

## Profile 43

## YAO 'Dolphin' and YBO 'Sturgeon' Bogie Rail, Sleeper and Ballast Wagons

<b>Build Details:</b>	1950-1960 Head Wrightson Ltd and BR Lancing
<b>Numbering:</b>	DB994000-DB994089 (Dolphin), DB994090-DB994472/DB994500-DB994999 (Sturgeon)
<b>Bogies / Suspension:</b>	5ft 6in wheelbase box construction
<b>Dimensions:</b>	66ft 1in over headstocks (Dolphin was 65ft 7in), 46ft bogie centers
<b>Published Drawings:</b>	BR Wagons (Don Rowland, David & Charles, 1985)
<b>Areas of operation:</b>	Nationwide
<b>Main liveries:</b>	Black, olive, grey/yellow

### Summary:

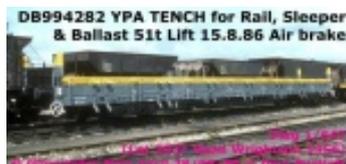
The Dolphin and Sturgeon wagons were based on an LNER design and were adaptable bogie rail, sleeper and ballast carriers. Small wheeled bogies and low floors made them useful at worksites and they featured dropside doors that could be removed to allow the carriage of rails and track panels. The 40t Dolphins were all withdrawn by 1993 but many of the Sturgeons were fitted with air brakes and a few survived into the 21st century.

### History:



YAO Dolphin DB994033 at Northampton, 24th February 1985.

*Paul Bartlett*



YPA Trench DB994282 at Gloucester, 28th August 1986

*Paul Bartlett*

The first BR-ordered wagons to appear were the 90 built by Head & Wrightson Ltd in 1950-1951 to lot 2217 (diagram 1/639). Numbered DB994000-DB994089 and coded 'Dolphin', these were identical to wagons built by the LNER. With a carrying capacity of 40 tons, the design included three removable three-plank dropside doors on each side, each of which had five corresponding door bangers fitted to the flush solebar. The headstocks were mounted above floor height and were topped with re-inforced steel ends, providing an interior length of 63ft 5in. Bogies were diamond frame and the underframe featured long truss bars. All of the Dolphins were built unfitted and there is no evidence of any being retrofitted with continuous brakes or through pipes. Under TOPS, code YAO was assigned to this type with design codes in the YA500x series, but most were withdrawn by the late 1980s. Among the late survivors were a pair recoded as YXO (for use as a drain cleaning train) while a number were reassigned to the internal user fleet for use at various track pre-assembly depots (PADs).

The first Sturgeons were built in 1952, again by Head & Wrightson Ltd. The design was modified to have a capacity of 50 tons (through the use of larger journals), a slightly increased interior length, and removable end top sections, sides and stanchions. Racks were provided between the solebars and the truss rods to allow the stowage of the ends, while the sides were made up of four wooden lift-out sections (i.e. not hinged) with large vertical grabs. This resulted in a notable visual difference from the Dolphins (and later Sturgeons) in that the solebars were devoid of the multiple door bangers. The bogies were now of a unique box construction type with 2ft 6in diameter wheels and a 5ft 6in wheelbase. To allow for a possible further build of Dolphins, the first batch of Sturgeons were numbered DB994500-DB994536 (lot 2322 to diagram 1/638). A second lot to the same design saw numbers taken to DB994716 then construction switched to diagram 1/645. This diagram marked the return to dropside doors for the sides, now in seven sections per side instead of three, and the wagons again featured a multitude of hinges and door bangers. Lettered as 'Sturgeon A' to distinguish them from earlier builds, the numbers ran to DB994999 and then bounced back to follow on from the

Dolphins, DB994090-DB994200 being built to lot 2895 in 1956. A third diagram was issued in 1956 (1/647) and Head & Wrightson built two more lots to this design, which is listed as having removable stanchions and bolsters. The fleet stayed at 802 wagons for a couple of years until 1960 when BR's Lancing works started building the first of 4 lots totalling 81 wagons. These were to the same diagram 1/647 but featured through vacuum pipes, all previous Sturgeons having been unfitted. The final two lots were strangely for just one and four wagons respectively.

