



To: **Potential Limousine Vehicle - QVM Program Applicant**

Subject: **QVM Program Qualification Requirements: 2018-19 Model Year Update**

Background

The Qualified Vehicle Modifier (QVM) program focuses on the manufacturing of safe limousines, in conjunction with compliance with Federal Motor Vehicle Safety Standards (FMVSS), process and quality control, and a commitment to continuous improvement. This document is a review of the policies that are currently in place to coincide with the on-going changes of the QVM program and of the conversion industry.

The following provides a general overview of the QVM program requirements for new applicants and related conversion information for the Lincoln MKT Town Car. Complete conversion information is contained in the latest QVM Limousine / Hearse Builders Guide. **The information that follows pertains to the QVM Program for the 2018 model year and beyond until updated.** The Builders Guide can be viewed at our website: www.fleet.ford.com/limo

QVM Program - New Builder Approvals

The following outlines the general process and highlights some of the major requirements for prospective QVM program applicants to qualify for the QVM Limousine Vehicles conversion program. The information provided is not meant to be complete, but is intended to provide a general overview of the QVM qualification process. Complete information regarding the qualification process can be obtained by contacting the QVM Engineering Office @ 313 / 322 - 7926.

Note: *Neither Ford Motor Company or QVM Engineering makes any determination as to the safety of any specific QVM built vehicle. The information reviewed by QVM Engineering is for the purpose of auditing QVM manufacturers to determine if they comply with our recommendations. All QVM manufacturers are solely responsible for the certification and safety performance of their products.*

PHASE 1 - A prospective applicant will be required to comply with the following as well as all other QVM program requirements to receive QVM Program approval:

- **Written Request for Consideration** - A prospective QVM applicant must first submit a written request stating their desire to be considered for QVM program approval. The request must contain the following:

- √ Detailed Company / Corporation information - including parent company names or other substantial holding interests. Also, the names of all chief operating officers and key management.
- √ Offices and manufacturing facility information - including location and facility size. Also, include any intended affiliation with other manufacturing organizations if the entire conversion process will not be performed at the main facility.

NOTE: *A prospective QVM applicant or current QVM builder may not be involved in any way with another manufacturing facility that manufactures vehicles and is NOT intending to be, or, is not a member of the QVM program. This includes facilities / companies which build non-QVM compliant Ford Motor Company vehicles.*

- √ Demonstrate the ability to secure a minimum of \$5 Million of General Liability Insurance.
- √ Projected start-up date.

QVM Program - New Builder Approvals (con't)

- **Design / Model Information** - A prospective QVM applicant must provide the following information for each model or group of converted vehicles intended for production:
 - √ Vehicle model or type (Limousine, funeral coach, 6-door, 24 hour car)
 - √ Wheelbase extension lengths to be offered for each vehicle type
 - √ Seating configurations available for each wheelbase extension and vehicle type, showing the designated seating positions and seating area dimensions for each seating position.
 - √ Number of doors (if not the standard; 4), for each wheelbase extension and vehicle type (i.e.; 5, or 6)
 - √ Total rated passenger capacity **INCLUDING DRIVER** for each wheelbase extension and vehicle type.
- **Weight Analysis** - In addition to a design report each QVM must submit a weight study detailing the actual or estimated weight of all added structure, including wiring, carpet, trim materials and included options (i.e.- sunroof, auxiliary A/C unit and hardware, electrical accessories,...). The weight analysis should start with the curb weight of a MKT Town Car 400A or 401A Package (as received from the factory), and provide detail demonstrating that the added weight of the structure, passengers and luggage meets the QVM Gross Vehicle Weight (GVW) guideline of 7450 (hearse), 7650 (70-80") or 7950 (120") pounds for MKT Town Car. For analysis purposes, assume that the curb weight of a 400A(limo)/401A(hearse) Package MKT Town Car is 4800/4700 pounds. (see page 5 - section titled 'Vehicle Platform Requirements' for GVW information for hearse applications).
- **Product Design Assumptions** - The following design assumption or standards are to be used during the conversion design and development process. These standards are only guidelines and not intended to cover all situations.
 - √ Weight / Passenger = 150 pounds
 - √ Casket & Contents = 350 pounds
 - √ Standard Luggage Load = 200 pounds
 - √ *Minimum Luggage Load = 100 pounds (***requires a restriction label***) * [luggage load restriction does NOT apply to hearse conversions.]
- ****FMVSS / CMVSS Analysis-** Each prospective QVM applicant must provide documentation demonstrating compliance with all applicable FMVSS (CMVSS if exporting to Canada) for their proposed conversion design(s). Compliance statements must be provided for all applicable standards - including standards deemed to not be affected during the conversion process. For standards not affected during the conversion process, the statement should justify the conclusion as to why the standard was not affected. When providing FMVSS compliance statements for standards affected during the limousine conversion process, each coach builder should include a statement that answers the following fundamental questions:
 1. What is the standard; not just the title, but a short statement that describes the purpose and intent of the standard.
 2. What does it take to pass the standard; provide detail or a summary of how the standard is satisfied or what must occur to comply - this could include numeric and/or qualitative measures.
 3. Why does your vehicle pass the standard; indicate the actual or projected performance of your vehicle design with respect to the standard under review. Make comparisons and reference the standards acceptance criteria. Also, what supports your conclusions that your vehicle meets the standard? This data must be accessible for inspection and review. Always **reference** testing data used for proof of compliance by test number, VIN, etc...

