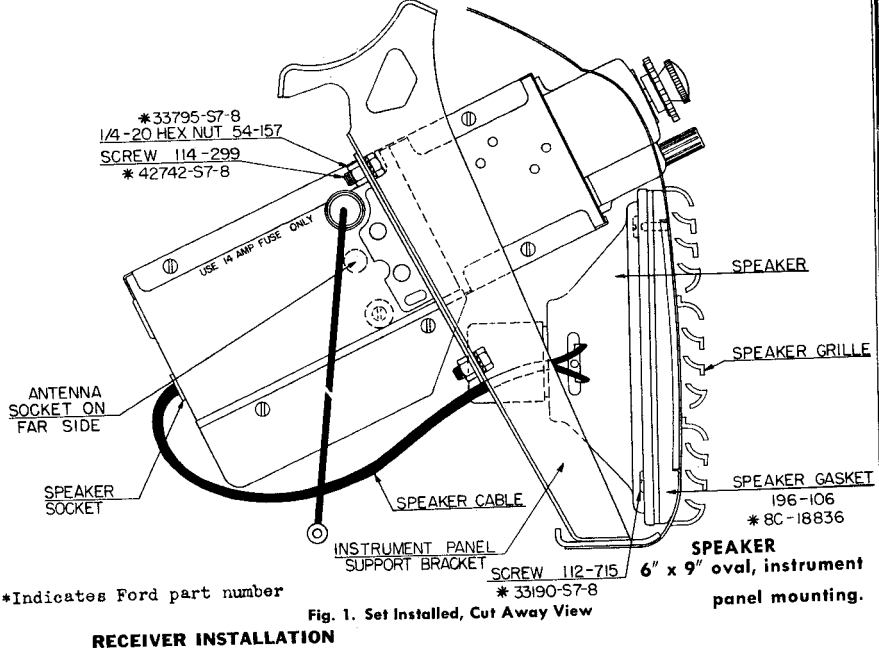
Zenith Radio Corp.

	Model: 8MF881	**Chassis:**	**Year:** Pre 1951
	Power:	**Circuit:**	**IF:**
	Tubes:		
	Bands:		

Resources
Riders 20 (XX) ZENITH 20-67
Riders 20 (XX) ZENITH 20-68
Riders 20 (XX) ZENITH 20-69
Riders 20 (XX) ZENITH 20-70
Riders 20 (XX) ZENITH 20-71
Riders 20 (XX) ZENITH 20-72
Riders 20 (XX) ZENITH 20-73



*Indicates Ford part number

Fig. 1. Set Installed, Cut Away View

RECEIVER INSTALLATION

Figures 1 and 2, illustrating the escutcheon plate, control knobs and the installed receiver, are given here to facilitate removal and reinstallation of the receiver when service or repair is necessary.

1. Disconnect the "A" lead, the speaker cable, and the antenna from the receiver. (Fig. 1.)
2. Remove the four ¼" screws No. 114-299, and take the set from its position behind the instrument panel. (Fig. 1.)
3. To take the speaker from behind the instrument panel remove the two screws No. 112-715. (Fig. 1.)

OPERATING INSTRUCTIONS

TO TURN RADIO ON:

The radio is connected to the accessory terminal of the ignition switch, therefore, it is necessary to turn the ignition key to the left, if the engine is not running, before turning the radio on. Press any one of the five automatic push buttons. (Fig. 2.) Allow approximately 20 seconds for the receiver to reach operating temperature.

To turn the receiver off, press the "Off" push button (Fig. 2.)

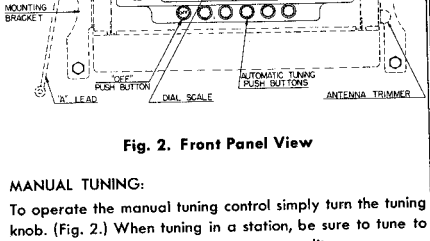


Fig. 2. Front Panel View

MANUAL TUNING:

To operate the manual tuning control simply turn the tuning knob. (Fig. 2.) When tuning in a station, be sure to tune to the exact frequency for the best tone quality.

VOLUME CONTROL:

Turn the volume control knob for the desired volume. (Fig. 2.)

