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October 1963 to August 1973

Shop Tips FROM FORD

111 Issues

Technical parts and service information published by Ford Division to assist servicemen in Service Stations, Independent Garages and Fleets.

A complete collection of Ford "Shop Tips" - Volumes 1 - 11

- How-To Articles
- Reference Guides
- Specifications
- Part Identification

Each issue is jammed packed full of shortcuts, tips, and tricks to make repairs fast and easy.

Articles are written in an easy, straight-to-the-point fashion and provide simple solutions to common problems.

Great source of Shortcuts, Tips, and Tricks

Covers both Car and Truck models!

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Ford Shop Tips (1963 - 1973) Complete Collection
EAN: 978-1-60371-210-1
ISBN: 1-60371-210-0

Forel Publishing Company, LLC
3999 Peregrine Ridge Ct.
Woodbridge, VA 22192
Email address: sales@ForelPublishing.com
Website: http://www.ForelPublishing.com

License #2013225

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Volume 1

October 1963 to December 1963

Shop Tips FROM FORD

3 Issues

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ALPHABETICAL INDEX TO SHOP TIPS ARTICLES 1963-64

INDEX TO SHOP TIPS ARTICLES 1963-64 BY CAR AND TRUCK LINE

FORD CAR

FAIRLANE

OCTOBER, 1963

Shop Tips FROM FORD

VOL. 1, NO. 1

Technical parts and service information published by Ford Division to assist servicemen in Service Stations, Independent Garages and Fleets.

Yours For Better Service!

As part of a continuing effort to make the servicing of Ford cars and trucks easier and more profitable for you, we are pleased to offer you this first issue of a new Ford technical service publication . . . "Shop Tips."

"Shop Tips" will be available to you monthly, free of charge, from your Ford dealer. It will contain information on running changes in the 1964 models, as well as service information on prior model Fords, that should prove to be of considerable help to you in servicing Ford products.

The technical information in "Shop Tips" is designed to keep you abreast of new developments and factory-recommended procedures. This should enable you to give your Ford customers the quick and efficient service that means added profits for you.

Because the new 1964 models have been introduced and will begin coming into your place of business in increasing numbers, this first issue of "Shop Tips" contains quick reference specifications on 1964 model Ford-built cars (Ford, Fairlane, Falcon, Thunderbird, Econoline) and light-duty trucks.

Be sure to file this and future bulletins for ready reference. If you have any suggestions for additional information that you would like to see included in this publication, please write to: Ford Division of Ford Motor Company, Parts and Service Promotion and Training Dept., P. O. Box 658, Dearborn, Michigan.

From your Ford dealer

IN THIS ISSUE

1 1964 FORD SPECIFICATIONS

IDENTIFICATION

The car warranty number and other important identifying information is stamped on the warranty plate which is attached to the rear face of the left front door inner panel.

The official vehicle Identification Number for title and registration purposes is stamped on a tab under the hood on the dash panel near the hood right hinge.

GENERAL DIMENSIONS

Wheelbase	119 inches	Over-all Width	79.9 inches
Tread:		Over-all Height	
Front	61 inches	All Models exc. Convert. & Station Wagon	55.5 inches
Rear	60 inches	Convertible	54.6 inches
Over-all Length	209.9 inches	Station Wagon	56.9 inches

APPROXIMATE REFILL CAPACITIES

	U.S. Measure	Imperial Measure
Fuel Tank:		
Car	20 gallons	16½ gallons
Station Wagon	21 gallons	17½ gallons
Cooling System:*		
223 CID Six	16 quarts	12½ quarts
289 CID V-8	14½ quarts	12 quarts
352 & 390 CID V-8	20½ quarts	17 quarts
Engine Crankcase:†		
223 CID Six	5 quarts	4½ quarts
289 CID V-8	5 quarts	4½ quarts
352 and 390 CID V-8	6 quarts	4 quarts
Transmission:		
Manual	3½ pints	3 pints
Overdrive:		
223 CID 6 cyl. & 289 CID V-8	3½ pints	3 pints
352 & 390 CID V-8	4½ pints	3¾ pints
Cruise-O-Matic:		
223 CID 6 cyl.	8½ quarts	7 quarts
289 CID V-8	10½ quarts	8½ quarts
352 & 390 CID V-8	11 quarts	9 quarts
Rear Axle	5 pints	4 pints

*Includes 1 quart for car equipped with heater.
†Includes 1 quart required with oil filter replacement.

ENGINES

	223 CID Six	289 CID V-8	352 CID V-8	390 CID V-8
Bore (Inches)	3.62	4.00	4.00	4.05
Stroke (Inches)	3.60	2.87	3.50	3.78
Taxable Horsepower	31.54	51.20	51.20	52.49
Brake Horsepower	138 @ 4200 rpm	195 @ 4400 rpm	250 @ 4400 rpm	300 @ 4600 rpm
Torque (Foot-Pounds)	203 @ 2200 rpm	282 @ 2400 rpm	352 @ 2600 rpm	427 @ 2800 rpm
Fuel Requirement	Economy Regular	Regular	Regular	Premium
Compression Ratio	8.5 to 1	9.0 to 1	9.3 to 1	10.1 to 1
Firing Order	1-5-3-6-2-4	1-5-4-2-6-3-7-8	1-5-4-2-6-3-7-8	1-5-4-2-6-3-7-8
Replacement Spark Plugs:				
FoMoCo Part Number	B7A-12405-A (Autolite BTF6)	B8A-12405-A (Autolite BF42)	B8A-12405-A (Autolite BF42)	B8A-12405-A (Autolite BF42)
Spark Gap Width	0.032-0.036 in.	0.032-0.036 in.	0.032-0.036 in.	0.032-0.036 in.
Distributor Point Gap	0.024-0.026 in.	0.014-0.016 in.	0.014-0.016 in.	0.014-0.016 in.

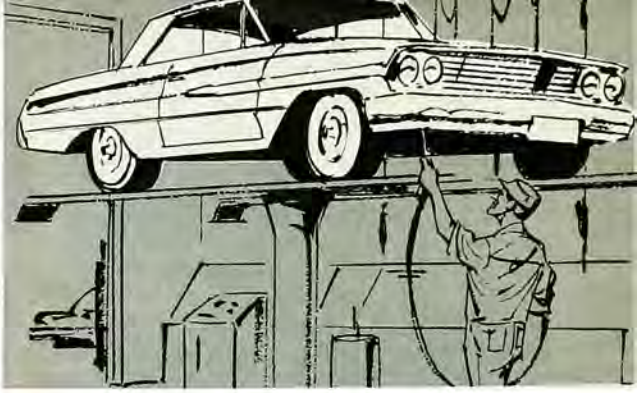
BATTERY (12 VOLTS)

	Ampere Hours	Plates
Standard:		
223 CID 6 cyl.	55	66
289 CID 8 cyl.	55	54
352 & 390 CID 8 cyl.		
Std. Transmission	55	66
Auto. Transmission	65	78
Heavy Duty:		
223 CID 6 cyl.	65 or 70	78 66
289 CID 8 cyl.	65	66
352 & 390 CID 8 cyl.		
Std. Transmission	65	78
Auto. Transmission	70	66

LIGHTS (12 VOLTS)

	Wattage or Candlepower	Lamp Number
	7½ watts	4002
	7½ watts	4001
	4 cp	1157A
	cp	1157
	p	1141
	p	1155
	watts	4405
Courtesy Light (Door Mounted)	15 cp	1003
Courtesy Light (Convertible)	4 cp	1155
Dome	15 cp	1003
Parking Brake Indicator	2 cp	257
Radio Dial	1.9 cp	1891
All instrument panel bulbs unless otherwise indicated	2 cp	1895

1964 Ford Specifications (Continued)



FUSES AND CIRCUIT BREAKERS

	Location	Protective Device Number
Radio	Fuse Panel	SFE-7.5
Clock	Fuse Panel	1AG-2
Turn Indicator and Back-up Lights	Fuse Panel	SFE-14
Heater Fan	Fuse Panel on Light Switch	SFE-14
Parking, Rear and Dome Lights	Fuse Panel on Light Switch	3FE-7.5
Ford Air Conditioner	Cartridge on Power Feed Wire	3AG-15
SelectAire Conditioner	Instrument Panel Left Side	20 Amp. C.B.
Overdrive	Clip on Overdrive Relay	3AG-15
Spotlight	Cartridge on Power Feed Wire	SFE-7.5
Windshield Washer Pump	Fuse Panel	SFE-7.5
Cigar Lighter	Fuse Panel	SFE-14

	Location	Protective Device Number
Headlight	Integral with Headlight Switch	
Electric Window Circuit	On Starting Motor Relay	20 Amp. C.B.
Electric Window Motor	Integral with Motor	
Tailgate Window Motor	Left Rear Quarter Panel	13.5 Amp. C.B.
Electric Wiper Motor:	Instrument Panel, Left of Steering Column	
Single Speed Motor		5 Amp. C.B.
2-Speed Motor		12 Amp. C.B.
Electric Seat Circuit	On Starting Motor Relay	20 Amp. C.B.
Convertible Top Motor	On Starting Motor Relay	20 Amp. C.B.

IGNITION TIMING

	Degrees† BTDC
223 CID Six* —Std. Trans.	4
Auto. Trans.	10
289 CID V-8 —Std. Trans.	6
Auto. Trans.	10
352 CID V-8*—Std. Trans.	6
Auto. Trans.	10
390 CID V-8*—Std. Trans.	4
Auto. Trans.	6

*Ignition timing requirements may vary depending upon locality, fuel, and operating conditions. For best economy and performance, the timing may be advanced to a point just short of audible detonation under load but not to exceed 5° over normal setting.

†Do not retard the initial advance beyond 2° BTDC for sub-standard fuels.

TIRE PRESSURES

	P.S.I. (Cold) Front	Rear
Passenger Car	24	24
Station Wagon	24	28

For considerable high-speed driving or heavy loads, add 4-6 pounds to the recommended cold pressure.

LUBRICANT SPECIFICATIONS

ENGINE CRANKCASE OILS

oil viscosity

Use of SAE 10W-30 oil will provide the proper viscosity for all normal ranges of outside temperatures. For operation at sustained outside temperatures below —10° F. a 5W-20 oil should be used.

oil quality

Use only oils which have been tested and certified by the maker as satisfying automobile manufacturers specifications for Engine Operating Sequence Tests for Service M.S. Ford Motor Company specification covering these tests is M2C27.

If engine oils are used which do not meet these requirements, it will be necessary to change oil at more frequent intervals than the recommended interval of every 6,000 miles or every 6 months, whichever comes first.

If you find it necessary to use an "MS" oil which is not certified by the marketer as having passed the Engine Operating Sequence Tests, the addition of Rotunda Oil Conditioner (R107-A) to the oil will satisfy the requirements.

Use of the right oil filter is also essential to good engine life and operation. For 6-month/6,000-mile filter change intervals, filters must meet Ford Specification ES-C0AE-6714-A.

ITEM	FORD PART NUMBER	PART NAME	FORD SPECIFICATION	ALTERNATE LUBRICANT
Brake Master Cylinder	R-103-A	Rotunda Heavy Duty Brake Fluid	M-3833-D	Alternate fluid must meet SAE J70B specification for 70R3 type extra heavy duty brake fluid.
Front Suspension Ball Joints and Steering Linkage	C1AZ-19590-B	FoMoCo Ball Joint Grease	M-1C47-A	Substitute must meet Ford Specification.
Front Wheel Bearings	C2AZ-19585-A	FoMoCo Wheel Bearing Grease	M-1C48	Substitute must meet Ford Specification.
Rear Axle	C1AZ-19580-E	FoMoCo Hypoid Gear Lubricant	M-2C50-B	Substitute must meet Ford Specification.
S Housing (Manual or Power)	C3AZ-19578-A	FoMoCo Special Steering Gear Lubricant	ESW-M-1C87-A	A good lithium base grease #1 grade may be used to "add to" factory fill.
	C0AA-19A501-A	FoMoCo Solvent and Penetrating Fluid		Reputable solvent and penetrating fluid.
		Rotunda Automatic Transmission Fluid	M-2C33-D	Automatic transmission fluid marked "Type A, Suffix A".
		Rotunda Automatic Transmission Fluid	M-2C33-D	Only one quart of automatic transmission fluid marked "TYPE A, SUFFIX A" may be used to "add to" fill.
T		Rotunda Manual Transmission Lubricant	M-568-D	Reputable SAE 80 grade mild extreme pressure type lubricant can be used to "add to" factory fill.
U		FoMoCo Universal Joint Lubricant	M-1C57	Substitute must meet Ford Specification.

2 1964 FAIRLANE SPECIFICATIONS

IDENTIFICATION

The car warranty number and other important identifying information is stamped on the warranty plate which is attached to the rear face of the left front door inner panel.

The official Vehicle Identification Number for title and registration purposes is stamped on a tab at the right side of the dash panel near the hood hinge.

GENERAL DIMENSIONS

Wheelbase	115.5 inches
Tread:	
Front	57 inches
Rear	56 inches
Over-all Length:	
All models except Station Wagon	197.6 inches
Station Wagon	201.8 inches
Over-all Width	72.2 inches

APPROXIMATE REFILL CAPACITIES

	U.S. Measure	Imperial Measure
Fuel Tank	16 gallons	13½ gallons
Cooling System*		
Six	9½ quarts	8 quarts
V-8	14½ quarts	12 quarts
*Includes 1 quart required for car heater.		
Engine Crankcase:†		
Six	4½ quarts	3¾ quarts
260 and 289 CID V-8	5 quarts	4 quarts
†Includes 1 quart required with oil filter replacement.		

	U.S. Measure	Imperial Measure
Transmission:		
3-Speed Manual		
6-cyl.	2½ pints	2 pints
8-cyl.	3½ pints	3 pints
4-Speed Manual or Overdrive	3½ pints	3 pints
Automatic Transmissions:		
Fordomatic 200 CID Six & 260 CID V-8	7½ quarts	6 quarts
Cruise-O-Matic 289 CID V-8	8½ quarts	7 quarts
Rear Axle	4½ pints	3¾ pints

ENGINES

	170 CID Six	200 CID Six	260 CID V-8	289 2-V CID V-8
Bore (Inches)	3.50	3.68	3.80	4.00
Stroke (Inches)	2.94	3.13	2.87	2.87
Taxable Horsepower	29.4	32.5	46.2	51.2
Brake Horsepower	101 @ 4400 rpm	116 @ 4000 rpm	164 @ 4400 rpm	195 @ 4400 rpm
Torque (Foot-Pounds)	156 @ 2400 rpm	175 @ 2400 rpm	253 @ 2200 rpm	282 @ 2400 rpm
Fuel Requirement	Econ. Regular	Econ. Regular	Regular	Regular
Compression Ratio	8.7 to 1	8.7 to 1	8.7 to 1	8.7 to 1
Firing Order	1-5-3-6-2-4	1-5-3-6-2-4	1-5-4-2-6-3-7-8	1-5-4-2-6-3-7-8
Replacement Spark Plugs:				
FoMoCo Part Number	B7A-12405-B (Autolite BF-82)	B7A-12405-B (Autolite BF-82)	B8A-12405-A (Autolite BF-42)	B8A-12405-A (Autolite BF-42)
Spark Gap Width	0.032-0.036 inch	0.032-0.036 inch	0.032-0.036 inch	0.032-0.036 inch
Distributor Point Gap	0.024-0.026 inch	0.024-0.026 inch	0.014-0.016 inch	0.014-0.016 inch
Ignition Timing†				
Std. Transmission	6°*	—	6°	6°
Auto. Transmission	—	12°*	10°	10°

*Ignition timing requirements may vary depending upon locality, fuel, and operating conditions. For best economy and performance, the timing may be advanced to a point just short of audible detonation under load but not to exceed 5° over normal setting.
†Do not retard the initial advance beyond 2° BTDC for sub-standard fuels.

FUSES AND CIRCUIT BREAKERS

Circuit	Location	Protective Device Number
Radio	Fuse Panel on Lights Switch	SFE-7.5
Clock	Cartridge in Power Feed Wire	1AG-2 or AGA-2
Turn Indicator and Back-Up Lights	Fuse Panel on Lights Switch	SFE-14
[illegible]er Fan	Fuse Panel on [illegible]ch	SFE-14
[illegible]	[illegible]on [illegible]ch [illegible]h [illegible]witch	1AG-2 or AGA-2
License, and [illegible]		3AG-15 or AGC-15

Circuit	Location	Protective Device Number
Ford Air Conditioner	Cartridge on Power Feed Wire	3AG-15 or AGC-15
SelectAire Conditioner	Instrument Panel Left Side	20 Amp. C.B.
Overdrive	Clip on Overdrive Relay	3AG-15 or AGC-15
Spotlight	Cartridge on Power Feed Wire	SFE-7.5
Windshield Wiper:		
Single Speed	Instrument Panel Left Side	5 Amp. C.B.
2-Speed	Instrument Panel Left Side	12 Amp. C.B.
Cigar Lighter	On Back of Cigar Lighter Socket	C.B.

1964 Fairlane Specifications (continued)

BATTERY (12 VOLTS)

	Ampere Hours	Plates
Standard:		
170 & 200 CID 6 cyl.	40	54
260 & 289 CID 8 cyl.	55	54
Heavy Duty		
170 & 200 CID 6 cyl.	55	54
260 & 289 CID 8 cyl.	65	66

TIRE PRESSURES

	P.S.I. (Cold) Front	Rear
Passenger Car	24	24
Station Wagon	24	28

For considerable high-speed driving or heavy loads, add 4 pounds to the recommended cold pressure.

LIGHTS (12 VOLTS)

	Wattage or Candlepower	Lamp Number
Headlights:		
(Inner)	50-37½ watts	4002
(Outer)	37½ watts	4001
Parking and Front Turn Indicator	32-4 cp	1157
Stop, Tail, and Rear Turn Indicator	32-4 cp	1157
Back-Up	32 cp	1156
License Plate	4 cp	1155
Spotlight	30 watts	4405
Dome	15 cp	1003
Radio Dial	1.9 cp	1891
All instrument panel bulbs unless otherwise indicated	2 cp	1895

LUBRICANT SPECIFICATIONS

engine crankcase oils

oil viscosity

Use of SAE 10W-30 oil will provide the proper viscosity for all normal ranges of outside temperatures. For operation at sustained outside temperatures below —10°F. a 5W-20 oil should be used.

oil quality

Use only oils which have been tested and certified by the maker as satisfying automobile manufacturers specifications for Engine Operating Sequence Tests for Service M.S. Ford Motor Company specification covering these tests is M2C27.

If engine oils are used which do not meet these requirements, it will be necessary to change oil at more frequent intervals than the recommended interval of every 6,000 miles or every 6 months, whichever comes first.

If you find it necessary to use an "MS" oil which is not certified by the marketer as having passed the Engine Operating Sequence Tests, the addition of Rotunda Oil Conditioner R107-A to the oil will satisfy the requirements.

Use of the right oil filter is also essential to good engine life and operation. For 6-month/6,000-mile filter change intervals, filters must meet Ford Specification ES-C0AE-6714-A.

ITEM	FORD PART NUMBER	PART NAME	FORD SPECIFICATION	ALTERNATE LUBRICANT
Brake Master Cylinder	R103-A	Rotunda Heavy Duty Brake Fluid	M-3833-D	Alternate fluid must meet SAE J70B specifications for 70R3 type extra heavy-duty brake fluid.
Front Suspension Ball Joints and Steering Linkage	C1AZ-19590-B	FoMoCo Ball Joint Grease	M-1C47-A	Substitute must meet Ford Specification.
Front Wheel Bearings	C2AZ-19585-A	FoMoCo Wheel Bearing Grease	M-1C48	Substitute must meet Ford Specification.
Rear Axle	C2AZ-19580-A*	FoMoCo Hypoid Gear Lubricant	M-2C28-B	Substitute must meet Ford Specification.
Steering Gear Housing (Manual or Power)	C3AZ-19578-A	FoMoCo Special Steering Gear Lubricant	ESW-M-1C87-A	A good lithium base grease No. 1 grade may be used to "add to" factory fill.
Power Steering Pump Reservoir	R106-A	Rotunda Automatic Transmission Fluid	M2C33-D	Automatic Transmission fluid "TYPE A, SUFFIX A."
Transmission (Automatic)	R106-A	Rotunda Automatic Transmission Fluid	M2C33-D	Only one quart of Automatic transmission fluid marked "TYPE A, SUFFIX A" may be used to "add to" factory fill.
		Rotunda Manual Transmission Lubricant	M-568-D	Reputable SAE 80 grade mild extreme pressure type lubricant can be used to "add to" factory fill.
U	86-B	FoMoCo Universal Joint Lubricant	M-1C57	Substitute must meet Ford Specification.

