

SPECIFICATIONS

1. DIMENSIONAL DATA

1.1. Length:

Travel Position (overall)
7633 mm (300.5 ins.)

1.2. Width:

(overall)
2578 mm (101.5 ins.)

1.3. Height:

(overall, travel position)
2451 mm (96.5 ins.)

1.4. Boom:

Extended radius: 32'-11"

Retracted radius: 16'-11"
(from boom pivot to
sheave centre)

Function speeds and times
based on 30 gpm system
flow:

Swing speed: 180°=20.5 sec

Boom luffing (-0° to +72°)

Up: 20.7 sec

Dn: 18.4 sec

Boom extension speed:

Extend: 36.5 sec

Retract: 40.3 sec

Boom elevation: minus 0 to
plus 72 degrees

**Boom tip height @ full
extension:**

58 ft above ground with jib

43 ft 5 in without jib

Outrigger spread:

Side to Side: 13 ft 4 in.

Front to Back: 14 ft 8 in.

Outrigger pad size: 14" Sq

Controls:

Pilot Operated cab with
override on overload
system.

1.5. Weight:

Standard Travel Mode:

Front Axle 6,065 kg (13,370 lbs)

Rear Axle 5,597 kg (12,340 lbs)

Total: 11,662 kg (25,710 lbs)

(Weights include 180 lb driver, &
hook block, and do not include
equipment such as, tools, chains,
or rigging, or jib, etc.)

1.6. Wheel Base:

2642 mm (104.0 ins.)

1.7. Track Width:

2045 mm (80.5 ins.)

1.8. Tires:

Michelin 15.5 R25 x HA
one star.

Pressure: 400 kPa (58.0 psi)

1.9. Turning Radius (outside):

Front Wheel Steer

8230 mm (324 ins.)

All Wheel Steer

4,750 mm (187 in.)

- 1.10. Ground Clearance:**
317.5 mm (12.5 ins.)
(tie downs)
- 1.11. Travel Speed:**
Forward 38.6 Km/h
(24 mph)
Reverse 25 Km/h
(15 mph)
- 1.13. Fuel Capacity:**
210 litres (50 US Gal)
- 1.15. Hydraulic Oil Capacity:**
Reservoir: 227 litres
(60.0 Gal)
Whole system: 53 litres
(14 Gal)
- 1.16. Coolant Capacity:**
28 litres (7.4 gal)
- 1.17. Engine:**
Cummins Diesel, 4 cyl.,
rated 130 horsepower at
2500 rpm, gross torque
344 ft lb @ 1500 rpm, Oil
Capacity 9.5 litres (2.5 gal)
Model- Cummins
4BTA 3.9L
Rated 130 HP @ 2500rpm

Power shift Transmission
- 1.18. Electric System:** 12V DC

- 1.19. Transmission:**
Dana T20000 series Power
Shift, 3 speed forward and
reverse with , low-high
range shift, electric shift
located on the steering
column.
Oil Capacity: 23 litres (6.0
gal)
- 1.20. Axles:**
Front Drive Steer: 9,979
kg (22,000 lbs.) capacity,
double reduction, posi-trac
differential.
Rear: 10,432 kg (22,000
lb) capacity maxi-trac,
double reduction
differential.
Oil Capacity: 15 ltrs each
- 1.21. Suspension:**
Fixed, Oscillating rear axle
& solid mount front axle.
- 1.22. Brakes:**
Operational- hydraulic
activated disc type.
Parking – Spring applied
disc on transmission.
Brake, Emergency:
Manufacture- MICO
Type- Failsafe hydraulic
released/spring applied
Calliper- type
Disc- 13” x 1/2” thick
Location-
Transmission
Control – Two position

switch with solenoid valve
'OFF/ON'

1.23. Steering:

Full hydraulic power.

1.24. Chassis:

High strength fabricated
steel frame structure.

1.25. Cab:

Fully glazed permitting 360
degree visibility. Cab is
equipped with heat and air
conditioning.

1.26. Transportable by:

C-130 Aircraft 13,000 lbs
per axle.

1.27. Hydraulic Pumps:

Torque converter driven
30.4 gpm & 15.2 gpm
@2500 rpm. 30.4 gpm
pump supplies hydraulic flow
to hoist, boom extend, boom
lift and swing.

15.2 gpm pump powers
steering, brakes and
outriggers.

1.28. Winch:

Single line Pull: 9,100 lbs
Speed: 17.37m/m (57ft/m)
Max. Permissible line pull
w/3.5 F.S. is 8,625 lbs

Wire Rope: Cable supplied
is 240 ft of 1/2, 6 x36
IWRC Compac EIPS RRL
Bright, with breaking
strength of 30,200 lbs.

