

Instructions On How To Install Frontenac Head

1. Drain water—while waiting for water to drain—shut off gasoline—take off inlet manifold—with carburetor, also exhaust manifold.

Put expansion plugs in block to plug old intake and exhaust ports—lay expansion plug in hole and hit same a smart blow on center—this operation spreads the plug.

Remove commutator wires also coil box—cut dash on perpendicular lines with outside porcelain, carrying timer wires and horizontal lines even with holes where upper porcelain plugs come thru. Then cut a small section on right side of dash for new exhaust pipe.

Remove Ford Cylinder Head—scrape carbon from pistons—take care not to put any carbon in bolt holes or water jacket.

Remove Ford valves and springs—turn motor until pistons 2 and 3 are on upper dead center—then take cylinder head gasket and coat both sides with Permatex or Forma Gasket Liquid—then lay gasket on cylinder block, pistons 2 and 3 being slightly above cylinder block will hold gasket in place and prevent it from slipping sidewise, attach exhaust manifold—you are now ready to install the Frontenac Head.

When head is in line with block put in all head bolts and be sure to put bolt with special head in center, as screw which holds cover, screws into this bolt head.

Then tighten all bolts gradually from the center out to insure tight joint, in gasket.

2. Put on rocker arm brackets—taking care to keep caps with same bracket as they are machined together and will not interchange.

Take push rods for cylinders Nos. 1, 2, 3, see that all nuts are as far down as possible and drop push rods down thru Ford valve guides. Take push rod for No. 4 cylinder "one next to dash" and remove adjusting and lock nut—then put push rod in place—install adjusting and lock nut and run down as far as possible.

Take rocker arm and shaft assemblies and put same in place. Put caps on rocker shaft brackets and tighten down.

Turn motor until No. 4 exhaust valve closes and adjust push rods on No. 1 cylinder—clearance .015 thousandths.

Turn motor one-half turn until exhaust valve on No. 3 closes then adjust push rods on No. 2 cylinder, clearance .015 thousandths.

Turn motor another one-half turn until exhaust valve on No. 1 closes—then adjust push rods on No. 4 cylinder, clearance .015 thousandths.

Turn another one-half turn until exhaust valve on No. 2 closes and adjust push rods on No. 3 cylinder, clearance .015 thousandths.

Be sure that you tighten lock nuts on push rods.

Ford flange nut will fit Frontenac exhaust pipe.

Apply graphite grease on threads to prevent rust.

Next connect top water connection—use same original Ford cap screws.

Take coil box and remove coils—then take out the porcelains that carry spark plug wires Nos. 1, 2, 3—then put in 3 small flat head bolts and put nuts on to hold them in place. These 3 flat head bolts are used in place of Ford porcelains—to allow sufficient clearance for cylinder head cover. Then attach new spark plug wires for No. 1 and No. 2 plugs—use original wires for Nos. 3 and 4 plugs. Then put in the $\frac{1}{4}$ -in. x $3\frac{1}{4}$ -in. bolts thru coil box and put on wood spacers to hold coil box away from dash, put coil box on dash, put bolts thru dash, and put nuts on bolts and tighten.

Reconnect commutator wires,—put in spark plugs $\frac{3}{8}$ long and set at .025 gap.

Now install carburetor—see carburetor instruction book.

Next drive out pin which holds control lever on steering gear rod, attach throttle rod to carburetor at one end and connect other end to control lever. Be sure that the gas control handle at steering is one notch open and carburetor throttle closed tight. Then drill through lever and rod and pin in place.

Connect gasoline line—turn on gasoline.

Fill radiator with water—put valve doors in place.

Oil valve stems and push rods.

3. Now start motor and run slowly until thoroughly warmed up—then stop motor and tighten all cylinder head bolts as tight as possible.

Check valves for .015 thousandths clearance, proceeding as formerly instructed.

Put on steel shield inside of dash board.

To install cylinder head cover proceed as follows:

Turn motor until No. 4 exhaust valve opens—this clearance will allow aluminum cover to be put in place.

CARE OF CYLINDER HEAD.

