



Ingersoll

**HYDROSTATIC TRANSAXLE
114H, 1112H TRACTOR
Service Manual 8-57310**



QUALITY IN THE AMERICAN TRADITION

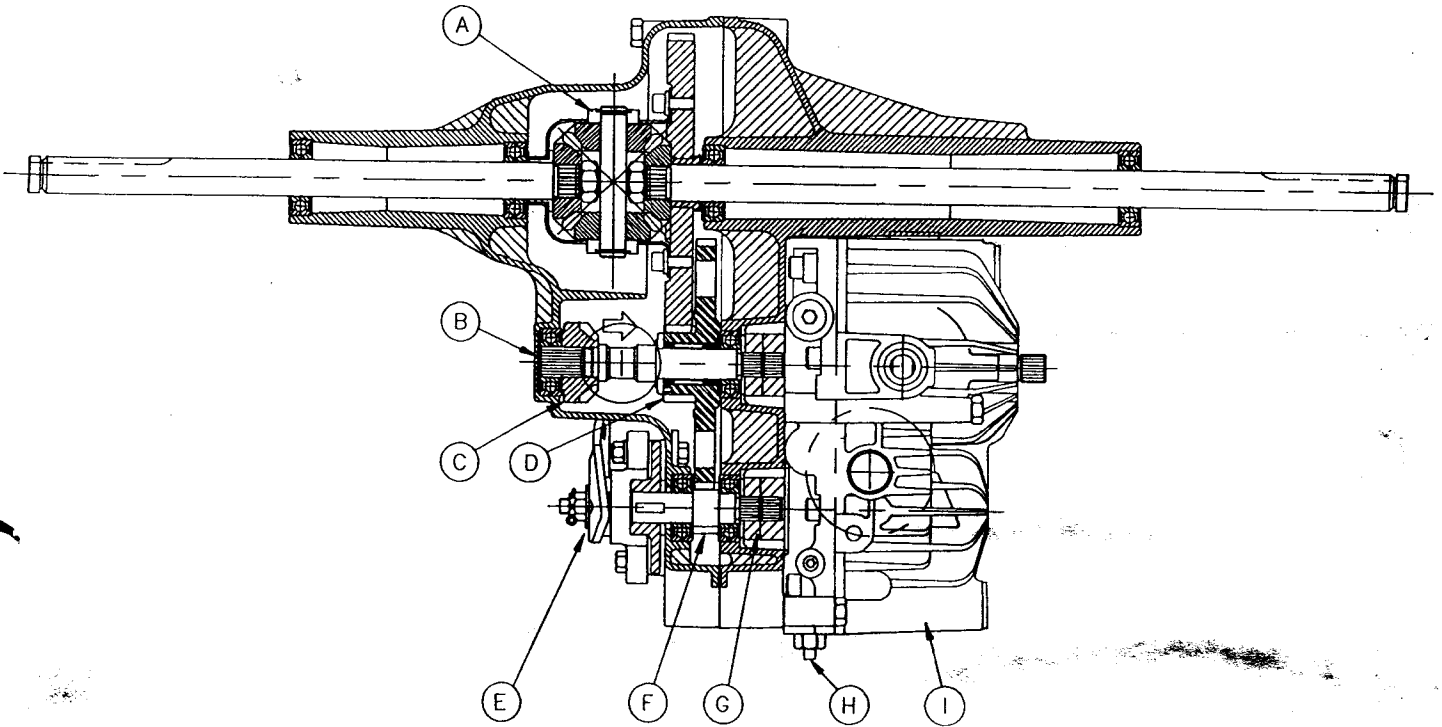
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HYDRO TRANSAXLE ASSEMBLY



REF.	DESCRIPTION
A	Differential Assembly
B	Drive Shaft
C	Driven Pinion
D	Reduction Gear Assembly
E	Brake Assembly
F	Pinion Shaft
G	Couplings
H	Freewheel Button
I	Hydrostatic Transmission

GENERAL PRINCIPLES

Prerequisite for good repair work.

- A. Study crosssectional views to refamiliarize yourself with the product.
- B. Move the article to be repaired into a well lit and clean work area.
- C. Keep clean rags or paper towels on hand.
- D. Find section in repair manual covering your particular problem and study in depth.
- E. Acquire or make specialized tools and keep orderly in reach.
- F. After disassembly, wash all parts, arrange in order and inspect under a good light to determine the extent of damage including possible damage that occurred as a result of the primary part failure.
- G. Replace all damaged and questionable parts and always replace fasteners with locking devices and retaining rings.
- H. Lubricate parts used in reassembly.
- I. Reference numbers shown in parenthesis throughout manual correspond with parts drawing on page 16.

TOOLS REQUIRED

- (1) Socket 3/8
- (1) Socket 7/16
- (1) Socket 1/2
- (1) Open End of Box Wrench 3/8
- (1) Open End of Box Wrench 7/16
- (1) Open End or Box Wrench 1/2
- (1) Open End or Box Wrench 3/4
- (1) #3 Phillips Socket Driver
- (2) #9 Screw Drivers
- (1) Needle Nose Pliers
- (1) External Snap Ring Pliers
- (1) Brass Hammer
- (1) Drive Pin
- (1) Feeler Gage
- (1) Parallel Bar
- (1) Inch Type Torque Wrench
- (1) Depth Micrometer
- (1) Impact Puller
- (1) Locking Pliers
- Scotch Tape
- #320 Strip Sand Paper
- (1) Torx Socket Driver #T30

SECTION 1 - TROUBLE SHOOTING TRACTOR WILL NOT MOVE FORWARD OR REVERSE.



WARNING

Do not attempt any adjustments with engine running.

- 1.00 Check control linkage to directional control on hydro.
- 1.01 **IMPORTANT!** Check oil level in reservoir on top of hydro. To remove cap on early models, turn cap clockwise. (An early model reservoir is designated by a silver label on the cap). **NOTE:** On late models, twist cap counter clockwise 1/4 turn. Remove bladder, (**Note: On all models**) then fill reservoir with oil as required to markings on reservoir. **IMPORTANT:** Reinstall bladder and lightly tighten cap. (See hydro specifications for oil type and quantities).
- 1.02 Make sure freewheel button on hydro is fully released.
- 1.03 Check input drive belt. Adjust or replace as needed. (See tractor manual for specifications)
- 1.04 If the splined shaft on hydro is not rotating when input fan is rotating then refer to section 3 (DAMAGED INPUT ASSEMBLY) or

section 4 (HYDRO TRANSMISSION REMOVAL).

- 1.05 If hydro shaft does rotate but brake disc does not, (When hydro directional control level is not in neutral) then refer to section 4 (HYDRO TRANSMISSION REMOVAL).

- 1.06 Make sure parking brake is released.

OVERHEATING

- 1.10 **IMPORTANT!** Check oil level.
- 1.11 Oil must be within specified limits on reservoir.
- 1.12 Oil must be as specified in tractor/hydro manual.
- 1.13 Check for broken or distorted cooling fan blades or, remove any obstructions such as grass clippings, leaves, dirt, etc. from cooling fins.
- 1.14 Check tractor manual for recommended load rating. **DO NOT EXCEED.**
- 1.15 Be sure parking brake is fully released.
- 1.16 If parking brake is released but still braking, refer to section 2. (BRAKE ADJUSTMENT OR REPAIR)

BRAKE FAILS TO STOP VEHICLE OR HOLD ON HILLS.

- 1.20 The brake is located on the side of the transaxle, Find brake lever rod and depress brake several times to verify actuation of brake.
- 1.21 Adjust brake arm as specified in section 2.
- 1.22 Or brake pucks must be replaced. Section 2 (BRAKE ADJUSTMENT OR REPAIR).

TRANSMISSION LEAKS OIL OR GREASE.

- 1.30 Make sure oil reservoir base on top of hydro is snug. Torque reservoir base clockwise to tighten on all models.
- 1.31 If oil leaks from shaft seals on hydro refer to parts catalog for part numbers and illustrations.
- 1.32 Check transaxle housings for damage. See section 6. (HOUSING CRACKED OR BROKEN).
- 1.33 Retorque housing bolts to 80-120 inch/lbs.
- 1.34 If ball bearings leak grease then go to section 7 (DAMAGED BALL BEARINGS).

SECTION 2 - BRAKE ADJUSTMENT AND REPAIR

- 2.00 Disconnect brake rod from actuating arm
- 2.01 The brake is factory set for a specific brake clearance. If brake is found to be out of adjustment then go to section 2.13 for readjustment.
- 2.02 To install new pads, remove (1) bolt (#40) and nut (#53) securing the brake yoke assembly.
- 2.03 Pull disc (#35) from shaft and inspect bearing area for grease leakage.
- 2.04 Remove (2) actuating pins (#33) from brake yoke assembly and check for excessive wear on pins (#33) or yoke (#34).

