Holden Commodore.
Holden Calais.

VK SERIES

SERVICE MANUAL SUPPLEMENT

FOREWORD

The information in this Supplement, when used in conjunction with Holden Commodore 'VB' series Service Manual M38145, 'VB' Station Wagon Supplement M38265, VC Service Manual Supplement (Number 1) M38366 and Number 2 M38401, Improved Performance L6 & V8 Engines Service Manual M38338 and VH Series Service Manual Supplement M38731, provides new specifications and new service procedures for *Holden Commodore and Holden Calais VK Series vehicles.*

Transmission, front brake and rear axle assemblies are similar to those used in other GMH vehicles. No major service repair and overhaul procedures are given for these assemblies, and reference should be made to existing Service Manuals.

The Section Index on this page enables the user to quickly locate the numeric identifiers for each group of Sections. Bend the Manual back to expose the black tabs on the pages and locate the tab indicating the identifier for the group of Sections you wish to find. An index is included at the beginning of each Section. In addition, numeric identifiers are also used to signify the individual operations within the Sections. Specifications for vehicle components are provided at the end of each Section where appropriate.

Summaries of Special Service Tools, where required, are also included at the end of Sections.

Service Tools, unless otherwise specified, are available from:

● **Kent-Moore Australia Pty. Ltd.**
Unit 3, 9 Pioneer Avenue,
Thornleigh. N.S.W. Australia. 2120.
Telephone (02) 848-9777 Telex 22355

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All information, illustrations and specifications contained in this Supplement are based on the latest product information available at the time of publication approval. The right is reserved to make changes at any time without notice.

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SECTION INDEX

GENERAL MOTORS–HOLDEN'S SALES PTY. LIMITED
SERVICE DEPARTMENT

SECTION 0A

GENERAL INFORMATION

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1. GENERAL DESCRIPTION

The VK Series is a minor facelift of the VH Series incorporating exterior, interior and mechanical changes.

The model line-up differs from the VH Series, with the deletion of the 69 body style (4 door, 4 window sedan) and the introduction of the 19 body style (4 door, 6 window sedan).

MODEL LINE UP		
8VK19	Commodore SL	Sedan 4 door, 6 window
8VK35	Commodore SL	Station Wagon
8VL19	Commodore Berlina	Sedan 4 door, 6 window
8VL35	Commodore Berlina	Station Wagon
8VX19	Calais	Sedan 4 door, 6 window

The 3.3 litre L6 engine, equipped with Electronic Spark Timing (EST), is the base engine for SL and Berlina models, and the 3.3 litre L6 engine equipped with Electronic Fuel Injection (EFI) is the base engine on Calais models.

The three speed Trimatic Automatic Transmission is standard equipment on Calais and Berlina models and is available as an option on Commodore SL models. The Torquemaster four speed manual transmission is standard on Commodore SL models.

The 5.0 litre V8 engine is available on all models as an option. A five speed manual transmission is also available as an option on all 3.3 litre L6 EST engines

The following charts contain model availability, power train combinations, engine data and exterior dimensions for VK Series models.

2. MODEL AVAILABILITY & BASE EQUIPMENT

BODY STYLE	MODEL NO.	MODEL NAME	No. OF DOORS	ENGINE	TRANSMISSION		REAR AXLE RATIO : 1	TYRES	WHEELS
					TYPE	SHIFT LOC.			
Sedan	8VK19	Commodore SL	4	3.3 EST	4 Speed Manual	Floor	3.08	BR78S14	5.50 JJX14 Steel
S/Wagon	8VK35	Commodore SL	5	3.3 EST	4 Speed Manual	Floor	3.08	CR78S14	6.0 JJX14 Steel
Sedan	8VL19	Commodore Berlina	4	3.3 EST	3 Speed Auto	Floor	3.08	CR78S14	6.0 JJX14 Steel
S/Wagon	8VL35	Commodore Berlina	5	3.3 EST	3 Speed Auto	Floor	3.08	CR78S14	6.0 JJX14 Steel
Sedan	8VX19	Calais	4	3.3 EFI	3 Speed Auto	Floor	3.08	P205/ 60HR15	6.0 JJX15 Alloy

