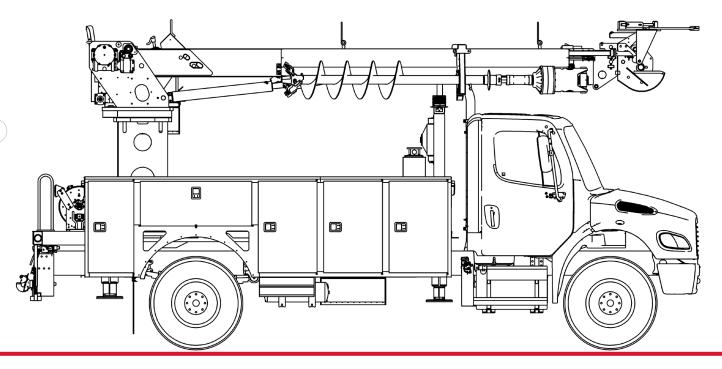


COMMANDER LOAD CHART



NO. 225





SERVICE CALL: COMMANDER LOAD CHART



MODEL(S): COMMANDER DIGGER DERRICKS



TOOLS NEEDED: None

PHONE: 1-844-TEREX4U (1-844-837-3948) | EMAIL: <u>UTILITIES.SERVICE@TEREX.COM</u>

WARNING



Injection Hazard

Fluid escaping under pressure can penetrate skin and result in death or serious injury.



Relieve pressure before disconnecting hydraulic lines

Stay clear of leaks and pin holes. Use a piece of cardboard or wood to search for leaks. Do not use hand.

Fluid injected into skin must be surgically removed within a few hours by a doctor familiar with this type of injury, or gangrene will result.



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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
Use the load chart below to answer the following questions.

DIGGER DERRICK	CADE FEET CADE CAPACITIES CADA CAPACITIE																				
TEREX TELECET		ZOME ZOME		<u></u>	\	1		200	RES	-CAI		SHEAVE LOAD CAPACITIES	FEET ZONE B	ACC		AW-	008		RE	0	A AI
ND SECTION EXTENDED	SHEAVE HEIGHT IN	FEET ZONE A	34.0 15890	33.5 12050 1	30.7 7300	26.5 4680	21.2 3360	15.2 2820	8.8 2720	1 0.6 1730 1	D & 3RD SEC. EXTENDED	SHEAVE HEIGHT IN	FEET ZONE A	42.3 15100	. 08601 2.14	38.3 6310	33.2 4730	26.5 3890	18.8 3290	10.6 2680	29.3 -0.1 1490 1490
	SHEAVE LOAD CAPACITIES HEIGHT IN	FEET ZONE A ZONE B	76.6 27230 27	1 26.2 21920 2	24.5 13710 1	21.9 10730 1	18.5 9050	14.7 7860	10.6 6320	5.3 3980		SHEAVE LOAD CAPACITIES HEIGHT IN	FEET ZONE A ZONE B	34.4 20130 201	33.9 14641 1	31.4 8860	1 27.5 6690	7 22.5 5580	16.8 4790	10.6 4020	21.8 2.6 2440 2440
	BOOM ANGLES RADIU		08	22	09	45	. 08	15	0	-20	3RD	S	IN DEGREES FE	08	75	. 09	. 45	30	15	10.6 4020 3960 31.5 10.6 2680 2500 OPTIONS: FBG HYD 3RD, ESK, 2.6 2440 2440 29.3 -0.1 1490 1490 Aug 18 Aug 18	

Example 1

Using the load chart on Page 4 and the information below, what is the gross and net capacity when lifting off the back of the truck?

Boom Angle	60°	Radius	N/A
Rigging:	100 lbs.	Load Weight	N/A
2nd Section	Extended	Third Section	Retracted
4th Section	N/A		

STEP 1

Determine which section of the load chart is used. According to the table, the 2nd Section is extended and the 3rd section is retracted. We will be using this section of the load chart.

2ND SECTION EXTENDED											
LOAD RADIUS	SHEAVE HEIGHT IN	LOAD CAPACITIES									
INFEET	FEET	ZONE A	ZONE B								
5.0	34.0	15890	15890								
7.0	33.5	12050	12050								
13.0	30.7	7300	6490								
17.8	26.5	4680	3720								
21.4	21.2	3360	2680								
23.5	15.2	2820	2250								
24.0	8.8	2720	2160								
22.1	0.6	1730	1730								

STEP 2

According to the table, the boom angle is 60°.

