



Application Report Bundle

iSCAAN**116-A357711-1** (Iteration 1) *Preliminary*US Units | **SI Units**

DISCLAIMER STATEMENT

The vehicle performance calculated by iSCAAN is an estimate for the specified vehicle and power train operating at standard engine conditions per SAE J1995 at 91 m (300 feet) altitude of 100 kPa barometric pressure and 25°C (77°F) inlet air temperature. Engine performance is significantly affected as operating altitude increases, therefore, Allison Transmission, Inc. does not represent and hereby disclaims that, under all conditions, the actual vehicle will achieve the simulated performance.

APPLICATION PROFILE ▲

Date	May 26, 2025 16:08:01
Scaan Number	
Application	116-A357711-1
Application Name	UAT-4 Cummins ISB6.7 340
Owner	Gunter Pilger @ DGS Mainz
SCAAN Analysis Type	Standard Vehicle Run
Optional Analysis Type	
Classification	Standard
Review Status	Not Submitted

Input Summary ▲

MISSION ▲

End User	xxx
Selected Vocation	Military — Wheeled - Tactical — Straight Truck (52-25-10)

PLATFORM ▲

Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
User Expected Engine Load	0%

Area and Weight

Frontal Area	8.190 m ²
Height / Width	3.150 m / 2.600 m
Standard Wind Resistance Coefficient	0.750 (no Deflector)
User Defined Wind Resistance Coefficient	0.750 (no Deflector)
Gross Vehicle Weight	19000 kg (no Trailer)
Weight On Drive Wheels	19000 kg (100.00%)

Tires

Number Of Tires	4 (Standard Profile Radial)
Selected Tire	
Tire Revolutions	286 revs/km
Tire Rolling Radius	0.556 m
Standard Surface	Smooth Concrete (SC Factor = 1.00)
Selected Surface	Smooth Concrete (SC Factor = 1.00)
Standard On-Road Traction Limit Coefficient	0.700
Standard Off-Road Traction Limit Coefficient	0.550
User Defined On-Road Traction Limit Coefficient	0.700
User Defined Off-Road Traction Limit Coefficient	0.550
Tire/Wheel Inertia (estimated)	84.4565 kg-m²

ACCESSORY LOSSES (POWER @ GOVERNED SPEED)

Accessory	Standard Loss (kW)	User Defined Loss (kW)
Fan (Clutch Fan)	20.2	20.2
Alternator / Generator	2.5	2.5
Air Compressor	1.3	1.3
Steering Pump	1.3	1.3
Air Conditioning	0.0	0.0
Implement Drive	0.0	0.0

ENGINE

Number of Power Packs	1
Engine Rating	Cummins ISB6.7 (Diesel) -- 340hp@2800rpm 1100Nm@1400rpm -- without SEM/LRTP (116-L033737-E, Rev A)
Engine Controls Type	Electronic
Evaluate at Altitude	No
Certifications	
Displacement	6.70 l
Peak Torque	1100.0 N-m
Peak Torque Speed	1400 rpm
Peak Power	252.2 kW
Peak Power Speed	2800 rpm
Governed Power	252.2 kW
Governed Speed	2800 rpm
Number Of Curves	1
Engine Curve Reference	
Engine Idle Speed	700 rpm
Cruise Velocity @ Speed	0.0 km/h @ 0 rpm
Engine Retarder	
Engine Inertia (estimated)	0.9562 kg-m²

ENGINE CURVE - STANDARD LOSSES - COMBINED LOW & HIGH CURVES (AC ON WHERE APPLICABLE)

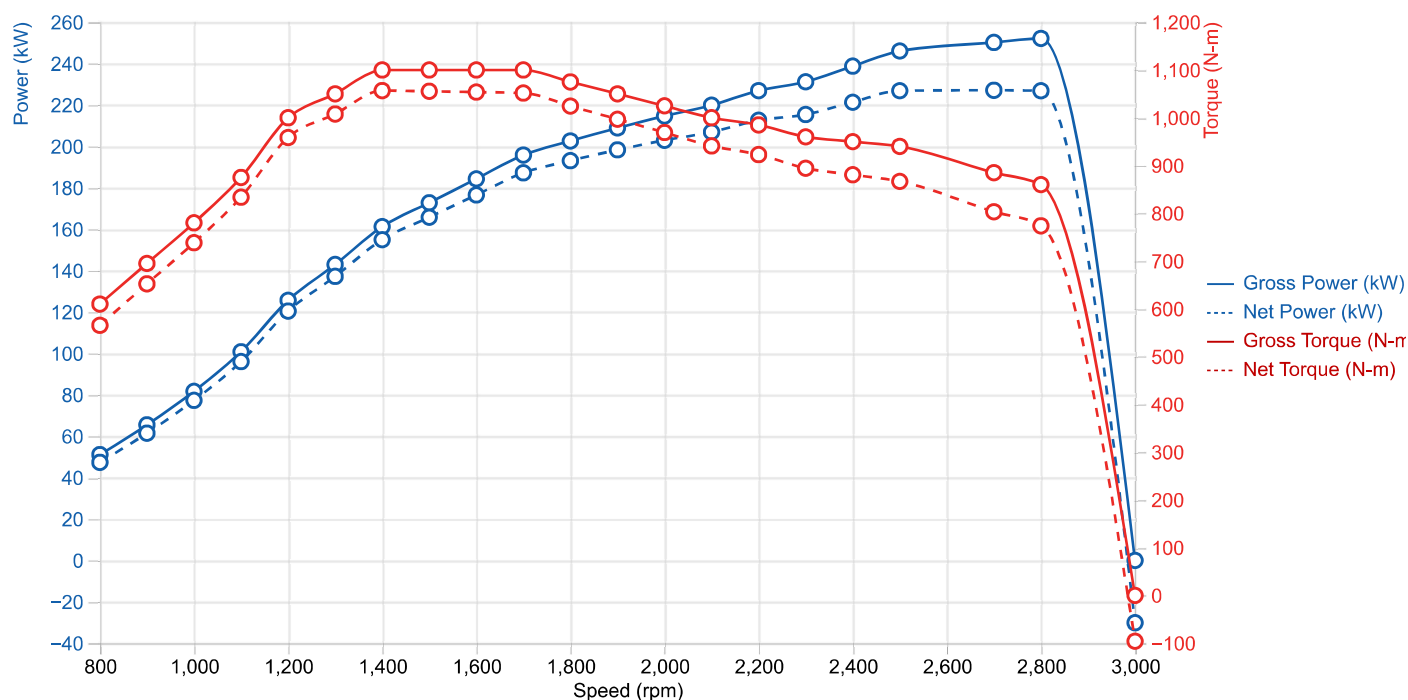

Speed (rpm)	Gross Power (kW)	Gross Torque (N-m)	Net Power Fan On (kW)	Net Torque Fan On (N-m)	Net Power Fan Off (kW)	Net Torque Fan Off (N-m)	Point Identification
800	51.1	610.0	47.4	565.5	47.8	571.1	
900	65.5	695.0	61.5	652.3	62.2	659.4	
1000	81.7	780.0	77.3	738.4	78.2	747.1	
1100	100.8	875.0	96.0	833.7	97.3	844.3	
1200	125.7	1000.0	120.5	958.5	122.0	971.2	
1300	142.9	1050.0	137.2	1007.9	139.2	1022.7	
1400	161.3	1100.0	154.9	1056.8	157.5	1074.1	Peak Torque
1500	172.8	1100.0	165.8	1055.4	168.9	1075.2	
1600	184.3	1100.0	176.6	1053.7	180.3	1076.2	
1700	195.8	1100.0	187.2	1051.7	191.8	1077.1	
1800	202.6	1075.0	193.1	1024.4	198.5	1052.9	
1900	208.9	1050.0	198.3	996.9	204.7	1028.6	
2000	214.7	1025.0	203.0	969.1	210.3	1004.2	
2100	219.9	1000.0	206.9	941.1	215.5	979.8	
2200	226.9	985.0	212.6	922.8	222.4	965.4	
2300	231.2	960.0	215.4	894.3	226.6	940.8	
2400	238.8	950.0	221.3	880.6	234.1	931.3	
2500	246.1	940.0	226.9	866.7	241.3	921.7	
2700	250.2	885.0	227.1	803.3	245.2	867.4	

2800	252.2	860.0	226.9	773.8	247.1	842.7	Peak Governed
3000	0.0	0.0	-30.1	-95.8	-5.3	-16.7	No Load Governed

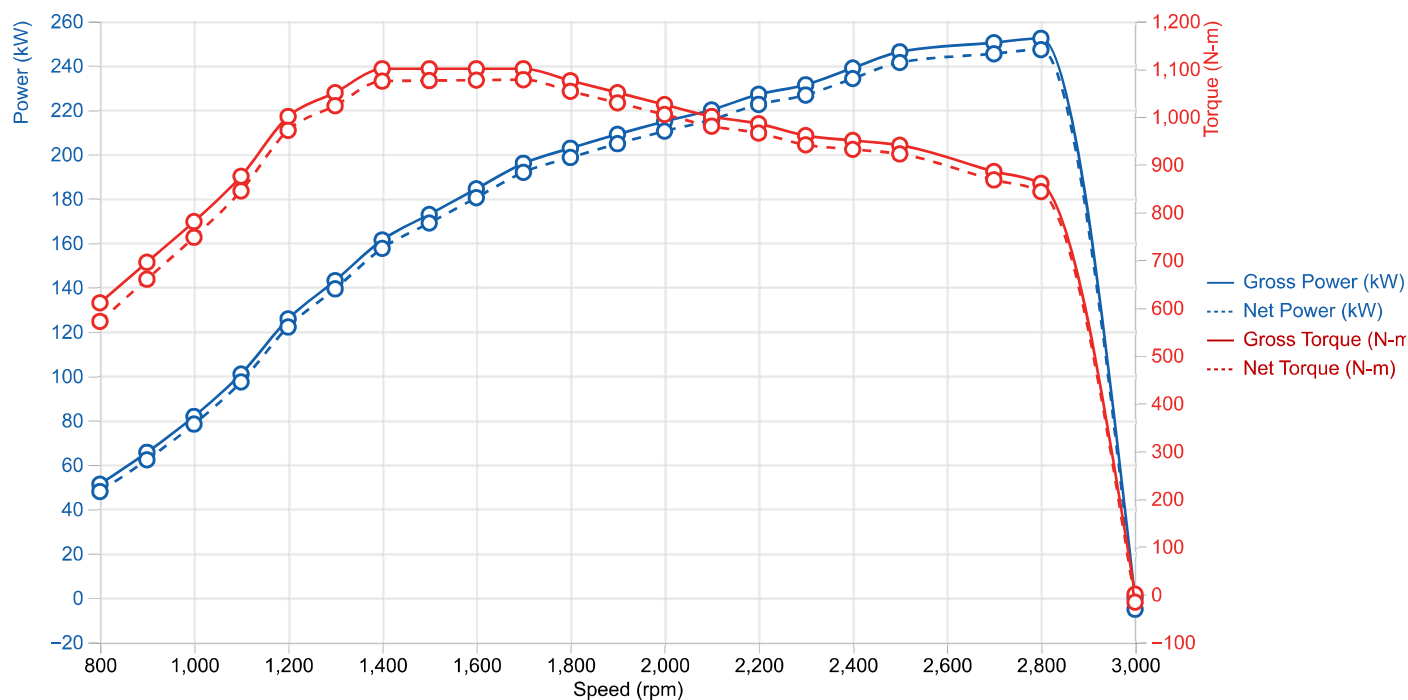
Peak Power point has been defined for the purposes of assessing Accessory Losses

LOTS - ENGINE CURVE - STANDARD LOSSES - COMBINED LOW & HIGH CURVES (AC ON WHERE APPLICABLE)

Standard Parameters Fan On



Standard Parameters Fan Off



ENGINE CURVE - USER DEFINED LOSSES - COMBINED LOW & HIGH CURVES (AC ON WHERE APPLICABLE)

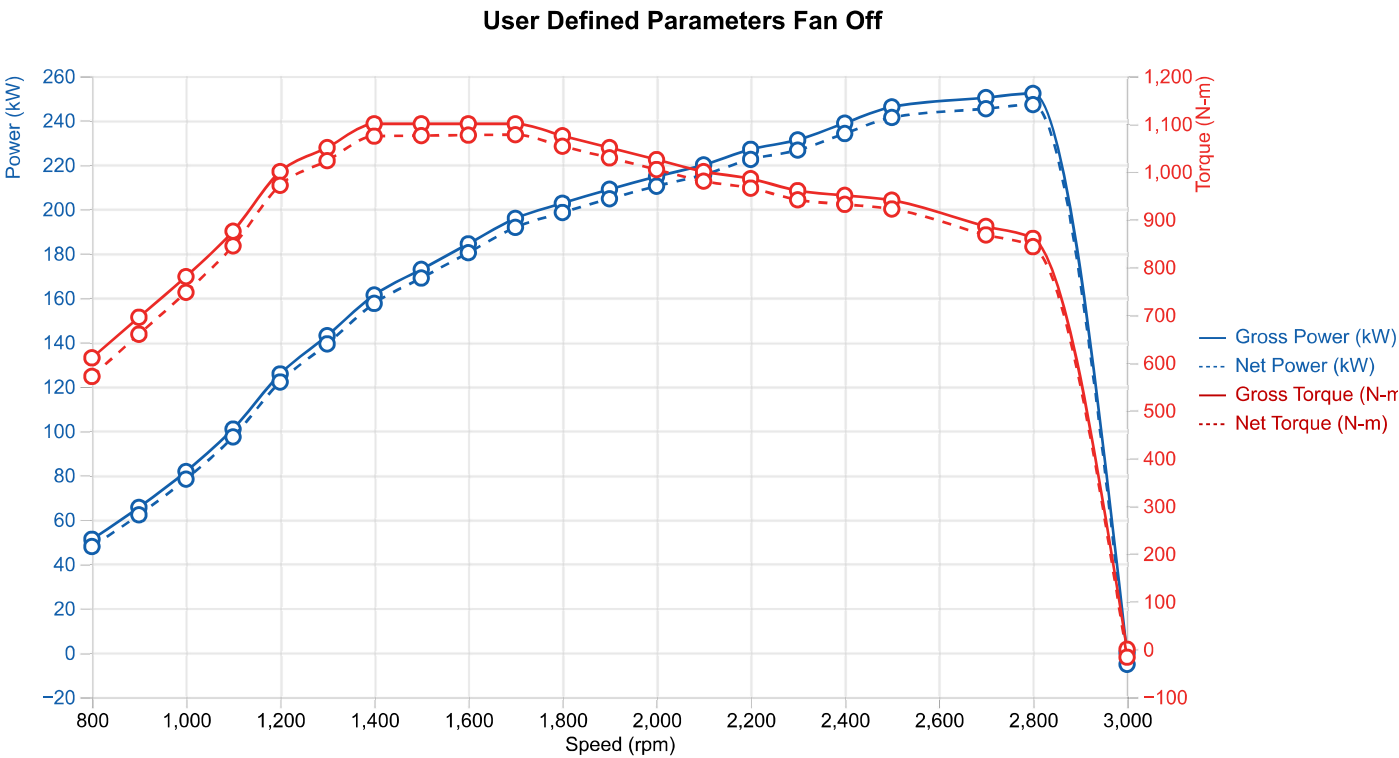
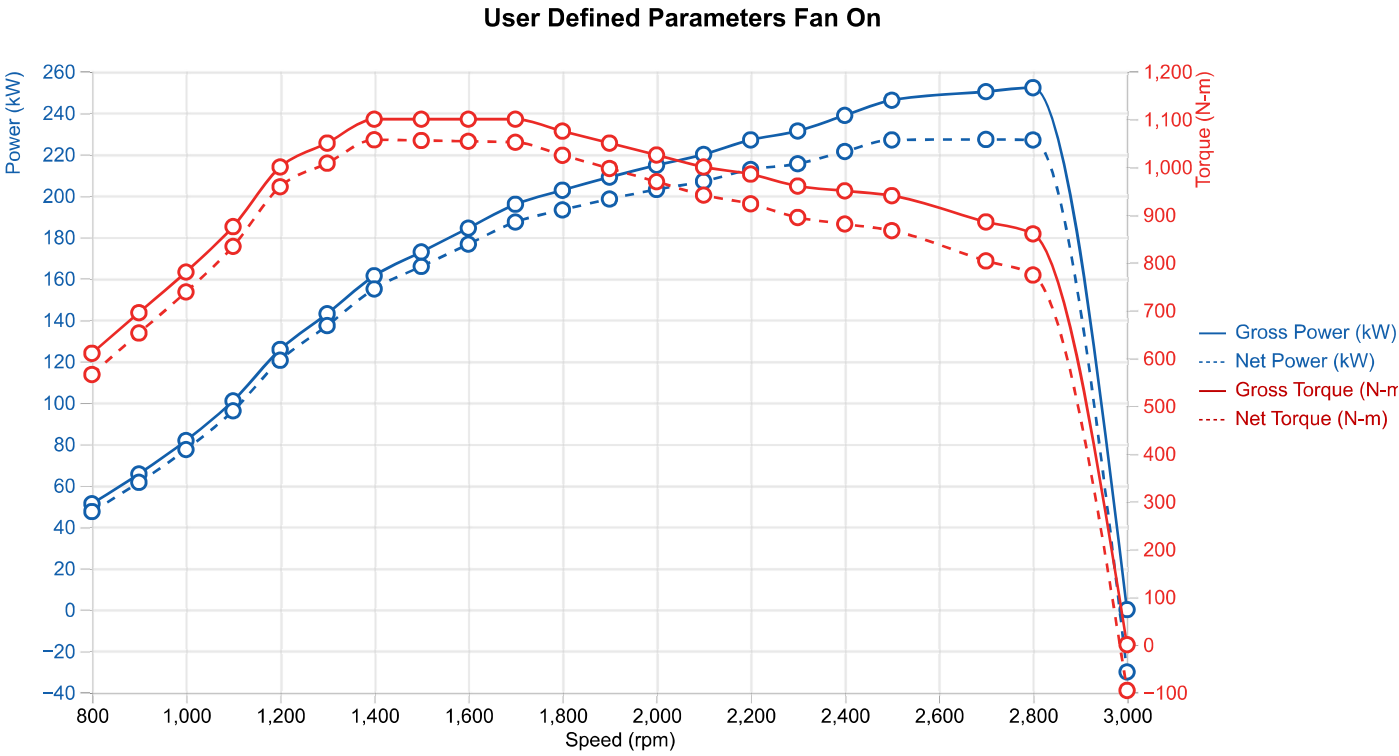
Speed (rpm)	Gross Power (kW)	Gross Torque (N-m)	Net Power Fan On (kW)	Net Torque Fan On (N-m)	Net Power Fan Off (kW)	Net Torque Fan Off (N-m)	Point Identification
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800	51.1	610.0	47.4	565.5	47.8	571.1	
900	65.5	695.0	61.5	652.3	62.2	659.4	
1000	81.7	780.0	77.3	738.4	78.2	747.1	
1100	100.8	875.0	96.0	833.7	97.3	844.3	
1200	125.7	1000.0	120.5	958.5	122.0	971.2	
1300	142.9	1050.0	137.2	1007.9	139.2	1022.7	
1400	161.3	1100.0	154.9	1056.8	157.5	1074.1	Peak Torque
1500	172.8	1100.0	165.8	1055.4	168.9	1075.2	
1600	184.3	1100.0	176.6	1053.7	180.3	1076.2	
1700	195.8	1100.0	187.2	1051.7	191.8	1077.1	
1800	202.6	1075.0	193.1	1024.4	198.5	1052.9	
1900	208.9	1050.0	198.3	996.9	204.7	1028.6	
2000	214.7	1025.0	203.0	969.1	210.3	1004.2	
2100	219.9	1000.0	206.9	941.1	215.5	979.8	
2200	226.9	985.0	212.6	922.8	222.4	965.4	
2300	231.2	960.0	215.4	894.3	226.6	940.8	
2400	238.8	950.0	221.3	880.6	234.1	931.3	
2500	246.1	940.0	226.9	866.7	241.3	921.7	
2700	250.2	885.0	227.1	803.3	245.2	867.4	
2800	252.2	860.0	226.9	773.8	247.1	842.7	Peak Governed
3000	0.0	0.0	-30.1	-95.8	-5.3	-16.7	No Load Governed

Peak Power point has been defined for the purposes of assessing Accessory Losses

PLOTS - ENGINE CURVE - USER DEFINED LOSSES - COMBINED LOW & HIGH CURVES (AC ON WHERE APPLICABLE)





TRANSMISSION

Transmission Manufacturer	Allison Transmission
Transmission Family	3000 Series (1-L001243-TF, Rev AJ)
Transmission	3200 SP Retarder (1-L007346-T, Rev E)
Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Torque Converter	TC417 (1-L001251-TC, Rev C) - Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)

CONTROLS

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Controls Release	Production Calibration (PC) for 3000 Series (1-L001194-CR, Rev F)
Shift Schedule	Primary
DynActive	No
Speed Profile	Performance
Shift Speed & Strategy	2600 rpm S2 Performance 2
Equivalent DynActive Bias	11
Primary Mode: Gears	Low = 1, Start = 1, High = 6 (1-1-6)

DRIVELINE

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Driveline Protection	No
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Component	Description	Ratio	Standard Efficiency (%)	User Defined Efficiency (%)
Propshaft -- One Piece -- Two Joint (1-L003521-DL)	Single	1.000	98.60	98.60
Axle -- On Hwy Single Red -- 4x4 (1-L003532-DL)	Single	6.000	95.00	95.00
Aux Gearing -- Transfer Case -- Two Speed (1-L003523-DL)	Low	0.950	97.00	97.00
	High	2.150	97.00	97.00

Overall Driveline Ratio	Description	Ratio	Standard Efficiency (%)	User Defined Efficiency (%)	N over V Ratio rpm/kph
	High	12.900	90.86	90.86	61.531
	Low	5.700	90.86	90.86	27.188

Ratings and Guidelines Check

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MISSION

▲

End User	xxx
Selected Vocation	Military — Wheeled - Tactical — Straight Truck (52-25-10)

PLATFORM

▲

Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
Engine Description	Cummins ISB6.7 (Diesel) -- 340hp@2800rpm 1100Nm@1400rpm -- without SEM/LRTP (116-L033737-E, Rev A)
Transmission	3200 SP Retarder (1-L007346-T, Rev E)
Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Vehicle Parameters	Standard
Torque Converter	TC417 (1-L001251-TC, Rev C) - Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)
LRTP Status	

NOTE

This SCAAN information is subject to the SCAAN Disclaimer set forth elsewhere.

CONVERTER RATING AND GUIDELINE CHECKSSECTION SCORE - OK

Check	Check Name	Minimum or Maximum	Rating or Recommendation	Actual Value	Units	Overall Status
C01 ▼?	Transmission / Converter Compatibility					✓ OK: Acceptable
C02 ▼?	Engine / Converter Compatibility					✓ OK: Acceptable
C04 ▼?	Engine Speed at Converter Stall			1896	rpm	🚩 Reference
C05 ▼?	Minimum Engine Speed	Min	1500	1896	rpm	✓ OK: Acceptable
C10 ▼?	Torque Converter Input Torque	Max	1695.0	1100.0	N-m	✓ OK: Acceptable
C07 ▼?	Turbine Torque at Converter Stall	Max	2305.0	2152.9	N-m	✓ OK: Acceptable
C08 ▼?	Converter Speed Ratio at Engine Governed Speed	Min	0.800	0.921		✓ OK: Acceptable
C03 ▼?	Converter Stall Torque Ratio			2.195		🚩 Reference

Notes

Check	Comments
C05	Net peak torque speed (1400 rpm) + allowable variation (100 rpm).

