1973 Ford V8 Tune-Up

TUNE-UP

ENGINE IDENTIFICATION

Engine code letter is fourth digit of Official Serial Number or Warranty Number.

Application	Code
302"	G
360"	Y
390"	H
460"	J

MODEL IDENTIFICATION

RATING PLATE

F100/350 & E100/300 – Rating Plate is located on rear (lock) face of left front door.

P350 – Rating Plate is included in boxed items and affixed by the body manufacturer.

U100 – Rating Plate is located on inner panel of glove compartment door.

Cowl & Windshield Models – Rating Plate is located on right side of cowl top panel or on upper panel under hood.

F10YUA47195

First Digit – Truck Series Letter.
Second & Third Digits – Truck Series Number.
Fourth Digit – Engine Code.
Fifth Digit – Assembly Plant.
Remaining Digits – Consecutive Unit Number.

TUNE-UP NOTES

► *IDLE SPEED ADJUSTMENT CAUTION* – Procedures and specifications for idle speed adjustment must be followed exactly as outlined. *See "Hot (Slow) Idle RPM" under Tune-Up.*

NOTE – For other items affecting Tune-Up, see CARBURETION Section or EMISSION CONTROL Section.

COMPRESSION PRESSURE

Check compression with engine at normal operating temperature and at cranking speed, throttle valve wide open and spark plugs removed. Compression in lowest reading cylinder should be within 25% of highest reading cylinder.

VALVE TAPPET CLEARANCE

Application	① Clearance
302"	.090-.190"
360" & 390"	.119-.219"
460"	.075-.175"

① – Clearance specified is obtained at valve stem tip with tappet collapsed.

VALVE ARRANGEMENT

302" & 460"
I-E-I-E-I-E-I-E (right bank, front to rear).
E-I-E-I-E-I-E-I (left bank, front to rear).
360" & 390"
E-I-E-I-I-E-I-E (both banks, front to rear).

SPARK PLUGS

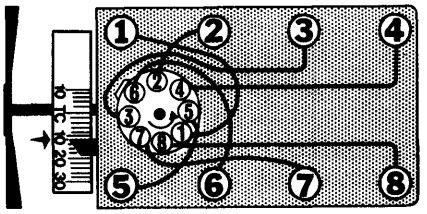
Gap ..... .034"
Torque ..... 15-20 ft. lbs.

Spark Plug Type

Application	Autolite No.
302", 360", 390"	BRF-42
460"	ARF-42

DISTRIBUTOR

Point Gap ..... .017"
Cam Angle ..... 24-30°
Breaker Arm Spring Tension ..... 17-21 ozs.
Condenser Capacity ..... .21-.25 mfd.



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FIRING ORDER & TIMING MARKS

IGNITION TIMING

With engine at normal operating temperature and vacuum advance line disconnected and plugged, adjust timing to specifications.

NOTE – Refer to engine compartment, Emission Control Tune-Up Decal for specifications.

HOT (SLOW) IDLE RPM

With engine at normal operating temperature, timing and dwell correctly set and parking brake engaged, install tachometer. Place automatic transmission in "D" or manual transmission in "N", turn headlights to high beam and turn air conditioning "OFF". With air cleaner installed, adjust idle speed to specifications. On engines equipped with idle stop solenoids, turn solenoid in or out of bracket to obtain specified RPM. Disconnect solenoid lead wire at bullet connector, then adjust carburetor stop screw to obtain an idle speed of 500 RPM with either transmission in "N". Reconnect solenoid lead wire and open throttle slightly by hand so that solenoid plunger may fully extend. Adjust idle mixture screws for smoothest idle within range of limiter caps.

NOTE – Refer to engine compartment, Emission Control Tune-Up Decal for specifications.

IDLE MIXTURE ADJUSTMENT

EXHAUST GAS ANALYZER PROCEDURE

Install a suitable, calibrated exhaust gas analyzer. With air cleaner installed, take an analyzer reading. Adjust idle mixture screws within range of limiter caps to specified CO%. Correct for any changes in engine idle RPM immediately as idle mixture screw is turned.

