

PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE: Manufacturer Part Numbers Shown Are MOTOROLA



FORD MODEL 1MZ4004
(DOZA-19A242)
(70 Mustang)
(8-Track Stereo Player)

OPERATING INSTRUCTIONS

Insert cartridge until it locks and turns unit on.

Set operating controls as desired.

Press program selector to play desired tracks, or allow unit to select tracks automatically.

Remove cartridge to turn unit off.

Removing power from unit will automatically cause ejection of cartridge.

CLEANING

Clean all tape contact surfaces with a soft, lint-free material and head cleaner or methyl alcohol. Use alcohol to remove oil and grease from all driving surfaces.

CAUTION: Avoid getting head cleaner on any plastic surface.

LUBRICATING

Lubricate bearings and bushings lightly with #20 machine oil. Use a light film of non-hardening grease on cam surfaces.

HEAD DEMAGNETIZING

Demagnetize head when unit is serviced. Avoid using magnetic materials near head.

FORD MODEL 1MZ4004

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

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TD928

ADJUSTMENTS

ADJUST	REMARKS
Head Height	Play a test cartridge, follow instructions with cartridge, and adjust B1 for proper response.
Head Azimuth	Connect an AC VTVM across right output. Play a test cartridge and adjust B2 for maximum.
Indexing Solenoid	Press program selector to continuously cycle indexing mechanism, turn Screw B4 clockwise until cycling stops, and then turn screw counter-clockwise 1/4 turn past restart of cycling.

TROUBLE CHART

SYMPTOM	REMARKS
Capstan does not rotate.	Belt (1) dirty, worn, or broken. Assembly (10) binding. Motor defective or not supplied with power.
Track-shift mechanism inoperative.	Switch (S2) dirty. Cam (3) binding or worn. Pawls (4) and (5) worn. Arms (7) and (8) binding. Solenoid (M3) defective or not supplied with power. Cartridge defective.
Wow or Flutter.	Belt (1) dirty or worn. Capstan dirty or binding. Cartridge defective. Motor defective. Speed regulator circuit defective. Spring (26) weak or missing. Spring (30) weak or missing. Lever (28) binding.
Tape is pulled from cartridge.	Cartridge defective. Capstan dirty or scored.

MECHANICAL PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1*	42-42683B02*	Drive Belt	15	4-40409B01	Thrust Washer (2 used)
2	49-43510B01	Flywheel and Capstan Shaft	16	43-40411B02	Thrust Bearing
3	45-40428B07	Ratchet Cam	17	4-40409B05	Thrust Washer (2 used)
4	55-40606B01	Pull Ratchet Pawl (Stamped "B")	18	43-40411B03	Thrust Bearing
5	55-40605B01	Push Ratchet Pawl (Stamped "A")	19	41-4044B01	Azimuth Adjust Spring
6	41-40681B01	Pawl Tension Spring	20	3-41697B01	Azimuth Screw
7	45-41231B02 (1)	Left Radius Arm (2 used)	21	46-40299B01	Solenoid Stop
8	45-41230B01 (1)	Right Radius Arm (2 used)	22	49-41580B01	Roller (2 used)
9	42-41229B01 (1)	Spring Clip (4 used)	23	7-43576A01	Motor Support (3 used)
10	15-40059A78 (2)	Capstan Housing Assembly	24	46-42104B01 (4)	Tape Stop (Nylon on Tape Guide)
11	1-42902B83 (1)	Head Retainer	25	45-41364B01	Switch Actuator Arm
12	41-40540B03 (1)	Head Tension Spring	26	41-40805B01	Tape Drive Assist Spring
13	41-40445B02	Plunger Spring	27	(3)	Ejector Arm
14	47-40298B01	Solenoid Plunger	28	(3)	Ejector Lever
			29	49-41549B01 (3)	Cartridge Roller
			30	41-412279B01	Ejector Lever Spring
			31	45-40480B01	Micro Switch Arm (Not used in some versions)
			32	41-41251B02	Cam Tension Spring

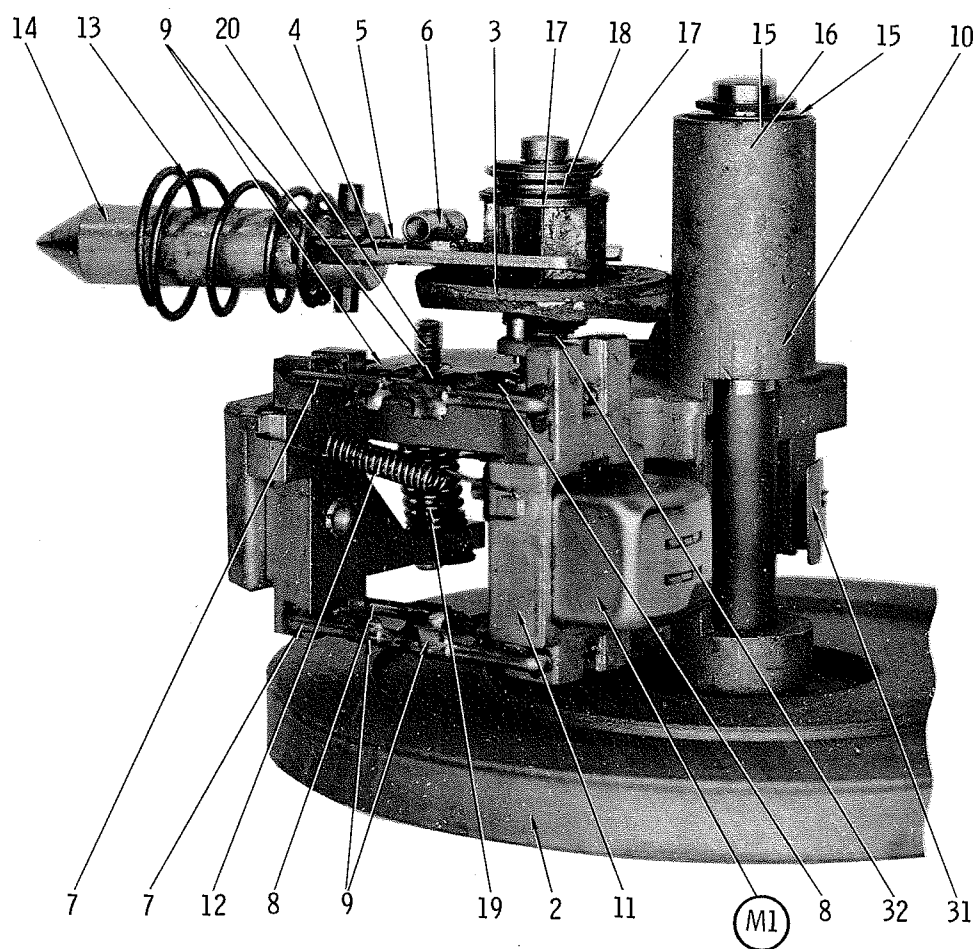
* Drive Belt - WALSCO Replacement Number 1424-06.

