

Automobile Manufacturers Association

Consolidated Specification Questionnaire

For 1949 Models

Mechanical Details

Make of Car MERCURY Model 9CM
 Name of Maker FORD MOTOR COMPANY Address DEARBORN, MICHIGAN
 Date 7-1-48

NOTE: (1) Subject to Correction: It is understood that the following data are subject to correction in the case of cars not in production at the time this compilation was requested.
(2) Only standard equipment included in Factory Delivered price should be included in this questionnaire.

ENGINE

No. of cylinders 8
 Valve arrangement "V" L-HEAD
 Bore 3-3/16 Stroke 4.00
 Cylinder head, cast iron or aluminum C.I.
 Cylinder sleeve, Yes - No NO
 Piston displacement 255.4
 Taxable horsepower 32.5

Horsepower rating—

To be based on actual performance corrected to 60°F. at sea level (barometric pressure 29.92 inches of mercury) with standard fuel (Octane No. of fuel 70)

—With Bare Engine—

Maximum brake hp. 110 at 3600 R.P.M.

—With Standard Accessories—

Maximum brake hp. _____ at _____ R.P.M.

*Those standard accessories needed for normal operation including fan, generator, starter, air cleaner, muffler, manifolds, fuel and water pumps.

Maximum torque—

With bare engine, lb. ft. 200 at 2000 R.P.M.

With standard accessories,* lb. ft. _____ at _____ R.P.M.

Compression Ratio—

Standard 6.8 Optional _____

Standard compression pressure—pounds—

At cranking speed 115

At what R.P.M. _____

PISTONS and RINGS

Piston

Make NELSON

Material ALUM ALLOY IMBEDDED STEEL SKIRT

Features—split skirt, low-stress, oval, tin-plated, aluminum oxide finish, auto-thermic, V-Bridge, porous chrome plate, etc. SPLIT SKIRT OVAL TIN PLATED

Weight—ounces—without rings, pin or bushing 370 GMS.

Length 2.89

Clearance—

Top land .0215 to .0260

Skirt, top .001-.002 bottom .0005-.001

PISTONS and RINGS (cont'd)

Piston ring groove depth—
 Oil .1563-.1633 Compression #1.1663-.1733 #2.1748-.1818
 No. of oil rings used per piston 2
 Width of oil rings .186
 Width of oil ring gap .008-.020
 No. of compression rings used per piston 2
 Width of compression rings .0933
 Width of compression ring gap .012-.020
 Maximum wall thickness of oil rings .142
 Maximum wall thickness of compression rings .154
 Are ring expanders used, Yes - No NO

RODS and PINS

Wristpin—

Material ALLOY STEEL TUBING

Length 2.847 Diameter .7503

Locked in rod, piston or floating FLOATING

Clearance in piston .0005 T. to .0001 L.

Clearance in rod .0002 L. to .0004 L.

Connecting rod—

Length—center to center 7.00

Material HI. CARB. MANG. STEEL FORG. H.T.

Weight—ounces 524 GMS.

Crankpin journal—

Diameter 2.1385 Length 1.755

Lower bearing—

Material COPPER-LEAD ALLOY STEEL BACKED

Clearance .0005 L. to .003 L.

End play .006 to .020 (2 RODS)

Ship—solid, laminated or none NONE

Spur or separate SEPARATE

Rods and pistons removed from above or below ABOVE

CRANKSHAFT

Material CAST ALLOY STEEL

Weight—stripped 66

Vibration dampener used—yes or no NO

Type _____

Make of Car.....**MERCURY**.....Model.....**9CM**.....Date.....**7-1-48**.....

LUBRICATION (cont'd)

Timing gear or chain lubrication—*packing or splash*.....**BEPLASH**.....
 Oil pump type.....**GEAR**.....
 Oil grade recommended—*SAE viscosity and temperature range*—
SAE 20 OR 20W.....**32° F. & UP**.....
SAE 10 OR 10W.....**-10° F. TO 32° F.**.....
SAE 10W or 10.....**LESS THAN -10° F**.....
**DIPOSENE**.....
 Normal oil pressure—*lbs. at N.P.H.*.....**57 @ 40**.....
 Pressure at which relief valve opens.....**ONE**.....
 Capacity of oil reservoir—*quarts, dry*.....**6**.....*refill*.....**5**.....
 Oil pressure gauge make.....**ONE**.....
 Oil reservoir level gauge type.....**DIPSTICK**.....
 Flushing type oil intake—*yes or no*.....**NO**.....
 External oil filter make.....**FRAM**.....
 Other type of oil cleaner.....**—**.....
 Oil cooler make.....**NONE**.....
 Chain lubrication—*Make*.....**SAEK**.....

