

TUNE-UP

ENGINE IDENTIFICATION

Engine is identified by the prefix of the engine identification number stamped on block as follows:

- F4** - Stamped on water pump boss at front of engine.
- 232"** - Stamped on machined pad on right side of crankcase adjacent to distributor.
- 258"** - Stamped on machined surface on right side of block between number two and three cylinders.

MODEL IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

Vehicle identification number is stamped on metal plate located on dash under hood. It is on left side of; CJ5, CJ5A, CJ6, CJ6A, DJ5 and DJ6 models. It is located on right side of all other models. Number is decoded as follows:

8105A1410001

- First & Second Digit** - Chassis Code.
- Third & Fourth Digits** - Body Style.
- Fifth Digit** - Special Model Code.
- Sixth Digit** - Drivers Side Code.
- Seventh Digit** - Engine Code.
- Remaining Digits** - Sequence Build 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 spark plugs and air cleaner removed and throttle and choke valves wide open, crank engine through at least four compression strokes. Compression is considered satisfactory if lowest reading cylinder is within 75% of highest reading cylinder.

Application	PSI
F4.....	120-130
232".....	145
258".....	185

VALVE TAPPET CLEARANCE

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

VALVE ARRANGEMENT

- F4** - Intake valves in head, exhaust valves in block.
- 232" & 258"** - E-I-I-E-I-E-E-I-E-I-E (front to rear).

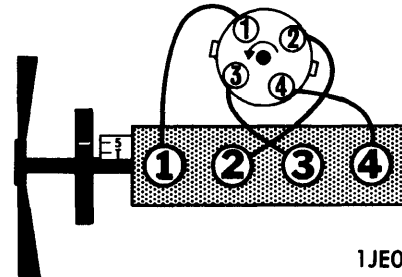
SPARK PLUGS

Application	Gap	Torque
F4.....	.030"	20-30 ft. lbs.
232".....	.035"	25-30 ft. lbs.
258".....	.035"	25-30 ft. lbs.

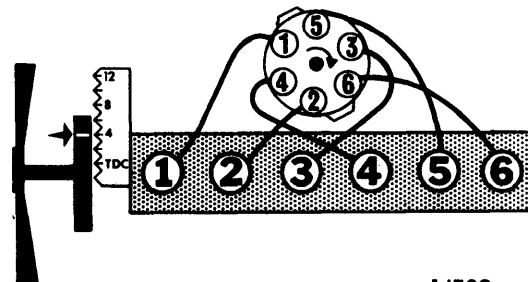
Application	Spark Plug Type	Champion No.
F4.....		J-8
232".....		N-14Y
258".....		N-14Y

DISTRIBUTOR

Point Gap	
F4.....	.020"
232" & 258".....	.016"
Cam Angle	
F4.....	42°
232" & 258".....	31-34°
Breaker Arm Spring Tension	
F4.....	17-20 ozs.
232" & 258".....	17-21 ozs.
Condenser Capacity	
F4.....	.25-.28 mfd.
232" & 258".....	.18-.23 mfd.



1JE01
F4 4 CYL. FIRING ORDER & TIMING MARKS



1JE02
6 CYL. FIRING ORDER & TIMING MARKS

IGNITION TIMING

Ignition timing is set with engine at normal operating temperature and idle, and distributor vacuum advance disconnected and plugged. Use timing light to adjust to specified ignition timing.

TUNE-UP (Cont.)

Application	Timing
F4	
With Distributor IAY-4012, IAY-4401	5° BTDC
With Distributor IAY-4401A, IAY-4401B	TDC
232"	3° BTDC
258"	5° BTDC

HOT (SLOW) IDLE RPM

Set idle with all accessories OFF, engine at operating temperature, air cleaner removed and vacuum supply plugged. Manual transmission should be in Neutral and automatic transmission should be in "D". Idle speed solenoid should be energized if vehicle is so equipped.

Application	Idle Speed RPM	RPM
F4 (All).....		700-750
232" (Man. Trans.).....		650-700
232" (Auto. Trans.).....		600
258" (Man. Trans.).....		650-700
258" (Auto. Trans.).....		600

COLD (FAST) IDLE RPM

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

232" - With throttle lever tang at index mark on fast idle cam, engine should run at 1800 RPM. Adjust by bending tang.

258" - With engine at normal operating temperature and fast idle screw against index mark of fast idle cam, set engine to 2300 RPM.

AUTOMATIC CHOKE SETTING

F4 - Equipped with manual choke.

232" - Set on index with engine running COLD.

258" - Set one notch rich.

FUEL PUMP PRESSURE & VOLUME

Pressure (At Cranking Speed)

F4.....	2.5-3.75 psi
232".....	3.5-5.5 psi
258".....	4-5 psi

Volume

F4 (Measured at 20 Strokes).....	.5 pts.
232" (At 600 RPM).....	.1 pts.
258" (At 500 RPM).....	.1 pts.

EMISSION CONTROL

See appropriate article in EMISSION CONTROL Section.

