



The names Mark IV North America and Mark IV are used throughout this manual. The following facilities are included within the context of Mark IV North America and Mark IV:

Mark IV Automotive OEM North America

Dayco Products LLC.

Springdale, Arkansas
Walterboro, South Carolina
Williston, South Carolina

Dayco Canada Corp.

Toronto, Ontario.
Montreal, Quebec

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September 22, 2004

Dear Supplier:

The Mark IV North America **MARK IV Supplier Performance Requirements Manual** is an integral part of Mark IV's supply base development. It is our expectation that the materials entering our manufacturing locations satisfy the needs of our internal processes and our external customers. The intent of this manual is to ensure that we are selecting and developing suppliers capable of meeting these expectations, as well as those of our customers.

Our long term relationship with our supply base will be dependent upon our cooperative efforts in meeting Mark IV's expectations as well as the demands of our customers. Mark IV North America has made a commitment to be a leading supplier to our customer base, utilizing Lean Enterprise concepts. As a result of the desire to be a competitive force in the markets we serve, **Mark IV requests the commitment of our suppliers' top management to pledge their organizations support in meeting the requirements contained within this manual.**

Global Purchasing: V. Imperiale

Purpose

The purpose of this manual is to introduce, define, and clarify the quality, performance, and general business requirements for suppliers to Mark IV North America.

The requirements contained herein are supplemental to, and are not intended to supersede, any purchase order, engineering, or material specification requirements.

Objectives

Mark IV is dedicated to providing world-class quality and service to its customers. As the Mark IV manufacturing facilities are largely dependent on their suppliers for the quality of their process outputs, the following four objectives must be met in the supply base:

- On-time delivery of defect-free product;
- Continual improvement;
- Reduction of cost in the value stream;
- Support of customer business initiatives.

Achievement of these objectives makes it possible for the suppliers' products to flow directly into Mark IV manufacturing facilities without the added costs of inspection and other non value-added activities related to nonconformance. Additionally, successful achievement of the above objectives permits both suppliers and Mark IV to meet other business goals related to cost, productivity, and competitive position.

Scope

The requirements contained within this manual apply to all production suppliers of materials, components, or services incorporated into Mark IV North America products. This may include products processed at one Mark IV location and shipped to another.

Supplier Sourcing and Selection

Sourcing of new suppliers for Mark IV is a cross-functional activity. Sourcing activities will proceed as defined by the appropriate Business Unit and/or manufacturing facility Purchasing, Engineering, Logistics, or Supply Management functions. This *Supplier Performance Requirements Manual* will be made available to the supplier as a guide to the Mark IV expectations. Suppliers that meet all defined criteria and agree to all terms, quality, and business requirements will be considered for Approved Supplier status. All Approved Suppliers must hold an acceptable quality system registration (i.e. QS-9000,

ISO9000, TS16949). The above-listed requirements may be modified and/or waived, as necessary, to accommodate the use of customer-specified suppliers. The appropriate Logistics, Purchasing, Quality, Engineering, and Supply Management functions have the final authority over the sourcing decisions and addition of the suppliers to the Approved Supplier List(s).

It is not the intention of Mark IV to perform routine quality system audits of its suppliers. As suppliers are expected to maintain third party registration, this function is to be fulfilled by the registrars. Mark IV does, however, reserve the right to perform quality system audits and/or manufacturing process audits under the following circumstances:

- As a part of sourcing activities;
- To assist suppliers in improvement when repeated serious problems occur.

General Criteria for Prospective Suppliers

- Accepted Quality System Registration
- Acceptable Site Quality Assessment by Mark IV
- Agreement on pricing, terms, and conditions
- Indication of satisfactory Supplier Financial health
- Mutual site visit(s) as appropriate
- Acceptance of Mark IV conditions of business

Supplier Quality System Requirements

Key production suppliers to Mark IV are expected to be working toward compliance with ISO/TS 16949. **The minimum requirement for inclusion in Mark IV supply base is registration to ISO9001:2000** (with the exception noted in the *Supplier Sourcing and Selection* section). The scope of registration shall contain the type of product or service supplied to Mark IV. Development activities will be conducted with key suppliers not holding ISO/TS16949 registration with the goal of conformity to the applicable automotive-specific requirements of the standard. Prioritization of development activities will be determined by the appropriate purchasing and/or Supply Management functions and may be based on commodity type, dollar spend, supplier size, and supplier performance.

