



AVELING - BARFORD

SN 30 30 TON DUMP TRUCK

AUTOLIT



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SN30 specification

ENGINE—Choice of

General Motors 12V-71 N. 85 twelve-cylinder vee-form 2 stroke diesel engine; 476 h.p. at 2,100 r.p.m.; bore 4 $\frac{1}{2}$ " (113 mm.) stroke 5" (127 mm.) giving displacement of 861.2 cu. ins. (12,980 c.c.) Maximum torque 1,300 lb. ft. (178.7 kg.m.) at 1,300 r.p.m.

or
Rolls-Royce C8TFL eight-cylinder turbo-charged diesel engine; 480 h.p. at 2,100 r.p.m.; bore 5 $\frac{1}{2}$ " (139 mm.) stroke 6" (152 mm.) giving displacement of 890 cu. ins. (76,222 c.c.) Maximum torque 1,200 lb. ft. (165.5 kg.m.) at 1,550 r.p.m.

ELECTRICAL SYSTEM

24 volt system (Neg. earth) 4 x 6-volt batteries, 222 amp. hr. capacity (20 hr. rating).

AIR FILTRATION

"Rotopac" two stage dry type air cleaner.

STANDARD TRANSMISSION

CLUTCH (Rolls-Royce engine)

Borg and Beck 16" (407 mm.) dia. twin dry plate type 16/565. Air-assisted. Total surface area 620 sq. ins. (4,000 cm²).

CLUTCH (General Motors engine)

Borg and Beck 17" (432 mm.) dia. twin dry plate type. Air-assisted. Total surface area 636 sq. ins. (4,100 cm²).

GEARBOX (Mechanical)

Providing six forward speeds and one reverse under control of one hand lever. All gears, except reverse, are in constant mesh, helical with sliding dog engagement. Gears are of case-hardened alloy steel. Specially designed for off-highway operation, the gearbox is remotely mounted for easy removal and access to clutch for servicing.

GEARBOX RATIOS

Gear	Ratio
1st	5.285 : 1
2nd	3.28 : 1
3rd	2.175 : 1
4th	1.48 : 1
5th	1.0 : 1
6th	.694 : 1
Reverse	4.725 : 1

ROAD SPEEDS

M.P.H.	K.P.H.
3.8	6.2
6.1	9.8
9.2	14.8
13.5	21.7
20.0	32.1
30.0	48.2
4.23	6.8

OPTIONAL TRANSMISSION

Allison Torqmatic CL5T 5560. Full torque shifting transmission incorporating hydraulic torque converter with lock up clutch and Torqmatic brake. Power shift gearbox having six forward speeds and one reverse speed.

TORQUE CONVERTER — T.C.590. Single stage.

RATIO — 2.5 : 1.

GEARBOX RATIOS

Gear	Ratio
1st	4.0 : 1
2nd	2.68 : 1
3rd	2.01 : 1
4th	1.35 : 1
5th	1.0 : 1
6th	.67 : 1
Reverse	5.12 : 1

ROAD SPEEDS

M.P.H.	K.P.H.
5	8.05
7.5	12.07
10	16.09
14.8	23.82
20	32.1
35	52.12
3.9	6.28

REAR AXLE

Extra heavy-duty specially developed for arduous "off-highway" duty. Fully floating half shafts, spiral bevel differential, and planetary reduction gear in road wheel hubs. Cast steel housing is mounted semi-rigidly to chassis through eight shock springs on the mounting bolts.

RATIOS	Spiral bevel differential	3.70 : 1
	Planetary gears	4.94 : 1
	Total	18.28 : 1

FRONT AXLE

Straight bed, forged alloy steel, I section. Mounted to chassis by longitudinal semi-elliptical springs bearing on curved spring-pads and constrained by longitudinal, slotted, rubber-bushed radius rods.

HUB MOUNTING—Taper roller bearings.

Inner bearing—4 $\frac{1}{2}$ " (113 mm.) dia.

Outer bearing—3 $\frac{1}{2}$ " (82.5 mm.) dia.

BRAKES

SERVICE AND PARKING

All wheel brakes are air-actuated through diaphragm type chambers which incorporate "Fail Safe" spring brake arrangement.

