

1085R Cruz-Air

Custom Built in America. For Today. For the Future.

SPECIFICATIONS

Axles: Torque proportioning (high traction) differential.

Front: Planetary, steering, axle oscillates and is equipped with oscillation lockouts.

Rear: Planetary, steering axle with parking brake.

Tire Size

Standard 17.5 - 25, 16PR; Optional 17.5 - 25, 20PR, Super Ground Grip; Optional 17.5 R 25, Michelin XHAT*

Travel Speeds (Forward and reverse)

Unit equipped with 17.5 - 25 tires.

| Gear Ratios | High | Low |
|-------------|--------|--------|
| 1st mph | 6.7 | 3.1 |
| (km/h) | (10.8) | (5.0) |
| 2nd mph | 12.7 | 5.9 |
| (km/h) | (20.4) | (9.5) |
| 3rd mph | 29.1 | 15.8 |
| (km/h) | (46.8) | (25.4) |

Drawbar Pull

| Gear Ratios | High | Low |
|-------------|--------|---------|
| 1st lbf | 12,016 | 27,856 |
| (kN) | (53.4) | (123.9) |
| 2nd lbf | 5,705 | 13,805 |
| (kN) | (25.4) | (61.4) |
| 3rd lbf | 1,477 | 4,339 |
| (kN) | (6.6) | (19.3) |

3% grade speed (max) 12.4 mph (20.0 km/h)

Brakes:

Service: Hydraulic dry disc on each wheel, foot operated;

Parking: Spring applied, hydraulic released. Located on rear driveshaft

Working: Hydraulic at each wheel. Hand operated.

Maximum Gradeability (Paved Surface)

With no load and 17.5 - 25 tires 95%

Note: Gradeability is a measure of tractive effort only and does not represent grades on which the machine can operate.

Turning Radius

Inside curb — 15'7" (4.75 m)

Outside — 25'6" (7.77 m)

Service Capacities

Fuel tank: 75gal (284 Liters)

Hydraulic system (complete) 75gal (284 Liters)

Hydraulic reservoir 35gal (132 Liters)

Cooling system 9gal (34 Liters)

Engine oil (with filter) 17 qts. (16.1 Liters)

Swing gearbox 8.5 qts. (8 Liters)

Transmission 21qts. (19.9 Liters)

And torque converter

Operating Weights

Standard excavator with rigid dipper, 17.5 - 25, 16 PR tires,

std. cab with heater, rear (std.) outriggers, 60" (1.5 m);

Ditching bucket, Wrist-O-Twist*, full fuel. 175 lb. (79kg)

operator: 42,980 lb. (19,470 kg); Standard excavator with

Extenda-Stick*, 17.5 - 25, 16 PR tires, std. cab with heater,

front and rear (opt.) outriggers, 36" backhoe bucket, full fuel,

175 lb (70 kg) operator: 42,260 lbs. (20,050 kg)

Standard Equipment

Enclosed, total vision, vandal-resistant cab. Tinted windows.

Adjustable bucket seat. Cab controls for all operations. Signal

horn. Windshield wipers. 13'8" (4.2 m) grading and excavation

boom. Fast hoist, crowd and tool. Swing brake. Positive oil

cooler. Hydraulic oil filters. Hydraulic rear outriggers. Hydraulic

service and working brakes. Parking brake - spring applied,

hydraulic-released, on drive shaft. Turn signals. Head and tail-

lights. Four-wheel drive. Planetary axles. Front-2 wheel steering,

4 wheel steering, and crab steering. 17.5 - 25, 16 PR tires.

Power shift transmission, forward and reverse. Torque converter.

Torque proportioning differentials. Electric engine hour meter.

Fuel gauge. Dry-type air cleaner. Cold weather start kit. Remote

boom and swing lubrication. Master battery disconnect switch.

Back-up alarm.

Optional Equipment

15' (4.6 m) rigid dipper. 15' (4.6 m) Extenda-Stick* dipper,

17.5 - 25, 20 PR super ground grip tires. 17.5 R 25 XHAT*

(Michelin) tires. Hydraulic front outriggers. Secondary steering.

Upper vandal cover. Cab heater; LP gas. Excavator boom work

light package. Tool box. Windshield washer. Pintle hitch.

Wrist-O-Twist* with quick latch. Various buckets (See list.)

Lift lugs. Auxiliary hydraulic controls.

Buckets

| Nominal | Bucket | SAE Capacity |
|----------|----------|--------------|
| Width | Weight | (struck) |
| In. (mm) | Lb. (kg) | yd3 (m3) |

General Purpose:

24" (610 mm) 925 lb (420 kg) 0.37 yd3 (0.28 m3)

30" (762 mm) 1,030 lb (467 kg) 0.50 yd3 (0.38 m3)

36" (914 mm) 1,130 lb (513 kg) 0.62 yd3 (0.47 m3)

42" (1,067mm) 1,235 lb (560 kg) 0.74 yd3 (0.57 m3)

Ditch Forming:

60" (1,524mm) 1,005 lb (456 kg) 0.63 yd3 (0.48 m3)

72" (1,829mm) 1,075 lb (488 kg) 0.75 yd3 (0.57 m3)

Front Loading:

60" (1,524mm) 1,626 lb (738 kg) 1.5 yd3 (1.15 m3)

Concrete Removal:

48" (1,219 mm) 1,850 lb (839 kg) NA

Note: For heaped capacities, add approx. 20%

Operator's Cab

All controls for both the lower and upper works are located in

a single, all-steel, weatherproof cab. Windshield of tinted, tem-

pered glass slides open and is stored in an up-and-over position.