FUEL

Gasoline tank capacity.....**19 1/2**.....
 Fuel feed—
 Type—*vacuum tank, electric pump, gravity vacuum pump or carburetor pump*.....**CARBURETOR PUMP**.....
 Make.....**A.C. OR HOLLEY**.....Model.....
 Carburetor—
 Make.....**HOLLEY**.....Model.....**685-ETQ**.....
 Number used.....**1**.....
 Size.....**31/32 Venturi**.....
 Type.....**DUAL CONCENTRIC**.....
 Up or down draft.....**DOWN**.....Single or dual.....**SIDE INLET**.....
 Intake manifold heat control—*manual, automatic or none*.....
 Automatic choke make.....**HOLLEY**.....Model.....**ON CARB.**.....
 Air cleaner—*intake silencer make*.....**GAERS**.....
 Type—*dry filter oil bath oil resistant filter*.....**DRY**.....
 Heavy Duty type—*Make*.....**—**.....Model.....
 Muffler make.....**VARIOUS**.....
 Tail pipe diameter.....**1 3/4**.....

COOLING

Water pump—
 Type.....**CENTRIFUGAL B.B. BACKLESS**.....
 Drive.....**V-BELT**.....
 Is pump equipped with packing set.....**NO**.....
 Water circulation thermostat make.....**STR. THOMPSON & JILSON**.....
 Pressure relief valve—*yes or no*.....
 By-pass for recirculation—*yes or no*.....**YES**.....
 Radiator core—
 Type.....**VERTICAL TUBE AND FIN**.....
 Make.....**ONE**.....

ENGINE (cont'd)

Cooling system—*capacity, quarts*.....**22 1/2**.....
 Water jackets full length of cylinders—*yes or no*.....**YES**.....
 Water all around cylinders—*yes or no*.....**YES**.....
 Lower radiator hose—
 Inside diameter.....**1 3/4**.....Length.....**5 1/2**.....
 Upper radiator hose—
 Inside diameter.....**1 1/4**.....Length.....**13 1/2**.....
 Fan belt—
 Make.....**GOODYEAR & FIRESTONE**.....
 Angle of vee.....**43°**.....
 Length, outside.....**36.20**.....Width, maximum.....**.75**.....
 Fan—
 Make.....**SCHWITZER-CUMMIS**.....No. of blades.....**4**.....

IGNITION

Ignition units—
 Make.....**FORD**.....Model.....**TRA-C**.....
 Manual or octane selector, *degrees advance*.....*retard*.....**NONE**.....
 Maximum centrifugal advance—*crankshaft, degrees*.....**NONE**.....
*at*.....*engine R.P.M.*.....
 Incline of Mercury Necessary to operate Vacuum Advance (Plus or minus 1 inch).....
 Maximum Vacuum advance crankshaft, *degrees*.....**26°**.....
 Breaker gap.....**.014-.016**.....Breaker arm tension.....**17-20**.....*oz.*.....
 Cam angle.....**26-30**.....*deg.*.....
 Timing—*breaker points open*.....**2°**.....*degrees crankshaft rotation*
*or*.....*before piston travel (after or before) top center*
*with vacuum selector in the*.....*position.*.....
 Timing mark location—*flashed, advance lamp or cone*.....
 Firing order.....**1-3-4-2-5-6-7-2**.....
 Appearance down of ignition coil—
 With engine stopped.....**5**.....
 With engine idling.....**3**.....
 Spark plug—
 Thread—**10 mm., 14 mm. or 18 mm.**.....**14 mm**.....
 Make.....**CHAMPION**.....Model.....**H-10**.....
 Gap.....**.029-.032**.....
 Ignition cable make.....**ESSEX WIRE**.....

BATTERY

Make.....**VARIOUS**.....Model.....**9CM**.....
 Capacity—*ampere hours*.....**100**.....@ 20 hour rate.....
 Number of plates per cell.....**17**.....
 Bench charging rate—
 Start.....**6-10**.....*amps*.....
 Which battery terminal is grounded.....**POSITIVE**.....
 Location of battery.....**UNDER HOOD**.....