*SAE ... grade lubricants are recommended for all temperatures ... —25° F. For temperatures below —25° F., the same type of lubricant, but of SAE 80 grade (Ford Part No. C2AZ-19580-B), should be ...

3 1964 FALCON SPECIFICATIONS

IDENTIFICATION

The car warranty number and other important identification information is stamped on the warranty plate, which is attached to the rear face of the left front door. The official serial number for registration purposes is stamped on the body in the engine compartment.

GENERAL DIMENSIONS

Wheelbase	109.5 inches
Tread—Front—6-cyl.	55 inches
—8-cyl.	55.6 inches
Rear	56 inches
Overall Length—	
Sedan and Convertible	181.7 inches
Station Wagon, Sedan Delivery, and Ranchero	190.9 inches
Overall Width	71.6 inches

APPROXIMATE REFILL CAPACITIES

	U. S. Measure	Imperial Measure
Fuel Tank		
6-cyl. (except Ranchero and Sedan Delivery)	14 gallons	11½ gallons
8-cyl. (and 6-cyl. Ranchero and Sedan Delivery)	20 gallons	16½ gallons
Engine Cooling System		
6-cyl.*	9½ quarts	8¼ quarts
8-cyl.*	14½ quarts	12 quarts
Engine Crankcase		
6-cyl.†	4½ quarts	3¾ quarts
8-cyl.†	5 quarts	4¼ quarts

*Includes 1 quart for heater.
†Includes 1 quart required for filter replacement.

	U.S. Measure	Imperial Measure
Transmission		
3-speed Manual—6-cyl.	2½ pints	2 pints
—8-cyl.	3½ pints	3 pints
4-speed Manual—6-cyl.	4½ pints	3¾ pints
—8-cyl.	3½ pints	3 pints
Fordomatic	7½ quarts	6¼ quarts
Rear Axle		
6-cyl.	2½ pints	2 pints
8-cyl.	4½ pints	3¾ pints

ENGINES

	144 CID Six	170 CID Six	200 CID Six	260 CID V-8
Bore (Inches)	3.50	3.50	3.68	3.80
Stroke (Inches)	2.50	2.94	3.13	2.87
Taxable Horsepower	29.4	29.4	32.5	46.2
Brake Horsepower	85 @ 4200 rpm	101 @ 4400 rpm	116 @ 4000 rpm	164 @ 4400 rpm
Torque (Foot-Pounds)	134 @ 2000 rpm	156 @ 2400 rpm	175 @ 2400 rpm	258 @ 2200 rpm
Fuel Requirement	Economy Regular	Economy Regular	Economy Regular	Regular
Compression Ratio	8.7 to 1	8.7 to 1	8.7 to 1	8.7 to 1
Firing Order	1-5-3-6-2-4	1-5-3-6-2-4	1-5-3-6-2-4	1-5-4-2-6-3-7-8
Replacement Spark Plugs: FoMoCo Part Number	B7A-12405-B (Autolite BF-82)	B7A-12405-B (Autolite BF-82)	B7A-12405-B (Autolite BF-82)	B8A-12405-A (Autolite BF-42)
Spark Gap Width	0.032-0.036 inch	0.032-0.036 inch	0.032-0.036 inch	0.032-0.036 inch
Distributor Point Gap	0.024-0.026 inch	0.024-0.026 inch	0.024-0.026 inch	0.014-0.016 inch
Ignition Timing†				
Std. Transmission	8°*	6°*	—	6°
Auto. Transmission	12°*	—	12°*	10°

*Ignition timing requirements may vary depending upon locality, fuel, and operating conditions. For best economy and performance, the timing may be advanced to a point just short of audible detonation under load but not to exceed 5° over normal setting.
†Do not retard the initial advance beyond 2° BTDC for sub-standard fuels.

FUSES AND CIRCUIT BREAKERS

Circuit	Location	Protective Device Number
Radio	Fuse Panel on Lights Switch	SFE-7.5
Instrument Lights	Fuse Panel on Lights Switch	1AG-2 or AGA-2
[illegible]rn Indicator and [illegible]ck-Up Lights	Fuse Panel on [illegible]ch	SFE-14
[illegible]	[illegible]n [illegible]h	SFE-14
[illegible]	[illegible]n	3AG-15 or AGC-15
[illegible]	[illegible]wer	3AG-15
Spotlight	Cartridge in Power Feed Wire	SFE-7.5
Cigar Lighter	On Back of Cigar Lighter Socket	C.B.
Headlight	Integral with Headlight Switch	
Windshield Wiper Motor —Single Speed	Edge of Instrument Panel—Left of Steering Column	5 amp. C.B.
2-Speed	Same as Above	12 amp. C.B.
Electric Tailgate Window	On Starter Relay	20 amp. C.B.
Convertible Top	On Starter Relay	20 amp. C.B.

1964 Falcon Specifications (continued)

BATTERY (12 VOLTS)

	Ampere Hours	Plates
Standard:		
All 6 cyl. Engines	40	54
All 8 cyl. Engines	55	54
Heavy Duty:		
All 6 cyl. Engines	55	54
All 8 cyl. Engines	65	66

TIRE PRESSURES

	P.S.I. (Cold) Front	Rear
Sedan and Convertible	24	24
Station Wagon, Ranchero and Sedan Delivery	24	28†

For considerable high-speed driving or heavy loads, add 4 pounds to the recommended cold pressure.

†30 for 6-cylinder Ranchero or Sedan Delivery.

LIGHTS (12 VOLTS)

	Wattage or Candlepower	Lamp Number
Headlights	50-40 watts	6012
Parking and Front Turn Indicator	32-4 cp	1157A
Stop, Tail, and Rear Turn Indicator	32-4 cp	1157
Spotlight	30 watt	4405
Back-Up	32 cp	1156
Rear License Plate	4 cp	1155
Dome Lamp	15 cp	1003
Courtesy Light (Convertible)	6 cp	631
Radio Dial	2 cp	1891
All instrument panel bulbs, unless otherwise indicated	2 cp	1895

LUBRICANT SPECIFICATIONS

engine crankcase oils

oil viscosity

Use of SAE 10W-30 oil will provide the proper viscosity for all normal ranges of outside temperatures. For operation at sustained outside temperatures below —10° F. a 5W-20 oil should be used.

oil quality

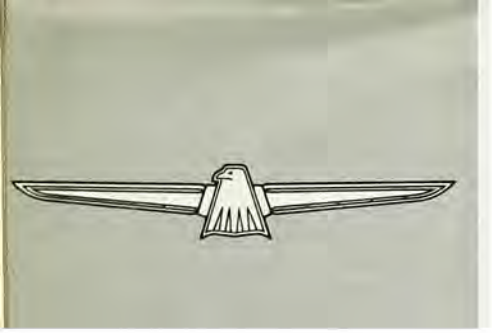
Use only oils which have been tested and certified by the maker as satisfying automobile manufacturers specifications for Engine Operating Sequence Tests for Service M.S. Ford Motor Company specification covering these tests is M2C27.

If engine oils are used which do not meet these requirements, it will be necessary to change oil at more frequent intervals than the recommended interval of every 6,000 miles or every 6 months, whichever comes first. Rotunda Oil Conditioner (R107-A) can be added to crankcase oils that do not meet the Ford specification. This will upgrade the oil to meet the engine operating sequence test requirements.

Use of the right oil filter is also essential to good engine life and operation. For 6 month/6,000 mile filter change intervals, filters must meet Ford Specification ES-C0AE-6714-A.

ITEM	FORD PART NUMBER	PART NAME	FORD SPECIFICATION	ALTERNATE LUBRICANT
Brake Master Cylinder	R103-A	Rotunda Heavy Duty Brake Fluid	M-3833-D	Alternate fluid must meet SAE J70B specification for 70R3 type extra heavy duty brake fluid.
Front Suspension Ball Joints	C1AZ-19590-B	FoMoCo Ball Joint Grease	M-1C47-A	Substitute must meet Ford Specification.
Front Wheel Bearings	C2AZ-19585-A	FoMoCo Wheel Bearing Grease	M-1C48	Substitute must meet Ford Specification.
Rear Axle	C2AZ-19580-A*	FoMoCo Hypoid Gear Lubricant	M-2C28-B	Substitute must meet Ford Specification.
Steering Gear Housing (Manual or Power)	C3AZ-19578-A	FoMoCo Special Steering Gear Lubricant	ESW-M-1C87-A	A good lithium base grease No. 1 grade may be used to "add to" factory fill.
Exhaust Control Valve	C0AA-19A501-A	FoMoCo Solvent and Penetrating Fluid		Reputable solvent and penetrating fluid.
Steering—Power (Pump Reservoir)	R106-A	Rotunda Automatic Transmission Fluid	M2C33-D	Automatic Transmission fluid "TYPE A, SUFFIX A."
Co[illegible] Top Reservoir	R106-A	Rotunda Automatic Transmission Fluid	M2C33-D	Automatic Transmission fluid "TYPE A, SUFFIX A."
[illegible] utomatic)	R106-A	Rotunda Automatic Transmission Fluid	M2C33-D	Only one quart of automatic transmission fluid marked "TYPE A, SUFFIX A" may be used to "add to" factory fill.
[illegible]		Rotunda Manual Transmission Lubricant	M-568-D	Reputable SAE 80 grade mild extreme pressure type lubricant can be used to "add to" factory fill.
U[illegible]	586-B	FoMoCo Universal Joint Lubricant	M-1C57	Substitute must meet Ford Specification.

*SA[illegible] —25° F. For temperatures below —25° F., the same type of lubricant, but of SAE 80 grade, should be used.



4 1964 THUNDERBIRD SPECIFICATIONS

IDENTIFICATION

The warranty number and other important identifying information is stamped on the warranty plate which is attached to the rear face of the left door inner panel. The official Vehicle Identification Number for title and registration purposes is stamped on a tab at the right side of the dash panel near the hood hinge.

DIMENSIONS

Wheelbase	113	inches	Over-all Width	77	inches
Tread—Front	61	inches	Over-all Height		
Rear	60	inches	Hardtop	52.5	inches
Over-all Length	205.4	inches	Hardtop—Landau	52.6	inches
			Convertible	53.6	inches

APPROXIMATE REFILL CAPACITIES

	U.S. Measure	Imperial Measure
Fuel Tank	22 gallons	18¼ gallons
Cooling System	20 quarts*	16½ quarts*

*Includes one quart for heater.

	U.S. Measure	Imperial Measure
Engine Crankcase	6 quarts†	5 quarts†
Cruise-O-Matic Transmission	10 quarts	8¼ quarts
Rear Axle	5 pints	4 pints

†Includes one quart with filter replacement.

ENGINE

Piston Displacement (Cubic Inches)	390
Bore (Inches)	4.05
Stroke (Inches)	3.78
Taxable (SAE) Horsepower	52.49
Brake Horsepower	300 @ 4600 rpm
Torque (Foot-Pounds)	427 @ 2800 rpm
Compression Ratio	10.5 to 1
Fuel Requirement	Premium
Firing Order	1-5-4-2-6-3-7-8
Replacement Spark Plugs	FoMoCo Part No. B8A-12405-A (Autolite BF-42)
Spark Gap Width	0.032-0.036 inches
Distributor Point Gap	
Conventional system	0.014-0.016
Transistorized system	0.019-0.021
Ignition Timing	6°

Ignition timing requirements may vary depending upon locality, fuel, and operating conditions. For best economy and performance, the timing may be advanced to a point just short of audible detonation under load but not to exceed 5° over normal setting. Do not retard the initial advance beyond 2° BTDC for substandard fuels.

FUSES AND CIRCUIT BREAKERS

Circuit	Location	Protective Device Number
Headlights	Fuse Panel on R.H. Cowl	12 amp. C.B.
Back-Up Lights	"	7.5 amp. C.B.
Heater and Air Conditioner	"	20 amp. C.B.
Windshield Washer	"	SFE-7.5
Indicator Lights	"	SFE-15
	"	SFE-7.5
		1AG-2 or AGA-2
		3AG-15 or AGC-15
		SFE-15
		SFE-6
Taillight, Parking, and License	Fuse Panel on R.H. Cowl	12 amp. C.B.
Dome and Courtesy	"	SFE-14
Automatic Speed Control	"	SFE-4
Electric Window Circuit	"	20 amp. C.B.
Electric Seat	"	20 amp. C.B.
Seat Belt Warning	"	SFE-4
Cigarette Lighter (Socket)	Back of Socket	CB (Reset)
Electric Window Motor	Integral with Motor	
Spotlight	Cartridge in Power Feed Wire	SFE-7.5

1964 Thunderbird Specifications (continued)

LIGHTS (12 VOLTS)

	Lamp Wattage or Candlepower	Lamp Number
Headlight—(Inner)	37.5 watts	4001
(Outer)	50-37.5 watts	4002
Parking and Front Turn Indicator	4-32 cp	1157A
Stop, Tail, and Rear Turn Indicator	4-32 cp	1157
Back-Up	32 cp	1076
Pillar Light	15 cp	1003
Courtesy Light (door mounted)	15 cp	1004
Map	6 cp	631
License Plate	4 cp	1155
Speedometer and Odometer	2 cp	1895
Interior Turn Indicator	2 cp	1895G*
Fender Mount Turn Indicator	1 cp	53
Clock	3 cp	1816
Spotlight	30 watt	4405
Luggage Compartment	6 cp	631
High Beam Indicator	2 cp	1895
Oil Pressure Gauge	3 cp	1816
Charge Gauge	3 cp	1816
Fuel and Temperature Gauge	3 cp	1816
Ignition Key Switch	1.5 cp	1445
Windshield Wiper Control	2 cp	1895
Heater Control Panel	2 cp	1895
Parking Brake Signal	2 cp	1895
Radio Dial—AM	1.9 cp	1891
—AM-FM	.75 cp	1892
Cruise-O-Matic Selector Dial	1.5 cp	1445

*(Minnesota and Wisconsin only)

BATTERY (12 VOLTS)

	Ampere Hours	Plates
Standard	65	78
Heavy Duty	80	78

TIRE PRESSURES

	P.S.I. (Cold) Front	Rear
8.15 x 15	24	24

For considerable high-speed driving, or when heavy loads are carried, add 4 pounds to the recommended cold pressure.

LUBRICANT SPECIFICATIONS

engine crankcase oils

oil viscosity

Use of SAE 10W-30 oil will provide the proper viscosity for all normal ranges of outside temperatures. For operation at sustained outside temperatures below —10°F. a 5W-20 oil should be used.

oil quality

Use only oils which have been tested and certified by the maker as satisfying automobile manufacturers specifications for Engine Operating Sequence Tests for Service M.S. Ford Motor Company specification covering these tests is M2C27.

If engine oils are used which do not meet these requirements, it will be necessary to change oil at more frequent intervals than the recommended interval of 6,000 miles or every 6 months, whichever comes first.

If you find it necessary to use an "MS" oil which is not certified by the marketer as having passed the Engine Operating Sequence Tests, the addition of Rotunda Oil Conditioner (R107-A) to the oil will satisfy the requirements.

Use of the right oil filter is also essential to good engine life and operation. For 6-month/6,000-mile filter change intervals, filters must meet Ford Specification ES-C0AE-6714-A.

ITEM	FORD PART NUMBER	PART NAME	FORD SPECIFICATION	ALTERNATE LUBRICANT
Brake Master Cylinder	Rotunda R103-A	Rotunda Heavy-Duty Brake Fluid	M-3833-D	Alternate Fluid must meet SAE J70B specification for 70R3 type extra-heavy duty brake fluid.
Front Suspension Ball Joints	Ford C1AZ-19590-B	FoMoCo Ball Joint Grease	M-1C47-A	Substitute must meet Ford Specification.
Front Wheel Bearings	Ford C2AZ-19585-A	FoMoCo Wheel Bearing Grease	M-1C48	Substitute must meet Ford Specification.
Rear Axle	Ford C1AZ-19580-E	FoMoCo Hypoid Gear Lubricant	M-2C50-B	Substitute must meet Ford Specification.
Stee (Pump Reservoir)	Rotunda R-106-A	Rotunda Automatic Transmission Fluid	M2C33-D	Automatic Transmission Fluid marked "TYPE A, SUFFIX A".
T		Rotunda Automatic Transmission Fluid	M2C33-D	Only one quart of Automatic transmission fluid marked "TYPE A, SUFFIX A" may be used to "add to" the transmission factory fill.
Univ	6-B	FoMoCo Universal Joint Lubricant	M1C57	Substitute must meet Ford Specification.

1964 ECONOLINE
FALCON CLUB WAGONS
SPECIFICATIONS

IDENTIFICATION

The vehicle warranty number and other important identifying information is stamped on the warranty plate which is attached to the rear face of the left front door inner panel. The official Vehicle Identification Number for title and registration purposes is stamped on the body.

GENERAL DIMENSIONS

Wheelbase	90 inches
Tread:	
Front	60 inches
Rear	60.24 inches
Over-all Length	168.23 inches
Over-all Width	
Pickup	75.00 inches
Van or Bus	75.76 inches

APPROXIMATE REFILL CAPACITIES

	U.S. Measure	Imperial Measure
Fuel Tank	14 gallons	11½ gallons
Cooling System	10½ quarts*	8¾ quarts*
Engine Crankcase	4½† quarts	3¾† quarts
Transmission:		
3-Speed Manual	3 pints	2½ pints
4-Speed Manual	4½ pints	3¾ pints
Cruise-O-Matic	7½ quarts	6¼ quarts
Rear Axle	2½ pints‡	2 pints‡

*includes 1.5 quarts for heater.
†includes 1 quart extra required for filter replacement.
‡heavy duty vehicle 4¼ pints (U.S.).

ENGINES

Bore (Inches)	
144 CID	3.50
170 CID	3.50
Stroke (Inches)	
144 CID	2.50
170 CID	2.94
Taxable SAE Horsepower	
144 CID	29.4
170 CID	29.4
Maximum Brake Horsepower	
144 CID	85 @ 4200 rpm
170 CID	101 @ 4400 rpm
Maximum Gross Torque (Foot-Pounds)	
144 CID	134 @ 2200 rpm
170 CID	152 @ 1800-2000 rpm
Compression Ratio	8.4:1
Cylinder Firing Order	1-5-3-6-2-4
Idle Speed	550-575 rpm
Fuel Requirement	Regular
Replacement Spark Plugs	FoMoCo Part No. B7A-12405-B (Autolite BF-82)
Spark Gap Width	0.032-0.036 inch
Distributor Point Gap Width	0.024-0.026 inches
Ignition Timing	
144 CID—Std. Trans.	4°
170 CID—Std. Trans.	4°
170 CID—Auto Trans.	10°

Ignition timing requirements may vary depending upon locality, fuel, and operating conditions. For best economy and performance, the timing may be advanced to a point just short of audible detonation under load but not to exceed 5° over normal setting. Do not retard the initial advance beyond 2° BTDC for sub-standard fuels.

BATTERY (12-VOLT)

	Ampere Hours	Plates
Standard:		
Van & Bus	55	54
Pickup	40	54
Heavy Duty:		
Van & Bus	65	66
Pickup	55	54

LOAD CAPACITIES

Maximum Payload Capacity

Wagon & Bus (with second and third seats)	1400 pounds
Van	1600 pounds
Pickup	1650 pounds
Van, Bus or Pickup (Heavy Duty)	2000 pounds
Maximum Gross Vehicle Weight	4350 pounds
Heavy Duty	4850 pounds

Load Volume Capacity

Wagon & Bus—204 cubic feet (without rear compartment seats)
Van—204 cubic feet
Pickup—73 cubic feet

1964 Econoline Specifications (continued)

FUSES AND CIRCUIT BREAKERS

Circuit	Location	Protective Device Number
Turn Indicator	Fuse Panel on Lights Switch	SFE-14
Radio (Manual)	Fuse Panel on Lights Switch	SFE-7.5
Parking, Rear and Dome Lamps	Fuse Panel on Lights Switch	3AG-15
Heater Fan	Fuse Panel on Lights Switch	SFE-14
Spot Lamp	Cartridge in Feed Wire	SFE-7.5
Headlamps	Fuse Panel on Lights Switch	Circuit Breaker
Instrument Panel Lamp Rheostat	Cartridge in Feed Wire	1 AG-1 or AGA-1
Windshield Wiper Motor	Integral with Switch	Circuit Breaker
Cigar Lighter	Back of Lighter Socket	Reset Disc

LIGHTS (12 VOLTS)

	Lamp Wattage or Candle Power	Lamp Number
Headlight	50-40 watts	6012
Parking and Front Turn Indicator	4-32 cp	1157
Stop, Tail, and Rear Turn Indicator	4-32 cp	1157
Rear License Plate	4 cp	1155
Interior	15 cp	1003
Speedometer and Odometer	2 cp	1895
High Beam Indicator	1.5 cp	1445
Oil Pressure Indicator	2 cp	1895
Generator Indicator	2 cp	1895
Radio Dial	2 cp	1895
Turn Signal	2 cp	1895
Spotlight	30 watt	4405

TIRE PRESSURES

Size	P.S.I. (Cold) Front	Rear
6.50 x 13—4PR PT*	28	28
7.00 x 13—6PR PT*	30	30
7.00 x 13—8PR TT†	35	45
7.00 x 14—4PR PT*	28	28
7.00 x 14—6PR PT*	30	30
7.00 x 14—8PR TT†	35	35

*Passenger Type †Truck Type

LUBRICANT SPECIFICATIONS

engine crankcase oils

oil viscosity

Use of SAE 10W-30 oil will provide the proper viscosity for all normal ranges of outside temperatures. For operation at sustained outside temperatures below —10° F. a 5W-20 oil should be used.

oil quality

Use only oils which have been tested and certified by the maker as satisfying automobile manufacturers specifications for Engine Operating Sequence Tests for Service M.S. Ford Motor Company specification covering these tests is M2C27.

