PERFORMANCE DATA[EM0213]

December 19, 2014

Performance Number: EM0213 **Change Level: 07**

SALES MODEL:	C18	**COMBUSTION:**	DI
ENGINE POWER (BHP):	755	**ENGINE SPEED (RPM):**	1,900
PEAK TORQUE (FT-LB):	2,582.2	**PEAK TORQUE SPEED (RPM):**	1,300
COMPRESSION RATIO:	16.0	**TORQUE RISE (%):**	24
RATING LEVEL:	INDUSTRIAL C - INTERMITTENT	**ASPIRATION:**	TA
PUMP QUANTITY:	1	**AFTERCOOLER TYPE:**	ATAAC
FUEL TYPE:	DIESEL	**AFTERCOOLER CIRCUIT TYPE:**	JW+OC, ATAAC
MANIFOLD TYPE:	DRY	**INLET MANIFOLD AIR TEMP (F):**	122
GOVERNOR TYPE:	ELEC	**JACKET WATER TEMP (F):**	192.2
INJECTOR TYPE:	EUI	**TURBO CONFIGURATION:**	SERIES
REF EXH STACK DIAMETER (IN):	6	**TURBO QUANTITY:**	2
MAX OPERATING ALTITUDE (FT):	6,201	**TURBOCHARGER MODEL:**	GTB4502-1.31 A/R
		CERTIFICATION YEAR:	2010
		PISTON SPD @ RATED ENG SPD (FT/MIN):	2,281.5

INDUSTRY	SUBINDUSTRY	APPLICATION
INDUSTRIAL	GENERAL INDUSTRIAL	INDUSTRIAL
OIL AND GAS	LAND PRODUCTION	INDUSTRIAL
INDUSTRIAL	AGRICULTURE	INDUSTRIAL
INDUSTRIAL	CONSTRUCTION	INDUSTRIAL
INDUSTRIAL	FORESTRY	INDUSTRIAL
OIL AND GAS	LAND DRILLING	INDUSTRIAL
OIL AND GAS	WELL SERVICING	INDUSTRIAL
INDUSTRIAL	MATERIAL HANDLING	INDUSTRIAL
INDUSTRIAL	MINING	INDUSTRIAL

General Performance Data

INLET MANIFOLD AIR TEMPERATURE ("INLET MFLD TEMP") FOR THIS CONFIGURATION IS MEASURED AT THE OUTLET OF THE AFTERCOOLER.

ENGINE SPEED	ENGINE POWER	ENGINE TORQUE	BRAKE MEAN EFF PRES (BMEP)	BRAKE SPEC FUEL CONSUMPTN (BSFC)	VOL FUEL CONSUMPTN (VFC)	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	EXH MFLD PRES	ENGINE OUTLET TEMP
RPM	BHP	LB-FT	PSI	LB/BHP-HR	GAL/HR	IN-HG	DEG F	DEG F	IN-HG	DEG F
1,900	755	2,087	284	0.362	39.5	110.1	121.7	1,208.3	118.9	770.0
1,800	755	2,203	300	0.353	38.4	110.2	121.6	1,202.9	114.0	770.3
1,700	755	2,333	318	0.348	37.8	112.2	121.9	1,202.4	101.3	778.0
1,600	740	2,430	331	0.342	36.3	110.9	121.4	1,197.6	95.0	783.5
1,500	711	2,489	339	0.331	33.8	105.7	121.5	1,206.9	84.8	793.5
1,400	679	2,546	347	0.329	32.0	102.2	121.4	1,203.7	78.6	800.2
1,300	640	2,584	352	0.329	30.5	100.6	121.4	1,190.1	76.4	792.4
1,200	573	2,506	342	0.331	27.4	90.9	121.3	1,155.8	67.7	781.8
1,100	479	2,286	312	0.339	23.2	79.3	121.3	1,141.4	55.1	787.3
1,000	378	1,986	271	0.314	17.1	51.5	121.3	1,033.4	35.2	743.7
900	315	1,839	251	0.318	14.3	37.3	117.6	1,040.8	23.3	767.5
800	253	1,664	227	0.316	11.8	26.3	111.8	1,035.8	15.3	787.1
700	193	1,449	197	0.324	9.1	16.7	97.8	1,048.4	9.2	784.5
600	133	1,162	158	0.339	6.5	8.7	90.7	983.0	5.1	750.1

