SCANIA

SPECIFICATION

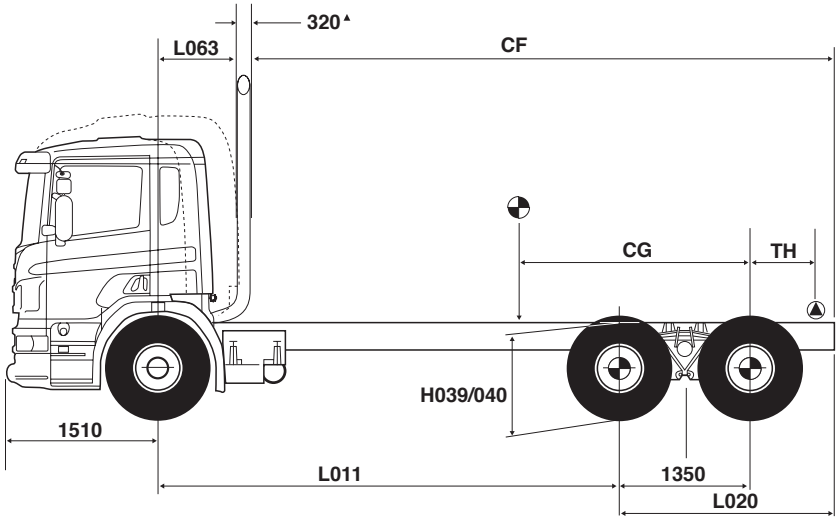
P-, G- and R-series

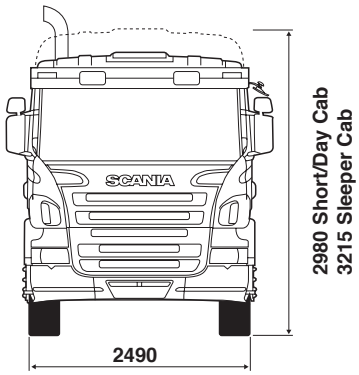
P 280 CB6x4MHZ

28500Kg GVW

THREE AXLE TIPPER

P





L063 (centreline of front axle to back of cab) Short – 300 Day – 590 Sleeper – 860

▲Reduces to 250mm with sleeper cab

DIMENSIONS (mm)

L011		**3900**	**4100**	**4300**
L100	**Day cab**	**5486**	**5945**	**6400**
	(feet)	**(18.0)**	**(19.5)**	**(21.0)**
	Sleeper	**5334**	**5563**	**5880**
	(feet)	**(17.5)**	**(18.3)**	**(19.3)**
CF	**Day cab**	**5200**	**5400**	**5600**
	Sleeper	**5000**	**5200**	**5400**
L020		**2210**	**2210**	**2210**
CG Max	**Day cab**	**1344**	**1380**	**1395**
	Sleeper	**1330**	**1365**	**1392**
CG Min	**Day cab**	**1215**	**1248**	**1253**
	Sleeper	**1200**	**1233**	**1254**
TH		**780**	**780**	**780**

Frame Height	H039 unladen	H040 laden
'H'	1110 mm	1062 mm
'S'	1060 mm	1012 mm

L015 (Theoretical wheelbase) = L011 + 675mm.

L100 = Nominal tipper bodylength to suit weight distribution. CG dimension for body and payload calculated for standard model at standard GB plated weights. TH = Tipper hinge. Height dimensions measured to top of frame at rear bogie centreline.

PLATED WEIGHTS – AWR

		Front Axle	Rear Bogie	GVW	GTW $
Design Gross	Kg	7500†	21000	28500	32000
Legal Max in GB	Kg	7500	19000	26000	29500

$ With trailer brakes design = 70000kg. Max in GB = 44000kg.
Rear bogie load in GB (with trailer attached) = 17000kg.
† Front axle capacity up to a maximum of 9000 kg available as option.
Plated weights dependent on statutory tyre limitations.

