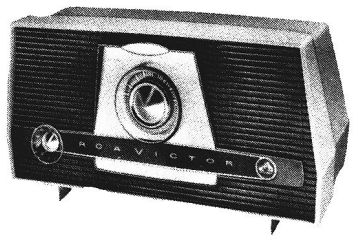
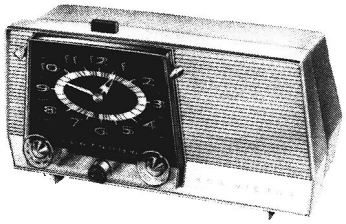
RCA VICTOR



MODEL X-411



MODEL C-423

RADIO RECEIVERS

MODELS
X-411 C-423

SERVICE DATA

— 1959 No. 3 —

ISSUED BY
SERVICE DIVISION
RCA VICTOR COMPANY, LTD.
MONTREAL, CANADA

GENERAL DESCRIPTION

The Model X-411 is a five tube (including rectifier) table model radio receiver designed for operation on a 115 volt AC-DC power supply. The two piece cabinet completely encloses the radio chassis, using a molded plastic hood instead of a conventional back cover.

The Model C-423 is a five tube (including rectifier) table model clock radio designed for operation on a 115 volt, 60 cycle power supply. The two piece cabinet complete encloses the radio chassis and clock.

The chassis, "Filteramic" antenna, speaker (and clock on C-423) are attached to the molded cabinet front, thus providing greater ease in servicing when the hood back is removed. The chassis is of the "Printed Circuit" type in which all components, except antenna, speaker(s) and clock (Model C-423), are mounted on an insulation plate. Component connections are on the underside of the plate. A conventional superheterodyne circuit is employed using 150 milliampere series-string miniature tubes.

The Model X-411 features a "Filteramic" noise reduction antenna dual speakers, push-pull type power switch incorporated with the calibrated volume control knob, vernier station tuning, illuminated dial and a jack for phono attachment.

The Model C-423 Clock Radio features a "Filteramic" noise reduction antenna, a "levermatic" clock timer, with sleep, wake-up buzzer and "Drowse" alarms, a calibrated volume control knob, vernier station tuning, illuminated slide-rule dial, appliance outlet, and phono-jack.

The "Lever-Matic" clock timer features not only the commonly accepted self-starting type of clock with sweep-record hand, but also a clock controlled switch which will: (1) turn the radio off after a period of operation of up to 60 minutes (sleep), (2) turn the radio on at a time predetermined up to 11 hours in advance (Auto), (3) sound a buzzer alarm (if desired) a short time after the radio is energized (Alarm), and (4) permit the buzzer alarm (if used) to be turned off for a period of 7 minutes after it will be sounded again (Drowse Alarm) (radio is on during this operation). Lever type clock function controls are located at the perimeter of the clock face for maxmium ease of operation.

On Model X-411 and C-423 the power supply attachment cord is fastened to the cabinet hood and becomes disconnected from the chassis when the hood is removed.

ELECTRICAL AND MECHANICAL SPECIFICATIONS

TUNING RANGE ..... 540–1,600 kc

INTERMEDIATE FREQUENCY ..... 455 kc

TUBE COMPLEMENT

(1) RCA 12BE6 ..... Converter
(2) RCA 12BA6 ..... I.F. Amplifier
(3) RCA 12AV6 ..... Det.-AVC-A.F. Amp.
(4) RCA 50C5 ..... Output
(5) RCA 35W4 ..... Rectifier

POWER SUPPLY RATING (C-423)

115 volts, 60 cycles, a. c. ..... 35 watts
Caution: Do not connect to a d. c. power supply.

