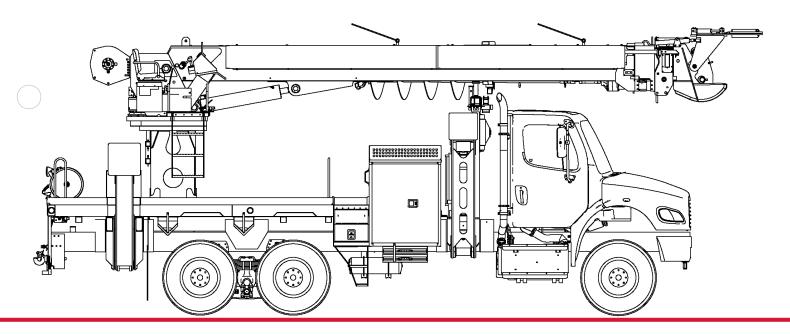


GENERAL LOAD CHART



NO. 221









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.

CONTENTS

TECH TIP#221

TOC





INTRODUCTION
Use the load chart below to answer the following questions.

DIGGER DERRICK	General Sample -CAUTION: MULTIPLE-PART LINES ARE REQUIRED FOR LOADS ABOVE 8320 LBSSYNTHETIC OR ROTATION RESISTANT WIR ROPE MUST HAVE 42300 LB. BREAKING STRENGTH AND 28% MAXIMUM STRETCH A 9640 LB SAFE WORKING LOADWIRE ROPE OTHER THAN ROTATION RESISTANT MUST HAVE 33740 LB. BREAKIN STRENGTHCAPACITIES ARE BASED ON AN UNLOADE! VEHICLE WEIGHT OF NOT LESS THAN 22660 LBS. AND ARE 86% OF TIPPING LOADS. ALL OUTRIGGERS MUST BE EXTENDED AND SE FIRMLY ON THE GROUND BEFORE OPERATI THE DERRICK. DERRICK MUST BE MOUNTE ACCORDING TO TREAT TELELECT INSTALLATION INSTRUCTIONSWARNING: ALWAYS REFER TO UPPER CONTROL LOAD CHART FOR OPERATION INSTALLATION INSTRUCTIONS.													REF.	REF: OPTIONS: FBG HYD 3RD, MKIII, AUG 18, TRANS STL HEAD						
TEREX TELELECT		Zona Zona		トレート		WARNING:	IF DERRICK IS MODIFIED IN ANY WAY OR	AS CAPACITIES SHOWN MAY BE AFFECTED.			4TH SEC. EXTENDED	LOAD SHEAVE LOAD CAPACITIES	FEET FEET ZONE A ZONE B		NOT APPLICABLE						
2ND SECTION EXTENDED	SHEAVE LOAD CAPACITIES	FEET ZONE A ZONE B	0 51.5 24830 24830	3 50.7 17140 17140	8 46.5 8540 8540	1 40.0 5730 5730	4 31.6 4270 4270	3 21.8 3320 3320	5 11.3 2450 2450	9 4.3 1670 1670	2ND & 3RD SEC. EXTENDED	S SHEAVE LOAD CAPACITIES	FEET ZONE A ZONE B	8 66.3 17590 17590	5 65.2 11440 11440	3 59.5 5610 5610	7 50.6 3610 3610	4 39.1 2390 2390	8 25.7 1760 1760	40.6 11.3 3210 3210 3210 3210 55.6 11.3 1250 1250 680 680 680 680 4.3 2430 2430 2430 54.6 1.7 680 680 680 80 4.3 2430 40G 18, TRANS 5TL HEAD	
2ND SE	LOAD RADIUS	IN TEE	7.0	10.3	20.8	7 29.1	35.4	39.3	40.6	39.9	2ND & 3F	LOAD RADIUS		8.6	14.5	28.3	39.7	48.4	53.8		
RACTED	LOAD CAPACITIES	ZONE A ZONE B	40660 40660	28810 28810	16620 16620	12000 12000	0696 0696	7800 7800	6310 6310	5050 5050	SEC. RET.	LOAD CAPACITIES	ZONE A ZONE B	24930 24930	17460 17460	9120 9120	0059 0059	5070 5070	4100 4100		
FULLY RETRACTED	SHEAVE HEIGHT IN	FEET	36.7	36.2	33.6	29.4	24.1	17.9	11.3	6.9	3RD SEC. EXT2ND SEC. RET.	SHEAVE HEIGHT IN	FEET	51.5	20.7	46.5	40.0	31.6	21.8	11.3	4.3 2430 2430 54.6 1.7 680 680
	LOAD RADIUS IN	FEET	4.4	6.5	12.3	17.3	21.0	24.8	25.6	25.1	3RD SEC.	LOAD RADIUS IN	FEET	7.2	10.6	20.3	29.1	35.4	39.3	40.6	39.9
	BOOM ANGLES	IN DEGREES	08	92	09	45	30	15	0	-20		BOOM ANGLES	IN DEGREES	08	22	09	45	30	15	0	-20