Note: Suppliers are required to notify Mark IV Purchasing and/or Supply management immediately if their quality system registration status is suspended, placed on probation, or terminated.

ISO 9001 registered suppliers, in addition to maintaining their registration status, are expected to have a understanding of, and/or ability to use the following:

Quality planning (APQP) & FMEA
Manufacturing process design
Change control
PPAP
Management of production tooling
Engineering specifications
Product identification and traceability
Cleanliness of premises
Designation and control of special characteristics
Work instructions

Monitoring and measurement of manufacturing processes
Verification of job setups
Laboratory requirements
Measurement system analysis
Calibration/verification records
Control of unidentified or suspect product
Problem solving methods
Customer packaging and labeling standards
Record retention

Continual Improvement

Mark IV North America suppliers are expected to continually improve in quality, delivery, service, and cost. Continual improvement activities should be data driven and include trend analysis and prioritized action plans. Mark IV and its suppliers are competing in an environment where the customers' expectations are constantly rising. Those organizations that do not continually improve are at risk of diminishing profitability and future business opportunities. Mark IV desires to do business with suppliers who can demonstrate ongoing improvement. In this way, both parties help assure themselves future positions in the automotive and heavy-duty industries. Mark IV North America reserves the right to review continual improvement activities to assess their effectiveness.

Reference Documents

Suppliers are required to obtain and use the following reference documents:

APQP - Advanced Product Quality Planning and Control Plan
FMEA - Failure Mode and Effects Analysis
MSA - Measurement Systems Analysis
PPAP - Production Part Approval Process
QS-9000 - Quality System Requirements
SPC - Statistical Process Control
ISO/TS 16949 Quality Management Systems (will replace QS-9000)
MMOG/LE – Material Management Operation Guideline / Logistics Evaluation

The above documents may be purchased at:
Automotive Industry Action Group (AIAG), www.aiag.org

26200 Lahser Road, Suite 200,
Southfield, MI 48034
Phone: (248) 358-3570

Mark IV Supplier Performance Requirements and Rating System

Mark IV suppliers will be rated on their overall performance. *Supplier performance is monitored through the following indicators: delivered product quality; customer disruptions including field returns; delivery schedule performance (including incidents of premium freight); special status customer notifications related to quality or delivery issues; customer service/support.* This section details the performance requirements and the supplier performance rating system.

Each supplier will have a scorecard with an overall performance rating. The rating will be calculated using scores derived from the three key elements of supplier performance, Quality, Delivery, and Service/Support. The weighting of the overall score using the key elements will be as follows:

Quality	40%
Delivery	40%
Service/Support	20%

A supplier with perfect scores in all key elements will receive an overall score of 100.

Quality Performance:

Mark IV's expectation is that its suppliers will deliver conforming product 100% of the time. Delivery of product meeting the quality requirements of the Mark IV locations is necessary for maintenance of uninterrupted flow of product through our manufacturing facilities and to our customers. This includes appearance, functionality, conformance to specification requirements, and statistical capability of critical characteristics. In order to assure that it meets the needs of its customers, Mark IV demands the highest levels of quality in products purchased from its suppliers.

It is also Mark IV's expectation that its suppliers label their products correctly. Suppliers are expected to submit barcode labels in the Mark IV-required format to the receiving locations for approval. After the receiving location approves the suppliers' labels, all subsequent shipments must contain conforming labels. Properly labeled parts facilitate the receiving process and the flow of part-related information at the receiving locations. Any failure to provide conforming labels,

including unapproved labels, improperly formatted, or unreadable labels will result in a shipment quality rejection (QR) for the affected shipment.