Sheaves: 14" dia Bearing
Mounted

2. OPERATIONAL DATA SUMMARY

2.1. GENERAL DESCRIPTION

This crane is a self-propelled hydraulic crane. The crane is powered by an engine, located within the main frame. The controls are located on the left side of the crane cab. The cab contains all the controls necessary to operate the crane.

The engine power is transmitted through the torque converter and transmission to the drive wheels. The hydraulic pumps are direct driven off the transmission pump drives. Hydraulic oil is then delivered through the control valve through a hydraulic swivel to crane functions. The pilot operated control valves are operated using joy stick type levers, located on the operator's seat arm rests. The valves direct the oil to the respective crane systems.

A telescoping two (2) section boom is utilized on the crane. The boom is controlled through the use of boom lift and extension cylinders and swing drive system. The boom can be equipped with optional 15 extensions, jibs, etc.

The outriggers are wing style that pivot down, with operation made possible by the use of hydraulic

cylinders. They are electrically controlled through toggle switches that are located on the right hand side in the operator's compartment.

2.2. CARRIER

The carrier is specially designed for military applications. It is 18 ½ ft long and 8 ft wide. The crane is equipped with an enclosed two person cab with left and right doors. Outriggers are an integral part of the frame.

2.3. CAB

The crane operator's station is a standard two person cab where all craning and operating controls as well as engine monitoring instrumentation is located. The operator's seat and steering wheel are adjustable.

2.4. ENGINE

A diesel engine is housed in the engine compartment located to the rear of the crane. The engine is used to provide crane mobility, drive the hydraulic pumps, and supply electrical power to charge the battery, and provide power for crane control circuits, accessories, and lighting. All controls for the

engine are located in the operator's station. There are removable side covers for access to the engine fluid level checks. The engine side covers come OFF for servicing.

2.5. FUEL TANK

A single fuel tank is mounted at the left side of the machine between the wheel fenders. The tank has a total capacity of 50 US gallons. The tank is equipped with a fuel level sender. The sender unit works in conjunction with a fuel level gauge on the front console of the cab.

2.6. DRIVE TRAIN

The drive train consists of the transmission and drive line. The transmission transmits power from the engine to the drive axles through the drive line. It is a three (3) speed power shift transmission with range shift with two (2) output drive shafts one to each axle, to provide four (4) wheel drive.

2.7. AXLES

The front axle is a drive steer axle with a maxi track standard differential. It is fix mounted to the frame and has hydraulically applied disc brakes located at each wheel.

The rear axle is also a drive steer axle with a no spin type differential. It is a trunnion mounted oscillating axle with wheel mounted disc brakes.

2.8. STEERING SYSTEM

The crane incorporates a hydraulically controlled steering system. A steering control valve directs flow from the hydraulic pump to the hydraulic steer cylinder to provide full power steering for the front and rear axles.

2.9. OUTRIGGERS

Butterfly style stabilizers positioned on the front and back of the machine provide stability during craning operations. The stabilizer cylinders have holding valves to raise and hold the crane in position. They are controlled by electric toggle switches located to the right of the operator inside the cab.

2.10. TURRET MOUNTING

The boom turret is bolted onto the swing bearing which is bolted to the frame structure. Thirty (30) bolts mounted in a circular pattern hold the turret to the swing bearing and thirty (30) bolts hold the swing bearing to the frame.

2.11. BOOM ASSEMBLY

The boom is a two (2) section telescopic full power hydraulic.

The two (2) boom sections are fabricated utilizing a rectangular box section design. The steel used in fabrication is for operation in cold ambient temperatures.

The boom extension system is fitted with dual counterbalance valves to hold the boom in the extended positions above horizontal and prevent extension when in positions below horizontal.

The boom extension cylinder is sized to permit telescoping with rated load to maximum extension. Replaceable nylatron wear pads are used on the top and bottom of each boom section.

2.12. BOOM LIFT

The boom lift function is powered by a single (1) cylinder, positioned to give maximum clearance, when handling loads with a fully retracted boom.

Boom lift cylinder has a holding valve for positioning of boom between 0 degrees and plus 72 degrees. A holding valve is bolted

to the cylinder to prevent boom lowering due to accidental hose or tube damage.

2.13. SWING

The swing function utilizes a shear ball type swing bearing. A high torque Gerotor style motor driving through a worm style self locking gear reduction provides smooth positive swing operation.

A fail safe, spring applied, hydraulically released disc brake is located between the drive motor and gear reduction.

High strength bolts hold the upper turret structure to the shear ball bearing and to the frame pedestal.

Swing rotation is 360 degrees at a swing speed of 2 rpm.

A hydraulic swivel is used to transfer oil flow to the crane functions. An electric slip ring assembly is used to supply power for lights and hoist rotation tell tail mounted on the turret..

