

SPECIAL SERVICE NOTES: Engine Installation—Complete engine and drive unit (including steering gear) mounted on separate sub-assembly which is bolted to main body side members at engine cowl.

Supercharged Model—This model has special Carburetor, Distributor (requires synchronization), Valve Timing and Ignition Setting.

Rotation—Crankshaft rotation counter-clockwise or opposite direction from conventional (occasioned by reversal of engine).

MODEL IDENTIFICATION

SERIAL NUMBER: First number 1101 (1936). Stamped on Service Motor Plate on right side of cowl under engine hood.

ENGINE NUMBER: First number FB-100 (1936). Stamped on left side of engine block at front end.

TUNE-UP

COMPRESSION: Ratio—6.5-1 (1936), 6.32-1 (1937) Std. Aluminum Heads.

Pressure—110 lbs. at cranking speed of 130 R.P.M.

VACUUM READING:—18-20" steady reading with engine idling at 6 M.P.H.

FIRING ORDER: 4L-2L-2R-1R-3R-4R-1L-3L (Std.), 1L-3L-3R-2L-2R-1R-4L-4R (Schgd. 812) with cylinder banks right 'R' and left 'L' as viewed from drivers seat and #1 cylinder at front or flywheel end.

SPARK PLUGS: Champion Type J9B. 14 mm. Metric Gaps—.025" (Std. 810, 812), .028" (Schgd. 812).

IGNITION: See Coil, Condenser, and Distributor. Breaker Gap (810, 812)—.017". (Schgd. 812) .020". Cam Angle (810, 812)—27.5°. (Schgd. 812) 36°. Breaker Arm Spring Tension—17-20 ounces. Synchronization (Schgd. 812)—Movable contacts open 45° (distr.) after fixed set. Automatic Advance—See Distributor.

IGNITION TIMING: See Ignition Timing. Std. Setting—5° BTDC (Std. 810, 812), 2° BTDC (Schgd. 812) with point on flywheel 2 teeth (Std. 810, 812), 1 (Schgd. 812) before dead center mark "4L" at pointer in inspection hole on right side of housing. NOTE—On Schgd. 812, contacts open alternately at 45-45° (distr.) intervals.

CARBURETION: See Carburetor & Carb. Equipment. Idle Setting—Both idle screws midway between "miss" and "roll" points. Idle speed 500 R.P.M. or 6 MPH.

Float Level—Fuel level 15/32" (EE-15), 5/8" (AA-25) below top edge of bowl.

Accelerating Pump—Not adjustable.

Fuel Pump Pressure: 4 1/4 lbs. maximum.

VALVES: See Valve Timing.

Tappet Clearance—.008" all valves (Std. 810, 812), .008-.010" all valves (Schgd. 812) with Engine cold. NOTE—Carburetor and intake manifold must be removed to get at valves (manifold serves as cover for valve chamber). Tappet adjusting screw located on upper end of rocker arms.

STARTING: See Battery, Starter, Generator, Regulator.

IGNITION

Ignition Switch:—Mitchellock Model 16-S No. 6679. Connected to coil by armored cable. Switch has two "on" positions, Right Startix On, Left Startix Off. **Ignition Lock**—Yale & Towne No. 9366. Mitchell No. 6622.

COIL: Auto-Lite Model CE-4620. Service Coil (less Switch & Cable) CE-3224JS.

Ignition Current—3 amperes idling, 4 1/2-5 1/2 stopped.

CONDENSER: Auto-Lite Part No. IG-2671 (Std. 810, 812—IGP distr.), IGB-1025C (Schgd. 812—IGH distr.).

Capacity—.20-.25 microfarad.

DISTRIBUTOR (STD. 810, 812): Auto-Lite Model IGP-4006. Single breaker, 8 lobe cam, full automatic advance type. No synchronization required.

Breaker Gap—Set at .017".

Cam Angle or Dwell—27.5° closed, 17.5° open.

Breaker Arm Spring Tension—18-20 ounces.

Automatic Advance—IGP-4006

Distributor		Engine	
Degrees	R.P.M.	Degrees	R.P.M.
Start.....	300	0.....	600
2.5.....	600	5.....	1200
5.....	900	10.....	1800
7.5.....	1200	15.....	2400
10.....	1500	20.....	3000

Removal:—Distributor mounted between cylinder banks at forward end of engine. To remove, take out hold-down screw in advance arm.

DISTRIBUTOR (SCHGD. 812): Auto-Lite Model IGH-4028. Double breaker, 4 lobe cam, full automatic advance type. Must be synchronized.

