“Matched” digging-loading combination cuts more trench, loads-out more yards per day than competitive-make rigs... yet costs less to own, less to operate and maintain

Manufactured and warranted by

J. I. CASE COMPANY
Utility Sales Division
Racine, Wisconsin, U.S.A.

1st in quality for over 100 years
Perfect balance...key to higher output

Here is a "matched" digging-loading team that can save you big money on hundreds of trenching, excavating, and loading jobs. 42 hp Model 310 Utility is the only tractor-backhoe-loader combination designed and built as a single, perfectly-balanced unit for absolute top-notch performance of complete rig...tractor, front-end loader and rear-mounted backhoe.

Every hour, you dig more trench or load more yardage because just-right weight distribution gives you a solid, more stable vehicle for precise cutting, and for faster, safer operation in any terrain. High-torque power plant and big-capacity hydraulic system are properly sized for most efficient control of both tools.

The complete 310 Utility unit—tractor, loader, backhoe, even the engine—is all engineered, built, and fully warranted by J. I. Case Co. and sold thru just one marketing organization. As a result, the price is lower—value higher, dollar-for-dollar—than any competitive tractor with separately-manufactured attachments.

Cuts more trench per hour

Utility backhoe outperforms everything in its class because it has greater physical capabilities, and is faster, easier to operate. Case-built unit digs more "hole" from one position...cuts 13' 1/2" deep, reaches over 18' from the pivot, and loads heaped bucketfuls into trucks up to 10'7" high. Superior leverage teamed with big-diameter cylinders and 19 gpm hydraulic pump give you maximum breakaway force of 12,000 to 15,000 lbs. You change digging locations quickly—save climbing back and forth—because throttle and loader controls are accessible from the backhoe seat. Independently controlled, telescoping stabilizers provide an 8'2" wide stance...firm footing and balance for accurate cutting in any ground.

You make more dig-and-dump cycles per hour because smooth, uninterrupted 180° swing is foot-operated, leaving hands free to maneuver bucket and dipper stick while swinging. Left-right hydraulic foot controls are self-centering, with automatic "feathering" action for smooth starts and stops. Hand controls for crowd, lift, bucket and stabilizers may be "feathered" or applied full-power to give the exact flowing motion and speed you want.

Loads extra yards every day

You'll load-out more yardage, faster, steadier, with the Case-built loader. Available with a range of 6 buckets, 11 cu. ft. to 1 cu. yd., Model 310's husky loader frame and box-section arms hold bucket firm for crisp, straight-ahead digging. Unit gets heaped bucketfuls faster, because high-
torque characteristics of the 42 hp engine supply extra “muscle” just when you need it to pull thru tough going. Extra leverage and high-power hydraulics exert 3000 lbs. breakaway force. You load trucks quicker with less spill loss, less maneuvering, because bucket rolls back 13° at ground level... lifts 1500-lb. loads to clear 10′9″ height... tilts forward 45° for clean dumping at full lift... reaches more than 2½′ ahead of tractor... and lets you back-off without stopping to raise the bucket.

In addition to speedy digging, lifting, and dumping, you can also maneuver faster because tractor steer-turns in 10′ radius, and has individual rear-wheel brakes for shorter pivot-turns. Transmission is easy to shift, and tractor quickly accelerates to top speed in any gear. Shuttle transmission (optional) lets you reverse direction with synchro-mesh one-motion shift... backs-up 24% faster than in same forward gear. Optional power-assist steering makes your job still easier... lets you turn with one finger, yet retains mechanical steering “feel”. And it won’t stray off-course in ruts or broken ground.

One man with Model 310 can handle 2 or more modest-size jobs in a day because the machine is completely self-mobile. Wheel brake pedals lock together for safe, over-the-road travel at speeds to 22.9 mph.

**Works more hours per month... costs less to maintain**

Balanced, complete-unit design of 310 Utility Backhoe-Loader, plus the added advantage of undivided service responsibility, cuts your repair bills and keeps your “bread and butter” machine working more hours every month. Husky, wrap-around loader main-frame and sturdy backhoe mount absorb shock and stress... put the load where it belongs... directly on the heavy-duty tractor axles. Power plant and drive-train are matched to all equipment demands. Day-to-day servicing is easier with standard lube fittings and just one simple check-out procedure. There are fewer parts to “go haywire” because there’s no duplication, as is often the case with “hung-on” attachments. Your J. I. Case Dealer has direct-from-factory “know-how”... stocks parts for the entire rig at one location... and can handle **all** your service requirements at most reasonable cost.

