

7 AND 8B BACKHOES



CSM4070

7 Backhoe

FEATURE/BENEFIT PROFILE



CSM4078

QUIK-TATCH MOUNTING

- The backhoe can be mounted and dismounted quickly and easily.
- The 790 and 990 Tractors use cam action locks (Patent #4,747,612). Other tractors use quick pins.
- Allows using tractor or skid steer loader for other jobs.

TWO-LEVER CONTROL

- Provides simple and natural operation.

CLOSE COUPLED

- For better tractor or skid steer loader/backhoe stability.

FULL BUCKET ROTATION

- 180-degree on 7 and 8B enables operator to dig vertical walls with no spills at loading point

180-DEGREE SWING

- Allows operator to dig at 90 degrees right or left for added flexibility.

WIDE-STANCE STABILIZERS

- With cylinder guards. Help provide stable operation.

SOLID MOUNT

- Incorporates a solid system for a more stable operation.

PRODUCT STORY

MARKETS

The Model 7 Backhoe is compatible with the 790 Tractor equipped with a 70 Loader. The Model 8B Backhoe is compatible with the 990 Tractor equipped with a 430 Loader.

Potential customers for these backhoes include:

- Housing contractors
- Municipalities
- Landscaping contractors
- Plumbing contractors
- Public utilities
- Cemeteries

DIGGING DEPTH TO MATCH CUSTOMER'S REQUIREMENTS

There is a backhoe model to match the customer's digging requirements.

- 7 Backhoe has a maximum digging depth of 7-1/2-ft.
- 8B Backhoe has a maximum digging depth of 8-1/2-ft.

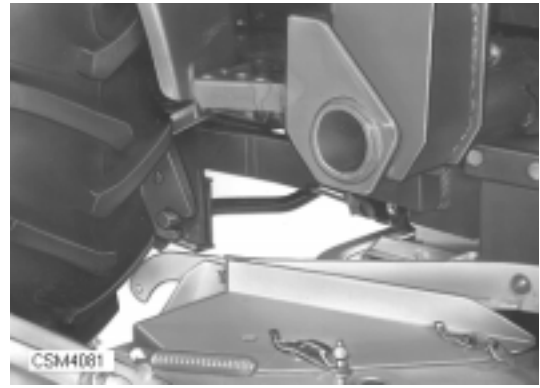
TRACTOR/BACKHOE HOOKUP

All models attach solidly to the tractor/loader.



Backhoe's subframe mounting bar fits into the rear mounting brackets that are attached to the tractor. This solid mount provides two features:

- Stability by virtually eliminating vertical or side-to-side movement often found in some 3-point hitch backhoe mounts. In addition, this subframe design also positions the entire backhoe much closer to the tractor.
- Tractor chassis protection—the subframe protects the tractor chassis by tying the respective tractor/loader and the backhoe combination together as one. It also allows operators to take full advantage of the total weight transfer between backhoe stabilizers and loader's bucket.



The backhoe subframe is attached to the tractor or loader with cam action locks or quick-pins for fast removal or installation.

- Backhoes mounted on 790 and 990 Tractors (70 Series shown above) use cam action locks (Patent #4,747,612).
- Backhoes mounted on other tractors use quick pins.
- 3-point hitch backhoes are not compatible (a sub-frame is required).



Backhoe hydraulic hoses attach to the tractor hydraulic system with quick couplers.

- Fast and easy hookup or removal of hydraulic lines.

