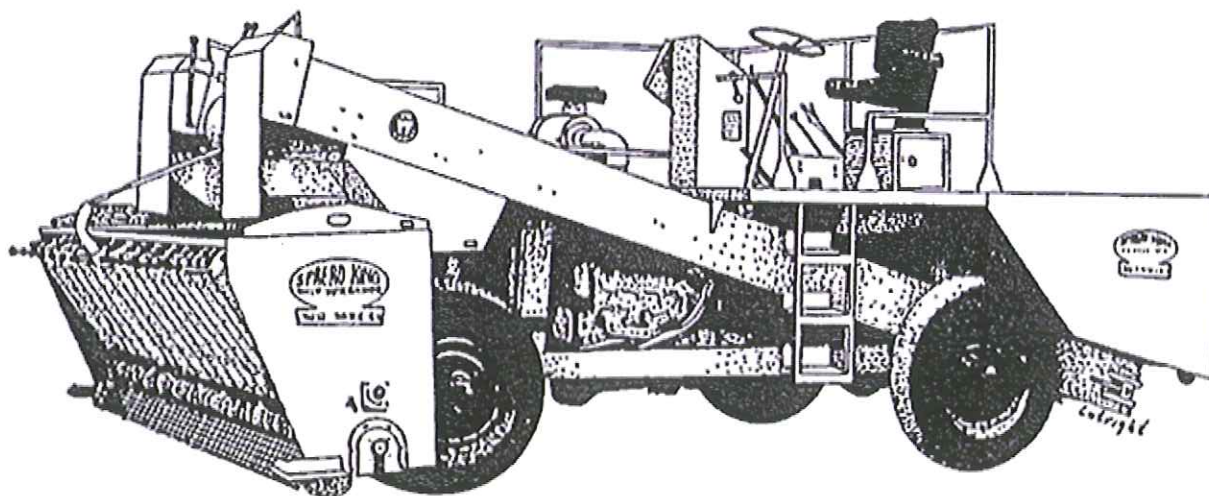


W. H. Manufacturing Co.

MODEL WHS

CHIP-SPREADER

Serial No. 8908 & Up



W. H. Manufacturing Co.

P. O. BOX 4845 — HIGHWAY 30 WEST
POCATELLO, IDAHO 83201



MAINTENANCE AND OPERATION

TABLE OF CONTENTS

OPERATION AND REPAIRS

<u>TITLE</u>	<u>PAGE</u>
CONVEYORS	G
CONVEYORS	H
FRONT HOPPER	D
FRONT HOPPER	E
FRONT HOPPER CONTROL	F
GENERAL OPERATIONS	C
HYDROSTATIC COMPONENTS	S
LUBE CHART	B
SEALING TRUCK BED TO REAR HOPPER	J
SPREADER COMPONENTS	R
WARRANTY	A

TRANSMISSION POWER FLOW

GENERAL	K
POWER FLOW IN FIRST SPEED REVERSE	L
POWER FLOW IN THIRD SPEED FORWARD	M
POWER FLOW IN FOURTH SPEED REVERSE	N
POWER FLOW IN FIFTH SPEED FORWARD	O

HYDROSTATICS

HYDRAULIC TROUBLE SHOOTING	P
HYDRAULIC TROUBLE SHOOTING	Q

PARTS AND ILLUSTRATIONS

AIR FILTER	WH-57
AIR HORN OPTION	WHS-25C
AIR SYSTEM - ONE MAN	WHS-71
AIR SYSTEM- REAR AXLE	WHS-73
AIR SYSTEM - STANDARD	WHS-25A
AIR TRUCK HITCH	WHS-25F
AIR TRUCK HITCH OPTION	WHS-25B
CLUTCH SHAFT AND LEVER	WHS-61A
CONVEYOR	W-41
DIFFERENTIAL ASSEMBLY	W-9
DRIVE SHAFT	W-7
ENGINE ATTACHMENTS	WHS-79
ENGINE ATTACHMENTS-CUMMINS	WHS-79A

TABLE OF CONTENTS

PARTS AND ILLUSTRATIONS

<u>TITLE</u>	<u>PAGE</u>
ENGINE CLUTCH	W-1
FUEL TANK	WHS-83
FRONT AXLE	W-13
FRONT BRAKE ASSEMBLY	W-21
FRONT HOPPER	W-37
FRONT HOPPER/SCREEN (RETRACTABLE)	W-38A
HYDRAULIC SCHEMATIC	WHS-67A
HYDRAULIC SYSTEM CONVEYORS	WHS-29D
HYDRAULIC SYSTEM HOPPER	WHS-29C
LIGHTING OPTION	WHS-25E
METERING QUADRANT	WHS-65A
ONE MAN WITH AIR HORN	WHS-25D
OIL COOLER TANK & CONTROLS	WHS-53A
PLANETARY ASSEMBLY	W-11
POWER STEERING SYSTEM	WHS-69A
POWER STEERING SYSTEM - DUAL CONTROL	WHS-69B
PTO DRIVE SHAFT	WHS-30B
RADIATOR - CUMMINS	WHS-81
RADIATOR - CATERPILLAR	WHS-81A
REAR BRAKE ASSEMBLY	W-23
REAR HOPPER AND TRUCK HITCH	W-43
REVERSING TRANSMISSION	WA-3
SHIFTER	WHS-63
SPROCKET AND HOPPER DRIVE	WHS-39
STEERING CYLINDER	WHS-15A
TRANSMISSION	WA-5
TRANSMISSION COVER	WA-4A
WIRING DIAGRAM	WHS-45F, G & H
WIRING DIAGRAM CONTROL PANEL	WHS-45A
WIRING DIAGRAM LIGHTING OPTION	WHS-45K
WIRING DIAGRAM ONE MAN OPTION	WHS-45I
WIRING DIAGRAM STARTER & ALTERNATOR	WHS-45E
WIRING DIAGRAM TERMINAL STRIP 1	WHS-45B

TABLE OF CONTENTS

PARTS AND ILLUSTRATIONS

<u>TITLE</u>	<u>PAGE</u>
WIRING DIAGRAM TERMINAL STRIP 2	WHS-45C
WIRING DIAGRAM TERMINAL STRIP 3	WHS-45D
WIRING DIAGRAM TERMINAL STRIP 5	WHS-45J

WARRANTY

THE STANDARD W-H MANUFACTURING CO. WARRANTY

All new machines and parts are guaranteed against defective workmanship and material for a period of twelve (12) months, except that the Manufacturer assumes no responsibility and makes no warranty with respect to engines, engine accessories, tires or other purchased components beyond the warranty of the supplier of same.

This warranty will not apply to a machine which shall have been repaired by other than an authorized W-H Manufacturing Co. Distributor using genuine W-H Manufacturing Co. parts. The Manufacturer's obligation under this warranty is limited to the replacement of any part or parts of its manufacture which shall be found to be defective within (12) months from date of delivery to original user. The Manufacturer's warranty does not obligate the Manufacturer to bear any other costs excepting only the furnishing of a replacement for the defective part; all other damages, including but not limited to any loss or damage resulting from the use or loss of use of any of said products, being here by expressly waived. No representative of the Manufacturer is authorized to change this warranty in any way, and no attempt to repair the products of the Manufacturer by any representative of the Manufacturer shall change or extend this warranty in any way. All hydrostatic drive components carry twenty-four (24) month warranty with the same conditions applied.

Parts to be substituted for parts found defective are to be furnished free to the customer by the Manufacturer, f.o.b. factory. Installation of such parts is to be made by and at the expense of the Customer. (UNLESS HE IS AUTHORIZED IN WRITING BY THE MANUFACTURER TO MAKE SUCH INSTALLATION AT THE MANUFACTURER'S EXPENSE.) Parts claimed to be defective and for which free replacement is desired are to be returned to the Manufacturer, f.o.b. Pocatello, Idaho or to such other place as the Manufacturer may designate, for inspection, if requested by the Manufacturer.

W-H Manufacturing Co.
14251 W. Highway 30
P.O. Box 4845
Pocatello, Idaho 83205

W-H Manufacturing Co. reserves the right to change its design at any time without incurring obligation to make such design changes on machines previously sold.

LUBRICATION CHART

Minimum Time To Service	DESCRIPTION AND LOCATION	
Daily	Front Hopper-4 Bearings-Spread Roll & Agitator	Grease
Daily	Power Take-off-gear box-Level Check	M.P. 90 Gear Oil
Daily	Engine Oil Level	Mfg's Specs.
Weekly	Conveyor System - Head Pulley Bearings (4)	Grease
Weekly	Conveyor System - Tail Pulley Bearings (4)	Grease
Weekly	PTO System - Pillow Block Bearings - (4)	Grease
Weekly	PTO System - Drive Shaft - (3) Fittings	Grease
Weekly	Steering Pump - Level Check	AW32 Hyd.-10W
Weekly	Engine Clutch - Pedal - One Fitting	Grease
Weekly	Reverse Box - Level Check (Only Check Highest Plug Main Transmission)	M.P. 90 Gear Oil
Weekly	Main Transmission - Level Check	M.P. 90 Gear Oil
Weekly	Drive Shaft - 3 fittings	Grease
Weekly	Differential - Level Check	M.P. 90 Gear Oil
Weekly	Planetaries - Level Check	M.P. 90 Gear Oil
Bi-Weekly	Front Axle - King Pins - 2 Fittings	Grease
Bi-Weekly	Front Axle - Cross Tube & Cylinder Ends 4 Fittings	Grease
Weekly	Hydraulic Reservoir -	AW32 Hyd.-10W
When New	Hydraulic Oil Filters change after 100 hrs. after purchase.	
Every Spring	Change oil filters after every year	
Bi-Weekly	Front Axle - Oscillating Shaft One Fitting	Grease

GENERAL OPERATIONS

The following is a brief outline of operational and repair procedures, suggested by W.H. Manufacturing Co., to be used with the Model WHS Chip-Spreader. These procedures are a product of our experiences, and are given to operators of our Chip-Spreaders as and aid to better adapting the machine to standard construction routines.

