7. GAUGES WITH AND WITHOUT INTEGRAL WARNING LIGHT (CHAPTER 7)

7.1. IP/GAUGE LIST, P. 1

<table>
<thead>
<tr>
<th>GAUGE</th>
<th>WARNING LIGHT</th>
<th>SIGNAL PATH</th>
<th>SENSOR LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPM (TACH)</td>
<td>NO</td>
<td>ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER ENGINE</td>
<td></td>
</tr>
<tr>
<td>MPH/KPH (SPD)</td>
<td>NO</td>
<td>ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER TRANSMISSION</td>
<td></td>
</tr>
<tr>
<td>FUEL</td>
<td>YES</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER FUEL TANK</td>
<td></td>
</tr>
<tr>
<td>VOLT</td>
<td>YES</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td></td>
</tr>
<tr>
<td>AIR 1 (PRES)</td>
<td>YES</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER INSIDE CAB-DASH PNL</td>
<td></td>
</tr>
<tr>
<td>AIR 2 (PRES)</td>
<td>YES</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER STEERING COL AREA</td>
<td></td>
</tr>
<tr>
<td>WATER (TEMP)</td>
<td>YES</td>
<td>ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER ENGINE</td>
<td></td>
</tr>
<tr>
<td>ENG OIL (TEMP)</td>
<td>YES</td>
<td>ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER ENGINE</td>
<td></td>
</tr>
<tr>
<td>OIL (PRES)</td>
<td>YES</td>
<td>ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER ENGINE</td>
<td></td>
</tr>
<tr>
<td>TRANS (TEMP)</td>
<td>YES</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER TRANSMISSION</td>
<td></td>
</tr>
<tr>
<td>AIR APPLICATION</td>
<td>NO</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER FWD CHASSIS</td>
<td></td>
</tr>
<tr>
<td>REAR AXLE TEMP</td>
<td>YES</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER AXEL</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:
1. WARNING LIGHTS ARE PART OF THE GAUGES AND LOCATED IN THE GAUGE

Figure 89  IP/Gauge List
### 7.2. WARNING LIGHT LIST, P. 2

#### WARNING LIGHT LIST

<table>
<thead>
<tr>
<th>WARNING LIGHT TITLE</th>
<th>SIGNAL PATH</th>
<th>SENSOR LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>RETARD OVERHEAT</td>
<td>TRANS CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>FASTEN BELTS (RIGHT TURN)</td>
<td>ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>COOLANT LEVEL</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td>ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
</tr>
<tr>
<td>CHECK SYSTEM OVERHAUL</td>
<td>TRUCK CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>FWD RR AXLE SNOW VALVE</td>
<td>TRANSER CASE</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>OPTIMIZED IDLE</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>ALTERNATOR</td>
<td>DISCRETE NOT ON DATA BUS</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>PTO COUNTERCLOCKWISE</td>
<td>DISCRETE NOT ON DATA BUS</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>PRE-ADJ. GEAR</td>
<td>DISCRETE NOT ON DATA BUS</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>BRK RESEVOIR</td>
<td>DISCRETE NOT ON DATA BUS</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>PTO</td>
<td>DISCRETE NOT ON DATA BUS</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>TRUCK ENGAGED PARK FLUID</td>
<td>DISCRETE NOT ON DATA BUS</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>PARK (P)</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td>SWITCH</td>
</tr>
<tr>
<td>CHECK ELECT SYS</td>
<td>ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>RANGE DESELECTED</td>
<td>TRANS CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>PARK FILTER</td>
<td>SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td>PARK FILTER</td>
</tr>
<tr>
<td>ENGINE (PRO-LINE)</td>
<td>ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>PRE-ADJ. GEAR</td>
<td>DISCRETE NOT ON DATA BUS</td>
<td>DISCRETE NOT ON DATA BUS</td>
</tr>
<tr>
<td>PARK</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Diagram

![Diagram of Warning Light List](image-url)

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REFER TO CONSOLIDATED ENGINE/VEHICLE CONTROLLER DIAGNOSTICS MANUAL EGES-175 (DT466), EGES-190 (V8-AVNT), FOR CIRCUIT DIAGRAMS SHOWING INPUT CIRCUITRY FOR THE FOLLOWING DATALINK DRIVEN SYSTEM:

ENGINE OIL PRESSURE GAUGE
ENGINE OIL TEMPERATURE GAUGE
SPEEDOMETER GAUGE
TACHOMETER GAUGE
WATER TEMPERATURE GAUGE

Figure 92  Engine Oil Pressure and Temp, Speedometer, Tach, Voltmeter and Water Temp Gauge Circuits
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* W/ MXT

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International Truck and Engine Corporation

Electrical Circuit Diagram

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Light Systems - Clearance, Marker, Park, Tail, Turn, & Stop Lamps

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NOTE:
1. PARK BRAKE CANNOT BE RELEASED UNTIL:
   A. IGN IS ON
   B. SERVICE BRAKE APPLIED
   C. LIFT DOOR IS CLOSED

*NORMALLY CLOSED

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![Transmission Circuit Diagram]
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