**VEHICLE AND MANUFACTURER IDENTIFICATION BY VIN CODE**

As long ago as 1976 the ISO (International Organization for Standardization) published two standards concerning the Vehicle Identification Number (ISO 3779) and the World Manufacturer Identifier (ISO 3780), both regarding road vehicles and trailers.
Just before this, the European Commission had issued a directive about the identification of road vehicles, with or without body, and capable of speeds above 25 km/h, including trailers (directive EEC/76/114). This directive was subsequently changed in May 1978 to bring it in line with the two ISO standards mentioned (except that ISO 3779 also concerns motorcycles and mopeds).
Although the EEC-directive stated that it should have been implemented by the member states on 01/10/1978, some countries only did so on 01/01/1995 (for instance The Netherlands) or even 01/01/1996 (Germany).
In North America a system is used which is much more stringent than ISO Standard 3779 but still follows the same principle.

The use of the Vehicle Identification Number is now almost universally accepted as 83 countries (including all countries with a major automotive industry) have had WMI's (see below) allocated.
However, in the PSV Circle's Newssheets there have been only a very few times when the subject has been given attention and the information then given was not always accurate or complete.
Therefore, in this article, I will try to set out the implications of the EC-directive in respect to the documentation of buses and coaches.

First of all, every vehicle must have a *construction plate*, which should be fitted in an easy accessible location on a part of the vehicle which, during the life span of the vehicle, normally won't be changed. This plate should be clearly legible and must contain the following data:

1) the name of the manufacturer;
2) the number of the EU-type approval. As long as a vehicle doesn't have a EU-number or EU-approvals are not yet issued (this is so in case of buses), a member state may require that the national approval number is used (like for instance Belgium and Italy do);
3) the identification number of the vehicle;
4) the allowed maximum mass of the vehicle;
5) the allowed maximum mass of the vehicle, combined with a trailer;
6) the allowed maximum mass for each of the axles from front to rear.

As long as the European directives concerning dimensions and weights are not yet approved, a member state may require that the allowed masses according to national legislation are stated.
When the masses which are technically possible are greater than the legally allowed masses, than a member state may require that these figures are also stated, in a separate column.
For all data, Latin letters and Arabian numbers must be used while for the data mentioned under 1) and 3) only capital letters are allowed.
It is allowed for the manufacturer to add other data but only outside a clearly marked rectangle containing the mandatory data.

The most important part as far the documentation of buses and coaches is concerned is of course the identification number of the vehicle (VIN). The purpose of this number, which always contains 17 digits, is to ascertain the possibility of identifying the vehicle during a period of 30 years.
Apart from on the construction plate, this number must also be placed on the chassis or frame in a well accessible place. The characters used for the identification number must be at least 4mm high on the construction plate and 7mm on the chassis.
It is not allowed to use the letters I, O and Q for the VIN, nor is it allowed to use asterisks, slashes or other signs.

For this number and its sections, internationally accepted codes are used:
**VIN: Vehicle Identification Number;**
**WMI: World Manufacturer Identifier;**
**VDS: Vehicle Descriptor Section;**
**VIS:Vehicle Identifier Section.**

Note that the phrase "chassis number" is no longer used in the ISO Standards or in the EC directive. Effectively this means, when the EC directive is implemented in a member state, that it is not required for a vehicle to carry a chassis number but a VIN - in fact, a vehicle that does not carry a VIN may be refused (type) approval. Interestingly, some manufacturers (like Dennis) use both a chassis number and a VIN, in which only the last part (a sequential production number) is the same in both numbers.

The **WMI**.
The first group of the VIN contains a code which is assigned to a vehicle manufacturer to make identification of the manufacturer possible. This code consists of three digits which are assigned by or on behalf of the national authorities of the country in which the manufacturer is based.
The first digit points to a geographical region (as such, Africa, Asia, Europe, North America, South America and Oceania are recognized).
The second digit points to a country within one of these regions and the third points to a specific manufacturer. Manufacturers may have more than one WMI.
For the UK, the first character of the WMI is the letter S. This letter is also assigned to the (former) German Democratic Republic (now the Federal Republic) and Poland.
For the second position the UK may use the letters A through M.

The designation of European WMI country codes is set out in the following chart. The vertically placed characters point to the first position of the WMI, the horizontally placed characters are the ones used for the second position.

<*table of European WMI country codes*>

There is, however, one important exception in the designation of WMI's. When a manufacturer builds less than 500 vehicles annually, the third digit of the WMI is **always a 9**.
Of course then a further identification is needed which can be found in the 12th, 13th and 14th position of the full VIN. You can find examples of this in the following table, which sets outs the WMI's of British bus manufacterers and some other makes which have vehicles registered in the UK. It should be born in mind that the full VIN is only rarely reported in the Newssheets which means that from some WMI's (like SBB, SBC, I only have one example. So, apart from the continental European ones, I cannot be completely sure about the accuracy.