2.05 Use a degreasing solvent to clean brake area thoroughly before reassembly.

2.06 Before Reassembly of brake, use a graphite dry slide lubricant on brake shaft, (2) acutating pins (#33), and cam area of actuating arm (#32).



NOTE

Use lubricant conservatively.

2.10 Replace brake puck (#39) in housing (#2) and reinstall brake disc (#35).

2.11 Reassemble brake yoke assembly by reinstalling (2) actuating pins (#33), (1) puck plate (#38), and (1) brake puck (#39). (Secure puck with scotch tape for ease of assembly).

2.12 Rebolt yoke assembly by using locktite (#242).

2.13 Check gap between disc (#35) and puck (#39) with feeler gage. (See figure 1). Gap must be adjusted to (.010 to .020 MIN. by tightening or loosening castle nut (#30).

2.14 Relink brake rod to actuating arm.

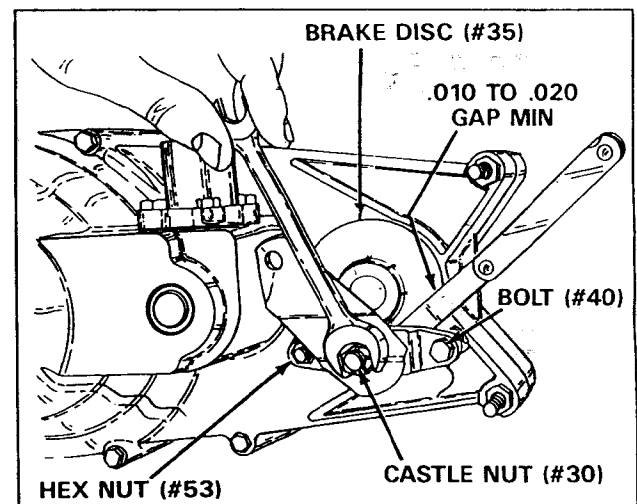
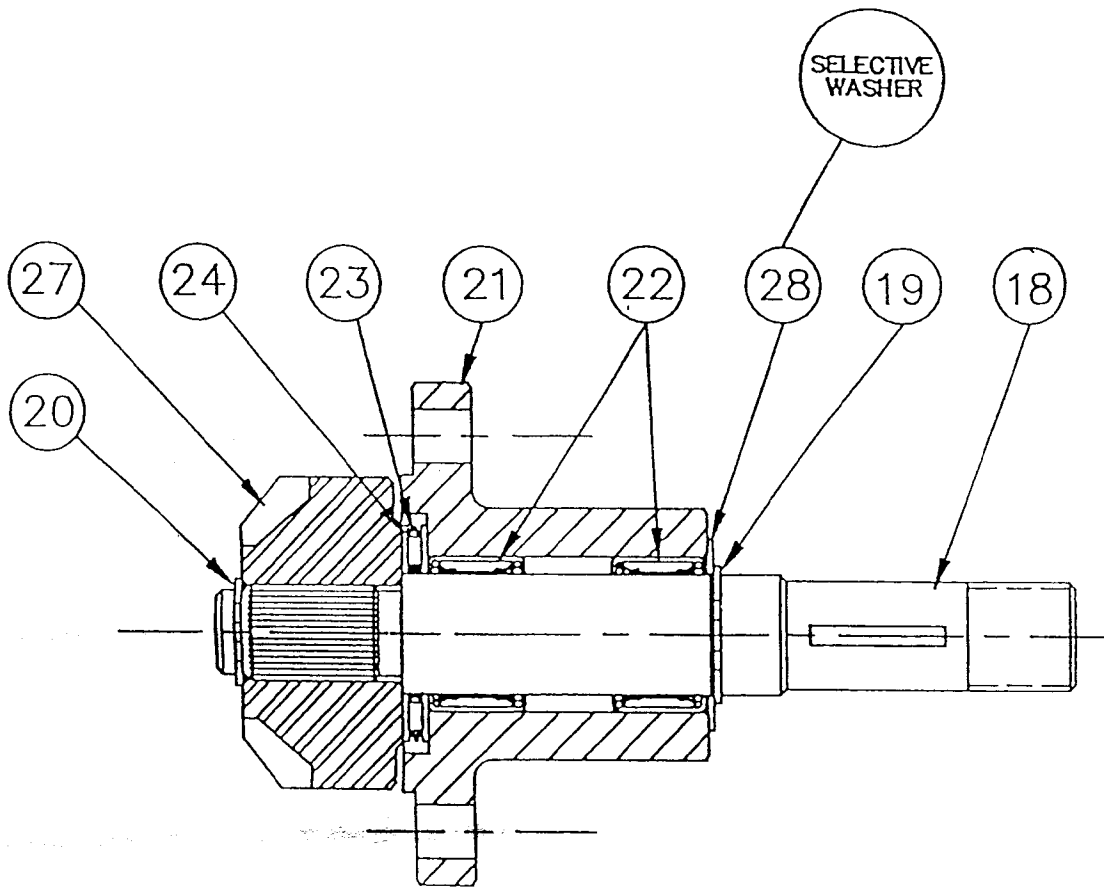


FIGURE 1

INPUT ASSEMBLY
SECTION 3



REF	DESCRIPTION
18	INPUT SHAFT
19	RETAINING RING
20	RETAINING RING
21	INPUT BEARING HOUSING
22	NEEDLE BEARING
23	THRUST BEARING
24	THRUST RACE
27	INPUT PINION GEAR 17T
28	FLAT WASHER 5/8" ID

SECTION 3 - DAMAGED INPUT ASSEMBLY

- 3.00 If any input assembly component appears malfunctioning, removal can be done without transaxle disassembly.
- 3.01 Remove fan and pulley from input shaft.
NOTE: Do not use hammer to remove pulley, use appropriate puller.
- 3.02 **Important!** When servicing input assembly, clean area thoroughly with a degreaser-cleaner before removing assembly.
- 3.03 To detach assembly remove (3) bolts (#26) from input housing (#21) and then lightly tap assembly to free from pilot mounting surface.
- 3.04 Wash input assembly and inspect for damage.
- 3.05 Hand turn input shaft (#18). If it feels rough or is hard turn, bearings must be replaced.
- 3.06 Remove small retaining ring (#20). Pull input pinion gear (#27) from input shaft.
- 3.07 Slide input shaft (#18) out of input housing (#21) and remove retaining ring (#19) from input shaft.
- 3.08 With a suitable arbor push both needle bearings (#22) through housing (#21) as shown in figure 2. (**CAUTION: DO NOT SUPPORT INPUT HOUSING ON THREE BOLT HOLE TABS**).
- 3.09 To reinstall new bearings, use an arbor to press into both ends of housing. (**Note:** Bearings must be flush to .010 max depressed).
- 3.10 Check needle bearing (#22) running surface on input shaft (#18). If this area appears galled, flaked or grooved then replacement of shaft (#18) and needle bearings (#22) is a must.

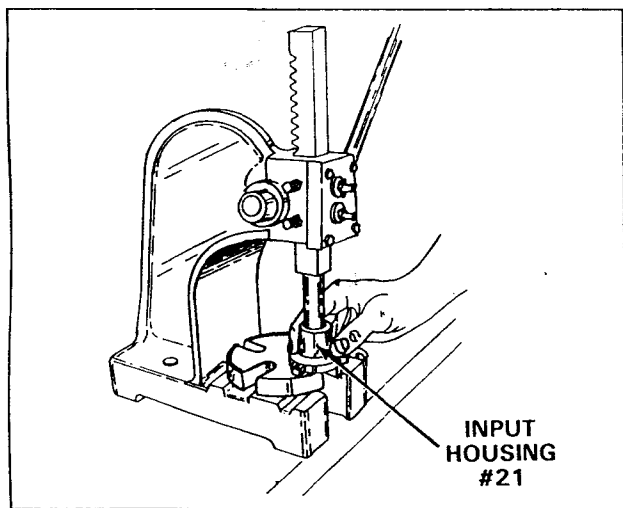


FIGURE 2

- 3.11 If pinion (#27) is found to be damaged it is likely that the driven pinion (#54) is also damaged.

- 3.12 To check driven pinion (#54) for damage, look into input opening on transaxle. See figure 3. Rotate drive shaft on hydro, see Figure 4, to view teeth of driven pinion. To replace pinion (#54), see section 5.30 DAMAGED DRIVEN PINION.