Boom Angle	60°	Radius	N/A
Rigging:	100 lbs.	Load Weight	N/A
2nd Section	Extended	Third Section	Retracted
4th Section	N/A		

	29	FULLY RE	TRACTE	D	2ND SECTION EXTENDED								
BOOM ANGLES	LOAD RADIUS IN	SHEAVE HEIGHT IN	I LOAD CAPACITIES II LOAD RADIUS		SHEAVE HEIGHT IN	LOAD CAPACITIES							
IN DEGREES	FEET	FEET			INFEET	FEET	ZONE A	ZONE B					
80	2.8	26.6	27230	27230	5.0	34.0	15890	15890					
75	4.1	26.2	21920	21920	7.0	33.5	12050	12050					
60	7.6	24.5	13710	13710	13.0	30.7	7300	6490					
45	10.7	21.9	10730	10730	17.8	26.5	4680	3720					
30	12.9	18.5	9050	9050	21.4	21.2	3360	2680					
15	14.3	14.7	7860	7720	23.5	15.2	2820	2250					
0	15.5	10.6	6320	6320	24.0	8.8	2720	2160					
-20	14.3	5.3	3980	3980	22.1	0.6	1730	1730					

STEP 3

The question indicated we are lifting off the back of the truck. This means we will be lifting in Zone A.

The gross capacity as shown on the load chart is 7300 lbs.

The net capacity is the gross capacity - rigging = 7300 - 100 = 7200 lbs.

		FULLY RE	TRACTE	n	2ND SEC	TION EXTE	NDED		TEE	REX TEL	ELECT	· E	DIGGER DERRICK						
BOOM ANGLES IN DEGREES	LOAD RADIUS IN FEET	SHEAVE HEIGHT IN FEET	LOAD CA	PACITIES	LOAD RADIUS SHEAVE HEIGHT IN LOAD CAPACITIES					COMMANDER 4040 TM WINCH									
80	2.8	26.6	27230	27230	5.0	34.0	ZONE A 15890	ZONE B 15890	1	EONE .	ZONE		Sample						
75	4.1	26.2	21920			33.5							-CAUTION: MULTIPLE-PART LINES ARE						
60	7.6	24.5	13710			30.7	7300		5490 ZONE A				REQUIRED FOR LOADS ABOVE 6808 VBSSYNTHETIC OR ROTATION RESISTANT WIRE						
45	10.7	21.9	10730			26.5		3720		WARN	INC.	_	ROPE MUST HAVE 37200 LB. BREAKING						
30	12.9	18.5	9050			21.2	3360	2680		RICK IS MODIFI	IED IN ANY W		STRENGTH AND 2.8% MAXIMUM STRETCH AT 7440 LB SAFE WORKING LOAD.						
15	14.3	14.7	7860	7720	23.5	15.2	2820	2250		, TEREX TELEI CITIES SHOWN			-WIRE ROPE OTHER THAN ROTATION						
0	15.5	10.6	6320	6320	24.0	8.8	2720	2160					RESISTANT MUST HAVE 26040 LB. BREAKING STRENGTH.						
-20	14.3	5.3	3980	3980	22.1	0.6	1730	1730					-CAPACITIES ARE BASED ON AN UNLOADED						
	3RD SEC.	EXT2ND	SEC. RE	T.	2ND & 3RD	SEC. EXT	ENDED			4TH SEC.	EXTEND	ED	VEHICLE WEIGHT OF NOT LESS THAN 25500 LBS. AND ARE 85% OF TIPPING LOADS. ALL						
BOOM ANGLES	LOAD RADIUS IN	SHEAVE HEIGHT IN	LOAD CAPACITIES		LOAD RADIUS	HEIGHT IN		IT IN LOAD CAPACITIES		LOAD SHEAVE LOAD CAPACITIES			OUTRIGGERS MUST BE EXTENDED AND SET FIRMLY ON THE GROUND BEFORE OPERATIN						
	FEET	FEET	ZONE A		30.00.00	FEET	ZONE A	ZONE B	FEET	FEET	ZONE A	ZONE B	THE DERRICK. DERRICK MUST BE MOUNTED						
80 75	4.3	34.4		20130		42.3				NOT AD	DUCAD		ACCORDING TO TEREX TELELECT INSTALLATION INSTRUCTIONS.						
60	6.2 11.9	33.9	14641 8860	14640 8860		41.7 38.3	10980	10980 6310		NOT AP	PLICAB	LE	-WARNING: ALWAYS REFER TO UPPER						
45	17.1	31.4 27.5	6690	0.110.00		33.2	6310 4730	4130					CONTROL LOAD CHART FOR OPERATION FR BOOM TIP CONTROLS.						
30	20.7	27.5	5580			26.5		3060					DOGIN III CONTROLS.						
15	20.7	16.8	4790			18.8		2610					REF:						
0	23.5	10.6	4020	3960		10.6		2500					OPTIONS: FBG HYD 3RD, ESK,						
	23.3	2.6	2440		29.3	-0.1	1490	1490					AUG 18						