(1) Part of Ref. No. (10).

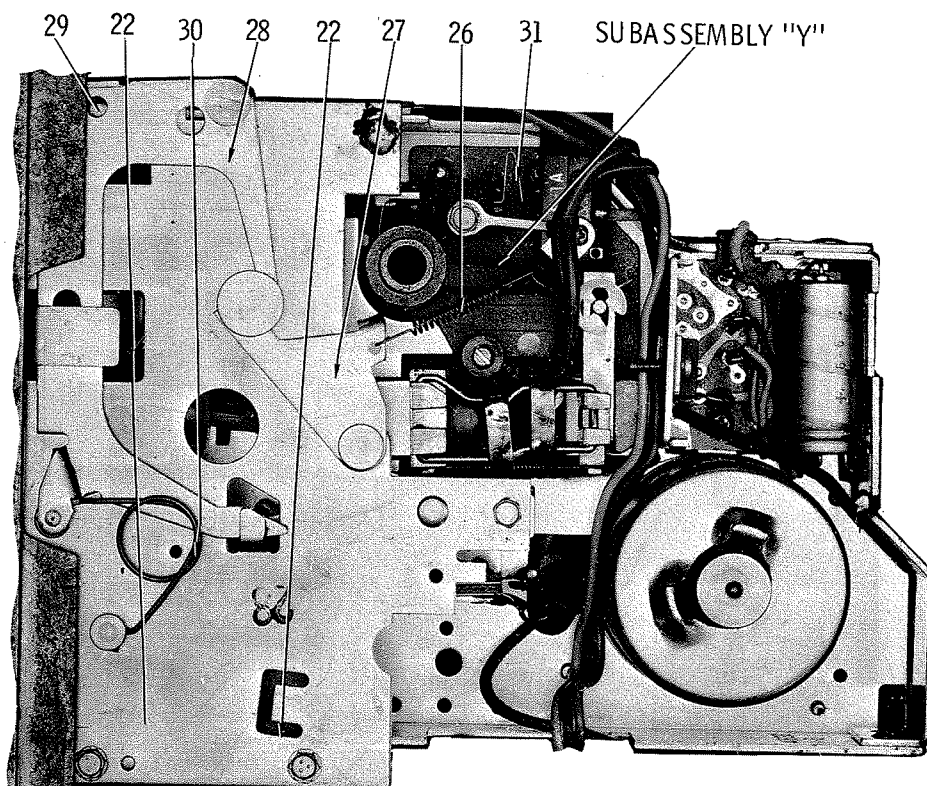
(2) Includes Ref. Nos. (7), (8), (9), (11), and (12).