QVM Program - New Builder Approvals (con't)

To assist the QVM Program members with determining compliance with government safety standards, Ford Motor Company has conducted analytical analysis and physical testing for several FMVSS standards typically affected during the vehicle conversion process. This data (commonly referred to as "group test data") is available to all members of the QVM program. This data is only applicable if all associated conversion guidelines and assumptions presented in this document and the QVM Limousine Builders Guides are followed. Any deviation or departure from these guidelines requires approval and written authorization from the QVM Engineering office. After successfully completing the requirements for 'Written Request for Consideration', 'Model/Design Information' and 'Weight Analysis' the QVM Engineering Office will loan the prospective QVM applicant this data for use in determining FMVSS compliance. This information is confidential and the property of Ford Motor Company. The documentation must be returned to the QVM Engineering Office if the prospective applicant does not successfully qualify for QVM approval.

If a prospective applicant does not have adequate experience interpreting FMVSS regulations, the QVM Engineering Office strongly encourages that assistance from an experienced professional engineer be considered to assist in the interpretation of these standards. If this method is chosen, a full time employee of the company must be trained and dedicated as the FMVSS liaison to insure that the stated compliance is not affected during daily manufacturing operations.

***Crash test data will be provided to the perspective QVM upon request. This process starts in PHASE 1, and is an ongoing process until statements of compliance are reviewed during the final 'on-site' inspection audit.**

PHASE 2 - Once the steps in Phase 1 have been completed and reviewed by the QVM Engineering Office, the prospective builder will be authorized to begin manufacture of their first two QVM approved builds for the vehicle inspection process (see below). All conversions manufactured before completing these reviews are not eligible for QVM program consideration.

- **'Good Faith' Agreement** - Once a prospective applicant enters into the QVM qualification process they agree to follow the program guidelines as presented in this document and the MKT Town Car Limousine / Hearse or Navigator Builders Guide. This 'good faith' agreement applies with the onset of the Phase 2 criteria until such time that the prospective applicant is either approved or disqualified from QVM consideration.
- **Facility & Converted Vehicle Inspection Audit** - After the above paper work has been received, reviewed, and approved by the QVM Engineering Office, an on-sight facility and vehicle inspection audit will be scheduled. At this time the prospective QVM will be authorized to convert two trial vehicles which will be reviewed at the audit. The vehicle inspection review will be conducted on one completed unit that represents the highest content / weight and longest extension length authorized during the Phase 1 review process. The second vehicle must be in a partial completion stage to allow for review of the interior structure and chassis modifications. This on-site inspection will focus on the following criteria:

- √ Facility and manufacturing process readiness (**see attachment 1: The QVM principals and rating system brochure**)
- √ Converted vehicle construction and verification to submitted design analysis and QVM guidelines. See the Builders Guide for details. www.fleet.ford.com/limo

PHASE 3 - Once the above stages are completed successfully, the newly approved builder will be required / restricted to the following:

- **Sign a QVM Agreement** - The newly approved builder must sign a QVM contract and meet all the stipulations contained within the agreement.
- **Mandatory Probation Period** - The newly approved builder will be under a one-year probation period to assess their capability to meet program guidelines.
- √ **Vehicle Weights / Requirements** - For approval, a QVM manufacturer must acquire the use of and/or purchase scales in order to weigh vehicles at the appropriate GVW that applies. The weight information is documented on a QVM Weight Ticket. Each vehicle produced will require a weight ticket until written instruction from the QVM Engineering Office states otherwise. **(See Attachment 3 below.)**
 - **Calibration information for your purchased scales must be available and scales must be recalibrated every calendar year.**
- **Wheelbase Extension Length Limit** – *Each new potential QVM will be able to produce any length vehicle that best suits their business case. The maximum length allowed by the QVM program is as follows. **MKT Town Car = 120 inches.** In order to ensure that quality and safety are maintained, the following criteria has been established as a requirement for building vehicles at their maximum limit for new QVMs.*
 - *The first 25 vehicles produced will be required to have the following documentation*
 - *A QVM weight ticket showing **all** weights required (see attached QVM weight ticket)*
 - *Owner information for the vehicle including; Company name, address, phone number, email address, and contact name if different from the company name.*
 - *A written approval (email or otherwise) from this office for the release/sale of each vehicle is required before they can be released to the end customer.*

**** The QVM Office reserves the right to review the above information and conduct surveys of vehicle customers to assess the newly approved builder's capability to meet QVM requirements for quality, customer satisfaction, and conversion design and durability considerations.**

- **6 - Month Interim Status Review** - The QVM Engineering Office will conduct an interim status review to confirm the newly approved QVM builders performance to program objectives. This review will examine the following:
 - √ Feedback on Conversion Quality and Customer Satisfaction from the FCSD Hotline (800/ 34-FLEET)
 - √ Customer Satisfaction Mail / Phone Survey Results (If deemed necessary)
 - √ Certificate of Completion Reports / Incentive Program Compliance
 - √ Compliance to Conversion Restrictions / Guidelines

See Attachment 2 - Flow Chart / New Builder Approvals - for a summary of the qualification process.

Vehicle Platform Requirements

QVM approved conversions are to be constructed on the indicated heavy-duty option packages and are required to meet the following GVW guidelines. Contact the QVM Engineering Office for more information or questions concerning vehicle platform capabilities.

- All conversions must be completed on the specified heavy duty package:
 - ✓ MKT Town Car Limousine – 400A option package
 - ✓ MKT Town Car Hearse – 401A option package

Note: Any **other** Ford Motor Company vehicles than the ones mentioned above are restricted from conversions and will lead to immediate dismissal from the QVM program. All following vehicle brands are restricted from conversion:

- Ford
- Lincoln

The QVM Spirit

QVM certification is not just a program for vehicle modification. QVM envisions complying with the spirit of the program and is intended to create trust between the customer, coachbuilder, and chassis manufacturer with a goal of producing vehicles that meet approved crash and durability standards. QVM is not intended to simply provide a mask (certification) to hide behind, or solely a method for receiving conversion incentives to increase QVM profitability. QVM is about doing the right thing with all partners involved in the business, even if QVM is not the most convenient or aggressive path available.

Therefore, a QVM builder may **not** be involved in any way (including ownership, partial ownership, or receiving profits) with another manufacturing facility that manufactures vehicles outside of the QVM program guidelines, and is **not**, or not intending to be a member of the QVM program. This specifically includes facilities / companies which build non-QVM compliant Ford Motor Company vehicles including all Ford Motor Company affiliated vehicles such as: Ford trucks, Lincoln, and Lincoln trucks. Affiliation with such a company is grounds for immediate dismissal from, and loss of all benefits associated with the QVM program.

If you need further clarification of this policy, please call the QVM Engineering Office: 313 / 322 - 7926

Platform Maximum Weights

- GVW limits for QVM approved conversions are as follows:
 - ✓ MKT Town Car Limousine (120") = 7,950 pounds
 - ✓ MKT Town Car Limousine (70-80") = 7,650 pounds
 - ✓ MKT Town Car Hearse (44") = 7,450 pounds

QVM Program - Vehicle Conversion Highlights

The following information provides a general overview of some of the new or revised conversion requirements associated with the QVM program. These requirements are applicable to all QVM conversions unless indicated otherwise. The information provided is not meant to be complete, but is intended to provide an overview for product design and development purposes.