POWER SUPPLY RATING (X-411)

115 volts d. c. or 50 to 60 cycles a. c. ..... 30 watts

LOUDSPEAKER (C-423)

Size and type ..... 4 in. P.M.
Voice coil impedance at 400 cycles ..... 3.2 ohms

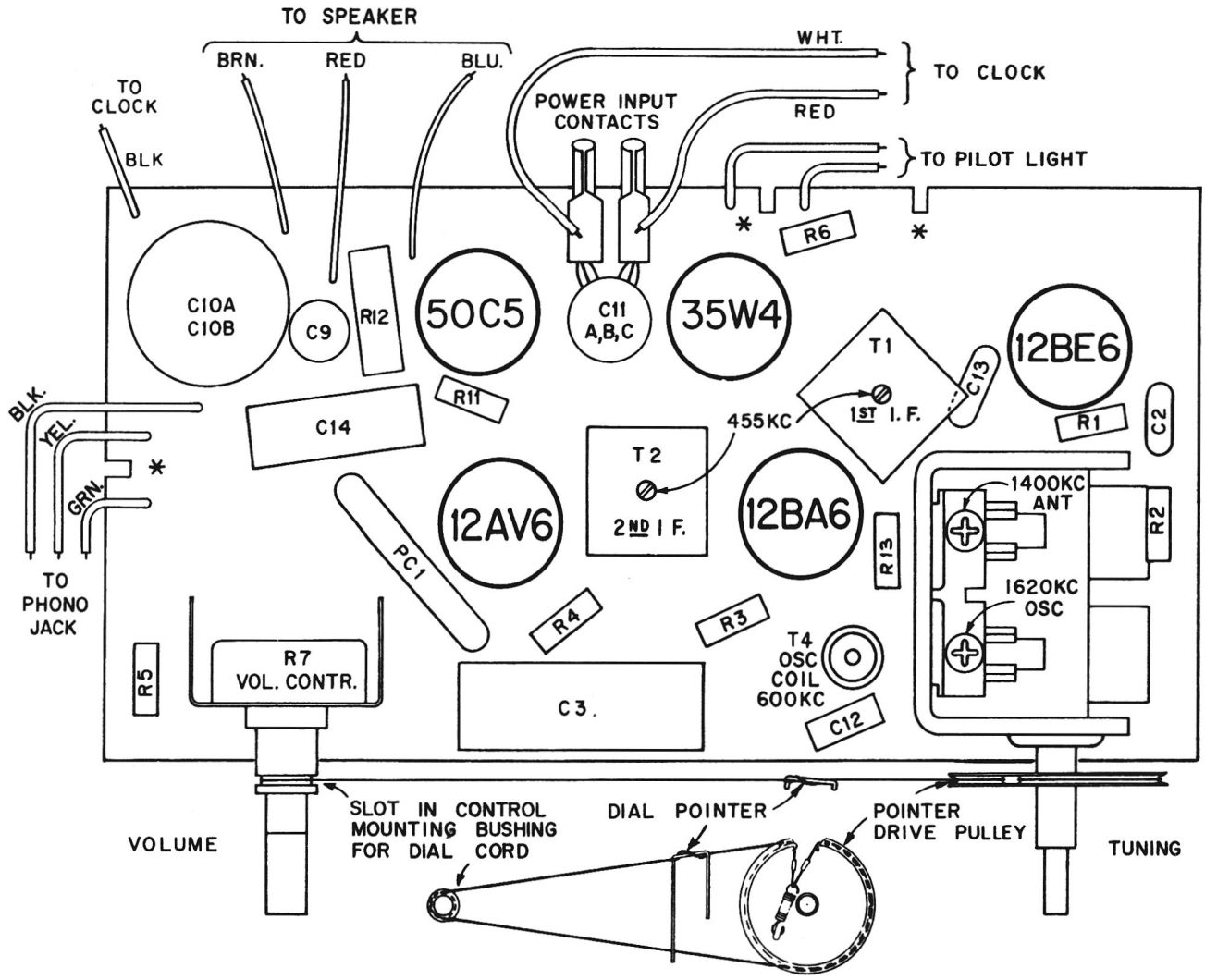
LOUDSPEAKER (X-411)

Size and type ..... One 3½", one 4" P.M.
Voice coil impedance at 400 cycles ..... 3.2 ohms each

POWER OUTPUT

Undistorted ..... 1.0 watts
Maximum ..... 1.3 watts

TUNING DRIVE RATIO ..... Planetary—Approx. 6:1 (3 turns of knob)



MODEL C-423

Chassis Assembly and Dial Cord Arrangement — View from Component Side

NOTE: CHASSIS LAYOUT FOR MODEL X-411 IS IDENTICAL TO MODEL C-423 EXCEPT FOR VOLUME CONTROL & SWITCH. MODEL X-411 HAS DIRECT DRIVE TUNING — THUS ELIMINATING DIAL CORD ARRANGEMENT.