If engine oils are used which do not meet these requirements, it will be necessary to change oil at more frequent intervals than the recommended interval of every 6,000 miles or every 6 months, whichever comes first.

If you find it necessary to use an "MS" oil which is not certified by the marketer as having passed the Engine Operation Sequence Tests, the addition of Rotunda Oil Conditioner (R107-A) to the oil will satisfy the requirements.

Use of the right oil filter is also essential to good engine life and operation. For 6 month/6,000 mile filter change intervals, filters must meet Ford Specification ES-C0AE-6714-A.

ITEM	FORD PART NUMBER	PART NAME	FORD SPECIFICATION	ALTERNATE LUBRICANT
Brake Master Cylinder	Rotunda R103-A	Rotunda Heavy Duty Brake Fluid	M-3833-D	Alternate fluid must meet SAE J70B spec. for 70R3 type extra heavy duty fluid.
Front Suspension and Steering Linkage	Ford C1AZ-19590-B	FoMoCo Ball Joint Grease	M-1C47-A	Substitute must meet Ford Specification.
Front Wheel Bearings	Ford C2AZ-19585-A	FoMoCo Wheel Bearing Grease	M-1C48	Substitute must meet Ford Specification.
Rear Axle	Ford C2 AZ-19580-A*	FoMoCo Hypoid Gear Lubricant	M-2C28-B	Substitute must meet Ford Specification.
Steering Gear Housing	Ford C3AZ-19578-A	FoMoCo Special Steering Gear Grease	ESW-M-1C87-A	A good lithium base grease No. 1 grade may be used to "add to" factory fill.
Transmission (Automatic)	Rotunda R106-A	Rotunda Automatic Transmission Fluid	M-2C33-D	Only one quart of Automatic Transmission fluid marked Type A, Suffix A may be used to "add to" factory fill.
Tr... al Shift)	Rotunda R139-A	Rotunda Manual Transmission Lubricant	M-568-D	Reputable SAE 80 grade mild extreme pressure type lubricant can be used to "add to" factory fill.
U...	...86-B	FoMoCo Universal Joint Lubricant	M1C57	Substitute must meet Ford Specification.
F...		Engine Oil—SAE 10W	—	—
Accel... Clu...		Engine Oil—SAE 10W	—	—

*SAE ... 25° F. For temperatures below ... the same type of lubricant, but of SAE 80 grade (Ford Part No. C2AZ-19580-B), should ...

6 1964 TRUCK SPECIFICATIONS

ENGINES

ENGINE	144 CID Six	223 CID Six	262 CID Six	292 CID V-8
Bore (Inches)	3.500	3.625	3.719	3.750
Stroke (Inches)	2.50	3.60	4.03	3.30
Taxable (SAE) Horsepower	29.4	31.50	33.18	45.00
Brake Horsepower (bhp at rpm)	85 at 4200	135 at 4000	152 at 4000	160 at 4000
Maximum Gross Torque (Foot-Pound at rpm)	134 at 2000	200 at 1800-2400	237 at 1800	270 at 1800-2000
Compression Ratio	8.7:1	8.1:1	8.0:1	8.0:1
Compression Pressure (psi at Cranking Speed)	150-190	130-170	130-170	130-170
Idle Speed (rpm at Neutral)				
Std. Trans.	500-550	500-550	500-550	500-550
Auto. Trans.		475-525		475-525
Oil Pressure—Hot (psi at 2000 rpm)	35-55	35-55	35-55	35-55
Cylinder Firing Order	1-5-3-6-2-4	1-5-3-6-2-4	1-5-3-6-2-4	1-5-4-8-6-3-7-2
Replacement Spark Plugs				
Ford Part Number	B7A-12405-B (Autolite BF82)	B7A-12405-A (Autolite BTF-6)	B9T-12405-A (Autolite BTF-31)	B7A-12405-A (Autolite BTF-6)
Spark Gap Width	0.035	0.030	0.030	0.030
Distributor Point Gap	0.024-0.026	0.024-0.026	0.024-0.026	0.014-0.016
Ignition Timing				
Std. Trans.	4°	4°	2°	6°
Auto. Trans.		4°		6°

Ignition timing requirements may vary depending upon locality, fuel, and operating conditions. For best economy and performance, the timing may be advanced to a point just short of audible detonation under load but not to exceed 5° over normal setting. Do not retard the initial advance beyond 2° for sub-standard fuels.

FUEL TANK CAPACITIES

Tank Type	Truck Model	Approximate Capacity	
		U.S. Gallons	Imperial Gallons
Standard	F-Series (cab models)	18	15
	P-Series and F-100, F-250, F-350 Series (cowl models)	17	14
Optional (Mounted Outside of Frame)	P-400 and P-500 P-350	30	25

TRANSMISSION REFILL CAPACITIES

Transmission Type and Make	Approximate Capacity (Pints)	
	U.S. Measure	Imperial Measure
3-Speed (Ford)	3½	2¾
3-Speed with Overdrive (Warner)	3¼	2½
3-Speed Medium-Duty (Warner)	3½	2¾
3-Speed Heavy-Duty (Warner)	5½	4½
4-Speed (Warner)	8	6½
HD Cruise-O-Matic—		
6-cyl.	20	16½
8-cyl.	22	18¼
4-Wheel Drive Transfer Case	4½	3¾

ENGINE CRANKCASE REFILL CAPACITIES

Engine	Approximate Capacity* (Quarts)	
	U.S. Measure	Imperial Measure
144 Six	3½	3
223 Six	5	4
262 Six	5	4
292 V-8	5	4

*Add 1 quart with filter change.

REAR AXLE LUBRICANT CAPACITIES

Rear Axle Model	Truck Model	Approximate Capacity (Pints)
Ford 3300	F-100, P-100	4½
Spicer 44	F-100	4½
Spicer 2414 (Front Axle)	4-Wheel Drive (F-100, F-250)	3½*
Spicer 60	F-250, P-350	6
Spicer 70	F-350, P-350	5
n C-100-N	P-500	15
		15
		13

ENGINE COOLING SYSTEM REFILL CAPACITIES

Engine	Truck Model	Approximate Capacity* (Quarts)	
		U.S. Measure	Imperial Measure
144 Six	P-100	9	7½
223 Six	F-100, F-250	13½	11¼
	P-100, P-350, P-400, P-500	18½	15½
262 Six	F-100, F-250	20	16½
292 V-8	F-100, F-250, F-350 (with single rear wheels)	16½	13¾
	F-350 (with dual rear wheels)	22	18¼
	P-350	22	18¼
	P-400, P-500	23	19

*Add 1 quart for trucks equipped with heater.

Series 100 through 350 and P Series

WHEEL NUT TORQUE

Model	Wheel Type	Bolt Size	Wheel Nut Torque* (Foot-Pounds)
F-100, P-100, F-250, P-350	Disc	½-20	65-90
F-350, P-400	Disc	⅝-18	175-200†
P-500	Disc	¾-16	400-500

*Torque specifications are for clean, dry bolt threads.
†125-140 on 17.5 x 5.25 rim used on single wheels.

FRONT WHEEL ALIGNMENT

Truck Model	Front Axle Capacity (Pounds)	Caster* (Degrees)	Camber† (Degrees)	Toe-In (Inches)	King Pin Inclination (Degrees)
F-100, F-250 and P-100 (except 4-Wheel Drive)	2600	3	1	1/16	4
F-100, F-250 (4-Wheel Drive Only)	3000	3¼	1½	1/16	7½
F-350, P-350	3800	4	1	1/16	4
P-400	3800	3	1	1/16	4
P-500 (137-inch wheelbase)	4700	3	1	1/16	4
P-500 (154-inch wheelbase)	4700	3½	1	1/16	4

*Maximum caster variation between wheels—½°
†Maximum camber variation between wheels—¼°

TIRES

Tire Size and Ply Rating	Rim Type	Revolutions Per Mile (New Tires)	Load Capacity (Pounds)	Pressure (Psi)
6.50-16 6PR (PT)	5K 6L	732	1215	42
6.50-16 6PR (TT)	5K 6L	700	1420	45
6.70-15 4PR (PT)	5½ K 5K	772	1115	30
6.70-15 6PR (PT)	5½ K	772	1215	36
7.00-16 6PR (PT)	6L	691	1395	42
7.00-16 6PR (TT)	6L	669	1580	45
7.10-15 4PR (PT)	5½ K	760	1195	30
7.10-15 6PR (PT)	5½ K	760	1300	36
7-17.5 6PR (TT)	5.25	704	1520	45
[illegible]TT)	5.25	676	1735	45
[illegible]	[illegible]	[illegible]	2060	60
[illegible]	[illegible]	[illegible]	2440	65
[illegible]	[illegible]	[illegible]	2740	65

BATTERY (12 volts)

	Ampere Hours	Plates
Standard:		
F-100 thru F-350 All Engines		
Std. Transmission	55	66
Auto. Transmission	70	66
P-100 thru P-500 All Engines	55	66
Heavy Duty		
F-100 thru F-350 All Engines	70	66
P-100 thru P-500 All Engines	70	78

FUSES AND CIRCUIT BREAKERS

Circuit	Protective Device	Location
Headlights	Circuit Breaker	Integral with Headlight Switch
Other Lights (Instruments, Dome, Parking and Rear)	2 amp.	Fuse Panel
Turn Signals	SFE-14 Fuse	Fuse Panel
Radio	SFE-7.5 Fuse	Fuse Panel
Heater Blower	SFE-14 Fuse	Fuse Panel
Electric Windshield Wiper	Circuit Breaker	Integral with Switch
Spotlight	SFE-7.5 Fuse	Cartridge in Feed Wire
Cigarette Lighter	Circuit Breaker	Back of Lighter Socket
Overdrive	3AG-15 or AGC-15	Open Clips on O/D Relay
Two-Speed Axle	20 Amp. C.B.	Instrument Panel

BULBS

Description	Candle Power or Wattage	Trade Number
EXTERIOR LIGHTS		
Headlights Single—High/Low Beam	50/40 W	6012
Front Turn Signal/Parking	32/4 C.P.	1157
Front Parking Only	4 C.P.	1155
Independent Turn Signal, Front & Rear	32 C.P.	1156
Rear Turn Signal & Stop/Tail	32/4 C.P.	1157
Rear License Light Only	4 C.P.	1155
Marker	4 C.P.	1155
Spotlight	30 W	4435
INTERIOR LIGHTS		
Instrument Panel Indicators Hi-Beam	1½ C.P.	1445
Oil Pressure	1 C.P.	53
Generator	2 C.P.	1895
Turn Signal	2 C.P.	1895
Tachometer	2 C.P.	1895
Instrument Cluster Illumination	2 C.P.	1895
Cigarette Lighter Socket	1.5 C.P.	1445
Heater Control	2 C.P.	1895
Radio Dial	2 C.P.	1895
INTERIOR ILLUMINATION		
Dome Light	15 C.P.	1003

7

EXCESSIVE BRAKE PEDAL TRAVEL—All Car Lines with Self Adjusting Brakes

Excessive brake pedal travel on passenger vehicles with self-adjusting brakes has been found to be the result of one or more of the brake adjuster screw assemblies seizing and failing to operate. To alleviate excess pedal travel caused by this condition, the following corrective procedure is suggested:

1. Remove all four brake drums.
2. Disconnect the adjusting lever from the secondary shoe and remove the adjuster screw and nut assembly.

NOTE: As the adjusting screw and nut assemblies are right- and left-handed, and interchanging the assemblies from one side of the vehicle to the other will cause the brake shoes to retract rather than expand upon action of the adjuster lever, each assembly should be cleaned and lubricated completely before proceeding to the next assembly.

3. Disassemble and clean the adjuster screw and nut assembly.
4. Apply a thin uniform coating of HD Moly Grease—Grade 2 (Ford Part No. C1AZ-19590-B) to the threads of the adjuster screw and reassemble the adjuster screw and nut.
5. Install the adjuster screw and nut assembly to the brake shoes and connect the adjuster lever.
6. Repeat steps 3 thru 5 for each remaining assembly.
7. Install all drums and adjust brakes.
8. Check brake operation.

NOTE: Either new or used adjuster screw and nut assemblies should always be lubricated before installation.

8

AUTOMATIC CHOKE CONNECTOR HOSE INSTALLATION—1963 & 1964 All Eight-Cylinder Engines

A rubber hose connects the choke inlet tube to the air cleaner to provide filtered air to the automatic choke. The hose connection is located on the underside of the air cleaner and can be easily overlooked when the air cleaner is removed and/or installed. Failure to connect the hose to the air cleaner will result in unfiltered air entering the choke system. A potentially dangerous condition could also be encountered on the Galaxie, Mercury and Thunderbi[illegible] Venturi engines when the c[illegible]se is not connected at the [illegible] the ve[illegible] on[illegible]

9

HOT STARTING AND HOT IDLE IMPROVEMENTS—1963 Ford & Fairlane—8 Cylinder (221/260)

To improve hard hot starting and rough hot idle of the 221/260 engines, revised carburetor bowl vents have been incorporated in the 2V Ford carburetor air horn. This has been done to limit the excess fuel vapors in the carburetor bowl from entering the air cleaner during hot idle and soak periods. The excess fuel vapors will cause hard hot restarts and poor idle.

The change was effective with carburetors built December 14, 1962. Check either the carburetor identification tag or visually inspect the vent tubes. The internal diameter of the new vent tubes is smaller.

The new air horn (Ford Part No. C3OZ-9524-B) incorporating these vent tube restrictors can be installed on all 1963 and past models with 221 and 260 CID engines.

10

STARTER SOLENOID DAMAGE DURING TUNE-UP—All Car Lines

Starter solenoid burnout in the ignition bypass circuit will occur if the "I" terminal of the solenoid or the positive terminal of the coil is grounded during cranking. This condition cannot occur by itself and must be attributed to an incorrect underhood procedure.

The ignition bypass circuit connects the battery to the coil through the solenoid plunger and the "I" terminal. See the Schematic in Figure #1. The bypass conductor is of heavy material and is not damaged in normal use, but in a short circuit such as described, burnout is very rapid. Many of the solenoids that have been examined for failures, have been found to be burned out in this manner.

The underhood shortcut of using a jumper between the "S" terminal of the starter solenoid and the hot battery post to "bump" the engine over, has been used for many years and is an acceptable practice. This is not to be confused with the above condition. It is grounding the "I" terminal of the solenoid or the positive terminal of the coil to prevent the engine from running that is not acceptable. The recommended procedure, when working on the engine but not to have it run, is to remove the coil tower lead from the coil or distributor cap prior to turning it over.

11

HOT ENGINE IDLE STALL—1963 Ford Single Venturi Carburetor—144, 170, 223, 262 Engines

Investigation has shown an occasional hot engine idle stall due to an over-rich fuel-air mixture. This condition can be corrected by adjusting the float assembly to a one inch dry fuel setting.

When readjusting to this dry fuel setting, remove the fuel inlet seat and replace the fiber seat gasket with a rubber coated aluminum seat gasket, (Ford Part No. C3AZ-9569-B). The use of the coated aluminum gasket will in effect shim up the fuel inlet seat, minimizing float tab correction.

If excessive float tab corrections are made while attempting to set the float level, it is possible to exert excessive side thrust on the fuel inlet needle which will prevent proper seating of the needle to the seat.

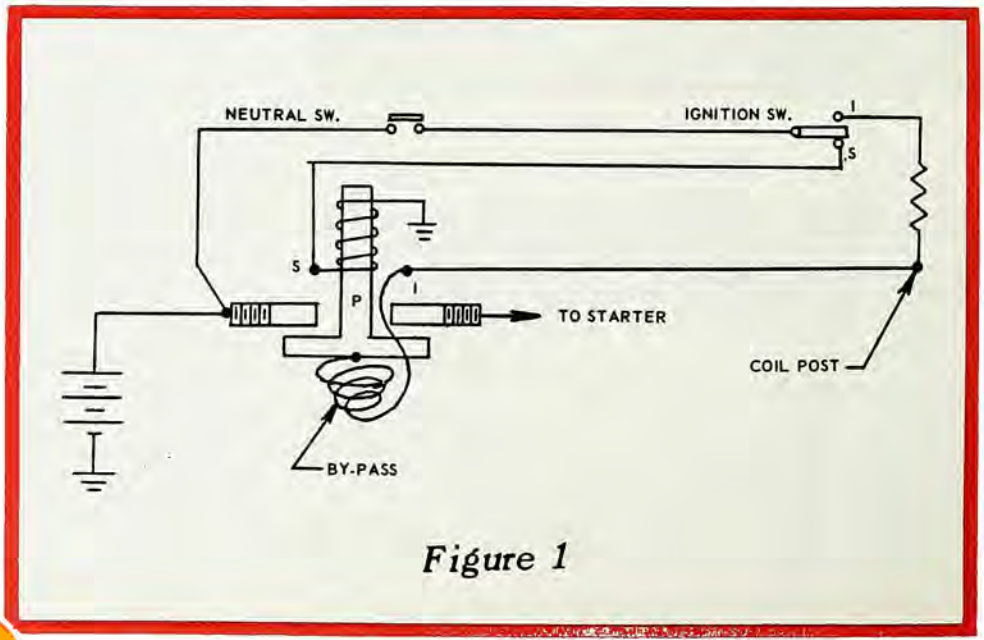


Figure 1

12

INOPERATIVE FRONT LAMPS— 1963 Falcon

A short circuit may occur in the headlamp, parking lamp, or turn signals on early 1963 Falcons in the main wiring harness that crosses the radiator support. It is caused by improper harness retention which results in the harness chafing on the screws that mount the hood auxiliary catch striker plate. (Figure #1, View B) This chafing wears through the insulation and results in a short circuit.

The above problem was corrected in production on January 23, 1963, with the use of the new radiator support. The service correction is to properly install the harness retaining straps as shown in Figure #1, View A. The straps can be removed quickly by tapping them through the radiator support from the front with a small hammer. They can easily be installed by pushing them back into the support with a 5/16 socket. If any of the straps are damaged during repositioning, use Ford Part No. 372363-S for replacement.

