TUNE-UP

ENGINE IDENTIFICATION

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

Application	Code
P-3500 242" 4-Cyl. Diesel	J

MODEL IDENTIFICATION

VEHICLE IDENTIFICATION & WARRANTY NUMBERS

Vehicle Identification Number is located on instrument panel close to windshield on passenger side. Truck Rating Plate is mounted on upper cowl panel in engine compartment.

P35JDA37000

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

Adjustment of injectors or internal adjustments of injection pump must be done in a properly equipped injector shop with a perfectly clean environment.

COMPRESSION PRESSURE

Remove injectors and install suitable pressure gauge. Compression should be 345-385 psi at sea level, with a maximum variation between cylinders of 10 psi.

VALVE TAPPET CLEARANCE

Application	Intake	Exhaust
242" (Hot)	.015"	.012"
242" (Cold)	.014-.018"	.010-.014"

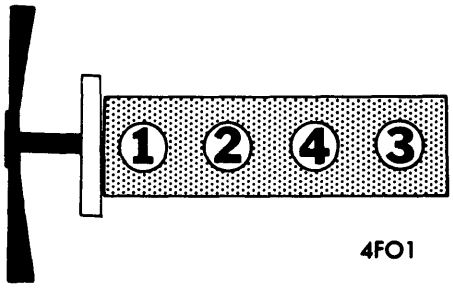
VALVE ARRANGEMENT

E-I-I-E-E-I-I-E (front to rear).

INJECTORS

Application	Type
242"	NL424

NOTE – Tighten injector mounting bolts to 15 ft. lbs.



FIRING ORDER 242" DIESEL (1-2-4-3)

INJECTION TIMING

1) Rotate engine until number one cylinder on compression stroke is 22° BTDC. Flywheel 22° mark will be aligned with notch in flywheel housing opening. A timing mark on rear face of camshaft gear will be visible in injection pump opening.

2) Remove plug in mounting flange of injection pump, and insert tool (C.9077). Rotate gear until spring loaded plunger drops into center punch mark in rear face of gear. Release plunger and turn gear ⅝" counterclockwise. Install new "O" ring to front face of injection pump.

3) Install pump and gear to engine, keeping stud in center slotted mounting hole. Turn pump until plunger re-engages with timing mark. Tighten attaching bolts and nut. Remove timing tool and reinstall plug.

IDLE RPM

With engine at normal operating temperature, adjust speed stop screw on governor housing back plate to 500-550 RPM. Tap accelerator pedal to ensure a consistent return to this setting.

MAXIMUM NO-LOAD SPEED

With engine at normal operating temperature, in neutral, depress accelerator pedal fully to hold governor control lever against maximum speed stop. Adjust stop to give a no-load speed of 3090 RPM. Tighten lock nut and seal adjusting screw.

Maximum No-Load RPM	3090
Maximum Full Load RPM	2800

BLEEDING FUEL SYSTEM

NOTE – If air has been allowed to enter fuel system for any reason, it will be necessary to bleed system to remove all air.

1) Check that all fuel line connections are tight and there is sufficient fuel in tank. Loosen two bleed screws on top of filter two or three turns and operate priming lever on fuel supply pump. Continue priming until a stream of fuel, free of bubbles issues from filter.

NOTE – If eccentric on injection pump is on maximum lift, it will render fuel supply pump priming inoperative. If this occurs, rotate engine until priming lever can be operated.

2) Tighten first inlet and then outlet bleed screws on filter as priming lever returns to its downward position.

3) Loosen bleed screws on injection pump body approximately two or three turns, and operate primer as before. When fuel free of air bubbles issues from bleed screws, tighten screw farthest from inlet connection first and then other bleed screw second. Wipe all excess fuel from filter and pump.

NOTE – Never lever injection pump plungers up or down to prime injection tubes or test injectors, as plunger arms may be seriously damaged.

FUEL PUMP PRESSURE & VOLUME

Pressure	2¾-4½ psi
Volume (at 1000 RPM)	1 qt. in 1¼ min.

ELECTRICAL

BATTERY

12 Volt – Negative Ground.

Application	Capacity (Amps)
Standard	45
Optional	55
Optional	70
Optional	80

ALTERNATOR

I.D. Plate	Amps.	① Ford Part No.
Orange	42	D0AZ-E
Red	55	D0AZ-F

① – Basic part number is 10346.

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

STARTER

Mfg.	① Ford Part No.
Delco-Remy	C6TZ-C

① – Basic part number is 11002.

Other Data & Specifications – *See Delco-Remy Starters in ELECTRICAL Section.*

ALTERNATOR REGULATOR

Application	① Ford Part No.
Standard	C3SZ-B
Transistorized (38 & 42 Amp. Alt.)	C6AZ-A

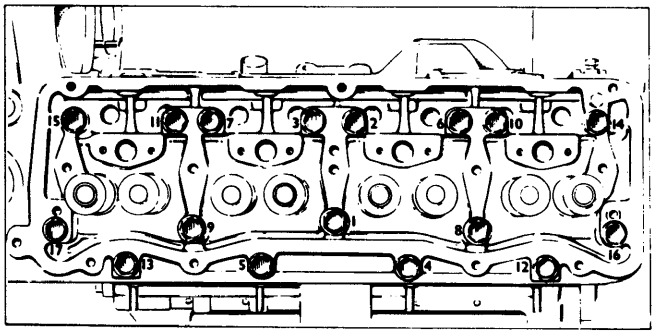
① – Basic part number is 10316.

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

ENGINE

CYLINDER HEAD TIGHTENING

Tighten cylinder head bolts to 110-115 ft. lbs. in order shown in illustration.



4FO2

CYLINDER HEAD TIGHTENING SEQUENCE

FILTERS & CLEANERS

Filter or Cleaner	Service Interval (Miles)
Oil Filter	Replace 6000
Air Cleaner (Oil Bath)	① Clean 6000
Crankcase Breather	① Clean 6000
Primary Fuel Filter	Drain 1000
Fuel Filter	Replace 12,000

① – More frequently under continuous stop and go or extremely dusty conditions.

BELT ADJUSTMENT

Tension (Lbs.) Using Strand Tension Gauge

Application	Lbs.
New	140
Used	① 110

① – Belt operated a minimum of ten minutes is considered used.

CAPACITIES

Application	Quantity
Crankcase	10 qts.
Fuel Tank	17 gals.
Rear Axle	6.5 pts.
Cooling System	① 17 qts.

① – 18 qts. with heater.