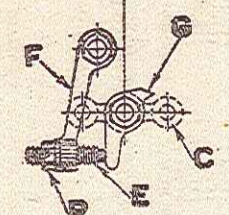
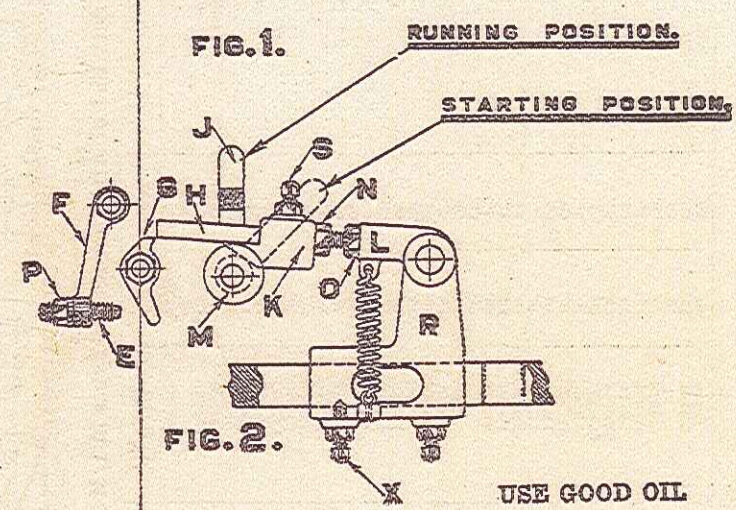
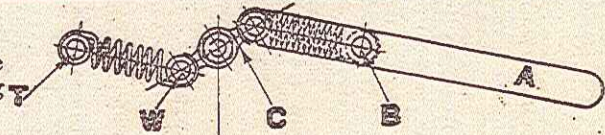


# Instructions For Using Webster Tri-Polar Oscillator Types M-1, K-26, L-26

## TO START ENGINE.

1. Move timing lever (J, Fig. 2) to the right. This is the retarded or starting position.
2. Turn fly wheels forward until oscillator trips, and stop in this position. The crank should now be set on dead center.
3. Cock oscillator with starting lever (A) as in (Fig. 1).
4. Open needle valve. Hold hand over intake pipe and turn fly wheel forward about a quarter of a revolution to draw charge of gas into cylinder.
5. Pull fly wheels back against compression and trip oscillator quickly by pressing down on starting lever (A). This will start the engine. After a few explosions, move timing lever (J) to the left. This is the advanced or running position.
6. Adjust needle valve of mixer until best results are obtained. Small engines may be started by cranking, care being taken to have timing lever (J) in retarded position.
7. In case bracket is equipped with a priming cup, starting can be made as follows: Carry out directions (1, 2 and 3). Open needle valve as in (4). Fill priming cup with gasoline. Open priming cup valve and turn fly wheel forward about one-fourth of a revolution so that fuel is drawn in by suction. Close priming cup valve. By carrying out direction (5) the engine will start.



USE GOOD OIL  
REGULARLY.  
ADJUSTMENT  
OF SPARK POINTS  
IS VERY IMPORTANT.

## TO TEST FOR SPARK.

- IMPORTANT!** Remove oscillator and bracket from engine and trip oscillator with starting lever (A). If a weak spark or no spark occurs at the points there are but three reasons for it.
- No. 1. The adjustment of screw (E) in the electrode arm (F) may not be correct. The correct position of screw (E) is when it just touches the tail of push finger (G) when the spring arm (C) is in a horizontal position as in (Fig. 3). Always be sure to tighten lock nut. With the screw (E) in this position the points will be together, and a maximum spark will always be obtained. As the points wear down the screw (E) must be adjusted.
  - No. 2. The connections between oscillator and stationary or insulated electrode on ignitor plug may be short-circuited. By this is meant the brass terminal on the electrode and the wire running from oscillator to it. Care must be taken not to bend this brass terminal or connecting wire from oscillator to terminal in such a way that either will touch any part of bracket or oscillator, as this will cause a short-circuit and no spark will occur at the points. The wire may also be broken. This can be easily replaced by removing cover which is under magnets. Use good wire.
  - No. 3. The insulation on the stationary electrode is dirty or broken down, in which case the insulation must be renewed or cleaned.

