

Transition Program for Equipment Manufacturers (TPEM)

Program Overview for Equipment Manufacturers

Last Update: May 12, 2015



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TPEM OVERVIEW

WHAT IS TPEM?



TPEM Background

- In October 1998, EPA, promulgated new regulations for nonroad compression-ignition (e.g., diesel) engines. These regulations, codified at 40 CFR Part 89, established emission standards (Tier 1 and Tier 2 standards) for the first time for engines under 37 kW, and established more stringent standards (Tier 2 and Tier 3 standards) for engines at or above 37 kW.
- Some of these new standards are expected to cause some engine design changes. During the rulemaking process, some original equipment manufacturers (OEMs) expressed concerns that engine manufacturers would not provide sufficient notice of possible changes in engine design. These changes can create problems in fitting the engine to the equipment, which can lead to delays in production if equipment manufacturers are forced to redesign their equipment at the last minute.
- In response to these concerns, EPA included an OEM transition program in the October 1998 rule. This Transition Program for Equipment manufacturers (TPEM) consists of a number of regulatory flexibility provisions designed to provide equipment manufacturers, with some control over the transition process to new standards.
- A new phase of the program. Tier 4, was created when Part 1039 standards first apply starting in 2008 for the smaller power categories and 2011 for the larger power categories.
 - The Tier 4 program is independent of the Part 89 program and has different requirements
 - It is important to note that there was never a Tier 3 TPEM program



TPEM Regulations

- Part 89 TPEM Program
 - 40 CFR Part § 89.102
 - Part 89 is finished, so we'll focus on the Tier 4 Program
- CI Tier 4 Program
 - 40 CFR Part § 1039.625 – General Provisions
 - 40 CFR Part § 1039.626 – Additional provisions for imported equipment
 - 40 CFR Part § 1039.630 – Provisions for Economic Hardship Relief



TPEM Overview

ELIGIBILITY



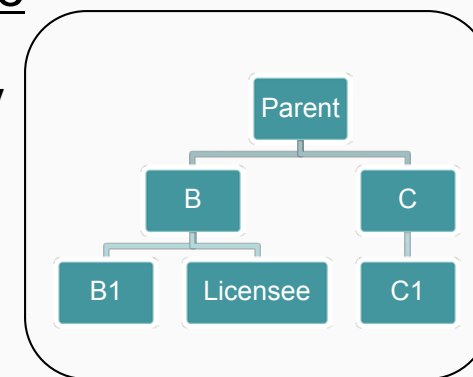
Who is eligible to participate?

- § 1039.625(a): “You may use [TPEM] only if you have primary responsibility for designing and manufacturing equipment and your manufacturing procedures include installing some engines in this equipment. “Consider all U.S.-directed equipment sales in showing that you meet the requirements of this section, including those from any parent or subsidiary companies and those from any other companies you license to produce equipment for you.
 - Divisions and subsidiaries do not qualify on their own. Only the parent company
- Importers do not qualify on their own
 - Must be managing a foreign equip manufacturer’s allowance under § 1039.626
- Dealers do not qualify
 - Unless they have a manufacturing side to the business or are importing under § 1039.626



Parent Companies

- Number of allowances per Company
 - One allowance per power category for the entire company/conglomerate, including:
 - All equipment lines within the same power category
 - All company divisions or sections, regardless of location
 - The parent company and all subsidiaries
 - All companies licensed to produce equipment for you via contract
 - Mergers do not usually result in an extra allowance
 - While it is best that the parent company manage the allowance, a subsidiary can do it as long as the entire conglomerate is taken into account
 - Submit one notification/report for the entire company



*Only one
allowance per
power category*



TPEM Overview

TPEM AVAILABILITY PER POWER CATEGORY



When can manufacturers participate?

- TPEM availability varies according to the power category
 - Power categories are different for Part 89 and Part 1039
 - The power category of a flex engine (TPEM engine) is determined by:
 - Engine power rating if engine was not previously certified
 - For engines previously certified, power category is determined by the engine manufacturer at certification
 - While the power category is largely determined by engine rating, some provisions allow engine manufacturers to combine engines from different power categories during the certification process. Check with your engine manufacturer to determine what power category your engine was originally certified to.