Example 1

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

Boom Angle	40°	Radius	N/A
Rigging:	100 lbs.	Load Weight	N/A
2nd Section	Retracted	Third Section	Half Extended
4th Section	N/A		

STEP 1

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

	3RD SEC.	EXT2ND	SEC. RE	T.				
BOOM ANGLES	LOAD RADIUS IN	SHEAVE HEIGHT IN	LOAD CAPACITIES					
IN DEGREES	FEET	FEET	ZONE A	ZONEB				
80	7.2	51.5	24930	24930				
75	10.6	50.7	17460	17460				
60	20.3	46.5	9120	9120				
45	29.1	40.0	6500	6500				
30	35.4	31.6	5070	5070				
15	39.3	21.8	4100	4100				
0	40.6	11.3	3210	3210				
-20	39.9	4.3	2430	2430				

STEP 2

According to the table, the boom angle is 40°. Since 40° is not listed on the load chart, move to the next lower angle of 30°.

Boom Angle	40°	Radius	N/A
Rigging:	100 lbs.	Load Weight	N/A
2nd Section	Retracted	Third Section	Half Extended
4th Section	N/A		

	3RD SEC.	EXT2ND	SEC. RE	T.		
BOOM ANGLES	LOAD RADIUS IN	PACITIES				
IN DEGREES	FEET	FEET	ZONE A	ZONEB		
80	7.2	51.5	24930	24930		
75	10.6	50.7	17460	17460		
60	20.3	46.5	9120	9120		
45	29.1	40.0	6500	6500		
30	35.4	31.6	5070	5070		
15	39.3	21.8	4100	4100		
0	40.6	11.3	3210	3210		
-20	39.9	4.3	2430	2430		

STEP 3

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

The gross capacity as shown on the load chart is 5070 lbs.

The net capacity is the gross capacity - rigging = 5070 - 100 = 4970 lbs.

		FULLY RE	TRACTE	D	2ND SEC	TION EXTE	NDED		TER	REX TEL	ELEC1	Γ	DIGGER DERRICK					
BOOM ANGLES IN DEGREES	RADIUS IN HEIGHT IN		LOAD CA	PACITIES ZONE B	LOAD RADIUS IN FEET	SHEAVE HEIGHT IN FEET	LOAD CA	PACITIES ZONE B	/	ZONE	ZONE		General TM WINCH Sample					
80	4.4	36.7	40660	40660	7.0	51.5	24830	24830			EBE							
75	6.5	36.2	28810	28810	10.3	50.7	17140	17140	\ \ \ \	ZOME A	\rightarrow		-CAUTION: MULTIPLE-PART LINES ARE REQUIRED FOR LOADS ABOVE 8820 LBS.					
60	12.3	33.6	16620	16620	20.8	46.5	8540	8540		ZURE A			-SYNTHETIC OR ROTATION RESISTANT WIRE					
45	17.3	29.4	12000	12000	29.1	40.0	5730	5730		WARN	ING:	-	ROPE MUST HAVE 48200 LB. BREAKING STRENGTH AND 2.8% MAXIMUM STRETCH AT					
30	21.0	24.1	9690	9690	35.4	31.6	4270	4270		RICK IS MODIF		9640 LB SAFE WORKING LOAD.						
15	24.8	17.9	7800	7800	39.3	21.8	3320	3320		CITIES SHOWN			-WRE ROPE OTHER THAN ROTATION RESISTANT MUST HAVE 33740 LB. BREAKING					
0	25.6	11.3	6310	6310		11.3	2450	2450					STRENGTH.					
-20	25.1	6.9	5050	5050	39.9	4.3	1670	1670					-CAPACITIES ARE BASED ON AN UNLOADED					
	3RD SEC.	EXT2ND	SEC. RE	T.	2ND & 3RD	SEC. EXT	ENDED			4TH SEC.	. EXTEN	DED	VEHICLE WEIGHT OF NOT LESS THAN 22660 LBS. AND ARE 85% OF TIPPING LOADS. ALL					
BOOM ANGLES IN DEGREES	LOAD RADIUS IN	SHEAVE HEIGHT IN	100 TO 10	PACITIES	LOAD RADIUS	SHEAVE HEIGHT IN	LOAD CAI	200000000000000000000000000000000000000	LOAD RADIUS IN	SHEAVE HEIGHT IN	LOAD CA		OUTRIGGERS MUST BE EXTENDED AND SET FIRMLY ON THE GROUND BEFORE OPERATING					
80	FEET	FEET	ZONE A	ZONEB	0.0	66.3	ZONE A	ZONE B	FEET	FEET	ZONE A	ZONE B	THE DERRICK. DERRICK MUST BE MOUNTED					
75	7.2 10.6	51.5 50.7	24930 17460	24930 17460		65.2	17590 11440	17590 11440		NOT AP	DUCAE	21 =	ACCORDING TO TEREX TELELECT INSTALLATION INSTRUCTIONS.					
60	20.3	46.5	9120	9120		59.5		5610		NOT AF	LIOAL	I	-WARNING: ALWAYS REFER TO UPPER					
45	29.1	40.0	6500	6500		50.6		3610	-				CONTROL LOAD CHART FOR OPERATION FRO BOOM TIP CONTROLS.					
30	35.4	31.6	5070		48.4	39.1	2390	2390					_					
15	39.3	21.8	4100	4100	7.2.7	25.7	1760	1760	-				REF:					
0	40.6	11.3	3210	3210		11.3	1250	1250	-				OPTIONS: FBG HYD 3RD, MKIII,					
-20	39.9	4.3	2430	2430		17	680	680					AUG 18, TRANS STL HEAD					

Example 2

Using the load chart on Page 4 and the information below, what is the maximum radius that a transformer weighing 3100 lbs. can be placed off the side of the truck?

