

TUNE-UP

ENGINE IDENTIFICATION

Engines can be identified by number stamped on block as follows: The 4 cylinder number is stamped on water pump boss at front of engine and the 6 cylinder number is stamped on machined pad on right side of crankcase adjacent to distributor.

MODEL IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

Vehicle identification number is stamped on metal plate located on left side of firewall in engine compartment (Universal Jeep and Jeepster) and on left door hinge pillar post (Wagoneer and Gladiator).

8105A1410001

- First & Second Digits** - Chassis Code.
- Third & Fourth Digits** - Body Style.
- Fifth Digit** - Special Model Code.
- Sixth Digit** - Drive Code: 1- LHD, 2- RHD.
- Seventh Digit** - Engine Code.
- Remaining Digits** - Sequence Built 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

With air cleaner removed and throttle and choke wide open, crank engine through at least four compression strokes. Compression pressure is satisfactory if lowest reading cylinder is more than 75% of highest reading cylinder.

Application	PSI
F4.....	120-130
232".....	145

VALVE TAPPET CLEARANCE

Application	Intake	Exhaust
F4 (Cold).....	.018"	.016"
232" (Hydraulic).....	Zero Lash.....	Zero Lash

VALVE ARRANGEMENT

F4 - Intake valves in head, exhaust valves in block.
232" - E-I-I-E-I-E-E-I-E-I-E.

SPARK PLUGS

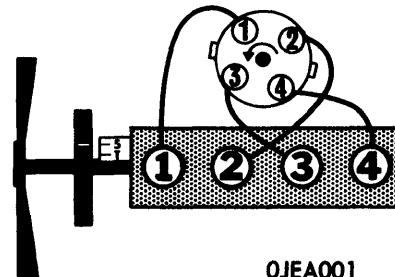
Gap	
F4.....	.030"
232".....	.035"
Torque	
F4.....	20-30 ft. lbs.
232".....	25-30 ft. lbs.

Spark Plug Type

Application	Champion No.
F4.....	J-8
232".....	N-14Y

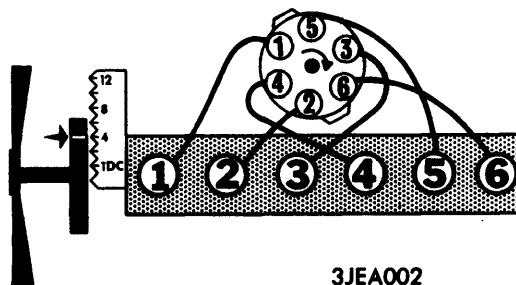
DISTRIBUTOR

Point Gap	
F4.....	.020"
232".....	.016"
Cam Angle	
F4.....	42°
232".....	31-34°
Breaker Arm Spring Tension	
F4.....	17-20 ozs.
232".....	17-21 ozs.
Condenser Capacity	
F4.....	.25-.28 mfd.
232".....	.18-.23 mfd.



OJEA001

FIRING ORDER & TIMING MARKS



3JEA002

FIRING ORDER & TIMING MARKS

IGNITION TIMING

Ignition timing is checked or adjusted with engine at normal operating temperature, distributor vacuum hose disconnected and plugged and engine at normal idle.

Application	Timing
F4.....	0° TDC
232".....	3° BTDC

TUNE-UP (Cont.)

HOT (SLOW) IDLE RPM

Idle speed is adjusted with transmission in Neutral, engine at normal operating temperature and choke valve fully open. Set idle speed to specified RPM. Starting from full rich stop position of idle mixture screw (screw turned counterclockwise so that limiter cap tab is against stop), turn mixture screw in for best lean idle setting. Recheck idle speed.

Application	Idle Speed (RPM)	RPM
F4.....	700-750
232".....	650-700

COLD (FAST) IDLE RPM

F4 — With choke wide open, lip on fast idle rod should contact boss on casting body. Adjust by bending choke connector rod at offset.

232" — With engine at normal operating temperature and throttle lever tang at index mark on fast idle cam, bend tang to obtain an engine speed of 1800 RPM.

DISTRIBUTOR

Application	Prestolite Part No.
F4.....	1AY-4401B

Application	Delco-Remy Part No.
232".....	1110481

Other Data & Specifications — See Tune-Up, Prestolite and Delco-Remy Distributors in ELECTRICAL Section.

CARBURETORS

Carter Model YF 1-Bbl.

Application	Carb. No.
F4.....	4941S

Carter Model RBS 1-Bbl.

Application	Carb. No.
232".....	4925S, 4926S

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

ACCELERATOR LINKAGE ADJUSTMENT

F4 — Loosen lock nuts and adjust length of accelerator cable so that carburetor throttle valve is wide open when accelerator pedal strikes floorboard.

