A.E.A. tune-up

Specification

CHARTS

Hudson

1940-1947

1 9 4 0 Hudson

Hudson Six - Model 40
Hudson Six - Models 41, 43
Hudson Eight - Models 44, 47

HUDSON Six 1940

Model 40

Serial No. 40,101 and up (U.S.) * *

A.E.A. TUNE-UP SYSTEM

Standards of Adjustment

Automotive Electric Association

Issued November 1940

Form No. HU-25

IGNITION

SPARK PLUGS

Size 14mm. **Gap** .032"

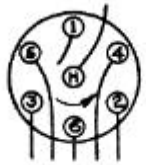
Original Equipment

Champion Type J-8

Auto-Lite Type A-7

For Cooler or Hotter Type See Manufacturers' Chart *

DISTRIBUTOR



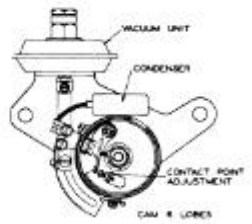
Auto-Lite

No. IGW-4203

Firing Order

1-5-3

6-2-4



Breaker-Arm Spring

Breaker Contact Gap – .020" **Cam Angle** – 35°

Condenser – Part No. IGW-3075C **Capacity** – .20 – .25 Mfds.

Rotation – Counterclockwise (viewed from top of distributor)

Adjustment – Loosen hold down arm clamp screw

Vacuum Control – No. VC-3080S. 6" – 8" hg. to start plunger travel. 6.5° – 8.5° distributor advance at 10" hg. – maximum

Automatic Advance – Full Automatic – Start 0° at 300 R.P.M.; Intermediate 7° at 825 R.P.M.; Maximum 14° at 1580 R.P.M. (Distributor degrees at distributor R.P.M.)

COIL

Auto-Lite

No. IG-4662

Extension Lock Type

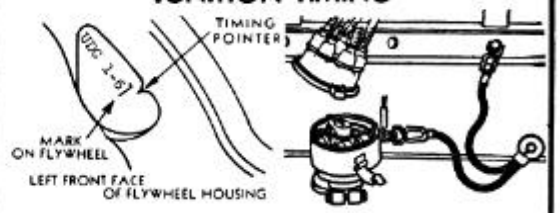
Servicing Coil

No. IG-3224JS

Mounting Bracket

No. IG-1798S

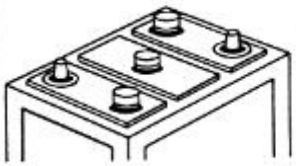
IGNITION TIMING



Use Timing Light – Breaker contacts to open for No. 1 cylinder at upper dead center when mark "UDC 1-6" is in line with pointer on the engine support plate.

STARTING & LIGHTING

BATTERY



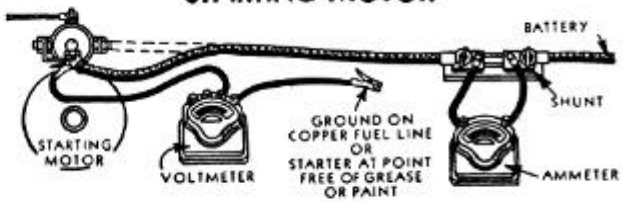
NATIONAL – Type HT-17

Capacity – 96 Amp. Hour (20 hr. rate)

Location – On left side of engine compartment.

Ground – Positive terminal grounded.

STARTING MOTOR



AUTO-LITE No. MZ-4079, MZ-4079A

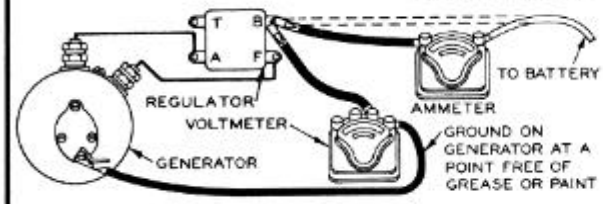
Drive – Bendix Part No. EBA-29

Free Running Speed – 4300 Min. R.P.M. 70 Max. Amps. 5.5 Volts

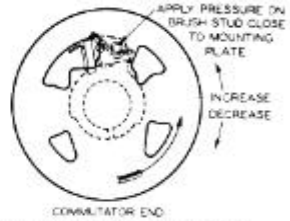
Lock Torque (Stalled) – 11.8 Ft. Lbs. 560 Amps. 4.0 Volts

Control – Solenoid Switch

GENERATOR



Third Brush Adjustment



AUTO-LITE No. GDS-4801A

Rotation – Clockwise (viewing drive end)

Regulation – Third Brush and Vibrating Voltage Regulator

Maximum Output Safe Setting:

Cold – 32 – 34 Amps. 8.0 Volts

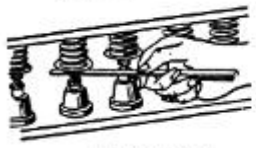
Regulator No. VRD-4008B (Early) **No. VRR-4001A** (Later) (see reverse side) 3*

Cut-Out Relay – (combined with regulator)

Brush Spring Tension – 53 oz. maximum with new brushes

VALVES

CLEARANCE



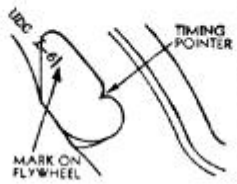
USE NEW FEELER STOCK FOR EACH JOB

Engine Warm

Intake – .006"
Exhaust – .006"

With engine oil and coolant at normal operating temperatures*

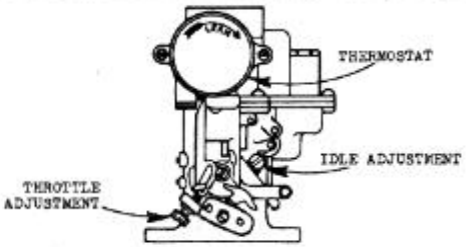
TIMING



Intake Valves open at 10-2/3° before top dead center.

Tappet Lash for timing: .010" (Cold)

CARBURETION



CARTER – Model 454S **TYPE – 1-1/4" Single Downdraft**

Idle Adjustment – 3/4 to 1-1/2 turns open. Idle at 7 M.P.H. or 350 R.P.M. To make richer, turn screw out. 4*

Fixed Jets –

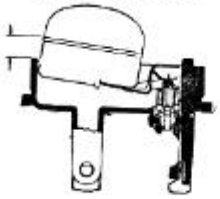
Metering Rod – Standard	Part No. 75-407
Metering Rod – 1 Size Lean	Part No. 75-410
Metering Rod – 2 Sizes Lean	Part No. 75-411
Metering Rod – 3 Sizes Lean	Part No. 75-412
Metering Rod Jet Assembly	Part No. 120-17S

Accelerating Pump – (see reverse side) 5*

Metering Rod Adjustment – (see reverse side) 6*

Manifold Heat Control – (see reverse side) 7*

FUEL LEVEL



Float Level – 3/8"

Measure from machined surface of small projection on bowl cover to top of seam in float.

ADDITIONAL SPECIFICATIONS

Cooling System –

Capacity – 13 Qts. (U.S. Meas.)

Radiator Gravity Flow – Service 23 Gals. Per Min. (U.S. Meas.)

Thermostat – In cylinder head water outlet Opens at 155° F.

Temperature Gauge – King-Seeley
Dash Unit No. 8120 (Early)
Dash Unit No. 7756 (Later)
Motor Unit No. 7000

Crankcase – Capacity 4-1/2 Qts. (refill) U.S.

Fuel Pump – AC Type AF No. 1523753
TEST: Using AC Fuel Pump Analyzer No. 1521561
CAPACITY – 1 pint or over in 1 minute
PRESSURE – 3-1/2 lbs. maximum

Air Cleaner – AC Oil-Wetted * (with silencer) No. 1528159

Gasoline Gauge – King-Seeley
Dash Unit No. 8118 (Early)
Dash Unit No. 7752 (Later)
Tank Unit No. 7550

Speedometer – Stewart-Warner No. 587-D
Inner Core No. 95276 – 61-3/32" Standard
91-3/32" Overdrive

(Continued – 8* – see reverse side)

Printed in U.S.A.

Copyright 1940 Automotive Electric Association

A. E. A. Tune-Up System

IGNITION LOCK

Briggs & Stratton

KEY SERIES	H601 – H1100
KEY BLANK PART NO.	42107
LOCK PART NO.	50184

Form No. HU-28

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number** – On plate on right hand front door hinge pillar. 40,101 and up (U.S.).

Wheelbase – 118".

Engine Number – Stamped on top of cylinder block left hand side between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * **Voltage Regulator** – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: (VRD-4006B) Circuit breaker closes at 6.4 to 7.0 volts; opens at 1.5 to 4.5 amperes discharge. Voltage regulator operates at 7.35 to 7.85 volts at 70° F.

Test figures: (VRR-4001A) Circuit breaker closes at 6.4 to 6.6 volts; opens at 4.0 to 6.0 amperes discharge. Voltage regulator operates at 7.35 to 7.65 volts at 70° F.

4 * **Fast Idle Adjustment** – With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just seats against cam. Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw.

5 * **Accelerating Pump** – Set to longest stroke for cold weather, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment – With throttle valve seated and connector link in place (short stroke: hole nearest countershaft), pump plunger should travel 3/16" from closed to wide open position. Adjustment should be made by bending throttle connector rod at lower angle. Pump travel can be measured by using universal pump stroke gauge T109-117S by placing base of gauge on ridged portion of bowl cover so that projection portion of pump gauge rests on top surface of connector link at pump shaft. Hold gauge vertical. The difference between the number shown by index mark on gauge, at wide open and closed positions, should be 12.

6 * **Metering Rod Adjustment** – Correct setting of metering rod is important and must be made after pump adjustment. Insert gauge (tool No. T109-102) in place of metering rod, seating tapered end in metering rod jet. Hold gauge vertical to insure seating. With throttle valve seated, press down lightly on piston link directly over piston. There should be less than .005" clearance between metering rod pin and shoulder in notch of gauge. Gauge must not drag on pin. Adjustment can be made by bending lip on piston link so that it contacts pump arm. (Use tool T109-105.) Remove gauge and install metering rod and disk. Connect metering rod and spring.

7 * **Manifold Heat Control** – For normal operation, set at "W" position. Make sure valve operates freely.

8 * **Vacuum-Operated Devices** – Windshield Wiper – Trico
Distributor Control – Auto-Lite

Windshield Wiper – Trico – Service Motor SK-52 Linkage 78662-C L.H.
Linkage 78663-C R.H.

Recommended Tire Pressure – Cold – 26 lbs. front – 30 lbs. rear

Battery Cables and Wiring – Battery to Ground Cable – Length 7"; Gauge No. 2. Battery to Switch Cable – Length 36"; Gauge No. 0.

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

Proper tools and equipment are essential in order to perform accurate work and restore original performance.

HUDSON Six 1940

Models 41, 43

Serial No. (see reverse side) U.S. * *

A. E. A. TUNE-UP SYSTEM

Standards of Adjustment

Automotive Electric Association

Issued November 1940

Form No. HU-29

IGNITION

SPARK PLUGS

Size 14mm. Gap .032"

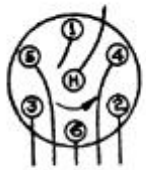
Original Equipment

Champion Type J-8

Auto-Lite Type A-7

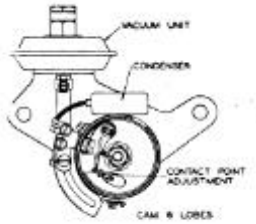
For Cooler or Hotter Type See Manufacturers' Chart *

DISTRIBUTOR



Auto-Lite No. IGW-4203

Firing Order 1-5-3 6-2-4



Breaker-Arm Spring

Breaker Contact Gap – .020"
Condenser – Part No. IGW-3075C **Capacity** – .20 – .25 Mfds.
Rotation – Counterclockwise (viewed from top of distributor)
Adjustment – Loosen hold down arm clamp screw
Vacuum Control – No. VC-3060E. 6" – 9" hg. to start plunger travel. 6.5° – 8.5° distributor advance at 10" hg. – maximum.
Automatic Advance – Full Automatic – Start 0° at 300 R.P.M.; Intermediate 7° at 825 R.P.M.; Maximum 14° at 1580 R.P.M. (Distributor degrees at distributor R.P.M.)

COIL

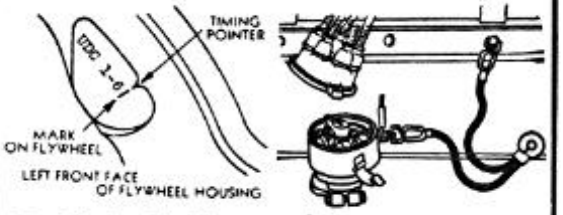
Auto-Lite No. IG-4662

Extension Lock Type

Servicing Coil No. IG-3224JS

Mounting Bracket No. IG-1798S

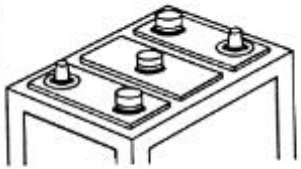
IGNITION TIMING



Use Timing Light – Breaker contacts to open for No. 1 cylinder at upper dead center, 3/4" maximum ahead of upper dead center for Ethyl Fuel.

STARTING & LIGHTING

BATTERY



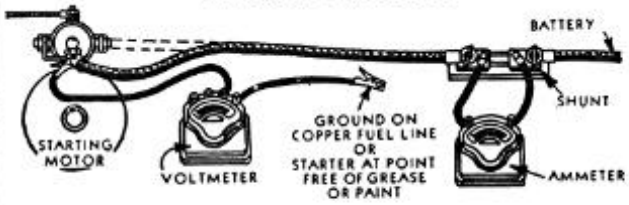
NATIONAL – Type HT-17

Capacity – 96 Amp. Hour (20 hr. rate)

Location – On left front side of engine compartment.

Ground – Positive terminal grounded.

STARTING MOTOR



AUTO-LITE No. MZ-4079, MZ-4079A

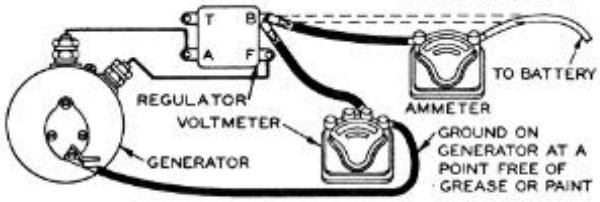
Drive – Bendix Part No. EBA-29

Free Running Speed – 4300 Min. R.P.M. 70 Max. Amps. 5.5 Volts

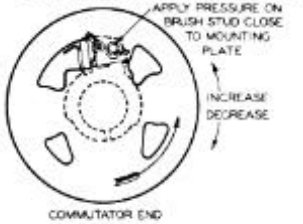
Lock Torque (Stalled) – 11.8 Ft. Lbs. 560 Amps. 4.0 Volts

Control – Solenoid Switch

GENERATOR



Third Brush Adjustment



AUTO-LITE No. GEC-4801A

Maximum Output Safe Setting:

Cold – 39 – 43 Amps. 8.0 Volts

Rotation – Clockwise (viewing drive end)

Regulation – Third Brush and Vibrating Voltage Regulator

Regulator No. VRD-4008B (Early) **No.** VRR-4001A (Later) (see reverse side) 3*

Cut-Out Relay – (combined with regulator)

Brush Spring Tension – 53 oz. maximum with new brushes

VALVES

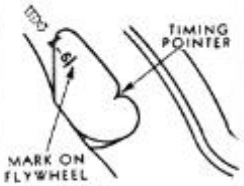
CLEARANCE

Engine Warm

Intake – .006"
Exhaust – .008"

With engine oil and coolant at normal operating temperatures *

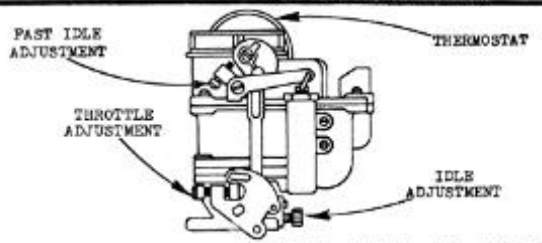
TIMING



Intake Valves open at 10-2/3° before top dead center.

Tappet Lash for timing: .010" (Cold)

CARBURETION



CARTER – Model 461S **TYPE** – 1" Dual Downdraft

Idle Adjustment – 1/4 to 1-1/4 turns open. Idle at 7 M.P.H. or 350 R.P.M. To make richer, turn screw out. 4*

Fixed Jets – Metering Rod – Standard Part No. 75-404
Metering Rod – 1 Size Lean Part No. 75-414
Metering Rod – 2 Sizes Lean Part No. 75-415
Metering Rod – 3 Sizes Lean Part No. 75-416
Metering Rod Jet Assembly Part No. 120-65S

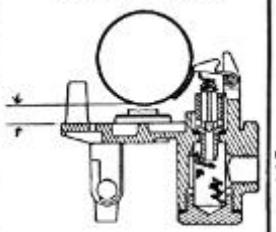
Accelerating Pump – (see reverse side) 5*

Metering Rod Adjustment – (see reverse side) 6*

Climatic Control – (See reverse side) 7*

Manifold Heat Control – (see reverse side) 8*

FUEL LEVEL



Float Level – 3/32"

Measure from float to float chamber cover when needle is seated.

ADDITIONAL SPECIFICATIONS

Cooling System –
Capacity – 13 Qts. (U.S. Meas.)
Radiator Gravity Flow – Service 23 Gals. Per Min. (U.S. Meas.)
Thermostat – In cylinder head water outlet Opens at 155° F.
Temperature Gauge – King-Seeley
Dash Unit No. 8120 (Early)
Dash Unit No. 7755 (Later)
Motor Unit No. 7000

Crankcase – Capacity 4-1/2 Qts. refill (U.S.)

