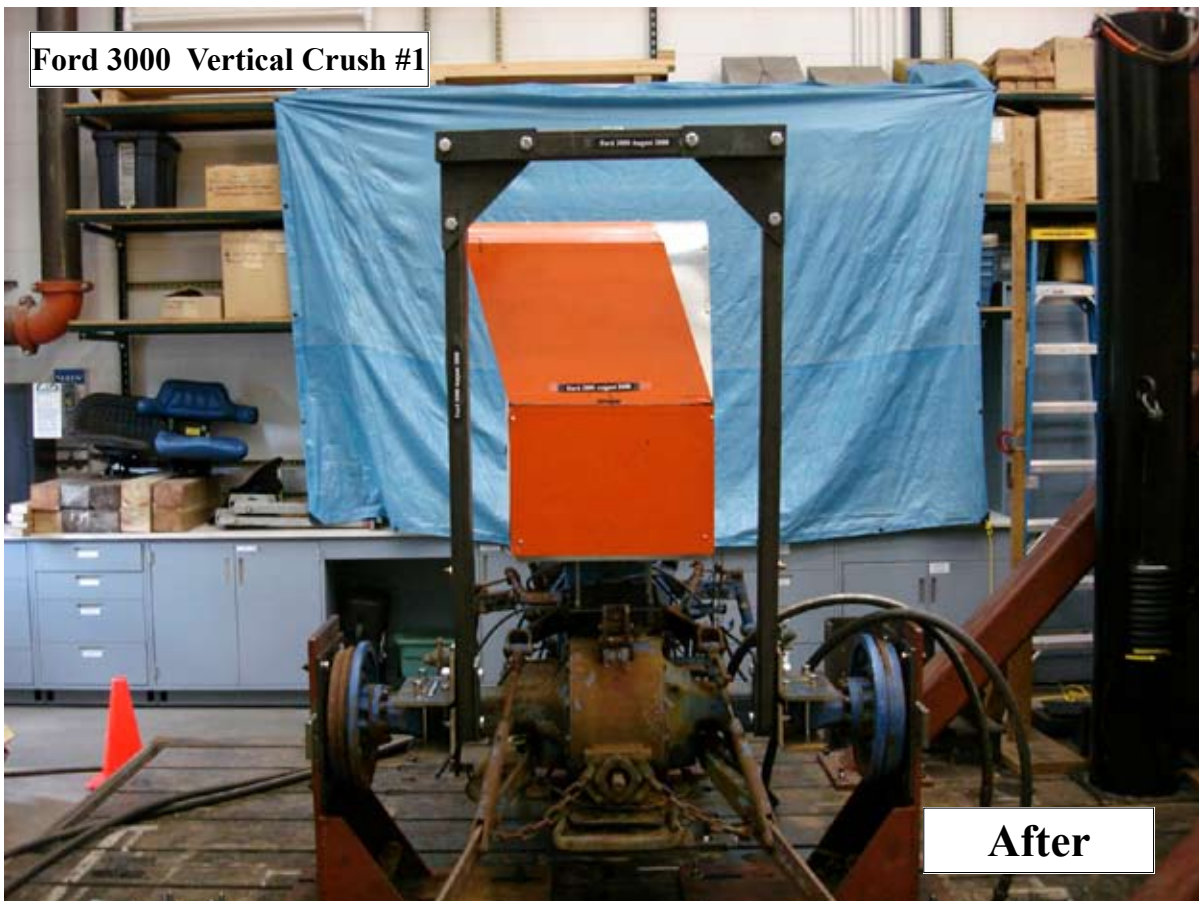
CROPS Testing Information, Ford 3000 Series

