GRAVELY® SET UP INSTRUCTIONS

CLARKE-GRAVELY CORPORATION
A Studebaker-Worthington Company

NAME: **STEERING BRAKE KIT FOR 5000 SERIES TRACTORS**

PART NUMBER(S): **23378**

1. Align the holes of the instruction plate and the brake handle support with the two holes in the rear hitch of the tractor and secure with two bolts, ½-13 x 1¾, and nuts, ½-13. See figs. 1 & 2.

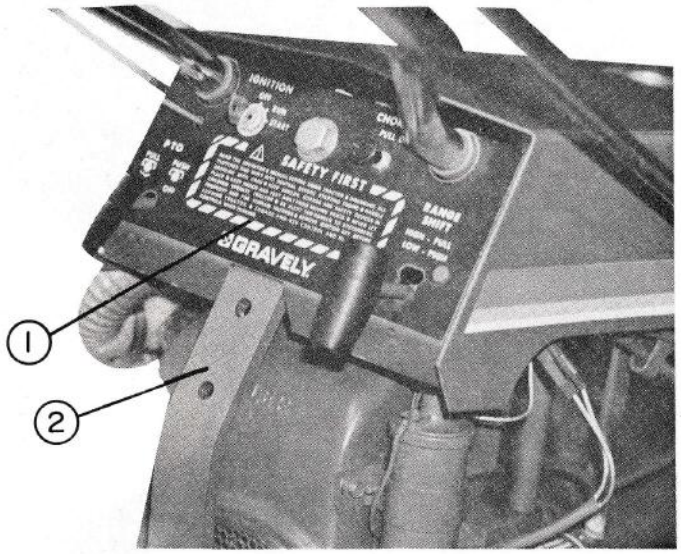

Fig. 1

1 — Instrument Panel
2 — Rear Hitch

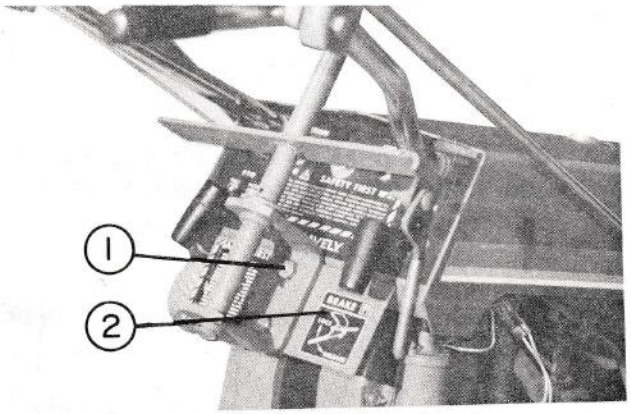

Fig. 2

1 — Bolts
2 — Instruction Plate

If the rear hitch does not have predrilled holes, as shown in fig. 1, place the instruction plate against the instrument panel of the tractor with the holes centered on the rear hitch. Mark the holes with a sharp instrument. Drill the holes using a 17/32" (13.49 mm) drill bit.

RIGHT SIDE SET-UP
(As Viewed from the Operator's Position)