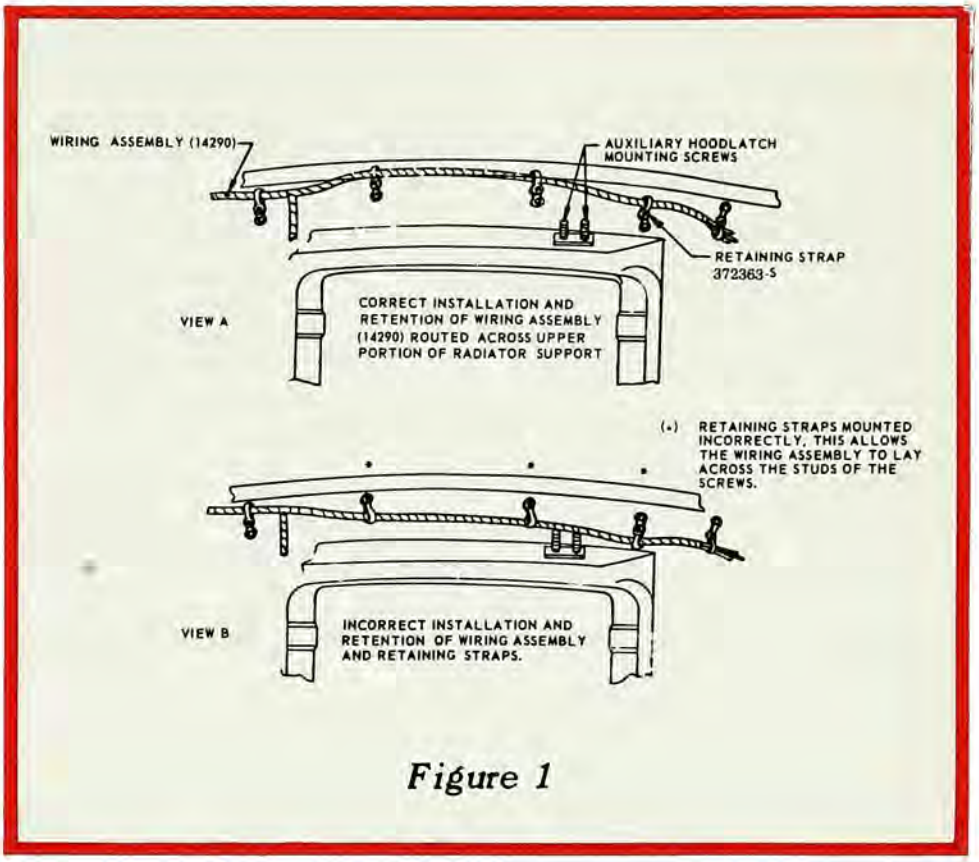


Figure 1

13

FRONT SUSPENSION ALIGNMENT— 1962-1963 Fairlane

To correct complaints of tire wear and/or steering and handling problems on 1962-1963 Fairlanes, an intensive field and laboratory investigation has been made. This investigation has resulted in revisions to the front suspension alignment specifications on all Fairlanes built during and after May, 1963.

When you encounter front end alignment problems on 1962-1963 Fairlanes, the front suspension should be set to the new specifications, with particular attention to the setting procedures noted below:

Revised Alignment Specifications:

Caster	0 degrees
Camber	
normal	0 degrees
driving on crowned roads	¼" positive left side
Toe-In	3/16"-5/16"

Setting Procedure Notes:

1. Lower Arm Inner Pivot Bolt Torque

Some movement of the lower arm inner pivot can occur if the pivot bolt t... is not to specifications. Before ...heel alignment, be certain the suspension. The bolt should be torqued to 100-120 ft. lbs. while prying the arm outward.

2. System Friction

Before checking front end alignment, be certain the vehicle is jounced sufficiently to allow it to settle to a normal position. Otherwise, static friction in suspension components will keep the vehicle from assuming normal ride height, resulting in false alignment readings.

3. Upper Arm Inner Shaft Retaining Bolts

Upper arm inner shaft movement can occur if the retaining bolts are not fully tightened to the 115-135 ft. lbs. specification. Any looseness of the upper arm inner shaft may permit the shaft to move back to the previous setting under vehicle operation.

14

DISPOSABLE (SPIN-ON) ONE PIECE TYPE OIL FILTER—F-100-250 Trucks with 223-292 CID Engines

To facilitate servicing, the subject oil filter (same as passenger car) became effective in production approximately March 15, 1963 on F-100-250 trucks equipped with 223-292 CID engines.

Service Kit B7A-6882-A can be used when desired for adapting the spin-on filter to previous model F-100-250 trucks with 223-292 CID engines which are equipped for cartridge type filters.

Following is the procedure for installing this kit:

1. Remove existing filter assembly and component parts.
2. Clean cylinder block filter recess.
3. Install new gasket EAA-6838-A.
4. Install adapter ECG-66891-A. Make sure anti-drain back holes are in the up position.
5. Install insert B7A-6890-A and torque to 50-60 ft. lbs.
6. Apply light oil to oil filter seal. Hand tighten until gasket contacts adapter face. Then tighten 1/2 turn more. Start engine and check for leaks.

15

TURN SIGNAL LEVER LOOSE— All Car Lines

When customer complaints of turn signal lever looseness are encountered, the following procedure is recommended:

Remove the turn signal lever and add a small portion of Loctite Sealant (Ford Part No. C3AZ-19554-A) to the threaded end of the lever and reinstall the lever.

NOTE: Approximately six (6) hours drying time is required for the sealer to harden.

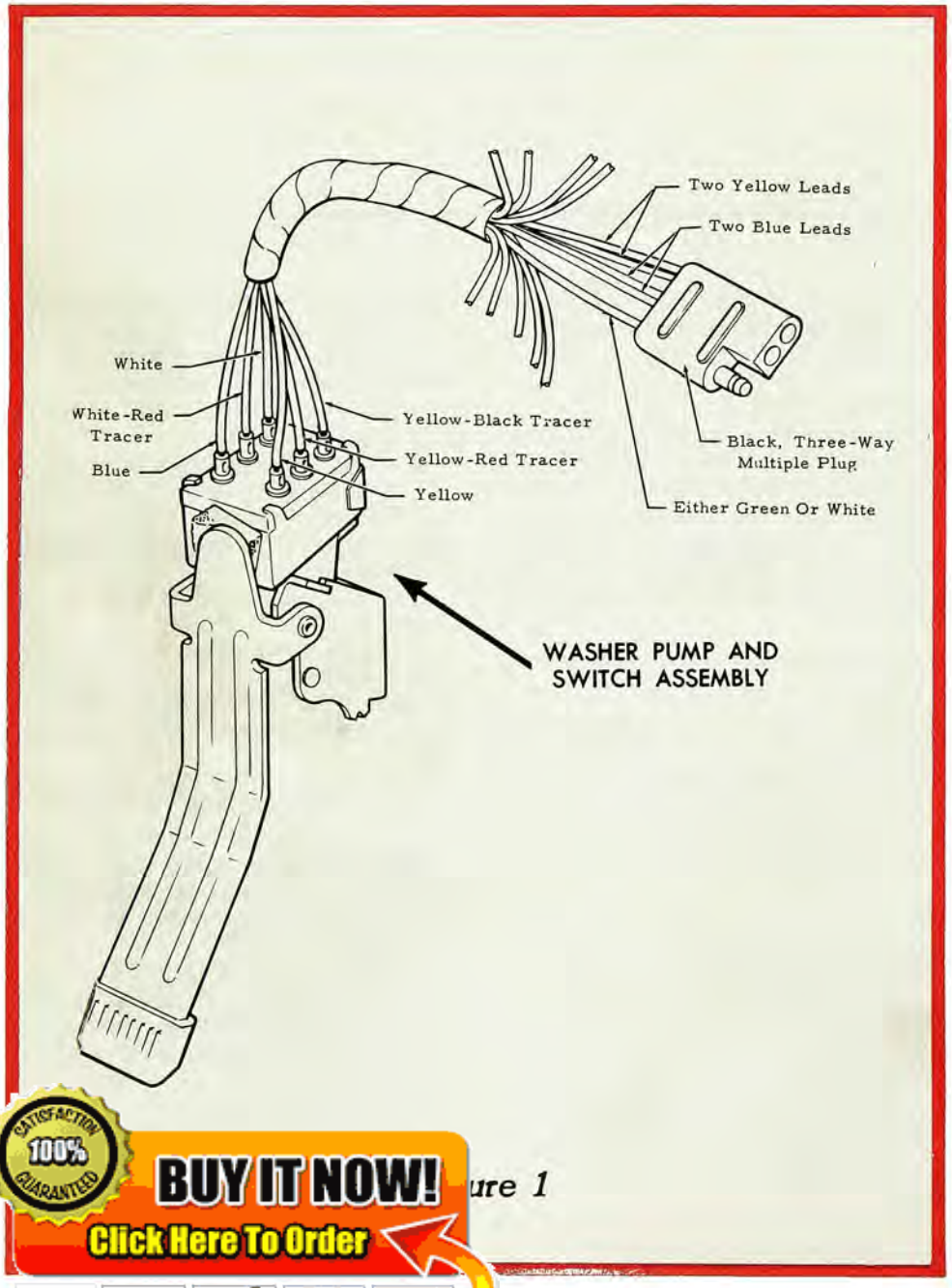
This procedure became effective in production on October 1, 1962, for all vehicles except Thunderbird and on May 1, 1963, for Thunderbird.

16

TWO-SPEED WIPER MOTOR JAMMED IN PARK—1963 Falcon, Fairlane, Ranchero

Whenever a jammed in park condition is encountered with two-speed wipers on the above vehicles, check the windshield washer coordinator switch or the three way disconnect plug for the correct wiring. After the wiper motor is corrected, the washer switch and multiple plug should be inspected as follows:

1. Remove the washer pump retaining screws.
2. Remove the two hoses from rear of pump.
3. Tilt pedal of washer pump down and away from view until terminal-block of washer pump is clearly visible. The color code of the wires is molded on the black plastic terminal block.
4. Compare the wire installation at switch terminals with the code on the terminal block (see Figure 1 below.) If the wires are improperly located at the pump assembly switch, replace the assembly.
5. Disconnect the black, three-way multiple connector plug from the main wiper harness.
6. With the male terminal of the multiple connector to the left, the color code of the wires should be from the left: two yellow wires on the extreme right, two blue wires in the center and either a white or a green wire on the near left.
7. If it is determined that the wires are improperly located in the multiple plug, replace the washer pump and switch assembly.



ure 1

17

STOPLAMP SWITCH TERMINAL CORROSION—All 1963 Car Lines

On complaints of erratic stoplamp operation, which is traced to a corrosion problem at the switch terminals, the following corrective measures should be followed:

1. Disconnect the two (2) female wire connectors from the stoplamp switch.
2. Remove the corrosion from both terminals of the switch and wires.
3. Using any Brand Name of B Petrolatum (Vaseline) of the non-carbolated type (available at any drugstore) apply it to the female wire connectors until they are filled.
4. Reconnect the wires to the stoplamp switch.

It is recommended the above correction be followed also when replacing a stoplamp switch.

18

HARD OPERATING KEY CYLINDERS—1963 All Models

Should complaints of high key efforts be received on the subject vehicles, the lock cylinders should be well lubricated with a clear lock lubricant, part number B4A-19587-A.

NOTE: No substitutes such as graphited lubricants should be used in key cylinders. No windshield de-icer solutions or direct heat should be applied to the lock cylinders as these tend to dry out the lubricants.

Also, when a door key cylinder is being replaced, care should be taken to insure that the retaining clip is installed properly into the retainer slot provided in the cylinder case.

19

TIRE AIR PRESSURE—1963 Falcon Sedans, Hardtops and Convertibles

In the event of customer complaint of harsh ride of the subject vehicles, tire pressures front and rear may be reduced to 24 p.s.i. instead of the presently recommended 27 p.s.i. If the customer prefers economy to smoothness of ride, an increase in air pressure (over the 24 p.s.i.) may be recommended.

20

DRAG LINK BALL STUD DUST SEAL—1961-63 F-100-250 Trucks (Including 4 x 4)

When the subject trucks are operated under severe conditions where excessive foreign matter may enter the front ball joint causing premature wear, it is recommended that Ball Stud Dust Seal, B7C-3332A, be installed to correct the condition.

NOVEMBER, 1963

Shop Tips FROM FORD

VOL. 1, NO. 2

Technical parts and service information published by Ford Division to assist servicemen in Service Stations, Independent Garages and Fleets.

SPECIAL FEATURE!

1963-64 FORD 427 C.I.D. HIGH PERFORMANCE ENGINE SPECIFICATIONS • PARTS ACCESSORIES

(See page 3)

Be sure to file this and future bulletins for ready reference. If you have any suggestions for additional information that you would like to see included in this publication, please write to: Ford Division of Ford Motor Company, Parts and Service Promotion and Training Dept., P. O. Box 658, Dearborn, Michigan, 48121.

IN THIS ISSUE

(Continued on Page 2)

IN THIS ISSUE—Continued

1 ENGINE OIL WARNING SYSTEM—Vehicles Equipped With 427 C.I.D. Engines

A new engine oil warning system was released and is being used on all Ford 427 C.I.D. engines. This system now warns the driver of either a loss of oil pressure or excessive oil temperature. The system has an oil pressure sending unit and an oil temperature sending unit (both located on top of the oil filter adapter). It also has an oil temperature relay and oil temperature flasher assembly (both located above the master brake cylinder under the hood assembly), and a new wiring harness. The warning light has not been changed and is still located in the instrument panel cluster.

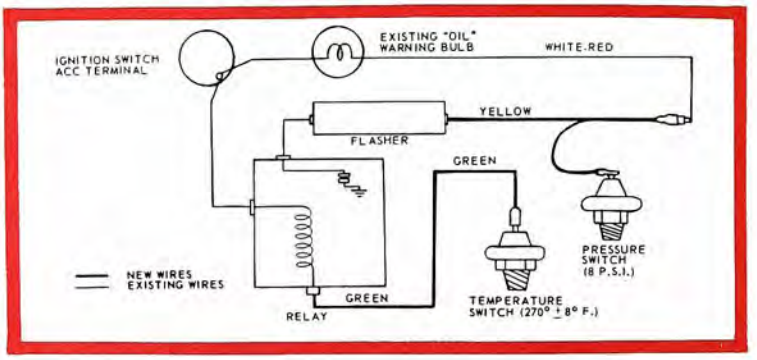
The operation of this system is as follows:

When the oil temperature rises above 270° ±8° F., the instrument panel oil indicator light will flash on and off until the oil temperature drops below the 270° ±8° F. temperature.

When the oil pressure drops below the required 8 PSI the same instrument panel oil indicator light will now glow continuously.

The following wiring diagram and warning light operation chart will aid in servicing this new system:

OIL WARNING LIGHT OPERATION CHART		
Oil Temperature	Oil Pressure	Light Operation
Below 270° ±8° F.	Below 8 P.S.I.	ON
Below 270° ±8° F.	Above 8 P.S.I.	OFF
Above 270° ±8° F.	Above 8 P.S.I.	Flashing On & Off

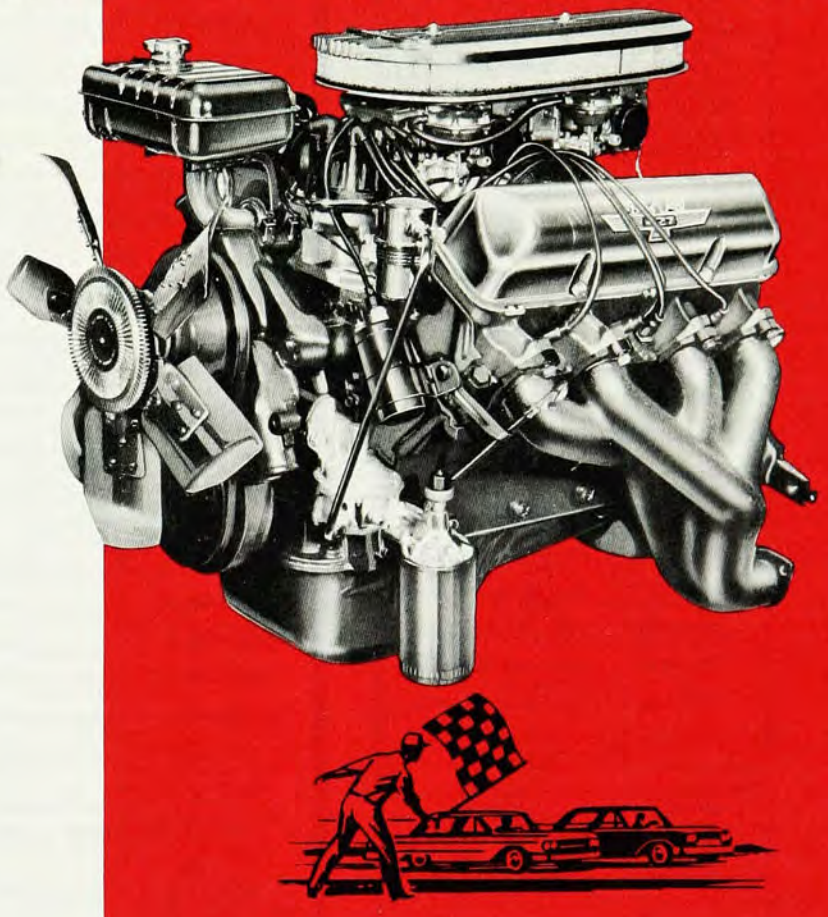


2 COMPLETE LIST OF 1964 POWER OPTIONS

	ENGINES					TRANSMISSIONS				
CAR LINE	Cu. In.	HP	Cyl.	Carb.	Type of Fuel	3-Speed Manual Column Shift	4-Speed Manual Floor Shift	3-Speed Manual Overdrive	Fordo-matic 2-Speed	Cruise O-Matic 3-Speed
FALCON	144	85	6	1-V	REGULAR	STD	—	—	—	—
	170	101	6	1-V	REGULAR	STD	OPT	—	OPT	—
	200	116	6	1-V	REGULAR	—	—	—	*OPT	—
FALCON HI-PERFORMANCE	260	164	V-8	2-V	REGULAR	STD	OPT	—	OPT	—
FAIRLANE	170	101	6	1-V	REGULAR	STD	—	—	—	—
	200	116	6	1-V	REGULAR	—	—	—	*OPT	—
	260	164	V-8	2-V	REGULAR	STD	—	OPT	OPT	—
	289	195	V-8	2-V	REGULAR	STD	OPT	—	—	OPT
FAIRLANE HI-PERFORMANCE	289	271	V-8	4-V	PREMIUM	—	*OPT	—	—	—
FORD	223	138	6	1-V	REGULAR	STD	—	OPT	—	OPT
	289	195	V-8	2-V	REGULAR	STD	—	OPT	—	OPT
	352	220	V-8	4-V	REGULAR	STD	—	—	—	OPT
	390	300	V-8	4-V	PREMIUM	STD	OPT	OPT	—	OPT
	Interceptor 390	330	V-8	4-V	PREMIUM	STD	OPT	—	—	OPT
	427	410	V-8	1—4-V	SUPER PREMIUM	—	*OPT	—	—	—
			V-8	2—4-V	SUPER PREMIUM	—	*OPT	—	—	—
			V-8	4-V	PREMIUM	—	—	—	—	STD

*Required at Additional Cost

1963-64 FORD *HIGH PERFORMANCE* PARTS AND ACCESSORIES



On the following pages is a list of engine and chassis parts that are available from Ford dealers to service Ford vehicles with the 427 cubic inch High Performance engine.

This handy reference guide is designed to make it easy for you to identify parts which may be required for servicing vehicles with the 427 engine or prepare them for various competitive activities.

1963-64 FORD 427 ENGINE SPECIFICATIONS

Bore	4.23 in.
Stroke	3.78 in.
Firing order:	1-5-4-2-6-3-7-8
Maximum B.H.P.	4-V 410 @ 5600 RPM 8-V 425 @ 6000 RPM
Maximum Torque	4-V 476 @ 3400 RPM 8-V 480 @ 3700 RPM
Compression Ratio:	Nominal 10.9:1 Maximum 11.5:1
Camshaft, Part No. C2AE-6250-A (Std.)	
e opens	8° 30′ ATC*
loses	36° 30′ ABC*
opens	11° 30′ BBC*
	39° 30′ BTC*
	96°
	.018—.022 (dwell angle 33 to 35)

Spark Plug Recommendations	C0AZ-12405-A C0AZ-12405-B
Spark Plug Gap	Street Use: .032 Racing: .025
Ignition Timing	8°
Valve lash	.025-.028 Hot
Fuel Pump Pressure	5 to 6 lbs. at 1800 RPM (No Load)
RPM Red Line	6200 RPM
Carburetor Jets	8-V—Primary 62 Fixed Power .040
Valve Spring Pressure (replace below 70)	80 to 90 lbs. at 1.820 length
Valve Spring compressed to 1.320	255 to 280 lbs.