**12-month work tools**
**cut hourly equipment cost**

Optional Utility attachments increase the number and kinds of jobs you can handle... stretch-out your work season... keep your tractor busy full-time. Here is a **partial list** of equipment, ready for quick-mount to Model 310 Backhoe-Loader:

- **Side and rear-mount**
  - sickle mowers
  - Rear-mount rotary mower
  - 3-point snap-lock Eagle Hitch, or conventional 3-point flexible hitch
  - Agricultural implements
  - 6′ x 24″ dozer blade
  - Adjustable pallet fork
  - 5′ crane boom

- **Logging fork**
- **Post hole digger**
- **Post driver**
- **72″ rotary sweeper**
- **All-purpose blade**
- **Scarifier-scraper**
- **Terra-Scoop**
- **Manure bucket**
- **All-weather cab**

- 6000-lb. line-pull winch

**Easy financing with skip-payment privilege**

You can get a new, fully equipped Case 310 Backhoe-Loader on a straight lease basis, with only 10% advance rental payment. Or you can lease and retain option to buy — with or without trade-in — and let your lease payments build-up your equity. Or, you can trade-in your present equipment and purchase on liberal monthly terms. Only 5 days’ work will support monthly installment payments after average down payment or trade-in. And you can elect skip-payments during 3 off-season months. Your J. I. Case Dealer offers the best financial arrangement to suit either your pocketbook, your work season, or your tax situation.
35 reasons why the **CASE**

1. Open-mouth bucket...no obstructions. Always gets full payloads, no load-cutting carry-back to reduce efficiency.


4. 9 sizes and types of backhoe buckets. One just right for every purpose.

5. Positive knock-out and action "stops". Insures cleaner dump. Hydraulic cylinders don't "bottom", require less maintenance.


7. Stationary hardened pivot-pins...renewable bushings. Retain snug fit because pin only turns within bushing.

8. Deep box-section boom and dipper stick...welded-in gussets and castings at all strain points. Rugged, rigid, repair-free.

9. Telescoping stabilizers...independently controlled. Firm, safe 8'2" wide stance for straight, angled, or side digging.


11. Swing cylinders mounted high. "Out of the dirt" so rods don't score. Less seal leakage, less maintenance.

12. Mechanical, lever-arm swing linkage. Holds boom firm for accurate cutting...doesn't get "sloppy" like chains do.

13. 6-spool control valve with individually replaceable spools and bodies. Saves you big money on repair bills.

14. 4-bolt mounting. Backhoe easily removable in 10 minutes for using scarifier and other rear attachments. No pins to wear loose or break in the middle of a job.

15. High, comfortable backhoe seat. Full visibility at all times.

16. Throttle and loader controls within backhoe operator's reach. No time wasted climbing back and forth when moving backhoe ahead.

17. Choice of loader buckets. 11, 13, 15 cu. ft.; 2½, 3½, 1 cu. yd.* for all requirements.

18. 13° rollback, 90° grading angle at ground; 45° dump, full lift. Easier heaping, smoother grading, cleaner dumping.


20. Solid steel trunnion bar. Distributes stresses. Loader frame can't distort.

*SAE rated

9 backhoe buckets...6 loader buckets...to exactly fit your jobs

**BACKHOE BUCKETS**

- 14", 16", 19", 24", 30" regular

- 16", 30" bell-hole

- 38" grave

- 38" combination

**LOADER BUCKETS**

- 13 cu. ft.

- 1 cu. yd.

- 11, 13, 15-cu. ft.* digging

- ½, ¾-cu. yd.* light material

- 1-cu. yd.* snow

Split guard integral on ¾ & 1-cu. yd. buckets; optional on 11, 13-cu. ft. & ¾-cu. yd. buckets
**Backhoe-Loader is your best buy**

1. Seamless steel tubing and double steel wire-braid hose. Minimum exposed hydraulic lines. Less lag in control, less accidental damage or leakage of fluid.

