# **TMS527.5**

# **27.5 TON CAPACITY** 28 ft. - 70 ft. BOOM (FULL POWER)

**6x4 CARRIER** PCSA CLASS 10-68 85% OF TIPPING

### JIB CAPACITIES IN POUNDS

### 23 ft. - 38 ft. TELE, JIB On Outriggers - Over Side & Rear Without Front Jack

OFFSET		FFSET	200 0					LENGT	н		1 38	l ft. JIB	LENG	TH (full	v exten	(herb)
			30-0	FFSET	0° 0	FFSET	15° C	FFSET	30° C	FFSET		FFSET		DFFSET		FFSET
.ft. Ibs.	Rad. Ref.ft.	Cap. Ibs.	Rad. Ref.ft.	Cap. Ibs.	Rad. Ref.ft.	Cap. Ibs,	Rad, Ref.ft.	Cap Ibs.	Rad. Ref.ft.	Cap. Jbs.	Rad. Ref.ft.	Cap.	Rad. Ref.ft.	Cap.	Rad.	Cap.
7.512,500	31.4	7,300	35.0	4,500	29.0		35.3			1.4.4.						1 <u>bs.</u> 2,230
3.3 7,990	37.8	6,390	40.6	4,150	35.9	6,500	42.5	4.270								1.990
0.2 5,880	44.7	5,110	47.2	3,900	43.9	5,300										1,990
7.0 4,350	51.3	3,780	53.6	3,500		****										1,870
3.2 3,270	57.3	2,840	59.5	2,510												
9.2 2,650	62.9	2,170	65.1	1.980												1,680
4.7 1,830	68.0	1.660	69.9	and the second second												1,600
9.6 1,330	72.6	1.260			_											1,200
1.0 950	76.6						- <u> /</u>	1,000	04.7	370	01.0	1,050	00.4	980	89.0	920
	3.3         7,990           3.2         5,880           7.0         4,350           3.2         3,270           3.2         2,650           3.7         1,830           3.6         1,330	3.3         7,990         37.8           1.2         5,880         44.7           1.0         4,350         51.3           3.2         3,270         57.3           1.2         2,650         62.9           4.7         1,830         68.0           1.6         1,330         72.6	3.3         7,990         37.8         6,390           3.2         5,880         44.7         5,110           4.350         51.3         3,780           3.2         3,270         57.3         2,840           2.2         2,650         62.9         2,170           7.7         1,830         68.0         1,660           6.6         1,330         72.6         1,260	3.3         7,990         37.8         6,390         40.6           3.2         5,880         44.7         5,110         47.2           4.350         51.3         3,780         53.6           3.2         3,270         57.3         2,840         59.5           2         2,650         62.9         2,170         65.1           4.7         1,830         68.0         1,660         69.9           4.6         1,330         72.6         1,260         74.2	7.5         12,500         31.4         7,300         35.0         4,500           3.3         7,990         37.8         6,390         40.6         4,150           1.2         5,880         44.7         5,110         47.2         3,900           1.0         4,350         51.3         3,780         53.6         3,500           2.3,270         57.3         2,840         59.5         2,510           1.2         2,650         62.9         2,170         65.1         1,980           1.7         1,830         68.0         1,660         69.9         1,540	7.5         12,500         31.4         7,300         35.0         4,500         29.0           3.3         7,990         37.8         6,390         40.6         4,150         35.9           3.2         5,880         44.7         5,110         47.2         3,900         43.9           1.0         4,350         51.3         3,780         53.6         3,500         51.6           3.2         3,270         57.3         2,840         59.5         2,510         58.8           3.2         2,650         62.9         2,170         65.1         1,980         65.7           1.7         1,830         68.0         1,660         69.9         1,540         71.9           1.6         1,330         72.6         1,260         74.2         1,190         77.7	7.5         12,500         31.4         7,300         35.0         4,500         29.0         7,600           3.3         7,990         37.8         6,390         40.6         4,150         35.9         6,500           1.2         5,880         44.7         5,110         47.2         3,900         43.9         5,300           1.0         4,350         51.3         3,780         53.6         3,500         51.6         3,560           2.2         3,270         57.3         2,840         59.5         2,510         58.8         2,610           1.2         2,650         62.9         2,170         65.1         1,980         65.7         2,030           1.7         1,830         68.0         1,660         69.9         1,540         71.9         1,580           1.6         1,330         72.6         1,260         74.2         1,190         77.7         1,190	7.512,500         31.4         7,300         35.0         4,500         29.0         7,600         35.3           3.3         7,990         37.8         6,390         40.6         4,150         35.9         6,500         42.5           3.2         5,880         44.7         5,110         47.2         3,900         43.9         5,300         50.2           2.0         4,350         51.3         3,780         53.6         3,500         51.6         3,560         57.5           3.2         3,270         57.3         2,840         59.5         2,510         58.8         2,610         64.3           3.2         2,650         62.9         2,170         65.1         1,980         65.7         2,030         70.7           7.7         1,830         68.0         1,660         69.9         1,540         71.9         1,580         76.5           1.6         1,330         72.6         1,260         74.2         1,190         77.7         1,190         81.7	7.5         12,500         31.4         7,300         35.0         4,500         29.0         7,600         35.3         4,900           3.3         7,990         37.8         6,390         40.6         4,150         35.9         6,500         42.5         4,270           1.2         5,880         44.7         5,110         47.2         3,900         43.9         5,300         50.2         3,820           1.0         4,350         51.3         3,780         53.6         3,500         51.6         3,560         57.5         3,260           2.2         3,270         57.3         2,840         59.5         2,510         58.8         2,610         64.3         2,470           2.2         2,650         62.9         2,170         65.1         1,980         65.7         2,030         70.7         1,820           1.7         1,830         68.0         1,660         69.9         1,540         71.9         1,580         76.5         1,400           1.6         1,330         72.6         1,260         74.2         1,190         77.7         1,190         81.7         1,080	7.5         12,500         31.4         7,300         35.0         4,500         29.0         7,600         35.3         4,900         41.5           3.3         7,990         37.8         6,390         40.6         4,150         35.9         6,500         42.5         4,270         48.8           1.2         5,880         44.7         5,110         47.2         3,900         43.9         5,300         50.2         3,820         56.1           1.0         4,350         51.3         3,780         53.6         3,500         51.6         3,560         57.5         3,260         62.8           2.2         2,650         62.9         2,170         65.1         1,980         65.7         2,030         70.7         1,820         74.9           2.7         1,830         68.0         1,660         69.9         1,540         71.9         1,580         76.5         1,400         80.2           4.6         1,330         72.6         1,260         74.2         1,190         77.7         1,190         81.7         1,080         84.7	7.5         12,500         31.4         7,300         35.0         4,500         29.0         7,600         35.3         4,900         41.5         2,900           3.3         7,990         37.8         6,390         40.6         4,150         35.9         6,500         42.5         4,270         48.8         2,650           1.2         5,880         44.7         5,110         47.2         3,900         43.9         5,300         50.2         3,820         56.1         2,440           1.0         