

PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE: Manufacturer Part Numbers Shown Are UNITED DELCO



MODEL 95CT411

CADILLAC MODELS 95CT411
(7311205)
(69 Cadillac)
95CT412
(7311205)
(69 1/2 Cadillac)

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.

CLEANING

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

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.

CADILLAC MODELS 95CT411/412

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

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TQ607R

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. Pawl (4) worn. Arm (6) binding. Solenoid (M3) defective or not supplied with power. Cartridge defective. Lower cam bearing installed too deeply in casting. Assembly (14) binding or worn.
Wow or Flutter.	Belt (1) dirty or worn. Capstan dirty or binding. Cartridge defective. Motor defective. Speed regulator circuit defective.
Sound weak or distorted.	Head dirty, misaligned, or defective. Cartridge defective. Amplifiers defective.
Tape is pulled from cartridge.	Cartridge defective. Capstan dirty or scored.

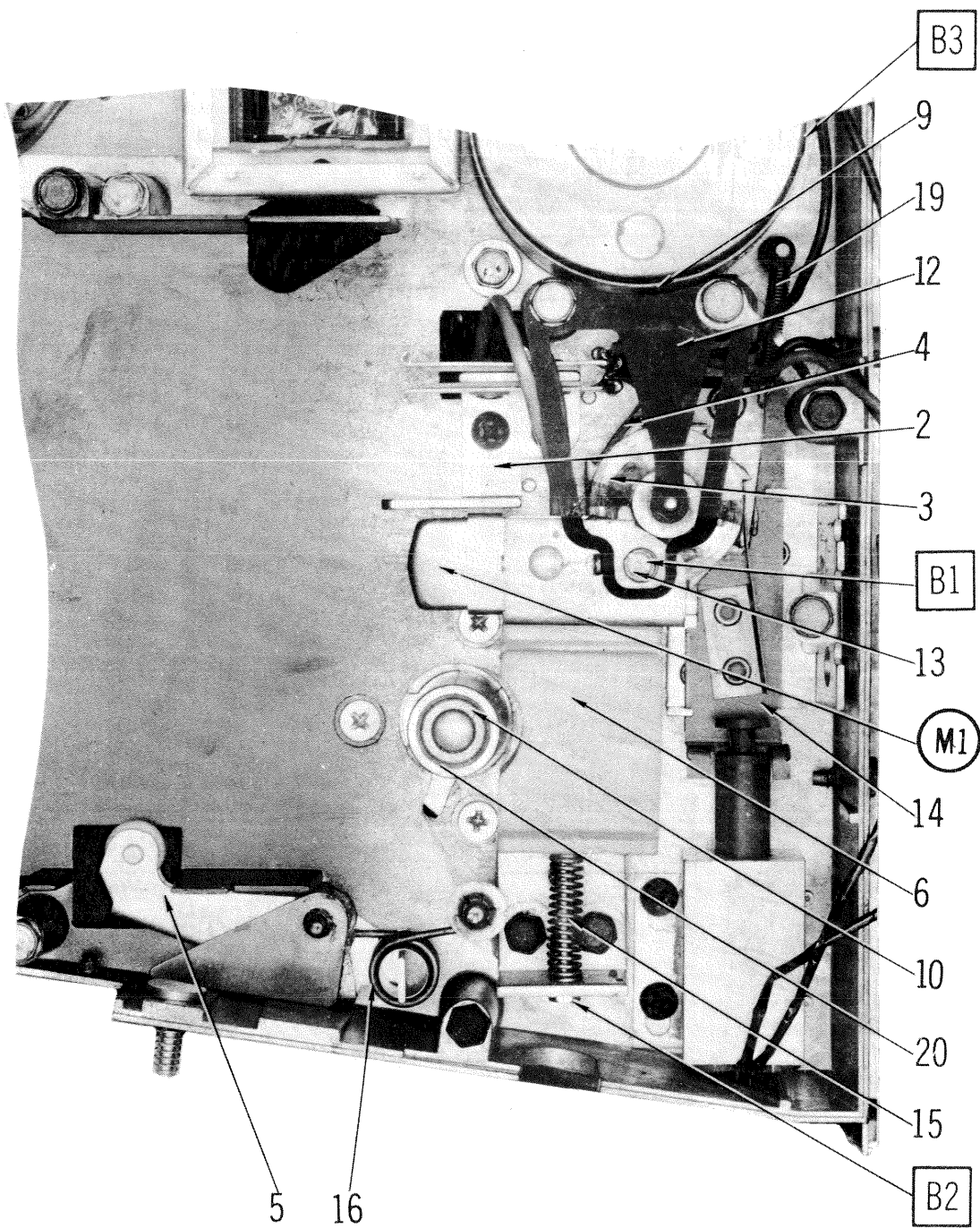
ADJUSTMENTS

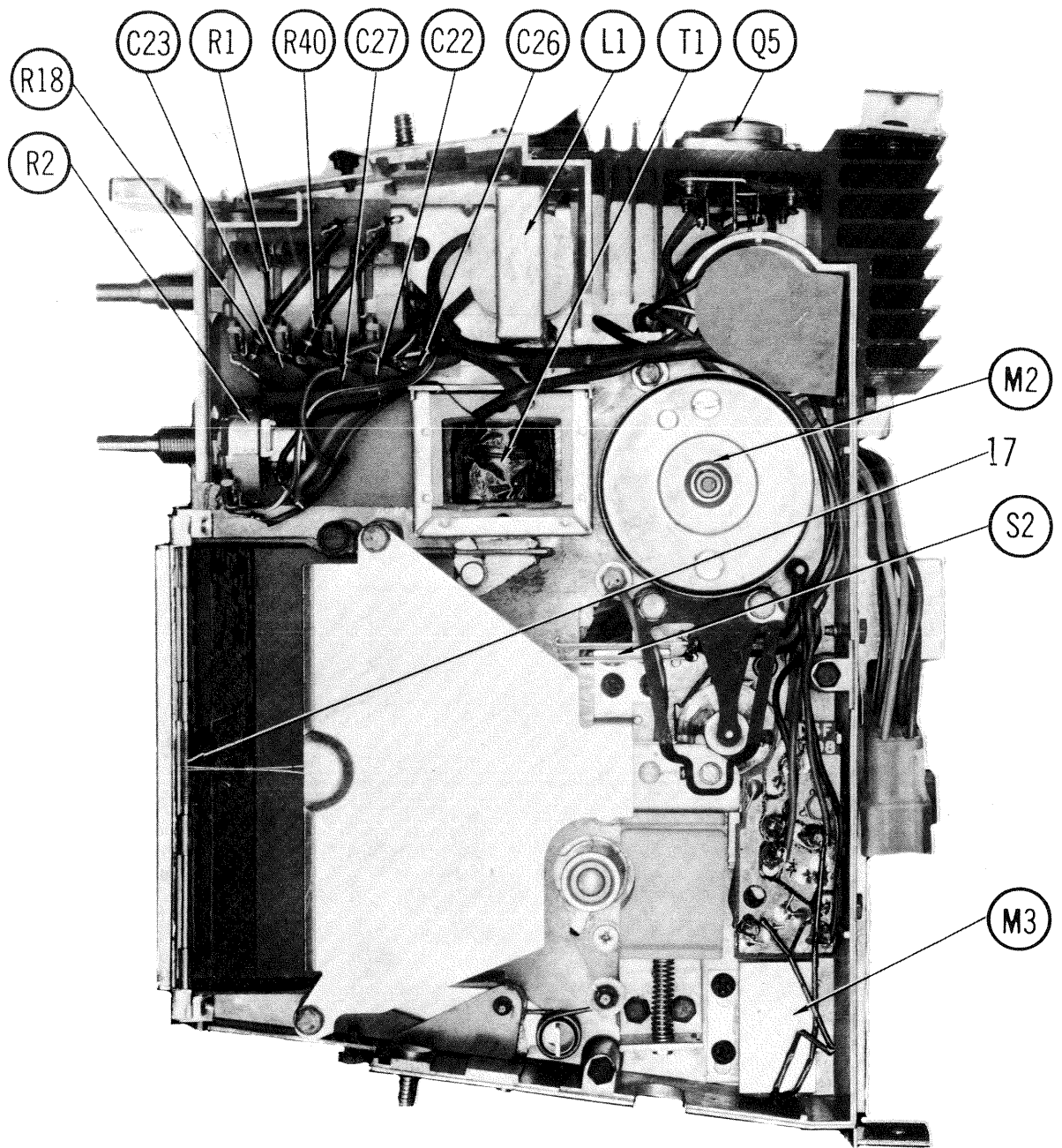
ADJUST	REMARKS
Head Height	Play a test cartridge, follow instructions with cartridge, and adjust B1 for proper response.
Head Azimuth	Connect an AC VTVM across right output. Play a test cartridge and adjust B2 for maximum.
Motor Speed	Play a test cartridge with a timed-interval track, follow instructions with cartridge, and adjust B3 for correct interval between tones. (Make only a slight adjustment before rechecking speed.)
Flywheel Play	Adjust B5 for a slight vertical play of flywheel.
Hum Reduction	Rotate motor for MINIMUM hum and position Shield (9) for MINIMUM hum.
Solenoid Position	Loosen the solenoid mounting screws and position the solenoid until the finger on Slide (14) clears the tooth on Cam (3) by 1/32 inch when the solenoid plunger is fully retracted.