- **B-Pillar Body Reinforcement - Full OEM B-pillars are required at all locations in the conversion.** B-pillars must be purchased from the approved OEM source. QVM Engineering must approve any modifications to the OEM B-pillar.

B-Pillars / Pillar Spacing

- ⇒ Only OEM factory approved B-Pillars may be used at door locations.
- ⇒ B-pillars can not be split or modified in any way
- ⇒ **All pillars MUST be welded with a full / continuous seam at the top, bottom, inside and outside attachment points**

*** If there are any questions regarding b-pillar usage and/or spacing, please contact the QVM Engineering office: 313-322-7926**

***** All Builders Guides may be viewed on our website at www.fleet.ford.com/limo**

- **Side Impact Intrusion Beam** - The side impact beam for the extended section of the converted vehicle must meet or exceed the following guidelines:
 - Round tubing
 - OD = 1.251 x wall = 0.0945 (inches)
 - >230 KSI , Tensile strength
 - Maximum unsupported span (distance between B-pillars) of 70 inches.
 - Rigidly attached at each B-pillar
- **Roof Supports** - OEM style (or equivalent) roof supports must be located and positively attached at each B-pillar reinforcement.
- **Driveshaft Length** - The OEM driveshaft length can not be extended. Multiple section drive shafts are required for all wheelbase extensions.
- **Center Divider Attachment** - The center divider (i.e.-partition) must be rigidly attached to the body structure.
- **Body Cut Line** - the body separation cut line must be rearward of the front door B-pillar as specified.
- **Door Configuration** - Vehicle designs with wheelbase extensions over 100 inches which incorporate more than four (4) doors **must be reviewed and approved by QVM Engineering.**
- **Framing Fixture** - All QVM manufacturers are required to incorporate a rigid vehicle cutting fixture during the extension process. This fixture must be constructed to reference the master locator holes of the OEM frame. This will insure accuracy during the extension process and prevent excessive front to rear axle thrust angle concerns. **This fixture must be in place and functioning at the time of the annual QVM audit.** *Details on the cutting fixture are in the Builders Guide. You can view the Builders Guide Online at www.fleet.ford.com/limo*

QVM Program - Key Contact List

The chart below provides the contact names / numbers for several areas that support a prospective builder during the QVM application process.

Questions Regarding	Contact-Area	Phone (p) / Fax (x) / Cell [c]
The QVM Program, The QVM application process, engineering or the conversion process	Jeff Metz - QVM Engineering Office (jmetz@ford.com)	313-322-7926 p 313-805-3157 c 313-390-3160 x
<ul style="list-style-type: none"> • Incentive program information • MKT Town Car & SUV order status • Advertising information,(clip art, brochures) 	Kim Johnston- QVM Fleet Office (kjohnst3@ford.com)	313-390-2779 p 313-390-3488 x
QVM incentive process, claim forms, payment schedule	Kim Johnston- QVM Fleet Office	Same as above

Financing, or setting up a credit line for purchasing QVM limousines	Ford Motor Credit Commercial Lending Services	800-706-0997 p
-Acquiring a Fleet Identification Number (FIN) - (required to order and purchase MKT Town Car 418/419 option Limousine/Hearse Builders Package chassis 17 L Navigator & 800A Excursion limo chassis) -Fleet Service Assistance	Ford Fleet Business Office. Commercial Vehicle Operations	800-343-5338 p For FIN info follow the menu. For Fleet Service ONLY! use: <i>Menu pick – 3</i>
Purchasing OEM approved B-pillars required for QVM approved limousine conversions round crash beam bar material.	Bud Thomas- Infinite Innovations	417-863-0300 p 417-863-0320 x

If you have any questions or need more information, please contact me or the QVM Engineering Office.



