



LOAD CHARTS for Use in CCO Written Examinations

BRODERSON

TELESCOPIC BOOM CRANE—FIXED CAB (TSS)

These charts have been adapted from the original manufacturers' charts for use in NCCCO Written Examinations.

These charts are not to be used for any other purpose.

© Copyright 2011 National Commission for the Certification of Crane Operators (NCCCO).
All rights reserved. This document may not be reproduced in whole or in part without express
written permission of the manufacturer and the consent of NCCCO.

HOLD HARMLESS/RELEASE AGREEMENT

The user of this publication for and in consideration of the assistance, cooperation, and information provided by the National Commission for the Certification of Crane Operators (NCCCO) in this publication, *Mobile Crane Load Chart Manual*, the receipt of which is acknowledged, does hereby and for all future time release and hold harmless from any liability, and forever discharge for itself, its administrators and assigns the said NCCCO from all and any manner of action or demands whatsoever in law, in admiralty, or in equity, which against NCCCO anyone ever had, now have, or which shall later be claimed. This Agreement relates specifically to any cause of action arising out of the publication, information provided, subsequent conduct, and any use of the information provided in this publication and related uses or demonstrations of skills, methods, and techniques cited in the publication. This mutually beneficial release and hold-harmless agreement may not be changed orally and exists in perpetuity. This publication is issued solely as a public service to improve the lifting industry and promote public safety.

NO WARRANTY

Information and materials provided in this *Mobile Crane Load Chart Manual* are provided "as is" without warranty of any kind, either express or implied, including without limitation warranties of merchantability, fitness for a particular purpose, and non-infringement. NCCCO specifically does not make any warranties or representations as to the accuracy or completeness of any such information and materials. Under no circumstances shall NCCCO be liable for any loss, damage, liability, or expense incurred or suffered which is claimed to have resulted from use of this publication, including without limitation, any fault, error, omission, interruption, or delay with respect thereto. Use of this publication is at user's sole risk. Under no circumstances, including, but not limited to, negligence, shall NCCCO be liable for any direct, indirect, incidental, special, or consequential damages, even if NCCCO has been advised of the possibility of such damages.

Copyright © 2011 by National Commission for the Certification of Crane Operators. All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without prior written permission from the publisher. For information, contact the publisher, the National Commission for the Certification of Crane Operators, at info@nccco.org.

BRODERSON LIFTING NOTES

1. Outriggers must be fully extended outward to use the outriggers out and down capacities.
2. The “On Outrigger” capacities of this crane are based on all outriggers being extended to a firm, level surface with all tires off ground.
3. Do not position boom at load radii where no load capacities are shown.
4. The weights of the hooks, blocks, overhaul weights, slings, and other handling devices must be added with the load.
5. Verified weights and measured radii must take precedence over the rated capacity limiter readings.
6. Maximum hydraulic pressure = 3000 psi
7. Tire pressure is 100 psi for 17.5-25 20PR tires
8. If the desired load radius falls between two load radii on the chart, it is recommended to use the load radius with lower capacity and not try to interpolate between the numbers.
9. Do not operate the crane at a load radius where no capacity is listed on the chart. Even an empty boom may tip the crane on rubber if it is extended over the side past 44 feet.
10. The capacities shown in the “360° rotation” columns of the capacity chart apply to the entire 360 degree rotation of the boom and are maximum allowable at the indicated radius. The capacities “Over Front” are limited to the following:
 - a. On outriggers – Boom rotation is limited to an arc not to exceed the eight-foot wide front outrigger housing.
 - b. On rubber operations, including pick and carry, are limited to the boom centered over front, in line with the chassis.
11. Pick and carry operation: Traveling with suspended loads involves so many variables, such as ground conditions, boom length, momentum in starting and stopping, that it is impossible to devise a single standard rating procedure with any assurance of safety. For such operations, the user must evaluate prevailing conditions and determine safe practices using precautions, such as the following:
 - a. The boom should be centered over front axle.
 - b. Do not pick and carry with boom extension.
 - c. Use shortest boom practical.
 - d. Reduce travel speed to suit conditions (3 mph max).
 - e. Maintain specified tire pressures.
 - f. Pick and carry on rubber capacities are for smooth, level paved surface.
 - g. For unpaved surface, reduce capacity by 25%.