## TO ATTACH WEBSTER TRI-POLAR OSCILLATOR.

1. Remove battery ignitor from cylinder and ignitor trip from valve rod.
2. Put valve rod clamp (R) complete with push rod (H), wedge (K), and journal (L) on the valve rod as shown by (Fig. 2), fastening by set screws, being careful that set screw (X) fits into its seat in the valve rod. (On one and one-half horse power engines there is no locating seat for set screws.) The valve rod clamp (R) should go back until it strikes the detent block on the valve rod.
3. Put gasket on oscillator bracket and bolt to cylinder, being careful to lift push rod (H) above the roller (M) in doing this. The push rod (H) should lie freely in roller (M), but if it binds on either side, correct by shifting the washers on sides of push rod journal (L).
4. Attach oscillator to bracket and adjust screw (E) until it just touches push finger (G) when the spring arm (C) is in horizontal position, as in (Fig. 3). Tighten lock nut (P).

## TO ADJUST AND TIME WEBSTER TRI-POLAR OSCILLATOR.

1. Place engine crank in firing position. To do this, set engine crank 8 degrees below inner dead center on compression stroke, for every 100 revolutions per minute of the engine.
2. Move timing lever (J) to left, or running position. Cock oscillator as in (Fig. 1).
3. Adjust length of push rod (H) in journal (L) until end of push rod just touches tip of push finger (G). Tighten lock nut (O).
4. Turn nut (N) so as to force wedge (K) toward oscillator until lower edge of push rod (H) just clears push finger (G). Tighten set screw (S) and lock nut.
5. Trip oscillator and attach oscillator terminal wire to insulated electrode. Turn engine over slowly and if properly timed, oscillator will trip off at firing position. To make engine fire earlier, move wedge toward oscillator and in the opposite direction to make it fire later.

## CARE OF OSCILLATOR.

The oscillator being a mechanical device requires the same attention regarding lubrication as does the engine itself.

Oil frequently the two main bearings of the oscillator, the trip roller and the movable electrode. Use a good quality of oil. Avoid the use of heavy oil. In cold weather use very light oil, and if the electrode and main bearings have a tendency to stick, wash them out with a few drops of kerosene.

Ignitor points may be cleaned without removing bracket from engine by sliding movable electrode back and forth from the outside.

Never remove the magnets from the oscillator, as they will immediately lose much of their strength.

Never take the oscillator apart. It contains absolutely no brush or rubbing contacts of any kind. Dismantling can result only in derangement of the machine and permanent injury thereto.

Oil the four spring roller pins (T) and (W) (Fig. 1) and clean dust off daily.

