

ENGINEERING DIRECTIVES AND STANDARDS

Volume : III Effective Date :
Chapter : 1 Revision Date : 01/04/2001
Section : 1 Subject : **ENFORCEMENT OF LEGAL LOAD REQUIREMENTS ON
CONSTRUCTION AND MAINTENANCE CONSTRUCTION
PROJECTS**
Directive : 12

1. **PURPOSE.** The purpose of this directive is to revise the policy for enforcement of maximum load requirements on construction and maintenance construction projects for all deliveries of materials in order to implement the requirements of the 1978 Weight Law, Louisiana Revised Statute 32:386.
2. **SCOPE.** This directive contains details for enforcement of weight limitations for hauling equipment operating for construction and maintenance projects.
3. **POLICY.** It will be the policy of the DOTD to enforce all maximum weight laws and weight limitations on all construction and maintenance construction projects, and for materials delivered for maintenance purposes.

Since the implementation of this policy by weighing each vehicle would slow down the construction operations to an intolerable pace, the Department will certify each vehicle operating on projects and establish the legal payload.

Whenever the material being transported is paid for by weight, then payment will be made not to exceed the established legal payload for which that particular truck is certified.

In cases where payment is made by volume, or when the material is incidental to another item, the Department will determine the volume that can legally be transported in each vehicle, for each type of construction material, using available weight-volume conversion factors based on statewide or area averages to be maintained by the Materials Section. In this case, payment will be made not to exceed the volume of the material determined to be equal to the legal payload for that particular truck, in increments as specified in EDSM III.5.1.3.

Material delivered in tank trucks, such as asphalt, portland cement and hydrated lime, will be regulated by use of the weight tickets that are normally furnished the contractor. (Due to variation in accuracy of scales, the tare weight shown on the certification tag may vary from that shown on the vendor's ticket. In this case the tare weight on vendor's ticket will be used in computing the legal payload for that particular shipment.) In the event the load is in excess of the legal payload, payment will be made not to exceed the established legal payload. In the event the material delivered is incidental to an item and a direct pay item is not provided for, a deduction will be made from that particular item, as based on the invoice price, for material delivered in excess of the legal payload. The contractor may be allowed to return that portion of the load that is in excess.

Single indivisible loads operating with permits, such as prestressed structural members, will not be allowed on the finished portions of the pavement if the axle loads are in excess of the legal load limits unless necessary for the construction of the work item included in the contract with the approval of the engineer.

4. **IMPLEMENTATION.** This policy will be implemented as follows:

- A. Responsibilities of the Material Section.

The Materials Section, with the assistance of district laboratories, will develop and distribute to each District and Project Engineer the weight-volume conversion factors (unit weight of materials in trucks) for each construction material. This information will be maintained on a continuing basis in an effort to keep it as current as possible, reflecting all changes due to material characteristics.

B. Responsibilities of the Project Personnel.

The Project Personnel will be responsible for the following:

- (1) Certification of Trucks. The Project Personnel will contact the Weights and Standards Police Chief and request a portable scale unit and have each axle of each truck weighed to determine the tare weight with a minimum of 3/4 tank of fuel and the driver. Based on the axle configuration of the vehicle, using Attachment A, the legal gross weight will be determined. This configuration will be identified by type as shown on Attachment A.

The maximum allowable load on the steering axle, by Louisiana Law, is based on the width of the tires on this axle; therefore, as the tire size gets larger, the maximum allowable load increases.

The legal payload will be determined by subtracting the tare weight of the vehicle from the legal gross weight. The legal payload will vary depending on whether the construction project for which the material is being used is an interstate or non-interstate project.

The truck and the trailer, or the truck and the truck bed will then be tagged with weight certification tags bearing the same number, the tare weight of the truck and the legal payload. Since most projects are on non-interstate highways, only the legal payload for a non-interstate project will appear on the certification tag. The certification tags will be placed on the driver's side of the vehicle near the rear of the cab and near the front of the trailer or bed.

The project personnel will measure the truck bed, or the trailer, and calculate the volume. Then, using the weight-volume conversion factors furnished by the Materials Laboratory, the volume for the material to be transported will be determined as based on the legal payload determined by the project personnel.