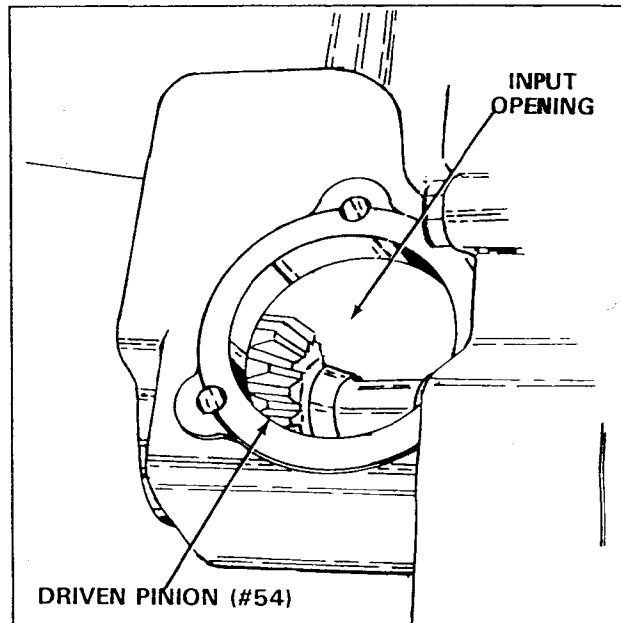


FIGURE 3

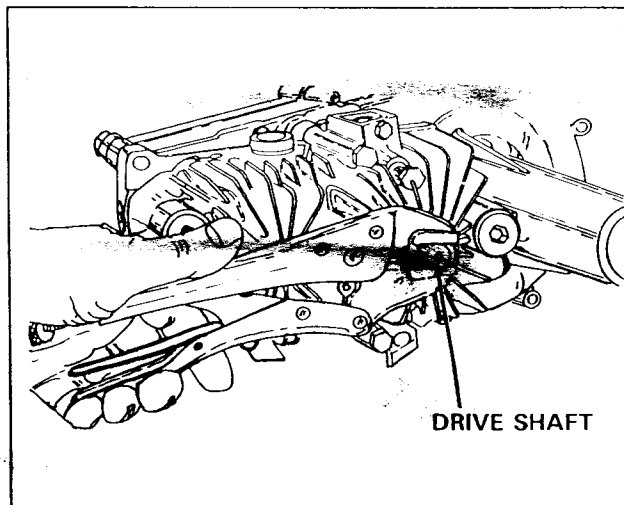


FIGURE 4

- 3.20 Reassemble in reverse order of disassembly. (**Note:** Before putting shaft (#18) into housing (#21), pack grease (#62) between (2) needle bearings (#22). (**NOTE:** Do not install retaining ring (#19) until following section 3.21)
- 3.21 The washers (#28) under the retaining ring (#19) are factory selected. If any component has been replaced a new washer or washers must be selected. Check with feeler gage for a maximum .010 end play. See figure 5.

- 3.22 Before remounting input assembly wipe both mounting surfaces clean and repack 3 ounces of (type "O") grease (#62) on driven pinion (#54).
- 3.23 Using Loctite #242, bolt down input assembly and torque bolt (#26) to 80-120 inch/LBS.

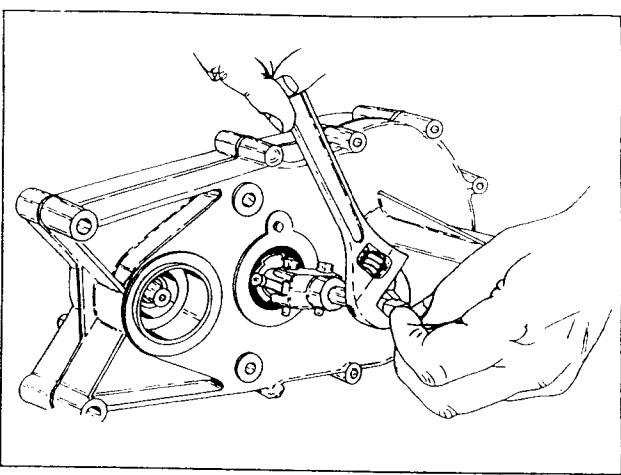


FIGURE 6

SECTION 5 - TRANSAXLE REPAIR

- 5.00 If the previous check list, (Section 1) did not remedy the problem and the hydro transmission is functioning, then an internal malfunction can be assumed.
- 5.01 Remove transaxle from tractor and follow tear down procedure section 3.01.
- 5.02 Remove (10) self tapping screws (#41 and #42).

NOTE! Before pulling housing halves apart, axle shaft ends (#3 and #4) must be free of rust and nicks for ease of disassembly. Do not try to force halves apart before preparation. See figure 7.

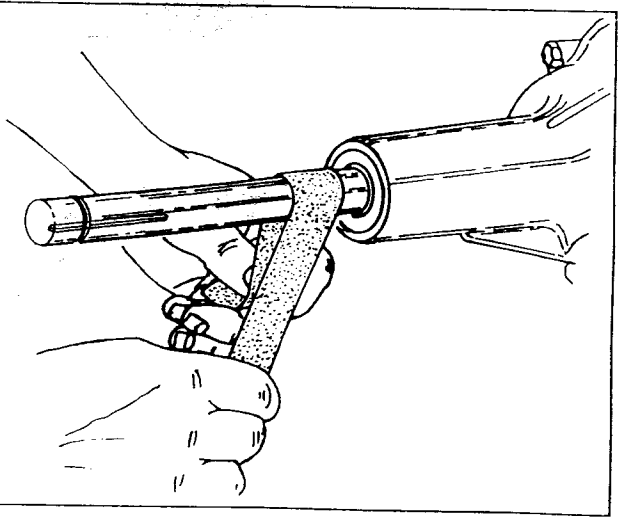


FIGURE 7

- 5.03 Carefully pry halves apart in areas shown in figure 8.

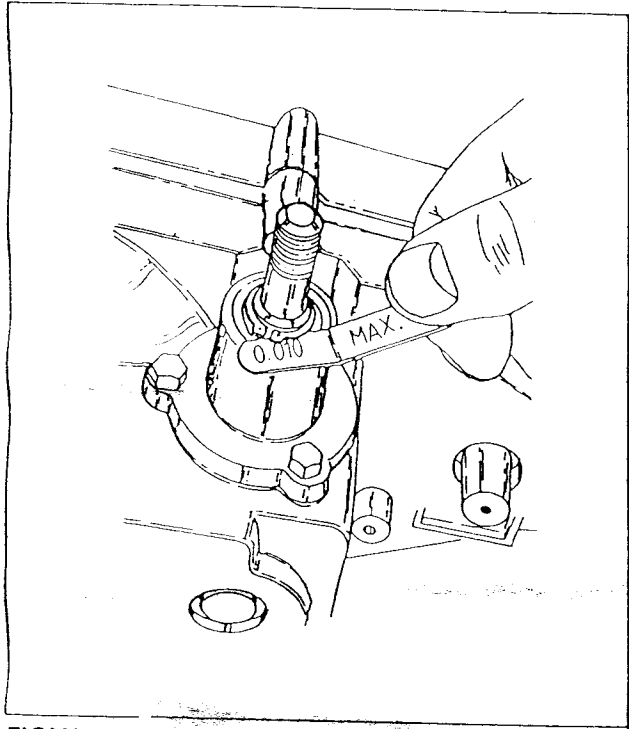


FIGURE 5
SECTION 4 - HYDRO TRANSMISSION REMOVAL

- 4.00 Repair covered in this section may require removal of the transaxle from the tractor.
- 4.01 Remove (4) bolts securing hydro to axle. (For hydro repairs see Sundstrand Hydro Transmission manual).
- 4.02 The hydro input and output shafts are coupled to the transaxle drive shaft (#46) and pinion shaft (#45) with (2) sets of couplings (#51). To service either unit the couplings (#51) must be removed from the shaft splines.
- 4.03 Couplings (#51) may sieze to shaft splines and thus a puller is recommended. See figure 6. Tapping couplings lightly may be necessary for removal.
- 4.04 Check coupling teeth and spline for wear. Replace if needed.

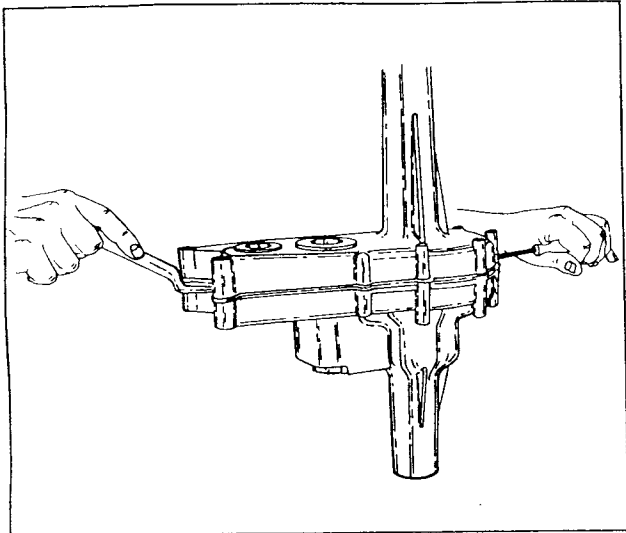


FIGURE 8

Caution! Do not nick mating surfaces. Tap lightly on drive shaft (#46) with a brass hammer as needed. See figure 9.