! TRANSMISSION RATING AND GUIDELINE CHECKSSECTION SCORE - XXX

Check	Check Name	Minimum or Maximum	Rating or Recommendation	Actual Value	Units	Overall Status
T01 ▾?	Transmission / Vocation Compatibility					! XX: Questionable - may not be acceptable
T02 ▾?	Transmission / Engine Compatibility					✓ OK: Acceptable
T17 ▾?	Transmission Permitted in End User/Chassis Mfg Locations					✓ OK: Acceptable
T15 ▾?	Transmission Input Power (Gross)	Max	336.0	252.2	kW	✓ OK: Acceptable
T14 ▾?	Transmission Input Torque (Gross)	Max	1695.0	1100.0	N-m	✓ OK: Acceptable
T03 ▾?	Transmission Input Speed		1900 / 2800	2800	rpm	✓ OK: Acceptable
T11 ▾?	Transmission Output Speed	Max	3600	4294	rpm	! XXX: Not Acceptable - rating or usage violation

Notes

Check	Comments
T11	Rated Transmission Output Speed exceeded in Range 6L at 69.8 km/h

! VEHICLE RATING AND GUIDELINE CHECKS - STANDARDSECTION SCORE - XX


Check	Check Name	Minimum or Maximum	Rating or Recommendation	Actual Value	Units	Overall Status
V06 ▾?	Minimum Required Driveline Ratio For Wheel Slip	Min	11.989	5.700		! XX: Questionable - may not be acceptable
V21 ▾?	1st Range Converter Stall Gradeability			39.46	%	📖 Reference
V13 ▾?	1st Range 70% Converter Efficiency Gradeability			26.58	%	📖 Reference
V23 ▾?	1st Range 80% Converter Efficiency Gradeability			22.97	%	📖 Reference
V17 ▾?	Maximum Geared Vehicle Speed at Engine Governed Speed			69.8	km/h	📖 Reference
V18 ▾?	Maximum Speed on 0.25% Grade	Min	88.5	116.0	km/h	✓ OK: Acceptable
V46 ▾?	Heat Generated at 0.7 Tractive Effort to Drive Wheel Weight Ratio			N/A	kW	📖 Reference
V49 ▾?	Heat Generated at 0.6 Tractive Effort to Drive Wheel Weight Ratio			N/A	kW	📖 Reference

Notes

Check	Comments
V06	1st range at 70% converter efficiency operation, 0.55 traction coefficient.
V17	Check is in 6L Lockup.
V18	At 2056 rpm Engine Speed, Range 6L.
V46	Cannot attain conditions required at 0.7 Tractive Effort to Drive Wheel Weight Ratio
V49	Cannot attain conditions required at 0.6 Tractive Effort to Drive Wheel Weight Ratio

Vehicle Performance Summary

MISSION

End User

xxx

Selected Vocation

Military — Wheeled - Tactical — Straight Truck (52-25-10)

PLATFORM

Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
Engine Description	Cummins ISB6.7 (Diesel) -- 340hp@2800rpm 1100Nm@1400rpm -- without SEM/LRTP (116-L033737-E, Rev A)
Transmission	3200 SP Retarder (1-L007346-T, Rev E)
Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Vehicle Parameters	Standard
Torque Converter	TC417 (1-L001251-TC, Rev C) Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)
LRTP Status	

NOTE

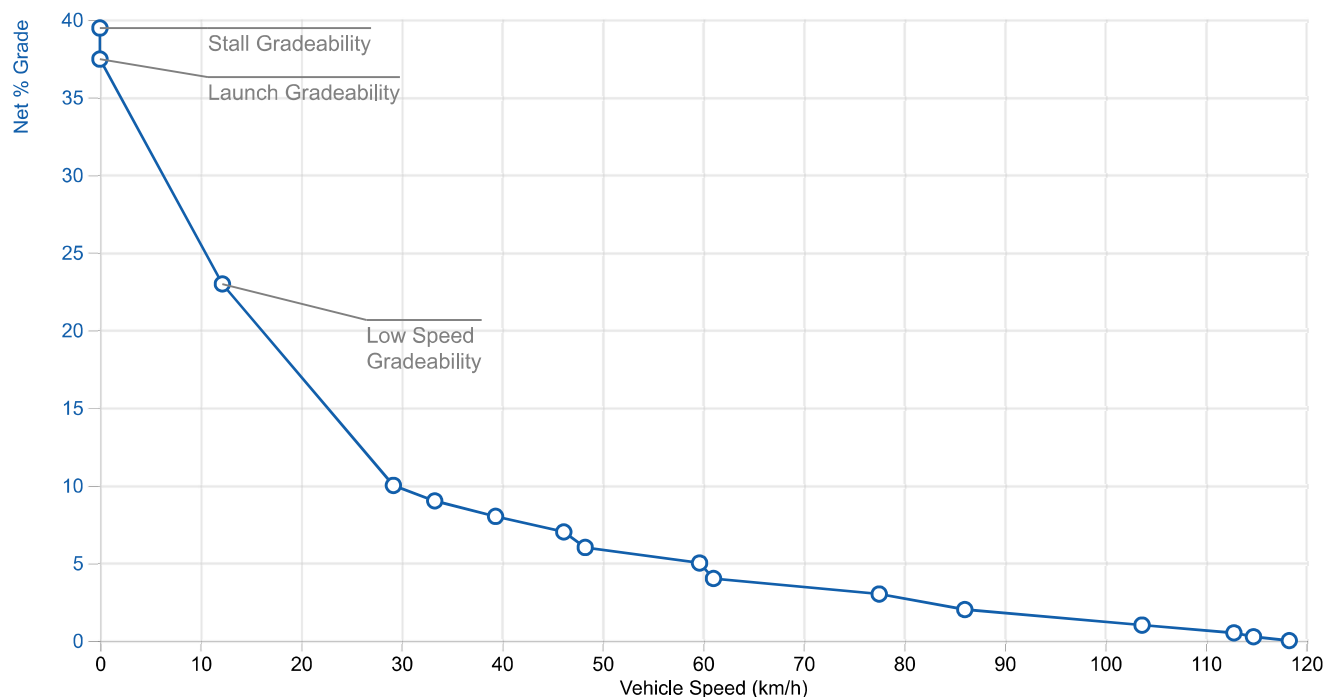
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FULL THROTTLE AUTOMATIC UPSHIFTS (GRADEABILITY) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.95▲

Engine Fan	On	Engine Power	Standard Power Curve
Air Conditioning	Off	Vehicle Parameters	Standard
Axle Ratio	6.000	Auxiliary Gearing Ratio	0.950

Gradeability	% Grade	Vehicle Speed (km/h)	Gear Range	Match Point
Stall Gradeability	39.5		1C	Stall
Launch Gradeability	37.5		1C	
Low Speed Gradeability	23.0	12.2	1C	80 Percent
Maximum Speed on Grade	0.0	118.3	6L	Road Load
	0.3	114.8	5L	
	0.5	112.8	5L	
	1.0	103.7	5L	
	2.0	86.0	4L	
	3.0	77.5	4L	
	4.0	61.0	3L	
	5.0	59.7	3L	
	6.0	48.3	3L	
	7.0	46.2	2L	
	8.0	39.4	2L	
	9.0	33.3	2C	
	10.0	29.2	2C	

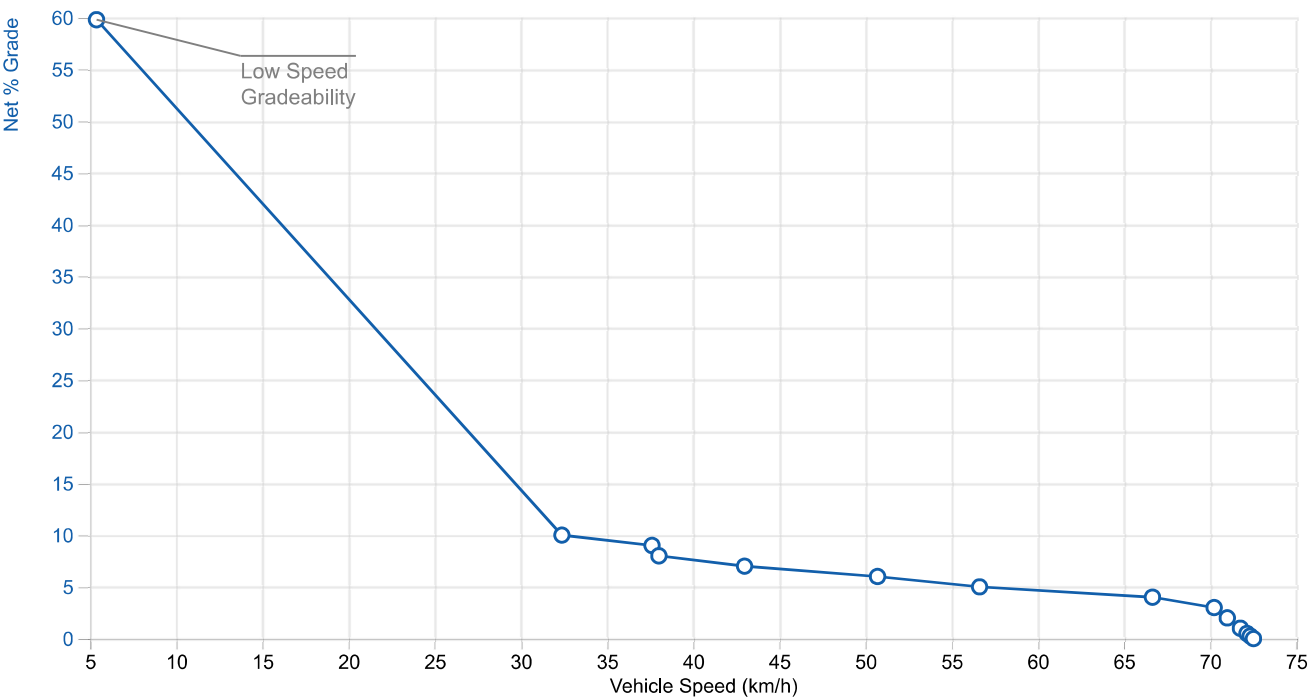
PLOTS - FULL THROTTLE AUTOMATIC UPSHIFTS (GRADEABILITY) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.95▲


FULL THROTTLE AUTOMATIC UPSHIFTS (GRADEABILITY) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.15▲

Engine Fan	On	Engine Power	Standard Power Curve
Air Conditioning	Off	Vehicle Parameters	Standard
Axle Ratio	6.000	Auxiliary Gearing Ratio	2.150

Gradeability	% Grade	Vehicle Speed (km/h)	Gear Range	Match Point
Stall Gradeability	152.4		1C	Stall
Launch Gradeability	150.4		1C	
Low Speed Gradeability	59.8	5.4	1C	80 Percent
Maximum Speed on Grade	0.0	72.5	6L	Road Load
	0.3	72.3	6L	
	0.5	72.1	6L	
	1.0	71.8	6L	
	2.0	71.0	6L	
	3.0	70.2	6L	
	4.0	66.7	6L	
	5.0	56.6	6L	
	6.0	50.7	5L	
	7.0	43.0	5L	
	8.0	38.0	4L	
	9.0	37.6	4L	
	10.0	32.4	4L	

PLOTS - FULL THROTTLE AUTOMATIC UPSHIFTS (GRADEABILITY) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.15▲

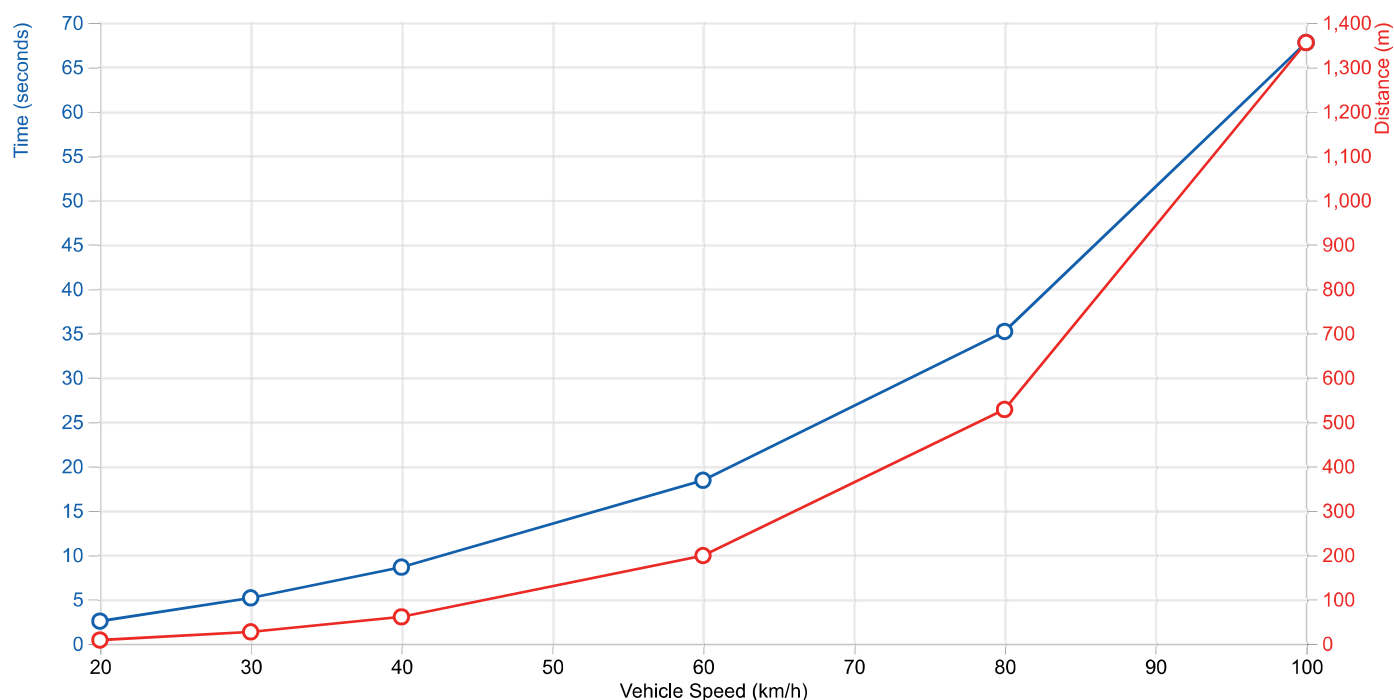


FULL THROTTLE AUTOMATIC UPSHIFTS (ACCELERATION) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.950▲

Engine Fan	On	Engine Power	Standard Power Curve
Air Conditioning	Off	Vehicle Parameters	Standard
Axle Ratio	6.000	Auxiliary Gearing Ratio	0.950

Speed	Time (seconds)	Distance (m)
0 - 20 km/h	2.5	8
0 - 30 km/h	5.2	26
0 - 40 km/h	8.6	60
0 - 60 km/h	18.4	199
0 - 80 km/h	35.2	528
0 - 100 km/h	67.8	1355

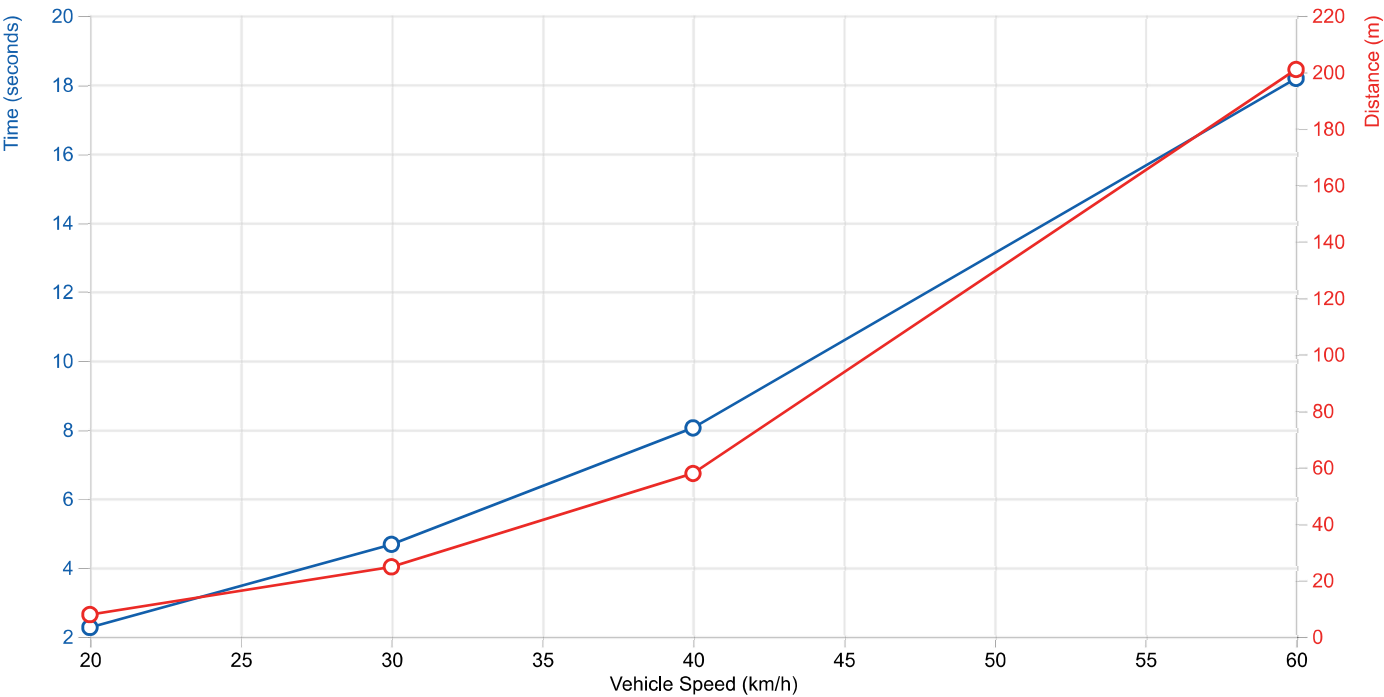
PLOTS - FULL THROTTLE AUTOMATIC UPSHIFTS (ACCELERATION) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RA▲


FULL THROTTLE AUTOMATIC UPSHIFTS (ACCELERATION) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.1▲

Engine Fan	On	Engine Power	Standard Power Curve
Air Conditioning	Off	Vehicle Parameters	Standard
Axle Ratio	6.000	Auxiliary Gearing Ratio	2.150

Speed	Time (seconds)	Distance (m)
0 - 20 km/h	2.3	8
0 - 30 km/h	4.7	25
0 - 40 km/h	8.0	58
0 - 60 km/h	18.2	201
0 - 80 km/h	Speed not possible	Speed not possible
0 - 100 km/h	Speed not possible	Speed not possible

PLOTS - FULL THROTTLE AUTOMATIC UPSHIFTS (ACCELERATION) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RA▲



Engine-Converter Match

MISSION	
End User	xxx
Selected Vocation	Military — Wheeled - Tactical — Straight Truck (52-25-10)

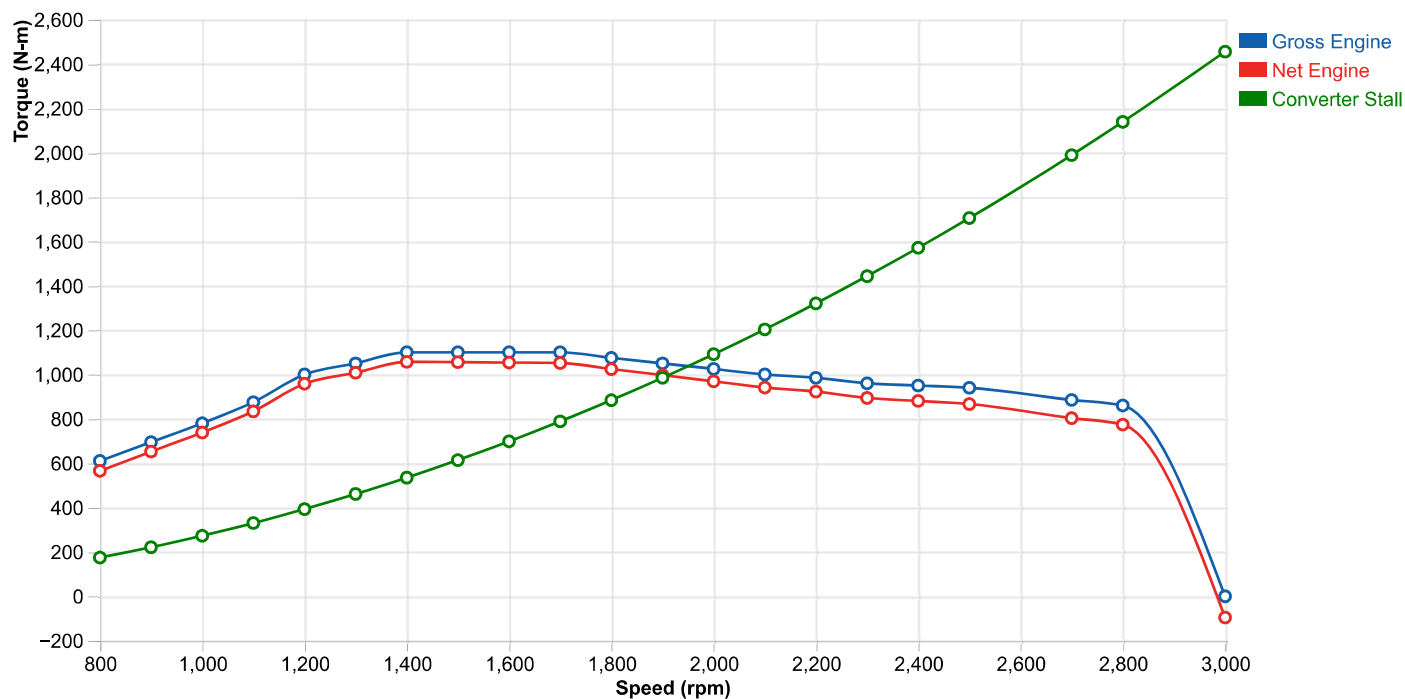
PLATFORM	
Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
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Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Vehicle Parameters	Standard
Torque Converter	TC417 (1-L001251-TC, Rev C) Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)
LRTP Status	

NOTE	
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CONVERTER MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE	
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Engine Fan		On			Engine Power		Standard Power Curve		
Air Conditioning		Off			Vehicle Parameters		Standard		
Speed Ratio	Torque Ratio	Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Turbine Speed (rpm)	Turbine Torque (N-m)	Turbine Power (kW)	Converter Heat Rejection (kW)	Match Point
0.000	2.195	1896	997.9	198.2	0	2152.9	0	198.22	Stall
0.100	2.080	1907	994.8	198.7	191	2033.6	40.6	158.14	
0.200	1.950	1930	988.6	199.8	386	1894.1	76.6	123.27	
0.300	1.820	1945	984.5	200.5	583	1760.4	107.5	92.97	
0.400	1.660	1986	973	202.3	794	1586.4	132	70.41	
0.436	1.608	2003	968.3	203.1	872	1528.9	139.7	63.44	70 Percent
0.500	1.520	2039	958.1	204.6	1020	1429.6	152.6	51.97	
0.558	1.438	2073	948.7	205.9	1156	1338.7	162	43.92	80 Percent
0.600	1.377	2099	941.4	206.9	1259	1271.5	167.7	39.24	
0.650	1.308	2146	932.7	209.6	1395	1196.3	174.7	34.87	85 Percent
0.700	1.243	2190	924.6	212.1	1533	1126.7	180.9	31.18	
0.850	1.036	2370	884.7	219.6	2015	897.7	189.4	30.2	
0.875	1.001	2422	877.6	222.6	2119	859.8	190.8	31.78	
0.880	0.995	2438	875.3	223.5	2146	852.7	191.6	31.92	Coupling
0.900	0.993	2592	837.7	227.3	2332	813	198.6	28.76	
0.911	0.992	2684	808.4	227.2	2444	783	200.4	26.78	
0.921	0.992	2800	773.8	226.9	2580	747.9	202.1	24.82	Governed
0.923	0.992	2803	761.6	223.5	2588	735.7	199.4	24.18	
0.925	0.991	2806	746	219.2	2596	720.2	195.8	23.48	
0.950	0.989	2858	521.9	156.2	2715	496.9	141.3	14.92	
0.975	0.985	2913	280.8	85.7	2841	256.9	76.4	9.25	
0.990	0.984	2950	121.6	37.6	2921	100	30.6	6.99	

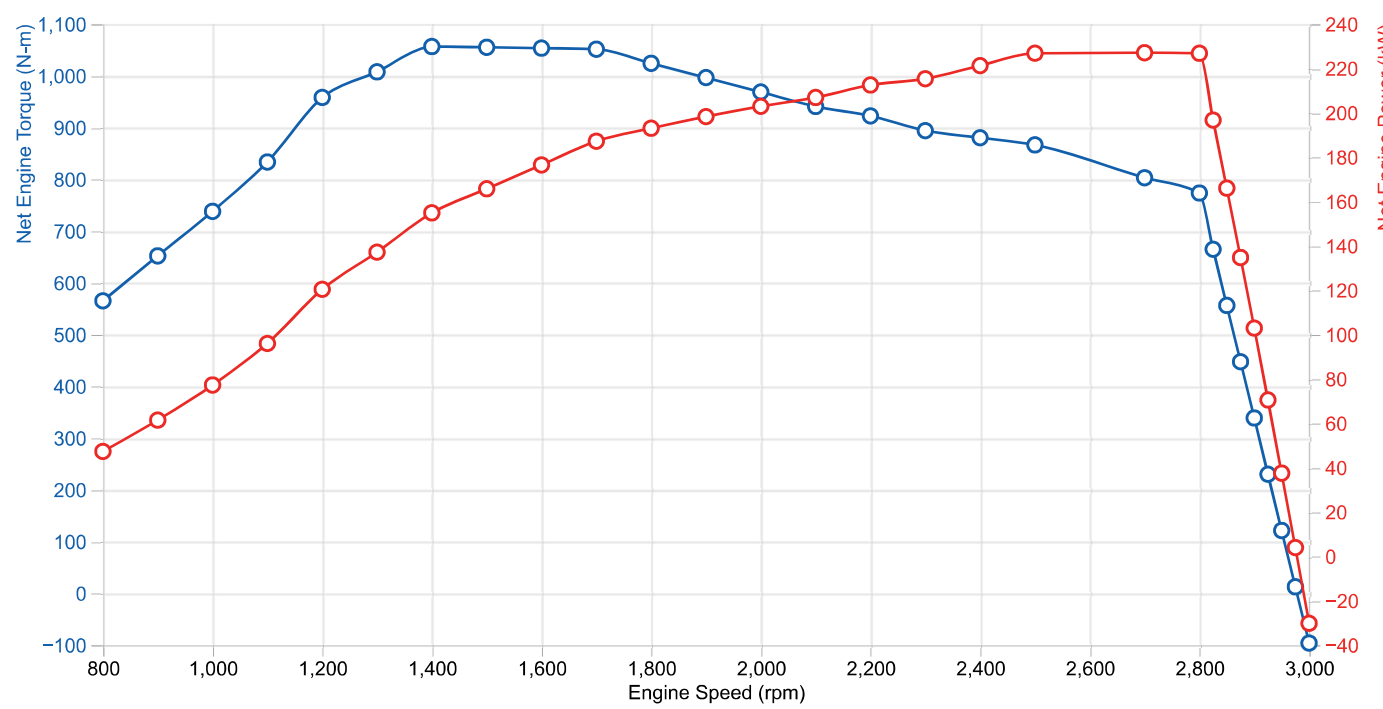
PLOTS - CONVERTER MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE



LOCKUP MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE

Engine Fan		On		Engine Power		Standard Power Curve	
Air Conditioning		Off		Vehicle Parameters		Standard	
Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Turbine Speed (rpm)	Turbine Torque (N-m)	Turbine Power (kW)	Converter Heat Rejection (kW)	Match Point
800	565.5	47.4	800	553	46.3	1.04	
900	652.3	61.5	900	638.9	60.2	1.26	
1000	738.4	77.3	1000	724.2	75.8	1.49	
1100	833.7	96	1100	818.9	94.3	1.71	
1200	958.5	120.5	1200	943.2	118.5	1.93	
1300	1007.9	137.2	1300	992.1	135.1	2.14	
1400	1056.8	154.9	1400	1040.9	152.6	2.34	
1500	1055.4	165.8	1500	1039.9	163.3	2.45	
1600	1053.7	176.6	1600	1037.7	173.9	2.69	
1700	1051.7	187.2	1700	1035.3	184.3	2.92	
1800	1024.4	193.1	1800	1007.7	189.9	3.16	
1900	996.9	198.4	1900	979.8	194.9	3.41	
2000	969.1	203	2000	951.6	199.3	3.66	
2100	941.1	207	2100	923.3	203	3.91	
2200	922.8	212.6	2200	904.7	208.4	4.17	
2300	894.3	215.4	2300	875.9	211	4.43	
2400	880.6	221.3	2400	861.9	216.6	4.7	
2500	866.7	226.9	2500	847.8	222	4.96	
2700	803.3	227.1	2700	783.9	221.6	5.48	
2800	773.8	226.9	2800	754.2	221.1	5.74	Governed
2825	665.1	196.8	2825	645.5	191	5.81	
2850	556.5	166.1	2850	536.7	160.2	5.88	

2875	447.8	134.8	2875	428	128.9	5.96	
2900	339.1	103	2900	319.2	96.9	6.03	
2925	230.4	70.6	2925	210.5	64.5	6.1	
2950	121.6	37.6	2950	101.7	31.4	6.17	
2975	12.9	4	2975	-7.1	-2.2	6.25	
3000	-95.8	-30.1	3000	-115.9	-36.4	6.32	

PLOTS - LOCKUP MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE



Transmission Output Performance Summary

MISSION	
End User	xxx
Selected Vocation	Military — Wheeled - Tactical — Straight Truck (52-25-10)
PLATFORM	

Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
Engine Description	Cummins ISB6.7 (Diesel) -- 340hp@2800rpm 1100Nm@1400rpm -- without SEM/LRTP (116-L033737-E, Rev A)
Transmission	3200 SP Retarder (1-L007346-T, Rev E)
Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Vehicle Parameters	Standard
Torque Converter	TC417 (1-L001251-TC, Rev C) Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)
LRTP Status	

NOTE

This SCAAN information is subject to the SCAAN Disclaimer set forth elsewhere.

