# PACKARD Eight 1956

**CLIPPER DELUXE, SUPER & CUSTOM**

**A. E. A. TUNE-UP SYSTEM**

## Standards of Adjustment

# PACKARD Eight 1956

**ISSUED AUGUST, 1956**

**FORM NO. PA-78**

## ELECTRICAL SYSTEM

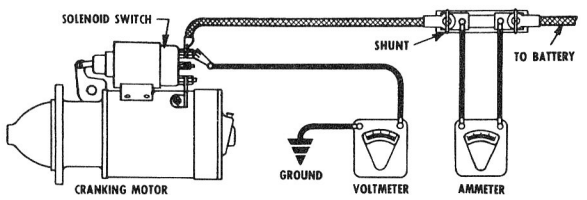
### BATTERY AND CABLE - 12 VOLT

AUTO-LITE Type 3EA-60 Capacity - 60 Amp. Hour
WILLARD Type HDW-3KM-60 (20 hr. rate)

Negative terminal grounded

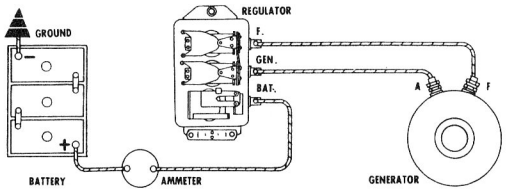
CABLES - PACKARD - Battery to Ground Cable - Length 15"; Part No. IT-15. Battery to Switch Cable - Length 40"; Part No. 1L-41.

### STARTING MOTOR




AUTO-LITE No. MDF-6008
Drive - Overrunning clutch AUTO-LITE No. MCL-3123
FREE RUNNING SPEED - 3200 Min. R.P.M.
60 Max. Amps. 10.0 Volts
LOCK TORQUE (Stalled) - 6.5 Min. Ft. Lbs.
240 Max. Amps. 4.0 Volts
CONTROL - Starting Switch No. SAD-4101

### GENERATOR




AUTO-LITE No. GJC-7002F
Brush Spring Tension - 18 - 36 oz. with new brushes
MAXIMUM CONTROLLED OUTPUT:
Hot - 30 Amps. 15 Volts at 2400 R.P.M.
Cold - 30 Amps. 15 Volts at 2150 R.P.M.
Rotation - Clockwise (viewing drive end)

### REGULATOR

AUTO-LITE No. VRX-6009A
Cut-Out Relay - Armature Air Gap .031"-.034". Contact point gap .015" minimum. Contacts close at 13.0 to 13.7 volts; open at 8.2 to 9.3 volts.
Current Regulator - Armature air gap .048"-.052".
Operating current after 15 minutes operation:

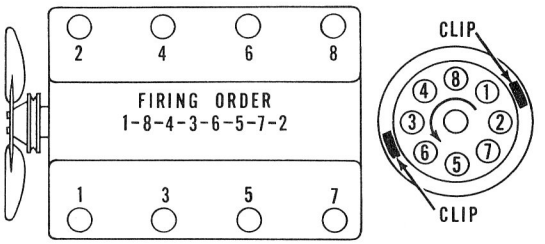
| Temp. F. | 50° | 70° | 90° |
|---|---|---|---|
| Amperes | 32 ± 2 | 30 ± 2 | 28 ± 2 |

Voltage Regulator - Armature air gap .048"-.052".
Operating voltage after 15 minutes operation:

| Temp. F. | 50° | 80° | 110° |
|---|---|---|---|
| Volts | 14.7 ± 3 | 14.5 ± 3 | 14.3 ± 3 |

### DISTRIBUTOR

AUTO-LITE - No. IBJ-4001C (5660)
No. IBJ-4001D (5640)
No. IBJ-4001E (Late) (5640-5660)
Breaker Contact Gap - .017"
Cam Angle - 31°
Breaker Contact Set - No. IGW-3028HS
Breaker Arm Spring Tension - 17 - 20 oz.
Condenser - No. IBB-2015L
Capacity - .25 - .28 Mfds.
Vacuum Control - (IBJ-4001C Dist.) IAZ-2023LA 7" hg. to start plunger travel; 10° distributor advance at 13" hg.
(IBJ-4001D Dist.) IAZ-2023LB 6" hg. to start plunger travel; 12° distributor advance at 12-1/2" hg.
(IBJ-4001E Dist.) IAZ-2023LA 8" hg. to start plunger travel; 10° distributor advance at 16" hg.
Automatic Advance - (IBJ-4001C Dist.) Start 0° at 300 R.P.M.; Intermediate 10° at 850 R.P.M.; Maximum 15° at 2000 R.P.M.
(IBJ-4001D Dist.) Start 0° at 300 R.P.M.; Intermediate 10° at 850 R.P.M.; Maximum 14° at 1700 R.P.M.
(IBJ-4001E Dist.) Start 0° at 300 R.P.M.; Intermediate 8° at 900 R.P.M.; Maximum 14° at 2550 R.P.M.




### SPARK PLUGS

CHAMPION Type N-18 Gap .033"-.037" Size 14mm.
Use Round Wire Gauge

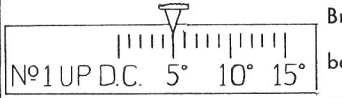
### IGNITION COIL

AUTO-LITE No. CAD-4004 Servicing Coil No. CAD-4004
Mounting Bracket On Coil
Primary Resistor PU-4001

### HIGH TENSION CABLES

Ignition Cable Set - PACKARD No. 448F

### IGNITION TIMING




USE TIMING LIGHT -
Breaker contacts to open 5° before top dead center.
Timing mark on crankshaft vibration damper.