Ford 3000 Vertical Crush #1



Before

Ford 3000 Vertical Crush #1

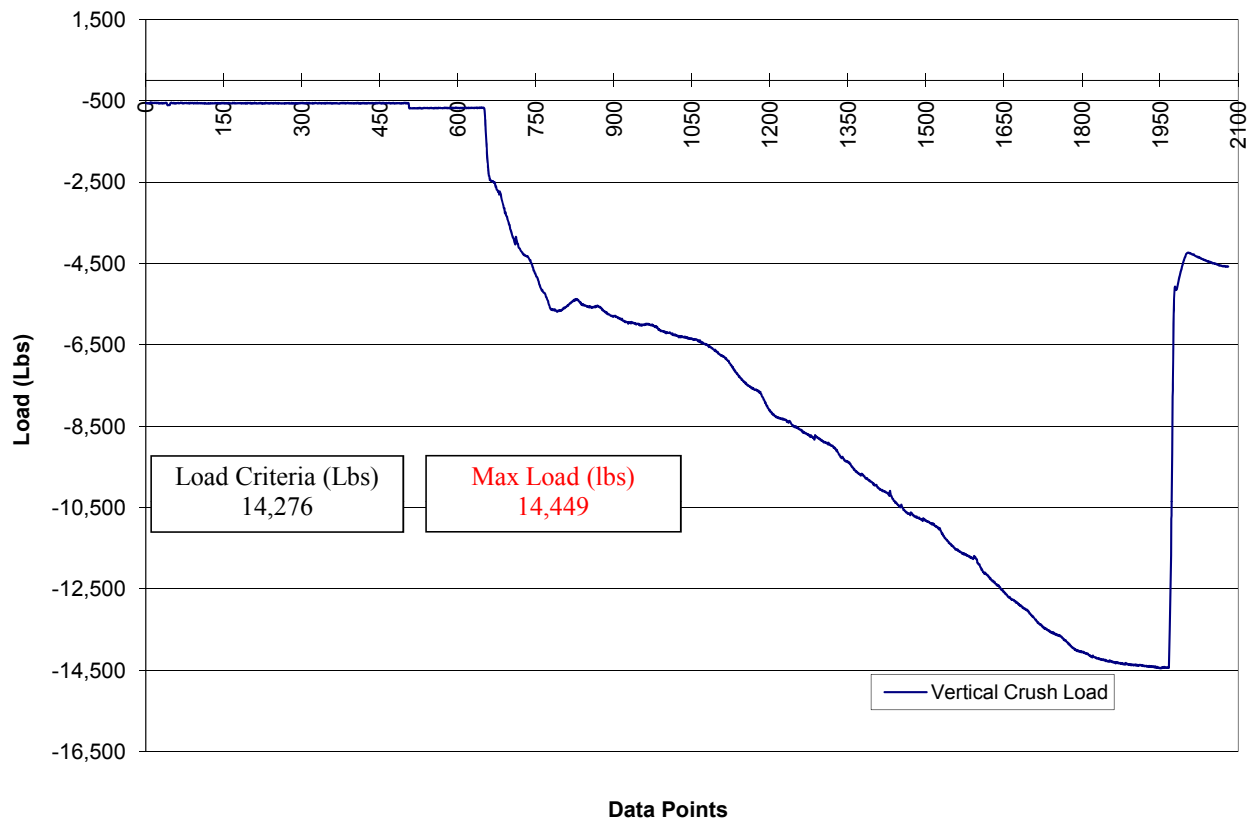


After

