Appendix G

Non-Highway Mobile Model Runs

Other Non-Highway Mobile Source

Emissions Summary

From the Non-Road Model

Non-Road Model

Input Information

Emission Totals by County and Pollutant

All Fuels **Tons/Day**

KENTUCKY 2002 OZONE PRECURSOR EMISSIONS INVENTORY
KENTUCKY PORTION OF CLARKSVILLE-HOPKINSVILLE AREA

Typical weekday for Summer Season, 2002

Date of Model Run: Dec 01 14:20:06: 2004 Today's Date: 12/1/2004

FIPS	County	Exhaust VOC	Exhaust NOx	Exhaust CO	Exhaust PM2.5	Exhaust SO2	Exhaust CO2
21047	Christian County	1.00	3.34	15.16	0.33	0.35	277.17
Totals:		**1.00**	**3.34**	**15.16**	**0.33**	**0.35**	**277.17**

Emission Totals by County and Pollutant

All Fuels **Tons/Day**

KENTUCKY 2002 OZONE PRECURSOR EMISSIONS INVENTORY
KENTUCKY PORTION OF CLARKSVILLE-HOPKINSVILLE AREA

Typical weekday for Summer Season, 2002

Date of Model Run: Dec 01 14:20:06: 2004 Today's Date: 12/1/2004

FIPS	County	Crankcase VOC	Diurnal VOC	Vapor Displacement VOC	Spillage VOC	Total VOC
21047	Christian County	0.03	0.07	0.01	0.03	1.15
Totals:		**0.03**	**0.07**	**0.01**	**0.03**	**1.15**

Table 4-1
Summary of Emissions
Other Non-Highway Mobile Sources

County	*Annual VOC Emissions (tons/year)	Daily VOC Emissions (tons/day)	*Annual CO Emissions (tons/year)	Daily CO Emissions (tons/day)	*Annual NOx Emissions (tons/year)	Daily NOx Emissions (tons/day)
Christian	0.00	1.15	0.00	15.16	0.00	3.34

*Annual other non-highway emissions not provided.

Non-Road Model

Input Information

```
Written by Nonroad interface at 12/1/2004 2:20:00 PM
This is the options file for the NONROAD program.
The data is sperated into "packets" bases on common
information.  Each packet is specified by an
identifier and a terminator. Any notes or descriptions
can be placed between the data packets.

-----------------------------------------------------

                    PERIOD PACKET

This is the packet that defines the period for
which emissions are to be estimated.  The order of the
records matter.  The selection of certain parameters
will cause some of the record that follow to be ignored.
The order of the records is as follows:

1  - Char 10  - Period type for this simulation.
                  Valid responses are: ANNUAL, SEASONAL, and MONTHLY
2  - Char 10  - Type of inventory produced.
                  Valid responses are: TYPICAL DAY and PERIOD TOTAL
3  - Integer  - year of episode (4 digit year)
4  - Char 10  - Month of episode (use complete name of month)
5  - Char 10  - Type of day
                  Valid responses are: WEEKDAY and WEEKEND
-----------------------------------------------------
/PERIOD/
Period type        : Seasonal
Summation type     : Typical day
Year of episode    : 2002
Season of year     : Summer
Month of year      :
Weekday or weekend : Weekday
/END/

-----------------------------------------------------

                    OPTIONS PACKET

This is the packet that defines some of the user
options that drive the model.  Most parameters are
used to make episode specific emission factor
adjustments. The order of the records is fixed.
The order is as follows.

1  -  Char 80  - First title on reports
2  -  Char 80  - Second title on reports
3  -  Real 10  - Fuel RVP of gasoline for this simulation
4  -  Real 10  - Oxygen weight percent of gasoline for simulation
5  -  Real 10  - Percent sulfur for gasoline
6  -  Real 10  - Percent sulfur for diesel
7  -  Real 10  - Percent sulfur for LPG/CNG
8  -  Real 10  - Minimum daily temperature (deg. F)
9  -  Real 10  - maximum daily temperature (deg. F)
10 -  Real 10  - Representative average daily temperature (deg. F)
11 -  Char 10  - Flag to determine if region is high altitude
                      Valid responses are: HIGH and LOW
12 -  Char 10  - Flag to determine if RFG adjustments are made
                      Valid responses are: YES and NO
-----------------------------------------------------
/OPTIONS/
```

```
Title 1              : KENTUCKY 2002 OZONE PRECURSOR EMISSIONS INVENTORY
Title 2              : KENTUCKY PORTION OF CLARKSVILLE-HOPKINSVILLE AREA
Fuel RVP for gas     : 8.6
Oxygen Weight %      : 0.0
Gas sulfur %         : 0.0339
Diesel sulfur %      : 0.2318
CNG/LPG sulfur %     : 0.003
Minimum temper. (F): 67
Maximum temper. (F): 94
Average temper. (F): 85
Altitude of region : LOW
/END/
```

REGION PACKET

This is the packet that defines the region for which emissions are to be estimated.

The first record tells the type of region and allocation to perform.

Valid responses are:

US TOTAL - emissions are for entire USA without state breakout.

50STATE - emissions are for all 50 states and Washington D.C., by state.

STATE - emissions are for a select group of states and are state-level estimates

COUNTY - emissions are for a select group of counties and are county level estimates. If necessary, allocation from state to county will be performed.

SUBCOUNTY - emissions are for the specified sub counties and are subcounty level estimates. If necessary, county to subcounty allocation will be performed.

The remaining records define the regions to be included. The type of data which must be specified depends on the region level.

US TOTAL - Nothing needs to be specified. The FIPS code 00000 is used automatically.

50STATE - Nothing needs to be specified. The FIPS code 00000 is used automatically.

STATE - state FIPS codes

COUNTY - state or county FIPS codes. State FIPS code means include all counties in the state.