TPEM Timeline

hp (kW)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<10.7 (8)			2			4													
≥10.7 (8) <25.5 (19)			2			4													
≥25.5 (19) <49.6 (37)		2				4					4+								
≥49.6 (37) <75.1 (56)		2				3/4				4 Opt1	4 Opt2								
≥75.1 (56) <100.6 (75)		2				3				4		4+							
≥100.6 (75) <174.3 (130)	2				3					4		4+							
≥174.3 (130) <301.7(225)	2			3					4			4+							
≥301.7 (225) <603.5 (450)				3					4			4+							
≥603.5 (450) <751.0 (560)				3					4			4+							
≥751.0 (560)				2					4				4+						

This chart represents the years TPEM is available for each power category

Blue = Tier 4

Notice that power categories for Tier 4 TPEM are different from Part 89 TPEM. Red lines divide Tier 4 categories (see next slide)

Gray – Part 89 TPEM; Pink – Pull-ahead period; Yellow – Regular Tier 4 TPEM; Blue, delayed TPEM



Tier 4 Power Categories

- Equipment manufacturers get one allowance per power category at the parent company level.
 - All companies/divisions/subsidiaries under the control of one person or entity must count towards the same allowance.

Power category
$kW < 19$
$19 \leq kW < 56$
$56 \leq kW < 130$
$130 \leq kW \leq 560$
$kW > 560$



Comparison - Part 89 & Part 1039 Power Categories

Part 89 TPEM Power Categories

Power Category
kW < 8 (hp < 11)
8 ≤ kW < 19 (11 ≤ hp < 25)
19 ≤ kW < 37 (25 ≤ hp < 50)
37 ≤ kW < 75 (50 ≤ hp < 100)
75 ≤ kW < 130 (100 ≤ hp < 175)
130 ≤ kW < 225 (175 ≤ hp < 300)
225 ≤ kW < 450 (300 ≤ hp < 600)
450 ≤ kW ≤ 560 (600 ≤ hp ≤ 750)
<560 (>750 hp)

Part 1039 TPEM Power Categories

Power category
kW < 19
19 ≤ kW < 56
56 ≤ kW < 130
130 ≤ kW ≤ 560
kW > 560



Tier 4 TPEM: General vs Delayed

TABLE 1 OF §1039.625—GENERAL AVAILABILITY OF ALLOWANCES

Power category	Calendar years
kW <19	2008-2014
19 ≤kW <56	2008-2014
56 ≤kW <130	2012-2018
130 ≤kW ≤560	2011-2017
kW >560	2011-2017

(2) If you do not use any allowances in a power category before the earliest dates shown in the following table, you may delay the start of the seven-year period for using allowances under this section as follows:

TABLE 2 OF §1039.625—AVAILABILITY OF DELAYED ALLOWANCES

Power category	Calendar years
kW <19	
19 ≤kW <56	2012-2018
56 ≤kW <130	2014-2020
130 ≤kW ≤560	2014-2020
kW >560	2015-2021

If an equipment manufacturer did not use TPEM on any particular power category during the “general availability period,” they may start using the program during the “delay availability period.”

Manufacturers must use the program within the years specified for the power category and availability period established by the regs, as shown in these tables.



TPEM OVERVIEW

ALLOWANCES



TPEM Allowances

- § 1039.625(a):
 - “Consider all U.S.-directed equipment sales in showing that you meet the requirements of this section, including those from any parent or subsidiary companies and those from any other companies you license to produce equipment for you. If you produce a type of equipment that has more than one engine, count each engine separately.”
- Allowances:
 - Percent of Production
 - Small Volume
 - Single Family
 - Multi-Family
 - The number of engines manufacturers can exempt under each allowance varies with the power category
 - Consult regs for limits