TONE CONTROL:

The tone control knob is located directly behind the volume control knob. Turning this control to the right or left will change the tone of the receiver. The control has four positions. The position to which the control is set is indicated in the window in the center of the dial scale.

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AUTOMATIC TUNING:
There are five automatic tuning push buttons located to the right of the "Off" push button. (Fig. 2.)

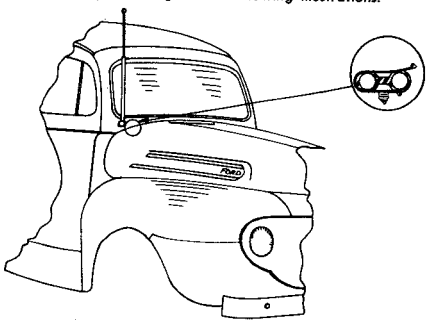
The five buttons may be adjusted in succession to any desired dial setting. To simplify the identification of the stations, it is advisable to set the buttons in sequence according to the frequencies of the stations, beginning with the station broadcasting at the lowest frequency and progressing to the station broadcasting at the highest frequency.

To adjust the automatic tuning push buttons:

1. Turn the receiver on and allow it to operate for at least 15 minutes in order for each part to reach normal operating temperature.
2. Tune in the station desired for number 1 position by turning the tuning knob. (Fig. 2.) Be sure to tune to the exact frequency to insure the best tone.
3. Loosen the number one push button, located nearest the "OFF" push button (Fig. 2) by turning it counterclockwise with your fingers not more than two turns. If the push button is completely unscrewed, the plunger assembly, inside the receiver, may fall apart. Then it will be necessary to remove the radio from the car, open the case, and reassemble the plunger.
4. Press the button in as far as it will go.
5. Release the number 1 button and tighten it by turning it clockwise with your fingers.
6. Use the same procedure for adjusting positions 2, 3, 4, and 5. When the five automatic tuning push buttons have been adjusted to the five desired stations, any one of the five stations can be instantly tuned in by pressing the automatic push button that is adjusted to it.

INTERFERENCE SUPPRESSION

There should be no motor noise or interference from the ignition circuit if the receiver has been installed in the car according to the instructions furnished with it. The interference suppression equipment may be checked for proper installation by referring to the following illustrations:



REMOVE SCREW FROM HOOD PAD ON COWL AT LOCATION SHOWN AND INSTALL HOOD BONDING SPRING 80-579 *51A-18870 WITH SCREW 112-365 *32923-S7-8

Fig. 3

The hood bonding spring No. 80-579 should be installed on the cowl at the location shown in Fig. 3.

The generator condenser, No. 22-1601, should be mounted under the top assembly bolt on the rear end plate of the generator, and the lead connected to the ARMATURE terminal of the generator. (Fig. 4.)

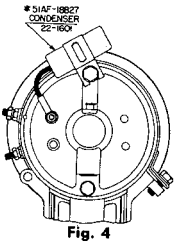


Fig. 4

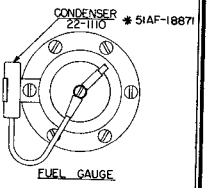


Fig. 5

A condenser, Part No. 22-1110, should be connected to the fuel gauge tank unit. (Fig. 5.)

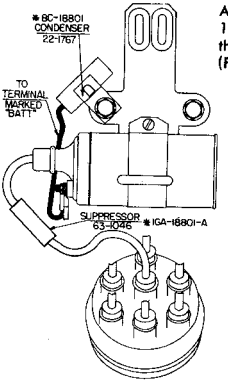


Fig. 6

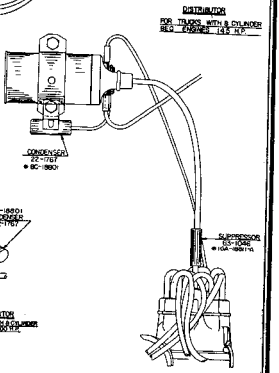


Fig. 6A **Fig. 6B**

The suppressor, No. 63-1046, should be in the high tension wire, approximately 1½ inches from the distributor cap. (Figs. 6, 6A and 6B.) The ignition coil condenser, No. 22-1767, should be connected to the BAT. terminal of the ignition coil. (Figs. 6, 6A and 6B.)