CHASSIS/CAB WEIGHTS

(Tolerance +/- 2.5%)

Axle distance	Front	Rear	Total (kg)
3900	4721	3429	8150
4100	4728	3442	8170
4300	4755	3485	8240

Chassis cab weight includes 20 litres of fuel, oil and water. Driver not included. See overleaf for option weights.

ENGINE (EURO 5)

Scania '9 litre' vertical five cylinder in-line turbocharged intercooled direct injection diesel with Scania XPI.

	'280'
Type:	**DC9-38**
Swept Volume:	9.3 litres
Bore:	130 mm
Stroke:	140 mm
Compression Ratio:	17:1
***Max. Power:**	206kW (280 h.p.) at 1900 rev/min
***Max. Torque:**	1400 Nm (1033 lbf.ft) between 1000 and 1350 rev/min
Engine Management System:	EMS incorporating Cruise Control and speed limiter
Emission Control:	Scania EGR
Cooling:	Water cooled with rubber mounted 2 row radiator and electronically regulated fan
Coolant Capacity:	42 litres
Oil Capacity:	31 litres
Air Cleaner:	Dry replaceable paper element
Engine driven PTO provision:	ED120

Options:-

(1) *Details as above except for the following:-*

	'320'
Type:	**DC9-37**
***Max. Power:**	235kW (320 h.p.) at 1900 rev/min
***Max. Torque:**	1600 Nm (1180 lbf.ft) between 1100 and 1200 rev/min

*With fan at max. slip

CLUTCH

Type:	Single dry plate
Operation:	Air assisted with clutch wear protection

GEARBOX

Type:	Scania GR905 eight speed synchromesh (four speed main fitted with two speed planetary range unit), plus one crawler gear.
Oil Capacity:	15.6 litres

GEAR RATIOS

Crawler	16.41:1		
Low Range		**High Range**	
1st	10.34:1	5th	2.76:1
2nd	7.19:1	6th	1.92:1
3rd	5.08:1	7th	1.35:1
4th	3.75:1	8th	1.00:1
Reverse	14.78:1		

Options:-

(1) Type: *Scania GRS905 fourteen speed range change/splitter including 2 crawler gears.*

(2) Type: *Scania GRS0905 fourteen speed range change/splitter including 2 crawler gears and overdrive top gear – only with hub reduction rear axles.*

REAR AXLES

Type:	Both Scania AD1300
Capacity:	26000 Kg

Pressed steel housing with magnetic oil drain plugs.

Option:-

(1) Type: *Both Scania AD1101P for hub reduction axles.*

Capacity: 23000Kg

REAR AXLE GEAR

Type:	Scania RB662 - first axle
	R660 - second axle

Single reduction hypoid in both axles.Crown wheels and pinions matched during manufacture.Pneumatically operated inter-axle and cross axle differential locks.

Options:-

***(1)* Type:**	Scania RBP735 - first axle
	RP735 - second axle

Single reduction spiral bevel plus epicyclic hub reduction.
Overall ratios - 3.67 / 3.93 / 4.22

FRONT AXLE

Type:	Scania AM900 I section rigid beam -'H' chassis.
	Scania AM920 I section rigid beam - 'S' chassis
Capacity:	9000Kg

STEERING

Type:	Recirculating ball. Hydraulically assisted power steering
Steering wheel:	Diameter 450mm. Lock to lock 4.9 turns
Turning circle:	Kerb to kerb

3.9m A/D	17.2m	4.1m A/D	17.8m	4.3m A/D	18.5m

SUSPENSION

Type Front:	Semi-elliptic parabolic springs with swinging shackles and threaded shackle pins damped by double acting telescopic shock absorbers.
Type Rear:	Two spring balance beam bogie fitted with rubber mounted radius arms and double acting telescopic shock absorbers.

