THE TERRAMITE CORPORATION
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TERRAMITE MODEL 1

for 7.6 Gravely Tractor

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OPERATOR'S MANUAL AND ILLUSTRATED PARTS LIST

INTRODUCTION

The Terramite 1 was developed to replace hand labor in areas inaccessible to large industrial backhoes. Properly maintained, this model will give many years of good service.

The powerplant of Terramite 1 is the Gravely Convertible 76 tractor. Instructions contained herein pertain only to the Terramite 1. Refer to the Gravely Convertible 76 Owner's Manual for tractor information.

Experienced operators should excavate a trench 16 inches by 30 inches by 50 feet in hard clay in less than one hour. Equipped with a 36 inch bucket, a normal grave can be dug in less than an hour.

LUBRICATION AND MAINTENANCE

Lubricate through all fittings of the Terramite 1 after every four hours of operation.

At the start of each day, check tractor oil level and governor oil level. See tractor manual.

Also, daily check all bolts, nuts, and fasteners for looseness.

Do not allow dirt and mud buildup on the unit. This can cause heat buildup.

Daily check oil level in backhoe reservoir. Keep oil level to bottom of strainer on filler neck. Use a good grade of non-foaming hydraulic oil. Never use detergent oil in any hydraulic system.

Keep oil filter clean (filter is located on the left inside bottom of tank).

Remove six bolts from filler neck to allow hand to reach filter.

Remove filter and clean in Varsol or kerosene.

Filter should be cleaned more often when dusty conditions exist.

Under normal conditions clean after each 50 hours of operation.

Do not mix hydraulic oils (use one type of oil only).

OPERATION (Controls)

Lever A—Controls rear stabilizer: push forward to lower, pull to raise.

Lever B—Controls left hand stabilizer: push forward to lower, pull to raise.

Lever C—Controls boom: push forward to lower boom, pull back to raise.

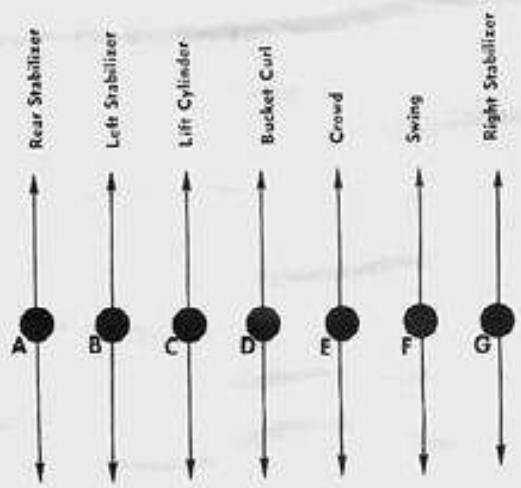
Lever D—Controls bucket: push forward to roll bucket outward, pull back to roll inward.

Lever E—Controls "crowd": push forward to move dipperstick and bucket out, pull back to move dipperstick and bucket in.

Lever F—Controls swing: push forward to swing to the left, pull back to swing to right.

Lever G—Controls right hand stabilizer: push forward to lower stabilizer, pull back to raise.

When a control lever is released, the component which it controls will remain in that position. Release control lever when a cylinder reaches the end of the stroke.



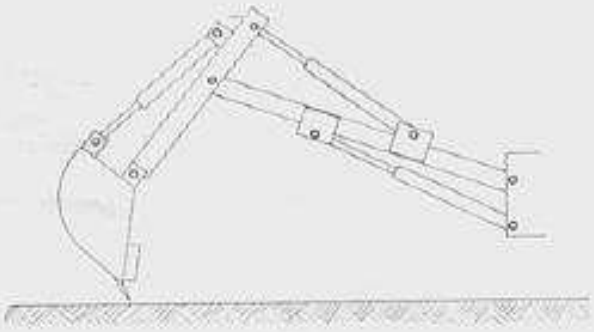
operators position

TRANSPORTING

The operator remains seated while moving machine. The dipperstick is moved to an inward position with the bucket curled. The rear stabilizer is retracted with the front stabilizer position a few inches above ground. The operator then actuates the high-low and forward reverse lever to change speed and direction. Steering is accomplished by swinging boom while tractor is in

and swinging boom. Front stabilizers should remain close to ground while traveling, especially on uneven ground to prevent tipping.

