

Folketingets Trafikudvalg

Æret medlemmer af Trafikudvalget.

Som alle er bekendt med kommer vi fra Limousine Branchen (Med forlænget Limousiner) baggrunden for vores henvendelse til jer er at vi gennem mange år forgæves har søgt kontakt med Færdselsstyrelsen om godkendelse af de importerede biler som er forlænget (Stretch Limousiner) under samme regler som i resten af Europa dog uden held, idet FS ikke ønsker en dialog om denne sag med henviser til deres love og regler uden hensyntagen til at de biler vi køre i er ombygget efter de regler som Ford & Cadillac samt Chrysler forlanger for at deres biler bliver ombygget. FS nægter at godkende Ford & Cadillac samt nu også Chryslers sikkerhedsprogrammer.

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Problemet er at FS benytte et nyt direktiv fra EU om persontransport (busser), hvor man ændrede reglerne så sidevendte sæder ikke længer er tilladt og derved overføre den samme lov til Limousiner, men da Limousiner som hovedregel har sidevendte sæder vil det betyde at branchen ikke længer kan indføre den type bil i Danmark, samtidig stiller de krav om nakkestøtte såfremt bilen har sidevendt sæder, så lang så godt, men FS sige jo at man ikke længer vil godkende forlænget biler, men forlanger på den anden side overholdelse af de andre regler, så oplyser de at man kan få godkendt bilen såfremt man kan fremskaffe dokumentation på forlængelsen, hvis man ikke kan fremskaffe denne, siger de så at man kan køre til Tyskland og få fortaget denne test TUV godkendelse (Merkblatt 751) men oplyser samtidig at man ikke godkender en TUV godkendelse.

De ovennævnte punkter gælder kun for en bil (Limousine) det vi økonomisk betyde at hver enkel Vognmand skal betale en ekstraomkostning på op til kr.300.000.- pr bil selv om man har fulgt de regler som er gælder alle andre steder i Europa og USA, tager FS et særstandpunkt.

FS påstand er at hverken Ford eller Cadillac garanterer for bilerne, selv om det tydeligvis fremgår af deres egne hjemmesider at forudsætningen for godkendelse af ombygning er at der benyttes special modeller fra Ford og Cadillac, samt nu også Chrysler, de biler der ombygges kan ikke engang køre når de modtages på ombygnings fabrikker, idet de kommer uden kabler og bremse rør samt andre dele, bilerne kommer med Heavy-duty forstærkninger på alle sikkerhedsdele (se bilag CMC & QVM) og alle 3 fabrikker giver garanti på bilerne som hvis man køber en alm. Sedan model, men som her er ombygget til Limousiner, ombyggerne giver garanti på resten, dette påstår FS ikke er rigtigt (Se bilag garanti) og bilag med mail fra FS, samtidig påstår FS at bilerne ikke overholder de accepterede amerikanske sikkerhedsstandarder og amerikanske (californiske) luftforureningsregler, men hele forudsætningen er netop at bilerne overholder de regler, da Californien i USA er det største markedet for Limousiner og de derfor altid vil overholde de regler.

Der virker som om af FS bevist modarbejder branchen og ikke ønsker at tage hensyn til at vi som Branche kun kan købe vores biler et sted (USA) og at man i USA selv har indført meget strenge regler for Limousinerne og det er vores hensigt at overholde de samme regler som man har andre steder og ikke udsættes for en hetz fra en Styrelse som så åbenlyst hellere så vores hæl end vore tå.

I en udtalelse til Lokalavisen (Se bilag) udtaler en medarbejder at hvis det var en Ford Lincoln kunne man godt få den godkendt og dermed er det efter vores opfattelse en helt klar omgåelse af sandheden, for der afkræves stadig en dokumentation på forlængelsen.

Victor Hollnagel fra Færdselsstyrelsen. Han fortæller Hillerød Posten, at der ikke er sket en ændring af kravene for godkendelse af limousiner fra styrelsens side. Der er, som der i mange år har været, et krav om at det skal kunne dokumenteres, at sikkerheden for Limousinerne er i orden.

En Limousine er groft sagt en standardbil der er blevet skåret op på midten, hvorefter bilen er blevet forlænget med adskillige meter. Dermed kan bilen ikke længere leve op til de sikkerhedskrav, den oprindeligt har gennemgået. Derfor skal firmaerne, der forlænger bilerne kunne dokumentere, at det de skaber fortsat er en sikker bil.

Denne medarbejder udtaler sig uden at vide at de 3 fabrikkers bil modeller udelukket kan og må bruges til ombygning til forlænget biler, som også tydeligt fremgår af fabrikernes egne oplysninger.

I Berlinske udtaler kontorchefen i FS, at vi som vognmænd bare kunne købe godkendte Limousiner som følger de regler der er, problemet er jo at vi netop følger de regler der er gældende alle andre steder i Europa, men FS omgår igen sandheden ved gentagende gange at påstå at det ikke er rigtigt, selv om vi har fremsendt dokumentation på det. (Bilag vedlagt).

Ifølge Færdselsstyrelsen, som sætter kravene til limousinerne, er der dog ikke en finger at sætte på kravene til limousinerne. Her siger kontorchef Ib Rasmussen, at reglerne er som de altid har været, og at det er limousine-vognmændenes eget ansvar at købe biler i udlandet, der lever op til de danske krav.
- Vi kræver de samme sikkerhedsoplysninger, som vi gør til alle andre køretøjer. Det er fabrikanten af bilerne, som skal dokumentere, at bilerne kan tåle at blive brugt, og sådan har det altid været. Derfor er det vognmændenes eget ansvar at købe limousiner, som er testet og godkendt, siger Ib Rasmussen fra Færdselsstyrelsen.

Men for at afslutte denne forklaring, er sagen den at FS er en styrelse der i den grad benytter magt til at tryne alle der har kontakt med dem, om det er os som vognmænd eller andre såsom synshallerne som ikke tør sige en medarbejder i mod fra FS, da det kan få alvorlige konsekvenser for stedet, vi har også haft kontakt med Ford Danmark som ikke ønsker at hjælpe os idet som de siger, vil kunne skabe unødige problemer med FS og fremtidig samarbejde med FS.

Såfremt man beklager sig over for en medarbejder, få man den besked at der er fortaget en afgørelse og denne kan ikke ankes.

Vi ser frem til mødet hvor vi håber at i stiller nogle uddybende spørgsmål og vil efter bedste evne besvare evt. spørgsmål.

Venlig hilsen

Leif Berner

Celebrity Limousine Service

Der vil til mødet også deltage følgende.

Niels Frølich Limousine Service

Jan Kock Vestsjællands Limousine Service

Per Martin Sørensen Starlimo

NOTE : Jan Kock fra Limo2you - Limousine Service.

Som indehaver af Nordens største Limousine Service – med 24 kørende limousiner – har jeg gennem de sidste 30 år importeret 34 limousiner.

Alle 34 limousiner er den dag i dag kørende et eller andet sted i Danmark. Jeg har således selv beholdt de 24 i min egen forretning.

Det er derfor med stor undren, at jeg læser om Færdselsstyrelsens udtalelse vedr. den af Niels Frølich ejede og indregistrerede Chrysler 300 Limousine.

