

**Steiger
CA/CU Series
Industrial Tractor**

Service Manual

37-121

Reprinted

CASE III

Safety Suggestions

The manufacturer, dealer and/or agent can not anticipate every possible circumstance that might involve potential hazard. The Warnings, Cautions and Safety Suggestions in this manual are therefore not all inclusive. If an operating procedure, tool device, maintenance or work method not specifically recommended is used, you must also ensure that the product will not be damaged or made unsafe by the procedures you choose.



Whenever you see this symbol, it means Attention! Become Alert! Your safety is involved.

- **Always** observe and heed all caution and warning signs or other decals wherever they may appear.
- **Always** install the locking bar between the front and rear frames whenever possible -
 - A. Before service work is done near center of tractor
 - B. Before lifting or transporting the tractor on another vehicle
 - C. Before operating stationary PTO driven equipment
- **Never** perform any service or maintenance in the center hinge area of a 4 wheel-drive articulated tractor unless the engine is shut off and the switch key removed.
- **Never** clean, service or adjust the tractor or any equipment operated by it until the tractor engine is shut down and all machine motion is stopped, unless specific instructions are given for a particular repair or procedure.
- **Always** direct compressed air away from the body and towards a safe area. Use only an approved air nozzle and wear adequate eye protection.
- **Always** keep hand tools in good condition and proper working order. Replace any that are damaged.
- **Always** have electrical equipment and cords serviced and/or inspected periodically. Use only properly grounded electrical equipment.
- **Always** keep shop floors dry and clean to prevent falls of people and/or equipment.
- **Always** weld and/or grind only in safe areas away from any flammable or explosive materials.
- **Always** read the operation instructions and understand the proper use of test equipment or other special tooling.
- **Always** inspect all lift tie chains and/or slings periodically, replace any that show signs of damage.
- **Always** use a rated alloy chain for lifting or a sling of a size and type adequate for the intended usage.
- **Always** relieve all pressure in air, oil or water systems before any lines, fittings or related items are disconnected or removed. Be alert for possible fluid pressure or spring force when disconnecting or repairing any device from a system that utilizes fluid pressure or spring force.
- **Always** reinstall all fasteners with the same part number. **Do not** use a lesser quality fastener if replacements are necessary.
- **Always** wear eye protection when charging, boosting or performing other services to or around batteries.
- **Never** spin or rotate bearings with compressed air.
- **Never** attempt to lift or jack an object that exceeds the weight capacity of the lifting fixture (jack, hoist, fork lift etc.).
- **Never** wear loose fitting clothing around rotating shafts or machinery. Long hair should always be netted.
- **Do not** try to locate high pressure fluid leaks with your hands. Use cardboard or wood to search for suspected leaks. High pressure fluid escaping from a very small area can be nearly invisible. If injured by high pressure fluid, seek immediate medical attention. Serious infection or reaction can develop if proper medical treatment is not administered immediately.
- **Do not** use unguarded grinding tools or other power tools requiring a guard. Wear safety glasses and safety shoes whenever they may be required.

- **Do not** attempt to separate or disassemble hydraulic cylinders with the use of compressed air or hydraulic pressure.
- **Do not** attempt tire repairs unless you have the proper equipment and know how to perform the repair correctly and safely.
- **Do not** work on anything that is supported only by lift jacks or a hoist. **Always** use adequate blocks or proper stands to support the product before performing any service work.
- Use **only** approved cleaning solvents. **Never** use gasoline or other flammable or explosive materials for cleaning.
- Report or correct any unsafe areas or practices immediately.
- **Before** doing any electrical work, disconnect the battery. Do not damage wiring during removal operations. Reinstall the wiring so it is not damaged nor will it be damaged in operation by contacting sharp corners, or by rubbing against objects or sharp corner.
- If guards or shields must be removed to perform the repair or service, use extra caution. After the repair is completed, be sure to reinstall any guard or shield that was removed.

These are a few of the most common causes of personal injuries. There are a great many more and shops are continually finding accidents happening that they never heard of before.

The only known way to reduce personal injury, is to teach and practice **Safety First**.