*Figures based on 8-V engine

1963-4 Ford High Per

Part Number	Description
FRONT SUSPENSION AND STEERING LINKAGE	
C1AA-1177-A	Oil Seal, Rear Wheel Bearing Inner
C0AZ-3102-A	Spindle, Right Hand
C0AZ-3103-A	Spindle, Left Hand
C0AA-3280-C	Rod Assembly—Spindle Arm
C1AA-3289-D	End, Spindle Arm
C0AA-3304-D	Rod Assembly—Idler Arm
AG-3310-A	Sleeve Assembly Drag Link
C0AA-3351-A	Bracket Idler Arm Mtg
C0AA-3355-A	Arm Idler
LF-3357-A	Bushing, Idler
30AA-3590-D	Arm, Pitman
REAR AXLE	
C1AW-4209-E	Kit—Diff. Gear and Pinion (5.83)
WAB-4209-C	Kit—Diff. Gear and Pinion (5.67)
WAB-4209-D	Kit—Diff. Gear and Pinion (5.43)
WAB-4209-E	Kit—Diff. Gear and Pinion (5.14)
WAB-4209-F	Kit—Diff. Gear and Pinion (4.86)
WAB-4209-G	Kit—Diff. Gear and Pinion (4.71)
WAB-4209-H	Kit—Diff. Gear and Pinion (4.57)
WAB-4209-J	Kit—Diff. Gear and Pinion (4.29)
WAB-4209-K	Kit—Diff. Gear and Pinion (3.40)
C0AW-4234-D	Shaft—Rear Axle Right Hand
C0AZ-4235-C	Shaft—Rear Axle Left Hand
C2AZ-4880-A	Kit—Locking Differential
FRONT SPRING AND STABILIZER	
AJ-5310-N	Front Spring 750 Lbs
AJ-5310-R	Front Spring 900 Lbs
C3AZ-5310-F	Front Spring, 1,200 Lbs
C1AA-5482-A	Stabilizer Bar
C0AA-5493-A	Insulator
ENGINE	
C3AE-6007-HE-359-T	Engine Assembly—427 CI—4V
C3AE-6007-HE-361-T	Engine Assembly—427 CI—8V
B9AE-6A008-A	Dowel—Cylinder Head to Cylinder Block
C3AZ-6009-K	Cylinder Assembly 427 CI—4V
C3AZ-6009-M	Cylinder Assembly 427 CI—8 V
C3AZ-6010-K	Cylinder Block 4V and 8V
C2AZ-6019-A	Kit—Cylinder Front Cover—4V—8V
C0AE-6020-C	Gasket, Cyl. Front Cover—4V—8V Also in (C2AZ-6019-A Kit)
C2AZ-6023-B	Pointer, Timing 4V—8V
C3AZ-6049-J	Cylinder Head Assy 4V—8V
C3AZ-6051-B	Cylinder Head Gasket 4V—8V

Part Number	Description
ENGINE (Continued)	
C3AZ-6135-A	Pin—Piston
C3AZ-6140-B	Retainer, Piston Pin
C3AZ-6148-A	Partial Ring Set—Std. Size 4V—8V
C3AZ-6200-C	Rod Assy.—Connecting 4V—8V
C3AZ-6200-F	Rod Assy.—Connecting Reinforced Cap 4V—8V
C1AE-6211-H-J	Bearing, Connecting 4V—8V
C2AZ-6214-A	Bolt—Connecting Rod 4V—8V
C3AZ-6250-D	Camshaft (306°) 4V—8V
C3AZ-6250-K	Camshaft (324°) 4V—8V
C3AZ-6256-A	Sprocket—Camshaft (4V and 8V)
B8A-6262-AA	Bearing Camshaft Intermediate (4V and 8V)
B8A-6263-AA	Bearing Camshaft Rear (4V and 8V)
C3AZ-6265-A	Spacer Cam Sprocket (4V and 8V)
B8S-6267-AA	Bearing Camshaft Front Intermediate (4V and 8V)
C3AZ-6261-A	Bearing Camshaft Front (4V and 8V)
B8A-6268-A	Chain—Timing (Link-Belt) (4V and 8V)
B8A-6270-AA	Bearing—Camshaft Rear Intermediate (4V and 8V)
C3AZ-6269-A	Plate Camshaft Thrust (4V and 8V)
C3AZ-6287-A	Eccentric, Cam Fuel Pump Drive (4V and 8V)
C3AZ-6303-G	Crankshaft—Roller Fillets (4V and 8V)
B8A-6306-A	Sprocket, Crankshaft (4V and 8V)
B8A-6310-A	Slinger-Crankshaft Oil (4V and 8V)
C3AZ-6312-B	Damper Assy.—Crankshaft Vibration
C1AE-6333-A & B	Bearing Crankshaft Main Front (4V and 8V)
C1AE-6336-B	Seal Crankshaft Rear Main Cap (4V and 8V)
C1AE-6337-A & B	Bearing, Crankshaft Main Center (4V and 8V)
C1AE-6345-B	Bolt (4V and 8V)
C3AZ-6A354-A 3765 69 B 3748 52 C 3731 35	Spacer Main Bearing Cap (4V and 8V)
B8AZ-6359-A	Spacer Crankshaft Damper
C3AZ-6375-E	Flywheel Assembly (4V and 8V)
B8A-6378-A	Washer Crankshaft Damper
B8A-6379-A	Bolt Flywheel (4V and 8V)
C3AZ-6392-A	Housing Assembly—Flywheel (4V and 8V)
EAD-6397-A	Dowel Flywheel Hsg. to Cyl. Block (4V and 8V)
B9TE-6500-A	Tappet Assy. Valve (4V and 8V)
C3AZ-6505-E	Valve, Exhaust (4V and 8V)
C3AZ-6507-J	Valve Intake Bumper Type (4V and 8V)
C3AZ-6513-A	Spring Assy. Valve Damper (4V and 8V)
C3AZ-6514-A	Retainer—Valve Spring (4V and 8V)
B8A-6518-A	Key Valve Spring Retainer (4V and 8V)
C1SE-6524-A	Baffle, Valve Spring Oil (4V and 8V)
C1AE-6A527-A	Bolt ⅛-16 x 3.20 attach 6506 to Cylinder Head 6049 (4V and 8V)
C1DE-6A527-A	Bolt ⅛-16 x 2.97 attach 6506 to Cylinder Head 6049 (4V and 8V)

Part Number	Description
ENGINE (Continued)	
C3AZ-6531-A	Support—Rocker Arm (4V and 8V)
C3AZ-6A536-A	Seat Valve Spring 4V—8V
B6A-6549-C	Screw, Valve Rocker Arm Adjusting 4V—8V
C3AZ-6563-A	Shaft, Valve Rocker Arm 4V—8V
B8A-6564-B	Arm Assy. Valve Rocker 4V—8V
B8A-6565-C	Rod—Valve Push 4V—8V
B8A-6571-B	Seal—Valve Stem 4V—8V
EAA-6572-A	Plug—Valve Rocker Arm Shaft 4V—8V
C3AZ-6582-F	Cover Assy. Valve Rocker Arm R.H. 4V—8V
C3AF-6582-G	Cover Assy. Valve Rocker Arm L.H. 4V—8V
B9AE-6584-C	Gasket, Valve Rocker Arm 4V—8V
B8A-6587-B	Spring, Valve Rocker Arm Locating 4V—8V
B8A-6590-A	Washer, Valve Rocker Arm Shaft 4V—8V
B8A-6598-A	Washer, Valve Rocker Arm Shaft Spring 4V—8V
C3AZ-6600-A	Pump Assy. Oil 4V—8V
B8A-6608-A	Rotor & Shaft Assy. Oil Pump Drive 4V—8V
B8A-6616-C	Cover, Oil Pump 4V—8V
B8AZ-6A618-A	Shaft Assy. Oil Pump Intermediate 4V—8V
C0AE-6622-E	Screen & Cover Assy. Oil Pump 4V—8V
C2AE-6622-E-SO	Screen & Cover Assy. Oil Pump 8 QT. 4V—8V
B8A-6626-A	Gasket, Oil Pump Inlet Flange 4V—8V
B8A-6629-A	Ring, Oil Pump Shaft Retainer 4V—8V
B9AZ-6A630-C	Baffle Assy. Crankcase Ventilation 4V—8V
C3AZ-6A630-A	Duct, Crankcase Ventilation 4V
C3AZ-6A630-B	Duct—Crankcase Ventilation 8V
C0AE-6A631-A	Element, Crankcase Ventilation 4V—8V
C1AE-6A632-A	Gasket, Crankshaft Ventilation 4V—8V
C0AE-6A633-A	Retainer, Crankcase Ventilation 4V—8V
C0AE-6A636-A	Gasket, Oil Filter Adaptor to Block 4V—8V
C1AZ-6A642-A	Oil Cooler
B8A-6659-A	Gasket, Oil Pump to Block 4V-8V
C0AZ-6666-A	Plug, Cup (Relief Valve) 4V—8V
C0ME-6670-A	Spring—Relief Valve 4V—8V
C1AE-6670-A	Spring, Oil Pump Relief Valve 4V—8V
B9AE-6674-B	Plunger—Relief Valve 4V—8V
C1AE-6674-A	Plunger, Oil Pump Relief Valve 4V—8V
C0AE-6675-F	Pan Assy. Oil 4V—8V
C1AE-6675-F	Pan Assembly—Oil (1962/63 406 & 427 CI)
C2AZ-6675-A-SO	Pan Assembly—Oil—8 Quart (4V and 8V)
AE-6677-A	Cover—Starter Pinion
C3AZ-6700-A	Bearing—Crankshaft—Front Oil
B4Q-6701-A	Seal—Crankshaft—Rear Oil (4V and 8V)
C0AE-6710-C	Gasket, Oil Pan (4V and 8V)
C1AZ-6731-A	Filter Assembly—Oil (4V and 8V)

ormance Service Parts

Part Number	Description
ENGINE (Continued)	
C3AZ-6750-B	Indicator Assembly Oil Level
C3AZ-6754-B	Tube Assembly Oil Level Indicator
C2AZ-6758-B	Tube Assembly Crankcase Ventilation (4V)
C0AE-6763-A	Pipe Assembly—Oil Filter (8V)
C3AZ-6763-A	Pipe Assembly—Oil Filter (4V)
C0AE-6766-E	Cap Assembly Oil Filler with Decal (4V and 8V)
C3AZ-6766-B	Cap Assembly Oil Filler with Decal (4V and 8V)
C3AZ-6881-A	Adaptor Assembly Oil Filter (4V and 8V)
TRANSMISSION & CLUTCH	
C3AZ-7003-H	4-Speed Transmission with Steel Casing 4V—8V
C3AZ-7006-D-SO	Transmission, Case 4-Spd. Alum
C3AZ-7007-B	Plate Assy. Engine Rear Cover
C3AZ-7A039-D-SO	Extension Housing Alum. 4-Speed
C3AZ-7513-A	Shield—Clutch Release Lever
C3AZ-7515-B	Lever—Clutch Release
B9AA-7522-A	Bracket—Clutch Release Lever
C3AZ-7550-M	Disc Assy. Clutch
C3AZ-7550-N	Disc Assy.—Clutch (Drag Racing)
AB-7562-A	Spring Clutch Release Lever (Drag Racing)
C3AZ-7563-D	Pressure Plate Assy. (Drag Racing)
C3AZ-7563-C	Pressure Plate—Clutch
B8A-7600-A	Bearing—Clutch Pilot
RADIATOR & GRILLE	
C1AE-8A080-B	Tank Assy. Radiator Supply 4V—8V
B8A-8100-A	Cap Assy. Supply Tank 4V—8V
9N-8115-B	Draincock Assy. ¼—18 Pipe 4V—8V
B8A-8255-A	Gasket, Water Outlet Connect. 4V—8V
B7A-8287-A	Clamp Water Bypass 4V—8V
WATER PUMP & FAN	
C0SE-8A500-A	Cap, Water Pump Connect. 4V & 8V
C2AE-8501-B	Pump Assy. Water Pump 4V & 8V
B8A-8507-A	Gasket, Water Pump to Block 4V—8V
C2AZ-8508-A	Cover, Water Pump 4V—8V
B7A-8509-B	Pulley, Water Pump 4V—8V
C2AZ-8513-A	Gasket, Water Pump Cover 4V—8V
C1AZ-8530-A	Bearing & Slinger Assy. Water Pump 4V—8V
B5S-8546-A	Spacer, Water Pump Pulley to Fan 4V—8V
C2AZ-8546-A	Spacer—Pulley to Fan

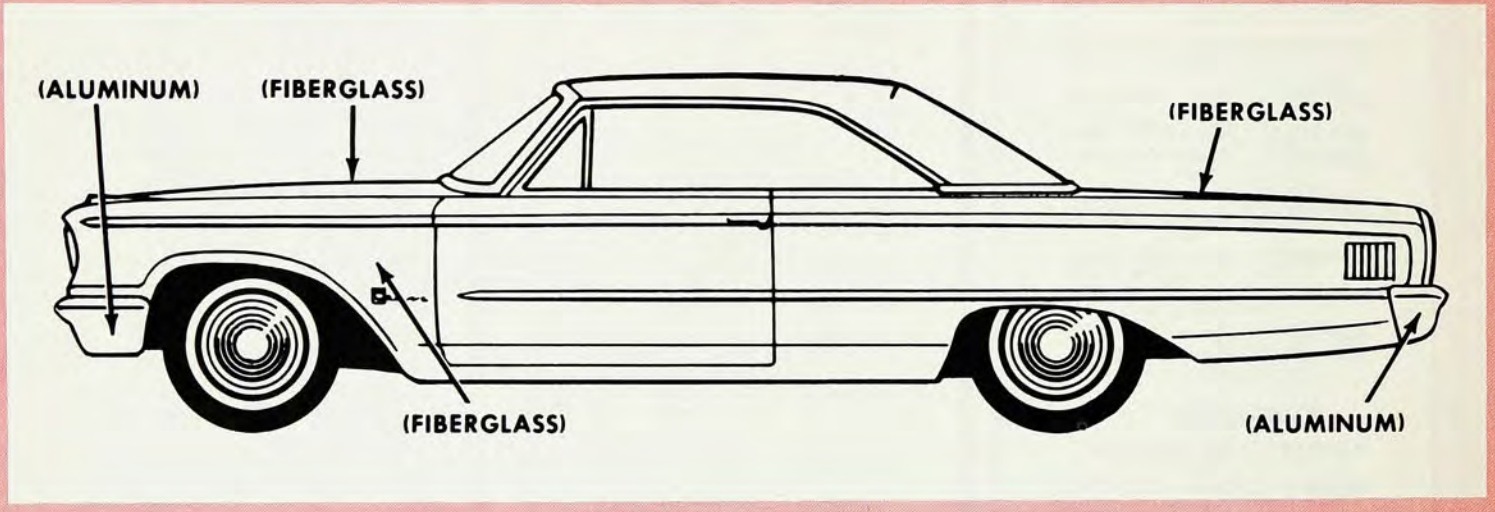
Part Number	Description
WATER PUMP & FAN (Continued)	
C1AA-8600-E	Fan Assy.—4-Blades
C2AZ-8600-A	Fan Assy.—5-Blade
C2AZ-8A616-A	Fan Drive—Clutch
C2AZ-8620-B	Belt Fan 4V—8V (Ford Only)
FUEL TANK	
B7Q-9155-A	Filter Assy. Fuel 4V—8V (Ford)
C0AE-9180-A	Bracket—Fuel Filter Mtg. 4V—8V
B6A-9278-A	Switch Assy. Oil Pressure 4V—8V
C3AZ-9D280-A	Manifold Assy. Carb. Fuel Supply 8V
B7TZ-9B281-A	Clip—Fuel Filter Bracket 4V—8V
C3AZ-9D281-A	Hose—Carburetor Fuel—Rear 8V
FUEL PUMP	
C0AE-9350-E	Pump Assy.—Fuel 4V—8V
B6T-9365-A	Element Assy.—Fuel Filter 4V—8V
C1SZ-9417-A	Gasket, Fuel Pump Mtg. 4V—8V
MANIFOLDS	
C3AZ-9424-J	Manifold Assy.—Intake 4V
C3AZ-9A424-A	Seal—Intake Manifold 4V—8V
C3AZ-9A425-A	Seal, Intake Manifold to Block Front 4V—8V
C3AZ-9430-C	Manifold Assy. Exhaust R.H. 4V—8V
C3AZ-9431-F	Manifold Assy. Exhaust L.H. 4V—8V
C0AE-9A435-B	Spacer—Exhaust Manifold
B9JE-9441-B	Gasket—Intake Manifold to Cylinder
C2AZ-9441-A	Gasket—Intake Manifold (Heat Open) 4V—8V
C3AZ-9441-B	Gasket—Intake Manifold (Heat Blocked) 4V—8V
C2AZ-9447-E	Gasket—Carburetor to Intake Manifold 8V
C3AZ-9447-A	Gasket—Carburetor to Intake Manifold 4V
C3AZ-9A447-A	Tab Exhaust Manifold Bolt Locking 4V—8V
CARBURETOR	
C3AZ-9A501-A	Tube—Carburetor Secondary Balance 8V
C3AZ-9510-S	Carb. Assy. 8V 540 CVM 8V
C4AZ-9510-A	Carburetor Assy. 600 CFM 8V Primary & Secondary
C3AZ-9510-K	Carburetor Assy. Std. 4V
C0AE-9A589-C	Spacer, Carb. to Intake Manifold 4V
AIR CLEANER	
C3AZ-9600-H	Air Cleaner (4 V)
C3AZ-9601-C	Element Assembly—Carb. Air Cleaner (8 V)
ECU-9601-B	Element Air Cleaner (Remove Top Flange) (4 V)
C3AZ-9654-A	Gasket Air Cleaner to Carburetor (4 V)
C3AZ-9673-B	Gasket—Carburetor to Air Cleaner
ACCELERATOR AND CHOKE CONTROL RODS	
C3AZ-9A702-B	Rod—Accelerator Shaft to Bell Crank (8 V)

Part Number	Description
ACCELERATOR AND CHOKE CONTROL RODS (Continued)	
C3AZ-9732-C	Bellcrank Assembly—Accelerator
C0AZ-9741	Bracket—Accelerator Retracting
C3AZ-9C760-A	Trunnion—Carburetor Throttle Lever
PB8M-9767-B	End—Carburetor Throttle Synchronizer Rod
B7A-9826-A	Clip Rod End Clevis—Left Hand
C3AZ-9B841-A	Rod Carburetor Throttle Front
C3AZ-9B842-B	Rod Carburetor Throttle Rear
C1AE-9865-A	Insulator—Thermostatic Choke Control Tube
C3AZ-9890-A	Chamber Assembly Thermostat Choke Heat
GENERATOR & ALTERNATOR	
C1TZ-10002-A	Generator Assembly 4V—8V
C1AE-10039-A	Bracket—Generator 4V—8V
C1AE-10039-F	Bracket—Generator Mtg. 4V—8V
FAP-10130-A	Pulley—Generator 4V—8V
C2AZ-10145-A	Arm—Generator Adjusting 4V—8V
C3MY-10145-A	Arm—Alternator Assy. Adj. 4V—8V
C3SZ-10156-C	Bracket—Alternator Mtg. 4V—8V
C1AZ-10170-B	Shield—Generator Splash 4V—8V
C3MY-10346-A	Alternator Assy. 4V—8V
ELECTRICAL	
C3AZ-10884-A	Bulb Assy.—Elect. Heater Indicator 4V—8V
C2AZ-11002-A	Starting Motor 4V—8V
C2AZ-11350-B	Starting Drive 4V—8V
B6A-12029-A	Coil—Ignition 4V—8V
B6A-12029-B	Ignition Coil (12V) Without Transistorized System
C3TZ-12029-A	Ignition Coil (12V) with Transistorized System
B8S-12043-B	Strap Assy.—Ignition Coil 4V—8V
B7A-12106-A	Housing Assy. Dist. Terminal 4V—8V
A9AZ-12113-A	Insulator, Coil Wire 4V—8V
C3AZ-12127-AE	Distributor Assembly (Except with Transistorized System) (4V and 8V)
C3AZ-12127-AF	Distributor Assembly (Transistor) (4V and 8V).
B7A-12200-A	Rotor Assembly Distributor (4V and 8V)
C0AZ-12259-B	Wiring and Bracket Assy. R.H. and L.H. (8V)
C3AZ-12259-F	Wiring and Bracket Assy. R.H. and L.H. (4V)
B8A-12270-A	Clamp Distributor (4V and 8V)
C3AZ-12298-A	Wire Assy. Coil to Dist. High Tension (4V and 8V)
C0AZ-12405-A	Spark Plug Assembly (4V and 8V)
C3AZ-12405-A	Spark Plug Assembly (BF-601) (4V and 8V)
C2AZ-12405-B	Spark Plug Assembly (BTF.1) (4V and 8V)
SHOCK ABSORBERS	
C1AZ-18077-A	Shock Absorber, Front
C1AZ-18097-A	Shock Absorber, Rear

❺ MISCELLANEOUS ACCESSORIES

Part Number	Description
C4AZ-5C246-A	Lake Pipe Kit
C4AZ-6B068-A	Engine High Performance Kit
C4AZ-6980-A	Engine Dress-Up Kit
C2RZ-17A326-A	"Sun" Tachometer Kit—8 Cylinder—4"
C2RZ-17A326-B	Rotunda Tachometer—8 Cylinder—4"
C2RZ-17A326-C	Rotunda Tachometer—6 Cylinder—4"
C3RZ-17A326-A	Rotunda Tachometer—6 Cylinder—3"
C3RZ-17A326-B	Rotunda Tachometer—8 Cylinder—3"
C2RZ-17368-A	Bracket Kit for "Sun" Tachometer
C2RZ-17368-B	Bracket Kit for C2RZ-17A326-B and -C Tachometers

❻ *Lightweight Body Components*



PART NUMBER	DESCRIPTION
FOR 1962 GALAXIE SEDAN AND CONVERTIBLE	
C2AB-16005-S	Fender Assy. R.H. (Fiber Glass)
C2AB-16006-S	Fender Assy. L.H. (Fiber Glass)
C2AB-16610-F	Hood Assy. (Fiber Glass)
C2AB-17A867-C	Arm Rear Bumper Outer R.H. (Aluminum)
C2AB-17A868-C	Arm Rear Bumper Outer L.H. (Aluminum)
C2AB-17787-A	Arm Rear Bumper Inner R.H. (Aluminum)
C2AB-17788-A	Arm Rear Bumper Inner L.H. (Aluminum)
C1AB-17A820-A	Brace Frt. Bumper Outer (Aluminum)
C1AB-17A821-A	Brace Frt. Bumper Outer (Aluminum)
C2AB-17757-A	Bar—Frt. Bumper, Impact (Aluminum)
C2AB-17A971-A	Arm, Frt. Bumper Inner R.H. (Aluminum)
	per Inner L.H. (Aluminum)
	age Compt. (Fiber Glass)

PART NUMBER	DESCRIPTION
FOR 1963 GALAXIE SEDAN AND CONVERTIBLE	
C3AA-16005-R	Fender Assy., Front R.H. (Fiber Glass)
C3AA-16006-R	Fender Assy., Front L.H. (Fiber Glass)
C3AA-16044-C	Apron, Front Fender Less W/Strip R.H. (Fiber Glass)
C3AA-16045-C	Apron, Front Fender Less W/Strip L.H. (Fiber Glass)
C3AA-16610-F	Hood Assy. (Fiber Glass)
C3AB-17754-C	Arm, Front Bumper Outer—R.H. (Aluminum)
C3AB-17755-C	Arm, Front Bumper Outer—L.H. (Aluminum)
C3AB-17757-J	Bar, Front Bumper Impact (Aluminum)
C3AB-17795-E	Arm, Rear Bumper Outer R.H. (Aluminum)
C3AB-17796-E	Arm, Rear Bumper Outer L.H. (Aluminum)
C3AB-17906-J	Bar Rear Bumper Impact (Aluminum)
C3AA-6240110-G	Dr. Assy. Luggage Compt. (Fiber Glass)

7 GENERATOR FAILURE FROM ROAD SPLASH—1963 F-100-250-350 Trucks with 30 Amp. Ford Generator

When operating F-100-250-350 trucks under conditions of excessive road splash, water may enter the generator causing failure.