If the operator will follow, very closely, these suggestions he will be pleased with efficiency and extra profits made possible by its use.

POWER TRAIN - REPAIRS

For engine, clutch and reversing unit, transmission and rear axle, refer to appropriate manufacturers manuals.

POWER TAKE - OFF AND VEE BELT ADJUSTMENT

The Model "WHS" Chip-Spreader has a front of the engine power take off that is connected to the drive through an automotive type spline shaft and universal joint. This drives the conveyor and front hopper hydrostatic pumps.

CONTROL GATES IN REAR HOPPER

These gate slide in a guide operated by a handle protruding from the upper edge of the operators decks. These gates are adjustable and are held in position by means of a pin fastened to a chain. These gates are used to control the amount of material on the conveyor belts.

BAFFLE PLATES

Baffle plates are located directly below the head pulleys of each conveyor and are needed to aid in placing cover materials into the extreme ends and center of the front hopper. These baffle plates also minimize segregation of heavier materials.

REMOVAL OF BAFFLE EXTENSIONS

These extensions are held on by means of two bolts which set into two slotted angles welded to the machine. Removal of the extensions is necessary when installing or removing the front Spread Hopper.

FRONT HOPPER

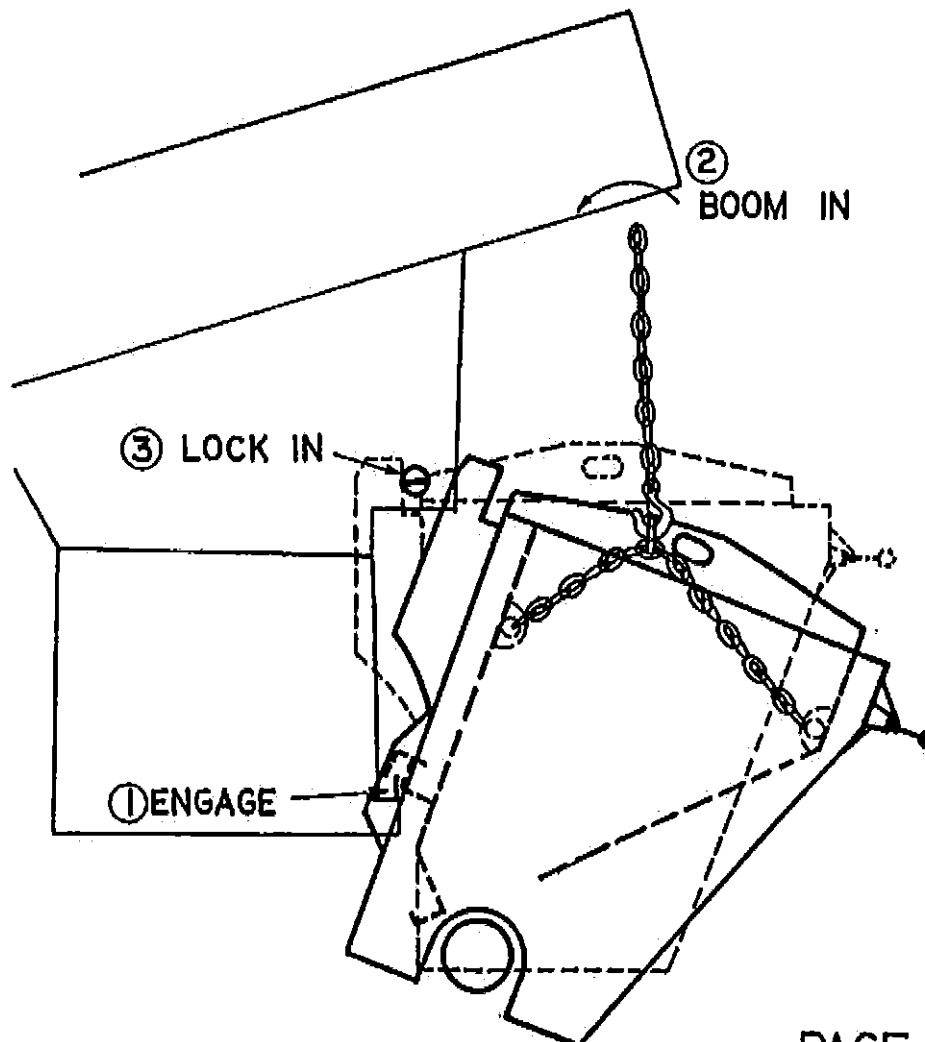
FRONT HOPPER

This is a storage and spreading mechanism for cover materials. It's spreading width ranges from 6 inches to full hopper width. It consists of a drive housing that transmits power to its spread-roll and agitating shaft. These rotating parts are automatically stopped by a limit switch when the operator closes the master front gate control lever.

REMOVAL AND ATTACHMENT OF FRONT HOPPER

The front hopper is held to the Chip-Spreader on a seat which interlocks with a lip on rear edge of hopper. See diagram.

The front hopper is held in place by 2 snap pins, one on each side of the conveyor frame. These pins are spring loaded and with a half-turn will snap out to secure hopper.



FRONT HOPPER

ROD SCREENS

When delivered from the factory, the front hopper is equipped with rod screens that function to stop oversized materials, mud, sticks, ect., from entering the spread opening. These screens should be in place whenever possible. If streaks or light areas appear behind the spread roll, it is caused by over-sized foreign materials too large to pass thru the control gate. In most cases the foreign material can be discharged by fully opening the metering lever, then immediately closing it back to the proper control position. If this fails the foreign material is very large and can be dislodged only by manual means. If the plug is not too large, it is recommended that the hopper be allowed to run low, then the piece or pieces removed.

ROD SCREEN SIZES

The Chip-Spreader is equipped and shipped with one size screen. This screen is 3/4" Mesh. and is required in most applications. However, if large materials are handled such as 1" and up, we make a 1-1/8" mesh screen, which can be obtained in place of the 3/4" screen.

CARE OF CHAIN DRIVE

There is an idler in the chain that drives the auger and spread roll. To adjust the tension on this chain, open the chain guard on the right end of the front hopper. Adjustment is then made by moving the idler in its slotted base plate.

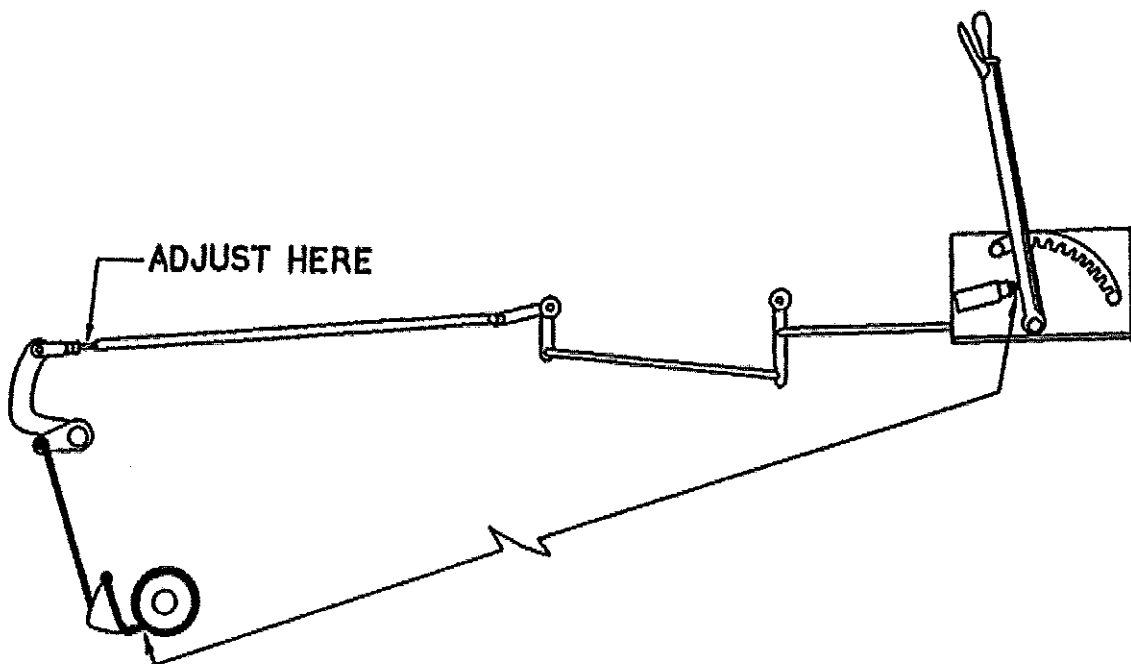
MATERIAL CONTROL SYSTEM

Because of the necessary accuracy needed to do an effective spreading job, the metering lever for the control gates is designed so that one notch change in the metering quadrant allows two 1/16" change in the opening of the control gates. To assure the return of the control lever to the exact spot with a minimum loss of time, a stop lever is installed beside the control lever on the metering quadrant. This stop lever is set at the desired opening and control lever is brought in line with it when the gate is opened, each time the machine is started. To change stop-lever move to desired position.