CROPS Testing Information, Ford 3000 Series

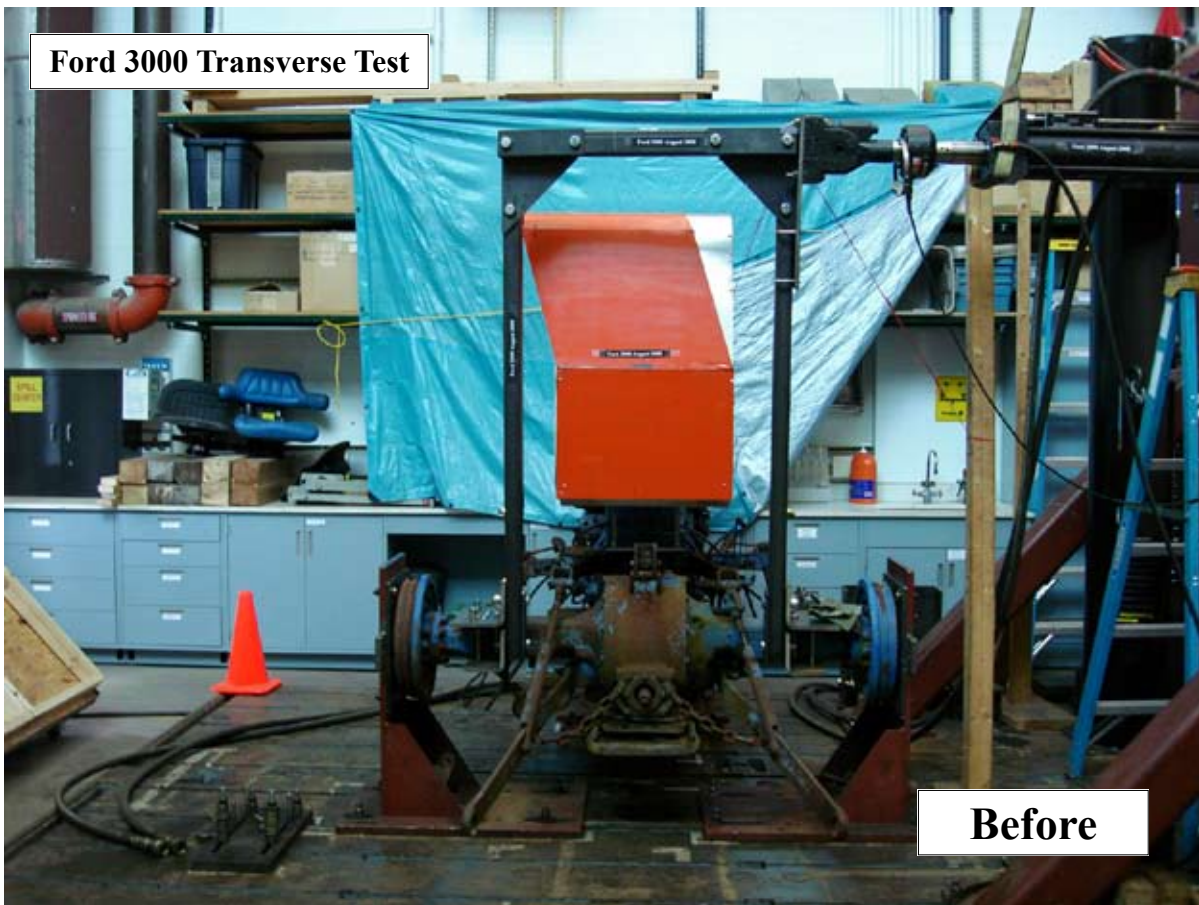
CROPS Lab Testing August 2008 Ford 3000 Series

