

PARTS CATALOG AND INSTRUCTIONS

MODEL

2500B4 Four-Wheel Speed Truck

3600B4 Four-Wheel Tow Tractor

2500B Three-Wheel Speed Truck

3600B Three-Wheel Tow Tractor



UNITED TRACTOR COMPANY
2181 Enterprise Parkway
Twinsburg, OH 44087



The first part of the document
 discusses the importance of
 maintaining accurate records
 and the role of the
 committee in this regard.

It is noted that the
 committee has been
 working on this matter
 for some time.

The committee has
 received several
 reports from the
 field offices.

These reports indicate
 that there is a
 need for further
 investigation.

The committee has
 decided to
 conduct a
 thorough review.

It is recommended
 that the committee
 should continue to
 monitor the situation.



THE ILLUSTRATIONS AND INSTRUCTIONS CONTAINED IN THIS MANUAL ARE THE MOST RECENT AVAILABLE AT THE TIME OF PUBLICATION.

ANY DIFFERENCES BETWEEN THE UNIT YOU RECEIVE AND THE DIRECTIVES CONTAINED IN THIS MANUAL ARE THE RESULT OF DESIGN IMPROVEMENTS AND/OR ADDITIONS.



CAUTION

1. Only trained and authorized personnel may operate this vehicle. Consult the Operator's Manual before starting.
2. Unauthorized personnel shall not be permitted to ride on this vehicle. Keep your body position within the running lines of the vehicle.
3. When leaving this vehicle unattended, set the brakes, remove the key, and neutralize manual controls.
4. Do not exceed the capacity of this vehicle as is found on the name plate. Any modifications of this vehicle which affect capacity (tire size, axles, etc.) should not be performed without the prior written consent of the manufacturer.
5. Loads must be equally distributed over deck area. Use extreme care when handling long, high, or wide loads. Proper operator and by-stander protection must be made against shifting loads.
6. Observe all floor capacities, including dock board and bridge plate.
7. Travel slowly and cautiously in all hazardous areas, such as aisle crossings, uneven floors and ascending or descending grades. Avoid running over loose objects in the roadway as well as slippery or uneven surfaces.
8. Starts, stops, and turns should be made in a safe manner.
9. Report any damage or malfunction in this vehicle to your supervisor immediately. Do not operate until corrected.
10. Avoid prolong operation in confined areas.
11. Consult the Operator's Manual for additional warnings.

CAUTION:

Exhaust gases contain carbon monoxide which is odorless and a DEADLY POISON. Proper care must be taken to provide efficient ventilation when running engine indoors.

Do Not fill the gasoline tank while engine is running.

WARNING

THE FOLLOWING LABELS ARE ON THIS VEHICLE
FOR YOUR PROTECTION AND ASSISTANCE.

WARNING

APPLY HAND BRAKE

**PARKING BRAKES ARE NOT
AUTOMATICALLY APPLIED**

WARNING

**BATTERY GASES CAN BE EXPLOSIVE. KEEP
SPARKS, FLAMES AND LIGHTED CIGARETTES
AWAY FROM BATTERIES. DANGER IS INCREASED
WHILE CHARGING. IF CHARGING WHILE BAT-
TERIES ARE IN VEHICLE, VEHICLE MUST BE IN A
WELL VENTILATED AREA.**

KALAMAZOO



MODEL 2500B & 2500B4 SPEED TRUCK

MODEL 3600B & 3600B4 TRACTOR

GENERAL DESCRIPTION AND OPERATING INSTRUCTIONS:

The tractor is powered by a Kohler Engine OHC 16-18 HP, air cooled engine, Model TH18S, developing 18 HP @ 3600 RPM.

The manual shift transmission is mated to the engine by means of a standard automotive dry type clutch. Final drive is then accomplished by a propeller shaft connecting the transmission to an auxiliary differential axle, which in turn chain drives the load-carrying dead axle.

The conventional three-speed remote shift transmission is controlled by means of a shifting tower located to the operator's left.

GEAR SHIFT PATTERN

Rev.	2nd.
	N.
1st.	3rd.

The accelerator, brake, and clutch pedals are arranged in the conventional automotive manner with the clutch pedal being operated by the left foot and the brake and accelerator pedals being operated by the right foot.

A keyed ignition switch, choke control knob, and ammeter are located on the instrument panel directly in front of the operator.

The horn button, located in the center of the steering wheel, is conveniently placed for right-hand operation while maintaining complete steering control of the vehicle.

Electric headlight and tail light are operated at the same time when the light switch is turned on.

STARTING THE UNIT. The truck is operated in much the same manner as a standard automobile with a manual shift transmission. The following paragraphs outline procedures for proper starting of the engine.

- a. SET THE PARKING BRAKE. To set the parking brake, pull up on the handle (located to the driver's left). For maximum holding power, depress the service brake pedal at the same time as the lever is pulled up. NOTE: The parking brake should always be set before the operator leaves the driver's seat. After the parking brake is set, place right foot on the accelerator pedal.
- b. Place the transmission selector lever in 'N' neutral and depress the clutch pedal.

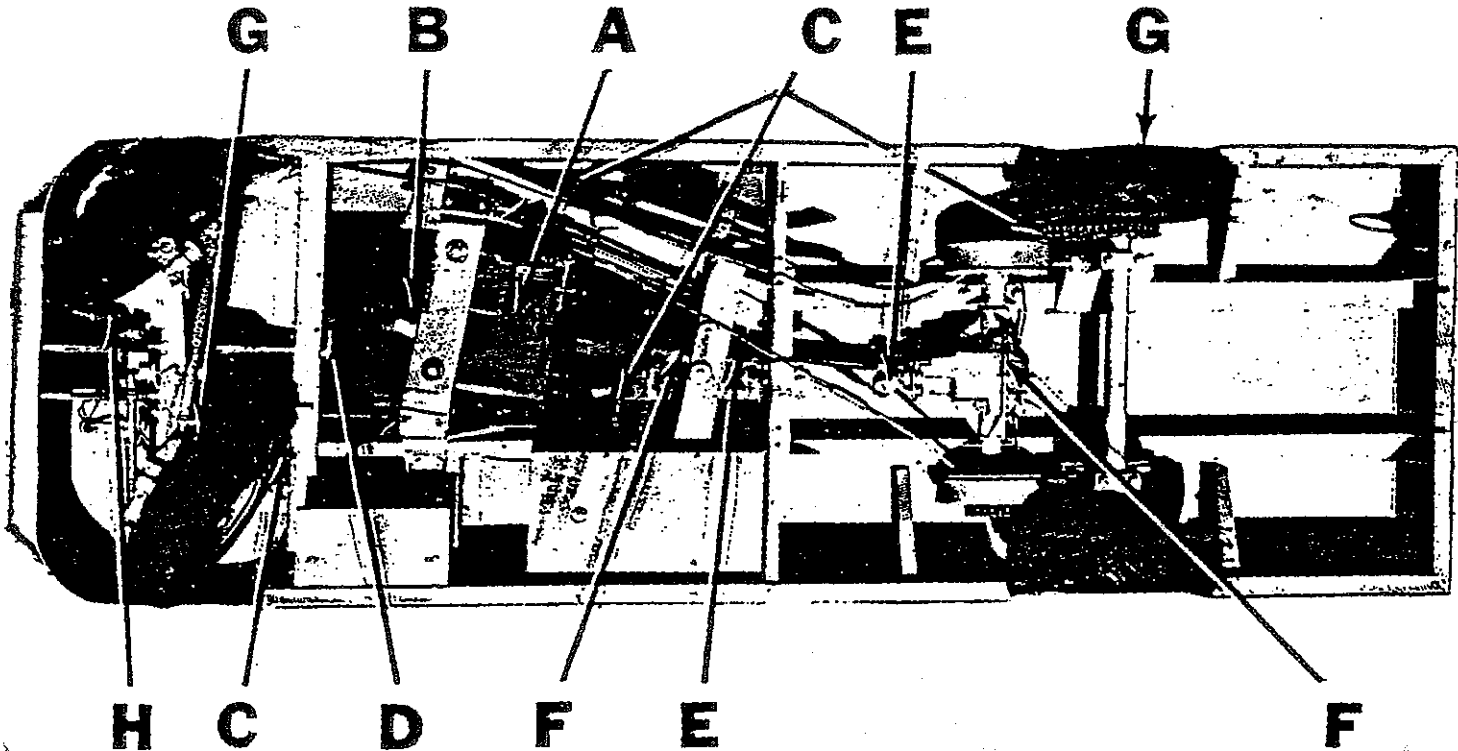
CHOKER CONTROL - Pull choke control out to fully close the choke on the carburetor. NOTE: A warm engine requires less choking than a cold engine.

Depress the accelerator pedal and turn key to "Start" position. When engine starts, slowly push in the choke control.

NOTE: do not keep the starter engaged for more than 15 seconds at a time. Wait 10 to 15 seconds before trying again.

Allow the engine to idle 20 to 30 seconds after start-up before placing in gear.

STOPPING ENGINE. To stop the truck engine, place the ignition switch in the 'off' position. The parking brake must be set.

LUBRICATION GUIDECRANKCASE OIL:

<u>Air Temperature</u>	<u>Viscosity</u>
+120°F to +40°F	SAE-30
+ 40°F to + 5°F	SAE-20W
+ 5°F to -20°F	SAE-10W

Use only high grade lubricants conforming to S.A.E. standards.

- A. ENGINE - Check oil level daily. Drain and refill to "full" mark every 100 operating hours. Crankcase capacity - 3½ qts.
- B. AIR CLEANER - Drain, clean filtering element with kerosene and refill to oil level line each 100 operating hours. Use same grade oil as in the engine. Capacity - ½ quart. For service on dry type air cleaner, see Service Bulletin at rear of manual.
- C. LINKAGES, CLUTCH SHAFT BEARINGS AND CHAINS - Oil weekly, using same grade oil as in the engine.
- D. BRAKE PEDAL TUBE AND BEARINGS - Pressure gun fitting, lubricate each 100 operating hours.
- E. UNIVERSAL JOINTS - Pressure gun fittings, lubricate each 2500 operating hours.

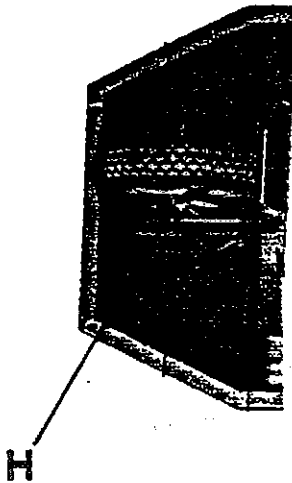
2500B - 2500B4
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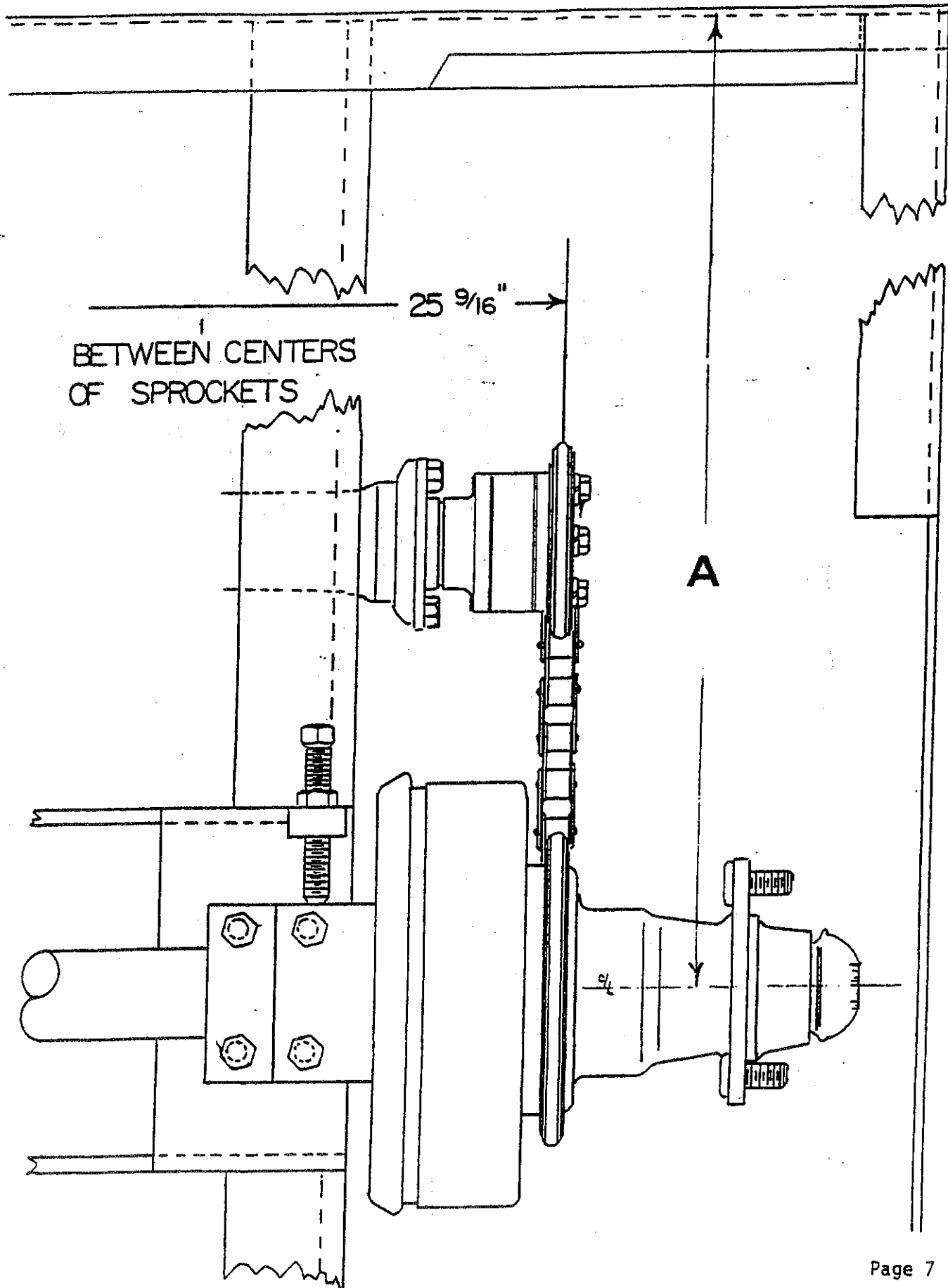
KALAMAZOO



LUBRICATION GUIDE (continued)

- F. TRANSMISSION AND DIFFERENTIAL - Check oil level each 200 operating hours. Drain and refill each 2500 operating hours, or at least once a year. Use CW-SAE-90.
Transmission capacity - $1\frac{1}{2}$ pints.
Differential capacity - $1\frac{1}{4}$ pints.
- G. WHEEL BEARINGS - Remove, clean and repack with wheel bearing grease SAE-130 to 150 each 2500 operating hours.
- H. STEERING COLUMN AND AUTOMOTIVE STEERING GEAR BOX - (THREE WHEEL)
Clean and repack steer column with SAE-140 gear lube when part is removed for servicing. Check oil level of gear box every 200 operating hours and add SAE-90 lubricant as required.
- H. STEERING GEAR BOX - Check oil level of gear box every 200 operating hours and add SAE-90 lubricant as required.





When chain tension is adjusted properly a force of approximately 50 lb. at the mid point between the sprockets will deflect the chain $\frac{1}{4}$ inch.

To adjust the chain tension —

1. Loosen mounting block bolts.
2. Loosen adjusting bolt lock nut.
3. Turn adjusting bolt until proper chain tension is achieved.
4. Retighten lock nut.
5. Retighten mounting block bolts.

(Note: In order for the vehicle to "track" correctly the dead axle must be square with the frame. This should be checked after the chains have been adjusted by comparing dimension "A" on each side. It may be necessary to readjust the axle mounting blocks slightly to align the dead axle in the frame.)

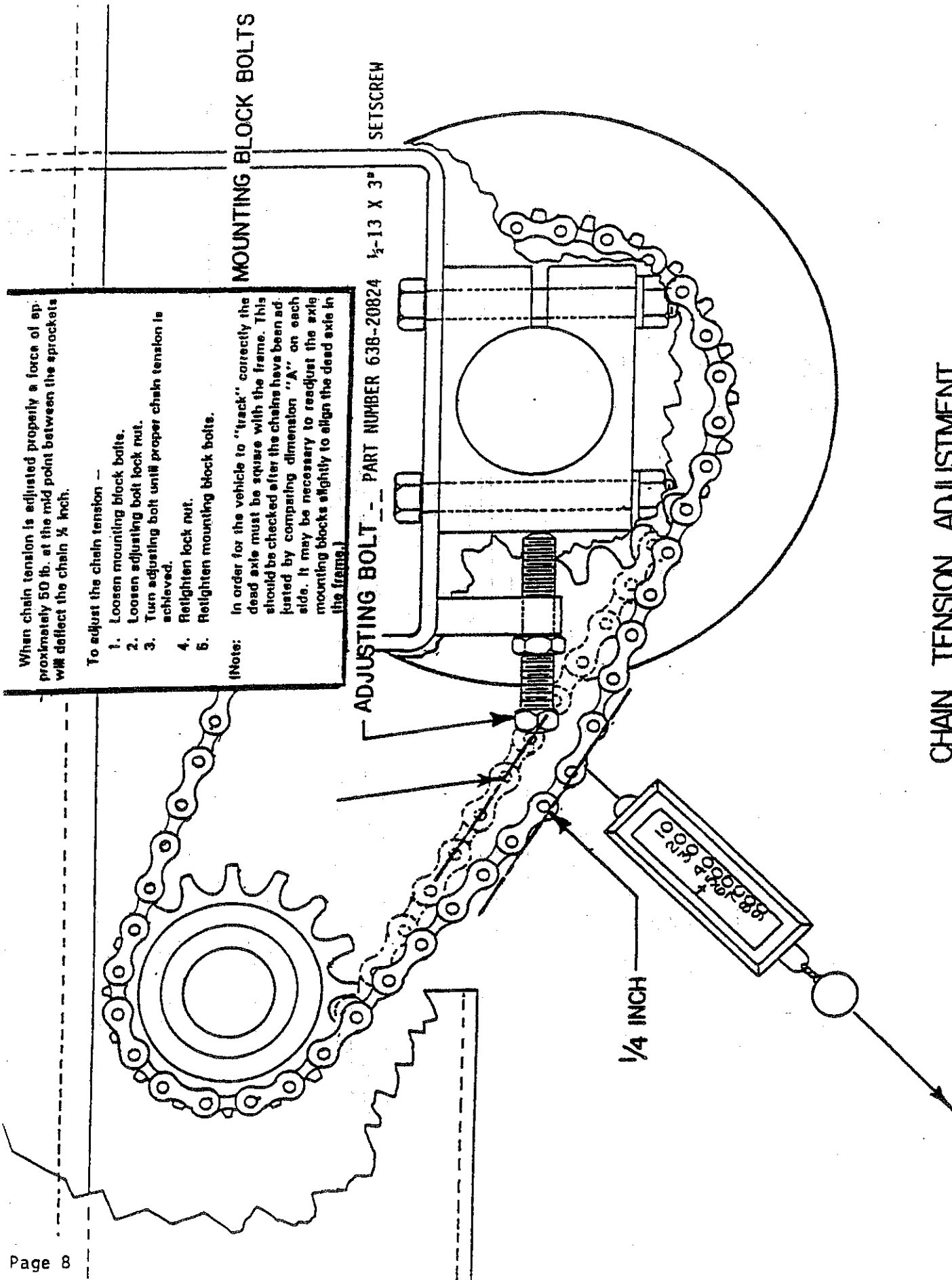
MOUNTING BLOCK BOLTS

ADJUSTING BOLT — PART NUMBER 638-20824 $\frac{1}{2}$ -13 X 3"

SETSCREW

$\frac{1}{4}$ INCH

CHAIN TENSION ADJUSTMENT



SERVICE BULLETIN No. 359

Adjustment and Lubrication — Twin Lever Type

Ross Cam and Lever Steering Gear

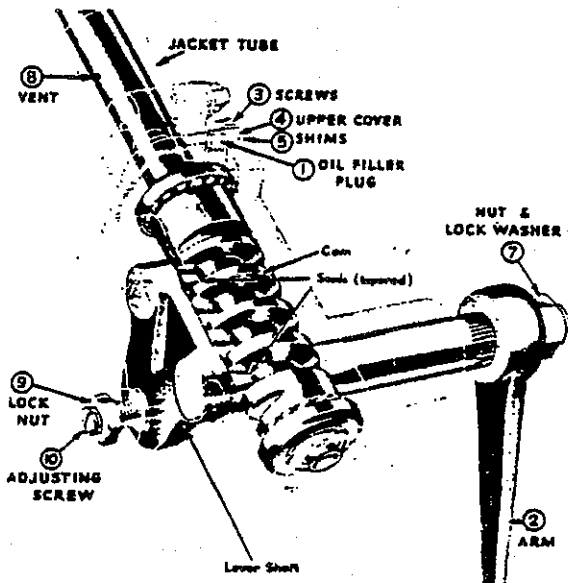
ADJUSTMENTS

When making adjustments free the steering gear of all load, preferably by disconnecting the drag link from the steering arm, and loosen instrument board bracket clamp on steering gear jacket tube.

If the ball thrust bearings on the cam must be adjusted, make the adjustment (I) before making the side adjustment (II).

I. ADJUSTMENT OF BALL THRUST BEARINGS ON CAM

Adjust to a barely perceptible drag but allow the steering wheel to turn freely (with the thumb and forefinger lightly gripping the rim).



Before making this adjustment loosen the housing side cover adjusting screw (9, 10) to free the studs in the cam groove.

To adjust, unscrew the cover screws (3) and move up the housing upper cover (4) to permit removal of shim (5). (Shims are of .002", .003" and .010" thickness.

Clip and remove a thin shim, or more as required. Re-assemble cover screws and tighten. Draw down tight. Test adjustment and if necessary remove or replace shims until adjustment is correct.

II. ADJUSTMENT FOR MINIMUM BACKLASH OF TAPERED STUDS IN CAM GROOVE

Adjust so that a very slight drag is felt through the mid-position high spot while turning the steering wheel slowly from one extreme position to the other.

Backlash of studs in the groove shows up as backlash at steering wheel and at ball on steering arm.

The groove is purposely cut shallower, therefore narrower, in the mid-position range of travel of each stud (see illustration on next page) to provide close adjustment where usually the straight-ahead-driving action takes place. It also makes this close adjustment possible after normal wear occurs without causing a bind elsewhere.

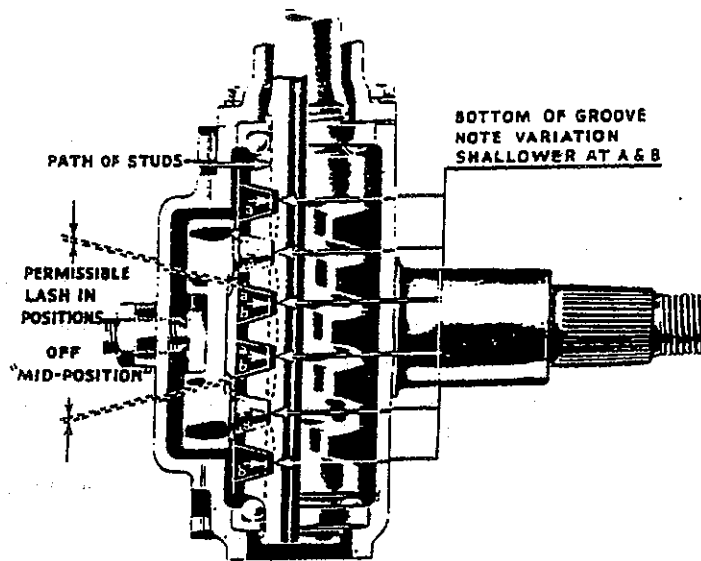
Therefore, adjust through the mid-position. Do not adjust in positions off mid-position as backlash at these points is normal and not objectionable.

To adjust, tighten side cover adjusting screw (10) until the adjustment is correct and tighten the lock nut (9) to hold it. Then give the gear a final test.

Secure the gear at all points loosened prior to making the adjustment. Also check tightness of mounting bracket bolts and nuts, and of steering arm on lever shaft and the nut and lockwasher (7). With all supporting brackets clamped tight, turn steering wheel to see if any stiffness exists. If so, the column is probably out of alignment and needs correcting. (Refer paragraph on "Column Alignment.")

LUBRICATION

Lubricate through the pipe plug hole or fitting in the top of the housing. Keep housing full. For recommended lubricant see Ross Bulletin 210-A.



GEAR (Studs A-B) SHOWN AT MID-POSITION OF TRAVEL
 a shows VARIOUS POSITIONS OF STUD A ON TURNS
 b shows VARIOUS POSITIONS OF STUD B ON TURNS
 IMPORTANT - ADJUST THRU THE MID-POSITION

GENERAL INFORMATION

COLUMN ALIGNMENT

Alignment of the column is of paramount importance. **THE STEERING COLUMN MUST NOT BE SPRUNG IN ANY DIRECTION FROM ITS FREE POSITION.** To determine whether misalignment exists, release upper column bracket and note whether the column moves to a different position, its free position. If it does, it has been out of line and should be re-clamped in the new position or the condition corrected by other methods provided by the vehicle manufacturer. Caution: If the column has been permanently bent because of severe misalignment, the above test may not be reliable, and replacement of the tubes will be necessary.

STEERING GEAR CONNECTION WITH FRONT WHEELS

Normally, the steering gear should be in approximately its mid-position when the front wheels are straight-ahead. To check, (the drag link must be disconnected from the steering arm) turn the steering wheel to the right as far as possible, then rotate the wheel in the opposite direction as far as possible and note the total number of turns. Turn wheel back just one-half of this total movement thus placing the gear in mid-position. Place front wheels straight ahead. The ball on the steering gear arm should now line up, or nearly so, with the ball socket on the drag link. If necessary, the steering arm can be shifted on the splines of the lever shaft to change the ball position. Shifting it one spline will shift the ball 10°. Some drag links can be adjusted in length to take up minor variations.



SECTION VI

MAINTENANCE SCHEDULE

Presented in this section is the recommended maintenance schedule for trucks operated under normal conditions and single shift operations. Conditions such as heavy dust, salt, abrasives, chemicals, extreme heat or cold, frequent stop and go, and trailer pulling will require more frequent maintenance than that listed.

DAILY MAINTENANCE CHECK:

- A. Master cylinder fluid
- B. Parking brake for secure hold
- C. Battery water level
- D. Tires for proper inflation
- E. Wheel lug nuts
- F. Headlights and brake lights
- G. Check steering gear for oil leaks. Be alert to any changed in steering action such as hard steering, excessive free play or unusual sounds when turning.
- H. Be alert to any changes in free movement of brake or accelerator pedals. Visually check linkage for damaged or missing parts, interference or binding.
- I. Be alert to changes in braking action, such as pulling to one side, unusual sounds when braking or between brake applications or increased brake pedal travel.
- J. Blow horn occasionally to be sure it works.

50 HOUR MAINTENANCE: (PERFORM AT 50 HOUR INTERVALS)

- A. Lubricate all grease fittings in steering linkage.
- B. Lubricate drive shaft cross.
- C. Lubricate parking brake cable, guides, and linkage.
- D. Lubricate accelerator and brake linkage.
- E. Check cables for cracks, fraying, wear and tension.
- F. Check for fluid leaks.
- G. Check rear axle oil and add as required.
- H. Check steering gear fluid and add as required
- I. Lubricate front steer knuckles.



SECTION VI (CONTINUED)

100 HOUR INTERVAL MAINTENANCE:

- A. Repeat all 50 hour maintenance.
- B. Check front and rear springs for damage, loose or missing parts.
- C. Check brake lines and hoses for secure attachment, leaks, cracks, chafing and deterioration.
- D. Check brake drums and brake linings and other interval brake parts for wear, cracks and leaks.
- E. Check front axle king pins, knuckles, steer arms, and linkages for wear, excessive free play (must be performed with wheels off ground).

300 HOUR INTERVAL MAINTENANCE:

- A. Perform all 50 and 100 hour maintenance.
- B. Grease front and rear wheel bearings and replace seals.
- C. Clean entire truck, using high pressure steam. Use caution on control panel, being sure to protect it from high pressure spray or detergent.
- D. Adjust all linkages and inspect all electrical connections.
- E. Check all fasteners for security to their mading parts.

500 HOUR INTERVAL MAINTENANCE:

- A. Replace brake shoes
- B. Perform all 50 and 100 hour maintenance.

800 HOUR INTERVAL MAINTENANCE:

- A. Replace steer axle steer knuckle bushings and shim as required.

SECTION VII

CORRECTIVE MAINTENANCE

This section is intended to provide guidance in the general maintenance of the truck where some disassembly may be required during inspection and cleaning or repair and replacement of components during the performance of routine maintenance.

1. **CLEANING.** The most important function in maintenance is cleanliness. Always clean the area around the parts which you intend to work before you touch a tool to it. NEVER use gasoline or other flammable fluids. Use only proper cleaning solvents. Clean all parts completely for inspection and clean installation area.
2. **BRAKE PEDAL ASSEMBLY**
 - (A) **REMOVAL:** Remove brake pedal lever from the drivers cab by removing index number bolt, lockwasher spring, and nut from the bracket supporting the master cylinder.
 - (B) Clean and inspect lever bushings. Replace as necessary.
 - (C) Replace in reverse order. Oil all pivot points with SAE10 oil. Adjust master cylinder push rod bolt for 3/8" to 1/2" free travel of brake pedal.
3. **BRAKE MASTER CYLINDER.**
 - (A) The brake master cylinder may be removed during removal of the brake pedal lever (refer to Paragraph 2 of this section).
 - (B) Clean all areas per Paragraph 1.
 - (C) The brake master cylinder is not normally rebuilt, therefore, disassembly is not necessary.
 - (D) Inspect the master cylinder for blocked air vent in filler cap, evidence of leaks or deterioration, and loose or broken hydraulic fittings.
 - (E) Reinstall the brake master cylinder in reverse order. Bleed brake system.

SECTION VII (CONTINUED)

4. BLEEDING THE BRAKE SYSTEM.

(A) BLEEDING THE MASTER CYLINDER.

(A1) Fill the master cylinder reservoir with brake fluid. Push the push rod one full stroke and repeat stroking until fluid is forced out of the outlet. DO NOT pump dry. Fill master cylinder again with brake fluid.

(B) BLEEDING THE WHEEL CYLINDER.

(B1) MANUAL BLEEDING: Manual bleeding requires two personnel to perform. One person is required to open and close the bleeder valve and check for air bubbles. The other person pumps the brake pedal slowly to force the fluid and air bubbles from the brake lines.

(B2) TOOLS: Bleeder hose (any clear gas line or equal hose of proper inside diameter to fit over the bleeder valve will work), clean glass jar, and bleeder wrench (any closed end wrench of proper size will work if first attached to the bleeder valve before the bleeder hose is attached to the bleeder valve).

(B3) ORDER OF BLEEDING:

(B3.1) Bleed master cylinder.

(B3.2) Bleed wheel cylinders beginning with the one located farthest from the master cylinder; then the opposite cylinder.

(B4) PROCEDURE:

(B4.1) Clean each bleeder valve thoroughly.

(B4.2) Fill the master cylinder with fresh brake fluid.

(B4.3) Insert wrench over the bleeder valve and slip the bleeder hose over the outlet hole of the bleeder valve of the wheel cylinder, submerge the opposite end of the hose in the glass jar which is to be partially filled with clean brake fluid so that air bubbles may be observed.

SECTION VII (CONTINUED)

4. BLEEDING THE BRAKE SYSTEM (CONTINUED)

(B4.4) One operator must open the bleeder valve approximately one turn. Once the bleeder valve is opened, the second operator must slowly depress the brake pedal to the full stroke limit. Repeat pedal stroking until the observer indicates the bubbles have ceased. It is not unusual for 10 to 15 strokes to be required. BE SURE TO CHECK THE MASTER CYLINDER RESERVOIR FOR BRAKE FLUID DURING BLEEDING (always keep at least 1/2 full at all times to prevent air from entering the system and making re-bleeding necessary). After all air bubbling has ceased, close the bleeder valve.

(B4.5) Repeat at each bleeder valve, in rotation, work-in toward the wheel cylinder nearest the master cylinder.

(B4.6) The pedal should be firm. If not, check for leaks worn shoes, or drums.

(B4.7) After bleeding all cylinder, fill the master cylinder with fresh brake fluid to within 3/8" of the top edge of the reservoir.

5. PARKING BRAKE LEVER & CABLE

(A) REMOVAL. The parking brake lever may be removed by unbolting the hand lever from the driver's cab and removing clevis pins and cotters from the cable end. The parking brake cable is removed by removing lock and jam nuts at the cable equalizer.

(B) INSPECTION. Clean cable ends and check for wire strand breakage, replace if worn. Oil with graphite oil or spray.

(C) Replace in reverse order. Adjust cable at equalizer with the parking brake lever in the off or released position. Tighten enough to remove slack in the emergency brake cable. Adjust to provide adequate contact of the brake linings with the drums but be sure that the linings are free of the drums when parking brake lever is released.

b. REAR BRAKE ADJUSTMENT

(A) This truck is equipped with self-adjusting rear brakes and adjustments are not normally required.

SECTION VII (CONTINUED)

6. REAR BRAKE ADJUSTMENT (CONTINUED)

- (B) If adjustment becomes necessary, block the front wheels, raise the rear of the truck, and release parking brake.
- (C) Check for proper operation of self-adjustor by pressing the adjustor lever away from the star wheel with a small screwdriver and backing off the star wheel with a larger screwdriver or adjusting spoon about 2 full turns. Spin the brake drum in reverse and have an assistance apply the brake. If the self-adjustor is working properly, the adjustor lever will move up and when the brake is released, the lever should snap down and turn the star wheel.
- (D) Adjust by rotating the star wheel with a screwdriver or adjusting spoon. Use a small screwdriver to press the adjusting lever away from the star wheel and place the adjusting spoon under the star wheel and ply downward on the end of the tool to tighten shoes.

7. BATTERY (BEFORE REPLACEMENT)

- (A) Check for loose cable connections.
- (B) Check for frayed insulation on wires which could cause current drian.
- (C) Check the condition of the battery by use of a battery hydro-meter which determines the specific gravity of liquids.
- (D) Check for cracks or breaks in the battery case or cover.
- (E) Clean all battery post and cable clamps. When reconnecting cable, the group strap should be connected last.
- (F) Clean battery case with baking soda and secure battery.