3. POWER TRAIN COMBINATIONS

ENGINE	TRANSMISSION TYPE	MODEL AVAILABILITY	FIRST GEAR RATIO : 1	REAR AXLE RATIO : 1	
				BASE	PERFORMANCE
3.3 Litre Six Cylinder EST	4 Speed Manual	SL Sedan SL Station Wagon Berlina Sedan Berlina Station Wagon	3.50	3.08	
	5 Speed Manual	SL Sedan SL Station Wagon Berlina Sedan Berlina Station Wagon	3.24	3.36	
	3 Speed Automatic	SL Sedan SL Station Wagon Berlina Sedan Berlina Station Wagon	2.31	3.08	
3.3 Litre Six Cylinder EFI	3 Speed Automatic	SL Sedan Berlina Sedan Calais	2.31	3.08	
5.0 Litre Eight Cylinder	3 Speed Automatic	All Models	2.31	2.60	3.08

4. ENGINE DATA

ENGINE DESIGNATION	3.3 LITRE EST	3.3 LITRE EFI	5.0 LITRE
PISTON DISPLACEMENT NOM. – cc	3298	3298	5044
COMPRESSION RATIO : 1	8.8	8.8	9.2
NUMBER OF CYLINDERS BORE x STROKE – mm	6 92.075 x 82.550	6 92.075 x 82.550	8 101.60 x 77.775
TAXABLE H.P. RAC or SAE	31.5	31.5	51.2
POWER K.W. DIN @ R.P.M.	86 kw @ 4200	106 kw @ 4400	117 kw @ 4000
TORQUE Nm DIN @ R.P.M.	232 Nm @ 2400	266 Nm @ 3200	336 Nm @ 2400

5. EXTERIOR DIMENSIONS

BODY DIMENSIONS	SEDAN MODELS			STATION WAGON MODELS	
	8VK19	8VL19	8VX19	8VK35	8VL35
OVERALL LENGTH	4713.5	4713.5	4713.5	4716.5	4716.5
OVERALL WIDTH	1722	1722	1722	1722	1722
OVERALL HEIGHT	1378	1374	1360	1401	1465
WHEELBASE	2668	2668	2668	2668	2668
OVERHANG – FRONT	922.5	922.5	922.5	922.5	922.5
OVERHANG – REAR	1123	1123	1123	1126	1126
TREAD – FRONT	1451.3	1451.3	1451.3	1451.3	1451.3
TREAD – REAR	1416.5	1416.5	1416.5	1440	1440