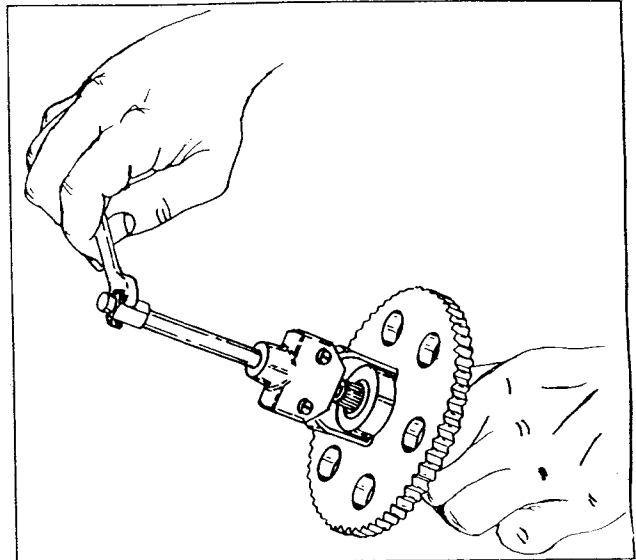


FIGURE 10

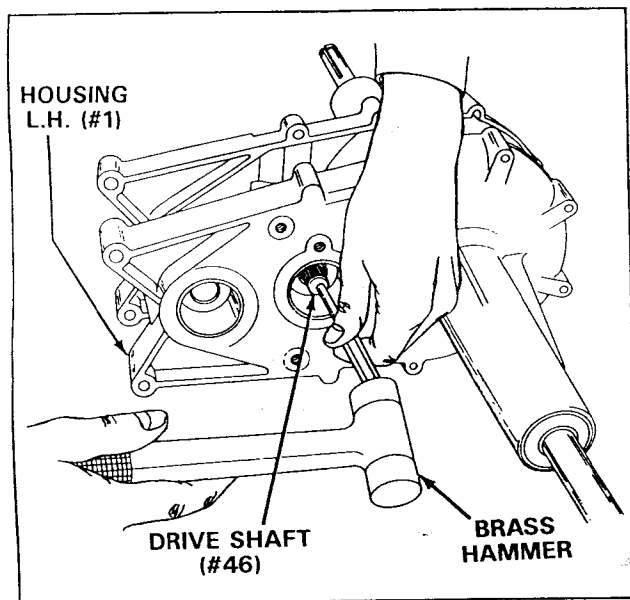
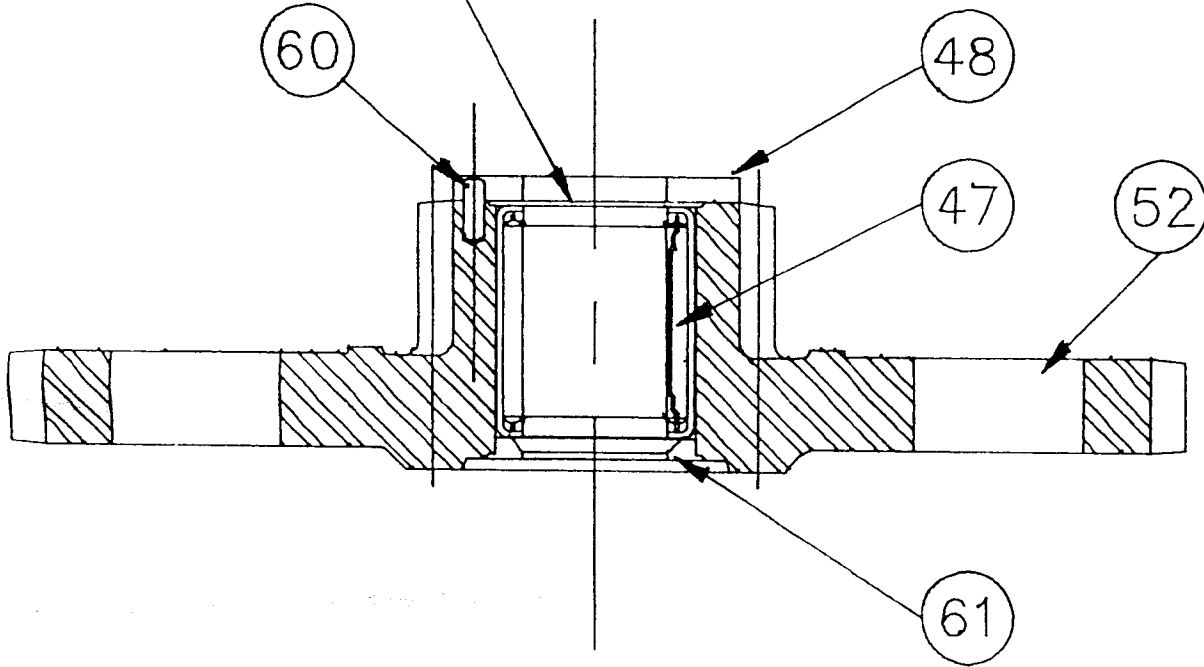


FIGURE 9

5.04 Should ball bearing remain on drive shaft after removal of drive shaft assembly, use a puller as shown in figure 10 to remove ball bearing.

REDUCTION GEAR SECTION 5.10

NEEDLE BEARING 0.005/0.015
DEPRESSED THIS SIDE



REF	DESCRIPTION
47	NEEDLE BEARING
48	THRUST BEARING
52	REDUCTION GEAR
60	DOWEL PIN
61	GREASE SEAL, BRONZE

REDUCTION GEAR

- 5.10 Pull reduction gear (#52) from drive shaft (#46) and inspect for damage.
- 5.11 If reduction gear teeth are found to be broken then mating gears must also be checked. See section 5.40, for pinion or section 5.50 for final drive replacement.
- 5.12 Check needle bearing (#47) and seal (#61) for damage. If reduction gear (#52) is being replaced, then it would be wise to replace both the needle bearing (#47) and seal (#61).
- 5.13 Check needle bearing (#47) running surface on drive shaft (#46). If this area appears galled, flaked, or grooved, then replacement of shaft (#46) and needle bearing (#47) is a must.
- 5.20 **Note:** Needle bearing (#47) must be positioned with the bearing numbers toward the 60 tooth side of the reduction gear (#52). See figure 11.

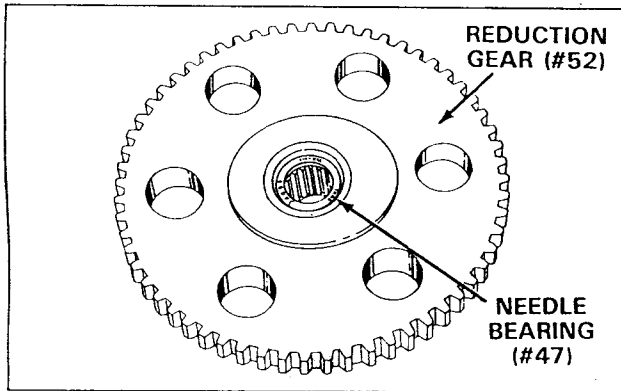


FIGURE 11

- 5.21 Needle bearing (#47) must be .005 to .015 depressed from 17 tooth face of reduction gear (#52). Use depth-mic as shown in figure 12.

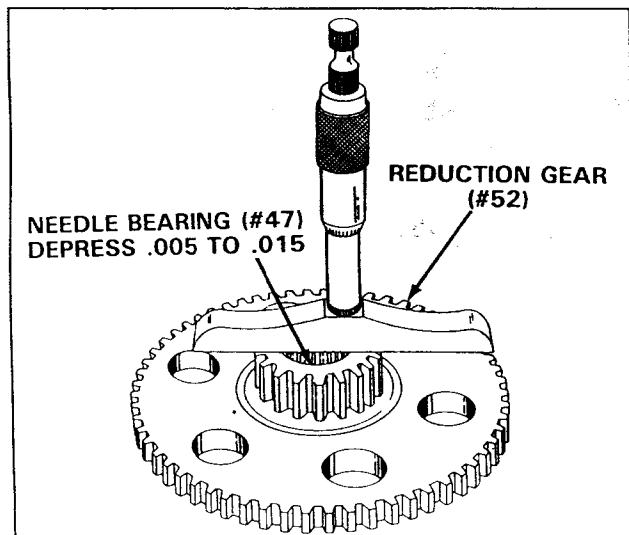


FIGURE 12

- 5.22 If needle bearing (#47) has been replaced, then the bronze grease seal (#61) must also be replaced. Press new seal (#61) into reduction gear (#52) making sure seal lip projects outward and seal is flush or .010 max. depressed below face of reduction gear. See figure 13.