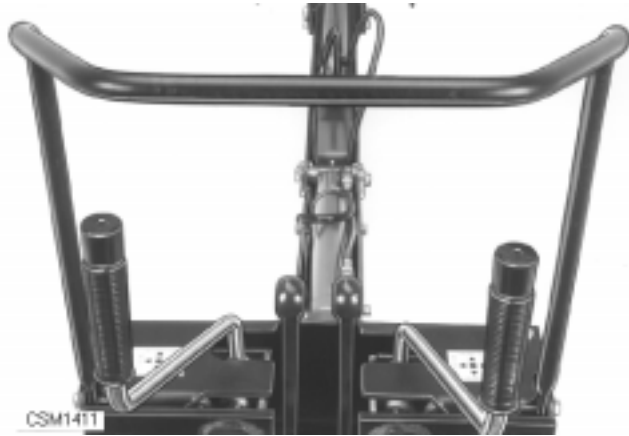
CONVENIENT AND EASY OPERATION



Adjustable seat pivots up and locks automatically when not in use.



Low-profile console allows an unobstructed view of the working area.



Two-lever control is used for boom lift, swing, dipperstick, and bucket.

Convenient grab rail for safer mounting and large footrests with non-slip surface are provided.

Convenient location for storing swing and boom lock pins is also provided.



Wide-stance stabilizers are angled rearward for easier backhoe mounting.

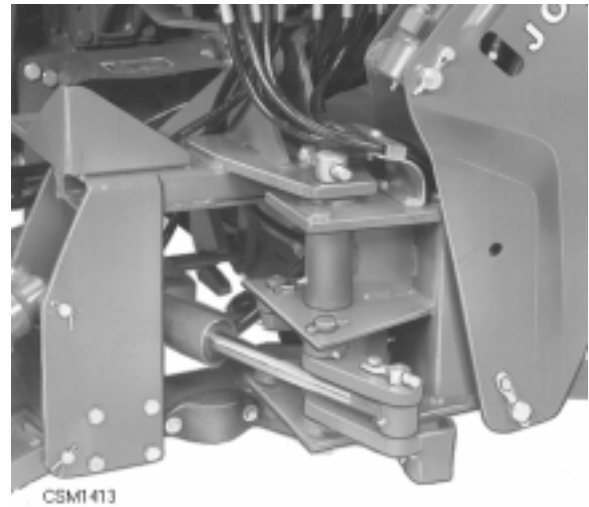
FULL 180-DEGREE SWING

Allows trenching 90 degrees from center of tractor for increased productivity.

Swing system is constant speed/constant torque type for good swing control and smooth operation.

Shock-absorbing rubber bumpers minimize stress.

7 BACKHOE PUSH-TYPE CYLINDER SWING SYSTEM

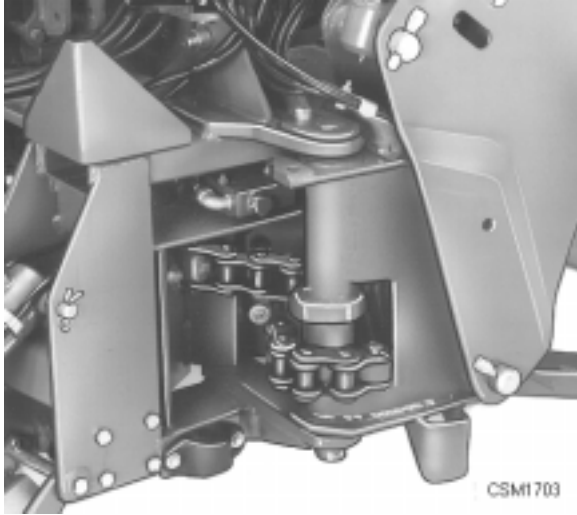


Hydraulic cylinder pushes hinged link (incorporated into swing frame) that in turn swings backhoe.

This design allows:

- Hydraulic cylinder to travel in straight line during full 180-degree swing at fixed rate of speed for smooth, even backhoe operation.
- Close coupling of backhoe to tractor for more stable operation.

8B BACKHOE PULL-TYPE CYLINDER SWING SYSTEM



One hydraulic cylinder pulls chain around backhoe swing frame while second cylinder (mounted on opposite end of chain) keeps chain properly tensioned.

Some competitors use a single cylinder and chain design that requires manual adjustment.