BRODERSON CAPACITY CHART

CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE						
LOAD RADIUS FEET	MAIN BOOM CAPACITIES IN POUNDS					
	360° ROTATION			OVER FRONT		
	ON RUBBER	O/R'S IN & DOWN	O/R'S OUT & DOWN	ON RUBBER	ON OUTRIGGERS	
MAIN BOOM	10	18800	25500	30000	24900	30000
	12	15200	20800	28500	21400	28500
	14	11000	16000	25950	18100	25950
	16	8800	12600	22500	14300	22500
	18	7200	10300	19500	11800	19500
	20	5900	8500	17050	9700	17050
	22	4900	7100	15000	8200	15000
	24	4050	5900	13300	7000	13300
	26	3300	4900	11900	6000	11900
	28	2800	4100	10650	5100	10650
	30	2250	3500	9600	4400	9600
	32	1800	3000	8600	3800	8600
	34	1500	2600	8050	3400	8050
	36	1300	2200	7500	3000	7500
	38	1100	2000	6950	2700	6950
	40	1000	1800	6500	2500	6500
	44	700	1400	5700	2100	5700
	48		1100	5000	1700	5000
52		900	4400	1400	4400	
56		700	4000	1150	4000	
60		500	3500	900	3500	
BOOM EXTENSION	64			2700		2700
	68			2500		2500
	72			2400		2400
	76			2100		2100
	80			1900		1900