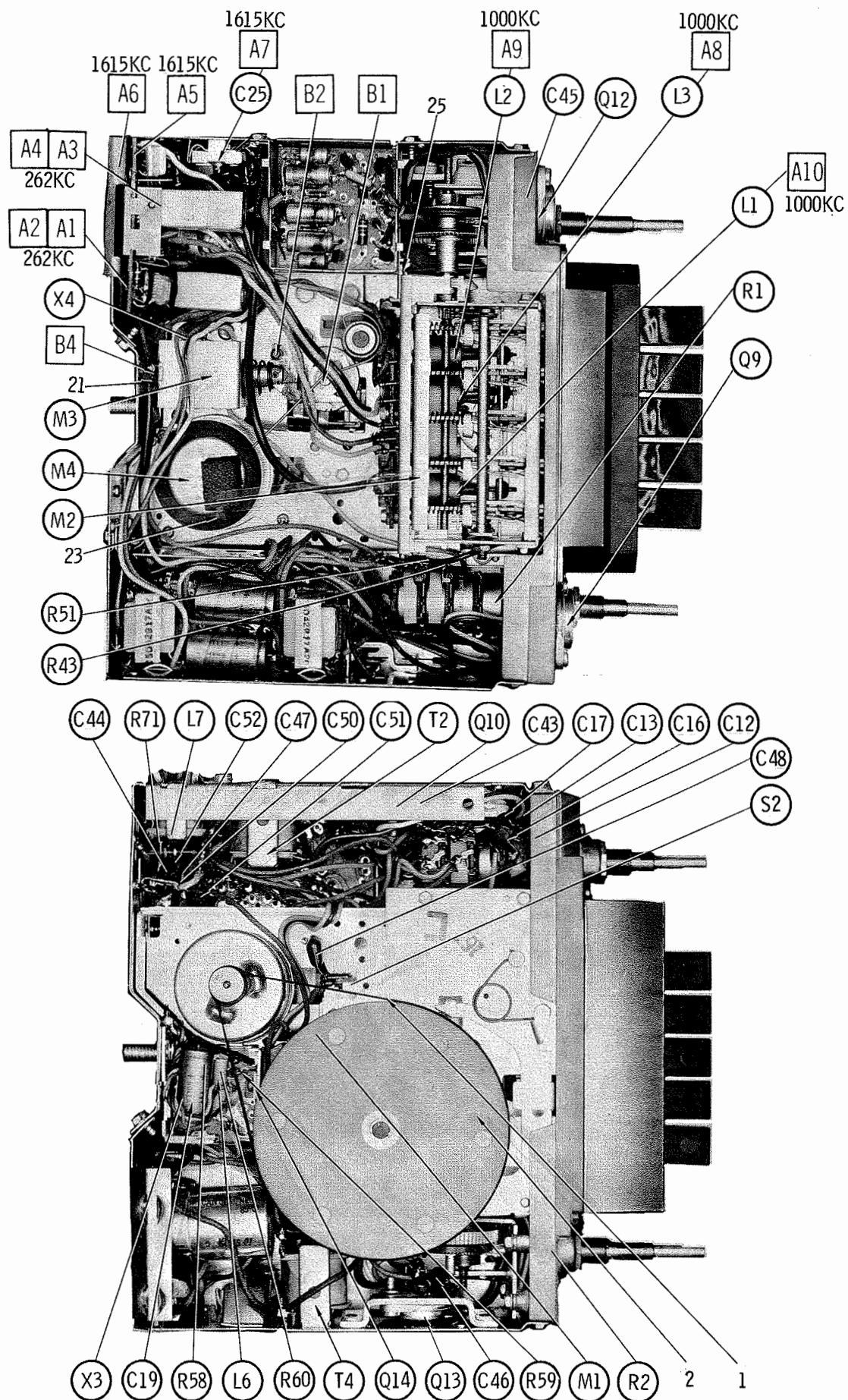
(3) Part of Ejector Bracket Assembly,

Part No. 1-42902B85. (4) Not shown on photos.



SUBASSEMBLY "Y"





ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
Use only enough generator output
to provide a usable indication.
Suggested Alignment Tools:


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A1 thru A4.....GENERAL CEMENT #9296,9297,9300
                  WALSCO #2510,2546,2547
A5,A6,A7 .....GENERAL CEMENT #8290,8868,9087
                  WALSCO #2525,2528,2587

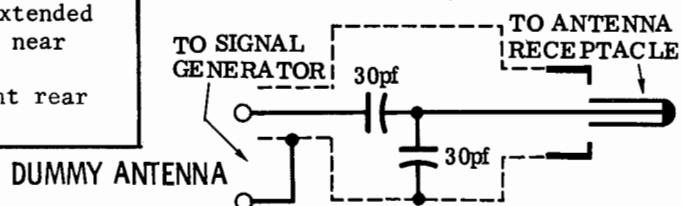
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PUSH-BUTTON ADJUSTMENT

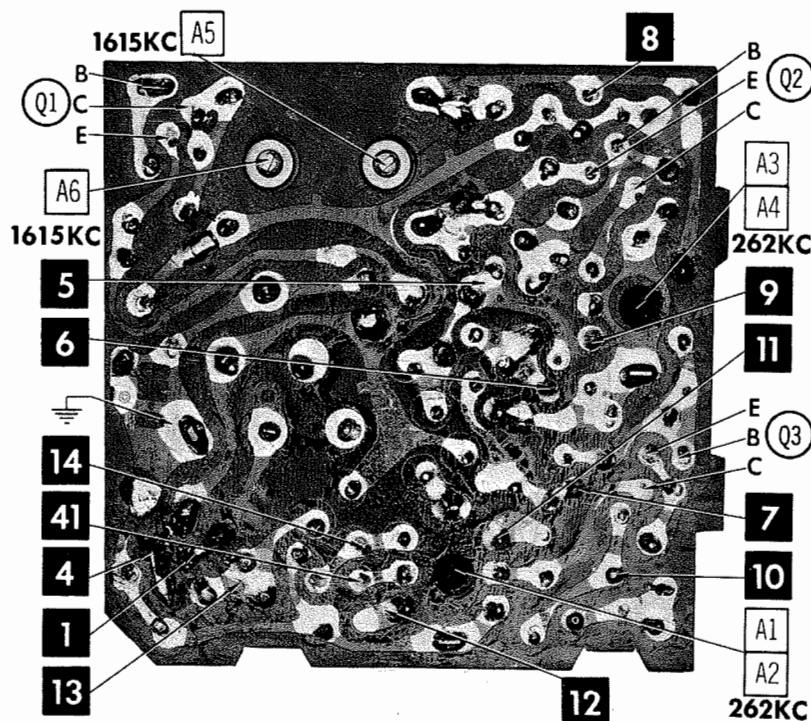
1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