Make of Car MERCURY Model SCM Date 7-1-49

STARTING MOTOR

Make OWN Model TBA
 Normal engine cranking speed
 Brush spring tension 3-3.5 lbs.
 Lock test—
 Amperage draw 550 Amps
 Volts 3.25
 Torque in pounds feet 15
 No load test—
 Amperage draw 45-60
 Volts 5.6 R.P.M. 5000-5000
 Type of drive—Bands or sliding gear with commutating clutch
 Starting device—Solenoid, magnet, etc. SOLENOID
 Starter operation—check items required to start engine
 1. Turn on ignition X
 2. Depress starter pedal
 3. Depress accelerator pedal
 4. Depress clutch pedal
 5. Operate button on dash X
 6. Pull out throttle
 Starting motor pinion meshes front or rear REAR
 No. of teeth in flywheel 12
 Face width of flywheel teeth 3/8"
 Gear ratio between starter armature and flywheel 11.2:1

GENERATOR

Make OWN Model SEA
 Type—bird brush, slant, etc. SHORT
 Brush spring tension 22 oz.
 Current regulator, voltage regulator or current and voltage control unit VOLT. & CURRENT REG.
 Maximum controlled charging rate
 Temperature 90° F.
 Amperes 30
 Voltage 7.1
 R.P.M. 1670
 Cutout relay—
 Voltage at closing 6.6-7.0 VOLTS (HOT)
 Amperes to open, reverse current 6 (MAX.)
 Air gap .010
 Voltage regulator—
 Volts 7.2-7.6
 Temperature NORMAL OPERATING
 Air gap .035
 Current regulator—
 Amperes 30-34
 Temperature NORMAL OPERATING
 Air gap .035
 Car speed for maximum charging rate 18.6 M.P.H.
 Ammeter or charge indicator make FORD

LAMPS

Lighting switch make R.E.M.
 Are tail and dash lights in series NO PARALLEL
 Headlights—
 Make FORD
 Location—in fender, in a shell, or in fender shell
 Parking or fender light make FORD
 Tail and stop light make FORD
 Horn—
 Type—vibrator or motor VIBRATOR No. used 2
 Make SPARKS-WITHINGTON & AUTOLITE
 Amperage draw of each 14

CLUTCH

Make BORG & BECK
 Drive type—
 Direct to flywheel face DIRECT
 Through fluid flywheel NO
 Semi-centrifugal NONE
 Power operated unit—make
 Vibration insulation or neutralizer—fabric, rubber blocks or springs SPRINGS
 No. of clutch driving discs ONE
 No. of clutch driven discs ONE
 Clutch facing—
 Material—woolen or unrolled asbestos, cork WOOLEN ASBESTO
 Inside diameter 6.75
 Outside diameter 10.0
 Thickness .125
 No. required 2

TRANSMISSION

Transmission—
 Make OWN Model GM
 No. of forward speeds 3
 Manual shift—yes, no YES
 Automatic or auxiliary shifting mechanism—yes no NO
 If yes, Make
 Type—centrifugal, vacuum, electric or hydraulic
 Automatic overdrive—
 Make WARNER GEAR (OPTIONAL E.C.)
 Oil capacity—quarts SEE TRANSMISSION OIL
 Oil grade recommended—S.A.E. viscosity
 Summer 80 Winter 60
 Gear ratio in high—standard 5-passenger 4-door sedan 3.91 (4.27 with O.D.)
 In—division ratio
 in overdrive 70 in second 1.604
 in third 1.00 in fourth
 in low 2.819 in reverse 3.625

E.C. = EXTRA COST

Make of Car MERCURY Model 9CM Date 7-1-48

TRANSMISSION (cont'd)

Conduct road gears on second YES
 Spur or bevel gears—
 For second speed
 For first speed
 For reverse speed
 For all speeds HELICAL
 Synchronous meshing for third gears YES
 Transmission oil—
 Capacity—pints 3½
 Grade recommended S.A.E. viscosity
 Summer 80 Winter 80
 Universal joints—
 Make MECHANICS - 2C
 Number used 2
 Type—metal with anti-friction bearing or metal with plain bearing NEEDLE ROLLERS
 Lubricated with UNIVERSAL JOINT GREASE
 Drive taken through springs, torque arm, torque tube or radius rods SPRINGS
 Torque taken through springs, torque arm, torque tube or radius rods SPRINGS