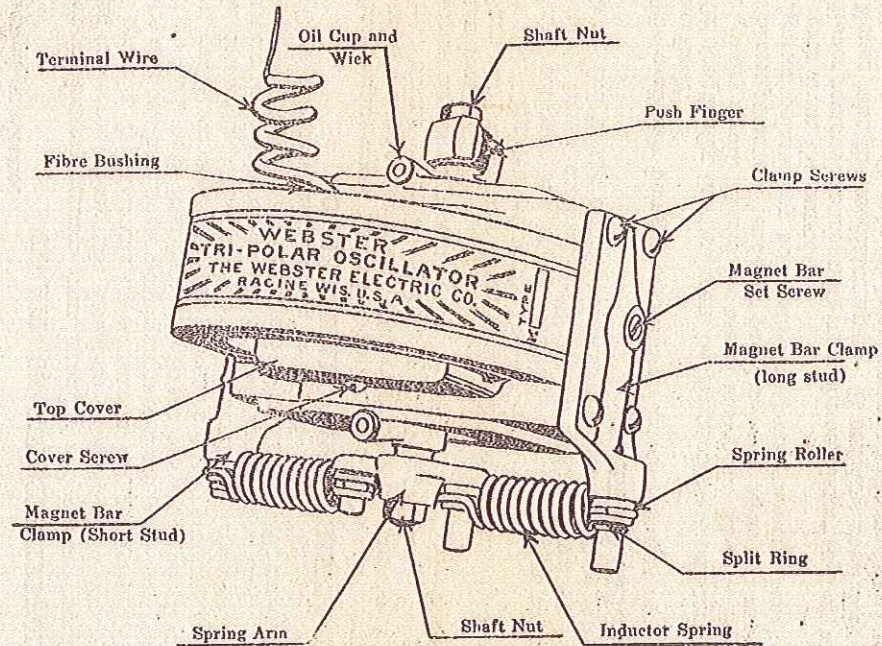
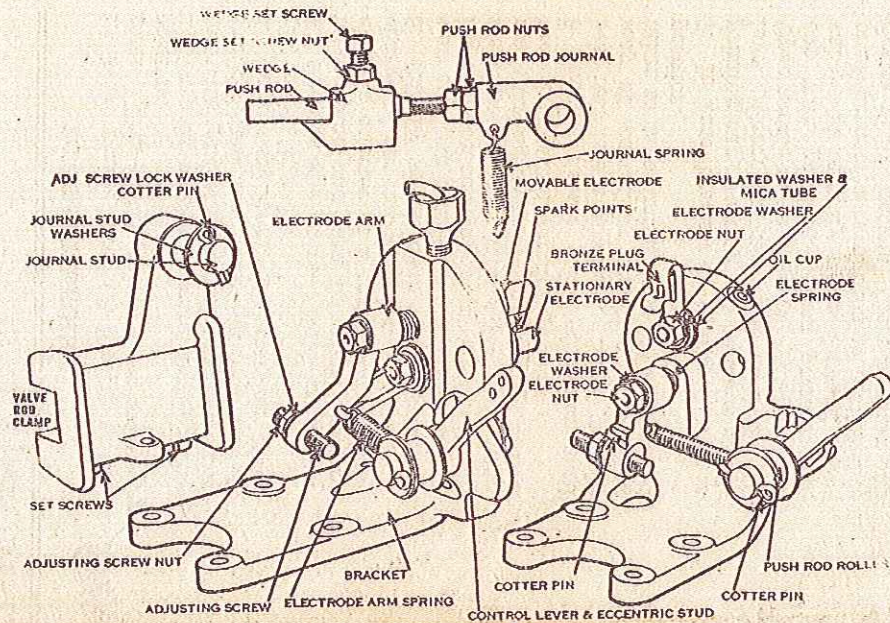
KEEP OSCILLATOR CLEAN.

Webster Electric Co., Racine, Wis., U. S. A.



# Webster Tri-Polar Oscillator

DO NOT FAIL  
TO READ CAREFULLY  
INSTRUCTIONS  
WITH THIS MARK.



