



communications

Supplier Quality Requirements Review

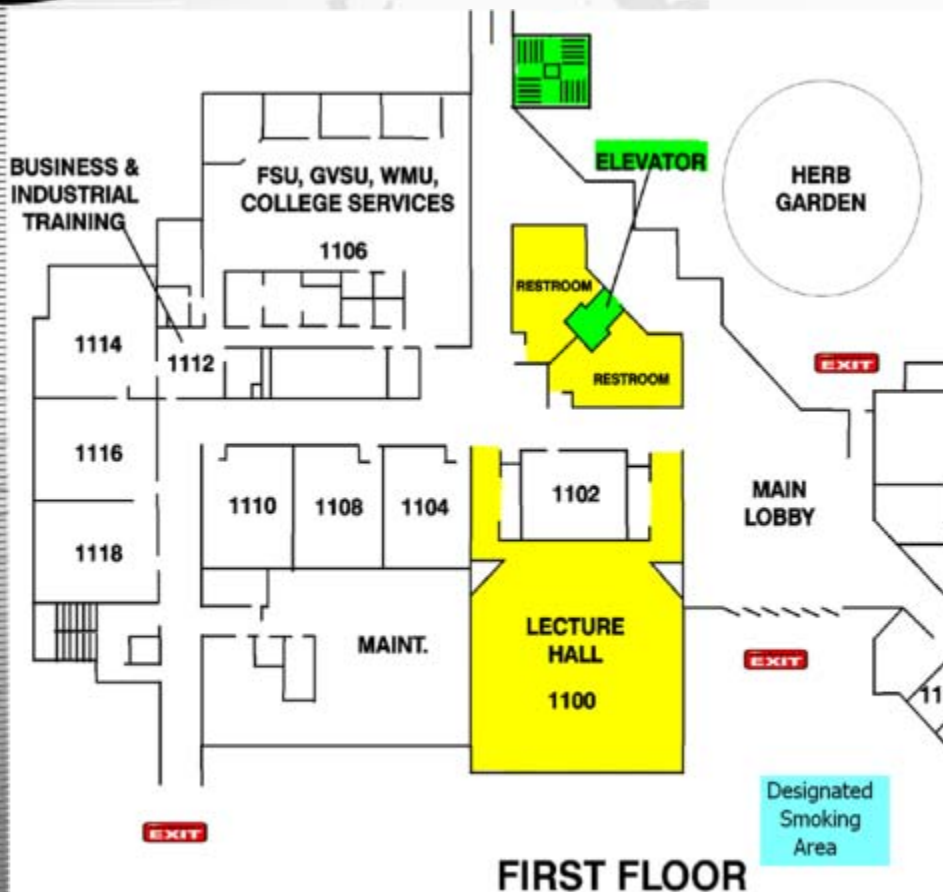
Welcome !

**L-3 Communications,
Combat Propulsion Systems
Muskegon Operations**

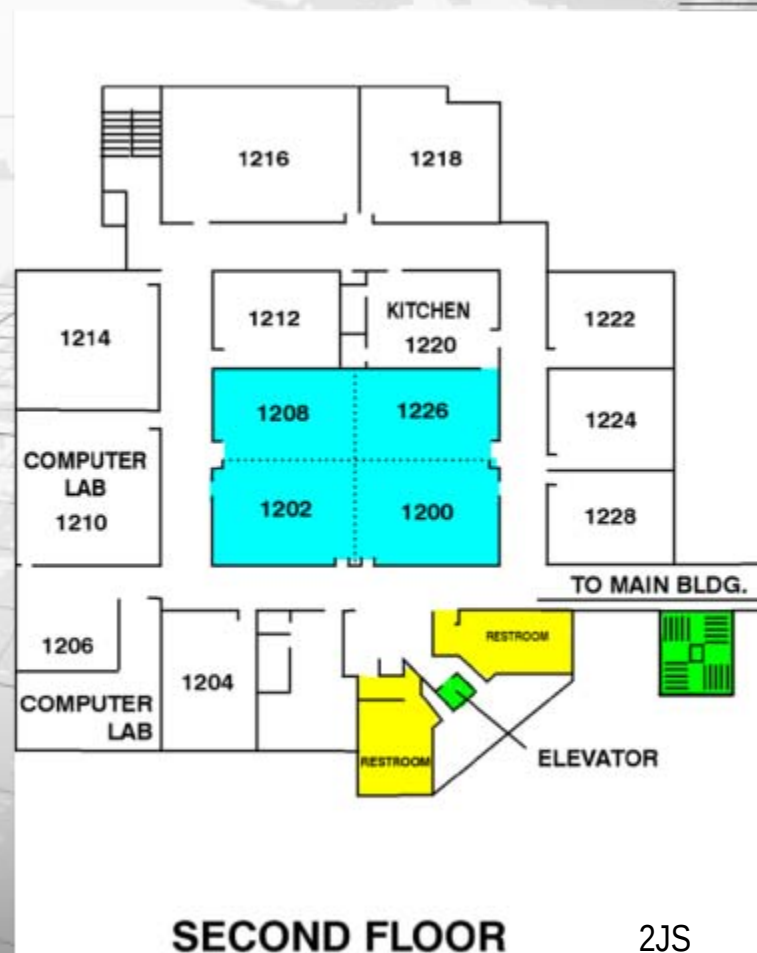


NEED TO KNOW

CONFERENCE ROOM



FOR LUNCH





Supplier Symposium Agenda

Presentation Section

Intro and L-3 DVD

SQA Goals and Objectives

Contract Review

L-3 Website

Presenter

Tim Donkin

Sue Laban

Sue Laban

Jane Scoville

BREAK – 10:40AM

FPI and Delegation Program

Barb Szost

LUNCH – 12:00PM

QY-2 / QY-10

Bob Griswold

Supplier Ratings and Corrective Actions

Noel Rodriguez

BREAK – 1:50PM

SQMR / Process Change

Bob Griswold

Lean Sigma

Sue Laban

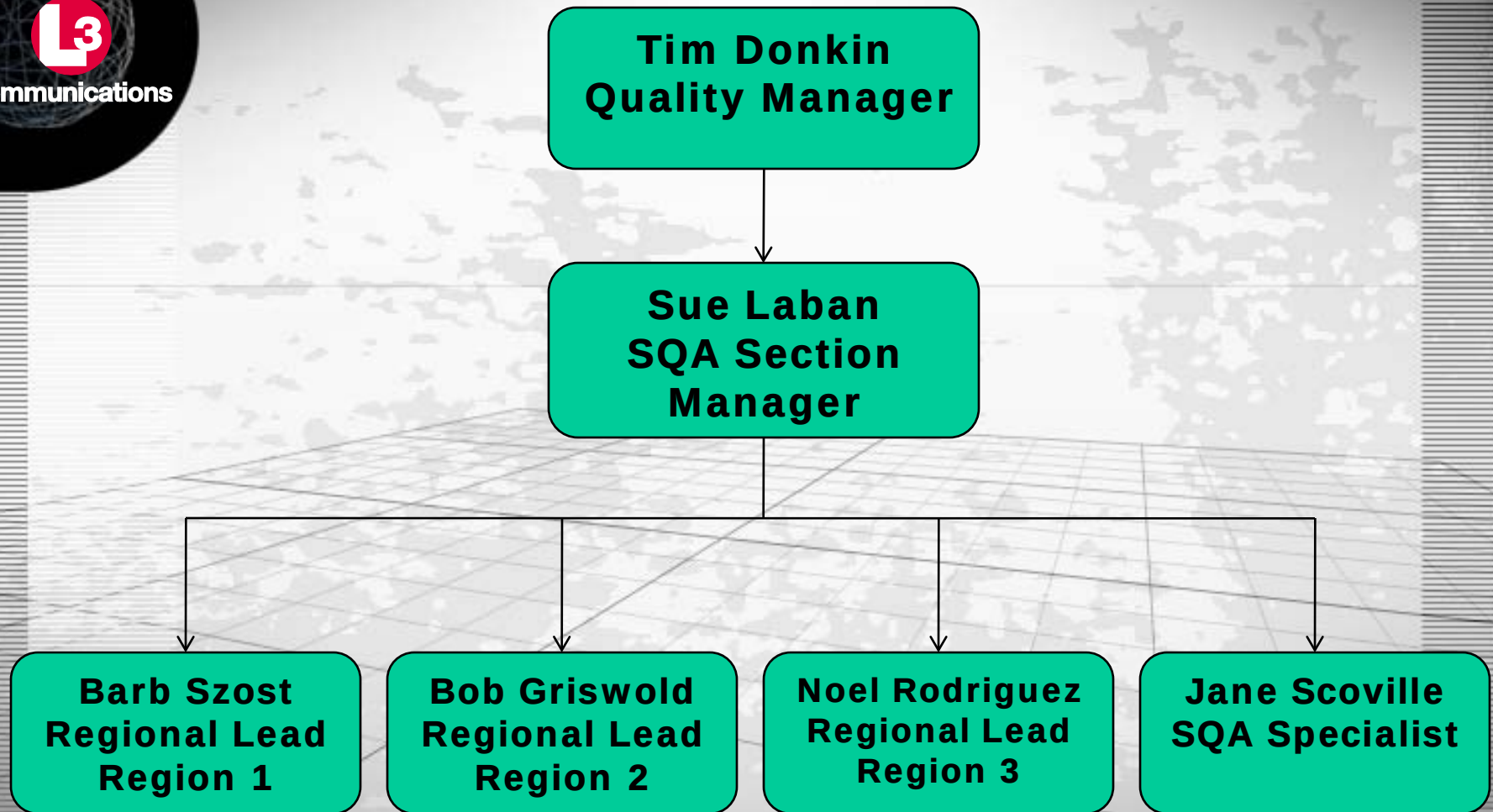
Keypoint Summary

Sue Laban

FILL OUT EVALUATIONS



Supplier Quality Assurance Dept.