To provide protection from road splash, a generator boot became effective in production on the subject trucks approximately March 15, 1963.

The new generator boot, Ford Part No. C1AZ-10170-B, can be installed on 1961-62 and on earlier production 1963 F-100-250-350 trucks equipped with the 30 amp. Ford generator when desired.

8 VINYL TRIM CLEANING MATERIALS—All Car Lines

Proper care of vinyl and soft trim parts requires the use of correct cleaning materials to assure maximum life and retention of original beauty. In this regard, two lists of cleaning materials are shown below. The first indicates those materials that are not compatible with soft trim parts and the second list indicates those materials that are.

Cleaning Materials That Should NOT Be Used

1. All materials containing aliphatic hydrocarbon or aromatic hydrocarbon solvent ingredients such as:
   - Kerosene
   - Naphtha
   - Toluol
   - Xylol 10°
   - Petroleums—Heavy, Fraction, Naphtha
   - Thinners—Special Lacquer
   - Lacquers—Interior, Exterior
   - Cellulose Acetate
   - Butyl Cellosolve
   - Spot Remover
2. Body polish, battery acid, antifreezes, gasoline, motor oils or other type lubricants.
3. In general, household cleaners containing organic solvents or abrasives should not be used on soft trim parts that are color coated (leather, painted vinyls, etc.).

Cleaning Materials That Can Be Used

1. Rotunda Convertible Rear Window Cleaner (R 110-A).

...lered acceptable for cleaning ...ing minute scratches from

Recommended for cleaning vinyl and leather trim, white side wall tires and convertible and landau tops (packaged in a 32 oz. container).

3. Rotunda All-Purpose Cleaner (R 119-A).

Recommended for cleaning fabrics, convertible and landau tops, vinyls, tires and also painted surfaces (packaged in a gallon container).

4. Rotunda Triple Clean (R 118-A).

A multi-purpose cleaner suitable for cleaning leather, vinyl, cloth, convertible and landau tops, and carpet fabrics (packaged in a 12 oz. plastic squeeze bottle with an attached brush applicator).

5. Rotunda Deep Clean (Foam Cleaner) (R 118-B).

Considered as a multiple type cleaner for fabrics and vinyls (packaged in a 32 oz. container).

NOTE: Specific instructions are provided with each of the above containers.

9 STEERING LINKAGE SERVICE REQUIREMENTS ON 1963 THUNDERBIRD AND FALCON

The steering connecting and tie rod ends on the subject vehicles are permanently lubricated and sealed during assembly. Any additional lubricant will result in an over-lubricated condition and possible seal failure.

The tie rod ends on Thunderbirds and all steering linkage on early produced Falcons have plugged holes for initial fill only. (On later produced vehicles the lube plugs have been omitted.) These ends should not be lubricated in service. In case of seal and/or other type failure, the complete part should be replaced.

Early publications of Falcon owner manuals recommended that steering linkage be lubricated at 36,000 miles. Owners requesting this work should be advised that the steering linkage is permanently lubricated and the necessity for this operation eliminated.

10 DISC WHEEL NUT LOOSENING—Ford 500 Through 800 Series Trucks

Retaining nuts on Ford 500-800 series truck disc wheels will loosen if not properly tightened. Correct torque for these wheel nuts is 450-500 ft. lbs., and only wheel nuts which are tightened to this specification will remain tight under vehicle operation.

For proper tightening, a 500# capacity torque wrench (any one of many models offered by Snap-On, Proto, Sturtevant, Richmond, etc.) should be used. In the absence of such wrenches, the wheel nuts can be tightened to approximately correct specifications by use of an extended lever wrench. The full weight of a 150 pound man at the end of a 3 foot or 3½ foot wrench bar (held horizontally) will produce 450-500 ft. lbs. (See Figure 1).

Truck owners and operators should be cautioned that tire replacements made on the road will require the use of an extension pipe to the wheel wrench, and that as soon as possible after such repairs, a recheck of wheel nut torque with a torque wrench should be made to confirm the nut tightness. The importance of wheel nut tightness cannot be over emphasized. Truck owners should be referred to the Operator's Manual which specifies that after delivery, after any wheel replacement, after tire replacement and after cross-switching of tires, the wheel nuts should be inspected and tightened twice within the first 500 miles of operation and at the 1000 mile point after delivery or after any service requiring removal and reinstallation of wheels.

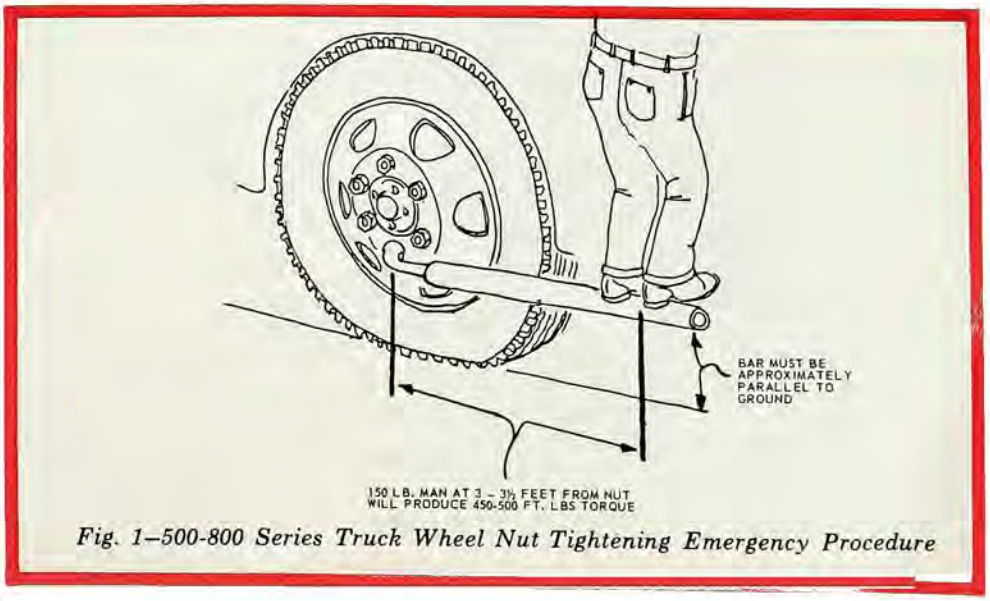


Fig. 1—500-800 Series Truck Wheel Nut Tightening Emergency Procedure

11 REVISIONS IN REAR AXLE BOLT TORQUE SPECIFICATIONS—1963 Vehicles

To keep you informed on the latest changes in rear axle component torque specifications, the following chart indicates the bolt torque changes and the vehicles affected.

NOTE: Caution should be exercised not to exceed the maximum torque limits specified—to do so may result in thread stripping.

1963 REAR AXLE COMPONENTS— TORQUE SPECIFICATION REVISION CHART (Non Lubricated Thread) (FIGURES SHOWN IN FT.-LBS.)

Bolts Affected	Ford, Fairlane 289 4V, Thunderbird, Econoline with 2700 Axle and F-100		Fairlane (Except 289 4V)		Falcon 144, 170 CID Engine and Econoline with 2300# Axle and 144, 170 CID Engines	
	From	To	From	To	From	To
Ring Gear Bolts	65-75	65-80	65-75	65-80	40-50	40-55
Pinion Retainer Bolts	30-40	30-45	30-40	30-45	.....	.....
Diff. Brg. Cap Bolts	70-80	70-85	55-65	55-70	40-50	40-55
Adjuster Lock Bolts	12-20	12-25	12-20	12-25	12-20	12-25

12 EXHAUST SYSTEM CLEARANCE—1963 Falcon with V-8 Engine

Exhaust system alignment is an important factor in preventing noises from entering the passenger compartment.

When making replacements, the following dimensions should be maintained as closely as possible with the exhaust system cold.

1. The muffler to rear spring shackle clearance is $1\frac{1}{16}$" on all cars with V-8 engines except Sprint. On Sprint cars the clearance should be $\frac{7}{8}$".

2. Muffler to fuel tank clearance is $\frac{3}{4}$" on all cars with V-8 engines except Sprint. On Sprint cars the clearance should be $\frac{15}{16}$".

3. In the area opposite the hand brake lever there must be a clearance of $1\frac{1}{4}$" between the floor pan and muffler inlet pipe.

4. A clearance of $1\frac{1}{8}$" to the floor pan and the engine rear mount rubber should be maintained at the engine rear mount.

5. The muffler inlet tube should have a clearance of $\frac{1}{2}$" at the bottom rear right hand corner of the automatic transmission.

6. There should be $\frac{1}{2}$" clearance between the muffler "Y" pipe and the starter (at the point pipe curves around the starter).

7. A clearance of $\frac{1}{2}$" should be maintained between the flat on the muffler "Y" pipe and the power steering hoses.

The above areas are indicated in Figure 1 for clarification of location.

ce—1963 Falcon with 8-cylinder Engine

13 DISTRIBUTOR MODIFICATION FOR IMPROVED LOW END ACCELERATION AND FUEL ECONOMY AND CARBURETOR MODIFICATION FOR IMPROVED FUEL ECONOMY—1963 Ford with 352 Engine and 2V Carburetor

To improve low end acceleration and to improve fuel economy on the 1963 Ford with 352 engine and standard or automatic transmissions, the following Distributor or Carburetor Modifications can be made:

1. Distributor Modification for Improved Low End Acceleration & Fuel Economy —Units built prior to January 19, 1963

The C3AZ-12127-AH distributor used on 390 cubic inch engines became effective in production approximately January 19, 1963, on 1963-352 cubic inch engines. This new distributor improves the low end acceleration and also improves the fuel economy when the vehicle is operated under normal load.

To improve the low end acceleration and fuel economy on cars—with 352 engines—built prior to January 19, 1963, the existing distributor can be reworked to incorporate the improvements of the new distributor by installing new primary and secondary distributor weight springs, a new vacuum diaphragm spring and a new vacuum advance stop listed below; and also adjusting the distributor advance curve to that shown in Table 1 (see next page).

The new primary and secondary distributor centrifugal weight springs —Figure 1 (next page)—increase the rate of advance during acceleration or when there is a heavy load on the engine. When the engine is operated under a light load, the new vacuum diaphragm spring—Figure 2, provides additional advance which is required for maximum part throttle power and economy. The vacuum advance stop —Figure 2—is required to limit the maximum spark advance.

Ford Part Number and Name	Required Quantity
B8A-12192-B Primary Weight Spring (color code—orange)	1
B7A-12191-B Secondary Weight Spring (color code—green)	1
C0TZ-12192-A Vacuum Diaphragm Spring (color code—blue)	1
C0TZ-12202-A Vacuum Advance Stop	1

2. 2V Carburetor Modifications for Improved Fuel Economy

A. Booster Venturi—1963

Fuel economy during off idle throttle operation can be improved by replacing the booster venturi assembly (C1AZ-9A523-C) with a new assembly, part number C0AE-9A523-A. This improved booster venturi is calibrated with a smaller idle-fuel mixture restrictor, and will reduce the fuel-air mixture in the idle system during off-idle throttle operation. The booster venturi can be used in carburetors with either manual or automatic transmission; carburetors built with the satisfactory booster can be identified by a dot of orange paint on the code tag.

B. Main Metering Jet (one size leaner) —1960 through 1963 units built prior to November 2, 1962

Fuel economy under normal driving conditions can be improved by leaning the part throttle and wide open throttle flow characteristics of the 2V Ford carburetor by changing the main metering jet to a leaner size.

New carburetors with one size leaner (smaller) main metering jets became effective in production approximately November 2, 1962. Carburetors incorporating this change can be identified by the letter "B" stamped in the carburetor code tag after the prefix and suffix.

The part numbers of the leaner main metering jets, and their application are as shown in Table 2.

TABLE 1

Centrifugal Advance: Set test stand to 0° @ 250 RPM and 0 inches of vacuum.

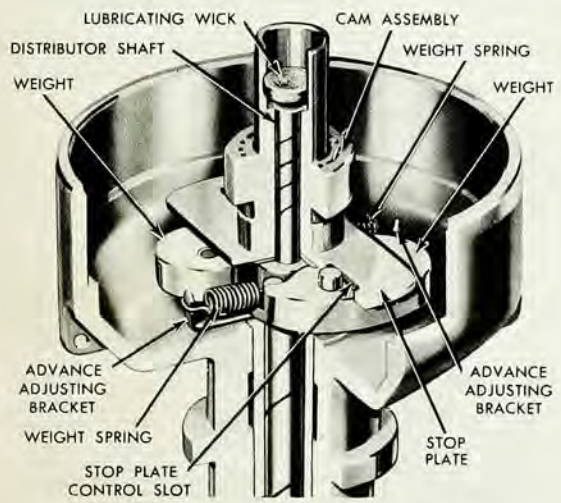
Distributor RPM	Advance (Degrees)	Vacuum (Inches of Mercury)
400	½— 1½	0
500	3½— 4½	0
600	5 — 6	0
1100	7 — 8¼	0
2000	10¾—12¼	0

Vacuum Advance: Set test stand 0° @ 1000 RPM and 0 inches of vacuum.

Distributor RPM	Advance (Degrees)	Vacuum (Inches of Mercury)
10000	½—3½	7
10000	3½—6½	10
10000	5½—8½	12
10000	5½—8½	20

TABLE 2

Part Number	Jet Size and Identification Number	Application
C1AZ-9533-D	56	0 to 5,000 ft. Std. Trans.
C1AE-9533-A	54	5,000 to 10,000 ft. Std. Trans.
C1AZ-9533-L	52	10,000 to 15,000 ft. Std. Trans.
C1AE-9533-B	55	0 to 5,000 ft. Auto. Trans.
C1AZ-9533-H	53	5,000 to 10,000 ft. Auto. Trans.
C1AZ-9533-M	51	10,000 to 15,000 ft. Auto. Trans.



Mechanism

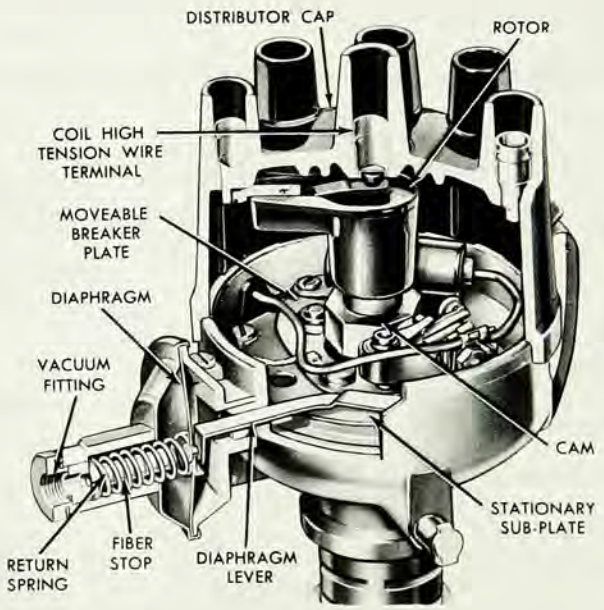


Figure 2—Vacuum Advance Mechanism

14 INCREASED ENGINE IDLE SPEED, 1963—144-170 CID Passenger Car Engines with Automatic Transmissions

In order to maintain a smoother and more stable idle, it is recommended that the idle speed be increased on the 1963 144-170 passenger car engines with automatic transmissions.

The specifications for engine idle speed were revised early in 1963 as shown below:

144-170 CID Engine	Automatic Transmission	500-525 RPM (was 475-500)

15 HYDRAULIC TAPPET NOISE—DIAGNOSIS AND TESTING—All Car Lines

Whenever hydraulic tappet noise is encountered and a problem of engine oil aeration is suspected, the following diagnosis procedure is recommended. It may save some time by eliminating engine tear-down for inspection:

1. Check the engine oil for proper level and correct as required. Too high a level may cause aeration by crankshaft splash. Also check the dipstick to assure the correct part is being used.

2. Remove engine oil pressure sending unit, and insert a petcock type valve that will permit a ¼ to ⅜ inch hose to be attached. Use a sufficient length of hose, so that the oil may be returned back into the oil fill tube. Transparent tubing is desired. Close this valve.

3. Operate the engine at approximately 1200 RPM until "normal" engine temperature is indicated.

4. Bring down engine speed to approximately 500 RPM and open petcock *slightly* to permit a steady oil discharge and observe for air bubbles.

5. Increase engine speed to approximately 1000 RPM and recheck for air bubbles. To facilitate observation, direct the oil flow over a white card or through transparent tubing.

NOTE: The engine should not be operated at excessive speeds or for extended periods with the above oil bleed.

If evidence of aeration is present, the engine oil pan should be removed and the pump and intake system closely inspected. The difficulty may [illegible]ther end of the pick-up tube [illegible]

16 NEW CYLINDER HEAD GASKET, HEAD BOLT WASHERS AND HEAD BOLT SPECIFICATIONS—1958 Through 1963 Truck—401, 477, 534 Engines

On complaints of abnormal coolant loss in super duty engines, it is imperative that repairs be made immediately. Investigations have shown that in some instances repairs have been delayed until major damage or complete engine replacement is required.

The new rubber-asbestos composition head gasket (Ford Part No. C3TZ-6051-F) should be used for all service replacements. Along with the composition gasket, it is mandatory that the new flat washers (Ford Part No. 378682-S) be used under the cylinder head bolts.

The new washers replace the earlier concave type.

Prior to installing the new gaskets it is recommended that the cylinder head bolt holes in the block be cleaned, using a bottoming tap, and then blown out with compressed air. This will prevent false torque reading on the cylinder head bolts due to accumulation of varnish and foreign material in block holes. Cylinder head bolt threads should also be cleaned and oiled. Gasket sealer is not used with the composition-type gasket.

17 SURGING OR HESITATION—1963 Econoline with 144 or 170 Engine

Vehicle surging or hesitation at part throttle steady speed or wide open throttle operation, caused by an excessively lean fuel mixture may be encountered on 1963 Econolines with both the 144 and 170 engines. Design specifications for the carburetor favor the lean side for fuel economy but under certain operating conditions may affect smooth engine operation.

