

Axle Rating for Industrial Wheel Loaders and Loader-Backhoes—SAE J43

SAE Recommended Practice
Approved December 1978

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AXLE RATING FOR INDUSTRIAL WHEEL LOADERS AND LOADER-BACKHOES—SAE J43

SAE Recommended Practice

Report of Off-Road Machinery Technical Committee approved December 1978. Rationale statement available.

1. Purpose and Scope—The purpose of this SAE Recommended Practice is to establish a standardized procedure for determining front and rear axle ratings for industrial wheel loaders and loader-backhoes.

2. Front Axle Rating

2.1 The tractor shall have mounted a loader or loader-backhoe specified by the tractor manufacturer.

2.2 The loader shall be equipped with the largest recommended general purpose bucket.

2.2.1 The rated volume load in the bucket shall be per SAE J742b (June, 1975).

2.2.2 The load in the bucket shall be that obtained in paragraph 2.2.1 with a material density of 1780 kg/m^3 (3000 lb/yd^3).

2.3 The tractor shall be equipped and/or counterweighted to give a tipping load with center of gravity of load at maximum forward position in

the raising cycle, (SAE Rating) as defined in SAE J732c (June, 1975) of no less than 2.0 times the load described in paragraph 2.2.2.

2.4 Front axle rating shall be the load measured at the ground center of contact of the front tires under the conditions of paragraphs 2.2 and 2.3.

3. Rear Axle Rating

3.1 The tractor shall be equipped as in paragraph 2.3.

3.2 Position loader lift arm and empty bucket so that bucket bottom is flat on the ground.

3.3 Rotate bucket onto the cutting edge until load at the front wheels is zero.

3.4 Rear axle rating shall be the load measured at the ground center of contact of the rear tires under the conditions of paragraph 3.3.

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