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who laboriously scanned, post-processed, Distilled, and organized the original 1983 (June 1999 printing) Factory Service Manual provided by Rob Windsor, owner/moderator of the Early Mazda Rotaries (AKA SA22C, neé FB) email list. (Thanks, Rob!)

There are several ways to get around in the document. I have provided Bookmarks to all the sections and subsections, and the Table of Contents is hot-linked as well. Thumbnails are also provided in the Thumbnails side bar.

Several of the pages in the original document were of the fold-out variety, but were reduced in the re-printed copy the scans were taken from. These pages have been re-enlarged into full sheet and segmented versions, as indicated in the Bookmarks. These pages probably should be printed out on 11" x 17" paper if available, but are still readable on 8.5" x 11" paper. You could also print out the segmented versions and attach them together, if so desired (or not.)

I have also included a label for the spine of a binder, for those who wish to print out all 30-odd pages and keep a dead-tree edition handy. ©

The original document is © 1982 Mazda Motor Corporation and remains so. This version is provided as a service for owners of first generation Mazda RX-7s who are having a devil of a time locating the factory wiring guide for a reasonable price.

Subscribe to the Early Mazda Rotaries email list:

Send an email with "subscribe" (without the quotes) to list-request@sa22c.org

See http://www.dfw-rx7.com for information on the DFW-RX7 email list.

Mazda RX-7

1983 Workshop Manual





Wiring Diagram

SECTION INDEX	
Name	Section
How to use this wiring diagramSymbol in this wiring diagram	0
■ Electric wiring schematic	W
Charging systemStarting system	Α
 Emission control system Ignition system Cruise control system Kick down system (for A/T) Fuel pump 	В
■ Meters & warning lights	С
■ Front wiper & washer ■ Rear wiper & washer	D
Headlights & illumination lightsHeadlight cleaner	E
 Turn & hazard flasher lights Back-up lights License lights Horn Side marker lights Front parking lights Tail lights 	F
■ Heater & air conditionar ■ Rear window defroster	G
■ Glove box light ■ Seat belt warning system ■ Cigarette lighter ■ Ignition key reminder buzzer ■ Ignition switch light system ■ Interior and spot light ■ Lights off reminder chime system ■ Auto clock ■ Luggage compartment light ■ Glass hatch release system ■ Fuel-door release system	Н
■ Remote control mirror ■ Power window	1
■ Audio system ■ Power antenna	J
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HOW TO USE THIS WIRING DIAGRAM

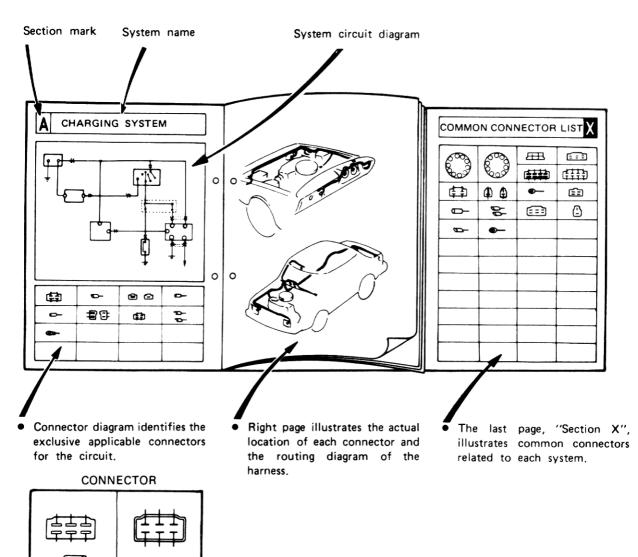
Female

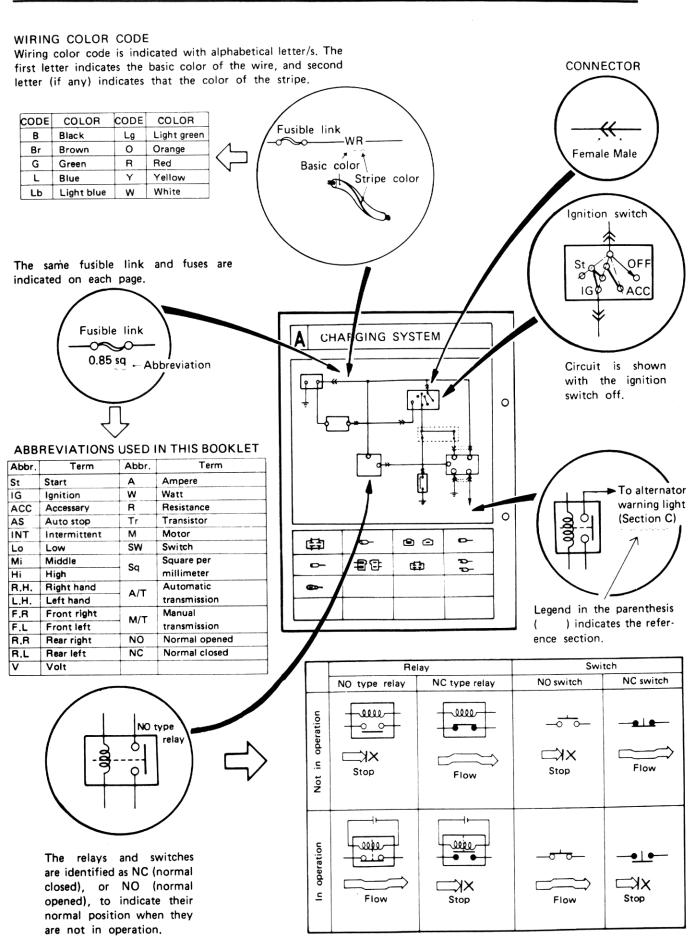
Male

The complete electrical system is divided into charging system, ignition system, etc.

Each system is shown on both right and left pages as described below.

When reading the wiring diagram, following should be noted:

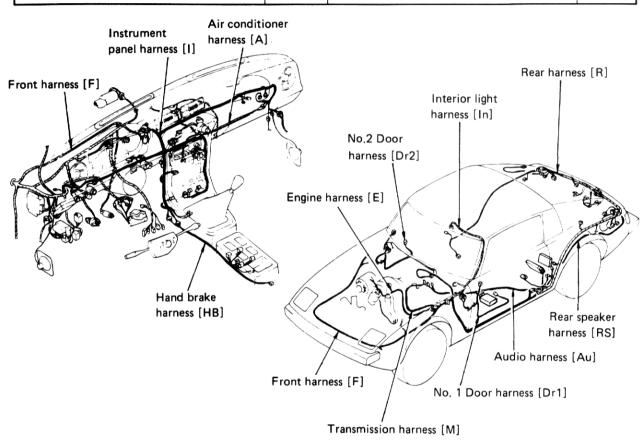


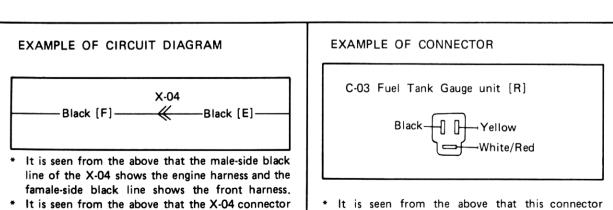


HARNESS SYMBOLS

Each harness is distinguished by a symbol to indicate to which harness belong a wiring and connector in circuit diagrams and connector charts.

DESCRIPTION OF HARNESS	SYMBOL	DECRIPTION OF HARNESS	SYMBOL
Front harness	[F]	Interior light harness	[In]
Engine harness	[E]	No. 1 Door harness	[Dr1]
Instrument panel harness	[1]	No. 2 Door harness	[Dr2]
Rear harness	[R]	Audio harness	[Au]
Transmission harness	[M]	Rear speaker harness	[RS]
Hand brake harness	[HB]	Air conditioner harness	[A]





(C-03) is on the Rear harness.

is a connector connecting the engine and the front.