CHASSIS REMOVAL (X-411, C-423)

1. Remove two holding screws in bottom of cabinet.
2. Loosen captive holding screw at rear top of hood. DO NOT TRY TO REMOVE.
3. Grip cabinet by its ends, from the rear, allowing the fingers to extend loosely over the front.
4. Hold cabinet front down and shake vertically until front separates from hood. Fingers will limit the separation.

CABINET REASSEMBLY (X-411, C-423)

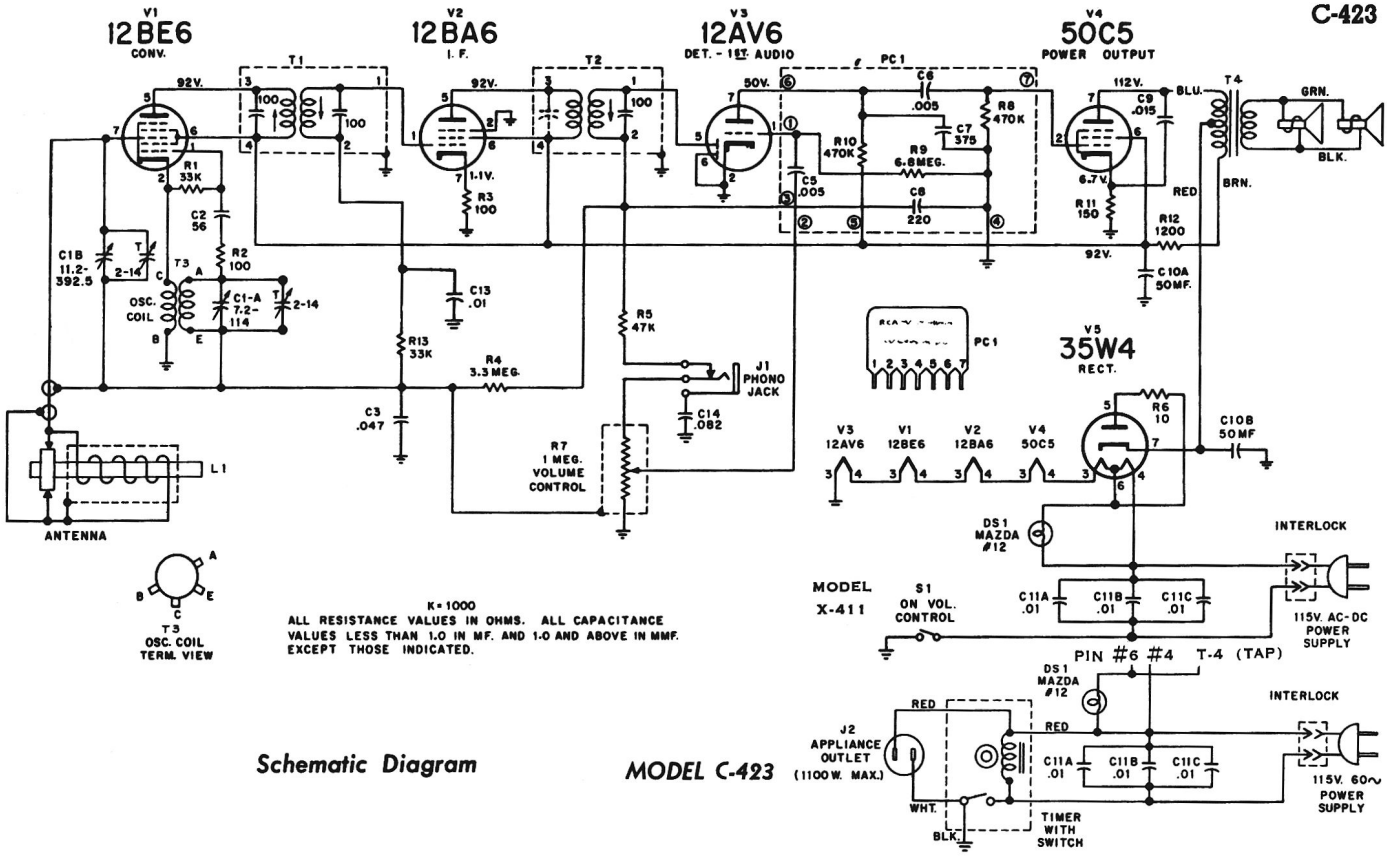
1. Place rib, on bottom of chassis mounting stud, in channel inside bottom of hood and slide sections firmly together.
2. Gently tighten captive holding screw at rear top of hood.
3. Insert and gently tighten two holding screws in bottom of cabinet.

