1963 Ford & Falcon, Mercury & Comet, Thunderbird V8 Cars

ENGINE IDENTIFICATION

Fifth figure of "Vehicle Warranty Number" on car patent plate identifies engine as follows:

Engine	Standard - CODE -	Low Compression
221"	L	3
260"	F	8
289" 2-Bbl	C	
4-Bbl	K	
352"	X	
390" 2-Bbl	Y	
4-Bbl Std	Z	9
4-Bbl Police	P	
Three 2-Bbl	M	
406" One 4-Bbl	B	
Three 2-Bbl	G	
427" One 4-Bbl	Q	
Two 4-Bbl	R	

COMPRESSION PRESSURE

Maximum variation between cylinders 10 lbs (all engines)

221", 260"	130-170 lbs
289", 352"	160-200 lbs
390" (10 5-1 Compr Ratio)	160-200 lbs
(10 8-1 Compr Ratio)	170-210 lbs
406", 427"	160-200 lbs

VACUUM READING

221"	16" at idle
260", 289", 352", 390"	18" at idle
406", 427"	13" at idle

TUNE-UP SPECIFICATIONS

VALVE TAPPET CLEARANCE

221", 260"	① Hydraulic
289" 2-Bbl	① Hydraulic
4-Bbl (Cold)	.024" Int & Exh
(Hot)	② .021" Int & Exh
352"	① Hydraulic
390" 2 & 4-Bbl Std, Three 2-Bbl	① Hydraulic
4-Bbl Police (Cold)	.028" Int & Exh
(Hot)	② .025" Int & Exh
406", 427" (Cold)	.028" Int & Exh
(Hot)	② .025" Int & Exh

① - *For operating range adjustment, see Engine Data*
② - After 30 minutes operation at 1200 RPM

SPARK PLUGS

Gap (All except 427")	.032-.036"
(427")	.028-.032"
Torque (All)	① 15-20 ft lbs

① - 20-30 ft lbs with new plug in new head

Engine	Spark Plug Type	Autolite No.
221", 260"	Normal and/or Severe Service	BF-42
	Light Service (Idling, Stop & Go)	BF-82
289" 2-Bbl		BF-42
4-Bbl		BF-32
352"		BF-42
390" 2 & 4-Bbl Std		BF-42
Three 2-Bbl		BF-32
4-Bbl Police		①
406", 427"		BF-32

① - BF-32 for sustained high speed; BF-42 for low speed, light load

DISTRIBUTOR

Engine	Point Gap	Cam Angle
221"	.014-.016"	26-28½°
260"	① .015-.018"	26-28½°
289" 2-Bbl	.014-.016"	26-28°
4-Bbl	.019-.021"	② 33-36°
352"	.014-.016"	26-28½°
390" All Carbs	.014-.016"	26-28½°
406"	.019-.021"	② 33-36°
427" Std Ignition	.019-.021"	② 33-36°
Transistor Ign	.019-.021"	③ 22-24°

① - .014-.016" on Falcon & Comet with Synchro-mesh
② - Both sets operating together (dual points)
③ - Single points (without condenser)

Breaker Arm Spring Tension

221", 260"	17-20 ozs
289" 2-Bbl	17-20 ozs
4-Bbl	25-28 ozs
352", 390" All Carbs	17-20 ozs
406"	27-32 ozs
427" Std Ignition	27-30 ozs
Transistor Ignition	21-24 ozs

Condenser Capacity

21-25 mfd for all engines *NOTE* - No condenser used on 427" with Transistor Ignition

TRANSISTOR IGNITION

See "Ford Motor Co Transistor Ignition" in Electrical Section

TUNE-UP NOTES

► *1963 VERY ROUGH OR NO IDLE CORRECTION:* May be caused by restricted idle fuel jet (check by removing air cleaner and covering idle air bleed with engine running - increase in RPM indicates restriction) To correct, thoroughly clean all passages with compressed air

► *1963 CARBURETOR MAIN METERING JET SIZE "TAILORING" TO CORRECT FOR RICHNESS OR LEANNESS:* A one size richer or leaner jet may be installed in place of the standard jet for better performance, depending on the particular condition *NOTE* - Make sure any factors contributing to a rich or lean condition have been eliminated before changing jets *See "Ford 2 & 4-Barrel Carburetor Jet Specification Table" in Carburetion Section*

► *1963 221" & 260" ENGINES HARD HOT START & ROUGH IDLE CORRECTION & PRODUCTION CHANGE:* May be caused by excess fuel vapors in carburetor bowl To correct, install new air horn, No C3OZ-9524-B, which has smaller internal diameter of vent tubes *NOTE* - This change made in production on December 14, 1962

► *1963 352" 2-BBL ENGINE CARBURETOR & DISTRIBUTOR MODIFICATIONS FOR IMPROVED ACCELERATION & FUEL ECONOMY:* 1) Distributor C2AF-12127-A used on 390" Engine used on later production on this engine Either install this distributor or modify existing distributor (C0AF-12127-D or E) as follows: Install Orange Primary Weight Spring, B8A-12192-B, Green Secondary Weight Spring, B7A-12191-B, Blue Vacuum Diaphragm Spring, C0TZ-12192-A, and Vacuum Advance Stop, C0TZ-12202-A. Adjust Mechanical and Vacuum Advance of modified distributor to specifications listed for C2AF-12127-A *(see "Distributor Advance Specifications")*

2) Replace carburetor Booster Venturi Assembly "FA" (C1AZ-9A523-C) with "F" Booster Venturi Assembly (C0AE-9A523-A) *NOTE - Carburetors with "F" booster in production identified by orange paint on code tag*

3) Install 1 size leaner main metering jet *NOTE - Carburetors with this jet installed in production have "B" on code tag after prefix and suffix*

► *1963 HARD HOT START & FUEL ECONOMY CORRECTION & PRODUCTION CHANGE:* May be caused by excessive choke because choke spring is sensitive to cooler engine compartment air To correct, clamp heater hose to choke housing cover using Clamp C3AZ-18572-A, and three Cover Screws C3AZ-9B874-A *NOTE - Heater hose clamped to choke housing on later cars*

► *1963 HESITATION ON ACCELERATION CORRECTION (EARLY CARS).* May be caused by improperly seated (staked) accelerator pump ball checks To correct, stake balls properly

► *HESITATION, STUMBLE, ROUGH ENGINE IDLE CORRECTION (CARS WITH FORD CARBS).* *See "Automatic Choke Torsion Spring Adjustment" in Ford 2 & 4-Barrel Carburetors in Carburetion Section.*

► *1958-63 HESITATION OR STUMBLE ON ACCELERATION CORRECTION (CARS WITH FORD CARBS):* Plastic accelerator pump cavity filler block, No C3OZ-9F565-A, may be installed in accelerator pump cavity if carburetor not already equipped This filler block used in some late production 1962 cars and in most all 1963 cars

► *1963 ENGINE STALLING CORRECTION:* May be caused by engine coolant tag being drawn into air cleaner opening To correct, shorten tag wire and relocate tag

► *TRANSISTOR IGNITION CAUTION: Special procedure for connecting dwell meter, "bumping" engine, and other operations must be followed to prevent damage to transistor ignition system ,See "Ford Motor Co. Transistor Ignition" in Electrical Section*