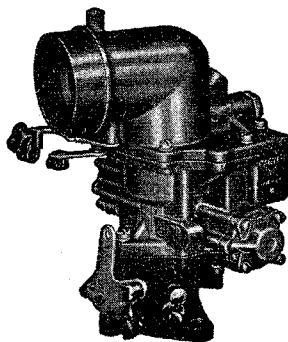


Model CJ-V35 (Navy)
 1/4 Ton 4x4 V35-U

Models MC & MCI (Army)
 1/4 Ton 4x4 Utility
 Truck M38



**WILLYS-OVERLAND
 MODEL CJ-V35
 (NAVY)**

**MODELS MC & MCI
 (ARMY)**

YS DOWN-DRAFT CARBURETOR—No. 637S

CARBURETER SPECIFICATIONS

For Willys 4 Cylinder Engine: 3 1/8 Inch Bore, 4 3/8 Inch Stroke

Dimensions: Flange size, 1 inch S. A. E.

Primary venturi, 1 1/32 inch I. D.

Main venturi, 1-1/32 inch I. D.

Float Setting: Distance from seam of float to float chamber cover, with weight of float on needle and spring: 1/4 inch.

Vents: Balanced thru air horn to air cleaner via tubing external to carbureter. Inside: none.

Gasoline Intake: Square vertical (spring loaded) needle. No. 53 drill size in needle seat.

Low Speed Jet Tube: Jet size, .028 (No. 70 drill) inch diameter, (in end of tube). Auxiliary jet (on side of tube) size: .021 inch (No. 75 drill) diameter. By-pass (in air horn) size: No. 52 drill.

Economizer (in body) size: No. 56 drill.

Idle Ports: Upper port: slot type, length, .132 inch. Width, .030 inch.

Idle Port Opening: Top of port .098 to .102 inch above top edge of valve with valve closed tight.

Lower port: Size .053 to .057 inch diameter (for idle adjustment screw).

Set Idle Adjustment Screw: 1 to 1 1/4 turns open. For richer mixture, turn screw out. Idle engine at 700 r.p.m. with deep fording vents open.

Main Nozzle: In primary venturi, angle 15°. Main nozzle bleed (tube in air horn) size: No. 70 drill.

Metering Rod: (Diaphragm operated) Economy step, .068 inch. Power step, .056 inch diameter.

Metering Rod Jet: Size, .096 inch diameter.

Accelerating Pump: Diaphragm type, vacuum operated. Discharge jet size, No. 72 drill. Intake ball check size, No. 40 drill. Discharge ball check under needle size: No. 50 drill.

Pump Stroke: 1/16 inch.

Choke: Manual—Offset, butterfly type with poppet valve.

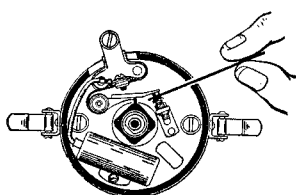
Vacuum Spark Port: None.

Motor Tune-Up—Be Accurate!

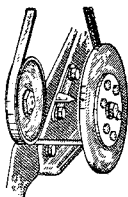
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



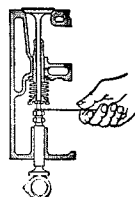
**Spark Plug
 Gap
 .030"**



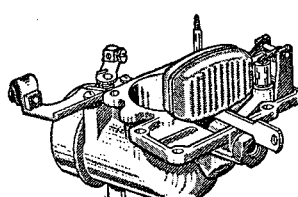
**Breaker Point
 Setting
 .020"**



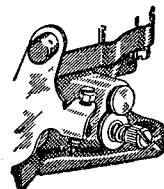
**Ignition Timing
 Breaker Points to Open:
 5° B.T.D.C.
 At Vibration Damper**



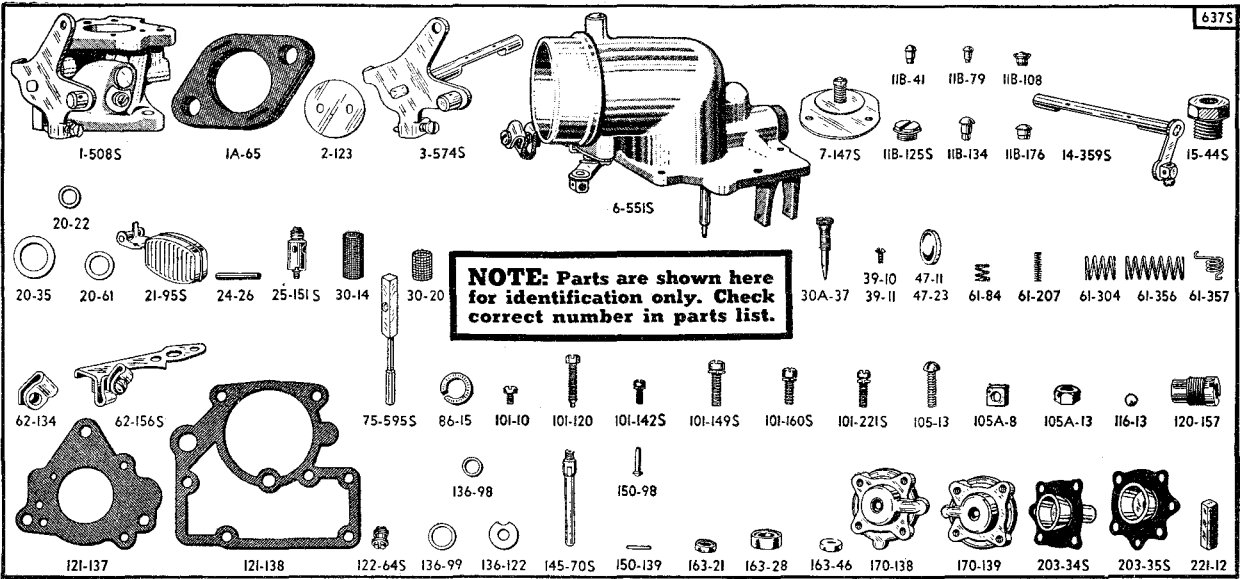
**Valve Setting
 (Hot or Cold)
 Intake .016"
 Exhaust .016"**