## FUEL SYSTEM

### FUEL PUMP

CARTER - Combination Fuel & Vacuum Pump No. 2198S
Capacity - 2 pints or over in 1 minute
Pressure - 3-1/2 lbs. minimum; 5-1/2 lbs. maximum
Vacuum Test - 10" hg. minimum at 500 R.P.M.

### AIR CLEANER

AC - No. 1552581 (Heavy Duty)

### CARBURETOR

CARTER - WGD No. 2393S (DeLuxe & Super)

Float Adjustment - With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 3/16" (gauge T109-28) between top of float and bowl cover. Adjust by bending float lever.

Float Alignment - Side of float parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. Adjust by bending float lever.

Fixed Jets - Metering Rod - Standard Part No. 75-1223
Metering Rod Jet Part No. 120-165

### CARBURETOR (Cont'd)

Climatic Control - set two points rich

Pump Adjustment - Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at upper angle. (Use bending tool T109-213)

Metering Rod Adjustment - The metering rods must be adjusted after the pump adjustment. No metering rod gauges are necessary; procedure is as follows: With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom in casting. With rods held in this position, revolve metering rod arm until lip contacts vacumeter link. Hold in place and carefully tighten metering rod arm set screw.

Fast Idle Adjustment - With the thermostatic coil housing gasket and baffle plate removed, crack throttle valve and hold choke valve closed. Then close throttle. There should now be .024" clearance (gauge T109-189) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle. (Use bending tool T109-213).

Unloader Adjustment - This adjustment must be made after fast idle adjustment. Hold throttle valve in wide open position and close choke valve as far as possible without forcing. There should be 1/8" (gauge T109-36) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader arm on choke piston lever. (Use bending tool T109-213).

Idle Engine Speed - Idle engine at 400 R.P.M. in "drive".

CARTER - WCFB No. 2394S (Custom)

Float Adjustment - Lateral - With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. Vertical - With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8" (gauge T109-232) for primary floats and 3/16" (gauge T109-222) for secondary floats. Adjust by bending float arms.

Float Drop Adjustment - With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8" for primary floats and 11/16" for secondary floats. Adjust by bending stop tabs on float brackets.

| | | |
|---|---|---|
| Fixed Jets - Metering Rod, Standard | Part No. | 75-1241 |
| Primary Metering Rod Jet | Part No. | 120-166 |
| Secondary Metering Jet | Part No. | 120-176 |

Climatic Control - Set on index.

### CARBURETOR (Cont'd)

Pump Adjustment - Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward counter-shaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213).

Metering Rod Adjustment - Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

Bowl Vapor Vent Adjustment - Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16" (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

Fast Idle Adjustment - Loosen choke lever clamp screw on choke shaft. Insert .025" wire gauge (T109-189) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position - hold in place and tighten clamp screw. With choke valve tightly closed tighten fast idle adjusting screw until there is .023" (gauge T109-189) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

Unloader Adjustment - With throttle wide open there should be 9/32" (gauge T109-126) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

Secondary Throttle Lever Adjustment - Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213) With primary and secondary throttle valves in tightly closed position there should be .008-.013" (gauge T109-200) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever.

Secondary Throttle Lock-Out Adjustment - This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and hold choke valve tightly closed. Then close throttle. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

| | | |
|---|---|---|
| Idle Engine Speed - | 400 R.P.M. | (Automatic Transmission) |
| | 475 R.P.M. | (Standard & Overdrive) |

## MISCELLANEOUS

### VALVES

VALVE CLEARANCE - Automatic Take-Up
VALVE TIMING - Inlet valves open at 14° before top dead center.

### COOLING SYSTEM

Capacity - 26 Quarts without heater (U.S. Measure)
Thermostat - Opens at 167° - 173° F. (Standard); 177° - 182°F. (High opening).
Pressure Cap - 12 lbs.

### WINDSHIELD WIPER

TRICO -

| | |
|---|---|
| Service Motor No. | CPD-1-3 (Early) |
| | No. CPD-2-1 (Late) |
| Wiper Arm (Driver side) | 88861-2C |
| (Pass. side) | 88860-2C |
| Blade (Both sides) | RB-12-2 or PR-12-2 |
| Linkage (Driver side) | G-88731-1C |
| (Pass. side) | G-88730-1C |

### ADDITIONAL SPECIFICATIONS

Gauges - KING-SEELEY
Temperature Gauge - Dash Unit No. 49550
Motor Unit No. 44235
Oil Pressure Switch - Motor Unit No. 47195
Gasoline Gauge - Dash Unit No. 49546
Tank Unit No. 44517
Voltage Regulator for Gauges - No. 45677

Speedometer - KING-SEELEY No. 49561

Crankcase Capacity - 5 Quarts (U.S. Measure)

Recommended Tire Pressure -
Cold - 24 lbs. front and rear

Ignition Lock - BRIGGS & STRATTON

| | |
|---|---|
| Key Series | P1251 - P1500 |
| Key Blank Part No. | 42106 |
| Lock Part No. | 50184 |

NOTE: The SYMBOL "hg." used on this chart designates "Inches Vacuum" (mercury).

Original equipment service parts and accurate work to manufacturers' specifications with proper tools and equipment will restore original performance.