SUBCOUNTY - county FIPS code and subregion code.

```
/REGION/
Region Level         : COUNTY
```

```
Christian County KY: 21047
/END/

or use -
Region Level        : STATE
Michigan            : 26000
-----------------------------------------------------

                  SOURCE CATEGORY PACKET

This packet is used to tell the model which source
categories are to be processed.  It is optional.
If used, only those source categories list will
appear in the output data file.  If the packet is
not found, the model will process all source
categories in the population files.
-----------------------------------------------------


Diesel Only -
                    :2270000000
                    :2282020000
                    :2285002015
Spark Ignition Only -
                    :2260000000
                    :2265000000
                    :2267000000
                    :2268000000
                    :2282005010
                    :2282005015
                    :2282010005
                    :2285004015
                    :2285006015

-----------------------------------------------------
 This is the packet that lists the names of output files
 and some of the input data files read by the model.  If
 a drive:\path\ is not given, the location of the
 NONROAD.EXE file itself is assumed.  You will probably
 want to change the names of the Output and Message files
 to match that of the OPTion file, e.g., MICH-97.OPT,
 MICH-97.OUT, MICH-97.MSG, and if used MICH-97.AMS.
-----------------------------------------------------
/RUNFILES/
ALLOC XREF          : c:\nonroad\data\allocate\allocate.xrf
ACTIVITY            : c:\nonroad\data\activity\activity.dat
TECHNOLOGY          : c:\nonroad\data\tech\tech.dat
SEASONALITY         : c:\nonroad\data\season\season.dat
REGIONS             : c:\nonroad\data\season\season.dat
MESSAGE             : c:\nonroad\outputs\chr02rn.msg
OUTPUT DATA         : c:\nonroad\outputs\chr02rn.out
EPS2 AMS            :
/END/

-----------------------------------------------------
This is the packet that defines the equipment population
files read by the model.
-----------------------------------------------------
/POP FILES/
Population File     :c:\nonroad\data\pop\ky.pop
/END/
```

```
POPULATION FILE     : c:\nonroad\data\POP\MI.POP


-----------------------------------------------------
This is the packet that defines the growth files
files read by the model.
-----------------------------------------------------
/GROWTH FILES/
National defaults  : c:\nonroad\data\growth\nation.grw
/END/


/ALLOC FILES/
Air Transportation :c:\nonroad\data\allocate\ky_airtr.alo
Coal mining empl.  :c:\nonroad\data\allocate\ky_coal.alo
Construction empl. :c:\nonroad\data\allocate\ky_const.alo
Harvested acres    :c:\nonroad\data\allocate\ky_farms.alo
Golf course estab. :c:\nonroad\data\allocate\ky_golf.alo
Wholesale estab.   :c:\nonroad\data\allocate\ky_holsl.alo
Family housing     :c:\nonroad\data\allocate\ky_house.alo
Loggin empl.       :c:\nonroad\data\allocate\ky_loggn.alo
Landscape empl.    :c:\nonroad\data\allocate\ky_lscap.alo
Manufacturing empl.:c:\nonroad\data\allocate\ky_mnfg.alo
Oil & Gas employees:c:\nonroad\data\allocate\ky_oil.alo
Census population  :c:\nonroad\data\allocate\ky_pop.alo
RV Park establish. :c:\nonroad\data\allocate\ky_rvprk.alo
Snowblowers comm.  :c:\nonroad\data\allocate\ky_sbc.alo
Snowblowers res.   :c:\nonroad\data\allocate\ky_sbr.alo
Snowmobiles        :c:\nonroad\data\allocate\ky_snowm.alo
Rec marine inbrd   :c:\nonroad\data\allocate\ky_wib.alo
Rec marin outbrd   :c:\nonroad\data\allocate\ky_wob.alo
/END/

-----------------------------------------------------
This is the packet that defines the emssions factors
files read by the model.
-----------------------------------------------------
/EMFAC FILES/
THC exhaust        : c:\nonroad\data\emsfac\exhthc.emf
CO exhaust         : c:\nonroad\data\emsfac\exhco.emf
NOX exhaust        : c:\nonroad\data\emsfac\exhnox.emf
PM exhaust         : c:\nonroad\data\emsfac\exhpm.emf
BSFC               : c:\nonroad\data\emsfac\bsfc.emf
Crankcase          : c:\nonroad\data\emsfac\crank.emf
Spillage           : c:\nonroad\data\emsfac\spillage.emf
Diurnal            : c:\nonroad\data\emsfac\diurnal.emf
/END/

-----------------------------------------------------
This is the packet that defines the deterioration factors
files read by the model.
-----------------------------------------------------
/DETERIORATE FILES/
THC exhaust        : c:\nonroad\data\detfac\exhthc.det
CO exhaust         : c:\nonroad\data\detfac\exhco.det
NOX exhaust        : c:\nonroad\data\detfac\exhnox.det
PM exhaust         : c:\nonroad\data\detfac\exhpm.det
/END/

Optional Packets - Add initial slash "/" to activate
```

```
/STAGE II/
Control Factor     : 0.0
/END/
Enter percent control: 95 = 95% control = 0.05 x uncontrolled
Default should be zero control.

MODELYEAR OUT/
by-model-year out  : c:\nonroad\outputs\template.bmy
/END/

SI REPORT/
SI report file-CSV :C:\NONROAD\OUTPUTS\NRPOLLUT.CSV
/END/

PM Base Sulfur
 cols 1-10: dsl tech type;
 11-20: base sulfur wt%; or '1.0' means no-adjust (cert= in-use)
 21-30: sulfate conversion rate
/PM BASE SULFUR/
T2        0.2000    0.02247
T3        0.2000    0.02247
T3B       0.0500    0.02247
T4A       0.0500    0.02247
T4B       0.0015    0.02247
T4        0.0015    0.30
T4N       0.0015    0.30
/END/
```

2002 Commercial Aircraft Emissions

From EDMS Model

EDMS 4.12 Emissions Inventory Report

Airport: CAMPBELL AAF
Study Name: ChristianCounty2002
Report Date: 10/26/04

SUMMARY
(Tons/Year)

NAME	CO	HC	NOx	SOx	PM10
Aircraft	1.552	.497	1.491	.102	.000
GSE/AGE/APU	2.301	.094	.164	.018	.006
Total	3.853	.591	1.655	.120	.006

T[illegible]AL COMMERCIAL AIRCRAFT EMISSIONS FOR THE FORT CAMPBELL ARMY AIR FORCE BASE

	CO (Tons/Yr)	CO (**Tons/Day)	VOC (Tons/Yr)	VOC (**Tons/Day)	NOx (Tons/Yr)	NOx (**Tons/Day)
***EDMS Emissions**	3.853	0.01	0.647	0.00	1.655	0.00
	3.85		**0.65**		**1.66**	
		0.01		**0.00**		**0.00**

*EDMS 4.12 derived annual emissions with HC emissions converted to VOC using the EPA Volume IV commercial aircraft HC to VOC conversion factor - 1.0947.

**Christian County's Hopkinsville Airport Seasonal Adjustment Factor of 1.10 and 365 days was utilized to calculate daily emissions at the Hopkinsville Fort Campbell Army Air Force Base.

AIRCRAFT EMISSIONS

(Tons/Year)

Aircraft	Engine	Mode	CO	HC	NOx	SOx	PM10
DC8-71	CFM56-2A SERIES	APCH	.001	.000	.003	.000	.000
#1		CLMB	.000	.000	.005	.000	.000
		TKOF	.000	.000	.008	.000	.000
		TAXI	.021	.001	.004	.001	.000
		TOTAL	.022	.001	.020	.001	.000
		APU	.001	.000	.000	.000	.000
		GSE	.040	.002	.002	.000	.000
B757-200	PW2037	APCH	.000	.000	.002	.000	.000
#1		CLMB	.000	.000	.005	.000	.000
		TKOF	.000	.000	.006	.000	.000
		TAXI	.012	.001	.002	.001	.000
		TOTAL	.012	.001	.015	.001	.000
		APU	.000	.000	.001	.000	.000
		GSE	.040	.002	.002	.000	.000
B747-400	PW4056	APCH	.005	.000	.028	.002	.000
#1		CLMB	.002	.000	.076	.003	.000
		TKOF	.001	.000	.094	.003	.000
		TAXI	.128	.011	.028	.006	.000
		TOTAL	.136	.011	.226	.014	.000
		APU	.013	.001	.002	.001	.000
		GSE	.217	.009	.014	.001	.001
B747-100F	JT9D-7A	APCH	.009	.002	.009	.001	.000
#1		CLMB	.000	.000	.043	.001	.000
		TKOF	.000	.000	.055	.001	.000
		TAXI	.248	.107	.009	.003	.000
		TOTAL	.257	.109	.116	.006	.000
		APU	.003	.000	.002	.000	.000
		GSE	.110	.005	.009	.001	.001
B767-200ER	CF6-80A2	APCH	.001	.000	.003	.000	.000
#1		CLMB	.000	.000	.008	.000	.000
		TKOF	.000	.000	.011	.000	.000
		TAXI	.015	.003	.002	.001	.000
		TOTAL	.016	.003	.024	.001	.000
		APU	.000	.000	.001	.000	.000
		GSE	.054	.002	.004	.000	.000
B777-200	PW4077	APCH	.000	.000	.006	.001	.000
#1		CLMB	.000	.000	.015	.000	.000
		TKOF	.000	.000	.019	.000	.000
		TAXI	.016	.002	.003	.001	.000
		TOTAL	.016	.002	.043	.002	.000
		APU	.000	.000	.001	.000	.000
		GSE	.054	.002	.003	.000	.000