8. WHEELS AND TIRES.

- (A) INSPECTION: Check tires for proper inflation, wear, cracks and gouges.
- (B) INSPECTION: Check wheel nuts for secure fit. WARNING: Never loosen the fasteners which secure the wheel halves together when the tires are inflated.

9. DRIVE SHAFT

- (A) INSPECTION: Check for leaks at rear axle yokes. Check for worn or loose cross journal and cups, and secure U-bolts.

SECTION VII (CONTINUED)

9. DRIVE SHAFT (CONTINUED)

- (B) REMOVAL: Remove U-bolt or caps from rear axle yokes.
- (C) DISASSEMBLY: Secure drive shaft in vise. Remove the two snap rings. Using a brass drift or socket slightly smaller than the cross journal bearing cup, drive lightly on the end of the bearing cup assembly until the opposite bearing is pushed out of the drive shaft yoke. Remove the cross journal and drive out the remaining bearing cap.
- (D) ASSEMBLY: Replace cross journal with cross journal kit. Place cross journal in drive shaft yoke. Place bearing cups in drive shaft yoke. Use vise to press the bearings into the cross journal being careful to align bearings with journal. Once seated, insert snap rings.
- (E) Install in reverse order.

10. STEERING GEAR

- (A) INSPECT for oil leaks. Check oil level.
- (B) ADJUSTMENTS: Adjust backlash of steering gear shaft and pitman arm shaft by backing off lock nut and turning adjusting screw in until minimum amount of backlash is noticed.

11. STEER AXLE

(A) INSPECTION

- (A1) Check pivot bushings for cracks or wear.
- (A2) Inspect tie rod and drag link ends for secure fit and wear.
- (A3) Inspect king pins, steer knuckles, knuckle bushing, shims, and thrust bushings for wear and secure fit.
 - (A3.1) Block rear wheels and apply parking brake. Lift front wheels off ground with floor jack and secure with jack stands. Test kingpins by pushing on top of wheel and pulling on bottom of wheel while observing steer knuckle movement - there should be no movement. If movement is observed, the kingpin, shims, and bushing must be replaced.

(B) REMOVAL OF STEER KNUCKLE

- (B1) Remove front wheels. Chisel plugs from top and bottom of kingpin (figure 01-007 Index 6). Punch out wedge pin (figure 01-007 Index 7) from the front. Drive kingpin out with brass drift or punch. (figure 01-007 Index 8). Disconnect the rod ends.

KALAMAZOO



SECTION VII (CONTINUED)

11. STEER AXLE (CONTINUED)

(C) INSTALLATION.

(C1) Install in reverse order. Replace all shims, bushings, and bearings, wedge pins, and caps with new.

(C2) Replace grease seals and repack wheel bearings.



TROUBLE SHOOTING

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL		
BATTERY DISCHARGED	Shorted battery cell.	Replace battery.
	Shorted wiring.	Inspect and repair circuitry as required.
LIGHTS BURN DIM	Loose or dirty connections.	Tighten or clean connections as necessary.
	Leak in wiring.	Inspect for frayed or broken insulation and repair.
DASHBOARD INSTRUMENT FAILS TO INDICATE	Defective wiring.	Check & repair wiring.
	Defective wiring.	Replace as required.
REAR AXLE		
AXLE NOISY ON PULL & COAST	Excessive backlash in bevel gear and pinion.	Adjust as necessary.
	Excessive end play in pinion shaft.	Adjust as necessary.
	Worn pinion shaft bearing	Replace as necessary.
	Pinion set too deep in bevel gear	Adjust as necessary.
	Pinion & bevel gear too tight.	Adjust as necessary.
AXLE NOISY ON PULL	Pinion & bevel gear improperly adjusted.	Adjust as necessary.
	Pinion bearings excessively rough.	Replace pinion bearing.
	Pinion bearings excessively loose.	Adjust as necessary.
AXLE NOISY ON COAST	Excessive backlash in bevel gear & pinion.	Adjust as necessary.
	Excessive end play in pinion.	Adjust as necessary.
	Improper tooth contact.	Adjust tooth contact as necessary.
	Excessively rough bearings.	Replace bearings as necessary.

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TROUBLE SHOOTING (cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
REAR AXLE		
EXCESSIVE REAR AXLE BACKLASH	Differential pinion gear washers worn. Excessive backlash in bevel gear & pinion.	Replace washers & adjust as necessary. Adjust as necessary.
STEERING		
STEERING LOOSE	Tie rod ends worn. Connecting rod ball sockets worn. Steering gear parts worn. Steering gear improperly adjusted.	Replace as necessary. Replace as necessary. Replace drag link. Adjust steering gear.
HARD STEERING	Lack of lubrications. Worn tie rod ends. Bent or worn drag link. Steering gear parts worn.	Lubricate all fittings. Replace as necessary. Replace as necessary. Replace as necessary.
BRAKES		
BRAKES DRAG	Brake shoes improperly adjusted. Defective wheel cylinder. Improper pedal adjustment. Dirt in master brake cylinder.	Adjust as necessary. Repair or replace cylinder. Adjust as necessary. Clean as necessary.
ONE BRAKE DRAGS	Brake shoes improperly adjusted. Brake line or hose clogged. Brake return spring broken. Defective wheel cylinder. Loose or damaged wheel bearings.	Adjust as necessary. Replace line or hose. Replace spring. Repair or replace cylinder. Tighten or replace bearings.



TROUBLE SHOOTING (cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
BRAKES		
ONE BRAKE GRABS	<p>Anchor pin adjustment incorrect. Grease or brake fluid on lining. Dirt between lining & drum. Dirt between lining & drum. Brake drum rough or scored. Loose or worn wheel.</p> <p>Front axle or rear axle U-bolts loose. Brake mounting loose. Tires under-inflated.</p>	<p>Readjust anchor pin as required. Replace lining.</p> <p>Clean using wire brush. Turn drum & replace lining. Tighten or replace as necessary. Tighten as required.</p> <p>Tighten as required. Inflate to proper pressure.</p>
EXCESSIVE BRAKE PEDAL FREE TRAVEL	<p>Linings worn.</p> <p>Leak in brake line or connection. Excessively scored brake drum. Air in hydraulic system.</p>	<p>Adjust for lining normal wear or replace linings. Locate leak & repair.</p> <p>Turn drums and replace linings. Bleed brake hydraulic system.</p>
SPONGY BRAKE PEDAL	<p>Air in hydraulic system.</p> <p>Incorrect brake shoes adjustment. Grease or brake fluid on linings. Brake shoes improperly adjusted. Warped brake shoes. Distorted brake drums.</p>	<p>Bleed brake hydraulic system. Adjust brake shoes as required. Replace linings.</p> <p>Adjust brake shoes as required. Replace brake shoes. Replace or turn brake drums.</p>
EXCESSIVE PEDAL PRESSURE REQUIRED TO OPERATE BRAKES	<p>Air in hydraulic system.</p> <p>Incorrect brake shoes adjustment. Grease or brake fluid on linings. Brake shoes improperly adjusted. Warped brake shoes. Distorted brake drums.</p>	<p>Bleed brake hydraulic system. Adjust brake shoes as required. Replace linings.</p> <p>Adjust brake shoes as required. Replace brake shoes. Replace or turn brake drums.</p>

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TROUBLE SHOOTING (cont)

BRAKES

BRAKES SQUEAK

Brake shoes warped or drums distorted.
Loose brake linings.
Dirt imbedded in linings.
Improper brake adjustment.

Replace shoes or drums as required.
Replace linings.
Replace linings.
Adjust brakes as as required.

— NOTES —

TRANSMISSION REPAIR**TROUBLE SHOOTING****CONDITION AND PROBABLE CAUSE:****NOISY TRANSMISSION:**

1. MISALIGNMENT DUE TO LOOSE MOUNTING BOLTS.
2. DAMAGED OR WORN TRANSMISSION PARTS.
3. FLYWHEEL HOUSING MISALIGNMENT.
4. DIRT OR METAL CHIPS IN LUBRICANT.
5. INSUFFICIENT LUBRICANT.
6. INCORRECT LUBRICANT.

HARD SHIFTING:

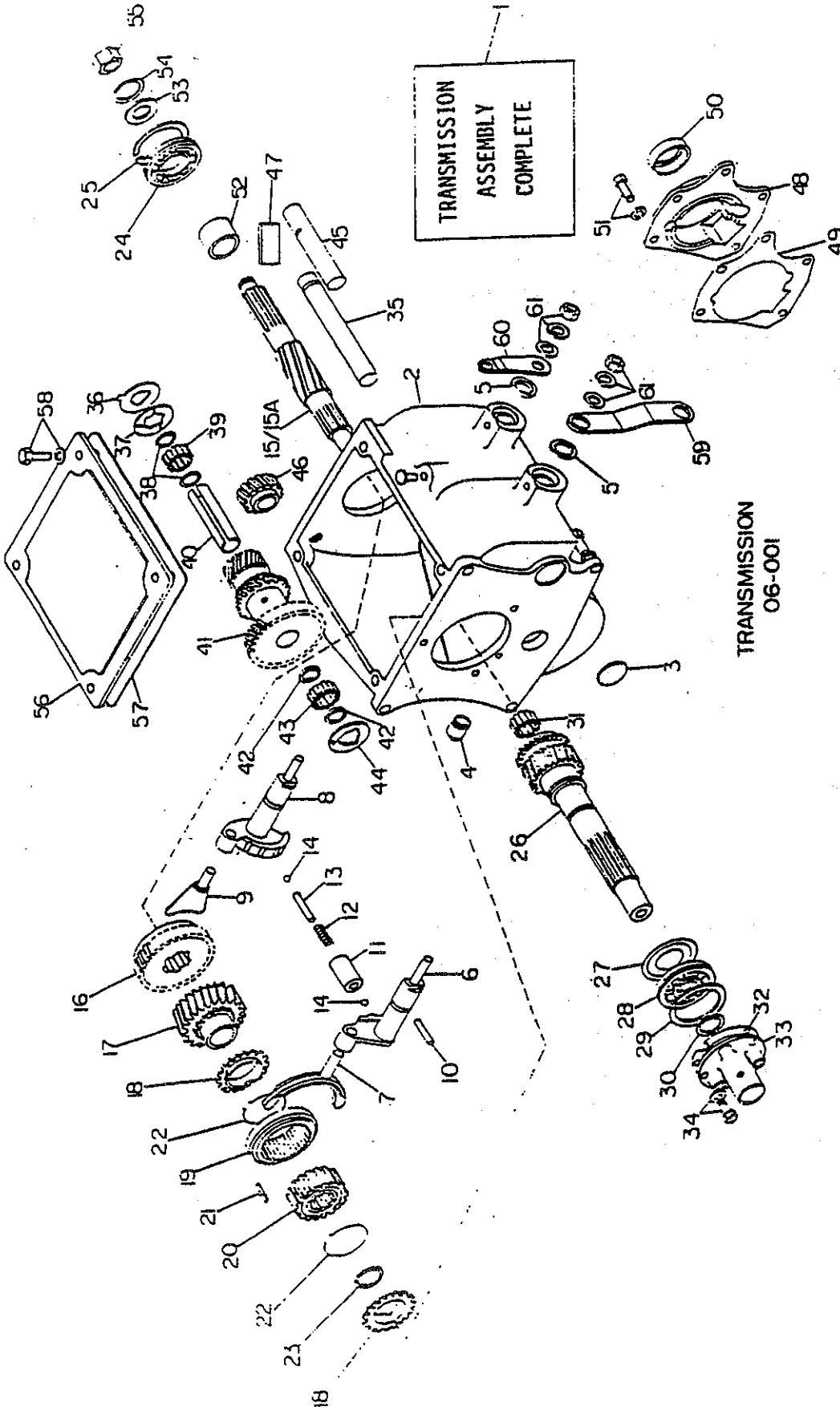
1. CHECK TRANSMISSION AND CLUTCH LINKAGE ADJUSTMENT.
2. SHIFTING MECHANISM BINDING CAUSED BY BENT OR WORN PARTS.
3. INCORRECT LUBRICANT.

INPROPER CLUTCH OPERATION:

1. CLUTCH PLATE BINDING ON SHAFT SPLINES.
2. CLUTCH NOT RELEASING.
3. SYNCHRO-CLUTCH WEAR OR FAILURE.
4. INCORRECT LUBRICANT.

TRANSMISSION JUMPS OUT OF GEAR:

1. CHECK GEAR SHIFT LEVER ADJUSTMENT.
2. SYNCHRO-CLUTCH WEAR OR FAILURE.
3. INCORRECT LUBRICANT.
4. GEAR TEETH WORN, TAPERED.
5. INSUFFICIENT INTERLOCK SPRING TENSION OR EXCESSIVE SLEEVE CLEARANCE.
6. MISALIGNMENT OR LOOSE FLYWHEEL HOUSING.
7. EXCESSIVE TRANSMISSION END PLAY.
8. SHIFTING LINKAGE BINDING.
9. WORN OR LOOSE ENGINE OR TRANSMISSION MOUNTS.
10. DAMAGED CLUTCH SHAFT NEEDLE BEARINGS.
11. DAMAGED OR WORN CRANKSHAFT PILOT BEARINGS.



TRANSMISSION REPAIR

TRANSMISSION REMOVAL:

REMOVE ENGINE COVER. DISCONNECT BATTERY CABLES FROM BATTERY, DISCONNECT ENGINE LINKAGE, FUEL LINE AND WIRES. DISCONNECT TRANSMISSION LINKAGE AND DRIVE SHAFT. REMOVE ENGINE AND TRANSMISSION FROM VEHICLE. REMOVE TRANSMISSION FROM ENGINE.

TRANSMISSION DISASSEMBLY: (USE ILLUSTRATION 06-001 FOR REFERENCE).

WITH THE TRANSMISSION REMOVED, COMPLETELY DRAIN LUBRICANT AND SET UP ON A TRANSMISSION STAND. REMOVE CASE COVER (ITEM 56).

INPUT SHAFT ASSEMBLY REMOVAL: (ITEM 26).

REMOVE FRONT BEARING CAP (ITEM 33). REMOVE THE INPUT SHAFT SNAP RING (ITEM 30) AND BEARING LOCK RING (ITEM 29). THE FRONT BEARING (ITEM 28) MAY BE REMOVED FROM THE INPUT SHAFT BY USING A BEARING PULLER BEING CAREFUL TO PREVENT DAMAGE TO THE SYNCHRONIZER CLUTCH.

THE OIL SLINGER (ITEM 27), BEING A FREE FIT ON THE INPUT SHAFT, CAN NOW BE REMOVED.

REMOVE REAR COVER (ITEM 48) FROM THE TRANSMISSION CASE. REMOVE SEAL (ITEM 50):

TO REMOVE THE TRANSMISSION INPUT SHAFT, THE MAINSHAFT (ITEM 15), MUST BE REMOVED TO THE REAR OF THE TRANSMISSION CASE ABOUT $\frac{1}{2}$ ". THEN BY LOWERING THE FRONT END OF THE INPUT SHAFT AND RAISING THE REAR END OVER THE COUNTERSHAFT GEAR, THE SHAFT CAN BE REMOVED FROM THE CASE. (SEE FIGURE 1)

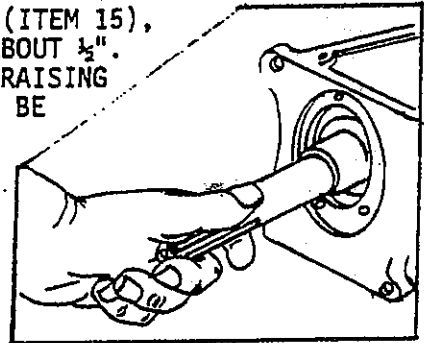


FIGURE 1.

INPUT SHAFT ROLLER BEARINGS: (ITEM 31)

INSIDE THE REAR END OF THE INPUT SHAFT ARE 21 ROLLER BEARINGS. THOSE FORM THE FRONT BEARING ASSEMBLY FOR THE MAINSHAFT. WORN ROLLERS WILL RESULT IN A NOISY TRANSMISSION. REPLACE AT ALL TEARDOWNS.

MAINSHAFT DISASSEMBLY: (ITEM 15 THRU 22)

AFTER REMOVAL OF THE INPUT SHAFT, REMOVE THE SECOND AND HIGH FORK (ITEM 7). TILT THE MAINSHAFT AND REMOVE THE SYNCHRO-UNIT (ITEMS 19 THRU 22), SECOND SPEED GEAR (ITEM 17) LOW AND REVERSE GEAR (ITEM 16), AND LOW AND REVERSE FORK (ITEM 9).

THE MAINSHAFT AND REAR BEARING IS THEN REMOVED FROM THE REAR OF THE CASE.

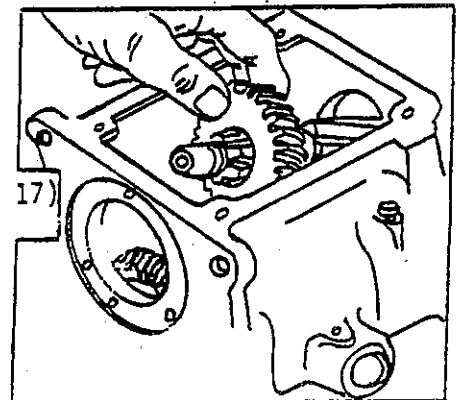


FIGURE 2

COUNTERSHAFT GEAR ASSEMBLY REMOVAL: (ITEM 41)

REMOVE LOCK PLATE (ITEM 47). ROLLER BEARINGS SHOULD BE REPLACED AT ASSEMBLY. DRIVE OUT THE COUNTERSHAFT (ITEM 35) THROUGH THE REAR OF THE CASE, USING A SOFT (BRASS) DRIFT. LOWER THE COUNTERSHAFT GEARS TO THE BOTTOM OF THE CASE.

REVERSE IDLER GEAR REMOVAL: (ITEM 46)

REMOVE THE REVERSE IDLER GEAR BY DRIVING THE SHAFT OUT THE REAR OF THE CASE WITH A SOFT (BRASS) DRIFT. LIFT THE REVERSE IDLER GEAR FROM THE CASE. REMOVE THE COUNTERSHAFT GEAR ASSEMBLY.

NOTE: CAREFULLY IDENTIFY THE POSITION OF THE 3 THRUST WASHERS TO AVOID MISPLACEMENT DURING ASSEMBLY. IF THEY SHOW ANY WEAR, SCORE, OR DAMAGE IN ANY MANNER, REPLACE THEM.

INTERLOCK SLEEVE REMOVAL: (ITEM 11)

REMOVE THE OUTER SHAFT LEVERS (ITEM 6 & 8) AND LOCK PIN (ITEM 10). REMOVE THE SHIFTER SHAFTS FROM THE CASE SLOWLY TO CATCH THE TWO INTERLOCK BALLS (ITEM 14).

INSPECTION OF THE TRANSMISSION:BEARINGS:

BEARINGS MUST BE HANDLED WITH GREAT CARE. WRAP THEM IN A CLEAN CLOTH OR PAPER UNTIL THEY CAN BE WASHED. TO WASH A BEARING, SUBMERGE IT IN A CLEANING SOLUTION THAT IS ABSOLUTELY FREE OF DIRT AND ROTATE IT TO FLUSH AWAY ALL OIL AND DIRT. DRY THE BEARING WITH CARE. CAREFULLY EXAMINE EACH BEARING FOR CRACKED RACES, WORN, OR SCORED BALLS.

GEARS:

WASH ALL GEARS IN A CLEANING SOLUTION. INSPECT FOR WORN, CRACKED OR CHIPPED TEETH. SLIDE EACH GEAR ONTO A NEW SHAFT. IF IT APPEARS TO BE LOOSE, IT MUST BE REPLACED.

NOTE: WHENEVER ANY GEAR REQUIRES REPLACEMENT THE GEAR WITH WHICH IT MESHES SHOULD ALSO BE REPLACED.

MAIN SHAFT:

INSTALL THE GEARS ONTO THE MAIN SHAFT TO BE SURE THEY SLIDE ON AND OFF EASILY. THEY SHOULD FIT SMOOTHLY WITHOUT EXCESSIVE PLAY BETWEEN THE SPLINES. IF THE FIT IS TIGHT, LOOK FOR BURRED EDGES ON THE SPLINE.

SYNCHRO-CLUTCH AND FRICTION RINGS:

CAREFULLY INSPECT THE SYNCHRO-CLUTCH AND FRICTION RINGS. SLIDE THE RINGS ON THE CONES OF THE SECOND SPEED GEAR AND THE CLUTCH SHAFT. REPLACE RINGS IF THERE IS EXCESSIVE WEAR OR A PITTED CONDITION ON THE TAPER.

TRANSMISSION CASE:

EXAMINE THE SURFACES OF THE BEARING RECESSES IN THE TRANSMISSION CASE FOR WEAR OR SCORING WHICH INDICATES THAT THE BEARINGS HAS BEEN REVOLVING IN ITS HOUSING. EXAMINE THE CASE FOR CRACKS OR OTHER DEFECTS. BE CERTAIN THAT ALL PARTS OF THE CASE ARE THOROUGHLY CLEAN BEFORE AND DURING ASSEMBLY.

TRANSMISSION REPAIR CONT.

ASSEMBLY:

WHEN ASSEMBLING THE TRANSMISSION, ALWAYS USE NEW GASKETS (ITEMS 32, 49, & 57), SEALS (ITEM 5), AND ROLLERS (ITEM 31, 39, & 43).

SHIFT LEVERS: (ITEM 6 & 8)

INSTALL NEW SHIFTER SHAFT O-RING (ITEM 5). INSTALL THE SECOND AND HIGH SHIFT LEVER (ITEM 6). INSTALL THE INTERLOCK SLEEVE, BALL BEARING, PIN AND SPRING (ITEMS 11, 12, 13, & 14). WHILE COMPRESSING THE INTERLOCK SPRING WITH FINGER PRESSURE, LOCATE THE BALL IN THE DETENT OF THE QUADRANT. LOCK THE SHIFTER SHAFTS IN PLACE WITH LOCK PINS AND INSTALL THE SHIFT LEVERS.

COUNTERSHAFT GEAR AND SHAFT INSTALLATION:

TO HOLD THE COUNTERSHAFT NEEDLE BEARINGS, SPACER, AND WASHERS IN PLACE WHILE INSTALLING THE COUNTERSHAFT GEAR, LOAD THE COUNTERSHAFT GEAR WITH A DUMMY SHAFT. (SHAFT MAY BE MADE FROM YOUR OLD COUNTERSHAFT (ITEM 35) AND CUTTING IT DOWN TO 5 7/8" AND PURCHASE A REPLACEMENT IN ITS PLACE OR MACHINE A SHAFT .677" X 5 7/8"). AFTER INSTALLING THE BEARINGS IN THE COUNTERSHAFT GEAR, AND HOLDING IT IN SUCH A MANNER SO AS NOT TO DROP THE DUMMY SHAFT, INSTALL THE THRUST WASHERS. THE FRONT BRONZE THRUST WASHER MUST INDEX WITH THE TRANSMISSION CASE. POSITION THE LARGE THRUST WASHER AND INSTALL THE COUNTERSHAFT GEAR ASSEMBLY IN THE BOTTOM OF THE CASE. DO NOT INSTALL COUNTERSHAFT THROUGH COUNTERSHAFT GEAR AT THIS TIME.

REVERSE IDLER GEAR INSTALLATION:

INSTALL THE REVERSE IDLER GEAR (ITEM 46) WITH THE CHAMFERED SIDE OF THE TEETH TO THE FRONT OF THE CASE. DRIVE THE REVERSE IDLER SHAFT (ITEM 45) IN FROM THE REAR OF THE CASE WITH THE NOTCHED END OF THE SHAFT TO THE REAR. THE NOTCH MUST FACE THE COUNTERSHAFT TO PERMIT INSTALLATION OF THE LOCKING PLATE (ITEM 47). AFTER ALIGNING THE SLOTS IN THE COUNTERSHAFT AND THE REVERSE IDLER SHAFT. POSITION THE COUNTERSHAFT GEAR ASSEMBLY AND DRIVE THE DUMMY SHAFT OUT USING THE COUNTERSHAFT. ONCE IN PLACE, INSERT THE LOCK PLATE IN POSITION.

ASSEMBLING THE GEAR ON THE MAIN SHAFT:

PRESS THE TRANSMISSION REAR BEARING ON THE MAINSHAFT AND INSTALL SNAP RINGS. PLACE THE MAINSHAFT IN THE CASE FROM THE REAR. INSTALL SHIFT FORKS. INSTALL THE FIRST AND REVERSE SLIDING GEAR ON THE MAINSHAFT.

NOTE: TO AVOID HARDSHIPS IN ASSEMBLY, THE FIRST AND REVERSE GEAR SHOULD BE INSTALLED ON THE MAINSHAFT A NUMBER OF TIMES WHILE OUT OF THE CASE.

INSTALL THE SECOND SPEED GEAR AND THE SYNCHRO-UNIT ON THE MAINSHAFT. THE HUB OF SYNCHRO-UNIT IS INSTALLED TOWARD THE FRONT.

INSTALL THE SNAP RING ON THE FRONT END OF THE MAINSHAFT. WHEN THE SYNCHRO-UNIT HUB IS PRESSED TIGHT AGAINST THE SNAP RING, THERE SHOULD BE A .003 TO .010 CLEARANCE BETWEEN THE SECOND SPEED GEAR AND THE SHOULDER OF THE MAINSHAFT.

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TRANSMISSION REPAIR CONT.

CLUTCH SHAFT ASSEMBLY / INSTALLATION:

INSERT THE 21 BEARINGS IN THE MAIN DRIVE GEAR. A COAT OF LUBRIPLATE WILL HOLD THEM IN POSITION.

INSTALL THE FRONT FRICTION RING AND THE MAINSHAFT GEAR ON THE MAINSHAFT. MOVE THE MAINSHAFT REAR BEARING INTO THE TRANSMISSION CASE AND ALIGN THE SHIFTER FORKS AND GEARS GUIDING THE END OF THE MAINSHAFT INTO ITS BEARING IN THE MAIN-DRIVE GEAR.

PLACE THE OIL SLINGER ON THE MAIN DRIVE GEAR WITH THE CONCAVE SIDE TOWARD THE REAR. INSTALL THE SNAP RINGS. PLACE A NEW GASKET BETWEEN THE BEARING CAP AND CASE AND INSTALL THE BEARING CAP.

SYNCHRO RING CLEARANCE: (ITEM 18)

MEASURE THE CLEARANCE OF THE FRICTION RINGS USING FEELER GAUGES. THESE CLEARANCES SHOULD BE BETWEEN .036" to .100" AT EATHER RING.

BE SURE ALL GEARS ARE SHIFTING PROPERLY BEFORE INSTALLATION

LUBRICANTS:

ANY ONE OF THE FOLLOWING LUBRICANTS ARE ACCEPTABLE (DO NOT MIX).

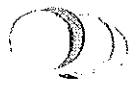
SAE 80 GEAR LUBRICANT

SAE 20 W - 20 ENGINE OIL

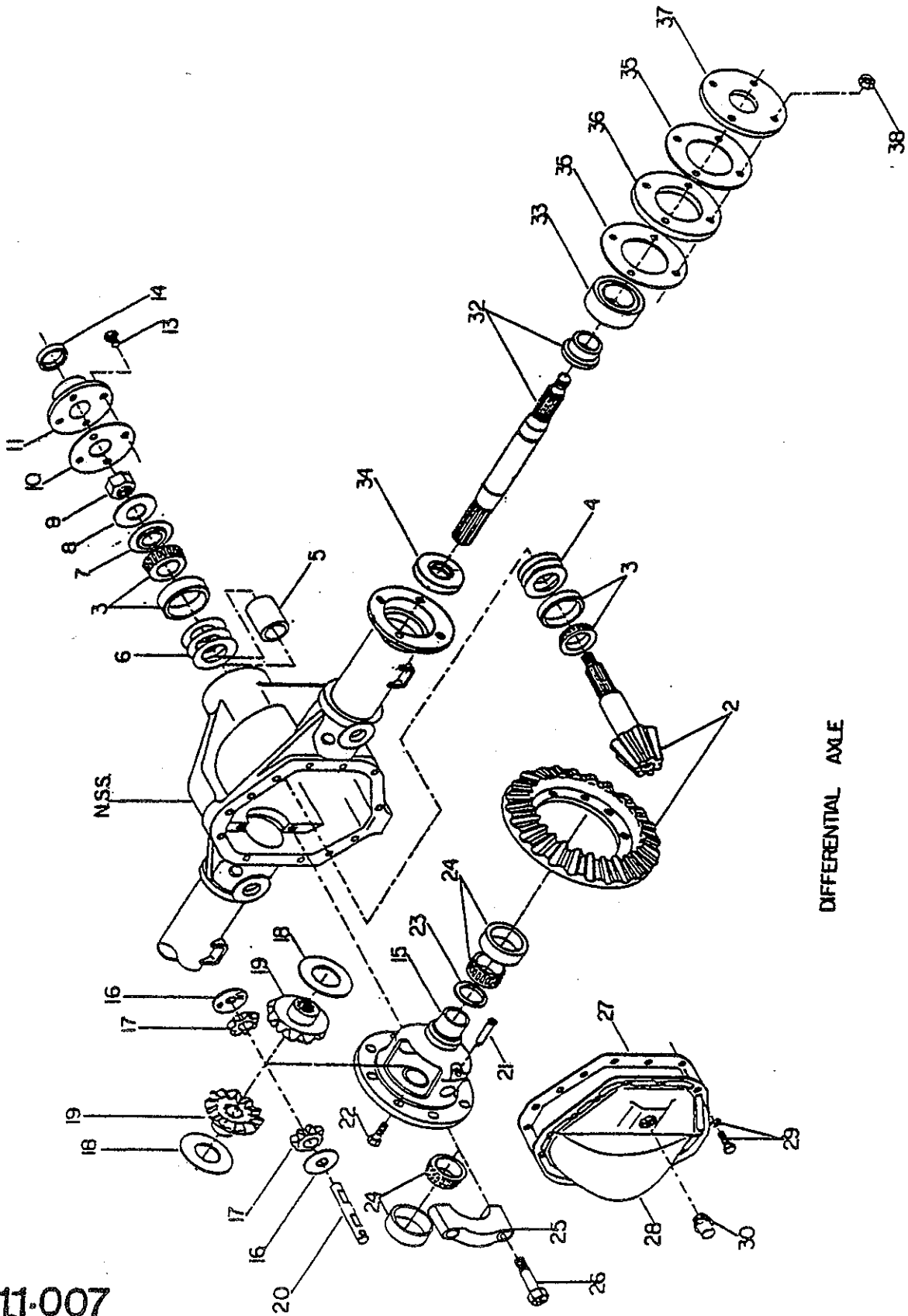
SAE 10 W - 30 ENGINE OIL

AUTOMATIC TRANSMISSION FLUID, TYPE A "AQ-ATF" SUFFIX "A".

FILL TO THE FILL PLUG LEVEL. CAPACITY (U.S.) 1 1/2 PINTS.



11-007



DIFFERENTIAL AXLE

DIFFERENTIAL ASSEMBLY REPAIR

REMOVAL:

Remove the attaching parts securing the differential axle to the frame and remove.

CLEANING AND INSPECTION:

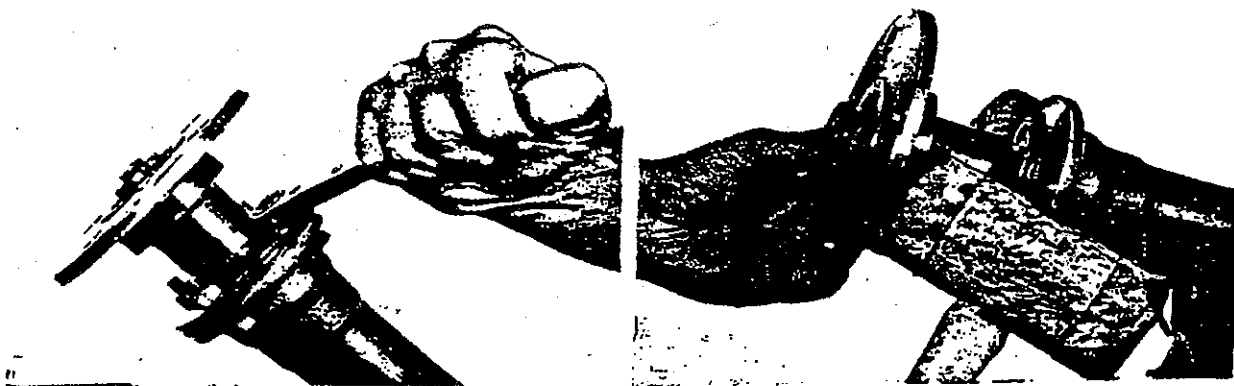
Completely clean the axle and drain lube before disassembly.

Inspect bearings, seals, axle shafts, and gears for wear, cracks or chipped surfaces.

DISASSEMBLY:AXLE SHAFT REMOVAL:

THIS MAY BE PERFORMED WITH DIFFERENTIAL AXLE IN UNIT.

- (A) After sprockets and chains are removed, remove bearing retainer bolts and bearing retainer.
- (B) Remove axle shaft. May require a tap with a rubber hammer.



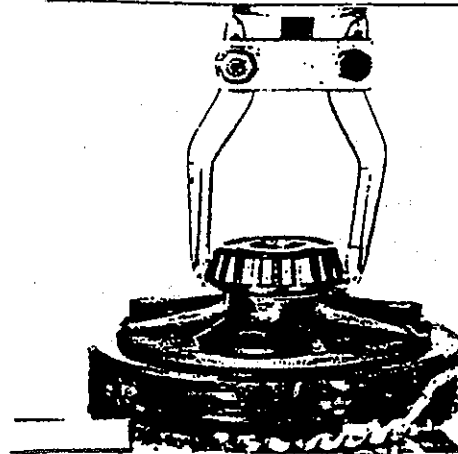
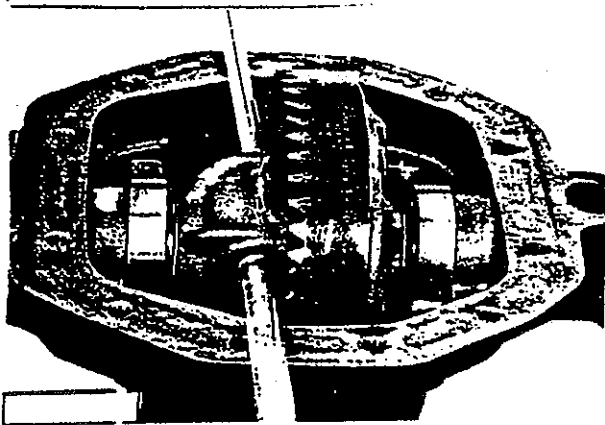
- (C) Remove axle bearings.
- (D) The axle shaft bearing retainer is a press fit and if removal is required, drill 1/4" (approx.) hole in the outside of the retainer ring to a depth approximately 3/4 the thickness of the ring (DO NOT drill through to the axle shaft). After drilling, position a chisel across the hole and strike sharply to break the ring. NOTE: New axle shaft includes bearing retainer.
- (E) It is recommended that when bearings are removed, they be replaced with new bearings.
- (F) Remove axle shaft seal and replace with new. Inspect sealing surface of the axle shaft. replace the axle shaft if sealing surface has been grooved more than 1/64".

