STRYKER Overview

Ms. Dorothy Foley
Deputy Associate Director,
Systems Engineering
PMO Stryker Brigade Combat Team

Stryker Family of Vehicles

Commander's Vehicle (CV) - 28

Fire Support Vehicle (FSV) - 14

Infantry Carrier Vehicle (ICV) - 130

Commonality

Common Operating Picture
Common Chassis & Drive Train
Common KPP's
Common Survivability
Common TMDE, Spare Parts, Tools & Skills

Mobile Gun System (MGS) - 29

Reconnaissance Vehicle (RV) - 52

Bottom Line

Stryker provides enhanced, Battle-proven capabilities to warfighters

- **Over 16 million miles in Combat**
- **Currently on 7th SBCT Deployment**

NBC Reconnaissance Vehicle (NBCRV) - 3

Medical Evacuation Vehicle (MEV) - 16

120mm Mounted Mortar Carrier (MCV) - 37

Engineer Squad Vehicle (ESV) - 13

Anti Tank Guided Missile (ATGM) - 10

Note: Red – LRIP

Stryker Family Description

Stryker Family:

2 Variants:
Infantry Carrier Vehicle (ICV) with 8 Configurations
Mobile Gun System (MGS)

Key Mission Essential Packages:

- Remote Weapon Station (MK19 & M2)
- MGS Lethality (Bunker Busting Capability)
- LRAS3 Target Acquisition (RV/FSV)
- TOW2B Antitank (ATGM)
- 120mm Mortar (MC)
- Mine Plow, Roller and Detector (ESV)
- Integrated NBC Sensor Suite (NBCRV)

Capabilities:

- Decisive offensive action – dismounted Infantry assault enabled by fires and platforms
- Organic combined arms lethality
- Protected tactical and operational mobility
- Robust RSTA to enhance SA
- C-130 Deployable
- Holistic survivability and force protection
- Interoperable with other systems
- Platform commonality