2. Raise the right side tractor wheel clear of the floor and block securely. See fig. 3.

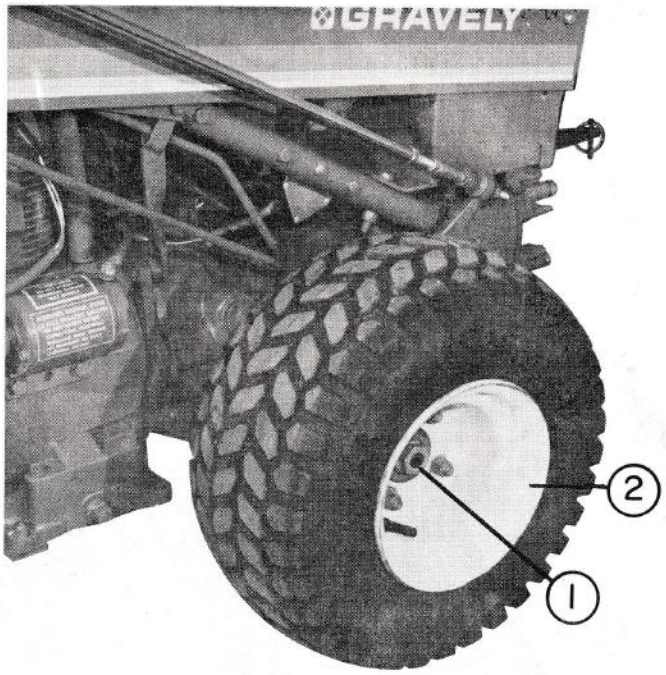

Fig. 3

1 — Axle Nut
2 — Wheel Assembly

3. Remove the axle nut and washer from the axle and remove the hub and wheel assembly. See fig. 3.

Form No. **24345** **Printed in U.S.A.**

4. Remove the four bolts securing end plate to the axle housing. Do not remove the end plate. See fig. 4.

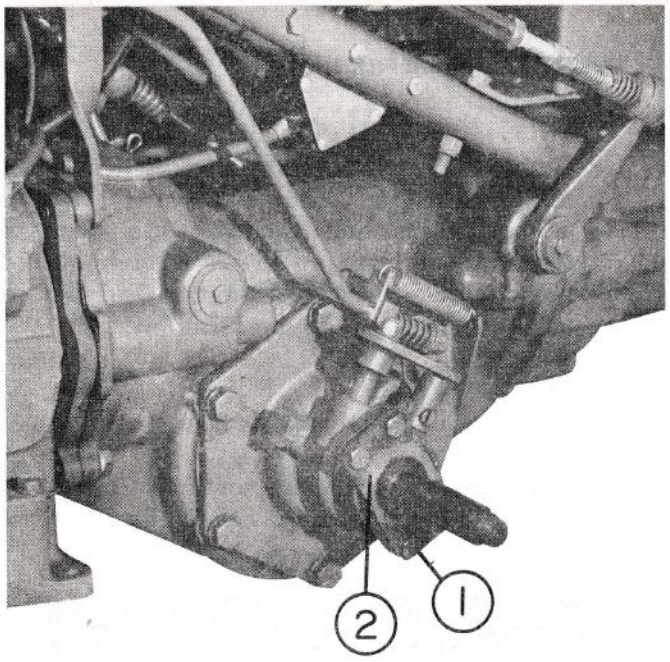

Fig. 4

1 — Bolts
2 — End Plate

5. Insert the end of the brake rod into the hole in the parking brake handle. See fig. 5.

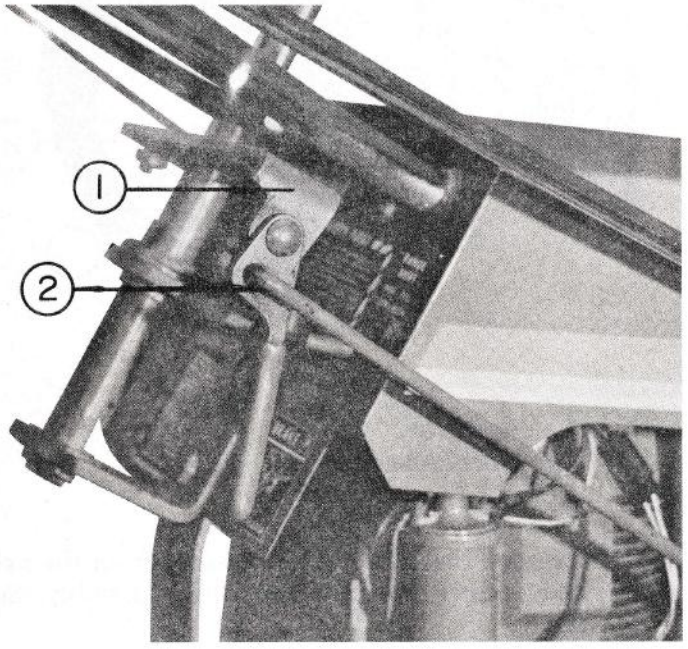

Fig. 5

1 — Parking Brake Handle
2 — Brake Rod

6. Thread two 3/8-16 nuts on the brake rod.

7. Slide the adjustment bracket on the brake rod. See fig. 6.

8. Slide the compression spring on the brake rod and thread two 3/8-16 nuts on the brake rod.

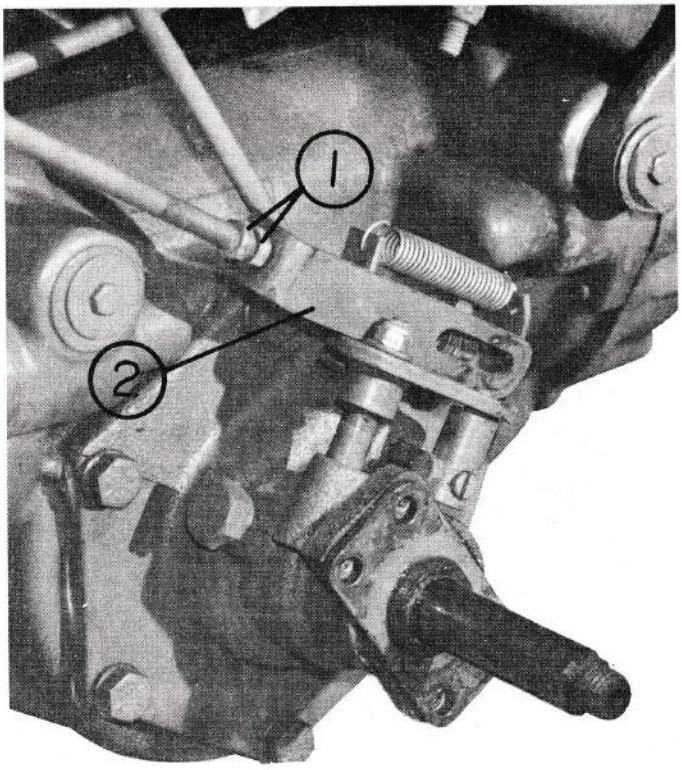

Fig. 6

1 — Nuts, 3/8-16
2 — Adjusting Bracket