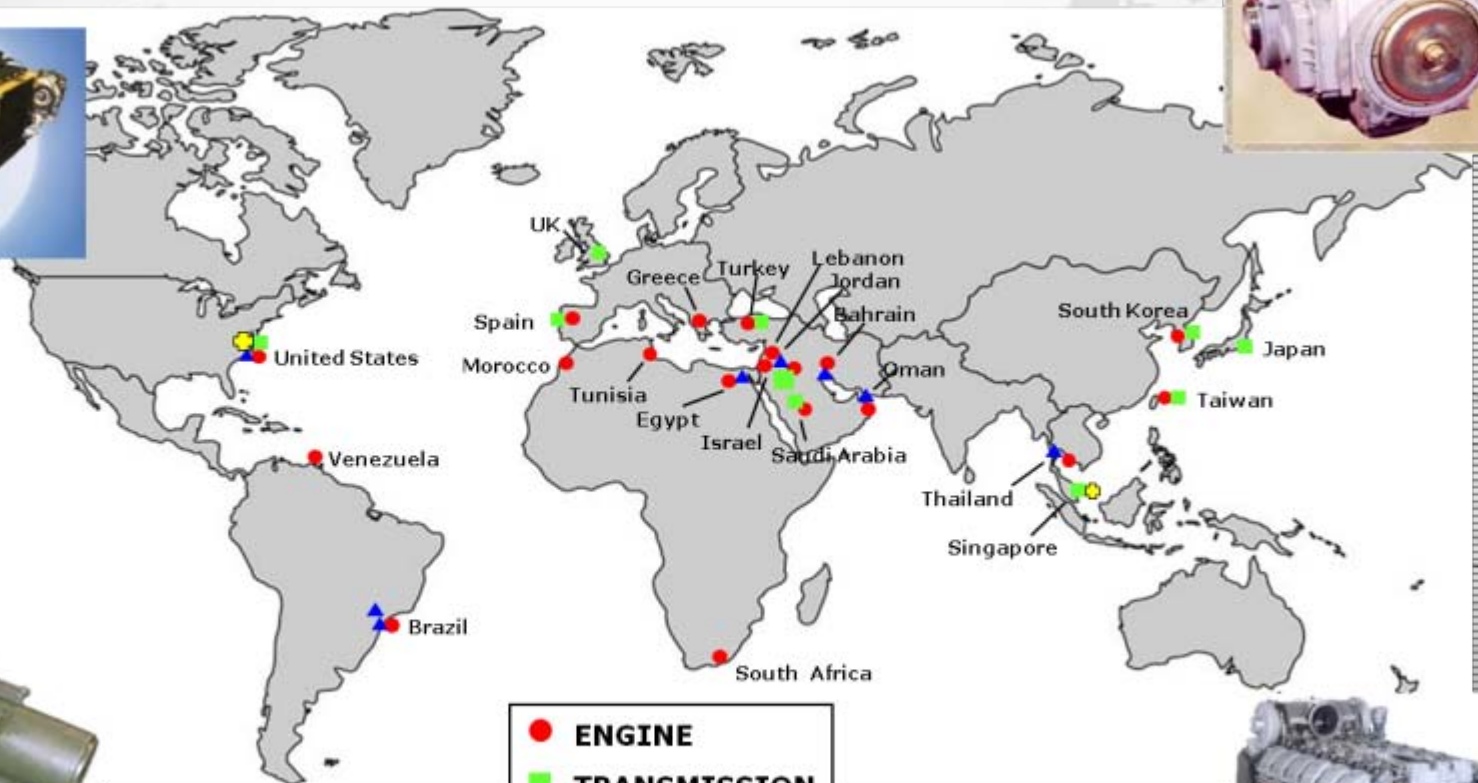




Combat Propulsion Systems History



CPS Muskegon Supplies Products to 35 Countries on 5 Continents





History of Facility

- ✦ **1942 - 1943 - U.S. Army Constructed Plant**
 - ✦ **Operated as GOCO by Continental Motors Corp.**
- ✦ **1964 - Ryan acquired CMC**
- ✦ **1970 - Teledyne acquired Ryan /CMC**
- ✦ **1972 - Teledyne purchased Getty Street Plant**
- ✦ **1980 - First production of hydro-pneumatic suspension**
- ✦ **1996 - General Dynamics acquired Teledyne**
- ✦ **1996 - Transfer Detroit Arsenal Tank Plant**
- ✦ **1998 - Transfer Bradley Transmission & Turret Drive**
- ✦ **2002 - First delivery of AAV SDD suspension units**
- ✦ **2002 - Launch production of GD883 Engine**
- ✦ **2005 - L-3 Communications acquired General Dynamics**
- ✦ **2009 - Currently have 600 employees at the CPS facility**



Combat Propulsion Systems is ISO Certified

- ✦ Quality Management System ISO 9001-2000
- ✦ Environmental Management System ISO 14001-2004



- ✦ Occupational Health & Safety System Certificate of Registration OHSAS 18001-1999



Lean Sigma

- ✦ **Initiated transformation October 2005**
- ✦ **Introductory training provided to all employees**
- ✦ **Utilization of Muskegon Community College and Achievement Dynamics**
- ✦ **Transformation launches**
 - ✦ **Engine, Transmission and Turret Drive Assembly**
- ✦ **Building staff expertise**
 - ✦ **Lean Master certification from the University of Michigan**
 - ✦ **Twenty-eight Green Belts**
- ✦ **Benchmarking visits**
 - ✦ **Howmet, BAE, Johnson Technologies**



Manufacturing Capabilities

✚ Assembly

- ✚ Engines, Transmissions, Turret Drives, Suspensions, Hatches

✚ Machining

- ✚ CNC and conventional; aluminum, steel, armor steel

✚ Welding

- ✚ Mig and Tig; aluminum, steel, armor steel

✚ Inspection and Test

- ✚ CMM and layout
- ✚ Gauge calibration and maintenance
- ✚ NDT; MPI, LPI, UTI

✚ Fixture design and build

- ✚ Staffed Tool Room; prototype and low volume needs



M1A2 Components



- Grille Door • Support Rollers • Struts • Retainer • GPS Support • Baffle Plate
- Idler-Lt. & Rt. • Lifting Eyes • Coax Weapon Mount • Replenisher • CITV Ring • 120mm Gun Mount • Turret Platform



Israeli Merkava Tank





CPS883 Production for Merkava IV

⊕ CPS883

- ⊕ **12 Cylinder - NATO qualified**
- ⊕ **1500hp @ 2700 rpm (2600hp @ 3300rpm amphibious vehicle)**
- ⊕ **Development phase completed; Production delivery started in November 2002**
- ⊕ **Production delivery 2002-2008 for 400 engines**