Suppliers will be required to bear expenses resulting from the shipment of nonconforming material. Such costs would include, but not necessarily be limited to:

- Non-standard freight and expediting charges;
- Plant overtime costs;
- Processing and material handling costs;
- Sorting and rework charges;
- Scrap, in-process or finished goods;
- Travel costs of Mark IV personnel to resolve concerns;
- Customer plant shutdown charges;
- Field action (recall) charges;
- Chargebacks for improper labeling.

The receiving location Purchasing or Logistics function will debit suppliers for nonconformance-related costs as deemed necessary by Mark IV management.

Additionally, suppliers will be required to produce and/or certify stock to replace rejected material. Suppliers, if required by the receiving location, must provide personnel to sort product at Mark IV and/or Mark IV's customer location(s). The providing of on-site personnel can be invaluable in understanding, communicating, and resolution of problems and is highly recommended whether requested or not.

When the receiving Mark IV plant requests corrective action, the supplier is required to give an initial response within one business day. Permanent corrective action is expected to be implemented 30 working days from the initial notification. If flexibility is needed in the timing for permanent corrective action, the plant QA Manager must be contacted. Corrective action must be provided in the proper format as required by the receiving location(s).

In the event that nonconforming or suspect product may have been shipped, the supplier must contact the Mark IV facility Quality Assurance Manager for disposition of the affected material.

Quality Performance Scoring:

Supplier quality performance will be rated using a composite of a parts per million (PPM) score, a quality reject (QR) score, and a supplier quality event (SQE) score.

PPM will be calculated with the following formula:

$$\text{PPM} = (\text{total rejected parts} / \text{total parts received}) \times 1,000,000$$

Mark IV will then take the calculated PPM total and, using an algorithm, assign a point score for the time period. An example of the PPMs and derived scores is shown below.

PPM	Point score	PPM	Point score	PPM	Point score	PPM	Point score	PPM	Point score
0	100	51-61	89	205-257	78	788-840	67	4707-5235	55
1-6	99	62-72	88	258-310	77	841-893	66	5236-5765	54
7-11	98	73-83	87	311-363	76	894-946	65	5766-6294	53
12-17	97	84-94	86	364-416	75	1000	63	6295-6823	52
18-22	96	95-105	85	417-469	74	1001-1530	62	6824-7353	51
23-28	95	106-116	84	470-522	73	1531-2059	61	7354-7882	50
29-33	94	117-127	83	523-575	72	2060-2589	60	7883-8411	49
34-39	93	128-138	82	576-628	71	2590-3118	59	8412-8941	48
40-44	92	139-149	81	629-681	70	3119-3647	58	8942-9470	47
45-49	91	150	80	682-734	69	3648-4177	57	9471-9999	46
50	90	151-204	79	735-787	68	4178-4706	56	10000	0

Note: The table above does not contain the complete rating data. The number derived from the calculation is recorded as the supplier's PPM score.

The number of QRs for a supplier during the rating period will be displayed in the scorecard and is subtracted from the total number of shipments during the rating period to get the number of shipments accepted. The number of shipments accepted is divided by the total number of shipments and is multiplied by 100 to calculate the QR score.

$$\text{QR score} = 100 \times (\text{shipments accepted} / \text{total shipments}).$$

SQEs are defined generally as events caused by poor supplier quality that have larger negative impact on Mark IV than simple QRs. Such events could include, but are not limited to, rejection and sorting of finished goods at Mark IV locations, customer quality rejects, returns and/or sorts, warranty issues, field returns, customer field actions, etc. Mark IV takes these quality issues seriously; therefore, suppliers will be penalized twenty-five points for each SQE. Mark IV receiving location Purchasing and/or Logistics functions will assign the SQE scores.

$$\text{SQE score} = \text{number of SQEs} \times 25.$$

To arrive at the total supplier quality score, the PPM score and QR scores will be added together and then divided by two. The resulting score will then have the SQE score subtracted from it.

$$\text{Quality score} = ((\text{PPM score} + \text{QR score}) / 2) - \text{SQE score}.$$

The number derived from the calculation is recorded as the supplier's quality performance score in the scorecard and is then multiplied by 0.4 to determine the quality performance contribution to the overall performance rating. No score less than zero will be awarded.