ENGINE SPEED	ENGINE POWER	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP	WET INLET AIR VOL FLOW RATE	ENGINE OUTLET WET EXH GAS VOL FLOW RATE	WET INLET AIR MASS FLOW RATE	WET EXH GAS MASS FLOW RATE	WET EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)	DRY EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)
RPM	BHP	IN-HG	DEG F	CFM	CFM	LB/HR	LB/HR	FT3/MIN	FT3/MIN
1,900	755	113	423.4	1,549.3	3,242.7	6,777.7	7,054.0	1,296.6	1,179.4
1,800	755	113	418.1	1,512.2	3,182.4	6,600.7	6,869.7	1,272.2	1,156.7
1,700	755	115	412.3	1,436.4	3,077.7	6,245.9	6,510.7	1,222.7	1,108.5
1,600	740	113	405.6	1,381.6	2,987.4	5,990.8	6,245.0	1,181.5	1,071.0
1,500	711	108	392.6	1,279.7	2,812.7	5,523.8	5,760.3	1,103.6	999.4
1,400	679	104	384.9	1,219.0	2,720.0	5,250.4	5,474.8	1,061.5	961.6
1,300	640	102	384.6	1,201.7	2,672.9	5,172.3	5,385.8	1,049.6	953.4
1,200	573	93	366.7	1,119.6	2,486.5	4,805.4	4,997.4	984.8	897.1
1,100	479	81	341.6	989.3	2,239.9	4,225.0	4,387.7	883.2	806.8
1,000	378	53	279.6	766.4	1,702.0	3,253.1	3,372.5	695.4	637.4
900	315	38	244.8	581.1	1,350.7	2,455.5	2,555.9	541.1	492.0
800	253	27	216.9	430.9	1,036.3	1,816.0	1,898.4	408.7	368.3
700	193	17	186.2	317.1	767.6	1,334.9	1,398.3	303.3	272.1
600	133	9	163.9	221.9	524.6	933.5	979.1	213.2	190.9

Heat Rejection Data

ENGINE SPEED	ENGINE POWER	REJECTION TO JACKET WATER	REJECTION TO ATMOSPHERE	REJECTION TO EXH	EXHUAST RECOVERY TO 350F	FROM OIL COOLER	FROM AFTERCOOLER	WORK ENERGY	LOW HEAT VALUE ENERGY	HIGH HEAT VALUE ENERGY
RPM	BHP	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN
1,900	755	18,599	2,891	27,631	12,502	4,466	8,189	32,017	83,855	89,327
1,800	755	17,537	2,775	26,877	12,185	4,352	7,838	32,017	81,712	87,044
1,700	755	17,746	2,845	25,890	11,785	4,288	7,265	32,017	80,510	85,764
1,600	740	16,315	2,822	25,228	11,454	4,129	6,818	31,392	77,518	82,576
1,500	711	14,674	2,660	23,349	10,820	3,841	5,997	30,141	72,115	76,820
1,400	679	13,905	2,450	22,286	10,443	3,648	5,541	28,776	68,489	72,957
1,300	640	12,762	2,351	20,972	10,077	3,433	5,452	27,127	64,456	68,662
1,200	573	11,094	2,034	19,691	9,106	3,091	4,724	24,283	58,039	61,826

Sound Data

SOUND DATA REPRESENTATIVE OF NOISE PRODUCED BY THE "ENGINE ONLY" WITHOUT AFTERTREATMENT OR MUFFLER INSTALLED

EXHAUST: Sound Power (1/3 Octave Frequencies)