DIFFERENTIAL CASE REMOVAL & REPAIR:

- (A) Remove right and left hand axle shafts as previously stated.
- (B) Remove cover plate screws and remove cover.
- (C) Bearing caps are marked for horizontal and vertical position. When re-assembling, place them back in the same position as removed. Remove 4 bearing cap screws and remove caps. Place caps in a safe place to avoid damaging their machined surface.

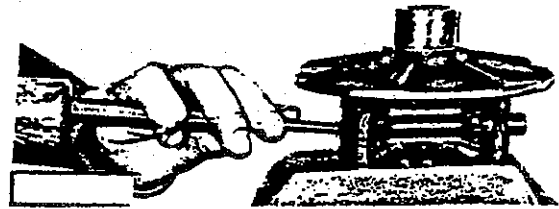
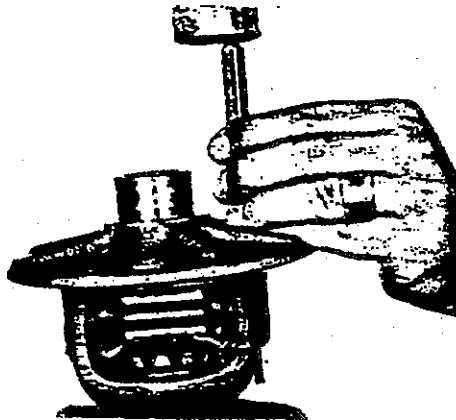
DIFFERENTIAL ASSEMBLY REPAIR CONT.

- (D) Pry differential case from carrier with two pry bars. If new bearings are not required, old bearings are to be replaced same side as removed.

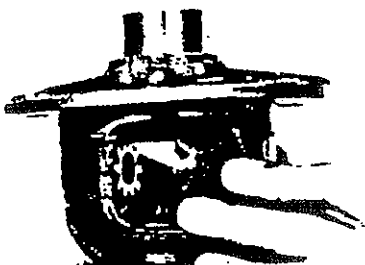


DO NOT REMOVE BEARING FROM DIFFERENTIAL CASE UNLESS BEARING FAILURE IS EVIDENT. When bearings are removed, before you replace them, make sure there is no sign of damage. If damage occurs, replace with new ones. Insert jaw puller into indentations provided in the differential case.

- (E) Remove ring gear capscrews. Using a hard wood block and hammer, drive ring gear off case. Be careful not to damage ring gear.
(F) Supporting the differential case in a vise, drive the lock pin out. Drive the pinion shaft from the case with a long drift punch.



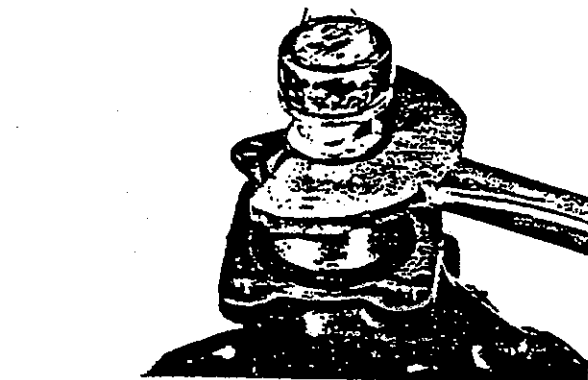
- (G) Remove pinion gears and thrust washers by rotating both gears 90° degrees to the opening in the case.



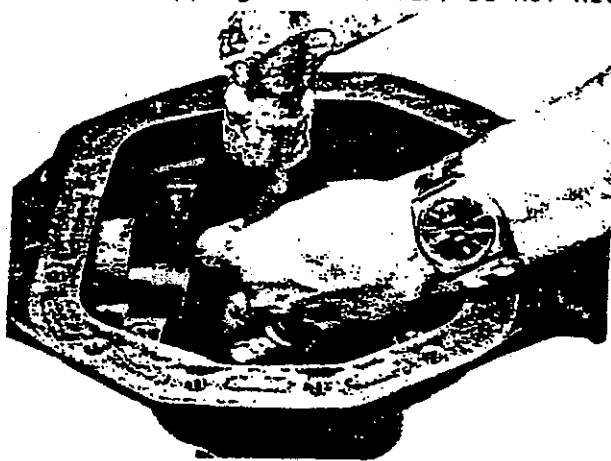
NOTE: ON the spline end of the pinion, there are shims. these shims may stick to the pinion bearing or even fall out. Collect shims and keep together as they will be used later in assembly. If shims are mutilated, replace shim thickness .003", .004", .010", and .030"

DIFFERENTIAL ASSEMBLY REPAIR CONT.

- (H) Hold end yoke with tool similar to the one shown and remove nut and washer.

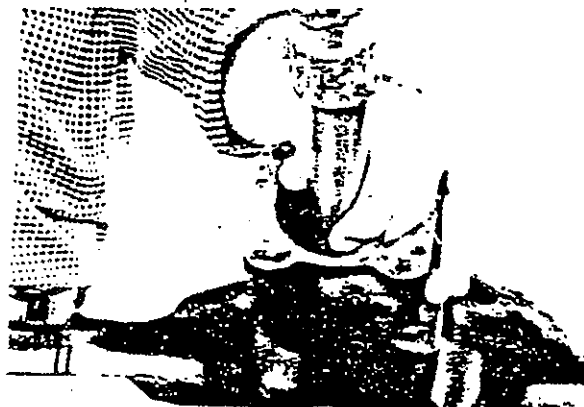


- (I) Remove pinion by tapping with a rawhide hammer. Catch pinion with hand to prevent damage. Remove oil seal with slide hammer puller. Replace with new seal at time of assembly.
- (J) Remove front pinion bearing cup by locating driver on back edge of cup and tapping with hammer. DO NOT NICK CARRIER BORE.



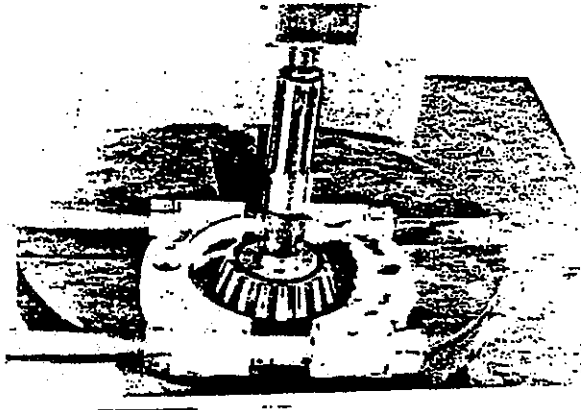
NOTE: Shims are located between the bearing cup and carrier bore. Exercise caution when removing bearing cup. If shims are damaged, replace.

- (K) Place nose of carrier up. Locate driver on back edge of cup; then drive out. Be careful-DO NOT nick carrier bore. If shims are damaged when removed, replace.

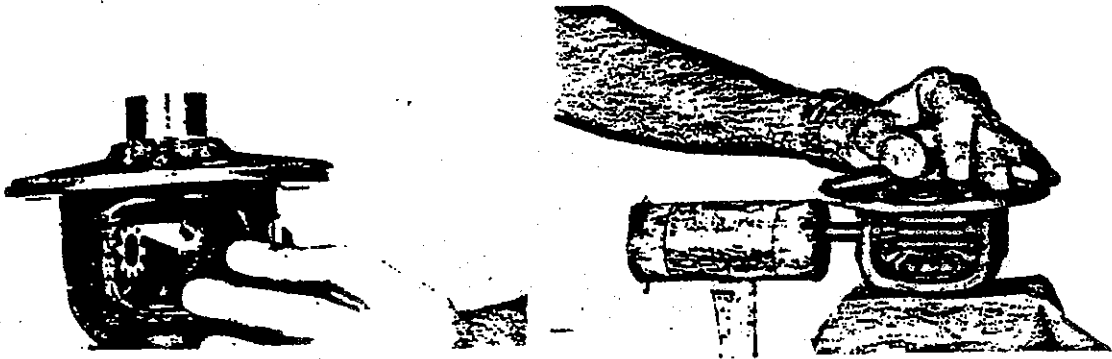


DIFFERENTIAL ASSEMBLY REPAIR CONT.

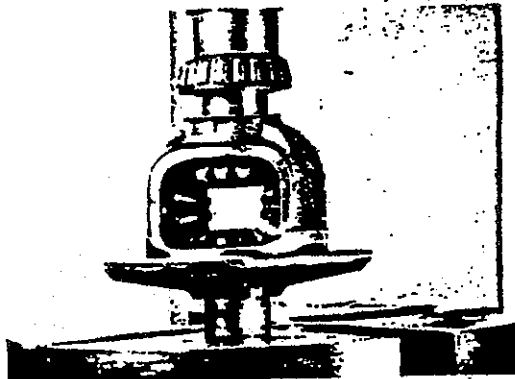
- (L) Remove front pinion bearing cone by placing bearing on a universal clamp. Press the pinion out of the bearing. catch pinion with hand to prevent damage.

CARRIER REASSEMBLY:

- (A) Install thrust washer behind axle side gears and place in case. install the differential pinion mates and thrust washers directly opposite each other. Rotate pinion mates until pinion shaft can be installed. Assemble lock pin. Drive pin to approximate center location of pinion mate shaft.

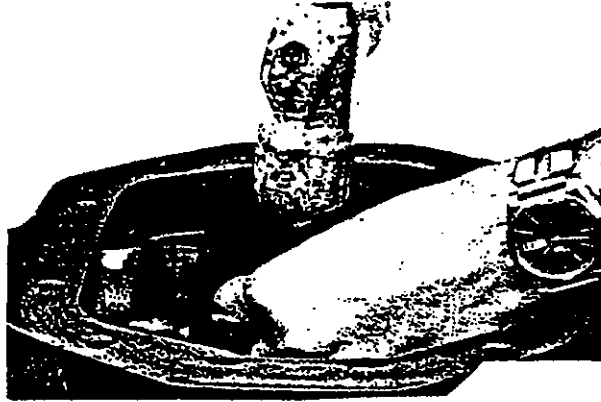


- (B) When installing new differential bearings, reuse original shims or shims, if required, making sure that shims are installed on the same side and thickness of the case from which they were removed.



DIFFERENTIAL ASSEMBLY REPAIR CONT.

- (C) Position ring gear on case and start capscrews into gear. Proceed to tightened screws, alternating back and forth across gear to allow gear to be pulled evenly into place. Torque capscrews to 50 - 55 ft. lbs.
- (D) Replace previously removed shims or new shims of the same thickness in inner bearing bore. Seat bearing cup into carrier.



- (E) Seat the outer pinion bearing cup into the carrier.
Seat bearing cone on pinion using universal clamp and arbor press.
- (F) Insert pinion into carrier. Assemble spacer, preload shims onto the pinion.
Assemble bearing cone, slinger, flange, washer, and pinion nut.
Torque to 50 - 80 ft. lbs.

AXLE SHAFT INSTALLATION.

- (A) Replace axle shaft seal. Install new shaft bearings and carefully insert axle shaft into axle tubes.
- (B) Install bearing retainer cap and gaskets and torque to 35 - 45 ft. lbs.
- (D) Install carrier cover and gasket and torque to 18 - 23 ft. lbs.
- (E) Install sprocket hubs and torque to 60 - 65 ft. lbs.
- (F) Install Lube.



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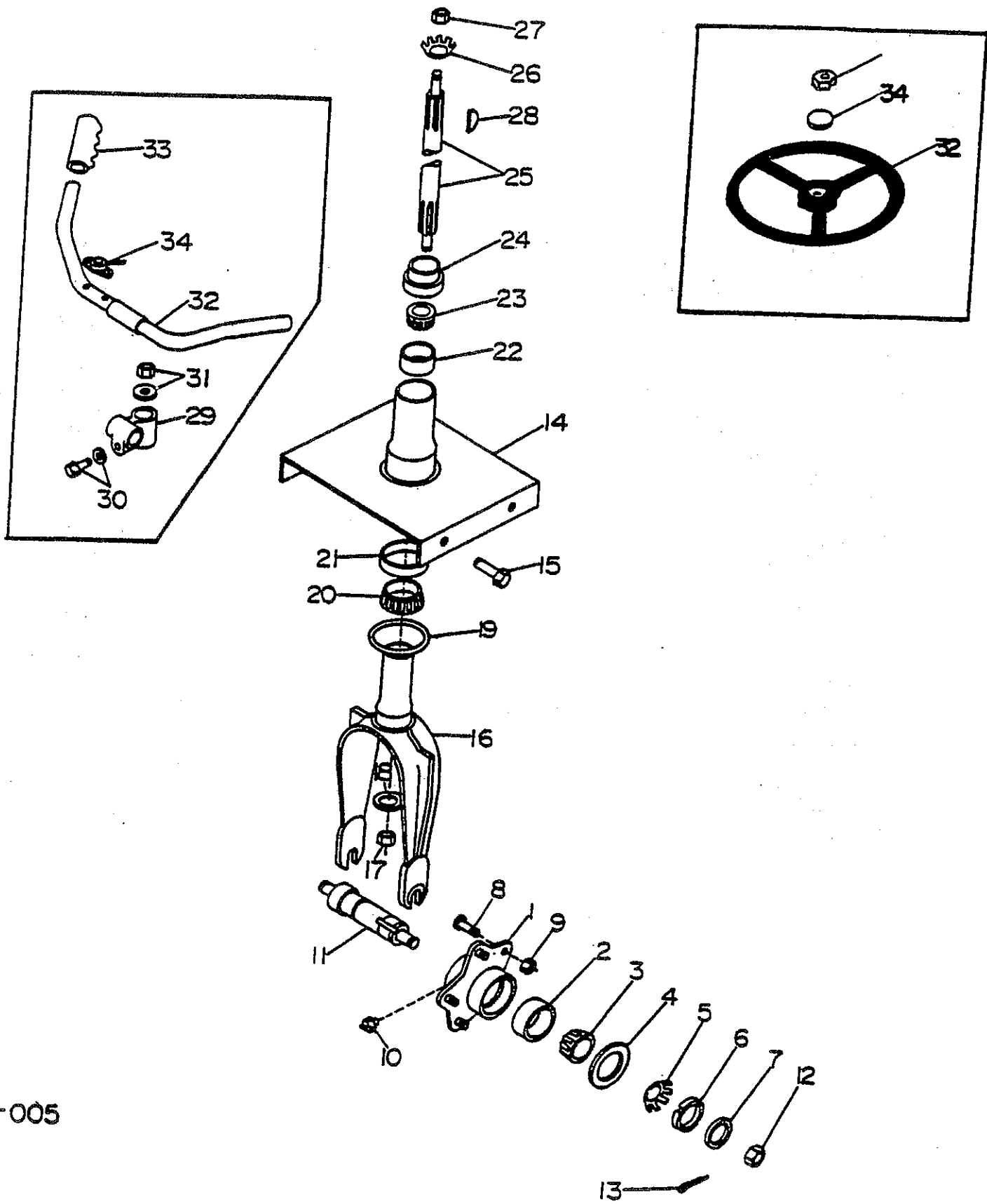


MODEL 2500B - 2500B4
3600B - 3600B4

Beginning Serial Number 21GH-01

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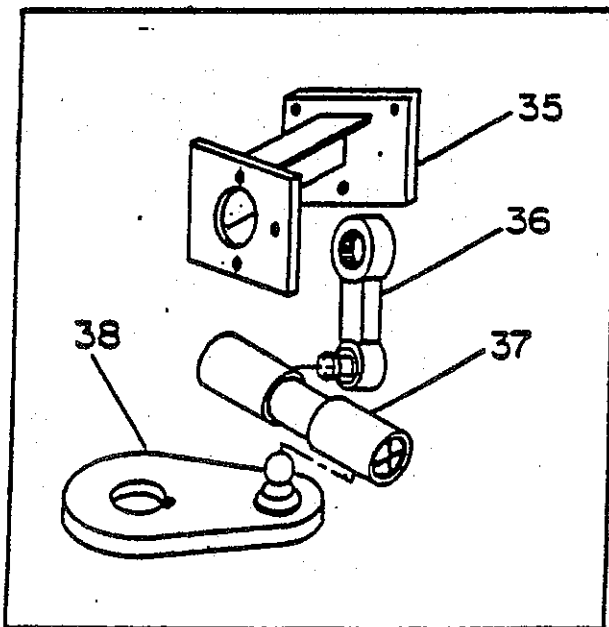
I-005

FIGURE & INDEX No.	PART NUMBER	DESCRIPTION	QTY.
1	342-00105	HUB ASSEMBLY (Includes 2,3,4,& 8)	1
2	306-00033	CUP, BEARING	2
3	306-00121	CONE, BEARING	2
4	906-00008	SEAL, HUB	2
5	331-00064	LOCKWASHER	1
6	331-00065	NUT, BEARING LOCK	1
7	349-00328	WASHER, HUB	2
8	331-00122	STUD, HUB	5
9	331-00123	NUT, WHEEL	5
10	109-00262	FITTING, LUB	1
11	302-00089	AXLE, HUB	1
12	331-00077	NUT, HUB RETAINING	2
13	681-00312	COTTER PIN 3/32 X 1 1/2"	2
14	317-00038	COLUMN, STEER SHAFT	1
15	651-00814	HEX BOLT 1/2-20 NF X 1 3/4"	2
	651-00816	HEX BOLT 1/2-20 NF X 2"	2
	664-00800	WASHER 1/2"	2
	666-00800	LOCKWASHER 1/2"	4
	670-00800	HEX NUT 1/2-20 NF	4
16	332-00032 *	FORK, STEER (FORK ONLY)	1
17	331-00065	NUT, SHAFT TO FORK	1
18	665-01200	WASHER SAE 3/4"	1
20	306-00090	CONE, BEARING	1
21	306-00089	CUP, BEARING	1
22	306-00080	CUP, BEARING	1
23	306-00081	CONE, BEARING	1
24	321-00029	COLLAR, STEER SHAFT	1
25	355-00188	SHAFT, STEER FORK (FOR HANDLE BAR ONLY)	1
	355-00189	SHAFT, STEER FORK (FOR STEERING GEAR ONLY)	1
26	666-01200	LOCKWASHER 3/4"	1
27	676-01200	JAM NUT 3/4-16	1
28	682-40115	WOODRUFF KEY #115	1
29	342-00090	HUB, HANDLE BAR	1
30	651-00710	HEX BOLT 7/16-20 X 1 1/4"	1
	666-00700	LOCKWASHER 7/16"	1
31	676-01400	HEX NUT 7/16-14	1
	666-01400	WASHER 7/16"	1
32	338-00022	HANDLE BAR	1
	836-00002	HAND WHEEL (17 3/4" Dia.) (NOT FOR STEER GEAR)	1
	836-00008	HAND WHEEL (15" Dia.) (NOT FOR STEER GEAR)	1
	836-00005	HAND WHEEL () (FOR STEERING GEAR)	1
33	424-00010	GRIP, HANDLE BAR	1
34	903-00097	HORN BUTTON KIT (STEERING GEAR ONLY)	1
	224-00025	HORN BUTTON (HANDLE BAR ONLY)	1
*	308-00044	FORK & COLUMN ASSEMBLY (INCLUDES 1 Thru 25) (FOR HANDLE BAR STEERING ONLY)	
*	308-00052	FORK & COLUMN ASSEMBLY (INCLUDES 1 Thru 25) (FOR STEERING GEAR STEERING ONLY)	1

FIGURE & INDEX No.	PART NUMBER	DESCRIPTION	QTY.
FOR UNITS BUILT <u>PRIOR</u> TO SERIAL NUMBER 21HA-72 (MAY 1981) OR WITH CAST STEEL STEERING GEAR HOUSING WITH THE WORD "GEMMER" CAST IN IT.			
	836-00003	STEERING GEAR ASSEMBLY (GEMMER)	1
35	310-00102	BRACKET, GEAR MOUNT (CAST IRON) (NOT AS SHOWN)	1
36	301-00144	PITMAN ARM	1
37	109-00302	NIPPLE, DRAG LINK	1
	345-00031	SOCKET, DRAG LINK	2
38	301-00143	ARM, STEER	1

FOR UNITS BUILT AFTER SERIAL NUMBER 21HA-72 (MAY 1981) OR WITH CAST ALUMINUM STEERING GEAR HOUSING WITH THE WORD "ROSS" CAST IN IT.

	836-00079	STEERING GEAR ASSEMBLY (ROSS)	1
35	310-00286	BRACKET, GEAR MOUNT (FABRICATED)	1
36	301-00404	PITMAN ARM	1
37	345-00116	LINK, STEER ARM (Includes 37A & 37B)	1
37A	109-00302	NIPPLE, LINK	1
37B	345-00031	SOCKET, LINK	2
38	301-00401	ARM, STEER	1



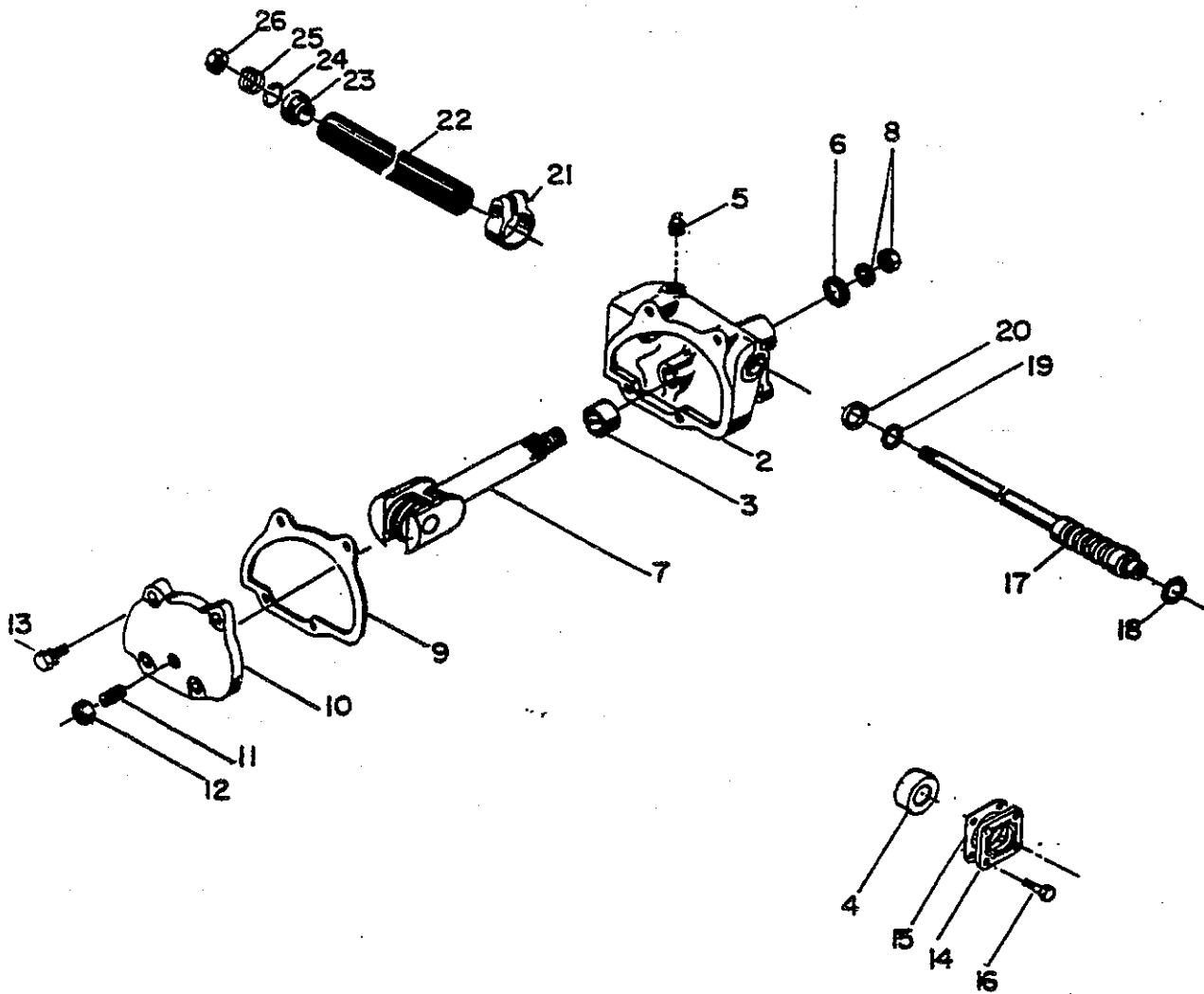
AUTOMOTIVE STEERING

KALAMAZOO



NOTES

Lined area for notes, consisting of 20 horizontal lines.



STEERING GEAR

3 WHEEL STEERING BUILT BEFORE
MAY 1981

FIGURE & INDEX No.	PART NUMBER	DESCRIPTION	QTY.
		FOR GEARS WITH CAST STEEL HOUSING AND THE WORD "GEMMER" CAST IN IT.	
1	836-00003	STEERING GEAR ASSEMBLY (GEMMER)	1
2	903-00032	HOUSING, STEER GEAR	1
3	RG. 3AC15	BUSHING, GEAR HOUSING	2
4	903-00020	RETAINER, COLUMN BEARING	1
5		PLUG, HOUSING FILLER 3/4-20	1
6	903-00019	SEAL, PITMAN ARM SHAFT	1
7	903-00028	SHAFT & ROLLER, PITMAN ARM	1
8	666-01400	LOCKWASHER, 7/8"	1
	676-01400	JAM NUT, 7/8-14	1
9	903-00033	GASKET, SIDE COVER	1
10	903-00001	COVER, HOUSING SIDE (Includes 11 & 12)	1
11	903-00027	SCREW, ADJUSTOR	1
12	676-01200	JAM NUT, 3/4-16	1
13	650-00505	BOLT, 5/16-18 X 5/8"	4
14	903-00029	COVER, HOUSING END	1
15	903-00031	SHIM, .003	1
	903-00005	SHIM, .002	2
	903-00006	SHIM, .005	1
	903-00008	SHIM, .010	5
16	650-00505	HEX BOLT, 5/16-18 X 5/8"	4
17	903-00002	COLUMN & WORM ASSEMBLY	1
18	903-00026	BEARING, COLUMN SHAFT	1
19	903-00026	BEARING, COLUMN SHAFT	1
20	903-00025	CUP, BEARING SHAFT	1
21	903-00098	CLAMP, COLUMN TUBE	1
	651-00516	HEX BOLT, 5/16-24 X 2	1
	666-00500	LOCKWASHER, 5/16"	1
	670-00500	HEX NUT, 5/16-24	1
22	903-00003	TUBE, COLUMN	1
23	903-00030	PILOT, COLUMN UPPER BEARING	1
24	RG. 31208	BEARING, UPPER COLUMN	1
25	903-00027	SPRING, UPPER COLUMN	1
26	676-00500	JAM NUT, HAND WHEEL 5/16-24	1

KALAMAZOO



MODEL 2500B (3 WHEEL ONLY)
3600B (3 WHEEL ONLY)

Illustration 02-001

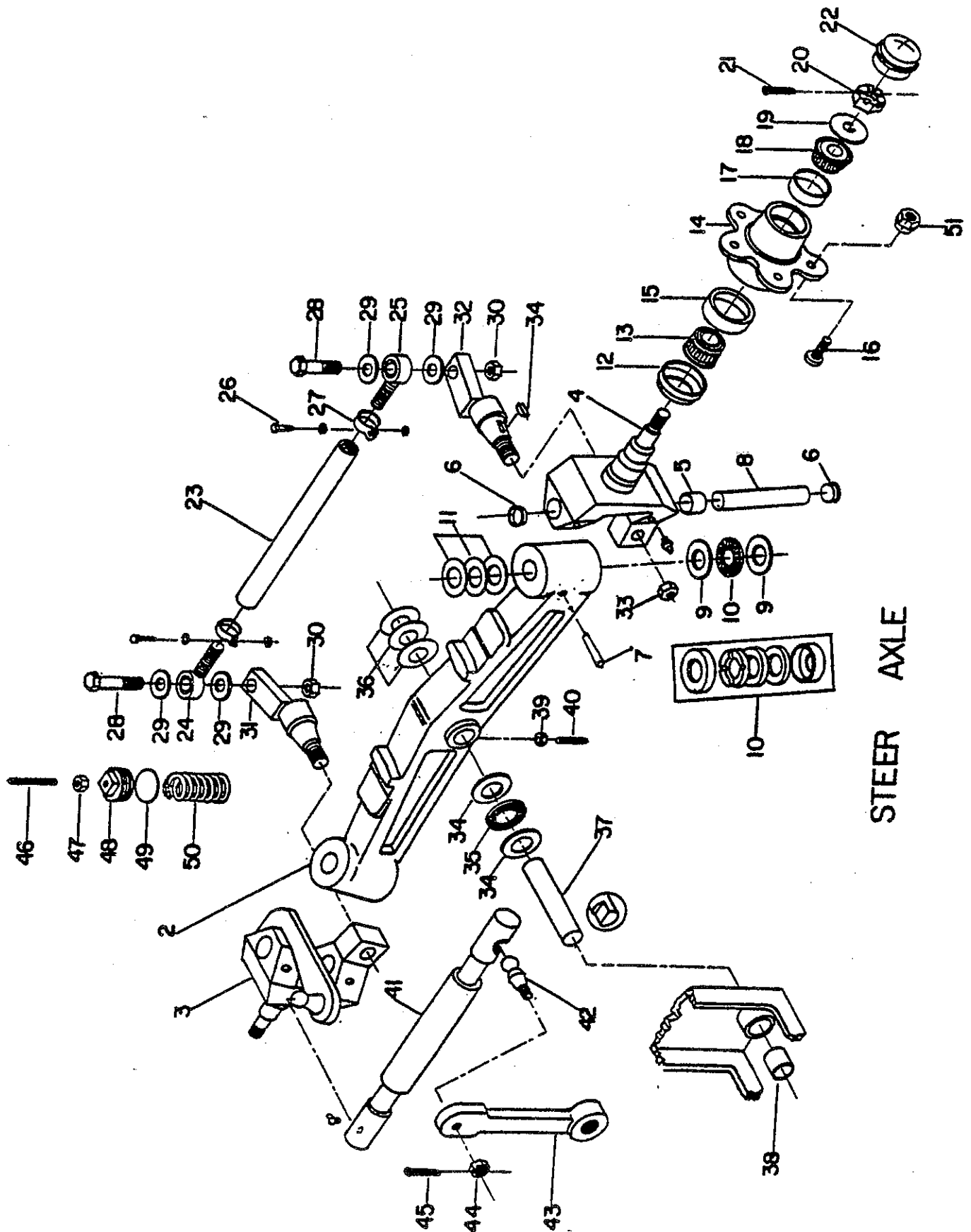
Beginning Serial Number 21HA-72

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
	836-00079	Steering Gear Assembly (Includes 1 thru 19)	1
1	Not Used	Stand Pipe (See Item 20)	-
2	903-00037	Lock Nut	1
3	903-00047	Seal, Housing Lower	1
4	903-00082	End Plug, Housing	1
5	903-00075	Ball Cup Kit (Includes item 6)	1
6	See item 5	Ball Cup	-
7	903-00151	Worm Assembly	1
8	903-00075	Ball Cup Kit (Includes item 9)	1
9	See item 8	Ball Cup	-
10	903-00152	Housing & tube	1
11	903-00058	Column Bearing	1
12	903-00048	Dust Cover	1
13	903-00155	Nut, Adjusting Lock 1/2-20	1
14	331-00372	Screw, Adjusting	1
15	903-00134	Side Cover (Includes 13 & 14)	1
16	903-00139	Gasket, Side Cover	1
17	903-00132	Output Shaft	1
18	650-00507	Screw, Side Cover 5/16-18 X 7/8	4
19	903-00156	Seal, Output Shaft	1
20	903-00046	Grommet, horn wire (at item 4)	1