Stryker Vehicle Key Performance Parameters

C-130 Transportability for MGS
Net Ready
Infantry / Engineer Squad

MGS Only Bunker Buster
Force Protection
Survivability

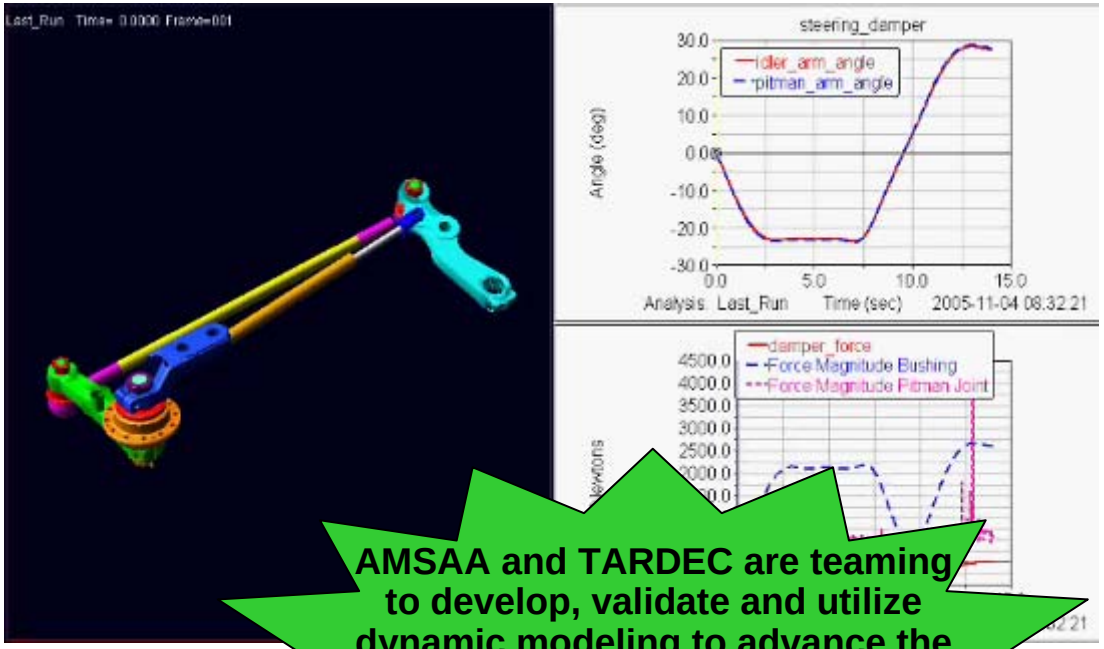
Key Stryker Sites

Deployed Stryker AOR Mileage Overview

- **Over 16 Million Miles in Combat**
- **7 Brigade Rotations from Nov 2003 to Sep 2008**
- **Stryker FOV Provides Enhanced, Battle-Proven Capabilities to Warfighters**
- **Above 90% Maintance Readinesss Rate**

Stryker Program Support

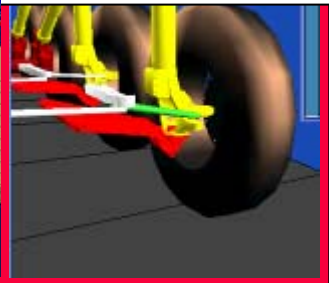
- Dynamic Modeling
  - Driveline Components
  - Steering and Suspension
  - Handling and Stability
  - Shape Optimization

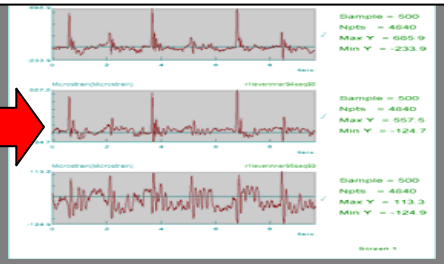


AMSAA and TARDEC are teaming to develop, validate and utilize dynamic modeling to advance the use of state-of-the-art processes while addressing issues including the effects of removal of steering damper and stiffening of steering bearing flange.

TARDEC – (Steve Schultz)
TACOM – (Dorothy Foley)
AMSAA – (Richard Heine)

