

**Example Template - HDV Class 2b/3 - Federal Tier 3 FTP Fleet Average NMOG+NOx Calculations for One Model Year**

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Instructions	
Select Model Year:	2019

HDV Class 2b Averaging Set				
Emission Standard	Total Production	Fleet average compliance value	Fleet average standard	Credits or Debits
		g/mi	g/mi	g/mi
FTP (NMOG+NOx)	193,840	0.224	0.253	5.621

HDV Class 3 Averaging Set				
Emission Standard	Total Production	Fleet average compliance value	Fleet average standard	Credits or Debits
		g/mi	g/mi	g/mi
FTP (NMOG+ NOx)	340,000	0.421	0.400	(7,140)

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Example Template - HDV Tier 3 Class 2b/3 FTP Fleet Average (NMOG + NOx) Credits - AB&T Model Year Summary Table

Manufacturer: \_\_\_\_\_

Date: \_\_\_\_\_

Purpose and Scope of this Guidance Document

This document was prepared by EPA's Office of Transportation and Air Quality (OTAQ). It is one of several intended to aid regulated parties in reporting Tier 3 and Cold NMHC Averaging, Banking and Trading (AB&T) information and calculating AB&T fleet average credits for light-duty vehicles and certain heavy-duty class 2b and 3 vehicles, ref. 40 CFR 86.1862-04(c). It contains EPA's recommended format for manufacturers to report to EPA their end-of-year Tier 3 AB&T calculations, credits and other information with respect to the implementation of the AB&T provisions of the EPA Tier 3 final rule (79 FR 23414, April 28, 2014) as amended (80 FR 9078, February 19, 2015; 80 FR 26463, May 8, 2015); ref. 40 CFR Parts 85, 86, 600, 1065, 1066. Use of this document is purely optional.

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Select Model Year:	2019
Select Phase-in Approach:	Primary--(Used for 2016-2021MYs)
Applicable Phase-in Regulations:	40 CFR 86.1816-18(b)(7) and/or (b)(11)
Small Volume?	No

A. Date of Transaction	B. Model Year	C. Category	Fleet Average Compliance Level			G. Credit (Debit) [Calc from D,E,F]	Date Credits/Debits were earned	Date Credits will expire	Last Date When Credits can be Traded	Comments
			D. Applicable FTP Standards	E. Mfr FTP Compliance Level	F. Production Volume					
			gram/mi	gram/mi	units	gram/mi				

2016 Early Credits:

5/1/2017	2016	HD Class 2b	0.333	0.302	10,002	310	12/31/2016	12/31/2021	12/31/2021	2016 Early Tier 3 HD Class 2b FTP Credits earned per 40 CFR 86.1816-18(b)(11); see other spreadsheet.
5/1/2017	2016	HD Class 3	0.548	0.421	1,000	127	12/31/2016	12/31/2021	12/31/2021	2016 Early Tier 3 HD Class 3 FTP Credits earned per 40 CFR 86.1816-18(b)(11); see other spreadsheet.
4/1/2019	2016	Transfer	-	-	-	(437)	12/31/2016	-	-	Transferred 437 Credits from 2016 model year to 2018 model year (earned on 12/31/2016).
Total 2016 Early Credits Remaining:						0				

2017 Early Credits:

5/1/2018	2017	HD Class 2b	0.310	0.298	21,784	261	12/31/2017	12/31/2022	12/31/2022	2017 Early Tier 3 HD Class 2b FTP Credits earned per 40 CFR 86.1816-18(b)(11); see other spreadsheet.
5/1/2018	2017	HD Class 3	0.508	0.501	1,000	7	12/31/2017	12/31/2022	12/31/2022	2017 Early Tier 3 HD Class 3 FTP Credits earned per 40 CFR 86.1816-18(b)(11); see other spreadsheet.
4/1/2019	2017	Transfer	-	-	-	(268)	12/31/2017			Transferred 268 Credits from 2017 model year to 2018 model year (earned on 12/31/2017).
Total 2017 Early Credits Remaining:						0				

Total 2016-2017 Early Credits Remaining: 0

2018 Credits:

5/1/2019	2018	HD Class 2b	0.278	0.298	58,471	(1,169)	12/31/2018	12/31/2023	12/31/2023	2018 Tier 3 HD Class 2b FTP Credits earned using Primary phase-in approach; see other spreadsheet.
5/1/2019	2018	HD Class 3	0.451	0.460	10,000	(90)	12/31/2018	12/31/2023	12/31/2023	2018 Tier 3 HD Class 3 FTP Credits earned using Primary phase-in approach; ; see other spreadsheet.
4/1/2019	2016	Transfer	-	-	-	437	12/31/2016	-	-	Transferred 437 Credits from 2016 model year to 2018 model year (earned on 12/31/2016).
4/1/2019	2017	Transfer	-	-	-	268	12/31/2017			Transferred 268 Credits from 2017 model year to 2018 model year (earned on 12/31/2017).
1/20/2019	2018	Transfer	-	-	-	500	12/31/2016	12/31/2021	12/31/2021	Purchased 500 HDV FTP credits from Manufacturer A (earned on 12/31/2016)
Total 2018 Credits Remaining:						(54)				