CONTROL GATE ROD

The control gate is moved by means of adjustable linkage to the control lever at the driver's seat. If at any time the deposited materials are heavier on one side than on the other, check the opening on each end of the hopper with the gate approximately 1/4" open. If this measurement indicates more than 1/32" variation, pull the clevis pin on the reach rod on one end and adjust to the desired distance.

FRONT HOPPER CONTROL



SERVICE NOTE: Adjustment of Hopper Gates and Aggregate Feed.

It is important that the aggregate spread gates, the hopper spread roll, and aggregate feed all shut off at the same time. The limit switch on the operators quadrant controls the feed and the spread roll; while the lever on the quadrant controls gate position. THERE IS NO ADJUSTMENT PROVIDED FOR IN THE SWITCH OR LEVER. This adjustment can be properly and easily made only at the point indicated in the figure.

To Adjust:

Disconnect the clevis at the main gate control arm on the hopper. Move the lever on the quadrant all the way forward. When locked into the full forward position the limit switch is depressed. At the hopper; make sure there are no obstructions which are restricting the operating gates from closing against the spread roll. Pull the main gate control arm all the way forward to close the gates. While holding the gates closed; adjust the main gate control reach rod as necessary until the clevis pin maintains a snug fit, in the forward direction, in the main gate control arm. When adjustment is completed, tighten the lock nut on the reach rod.

NOTE:

This adjustment is designed to eliminate aggregate leakage, thus preventing poor coverage performance. The adjustment should be made on the initial hopper installation, and checked periodically there after.

CONVEYORS

CONVEYORS

The functions of the two conveyors (one on each side of the machine) is to transport materials from the rear hopper into the front hopper and spread roll.

To help eliminate spillage of materials the conveyors have on chute lining, which can be replaceable or adjusted when worn.

CONVEYOR BELT ADJUSTMENT

The belts on the conveyor are pre-adjusted at the factory, when the Chip - Spreader is test operated, but due to stretching, load variation, skirting drag, ect. final adjustment must be made in the field.

To move the belt to the right, tighten the nut at the top right hand edge of the conveyor frame, raising the return idler. To move the belt to the left, tighten the left hand nut. Care should be used in this adjustment as the belt will respond slowly and over adjustment can occur. Adjustment should be made with the conveyor belts running and loaded.

To further aid in adjusting the belts there is an adjustment at the tail pulleys which is used to further tighten the belts when wear occurs, and to help in aligning the tail pulleys. Tighten the opposite side that you wish to move the belt. Extreme care should be taken to assure that the belts are running accurately and evenly on the head and tail pulleys.

When a new belt is installed, loosen the tail pulley adjusters, and the adjusters behind the head pulleys. This will give sufficient slack to allow the belt ends to be pulled together without the use of a belt stretcher. When retightening the belt be sure the belt does not sag excessively between the troughing rolls when loaded.

CHUTE LINING WEAR

The chute linings on the conveyors are held in place by a channel bolted to the conveyor side angles. To adjust or replace the chute linings, loosen the 3/8" bolts and lower or remove as desired. To replace simply insert new lining under the channel and tighten the hold down bolts.

Care should be taken in installing or adjusting the chute lining to assure an even bearing on the conveyor belt. Be very sure the opening remaining on the conveyor belt surface is parallel to the belt or excess spillage and wear will occur.

CONVEYORS

BELT SPLICES

We suggest the splice be made with flexco SRB fasteners. Any good fastener may be used which will work on a 10" radius without pulling, this is important, because too large a fastener will tear out the belt after a short time of operation.

CONVEYOR BELT LENGTH

Conveyor belts are 4 ply 20" standard rubber covered conveyor belting and should be cut 37'8" long.

Run conveyor belts snug enough that very little dip occurs between the troughing rolls when loaded.

CONVEYOR BELT WIPER

Immediately under the front of each head pulley is a rubber wiper set to touch the conveyor belt. The function of this wiper is to aid in cleaning adhesive particles from the conveyor, and to prevent excessive gravel from following under the head pulleys when overloading of the hopper occurs. This strip should be replaced or moved up whenever wear causes clearance from the conveyor belt.

HEAD PULLEY AND HOPPER DRIVE MOTORS

The Motors Which Drive the head pulleys have cables attached to their Swash Plate levers offering infinite belt speed adjustments. The front hopper drive motor speed is set at the factory and need not be adjusted.

TRUCK HITCH

HEAD BAFFLES

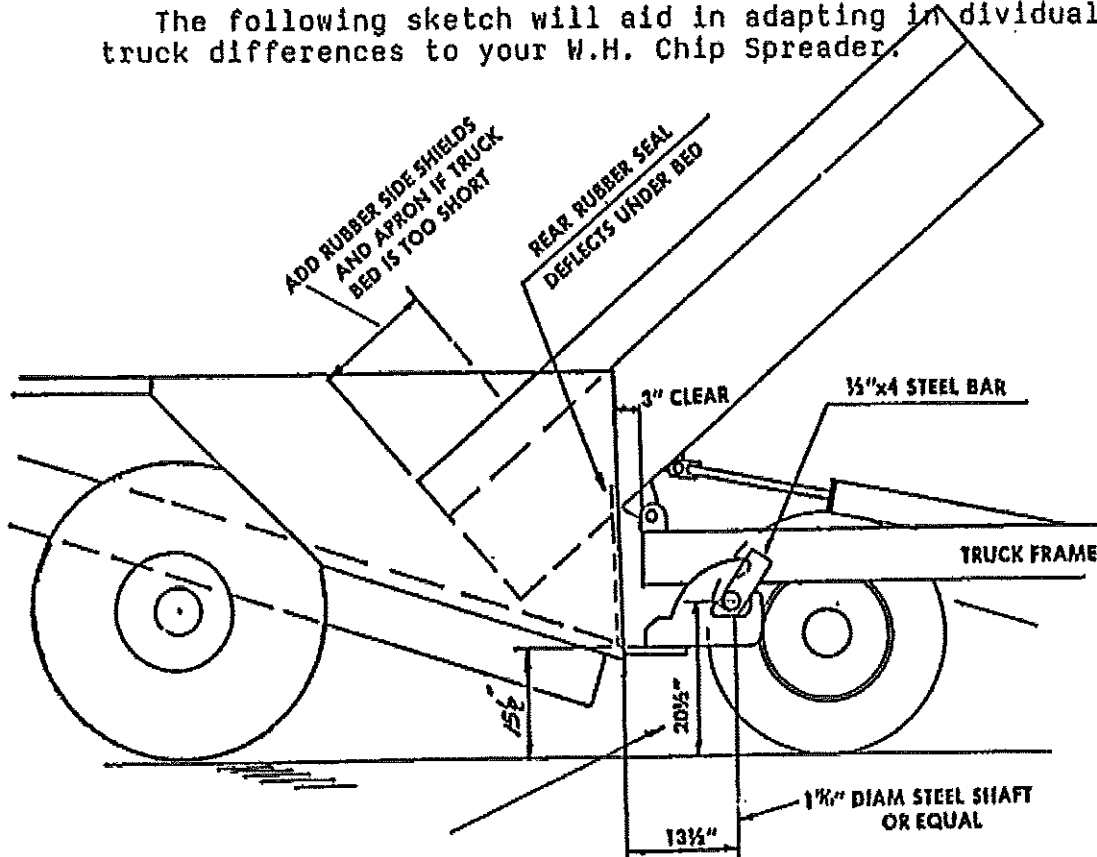
The Head Baffles are anchored to the upper end of each conveyor and are held in place by four $\frac{1}{2}$ " cap screws. The function of the baffles is to aid in controlling the conveyor material. The Head Baffle deflectors should be spaced to deflect the material in an even fan shaped cascade along the entire face of the baffle plates, thereby eliminating segregation of the conveyed material.

Mounted vertically at the apex of the baffle plates is another deflector plate. The function of this plate is control of the material stream from side to side as desired. On narrower than full width spread, this vertical deflector must be moved to control the flow of material to compensate for the reduction in width of spread. The vertical deflector plates are adjusted with a reach rod and are locked in place by spring loaded ratchets.

TRUCK HITCH

The function of the truck hitch is to provide a means where by the truck can be held in a close relationship with the rear hopper. The success of the entire spreading operation is directly related to this hook-up, and extreme care should be taken to assure proper hook-up with each truck in your fleet.

The following sketch will aid in adapting individual truck differences to your W.H. Chip Spreader.



SEALING TRUCK BEDS

SEALING TRUCK BEDS TO HOPPER

In general the tail gates of all truck beds must set at least 8" inside the Hopper Retaining - Skirt, when the bed is raised. Variances in frame lengths, dump bed over hangs, and rear wheel locations, make it necessary to check each bed in relation to the rear hopper of the Chip - Spreader.

On large tandem trucks, the frame, rear wheels and often the tail gate of the dump bed are usually on the same perpendicular line. In such cases it is necessary to install bed extensions to assure a proper seal in the dump position. If the above conditions exist. Hitches should be set to allow 2" to 2'- $\frac{1}{4}$ " clearance between the rear tire and the bumper of the Chip-Spreader.

If trouble is encountered with spillage while dumping into the rear hopper, check these items.

1. Does tail gate set inside of rubber skirt on rear hopper?
2. On large trucks, do you have restraining chains on tail gate?
3. (Where restraining chains are used, allow aproximately 18" of slack in the chains.)

TRANSMISSION POWER FLOW

The mechanical transmission gives five speeds. The reverse box, installed between the oil clutch and the mechanical transmission, gives a forward or reverse direction. The mechanical transmission with reverse box gives five speeds in the forward or reverse direction.

The input shaft (13) and gear (3) are free to turn in relation to shaft (4)

The reverse box has a clutch (2) that can be moved with a fork toward the clutch housing (1) to connect the input shaft (13) directly to shaft (4). This sends power to the mechanical transmission with forward rotation.