Fuel Pump – AC Type AK No. 1523289
TEST: Using AC Fuel Pump Analyzer No. 1521551
CAPACITY – 1 pint or over in 45 seconds
PRESSURE – 4-1/2 lbs. maximum

Air Cleaner – AC Oil-Wetted * (with silencer) No. 1526161

Gasoline Gauge – King-Seeley
Dash Unit No. 8118 (Early)
Dash Unit No. 7752 (Later)
Tank Unit No. 7550

Speedometer – Stewart-Warner No. 587-D
Inner Core No. 95376 – 61-3/32" Standard
91-3/32" Overdrive

(Continued – 9* – see reverse side)

Printed in U.S.A.

Copyright 1940 Automotive Electric Association

A. E. A. Tune-Up System

IGNITION LOCK

Briggs & Stratton

KEY SERIES	H601 – H1100
KEY BLANK PART NO.	42107
LOCK PART NO.	50184

Form No. HU-29

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number** – On plate on right hand front door hinge pillar.
41,101 and up (Model 41) (U.S.)
43,101 and up (Model 43) (U.S.)

Wheelbase – 118" (Model 41) 125" (Model 43)

Engine Number – Stamped on top of cylinder block left hand side between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * **Voltage Regulator** – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: (VRD-4008B) Circuit breaker closes at 6.4 to 7.0 volts; opens at 1.5 to 4.5 amperes discharge. Voltage regulator operates at 7.35 to 7.65 volts at 70° F.

Test figures: (VRR-4001A) Circuit breaker closes at 6.4 to 6.6 volts; opens at 4.0 to 6.0 amperes discharge. Voltage regulator operates at 7.35 to 7.65 volts at 70° F.

4 * **Fast Idle Adjustment** – Hold choker valve tightly closed and adjust fast idle arm screw to give .018" opening between edge of throttle valve and bore of carburetor side opposite port. Use gauge T109-44.

5 * **Accelerating Pump** – Set to longest stroke for cold weather driving, short stroke for hot weather.

Pump Adjustment – With pump connector link in long stroke (outer) hole in pump arm, and throttle adjustment screw backed out, pump plunger should travel 9/32" from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle. (Use tool T109-75.) Pump travel can be measured by using gauge T109-117B. Difference between reading at wide open and seated throttle should be 18. Projecting portion of indicator should be placed on top surface of lower portion of connector link at pump shaft.

6 * **Metering Rod Adjustment** – Insert one metering rod gauge T109-113 in place of metering rods. Be sure gauge seats in metering rod jet after backing out throttle lever adjusting screw, so that throttle valves seat. Install metering rod pin and pin spring in metering rod arm. Press lightly on vacuum piston link until piston rests in bottom of cylinder. There may be less than .005" clearance between metering rod pin and gauge. With throttle valve seated, bend lip on anti-percolator arm until this clearance is obtained (between metering rod gauge and metering rod pin). Remove gauge and metering rod pin, and install metering rods, discs, spring, pin and pin spring, and hook metering rod spring on metering rods.

7 * **Climatic Control (Choke)** – For average driving and climatic conditions, center index mark on coil housing should be in line with pointer.

8 * **Manifold Heat Control** – Thermostatically controlled. See that valve operates freely

9 * **Vacuum-Operated Devices** – Windshield Wiper – Trico
Distributor Control – Auto-Lite

Windshield Wiper – Trico – Service Motor SK-52 Linkage 78662-C L.H.
Linkage 78663-C R.H.

Recommended Tire Pressure – 28 lbs. front – 30 lbs. rear (cold)

Battery Cables and Wiring – Battery to Ground Cable – Length 7"; Gauge No. 2. Battery to Switch Cable – 38"; Gauge No. 0.

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

Proper tools and equipment are essential in order to perform accurate work and restore original performance.

HUDSON Eight 1940

Models 44, 47

Serial No. (see reverse side) U. S. * *

A. E. A. TUNE-UP SYSTEM

Standards of Adjustment
Automotive Electric Association

Issued November 1940

Form No. HU-30

IGNITION

SPARK PLUGS

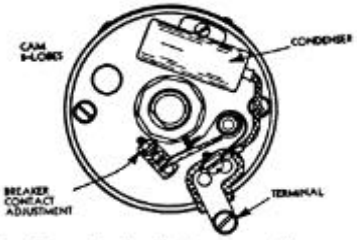
Size 14mm. **Gap** .032"
Original Equipment
Champion Type J-8

For Cooler or Hotter Type Consult Champion Operating Range Chart *

DISTRIBUTOR

Auto-Lite
No. IGP-4008A

Firing Order
1-6-2-5
8-3-7-4



Breaker-Arm Spring

Breaker Contact Gap — .017"
Condenser — Part No. IG-2871
Rotation — Clockwise (viewed from top of distributor)
Adjustment — Loosen hold down arm clamp screw
Automatic Advance — Full Automatic — Start 0° at 300 R.P.M.; Intermediate 8° at 850 R.P.M.; Maximum 17.5° at 1700 R.P.M.
(Distributor degrees at distributor R.P.M.)

Cam Angle — 27.5°
Capacity — .20 - .25 Mfds.

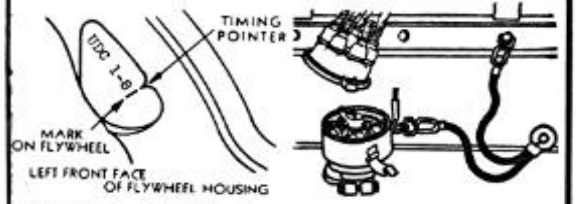
COIL

Auto-Lite
No. CE-4641
Extension Lock Type

Servicing Coil
No. CE-3224JS

Mounting Bracket
No. IG-1798S

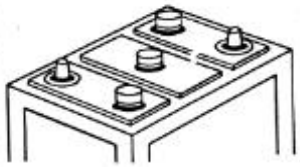
IGNITION TIMING



Use Timing Light — Breaker contacts to open for No. 1 cylinder at upper dead center. 3/4" maximum ahead of upper dead center for Ethyl Fuel.

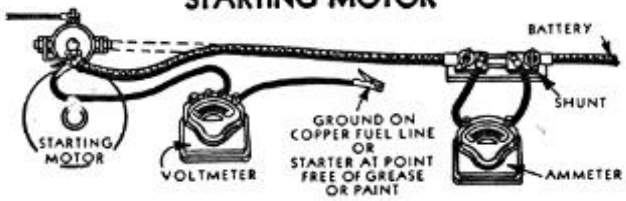
STARTING & LIGHTING

BATTERY



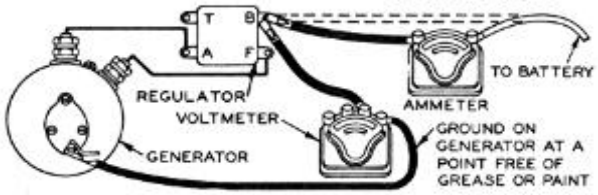
NATIONAL — **Type HT-19**
Capacity — 106 Amp. Hour (20 hr. rate)
Location — On left front side of engine compartment.
Ground — Positive terminal grounded.

STARTING MOTOR

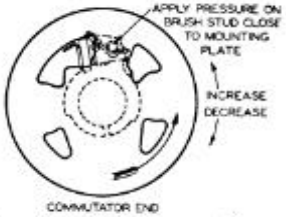


AUTO-LITE No. MAB-4103, MAB-4103A
Drive — Bendix Part No. EBA-29
Free Running Speed — 3700 Min. R.P.M. 60 Max. Amps. 5.5 Volts
Lock Torque (Stalled) — 22.5 Ft. Lbs. 775 Amps. 4.0 Volts
Control — Solenoid Switch

GENERATOR



Third Brush Adjustment



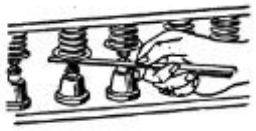
AUTO-LITE No. GEC-4801A
Maximum Output Safe Setting:
Cold — 39 - 42 Amps. 8.0 Volts

Rotation — Clockwise (viewing drive end)
Regulation — Third Brush and Vibrating Voltage Regulator

Regulator No. VRD-4008B (Early) **No. VRR-4001A** (Later) (see reverse side) 3*
Cut-Out Relay — (combined with regulator)
Brush Spring Tension — 53 oz. maximum with new brushes

VALVES

CLEARANCE



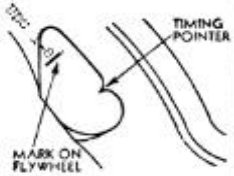
USE NEW FEELER STOCK FOR EACH JOB

Engine Warm

Intake - .006"
Exhaust - .006"

With engine oil and coolant at normal operating temperatures *

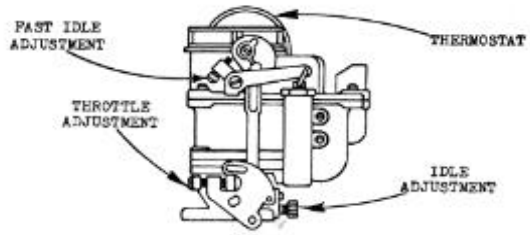
TIMING



Intake Valves open at 10-2/3° before top dead center.

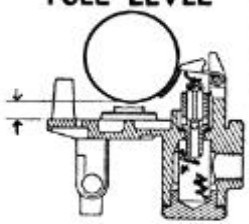
Tappet Lash for timing: .010" (Cold)

CARBURETION



CARTER — Model 455S **TYPE — 1-1/4" Dual Downdraft**
Idle Adjustment — 1/2 to 1-1/2 turns open. Idle at 7M.P.H. or 350 R.P.M. To make richer, turn screw out. 4*
Fixed Jets — Metering Rod - Standard Part No. 75-405
Metering Rod - 1 Size Lean Part No. 75-418
Metering Rod - 2 Sizes Lean Part No. 75-419
Metering Rod - 3 Sizes Lean Part No. 75-420
Metering Rod Jet Assembly Part No. 120-1218
Accelerating Pump — (See reverse side) 5*
Metering Rod Adjustment — (see reverse side) 6*
Climatic Control Adjustment — (see reverse side) 7*
Manifold Heat Control — (see reverse side) 8*

FUEL LEVEL



Float Level — 3/32"
Measure from float to float chamber cover when needle is seated.

ADDITIONAL SPECIFICATIONS

Cooling System —
Capacity — 18 Qts. (U.S. Meas.)
Radiator Gravity Flow — Service
24 Gals. Per Min. (U.S. Meas.)
Thermostat — In cylinder head water outlet
Opens at 155° F.
Temperature Gauge — King-Seeley
Dash Unit No. 8120 (Early)
Dash Unit No. 7755 (Later)
Motor Unit No. 7000
Crankcase — Capacity 7 Qts. refill (U.S.)
Fuel Pump — AC Type AK No. 1523299
TEST: Using AC Fuel Pump Analyzer No. 1521551
CAPACITY - 1 pint or over in 45 seconds
PRESSURE - 4-1/2 lbs. maximum
Air Cleaner — AC Oil-Wetted *
(with silencer) No. 1528161
Gasoline Gauge — King-Seeley
Dash Unit No. 8118 (Early)
Dash Unit No. 7752 (Later)
Tank Unit No. 7550
Speedometer — Stewart-Warner No. 587-D
Inner Core No. 95376 - 61-3/32" Standard
91-3/32" Overdrive

(Continued - 9* - see reverse side)

Printed in U.S.A.

Copyright 1940 Automotive Electric Association

A. E. A. Tune-Up System

IGNITION LOCK

Briggs & Stratton

KEY SERIES	H601 - H1100
KEY BLANK PART NO.	42107
LOCK PART NO.	50184

Form No. HU-30

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number** – On plate on right hand front door hinge pillar.
44,101 and up (Model 44) (U.S.)
47,101 and up (Model 47) (U.S.)

Wheelbase – 118" (Model 44). 125" (Model 47).

Engine Number – Stamped on top of cylinder block between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * **Voltage Regulator** – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the votage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: (VRD-4008B) Circuit breaker closes at 6.4 to 7.0 volts; opens at 1.5 to 4.5 amperes discharge. Voltage regulator operates at 7.35 to 7.65 volts at 70° F.

Test figures: (VRR-4001A) Circuit breaker closes at 6.4 to 6.8 volts; opens at 4.0 to 6.0 amperes discharge. Voltage regulator operates at 7.35 to 7.65 volts at 70° F.

4 * **Fast Idle Adjustment** – Hold choker valve tightly closed and adjust fast idle arm screw to give .016" opening between edge of throttle valve and bore of carburetor side opposite port. Use gauge T109-44.

5 * **Accelerating Pump** – Set to longest stroke for cold weather driving, short stroke for hot weather.

Pump Adjustment – With pump connector link in long stroke (outer) hole in pump arm, and throttle adjustment screw backed out, pump plunger should travel 9/32" from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle. (Use tool T109-75.) Pump travel can be measured by using gauge T109-117S. Difference between reading at wide open and seated throttle should be 18. Projecting portion of indicator should be placed on top surface of lower portion of connector link at pump shaft.

6 * **Metering Rod Adjustment** – Insert one metering rod gauge T109-113 in place of metering rods. Be sure gauge seats in metering rod jet after backing out throttle lever adjusting screw, so that throttle valves seat. Install metering rod pin and pin spring in metering rod arm. Press lightly on vacuum piston link until piston rests in bottom of cylinder. There may be less than .005" clearance between metering rod pin and gauge. With throttle valve seated, bend lip on anti-percolator arm until this clearance is obtained (between metering rod gauge and metering rod pin). Remove gauge and metering rod pin, and install metering rods, discs, spring, pin and pin spring, and hook metering rod spring on metering rods.

7 * **Climatic Control (Choke)** – For average driving and climatic conditions, center index mark on coil housing should be in line with pointer.

8 * **Manifold Heat Control** – Valve operated by thermostatic spring. Make sure valve operates freely.

9 * **Vacuum-Operated Devices** – Windshield Wiper – Trico

Windshield Wiper – Trico – Service Motor SK-62 Linkage 78682-C L.H.
Linkage 78683-C R.H.

Recommended Tire Pressure – Cold – 28 lbs. front – 30 lbs. rear

Battery Cables and Wiring – Battery to Ground Cable – Length 7"; Gauge No. 2.
Battery to Switch Cable – Length 38"; Gauge No. 0.

NOTE: Proper tools and equipment are essential in order to perform accurate work and restore original performance.

1 9 4 1 Hudson

Hudson Six - Series 10, 18
Hudson Six - Series 11, 12
Hudson Eight - Series 14, 15, 17

HUDSON Six 1941

Series 10, 18

Serial No. (see reverse side) U.S. * *

A.E.A. TUNE-UP SYSTEM

Standards of Adjustment
Automotive Electric Association

Issued November 1941

Form No. HU-31

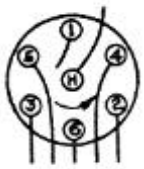
IGNITION

SPARK PLUGS

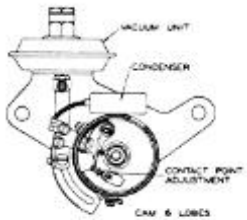
Size 14mm. **Gap** .032"
Original Equipment
Champion Type J-9

For Cooler or Hotter Type See Manufacturer's Chart *

DISTRIBUTOR



Auto-Lite
No. IGW-4203A
Firing Order
1-5-3
6-2-4



Breaker-Arm Spring

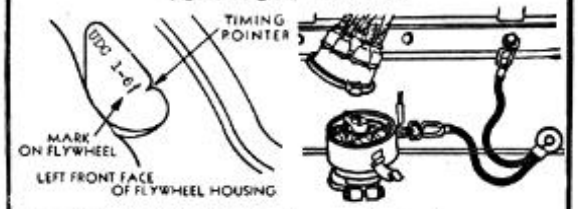
Breaker Contact Gap – .020" **Cam Angle** – 35°
Condenser – Part No. IGW-3075C **Capacity** – .20 – .25 Mfds.
Rotation – Counterclockwise (viewed from top of distributor)
Adjustment – Loosen screw connecting vacuum linkage to base
Vacuum Control – No. VC-3060ES. 5.75" – 7.75" hg. to start plunger travel; 6.5° – 8.5° distributor advance at 10" hg.-max.
Automatic Advance – Full Automatic – Start 0° at 400 R.P.M.; Intermediate 7° at 1100 R.P.M.; Maximum 11.6° at 1570 R.P.M. (Distributor degrees at distributor R.P.M.)

COIL

Auto-Lite
No. IG-4098

Servicing Coil
No. IG-4098

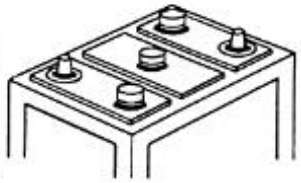
IGNITION TIMING



Use Timing Light – Breaker contacts to open for No. 1 cylinder when mark "UDC 1-6" on flywheel is 1/2" ahead of pointer on the inspection hole. (see reverse side) 3*

STARTING & LIGHTING

BATTERY

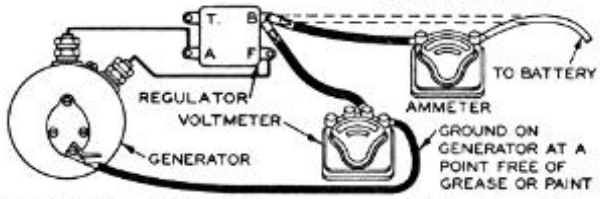


NATIONAL – Type HT-17
Capacity – 98 Amp. Hour (20 hr. rate)
Location – On left side of engine compartment.
Ground – Positive terminal grounded.

