

AUTOMOBILE MANUFACTURERS ASSOCIATION CONSOLIDATED SPECIFICATION QUESTIONNAIRE

MAKE OF CAR: THUNDERBIRD	MODEL NAME	SYMBOL
COMPANY: Ford Division Ford Motor Company	Thunderbird Convertible - 40A Thunderbird Hard Top - 40B	
MODEL YEAR: 1957	DATE	

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- NOTES: 1. The specifications set forth herein are those in effect at the date of compilation and are subject to change without notice.
 2. All specifications are standard for the models under which they are listed unless otherwise indicated.
 3. All dimensions are nominal engineering dimensions unless otherwise indicated.
 4. Unless otherwise indicated, specifications apply to 5 or 6 passenger, 4-door sedan or equivalent.

GENERAL SPECIFICATIONS

Model	292 Cu. In.	312 Cu. In.	
Wheelbase	102.0		
Tread	Front	56.0	
	Rear	56.0	
Maximum Overall Dimensions	Length (L-103)	181.4	
	Width (W-103)	72.8	
	Height (H-101)	51.6	
Steering ratio—overall	23.1		
Turning diameter (curb to curb)	34.9 Ft.		
Shipping weight*	N. A.		
Transmission— (Specify standard, optional, not avail.)	Conventional	Standard	
	Overdrive	Optional	
	Automatic	Optional	
Axle ratio	Conventional	3.56:1	
	Overdrive	3.70:1	
	Automatic	3.10:1	
Tire size	7.50 x 14 - 4 Ply		
Engine	Type	V	
	No. of cylinders	8	
	Valve arrangement	Overhead	
	Bore and stroke	3.75 x 3.30	3.80 x 3.44
	Piston displacement, cu. in.	292	312
	Standard compression ratio	9.1:1	9.7:1
	Maximum bhp at engine rpm	N. A.	N. A.
Maximum torque at rpm	N. A.	N. A.	

*Standard car weight, not including gas and water.

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ENGINE—GENERAL

Type	V, In-line, other	V		
	Angle of V	90°		
No. of cylinders		8		
Valve arrangement		Overhead		
Bore and stroke		3.75 x 3.30	3.80 x 3.44	
Piston displacement, cu. in.		292	312	
Numbering system (front to rear)	L. Bank	5-6-7-8		
	R. Bank	1-2-3-4		
Firing order		1-5-4-8-6-3-7-2		
Compression ratio	Standard Head	9.1:1	9.7:1	
	Optional Head			
Cylinders	Head Material	Cast Iron		
	Sleeve—Wet, dry, other, none			
Number of mounting points	Front	Two		
	Rear	One		
Taxable horsepower	(Dia. ² x No. Cyl.) 2.5	45.00	46.21	
Advertised max. brake horsepower at engine RPM*	Standard head	N. A.	N. A.	
	Optional head			
	With fuel (Octane and method)	Standard Head	N. A.	N. A.
		Optional Head		
Max. torque (lb. ft. @ RPM)	Standard head	N. A.	N. A.	
	Optional head			
Recommended idle speed (neutral)		475-500 RPM		

ENGINE—PISTONS

Material	Aluminum Alloy		
Description and finish	Autothermic, Solid Skirt Cam-Ground, Flat Head Tin-Plated		
Weight (piston only) oz.	19.6		20.7
Clearance	Top land	.0230-.0284	
	Skirt	Top	.0013-.0027
		Bottom	.0009-.0015
Ring groove depth	No. 1 ring	.1926-.1940	.2045-.2107
	No. 2 ring	.1926-.1940	.2045-.2107
	No. 3 ring	.1735-.1802	.1867-.1905
	No. 4 ring		

*Corrected as defined by SAE Engine Test Code, with the following standard power consuming accessories:_____

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ENGINE—RINGS

Type (top to bottom)	No. 1 oil or comp.		Compression
	No. 2 oil or comp.		Compression
	No. 3 oil or comp.		Oil Control
	No. 4 oil or comp.		
No. rings above piston pin		Three	
Compression	Material	No. 1-Alloy Cast Iron	No. 2-Cast Iron
	Coating	Chrome-Plated	Phosphate-Coated
	Width	.0930 - .0935	No.1-.0775 - .0780
	Gap	.010 - .020	No.2-.0930 - .0930
	Maximum wall thickness	.181	.168
Oil	Material	Steel	
	Coating	Chrome-Plated Rails - Blued Expander	
	Width	.183 (Assy)	
	Gap	.015 - .055	
	Maximum wall thickness	.177	.158
Location of expanders		In Oil Ring Assembly	

ENGINE—PISTON PINS

Material		Alloy Steel, Heat-Treated	
Length		3.016 - 3.030	3.022 - 3.028
Diameter		.9120 - .9123	
Type	Locked in rod, in piston, floating, etc.		Full-Floating
	Bushing	In rod or piston	In Rod
		Material	Bronze
Clearance	In piston	.0001 - .0003 (S.F.)	
	In rod	.0001 - .0003 (S.F.)	
Direction offset in piston		Right (.062)	

ENGINE—CONNECTING RODS

Material		Forged Steel	
Weight (oz.)		24.06	23.04
Length (center to center)		6.320 - 6.324	6.250 - 6.254
Bearing	Material	Steel-Backed Copper-Lead	
	Type (cast-in or removable)	Replaceable Insert	
	Effective length	.711	
	Clearance	.0008 - .0027	
	End play	.006 - .016 (Two Rods)	

ENGINE—CRANKSHAFT

Material	Precision-Molded Alloy Cast Iron
Weight (lb.)	50.43

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ENGINE—CRANKSHAFT (cont.)