ENGINE SPEED	ENGINE POWER	OVERALL SOUND	100 HZ	125 HZ	160 HZ	200 HZ	250 HZ	315 HZ	400 HZ	500 HZ	630 HZ	800 HZ
RPM	BHP	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
1,900	755	119.3	88.2	83.8	90.9	95.2	98.5	102.3	101.7	104.6	108.0	110.2
1,800	755	118.9	88.5	86.6	91.0	93.1	98.8	103.5	102.7	104.8	107.6	110.2
1,700	755	118.6	90.8	90.0	95.5	94.8	100.6	101.4	104.8	104.9	107.2	109.2
1,600	740	118.1	90.7	92.2	97.6	96.3	99.9	101.2	105.0	104.6	106.8	108.8
1,500	711	117.5	87.9	92.6	95.9	96.2	98.8	101.4	103.9	104.3	106.5	108.3
1,400	679	117.4	87.8	90.8	92.8	96.0	100.9	102.5	104.2	104.6	106.5	108.1
1,300	640	117.1	86.0	89.2	88.9	96.3	101.8	102.9	104.1	104.8	106.6	107.9
1,200	573	116.0	79.1	89.3	91.2	96.3	97.6	101.5	102.6	104.9	106.2	107.1
1,100	479	115.3	79.6	89.7	90.5	94.9	97.8	102.0	101.8	104.4	105.8	106.5
1,000	378	113.4	85.6	88.2	88.1	93.2	97.9	101.9	102.1	102.0	103.9	104.3
900	315	111.5	94.2	84.6	84.0	92.6	96.5	100.7	102.9	99.1	102.0	102.1

EXHAUST: Sound Power (1/3 Octave Frequencies)

ENGINE SPEED	ENGINE POWER	1000 HZ	1250 HZ	1600 HZ	2000 HZ	2500 HZ	3150 HZ	4000 HZ	5000 HZ	6300 HZ	8000 HZ	10000 HZ
RPM	BHP	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
1,900	755	111.2	110.6	110.4	108.7	108.7	107.7	104.3	100.6	95.0	88.3	82.4
1,800	755	110.7	110.4	109.9	108.1	108.1	107.1	103.9	100.3	94.7	88.1	82.1
1,700	755	110.3	109.8	109.5	107.8	107.7	106.7	103.3	99.6	94.4	87.5	81.8
1,600	740	109.8	109.3	108.9	107.0	107.1	105.9	102.5	99.0	93.8	86.9	81.3
1,500	711	109.2	108.6	108.2	106.1	106.5	105.1	101.7	98.4	93.1	85.9	80.7
1,400	679	108.9	108.4	107.9	106.0	106.3	104.9	101.5	98.0	92.4	85.7	79.8
1,300	640	108.3	108.0	107.5	105.7	105.9	104.6	101.1	97.6	91.9	84.4	78.6
1,200	573	107.0	106.8	106.2	104.1	104.3	103.3	99.8	96.7	91.7	80.6	75.2
1,100	479	106.3	106.2	105.4	103.4	103.0	102.2	99.1	93.1	87.5	84.3	71.1
1,000	378	104.2	103.9	102.7	100.9	100.6	99.9	96.3	92.0	87.2	81.0	66.7
900	315	102.0	101.2	100.0	98.2	98.3	97.8	93.0	93.5	90.7	73.0	64.5

PERFORMANCE DATA[EM0213]

Sound Data (Continued)

MECHANICAL: Sound Power (1/3 Octave Frequencies)

ENGINE SPEED	ENGINE POWER	OVERALL SOUND	100 HZ	125 HZ	160 HZ	200 HZ	250 HZ	315 HZ	400 HZ	500 HZ	630 HZ	800 HZ
RPM	BHP	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
1,900	755	120.6	79.4	86.6	92.5	94.2	94.9	96.7	101.2	113.9	106.7	108.4
1,800	755	120.0	77.9	87.4	93.2	92.1	92.8	97.1	101.1	115.3	105.7	107.2
1,700	755	119.7	75.5	87.0	92.4	89.4	90.1	97.7	101.7	114.5	104.0	108.3
1,600	740	118.6	74.5	86.2	89.0	86.9	88.7	96.4	100.8	112.5	102.9	107.3
1,500	711	117.7	73.3	85.5	85.4	85.2	87.9	94.6	100.2	110.2	102.7	106.0
1,400	679	117.3	72.3	84.4	84.4	85.2	87.6	93.2	99.9	108.0	102.1	106.3
1,300	640	116.3	71.4	82.8	83.2	84.9	87.4	92.1	99.5	105.9	101.1	105.1
1,200	573	114.6	70.5	80.0	80.2	83.4	87.3	94.4	98.8	101.5	99.8	101.3
1,100	479	115.4	71.5	77.4	78.4	82.5	86.8	95.5	97.8	100.7	100.2	102.1
1,000	378	115.3	73.3	73.3	76.4	82.0	86.3	92.2	95.4	99.7	101.5	103.0
900	315	113.5	75.5	68.0	74.3	83.1	86.5	87.2	92.6	96.9	102.9	101.6