Medarbejder i Færdselsstyrelsen Victor Hollnagel udtaler i artiklen ” at den omtalte Chrysler 300 Limousine er godkendt uden dokumentation og at det er en fejl, at den overhovedet er godkendt ”

Med andre ord kører der en Limousine rundt i Danmark med betalende gæster, som efter Færdselsstyrelsens opfattelse, kan risikere liv og lemmer i tilfældet af en sidekollision, alene med den begrundelse, at færdselsstyrelsen ikke godkender de Amerikanske krav til sidekollision.

Det mærkelige er imidlertid, at synshallerne efterfølgende år efter år godkender selv samme Chrysler 300 Limousine til at transportere betalende gæster i. !!!

Min undring over Victor Hollnagel's udtagelse begrundes jeg med følgende :

Gennem de sidste 10 år har jeg benyttet 5 forskellige synssteder – Nakskov – Nykøbing Falster – Avedøre – Rødovre samt Slagelse.

Jeg har fået synet mine importerede Limousiner af mange forskellige medarbejdere i de 5 forskellige synssteder – lige fra den menige synsmedarbejder over synslederen til områdechefen samt indehaveren af synsstedet.

ÉN AF SYNSFOLKENE ER DEN DAG I DAG ANSAT I FÆRDELSSTYRELSEN.

Mine limousiner er af meget forskellige udførelser – kun ganske få er ” såkaldt almindelige limousiner ”.

Limousinerne er fra 6½ meter til 13 meter – fra 2 akslede til 4 akslede – flere med indbygget seng og en enkelt med indbygget jacuzzi (boblebad) samt 3 limousiner af mærket Excalibur – den ene er en af verdens dyreste limousiner.

Fællesnævneren for alle mine 34 Limousiner er :

ALLE 34 LIMOUSINER ER SYNET OG GODKENDT UNDEN KRÆVET DOKUMENTATION
– HVERKEN DATAERKLÆRING ELLER DOKUMENTATION FOR KOLLISIONSSIKRET
FORLÆNGELSE ELLER ANDEN DOKUMENTATION OVERHOVEDET.

Såfremt Victor Hollnagel's udtalelse omkring Chrysler 300 Limousinen's godkendelse uden dokumentation – altså at Limousinen er synet ved en fejl - samt Færdselsstyrelsens udtalelse om, at der ikke er sket ændringer i synsgrundlaget for limousiner – må jeg blot konstatere og konkluderer følgende:

I 10 ÅR HAR :

5 FORSKELLIGE SYNSSTEDER – Statens Bil Inspektion – A PLUS samt privatejede synshaller

CA. 18 FORSKELLIGE SYNSMEDARBEJDERE (heraf er 1 ansat i Færdselsstyrelsen i dag)

BEGÅET FEJL VED AT SYNE OG GODKENDE ALLE DISSE LIMOUSINER !!!!!!!

ifølge Victor Hollnagel's udtalelse.

Hertil kommer at alle limousinerne fremstilles i synshallerne 1 gang om året til kontrol.

Jeg vedlægger – som bilag - til orientering en synsblanket hvoraf fremgår, at limousinen er synet og godkendt, som en personbil – HVOR DER IKKE ER FORETAGET KONSTRUKTIVE ÆNDRINGER.

Det betyder, at synshallen betragter en limousine som en bil, der er ” færdigbygget fra fabrikken ” og ikke en ” ombygget bil ”

Jeg kan naturligvis dokumentere alle 34 synsblanketter.

Min holdning til ovenstående er :

Det kan ikke være rigtigt, at kompetente synsfolk, i forskellige egne af landet, kan tage så grundigt fejl over en periode på 10 år !!!!

Hvis det er rigtigt, er min forretning opbygget på en stor fejltagelse og jeg har kørt rundt med betalende gæster og udsat gæsterne for en stor fare – i værste fald.

Det kan simpelthen ikke være rigtigt !!!!!

Jeg er aldrig blevet kontaktet af Færdselsstyrelsen omkring denne hændelse gennem 10 år

Hvis der virkelig er tale om en fejl i synssystemet – er det meget betænkeligt, at Færdselsstyrelsen ikke har reageret på det – Færdselsstyrelsen er øverste myndighed og kan således ikke undgå at kende til min virksomhed.

Færdselsstyrelsen har så siddet med hænderne i skødet og ladet stå til.

Denne grove passivitet kan efter min mening ikke undgå at danne præcedens på området.

Færdselsstyrelsen kan ikke bare ændre praksis over natten – uden at informerer de involverede aktører på banen.

Hvis praksis ændres og der ikke er tale om en lov ændring – må en sådan praksis ændring ikke komme firmaer til skade, der har arbejdet ud fra det samme grundlag i 30 år !!!!!

STATUS ER SÅLEDES, AT JEG HAR 2 LIMOUSINER STÅENDE I GARAGE ANLÆGGET ,
SOM DER IKKE KAN REGISTRERES PÅ NUVÆRENDE TIDSPUNKT – ENDVIDERE HAR
JEG KØBT YDERLIGERE 4 LIMOUSINER I USA – DER ER PÅ VEJ HJEM OVER
ATLANTEN - disse 6 limousiner skulle sætte prikken over i'et i efteråret til vores 30 års jubilæum
– hvor det var planen at præsenterer 30 limousiner til vores nuværende og kommende kunder.

Med limo hilsen

Jan Kock

Limo2you – Nordens største Limousine Service.

Fra: FS Mikael Spang-Hanssen
Til: info@celebritylimo.dk
Emne: SV: Limousine indreg.
Dato: 8. marts 2007 13:56:10

J.nr. FS352-000160

Kære Leif Berner

De danske, tekniske krav til personbiler, herunder limousiner, er fastsat i Færdselsstyrelsens bekendtgørelse om Detailforskrifter for Køretøjer. Denne bekendtgørelse er udstedt med hjemmel i færdselslovens § 68 og efter bemyndigelse i henhold til lovens § 134 a.

Med virkning fra den 20. oktober 2007 indføres forbud mod sidevendte sæder i personbiler, der registreres første gang på denne dato eller senere. Dette forbud er en følge af EF-direktiv 2005/39 om sæder, hvorefter EU-landene fra den nævnte dato skal nægte registrering af nye typegodkendte biler, der ikke opfylder direktivets krav. Der er ikke endnu ikke fastsat fælles regler i EU for godkendelse af enkeltkøretøjer. I Detailforskrifter for Køretøjer skelnes der ikke mellem om køretøjer godkendes enkeltvis eller som serie. Da Færdselsstyrelsen bl.a. har fået til opgave at sikre det højst mulige niveau for sikkerhed og miljø, har styrelsen valgt også med hensyn til sidevendte sæder at holde fast i princippet med kun ét regelsæt. Andre EU-lande kan derimod vælge fortsat at tillade sidevendte sæder i forbindelse med godkendelse af enkeltkøretøjer. Sådanne køretøjer kan dog ikke umiddelbart senere registreres i EU-lande som fx Danmark med forbud mod sidevendte sæder.

Detailforskrifter for Køretøjer indeholder imidlertid ligesom EF-direktivet en undtagelse for turistbusser med en tilladt totalvægt på over 10.000 kg, hvor sidevendte sæder tillades placeret i bussens bageste del, så de danner en hel afdeling med op til 10 sæder. Sådanne sidevendte sæder skal være forsynet med nakkestøtte og mindst hofteselev med retraktor, der er typegodkendt i overensstemmelse med EF-direktiv 77/541, ligesom seleforankringerne skal opfylde kravene i EF-direktiv 76/115.