Vibration damper type		Rubber-Floatod		
End thrust taken by bearing (No.)		3		
Crankshaft end play		.002 - .006		
Main bearing	Material	Steel-Backed Babbitt	Steel-Backed Copper-Lead	
	Type (cast-in or removable)	Replaceable Insert		
	Clearance	.0008 - .0026		
	Journal dia. and bearing effective length	No. 1	2.4980 - 2.4988 x 1.082	2.6235 - 2.6243 x 1.102
		No. 2	2.4980 - 2.4988 x 1.165	2.6235 - 2.6243 x 1.125
		No. 3	2.4980 - 2.4988 x 1.125	2.6235 - 2.6243 x 1.125
		No. 4	2.4980 - 2.4988 x 1.165	2.6235 - 2.6243 x 1.125
		No. 5	2.4980 - 2.4988 x 1.220	2.6235 - 2.6243 x 1.160
No. 6				
No. 7				
Direction offset from cyl. bore				
Connecting rod crankpin journal diameter		2.1880 - 2.1888		

ENGINE—CAMSHAFT

Material		Precision-Molded Alloy Cast Iron		
Bearings	Material	Steel-Backed Babbitt		
	Number	Five		
Type of drive	Gear or chain		Chain	
	Crankshaft gear or sprocket material		Steel	
	Camshaft gear or sprocket material		Cast Iron	
	Timing chain	Make	N. A.	
		No. of links	56	
Width		.9275		
Pitch		.375		

ENGINE—VALVE SYSTEM

Hydraulic lifters (yes, no)		No	
Special provision for valve rotation (intake, exhaust)		Free-Turn, Intake & Exhaust	
Rocker ratio		1.54:1	
Operating tappet clearance (indicate hot or cold)	Intake	.019 (Hot)	
	Exhaust	.019 (Hot)	
Tappet clearance for timing	Intake	.019 (Hot)	
	Exhaust	.019 (Hot)	
Timing marks on fly-wheel, damper, other		Damper	

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ENGINE—VALVE SYSTEM (cont.)

Timing	Intake	Opens (°BTC)	18°
		Closes (°ABC)	58°
	Exhaust	Opens (°BBC)	66°
		Closes (°ATC)	10°
Intake	Material		Chrome Steel
	Overall length		5.11
	Actual overall head dia.		1.920 - 1.930
	Angle of seat		45° 30' - 45° 45'
	Seat insert material		
	Stem diameter		.3416 - .3423
	Stem to guide clearance		.0010 - .0024
	Lift		.401
	Outer spring press. and length	Valve closed (lb. @ in.)	71-79 @ 1.78
		Valve open (lb. @ in.)	161-177 @ 1.39
	Inner spring press. and length	Valve closed (lb. @ in.)	
		Valve open (lb. @ in.)	
	Exhaust	Material	
Overall length		5.09	
Actual overall head dia.		1.505 - 1.515	
Angle of seat		45° 30' - 45° 45'	
Seat insert material			
Stem diameter		.3403 - .3410	
Stem to guide clearance		.0023 - .0037	
Lift		.421	
Outer spring press. and length		Valve closed (lb. @ in.)	71-79 @ 1.78
		Valve open (lb. @ in.)	161-177 @ 1.39
Inner spring press. and length	Valve closed (lb. @ in.)		
	Valve open (lb. @ in.)		

ENGINE—LUBRICATION SYSTEM

Type of lubrication (splash, pressure, nozzle)	Main bearings	Pressure
	Connecting rods	Pressure
	Piston pins	Oil Mist
	Camshaft bearings	Pressure
	Tappets	Gravity
	Timing gear or chain	Gravity
	Cylinder walls	Pressure Stream

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ENGINE—LUBRICATION SYSTEM (cont.)

Oil pump type	Rotary
Normal oil pressure (lb. @ rpm)	45 @ 2000
Oil pressure gage type (electric or mechanical)	Electric
Type oil intake (floating, stationary)	Stationary
Oil filter type (full flow, partial flow)	Full Flow
Capacity of crankcase, less filter—refill (qt.)	5
Oil grade recommended (SAE viscosity and temperature range)	Above 30F - SAE 20 or 20W Above 10F - SAE 10 or 10W Below 10F - SAE 5W
Oil type recommended	Normal Service - ML-Regular (Low Detergency) Heavy Duty - MM-Premium (Mild Detergency)

ENGINE—FUEL SYSTEM

	Standard head	Regular	Premium	
Recommended fuel	Optional head			
Fuel Tank	Capacity (gals.)	20		
	Filler Location	R. H. Side		
Fuel Filter	Type	Porous Fiber		
	Location	In Pump-to-Carburetor Line		
Fuel pump	Type (elec. or mech.)	Mechanical Diaphragm		
	Location	Lower Left, On Front Cover		
	Pressure range	4-5 PSI @ Idle		
	Vacuum booster (std., optl., none)	Standard		
Carburetor	Make	Holley		
	Model number	N. A.		
	Number used	One	One Std., Two Optional	
	Type	Downdraft, side inlet, other	Downdraft	
		Single or dual	Dual	Four-Barrel
		Intake manifold heat control (manual, auto., none)	Automatic	
		Automatic choke type (integral, other)	Integral	
	Air cleaner type	Dry - Disposable Element		
	Standard			
	Optional			

ENGINE—EXHAUST SYSTEM

Type (single, single with cross-over, dual, other)	Dual
Muffler type (rev. flow, str. thru, sep.resonator)	3 Passage
Exhaust pipe dia.	Branch
	Main
Tail pipe diameter	2.0
	2.0

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ENGINE—COOLING SYSTEM n.