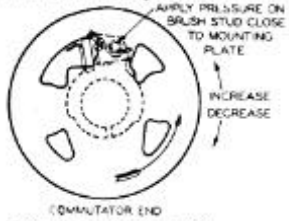
STARTING MOTOR

AUTO-LITE No. MZ-4092
Drive – L.H. Inboard Bendix – No. EBA-29
Free Running Speed – 4300 Min. R.P.M. 70 Max. Amps. 5.5 Volts
Lock Torque (Stalled) – 11.8 Ft. Lbs. 560 Amps. 4.0 Volts
Control – Solenoid Switch No. SS-4001

GENERATOR



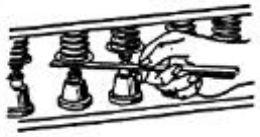
Third Brush Adjustment



AUTO-LITE No. GDS-4801A
Rotation – Clockwise (viewing drive end)
Regulation – Third Brush and Vibrating Voltage Regulator
Maximum Output Safe Setting:
Cold – 32 – 34 Amps. 8.0 Volts
Regulator No. VRR-4001A (see reverse side) 4*
Cut-Out Relay – (combined with regulator)
Brush Spring Tension – 53 oz. maximum with new brushes

VALVES

CLEARANCE



USE NEW FEELER STOCK FOR EACH JOB

Engine Warm

Up to car No. 106848
Intake – .006"
Exhaust – .008"

After car No. 106848
Intake – .010"
Exhaust – .012"

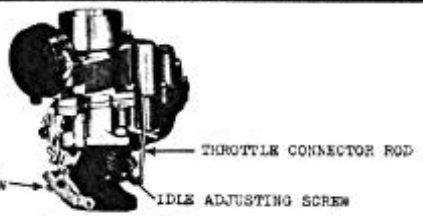
With engine oil and coolant at normal operating temperatures *

TIMING

Previous to car No. 106848, intake valves open 10-2/3° before top dead center. After car No. 106848, inlet valves open 26-1/2° before top dead center.

Tappet Lash for timing: .010" (Cold)

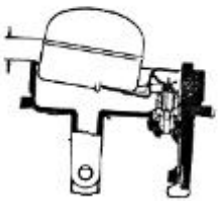
CARBURETION



Casting No. 298 on Face of Flange

CARTER – Model 454S 5* **TYPE – 1-1/4" Single Downdraft**
Idle Adjustment – 3/4 to 1-1/2 turns open. Idle at 7-1/2 M.P.H. or 350 R.P.M. To make richer, turn screw out. 6*
Fixed Jets – Metering Rod – Standard Part No. 75-407
Metering Rod – 1 Size Lean Part No. 75-410
Metering Rod – 2 Sizes Lean Part No. 75-411
Metering Rod – 3 Sizes Lean Part No. 75-412
Metering Rod Jet Assembly Part No. 120-178
Accelerating Pump – (see reverse side) 7*
Metering Rod Adjustment – (see reverse side) 8*
Manifold Heat Control – (see reverse side) 9*

FUEL LEVEL



Float Level – 3/8" remove cork gasket. Measure from float (at free end) to float chamber cover when needle is seated.

ADDITIONAL SPECIFICATIONS

Cooling System –
Capacity – 13 Qts. (U.S. Meas.)
Radiator Gravity Flow – Service
21 Gals. Per Min. (U.S. Meas.)
Thermostat – In cylinder head water outlet Starts to open at 150° – 155° F. Fully open at 185° F.
Temperature Gauge – King-Seeley
Dash Unit No. 8310
Motor Unit No. 7000
Crankcase – Capacity 4-1/2 Qts. refill (U.S.)
Fuel Pump – (Model 10)
AC Type AF No. 1523753
TEST: Using AC Fuel Pump Analyzer No. 1521551
CAPACITY – 1 pint or over in 1 minute
PRESSURE – 3-1/2 lbs. maximum
(Model 18)
AC Type AK No. 1523289
TEST: Using AC Fuel Pump Analyzer No. 1521551
CAPACITY – 1 pint or over in 45 seconds
PRESSURE – 4-1/2 lbs. maximum
Air Cleaner – AC Oil-Wetted (with silencer) No. 1528159

(Continued – 10* – see reverse side)

Printed in U.S.A.

Copyright 1941 Automotive Electric Association

A. E. A. Tune-Up System

Briggs & Stratton

KEY SERIES	HG01 – H1100
KEY BLANK PART NO.	42755
LOCK PART NO.	50184

Form No. HU-31

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number** – On plate on right hand front door hinge pillar.
Series 10 – 10,101 and up (U.S.).
Series 18 – 18,101 and up (U.S.).

Wheelbase – Series 10 – 116".
Series 18 – 128".

Engine Number – Stamped on top of cylinder block left hand side between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * **Ignition Timing** – When Ethyl or premium gasoline, with an octane rating of 80 or higher, is used or in high altitudes, a more advanced setting may be used. At proper timing under these conditions, a slight "ping" should be noted at between 10 to 15 M.P.H. when accelerating with wide open throttle from 8 M.P.H. However, timing should never be advanced so that pointer is more than 1" ahead of the "UDC 1-5" mark on flywheel.

4 * **Voltage Regulator** – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: Circuit breaker closes at 6.4 to 7.0 volts; opens at 2.0 to 6.0 amperes discharge. Voltage regulator operates at 7.1 to 7.4 volts at 110° F.

5 * **Carburetor** – Carter 501S used on cars with optional 3" x 5" engine. (see opposite column for specifications)

6 * **Fast Idle Adjustment** – With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just seats against cam. Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw. There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve. (Use tool T109-85.) Adjustment can be made by bending at offset portion of fast idle link. (Use tool T109-41.)

7 * **Accelerating Pump** – Set to longest stroke for cold weather, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment – With throttle valve seated and connector link in place (short stroke: hole nearest countershaft), pump plunger should travel 3/16" from closed to wide open position. Adjustment should be made by bending throttle connector rod at lower angle. Pump travel can be measured by using universal pump stroke gauge T109-117S by placing base of gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft. Hold gauge vertical. The difference between the number shown by index mark on gauge, at wide open and closed positions, should be 12.

8 * **Metering Rod Adjustment** – Correct setting of metering rod is important and must be made after pump adjustment. Insert gauge (tool T109-102) in place of metering rod, seating tapered end in metering rod jet. Hold gauge vertical to insure seating. With throttle valve seated, press down lightly on piston link directly over piston. There should be less than .005" clearance between metering rod pin and shoulder in notch of gauge. Gauge must not drag on pin. Adjustment can be made by bending lip on piston link so that it contacts pump arm. (Use tool T109-105.) Remove gauge and install metering rod and disk. Connect metering rod and spring.

9 * **Manifold Heat Control** – For normal operation, set at "W" position.

10 * **Gasoline Gauge** – King-Seeley
Dash Unit No. 8305
Tank Unit No. 7550

Speedometer – Stewart-Warner No. 587-G
Inner Core (Series 10) No. 96926 – 65-13/16" (Standard), 71-13/16" (Overdrive)
Inner Core (Series 18) No. 96926 – 87-13/16"

Windshield Wiper – Trico
Service Motor No. 88M-103

Recommended Tire Pressure –
16" x 5.50" – Front and Rear – 32 lbs. cold, 35 lbs. hot
16" x 6.00" – Front – 26 lbs. cold – 29 lbs. hot
Rear – 30 lbs. cold – 33 lbs. hot

Battery Cables and Wiring – Battery to Ground Cable – Length 7"; Gauge No. 1.
Battery to Switch Cable – Length 33"; Gauge No. 0.

CARBURETOR

CARTER – 501S **TYPE – 1" Dual Downdraft**
(used on 3" x 5" engines)

Idle Adjustment – 1/2 to 1-1/2 turns open. Idle at 7-1/2 M.P.H. To make richer, turn screw out.

Fast Idle Adjustment – With choker valve tightly closed and fast idle screw on upper step of fast idle cam, adjust screw to give .045" opening between edge of throttle valve and bore of carburetor side opposite port.

Fixed Jets –

Metering Rod – Standard	Part No. 76-467
Metering Rod – 1 Size Lean	Part No. 76-474
Metering Rod – 2 Sizes Lean	Part No. 76-475
Metering Rod Jet Assembly	Part No. 120-658

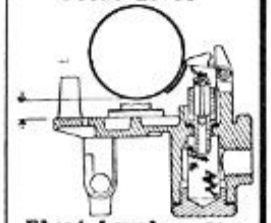
Pump Adjustment – With pump connector link in long stroke (outer) hole in pump arm, and throttle adjustment screw backed out, pump plunger should travel 9/32" from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle. (Use tool T109-75.) Pump travel can be measured by using gauge T109-117S. Difference between reading at wide open and seated throttle should be 18. Projecting portion of indicator should be placed on top surface of lower portion of connector link at pump shaft.

Metering Rod Adjustment –

(1) Insert one metering rod gauge T109-113 in place of metering rods. Be sure gauge seats in metering rod jet after backing out throttle lever adjusting screw, so that throttle valves seat.
(2) Install metering rod pin and pin spring in metering rod arm.
(3) Press lightly on vacuum piston link until piston rests in bottom of cylinder. There may be less than .005" clearance between metering rod pin and gauge.
(4) With throttle valve seated, bend lip on anti-percolator arm until this clearance is obtained (between metering rod gauge and metering rod pin).
(5) Remove gauge and metering rod pin, and install metering rods, discs, spring, pin and pin spring and hook metering rod spring on metering rods.

Climatic Control Adjustment – For average driving and climatic conditions, center index mark on coil housing should be set one point lean.

Float Level



Float Level – Distance from float to bowl cover, when needle is seated, to be 1/8".

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.

HUDSON Six 1941
Series 11, 12

Serial No. (see reverse side) U.S. * *

A. E. A. TUNE-UP SYSTEM

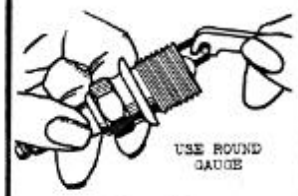
Standards of Adjustment
Automotive Electric Association

Issued November 1941

Form No. HU-32

IGNITION

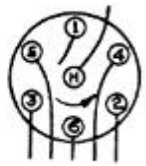
SPARK PLUGS



Size 14mm.
Gap .032"
Original Equipment
Champion Type J-9

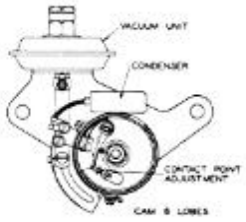
For Cooler or Hotter Type See Manufacturer's Chart *

DISTRIBUTOR



Auto-Lite
No. IGW-4203A

Firing Order
1-5-3
6-2-4



Breaker-Arm Spring

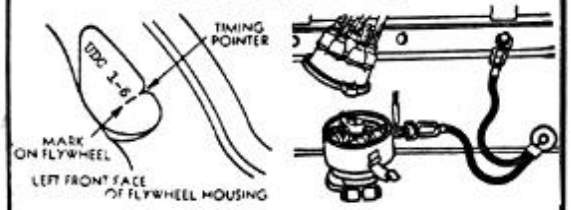
Breaker Contact Gap – .020"
Condenser – Part No. IGW-3075C **Capacity** – .20 – .25 Mfds.
Rotation – Counterclockwise (viewed from top of distributor)
Adjustment – Loosen screw connecting vacuum linkage to base
Vacuum Control – No. VC-3060ES. 5.75" – 7.75" hg. to start plunger travel; 8.5° – 8.5° distributor advance at 10" hg. – max.
Automatic Advance – Full Automatic – Start 0° at 400 R.P.M.; Intermediate 7° at 1100 R.P.M.; Maximum 11.8° at 1570 R.P.M. (Distributor degrees at distributor R.P.M.)

COIL

Auto-Lite
No. IG-4098

Servicing Coil
No. IG-4098

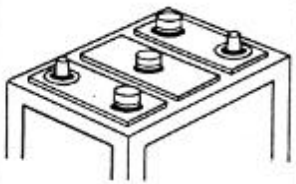
IGNITION TIMING



Use Timing Light – Breaker contacts to open for No. 1 cylinder when mark "UDC 1-6" on flywheel is 1/2" ahead of pointer on the inspection hole. (see reverse side) 3*

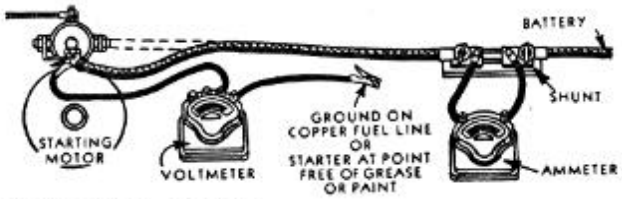
STARTING & LIGHTING

BATTERY



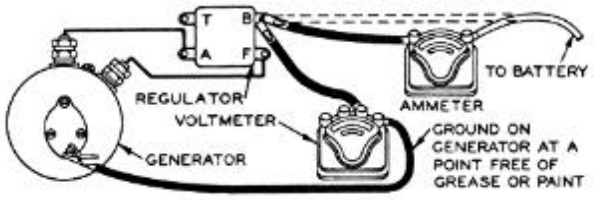
NATIONAL – Type HT-17
Capacity – 96 Amp. Hour (20 hr. rate)
Location – On left front side of engine compartment.
Ground – Positive terminal grounded.

STARTING MOTOR

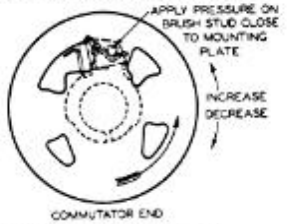


AUTO-LITE No. MZ-4092
Drive – L.H. Inboard Bendix No. EBA-29
Free Running Speed – 4300 Min. R.P.M. 70 Max. Amps. 5.5 Volts
Lock Torque (Stalled) – 11.8 Ft. Lbs. 560 Amps. 4.0 Volts
Control – Solenoid Switch Part No. SS-4001

GENERATOR



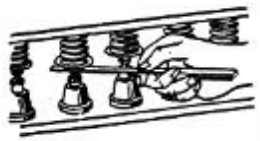
Third Brush Adjustment



AUTO-LITE No. GEC-4801A
Rotation – Clockwise (viewing drive end)
Regulation – Third Brush and Vibrating Voltage Regulator
Maximum Output Safe Setting:
Cold – 39 – 43 Amps. 8.0 Volts
Regulator No. VRR-4001A (see reverse side) 4*
Cut-Out Relay – (combined with regulator)
Brush Spring Tension – 53 oz. maximum with new brushes

VALVES

CLEARANCE



Engine Warm

Intake – .006"
Exhaust – .006"

With engine oil and coolant at normal operating temperatures*

TIMING

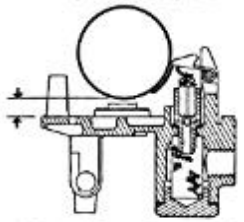
Intake Valves open at 10-2/3° before top dead center.

Tappet Lash for timing: .010" (Cold)

CARBURETION

CARTER – Model 501S **TYPE – 1" Dual Downdraft**
Idle Adjustment – 1/2 to 1-1/2 turns open. Idle at 7-1/2 M.P.H. or 600 R.P.M. To make richer, turn screw out. 5*
Fixed Jets – Metering Rod – Standard Part No. 75-467
Metering Rod – 1 Size Lean Part No. 75-474
Metering Rod – 2 Sizes Lean Part No. 75-475
Metering Rod – 3 Sizes Lean Part No. 75-476
Metering Rod Jet Assembly Part No. 120-858
Accelerating Pump – (see reverse side) 6*
Metering Rod Adjustment – (see reverse side) 7*
Climatic Control – 0* **Manifold Heat Control** – 9*

FUEL LEVEL



Float Level – 1/8" from float to bowl cover when needle is seated.

ADDITIONAL SPECIFICATIONS

Cooling System –
Capacity – 13 Qts. (U.S. Meas.)
Radiator Gravity Flow – Service 21 Gals. Per Min. (U.S. Meas.)
Thermostat – In cylinder head water outlet Starts to open at 150° – 155° F. Fully open at 185° F.
Temperature Gauge – King-Seeley
Dash Unit No. 8310
Motor Unit No. 7000
Crankcase – Capacity 4-1/2 Qts. refill (U.S.)
Fuel Pump – AC Type AK No. 1523289
TEST: Using AC Fuel Pump Analyzer No. 1521551
CAPACITY – 1 pint or over in 45 seconds
PRESSURE – 4-1/2 lbs. maximum
Air Cleaner – AC Oil-Wetted (with silencer) No. 1528161
Gasoline Gauge – King-Seeley
Dash Unit No. 8305
Tank Unit No. 7550
Speedometer – Stewart-Warner No. 587-G
Inner Core No. 96926 – 65-13/16" (Standard) 71-13/16" (Overdrive)
Windshield Wiper – Trico
Service Motor No. SSM-103

(Continued – 10* – see reverse side)

Printed in U.S.A.

Copyright 1941 Automotive Electric Association

A. E. A. Tune-Up System

IGNITION LOCK

Briggs & Stratton

KEY SERIES	H601 - H1100
KEY BLANK PART NO.	42755
LOCK PART NO.	50184

Form No. HU-32

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

*** * Serial Number** – On plate on right hand front door hinge pillar.
11,101 and up (Series 11) (U.S.).
12,101 and up (Series 12) (U.S.).