Med henvisning til de helt særlige forhold, der gælder ved kørsel med forlængede limousiner, er Færdselsstyrelsen indstillet på at tillade, at personbiler, der udelukkende anvendes med tilladelse til limousinekørsel, kan være forsynet med sidevendte sæder på betingelse af, sæderne er forsynet med nakkestøtter og sikkerhedsseler efter reglerne for turistbusser. For amerikanske limousiner vil nakkestøtterne, sikkerhedsselerne og seleforankringerne kunne opfylde kravene i amerikansk standard FMVSS 202, FMVSS 209 henholdsvis FMVSS 210.

Ifølge Detailforskrifter for Køretøjer kan et EF-typegodkendt køretøj ikke nægtes godkendt i Danmark. En forlænget limousine bygget til det amerikanske marked er imidlertid ikke EF-typegodkendt. Køretøjet kan derfor kun godkendes, hvis det opfylder de danske, tekniske krav. En TÜV godkendelse fra Tyskland er en godkendelse i henhold til de nationale tyske krav. En TÜV godkendelse har derfor kun gyldighed i Tyskland på samme måde som en dansk synsgodkendelse kun har gyldighed i Danmark.

Der er ikke i Danmark forbud mod at forlænge en bil. En forlænget limousine kan derfor godkendes i Danmark, når den - som andre ombyggede biler - fortsat opfylder kravene i Detailforskrifter for Køretøjer. Det indebærer bl.a., at bilens tilladte vægte fortsat ikke må overstige de af bilfabrikanten garanterede, teknisk tilladte, at sædeindretningen fortsat skal opfylde kravene med hensyn til sikkerhedsseler og styrke mv., samt at kravene til bremses fortsat skal være opfyldt ved en forhøjelse af de tilladte vægte. Det er i den forbindelse selvfølgelig forudsat, at bilen i den udførelse den forlod bilfabrikanten opfyldte de danske krav.

De danske regler om godkendelse af køretøjer er fastsat af Færdselsstyrelsen med hjemmel i synslovens § 4. Synsvirksomhederne skal efter disse regler følge reglerne i Færdselsstyrelsens Vejledning om syn af køretøjer.

Vejledning om syn af køretøjer findes på vores hjemmeside, link: <http://www.fstyr.dk/sw22949.asp>.

Kapitel 1 - 13 indeholder bestemmelserne fra Detailforskrifter for Køretøjer med tilhørende retningslinier og overgangsbestemmelser. Kapitel 14 indeholder bestemmelserne om godkendelse ved syn, herunder om foreskrevne dokumentation for, at køretøjet opfylder kravene i Detailforskrifter for Køretøjer. Denne dokumentation skal i forbindelse med første registrering i Danmark af ikke-typegodkendte personbiler, herunder forlængede limousiner, bestå af en Data-erklæring. Data-erklæringen skal udfyldes og underskrives af bilfabrikanten, dennes repræsentant eller et anerkendt prøvningslaboratorium, og findes på dansk og engelsk på vores hjemmeside, link: <http://www.fstyr.dk/sw24638.asp>. For forlængede limousiner skal Data-erklæringen omfatte bilen i den udførelse den forlod bilfabrikanten, mens der med hensyn til den forlængede udførelse skal fremlægges supplerende dokumentation fra bilfabrikanten, dennes repræsentant eller et anerkendt prøvningslaboratorium for, at bilen efter ombygningen fortsat opfylder gældende bestemmelser. Med hensyn til styrken af det forlængede selvbærende karrosseri er det i vejledningen fastsat (pkt. 8.01.001 (1)), at ombygning af bærende dele forudsætter accept fra bilfabrikanten, TÜV-godkendelse i henhold til Merkblatt 751 eller anden af Færdselsstyrelsen godkendt prøvningsrapport fra anerkendt prøvningslaboratorium.

Med hensyn til den i din mail omtalte QVM-attest fra USA fremgår det af det tilsendte materiale, at der er tale om et Ford program for Qualified Vehicle Modifiers (QVM). Med dette program hjælper Ford ombyggervirksomheder med at kunne ombygge de af programmet omfattede Ford modeller i overensstemmelse med Fords retningslinier og de amerikanske sikkerhedsstandarder (FMVSS). Ford står imidlertid ikke inde for, at en QVM-virksomhed har foretaget ombygningen i overensstemmelse med Fords retningslinier og de amerikanske sikkerhedsstandarder (FMVSS), ligesom programmet ikke omfatter overholdelse af de amerikanske luftforureningsregler. Det fremgår således klart af programmet, at Ford ikke garanterer for de ombyggede biler.

Det er derfor vores opfattelse, at en QVM-attest fra Ford ikke i sig selv er dokumentation for, at en ombygget Ford bil er ombygget i overensstemmelse med Fords retningslinier, herunder overholder de af Ford tilladte vægte, og at den ombyggede bil ifølge Ford opfylder de i Danmark accepterede amerikanske sikkerhedsstandarder og amerikanske (californiske) luftforureningsregler.

Du er velkommen til at kontakte mig, hvis du har yderligere spørgsmål.

Med venlig hilsen/Best Regards

Mikael Spang-Hanssen
Chefkonsulent/Executive Adviser

Færdselsstyrelsen, Bilteknisk Afdeling
Road Safety and Transport Agency

Adelgade 13, Postboks 9039, DK-1304 København K
Tel.: (+45) 33 95 43 60 Fax: (+45) 33 93 22 92
E-mail: msh@fstyr.dk Internet: www.fstyr.dk

Nu kan du også få leveret Færdselsstyrelsens indkaldelser til periodisk syn i din e-Boks.

Har du ikke e-Boks, kan du læse mere om det på www.e-boks.dk

Fra: Celebrity Limousine Service [<mailto:info@celebritylimo.dk>]
Sendt: 20. februar 2007 16:00
Til: FS Carsten Falk Hansen
Emne: Limousine indreg..

Goddag Carsten Falk Hansen

I forbindelse med at ændringen i loven om bilens indretning, er jeg stødt på en væsentlig forvrængning af bilens indretning, i forhold til min Branche (Limousine Branchen) hvor vi betjener vores kunder med de såkaldte (Fest Limousiner) altså forlænget Sedan modeller
Se vedhæftet billede, den ændring som er oplyst træder i kraft d. 20 Oktober 2007, hvorved vi ikke længer kan indkøbe den type bil, hvor der forekommer sæder der som angivet på billedet..

Dette vil betyde, at min del af branchen, langsomt vil dø ud, da vi ikke længer vil kunne tilbyde vores kunder transport op til 8 passagerer, men kun 6 passagerer, efter at de biler der i dag er i Danmark er udtjent..

Jeg vil derfor bede dig om at svare på, om denne regel er gældende i hele Europa og såfremt det er tilfælde , hvor.. og ikke mindst hvor stå det..

Samtidig vil jeg bede om svar på, om en QVM attest fra USA, ikke er gældende i Danmark og hvorfor Danmark tager et særstandpunkt m.h.t. QVM attesten..

M.h.t. TUV godkendelse fra Tyskland om Danmark har særregler på dette område og såfremt der er det, bedes der svares på, hvad de regler er og hvor det stå i loven..

Jeg har også fået forståelsen for, at ingen forlænget biler kan godkendes i Danmark, derfor vil jeg bede dig svar på om Færdselsstyrelsen, kan svar på om denne type bil ikke er forsvarlig (Sikker) og såfremt dette er tilfælde , fremvise en skades oversigt, hvor i denne type bil har været oversag til ulykker og hvor der har været person eller materiel skader..