Jeff

Jeff Metz
QVM Engineering Office /Program Coordinator
313 / 322 - 7926

Dick

Dick Cupka
QVM Engineering Manager
313 / 322 - 1730



The Qualified Vehicle Modifier Program (QVM) Principals / Rating System

Coach-builders who build vehicles based on Ford cars help to contribute to Ford Motor Company's success, and Ford wants to contribute to the success of the coach-builders. The goals of the Qualified Vehicle Modifier (QVM) program are the production of higher quality vehicles and improved customer satisfaction. The program is open to the builders of limousines and professional cars,(i.e.: hearse/6-door family car/24 hour cars). This is a voluntary program open to any builder in these segments, and each builder will be rated on the same basis. The QVM program is intended to concentrate on the process of design, manufacturing and quality controls and is not intended to, nor will Ford, endorse any vehicle produced.

This brochure was developed to help coach-builders better understand the QVM program and rating system. The information provided is not meant to be complete, but is intended to provide an overview of the basic principles and guidelines of the program. Using the information contained in this brochure and in conjunction with the Lincoln MKT Town Car Limousine/Hearse Builders Guide, builders may be able to conduct their own self evaluations and estimate their potential of becoming a part of the QVM program.

General Principals

The QVM rating system seeks to measure a coach-builder's ability to meet Ford guidelines and assesses a coach-builder's commitment to continuous improvement. If a builder has multiple facilities making products that are included in the QVM program, then all facilities must be inspected and acceptable before a builder can become qualified.

To support this program, a Limousine QVM Engineering Office has been established within Ford Motor Company. This office is responsible for administering the QVM program, coordinating resolution of engineering issues, and acting as the focal contact for engineering issues for the coach-builders.

Qualification for the QVM program is based on a review on a regular basis of approximately once/year. The main emphasis of the QVM program is the evaluation of procedures and build controls, and also includes reviews of the following:

- FMVSS/CMVSS
- Quality control
- Manufacturing process and controls
- Philosophy on quality and continuous improvement commitment
- Adherence to Ford guidelines
- Representative vehicles in process
- Customer support system(s)

The QVM program does **not** include:

- Analysis of each vehicles engineering, build or quality control specifications, process, and/or parts
- FMVSS or emissions testing or analysis of a builder's FMVSS or emissions testing
- Evaluation of add-on equipment
- Finished vehicle testing
- Inspection of every vehicle produced
- Inspection of vehicles not specified in the program
- Inspection of service records, unique facilities, etc.

The QVM Rating System

Background

The QVM rating system seeks to measure a builder's ability to meet Ford guidelines and assesses a builder's commitment to continuous improvement.

The QVM rating system is not designed to compare one coach-builder to another, but is used to analyze the full potential of each individual builder. The QVM Engineering Office concentrates on the improvement of the manufacturing process and controls of building a limousine vehicle, and intends to facilitate each coach-builder in maximizing their absolute highest potential.

In order to have a quantitative analysis toward the inspection process of each coach-builder, a simple rating system was designed that is based upon a 3 point maximum.

-3 points = Item has been demonstrated, is in place, or has been completed by the coach-builder.
-2 points = Coach-builder has attempted to complete, or is in the process of completing the item, OR, item needs some revision after first attempt.
-1 point = Coach-builder has made little effort at completing an item, OR, is in the beginning stages of completing an item.
-0 points = Coach-builder has made no effort at completing an item.

QVM Rating System Criteria

The criteria for the QVM rating system is sorted in the following manner:

Mandatory - A Coach-builder must have in place, or can document that the item is in the process of being put in place to obtain QVM status. The mandatory categories determine whether a coach-builder is eligible to become a QVM. QVM status will be withheld until the item can be shown to the QVM Engineering Office as being implemented. (Please see page (3 & 4) for Mandatory criteria).

Recommended - These criteria are recommended by the QVM Engineering Office, but are not mandatory for initial QVM certification, however, these items *are covered extensively* during the facility inspection. If a coach-builder does not have in place, they must develop a plan to satisfy the item and submit to the QVM Engineering Office for review within 30-60 days. Recommended criteria suggested by the QVM Engineering Office must be in place by the next annual audit. (Please see page (5) for Recommended criteria)

Continuous Improvement - This subject is important to help improve the coach-builders overall process. The coach-builder should attempt continuous improvement items each model year. The QVM Program emphasizes continuous improvement, and items may be suggested by the QVM Engineering Office as a continuous improvement item from observations made during a facility visit / audit. These continuous improvement item suggestions from the QVM Engineering Office may not necessarily appear on the continuous improvement criteria list. (Please see page (6) for Continuous Improvement criteria)