Options:-

(1) *Rear or front and rear anti-roll bar(s) – rear N/A with tipper specification.*

SPRING SIZE

	Front	Rear
Length:	1820mm	1530mm
No. of leaves	2 x 32mm	4 x 41mm
Design Capacity	7500Kg	21000Kg

Option:-

(1) *Semi-elliptic parabolic springs front (3 x 29mm) - 8500kg capacity.*

(2) *Semi-elliptic parabolic springs front (4 x 28mm) – 9000kg capacity.*

WHEELS & TYRES

Front: 9.00 x 22.5 ten stud spigot mounted disc wheels fitted with 315/80R22.5 radial tubeless tyres.

Rear: 8.25 x 22.5 ten stud spigot mounted disc wheels fitted with 295/80R22.5 radial tubeless tyres.

Options:- ***(1)*** *11.75 x 22.5 wheels with 385/65R22.5 tyres - front axle only.* ***(2)*** *Aluminium wheels - machined or polished surface finish.*
(3) *Front wheel embellishers*

FRAME

Type: F950-50

Flat top constant depth 'U' channel with riveted crossmembers

Sidemember Dimensions:

270 x 90 x 9.5mm

Rear of chassis prepared for tipper hinge.

Width over parallel section of frame = 770mm

Bumper: Pressed steel

Option:- ***(1)*** *Brackets for front end tipping ram - N/A with sleeper cab.* ***(2)*** *F958 - 'H' duty class.* ***(3)*** *Aerodynamic bumper incorporating FUP – reduces front overhang to 1460mm.* ***(4)*** *Centre tow-pin – steel bumper only.*

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BRAKE SYSTEM

Type: Dual circuit, full air, EC brake system incorporating category 1 ABS. Brake pipes manufactured from either rust protected steel or high impact synthetics

Service Circuit: Actuates all truck brakes

Secondary Circuit: First position of park brake lever actuates spring chambers on front and first rear axle.

Parking Brake: Actuates spring chambers on front and first rear axle.

Exhaust Brake: Air actuated operated by brake pedal

Brake Antifreeze Protection: Air dryer

Brake Wear Adjusters: Automatic

Options:- ***(1)*** *Scania hydraulic retarder*
(2) *2 line EC trailer brake pipes to rear section of chassis.*
(3) *Traction Control anti-slip device*

BRAKE DIMENSIONS

Front Axle:	Size	413 x 178mm	**Rear Axle 1:**	Size	413 x 203mm
	Area	1640cm²		Area	1880cm²
Rear Axle 2:	Size	413 x 203mm	**Total Area:**	Service	5400cm²
	Area	1880cm²		Parking	3520cm²

ELECTRICAL SYSTEM

Type: 24V neg (-ve) earth **Alternator:** 100A

Batteries: Twin 140Ah

Rear H.I. lamps, Reversing lights, Battery connection – 200A

Options:- ***(1)*** *180Ah batteries,*
(2) *225Ah batteries,*
(3) *Bodywork electrical preparation – see separate document.*

FUEL TANK

1 x 300 litre steel RHS

Options:- (*Minimum axle distance and suspension type in brackets)*

	RH Side	***LH Side***		***RH Side***	***LH Side***
Steel - G	*150*	*150*	***Aluminium - W***	*200*	*200*
	200	*200*		*300*	*300*
	300	*300*		*350*	*350*
	450	*450 (4300Z)*		*400*	*400*
				500	*500 (4100Z)*
				600	*600 (4300Z)*
				700	*700 (4500Z)*

Tank sizes can be supplied in LH + RH combinations of the above but steel and aluminium cannot be mixed. Sides viewed from rear.

GENERAL EQUIPMENT

Vertical exhaust outlet – N/A with ADR to EXII/EXIII or FL.

Front tow pin

Options:-

(1) *ADR to EXII/EXIII, FL, OX or AT*

INSTRUMENTS & CONTROLS

Two man, one day, EC digital tachograph, rev-counter and gauges for coolant temperature and fuel. Central display for vehicle information and warning messages. Six speed wipers with four jet integral screen wash. Halogen headlamps adjustable from cab for correction of beam height. Warning lights for all major systems grouped within easy vision.

Instrument panel of modular design with switches and controls grouped according to usage. All instruments are back-lit and non-reflective. Impact absorbing, adjustable steering wheel with column lock.