Type (pressure system, atmospheric, other)		Pressure	
Radiator cap relief valve press.		12-15 P.S.I.	
Circulation thermostat	Type (choke, bypass)	Choke	
	Starts to open at	157-162 F	
Water pump	Type (centrifugal, other)	Centrifugal	
	Number of pumps	One	
	Drive (V-belt, other)	V-Belt	
	Bearing type	Double-Row Sealed Ball	
By-pass recirculation type (internal, external)		External	
Radiator core type (cellular, tube and fin)		Corrugated Fin and Tube	
Cooling system capacity	With heater (qt.)	21	
	Without heater (qt.)	20	
Water jackets full length of cylinder (yes, no)		Yes	
Water all around cylinder (yes, no)		Yes	
Radiator hose	Lower	Number and type (molded, straight)	One Molded
		Inside diameter and length	2.00 x 8.16
	Upper	Number and type (molded, straight)	One Molded
		Inside diameter and length	1.75 x 10.40
	By-pass	Number and type (molded, straight)	One Straight
		Inside diameter and length	.578 - .640 x 4.25
Drive belts	Fan	Number used	One
		Angle of V	38°
		Outside length	45.14 @ P.D.
		Width	.500
	Generator	Angle of V	See Fan Belt
		Outside length	
Fan	Number of blades and spacing		Four-Unequal
	Diameter		18
	Ratio—fan to crankshaft revolutions		.90:1
	Bearing type		See Water Pump

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ELECTRICAL—SUPPLY SYSTEM

Battery	Make and Model		Various
	Voltage Rtg. & Plates/cell		12 Volts - 66 Plates - 6 Cells
	SAE Designation & Amp Hr. Rtg		55
	Location		Engine Compartment
Terminal grounded		Negative	
Generator	Make		Four
	Model		FEJ-10000-C
	Type		Shunt
	Ratio—Gen. to Cr/s rev.		2:1
Regulator	Make		Ford
	Model		FEJ-10505-B
	Type		3 Coil
	Cutout relay	Closing voltage @ generator rpm	12.0 - 12.8
		Reverse current to open	2-6
	Regulated	Voltage	14.6 - 15.4 @ 75°
		Current	28-32
	Min. Gen. rpm required		3000
	Voltage test conditions	Temperature	75°F
		Load	5 Amps
Other			

ELECTRICAL—STARTING SYSTEM

Starting motor	Make		Ford
	Model		FEJ-11001-A
	Rotation (drive end view)		Clockwise
	Engine cranking speed		150-180
	Test conditions		85°
	Lock test	Amps	55°
		Volts	5
		Torque (lb. ft.)	15.5
	No load test	Amps	85
		Volts	12
RPM (min.)		4500	
Motor control	Switch (solenoid, manual)		Solenoid
	Starting procedure		Turn Ignition Key to Right Beyond the "On" Position

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ELECTRICAL—STARTING SYSTEM (cont.)

Motor drive	Engagement type		Bendix Folo-Thru		
	Pinion meshes (front, rear)		Rear		
	Number of teeth	Pinion Flywheel	9	146	Synchronesh-146 Fordomatic-148
	Flywheel tooth face width		.375		

ELECTRICAL—IGNITION SYSTEM

Coil	Make		Ford	
	Model		FEJ-12029-A	
	Amps	Engine stopped	4.5	
		Engine idling	2.5	
Distributor	Make			
	Model		FEJ-12127-B	
	Spark advance data (at distributor shaft)	Centr. advance start (rpm)	7° @ 1000	
		Centr. advance max. deg. @ rpm	35 @ 4000	
		Vacuum advance start (in. Hg.)	0° @ 5 IN. Hg.	
		Vac. adv. (max. deg. @ in. Hg.)	22° @ 18 In. Hg.	
	Breaker gap (in.)		.014 - .016	
Cam angle (deg.)		26° - 28.5°		
Breaker arm tension (oz.)		17-20		
Timing	C/S deg. @ rpm		3° Std. or O.D. Trans. - 6° Automatic	
	Mark location		Vibration Damper	
	Cylinder numbering system (see page 2)		L. Bank - 5-6-7-8 R. Bank - 1-2-3-4	
	Firing order (see page 2)		1-5-4-8-6-3-7-2	
Spark plug	Make and model		Champion 870	
	Thread (mm)		18	
	Tightening torque (lb. ft.)		20-25 Prod. Inst. Only	
	Gap		.032 - .036	
Cable	Conductor type		Stranded Steel	
	Insulation type		Neoprene Sheath	
	Spark plug protector			