*Indicates Ford part number

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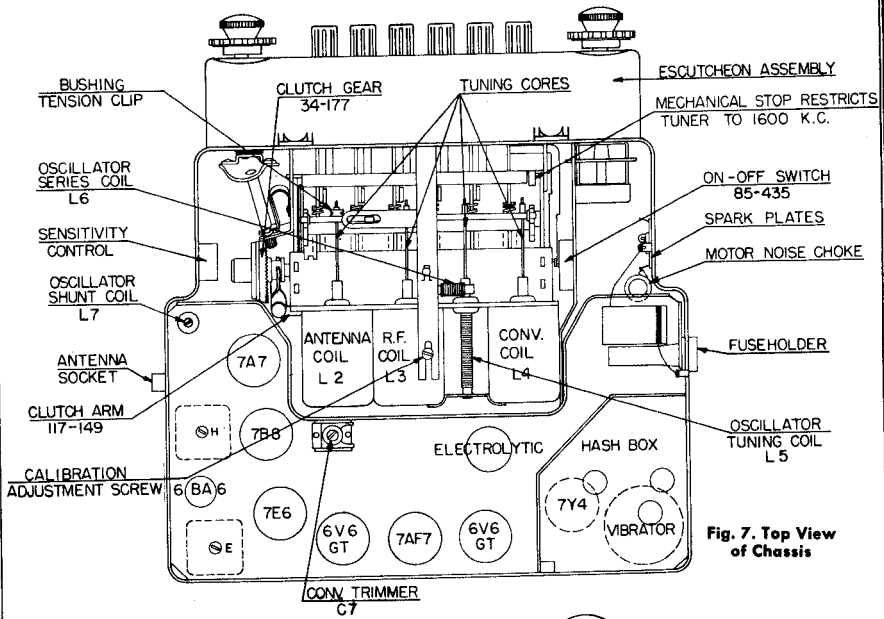

Fig. 7. Top View of Chassis

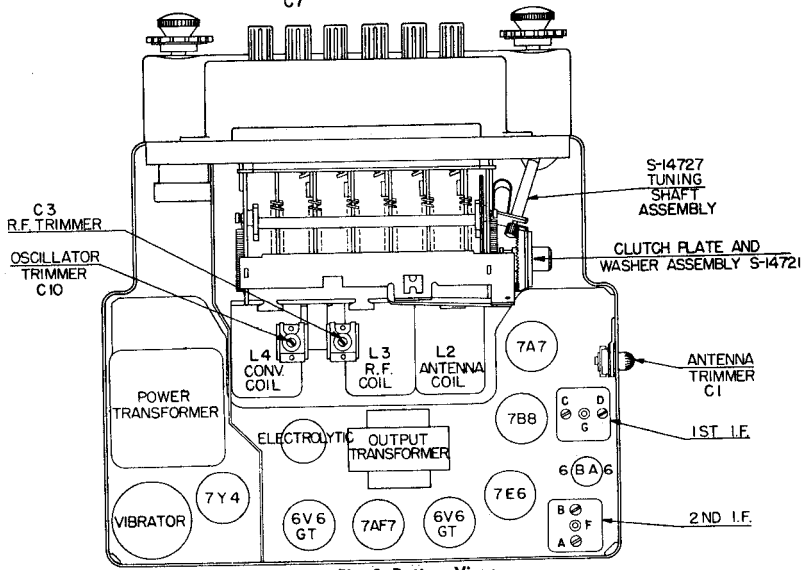

Fig. 8. Bottom View of Chassis

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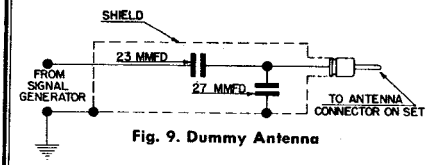

Fig. 9. Dummy Antenna

Figure 9 shows the schematic of a recommended dummy antenna, closely resembling actual antenna capacity, to be used in series with signal generator leads when aligning the R.F. section of the receiver.

ALIGNMENT

Maximum performance depends on accurate alignment of the receiver; therefore follow these instructions carefully.