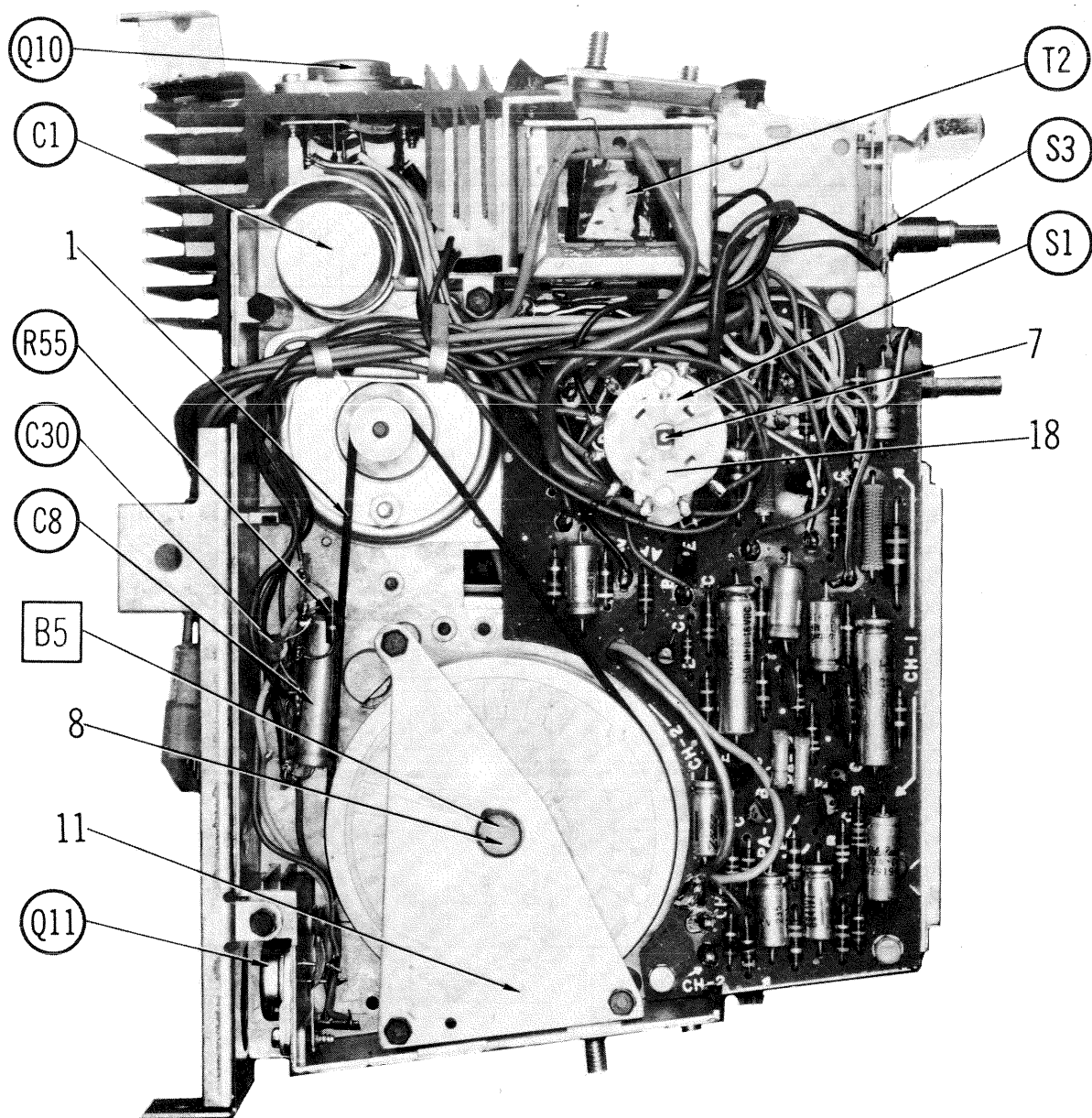
MECHANICAL PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1*	7304589*	Belt* (2 used)	11	7304224	Thrust Bearing Plate
2	7305811	Tape Guide Assembly	12	7304249	Retainer Assembly
	(1)		13	7304578	Head Height Adjustment Screw
3	7310096	Cam Assembly	14	1222930	Slide Assembly
4	7304226	Pawl		(2)	
5	7305877	Cartridge Lock Arm Assembly	15	7304444	Azimuth Adjust Tension Spring
6	7305875	Head and Parallelogram Arm Assembly	16	7304222	Cartridge Arm Lock Spring
7	7305559	Switch Arm Assembly	17	7307337	Cartridge Door Spring
8	7304225	Nylon Capstan Thrust Bearing	18	7304234	Switch Return Spring
9	7306985	Motor Shield	19	7304235	Slide Return Spring
10	7304935	Capstan, Flywheel, and Bearing Assembly	20	7304796	Tape Stripper

* Belt - WALSCO Part No. 1499-33 (Replace both belts). (2) Models ending in 412 use Part No. 7313405.
(1) Models ending in 412 use Part No. 7313401.