4,350         51.3         3,780         53.6         3,500         51.6         3,560         57.5         3,260         62.8         2,330           2.2         3,270         57.3         2,840         59.5         2,510         58.8         2,610         64.3         2,470         69.2         2,110           2.2         6,50         62.9         2,170         65.1         1,980         65.7         2,030         70.7         1,820         74.9         1,600           1.7         1,830         68.0         1,660         69.9         1,540         71.9         1,580         76.5         1,400         80.2         1,250           1.6 <td>7.5         12,500         31.4         7,300         35.0         4,500         29.0         7,600         35.3         4,900         41.5         2,900         31.0           3.3         7,990         37.8         6,390         40.6         4,150         35.9         6,500         42.5         4,270         48.8         2,650         37.9           1.2         5,880         44.7         5,110         47.2         3,900         43.9         5,300         50.2         3,820         56.1         2,440         46.3           1.0         4,350         51.3         3,780         53.6         3,500         51.6         3,560         57.5         3,260         62.8         2,330         54.3           3.2         3,270         57.3         2,840         59.5         2,510         58.8         2,610         64.3         2,470         69.2         2,110         62.0           2.2         2,650         62.9         2,170         65.1         1,980         65.7         2,030         70.7         1,820         74.9         1,600         69.2           4.7         1,830         68.0         1,660         69.9         1,540         71.9         1,880&lt;</td> <td>7.5         12,500         31.4         7,300         35.0         4,500         29.0         7,600         35.3         4,900         41.5         2,900         31.0         5,000           3.3         7,990         37.8         6,390         40.6         4,150         35.9         6,500         42.5         4,270         48.8         2,650         37.9         4,650           1.2         5,880         44.7         5,110         47.2         3,900         43.9         5,300         50.2         3,820         56.1         2,440         46.3         4,470           1.0         4,350         51.3         3,780         53.6         3,500         51.6         3,560         57.5         3,260         62.8         2,330         54.3         3,280           2.2         3,270         57.3         2,840         59.5         2,510         58.8         2,610         64.3         2,470         69.2         2,110         62.0         2,350           2.2         2,650         62.9         2,170         65.1         1,980         65.7         2,030         70.7         1,820         74.9         1,600         69.2         1,820         1,600         69.2         <t< td=""><td>7.5       12,500       31.4       7,300       35.0       4,500       29.0       7,600       35.3       4,900       41.5       29.00       31.0       50.0       89.0       39.0         3.3       7,990       37.8       6,390       40.6       4,150       35.9       6,500       42.5       4,270       48.8       2,650       37.9       4,650       45.6         1.2       5,880       44.7       5,110       47.2       3,900       43.9       5,300       50.2       3,820       56.1       2,440       46.3       4,470       53.7         1.0       4,350       51.3       3,780       53.6       3,500       51.6       3,560       57.5       3,260       62.8       2,330       54.3       3,280       61.2         2.2       3,270       57.3       2,840       59.5       2,510       58.8       2,610       64.3       2,470       69.2       2,110       62.0       2,350       68.4         2.2       65.0       62.9       2,170       65.1       1,980       65.7       2,030       70.7       1,820       74.9       1,600       69.2       1,820       75.0         1.7       1,830       68.0<!--</td--><td>7.5       12,500       31.4       7,300       35.0       4,500       29.0       7,600       35.3       4,900       41.5       2,900       31.0       5,000       39.0       39.750         3.3       7,990       37.8       6,390       40.6       4,150       35.9       6,500       42.5       4,270       48.8       2,650       37.9       4,650       45.6       3,300         1.2       5,880       44.7       5,110       47.2       3,900       43.9       5,300       50.2       3,820       56.1       2,440       46.3       4,470       53.7       2,950         1.0       4,350       51.3       3,780       53.6       3,500       51.6       3,260       62.8       2,330       54.3       3,280       61.2       2,640         3.2       3,270       57.3       2,840       59.5       2,510       58.8       2,610       64.3       2,470       69.2       2,110       62.0       2,350       68.4       2,170         2.2       2,650       62.9       2,170       65.1       1,980       65.7       2,030       70.7       1,820       74.9       1,600       69.2       1,820       75.0       1,690     </td></td></t<><td>7.5       12,500       31.4       7,300       35.0       4,500       29.0       7,600       35.3       4,900       41.5       2,900       31.0       5,000       39.0       39.750       45.4         3.3       7,990       37.8       6,390       40.6       4,150       35.9       6,500       42.5       4,270       48.8       2,650       37.9       4,650       45.6       3,300       51.8         1.2       5,880       44.7       5,110       47.2       3,900       43.9       5,300       50.2       3,820       56.1       2,440       46.3       4,470       53.7       2,950       59.3         1.0       4,350       51.3       3,780       53.6       3,500       51.6       3,260       62.8       2,330       54.3       3,280       61.2       2,640       66.4         2.2       3,270       57.3       2,840       59.5       2,510       58.8       2,610       64.3       2,470       69.2       2,110       62.0       2,350       68.4       2,170       72.9         2.2       2,650       62.9       2,170       65.1       1,980       65.7       2,030       70.7       1,820       74.9</td></td>	7.5         12,500         31.4         7,300         35.0         4,500         29.0         7,600         35.3         4,900         41.5         2,900         31.0           3.3         7,990         37.8         6,390         40.6         4,150         35.9         6,500         42.5         4,270         48.8         2,650         37.9           1.2         5,880         44.7         5,110         47.2         3,900         43.9         5,300         50.2         3,820         56.1         2,440         46.3           1.0         4,350         51.3         3,780         53.6         3,500         51.6         3,560         57.5         3,260         62.8         2,330         54.3           3.2         3,270         57.3         2,840         59.5         2,510         58.8         2,610         64.3         2,470         69.2         2,110         62.0           2.2         2,650         62.9         2,170         65.1         1,980         65.7         2,030         70.7         1,820         74.9         1,600         69.2           4.7         1,830         68.0         1,660         69.9         1,540         71.9         1,880<	7.5         12,500         31.4         7,300         35.0         4,500         29.0         7,600         35.3         4,900         41.5         2,900         31.0         5,000           3.3         7,990         37.8         6,390         40.6         4,150         35.9         6,500         42.5         4,270         48.8         2,650         37.9         4,650           1.2         5,880         44.7         5,110         47.2         3,900         43.9         5,300         50.2         3,820         56.1         2,440         46.3         4,470           1.0         4,350         51.3         3,780         53.6         3,500         51.6         3,560         