2.14. OVERLOAD SYSTEM

A radio operated load moment overload system is incorporated into the design of the crane to assist the operator in preventing or imposing an overload. An anti-

two block device is also part of the system as is a manual boom angle indicator.

The overload system is a Wylie model W3350R radio rated capacity indicator with a panel mounted monitor. A load measuring pin located in the hoist cable dead end sends a radio signal to the monitor when lifting with main boom or alternately when lifting with 15 foot jib, a load measuring pin in the jib sheave sends the load signal to the panel mounted monitor.

Also, as part of the system a boom length reel with internal boom angle sensor which is mounted on left side of boom, sends the boom length and boom angle information via radio to the panel mounted monitor. From the respective readings of load boom length and boom angle the monitor calculates and displays the load and the permissible load on the crane.

For the monitor to display correct readings, the monitor must be set up for either two-part main boom lift, single part jib lift, lifting over front or on tires. Frame mounted proximity switches automatically signal monitor position of boom for over front plus or minus 40 degrees from center or pick and carry position.

Quick disconnect plugs provided at end of the boom must be unplugged from main boom and jib sensors must be plugged in and vice versa for either main boom or jib lifting configurations. The anti-two block is also connected into the load monitor system plugs. The monitor will stop crane functions in the event of overload or anti-two block. An audible buzzer sounds as well as overload is shown on the monitor screen.

In the event of overload or anti-two block stops hoisting, boom extend and boom down functions.

Refer to Wylie Operators Manual located in Section 9 Service Packages of these manuals for calibration, set-up and or troubleshooting of system).

2.15. CONTROLS

Crane functions, driving controls and engine monitoring instruments are console mounted within easy reach and sight of the crane operator. Crane control valve levers are located in the operator's arm rests. Outrigger controls are to the right of driver. Boom functions are controlled by single axis-type controllers.

2.16. POWER SOURCE

The hydraulic power for the crane is provided by the engine driven transmission pump drives. Double gear type pumps with a capacity of 30.4 gpm and 15.2 gpm provide power for all crane functions. Pressure check points are provided for troubleshooting.

2.17. WINCH AND CABLE

The hydraulically powered winch is rated for 12,000 pounds single line pull on first layer. The winch has equal speed up and down. The winch has a planetary type reduction with fail safe multi-disc brake. Single line speed is fpm (mean drum). Permissible line pull with 3.5 to 1 F.O.S. is 3,922 kg (8,625 lbs).

Cable supplied is 240 ft of 1/2 diameter, 6 x36 IWRC Compac EIPS RRL Bright, with breaking strength of 30,200 lbs.

2.18. HYDRAULIC SYSTEM

The hydraulic system consists of a gear type pumps with combined capacity of 45.7 GPM. Pumps are driven off of transmission pump drive. There are pressure check points for troubleshooting. One part of the pump supplies oil flow to a directional control valve stack located behind cab on right inside frame member, providing function and direction for the following;

Swing, Boom extend retract, Boom lift, and hoist. The second part of the pump supplies oil flow to steering, outrigger valve stack and braking system.

Functions may only be operated with engine running.

2.19. ELECTRICAL SYSTEM

The electrical system is 12 volt DC. Head lights, hazard, running & beacon, lights are operated by switches on the dash panel.

CAUTION

If stop/start ignition switch is left in Accessories position, battery will be run dead.

2.20. PARKING BRAKE

The transmission is equipped with one (1) automatic spring applied, hydraulic released calliper brake.

Brake is not used as a service brake, brake is intended to stop and hold vehicle if a malfunction in drive system occurs and axle brakes fail.

Park brake (Emergency) must be in OFF position to engage transmission. When applied transmission will be disengaged. Transmission is interlocked with the brake.

2.21. TRAVEL BRAKE

This machine is equipped with 4 wheel disc brakes for normal travel operation. The travel brake is operated using the foot control pedal.

3. COMPONENT WEIGHTS

3.1. Boom assembly (with oil in cylinders):

Approx. 2,400 kg (3,000 lbs)

3.2. Turret Assembly:

Approx. 1,800 kg (2,150 lbs)

3.3. Outrigger Arms (each with pads):

Approx. 100 kg (220 lbs)

3.4. Axle Loadings:

Boom retracted in travel position over cab:

Front: 13,370 lbs

Rear: 12,340 lbs

3.5. Total Weight:

Total machine: 25,710 lbs

3.6. Hook Block:

Approx. weight 59 kg (130 lbs)

3.7. Axle Weights:

Approx. 700 kg (1,543 lbs)

3.8. Winch:

Approx. 213 kg (470 lbs)

3.9. Wheel Assembly:

Approx. Weight 204 kg (450 lbs)