Total 2016-2018 Credits Remaining: (54)

2019 Credits:

5/1/2020	2019	HD Class 2b	0.253	0.224	193,840	#NAME?	12/31/2019	12/31/2024	12/31/2024	2019 Tier 3 HD Class 2b FTP Credits earned using Primary or Alternative phase-in approach; see other spreadsheet.
5/1/2020	2019	HD Class 3	0.400	0.421	340,000	#NAME?	12/31/2019	12/31/2024	12/31/2024	2019 Tier 3 HD Class 3 FTP Credits earned using Primary or Alternative phase-in approach; see other spreadsheet.
3/4/2020	2019	Transfer	-	-	-	1,000	12/31/2019	-	-	Purchased 1,000 2019 HDV FTP Credits to Manufacturer B (earned on 12/31/2019).
Total 2019 Credits Remaining:						#NAME?				

Grand Total 2016-2019 Credits Remaining: #NAME?

[Note: D.Good revised this formula on 8/24/2018]

**Example Template - Light-Duty Vehicle - Cold NMHC Fleet Average Calculations for One Model Year**  
**Manufacturer:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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Purpose and Scope of this Guidance Document	
<p>This document was prepared by EPA's Office of Transportation and Air Quality (OTAQ). It is one of several intended to aid regulated parties in reporting Tier 3 and Cold NMHC Averaging, Banking and Trading (AB&amp;T) information and calculating AB&amp;T fleet average credits for light-duty vehicles and certain heavy-duty class 2b and 3 vehicles, ref. 40 CFR 86.1862-04(c). It contains EPA's recommended format for manufacturers to report to EPA their end-of-year Tier 3 AB&amp;T calculations, credits and other information with respect to the implementation of the AB&amp;T provisions of the EPA Tier 3 final rule (79 FR 23414, April 28, 2014) as amended (80 FR 9078, February 19, 2015; 80 FR 26463, May 8, 2015); ref. 40 CFR Parts 85, 86, 600, 1065, 1066. Use of this document is purely optional.</p> <p>This document does not in any way alter or waive the requirements in EPA regulations. Although the calculations and formulas provided in this document are intended to assist manufacturers in the implementation of EPA regulations, this document does not establish or change the legal rights or obligations of manufacturers or others in complying with EPA regulations, including 40 CFR 86.1862-04(c). If an error or other discrepancy is found in this document, including the calculation formulas, please contact your EPA certification team member or Dave Good at (734) 214-4450 or by email at <a href="mailto:good.david@epa.gov">good.david@epa.gov</a>. The regulations take precedence.</p>	

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Instructions		
Select Model Year:	2019	

LDV & LLDT Averaging Set				
Emission Standard	Total Production (Nationwide)	Fleet average compliance value (rounded to nearest 0.1 gpm)	Fleet average standard	Credits or Debits
		g/mi	g/mi	g/mi
Cold FTP (NMHC)	193,840	0.2	0.3	19,384

HLDT & MDPV Averaging Set				
Emission Standard	Total Production (Nationwide)	Fleet average compliance value (rounded to nearest 0.1 gpm)	Fleet average standard	Credits or Debits
		g/mi	g/mi	g/mi
Cold FTP (NMHC)	340,000	0.5	0.5	0

Enter "X" if all vehicles are certified at or below fleet average standard and you omit credit calculations per 40 CFR 86.18160-17(f):

<u>Averaging Set</u>	Check if applicable:
LDV & LLDT:	
HLDV & MDPV:	

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Example Template - LDV/LDT/MDPV Fleet Average Cold NMHC

Manufacturer: \_\_\_\_\_

Purpose and Scope of this Guidance Document

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Select Model Year:

2019

A. Date of Transaction	B. Model Year	C. Category	Fleet Average Compliance Level			G. Credit (Debit) [Calc from D,E,F]	Date Credits/Debits were earned	Date Credits will expire	Last Date When Credits can be Traded
			D. Applicable Cold NMHC Fleet Average Standard	E. Fleet Ave Cold NMHC Compliance Level	F. Production Volume (Nationwide)				
			gram/mi	gram/mi	units	gram/mi			

2010 Credits:

5/1/2011	2010	LDV/LLDT	0.3	0.3	10,002	0	12/31/2010	No expiration date	Not Limited
	2010	Transfer	-	-	-		-	-	-
Total 2010 Credits Remaining:						0			

2011 Credits:

5/1/2012	2011	LDV/LLDT	0.3	0.3	10,002	0	12/31/2011	No expiration date	Not Limited
5/1/2012	2011	HLDT/MDPV	0.5	0.4	1,000	100	12/31/2012	No expiration date	Not Limited
	2011	Transfer	-	-	-		-	-	-
Total 2011 Credits Remaining:						100			