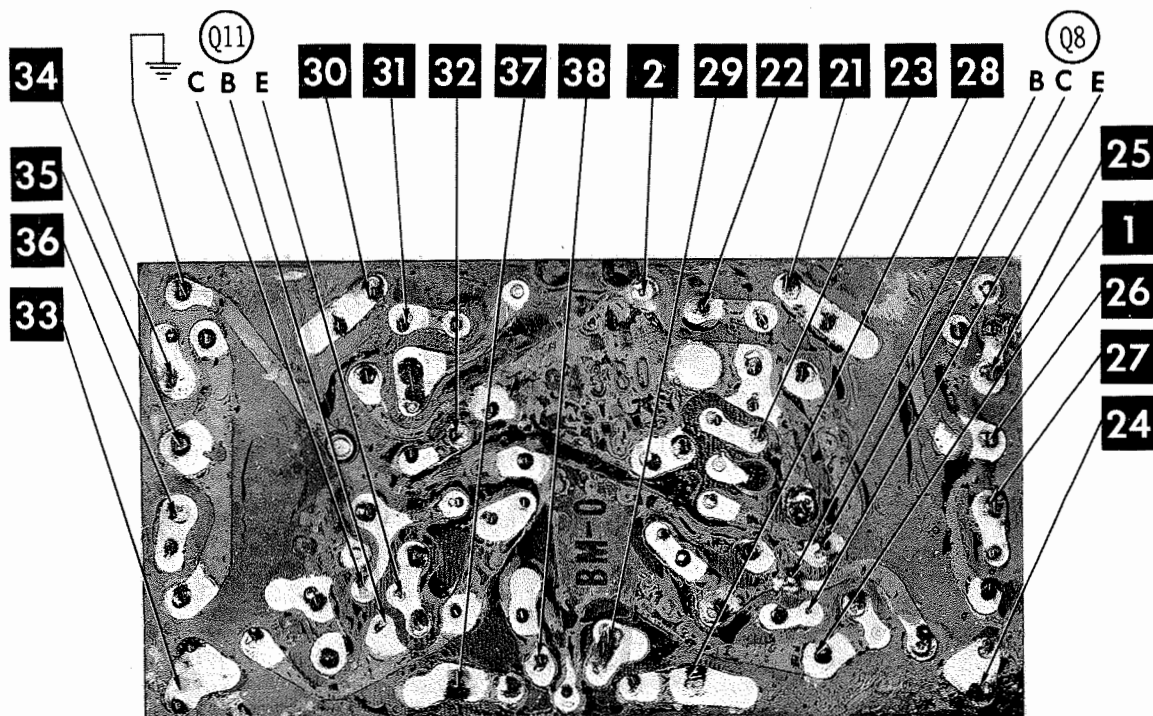
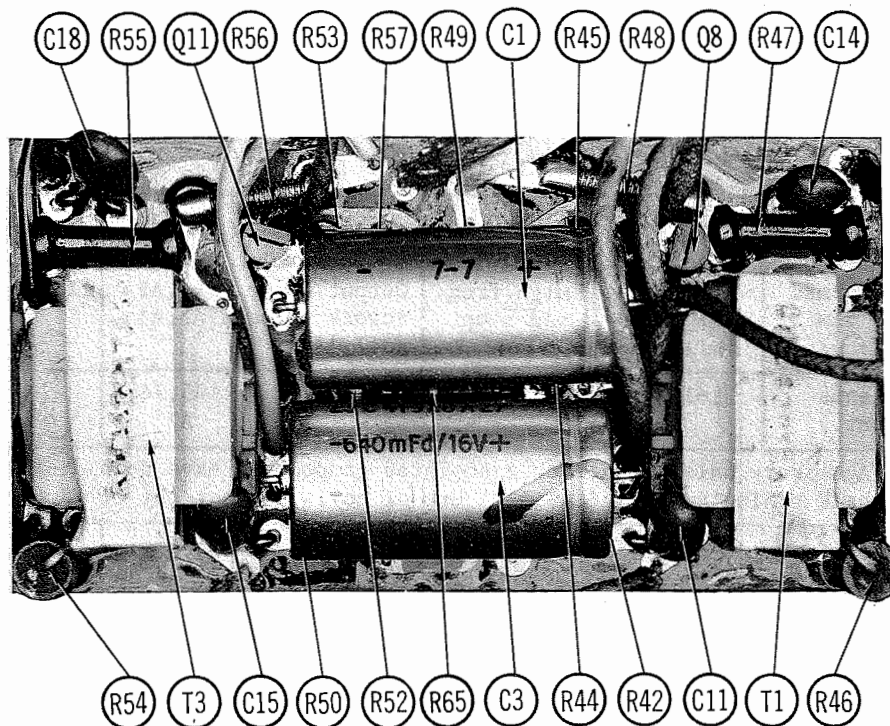
	GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point  , low side to ground.	262KC 400 cycle modulation	High freq. end stop.	Output meter across voice coil.	A1,A2, A3,A4	Adjust for maximum.
2.	Thru dummy antenna to antenna input.	1615KC	"	"	A5,A6, A7	"
<p>Step 3 is not necessary unless tuner or associated components have been disturbed. If necessary, back tuning cores (A8,A9,A10) out of coils but not out of forms. Repeat Step 2.</p>						
3.	Thru dummy antenna to antenna input.	1000KC	Tune to signal	Output meter across voice coil	A8,A9, A10	Adjust for maximum. Repeat Steps 2 and 3 until no further improvement is noted