The data presented in this report is independent of the Shift Calibration, which defines the actual gear range and converter mode (converter, lockup) that the transmission operates in.

GEAR F1 (RATIO = 3.487) - CONVERTER MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE

Engine Fan	On	Engine Power	Standard Power Curve
Air Conditioning	Off	Vehicle Parameters	Standard

Speed Ratio	Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
0.000	1896	997.9	198.2	0	7426.7	0.0	198.22	Stall
0.100	1907	994.8	198.7	55	7001.6	40.1	158.65	
0.200	1930	988.6	199.8	111	6509.0	75.5	124.38	
0.300	1945	984.5	200.5	167	6038.2	105.8	94.72	
0.400	1986	973.0	202.3	228	5430.7	129.5	72.82	
0.436	2003	968.3	203.1	250	5230.7	137.0	66.08	70 Percent
0.500	2039	958.1	204.6	292	4889.4	149.7	54.90	
0.558	2073	948.7	205.9	331	4575.3	158.8	47.14	80 Percent
0.600	2099	941.4	206.9	361	4343.4	164.3	42.66	
0.650	2146	932.7	209.6	400	4083.4	171.0	38.56	85 Percent
0.700	2190	924.6	212.1	440	3843.3	177.0	35.12	
0.850	2370	884.7	219.6	578	3051.0	184.6	35.01	
0.875	2422	877.6	222.6	608	2919.4	185.8	36.79	
0.880	2438	875.3	223.5	615	2894.6	186.5	36.99	Coupling
0.900	2592	837.7	227.3	669	2756.5	193.1	34.26	
0.911	2684	808.4	227.2	701	2652.0	194.7	32.54	
0.921	2800	773.8	226.9	740	2529.4	196.0	30.90	Governed
0.923	2803	761.6	223.5	742	2487.2	193.3	30.25	
0.925	2806	746.0	219.2	744	2433.7	189.7	29.53	

0.950	2858	521.9	156.2	779	1662.2	135.5	20.68	
0.975	2913	280.8	85.7	815	832.6	71.0	14.65	
0.990	2950	121.6	37.6	838	290.3	25.5	12.12	

GEAR F2 (RATIO = 1.864) - CONVERTER MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE


Engine Fan		On		Engine Power		Standard Power Curve		
Air Conditioning		Off		Vehicle Parameters		Standard		
Speed Ratio	Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
0.000	1896	997.9	198.2	0	3979.6	0.0	198.22	Stall
0.100	1907	994.8	198.7	102	3754.6	40.2	158.53	
0.200	1930	988.6	199.8	207	3493.0	75.7	124.08	
0.300	1945	984.5	200.5	313	3242.9	106.3	94.23	
0.400	1986	973.0	202.3	426	2919.2	130.3	72.10	
0.436	2003	968.3	203.1	468	2812.6	137.8	65.27	70 Percent
0.500	2039	958.1	204.6	547	2628.5	150.6	54.05	
0.558	2073	948.7	205.9	620	2460.3	159.8	46.19	80 Percent
0.600	2099	941.4	206.9	676	2336.5	165.3	41.62	
0.650	2146	932.7	209.6	748	2198.1	172.2	37.36	85 Percent
0.700	2190	924.6	212.1	822	2070.9	178.4	33.71	
0.850	2370	884.7	219.6	1081	1647.5	186.5	33.13	
0.875	2422	877.6	222.6	1137	1577.0	187.7	34.84	
0.880	2438	875.3	223.5	1151	1563.7	188.5	35.01	Coupling
0.900	2592	837.7	227.3	1251	1489.5	195.2	32.17	
0.911	2684	808.4	227.2	1311	1433.4	196.8	30.38	
0.921	2800	773.8	226.9	1384	1367.6	198.2	28.65	Governed
0.923	2803	761.6	223.5	1388	1345.0	195.5	28.00	
0.925	2806	746.0	219.2	1393	1316.3	192.0	27.28	
0.950	2858	521.9	156.2	1457	902.9	137.7	18.49	
0.975	2913	280.8	85.7	1524	458.4	73.1	12.53	
0.990	2950	121.6	37.6	1567	167.7	27.5	10.06	

GEAR F3 (RATIO = 1.409) - CONVERTER MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE


Engine Fan		On		Engine Power		Standard Power Curve		
Air Conditioning		Off		Vehicle Parameters		Standard		
Speed Ratio	Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
0.000	1896	997.9	198.2	0	3014.6	0.0	198.22	Stall
0.100	1907	994.8	198.7	135	2844.3	40.3	158.44	
0.200	1930	988.6	199.8	274	2646.2	75.9	123.92	
0.300	1945	984.5	200.5	414	2456.7	106.5	93.99	
0.400	1986	973.0	202.3	564	2211.3	130.5	71.82	

0.436	2003	968.3	203.1	619	2130.9	138.1	64.96	70 Percent
0.500	2039	958.1	204.6	724	1991.8	150.9	53.68	
0.558	2073	948.7	205.9	820	1864.4	160.2	45.79	80 Percent
0.600	2099	941.4	206.9	894	1770.4	165.7	41.22	
0.650	2146	932.7	209.6	990	1665.0	172.6	37.01	85 Percent
0.700	2190	924.6	212.1	1088	1567.6	178.6	33.45	
0.850	2370	884.7	219.6	1430	1245.3	186.5	33.14	
0.875	2422	877.6	222.6	1504	1191.6	187.7	34.91	
0.880	2438	875.3	223.5	1523	1181.4	188.4	35.10	Coupling
0.900	2592	837.7	227.3	1655	1124.7	195.0	32.37	
0.911	2684	808.4	227.2	1735	1081.9	196.6	30.66	
0.921	2800	773.8	226.9	1831	1031.8	197.9	29.03	Governed
0.923	2803	761.6	223.5	1837	1014.6	195.1	28.39	
0.925	2806	746.0	219.2	1842	992.9	191.6	27.69	
0.950	2858	521.9	156.2	1927	679.5	137.1	19.11	
0.975	2913	280.8	85.7	2016	342.4	72.3	13.39	
0.990	2950	121.6	37.6	2073	122.1	26.5	11.09	

GEAR F4 (RATIO = 1.000) - CONVERTER MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE


Engine Fan		On		Engine Power		Standard Power Curve		
Air Conditioning		Off		Vehicle Parameters		Standard		
Speed Ratio	Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
0.000	1896	997.9	198.2	0	2152.9	0.0	198.22	Stall
0.100	1907	994.8	198.7	191	2031.4	40.6	158.18	
0.200	1930	988.6	199.8	386	1890.0	76.4	123.44	
0.300	1945	984.5	200.5	583	1754.5	107.2	93.33	
0.400	1986	973.0	202.3	794	1578.9	131.3	71.03	
0.436	2003	968.3	203.1	872	1521.0	138.9	64.17	70 Percent
0.500	2039	958.1	204.6	1020	1420.9	151.7	52.90	
0.558	2073	948.7	205.9	1156	1329.3	160.9	45.06	80 Percent
0.600	2099	941.4	206.9	1259	1261.8	166.4	40.52	
0.650	2146	932.7	209.6	1395	1186.1	173.3	36.35	85 Percent
0.700	2190	924.6	212.1	1533	1116.4	179.2	32.84	
0.850	2370	884.7	219.6	2015	884.1	186.5	33.07	
0.875	2422	877.6	222.6	2119	845.2	187.6	35.02	
0.880	2438	875.3	223.5	2146	837.8	188.3	35.25	Coupling
0.900	2592	837.7	227.3	2332	796.3	194.5	32.85	
0.911	2684	808.4	227.2	2444	765.0	195.8	31.39	
0.921	2800	773.8	226.9	2580	728.3	196.8	30.11	Governed
0.923	2803	761.6	223.5	2588	716.0	194.0	29.51	
0.925	2806	746.0	219.2	2596	700.4	190.4	28.85	
0.950	2858	521.9	156.2	2715	475.7	135.3	20.96	

0.975	2913	280.8	85.7	2841	234.0	69.6	16.06	
0.990	2950	121.6	37.6	2921	76.1	23.3	14.32	

GEAR F5 (RATIO = 0.750) - CONVERTER MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE

Engine Fan		On		Engine Power		Standard Power Curve		
Air Conditioning		Off		Vehicle Parameters		Standard		
Speed Ratio	Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
0.000	1896	997.9	198.2	0	1602.1	0.0	198.22	Stall
0.100	1907	994.8	198.7	254	1511.3	40.3	158.51	
0.200	1930	988.6	199.8	515	1405.5	75.7	124.08	
0.300	1945	984.5	200.5	778	1304.0	106.2	94.29	
0.400	1986	973.0	202.3	1059	1172.4	130.0	72.34	
0.436	2003	968.3	203.1	1163	1128.9	137.5	65.61	70 Percent
0.500	2039	958.1	204.6	1359	1053.6	150.0	54.63	
0.558	2073	948.7	205.9	1541	984.6	158.9	47.06	80 Percent
0.600	2099	941.4	206.9	1679	933.7	164.2	42.75	
0.650	2146	932.7	209.6	1860	876.4	170.7	38.93	85 Percent
0.700	2190	924.6	212.1	2044	823.4	176.3	35.82	
0.850	2370	884.7	219.6	2686	646.3	181.8	37.80	
0.875	2422	877.6	222.6	2825	616.3	182.4	40.23	
0.880	2438	875.3	223.5	2861	610.5	182.9	40.60	Coupling
0.900	2592	837.7	227.3	3110	577.6	188.1	39.23	
0.911	2684	808.4	227.2	3259	553.2	188.8	38.43	
0.921	2800	773.8	226.9	3440	524.5	188.9	37.96	Governed
0.923	2803	761.6	223.5	3450	515.2	186.2	37.38	
0.925	2806	746.0	219.2	3461	503.5	182.5	36.74	
0.950	2858	521.9	156.2	3620	335.1	127.0	29.19	
0.975	2913	280.8	85.7	3787	154.0	61.1	24.62	
0.990	2950	121.6	37.6	3894	35.6	14.5	23.09	

GEAR F6 (RATIO = 0.652) - CONVERTER MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE

Engine Fan		On		Engine Power		Standard Power Curve		
Air Conditioning		Off		Vehicle Parameters		Standard		
Speed Ratio	Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
0.000	1896	997.9	198.2	0	1391.2	0.0	198.22	Stall
0.100	1907	994.8	198.7	293	1312.0	40.2	158.57	
0.200	1930	988.6	199.8	592	1219.5	75.6	124.23	
0.300	1945	984.5	200.5	895	1130.6	105.9	94.58	
0.400	1986	973.0	202.3	1218	1015.3	129.5	72.84	
0.436	2003	968.3	203.1	1338	977.1	136.9	66.21	70 Percent

0.500	2039	958.1	204.6	1564	910.8	149.2	55.46	
0.558	2073	948.7	205.9	1773	850.0	157.8	48.15	80 Percent
0.600	2099	941.4	206.9	1931	805.1	162.8	44.08	
0.650	2146	932.7	209.6	2139	754.3	169.0	40.62	85 Percent
0.700	2190	924.6	212.1	2351	707.2	174.1	37.94	
0.850	2370	884.7	219.6	3090	550.1	178.0	41.60	
0.875	2422	877.6	222.6	3250	523.4	178.1	44.44	
0.880	2438	875.3	223.5	3291	518.2	178.6	44.92	Coupling
0.900	2592	837.7	227.3	3577	488.5	183.0	44.34	
0.911	2684	808.4	227.2	3749	466.5	183.1	44.08	
0.921	2800	773.8	226.9	3957	440.3	182.5	44.45	Governed
0.923	2803	761.6	223.5	3969	432.2	179.6	43.92	
0.925	2806	746.0	219.2	3981	421.9	175.9	43.33	
0.950	2858	521.9	156.2	4164	274.4	119.7	36.55	
0.975	2913	280.8	85.7	4357	115.7	52.8	32.88	
0.990	2950	121.6	37.6	4479	12.0	5.6	31.98	

GEAR R1 (RATIO = 5.026) - CONVERTER MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE


Engine Fan		On		Engine Power		Standard Power Curve		
Air Conditioning		Off		Vehicle Parameters		Standard		
Speed Ratio	Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
0.000	1896	997.9	198.2	0	10440.5	0.0	198.22	Stall
0.100	1907	994.8	198.7	38	9854.4	39.2	159.60	
0.200	1930	988.6	199.8	77	9171.4	73.8	126.07	
0.300	1945	984.5	200.5	116	8517.3	103.5	96.98	
0.400	1986	973.0	202.3	158	7669.1	126.9	75.44	
0.436	2003	968.3	203.1	174	7389.5	134.3	68.81	70 Percent
0.500	2039	958.1	204.6	203	6908.2	146.8	57.86	
0.558	2073	948.7	205.9	230	6466.7	155.7	50.22	80 Percent
0.600	2099	941.4	206.9	251	6140.7	161.1	45.80	
0.650	2146	932.7	209.6	278	5775.2	167.8	41.77	85 Percent
0.700	2190	924.6	212.1	305	5437.6	173.7	38.38	
0.850	2370	884.7	219.6	401	4323.2	181.5	38.13	
0.875	2422	877.6	222.6	422	4137.9	182.7	39.88	
0.880	2438	875.3	223.5	427	4103.0	183.4	40.08	Coupling
0.900	2592	837.7	227.3	464	3908.5	189.9	37.41	
0.911	2684	808.4	227.2	486	3761.5	191.6	35.65	
0.921	2800	773.8	226.9	513	3589.7	193.0	33.92	Governed
0.923	2803	761.6	223.5	515	3530.3	190.3	33.19	
0.925	2806	746.0	219.2	516	3455.2	186.9	32.37	
0.950	2858	521.9	156.2	540	2371.3	134.1	22.07	
0.975	2913	280.8	85.7	565	1206.0	71.4	14.30	

0.990	2950	121.6	37.6	581	444.3	27.0	10.54
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GEAR F1 (RATIO = 3.487) - LOCKUP MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE

Engine Fan		On		Engine Power		Standard Power Curve	
Air Conditioning		Off		Vehicle Parameters		Standard	
Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
800	565.5	47.4	229	1865.8	44.8	2.55	
900	652.3	61.5	258	2162.0	58.4	3.05	
1000	738.4	77.3	287	2455.8	73.8	3.57	
1100	833.7	96.0	315	2782.3	91.9	4.13	
1200	958.5	120.5	344	3210.8	115.7	4.74	
1300	1007.9	137.2	373	3379.5	131.9	5.27	
1400	1056.8	154.9	401	3547.4	149.1	5.80	
1500	1055.4	165.8	430	3543.7	159.6	6.16	
1600	1053.7	176.6	459	3536.0	169.9	6.65	
1700	1051.7	187.2	488	3527.3	180.1	7.15	
1800	1024.4	193.1	516	3431.4	185.5	7.61	
1900	996.9	198.4	545	3334.6	190.3	8.08	
2000	969.1	203.0	574	3237.0	194.4	8.54	
2100	941.1	207.0	602	3138.5	197.9	9.02	
2200	922.8	212.6	631	3073.8	203.1	9.52	
2300	894.3	215.4	660	2973.7	205.4	10.00	
2400	880.6	221.3	688	2924.7	210.8	10.53	
2500	866.7	226.9	717	2874.9	215.8	11.07	
2700	803.3	227.1	774	2652.3	215.1	12.07	
2800	773.8	226.9	803	2548.6	214.3	12.58	Governed
2825	665.1	196.8	810	2173.3	184.4	12.39	
2850	556.5	166.1	817	1797.8	153.9	12.20	
2875	447.8	134.8	824	1422.4	122.8	12.01	
2900	339.1	103.0	832	1046.8	91.2	11.81	
2925	230.4	70.6	839	671.2	59.0	11.60	
2950	121.6	37.6	846	295.6	26.2	11.39	
2975	12.9	4.0	853	-80.1	-7.2	11.18	
3000	-95.8	-30.1	860	-455.8	-41.1	10.96	

GEAR F2 (RATIO = 1.864) - LOCKUP MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE

Engine Fan		On		Engine Power		Standard Power Curve	
Air Conditioning		Off		Vehicle Parameters		Standard	
Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
800	565.5	47.4	429	1009.0	45.3	2.03	

900	652.3	61.5	483	1167.2	59.0	2.46	
1000	738.4	77.3	536	1324.5	74.4	2.91	
1100	833.7	96.0	590	1499.4	92.7	3.38	
1200	958.5	120.5	644	1729.3	116.6	3.87	
1300	1007.9	137.2	697	1820.2	132.9	4.27	
1400	1056.8	154.9	751	1910.9	150.3	4.64	
1500	1055.4	165.8	805	1909.9	161.0	4.84	
1600	1053.7	176.6	858	1907.0	171.4	5.14	
1700	1051.7	187.2	912	1902.5	181.7	5.53	
1800	1024.4	193.1	966	1851.3	187.2	5.89	
1900	996.9	198.4	1019	1799.5	192.1	6.27	
2000	969.1	203.0	1073	1747.2	196.3	6.65	
2100	941.1	207.0	1127	1694.4	199.9	7.05	
2200	922.8	212.6	1180	1659.7	205.1	7.47	
2300	894.3	215.4	1234	1605.9	207.5	7.90	
2400	880.6	221.3	1288	1579.5	213.0	8.36	
2500	866.7	226.9	1341	1552.8	218.1	8.82	
2700	803.3	227.1	1448	1433.5	217.4	9.69	
2800	773.8	226.9	1502	1377.9	216.8	10.14	Governed
2825	665.1	196.8	1516	1176.7	186.8	10.01	
2850	556.5	166.1	1529	975.5	156.2	9.88	
2875	447.8	134.8	1542	774.3	125.1	9.74	
2900	339.1	103.0	1556	573.1	93.4	9.60	
2925	230.4	70.6	1569	371.8	61.1	9.46	
2950	121.6	37.6	1583	170.5	28.3	9.32	
2975	12.9	4.0	1596	-30.8	-5.1	9.17	
3000	-95.8	-30.1	1609	-232.1	-39.1	9.02	

GEAR F3 (RATIO = 1.409) - LOCKUP MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE



Engine Fan		On		Engine Power		Standard Power Curve	
Air Conditioning		Off		Vehicle Parameters		Standard	
Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
800	565.5	47.4	568	764.3	45.4	1.93	
900	652.3	61.5	639	884.6	59.2	2.31	
1000	738.4	77.3	710	1004.0	74.6	2.70	
1100	833.7	96.0	781	1136.6	92.9	3.12	
1200	958.5	120.5	852	1310.6	116.9	3.57	
1300	1007.9	137.2	923	1379.2	133.3	3.96	
1400	1056.8	154.9	994	1447.4	150.6	4.34	
1500	1055.4	165.8	1065	1445.9	161.2	4.59	
1600	1053.7	176.6	1136	1442.9	171.6	4.97	
1700	1051.7	187.2	1207	1439.3	181.9	5.38	

1800	1024.4	193.1	1278	1400.2	187.3	5.78	
1900	996.9	198.4	1348	1360.7	192.2	6.20	
2000	969.1	203.0	1419	1320.9	196.3	6.63	
2100	941.1	207.0	1490	1280.6	199.9	7.08	
2200	922.8	212.6	1561	1254.0	205.0	7.56	
2300	894.3	215.4	1632	1213.0	207.4	8.05	
2400	880.6	221.3	1703	1192.7	212.8	8.58	
2500	866.7	226.9	1774	1172.3	217.8	9.10	
2700	803.3	227.1	1916	1081.4	217.0	10.13	
2800	773.8	226.9	1987	1039.0	216.2	10.66	Governed
2825	665.1	196.8	2005	886.6	186.2	10.62	
2850	556.5	166.1	2023	734.2	155.5	10.57	
2875	447.8	134.8	2040	581.7	124.3	10.52	
2900	339.1	103.0	2058	429.2	92.5	10.47	
2925	230.4	70.6	2076	276.7	60.1	10.42	
2950	121.6	37.6	2094	124.1	27.2	10.36	
2975	12.9	4.0	2111	-28.4	-6.3	10.31	
3000	-95.8	-30.1	2129	-181.0	-40.4	10.25	

GEAR F4 (RATIO = 1.000) - LOCKUP MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE


Engine Fan		On		Engine Power		Standard Power Curve	
Air Conditioning		Off		Vehicle Parameters		Standard	
Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
800	565.5	47.4	800	545.5	45.7	1.67	
900	652.3	61.5	900	630.8	59.5	2.03	
1000	738.4	77.3	1000	715.5	74.9	2.39	
1100	833.7	96.0	1100	809.8	93.3	2.76	
1200	958.5	120.5	1200	933.6	117.3	3.13	
1300	1007.9	137.2	1300	982.3	133.7	3.49	
1400	1056.8	154.9	1400	1030.7	151.1	3.83	
1500	1055.4	165.8	1500	1029.5	161.7	4.07	
1600	1053.7	176.6	1600	1027.2	172.1	4.44	
1700	1051.7	187.2	1700	1024.2	182.3	4.90	
1800	1024.4	193.1	1800	995.8	187.7	5.39	
1900	996.9	198.4	1900	967.1	192.4	5.92	
2000	969.1	203.0	2000	938.2	196.5	6.48	
2100	941.1	207.0	2100	908.9	199.9	7.07	
2200	922.8	212.6	2200	889.4	204.9	7.71	
2300	894.3	215.4	2300	859.5	207.0	8.38	
2400	880.6	221.3	2400	844.4	212.2	9.10	
2500	866.7	226.9	2500	829.2	217.1	9.84	
2700	803.3	227.1	2700	762.9	215.7	11.44	

2800	773.8	226.9	2800	731.9	214.6	12.29	Governed
2825	665.1	196.8	2825	622.8	184.3	12.52	
2850	556.5	166.1	2850	513.7	153.3	12.75	
2875	447.8	134.8	2875	404.7	121.8	12.98	
2900	339.1	103.0	2900	295.6	89.8	13.22	
2925	230.4	70.6	2925	186.4	57.1	13.46	
2950	121.6	37.6	2950	77.3	23.9	13.70	
2975	12.9	4.0	2975	-31.9	-9.9	13.95	
3000	-95.8	-30.1	3000	-141.0	-44.3	14.20	

GEAR F5 (RATIO = 0.750) - LOCKUP MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE


Engine Fan		On		Engine Power		Standard Power Curve	
Air Conditioning		Off		Vehicle Parameters		Standard	
Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
800	565.5	47.4	1067	403.4	45.1	2.32	
900	652.3	61.5	1200	466.3	58.6	2.88	
1000	738.4	77.3	1333	528.8	73.8	3.49	
1100	833.7	96.0	1467	598.3	91.9	4.14	
1200	958.5	120.5	1600	689.9	115.6	4.86	
1300	1007.9	137.2	1733	725.4	131.7	5.54	
1400	1056.8	154.9	1867	760.7	148.7	6.24	
1500	1055.4	165.8	2000	759.0	159.0	6.82	
1600	1053.7	176.6	2133	756.5	169.0	7.55	
1700	1051.7	187.2	2267	753.4	178.8	8.40	
1800	1024.4	193.1	2400	731.4	183.8	9.28	
1900	996.9	198.4	2533	709.2	188.1	10.22	
2000	969.1	203.0	2667	686.6	191.8	11.22	
2100	941.1	207.0	2800	663.9	194.7	12.29	
2200	922.8	212.6	2933	648.3	199.1	13.46	
2300	894.3	215.4	3067	625.0	200.7	14.68	
2400	880.6	221.3	3200	612.7	205.3	16.01	
2500	866.7	226.9	3333	600.3	209.6	17.36	
2700	803.3	227.1	3600	548.9	206.9	20.19	
2800	773.8	226.9	3733	524.8	205.2	21.71	Governed
2825	665.1	196.8	3767	443.4	174.9	21.87	
2850	556.5	166.1	3800	362.0	144.1	22.03	
2875	447.8	134.8	3833	280.6	112.6	22.19	
2900	339.1	103.0	3867	199.1	80.6	22.36	
2925	230.4	70.6	3900	117.6	48.0	22.52	
2950	121.6	37.6	3933	36.2	14.9	22.69	
2975	12.9	4.0	3967	-45.3	-18.8	22.86	
3000	-95.8	-30.1	4000	-126.8	-53.1	23.03	

GEAR F6 (RATIO = 0.652) - LOCKUP MODE - STANDARD, FAN ON, AC OFF, STANDARD POWER CURVE ▲

Engine Fan		On		Engine Power		Standard Power Curve	
Air Conditioning		Off		Vehicle Parameters		Standard	
Engine Speed (rpm)	Net Engine Torque (N-m)	Net Engine Power (kW)	Transmission Output Speed (rpm)	Transmission Output Torque (N-m)	Transmission Output Power (kW)	Transmission Heat Rejection (kW)	Match Point
800	565.5	47.4	1227	347.5	44.6	2.72	
900	652.3	61.5	1380	401.6	58.1	3.43	
1000	738.4	77.3	1534	455.3	73.1	4.20	
1100	833.7	96.0	1687	515.0	91.0	5.05	
1200	958.5	120.5	1840	593.8	114.4	6.01	
1300	1007.9	137.2	1994	623.9	130.3	6.94	
1400	1056.8	154.9	2147	653.8	147.0	7.93	
1500	1055.4	165.8	2301	651.6	157.0	8.82	
1600	1053.7	176.6	2454	648.5	166.7	9.90	
1700	1051.7	187.2	2607	645.1	176.2	11.08	
1800	1024.4	193.1	2761	625.4	180.8	12.30	
1900	996.9	198.4	2914	605.4	184.8	13.60	
2000	969.1	203.0	3067	585.2	188.0	14.97	
2100	941.1	207.0	3221	564.8	190.5	16.44	
2200	922.8	212.6	3374	550.7	194.6	18.02	
2300	894.3	215.4	3528	529.9	195.8	19.66	
2400	880.6	221.3	3681	518.6	199.9	21.43	
2500	866.7	226.9	3834	506.9	203.5	23.37	
2700	803.3	227.1	4141	460.3	199.6	27.53	
2800	773.8	226.9	4294	438.3	197.1	29.81	Governed
2825	665.1	196.8	4333	367.3	166.6	30.13	
2850	556.5	166.1	4371	296.3	135.6	30.47	
2875	447.8	134.8	4410	225.3	104.0	30.80	
2900	339.1	103.0	4448	154.2	71.8	31.14	
2925	230.4	70.6	4486	83.2	39.1	31.49	
2950	121.6	37.6	4525	12.1	5.7	31.84	
2975	12.9	4.0	4563	-58.9	-28.2	32.19	
3000	-95.8	-30.1	4601	-130.0	-62.7	32.55	

Vehicle Full Throttle Performance ▲

MISSION ▲

End User xxx

Selected Vocation Military — Wheeled - Tactical — Straight Truck (52-25-10)

PLATFORM ▲

Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
Engine Description	Cummins ISB6.7 (Diesel) -- 340hp@2800rpm 1100Nm@1400rpm -- without SEM/LRTP (116-L033737-E, Rev A)
Transmission	3200 SP Retarder (1-L007346-T, Rev E)
Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Vehicle Parameters	Standard
Torque Converter	TC417 (1-L001251-TC, Rev C) Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)
LRTP Status	

NOTE

This SCAAN information is subject to the SCAAN Disclaimer set forth elsewhere.