Firing Interval—Contacts open alternately at regular 45° intervals corresponding to 90° firing intervals of the engine. See Ignition Timing for synchronization instructions.

Breaker Gap—Set at .020" (both sets equal).

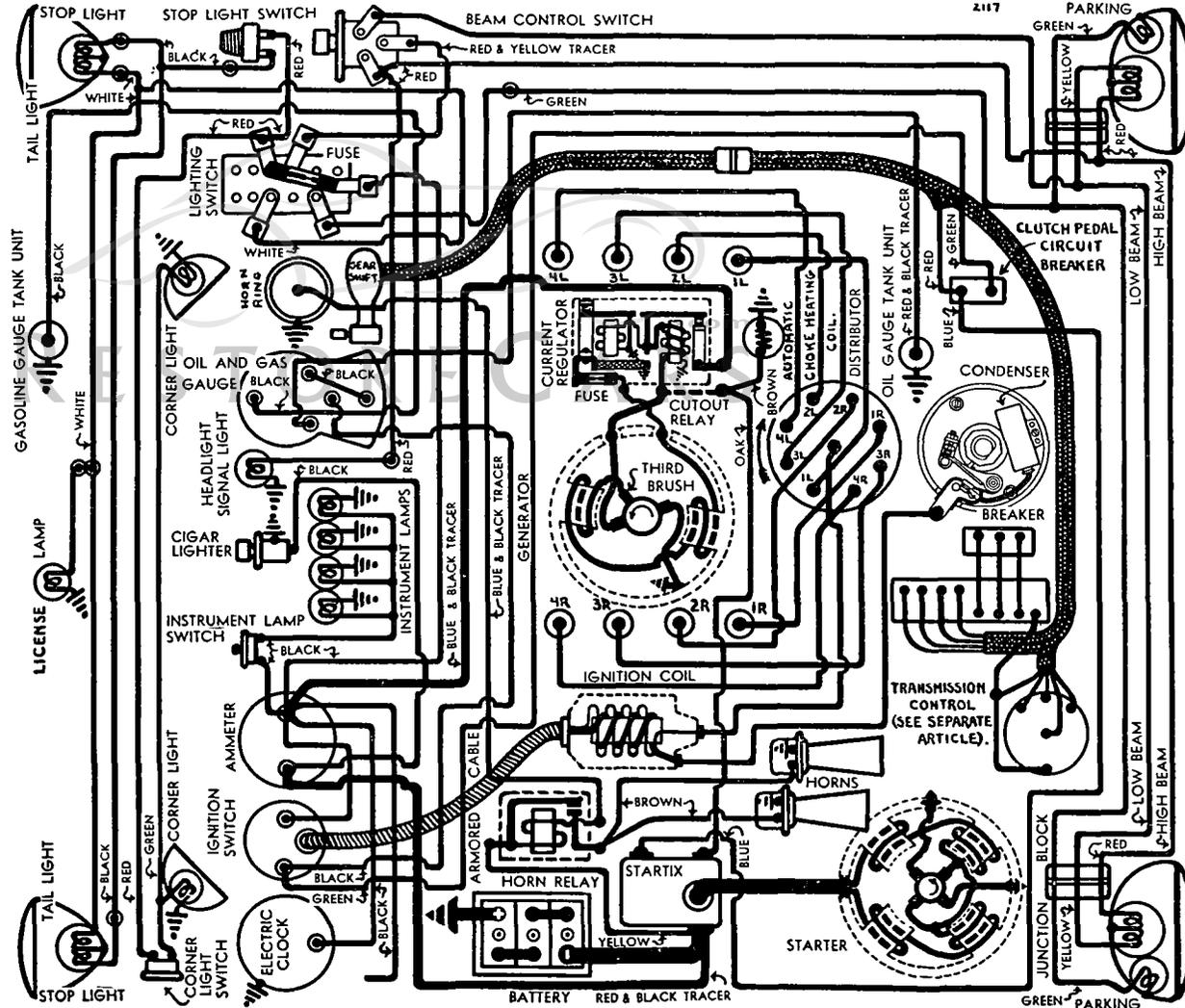
Cam Angle or Dwell—36° closed, 9° open for both sets operating together when correctly synchronized.

Breaker Arm Spring Tension—16-20 ounces.

Automatic Advance—IGH-4028

Distributor		Engine	
Degrees	R.P.M.	Degrees	R.P.M.
Start.....	300	0.....	600
9.....	1800	18.....	3600

Removal:—Same as for IGP-4006 above.



1936 MODELS