SYMBOL IN THIS WIRING DIAGRAM

Θ Θ	HARNESS BODY	HOLDER BLOCK	->>-	—[(§)]–
BATTERY	GROUND	FUSE	FUSIBLE LINK	MOTOR
-300-	*			*
COIL, SOLENOID	RESISTOR	VARIABLE RESISTOR	THERMISTER	DIÓDE
	NPN PNP	Р	(3.4W)	ф
CONDENSER	TRANSISTOR	PUMP	LIGHT	HORN
		-1004		
SPEAKER	CIGARRET LIGHTER	HEATER		

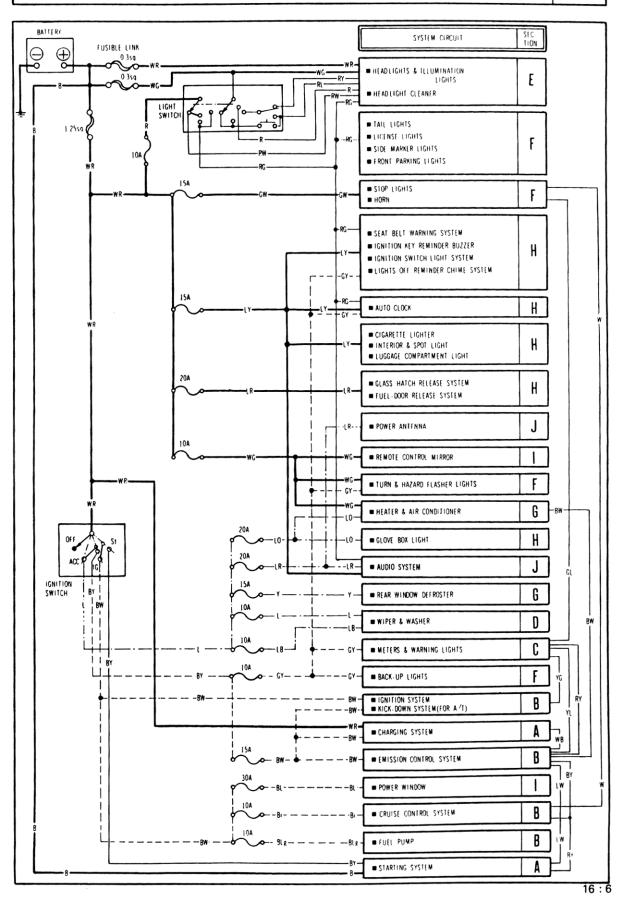
ELECTRICAL WIRING SCHEMATIC

CURRENT FROM BATTERY

CURRENT FROM ACC. TERMINAL OF IGNITION SWITCH

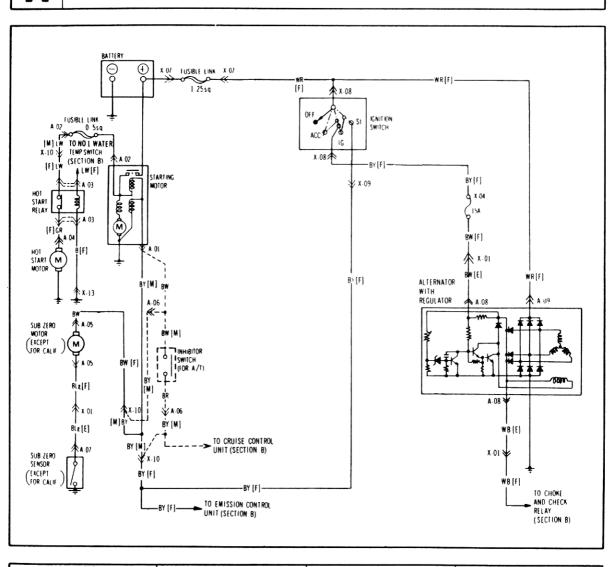
OTHERS

W

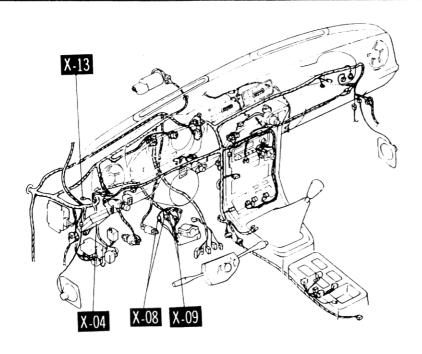


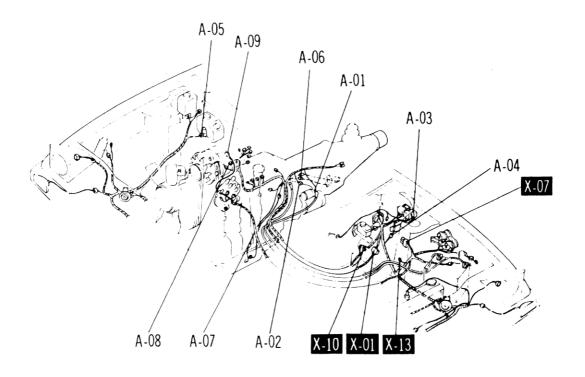
A

■CHARGING SYSTEM ■STARTING SYSTEM



A-01 STARTING MOTOR [M]	A-02 FUSIBLE LINK [M]	A-03 HOT START RELAY [F]	A-04 HOT START MOTOR [F]
8Y(FOR M 1) BW(FOR A/T)	© 550 - W	* (* G 	(R
A 05 SUB-ZERO MOTOR (EXCEPT FOR CALIF)[F]	A-06 INHIBITOR SWITCH (FOR A/T) [M]	A-07 SUB-ZERO SENSOR (EXCEPT FOR CALIF)[E]	A-08 ALTERNATOR WITH REGULATOR [E]
BW Blg	BY GY BW RW	∅ 81.g	⊕ BW
A 09 ALTERNATOR WITH REGULATOR [F]			
WR-CO			
Note ★…Not Used			