Alignment Procedure

Test-Oscillator — For all alignment operations, connect the low side of the test-oscillator through an isolating capacitor to the "common negative wiring." Keep the oscillator output as low as possible to avoid a-v-c action.

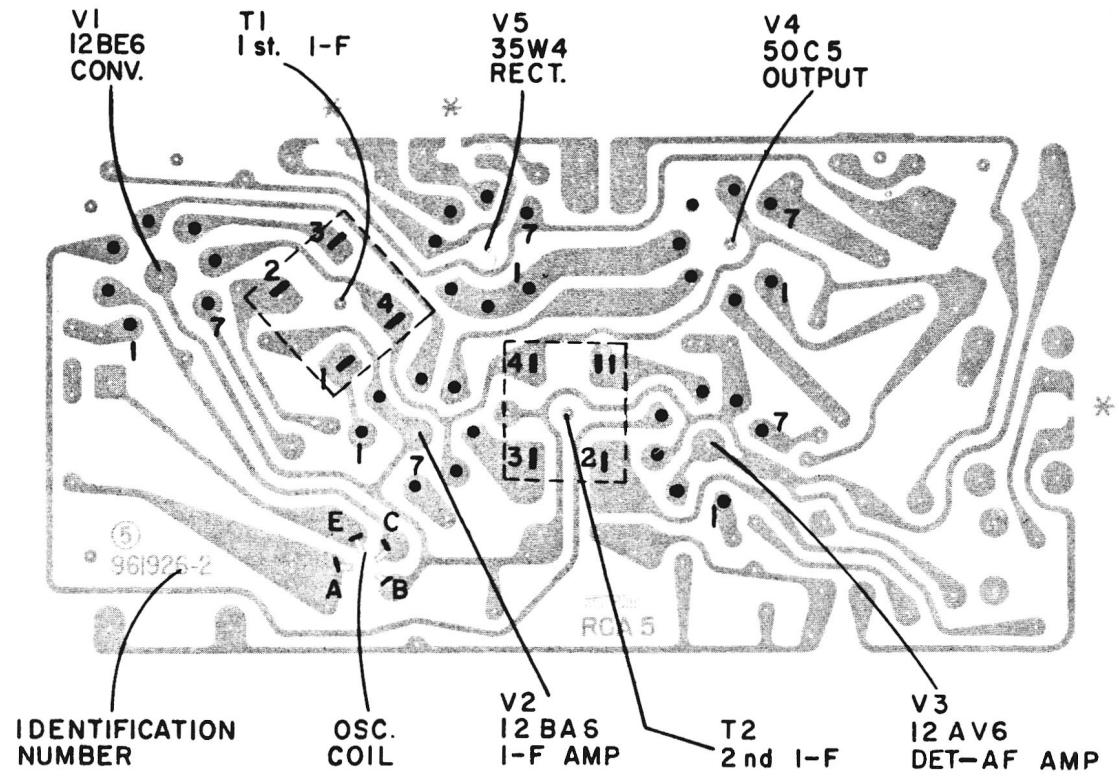
An isolation transformer (115 v./115 v.) may be necessary for the receiver if the test-oscillator is also a.c. operated.

Step	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. output
1	12BA6 I-F grid through .01 mfd. capacitor	455 kc	Quiet-point 1,600 kc end of dial	T2 (top) 2nd I-F trans.
2	Stator of C1-B through .01 mfd.			T1 (top and bottom) 1st I-F trans.
3	Short wire placed near loop to radiate signal	1,620 kc	Gang fully open	osc. trimmer C1-A
4		1,400 kc	1,400 kc signal	ant. trimmer C1-B
5		600 kc	600 kc signal	osc. coil T-4 (rock gang)
6		Repeat steps 3, 4, and 5		



K = 1000
ALL RESISTANCE VALUES IN OHMS. ALL CAPACITANCE VALUES LESS THAN 1.0 IN MF. AND 1.0 AND ABOVE IN MMF. EXCEPT THOSE INDICATED.