Aircraft	Engine	Mode	CO	HC	NOx	SOx	PM10
B747-200 #1	JT9D-7Q	APCH	.001	.000	.005	.001	.000
		CLMB	.000	.000	.024	.001	.000
		TKOF	.000	.000	.028	.001	.000
		TAXI	.088	.020	.005	.002	.000
		TOTAL	.089	.020	.062	.005	.000
		APU	.001	.000	.001	.000	.000
		GSE	.054	.002	.003	.000	.000
B737-800 #1	CFM56-7B26	APCH	.002	.000	.016	.001	.000
		CLMB	.001	.000	.024	.001	.000
		TKOF	.000	.000	.045	.002	.000
		TAXI	.067	.007	.017	.004	.000
		TOTAL	.070	.007	.102	.008	.000
		APU	.002	.000	.003	.000	.000
		GSE	.359	.014	.018	.002	.001
B727-200 #1	JT8D-15	APCH	.009	.002	.022	.003	.000
		CLMB	.004	.001	.048	.003	.000
		TKOF	.005	.001	.089	.005	.000
		TAXI	.111	.015	.032	.010	.000
		TOTAL	.129	.019	.191	.021	.000
		APU	.012	.001	.003	.001	.000
		GSE	.518	.021	.026	.002	.001
DC10-30 #1	CF6-50C2	APCH	.010	.001	.028	.003	.000
		CLMB	.001	.000	.072	.003	.000
		TKOF	.002	.001	.106	.004	.000
		TAXI	.123	.014	.017	.005	.000
		TOTAL	.136	.016	.223	.015	.000
		APU	.002	.000	.005	.001	.000
		GSE	.325	.013	.020	.002	.001
Falcon 20 #1	CF700-2D	APCH	.016	.000	.000	.000	.000
		CLMB	.004	.000	.001	.000	.000
		TKOF	.004	.000	.001	.000	.000
		TAXI	.124	.014	.001	.001	.000
		TOTAL	.148	.014	.003	.001	.000
		APU	.000	.000	.000	.000	.000
		GSE	.000	.000	.001	.000	.000
L-1011-100 #1	RB211-22B	APCH	.017	.005	.007	.001	.000
		CLMB	.001	.000	.022	.001	.000
		TKOF	.001	.000	.041	.001	.000
		TAXI	.210	.160	.007	.002	.000
		TOTAL	.229	.165	.077	.005	.000
		APU	.000	.000	.002	.000	.000
		GSE	.109	.004	.008	.001	.000
L-1011-500 TR #1	RB211-524B4	APCH	.003	.001	.018	.002	.000

Aircraft	Engine	Mode	CO	HC	NOx	SOx	PM10
		CLMB	.001	.000	.061	.002	.000
		TKOF	.002	.001	.123	.002	.000
		TAXI	.063	.010	.021	.005	.000
		TOTAL	.069	.012	.223	.011	.000
		APU	.006	.000	.004	.001	.000
		GSE	.217	.009	.014	.001	.001
Falcon 100 #1	TFE731-2	APCH	.002	.000	.001	.000	.000
		CLMB	.000	.000	.001	.000	.000
		TKOF	.000	.000	.001	.000	.000
		TAXI	.015	.005	.001	.000	.000
		TOTAL	.017	.005	.004	.000	.000
		APU	.000	.000	.000	.000	.000
		GSE	.000	.000	.001	.000	.000
Falcon 50 #1	TFE731-3	APCH	.002	.000	.001	.000	.000
		CLMB	.000	.000	.001	.000	.000
		TKOF	.000	.000	.002	.000	.000
		TAXI	.019	.004	.002	.000	.000
		TOTAL	.021	.004	.006	.000	.000
		APU	.000	.000	.000	.000	.000
		GSE	.000	.000	.001	.000	.000
L-1011-200 #1	RB211-524B	APCH	.001	.001	.009	.001	.000
		CLMB	.000	.000	.036	.001	.000
		TKOF	.001	.000	.067	.001	.000
		TAXI	.031	.005	.011	.003	.000
		TOTAL	.033	.006	.123	.006	.000
		APU	.000	.000	.002	.000	.000
		GSE	.108	.004	.007	.001	.000
L-1011-1 #1	RB211-22B new engine	APCH	.010	.003	.003	.000	.000
		CLMB	.002	.000	.011	.000	.000
		TKOF	.001	.000	.019	.001	.000
		TAXI	.136	.095	.004	.001	.000
		TOTAL	.149	.098	.037	.002	.000
		APU	.000	.000	.001	.000	.000
		GSE	.054	.002	.004	.000	.000

VEHICULAR EMISSIONS

(Tons/Year)

NAME	CO	HC	NOx	SOx	PM10
	.000	.000	.000	.000	.000

STATIONARY SOURCE EMISSIONS

(Tons/Year)

NAME	CO	HC	NOx	SOx	PM10
	.000	.000	.000	.000	.000

EDMS 4.12 Model Inputs for Study ChristianCounty2002

Date: Tuesday, October 26, 2004
Study Created: Friday, June 25, 2004
Study Pathname: D:\Old computer C drive\boldc2\EDMS 4.0\ChristianCounty2002\ChristianCounty2002.EDM

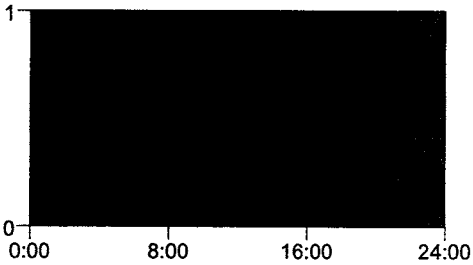
Airport: CAMPBELL AAF KY HOP
Airport Location (lat / lon): 36-40-22.170N 087-29-30.040W
Field elevation: 573 (feet MSL)
Average temperature: 58.7
Mixing Height: 3000 (feet)
Year being studied: 2002

This study is an analysis of Emissions only.
GSE are modeled based upon aircraft LTO.

Hourly Operational Profiles

Name: DEFAULT

Hour	Fraction of Peak	Hour	Fraction of Peak	Hour	Fraction of Peak
1	1.0000	9	1.0000	17	1.0000
2	1.0000	10	1.0000	18	1.0000
3	1.0000	11	1.0000	19	1.0000
4	1.0000	12	1.0000	20	1.0000
5	1.0000	13	1.0000	21	1.0000
6	1.0000	14	1.0000	22	1.0000
7	1.0000	15	1.0000	23	1.0000
8	1.0000	16	1.0000	24	1.0000



Daily Operational Profiles

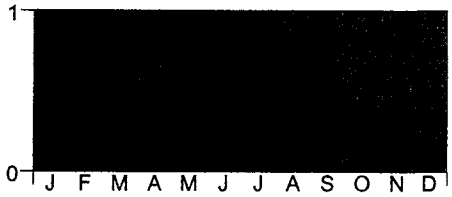
Name: DEFAULT

Day	Fraction of Peak	Day	Fraction of Peak
Monday	1.0000	Friday	1.0000
Tuesday	1.0000	Saturday	1.0000
Wednesday	1.0000	Sunday	1.0000
Thursday	1.0000		

Monthly Operational Profiles

Name: DEFAULT

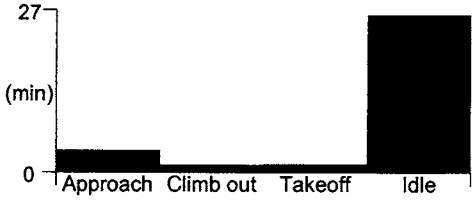
Month	Fraction of Peak	Month	Fraction of Peak
January	1.0000	July	1.0000
February	1.0000	August	1.0000
March	1.0000	September	1.0000
April	1.0000	October	1.0000
May	1.0000	November	1.0000
June	1.0000	December	1.0000



Aircraft

Aircraft Name:	Annual LTOs:	1
DC8-71	Annual TGO:	0
Engine Type:	Hourly Operational Profile:	DEFAULT
CFM56-2A SERIES	Daily Operational Profile:	DEFAULT
Identification:	Monthly Operational Profile:	DEFAULT
#1	Category:	HCJP