Side and rear windows are of tinted Lexan. Separate hand

controls for digging and parking brakes, swing brake, ignition,

directional lights, engine throttle and lock, and steering reversal

are all standard controls in the cab. (Operator controls can be

interchanged to satisfy techniques of most operators).

Engine

Make and model: Cummins QSB4.5-Tier3, turbocharged;

Number of cylinder: 4; Bore and stroke: 4.21 x 4.88"

(107 x 124mm); Displacement: 275 in3 (4506cm3);

Fuel supply: High pressure; Air Cleaner: Dual stage, dry-type;

Oil filter: Renewable cartridge; Lubrication: Positive pressure;

Cooling system: Pressurized radiator and lubricated bearing

impeller pump; Horsepower; SAE Gross: 160 (119 kW) @

2200 rpm.

Torque, max. (SAE): 460lb -ft (624Nm) @ 1500rpm

Electrical

Starting: 12-volt electric; Batteries (2) 700CCA @ 00F (-180C)

at 30sec; Alternator: 130 amp

Hydraulic System

Pumps: One fixed displacement gear pump for the crowd circuits

@ 52 gpm (197L/min). A tandem fixed displacement gear pump

section for the hoist circuits @ 52 gpm (197L/min.) and one

variable displacement pump section for the steering, brakes

and pilot circuits @ 0 to 26 gpm (98 L/min.) Main relief valve

pressure setting: 2650 psi (18,271 kpa)

Oil Cooler: Positive radiator type hydraulic oil cooler

Control Valves: Quantity: 2; Type: Sectional - 2 spool;

Functions controlled: Hoist, crowd, tool, swing and 2 auxiliary.

Cylinders: Double-acting hydraulic for hoist, crowd, outriggers,

steering and optional equipment.

Hoist: 6.5 x 55.4" (165mm x 1.41 m)

Dipper, backhoe 6.5x50.8" (165mm x 1.29m)

Tool: 5.5 x 37.5" (140 x 953 mm)

Outriggers (2 std, 4 opt.) 5.5 x 7.5" (140 x 445mm)

Extenda-Stick* (opt.): 4x60" (102mm x 1.52m)

Wrist-O-Twist* (opt.): 4x7.5" (102 x 191mm)

Single-acting hydraulic cylinders for axle oscillation lock.

Axle-lock (2): 3.5 x 5.35: (89 x 136 mm)

Level Grading Capabilities U.S. (Metric)

Style of dipper: Rigid Extenda-Stick*

| Type of bucket | Excav. | Excav. | Ditch* |
|---|----------------|----------------|-----------------|
| LA Max. equipment height in level-grading use | 20'5" (6.22 m) | 15'9" (4.80 m) | 16'3" (4.95 m) |
| LB Min. radius of level-grading cut | 9'3" (2.82 m) | 7'11" (2.41 m) | 8'4" (2.54 m) |
| LC Max. length of level-grading cut | 16'8" (5.08 m) | 18'1" (5.51 m) | 17'11" (5.46 m) |
| LD Depth below ground of level-grading cut | 4'5" (144 mm) | 0 (0) | 0 (0) |

* Ditching bucket with Wrist-O-Twist*

Cylinder cycle times: (full stroke seconds)

| | Standard | Dual Flow |
|---------------------------|---------------|-----------|
| Hoist cylinder | | |
| Extend | 10.7 | 6 |
| Retract | 7.0 | 4.3 |
| Tool cylinder | | |
| Extend | 4.8 | 2.7 |
| Retract | 3.8 | 2.2 |
| Backhoe dipper cylinder | | |
| Extend | 9.0 | 4.6 |
| Retract | 6.4 | 4.3 |
| Extenda-Stick* arm (opt.) | | |
| Extend | 4.1 | |
| Retract | 3.1 | |
| Wrist-O-Twist* (opt.) | | |
| Extend | 3.5 (approx.) | |
| Retract | 2.5 (approx.) | |

Breakout Force

Dipper cylinder:

Extenda-Stick* extended: 11,442 lbf (50,897 N)

Extenda-Stick* retracted: 15,596 lbf (69,374 N)

Bucket:

Standard pin position: 19,822 lbf (88,173 N)

Power pin position: 23,298 lbf (103,635 N)

Swing System

360° continuous @ 11.5 rpm. Positive operator control with

hydraulic motor, disc brake, 24.23:1 gear reducer.

Swing torque: 24,884 lb/ft (33,738 Nm)

Outriggers

2 standard, 4 optional. Individually or simultaneously controlled

from cab. Lowering time 5.0 seconds; Raising time 5.5 seconds

Transmission

Make and model Clark R18624

Type 6-speed power shift

Converter size 12.6" (320 mm)

| Gear Ratios | High | Low |
|-------------|--------|--------|
| 1st | 3.94:1 | 8.81:1 |
| 2nd | 2.00:1 | 4.49:1 |
| 3rd | 0.70:1 | 1.58:1 |



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217 Patneau Drive
Winona, Minnesota 55987

Phone: (507) 454-1563

Fax: (507) 453-6441

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