57.5         3,260         62.8         2,330         54.3         3,280           2.2         3,270         57.3         2,840         59.5         2,510         58.8         2,610         64.3         2,470         69.2         2,110         62.0         2,350           2.2         2,650         62.9         2,170         65.1         1,980         65.7         2,030         70.7         1,820         74.9         1,600         69.2         1,820         1,600         69.2 <t< td=""><td>7.5       12,500       31.4       7,300       35.0       4,500       29.0       7,600       35.3       4,900       41.5       29.00       31.0       50.0       89.0       39.0         3.3       7,990       37.8       6,390       40.6       4,150       35.9       6,500       42.5       4,270       48.8       2,650       37.9       4,650       45.6         1.2       5,880       44.7       5,110       47.2       3,900       43.9       5,300       50.2       3,820       56.1       2,440       46.3       4,470       53.7         1.0       4,350       51.3       3,780       53.6       3,500       51.6       3,560       57.5       3,260       62.8       2,330       54.3       3,280       61.2         2.2       3,270       57.3       2,840       59.5       2,510       58.8       2,610       64.3       2,470       69.2       2,110       62.0       2,350       68.4         2.2       65.0       62.9       2,170       65.1       1,980       65.7       2,030       70.7       1,820       74.9       1,600       69.2       1,820       75.0         1.7       1,830       68.0<!--</td--><td>7.5       12,500       31.4       7,300       35.0       4,500       29.0       7,600       35.3       4,900       41.5       2,900       31.0       5,000       39.0       39.750         3.3       7,990       37.8       6,390       40.6       4,150       35.9       6,500       42.5       4,270       48.8       2,650       37.9       4,650       45.6       3,300         1.2       5,880       44.7       5,110       47.2       3,900       43.9       5,300       50.2       3,820       56.1       2,440       46.3       4,470       53.7       2,950         1.0       4,350       51.3       3,780       53.6       3,500       51.6       3,260       62.8       2,330       54.3       3,280       61.2       2,640         3.2       3,270       57.3       2,840       59.5       2,510       58.8       2,610       64.3       2,470       69.2       2,110       62.0       2,350       68.4       2,170         2.2       2,650       62.9       2,170       65.1       1,980       65.7       2,030       70.7       1,820       74.9       1,600       69.2       1,820       75.0       1,690     </td></td></t<> <td>7.5       12,500       31.4       7,300       35.0       4,500       29.0       7,600       35.3       4,900       41.5       2,900       31.0       5,000       39.0       39.750       45.4         3.3       7,990       37.8       6,390       40.6       4,150       35.9       6,500       42.5       4,270       48.8       2,650       37.9       4,650       45.6       3,300       51.8         1.2       5,880       44.7       5,110       47.2       3,900       43.9       5,300       50.2       3,820       56.1       2,440       46.3       4,470       53.7       2,950       59.3         1.0       4,350       51.3       3,780       53.6       3,500       51.6       3,260       62.8       2,330       54.3       3,280       61.2       2,640       66.4         2.2       3,270       57.3       2,840       59.5       2,510       58.8       2,610       64.3       2,470       69.2       2,110       62.0       2,350       68.4       2,170       72.9         2.2       2,650       62.9       2,170       65.1       1,980       65.7       2,030       70.7       1,820       74.9</td>	7.5       12,500       31.4       7,300       35.0       4,500       29.0       7,600       35.3       4,900       41.5       29.00       31.0       50.0       89.0       39.0         3.3       7,990       37.8       6,390       40.6       4,150       35.9       6,500       42.5       4,270       48.8       2,650       37.9       4,650       45.6         1.2       5,880       44.7       5,110       47.2       3,900       43.9       5,300       50.2       3,820       56.1       2,440       46.3       4,470       53.7         1.0       4,350       51.3       3,780       53.6       3,500       51.6       3,560       57.5       3,260       62.8       2,330       54.3       3,280       61.2         2.2       3,270       57.3       2,840       59.5       2,510       58.8       2,610       64.3       2,470       69.2       2,110       62.0       2,350       68.4         2.2       65.0       62.9       2,170       65.1       1,980       65.7       2,030       70.7       1,820       74.9       1,600       69.2       1,820       75.0         1.7       1,830       68.0 </td <td>7.5       12,500       31.4       7,300       35.0       4,500       29.0       7,600       35.3       4,900       41.5       2,900       31.0       5,000       39.0       39.750         3.3       7,990       37.8       6,390       40.6       4,150       35.9       6,500       42.5       4,270       48.8       2,650       37.9       4,650       45.6       3,300         1.2       5,880       44.7       5,110       47.2       3,900       43.9       5,300       50.2       3,820       56.1       2,440       46.3       4,470       53.7       2,950         1.0       4,350       51.3       3,780       53.6       3,500       51.6       3,260       62.8       2,330       54.3       3,280       61.2       2,640         3.2       3,270       57.3       2,840       59.5       2,510       58.8       2,610       64.3       2,470       69.2       2,110       62.0       2,350       68.4       2,170         2.2       2,650       62.9       2,170       65.1       1,980       65.7       2,030       70.7       1,820       74.9       1,600       69.2       1,820       75.0       1,690     </td>	7.5       12,500       31.4       7,300       35.0       4,500       29.0       7,600       35.3       4,900       41.5       2,900       31.0       5,000       39.0       39.750         3.3       7,990       37.8       6,390       40.6       4,150       35.9       6,500       42.5       4,270       48.8       2,650       37.9       4,650       45.6       3,300         1.2       5,880       44.7       5,110       47.2       3,900       43.9       5,300       50.2       3,820       56.1       2,440       46.3       4,470       53.7       2,950         1.0       4,350       51.3       3,780       53.6       3,500       51.6       3,260       62.8       2,330       54.3       3,280       61.2       2,640         3.2       3,270       57.3       2,840       59.5       2,510       58.8       2,610       64.3       2,470       69.2       2,110       62.0       2,350       68.4       2,170         2.2       2,650       62.9       2,170       65.1       1,980       65.7       2,030       70.7       1,820       74.9       1,600       69.2       1,820       75.0       1,690	7.5       12,500       31.4       7,300       35.0       4,500       29.0       7,600       35.3       4,900       41.5       2,900       31.0       5,000       39.0       39.750       45.4         3.3       7,990       37.8       6,390       40.6       4,150       35.9       6,500       42.5       4,270       48.8       2,650       37.9       4,650       45.6       3,300       51.8         1.2       5,880       44.7       5,110       47.2       3,900       43.9       5,300       50.2       3,820       56.1       2,440       46.3       4,470       53.7       2,950       59.3         1.0       4,350       51.3       3,780       53.6       3,500       51.6       3,260       62.8       2,330       54.3       3,280       61.2       2,640       66.4         2.2       3,270       57.3       2,840       59.5       2,510       58.8       2,610       64.3       2,470       69.2       2,110       62.0       2,350       68.4       2,170       72.9         2.2       2,650       62.9       2,170       65.1       1,980       65.7       2,030       70.7       1,820       74.9