ELECTRICAL—SUPPRESSION

Description	
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MODEL 40A 40B

ELECTRICAL—INSTRUMENTS AND SWITCHES

Speed-ometer	Make	King Seely
	Trip odometer (yes, no)	No
Charge indicator—type		Warning Lamp
Temperature Indicator—type		Electric Gage
Oil pressure Indicator—type		Warning Lamp
Fuel Indicator—type		Electric Gage
Ignition switch	Identify positions in order and circuits controlled	To Left - Accessories "On" Center - Accessories and Engine "Off" To Right- 1st Position: Accessories and Engine "On" 2nd Position: Starter and Engine "On"
	Provision for illumination	Lighted with Instrument Panel Lights "On"
	Location	Lower Left Side of Instrument Panel
	Theft protection type	
Main lighting switch	Identify positions and lights controlled	Pull Out - 1st Position: Parking, Tail, License and Instrument Panel Lights. 2nd Position: Head, Tail, License and Instrument Panel Lights. Rotate Knob Clockwise to Dim Instrument Panel Lights.
Other light switches	Locations and lamps controlled	Toe Board Headlamp Dimmer Switch. Map Lamp Switch Integral with Map Lamp on Instrument Panel. Courtesy Lamp Switches in Door Pillars Operate Map Lamp. Stoplight Switch in Brake Line on Top of Frame. Road Lamp Switch on Bracket Under Instrument Panel.
Other switches	Locations and devices controlled	Power Seat Switch in Left Door Trim Molding. Power Window Switches on Door Trim Panels. Combined Automatic Transmission Neutral Switch and Back-up Lamp Switch on Transmission Shifter Tower. Turn Signal Switch in Steering Column Hub. Heater Blower Switch on Instrument Panel. Overdrive Kickdown Switch Accelerator Pedal.
Windshield wiper	Make	Trico
	Type	Vacuum
	Vacuum booster provision	Optional
	Washer provision	Optional
Horn	Type	Air-Electric
	Number used	Two
	Amp draw (each)	10 Amp. Max.

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MODEL 40A 40B

ELECTRICAL—LAMP BULBS

Give quantity used and trade number, e.g., Headlamp 2-4030.
Indicate accessories which are not standard equipment by an asterisk following the numbers.

Headlamp	
Headlamp beam indicator	2-#5400
Parking light	1-#57
Tail light	2-#1034
Stop light	2-#1034
Direction indicator	Front See Tail Light
	Rear See Parking Light
	Tell-Tale See Tail Light
License plate light	1-#57
Instrument light	1-#67
Ignition lock light	1-#57
Map light	1-#57
Dome light	1-#89
Clock light	None
Radio dial light	1-#57
Glove compartment light	1-#57
Courtesy light	None
Trunk compartment light	See Map Light
Other	None
R.H. Air or Blower Switch Light 1-#57; Heater Control 1-#57; L.H. Air & Ext. Lighting Switch Light 1-#57; Back-up Lights 2-#1034; Cigar Lighter & W/S Wiper Light 1-#57; Trans. Selector Quantant Light 1-#67; Hand Brake Warning Light 1-#57; Road Lamps (Clear) 2-#4415 (Amber) 2-#4415-A	

ELECTRICAL—FUSE & CIRCUIT BREAKER DATA

Use trade number of fuse, e.g., SFE-10. Indicate circuit breaker by ampere capacity suffixed by letters "C.B.", e.g., 30 C.B. Where fuse or circuit breaker protects multiple circuits indicate first use by a letter and repeat the same letter for all units protected by the same fuse or circuit breaker, e.g., Parking light SFE-10 (a), Direction Indicator: same as (a).

Headlamp	12 C.B. (a)
Headlamp beam indicator	Same as (a)
Parking light	12 C.B. (b)
Tail light	Same as (b)
Stop light	Same as (b)
Direction indicator	SFE - 7.5
License plate light	Same as (b)
Instrument light	Same as (b)
Ignition light	Same as (b)
Map light	SFE - 7.5 (c)
Dome light	None
Clock	Motochron - (Not Fused)
Clock light	Same as (b)
Radio	9-Tube SFE 7.5
Glove compartment light	None
Courtesy light	Same as (c)
Trunk compartment light	None
Other	Cigar Lighter-Thermal Fuse; Back-up Lights Same as (b); Heater Blower SFE-14; Overdrive 3AG-15; Power Seats & Windows as follows: 1-30 C.B. (Line Protector); 1-15 C.B. (Each Window Motor); One 15C.B. (Common to Both Seat Motor); 1-15 C.B. Seat S/W Line 1-15 C.B.; (Protector)

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MODEL	40A	40B
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DRIVE UNITS—CLUTCH (PEDAL OPERATED)

Make		Long	
Type (dry or wet plate)		Dry	
In combination with fluid coupling (yes, no)		No	
Semi-centrifugal (yes, no)		Yes	
Type pressure plate springs		Steel	
Total plate pressure (lb.)		1395	
No. of clutch driven discs		One	
Clutch facing	Material	Molded Asbestos	
	Inside diameter	7.0	
	Outside diameter	11.0	
	Total eff. area (sq. in.)	113.10	
	Thickness	0.125	
	Number required	Two	
	Engagement cushioning method		Torbend Disc With Spring Vibration Damper
	Release bearing	Type	Sealed Ball Thrust
		Method of lubrication	Prepacked
	Torsional damping	Method (springs, other)	Springs
Frict. mat.		Steel	

DRIVE UNITS—TRANSMISSIONS

Conventional (std. or opt.)	Standard
Conventional with overdrive (std. or opt.)	Optional
Automatic (std. or opt.)	Optional

DRIVE UNITS—CONVENTIONAL TRANSMISSION

Number of forward speeds		Three
Transmission ratios	In first	2.40:1
	In second	1.49:1
	In third	1.00:1
	In fourth	
	In reverse	2.86:1
Constant mesh gears in 2nd (yes, no)		Yes
Spur gear used in (indicate speeds)		None
Helical gears used in (indicate speeds)		All
Synchronous meshing in 2nd and 3rd gears (yes, no)		Yes

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DRIVE UNITS—CONVENTIONAL TRANSMISSION (cont.)