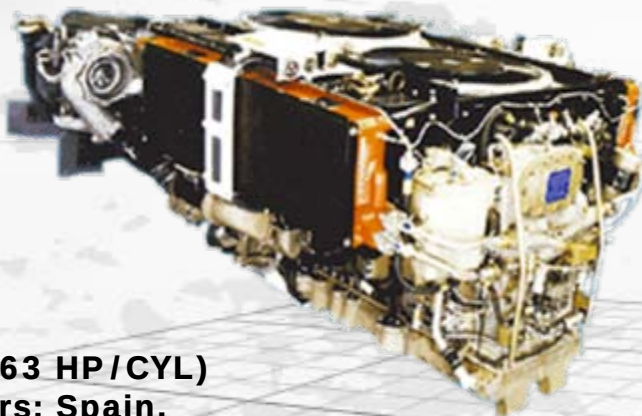


M88A2 Hercules Recovery Vehicle

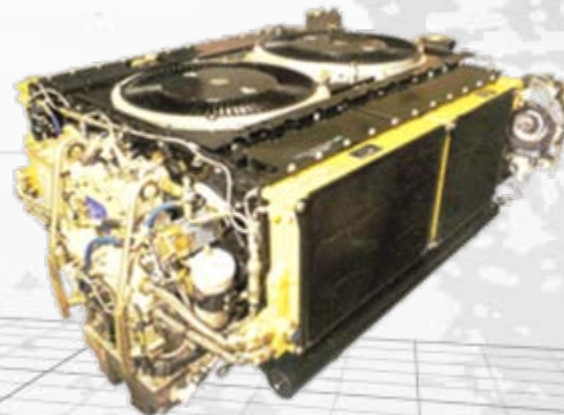




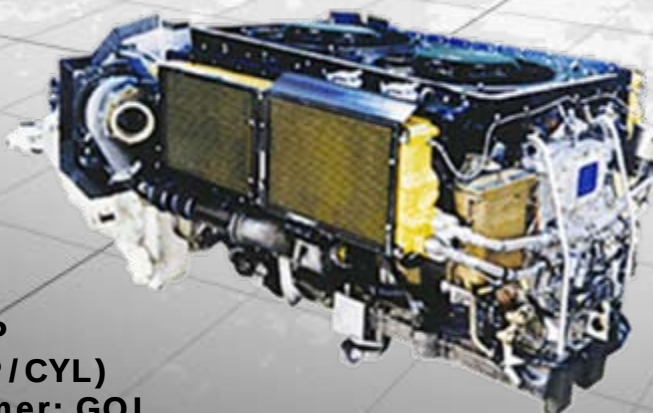
AVDS-1790 Engines V-12 Configuration



750 HP (63 HP/CYL)
**Customers: Spain,
Korea, Egypt, U.S. Govt (M60)/M88**



**1050 HP
(88 HP/CYL)**
Customer: United Defense



**900 HP
(75 HP/CYL)**
Customer: GOI

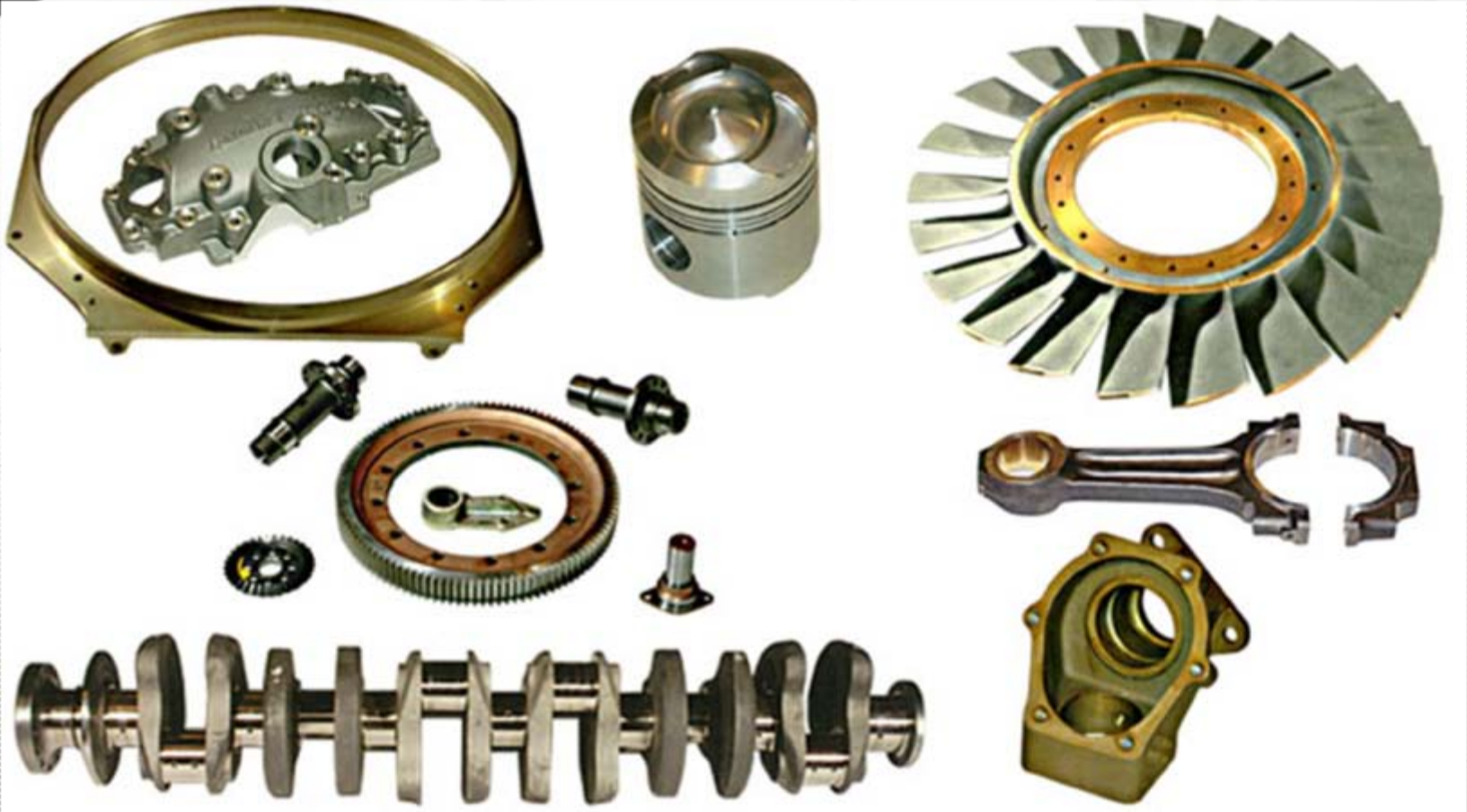


**1200 HP
(100 HP/CYL)**
Customer: GOI



communications

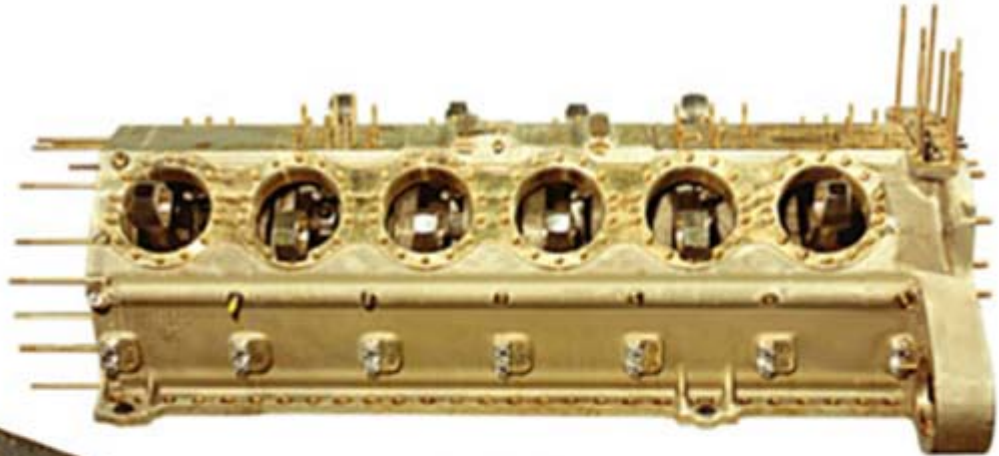
Engine Components



Engine Components



Cylinder
Head



Engine Block



Oil Pan



Oil Seal



Other AVDS-1790 Applications





Expeditionary Fighting Vehicle (EFV)





Bradley

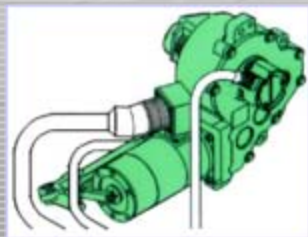


Bradley Fighting Vehicle Components

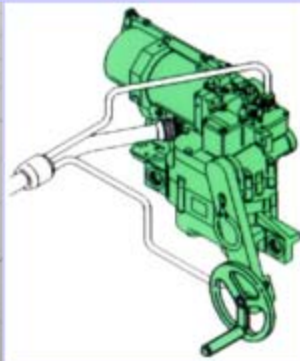


500-3 EC Transmission

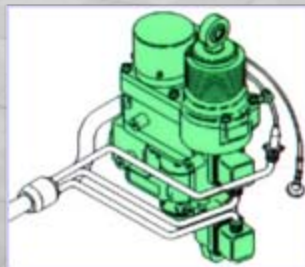
- U.S. Government
- Southeast Asia
- United Defense
- David Brown
- Lockheed Martin



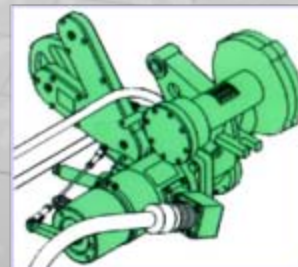
**Tow Elevation
Drive**



Azimuth Drive



**Tow Lift
Mechanism**



**Gun Elevation
Drive**

Turret Drive

- U.S. Government
- United Defense
- Boeing
- Lockheed Martin



Turret Drives

- ✚ Produce and deliver turret drive and stabilization components for light combat vehicles (Bradley, Avenger and Stryker Mobile Gun System)
- ✚ Turret Drive sets under contract with BAE Systems, Boeing and TACOM





MGS Stryker





Stryker Components

⊞ Gun Pod

- ⊞ Weld and machine

⊞ Traverse Drive

- ⊞ Machine, assemble and test

⊞ Elevation Drive

- ⊞ Machine, assemble and test

⊞ Manual Drive

- ⊞ Assemble and test



L-3 Combat Propulsion Systems DVD





SQA Goals & Objectives

Dedicated to quality.....



**OUR CUSTOMER is on the FRONT LINE
protecting our FREEDOM!**



SQA Goals & Objectives

The goal of L-3 Communications (L-3 CPS) is to provide high quality, low cost products and services that meet or exceed the needs and expectations of our customers.

VOICE OF THE SUPPLIER

We believe suppliers are very important

TEAM MEMBERS

in our processes.

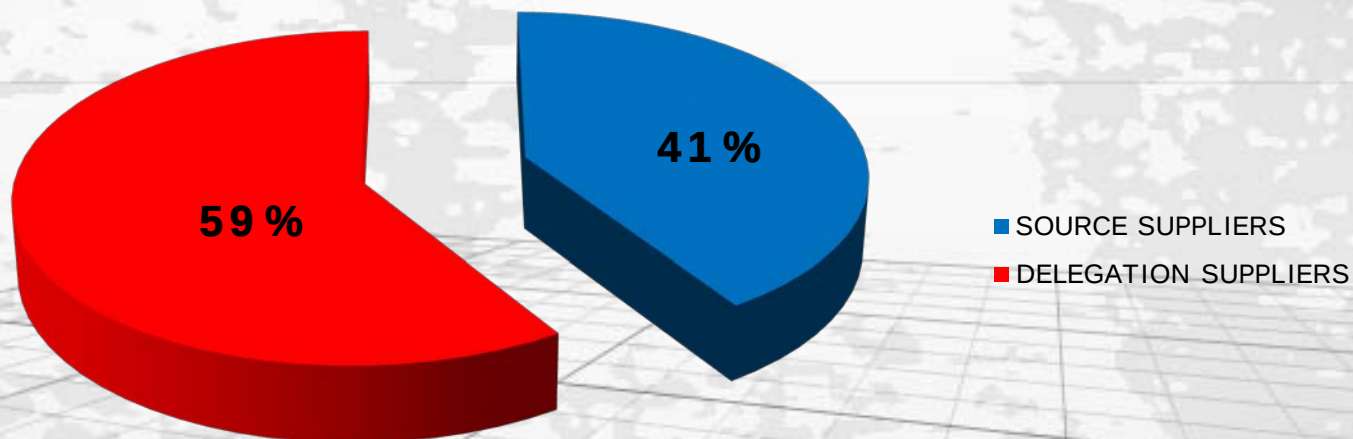
TOGETHER

we share the responsibility of providing goods and services that consistently meet contract requirements and customer expectations.



L-3 Supplier Quality – Current State

Source Vs. Delegation Suppliers



Total source suppliers: 155

Eligible for Delegation: 30 %

Continue on Source due to:

Poor Quality: 16 %

Low Volume: 25 %

Not yet established: 27 %

Overseas: 2 %



L-3 Supplier Quality – Current State

✦ Quantity of non-conforming product returned to supplier:

- ✦ 2006 – 117,134 pieces
- ✦ 2007 – 48,674 pieces
- ✦ 2008 – 32,632 pieces
- ✦ 2009 – 3,845 pieces to date



Verify, Inc.

Verify, Inc. (VSC), is a source of supply chain, quality control, and technical support services for aerospace and military industrial applications.

L-3 CPS has contracted with Verify to provide representation (project specialists) in select areas through-out the United States to offset and augment our needs for Supplier Quality Assurance.

Selected Project Specialists':

- Have knowledge of products / processes.
- Reside close to the subject supplier/s.
- Turn inspection/audit requirements quickly.



Verify, Inc.

✚ Audit Variations

✚ M45208	Systems Audit
✚ MFP	First Piece Inspection (FPI)
✚ MIDA	Inspection Delegation Audit
✚ MMIN	Minimum Inspect Audit
✚ MSV	Source Inspection
✚ MGL	General



- △ L-3 approved supply base
- Verify Project Specialists

- REGION 1 – Barb Szost also includes Austria, Germany, Israel and Italy
- REGION 2 – Bob Griswold
- REGION 3 – Noel Rodriguez also includes all Casting/Forging suppliers denoted by a yellow dot

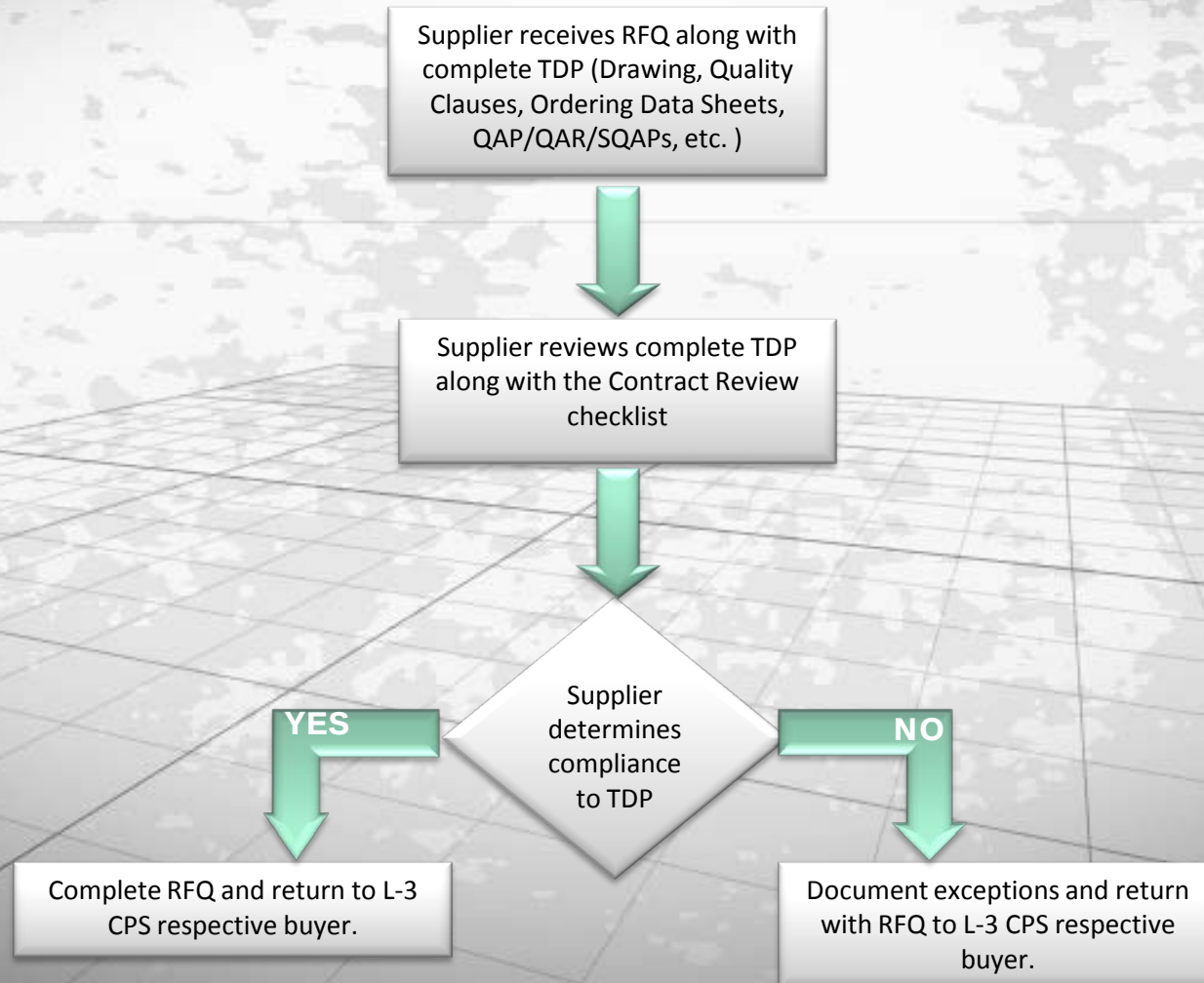


Contract Review





Contract Review





Contract Review - Checklist

YES	NO
☐	☐ Is product adequately defined to enable feasibility evaluation?
☐	☐ Can Drawing / ODS / QAP / QAR / SQAP and Specifications be met as written? ☐ Dimensional ☐ Material ☐ Finish ☐ In Process Gaging ☐ Final Inspection ☐ Testing (Performance / NDT / Weld / Salt Spray / Etc.)
☐	☐ Can component be processed and certified to specifications and standard as as defined per TDP?
☐	☐ Has inspection methodology and frequency been evaluated per drawing, ODS, QAP, QAR, or SQAP?
☐	☐ Can product be manufactured to tolerances specified on drawing?
☐	☐ Have all Quality Clauses been reviewed? (Definitions of clauses found on L-3 CPS website)
☐	☐ Can Quality Clauses be met on a continual basis?
☐	☐ Has the PQA manual been reviewed and understood? (Manual found on L-3 CPS website)
☐	☐ Can product be manufactured as written without exception?