9. Install the brake shoe assembly on the axle with the four bolts removed in step 4. Align the bolt holes so the brake cam is on top. See fig. 7. Do not tighten the bolts at this time.

10. Position the cam lever arm on the brake cam slightly forward of a vertical position.

11. If the tractor is equipped with swiftamatic, put the swiftamatic in high range and by hand push the cam lever arm towards the rear. The lever should be mounted just enough forward to activate the brake shoes without interfering with the swiftamatic mechanism.

12. Tighten the bolt and nut that secures the cam lever arm to the brake cam.

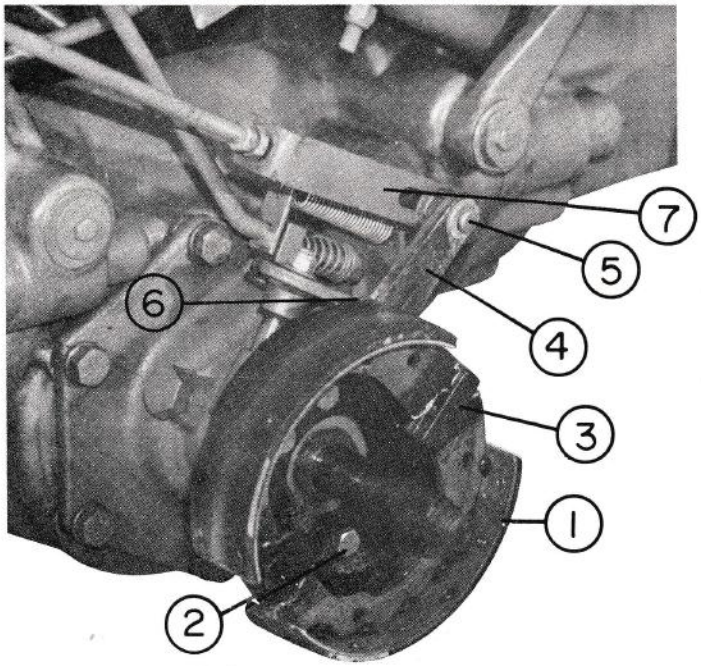

Fig. 7

1 — Brake Shoe Assembly
2 — Bolts
3 — Brake Cam
4 — Cam Lever Arm
5 — Clevis Pin
6 — Securing Nut & Bolt
7 — Adjusting Bracket

13. Tighten the four bolts securing the brake shoe assembly to the axle housing and torque the bolts to 30-35 ft. lbs. (40.68-47.46 Nm).

14. Fasten the adjustment bracket to the cam lever arm with a clevis pin and two washers, one on each side of cam lever arm and secure with cotter pin. See fig. 7.