Dimensions in mm

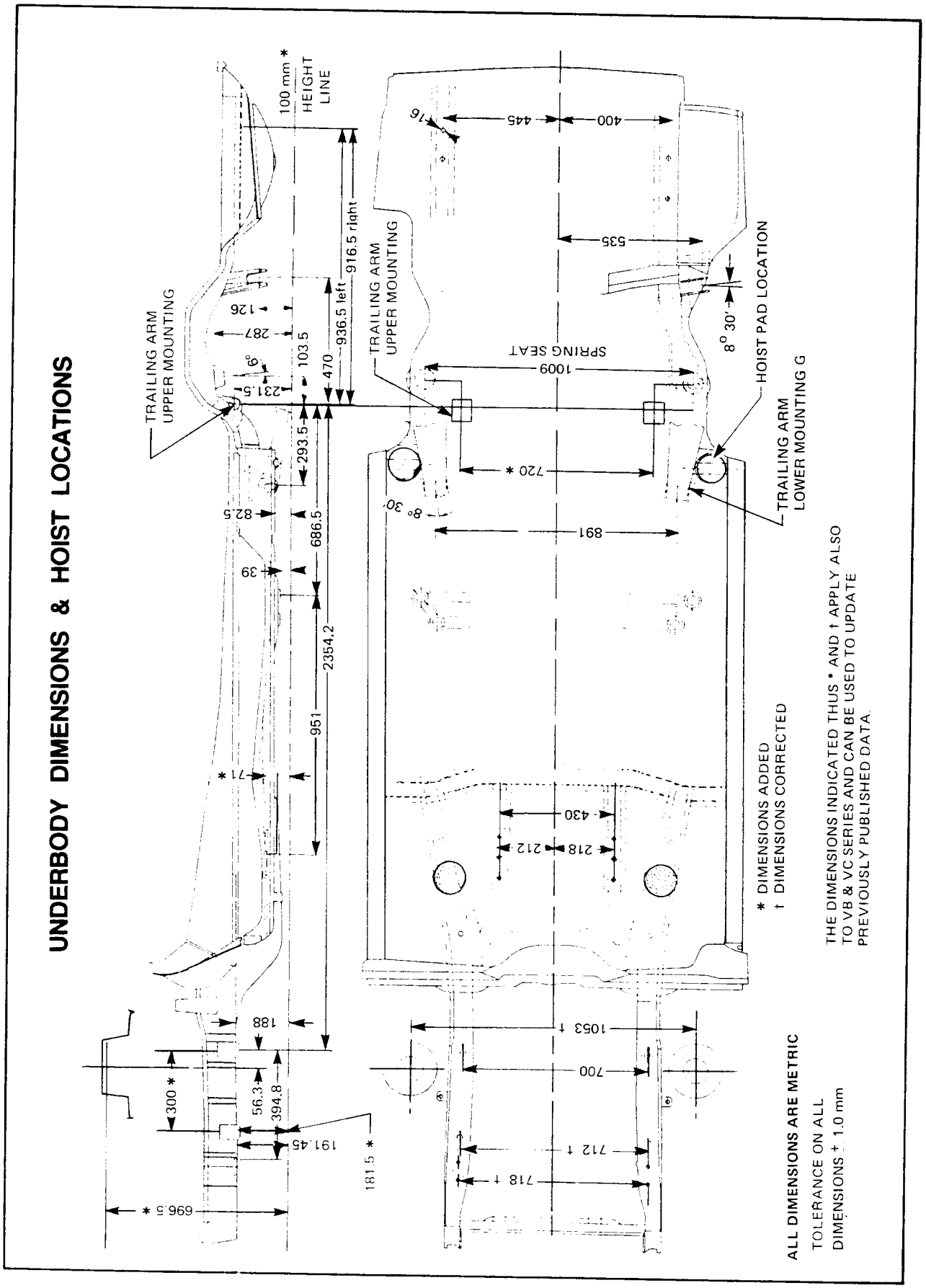
UNDERBODY DIMENSIONS & HOIST LOCATIONS
100 mm * HEIGHT LINE
TRAILING ARM UPPER MOUNTING
TRAILING ARM UPPER MOUNTING
SPRING SEAT
HOIST PAD LOCATION
TRAILING ARM LOWER MOUNTING G
* DIMENSIONS ADDED
† DIMENSIONS CORRECTED
THE DIMENSIONS INDICATED THUS * AND † APPLY ALSO TO VB & VC SERIES AND CAN BE USED TO UPDATE PREVIOUSLY PUBLISHED DATA.
ALL DIMENSIONS ARE METRIC
TOLERANCE ON ALL DIMENSIONS ± 1.0 mm

Figure 1A-1A

9. BODY ELECTRICAL

INDEX

9.1 DESCRIPTION

The electrically operated exterior rear view mirror assembly fitted to Calais models consists of a mirror with its electric drive motor contained in the door mounted mirror housing assembly (refer Fig. 1A-66).

The electric motor, which is activated by a switch mounted onto the transmission console (refer View A, Fig. 1A-67) provides complete adjustment of the mirrors.

An 'In-line' one amp fuse and holder assembly is attached to the mirror switch electrical harness and is located under the transmission console (refer View A, Fig. 1A-67).

Choice of the mirror to be adjusted involves pushing the raised bar of the switch to the left or right. Depressing the four way directional arrows illustrated on the upper face of the switch will provide the desired mirror adjustment.

Electrically operated venting sun roofs are released as Production Option CF5 for 19 body styles except 'SL' models.

COMPRESSOR

The compressor fitted to VK models illustrated in cut away section in Fig. 2B-8 is the TR 70 manufactured by Sanden. It is a new design based on a gyrating spiral within a spiral principle.

Two spiral components have 2.8 turn involute spiral walls projected from discs. Both spiral components are housed in a cylindrical casing, with one in a fixed position and the other interleaved with the former at an angular relationship of 180°. The free moving components are driven by a crankshaft in an orbiting motion. The orbiting motion of the free moving component provides a continuous compression process in two pairs of compression pockets.