Ford 3000 Vertical Crush #1



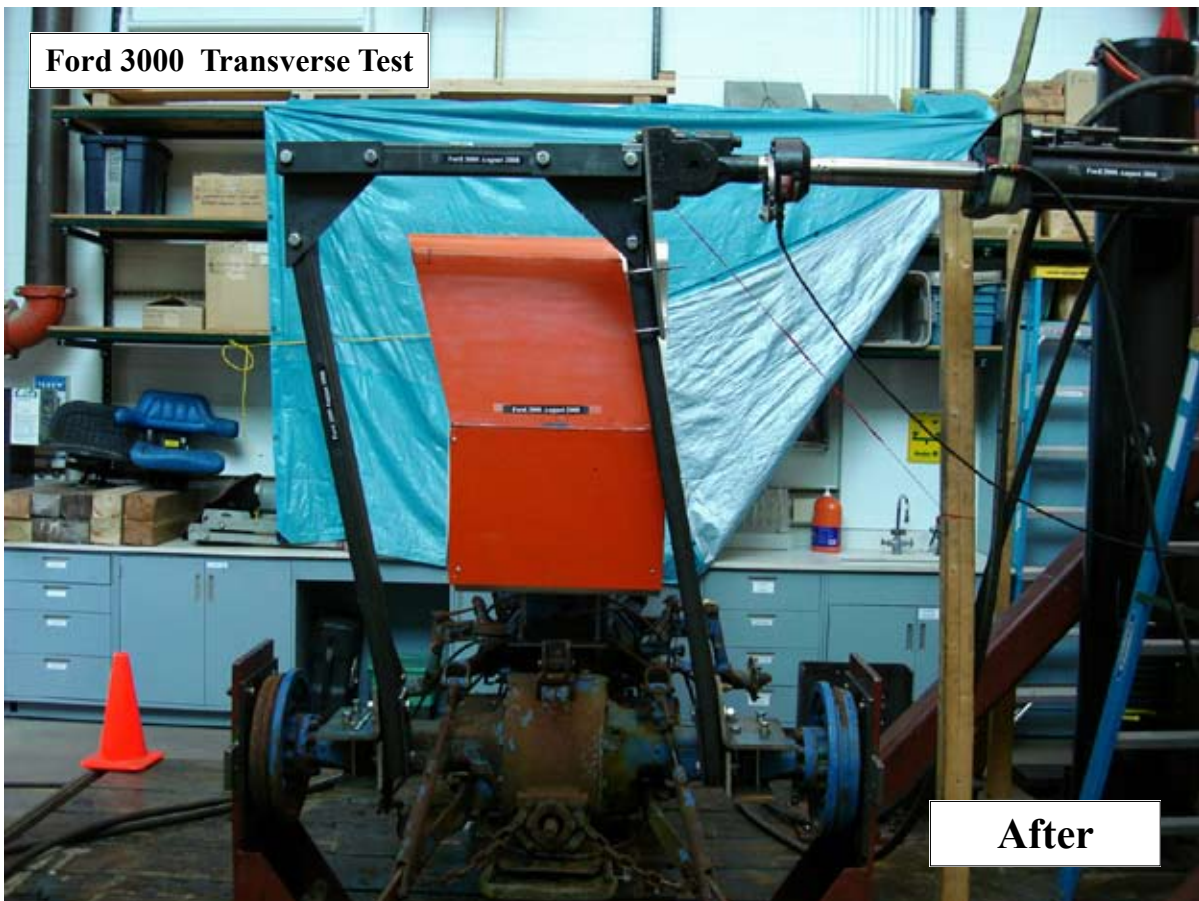
CROPS Testing Information, Ford 3000 Series

