



# BRADLEY TRANSMISSION MBD EFFORT



**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**

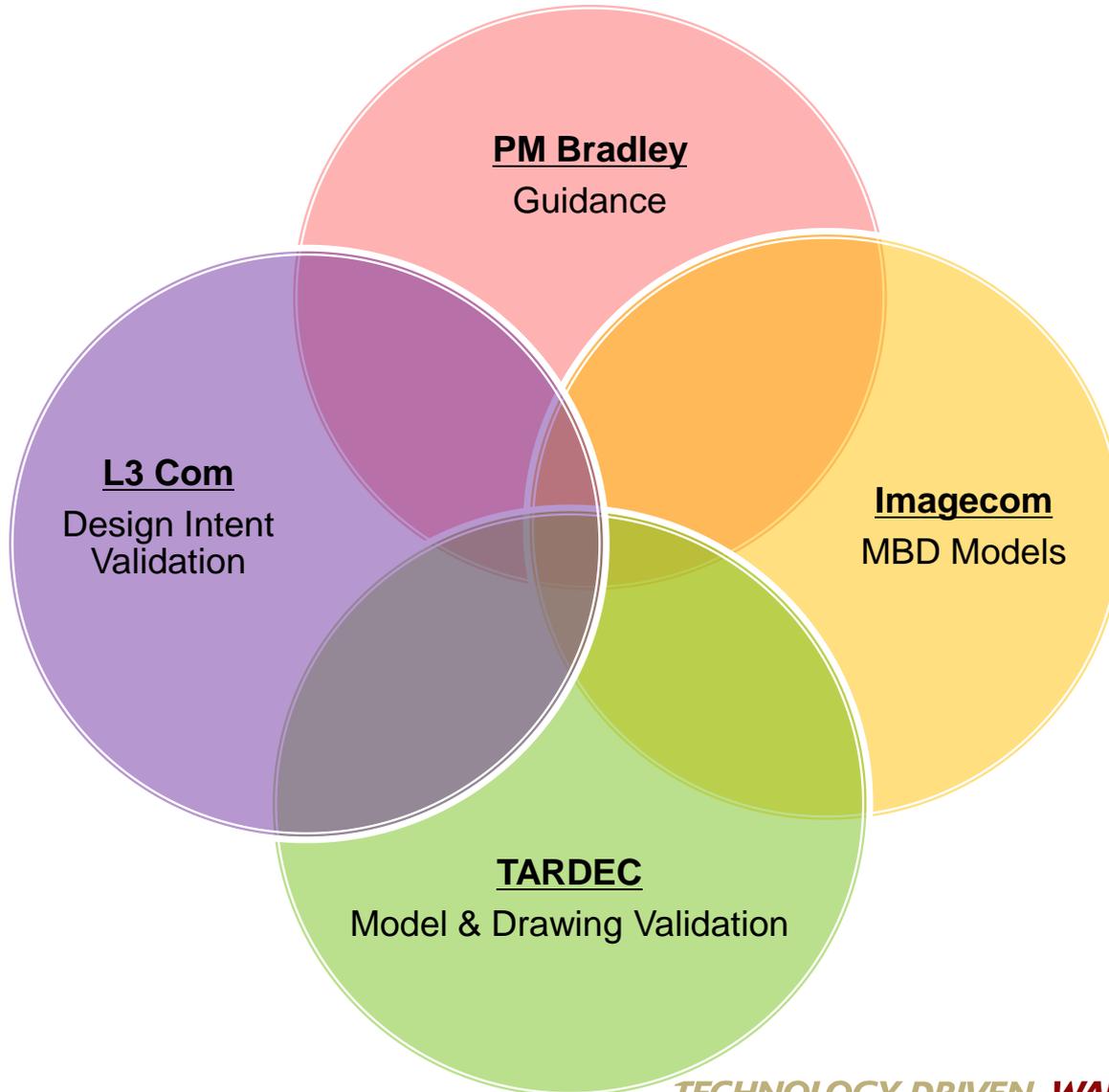
14 December 2010



# Bradley Transmission MBD Effort Program Objective



Develop competitive Bradley Transmission  
Technical Data Package (TDP) using Red River  
Army Depot (RRAD) developed models





