Dangerous Goods Training
Module 4 - Hazard Communication

► Unless otherwise accepted, packages must be marked with the correct proper shipping name that has been assigned to the dangerous goods. The proper shipping name for the dangerous goods can be obtained from Column 2 of the Schedule 1 Dangerous Goods List (DGL). A list of common proper shipping names for typical automotive dangerous goods is found in the WBT Library.

► The proper shipping name must also include the correct technical or chemical names for those substances which have been so identified in Column 5 of the Schedule 1 Dangerous Goods List (DGL) with Special Provision "16." Technical and chemical names can usually be found in the Safety Data Sheet (SDS) for the substance.

► Unless otherwise accepted, packages containing dangerous goods must also be marked with the identification number that has been assigned to the substance or article. The identification number for the dangerous goods may be obtained from Column 1 of the Schedule 1 Dangerous Goods List (DGL).

► Labels are the familiar diamond-shaped warning signs applied to dangerous goods packages that communicate the risks associated with the materials within.

► Although not very common, there are some automotive dangerous goods which may require a subsidiary risk label. The most common example is methanol, commonly used as a windshield washer concentrate, when it is offered for transport internationally. For domestic transportation, methanol only requires a primary hazard class flammable liquid label.
► Labels should be placed on packages in a diamond configuration. It is also important to note that many carriers may not accept shipments with labels in any orientation other than a diamond configuration. In no case should the labels be covered, removed, or placed on a package in a manner in which their effectiveness could be substantially reduced (e.g., over an edge).

► **Cargo handling labels** such as orientation arrows, cargo aircraft only labels, and magnetized materials labels may be required for certain dangerous goods packages. Orientation arrows are required on packages containing liquids in receptacles having a volume of 1 liter or more. Orientation arrows must be placed on the package on opposite sides (e.g., left/right or front/back). Examples include paint, adhesives, cleaning compounds, other fluids, & batteries.

Cargo aircraft- only labels are special labels applied to packages which are not permitted for transport on passenger aircraft. Examples include Class 1.4G air bag modules.

Large quantities (e.g., pallets) of magnetized materials such as speakers and magnetic clutches may be required to be marked with a magnetized material label.

► Unless the dangerous good is otherwise accepted from the hazard communication requirements, packages containing dangerous goods are required to be marked and labeled with the information shown below: A simple way to recall the required marks and labels is to remember the word TULIP:

- **T**ransportation information (e.g., shipper/consignee name & address)
- **U**N or DOT/TC specification packaging marks
- **L**abels, including appropriate hazard warning & cargo handling labels
- **I**dentification number
- **P**roper shipping name, including correct technical or chemical names
If one or more packages are unitized (e.g., palletized/shrink-wrapped) together, it is important to ensure that the dangerous goods are compatible with one another for transport and that the hazards associated with the dangerous goods are clearly communicated when packaged. When dangerous goods packages are put onto skids or pallets and banded, shrink-wrapped, or stretch-wrapped, the packages should be oriented so that the marks and labels are facing outward to ensure visibility.

If dangerous goods are shipped in cages or other returnable packaging, they must be properly marked and labeled and segregated from incompatible substances. HM packages should be packed in the parts cages to prevent damage and ensure visibility of the required marks and labels. Heavy packages, such as batteries, should be loaded on the floor of the cage and protected from damage (e.g., short circuit).

Overpacks are generally used to consolidate one or more dangerous goods or other non-hazardous parts to protect them while in transit or make it easier to handle (e.g., daily stock orders from your parts distribution center).

Overpacks containing one or more compatible dangerous goods packages must be marked and labeled to communicate the hazards within. There are five very simple pieces of information that are required on overpacks, as shown below. A simple way to recall the required marks and labels is to remember the word “PILOT.”

- Proper shipping name(s), including correct technical or chemical name(s)
- Identification number(s)
- Labels, including appropriate hazard warning & cargo handling labels
- Overpack mark
- Transportation information (e.g., shipper/consignee name & address)
Placards are enlarged labels that communicate the risks associated with dangerous goods being transported in cargo transport units (e.g., trailers, freight containers, cargo tanks). When required, placards must be placed on the four visible sides of a cargo transport unit (e.g., front, back, left, and right) in a diamond configuration. Placards must also be visible in transport when the cargo transport unit is viewed perpendicularly (e.g., at right angles to each side). Placards must be clean, affixed properly and away from cargo transport unit markings (e.g., advertisements, conspicuity marks, fittings, and attachments).

Most shipments of automotive dangerous goods, including air bag modules, seat-belt pretensioners, batteries, engines, paint, and chemicals will generally be excepted from placards per Part 1 of the TDGR, section 1.16 (under the 500 kg exemption), provided:

- each small means of containment (or package) is less than or equal to 30 kg gross;
- the shipment is accompanied by a dangerous goods declaration indicating the class (and subsidiary risk, if any) and the number of means of containment;
- each means of containment is properly marked; and
- the person transporting the goods is properly trained.

Limited quantities are smaller amounts of dangerous goods for which a packaging exception applies. Limited quantity consignments do not require expensive UN or DOT specification packaging and they are accepted from the segregation requirements. In addition, limited quantity shipments may not require labels for certain modes of transport and, in some cases, they may be accepted from the marking of the proper shipping name.
To determine if a dangerous good can be offered as a Limited Quantity, the Dangerous goods Table must first be consulted. Column 6 of the Schedule 1 Dangerous Goods List (DGL) will identify the appropriate limited quantity index which will outline the limited quantity exceptions for the particular dangerous goods.

Packages containing limited quantities should be marked with a hollow diamond (with black points) limited quantity marking.

Consumer commodities are limited quantities of dangerous goods which are distributed in a form which is intended or suitable for retail distribution. These dangerous goods may be renamed as Consumer Commodity and reclassified as ORM-D (Other Regulated Materials) for U.S. and cross-border (Canada-to-US) transportation, or renamed as Consumer Commodity or Bien de Consommation. The total quantity per package must not exceed 30 kg's (66 lbs) for surface transport.

Consumer commodities must be marked with the proper shipping name, Consumer Commodity, and marked below with the designation ORM-D within a rectangle having a border at least 0.25 inches away from the designation on all sides for U.S. transportation and for cross-border shipments (Canada-to-US).