A6-829-005492D

# 23 ft. - 38 ft. TELE. JIB

On Outriggers - 360°

With Front Jack

Main		ft. JIB			retrac	ted)		33	ft. JIB	LENGT	Н		38	ft. JIB L	FNGT	H (fully	extend	ed
Boom		FFSET		FFSET		FFSET	·····	FFSET	15° C	FFSET	30° (	DFFSET	0° 01	FSET		FFSET		FFSET
Angle	Rad. Ref.ft.	Cap. Ibs,	Rad. Ref.ft.	Cap. Ibs.	Rad. Ref.ft,	Cap. Ibs.	Rad. Ref.ft.	Cap. Ibs.	Rad. Ref.ft.	Cap.								
_75°	27.5	12,500	31.4	7,300	35.0	4,500	29.0	7,600	35.3	4,900	41.5	2,900	31.0	5,000	39.0	3.750		2,230
70	33.3	8,010	37.8	6,390	40.6	4,150	35.9	6,500	42.5	4,270	48.8	2,650		4.650		3.300		1,990
65	40.2	5,940	44.7	5,200	47.2	3,900	43.9	5,300	50.2	3,820	56.1	2,440		4.470		2,950		1,870
60	47.0	4,500	51.3	3,800	53.6	3,680	51.6	3,650	57.5	3,260	62.8	2,330		3,350		2.650		1,770
55	53.2	3,400	57.3	2,920	59.5	2,900	58.8	2,830	64.3	2,500		2,230		2,650		2.210		1.680
50	59.2	2,730	62.9	2,320	65.1	2,280	65.7	2,160	70.7	1,920		1,770			75.0	1,740		1,620
45	64.7	2,130	68.0	1,860	69.9	1,810	71.9	1,670	76.5	1,540		1.420	75.8	1.560	81.1	1,440		1,350
40	69.6	1,610	72.6	1,480	74.2	1,420	77.7	1,310	81.7	1.240	84.7	1,190	81.8	1,220	86.4	1,140	89.0	the second s
35	74.0	1,260	76.6	1,160	77.9	1,110	82.8	1,050	86.2	990	88.6	970	87.2	930	91.2	900	93.0	1,110 890
30	77.8	1,000	80.1	920	81.0	880				-			<u> </u>			500		890

A6-829-005692D

No load stability on outriggers with 23-38 ft. tele, jib installed:

	ret. 93 ft.	33 ft. Tele-jib 103 ft.	Tele-jib fully ext. 108 ft.	
Min. boom angle for indicated boom length	2°	4 <sup>0</sup>	$6^{\circ}$	
Max, boom length including jib for 0° boom angle	92.5 ft.	101.7 ft.	106.4 ft.	