The crowd lever can be operated simultaneously with the forward reverse lever to afford more power to negotiate steep grades or unstable ground conditions.



Proper Digging Angle

DIGGING

Once the Minibackhoe is in position—lower all three stabilizers. The unit should be as near level as possible and the wheels just clearing the ground.

BUCKET DIGGING ANGLE

Most important of the basic procedures of backhoe operation is maintaining the proper digging angle of the bucket.

If the bucket is curled too far inward the heel of the bucket will drag on the trench bottom causing unnecessary waste of digging power.

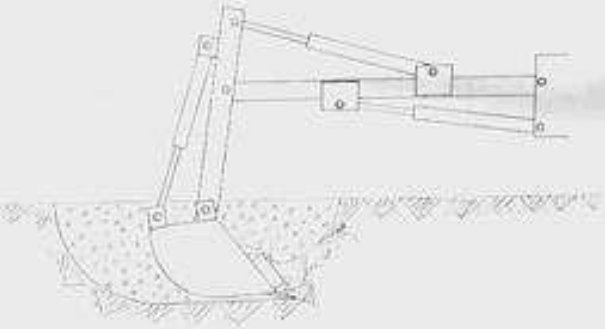
Also, if the bucket is rolled outward too far, the bucket teeth will tend to drag rather than cut.

To begin digging, extend the dipperstick to about a 90 degree angle to the boom. Position bucket correctly.

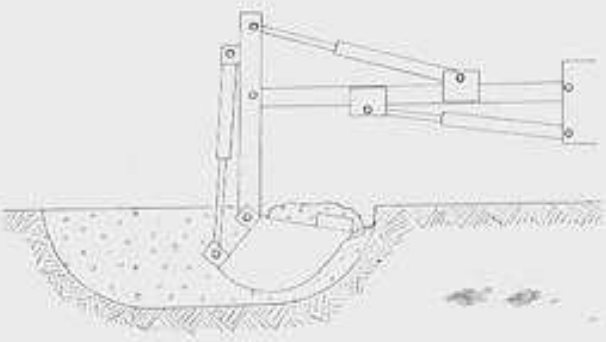
Pull the bucket in toward the tractor with the dipperstick. Maintain the correct bucket digging position by operating the bucket control along with the dipperstick control. Adjust the boom as required. As the bucket fills with dirt, roll the bucket inward and raise the boom.

As the bucket clears the hole, continue raising and swing the boom to the spoil dump.

When dumping, do not roll the bucket any farther out than necessary for the dirt to fall out. This will keep the bucket in the approximate position needed to resume digging when lowered back into the hole.