Results indicate the vehicle operating conditions at steady state (acceleration = 0).

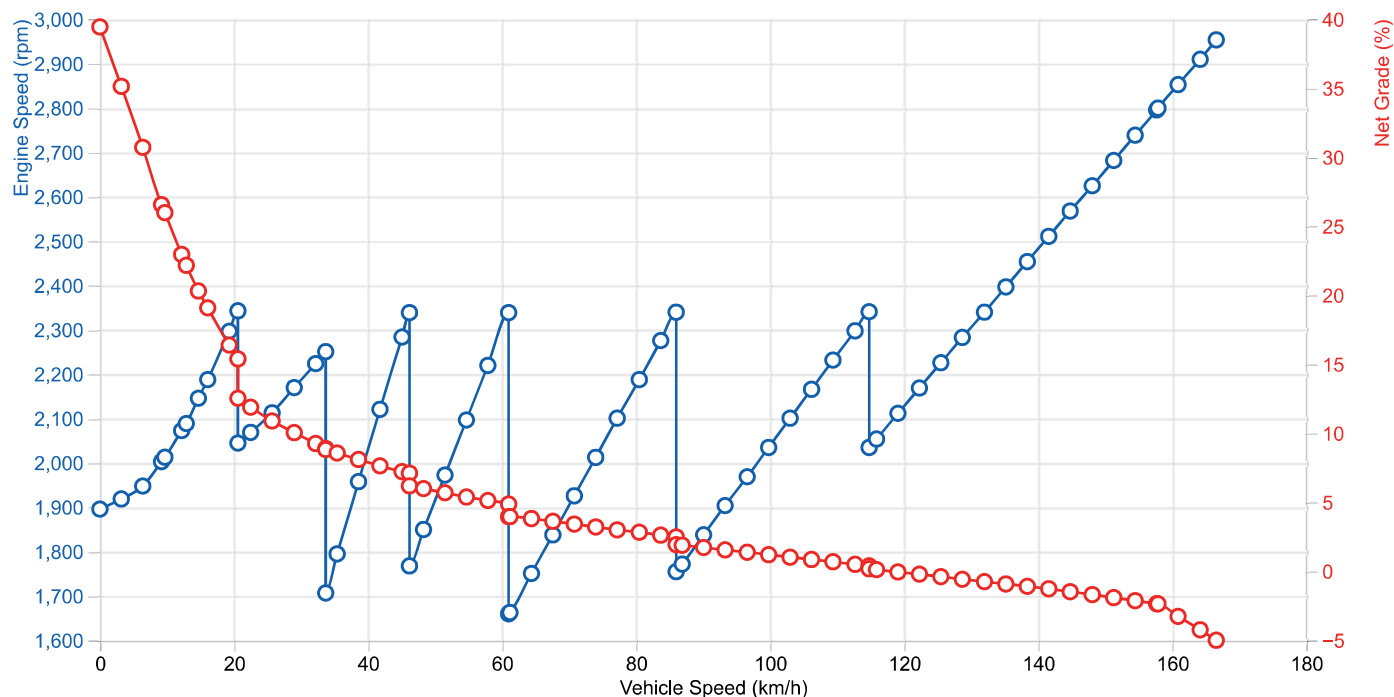
The **!** symbol indicates that Wheel Slip may occur.

FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 1.000

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	0.95

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)	Match Point
1C	0.0	1896	0	69.18	68.39	0.0	39.46	198.21	
1C	3.2	1919	88	62.59	61.78	56.0	35.15	137.69	
1C	6.4	1948	175	55.57	54.74	99.4	30.73	91.24	
1C	9.2	2003	250	48.72	47.86	124.5	26.58	66.07	70 Percent
1C	9.7	2013	263	47.76	46.89	128.1	26.00	62.51	
1C	12.2	2073	331	42.62	41.72	144.3	22.97	47.08	80 Percent
1C	12.9	2089	350	41.25	40.34	147.5	22.18	44.16	
1C	14.7	2146	400	38.04	37.10	155.4	20.32	38.51	85 Percent
1C	16.1	2188	438	35.91	34.96	160.5	19.10	35.26	
1C	19.3	2297	525	31.15	30.15	167.1	16.40	31.39	
1C	20.6	2343	559	29.38	28.36	167.8	15.40	33.32	
2C	20.6	2045	559	24.22	23.20	138.3	12.55	52.52	
2C	22.5	2069	613	23.07	22.02	144.4	11.90	46.81	
2C	25.7	2113	700	21.30	20.18	152.3	10.90	40.03	
2C	29.0	2170	788	19.83	18.64	159.5	10.06	35.31	
2C	32.2	2224	875	18.46	17.21	165.1	9.27	31.60	
2C	33.7	2251	916	17.83	16.54	166.8	8.91	30.44	
2L	33.7	1707	916	17.69	16.40	165.5	8.83	5.53	
2L	35.4	1795	963	17.27	15.94	169.8	8.58	5.86	
2L	38.6	1958	1050	16.48	15.06	176.8	8.11	6.42	

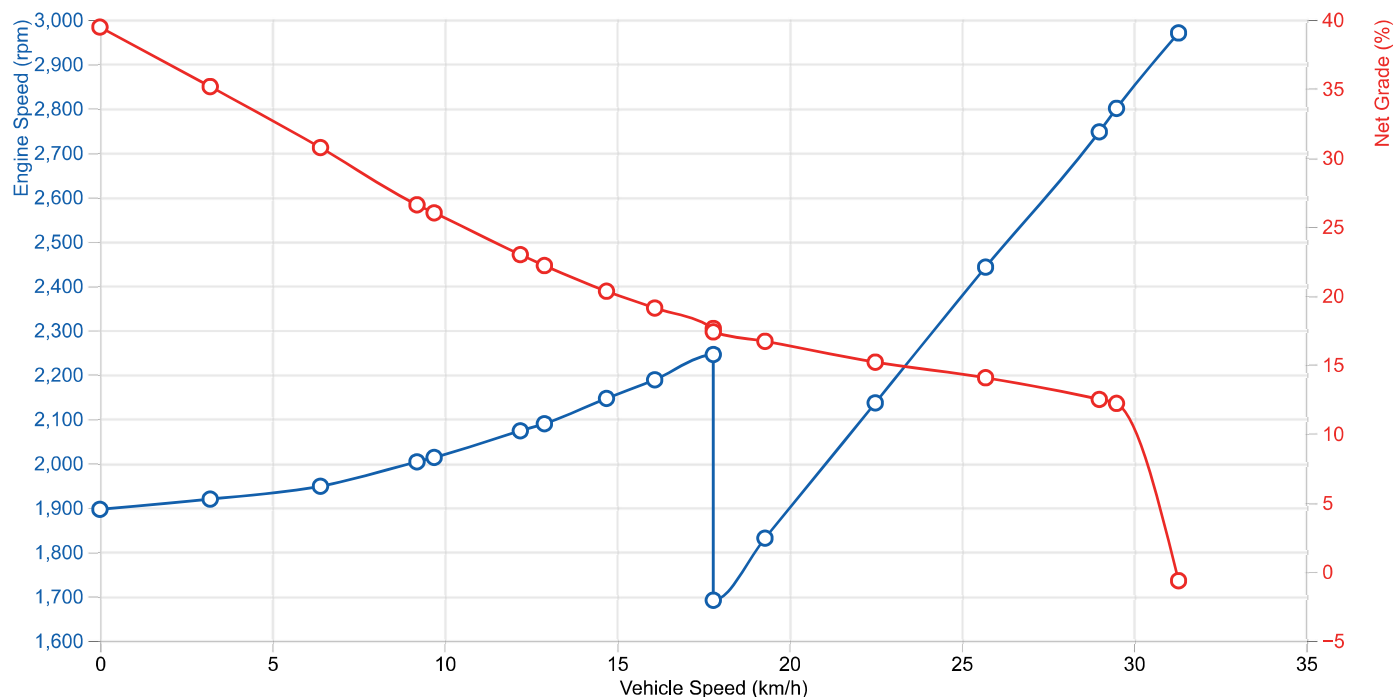
2L	41.8	2121	1138	15.72	14.21	182.7	7.65	7.10	
2L	45.1	2284	1225	15.04	13.44	188.2	7.23	7.79	
2L	46.2	2339	1255	14.86	13.23	190.5	7.12	8.04	
3L	46.2	1768	1255	13.16	11.53	168.7	6.20	5.59	
3L	48.3	1850	1313	12.86	11.16	172.5	6.00	5.92	
3L	51.5	1973	1400	12.40	10.60	177.4	5.70	6.46	
3L	54.7	2097	1488	11.94	10.03	181.5	5.39	7.05	
3L	57.9	2220	1576	11.60	9.57	186.8	5.14	7.61	
3L	61.0	2339	1660	11.23	9.07	190.3	4.88	8.22	
4L	61.0	1660	1660	9.55	7.40	162.0	3.97	4.71	
4L	61.2	1663	1663	9.55	7.40	162.2	3.97	4.72	
4L	64.4	1751	1751	9.41	7.12	168.2	3.83	5.07	
4L	67.6	1838	1838	9.17	6.76	172.3	3.63	5.52	
4L	70.8	1926	1926	8.94	6.38	175.8	3.43	6.00	
4L	74.0	2013	2013	8.70	6.00	179.0	3.22	6.52	
4L	77.2	2101	2101	8.46	5.61	181.6	3.01	7.08	
4L	80.5	2188	2188	8.31	5.30	185.6	2.84	7.61	
4L	83.7	2276	2276	8.07	4.90	187.7	2.63	8.16	
4L	86.0	2340	2340	7.95	4.66	190.0	2.50	8.63	
5L	86.0	1755	2340	6.91	3.61	165.1	1.94	8.80	
5L	86.9	1772	2363	6.87	3.53	165.8	1.90	8.97	
5L	90.1	1838	2451	6.73	3.22	168.6	1.73	9.56	
5L	93.3	1904	2538	6.60	2.91	171.1	1.56	10.24	
5L	96.6	1969	2626	6.46	2.59	173.3	1.39	10.84	
5L	99.8	2035	2713	6.32	2.26	175.2	1.21	11.52	
5L	103.0	2101	2801	6.18	1.92	176.9	1.03	12.30	
5L	106.2	2166	2888	6.09	1.63	179.6	0.87	13.01	
5L	109.4	2232	2976	5.97	1.30	181.5	0.70	13.78	
5L	112.7	2298	3063	5.83	0.95	182.4	0.51	14.64	
5L	114.8	2341	3121	5.78	0.75	184.1	0.40	15.18	
6L	114.8	2035	3121	5.39	0.36	171.7	0.19	15.41	
6L	115.9	2054	3151	5.35	0.25	172.1	0.13	15.69	
6L	119.1	2112	3239	5.25	-0.07	173.5	-0.04	16.60	
6L	122.3	2169	3326	5.17	-0.38	175.7	-0.20	17.47	
6L	125.5	2226	3414	5.08	-0.71	177.1	-0.38	18.37	
6L	128.7	2283	3501	4.97	-1.06	177.7	-0.57	19.33	
6L	132.0	2340	3589	4.89	-1.38	179.4	-0.74	20.32	
6L	135.2	2397	3676	4.83	-1.69	181.5	-0.91	21.37	
6L	138.4	2454	3764	4.77	-2.01	183.5	-1.08	22.43	
6L	141.6	2511	3851	4.70	-2.35	184.8	-1.26	23.52	
6L	144.8	2568	3939	4.57	-2.74	184.0	-1.47	24.43	
6L	148.1	2625	4026	4.45	-3.14	183.0	-1.68	25.60	
6L	151.3	2682	4114	4.33	-3.54	181.8	-1.90	27.03	
6L	154.5	2739	4201	4.21	-3.95	180.5	-2.12	28.34	
6L	157.7	2796	4289	4.09	-4.35	179.2	-2.34	29.71	
6L	157.9	2800	4294	4.08	-4.38	179.1	-2.35	29.81	Governed
6L	160.9	2853	4376	2.67	-6.07	119.3	-3.26	30.51	
6L	164.2	2910	4464	1.16	-7.88	52.9	-4.23	31.29	
6L	166.6	2954	4531	0.00	-9.28	0.0	-4.99	31.90	

PLOTS - FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6,000, ▲

FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6,000, AUX RATIO ▲

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	0.95

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)	Match Point
1C	0.0	1896	0	69.18	68.39	0.0	39.46	198.21	
1C	3.2	1919	88	62.59	61.78	56.0	35.15	137.69	
1C	6.4	1948	175	55.57	54.74	99.4	30.73	91.24	
1C	9.2	2003	250	48.72	47.86	124.5	26.58	66.07	70 Percent
1C	9.7	2013	263	47.76	46.89	128.1	26.00	62.51	
1C	12.2	2073	331	42.62	41.72	144.3	22.97	47.08	80 Percent
1C	12.9	2089	350	41.25	40.34	147.5	22.18	44.16	
1C	14.7	2146	400	38.04	37.10	155.4	20.32	38.51	85 Percent
1C	16.1	2188	438	35.91	34.96	160.5	19.10	35.26	
1C	17.8	2245	485	33.31	32.33	165.0	17.62	32.26	
1L	17.8	1691	485	32.86	31.88	162.8	17.37	7.10	
1L	19.3	1831	525	31.68	30.68	170.0	16.69	7.69	
1L	22.5	2136	613	29.01	27.96	181.6	15.18	9.15	
1L	25.7	2442	700	27.05	25.93	193.5	14.05	10.72	
1L	29.0	2747	788	24.25	23.07	195.2	12.48	12.23	
1L	29.5	2800	803	23.74	22.54	194.7	12.19	12.58	Governed
1L	31.3	2970	852	0.00	-1.24	0.0	-0.66	11.22	

PLOTS - FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6,000, AU▲

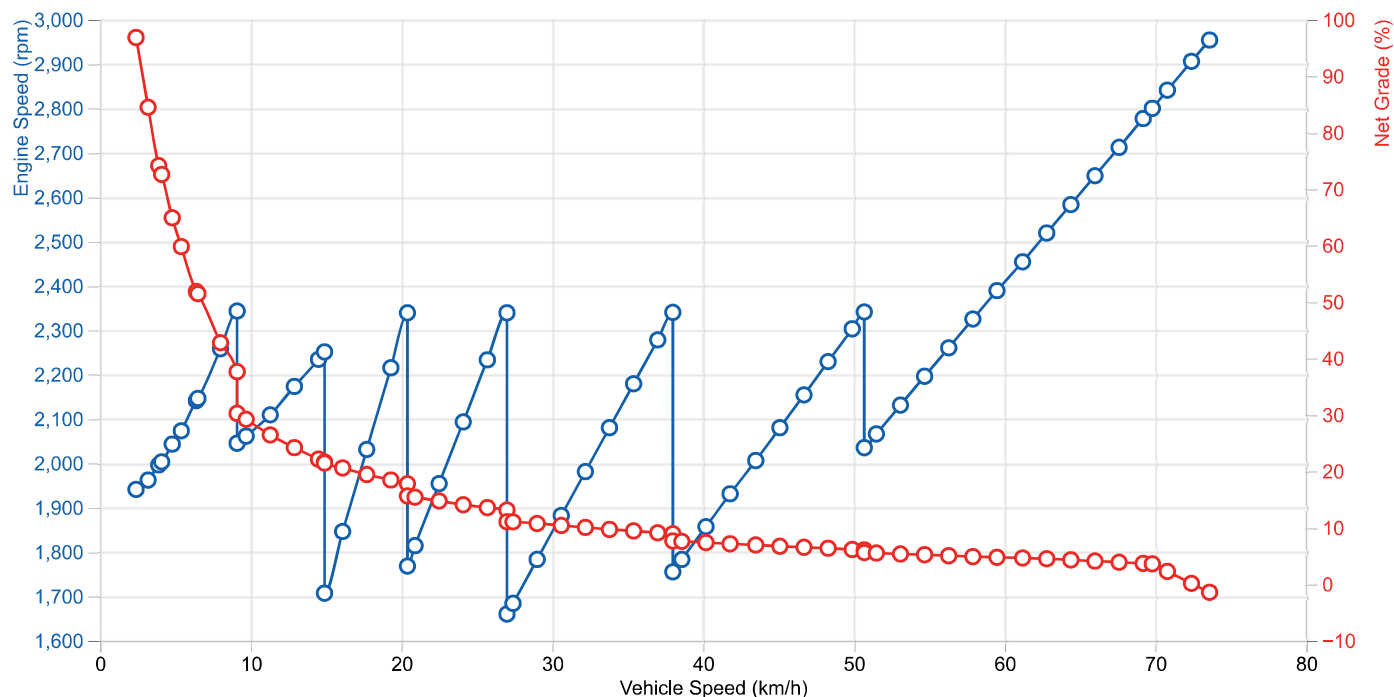

FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RAT▲

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	2.15

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)	Match Point
1C !	0.0	1896	0	156.56	155.77	0.0	152.36	198.21	
1C !	1.6	1924	99	139.48	138.68	62.4	111.43	130.89	
1C	2.4	1941	149	130.43	129.62	87.8	96.83	103.68	0.70 TE/Weight Ratio
1C	3.2	1962	198	121.06	120.24	108.2	84.48	82.13	
1C	3.9	1996	242	111.80	110.97	122.1	74.14	68.49	0.60 TE/Weight Ratio
1C	4.1	2003	250	110.27	109.45	124.5	72.58	66.07	70 Percent
1C	4.8	2043	297	102.26	101.44	137.1	64.90	53.76	
1C	5.4	2073	331	96.45	95.62	144.3	59.79	47.08	80 Percent
1C	6.4	2141	396	86.57	85.74	154.8	51.83	38.87	
1C	6.5	2146	400	86.08	85.24	155.4	51.45	38.51	85 Percent
1C	8.0	2258	495	74.13	73.27	165.7	42.77	31.87	
1C	9.1	2343	559	66.50	65.63	167.8	37.64	33.32	
2C	9.1	2045	559	54.82	53.96	138.3	30.26	52.52	
2C	9.7	2061	594	53.11	52.24	142.5	29.21	48.62	
2C	11.3	2109	693	48.49	47.60	151.7	26.43	40.46	
2C	12.9	2173	792	44.71	43.80	159.9	24.18	35.09	
2C	14.5	2234	891	41.21	40.28	165.8	22.14	31.08	
2C	14.9	2251	916	40.35	39.41	166.8	21.64	30.44	
2L	14.9	1707	916	40.03	39.09	165.5	21.46	5.53	
2L	16.1	1846	990	38.52	37.57	172.2	20.59	5.99	
2L	17.7	2031	1089	36.49	35.51	179.4	19.42	6.71	

2L	19.3	2215	1189	34.81	33.81	186.7	18.45	7.50	
2L	20.4	2339	1255	33.64	32.62	190.5	17.78	8.04	
3L	20.4	1768	1255	29.78	28.76	168.7	15.62	5.59	
3L	20.9	1814	1288	29.40	28.37	170.9	15.41	5.81	
3L	22.5	1954	1387	28.23	27.18	176.7	14.74	6.36	
3L	24.1	2093	1486	27.05	25.97	181.4	14.07	7.03	
3L	25.7	2233	1585	26.15	25.03	187.1	13.56	7.65	
3L	27.0	2339	1660	25.41	24.26	190.3	13.13	8.22	
4L	27.0	1660	1660	21.62	20.47	162.0	11.06	4.71	
4L	27.4	1684	1684	21.60	20.45	164.2	11.04	4.82	
4L	29.0	1783	1783	21.10	19.91	169.8	10.75	5.27	
4L	30.6	1882	1882	20.50	19.28	174.1	10.40	5.78	
4L	32.2	1981	1981	19.89	18.64	177.9	10.05	6.32	
4L	33.8	2080	2080	19.28	17.99	181.0	9.70	6.90	
4L	35.4	2179	2179	18.83	17.50	185.2	9.43	7.54	
4L	37.0	2278	2278	18.26	16.88	187.7	9.10	8.18	
4L	38.0	2340	2340	17.99	16.59	190.0	8.94	8.63	
5L	38.0	1755	2340	15.63	14.23	165.1	7.66	8.80	
5L	38.6	1783	2377	15.50	14.08	166.3	7.58	9.08	
5L	40.2	1857	2476	15.15	13.69	169.3	7.37	9.73	
5L	41.8	1931	2575	14.80	13.30	172.0	7.15	10.46	
5L	43.5	2006	2674	14.45	12.90	174.4	6.94	11.26	
5L	45.1	2080	2773	14.09	12.49	176.4	6.72	12.03	
5L	46.7	2154	2872	13.82	12.17	179.1	6.54	12.87	
5L	48.3	2229	2971	13.53	11.83	181.4	6.36	13.74	
5L	49.9	2303	3070	13.17	11.42	182.5	6.14	14.71	
5L	50.7	2341	3121	13.07	11.29	184.1	6.07	15.18	
6L	50.7	2035	3121	12.19	10.41	171.7	5.60	15.41	
6L	51.5	2066	3169	12.05	10.25	172.4	5.51	15.87	
6L	53.1	2131	3268	11.81	9.96	174.3	5.35	16.88	
6L	54.7	2196	3368	11.62	9.71	176.7	5.22	17.94	
6L	56.3	2260	3467	11.35	9.37	177.5	5.04	18.92	
6L	57.9	2325	3566	11.11	9.08	178.8	4.88	20.06	
6L	59.5	2389	3665	10.96	8.86	181.2	4.76	21.23	
6L	61.2	2454	3764	10.80	8.64	183.5	4.64	22.43	
6L	62.8	2519	3863	10.60	8.38	184.7	4.50	23.63	
6L	64.4	2583	3962	10.28	8.00	183.8	4.30	24.72	
6L	66.0	2648	4061	9.96	7.61	182.6	4.09	26.14	
6L	67.6	2712	4160	9.65	7.23	181.1	3.88	27.77	
6L	69.2	2777	4259	9.35	6.86	179.7	3.68	29.21	
6L	69.8	2800	4294	9.24	6.73	179.1	3.61	29.81	Governed
6L	70.8	2841	4358	6.76	4.20	133.0	2.26	30.35	
6L	72.4	2906	4457	2.89	0.26	58.2	0.14	31.23	
6L	73.6	2954	4531	0.00	-2.68	0.0	-1.44	31.90	

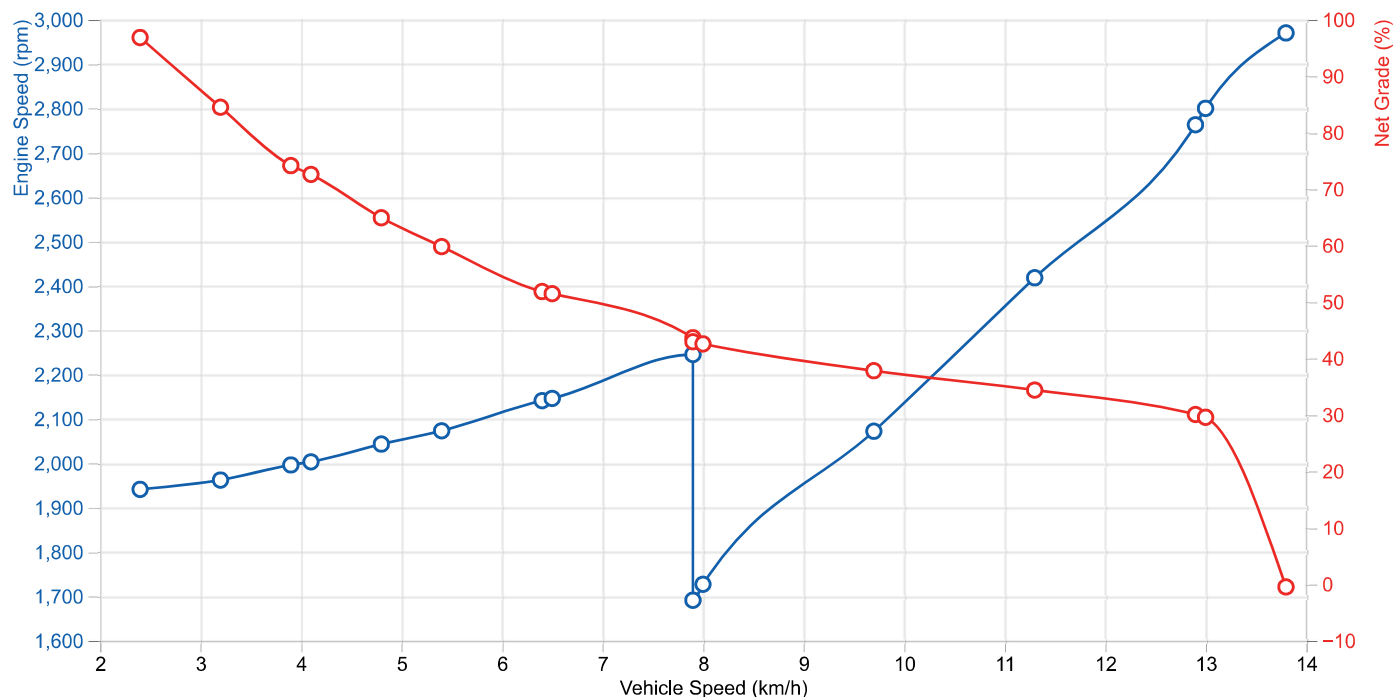
PLOTS - FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, ▲


FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO ➤

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	2.15

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)	Match Point
1C !	0.0	1896	0	156.56	155.77	0.0	152.36	198.21	
1C !	1.6	1924	99	139.48	138.68	62.4	111.43	130.89	
1C	2.4	1941	149	130.43	129.62	87.8	96.83	103.68	0.70 TE/Weight Ratio
1C	3.2	1962	198	121.06	120.24	108.2	84.48	82.13	
1C	3.9	1996	242	111.80	110.97	122.1	74.14	68.49	0.60 TE/Weight Ratio
1C	4.1	2003	250	110.27	109.45	124.5	72.58	66.07	70 Percent
1C	4.8	2043	297	102.26	101.44	137.1	64.90	53.76	
1C	5.4	2073	331	96.45	95.62	144.3	59.79	47.08	80 Percent
1C	6.4	2141	396	86.57	85.74	154.8	51.83	38.87	
1C	6.5	2146	400	86.08	85.24	155.4	51.45	38.51	85 Percent
1C	7.9	2245	485	75.38	74.53	165.0	43.64	32.26	
1L	7.9	1691	485	74.37	73.52	162.8	42.94	7.10	
1L	8.0	1727	495	73.82	72.96	165.0	42.56	7.22	
1L	9.7	2072	594	66.74	65.87	179.0	37.79	8.83	
1L	11.3	2418	693	61.47	60.58	192.4	34.38	10.60	
1L	12.9	2763	792	54.54	53.63	195.0	30.05	12.32	
1L	13.0	2800	803	53.73	52.82	194.7	29.56	12.58	Governed
1L	13.8	2970	852	0.00	-0.92	0.0	-0.49	11.22	