#### JIB CAPACITY NOTES

23' (7.1m) Tele. Jib length may be used for double line lifting service. 33' (10.1m) and 38' (11.6m) jib lengths may be used for single line lifting service only. Capacities are based on structural strength of 23'-38' (7.1m-11.6m) Tele. Jib at a given main boom angle regardless of main boom length.
 WARNING: Operation of machine with heavier loads than the

- capacities listed is strictly prohibited. Machine tipping with jib occurs rapidly and without advance warning.
  Capacities listed are with fully extended outriggers only.
  WARNING: Lifting on rubber with jib is prohibited.
  Reference radii listed are for fully extended boom only 70' (21.2m).

23 ft. JIB with 28-70 ft. BOOM	REDUCTIONS FOR LOAD HANDLING [	DEVICES
*Stowed - 250 lbs. *Erected - 1,985 lbs.		
23-38 ft. TELE. JIB with 28-70 ft. BOOM	HOOKBLOCKS 30 Ton, 4 Sheave	NOTE: All Load Handling Devices and Boom Attachments are Considered Part of the Load
*Stowed - 414 lbs. *Erected (Retracted) - 3,659 lbs. *Erected (Extended) - 4,611 lbs.	12 Ton, 1 Sheave	and Suitable Allowances MUST BE MADE for Their Combined Weights, Weights are for Grove furnished equipment.

\*Reduction of main boom capacities.

# **IS**527.5

.5 TON CAPACITY ) ft. BOOM (FULL POWER)

**6x4 CARRIER** PCSA CLASS 10-68 **85% OF TIPPING** 

# i CAPACITIES IN POUNDS ERS FULLY EXTENDED

### With or Without Front Jack

+				****						
C	om Leng	th in Fee	et							
	46	52	58	64	70					
				1	1					
	35,000									
	(73)									
	30,300	29,750	29,150							
	(69)	(72)	(74.5)							
	23,200	23,000	22,600	22,250	20,500					
_	(62)	(66)	(69.5)	(72)	(74)					
	17,950	17,950	17,950	17,950	17,650					
	(54.5)	(60)	(64)	(67)	(69.5)					
	13,200	13,200	13,200	13,200	13,200					
_	(46.5)	(53)	(58)	(62)	(65)					
	10,470	10,470	10,470	10,470	10,470					
	(36.5)	(45.5)	(51.5)	(56.5)	(60)					
	8,480	8,480	8,480	8,480	8,480					
	(23)	(36.5)	(45)	(50.5)	(55)					
		6,830	6,830	6,830	6,830					
_		(25)	(37)	(44.5)	(49.5)					
			5,720	5,720	5,720					
1			(26.5)	(37)	(43.5)					
			4,780	4,780	4,780					
_			(3.5)	(28)	(37)					
				3,940	3,940					
_				(13)	(28.5)					
	3,280									
	(15.5)									
	ed length (no load) 0									
D	om angle		(		70					
		A	6-829-006	5359 & -0	03716F					

۲ G ROY

# **FULL HYDRAULIC CARRIER-MOUNTED CRANE**

### 360° – With Front Jack

Radius	r		Main P.		th in Ca	- 1		
in			wain B	oom Leng	gtn in Fe	et		
Feet	28	34	40	46	52	58	64	70
10	55,000	36,000	36,000	<u> '`</u>	<u>↓ ~ ~ ~</u>	<u>↓ ~~</u>	<u>†−</u>	1 / ·
	(64)	(69)	(73)					
12	40,000	36,000	36,000	35,000	<b> </b>	1	1	
	(59.5)	(65.5)	(70)	(73)				
15	31,000	31,000	30,950	30,300	29,750	29,150	1	
	(51.5)	(59.5)	(65)	(69)	(72)	(74.5)		
20	23,200	23,200	23,200	23,200	23,000	22,600	22,250	20,500
	(36.5)	(49)	(57)	(62)	(66)	(69.5)	(72)	(74)
25	17,430	17,430	17,430	17,430	17,430	17,430	17,430	17,430
L	(6)	(36)	(47.5)	(54.5)	(60)	(64)	(67)	(69.5)
30		12,410	12,410	12,410	12,410	12,410	12,410	12,410
	See	(15.5)	(36.5)	(46.5)	(53)	(58)	(62)	(65)
35	Warning		9,260	9,260	9,260	9,260	9,260	9,260
	Note 16		(20)	(36.5)	(45.5)	(51.5)	(56.5)	(60)
40				7,280	7,280	7,280	7,280	7,280
45				(23)	(36.5)	(45)	(50.5)	(55)
45					5,830	5,830	5,830	5,830
5.0					(25)	(37)	(44.5)	(49.5)
50						4,670	4,670	4,670
						(26.5)	(37)	(43.5)
55						3,800	3,800	3,800
						(3.5)	(28)	(37)
60							3,130	3,130
							(13)	(28.5)
65				1				2,610
Min ha			<u> </u>	<u> </u>				(15.5)
May ba	om angle	(deg.) for	indicate	d length	(no load)			0
Wax. DO	om lengtl	1 (TL) at (	J deg. bo	om angle	(no load	)		70
NOTE: B	oom angle	are in deg	rees.		A	5-829-00	5363 & -(	003716E