The clutch (2) can also be moved with a fork in the opposite direction to connect gear (3) to shaft (4). Now power comes from the input shaft (13), through the countershaft (14), through a reverse idler (not shown), to gear (3) which is connected to shaft (4) by clutch (2). This sends power to the mechanical transmission with reverse rotation.

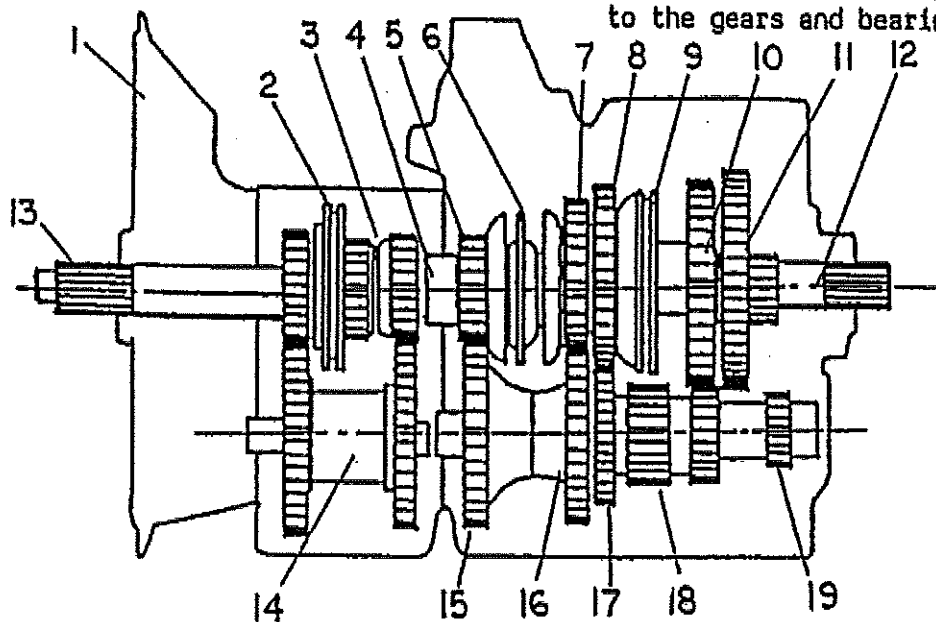
Gear (5) on shaft (4) and gear (7) are free to turn in relation to the output shaft (12). Synchronizer (6) can be moved with a fork toward the clutch housing to connect gear (5) on the input shaft directly to the output shaft (12) or in a direction away from the clutch housing to connect gear (7) to the output shaft (12).

Gears (8) and (10) are free to turn in relation to the output shaft (12). Synchronizer (9) can be moved with a fork toward the clutch housing to connect gear (8) to the output shaft (12) or in a direction away from the clutch housing to connect gear (10) to the output shaft (12).

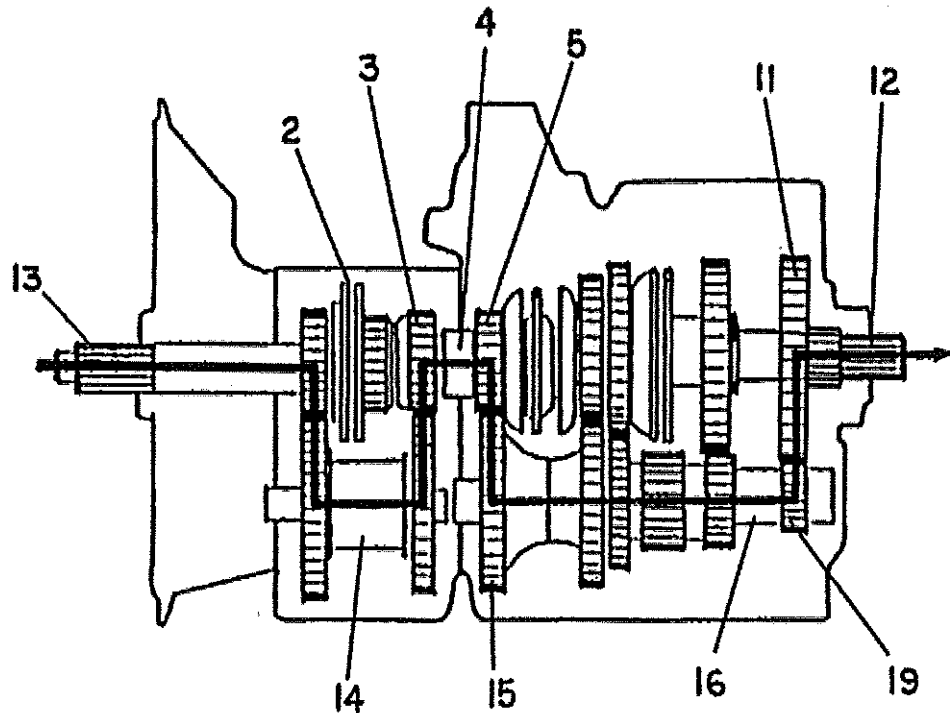
A sliding gear (11), connected to the output shaft (12) with a spline, can be moved with a fork to engage it with a gear (19) on the countershaft (16).

The synchronizers are used for second through fifth speed and the sliding gear is used for first speed.

Some of the gears in the transmission and reverse box turn through oil. This oil is thrown about inside the transmission and reverse box to give lube to the gears and bearings.



TRANSMISSION POWER FLOW



POWER FLOW IN FIRST SPEED REVERSE

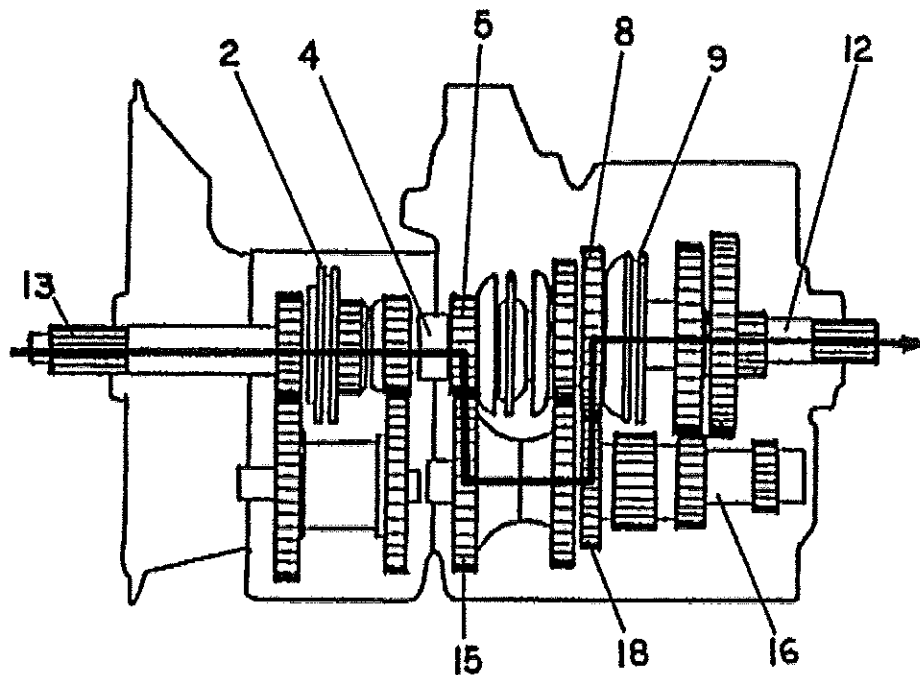
2. Clutch 3. Gear 4. Shaft 5. Gear 11. Sliding gear 12. Output shaft. 13. Input shaft 14. Countershaft 15. Gear 16. Countershaft 19. Gear

The clutch (2) in the reverse box is moved toward the mechanical transmission. The sliding gear (11) in the mechanical transmission is moved to engage it with gear (19) on the countershaft (16).

Power from the engine comes through the input shaft (13), through the countershaft (14) through the reverse idler gear (not shown) to gear (3) which is connected to shaft (4) by clutch (2). This sends power to the mechanical transmission with reverse rotation.

The gear (5) on shaft (4) turns gear (15) which is connected to the countershaft (16) with a key. This sends power through the countershaft. Gear (19) on the countershaft is engaged with the sliding gear (11) which is connected to the output shaft (12) with a spline and power is sent to the differential.

TRANSMISSION POWER FLOW



POWER FLOW IN THIRD SPEED FORWARD

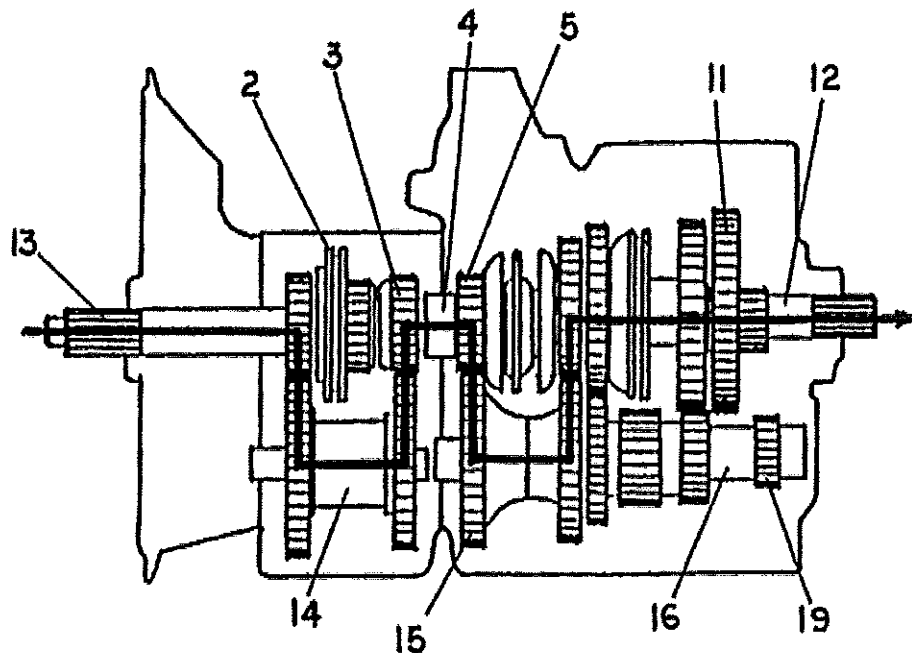
2. Clutch 4. Shaft 5. Gear 6. Gear 9. Synchronizer 12. Output shaft 13. Input shaft 15. Gear 16. Countershaft 18. Gear

The clutch (2) in the reverse box is moved toward the clutch housing. Synchronizer (9) is moved toward the clutch housing.