2012 Credits:

5/1/2013	2012	LDV/LLDT	0.3	0.3	10,002	0	12/31/2012	No expiration date	Not Limited
5/1/2013	2012	HLDT/MDPV	0.5	0.5	1,000	0	12/31/2012	No expiration date	Not Limited
	2012	Transfer	-	-	-		-	-	-
Total 2012 Credits Remaining:						0			

2013 Credits:

5/1/2014	2013	LDV/LLDT	0.3	0.3	10,002	0	12/31/2013	No expiration date	Not Limited
5/1/2014	2013	HLDT/MDPV	0.5	0.5	1,000	0	12/31/2013	No expiration date	Not Limited
	2013	Transfer	-	-	-		-	-	-
Total 2013 Credits Remaining:						0			

2014 Credits:

5/1/2015	2014	LDV/LLDT	0.3	0.3	10,002	0	12/31/2014	No expiration date	Not Limited
5/1/2015	2014	HLDT/MDPV	0.5	0.5	1,000	0	12/31/2014	No expiration date	Not Limited

Example Template - LDV/LDT/MDPV Fleet Average Cold NMHC

Manufacturer: \_\_\_\_\_

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Select Model Year:			2019						
A. Date of Transaction	B. Model Year	C. Category	Fleet Average Compliance Level			G. Credit (Debit) [Calc from D,E,F]	Date Credits/Debits were earned	Date Credits will expire	Last Date When Credits can be Traded
			D. Applicable Cold NMHC Fleet Average Standard	E. Fleet Ave Cold NMHC Compliance Level	F. Production Volume (Nationwide)				
			gram/mi	gram/mi	units				
	2014	Transfer	-	-	-		-	-	-
Total 2014 Credits Remaining:						0			
2015 Credits:									
5/1/2016	2015	LDV/LLDT	0.3	0.3	10,002	0	12/31/2015	No expiration date	Not Limited
5/1/2016	2014	HLDT/MDPV	0.5	0.5	1,000	0	12/31/2015	No expiration date	Not Limited
	2015	Transfer	-	-	-		-	-	-
Total 2015 Credits Remaining:						0			
2016 Credits:									
5/1/2017	2016	LDV/LLDT	0.3	0.2	10,002	1,000	12/31/2016	No expiration date	Not Limited
5/1/2017	2016	HLDT/MDPV	0.5	0.5	1,000	0	12/31/2016	No expiration date	Not Limited
	2016	Transfer	-	-	-		-	-	-
Total 2016 Credits Remaining:						1,000			
2017 Credits:									
5/1/2018	2017	LDV/LLDT	0.3	0.3	21,784	0	12/31/2017	No expiration date	Not Limited
5/1/2018	2017	HLDT/MDPV	0.5	0.5	1,000	0	12/31/2017	No expiration date	Not Limited
	2017	Transfer	-	-	-		-	-	-
Total 2017 Credits Remaining:						0			
Total 2010-2017 Credits Remaining:						1,100			
2018 Credits:									
5/1/2019	2018	LDV/LLDT	0.3	0.4	28,471	(2,847)	12/31/2018	No expiration date	Not Limited
5/1/2019	2018	HLDT/MDPV	0.5	0.5	1,000	0	12/31/2018	No expiration date	Not Limited
1/20/2019	2018	Transfer	-	-	-	2,000	12/31/2016	No expiration date	Not Limited
Total 2018 Early Credits Remaining:						(847)			



Example Template - LDV/LDT/MDPV Fleet Average Cold NMHC

Manufacturer: \_\_\_\_\_

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Select Model Year:	2019
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A. Date of Transaction	B. Model Year	C. Category	Fleet Average Compliance Level			G. Credit (Debit) [Calc from D,E,F]	Date Credits/Debits were earned	Date Credits will expire	Last Date When Credits can be Traded
			D. Applicable Cold NMHC Fleet Average Standard	E. Fleet Ave Cold NMHC Compliance Level	F. Production Volume (Nationwide)				
			gram/mi	gram/mi	units	gram/mi			

Total 2010-2018 Credits Remaining:	253
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2019 Credits:

5/1/2020	2019	LDV/LLDT	0.3	0.3	53,458	0	12/31/2019	No expiration date	Not Limited
5/1/2020	2019	HLDT/MDPV	0.5	0.5	1,000	0	12/31/2019	No expiration date	Not Limited
	2019	Transfer	-	-	-		-	-	-
Total 2019 Credits Remaining:						0			

Grand Total 2010-2019 Credits Remaining:	253
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Credits - AB&T Model Year Summary Table

Date:\_\_\_\_\_

**Document**

This document provides information on how to determine the credit for Banking and Trading (AB&T) information and calculating AB&T fleet average credits for light-duty vehicles and certain heavy-duty class 2b and 3 vehicles, ref. 40 CFR 86.1864-10. This document is not intended to be used in place of the AB&T provisions of the EPA Tier 3 final rule (79 FR 23414, April 28, 2014) as amended (80 FR 9078, February 19, 2015; 80 FR 26463, May 8, 2015); ref. 40 CFR 86.1864-10. For the implementation of EPA regulations, this document does not establish or change the legal rights or obligations of manufacturers or others in complying with the regulations. For more information, please contact David Good at (734) 214-4450 or by email at good.david@epa.gov. The regulations take precedence.