The compressor is belt driven from the engine crankshaft through an electro magnetic clutch. In the cycling clutch system, the compressor is run intermittently, automatically turning on and off in response to an electric signal controlled by the thermostatic switch. The compressor will cycle as necessary to maintain minimum temperature without the evaporator core freezing.

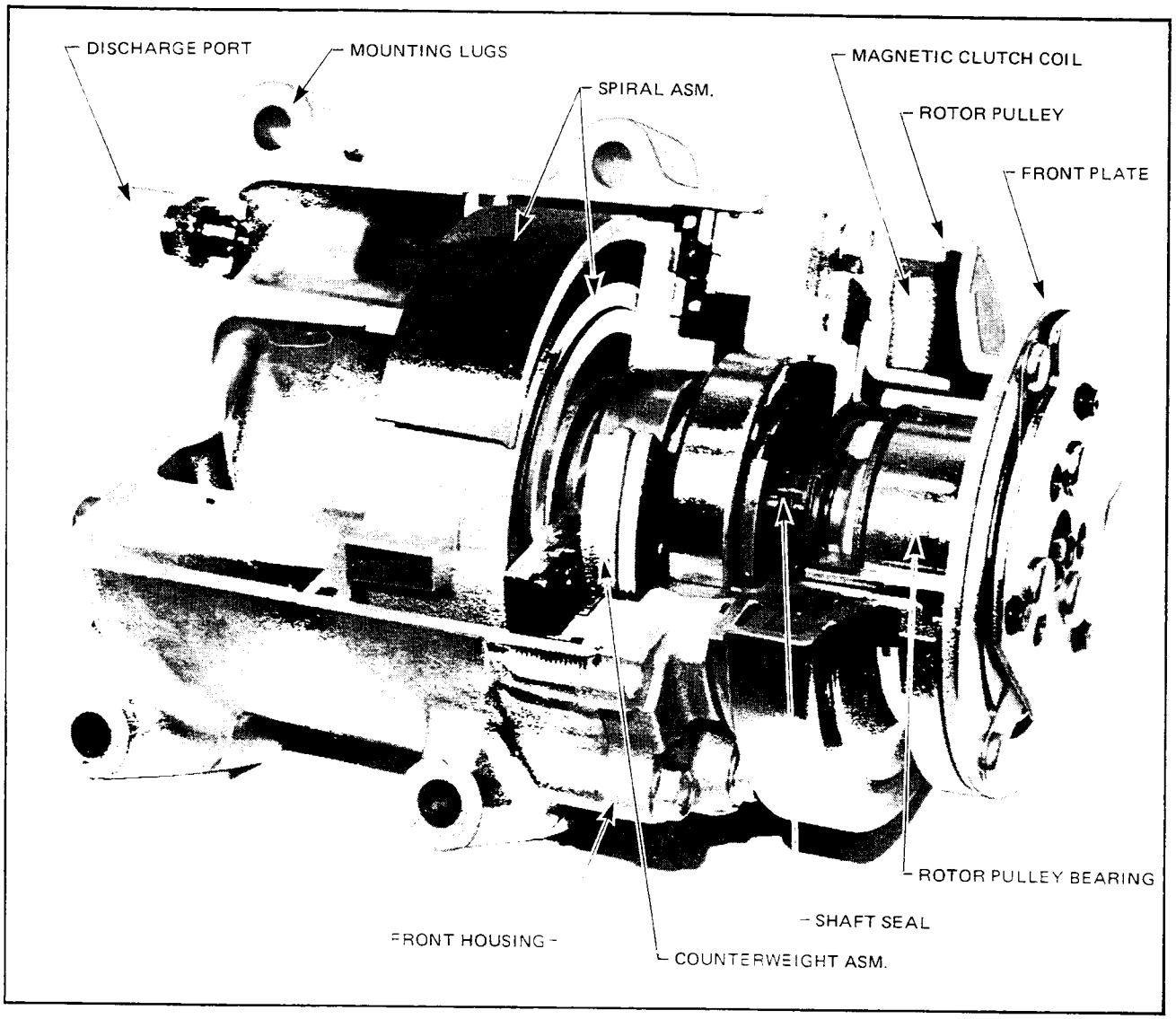

Figure 2B-8

2. SERVICE OPERATIONS

2.1 BRAKE FLUID CHANGE

1. Thoroughly clean master cylinder especially around wheel brake line connections.
2. Disconnect wheel brake lines from master cylinder and remove reservoir cap.
3. Allow master cylinder to drain until empty. (Refer Fig. 5-1).
4. Fill master cylinder reservoir with fresh, specified brake fluid from a sealed 500 ml container and **ensure reservoir is at least half full for remainder of procedure.**
5. Allow fluid to flow from open connection ports until fluid is free of air.
6. Reconnect wheel brake pipes to master cylinder and tighten to torque specified at end of section.
7. Bleed at each wheel using diaphragm type pressure bleeding equipment, until fluid removed is free of air.