Power from the engine comes through the input shaft (13). Clutch (2) connects the input shaft directly to shaft (4) and power is sent to the mechanical transmission with a forward rotation.

The gear (5) on shaft (4) turns gear (15) which is connected to the countershaft (16) with a key. This sends power through the countershaft. Gear (18) on the countershaft turns gear (8). Synchronizer (9) connects gear (8) to the output shaft (12) and power is sent to the differential.

TRANSMISSION POWER FLOW



POWER FLOW IN FOURTH SPEED REVERSE

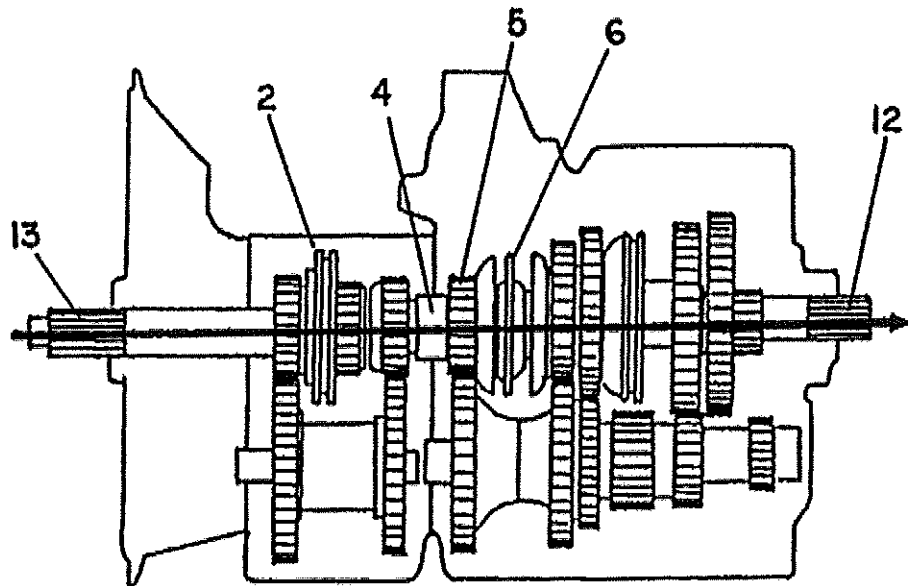
2. Clutch 3. Gear 4. Shaft. 5. Gear 6. Synchronizer 7. Gear 12. Output Shaft 13. Input Shaft 14. Countershaft 15. Gear 16. Countershaft 17. Gear

The clutch (2) in the reverse box is moved toward the mechanical transmission. Synchronizer (6) is moved in a direction away from the clutch housing.

Power from the engine comes through the input shaft (13) through the countershaft (14), through a reverse idler gear (not shown), to gear (3) which is connected to shaft (4) by clutch (2). This sends power to the mechanical transmission with reverse rotation.

The gear (5) on shaft (4) turns gear (15) which is connected to the countershaft (16) with a key. This sends power through the countershaft. Gear (17) on the countershaft turns gear (7). Synchronizer (6) connects gear (7) to the output shaft (12) and power is sent to the differential.

TRANSMISSION POWER FLOW



POWER FLOW IN FIFTH SPEED FORWARD

2. Clutch 4. Shaft 5. Gear 6. Synchronizer 12. Output Shaft
13. Input Shaft.

The clutch (2) in the reverse box is moved toward the clutch housing. Synchronizer (6) is moved toward the clutch housing.

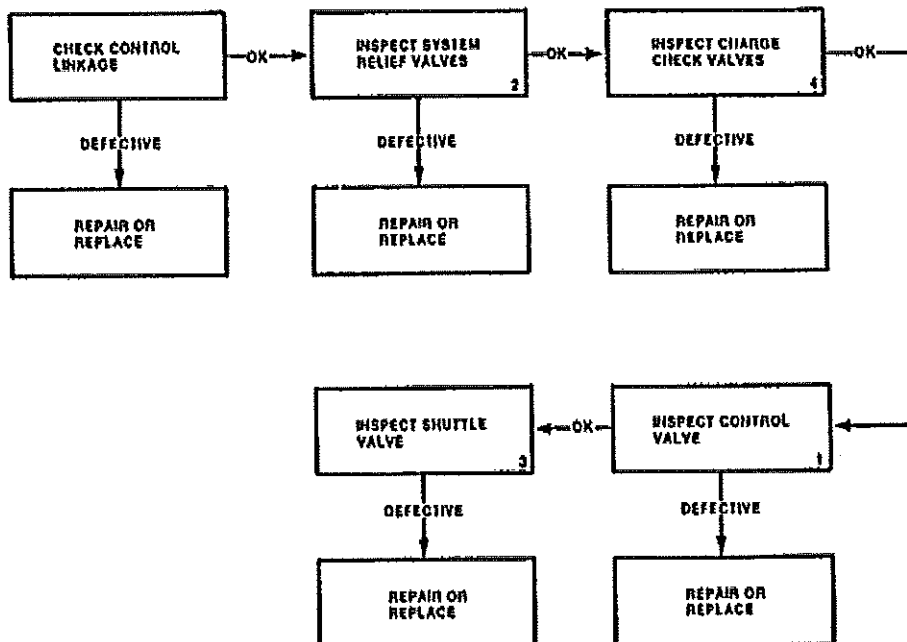
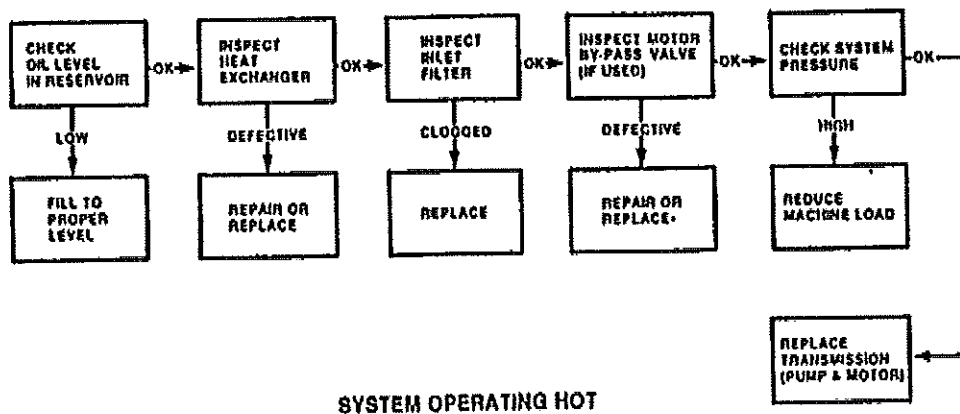
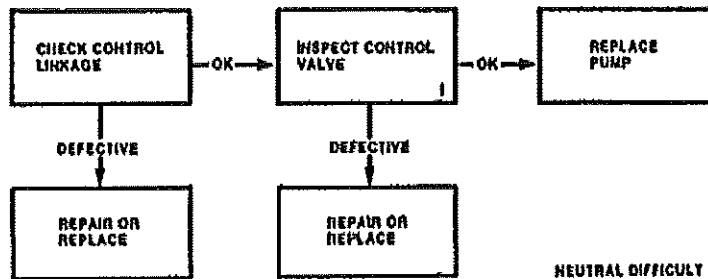
Power from the engine comes through the input shaft (13) Clutch (2) connects the input shaft directly to shaft (4) and power is sent to the mechanical transmission with a forward rotation.

Synchronizer (6) connects gear (5) on shaft (4) directly to the output shaft (12) and power is sent to the differential.