** FOR UNITS WITH CAST ALUMINUM STEERING GEAR HOUSING AND WITH THE WORD "ROSS" CAST IN IT.

FOR UNITS WITH SINGLE STEER WHEEL & TIRE





STEER AXLE

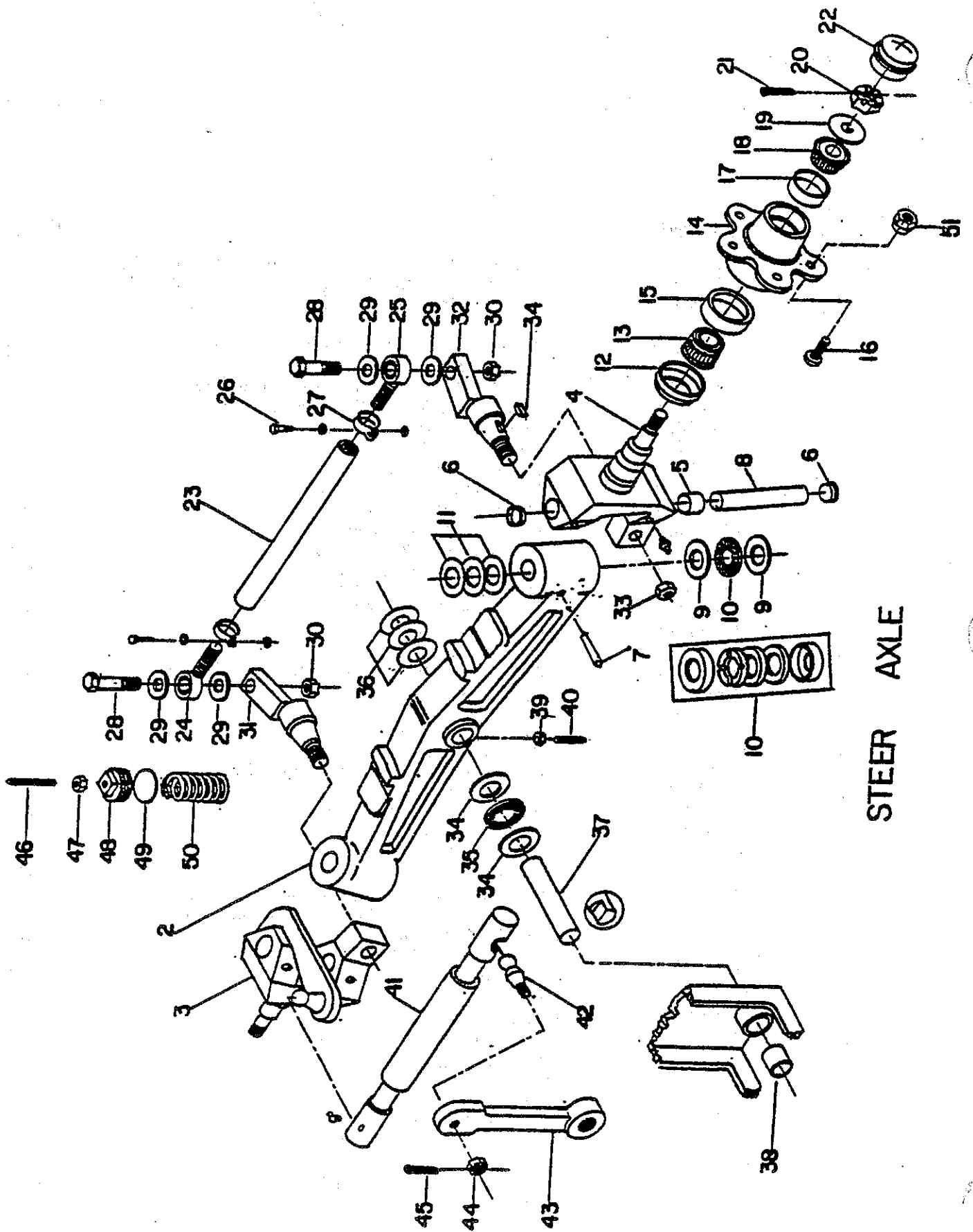
MODEL 2500BEE and 2500B4 (4 wheel)

Beginning Serial Number 21GB-01

Illustration 01-007

STEER AXLE

<u>Figure & Index No.</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
07-007-*A	302-00203	Steer axle assembly (includes 2 thru 32)	
*B	302-00204	Steer axle assembly (includes 2 thru 32)	
*C	302-00205	Steer axle assembly (includes 2 thru 32)	
2	302-00206	Axle center (w/o teflon bushing)	1(*A)
	800-00040	Axle center (with teflon bushing)	1(*B&*C)
3	800-00092	Steer knuckle, R.H. w/arm (includes 5)	1
4	800-00106	Steer knuckle, L.H. (includes 5)	1
5	313-00036	Bushing, steer knuckle	4
6	341-00186	Cap, king pin	4
7	373-00041	Wedge, king pin	2
8	341-00178	King pin, knuckle pivot	2
9	306-00148	Bearing race, knuckle	4(*A)
10	306-00147	Needle bearing, knuckle	2(*A)
	331-00102	Bearing assembly (shown in box)	2(*B&*C)
11	358-00030	Shim, knuckle (.003)	AR
	358-00031	Shim, knuckle (.010)	AR
	358-00032	Shim, knuckle (.030)	AR
12	110-00214	Seal, front hub	2
13	306-00081	Cone, bearing inner	2
14	342-00070	Hub, steer axle (includes 15, 16 and 17)	2
15	306-00080	Cup, bearing inner	2
16	331-00122	Stud, wheel	10
17	306-00078	Cup, bearing outer	2
18	306-00079	Cone, bearing outer	2
19	371-00002	Tongued washer, bearing retainer	2
20	680-01000	Nut-slotted 3/4-10 UNF	2
21	681-00410	Cotter pin 1/8 x 1-1/4	2
22	316-00028	Cap, hub grease	2
23	349-00805	Tie rod (round)	1(*A&*B)
	355-00459	Tie rod (hexagon)	1(*C)
24	306-00149	Rod end, tie rod (right hand thread)	1
25	306-00368	Rod end, tie rod (left hand thread)	1
26	650-00511	Bolt 5/16-18 NC x 1-3/8	2(*C)
	666-00500	Lockwasher 5/16"	2(*C)
	669-00500	Nut 5/16-18 NC	2(*C)
27	341-00295	Clamp, rod end	2(*C)
	676-01000	Jam nut 5/8-18 NF	2(*A&*B)
28	650-01022	Capscrew 5/8-11 x 2-3/4	2
29	349-00197	Spacer, rod end	4
30	671-01000	Nut 5/8-11	2
31	355-00098	Steer arm, R.H.	1
32	355-00099	Steer arm, L.H.	1
33	672-01200	Nut, steer arm 3/4-16 UNF huglock	2
34	306-00148	Bearing race, axle pivot	2
35	306-00147	Needle bearing, axle pivot	1
36	358-00030	Shim .003	AR
	358-00031	Shim .010	AR
	358-00032	Shim .030	AR



STEER AXLE

MODEL 2500BEE and 2500B4 (4 wheel)

Beginning Serial Number 21GB-01

Illustration 01-007

STEER AXLE (CONTINUED)

<u>Figure & Index No.</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
07-007-37	341-00178	Pin, axle pivot	1(*A)
	373-00163	Pin, axle pivot (for teflon bushed axle)	1(*A&*B)
38	313-00036	Bushing, axle pivot in frame	2
39	675-00600	Jam nut 3/8-16 NC	1
40	638-00608	Set screw 3/8-16 NC x 1	1
41	345-00022	Drag link	1
42	331-00427	Ball stud, pitman arm	1
43	301-00331	Pitman arm, steering	1
44	680-00900	Nut-slotted 9/16-18 NF	1
45	681-00508	Cotter pin 5/32 x 1"	1
46	638-00824	Set screw 1/2-13 NC x 3"	2
47	675-00800	Jam nut 1/2-13 NC	2
48	109-00227	Plug, spring adjustor	2
49	350-00768	Retainer, spring	2
50	362-00103	Spring, front axle pivot	2
51	408-00012	Bushing, teflon (in axle)	2(*B&*C)

TIE ROD ASSEMBLIES

355-00100	Tie rod assembly (round) includes 24, 25, 27
355-00115	Tie rod assembly (hexagon) includes 24 thru 27

STEER AXLE ASSEMBLIES

VISUAL IDENTIFYING CHARACTERISTICS BY ITEM NUMBER:

*A	302-00203	<u>Steer Axle Assembly:</u> (2) Bronze bushing, (9 & 10) uses race and needle bearing (23) round tie rod, (37) pin round at each end.
*B	302-00204	<u>Steer Axle Assembly:</u> (2) uses teflon bushing in axle, (9) not used, (10) bearing as shown in box, (23) round tie rod, (37) pin has flat on each end.
*C	302-00205	<u>Steer Axle Assembly:</u> Same as 302-00204 except Item (23) is hexagon.

See inset for steering wheel
and horn button detail.

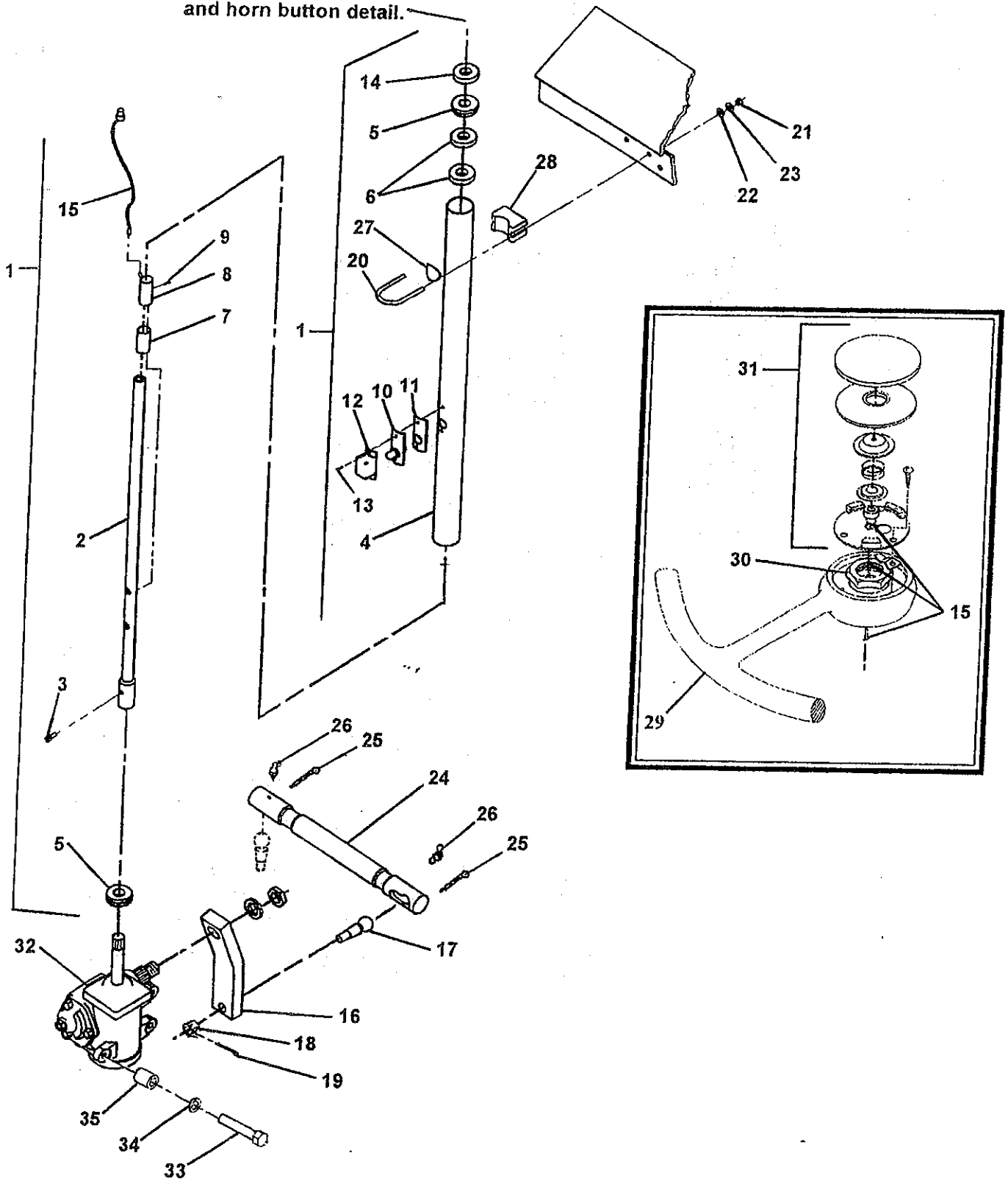
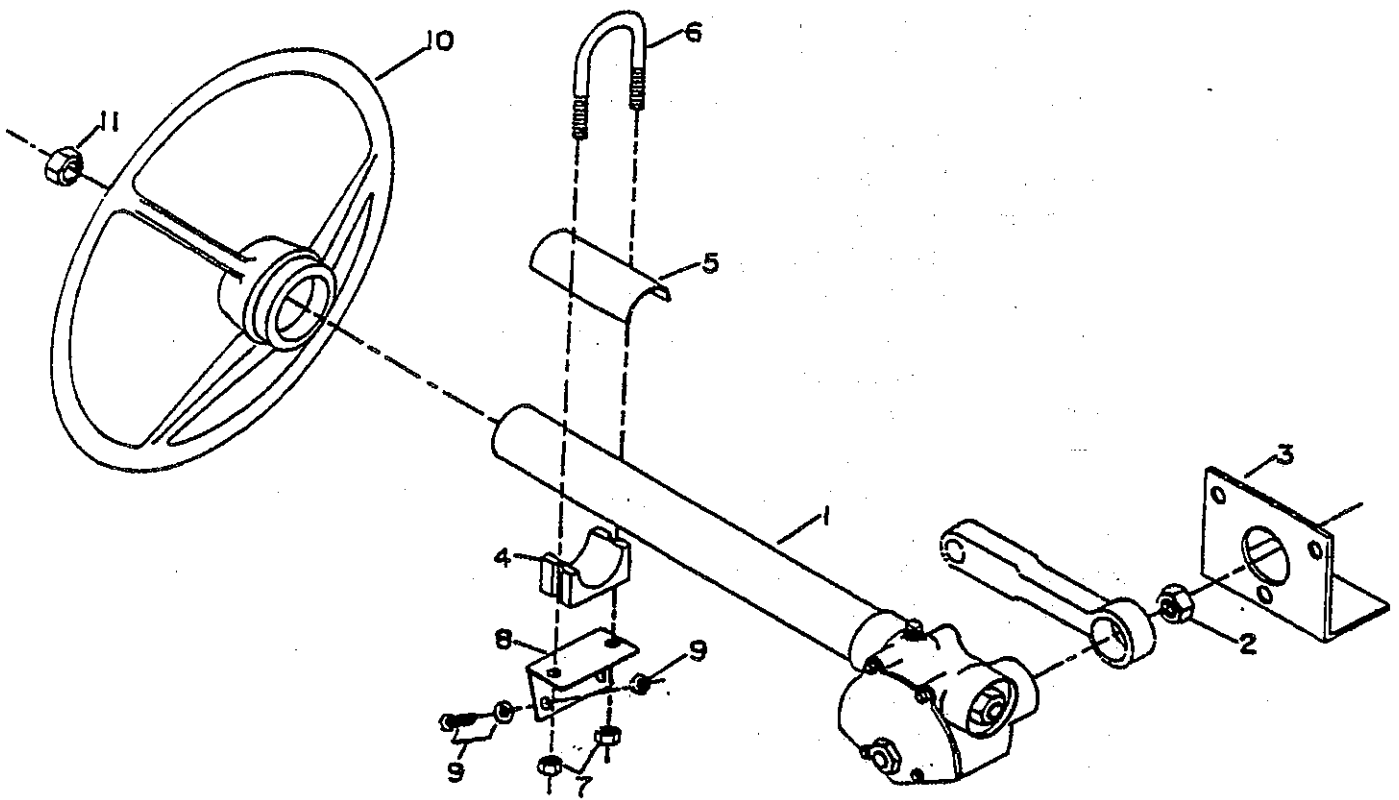


FIGURE 02-001 - STEER GEAR

<u>Figure & Index No.</u>	<u>U.I. Part No.</u>	<u>Description</u>	<u>Quantity</u>
02-001-	No #	STEER GEAR	REF.
1	836-00104	UPPER COLUMN ASSEMBLY	1
2	836-00100	UPPER COLUMN WELDMENT	1
3	331-00558	SCREW, Set, cup point, 5/16-18 x 1/4	1
4	349-00973	JACKET, Tube	1
5	408-00013	BUSHING	2
6	408-00014	BUSHING	2
7	361-00129	SPACER, 2.50 lg.	1
8	214-00029	CONTACT RING ASSEMBLY	1
9	341-00608	SCREW, Nylon, machine, #8-32 x 3/8	1
10	73872	HORN CONTACT	1
11	73966	SPACER, Rubber	1
12	79408	HORN COVER	1
13	627-40802	SCREW, Pan hd. slotted, machine, #8-32 x 1/4 w/washer	2
14	903-00048	SEAL, Dust	1
15	224-00045	CABLE ASSEMBLY	1
16	301-00473	PITMAN ARM	1
17	331-00427	BALL STUD	2
18	680-00900	NUT, Hex, slotted, 9/16-18	1
19	681-00508	COTTER PIN, 5/32 x 1	1
20	341-00205	U-BOLT	1
21	671-00600	NUT, Hex, NY 3/8-16	2
22	664-00600	WASHER, Flat, 3/8	2
23	666-00600	WASHER, Lock, 3/8	2
24	345-00022	DRAG LINK	1
25	681-00414	COTTER PIN, 1/8 x 1-3/4	2
26	109-00267	ZERK, 1/8 x 90 °	2
27	350-03079	SADDLE, Steering column	1
28	417-00001	BLOCK, Steering column	1
29	836-00005	STEERING WHEEL	1
30	676-01000	NUT, Jam, 5/8-18	1
31	903-00097	HORN BUTTON KIT	1
32	836-00095	STEERING GEAR	1
33	650-00714	SCREW, Hex hd., cap, 7/16-14 x 1-3/4	3
34	666-00700	WASHER, Lock, 7/16	3
35	361-00126	SPACER	3

FOR UNITS WITH 2 STEER WHEELS & TIRES

4 WHEEL ONLY



HAND WHEEL AND STEER GEAR
02-003

KALAMAZOOMODEL 2500B - 2500B4
3600B - 3600B4

Illustration 02-003

Beginning Serial Number 21GH-01

HAND WHEEL AND STEER GEAR

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	836-00010	Steering gear (4 wheel)*	1
2	903-00130	Nut, pitman arm	1
3	300-00613	Bracket, steer gear mount (4 wheel)*	1
4	417-00001	Block, steer column	1
5	349-00002	Saddle, steer column	1
6	347-00205	U-bolt, steer column	1
7	671-00600	Nut-nylok 3/8-16	2
8	Not used	Bracket, column mount	
9	Not used	Bolt	
10	836-00005	Hand wheel, steering	1
11	903-00102	Nut, hand wheel	1
12	903-00097	Horn button kit	1
13	224-00012	Wire, horn button	1

*Applies only to units with 2 wheel steering.





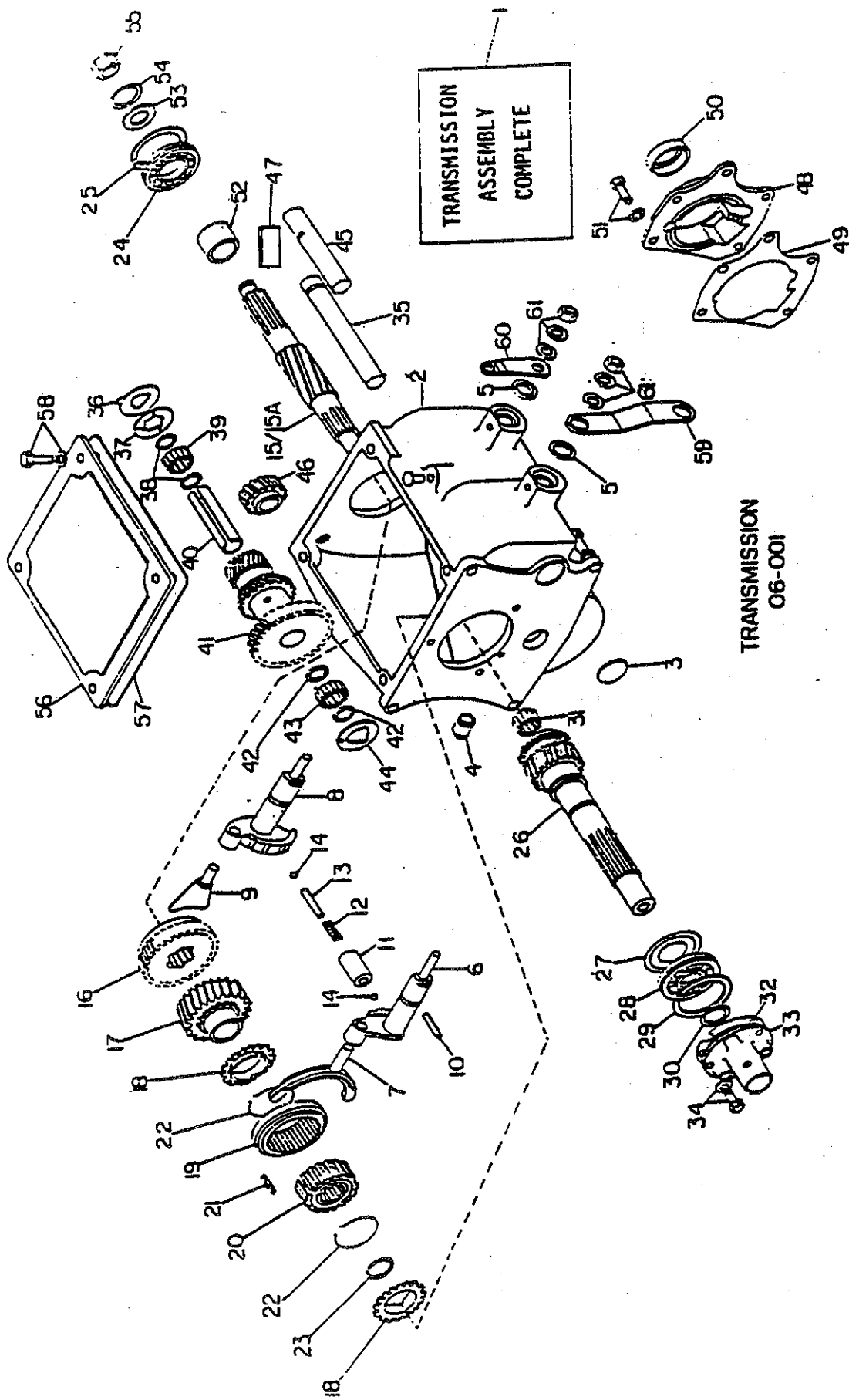
MODEL XRG-20 & 2500B (B4)

Beginning Serial Number 37-HA-01
Beginning Serial Number 21-FF-01

Illustration 06-001

TRANSMISSION ASSEMBLY

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	838-00014	Transmission assembly	1
2	913-00010	Case	1
3	913-00277	Plug	1
4	109-00242	Plug	2
5	913-00069	Oil seal	2
6	913-00158	Shift lever, 2nd & 3rd	1
7	913-00092	Shift fork, 2nd & 3rd	1
8	913-00186	Shift lever, low & reverse	1
9	913-00093	Shift fork, low & reverse	1
10	913-00276	Taper pin	2
11	913-00067	Sleeve, interlock	1
12	913-00066	Spring, shift lever poppet	1
13	913-00068	Plunger, interlock	1
14	303-00009	Steel ball	2
15A	913-00012	Mainshaft assembly (includes 15 thru 22)	1
15	913-00080	Mainshaft	1
16	913-00086	Gear, low & reverse	1
17	913-00016	Gear, second speed (includes 17)	1
	913-00091	Bushing, second speed gear	1
18	913-00032	Ring, synchronizer	2
19	913-00013	Synchronizer unit (includes 20, 21, 22)	1
20	913-00088	Sleeve, 2nd & 3rd synchro.	1
21	913-00087	Plate, shifting	3
22	913-00266	Spring wire, synchronizer	2
23	913-00267	Snap ring, clutch hub	2
24	913-00112	Bearing	1
25	913-00029	Snap ring, bearing	1
26	913-00018	Main drive gear (includes 27 thru 30)	1
27	913-00070	Oil baffle	1
28	913-00114	Bearing	1
29	913-00035	Snap ring	1
30	913-00030	Snap ring	1
31	913-00036	Roller bearing	13
32	913-00031	Gasket	1
33	913-00083	Retainer, bearing	1
34	**	Bolt	
	**	Lockwasher	
35	913-00082	Countershaft	1
36	913-00098	Washer, rear thrust	1
37	913-00097	Washer, rear bronze	1
38	913-00095	Spacer, bearing	2
39	913-00041	Roller bearing	20
40	913-00094	Spacer, bearing	1
41	913-00014	Countershaft gear	1
42	913-00095	Spacer, bearing	2
43	913-00041	Roller bearing	20





KALAMAZOO



MODEL XRG-20 & 2500B (B4)

Beginning Serial Number 37-HA-01

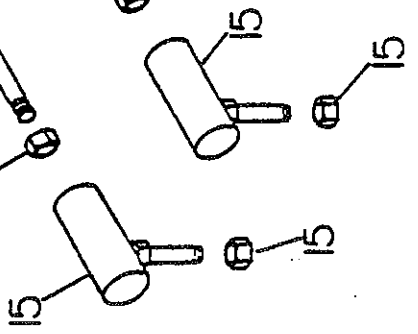
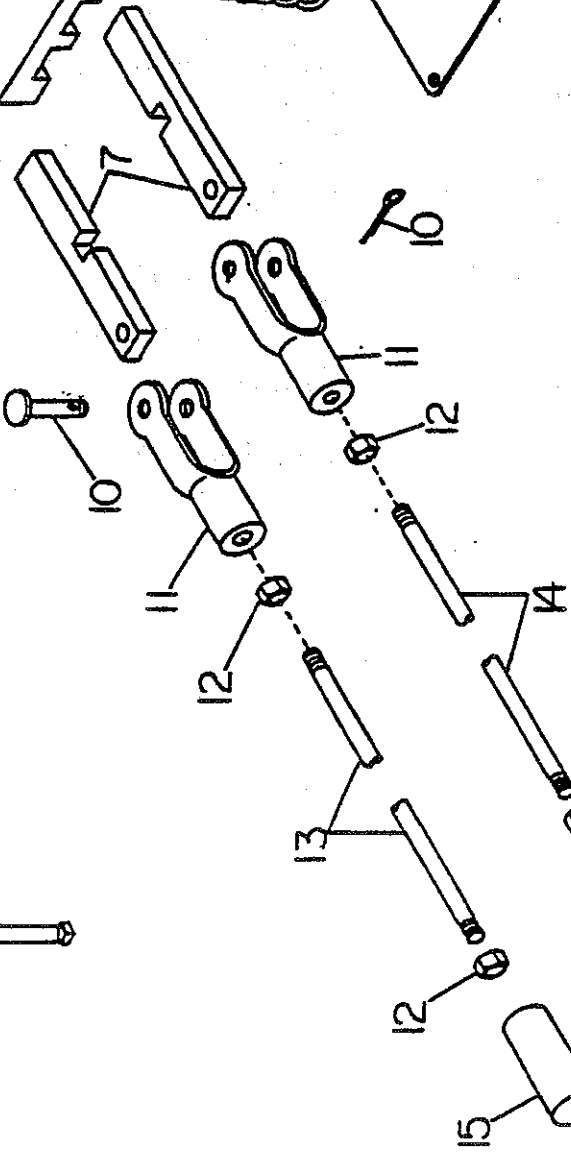
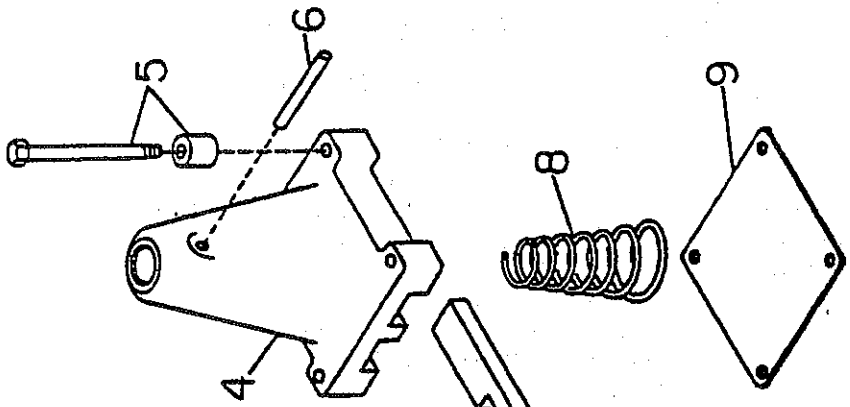
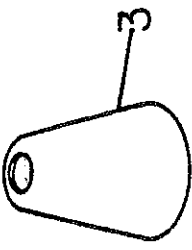
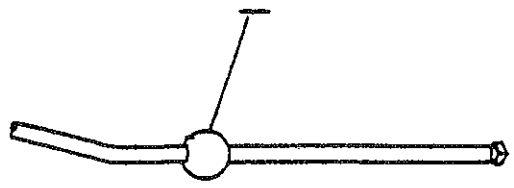
Illustration 06-001

Beginning Serial Number 21-FF-01

TRANSMISSION ASSEMBLY (CONTINUED)

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
44	913-00096	Washer, front thrust	1
45	913-00099	Shaft, reverse idler	1
46	913-00015	Gear, reverse idler (includes 46)	1
	913-00101	Bushing, reverse idler gear	1
47	913-00037	Plate, lock	1
48	913-00085	Retainer, rear bearing	1
49	913-00104	Gasket, bearing retainer	1
50	913-00024	Oil seal, mainshaft	1
51	**	Bolt	1
	**	Bolt	3
	**	Lockwasher	4
52	913-00100	Spacer	1
53	913-00022	Washer	1
54	**	Lockwasher	1
55	913-00025	Nut, mainshaft	1
56	913-00105	Cover, case	1
57	913-00103	Gasket, case cover	1
58	**	Bolt	4
	**	Lockwasher	4
59	301-00154	Lever, 2nd & 3rd Speed	1
60	301-00155	Lever, Low & Reverse	1

** Common Hardware



SHIFT LINKAGE
07-001

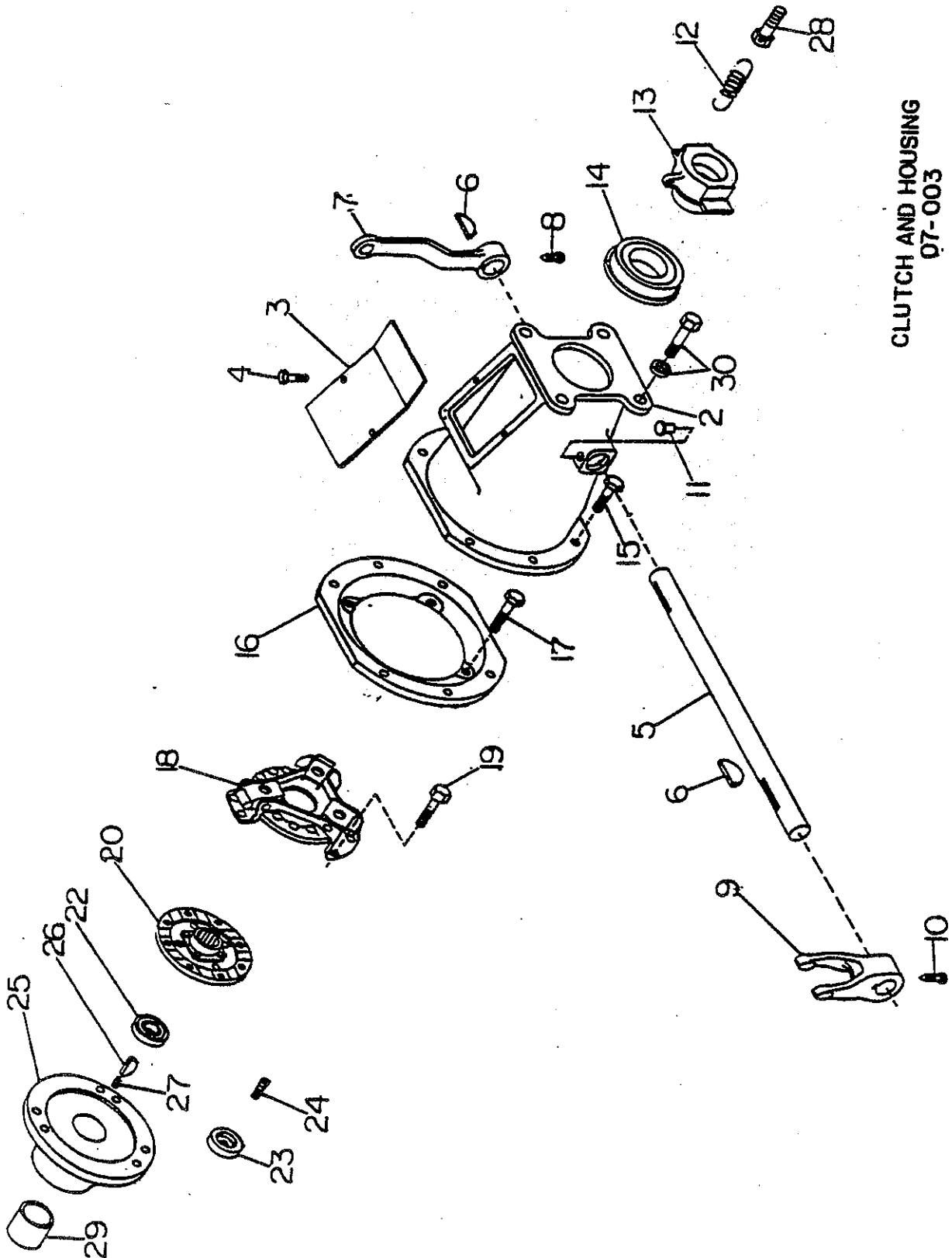
KALAMAZOOMODEL 2500B - 2500B4
3600B - 3600B4

Illustration 07-001

Beginning Serial Number 21GH-01

SHIFT LINKAGE

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	301-00161	Lever, shift control	1
2	412-00001	Knob, shift lever	1
3	Not Used	Boot, control housing	-
4	317-00040	Housing, shift control	1
5	651-00512	Hex bolt 5/16-24 x 1-1/2	4
	665-00500	Washer SAE 5/16	2
	666-00500	Lockwasher 5/16	4
	670-00500	Hex nut 5/16-24	4
6	913-00249	Pin, shift lever	1
7	350-01171	Bar, shift	2
8	913-00250	Spring, shift lever	1
9	812-00040	Cover, control housing	1
10	341-00080	Pin, clevis	2
	681-00406	Cotter pin 1/8 x 3/4	2
11	341-00067	Clevis, rod end	2
12	676-00600	Nut, jam 3/8-24	4
13	355-00210	Rod, 1st & reverse shift	1
14	355-00211	Rod, 2nd & high	1
15	341-00306	Ball joint, rod end	2
	672-00600	Nut-nylok 3/8-24	2