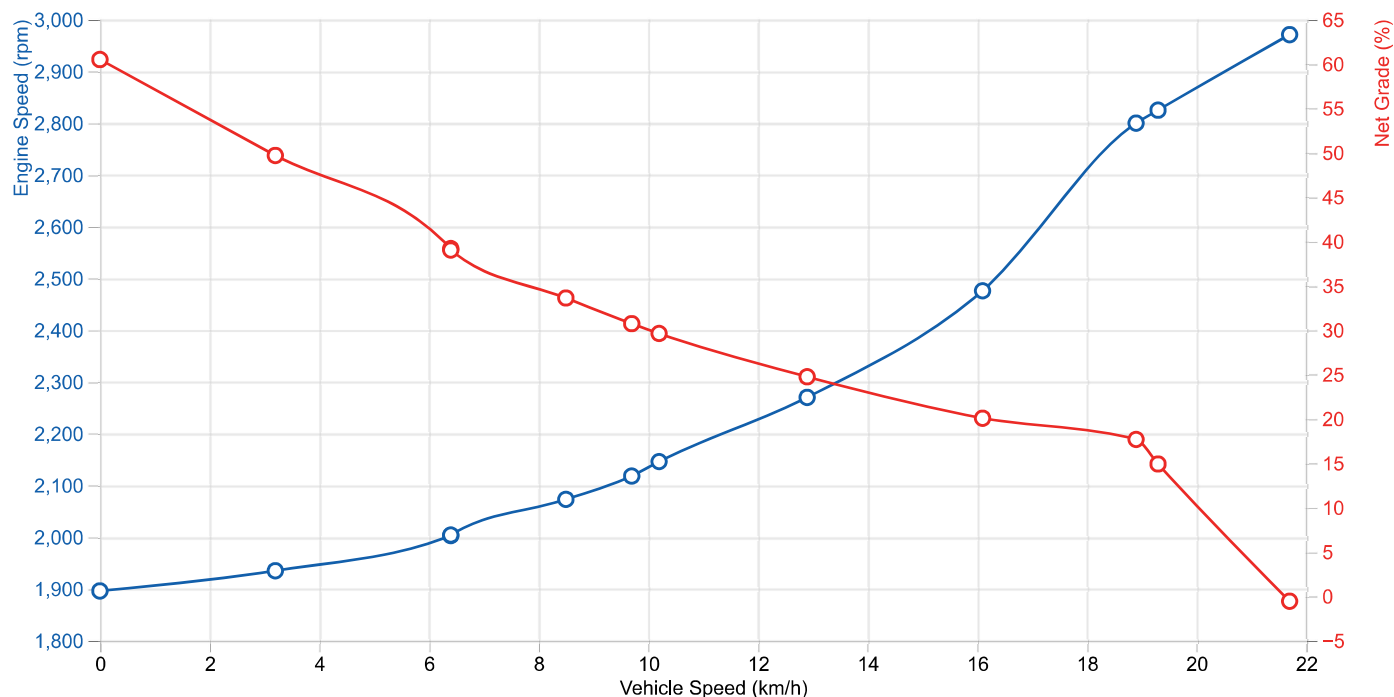
PLOTS - FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AU ➤


FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.950, STAN▲

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	0.95

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)	Match Point
R1C	0.0	1896	0	97.25	96.46	0.0	60.51	198.21	
R1C	3.2	1935	88	83.73	82.92	74.9	49.69	117.59	
R1C	6.4	2003	174	68.83	67.99	122.0	39.19	68.80	70 Percent
R1C	6.4	2004	175	68.59	67.75	122.6	39.03	68.18	
R1C	8.5	2073	230	60.24	59.38	141.5	33.62	50.16	80 Percent
R1C	9.7	2118	263	55.60	54.73	149.1	30.73	43.84	
R1C	10.2	2146	278	53.79	52.92	152.5	29.62	41.72	85 Percent
R1C	12.9	2270	350	45.66	44.75	163.3	24.74	34.87	
R1C	16.1	2476	438	37.61	36.66	168.1	20.07	40.52	
R1C	18.9	2800	513	33.44	32.44	175.3	17.68	33.92	Governed
R1C	19.3	2825	525	28.48	27.48	152.8	14.91	28.26	
R1C	21.7	2971	590	0.00	-1.04	0.0	-0.56	8.96	

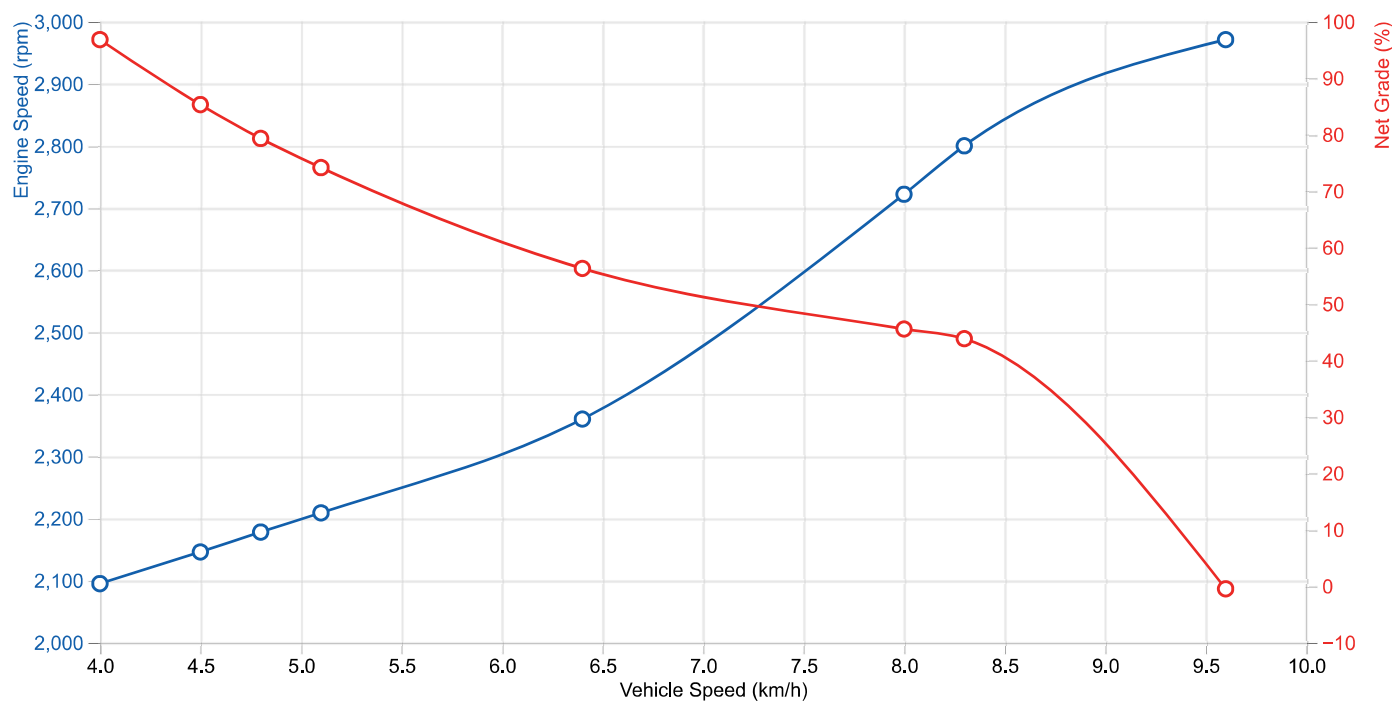
PLOTS - FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.9▲


FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.150, STAN▲

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	2.15

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)	Match Point
R1C I	0.0	1896	0	220.09	219.30	0.0	999.00	198.21	
R1C I	1.6	1939	99	185.43	184.63	82.9	737.02	108.96	
R1C I	2.8	2003	174	155.78	154.97	122.0	149.79	68.80	70 Percent
R1C I	3.2	2033	198	147.16	146.35	131.6	126.90	59.48	
R1C I	3.7	2073	230	136.32	135.51	141.5	105.96	50.16	80 Percent
R1C	4.0	2095	248	130.43	129.61	145.8	96.82	46.35	0.70 TE/Weight Ratio
R1C	4.5	2146	278	121.75	120.92	152.5	85.30	41.72	85 Percent
R1C	4.8	2178	297	116.59	115.77	156.4	79.30	39.26	
R1C	5.1	2209	316	111.80	110.97	159.5	74.14	37.27	0.60 TE/Weight Ratio
R1C	6.4	2360	396	92.23	91.39	164.9	56.28	37.48	
R1C	8.0	2722	495	78.09	77.24	174.5	45.55	34.98	
R1C	8.3	2800	513	75.67	74.82	175.3	43.84	33.92	Governed
R1C	9.6	2971	590	0.00	-0.87	0.0	-0.47	8.96	

PLOTS - FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.1▲



Vehicle Full Throttle Performance - Defense Wheeled

MISSION	
End User	xxx
Selected Vocation	Military — Wheeled - Tactical — Straight Truck (52-25-10)

PLATFORM	
Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
Engine Description	Cummins ISB6.7 (Diesel) -- 340hp@2800rpm 1100Nm@1400rpm -- without SEM/LRTP (116-L033737-E, Rev A)
Transmission	3200 SP Retarder (1-L007346-T, Rev E)
Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Vehicle Parameters	Standard
Torque Converter	TC417 (1-L001251-TC, Rev C) Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)
LRTP Status	

NOTE	
This SCAAN information is subject to the SCAAN Disclaimer set forth elsewhere.	
Results indicate the vehicle operating conditions at steady state (acceleration = 0).	
The ! symbol indicates that Wheel Slip may occur.	
The ✖ symbol indicates that the required grade cannot be negotiated.	

FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	0.95

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)
1C ✖							60.00	
1C	15.1	2157	410	37.46	36.52	156.8	20.00	37.60
1C	27.9	2828	759	19.69	18.53	152.6	10.00	25.51
1C	31.0	2961	844	1.23		10.6	0.00	11.64
2C ✖							60.00	
2C ✖							20.00	
2C	29.2	2174	795	19.71	18.53	160.1	10.00	34.97
2C	57.4	2944	1560	2.02		32.1	0.00	10.40
2L ✖							60.00	
2L ✖							20.00	
2L ✖	0.1						10.00	
2L	58.1	2944	1579	2.04		32.9	0.00	9.35
3L ✖							60.00	
3L ✖							20.00	
3L ✖	0.1						10.00	
3L	76.2	2921	2073	2.80		59.4	0.00	10.43
4L ✖							60.00	
4L ✖							20.00	
4L ✖	0.1						10.00	
4L	105.2	2860	2860	4.39		128.3	0.00	12.84
5L ✖							60.00	
5L ✖							20.00	
5L ✖	0.1						10.00	
5L	122.8	2504	3338	5.58		190.4	0.00	17.39
6L ✖							60.00	
6L ✖							20.00	
6L ✖	0.1						10.00	
6L	118.3	2098	3217	5.27		173.1	0.00	16.40

PLOTS - FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, ▲**FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO ▲**

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	0.95

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)
1C ✖							60.00	

1C	15.1	2157	410	37.46	36.52	156.8	20.00	37.60
1C	27.9	2828	759	19.69	18.53	152.6	10.00	25.51
1C	31.0	2961	844	1.23		10.6	0.00	11.64
1L ✖							60.00	
1L ✖							20.00	
1L	29.8	2829	811	19.74	18.54	163.6	10.00	12.37
1L	31.2	2961	849	1.23		10.7	0.00	11.30

PLOTS - FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AU▲

FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RAT▲

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	2.15

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)
1C	5.4	2072	330	96.69	95.86	144.0	60.00	47.32
1C	12.6	2850	774	37.44	36.53	130.7	20.00	21.80
1C	13.2	2907	811	19.47	18.56	71.2	10.00	15.14
1C	13.8	2967	848	0.92		3.5	0.00	11.42
2C ✖							60.00	
2C	16.3	2310	1001	37.42	36.47	169.0	20.00	29.98
2C	23.6	2855	1452	19.61	18.54	128.6	10.00	18.98
2C	25.7	2964	1584	1.12		8.0	0.00	9.47
2L ✖							60.00	
2L	16.9	1939	1040	37.51	36.54	176.1	20.00	6.34
2L	24.9	2855	1532	19.64	18.54	135.8	10.00	9.85
2L	25.8	2965	1590	1.12		8.0	0.00	9.23
3L ✖							60.00	
3L ✖							20.00	
3L	32.5	2816	1999	19.80	18.54	178.7	10.00	10.63
3L	34.1	2960	2101	1.30		12.3	0.00	10.34
4L ✖							60.00	
4L ✖							20.00	
4L	32.4	1996	1996	19.80	18.54	178.4	10.00	6.44
4L	47.9	2949	2949	1.69		22.5	0.00	13.70
5L ✖							60.00	
5L ✖							20.00	
5L ✖	0.1						10.00	
5L	63.4	2928	3905	2.25		39.6	0.00	22.55
6L ✖							60.00	
6L ✖							20.00	
6L ✖	0.1						10.00	
6L	72.5	2910	4464	2.63		53.1	0.00	31.29

PLOTS - FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, ▲

FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO ▶

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	2.15

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)
1C	5.4	2072	330	96.69	95.86	144.0	60.00	47.32
1C	12.6	2850	774	37.44	36.53	130.7	20.00	21.80
1C	13.2	2907	811	19.47	18.56	71.2	10.00	15.14
1C	13.8	2967	848	0.92		3.5	0.00	11.42
1L ✖							60.00	
1L	13.3	2851	818	37.46	36.54	138.2	20.00	12.19
1L	13.6	2908	834	19.46	18.54	73.2	10.00	11.74
1L	13.8	2967	851	0.92		3.5	0.00	11.25

PLOTS - FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX ▶**FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.950, STAN▶**

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	0.95

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)
R1C	0.3	1898	8	96.13	95.34	8.1	60.00	189.38
R1C	16.2	2492	442	37.40	36.44	168.8	20.00	40.73
R1C	20.1	2871	546	19.57	18.56	109.2	10.00	19.97
R1C	21.6	2966	588	1.04		6.3	0.00	9.32

PLOTS - FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.9▶**FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.150, STAN▶**

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	2.15

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Transmission Heat Rejection (kW)
R1C	6.1	2324	378	96.52	95.68	164.7	60.00	35.52
R1C	9.0	2886	553	37.47	36.60	93.5	20.00	17.69
R1C	9.3	2927	571	19.44	18.58	50.1	10.00	12.79
R1C	9.6	2969	589	0.87		2.3	0.00	9.09

PLOTS - FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.1

Vehicle Acceleration Performance

MISSION

End User	xxx
Selected Vocation	Military — Wheeled - Tactical — Straight Truck (52-25-10)

PLATFORM

Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
Engine Description	Cummins ISB6.7 (Diesel) -- 340hp@2800rpm 1100Nm@1400rpm -- without SEM/LRTP (116-L033737-E, Rev A)
Transmission	3200 SP Retarder (1-L007346-T, Rev E)
Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Vehicle Parameters	Standard
Torque Converter	TC417 (1-L001251-TC, Rev C) Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)
LRTP Status	

NOTE

This SCAAN information is subject to the SCAAN Disclaimer set forth elsewhere.

The **!** symbol indicates that Wheel Slip may occur.

Initial conditions for this report are Service Brakes locked and Engine at Full Throttle.

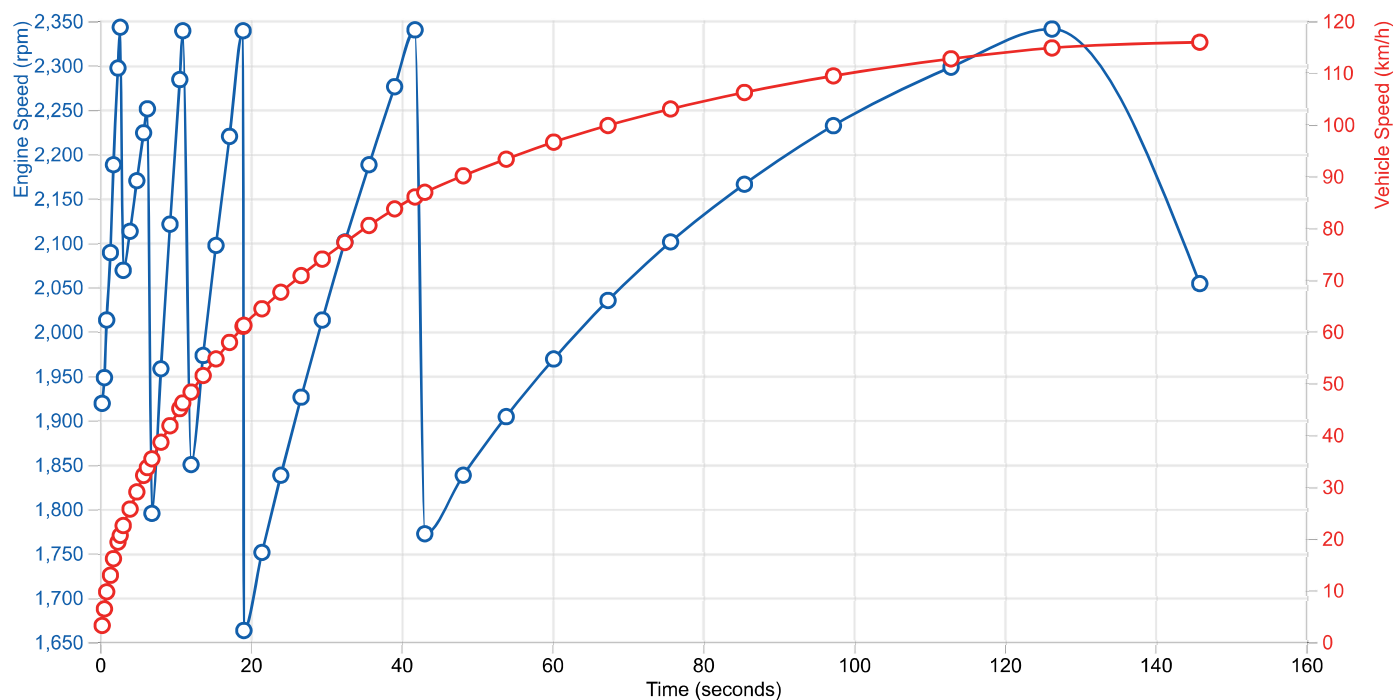
FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RAT

Engine Fan	On	Engine Power	Standard Power Curve
Air Conditioning	Off	Vehicle Parameters	Standard
Axle Ratio	6.000	Auxiliary Gearing Ratio	0.950
Grade	0.00%		

Gear Range	Vehicle Speed (km/h)	Time (seconds)	Distance (m)	Acceleration Rate (m/sec²)	Engine Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Transmission Heat Rejection (kW)
1C	3.2	0.3	0	3.088	1919	62.59	61.78	56.0	137.69
1C	6.4	0.6	1	2.731	1948	55.57	54.74	99.4	91.24
1C	9.7	0.9	1	2.321	2013	47.76	46.89	128.1	62.51
1C	12.9	1.4	3	1.996	2089	41.25	40.34	147.5	44.16
1C	16.1	1.8	5	1.718	2188	35.91	34.96	160.5	35.26
1C	19.3	2.4	7	1.474	2297	31.15	30.15	167.1	31.39
1C	20.6	2.7	9	1.378	2343	29.38	28.36	167.8	33.32
2C	22.5	3.1	12	1.127	2069	23.07	22.02	144.4	46.81

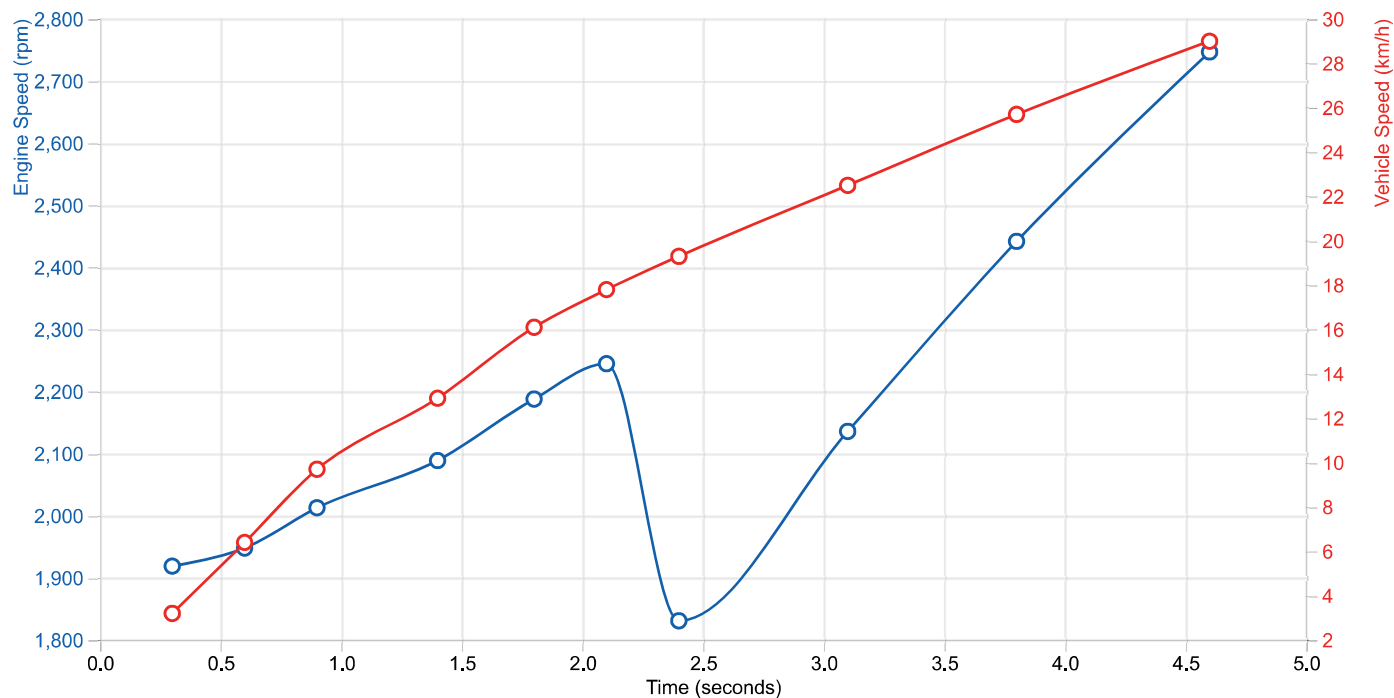
2C	25.7	4.0	17	1.031	2113	21.30	20.18	152.3	40.03
2C	29.0	4.9	24	0.952	2170	19.83	18.64	159.5	35.31
2C	32.2	5.8	32	0.878	2224	18.46	17.21	165.1	31.60
2C	33.7	6.3	37	0.843	2251	17.83	16.54	166.8	30.44
2L	35.4	6.9	43	0.799	1795	17.27	15.94	169.8	5.86
2L	38.6	8.1	54	0.755	1958	16.48	15.06	176.8	6.42
2L	41.8	9.3	68	0.712	2121	15.72	14.21	182.7	7.10
2L	45.1	10.6	84	0.674	2284	15.04	13.44	188.2	7.79
2L	46.2	11.0	89	0.662	2339	14.86	13.23	190.5	8.04
3L	48.3	12.1	103	0.568	1850	12.86	11.16	172.5	5.92
3L	51.5	13.7	125	0.539	1973	12.40	10.60	177.4	6.46
3L	54.7	15.4	150	0.510	2097	11.94	10.03	181.5	7.05
3L	57.9	17.2	179	0.487	2220	11.60	9.57	186.8	7.61
3L	61.0	19.0	209	0.461	2339	11.23	9.07	190.3	8.22
4L	61.2	19.1	210	0.379	1663	9.55	7.40	162.2	4.72
4L	64.4	21.5	252	0.366	1751	9.41	7.12	168.2	5.07
4L	67.6	24.0	298	0.347	1838	9.17	6.76	172.3	5.52
4L	70.8	26.7	349	0.328	1926	8.94	6.38	175.8	6.00
4L	74.0	29.5	406	0.308	2013	8.70	6.00	179.0	6.52
4L	77.2	32.5	469	0.288	2101	8.46	5.61	181.6	7.08
4L	80.5	35.7	539	0.272	2188	8.31	5.30	185.6	7.61
4L	83.7	39.1	617	0.252	2276	8.07	4.90	187.7	8.16
4L	86.0	41.8	680	0.239	2340	7.95	4.66	190.0	8.63
5L	86.9	43.1	711	0.182	1772	6.87	3.53	165.8	8.97
5L	90.1	48.2	838	0.167	1838	6.73	3.22	168.6	9.56
5L	93.3	53.9	982	0.150	1904	6.60	2.91	171.1	10.24
5L	96.6	60.2	1149	0.134	1969	6.46	2.59	173.3	10.84
5L	99.8	67.4	1344	0.117	2035	6.32	2.26	175.2	11.52
5L	103.0	75.7	1579	0.100	2101	6.18	1.92	176.9	12.30
5L	106.2	85.5	1863	0.084	2166	6.09	1.63	179.6	13.01
5L	109.4	97.3	2218	0.068	2232	5.97	1.30	181.5	13.78
5L	112.7	112.9	2698	0.049	2298	5.83	0.95	182.4	14.64
5L	114.8	126.3	3124	0.039	2341	5.78	0.75	184.1	15.18
6L	115.9	145.9	3751	0.013	2054	5.35	0.25	172.1	15.69

PLOTS - FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, ▲


FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO ▶

Engine Fan		On			Engine Power		Standard Power Curve		
Air Conditioning		Off			Vehicle Parameters		Standard		
Axle Ratio		6.000			Auxiliary Gearing Ratio		0.950		
Grade		0.00%							
Gear Range	Vehicle Speed (km/h)	Time (seconds)	Distance (m)	Acceleration Rate (m/sec²)	Engine Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Transmission Heat Rejection (kW)
1C	3.2	0.3	0	3.088	1919	62.59	61.78	56.0	137.69
1C	6.4	0.6	1	2.731	1948	55.57	54.74	99.4	91.24
1C	9.7	0.9	1	2.321	2013	47.76	46.89	128.1	62.51
1C	12.9	1.4	3	1.996	2089	41.25	40.34	147.5	44.16
1C	16.1	1.8	5	1.718	2188	35.91	34.96	160.5	35.26
1C	17.8	2.1	6	1.580	2245	33.31	32.33	165.0	32.26
1L	19.3	2.4	7	1.418	1831	31.68	30.68	170.0	7.69
1L	22.5	3.1	11	1.291	2136	29.01	27.96	181.6	9.15
1L	25.7	3.8	16	1.197	2442	27.05	25.93	193.5	10.72
1L	29.0	4.6	22	1.068	2747	24.25	23.07	195.2	12.23