Wheelbase – 121".

Engine Number – Stamped on top of cylinder block left hand side between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * Ignition Timing – When Ethyl or premium gasoline, with an octane rating of 80 or higher, is used or in high altitudes, a more advanced setting may be used. At proper timing under these conditions, a slight "ping" should be noted at between 10 to 15 M.P.H. when accelerating with wide open throttle from 8 M.P.H. However, timing should never be advanced so that pointer is more than 1" ahead of the "UDC 1-6" mark on flywheel.

4 * Voltage Regulator – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: Circuit breaker closes at 6.4 to 7.0 volts; opens at 2.0 to 6.0 amperes discharge. Voltage regulator operates at 7.1 to 7.4 volts at 110°F.

5 * Fast Idle Adjustment – With choker valve tightly closed and fast idle screw on upper step of fast idle cam, adjust screw to give .045" opening between edge of throttle valve and bore of carburetor side opposite port.

6 * Accelerating Pump – Set to longest stroke for cold weather, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment – With pump connector link in long stroke (outer) hole in pump arm, and throttle adjustment screw backed out, pump plunger should travel 9/32" from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle. (Use tool T109-75.) Pump travel can be measured by using gauge T109-117S. Difference between reading at wide open and seated throttle should be 18. Projecting portion of indicator should be placed on top surface of lower portion of connector link at pump shaft.

7 * Metering Rod Adjustment –

(1) Insert one metering rod gauge T109-113 in place of metering rods. Be sure gauge seats in metering rod jet after backing out throttle lever adjusting screw, so that throttle valves seat.
(2) Install metering rod pin and pin spring in metering rod arm.
(3) Press lightly on vacuum piston link until piston rests in bottom of cylinder. There may be less than .005" clearance between metering rod pin and gauge.
(4) With throttle valve seated, bend lip on anti-percolator arm until this clearance is obtained (between metering rod gauge and metering rod pin).
(5) Remove gauge and metering rod pin, and install metering rods, discs, spring, pin and pin spring and hook metering rod spring on metering rods.

8 * Climatic Control Adjustment – For average driving and climatic conditions, center index mark on coil housing should be set one point lean.

9 * Manifold Heat Control – Thermostatically controlled. See that valve operates freely.

10 * Recommended Tire Pressure – Front – 28 lbs. cold – 30 lbs. hot
Rear – 30 lbs. cold – 33 lbs. hot

Battery Cables and Wiring – Battery to Ground Cable – Length 7"; Gauge No. 1. Battery to Switch Cable – Length 38"; Gauge No. 0.

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.

HUDSON Eight 1941

Series 14, 15, 17

Serial No. (see reverse side) U.S. * *

A.I.A. TUNE-UP SYSTEM

Standards of Adjustment
Automotive Electric Association

Issued November 1941

Form No. HU-33

IGNITION

SPARK PLUGS

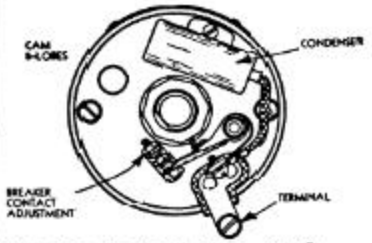
Size 14mm.
Gap .032"
Original Equipment
Champion Type J-9

For Cooler or Hotter Type See Manufacturer's Chart *

DISTRIBUTOR

Auto-Lite
No. IGP-4008A

Firing Order
1-6-2-5
8-3-7-4



Breaker Contact Gap – .017"

Condenser – Part No. IG-2671

Rotation – Clockwise (viewed from top of distributor)

Adjustment – Loosen hold down arm clamp screw

Automatic Advance – Full Automatic – Start 0° at 300 R.P.M.; Intermediate 6° at 850 R.P.M.; Maximum 17.6° at 1700 R.P.M. (Distributor degrees at distributor R.P.M.)

Breaker-Arm Spring

Cam Angle – 31°

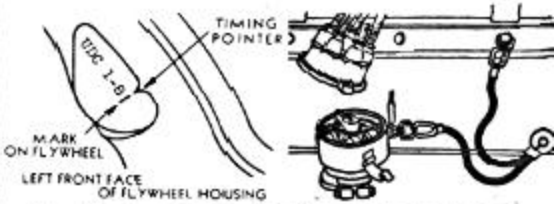
Capacity – .20 – .25 Mfds.

COIL

Auto-Lite
No. CE-4029

Servicing Coil
No. CE-4029

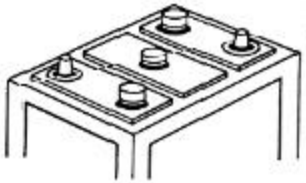
IGNITION TIMING



Use Timing Light – Breaker contacts to open for No. 1 cylinder at upper dead center, when mark on flywheel is opposite pointer on rear engine support plate.

STARTING & LIGHTING

BATTERY



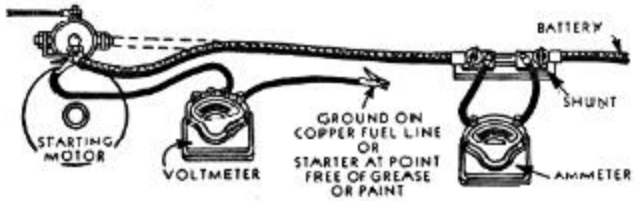
NATIONAL – Type HT-19

Capacity – 108 Amp. Hour (20 hr. rate)

Location – On left front side of engine compartment.

Ground – Positive terminal grounded.

STARTING MOTOR



AUTO-LITE No. MAB-4100

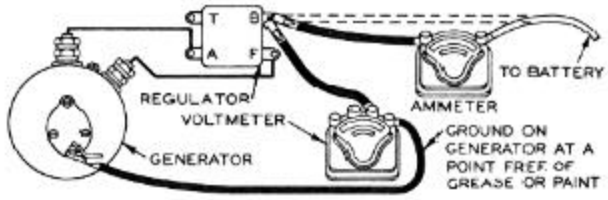
Drive – L.H. Inboard Bendix Part No. EBA-29

Free Running Speed – 3700 Min. R.P.M. 60 Max. Amps. 5.5 Volts

Lock Torque (Stalled) – 22.5 Ft. Lbs. 775 Amps. 4.0 Volts

Control – Solenoid Switch Part No. SS-4001

GENERATOR



AUTO-LITE No. GEC-4801A

Maximum Output Safe Setting:
Cold – 39 – 43 Amps. 8.0 Volts

Regulator No. VRR-4001A (see reverse side) 8*

Cut-Out Relay – (combined with regulator)

Brush Spring Tension – 53 oz. maximum with new brushes

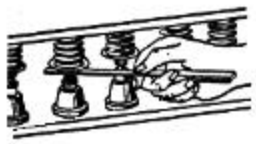
Third Brush Adjustment

Rotation – Clockwise (viewing drive end)

Regulation – Third Brush and Vibrating Voltage Regulator

VALVES

CLEARANCE



Engine Warm

Intake – .006"
Exhaust – .006"

With engine oil and coolant at normal operating temperatures*

TIMING

Intake Valves open at 10-2/3° before top dead center.

Tappet Lash for timing: .010" (Cold)

CARBURETION

CARTER – Model 502S TYPE – 1-1/4" Dual Downdraft

Idle Adjustment – 1/2 to 1-1/2 turns open. Idle at 7-1/2 M.P.H. or 600 R.P.M. To make richer, turn screw out. 4*

Fixed Jets – Metering Rod – Standard Part No. 75-466
Metering Rod – 1 Size Lean Part No. 75-478
Metering Rod – 2 Sizes Lean Part No. 75-479
Metering Rod – 3 Sizes Lean Part No. 75-480
Metering Rod Jet Assembly Part No. 120-1218

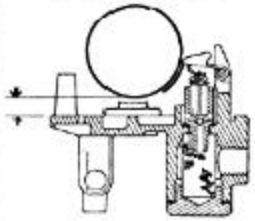
Accelerating Pump – (see reverse side) 5*

Metering Rod Adjustment – (see reverse side) 6*

Climatic Control Adjustment – (see reverse side) 7*

Manifold Heat Control – (see reverse side) 8*

FUEL LEVEL



Float Level – 1/8"

Measure from float to float chamber cover when needle is seated.

ADDITIONAL SPECIFICATIONS

Cooling System –
Capacity – 18 Qts. (U.S. Meas.)
Radiator Gravity Flow – Service 23-1/2 Gals. Per Min. (U.S. Meas.)
Thermostat – In cylinder head water outlet Starts to open at 150° – 158° F. Fully open at 185° F.
Temperature Gauge – King-Seeley
Dash Unit No. 8310
Motor Unit No. 7000

Crankcase – Capacity 7 Qts. refill (U.S.)

Fuel Pump – AC Type AK No. 1523909
TEST: Using AC Fuel Pump Analyzer No. 1521551
CAPACITY – 1 pint or over in 45 seconds
PRESSURE – 4-1/2 lbs. maximum

Air Cleaner – AC Oil-Wetted (with Silencer) No. 1528161

Gasoline Gauge – King-Seeley
Dash Unit No. 8406
Tank Unit No. 7550

Speedometer – Stewart-Warner No. 587-C
Inner Core No. 96926 – 65-13/16" (Standard) 71-13/16" (Overdrive)

Windshield Wiper – Trico
Service Motor No. 83M-103

(Continued – 9* – see reverse side)

Copyright 1941 Automotive Electric Association

A. E. A. Tune-Up System

IGNITION LOCK

Briggs & Stratton

KEY SERIES	H601 – H1100
KEY BLANK PART NO.	42755
LOCK PART NO.	50184

Form No. HU-33

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number** – On plate on right hand front door hinge pillar.
14,101 and up (Series 14) (U.S.).
15,101 and up (Series 15) (U.S.).
17,101 and up (Series 17) (U.S.).

Wheelbase – 121" (Series 14 and 15).
128" (Series 17).

Engine Number – Stamped on top of cylinder block between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * **Voltage Regulator** – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: Circuit breaker closes at 6.4 to 7.0 volts; opens at 2.0 to 6.0 amperes discharge. Voltage regulator operates at 7.1 to 7.4 volts at 110°F.

4 * **Fast Idle Adjustment** – With choker valve tightly closed and fast idle screw on upper step of fast idle cam, adjust screw to give .053" opening between edge of throttle valve and bore of carburetor side opposite port.

5 * **Accelerating Pump** – Set to longest stroke for cold weather driving, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment – With pump connector link in long stroke (outer) hole in pump arm, and throttle adjustment screw backed out, pump plunger should travel 9/32" from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle. (Use tool T109-75.) Pump travel can be measured by using gauge T109-117S. Difference between reading at wide open and seated throttle should be 18. Projecting portion of indicator should be placed on top surface of lower portion of connector link at pump shaft.

6 * **Metering Rod Adjustment** –

(1) Insert one metering rod gauge T109-113 in place of metering rods. Be sure gauge seats in metering rod jet after backing out throttle lever adjusting screw, so that throttle valves seat.
(2) Install metering rod pin and pin spring in metering rod arm.
(3) Press lightly on vacuum piston link until piston rests in bottom of cylinder. There may be less than .005" clearance between metering rod pin and gauge.
(4) With throttle valve seated, bend lip on anti-percolator arm until this clearance is obtained (between metering rod gauge and metering rod pin).
(5) Remove gauge and metering rod pin, and install metering rods, discs, spring, pin and pin spring and hook metering rod spring on metering rods.

7 * **Climatic Control Adjustment** – For average driving and climatic conditions, center index mark on coil housing should be set one point lean.

8 * **Manifold Heat Control** – Valve operated by thermostatic spring. Make sure valve operates freely.

9 * **Recommended Tire Pressure** – Front – 26 lbs. cold – 29 lbs. hot
Rear – 30 lbs. cold – 33 lbs. hot

Battery Cables and Wiring – Battery to Ground Cable – Length 7"; Gauge No. 1.
Battery to Switch Cable – Length 38"; Gauge No. 0.

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

1 9 4 2 Hudson

Hudson Six - Series 20 Traveler & Deluxe
Hudson Six - Series 21 (Super), 22 (Commodore 6)
Hudson Eight - Series 24, 25, 27 (Commodore 8)

HUDSON Six 1942

Series 20 Traveler and De Luxe

Serial No. 20-101 and up (U.S.) * *

A. E. A. TUNE-UP SYSTEM

Standards of Adjustment

Automotive Electric Association

Issued April 1943

Form No. HU-34

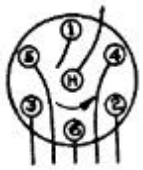
IGNITION

SPARK PLUGS

Size 14mm.
Gap .030" - .032"
Original Equipment
Champion Type J-9

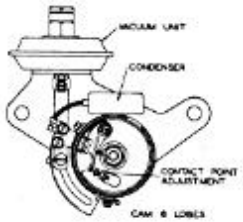
For Cooler or Hotter Type See Manufacturer's Chart *

DISTRIBUTOR



Auto-Lite
No. IGW-4203A

Firing Order
1-5-3
6-2-4



Breaker-Arm Spring

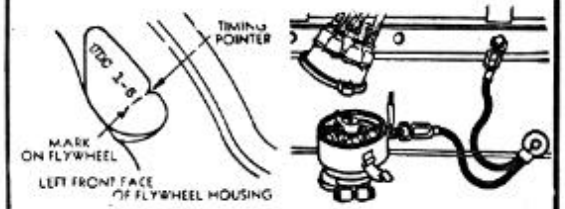
Breaker Contact Gap – .020"
Condenser – Part No. IGW-3075C
Rotation – Counterclockwise (viewed from top of distributor)
Adjustment – Loosen screw connecting vacuum linkage to base
Vacuum Control – No. VC-3060E3, 5.75" - 7.75" hg. to start plunger travel; 6.5° - 8.5° distributor advance at 10" hg. - max.
Automatic Advance – Full Automatic - Start 0° at 400 R.P.M.; Intermediate 7° at 1100 R.P.M.; Maximum 11.8° at 1570 R.P.M. (Distributor degrees at distributor R.P.M.
Cam Angle – 35°
Capacity – .20 - .25 Mfds.

COIL

Auto-Lite
No. IG-4098

Servicing Coil
No. IG-4098

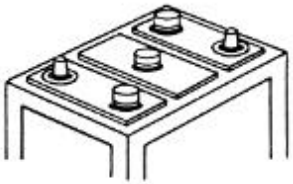
IGNITION TIMING



Use Timing Light – Breaker contacts to open for No. 1 cylinder when mark "UDC 1-6" on flywheel is 1/2" ahead of pointer on the inspection hole. (see reverse side) 3*

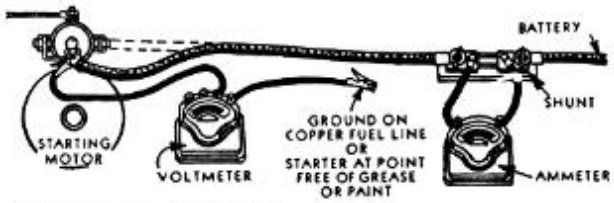
STARTING & LIGHTING

BATTERY



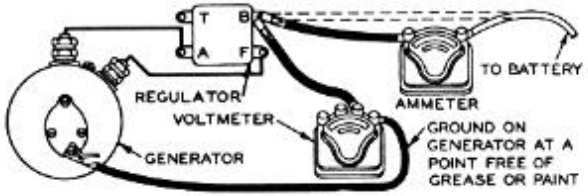
NATIONAL – Type HT-17
Capacity – 96 Amp. Hour (20 hr. rate)
Location – On left side of engine compartment.
Ground – Positive terminal grounded.

STARTING MOTOR

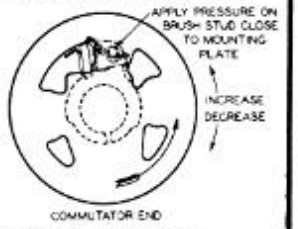


AUTO-LITE No. MZ-4092
Drive – L. H. Inboard Bendix - No. EBA-29
Free Running Speed – 4300 Min. R.P.M. 70 Max. Amps. 5.5 Volts
Lock Torque (Stalled) – 11.8 Ft. Lbs. 580 Amps. 4.0 Volts
Control – Solenoid Switch No. SS-4001

GENERATOR



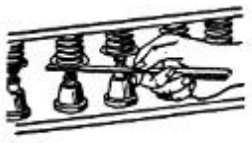
Third Brush Adjustment



AUTO-LITE No. GDS-4801A
Maximum Output Safe Setting:
Cold - 32 - 34 Amps. 8.0 Volts
Regulator No. VRR-4001A (see reverse side) 4*
Cut-Out Relay – (combined with regulator)
Brush Spring Tension – 53 oz. maximum with new brushes
Rotation – Clockwise (viewing drive end)
Regulation – Third Brush and Vibrating Voltage Regulator

VALVES

CLEARANCE



Engine Warm

Intake - .010"

Exhaust - .012"

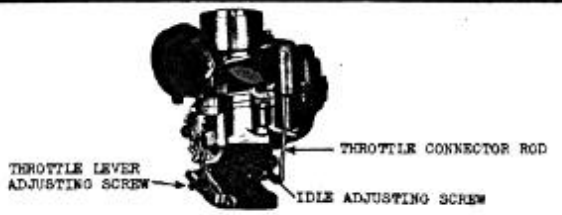
With engine oil and coolant at normal operating temperatures *

TIMING

Inlet Valves open 28-1/2° before top dead center.