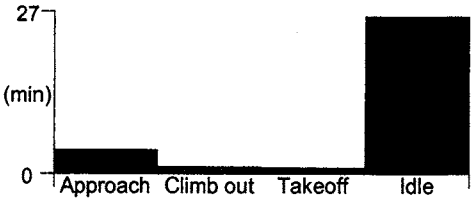
Takeoff weight (lbs):	325000
Approach angle (°):	3
Takeoff Time (minutes):	1.28
Climb out Time (minutes):	1.17
Approach Time (minutes):	3.62
Total Idle Time (minutes):	26.55
Taxi & Queue Time (minutes):	26.00



Assigned APU:	APU GTCP85-129 (200 HP)		Op Time (mins):	26.00
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Narrow Body	Diesel	15.00	56	0.2500
Hydrant Truck, Narrow Body	Diesel	12.00	235	0.7000
Catering Truck, Narrow Body	Diesel	15.00	210	0.5300
Cabin Service Truck, Narrow	Diesel	20.00	210	0.5300
Belt Loader, Narrow Body	Gasoline	48.00	107	0.5000
Baggage Tractor, Narrow Body	Gasoline	75.00	107	0.5500
Air Conditioner, Narrow Body	Electric	30.00	0	0.7500
Aircraft Tractor, Mid-Range	Diesel	8.00	190	0.8000

Aircraft Name:	Annual LTOs:	1
B757-200	Annual TGO:	0
Engine Type:	Hourly Operational Profile:	DEFAULT
PW2037	Daily Operational Profile:	DEFAULT
Identification:	Monthly Operational Profile:	DEFAULT
#1	Category:	LCJP

Takeoff weight (lbs):	222000
Approach angle (°):	3
Takeoff Time (minutes):	0.94
Climb out Time (minutes):	1.11
Approach Time (minutes):	3.93
Total Idle Time (minutes):	26.40
Taxi & Queue Time (minutes):	26.00



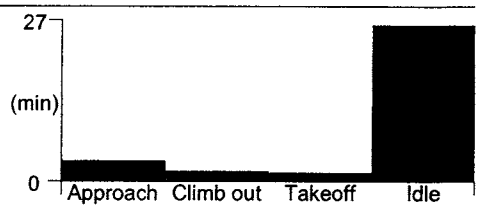
Assigned APU:	APU GTCP331-200ER (143 HP)	Op Time (mins):	26.00

Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Narrow Body	Diesel	15.00	56	0.2500
Hydrant Truck, Narrow Body	Diesel	12.00	235	0.7000
Catering Truck, Narrow Body	Diesel	15.00	210	0.5300
Cabin Service Truck, Narrow	Diesel	20.00	210	0.5300
Belt Loader, Narrow Body	Gasoline	48.00	107	0.5000
Baggage Tractor, Narrow Body	Gasoline	75.00	107	0.5500
Air Conditioner, Narrow Body	Electric	30.00	0	0.7500
Air Start, 180 PPM	Diesel	7.00	425	0.9000
Aircraft Tractor, Mid-Range	Diesel	8.00	190	0.8000

Aircraft Name:
B747-400
Engine Type:
PW4056
Identification:
#1

Annual LTOs:	4
Annual TGO:	0
Hourly Operational Profile:	DEFAULT
Daily Operational Profile:	DEFAULT
Monthly Operational Profile:	DEFAULT
Category:	HCJP

Takeoff weight (lbs):	843000
Approach angle (°):	3
Takeoff Time (minutes):	1.35
Climb out Time (minutes):	1.63
Approach Time (minutes):	3.41
Total Idle Time (minutes):	26.57
Taxi & Queue Time (minutes):	26.00

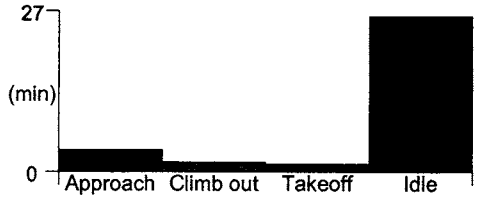


Assigned APU:	APU PW901A	Op Time (mins):	26.00	
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Wide Body	Diesel	25.00	235	0.2500
Hydrant Truck, Wide Body	Diesel	20.00	235	0.7000
Catering Truck, Wide Body	Diesel	20.00	210	0.5300
Cargo Loader, Wide, Lower Lobe	Diesel	80.00	80	0.5000
Cabin Service Truck, Wide Body	Diesel	35.00	210	0.5300
Belt Loader, Wide Body	Gasoline	35.00	107	0.5000
Baggage Tractor, Wide Body	Gasoline	120.00	107	0.5500
Air Conditioner, Wide Body	Electric	30.00	0	0.7500
Aircraft Tractor, Wide Body	Diesel	8.00	475	0.8000
Air Start, 180 PPM	Diesel	7.00	425	0.9000

Aircraft Name:
B747-100F
Engine Type:
JT9D-7A
Identification:
#1

Annual LTOs:	2
Annual TGO:	0
Hourly Operational Profile:	DEFAULT
Daily Operational Profile:	DEFAULT
Monthly Operational Profile:	DEFAULT
Category:	HCJC

Takeoff weight (lbs):	635000
Approach angle (°):	3
Takeoff Time (minutes):	1.28
Climb out Time (minutes):	1.58
Approach Time (minutes):	3.65
Total Idle Time (minutes):	26.53
Taxi & Queue Time (minutes):	26.00



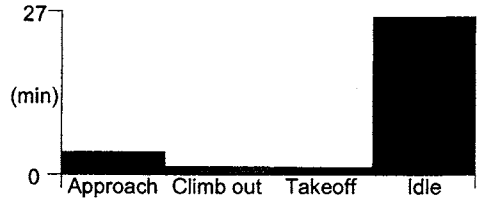
Assigned APU:	APU GTCP 660 (300 HP)		Op Time (mins):	26.00
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Gasoline	12.00	260	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Wide Body	Diesel	25.00	235	0.2500
Hydrant Truck, Wide Body	Diesel	20.00	235	0.7000
Cargo Loader, Wide, Main Deck	Diesel	100.00	133	0.5000
Cargo Loader, Wide, Lower Lobe	Diesel	80.00	80	0.5000
Belt Loader, Wide Body	Gasoline	35.00	107	0.5000
Baggage Tractor, Wide Body	Gasoline	120.00	107	0.5500
Air Conditioner, Wide Body	Diesel	30.00	300	0.7500

Aircraft Tractor, Wide Body	Diesel	8.00	475	0.8000
Air Start, 180 PPM	Diesel	7.00	425	0.9000

Aircraft Name:
B767-200ER
Engine Type:
CF6-80A2
Identification:
#1

Annual LTOs:	1
Annual TGO:	0
Hourly Operational Profile:	DEFAULT
Daily Operational Profile:	DEFAULT
Monthly Operational Profile:	DEFAULT
Category:	HCJP

Takeoff weight (lbs):	315500
Approach angle (°):	3
Takeoff Time (minutes):	1.20
Climb out Time (minutes):	1.28
Approach Time (minutes):	3.77
Total Idle Time (minutes):	26.38
Taxi & Queue Time (minutes):	26.00

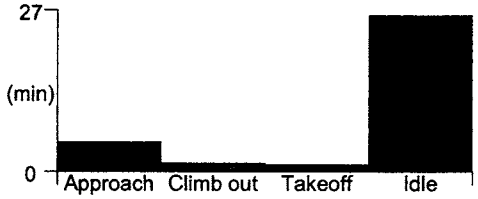


Assigned APU:	APU GTCP331-200ER (143 HP)		Op Time (mins):	26.00
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Wide Body	Diesel	25.00	235	0.2500
Hydrant Truck, Wide Body	Diesel	20.00	235	0.7000
Catering Truck, Wide Body	Diesel	20.00	210	0.5300
Cargo Loader, Wide, Lower Lobe	Diesel	80.00	80	0.5000
Cabin Service Truck, Wide Body	Diesel	35.00	210	0.5300
Belt Loader, Wide Body	Gasoline	35.00	107	0.5000
Baggage Tractor, Wide Body	Gasoline	120.00	107	0.5500
Air Conditioner, Wide Body	Electric	30.00	0	0.7500
Aircraft Tractor, Wide Body	Diesel	8.00	475	0.8000
Air Start, 300 PPM	Diesel	7.00	850	0.9000