Comments

2010 LDV/LDT Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

2011 LDV/LDT Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.  
Early 2011 HLDT/MDPV Cold NMHC Credits earned per 40 CFR 86.1811-10(g)(2)(iv) & 86.1864-10(o)(5); see other spreadsheet.

2012 LDV/LDT Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.  
2012 HLDT/MDPV Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

2013 LDV/LDT Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.  
2013 HLDT/MDPV Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

2014 LDV/LDT Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.  
2014 HLDT/MDPV Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

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Expires XX/XX/XXXX

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## Date: \_\_\_\_\_

and Trading (AB&T) information and calculating AB&T fleet average credits for light-duty vehicles and certain heavy-duty class 2b and 3 vehicles, ref. 40 CFR 101.11.10 (incorporating by reference the AB&T provisions of the EPA Tier 3 final rule (79 FR 23414, April 28, 2014) as amended (80 FR 9078, February 19, 2015; 80 FR 26463, May 8, 2015); ref.

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## Comments

2015 LDV/LDT Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

2015 HLDT/MDPV Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

2016 LDV/LDT Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

2016 HLDT/MDPV Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

2017 LDV/LDT Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

2017 HLDT/MDPV Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

2018 LDV/LDT Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

2018 HLDT/MDPV Cold NMHC Credits earned per 40 CFR 86.1864-10; see other spreadsheet.

Purchased 2000 Cold NMHC credits from Manufacturer A (earned on 12/31/2016)
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EPA ICR Number 0783.65

## Date: \_\_\_\_\_

and Trading (AB&T) information and calculating AB&T fleet average credits for light-duty vehicles and certain heavy-duty class 2b and 3 vehicles, ref. 40 CFR 101.11.10 (incorporating by reference the AB&T provisions of the EPA Tier 3 final rule (79 FR 23414, April 28, 2014) as amended (80 FR 9078, February 19, 2015; 80 FR 26463, May 8, 2015); ref.

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### Comments

2019 LDV/LDT Cold NMHC Credits earned per 40 CFR 86.1864-10; see attached spreadsheet.

2019 HLDT/MDPV Cold NMHC Credits earned per 40 CFR 86.1864-10; see attached spreadsheet.

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Instructions

Select Model Year: 2019

Enter "X" if all vehicles are certified at or below fleet average standard and you omit credit calculations per 40 CFR 86.18160-170:

Averaging Set	Check if applicable:
LDV/LDT1:	
LDT2:	
HLDT/MDPV:	
HDV:	

Tier 3 Evaporative LDV/LDT1 Averaging Set					Tier 3 Evaporative LDT2 Averaging Set				
Evaporative Emissions	Total Production of Averaging Set	Fleet average compliance value	Fleet average standard	Credits or Debits	Evaporative Emissions	Total Production of Averaging Set	Fleet average compliance value	Fleet average standard	Credits or Debits
		grams/test					grams/test	grams/test	
E10 Total HC Equivalent	79,840	0.188	0.300	8,942	E10 Total HC Equivalent	134,000	0.337	0.400	8,442

Tier 3 Evaporative HLDT/MDPV Averaging Set					Tier 3 Evaporative HDV Averaging Set				
Evaporative Emissions	Total Production of Averaging Set	Fleet average compliance value	Fleet average standard	Credits or Debits	Evaporative Emissions	Total Production of Averaging Set	Fleet average compliance value	Fleet average standard	Credits or Debits
		grams/test					grams/test	grams/test	
E10 Total HC Equivalent	120,049	0.481	0.500	2,281	E10 Total HC Equivalent	116,000	0.601	0.600	(116)