NOTE – Allow at least ten seconds following each mixture adjustment for analyzer to properly respond and stabilize.

TUNE-UP (Cont.)

Idle Limiter Cap – If proper CO% cannot be achieved within range of idle limiter caps, remove caps and adjust screws until proper CO% is obtained. Install new limiter caps in full counterclockwise position with tab of cap against stop on carburetor.

CO Reading

Application	Percentage of CO
All	0.2

COLD (FAST) IDLE RPM

With engine at normal operating temperature and hot (slow) idle correctly set, rotate fast idle cam until fast idle adjusting screw rests on kickdown step of fast idle cam. Start engine and turn fast idle screw to obtain specified RPM.

Fast Idle RPM

Application	Man. Trans.	Auto. Trans.
302" & 460"	1100	1500
360" & 390"	1200	1500

AUTOMATIC CHOKE ADJUSTMENT

Loosen choke cover retaining screws and turn choke cover in desired direction as indicated on cover to specified setting.

Application	Setting
302"	2 Rich
360" & 390"	Index
460"	N/A

GOVERNOR ADJUSTMENT

VELOCITY GOVERNOR

With engine at normal operating temperature, tachometer connected to engine and throttle at wide open position, compare RPM reading with operating range stamped on governor plate. If adjustment is required, remove governor seal. To increase RPM, turn cap counterclockwise and to decrease RPM turn cap clockwise. With adjustment complete, stop engine and seal cap.

VACUUM GOVERNOR

With engine at normal operating temperature, tachometer connected to engine and throttle at wide open position, compare RPM reading with correct operating range. If adjustment is required, stop engine and remove adjusting hole plug from controlling unit housing. Turn adjusting nut clockwise to increase speed and counterclockwise to decrease speed. One full turn of adjusting nut will change top speed approximately 150 RPM. Repeat procedure until correct top speed is obtained. Reinstall adjusting hole plug, new locking wire and lead seal.

FUEL PUMP PRESSURE & VOLUME

Pressure (At 500 RPM)	4.5-6.5 psi
Volume (At 500 RPM)	1 pt. in 30 seconds

EMISSION CONTROL

See appropriate article in EMISSION CONTROL Section.

IGNITION

DISTRIBUTOR

Application	① Ford Part No. Man. Trans.	Auto. Trans.
302"		
U100	D3BZ-B	D3UZ-E
F100	D3BF-DA	D3UF-GA
E100/200	D3BF-BA	D3UF-EA
E300	D3UF-JA	② D3UF-HA
360"		
F100	D3TF-UA	D3TF-PA
F250/350	D3TF-HA	D3TF-VA
390"		
F100	D3TF-EA	D3TF-XA
F250/350	D3TF-HA	D3TF-VA
460"		
F100	D3AF-GA	D3AF-GA
F250/350	D3TF-DA	D3TF-SA
P350	D3TF-DA	D3TF-SA

① – Basic number is 12127. Table gives prefix and suffix.
② – E300 Calif. equipped, D4UF-KA.

Other Data & Specifications – *See Tune-Up and Ford Distributors in ELECTRICAL Section.*

IGNITION COIL

Application	① Ford Part No.
Standard	B6A-B
Transistorized	C3TZ-A

① – Basic number is 12029. Table gives prefix and suffix.

Resistance	Ohms @ 75°F
Standard	
Primary	1.40-1.54
Secondary	7,600-8,800
Transistorized	
Primary	.226-.251
Secondary	4,900-5,680

CARBURETION

CARBURETORS

Ford Model 2100 2-Bbl.

Application	① Ford Part No. Man. Trans.	Auto. Trans.
302"		
U100	D3BF-EA	D3BF-BE
E100/200	D3UF-AD	D3UF-CD
E300	D3UF-DC	D3UF-FC
F100	N/A	D3TF-NA
360" & 390"		
F100	D3TF-DD	D3TF-MC
F250/350	D3TF-GC	D3TF-HC

Ford Model 4300 4-Bbl.