Mandatory Rating Criteria

Process Controls

Each check is worth 3

- √ **FMVSS understanding and conformity**
 - Ability to demonstrate compliance and understanding of all applicable standards, especially standards directly affected by the limousine manufacturing process
- √ **Engineering Drawings / Critical Process Sketches**
 - Demonstrate parts and critical process drawings and concepts. Are these drawings easily accessible to anyone who may need them?
 - Are they updated on a regular basis in the process books ?
 - Who is responsible for updating these items ?
- √ **Weight and Electrical Load Analysis**
 - Identify an analysis for the weight of production vehicles, and their electrical load to ensure production is within GVWR and the electrical load capacity of the vehicle is not exceeded.
 - Demonstrate the purchase of private scales in order to measure vehicles with four corner weights.

Quality Controls

- √ **Written direction used in all stages of the manufacturing**
 - Demonstrate written direction process for quality and repeatability
 - Written direction supported by visual aids in critical areas ?
- √ **Engineering change control**
 - Demonstrate the use of change control. Can documentation be provided to show the process of an engineering change? Check/sign off for all pertinent areas including FMVSS affected changes?
- √ **Operator/Foreman knowledge of FMVSS & QVM requirements**
 - Sign-Off / Check sheet available?
 - Appointed FMVSS & QVM guideline inspector / specialist?
 - How is this person trained?
- √ **Road test performed and set road test route and procedure in place**
 - Demonstrate / show the document that reviews the route
 - Is the route formalized?
 - Sign-Off / Check sheet available?
- √ **Critical control items identified**
 - Weld integrity and critical torque monitored on a regular basis**
 - Weld integrity / critical torque check sheet / Sign-Off?
 - Crucial chassis modification inspections**
 - Sign-Off / Check sheets available?
 - In-process quality control checks of critical structural items**
 - Demonstrate the process. Check sheet available / Sign-Off?
 - Critical parts identified and tracked**
 - How are critical parts tracked from purchasing through production?
 - How are wrong parts prevented from being used in production?

Mandatory Rating Criteria - Con't

- √ **In-process testing performed for quality control**
 - ⇒ **Electrical**
 - Demonstrate the understanding of the aftermarket electrical system installation and OEM compatibility (fuses, gauges)
 - ⇒ **Water, air, fluid**
 - Demonstrate the test or area in which each is tested
- √ **Labeling**
 - Inspection area? Sample labels and sign-off sheet available?

Customer Support

- √ **Owners manual provided, including electrical, supplier, and Ford vehicle information**
 - Does the customer understand the information, or are they provided a contact within the organization to resolve issues regarding written material?

Vehicle Build / Modification (See Limousine/Hearse Builders Guide for details)

Here, each heading is worth 3

Chassis:

- √ **Cutting fixture as described by QVM Program Guidelines**
 - Demonstrate the operation of the cutting fixture, including proper measurement documentation for each vehicle
- √ Fuel System - OEM extensions and fittings
- √ Exhaust / heat shields used where needed
- √ Frame extension - QVM / per Builders Guide
- √ Weld techniques at critical areas approved
- √ Air condition / heating - Tubing - Return air system
- √ Suspension / front springs used on vehicles where needed for weight
- √ Tires / wheels - OEM / GVW compliance
- √ Brakes-OEM lines and fittings
- √ Engine / Transmission / Driveline-Extension approved
- √ GVWR Compliance - Provide certified weight tickets on highest content vehicles

Body / Electrical:

- √ Floor / rocker / mounting
- √ Roof rails / bows - location
- √ Seating / restraint systems - seat belts
- √ Electrical management system - Are tapping locations approved and recommended by either Ford or the aftermarket supplier?

Seating / Seating Restrictions:

- √ Does seating coincide with QVM size guidelines ?
- √ Does seating coincide with GVW capacity ?
- √ Are restrictions robust / tamper proof per QVM recommendation ?

This section is worth a total of 42

Recommended Rating Criteria

Process Controls

Each check is worth 3 points

- √ **Problem anticipation / prevention**
 - Demonstrate how problems are anticipated and / or prevented

Quality Controls

- √ **Inspection / rejection procedures and control items identified**
 - When an operator recognizes a potential issue, are controls in place to follow a procedure to reject a vehicle in advancing in the manufacturing process?