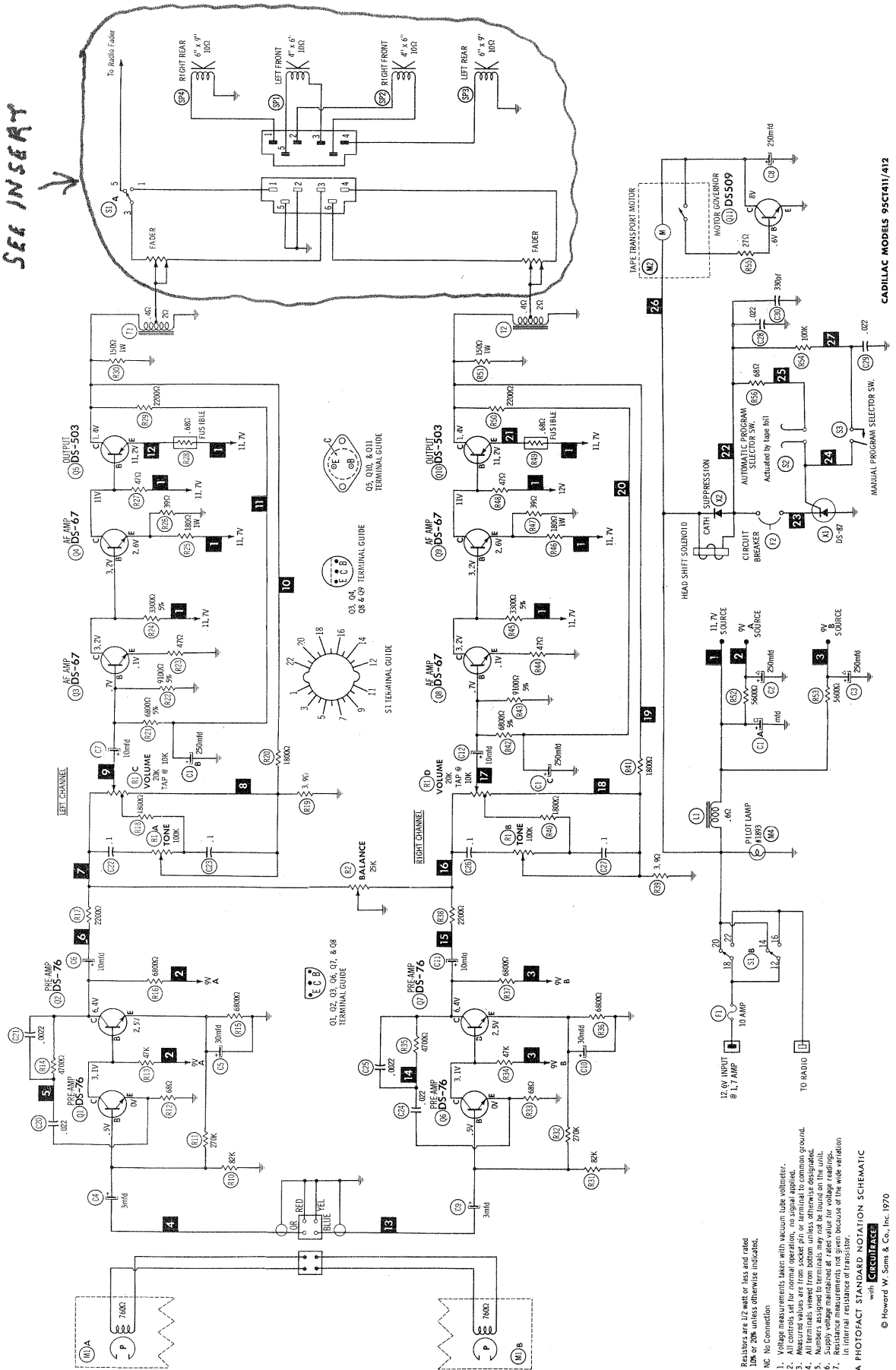




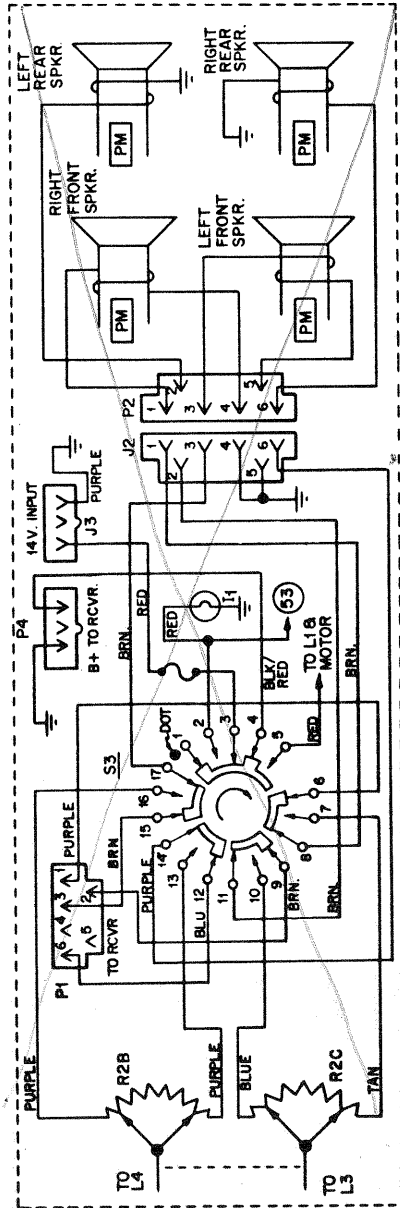


NOTE: DEMAGNETIZE HEADS AFTER SERVICING

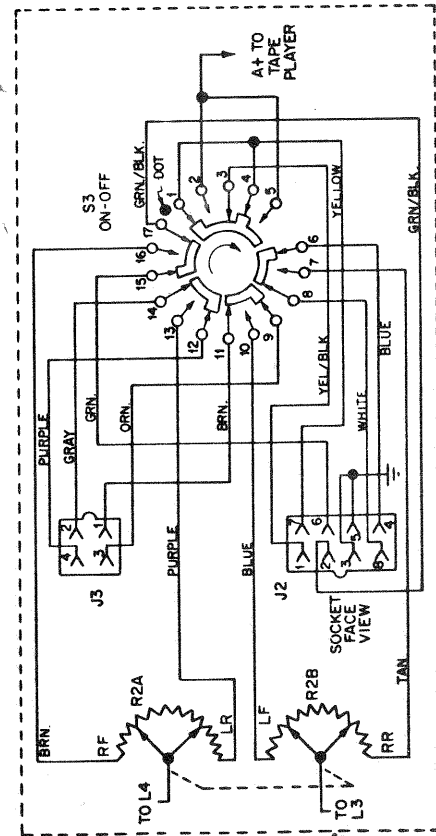
INCORRECT -
SEE INSET



