



The accuracy standard referenced for the PAT DS-350 rated capacity indicator as installed by the crane manufacturer is the SAE J-159 standard as referenced by the ANSI B-30.5. This is the U.S. national standard for mobile cranes. The DS-350 system is a rated capacity indicator and operator aid. It is not a scale and therefore the standards and procedures used in the U.S. are those related to the function of the system as an operators aid. The accuracy is a function of both the load indication and the radius indication. To determine the accuracy of the system is necessary to remove any stowed jib or attachments and perform a cutt-off test. Shown below is the references for accuracy from the J-159 standard and the test procedure and calculation for reference.

4.1.2 Overload and Limit Signal An Audible and Visual signal (preferably a red light) is to be activated at no more than **105%** of Rated Capacity and also when the radius or angle shall fall outside of the crane's Rated Capacity Chart. Also, when a Rated Capacity Limiter is employed to actuate an optional crane control Function Kick-Out System (FKO), the FKO is to be activated at no more than **105%** of Rated Capacity. These signals shall continue to function as long as the load, radius, and angle parameters are exceeded.

4.2.1 Actual Load When Actual Load is displayed as an additional function of a Rated Capacity System its accuracy shall be such that the indicated load is **100% +10% -0%** of the Actual Load.

4.2.2 Radius When Radius is displayed as an additional function of a Rated Capacity System its accuracy is to be such that the indicated radius is **100% +10% -0%** of the Actual Load Radius.

7.2 Test Procedures The following test procedure or equivalent is to be used:

7.2.1 KNOWN WEIGHT

(a) Test load to be applied by suspending known weights accurate to +/- 1%. If the weights of additional equipment such as blocks, slings, sensors, etc. are included in the test load, the total load is to be known to an accuracy of +/- 1%. Starting with the load at short radius (load within rating) lift load and increase radius slowly until the limit signal is activated. Measure and record radius. Two or more readings are to be taken with each test load. Similarly, check the warning signal.

(b) Determine the system accuracy in accordance with paragraph 7.3.

7.3 COMPUTATIONS For each radius measured with the above test, refer to the applicable crane manufacturer's load rating chart and determine the rated load. At radii between those listed on the load rating chart, rated load shall be determined by (load chart instructions) (linear interpolation) unless otherwise specified by the crane manufacturer.

The system accuracy is to be determined from the following formula:

$$\frac{\text{TEST LOAD}}{\text{RATED LOAD}} \times 100 = \% \text{ of RATED LOAD}$$