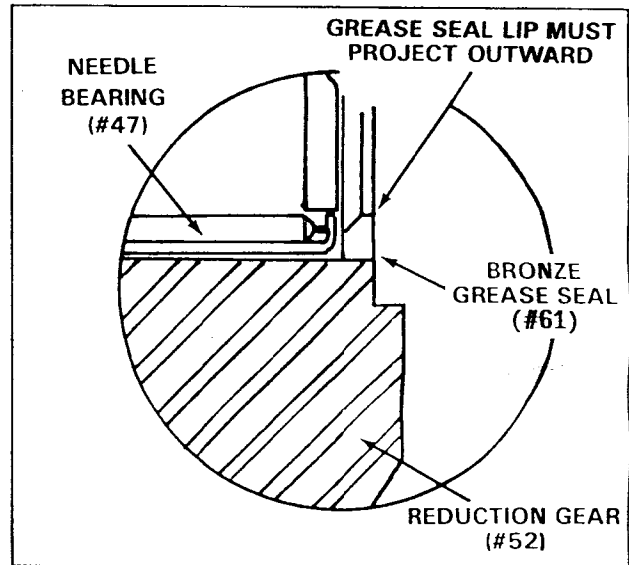


FIGURE 13



Reduction gear can be replaced as a complete assembly. See parts list #62758.

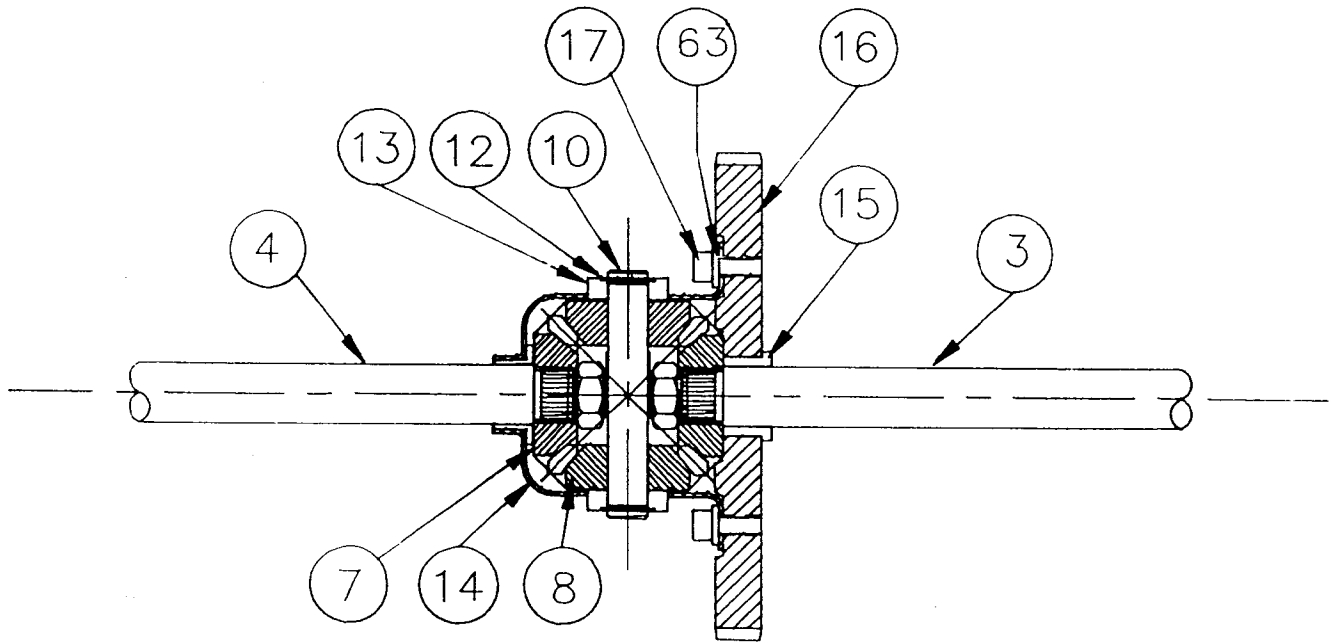
DAMAGED DRIVEN PINION

- 5.30 Follow disassembly procedure section 5 TRANSAXLE REPAIR.
- 5.31 Use a puller or brass hammer to tap drive shaft through driven pinion (#54). Inspect pinion teeth and spline on shaft (#46) for damage, replace parts as needed.

DAMAGED PINION SHAFT

- 5.40 To remove pinion shaft (#45) the brake yoke assembly and brake disc must be removed. (See section 2)
- 5.41 Pull key (#36) from shaft and slide pinion shaft (#45) through ball bearing (#43).
- 5.42 If pinion shaft (#45) is found to be damaged then it is likely that the reduction gear (#52) is also damaged. Refer to section 5.10 for reduction gear replacement.

DIFFERENTIAL ASSEMBLY SECTION 5.50



REF	DESCRIPTION	REF	DESCRIPTION
3	Axle, (LH)	13	Thrust Bearing
4	Axle, (RH)	14	Differential Housing Assembly
7	Miter Gear Splined	15	Flange Bearing 3/4 ID
8	Miter Gear 1/2 ID	16	Final Drive Gear 72T
10	Cross Shaft	17	Torx Head Bolt
12	Retaining Ring	63	Spring Lock Washer

FINAL DRIVE/DIFFERENTIAL

- 5.50 After removal from housing assembly, disassembly of differential is done by removing (4) bolts (#17) and (4) lockwashers (#63) from final drive gear (#16).
- 5.51 Slide longer axle shaft (#3) through gear (#16) and check bronze flange bearing (#15) for wear. Replace as needed using an arbor or press.
- 5.52 Remove retaining ring (#12) (IMPORTANT) Do Not reuse retaining ring) from cross shaft (#10) and slide shaft through miter gears (#8). Check gear teeth for damage, replace as needed.
- 5.53 Slide shorter axle shaft (#4) through differential housing (#14) and check bronze flange bearing for wear. If bearing is found to be damaged, **DO NOT ATTEMPT TO REPLACE FLANGE BEARING**. Bearing must be replaced as a sub-assembly with differential housing (#14).
- 5.54 Differential housing (#14) must be checked for damage, if holes for cross shaft bearings (#13) appear elongated, housing is distorted, or anti-rotational ears are damaged, housing sub-assembly with flange bearing must be replaced.
- 5.55 If miter gear (#7) on axle shafts (#3 and #4) are found to be broken refer to section 5.61 - 5.62.
- 5.56 Reassemble differential in reverse order and use (3) ounces of grease (#62) on miter gears (#7 and #8).
NOTE: Do Not reuse differential housing bolts (#17), factory replacement bolts are a must.
- 5.57 Use Permilok #HM128 on (4) bolts (#17) and torque to 170-180 inch/lbs.
NOTE: Before using locking adhesive, bolt must be free from oil.
- 5.60 Follow transaxle disassembly section 5.01 - 5.11 and differential disassembly sections 5.50 - 5.54.
- 5.61 Remove nut (#9) securing miter gear (#7) to shaft. Slide gear from spline and inspect for damage.
- 5.62 Reassemble shaft and splined miter gear (#7) with a new nut (#9) and Torque to 40-55 ft./lbs.
- 5.63 Reassemble differential (See section 5.56).

SECTION 6 - HOUSING CRACKED OR BROKEN

- 6.00 See disassembly procedure 5.01 - 5.11.
- 6.01 When a transaxle housing is being replaced it is also recommended that new ball bearings be installed. See section 7.10 for bearing reinstallation.
IMPORTANT! In the right hand housing (#2) (Housing on which brake is mounted) are (3) different type bearings (#5, #43 and #44). Use damaged housing as a reference for reassembly).

STRIPPED THREADS

- 6.10 If any threads are stripped and replacement housings are not available, then housing repair can be done by the following steps.
WARNING! Transaxle must be disassembled before attempting repair.
- 6.20 To repair any of the (3) 1/4-20 threads at the input housing mount, use a #R1185-4 1/4-20 x .375 HeliCoil.
- 6.21 Bolts securing both housing halves are self tapping bolts and must be torqued to 80-120 inch/LBS. Over torquing bolts will strip out threads. If any of these threads are stripped, drill (using 1/4" drill) through damaged boss. Reinstall a 1/4-20 Grade 5 bolt and nut reaching through both housings. Use locktite #242 on nut and torque to 80-120 inch/LBS.
WARNING! Do not leave drill shavings in transaxle.

SECTION 7 - DAMAGED BALL BEARINGS

- 7.00 See disassembly procedure 5.01 - 5.11.
- 7.01 If bearings feel like balls are catching, are hard to turn, or very loose, replacement is a must.
- 7.02 Remove damaged bearings from housing using an impact puller (figure 14) or tapping bearings out using the correct diameter rod as shown in figure 15.
- 7.10 Reinstall bearings with Loctite Bearing Mount/B adhesive sealant and press in place using a suitable arbor.
- 7.11 Wipe bearings clean of excess locktite.