WMI's from the UK

| | |
|---|---|
| SA9 026 | Fleur-de-Lys |
| SA9 035 | Leyland (Swift) |
| SAB | renumberings |
| SAL | Land Rover |
| SAZ | Freight Rover |
| SBB | Leyland (Cub) |
| SBC | Ford |
| SBL | Leyland |
| SDB | Talbot |
| SDE | Dodge |
| SDG | Renault/Dodge |
| SDJ | CVE |
| SEY | LDV |
| SFA | Ford |
| SFD | Dennis Specialist Vehicles |
| SLV | Volvo Bus & Truck |
| SMC | MCW |

WMI's of other manufacturers

| | |
|---|---|
| TW0 | Caetano/Toyota |
| VF9 300 | Kässbohrer France |
| VF9 495 | Carrosserie Lorraine |
| VS9 001 | Sida-Setra |
| WAG | Neoplan |
| WDB | Mercedes-Benz |
| WKK | Kässbohrer |
| WMA | MAN |
| WV2 | Volkswagen |
| WVM | Volkswagen-MAN |
| XL9 003 | BOVA |
| XLA | Van Doorne's Bedrijfswagenfabriek DAF |
| XLR | DAF Trucks |
| XLV | DAF Bus |
| XMG | DAF Bus International |
| YA9 128 | LAG, Eos Coach |
| YE2 | Van Hool |
| YS4 | Scania |
| YV3 | Volvo Bus Corporation |
| ZCF | Iveco-Fiat |
| ZFA | Fiat |

The 4 different WMI's from DAF reflect the identity changes of this company (take-over of Leyland Trucks, the United Bus period and the time after the collapse of this company).

The **VDS**.
The second group of the VIN consists of 6 digits which may be used by a manucturer to identifity the vehicle type. Positions not used must be filled with numbers or letters. The last digit of the VDS (VIN-9) is used by some manufacturers (Volvo, LAG/Eos Coach) as a check digit (as required in the United States).
There is a wide variety of ways that European manufacterers make use of the VDS. Some manufacturers do not use it at all, some just use the normal chassis designation and some use every position available as a code for chassis type, engine, suspension, number of axles and so on.

The **VIS**.
The last group contains 8 digits, of which the last four always must be numerical. This group may be used as the manufacturer wishes (with the exception of those who build less than 500 vehicles per year) and must make it possible, in combination with the other two groups, to identify the vehicle.
Positions in this group that are not used, must be filled with zeroes.
If the manufacturer uses a *year digit*, ISO 3779 recommends to use the first digit of the VIS for this. Likewise, when a factory code is used, ISO recommends to use the second digit of the VIS. Both of these codes are not mandatory according to the EC-directives. Some manufacturers, like Volvo and Neoplan, use both the year and factory code, some only the year code (BOVA), some only the factory code (DAF) and some use neither (Scania, Kässbohrer).
The year code can either indicate a calendar year or a model or production year as used by the manufacturer and the following table sets out the coding as recommended by ISO. Like a check digit, the year and factory code are mandatory in the United States.

| | | | | |
|---|---|---|---|---|
| 1971: 1 | 1979: 9 | 1987: H | 1995: S | 2003: 3 |
| 1972: 2 | 1980: A | 1988: J | 1996: T | 2004: 4 |
| 1973: 3 | 1981: B | 1989: K | 1997: V | 2005: 5 |
| 1974: 4 | 1982: C | 1990: L | 1998: W | 2006: 6 |
| 1975: 5 | 1983: D | 1991: M | 1999: X | 2007: 7 |
| 1976: 6 | 1984: E | 1992: N | 2000: Y | 2008: 8 |
| 1977: 7 | 1985: F | 1993: P | 2001: 1 | 2009: 9 |
| 1978: 8 | 1986: G | 1994: R | 2002: 2 | 2010: A |

If possible the VIN code should be placed on one line. Only in technically motivated exceptions is it allowed to place the VIN in two lines but a division within the three groups is not allowed. When the VIN is placed on two lines, the beginning and ending of each line must be marked by a symbol which cannot be confused with a number or letter.
These symbols (like an asterisk), which are also sometimes used to mark the start and end of the VIN itself, are **never** part of the VIN code and may not be used in documents.

I hope this article will spark some interest in PSV Circle members so that in the future more and more full VIN-codes will be reported, thereby making bus and coach documentation even more complete.

*This article is a translation and 'UK-version' of an article that appeared in the 1995-9 issue of "de Autobuskroniek", which is the magazine of the PSV Circle's Dutch sister organization ADV.*