REAR AXLE

Rear axle—
 Make SPICER Model 41
 Type—Semi, full or three-quarter floating SEMI-FLOATING
 Minimum road clearance under center of rear axle—tires inflated 7.8"
 Rear axle oil—
 Capacity—pints 3
 Grade and type recommended—S.A.E. viscosity
 Summer 90 E.F. Winter 90E.P.*
 Type of gearing—spiral bevel, worm, hypoid HYPOID
 Gear ratio—standard 5-passenger 4-door sedan 3.91:1 †
 Optional gear ratios 4.27:1
 Number of teeth— 47 11 on 4.27
 In ring gear 43 In pinion 11 on 3.91
 How is pinion adjusted—screw or shims SHIMS
 How is pinion bearing adjusted—screw or shims SHIMS
 Are pinion bearings carried in sleeve NO
 Backlash between pinion and ring gear .003 to .008
WITH .002 MAX VARIATION IN ANY ONE AXLE

TIRES and WHEELS

Tires—
 Make FIRESTONE, GOODRICH, GOODYEAR
 Size 7.10 x 15 No. of plies 4

TIRES and WHEELS (Cont'd)

Inflation pressure—Front 24 (COLD) Rear 24 (COLD)
 Rim-Diameter 15" Width 5½"

SPRINGS

FRONT SPRING—

Independent or conventional suspension INDEPENDENT
 Type—coil, semi-elliptic, transverse, torsion COIL
 Make EATON
 Material SAE 9260
 Torsional stabilizer at front YES
 If leaf—
 Length Width
 Number of leaves—5-passenger, 4-door sedan
 Are radius rods used on axle
 If coil—
 Free length 15.50
 Length under curb weight 11.05

REAR SPRING—

Independent or conventional suspension CONVENTIONAL
 Type—coil, semi-elliptic, transverse, torsion SEMI-ELLIPTIC
 Make EATON, MATHER, US SPRG. & BUMPER
 Material SAE 5147 - 4068
 Torsional stabilizer at rear NO
 If leaf—
 Length 53.0 Width 2
 Number of leaves—5-passenger, 4-door sedan 8
 Spring leaves lubricated with NONE REQ'd
 Spring cover, Yes No NONE REQ'D
 Spring shackles—
 Front—Type RUBBER Make HARRIS
 Rear—Type RUBBER Make HARRIS
 Spring bolts—
 FRT. Type SHOULDER TYPE, FLOATS ONE END
 RR. Type SHOULDER TYPE, FIXED BOTH ENDS
 Free length
 Length under curb weight
 Rate for above pounds per inch

Shock absorbers—

Make MONROE, GABRIEL
 Type, one way with lever, two way with lever, or direct acting
 Front DIRECT ACTING
 Rear DIRECT ACTING
 Fluid capacity (oz.)—front MONROE-4.1 rear MONROE - 6.8
GABRIEL-4.8 GABRIEL - 7.

* Use 80 E.P. for -10° F or lower.
 † 4.27:1-----Std. with O.D. Trans.

Make of Car MERCURY Model 9CM Date 7-1-48

STEERING

Steering gear—
 Type WORM AND ROLLER
 Make GEMMER Model

Ratio 18.2 : 1
 Lubricant recommended 90 E.P.
 Steering wheel diameter 18"
 Drag link longitudinal or transverse TRANSVERSE
 Tie rod—one or two TWO
 Is intermediate steering arm used IDLER ARM
 Number of turns of steering wheel for full left
 to right swing of wheels 4
 Car turning radius—feet—right, left or both 21' 10"
 Caster—degrees 1/2° to 1/2°
 Camber—degrees or 0° inches to 3/4
 Toe-in—3/32 inches to 5/32
 Cross-tie inclination of tie-pin—degrees 50
 Front axle—
 Make OWN Model 8CM
 Section type—L-beams, tubular or none
 End type—Elliptic or reverse Elliptic ELLIOTT
 Minimum road clearance—tires inflated 7, 8"

BRAKES

Foot brakes—
 Make BENDIX
 Type of mechanism, hydraulic or mechanical HYDRAULIC
 if vacuum booster is standard, state make

Brake lining moulded, semi-moulded or woven—
 Primary shoe MOULDED
 Secondary shoe MOULDED
 Drum—
 Material COMPOSITE Diameter 11"
 Lining—
 Length per wheel 23.9"

BRAKES (cont'd)