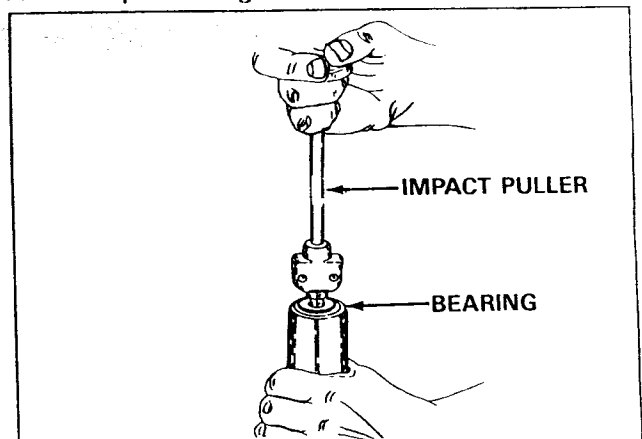


FIGURE 14

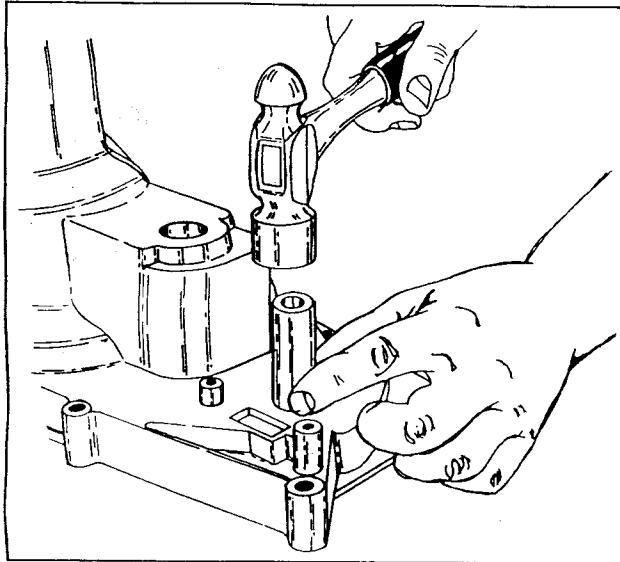


FIGURE 15

SECTION 8 - TRANSAXLE REASSEMBLY

8.00 Slide one washer (#6) on axle shaft (#4) (Ref.: differential housing side) then slide differential/axle assembly into right hand housing (#2) (Housing on which brake is mounted). Clamp axle (#4) gently in vise as shown in figure 16.

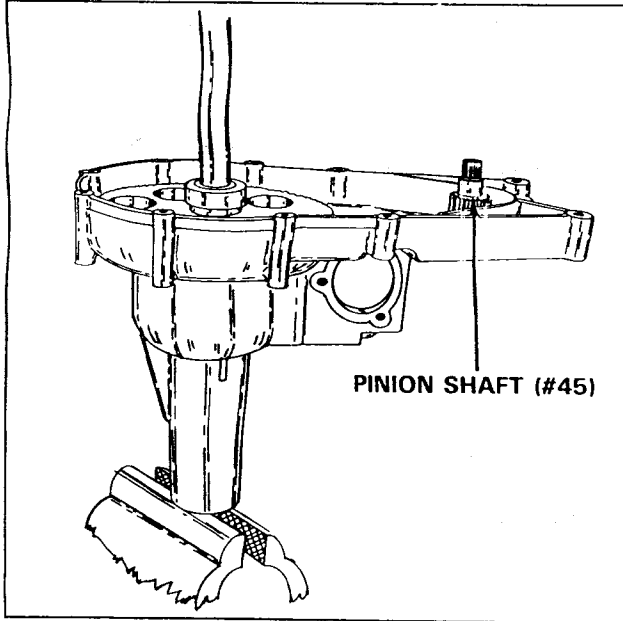


FIGURE 16

8.01 Insert keyed end of pinion shaft (#45) into bearing. See figure 16.

8.02 Take drive shaft (#46) and press splined end into bearing until driven pinion (#54) is seated against bearing. See figure 17.

NOTE: Use a press or abor only. **DO NOT** use a hammer or mallet.

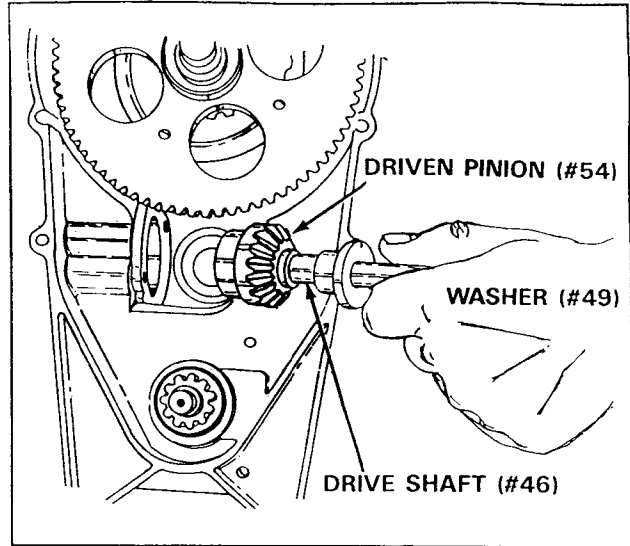


FIGURE 17

8.03 **IMPORTANT!** Washer (#49) is a selective washer. A .040 or .050 thickness washer must be selected to achieve optimum running clearances. To select appropriate washer begin by installing the .050 washer on the drive shaft and proceed with the following steps.

8.04 Press bronze thrust bearing (#48) on reduction gear dowel pin (#60).

8.05 **IMPORTANT!** Bronze thrust bearing (#48) grease pocket must face outward. See figure 18.

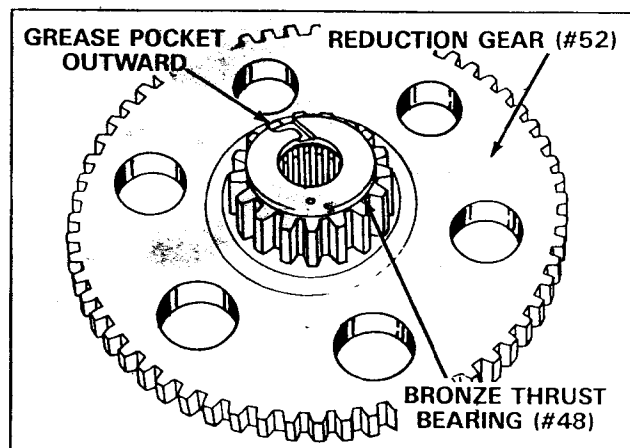


FIGURE 18

8.06 Lubricate needle bearing (#47) in reduction gear (#52). Carefully slip reduction gear (#52) on drive shaft (#46) rotating gear somewhat to align gear teeth.

- 8.07 To check for the required running clearances .015 — .030 of this assembly as described in section 8.03 above, the following test must be done.
- 8.08 Use a parallel bar across housing. See figure 19.
- 8.09 With a feeler gage, depth micrometer, or calipers, measure the distance between the parallel bar and the reduction gear thrust face. See figure 19.

NOTE: (Depth micrometer is a preferred tool).

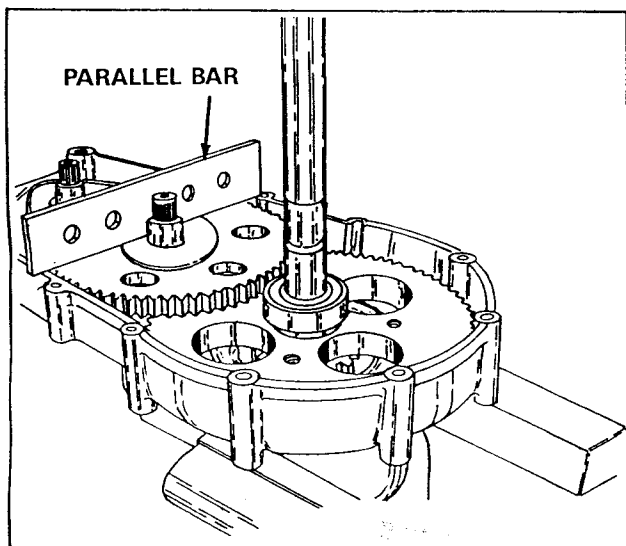


FIGURE 19

- 8.10 Subtract .019 (fixed dimension) from measurement between parallel bar and reduction gear (#52) thrust face. This dimension must be within .015 — .030 gap. If the gap is too narrow, then remove reduction gear (#52) and .050 washer and reinstall the .040 washer. (Continue to follow steps).
- 8.11 Once the proper running clearances have been established, place the (#59 washer on the drive shaft (#46) positioned on top of the reduction gear (#52).
NOTE: This washer does not effect assembly running clearances.
- 8.12 Use 14 ounces of type "Ø" grease (#62) over gears.