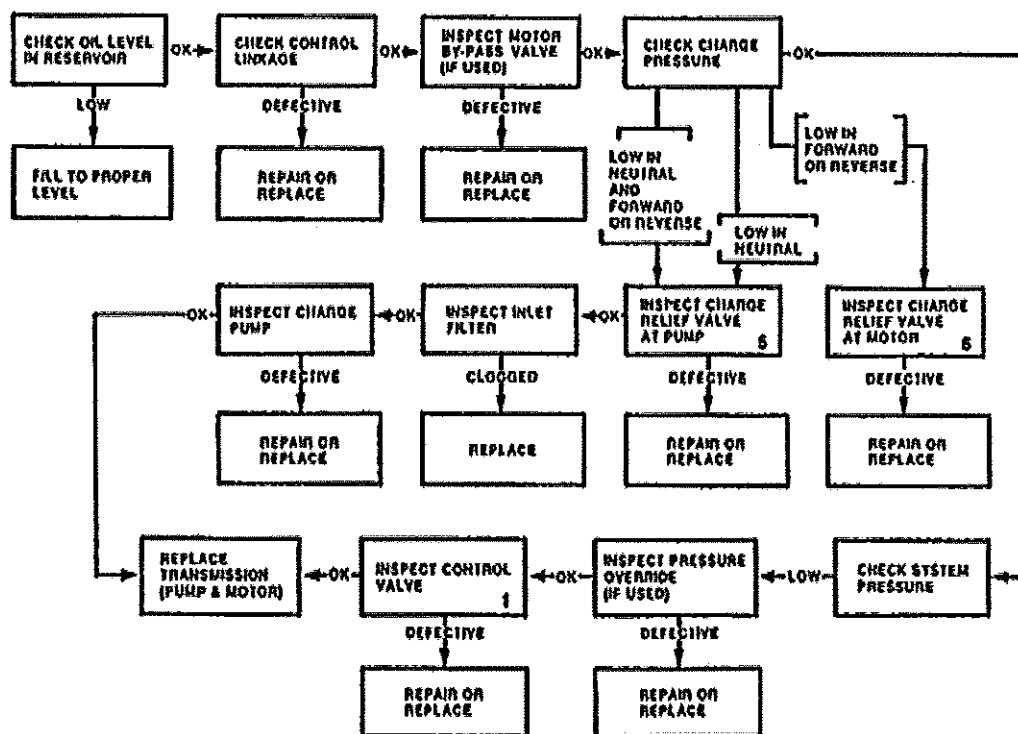
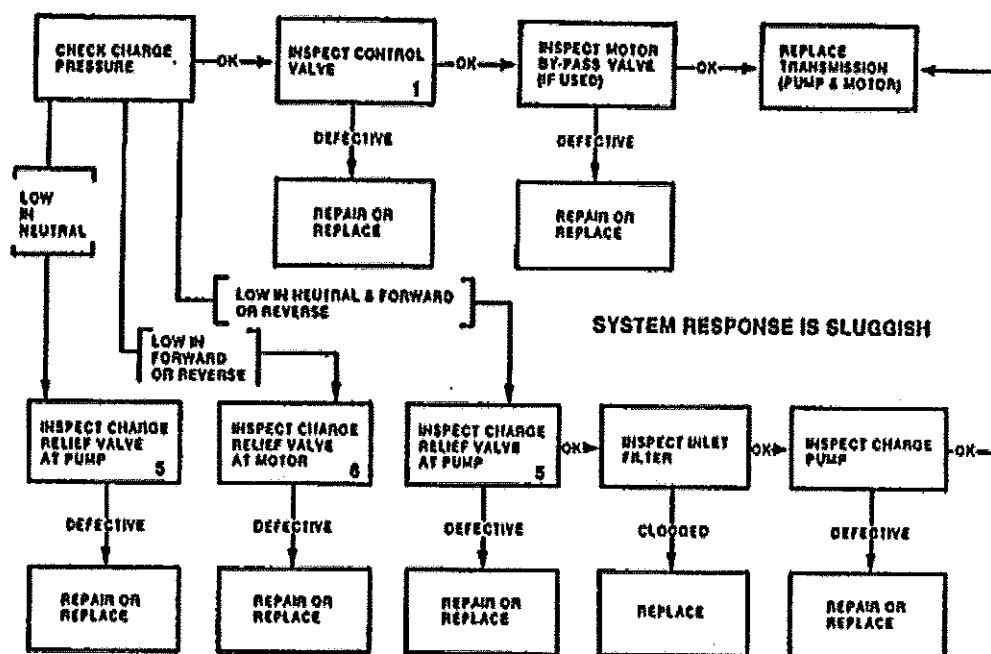
Transmission Oil - Use SAE 90 Multipurpose Oil and fill to top filler plug on main transmission case.

Due to the long working time in 2nd & 3rd gears you must keep the oil to the top shaft.