A6-829-006359 & -003716E

- 5. Fated loads do not account for wind on lifted load or boom. It is recommended when wind velocity is above 20 mph (32 km/h), rated loads and boom lengths be appropriately reduced.
   6. Fated loads are for lift crane service only.
   7. Eo not operate at a radius or boom length where capacities are not listed. At these positions, the crane may overturn without any load on the hook.
   8. The maximum load which can be telescoped is not definable because of variations in loadings and crane maintenance, but it is safe to attempt retraction and extension within the limits of the capacity chart.
   9. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used.
   10. For safe operation, the user shall make due allowances for his particular job conditions, such as; soft or uneven ground, out of level conditions, high winds, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electric wires, etc. Side pull on boom or jib is extremely dangerous.
   12. Handling of personnel from the boom is not authorized except with equipment furnished and installed by Grove Marateturing Company.
   13. Keep load handling devices a minimum of 18 inches (45.7 cm) below boom head at all times.
   14. The boom angle before loading should be greater than the loaded boom angle to account for deflection.
   15. Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon

- Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
   Capacities for the 28 ft. (8.6m) boom length shall be lifted with the boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for the 34 ft. (10.4m).
   Fadii less than 35 feet or 12 meters not recommended when lifting over front on machine. (Only applicable to machines equipped with front jack cylinder.)
- DEFINITIONS:
   Operating Radius: Horizontal distance from a projection of the axis of rotation to the supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
   Loaded Boom Angle (Shown in Parenthesis on Main Boom Capacity Chart): is the angle between the boom base saction and the horizontal, after lifting the rated load at the rated radius with the rated boom length.
   Working Area: Areas measured in a circular arc about the center line of rotation as shown on the working area diagram.

  - diagram
- Freely Suspended Load: Load hanging free with no direct external force applied except by the lift cable.
   Side Load: Horizontal force applied to the lifted load either on the ground or in the air.



OVER SIDE — Without Front Jack

# TMS

27.5 TOP

28 ft. - 70 ft. BO

6x4 ( PCSA C

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> 2. 3. 4. 5.

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# RATED LIFTING CAPA ON OUTRIGGERS FU

### OVER REAR - With or W

Radius			Main Bo	om Leng	th in Fee	et		
in								
Feet	28	34	40	46	52	58	64	70
10	55,000	36,000	36,000	T			ĵ	1
	(64)	(69)	(73)				ĺ	
12	40,000	36,000	36,000.	35,000				
	(59.5)	(65.5)	(70)	(73)		l		
15	31,000	31,000	30,950	30,300	29,750	29,150	1	[
	(51.5)	(59.5)	(65)	(69)	(72)	(74.5)		
20	23,200	23,200	23,200	23,200	23,000	22,600	22,250	20,50
	(36.5)	(49)	(57)	(62)	(66)	(69.5)	(72)	(74)
25	17,430	17,430	17,430	17,430	17,430	17,430	17,430	17,43
	(6)	(36)	(47.5)	(54.5)	(60)	(64)	(67)	(69.5
30		12,410	12,410	12,410	12,410	12,410	12,410	12,41
		(15.5)	(36.5)	(46.5)	(53)	(58)	(62)	(65)
35	See Warning		9,260	9,260	9,260	9,260	9,260	9,26
	Note 16		(20)	(36.5)	(45.5)	(51.5)	(56.5)	(60)
40				6,830	6,830	6,830	6,830	6,83
				(23)	(36.5)	(45)	(50.5)	(55)
45					5,450	5,450	5,450	5,45
					(25)	(37)	(44.5)	(49.5
50						4,470	4,470	4,47
						(26.5)	(37)	(43.5
55						3,500	3,500	3,50
						(3.5)	(28)	(37)
60							2,760	2,76
							(13)	(28.5
65								2,20
								(15.5)
Min. boom angle (deg.) for indicated length (no load)								
Max. boom length (ft.) at 0 deg. boom angle (no load)								

Radius	I		Main Bo	om Leng	th					
in				-						
Feet	28	34	40	46	Г					
10	55,000	36,000	36,000		Г					
	(64)	(69)	(73)							
12	40,000	36,000	36,000	35,000	Γ					
	(59.5)	(65.5)	(70)	(73)	1					
15	31,000	31,000	30,950	30,300	2					
	(51.5)	(59.5)	(65)	(69)	C					
20	23,200	23,200	23,200	23,200	2					
	(36.5)	(49)	(57)	(62)	le					
25	17,950	17,950	17,950	17,950	T					
	(6)	(36)	(47.5)	(54.5)	LŒ					
30		13,200	13,200	13,200	1					
		(15.5)	(36.5)	(46.5)	(5					
35	See Warning		10,470	10,470	11					
	Note 16		(20)	(36.5)	(4					
40				8,480	1					
				(23)	(3					
45					(					
					(2					
50										
55										
55										
60										
50										
65					<u> </u>					
_										
Min. boo	Min. boom angle (deg.) for indicated length (no									
Max.bo	om length	n (ft.) at (	deq. bo	om angle	(n					
	oom angles				<u></u>					

NOTE: Boom angles are in degrees.