Sidst men ikke mindst, hvad er kravet fra færdselsstyrelsen m.h.t. indregistrering af denne type bil og hvor kan man finde det i jeres retningslinjer og love..

Venlig hilsen

Leif Berner

Celebrity Limousine Service

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www.mimesweeper.com



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 or Excursions. 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 Limousine / Hearse or Excursion 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 process and build controls and 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 points

- √ **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/Excursion Builders Guide for details)

Here, each heading is worth 3 points

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 approved technique
- √ 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 points

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 points

- √ **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

LIMOUSINE/HEARSE BUILDERS GUIDE
TABLE OF CONTENTS

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DESIGN GUIDELINES [NOTES]

Many of the guidelines and notes presented in this manual are mandatory requirements of the QVM Program. If you intend to deviate from these guidelines you should consult with QVM Engineering before proceeding to determine if you will be in violation of QVM Program requirements. *Note: Neither Ford Motor Company nor 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*

- Any dimensions shown on engineering drawings are in millimeters unless otherwise specified.
- Body and chassis component drawings are typical for all wheelbase extensions.
- The Engineering Guidelines contained in this book are to assist the QVM modifier during the conversion process to achieve a durable, high-quality vehicle. The design and engineering data presented is based upon vehicles up to a gross vehicle weight (GVW) limitation of 7,500 pounds. Lincoln Town Cars may be extended up to 120 inches if qualified by Limousine Engineering, and must be within the 7,500-pound GVWR limitation. The vehicle structure and systems should be analyzed on an individual basis using engineering and/or test data to validate the vehicle for FMVSS/CMVSS compliance.

Modified vehicle designs with wheelbase extensions which incorporate more than four (4) doors must be reviewed and approved by QVM Engineering.

All conversion designs with wheelbase extensions over 70 inches must incorporate a rigid underbody cross-member connecting the sides of the vehicle frame rails. The cross-member must meet the following design criteria:

- The cross-member must be positioned at a location which is 89 (+/- 1.0) inches from the centerline of the front axle (imaginary line between center of the two front wheel spindles).
- The cross-member must be constructed of a closed cross-section (i.e., box, rectangle, tube) and equivalent in strength and performance of a 1 x 3 rectangular tube, 0.065" minimum wall thickness, 1010 steel (SAE #J526).
- The cross-member should span the distance from the frame side rails in a straight line if possible. If the cross-member must be cut to clear obstructions, any cut lines and/or seams must be reinforced (i.e., gusset plate).
- **Frame Rail Extension:** As an alternate to the 12-gauge lap tube frame rail extension design shown on Illustration Section page 4, a one-piece closed cross-section tube of 2" x 4" 1010 4500 Grade B steel with a minimum wall thickness of 1/8" to 3/16" may be used as an approved frame rail extension design (see Illustration Section page 4 for attachment welding requirements).
- The side impact beam for the extended section of the converted vehicle must meet or exceed the following guidelines:

3.9 Mechanical Requirements: The steel tube furnished shall meet the following mechanical properties (when tested per ASTM A370):

Mechanical Properties	Type I	Type II	
	Grade A	Grade A	Grade B
Ultimate Tensile Strength (Mpa)	1475 min	1500 min.	1300 min
Yield Strength (Mpa)	1170 min	1410 typ	1230 typ
Total Elongation (in 50mm)	10% min	3.5 min	3.5 min

- 1010 steel (SAE #J526)
- Tubular design - standard 2" x 2" x 0.09511 square tube or other cross-section of equivalent or greater bending strength
- Maximum unsupported span (distance between B-pillars) of 70 inches
- Rigidly attached at each B-pillar
- OEM style (or equivalent) roof supports must be located and positively attached at each B-pillar reinforcement.
- **B-Pillars and Pillar Spacing**
 - B-pillars should be located relative to a rear door plug gauge fixture to assure uniform alignment of the rear door when installed.
 - B-pillars cannot be split or modified in any way. Exception: Horizontal cut for 1/2 post modification at beltline.
 - Maximum unsupported span (distance between B-pillars) of 70 inches.
 - Maximum unsupported span (rocker-roof) of 100 inches.
 - Center pillar requirements (see chart below for details).

Span Length	Acceptable B-Pillar Types (center)	Acceptable B-Pillar Design (center)	Action Required for QVM Approval*
70" or less	- not required -	---	---
71 - 100"	Full (rocker-roof)	OEM	<ul style="list-style-type: none"> • no action required • FMVSS 214 physical testing • other structural pillar testing may be required
"	1/2 (rocker-beltline)	OEM (modified)	<ul style="list-style-type: none"> • provide attachment, support structure, & design information for review • FMVSS 214 physical testing • other structural pillar testing may be required
Over 100"	Full (rocker-roof)	OEM	<ul style="list-style-type: none"> • no action required

* Contact the QVM Engineering Office before proceeding for more information. If OEM pillars are used (only one approved) then no physical testing is needed or should be needed.

- The OEM driveshaft length may not be extended in its current configuration (material, tube size). Multiple section driveshafts are required for all wheelbase extensions over 6 inches. If a single driveshaft is used for wheelbase extensions of 6 inches or less it must be designed and constructed to maintain the performance characteristics (critical speed) of the OEM driveshaft. Note: If the outer diameter of the driveshaft tube is increased it is likely that clearance concerns will occur.
- The center divider (i.e., partition) must be rigidly attached to the body structure.
- The body separation cut line should be rearward of the front door B-pillar.
- If the front passenger seat is removed from the vehicle, the OEM seat attachment hardware must be removed or defeated to prevent reinstallation of the front passenger seat. Specifically, the seat bolt studs must be removed and the receiver nuts welded closed.

MANUFACTURING NOTES

- All QVM manufacturers are required to incorporate a rigid vehicle cutting fixture during the extension process. This fixture must be constructed to positively attach to the six 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. (See Illustration Section page 3).
- Body and door drain holes must remain functional on the base vehicle and adequate drain holes should be provided on the vehicle extension. They may be positioned and sized to utilize the space between the rocker and frame rail, but should not penetrate the roof, rocker or frame rail.
- Vehicles should be tested for water leaks.
- Front and rear doors should not be lifted by the interior or exterior door handles as this may result in door handle breakage.
- Suspension geometry should not be altered since this could affect performance and safety of the vehicle.
- Suspension fasteners are important since they could affect performance of critical components and systems and lead to major service expenses. Identical fasteners (same part number) or an equivalent fastener is recommended. DO NOT use a replacement part of lesser quality or substitute fasteners of different designs. See torque values as specified in the current Lincoln Town Car Workshop Manual to verify proper retention of parts. New fasteners must be installed whenever existing fasteners are loosened or removed.
- Brake, Fuel and Air Suspension tubing extension, support clips, along the left and right frame rails should be spaced approximately every 200-300 mm (8-12 inches), using clip and thread rolling (not thread cutting) screws. Extensions must be higher than bottom edge of frame rail.
- Roof bows and side anti-intrusion beams are required.
- As required for sound deadening.
- Rustproofing.