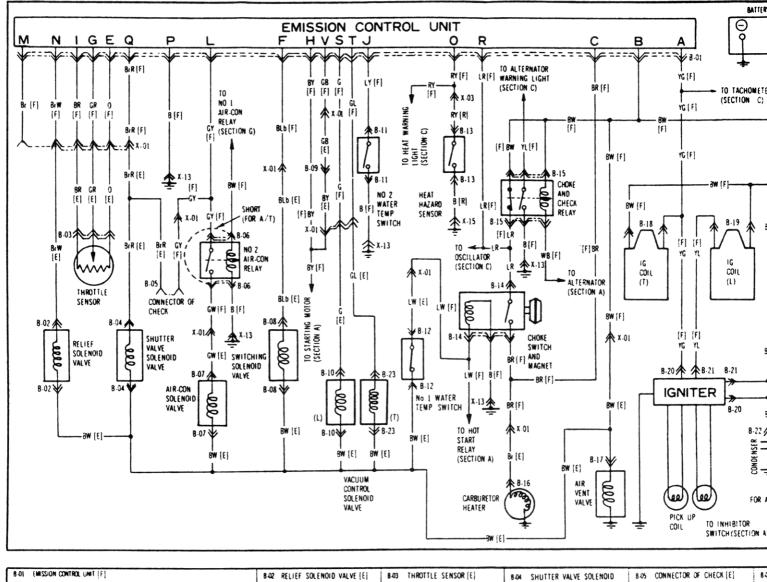




B

■EMISSION CONTROL SYSTEM ■IGNITION SYSTEM ■CRUISE CONTROL

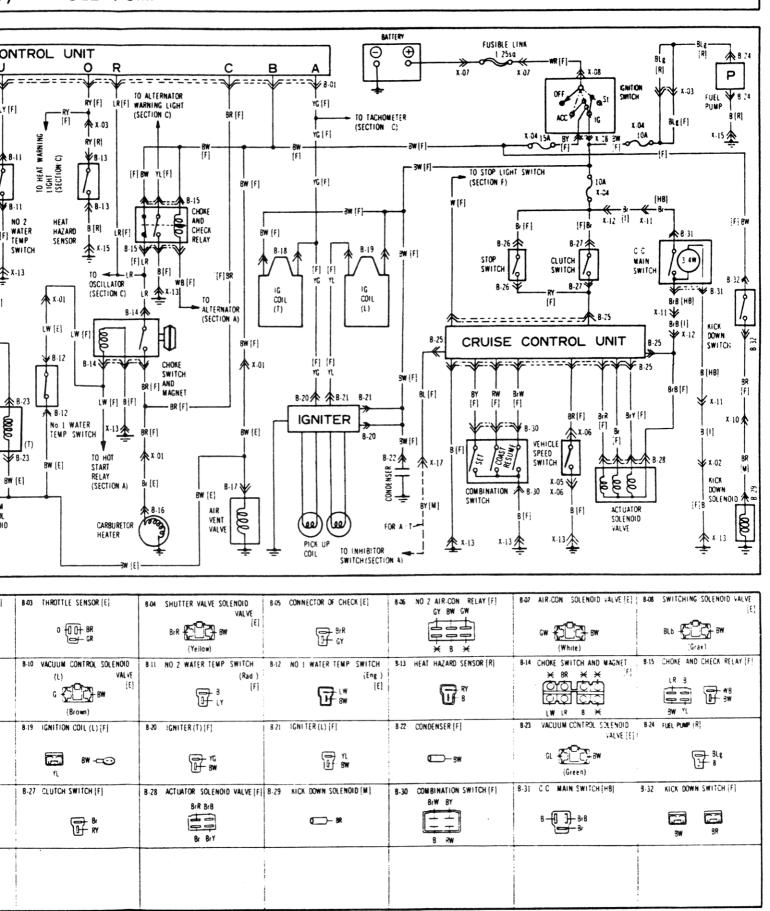
■KICK DOWN SYSTEM(FOR A/T) ■FUEL PUMP



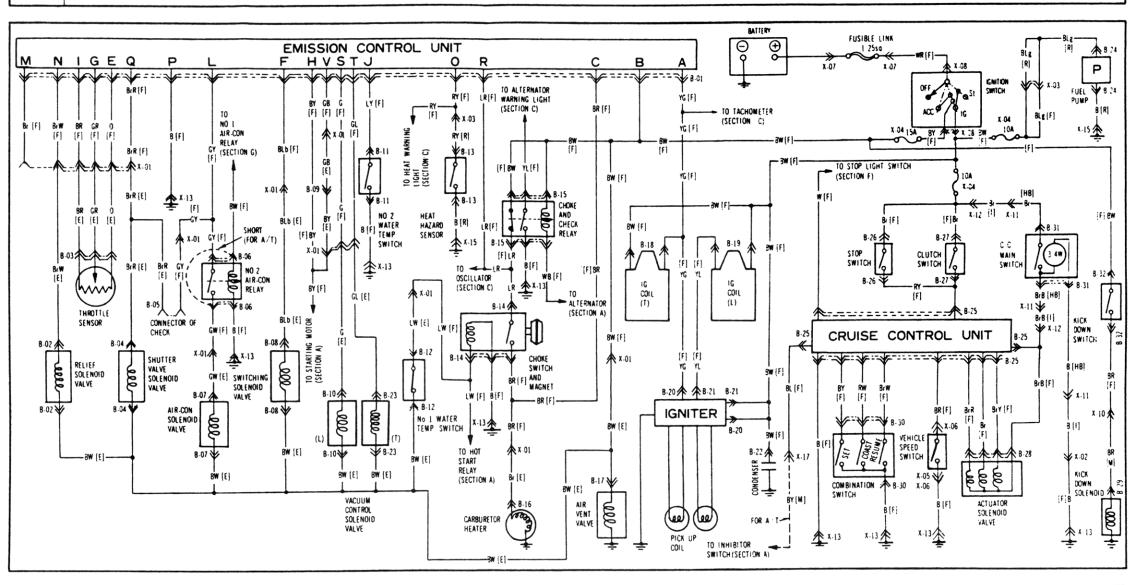
8-01 EMSSION CONTROL UNIT [F]	8-02 RELIEF SOLEMOID VALVE [E]	8-03 THROTTLE SENSOR [E]	B-04 SHUTTER VALVE SOLENOID VALVE	8-05 CONNECTOR OF CHECK[E] 8-4
(YGY BRY G) (GRY ER) (GrY RY) (GRY G) (XX	8r w (Blue)	0 € GR	BrR (Yeilow)	⊕ 8rR GY
(YG)(BR)(0) (GR)(BR) (Gr)(RY) (BrR)(G)(XX) (BW) (X) (BLb) (BY)(1Y) (YY)(BW)(B) (LR)(LL)(GB)	8.09 SHORT CONNECTOR (E)	8-10 VACUUM CONTROL SOLENOID (L) VALVE (E) (Brown)	Bil NO 2 WATER TEMP SWITCH (Rad) B B F]	B-12 NO I WATER TEMP SWITCH 3- (Eng.) LW [E]
B 16 CARBURETOR HEATER [E] B-17 AIR VENT VALVE [E]	B-18 IGNITION COIL (T) [F]	8-19 IGNITION COIL (L) [F]	8-20 IGNITER (T) [F]	8 21 IGNITER (L) [F] 8-
B1 8W	8₩ - □ ⊙ 16	8₩ - - -⊙ Yi	TG BW	YL Û BW
8-25 CRUISE CONTROL UNIT [F]	B-26 STOP SWITCH [F]	8-27 CLUTCH SWITCH [F]	B-28 ACTUATOR SOLENOID VALVE[F]	B-29 KICK DOWN SOLENOID [M] B.
(gr) (Br) (RY) (Br) (Br) (Br)	By RY	Br RY	BrR BrB Br BrY	(
(B) (B) (B) (R) (RW) (X) W				