2. Heavy unit-welded loader main frame. Husky and strong. Distributed load to both front and rear axles.

3. 11-gallon hydraulic reservoir in main frame. Big capacity, and large exposed surfaces for quick cooling.

4. 4 positive-hold control positions. Lift, lower, hold, and bucket "float" are standard.


6. 6-bolt mounting. Loader can be removed in 10 minutes. No loose and "sloppy" pins.

7. Frame mounted for over-the-axle weight bearing. No strain on engine and drive. Bolted to main front casting of tractor.


9. 19 gpm hydraulic pump serves both backhoe and loader. Big capacity for fast action, one pump for less "trouble", expense.


11. Full-flow hydraulic oil filter...100 mesh cleanable and replaceable cartridge. Keeps dirt particles from fouling control valves.

12. One-piece drop-forged axle, forged spindles...virtually unbreakable. See page 7.


15. Optional loader attachments...bulldozer, pallet fork, logging fork, crane boom, manure bucket. See right.

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**Loader attachments increase job range**

**Pallet Fork**

with 36" long, adjustable to 38" wide. Lifts 10'3" high, level.

**Dozer Blade**

6' x 24". Reinforced all-welded construction. 6" digging depth.

**Logging Fork**

Adjustable 36" wide. Lifts 11'2" high; dumps 18" with 53" reach, clears 8'8" after dump.

**Crane Boom**

Lifts 12' high at 5'4" ahead of tractor. Heavy-gauge steel tube and bar construction.

**Manure Bucket**

46" wide, has 26" lines. Plate bolts on for dirt and materials.
You get extra workpower in 310 Utility Backhoe-Loader because high-output digging tools are integrated with the top-performing tractor in its class. Precisely-engineered, heavy-duty Model 310 develops over 30 drawbar horsepower, gives you brawn and stamina for steady production at maximum work speed.

**Smooth-running, high-torque engine boosts output...cuts operating costs**

Spectacular lugging power, low fuel consumption, and long, trouble-free life are built into the 42 hp, 4 cylinder, Case Pour-Torq gasoline engine. This 148-cu. in., valve-in-head, 4-cycle engine develops maximum power at 1900 rpm, peak torque (128 ft.-lbs.) at 1200 rpm...gives you extra pull and push-power just when you need it most, to carry thru tough spots.

High compression ratio plus high-turbulence combustion chamber get maximum work from every drop of fuel. Intake manifold delivers equal fuel-air charge to all cylinders; large exhaust porting quickly carries off spent gases...with flow thru cylinders for maximum cooling of spark plugs and valves. Rotators on exhaust valves, keep seats snug for full delivery of power. And bypass (radiator and thermostat) cooling system speeds warm-up, maintains cylinder temperatures for peak fuel economy. 12-volt electric system makes starting easy, even in coldest weather.

"Balance" is a key factor. Engine main-bearing seats and caps are machined at one time for perfect crankshaft alignment. The massive, stress-relieved and hardened, forged crankshaft is dynamically and statically balanced. Forged connecting rods, aluminum-alloy pistons, and wet-type replaceable cylinder liners are matched in weight and size to balance forces and pressures within the engine. A gear-type oil pump with floating intake screen supplies clean oil under pressure to all main, connecting-rod, camshaft, and valve-lifter bearings.

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**No-grab, long-wearing clutch speeds cycles, cuts maintenance**

You get smooth clutching and de-clutching for almost-continuous gear or direction changes with 9½" dia. single dry-disc clutch, faced with ferromagnetic-type lining. This quick heat-dissipating material is applied over the entire surface of friction disc—not just small "buttons"—outlasts ordinary automotive clutch lining about 8 to 1.
the low-price field

The engine in Model 310 is protected 7 ways against dirt. Screw-in type renewable filter cleans the lube oil. A big oil-bath cleaner removes dust from intake air. Fuel is strained. Special seals at front and rear of crankshaft exclude dirt; and there's even protection on the governor shaft and oil dip-stick. The extra care that goes into design and manufacture of a Case-built engine saves you money from the first day of operation.