SAFETY

FAILURE TO FOLLOW THESE PRACTICES COULD RESULT IN PERSONAL INJURY OR DEATH

- In working on the vehicle, the following safety precautions should always be followed:
 - Use safety stands whenever a procedure requires you to be under the vehicle. Air suspension should be deactivated or shut off before jacking or hoisting the vehicle. (See Engineering Guidelines - Chassis Section [Air Suspension Venting].)
 - Set the parking brake when working on the vehicle. Set the transmission in PARK unless instructed otherwise for a specific operation. Place wood blocks (4" x 4" or larger) or wheel chocks at the front and rear surfaces of each tire to prevent vehicle movement.
 - Operate the engine only in a well-ventilated area to avoid the danger of carbon monoxide.
 - Keep yourself away from moving parts when the engine is running, especially fan blades, belts and any other rotating mechanisms.
 - Always remove rings, watches, loose hanging jewelry, and loose clothing before beginning work on a vehicle.
 - To prevent burns, avoid contact with hot metal parts such as the radiator, exhaust manifold, tail pipe, catalytic converter or muffler.
 - Do not smoke while working on a vehicle.
 - Disconnect the battery.

TOLERANCES

- The following tolerances apply unless otherwise specified:
 - All body parts: length, width and height ± 0.5 mm (0.02 in.), angles ± 0.5 degrees.
 - All chassis parts: length, width and height ± 0.8 mm (0.031 in.), angles ± 0.5 degrees.
 - Frame rail, rocker and roof rail cut lines, including ends of frame members, must be square within 0.8 mm (0.031 in.) total.
 - Body sheet metal cut lines must be square within 1.5 mm (0.062 in.) total.
- Material gauges are the same as OEM on all vehicle extensions.
- Vehicle extension alignment and squareness should be held within 1.5 mm (0.06 in.) total variation.
- The following body and side panel minimum clearances should be held for proper fit and finish (see Figures 1 and 2, page 5).

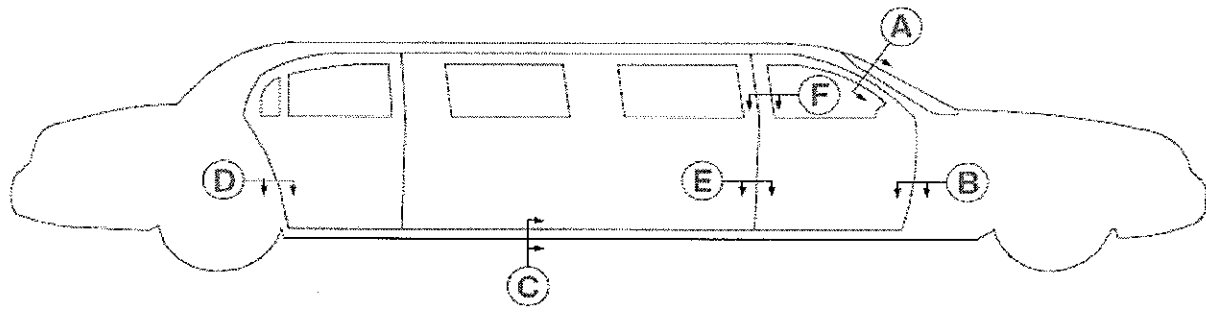
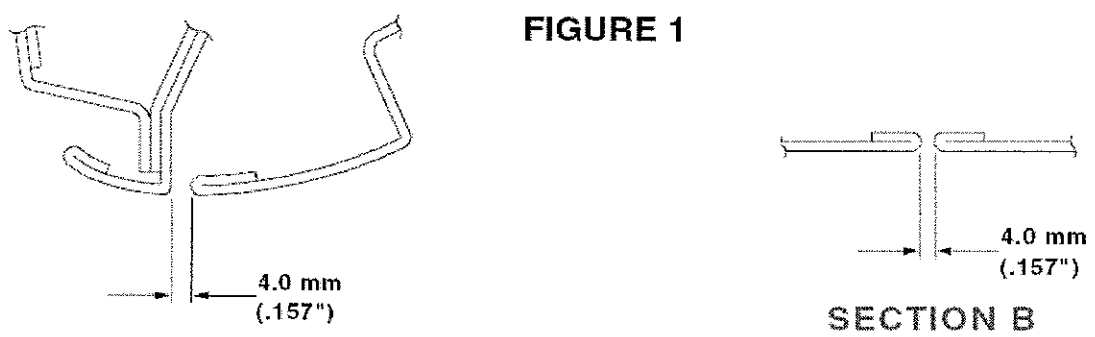
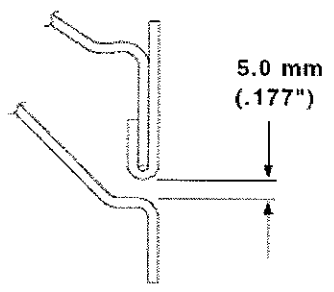


FIGURE 1

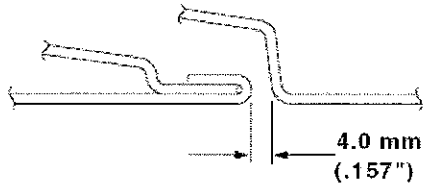


SECTION A

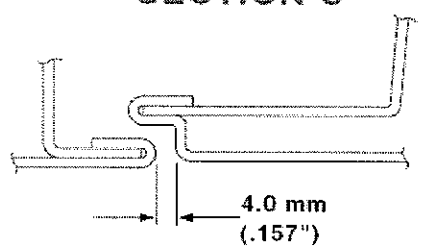
SECTION B



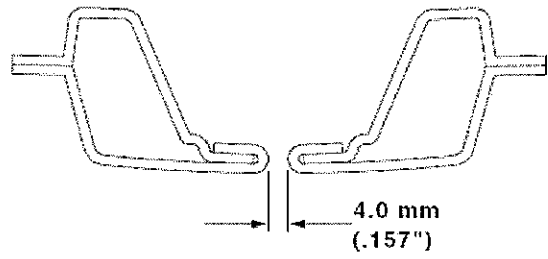
SECTION C



SECTION D



SECTION E



SECTION F

FIGURE 2

Steelcase
 Steelcase Corporation
 1100 North Dearborn Avenue
 Grand Rapids, MI 49506-1300
 616.755.5000

WEIGHT DISTRIBUTION

The mass weight of the Lincoln limousine conversion and its distribution throughout the vehicle is important to the design of body structure and to the durability of chassis component systems such as brakes, tires, axles, etc. Use of lightweight interior materials is recommended. Exceeding the gage of materials specified in this builders guide may affect fit and structural function. It is recommended that a converted vehicle, when fully loaded to GVW, be designed to achieve a front/rear weight distribution of approximately 50% / 50%. The following example shows key weights that should be noted for proper weight distribution.

ESTIMATED VEHICLE WEIGHT (LBS.) - 418 LIMOUSINE PACKAGE

	<u>Front</u>	<u>Rear</u>	<u>Total</u>
Limousine vehicle curb weight	3,245	2,655	5,900
Maximum payload of total vehicle	1600 lbs., 10 people including driver + 100 pounds luggage		
Gross Axle Weight Ratings GAWR	3,825	3,675	--
Gross Vehicle Weight Rating GVWR	--	--	7,500
Front / Rear Distribution of a totally loaded vehicle:	50.1%	49.9%	--

Gross Vehicle Weight (GVW) - is the sum of the modified vehicle curb weight and payload or the combined front/rear axle weights of a fully loaded vehicle. Maximum Curb Weight is calculated as follows:

1. Fully trimmed vehicle with all available options.
2. Maximum recommended capacities of fuel, engine coolant, engine oil, windshield washer fluid, and brake fluid.

Maximum Payload - is the sum of the total passenger weights and luggage capacity. 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.

