The Swiss numbering system. Part 2

THE SWISS NUMBERING SYSTEM

- Part 2

Brian Hemming

In 1989 the Swiss railways started to use a common numbering system, similar to those of Germany, Spain and the former Czechoslovakia, for their locomotives and railcars. The system has seven digits **XXX XXX-X** where the first group of three digits denotes the class, the next group of three digits the serial number within the class, and the last digit is a check digit. The numbers can be extended to international numbers later, by adding a sequence such as 90 85 0 at the left which will be described in Part 3 of this series With the adoption of this system the old wheel based designation of classes was dropped, thus for example Ae 6/6 11519 would become Ae 610 519-1. A number of Swiss railways, mostly standard gauge and only the narrow gauge Zentralbahn (formerly SBB Brünig Line and LSE) have applied new numbers on new or rebuilt equipment. Many older locomotives and railcars have not yet been renumbered although new class numbers have been designated. The full implementation of the new system will take several years and both systems will coexist for some time.

1st digit

0 = Museum locomotives, steam locomotives
1 = Narrow gauge vehicles
2 = Tractors (small shunting locomotives under 500 kW)
3 = Electric locomotives with less than 4 powered axles
4 = Electric locomotives with 4 powered axles
5 = Railcars (EMUs, DMUs)
6 = Electric locomotives with more than 4 powered axles
7 = not yet in use
8 = Diesel locomotives
9 = Electric shunting locomotives

2nd digit

If 1st digit = 0, then a 2nd digit of 0 = steam,
1 = electric, 2 = railcar, 3 = diesel, 7 = tractor,
8 = snowplough, 9 = special purpose.
If 1st digit = 1, then a 2nd digit of 0 - 2 = locomotives,
7 = tractor, 8 = snowplough.
If 1st digit = 2, then a 2nd digit of 0 = battery,
1 = electric, 2 = electric and diesel, 4 = diesel,
5 = electric and battery.
If 1st digit = 3, 4 or 6, the 2nd digit = the locomotive generation.
If 1st digit = 5, then a 2nd digit of 0 = long distance EMUs,
1 = short distance EMUs, 4 - 7 = single power cars.
If 1st digit = 8 or 9, the 2nd digit = the number of powered axles.

3rd digit

0 - 4 = owner is SBB CFF FFS with alternatives for locomotives and railcars or tractors.
For electric locomotives and railcars, then 0 - 4 are used in the current system.
For tractors (where the 1st digit = 2), then 0 = 0 - 99 kW,
1 = 100 - 199 kW, 2 = 200 - 299 kW, 3 = 300 - 399 kW,
4 = 400 - 499 kW.
5 = owner BLS (was BLS/BN/GBS/SEZ).
6 - 8 = owner various private railways, see 4th digit .

4th digit

If 3rd digit = 1 – 5 this is part of serial number.
If 3rd digit = 6, then 0 = SOB (was BT), 1 - 3 = RM,
(4 was old SOB), 5 = SZU, (6 was MThB),
7 - 8 = THURBO, 9 = BABHE (was OKK).
If 3rd digit = 7, then 0 - 1 = TPF (was GFM), 2 = OeBB,
3 = TRN (was RVT), 4 = CJ, 5 = TMR (was MO/MC),
6 = OC, 7 - 9 = various private railways incl. Lokoop.
If 3rd digit = 8, then 0 = PTT, (1 was STB), 2 = TSOL,
3 = TRAVYS (was PBr), 4 = BDWM (was WM), 5 = ST,
6 = RB (was ARB/VRB), 7 = RHB, 8 = LO, 9 = KLB.

The narrow gauge railways, with the exception of the Zentralbahn, have not yet joined the new numbering system, but there is space for them, in which case if the 1st digit = 1, the 3rd and 4th digits will have different meanings from those above.

(4th), 5th and 6th digits

Denote the serial number, starting with 001. SBB/CFF/FFS classes previously started at 000 but this practice has now been discontinued. For renumbered old vehicles, the last two or three digits of the old number are often taken, so the new number is similar to the old one.

7th digit

This is a check digit which is only between 0 and 9 and is used to detect data transmission errors. It is calculated as follows: The first to sixth digits of the number are multiplied alternately by 1 and 2. All the digits of the results are added, and the last digit of the total sum is subtracted from 10 (0 stays 0). The result of this is the check digit.

As an example 610 519 is
(6) + (2) + (0) + (1+0) + (1) + (1+8) making a total of 19. The check digit is 10 - 9 = 1, and the full number of the locomotive is therefore 610 519-1.