CLUTCH AND HOUSING
07-003

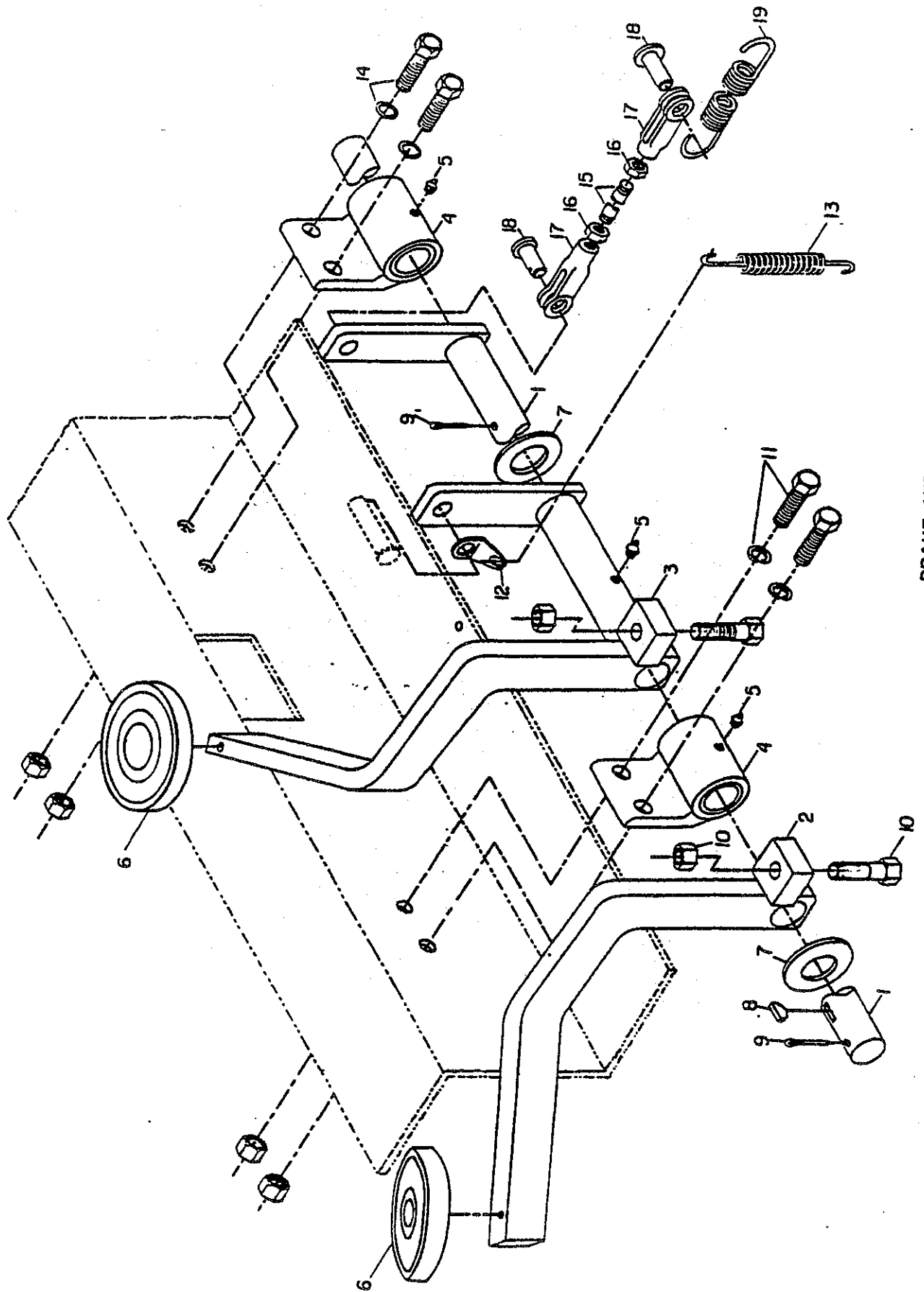
KALAMAZOO
 MODEL 2500B - 2500B4
 3600B - 3600B4

Illustration 07-003

Beginning Serial Number 21GH-01

CLUTCH & HOUSING

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
2	317-00044	Bell housing, engine to trans.	1
3	350-01262	Cover, inspection	1
4	650-00404	Bolt, 1/4-20 x 1/2	2
	666-00400	Lockwasher 1/4"	2
5	355-00193	Shaft, clutch throwout	1
6	682-40900	Key, throwout shaft #9 woodruff	2
7	301-00151	Lever, clutch throwout	1
8	640-00406	Set screw 1/4-20NC x 3/4"	1
9	332-00033	Yoke, clutch throwout	1
10	331-00492	Set screw 5/16-18 NC x 2"	1
11	104-00001	Cover, oil hole	2
12	362-00037	Spring, clutch sleeve	1
13	332-00034	Sleeve, clutch release	1
14	306-00044	Bearing, clutch throwout	1
15	650-00512	Hex bolt, 5/16-24 x 1-1/2	6
	666-00500	Lockwasher 5/16	6
	670-00500	Hex nut 5/16-24	6
16	317-00043	Housing, flywheel	1
17	331-00490	Bolt-drilled head	4
18	804-00012	Pressure plate, clutch	1
19	650-00506	Bolt 5/16-18 x 3/4	6
	666-00500	Lockwasher 5/16	6
20	804-00054	Disc, clutch (old 804-00013)	1
22	306-00086	Bearing, pilot	1
23	361-00003	Spacer, pilot bearing	1
24	914-00245	Screw, spacer	1
	914-00130	Lockwasher, spacer	1
25	368-00047	Flywheel (TJD engine)	1
26	914-00155	Key, flywheel	1
27	914-00183	Seal, flywheel keyway (cork)	1
28	331-00126	Bolt - drilled head 5/16-18 NC x 1"	1
29	Not Used	Sleeve, flywheel	-
30	651-00712	Capscrew 7/16-20 N.F. x 1-1/2	4
	666-00700	Lockwasher 7/16"	4
	670-00700	Hex nut 7/16-20 N.F.	4
31	914-00144	Seal, rear engine (not shown)	1



**BRAKE AND CLUTCH
 LINKAGE
 07-009**

MODEL 2500B - 2500B4
3600B - 3600B4

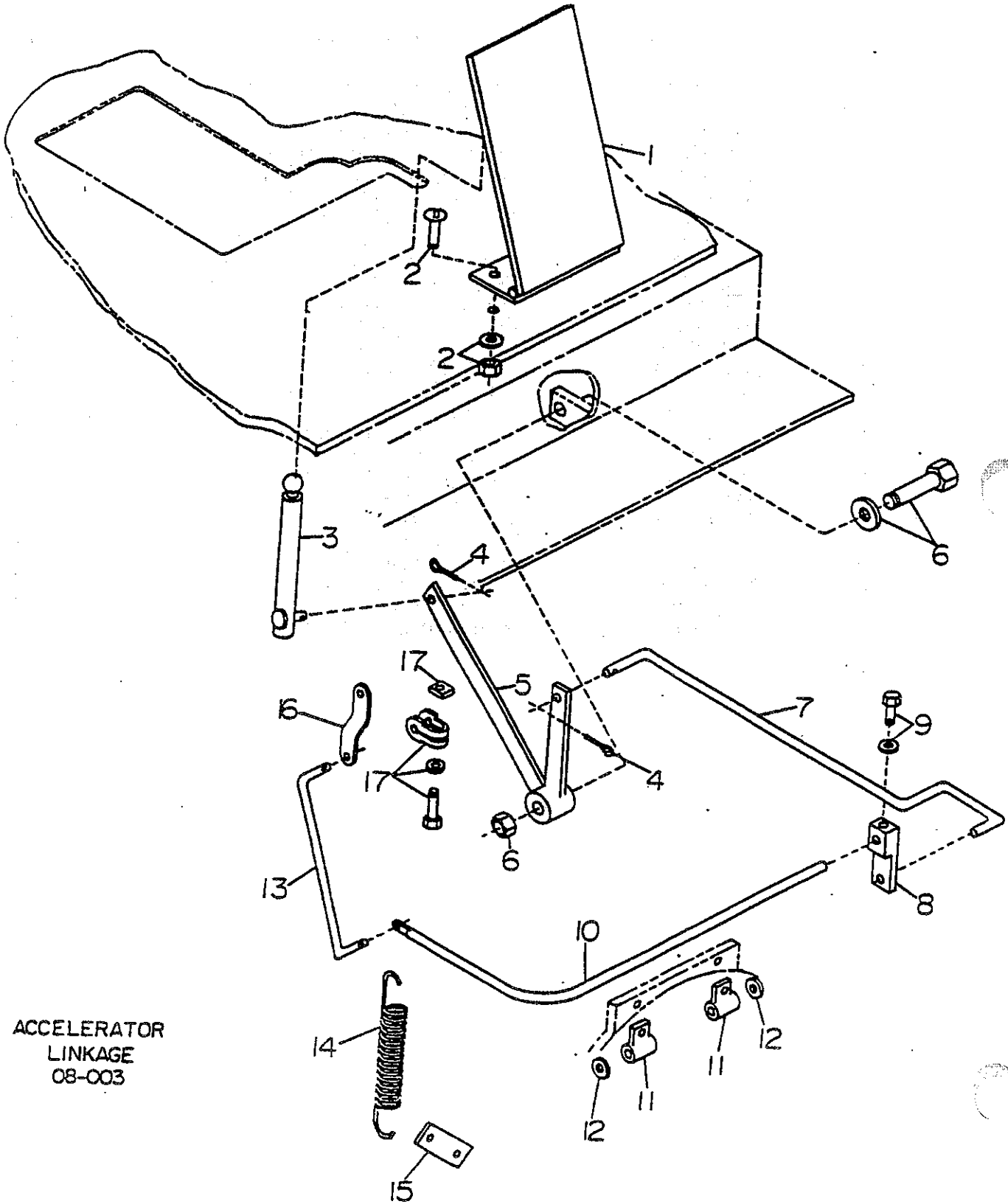
Illustration 07-009

Beginning Serial Number 21GH-01

BRAKE & CLUTCH LINKAGE

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	355-00191	Shaft, clutch lever	1
2	301-00164	Lever, clutch pedal	1
3	301-00163	Lever, brake pedal	1
4	306-00156	Bearing, linkage pivot (includes 5)	2
	306-00329	Bushing, pivot bearing	
5	109-00267	Fitting, bearing lub	2
	115-00008	Fitting, brake lever	1
6	436-00022	Pad, brake & clutch lever	2
7	664-01200	Washer, shaft 3/4 SAE flat	2
8	682-40900	Key, clutch lever #9 Woodruff	1
9	681-00408	Cotter pin 1/8 x 1"	2
10	651-00610	Hex bolt 3/8-24 x 1-1/4"	2
	670-00600	Hex nut 3/8-24	2
11	651-00608	Hex bolt 3/8-24 x 1	2
	666-00600	Lockwasher 3/8"	2
	670-00600	Hex nut 3/8-24	2
12	320-00004	Anchor, return spring	1
13	362-00057	Spring, brake lever	1
14	651-00608	Hex bolt 3/8-24 x 1	2
	666-00600	Lockwasher 3/8"	2
	670-00600	Hex nut 3/8-24	2
15	355-00299	Rod, clutch	1
16	676-00600	Jam nut, rod 3/8-24	2
17	341-00067	Clevis, rod 3/8"	2
18	373-00085	Pin, rod clevis	2
19	362-00066	Spring, clutch lever	1

ACCELERATOR
LINKAGE
08-003



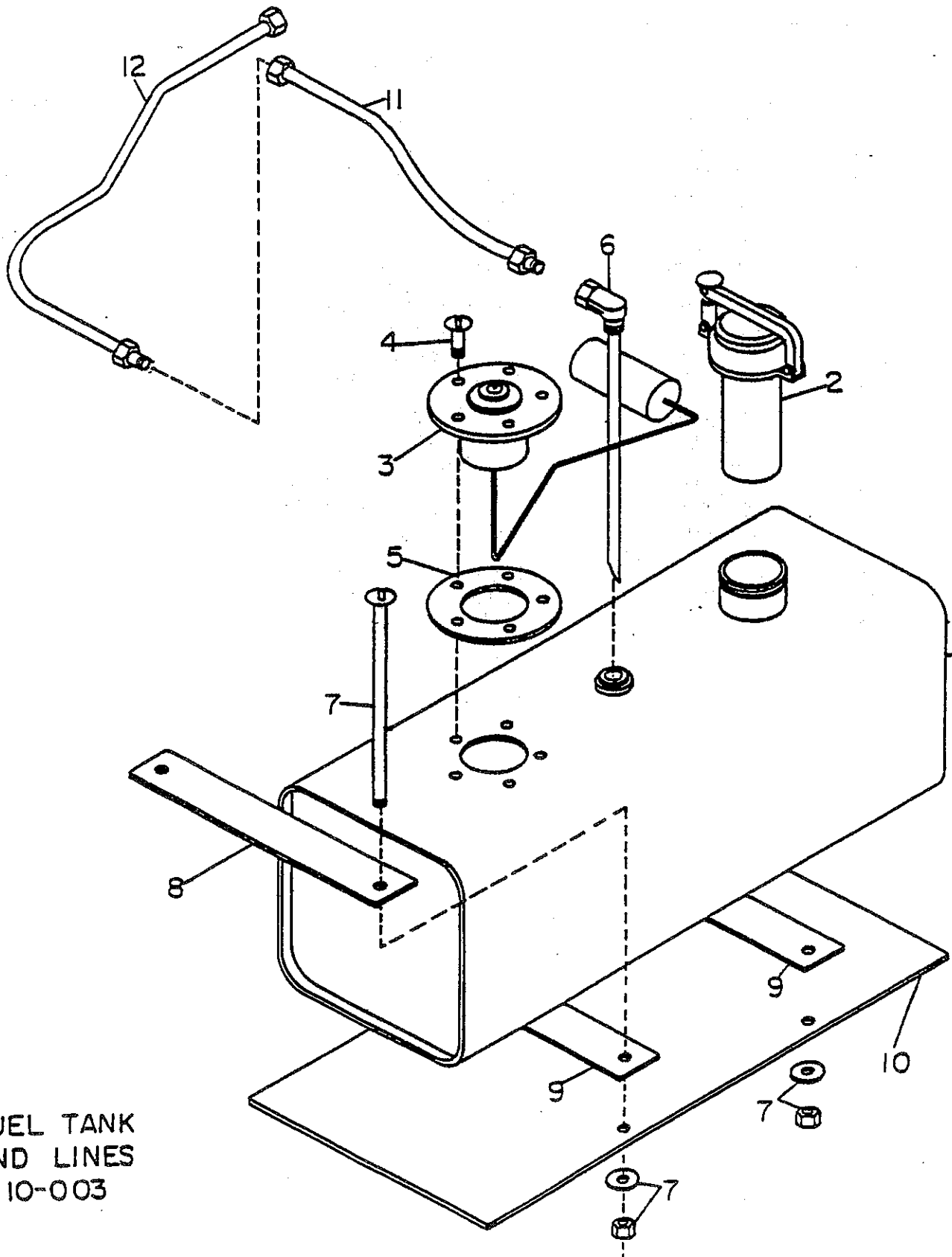
MODEL 2500B - 2500B4
3600B - 3600B4

Illustration 08-003

Beginning Serial Number 21GH-01

ACCELERATOR LINKAGE

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	436-00023	Pedal, accelerator	1
2	653-41005	Machine screw #10-32 x 5/8	2
	666-00300	Lockwasher	2
	670-41000	Nut # 10-32	2
3	355-00216	Rod, pedal push	1
4	681-00204	Cotter, push rod	2
5	301-00098	Bellcrank, accelerator	1
6	651-00816	Hex bolt 1/2-20NF x 2"	1
	670-00800	Nut 1/2-20 NF	1
7	355-00214	Rod, accelerator	1
8	301-00153	Lever, accelerator cross rod	1
9	640-00506	Set screw 5/16-18 x 3/4	1
	676-00500	Jam nut 5/16-18	1
10	355-00207	Cross rod	1
11	306-00157	Bearing, cross rod	2
12	665-00700	Washer, bearing 7/16"	2
13	345-00039	Rod, cross rod to carb	1
14	362-00106	Spring, accel. return	1
15	NO LONGER USED		
16	914-00235	Lever, carburetor	1
17	914-00236	Lever, carburetor	1
18	802-00018	Choke cable	1



FUEL TANK
AND LINES
10-003

MODEL 2500B - 2500B4
3600B - 3600B4

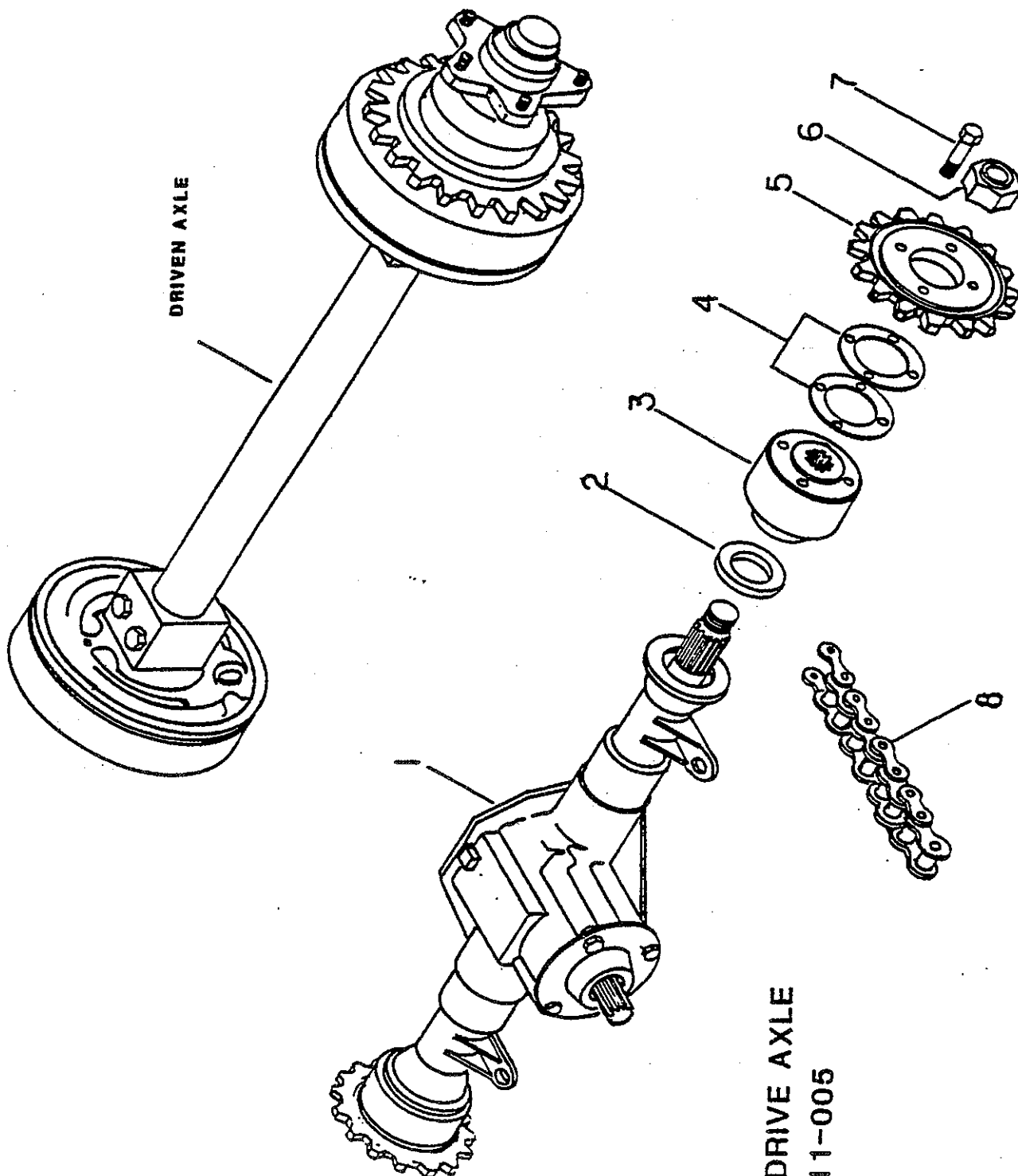
Illustration 10-003

Beginning Serial Number 21GH-01

FUEL TANK AND LINES

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	309-00120	Fuel tank w/o sending unit	1
	309-00134	Fuel tank w/sending unit	1
2	316-00042	Gas cap (threaded)	1
3	123-00006	Sending unit, fuel gauge	1
4	653-61005	Machine screw #10-32 x 5/8	5
	668-20300	Washer 3/16"	5
5		Gasket, sending unit (included w/sender)	1
6	130-00011	Siphon, fuel tank	1
7	658-00564	Bolt 5/16-18 NC x 8"	4
	664-00500	Washer 5/16	4
	671-00500	Nut,nylok 5/16-18NC	4
8	426-00033	Anti squeak	2
9	426-00033	Anti squeak	2
10	350-01135	Support, fuel tank	1
11	130-00006	Fuel line- hose	1
12	130-00013	Fuel line - tube	1
	109-00266	Tube nut	1
	109-00253	Sleeve	1
	109-00252	Tube nut	1
	109-00280	Union body	1





DRIVEN AXLE

DRIVE AXLE
11-005

KALAMAZOO



MODEL 2500B - 2500B4
3600B - 3600B4

Illustration 11-005

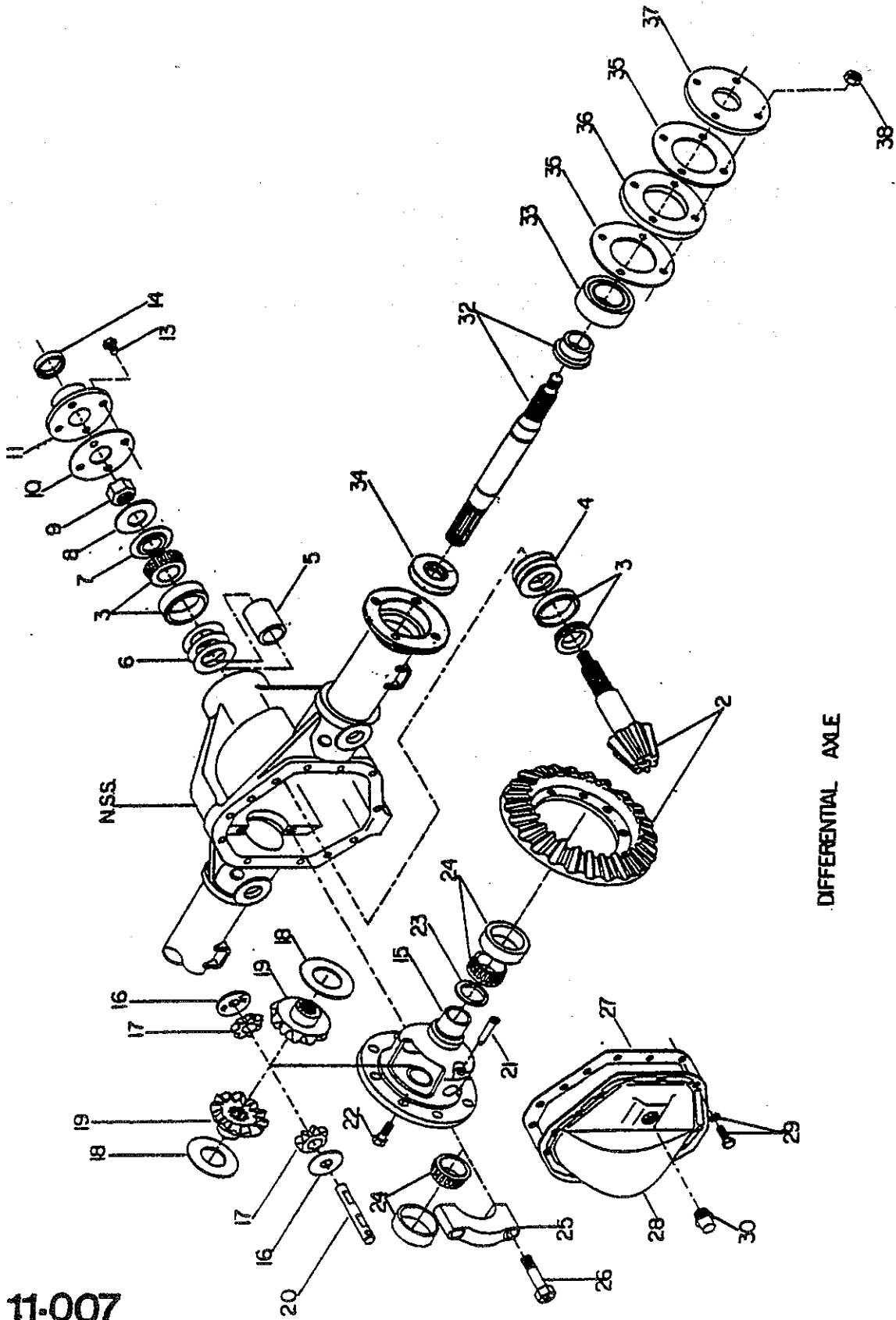
Beginning Serial Number 21GH-01

DRIVE AXLE

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	800-00054	Differential assembly (includes 2 thru 7)	1
	800-00051	Differential assembly (less 2 thru 7)	1
2	904-00212	Felt seals	4
3	342-00149	Hub, sprocket	2
4	358-00035	Shim sprocket	4
5	351-00082	Sprocket, drive 16 tooth	2
6	680-01000	Nut - slotted 5/8-16	2
7	341-00339	Hex bolt w/drilled head	8
	202-00043	Wire	4

CHAIN DRIVEN AXLE PARTS ONLY

11-007



DIFFERENTIAL AXLE

KALAMAZOO



MODEL 2500B - B4

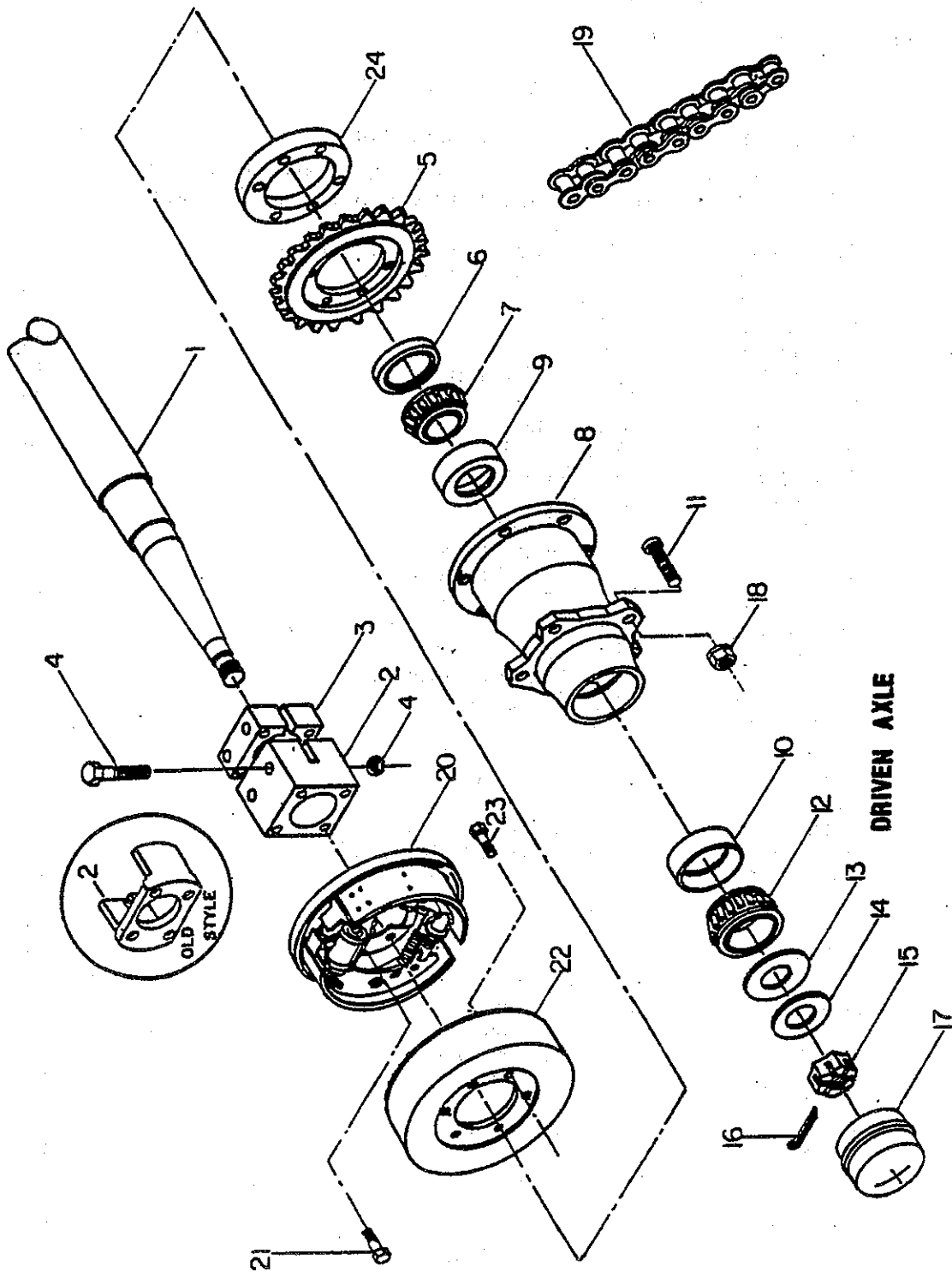
CHAIN DRIVEN AXLE PARTS ONLY

Beginning Serial Number 21GE-01

Illustration 11-007

DIFFERENTIAL ASSEMBLY

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
	800-00054	Differential Axle w/ Hubs and Sprockets	1
	800-00051	Differential Axle w/o Hubs and Sprockets	1
1	N.S.S.	Housing	1
2	904-00203	Ring Gear & Pinion (6 3/8")	1
3	904-00229	Bearing Assembly	2
4	904-00230	Shim .003	AR
	904-00231	Shim .005	AR
	904-00232	Shim .010	AR
5	904-00217	Spacer, Pinion	1
6	904-00235	Shim .003	AR
	904-00236	Shim .005	AR
	904-00237	Shim .010	AR
7	904-00216	Oil Slinger	1
8	904-00249	Oil Baffle	1
9	904-00114	Nut, Pinion	1
10	335-00033	Gasket, Retainer	1
11	335-00032	Retainer, Oil Seal	1
12	666-00600	Lockwasher 3/8"	4
13	650-00607	Capscrew 3/8-16N.C. X 7/8"	4
14	110-00022	Oil Seal	1
15	904-00201	Case Assembly (Includes 16 thru 21)	1
	904-00221	Differential Case	1
16	904-00226	Thrust Washer	2
17	904-00222	Gear, Pinion Mate	2
18	904-00227	Thrust Washer	2
19	904-00223	Gear, Side	2
20	904-00224	Shaft, Pinion Mate	1
21	904-00225	Pin, Pinion Mate Shaft	1
22	904-00104	Screw, Ring Gear	4
23	904-00242	Shim .003	AR
	904-00243	Shim .005	AR
	904-00244	Shim .010	AR
24	904-00197	Bearing Cone	2
	904-00198	Bearing Cup	2
25	N.S.S.	Cap, Bearing	2
26	904-00228	Screw, Bearing Cap	4
27	904-00246	Gasket, Cover	1
28	904-00202	Cover, Inspection	1
29	904-00247	Bolt, Inspection Cover	12
30	904-00320	Plug, Pipe	1
	904-00330	Plug, Rubber	1
31	904-00071	Plug, Vent	1
32	904-00204	Axle Shaft, L.H. 12 1/8"	1
	904-00205	Axle Shaft, R.H. 12 7/8"	1
	904-00220	Retainer, Bearing (Included W/ Axle)	1
33	904-00200	Bearing, Axle Shaft	2
34	904-00219	Oil Seal, Axle Shaft	2
35	904-00210	Gasket, Retainer	4
36	904-00211	Retainer, Bearing	2
37	904-00214	Dust Shield, Axle	2
38	904-00215	Screw, Retainer	8



MODEL 2500B-B4
2500BEE

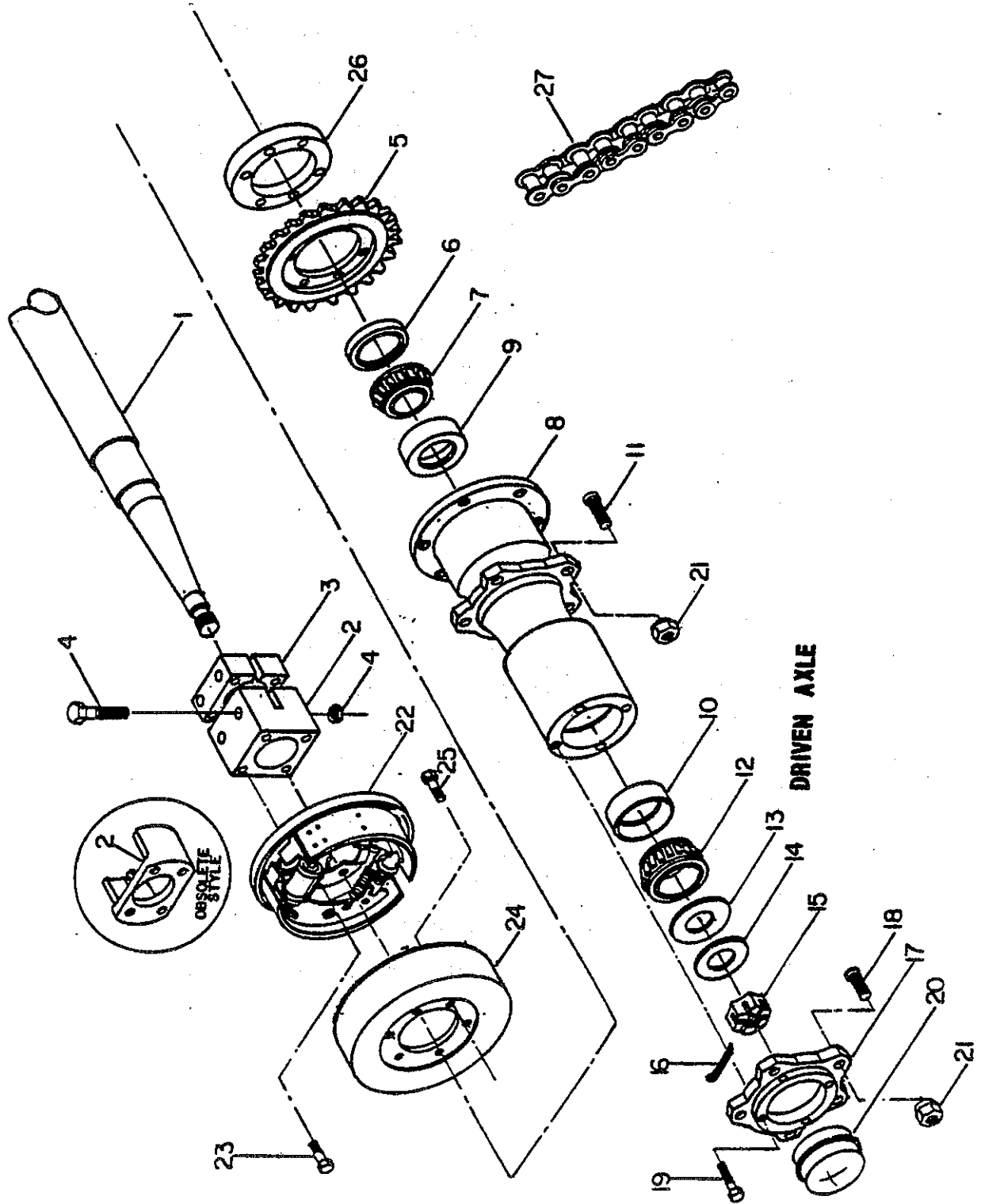
Illustration 11-009

Beginning Serial Number 21HA-01 (1981)

DRIVEN AXLE (SINGLE DRIVE) 2000 THRU 5000 LB.

