

ISO 7176-8 TWO DRUM TEST REPORT

TEST PERFORMED AT: Newman Engineering Inc.
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DATE OF TEST: August 21, 1996

WHEELCHAIR TYPE AND DESCRIPTION: Eclipse 600 24 in. wide build on or about Aug. 10, 1996
-90 durometer shock absorbers
-brazed and welded tubular steel frame
-23.5 in. OD rear wheels with quick-release axles (rear axle located at fourth hole from front)
-5 in. Darcor front castors
-Invacare footrests
-2 in. Delrin spacer at front
-seat at highest position at rear
-back was vertical and at 2 positions from rearmost
-Substituted back fabric with polyester tape webbing
- 4 in. medium density urethane foam on seat

TEST DUMMY: 26 lb steel frame with hinged back supporting 574 lb of sand in approx. 30 lb PP bags.

METHOD:

- The two drum test machine specified in ISO 7176-8 was simulated by a 32 ft. long track. Slats with a height of 0.47 in. and a width of 1.42 in. were placed approx. 14 in. apart.

COMMENTS:

- 2 of 6 cycles were performed with approx. 1000 lb total load. No yielding was noted. It is therefore concluded that critical parts are stressed below 60% of their yield strength with a 600lb load. The steel parts comprising the frame are thus stressed below their endurance limit and can be considered to survive a fatigue life test.
- No loosening of fasteners noted.
- Suspension elements were fully buckled by the 1000lb load.

CONCLUSION

- This simplified simulation of the drum test was considered an adequate model in the absence of a drum tester capable of testing a 600lb load.