# SIGNAL SYSTEMS

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# **DESCRIPTION AND OPERATION**

#### DIRECTIONAL SIGNAL LEVER

The direction signal switch lever is a multi-purpose lever controlling direction signals, passing signal, and high and low beams. See Figure 1G-1.

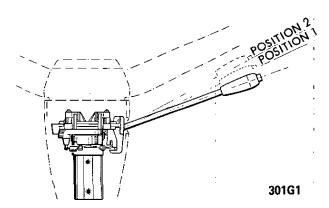


Figure 1G-1 Directional Signal Position for Headlamp Operation

The direction signal lever is provided with a two-

step mechanism for operation of headlight high and low beams, and passing signal (not in New Jersey). With headlights off, moving the lever repeatedly towards steering wheel flashes headlights as a passing signal. With headlights on, moving the lever repeatedly towards steering wheel up to first stop also flashes passing signal regardless whether or not the direction signals are switched on. When the lever is moved up to the second stop, the headlights are changed from high to low beam or vice versa. On all Rallye cars, when switching from low to high beam position, with the fog lamp instrument panel switch "ON" and ignition switch in "RUN" position, the fog lights are automatically switched off. Direction signals work in the normal manner; pushing the lever up for right turn signal and pulling the lever down for left turn signal.

### **HORN**

The horn button is located in the center part of the steering wheel. The **horn** is actuated by pushing down on the ends of both spokes on Opel 1900 and Manta's or on the center horn button on the Rallye. The button is provided with a spring-loaded plunger. See Figure 1G-2.

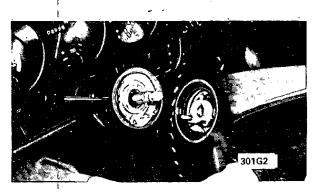


Figure 1G-2 Horn Button and Contact

#### HAZARD; WARNING FLASHER

The hazard warning flasher is operated by the button on the top of the steering column. When the button is pressed down and released, all four turn signal lights will flash. To turn the flasher system off, press down on the button and release. When the hazard warning system is operating, a flashing light in the instrument cluster will operate. The hazard warning flasher switch is part of the directional signal switch.

# BRAKE SYSTEM WARNING LIGHT

The brake system warning light is located in the left side of the instrument cluster assembly. The light will come on when the brake pedal is depressed and the ignition is on if there is a hydraulic leak in the brake system. The light will go out when the foot is removed from the brake pedal. The light will also glow with the parking brake applied and the ignition on. (On automatic transmission equipped vehicles, light is a reminder to release parking brake; and on manual transmission equipped vehicles, light glows when the clutch pedal needs adjustment,)

# DIAGNOSIS

#### SIGNAL SYSTEM

The indicator light on the dash will show defects in the directional signal system as follows:

1. Indicator light on dash gives only one quick flash.

One of the switched-on directional signal lamp bulbs is defective. The other signal lamp will continue to flash. The most common defect is a burned out bulb.

2. **Indicator** light on dash stays on when directional signal **lever** is switched to either side. Check flasher unit.

# **MAJOR REPAIR**

# Removing and Installing Directional Signal Switch

Proceed as outlined in Group 3, Section E.

#### **HORN REMOVAL**

- 1. Remove grille (GT only).
- 2. Remove horn bracket attaching bolt.
- 3. Disconnect wires and remove horn.

#### Installation

- 1. Install horn with bracket attaching bolt.
- 2. Connect horn wire.
- 3. Install grille (GT only).

## Removing Horn Contact

- 1. Disconnect battery.
- **2.** Remove horn cap.
- 3. Bend lockplate tabs down and remove steering wheel nut, lockplate, and washer.
- **4. Mark** shaft and wheel hub for reassembly alignment.
- 5. Remove steering wheel using Wheel Puller **J-21686.**
- **6.** Remove horn contact from wheel.

#### installation

- 1. Replace horn contact.
- 2. Before installing steering wheel, lubricate return pin and slide area on directional signal switch return cams and contact ring.
- 3. With steering wheel properly aligned to shaft, install washer, lockplate, and nut. Torque nut to 15 lb.ft.
- 4. Bend up lockplate tab and install horn cap.
- 5. Connect battery.

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FUSE Position	AMPS.	CIRCUITS PROTECTED	
OPEL 1900 & MANTA (51,53,54,57,57R)			
1	5	LEFT PARKING LIGHT, LEFT TAIL LIGHT, LEFT SIDE MARKER LIGHTS	
2	5	RIGHT PARKING LIGHT, RIGH TAIL LIGHT, RIGHT SIDE MARKER LIGHTS, INSTRUMENT PANEL LIGHTS, SHIFT QUADRANT LIGHTS, LICENSE PLATE LIGHT, FOG LIGHTS (RALLYE ONLY)	
3	8	IGNITION KEY WARNING BUZZER, TRUNK LIGHT, HAZARD WARNING FLASHER, COURTESY LIGHT, CLOCK	
4	15	BACKUP LIGHTS, BLOWER MOTOR, CIGAR LIGHTER; RADIO, SAFETY BELT WARNING BUZZER AND LIGHT	
5	15	WINDSHIELD WIPERS, WINDSHIELD WASHER (RALLYE ONLY), HORN	
6	8	STOP LIGHTS, TURN SIGNAL AND INDICATOR LIGHT, PARKING BRAKE WARNING AND BRAKE FAILURE LIGHT, FUEL GAGE, TEMPERATURE GAGE, OIL PRESSURE INDICATOR LIGHT. CHARGING INDICATOR LIGHT, TACHOMETER AND OIL PRESSURE GAGE (RALLYE ONLY)	
	AIR CONDITIO	ONING - 20 AMP INLINE FUSE	
		OPEL GT (77)	
1	8	WINDSHIELD WIPERS, WINDSHIELD WASHER, HORN, BACKUP LIGHT, SAFETY BELT WARNING BUZZER AND LIGHT	
2	5	STOP LIGHTS, TURN SIGNAL AND INDICATOR LIGHT, PARKING BRAKE WARNING LIGHT (AUTOMATIC ONLY), BRAKE FAILURE WARNING LIGHT, RADIO, TACHOMETER, OIL PRESSURE GAGE & INDICATOR LIGHT, FUEL GAGE, TEMPERATURE GAGE, CHARGING INDICATOR LIGHT	
3	16	CIGAR LIGHTER, BLOWER MOTOR	
4	5	IGNITION KEY WARNING BUZZER, COURTESY LIGHT, CLOCK, HAZARD WARNING FLASHER	
5	5	LEFT PARKING LIGHTS, LEFT TAIL LIGHT, LEFT REAR SIDE MARKER LIGHT	
6	5	RIGHT PA'RKING LIGHTS, RIGHT TAIL LIGHT, RIGHT REAR SIDE MARKER LIGHT	
7	5	INSTRUMENT PANEL LIGHTS, LICENSE PLATE LIGHT. SHIFT QUADRANT LIGHT	
	AIR CONDITION	ONING - A/C HAS A 20 AMP INLINE FUSE AND IS CONNECTED TO THE HOT SIDE OF FUSE NO. 2	