- Passenger Weight 150 pounds each
- Casket & Contents 350 pounds
- Standard Luggage Load = 200 pounds
- Minimum Luggage Load = 100 pounds (requires a label)

NOTES:

- Luggage capacity may be restricted to 100 lbs. depending on curb weight.
- When luggage capacity is restricted to 100 lbs., a warning label stating that luggage capacity is restricted to 100 lbs. must be securely fastened in plain view when the trunk lid is open.
- A seating position's width should be at least 16.5 inches, but not exceed 20 inches. Each position must have a seat belt. See Seating Section for more details.

Weight Limits and base car conversions

GAWR / GVWR / TIRE PRESSURE / WHEEL WEIGHT LIMITS

The weights below are critical to your conversion process. All weights must be within limits in order for your Safety Certification Label to be valid.

GAWR FRONT	3,825 lbs.
GAWR REAR	3,675 lbs.
GVWR TOTAL	7,500 lbs.
TIRE PRESSURE	42 psi
WHEEL WEIGHT LIMIT	1,930 lbs.

2007 TOWN CAR ADDED FACTORY CONVERSIONS REQUIRED

** These conversions started with the 2007 model year vehicle and will be applicable for all further model years until notified ** If there are questions, please contact the QVM Engineering Office: 313-322-7926

Each Town Car limousine and hearse package comes to you (QVM) as an incomplete vehicle. (See the definitions page for details). Aside from completing the limo or hearse conversion, there are a couple of conversions that must occur to the base chassis before final sale to make the vehicle "complete." They are as follows:

- 1) The Intake Manifold Shield must be removed as shown on page 8
- 2) The NEW fuel regulator shield must be installed as shown on page 9
- 3) The ground strap tab from the Fuel Rail Shield Retro Fit Procedure must still be completed on all 2007 Town Cars. See page (10) for details.

NOTE: The Fuel Regulator Shield is a "kit" that comes in the trunk of all limo and hearse package vehicles.

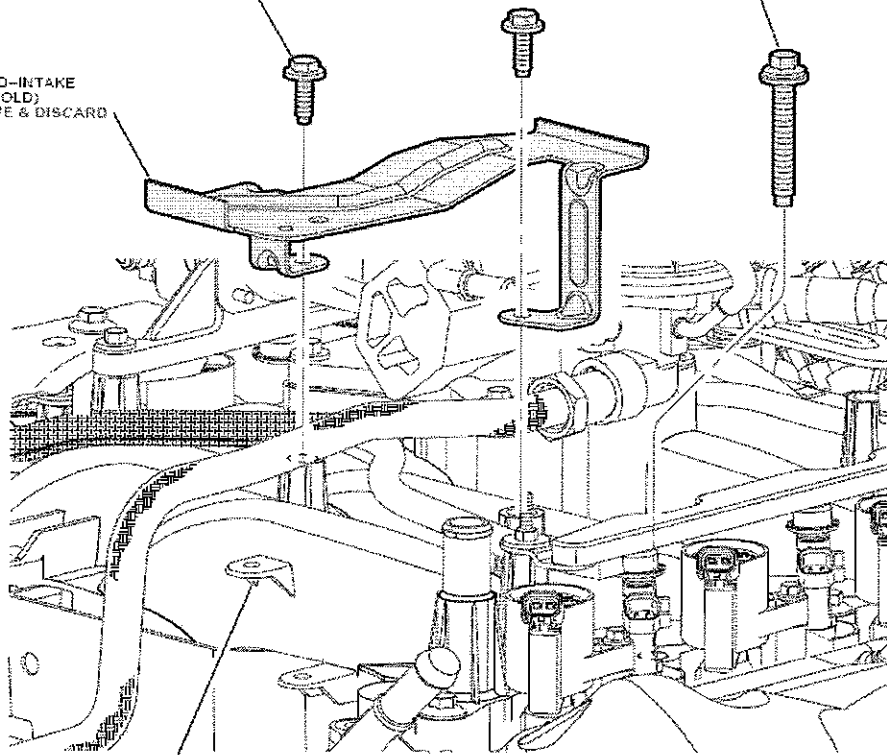
- 4) LIMOS only! Fuel tank protection kits will also continue to come in the trunk and must be installed before final delivery. See the copy of the TSB on page (11)

**INTAKE MANIFOLD SHIELD REMOVAL
FOR 4.6L TOWN CAR LIMO**

H807309 (10mm HEX)
M6 X 1 X 24 SCREW &
WSHR HEX HD PILOT
TORQUE 8-12 Nm
REMOVE (2) PLACES
NOTE:
RETAIN (1) SCREW FOR
INSTALLATION OF FUEL
REGULATOR SHIELD.

W503501 (10mm HEX)
M8 X 1.25 X 55 BOLT &
WSHR HEX FLNF PILOT
TORQUE 20-30 Nm
REMOVE & DISCARD

(SHIELD-INTAKE
MANIFOLD)
REMOVE & DISCARD



(MANIFOLD ASY-
INTAKE)

FRONT OF ENGINE

FORD MOTOR COMPANY V-ENGINE ILLUSTRATOR

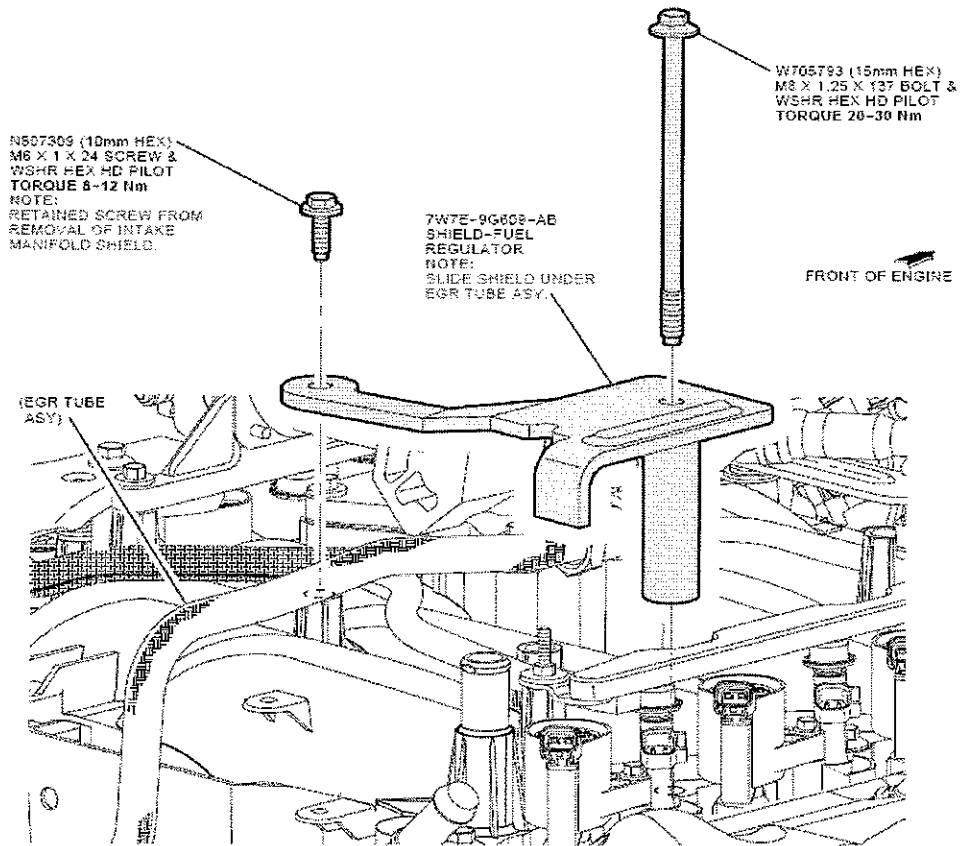
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FRAME 1 OF 2