Ford 3000 Transverse Test



Before

Ford 3000 Transverse Test

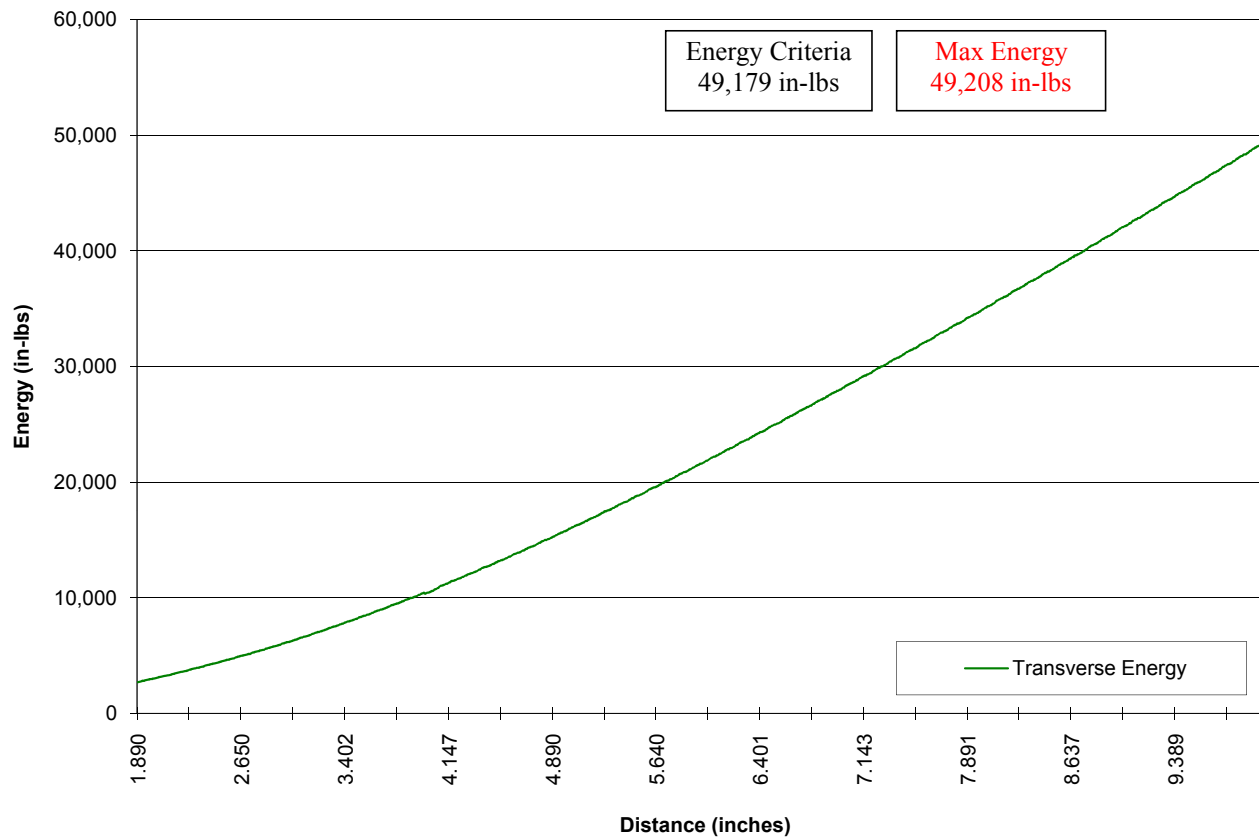


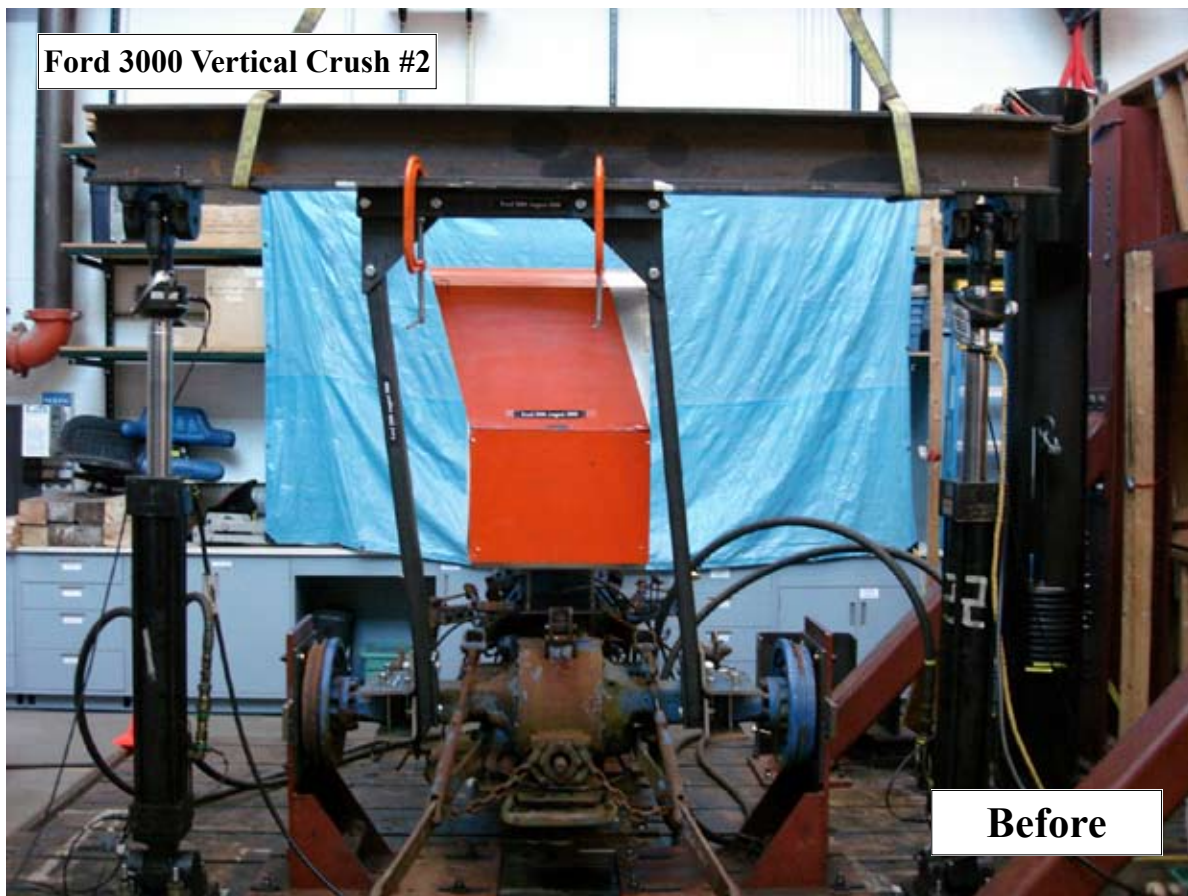
After