Extra-sensitive governor lets you “hang into the load”

Model 310 “takes” changing loads with hardly noticeable change in engine rpm. A super-sensitive, patented, centrifugal, fly-weight governor is built into camshaft gear. Governor makes lightning-fast adjustments of carburetor setting thru linkage mounted in anti-friction needle bearings...keeps you working within just a few rpm’s of the throttle setting, up to full load.

100% anti-friction power-train delivers more “push” to wheels

Model 310 delivers a bigger percentage of developed horsepower to propelling wheels because all gears, shafts, and axles—from engine to ground—are mounted on needle-, roller-, and ball-bearings. Very little horsepower is lost as friction. You get more thrust for tough cutting, for working faster...and fuel cost per job is lower. Long bearing life cuts maintenance expense and downtime.

All gears in transmission, differential, and final drive are carburized and hardened for maximum strength and durability. Gear teeth are crown shaved for easy shifting, quiet operation, and extra-long tooth life. Spur-type gears are used throughout, except differential where spiral bevel gears are employed. Final drive gears are splined to big 2½” dia. rear axles. Individual rear-wheel brakes are located on differential shafts, ahead of final reduction and axles...where torque load is lowest.

Choice of 3 transmissions to suit YOUR type of operation

Standard transmission affords 4 speeds forward, 1 reverse. Most economical for varied service where backhoe work predominates, and loader usually handles light digging or free-running materials. 91.6:1 reduction in low gear.

Shuttle transmission (optional) offers 8 forward speeds, 8 reverse...with synchronized, one-motion, left-hand-operated forward-reverse shift...and with reverse speeds 24% faster than in same forward gear. Ideal for general service where extended periods of fast-cycle continuous loading are anticipated; where quick, on-the-job moves save cost; where good loader digging power is required. 138:1 reduction in lowest gear.

Tripl-Range transmission (optional) provides 12 speeds forward, 3 reverse...5 standard gear-ratios plus step-down reduction and overdrive in each gear...for applying full horsepower at any speed in all conditions. 138:1 reduction in lowest gear.
GENERAL SPECIFICATIONS

**Model Utility BACKHOE-LOADER**

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<th>A</th>
<th>B</th>
<th>C</th>
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<td>90°</td>
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**BACKHOE OPERATING DATA**

- Swing arc, uninterrupted: 180°
- Stabilizer spread, ground level: 8²/""
- Vertical cut on max. grade of: 10°

**LOADING OPERATING DATA**

- Buckets, cu. ft.
  - SAE rated capacity: 11 13 15 18 21 27
  - SAE 911 12 15 17 23
- width: 5/34" 56 1/8" 63 3/16" 79 1/8" 79 3/8" 79 7/8"
- Lift capacity at full height: 1400 lbs.
- Maximum breakaway (to 12") 3000 lbs.
- Cycle lift: dumper 6 1/2 sec.
  - 4 sec.
- Lower 4 sec.

**DIMENSIONS AND WEIGHT**

- Width, overall (travel pos.): 79°
- Height, overall (travel pos.): 11 1/2°
- Height, tractor only: 58°
- Length, overall (travel pos.): 21 1/4"
- Tread, front: 47 7/8"
- Tires, front, std.: 5.50-16, 6 ply
- Wheelbase: 79 1/4"
- Ground clearance: 12"
- Weight, approx: 7600 lbs.

**ENGINE**

- Make and model: Case G-148
- Fuel: Gasoline
- Gross engine flywheel horsepower @ 1900 rpm: 42°
- Drawbar horsepower: 30°
- Torque, maximum, ft-lbs: 128 @ 1200 rpm
- Cylinders, no. (value-in-head): 4
- Bore and stroke: 3 3/8" x 4 1/2"
- Displacement (cu. in): 148
- Compression ratio: 7.25 to 1
- Main bearings, steel-backed (3): 2 1/4" dia. x 1 1/4"
- Crankpin bearings, steel-backed (4): 2 2" dia. x 1 3/8"
- Ignition: 12-volt electric
- Carburetor: Up-draft
- Fuel supply: Gravity
- Air cleaner: Oil bath
- Oil filter, bypass type: Positive pressure screw-in cartridge
- Governor: Mechanical fly weight
- Lubrication: Positive pressure
- Cooling system, type: Pressurized, 41 qts. pump; Vane, perm. lub. brng.
- *See level (calculated) max. hp. (based on 60° F. and 29.92" Hg.)*
- Manufacturer's rating: Nebraska test not yet available