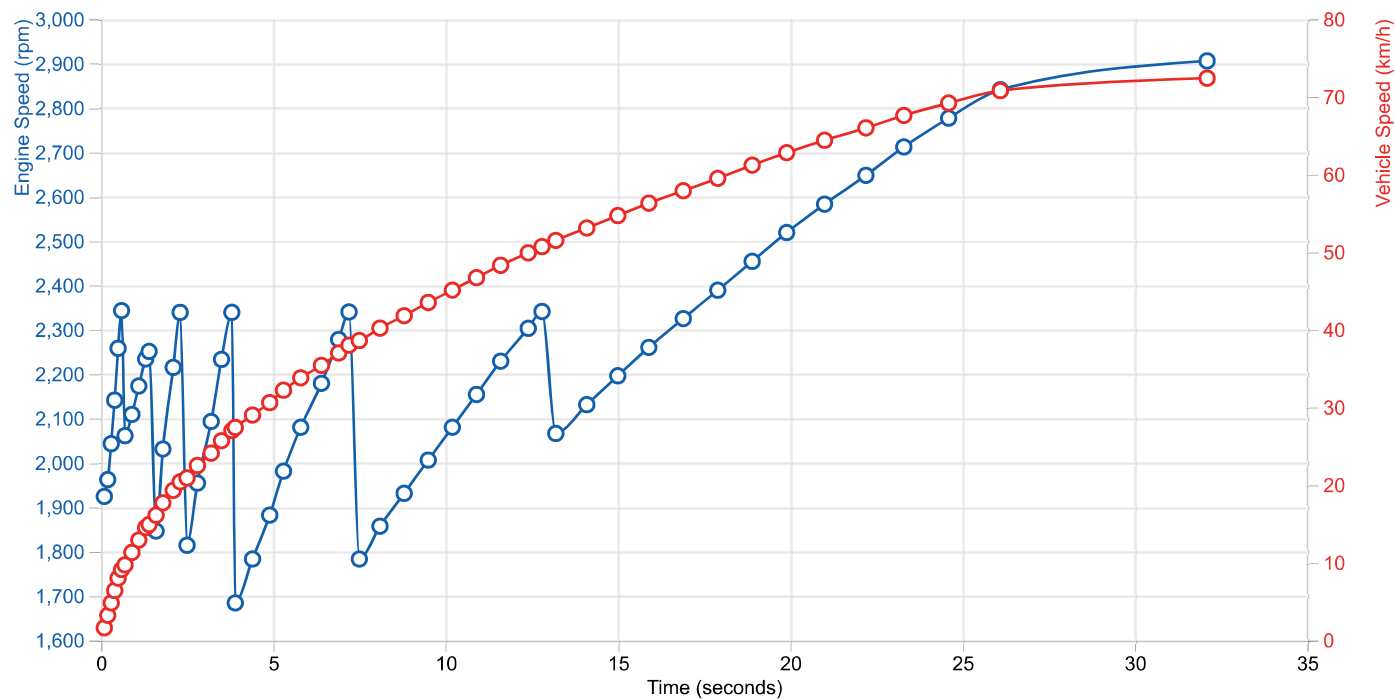
PLOTS - FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AU▶


FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.150

Engine Fan		On			Engine Power		Standard Power Curve		
Air Conditioning		Off			Vehicle Parameters		Standard		
Axle Ratio		6.000			Auxiliary Gearing Ratio		2.150		
Grade		0.00%							
Gear Range	Vehicle Speed (km/h)	Time (seconds)	Distance (m)	Acceleration Rate (m/sec²)	Engine Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Transmission Heat Rejection (kW)
1C I	1.6	0.1	0	5.948	1924	139.48	138.68	62.4	130.89
1C	3.2	0.2	0	5.040	1962	121.06	120.24	108.2	82.13
1C	4.8	0.3	0	4.165	2043	102.26	101.44	137.1	53.76
1C	6.4	0.4	0	3.336	2141	86.57	85.74	154.8	38.87
1C	8.0	0.5	1	2.879	2258	74.13	73.27	165.7	31.87
1C	9.1	0.6	1	2.522	2343	66.50	65.63	167.8	33.32
2C	9.7	0.7	1	2.512	2061	53.11	52.24	142.5	48.62
2C	11.3	0.9	2	2.268	2109	48.49	47.60	151.7	40.46
2C	12.9	1.1	2	2.086	2173	44.71	43.80	159.9	35.09
2C	14.5	1.3	3	1.911	2234	41.21	40.28	165.8	31.08
2C	14.9	1.4	3	1.867	2251	40.34	39.41	166.8	30.43
2L	16.1	1.6	4	1.643	1846	38.52	37.57	172.2	5.99
2L	17.7	1.8	6	1.554	2031	36.49	35.51	179.4	6.71
2L	19.3	2.1	7	1.479	2215	34.81	33.81	186.7	7.50
2L	20.4	2.3	8	1.423	2339	33.64	32.62	190.5	8.04
3L	20.9	2.5	9	1.328	1814	29.40	28.37	170.9	5.81
3L	22.5	2.8	11	1.272	1954	28.23	27.18	176.7	6.36
3L	24.1	3.2	13	1.216	2093	27.05	25.97	181.4	7.03
3L	25.7	3.5	16	1.172	2233	26.15	25.03	187.1	7.65
3L	27.0	3.8	18	1.133	2339	25.41	24.26	190.3	8.22
4L	27.4	3.9	19	1.000	1684	21.60	20.45	164.2	4.82
4L	29.0	4.4	22	0.975	1783	21.10	19.91	169.8	5.27

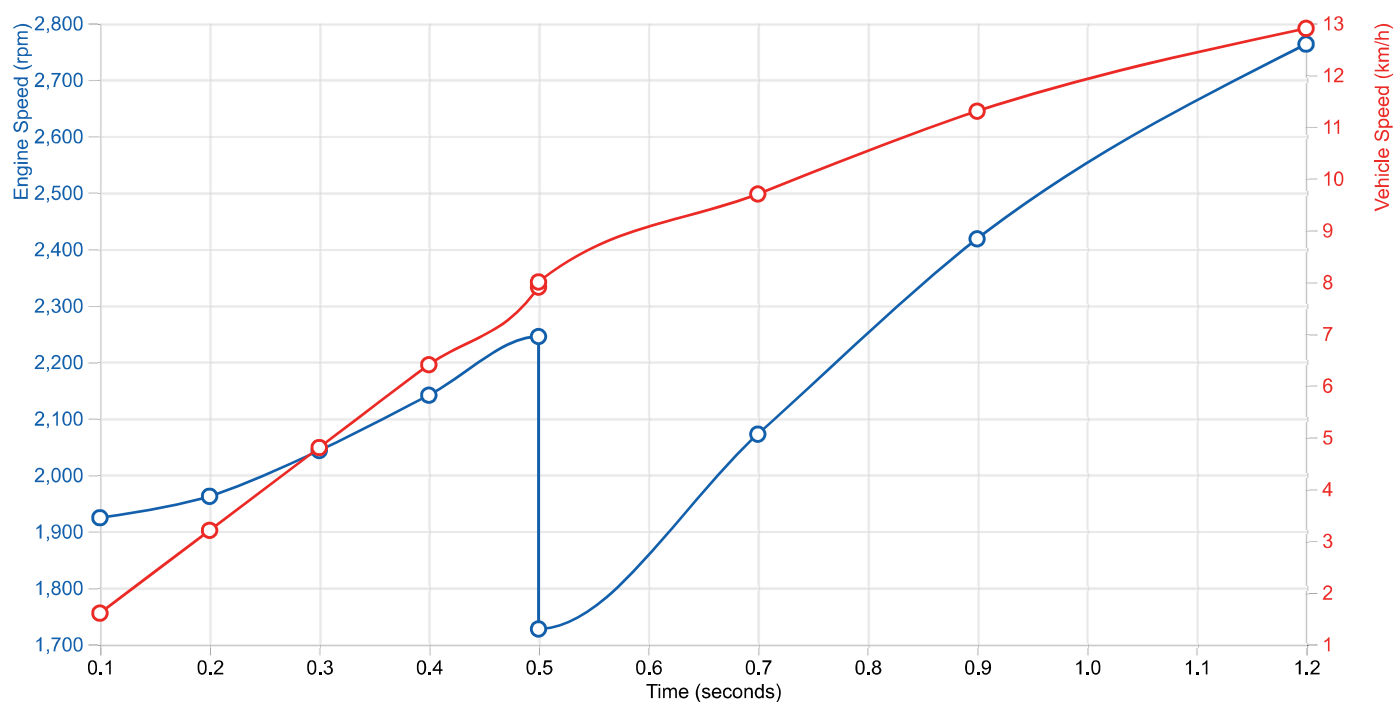
4L	30.6	4.9	26	0.944	1882	20.50	19.28	174.1	5.78
4L	32.2	5.3	31	0.913	1981	19.89	18.64	177.9	6.32
4L	33.8	5.8	35	0.881	2080	19.28	17.99	181.0	6.90
4L	35.4	6.4	40	0.857	2179	18.83	17.50	185.2	7.54
4L	37.0	6.9	45	0.827	2278	18.26	16.88	187.7	8.18
4L	38.0	7.2	49	0.812	2340	17.99	16.59	190.0	8.63
5L	38.6	7.5	51	0.706	1783	15.50	14.08	166.3	9.08
5L	40.2	8.1	59	0.687	1857	15.15	13.69	169.3	9.73
5L	41.8	8.8	66	0.667	1931	14.80	13.30	172.0	10.46
5L	43.5	9.5	74	0.647	2006	14.45	12.90	174.4	11.26
5L	45.1	10.2	83	0.627	2080	14.09	12.49	176.4	12.03
5L	46.7	10.9	92	0.610	2154	13.82	12.17	179.1	12.87
5L	48.3	11.6	102	0.593	2229	13.53	11.83	181.4	13.74
5L	49.9	12.4	112	0.573	2303	13.17	11.42	182.5	14.71
5L	50.7	12.8	118	0.565	2341	13.07	11.29	184.1	15.18
6L	51.5	13.2	124	0.518	2066	12.05	10.25	172.4	15.87
6L	53.1	14.1	137	0.503	2131	11.81	9.96	174.3	16.88
6L	54.7	15.0	150	0.490	2196	11.62	9.71	176.7	17.94
6L	56.3	15.9	164	0.474	2260	11.35	9.37	177.5	18.92
6L	57.9	16.9	180	0.458	2325	11.11	9.08	178.8	20.06
6L	59.5	17.9	196	0.448	2389	10.96	8.86	181.2	21.23
6L	61.2	18.9	213	0.437	2454	10.80	8.64	183.5	22.43
6L	62.8	19.9	231	0.424	2519	10.60	8.38	184.7	23.63
6L	64.4	21.0	250	0.404	2583	10.28	8.00	183.8	24.72
6L	66.0	22.2	270	0.385	2648	9.96	7.61	182.6	26.14
6L	67.6	23.3	293	0.366	2712	9.65	7.23	181.1	27.77
6L	69.2	24.6	317	0.347	2777	9.35	6.86	179.7	29.21
6L	70.8	26.1	346	0.224	2841	6.76	4.20	133.0	30.35
6L	72.4	32.1	466	0.026	2906	2.89	0.26	58.2	31.23

PLOTS - FULL THROTTLE AUTOMATIC UPSHIFTS (1C, 2C, 2L, 3L, 4L, 5L, 6L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, ▲



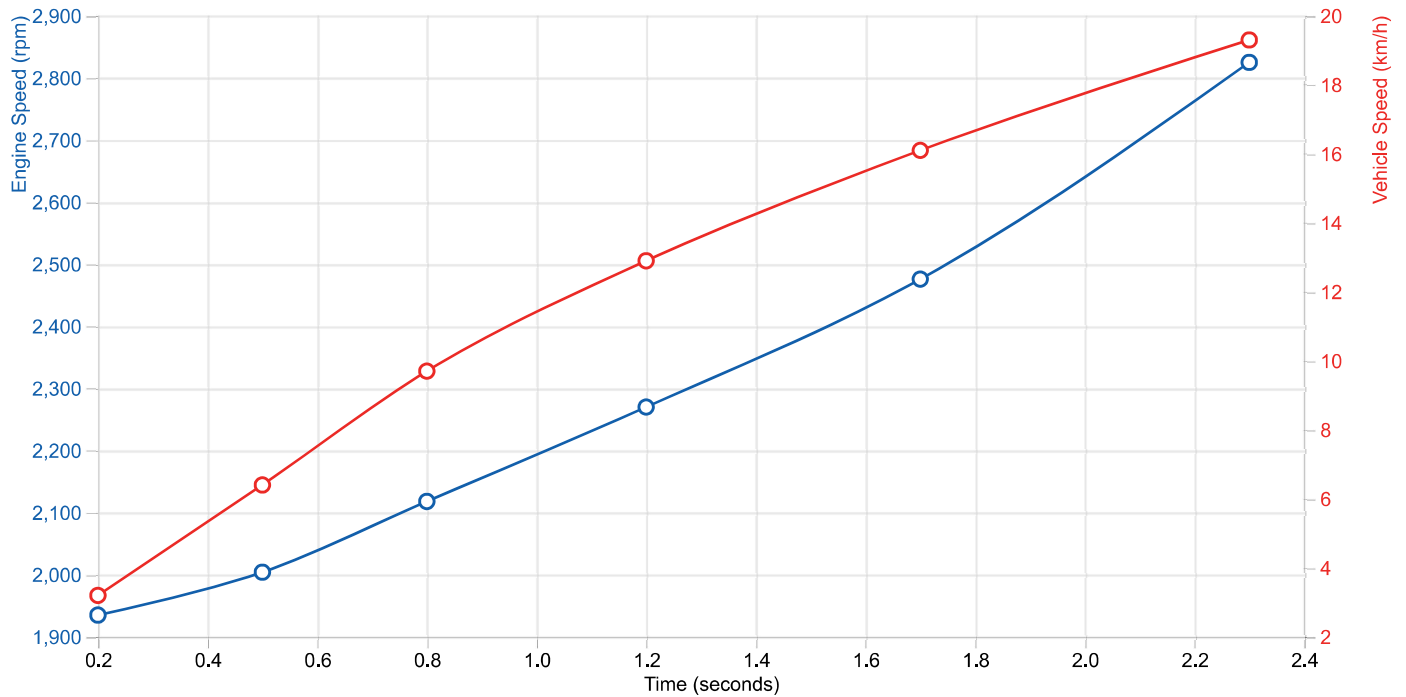
FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO ▶

Engine Fan		On			Engine Power		Standard Power Curve		
Air Conditioning		Off			Vehicle Parameters		Standard		
Axle Ratio		6.000			Auxiliary Gearing Ratio		2.150		
Grade		0.00%							
Gear Range	Vehicle Speed (km/h)	Time (seconds)	Distance (m)	Acceleration Rate (m/sec²)	Engine Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Transmission Heat Rejection (kW)
1C	1.6	0.1	0	5.948	1924	139.48	138.68	62.4	130.89
1C	3.2	0.2	0	5.040	1962	121.06	120.24	108.2	82.13
1C	4.8	0.3	0	4.165	2043	102.26	101.44	137.1	53.76
1C	6.4	0.4	0	3.336	2141	86.57	85.74	154.8	38.87
1C	7.9	0.5	1	2.910	2245	75.38	74.53	165.0	32.26
1L	8.0	0.5	1	2.312	1727	73.82	72.96	165.0	7.22
1L	9.7	0.7	1	2.093	2072	66.74	65.87	179.0	8.83
1L	11.3	0.9	2	1.919	2418	61.47	60.58	192.4	10.60
1L	12.9	1.2	3	1.707	2763	54.54	53.63	195.0	12.32

PLOTS - FULL THROTTLE MANUAL 1ST HOLD - LOCKUP APPLY (1C, 1L) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AU▶**FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.950, STAN▶**

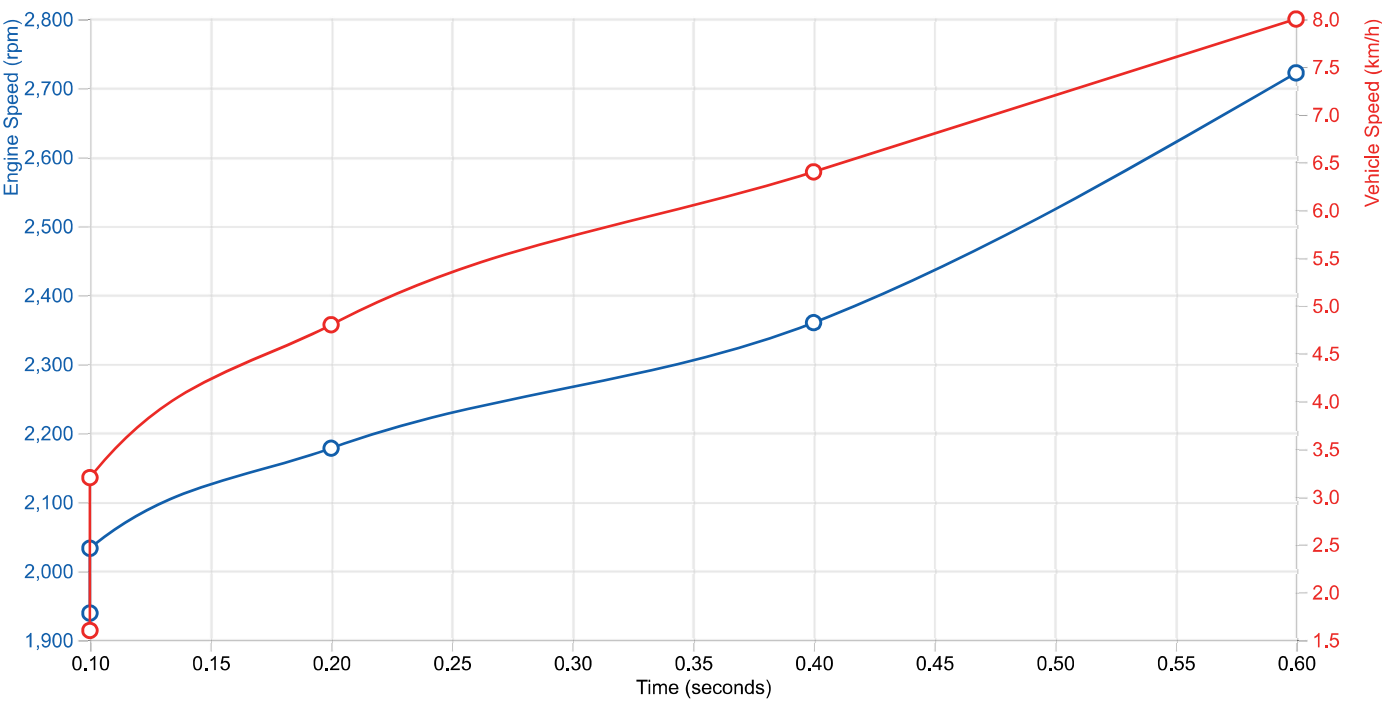
Engine Fan		On			Engine Power		Standard Power Curve		
Air Conditioning		Off			Vehicle Parameters		Standard		
Axle Ratio		6.000			Auxiliary Gearing Ratio		0.950		
Grade		0.00%							
Gear Range	Vehicle Speed (km/h)	Time (seconds)	Distance (m)	Acceleration Rate (m/sec²)	Engine Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Transmission Heat Rejection (kW)
R1C	3.2	0.2	0	4.003	1935	83.73	82.92	74.9	117.59

R1C	6.4	0.5	0	3.190	2004	68.59	67.75	122.6	68.18
R1C	9.7	0.8	1	2.526	2118	55.60	54.73	149.1	43.84
R1C	12.9	1.2	2	2.055	2270	45.66	44.75	163.3	34.87
R1C	16.1	1.7	4	1.576	2476	37.61	36.66	168.1	40.52
R1C	19.3	2.3	7	1.293	2825	28.48	27.48	152.8	28.26

PLOTS - FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.9▲

FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.150, STAN▲

Engine Fan		On			Engine Power		Standard Power Curve		
Air Conditioning		Off			Vehicle Parameters		Standard		
Axle Ratio		6.000			Auxiliary Gearing Ratio		2.150		
Grade		0.00%							
Gear Range	Vehicle Speed (km/h)	Time (seconds)	Distance (m)	Acceleration Rate (m/sec²)	Engine Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Transmission Heat Rejection (kW)
R1C I	1.6	0.1	0	6.924	1939	185.43	184.63	82.9	108.96
R1C II	3.2	0.1	0	4.841	2033	147.16	146.35	131.6	59.48
R1C	4.8	0.2	0	3.698	2178	116.59	115.77	156.4	39.26
R1C	6.4	0.4	0	2.762	2360	92.23	91.39	164.9	37.48
R1C	8.0	0.6	1	1.851	2722	78.09	77.24	174.5	34.98

PLOTS - FULL THROTTLE REVERSE PERFORMANCE (R1C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.1▲



Vehicle Closed Throttle Braking Performance

MISSION	
End User	xxx
Selected Vocation	Military — Wheeled - Tactical — Straight Truck (52-25-10)
PLATFORM	
Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
Engine Description	Cummins ISB6.7 (Diesel) -- 340hp@2800rpm 1100Nm@1400rpm -- without SEM/LRTP (116-L033737-E, Rev A)
Transmission	3200 SP Retarder (1-L007346-T, Rev E)
Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Vehicle Parameters	Standard
Torque Converter	TC417 (1-L001251-TC, Rev C) Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)
LRTP Status	
NOTE	
This SCAAN information is subject to the SCAAN Disclaimer set forth elsewhere.	
Results indicate the vehicle operating conditions at steady state (acceleration = 0).	
The ! symbol indicates that Wheel Slip may occur.	
CLOSED THROTTLE DOWNSHIFTS, STANDARD RETARDER (6L, 5L, 4L, 3L, 2L, 2C) - STANDARD, FAN ON, AC OFF, AXLE RATIO =	

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	0.95

Engine Retarder Off

Transmission Retarder Off

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Equilibrium Grade (%)	Transmission Heat Rejection (kW)	Deceleration Rate (m/sec ² s)	Wheel Power (kW)
6L	169.2	3000	4601	-6.52	33.63	-0.625	121.9
6L	167.4	2968	4551	-6.41	32.75	-0.615	119.1
6L	164.2	2910	4464	-6.21	31.25	-0.596	114.2
6L	160.9	2853	4376	-6.02	29.80	-0.577	109.5
6L	157.7	2796	4289	-5.83	28.41	-0.559	104.8
6L	154.5	2739	4201	-5.64	27.06	-0.541	100.4
6L	151.3	2682	4114	-5.46	25.77	-0.524	96.0
6L	148.1	2625	4026	-5.28	24.52	-0.507	91.8
6L	144.8	2568	3939	-5.10	23.30	-0.490	87.6
6L	141.6	2511	3851	-4.93	22.14	-0.473	83.7
6L	138.4	2454	3764	-4.76	21.02	-0.457	79.8
6L	135.2	2397	3676	-4.59	19.93	-0.441	76.2
6L	132.0	2340	3589	-4.43	18.92	-0.426	72.6
6L	128.7	2283	3501	-4.28	17.94	-0.411	69.2
6L	125.5	2226	3414	-4.12	16.99	-0.396	65.8
6L	122.3	2169	3326	-3.97	16.07	-0.381	62.5
6L	119.1	2112	3239	-3.82	15.19	-0.367	59.3
6L	115.9	2054	3151	-3.68	14.33	-0.353	56.2
6L	112.7	1997	3063	-3.53	13.51	-0.340	53.3
6L	109.4	1940	2976	-3.40	12.72	-0.326	50.4
6L	106.2	1883	2888	-3.26	11.95	-0.314	47.7
6L	103.0	1826	2801	-3.13	11.22	-0.301	45.1
6L	99.8	1769	2713	-3.01	10.52	-0.289	42.6
6L	98.4	1745	2676	-2.95	10.22	-0.284	41.5
5L	98.4	2007	2676	-3.12	10.04	-0.299	49.8
5L	96.6	1969	2626	-3.04	9.65	-0.292	48.1
5L	93.3	1904	2538	-2.92	9.01	-0.280	45.1
5L	90.1	1838	2451	-2.79	8.39	-0.268	42.4
5L	86.9	1772	2363	-2.67	7.80	-0.257	39.7
5L	83.7	1707	2276	-2.56	7.23	-0.246	37.1
5L	80.5	1641	2188	-2.45	6.70	-0.235	34.7
5L	77.2	1576	2101	-2.34	6.24	-0.225	32.4
5L	74.0	1510	2013	-2.24	5.85	-0.215	30.2
5L	71.7	1462	1950	-2.17	5.58	-0.208	28.7
4L	71.7	1950	1950	-2.57	6.19	-0.245	43.6
4L	70.8	1926	1926	-2.54	6.06	-0.242	42.6
4L	67.6	1838	1838	-2.42	5.59	-0.231	39.3
4L	64.4	1751	1751	-2.31	5.14	-0.221	36.1
4L	61.2	1663	1663	-2.20	4.71	-0.210	33.1
4L	57.9	1576	1576	-2.10	4.36	-0.201	30.3
4L	54.7	1488	1488	-2.01	4.10	-0.192	27.7

4L	51.5	1400	1400	-1.92	3.83	-0.183	25.2
4L	49.3	1342	1342	-1.86	3.63	-0.178	23.7
3L	49.3	1891	1342	-2.52	5.17	-0.238	40.5
3L	48.3	1850	1313	-2.47	5.00	-0.234	39.0
3L	45.1	1727	1225	-2.35	4.51	-0.222	34.7
3L	41.8	1603	1138	-2.23	4.06	-0.211	30.7
3L	38.6	1480	1050	-2.12	3.74	-0.200	27.1
3L	36.2	1388	985	-2.04	3.50	-0.193	24.6
2L	36.2	1836	985	-2.77	4.71	-0.258	38.2
2L	35.4	1795	963	-2.72	4.57	-0.254	36.8
2L	32.2	1632	875	-2.56	4.00	-0.239	31.4
2L	29.0	1468	788	-2.42	3.69	-0.225	26.7
2L	25.7	1305	700	-2.29	3.32	-0.214	22.5
2L	22.5	1142	613	-2.15	2.83	-0.201	18.5
2L	19.7	999	536	-2.06	2.37	-0.192	15.4
2C	19.7	700	536	-2.03	5.65	-0.186	15.2