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	302-00163	Axle shaft 2000 thru 3000 lb cap.	1
	302-00169	Axle shaft 4000 thru 5000 lb cap.	1
2	350-03150	Block, axle & brake mount	2
3	350-02465	Block, axle mount (inboard 4000 & 5000 lb.)	2
4	651-00832	Bolt-hex, 1/2-20 x 4	AR
	651-00836	Bolt-hex, 1/2-20 x 4-1/2	AR
5	351-00083	Sprocket, 15 MPH (26 tooth)	2
	351-00084	Sprocket, 10 MPH (34 tooth)	2
	351-00085	Sprocket, 7-1/2 MPH (48 tooth)	2
6	110-00021	Seal, hub grease	2
7	306-00087	Cone, hub inner	2
8	342-00086	Hub assembly (includes 9, 10 & 11)	2
9	306-00088	Cup, hub inner	2
10	306-00078	Cup, hub outer	2
11	331-00122	Stud, wheel mount	10
12	306-00079	Cone, hub outer	2
13	Not used	Washer, hub	-
14	Not used	Washer, hub	-
15	331-00077	Castle nut, 3/4 NF	2
16	681-00512	Cotter pin, 5/32 x 1-1/2	2
17	316-00028	Grease cap, hub	2
18	331-00123	Nut, wheel mount	10
19	318-00028	Chain, 15 MPH (50 pitches)	2
	318-00087	Chain, 10 MPH (53 pitches)	2
	318-00029	Chain, 7-1/2 MPH (63 pitches)	2
	318-00010	Offset link, chain	AR
	318-00045	Connecting link, chain	AR
20	311-00204	Brake assembly, LH	1
	311-00205	Brake assembly, RH	1
21	331-00475*	Bolt, brake mount	8
	331-00485	Washer, brake mount	8
22	311-00203	Brake drum	2
23	651-00610	Bolt, hub mtg. 3/8-24 NF x 1-1/4	12
	666-00600	Lockwasher, 3/8	12
24	350-02177	Spacer, sprocket	2

*Apply Loktite #242 to thread holes of item 21 and torque bolts to 40 ft. lbs.



KALAMAZOO



MODEL 2500B-B4
2500BEE

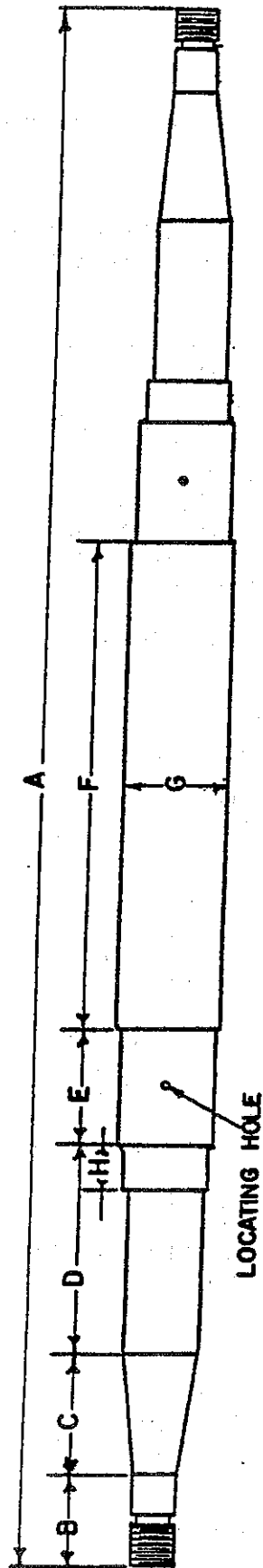
Illustration 11-011

Beginning Serial Number 21HA-01 (1981)

DRIVEN AXLE (DUAL DRIVE) 2000 THRU 5000 LB.

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	See next page	Axle shaft 2,000 thru 3,000 lb cap.	1
	See next page	Axle shaft 4000 thru 5000 lb. cap.	1
2	350-03150	Block, axle and brake mounting	2
3	350-02465	Block, axle mount inner	2
4	651-00832	Hex bolt, 1/2-20 x 4"	AR
	651-00836	Hex bolt, 1/2-20 x 4-1/2"	AR
	666-00800	Lockwasher, 1/2"	AR
	670-00800	Hex nut, 1/2-20	AR
5	351-00083	Sprocket, 15 MPH (26 tooth)	2
	351-00084	Sprocket, 10 MPH (34 tooth)	2
	351-00085	Sprocket, 7-1/2 MPH (48 tooth)	2
6	110-00021	Seal, hub grease	2
7	306-00087	Cone, hub inner	2
8	See next page	Hub assembly (includes 9, 10 & 11)	2
9	306-00088	Cup, hub inner	2
10	See next page	Cup, hub outer	2
11	331-00122	Stud, wheel mount	10
12	See next page	Cone, hub outer	2
13	Not Used	Washer, hub	-
14	110-00243	Gasket, grease cap	2
15	331-00077	Castle nut, 3/4 NF	2
16	681-00512	Cotter pin, 5/32 x 1-1/2	2
17	See next page	Flange, wheel mount	2
18	331-00122	Stud, wheel mount (included w/item 17)	10
19	651-00612	Hex bolt, 3/8-24 x 1-1/2	AR
20	316-00028	Cap, hub grease (push on)	2
	350-03012	Cap, hub grease (bolt on - 5000 lb.)	2
	110-00243	Gasket, grease cap (bolt on)	2
21	331-00123	Nut, wheel	20
22	311-00204	Brake assembly, LH	1
	311-00205	Brake assembly, RH	1
23	331-00475	Capscrew, brake mtg. 3/8-16 x 5/8 grade 8	8
	331-00485	Washer, brake mtg.	8
24	311-00203	Brake drum	2
25	651-00612	Hex bolt, 3/8-24 x 1-1/2	12
	666-00600	Lockwasher, 3/8"	12
26	350-02177	Spacer, brake drum	2
27	318-00028	Chain, 15 MPH (50 pitches)	2
	318-00087	Chain, 10 MPH (53 pitches)	2
	318-00029	Chain, 7-1/2 MPH (63 pitches)	2
	318-00010	Offset link, chain	AR
	318-00045	Connecting link, chain	AR

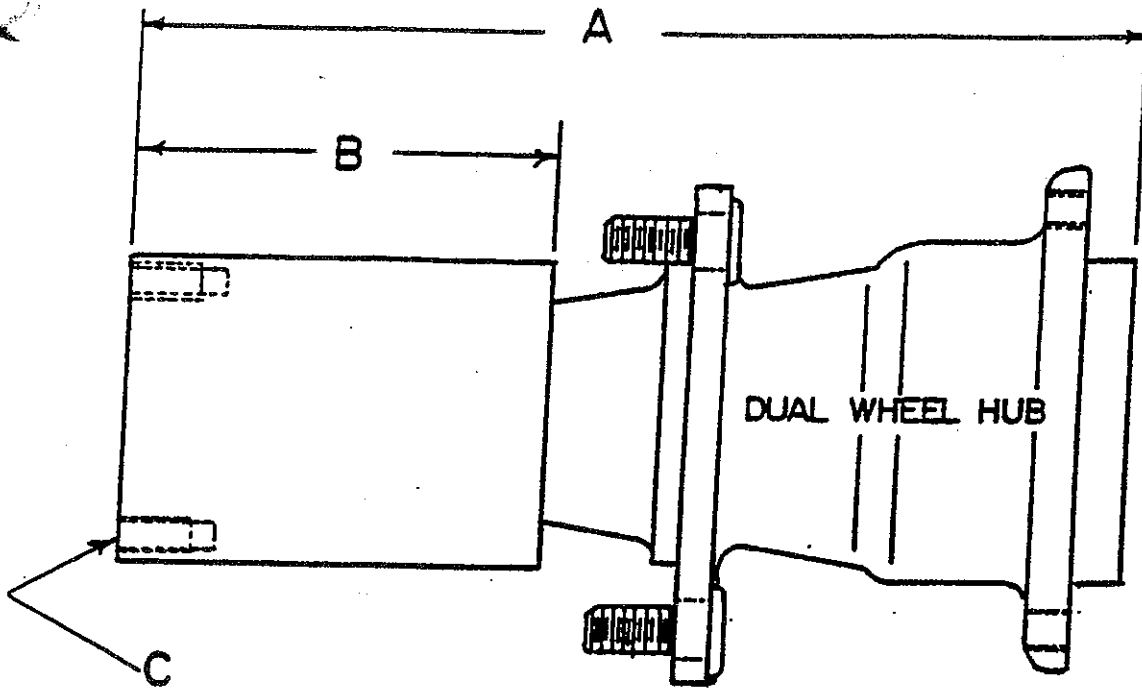
DRIVEN (DEAD) AXLE



DUAL DRIVE WHEELS

AXLE	CAPACITY	"A" OVERALL LENGTH	USED WITH HUB
302-00141	2000 thru 3000 lb.	45-3/4"	342-00091
302-00140	4000 thru 5000 lb.	45-3/4"	342-00091
302-00177	4000 thru 5000 lb.	47-3/8"	342-00154

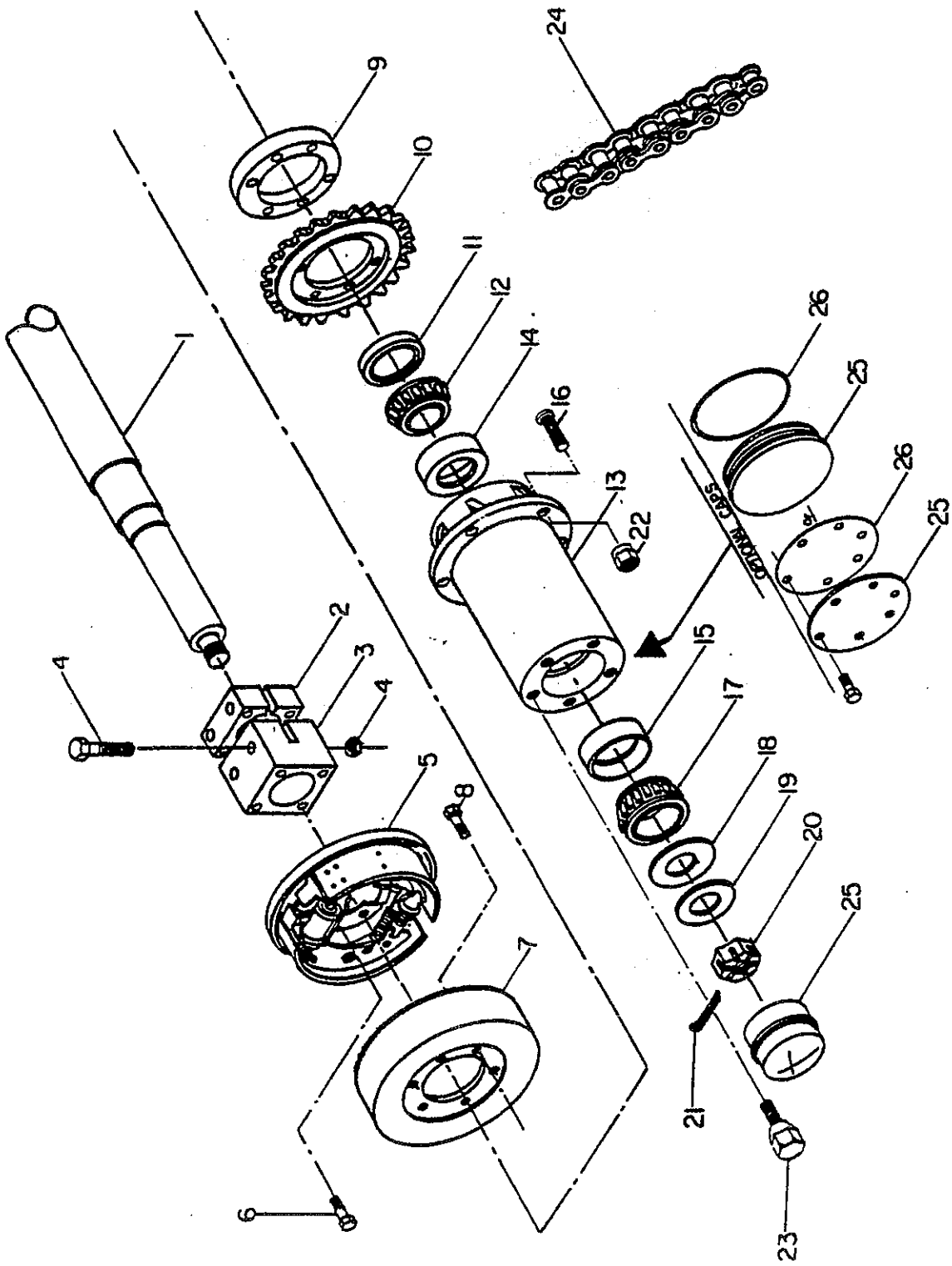
NOTE: HUB AND AXLE MUST BE MATCHED.



PART NUMBER	DUAL WHEEL HUB			INNER CUP	OUTER CONE	OUTER WHEEL FLANGE
	"A"	"B"	"C"			
342-00091*	10 1/16"	4 1/4"	4 Holes	306-00088	306-00078	332-00029
342-00154*	11 1/16"	5 1/4"	6 Holes	306-00088	306-00094	332-00074

* HUB INCLUDES INNER & OUTER CUPS

DRIVEN HUBS 2000 thru 5000 LB. CAP.



KALAMAZOO



MODEL 2500B / B4
2500BEE

Illustration 11-025

Beginning Serial Number 21HA-01 (1981) 6000 LB. CAPACITY

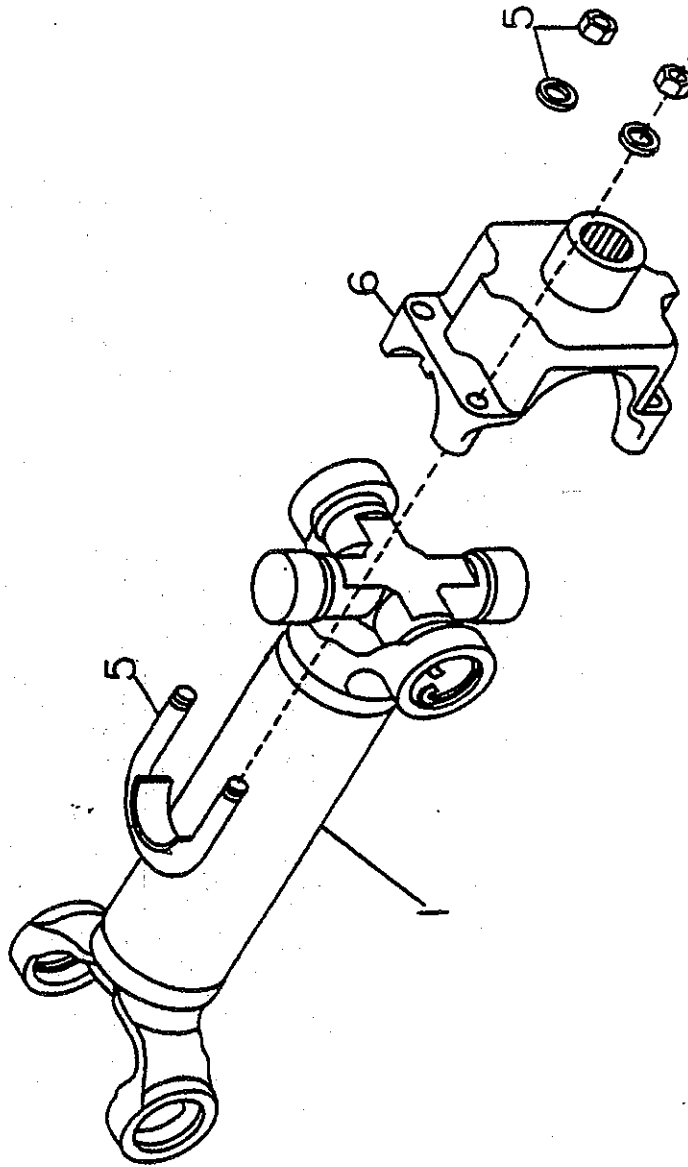
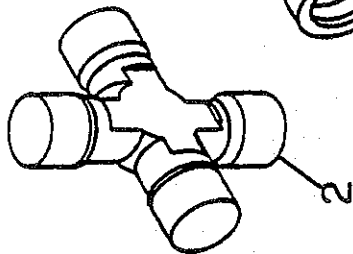
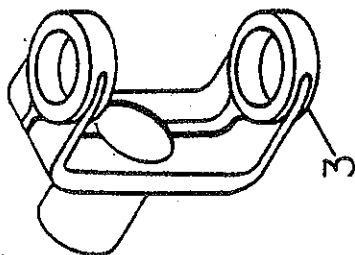
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	302-00182	Axle Shaft, Single Drive 6000 LB.	1
	302-00230	Axle Shaft, Dual Drive 6000 LB.	
2	350-03047	Block, Axle Mounting	2
3	350-03149	Block, Brake and Axle Mount	2
4	651-00836	Hex Bolt, 1/2-20 X 4 1/2"	8
	666-00800	Lockwasher, 1/2"	8
	670-00800	Nut, 1/2-20 NF	8
5	311-00237 *	Brake Assembly, L. .	1
	311-00238 *	Brake Assembly, R.H.	1
6	331-00475	Capscrew, 3/8-16 X 5/8" Grade 8	8
	331-00485	Lockwasher, 3/8"	8
7	311-00239	Brake Drum	2
8	331-00477	Capscrew, 3/8-24 X 1 1/2" Grade 8	12
	331-00493	Capscrew, 3/8-16 X 1 1/2" Grade 8	12
	666-00600	Lockwasher, 3/8"	12
9	350-02177	Spacer, Hub Mount	2
10	351-00083	Sprocket, 15 MPH (26 tooth)	2
	351-00084	Sprocket, 10 MPH (34 tooth)	2
	351-00085	Sprocket, 7 1/2 MPH (48 tooth)	2
11	110-00238	Seal, Hub Grease	2
12	306-00358	Cone, Hub Inner (Single Drive)	2
	306-00363	Cone, Hub Inner (Dual Drive)	2
13	342-00157	Hub, Drive (Single Wheels) includes 14,15,&16	2
	342-00168	Hub, Drive (Dual Wheels) includes 14,15,&16	2
14	306-00359	Cup, Hub Inner (Single Drive)	2
	306-00362	Cup, Hub Inner (Dual Drive)	2
15	306-00359	Cup, Hub Outer (Single Drive)	2
	306-00362	Cup, Hub Outer (Dual Drive)	2
16	331-00122	Stud, Wheel Mount	12
17	306-00358	Cone, Hub Outer (Single Drive)	2
	306-00363	Cone, Hub Outer (Dual Drive)	2
18	664-01600	Washer, 1"	2
19	665-01600	Washer, SAE 1"	2
20	331-00486	Slatted Nut, 1-14	2
21	681-00516	Cotter Pin, 5/32 X 2"	2
22	331-00123	Nut, Wheel Mount	12
23	331-00494	Stud, Wheel Mount	12
24	318-00028	Chain, 15 MPH (50 pitches)	2
	318-00087	Chain, 10 MPH (53 pitches)	2
	318-00029	Chain, 7 1/2 MPH (63 pitches)	2
	318-00045	Connecting Link, Chain	AR
	318-00010	Offset Link, Chain	AR
25	350-03050	Cap, Hub Grease (Single Drive)	2
	316-00045	Cap, Hub Grease (Dual Drive)	2
26	110-00240	Gasket, Grease Cap (Single Drive)	2
27	368-00270	Wheel-Inner (Rear) <u>Single & Dual Drive</u>	2
	368-00299	Wheel-Outer (Rear) <u>Dual Only</u>	2

* NOTE:

311-00237 & 311-00238 Use the same service components as 311-00204 & 311-00205

04-007

AXLE END



DRIVE SHAFT
04-007

KALAMAZOO



MODEL 2500B - 2500B4
3600B - 3600B4

Illustration 04-007

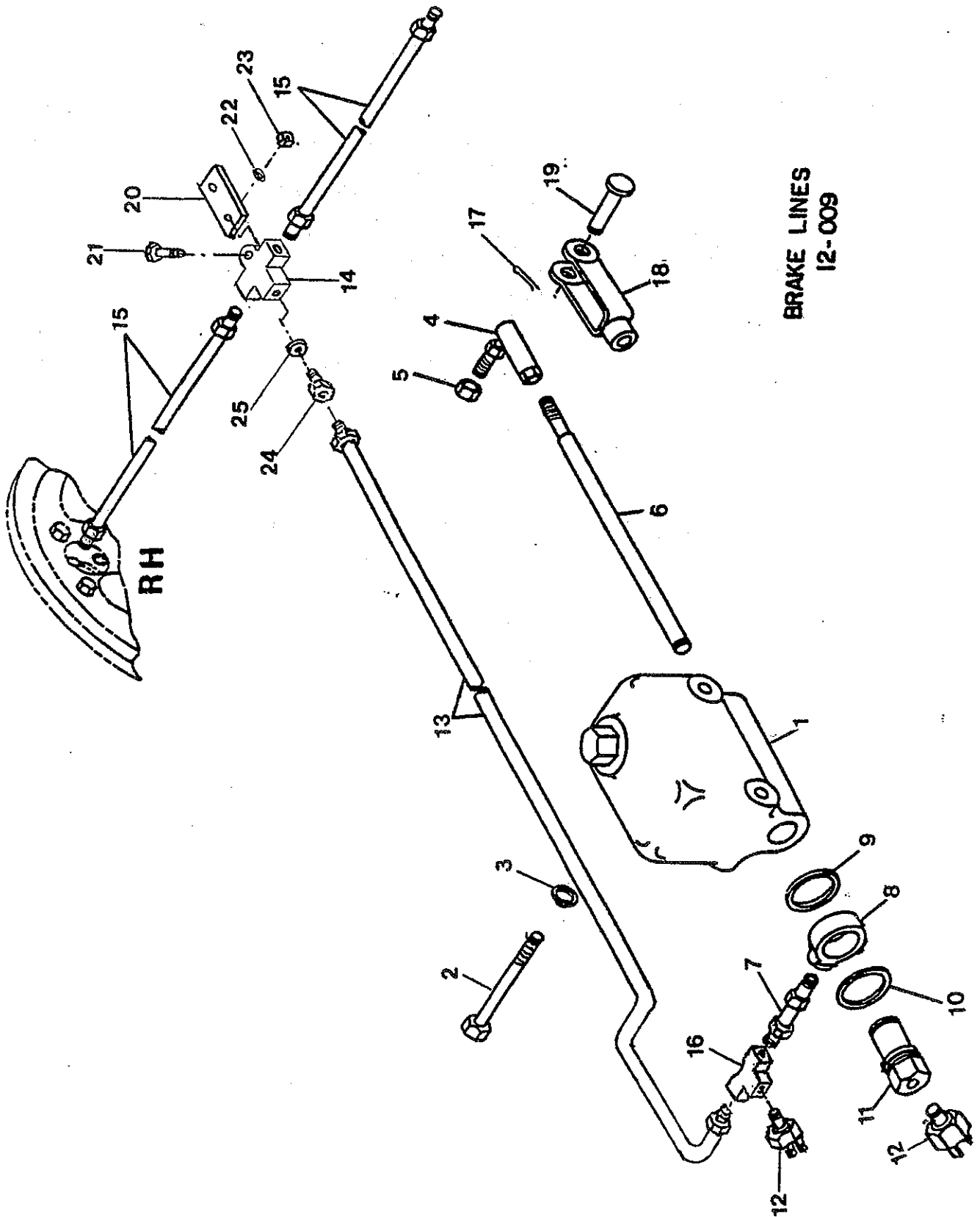
Beginning Serial Number 21GH-01

DRIVE SHAFT

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	812-00043	Drive shaft 10-17/32" c/c*	1
	812-00044	Drive shaft 7-25/32 c/c*	1
	812-00079	Drive shaft 25-7/8" c/c*	1
2	904-00017	Cross kit, drive shaft	2
3	814-00007	Yoke, axle end	1
4	904-00012	Snap ring cross kit	4
5	301-00216	U-bolt, flange	2
	666-00500	Lockwasher 5/16	4
	670-00500	Nut 5/16-24	4
	904-00004	Flange, transmission	1

*Center of cross to center of cross

CHAIN DRIVEN AXLE PARTS ONLY



**BRAKE LINES
12-009**

KALAMAZOO

MODEL 2500B - 2500B4
3600B - 3600B4

Illustration 12-009

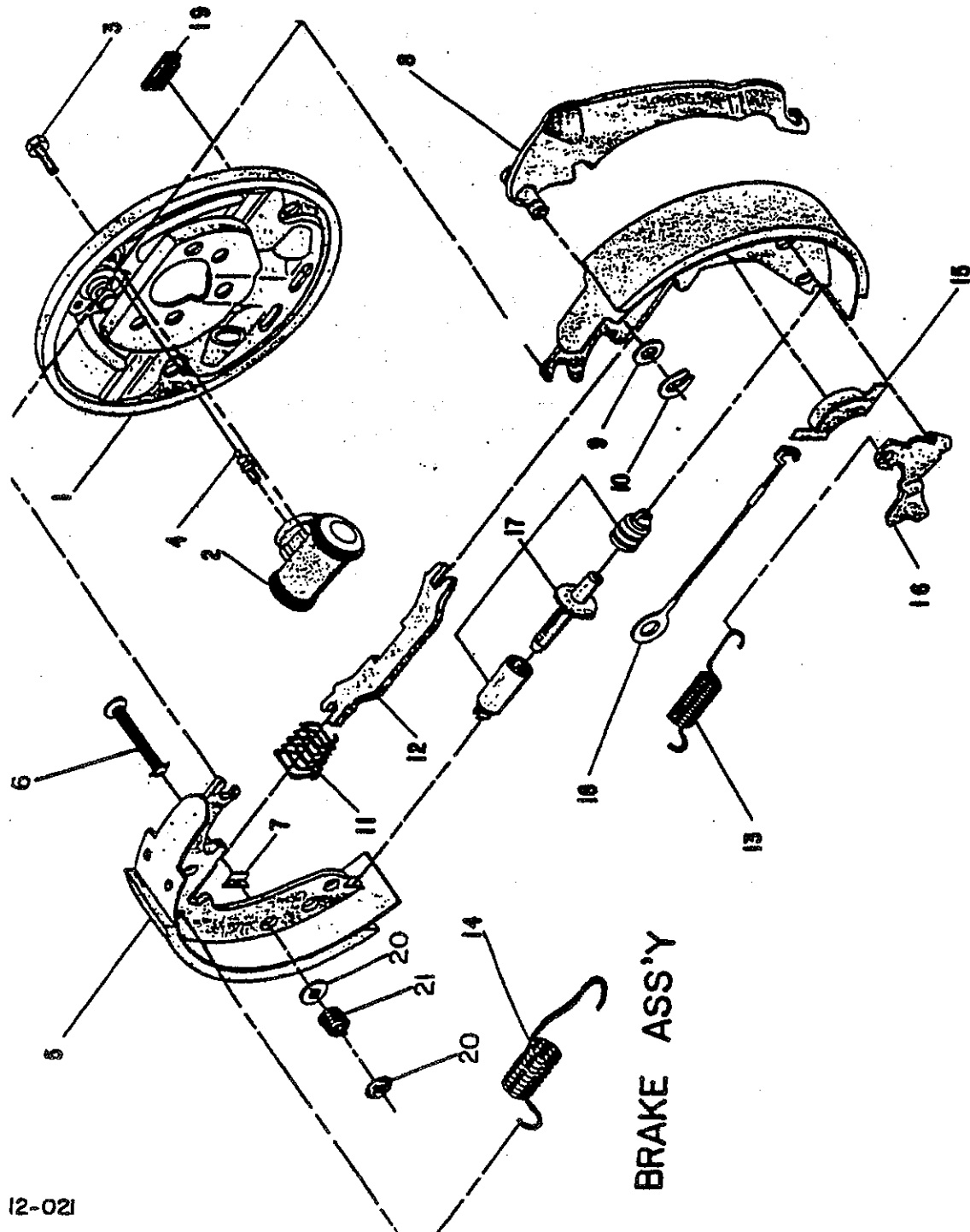
Beginning Serial Number 21 IA 33

<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	107-00107	Master Cylinder	1
2	650-00624	Bolt, Hex 3/8-16 x 3'	2
3	666-00600	Lockwasher 3/8"	2
4	341-00306	Ball Joint, Push Rod	1
5	672-00600	Nut, Nylock 3/8-24	1
6	341-00559	Rod, Cylinder Push	1
7	79808	Tube Assembly (Models 2500B and 3600B)	1
8	911-00037	Fitting, Banjo	1
9	911-00001	Gasket, Banjo Fitting	1
10	911-00002	Gasket, Banjo Fitting Bolt	1
11	911-00038	Bolt, Banjo Fitting (Models 2500B4 & 3600B4)	1
	911-00003	Bolt, Banjo Fitting (Models 2500B & 3600B)	1
12	235-00056	Switch, Brake Light	1
13	130-00012	Line, Cylinder to Tee (90")	1
	130-00013	Line, Cylinder to Tee (16-1/2")	1
14	109-00506	Tee, Brake Line	1
15	130-00084	Line, Brake R.H. and L.H.	2
16	62447	Tee Fitting, Brass (Models 2500B & 3600B)	1
17	681-00406	Cotter Pin 1/8 x 3/4 (Models 2500-B & 3600B)	1
18	341-00067	Clevis (Models 2500B & 3600B)	1
19	373-00007	Pin, Clevis (Models 2500B & 3600B)	1
20	310-00361	Bracket, Tee Mounting	1
21	650-00416	Bolt, Hex Hd 1/4-20 x 1	1
22	666-00400	Lockwasher 1/4	1
23	669-00400	Nut, Hex 1/4-20	1
24	73503	Adapter, Brake Line	1
25	335-00062	Gasket, Brake Line Adapter	1

CHAIN DRIVEN AXLE PARTS ONLY

PAGE 105 (C)

Rev. Apr. 92



12-021

BRAKE ASS'Y

MODEL 2500B - 2500B4
3600B - 3600B4

BEGINNING SERIAL 21GH-01

FIGURE 12-021

BRAKE ASSEMBLY (2" Lining)

FIGURE & INDEX No.	PART NUMBER	DESCRIPTION	QTY.
1	SEE BELOW	BRAKE ASSEMBLY, L.H. (Includes 1 thru 21)	1
	SEE BELOW	BRAKE ASSEMBLY, R.H. (Includes 1 thru 21)	1
2	935-00040	WHEEL CYLINDER, BRAKE	1
3	341-00365	SCREW & LOCKWASHER, WHEEL CLY.	2
4	904-00258	BLEEDER SCREW	1
5	935-00044	SHOE & LINING, PRIMARY	1
	935-00045	SHOE & LINING, SECONDARY	1
6	935-00069	PIN, SHOE HOLD DOWN	2
7	Not Used	ANCHOR, SPRING	-
8	935-00072	LEVER, PARKING BRAKE L.H.	1
	935-00061	LEVER, PARKING BRAKE R.H.	1
9	935-00004	WASHER, SPRING	1
10	935-00003	CLIP, LEVER RETAINER	1
11	935-00025	SPRING, STRUT	1
12	311-00168	STRUT, BRAKE SHOE	1
13	935-00027	SPRING, ADJUSTOR LEVER	1
14	935-00026	SPRING, SHOE ANCHOR	2
15	935-00034	GUIDE, ADJUSTOR CABLE	1
16	935-00020	LEVER, ADJUSTOR L.H.	1
	935-00021	LEVER, ADJUSTOR R.H.	1
17	935-00029	STAR WHEEL, ADJUSTOR L.H.	1
	935-00030	STAR WHEEL, ADJUSTOR R.H.	1
18	935-00028	CABLE, ADJUSTOR	1
19	935-00073	PLUG, ADJUSTOR HOLE	2
20	935-00070	CUP, SHOE HOLD DOWN	4
21	311-00178	SPRING, SHOE HOLD DOWN	2