Delivery Performance:

Mark IV expects 100% on time delivery of the correct amount of material from its suppliers. Failure of suppliers to meet delivery and quantity targets not only increases costs for Mark IV, but also causes potential scheduling and delivery problems elsewhere in the parallel supply chains. Additionally, untimely delivery of purchased materials may jeopardize Mark IV facilities' ability to meet their customers' requirements. While premium freight may allow suppliers to meet their expected delivery schedules, the charges represent undesirable additional costs in the supply chain. Suppliers are expected to bear reasonable costs resulting from delivery failures. Such costs would include, but not be limited to:

- Non-standard freight charges and expediting costs (customer or supplier related);
- Plant overtime costs;
- Customer plant shutdown charges;
- Mark IV line downtime costs.

The Mark IV plant purchasing function may, at its discretion, debit suppliers for costs incurred from their failures to deliver materials when scheduled.

Mark IV Logistics and Purchasing will strive to provide the most accurate information available to the suppliers in order to facilitate the suppliers' forecasting and scheduling activities. Suppliers are expected to report problems or inaccuracies in the provided data back to the relevant purchasing and/or logistics functions to assist in problem solving. Suppliers must exhaust all reasonable options available to meet delivery requirements. If a supplier should realize that it will be impossible to meet any delivery date or quantity target, the receiving location purchasing function must be notified immediately in order to minimize the effects of the failure for Mark IV and the other suppliers that may be affected.

Delivery Performance Scoring:

Delivery performance is a ship-based measure and will be scored on a hit or miss basis. A hit will be an on-time delivery of the correct amount of product. A miss will be a delivery, which is either outside of the allowed delivery or quantity tolerance limits. The ASN will be the basis for determining a hit or miss delivery. The receiving locations will establish the delivery targets and tolerances. Any instance of a premium freight shipment will result in a one-point reduction in the

delivery performance score. The respective Mark IV Logistics and Purchasing functions have the discretionary authority to adjust individual delivery hits or misses (including premium freight) based on circumstances.

Supplier delivery performance will be scored as a percent hits of total deliveries less premium freight occurrences. The score will be calculated using the following formula:

Delivery performance = (100 x (hits / total deliveries)) – premium freight deliveries.

The number derived from the calculation is recorded as the supplier's delivery performance score in the scorecard and is then multiplied by 0.4 to determine the delivery performance contribution to the overall performance rating. No score less than zero will be awarded.

Service/Support Performance:

Suppliers will be rated on how well they support their Mark IV receiving locations in **six** areas. The overall score for Service/Support will be the sum of the point scores weighted as follows:

1. PPAP performance	20 points
2. Responsiveness	35 points
3. EDI compliance	15 points
4. NAFTA compliance	15 points
5. ASN accuracy	15 points
Total Points Possible	100 points

PPAP Performance

It is Mark IV's expectation that suppliers will deliver PPAP packages that arrive on or before the date scheduled by the receiving location purchasing function. PPAP packages must have all required documentation and samples, and submitted materials must meet all dimensional, chemical, physical, appearance, and performance requirements. All process capability requirements must be met.

Failure of suppliers to meet PPAP requirements can cause problems with build schedules, process validation, and the ability of Mark IV to achieve on-time delivery of product samples to customers. Suppliers will be awarded a PPAP performance score between 0 and 20. PPAP performance will be scored by subtracting 5 points for each unsuccessful PPAP. The minimum score will be zero. Suppliers having no PPAP submissions in the rating period receive a default score of 20.

Responsiveness

It is Mark IV's expectation that suppliers will respond promptly and proactively to all problems and concerns, or other needs that are identified by the Mark IV receiving location(s) or their customers. Suppliers will be judged on the following:

- Reactions to complaints or requests for action;
- Timely submission of corrective actions;
- Adequacy of corrective actions;
- Adequacy of containment and stock certification activities;
- Availability of support personnel;
- Promptness and completeness of responses to RFQs;
- Early communication of potential problems.