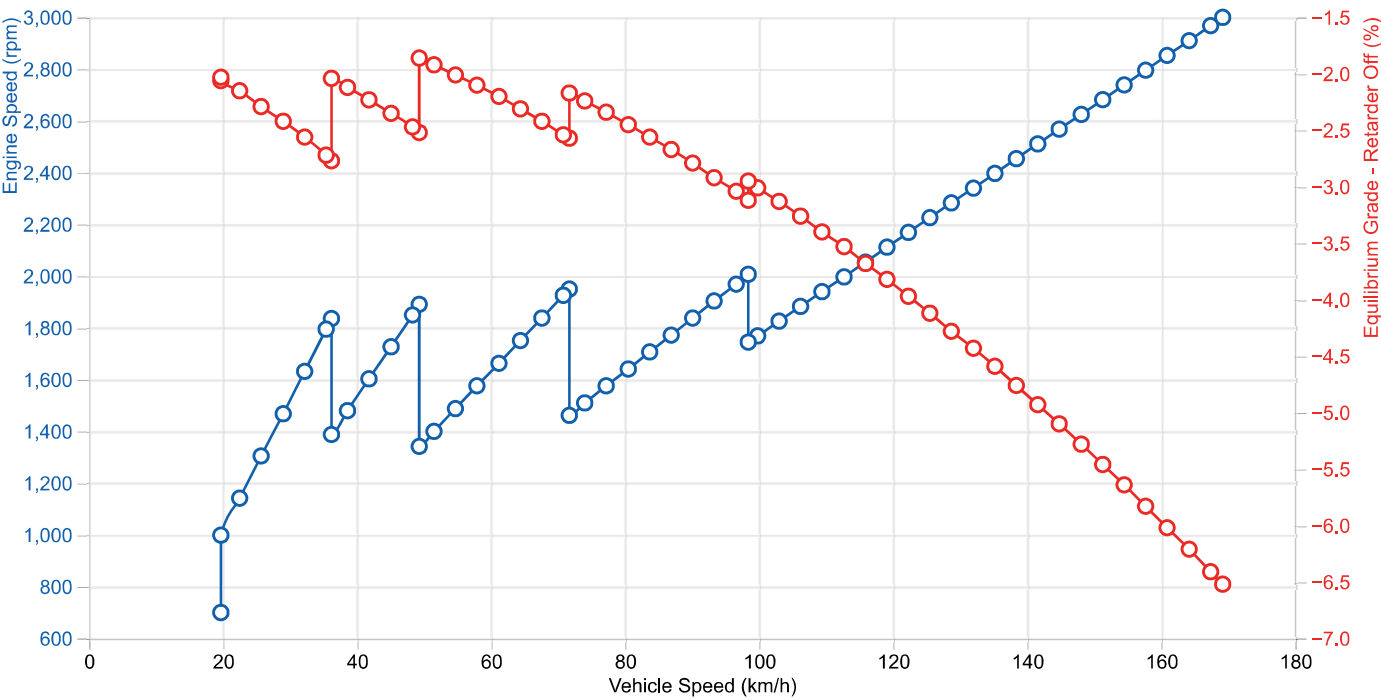
Engine Retarder Off

Transmission Retarder On

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Equilibrium Grade (%)	Transmission Heat Rejection (kW)	Deceleration Rate (m/sec ² s)	Wheel Power (kW)
6L	169.2	3000	4601	-11.26	406.60	-1.076	532.3
6L	167.4	2968	4551	-11.20	405.72	-1.070	529.4
6L	164.2	2910	4464	-11.09	404.22	-1.060	524.6
6L	160.9	2853	4376	-11.00	402.77	-1.051	519.8
6L	157.7	2796	4289	-10.91	401.38	-1.042	515.2
6L	154.5	2739	4201	-10.83	400.03	-1.035	510.7
6L	151.3	2682	4114	-10.75	398.74	-1.028	506.4
6L	148.1	2625	4026	-10.68	397.49	-1.021	502.1
6L	144.8	2568	3939	-10.63	396.28	-1.016	498.0
6L	141.6	2511	3851	-10.58	395.11	-1.011	494.0
6L	138.4	2454	3764	-10.54	393.99	-1.008	490.2
6L	135.2	2397	3676	-10.51	392.90	-1.005	486.5
6L	132.0	2340	3589	-10.49	391.89	-1.003	483.0
6L	128.7	2283	3501	-10.49	390.91	-1.003	479.5
6L	125.5	2226	3414	-10.49	389.96	-1.003	476.1
6L	122.3	2169	3326	-10.51	389.04	-1.004	472.9
6L	119.1	2112	3239	-10.53	388.16	-1.007	469.7
6L	115.9	2054	3151	-10.57	387.30	-1.011	466.6
6L	112.7	1997	3063	-10.63	386.48	-1.016	463.6
6L	109.4	1940	2976	-10.70	385.69	-1.023	460.8
6L	106.2	1883	2888	-10.79	384.92	-1.031	458.1
6L	103.0	1826	2801	-10.89	384.19	-1.041	455.5
6L	99.8	1769	2713	-11.02	383.49	-1.053	452.9
6L	98.4	1745	2676	-11.08	383.19	-1.058	451.9
5L	98.4	2007	2676	-11.24	383.01	-1.073	460.2
5L	96.6	1969	2626	-11.32	382.62	-1.080	458.4
5L	93.3	1904	2538	-11.48	381.98	-1.095	455.5
5L	90.1	1838	2451	-11.67	381.36	-1.113	452.7
5L	86.9	1772	2363	-11.88	380.77	-1.133	450.0

5L	83.7	1707	2276	-12.12	380.20	-1.155	447.5
5L	80.5	1641	2188	-12.39	379.67	-1.181	445.0
5L	77.2	1576	2101	-12.71	379.21	-1.210	442.7
5L	74.0	1510	2013	-13.02	377.56	-1.239	439.1
5L	71.7	1462	1950	-12.95	365.62	-1.233	424.8
4L	71.7	1950	1950	-13.36	366.23	-1.265	439.7
4L	70.8	1926	1926	-13.32	361.59	-1.262	433.8
4L	67.6	1838	1838	-13.21	344.95	-1.251	412.6
4L	64.4	1751	1751	-13.09	328.33	-1.240	391.7
4L	61.2	1663	1663	-12.98	311.73	-1.230	370.9
4L	57.9	1576	1576	-12.88	295.20	-1.220	350.3
4L	54.7	1488	1488	-12.78	278.77	-1.211	329.9
4L	51.5	1400	1400	-12.69	262.30	-1.202	309.6
4L	49.3	1342	1342	-12.63	251.29	-1.197	296.2
3L	49.3	1891	1342	-13.30	252.83	-1.248	313.0
3L	48.3	1850	1313	-13.25	247.28	-1.243	305.6
3L	45.1	1727	1225	-13.12	230.58	-1.231	283.4
3L	41.8	1603	1138	-13.00	213.93	-1.220	261.6
3L	38.6	1480	1050	-12.88	197.41	-1.209	240.2
3L	36.2	1388	985	-12.80	185.07	-1.201	224.4
2L	36.2	1836	985	-13.54	186.28	-1.251	238.0
2L	35.4	1795	963	-13.50	182.03	-1.247	232.0
2L	32.2	1632	875	-12.20	148.62	-1.129	190.6
2L	29.0	1468	788	-10.55	113.70	-0.978	147.8
2L	25.7	1305	700	-8.98	83.86	-0.833	111.2
2L	22.5	1142	613	-7.48	59.05	-0.695	80.3
2L	19.7	999	536	-6.29	41.51	-0.585	58.5
2C	19.7	700	536	-6.27	44.78	-0.572	58.3

PLOTS - CLOSED THROTTLE DOWNSHIFTS, STANDARD RETARDER (6L, 5L, 4L, 3L, 2L, 2C) - STANDARD, FAN ON, AC OFF, AXLE ▲



CLOSED THROTTLE MANUAL 1ST HOLD - LOCKUP RELEASE, WITHOUT RETARDER (1L, 1C) - STANDARD, FAN ON, AC OFF, AXL ▲

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	0.95

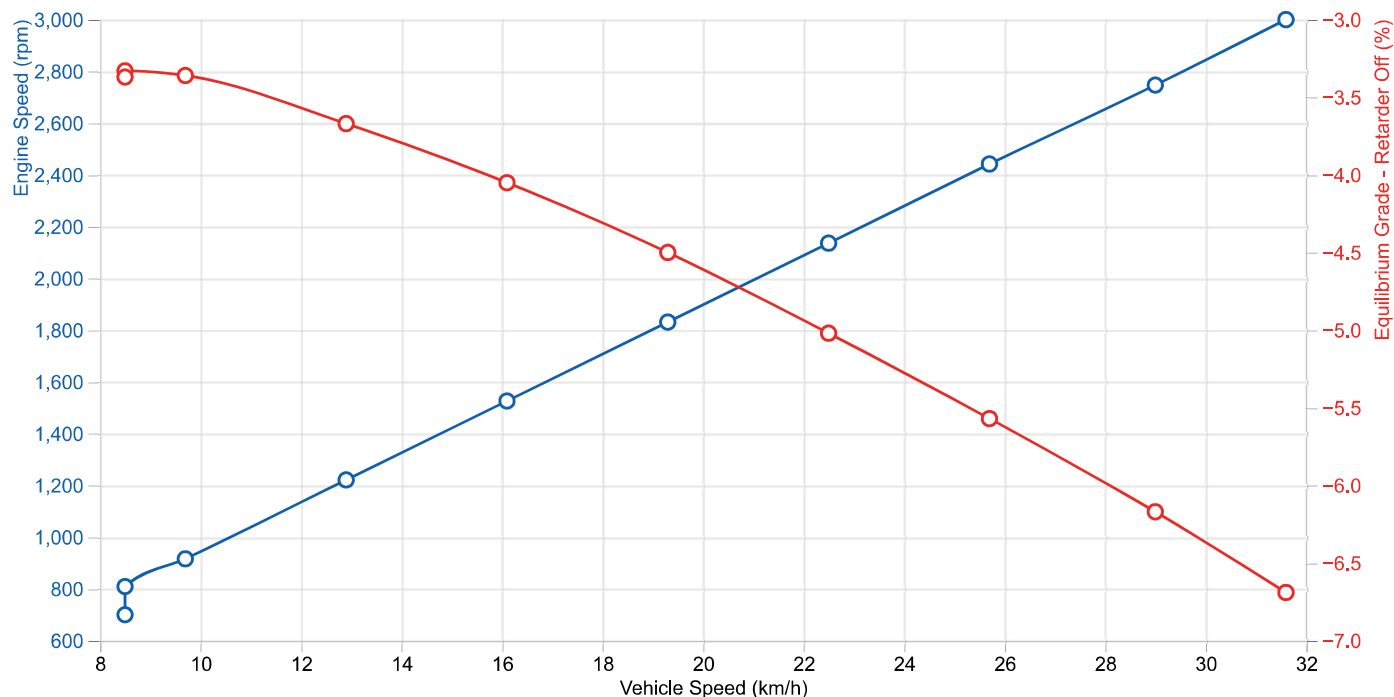
Engine Retarder Off
Transmission Retarder Off

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Equilibrium Grade (%)	Transmission Heat Rejection (kW)	Deceleration Rate (m/sec ² s)	Wheel Power (kW)
1L	31.6	3000	860	-6.69	12.25	-0.573	98.4
1L	29.0	2747	788	-6.17	10.70	-0.529	82.7
1L	25.7	2442	700	-5.57	9.02	-0.478	66.1
1L	22.5	2136	613	-5.02	7.48	-0.430	51.8
1L	19.3	1831	525	-4.50	6.06	-0.386	39.6
1L	16.1	1526	438	-4.05	4.82	-0.348	29.5
1L	12.9	1221	350	-3.67	3.73	-0.315	21.2
1L	9.7	916	263	-3.36	2.58	-0.288	14.4
1L	8.5	809	232	-3.33	2.22	-0.286	12.7
1C	8.5	700	232	-3.37	3.46	-0.272	12.8

Engine Retarder Off
Transmission Retarder On

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Equilibrium Grade (%)	Transmission Heat Rejection (kW)	Deceleration Rate (m/sec ² s)	Wheel Power (kW)
1L	31.6	3000	860	-16.18	150.60	-1.293	250.6
1L	29.0	2747	788	-14.37	120.70	-1.152	203.8
1L	25.7	2442	700	-12.30	89.55	-0.988	154.7
1L	22.5	2136	613	-10.37	63.69	-0.835	113.7
1L	19.3	1831	525	-8.61	43.10	-0.694	80.3
1L	16.1	1526	438	-7.05	27.43	-0.569	54.3
1L	12.9	1221	350	-5.57	15.22	-0.450	33.8
1L	9.7	916	263	-4.33	6.99	-0.350	19.3
1L	8.5	809	232	-4.05	5.11	-0.328	15.9
1C	8.5	700	232	-4.09	6.36	-0.331	16.0

PLOTS - CLOSED THROTTLE MANUAL 1ST HOLD - LOCKUP RELEASE, WITHOUT RETARDER (1L, 1C) - STANDARD, FAN ON, AC ▲


CLOSED THROTTLE DOWNSHIFTS, STANDARD RETARDER (6L, 5L, 4L, 3L, 2L, 2C) - STANDARD, FAN ON, AC OFF, AXLE RATIO = ▲

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	2.15

Engine Retarder Off
Transmission Retarder Off

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Equilibrium Grade (%)	Transmission Heat Rejection (kW)	Deceleration Rate (m/sec ² s)	Wheel Power (kW)
6L	74.8	3000	4601	-4.62	33.63	-0.434	121.9
6L	74.0	2971	4556	-4.57	32.83	-0.429	119.3
6L	72.4	2906	4457	-4.45	31.13	-0.418	113.8
6L	70.8	2841	4358	-4.34	29.50	-0.407	108.5
6L	69.2	2777	4259	-4.22	27.94	-0.396	103.3
6L	67.6	2712	4160	-4.11	26.44	-0.386	98.3
6L	66.0	2648	4061	-4.00	25.01	-0.375	93.4
6L	64.4	2583	3962	-3.89	23.62	-0.365	88.7
6L	62.8	2519	3863	-3.78	22.29	-0.355	84.2
6L	61.2	2454	3764	-3.68	21.02	-0.346	79.8
6L	59.5	2389	3665	-3.58	19.80	-0.336	75.7
6L	57.9	2325	3566	-3.48	18.66	-0.327	71.7
6L	56.3	2260	3467	-3.39	17.56	-0.318	67.8
6L	54.7	2196	3368	-3.29	16.50	-0.309	64.0
6L	53.1	2131	3268	-3.20	15.49	-0.300	60.4
6L	51.5	2066	3169	-3.10	14.51	-0.291	56.9
6L	49.9	2002	3070	-3.01	13.57	-0.283	53.5
6L	48.3	1937	2971	-2.93	12.68	-0.275	50.3
6L	46.7	1873	2872	-2.84	11.82	-0.267	47.2
6L	45.1	1808	2773	-2.76	11.00	-0.259	44.3
6L	43.5	1745	2676	-2.68	10.22	-0.252	41.5

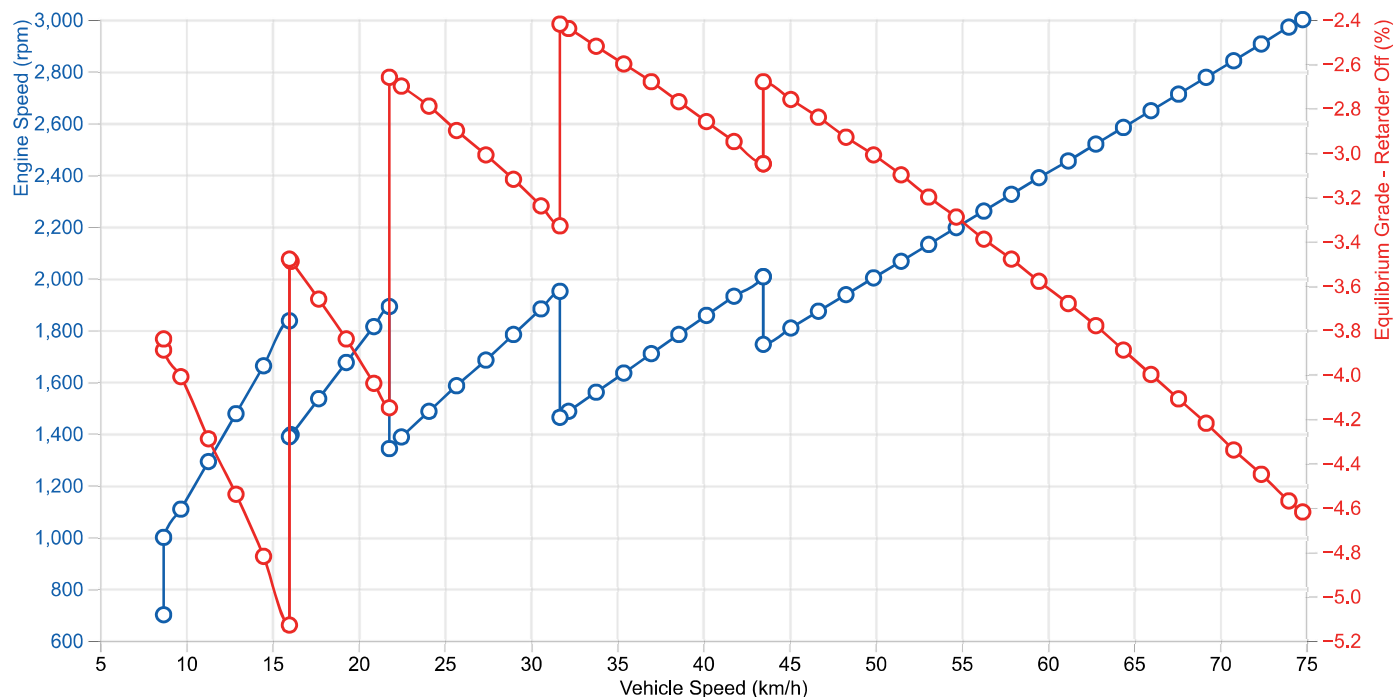
5L	43.5	2007	2676	-3.05	10.04	-0.284	49.8
5L	43.5	2006	2674	-3.05	10.02	-0.284	49.7
5L	41.8	1931	2575	-2.95	9.28	-0.275	46.3
5L	40.2	1857	2476	-2.86	8.56	-0.266	43.1
5L	38.6	1783	2377	-2.77	7.89	-0.258	40.1
5L	37.0	1709	2278	-2.68	7.25	-0.250	37.2
5L	35.4	1634	2179	-2.60	6.65	-0.242	34.4
5L	33.8	1560	2080	-2.52	6.15	-0.235	31.8
5L	32.2	1486	1981	-2.44	5.71	-0.227	29.4
5L	31.7	1463	1950	-2.42	5.58	-0.225	28.7
4L	31.7	1950	1950	-3.33	6.19	-0.303	43.6
4L	30.6	1882	1882	-3.24	5.82	-0.295	40.9
4L	29.0	1783	1783	-3.12	5.31	-0.284	37.2
4L	27.4	1684	1684	-3.01	4.81	-0.274	33.8
4L	25.7	1585	1585	-2.90	4.38	-0.264	30.6
4L	24.1	1486	1486	-2.79	4.09	-0.254	27.6
4L	22.5	1387	1387	-2.70	3.78	-0.246	24.9
4L	21.8	1342	1342	-2.66	3.63	-0.242	23.7
3L	21.8	1891	1342	-4.15	5.17	-0.361	40.5
3L	20.9	1814	1288	-4.04	4.86	-0.351	37.7
3L	19.3	1675	1189	-3.84	4.31	-0.334	33.0
3L	17.7	1535	1089	-3.66	3.88	-0.318	28.7
3L	16.1	1396	990	-3.49	3.52	-0.303	24.8
3L	16.0	1388	985	-3.48	3.50	-0.302	24.6
2L	16.0	1836	985	-5.13	4.71	-0.416	38.2
2L	14.5	1662	891	-4.82	4.10	-0.391	32.4
2L	12.9	1477	792	-4.54	3.71	-0.368	27.0
2L	11.3	1292	693	-4.29	3.29	-0.348	22.2
2L	9.7	1108	594	-4.01	2.73	-0.326	17.7
2L	8.7	999	536	-3.89	2.37	-0.316	15.4
2C	8.7	700	536	-3.84	5.65	-0.288	15.2

Engine Retarder Off
Transmission Retarder On

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Equilibrium Grade (%)	Transmission Heat Rejection (kW)	Deceleration Rate (m/sec ² s)	Wheel Power (kW)
6L	74.8	3000	4601	-15.40	406.60	-1.430	532.3
6L	74.0	2971	4556	-15.46	405.80	-1.435	529.7
6L	72.4	2906	4457	-15.58	404.10	-1.446	524.2
6L	70.8	2841	4358	-15.72	402.47	-1.459	518.8
6L	69.2	2777	4259	-15.87	400.91	-1.473	513.6
6L	67.6	2712	4160	-16.04	399.41	-1.488	508.6
6L	66.0	2648	4061	-16.22	397.98	-1.504	503.8
6L	64.4	2583	3962	-16.42	396.59	-1.522	499.1
6L	62.8	2519	3863	-16.64	395.26	-1.542	494.5
6L	61.2	2454	3764	-16.88	393.99	-1.564	490.2
6L	59.5	2389	3665	-17.14	392.77	-1.587	486.1
6L	57.9	2325	3566	-17.43	391.63	-1.613	482.1
6L	56.3	2260	3467	-17.73	390.53	-1.640	478.2
6L	54.7	2196	3368	-18.07	389.47	-1.670	474.4

6L	53.1	2131	3268	-18.43	388.46	-1.703	470.8
6L	51.5	2066	3169	-18.82	387.48	-1.738	467.2
6L	49.9	2002	3070	-19.25	386.54	-1.776	463.9
6L	48.3	1937	2971	-19.72	385.65	-1.817	460.6
6L	46.7	1873	2872	-20.23	384.79	-1.863	457.6
6L	45.1	1808	2773	-20.79	383.97	-1.912	454.6
6L	43.5	1745	2676	-21.38	383.19	-1.964	451.9
5L	43.5	2007	2676	-21.78	383.01	-1.985	460.2
5L	43.5	2006	2674	-21.79	382.99	-1.986	460.1
5L	41.8	1931	2575	-22.44	382.25	-2.043	456.7
5L	40.2	1857	2476	-23.16	381.53	-2.105	453.5
5L	38.6	1783	2377	-23.95	380.86	-2.173	450.5
5L	37.0	1709	2278	-24.83	380.22	-2.248	447.5
5L	35.4	1634	2179	-25.81	379.62	-2.331	444.8
5L	33.8	1560	2080	-26.90	379.12	-2.423	442.2
5L	32.2	1486	1981	-27.59	371.46	-2.481	431.8
5L	31.7	1463	1950	-27.56	365.62	-2.479	424.8
4L	31.7	1950	1950	-28.58	366.23	-2.502	439.7
4L	30.6	1882	1882	-28.48	353.26	-2.494	423.2
4L	29.0	1783	1783	-28.35	334.45	-2.483	399.4
4L	27.4	1684	1684	-28.22	315.65	-2.473	375.8
4L	25.7	1585	1585	-28.09	296.93	-2.463	352.4
4L	24.1	1486	1486	-27.98	278.34	-2.453	329.4
4L	22.5	1387	1387	-27.87	259.70	-2.444	306.4
4L	21.8	1342	1342	-27.82	251.29	-2.441	296.2
3L	21.8	1891	1342	-29.50	252.83	-2.461	313.0
3L	20.9	1814	1288	-29.37	242.44	-2.451	299.1
3L	19.3	1675	1189	-29.14	223.56	-2.433	274.2
3L	17.7	1535	1089	-28.92	204.80	-2.416	249.7
3L	16.1	1396	990	-28.72	186.10	-2.401	225.7
3L	16.0	1388	985	-28.71	185.07	-2.400	224.4
2L	16.0	1836	985	-30.58	186.28	-2.376	238.0
2L	14.5	1662	891	-28.11	155.66	-2.198	199.1
2L	12.9	1477	792	-23.61	115.41	-1.867	149.9
2L	11.3	1292	693	-19.45	81.72	-1.551	108.5
2L	9.7	1108	594	-15.59	54.48	-1.251	74.6
2L	8.7	999	536	-13.56	41.51	-1.092	58.5
2C	8.7	700	536	-13.51	44.78	-1.003	58.3

PLOTS - CLOSED THROTTLE DOWNSHIFTS, STANDARD RETARDER (6L, 5L, 4L, 3L, 2L, 2C) - STANDARD, FAN ON, AC OFF, AXLE ▲


CLOSED THROTTLE MANUAL 1ST HOLD - LOCKUP RELEASE, WITHOUT RETARDER (1L, 1C) - STANDARD, FAN ON, AC OFF, AXL▲

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	2.15

Engine Retarder Off
Transmission Retarder Off

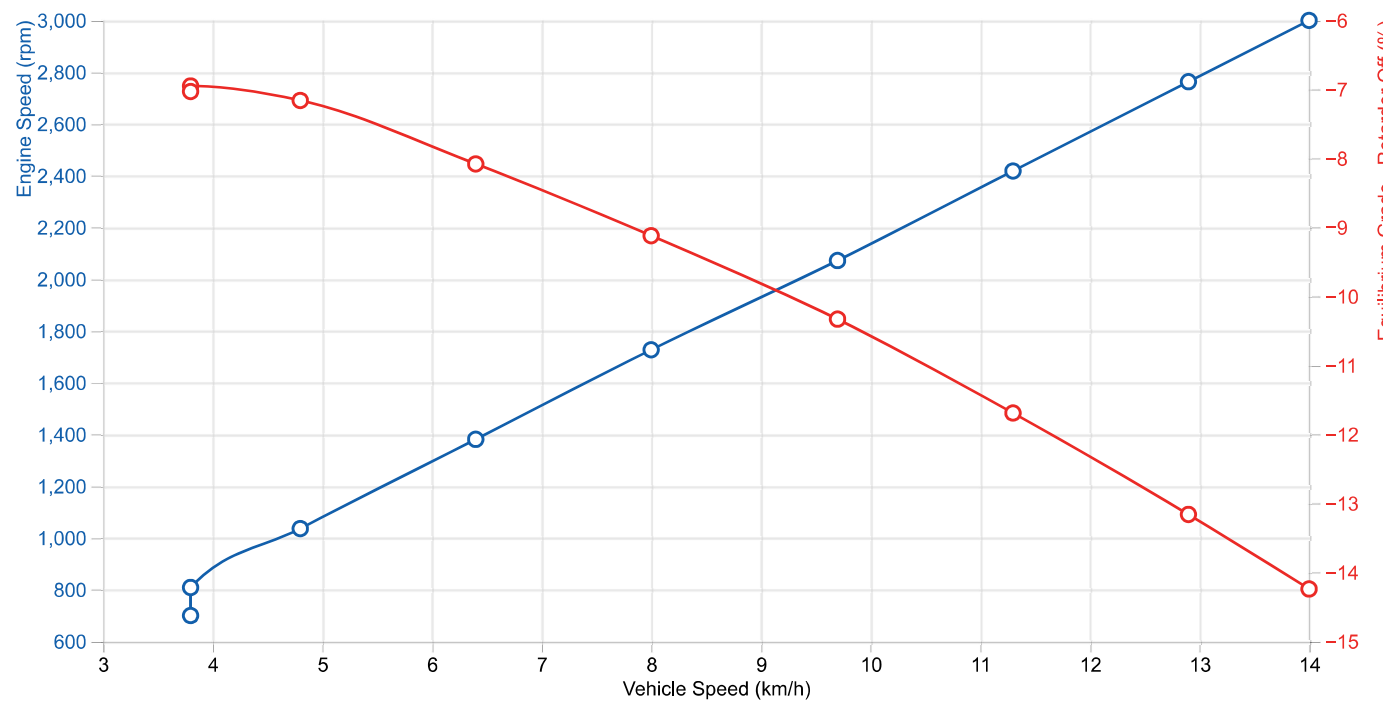
Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Equilibrium Grade (%)	Transmission Heat Rejection (kW)	Deceleration Rate (m/sec ² s)	Wheel Power (kW)
1L	14.0	3000	860	-14.24	12.25	-0.829	98.4
1L	12.9	2763	792	-13.16	10.79	-0.767	83.7
1L	11.3	2418	693	-11.69	8.89	-0.683	64.9
1L	9.7	2072	594	-10.33	7.16	-0.604	49.0
1L	8.0	1727	495	-9.12	5.60	-0.534	35.9
1L	6.4	1381	396	-8.08	4.33	-0.474	25.3
1L	4.8	1036	297	-7.16	3.03	-0.420	16.8
1L	3.8	809	232	-6.95	2.22	-0.407	12.7
1C	3.8	700	232	-7.03	3.46	-0.340	12.8

Engine Retarder Off
Transmission Retarder On

Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Output Speed (rpm)	Equilibrium Grade (%)	Transmission Heat Rejection (kW)	Deceleration Rate (m/sec ² s)	Wheel Power (kW)
1L	14.0	3000	860	-37.53	150.60	-1.702	250.6
1L	12.9	2763	792	-33.18	122.49	-1.525	206.6
1L	11.3	2418	693	-27.38	87.32	-1.279	151.2
1L	9.7	2072	594	-22.20	58.92	-1.049	106.0
1L	8.0	1727	495	-17.72	37.26	-0.845	70.7
1L	6.4	1381	396	-13.75	21.17	-0.660	43.9
1L	4.8	1036	297	-10.16	9.75	-0.489	24.1

1L	3.8	809	232	-8.59	5.11	-0.415	15.9
1C	3.8	700	232	-8.68	6.36	-0.419	16.0

PLOTS - CLOSED THROTTLE MANUAL 1ST HOLD - LOCKUP RELEASE, WITHOUT RETARDER (1L, 1C) - STANDARD, FAN ON, AC ▲



Vehicle Wheel Power Requirements ▲

MISSION ▲	
End User	xxx
Selected Vocation	Military — Wheeled - Tactical — Straight Truck (52-25-10)
PLATFORM ▲	
Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
Engine Description	Cummins ISB6.7 (Diesel) -- 340hp@2800rpm 1100Nm@1400rpm -- without SEM/LRTP (116-L033737-E, Rev A)
Transmission	3200 SP Retarder (1-L007346-T, Rev E)
Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Vehicle Parameters	Standard
Torque Converter	TC417 (1-L001251-TC, Rev C) Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)
LRTP Status	
NOTE ▲	

This SCAAN information is subject to the SCAAN Disclaimer set forth elsewhere.