Example 2

Using the load chart on Page 4 and the information below, what is the maximum radius that a transformer weighing 3000 lbs. can be placed off the side of the truck?

Boom Angle	N/A	Radius	N/A
Rigging:	100 lbs.	Load Weight	3000 lbs.
2nd Section	N/A	Third Section	N/A
4th Section	N/A		

STEP 1

The net load is the total weight of the load + rigging. It this case the net load is:

3000 + 100 = 3100 lbs.

Lifting off the side of the truck puts the load in Zone B. The load chart on the next page shows maximum radius the weight can be lifted in each configuration.

The maximum radius is 23.5 feet with the 2nd retracted and the 3rd extended.

AYOR BEOTEED.										4TH SEC. EXTENDED VEHICLE WEIGHT OF NOT LESS THAN 25500	LOAD CAPACITIES OUTGESTAND SET COAD CAPACITIES OUTGESTAND SET COAD IN DECORE OF DEPARTING	ZONE A ZONE B THE DEPRICK DERRICK MIST BE MOLINTED	ACCORDING TO TEREX TELELECT	NOT APPLICABLE INSTALLATION INSTRUCTIONS.	CONTROL LOAD CHART FOR OPERATION FROM	BOOM TIP CONTROLS.	t	REF.	OPTIONS FRG HVD 3RD FSK		
TEREX TELELECT		/	1	ا ح		WARNI	IF DERRICK IS MODIFI	AS CAPACITIES SHOWN			4TH SEC.	LOAD SHEAVE RADIUS IN HEIGHT IN	FEET FEET		NOT AP						
DED	LOAD CAPACITIES	ZONE A ZONE B	15890 15890	12050 12050	7300 6490	4680 3720	3360 2680	2820 2250	2720 2160	1730 1730	NDED	LOAD CAPACITIES	ZONE A ZONE B	15100 15100	10980 10980	6310 6310	4730 4130	3890 3060	3290 2610	2680 2500	
2ND SECTION EXTENDED	SHEAVE HEIGHT IN	FEET 2	34.0	33.5	30.7	26.5	21.2	15.2	24.0 8.8	9.0	2ND & 3RD SEC. EXTENDED	SHEAVE HEIGHT IN	FEET	42.3	41.7	38.3	33.2	26.5	18.8	10.6	
2ND SEC	LOAD RADIUS		5.0	7.0	13.0	17.8	21.4	21.4		22.1	2ND & 3R	LOAD RADIUS		5.6	8.3	16.3	22.7	27.6	30.6	31.5	
ACTED	LOAD CAPACITIES	ZONE A ZONE B	27230 27230	21920 21920	13710 13710	0730 10730	9050 9050	7860 7720	6320 6320	3980 3980	EC. RET.	LOAD CAPACITIES	ZONE A ZONE B	20130 20130	14641 14640	0988 0988	6690 6520	5580 4800	4790 4110	4020 3960	
FULLY RETRACTED	SHEAVE L	FEET Z	26.6	26.2 2	24.5 1	21.9	18.5	14.7	10.6	5.3	3RD SEC. EXT2ND SEC. RET.	SHEAVE L	FEET	34.4 2	33.9 1	31.4	27.5	22.5	16.8	10.6	
	LOAD RADIUS IN	FEET	2.8	4.1	9.7	10.7	12.9	14.3	15.5	14.3	3RD SEC.	LOAD RADIUS IN	FEET	4.3	6.2	11.9	17.1	20.7	22.8	23.5	
	BOOM ANGLES	IN DEGREES	80	75	09	45	30	15	0	-20		BOOM ANGLES	IN DEGREES	80	75	09	45	30	15	0	



FOR FURTHER ASSISTANCE,
CONTACT THE TEREX UTILITIES TECHNICAL SUPPORT TEAM

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