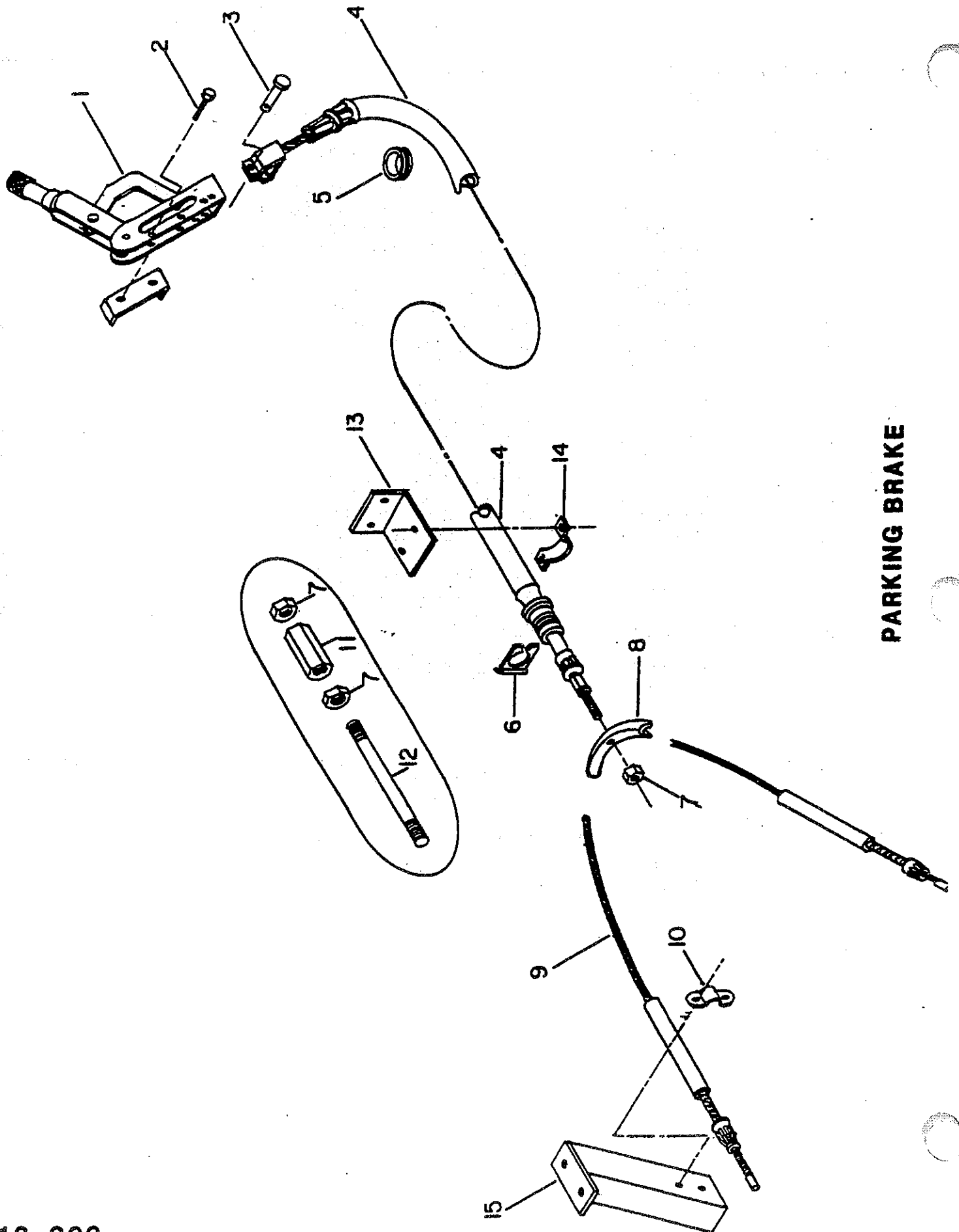
CHAIN DRIVEN AXLE - 2,000 thru 5,000 LB. CAPACITY

1	311-00204	BRAKE ASSEMBLY, L.H.	1
	311-00205	BRAKE ASSEMBLY, R.H.	1

CHAIN DRIVEN AXLE - 6,000 LB. CAPACITY

1	311-00237	BRAKE ASSEMBLY, L.H.	1
	311-00238	BRAKE ASSEMBLY, R.H.	1

1			1
			1



PARKING BRAKE

KALAMAZOO



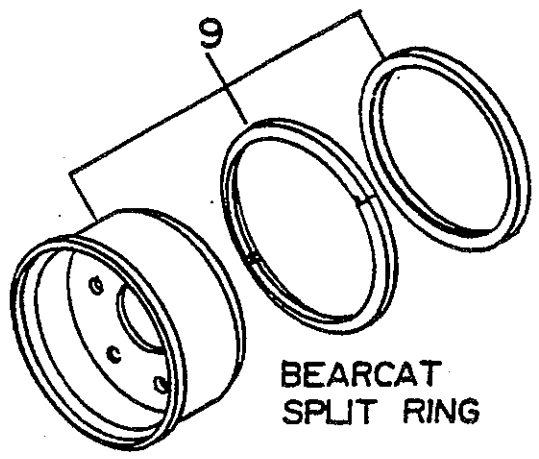
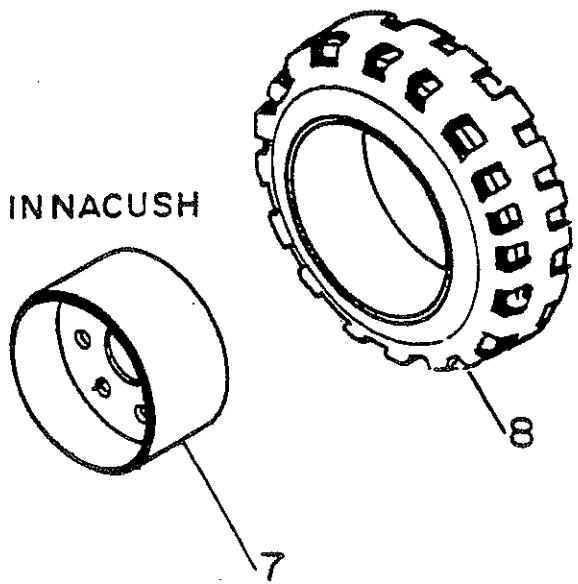
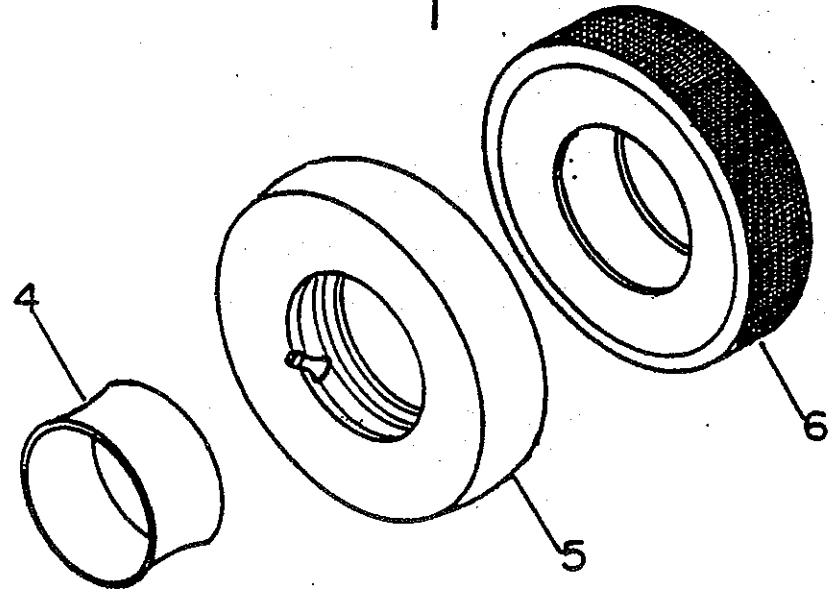
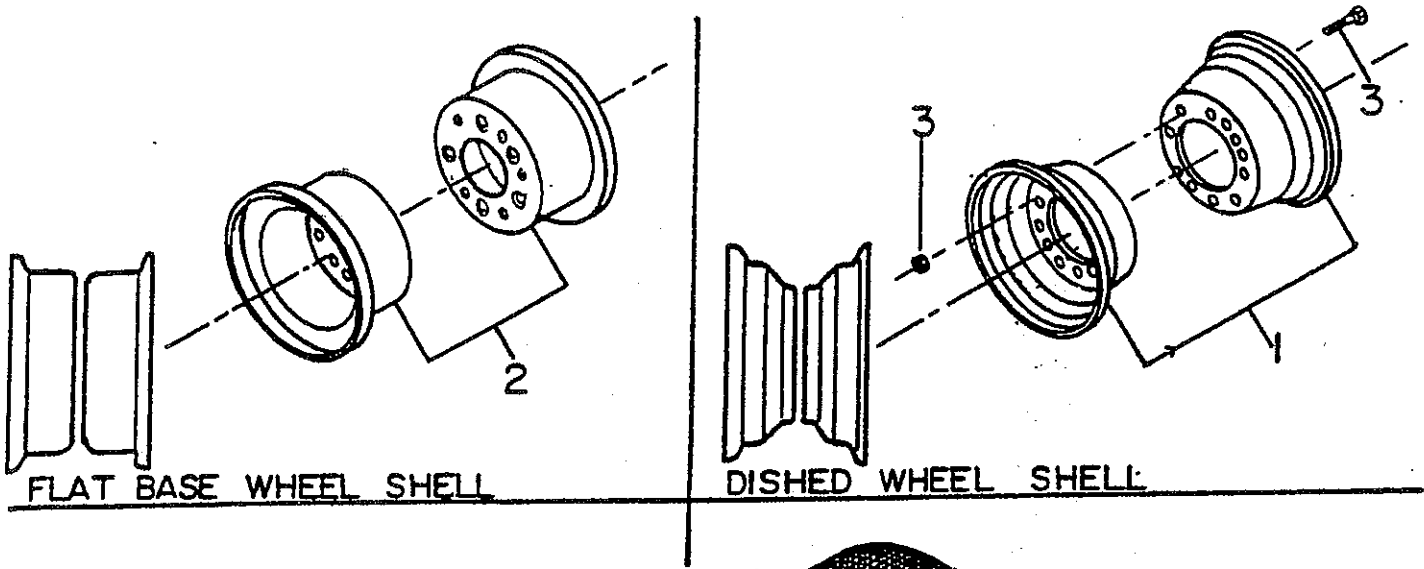
MODEL 2500B - 2500B4
3600B - 3600B4

Illustration 13-009

Beginning Serial Number 21GH-01

PARKING BRAKE

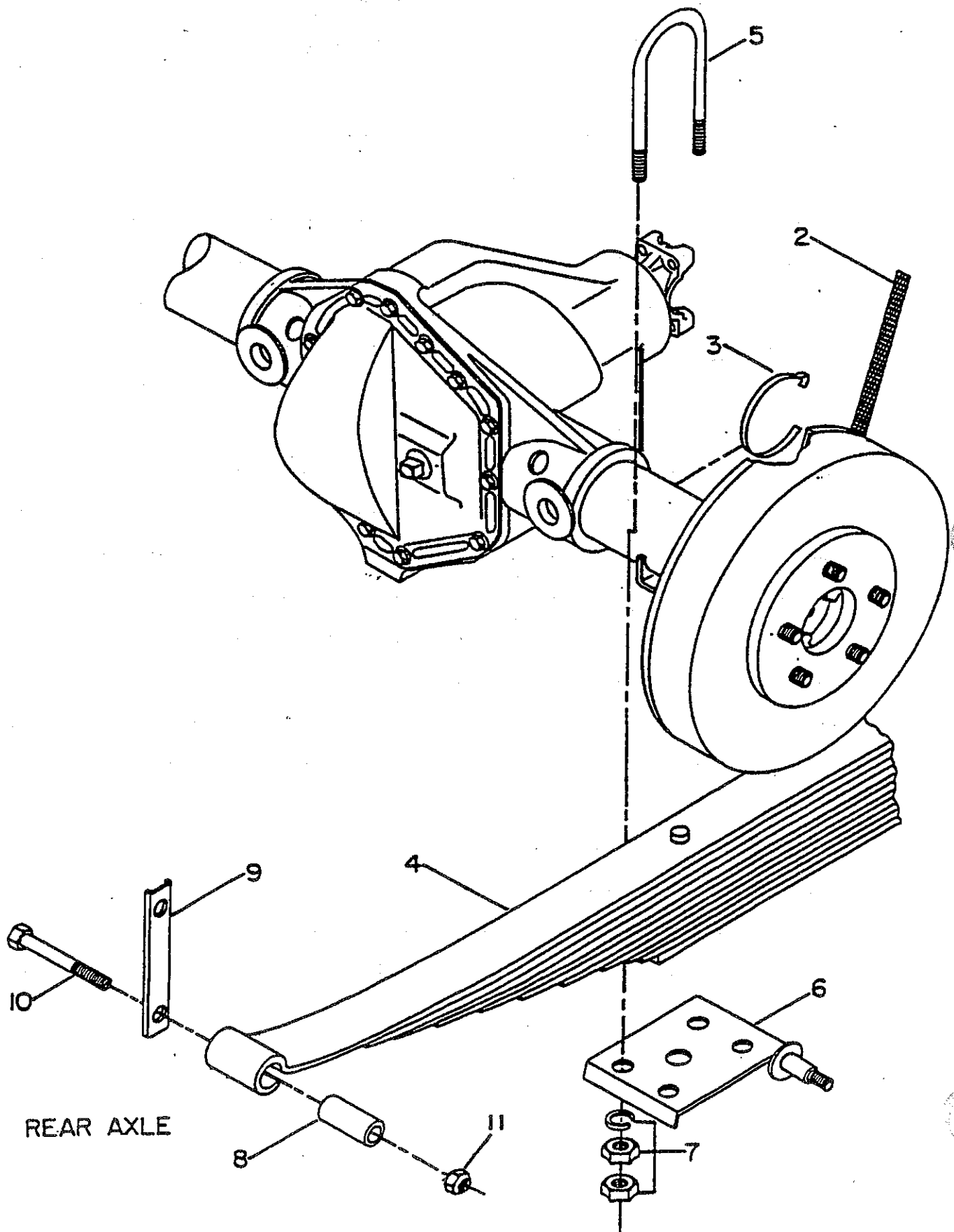
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	301-00129	Lever, parking brake	1
2	650-00514	Bolt, 5/16-18 NC x 1-3/4"	2
	666-00500	Lockwasher 5/16"	2
3		Clevis, cable	1
4	370-00010	Cable, parking brake	1
5	425-00003	Grommet, cable	1
6	320-00066	CTip, cable	1
7	670-00500	Nut, 5/16-24 NF	1
8	310-00169	Equalizer, brake cable	1
9	370-00035*	Cable, to brake (72.25") <i>62" wheel base</i>	1
	370-00034*	Cable, to brake (107.25") <i>82" & 97" wheel base</i>	1
	370-00041*	Cable, to brake (64.50")	1
10	341-00299	Clamp, cable	2
11	109-00660	Nut, cable extension	1
12	SEE BELOW	Rod, cable extension	1
13	350-01118	Bracket, cable mount	1
14	341-00123	Clamp, cable	1
15	310-00302	Support, extension cable	2
12	355-00547	Rod, Cable Extension (6" long)	1
	355-00511	Rod, Cable Extension (16" long)	1



MODEL 2500B/B4
3600B/B4

FIGURE & INDEX No.	PART NUMBER	DESCRIPTION	QTY.
1	368-00124	WHEEL SHELL ASSEMBLY (DISHED) 2 halves	AR.
2	368-00174 368-00175	WHEEL SHELL - FLAT BASE, INNER WHEEL SHELL - FLAT BASE, OUTER	AR. AR.
3	331-00516 666-20600 670-20600	HEX BOLT, 3/8-24 X 3/4" GRADE 5 LOCKWASHER, 3/8" HEX NUT, 3/8-24	5 5 5
4	442-00069	FLAP (USED WITH FLAT BASE RIM)	AR.
5	442-00008 442-00030 442-00055	TUBE, INNER 4.80 X 8 TUBE, INNER 5.70 X 5.00 X 8 TUBE, INNER (ARMOR GUARD)	AR. AR. AR.
6	442-00027 442-00067 442-00086 442-00004 442-00005 442-00037 442-00071 442-00066	TIRE - BEARCAT GRIZZLEY 5.00 X 8 TIRE - BEARCAT SUPERSOFT SG28 TIRE - BEARCAT SUPERSOFT XSG23 TIRE - PNEUMATIC 4.800 X 5.00 X 8 TIRE - PNEUMATIC 5.700 X 5.00 X 8 TIRE - PNEUMATIC 5.700 X 5.00 X 8 (STEEL GUARD) TIRE - PNEUMATIC 5.700 X 5.00 X 8 (UNIROYAL) TIRE - PNEUMATIC 5.700 X 5.00 X 8 (ARMOR GUARD)	
7	368-00127	WHEEL (FOR PRESS ON INNACUSH) <u>CHAIN DRIVE TRUCKS ONLY</u>	
8	442-00007 442-00006	TIRE - INNACUSH 15½ X 5 X 10 TIRE - INNACUSH 15½ X 6 X 10	
	368-00246	BEARCAT SUPERSOFT SG-24 (SPLIT RING TYPE) WHEEL AND TIRE ASSEMBLY	

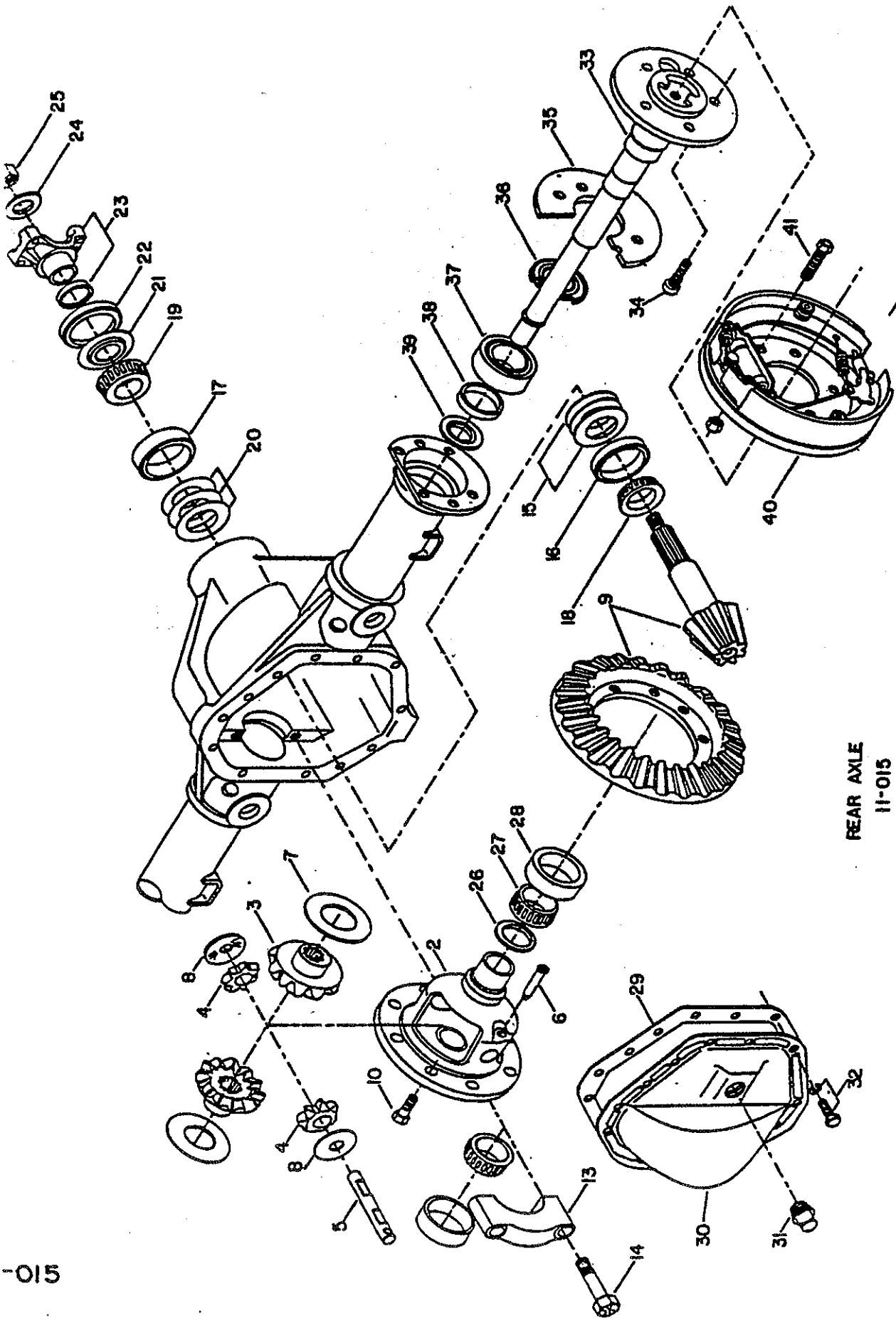




REAR AXLE MOUNTING

FIGURE & INDEX No.	PART NUMBER	DESCRIPTION	QTY.
2	370-00034	CABLE, PARKING BRAKE	1
3	341-00294	CLIP, BRAKE LINE	2
4	362-00113	SPRING, 11 LEAF REAR	2
5	341-00381	U-BOLT, AXLE MOUNT (ELECTRIC TRUCKS)	4
	341-00428	U-BOLT, AXLE MOUNT (GAS TRUCKS)	4
6	350-03297	PLATE, AXLE MOUNT	2
7	672-00700	NY-LOK NUT, 7/16-20	8
8	313-00096	BEARING, SPRING SILENT BLOCK	6
9	350-01622	SHACKLE, SPRING MOUNT	4
10	331-00364	BOLT, SPRING MOUNT	6
11	672-00700	NY-LOK NUT, 7/16-20	6
12	417-00010	BUMPER, AXLE	2

LEAF SPRING MOUNT AXLE PARTS ONLY



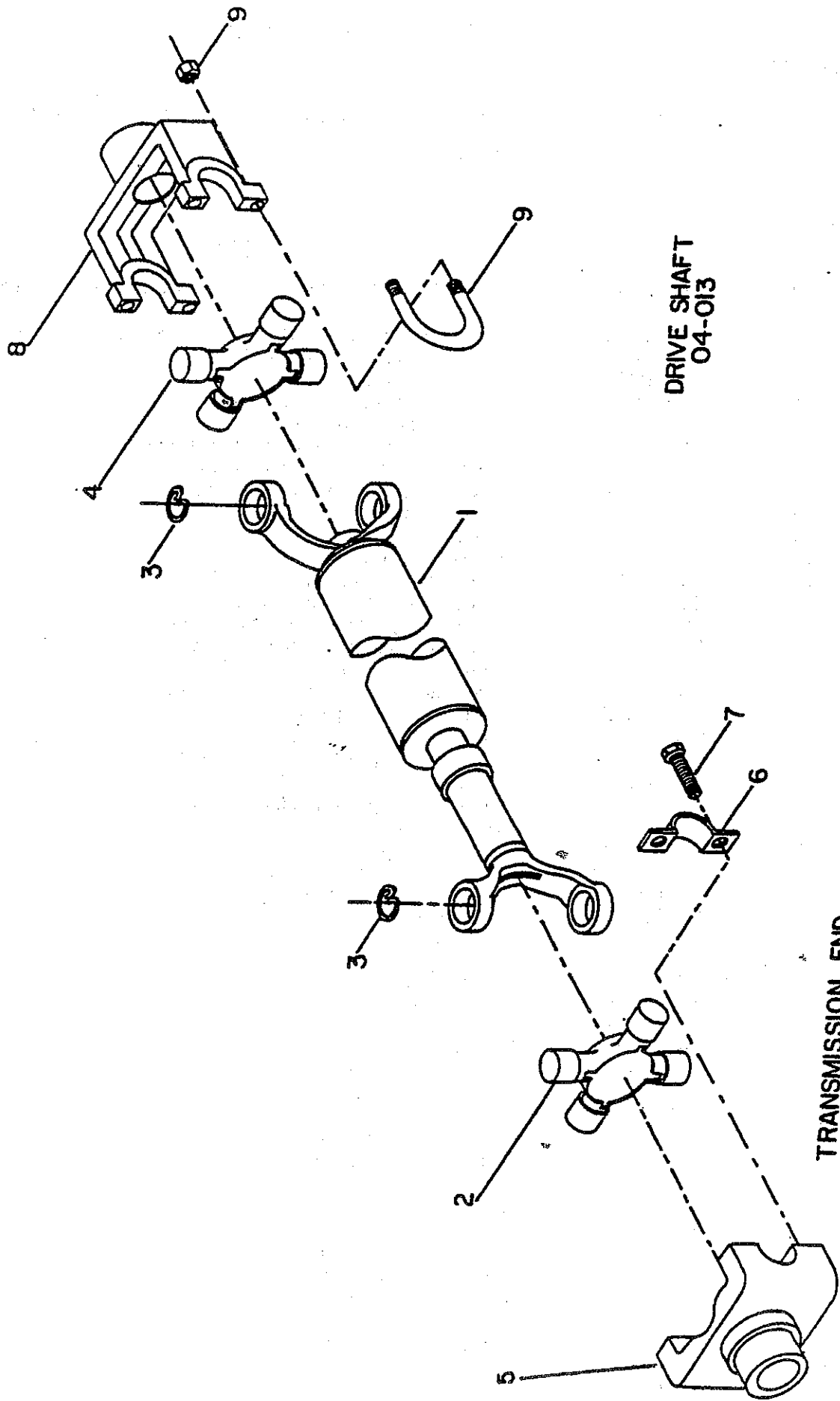
REAR AXLE
11-015

LEAF SPRING MOUNT AXLE PARTS ONLY

LEAF SPRING MOUNT AXLE PARTS ONLY

REAR AXLE (DIFFERENTIAL)

<u>Figure & Index No.</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
11-015-1	800-00131	DIFFERENTIAL ASSEMBLY (includes items 1 thru 39)	1
1			1
2	904-00336	Case assembly (includes 3 thru 8)	
3	904-00327	Gear, differential side	2
4	904-00055	Gear, pinion side	2
5	904-00337	Shaft, differential	1
6	904-00025	Lock, differential	1
7	904-00326	Thrust washer, differential gear	2
8	904-00024	Thrust washer, differential pinion	2
9	336-00061	Ring gear & pinion (8 3/8")	1
10	331-00508	Bolt, ring gear	10
13	Not sold	Cap, case carrier	2
14	904-00182	Capscrew, carrier cap	4
15	904-00098	Shim .003, pinion shaft inner	2
	904-00099	Shim .005, pinion shaft inner	2
	904-00100	Shim .010, pinion shaft inner	2
16	306-00175	Bearing cup, pinion shaft inner	1
17	306-00182	Bearing cup, pinion shaft outer	1
18	306-00183	Bearing cone, pinion shaft inner	1
19	306-00174	Bearing cone, pinion shaft outer	1
20	904-00094	Shim .003, pinion shaft outer	2
	904-00095	Shim .005, pinion shaft outer	2
	904-00096	Shim .010, pinion shaft outer	2
	904-00097	Shim .030, pinion shaft outer	1
21	904-00026	Slinger, pinion oil seal	1
22	904-00367	Oil seal, pinion shaft	1
23	904-00339	End yoke, pinion shaft	1
24	904-00091	Washer, pinion nut	1
25	331-00270	Nut, pinion	1
26	904-00322	Shim .003, case	2
	904-00323	Shim .005, case	2
	904-00324	Shim .010, case	2
	904-00325	Shim .030, case	2
27	904-00287	Bearing cone, case	1
28	904-00288	Bearing cup, case	1
29	361-00096	Spacer-metal, housing cover	1
30	904-00066	Cover, housing	1
31	SM.36472	Plug, cover drain	1
32	SM.34279	Bolt, housing cover	10
33	904-00369	Axle shaft (includes 34 thru 38)	2
34	904-00141	Stud, wheel	10
35	904-00319	Retainer, axle shaft	2
36	904-00277	Oil seal, axle shaft	2
37	904-00278	Bearing, axle shaft	2
38	904-00368	Retainer, bearing	2
39	904-00329	Seal, axle tube	2
40	311-00159	Brake assembly, left hand	1
	311-00160	Brake assembly, right hand	1
41	331-00452	Bolt, brake mounting	12
	331-00453	Nut, brake mounting	12



DRIVE SHAFT
 04-013

TRANSMISSION END

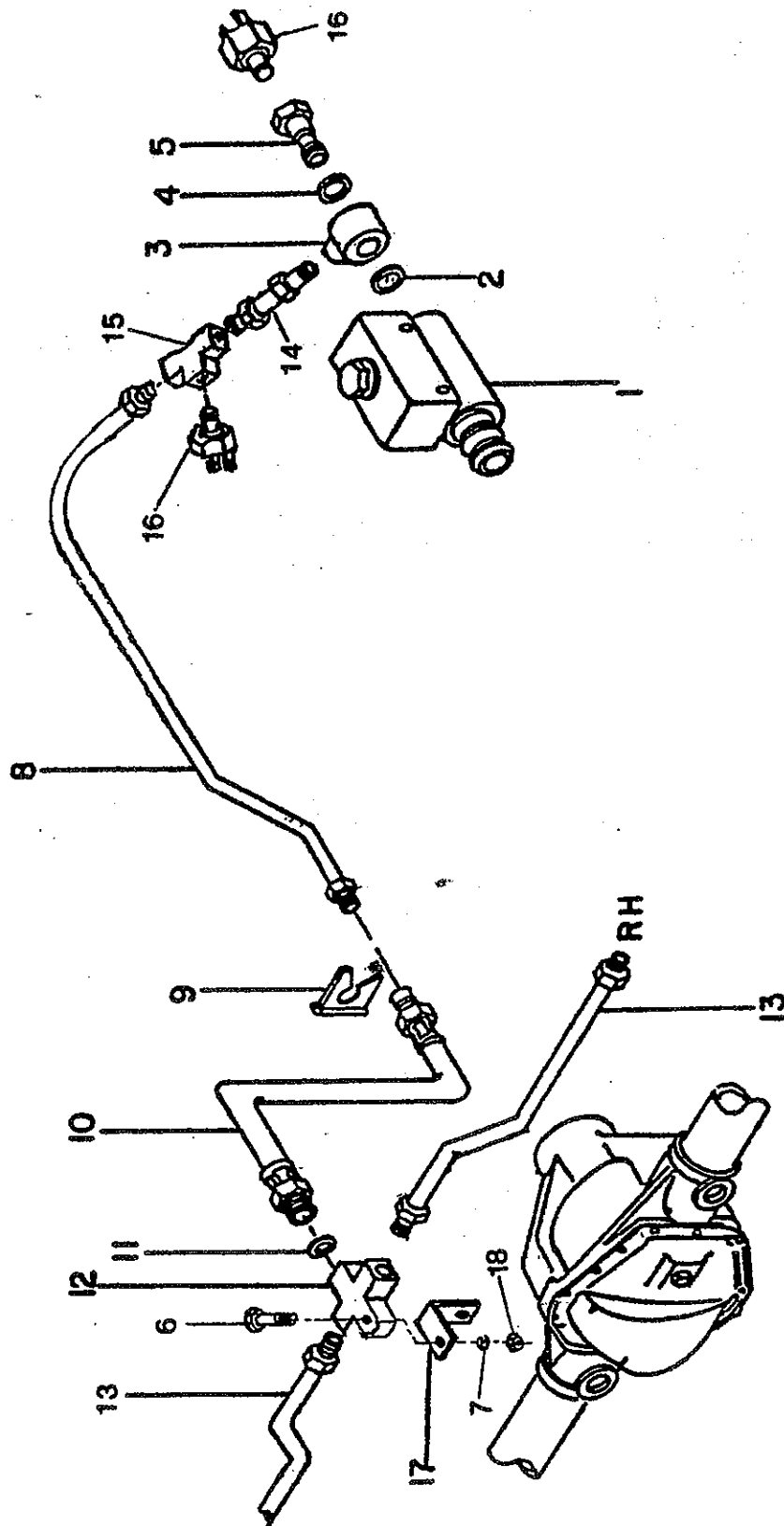
MODEL 2500B
2500B4

FIGURE 04-013

DRIVE SHAFT - DANA 44 SPRING MOUNT DIFFERENTIAL

FIGURE & INDEX No.	PART NUMBER	DESCRIPTION	QTY.
1	812-00125	DRIVE SHAFT (GAS TRUCKS)	1
2	904-00017	CROSS KIT	1
3	904-00012	SNAP RING, CROSS	4
4	904-00017	CROSS KIT	1
5	904-00004	YOKE, TRANSMISSION END (GAS TRUCKS)	1
	332-00062	YOKE, ELECTRIC MOTOR (ELECTRIC TRUCKS)	1
6	320-00076	CROSS CAP, SHAFT TO YOKE	2
7	331-00484	BOLT, CROSS CAP	4
	666-00500*	LOCKWASHER, 5/16"	4
8	904-00339	YOKE, AXLE END	1
9	301-00216	U-BOLT, SHAFT TO YOKE	2
	666-00500	LOCKWASHER, 5/16"	4
	670-00500	HEX NUT, 5/16-24	4

LEAF SPRING MOUNT AXLE PARTS ONLY



**LEAF SPRING MOUNT AXLE PARTS ONLY
 BRAKE LINES**

12-023

KALAMAZOO

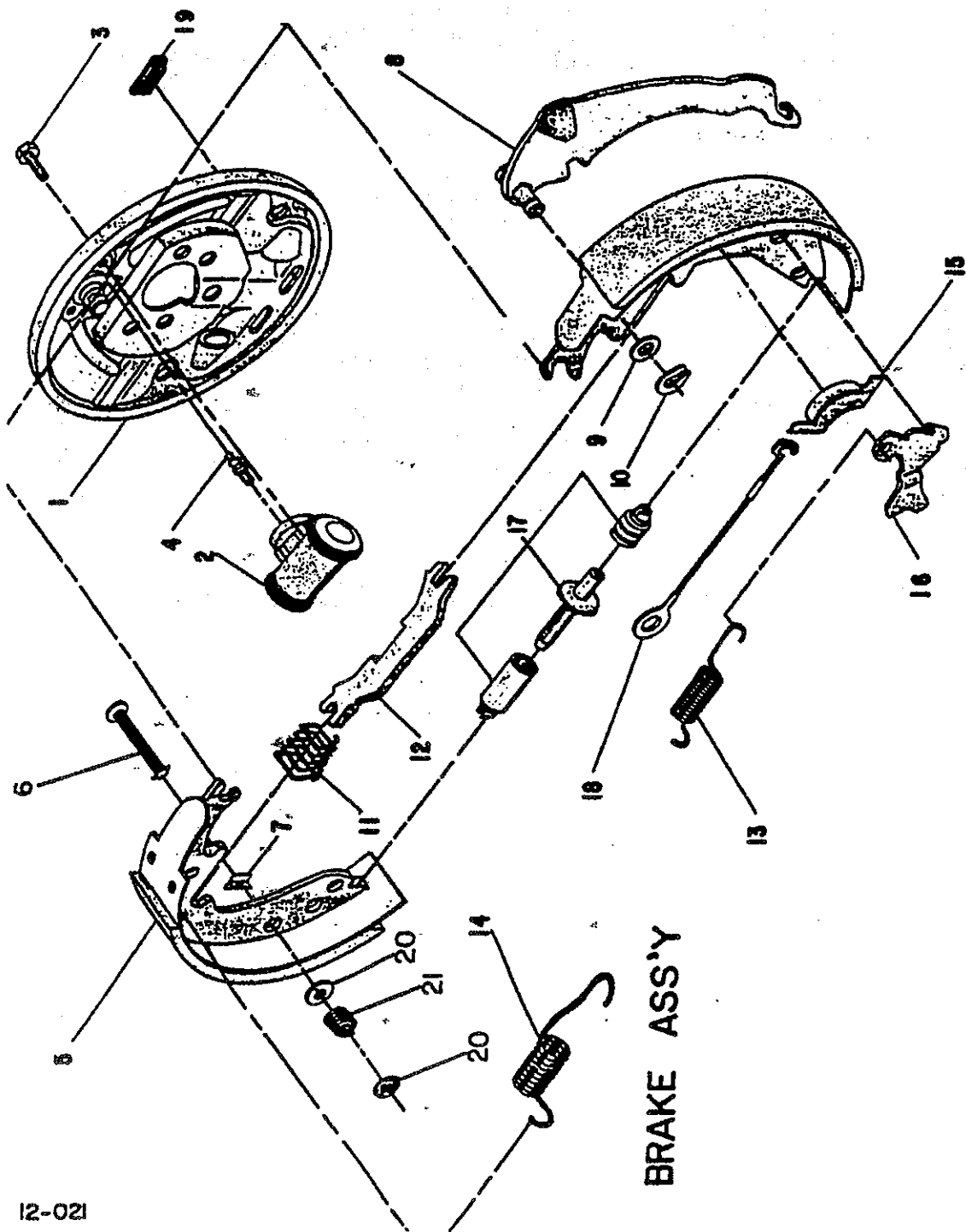
MODELS 2500B4 / 2500B
 BEGINNING SERIAL NO. 21 IA 33