Lubricant	Capacity (pt.)		3.25
	Type recommended		Multi-Purpose
	SAE viscosity number	Summer	SAE 90
		Winter	SAE 90
Extreme cold			

DRIVE UNITS—CONVENTIONAL TRANSMISSION WITH OVERDRIVE

For transmission data see conventional transmission section

Overdrive	Type (planetary or other)		Planetary	
	If planetary, No. of pinions		3	
	Manual lockout (yes, no)		Yes	
	Downshift accelerator control (yes, no)		Yes	
	Minimum cut-in speed		28 MPH	
	Gear ratio		0.72:1	
	Lubricant	Capacity (O.D. only)		N. A.
		Separate filter (yes, no)		No
		Type recommended		Multi-Purpose
		SAE viscosity number	Summer	SAE 90
Winter	SAE 90			
Ext. cold				

DRIVE UNITS—AUTOMATIC TRANSMISSION

Trade name	Ford-O-Matic										
Type (fluid coupling with gears, torque converter with gears, other)	Torque Converter With Planetary Gears										
Manual selector positions, left to right (show symbols and define, e.g., N- Neutral)	<table style="margin: auto; border: none;"> <tr> <td style="text-align: center;"><u>P</u></td> <td style="text-align: center;"><u>R</u></td> <td style="text-align: center;"><u>N</u></td> <td style="text-align: center;"><u>DR</u></td> <td style="text-align: center;"><u>LO</u></td> </tr> <tr> <td style="text-align: center;">Park</td> <td style="text-align: center;">Reverse</td> <td style="text-align: center;">Neutral</td> <td style="text-align: center;">Drive</td> <td style="text-align: center;">Low</td> </tr> </table>	<u>P</u>	<u>R</u>	<u>N</u>	<u>DR</u>	<u>LO</u>	Park	Reverse	Neutral	Drive	Low
<u>P</u>	<u>R</u>	<u>N</u>	<u>DR</u>	<u>LO</u>							
Park	Reverse	Neutral	Drive	Low							
List gear ratios in each drive position (range)	Drive 1.46 - 1.00 Plus Torque Converter Low 2.40 - 1.00 Plus Torque Converter Reverse 2.00 - 1.00 Plus Torque Converter										
Shifting within drive position range by accelerator control and speed limiting governor (yes, no)	Yes										
By governor—forced shift (yes, no)	Yes										
Downshift of gears in high range possible up to (mph)	67 MPH										

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MODEL 40A 40B

DRIVE UNITS—AUTOMATIC TRANSMISSION (cont.)

Torque convertor	Number of elements		Three	
	Max. ratio at stall at engine rpm		2.1-1 @ 1610 - 1810	
	Mechanical lockup	Provided (yes, no)	No	
		Speed range		
		Releases at (speed range, mph)		
Type of cooling (forced air, oil cooler and type, other)		Oil Cooler in Radiator Lower Tank		
Anti-creep device (yes, no)		No		
Lubricant	Capacity—refill (pt.)		21.5 Pts.	
	Type recommended		Automatic Transmission	
	Grade	Summer	Type A	
		Winter	Type A	
		Extreme cold	Type A	

DRIVE UNITS—PROPELLER SHAFT

Number used		One	
Type (exposed, torque tube)		Exposed	
Outer diameter x length* x wall thickness	Conventional trans.	2.00 x 28.25 x .083	
	Overdrive trans.	2.00 x 28.25 x .083	
	Automatic trans.	2.00 x 25.30 x .083	
Inter-mediate bearing	Type (plain, anti-friction)	None	
	Lubri. (fitting, prepack)		
Universal joints	Make		Spicer
	Number used		Two
	Type (ball and trunnion, cross, other)		Cross
	Bearing	Type (plain, anti-friction)	Needle Roller
		Lubric. (fitting, prepack)	Fitting
Drive taken through (torque tube or arms, spring)		Rear Springs	
Torque taken through (torque tube or arms, springs)		Rear Springs	

*Centerline to centerline of joints or centerline of rear attachment point.

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MAKE OF CAR THUNDERBIRD **MODEL YEAR** 1957

MODEL	40A	40B
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DRIVE UNITS—REAR AXLE

Type (semi-floating, other)		Semi-Floating	
Gear type (hypoid, other)		Hypoid	
Gear ratio and No. of teeth	Conventional trans.	3.56:1	
	Overdrive trans.	3.70:1	
	Automatic trans.	3.10:1	
Pinion adjustment (shim, other)		Shims	
Pinion bearing adj. (shim, other)		Shims	
Lubricant	Capacity (pt.)	3.8	
	Type recommended	Multi-Purpose Extreme Pressure	
	SAE viscosity number	Summer	SAE 90
		Winter	SAE 90
Extreme cold		SAE 80	

DRIVE UNITS—WHEELS

Type (disc, other)		Disc
Rim (size and flange type)		14 x 5K
Attachment	Type (bolt or stud)	Stud
	Circle diameter	4.5
	Number and size	Five

DRIVE UNITS—TIRES

Size and ply rating	Standard	7.50 x 14
	Optional	
Rev/mile at 30 mph		773 @ 35 MPH
Inflation press. (cold)	Front	22
	Rear	22

BRAKES—SERVICE

Type		Hydraulic, Internal Expanding, Duo Servo, Single Anchor	
Booster type		None	
Effective area (sq. in.)		176 Sq. In.	
Percent brake effectiveness—rear		45%	
Drum	Diameter	Front	11.0
		Rear	11.0
Type and material		Composite Pressed Steel Disc and Cast Iron Drum	

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BRAKES—SERVICE (cont.)