FULL BUCKET ROTATION

Models 7 and 8B

Two-bar linkage on bucket cylinder gives full 180-degree bucket cornered trenches and no spill at loading height.

Available bucket widths:

- 7 Backhoe — 9-, 13-, 16-, and 19-in.
- 8B Backhoe — 12-, 18-, 24-, and 36-in.

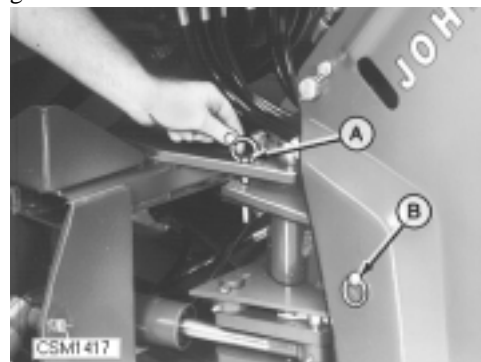
ADDITIONAL FEATURES



Replaceable bushings are provided in the swing system.



Pin rotation retainers are used throughout the backhoe, ensuring the rotation occurs in the desired area.



Pins are provided to prevent movement of the swing (A) and boom (B) when the backhoe is not in use or in transport.

EQUIPMENT FOR BASE MACHINE

7 Backhoe - 7-ft. 6-in. digging depth	Transport locks
8B Backhoe - 8-ft. 6-in. digging depth	Operator's seat
Quik-Tatch mounting	Hydraulic stabilizers with combination grouser and smooth pads
180-degree swing	Mounting and hydraulics for 790 and 990 Tractors
Control console	Subframe for 790 and 990 Tractors
Two-lever control	Rear hanger brackets for 790 and 990 Tractors
Six-spool control valve	
9-in. bucket (7 Backhoe)	
12-in. bucket (8B Backhoe)	

TRACTOR AND EQUIPMENT COMPATIBILITY

7 Backhoe is compatible with 790 Tractors.

8B Backhoe is compatible with 990 Tractors.

Note: On 790 Tractors the overall tire height of 11.2-24, 4 PR (R1) tires, the stabilizer will not contact ground for adequate stability.

Requirements and/or recommendations:

- 1) 70 Loader is required on the 790 Tractor.
- 2) 430 Loader is required on the 990 Tractor.
- 3) Tractor 3-point hitch must be removed for installation.
- 4) Not recommended for use with the 990 Tractors equipped with canopy because of limited headroom.
- 5) 790 Tractors require BM18005 auxiliary rear outlet hydraulic kit.
- 6) 990 Tractors require BM18010 rear hydraulic kit.
- 7) 790 Tractors require ROPS extensions.
- 8) Rear auxiliary hydraulic kit required on 790 Tractors.

BASE MACHINE AND OPTIONAL EQUIPMENT CODES

Code	Description
BASE MACHINE	
0512TY	7 Backhoe
1840M	8B Backhoe
MOUNTINGS AND HYDRAULICS	
For 790 Tractors:	
1005	Mountings, hydraulics, subframes, and rear hanger brackets for 770 and 790 Tractor with 419 or 70 Loader
1002	Less mountings, hydraulics, subframes, and rear hanger brackets
For 990 Tractors:	
1000	Mountings, hydraulics, subframes, and rear hanger brackets for 990 Tractor with 430 Loader
1004	Less mountings, hydraulics, subframes, and rear hanger brackets
BUCKETS	
For 790 Tractors:	
4000	Bucket, 9-in.
4001	Bucket, 13-in.
4002	Bucket, 16-in.
4003	Bucket, 20-in.
4004	Less bucket
For 990 Tractors:	
3000	Bucket, 12-in.
3001	Bucket, 18-in.
3002	Bucket, 24-in.
3003	Bucket, 36-in.
3004	Less bucket