Boom Angle	N/A	Radius	N/A
Rigging:	100 lbs.	Load Weight	3100 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:

3100 + 100 = 3200 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 40.6 feet with the 2nd retracted and the 3rd extended.

TEREX TELELECT CONTROL CONTROL SAMPING: WARNING: IF DERRICK IS MODIFIED IN ANY WAY OR REMOUNTED, TEREX TELELECT MUST BE NOTIFIED AS CAPACITIES SHOWN MAY BE AFFECTED. AS CAPACITIES SHOWN MAY BE AFFECTED. AND ACTIFICATE AND LOS MAXIMUM STRETCH AT 9640 LB SAFE WORKING LOAD. WHER ROPE OTHER THAN ROTATION RESISTANT MUST HAVE 33740 LB. BREAKING STRENGTH AND 28% MAXIMUM STRETCH AT 9640 LB SAFE WORKING LOAD. WHER ROPE OTHER THAN ROTATION RESISTANT MUST HAVE 33740 LB. BREAKING STRENGTH. CAN AND ACTIFICATION OF THE STRENGTH. CAN AND ACTIFICATION OF T		-CAPACITIES ARE BASED ON AN UNLOADED	4TH SEC. EXTENDED VEHICLE WEIGHT OF NOT LESS THAN 22660	LOAD CAPACITIES	ZONE A ZONE B THE DEBRICK DERRICK MUST BE MOLINTED	ACCORDING TO TEREX TELELECT	NOT APPLICABLE INSTALLATION INSTRUCTIONS.	-warning: ALWAYS REFER TO UPPER CONTROL LOAD CHART FOR OPERATION FROM	BOOM TIP CONTROLS.		1501		OPTIONS: FBG HYD 3RD, MKIII,								
TEREX TELE		2000	1	ا د		WARNI	RRICK IS MODIFI	ACITIES SHOWN			4TH SEC.	SHEAVE N HEIGHT IN	FEET		NOT AP						
			IF DERF AS CAPAI									LOAD RADIUS IN	FEET								
	PACITIES	ZONE B	24830	17140	8540	5730	4270	3320	2450	1670	TENDED	PACITIES	ZONE B	17590	11440	5610	3610	2390	1760	1250	
NDED	LOAD CAPACITIES	ZONE A	51.5 24830 24830	17140	8540	5730	4270	3320	2450	1670		LOAD CAPACITIES	ZONE A	17590	11440	5610	3610	2390	1760	1250	1230
JON EXTE	SHEAVE HEIGHT IN	FEET	51.5	50.7	46.5	40.0	31.6	21.8	11.3	4.3	SEC. EXT	SHEAVE HEIGHT IN	FEET	66.3	65.2	59.5	50.6	39.1	25.7	112	
2ND SECTION EXTENDED	LOAD RADIUS	I II I	7.0	10.3	20.8	29.1	35.4	39.3	40.6	39.9	2ND & 3RD SEC. EXTENDED	LOAD RADIUS	N PEE	9.6	14.5	28.3	39.7	48.4	53.8	256	0.00
	ACITIES	ZONEB	40660	28810	16620	12000	0696	7800	6310	5050			ZONEB	24930	17460	9120	6500	5070	4100	3210	2410
TRACTED	LOAD CAPACITIES	ZONEA	40660 40660	28810	16620	12000	0696	7800	6310	5050	SEC. RE1	LOAD CAPACITIES	ZONEA	24930 24930	17460	9120	6500	5070	4100	3210	24.0
FULLY RETRACTED	SHEAVE HEIGHT IN	FEET	36.7	36.2	33.6	29.4	24.1	17.9	11.3	6.9	3RD SEC. EXT2ND SEC. RET.	SHEAVE HEIGHT IN	FEET	51.5	50.7	46.5	40.0	31.6	21.8	113	?
	LOAD RADIUS IN	FEET	4.4	6.5	12.3	17.3	21.0	24.8	25.6	25.1	3RD SEC. I	LOAD RADIUS IN	FEET	7.2	10.6	20.3	29.1	35.4	39.3	901	0.01
	BOOM ANGLES	IIN DEGREES	08	92	09	45	30	15	0	-20		BOOM ANGLES	IN DEGREES	80	75	09	45	30	15	U)



FOR FURTHER ASSISTANCE,
CONTACT THE TEREX UTILITIES TECHNICAL SUPPORT TEAM

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