**FUEL TANK:** capacity: 13 gal.

**POWER TRAIN**

- Clutch, friction, single dry disc, ferromatallc: 9 1/4" dia.
- Transmission: Sliding spur gear
- Travel speeds:
  - Standard transmission
    - Forward, mph: (4) 2.8 to 13.4
    - Reverse, mph: (1) 3.3
  - Optional shuttle transmission
    - Forward, mph: (8) 2.1 to 12.3
    - Reverse, mph: (3) 1.9 to 5.4
  - Optional Trip-Range transmission
    - Forward, mph: (12) 1.5 to 22.9

**BRAKES:** foot, double-disc, individual rear wheel, lock-together for travel, parking lock: 6" dia.

**STEERING**

- Type, standard: Cam and lever gear
- Optional: Power-assist
- Turn radius, steered: 10°

**HYDRAULIC SYSTEM**

- **Backhoe cylinders, double-acting:** chrome-plated rods:
  - Boom: [1] 3 1/4" x 35°, 1 1/4" rod
  - Crowd: [1] 4° x 26 1/8°, 2" rod
  - Bucket: [1] 3 3/16" x 27 1/2", 1 1/4" rod
- Swing: [2] 2 1/4" x 16 1/2", 1 1/4" rod
- Stabilizers: [2] 3 1/4" x 9°, 1 1/2" rod
- **Loader cylinders, double-acting:** chrome-plated rods:
  - Lift: [2] 2 1/4" x 31 1/2", 1 1/2" rod
  - Bucket: [2] 2 1/4" x 20 1/4", 1 1/2" rod

- **Cylinder design and packing:** Easy-to-service with removable end-caps secured by bolted, hardened and chromium-plated rods equipped with multiple check and self-locking nuts to prevent leaks.
- **Reservoir:** Built to loader frame. 11 gal. capacity. Has full-flow oil filter.
- **Controls:** Four-position double-spool valve with positive-hold "Float" position; built-in relief; mounted for right-hand operation of loader. Heavy-duty 6-spool valve with individually replaceable spools and bodies provide precise operation of backhoe boom, crowd, bucket, and stabilizer cylinders. Foot pedals control backhoe swing with feathered action and cushioned stops. Primary relief setting at 1600 psi.
- **Pump:** Tractor-mounted, direct drive with Morflex coupling, gear-type, 19 gpm capacity @ 1900 rpm.
- **Hydraulic lines:** Steel tubing with brazed fittings, and double wire-bond high-pressure hose with swaged fittings.

**STANDARD EQUIPMENT**

- Upright muffler, anti-freeze solution, grille guard, radiator grille screen assembly, 2 headlights, heat indicator gauge, ammeter, fuel gauge, oil pressure gauge, engine speed indicator, hour meter, speedometer, swinging drawbar, large safety platform and rear fenders, easy-ride push-back safety seat, tool box, foot throttle, Model 31 backhoe less bucket, Model 31 loader less bucket.

**OPTIONAL TRACTOR EQUIPMENT**

- 900-lb. cast rear counterweight, weight box, Eagle Hitch, 3-point hitch, shuttle transmission, Trip-Range transmission, industry tread tires, PTO, power steering, all-weather cab, auxiliary hydraulics, cigarette lighter, flashing warning signal.

**OPTIONAL LOADER EQUIPMENT**

- Buckets (see operating data), bucket spoil guard, crane boom, sweeper, dozer blade, log fork, pallet fork, manure fork, dirt plate for manure fork.

**OPTIONAL BACKHOE EQUIPMENT**

- Buckets (see operating data).

**OTHER OPTIONAL EQUIPMENT**

- Hydraulic and mechanical side-mounted mowers, rear-mounted mechanical mower, 5' rear-mounted rotary mower, all-purpose blade, scarifier-tiller, Scraper, Scoop, Case agricultural implements, 5-ton capacity tilt trailer.

**IMPORTANT:** J. I. Case Co. reserves the right to change these specifications without notice and without incurring any obligations relating to such changes.

**Sold and Serviced by:**