Evaporative Family (including Early Allowance Evap Families)	Vehicle Class of Evap Family (and Averaging Set)	FEL of Evap Family (low altitude)	Class of MDV (Needed only if Column B is HDV)	HDV Class 4&8 Certification Basis (If Statement, Can't Earn Credits)	HDV also meets ORVR Standards (Needed for Allowances for Class 3 and above HDVs)	Evap Family Useful Life of Averaging Set (must be 150K)	Test Fuel (used for HS + Diurnal test)	2015 or 2016 Carryover P2EV Option 1 (Rig Test) Using Phase 2 test fuel?	2015 or 2016 CARB LEV3 Option 1 (Rig Test) Carryover? [Can be 2015-2016 Carryover CARB Option1, CARB Option2 or Tier3 Evap Family]	Early Allowance Evap Family (Not used to meet Phase-in Requirements; Not used for 2017 Nationwide P2EV Phase-in Option)? [Can be 2015-2016 Carryover CARB Option1, CARB Option2 or Tier3 Evap Family]	Model Year Early Allowance Was Earned	Production (Federal only) (Needed for 2027MY & LDV/LDT/HLDT Allowances)	Production (50-State)	Manufacturer Comments	Fleet Ave Standard for Vehicle Class [derived from class in Column B]	FEL Used for Fleet Average Calculations [Derived from Columns B, C, E, J, K, W]	Production used in Calcs [Derived from Columns P & Q]	Evap Intermediate Calculation [Unrounded Production x FEL]	Error Checks	
																			Error Check: Does FEL Exceed the CAP for the Vehicle Class?	Error Message from Column Y (if any)
	LDV/LDT1, LDT2, HLDT/MDPV, HDV, HLDT Allowance only or MDPV Allowance only	gr/test; (HS + Diurnal)	Class 2b, 3, 4, 5, 6, 7 or 8	Test Data or Statement	Yes or No [Uses 2:1 Production Multiplier]	(x 1000 Miles)	Ph 2, LEV3 or Tier3	Yes or No	(And Using LEV 3 test fuel): Yes or No	(Note: Early Allowances Expire after 2021 MY): Yes or No	2015, 2016, 2017 (>6000 GVWR only) or NA	# of Units	# of Units		gr/test; (HS + Diurnal)	[P2EVs, CARB Opt 3 Vehs. Allowances & some HEVs can't earn credits]	# of Units	Unrounded units x gr/test		
A	LDV/LDT1	0.150				150	LEV 3	No	No	No	NA		39,458		0.300	0.150		Err:514	OK	Err:514
B	LDV/LDT1	0.150				120	Tier 3	No	No	No	NA		20,382		0.300	0.150		Err:514	OK	Err:514
C (2015 P2EV)	LDV/LDT1	0.350				150	Phase 2	Yes	No	Yes	2015	20,000		2015 P2EV Carryover & 2015 Early Allowance: [Allowance vehs not used in Evap Phase-in calcs.] [Formatted comments field cells to "wrap text" as shown in example comments for this cell.]	0.300	0.300		Err:514	OK	Err:514
D	LDT2	0.300				150	Tier 3	No	No	No	NA		45,000		0.400	0.300		Err:514	OK	Err:514
E	LDT2	0.350				150	LEV 3	No	No	No	NA		79,000		0.400	0.350		Err:514	OK	Err:514
F (2015 P2EV)	LDT2	0.500				150	Phase 2	Yes	No	No	NA		10,000	2015 LDT2 P2EV Carryover	0.400	0.400		Err:514	OK	Err:514
G	HLDT/MDPV	0.400				150	Tier 3	No	No	No	NA		90,000		0.500	0.400		Err:514	OK	Err:514
H	HLDT/MDPV	0.500				150	Tier 3	No	No	No	NA		90,000		0.500	0.500		Err:514	OK	Err:514
I (LEV3 Opt 1 HLDT Carryover)	HLDT/MDPV	0.750				150	LEV 3	No	Yes	No	NA		3,000	2015 HLDT Carryover LEV3 Option 1 (Rig test) tested on LEV3 test fuel.	0.500	0.500		Err:514	OK	Err:514
J	HLDT Allowance only	0.350				150	LEV 3	No	No	Yes	2015	2,049		2015 Early Allowance (HLDT): [Allowance vehs not used in Evap Phase-in calcs]	0.500	0.350		Err:514	OK	Err:514
K	HLDT Allowance only	0.500				150	LEV 3	No	No	Yes	2016	5,000		2016 Early Allowance (HLDT): [Allowance vehs not used in Evap Phase-in calcs]	0.500	0.500		Err:514	OK	Err:514
L	MDPV Allowance only	0.400				150	Tier 3	No	No	Yes	2017		10,000	2017 Early Allowance (MDPV): [Allowance vehs not used in Evap Phase-in calcs]	0.500	0.400		Err:514	OK	Err:514
M	HDV	0.150	2b			150	Tier 3	No	No	No	NA		60,000		0.600	0.150		Err:514	OK	Err:514
N (2017 Allowance)	HDV	0.350				150	LEV 3	No	Yes	No	2017		2,500	2017 Early Allowance (HDV): certified to LEV3 Option 2 stds, not used in Evap Phase-in calcs	0.600	0.350		Err:514	OK	Err:514
O	HDV	1.200	3			150	Tier 3	No	No	No	NA		45,000		0.600	1.200		Err:514	OK	Err:514
P (2016 Allowance which also me	HDV	0.550	3		Yes	150	Tier 3	No	No	Yes	2016		2,500	2016 Early 2 for 1 Allowance (HDV class 3 & above veh certified to Evap&ORVR, not used in phase-in calcs)	0.600	0.550		Err:514	OK	Err:514
Q	HDV	0.500	4	Statement		150	NA	No	No	No	NA		2,500		0.600	0.600		Err:514	OK	Err:514
R	HDV	1.600	6	Statement		150	NA	No	No	No	NA		1,000		0.600	1.600		Err:514	OK	Err:514
																		Err:514		Err:514

A7:

Evaporative Emission (Hot Soak plus Diurnal) Credits Earned During the Phase-in Model Years (2017-2021 model years): This spreadsheet is intended to be used to calculate the Evaporative (hot soak + diurnal) credits or debits for gasoline-fueled vehicles, flexible-fueled vehicles (FFVs) and bi-fueled vehicles as outlined in 40 CFR 86.1813-17, 1037.103, and 86.1861-17. Do not include electric vehicles, fuel cell vehicles, diesel vehicles or dedicated CNG vehicles in the spreadsheet calculations; ref. §86.1813-17 introductory paragraph and §86.1813-17(a)(2)(i). Multi-fueled vehicles (including bi-fueled, dual fueled, and flexible-fueled vehicles) must comply using gasoline test fuel only; ref. §86.1813-17(a)(2)(i).