■IGNITION SYSTEM ■CRUISE CONTROL SYSTEM

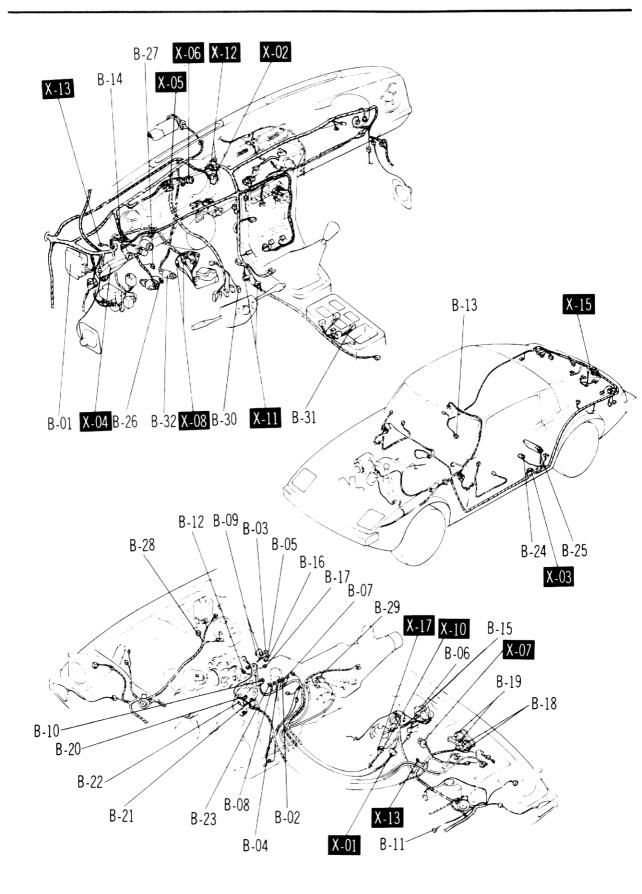
■FUEL PUMP



■EMISSION CONTROL SYSTEM ■IGNITION SYSTEM ■CRUISE CONTROL SYSTEM
■KICK DOWN SYSTEM(FOR A/T) ■FUEL PUMP

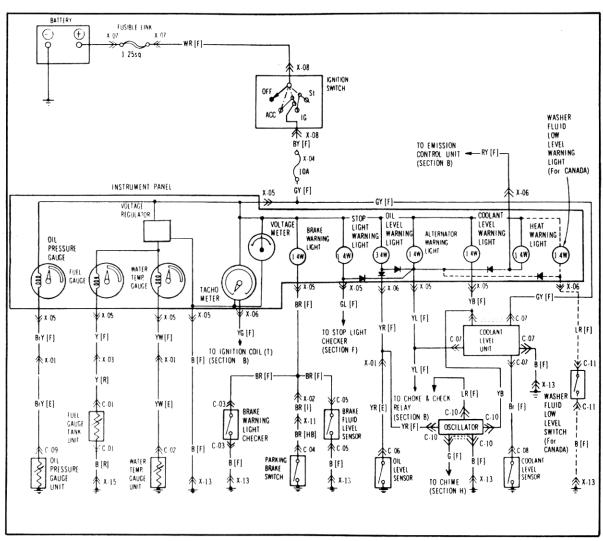


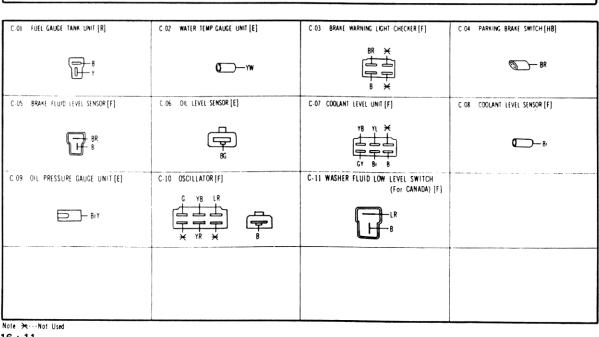
						T	The court of the c
8-01 EMISSION CONTROL UNIT (F)	B-02 RELIEF SOLENOID VALVE [E]	B-03 THROTTLE SENSOR [E]	BO4 SHUTTER VALVE SOLENOID	8.05 CONNECTOR OF CHECK [E]	8-36 NO 2 AIR-CON RELAY [F]	BOY AIR-CON SOLENOID VALVE (E)	8-08 SWITCHING SOLENOID VALVE
			VALVE		GY BW GW	1	[2]
	~ PSP ~	0 10 01 88	(E	C 848		957 [©] ≥0	BLb COS 6W
1	BrW SI SW	0 (1 0 BR ⇒← GR	Brk 12 5W	BrR GY	1	GW TO SW	00 32LL2 0"
	(Blue)		(Yeilow)	ال ق	× 8 ×	(White)	(Grav)
(YG)(BR)(0)(GR)(BR)(BR)(RY)(BrR)(G)(×)	8-09 SHORT CONNECTOR [E]	8-10 VACUUM CONTROL SOLENOID	B-II NO 2 WATER TEMP SWITCH	B-12 NO I WATER TEMP SWITCH	3-13 HEAT HAZARD SENSOR [R]	B-14 CHOKE SWITCH AND WAGNET	8-15 CHOKE AND CHECK RELAY [F]
	Show control of (2)	(L) VALVE	(Rad)	(Eng)	i	× BR × ×	
BW (X) (BLb) BY (LY) (GY) (BrW) B (R) GL (GB)		(5)	[6]	[6]	_ ~	CADICAD	LR 3
		G ₹⊅∐CZ}+BW	T: (''	₽ (W	₩	قِيقَ آفِيقِ	
	BY GB	(Brown)	ا ت	· · · · · · · · · · · · · · · · · · ·			BW YL
		(Brown)				[₩ LR 8 ×	
8 16 CARBURETOR HEATER [E] 8-17 AIR VENT VALVE [E]	B-18 IGNITION COIL (T) [F]	8-19 IGNITION COIL (L) [F]	8-20 IGNITER (T) [F]	8 21 IGNI TER (L) [F]	8-22 CONDENSER [F]	8-23 VACUUM CONTROL SOLENOID	
						VALVE (E)	· .
		===		(C) VI		CI ACI CO SW	G→ 81.0
	BW -□⊙	6₩ - □	F YG F BW	BW YL	0 ──-9₩	00 DECEMBER	31 g
Br BW	16	YL.	<u> </u>	O 1		(Green)	_
8-25 CRUISE CONTROL UNIT [F]	8-26 STOP SWITCH[F]	8-27 CLUTCH SWITCH [F]	B-28 ACTUATOR SOLENOID VALVE[F]	B-29 KICK DOWN SOLENOID [M]	8-30 COMBINATION SWITCH [F]	B-31 C C MAIN SWITCH [HB]	3-32 KICK DOWN SWITCH (F)
one section (1)	See State State (1)			, ,	BrW BY		1
1			BrR BrB			()	
	Br D+ RY	Br III RY		(— BR	= = .	8-(1) 3)-318	
(Bry)(BrR)(RY) (BY)(BrW)(B)	1 <u>0</u> + 84	(<u>1</u>) + RY	Br BrY			5	3W 9R
		1	or or i		8 RW		+
(Br) (BL) (BR) (BR) (RW) (×) (W)							1
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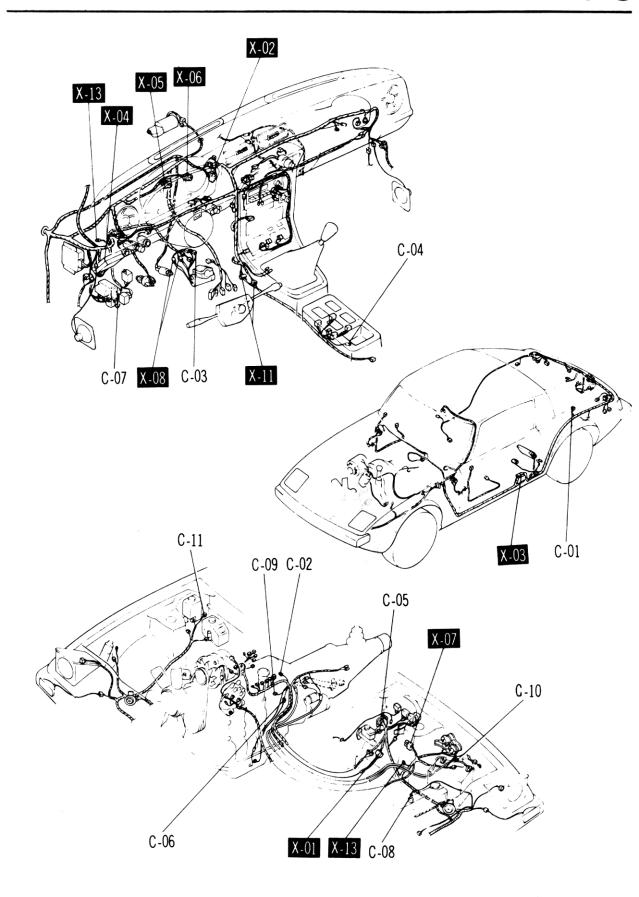