NOTE: If pressure equipment if not available, proceed to bleed brake system manually (at least 6 pumps per wheel brake).

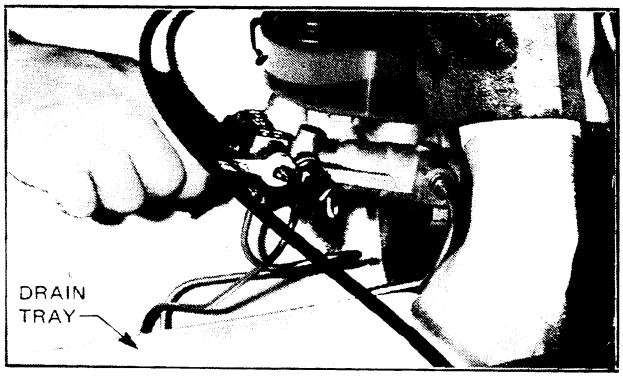

Figure 5-1

8. Loosen left hand caliper bleed screw.
9. Remove left hand caliper anchor plate retaining bolts. (See Fig. 5-2).
10. Hold caliper upside down and remove bleed screw to drain contents of caliper into suitable receptacle.
11. Hand tighten bleed screw and reinstall caliper assembly.
12. Tighten anchor plate retaining bolts to torque specified at end of section.
13. Repeat step 8 to 12 for right hand caliper assembly.
14. Bleed front calipers.

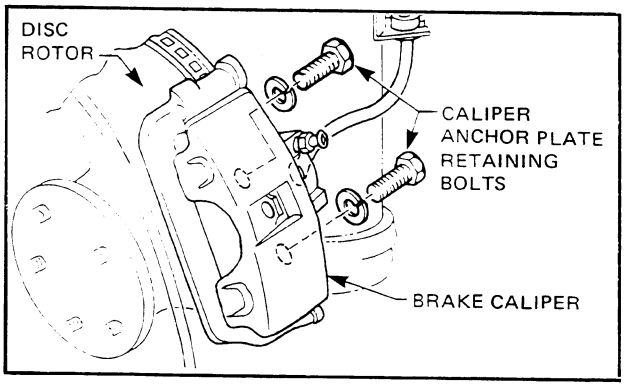

Figure 5-2

2.2 BRAKE BOOSTER

REMOVE

1. Disconnect electrical lead and three brake pipes from master cylinder. (Refer Fig. 5-3).
2. Unscrew nuts securing master cylinder support bracket to adjacent spring tower. (Refer Fig. 5-3).
3. Remove master cylinder to bracket bolt and remove bracket. (Refer Fig. 5-3).
4. Remove nuts securing master cylinder to power booster studs. (Refer Fig. 5-3).
5. Remove master cylinder taking care not to disturb power booster push rod.

NOTE: Do not depress brake pedal with master cylinder removed or reaction disc may become dislodged in booster.

