

Test Data

- If the bottom line is to impact wearer performance measured by tasks meaningful to the soldier mission.

NC STATE UNIVERSITY



- **A pilot study conducted Jan 2009 at Fort Bragg**
- Planned and Executed by NC State University. Test Group Special Forces Soldiers.
- 1 days of event based testing in body armor to determine the effects of physical fatigue on performance
- 4 event per day for 1 days – total 4 events. 3 individual soldier lanes per event
- Medical Evacuation Lanes, then a physical survey (on a BORG scale)

- **Comprehensive Study conducted Nov 2010 at Fort Bragg**

- Directed by Government contract
- Events, criteria, and scoring established by the military element. All data collected by military members.
- 2 days of event based testing in body armor to determine the effects of physical fatigue on performance
- 2 event per day for 2 days – total 4 events. 8 individual soldier lanes per event
- An event equals an RPAT and a Medical Evacuation Lane, then a physical survey (on a BORG scale)

Borg Rating Scale of Discomfort	
Rating	Description
10	Extremely strong ("Maximal")
9	
8	
7	Very strong discomfort
6	
5	Strong discomfort
4	
3	Moderate discomfort
2.5	
2	Light discomfort
1.5	
1	Very little discomfort
0.7	
0.5	Just noticeable discomfort
0.3	
0	No discomfort at all

Discomfort scoring was also used for both for all testing. A basic 1 – 1- measure for all body parts was collected and averaged for each event.



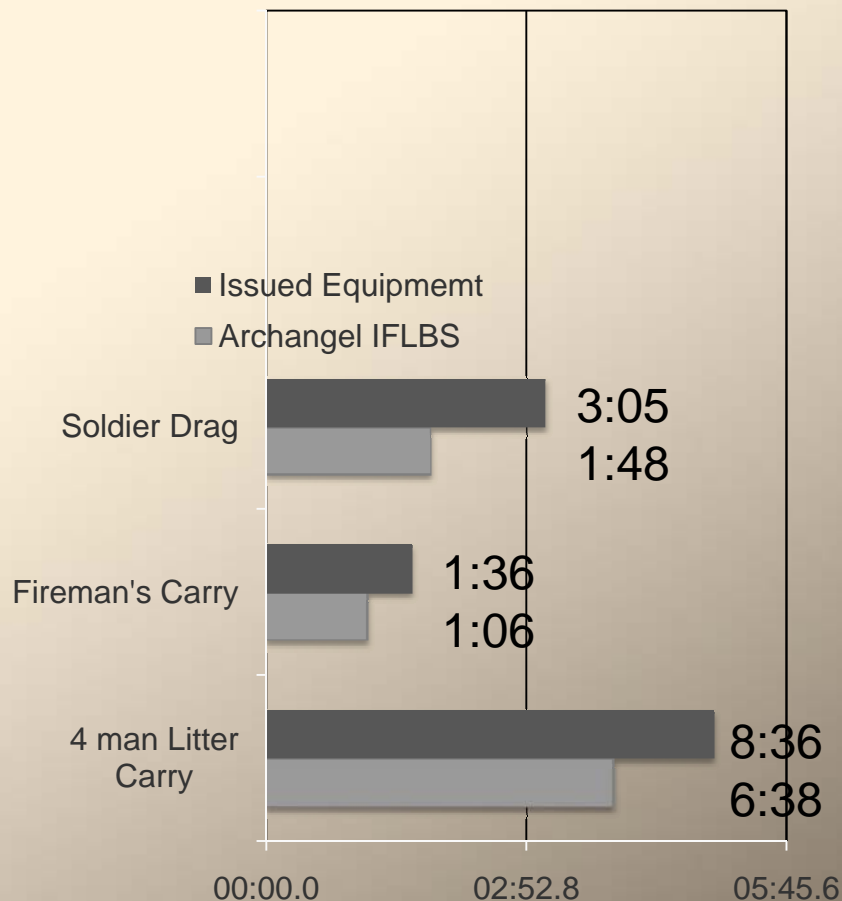
NC State Pilot Study, Jan 2009

All results are a mean of each test group from 4 repetitions during an 8 hour test plan.

Equivalent load/weight

NC STATE UNIVERSITY

Research in Ergonomics and Design



Soldier Drag 100M Lane

IFLBS wearer completed task mean of **41.1%** faster

Fireman's Carry 100M Lane

IFLBS wearer completed task mean of **30.2%** faster

4 Man Litter Carry 400M lane

IFLBS wearer completed task mean of **22.5%** faster