MECHANICAL: Sound Power (1/3 Octave Frequencies)

ENGINE SPEED	ENGINE POWER	1000 HZ	1250 HZ	1600 HZ	2000 HZ	2500 HZ	3150 HZ	4000 HZ	5000 HZ	6300 HZ	8000 HZ	10000 HZ
RPM	BHP	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
1,900	755	109.5	109.8	110.6	109.7	110.1	110.4	107.3	103.3	102.5	104.1	104.1
1,800	755	108.5	108.7	109.5	108.4	109.6	109.4	106.3	102.5	101.7	104.1	102.7
1,700	755	107.2	108.9	108.6	108.9	109.1	108.3	105.7	102.2	101.7	104.0	101.6
1,600	740	106.6	107.5	107.9	108.7	108.0	107.6	105.4	101.5	100.9	104.2	102.2
1,500	711	106.4	106.4	107.4	108.6	107.2	107.0	104.9	100.5	99.9	104.1	102.6
1,400	679	105.1	105.7	108.0	107.7	106.8	106.6	104.4	100.5	100.0	104.5	102.7
1,300	640	103.8	105.3	107.7	106.4	106.2	106.0	104.1	100.2	99.6	104.0	102.7
1,200	573	103.4	106.1	104.9	105.4	105.5	105.1	101.4	98.4	97.5	103.2	102.1
1,100	479	103.7	106.0	105.3	105.5	105.1	105.1	101.5	97.4	99.7	107.7	103.8
1,000	378	104.8	105.2	106.1	105.7	105.3	104.2	101.6	97.7	100.2	106.5	101.5
900	315	105.8	104.7	106.1	105.7	106.1	102.3	100.5	98.5	98.1	98.3	97.0

Regulatory Information

EPA TIER 4 INTERIM		2011 - 2014		
GASEOUS EMISSIONS DATA MEASUREMENTS PROVIDED TO THE EPA ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 1039 SUBPART F AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. THE "MAX LIMITS" SHOWN BELOW ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE NON-ROAD REGULATIONS.				
Locality	**Agency**	**Regulation**	**Tier/Stage**	**Max Limits - G/BKW - HR**
U.S. (INCL CALIF)	EPA	NON-ROAD NON-GENSET	TIER 4 INTERIM	CO: 3.5 NOx: 3.5 HC: 0.4 PM: 0.10

Altitude Derate Data

ALTITUDE CORRECTED POWER CAPABILITY (BHP)

AMBIENT OPERATING TEMP (F)	50	60	70	80	90	100	110	120	130	NORMAL
ALTITUDE (FT)										
0	753	750	747	744	742	740	738	737	732	744
1,000	749	746	742	738	736	733	732	730	717	739
2,000	745	742	737	732	730	729	726	716	701	736
3,000	741	736	731	727	724	724	714	701	685	733
4,000	735	730	726	721	718	711	698	681	669	728
5,000	730	723	718	711	699	693	677	665	652	723
6,000	723	720	720	714	700	698	679	662	646	720
7,000	715	711	709	704	695	684	666	647	627	713
8,000	710	706	700	691	678	661	642	617	593	710
9,000	688	682	674	663	648	629	606	584	563	692
10,000	664	656	646	633	615	594	574	554	534	673
11,000	640	629	616	600	583	564	545	525	507	653
12,000	613	600	587	572	554	535	516	499	484	633
13,000	586	574	560	544	525	507	492	477	462	611
14,000	562	548	532	516	499	484	469	455	441	590
15,000	535	520	505	492	477	462	448	434	416	571