**Early Allowances:** This spreadsheet allows Early Allowance vehicles to be included in the credit calculation in the model year the Allowance is used (i.e. 2017-2021MYs for LDV/LDT1 and LDT2 vehicles and 2018-2021 for HLDLT, MDPV and HDV vehicles). [This spreadsheet doesn't calculate Early Allowances in the 2015-2017 model year when they are earned.] As provided in the provisions of §86.1813-17(g)(3), Early Allowance evaporative vehicles cannot be used to generate fleet average evaporative credits if they were used to meet the Tier 3 evaporative phase-in requirements. [The primary evaporative phase-in requirements are outlined in §86.1813-17(a)(5) and the alternative phase-in requirements are outlined in §86.1813-17(g)(4)(i).] Early Allowance vehicles may meet Tier 3 or CARB LEV3 Option 2 evaporative emission standards—or (for 2015 or 2016 carryover evaporative families only) the CARB LEV3 Option 1 (Rig test) evaporative standards. Note that vehicles meeting the CARB LEV3 Option 1 (Rig test) evaporative standards cannot generate credits or debits. As provided in the provisions of §86.1813-17(g)(3), Early Allowances expire after the 2021 model year.

**Credits Earned After the Phase-in Model Years:** After the 2021 model year, the spreadsheet can be used to calculate evaporative emission credits normally. Do not include any Early Allowance vehicles as Early allowance credits expire after the 2021 model year, ref. §86.1813-17(g)(3).

**Instructions:**

**Any cell that is dark orange requires manufacturer input:**

1. Input Manufacturer name and the date of submission at the top of this sheet then select model year in cell C8.

2. If you are using the provisions of 40 CFR 86.1860-17(f) (e.g. that all vehicles in a specified vehicle class are certified at or below the applicable fleet average emission standard and you elect not to provide fleet average calculations or generate credits for a category of vehicles) enter an "X" in cells D13 to D16, as applicable. Otherwise leave those cells blank and continue with instructions 3-6 below.

NOTE: When using this option for one or more categories of vehicles, it is not necessary to input the data in this spreadsheet in rows 21 and below for those categories of vehicles.

3. Enter in column A all the gasoline, and multi-fueled evaporative families which were certified for a specific model year, plus any gasoline or multi-fuel Early Allowance evaporative families which you would like to include for the model year. Include all Heavy-duty evaporative families (including HDV class 2b, 3, 4, 5, 6, 7, and 8 evaporative families, if applicable). The information in each row is specific to the evaporative family input in column A.

4. Enter in column B the vehicle class of the vehicles in an evaporative family. If vehicles in an evaporative family are in in more than one vehicle class, please subdivide the evaporative family accordingly. Note that to track HLDLT and MDV Early Allowances properly, it was necessary to create two additional vehicles categories: "HLDLT Allowance only" and "MDPV Allowance only." These categories should be used for Early Allowance evaporative families, only. HLDLT Allowances can earn allowances in 2015-2017 model years for vehicles sold in federal states only (not including California or Section 177 states which have adopted California emission requirements). MDPV Allowances can earn allowances in 2015-2017 model years for vehicles sold in any state or U.S. territory.

5. Columns B, C, E, F, G, H, I, J, K, L, M, and either O or P must be completed for every evaporative family.

6. Enter comments in column S as needed.

**Error Checks in columns Z and AA of the Evaporative spreadsheet are checking for data input errors where:**

1) Column AA: Checks whether the FEL evaporative standard in column C exceeds the CAP standard for the applicable vehicle class which was entered in column B; ref. §86.1813-17(a)(2)(ii) and §1037-103(b)(3).

2) Column AB: Prints the complete error message from Column R (if any).

Note that the Excel formulas and Error messages in columns R and S are shown on the hidden tab entitled "Sheet2."

**Applicable Regulations:** Applicable regulations and references to the preamble of the Tier 3 final rule are in the "mouse over" comment fields for some cells.

**Revisions:**

1. May 1, 2018 - Added Column G "HDV also meets ORVR Standards..."; needed to calculate "2 for 1" Allowances for HDV class 3 and above vehicles, where the vehicle is certified to Tier 3 evaporative standards and ORVR standards; and the Early Allowances are not used to meet the Evaporative Phase-in requirements, ref. 40 CFR 86.1813-17(g)(1)(v) and (vi). Revised calculations in column R, "Production used in Calcs"accordingly.