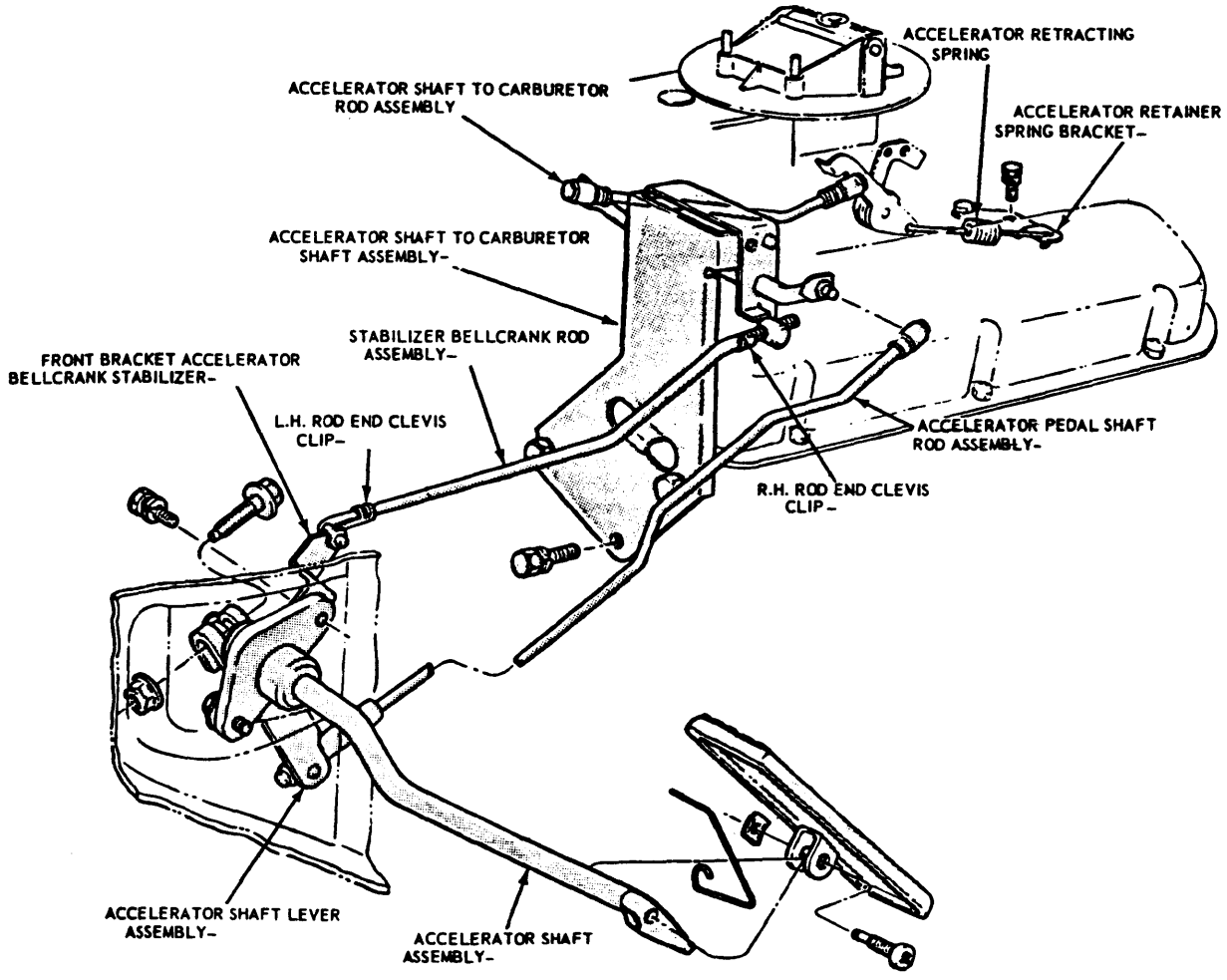
Application	① Ford Part No. Man. Trans.	Auto. Trans.
460"	D3PF-NA	D3TF-ZA, ZC

① — Basic number is 9510. Table gives prefix and suffix.

