TUNE-UP

ENGINE IDENTIFICATION

The Engine Identification Number is located on right side of crankcase, adjacent to distributor. Cubic inch displacement is indicated by a letter code.

Application	Letter Code
258"	A

MODEL IDENTIFICATION

Number is located on rear face of left front door.

613105H587201

First Four Digits – Model Code.
Fifth Digit – Engine Type.
Sixth Digit – Cab or Body Type.
Remaining Digits – Chassis Serial 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.

NOTE – Due to changes and corrections, always refer to Engine Tune-Up Decal in engine compartment before attempting tune-up. In the event of a conflict between specifications given in this manual and decal specifications, decal specifications prevail.

COMPRESSION PRESSURE

With engine warm, all spark plugs removed and throttle wide open, the variation between cylinders should not exceed 10 psi.

Application	PSI
258"	185

VALVE TAPPET CLEARANCE

Application	Clearance (Hot)
All Hydraulic	Zero Lash

VALVE ARRANGEMENT

6 Cyl. – E-I-I-E-I-E-E-I-E-I-I-E (Front to rear.)

SPARK PLUGS

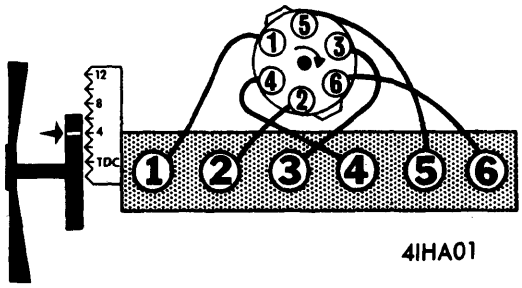
Gap ..... .035"
Torque ..... 25-30 ft. lbs.

Spark Plug Type

Application	Champion No.
258"	RN-12Y

DISTRIBUTOR

Point Gap ..... .016"
Cam Angle ..... 31-34°
Breaker Arm Spring Tension ..... 19-23 ozs.
Condenser Capacity ..... .18-.23 mfd.



FIRING ORDER & TIMING MARKS

IGNITION TIMING

Check or adjust timing with engine at normal operating temperature, distributor vacuum advance line disconnected and plugged, transmission in Neutral, and hot (slow) idle speed set.

Application	Timing
Under 6,000 Lbs. G.V.W.	TDC
Over 6,000 Lbs. G.V.W.	5° BTDC

HOT (SLOW) IDLE RPM

With vehicle level, engine at normal operating temperature, choke open, air cleaner installed, air conditioner off, and transmission in Neutral, connect tachometer to engine. Turn idle mixture screw counterclockwise (out) against tab stop. Adjust idle speed screw to give engine speed 25 RPM higher than specifications. Turn idle mixture screw clockwise (in) to reduce idle speed to specifications. If idle mixture adjustment cannot be made due to limiter cap, use the following procedure. Remove limiter cap and, with engine idling, adjust engine RPM to specifications. Adjust idle mixture screw to the point that engine RPM drops approximately 10 RPM. Install new limiter cap with tab fully counterclockwise against stop. Adjust idle speed screw to give engine speed 25 RPM higher than specifications. Turn idle mixture screw clockwise (in) to reduce idle speed to specifications.

Idle Speed

Application	RPM
All (Solenoid Activited)	675-725

COLD (FAST) IDLE RPM

Connect tachometer to engine at normal operating temperature. With engine off, remove air cleaner and disconnect and plug vacuum signal hose at EGR valve. Holding choke plate closed, close throttle to allow fast idle adjusting screw to rest on highest step of fast idle cam. Without touching pedal, start engine and allow speed to stabilize. If engine RPM is not at specified speed, adjust by turning fast idle speed adjusting screw.

Fast Idle Speed

Application	RPM
All	2000

TUNE-UP (Cont.)

CHOKE ADJUSTMENT

Loosen choke cover retaining screws. Rotate cover to specified setting and tighten screws.

Application	Setting
All	1 Notch Rich

DASHPOT ADJUSTMENT

With engine at normal operating temperature and hot (slow) idle speed set, depress dashpot plunger completely into dashpot body. Loosen lock nut and rotate dashpot to obtain specified clearance between plunger and throttle lever pad.

Application	Clearance
All	.070-.090"

THROTTLE MODULATOR ADJUSTMENT

Disconnect solenoid valve vacuum hose from carburetor or intake manifold port. Disconnect vacuum hose from throttle modulator unit. Using a spare piece of suitable vacuum hose, temporarily connect throttle modulator directly to vacuum port. Start engine. Increase engine speed to 1500-2000 RPM. Throttle modulator should be extended. Release throttle allowing engine to decelerate. Extended modulator should hold engine speed at specified modulator activated RPM. Adjust by loosening lock nut and repositioning throttle modulator to obtain specified RPM. Disconnect temporary vacuum hose from throttle modulator and hold finger over end of hose. Throttle modulator should retract and engine speed should return to normal hot (slow) idle RPM.