AUTOMATIC CHOKE SETTING

232" (4926S Carb.) — With air cleaner removed, check that choke valve and rod move freely. Set one point rich.

FUEL PUMP PRESSURE & VOLUME

Pressure (At Cranking Speed)

F4.....	2½ - 3¼ psi
232".....	3½ - 5½ psi

Volume

F4 (Cranking Speed).....	½ pint in 20 strokes.
232" (At 600 RPM).....	1 pint in 30 seconds.

MANIFOLD HEAT CONTROL VALVE

Check valve for freedom of movement and lubricate with a suitable penetrating oil.

EMISSION CONTROL

See appropriate article in EMISSION CONTROL Section.

IGNITION

IGNITION COIL

Application	Prestolite Part No.
F4.....	200691

Application	Delco-Remy Part No.
232".....	1115033

Resistance	Ohms @ 75°F
Primary	
Prestolite Coil.....	3.9-4.2
Delco-Remy Coil.....	3.2-4.0
Secondary	
Prestolite Coil.....	9400-11700
Delco-Remy Coil.....	8000-20000

CARBURETION

232" — Adjust length of accelerator rod at threaded end so that carburetor throttle valve reaches wide open position when accelerator pedal is fully depressed and returns to curb idle position when pedal is released.

DASHPOT ADJUSTMENT

With throttle valve closed in curb idle position, fully depress dashpot plunger stem and adjust dashpot to obtain specified clearance between end of plunger stem and throttle lever.

Dashpot Clearance Specifications

Application	Clearance
F4.....	¼"
232".....	⅜"

DETENT SWITCH ADJUSTMENT

Turbo Hydra-Matic Trans. — The switch is mounted on a bellcrank above the accelerator pedal and is actuated when the pedal is fully depressed. Adjustment is made by varying the length of the threaded rod.

1970 Jeep 4 & 6 Tune-Up

ELECTRICAL

BATTERY

12 Volt – Negative Ground.

Application	Amp. Hour Rating
All	50

STARTER

Application	Prestolite Part No.
F4.....	MDU-7004
232".....	MDY-8102A

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

ALTERNATOR

Application	Amps.	Motorola Part No.
F4.....	35.....	A12NW526
232".....	35.....	A12NAM453

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

ALTERNATOR REGULATOR

Application	Motorola Part No.
F4.....	R-2K1
232".....	TVR-12W14

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

ENGINE

INTAKE MANIFOLD TIGHTENING

F4 – Tighten all nuts to 29-35 ft. lbs.
232" – Tighten all bolts to 20-25 ft. lbs., then tighten nuts to 20-25 ft. lbs.

FILTERS & CLEANERS

Filter or Cleaner	Service Interval (Miles)
Oil Filter.....	At Oil Change
Air Cleaner	
F4.....	① Clean 2,000
232".....	① Clean 4,000
Fuel Filter.....	② Replace 12,000
PCV Valve	
F4.....	Clean 6,000
232".....	Clean 12,000

① – Clean element and sump. Refill to level with SAE 40 or 50 engine oil above 32°F and SAE 20 engine oil below 32°F.

② – Located in fuel pump.

BELT ADJUSTMENT

Tension (Lbs.) Using Strand Tension Gauge

Application	New Belt	Used Belt
Alternator & Fan.....	110-120.....	70-80
Air Injection Pump		
F4.....	60-80.....	50-60
232".....	110-140.....	70-90

CAPACITIES

Application	Quantity
Crankcase	
F4.....	① 4 qts.
232".....	① 5 qts.
Automatic Transmission	
Oil Change.....	7½ pts.
After Overhaul.....	19 pts.
Manual Transmission	
3-Speed.....	2½ pts.
4-Speed (Jeep & Jeepster).....	6¾ pts.
4-Speed (Gladiator).....	6½ pts.
Four-Wheel Drive Transfer Case.....	3¼ pts.
Rear Axle	
Jeep & Jeepster.....	2½ pts.
Wagoneer & Gladiator.....	3 pts.
Front Axle (Four-Wheel Drive)	
Except Gladiator.....	2½ pts.
Gladiator.....	3 pts.
Fuel Tank	
Jeep & Jeepster.....	10½ gals.
Wagoneer.....	18 gals.
Gladiator.....	20 gals.
Gladiator (3407Z19 Auxiliary).....	15 gals.
Cooling System	
F4.....	② 11 qts.
232".....	② 9½ qts.

① – Add 1 quart with filter change.

② – Add 1 quart with heater.