15. If the tractor is equipped with the 4.00-8 or 6.50-8 tire and wheel assembly, fasten the brake drum to the wheel hub using four hex bolts, ½-13 x 1 3/8, and four lock nuts, ½ x 13, with the bolt heads to the inside of the brake drum.

16. If the tractor is equipped with 8.50 tire and wheel assembly, fasten the brake drum to the wheel hub using four hex bolts, ½ x 13 x 1 5/8, and four lock nuts, ½-13, with the bolt heads to the inside of the brake drum.

17. Slide the wheel and brake drum assembly on the axle and over the brake shoes. Secure with the washer and axle nut removed in step 3 and torque the axle nut to 80-85 ft. lbs. (108.48 -115-26 Nm).

Fig. 8

LEFT SIDE SET-UP
(As Viewed from the Operator's Position)

1. Raise the left side tractor wheel clear of the floor and block securely.

2. Remove the axle nut and washer from the axle and remove hub and wheel assembly.

3. Remove the bolt or hood stud securing the tube support to the advance casting and replace with the pivot stud. See figs. 9 & 10.

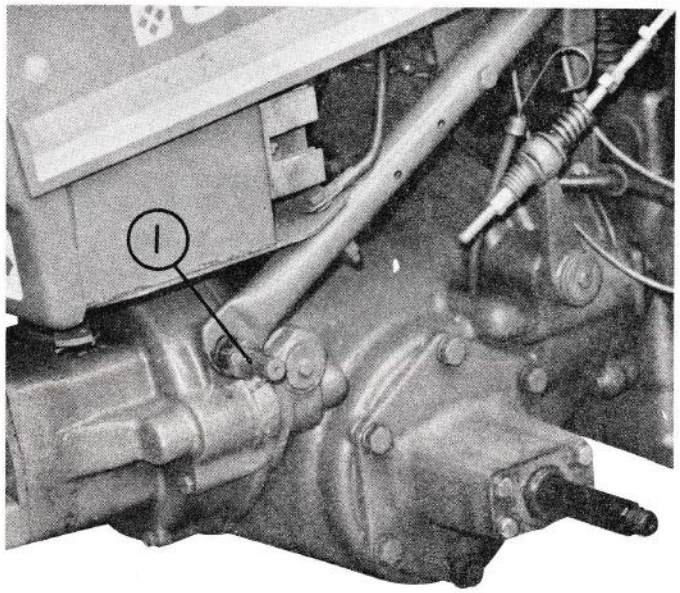

Fig. 9

1 — Bolt or Hood Stud

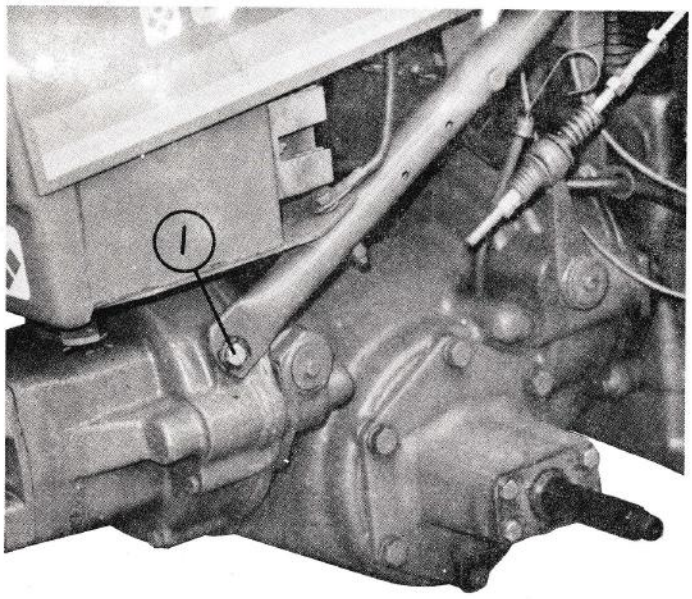

Fig. 10

1 — Pivot Stud

4. For tractor without a battery box, fit the hood on the pivot stud, add a flat washer and secure with an "E" ring. Install another "E" ring in the middle groove of the pivot stud, add a flat washer, the pivot plate, another flat washer and secure the assembly with the last "E" ring. See fig. 11.

