







# **HEADLIGHT (CANADA)**

#### SYSTEM OUTLINE -

VOLTAGE IS ALWAYS APPLIED FROM THE MAIN FUSE, THROUGH THE HEAD RELAY (COIL SIDE) TO **TERMINAL 5** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN), **TERMINAL 3** OF LIGHT AUTO CUT RELAY (INTEGRATION RELAY), **TERMINAL 8** OF DIMMER SW, THROUGH DRL NO.2 RELAY (COIL SIDE), TO **TERMINAL 17** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN). WHEN THE IGNITION SW IS TURNED ON, VOLTAGE FROM THE **GAUGE** FUSE IS APPLIED TO **TERMINAL 2** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN).

### 1. DAYTIME RUNNING LIGHT OPERATION

WHEN THE ENGINE STARTS, VOLTAGE FROM **TERMINAL "L"** OF THE GENERATOR IS APPLIED TO **TERMINAL 11** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN). IF THE PARKING BRAKE LEVER IS PULLED UP (PARKING BRAKE SW ON) AT THIS TIME, THE RELAY AND THE DAYTIME RUNNING LIGHTS DO NOT OPERATE.

WHEN THE PARKING BRAKE IS RELEASED (PARKING BRAKE SW OFF), A SIGNAL IS OUTPUT FROM **TERMINAL 1** OF THE PARKING BRAKE SW TO **TERMINAL 8** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN). THIS ACTIVATES THE DAYTIME RUNNING LIGHT RELAY (MAIN), TURNING ON THE DRL NO.2 RELAY. CURRENT ALSO FLOWS FROM THE **MAIN** FUSE TO DRL NO.2 RELAY (POINT SIDE)  $\rightarrow$  **HEAD HI (LH)** FUSE  $\rightarrow$  HEADLIGHT HI LH  $\rightarrow$  HEADLIGHT HI RH  $\rightarrow$  **TERMINAL 1** OF DRL NO.3 RELAY  $\rightarrow$  **TERMINAL 4**  $\rightarrow$  **GROUND**, CAUSING THE HEADLIGHTS TO LIGHT UP AT HALF THEIR NORMAL BRIGHTNESS.

ONCE THE DAYTIME RUNNING LIGHT RELAY (MAIN) HAS BEEN ACTIVATED AND THE HEADLIGHTS LIGHT UP, THE HEADLIGHTS REMAIN ON EVEN IF THE PARKING BRAKE LEVER IS ENGAGED AGAIN (PARKING BRAKE SW ON).

#### 2. HEADLIGHT OPERATION

WHEN THE LIGHT CONTROL SW IS AT **HEAD** POSITION AND THE DIMMER SW IS AT **LOW** POSITION, CURRENT FLOWS FROM THE HEAD RELAY (COIL SIDE) TO **TERMINAL 3** OF THE LIGHT AUTO CUT RELAY (INTEGRATION RELAY)  $\rightarrow$  **TERMINAL 4**  $\rightarrow$  **TERMINAL 14** OF LIGHT CONTROL SW  $\rightarrow$  **TERMINAL 16**  $\rightarrow$  **GROUND**, ACTIVATING THE HEAD RELAY.

THIS CAUSES CURRENT TO FLOW FROM THE HEAD RELAY (POINT SIDE) TO THE **HEAD LO** FUSE  $\rightarrow$  HEADLIGHT LO  $\rightarrow$  **GROUND**, CAUSING THE HEADLIGHT TO LIGHT UP AT NORMAL BRIGHTNESS. SIMULTANEOUSLY, CURRENT FLOWS FROM THE **DRL** FUSE TO DRL NO.3 RELAY (COIL SIDE)  $\rightarrow$  **GROUND**, ACTIVATING RELAY NO.3.

WHEN THE DIMMER SW IS AT HIGH POSITION, **TERMINAL 7** OF THE DIMMER SW OUTPUTS A SIGNAL TO **TERMINAL 16** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN) TO ACTIVATE IT. THIS TURNS ON DRL NO.2 RELAY, SO CURRENT FLOWS FROM DRL NO.2 RELAY (POINT SIDE) TO THE **HEAD HI (LH)** FUSE  $\rightarrow$  HEADLIGHT HI LH  $\rightarrow$  DRL NO.4 RELAY (POINT SIDE)  $\rightarrow$  **GROUND**, AND FROM THE **HEAD HI (RH)** FUSE TO DRL NO.3 RELAY (POINT SIDE)  $\rightarrow$  HEADLIGHT HI RH  $\rightarrow$  DRL NO.4 RELAY (POINT SIDE)  $\rightarrow$  **GROUND**, CAUSING THE HEADLIGHTS TO OPERATE AT HI.