Aircraft Name:
B777-200
Engine Type:
PW4077
Identification:
#1

Annual LTOs:	1
Annual TGO:	0
Hourly Operational Profile:	DEFAULT
Daily Operational Profile:	DEFAULT
Monthly Operational Profile:	DEFAULT
Category:	HCJP

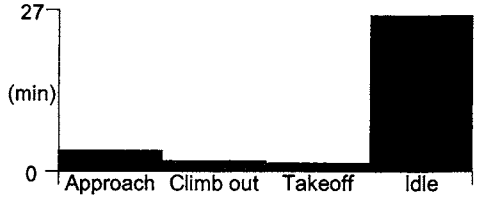
Takeoff weight (lbs):	535000
Approach angle (°):	3
Takeoff Time (minutes):	1.17
Climb out Time (minutes):	1.45
Approach Time (minutes):	5.04
Total Idle Time (minutes):	26.58
Taxi & Queue Time (minutes):	26.00



Assigned APU:	APU GTCP331-500 (143 HP)		Op Time (mins):	26.00
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Wide Body	Diesel	25.00	235	0.2500
Hydrant Truck, Wide Body	Diesel	20.00	235	0.7000
Catering Truck, Wide Body	Diesel	20.00	210	0.5300
Cargo Loader, Wide, Lower Lobe	Diesel	80.00	80	0.5000
Cabin Service Truck, Wide Body	Diesel	35.00	210	0.5300
Belt Loader, Wide Body	Gasoline	35.00	107	0.5000
Baggage Tractor, Wide Body	Gasoline	120.00	107	0.5500
Air Conditioner, Wide Body	Electric	30.00	0	0.7500
Aircraft Tractor, Wide Body	Diesel	8.00	475	0.8000
Air Start, 180 PPM	Diesel	7.00	425	0.9000

Aircraft Name:	Annual LTOs:	1
B747-200	Annual TGO:	0
Engine Type:	Hourly Operational Profile:	DEFAULT
JT9D-7Q	Daily Operational Profile:	DEFAULT
Identification:	Monthly Operational Profile:	DEFAULT
#1	Category:	HCJP

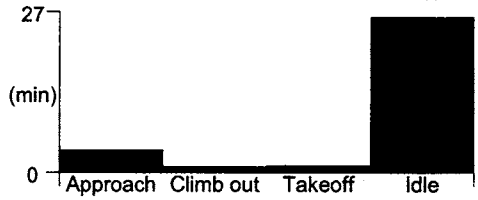
Takeoff weight (lbs):	775000
Approach angle (°):	3
Takeoff Time (minutes):	1.35
Climb out Time (minutes):	1.74
Approach Time (minutes):	3.49
Total Idle Time (minutes):	26.50
Taxi & Queue Time (minutes):	26.00



Assigned APU:	APU GTCP 660 (300 HP)		Op Time (mins):	26.00
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Wide Body	Diesel	25.00	235	0.2500
Hydrant Truck, Wide Body	Diesel	20.00	235	0.7000
Catering Truck, Wide Body	Diesel	20.00	210	0.5300
Cargo Loader, Wide, Lower Lobe	Diesel	80.00	80	0.5000
Cabin Service Truck, Wide Body	Diesel	35.00	210	0.5300
Belt Loader, Wide Body	Gasoline	35.00	107	0.5000
Baggage Tractor, Wide Body	Gasoline	120.00	107	0.5500
Air Conditioner, Wide Body	Electric	30.00	0	0.7500
Aircraft Tractor, Wide Body	Diesel	8.00	475	0.8000
Air Start, 180 PPM	Diesel	7.00	425	0.9000

Aircraft Name:	Annual LTOs:	9
B737-800	Annual TGO:	0
Engine Type:	Hourly Operational Profile:	DEFAULT
CFM56-7B26	Daily Operational Profile:	DEFAULT
Identification:	Monthly Operational Profile:	DEFAULT
#1	Category:	LCJP

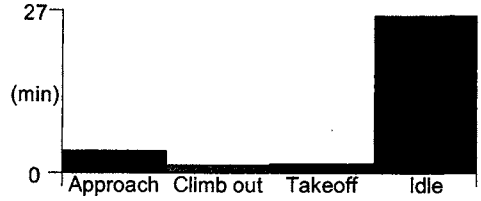
Takeoff weight (lbs):	172300
Approach angle (°):	3
Takeoff Time (minutes):	1.08
Climb out Time (minutes):	0.90
Approach Time (minutes):	3.72
Total Idle Time (minutes):	26.35
Taxi & Queue Time (minutes):	26.00



Assigned APU:	APU 131-9	Op Time (mins):	26.00	
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Narrow Body	Diesel	15.00	56	0.2500
Hydrant Truck, Narrow Body	Diesel	12.00	235	0.7000
Catering Truck, Narrow Body	Diesel	15.00	210	0.5300
Cabin Service Truck, Narrow	Diesel	20.00	210	0.5300
Belt Loader, Narrow Body	Gasoline	48.00	107	0.5000
Baggage Tractor, Narrow Body	Gasoline	75.00	107	0.5500
Air Start, 180 PPM	Diesel	7.00	425	0.9000
Air Conditioner, Narrow Body	Electric	30.00	0	0.7500
Aircraft Tractor, Narrow Body	Diesel	8.00	88	0.8000

Aircraft Name:	Annual LTOs:	13
B727-200	Annual TGO:	0
Engine Type:	Hourly Operational Profile:	DEFAULT
JT8D-15	Daily Operational Profile:	DEFAULT
Identification:	Monthly Operational Profile:	DEFAULT
#1	Category:	LCJP

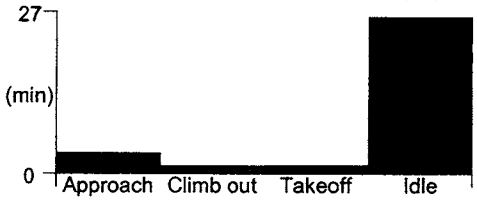
Takeoff weight (lbs):	204000
Approach angle (°):	3
Takeoff Time (minutes):	1.51
Climb out Time (minutes):	1.30
Approach Time (minutes):	3.68
Total Idle Time (minutes):	26.39
Taxi & Queue Time (minutes):	26.00



Assigned APU:	APU GTCP85-129 (200 HP)		Op Time (mins):	26.00
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Narrow Body	Diesel	15.00	56	0.2500
Hydrant Truck, Narrow Body	Diesel	12.00	235	0.7000
Catering Truck, Narrow Body	Diesel	15.00	210	0.5300
Cabin Service Truck, Narrow	Diesel	20.00	210	0.5300
Belt Loader, Narrow Body	Gasoline	48.00	107	0.5000
Baggage Tractor, Narrow Body	Gasoline	75.00	107	0.5500
Air Start, 180 PPM	Diesel	7.00	425	0.9000
Air Conditioner, Narrow Body	Electric	30.00	0	0.7500
Aircraft Tractor, Narrow Body	Diesel	8.00	88	0.8000

Aircraft Name:	Annual LTOs:	6
DC10-30	Annual TGO:	0
Engine Type:	Hourly Operational Profile:	DEFAULT
CF6-50C2	Daily Operational Profile:	DEFAULT
Identification:	Monthly Operational Profile:	DEFAULT
#1	Category:	HCJP