Other Data & Specifications — *See Tune-Up and Ford Carburetors in CARBURETION Section.*

ACCELERATOR LINKAGE ADJUSTMENT

E100/300 — Disconnect retaining clip and bellcrank stabilizer clevis from bellcrank assembly. Insert 3/16 inch diameter adjustment pins through adjustment holes in bellcrank assembly. Adjust bellcrank stabilizer clevis so that it fits freely in bore of bellcrank. Connect retaining clip and bellcrank stabilizer to bellcrank. *NOTE — Make sure that clip is positioned securely.* Remove adjustment pins. Depress accelerator pedal to wide open position and adjust control rod assembly until carburetor throttle lever just reaches wide open position. Shorten control rod ONE turn. Reinstall clips and tighten all nuts and bolts.



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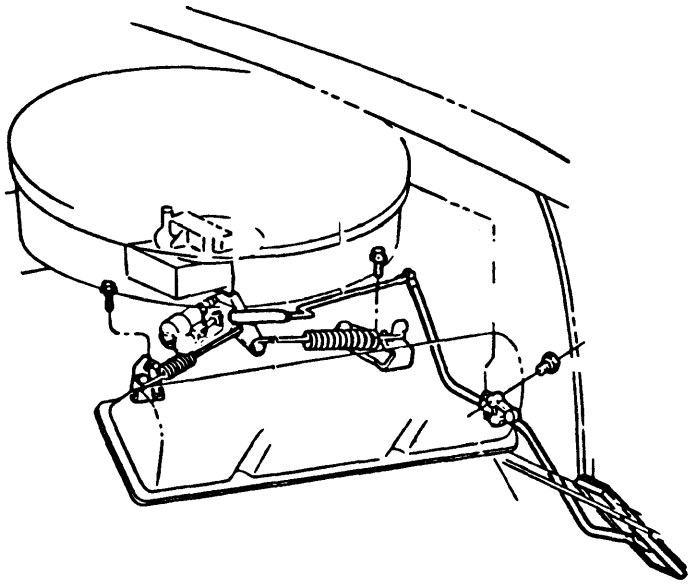
E100/300 ACCELERATOR LINKAGE

CARBURETION (Cont.)

F100/350, P350, U100 – Install accelerator rod to shaft assembly and depress accelerator pedal to floor. Rotate carburetor throttle lever to wide open position against stop and adjust accelerator control rod until forward end surface of rod just touches rear surface of throttle lever ball stud. Connect accelerator control rod to throttle lever ball stud.

DOWNSHIFT LINKAGE ADJUSTMENT

With accelerator linkage correctly adjusted, hold throttle lever in wide open position. Place a .060" feeler gauge between throttle lever and adjusting screw. Loosen adjusting screw lock nut and turn adjusting screw until downshift lever on transmission is against internal stop. Tighten adjusting screw lock nut.



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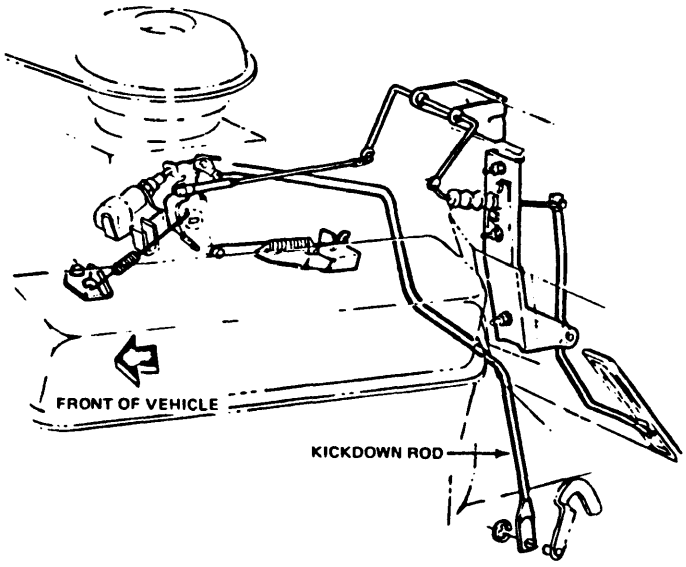
P, F100/350 ACCELERATOR LINKAGE