DFAR number 252.225-7014

- ✦ **Per L-3 CPS Purchase Order Terms and Conditions, DFAR number 252.225-7014 "Alternate 1" Preference for Domestic Specialty Metals must be adhered to.**
- ✦ **Validate that your facility is in compliance.**
- ✦ **Contact your respective L-3 buyer immediately if issues are found.**



Drawing Specifications and Standards

- ⊕ **Drawing Specification revision levels will be controlled by L-3 Communications.**
 - ⊕ **What does this mean?**
 - ✧ **Upon receipt of RFQ compare Drawing Specifications listed on the Drawing to the Specification Revision Level listed in the L-3 CPS Website.**
 - ✧ **Compare to your facilities current process to ensure compliance. If in compliance – submit RFQ**
 - ⊕ **What if the facility does not operate to the required Specification Revision Level?**
 - ✧ **Submit an exception letter along with RFQ**
 - ✧ **Take the necessary steps to ensure compliance**



QAR, QAP & SQAP

Documents provided direction for the development, preparation, maintenance and interpretation of Quality Assurance Requirements.

- ⊕ Compliance with the instructions contained in document are required unless written approval from L-3 CPS is obtained.
- ⊕ Check your Technical Data Packages (TDP) for reference to the QAR, QAP and/or SQAP.
- ⊕ Personally validate your facility is in compliance with the QAR, QAP and/or SQAP listed in the TDP. If you do not comply, written authorization must be obtained. Contact your respective Regional Lead for direction.

QK9.2 (1/11/08) QAP CONFORMANCE

- ⊕ The current revision date can be located at [www.L-3com.com/cps/Quality Assurance Provisions \(QAP\) and Requirements \(QAR\).](http://www.L-3com.com/cps/Quality Assurance Provisions (QAP) and Requirements (QAR).)
- ⊕ The supplier shall have documented objective evidence on file verifying conformance to specific characteristics referenced in the requirement. The objective evidence shall be made available to L-3 Communications – Combat Propulsions Systems on request within a reasonable amount of time.





SUPPLEMENTARY QUALITY ASSURANCE PROVISIONS (SQAP) (QUALITY ASSURANCE PM 702-101)									
U.S. ARMY TANK-AUTOMOTIVE COMMAND (USATACOM)									
THIS SQAP FORMS A PART OF DRAWING					AND SPECIFICATION				
AS SPECIFIED IN THE CONTRACT. INSPECTION SHALL BE CONDUCTED AS SPECIFIED HEREIN AND IN ACCORDANCE WITH REFERENCED DOCUMENTS.					N/A				
RESPONSIBILITY FOR INSPECTION. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMANCE OF ALL INSPECTION REQUIREMENTS SPECIFIED HEREIN. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR COMPLETE COMPLIANCE TO ALL CONTRACTUAL REQUIREMENTS. THIS INCLUDES COMPLIANCE TO ALL REQUIREMENTS OF GENERAL SUPPLEMENTARY QUALITY ASSURANCE PROVISIONS (STA FORM 4402) WHICH FORMS A PART OF THIS SQAP.									
<u>PART I - LIST OF APPLICABLE DOCUMENTS</u>									
<u>LIST OF DRAWINGS</u>									
<u>NUMBER</u>					<u>NOMENCLATURE</u>				
					CAM DRIVE				
<u>LIST OF STANDARDS</u>									
<u>NUMBER</u>					<u>TITLE</u>				
MIL-STD-105					SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES				
<u>PART II - INSPECTION PROVISIONS</u>									
<u>TABLE I - CLASSIFICATION OF QUALITY</u>									
<u>CONFORMANCE CHARACTERISTICS</u>									
100% INSPECTION SHALL BE PERFORMED FOR CRITICAL CHARACTERISTICS UNLESS OTHERWISE STATED. INSPECTION OF MAJOR AND MINOR CHARACTERISTICS SHALL BE PERFORMED IN ACCORDANCE WITH THE CLASSIFICATION OF QUALITY CONFORMANCE CHARACTERISTICS CONTAINED HEREIN UTILIZING THE SAMPLING TABLES AND PROCEDURES CONTAINED IN MIL-STD-105 AS APPLICABLE.									
<u>CLASS</u>	<u>CHARACTERISTIC</u>	<u>PER DWG. AND/OR SPEC.</u>	<u>INSPECTION METHOD</u>						
<u>CRITICAL</u>	NONE								
<u>REVISIONS</u>									
<u>DWG</u>	<u>SQAP</u>	<u>DATE</u>	<u>APPR</u>	<u>ED NUMBER</u>	<u>DWG</u>	<u>SQAP</u>	<u>DATE</u>	<u>APPR</u>	<u>ED NUMBER</u>
SQAP FOR									
SUBMITTED BY TELEDYNE CONTINENTAL MOTORS				DRAWING SIZE-NO.-REVISION AND DATE				SQAP NO.	
DATE		APPROVED			ED NO.		PAGE NO.		NO. OF PAGES
							1		2
STA FORM 4402A PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE									



SUPPLEMENTARY QUALITY ASSURANCE PROVISIONS (SQAP) (CONTINUATION SHEET)
(QUALITY ASSURANCE PAM 782-101)

PART II - INSPECTION PROVISIONS (CONT.)

CLASS	CHARACTERISTIC	PER DWG. AND/OR SPEC.	INSPECTION METHOD
MAJOR	A.Q.L. 1.0% DEFECTIVE		
101	99 / 1.01 DIA	XXXXXXXXXX	DIAL SNAP AGD SETTING DISK DIA CLASS XX
102	1.56 / 1.62 SPHER. DIA	XXXXXXXXXX	DIAL SNAP AGD SETTING DISK DIA CLASS XX
103	2.556 / 2.550 DIM	XXXXXXXXXX	LENGTH GAGE Gage XXXXXXXX
104	TOTAL RUNOUT OF 5001 / 5505 DIA TO DIA WITHIN .002 TIR	XXXXXXXXXX	FIXTURE GAGE Gage XXXXXXXX
105	MICROFINISH (32)		FINISH ANALYZER
MINOR	A.Q.L. 2.5% DEFECTIVE		
201	501 DIA HOLES		VISUAL
202	30 DEGREE CHAMFERS		VISUAL
203	IDENTIFICATION MARKING		VISUAL
204	MICROFINISH (63)		COMPARATOR BLKS

PART III - CERTIFICATION PROVISIONS

NONE REQUIRED

PART IV - TEST METHODS AND PROCEDURES

NONE REQUIRED

SQAP						SQAP NUMBER
REVISION						
LETTER						PAGE NO.
AND						NO. OF
DATE						PAGES

BYA FORM 4452-A1

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE



C=0 Sampling Plan

C = 0 SAMPLING PLAN

SUPPLIER SHALL ADHERE TO THE ACCEPTABLE QUALITY LEVELS (AQL) REFINED BY THE TECHNICAL DATA PACKAGE TDP.

THE ORDER OF PRECEDENCE SHALL BE:

1. DRAWING / P.O.
2. PERFORMANCE SPEC
3. QAP, SQAP, OR QAR
4. STANDARD IF NOT SPECIFIED IS AQL 4.0

SUPPLIER SHALL INSPECT FINISHED PRODUCT PER THE C = 0 SAMPLE PLAN PROVIDED

YOU WILL USE THE C = 0 SAMPLING PLAN FOR INSPECTION OF PURCHASED AND MANUFACTURED MATERIAL WHERE SAMPLING PLANS ARE APPLIED. YOU ALSO WILL IMPLEMENT THESE REQUIREMENTS WITH YOUR SUPPLIERS AS NEW PURCHASE ORDERS ARE RELEASED IN ORDER TO PERFORM THIS CONTRACT.

COMBAT PROPULSION SYSTEMS SAMPLING PLAN								
LOT SIZE						Standard if Not specified		
	AQL	.65	1.0	1.5	2.5	4.0	6.5	10.0
2 - 8		ALL	ALL	ALL	5	3	2	2
9 - 15		ALL	13	8	5	3	2	2
16 - 25		20	13	8	5	3	3	2
26 - 50		20	13	8	5	5	5	3
51 - 90		20	13	8	7	6	5	4
91 - 150		20	13	12	11	7	6	5
151 - 280		20	20	19	13	10	7	6
281 - 500		47	29	21	16	11	9	7
501 - 1200		47	34	27	19	15	11	8
1201 - 3200		53	42	35	23	18	13	9
3201 - 10000		68	50	38	29	22	15	9
10001 - 35000		77	60	46	35	29	15	9
35001 - 150000		96	74	56	40	29	15	9
150001 - 500000		119	90	64	40	29	15	9
500001 - & OVER		143	102	64	40	29	15	9
N/A - NOT APPLICABLE								
* ACCEPT LOT ON 0 DEFECTS AND REJECT LOT ON 1 DEFECT.								



L-3 Combat Propulsion Systems Muskegon Supplier Website

Web Site Address: www.L-3com.com/CPS

The screenshot displays the L-3 Communications Combat Propulsion Systems website. The browser window title is "L-3 Communications Combat Propulsion Systems - Windows Internet Explorer". The address bar shows "http://www.l-3com.com/cps/quality.html". The website header includes the L-3 Communications logo and the text "COMBAT PROPULSION SYSTEMS". Below the header is a navigation bar with links: HOME, ABOUT US, PRODUCTS & SERVICES, NEWS & EVENTS, JOBS, and CONTACT US. The main content area is titled "Quality" and contains a list of quality management documents, each with a green arrow icon:

- > 2607 Supplier Quality Requirements Review Presentation
- > PQS 2003 - Procurement Quality Assurance Handbook
- > First Piece/Source Inspection Request
- > Record/Resource Request Form (SQ-24-1) For Inspection Delegation Status
- > 7-D Corrective Action
- > C-8 Sampling Plan
- > Contractor Work Handbook
- > Process Flow Control Plan
- > QCS-4A Control Test Requirements
- > QCS-83-4 Quality Test Specification for First Article Inspection
- > QCS-4 Quality Test Specification for First Article Approval
- > SQMR (Supplier Quality Material Report)
- > SRPC (Supplier Request for Process Change)
- > Inspection Delegation Training Check Sheet (SQF-601)
- > SLP2 Shelf Life
- > Nonconformance Adjustment Form

On the left side of the website, there is a vertical navigation menu with the following items:

- QUALITY
- PROCUREMENT
- LOGISTICS
- DESIGN
- PRODUCTION
- REVISION LEVELS
- VEHICLE PROCESS
- CHANGE
- SUP
- REQUISITION
- REQUISITION

At the bottom of the website, the text "Last Updated: 11/26/06" is visible on the left, and "L-3 CORPORATION" is visible on the right.