The carburetor can be modified to correct the lean mixture and surging problem by installing a main metering jet one number size larger and by changing the power valve timing to open sooner (at less throttle opening).

The power valve timing change can be accomplished by installing four additional calibrating shims (Ford Part No. 375910-S) on the power valve rod, see Figure 1. Under no condition should the total number of shims exceed 8, as fuel economy will be adversely affected. If more than 4 shims exist on the power valve rod as installed in production, then fewer additional shims should be used so that the total amounts to only 8 shims.

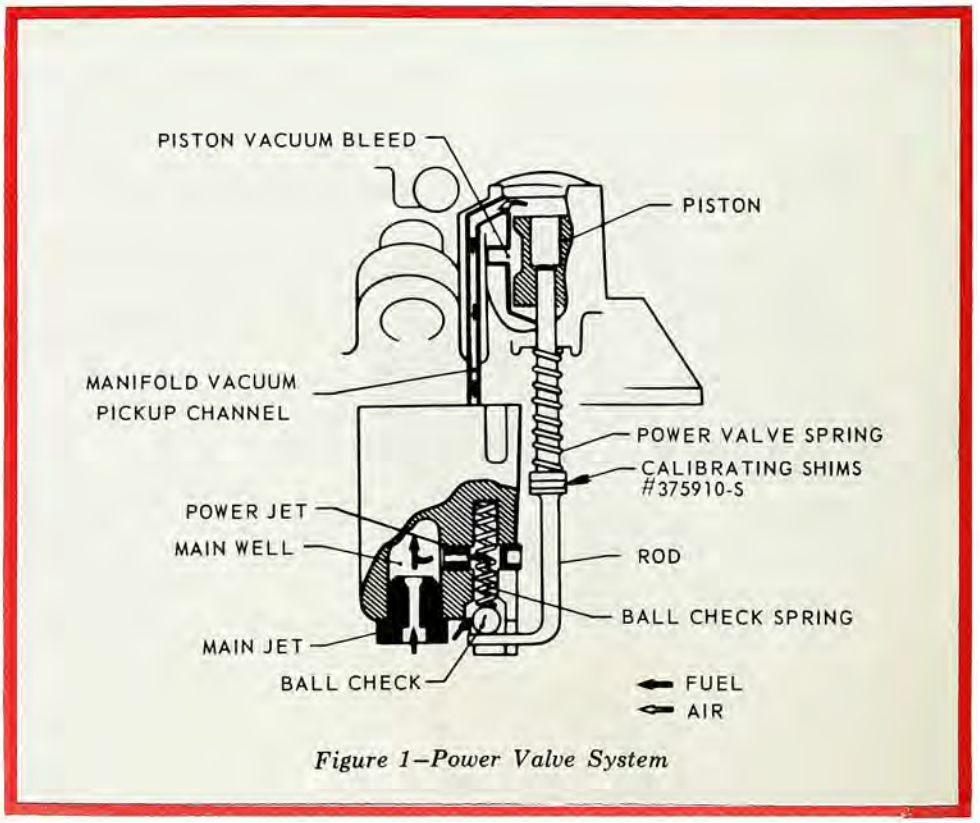


Figure 1—Power Valve System

18 CLUTCH SNAP RING FAILURE —All Fordomatic Two-Speed Transmissions

Clutch plate failures on Fordomatic two-speed transmissions can be caused by failure of the snap ring which retains clutch pack and sun gear in the clutch drum. See Figure 1. This snap ring may have lost its tension due to the influence of high temperature, and may come free from the retaining groove in the clutch drum. This allows the forward sun gear to move out of the drum with a resultant loss of compression and slippage of the clutch pack upon piston application.

Transmissions built after July, 1963, have snap rings which are not subject to this tension loss.

On transmissions built before August, 1963, which encounter clutch failure, the snap ring existing in the assembly should not be reused. *A new snap ring (Ford Part No. B9A-77523-A) should always be installed.* Furthermore, subsequent failure of the clutch pack because of this snap ring can be prevented by making it a practice to *replace this snap ring whenever the transmission is disassembled for any internal repairs.*

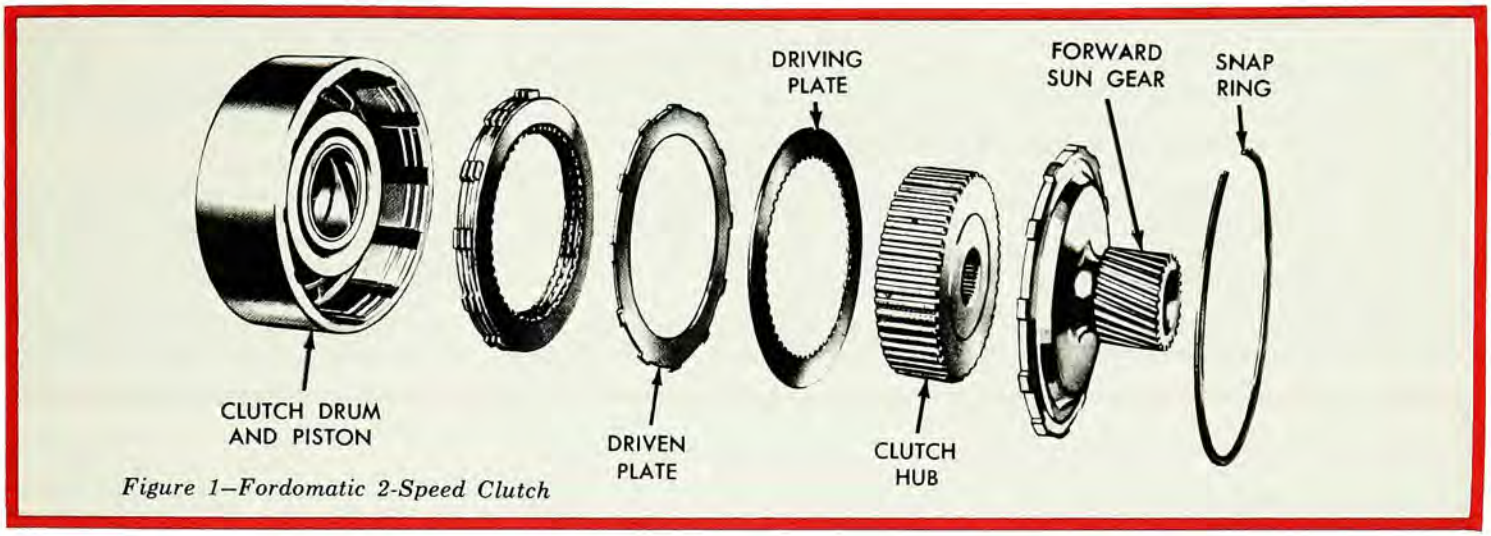


Figure 1—Fordomatic 2-Speed Clutch

19 CLUTCH SNAP RING FAILURE —All 1961 Through 1963 Cruise-O-Matic Transmissions for 223, 260, 289, 292, and 352 CID Engines

Clutch plate failures on Cruise-O-Matic transmissions can be caused by failures of one or all of the following snap rings: the input shaft to front clutch cylinder snap ring, the front clutch release spring to front clutch cylinder snap ring and the rear clutch pressure plate snap ring. See Figure 2. These snap rings may have lost their tension due to the influence of high temperature, and may come free from the retaining groove in the clutch cylinder and/or drum. This allows the clutch pressure plates (front or rear) and/or clutch release spring to move out of the cylinder or drum with a resultant loss of compression and slippage of the clutch pack upon piston application.

On transmissions built before mid-August, 1963, which encounter clutch failure, the snap rings existing in the assemblies should not be reused. *New snap rings should always be installed.* Furthermore, subsequent failure of the clutch packs because of these snap rings can be prevented by making it a practice to *replace these snap rings whenever the transmission is disassembled for any internal repairs.*

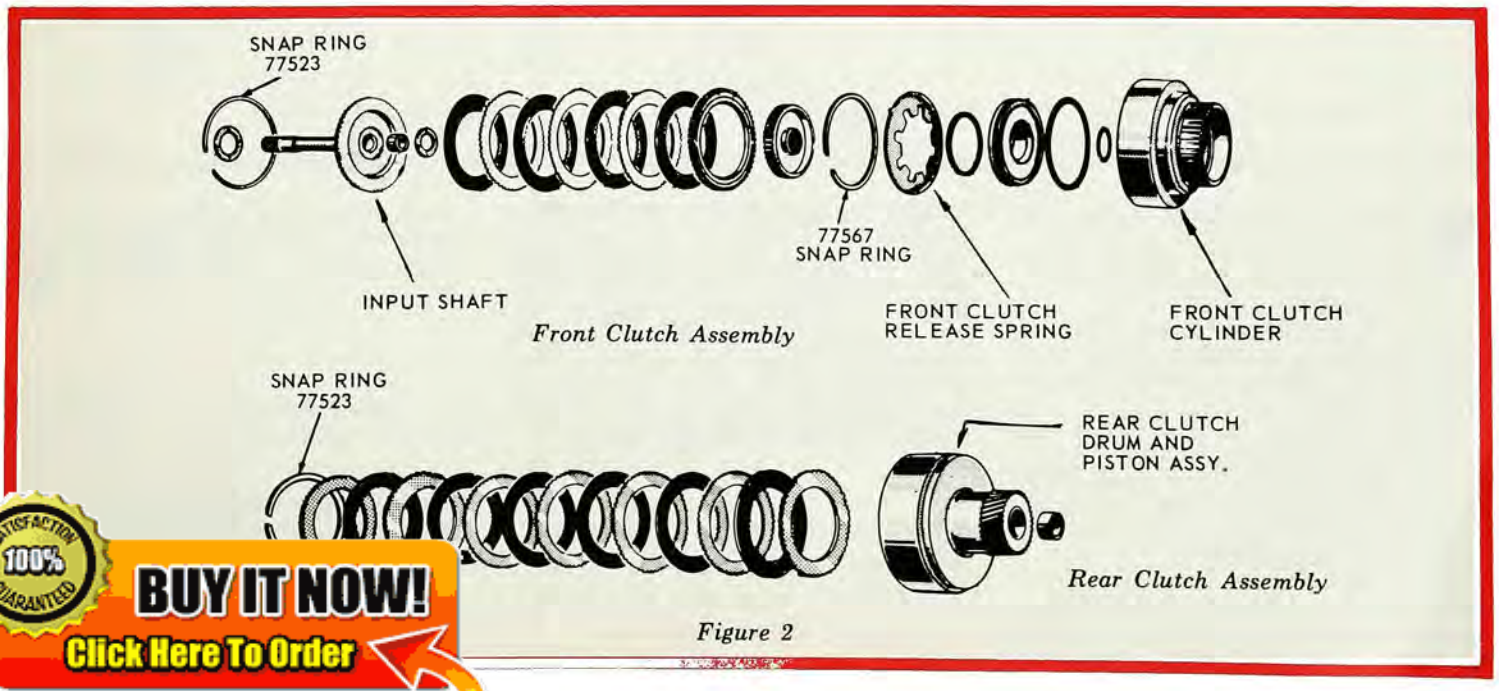


Figure 2

20 CARBURETOR PERCOLATION OR EXCESSIVE PRESSURE BUILD-UP IN FUEL LINE—

All 1954-62 Six & Eight Cylinder Passenger Cars Without Pressure Bleed Pumps

Hard hot engine starting is generally caused by fuel percolation in the carburetor main well, or excessively high pressure build-up in the fuel line between the pump and carburetor. The high pressure build-up results from the hot soak period. The percolation is aggravated by the highly volatile fuel and the retention of pressure in the fuel line.

In the event that percolation takes place, fuel is discharged into the induction system causing the fuel level to drop, thereby permitting additional fuel to be forced into the fuel bowl by the residual pressure in the line. It can be seen that a full pump-stroke of fuel may be discharged into the intake manifold by this sequence of events.

In the event excessively high pressure is built up in the fuel line, the problem of hard hot starting is due to the inability of the fuel inlet system to withhold the abnormally high pressure and fuel is forced past the fuel inlet needle, thereby raising the fuel level and causing the carburetor to flood over into the induction system.

Thus, where normal carburetor adjustments do not alleviate the problem, the difficulty can be greatly minimized, and in most cases eliminated by incorporating a pressure leakdown bleed between the pressure and inlet side of the fuel pump. This will reduce the amount of available fuel that can be forced into the carburetor after engine shut down. It has been determined that the bleed hole must be a minimum size—.0135" in diameter, a number 80 drill.

On A/C type fuel pumps the bleed hole can be drilled in the wall directly over the inlet valve cavity. See Fig. 1.

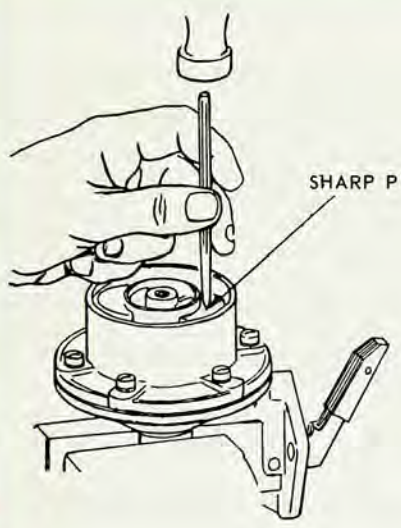
On Carter design fuel pumps, the bleed hole can be drilled into the fuel outlet passage wall, located on the low pressure side of the valve body. See Figure 2.

On some Carter models it may be necessary to drill the bleed hole in the web, on the pulsator side of the valve body, which separates the inlet and pressure cavities.

Specific location of the bleed hole is not critical as long as it is located between the inlet and pressure side of the pump. The diameter of the bleed hole is very critical however, and under no circumstances should a larger hole than specified be drilled.

When this problem is encountered, it is suggested that this pressure relief bleed-hole be incorporated in the fuel pump to minimize hard hot engine starting, as previously described.

This bleed hole is incorporated in the current production fuel pumps in all vehicles encountering this problem.



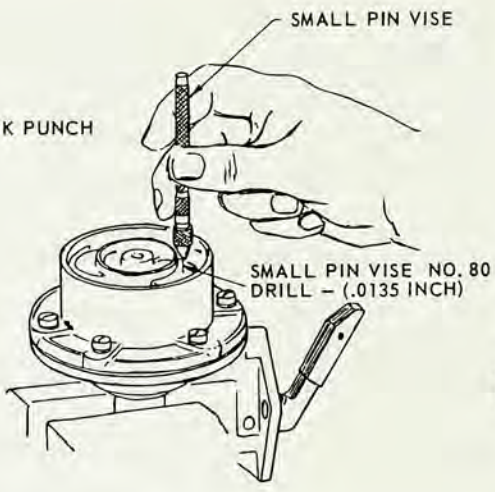


Figure 1–Bleed Hole–A/C Type Fuel Pump

Figure 2–Carter Pump

21 SPARK PLUG FLASHOVER DURING COMPRESSION TEST ON SPARK PLUG TESTERS

Spark plug flashover is the electrical sparking from the spark plug terminal down the insulator to the ground on the metal shell.

This condition in itself does not indicate a defective spark plug. In fact it indicates that the plug insulator is in [illegible] condition in that it has no [illegible]pin hole punctures that could [illegible]

affected by atmospheric and humidity conditions. Therefore, to avoid the possibility of encountering this condition of flashover when testing spark plugs in a compression tester, the tester can be fitted with an ignition cable boot. A 6 to 8 inch section of wire core ignition cable with a 90° molded boot connected to the clip on the tester should provide a suitable adapter.

22 SPARK PLUG REPLACEMENT— 1962 & 1963 Fairlane with 221 and 260 Cubic Inch Eight Cylinder Engines

The following guide is recommended when spark plug replacement becomes necessary on 221 or 260 cubic inch eight cylinder engines in the subject unit.

Type of Operation Condition	Ford Part No. Recommended Spark Plug
Normal and/or Severe Service	B8A-12405-A (BF 42)
Light Service—Excessive Idling—Stop and Go City Driving	B7A-12405-B (BF 82)

23 DISTRIBUTOR TESTING OF TRANSISTOR IGNITION—427 High Performance and Super Duty Truck Engines—1963

One of the desirable features of Transistor Ignition is the absence of pitting or ignition contact-point contamination. This is possible because of the low current and voltage requirements of the system. However, when checking the transistor ignition distributor on a test machine, the conventional system hook-up may cause point contamination.

The extent of this contamination is dependent upon the amount of time the distributor is run in the test machine. Extended testing will cause a definite amount of pitting. Therefore, it is recommended following such a test, that a point contact cleaner or solvent be used to remove any oxidation that is present. These cleaners are available in any radio supply store.

Since there is no condenser in the transistor ignition distributor, it will be necessary to incorporate one in the circuit when using a distributor test machine.

Figure 1 illustrates one manner in which this may be accomplished. Any of the current Ford distributor condensers can be used, since both car and truck have the same capacity. This is 0.21 to 0.25 microfarads.

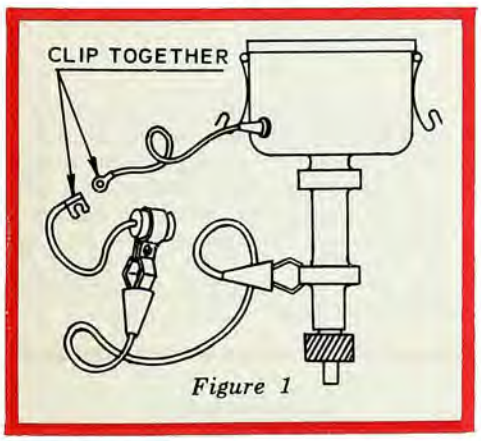


Figure 1

24 SERVICE REPLACEMENT RADIO SPEAKERS—Ford Cars and Trucks

Separate radio speakers are now available to service Ford cars and trucks as follows:

25 INSTRUMENT PANEL GAUGE READINGS—All 1963 Vehicles with AM-FM Radio

All vehicles having combination AM-FM radios are equipped with a radio suppression choke that connects to the ignition side (input) of the constant voltage (C.V.) regulator. However, the terminal of the suppression choke is such that it can be installed on the gauge side (output), resulting in low gauge readings.

Before making gauge tests and/or replacements to the fuel, oil pressure, and temperatures systems on vehicles equipped with AM-FM radios, check the radio suppression choke to be sure it is connected to the ignition side (input) of the C.V. regulator. See Fig. 2.

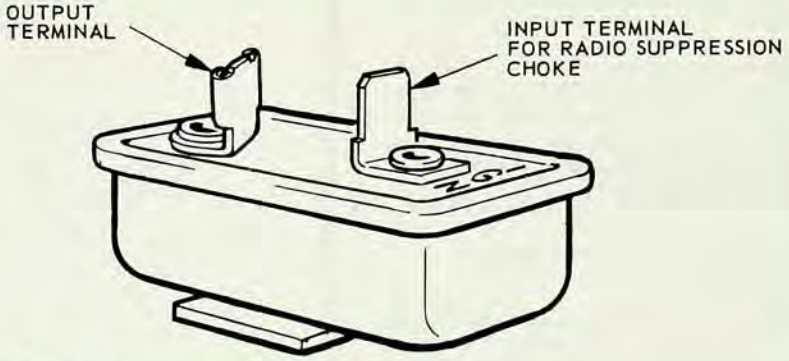


Figure 2 C.V. REGULATOR

26 RADIO CONTROL BREAKAGE—TONE, VOLUME, ON-OFF SWITCHES—All 1963 Vehicles

Examination of samples of the above knobs indicates that many failures are due primarily to damage. The damage and resultant failures are attributed to the neglect of the mechanic in removing the broken control knob pin from the control assembly prior to installing a new control knob.

The broken control knob pin can easily be removed from the control cavity by bending a paper clip to form a small hook on one end. Insert the hooked end into the center of the broken pin and pull outward to remove. See Figure 3.