Allowances

- Percent-of-Production Allowance:
 - Permits the use of non-complying engines on a certain percentage of the equipment that you manufacture for the US market in each power category. The rest of the equipment must use engines certified under the currently applicable standards.
 - Calculate the % annually ($\% \text{ of production} = \frac{\text{equipment with flex engines}}{\text{total production/sales}}$)
 - Then add up the percentage figures for each calendar year; the sum does not exceed 80.
- Example:
 - ABC Company wants to use non-complying engines in 40% of its 2008 US production of equipment in the under 19 kW power category, 30% of its 2009 production, and 10% of its 2010 production. Since the sum of the percentages this company used for the three years it used the allowance is 80 ($40 + 30 + 10 = 80$), ABC Company can no longer use non-complying engines in the 8 to 19 kW power category after 2010.
- When the availability period is over, manufacturers cannot claim any exemptions even if they have not reached the 80 percent cap. Your calculations must be made every calendar year using your actual US-directed production volume for each year.



Allowances

- **Small Volume Allowance:**
 - If you are a small OEM and only manufacture a few models (or if you are a larger OEM but only manufacture a few pieces of equipment in a particular power category), you might benefit from this allowance.
 - Single family:
 - Exempt up to 200 pieces of equipment per year in each power category so long as the total number of exempted pieces after seven years does not exceed 700 and provided that you only exempt equipment using engines from a single engine family per power category each year
 - Multiple engine families:
 - May use multiple engine families as long as limits are met
 - Limits are lower and vary by power category
 - > 130 kW, Max. 100 units per year, 350 units over allowance period
 - < 130 kW, Max. 150 units per year, 525 units over allowance period