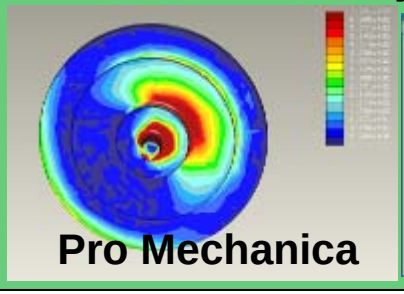
PoF Fatigue Analysis Overview



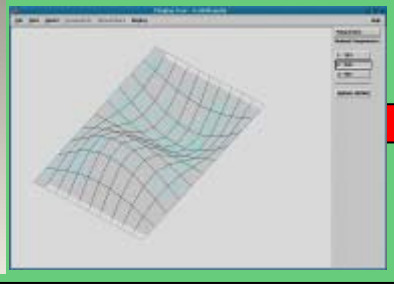


Loads, Accelerations

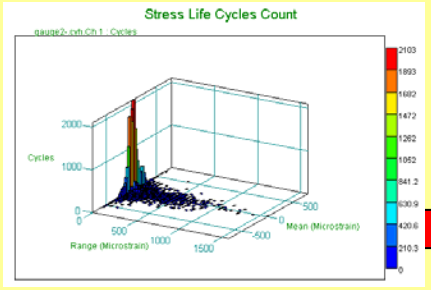
Finite Element Analysis/CALCE tools



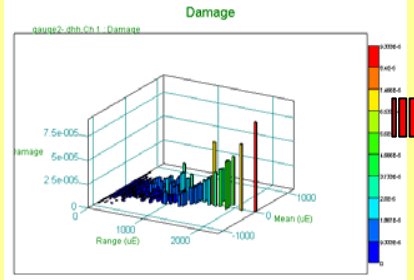
Pro Mechanica



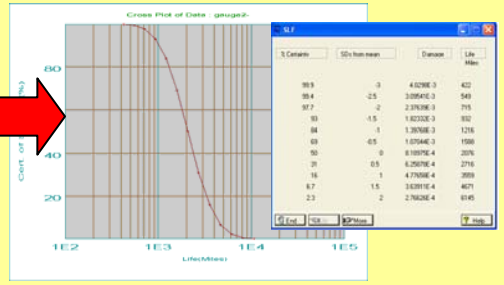
Rainflow Cycles Count



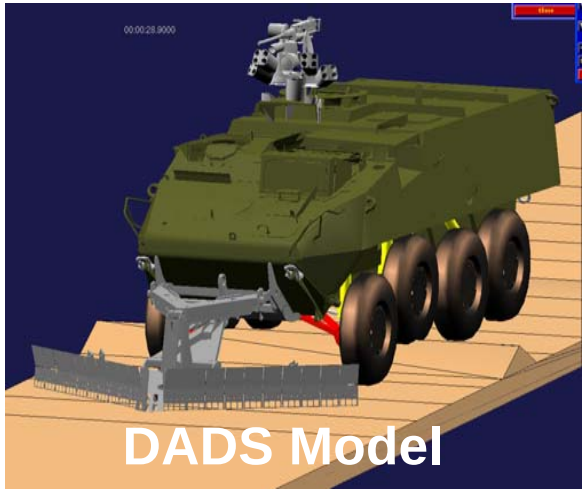
Damage Cycles Count

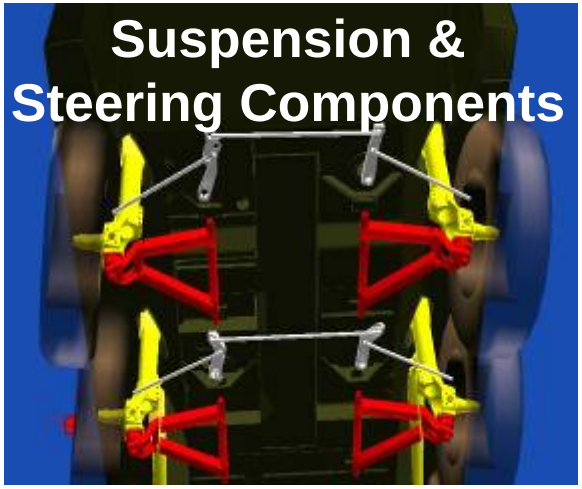


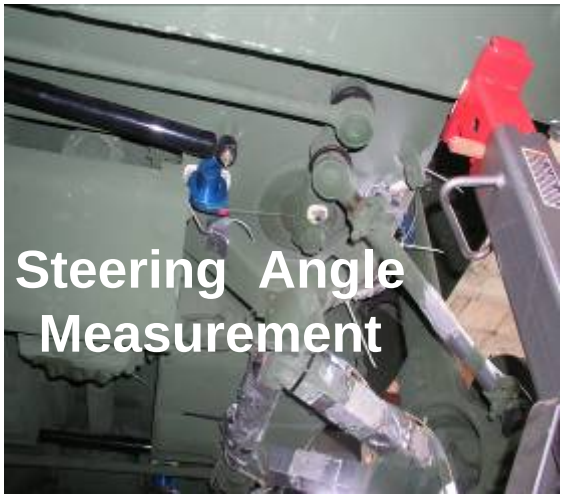
Life Prediction



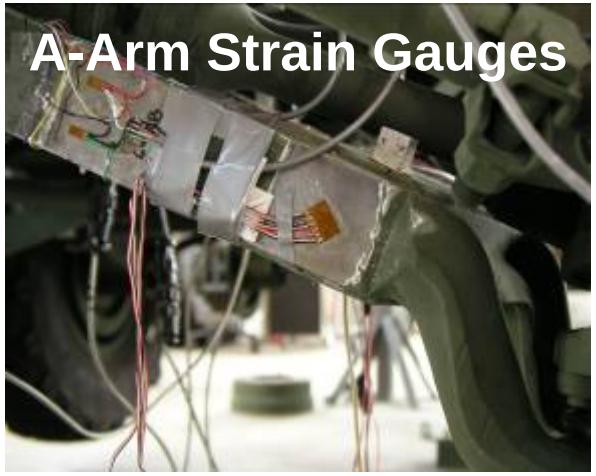
Stryker PoF M&S and Test Integration







Model extensively validated



Conclusion

- Government and Contractor engineering resources are optimized to reduce maintenance impacts, improve readiness rate and enhance system performance
- Failure modes have been evaluated using FEA tools
- Data from models are an engineering management tool used by Stryker engineering to make systems engineering decisions