The Project Engineer will forward this information and computations to the District Lab Engineer or Materials Engineer for entry into the Department's computer program for "Truck Weight and Volume Certification" (TWVC) using form given in Attachment B. Concurrently, the Project Engineer will start enforcing the load limits determined.

The contractor will be advised to haul this quantity.

However, since the weight-volume relationships used in determining the maximum allowable volume are based on statewide or area average conditions and average moisture contents, there is always a possibility that legal load limits may be exceeded if loads are regulated at maximum payloads. It will be the responsibility of the contractor and/or truck driver to distribute the load in such a manner that the legal axle loads will not be exceeded. In the event trucks are stopped by the Department scale units, violation tickets will be issued if the distribution of the load is such that it will result in overloading of any of the axles. It is the contractor's responsibility to make sure that all loads do not violate applicable state, local and federal laws, not only on the project, but also en route to the project. Although project personnel will not be responsible for determining if laws are violated off the project, when it is evident such laws are violated, pay quantities will be adjusted in accordance with section 4(c) of this directive.

- (2) Determination of Legal Gross Weight. The legal gross weight will be obtained from Attachment A as follows:
 - (a) Determine the tire size for the steering axle.
 - (b) From the axle configuration find the appropriate truck type.
 - (c) Obtain the maximum legal weight.

The maximum legal gross weight is the maximum legal weight as allowed by the "Louisiana Regulations for Maximum Allowable Limits for Truck Registration and Weights." (See attachment A.) For example, the maximum legal gross weight for vehicle types 10 through 14 is 80,000 lbs. for interstate and non-interstate projects. However it should be noted that the legal gross weight will differ between interstate and non-interstate projects for some vehicle types.

Certain air suspension type axles have been approved for trucks used on construction projects provided they comply with the above axle weight limitations. The necessary controls for raising or lowering the additional axle from a fixed position may be located in the cab of the vehicle; however, it is required that all controls that regulate ground contact pressure be installed outside the cab and away from the driver's reach.

- (3) Computation of Volume. The District Lab Engineer or Materials Engineer will compute the volume of each truck bed on which the measurements have been received from the Project Engineers, starting with 60% of total volumetric capacity to 100%, in increments of 0.1 cubic yard, and prepare tables giving the depth of material and volume for each certified truck, and furnish this information to all Project Engineers. This depth will be given from the top of the metal portion of the body at an established reference point which will be indicated on the sketches submitted. It should be noted that in the event the volume of the truck or trailer bed is such that it cannot accommodate the legal payload, the contractor will not be permitted to exceed capacity of the truck or trailer bed unless extensions are provided as described in EDSM III.5.1.3.
- (4) Recertification of trucks in accordance with the 1978 law. Trucks that have previously been certified under the previous weight laws will be recertified by the District Training Specialist as follows:
 - (a) The same tag number will be used.
 - (b) The legal gross weight will be determined on the basis of truck type and width of tire on the steering axle from Attachment A.
 - (c) Previously certified vehicle tare weights will be used and the new legal payload will be determined by subtracting the tare weight from the maximum legal weight given in Attachment A.
 - (d) Old tags will be removed and new tags, identified by punching the date "1978 - 2" on the upper right corner, will be installed.
 - (e) The new legal volume of material to be transported will be determined by project personnel as described in Paragraph 4.B.(1)
 - (f) This revised weight information will be entered into the "Truck Weight and Volume Certification" database (TRVC) by the District Lab Engineer or Materials Engineer using the form given In Attachment B. Concurrently, the Project Engineer will begin enforcing the new allowable weights and the contractors will be permitted to haul the new quantity.
 - (g) All trucks on which dimensional measurements have been taken and reported to the Construction Audit Section, since the certification program was initiated, will not require re-measurement provided they are properly referenced by respective tag numbers on Attachment B. Only the tare weight, legal gross weight and the legal payload will be reported in this case.

C. Disposition of Overloads.

- (1) In the event a truck delivers material measured either by weight or volume, or one where no measurement is provided, it will be the responsibility of the project personnel to advise the truck driver that he is overloaded, and issue him a pay or haul ticket for the legal payload.