Suppliers will be assigned a responsiveness performance score by the appropriate receiving location purchasing and quality personnel. The assigned score will be a point score between 0 and 35. Each failure in any of the above listed areas will result in a deduction of 5 points. The minimum score will be zero.

EDI Compliance

It is Mark IV's expectation that suppliers are to implement systems to support electronic interchange of data between themselves and Mark IV facilities. EDI is important for reduction in time and errors during information exchange and improvement in the flow of critical information needed for forecasting and scheduling activities. Mark IV may at their discretion waive this requirement for some suppliers.

Suppliers successfully supporting this requirement will receive a score of 15. Suppliers not meeting this requirement will receive a score of zero unless waived by Mark IV. If the requirement is waived, the default score of 15 will be awarded.

NAFTA Compliance

It is Mark IV's expectation that suppliers provide NAFTA Certificates of Origin for all eligible materials and/or parts. Certificates that are valid for the applicable calendar year must be submitted to the Mark IV receiving locations on or before the specified due date. Suppliers that are in full compliance with this requirement after the specified due date will receive a score of 15 points. All others will receive a score of zero.

ASN Accuracy

It is Mark IV's expectation that suppliers support the receiving locations by transmitting timely, accurate ASNs. ASNs are critical to purchasing because they

provide feedback confirming that the releases or kanbans have been filled and the product is being shipped as required. Mark IV receiving locations may, at their discretion, waive the ASN requirement for some suppliers.

Purchasing at the receiving locations will award a score between zero and 15 relative to timeliness and accuracy of the suppliers' ASNs. For suppliers who have had the ASN requirement waived, the default score of 15 will apply. Three points will be subtracted for each ASN that fails to meet the timeliness or accuracy requirements. The minimum score will be zero.

Supplier Service/Support Rating Calculation Example:

For example, if supplier "X" was late on one PPAP, sent two inadequate corrective action reports and a late quotation, fully supports EDI, had two noncompliant ASNs, and was late submitting NAFTA Certificates of Origin, the support overall score would be calculated as follows:

Category	(Calculation)	Score
PPAP Performance	(20-5)	15
Responsiveness	(35-15)	20
EDI Compliance	(15)	15
NAFTA Compliance	(0)	0
ASN Accuracy	(15-6)	9
Total Service/Support Score	(Sum)	59

Overall Performance Scorecard Rating Calculation Example:

The same supplier "X" had shipped 100,000 units during a rating period containing 20 shipments, and had 50 parts rejected as nonconforming in one of the shipments (one QR). A bent part was found at a customer plant and Mark IV sorted product at the customer location (one SQE). Using the formulas supplied, the PPM would be 500 and the PPM score from the table would be 73. The QR score would be 95. The overall quality score for the rating period is $((73+95)/2)-25$, which is 59. During the same period, one shipment was late and quantities shipped were all within tolerance limits, resulting in a score of 95. One premium freight shipment occurred. The delivery performance score would be $95-1$, which is 94. Taking the support score from the example above, the overall rating calculation would be as follows:

Performance Area	Area Score	Factor	Adj. Score
Quality Performance	59	.40	23.6
Delivery Performance	94	.40	37.6
Service/Support Performance	59	.20	11.8
Overall Performance Rating			73

The following matrix will be used in evaluating suppliers with scores in the following ranges:

Point Score Range	Category	Explanation of Score
95 – 100	Excellent	Preferred candidates for additional and future business. Level needed to maintain preferred supplier status.
85-94	Acceptable	Candidate for future business.
70 – 84	Marginal	If score is in this range for 3 consecutive monthly rating periods, the supplier will be placed on probation and will only be considered for future business with Mark IV under OE customer direction or after reinstatement criteria are met.
0 – 69	Unacceptable	Suppliers' top management will be requested to attend an inquiry where the performance will be reviewed. Market testing and re quoting activities could occur.