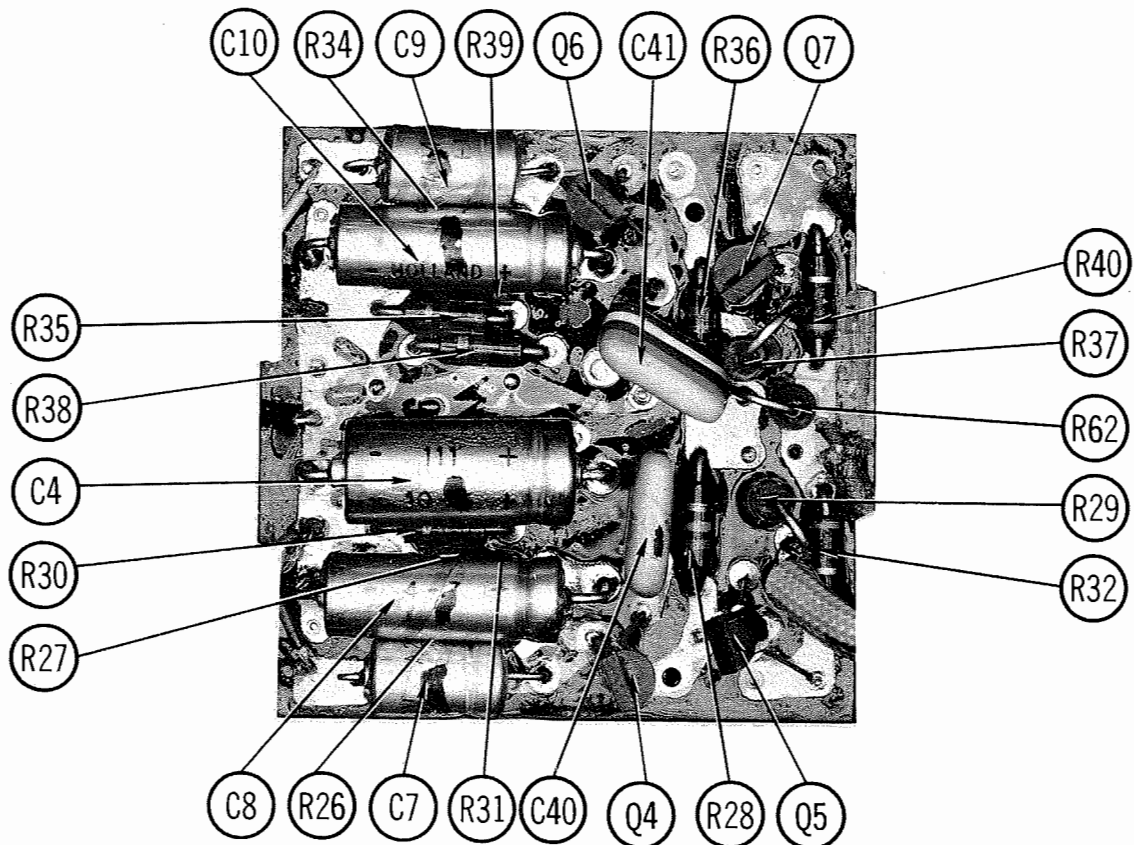
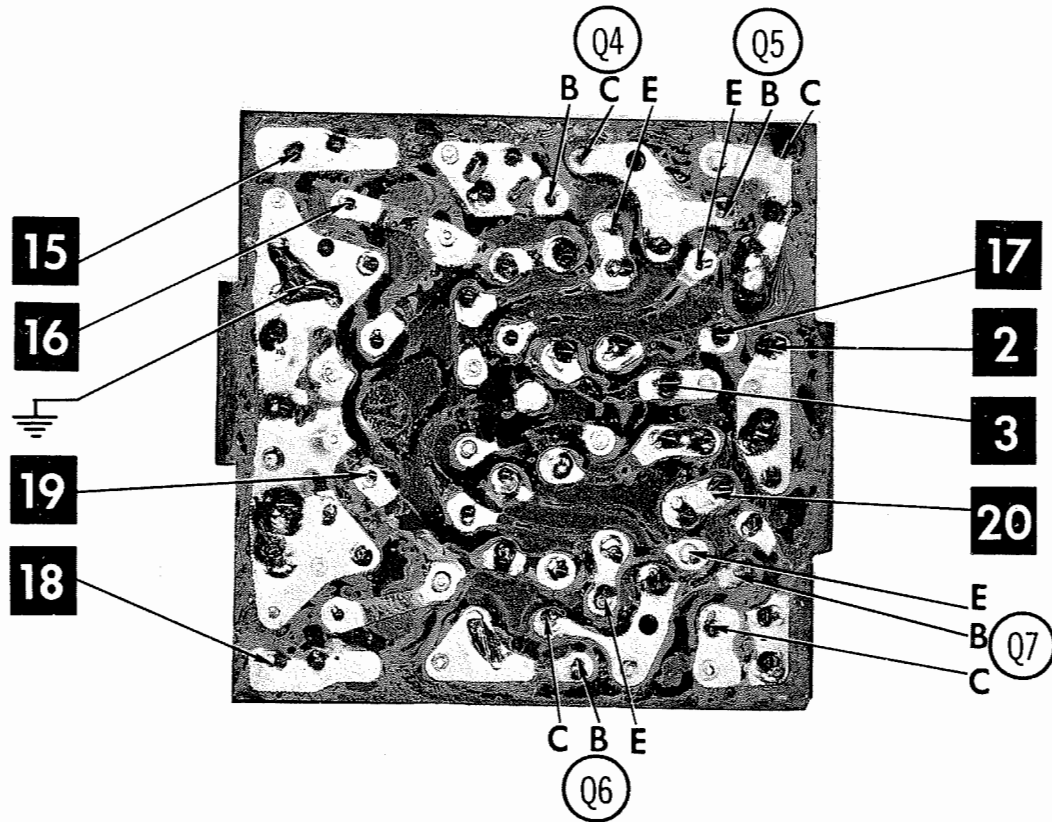
With radio installed in car and antenna extended to desired height, tune in a weak station near 1400KC and adjust A7 for maximum output. Antenna adjustment (A7) is located on right rear corner below antenna input.