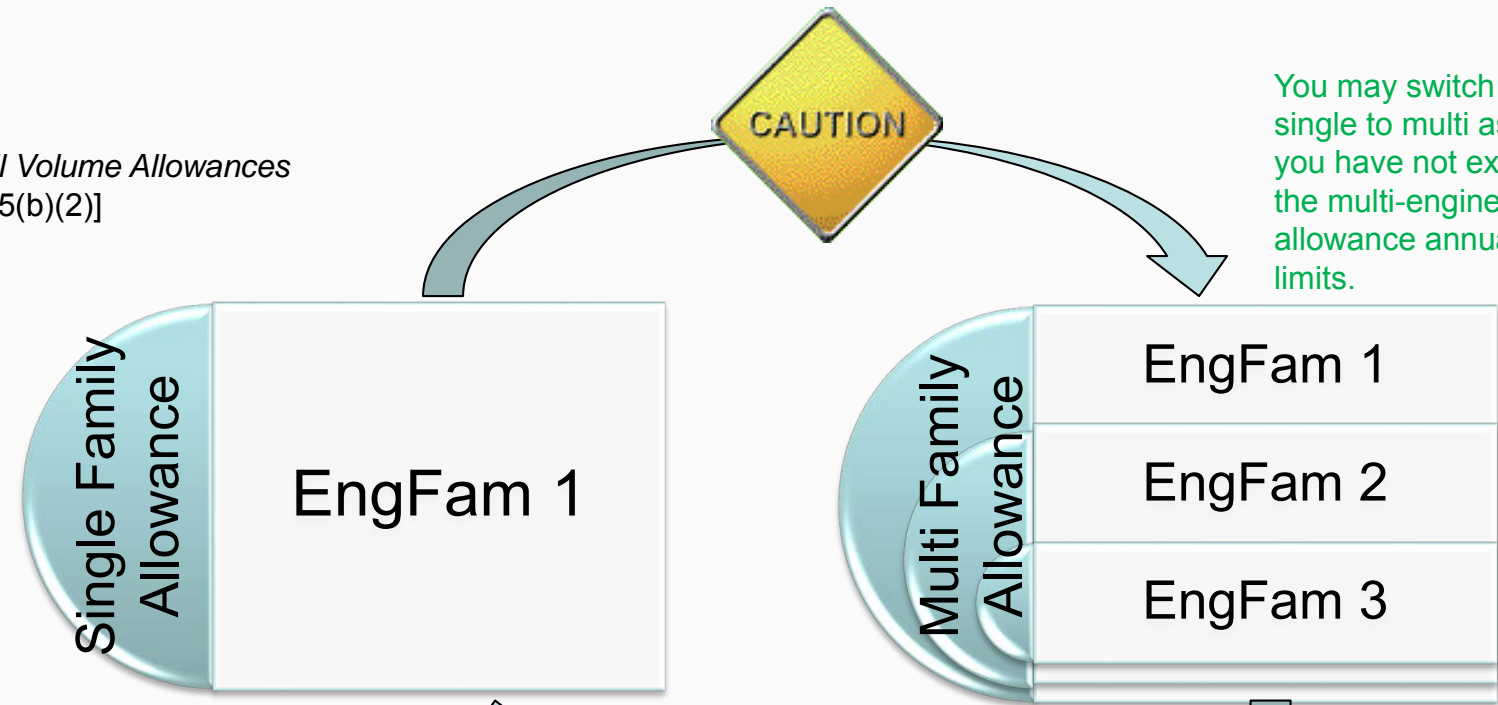
TPEM Allowances

- Use **one** allowance per power category
- Switching allowances
 - After you've started participation in TPEM, you may only switch allowances if you have not already violated the terms of the allowance you want to switch to.
 - You must comply with one allowance per power category during your entire participation in TPEM
 - No need to file a new notification
 - Explain your switch in the comments section of your report



Switching Allowances - Example

[See *Small Volume Allowances*
§ 1039.625(b)(2)]



You may switch from single to multi as long as you have not exceeded the multi-engine family allowance annual/total limits.

Can't switch from multi to single as you have already violated the terms of the single engine family allowance by using more than one engine family in a calendar year.



TPEM REQUIREMENTS

TPEM BONDING REQUIREMENTS



TPEM Bonding Requirements

United States
Environmental Protection Agency
Office of Transportation and Air Quality
TPEM Bonding Worksheet - Nonroad CI
Last released: 09/20/2011 Version Number: 3.0

Bond Worksheet for TPEM - Nonroad CI

Please save this file with the title "TPEM worksheet (CI.XI.XI.XI.XI.XI)" where XI.XI.XI.XI.XI is your company's name and TPEM is actually the Model Year that this Bond Worksheet represents.

All fields highlighted in yellow are CBI.

According to §1039.626, as an equipment manufacturer using the provisions of §1039.625 for equipment produced outside the United States, you may be required to post a bond to cover any potential enforcement actions under the Clean Air Act before you or anyone else imports your equipment to the United States. The bond requirements do not apply if you §1039.626(a)(9)(ii) your long term assets in the U.S. meet the thresholds cited at §1039.626(a)(1) - §1039.626(a)(3). To determine whether you are required to post a bond, complete the Long Term Asset Test below, which is based on the value of buildings, land, and fixed equipment from your most recent balance sheet, minus depreciation and long term liabilities (such as mortgages). The value of the fixed assets are for the whole company, including any parent or subsidiary companies. If you do need to post a bond based on the Long Term Asset Test, complete the Bond Value Calculation section of the Bonding Worksheet to determine the value of the bond. If your estimated or actual engine imports increase beyond the level appropriate for your current bond payment, you must post additional bond to reflect the increased value within 30 days after you change your estimate or determine the actual value. You may not decrease your bond. However, you may submit an updated worksheet if the value of the identified assets drops below the threshold value.

THIS WORKSHEET CONTAINS CBI

Worksheet Filer's Name: _____
Worksheet Filer's Parent Company Name: _____
Certificate Holder's Name: _____
Equipment Manufacturer's Name: _____

Long-term Asset Test

CBI: Identify the asset threshold that applies to your company. (see §1039.626(a)(9)(ii) and §1039.626(a)(1) - §1039.626(a)(3))

\$ 15,000,000	_____
\$ 5,000,000	_____
\$ 2,000,000	_____

CBI: Identify your level of fixed assets in the United States minus depreciation and related long-term liabilities. (see §1039.626(a)(9)(ii) and §1039.626(a)(1) - §1039.626(a)(3))

Less than \$1,000,000	_____
At least \$1,000,000 but less than \$5,000,000	_____
At least \$5,000,000 but less than \$10,000,000	_____
\$10,000,000 or more	_____

Please identify the asset threshold that applies to your company.