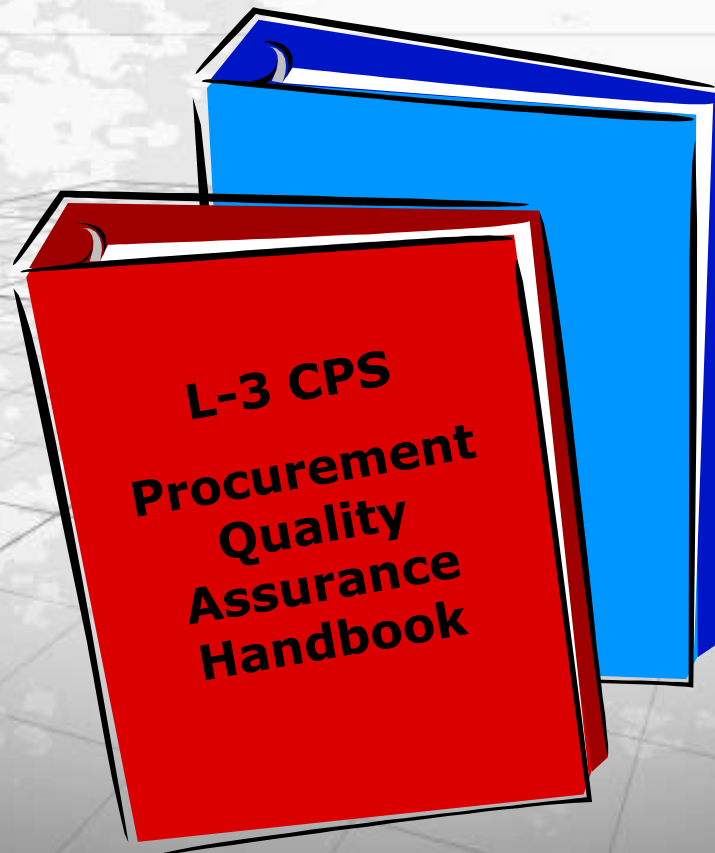


15 Minute Break





PQA 2005 OVERVIEW





Minimum Quality System Requirements

- ⊕ **Supplier's shall develop, document, implement and maintain a quality system providing a high degree of confidence that material and services will conform to contract requirements.**
- ⊕ The quality system can be patterned at a minimum after, or in accordance with:
 - ✧ MIL-I-45208
 - ✧ ISO-9001:2000
- ⊕ Distributors and Commercial Suppliers may qualify under the Standard Inspection Clause. (MMIN)





Minimum Quality System Requirements

- ⊕ Measuring and test equipment used to determine acceptability of product is to be calibrated utilizing traceable standards. The calibration system can be patterned after, or in accordance with, MIL-STD-45662A or ANSI/ISO standards.





Minimum Quality System Requirements

- ⊕ The suppliers quality system shall provide:
 - ⊕ Control of purchases and services from sub-contractors
 - ⊕ Conveyance of applicable contract and technical requirements
 - ⊕ Established method of assessing sub-contractors capability and performance to contract/technical requirements.
- ⊕ The supplier's quality system is subject to periodic review by L-3 CPS and/or government agencies.





QY-11 First Piece Inspection

An onsite inspection is required if any of the below criteria are present:

CHANGE IN MANUFACTURING LOCATION

CHANGE THAT AFFECTS FORM, FIT, OR FUNCTION OF PART

MORE THAN (1) YEAR BREAK IN PRODUCTION OF PART

CHANGE IN MANUFACTURING PROCESS

FORMAL CORRECTIVE ACTION HAS BEEN REQUIRED

CHANGE IN SUB SUPPLIER OR SUB SUPPLIER MFG PROCESS



First Piece Inspection

- ⊕ **L-3 personnel will review first pc. data packages:**
 - ⊕ First time supplying product to the L3 facility, L-3 Regional Lead to perform an initial cursory FPI documentation review at L-3.
 - ⊕ In order to protect delivery rating, adequate timing must be established to submit FPI documentation to SQA Specialist and obtain approval prior to submission of inspection request. **Fax to 231-724-2395.**
 - ⊕ The L-3 Inspection Request is to be utilized for on-site physical inspections prior to delivery.
- ⊕ **5 day scheduling window**



L-3 PRE-REVIEW (CURSORY) OF FPI DOCUMENTS

If you are supplying a new part number to L-3 CPS, L-3 SQA must complete a pre-review of all FPI documentation to be presented during the on-site FPI inspection.

To ensure the FPI pre-review is completed in a timely manner, please make sure your FPI package includes the following items:

- **Copy of L-3 CPS Purchase Order**
- **Drawing and applicable QAP / QAR – OD Sheets**
- **Certifications of conformance**
 - Physical, Chemical, Process and Test requirements specified as part of the Purchase Order**
- **100 % dimensional verification**
 - Ballooned drawing shall match inspection report, must include notes and PO clauses**
- **Final Inspection / Test Reports**
- **Control Plan / Flow Chart**
 - (QY-10 appears on Purchase Order)**





L-3 PRE-REVIEW (CURSORY) OF FPI DOCUMENTS

Submit your FPI documentation to your Regional Lead for PRE-review and approval.

Upon L-3 pre-review approval, an onsite FPI verification inspection will be arranged with a Verify Inspector.

The Quality Representative will visit and conduct an audit of the process, product, and objective evidence.

A walk through of the manufacturing process to include a review of the work instructions should be anticipated as a means to validate FPI and process requirements.

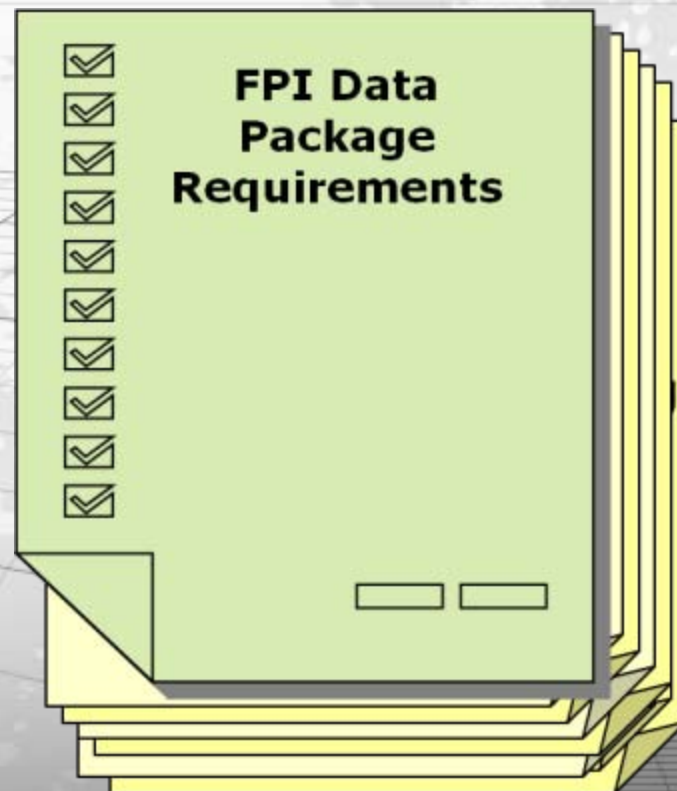


First Piece/Source Inspection Onsite Audit

- ⊕ FPI required prior to shipment
- ⊕ Ensure FPI package is complete prior to submitting Inspection Request form
- ⊕ Notify SQA Regional Lead prior to FPI submission/visit if a nonconformance exists
- ⊕ Retain approved Inspection Documentation and Approved Audit Package on file for five (5) years after P.O. completion



QY-11 First Piece Inspection Onsite Audit





INSPECTION REQUEST

If your purchase order contains the QY-2 or QY-10 Clause, complete & attach the Flow Chart/Control Plan (FC/CP) Worksheet found in the forms section of the www.L3Com.com/CPS procurement website.
(See *The PQA 2005 Procurement Quality Assurance Handbook* for Details).

Yes	No	Check Yes or No
		Our PO Has a QY-10 or a QY-2 Quality Clause (please circle one if applicable) (FAI / FAT)

Check which type of inspection you are requesting ☐ Source Inspection ☐ First Piece Inspection ☐ First Article Inspection (FAI)

If this is a First Piece Inspection Request check the box below that applies to the reason for request:

- ☐ New Part Number to Supplier
- ☐ Process/Configuration Change by Supplier
- ☐ 12 Month Interruption in Production
- ☐ Corrective Action

DATE: SUPPLIER # (VCN) FROM PO: L-3 BUYER:

SUPPLIER NAME: (THIS FORM CAN ACCOMMODATE 4 SEPARATE PART NUMBERS BELOW)

	P.O. INFORMATION	P.O. INFORMATION	P.O. INFORMATION	P.O. INFORMATION
PART NUMBER:				
PART NAME:				
PART REV. LEVEL:				
P.O. NUMBER:				

SUPPLIER POINT OF CONTACT:

PHONE NUMBER:

E-MAIL ADDRESS:

DATE INSPECTION / AUDIT REQUIRED (ALLOW 5 DAYS FOR SCHEDULING):

COMMENTS:

FILL OUT THE ABOVE REQUEST AND SUBMIT FOR PROCESSING TO:

FAX: 231-724-2395

**ALL INFORMATION ABOVE MUST BE COMPLETED OR THE
DOCUMENT WILL NOT BE PROCESSED.**

QY-11 First Piece Inspection Onsite Audit Request



SUPPLIER CORRECTIVE ACTION REQUEST (SCAR)

Any nonconformance discovered during an audit/inspection will be documented via the SCAR.

Product will be **REJECTED** and quality rating will be impacted.

SCAR will be issued by Onsite Field Inspector at time of audit.

Completion of the corrective action section of this form is required by the Supplier and to be submitted to respective Regional Lead.



SUPPLIER CORRECTIVE ACTION REQUEST (SCAR)

Audit Date:		Supplier's Name:	
Address:	City, State, Zip code:	Telephone:	Fax:
		E-mail:	
SCAR #:	Supplier SCAR Change Name:	Phone:	E-mail:
ECR:	Position:		

Mark each item written below: F = Finding O = Observation

F or O:	Details:
Auditor Name:	Auditor Signature:

Once completed, forward to L-3 CPS for review and acceptance.