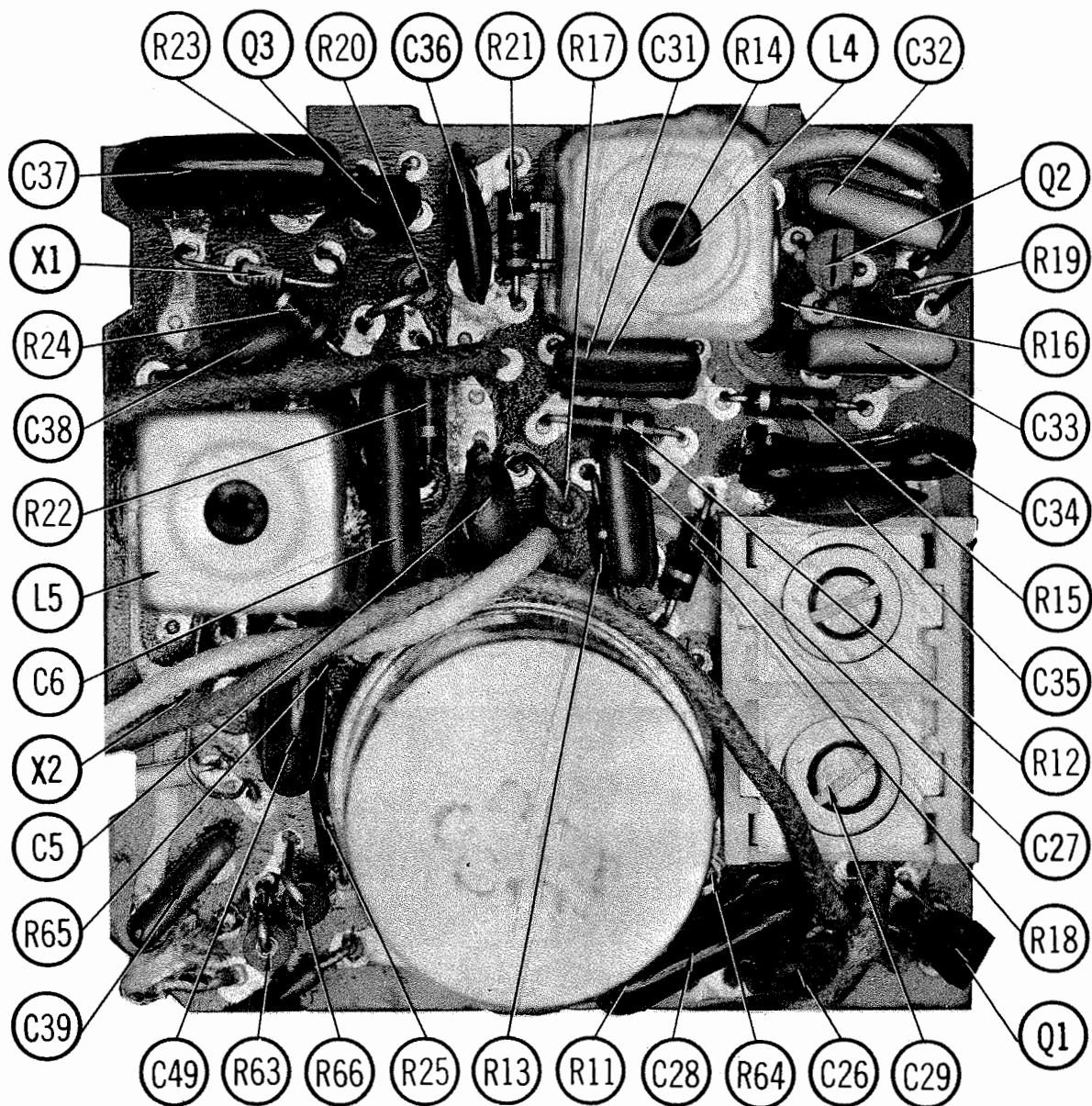
FORD MODEL 1M24004

A Howard W. Sams CIRCUITRACE[®] Photo





FORD MODEL 1M24004



PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

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WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	25B	RF Amp	48-134805	GE-17	TR-21	HEP723	SK3018	ECG 108
Q2	25A	Converter	48-134804	GE-17	TR-21	HEP722	SK3018	ECG 108
Q3	24B	IF Amp	48-134807	GE-17	TR-21	HEP725	SK3018	ECG 108
Q4	822A	Preamp	48-134823	GE-20	TR-21	HEP730	SK3020	ECG 123A
Q5	54C	Preamp	48-134810	GE-20	TR-21	HEP725	SK3020	ECG 123A
Q6	822A	Preamp	48-134823	GE-20	TR-21	HEP730	SK3020	ECG 123A
Q7	54C	Preamp	48-134810	GE-20	TR-21	HEP725	SK3020	ECG 123A
Q8	54C	Driver	48-134810	GE-20	TR-21	HEP725	SK3020	ECG 123A
Q9	2N176	Output (1)	48-134747	GE-13mp*	TR-01	HEP623	SK3013*	ECG 104mp*
Q10	2N176	Output (1)	48-134747		TR-01	HEP623		
Q11	54C	Driver	48-134810	GE-20	TR-21	HEP725	SK3020	ECG 123A
Q12	2N176	Output (1)	48-134747	GE-13mp*	TR-01	HEP623	SK3013*	ECG 104mp*
Q13	2N176	Output (1)	48-134747		TR-01	HEP623		
Q14	A5A	Motor Reg.	48-137-80	GE-28	IRTR-55	HEP701	SK3041	ECG 152

(1) When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

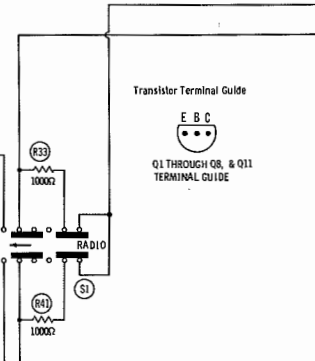
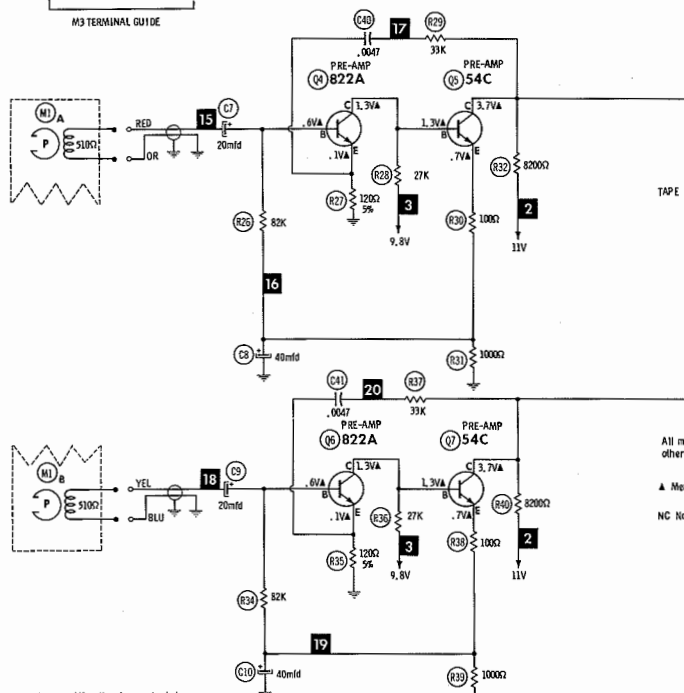
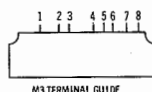
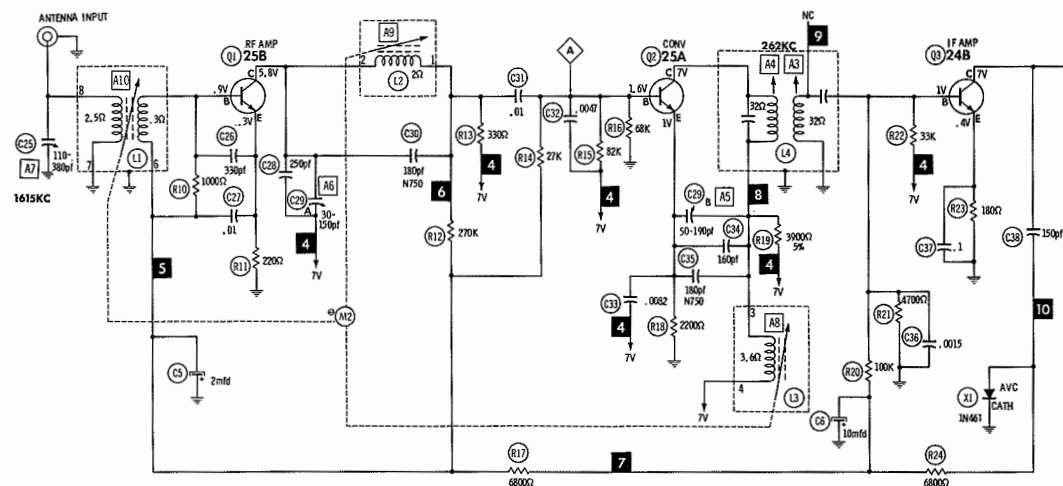
* Matched pair.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X1	1N461					
X2	1N461					
X3	SR390	GE-504A	5A4D	SK3016	ECG 116	
X4	SR1668	GE-504A	5A4D	SK3016	ECG 116	