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U100 ACCELERATOR LINKAGE

ELECTRICAL

BATTERY

12 Volt – Negative Ground.

Filler Caps	Plates	Amps.
Yellow	54	45
Red	66	55
Red	66	70
Yellow	78	70

STARTER

Application	① Ford Part No.
302" (Man. Trans.)	C5TZ-D
302" (Auto. Trans.)	C2OZ-B
360" & 390"	C3OZ-C
460"	② C8VY-C

① – Basic number is 11002. Table gives prefix and suffix.
② – Before serial number R20,001. After R20,001, D3TZ-C.

Other Data & Specifications – *See Ford Starters in ELECTRICAL Section.*

ALTERNATOR

Application	I.D. Color (Amps.)	① Ford Part No.
All	Purple (38)	D2AZ-C
All	Orange (42)	D2AZ-C
All	Red (55)	D2AZ-D
E100/300	Green (61)	D2TZ-B

① – Basic number is 10346. Table gives prefix and suffix.

Other Data & Specifications – *See Ford Alternators in ELECTRICAL Section.*

ALTERNATOR REGULATOR

Application	Ford Part No.
All	D3TZ-10316-A

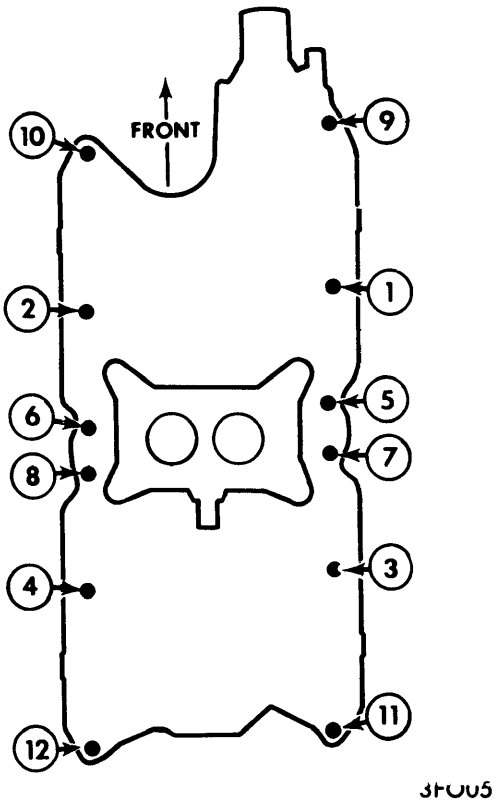
Other Data & Specifications – *See Ford Alternator Regulators in ELECTRICAL Section.*

ENGINE

INTAKE MANIFOLD TIGHTENING

Tighten intake manifold bolts in sequence shown to specifications.

Application	Torque (Ft. Lbs.)
302"	23-25
360" & 390"	40-45
460"	25-30



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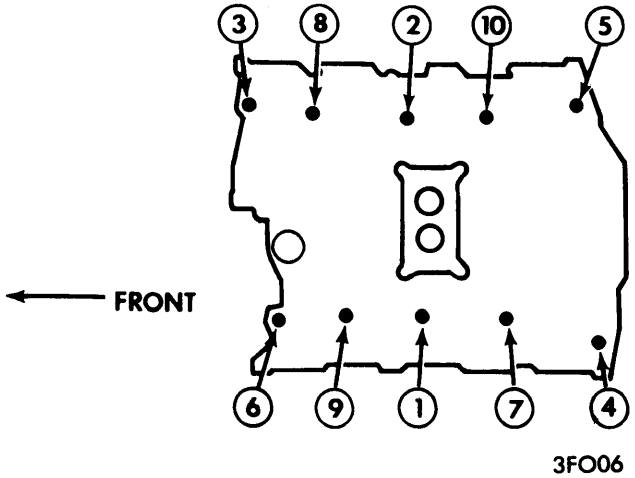
302" INTAKE MANIFOLD TIGHTENING SEQUENCE



