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Date: June 2006

Replaces: Form JD104A
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BMC's IC-40-2A is a self-propelled industrial crane designed for in-plant lifting and material handling applications. It has the special features of low height, narrow width, short length, cargo deck, four wheel steer, and four wheel drive. The basic unit consists of a chassis and hydraulic boom assembly. The chassis includes a frame, four hydraulic outriggers, engine, variable speed hydrostatic transmission, and two drive axles with power steering. The boom assembly includes a hydraulic powered continuous rotation turret, three section telescopic boom, hydraulic boom elevating cylinder, hydraulic boom extension cylinders and hydraulic powered hoist. A Rated Capacity Limiter is standard.

IC-40-2A:

3-section hydraulically extended boom with capacity of 9,000 pounds at a 4-foot load radius. Horizontal reach of 19 feet 2 inches and vertical reach of 26 feet. Hoist is located on back of turret.

GENERAL:

Length:

Chassis 10 feet 8 inches
Overall 12 feet 2 inches

Width:

5 feet 4 inches

Height:

Deck 31 inches
Overall 6 feet 9 inches

Wheelbase:

6 feet 6 1/2 inches

Ground Clearance:

Chassis 9 inches
Minimum (Axle) 8 inches

Angle of Approach:

24 degrees

Angle of Departure:

24 degrees

Turning Radius: (Minimum)

9 feet 10 inches

Aisle Width: 90 degree Turn: (Min.)

8 feet 0 inches

Travel Speed: (Max.)

10 MPH

Weight Distribution: (Pounds)

Front Axle 4,160
Rear Axle 4,680
Total 8,840

Tire Footprint Area:

40 square inches, each

Outrigger Footprint Area:

48 square inches, each

Drawbar Pull:

2,000 pounds

Gradeability:

25% (14 degrees)

Boom Movement:

Rotation Continuous
Elevation 70 degrees
Extension 12 feet

GENERAL: (Cont'd)

Tailswing:	3 feet 7 inches
Boom Speeds:	
Rotation	360 deg. in 33 sec. (1.4 RPM)
Elevation	17 seconds
Extension	31 seconds
Sheave Height:	
Without Jib	26 feet 3 inches
With Jib	33 feet 9 inches
Horizontal Reach:	
Without Jib	19 feet 2 inches, C/L Rotation
With Jib	27 feet 2 inches, C/L Rotation

ENGINE:

Standard Gasoline:

Nissan 2.0L, Zenith EFI Dual Fuel, CARB Tier II and EPA Tier I Certified:

Nissan Model H20 industrial gasoline engine complete with throttle body electronic fuel injection, dual fuel and engine management system. Water-cooled, 4-cylinder, 121 CID, 3.43" bore, 3.27" stroke, 51 HP at governed speed of 2,800 RPM. Maximum torque, 105 ft. lbs. at 1,600 RPM. 35 amp alternator, 13.5 gallon gas tank and 33 lb. LPG tank. Includes high temperature and low oil pressure shutdown engine management system. Includes catalytic converter muffler.

Optional Engines and Accessories:

Cummins 2.3L, CARB Tier II and EPA Tier II Certified:

Cummins Model A2300 diesel engine. Water-cooled, 4-cylinder, 140 CID, 3.46" bore, 3.70" stroke. 47 HP at governed speed of 2,600 RPM. Maximum torque, 111 ft. lbs. at 1,800 RPM. 45-amp alternator. (Net Weight: 60 pounds)

Spark Arrestor Muffler:

Spark arrestor muffler used in addition to standard muffler. (Net Weight: 10 pounds)

Engine Shutdown Kit:

Consists of Murphy switches that shut engine down if water temperature is excessive or if oil pressure is too low. For diesel engine only.

HYDROSTATIC TRANSMISSION PUMP:

Standard:

Sauer-Danfoss piston type, 2.8 CID per revolution, direct driven from engine crankshaft. Maximum flow 34 GPM, maximum pressure 4,000 PSI. Electrohydraulic servo and electronic, automotive type controller.

AXLES:

Standard:

Front Axle:

Planetary drive/steer axle with an overall 16.15/1 ratio. Differential is limited slip. Axle is rigidly mounted to frame.

Rear Axle:

Planetary drive/steer axle with an overall 16.15/1 ratio. Differential is limited slip. Axle oscillates 1 1/2 degrees in either direction.

STEERING:

Standard:

Full-hydraulic steering unit controls a steering cylinder attached to each axle. Limited steering if engine dies.