(CONTINUED ON PAGE 68)

NOTE: DEMAGNETIZE HEADS AFTER SERVICING



Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

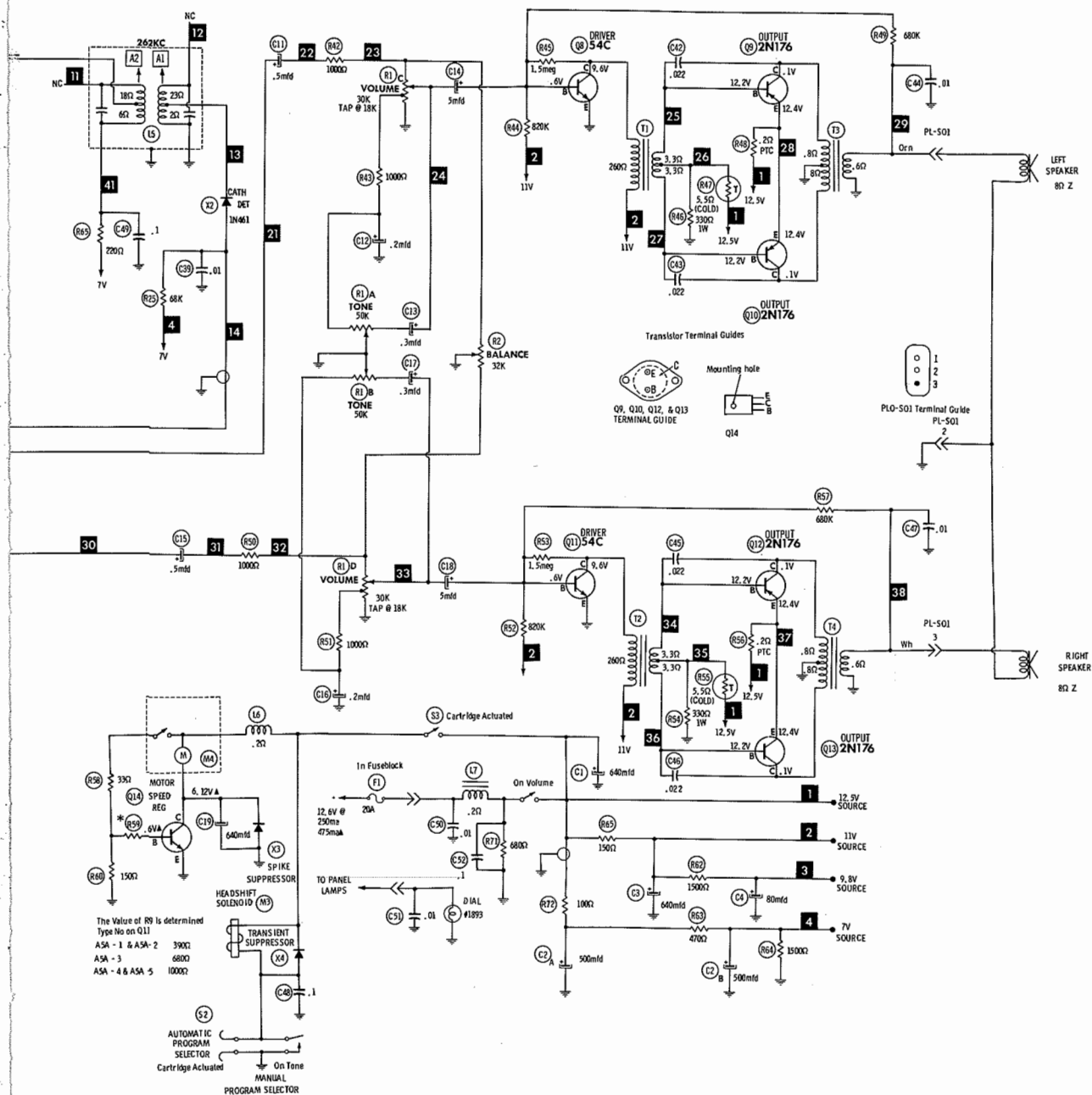
A PHOTOFACT STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**
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- See parts list
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

All measurements taken in RADIO position unless otherwise designated.