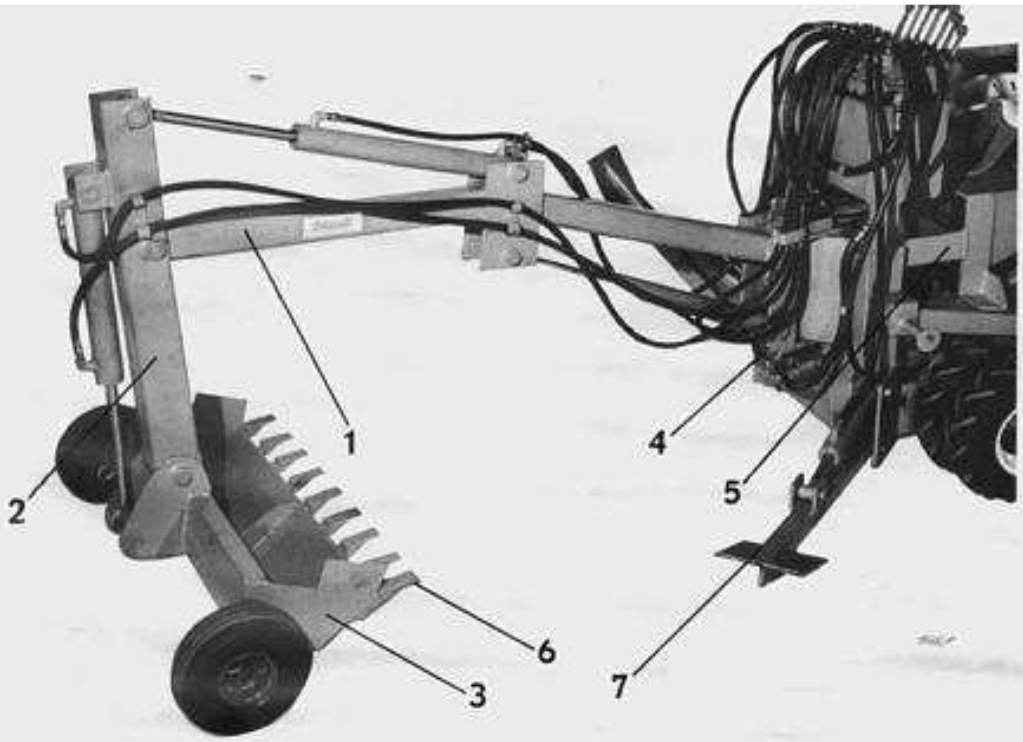


Proper Digging Angle



TROUBLE SHOOTING

POSSIBLE TROUBLE	POSSIBLE CAUSE	POSSIBLE REMEDY
Excessive Slow Operation	Low Engine Speed	Adjust throttle and governor linkage to proper engine speed. See Gravely Operator Manual
	High-low control lever not fully engaged	Lever must be thrown over center to prevent clutch slippage.
	Low oil supply	Fill tank to proper level
	Restriction in intake line	Check for kinks or bends
	Clogged strainer	Remove and clean
Apparent loss of power	Pump worn	See dealer
	Cylinder packing worn	Overhaul with repair kit
	High-low clutch slipping	Make adjustment. See Gravely Manual
Erratic Motion	Improper oil	See oil specifications
	Low oil supply	Check oil level
	Foaming Oil	See oil specifications
	Air in system	Check leaks on inlet side of pump
	Improper operator techniques	Control valves should be feathered or two functions operated simultaneously to affect smooth operation.
Boom Drops Slowly	Plugged restriction	Remove adaptor union on valve bank that feeds rear of boom cylinder. Check orfice in restrictor
Swings slowly causing excessive pull on engine	Plugged adaptor union in swing circuit	Remove hose from adaptor union on swing valve of bank. Check orfices
Excessive machine movement during digging operations	Improper operation	Valves should be feathered or operated simultaneously with other valve function. This will affect a smooth movement of digging elements