IGNITION

DISTRIBUTOR

Application	Make	Model No.
F4.....	Prestolite.....	①IAY-4401B
232".....	Delco-Remy.....	1110481
258".....	Delco-Remy.....	1110340

① - Also uses IAY-4012, IAY-4401, IAY-4401A.

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

IGNITION COIL

Resistance	Ohms @ 75°F
Primary	
F4.....	3.9-4.2
232".....	3.2-4.0
258".....	1.4-1.7
Secondary	
F4.....	9400-11700
232".....	8000-20000
258".....	3000-20000

Ballast Resistor - Used on 258" only, 1.75-1.85 ohms @ 70°F.

CARBURETION

CARBURETORS

Carter Model YF

Application	Carb. No.
4F.....	6115S
258" (Man. Trans.).....	6172S
258" (Auto. Trans.).....	6158S

Carter Model RBS

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

THROTTLE LINKAGE ADJUSTMENT

F4 - Loosen lock nut and adjust length of accelerator rod so carburetor throttle valve is fully open when accelerator pedal strikes toeboard.

232" & 258" - Adjust length of accelerator rod at threaded end so that carburetor throttle valve is fully open 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 for specified clearance between end of plunger stem and throttle lever.

Application	Clearance
F4.....	3/4"
232".....	1/8"
258".....	3/4"

1971 Jeep 4 & 6 Tune-Up

ELECTRICAL

BATTERY

12 Volt - Negative Ground.

Application	Amp. Hr. Rating
All	50

STARTER

Application	Make	Model No.
F4.....	Prestolite.....	MDU-7004
232".....	Prestolite.....	MHA-7008
258".....	Ford.....	C9FF-11001-A

Other Data & Specifications - See Ford and Prestolite Starters in ELECTRICAL Section.

ALTERNATOR

Application	Amps.	Motorola No.
F4.....	35.....	A12NW526
232".....	35.....	A12NAM453
258".....	35.....	8AL2011F

Other Data & Specifications - See Motorola Alternators in ELECTRICAL Section.

ALTERNATOR REGULATOR

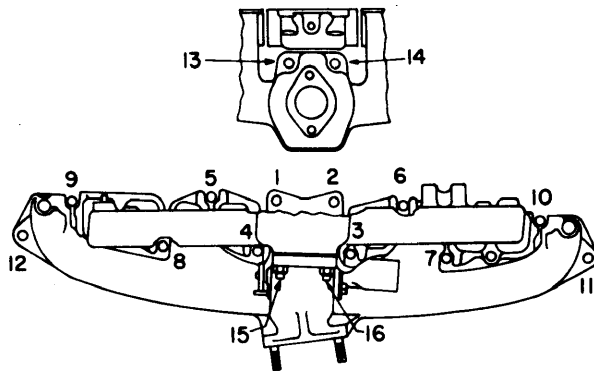
Application	Motorola No.
F4.....	R-2K1
232".....	R-2K1
258".....	8RB2005

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

ENGINE

INTAKE MANIFOLD TIGHTENING

Manifold bolts should be tightened to 20-25 ft. lbs.



1JE03

INTAKE MANIFOLD TIGHTENING SEQUENCE

FILTERS & CLEANERS

Filter or Cleaner	Service Interval (Miles)
Oil Filter.....	Replace 2000
Air Filter	
F4.....	Clean 2000
232".....	Clean 4000
258".....	Clean 6000

CAPACITIES

Cooling System (Includes Heater)	
F4.....	12 qts.
232".....	10.6 qts.
258".....	10.6 qts.
Crankcase (Add 1 qt. for filter change)	
F4.....	.4 qts.
232".....	.5 qts.
258".....	.5 qts.
Transmissions	
3-Speed.....	2.5 pts.
4-Speed (Jeep & Jeepster).....	6.75 pts.
4-Speed (Gladiator & Wagoneer).....	6.5 pts.
Automatic.....	① 19 pts.
Transfer Case.....	3.25 pts.
Differential	
Front (Except Gladiator).....	2.5 pts.
Front (Gladiator).....	3 pts.
Rear (Jeep & Jeepster).....	2.5 pts.
Rear (Wagoneer & Gladiator).....	3 pts.
Fuel Tank	
Jeep & Jeepster.....	16 gals.
Wagoneer.....	22 gals.
Gladiator.....	20 gals.
Auxiliary Tank (if equipped).....	15 gals.

① - 7.5 pts. for refill.

BELT ADJUSTMENT

Tension (Lbs.) Using Strand Tension Gauge
New Belt Used Belt

Alternator & Fan		
F4.....	110-120 lbs.	70-80 lbs.
232".....	110-120 lbs.	70-80 lbs.
258".....	125-145 lbs.	90-110 lbs.
A.I.R. Pump		
F4.....	60-80 lbs.	50-60 lbs.
232".....	110-140 lbs.	70-90 lbs.
258".....	125-145 lbs.	90-110 lbs.