Modulator Activated RPM

Application	RPM
All	2000

IDLE STOP SOLENOID ADJUSTMENT

With engine at normal operating temperature, air cleaner in place, transmission in Neutral, and air conditioning off, adjust hot (slow) idle speed to specifications. Disconnect idle stop solenoid electrical supply wire; idle speed should drop as solenoid plunger retracts. Adjust this low idle speed to specifications by turning the low idle speed adjusting screw.

Application	RPM
All	550-600

FUEL PUMP PRESSURE & VOLUME

Pressure (At 1000 RPM)① ..... 4-5.5 psi
Volume (At 2000 RPM) ..... 3.6 pts. in 1 min.

① – Fuel pressure test must be taken at carburetor inlet height.

MANIFOLD HEAT CONTROL VALVE

Check valve periodically for spring tension and freedom of operation.

EMISSION CONTROL

See appropriate article in EMISSION CONTROL Section.

IGNITION

DISTRIBUTOR

Application	Delco Part No.
All	1110522

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

IGNITION COIL

Application	IHC Part No.
All	191455-C91

Resistance	Ohms @ 80°F
Primary	1.81-1.95
Secondary	7,200-9,500
Ballast Resistor (Loom)	1.30-1.35

CARBURETION

CARBURETORS

Holley Series 1940C 1-Bbl.

Application	Holley Part No.
Under 6,000 Lbs. G.V.W.	
Federal	6831
Calif.	6800
Over 6,000 Lbs. G.V.W.	6832

Other Data & Specifications – *See Tune-Up and Holley Carburetors in CARBURETION Section.*

ACCELERATOR AND DOWNSHIFT LINKAGE ADJUSTMENT

Accelerator Adjustment – With accelerator linkage clean and lubricated, adjust pedal stop screw so that pedal will just strike screw when carburetor throttle plate is wide open.

Downshift Linkage Adjustment – Block choke valve in full open position and check that dashpot or throttle modulator on carburetor is not touching throttle lever of carburetor. Loosen lock nut on adjusting link, remove fastener from carburetor pin, and disconnect transmission throttle rod return spring. Hold throttle rod forward and adjust link so that carburetor pin contacts rear of slot in link. Tighten lock nut, install fastener, and reconnect return spring. Check throttle rod linkage for freedom of movement by rotating bellcrank in counterclockwise direction to full open position; hold throttle rod and allow bellcrank to return to idle position. Then release throttle rod and allow it to return slowly, making sure it returns to the full forward position.

ELECTRICAL

BATTERY

12 Volt – Negative Ground.

STARTER

Application	Delco Part No.
258"	1108478

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

ALTERNATOR

Application	Amps.	Delco Part No.
Standard	37	1100588
Optional	61	1100544

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

ALTERNATOR REGULATOR

Delco – Nonadjustable, integral with alternator.

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

ENGINE

INTAKE MANIFOLD TIGHTENING

Manifold bolts and stud nuts are tightened to 20-25 ft. lbs.

FILTERS & CLEANERS

Filter or Cleaner	Service Interval (Miles)
Oil Filter	Replace 4,000
Air Filter	
Paper Element	①Clean 4,000
Oil Bath	Clean 6,000
PCV Valve	Replace 12,000
Vapor Storage Canister Filter	Replace 12,000
Fuel Filter	Replace 12,000

① – Replace as required.

BELT ADJUSTMENT

Adjust power steering belt tension to obtain ⅜ inch deflection at belt midpoint; adjust all other belts for ½ inch deflection.

CAPACITIES (EXCEPT COOLING)

Application	Quantity
Crankcase	
Scout	①5 qts.
All Others	①4 qts.
Automatic Transmission	9.5 qts.
Man. Trans. & Rear Axle	②
Front Axle & Transfer Case	②
Four-Wheel Drive Knuckle Ends	②
Fuel Tank	
Scout	19 gals.
100	15 gals.
200	16 gals.
Travelall	20 gals.
Metro	
Std.	23 gals.
Opt.	35 gals.

① – Add 1 quart with filter change.
② – Fill to bottom of filler plug hole.

COOLING CAPACITIES

Application	Quantity
Scout (Includes Heater)	11.5 qts.
All Others (Includes Heater)	12 qts.