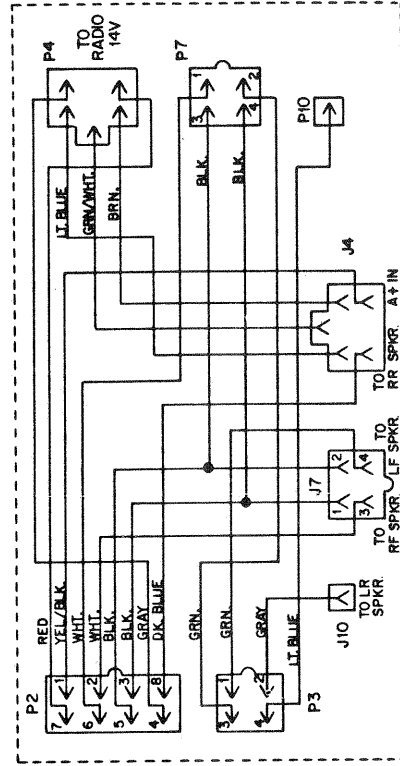
BUICK - HIVEHKA - SPECIAL INTERPRETATION



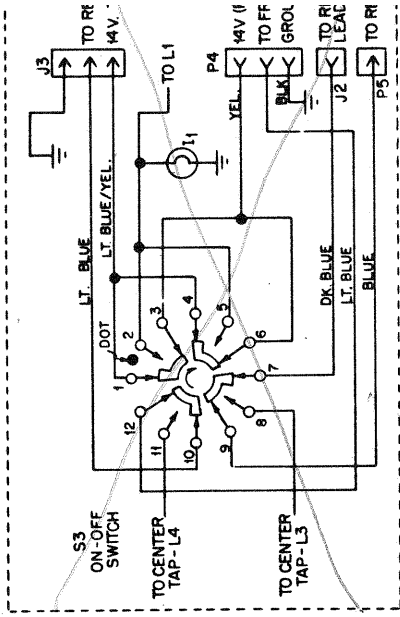
CHEVROLET, CHEVELLE, CAMARO, CHEVY II & ACADIAN (USED WITH MULTIPLEX)



