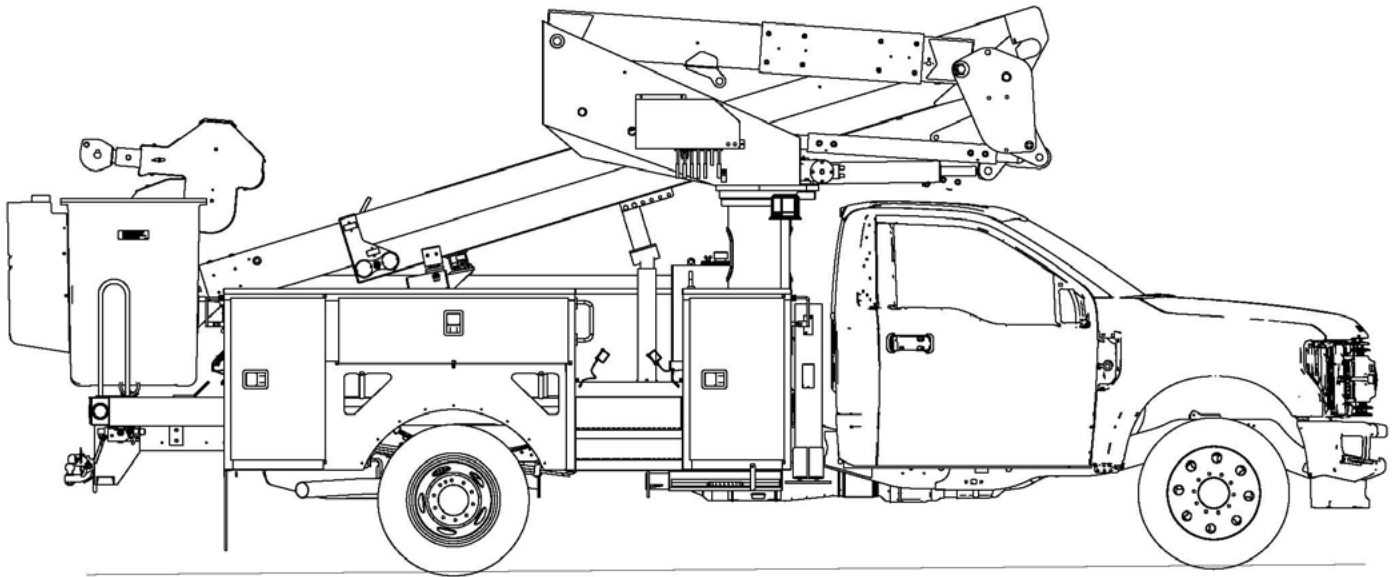




TECH TIPS

LTM40 AERIAL LOAD CHARTS

NO. 184



GENERAL KNOWLEDGE
AERIAL LOAD CHARTS



MODEL(S):
LTM40



TOOLS NEEDED:
NONE

TEREX UTILITIES TECHNICAL SUPPORT TEAM

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DANGER

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury.

Many of the hazards identified in the Operator's Manual are also safety hazards when maintenance and repair procedures are performed.

DO NOT PERFORM MAINTENANCE UNLESS:

- ✓ You are trained and qualified to perform maintenance on this machine.
- ✓ You read, understand and obey:
 - manufacturer's instructions and safety rules
 - employer's safety rules and worksite regulations
 - applicable governmental regulations
- ✓ You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this Tech Tip is a supplement to the Service Manual. Consult the appropriate Service Manual of your machine for safety rules and hazards.



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INTRODUCTION

An operator will lift a replacement light fixture from the ground and position it on a pole. Using the information in the following steps, determine if the lift plan can be achieved while remaining within the limits of the load chart.



This tech-tip demonstrates how to use a load chart. Always use the unit specific load chart to determine capacities and to plan the path of the load.

STEP 1

The light fixture has a known weight of 115 lbs. Performing a dry run, the operator determined the boom angles required to move and place the transformer range from 30 to 70 degrees.

TEREX UTILITIES					
LTM40 JIB AND BASKET CAPACITIES					
Maximum Jib Load	800	800	600	400	
Upper Boom	Basket	Jib Capacity at Load Radius Shown			
Angle	Capacity	0	0-2'	2-4'	4-6'
-20	300	80	80	80	80
-8	300	80	80	80	80
0	300	80	80	80	80
15	300	80	80	80	80
30	300	80	80	80	80
45	300	80	80	80	80
60	300	680	660	600	400
70	300	680	660	600	400
80	300	680	660	600	400

1) Capacities are in pounds, basket capacity is total for all baskets.
 2) Jib capacity shown is in addition to basket capacity shown. If the platform capacity rating is different than the basket capacity shown, use the lower value. Maximum winch capacity is 800 pounds
 3) 90% of unused basket capacity may be added to the jib capacity, but do not exceed the maximum jib load shown.
 4) If the aerial device is modified in any way or remounted, Terex Utilities must be notified as capacities shown may be affected.

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Load Radius	2 feet	Liner	40 lbs.
Operator	150 lbs.	Tools	10 lbs.
Light Fixture	115 lbs.		

STEP 2

Determine if the load in the platform is within capacity. Using the load chart, the platform capacity is 300 lbs. The weight of the Operator + Liner + Tools = 150 + 40 + 10 = 200 lbs. The total weight is within the platform capacity of 300 lbs.

Load Radius	2 feet	Liner	40 lbs.
Operators	150 lbs.	Tools	10 lbs.
Transformer	115 lbs.		

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STEP 3

During the dry run, the operator determined the upper boom angle would required a range of 30 degrees to 70 degrees to complete the lift. This range is highlighted in **Figure 3**.

Load Radius	2 feet	Light Fixture	115 lbs.
Minimum UB Angle	30 Degrees	Maximum UB Angle	70 Degrees

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FIGURE 3

STEP 4

The load radius is 2 feet. Based on this load radius, we will be using the 3rd column in the loadchart for a radius of 2' to 4' **Figure 4**

Load Radius	2 feet	Light Fixture	115 lbs.
Minimum UB Angle	30 Degrees	Maximum UB Angle	70 Degrees

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FIGURE 4

STEP 5

Through the path of the load, the capacity at 30 and 45 degrees is only 80 lbs. At 60 and 70 degrees the capacity increases to 600 lbs. The weight of the light fixture is 115 lbs.

The load chart also states that 90% of unused basket (platform) capacity may be added to the jib provided it does not exceed the maximum jib load.

In **Step 2**, it was determined that 100 lbs of platform capacity is unused. $90\% \times 100 = 90$ lbs.

90 lbs of capacity can be added at 30 and 45 degrees providing a maximum capacity of 170 lbs. at those upper boom angles. Using the unused capacity, the load can be lifted.

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FIGURE 5

STEP 6

The 90 lbs. of unused platform capacity cannot be added to any boom angles where the added capacity exceeds the Maximum Jib Load. In the load chart example, the Maximum Jib Load is 600 lbs at the load radius. At 60 and 70 degrees, the load chart capacity equals the maximum jib load of 600 lbs. The 90 lbs. of unused capacity cannot be added at these angles.

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FIGURE 6



FOR FURTHER ASSISTANCE,
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