Illustration 12-023

BRAKE LINES (FOR MODEL 44 AXLE)

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	107-00107	Master Cylinder	1
2	911-00001	Gasket, Banjo Fitting	1
3	911-00037	Fitting, Banjo	1
4	911-00002	Gasket, Banjo Fitting Bolt	1
5	911-00003	Bolt, Banjo Fitting (Model 2500B)	1
	911-00038	Bolt, Banjo Fitting (Model 2500B4)	1
6	650-00416	Bolt, Hex Hd 1/4-20 x 1	1
7	666-00400	Lockwasher 1/4	1
8	130-00012	Line, Cylinder to Flex Hose 90"	1
	130-00013	Line, Cylinder to Flex Hose 16-1/2"	1
9	320-00066	Clip, Brake Line	1
10	129-00163	Hose, Brake	1
11	335-00062	Gasket, Brake Line	1
12	109-00506	Tee, Brake Line	1
13	130-00002	Line, Brake L.H. and R.H.	2
14	79808	Tube Assembly (Model 2500B)	1
15	62447	Tee Fitting, Brass (Model 2500B)	1
16	235-00056	Switch, Brake Light	1
17	300-00238	Bracket, Brake Line Tee	1
18	669-00400	Nut, Hex 1/4-20	1

LEAF SPRING MOUNT AXLE PARTS ONLY



BRAKE ASS'Y

Kalamazoo

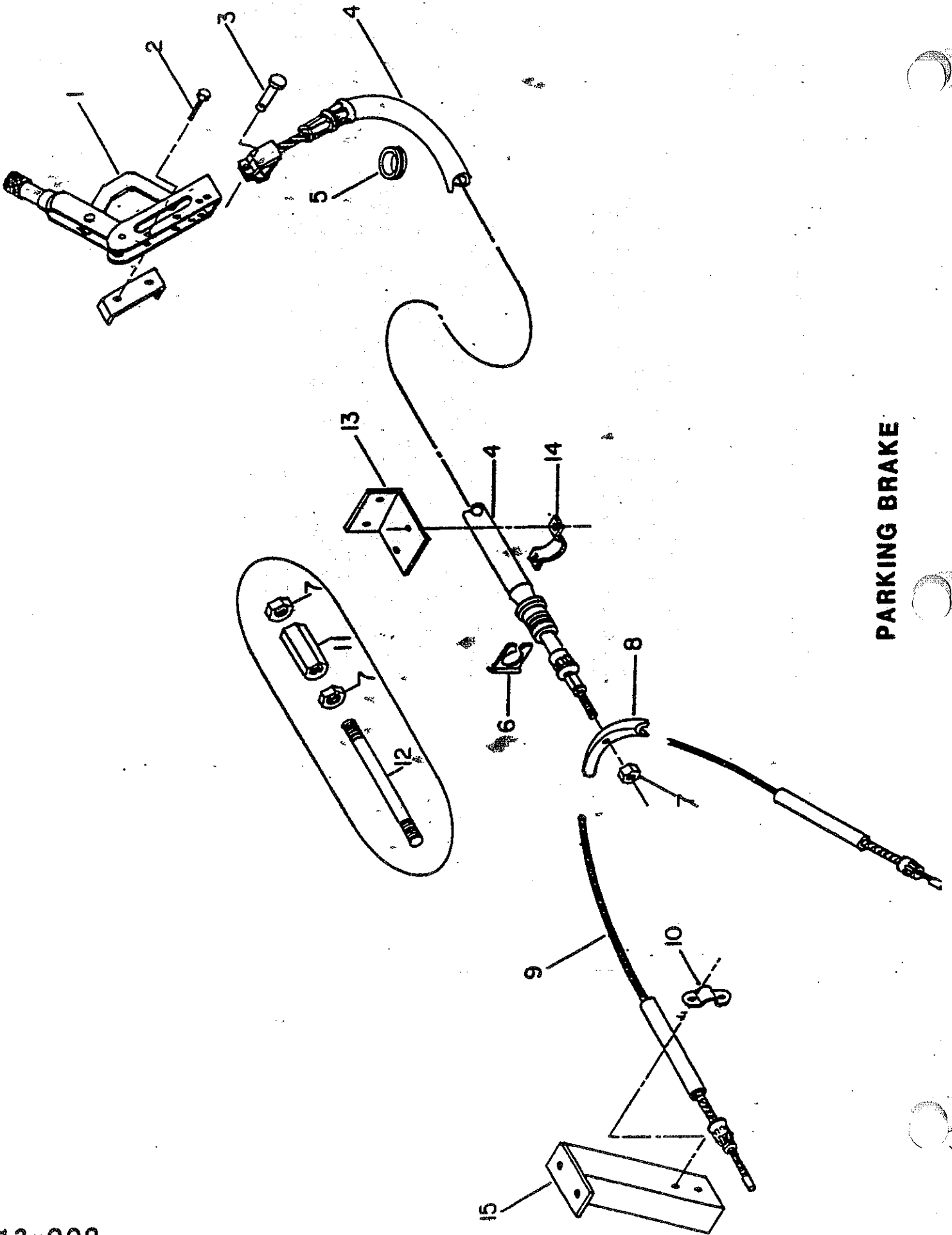


MODEL 2500B - 2500B4
3600B - 3600B4

BEGINNING SERIAL 21GH-01
LEAF SPRING MOUNTED REAR AXLE
BRAKE ASSEMBLY (2" Lining)

FIGURE 12-02

FIGURE & INDEX No.	PART NUMBER	DESCRIPTION	QTY.
1	311-00159	BRAKE ASSEMBLY, L.H. (Includes 1 thru 21)	1
	311-00160	BRAKE ASSEMBLY, R.H. (Includes 1 thru 21)	1
2	935-00040	WHEEL CYLINDER, BRAKE	1
3	341-00365	SCREW & LOCKWASHER, WHEEL CLY.	2
4	904-00258	BLEEDER SCREW	1
5	935-00044	SHOE & LINING, PRIMARY	1
	935-00045	SHOE & LINING, SECONDARY	1
6	935-00069	PIN, SHOE HOLD DOWN	2
7	Not Used	ANCHOR, SPRING	-
8	935-00072	LEVER, PARKING BRAKE L.H.	1
	935-00061	LEVER, PARKING BRAKE R.H.	1
9	935-00004	WASHER, SPRING	1
10	935-00003	CLIP, LEVER RETAINER	1
11	935-00025	SPRING, STRUT	1
12	311-00168	STRUT, BRAKE SHOE	1
13	935-00027	SPRING, ADJUSTOR LEVER	1
14	935-00026	SPRING, SHOE ANCHOR	2
15	935-00034	GUIDE, ADJUSTOR CABLE	1
16	935-00020	LEVER, ADJUSTOR L.H.	1
	935-00021	LEVER, ADJUSTOR R.H.	1
17	935-00029	STAR WHEEL, ADJUSTOR L.H.	1
	935-00030	STAR WHEEL, ADJUSTOR R.H.	1
18	935-00028	CABLE, ADJUSTOR	1
19	935-00073	PLUG, ADJUSTOR HOLE	2
20	935-00070	CUP, SHOE HOLD DOWN	4
21	311-00078	SPRING, SHOE HOLD DOWN	2



PARKING BRAKE

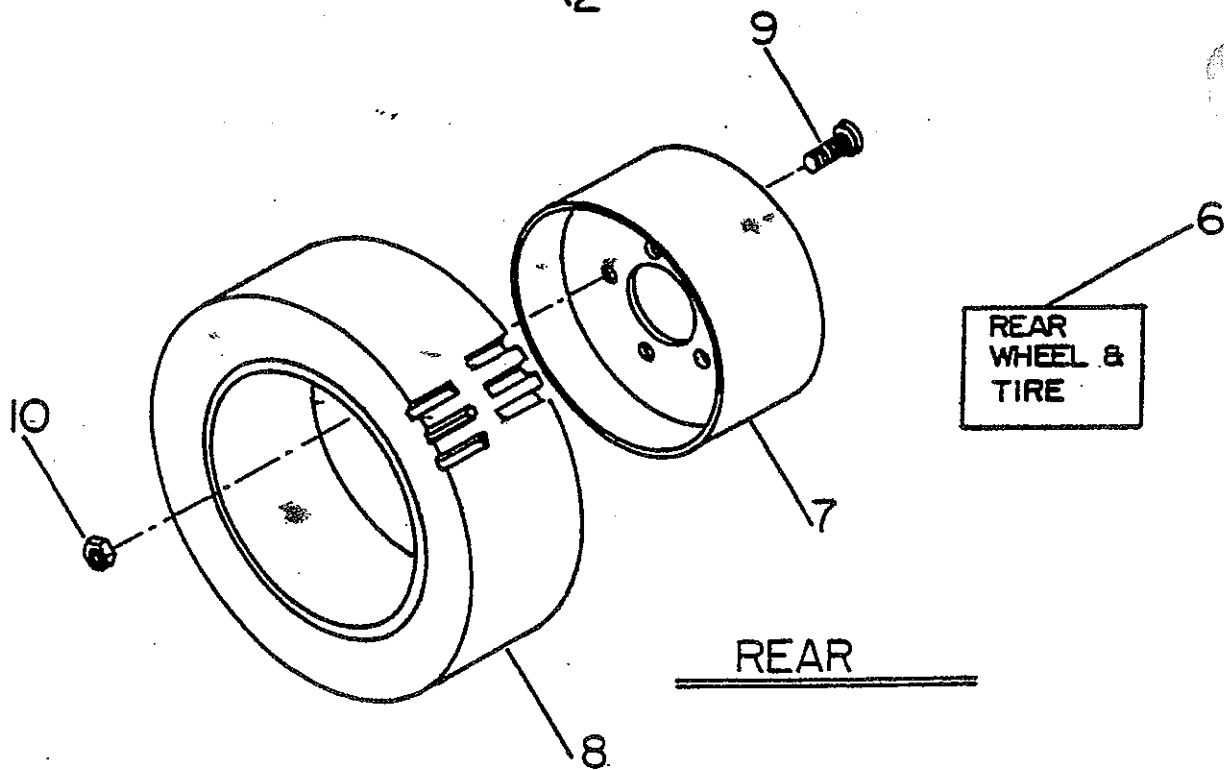
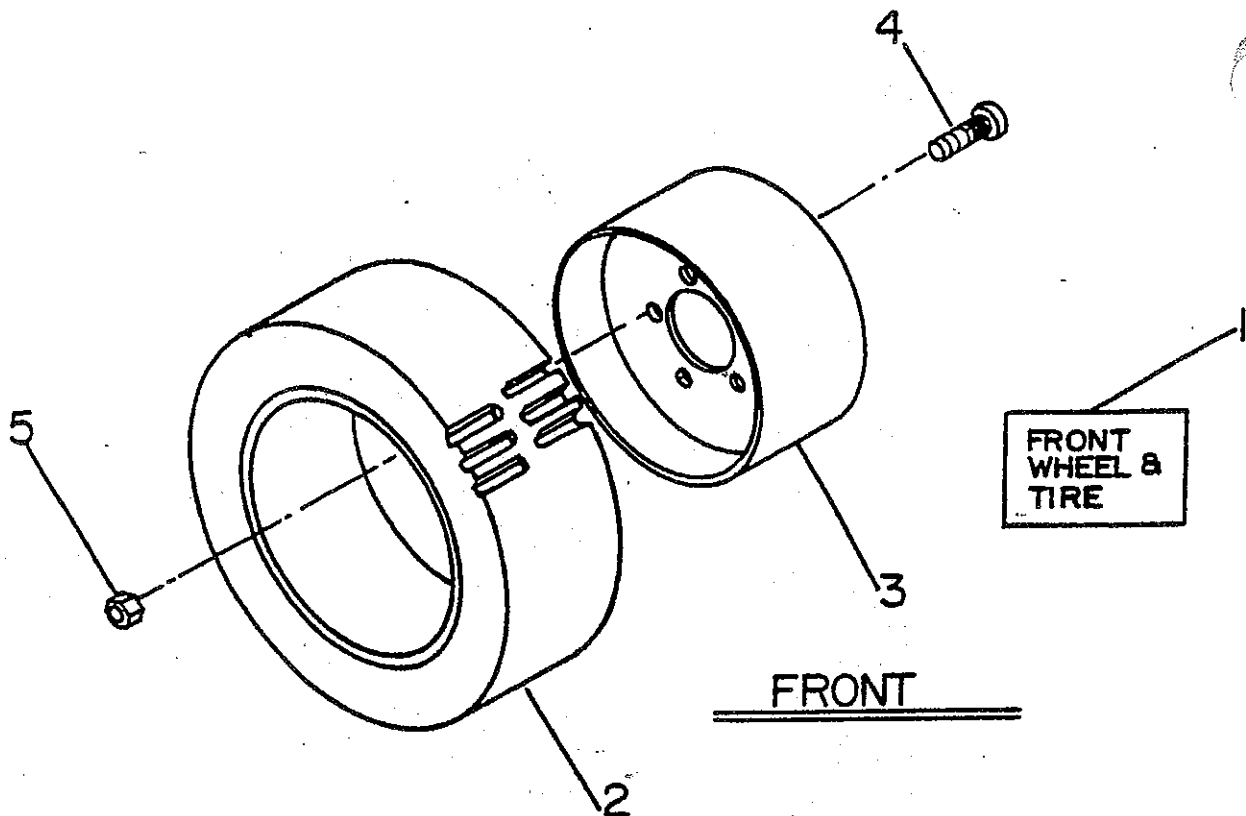
MODEL 2500B - 2500B4
3600B - 3600B4

Illustration 13-009

Beginning Serial Number 21GH-01

PARKING BRAKE

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	301-00129	Lever, parking brake	1
2	650-00514	Bolt, 5/16-18 NC x 1-3/4"	2
	666-00500	Lockwasher, 5/16"	2
3		Clevis, cable	1
4	370-00010	Cable, parking brake	1
5	425-000Q3	Grommet, cable	1
6	320-00066	Clip, cable	1
7	670-00500	Nut, 5/16-24 NF	1
8	310-00169	Equalizer, brake cable	1
9	370-00035*	Cable, to brake (72.25") <i>62" wheel Base</i>	1
	370-00034*	Cable, to brake (107.25") <i>82"+97" wheel Base</i>	1
	370-00041*	Cable, to brake (64.50")	1
10	341-00299	Clamp, cable	2
11	109-00660	Nut, cable extension	1
12	SEE BELOW	Rod, cable extension	1
13	350-01118	Bracket, cable mount	1
14	341-00123	Clamp, cable	1
15	310-00302	Support, extension cable	2
12	355-00547	Rod, Cable Extension (6" long)	1
	355-00511	Rod, Cable Extension (16" long)	1



WHEEL & TIRE

WHEEL AND TIRE

FIGURE & INDEX No.	PART NUMBER	DESCRIPTION	QTY.
-----------------------	-------------	-------------	------

FRONT WHEEL & TIRE

1	368-00134	INNACUSH WHEEL & TIRE (15½ x 6 x 10)	2
2	442-00006	INNACUSH TIRE (15½ x 6 x 10)	2
3	368-00127	WHEEL, FRONT	2
4	331-00122	STUD, HUB TO WHEEL	10
5	331-00123	NUT, WHEEL	10

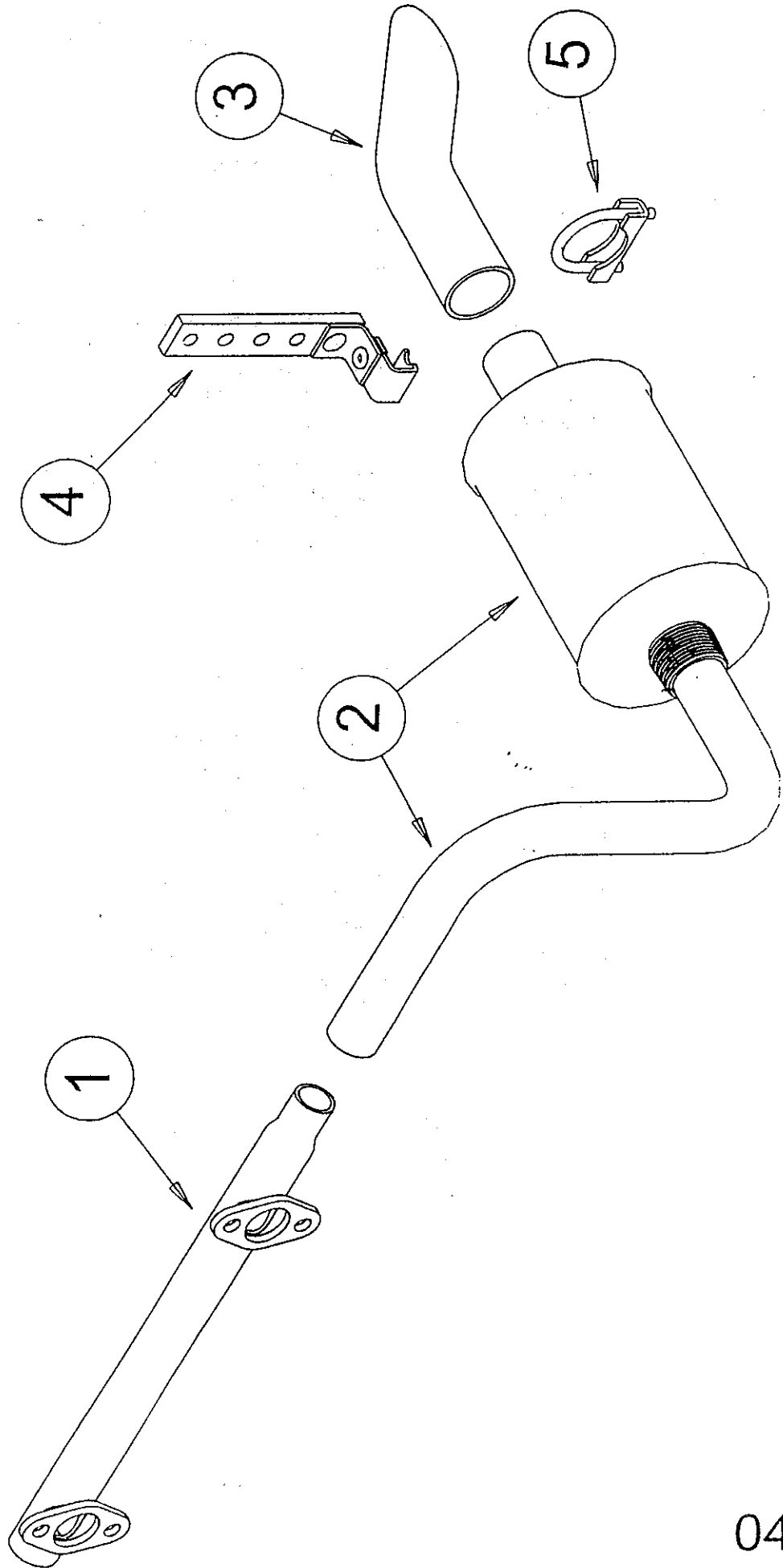
1	368-00129	INNACUSH WHEEL & TIRE (15½ x 5 x 10)	2
2	442-00007	INNACUSH TIRE (15½ x 5 x 10)	2
3	368-00127	WHEEL, FRONT	2
4	331-00122	STUD, HUB TO WHEEL	10
5	331-00123	NUT, WHEEL	10

REAR WHEEL & TIRE

6	368-00297	INNACUSH WHEEL & TIRE (15½ x 6 x 10)	2
7	368-00296	WHEEL & DRUM - REAR	2
8	442-00006	INNACUSH TIRE (15½ x 6 x 10)	2
9	904-00141	STUD, FLANGE TO WHEEL	10
10	331-00123	NUT, WHEEL	10

6	368-00298	INNACUSH WHEEL & TIRE (15½ x 5 x 10)	2
7	368-00296	WHEEL & DRUM - REAR	2
8	442-00009	INNACUSH TIRE (15½ x 5 x 10)	2
9	904-00141	STUD, FLANGE TO WHEEL	10
10	331-00123	NUT, WHEEL	10

LEAF SPRING MOUNT AXLE PARTS ONLY



04-005

KALAMAZOO



MODEL 2500B - 2500B4
3600B - 3600B4

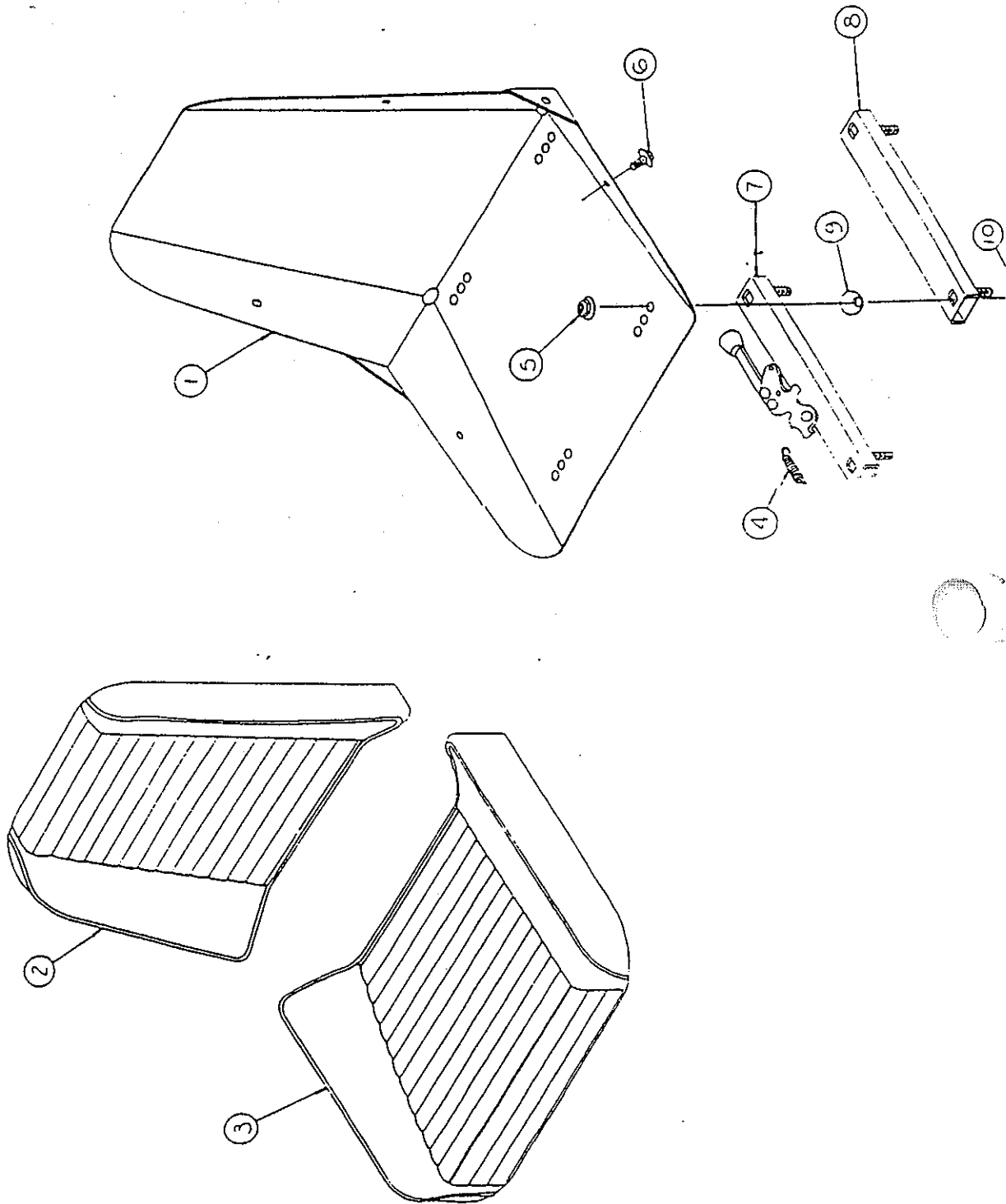
Illustration 04-005

Beginning Serial Number 21GH - 01

EXHAUST

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	349 - 01006	Manifold Kit	1
2	824 - 00045	Muffler / Pipe Assembly	1
3	349 - 00322	Tail Pipe	1
4	340 - 00021	Hanger - Tail Pipe	1
5	341 - 00164	Clamp, Muffler - 1-1/2"	1







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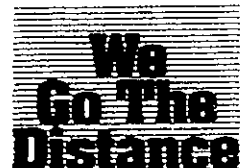
MODEL 2500B - 2500B4
3600B - 3600BR

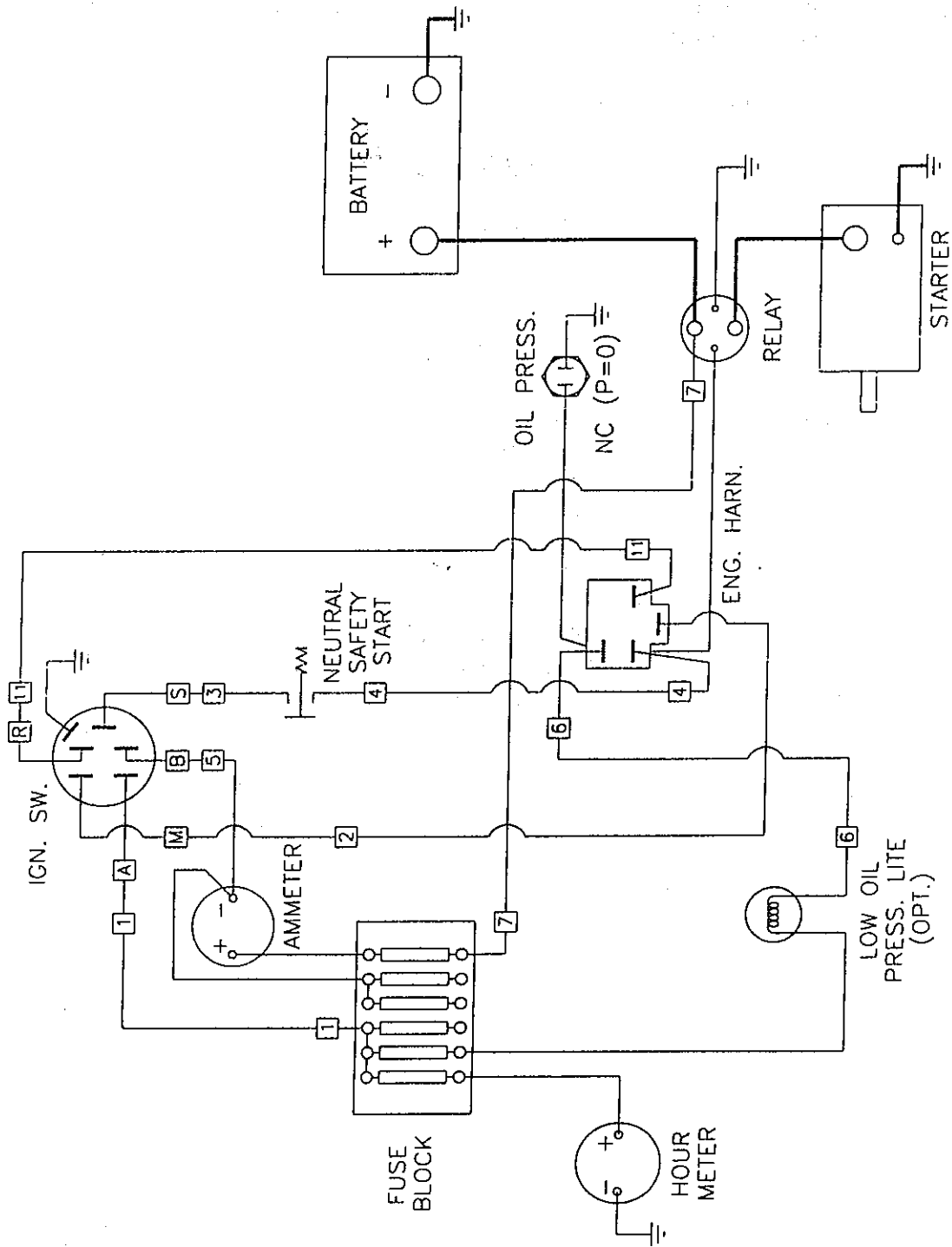
ILLUSTRATION 16-021

Beginning Serial Number 21GH-01

Seat and frames

<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
<u>DRIVER SEAT</u>			
1	48495	SHELL	1
2	48117	SEAT BACK	1
3	48118	SEAT CUSHION	1
4	48493	SPRING	1
5	42513	5/16-18 FLANGED SELF LOCKING NUT	4
6	425326	1/4-20 X 3/4-LG. HEX HD. M/S W/34/ INT. L/W	5
7	48120	TRACK, CONTROL W/HANDLE	1
8	48119	TRACK, FREE	1
9	48494	SPACER	4
10	126358	5/16-18 X 1 LG. CARRIAGE BOLT	4





UNLESS OTHERWISE SPECIFIED

- .X = ±0.06
- .XX = ±0.03
- .XXX = ±0.005
- FRACTION = ±1/32
- ∠ = ±1°

DRAWN BY: MAF

DATE: 11-11-98



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DRAWING NAME: WIRING SCHEMATIC - KOHLER ENG.

MATERIAL:

SCALE: NONE

DRAWING NUMBER: 9653

REV:

MODEL 2500B - 2500B4
 3600B - 3600B4

Illustration 15-015

Beginning Serial Number 21GH-01

ELECTRICAL

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	202-00261	Main wiring harness	1
2	221-00028	Fuse block	1
3	361-00089	Spacer, fuse block	1
4	221-00006	Fuse (10 amp)	AR
	221-00011	Fuse (15 amp)	AR
	221-00026	Fuse (12 amp)	AR
5	235-00069	Switch, ignition	1
	235-00056	Switch, brake light (at cylinder)	1
	235-00005	Switch, headlight & tail light	2
	235-00038	Switch, turn signal	1
	228-00001	Switch, starter interlock relay	1
	235-00034	Switch, neutral safety	1
6	207-00020	Light, front head	1
	207-00070	Light, tail & stop light	1
	207-00032	Light, front turn	2
	310-00091	Bracket, headlight	1
	443-00108	Spacer, head light	1
	235-00126	Flasher, turn signal	1
	226-00004	Receptacal, flasher	1
7	201-00038	Battery	1
	202-00034	Cable, battery ground	1
	202-00247	Cable, battery pos.	1
	340-00004	Hold down, battery	1
8	216-00036	Gauge, fuel	1
	216-00012	Gauge, ammeter	1
	216-00031	Gauge, hour meter	1
	429-00002	Vibration dampener, hour meter	1
9	224-00003	Horn	1

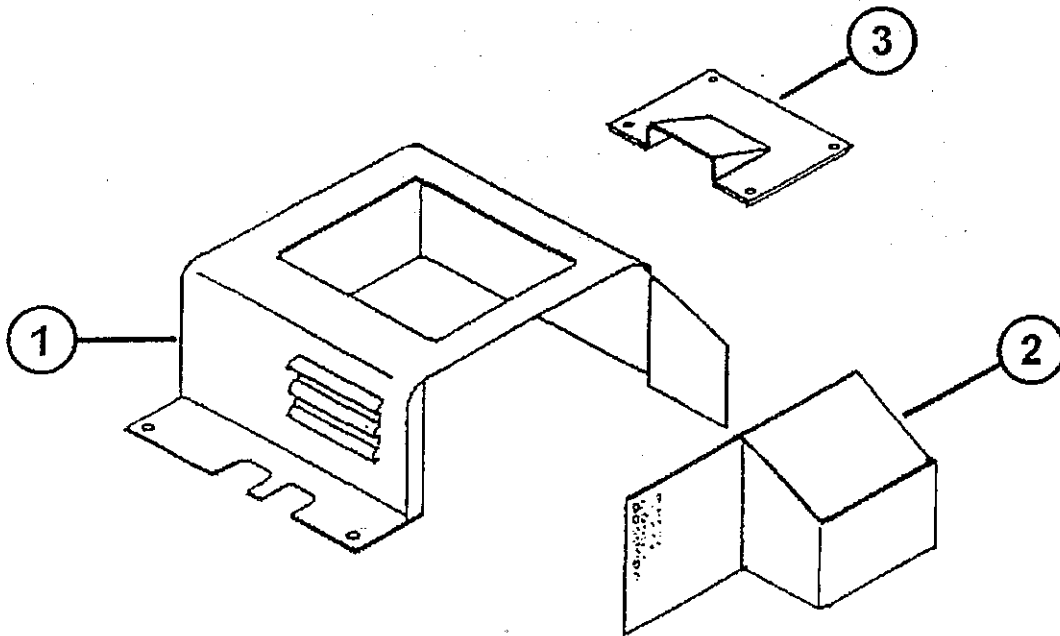
MODEL 2500B - 2500B4
3600B - 3600B4

Illustration 16-023

Beginning Serial Number 21GH - 01

SHEET METAL & PARTS

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	324 - 00158	Cover, Engine	1
2	324 - 00171	Cover, Exhaust	1
3	324 - 00160	Cover, Transmission	1
	350 - 01083	Plate, Control Housing Floor	1
	350 - 01101	Plate, Battery Cover Floor	1
	432 - 00001	Trim, Plastic	6 ft.
	703 - 00074	Decal, "K" Emblem	1
	703 - 00060	Decal, Caution	1
	703 - 00065	Decal, Hand Brake	1
	436 - 00034	Mud Guard, Behind Steer Axle	1



ENGINE COVER