CADILLAC (4 SPKR.) TAPE SYSTEM



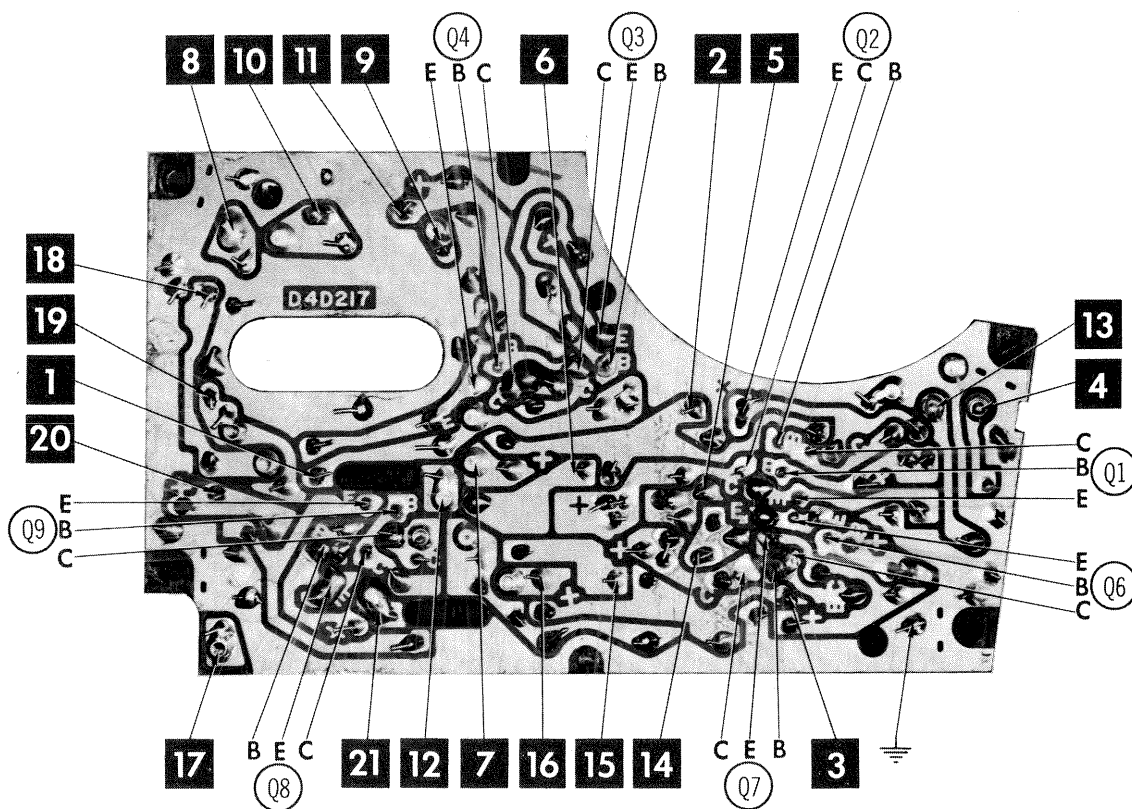
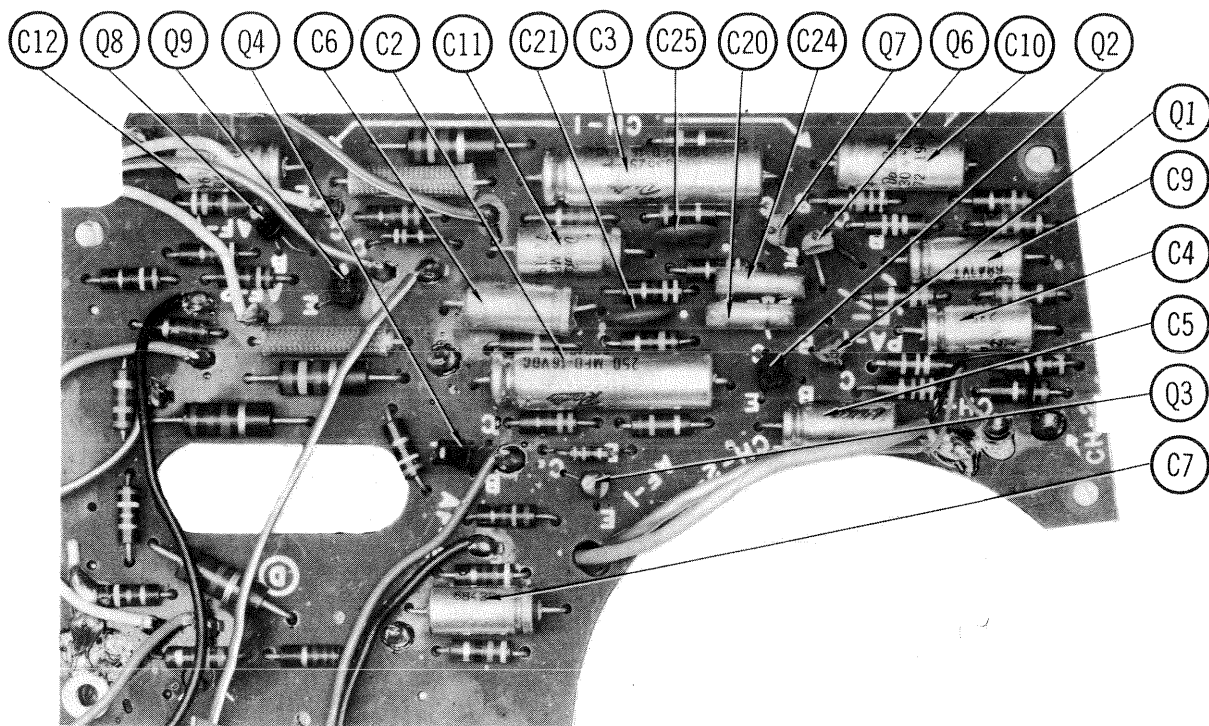
CADILLAC HARNESS - 7310710