CAUTION: Make all alignment adjustment to the receiver with the volume control set at maximum, and the tone control in the treble position. Reduce the signal intensity as much as possible at the signal generator. Connect the output meter across the voice coil.

I.F. ALIGNMENT PROCEDURE

1. Remove top and bottom covers from receiver.
2. Set signal generator to 265 Kc.
3. Apply signal from generator through a .1 Mfd. dummy to 7B8 converter grid. (Pin No. 6 on socket.)
4. Adjust I.F. trimmers A, B, C, and D in order named for maximum output. (Fig. 8.) Some units have I.F. transformers that are slug tuned. In this case adjust I.F. slugs E, F, G, and H in order named. Repeat the operation to assure accurate alignment. (Figs. 7 and 8.)

R.F. AND OSCILLATOR ALIGNMENT

1. Connect signal generator leads through dummy, illustrated in Fig. 9, to antenna lead in socket on receiver. This is important.
2. Set signal generator to 535 Kc.
3. Tune set to 535 Kc.
4. Adjust oscillator trimmer C-10 (Fig. 8), for maximum response.
5. Set signal generator to 1300 Kc.
6. Tune set to 1300 Kc.
7. Adjust converter trimmer C-7, R.F. trimmer C3 and antenna trimmer C-1 (Fig. 8) for maximum response (Figs. 7 and 8).
8. If dial calibration is off after making above adjustments, a correction can be made by turning eccentric screw at fulcrum of dial pointer. (Fig. 7.)

TO ADJUST OR REPLACE THE ADJUSTING SPRING AND CORE

1. Remove the top and bottom covers from the receiver. Remove the escutcheon assembly.
2. With pliers remove the bushing tension clip from the cross arm insulating bushing.
3. With core alignment tool, part No. S-13064, screw the core in, or out, to the desired position.
4. After all adjustments or replacements are completed, be sure to replace the bushing tension clip.

ALIGNMENT PROCEDURE AFTER CORE OR COIL REPLACEMENT

WARNING: The following adjustments are to be made only after a core or coil is replaced.

1. Set signal generator to 1675 Kc.
2. Connect signal generator leads through dummy, illustrated in Fig. 9, to antenna receptacle on the receiver.
3. Set receiver dial to 1600 Kc. (Maximum high frequency end of dial.)
4. Screw the cores completely out of the antenna coil, the R.F. coil, the converter coil, and the oscillator coil.
5. Adjust the oscillator trimmer C-10 (Fig. 8) at 1675 Kc.
6. Adjust the converter trimmer C-7, R.F. trimmer C3, and antenna trimmer C-1 (Figs. 7 and 8) for maximum output reading.
7. Set signal generator dial and receiver dial to 1300 Kc.
8. Replace cores to their approximate original position (so that the cores project about 1/16 of an inch from the end of the coil form).
9. Adjust the oscillator core L-5 (Fig. 7) to scale at 1300 Kc.
10. Adjust the antenna core L-2, R.F. core L3, and converter core L-4 (Fig. 7) for maximum output reading.
11. Set signal generator to 600 Kc.
12. "Rock in" shunt oscillator coil L-7 (Fig. 7) for maximum output reading. This should be done only as a last resort. This is the same as rocking in the padder condenser on a gang condenser receiver.
13. Check receiver at 1300 Kc. for calibration and gain. If the receiver is off scale or weak, repeat operations 9, 10, and 11.
14. After alignment is complete, the maximum high frequency tuning range should be checked. If the range is greater or less than 1605 Kc., the lug stop near the volume control should be bent to limit the frequency coverage to 1605 Kc.

IMPORTANT: After reinstalling the receiver in the car, allow it to operate for approximately 15 minutes to reach normal operating temperature. Extend antenna to maximum. Check the antenna trimmer alignment on a weak station at approximately 1300 Kc.