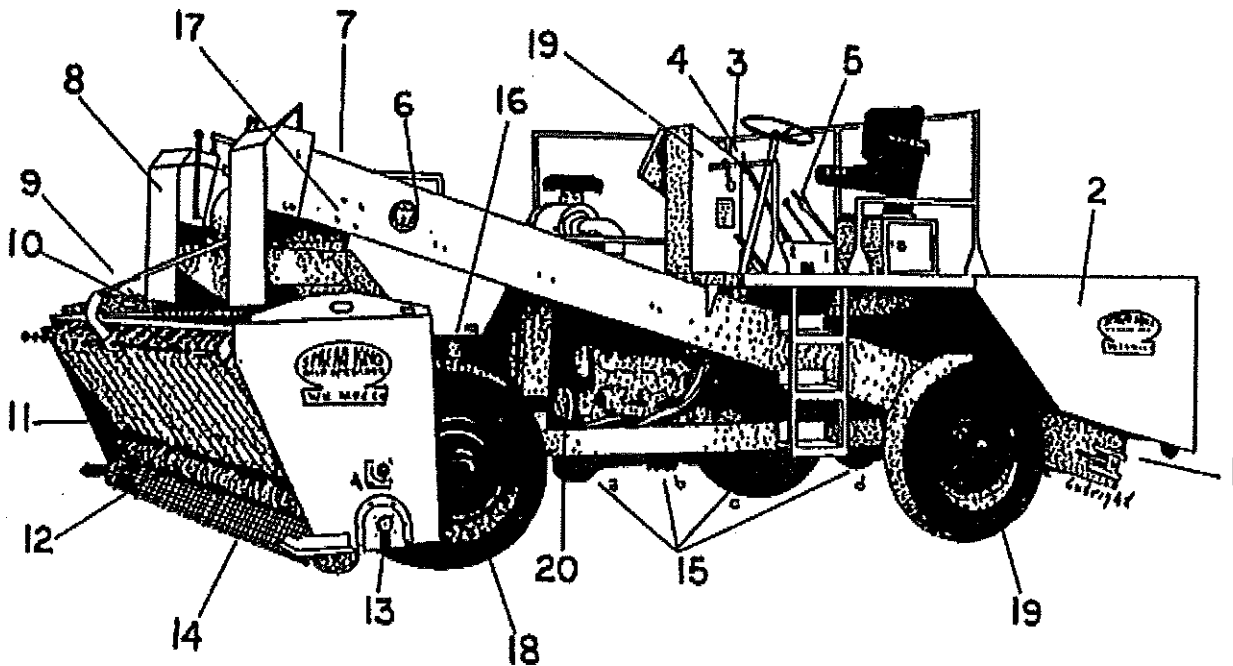
HYDROSTATIC TROUBLE-SHOOTING



HYDROSTATIC TROUBLE-SHOOTING



SPREADER COMPONENTS

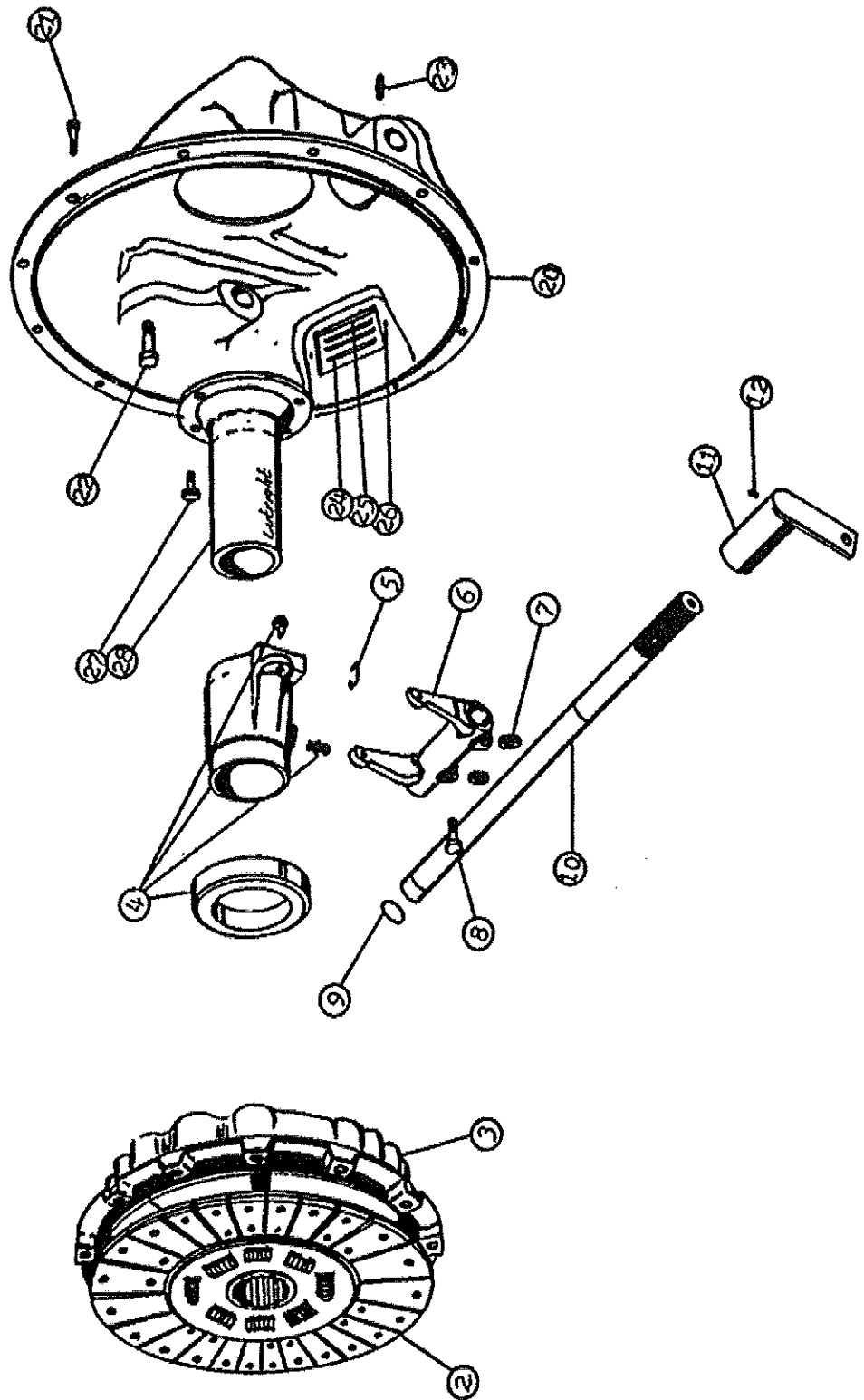


- | | |
|---|--------------|
| 1. Spring loaded truck hitch | Page W-43 |
| 2. Receiving hopper | Page W-43 |
| 3. Metering quadrant | Page W-61 |
| 4. Feed roll limit switch | Page WH-45 |
| 5. Hand brake, mechanical | Page WH-61 |
| 6. Independently operated conveyors | Page WHS-41 |
| 7. Variable speed conveyor controls | Page WHS-53 |
| 8. Baffle plates | Page WHS-41 |
| 9. Spread hopper | Page W-37 |
| 10. Full width rejection screens | Page W-37 |
| 11. Agitator | Page WHS-39 |
| 12. Individually operated radial cutoff gates | Page W-37 |
| 13. Spread roll | Page WHS-39 |
| 14. Adjustable segregation screen | Page WHS-37 |
| 15. Direct in-line positive power flow | See MFG Book |
| a. Engine | Page W2-3 |
| b. Reversing unit | Page W2-5 |
| c. 5-speed synchro mesh transmission | Page W-9 |
| d. Planetary heavy duty rear axle | Page WHS-43 |
| 16. Hydrostatic pumps | Page WHS-35 |
| 17. Hydrostatic motors | Page W-21 |
| 18. Front brakes | Page W-23 |
| 19. Rear brakes | Page WH-20 |
| 20. Power steering | |

ENGINE CLUTCH

PART NO	DESCRIPTION	NO. REQD.	REMARKS
NOTE:	ALWAYS SPECIFY ENGINE USED WHEN ORDERING FROM THIS PAGE.		
W2-1	BEARING-CLUTCH PILOT	1	CAT EQUIPPED
W2-1A	BEARING-CLUTCH PILOT	1	CUMMINS EQUIPPED
W2-2	DISC-DRIVEN 14" LIPE-ROLLWAY	1	CAT OR CUMMINS EQUIPPED
W2-3	PLATE-CLUTCH PRESSURE, LIPE ROLLWAY	1	CAT OR CUMMINS EQUIPPED
W2-4	BEARING ASSEMBLY	1	CAT OR CUMMINS EQUIPPED
W2-4A	BEARING ONLY-CLUTCH RELEASE	1	CAT OR CUMMINS EQUIPPED
W2-4B	SLEEVE ONLY-RELEASE BEARING	1	CAT OR CUMMINS EQUIPPED
W2-4C	PAD-CLUTCH YOKE	2	CAT OR CUMMINS EQUIPPED
W2-4D	FITTING-BEARING LUBRICATION	1	CAT OR CUMMINS EQUIPPED
W2-5	SPRING-PULL BACK	2	CAT OR CUMMINS EQUIPPED
W2-6	YOKE-RELEASE	1	CAT OR CUMMINS EQUIPPED
W2-7	WASHER-KEY	2	CAT OR CUMMINS EQUIPPED
W2-8	BOLT & L.W.-YOKE RETAINING	2	CAT OR CUMMINS EQUIPPED
W2-9	"O" RING-CLUTCH RELEASE SHAFT	2	CAT OR CUMMINS EQUIPPED
W2-10	SHAFT-CLUTCH RELEASE	1	CAT OR CUMMINS EQUIPPED
W2-11	LEVER-CLUTCH RELEASE SHAFT	1	CAT OR CUMMINS EQUIPPED
W2-12	SCREW-LEVER RETAINING	1	CAT OR CUMMINS EQUIPPED
W2-20	BELLHOUSING	1	CAT OR CUMMINS EQUIPPED
W2-21	SCREW & L.W.-BELLHOUSING/ENGINE	12	CAT OR CUMMINS EQUIPPED
W2-22	SCREW-BELLHOUSING/REVERSE BOX	4	CAT OR CUMMINS EQUIPPED
W2-23	FITTING-RELEASE SHAFT LUB.	2	CAT OR CUMMINS EQUIPPED
W2-24	COVER-ACCESS OPENING	1	CAT OR CUMMINS EQUIPPED
W2-25	GASKET-ACCESS COVER	1	CAT OR CUMMINS EQUIPPED
W2-26	SCREW & L.W.-ACCESS COVER.	4	CAT OR CUMMINS EQUIPPED
ITEM 27	SEE REVERSE BOX GROUP, PAGE W4		
ITEM 28	SEE REVERSE BOX GROUP, PAGE W4		

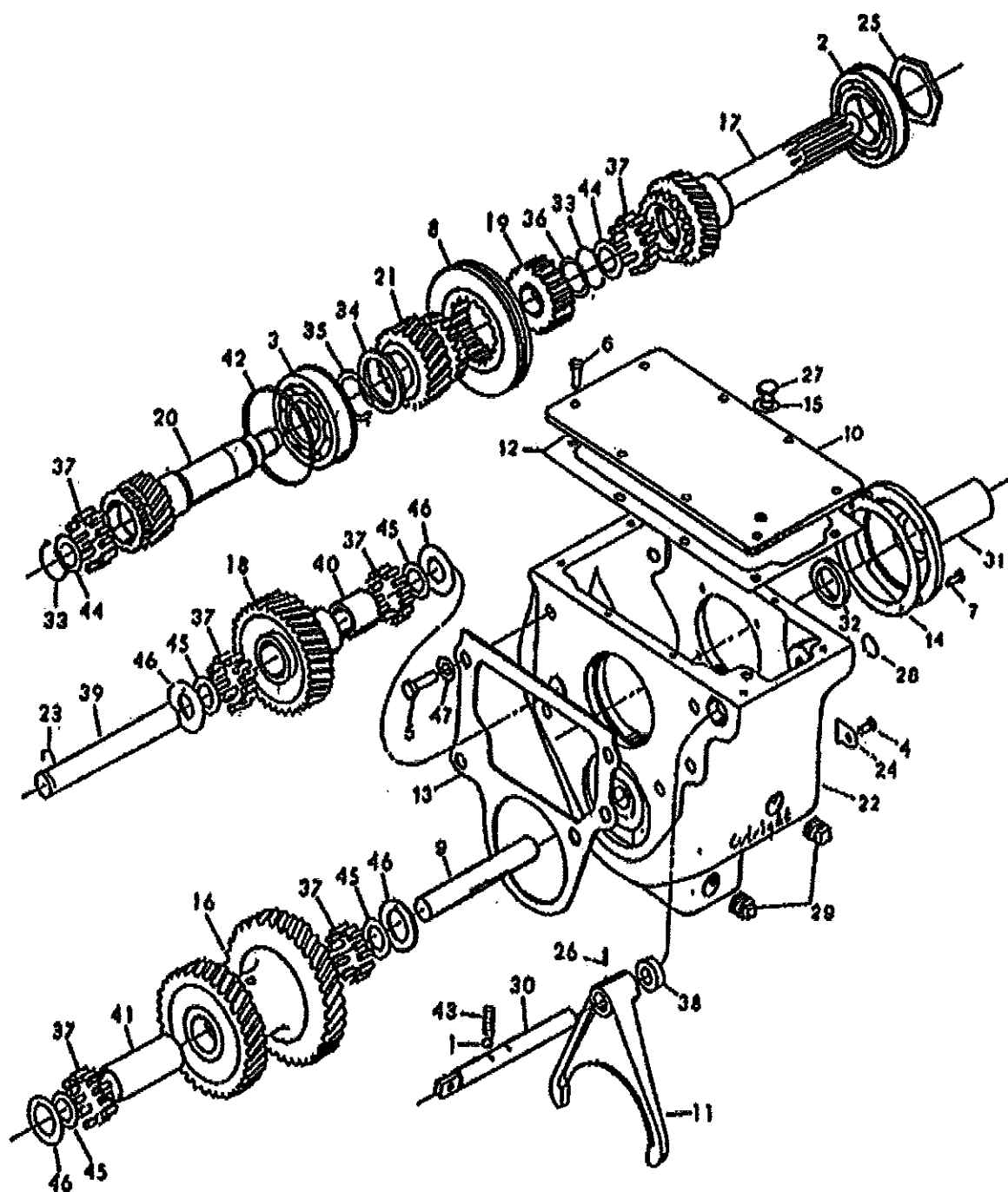
ENGINE CLUTCH



REVERSING TRANSMISSION

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WA-4-0	REVERSING TRANSMISSION ASSEMBLY	1	
WA-4-1	BALL	1	
WA-4-2	BEARING ASSEMBLY W/SNAP RING	1	
WA-4-3	BEARING ASSEMBLY W/SNAP RING	1	
WA-4-4	BOLT	1	
WA-4-5	BOLT	4	
WA-4-6	SCREW & LOCKWASHER	8	
WA-4-7	BOLT	4	
WA-4-8	CLUTCH	1	
WA-4-9	COUNTERSHAFT	1	
WA-4-10	COVER	1	
WA-4-11	FORK	1	
WA-4-12	GASKET	1	
WA-4-13	GASKET	1	
WA-4-14	GASKET	1	
WA-4-15	GASKET	1	
WA-4-16	GEAR	1	
WA-4-17	GEAR	1	
WA-4-18	GEAR	1	
WA-4-19	GEAR	1	
WA-4-20	GEAR	1	
WA-4-21	GEAR ASSEMBLY W/BUSHING	1	
WA-4-22	HOUSING ASSEMBLY	1	
WA-4-23	KEY	1	
WA-4-24	PLATE	1	
WA-4-25	NUT	1	
WA-4-26	PIN	1	
WA-4-27	PLUG	1	
WA-4-28	PLUG	1	
WA-4-29	PLUG	2	
WA-4-30	RAIL	1	
WA-4-31	RETAINER ASSEMBLY	1	
WA-4-32	SEAL	1	