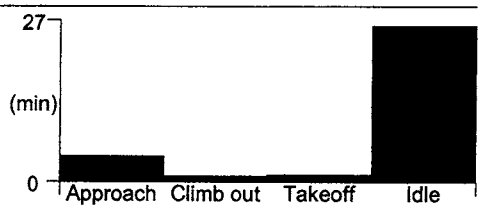
Takeoff weight (lbs):	561000
Approach angle (°):	3
Takeoff Time (minutes):	1.30
Climb out Time (minutes):	1.23
Approach Time (minutes):	3.45
Total Idle Time (minutes):	26.42
Taxi & Queue Time (minutes):	26.00



Assigned APU:	APU TSCP700-4B (142 HP)		Op Time (mins):	26.00
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Wide Body	Diesel	25.00	235	0.2500
Hydrant Truck, Wide Body	Diesel	20.00	235	0.7000
Catering Truck, Wide Body	Diesel	20.00	210	0.5300
Cargo Loader, Wide, Lower Lobe	Diesel	80.00	80	0.5000
Cabin Service Truck, Wide Body	Diesel	35.00	210	0.5300
Belt Loader, Wide Body	Gasoline	35.00	107	0.5000
Baggage Tractor, Wide Body	Gasoline	120.00	107	0.5500
Air Conditioner, Wide Body	Electric	30.00	0	0.7500
Aircraft Tractor, Wide Body	Diesel	8.00	475	0.8000
Air Start, 180 PPM	Diesel	7.00	425	0.9000

Aircraft Name:	Annual LTOs:	4
Falcon 20	Annual TGO:	0
Engine Type:	Hourly Operational Profile:	DEFAULT
CF700-2D	Daily Operational Profile:	DEFAULT
Identification:	Monthly Operational Profile:	DEFAULT
#1	Category:	SGJB

Takeoff weight (lbs):	28660
Approach angle (°):	3
Takeoff Time (minutes):	1.14
Climb out Time (minutes):	0.94
Approach Time (minutes):	4.28
Total Idle Time (minutes):	26.17
Taxi & Queue Time (minutes):	26.00



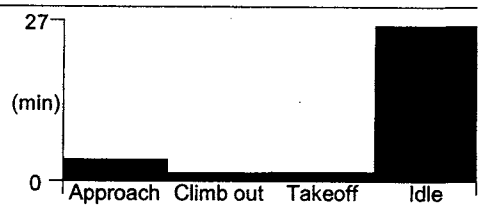
No APU assigned.

Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Fuel Truck, MidSize, 3-6,000 g	Diesel	20.00	175	0.2500
Aircraft Tractor, Commuter/Reg	Diesel	5.00	86	0.8000
Ground Power Unit, 28VDC	Diesel	40.00	71	0.7500

Aircraft Name: L-1011-100
Engine Type: RB211-22B
Identification: #1

Annual LTOs:	2
Annual TGO:	0
Hourly Operational Profile:	DEFAULT
Daily Operational Profile:	DEFAULT
Monthly Operational Profile:	DEFAULT
Category:	HCJP

Takeoff weight (lbs):	430000
Approach angle (°):	3
Takeoff Time (minutes):	1.46
Climb out Time (minutes):	1.34
Approach Time (minutes):	3.58
Total Idle Time (minutes):	26.47
Taxi & Queue Time (minutes):	26.00

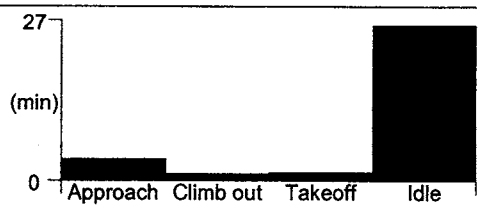


Assigned APU:	APU ST-6	Op Time (mins):	26.00	
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Wide Body	Diesel	25.00	235	0.2500
Hydrant Truck, Wide Body	Diesel	20.00	235	0.7000
Catering Truck, Wide Body	Diesel	20.00	210	0.5300
Cargo Loader, Wide, Lower Lobe	Diesel	80.00	80	0.5000
Cabin Service Truck, Wide Body	Diesel	35.00	210	0.5300
Belt Loader, Wide Body	Gasoline	35.00	107	0.5000
Baggage Tractor, Wide Body	Gasoline	120.00	107	0.5500
Air Conditioner, Wide Body	Electric	30.00	0	0.7500
Aircraft Tractor, Wide Body	Diesel	8.00	475	0.8000
Air Start, 300 PPM	Diesel	7.00	850	0.9000

Aircraft Name: L-1011-500 TR
Engine Type: RB211-524B4
Identification: #1

Annual LTOs:	4
Annual TGO:	0
Hourly Operational Profile:	DEFAULT
Daily Operational Profile:	DEFAULT
Monthly Operational Profile:	DEFAULT
Category:	HCJP

Takeoff weight (lbs):	470000
Approach angle (°):	3
Takeoff Time (minutes):	1.34
Climb out Time (minutes):	1.12
Approach Time (minutes):	3.63
Total Idle Time (minutes):	26.58
Taxi & Queue Time (minutes):	26.00

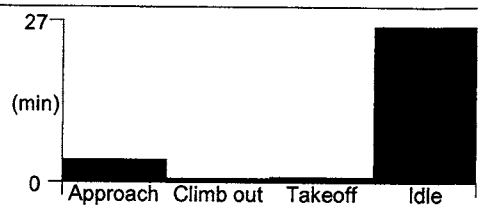


Assigned APU:	APU GTCP 660 (300 HP)		Op Time (mins):	26.00
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Wide Body	Diesel	25.00	235	0.2500
Hydrant Truck, Wide Body	Diesel	20.00	235	0.7000
Catering Truck, Wide Body	Diesel	20.00	210	0.5300
Cargo Loader, Wide, Lower Lobe	Diesel	80.00	80	0.5000
Cabin Service Truck, Wide Body	Diesel	35.00	210	0.5300
Belt Loader, Wide Body	Gasoline	35.00	107	0.5000
Baggage Tractor, Wide Body	Gasoline	120.00	107	0.5500
Air Conditioner, Wide Body	Electric	30.00	0	0.7500
Aircraft Tractor, Wide Body	Diesel	8.00	475	0.8000
Air Start, 180 PPM	Diesel	7.00	425	0.9000

Aircraft Name: Falcon 100
Engine Type: TFE731-2
Identification: #1

Annual LTOs:	3
Annual TGO:	0
Hourly Operational Profile:	DEFAULT
Daily Operational Profile:	DEFAULT
Monthly Operational Profile:	DEFAULT
Category:	SGJB

Takeoff weight (lbs):	15000
Approach angle (°):	3
Takeoff Time (minutes):	0.81
Climb out Time (minutes):	0.61
Approach Time (minutes):	3.70
Total Idle Time (minutes):	26.16
Taxi & Queue Time (minutes):	26.00



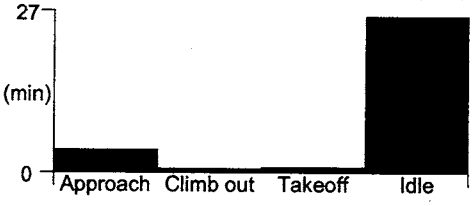
No APU assigned.

Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Fuel Truck, MidSize, 3-6,000 g	Diesel	20.00	175	0.2500
Aircraft Tractor, Commuter/Reg	Diesel	5.00	86	0.8000
Ground Power Unit, 28VDC	Diesel	40.00	71	0.7500

Aircraft Name: Falcon 50
Engine Type: TFE731-3
Identification: #1

Annual LTOs:	3
Annual TGO:	0
Hourly Operational Profile:	DEFAULT
Daily Operational Profile:	DEFAULT
Monthly Operational Profile:	DEFAULT
Category:	SGJB

Takeoff weight (lbs):	15000
Approach angle (°):	3
Takeoff Time (minutes):	0.81
Climb out Time (minutes):	0.61
Approach Time (minutes):	3.70
Total Idle Time (minutes):	26.16
Taxi & Queue Time (minutes):	26.00



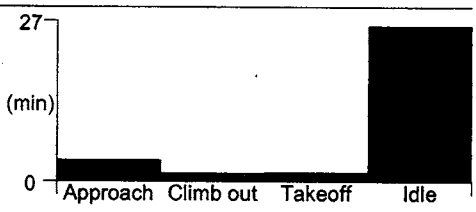
No APU assigned.

Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Fuel Truck, MidSize, 3-6,000 g	Diesel	20.00	175	0.2500
Aircraft Tractor, Commuter/Reg	Diesel	5.00	86	0.8000
Ground Power Unit, 28VDC	Diesel	40.00	71	0.7500

Aircraft Name: L-1011-200
Engine Type: RB211-524B
Identification: #1

Annual LTOs:	2
Annual TGO:	0
Hourly Operational Profile:	DEFAULT
Daily Operational Profile:	DEFAULT
Monthly Operational Profile:	DEFAULT
Category:	HCJP

Takeoff weight (lbs):	430000
Approach angle (°):	3
Takeoff Time (minutes):	1.46
Climb out Time (minutes):	1.34
Approach Time (minutes):	3.58
Total Idle Time (minutes):	26.47
Taxi & Queue Time (minutes):	26.00



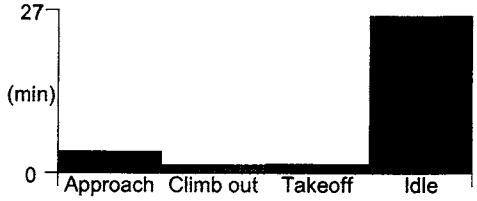
Assigned APU:	APU ST-6	Op Time (mins):	26.00	
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Wide Body	Diesel	25.00	235	0.2500
Hydrant Truck, Wide Body	Diesel	20.00	235	0.7000
Catering Truck, Wide Body	Diesel	20.00	210	0.5300
Cargo Loader, Wide, Lower Lobe	Diesel	80.00	80	0.5000
Cabin Service Truck, Wide Body	Diesel	35.00	210	0.5300
Belt Loader, Wide Body	Gasoline	35.00	107	0.5000
Baggage Tractor, Wide Body	Gasoline	120.00	107	0.5500
Air Conditioner, Wide Body	Electric	30.00	0	0.7500

Aircraft Tractor, Wide Body	Diesel	8.00	475	0.8000
Air Start, 180 PPM	Diesel	7.00	425	0.9000

Aircraft Name:
L-1011-1
Engine Type:
RB211-22B new engine
Identification:
#1

Annual LTOs:	1
Annual TGO:	0
Hourly Operational Profile:	DEFAULT
Daily Operational Profile:	DEFAULT
Monthly Operational Profile:	DEFAULT
Category:	HCJP

Takeoff weight (lbs):	430000
Approach angle (°):	3
Takeoff Time (minutes):	1.46
Climb out Time (minutes):	1.34
Approach Time (minutes):	3.58
Total Idle Time (minutes):	26.47
Taxi & Queue Time (minutes):	26.00



Assigned APU:	APU ST-6	Op Time (mins):	26.00	
Assigned GSE/AGE:	Fuel:	Op Time (mins):	Horsepower:	Load Factor:
Water Service	Electric	12.00	0	0.2000
Service Truck	Diesel	15.00	235	0.2000
Lavatory Truck, Wide Body	Diesel	25.00	235	0.2500
Hydrant Truck, Wide Body	Diesel	20.00	235	0.7000
Catering Truck, Wide Body	Diesel	20.00	210	0.5300
Cargo Loader, Wide, Lower Lobe	Diesel	80.00	80	0.5000
Cabin Service Truck, Wide Body	Diesel	35.00	210	0.5300
Belt Loader, Wide Body	Gasoline	35.00	107	0.5000
Baggage Tractor, Wide Body	Gasoline	120.00	107	0.5500
Air Conditioner, Wide Body	Electric	30.00	0	0.7500
Aircraft Tractor, Wide Body	Diesel	8.00	475	0.8000
Air Start, 300 PPM	Diesel	7.00	850	0.9000

User-Created Aircraft

**My Airplane

Category: HCJP
# of Engines: 2
Flight Profile: A340-300 CFM56-5C4
Times in mode are default EPA values.
Engines Emissions Data Source: TRENT-890

**B737-300

Category: LCTB
# of Engines: 2
Flight Profile: B737-300 CFM56-3-B1
Engine emissions data is user specified.

	Times in Mode (minutes)	Fuel Flow (Kg/s)	Emissions Indices (grams/Kg of fuel burned) CO	HC	NOx	SOx
Approach:	4.50	0.277778	4.026528	0.103910	11.300256	0.701395
Climb Out:	2.20	0.277778	3.240000	0.000000	0.180000	0.000000
Takeoff:	0.50	0.277778	3.700080	0.164448	85.101840	2.220048
Idle:	26.00	0.277778	12.665160	0.586350	1.923228	0.253303

**My Helicopter

Category: HCJH
# of Engines: 2
Engine emissions data is user specified.

	Times in Mode (minutes)	Fuel Flow (Kg/s)	Emissions Indices (grams/Kg of fuel burned) CO	HC	NOx	SOx
Approach:	4.00	0.277778	0.000000	0.000000	1.000000	0.000000
Climb Out:	2.20	0.277778	0.000000	1.000000	0.000000	0.000000
Takeoff:	0.70	0.277778	1.000000	0.000000	0.000000	0.000000
Idle:	26.00	0.277778	0.000000	0.000000	0.000000	1.000000

User-Created GSE

**My Gse

Default Operating Time per LTO (minutes):	7.00
Default Annual Operating Time (hours):	333
Default Power Rating (Horsepower):	425
Default Load Factor:	0.9000

Emissions data is based upon the following system GSE type operating in the specified year.

Gse Type:	Air Start, 180 PPM
Operating Year:	2009
Default Fuel:	Diesel

**My GSE

Default Operating Time per LTO (minutes):	15.00
Default Annual Operating Time (hours):	0
Default Power Rating (Horsepower):	100
Default Load Factor:	1.0000

Emissions data is user specified.

Emissions Factors (grams/hp-hour):

Fuels	CO	HC	NOx	SOx	PM
Diesel (default)	10.000000	10.000000	10.000000	10.000000	10.000000
Gasoline					
CNG					
LPG					

User-Created APUs

**My APU

Default Operating Time per LTO (minutes):	26.00
Emissions Data Source:	APU WR27-1

End of Report

2002 Locomotive
Questionnaire

2002 KENTUCKY RAILROAD INFORMATION

QUESTIONNAIRE

2002 Railroad General Information:

Railroad Name_____

Contact Person_____Phone #_____

Contact Person E-mail_____

Contact Person Fax Number_____

Any clarifying remarks regarding the information provided_____

_____

_____

2002 System Level Railroad Information:

S m Total Gross Ton Miles *(GTM)_____

System Total Fuel Consumption (gallons)_____

System Total Track Mileage (miles)_____

2002 State Level Railroad Information:

State Total Railroad Gross Ton Miles *(GTM) in Kentucky_____

State Total Railroad Fuel Consumption (gallons) in Kentucky_____

State Total Railroad Track Mileage (miles) in Kentucky_____

(Please see County Level information needed starting on Page 2.)