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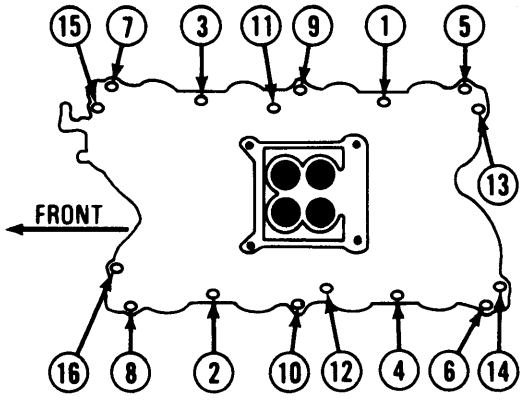
360" & 390"
INTAKE MANIFOLD TIGHTENING SEQUENCE



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460"
INTAKE MANIFOLD TIGHTENING SEQUENCE

BELT ADJUSTMENT

Tension (Lbs.) Using Strand Tension Gauge

Application	Used Belt ①	New Belt
¼" Wide	60	80
⅜ - ½" Wide	110	140

① — Belt run for 10 minutes or more is considered used.

COOLING CAPACITIES

Application	Quantity (Qts.)
U100	14.7
F100 (4 x 2)	
302" (Standard)	14.8
302" (Heavy Duty)	17.5
360" & 390" (Standard)	19.6
360" (Heavy Duty)	21.9
390" (Heavy Duty)	22.3
460" (Standard)	21.0
460" (Heavy Duty)	23.2
F250 (4 x 2)	
360" & 390" (Standard)	19.6
360" (Heavy Duty)	21.9
390" (Heavy Duty)	22.3
460" (Standard)	21.0
460" (Heavy Duty)	23.2
F100/250 (4 x 4)	
360" & 390" (Standard)	22.3
360" & 390" (Heavy Duty)	23.9
F, P350	
360" & 390" (Standard)	22.3
360" & 390" (Heavy Duty)	23.9
460"	21.0
460"	23.2
E100/300	
302" (Standard)	15.2
302" (Heavy Duty)	17.5

ENGINE (Cont.)

CAPACITIES (EXCEPT COOLING & FUEL)

Application	Quantity
Crankcase	
302", 360", 390"	① 6 qts.
460"	① 5 qts.
Drive Axles	②
Transfer Case	
F100	1.25 pts.
F250	4.5 pts.
U100	2.75 pts.
Automatic Transmission	
C-4	10.25 qts.
C-6	12.75 qts.
FMX-HD	11 qts.
Manual Transmission	
Ford 3.03	3.5 pts.
T-18B	6.5 pts.
T-89F	3.25 pts.
New Process 435	6.75 pts.

① — Includes 1 qt. for filter change.
② — Fill to bottom of filler plug hole.

FUEL TANK CAPACITIES

Application	Quantity (Gals.)
F100	
Standard	19.2
Optional	20.1
F250 (4 x 2)	
Standard (Federal)	20.5
Standard (California)	19.4
Optional (Federal)	24.0
Optional (California)	20.2
F250 (4 x 4)	
Federal	19.5
California	18.0
F350 (Cab Models)	
Federal	19.5
California	18.0
F350 (Cowl and Windshield Models)	
Federal	24.0
California	20.2
F350 (Super Camper Special)	
Federal	20.6
California	19.3
P350	
104" Wheelbase	17.0
122" Wheelbase (Federal)	30.0
122" Wheelbase (California)	23.5

FILTERS & CLEANERS

Filter or Cleaner	Service Interval (Miles)
Oil Filter	4,000
Air Filter (Oil Bath)	8,000
Air Filter (Dry Type)	12,000
Crankcase Breather	12,000
Fuel Filter	12,000
Emission Breather (In Air Cleaner)	8,000