3.10. Jib Assembly (with pins)

Weight: 302 kg (655 lbs)

3.11. Cab Assembly:

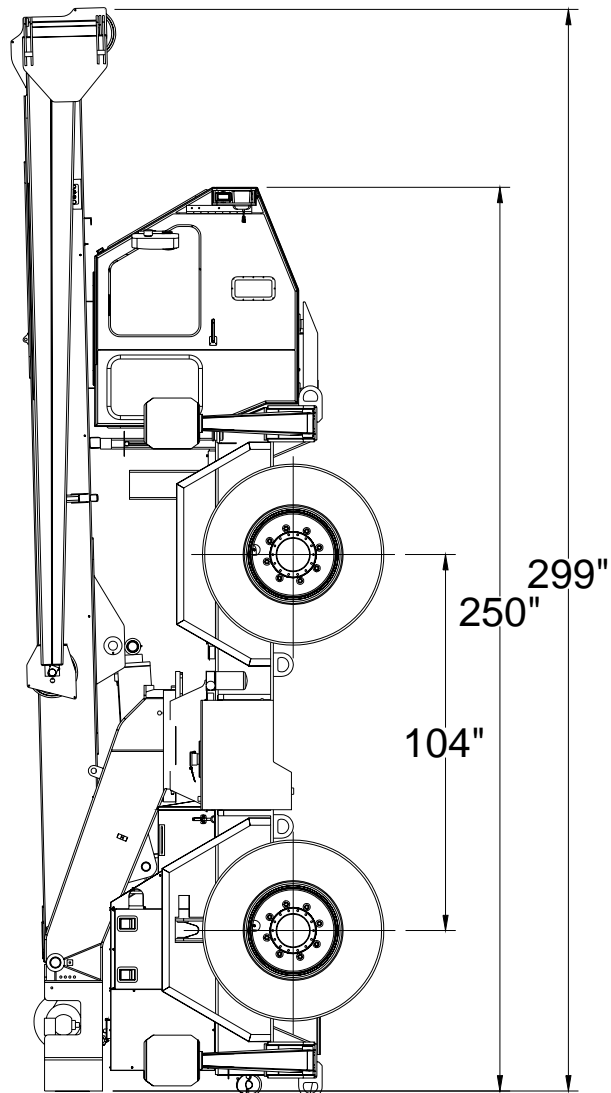
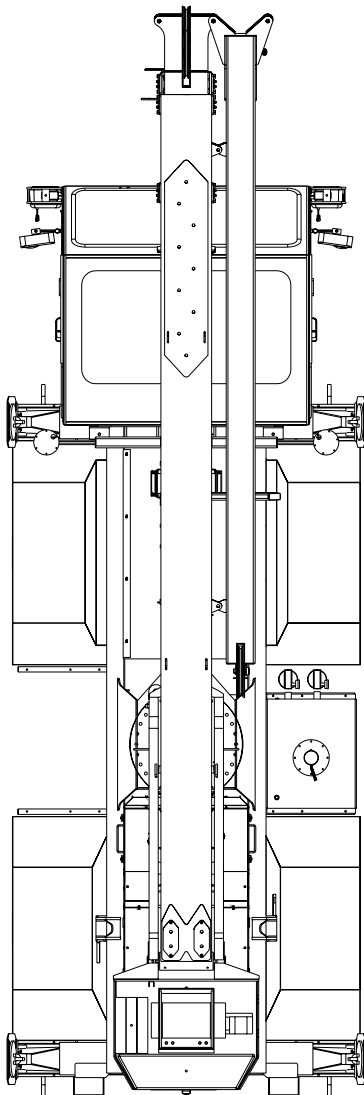
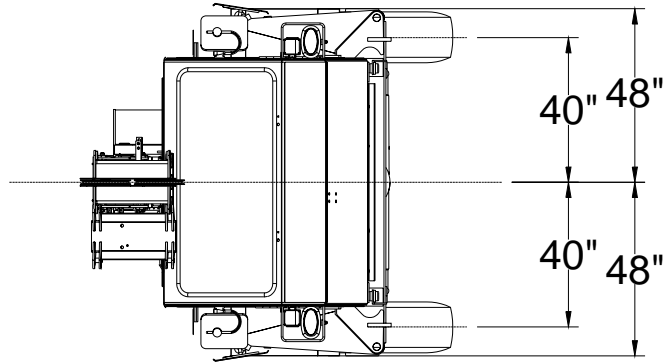
Approx. 1,800 kg (3,968 lbs)

3.12. Engine Transmission Assembly:

Approx. 900 kg (1,984 lbs)

6. CONFIGURATION DIAGRAMS

6.1. Basic Machine Dimensions



6.2. Tie Down Configuration