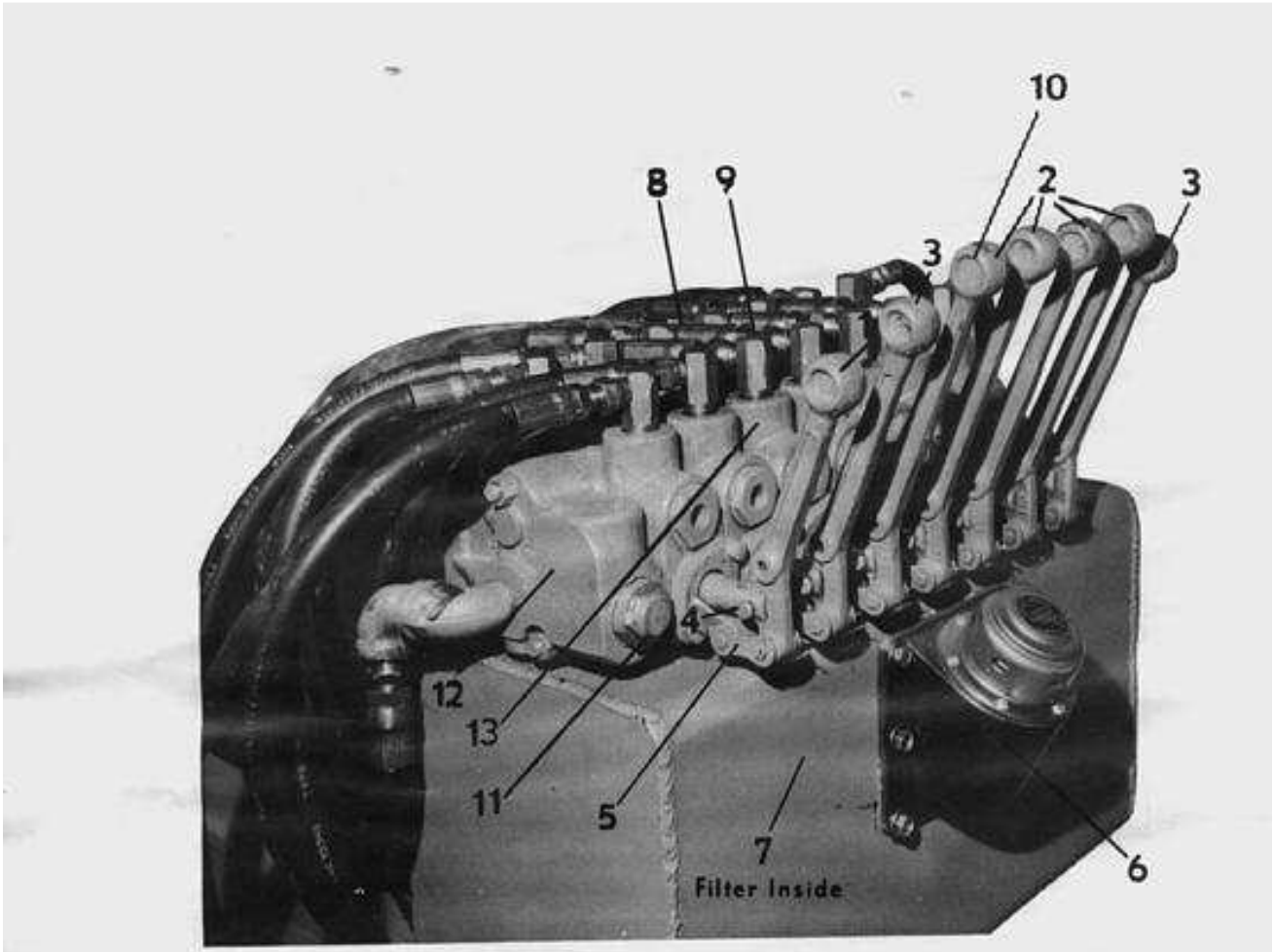


STRUCTURAL COMPONENTS

Item Number	Part Number	Description
1	215003	Boom Assembly
2	215004	Dipperstick
3	215005	Bucket 16" (std.)
	215006	Bucket 12"
	215007	Bucket 8"
	215009	Special Grave Digging Bucket 36"
4	215002	Swing frame
5	215001	Main frame assembly
6	215010	Bucket tooth
7	215020-G	Outrigger