CAB

CP16 Day Cab

Please see separate specification – 'Scania Cabs' for equipment levels.

Options:-

(1) ***CP19*** *Sleeper Cab*

(2) ***CP14***

P.T.O. OPTIONS Check gearbox availability

Rear Mount Pump	Flange	**GR875 / GRS895 / GR/S905**	**GRSO905**
[1]EG640P	[1]EG640F	1.65 / 2.04H	
[1]EG641P	[1]EG641F		1.33 / 1.67H
EG650P	EG660F	1.00 / 1.24H	
[1]EG651P	[1]EG661F	1.28 / 1.58H	
EG652P	EG662F		0.82 / 1.03H
[1]EG653P	[1]EG663F		1.03 / 1.29H
Side Mount			
EG500P	EG500F	1.33 / 1.65H	
EG501P	EG501F		1.78 / 2.22H
[2]EG502P	[2]EG502F	1.33 / 1.65H	
[2]EG503P	[2]EG503F		1.78 / 2.22H
Sandwich			
EK730	EK740	1.00	1.00

[1] = Not in combination with side mounted P.T.O.
[2] = Not in combination with rear mounted P.T.O.
H= High on 'S' splitter gearboxes only.
Flange output rear mount N/A on 6x2/4 or 6x2/2 chassis

WEIGHTS FOR OPTIONAL EQUIPMENT IN KILOGRAMS (Front – Rear – Total)

Axle Distance	**39**	**41**	**43**
GRS905/GRS0905	+8 +1 +9	+8 +1 +9	+8 +1 +9
AD1101P Rear axles	0 +57 +57	0 +57 +57	0 +57 +57
Front/Rear anti-roll bars	+33 +51 +84	+33 +51 +84	+33 +51 +84
3 x 29mm f/springs	+44 0 +44	+44 0 +44	+44 0 +44
4 x 28mm f/springs	+73 0 +73	+73 0 +73	+73 0 +73
315/80 tyres/9.00 rims	0 +72 +72	0 +72 +72	0 +72 +72
385/65 tyres/11.75 rims	+38 N/A +38	+38 N/A +38	+38 N/A +38
Aluminium Wheels			
8.25x22.5	–24 –96 –120	–24 –96 –120	–24 –96 –120
9.00x22.5	–30 –120 –150	–30 –120 –150	–30 –120 –150
11.75x22.5	–44 N/A –44	–44 N/A –44	–44 N/A –44
Delete tipper hinge prep.	+24 –99 –75	+24 –99 –75	+24 –99 –75
F/E ram brackets	+45 +3 +48	+45 +3 +48	+45 +3 +48
Aerodynamic bumper	–19 +2 –17	–19 +2 –17	–19 +2 –17
Centre tow pin	+29 –5 +24	+29 –5 +24	+29 –5 +24
F958-50 frame	+110 +186 +296	+115 +186 +301	+120 +196 +316
Retarder	+72 +17 +89	+73 +16 +89	+73 +16 +89
180Ah Batteries	+14 +3 +17	+14 +3 +17	+14 +3 +17
225Ah Batteries	+46 +10 +56	+46 +10 +56	+46 +10 +56
Std. Tank Full	+133 +91 +224	+137 +87 +224	+141 +83 +224
*2 x 300l G	+160 +146 +306	+166 +140 +306	+172 +134 +306
CP14 cab	–35 +2 –33	–35 +2 –33	–35 +2 –33
CP19 sleeper cab	+65 +15 +80	+65 +15 +80	+65 +15 +80
Air deflectors – CP14	+40 +2 +42	+40 +2 +42	+40 +2 +42
– CP16/19	+39 +3 +42	+39 +3 +42	+39 +3 +42
EG Series PTOs	+15 +3 +18	+15 +3 +18	+15 +3 +18
EK Series PTOs	+42 +5 +47	+42 +5 +47	+42 +5 +47

* Additional to standard tank full of fuel.