- (2) In case of a recurrence, the project personnel will call in the portable scale unit, have the truck weighed, and if overloaded, the Weights Enforcement personnel will issue a violation ticket. A pay ticket will be issued for the delivery not to exceed the legal payload.

D. Reevaluation of Maximum Volumes Established.

In the event a trucker contests the maximum allowable volume established by the Department, a reevaluation will be made as follows:

The volume established by the project personnel will be loaded into the truck, struck off and accurately measured, and a portable scale unit will be requested to weigh all axles of the truck. If the weights determined are below the legal load limit, then material will be added, in increments of 0.1 cubic yard, until the legal gross load or legal axle on any axle is reached.

When this is done, the District Lab Engineer and the Materials Engineer will immediately be advised to update the "Truck Weight and Volume Certification" database (TWVC) and the trucker will be permitted to haul the newly established maximum volume.

- E. When a portable scale unit is not available for initial certification of trucks, the Project Engineer will permit operators to proceed until such time as the trucks can be certified. After the initial certification, it will not be necessary to recertify a truck or a truck-trailer combination unless modifications are made, or certification tags are pulled off or are missing, or the certification number on the cab or the tractor does not match the number on the trailer or the body of the truck. During this period, the Project Engineers, are to exercise judgment and prohibit obviously overloaded trucks from operating. receipt.

In order to expedite certification of trucks, the Project Engineers will, with the assistance of the Training Specialist assigned by the District Administrator, certify those trucks which have already been weighed empty and determine the legal payload. However, in this case, it is necessary to use the same truck certification numbers previously assigned by the portable scale operators. Tags have been furnished the Training Specialist for this purpose.

In cases where the contractor of the truck is willing to determine the tare weight of the trucks using their own certified scales acceptable to the engineer, certified public scales or Department's permanent pit scales, the Project Engineer will certify trucks without calling portable scale units as described above.

5. **LEGAL PAYLOAD EXCEPTIONS.** A growing number of hot mix plants are being equipped with certified platform scales that can accurately provide gross vehicle weights on a load by load basis. Certified haul tickets issued at the platform scales list the truck tare weight, payload weight and gross vehicle weight.

Instances have been noted where the payload weight shown on the certified haul ticket was slightly in excess of the predetermined allowable load for that particular vehicle. At the same time, the indicated gross vehicle weight was within the legal maximum listed previously under Part 4.B.(2). This variation could be the result of differences in fuel quantity or other minor considerations, but it seldom amounts to more than a few hundred pounds.

When such a condition is encountered, the contractor will be permitted to haul on the basis of the certified weights furnished by the platform scales. The amount of payload material indicated on the haul ticket will be acceptable provided legal gross weights for that vehicle are not exceeded.

6. **REQUIREMENTS FOR USE OF ADD-ON AXLES.** Certain air suspension or hydraulic operated add-on axles have been approved by the Department to convert single axles to tandem and tandem to tridum as long as these axles are installed as described in Paragraph 4.B.2.c. They are acceptable provided this office has given blanket approval for their use. These systems are designed and installed in such a manner that they will require raising of the add-on axle in order to travel off the pavement as well as making short radius turns on the job site. Therefore, it will be permissible to raise the axle for various maneuvers required such as positioning the truck to dump hot mix into a spreader, etc.
7. **OTHER ISSUANCES AFFECTED.** This memorandum supersedes EDSM NO. III.1.1.12, dated March 10, 1986.
8. **EFFECTIVE DATE.** This directive will be effective immediately upon receipt.