**Float Setting
 (Use Gauge)
 1/4 Inch**



**Idle Adjustment
 Screw Setting
 1 to 1 1/4
 Turns Open**



Willys Carburetor No. 637S

WHEN SERVICING, USE GASKET ASSORTMENT No. 188; REPAIR PACKAGE No. 1509

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME		Part No.	PART NAME
1A-65	FLANGE GASKET		62-156S	Choke tube bracket assembly.....
1-508S	Body flange assembly.....		75-595S	METERING ROD ASSEMBLY.....
2-123	Throttle valve		86-15	Flange stud lock washer.....(2)
3-574S	Throttle shaft and lever assembly.....		101-10	Wire clamp screw.....
6-551S	Air horn assembly.....		101-120	Throttle lever adjustment screw.....
7-147S	Choke valve assembly.....		101-142S	Tube bracket attaching screw and washer assembly(2)
11B-41	RIVET PASSAGE PLUG.....		101-149S	FLANGE ATTACHING SCREW AND WASHER ASSEMBLY(3)
11B-79	RIVET PASSAGE PLUG.....		101-160S	AIR HORN ATTACHING SCREW AND WASHER ASSEMBLY(6)
11B-108	IDLE PORT PASSAGE PLUG.....		101-221S	DIAPHRAGM HOUSING ATTACHING SCREW AND WASHER ASSEMBLY.....(8)
11B-125S	PUMP PASSAGE PLUG ASSEMBLY.....		105-13	Choke tube bracket screw.....
11B-134	INTAKE NEEDLE PASSAGE PLUG.....		105A-8	Choke tube bracket nut.....
11B-176	CHOKE SHAFT RIVET PLUG.....		105A-13	Flange nut(2)
14-359S	Choke lever and shaft assembly.....		116-13	PUMP DISCHARGE CHECK BALL.....
15-44S	Strainer nut assembly.....		120-157	METERING ROD JET.....
20-22	Needle seat gasket.....		121-137	BODY FLANGE GASKET.....
20-35	Strainer nut gasket.....		121-138	AIR HORN GASKET.....
20-61	Pump passage plug gasket.....		122-64S	INTAKE CHECK PLUG ASSEMBLY.....
21-95S	Float and lever assembly.....		136-98	CHOKE SHAFT WASHER.....
24-26	Float lever pin.....		136-99	THROTTLE SHAFT WASHER.....
25-151S	NEEDLE, SPRING AND SEAT ASSEMBLY.....		136-122	IDLE ADJUSTMENT SEAL WASHER.....
30-14	STRAINER		145-70S	Bleeder tube assembly.....
30-20	STRAINER (PUMP)		150-98	Intake needle pin.....
30A-37	Idle adjustment screw.....		150-139	METERING ROD SLEEVE PIN.....
39-10	CHOKE VALVE ATTACHING SCREW(2)		163-21	CHOKE SHAFT SEAL.....
39-11	THROTTLE VALVE ATTACHING SCREW(2)		163-28	THROTTLE SHAFT SEAL.....
47-11	Welsh plug		163-46	IDLE ADJUSTMENT SCREW SEAL.....
47-23	Welsh plug		170-138	Pump diaphragm housing.....
61-84	Adjustment screw lock spring.....		170-139	Metering rod diaphragm housing.....
61-207	Intake needle spring.....		203-34S	METERING ROD DIAPHRAGM ASSEMBLY.....
61-304	PUMP SPRING		203-35S	PUMP DIAPHRAGM ASSEMBLY.....
61-356	METERING ROD SPRING.....		221-12	BALL CHECK WEIGHT.....
61-357	CHOKE SPRING			
62-134	Tube holder			

NOTE: Figures in parentheses indicate number of pieces used in one carburetor. Where no figure is shown, only one is used.