

AGRICULTURAL MOTOR COMPETITION, CANADIAN INDUSTRIAL

CLASS AND DIVISION			Entry No.	MAKER	DEDUCTIONS										Economy Brake Test								
					Stopping After Starting Test	For Changing Load in Test	For Too Variable Speed	Cleaning Carburetors Adjusting or Changing Ignition	Hot Knocking or Adjusting Bearings	Having Flows Out of Ground Too Long	Highest Possible No. of Points		Div. 1 & 2—Inter. Comb.		130	20	190						
											Vibration of Engine Frame	More Than One Max Starting	Div. 3—Steam		130	30	190						
Lack of Water in Cooling System per Hour Run	TOTAL	H. P. Hours per Lb. Fuel	H. P. Hours per Lb. Water	TOTAL																			
DIVISION 1 (Gasoline)																							
Class A	1	J.I. Case T.M. Co.	20.0		9.25			6.0	2.0		17.25	84.5	20.0	104.5									
	19	Avery Co.													0	64.0	1.5	85.5	94.3	14.7	109.0		
Class B	2	Avery Co.			0		0	2.0		1.5	17.0	109.2	14.3	123.5									
	3	J.I. Case T.M. Co.													7.05	0	6.0	13.05	111.1	14.8	125.9		
Class C	4	Sawyer-Massey	10.0	5.0	4.65		0	0.5			5.15	94.3	20.0	114.3									
	5	J.I. Case T.M. Co.													0.25	2.0	1.0	3.0	16.25	109.2	7.3	116.5	
	6	J.I. Case T.M. Co.													100.0	32.8	6.0	3.0	6.0	178.8	89.1	7.1	96.1
	7	Avery Co.													30.0	4.5	0	0.5	10.0	45.0	67.6	7.6	75.2
DIVISION 2 (Kerosene)																							
Class A	8	Avery Co.	70.0	10.0	13.2			0	1.5		6.0	100.7	91.0	10.6	101.6								
Class B	9	Avery Co.	20.0		2.25	10.0	0	2.0		28.0	62.25	89.3	9.1	98.4									
	10	J.I. Case T.M. Co.													8.5	0	7.0	10.0	25.5	112.7	10.4	123.1	
Class C	11	J.I. Case T.M. Co.			0.2		5.0	36.0	1.0		6.0	48.2	109.2	7.2	116.4								
	12	J.I. Case T.M. Co.														0.8	2.0	6.0	8.8	102.3	7.2	109.4	
DIVISION 3 (Steam)																							
Class A	13	Sawyer-Massey			6.0		30.0	0	1.5		27.5	87.5	28.6	116.1									
	14	J.I. Case T.M. Co.													0	20.0	4.1	24.0	92.2	25.9	118.1		
Class B	15	J.I. Case T.M. Co.	30.0	4.0	0		20.0	0	4.0		24.0	96.6	29.8	126.4									
	16	Sawyer-Massey													0	0	1.5	35.5	76.7	25.8	102.5		
Class C	17	J.I. Case T.M. Co.			15.5		0	4.0			19.5	119.0	30.0	149.0									
	18	Sawyer-Massey													0	0	1.5	1.5	75.5	25.8	101.3		

* Blew gasket in steam line.

are as follows, and while they have been previously published in this magazine I give them here again in that they throw more or less light upon the detailed sheets:

CLASSIFICATION

The entries shall be classified as follows:

DIVISION 1

Internal Combustion Motors

Class

(a) Gasoline traction engines having a piston displacement of and less than 300 cubic feet per minute.

(b) Gasoline traction engines having a piston displacement over 300 cubic feet per minute and not over 500 cubic feet per minute.

(c) Gasoline traction engines having a piston displacement over 500 cubic feet per minute.

DIVISION 2

Internal Combustion Motors

Class

(a) Kerosene traction engines having a piston displacement of and less than 300 cubic feet per minute.

(b) Kerosene traction engines having a piston displacement over 300 cubic feet per minute and not more than 500 cubic feet per minute.

(c) Kerosene traction engines having a piston displacement over 500 cubic feet per minute.

DIVISION 3
Steam Tractors

Class

(a) Steam traction engines whose piston area in square feet times 200 x .8 = 60 or less.

(b) Steam traction engines whose piston area in square feet times 200 x .8 = from 60 to 100.

(c) Steam traction engines whose piston area in square feet times 200 x .8 = over 100.

may be given, upon which will be set forth, together with the number of points scored, that it was the only entry in the class.