HAND SIGNALS

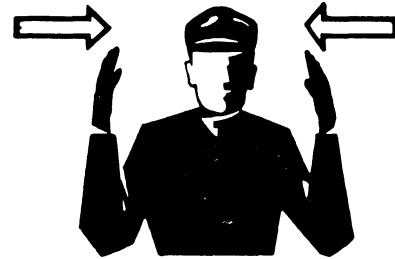
For communication under noise conditions and special operations the American Society of Agricultural Engineers has made standard agricultural hand signals. You will find that the hand signals can decrease time loss and prevent accidents.

Start The Engine



Start the engine. Move arm in a circle at belt level.

This Far To Go



This far to go. Put your hands in front of your face with the back of your hands outward. Move your hands in or out as an indication how far to go.

Stop The Engine



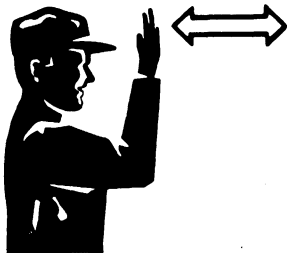
Stop the engine. Move your right arm across your neck from left to right.

Move Out



Move out. Face in the needed direction of movement. Put your arm straight out behind you. Then, swing your arm over your head and forward until your arm is straight out in front of you with the back of your hand up.

Move Toward Me - Follow Me



Move toward me or follow me. Look toward person or vehicle you need to move. Hold one hand in front of you with the back of the hand toward the vehicle and move your arm from the elbow to the fingers backward and forward.

HAND SIGNALS

Come To Me



Come to me (can also be come to me because I need assistance). Lift your arm vertically over your head with the back of your hand to the rear and turn your arm in large horizontal circles.

Raise Equipment



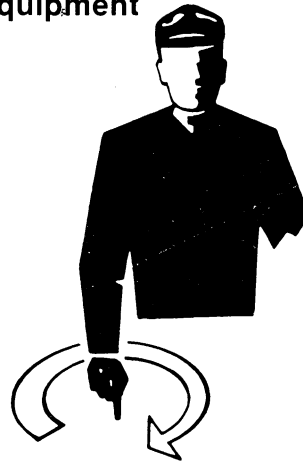
Raise equipment. Point up with one finger and at the same time, move your hand in a circle at head level.

Decrease Speed



Decrease speed. Put your arm out horizontally with the back of your hand up and then move your arm down about 45 degrees minimum many time. Keep your arm straight and do not move your arm above your shoulder.

Lower Equipment



Lower equipment. Point to the ground with one finger and at the same time move your hand in a circle.

Increase Speed



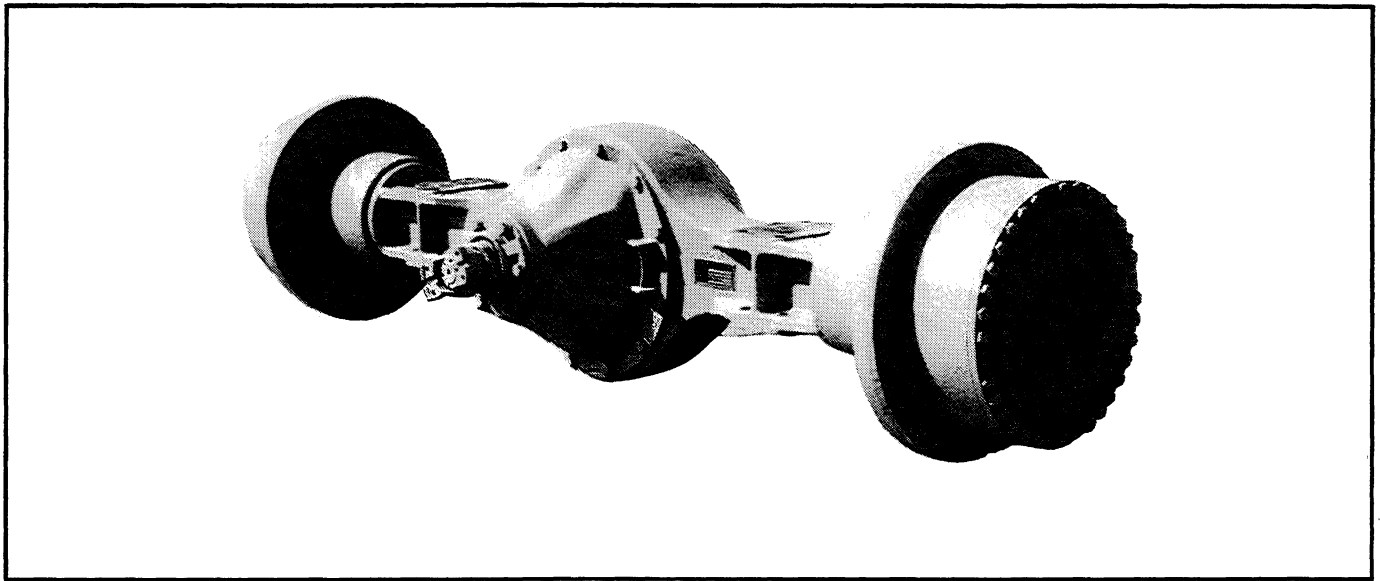
Increase speed. Lift your hand to shoulder level with your fingers closed. Move your closed hand fully up and then return to shoulder level. Do this fast, many times.