16

■METERS & WARNING LIGHTS





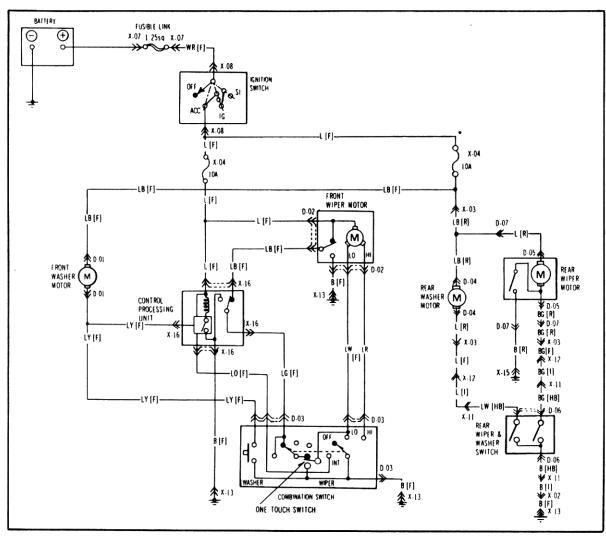


16

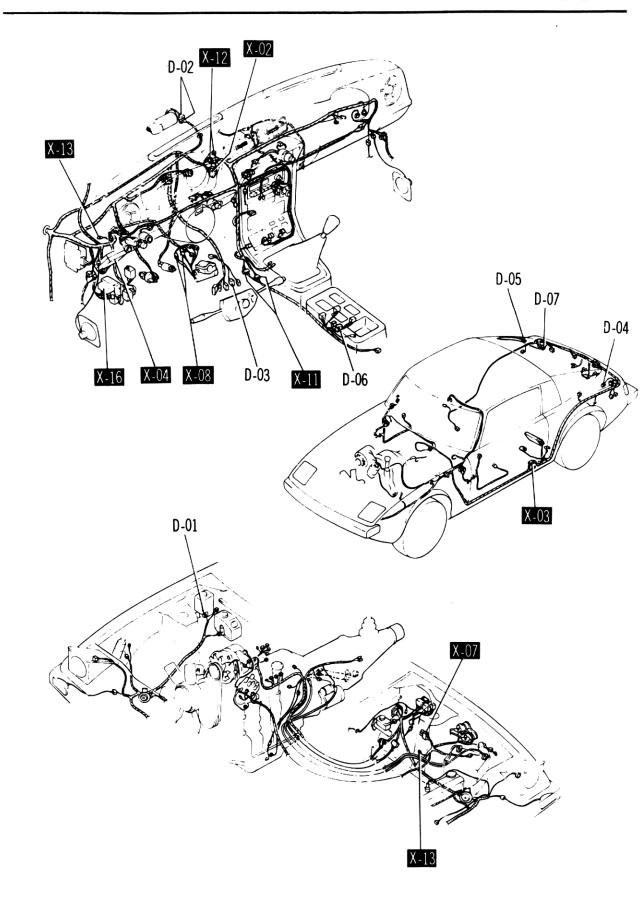
D

■FRONT WIPER & WASHER





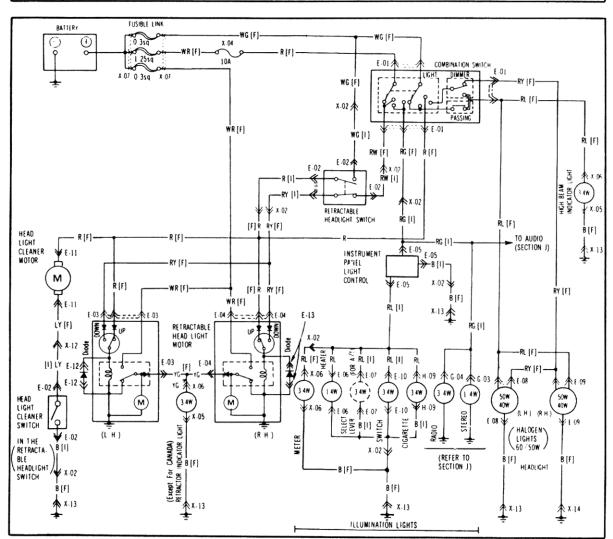
D:01 FRONT WASHER MOTOR [F]	D-02 FRONT WIPER MUTOR [F]	D-03 COMBINATION SWITCH [F]	D-04 REAR WASHER MOTOR [R]
LY LB	L LB B	B LO LY R LG LW	E L
D-05 REAR WIPER MOTOR (R)	D.06 REAR WIPER & WASHER SWITCH [HB]	D-07 CONNECTOR TO REAR WIPER	
@ ec @ r	8 	8 - 1 - 86 - 1 - 8 18 - 1 - 1 - 1	



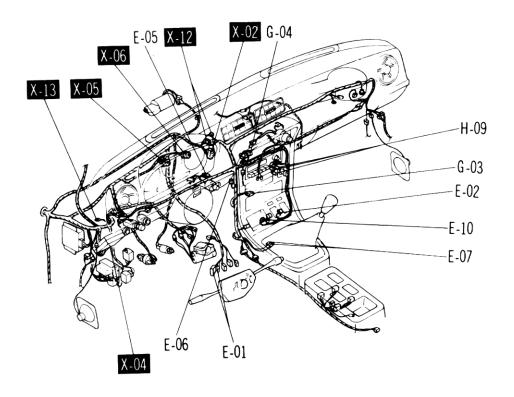
E

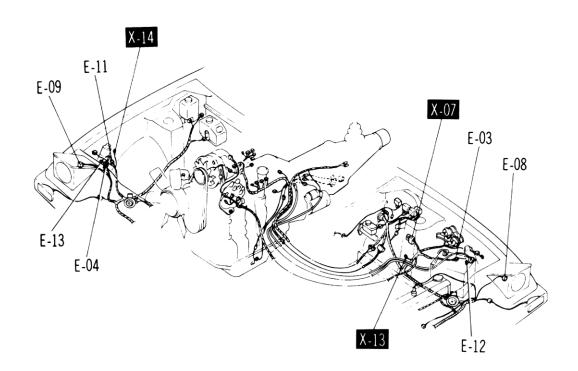
■HEADLIGHTS & ILLUMINATION LIGHTS

■HEADLIGHT CLEANER



E-01 COMBINATION SWITCH [F]	E-02 RETRACTABLE HEADLIGHT SWITCH [1]	E-03 RETRACTABLE HEADLIGHT MOTOR(L H) [F]	E 04 RETRACTABLE HEADLIGHT MOTOR(R H) [F]
R R R GL	RW WG LY PPP RY R B	WR R RY	WR) R
E-05 INSTRUMENT PANEL LIGHT CONTROL[1]	E-06 HEATER ILLUMINATION LIGHT [1]	E-07 SELECT LEVER ILLUMINATION LIGHT [1] (FOR A/T)	E-08 HEADLIGHT(LH)[F]
R. (1) R. B	₽ R	0 —− RL 0 ===0 - B	Rt
E-09 HEADLIGHT(RH)[F]	E-10 SWITCH PANEL ILLUMINATION LIGHT [1]	E-11 HEADLIGHT CLEANER MOTOR [F]	E-12 DIODE (L. H.)
RY RY	RI.	正 t	
E-13 DIODE (R.H.)			

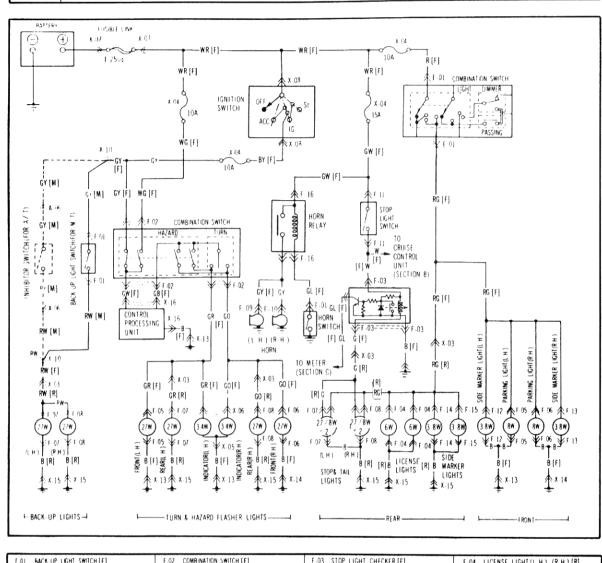




16

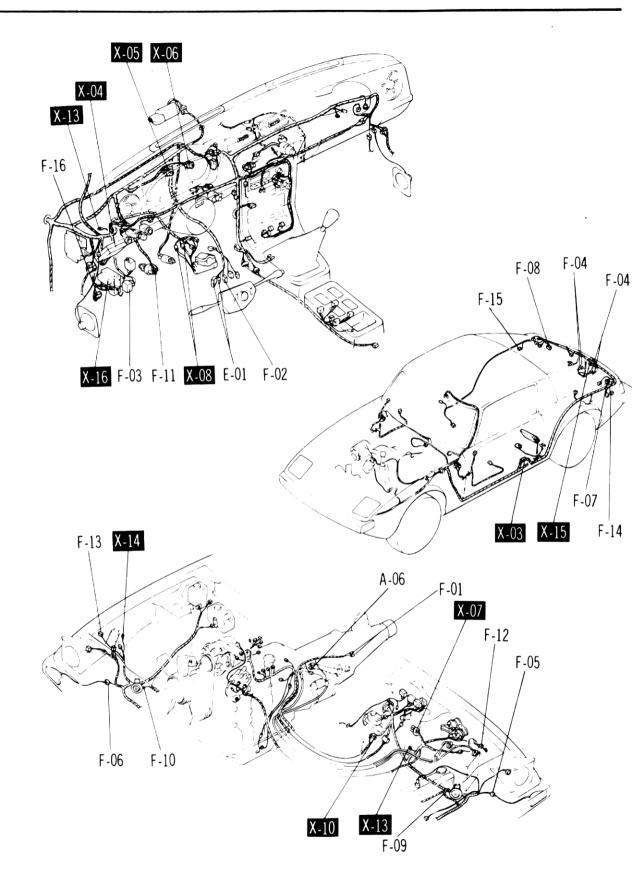
■TURN & HAZARD FLASHER LIGHTS ■BACK-UP LIGHTS
■STOP LIGHTS ■LICENSE LIGHTS ■HORN