WILLIAM H. TEMPLE
DOTD CHIEF ENGINEER

LICENSE WEIGHT

VEHICLES WITH SINGLE-MOUNTED TIRES ON ANY AXLE EXCEPT THE STEERING AXLE SHOULD USE TABLE 1:

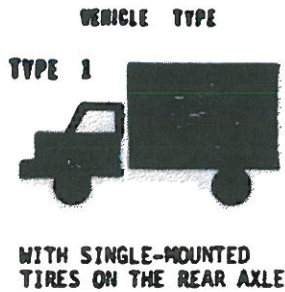


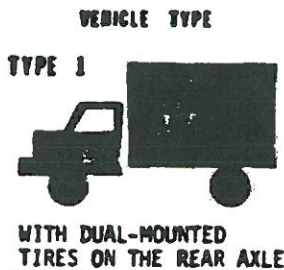
TABLE 1
MAXIMUM ALLOWABLE AXLE WEIGHTS FOR VARIOUS TIRE SIZES

Tire Size (width)	Maximum Allowable License Weight & Legal Weight on Non-Interstate Hwys.
8.00	11,000
9.00	12,000
10.00	13,000
11.00	15,000
12.00	16,000
13.00	17,000
14.00	19,000
15.00 or larger	20,000 (Interstate)
15.00 or larger	22,000 (Non-Interstate)

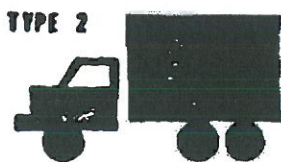
The above table applies to all axles of the vehicle with single-mounted tires. Type I vehicles with single-mounted tires on the rear axle should add the allowable axle load on the steering axle to the allowable axle load on the rear axle to find the maximum gross weight to be licensed.

If the exact tire size is not in the table, the next larger size shall be used to determine the maximum allowable weight.

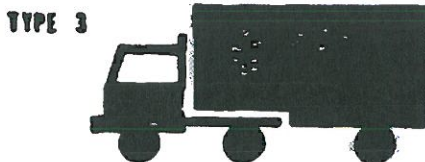
VEHICLES WITH DUAL-MOUNTED TIRES ON ALL AXLES EXCEPT THE STEERING AXLE SHOULD USE THE FOLLOWING:



Tire Width on Steering Axle	Maximum Allowable License Weight & Legal Weight on Non-Interstate Hwys.	Legal Weight on Interstate Highways
8.00	33,000 lbs.	31,000 lbs.
9.00	34,000 lbs.	32,000 lbs.
10.00	35,000 lbs.	33,000 lbs.
11.00	37,000 lbs.	35,000 lbs.
12.00	38,000 lbs.	36,000 lbs.
13.00	39,000 lbs.	37,000 lbs.
14.00	41,000 lbs.	39,000 lbs.
15.00 or larger	44,000 lbs.	40,000 lbs.



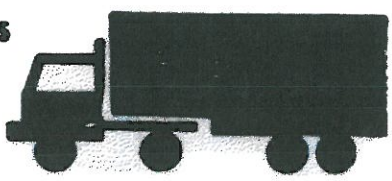
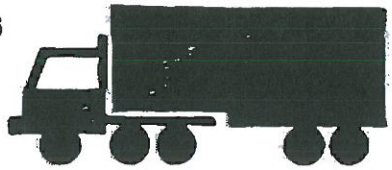
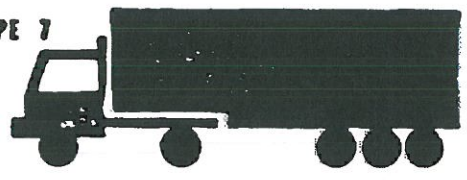
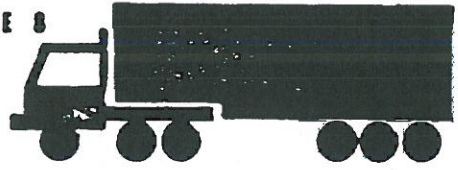
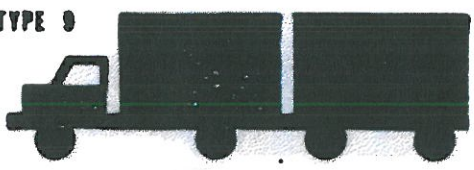

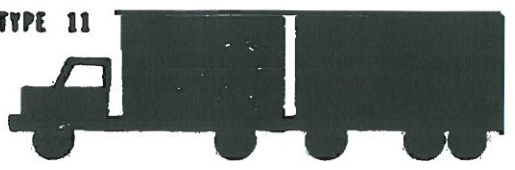
8.00	48,000 lbs.	45,000 lbs.
9.00	49,000 lbs.	46,000 lbs.
10.00	50,000 lbs.	47,000 lbs.
11.00	52,000 lbs.	49,000 lbs.
12.00	53,000 lbs.	50,000 lbs.
13.00	54,000 lbs.	51,000 lbs.
14.00	56,000 lbs.	53,000 lbs.
15.00 or larger	59,000 lbs.	54,000 lbs.