Brake lining	Bonded or riveted		Riveted		
	Primary	Material		Molded Asbestos	
		Size (length x width x thickness)	Front wheel	11.00 x 2.00 x .190	
			Rear wheel	11.00 x 1.75 x .214	
		Segments per shoe		One	
	Secondary	Material		Molded Asbestos	
		Size (length x width x thickness)	Front wheel	11.00 x 2.50 x .25	
			Rear wheel	11.00 x 2.00 x .214	
		Segments per shoe		One	
	Wheel cylinder bore	Front	1.125		
Rear		.937			
Master cylinder bore		1.0			
Available pedal travel		6.5			
Line pressure at 100 lb. pedal load		700 Approx.			
Shoe clearance adjustment		.010			

BRAKES—PARKING

Type of control		T-Handle Pull Twist Release
Location of control		Under Instrument Panel Left Side
Operates on		Rear Brakes
If separate from service brakes	Type (internal or external)	
	Drum diameter	
	Lining size (length x width x thickness)	

FRAME

Type and description	"X" Member, Box Section Side Rails and Four Crossmembers.
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FRONT SUSPENSION

Type and description	Independent Ball Joint Coil Spring System Incorporating Two Unequal Length Transverse Control Arms.
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FRONT SUSPENSION (cont.)

	Type	Coil
	Material	SAE 9260 or SAE 5160
Spring	Size (length x width x No. leaves or coil I.D.)	14.99 x 4.03
	Spring rate (lb. per in.)	290
	Rate at wheel (lb. per in.)	
	Normal load (lb. @ rated length)	1540
Shock absorbers	Manufacturer	Gabriel
	Type (direct or lever)	Direct
	Piston diameter	1.0
Stabilizer	Type (link, linkless, frameless)	Link Frame Mounted
	Material	

STEERING

Type used (Standard or optional)	Mechanical		Standard	
	Power		Optional	
Wheel diameter			17 Inch	
Turning diameter	Outside front	Wall to wall (r. & l.)	37.43	
		Curb to curb (r. & l.)	34.98	
	Inside rear	Wall to wall (r. & l.)	N. A.	
		Curb to curb (r. & l.)	N. A.	
Inside wheel angle with outside wheel at 20°			24° 31'	
Mechanical	Gear	Type	Worm and Roller	
		Make	Ford	
		Ratios	Gear	20:1
			Overall	23:1
	No. wheel turns		3.5	
Power	Type		Linkage Booster	
	Make		Bendix	
	Trade name		Master Guide	
	Gear	Type		Worm and Roller
		Ratios	Gear	20:1
			Overall	23:1
	Pump driven by		Belt to Crankshaft	
	Overall torque ratio		25% of Standard Effort	
	Number wheel turns			
	Linkage	Type		Parallelogram
Location (front or rear of wheels)		Rear of Wheels		
Drag link (trans. or long)				
Tie rods (one or two)		Two Transverse		

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STEERING (cont.)

Kingpin	Inclination at camber (deg.)		<u>7° 7' Curb Weight</u>
	Diameter		
	Bearings (type)	Upper	<u>Ball Joint</u>
		Lower	<u>Ball Joint</u>
		<u>Ball Bearing in Lower Joint</u>	
Wheel alignment (range and preferred)	Caster (deg.)		<u>0° 30' to 1° 30' Curb Weight</u> Caster not to vary more than 1/2° from side to side.
	Camber (deg.)		<u>0° 8' to 1° 8' Curb Weight</u> Camber not to vary more than 1/4° from side to side.
	Toe-in (outside tread-inches)		<u>1/16 - 1/8</u>
Steering knuckle type			<u>Ball Joints</u>
Wheel spindle	Diameter	Inner bearing	<u>1.2493 - 1.2498</u>
		Outer bearing	<u>0.7493 - 0.7498</u>
	Thread size		
	Bearing type		<u>Tapered Roller</u>

REAR SUSPENSION

Type			<u>Longitudinal Leaf</u>	
Drive and torq. taken through (see page 14)			<u>Rear Springs</u>	
Spring	Type		<u>Semi-Elliptic</u>	
	Material			
	Size (length x width x No. leaves or coil I.D.)		<u>55 x 2 x 5</u>	
	Spring rate (lb. per in.)		<u>105</u>	
	Rate at wheel (lb. per in.)			
	Normal load (lb. at rated length)		<u>845</u>	
	Mounting insulation type			<u>Rubber Bushed Shackles & Rubber Bushings</u>
	If leaf	No. of leaves		<u>5</u>
		Covers (yes, no)		<u>No</u>
		Lubricated (yes, no)		<u>No</u>
Inserts		Type and size		<u>Leaf Tip Inserts</u>
	Material		<u>Wax Impregnated Fabric</u>	
Shackle (comp. or tens.)			<u>Tension</u>	
Shock absorbers	Manufacturer		<u>Gabriel</u>	
	Type (direct or lever)		<u>Direct</u>	
	Piston diameter		<u>1.0</u>	
Stabilizer	Type (link, linkless, frameless)		<u>None</u>	
	Material			
Track bar type			<u>None</u>	

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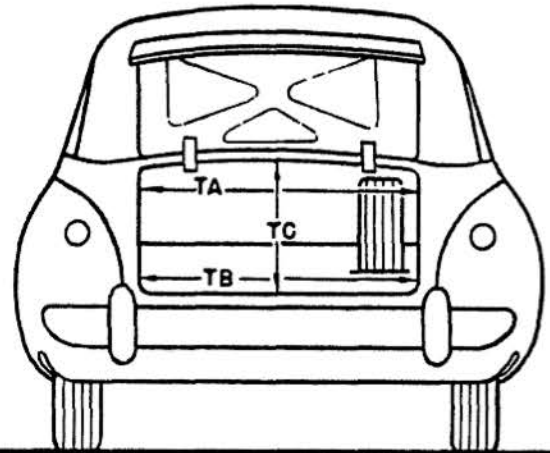
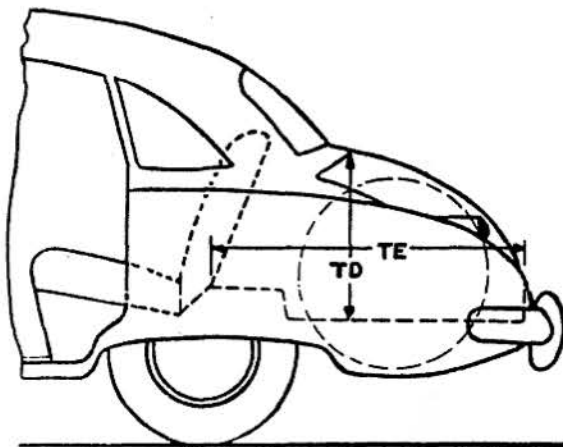
BODY—GENERAL DEFINITIONS