■STOP LIGHTS ■LICENSE LIGHTS ■HORN
■SIDE MARKER LIGHTS ■FRONT PARKING LIGHTS
■TAIL LIGHTS



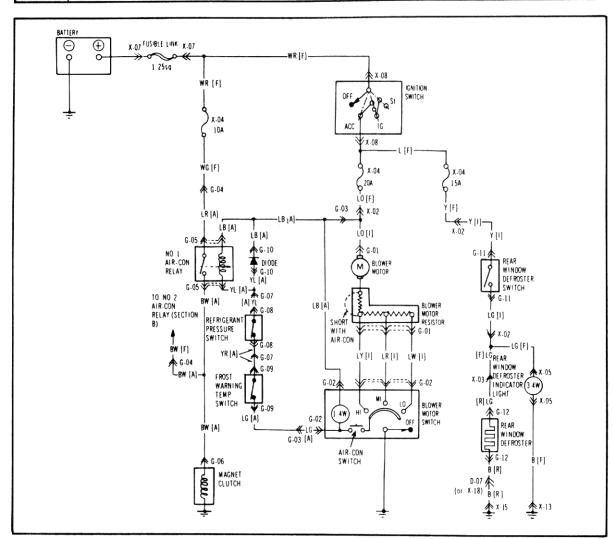
F-01 BACK-UP LIGHT SWITCH [E]	F-02 COMBINATION SWITCH [F]	F-03 STOP LIGHT CHECKER [F]	F-04 LICENSE LIGHT(LH) (RH)[R]
0 — 61 0 — R₩	WG GW GY GR + X GO GB	* 6	
F-05 FRONT TURN & PARKING LIGHT(LH)[F]	F-06 FRONT TURN & PARKING LIGHT(R H) [F]	F-07 REAR COMBINATION LIGHT(LH)[R]	F-08 REAR COMBINATION LIGHT(RH)[R]
RC (1) B	RG-{ D}- 8	C RC 8	CO RW X
F HORN(L H) [F]	F 10 HORN(R H) [F]	F-11 STOP LIGHT SWITCH [F]	F-12 FRONT SIDE MARKER LIGHT (L H) [F]
€ v	€ CY	<u>□</u> + «	B D R
F-13 FRONT SIDE MARKER LIGHT(RH)[F]	F:14 REAR SIDE MARKER LIGHT(L H)[R]	F-15 REAR SIDE MARKER LIGHT (R H) [R]	F 16 HORN RELAY (F)
B RC	B Pr;	€ 8 € 8	cr filt cm

Note ★…Not Used

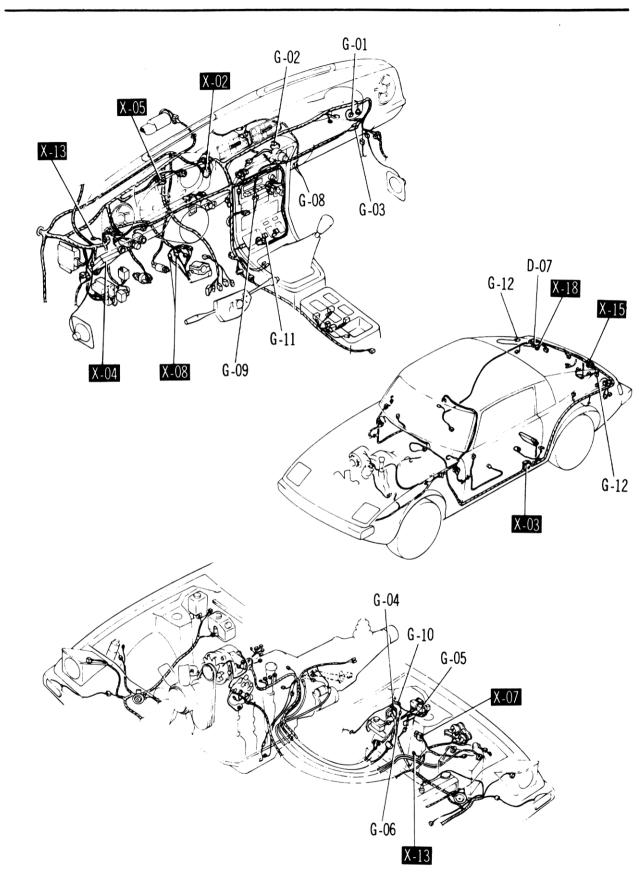


G

■HEATER & AIR CONDITIONER ■REAR WINDOW DEFROSTER



G-01 BLOWER MOTOR & RESISTOR[1]	G-02 BLOWER MOTOR SWITCH [I]	G-03 CONNECTOR BETWEEN INPANE AND AIR-CON, HARNESS [1] [A]	G-04 CONNECTOR BETWEEN FRONT AND AIR-CON HARNESS [F] [A]
LO LR	(A)	10 - Соо сар— 18	8₩ 🔁 🔽 8M
G-05 No 1 AIR-CON RELAY [A]	G-06 MAGNET CLUTCH [A]	G-07 CONNECTOR TO REFRIGERANT PRESSURE SWITCH [A]	G.08 REFRIGERANT PRESSURE SWITCH [A]
18 LR	€ —8₩	YR — TP	() (P
G-09 FROST WARNING TEMP. SWITCH [A]	G-10 DIODE [A]	G-11 REAR WINDOW DEFROSTER SWITCH [I]	G-12 REAR WINDOW DEFROSTER[R]
€D- YR	LB YL (IN THE AIR-CON, HARNESS)	Fig.	₽ • •
L	L		