Stop



Stop. Raise your arm fully up with the back of your hand to the rear. Keep this position until the signal is understood.

T.M.
STEIGER
S-34 & S-40 AXLE
SERVICE MANUAL



IMMEDIATE ACTION LETTER REFERENCE:

No/Date

1 _____ 2 _____ 3 _____

4 _____ 5 _____ 6 _____

7 _____ 8 _____ 9 _____

SERVICE BULLETIN REFERENCE:

No/Date

1 _____ 2 _____ 3 _____

4 _____ 5 _____ 6 _____

7 _____ 8 _____ 9 _____

SERVICE NEWS REFERENCE:

No/Date

1 _____ 2 _____ 3 _____

4 _____ 5 _____ 6 _____

7 _____ 8 _____ 9 _____

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Wheel Hub Disassembly

Disassembly Procedures

The instructions contained herein cover the disassembly and reassembly of the axle assembly in a sequence that would normally be followed after the unit has been removed from the machine and is to be completely overhauled. However, most axle repairs can be made with the assembly in the tractor. When axles are repaired off the tractor, mount the axles on steel horses or on V-blocks. If axle is mounted on horses, invert it from its normally installed position and allow housing mounting pads to rest on crossbars of horses to provide necessary rigidity.

NOTE: *Cleanliness is of extreme importance in the repair and overhaul of this unit. Before attempting any repairs, the exterior of the unit must be thoroughly cleaned to prevent the possibility of dirt and foreign matter entering the mechanism.*

Disassembly of Wheel Hub Assembly

1. Remove the drain plugs from the planetary hubs and axle housing.
2. Remove the capscrews from the planet carrier assembly, and place them in a container separate from other fasteners.
3. The planet carrier assembly may now be removed from the hub. Be sure to handle with care to avoid personal injury and/or damage to equipment. If necessary, use the jacking screws to initiate planet carrier separation from the hub (Fig. 1).
4. Attach a hoist and remove the planet carrier assembly (Fig. 2).

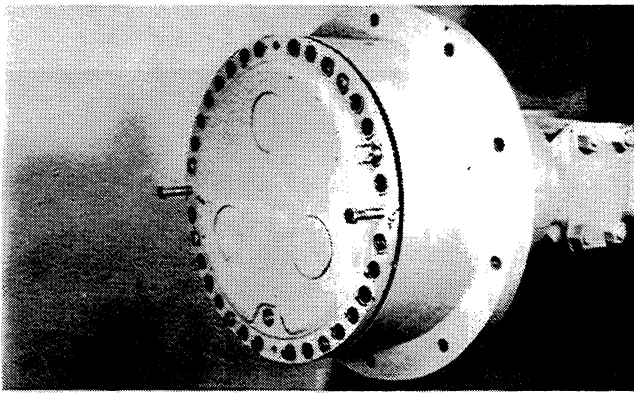


Figure 1:

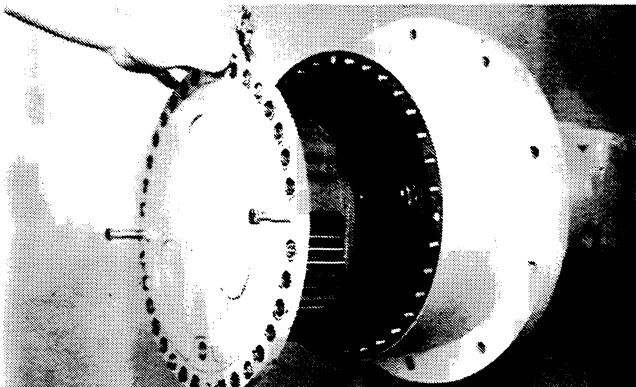


Figure 2:

Wheel Hub Disassembly

5. The axle shaft and sun gear assembly may now be withdrawn, (Fig. 3). At this time, as both axle shaft assemblies are removed, the differential carrier can be removed from the axle housing.

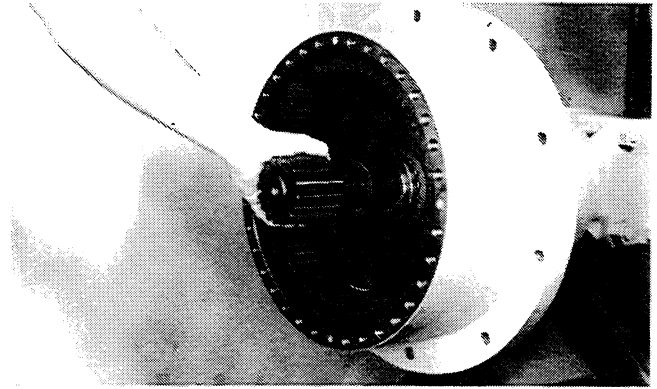


Figure 3:

6. Straighten the tangs of the nut lock as shown (Fig. 4).

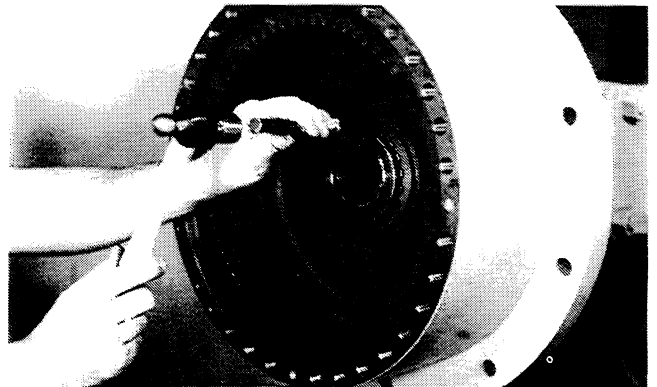


Figure 4:

7. Loosen the adjusting nut, nut lock and internal gear hub retaining washer (Fig. 5).

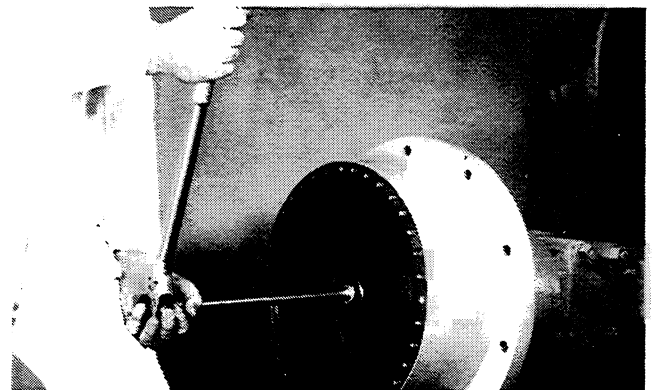


Figure 5:

8. Support the hub using a hoist. This will allow the internal gear hub to move outward. If it does not move freely, bars may be used to apply force (Fig. 6).