NOTE: Included in the dimension definitions listed on this and the following pages are those which have been proposed for adoption by the SAE. These are indicated by a number following the type of dimension, e.g., L 3. Additional dimensions have been added by the AMA Specifications Body Sub-Committee for inclusion in the Questionnaire. These are shown by an additional letter, e.g., MA. The dimensions are developed from the following basic points:

1. Front and rear seat "A" points are taken 5" forward of vertical tangent to seat back 15" from center of body.
2. Front seat is in the rear position.
3. Loaded position—5 passengers, front 300 lb., rear 450 lb., includes spare wheel, tire and tools, and full complement of gas, oil, water, etc. and tires to recommended pressure, etc.
4. C. L. (centerline).
5. D. L. O. (daylight opening, exposed glass dimension).
6. Ramp breakover angle (page 20-A) is the supplement of the included ramp angle (180° minus the included ramp angle) over which a car can pass without hanging up.

MODEL	40A	40B
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BODY—TRUNK OPENING DIMENSIONS



TA—Width across the top	46.3	
TB—Width across the bottom	43.3	
TC—Diagonal dimension at CL from top of opening to bottom	38.3	
TD—Vertical height of opening (floor to top, inside edge of opening)	16.1	
TE—Max. horizontal depth (forward from vertical projection of inside edge of opening)	63.4	
Position of spare tire stowage	Right Side Luggage Compartment on Angle	
Method of holding lid open	Spring Center Balance	

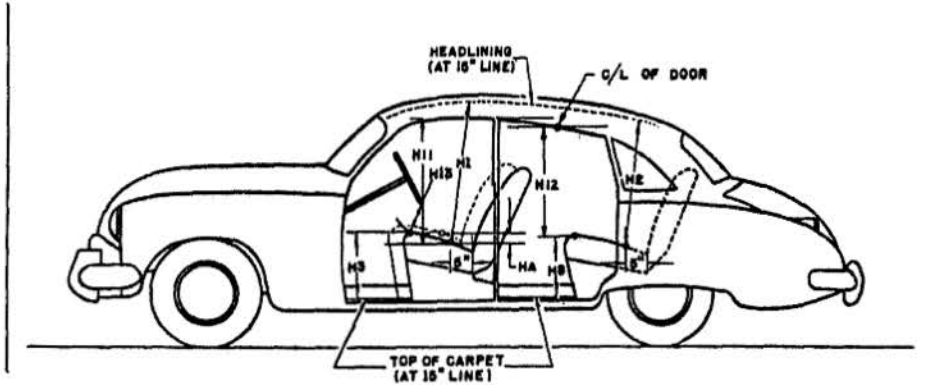
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MODEL 40A 40B

BODY—HEIGHT DIMENSIONS—INTERIOR



H1. Front headroom—from "A" pt. to headlining at 8° back of vertical on 15" line. (For "A" pt. see note 1, page 19)	33.6	33.1
H2. Rear headroom—from "A" pt. to headlining at 8° back of vertical on 15" line.		
H3. Front seat height to floor carpet on 15" line (front edge of cushion).	7.0	7.0
H8. Rear seat height to floor carpet on 15" line (front edge of cushion).		
H11. Entrance—front—cushion "A" point to bottom windcord vertical.	27.2	27.0
H12. Entrance—rear—top of cushion to bottom windcord vertical at C/L of rear door.		
H13. Steering wheel clearance to seat cushion taken on arc.	5.6 With Wheel in Neutral Position	
HA. Front seat vertical rise at "A" pt. (inches.)	1.8	

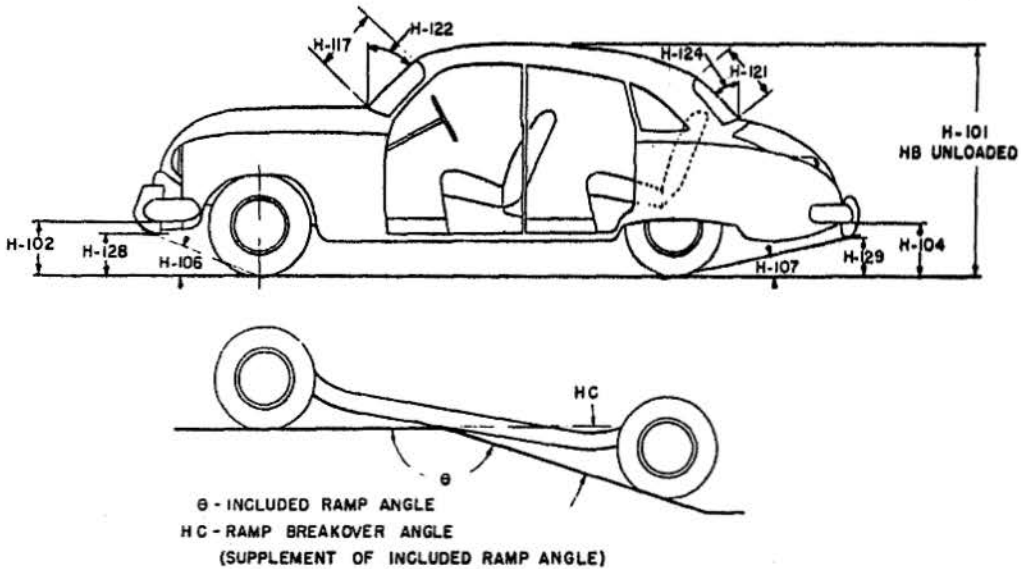
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MODEL 40A 40B