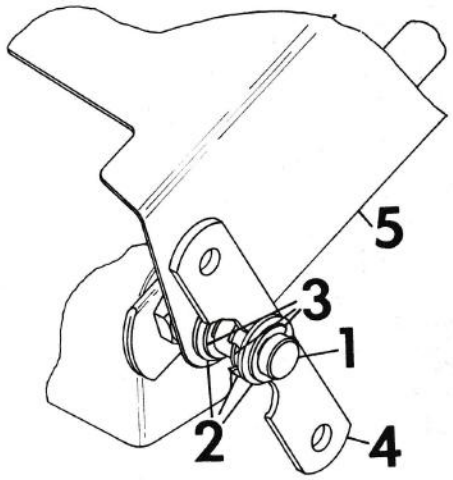

Fig. 11

1 — Pivot Stud
2 — Washers
3 — "E" Rings
4 — Pivot Plate
5 — Hood

5. For tractors with a battery box, install an "E" ring the middle groove of the pivot stud, add a flat washer, next install the pivot plate and another flat washer and secure with an "E" ring. See fig. 12.

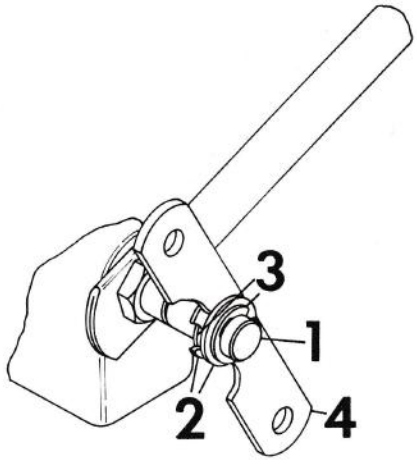

Fig. 12

1 — Pivot Stud
2 — Washers
3 — "E" Rings
4 — Pivot Plate

6. Insert the brake link rod in the botton hole of the pivot plate and secure with a cotter pin. See fig. 13.

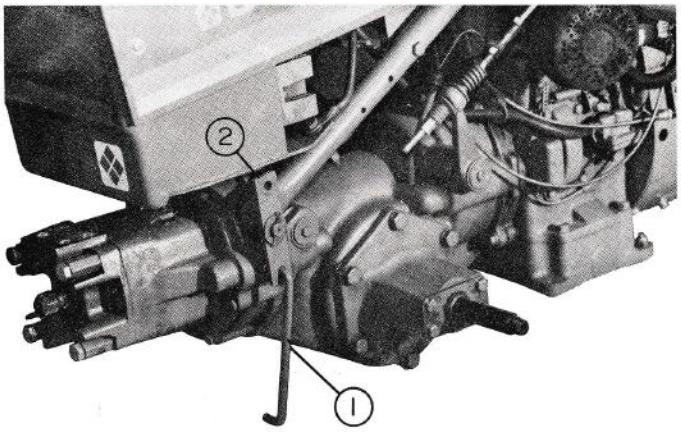

Fig. 13

1 — Brake Link Rod
2 — Pivot Plate

7. Insert the bent end of the other brake rod into the cross member of the brake handlebar weldment.

8. Thread two nuts, 3/8-16, on the brake rod.

9. Slide the adjustment bracket on the brake rod and thread two nuts, 3/8-16, on the brake rod. See fig. 14. Fasten the adjusting bracket to the pivot plate with a clevis pin and a flat washer on each side of the pivot plate. Secure the assembly with a cotter pin.

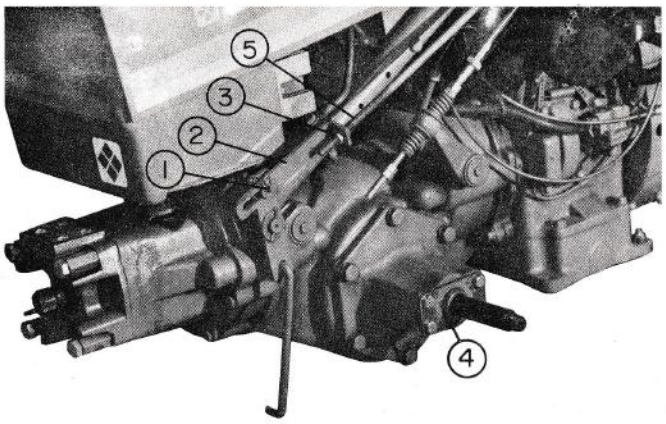

Fig. 14

1 — Clevis Pin
2 — Adjustment Bracket
3 — Nuts
4 — End Plate
5 — Brake Rod

10. Remove the four bolts securing the end plate to the axle housing.

11. Install the brake shoe assembly over the axle and secure with the four bolts removed in step 10. See fig. 15. Torque the bolts to 30-35 ft. lbs. (40.68-47.46 Nm).