Root Cause(s) of Non-Conformance:

Immediate Corrective Action Taken:

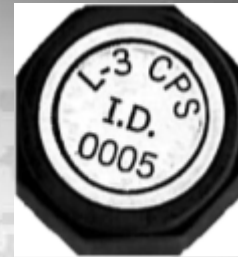
Long Term Corrective Action Taken:

Action Taken to Prevent Recurrence:

Contact Name:	Contact Signature:



L-3 Supplier Delegation Program



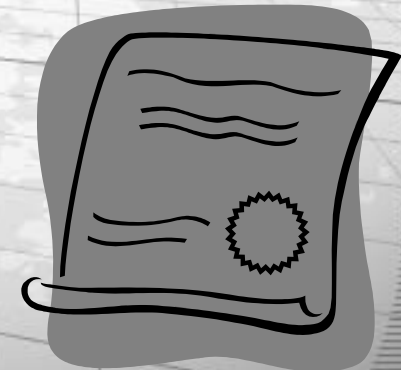
- ⊕ **The Delegate is responsible for assuring all requirements of the purchase order are satisfied.**
- ⊕ In-Process and Final Inspection are complete
- ⊕ Process monitoring
- ⊕ Verification of items such as Weld Sample Approval, Material Certifications, First Article Test Approval, Control Test Approval are current
- ⊕ Verify that the manufacturing process flow has not changed per the No Change Clause since FPI sign off



L-3 Supplier Delegate (Stamp Holder)

✦ **The supplier shall identify a qualified delegate to perform acceptance activities at their facility. The delegate must have:**

- ✦ Technical Competence
- ✦ Quality Assurance background and experience
- ✦ Access to the manufacturing process for process verification
- ✦ Ability to exercise a “No Ship” directive





L-3 Supplier Delegation Program

- A copy of the Inspection Delegates Application Record must be submitted for review.

L-3 COMMUNICATIONS COMBAT PROPULSION SYSTEMS SUPPLY CHAIN MANAGEMENT (ID) RECORD / RESUME REQUEST FORM (QJ-21.1)		
DATE: _____		
PERSONAL DATA		
Name (Last, First, Middle Initial) _____		
Company Name _____		
Company Address including Street, City, State (Province) Zip/Postal Code _____		
How Long at Current Company _____		
Citizenship _____		
RECENT ASSIGNMENTS		
Current Position & Responsibilities _____		
Previous Position & Responsibilities _____		
Next Previous Position & Responsibilities _____		
STAMP RECORD		
Print and Sign the Delegates Name and Supplier VCN#. Return this form to L-3 SQA Department via fax at 231-724-2395. L-3 will stamp this form and return to supplier along with supplier Delegation stamp		
STAMP IMPRESSION ☐	RECIPIENT NAME _____ SIGNATURE _____ DATE _____	VCN# _____
INACTIVE STAMP RECORD (TO BE COMPLETED BY SUPPLIER WHEN EMPLOYEE IS NO LONGER AN L-3 DELEGATE AND STAMP IS TO BE RETURNED OR WHEN STAMP IS LOST OR DAMAGED.)		
RETURNED DATE: _____		REASON: _____
DATE STAMP LOST OR DAMAGED: _____		



L-3 Supplier Delegation Program

⊕ A copy of the Inspection Delegation Training Checksheet must also be submitted for review



Combat Propulsion Systems

INSPECTION DELEGATION TRAINING CHECKSHEET (SQF-021)

DATE:	DELEGATE NAME:
SUPPLIER:	DELEGATE EMAIL:
LOCATION:	TRAINED BY:

THE FOLLOWING ARE TOPICS TO BE DISCUSSED WHEN TRAINING A NEW INSPECTION DELEGATE. WHENEVER POSSIBLE, SAMPLES OF DOCUMENTS SHOULD BE UTILIZED IN THE TRAINING PROCESS. PLEASE CHECK OFF CATEGORIES INDICATING COMPREHENSION. NOTE: USE ONE (1) CHECKSHEET PER NEW DELEGATE. RETURN COMPLETED FORM ALONG WITH COMPLETED INSPECTION DELEGATION RECORD TO SQA ADMINISTRATION FOR RECORD RETENTION.

1. ☐ The Inspection Delegate is qualified to perform acceptance activities. (PQA2005 pg 9-10)
2. ☐ The Delegate has: (PQA2005 pg 10)
 - a. Technical Competence
 - b. Quality Assurance background and experience
 - c. Unrestricted access to L-3 CPS SQA
 - d. Access to the manufacturing process for process verification
 - e. Ability to exercise a "No Ship" directive
3. ☐ I understand that a copy of the stamped shipper/packing slip and all supporting inspection data and objective evidence of product conformance is to be maintained on file. (PQA2005 pg 9-10)
4. ☐ I understand that records must be retained for 5 years after Purchase Order Completion (PQA2005 pg 6,7-9)
5. ☐ I understand that documents must be available for L-3 CPS/ government review at any time. (PQA2005 pg 5,9)
6. ☐ The ID stamp must be kept under personal control and secured from unauthorized use. (PQA2005 pg 10)
7. ☐ I am to notify my L-3 CPS Regional Lead immediately if this stamp is lost, stolen, or if it cannot be used due to damage or wear. (PQA2005 pg 10)
8. ☐ I am to notify my L-3 CPS Regional Lead if I suspect any misuse of this stamp. (PQA2005 pg 10)
9. ☐ I understand that the stamp impression affixed to the shipping documentation is the only form of product acceptance. Unstamped items may be returned at L-3 CPS discretion at the Supplier's expense per the Purchase Order Terms and Conditions. (PQA2005 pg 9-10)
10. ☐ I have reviewed PQA2005 and Quality Clause Definitions (located on L-3 Website www.L-3Com.com/CPS).
11. ☐ I understand that even though I have an L-3 ID stamp, I am still required to submit my FPI documentation to L-3 CPS for a pre-review when I am supplying a new part number to L-3 CPS for the first time. (PQA2005 pg 6)
12. ☐ I understand that the ID Delegate stamp holder does not have the authority to stamp off on First Piece Inspection (FPI) requirements. (PQA2005 pg 15)
13. ☐ The ID Delegate stamp cannot be transferred / reassigned to someone else in my company. (PQA2005 pg 10)
14. ☐ I understand that I do not have MRB authority. (PQA2005 pg 7,13,10)



L-3 Supplier Delegation Program

- ⊞ Material received from an Inspection Delegation supplier accompanied with the stamped shipper / packing slip will be received without further evaluation.
- ⊞ Copy of the stamped shipper / packing slip and all supporting inspection data and objective evidence of product conformance is maintained on file at the supplier's facility.
- ⊞ Stamp must be kept under personal control.



These documents must be made available for L-3 CPS and/or government review at any time.



Lunch is in Room 1200 Located Downstairs Reconvene at 1:00pm





QY-2 First Article Test / First Article Inspection

- ⊕ **The supplier shall obtain first article approval (FAA) for this assembly or its sub-components when a line item is included on this purchase order that requires the delivery of the final test report. The absence of this line item indicates that no FAT/FAA has been contracted or is required for this purchase order and a previous approval satisfies the TDP requirements for FAA.**
- ⊕ **First article approval (FAA) will be granted upon successful completion of a first article inspection (FAI) and a First Article Test (FAT). Shipments under this purchase order prior to first article approval are NOT allowed.**
- ⊕ **FAI and FAT shall be conducted in accordance with the requirements of the technical data package (TDP) which includes but is not limited to: Drawing, SQAP/QAR/QAP, military specifications and the purchase order. Additional supplier instructions for FAI/FAT are contained within L-3 CPS supplier instructions QCS 83-4.**
- ⊕ **Test sample selection shall be accomplished under the supervision of L-3 CPS. Notification, prior to test start, to allow test monitoring is required. (Reference QCS-4 located on the L-3 CPS website)**



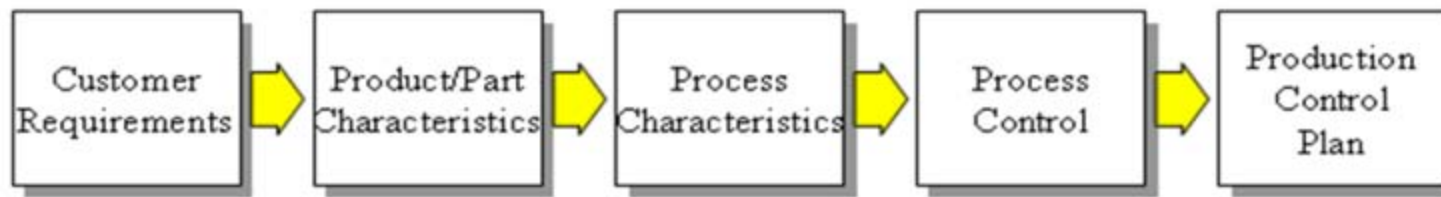
QY-10 Flow Chart/Control Plan

- ✚ **If QY-10 is listed as part of the Purchase Order, prior to First Piece Inspection (FPI) a Process Flow Chart/Control Plan (FC/CP) is to be developed using L-3 CPS's Work Sheet and Instructions. The request for FPI will not be processed without the Flow Chart/Control Plan completed in its entirety in accordance with instructions.**
- ✚ **The Process Flow Chart/Control Plan must be sent to your Regional Lead.**
- ✚ **A walk through of the manufacturing process to include a review of the FC/CP and work instructions should be anticipated as a means to validate process requirements. The FC/CP may be used as part of the Process/Product Validation at FPI and on future L3-CPS audits.**
- ✚ **As a Flow Chart/Control Plan is a living document, it must be kept current with manufacturing process. Authorization is required from L-3 CPS via Supplier Process Change Request (SPCR) prior to any change. If SPCR is approved, a follow up FPI will be required.**



QY-10 Flow Chart/Control Plan

- ⊕ The purpose of FC/CP is to provide a representative view of the actual manufacturing process flow and process control points.
- ⊕ This document can be used as an aid for:
 - ⊕ Work station development
 - ⊕ Identifying process control points
 - ⊕ Defining the methods being used at these control points
 - ⊕ Must include all Key Product Characteristics such as KPC/QAR/QAP/SQAP
 - ⊕ All out sourcing identification





Process Flow/Control Plan Worksheet

If your Purchase Order has a QY-2 or QY - 10 Clause, this form is to be completed per directions on the Process Flow/Control Plan Work Sheet. (Check yes our PO Has a QY-2 or QY-10 Clause) On The Inspection Request Form

L-3 Communications Combat Propulsion Systems Supply Chain Management
Supplier Quality Assurance
QY-2 or QY-10 Flow Chart/Control Plan (FC/CP) Work Sheet
Refer To The Purchase Order
For Correct Quality Clauses

Supplier
Name:

Part Number:

FAT/FAI
Competition
Date:

Contact:

Supplier
Number:
Location:

Part Name:

Flow Chart
Revision Date:
Prepared By:

Contact
Phone:
Contact E-
mail:

[illegible]

See Instructions On Next Page

**L-3 Communications Combat Propulsion Systems Supply Chain Management
Supplier Quality Assurance
QY-2 or QY-10 Flow Chart/Control Plan (FC/CP) Work Sheet
Refer To The Purchase Order
For Correct Quality Clauses**

Supplier Name:	Part Number:	FAT / FAI	Contact:
Supplier Number:	Part Name:	Competition Date:	Contact
Location:	P.O. Number:	Flow Chart	Phone:
		Revision Date:	Contact
		Prepared By:	E-mail:

1	2	3	4	5	6	7	8	9	10	11
Step #	Description of Process Step	▲ Store	● Move	■ Inspect	◆ Process	Work/Inspect Instructions	Characteristic Inspected	Type of Inspection	Insp Freq/Time or Certification Review	# Out Sourced - Who

FILL IN THE APPROPRIATE INFORMATION IN THE HEADING SECTION OF THIS DOCUMENT.