8.00	55,000 lbs.	51,000 lbs.
9.00	56,000 lbs.	52,000 lbs.
10.00	57,000 lbs.	53,000 lbs.
11.00	59,000 lbs.	55,000 lbs.
12.00	60,000 lbs.	56,000 lbs.
13.00	61,000 lbs.	57,000 lbs.
14.00	63,000 lbs.	59,000 lbs.
15.00 or larger	66,000 lbs.	60,000 lbs.



8.00	70,000 lbs.	65,000 lbs.
9.00	71,000 lbs.	66,000 lbs.
10.00	72,000 lbs.	67,000 lbs.
11.00	74,000 lbs.	69,000 lbs.
12.00	75,000 lbs.	70,000 lbs.
13.00	76,000 lbs.	71,000 lbs.
14.00	78,000 lbs.	73,000 lbs.
15.00 or larger	80,000 lbs.	74,000 lbs.

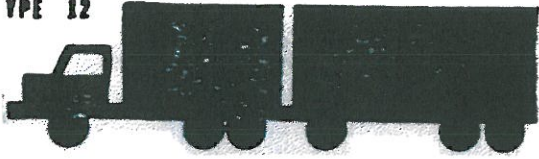
VEHICLE TYPE	Tire Width on Steering Axle	Maximum Allowable License Weight & Legal Weight on Non-Interstate Hwys.	Legal Weight on Interstate Highways
TYPE 5 	8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 or larger	70,000 lbs. 71,000 lbs. 72,000 lbs. 74,000 lbs. 75,000 lbs. 76,000 lbs. 78,000 lbs. 80,000 lbs.	65,000 lbs. 66,000 lbs. 67,000 lbs. 69,000 lbs. 70,000 lbs. 71,000 lbs. 73,000 lbs. 74,000 lbs.
TYPE 6 	8.00 9.00 or larger	80,000 lbs. 80,000 lbs.	79,000 lbs. 80,000 lbs.
TYPE 7 	8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 or larger	78,000 lbs. 79,000 lbs. 80,000 lbs. 82,000 lbs. 83,000 lbs. 84,000 lbs. 86,000 lbs. 88,000 lbs.	73,000 lbs. 74,000 lbs. 75,000 lbs. 77,000 lbs. 78,000 lbs. 80,000 lbs. 82,000 lbs. 83,000 lbs.
TYPE 8 	Regardless of tire size on steering axle	88,000 lbs.	83,400 lbs.
TYPE 9 	8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 or larger	77,000 lbs. 78,000 lbs. 79,000 lbs. 80,000 lbs. 80,000 lbs. 80,000 lbs. 80,000 lbs. 80,000 lbs.	71,000 lbs. 72,000 lbs. 73,000 lbs. 75,000 lbs. 76,000 lbs. 77,000 lbs. 79,000 lbs. 80,000 lbs.
TYPE 10 	Regardless of tire size on steering axle	80,000 lbs.	80,000 lbs.
TYPE 11 	Regardless of tire size on steering axle.	80,000 lbs.	80,000 lbs.

VEHICLE TYPE

Tire Width
 on Steering Axle

Maximum Allowable
 License Weight &
 Legal Weight on
 Non-Interstate Hwys.

TYPE 12

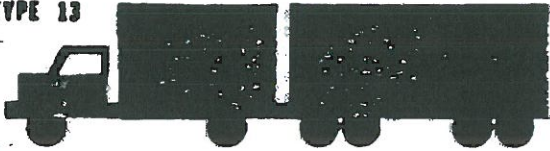


Regardless of tire
 size on steering
 axle

80,000 lbs.

80,000 lbs.