Tappet Lash for timing: .010" (Cold)

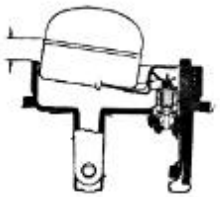
CARBURETION



Casting No. 298 on Face of Flange

CARTER – Model 454S **TYPE – 1-1/4" Single Downdraft**
Idle Adjustment – 3/4 to 1-1/2 turns open. Idle at 7 to 8 M.P.H. To make richer, turn screw out. 5*
Fixed Jets – Metering Rod – Standard Part No. 75-407
Metering Rod – 1 Size Lean Part No. 75-410
Metering Rod – 2 Sizes Lean Part No. 75-411
Metering Rod – 3 Sizes Lean Part No. 75-412
Metering Rod Jet Assembly Part No. 120-178
Accelerating Pump – (see reverse side) 6*
Metering Rod Adjustment – (see reverse side) 7*
Manifold Heat Control – (see reverse side) 8*

FUEL LEVEL



Float Level – 3/8" remove cork gasket. Measure from float (at free end) to float chamber cover when needle is seated.

ADDITIONAL SPECIFICATIONS

Cooling System –
Capacity – 13 Qts. (U.S. Meas.)
Radiator Gravity Flow – Service – 21 Gals. Per Min. (U.S. Meas.)
Thermostat – In cylinder head water outlet Starts to open at 150° - 155° F. Fully open at 185° F.
Temperature Gauge – King-Seeley Dash Unit No. 8310 Motor Unit No. 7000
Crankcase – Capacity 4-1/2 Qts. (refill) (U.S.)
Fuel Pump – AC Type AF No. 1523753
TEST: Using AC Fuel Pump Analyzer No. 1521551
CAPACITY – 1 pint or over in 1 minute
PRESSURE – 3-1/2 lbs. maximum
Air Cleaner – AC Oil-Wetted (with silencer) No. 1528159
Gasoline Gauge – King-Seeley Dash Unit No. 8305 Tank Unit No. 7550
Ammeter – King-Seeley No. 40175
Speedometer – Stewart-Warner No. 587-G Inner Core No. 96926 - 65-13/16" 71-13/16" Overdrive

(Continued – 9* – see reverse side)

Printed in U.S.A.

Copyright 1943 Automotive Electric Association

A. E. A. Tune-Up System

IGNITION LOCK

Briggs & Stratton

KEY SERIES	H601 – H1100
KEY BLANK PART NO.	42107
LOCK PART NO.	50184

Form No. HU-34

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number** – On plate on right hand front door hinge pillar. 20-101 and up (U.S.).

Wheelbase – 116".

Engine Number – Stamped on top of cylinder block left hand side between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * **Ignition Timing** – When Ethyl or premium gasoline, with an octane rating of 80 or higher is used, or in high altitudes, a more advanced setting may be used. At proper timing under these conditions, a slight "ping" should be noted at between 10 to 15 M.P.H. when accelerating with wide open throttle from 8 M.P.H. However, timing should never be advanced so that pointer is more than 1" ahead of the "UDC 1-6" mark on flywheel.

4 * **Voltage Regulator** – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: Circuit breaker closes at 6.4 to 6.6 volts; opens at 4.0 to 6.0 amperes discharge. Voltage regulator operates at 7.1 to 7.4 volts at 110° F.

5 * **Fast Idle Adjustment** – With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just seats against cam. Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw. There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve. (Use tool T109-85.) Adjustment can be made by bending at offset portion of fast idle link. (Use tool T109-41.)

6 * **Accelerating Pump** – Set to longest stroke for cold weather, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment – With throttle valve seated and connector link in place (short stroke: hole nearest countershaft), pump plunger should travel 3/16" from closed to wide open position. Adjustment should be made by bending throttle connector rod at lower angle. Pump travel can be measured by using universal pump stroke gauge T109-117S by placing base of gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft. Hold gauge vertical. The difference between the number shown by index mark on gauge, at wide open and closed positions, should be 12.

7 * **Metering Rod Adjustment** – Correct setting of metering rod is important and must be made after pump adjustment. Insert gauge (tool No. T109-102) in place of metering rod, seating tapered end in metering rod jet. Hold gauge vertical to insure seating. With throttle valve seated, press down lightly on piston link directly over piston. There should be less than .005" clearance between metering rod pin and shoulder in notch of gauge. Gauge must not drag on pin. Adjustment can be made by bending lip on piston link so that it contacts pump arm. (Use tool T109-105.) Remove gauge and install metering rod and disk. Connect metering rod and spring.

8 * **Manifold Heat Control** – For normal operation, set at "W" position. Make sure valve operates freely.

9 * **Windshield Wiper** – Trico

Service Motor No. SSM-103 (closed)
Wiper Arm (Both Sides) – 79070 7-3/4" c
Wiper Blade (Both Sides) – P-778 8-3/4" c
Service Motor No. SSM-103 (convertible)
Wiper Arm (Both Sides) – 79070 8" c
Wiper Blade (Both Sides) – P-778 8-1/4" c

Recommended Tire Pressure –
16" x 5.50" – Front and Rear – 32 lbs. cold, 35 lbs. hot.
16" x 6.00" – Front – 26 lbs. cold, 29 lbs. hot
Rear – 30 lbs. cold, 33 lbs. hot

Battery Cables and Wiring – Battery to Ground Cable – Length 7"; Gauge No. 1. Battery to Switch Cable – Length 33"; Gauge No. 0.

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.

HUDSON Six 1942

Series 21 – Super
Series 22 – Commodore

Serial No. (see reverse side) U.S. * *

A.E.A. TUNE-UP SYSTEM

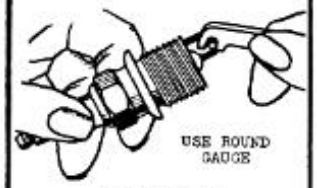
Standards of Adjustment
Automotive Electric Association

Issued April 1943

Form No. HU-35

IGNITION

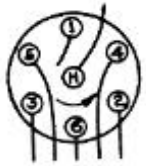
SPARK PLUGS



Size 14mm.
Gap .030" – .032"
Original Equipment
Champion Type J-9

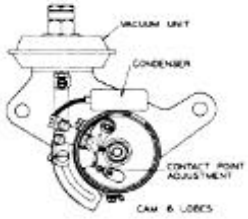
For Cooler or Hotter Type See Manufacturer's Chart *

DISTRIBUTOR



Auto-Lite
No. IGW-4203A

Firing Order
1-5-3
6-2-4



Breaker-Arm Spring

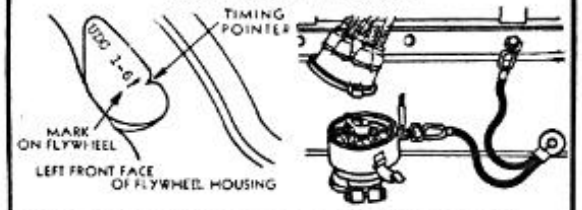
Breaker Contact Gap – .020"
Condenser – Part No. IGW-3075C
Rotation – Counterclockwise (viewed from top of distributor)
Adjustment – Loosen screw connecting vacuum linkage to base
Vacuum Control – No. VC-3060BS. 5.75" – 7.75" hg. to start plunger travel; 6.5° – 8.5° distributor advance at 10" hg. – maximum.
Automatic Advance – Full Automatic – Start 0° at 400 R.P.M.; Intermediate 7° at 1100 R.P.M.; Maximum 11.8° at 1570 R.P.M. (Distributor degrees at distributor R.P.M.)
Cam Angle – 35°
Capacity – .20 – .25 Mfds.

COIL

Auto-Lite
No. IG-4098

Servicing Coil
No. IG-4098

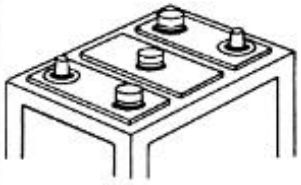
IGNITION TIMING



Use Timing Light – Breaker contacts to open for No. 1 cylinder when mark "UDC 1-6" on flywheel is 1/2" ahead of pointer on the inspection hole. (see reverse side) 3*

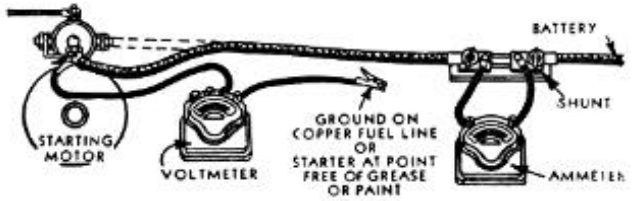
STARTING & LIGHTING

BATTERY



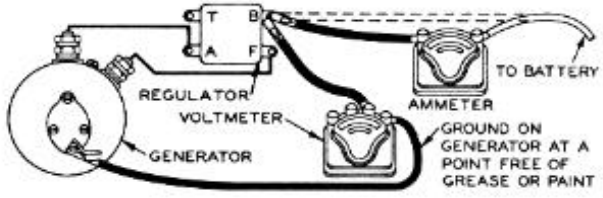
NATIONAL – Type HT-17
Capacity – 96 Amp. Hour (20 hr. rate)
Location – On left front side of engine compartment.
Ground – Positive terminal grounded.

STARTING MOTOR

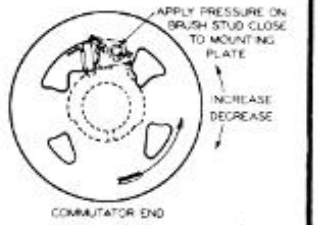


AUTO-LITE No. MZ-4092
Drive – L. H. Inboard Bendix No. EBA-29
Free Running Speed – 4300 Min. R.P.M. 70 Max. Amps. 5.5 Volts
Lock Torque (Stalled) – 11.8 Ft. Lbs. 560 Amps. 4.0 Volts
Control – Solenoid Switch Part No. SS-4001

GENERATOR



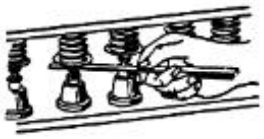
Third Brush Adjustment



AUTO-LITE No. GBC-4801A
Maximum Output Safe Setting:
Cold – 39 – 43 Amps. 8.0 Volts
Regulator No. VRR-4001A (see reverse side) 4*
Cut-Out Relay – (combined with regulator)
Brush Spring Tension – 53 oz. maximum with new brushes
Rotation – Clockwise (viewing drive end)
Regulation – Third Brush and Vibrating Voltage Regulator

VALVES

CLEARANCE



Engine Warm

Intake – .006"
Exhaust – .008"

With engine oil and coolant at normal operating temperatures*

TIMING

Intake Valves open at 10-2/3° before top dead center.

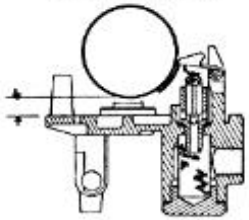
Tappet Lash for timing: .010" (Cold)

CARBURETION

Casting No. 286 on Face of Flange

CARTER – Model 501S TYPE – 1" Dual Downdraft
Idle Adjustment – 1/2 to 1-1/2 turns open. Idle at 8 M.P.H. or 600 R.P.M. To make richer, turn screw out. 5*
Fixed Jets – Metering Rod – Standard Part No. 75-467
Metering Rod – 1 Size Lean Part No. 75-474
Metering Rod – 2 Sizes Lean Part No. 75-475
Metering Rod – 3 Sizes Lean Part No. 75-476
Metering Rod Jet Assembly Part No. 120-658
Accelerating Pump – (see reverse side) 6*
Metering Rod Adjustment – (see reverse side) 7*
Climatic Control – (see reverse side) 8*
Manifold Heat Control – (see reverse side) 9*

FUEL LEVEL



Float Level – 1/8" from float to bowl cover when needle is seated.

ADDITIONAL SPECIFICATIONS

Cooling System –
Capacity – 13 Qts. (U.S. Meas.)
Radiator Gravity Flow – Service – 21 Gals. Per Min. (U.S. Meas.)
Thermostat – In cylinder head water outlet Starts to open at 150° – 155° F. Fully open at 165° F.
Temperature Gauge – King-Seeley
Dash Unit No. 8310
Motor Unit No. 7000
Crankcase – Capacity 4-1/2 Qts. refill (U.S.)
Fuel Pump – AC Type AK No. 1523289
TEST: Using AC Fuel Pump Analyzer No. 1521551
CAPACITY – 1 pint or over in 45 seconds
PRESSURE – 4-1/2 lbs. maximum
Air Cleaner – AC Oil-wetted (with silencer) No. 1528161
Gasoline Gauge – King-Seeley
Dash Unit No. 8305
Tank Unit No. 7550
Ammeter – King-Seeley No. 40175
Speedometer – Stewart-Warner No. 587-G
Inner Core No. 96926 – 65-13/16" Standard
71-13/16" Overdrive

(Continued – 10* – see reverse side)

Printed in U.S.A.

Copyright 1943 Automotive Electric Association

A. E. A. Tune-Up System

IGNITION LOCK

Briggs & Stratton

KEY SERIES	H601 – H1100
KEY BLANK PART NO.	42107
LOCK PART NO.	50164

Form No. HU-35

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number** – On plate on right hand front door hinge pillar.
21,101 and up (Super) (U.S.).
22,101 and up (Commodore) (U.S.).

Wheelbase – 121".

Engine Number – Stamped on top of cylinder block left hand side between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * **Ignition Timing** – When Ethyl or premium gasoline, with an octane rating of 80 or higher is used or in high altitudes, a more advanced setting may be used. At proper timing under these conditions, a slight "ping" should be noted at between 10 to 15 M.P.H. when accelerating with wide open throttle from 8 M.P.H. However, timing should never be advanced so that pointer is more than 1" ahead of the "UDC 1-6" mark on flywheel.

4 * **Voltage Regulator** – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: Circuit breaker closes at 6.4 to 6.6 volts; opens at 4.0 to 6.0 amperes discharge. Voltage regulator operates at 7.1 to 7.4 volts at 110°F.

5 * **Fast Idle Adjustment** – With choker valve tightly closed and fast idle screw on upper step of fast idle cam, adjust screw to give .045" opening between edge of throttle valve and bore of carburetor side opposite port.

6 * **Accelerating Pump** – Set to longest stroke for cold weather, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment – With pump connector link in long stroke (outer) hole in pump arm, and throttle adjustment screw backed out, pump plunger should travel 9/32" from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle. (Use tool T109-75.) Pump travel can be measured by using gauge T109-117S. Difference between reading at wide open and seated throttle should be 18. Projecting portion of indicator should be placed on top surface of lower portion of connector link at pump shaft.

7 * **Metering Rod Adjustment** –
(1) Insert one metering rod gauge T109-113 in place of metering rods. Be sure gauge seats in metering rod jet after backing out throttle lever adjusting screw, so that throttle valves seat.
(2) Install metering rod pin and pin spring in metering rod arm.
(3) Press lightly on vacuum piston link until piston rests in bottom of cylinder. There may be less than .005" clearance between metering rod pin and gauge.
(4) With throttle valve seated, bend lip on anti-percolator arm until this clearance is obtained (between metering rod gauge and metering rod pin).
(5) Remove gauge and metering rod pin, and install metering rods, discs, spring, pin and pin spring and hook metering rod spring on metering rods.

8 * **Climatic Control (Choke)** – For average driving and climatic conditions, set one point lean.

9 * **Manifold Heat Control** – Thermostatically controlled. See that valve operates freely.

10 * **Windshield Wiper** – Trico

Service Motor No. SSM-103 (Closed)	
Wiper Arm – (Both Sides) – 79070	7-3/4" c
Wiper Blade – (Both Sides) – P-778	8-3/4" c
Service Motor No. SSM-103 (Convertible)	
Wiper Arm – (Both Sides) – 79070	6" c
Wiper Blade – (Both Sides) – P-778	8-1/4" c

Recommended Tire Pressure –
Front – 26 lbs. cold – 30 lbs. hot
Rear – 30 lbs. cold – 33 lbs. hot

Battery Cables and Wiring – Battery to Ground Cable – Length 7"; Gauge No. 1.
Battery to Switch Cable – Length 38"; Gauge No. 0.

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.

HUDSON Eight 1942

Series 24, 25, 27 Commodore

Serial No. (see reverse side) U.S. * *

A.E.A. TUNE-UP SYSTEM

Automotive Electric Association

Issued April 1943

Form No. HU-36

IGNITION

SPARK PLUGS

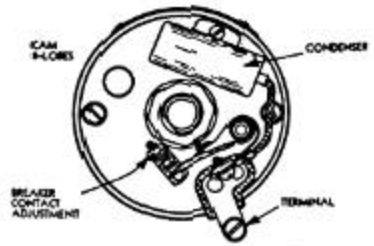
Size 14mm.
Gap .030" - .032"
Original Equipment
Champion Type J-9

For Cooler or Hotter Type See Manufacturer's Chart *

DISTRIBUTOR

Auto-Lite
No. IGP-4008A

Firing Order
1-6-2-5
8-3-7-4



Breaker-Arm Spring

Breaker Contact Gap - .017"
Condenser - Part No. IG-2871
Rotation - Clockwise (viewed from top of distributor)
Adjustment - Loosen hold down arm clamp screw
Automatic Advance - Full Automatic - Start 0° at 300 R.P.M.; Intermediate 6° at 650 R.P.M.; Maximum 17.5° at 1700 R.P.M. (Distributor degrees at distributor R.P.M.)
Cam Angle - 27.5°
Capacity - .20 - .25 Mfds.