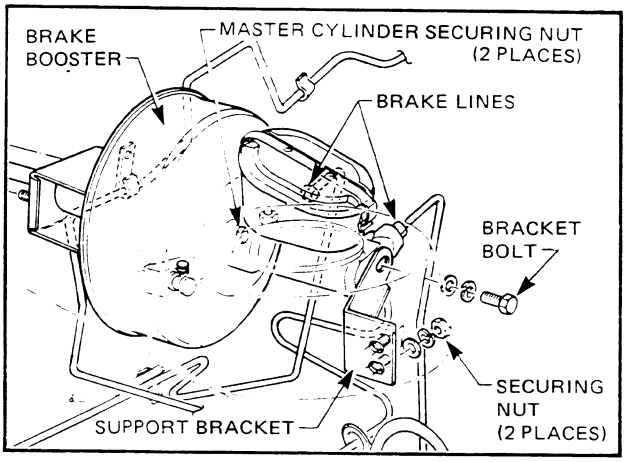

Figure 5-3

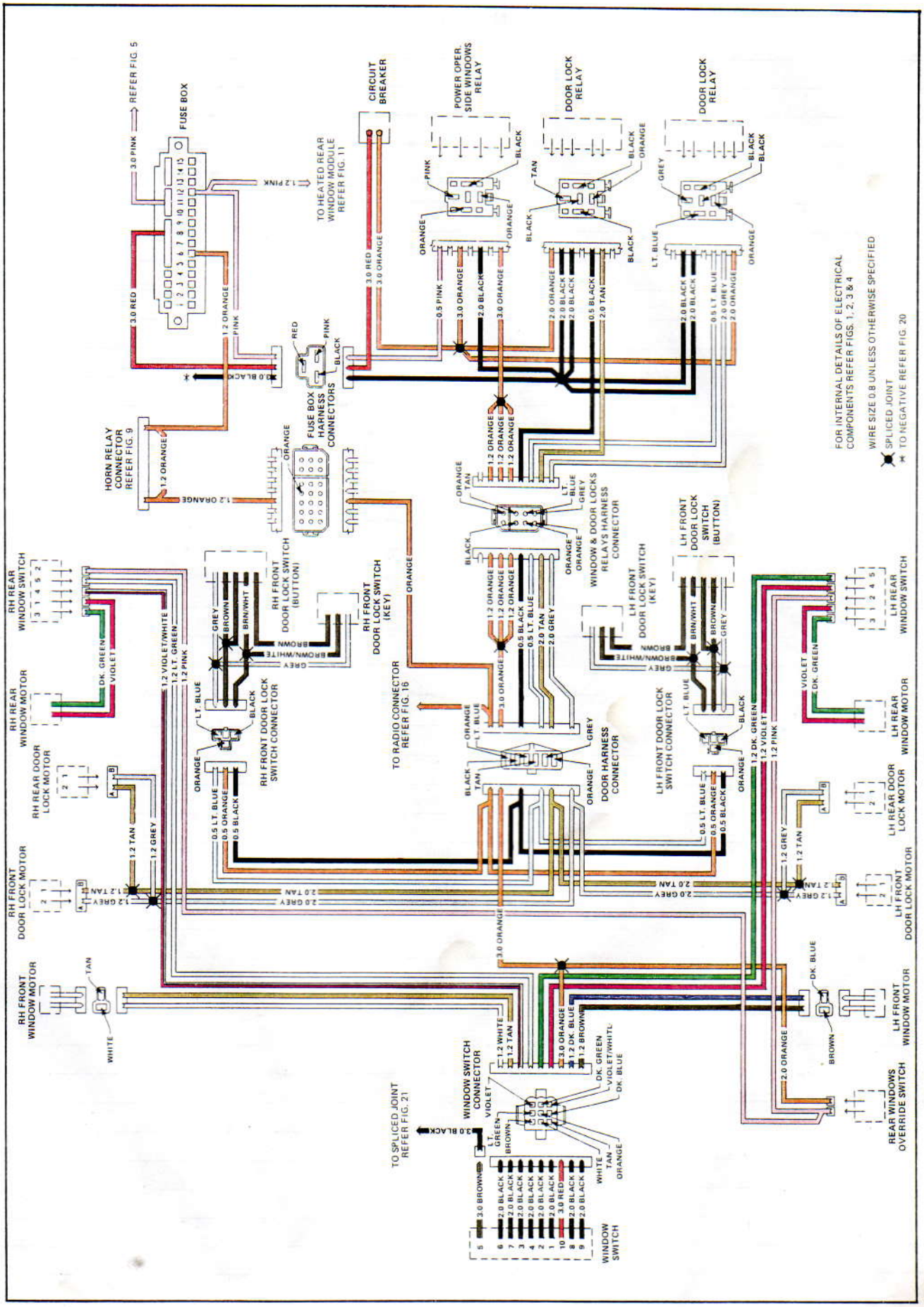