**When providing Gross Ton Miles (GTM) for the system, state, and county levels be consistent throughout in either ir ding or not including the locomotive weight.*

2002 KENTUCKY RAILROAD INFORMATION

QUESTIONNAIRE

2002 County Level Railroad Information:

Please provide 2002 County Level information for Total Gross Ton Miles *(GTM), Total Track Mileage, Fuel Used by Line Haul Locomotives, the Number of Yard Locomotives Operated, and the Fuel Used by Yard Locomotives in the following table:

2002 KENTUCKY RAILROAD INFORMATION QUESTIONNAIRE - COUNTY LEVEL -					
KENTUCKY COUNTY NAME	**2002 TOTAL GROSS TON MILES *(GTM) FOR EACH COUNTY**	**2002 TOTAL TRACK MILEAGE (MILES) FOR EACH COUNTY**	**2002 TOTAL FUEL USAGE BY LINE HAUL LOCOMOTIVES FOR EACH COUNTY (GALLONS)**	**NUMBER OF YARD LOCOMOTIVES OPERATED IN EACH COUNTY IN 2002**	**2002 TOTAL FUEL USAGE BY YARD LOCOMOTIVES OPERATED IN EACH COUNTY (GALLONS)**
Adair					
Allen					
Anderson					
Ballard					
Barren					
Bath					
Bell					
Boone					
Bourbon					
Boyd					
Boyle					
Bracken					
Breathitt					

**When providing Gross Ton Miles (GTM) for the system, state, and county levels be consistent throughout in either ir ' 'ding or not including the locomotive weight.*

2002 KENTUCKY RAILROAD INFORMATION QUESTIONNAIRE

- COUNTY LEVEL -

KENTUCKY COUNTY NAME	2002 TOTAL GROSS TON MILES *(GTM) FOR EACH COUNTY	2002 TOTAL TRACK MILEAGE (MILES) FOR EACH COUNTY	2002 TOTAL FUEL USAGE BY LINE HAUL LOCOMOTIVES FOR EACH COUNTY (GALLONS)	NUMBER OF YARD LOCOMOTIVES OPERATED IN EACH COUNTY IN 2002	2002 TOTAL FUEL USAGE BY YARD LOCOMOTIVES OPERATED IN EACH COUNTY (GALLONS)
Breckinridge					
Bullitt					
Butler					
Caldwell					
Calloway					
Campbell					
Carlisle					
Carroll					
Carter					
Casey					
Christian					
Clark					
Clay					
Clinton					
Crittenden					
Cumberland					
Daviess					
Edmonson					
Elliott					
Estill					

**When providing Gross Ton Miles (GTM) for the system, state, and county levels be consistent throughout in either including or not including the locomotive weight.*

2002 KENTUCKY RAILROAD INFORMATION QUESTIONNAIRE

- COUNTY LEVEL -

KENTUCKY COUNTY NAME	2002 TOTAL GROSS TON MILES *(GTM) FOR EACH COUNTY	2002 TOTAL TRACK MILEAGE (MILES) FOR EACH COUNTY	2002 TOTAL FUEL USAGE BY LINE HAUL LOCOMOTIVES FOR EACH COUNTY (GALLONS)	NUMBER OF YARD LOCOMOTIVES OPERATED IN EACH COUNTY IN 2002	2002 TOTAL FUEL USAGE BY YARD LOCOMOTIVES OPERATED IN EACH COUNTY (GALLONS)
Fayette					
Fleming					
Floyd					
Franklin					
Fulton					
Gallatin					
Garrard					
Grant					
Graves					
Grayson					
Green					
Greenup					
Hancock					
Hardin					
Harlan					
Harrison					
Hart					
Henderson					
Henry					
Hickman					

**When providing Gross Ton Miles (GTM) for the system, state, and county levels be consistent throughout in either ir ' ·ding or not including the locomotive weight.*

2002 KENTUCKY RAILROAD INFORMATION QUESTIONNAIRE

- COUNTY LEVEL -

KENTUCKY COUNTY NAME	2002 TOTAL GROSS TON MILES *(GTM) FOR EACH COUNTY	2002 TOTAL TRACK MILEAGE (MILES) FOR EACH COUNTY	2002 TOTAL FUEL USAGE BY LINE HAUL LOCOMOTIVES FOR EACH COUNTY (GALLONS)	NUMBER OF YARD LOCOMOTIVES OPERATED IN EACH COUNTY IN 2002	2002 TOTAL FUEL USAGE BY YARD LOCOMOTIVES OPERATED IN EACH COUNTY (GALLONS)
Hopkins					
Jackson					
Jefferson					
Jessamine					
Johnson					
Kenton					
Knott					
Knox					
Larue					
Laurel					
Lawrence					
Lee					
Leslie					
Letcher					
Lewis					
Lincoln					
Livingston					
Logan					
Lyon					
Madison					

**When providing Gross Ton Miles (GTM) for the system, state, and county levels be consistent throughout in either including or not including the locomotive weight.*

2002 KENTUCKY RAILROAD INFORMATION QUESTIONNAIRE

- COUNTY LEVEL -

KENTUCKY COUNTY NAME	2002 TOTAL GROSS TON MILES *(GTM) FOR EACH COUNTY	2002 TOTAL TRACK MILEAGE (MILES) FOR EACH COUNTY	2002 TOTAL FUEL USAGE BY LINE HAUL LOCOMOTIVES FOR EACH COUNTY (GALLONS)	NUMBER OF YARD LOCOMOTIVES OPERATED IN EACH COUNTY IN 2002	2002 TOTAL FUEL USAGE BY YARD LOCOMOTIVES OPERATED IN EACH COUNTY (GALLONS)
Magoffin					
Marion					
Marshall					
Martin					
Mason					
McCracken					
McCreary					
McLean					
Meade					
Menifee					
Mercer					
Metcalfe					
Monroe					
Montgomery					
Morgan					
Muhlenberg					
Nelson					
Nicholas					
Ohio					
Oldham					

**When providing Gross Ton Miles (GTM) for the system, state, and county levels be consistent throughout in either ir ' ·ding or not including the locomotive weight.*

2002 KENTUCKY RAILROAD INFORMATION QUESTIONNAIRE

- COUNTY LEVEL -

KENTUCKY COUNTY NAME	2002 TOTAL GROSS TON MILES *(GTM) FOR EACH COUNTY	2002 TOTAL TRACK MILEAGE (MILES) FOR EACH COUNTY	2002 TOTAL FUEL USAGE BY LINE HAUL LOCOMOTIVES FOR EACH COUNTY (GALLONS)	NUMBER OF YARD LOCOMOTIVES OPERATED IN EACH COUNTY IN 2002	2002 TOTAL FUEL USAGE BY YARD LOCOMOTIVES OPERATED IN EACH COUNTY (GALLONS)
Owen					
Owsley					
Pendleton					
Perry					
Pike					
Powell					
Pulaski					
Robertson					
Rockcastle					
Rowan					
Russell					
Scott					
Shelby					
Simpson					
Spencer					
Taylor					
Todd					
Trigg					
Trimble					
Union					

**When providing Gross Ton Miles (GTM) for the system, state, and county levels be consistent throughout in either ir ` ·ding or not including the locomotive weight.*

2002 KENTUCKY RAILROAD INFORMATION QUESTIONNAIRE

- COUNTY LEVEL -

KENTUCKY COUNTY NAME	2002 TOTAL GROSS TON MILES *(GTM) FOR EACH COUNTY	2002 TOTAL TRACK MILEAGE (MILES) FOR EACH COUNTY	2002 TOTAL FUEL USAGE BY LINE HAUL LOCOMOTIVES FOR EACH COUNTY (GALLONS)	NUMBER OF YARD LOCOMOTIVES OPERATED IN EACH COUNTY IN 2002	2002 TOTAL FUEL USAGE BY YARD LOCOMOTIVES OPERATED IN EACH COUNTY (GALLONS)
Warren					
Washington					
Wayne					
Webster					
Whitley					
Wolfe					
Woodford					

**When providing Gross Ton Miles (GTM) for the system, state, and county levels be consistent throughout in either including or not including the locomotive weight.*