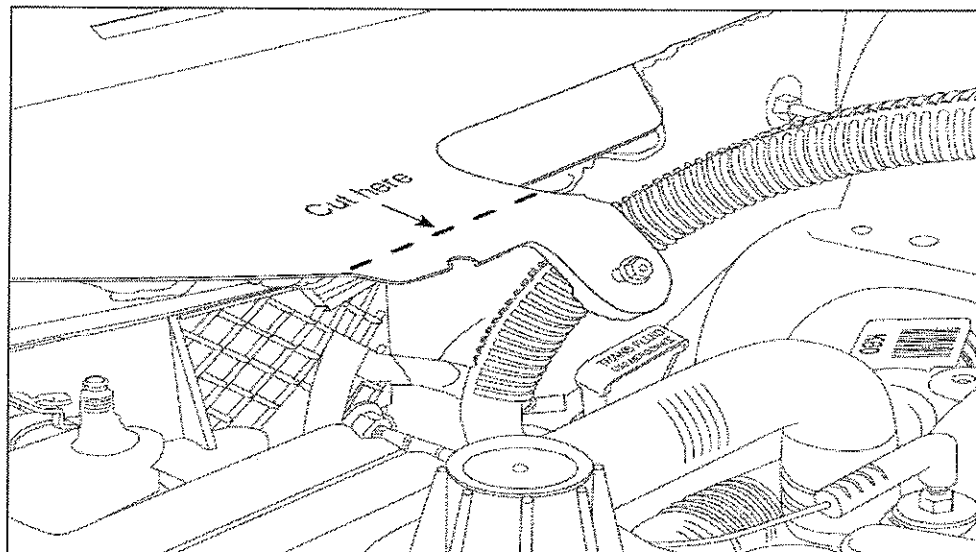
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FUEL REGULATOR SHIELD
FOR 4.6L TOWN CAR LIMO

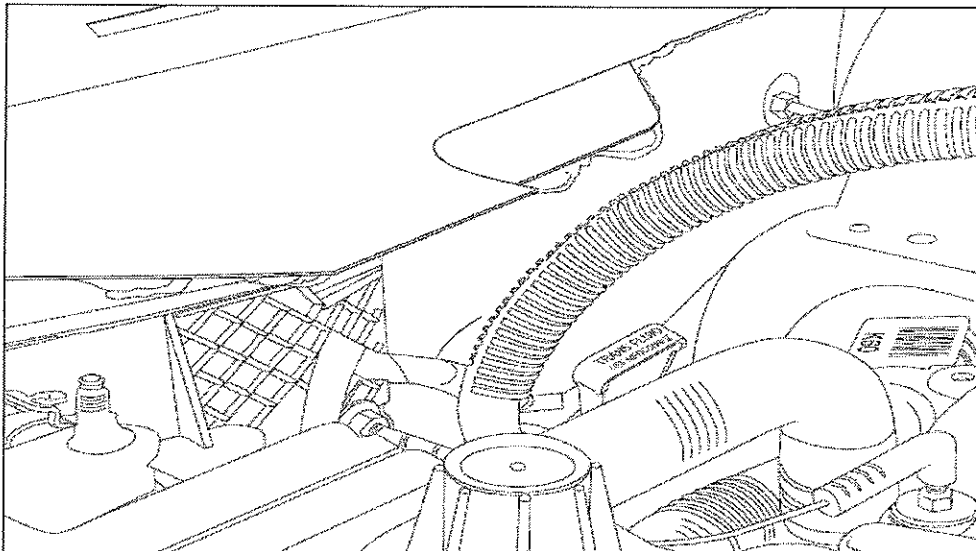


The ground strap tab removal process is shown below as a reminder. Any additional info regarding the Fuel Rail Shield Retro Fit process must be directed to the QVM Engineering Office. 313-322-7926

Uncut:



Cut:



The following pages describe the installation process of the Fuel Tank Protection Kit that comes in the trunk of all "LIMO" package Town Cars. For more detailed information regarding this "kit" please contact the QVM Engineering Office: 313-322-7926

**CROWN VICTORIA POLICE INTERCEPTOR (CVPI)
PACKAGE OPTIONAL UPGRADE KIT**

AFFECTED VEHICLES: CERTAIN 1992 THROUGH 2003 MODEL YEAR CROWN VICTORIA POLICE INTERCEPTOR (CVPI) VEHICLES CURRENTLY IN POLICE DUTY

OVERVIEW

This procedure provides details for installation of the following:

For all affected vehicles

- Two (2) rear axle shields
- One (1) differential cover shield
- Two (2) fuel tank strap shields

Additional parts required for 1998 through 2003 model year vehicles

- Two (2) foam pads onto the evaporative emissions canister
- Replacement of evaporative emissions canister retainer bolts and J-clips (located along the front edge of the canister) with three (3) rivets

SERVICE PROCEDURE

1. Raise the vehicle on a hoist.
2. NOTE: Shields are molded with "LH" and "RH" to ease identification.

Install the left and right axle shields being sure to position them so there is clearance between the shield and the stabilizer bar as illustrated. On 1992 to 1997 model year vehicles, be sure the ABS circuit wiring harness is not pinched under the shield and the right side parking brake cable is positioned in the notch molded into the shield. Tighten the clamps to 6 Nm (53 lb-in). See Figures 1 and 2.

In some cases, excess weld material on the coil spring seat or stabilizer bar bracket can interfere with clamp installation. If necessary, grind away only enough excess weld material to allow for correct seating of the shield and clamp onto the axle. **DO NOT grind the parent metal.**