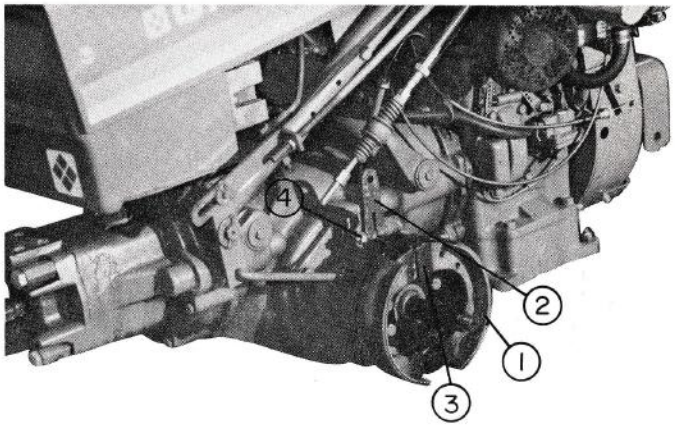

Fig. 15

1 — Brake Shoe Assembly
2 — Cam Lever
3 — Brake Cam
4 — Securing Nut & Bolt

12. Install the cam lever on the brake cam and tighten the bolt and nut. The lever arm must be in a vertical position. See fig. 15.

13. Insert the other end of the brake link rod into the cam lever arm and secure with a washer and cotter pin. See fig. 16.

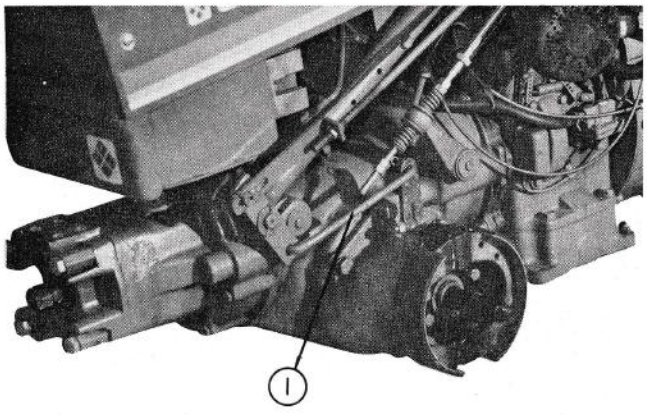

Fig. 16

1 — Brake Link Rod

14. Fasten the brake drum to the wheel hub and install the wheel assembly as described in steps 15, 16 and 17 of RIGHT SIDE SET-UP.