Schematic Diagram *MODEL C-423*



The assembly represented above is viewed from the wiring side of the board.

The printed wiring, on the near side of the board, is presented in "phantom" view superimposed on the component layout of the reverse side.

Chassis Wiring and Components — View from Wiring Side

OPERATING INSTRUCTIONS (C-423)

To Set Clock Time—Push in and turn TIME SET knob (at back of cabinet).

To Set Wake-up Time — Turn TIME SET knob (at back of cabinet).

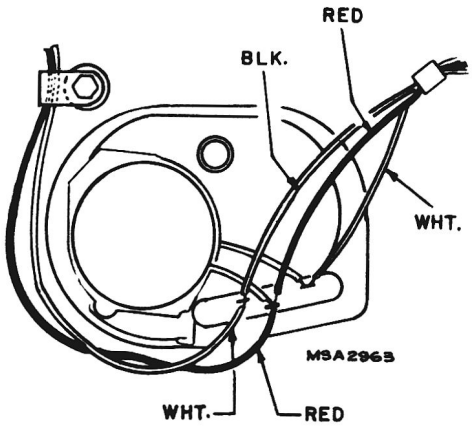
To Play the Radio — Set SERVICE lever to "ON." Turn TUNING knob to select desired station and adjust VOLUME as desired. Set SERVICE lever to "OFF" when through listening.

For "Radio Wake-up" Operation — With SERVICE lever set at "ON," tune in the desired station and adjust volume level. Set SERVICE lever to "AUTO." The radio will turn on automatically at the time for which the alarm has been preset.

For "Radio/Buzzer Wake-up" Operation — Setting SERVICE lever to "ALARM" will cause a buzzer to sound a short time after radio has been turned on. The buzzer feature only may be used without the radio feature by presetting the VOLUME knob to 0. Moving the SERVICE lever to any position other than "ALARM" will silence the buzzer.

For "Drowse" Operation — With the SERVICE lever set at "ALARM" and after the buzzer has sounded; it may be silenced for a period of about 7 minutes by pressing down the "DROWSE" button on top of the cabinet. If the radio feature is also being used it will continue to play during this interval. This operation may be repeated when the buzzer again sounds.

IMPORTANT — KEEP SERVICE KNOB AT "OFF" POSITION WHEN INSTRUMENT IS NOT IN USE.



Clock Connections

REPLACEMENT PARTS LIST

Insist on Genuine Factory Tested Parts, which are readily identified and may be purchased from Authorized Dealers.

SYMBOL	STOCK NO.	DESCRIPTION
C-1A,B	*S-23151+	Capacitor-variable tuning (X-411).
C-1A,B	*S-23122+	Capacitor-variable tuning (C423)
C-2		Capacitor-ceramic 56 mmf, 20% 500V
C-3		Capacitor-.047 mfd. 20% 400V
C-5, C6, C7, C8		Part of PC-1
C-9		Capacitor-.015 mfd, 10% 400V
C-10A, B	*S-23142+	Capacitor-electrolytic- 50/50 mfd. 120/150V
C-11	*S-23143+	Capacitor-.01 mfd. +100%, -075 600V
C-12		Capacitor-5.6 mmf. ± .5 mmf 500V (C-423 only)
C-13	*S-23217+	Capacitor-.01 mfd +100%, -0% 500V
C-14		Capacitor-0.082 mfd. 400V
PC-1	*S-22915+	Circuit-Audio coupling (includes C-5, C-6, C-7, C-8, R-8, R-9 and R-10)
L-1	*S-23127+	Antenna-Ferrite "Filteramic" Antenna
R-1		Resistor-33,000 ohms, 20% 1/2w
R-2		Resistor-100 ohms, 20% 1/2w
R-3		Resistor-100 ohms, 20% 1/2w
R-4		Resistor-3.3 megohms, 20% 1w
R-5		Resistor-47,000 ohms, 20% 1/2w
R-6		Resistor-10 ohm, 1/2w
R-7	*S-23149+	Control-Volume control -X-411
R-7	*S-23121+	Control-Volume control-C-423
R-8, R-9, R-10		Part of PC-1
R-11		Resistor-150 ohms 10% 1/2w
R-12		Resistor-1,200 ohms 10% 1w
R-13		Resistor-33,000 ohms 20% 1/2w
T-1	*S-22921+	Transformer-1st IF transformer
T-2	*S-22922+	Transformer-2nd IF transformer
T-3	103204 +	Transformer-Oscillator transformer
T-4	S-23140+	Transformer-Audio output (X-411)
T-4	*S-22908+	Transformer-Audio output (C-423)
	*S-22939+	Circuit-Printed chassis ass'y, complete with capacitors, resistors etc., less tubes tuning cap. and volume control
		SPEAKER ASSEMBLY (C-423)
	*S-21865+	Speaker-4" PM Speaker
		SPEAKER ASSEMBLY (X-411)
	*S-23141+	Speaker-3-1/2" PM
	*S-23218+	Speaker-4" PM