BRAKES:

Standard:

Primary braking from hydrostatic transmission. Foot-actuated wet-disc brakes in each axle for additional braking in some conditions. Lever actuated parking brake to hold crane when not being driven.

TIRES:

Standard:

28x9-15 pneumatic tires, 14 PR. Pressurized to 120 PSI for crane rated loads.

Optional Tires:

Foam Filling of Tires:

Standard tires, foam filled to prevent flats. (Net Weight: 390 pounds)

Spare Tire & Wheel:

28x9-15 pneumatic tires, 14-PR. (Net Weight: 140 pounds)

CHASSIS:

Standard:

Cargo Deck:

29 square foot area. A maximum of 6,000 pounds may be carried on the deck when centered over, or to the rear of the front axle. Nine stake pockets are provided in deck and nine, 1-inch dia. pipe stakes.

Outriggers:

Four hydraulic outriggers with box beam construction. Independent controls for each. Hydraulic cylinders are equipped with direct connected holding valves. Pad dimensions are 6 inches by 8 inches.

Lifting Rings:

Includes four lift rings, one at each corner of the chassis for attaching lifting sling cables.

Front Pulling Eye:

Heavy eye in front bumper provides for attachment of hook block so main winch line can be used for pulling loads at or near floor level.

Optional Chassis Accessories:

Auxiliary Winch:

Optional worm gear winch mounted behind front bumper, with a single lever control at the operator's console. Hydraulic powered to provide bare-drum line pull of 3,000 pounds at 20 feet per minute. Winch drum is 3 1/2 inch dia. by 6 1/4 inches long. The winch includes 80 feet of 5/16 inch wire rope, hook and four-way roller guide. (Net Weight: 120 pounds)

Pintle Hook:

T-60-A Holland 5-ton pintle hook mounted on rear frame member. (Net Weight: 7 pounds)

Lifting Sling:

Sling to attach to Lifting Rings. (Net Weight: 20 pounds)

Headlight and Taillight Grilles:

Consists of welded steel protective grilles for headlights and taillights. Easily removable or swung out of way for replacing bulbs. (Net Weight: 20 pounds)

OPERATOR'S COMPARTMENT:

Standard:

Operator control station provides one-position access to all chassis and crane functions. Includes adjustable operator's seat and retracting seat belt.

Operator's Compartment Accessories:

All Weather Cab:

Consists of rigid mounted canopy section and removable hinged door with safety glass. Rugged canopy structure with laminated glass front and top. Door is equipped with a keyed lock to protect operator's station. Includes heater with two speed fan and 12 volt electric windshield wiper. Includes sliding window in the door and one fold out window in rear to provide flow-through ventilation. Defroster fan and dome light included.
(Net Weight: 180 pounds)

Cab Heater:

Heater with two-speed fan, for units without All Weather Cab. (Net Weight: 15 pounds)

Operator Guard:

Tubular steel weldment with heavy expanded steel mesh top bolts over operator's compartment.
(Net Weight: 55 pounds)

ELECTRICAL SYSTEM:

Standard:

Electrical Group:

12 Volt DC.

Battery:

Group 24 with 550 CCA rating.

Lighting Group:

Consists of two headlights and taillights and 12 volt horn activated by button on instrument panel.

Instrument Group:

Located at operator's station and includes fuel gauge, ammeter, oil pressure, water temperature and hydraulic oil temperature gauges. Hourmeter records hours only during actual engine operation.

Outrigger Alarm System:

112 decibel alarm with alternating two-tone sound is actuated by a switch when the "outrigger down" controls are operated.

Back-up Alarm:

Provides pulsating 97 decibel sound from solid-state alarm when ignition is on and transmission is in reverse.

Optional Electrical Accessories:

Strobe Lights:

Two yellow strobe lights mounted on turret for high visibility. Flash 60-120 times per minute. Draw 1/2 amps each. Includes operator-controlled switch.

Boom Work Lights:

Two work lights, one on side of boom to light boom tip, and one on side of turret to light ground under boom tip. Includes switch at operator's station. (Net Weight: 10 pounds)

HYDRAULIC SYSTEM:

Standard:

Tandem pump mounted to rear end of hydrostatic piston pump which is driven by the engine crankshaft. Delivers 6 GPM at 2,600 PSI for boom circuits and 18 GPM at 2,350 PSI for hoist circuit. System protected by relief valves and two 10-micron filters. Hydraulic reservoir with 14 gallons capacity.