#### LIFTING CAPACITY NOTES:

GENERAL:

- GENERAL:
  1. Rated loads as shown on capacity chart pertain to this crane as originally manufactured and equipped. Modifications to the crane or use of optional equipment other than that specified can result in a reduction of capacity. Use only the jib or boom extension supplied with this crane, do not substitute jibs or boom extensions without the written approval of Grove Mfg. Co.
  2. Construction equipment can be hazardous if improperly operated or maintained. Operation and maintenance shall be in compliance with the information in the Operator's and Safety Handbooks, Service and Parts Manuals supplied with this crane. If these manuals are missing, order replacements from the manufacturer.
  3. The operator and other personnel associated with this crane shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) Safety Standards for cranes.
  1. The crane shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface it

SE TUP:
1. The crane shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports of sufficient strength under the outrigger floats or tires to spread the load to a larger bearing surface.
2. For outrigger operation, outriggers shall be fully extended with tires raised free of crane weight before operating the boom or lifting loads.
3. When equipped with front jack cylinder, the front jack cylinder shall be set in accordance with the written procedure.
4. When equipped with extendable counterweight, the counterweight shall be fully extended before operation.

procedure.
4. When equipped with extendable counterweight, the counterweight shall be fully extended before operation.
5. Tires shall be inflated to the recommended pressure before lifting on rubber.
6. With certain boom and hoist tackle combinations, maximum capacities may not be obtainable with standard cable lengths.
7. Detribution procedure.

Cable lengths.
 Rotation resistant wire rope is best suited for single line lifting operations. Consult the wire rope manufacturer for specific recommendations concerning multiple part reeving.
 B. Do not transport crane with boom extension or jib erected.
 OPERATION:

OPERATION:
1. Rated loads at rated radius shall not be exceeded. Do not tip the machine to determine allowable loads. For clamshell operation, weight of load must not exceed 80% of rated lifting capacities.
2. Rated loads do not exceed 85% of the tipping load as determined by SAE Crane Stability Test Code J-765a.
3. Rated loads include the weight of hook block, slings and auxiliary lifting devices and their combined weights shall be subtracted from the listed ratings to obtain the net load which may be lifted.
4. Load ratings are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.

# TMS527.5

**27.5 TON CAPACITY** 28 ft. - 70 ft. BOOM (FULL POWER)

> **6x4 CARRIER** PCSA CLASS 10-68 **85% OF TIPPING**

# RATED LIFTING CAPACITIES IN POUNDS ON OUTRIGGERS FULLY EXTENDED

#### **OVER REAR** – With or Without Front Jack

Radius in			Main Bo	om Leng	th in Fee	et			
Feet	28	34	40	46	52	58	64	70	
10	55,000	36,000	36,000			1	1	Î	
	(64)	(69)	(73)						
12	40,000	36,000	36,000	35,000	1	1	1	1	
	(59.5)	(65.5)	(70)	(73)					
15	31,000	31,000	30,950	30,300	29,750	29,150	1		
	(51.5)	(59.5)	(65)	(69)	(72)	(74.5)			
20	23,200	23,200	23,200	23,200	23,000	22,600	22,250	20,500	
	(36.5)	(49)	(57)	(62)	(66)	(69.5)	(72)	(74)	
25	17,950	17,950	17,950	17,950	17,950	17,950	17,950	17,650	
	(6)	(36)	(47.5)	(54.5)	(60)	(64)	(67)	(69.5)	
30		13,200	13,200	13,200	13,200	13,200	13,200	13,200	
		(15.5)	(36.5)	(46.5)	(53)	(58)	(62)	(65)	
35	See Warning		10,470	10,470	10,470	10,470	10,470	10,470	
	Note 16		(20)	(36.5)	(45.5)	(51.5)	(56.5)	(60)	
40				8,480	8,480	8,480	8,480	8,480	
				(23)	(36.5)	(45)	(50.5)	(55)	
45					6,830	6,830	6,830	6,830	
					(25)	(37)	(44.5)	(49.5)	
50						5,720	5,720	5,720	
						(26.5)	(37)	(43.5)	
55						4,780	4,780	4,780	
						(3.5)	(28)	(37)	
60							3,940	3,940	
							(13)	(28.5)	
65								3,280	
Min, boom angle (deg.) for indicated length (no load)									
Max. boom length (ft.) at 0 deg. boom angle (no load)         NOTE : Boom angles are in degrees.         A6-829-006359 & -0									



360° - With

Radius			Main Bo	oom L
in			<b>r</b>	
Feet	28	34	40	46
10	55,000	36,000	36,000	
	(64)	(69)	(73)	
12	40,000	36,000	36,000	35,00
	(59.5)	(65.5)	(70)	(73)
15	31,000	31,000	30,950	30,30
	(51.5)	(59.5)	(65)	(69)
20	23,200	23,200	23,200	23,20
	(36.5)	(49)	(57)	(62)
25	17,430	17,430	17,430	17,43
	(6)	(36)	(47.5)	(54.5
30		12,410	12,410	12,41
		(15.5)	(36.5)	(46.5
35	See Warning		9,260	9,26
	Note 16		(20)	(36.5
40				7,28
				(23)
45				
50				
55				
60				
65				
Min. boo	om angle	(deg.) for	r indicate	d leng
Max. bo	om lengtl	h (ft.) at	0 deg. bo	om an

rrane as originally manufactured and equipped. In than that specified can result in a reduction of S crane, do not substitute jibs or boom extensions

rated or maintained. Operation and maintenance and Safety Handbooks, Service and Parts Manuals placements from the manufacturer. shall fully acquaint themselves with the latest y Standards for cranes.

nding on the nature of the supporting surface, it ength under the outrigger floats or tires to spread