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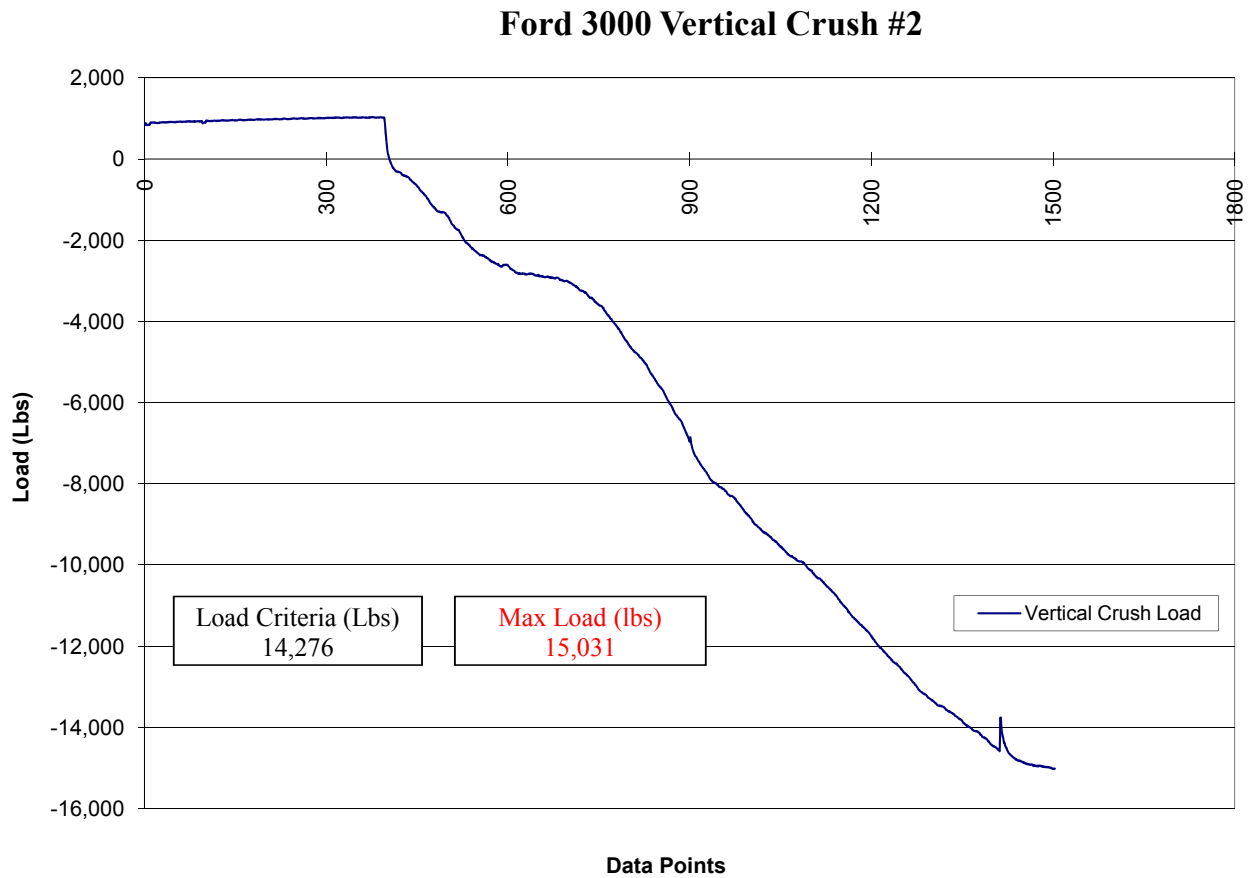
Ford 3000 Transverse Test





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