Cross Reference

Engine Arrangement			
Arrangement Number	**Effective Serial Number**	**Engineering Model**	**Engineering Model Version**
3466743	BDN00001	EE021	-
3660334	BDN00001	EE021	-
3665643	BDN00001	EE021	-

Test Specification Data						
Test Spec	**Setting**	**Effective Serial Number**	**Engine Arrangement**	**Governor Type**	**Default Low Idle Speed**	**Default High Idle Speed**
0K9857		BDN00001	3466743	ELEC		
3498909	PP6887	BDN00001	3660334	ELEC		
3498909	PP6887	BDN00001	3665643	ELEC		

Supplementary Data

Type	**Classification**	**Performance Number**
AMBIENT TEMP	50C (122F)	EM0214

This performance data is supplementary data for:
EM0214

Performance Parameter Reference

Parameters Reference:DM9600-06

PERFORMANCE DEFINITIONS

PERFORMANCE DEFINITIONS DM9600

APPLICATION:
Engine performance tolerance values below are representative of a typical production engine tested in a calibrated dynamometer test cell at SAE J1995 standard reference conditions. Caterpillar maintains ISO9001:2000 certified quality management systems for engine test Facilities to assure accurate calibration of test equipment. Engine test data is corrected in accordance with SAE J1995. Additional reference material SAE J1228, J1349, ISO 8665, 3046-1:2002E, 3046-3:1989, 1585, 2534, 2288, and 9249 may apply in part or are similar to SAE J1995. Special engine rating request (SERR) test data shall be noted.

PERFORMANCE PARAMETER TOLERANCE FACTORS:

Power	+/- 3%
Torque	+/- 3%
Exhaust stack temperature	+/- 8%
Inlet airflow	+/- 5%
Intake manifold pressure-gage	+/- 10%
Exhaust flow	+/- 6%
Specific fuel consumption	+/- 3%
Fuel rate	+/- 5%
Specific DEF consumption	+/- 3%
DEF rate	+/- 5%
Heat rejection	+/- 5%
Heat rejection exhaust only	+/- 10%
Heat rejection CEM only	+/- 10%

Heat Rejection values based on using treated water.

Torque is included for truck and industrial applications, do not use for Gen Set or steady state applications.

On C7 - C18 engines, at speeds of 1100 RPM and under these values are provided for reference only, and may not meet the tolerance listed.

These values do not apply to C280/3600. For these models, see the tolerances listed below.

C280/3600 HEAT REJECTION TOLERANCE FACTORS:

Heat rejection	+/- 10%
Heat rejection to Atmosphere	+/- 50%
Heat rejection to Lube Oil	+/- 20%
Heat rejection to Aftercooler	+/- 5%

TEST CELL TRANSDUCER TOLERANCE FACTORS:

Torque	+/- 0.5%
Speed	+/- 0.2%
Fuel flow	+/- 1.0%
Temperature	+/- 2.0 C degrees
Intake manifold pressure	+/- 0.1 kPa

OBSERVED ENGINE PERFORMANCE IS CORRECTED TO SAE J1995 REFERENCE AIR AND FUEL CONDITIONS.

REFERENCE ATMOSPHERIC INLET AIR

FOR 3500 ENGINES AND SMALLER
SAE J1228 AUG2002 for marine engines, and J1995 JAN2014 for other engines, reference atmospheric pressure is 100 KPA (29.61 in hg), and standard temperature is 25deg C (77 deg F) at 30% relative humidity at the stated aftercooler water temp, or inlet manifold temp.

FOR 3600 ENGINES
Engine rating obtained and presented in accordance with ISO 3046/1 and SAE J1995 JANJAN2014 reference atmospheric pressure is 100 KPA (29.61 in hg), and standard temperature is 25deg C (77 deg F) at 30% relative humidity and 150M altitude at the stated aftercooler

water temperature.