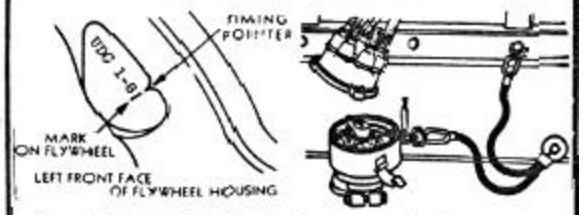
COIL

Auto-Lite
No. CE-4029

Servicing Coil
No. CE-3224JS

Mounting Bracket
No. IG-1798S

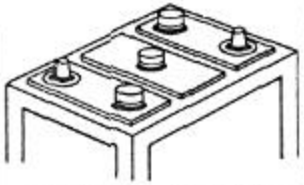
IGNITION TIMING



Use Timing Light - Breaker contacts to open for No. 1 cylinder at upper dead center, when mark on flywheel is opposite pointer on rear engine support plate. (see reverse side) 3*

STARTING & LIGHTING

BATTERY



NATIONAL - Type HT-19

Capacity - 106 Amp. Hour (20 hr. rate)

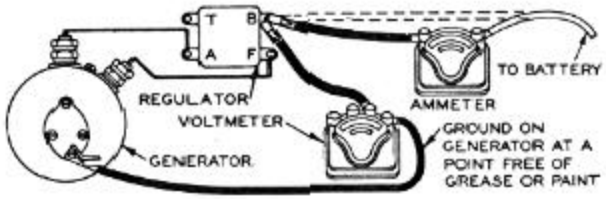
Location - On left front side of engine compartment.

Ground - Positive terminal grounded.

STARTING MOTOR

AUTO-LITE No. MAB-4100
Drive - L. H. Inboard Bendix Part No. EBA-29
Free Running Speed - 3700 Min. R.P.M. 60 Max. Amps. 5.5 Volts
Lock Torque (Stalled) - 22.5 Ft. Lbs. 775 Amps. 4.0 Volts
Control - Solenoid Switch Part No. SS-4001

GENERATOR



Third Brush Adjustment

AUTO-LITE No. GBC-4801A
Maximum Output Safe Setting:
Cold - 39 - 43 Amps. 8.0 Volts
Regulator No. VRR-4001A (see reverse side) 4*
Cut-Out Relay - (combined with regulator)
Brush Spring Tension - 53 oz. maximum with new brushes

Rotation - Clockwise (viewing drive end)
Regulation - Third Brush and Vibrating Voltage Regulator

VALVES

CLEARANCE

USE NEW FEELER STOCK FOR EACH JOB

Engine Warm

Intake - .006"
Exhaust - .008"

With engine oil and coolant at normal operating temperatures*

TIMING

Intake Valves open at 10-2/3° before top dead center.

Tappet Lash for timing: .010" (Cold)

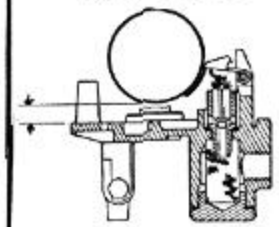
CARBURETION

CARTER - Model 5028 TYPE - 1-1/4" Dual Downdraft
Idle Adjustment - 1/2 to 1-1/2 turns open. Idle at 8 M.P.H. or 600 R.P.M. To make richer, turn screw out. 5*

Fixed Jets -		
Metering Rod - Standard	Part No.	75-466
Metering Rod - 1 Size Lean	Part No.	75-476
Metering Rod - 2 Sizes Lean	Part No.	75-479
Metering Rod - 3 Sizes Lean	Part No.	75-480
Metering Rod Jet Assembly	Part No.	120-1218

Accelerating Pump - (see reverse side) 6*
Metering Rod Adjustment - (see reverse side) 7*
Climatic Control Adjustment - (see reverse side) 8*
Manifold Heat Control - (see reverse side) 9*

FUEL LEVEL



Float Level - 1/8"

Measure from float to float chamber cover when needle is seated.

ADDITIONAL SPECIFICATIONS

Cooling System -
Capacity - 18 Qts. (U.S. Meas.)
Radiator Gravity Flow - Service - 23-1/2 Gals. Per Min. (U.S. Meas.)
Thermostat - In cylinder head water outlet. Starts to open at 150° - 155° F. Fully open at 185° F.
Temperature Gauge - King-Seeley
Dash Unit No. 8310
Motor Unit No. 7000
Crankcase - Capacity 7 Qts. (refill) (U.S.)
Fuel Pump - AC Type AK No. 1523289
TEST: Using AC Fuel Pump Analyzer No. 1521551
CAPACITY - 1 pint or over in 45 seconds
PRESSURE - 4-1/2 lbs. maximum
Air Cleaner - AC Oil-Wetted (with silencer) No. 1528161
Gasoline Gauge - King-Seeley
Dash Unit No. 6305
Tank Unit No. 7550
Ammeter - King-Seeley No. 40175
Speedometer - Stewart-Warner No. 567-G
Inner Core No. 96926 - 65-13/16" Standard
71-13/16" Overdrive

(Continued - 10* - see reverse side)

Copyright 1943 Automotive Electric Association

A. E. A. Tune-Up System

IGNITION LOCK

Briggs & Stratton

KEY SERIES	H601 – H1100
KEY BLANK PART NO.	42107
LOCK PART NO.	50184

Form No. HU-36

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number** – On plate on right hand front door hinge pillar.
24,101 and up (Series 24). (U.S.).
25,101 and up (Series 25). (U.S.).
27,101 and up (Series 27). (U.S.).

Wheelbase – 121" (Series 24 and 25).
128" (Series 27).

Engine Number – Stamped on top of cylinder block between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * **Ignition Timing** – When Ethyl or premium gasoline, with an octane rating of 80 or higher is used, or in high altitudes, a more advanced setting may be used. At proper timing under these conditions, a slight "ping" should be noted at between 10 to 15 M.P.H. when accelerating with wide open throttle from 8 M.P.H. However timing should never be advanced so that pointer is more than 3/4" ahead of "UDC 1-6" mark on flywheel.

4 * **Voltage Regulator** – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: Circuit breaker closes at 6.4 to 6.6 volts; opens at 4.0 to 6.0 amperes discharge. Voltage regulator operates at 7.1 to 7.4 volts at 110° F.

5 * **Fast Idle Adjustment** – With choker valve tightly closed and fast idle screw on upper step of fast idle cam, adjust screw to give .053" opening between edge of throttle valve and bore of carburetor side opposite port.

6 * **Accelerating Pump** – Set to longest stroke for cold weather driving, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment – With pump connector link in long stroke (outer) hole in pump arm, and throttle adjustment screw backed out, pump plunger should travel 9/32" from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle. (Use tool T109-75.) Pump travel can be measured by using gauge T109-117B. Difference between reading at wide open and seated throttle should be 18. Projecting portion of indicator should be placed on top surface of lower portion of connector link at pump shaft.

7 * **Metering Rod Adjustment** –

(1) Insert one metering rod gauge T109-113 in place of metering rods. Be sure gauge seats in metering rod jet after backing out throttle lever adjusting screw, so that throttle valves seat.
(2) Install metering rod pin and pin spring in metering rod arm.
(3) Press lightly on vacuum piston link until piston rests in bottom of cylinder. There may be less than .005" clearance between metering rod pin and gauge.
(4) With throttle valve seated, bend lip on anti-percolator arm until this clearance is obtained (between metering rod gauge and metering rod pin).
(5) Remove gauge and metering rod pin, and install metering rods, discs, spring, pin and pin spring and hook metering rod spring on metering rods.

8 * **Climatic Control Adjustment** – For average driving and climatic conditions, set one point lean.

9 * **Manifold Heat Control** – Valve operated by thermostatic spring. Make sure valve operates freely.

10 * **Windshield Wiper** – Trico

Service Motor No. SSM-103 (Closed)	
Wiper Arm – (Both Sides) – 79070	7-3/4" c
Wiper Blade – (Both Sides) – P-778	8-3/4" c
Service Motor No. SSM-103 (Convertible)	
Wiper Arm – (Both Sides) – 79070	6" c
Wiper Blade – (Both Sides) – P-778	8-1/4" c

Recommended Tire Pressure – Front – 26 lbs. cold – 29 lbs. hot
Rear – 30 lbs. cold – 33 lbs. hot

Battery Cables and Wiring – Battery to Ground Cable – Length 7"; Gauge No. 1.
Battery to Switch Cable – Length 38"; Gauge No. 0.

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

1 9 4 6 Hudson

Hudson Six - Series 51 (Super); 52 (Commodore)
Hudson Eight - Series 53 (Super); 54 (Commodore)

HUDSON Six 1946

Series 51 – Super
Series 52 – Commodore

Serial No. (see reverse side) U.S. * *

A. E. A. TUNE-UP SYSTEM

Standards of Adjustment
Automotive Electric Association

Issued July 1947

Form No. HU-37

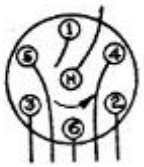
IGNITION

SPARK PLUGS

Size 14mm.
Gap .032"
Original Equipment
Champion Type J-9

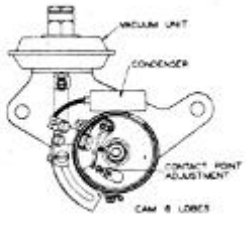
For Cooler or Hotter Type See Manufacturer's Chart *

DISTRIBUTOR



Auto-Lite
No. IGW-4203A

Firing Order
1-5-3
6-2-4



Breaker-Arm Spring

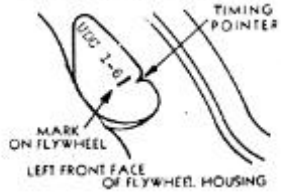
Breaker Contact Gap – .018" – .022"
Condenser – Part No. IGW-3076C
Rotation – Counterclockwise (viewed from top of distributor)
Adjustment – Loosen screw connecting vacuum linkage to base
Vacuum Control – No. VC-2060D. 5.88" – 7.88" hg. to start plunger travel; 6.5° – 8.5° distributor advance at 11" hg. – maximum.
Automatic Advance – Full Automatic – Start 0° at 400 R.P.M.; Intermediate 6° at 1000 R.P.M.; Max 11.75° at 1570 R.P.M. (Distributor degrees at distributor R.P.M.)
Cam Angle – 35°
Capacity – .20 – .25 Mfds.

COIL

Auto-Lite
No. IG-4098

Servicing Coil
No. IG-4098S

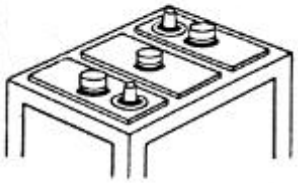
IGNITION TIMING



Use Timing Light – Breaker contacts to open for No. 1 cylinder when mark "UDC 1-6" on flywheel is 1/2" ahead of pointer on the inspection hole. (see reverse side) 3*

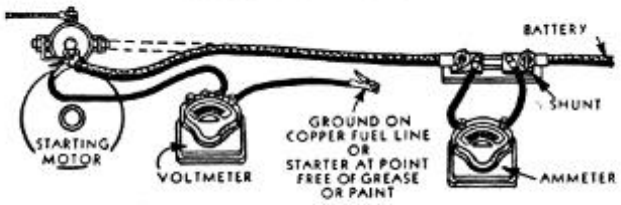
STARTING & LIGHTING

BATTERY



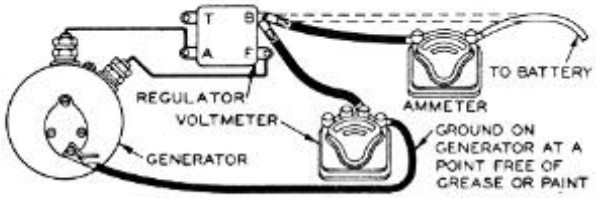
NATIONAL – Type HT-17
Capacity – 96 Amp. Hour (20 hr. rate)
Location – On left front side of engine compartment.
Ground – Positive terminal grounded.

STARTING MOTOR

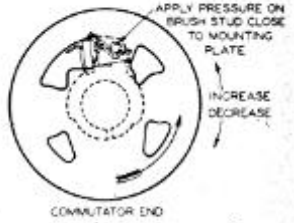


AUTO-LITE No. MZ-4002
Drive – L. H. Inboard Bendix No. EBA-29
Free Running Speed – 4300 Min. R.P.M. 70 Max. Amps. 5.5 Volts
Lock Torque (Stalled) – 7.8 Ft. Lbs. 490 Amps. 3.0 Volts
Control – Solenoid Switch Part No. SS-4001

GENERATOR



Third Brush Adjustment



AUTO-LITE No. GEC-4801A
Maximum Output Safe Setting:
Cold – 39 – 43 Amps. 8.0 Volts
Regulator No. VRR-4001A (see reverse side) 4*
Cut-Out Relay – (combined with regulator)
Brush Spring Tension – 35 – 53 oz. with new brushes
Rotation – Clockwise (viewing drive end)
Regulation – Third Brush and Vibrating Voltage Regulator

VALVES

CLEARANCE

USE NEW FEELER STOCK FOR EACH JOB

Engine Warm

Intake – .010"
Exhaust – .012"

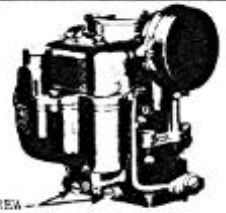
With engine oil and coolant at normal operating temperatures*

TIMING

Intake Valves open at 10° 40' before top dead center.

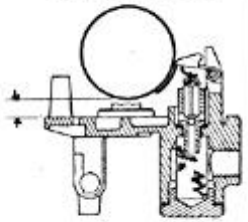
Tappet Lash for timing: .010" (Cold)

CARBURETION



CARTER – Model 501S **TYPE – 1" Dual Downdraft**
Idle Adjustment – 1/2 to 1-1/2 turns open. Idle at 6 M.P.H. or 600 R.P.M. To make richer, turn screw out. 5*
Fixed Jets – Metering Rod – Standard Part No. 75-467
Metering Rod – 1 Size Lean Part No. 75-474
Metering Rod – 2 Sizes Lean Part No. 75-475
Metering Rod – 3 Sizes Lean Part No. 75-476
Metering Rod Jet Assembly Part No. 120-65S
Accelerating Pump – (see reverse side) 6*
Metering Rod Adjustment – (see reverse side) 7*
Climatic Control – (see reverse side) 8*
Manifold Heat Control – (see reverse side) 9*

FUEL LEVEL



Float Level – Remove cork gasket. Distance from float to bowl cover, with needle seated, 1/8"

ADDITIONAL SPECIFICATIONS

Cooling System –
Capacity – 13 Qts. (U.S. Meas.)
Thermostat – In cylinder head water outlet
Starts to open at 150° – 155° F. Fully open at 185° F.
Temperature Gauge – King-Seeley
Dash Unit No. 41053
Motor Unit No. 41085
Crankcase – Capacity 4-1/2 Qts. refill (U.S.)
Fuel Pump – AC Type AK No. 499
TEST: Using AC Fuel Pump Analyzer No. FPA44
CAPACITY – 1 pint or over in 1 minute
PRESSURE – 2-1/2 lbs. min. – 4-1/2 lbs. max.
Air Cleaner – AC Oil-Wetted (with silencer) No. 1528161
Gasoline Gauge – King-Seeley
Dash Unit No. 41050
Tank Unit No. 7550
Ammeter – King-Seeley No. 41060
Speedometer – Stewart-Warner No. 587-W
Inner Core No. 96926 – 65" 71" Overdrive

(Continued – 10* – see reverse side)

Printed in U.S.A.

Copyright 1947 Automotive Electric Association

A. E. A. Tune-Up System

Briggs & Stratton

KEY SERIES	H601 - H1100
KEY BLANK PART NO.	42107
LOCK PART NO.	30164

Form No. HU-37

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number** – On plate on right hand front door hinge pillar. 31101 and up (U.S.) Series 51; 32101 and up (U.S.) Series 52.

Wheelbase – 121".

Engine Number – Stamped on top of cylinder block left hand side between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * Ignition Timing – When Ethyl or premium gasoline, with an octane rating of 80 or higher is used, or in high altitudes, a more advanced setting may be used. At proper timing under these conditions, a slight "ping" should be noted at between 10 to 15 M.P.H. when accelerating with wide open throttle from 8 M.P.H. However, timing should never be advanced so that pointer is more than 1" ahead of the "UDC 1-8" mark on flywheel.

4 * Voltage Regulator – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test Figures: Circuit breaker closes at 6.4 to 7.0 volts; opens at 4.1 to 4.8 volts. Voltage regulator operates at 7.35 to 7.65 volts at 70° F.

5 * Fast Idle Adjustment – With choker valve tightly closed and fast idle screw on upper step of fast idle cam, adjust screw to give .045" opening between edge of throttle valve and bore of carburetor side opposite port.

6 * Accelerating Pump – Set to longest stroke for cold weather, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment – With pump connector link in long stroke (outer) hole in pump arm, and throttle adjustment screw backed out, pump plunger should travel 9/32" from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle. (Use tool T109-75.) Pump travel can be measured by using gauge T109-117S. Difference between reading at wide open and seated throttle should be 18. Projecting portion of indicator should be placed on top surface of lower portion of connector link at pump shaft.

7 * Metering Rod Adjustment – Insert one metering rod gauge T109-113 in place of metering rods. Be sure gauge seats in metering rod jet after backing out throttle lever adjusting screw, so that throttle valves seat. Install metering rod pin and pin spring in metering rod arm. Press lightly on vacuum piston link until lug on link contacts lip of anti-percolator arm. There should now be less than .005" clearance between metering rod pin and gauge with throttle valve seated. Bend lip on anti-percolator arm until this clearance is obtained (between metering rod gauge and metering rod pin). Remove gauge and metering rod pin, and install metering rods, discs, spring, pin and pin spring, and hook metering rod spring on metering rods.