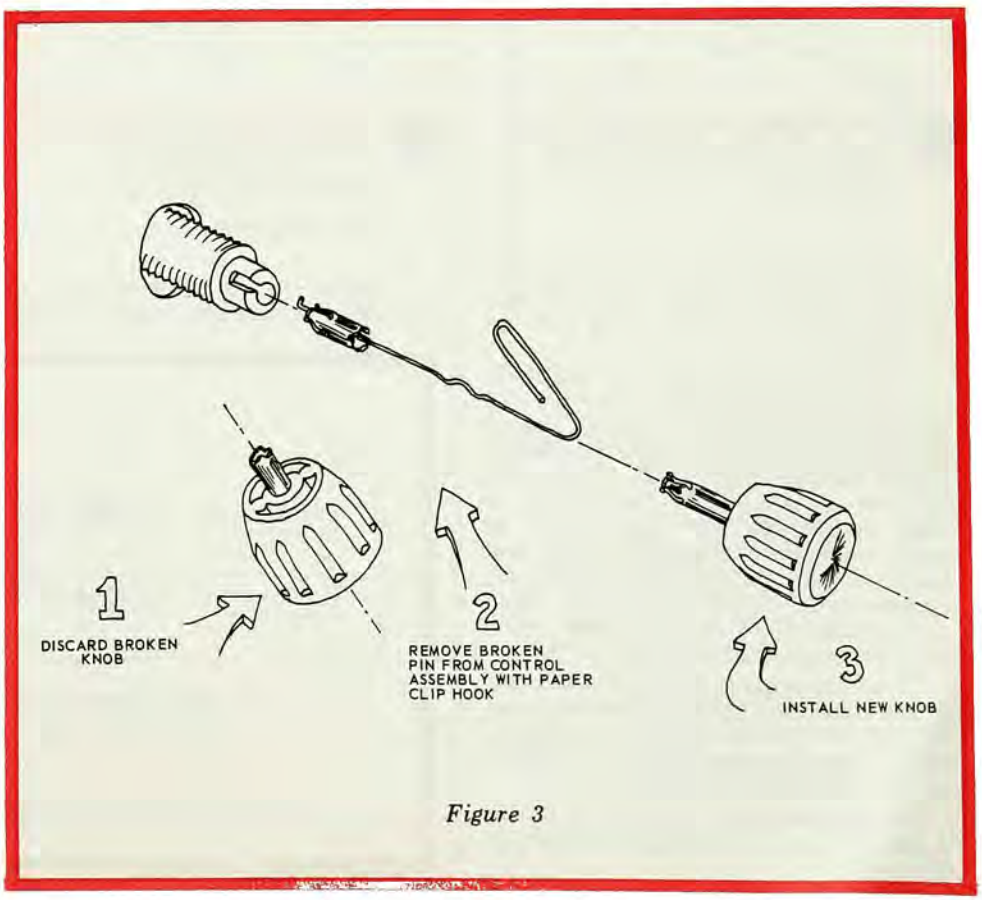


Figure 3

27 LOOSE TACHOMETER HEAD —1963 Falcon Sprint

Loose tachometer heads and mounting plates have been encountered on 1963 Falcon Sprints built prior to May 1, 1963. The loose heads are caused by loss of torque of the adjusting screw and are usually found on vehicles without a crash pad. This can be corrected by the addition of one #8 tooth lockwasher as shown in Figure 1.

A loose mounting plate on a vehicle with a crash pad is caused by the compressibility of the crash pad material. This has been corrected by use of a spacer that will give solid support to the mounting plate.

Vehicle without crash pad can be corrected by:

Adding one #8 tooth lockwasher to the tachometer mounting bracket screw as in Figure 1. Ford Part Number 34902-S7 (internal) or 34951-S (external) countersunk lockwasher will suffice.

Vehicle with crash pad can be corrected as follows:

1. Remove tachometer and mounting bracket.

2. Cut a ¼" length of ⅜" O.D. copper tubing to be used as a spacer at rear mounting hole.

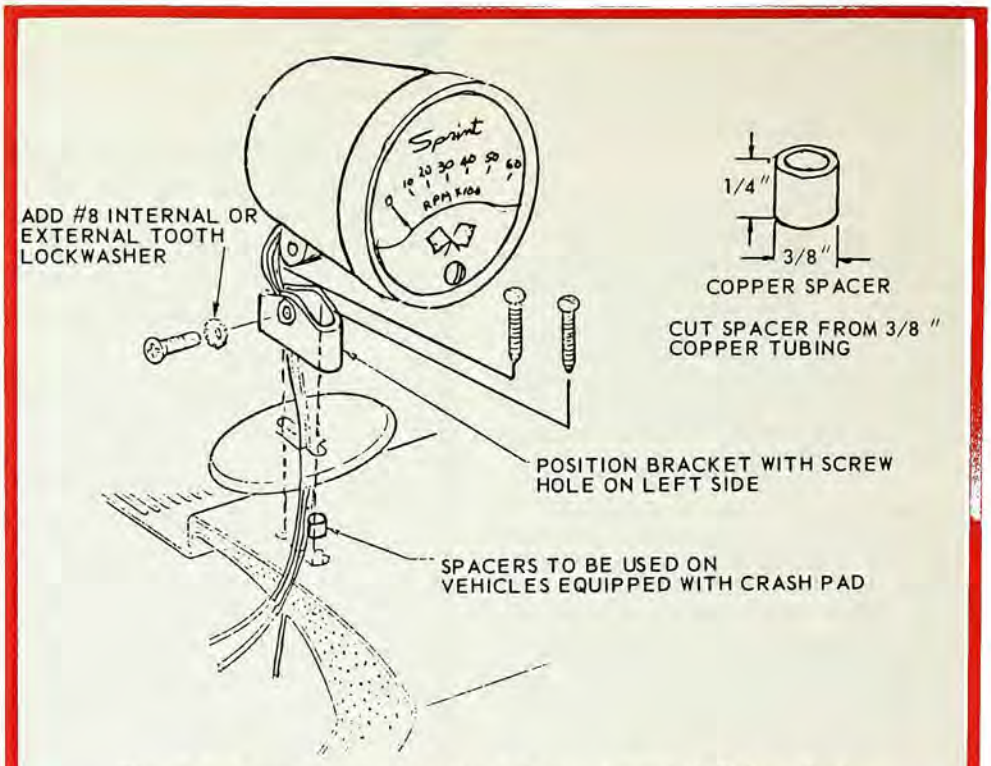


Figure 1–Loose Tachometer Head Correction–1963 Falcon Sprint

3. Cut out crash pad vinyl and foam around rear instrument panel hole to permit spacer to seat onto instrument panel metal.

4. Position mounting bracket so retaining screw can be installed from the left-hand side. Align spacer to rear mounting hole (hole furthest from windshield) and install bracket.

5. Attach tachometer head to mounting bracket using a #8 tooth lockwasher as outlined for vehicles without crash pad. The #8-32 x ½ flathead screw that holds tachometer head to bracket must be installed from left-hand side.

28 TACHOMETER INSTALLATION ON STANDARD IGNITION ENGINES

The Instruction Sheet (I.S. 1005) included with early C3RZ-17A326-A and B Rotunda Tachometer Kits may be misleading.

To operate correctly, the Rotunda tachometer must be connected in series with the ignition circuit. This is accomplished by disconnecting the ignition resistor wire (pink) from the ignition switch. The tachometer is then connected into the circuit in series (red wire to ignition switch and black wire to the free end of the pink resistor wire). *The tachometer black wire should NOT be connected to the distributor as indicated in I.S. 1005.*

The blue wire from the tachometer illuminating bulb feed wire and connected into the instru-

29 TACHOMETER APPLICATION TO TRANSISTORIZED IGNITION SYSTEM— All Vehicles

Failure of a tachometer can occur on vehicles equipped with a transistorized ignition system because of the higher current draw of these systems. This is true of all transistor systems.

To prevent these failures, a shunt circuit should be installed across the tachometer leads as shown in Figure 2. This shunt can be fabricated from 10" of Ford Part No. COLF-12250-A ignition resistor (pink) wire.

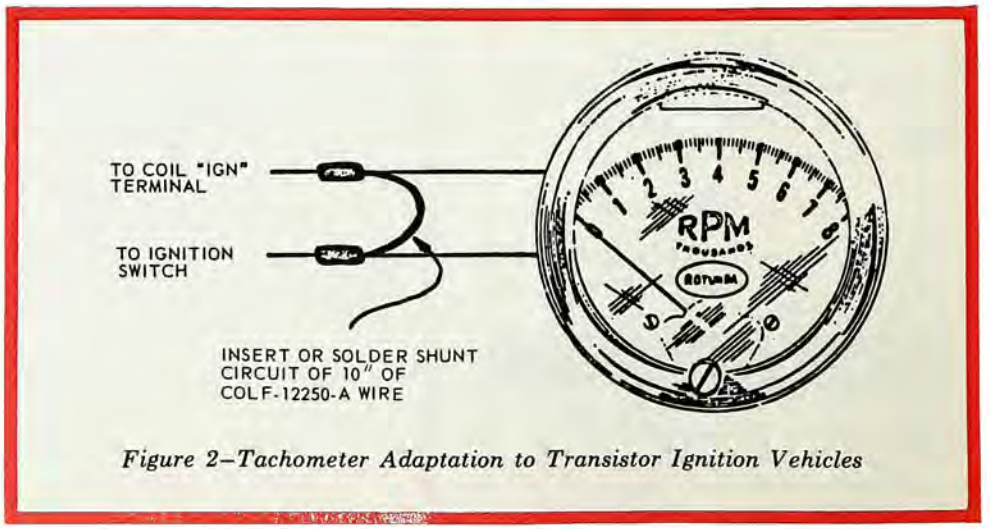


Figure 2–Tachometer Adaptation to Transistor Ignition Vehicles

30 TURN SIGNAL SWITCH NOT CANCELLING— 1963 Ford with Automatic Transmission

Problems with turn signal switches not cancelling and/or having high operating effort may be due to the turn signal lever binding on the steering column tube and pin flange assembly.

Where this condition is encountered, remove the turn signal lever. Insert a piece of cloth in the turn signal slot. Using a fine mill file, remove the shaded area shown in Figure 1. Reinstall the turn signal lever handle and check the turn signal operation. If the switch still does not cancel properly, replace it. Use switch, Ford Part No. C3AZ-13341-C for fixed steering columns and C3AZ-13341-D for moveable steering columns.

31 SEAT BELTS (METAL TO METAL TYPE)— Proper Threading Through Buckle or Hook Assembly— 1963 Vehicles

Proper threading of the seat belt through the buckle and/or hook is essential for providing positive tension resistance and proper holding capacity.

Figures 2 and 3 are provided to illustrate proper threading of the belts. Be sure to follow them.

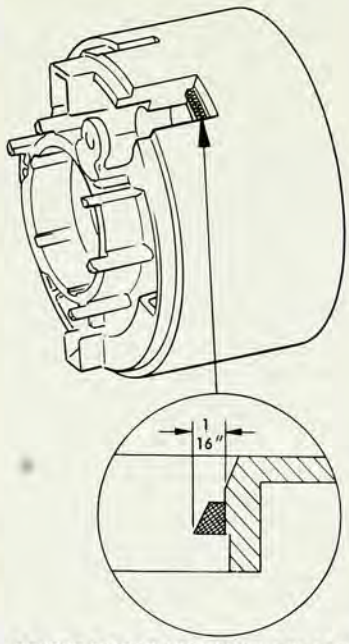


Fig. 1—Turn Signal Operation— 1963 Ford Galaxie with Automatic Transmission

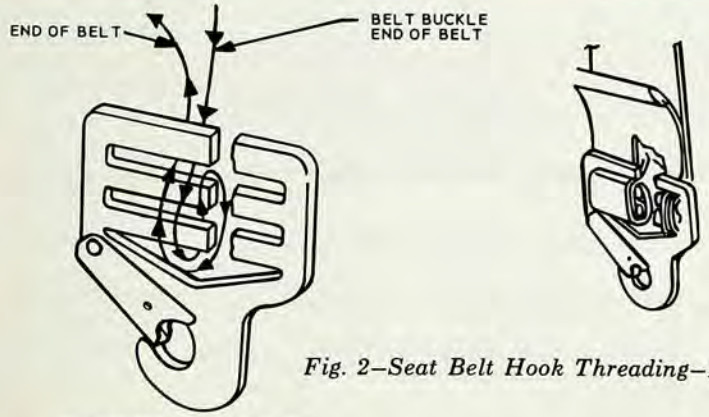
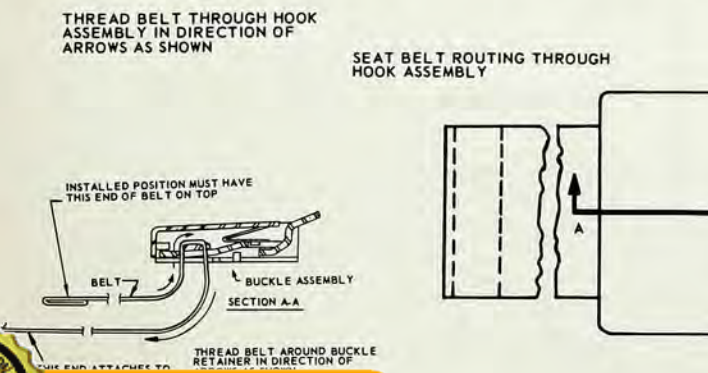


Fig. 2—Seat Belt Hook Threading—1963 Vehicles



Belt Buckle Threading—1963 Vehicles

32 FUEL LINE VIBRATION (FUEL PUMP TO CARBURETOR)— 1963 221, 260 and 289 C.I.D. V-8 Engines

Fuel line vibration and resultant failure of the line between the fuel pump and the carburetor can occur on vehicles equipped with the subject engines; particularly when operating on rough surfaced roads. For this reason, a fuel line bracket was used in late 1963 production and has been made available for correcting such failures and reducing fuel line vibration.

The following pieces are required for this installation:

Qty. Reqd.	Ford Part No.	Description
1	C30Z-9180-A	Bracket Assy.
1	354342-S8	Clip—Fuel Line to Bracket
1	370003-S8	Screw—10-32 x .69 Pan Head Locking

The bracket is to be installed on the water pump upper retaining bolt as shown in Fig. 4.

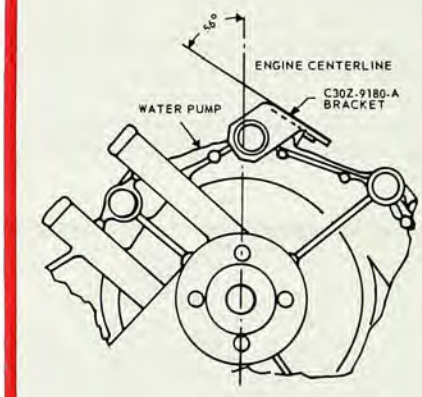


Fig. 4—Fuel Line Retaining Bracket Installation

ROTUNDA

FoMoCo GENUINE PARTS

33 IMPROVED AUTOMATIC CHOKE OPERATION AND FUEL ECONOMY ON SHORT TRIP STOP AND GO TYPE DRIVING—221, 260, 352, 390 C.I.D. Engines

Clamping the heater hose to the choke housing will improve the operation of the automatic choke system on these eight cylinder engines. The hot water in the heater hose is used to provide a source of continuing heat to the thermostatic choke spring and thus prevents excessive choking when a warm engine is restarted. Fuel economy will also be improved especially during short trip stop and go type of driving. The hot starting characteristics will also be improved with this device.

All 289 CID engines have the automatic-choke, heat retention system. This feature was incorporated in 1964 production on the 260, 352 and 390 CID engines (Refer to Fig. 1).

Early production cars that do not incorporate this desirable feature can be modified with the following procedure:

All Engines (Refer to Fig. 2)

1. Remove the carburetor air cleaner assembly.

NOTE: Vehicles equipped with the fourteen or sixteen inch air cleaner will require additional modification for heater hose clearance. Nineteen inch air cleaners do not require modification. (See Fig. 6).

2. Remove the choke cover retaining screws and install the new adaptor screws, Ford Part No. C3AZ-9B874-A.

NOTE: Removing one screw and installing the adaptor screw, progressively, will make installation quick and easy without disturbing the choke setting.

221 CID and 260 CID Engines (Fairlane and Falcon) (Refer to Fig. 3).

1. Remove the choke air shield.
2. Disconnect the choke heat tube and the distributor vacuum line at the carburetor.
3. Reroute the heater inlet hose next to the choke cover.
4. Position the Clamp, Ford Part No. C3AZ-18572-A over the heater hose and choke cover. Install the clamp retaining screws, Ford Part No. 31061-S.
5. Reinstall the distributor vacuum line, choke heat tube and the choke air shield to the carburetor.

352 CID and 390 CID Engines Except Thunderbird (Refer to Fig. 4).

Due to the water-warmed carburetor spacer used on these engines, the heater return hose is used to supply the additional choke heat.

1. Remove and discard the heater outlet hose bracket from the fender shield.
2. Reroute the heater return hose next to the choke cover.
3. Position the clamp (Ford Part No. C3AZ-18572-A) over the heater hose and choke cover. Install the clamp retaining screws (31061-S).

390 CID Engine (Thunderbird) (Refer to Fig. 5).

A thermostatic valve controls the coolant flow in the Thunderbird heater system. Therefore, new hose lengths and routing will be required to by-pass the valve and provide an uninterrupted flow of heated coolant for proper choke operation.

1. Drain radiator coolant.
2. Remove and discard the carburetor heat spacer outlet hose.
3. Remove and discard the heater return hose. Retain the "Y" adaptor.
4. Cut a 7 inch length of ¾ dia. heater hose and install one end to outlet end of the "Y" adaptor and the other end to the water pump fitting.
5. Cut a 34 inch length of ¾ dia. heater hose and install one end to the inlet end of the "Y" adaptor. Route the hose through the fender bracket to the heater core return outlet. Install the hose to the outlet.
6. Cut a 40 inch length of ⅝ dia. heater hose and install one end to the "Y" adaptor near the water pump. Route the hose over the spark plug wires, choke exhaust heat line and heater vacuum control line and to the carburetor heat spacer return outlet. Install the hose to the outlet.
7. Position the hose to the choke cover and the hose clamp (Ford Part No. C3AZ-18572-A) over the hose and cover. Install the clamp retaining screws.
8. Band the three hoses together for support.
9. Fill radiator with coolant and check all hose connections for leaks.
10. Install air cleaner.

Air Cleaner—Fourteen and Sixteen Inch Diameter (Refer to Fig. 6).

1. Mark a line ¼ inch from the edge of the choke relief area. Blend the line into the corners of the relief.
2. Using the ball side of a "ball peen" hammer, indent the metal in the area previously marked off to provide the necessary clearance for the heater hose.

CAUTION: Be sure not to distort or deform the air cleaner element sealing surface.

3. Position the air cleaner body over the carburetor and check for clearance at the heater hose and for proper seating of the body to the carburetor. Install the air cleaner element, cover, and choke vacuum hose to complete the installation.

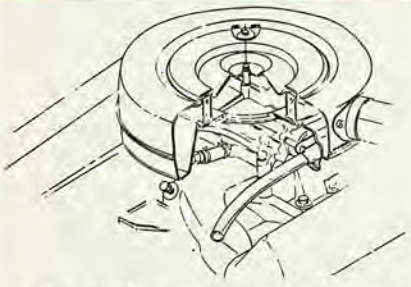


Fig. 1—Heater Hose To Automatic Choke Installation

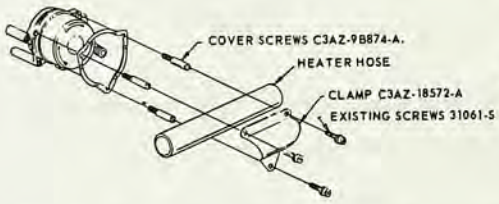


Fig. 2—Heater Hose Clamp Installation

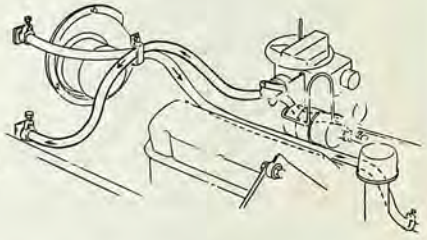
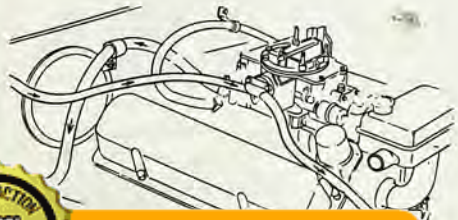


Fig. 3—221 And 260 C.I.D. Engine Heater Hose Routing



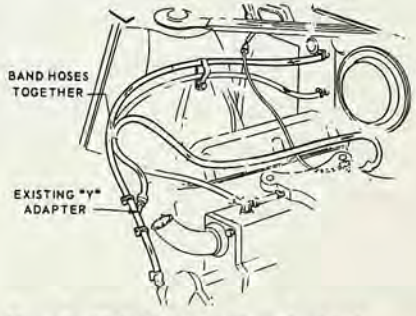


Fig. 5—390 C.I.D. Thunderbird Heater Hose Routing

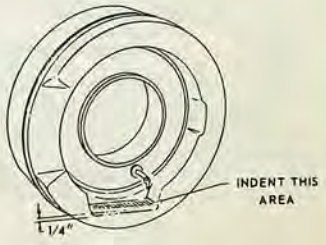


Fig. 6—Air Cleaner Modification