The data presented in this report defines the actual wheel power required to maintain a specified vehicle speed on various grades. The results are based on the physical characteristics of the vehicle – weight, aerodynamics, and rolling resistance – and are independent of engine rating, transmission model, and shift schedule.

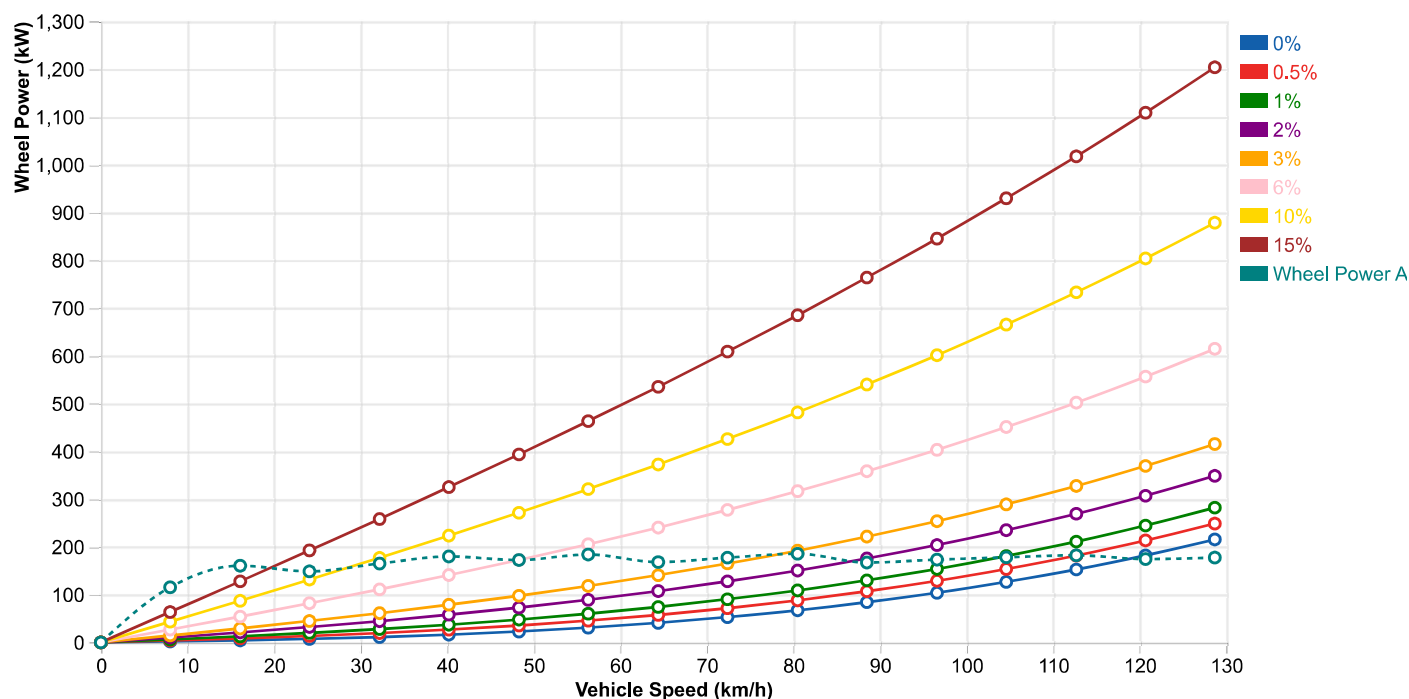
Positive grades indicate uphill operation and negative grades indicate downhill operation.

Positive wheel power values indicate propulsion power required, and negative wheel power values indicate braking power required. Wheel power values that exceed the available propulsion or braking wheel power indicate operating conditions that are not possible with the specified vehicle configuration.

WHEEL POWER REQUIRED ON GRADE - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.950, STANDARD POW▲

Engine Fan		On		Air Conditioning		Off			
Engine Power		Standard Power Curve		Vehicle Parameters		Standard			
Axle Ratio		6		Auxiliary Gearing Ratio		0.95			
Vehicle Speed (km/h)	Wheel Power Available (kW)	0%	0.5%	1%	2%	3%	6%	10%	15%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.0	115.4	1.9	4.0	6.1	10.2	14.4	26.9	43.3	63.7
16.1	160.5	4.3	8.4	12.6	20.9	29.2	54.1	87.1	127.8
24.1	148.7	7.3	13.5	19.8	32.3	44.8	82.1	131.6	192.6
32.2	165.1	11.2	19.6	27.9	44.5	61.2	111.0	177.0	258.3
40.2	179.9	16.3	26.7	37.1	58.0	78.8	141.0	223.5	325.2
48.3	172.5	22.8	35.3	47.8	72.8	97.7	172.5	271.4	393.5
56.3	184.0	30.9	45.5	60.0	89.2	118.3	205.5	321.0	463.3
64.4	168.2	40.8	57.5	74.1	107.5	140.7	240.4	372.4	535.1
72.4	177.5	52.9	71.6	90.4	127.8	165.3	277.4	425.8	608.9
80.5	185.6	67.2	88.1	108.9	150.5	192.1	316.7	481.6	685.0
88.5	167.2	84.2	107.1	130.0	175.8	221.5	358.5	540.0	763.8
96.6	173.3	103.9	128.9	153.9	203.8	253.8	403.2	601.2	845.3
104.6	178.1	126.7	153.7	180.8	234.9	289.0	450.9	665.4	929.8
112.7	182.4	152.7	181.8	211.0	269.3	327.5	501.9	732.9	1017.6
120.7	174.5	182.2	213.5	244.7	307.1	369.6	556.4	803.8	1108.9
128.7	177.7	215.5	248.8	282.1	348.7	415.3	614.6	878.6	1204.0

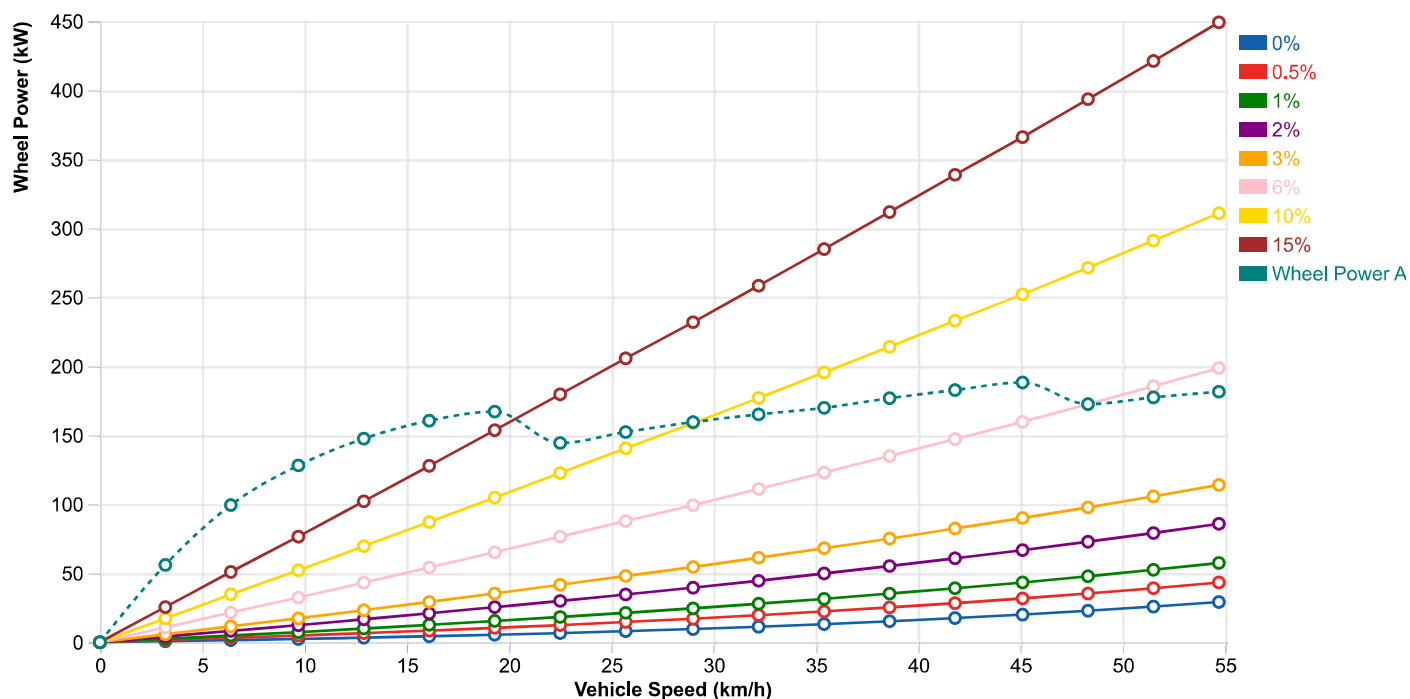
PLOTS - WHEEL POWER REQUIRED ON GRADE - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.950, STAND▲



WHEEL POWER REQUIRED ON GRADE - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.950, STANDARD POW

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	0.95

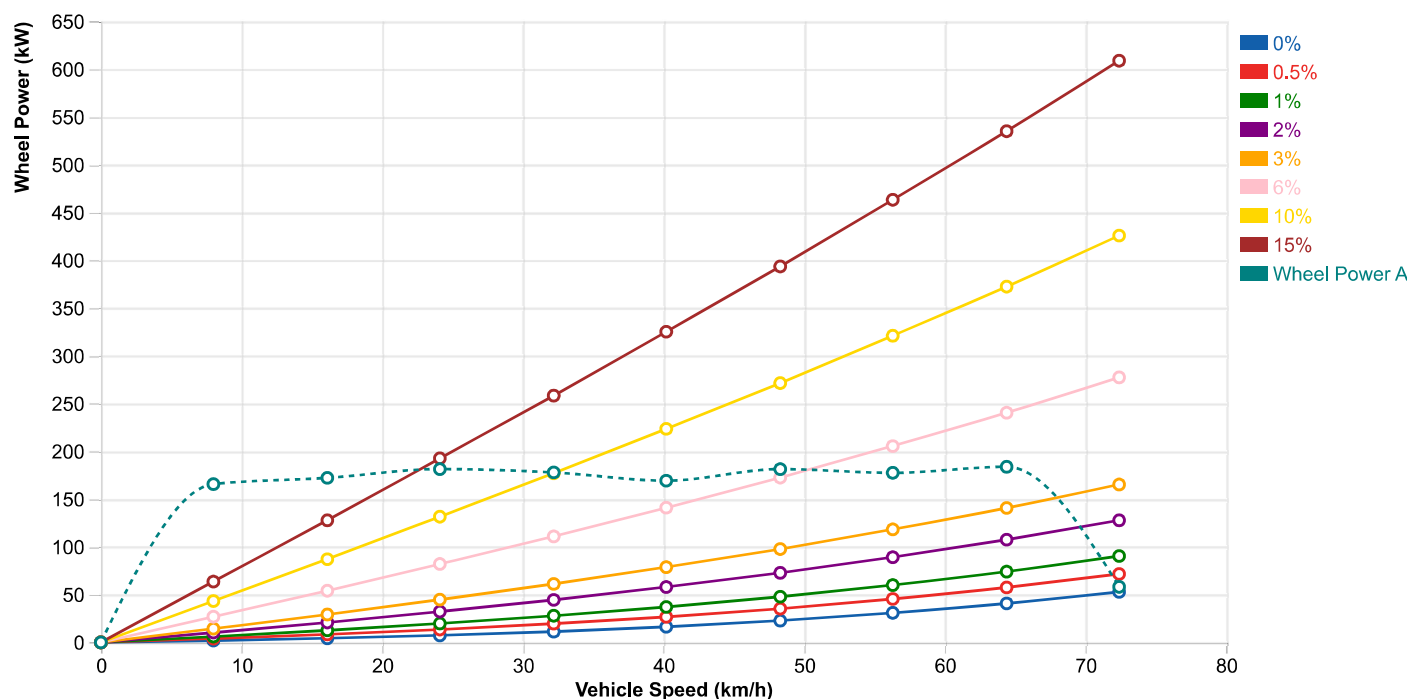
Vehicle Speed (km/h)	Wheel Power Available (kW)	0%	0.5%	1%	2%	3%	6%	10%	15%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.2	56.0	0.7	1.6	2.4	4.1	5.7	10.7	17.3	25.4
6.4	99.4	1.5	3.2	4.8	8.2	11.5	21.5	34.7	50.9
9.7	128.1	2.3	4.8	7.3	12.3	17.3	32.3	52.1	76.5
12.9	147.5	3.3	6.6	9.9	16.6	23.2	43.2	69.6	102.1
16.1	160.5	4.3	8.4	12.6	20.9	29.2	54.1	87.1	127.8
19.3	167.1	5.4	10.4	15.4	25.4	35.3	65.2	104.8	153.6
22.5	144.4	6.6	12.4	18.3	29.9	41.6	76.5	122.6	179.6
25.7	152.3	8.0	14.7	21.3	34.6	48.0	87.8	140.6	205.7
29.0	159.5	9.5	17.0	24.5	39.5	54.5	99.3	158.7	231.9
32.2	165.1	11.2	19.6	27.9	44.5	61.2	111.0	177.0	258.3
35.4	169.8	13.1	22.3	31.4	49.8	68.1	122.9	195.5	284.9
38.6	176.8	15.2	25.2	35.2	55.2	75.1	134.9	214.1	311.7
41.8	182.7	17.5	28.3	39.1	60.8	82.4	147.2	233.0	338.7
45.1	188.2	20.0	31.7	43.3	66.7	90.0	159.7	252.1	366.0
48.3	172.5	22.8	35.3	47.8	72.8	97.7	172.5	271.4	393.5
51.5	177.4	25.8	39.1	52.5	79.1	105.7	185.5	291.0	421.2
54.7	181.5	29.1	43.3	57.4	85.8	114.0	198.7	310.9	449.2

PLOTS - WHEEL POWER REQUIRED ON GRADE - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.950, STAND▲

WHEEL POWER REQUIRED ON GRADE - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.150, STANDARD POW▲

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	2.15

Vehicle Speed (km/h)	Wheel Power Available (kW)	0%	0.5%	1%	2%	3%	6%	10%	15%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.0	165.7	1.9	4.0	6.1	10.2	14.4	26.9	43.3	63.7
16.1	172.2	4.3	8.4	12.6	20.9	29.2	54.1	87.1	127.8
24.1	181.4	7.3	13.5	19.8	32.3	44.8	82.1	131.6	192.6
32.2	177.9	11.2	19.6	27.9	44.5	61.2	111.0	177.0	258.3
40.2	169.3	16.3	26.7	37.1	58.0	78.8	141.0	223.5	325.2
48.3	181.4	22.8	35.3	47.8	72.8	97.7	172.5	271.4	393.5
56.3	177.5	30.9	45.5	60.0	89.2	118.3	205.5	321.0	463.3
64.4	183.8	40.8	57.5	74.1	107.5	140.7	240.4	372.4	535.1
72.4	58.2	52.9	71.6	90.4	127.8	165.3	277.4	425.8	608.9

PLOTS - WHEEL POWER REQUIRED ON GRADE - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.150, STAND▲

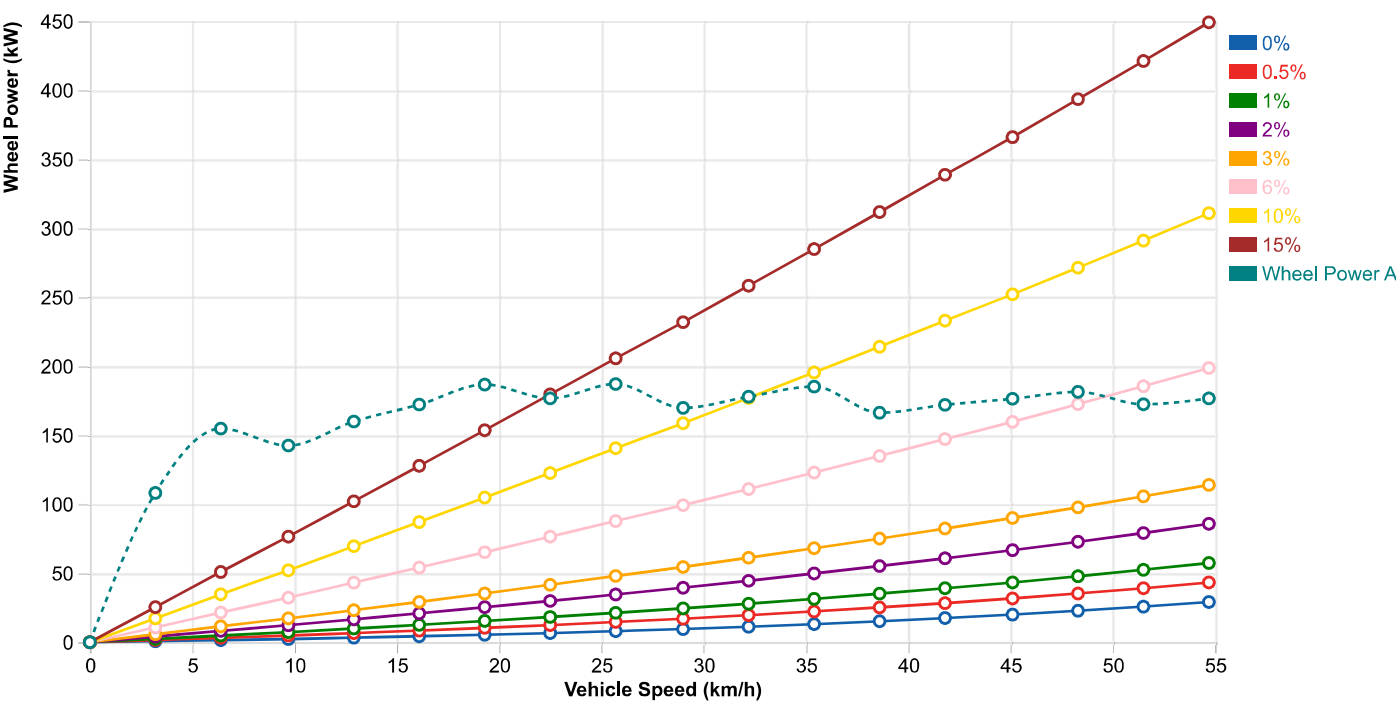


WHEEL POWER REQUIRED ON GRADE - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.150, STANDARD POW▲

Engine Fan	On	Air Conditioning	Off
Engine Power	Standard Power Curve	Vehicle Parameters	Standard
Axle Ratio	6	Auxiliary Gearing Ratio	2.15

Vehicle Speed (km/h)	Wheel Power Available (kW)	0%	0.5%	1%	2%	3%	6%	10%	15%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.2	108.2	0.7	1.6	2.4	4.1	5.7	10.7	17.3	25.4
6.4	154.8	1.5	3.2	4.8	8.2	11.5	21.5	34.7	50.9
9.7	142.5	2.3	4.8	7.3	12.3	17.3	32.3	52.1	76.5
12.9	159.9	3.3	6.6	9.9	16.6	23.2	43.2	69.6	102.1
16.1	172.2	4.3	8.4	12.6	20.9	29.2	54.1	87.1	127.8
19.3	186.7	5.4	10.4	15.4	25.4	35.3	65.2	104.8	153.6
22.5	176.7	6.6	12.4	18.3	29.9	41.6	76.5	122.6	179.6
25.7	187.1	8.0	14.7	21.3	34.6	48.0	87.8	140.6	205.7
29.0	169.8	9.5	17.0	24.5	39.5	54.5	99.3	158.7	231.9
32.2	177.9	11.2	19.6	27.9	44.5	61.2	111.0	177.0	258.3
35.4	185.2	13.1	22.3	31.4	49.8	68.1	122.9	195.5	284.9
38.6	166.3	15.2	25.2	35.2	55.2	75.1	134.9	214.1	311.7
41.8	172.0	17.5	28.3	39.1	60.8	82.4	147.2	233.0	338.7
45.1	176.4	20.0	31.7	43.3	66.7	90.0	159.7	252.1	366.0
48.3	181.4	22.8	35.3	47.8	72.8	97.7	172.5	271.4	393.5
51.5	172.4	25.8	39.1	52.5	79.1	105.7	185.5	291.0	421.2
54.7	176.7	29.1	43.3	57.4	85.8	114.0	198.7	310.9	449.2

PLOTS - WHEEL POWER REQUIRED ON GRADE - STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.150, STAND/A



Transmission Converter Cooling Test Point Summary

MISSION	
End User	xxx
Selected Vocation	Military — Wheeled - Tactical — Straight Truck (52-25-10)
PLATFORM	
Vehicle Manufacturer	Unknown - Europe/ME/SA - Germany (Europe/ME/SA)
Vehicle Model	UAT-4
Vehicle Configuration	4x4 MRAP
Engine Description	Cummins ISB6.7 (Diesel) -- 340hp@2800rpm 1100Nm@1400rpm -- without SEM/LRTP (116-L033737-E, Rev A)
Transmission	3200 SP Retarder (1-L007346-T, Rev E)
Transmission Rating	3200 SP Retarder Specialty/Military - Diesel Allison 6th Generation Controls without SEM/LRTP (1-L022117-R, Rev C)
Vehicle Parameters	Standard
Torque Converter	TC417 (1-L001251-TC, Rev C) Acceptable
Transmission Retarder	3000 Series Medium Capacity (1-L001293-TR, Rev A)
LRTP Status	
NOTE	

This SCAAN information is subject to the SCAAN Disclaimer set forth elsewhere.

The information presented in this report is intended to aid with the performance of Transmission Cooling Tests as described in TD-157 for On-Highway and On/Off-Highway Commercial transmissions and TD-165 for Off-Highway transmissions.

Cooling test should be conducted at 38°C (100°F) ambient temperature. If the vehicle will be operated in an area with an average ambient temperature greater than 38°C (100°F), then conduct the test at the LAT (Limiting Ambient Temperature) as defined in TD157 or TD165.

If Air Conditioning losses have been defined in the iSCAAN Application, the results below should be used with Fan ON if the air conditioning condenser is located in front of the engine radiator. If the air conditioning condenser is located elsewhere, use the Fan OFF results.

COOLING TEST (GEAR F4)-STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 0.950, STANDARD POWER CURVE ▲

Engine Fan			On			Air Conditioning			Off		
Engine Power			Standard Power Curve			Vehicle Parameters			Standard		
Axle Ratio			6.000			Auxiliary Gearing Ratio			0.950		
Limiting Ambient Temp			37.778 °C			End User Sub Region					
Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Speed Ratio	Turbine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Heat Rejection (kW)	Match Point
F4	42.5	2073	0.558	1156	1156	12.38	10.86	146.2	5.84	45.06	80% Converter Efficiency

COOLING TEST (GEAR F4)-STANDARD, FAN ON, AC OFF, AXLE RATIO = 6.000, AUX RATIO = 2.150, STANDARD POWER CURVE ▲

Engine Fan		On				Air Conditioning		Off			
Engine Power		Standard Power Curve				Vehicle Parameters		Standard			
Axle Ratio		6.000				Auxiliary Gearing Ratio		2.150			
Limiting Ambient Temp		37.778 °C				End User Sub Region					
Gear Range	Vehicle Speed (km/h)	Engine Speed (rpm)	Speed Ratio	Turbine Speed (rpm)	Output Speed (rpm)	Tractive Effort (kN)	Drawbar Pull (kN)	Wheel Power Available (kW)	Net Grade (%)	Heat Rejection (kW)	Match Point
F4	18.8	2073	0.558	1156	1156	28.02	27.03	146.2	14.66	45.06	80% Converter Efficiency