



Red River Army Depot

Supporting the Soldier



Embracing Vendor Relationships To Improve Quality

Sharon Wilson
Industrial Engineering Technician
Red River Army Depot



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Introduction

What is an Army Depot?

An Organization that

Manufactures

Repairs

Overhauls



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Introduction

For Red River Army Depot, everything we do supports the overhaul of heavy and medium tactical vehicles and combat vehicles such as the Bradley Fighting Vehicle System and the Multiple Rocket Launcher System.



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Introduction

In short, we need to quickly and safely



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

get these back to the soldier.

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Background

RRAD Vision: Our best nothing less for the warfighter.

RRAD Daily Motto: We support the soldier, building it as if our lives depend on it, theirs do.



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Background

Gilbreth's Concept "The one best way to do a job"
It was evident we were not always doing this.



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Background



Where did we start?
Ergonomic hazards everywhere
Minimal ergonomic application
Affecting bottom line

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Solutions

Partnerships

Defense Contractors
Industry Experts
Ergonomic Vendors
Army Experts



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Solutions

Partnerships

Defense Contractors
Working on Similar Vehicles
Vested Interest in Each Others Success
Exchange of Information



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Defense Contractors Equipment Storage Processes



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Solutions

Partnerships

Industry Experts
Advice
Perspective
Vendor Assistance



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Solutions

Partnerships

Ergonomic Vendors
Off-the-shelf products
Faster than in-house
engineering



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Solutions

Partnerships

Army Experts

Ergonomics skill set

Familiar with Army standards and regulations

Accessible



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Results

Partnerships

Army Experts



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Results

Partnerships

Army Experts



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Results

Partnerships
The Most Important One

LEAN Office



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



LSS Results

Productivity / Cost

HMMWV: 70% Improvement

HEMTT: 41% Improvement

OVERALL: 52% workload increase with only a 27% increase in personnel

Delivery

HMMWV: 3900% output increase. Flow time decreased by 75%.

HEMTT: 260% output increase. Flow time decreased by 67%.

SEE: 220% output increase. Flow time decreased by 51%.



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



LSS Results

Safety

Recordable accidents. Reduced by 88%
OSHA Rating: Reduced by 42%
Lost time accident rate: Reduced 88%

Quality

Improved Customer Service Rate - Increased from a positive 89.3% to 99.7%.



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



There is a gap between Lean Six Sigma (LSS)
and Ergonomics



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



There is a gap between
LSS and Ergonomics



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered

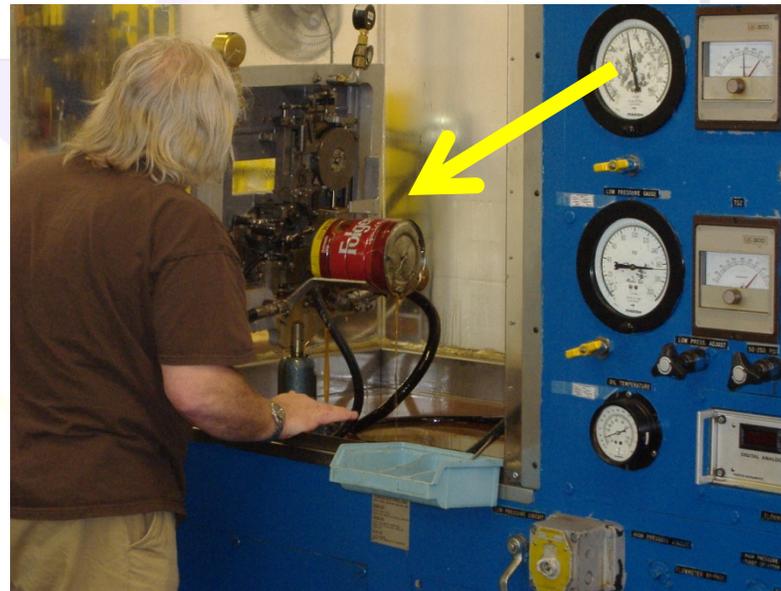


Red River Army Depot

Supporting the Soldier



There is a gap between LSS and Ergonomics



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



There is a gap between
LSS and Ergonomics



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



There is a gap between
LSS and Ergonomics...but it is closing



Employee comment:
“Why are we doing
the job like this?”



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



There is a gap between
LSS and Ergonomics...but it is closing.



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



Conclusions

Embrace relationships

Determine gaps between LSS and Ergonomics

Involve your people every step of the way



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered



Red River Army Depot

Supporting the Soldier



QUESTIONS?



2005-2006
2006-2007
2007-2008
Shingo Prize
For
Excellence in
Manufacturing

2006 DOD
Depot
Maintenance
Excellence
Award



ISO 9001:2000 & 14001:2004 Registered