Figure 12F-18 Electric Door Locks and Power Operated Side Windows

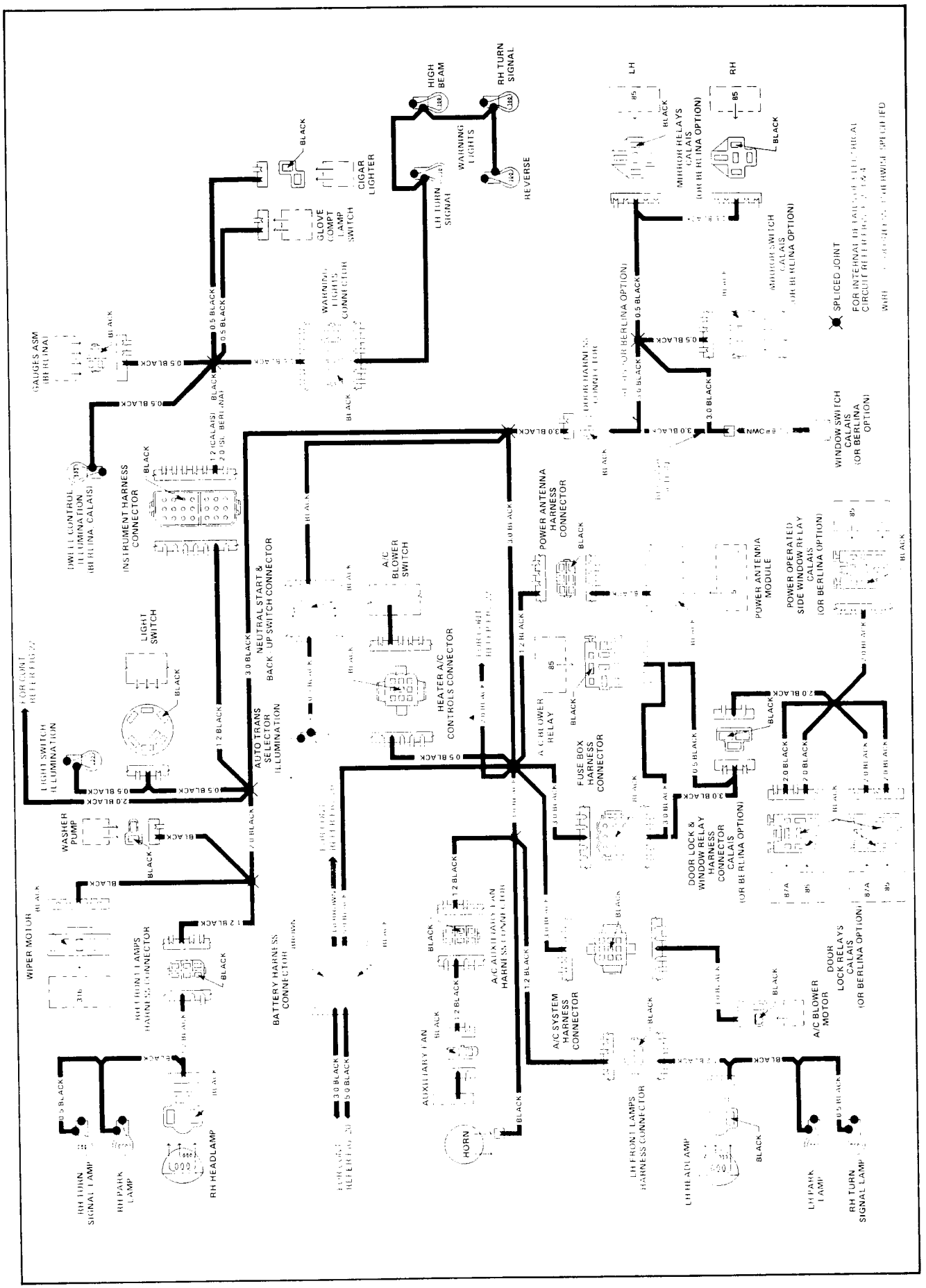