Worksheet Filer's Name: _____

Long-term Asset Details

Identify the address where you have at least that much value of fixed assets (with corresponding photographs), as described below. If you need to add additional locations, please use a second file. Name the file, "Bond worksheet XI.XI.XI.XI.XI-Y.xls" where XI.XI.XI.XI.XI is your company's name, and Y is the next sequential letter. For example, the second file is A, the third file is B.

Identify all the addresses where your fixed assets are located.

Address 1: _____
Address 2: _____
Address 3: _____

Include a photograph of each facility identified above. (Please embed files)

Address 1: _____ Address 2: _____ Address 3: _____

CBI: Include the following data from the most recent balance sheet. Please include all Capital I items.

	Address 1	Address 2	Address 3
Net PPE	_____	_____	_____
or	_____	_____	_____
Total fixed assets	_____	_____	_____
Mortgages on above assets	_____	_____	_____
Accumulated depreciation on above assets	_____	_____	_____
Net Assets	_____	_____	_____

- Part § 1039.626(a)(9)
 - Equipment manufacturers who produce their equipment abroad must either post a bond at the time of importation or obtain a waiver
- EPA Form 5900-239
 - Calculate Value of the Bond
 - For CI TPEM imports only
 - Apply for a Bond Waiver



TPEM Bonding Requirements

- Part § 1039.626(a)(9)
 - Equipment manufacturers who produce their equipment abroad must either post a bond at the time of importation or obtain a waiver
 - Bond size is determined by the amounts of engines imported in each power category

Table 1 of §1039.626—Per-Engine Bond Values

For engines with maximum engine power falling in the following ranges ...	The per-engine bond value is ...
kW < 19	\$150
19 ≤ kW < 56	300
56 ≤ kW < 130	500
130 ≤ kW < 225	1,000
225 ≤ kW < 450	3,000
kW ≥ 450	8,000

- Manufacturer must try to determine the maximum quantity of engines it will need each year, for every year they participate in TPEM, and obtain a bond at that maximum engine quantity year.
 - If later the manufacturer finds that it will import more engines than the bond covers, it must increase the bond amount
 - However, it can never decrease the amount of the bond
 - Renewed annually until:
 - 5 years after manufacturer used up its allowances
 - 5 years after the Tier 4 TPEM program expired for that power category



TPEM Bond Waivers

- § 1039.626(a)(9)(ii)(B) – If a manufacturer has enough long-term assets in the US to cover its obligations under any enforcement action, it can get a waiver from bonding requirements
- Thresholds established in § 1054.690 (b):
 - \$3,000,000 – certificate holders with no failed tests or enforcement actions in previous 10 years
 - Must also be engine manufacturer
 - \$6,000,000 – if also a secondary engine manufacturer
 - Otherwise, \$10,000,000
- Manufacturers must apply for waivers every year as the value of their US assets may change



How do I get a bond?

- EPA is not a party to the bonding agreement
 - So, we can provide some guidance, but:
 - EPA does not provide/review/collect the bonds
 - EPA does have a sample language, but each bond agency and manufacturer is responsible for making sure it is adequate
 - Surety Agents must be registered -U.S. Department of Treasury Circular 570
 - “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies.”
 - <http://www.fms.treas.gov/c570/c570.html>
 - Additional resources:
 - The Surety & Fidelity Association of America (www.surety.org)
 - National Association of Surety Bond Producers (www.nasbp.org/)



TPEM Requirements – How to sign up

NOTIFICATION & REPORTING REQUIREMENTS



Tier 4 TPEM Notification & Reporting Requirements

- To participate in TPEM, equipment manufacturers must:
 - Notify EPA – (Form 5900- 242)
 - Request TPEM engines from engine manufacturer in writing
 - Submit a report every year (Form 5900-240)
 - By March 31 of the year after using allowances
- Engine Manufacturers must submit an annual report
 - Form 5900-241
 - In addition to annual production report
 - While the annual production report is submitted through VERIFY, TPEM annual reports must be submitted to TPEM-Cl@epa.gov.
- Bond Spreadsheet – use to calculate size of bond or apply for waiver
 - No need to submit unless applying for bond
- All forms available at <http://www.epa.gov/otaq/certdat2.htm#tpem>
 - Please check website for updated forms before submitting your next report
- All forms must be submitted to TPEM-Cl@epa.gov



Responsibility for Data Submitted

- 40 CFR § 1068.25(c): “You are responsible for statements and information in your...requests or reports. If you provide statements or information to someone for submission to EPA, you are responsible for these statements and information as if you had submitted them to EPA yourself. For example, knowingly submitting false information to someone else for inclusion in an application for certification would be deemed to be a submission of false information to the U.S. government in violation of 18 U.S.C. 1001.