Spare Part List of Attachments for Types M-1, K-26 and L-26

Description	Price	Add Postage	Type M-1 1½ H. P.	Type K-26 3-5 H. P.	Type L-26 7-9-12 H. P.
Ignitor Plug Bracket	\$5.00	\$0.25	303M1	303K26	303K26
Adjusting Screw (Complete)	.10	.01	358J2	358J2	358J2
Adjusting Screw Lock Washer	.05	.01	699J1	699J1	699J1
Adjusting Screw Nut	.05	.01	357J1	357J1	357J1
Bronze Plug Terminal	.15	.01	546J2	546J2	546J2
Control Lever and Eccentric	.75	.07	362M1	362K26	362K26
Cotter Pin	.05	.01	697J17	697J17	697J17
Eccentric Stud Washer	.05	.01	680K3	680K3	680K3
Electrode Arm	.25	.03	320K17	320K3	320K3
Electrode Arm Spring	.10	.01	545K2	545K6	545K6
Electrode Nut (Mov. or Sta.)	.05	.01	355K	355K	355K
Electrode Spring	.10	.01	354M1	354K26	354K26
Electrode Lock Washer (Mov. or Sta.)	.05	.01	699K1	699K1	699K1
Electrode Washer (Sta.)	.05	.01	572K1	572K1	572K1
Insulating Washer	.05	.01	358K1	358K1	358K1
Key (Woodruff)	.05	.01	542J	542J	542J
Mica Tube	.20	.01	359K30	359K3	359K3
Movable Electrode (with point)	.75	.03	351M1	351K26	351K26
Oil Cup	.15	.01	495K	495K	495K
Priming Cup	.35	.02	632K	632K	632K
Push Rod	.30	.03	325K8	325K3	325K3
Push Rod Journal	.30	.03	463K1	463K1	463K1
Push Rod Journal Spring	.10	.01	545J1	545J1	545J1
Push Rod Nut	.05	.01	682K1	682K1	682K1
Push Rod Roller	.20	.01	447K1	447K1	447K1
Roller or Journal Washer	.05	.01	702J19	702J19	702J19
Spark Points (each)	.20	.01	479K1	479K1	479K1
Stationary Electrode (with point)	.09	.02	352K30	352K3	352K3
Valve Rod Clamp	.75	.07	345K30	345K26	345K26
Wedge (Complete)	.20	.04	363K7	363K7	363K7
Wedge Set Screw	.05	.01	703J19	703J19	703J19
Wedge Set Screw Nut	.05	.01	316J	316J	316J
Valve Rod Clamp Set Screw (cone point)	.05	.01	703K2	703K2	703K2
Valve Rod Clamp Set Screw (cup point)	.05	.01	357J1	357J1	357J1
Valve Rod Clamp Set Screw Nut	.05	.01	357J1	357J1	357J1

NEVER TAKE OSCILLATOR APART

Spare Part List of Oscillator, Types M-1, K-26 and L-26

Description	Price	Add Postage	Type M-1 1½ H. P.	Type K-26 3-5 H. P.	Type L-26 7-9-12 H. P.
Base Stud Lock Washer	\$.65	\$.01	699K1	699K1	699K1
Base Stud Nuts (each)	.05	.01	355K	355K	355K
Clamp Screw	.05	.01	567K	567K	567K
Fibre Bushing	.05	.01	328J	328J	328J
Inductor Spring	.10	.01	331K	331K	331K
Key (Woodruff)	.05	.01	542J	542J	542J
Magnet Bar Clamp (Long or Short Stud)	.25	.01	307M	307M	307M
Magnet Bar Clamp (Long or Short Stud)	.25	.07	307K	307K	307K
Magnet Bar Set Screw	.05	.01	698K	698K	698K
Oil Cup	.15	.01	495K	495K	495K
Oil Wick	.05	.01	497K	497K	497K
Push Finger	.50	.03	302K3	302K3	302K3
Shaft Nut	.05	.01	357J1	357J1	357J1
Shaft Nut Lock Washer	.05	.01	699J2	699J2	699J2
Spring Arm	.50	.03	502K	502K	502K
Split Ring	.05	.01	582K	582K	582K
Spring Roller	.15	.01	314K	314K	314K
Starting Lever	.20	.03	577K	577K	577K
Terminal Screw	.05	.01	761K	761K	761K
Terminal Wire	.10	.01	552J	552J	552J
Top Cover	.35	.03	340M	340K	340K
Top Cover Screw	.05	.01	341J	341J	341J

Defective Parts if any Must Be Returned for Replacement or Credit.  
Be Sure When Ordering Parts to Give Engine Horse Power, Oscillator Type and Number.  
Add 3 cents to Remittance to Cover Parcel Post Insurance on Shipment.