Customer Support

- √ **Parts and service network and training**
 - How can customers / dealers / service centers obtain parts and service, and do they know where to go for information on these subjects?
- √ **Warranty analysis , customer follow-up , and extensive customer satisfaction plan**
 - Demonstrate a plan that identifies warranty issues, and tracks customer satisfaction, and how warranty issues are corrected.

Quality Planning / Training / Management Control

This heading is worth 3 points

- √ Does the company have a quality plan that identifies key goals ?
- √ Training program for operators and foreman with regard to quality , FMVSS and Ford requirements
- √ How does management respond to quality concerns? Customer complaints? Warranty? Resolution?
- √ Management's commitment to continuous improvement -examples
- √ Does management emphasize process controls? . Effective communication, employee involvement ?
- √ Does management monitor quality in manufacturing and regarding FMVSS compliance?
- √ Is there a chain of command in place for issuing concerns of non-compliance in either FMVSS or QVM standards?

This section is worth a total of 15 points

Continuous Improvement Rating Criteria

Process Controls

Each check is worth 3

- √ **Engineering innovative / progressive**
 - Are engineering ideas shared with all employees / encouraged?
 - Is there a continuous effort to attempt to improve the engineering of the vehicle, and can these efforts be demonstrated?
- √ **Engineering specifications used to purchase parts consistent with Ford specifications**
 - Can parts be analyzed to determine their compatibility to Ford specs.

Quality Planning / Training / Management Control

- √ **Are there training methods for problem anticipation and resolution?**
 - Does management train or have training for employees on problem anticipation and resolution?
- √ **Training plans - Networks**
 - Is there training available for dealers, distributors, and service networks with affiliated manufacturers on company direction and overall quality plans?

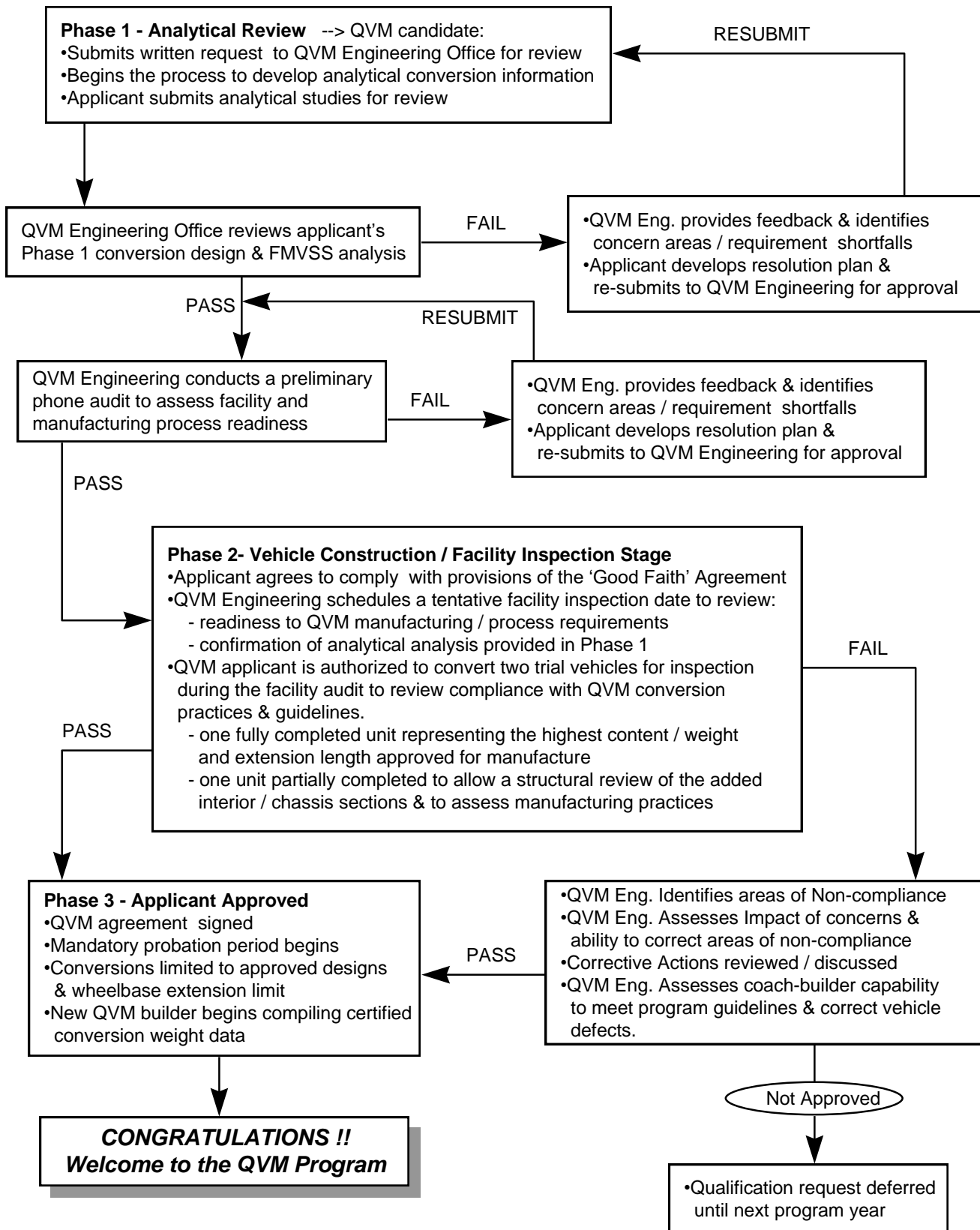
This section is worth a total of 12 points