BOOM ASSEMBLY:

Standard:

Three section, high strength steel construction, equipped with bearing pads for efficient support and extension. Double-acting hydraulic cylinders extend boom sections. The primary extension cylinder and the double-acting boom elevation cylinder are equipped with direct connected holding valves. Boom angle indicator provided on side of boom.

BOOM HOIST:

Standard:

Turret mounted, planetary gear hoist is hydraulically powered to provide bare-drum line pull of 5,000 pounds and a line speed of 86 feet per minute. Hoist includes 85 feet of 3/8 inch wire rope, downhaul weight, swivel hook and sheave block for 2-part line. (Required for lifts over 4,500 pounds.) Sheave block weight is 60 pounds. Downhaul weight is 36 pounds.

BOOM SWING:

Standard:

Heavy-duty ball bearing rotation gear with external teeth supports boom. Rotation is powered by hydraulic motor and worm gear drive. 360 degree continuous rotation.

BOOM ATTACHMENTS:

Standard:

Anti-Two-Block Device:

Has electric solenoid dump valve which prevents damage to hoist rope and machine components from accidentally pulling load hook against boom tip. This valve will dump **HOIST RAISE, TELESCOPE EXTEND, BOOM LOWER, SWING LEFT** and **SWING RIGHT** circuits. No other circuits are affected. These circuits are returned to normal operations by operating the "hoist lower" or "telescope retract" control. This system uses a trip arm to activate switch.

Rated Capacity Limiter:

Warns operator of impending overload with audible and visual signals. Has read-outs for load, boom angle, boom length and load radius. Prevents overload by dumping boom functions that cause overload: **HOIST RAISE, TELESCOPE EXTEND, BOOM LOWER, SWING LEFT** and **SWING RIGHT**. These circuits are returned to normal by lowering load to a safe resting place with hoist or by retracting or raising boom to a shorter load radius. There is an override switch under the dashboard.

Optional Boom Attachments:

Boom Extension - 8 Foot:

Provides 8 feet of additional length for lifting loads with load line. Boom extension may be stowed along side base boom section when not in use. Tip sheave, attaching brackets and pins included. Deduct 100 pounds from Capacity Chart when boom extension is in stowed position. Includes switch and trip arm for Anti-Two-Block system. (Net Weight: 130 pounds)

Boom Extension - 8 Foot Offset:

Same as BE-39 except has three settings: 0 degrees (in-line), 15 degrees offset and 30 degrees offset. (Net Weight: 150 pounds)

Searcher Hook:

2000 pounds capacity. Swivel hook with spring latch hangs from support structure projecting outward from boom tip. (Net Weight: 30 pounds)

Should you, as the end user, require an option or special equipment on your IC-40-2A that is not listed on our sales literature, please contact your dealer salesperson or the factory to receive a special quoted price.

Specifications subject to change without notice

CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE									
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS								
	360° ROTATION		OVER FRONT						
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS					
4	7000	8500	7200	9000					
5	5000	7000	6000	7000					
6	3700	5850	5300	5850					
8	2300	4150	4150	4150					
10	1450	3400	3200	3400					
12	1050	2850	2400	2850					
14	900	2350	1900	2450					
16	750	1900	1600	2150					
18	650	1600	1300	1950					
19	600	1450	1150	1850					
20	550	1450	1150	1600					
22	450	1250	1000	1450					
24	400	1050	850	1300					
26	350	850	750	1150					
27	300	750	650	1100					
8' BOOM EXTENSION	8-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET								
	MAIN BOOM ANGLE								
	ANGLE	0°	10°	20°	30°	40°	50°	60°	70°
	* 0°	1100	1200	1300	1450	1600	1850	2300	3500
	* 15°	—	—	1100	1250	1350	1500	1700	2050
* 30°	—	—	—	1100	1200	1300	1450	1600	

* USE 0° FOR STRAIGHT BOOM EXTENSION.
 * USE 0°, 15° OR 30° FOR OFFSET BOOM EXTENSION.
 CAUTION: BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.
 BOOM EXTENSION DEDUCT: 100 LBS. WHEN STOWED ON BASE BOOM,
 DO NOT PICK AND CARRY WITH LOADS ON BOOM EXTENSION.
 CAPACITIES ON OUTRIGGERS ARE 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW BOLDLINE ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPABILITIES. MAXIMUM HYDRAULIC PRESSURE 2600 PSI.