ATTACHMENTS ORDERED AS DESIRED

RUBBER STABILIZER PADS FOR THE 8B BACK- HOE

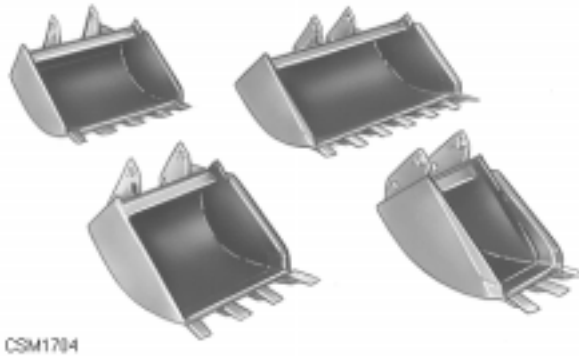
Attaches to standard equipment “claw” type stabilizer pad.

For use on hard surfaces where damage needs to be held to a minimum and/or “skidding” of the backhoe is a problem.

Bundle	Description
For 8B Backhoe	
TY20122	Rubber stabilizer pads

ATTACHMENTS FOR FIELD CONVERSION

BUCKETS



CSM1704

A variety of bucket sizes can be ordered to match digging requirements.

For bucket capacity, see “Specifications.”

Replaceable bucket teeth available from Parts.

Bundle	Description
For 7 Backhoe	
BM19557	9-in. bucket
BM19558	13-in. bucket
BM19559	16-in. bucket
BM19560	20-in. bucket
For 8B Backhoe	
BM19568	12-in. bucket
BM19569	18-in. bucket
BM19570	24-in. bucket
BM19571	36-in. bucket

POWER BEYOND KIT

Includes rear-mounted hydraulic couplers and hose for use.

Bundle	Description
BM18005	Power beyond kit for the 790 tractor
BM18010	Power beyond kit for the 990 tractor

MOUNTINGS, HYDRAULICS, AND SUBFRAME

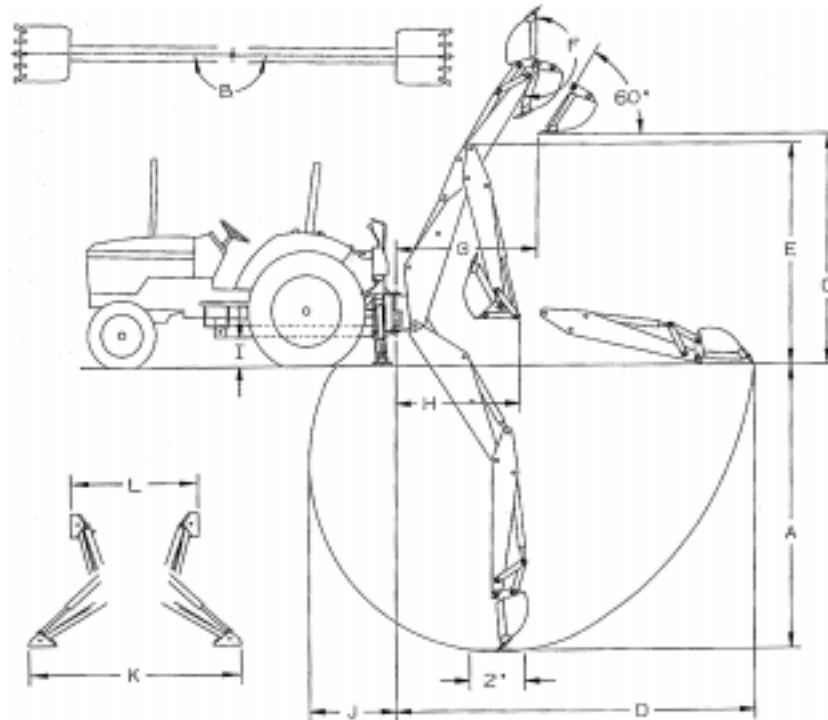
Allows converting backhoe for use with different tractors.