This equipment is very easily taken care of. All it requires is oiling at regular intervals. About once every 500 miles, take off cover and with ordinary oil can oil the end of rocker arms, oil the center bearing of rocker arms and the valve stems.

CAUTION: Whenever head is removed for grinding valves or cleaning carbon, be sure that when put back on motor the clearance on push rods is .015. If adjusted too close motor will lose power.

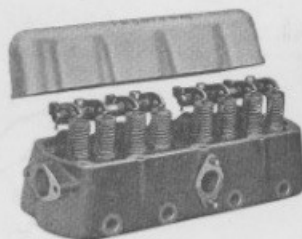
INSTRUCTION BOOK

AND

PARTS PRICE LIST

OF THE

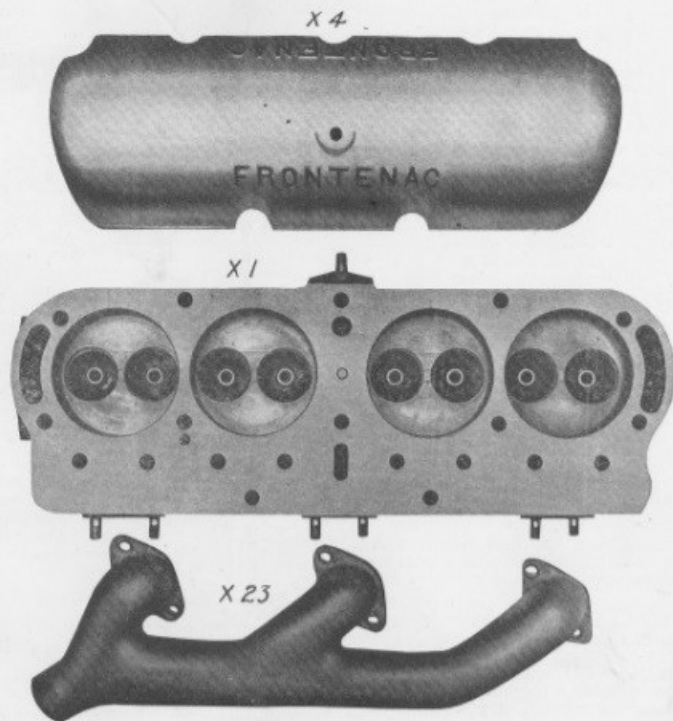
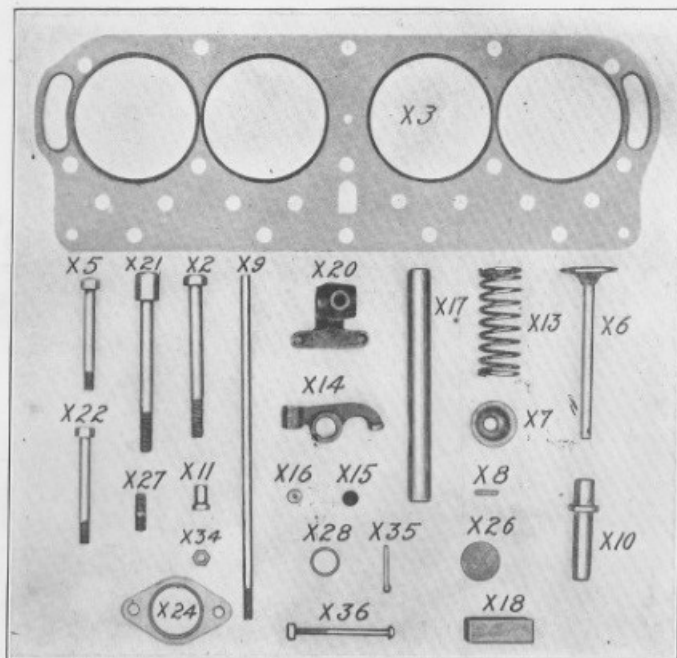
Frontenac Cylinder Head



FOR FORDS

Manufactured by

Chevrolet Bros. Mfg. Co.
INCORPORATED
INDIANAPOLIS, IND.