1 tires raised free of crane weight before operating

nder shall be set in accordance with the written

ight shall be fully extended before operation. ng on rubber

I capacities may not be obtainable with standard ig operations. Consult the wire rope manufacturer

p the machine to determine allowable loads. For led lifting capacities. determined by SAE Crane Stability Test Code

ciliary lifting devices and their combined weights d which may be lifted. : shall be made to move a load horizontally on the

5. Fated loads do not account for wind on lifted load or boom. It is recommended when wind velocity is

- 5. Fated loads do not account for wind on lifted load or boom. It is recommended when wind velocity it mph (32 km/h), rated loads and boom lengths be appropriately reduced.
   6. Fated loads are for lift crane service only.
   7. Evo not operate at a radius or boom length where capacities are not listed. At these positions, the coverturn without any load on the hook.
   8. The maximum load which can be telescoped is not definable because of variations in loadings maintenance, but it is safe to attempt retraction and extension within the limits of the capacity chart.
   9. When either boom length shall be used.
   10. For safe operation, the user shall make due allowances for his particular job conditions, such as; soft ground, out of level conditions, high winds, side loads, pendulum action, jerking or sudden stopping hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electric wires pull on boom sections must be extended equally at all times.
   12. Handling devices a minimum of 18 inches (45.7 cm) below boom head at all times.
   13. Keep load handling devices a minimum of 18 inches (45.7 cm) below boom head at all times.
   14. The boom angle before loading should be greater than the loaded boom angle to account for deflectior of 5. Capacities appearing above the bold line are based on structural strength and tipping should not be r as a capacity limitation.

- 15. Capacities appearing above the boin line are based on structural strength and topping should not be a as a capacity limitation.
  16. Capacities for the 28 ft. (8.6m) boom length shall be lifted with the boom fully retracted. If boom ratracted, capacities shall not exceed those shown for the 34 ft. (10.4m).
  17. Fadii less than 35 feet or 12 meters not recommended when lifting over front on machine. (Only ap
- machines equipped with front jack cylinder.) DEFINITIONS:

DEFINITIONS:
1. Operating Radius: Horizontal distance from a projection of the axis of rotation to the supporting surf loading to the center of the vertical hoist line or tackle with load applied.
2. Loaded Boom Angle (Shown in Parenthesis on Main Boom Capacity Chart): is the angle between the list is section and the horizontal, after lifting the rated load at the rated radius with the rated boom length.
3. Working Area: Areas measured in a circular arc about the center line of rotation as shown on the wc diacam.

diagram. 4. Freely Suspended Load: Load hanging free with no direct external force applied except by the lift cab 5. Side Load: Horizontal force applied to the lifted load either on the ground or in the air.

# ROVE<sup>®</sup> TMS527.5 G

23 ft. "A" FRAME JIB On Outriggers - Over Side & Rear Without Front Jack

	0° O	FFSET	15° O	FFSET	30° C	FFSET
BOOM ANGLE	Rad. Ref. ft.	Cap. Ibs.	Rad. Ref. ft.	Cap Ibs.	Rad, Ref. ft.	Cap. Ibs.
75°	27.0	12,000	32.5	7,700	35.7	5,070
70	33.3	8,100	38.1	7,000	41.2	4,800
65	40.2	5,980	44.9	5,260	47.8	4,500
60	47.0		51.3	3,800	54.0	3,590
55	53.2	3,350	57.3	2,970	59.8	2,840
50	59.2	2,710	62.9	2,300	65.1	2,300
45	64.7	2,160	68.0	1,880	69.9	1,880
40	69.6	1,720	72.6	1,560	74.2	1,510
35	74.0	1,370	76.6	1,270	77.9	1,180
30	77.8	1,120	80.1	1,050	81.0	950

A6-829-005452F

## 23 ft. "A" FRAME JIB On Outriggers - 360° With Front Jack

_		FFSET		FFSET	30° (	FFSET
Boom Angle	Rad. Ref, ft.	Cap. Ibs.	Rad. Ref. ft.	Cap. Ibs.	Rad. Ref. ft.	Cap. Ibs.
75°	27.0	12,000	32.5	7,700	35.7	5,070
70	33.3	8,330	38.1	7,000	41.2	4,800
65	40.2	6,110	44.9	5,430	47.8	4,500
60	47.0	4,800	51.3	4,300	54.0	4,070
55	53.2	3,700	57.3	3,430	59.8	3,200
50	59.2	2,920	62.9	2,770	65.1	2,570
45	64.7	2,330	68.0	2,250	69.9	2,120
40	69.6	1,930	72.6	1,850	74.2	1,760
35	74.0	1,510	76.6	1,500	77.9	1,480
30	77.8	1,320	80.1	1,300	81.0	1,300

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#### JIB CAPACITY NOTES:

- All capacities are in pounds 23 ft. jib may be used for double line lifting service. Capacities are based on structural strength of 23 ft. jib at a given main boom angle regardless of main boom length length
- Nength. WARNING: Operation of machine with heavier loads than the capacities listed is strictly pro-hibited. Machine tipping with jib occurs rapidly and without advance warning. Capacities listed are with fully extended out-riggers only. 2. 3
- riggers only. WARNING: Lifting on rubber with jib is pro-4.
- WARNING: Lifting on rubber with jib is pro-hibited.
   Reference radii listed are for fully extended main boom only.
   No load stability on outriggers with 23 ft. jib installed:
  - a. Minimum boom angle for fully extended main boom = 0°.
    b. Maximum boom length at 0° main boom angle = 93 ft.



# LIFTING AREA DIAGRAM





**GROVE MANUFACTURING COMPANY** Division of Kidde, Inc KIDDE

Box 21, Shady Grove, Pennsylvania 17256 Phone: (717) 597-8121 Telex: 842308 Cable: GROVE MFG

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