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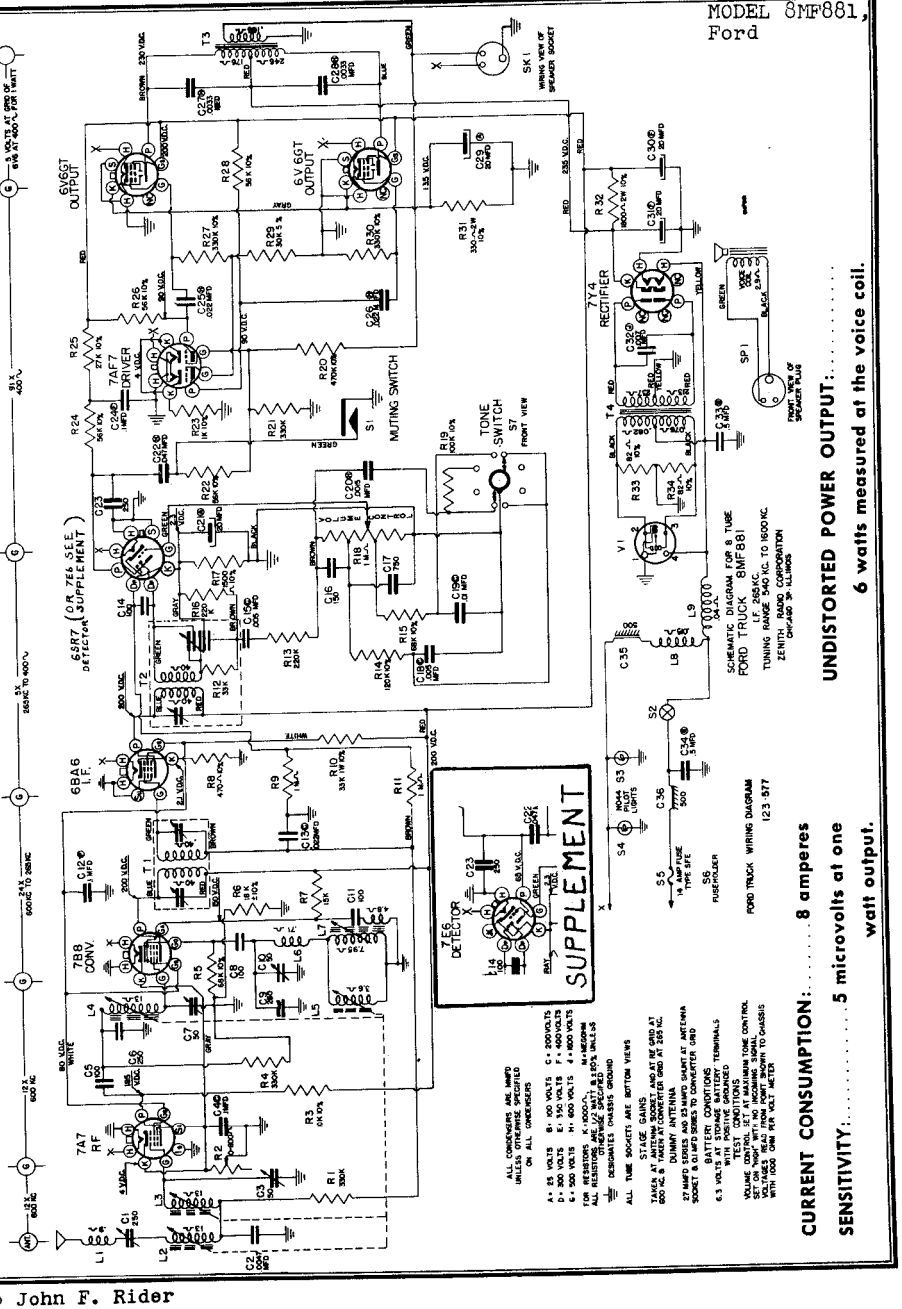

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PARTS LIST FORD TRUCK RECEIVER