# Bradley Transmission MBD Effort Background



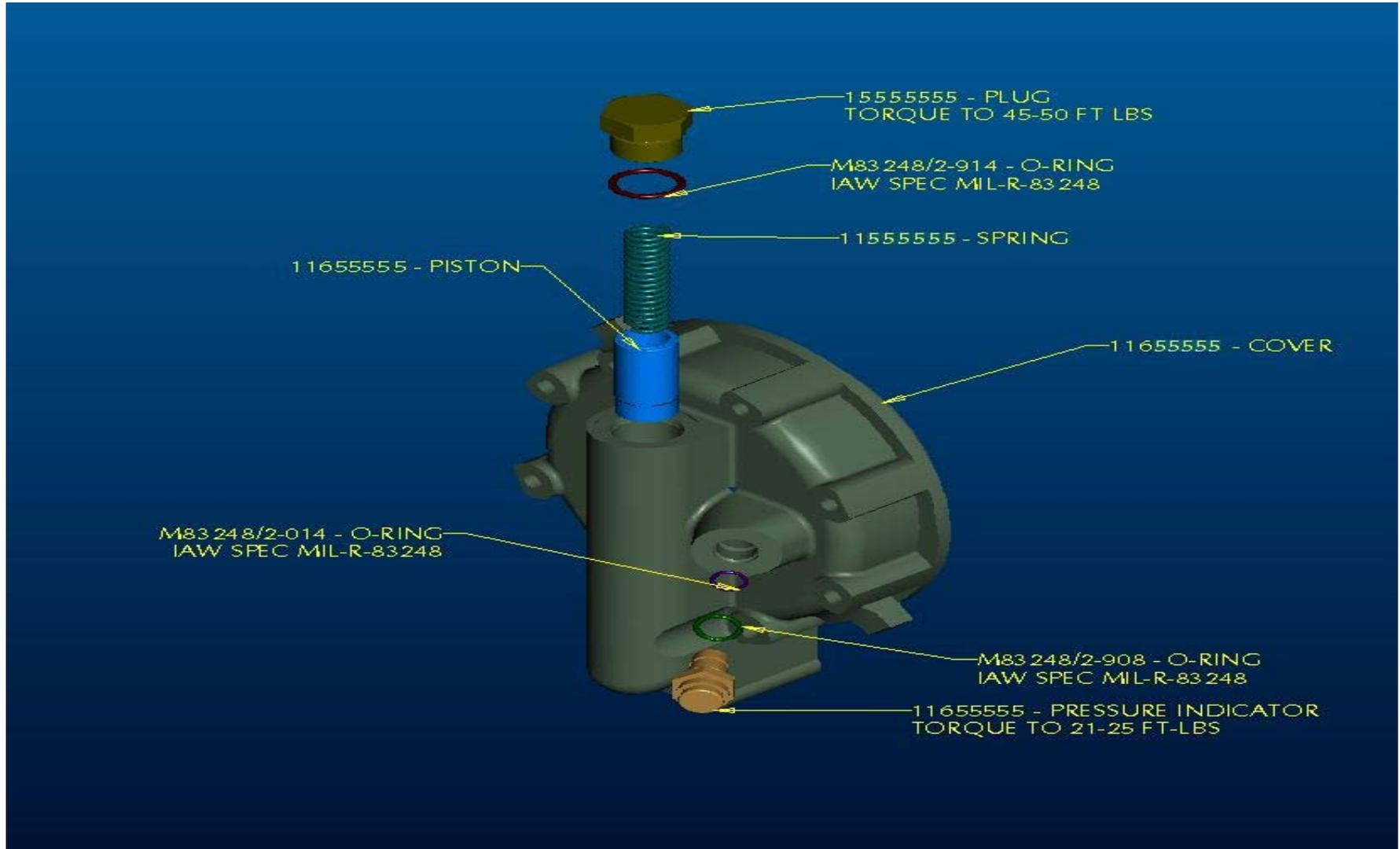
- In 2009 Red River Army Depot (RRAD) developed Bradley Transmission models in CATIA for instructions manuals
- In 2010 the CATIA models were converted to Pro/E using Proficiency and Elysium
- Evaluation of Pro/E converted models resulted in the decision to model the Bradley Transmission using MBD standard start part files



# Bradley Transmission MBD Effort Status



- Start of work meeting conducted on Nov 4th 2010
- Conducted training on developing and checking MBD models
- Defined parameters, revision information, standards, notes format, Distribution statement, and start part files
- Using ProjectLink to track data conversion status





APPLICABLE STANDARDS/SPECIFICATIONS:

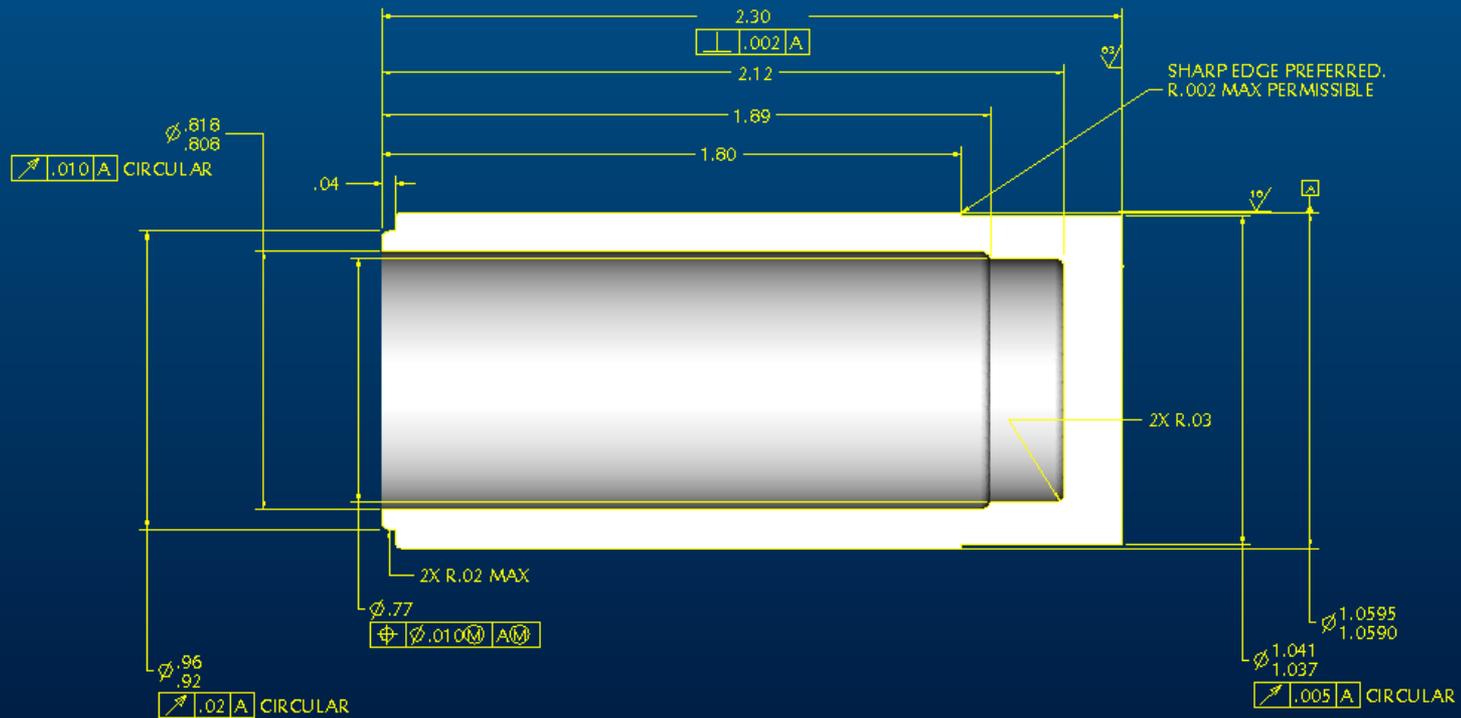
- A. ASME Y14.100-2000
- B. ASME Y14.5M-1994

1. IDENTIFY IAW MIL-STD-130:  
19207-1555555 AND MFR IDENT. DO NOT MARK PART
2. SPRING TO BE FREE OF BURRS, NICKS OR SCRATCHES
3. FINISH PLAIN
4. STRESS RELIEVE AT 800° - 850° F FOR 30 MINUTES AFTER COLD FORMING
5. CLOSED ENDS GROUND 240° - 300° F AND SQUARED WITHIN 3" IN FREE POSITION
6. COLD SET TO SOLID
7. MATERIAL: STEEL, ALLOY CHROME SILICON  
AISI 9254  
SPEC. ASTM A401



| SPRING DATA  |               |             |
|--|---------------|-------------|
| WIRE DIAMETER                                      |               | .103 - .107 |
| DIRECTION OF HELIX                                 |               | RIGHT HAND  |
| TOTAL COILS  |               | (16.5)      |
| ACTIVE COILS                                       |               | (14.5)      |
| SOLID LENGTH WITHOUT PERMANENT SET                 |               | 1.76 MAX    |
| SPRING RATE  |               | (46 LB/IN)  |
| OPERATING CONDITIONS                               | INITIAL LG    | 3.32        |
|  | FINAL LG      | 2.82        |
| TEST SPECIFICATION                                 | LOAD (LBS)    | 52 - 56     |
|  | COMPRESSED LG | 2.82        |
| MINIMUM OPERATIONS WITHOUT INJURY OR PERMANENT SET |               | 50,000      |

X.X + -0.1  
X.XX + -0.01  
X.XXX + -0.001  
ANG. + -0.5





# Bradley Transmission MBD Effort Outcome



- Models in Pro/Engineer Wildfire 4
- Models will comply with Model Based Definition (MBD) standards – ASME Y14.41 and Data Schema Rev B
- Parameters will be updated to conform to PDMLink, TACOM/TARDEC & L3 Com
- Output file formats
  - 3D Pro/E MBD Models
  - 2D Pro/E associated drawing
  - 2D PDF
  - 3D/2D PDF
- Upload on TARDEC's PDMLink and L3 Com's PDM system
- Scheduled to present PM Bradley with a competitive TDP July 2011



# Bradley Transmission MBD Effort Opportunities



- Define MBD final user-friendly look and feel
- Define gaps to transition the legacy Pro/E models to the new - MBD models
- Define obstacles to creating MBD models and ways to streamline the creation of MBD models

- Convert 3D Pro/E models with associated drawings to MBD models
- Automate the creation of drawings from MBD models
- Validate the compliancy of 3D MBD models to Government standards