TYPE 13

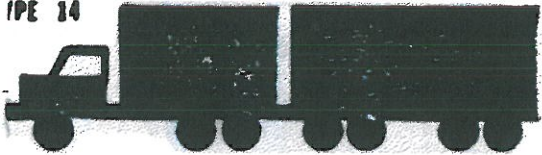


Regardless of tire
 size on steering
 axle

80,000 lbs.

80,000 lbs.

TYPE 14



Regardless of tire
 size on steering
 axle

80,000 lbs.

80,000 lbs.

TYPE 15



8.00
 9.00
 10.00
 11.00
 12.00
 13.00
 14.00 or larger

59,000 lbs.
 61,000 lbs.
 63,000 lbs.
 67,000 lbs.
 69,000 lbs.
 71,000 lbs.
 74,000 lbs.

56,000 lbs.
 58,000 lbs.
 60,000 lbs.
 64,000 lbs.
 66,000 lbs.
 68,000 lbs.
 68,000 lbs.

TYPE 18

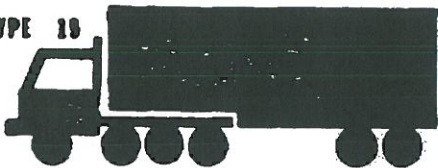


8.00
 9.00
 10.00
 11.00
 12.00
 13.00
 14.00
 15.00 or larger

56,000 lbs.
 57,000 lbs.
 58,000 lbs.
 60,000 lbs.
 61,000 lbs.
 62,000 lbs.
 64,000 lbs.
 67,000 lbs.

53,000 lbs.
 54,000 lbs.
 55,000 lbs.
 57,000 lbs.
 58,000 lbs.
 59,000 lbs.
 61,000 lbs.
 62,000 lbs.

TYPE 19



Regardless of tire
 size on steering
 axle

88,000 lbs.

83,400 lbs.

TYPE 20

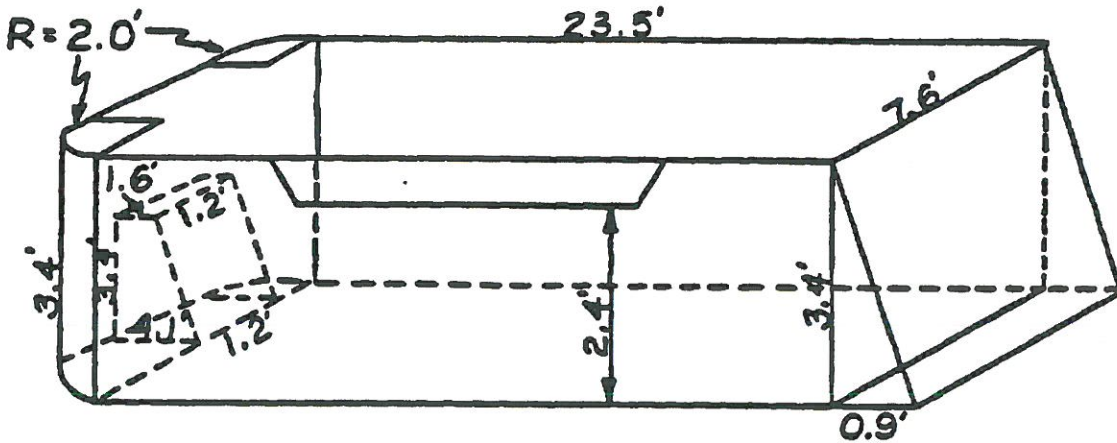


8.00
 9.00
 10.00
 11.00
 12.00
 13.00
 14.00
 15.00 or larger

64,000
 65,000
 66,000
 68,000
 69,000
 70,000
 72,000
 75,000

61,000 lbs.
 62,000 lbs.
 63,000 lbs.
 65,000 lbs.
 66,000 lbs.
 67,000 lbs.
 69,000 lbs.
 70,000 lbs.

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
TRUCK WEIGHT AND VOLUME CERTIFICATION - FORM NO. 1



Mark out hydraulic box, if not present.