Bundle	Description
7 Backhoe with 790 Tractors	
BM22373	Mountings, hydraulics, subframe, and rear hanger brackets for 790 Tractor with 70 Loader
8B Backhoe with 990 Tractors	
BM17019	Mountings, hydraulics, and subframe for 990 Tractor with 430 Loader

PATENTED FEATURES

Patent Description	Patent Year	Patent Number
Quick-Tatch Coupling for Mounted Implements	1988	4,747,612

SPECIFICATIONS



	7 Backhoe	8B Backhoe
A. Digging depth [2-ft. (610 mm) flat bottom]	7-ft. 6-in. (2.3 m)	8-ft. 6-in. (2.6 m)
B. Swing arc	180 degrees	180 degrees
C. Loading height (bucket at 60 degrees)	5-ft. 10-in. (1.8 m)	6-ft. 10-in. (2.1 m)
D. Reach from centerline of swing pivot	9-ft. 6-in. (2.9 m)	11-ft. 1-in. (3.4 m)
E. Transport height (maximum)	5-ft. 9-in. (1.7 m)	6-ft. 9-in. (2.1 m)
F. Bucket rotation	180 degrees	180 degrees
G. Loading reach (bucket at 60 degrees)	3-ft. 7-in. (1.1 m)	3-ft. 7-in. (1.1 m)
H. Transport overhang	3-ft. 8-in. (1.1 m)	4-ft. (1.2 m)
I. Ground clearance*	9.5-in. (241 mm)	9.5-in. (241 mm)
J. Undercut	2-ft. 6-in. (760 mm)	2-ft. 10-in. (864 mm)
K. Hydraulic stabilizer spread, down (approx.)	7 ft. 1-in. (2.1 m)	8-ft. 3-in. (2.5 mm)
L. Hydraulic stabilizer spread, up (approx.)	4-ft. 2-in. (1.3 m)	4-ft. 11-in. (1.5 mm)
Boom lift ability (dipper arm and boom extended lifting with boom cylinder only, weight attached at bucket pivot (measured at 36-in.))	290 lb. (132 kg)	689 lb. (313 kg)
SAE dipperstick digging force	1095 lb. (4870 N)	2213 lb. (9843 N)
SAE bucket digging force	1945 lb. (8651 N)	3389 lb. (15074 N)
Operating weight (with std. bucket and subframe only)	787 lb. (347 kg)	1260 lb. (572 kg)
Backhoe control valve main relief setting*	1700 psi (11720 kPa)	2200 psi (15169 kPa)

BUCKET SPECIFICATIONS**FOR 7 BACKHOE**

	9-in. (230 mm)	13-in. (330 mm)	16-in. (405 mm)	20-in. (508 mm)
SAE struck capacity	0.50 cu. ft. (0.014 m ³)	0.75 cu. ft. (0.021 m ³)	0.94 cu. ft. (0.027 m ³)	1.26 cu. ft. (0.036 m ³)
Heaped capacity	0.63 cu. ft. (0.018 m ³)	1.00 cu. ft. (0.028 m ³)	1.25 cu. ft. (0.035 m ³)	1.74 cu. ft. (0.049 m ³)
Shipping weight	46 lb. (20.9 kg)	51 lb. (23.1 kg)	56 lb. (25.4 kg)	67 lb. (30.4 kg)

FOR 8B BACKHOE

	12-in. (305 mm)	18-in. (457 mm)	24-in. (610 mm)	36-in. (914 mm)
SAE struck capacity	1.14 cu. ft. (0.032 m ³)	1.75 cu. ft. (0.050 m ³)	2.42 cu. ft. (0.069 m ³)	3.77 cu. ft. (0.107 m ³)
Heaped capacity	1.74 cu. ft. (0.049 m ³)	2.68 cu. ft. (0.076 m ³)	3.71 cu. ft. (0.105 m ³)	5.76 cu. ft. (0.163 m ³)
Shipping weight	82 lb. (37.2 kg)	101 lb. (45.8 kg)	117 lb. (53.1 kg)	154 lb. (69.9 kg)