A Measured in TAPE position

NC No Connection



FORD MODEL 1M24004

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

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ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	640 16V	23C41928A27	PRS1220	EA15-500	WBR500-35	QT1-30A	TC1505A	TL-1166
C2a	500 16V	23C40302A07	PWH2-02-40		BB0045A		PPF200.65	PCL-2177
b	500 16V							
C3	640 16V	23C41928A27	PRS1220	EA15-500	WBR500-35	QT1-30A	TC1505A	TL-1166
C4	80 16V	23C41928A23	CRE620A	EA30-100	AL100-16	MT1-19	MTA80E15	TE-1161
C5	2 10V	23C43280A02	MCD-30	EP15-2	PC2-100	MT1-1	MTV2CB50	TE-1121
C6	10 16V	23C43280A03	CRE457A	EA6-10	AL10-25	MT1-5	MTV2CB50	TL-1087
C7	20 16V	23C41928A24	CRE761A	EA15-25	AL20-16	MT1-10	MTA20D30	TL-1157
C8	40 16V	23C41928A20	CRE615A	EA30-50	NLW40-25	MT1-17	MTA40E30	TE-1209
C9	20 16V	23C41928A24	CRE761A	EA15-25	AL20-16	MT1-10	MTA20D30	TE-1157
C10	40 16V	23C41928A20	CRE615A	EA30-50	NLW40-25	MT1-17	MTA40E30	TE-1209
C11	.5 15V	23C43280A25		UK10-474	TYR13BD474K		TAS474K015POA	196D474X0035 DB
C12	.2 15V	23C43280A19		UK20-204	TYR13BD224K		TAS224K015POA	196D224X0035 DB
C13	.3 6V	23C43280A30		UK10-474	TYR13BD334K		TAS334K006POA	196D334X0035 DB
C14	5 6V	23C43280A27	MCD-50	EP6-5	PC5-100	MT1-3	MTV5CB50	TL-1084
C15	.5 15V	23C43280A25		UK10-474	TYR13BD474K		TAS474K015POA	196D474X0035 DB
C16	.2 15V	23C43280A19		UK20-204	TYR13BD474K		TAS224K015POA	196D224X0035 DB
C17	.3 6V	23C43280A30		UK10-474	TYR13BD334K		TAS334K006POA	196D334X0035 DB
C18	5 6V	23C43280A27	MCD-50	EP6-5	PC5-100	NT1-3	MTV5CB50	TL-1084
C19	640 16V	23C41928A27	PRS1220	EA15-500	WBR500-35	QT1-30A	TC1505A	TL-1166

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOR PART No.	MALLORY PART No.	SPRAGUE PART No.
C25	110-380	#20-40746A06	GPD X5F331K	DD-331	GP330	CCD-331	GP333	10TS-T33
C26	330		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C27	.01 100V		ADM-15-251			DM-15-251		MS-325
C28	250							
C29a	30-150	#20-40254A21						
b	50-190							
C30	180 N750			TCN-180				10TCU-T18
C31	.01 100V		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C32	.0047 100V		DBE6D5	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	6PS-D50
C33	.0082 100V		DBE6D82	CPR-8200J	DPMS6D68	6DP-2-822	PVC6282	6PS-D82
C34	160		ADM-15-161	CPR-160J		DM-15-161	SX316	MS-316
C35	180 N750			TCN-180				10TCU-T18
C36	.0015		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C37	.1 100V		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C38	150		GPD X5F151K		GP150	CCD-151	GP315	10TS-T15
C39	.01 100V		V1612S1	DD-151	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C40	.0047 100V		DBE6D5	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	6PS-D50
C41	.0047 100V		DBE6D5	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	6PS-D50
C42	.022 100V		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C43	.022 100V		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C44	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C45	.022 110V		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C46	.022 100V		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C47	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C48	.1 100V		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C49	.1		TTP-1	CK-104			TA010	TG-P10
C50	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C51	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C52	.1 100V		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3

Motorola Part Number.

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

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CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS—IRC PART No.	MALLORY PART No.
R1a	Tone	50K	18C41849B03,-L				
b	Tone/Track Selector Switch	50K					
c	Volume	30K Tap @ 20K					
d	Volume/Switch	30K Tap @ 20K					
R2	Balance	32K	18B41705B02				P353L, 3100, SH31, 0X1687

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R47	5.5 (Cold)		6-565324
R148	.2 (PTC)		17-40756A06

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R55	5.5 (Cold)		6-565234
R56	.2 (PTC)		17-40756A06

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Antenna	(1)			
L2	RF	(1)			
L3	Oscillator	(1)			
L4	Input IF	24D42517A27		8002	
L5	Output IF	24D42517A28		8010	
L6	RF Choke (1.5uh)	2440788A04	19-1001	4604	T856

(1) Part of M2.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	260ma 475ma*	.2	5mh	25D40907B13	TC-2	TR-154	TY17XT	*Measured in Tape.

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1	8	1		25D42917A20				
T2	8	1		25D42917A20				

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

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SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
	PM 8 ohms			Obtain from Ford Dealers.

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	SFE20		In Fuse Panel	SFE20		307020		

TAPE HEADS

ITEM No.	MEASURED			FORD PART No.	NORTRONICS PART No.	DESCRIPTION
	INDUCTANCE	BIAS/ERASE VOLTS (RMS)	BIAS FREQ.			
M1	380mh			59-43542A01	5800 (1)	8-Track Stereo Play.

(1) Use original mounting.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M2	Tuner	1-43500A59	AJS-686
	Coil Assembly	1-41700B61	
M3	Solenoid	24-42064B0	
M4	Motor	59-43663B01	
S1	Switch, AM-FM Selector	40-41363B01	
S2	Switch, Automatic Program Selector	40-40296B01	
S3	Switch, Motor Switch	40-40406B01	

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Tape Door	15-41349B01	Pushbutton	38-41329B01
Escutcheon	1-43601B27	Dial Glass	34-41294B04
Knob, Tuning or Volume	36-42998B01	Dial Pointer	52-40244B14
Knob, Tone or Balance	36-43004B01		