1	Enter the operation step process/number in this column. The flow should start with receiving inspection and end at the packing process for shipment to the customer.
2	Describe the process step in column 2. This should include any manufacturing, inspection, testing, etc. done on the product during processing.
3,4,5,6	These columns have symbols representing the process action – store, move, inspect, process. Store – used if you have a batching process where product is stored/held for future processing on a different line or operation. Move – would be used if transferring product from one station/line/building ect. to another is a significant step in your process (one where product handling ect. might be important or have effect on the product for example). Inspect – this represents any step in your process where raw materials, in process-sub assemblies, or finished goods are checked, tested, audited, etc. and usually means some specification or critical to quality characteristic is being measured and data is being collected for evaluation. Process – is any step that includes machining, assembly, heat treat, stamping, molding, welding, - essentially any action done on the part to meet customer specifications. NOTE: CLICK UNDER THE APPROPRIATE SYMBOL AND PLACE AN “X” IN THE CELL THAT BEST REPRESENTS THE ACTION (STORE, MOVE, INSPECT, PROCESS)
7	Enter your specific inspection or work instruction numbers in this column.
8	Enter the specific specification you are inspecting/measuring in this column if that applies. For receiving where you may be inspecting several characteristics, you can reference your receiving inspection document and or the blue print as a link to that information.
9	Enter the gauge, tester, certification name/number ect. used to measure the specific characteristics listed in column 8. Also enter any specific inspection process techniques.
10	Enter inspection frequency (how often each shift for example) and sample size as it applies.
11	Enter the name of the company that does a specific operation if the process is outsourced (i.e. machining, plating, heat treat, ect.).



QY-10/QY-2 Summary

- ✚ If **only a QY-10** is listed on the Purchase Order, contact your Regional Lead for clarification of requirement.
- ✚ If **only a QY-2** is listed on the Purchase Order, contact your Regional Lead for clarification of requirement.
- ✚ If **both QY-10 and QY-2** are listed on the Purchase Order **but no funded line item** exists, contact your respective L-3 CPS Buyer.
- ✚ If **both QY-10 and QY-2 and a funded line item exists**, FAI / FAT is required.
- ✚ First, complete and submit QY-10 (FC/CP) to your Regional Lead for approval.
- ✚ Once FC/CP is approved, review and complete required forms as stated in QCS 83-4 and QCS-4.
- ✚ The samples for FAT testing will be selected by L-3 CPS.
- ✚ Notify your Regional Lead, PRIOR TO test start, to allow onsite test monitoring if required.
- ✚ After FAI / FAT is complete, all documentation **MUST BE** submitted to your SQA Regional Lead as a part of your FPI package.
- ✚ All procedures and required forms / quality clauses can be located at the L-3 CPS Website.

www.L-3com.com/cps



Supplier Performance

- ⊕ **L-3 CPS stipulates that Supplier's maintain a Performance Rating of a minimum of 98 %.**
- ⊕ The Performance Rating encompasses both Quality and Delivery.
- ⊕ A Performance Rating is sent monthly to the Supply Base.
- ⊕ Performance Charts are used to assess whether issues exist that must be addressed by the supplier.
- ⊕ **Quality** issues should be directed to your respective Regional Lead. **Delivery** issues should be directed to your respective L-3 Buyer.



L-3 Communications
Combat Propulsion Systems
76 Getty Street
Muskegon, Mi. 49442

POLARIS ENGINEERING & MFG - 75772
17540 15 MILE ROAD
FRASER, MI 48026

Quality Manager: PAUL CRONCH

Monthly Supplier Performance Report

5/7/2009

Dear L-3 Valuable Supplier:

L-3 CPS suppliers are expected to make the necessary commitments to achieve and maintain a 100% Quality and Delivery Rating.

In the event a Supplier fails to maintain the minimum of 98% for either Quality or Delivery Ratings pursuant to any award issued as a result of the Purchase Order, L-3 CPS may elect to begin termination for default proceedings in accordance with the Purchase Order Terms and Conditions 26-002-0029. In addition, Supplier may be subject to permanent elimination from the L-3 CPS Supply Base.

It is crucial for a supplier to react to rejected material with prompt corrective actions documenting their analysis.

If the analysis reveals the defect or portion of defect shipment is not the supplier's responsibility contact the respective buyer.

If the defect analysis (i.e. 100% screen) reveals the actual defect quantity to be less than previously reported Report of Nonconformance (RON) quantity, supplier is to utilize the Nonconformance Adjustment Form, found on the L-3 CPS website, to request a reduction of the RON quantity, thus reducing the impact on the supplier performance rating.

If the RON quantity is different than the returned receipt quantity, contact the respective buyer.

Upon review of your monthly performance report if you detect an error in your quality rating please contact your Regional Lead. If you detect an error in your delivery rating please contact your Buyer.

Additionally, please note the following notice:

*****NOTICE 1 (10/31/08) *****

During a recent Diminishing Manufacturing Sources and Material Shortages (DMSMS) conference L3 was advised by the Defense Criminal Investigation Services of an increase in counterfeit fasteners. Please ensure all fastener materials meet the requirements



Current Month

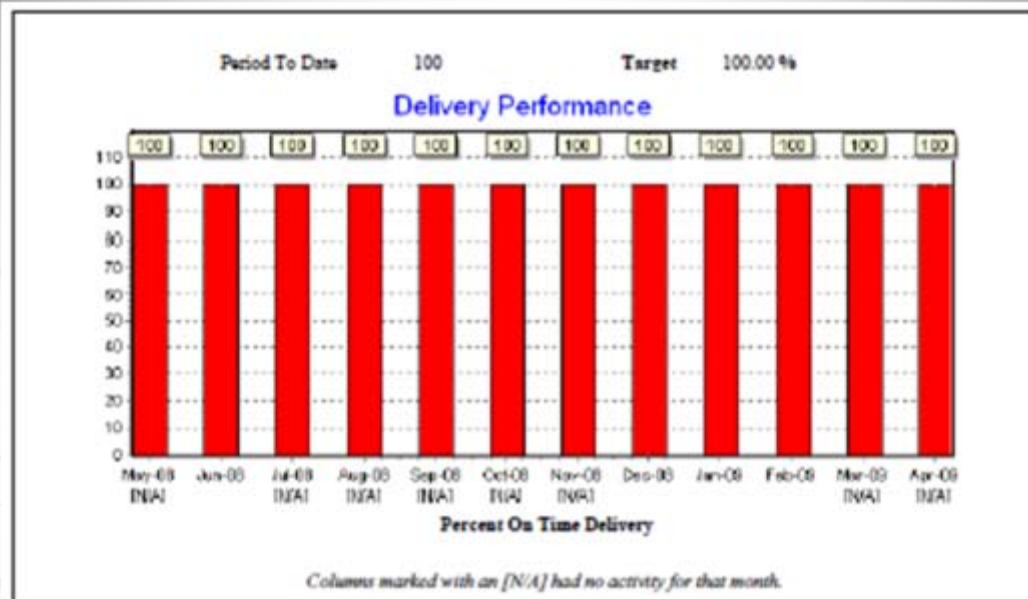
	Deliveries			Nonconformance	
	Received	Early	Late	Receiving	Production
Pieces	0	0	0	0	0

Year and Month Range

Month	Lots Received	Lots: Late		Pieces: Early		Receiving NC Lots: Rated		Late Actions	
		Lots: Early	Pieces Received	Pieces Late	Production NC Lots: Rated				
May-2008	0	0	0	0	0	0	0	0	0
Jun-2008	2	0	0	50	0	0	0	0	0
Jul-2008	0	0	0	0	0	0	0	0	0
Aug-2008	0	0	0	0	0	0	0	0	0
Sep-2008	0	0	0	0	0	0	0	0	0
Oct-2008	0	0	0	0	0	0	0	0	0
Nov-2008	0	0	0	0	0	0	0	0	0
Dec-2008	6	0	0	699	0	0	0	0	0
Jan-2009	3	0	0	317	0	0	0	0	0
Feb-2009	2	0	0	100	0	0	0	0	0
Mar-2009	0	0	0	0	0	0	0	0	0
Apr-2009	0	0	0	0	0	0	0	0	0

Monthly Rating History

Month	Receiving Final NC Rating		Delivery Rating		Overall 1 Month
	Production	Final NC Rating	Quality Rating		
May-2008	100	100	100	100	100
Jun-2008	100	100	100	100	100
Jul-2008	100	100	100	100	100
Aug-2008	100	100	100	100	100
Sep-2008	100	100	100	100	100
Oct-2008	100	100	100	100	100
Nov-2008	100	100	100	100	100
Dec-2008	100	100	100	100	100
Jan-2009	100	100	100	100	100
Feb-2009	100	100	100	100	100
Mar-2009	100	100	100	100	100
Apr-2009	100	100	100	100	100



Nonconformance History

NC Number	Part Number	Nc Close Date	Quantity Rejected	Supplier Responsible Quantity
-----------	-------------	---------------	-------------------	-------------------------------



communications

Purchase Order Detail

PO Number/Line	Part Number	Date Received	Date Due	Quantity Received	Status
04672 / 2	12549812	6/2/2008	6/2/2008	38 On Time	
04672 / 1	12549812	6/2/2008	6/2/2008	12 On Time	
08688 / 1	12548786	12/19/2008	3/16/2009	517 On Time	
08688 / 2	12548786	12/19/2008	3/16/2009	34 On Time	
08639 / 2	12549052	12/23/2008	1/12/2009	32 On Time	
08639 / 1	12549052	12/23/2008	1/12/2009	38 On Time	
08639 / 3	12549052	12/23/2008	1/12/2009	28 On Time	
09551 / 1	12549052	12/23/2008	1/12/2009	50 On Time	
10163 / 1	LS1048627	1/6/2009	4/9/2009	228 On Time	
10164 / 1	LS1014176	1/6/2009	4/9/2009	51 On Time	
10165 / 1	LS1004555	1/6/2009	3/9/2009	38 On Time	
10583 / 1	12549052	2/27/2009	3/9/2009	60 On Time	
10583 / 2	12549052	2/27/2009	3/9/2009	40 On Time	

Respectfully,

Timothy R. Donkin

L-3 Communications, CPS Quality Manager



Intensive Management Program

On a quarterly basis, Suppliers with a Quality Rating below 98% for a calendar year are considered for the Intensive Management Program and are reviewed by SQA and Procurement. See Intensive Management process flow on next slides.

INTENSIVE MANAGEMENT PROCESS FLOW



At the discretion of the IM Team the following criteria, but not limited to, will be considered as cause for placing a supplier on Intensive Management:

1. Rating Below 98%
2. Downward Trend
3. Unresponsive/Ineffective CA
4. Ineffective Contract Review



Supplier notification (SQA/Procurement) to recall Delegation Stamps if applicable.



Change TIPQA status to Source and add "IM" in Supplier Type field.