SCANIA

SPECIFICATION

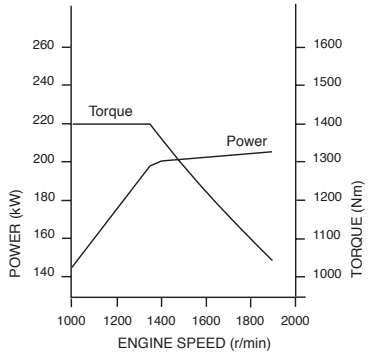
P 280 CB6x4MHZ

28500Kg GVW

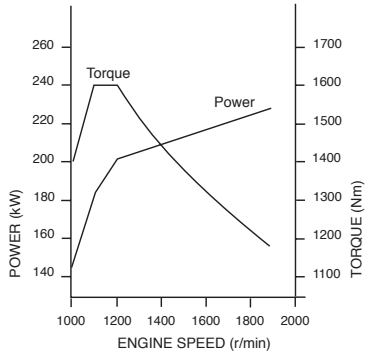
THREE AXLE TIPPER

ENGINE PERFORMANCE

'280' DC9-38

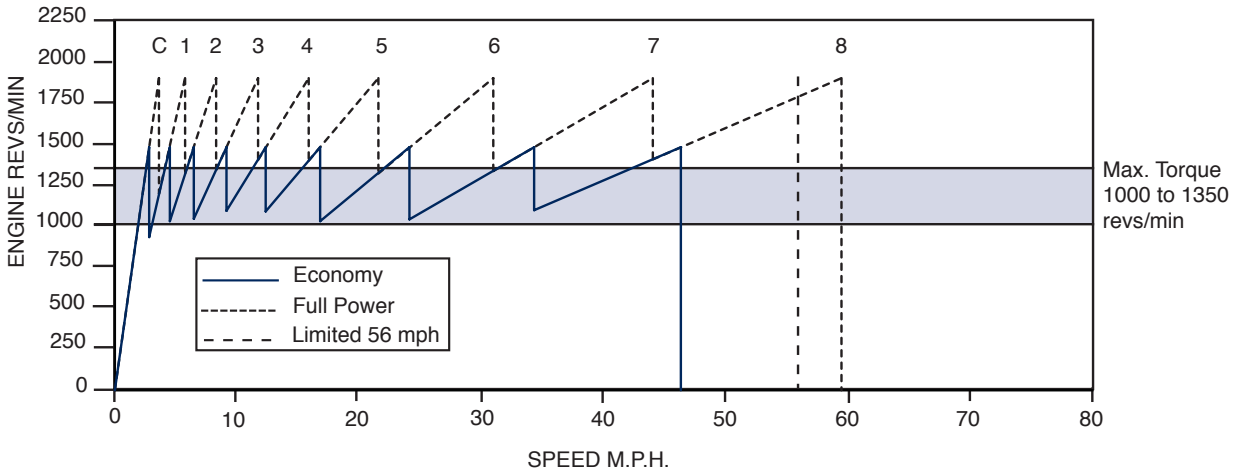


'320' DC9-37



Net engine performance to 80/1269*1999/99EC

GEAR STEP DIAGRAM



SPEED/GRADEABILITY Gradeability may be limited by tyre adhesion.

Axle gear/ Ratio		Optimum Cruising Speed M.P.H.	Gradeability - steady climb – in percent			
			DC9-38		DC9-37	
			26T	44T	26T	44T
RB 660	3.07	43 – 56	>35	26.5	>35	28.6
RB 660	3.42	39 – 51	>35	29.8	>35	32.2
RB 660	3.80 std.	35 – 46	>35	33.5	>35	>35
RB 660	4.22	32 – 42	>35	>35	>35	>35
RB 660	4.88	27 – 36	>35	>35	>35	>35

Calculations assume standard specifications. Performance achieved in operation will depend on conditions, bodywork, gear ratios and tyre specification.

The specifications contained in this publication are intended as a general guide, and not as representations as to the product described, nor as binding in detail.

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