Width 2" Thickness .212
 Clearance—for .010 heel .010
 Total foot braking area 179
 Percent braking power on rear wheels 44%
 Hand lever operates on—transmission, separate rear brakes, r rear-
ice brakes or all four service brakes REAR SERVICE
 Hand brake, if separate from service brake—
 Internal or external

Drum diameter

Lining—
 Length per drum

Width

Thickness

Clearance

FRAME and OTHER GENERAL DATA

Frame—
 Depth—max 5 1/2"
 Thickness—minimum .105"
 Flange width—max 2"
 Wheelbase 118
 Tread—
 Front 58 1/2
 Rear 60
 Weight of standard 5-passenger, four-door sedan—
 Shipping 3430
 Curb 3594
 Price of standard 5-passenger, 4-door sedan

First serial number, this series 9CM-101
 Serial number location PLATE ON DASH
 Overall length of car—
 With bumpers and bumper guards 206.8
 Overall width of car 76.9
 Overall height, road to roof with no load 64.8

Make of Car. MERCURY Model 9CM Date 7-1-48

NOTE—In giving bearing dimensions, kindly use the following order: inside diameter, outside diameter and width. Where cap and cone bearings are used, give both cap and cone numbers.

BEARINGS

Water pump bearing—
 Make or type SINGLE ROW SEALED & COMP. BUSHING
 Size or number 7BA-8530-B₂ Ball

Fan bearing— 7BA-8520-B₂ Composit. Bushing
 Make or type IRON CASTING
 Size or number .750x2.70

Starting motor commutator end bearing—
 Make or type COMP. BRONZE BUSHING
 Size or number .625 x .750 x .56

Starting motor drive end bearing—
 Make or type COMP. BRONZE BUSHING
 Size or number .625 x .750 x 1.151

Starting motor outboard bearing—
 Make or type -----
 Size or number -----

Generator commutator end bearing—
 Make or type BRONZE BUSHING
 Size or number .6705 x .7975 x .795

Generator drive end bearing—
 Make or type SEALED BALL
 Size or number 7BA-10094

Transmission main drive gear front pilot bearing— 6691 x 1.5745 x
 Make or type SINGLE ROW ANNUALR SHIELDED ...#709
 Size or number #.203

Clutch throwout bearing—
 Make or type AETNA "T" TYPE THRUST
 Size or number -----

Transmission main drive gear rear bearing—
 Make or type SINGLE ROW ANNUALR
 Size or number #.208

Transmission main shaft front pilot bearing—
 Make or type STRAIGHT ROLLER
 Size or number .750 x 1.125 x 1.44

Transmission main shaft rear bearing—
 Make or type SINGLE ROW ANNUALR
 Size or number #.306

Transmission countershaft front bearing—
 Make or type STRAIGHT ROLLER
 Size or number .750 x 1.125 x 1.44

Transmission countershaft rear bearing—
 Make or type STRAIGHT ROLLER
 Size or number .750 x 1.125 x 1.70

Transmission reverse idler bearing—
 Make or type BRONZE BUSHING

BEARINGS (cont'd)

Size or number .750 x .884 x 1.180

Overdrive shaft rear bearing—
 Make or type BABBIT BUSHING
 Size or number 1.500 x 1.625 x 1.50

Overdrive shaft pilot bearing—
 Make or type SINGLE ROW ANNUALR
 Size or number #.306

Main shaft extension bearing—
 Make or type BABBIT BUSHING
 Size or number 1.500 x 1.625 x 1.50

Rear axle pinion shaft front bearing—
 Make or type TAPERED ROLLER
 Size or number CONE - 02872
CUP - 02820

Rear axle pinion shaft rear bearing—
 Make or type TAPERED ROLLER
 Size or number CONE - 31593
CUP - 31520

Differential right bearing—
 Make or type TAPERED ROLLER
 Size or number CONE - 25577
CUP - 25523

Differential left bearing—
 Make or type TAPERED ROLLER
 Size or number CONE - 25577
CUP - 25523

Rear wheel inner bearing—
 Make or type PRELUBRICATED-SEALED-SINGLE ROW
 Size or number 88128

~~Rear wheel outer bearing—
 Make or type -----
 Size or number -----~~

Front wheel inner bearing—
 Make or type TAPERED ROLLER
 Size or number CUP 14275- CONE 14130

Front wheel outer bearing—
 Make or type TAPERED ROLLER
 Size or number CUP 12520- CONE 12580

Kingpin upper bearing—
 Make or type STEEL BACK BRONZE
 Size or number 15/16 Dia. x 1 1/4 Long