Diagram No.	Part No.	Description
		COILS AND CHOKES
L 9	20-213	Main Hash Choke
T 1	95-1077	1st I.F. Transformer
T 2	95-1078	2nd I.F. Transformer
L 1	S-8819	Antenna Motor Noise Choke Assembly
L 8	S-11232	Motor Noise Choke Assembly
L 7	S-14225	Oscillator Shunt Coil Assembly
L 6	S-14226	Oscillator Series Coil Assembly
L 3	S-14227	RF Coil Assembly
L 2	S-14227	Antenna Coil Assembly
L 4	S-14227	Converter Coil Assembly
L 5	S-14228	Oscillator Coil Assembly
L 2, L 3, L 4, L 5	S-14295	Tuner Coil Unit Assembly
		CONDENSERS
C12	22-170	.1 Mfd. 400 V.
C23	22-182	250 Mmfd. 400 V.
C 4	22-190	.1 Mfd. 200 V.
C17	22-242	750 Mmfd. 500 V.
C15, C18	22-906	.005 Mfd. 200 V.
C 6	22-1136	250 Mmfd. 500 V.
C16	22-1137	150 Mmfd. 500 V.
C34	22-1238	.5 Mfd. 120 V.
C19	22-1466	.01 Mfd. 200 V.
C29, C30, C31	22-1484	Electrolytic 20 Mfd.—25 V. x20-20 Mfd. 400 V.
C21	22-1553	20 Mfd. Electrolytic. 25 V.
C 9	22-1712	260 Mmfd. Compensating
C32	22-1713	.007 Mfd. 1600 V.
C 7	22-1715	Single Section Trimmer (Converter)
C 1	22-1721	Single Section Trimmer (Antenna)
C 3, C10	22-1722	Two Section Trimmer (R.F. and Osc.)
C33	22-1728	.5 Mfd. 100 V.
C 5, C11, C14	22-1730	100 Mmfd. Ceramic (or 22-162) 500 V.
C20	22-1743	.0015 Mfd. 600 V.
C27, C28	22-1747	.0033 Mfd. 600 V.
C24	22-1748	.1 Mfd. 400 V.
C22	22-1749	.047 Mfd. 600 V.
C25, C26	22-1750	.022 Mfd. 600 V.
C13	22-1751	.022 Mfd. 200 V.
C 2	22-1752	.0047 Mfd. (or 22-1022) 600 V.

Diagram No.	Part No.	Description
		RESISTORS
R 2	63-1379	Sensitivity Control
R10	63-1398	33M Ohm (Insulated) 1 W.
S 7, R18	63-1590	Volume Control and Tone Switch
R32	63-1620	1800 Ohm (Insulated) 2 W.
R31	63-1622	330 Ohm (Insulated) 2 W.
R33, R34	63-1740	82 Ohm (Insulated) ½ W.
R 8	63-1771	470 Ohm (Insulated) ½ W.
R23	63-1785	1000 Ohm (Insulated) ½ W.
R17	63-1792	1500 Ohm (Insulated) ½ W.
R 3	63-1827	10M Ohm (Insulated) ½ W.
R 7	63-1835	15M Ohm (Insulated) ½ W.
R25	63-1845	27M Ohm (Insulated) ½ W.
R29	63-1846	30M Ohm (Insulated) ½ W.
R12	63-1849	33M Ohm (Insulated) ½ W.
R22, R24, R26, R28	63-1859	56M Ohm (Insulated) ½ W.
R 5	63-1862	68M Ohm (Insulated) ½ W.
R19	63-1869	100M Ohm (Insulated) ½ W.
R14	63-1873	120M Ohm (Insulated) ½ W.
R13, R16	63-1884	220M Ohm (Insulated) ½ W.
R27, R30	63-1890	330M Ohm (Insulated) ½ W.
R 1, R 4, R21	63-1891	330M Ohm (Insulated) ½ W.
R20	63-1897	470M Ohm (Insulated) ½ W.
R 9, R11	63-1912	1 Megohm (Insulated) ½ W.
R 6	63-1838	18M Ohm. ½ W.
		MISCELLANEOUS
	12-1423	Set Mounting Bracket
	12-1424	Set Mounting Bracket
	46-715	Antenna Trimmer Knob (used on 22-1721)
SP 1	49-627	P.M. Speaker (6" x 9" Oval) (See S-14344.
S 6	52-451	Battery Cable—Fuse to Set—Fuse-holder
	52-455	Volume Control Cable
	52-470	Speaker Cable and Plug
	73-50	No. 6-32 x ¼" Headless Slotted Set Screw—Cuppoint
	78-596	Socket—Loktal Tube
SK 1	78-728	Socket—Speaker
	78-782	Socket—Miniature Tube
	78-796	Socket—Antenna Connector
	78-801	Socket—Octal Base Tube