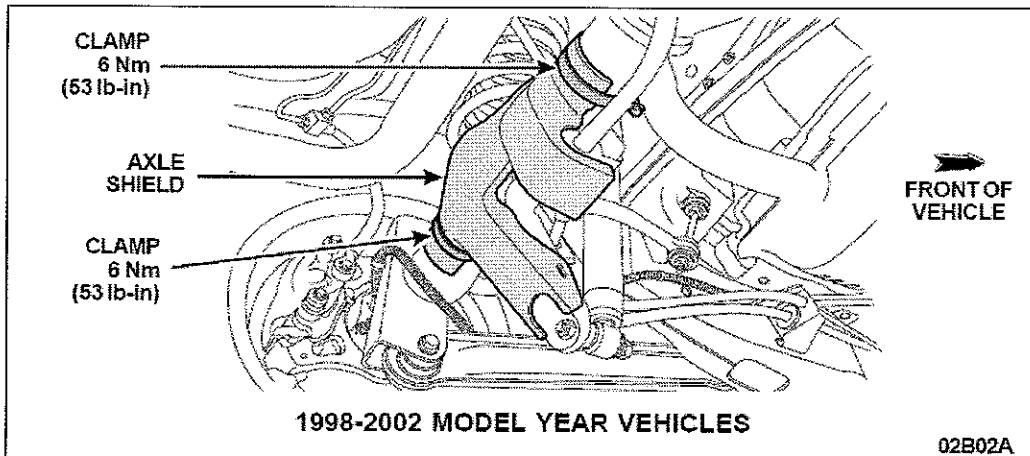


FIGURE 1

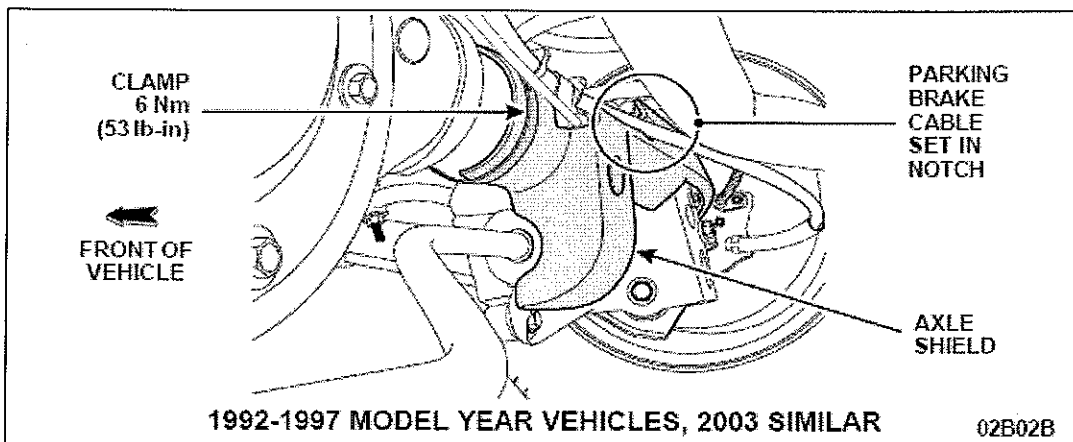


FIGURE 2

3. **CAUTION:** Tie straps, which are required for 1998 to 2002 model year vehicles only, have specific heat resistant properties. Use of a tie strap other than what is supplied in the kit can jeopardize the repair. Also, correct orientation of the tie strap is critical to the repair. The head of the tie strap must be positioned on the forward-facing side of the shock mount bracket.

On 1998 to 2002 model year vehicles, install one (1) tie strap on each shield to secure it to the shock absorber lower mount bracket as illustrated. If necessary, use pliers and LIGHT force to engage the locking feature of the tie strap. **DO NOT STRETCH THE TIE STRAP UNNECESSARILY.** See Figure 3.

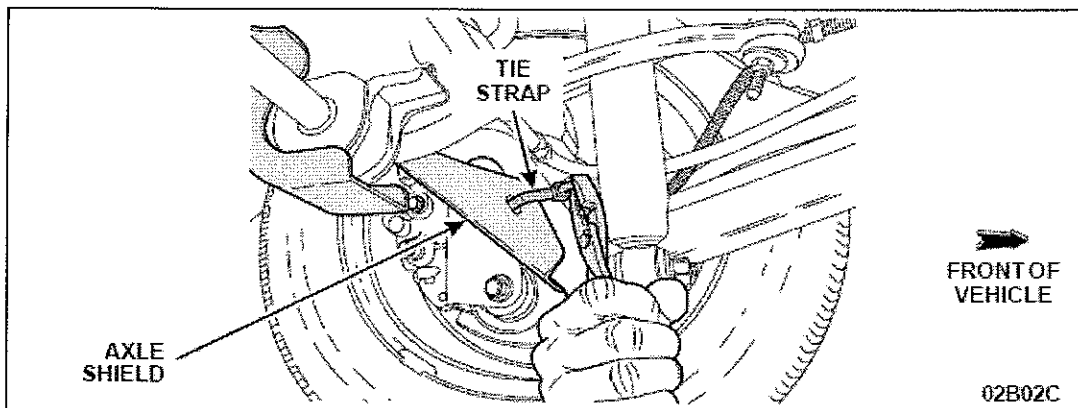


FIGURE 3

Ford Motor Company

© 2002 FORD MOTOR COMPANY
DEARBORN, MICHIGAN 48121
01/02

- On 1992 to 1997 model year vehicles, install the supplied convolute over the ABS circuit wiring leading to each rear wheel. Position the convolute so it is up against the grommet as shown in the illustration. Secure with vinyl tape. See Figure 4.

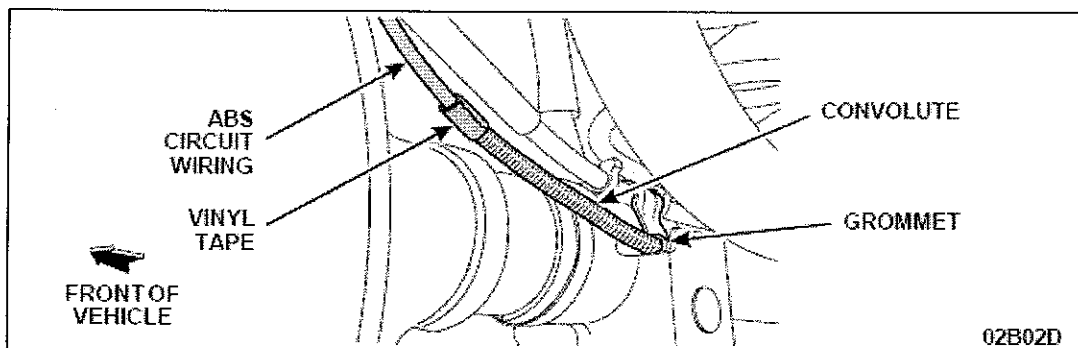


FIGURE 4

- CAUTION:** Do not loosen or remove more than three (3) differential cover bolts at any one time or a leak may develop.

NOTE: If the axle identification tag (all affected model year vehicles) and/or fluid identification tag (2002 to 2003 model year vehicles only) interferes with the installation of the differential cover shield, relocate the tag(s) as necessary to another bolt location on the cover. In some instances, the tag may simply need to be rotated to avoid interference with the shield installation.

Reposition the axle and/or fluid identification tag as necessary. Hand-tighten the bolt(s) at this time. See Figure 5.

- Remove and discard the three (3) differential cover bolts located at the 4, 6 and 8 o'clock positions. Position the differential cover shield and press into place. The cover should fit snug over the existing bolts. Install the three (3) *new* bolts. Tighten all loosened or removed bolts to 45 Nm (33 lb-ft). See Figure 5. Be sure to also tighten the axle tag bolt(s) to specification.

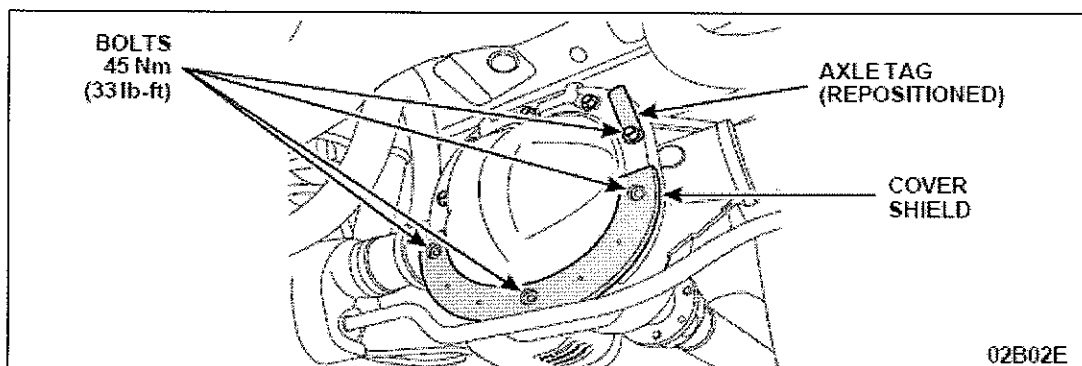


FIGURE 5

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