Suppliers that consistently fail to achieve acceptable performance ratings will be placed on probationary status. Suppliers on probation may forfeit the right to quote new business and, if the performance problems are severe and repeated, are subject to removal from the approved supplier list(s) of the receiving location(s). Suppliers' top management may be required to attend meetings with Mark IV Quality, Purchasing, and Operations management at the Mark IV receiving locations to assist in resolution of performance problems and to present action plans designed to raise performance to acceptable levels. Suppliers that have been placed on probationary status will be required to perform at acceptable levels for two consecutive rating periods before they can be removed from probation. Mark IV Logistics and plant purchasing functions control suppliers' probationary status. Corrective action will be required for any rating category consistently scoring below the acceptable range.

Performance rating summaries will be calculated, published, and distributed to the supply base, on a monthly basis, by the receiving location purchasing

functions. The report cards will contain 12 month performance histories for all scoring categories. Distribution of the reports will be done using the suppliers' primary contacts' email addresses. If email is not available, ratings may be faxed or sent by regular mail.

Disputing Ratings:

Mark IV will strive to be fair and accurate in calculating and determining its suppliers' performance ratings. There may be times, however, when a supplier believes that the assigned rating is incorrect or unfair. Suppliers have 30 days from the time of issue of the latest ratings to dispute scores. Suppliers should contact the appropriate Mark IV Purchasing or Logistics authority to attempt to have a score changed. Suppliers must present documented evidence to show that the awarded score was unfair or incorrect. Examples of such documentation could be:

1. Releases
2. Kanbans
3. EDI information
4. Purchase Orders
5. Bills of Lading
6. Signed deviation requests
7. Approved PPAP warrants

Based on the evidence presented, Mark IV may revise the supplier's disputed rating. Mark IV will attempt to resolve the issue within 10 working days from the date of the initial contact by the supplier. Final authority for rating adjustments lies with the respective plant Materials or Logistics Manager.

Glossary of Acronyms and Terms

AIAG (Automotive Industry Action Group)

An automotive industry trade association dedicated to improvement of processes and productivity. The North American vehicle manufacturers and their suppliers collaborate in this organization.

Approved Suppliers

Suppliers who have satisfied the evaluation and selection criteria as outlined in the Supplier Selection Procedure are Approved Suppliers. After final approval, the supplier name is added to the respective Approved Supplier List.

APQP (Advanced Product Quality Planning)

The activities by which processes used to manufacture new (and changed) products are defined, risks are assessed, and controls are established in order to prevent nonconformance.

ASN (Advance Shipping Notice)

An electronic transmission, from the supplier to the customer, containing required information about the product shipment.

Certified Stock

Product that has been 100% inspected and/or gaged in addition to the supplier's normal manufacturing controls in order to verify conformance to requirements. Generally, MARK IV receiving locations require that certified stock be specially marked.

Deviation

Written authorization by the customer allowing shipment of product that does not conform to all specifications. Deviations are typically limited in scope and duration and corrective action by the supplier is required to prevent future occurrences.

EDI (Electronic Data Interchange)

A system of electronic data exchange between trading partners. EDI is used to transmit forecasting information as well as shipment information.

ISO (International Organization for Standardization)

An international organization of national standards bodies dedicated to the preparation of international standards. The ISO 9000 series is the international standard for quality systems and has been adopted as the American national standard.

Non Standard Freight

Any freight charges incurred that result from transportation outside the normally contracted delivery routing. This could include additional trucks or special courier service.

PPAP (Production Part Approval Process)

A disciplined, documented method for verifying that new and changed processes and products meet all specified requirements-physical, chemical, dimensional, and appearance (when required).

PPM (Parts Per Million)

A measure of a supplier's product quality. It is expressed as the number of nonconforming products received per million parts shipped. PPM provides the customer with a tool with which to compare suppliers' performance on a level playing field.

RFI

A request for information.

RFQ

A request for quotation.