Written Continuous Improvement Rating Criteria


During a facility visit, the QVM Engineering Office will make continuous improvement recommendations that may not be listed on the QVM Rating Sheet. These items will be clearly explained and pointed out to the coach-builder during the review of the audit.

If there are any questions, please contact the QVM Engineering Office: 313 / 322 – 7926

QVM New Builder Approval Process



Attachment 2

OFFICIAL QVM WEIGHT TICKET — 2017					
VIN	<input style="width: 100%;" type="text"/>				
VEHICLE TYPE:	LIMO <input style="width: 50%;" type="text"/>	HEARSE <input style="width: 50%;" type="text"/>			
TOTAL WHEELBASE EXTENSION	HEARSE IS ALWAYS 44"				
TOTAL NUMBER OF PASSENGERS	<input style="width: 50%;" type="text"/>	INCLUDING DRIVER			
RIGHT FRONT PASSENGER SEAT INSTALLED?	YES <input type="checkbox"/>	NO <input type="checkbox"/>			
RSC MODULE CONFIGURED?*	YES <input type="checkbox"/>	NO <input type="checkbox"/>			
TIRE PRESSURE					
	LF	RF	LR	RR	
	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	
CURB WEIGHT CORNERS					
	LF	RF	LR	RR	
	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	
TOTAL CURB					
	FRONT	REAR	TOTAL		
	0	0	0		
NORMAL LOAD CORNERS					
	LF	RF	LR	RR	
	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	
TOTAL NORMAL					
	FRONT	REAR	TOTAL		
	0	0	0		
MAX GVWR CORNERS					
	LF	RF	LR	RR	
	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	
TOTAL GVWR					
	FRONT	REAR	TOTAL		
	0	0	0		
FUEL LEVEL					
	EMPTY	1/4	1/2	3/4	FULL
HIGHLIGHT FUEL LEVEL					
SCALE INFORMATION					
MANUFACTURER	<input style="width: 100%;" type="text"/>				
DATE LAST CERTIFIED	MO	DAY	YR		
	<input style="width: 50%;" type="text"/>	<input style="width: 50%;" type="text"/>	<input style="width: 100%;" type="text"/>		
*THE INFORMATION ABOVE IS CERTIFIED TO BE ACCURATE:					
QVM	<input style="width: 100%;" type="text"/>				
AUTHORIZED EMPLOYEE*	<input style="width: 100%;" type="text"/>				
*THE SIGNING OF THIS DOCUMENT ALSO CERTIFIES THAT ALL APPLICABLE LABELS HAVE BEEN PLACED ON THE VEHICLE ABOVE PER ANY QVM AND/OR FMVSS REGULATION					
SEND WEIGHT TICKETS TO JEFF METZ VIA EMAIL: JMETZ@FORD.COM					