H

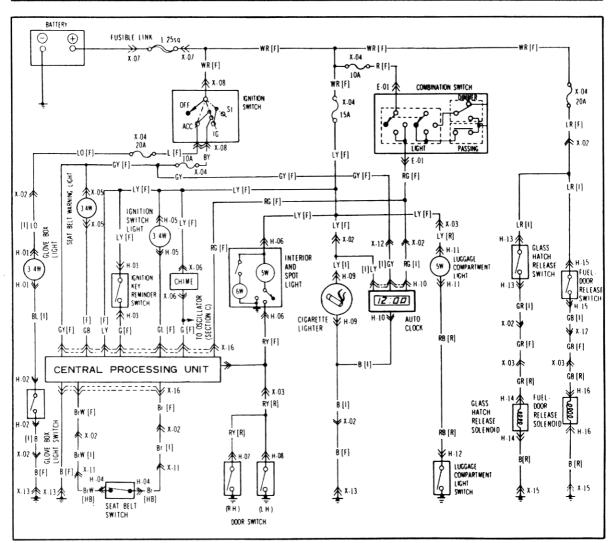
■GLOVE BOX LIGHT ■SEAT BELT WARNING SYSTEM ■CIGARETTE LIGHTER

■IGNITION KEY REMINDER BUZZER ■IGNITION SWITCH LIGHT SYSTEM

MINTERIOR AND SPOT LIGHT MLIGHTS OFF REMINDER CHIME SYSTEM

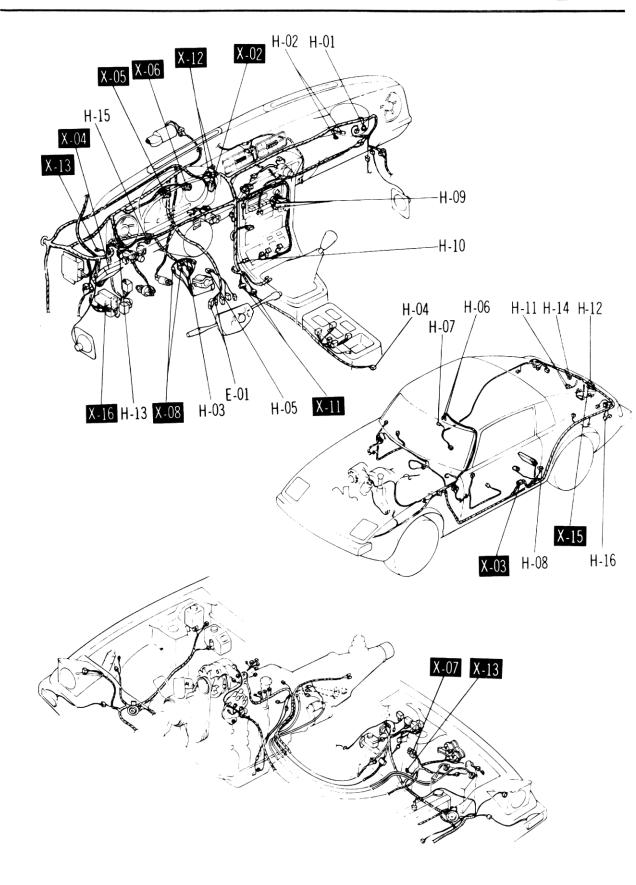
MAUTO CLOCK MLUGGAGE COMPARTMENT LIGHT

■GLASS HATCH RELEASE SYSTEM ■FUEL-DOOR RELEASE SYSTEM



H-01 GLOVE BOX LIGHT [1]	H-02 GLOVE BOX LIGHT SWITCH [I]	H-03 IGNITION KEY REMINDER SWITCH [F]	H-04 SEAT BELT SWITCH [HB]
LO BL	8 – C D	6 +	Br Br W
H-05 IGNITION SWITCH LIGHT [F]	H-06 INTERIOR & SPOT LIGHT [F]	H-07 DOOR SWITCH(FRONT RH)[R]	H-08 DOOR SWITCH(REAR LH) [R]
LY GL	(Ø∑—RY	Ø n
H-09 CIGARETTE LIGHTER [1]	H-10 AUTO CLOCK [1]	H-11 LUGGAGE COMPARTMENT LIGHT [R]	H-12 LUGGAGE COMPARTMENT LIGHT SWITCH
€ 1 v	B RS	⑤ — LY ⑥ — RB	(R) R8 –CCC>
H-13 GLASS HATCH RELEASE SWITCH[I]	H-14 GLASS HATCH RELEASE SOLENOID[R]	H-15 FUEL-DOOR RELEASE SWITCH[I]	H-16 FUEL-DOOR RELEASE SOLENOID[R]
LR GR	GR F	18 ¥ ☐ ☐ ¥ 3	