Notification

- Notification of intent to participate – § 1039.625(g)(1)
 - Must be submitted before using TPEM provisions
 - Use Form 5900- 242
 - Specify parent company's name and address, if applicable
 - Specify allowance to be used and your best estimate of the number of flex equipment you expect to produce in each power category per year
 - It is only an estimate – no need to resubmit if estimates change
 - Include report for prior Part 89 participation
 - Registration process, not an application process
 - EPA will not respond or send approval letter



Annual Reports

- Equipment manufacturer annual production volume report – § 1039.625(g)(2)
 - Must be submitted by March 31 of the year following each year TPEM allowances are used
 - Total count of units sold/produced in preceding year for each power category, based on actual US-directed production information
 - Percentages of US-directed production that correspond to number of units in each power category and cumulative numbers and percentages (if applicable) of units for all TPEM units sold/produced for each power category
 - Manufacturer of the TPEM engine installed in the equipment produced if different than specified in initial notification
 - Clearly label your file: [Year][Company Name]TPEM Report.xlsx



Foreign Manufacturers

- Foreign equipment manufacturers – § 1039.626
 - Must submit the notification and reports described earlier, including a letter of commitment to comply with requirements
 - Signed by the president or owner of the equipment manufacturing company (§ 1039.626(a)(5))
 - Template under development – check website
 - Post a bond
 - Only needs to submit information if requesting a bond waiver
 - To apply, must submit a list of long-term assets in the US with values totaling at least the thresholds set forth in § 1054.690(a)
 - See slide entitled “TPEM Bond Waivers” for details



Importers

- Importers who do not qualify as equipment manufacturers (§ 1039.626 (b))
 - May use TPEM only if each engine is part of an allowance provided to an equipment manufacturer
 - TPEM limits and reporting requirements must be followed for each equipment manufacturer
 - Must ensure that each equipment manufacturer files notification and annual reports
 - Must ensure that each equipment manufacturer is meeting all limits and requirements of the allowance they chose for each power category
 - If the equipment manufacturer has exceeded their allowance, the imported engine is not part of an allowance/not covered by TPEM
 - Must submit a notification as an importer, including:
 - Name & address of all equipment manufacturers you are importing for
 - Best estimate of the number of engines you will import during your TPEM participation, per power category and equipment manufacturer
 - Previous Part 89 participation
 - Must submit annual report
 - Total number of engines by engine & equipment manufacturer
 - Submit by March 31 of the following year
 - Bond requirements apply
 - Please check website for upcoming templates



Engine Manufacturer's Annual Reports

- Report number of flex engines produced by buyer or shipping destination (§ 1039.625(j) and § 1039.250(a)(2))
 - Use Form 5900-241
 - Submit to TPEM-CI@epa.gov
 - Must be submitted within 45 days after the end of the model year
- This is in addition to Annual Production Report
 - Annual Production Report (§ 1039.250(a)(1) – Form 5900-90) includes only certified engines produced during the year
 - Please note: while the annual production report is submitted through VERIFY, TPEM annual reports must be submitted to TPEM-CI@epa.gov .