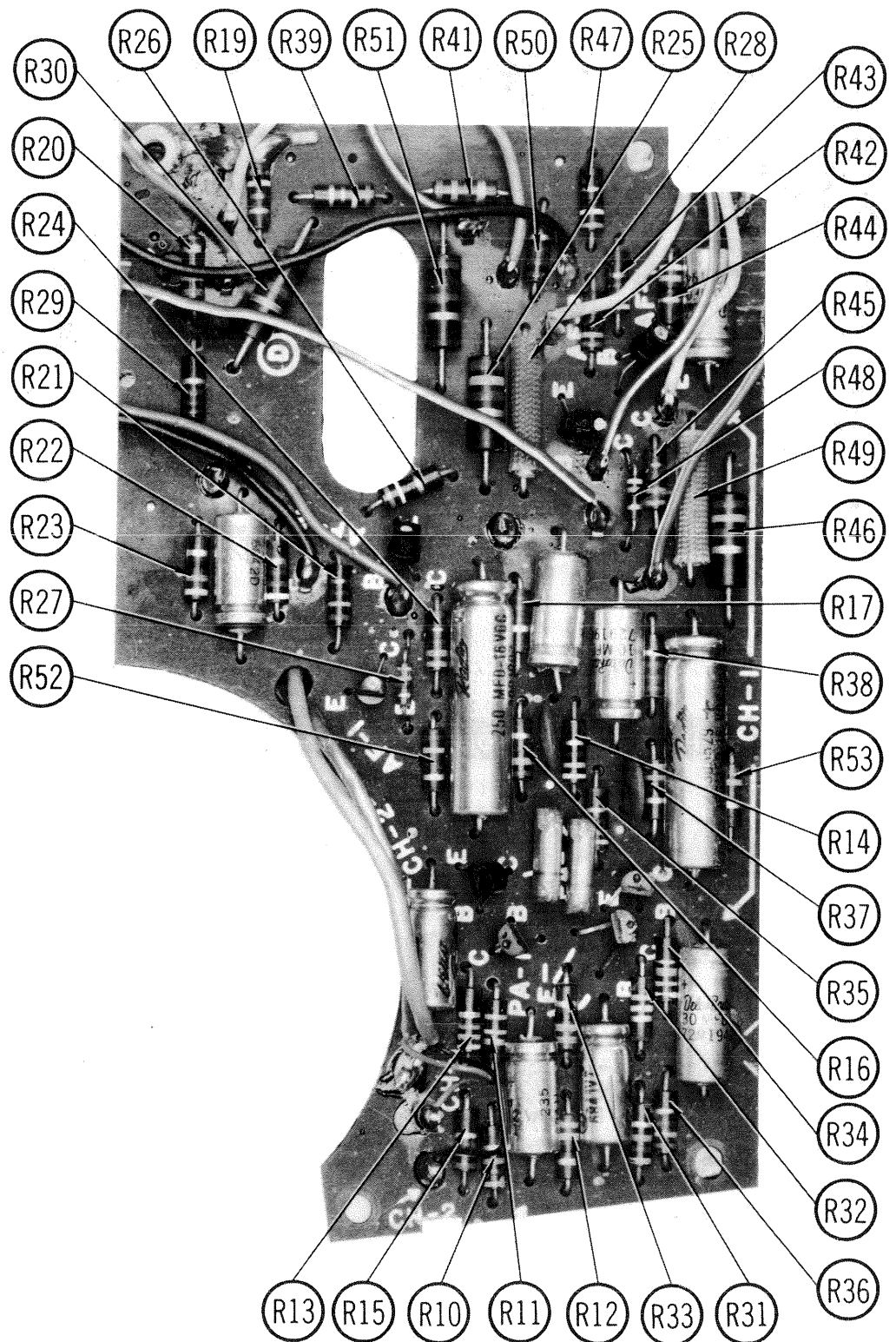


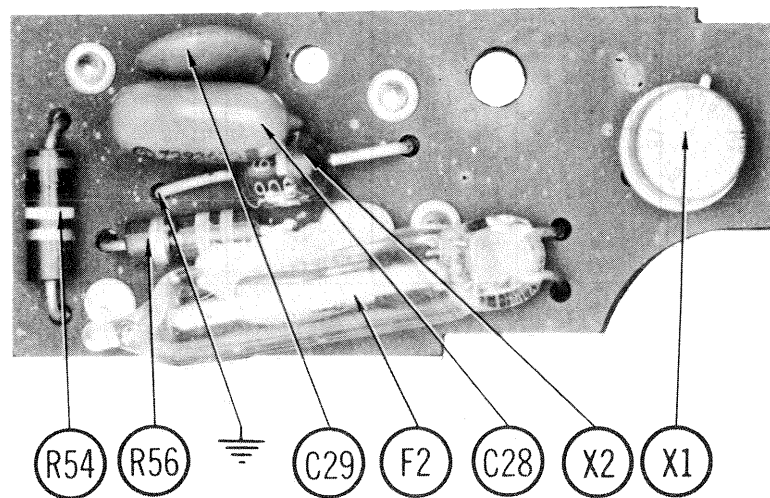
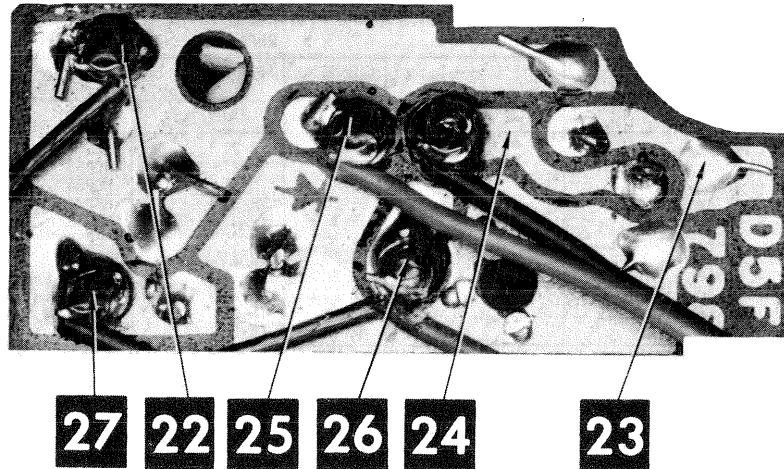
OLDSMOBILE - F-85 - TORONADO

correct speaker connections.
Keep in AR71 for reference

USED IN 95CT411







PARTS LIST AND DESCRIPTION

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

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS® for the most up-to-date replacement.