- 8.13 Add (2) washer (#6) on axle shaft (#3) then slide housing (#1) over axle shaft and align both housings with (2) spring pins (#58). Pull housings together with (10) self tapping screws (#41 & 42) and torque to 80-120 Inch/LBS.
- 8.14 Remove transaxle from vise.
- 8.15 Use feeler gage to check for (.015 to .030) clearance between selective washer (#49) and bronze thrust bearing (#48) as shown in figure 20.
- 8.16 Turn transaxle shafts to make sure that gears rotate freely.

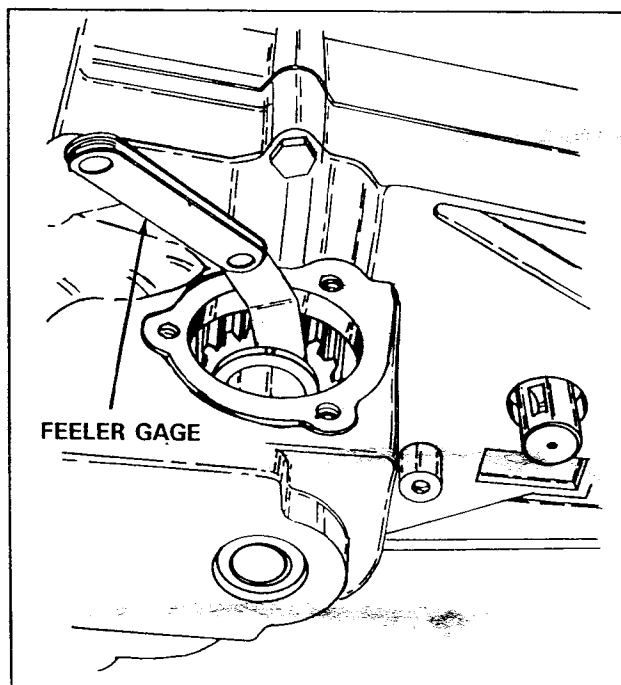
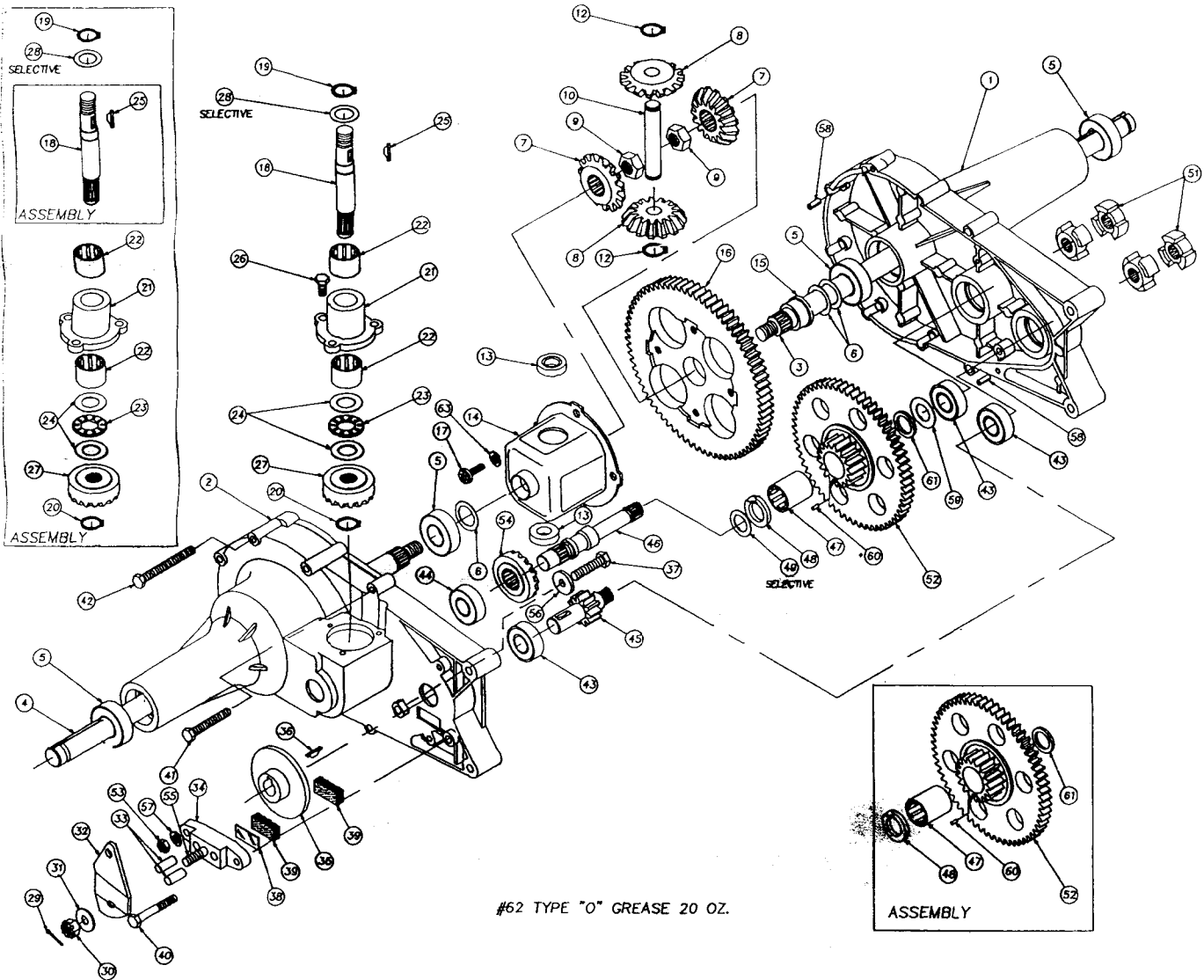


FIGURE 20

- 8.17 Pack 3 ounces of grease (#62) on drive pinion (#54) through input housing opening.
- 8.18 Remount input housing assembly, (section 3.22 — 3.23)
- 8.19 Assemble and mount brake. (See section 2.05 — 2.13 for reassembly).
- 8.20 Reinstall couplings (#51).
- 8.21 Align the locating pin and pilot of the hydro with the housing. Pull hydro down evenly with (4) mounting bolts and torque to 170-180 inch/LBS. (**Note:** Use locktite #242 on mounting bolts). (Fill hydro reservoir with oil per specifications).

