

**Environmental Protection Agency**

**Pt. 86, App. IV**

carbon monoxide into the system during the sampling period.

4. The calculations of §86.177-22 are performed in a normal way except, in the case of propane, the density of propane (17.30 grams/cu.ft./carbon atom) is used in place of the density of exhaust hydrocarbons. In the case of carbon monoxide, the density of 32.97 grams/cu. ft. is used.

5. The gravimetric mass is subtracted from the CVS measured mass and then divided by the gravimetric mass to determine the percent accuracy of the system.

6. The cause for any discrepancy greater than ±2 percent should be found and corrected. The following list of parametric errors may assist the operator in locating the cause of large errors.

Positive Error (Indication is higher than true value):

1. Calculated  $V_o$  is greater than actual  $V_o$ .
  - a. Original calibration in error.
  2. Pump inlet temperature recorder is reading low. A 6 °F. discrepancy will give a 1 percent error.
  3. Pump inlet pressure indicator is reading high. A 3.5 in. H<sub>2</sub>O high reading will give 1 percent error.
  4. Background concentration reading is too low. Check analyzer zero. Check leakage at floor inlet.
  5. Analyzer is reading high. Check span.
  6. Barometer reading is in error (too high). Barometric pressure reading should be gravity and temperature corrected.
  7. Revolution counter is reading high (Check pump speed and counters.)
  8. Mixture is stratified causing the sample to be higher than the average concentration in the mixture. Negative Error (Indication is lower than true value):

1. Calculated  $V_o$  is less than actual  $V_o$ .
  - a. Original calibration in error.
  - b. Pump clearances decreased due to influx of some surface adherent material. Re-calibration may be needed.
  2. Pump inlet temperature recorder is reading high.
  3. Pump inlet pressure indicator is reading low.
  4. Background concentration reading is too high.
  5. Analyzer is reading low.
  6. Barometer reading is in error (too low).
  7. Revolution counter is reading low.
  8. There is a leak into the sampling system. Pressure check the lines and fittings on the intake side of sample transfer pumps on both the CVS and analyzer console.

[42 FR 33000, June 28, 1977]

**APPENDIX IV TO PART 86—DURABILITY DRIVING SCHEDULES**

(a) Durability Driving Schedule for Light-Duty Vehicles and Light-Duty Trucks.

The schedule consists basically of 11 laps of a 3.7 mile course. The basic vehicle speed for each lap is listed below:

Lap	Speed miles per hour
1 .....	40
2 .....	30
3 .....	40
4 .....	40
5 .....	35
6 .....	30
7 .....	35
8 .....	45
9 .....	35
10 .....	55
11 .....	70

During each of the first nine laps there are 4 stops with 15 second idle. Normal accelerations and decelerations are used. In addition, there are 5 light decelerations each lap from the base speed to 20 m.p.h. followed by light accelerations to the base speed.

The 10th lap is run at a constant speed of 55 m.p.h.

The 11th lap is begun with a wide open throttle acceleration from stop to 70 m.p.h. A normal deceleration to idle followed by a second wide open throttle acceleration occurs at the midpoint of the lap.

(b) Durability Driving Schedule for Motorcycles. The Durability Driving Schedule for Class III Motorcycles may be used for Light-Duty Vehicles and Light-Duty Trucks.

The schedule consists basically of 11 laps of a 6.0 km (3.7 mi) course. The basic vehicle speed for each lap is listed below:

**SPEED (KILOMETERS PER HOUR)**

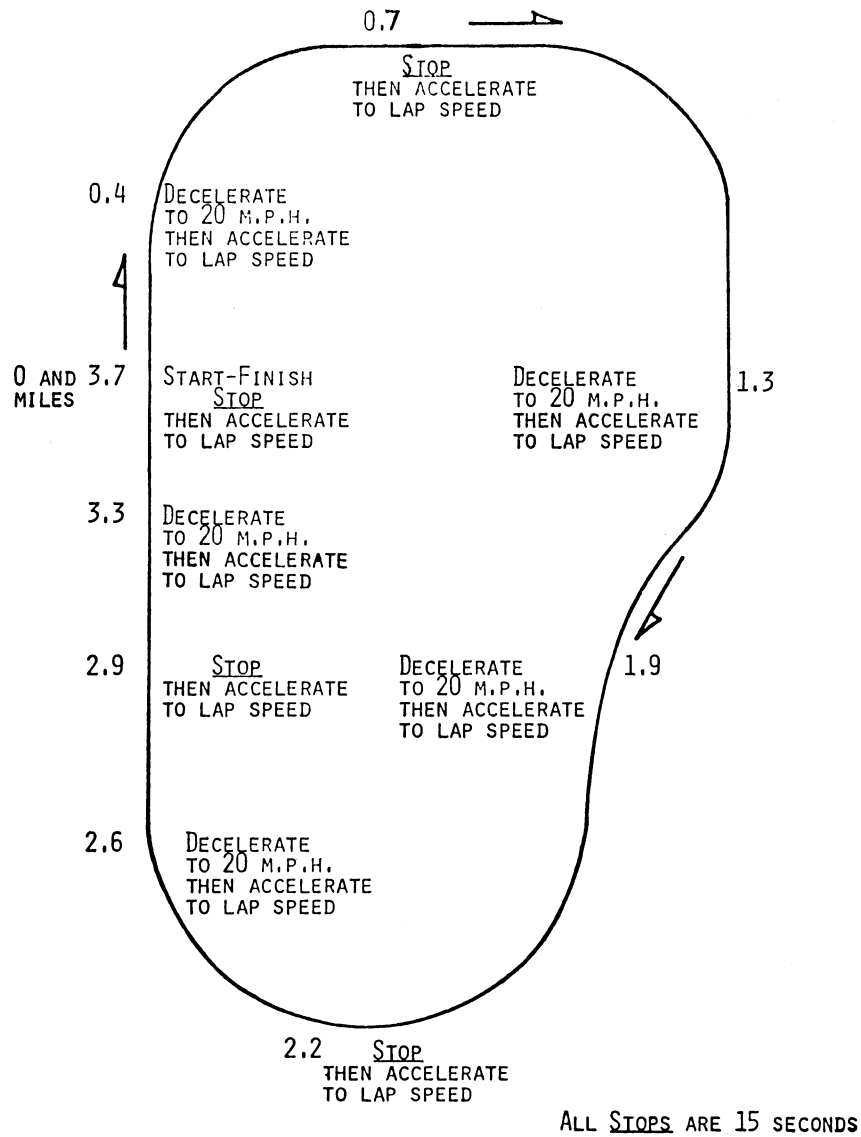
Lap	Class I	Class II	Class III
1 .....	65 .....	65 .....	65
2 .....	45 .....	45 .....	65
3 .....	65 .....	65 .....	55
4 .....	65 .....	65 .....	45
5 .....	55 .....	55 .....	55
6 .....	45 .....	45 .....	55
7 .....	55 .....	55 .....	70
8 .....	70 .....	70 .....	55
9 .....	55 .....	55 .....	46
10 .....	70 .....	90 .....	90
11 .....	70 .....	90 .....	110