BODY—HEIGHT DIMENSIONS—EXTERIOR



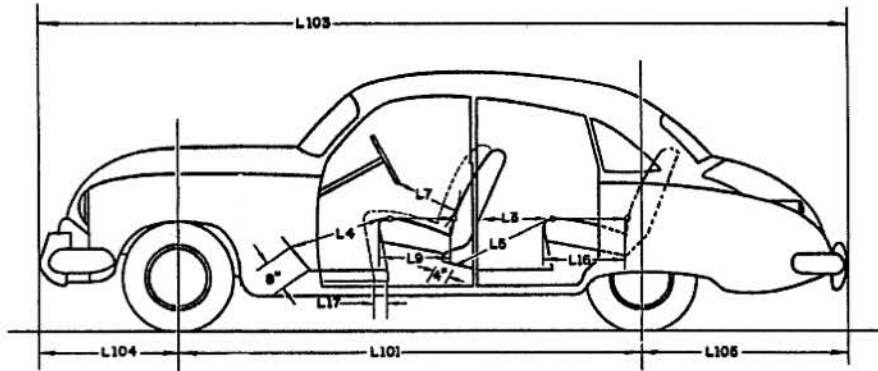
H101. Overall height.	51.8	51.6
HB. Overall height—unloaded.	49.6	
H102. Front bumper bottom to ground at normal section.	11.4	11.4
H104. Rear bumper bottom to ground at normal section.	11.6	11.6
H106. Angle of approach—from the tire rolling radius to lowest point on front bumper or guard.	22° 18'	22° 18'
H107. Angle of departure—from the tire rolling radius to lowest point on rear bumper or guard.	13° 57'	13° 57'
HC. Ramp breakover angle.*	11° 51' 56"	11° 51' 56"
H117. Windshield DLO—slant height.	17.1	17.1
H121. Backlight DLO*—Max. slant height.	18.0	12.4
H122. Windshield slope angle to vertical line on car axis.	49°	49°
H124. Backlight slope angle to vertical line on car axis.	42°	42°
H128. Ground to bottom of front bumper guard.	11.4	11.4
H129. Ground to bottom of rear bumper guard.	11.6	11.6
HD. Min. road clearance (location and dimension).	5.3 Frame	5.3 Frame
HE. Min. road clearance at rear axle.	6.7	6.7

*See Notes, page 19.

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BODY—LENGTH DIMENSIONS



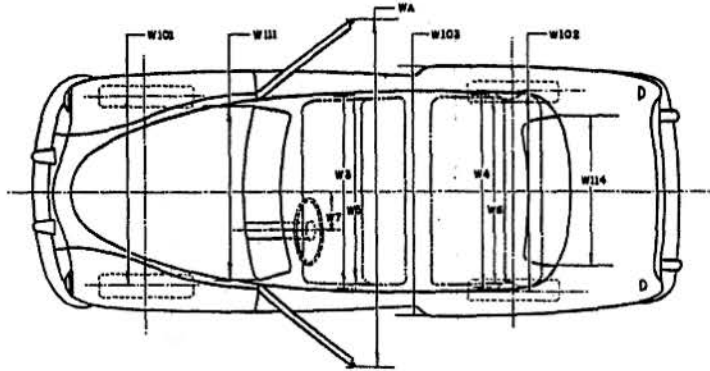
	L3. Rear compartment back of front seat back to rear seat back.	
	L4. Leg room—front—diagonal—ball of foot to top of seat to front seat back—15" line.	44.9
	L5. Leg room—rear—diagonal—from ball of foot to top of rear seat cushion and to seat back.	
Interior	L7. Steering wheel clearance to seat back taken on arc.	14.4 With Wheel in Neutral Position
	L9. Front seat depth (front edge to vert. tan. to seat back on 15" line).	17.8
	L16. Depth of rear seat (front edge to seat back).	
	L17. Total adjustment of front seat at floor.	4.0
	L101. Wheel base.	102.0
	L103. Overall length (bumper to bumper inc. guards).	181.4
Exterior	L104. Overhang—front including bumper guards.	28.3
	L105. Overhang—rear including bumper guards.	51.1

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MODEL 40A 40B

BODY—WIDTH DIMENSIONS



Interior	W3. Front shoulder room, at garnish moulding height or nearest interference 5" forward of seat back.	53.3	
	W4. Rear shoulder room, at garnish moulding height or nearest interference 5" forward of seat back.		
	W5. Front hip room, at top of seat 5" forward of vert. tan. to seat back.	58.8	
	W6. Rear hip room, at top of seat 5" forward of vert. tan. to seat back.		
	W7. Steering wheel center to center of body.	14.5	
	W101. Front tread at ground.	56.0	
	W102. Rear tread at ground.	56.0	
Exterior	W103. Max. overall width of car including bumpers or mouldings.	72.8	
	WA. Max. overall width of car with doors open.	148.9	
	W111. Windshield DLO, max. width.	56.6	
	W114. Back window DLO, max. width.	41.1	44.6

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