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	DS-76	Preamp		GE-10	TR-21	HEP53	SK3020	ECG 123
Q2	DS-76	Preamp		GE-10	TR-21	HEP53	SK3020	ECG 123
Q3	DS-67	AF Amp		GE-20	TR-21	HEP54	SK3020	ECG 123
Q4	DS-67	AF Amp		GE-20	TR-21	HEP54	SK3020	ECG 123
Q5	DS-503	Output *		GE-3	TR-01	HEP232	SK3009	ECG 104
Q6	DS-76	Preamp		GE-10	TR-21	HEP53	SK3020	ECG 123
Q7	DS-76	Preamp		GE-10	TR-21	HEP53	SK3020	ECG 123
Q8	DS-67	AF Amp		GE-20	TR-21	HEP54	SK3020	ECG 123
Q9	DS-67	AF Amp		GE-20	TR-21	HEP54	SK3020	ECG 123
Q10	DS-503	Output *		GE-3	TR-01	HEP232	SK3009	ECG 104
Q11	DS-509	Motor Reg.*		GE-14	TR-26	HEP704	SK3036	ECG 130

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

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
X1	DS-87 (SCR)					
X2	DS-79					

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.
C1A	1500 16V	7310473						TVL-3027.12
B	250 16V							
C	250 16V							
C2	250 16V	7307357	PRS1210	EA15-250	WBR300-35	QT1-30A	MTA250F15	TE-1165
C3	250 16V	7307357	PRS1210	EA15-250	WBR300-35	QT1-30A	MTA250F15	TE-1165
C4	3 12V	7291860	PTT127	EA15-2	AL3-150	MT1-3	MTA3D50	TE-1122
C5	30 6V	7296313	PTT27	EA6-25	AL30-6	MT1-13	MTA3D15	TE-1132.1
C6	10 12V	7292738	PTT114	EA15-10	AL10-25	MT1-5	MTA10D35	TL-1128
C7	10 12V	7292738	PTT114	EA15-10	AL10-25	MT1-5	MTA10D35	TL-1128
C8	250 16V	7307357	PRS1210	EA15-250	WBR300-35	QT1-30A	MTA250F15	TE-1165
C9	3 12V	7291860	PTT127	EA15-2	AL3-150	MT1-3	MTA3D50	TE-1122
C10	30 6V	7296313	PTT27	EA6-25	AL30-6	MT1-13	MTA3D15	TE-1132.1
C11	10 12V	7292738	PTT114	EA15-10	AL10-25	MT1-5	MTA10D35	TL-1128
C12	10 12V	7292738	PTT114	EA15-10	AL10-25	MT1-5	MTA10D35	TL-1128

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.
C20	.022 100V		V1612S22		DMF1S22	1DP-1-223	PVC1122	225P22391WD3
C21	.0022		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C22	.1		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C23	.1		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C24	.022 100V		V1612S22		DMF1S22	1DP-1-223	PVC1122	225P22391WD3
C25	.0022		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C26	.1		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C27	.1		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C28	.022 75V		V1612S22		DMF1S22	1DP-1-223	PVC1122	225P22391WD3
C29	.022		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C30	330		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TS-T33

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	RESISTANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS—IRC PART No.	MALLORY PART No.
R1A	Tone	100K	7304240				
B	Tone	100K					
C	Volume	20K Tap @ 11K					
D	Volume	20K Tap @ 11K	7309848				
R2A	Fader	100,2W					
B	Fader	100,2W					
R3	Balance	20K	7304970			U201R253B	MTC253L4

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFR. PART No.
R28	.68 ohm (Fusible)			7287480

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFR. PART No.
R49	.68 ohm (Fusible)			7287480

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L1	1.7A	.6	8mh	1221623	C-4095	TC-2	TR-154	TY17XT	

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MFR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	12 Tap	@ 10	7282057					
T2	12 Tap	@ 10	7282057					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				MFR. PART No.	QUAM PART No.	
SP1	3 1/2"	PM	10 ohms	1222943	3A05Z10	Front
SP2	3 1/2"	PM	10 ohms	1222943	3A05Z10	Front
SP3	6" x 9"	PM	10 ohms	7301803	69A1Z10	Rear
SP4	6" x 9"	PM	10 ohms	7301803	69A1Z10	Rear

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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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 F2	AGC 10A Circuit Breaker	7306041	7305588	AGC10	HHJ	311010	150145	

TAPE HEADS

ITEM No.	MEASURED			PART No.	NORTRONICS PART No.	DESCRIPTION
	INDUCTANCE	BIAS/ERASE VOLTS (RMS)	BIAS FREQ.			
M1	420mh			7298991	5800 *	8-Track Stereo Play * Use original mounting

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M2	Motor	7306712	* May be used in some versions.
M3	Solenoid	1222819	
		1222985 *	
M4	Lamp, Indicator	7296866	
S1	Switch, Power	7309849	
S2	Switch, Automatic Selector	7305811	
S3	Switch, Manual Selector	7305598 7313402	

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

ITEM	PART No.	ITEM	PART No.
Knob, Volume	7305851	Escutcheon	7310364
Knob, Tone	7304242	Door	1222923
Knob, Balance	7305528		

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.)