Diagram No.	Part No.	Description
	78-804	Socket—Vibrator
	93-888	Vibrator Cushion Washer
	93-891	Tone Control Knob Washer
T 4	95-1071	Power Transformer
T 3	95-1079	Output Transformer
	125-63	Rubber Grommet (used on S-14295)
	126-553	Miniature Tube Shield
	149-62	Iron Core and Screw
	149-63	Iron Core and Spring (4 used)
V 1	190-22	Vibrator
	196-106	Speaker Gasket
	199-81	Tone Gear Sleeve
	202-577	Instruction Book (Owner's Manual)
	202-606	Interference Elimination Instruction Sheet
	S-14344	Speaker and Gasket Assembly (use 49-627 and 196-106)

INSTALLATION PARTS

	S-14339	Installation Kit Assembly (complete)
	52-458	Battery Cable—Fuse to Ammeter
	54-157	¼-20 x 7/16" x 3/16" Hex Nut—Steel—Cad. Pl. (4 used)
	112-715	No. 8 x 3/8" Binding Hd. Self Tapping Screw
	114-299	¼-20 x ½" Hex. Hd. M. Screw—Steel—Cad. Pl.
S 5	136-11	14 Ampere Fuse—Type S.F.E. No. 14

MOTOR NOISE SUPPRESSION KIT

	S-14340	Motor Noise Suppression Kit Assembly (complete)
	22-1110	Fuel Gauge Capacitor
	22-1601	Generator Capacitor
	22-1767	Ignition Coil Capacitor
	63-1046	Distributor Suppressor
	80-579	Motor Hood Bond Spring
	112-365	No. 8 x ½" B.H. Sheet Metal Screw

DIAL ASSEMBLY

	12-1435	Dial Scale Retaining Bracket (2 used)
	19-165	Insulating Bushing Tension Clip (4 used)
	26-395	Dial Scale
	46-727	Tone Control Knob
	46-714	"Off" Switch Knob

Diagram No.	Part No.	Description
	56-228	Cross Arm Guide Rod
	57-1349	Escutcheon
	57-1344	Dial Background Plate
	59-208	Dial Pointer
	80-232	Knob Retaining Spring
	80-379	Pointer Retaining Spring
	80-586	Cross Arm Tension Spring (2 used)
	80-625	Pointer Link Tension Spring
	94-609	Cross Arm Insulating Bushing
S 3, S 4	100-36	Dial Light Bulb—Mazda No. 44
	112-699	No. 4-40 x 3/16" R.H. Self Tapping Screw—Stan Top—Steel—Cad
	114-294	No. 6-20 x ¼" Hex Hd. Self Tapping Screw Type No. 25 (Escutcheon Mtg.)
	S-14215	Pointer Support Bracket and Stud Assembly
	S-14216	Pointer Drive Link and Stud Assembly
	S-14300	Cross Arm and Bushing Assembly
	S-14304	Dial Light Socket and Wire Assembly
	S-14307	Tone Gear and Bushing Assembly
	S-14308	Tone Drum Shaft and Gear Assembly (26-390)
	S-14342	Tuning Control and Knob Assembly
	S-14343	Volume Control Knob and Spring Assembly
	S-14386	Tuner Unit Assembly
S 1	S-14534	Tuner Unit Final Assembly
S 2	85-435	"On-Off" Switch (on Tuner)
	S-14754	Automatic Knob and Screw Assembly
	S-14721	Clutch Plate and Washer
	S-14729	Tuning Shaft, Pinion Gear and Coupling Assembly
	17-102	Cam Lock (5 used)
	34-177	Clutch Gear
	64-162	.088 D x 3/32" Rivet (2 used on S-14733)
	73-118	No. 6-32 x ¼" Hex Hd. Slotted Set Screw (2 used)
	80-640	Yoke Tension Spring (2 used)
	80-641	Clutch Release Bar Spring
	80-642	Clutch Spring
	93-921	Tuning Shaft Steel Washer
	93-922	Tuning Shaft Spring Washer
	93-923	Fishpaper Washer (2 used)
	97-305	Clutch Arm Stud
	117-149	Clutch Lever
	188-111	Retaining Ring (2 used)