SYMBOL	STOCK NO.	DESCRIPTION
		MISCELLANEOUS-MODEL C-423
	*S-23289§	Cable-AC line cord
	*S-23290§	Cabinet-Cabinet back-White
	*S-23291§	Cabinet-Cabinet back-Maple
	*S-23292§	Cabinet-Cabinet front-White
	*S-23293§	Cabinet-Cabinet front-Pink
	S-4313 §	Cord-Drive cord
	*S-23294§	Clip-Lamp mounting clip
	*S-23111§	Connector-Appliance outlet receptible
	102542 §	Emblem-Trademark Emblem for clock window
	*S-23109+	Knob-Time set knob
	*S-23115+	Knob-Timer "Drowse" alarm button
	*S-23124+	Knob-Tuning knob
	*S-23123+	Knob-Volume control knob
	*S-23136+	Lamp-6.3 volt miniature lamp
	*S-23295+	Nut-T nut for cabinet front
	*S-22237§	Nut-Speaker retainer nut
	*S-23139§	Manual-Customer Instruction Manual
	S-23108§	Pointer-Dial pointer
	*S-23135§	Retainer-for clock window
	*S-23296+	Socket-Pilot lamp socket
	100201+	Socket-7 pin miniature socket for V-1, V-2, V-3
	100200+	Socket-7 pin miniature socket for V-4, V-5
	*S-23128§	Spring-Nut for clock
	*S-23116§	Window-Clock timer window
		MISCELLANEOUS-MODEL X-411
	*S-23219§	Cable-AC line cord
	*S-23220§	Cabinet-Cabinet back-White
	*S-23221§	Cabinet-Cabinet back-Pink
	*S-23222§	Cabinet-Cabinet front-Charcoal
	*S-23223§	Cabinet-Cabinet front-Turquoise
	*S-23224§	Cabinet-Cabinet front-White
	*S-23153§	Dial-Tuning dial
	*S-23144+	Knob-Vernier tuning knob
	*S-23150+	Knob-Volume control knob
	*S-23136+	Lamp-6.3 volt miniature lamp with 2 pin base
	*S-23145§	Lens-Dial light lens
	*S-23159§	Manual-Customer Instruction Manual
	*S-23147§	Motif-"Filteramic"
		Nut-Cabinet ass'y retaining nut
	*S-23155§	Nut-Retainer nut for 3-1/2" speaker
	S-22237§	Nut-Retainer nut for 4" speaker
	*S-23146§	Pointer-Tuning indicator
	103201 +	Socket-7 pin miniature for V-1, V-2, V-3
	103200 +	Socket-7 pin miniature for V-4, V-5
	*S-23152+	Socket-Pilot lamp socket

* Indicates New Stock Items.
\+ Indicates Parts Stocked at Branches at Manager's Option.
§ Indicates Parts Stocked at Replacement Parts Cote de Liesse Only. Order on Demand.

Only items listed under stock numbers are available as Replacement Parts.
All parts subject to change or withdrawal without notice.