2. May 1, 2018 - Added line 34 to show an example of the calculations for a HDV class 3 test group using the "2 for 1" Allowance option, where an evaporative family was certified to Tier 3 evaporative & ORVR standards (and didn't use the allowances in the Tier 3 evaporative phase-in calculations).

3. June 1, 2018 - Added the information in cells B10 through D15 for manufacturers who choose to use the provisions of 40 CFR 86.1860-17(f) instead of the Tier 3 AB&T provisions.

4. July 17, 2018 - Grouped all gold columns together. Password protected cells with calculations.

**To Print These Instructions:** R click on the Instructions (cell A7) and click on "Show/Hide Comments. Then in Excel, go to Page Layout, Page Setup, Sheet and set Comments to "As displayed on sheet" and click OK. Then Print the Selection.

A19:

EPA:

Include only gasoline-fuel test groups. Do not include test groups containing electric vehicles, diesel vehicles or dedicated CNG vehicles; ref. §86.1813-17 introductory paragraph, §86.1813-17(a)(2)(i).

Multi-fueled vehicles (including bi-fueled, dual fueled, and flexible-fueled vehicles) must comply using gasoline test fuel only; ref §86.1813-17(a)(2)(i).

B10:

EPA:

When using this option for a category of vehicles (LDV/LDT1, LDT2, HLDLT/MDPV and/or HDV) the manufacturer should normally document that they are using this option in an official letter to EPA.

When using this option for one or more categories of vehicles, it is not necessary to input the evaporative family data in this spreadsheet in rows 21 and below for those categories of vehicles.

B19:

EPA:

§86.18161-17(b)(2)(iv);

C19:

EPA:

§86.1813-17(a)(2)(ii)

D19:

EPA:

§86.1813-17; Include all Class 4 and above HDVs in this AB&T calculation (including vehicles certified using test data and vehicles certified using a statement of compliance); ref. §1037.103;

E19:

EPA:

§1037.103(c);

F19:

EPA:

§86.1813-17(g)(1)(v) and (vi)

G19:

EPA:

§86.1805-17;

Preamble to Tier 3 Final rule 79 FR 23496, April 28, 2014;

J19:

EPA:

§86.113-15(a)(2)(ii)(A);

Preamble to Tier 3 Final rule 79 FR 23495, 23499, 23504, April 28, 2014;

K8:

EPA:

§86.1860-17(b) and (c)(4)

K13:

EPA:

§86.1860-17(b) and (c)(4)

K19:

EPA:

§86.113-15(a)(2)(ii)(B);

§86.1813-17(g)(3);

Preamble to Tier 3 Final rule 79 FR 23494-495, April 28, 2014;

L10:

EPA:

§86.1813-17(a)(2)(i) Table 1

L15:

EPA:

§86.1813-17(a)(2)(i) Table 1

L19:

EPA:

§86.1813-17(g)(1), (2) and (3);

Preamble to Tier 3 Final rule 79 FR 23500-502, April 28, 2014;

M8:

EPA:

§86.1861-17(a)

M13:

EPA:

§86.1861-17(a)

N19:

EPA:

§86.1813-17(a)(6), (g)(1) and §86.1860-17(b), (c)(4)

O19:

EPA:

§86.1813-17(a)(6), (g)(1) and §86.1860-17(b), (c)(4)

Q8:

EPA:

§86.1860-17(b) and (c)(4)

Q13:

EPA:

§86.1860-17(b) and (c)(4)

R8:

EPA:

§86.1861-17(a)

R10:

EPA:

§86.1813-17(a)(2)(i) Table 1

R15: EPA: 986.1813-17(a)(2)(i) Table 1

S13: EPA: 986.1861-17(a)

W19: EPA: 986.1813-17(a)(2)(i);

Z19: EPA: intermediate steps from 986.1860-17(b) equation

AA19: EPA: 986.1813-17(a)(2)(ii); 91037-103(b)(3);

Example Template - Tier 3 Evaporative Fleet Average (Hot Soak + Diurnal) Credits - AB&T Model Year Summary Table

Manufacturer: \_\_\_\_\_

Date: \_\_\_\_\_

EPA Form Number 5900-470

OMB Control Number 2060-0104

Expires XX/XX/XXXX

EPA ICR Number 0783.65

Purpose and Scope of this Guidance Document

This document was prepared by EPA's Office of Transportation and Air Quality (OTAQ). It is one of several intended to aid regulated parties in reporting Tier 3 and Cold NMHC Averaging, Banking and Trading (AB&T) information and calculating AB&T fleet average credits for light-duty vehicles and certain heavy-duty class 2b and 3 vehicles, ref. 40 CFR 86.1862-04(c). It contains EPA's recommended format for manufacturers to report to EPA their end-of-year Tier 3 AB&T calculations, credits and other information with respect to the implementation of the AB&T provisions of the EPA Tier 3 final rule (79 FR 23414, April 28, 2014) as amended (80 FR 9078, February 19, 2015; 80 FR 26463, May 8, 2015); ref. 40 CFR Parts 85, 86, 600, 1065, 1066. Use of this document is purely optional.