BRAKE ADJUSTMENT

1. Loosen the jam nuts on the right and left brake rods. See figs. 17 & 18.

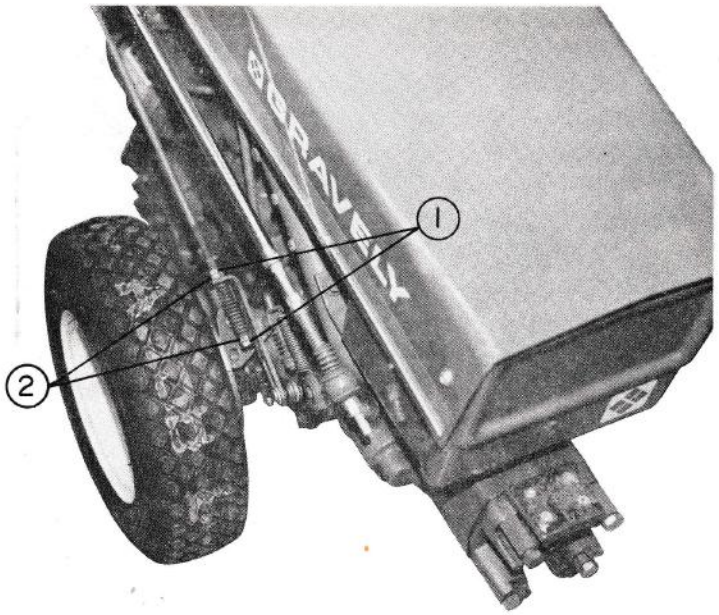

Fig. 17

1 — Jam Nuts
2 — Adjusting Nuts

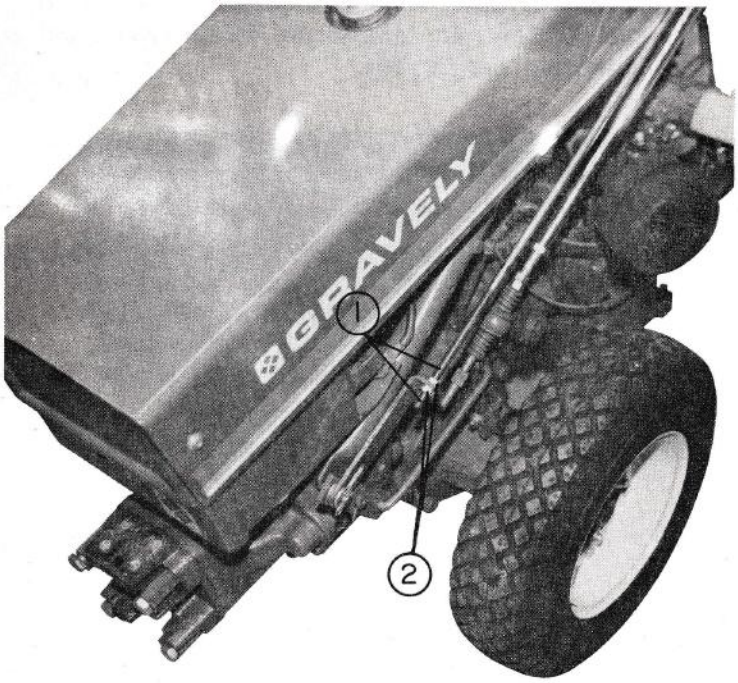

Fig. 18

1 — Jam Nuts
2 — Adjusting Nuts

2. Turn the adjusting nuts on the brake rods until the cross weldment is parallel to the instrument panel. The brake handlebar should have a slight amount of free movement to assure that the brakes are not too tight. See fig. 19.

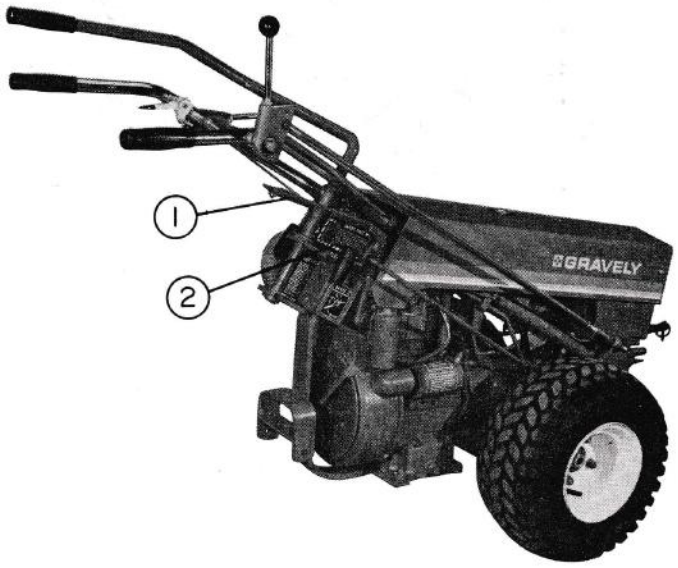

Fig. 19

1 — Cross Weldment
2 — Instrument Panel

3. After making the adjustments, check the free movement of the wheels by pushing or pulling the tractor with engine stopped and all controls in neutral. If either wheel drags, re-adjust.

4. If wheels move freely, move the brake handlebar to the right while pushing on the right handlebar of the tractor. This should activate the left wheel brake. If it does not, re-adjust.

5. Move the brake handlebar to the left while pulling on the right handlebar of the tractor. This should activate the right wheel brake. If it does not, re-adjust.

6. Engage the parking brake lock. Check to make sure both wheel brakes are engaging properly. If both brakes do not engage, re-adjust.

7. When brakes are properly adjusted, tighten the jam nuts against the adjusting nuts.