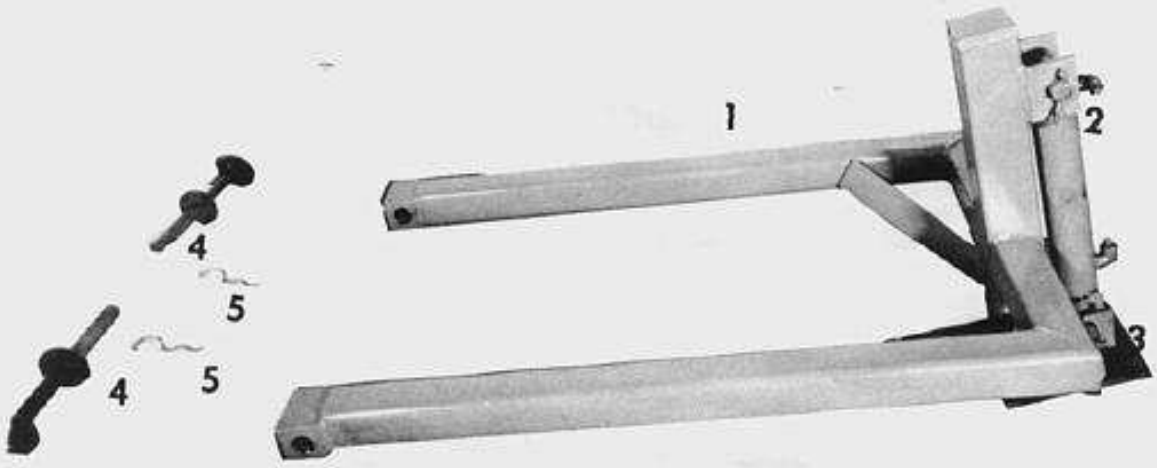
HYDRAULIC COMPONENTS

Part Number	Description
215016	Crowd Cylinder
215017	Bucket Cylinder
215018	Boom Cylinder
215019	RH & LH Stabilizer Cylinder
215020	RH & LH Stabilizer
215021	Swing Cylinder
215022	Hood
215023	Seat
215024	Seat Spring



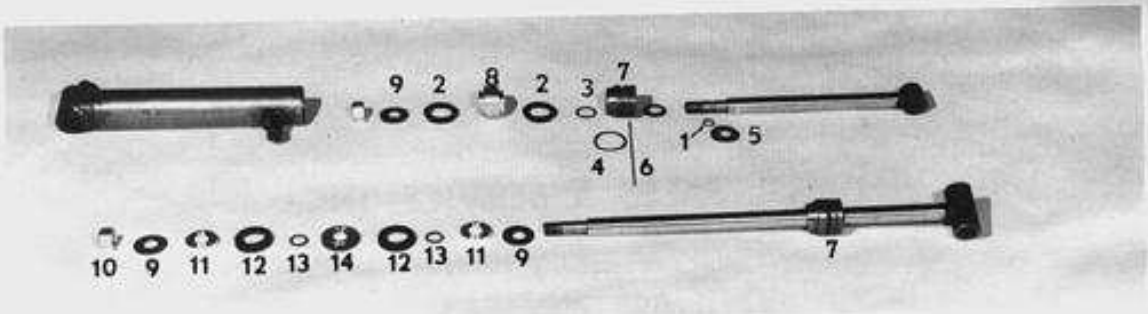
CONTROL VALVE

Item Number	Part Number	Description
1	215036	Control handle
2	215037	Control handles (four)
3	215038	Control handle
4	215039	Pin
5	215040	Link
6	215041	Fillerneck
7	215042	Filter Assembly
8	1-16-R	Restrictor
9	6MA-4UFS	90° Fittings
10	215045	R.H. end cap
11	215046	Relief Valve
12	215047	LH end cap
13	215048	Valve sections
	215049	Flow Restrictor (Boom)



REAR FRAME ASSEMBLY

Item Number	Part Number	Description
1	215011	Rear frame assembly
2	215012	Rear stabilizer cylinder
3	215013	Rear stabilizer
4	215014	Foot rest pin
5	215015	Spring clip pin



CYLINDERS

Item Number	Part Number	Description
1, 2, 3, 4, 5, 6	215033	Cylinder Repair Kit
7	215035	Bearing block
8	215034	Piston
9	215050	Washer (2 required)
10	215051	Stover Lock Nut
11	215052	Piston Cup Retainer Block
12	215053	Piston Cup
13	215054	Innerseal O Ring
14	215055	Center Section of Piston

Top exploded view shows parts for all cylinders except crowd cylinder and lift cylinder. Bottom view shows

Grasp rod with both hands and pull rod from barrel. See exploded view for proper placement of parts. Re-