This document does not in any way alter or waive the requirements in EPA regulations. Although the calculations and formulas provided in this document are intended to assist manufacturers in the implementation of EPA regulations, this document does not establish or change the legal rights or obligations of manufacturers or others in complying with EPA regulations, including 40 CFR 86.1862-04(c). If an error or other discrepancy is found in this document, including the calculation formulas, please contact your EPA certification team member or Dave Good at (734) 214-4450 or by email at good.david@epa.gov. The regulations take precedence.

Select Model Year:	2019
Select Phase-in Approach:	Primary--(Used for 2017-2022MYs)
Applicable Phase-in Regulations:	40 CFR 86.1813-17(a)(5) Table 3
Small Volume?	No

A. Date of Transaction	B. Model Year	C. Category	Tier 3 Fleet Average Compliance Level			G. Credit (Debit) [Calc from D,E,F]	Date Credits/Debits were earned	Date Credits will expire	Last Date When Credits can be Traded	Comments
			D. Applicable Evap HS+D Standards	E. Mfr Evap HS+D Compliance Level	F. Production Volume					
			grams/test	grams/test	vehicles	veh-grams/test				

2017 Credits (LDV/LDT1 and LDT2 Classes only):

5/1/2018	2017	LDV/LDT1	0.300	0.300	21,784	0	12/31/2017	-	-	2017 Tier 3 LDV/LDT1 Evap Credits earned; see other spreadsheet.
5/1/2018	2017	LDT2	0.400	0.400	41,000	0	12/31/2017	-	-	2017 Tier 3 LDT2 Evap Credits earned; see other spreadsheet.
	2017	Transfer	-	-	-		-	-	-	

LDV/LDT1 - Total 2017 Credits Remaining:	0	2017 Credits expire Dec 31, 2022;
LDT2 - Total 2017 Credits Remaining:	0	Debits must be paid off by Dec 31, 2020.

2018 Credits:

5/1/2019	2018	LDV/LDT1	0.300	0.240	48,471	2,908	12/31/2018	12/31/2023	12/31/2023	
5/1/2019	2018	LDT2	0.400	0.400	98,769	0	12/31/2018	-	-	
5/1/2019	2018	HLDT/MDPV	0.500	0.560	28,461	(1,708)	12/31/2018	-	-	
1/20/2019	2018	HLDT/MDPV	Transfer	-	-	500	12/31/2018	12/31/2023	12/31/2023	Purchased 500 HLDV/MDPV Evaporative credits from Manufacturer A (earned on 12/31/2018)
5/1/2020	2019	HLDT/MDPV	Transfer	-	-	1,208	12/31/2019	12/31/2024	12/31/2024	Transferred 1208 HLDV/MDPV 2019 Evaporative credits from 2019 to 2018 model year (earned on 12/31/2019).
5/1/2019	2018	HDV	0.600	0.460	54,076	7,571	12/31/2018	12/31/2023	12/31/2023	
3/4/2019	2018	HDV	Transfer	-	-	(7,000)	12/31/2018	-	-	Sold 7,000 2018 HDV Evaporative Credits to Manufacturer B (earned on 12/31/2018).

LDV/LDT1 - Total 2018 Credits Remaining:	2,908	
LDT2 - Total 2018 Credits Remaining:	0	2018 Credits expire Dec 31, 2023;
HLDT/MDPV - Total 2018 Credits Remaining:	0	Debits must be paid off by Dec 31, 2021.
HDV - Total 2018 Credits Remaining:	571	

2019 Credits:

5/1/2020	2019	LDV/LDT1	0.300	0.188	79,840	8,942	12/31/2019	12/31/2024	12/31/2024	
5/1/2020	2019	LDT2	0.400	0.337	134,000	8,442	12/31/2019	12/31/2024	12/31/2024	
5/1/2020	2019	HLDT/MDPV	0.500	0.481	120,049	2,281	12/31/2019	12/31/2024	12/31/2024	
5/1/2020	2019	HLDT/MDPV	Transfer	-	-	(1,208)	12/31/2019	-	-	Transferred 1208 HLDV/MDPV 2019 Evaporative credits from 2019 to 2018 model year (earned on 12/31/2019).
5/1/2020	2019	HDV	0.600	0.601	116,000	(116)	12/31/2019	-	-	

LDV/LDT1 - Total 2019 Credits Remaining:	8,942	
LDT2 - Total 2019 Credits Remaining:	8,442	2019 Credits expire Dec 31, 2024;
HLDT/MDPV - Total 2019 Credits Remaining:	2,281	Debits must be paid off by Dec 31, 2022.
HDV - Total 2019 Credits Remaining:	(116)	

Grand Totals:

LDV/LDT1 - Grand Total 2017-2019 Credits Remaining:	11,850
LDT2 - Grand Total 2017-2019 Credits Remaining:	8,442
HLDT/MDPV -Grand Total 2017-2019 Credits Remaining:	2,281
HDV - Grand Total 2017-2019 Credits Remaining:	455