HYDROSTATIC TRANSAXLE



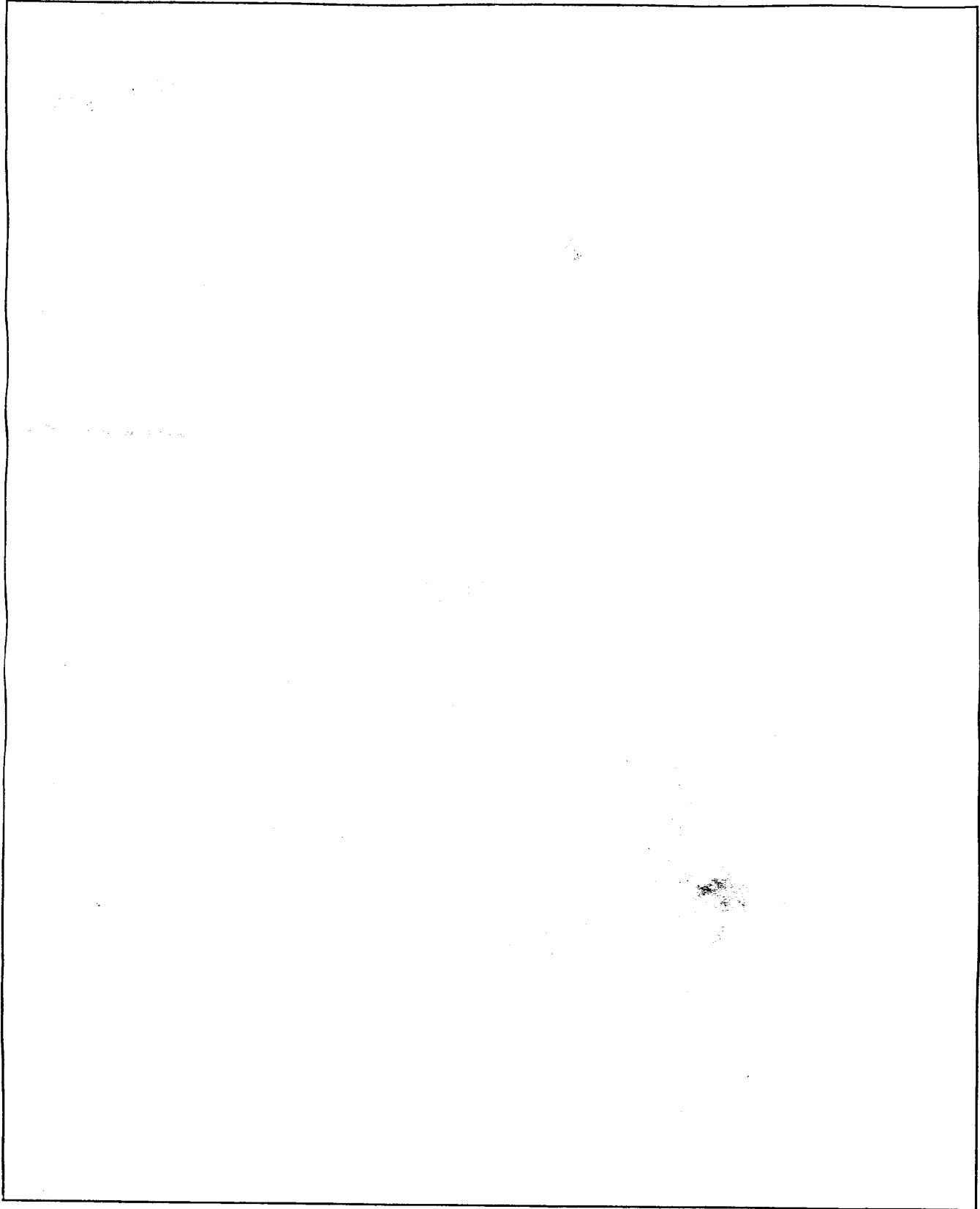
PARTS LIST FOR HYDROSTATIC TRANSAXLE

REF. NO.	QTY.	DESCRIPTION	REF. NO.	QTY.	DESCRIPTION
1	1	Housing Half LH	35	1	Disc, Brake
2	1	Housing Half RH	36	1	Key, Hi-Pro 3/16 x 5/8" Dia.
3	1	Axle LH 3/4"			
4	1	Axle RH 3/4"	37	1	Screw Hex 1/4-20 x 1.50 Long
5	4	Bearing, Ball		1	Plate, Puck
6	3	Washer, Flat 3/4 ID x 1-1/8 OD x .030 Thk.	38	2	Puck Brake
			39	1	Screw, Hex w/Patch 1/4-20 x 1.00 Lg.
7	2	Gear, Miter	40	4	Screw, Hex Self-Tap 1/4-20 x 2.00 Lg.
8	2	Gear, Miter		6	Screw, Hex Sel-Tap 1/4-20 x 3.00 Lg.
9	2	Nut, Hex Jam w/Patch 1/2-20	41	3	Bearing, Ball
10	1	Shaft, Cross	42	1	Bearing, Ball
12	2	Snap Ring	43	1	Shaft, Pinion w/11 Tooth Gear
13	2	Bearing, Thrust	44	1	Shaft, Drive
14	1	Housing Ass'y. Differential	45	1	Bearing, Needle
15	1	Bearing, Flange	46	1	Bronze Thrust Brg. 5/8 ID x 1-1/4 OD x 7/64 Thk
16	1	Gear, Differential 72 Tooth	47	1	Washer, Flat .62 ID x 1.0 OD x .050 Thk
17	4	Bolt, Torx Head 1/4-28 x 5/8" Lg.	48	AR	Washer, Flat .62 ID x 1.0 OD x .040 Thk
18	1	Shaft, Input	49	4	Coupling
19	1	Snap, Ring		1	Gear, 60 and 17 Tooth
20	1	Retaining Ring 7/16" Dia. Ext.	---	1	Nut, Hex 1/4-20
21	1	Housing, Input Bearing		1	Gear, Drive Pinion 17-T.
22	2	Bearing, Needle	51	1	Bolt, Square Head
23	1	Bearing, Thrust	52	1	Washer, 15/16 OD x .265 ID x .125 Thk
24	2	Washer, Flat 5/8 ID x 1-1/8 OD x .030 Thk.	53	1	Washer 1/4" Spring Lock
25	1	Key, Hi-Pro 1/8 x 5/8	54	2	Pin, Roll 3/16" Dia. x 1/2" Lg.
26	3	Screw, Hex /Patch 1/4-20 x 3/4 Long	55	1	Washer, Flat .62 ID x 1.0 OD x .030 Thk
27	1	Gear, Input Pinion 17 Tooth	56	1	Pin, Dowel 3/32 x 1/4
28	1	Washer, Flat .62 ID x 1.0 OD x .050 Thk.	57	1	Grease Seal (Bronze)
---	AR	Washer, Flat .62 ID x 1.125 OD x .060 Thk.	58	20 oz	Shell Durina-O Grease 20 oz.
---	AR	Washer, Flat .62 ID x 1.0 OD x .040 Thk.	59	4	Washer, HD Sprg Lock 1/4" (Yellow Di-Chrom)
29	1	Pin, Cotter	60	2	Nut, 5/16-18 PLTD
30	1	Nut, Castle 5/16-24	61		
31	1	Washer, Flat .343 ID x .88 OD x .062 Thk.	62		
32	1	Arm, Brake Actuator	63		
33	2	Pin, Brake Actuating	64		
34	1	Brake, Yoke			

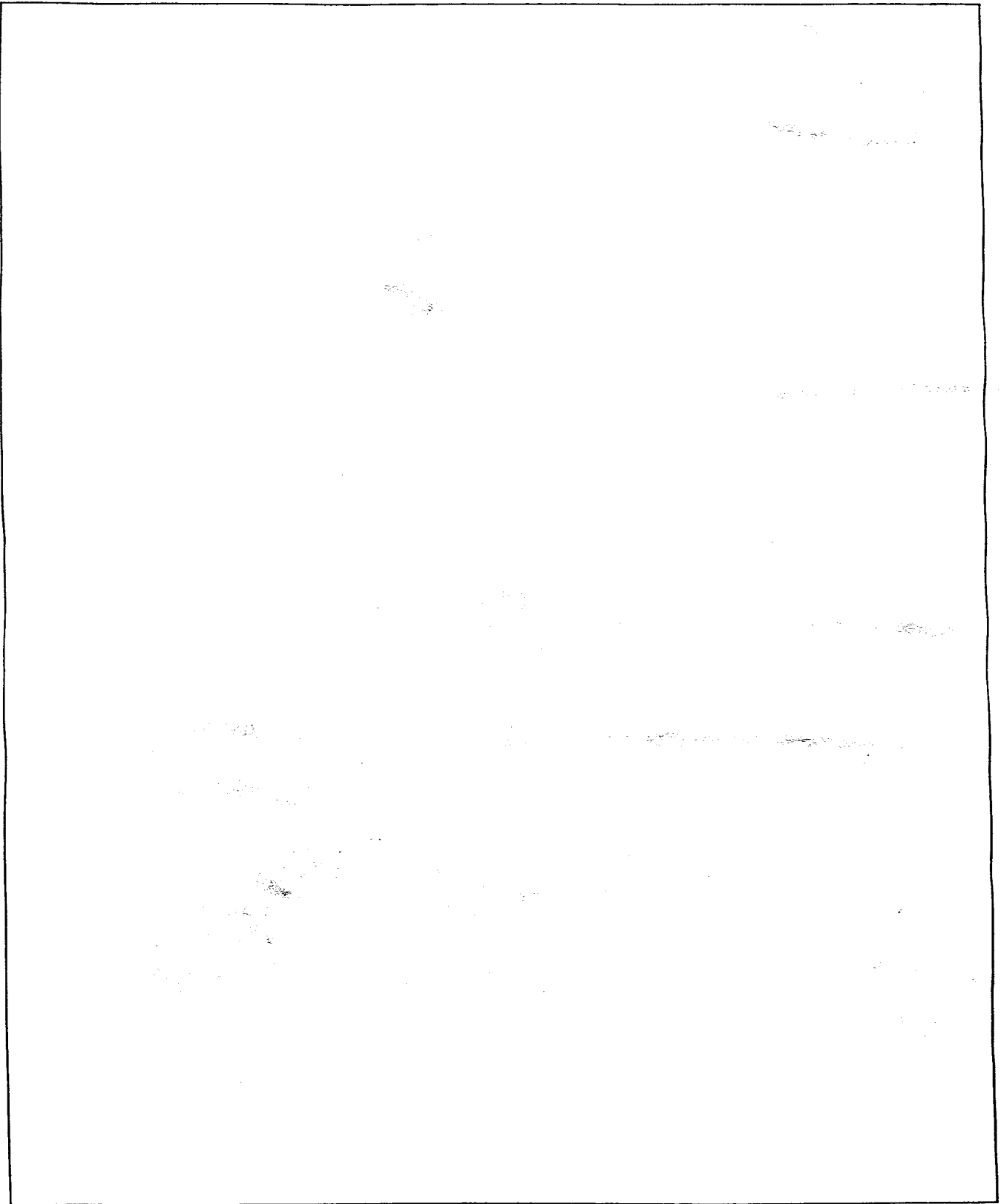
AR = As Required

REDUCTION GEAR ALSO AVAILABLE ASSEMBLED
INPUT ASSEMBLY ALSO AVAILABLE COMPLETE

NOTES



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