Anti-Percolator Adjustment – Must be made after pump and metering rod adjustments. Do not disturb these adjustments. Back out throttle lever adjusting screw so that throttle valves seat in bores of carburetor. With throttle valves seated, bend lips on anti-percolator arm so that center of indicator line is flush with top of anti-percolator plugs. Since there are two anti-percolators on this carburetor, care must be taken so that there is an even adjustment on both anti-percolator valves.

8 * Climatic Control – For average driving and climatic conditions, set 1 point lean.

9 * Manifold Heat Control – Thermostatically controlled. See that valve operates freely.

10 * Windshield Wiper – Trico
Service Motor SSM-10S (1st Series)
SSM-10S-2 (2nd Series)
Wiper Arm (Both sides) - AL-60
Wiper Blade (Both sides) - U-778 - 9" L (Closed Bodies)
8-1/4" L (Convertible)
Linkage (Driver side) - G-78602-1C (1st Series)
(Driver side) - G-78602-2C (2nd Series)
(Pass. side) - G-78603-1C (1st Series)
(Pass. side) - G-78603-2C (2nd Series)

Recommended Tire Pressure –
Front - 22 lbs. cold - 28 lbs. hot
Rear - 20 lbs. cold - 32 lbs. hot

Battery Cables and Wiring – Battery to Ground Cable - Length 7"; Gauge No. 1.
Battery to Switch Cable - Length 33"; Gauge No. 0.

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.

HUDSON Eight 1946

Series 53 - Super
Series 54 - Commodore
Serial No. (see reverse side) U.S. * *

A.E.A. TUNE-UP SYSTEM

Standards of Adjustment
Automotive Electric Association

Issued July 1947

Form No. HU-38

IGNITION

SPARK PLUGS

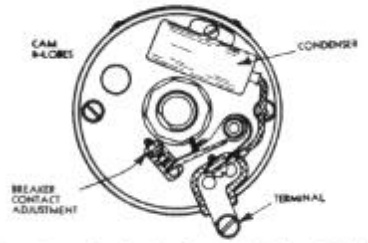
Size 14mm.
Gap .032"
Original Equipment
Champion Type J-9

For Cooler or Hotter Type See Manufacturer's Chart *

DISTRIBUTOR

Auto-Lite
No. IGP-4008A

Firing Order
1-6-2-5
8-3-7-4



Breaker Contact Gap – .015" - .019" **Cam Angle** – 27.5°
Condenser – Part No. IG-2871 **Capacity** – .20 - .25 Mfds.
Rotation – Clockwise (viewed from top of distributor)
Adjustment – Loosen hold down arm clamp screw
Automatic Advance – Full Automatic – Start 0° at 300 R.P.M.; Intermediate 3° at 400 R.P.M.; Maximum 17.5° at 1700 R.P.M. (Distributor degrees at distributor R.P.M.)

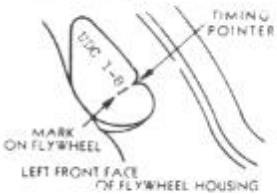
COIL

Auto-Lite
No. CE-4029

Servicing Coil
No. CE-3224JS

Mounting Bracket
No. IG-1798S

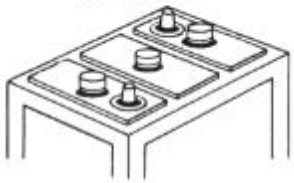
IGNITION TIMING



Use Timing Light – Breaker contacts to open for No. 1 cylinder at upper dead center, when mark on flywheel is opposite pointer on rear engine support plate. (see reverse side) 3*

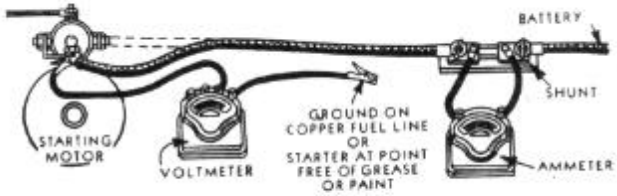
STARTING & LIGHTING

BATTERY



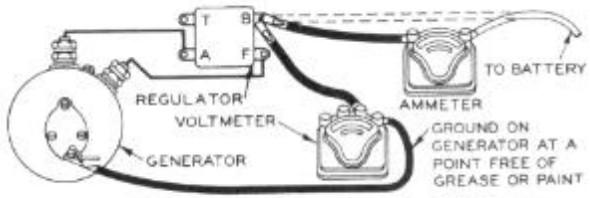
NATIONAL – Type HT-19
Capacity – 108 Amp. Hour (20 hr. rate)
Location – On left front side of engine compartment.
Ground – Positive terminal grounded.

STARTING MOTOR

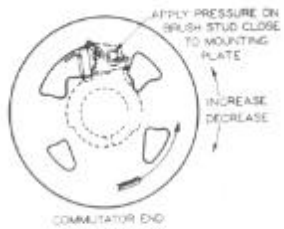


AUTO-LITE No. MAB-4100
Drive – L. H. Inboard Bendix Part No. EBA-29
Free Running Speed – 3700 Min. R.P.M. 60 Max. Amps. 5.5 Volts
Lock Torque (Stalled) – 15.8 Ft.Lbs. 580 Amps. 3.0 Volts
Control – Solenoid Switch Part No. SS-4001

GENERATOR



Third Brush Adjustment

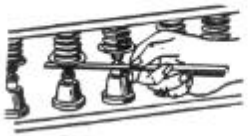


AUTO-LITE No. GEC-4801A
Maximum Output Safe Setting:
Cold – 39 – 43 Amps. 8.0 Volts
Regulator No. VRR-4001A (see reverse side) 4*
Cut-Out Relay – (combined with regulator)
Brush Spring Tension – 35 - 53 oz. with new brushes

Rotation – Clockwise (viewing drive end)
Regulation – Third Brush and Vibrating Voltage Regulator

VALVES

CLEARANCE



USE NEW FEELER STOCK FOR EACH JOB

Engine Warm

Intake – .006"
Exhaust – .006"

With engine oil and coolant at normal operating temperatures*

TIMING

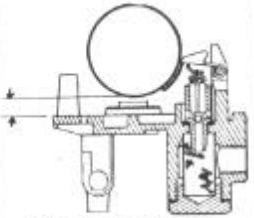
Intake Valves open at 10° 40' before top dead center.

Tappet Lash for timing: .010" (Cold)

CARBURETION

CARTER – Model 502S **TYPE – 1-1/4" Dual Downdraft**
Idle Adjustment – 1/2 to 1-1/2 turns open. Idle at 8 M.P.H. or 600 R.P.M. To make richer, turn screw out. 5*
Fixed Jets – Metering Rod – Standard Part No. 75-529
Metering Rod – 1 Size Lean Part No. 75-480
Metering Rod – 2 Sizes Lean Part No. 75-531
Metering Rod – 3 Sizes Lean Part No. 75-532
Metering Rod Jet Assembly Part No. 120-1213
Accelerating Pump – (see reverse side) 6*
Metering Rod Adjustment – (see reverse side) 7*
Climatic Control Adjustment – (see reverse side) 8*
Manifold Heat Control – (see reverse side) 9*

FUEL LEVEL



Float Level – Remove cork gasket. Distance from float to bowl cover when needle is seated, 1/8"

ADDITIONAL SPECIFICATIONS

Cooling System –
Capacity – 18 Qts. (U.S. Meas.)
Thermostat – In cylinder head water outlet starts to open at 150° - 155° F. Fully open at 185° F.
Temperature Gauge – King-Seeley
Dash Unit No. 41053
Motor Unit No. 41086
Crankcase – Capacity 7 Qts. (Refill)(U.S.)
Fuel Pump – AC Type AK No. 499
TEST: Using AC Fuel Pump Analyzer No. FPA44
CAPACITY- 1 pint or over in 1 minute
PRESSURE- 2-1/2 lbs. min. - 4-1/2 lbs. max.
Air Cleaner – AC Oil-Wetted (with silencer) No. 1528161
Gasoline Gauge – King-Seeley
Dash Unit No. 41050
Tank Unit No. 7550
Ammeter – King-Seeley No. 41080
Speedometer – Stewart-Warner No. 587-W
Inner Core No. 96926 - 65" Standard
71" Overdrive

(Continued - 10* - see reverse side)

Printed in U.S.A.

Copyright 1947 Automotive Electric Association

A. E. A. Tune-Up System

IGNITION LOCK

Briggs & Stratton

KEY SERIES	M601 – M1100
KEY BLANK PART NO.	42107
LOCK PART NO.	50184

Form No. HU-38

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number** – On plate on right hand front door hinge pillar.
33,101 and up (Series 53)(U.S.)
34,101 and up (Series 54)(U.S.)

Wheelbase – 121"

Engine Number – Stamped on top of cylinder block between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * Ignition Timing – When Ethyl or premium gasoline, with an octane rating of 80 or higher is used, or in high altitudes, a more advanced setting may be used. At proper timing under these conditions, a slight "ping" should be noted at between 10 to 15 M.P.H. when accelerating with wide open throttle from 8 M.P.H. However timing should never be advanced so that pointer is more than 3/4" ahead of "UDC 1-8" mark on flywheel.

4 * Voltage Regulator – Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: Circuit breaker closes at 6.4 to 7.0 volts; opens at 4.1 to 4.8 volts. Voltage regulator operates at 7.35 to 7.85 volts at 110° F.

5 * Fast Idle Adjustment – With choker valve tightly closed and fast idle screw on upper step of fast idle cam, adjust screw to give .063" opening between edge of throttle valve and bore of carburetor side opposite port.

6 * Accelerating Pump – Set to longest stroke for cold weather driving, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment – With pump connector link in long stroke (outer) hole in pump arm, and throttle adjustment screw backed out, pump plunger should travel 9/32" from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle. (Use tool T109-75.) Pump travel can be measured by using gauge T109-117S. Difference between reading at wide open and seated throttle should be 18. Projecting portion of indicator should be placed on top surface of lower portion of connector link at pump shaft.

7 * Metering Rod Adjustment – Insert one metering rod gauge T109-113 in place of metering rods. Be sure gauge seats in metering rod jet after backing out throttle lever adjusting screw, so that throttle valves seat. Install metering rod pin and pin spring in metering rod arm. Press lightly on vacuum piston link until lug on connector link contacts lip of anti-percolator arm. There should now be less than .005" clearance between metering rod pin and gauge with throttle valve seated. Bend lip on anti-percolator arm until this clearance is obtained (between metering rod gauge and metering rod pin). Remove gauge and metering rod pin, and install metering rods, discs, spring, pin and pin spring, and hook metering rod spring on metering rods.

Anti-Percolator Adjustment – This adjustment must be made after pump and metering rod adjustments have been made. Do not disturb these adjustments. Back out throttle lever adjusting screw so that throttle valves seat in bores of carburetor. With throttle valves seated, bend lips on anti-percolator arm so that center of indicator line is flush with top of anti-percolator plugs. Since there are two anti-percolators on this carburetor, care must be taken so that there is an even adjustment on both anti-percolator valves.

8 * Climatic Control Adjustment – For average driving and climatic conditions, set one point lean.

9 * Manifold Heat Control – Valve operated by thermostatic spring. Make sure valve operates freely.

10 * Recommended Tire Pressure – Front – 26 lbs. cold – 29 lbs. hot
Rear – 30 lbs. cold – 33 lbs. hot

Windshield Wiper – Trico
Service Motor SBM 103 (1st Series)
SBM 103-2 (2nd Series)
Wiper Arm (Both sides) – AL50 (Closed bodies)
79070 (Convertible & Brougham)
Wiper Blade (Both sides) – U-778 – 9" L.
Linkage (Driver side) – G-78662-1C (1st Series)
(Driver side) – G-78662-2C (2nd Series)
(Pass. side) – G-78663-1C (1st Series)
(Pass. side) – G-78663-2C (2nd Series)

Battery Cables and Wiring – Battery to Ground Cable – Length 7"; Gauge No. 1. Battery to Switch Cable – Length 38"; Gauge No. 0.

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

1 9 4 7 Hudson

Hudson Six - Series 71 (Super); 72 (Commodore)
Hudson Eight - Series 73 (Super); 74 (Commodore)

HUDSON Six 1947

Series 71 - Super
Series 72 - Commodore

Serial No. (see reverse side) U.S. * *

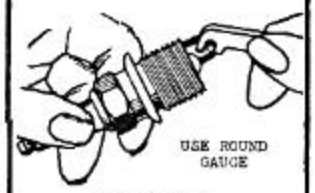
A.E.A. TUNE-UP SYSTEM

Standards of Adjustment
Automotive Electric Association
Issued February 1948

Form No. HU-39

IGNITION

SPARK PLUGS



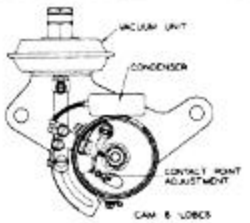
Size 14mm.
Gap .032"
Original Equipment
Champion Type J-9

For Cooler or Hotter Type See Manufacturer's Chart *

DISTRIBUTOR

Auto-Lite
No. IGW-4203A

Firing Order
1-5-3
6-2-4



Breaker-Arm Spring

Breaker Contact Gap – .018" - .022"
Condenser – Part No. IGW-3075C
Rotation – Counterclockwise (viewed from top of distributor)
Adjustment – Loosen screw connecting vacuum linkage to base
Vacuum Control – No. VC-2060D. 5.88"-7.88" hg. to start plunger travel; 6.5°-8.5° distributor advance at 11" hg. - maximum.
Automatic Advance – Full Automatic - Start 0° at 400 R.P.M.; Intermediate 7° at 1100 R.P.M.; Max. 11.75° at 1570 R.P.M. (Distributor degrees at distributor R.P.M.)
Cam Angle – 35°
Capacity – .20-.25 Mfds.

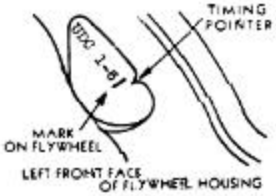
COIL

AUTO-LITE
No. IG-4098

Servicing Coil
No. IG-4098S

Mounting Bracket on coil

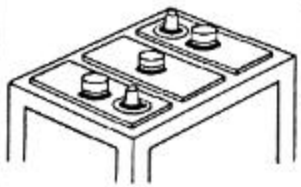
IGNITION TIMING



Use Timing Light - Breaker contacts to open for No. 1 cylinder when mark "UDC 1-6" on flywheel is 1/2" ahead of pointer on the inspection hole. (see reverse side) 3*

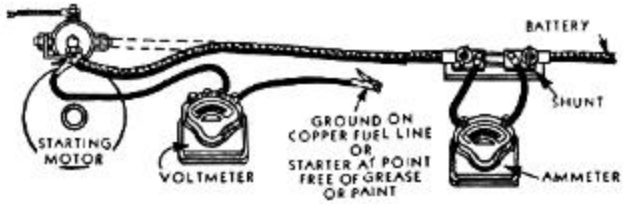
STARTING & LIGHTING

BATTERY



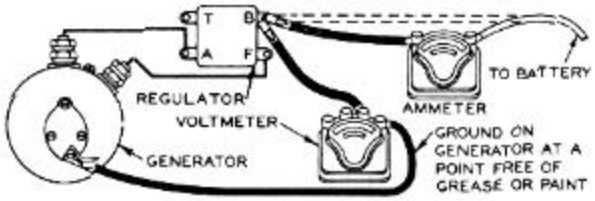
NATIONAL – Type HT-17
Capacity – 96 Amp. Hour (20 hr. rate)
Location – On left front side of engine compartment.
Ground – Positive terminal grounded.

STARTING MOTOR

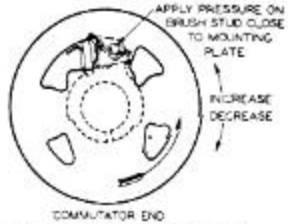


AUTO-LITE No. MZ-4092
Drive – L. H. Inboard Bendix No. EBA-29
Free Running Speed – 4300 Min. R.P.M. 70 Max. Amps. 5.5 Volts
Lock Torque (Stalled) – 4.4 Ft.Lbs. 280 Max. Amps. 2.0 Volts
Control – Solenoid Switch Part No. SS-4001

GENERATOR



Third Brush Adjustment



AUTO-LITE No. GEC-4801A
Maximum Output Safe Setting:
Cold – 39-43 Amps. 8.0 Volts
Regulator No. VRR-4001A (see reverse side) 4*
Cut-Out Relay – (combined with regulator)
Brush Spring Tension – 35 - 53 oz. with new brushes
Rotation – Clockwise (viewing drive end)
Regulation – Third Brush and Vibrating Voltage Regulator adjustable by applying pressure to base of third brush holder stud.

VALVES

CLEARANCE

USE NEW FEELER STOCK FOR EACH JOB

Engine Warm

Intake - .010"
Exhaust - .012"

With engine oil and coolant at normal operating temperatures*

TIMING

Intake Valves open at 10° 40' before top dead center.