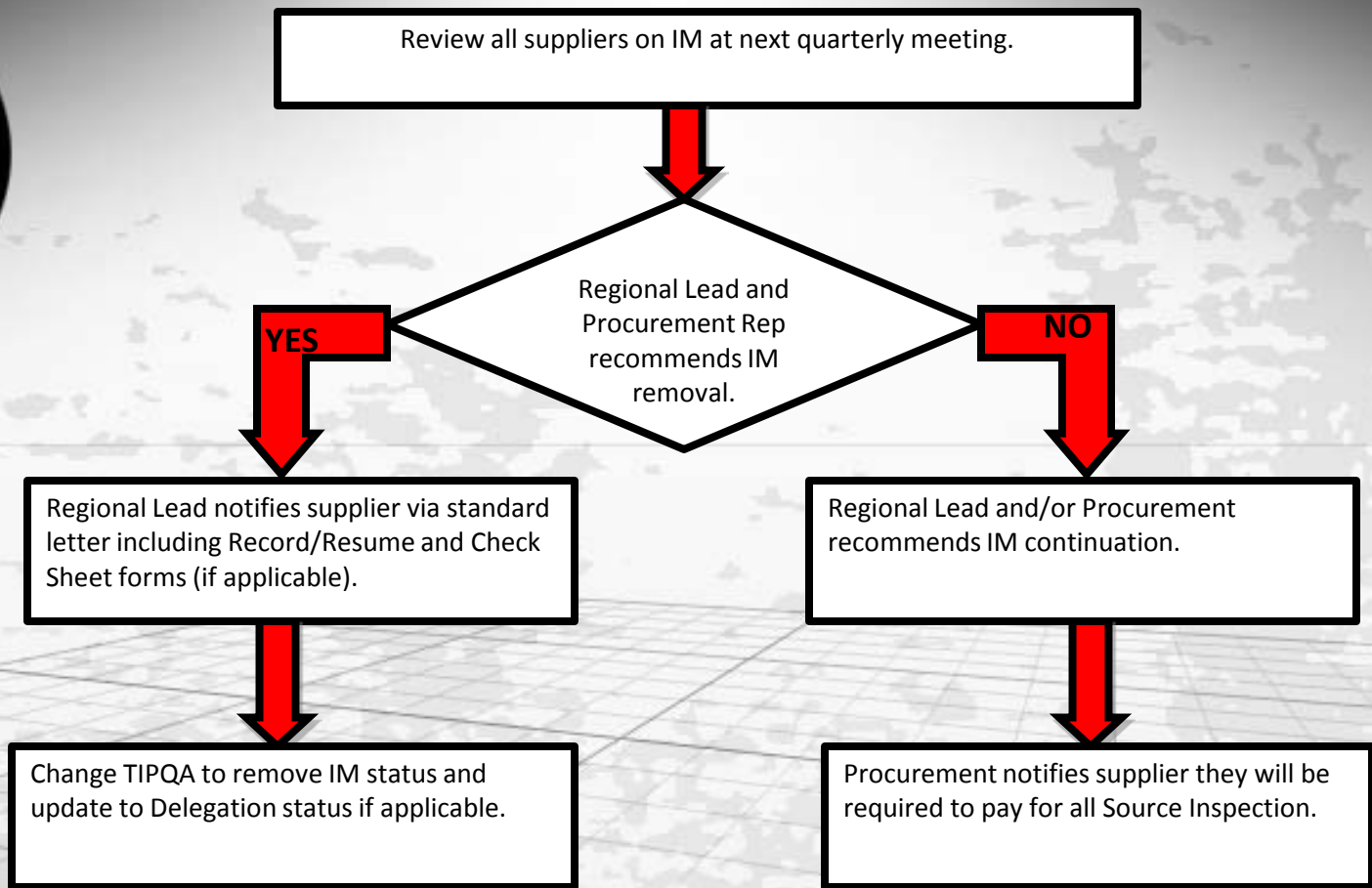


Regional Lead requests systemic CA with Action Matrix including L-3 expectations and timing.



CA Presentation from supplier to SQA and Procurement:

1. Conference Call.
2. Onsite Visit at Supplier Location.
3. Supplier visit L-3 CPS location.
4. Action Matrix Updates.





communications
Combat Propulsion Systems

SUPPLY CHAIN MANAGEMENT 7-D CORRECTIVE ACTION

SUPPLIER NAME:

LOCATION:

PART NUMBER:

PART DESCRIPTION:

P.O.#

PROGRAM AFFECTED:

SUPPLIER VCN:

DATE OF OCCURRENCE:

REVISION DATE:

NC#:

DATE LAST UPDATED:

DATE CLOSED:

1. USE THE TEAM APPROACH:

TEAM CHAMPION:

ISSUE DATE:

TEAM LEADER:

STATUS:

OPEN

CLOSED

TEAM MEMBERS

TITLE

PHONE

E-MAIL

2. DESCRIBE THE PROBLEM:

3. CONTAIN SUSPECT PRODUCT:

4. DEFINE & VERIFY ROOT CAUSE:

5. IMPLEMENT & VERIFY INTERIM CORRECTIVE ACTION:

6. IMPLEMENT PERMANENT CORRECTIVE ACTION:

7. PREVENT REOCCURRENCE:

SIGNOFF NOTE: SIGN ELECTRONICALLY (YOUR NAME AND DATE) SIGNIFYING YOU HAVE SEEN THIS DOCUMENT FOR REVIEW/CLOSURE

NOTE: THIS DOCUMENT IS RECOMMENDED FORMAT FROM ANY SUPPLIER TO L-3 THAT HAS A 'MAJOR ISSUE' (ASSEMBLY PLANT LINE STOPPAGE/LINE DOWN) OR AN 'INTENSIVE MANAGEMENT' SITUATION. A COPY OF THIS 7-STEP FORMAT MUST BE SUPPLIED TO THE REGIONAL LEAD/SQA FOR CLOSURE. ELECTRONIC SIGNATURES ARE NEEDED ABOVE TO GET BUY-IN FROM ALL APPROPRIATE PARTIES. FOR ANY QUESTIONS, PLEASE CONTACT YOUR L-3 REGIONAL MANAGER.

Supplier Corrective Action

Formal Corrective
Action issued at
Regional Lead
discretion.



Supplier Rating Protection



NONCONFORMANCE ADJUSTMENT FORM

SUPPLIER INFORMATION

SUPPLIER NAME		VCN#	
---------------	--	------	--

NONCONFORMANCE DETAILS

NC NUMBER	NC REJECT QTY	DATE RMA# ISSUED	L3 PART NUMBER	L3 PO#

100% SCREEN / SORT RESULTS

QTY. FOUND CONFORMING		QTY. FOUND <u>NON</u> -CONFORMING	
-----------------------	--	-----------------------------------	--

*Sort Documentation Must Be Submitted With This Form (I.e. Layout Results, Cpk...)

SUPPLIER SIGNATURES

SUPPLIER QUALITY MANAGER. _____ DATE: _____



AUTHORIZATION FOR ADJUSTMENT (fax to 231-724-2395 for L3 Authorization)

L3 SUPPLIER REGIONAL LEAD: _____ DATE: _____
QTY. ADJUSTED IN DATABASE: _____ DATE: _____



C/A Expectations - Problem Description and Containment

Describe and Contain

A robust Problem Description should answer

- ⊕ What date were you notified?
- ⊕ Who and how were you notified?
- ⊕ How many Pieces were defective?
- ⊕ What is Wrong with What?
- ⊕ Where is it wrong?
- ⊕ What is it actually?
- ⊕ What should it be?

A Robust Containment Statement should answer.....

- ⊕ What date Containment Started?
- ⊕ What method was utilized?
- ⊕ Quantity Contained and Results?
- ⊕ How is the product identified to indicate Certification of Conformance?
- ⊕ What evidence did we supply the Customer?



C/A Expectations – Interim Corrective Action

Implement and Verify

Implement Interim Corrective Action should answer.....	Verify Interim Corrective Action should answer.....
⊕ What date was the action implemented? ⊕ What was the method and tools used? ⊕ How is it documented? ⊕ What evidence did we supply the Customer?	•How did we verify our Interim Corrective Action is effective? •How did we document the results? •How many did we review? How many were acceptable? •What evidence did we supply the Customer?



C/A Expectations – Root Cause

Identify and Verify

**Identify Root Cause
should answer.....**

Why did the process allow
this defect to happen?

Why did our process fail to
detect it?

What method did we use to
develop this Root Cause?

**Verify Root Cause should
answer.....**

How did we verify the Root
Cause?

Can you turn the root cause
“on” and “off” and get the
expected results every time?

What evidence did we supply
the Customer?



C/A Expectations – Permanent Action

Act and Prevent

Permanent Corrective Action should answer.....

- ⊕ How did we enhance our process so this defect cannot happen?
- ⊕ How did we enhance our process so this defect would be detected?
- ⊕ How did we verify the Permanent Action is effective?
- ⊕ What were the results?
- ⊕ What other Process's would benefit from this Action?
- ⊕ What evidence did we supply the Customer?

Prevent Reoccurrence should answer.....

- ⊕ What did we update in our process that will prevent this issue from occurring again in all similar process's?
- ⊕ What evidence did we provide our Customer?



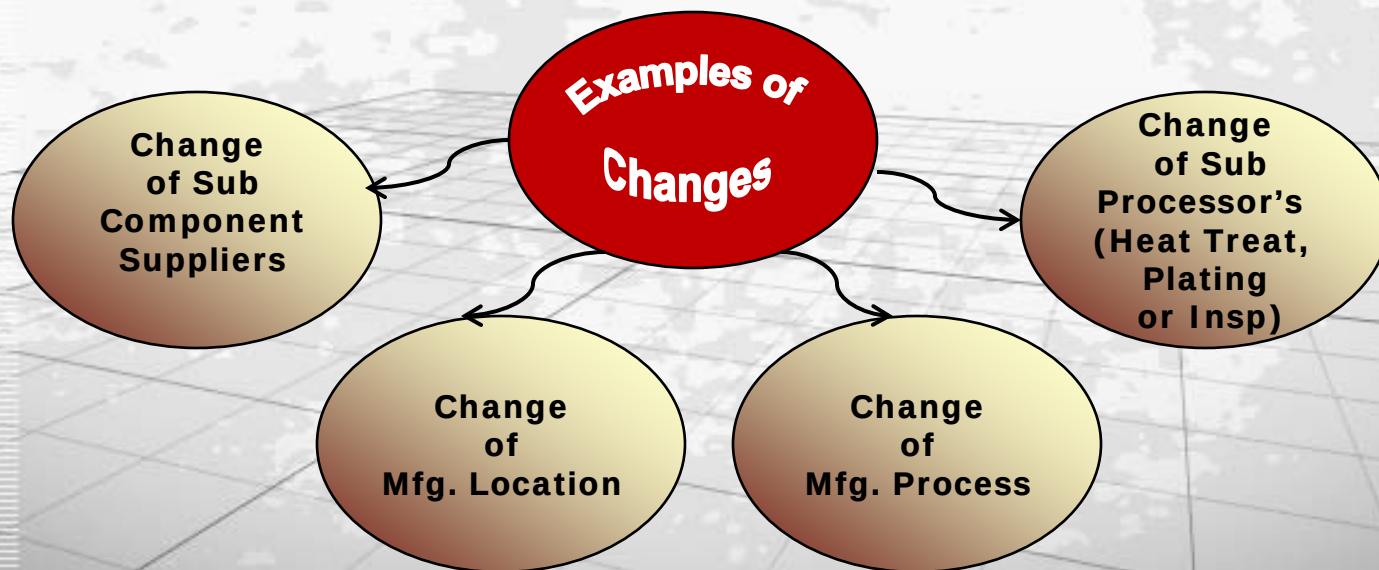
15 Minute Break





Supplier Process Change Request

- ✦ Per the No Change Clause listed on the Purchase Order as “NCG” a Supplier must seek written approval from the Respective SQA Regional Lead and the Buyer prior to implementing a change.



Suppliers can request written approval for a Process Change utilizing a SPCR form.

Upon completion of SPCR form fax to 231-724-2395