Contained in a separate chamber attached to each diaphragm chamber, is an extremely powerful coil spring which is held compressed by air pressure in the braking system. If the air pressure falls below 30 p.s.i. (2.1 kg/cm²) the brakes are automatically applied by the springs, thus providing full four-wheel "Fail Safe" braking. A second protected air reservoir in the system provides an emergency air supply to release the brakes to allow the machine to be moved to a service area. In the event of a complete failure of the air system, the brakes can be released manually by an adjusting nut at the rear of each chamber.

For parking, operation of a small valve located in the cab, exhausts air from the spring chamber, thus applying the brakes.

Two 30 in. (761 mm.) chambers fitted to front brakes.

Two 36 in. (914 mm.) chambers fitted to rear brakes.

Brake sizes:

Front—19 $\frac{1}{2}$ " x 7" (495 x 178 mm.).

Rear—19 $\frac{1}{2}$ " x 8" (495 x 203 mm.).

TORQMATIC RETARDER

Available only with Allison Transmission.

EXHAUST

Available only with Rolls-Royce engine and standard transmission.

TYRES

STEERING—16.00 x 25—26-ply standard.

18.00 x 25—28-ply—optional.

DRIVING—18.00 x 25—26-ply standard.

18.00 x 25—28-ply Premium tread—optional.

RIMS—13.00 x 25.

Tubless tyres also available.

STEERING

Manual steering box with hydraulic power assistance.

Turning radius 30 ft. (9144 mm.).



TIPPING

By twin hydraulic two-stage telescopic double-acting rams—universally mounted to body and trunnion mounted to chassis. Single lever control giving four positions.

Tipping angle $61\frac{1}{2}^\circ$

Time 8 seconds.

BODY

Welded construction with side, end, bottom and corner plates in T-1 or equivalent special alloy high tensile steel (yield point 100,000 p.s.i. —7027 kg/cm²).

Bottom plate $\frac{3}{4}$ " (19 mm.) thick. Side and end plates $\frac{1}{2}$ " (9.5 mm.) thick. Corner plates $\frac{3}{4}$ " (12.7 mm.) thick. Heavily reinforced box and channel section frame. Body pivots on large sleeved rubber bushes and is supported on chassis by large rubber pads.

Maximum payload—60,000 lb. (27,276 kg.).

Struck capacity—19 cu. yds. (14.53 m³).

Heaped capacity (S.A.E. Rating) 22.1 cu. yds. (16.8 m³).

Heaped capacity (1—1 Slope) 26 cu. yds. (21.4 m³).

FRAME

All welded construction in high tensile steel. Joint section side members with box rear ends reinforced by ribs.

CAB

Acoustically lined three-quarter width resiliently mounted cab. Fully adjustable bucket type driver's seat. Bench type seat for passenger.

LIGHTING

Two headlights in front and one head and two stop/tail lights at rear.

CAPACITIES

	Imp. Galls.	U.S. Galls.	Litres
Fuel Tank	110	132	500
Cooling System			
(GM engine)	19	23	86
(RR engine)	14.5	17.4	66
Hydraulic System	23.75	28.5	108
Engine Sump			
(GM engine)	10	12	45.4
(RR engine)	11.5	13.8	52.3
Rear Axle	3.5	4.2	16.3
Standard Transmission	4	4.8	18
Optional Transmission—			
(RR engine)	15	18	68
(GM engine)	24	28.8	109

WEIGHTS

UNLADEN	General Motors engine		Rolls-Royce engine	
	lb.	kg.	lb.	kg.
Total	50,370	22,848	50,170	22,750
Front Axle	21,800	9,833	21,700	9,843
Rear Axle	28,470	12,913	28,470	12,913
LADEN				
Total	110,370	50,062	110,170	49,972
Front Axle	31,170	14,137	30,970	14,047
Rear Axle	79,200	35,925	79,200	35,925

EXTRAS

Heavy-duty body. Heated body. Slurry body. Side extensions. Kinds Sprodnograph and Tachograph. Speedometer. Cab heater and defroster. Exhaust brake (for machines with Rolls-Royce engine and standard transmission only). Reversing bell. Engine bonnet sides. Nameplate board for body. Cu-driver's bucket seat.

SHIPPING SPECIFICATION	Length	Width	Height	Weight
Dump Truck on wheels	27' 7 $\frac{1}{2}$ " 8418 mm.	11' 5" 3480 mm.	10' 8" 3257 mm.	GM engine 22.8 long tons 22,850 kg. Rolls-Royce engine 22.4 long tons 22,700 kg.