Figure 12F-21 Front Earthing Circuit Continued

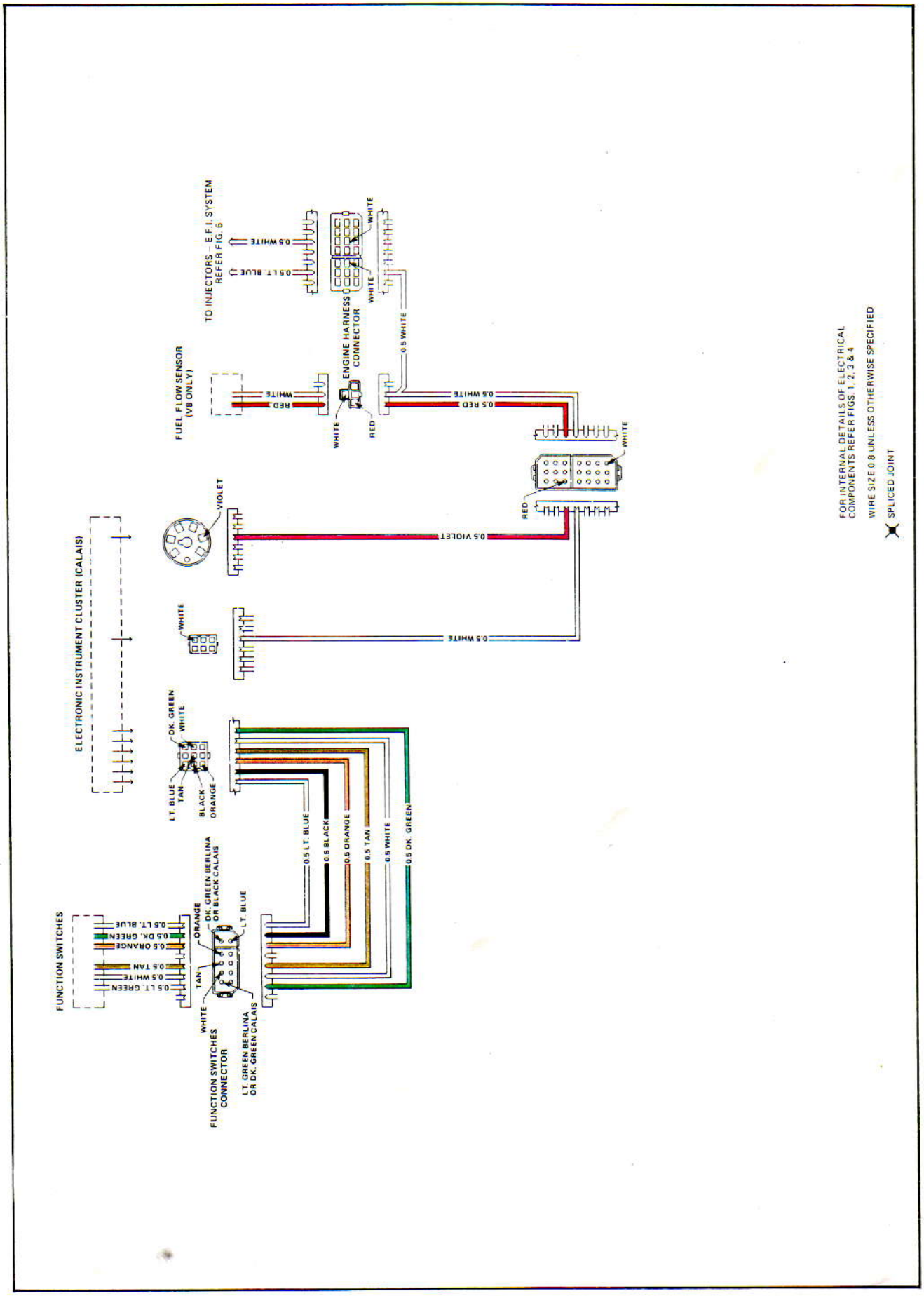

Figure 12F-23 Trip Computer