CERTIFICATION TAG NO. 08-144

DESCRIPTION: MAKE Mack YEAR 1971

SERIAL NO. (TRACTOR) B672ST-21163 (if applicable)

SERIAL NO. (TRAILER) 47969 (if applicable)

TRUCK TYPE 6

STEERING AXLE TIRE SIZE 10:00

MAXIMUM VOLUME 24,188 yds.³

LEGAL GROSS WEIGHT 80,000

TARE WEIGHT 27,500

LEGAL PAYLOAD 52,500

TARE WEIGHT: AXLE NO. 1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

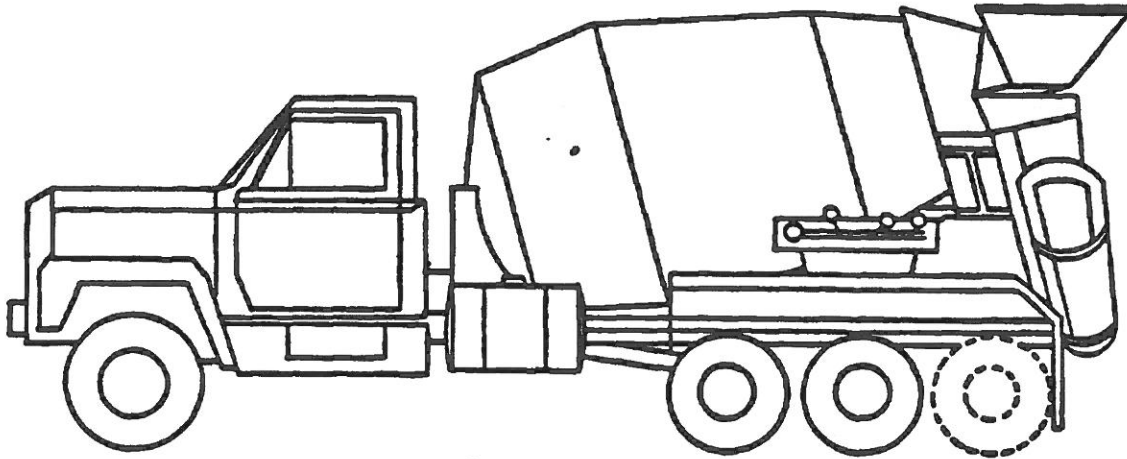
TOTAL: _____

REMARKS _____

MEASURED BY _____ DATE _____

WEIGHED BY _____ DATE _____

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
TRUCK WEIGHT AND VOLUME CERTIFICATION - FORM NO. 4



Should truck have additional axles, please indicate.

CERTIFICATION TAG NO. 05-122

DESCRIPTION: MAKE Auto Car YEAR 1980

SERIAL NO. (TRACTOR) PSFRGF0865 (If applicable)

SERIAL NO. (TRAILER) 100XRM1149 (If applicable)

TRUCK TYPE 18

STEERING AXLE TIRE SIZE 15X22.5

MANUFACTURER'S RATED MIXING CAPACITY 10 CU. YDS.

MANUFACTURER'S RATED AGITATING CAPACITY 13.25 CU. YDS.

LEGAL GROSS WEIGHT 67,000

TARE WEIGHT 29,600

LEGAL PAYLOAD 37,400

TARE WEIGHT: AXLE NO. 1 _____
2 _____
3 _____
4 _____
5 _____
6 _____

TOTAL: _____

REMARKS _____

MEASURED BY _____ DATE _____

WEIGHED BY _____ DATE 11-17-80

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
TRUCK WEIGHT AND VOLUME CERTIFICATION - FORM NO. 5

Sketch

To be used when truck configuration does not conform to those given on Forms 1-4.

CERTIFICATION TAG NO. _____

DESCRIPTION: MAKE _____ YEAR _____

SERIAL NO. (TRACTOR) _____ (If applicable)

SERIAL NO. (TRAILER) _____ (If applicable)

TRUCK TYPE _____

STEERING AXLE TIRE SIZE _____

MAXIMUM VOLUME _____

LEGAL GROSS WEIGHT _____

TARE WEIGHT _____

LEGAL PAYLOAD _____

TARE WEIGHT: AXLE NO. 1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

TOTAL: _____

REMARKS _____

MEASURED BY _____ DATE _____

WEIGHED BY _____ DATE _____