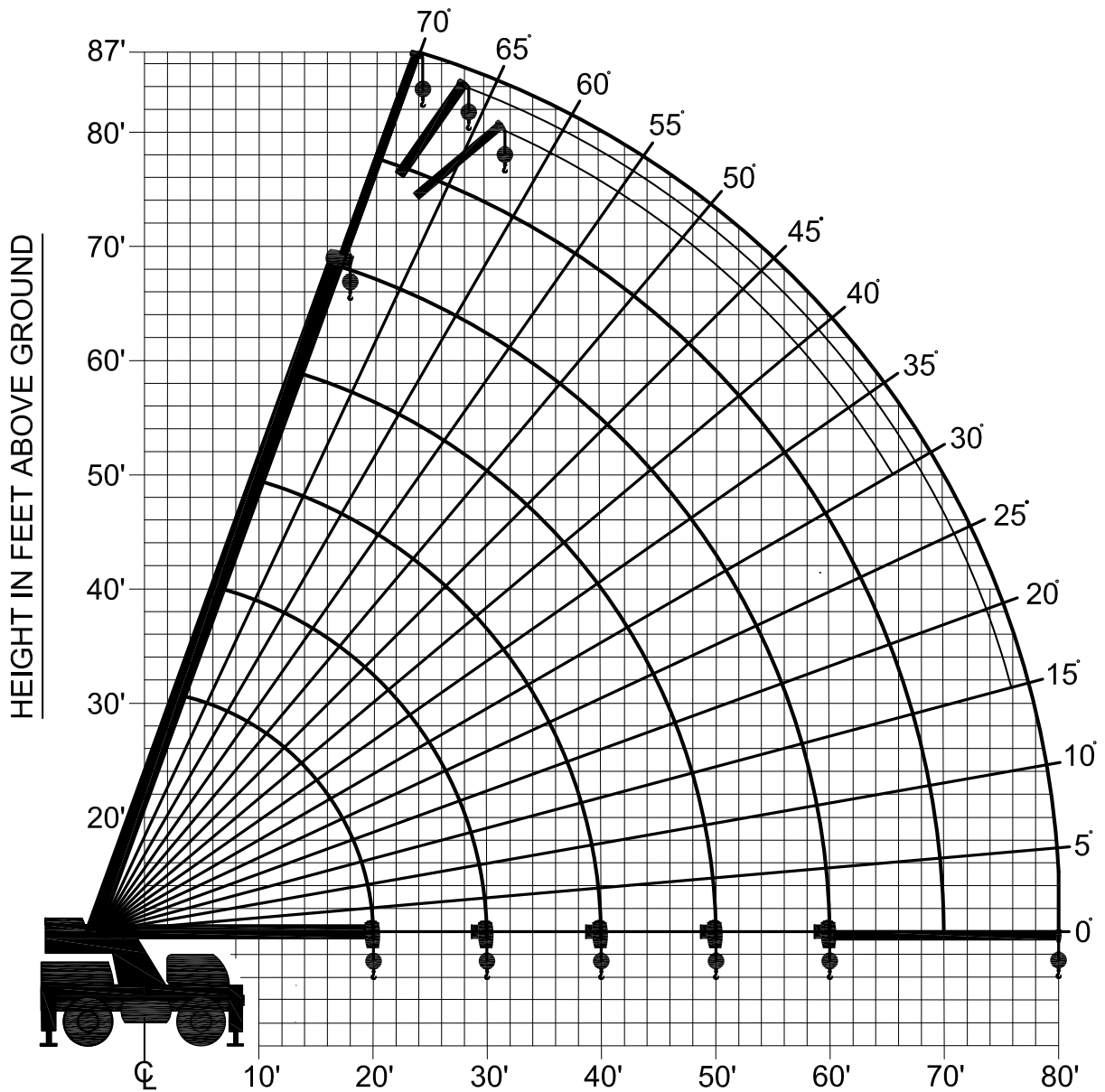
20 FOOT – BOOM EXTENSION CAPACITIES (lbs.)							
BOOM EXTENSION OFFSET ANGLE	MAIN BOOM ANGLE						
	0°	15°	30°	40°	50°	60°	70°
0°	2300	2400	2700	3100	3700	4800	6200
15°	0	2300	2400	2600	2900	3400	4100
30°	0	0	2300	2400	2500	2700	3100

CAUTION: BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITIES.

LOAD HOIST ROPE	
½" – 6 x 25 XIP IWRC Rope – Minimum breaking strength of 26,600 lbs.	
Single Part Line for loads to 7,500 lbs.	Four Part Line for loads to 30,000 lbs.

DEDUCTIONS FOR LIFTING DEVICES	
Overhaul (Headache) Ball = 180 lbs.	Load Block = 440 lbs.
Boom Extension Stowed on boom: 500 lbs	
Boom Extension Erected when lifting off main boom point: 1000 lbs.	

BRODERSON RANGE DIAGRAM



RADIUS IN FEET FROM Q ROTATION TO LOAD

Note: Main boom and extension lengths equal radii shown.

This page intentionally left blank

IMPORTANT CONTACT INFORMATION



NATIONAL COMMISSION FOR THE CERTIFICATION OF CRANE OPERATORS

2750 Prosperity Avenue, Suite 505
Fairfax, VA 22031-4312

Phone: 703-560-2391

Fax: 703-560-2392

E-Mail: info@nccco.org



INTERNATIONAL ASSESSMENT INSTITUTE

Attention: NCCCO Testing
600 Cleveland Street, Suite 900
Clearwater, Florida 33755

Phone: 727-449-8525

Fax: 727-461-2746



**NATIONAL COMMISSION FOR THE
CERTIFICATION OF CRANE OPERATORS**

2750 Prosperity Avenue, Suite 505
Fairfax, VA 22031-4312

Phone: 703-560-2391

Fax: 703-560-2392

info@nccco.org

www.nccco.org