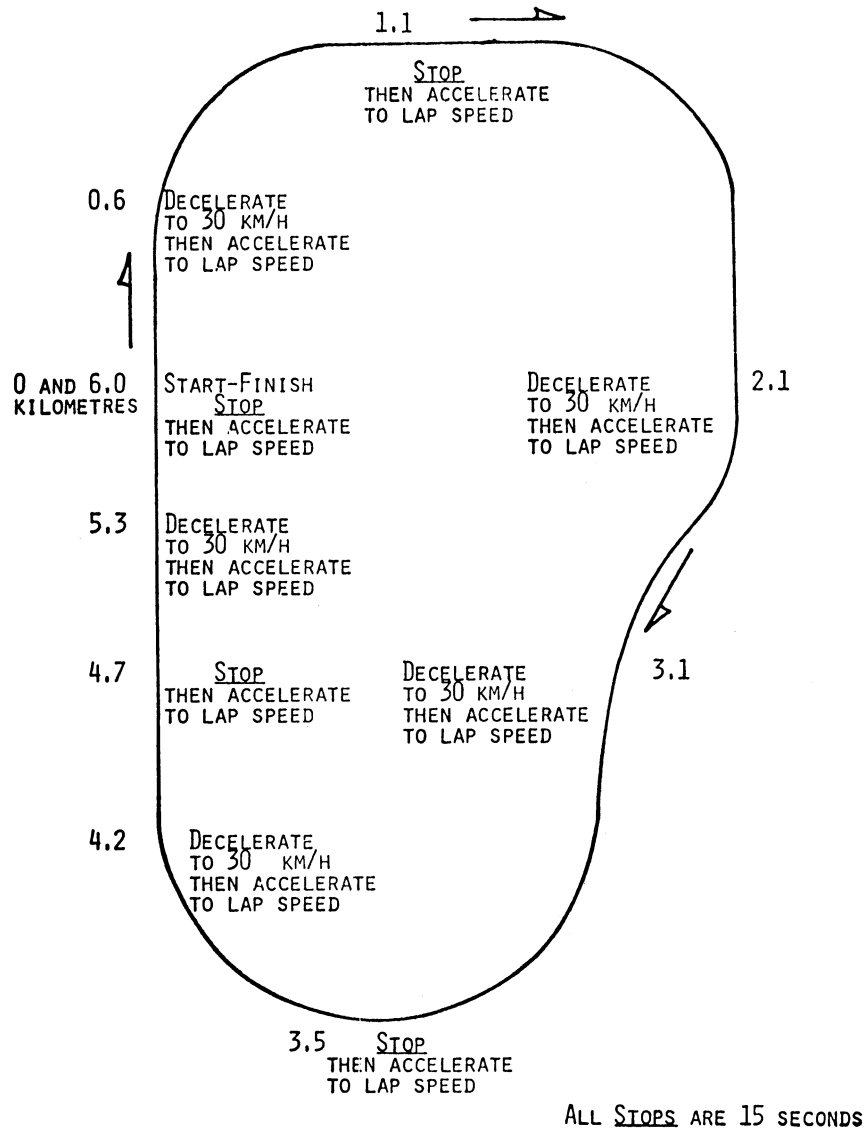
During each of the first nine laps there are 4 stops with 15 second idle. Normal accelerations and decelerations are used. In addition, there are 5 light decelerations each lap from the base speed to 30 km/h followed by light accelerations to the base speed.

The 10th lap is run at a constant speed.

The 11th lap is begun with a wide open throttle acceleration from stop. A normal deceleration to idle followed by a second wide open throttle acceleration occurs at the midpoint of the lap.

This schedule may be modified with the advance approval of the Administrator if it results in unsafe operation of the vehicle.





[42 FR 33002, June 28, 1977]

APPENDIX V TO PART 86—THE STANDARD ROAD CYCLE (SRC)

1. The standard road cycle (SRC) is a mileage accumulation cycle that may be used for any vehicle which is covered by the applicability provisions of §86.1801. The vehicle may

be run on a track or on a mileage accumulation dynamometer.

2. The cycle consists of 7 laps of a 3.7 mile course. The length of the lap may be changed to accommodate the length of the service-accumulation track.