ENTRIES

2. All entries must be made on or before June 2nd, 1913, and must be made on the official entry forms, with all data filled in accurately and accompanied with an entry fee of \$50.00 for each entry.

confused with any other entry of the same class by the same manufacturer; such entry must be accompanied by an affidavit that the engine was not especially made for the competition, that the manufacturer is willing to accept and fill orders at an early date for duplicates of the engine and that the engine is of the same grade of workmanship and materials as the regular or proposed products of the factory. A blue print, or photograph of blue print, of the boiler, with the approval stamp of the Alberta Inspector thereon, must also accompany the entry.

4. Each entry shall be allotted an official number, which shall be displayed during the competition.

5. Any firm or individual shall not enter more than one engine in each class be radically different in construction. Such difference being understood to apply to the power equipment and not to piston displacement.

6. If the same type of engine is entered in both gasoline and kerosene classes, the identical engine may be used

and operated in both classes, provided no change is made of parts or equipment, but there shall be a separate fee for each such entry.

7. Should the judges find the entry data inaccurate in any particular, they may, at their discretion, rule the engine out of the contest.

CONDITIONS

8. The fuel shall be that furnished by the Exhibition Association at cur-



The Sawyer-Massey 27-50 Steam Tractor Silver Medal Winner, Class A, Steam Engines doing its work quietly, and in a manner that reflected the utmost credit on its operators.

Note 1—Piston displacement to be area of piston in square feet times 700, which shall be considered the typical speed.

Note 2—In compound engines the high pressure shall be used and 10 per cent added.

Prizes in each class shall consist of:
First Prize Gold Medal
Second Prize Silver Medal
Third Prize Bronze Medal

In all classes where there is no competition a diploma of award only

Competitors shall state at time of making entry the number of bottoms with width of furrow they purpose using in plowing test, so that ground may be surveyed in ample time.

3. All entries must be accompanied by an affidavit that the information therein is true and that the engine in question is from regular stock, not being built especially for competition. However, should an engine of new type or design be entered it must be sufficiently different in design not to be

EXHIBITION, WINNIPEG, JULY, 1913, SCORE SHEET

CLASS AND DIVISION	Entry No.	MAKER	Ratio of Piston Displacement to Stroke-Test to Max. H.P.P.	Plowing Test							Design and Construction										GRAND TOTAL Less Deductions	RANK
				140	25	25	10	200	5	15	15	10	5	20	15	15	100			
				115	30	25	10	10	10	200	5	15	15	10	5	20	15	15	100			
			Ratio of Piston Displacement to Stroke-Test to Max. H.P.P.	Drawbar H. P. Hours per Pound of Fuel	Drawbar H. P. Hours per Pound Water	Acres Plowed per H. P. Per Eon.	Quality of Plowing	Distance Travelled Without Replenishing Fuel	Distance Travelled Without Replenishing Water	TOTAL	Diam. of Circle required to turn in	Protection of Working Parts	Accessibility of Working Parts	Ease of Manipulation	Oil Used in Cyl. and Crank-Case per H. P. Per Eon.	Finish, Proportion and Durability	Accessories	Speed Range	TOTAL			
DIVISION 1 (Gasoline)																						
Class A	1	J.I. Case T.M. Co.	43.5	68.2	25.0	15.8	5.25				114.25	3.6	12.0	11.75	8.0	4.5	15.0	13.75	12	80.6	325.60	1st
	19	Avery Co.	45.4	64.2	8.5	18.6	3.5				94.80	4.6	10.75	10.5	8.25	3.4	15.0	12.75	10	75.25	238.95	2nd
Class B	2	Avery Co.	46.2	58.9	7.2	18.6	5.25				89.95	4.5	11.5	10.5	7.75	2.1	15.	12.75	10	74.10	316.75	2nd
	3	J.I. Case T.M. Co.	47.3	82.8	7.7	16.4	6.25				113.15	4.2	11.0	12.5	8.75	1.5	15.	13.75	12	78.70	352.0	1st
Class C	4	Sawyer-Massey	47.4	88.0	9.6	16.3	8.0				121.90	4.4	11.75	11.75	9.5	2.2	15.	14	12	80.60	359.05	1st
	5	J.I. Case T.M. Co.	47.0	102.5	6.1	13.2	6.5				128.30	4.5	12.5	13.75	9.75	2.5	15.	14	8	80.00	355.55	2nd
	6	J.I. Case T.M. Co.	48.3	85.2	6.0	12.8	4.5				108.50	4.5	12.75	13.25	9.75	2.7	15.	14	8	79.95	354.05	4th
	7	Avery Co.	46.4	108.8*	6.3	18.3	6.25				139.65*	4.8	11.50	10.5	8.0	1.0	15.	13.	10	73.80	290.05*	3rd
DIVISION 2 (Kerosene)																						
Class A	8	Avery Co.	43.3	37.7	6.8	25.0	4.25				73.75	4.6	10.75	10.5	8.25	3.3	15.	12.75	10	75.15	193.10	Dip.
Class B	9	Avery Co.	44.4	55.0	6.2	16.5	6.0				83.70	4.5	11.5	10.5	7.75	2.0	15.	12.75	10	74.00	238.25	2nd
	10	J.I. Case T.M. Co.	43.1	92.0	6.7	13.3	5.5				117.50	4.2	11.0	12.5	8.75	2.7	15.	13.75	12	79.90	338.10	1st
Class C	11	J.I. Case T.M. Co.	45.0	88.0	6.1	13.9	4.75				112.75	4.5	12.5	13.75	9.75	2.7	15.	14	8	80.20	306.15	2nd
	12	J.I. Case T.M. Co.	47.4	78.5	6.1	14.3	5.0				103.90	4.5	12.75	13.25	9.75	1.9	15.	14	8	79.15	331.05	1st
DIVISION 3 (Steam)																						
Class A	13	Sawyer-Massey	49.4	91.2	28.3	20.9	7.25	4.7	8.7		161.05	4.0	12.0	13.0	8.25	2.2	17.25	13.75	13	83.45	382.50	2nd
	14	J.I. Case T.M. Co.	39.5	96.0	28.4	17.3	6.0	9.7	8.0		165.40	5.0	12.5	13.5	8.0	1.1	17.0	14.75	13	84.85	383.85	1st
Class B	15	J.I. Case T.M. Co.	42.9	112.5	30.0	14.7	5.25	6.8	7.4		176.65	4.9	12.5	13.5	8.0	1.1	17.0	14.75	13	84.75	406.70	1st
	16	Sawyer-Massey	39.1	68.2	28.1	18.4	5.5	3.7	9.6		133.50	4.3	12.5	13.0	8.25	1.4	17.25	13.75	13	82.95	322.55	2nd
Class C	17	J.I. Case T.M. Co.	41.3	113.5	29.0	15.0	6.5	8.6	6.5		179.10	4.8	12.0	13.5	8.5	3.6	17.0	15	13	87.40	437.30	1st
	18	Sawyer-Massey	39.6	68.2	26.7	13.1	4.25	3.9	7.7		123.85	4.6	12.0	13.0	8.25	4.7	17.25	13.75	13	86.55	349.80	2nd