MEASUREMENT LOCATION FOR INLET AIR TEMPERATURE
Location for air temperature measurement air cleaner inlet at stabilized operating conditions.

REFERENCE EXHAUST STACK DIAMETER
The Reference Exhaust Stack Diameter published with this dataset is only used for the calculation of Smoke Opacity values displayed in this dataset. This value does not necessarily represent the actual stack diameter of the engine due to the variety of exhaust stack adapter options available. Consult the price list, engine order or general dimension drawings for the actual stack diameter size ordered or options available.

REFERENCE FUEL

DIESEL
Reference fuel is #2 distillate diesel with a 35API gravity; A lower heating value is 42,780 KJ/KG (18,390 BTU/LB) when used at 29 (84.2), where the density is 838.9 G/Liter (7.001 Lbs/Gal).

GAS
Reference natural gas fuel has a lower heating value of 33.74 KJ/L (905 BTU/CU Ft). Low BTU ratings are based on 18.64 KJ/L (500 BTU/CU FT) lower heating value gas. Propane ratings are based on 87.56 KJ/L (2350 BTU/CU Ft) lower heating value gas.

ENGINE POWER (NET) IS THE CORRECTED FLYWHEEL POWER (GROSS) LESS EXTERNAL AUXILIARY LOAD
Engine corrected gross output includes the power required to drive standard equipment; lube oil, scavenge lube oil, fuel transfer, common rail fuel, separate circuit aftercooler and jacket water pumps. Engine net power available for the external (flywheel) load is calculated by subtracting the sum of auxiliary load from the corrected gross flywheel out put power. Typical auxiliary loads are radiator cooling fans, hydraulic pumps, air compressors and battery charging alternators. For Tier 4 ratings additional Parasitic losses would also include Intake, and Exhaust Restrictions.

ALTITUDE CAPABILITY
Altitude capability is the maximum altitude above sea level at standard temperature and standard pressure at which the engine could develop full rated output power on the current performance data set. Standard temperature values versus altitude could be seen on TM2001. When viewing the altitude capability chart the ambient temperature is the inlet air temp at the compressor inlet.

Engines with ADEM MEUI and HEUI fuel systems operating at conditions above the defined altitude capability derate for atmospheric pressure and temperature conditions outside the values defined, see TM2001. Mechanical governor controlled unit injector engines require a setting change for operation at conditions above the altitude defined on the engine performance sheet. See your Caterpillar technical representative for non standard ratings.

REGULATIONS AND PRODUCT COMPLIANCE
TMI Emissions information is presented at 'nominal' and 'Potential Site Variation' values for standard ratings. No tolerances are applied to the emissions data. These values are subject to change at any time. The controlling federal and local emission requirements need to be verified by your Caterpillar technical representative. Log on to the Technology and Solutions Divisions (T&SD) web page (https://pdgt.cat.com/cda/layout) for information including federal regulation applicability and time lines for implementation. Information for labeling and tagging requirements is also provided.

NOTES:
Regulation watch covers regulations in effect and future regulation changes for world, federal, state and local. This page includes

items on the watch list where a regulation change or product change might be pending and may need attention of the engine product group. For additional emissions information log on to the TMI web page.

Additional product information for specific market application is available.
Customer's may have special emission site requirements that need to be verified by the Caterpillar Product Group engineer.

HEAT REJECTION DEFINITIONS:
Diesel Circuit Type and HHV Balance : DM9500

EMISSIONS DEFINITIONS:
Emissions : DM1176

SOUND DEFINITIONS:
Sound Power : DM8702

Sound Pressure : TM7080

RATING DEFINITIONS:
Agriculture : TM6008

Fire Pump : TM6009

Generator Set : TM6035

Generator (Gas) : TM6041

Industrial Diesel : TM6010

Industrial (Gas) : TM6040

Irrigation : TM5749

Locomotive : TM6037

Marine Auxiliary : TM6036

Marine Prop (Except 3600) : TM5747

Marine Prop (3600 only) : TM5748

MSHA : TM6042

Oil Field (Petroleum) : TM6011

Off-Highway Truck : TM6039

On-Highway Truck : TM6038

Date Released : 5/12/14