Under TOPS the Sturgeon fleet became YBO and YBP although the fishkind name continued in use for operational purposes. Further TOPS codes YBA, YBB and YBQ appeared later as wagons were modified to have air brakes, air brakes with vacuum pipes or just vacuum pipes respectively. Design codes started at YB500A and worked through to YB501P to cover various different versions and modifications. Early liveries would have been overall black or olive but the Sturgeon lasted long enough to see the new engineers liveries, particularly on wagons that received upgraded brake gear. Application of the full grey and yellow livery used from the early 1980s was rare but saw the solebars, ends and lower bodysides painted grey with the top one or two planks in yellow. By this time, many of the wagons were operating without their sides and ends permanently, such wagons having the solebar and headstocks painted either grey or yellow.

With such a large fleet, modifications to the Sturgeons were bound to be numerous and these are summarised below. Sample numbers are included and these can be looked up in the Sturgeon collection on Paul Bartlett's excellent website. Unless stated, all conversions involved the removal of the sides and ends but did not result in any change to the TOPS codes.

- Permanent removal of sides and ends to allow carriage of track panels. This affected a large number of wagons and some retained the door bangers (such as DB994392) while others had them cut off flush with the bottom of the solebars (DB994166). Longitudinal timber baulks were fitted to some wagons to raise the load.
- Fitting of two small cranes to handle rails. As with the similarly modified Salmon wagons, these were recoded in the YF- series, with codes YFA and YFO known to have been applied to Sturgeons. Sample numbers: DB994151 and DB994750
- Modification to carry Jarrah (a type of Eucalyptus tree) sleepers. This involved the fitting of fourteen 5ft tall, U-section metal stanchions along each side, the metal ends being retained. The stanchions were to retain bundles of sleepers loaded longitudinally. Sample numbers are DB994563 and DB994566.
- Dedication to carrying Bruff Profiler and Grader machines. Five of these machines, with a curious mix of road wheels and bulldozer tracks, were built in 1986. The wagons (such as DB994717) were recoded as YXA or YXO.
- Dedication to carrying track-relaying beams. Also thought to have been recoded in YX- series.

- Dedication to carrying concrete sleepers. These wagons (such as DB994176) were fitted with a metal framework on the floor and had the wooden doors removed. Open-framed metal sides were mounted on new hinges about 300mm higher than the originals.
- Modification as drain cleaning vehicles. Wagons were fitted with large water tanks and other equipment, painted yellow. Wagons were recoded in YX- series. Paul has a picture of Dolphin DB994058 with similar modifications at <http://gallery6801.fotopic.net/c1383280.html>
- Modification as tunnel inspection vehicles. The only example known (DB994883) retained its ends and sides but was fitted with a substantial framework supporting a high-level working platform. TOPS code of YXO was assigned.
- At least one wagon was fitted with a curious ballast-loading hopper and conveyor system at one end (DB994642) and would presumably also have been recoded in the YX- series.

Four other TOPS codes have been carried by wagons in this fleet. At least two Sturgeons were transferred to the electrification engineers, dual piped and recoded YYR. Both were later air-braked and recoded YYA. From 1986, the minority of Sturgeons that remained in original condition (i.e. with dropside doors and metal ends) were recoded as YPA-A with the new fishkind of Tench. Design codes from YP001A to YP001K were assigned. There was no equivalent TOPS code for wagons without air brakes so these presumably remained as YBO or YBP Sturgeons. Finally, some time between 1994 and 1999, two of the Profiler and Grader-carrying YXAs were curiously given through vacuum pipes and recoded YXB.

The process of fitting air brakes to Sturgeons, which had started in 1978, continued throughout the 1980s. Nevertheless, there were still about 600 unfitted examples in 1987, comprising 490 YBO, 71 YBP and some of the 90 YFOs and 15 YXOs then in stock. These would have been the examples targetted for withdrawal as the ongoing elimination of unfitted trains rendered them surplus. Indeed by 1994 only the 303 air-braked wagons were still in use, comprising 231 YBA, 23 YFA, 41 YPA, 6 YXA and the 2 YYAs. Five years on, the fleet stood at 181 wagons in 1999, of which just 70 were still in use. Totals by TOPS code were 120 YBA, 4 YBB, 2 YBO, 7 YFA, 42 YPA, 4 YXA and 2 YXB. The last Sturgeon to see use was probably YXA drain-cleaner DB994978 in 2004, this being one of 11 wagons to remain on TOPS in early 2008.

Due to their longevity, many of the air-braked Sturgeons were eventually sold into preservation and no less than 21 are listed in Martin Hall's 2008 book by HB Publications. However, the LNER and BR-built Dolphins were not so lucky.

## Updates