PARTS PRICE LIST

Part No.	Name	Number Required	Price
X-1	Cylinder head	1	\$70.00
X-2	Cylinder head cap screw	11	.20 ea.
X-3	Cylinder head gasket	1	1.00
X-4	Cylinder head cover (alum.)	1	7.50
X-5	Cylinder head cover screw	1	.10
X-6	Valve (Model T & S)	8	1.00 ea.
R-6	Valve (Model R)	8	3.00 ea.
X-7	Valve spring cap	8	.20 ea.
X-8	Valve spring key (Model T & S)	8	.02 ea.
R-8	Valve spring key (Model R)	8	.05 ea.
X-9	Push rod	8	.30 ea.
X-10	Valve guide	8	.75 ea.
X-11	Push rod adjustment nut	8	.15 ea.
X-12	Rocker shaft washer (1-16)	8	.65 ea.
X-13	Valve spring	8	.20 ea.
X-14	Rocker arm assembly	8	1.50 ea.
X-15	Rocker arm felt oiler	8	.02 ea.
X-16	Rocker arm felt cap	8	.03 ea.
X-17	Rocker shaft	2	1.50 ea.
X-18	Coil box extension blocks	4	.05 ea.
X-19	Carburetor extension	1	2.00
X-20	Rocker shaft bracket	4	1.50 ea.
X-21	Cylinder head cap screw (Spec.)	1	.30
X-22	Rocker shaft cap screw	4	.10 ea.
X-23	Exhaust pipe (Model T & S)	1	5.00
X-24	Exhaust pipe gasket	2	.10 ea.
X-25	Carburetor studs	2	.30 ea.
X-26	Expansion plugs	6	.05 ea.
X-27	Exhaust pipe stud	6	.10 ea.
X-28	Exhaust pipe (1-32)	8	.25 ea.
X-29	Throttle rod ball socket joint	2	.25
X-30	Throttle rod assembly	1	.60
X-31	Gasoline line to vacuum	1	.50
X-32	Gasoline line to Carburetor	1	.75
X-33	Air line to intake	1	.70
X-34	Exhaust and intake pipe stud nut	8	.05 ea.
X-35	Rocker shaft cotter pin	8	.01 ea.
X-36	Coil block bolt	4	.05 ea.
X-37	Carburetor gasket	2	.05 ea.
X-38	Vacuum tank (Zorzi)	1	10.00
X-38	Vacuum Tank (Stewart)	1	16.00
X-39	Throttle rod cotter p'n	2	.91 ea.
X-40	Carburetor 1 1/4 Horiz. (Zenith)	1	30.00
X-40	Carburetor 1 1/4 Horiz. (Stromberg)	1	30.00
X-40	Carburetor 1 1/4 Horiz. (Schebler)	1	27.50
X-40	Carburetor 1 1/4 Horiz. (Rayfield)	1	30.00
X-41	Cylinder head core plug	1	.05
X-42	Push rod lock nut	8	.05 ea.
X-43	Spark plugs (Champion X)	4	.75 ea.
X-44	No. 1 Cylinder plug wire	1	.30
X-45	No. 2 Cylinder plug wire	1	.30
X-46	H. Tension short bolt	3	.10
X-47	H. Tension wire short bolt nut	6	.05
X-48	Toe board shield	1	1.50
X-49	Special gas line union	1	.40
X-50	Dash control (Zenith)	1	2.50
X-50	Dash control (Stromberg)	1	3.50
X-50	Dash control (Schebler)	1	2.50
X-51	Hot air stove (Zenith)	1	1.25
X-51	Hot air stove (Stromberg)	1	2.50
X-51	Hot air stove (Schebler)	1	2.00
X-51	Hot air stove (Rayfield)	1	2.50
X-52	Hot air tube (Zenith) 1 11/16 O. D.	1	1.00
X-52	Hot air tube (Stromberg) 1 15/16 O. D.	1	1.00
X-52	Hot air tube (Schebler) 2" O. D.	1	1.00
X-52	Hot air tube (Rayfield) 1 9/16 O. D.	1	1.00
X-53	Gas line union nut	2	.20
X-54	Air line union to carburetor	1	.50