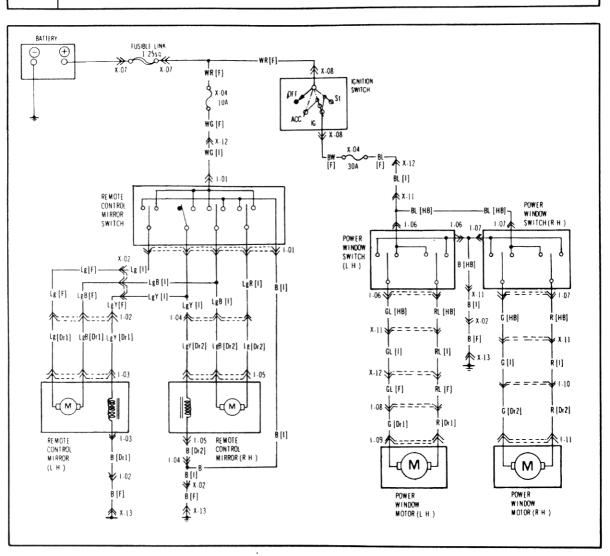
Note ★…Not Used

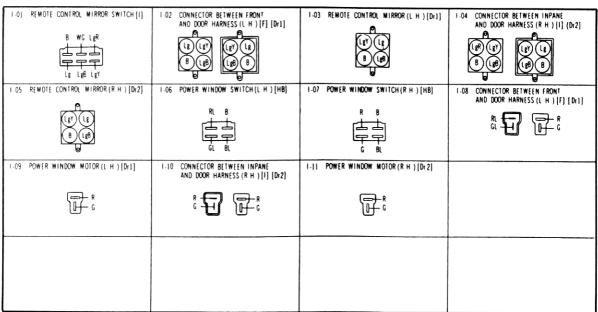


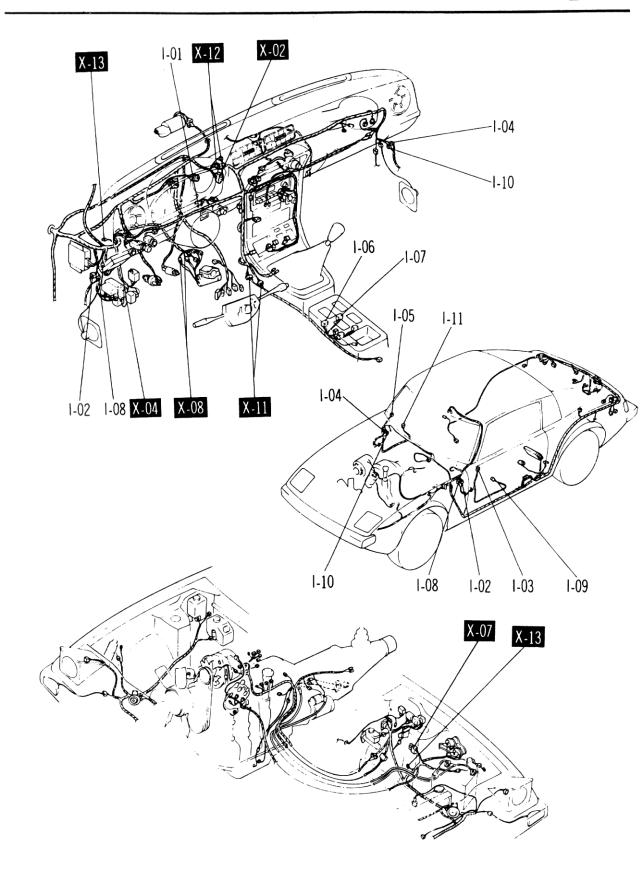
16

■REMOTE CONTROL MIRROR

■POWER WINDOW

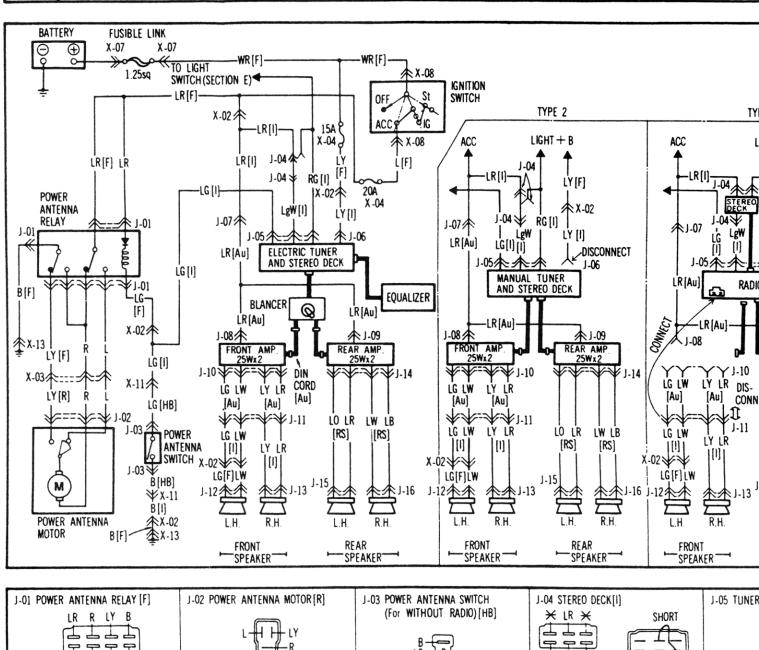






■ AUDIO SYSTEM

■ POWER ANTENNA

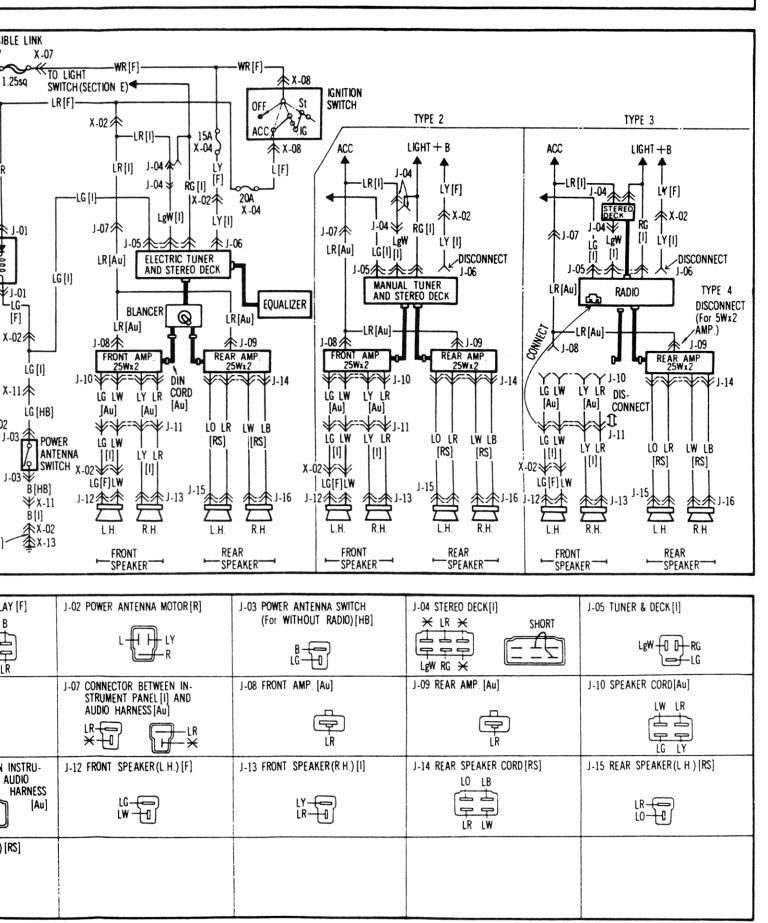


J-01 POWER ANTENNA RELAY [F] LR R LY B LG L R LR	J-02 POWER ANTENNA MOTOR[R]	J-03 POWER ANTENNA SWITCH (For WITHOUT RADIO)[HB]	J-04 STEREO DECK[I] ** LR ** SHORT LgW RG **	J-05 TUNER
J-06 TUNER & DECK[I]	J-07 CONNECTOR BETWEEN IN- STRUMENT PANEL [I] AND AUDIO HARNESS [AU]	J-08 FRONT AMP. [Au]	J-09 REAR AMP. [Au]	J-10 SPEAK
J-11 CONNECTOR BETWEEN INSTRU- MENT PANEL [I] AND AUDIO LW LR LR LW HARNESS LG LY LG LY	J-12 FRONT SPEAKER (L.H.) [F]	J-13 FRONT SPEAKER(R.H.)[I] LY	J-14 REAR SPEAKER CORD[RS] LO LB LR LW	J-15 REAR
J-16 REAR SPEAKER(R.H.) [RS] LW LB L				

Note × ···Not Used

IO SYSTEM

■ POWER ANTENNA



J-03▼

M

MOTOR

POWER ANTENNA

B[HB]

¥X-11

介X-02

全X-13

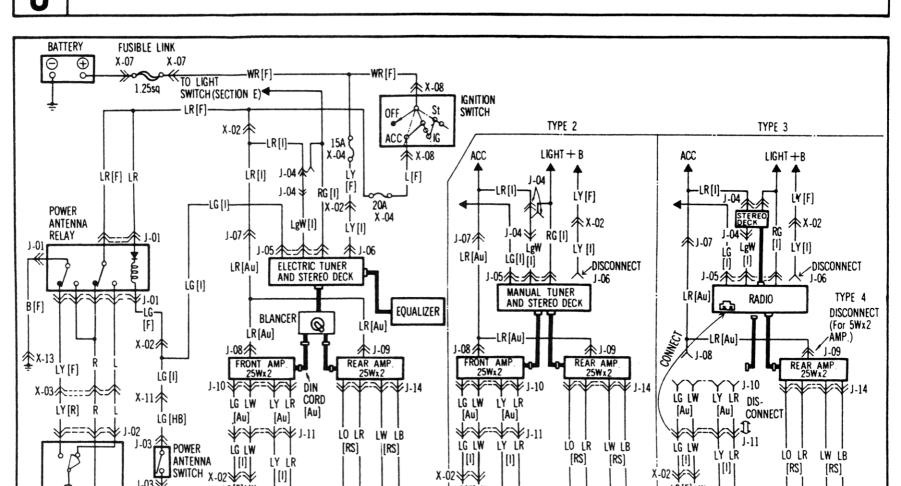
B[I]

LG[F]LW

FRONT

SPEAKER

<u></u> 全全 J-13 ^{J-15}



LG[F]LW

FRONT

SPEAKER"

J-12 余全

全▲J-16

REAR

SPEAKER"

J-15

REAR

SPEAKER"

LG[F]LW

FRONT

SPEAKER

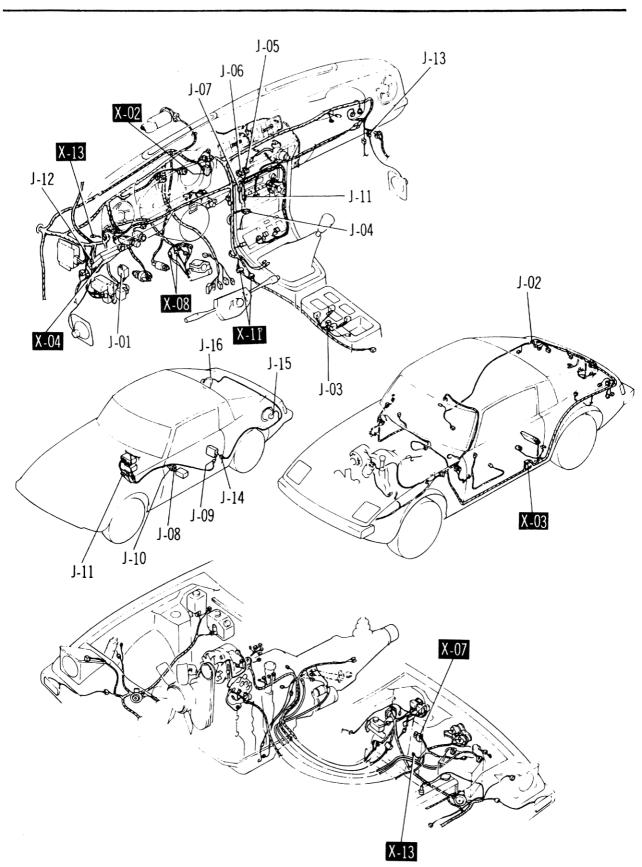
本 J-13

REAR

SPEAKER

J-01 POWER ANTENNA RELAY[F] LR R LY B LG L R LR	J-02 POWER ANTENNA MOTOR[R]	J-03 POWER ANTENNA SWITCH (For WITHOUT RADIO)[HB]	J-04 STEREO DECK[I] ** LR ** SHORT LgW RG **	J-05 TUNER & DECK[I] LgW + O D + RG LG
J-06 TUNER & DECK[I]	J-07 CONNECTOR BETWEEN IN- STRUMENT PANEL [I] AND AUDIO HARNESS [AU]	J-08 FRONT AMP. [Au]	J-09 REAR AMP. [Au]	J-10 SPEAKER CORD[Au] LW LR LG LY
J-11 CONNECTOR BETWEEN INSTRU- MENT PANEL [I] AND AUDIO LW LR LR LW HARNESS LG LY LY-LG	J-12 FRONT SPEAKER(L.H.)[F] LG LW	J-13 FRONT SPEAKER(R.H.)[I] LY LR 0	J-14 REAR SPEAKER CORD[RS] LO LB LR LW	J-15 REAR SPEAKER(LH.)[RS] LR LO LO
J-16 REAR SPEAKER(R.H.)[RS] LW LB				

Note ★ ··· Not Used



■COMMON CONNECTOR LIST