Recordkeeping Requirements

- Equipment manufacturers must keep records of all exempt equipment sufficient to demonstrate compliance
 - for at least five full years after the final year in which allowances are available for each power category (§ 1039.625(h))
 - These records must be made available to EPA upon request
- Records must include:
 - Equipment and engine model numbers, serial numbers & dates of manufacture of each engine and piece of equipment & maximum power of each engine
 - Total number or percentage of flex equipment and all documentation supporting your calculation
 - All TPEM notifications and reports
 - Sufficient information for verification (§ 1039.625(g))



Recordkeeping Requirements

- Engine Manufacturers must keep records for eight years
 - 40 CFR § 1039.250(c) & § 1068.25(b)
 - Store records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them (40 CFR § 1039.250(c) & (d))
 - Must keep records readily available
 - We may review them at any time



TPEM Requirements – How to sign up

HOW TO SUBMIT NOTIFICATIONS & REPORTS



How to submit TPEM documents

- All templates available at:
<http://www.epa.gov/otaq/certdat2.htm#tpem>
 - Notification of Intent to Participate
 - Equipment Manufacturer Annual Report
 - Bond calculation/waiver request template
 - Engine Manufacturer Annual Report
 - Some are interactive, with questions appearing based on previous selections

The screenshot shows the EPA Equipment Manufacturer Notification form. At the top, it features the EPA logo and the text: "United States US Environmental Protection Agency Office of Air and Radiation, Office of Transportation and Air Quality Transition Program for Equipment Manufacturers (40 CFR Part 1039) Equipment Manufacturer Notification". Below this, it states "Last Revision: April 2014 Version Number: 12".

Instructions include: "Please submit forms to: TPEM-CI@epa.gov DO NOT MAIL HARD COPIES." and "Please note that you must submit an annual report for each year you use the TPEM provisions. The report is due by March 31 of the year after you used a TPEM allowance. (§1039.625(g)(2))". It also provides a link for the electronic template: "Submit your reports using the electronic template found at: http://www.epa.gov/otaq/certdat2.htm".

The form is divided into sections with a "Submission Date:" field. The main section is "Equipment Manufacturer Basic Information" and includes fields for: Manufacturer (Company) Name, Manufacturer Contact Name, Manufacturer Email Address, Manufacturer Phone #, Manufacturer Address, Address 1, Address 2, City, State, ZIP, and Country.

There are two conditional sections:

- If Notification submitted by 3rd Party, provide the following information:** 3rd Party Contact Name, 3rd Party Email Address, 3rd Party Phone #, 3rd Party Address, Address 1, City, State, ZIP, and Country.
- If your company is part of another (Parent Company), provide the following information:** Parent Company Name, Parent Company Address, Address 1, Address 2, City, State, ZIP, and Country.

Other fields include "Other Companies Operating under Parent Company:" and "All Companies:". At the bottom, there is a checkbox for "Does this Notification contain Confidential Business Information (CBI)?".



How to submit TPEM documents

- Submit TPEM documents to TPEM-CI@epa.gov
 - Except hardship relief requests – email those to ComplianceInfo@epa.gov
 - Do not submit TPEM documents through VERIFY
 - Do not mail or email copies
 - Do not submit notifications/reports to EPA's enforcement office (OECA)
 - The very few who are not able to use electronic means (e.g., the Amish), may submit in writing. See website for details.
- Go to <http://www.epa.gov/otaq/certdat2.htm#tpem> for information
- Manufacturers must never modify the templates
 - Includes adding tabs or circumventing the drop-down menus



TPEM Compliance

OTHER FREQUENT COMPLIANCE ISSUES



Frequent Compliance Issues

- No communication between engine manufacturers & most equipment manufacturers
 - Equipment manufacturers not sure if their flex engines were previously certified or to what power category they were previously certified to.
- Dealers are the largest source of information for equipment manufacturers
 - But don't seem to have enough information
 - Filing paperwork for equipment manufacturers
 - Many tell their customers to file a notification but don't inform customers of annual reports and recordkeeping requirements.



Frequent TPEM Compliance Issues

- Existing inventory rules do not apply to TPEM engines
 - TPEM flex engines are non-compliant engines
 - You may not use left over TPEM engines after the program/your participation is over
 - Destroy or export (relabeled as “export-only”)
- If you need to replace a TPEM engine in service, follow the replacement engine rules
 - Found at 40 CFR § 1068.240
- TPEM engines should not be manufactured or sold unless an equipment manufacturer has requested it in writing
 - Dealers/distributors/rental companies do not qualify as equipment manufacturers
 - Therefore, they cannot claim allowances, unless they manufacture their own equipment, have primary design control and install some engines (§ 1039.625(a))