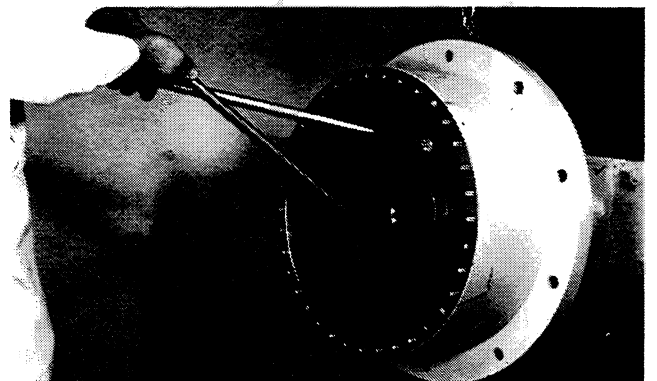


Figure 6:

Wheel Hub Disassembly

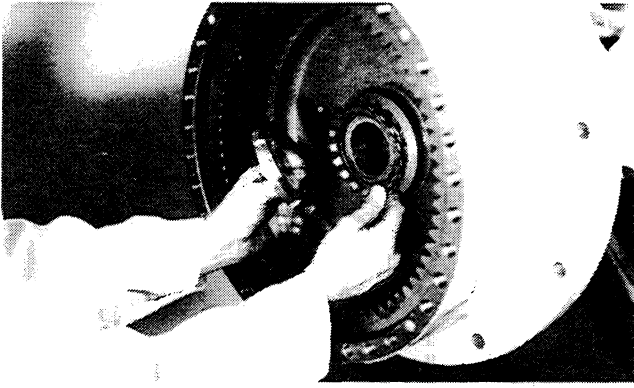


Figure 7:

9. Remove the adjusting nut, nut lock and internal gear hub retaining washer (Fig. 7).

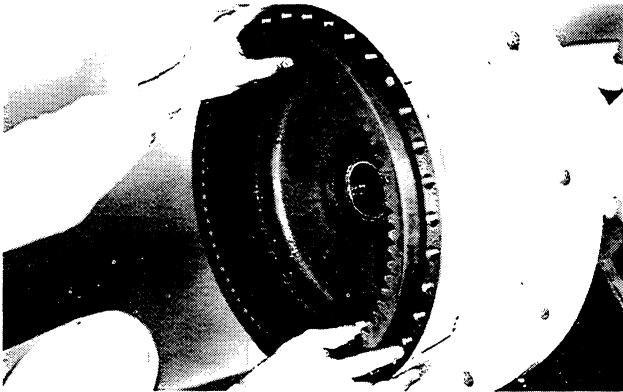


Figure 8:

10. While supporting the hub with a hoist, slide the internal gear and hub assembly from the spindle (Fig. 8).

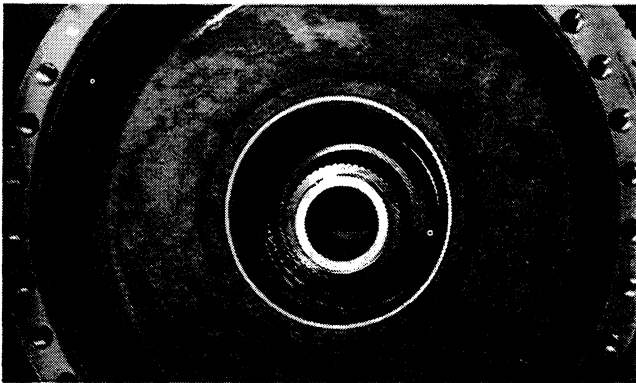


Figure 9:

11. Pull the hub from the spindle while keeping it aligned to avoid damaging the bearings or spindle splines (Fig. 9).

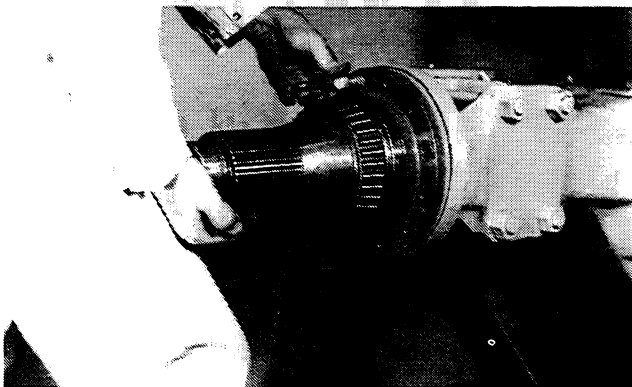


Figure 10:

12. Remove the spindle from the axle housing. Hold it firmly as the last capscrew is removed (Fig. 10).

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