


File

 AIR RESOURCES BOARD	CUSHMAN INC., TEXTRON TURF CARE AND SPECIALTY PRODUCTS - LINCOLN	EXECUTIVE ORDER M-8-21 New On-Road Motorcycles
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Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following 2000 model-year engine and emission control systems (ECS) produced by the manufacturer are certified as described below for four-stroke gasoline-powered motorcycles:

<u>Engine Family</u>	<u>Evaporative Family</u>	<u>Displacement (cm³)</u>	<u>Class</u>	<u>ECS & Special Features</u>
YCUXC.660CCC	YCUXE0140BBB	660	III	SFI, OC,O2S

Vehicle Models (Equivalent Inertia Mass): 898487 (680 kg)

Production motorcycles shall be in all material respects the same as those for which certification is granted.

The exhaust emission standards and certification values in grams per kilometer for hydrocarbons (HC) and carbon monoxide (CO), and the HC evaporative (Evap) standard and certification value in grams per test for this engine/evaporative family are as follows:

	<u>HC</u>	<u>CO</u>	<u>Evap HC</u>
<u>Standard:</u> (Effective Standard)	1.0	12	2.0 (1.8)
<u>Certification:</u>	0.5	4	1.2

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Section 2035 et seq.).

BE IT FURTHER RESOLVED: That because the listed motorcycles are certified to 0.2 grams per test or more below the applicable evaporative emission standard, the vehicles are exempt from complying with the Air Resources Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" pursuant to Executive Order G-70-16-E.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 28th day of December 2000.

R. B. Summerfield
 for R. B. Summerfield, Chief
 Mobile Source Operations Division

0-1

Engine Family: YCUXC.660CCC

Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family? Yes No

a) If yes, indicate family name: _____

b) Is the family being certified identical to the family from which the data is being carried over?

28. Model Designation of Test Vehicle: 898487

36. Road Load: 213.5 NT (495T) 171 NT (CA)

29. Test Information Number: 7131

37. Inertia Mass: 870 kg (495T), 680 kg (CA)

30. Vehicle ID: P99000369

38. N/V: 101.95

31. Service Accumulation Duration: 8000 (km)

39. EVAP. Bench Test Method Approved: N/A. assg DF Date: _____

32. Maximum Rated Power: 34 kW@5500 RPM

Reference: _____

33. Displacement: 660 cc

40. Unscheduled Maintenance: Yes No

34. Certification Fuel: Indolene HO III

41. If yes, Vehicle Log provided: Yes. See Section 8

35. Test Data Set(s): 99121402, 99122101
99122901, 00010502

42. Exhaust Emission Deterioration Factors:

Test Number	System Kilometers	Emission Values	
		HC	CO
1	3734	0.321	3.780
2	5250	0.207	3.488
3	6794	0.211	3.567
4	8334	0.347	3.993
5			
6			
7			
Interpolated Values at 8000 km:		HC = 0.28	CO = 3.5
Extrapolated Values at 30000 km:		HC = 0.40	CO = 3.6

Check One:	
Regular DF	<input checked="" type="checkbox"/>
Modified DF	<input type="checkbox"/>
If different vehicle specify vehicle ID	

43. Emission Test Results:

Official Test Results		Test 1	Test 2	Test 3	Test 4
g/km	CO	3.993			
g/km	CO ²	<u>217</u>			
g/km	HC	0.347			
g/km	Evap.	0.749			

Deterioration Factors	
(X)	<u>1.030</u>

(X)	<u>1.429</u>
(+)	<u>0.5</u>

*Note: Assigned DF for Evap.

44. Certification Levels:

g/km	CO	<u>4.1</u>			
g/km	HC	<u>0.50</u>			
g/km	Evap.	<u>1.249</u>			

Processed by: Stam/teka Date: 1/28/00 Reviewed by: K. Dwyer Date: 1/29/00

Motorcycle Engine Family Information Form

1. Manufacturer: Cushman, Textron Turf Care and Specialty Products - *Lincoln*

2. Certification Contact Person, address, phone, and fax:

EPA Cert. # *CU-MC-00-04*

Michael Ross Cushman, TTCSP 900 N. 21 st St., Lincoln, NE 68501-2409	Phone: (402) 474-8474 Fax: (402) 474-8727
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3. Model Year: 2000

10. Displacement: 660

4. Process Code: New
(new, correction, revision, r/c, f/f, etc.)

11. Number of Cylinders: 3

5. Engine Family: YCUXC.660CCC
 50s Engine Code: X
 49s Engine Code: _____
 Calif. Engine Code: _____

12. Cylinder Arrangement: Inline

13. Cylinder Head Configuration: SOHC 4 valves/cyl.

14. Type of Cooling: Liquid

6. Emission Control System: OC SFI O2S

15. Combustion Cycle: + Stroke

7. Calif. Designated Standard: HC=1.0 g/km

16. Method of Aspiration: Natural

8. Projected Annual Sales:

17. Fuel System: EFI SFI

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9. New Technology Yes X No
 If Yes, cite the correspondence or reference the
 submittal document: _____

18. Number of Catalytic Converters: 1

19. Adjustable Parameters:

Parameter(s)	Adjustable Range (or N/A)	Tamper Resistance Method (or N/A)	Method Approved
Idle Speed	950 +/- 50 RPM	ECU Controlled	
Valve Lash	.08mm INT. .10mm EXH	N/A	
Ignition Timing	5° BTDC	ECU Controlled	
Idle A/F Ratio	Set at Idle	ECU Controlled	

20. AECDs in the Emission Control Systems:

Exhaust System		Evaporative System	
AECDs in System:	<u>None</u>	AECDs in System:	<u>None</u>
	_____		_____
	_____		_____
	_____		_____
	_____		_____

Evaporative Emission Information

45. Evaporative Family: YCUXE0140BBE

46. Number of Evap. Canisters: 1

47. Design Working Capacity: 140 g

48. Configuration: Single canister

49. Number of Storage Areas: 1

50. Fuel Reservoir Volume: 3700 cc

51. Vent System Configuration: Non-vented

52. Nominal Tank Capacity: 6 Gallons

53. Engine Displacement Class: III

54. Storage Medium Composition: Activated Charcoal

55. Evap. Canister Medium Volume: 480 cc

56. Evap. Family Sales: 299

57. Engine Code: 660 cc

58. Evap. Emission Family Code: YCUXE0140BBE

59. Evap. Emission Family Group: N/A

60. Overall Evap D.F. = 0.5 Assigned

*note canister is Harley Davidson 27042-84A

Bench DF: N/A

61. Test Vehicle ID: _____

62. Test Results:

Test Number	System Kilometers	Evap. Emission Values (g/test)
1		
2		
3		
4		
5		
6		
7		
Interpolated Values at _____ km: =		
Extrapolated Values at _____ km: =		
Bench Test D.F. = _____		

Check One:
Regular DF
Modified DF
If different vehicle specify vehicle ID

Vehicle DF: N/A

63. Test Vehicle ID: _____

64. Test Results:

Test Number	System Kilometers	Evap. Emission Values (g/test)
1		
2		
3		
4		
5		
6		
7		
Interpolated Values at _____ km: =		
Extrapolated Values at _____ km: =		
Vehicle Test D.F. = _____		