Kingpin lower bearing—
 Make or type STEEL BACK BRONZE
 Size or number 15/16 Dia. x 1 1/4 Long

Kingpin thrust bearing—
 Make or type BALL OR TAPERED ROLLER
 Size or number NICE 6564- TIMKEN T92

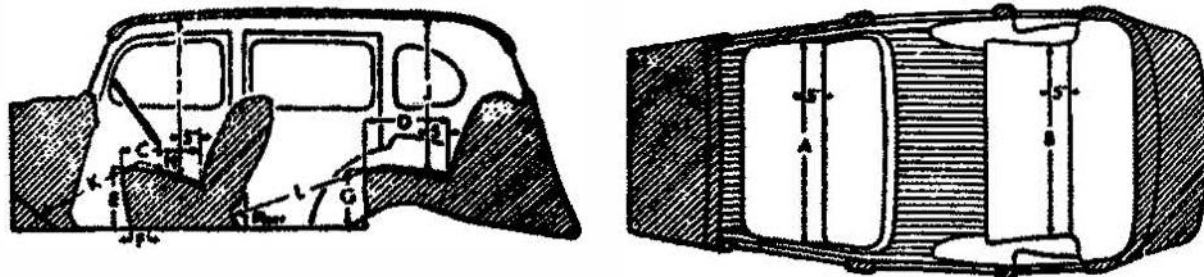
Make of Car **ACSCURY** Model **9CM** Date **7-1-48**

NOTE: (1) List only that equipment which is included in the factory delivered price. Special equipment which is fitted, but not included in the factory delivered price should be listed with its additional price.
 (2) Enter on top line year own model name, or series mark corresponding to Standard, Deluxe or Custom.

EQUIPMENT	Models		
	Standard	Deluxe	Custom
Catalog Designation of Model	9CM		
Laquer mate	-----		
Body finish, <i>laquer or synthetic enamel</i>	BAKED ENAMEL		
Fender finish, <i>laquer or synthetic enamel</i>	BAKED ENAMEL		
Hardware mate	VARIOUS		
Speedometer mate	STEWART-WARNER		
Gasoline gauge mate	FORD & KING-S		
Thermometer mate	FORD & KING-SEELEY		
Car lock mate	BRIGGS & STRATTON OR UNITED SPEC.		
Car lock operates on <i>ignition and steering</i>	IGNITION		
Clock mate <i>mechanical or electrical</i>	BORG		
Ciger lighter mate	CASCO OR CUNO		
Safety glass mate	PITTSBURG GLASS AND OWN		
Safety glass type, <i>laminated or tempered</i>			
in windshield	LAMINATED		
in side windows	LAMINATED		
in rear window			
Bumper mate	TEMPERED-STD. STEEL		
Bumper guard mate	HOUDAILLE, HERSEY		
Car heater mate EATON Type FRESH AIR			
Direction signal mate			
Front <i>yes or no</i> Rear <i>yes or no</i>	OWN		
No. of tail lights included	2		
No. of visors included	2		
No. of horns included	2		
No. of windshield wipers included	2		
No. of spare tires included	1		

Make of Car **MERCURY** Model **9CM** Date **7-1-48**

BODY DIMENSIONS (Five-Passenger, Four-Door Sedan)



INTERIOR

All interior body dimensions taken with front seat in its rear position

Width of front seat cushion, measured 8 inches from back (A)	59.0
Width of rear seat cushion, measured 8 inches from back (B)	50.0
Depth of front seat cushion (C)	18.25
Depth of rear seat cushion (D)	18.50
Height of front seat cushion measured 12 1/2 inches from center line of body (E)	13.12
Front seat horizontal adjustment, inches (F)	4
Front seat vertical adjustment, inches	
Height of rear cushions measured 12 1/2 inches from center line of body (G)	12.5
Vertical distance steering wheel and seat cushion (H)	5.2
Head room at front seat, measured 8 inches from back (I)	36.5
Head room at rear seat, measured 8 inches from back (J)	36.25
Leg room in front seat, measured from 6 inches up on toe board, following contour of seat cushion (K)	43.5
*Leg room in rear seat, measured from toe board , following contour of seat cushion (L)	44.00
Trunk capacity, cubic feet. (Spare Tire Removed, Spare Tire Attached)	26.8, 24.1
Width of left front pillar on diagonal with door closed	4.0

* No foot rest, measured 4" from toe point.