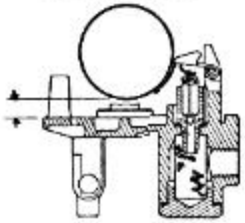
Tappet Lash for timing: .010"(Cold)

CARBURETION

Casting No. 286 on Face of Flange

CARTER – Model 501S TYPE – 1" Dual Downdraft
Idle Adjustment – 1/2 to 1-1/2 turns open. Idle at 8 M.P.H. or 600 R.P.M. To make richer, turn screw out. 5*
Fixed Jets – Metering Rod - Standard Part No. 75-467
Metering Rod - 1 Size Lean Part No. 75-474
Metering Rod - 2 Sizes Lean Part No. 75-475
Metering Rod - 3 Sizes Lean Part No. 75-476
Metering Rod Jet Assembly Part No. 120-65S
Accelerating Pump – (see reverse side) 6*
Metering Rod Adjustment – (see reverse side) 7*
Climatic Control – (see reverse side) 8*

FUEL LEVEL



Float Level – Remove cork gasket. Distance from float to bowl cover, with needle seated, 1/8"

ADDITIONAL SPECIFICATIONS

Cooling System –
Capacity - 18 Qts. (U.S. Meas.)
Thermostat - In cylinder head water outlet Starts to open at 150°-155° F. Fully open at 185° F.
Temperature Gauge – King-Seeley Dash Unit No. 41053 Motor Unit No. 41065
Crankcase – Capacity 4-1/2 Qts. refill (U.S.)
Oil Pressure Gauge - King-Seeley No. 41060
Fuel Pump - AC Type 499 No. 1523289 Series AK
TEST: Using AC Fuel Pump Analyzer No. FPA44
CAPACITY - 1 pint or over in 1 minute
PRESSURE - 2-1/2 lbs. min. - 4-1/2 lbs. max.
Air Cleaner - AC Oil-Wetted (with silencer) No. 1528161
Gasoline Gauge - King-Seeley Dash Unit No. 41050 Tank Unit No. 7550

Speedometer - Stewart-Warner No. 567-W
Inner Core No. 96926 - 65"
- 73" Overdrive

(Continued - 10* - see reverse side)

A. E. A. Tune-Up System

Briggs & Stratton

KEY SERIES	H601 - H1100
KEY BLANK PART NO.	42107
LOCK PART NO.	50184

Form No. HU-39

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

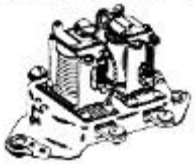
* * **Serial Number** - On plate on right hand front door hinge pillar.
Series 71 - 171101 and up (U.S.)
Series 72 - 172101 and up (U.S.)

Wheelbase - 121"

Engine Number - Stamped on top of cylinder block left hand side between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * **Ignition Timing** - When Ethyl or premium gasoline, with an octane rating of 80 or higher is used, or in high altitudes, a more advanced setting may be used. At proper timing under these conditions, a slight "ping" should be noted at between 10 to 15 M.P.H. when accelerating with wide open throttle from 8 M.P.H. However, timing should never be advanced so that pointer is more than 1" ahead of the "UDC 1-6" mark on flywheel.

4 * **Voltage Regulator** - Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.



Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: Circuit breaker closes at 6.4 to 7.0 volts; opens at 4.1 to 4.8 volts. Voltage regulator operates at 7.35 to 7.85 volts at 70° F.

5 * **Fast Idle Adjustment** - With choke valve tightly closed and fast idle screw on upper step of fast idle cam, adjust screw to give .045" opening between edge of throttle valve and bore of carburetor, side opposite port.

6 * **Accelerating Pump** - Set to longest stroke for cold weather, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment - Back out throttle lever adjustment screw until throttle valves seat in bores of carburetor. With pump connector link in outer hole (long stroke) pump plunger should travel 18/64" from closed to wide open throttle position. Pump stroke can be measured by placing universal pump stroke gauge T109-117S on raised portion of bowl cover with projecting lip of gauge resting on top surface on connector link where it extends through the plunger shaft. The difference in readings at closed and wide open throttle positions should be "18" (18/64" plunger travel). Adjustment may be made by bending throttle connector rod at lower angle.

7 * **Metering Rod Adjustment** - The metering rod adjustment should be made after the pump adjustment and before the anti-percolator adjustment. Back out throttle adjustment screw until throttle valves seat in bore of carburetor. Remove metering rod and metering rod disk. Insert in their place one metering rod gauge T109-118. Be sure gauge seats in metering rod jet. Reinstall metering rod pin and pin spring in metering rod arm. Then press lightly on vacuum piston link until pin contacts metering rod gauge. With throttle valve seated bend metering rod lip on anti-percolator arm until there is a clearance of .008" between pin and notch in metering rod gauge. Remove pin and metering rod gauge and install metering rods, disks, spring, pin and pin spring and hook metering rod spring on metering rod.

Anti-Percolator Adjustment - This adjustment must be made after pump and metering rod adjustments have been made. Do not disturb these adjustments. Back out throttle lever adjusting screw so that throttle valves seat in bores of carburetor. With throttle valves seated, bend lips on anti-percolator arm so that center of indicator line is flush with top of anti-percolator plugs. Since there are two anti-percolators on this carburetor, care must be taken so that there is an even adjustment on both anti-percolator valves.

Unloader Adjustment - With throttle wide open distance between upper edge of choke valve and inner wall of air horn should be 1/4". Adjustment can be made by bending lip on fast idle connector link. If unloader is adjusted properly, with throttle wide open, move choke valve wide open and choke valve will be locked in wide open position. Closing the throttle will release choke valve. Choke trip lever is notched out for this setting.

8 * **Climatic Control** - For average driving and climatic conditions, set 1 point lean.

9 * **Manifold Heat Control** - Thermostatically controlled. See that valve operates freely.

10 * **Windshield Wiper** - Trico
Service Motor SSM-103-2
Wiper Arm (Both sides) - AL-50
Wiper Blade (Both sides) - U-778 - 8-1/4" C
Linkage (Driver side) - G-78662-2C
(Pass. side) - G-78663-2C

Recommended Tire Pressure - Front - 26 lbs. cold - 29 lbs. hot
Rear - 30 lbs. cold - 33 lbs. hot

Battery Cables and Wiring - Battery to Ground Cable - Length 7"; Gauge No. 1. Battery to Switch Cable - Length 33"; Gauge No. 0.

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.

HUDSON Eight 1947

Series 73 - Super
Series 74 - Commodore
Serial No. (see reverse side) U.S. * *

A. E. A. TUNE-UP SYSTEM

Standards of Adjustment
Automotive Electric Association
Issued February 1948

Form No. HU-40

IGNITION

SPARK PLUGS

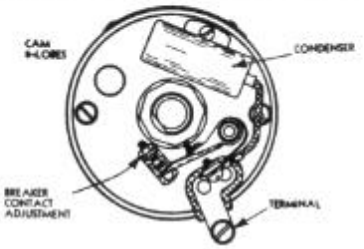
Size 14mm.
Gap .032"
Original Equipment
Champion Type J-9

For Cooler or Hotter Type See Manufacturer's Chart *

DISTRIBUTOR

AUTO-LITE
No. IGP-4008B

Firing Order
1-6-2-5
8-3-7-4



Breaker-Arm Spring

Breaker Contact Gap – .015" - .019" **Cam Angle** – 27.5°
Condenser – Part No. IG-2871 **Capacity** – .20 - .25 Mfds.
Rotation – Clockwise (viewed from top of distributor)
Adjustment – Loosen advance control arm clamp screw
Automatic Advance – Full Automatic – Start 0° at 300 R.P.M.; intermediate 3° at 400 R.P.M.; Maximum 17.5° at 1700 R.P.M. (Distributor degrees at distributor R.P.M.)

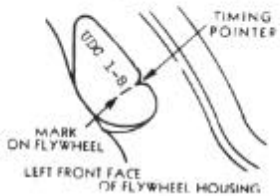
COIL

Auto-Lite
No. CE-4029

Servicing Coil
No. CE-3224JS

Mounting Bracket
No. IG-1798S

IGNITION TIMING

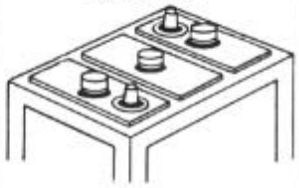


Use Timing Light – Breaker contacts to open for No. 1 cylinder at upper dead center, when mark on flywheel is opposite pointer on engine rear support plate.

(See reverse side) 3*

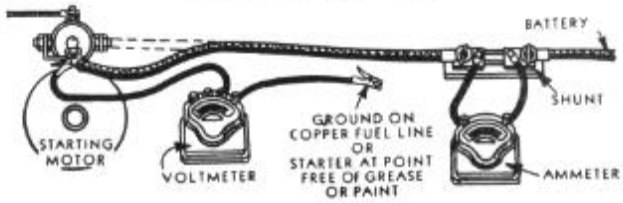
STARTING & LIGHTING

BATTERY



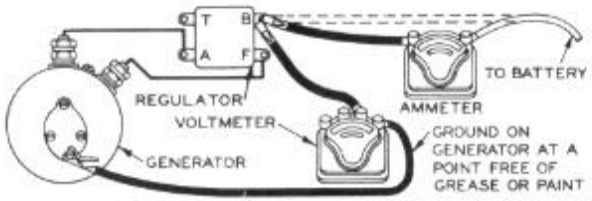
NATIONAL – Type HT-19
Capacity – 108 Amp. Hour (20 hr. rate)
Location – On left front side of engine compartment.
Ground – Positive terminal grounded.

STARTING MOTOR

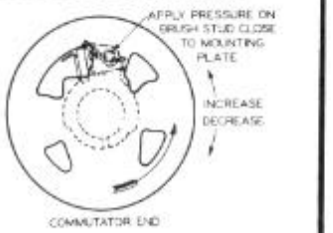


AUTO-LITE No. MAB-4100
Drive – L. H. Inboard Bendix Part No. EBA-29
Free Running Speed - 3700 Min. R.P.M. 60 Max. Amps. 5.5 Volts
Lock Torque (Stalled) - 9.2 Min. Ft. Lbs. 388 Max. Amps. 2.0 Volts
Control - Solenoid Switch Part No. SS-4001

GENERATOR



Third Brush Adjustment

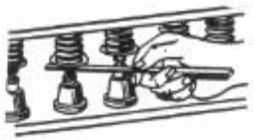


AUTO-LITE No. GEC-4801A
Maximum Output Safe Setting:
Cold – 39 – 43 Amps. 8.0 Volts
Regulator No. VRR-4001A (see reverse side) 4*
Cut-Out Relay – (combined with regulator)
Brush Spring Tension – 35 - 53 oz. with new brushes

Rotation - Clockwise (viewing drive end)
Regulation - Third Brush and Vibrating Voltage Regulator adjustable by applying pressure to base of third brush holder stud.

VALVES

CLEARANCE



USE NEW FEELER STOCK FOR EACH JOB

Engine Warm

Intake – .006"
Exhaust – .006"

With engine oil and coolant at normal operating temperatures*

TIMING

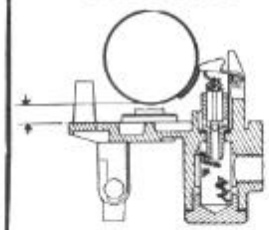
Intake Valves open at 10° 40' before top dead center.

Tappet Lash for timing: .010" (Cold)

CARBURETION

CARTER – Model 5028 **TYPE – 1-1/4" Dual Downdraft**
Idle Adjustment – 1/2 to 1-1/2 turns open. Idle at 8 M.P.H. or 600 R.P.M. To make richer, turn screw out. 5*
Fixed Jets – Metering Rod – Standard Part No. 75-529
Metering Rod – 1 Size Lean Part No. 75-480
Metering Rod – 2 Sizes Lean Part No. 75-531
Metering Rod – 3 Sizes Lean Part No. 75-532
Metering Rod Jet Assembly Part No. 120-121S
Accelerating Pump – (see reverse side) 6*
Metering Rod Adjustment – (see reverse side) 7*
Climatic Control Adjustment – (see reverse side) 8*
Manifold Heat Control – (see reverse side) 9*

FUEL LEVEL



Float Level – Remove cork gasket. Distance from float to bowl cover when needle is seated, 1/8"

ADDITIONAL SPECIFICATIONS

Cooling System -
Capacity - 18 Qts. (U.S. Measure)
Thermostat - In cylinder head water outlet Starts to open at 150° - 155° F. Fully open at 185° F.
Temperature Gauge - King-Seeley
Dash Unit No. 41053
Motor Unit No. 41065
Crankcase - Capacity 7 Qts. (Refill) (U.S.)
Oil Pressure Gauge - King-Seeley No. 41060
Fuel Pump - AC Type 499 No. 1523289 Series AK
TEST: Using AC Fuel Pump Analyzer No. FPA44
CAPACITY - 1 pint or over in 1 minute
PRESSURE - 2-1/2 lbs. min. - 4-1/2 lbs. max.
Air Cleaner - AC Oil-Wetted (with silencer) No. 1528161
Gasoline Gauge - King-Seeley
Dash Unit No. 41050
Tank Unit No. 7550
Speedometer - Stewart-Warner No. 587-W
Inner Core No. 96926 - 65" Standard
- 71" Overdrive

(Continued - 10* - See reverse side)

Printed in U.S.A.

Copyright 1948 Automotive Electric Association

A. E. A. Tune-Up System

Briggs & Stratton	
KEY SERIES	H601 - H1100
KEY BLANK PART NO.	42107
LOCK PART NO.	50184

Form No. HU-40

ADDITIONAL DATA

This information applies to the items on reverse side, marked as follows:

* Consult A.E.A. SERVICE MANUAL for more complete information.

* * **Serial Number -** On plate on right hand front door hinge pillar.
Series 73 - 173101 and up (U.S.)
Series 74 - 174101 and up (U.S.)

Wheelbase - 121"

Engine Number - Stamped on top of cylinder block between No. 1 and No. 2 exhaust manifold flanges. Same as Serial Number.

3 * **Ignition Timing -** When Ethyl or premium gasoline, with an octane rating of 80 or higher is used, or in high altitudes, a more advanced setting may be used. At proper timing under these conditions, a slight "ping" should be noted at between 10 and 15 M.P.H. when accelerating with wide open throttle from 8 M.P.H. However, timing should never be advanced so that pointer is more than 3/4" ahead of "UDC 1-6" mark on flywheel.

4 * **Voltage Regulator -** Test meter connections: Disconnect the wire from the "B" terminal on the regulator and connect the test ammeter in series between the terminal and the wire removed from the terminal. Connect the test voltmeter from the regulator "B" terminal to the regulator base.

Before test: Run the engine before taking any test readings at a speed equivalent to 30 M.P.H. for several minutes until the voltage remains constant and the charging rate has dropped back from its peak. Have regulator cover on the unit while balancing voltage and taking test readings.

Test figures: Circuit breaker closes at 6.4 to 7.0 volts; opens at 4.1 to 4.8 volts. Voltage regulator operates at 7.35 to 7.65 volts at 70° F.

5 * **Fast Idle Adjustment -** With choke valve tightly closed and fast idle screw on upper step of fast idle cam, adjust screw to give .058" opening between edge of throttle valve and bore of carburetor side opposite port.

6 * **Accelerating Pump -** Set to longest stroke for cold weather driving, center hole for moderate weather, short stroke for hot weather.

Pump Adjustment - Back out throttle lever adjustment screw until throttle valves seat in bores of carburetor. With pump connector link in outer hole (long stroke) pump plunger should travel 18/64 inch from closed to wide open throttle position. Pump stroke can be measured by placing universal pump stroke gauge T109-117S on raised portion of bowl cover with projecting lip of gauge resting on top surface on connector link where it extends through the plunger shaft. The difference in readings at closed and wide open throttle positions should be "18" (18/64" plunger travel). Adjustment may be made by bending throttle connector rod at lower angle.

7 * **Metering Rod Adjustment -** The metering rod adjustment should be made after the pump adjustment and before the anti-percolator adjustment. Back out throttle adjustment screw until throttle valves seat in bore of carburetor. Remove metering rod and metering rod disk. Insert in their place one metering rod gauge T109-113. Be sure gauge seats in metering rod jet. Reinstall metering rod pin and pin spring in metering rod arm. Then press lightly on vacuum piston link until pin contacts metering rod gauge. With throttle valve seated bend metering rod lip on anti-percolator arm until there is a clearance of .005" between pin and notch in metering rod gauge. Remove pin and metering rod gauge and install metering rods, disks, spring, pin and pin spring and hook metering rod spring on metering rod.

Anti-Percolator Adjustment - This adjustment must be made after pump and metering rod adjustments have been made. Do not disturb these adjustments. Back out throttle lever adjusting screw so that throttle valves seat in bores of carburetor. With throttle valves seated, bend lips on anti-percolator arm so that center of indicator line is flush with top of anti-percolator plugs. Since there are two anti-percolators on this carburetor, care must be taken so that there is an even adjustment on both anti-percolator valves.

Unloader Adjustment - With throttle wide open distance between upper edge of choke valve and inner wall of air horn should be 1/4" Adjustment can be made by bending lip on fast idle connector link. If unloader is adjusted properly, with throttle wide open, move choke valve wide open and choke valve will be locked in wide open position. Closing the throttle will release choke valve. Choke trip lever is notched out for this setting.

8 * **Climatic Control Adjustment -** For average driving and climatic conditions, set one point lean.

9 * **Manifold Heat Control -** Valve operated by thermostatic spring. Make sure valve operates freely.

10 * **Recommended Tire Pressure -** Front - 26 lbs. cold - 29 lbs. hot
Rear - 30 lbs. cold - 33 lbs. hot

Windshield Wiper - Trico
Service Motor SSM 103-2
Wiper Arm (Both sides) - AL50
Wiper Blade (Both sides) - U-778 - 8-1/4" C
Linkage (Driver side) - G-78662-2C
(Pass. side) - G-78663-2C

Battery Cables and Wiring - Battery to Ground Cable - Length 7"; Gauge No. 1. Battery to Switch Cable - Length 38"; Gauge No. 0.

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