WHEN THE DIMMER SW IS AT **FLASH** POSITION, CURRENT FROM THE HEAD RELAY (COIL SIDE) FLOWS TO **TERMINAL 8** OF THE DIMMER SW  $\rightarrow$  **TERMINAL 16**  $\rightarrow$  **GROUND**, ACTIVATING THE RELAY. SIMULTANEOUSLY, CURRENT FROM THE HEAD RELAY (POINT SIDE) FLOWS TO HEADLIGHT LO, LIGHTING UP HEADLIGHT LO AND ACTIVATING DRL NO.3 RELAY. THEN **TERMINAL 7** OF THE DIMMER SW OUTPUTS A SIGNAL TO **TERMINAL 16** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN), ACTIVATING THE DAYTIME RUNNING LIGHT RELAY (MAIN) SO THAT CURRENT FLOWS TO HEADLIGHT HI LIKE IT DOES FOR **HIGH** POSITION. THIS CAUSES ALL HEADLIGHTS TO LIGHT UP.

### **SERVICE HINTS**

### D 3 DAYTIME RUNNING LIGHT RELAY (MAIN)

15-GROUND : ALWAYS APPROX. 12 VOLTS

2-GROUND : APPROX. 12 VOLTS WITH THE IGNITION SW AT ON POSITION

13-GROUND: ALWAYS CONTINUITY

5-GROUND: APPROX. 12 VOLTS WITH THE DAYTIME RUNNING LIGHT SYSTEM

DOES NOT OPERATE OR THE LIGHT CONTROL SW AT **OFF** OR **TAIL** POSITION

(WITH THE CONNECTOR DISCONNECTED, ALWAYS APPROX. 12 VOLTS)

8-GROUND : CONTINUITY WITH THE PARKING BRAKE LEVER PULLED

## : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
B 2	28 (5S-FE), 30 (7A-FE)	H 1	28 (5S-FE), 30 (7A-FE)	J1	33
C 9	32	H 2	28 (5S-FE), 30 (7A-FE)	19	33
C11	32	H 3	28 (5S-FE), 30 (7A-FE)	P 2	33
D 3	32	H 4	28 (5S-FE), 30 (7A-FE)		
G 1	28 (5S-FE), 30 (7A-FE)	I13	33		

# : RELAY BLOCKS

	CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)	
Ì	2	26	ENGINE COMPARTMENT LEFT	
	6	27	ENGINE COMPARTMENT FRONT LEFT	

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)		
IA	20	ENGINE ROOM MAIN WIRE AND INPANE J/B (LEFT KICK PANEL)		
ID	20	INSTRUMENT PANEL WIRE AND INPANE J/B (LEFT KICK PANEL)		
1A	22	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)		
1C	22	INICTEL IMPAIT DANIEL WIDE AND 1/D NO 4 /LEFT KICK DANIEL\		
1D	22	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)		
1J	00	COMI MIDE AND JONG A /LEFT KICK PANEL)		
1K	22	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)		
2A	26	ENGINE ROOM MAIN WIRE AND J/B NO.2 (ENGINE COMPARTMENT)		
2B	20	ENGINE ROOM MAIN WIRE AND 3/B NO.2 (ENGINE COMPARTMENT)		

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)		
IC2	42	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)		
ID1	40	INICTEL IMPAIT DANIEL WIDE AND COMI. MIDE (LEFT VICK DANIEL)		
ID2	42	INSTRUMENT PANEL WIRE AND COWL WIRE (LEFT KICK PANEL)		
II1	44	ENGINE WIRE AND INSTRUMENT PANEL WIRE (NEAR THE ENGINE CONTROL MODULE)		

## : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION	
EB	38 (5S-FE)	FRONT SIDE OF LEFT FENDER	
ЕВ	40 (7A-FE)	FROIN SIDE OF LEFT FEINDER	
ID	42	LEFT KICK PANEL	
IE	42	INSTRUMENT PANEL BRACE LH	
IF	42	R/B NO.4 SET BOLT	

# : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
- 4	38 (5S-FE)	ENGINE ROOM MAIN WIRE	E 4	40 (7A-FE)	ENGINE ROOM MAIN WIRE
E 1	40 (7A-FE)		11		
E 3	38 (5S-FE)		12	44	COWL WIRE
	40 (7A-FE)		l15		
E 4	38 (5S-FE)				

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