* The accuracy of the fuel weight in this test has been questioned and as it has not been checked it cannot be considered reliable until verified.

rent prices at Winnipeg, at time of contest.

9. Each competitor must have sufficient staff for the care and running of his own entry, and shall have one man to whom the judges may give orders, or with whom the judges may consult.

10. Two men only, except observers, will be allowed on the steam engines during the test; one an engineer and one a fireman.

11. One man only, except observers, will be allowed on internal combustion engines during a test.

12. No other person to be allowed on or close to the engine except the official judges and observers.

13. The names of the operators to be furnished the judges at commencement of test, and the same operators to handle the engines during all tests.

14. One man only, except the official judges and observers, will be allowed on the plows.

15. The plows, belts, chains, water-tanks, sufficient revolution counters and recording dynamometers for their engines, with sufficient charts and such other things as may be required during the tests, must be supplied by the contestants.

Each engine shall be equipped with a standard revolution counter, both for the brake test and plow test.

16. All instruments, including dynamometers, shall be labelled with the name of the owner and deposited with the judges on the arrival of the engines on the Exhibition Grounds, for testing,

and shall remain in their possession until all tests are completed.

17. All engines must be on the grounds not later than 8 a.m., July 1st, 1913.

18. Each engine shall be allotted a certain space on the grounds, where the engines shall be exhibited at all times except when being tested, and will be guarded all the time.

19. Test to comprise brake-test, plowing test, and such other tests as the judges deem essential.

20. The judges may test the engines in any order that may to them seem desirable. The contestants will be given one hour's notice when to be ready for test.

21. The rules of the Province of Alberta with regard to boilers and engines shall govern the pressures, etc., allowed.

TEST

22. Provision shall be made so that a standard steam gauge can be applied to all boilers during the test.

23. Before commencing the tests, the pop valves and steam gauges shall be inspected by the judges and sealed, and any sediment or foreign matter that may get into these parts after being sealed shall not be taken into consideration.

24. Any engine failing to complete any test shall be disqualified.

25. Contestants shall be prepared to assist the judges and their observers in taking dimensions, removing parts for inspection, and any other work that may be necessary for a complete inspection and test.

26. The brake test shall consist of a two-hour economy test. During this test the engines are to run at their greatest load consistent with economy.

27. Competitors will be allowed 30

minutes after the previous engine has left the brake to line up to the brake, to try out the engine and to state the amount of load they wish to carry.

After the competitor has stated the load he wishes to carry the operator will keep the brake as near that load as possible for two hours, and no change will be made.

Careful measurements of the fuel and water used will be taken and the condition of the engine noted.