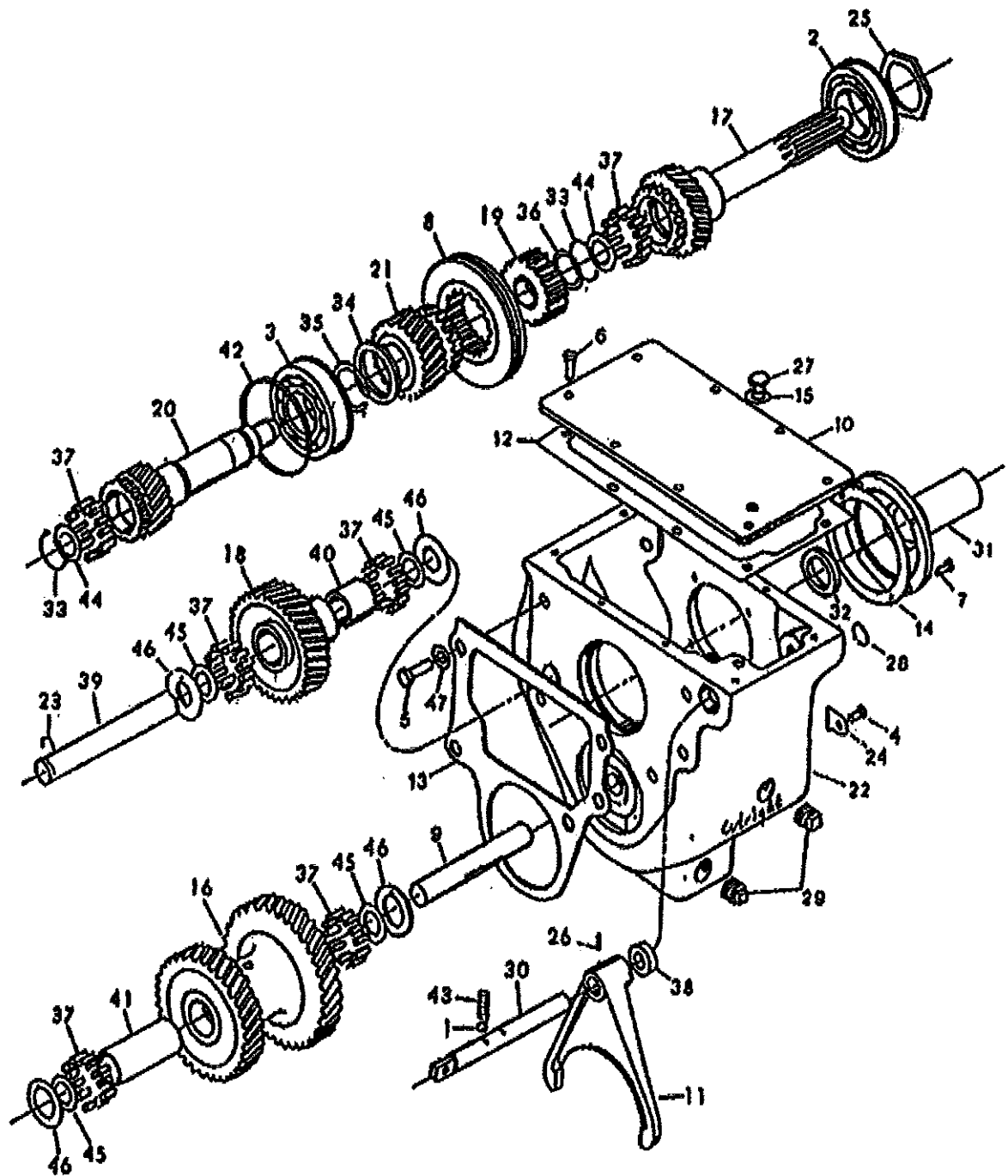
REVERSING TRANSMISSION



REVERSING TRANSMISSION

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WA-4-33	RING	2	
WA-4-34	RING	1	
WA-4-35	RING (.087-.089)	1	
WA-4-35	RING (.090-.092)	1	
WA-4-35	RING (.093-.094)	1	
WA-4-35	RING (.095-.096)	1	
WA-4-36	RING (.087)	1	
WA-4-36	RING (.090)	1	
WA-4-36	RING (.093)	1	
WA-4-36	RING (.096)	1	
WA-4-37	ROLLER	84	
WA-4-38	SEAL	1	
WA-4-39	SHAFT	1	
WA-4-40	SPACER	1	
WA-4-41	SPACER	1	
WA-4-42	SPACER	1	
WA-4-43	SPRING	1	
WA-4-44	WASHER	2	
WA-4-45	WASHER	4	
WA-4-46	WASHER	4	
WA-4-47	WASHER (LOCK)	4	

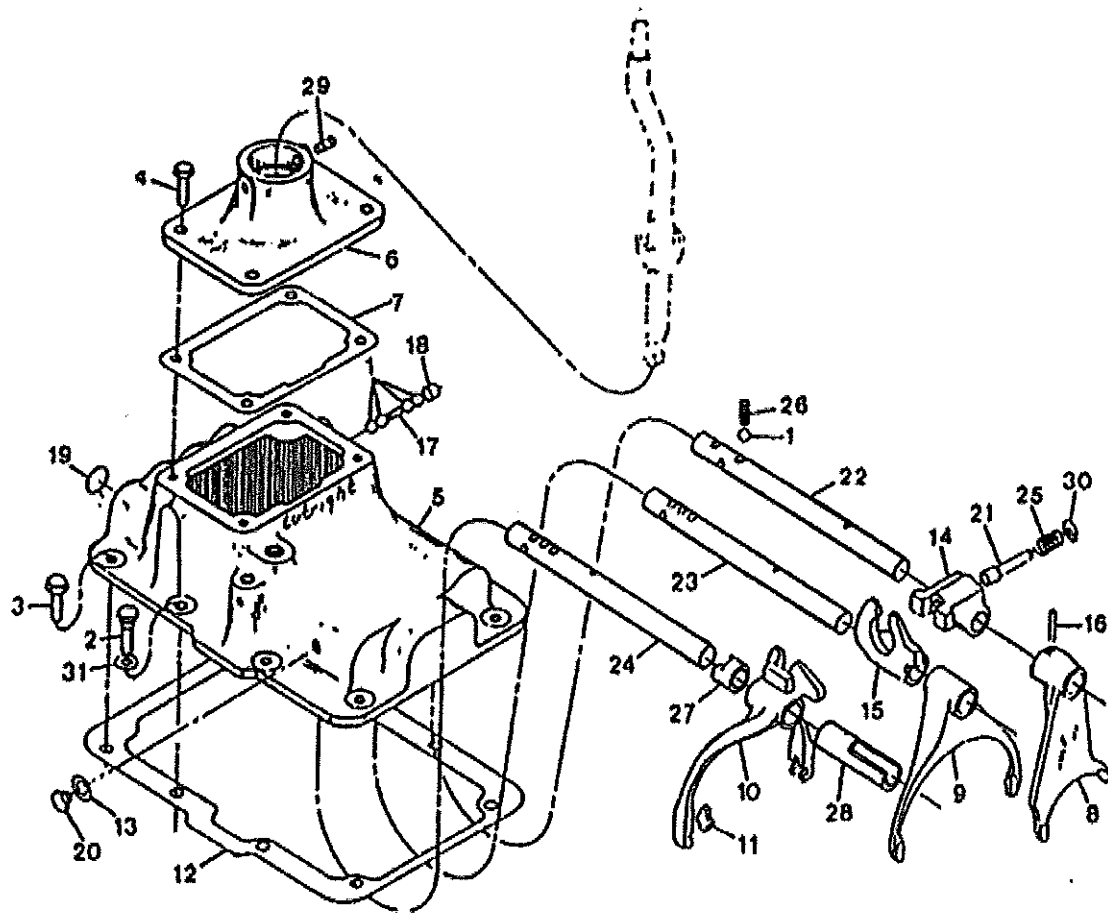
REVERSING TRANSMISSION



TRANSMISSION COVER

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
WA-5A-0	Cover And Shift Control Assembly	1	
WA-5A-1	Ball	8	
WA-5A-2	Bolt	2	
WA-5A-3	Bolt Assy. Cover Group	6	
WA-5A-4	Bolt Assembly	4	
WA-5A-5	Cover	1	
WA-5A-6	Upper Cover Assembly	1	
WA-5A-7	Gasket	1	
WA-5A-8	Fork	1	
WA-5A-9	Fork	1	
WA-5A-10	Fork & Insert As	1	
WA-5A-11	Insert	2	
WA-5A-12	Gasket	1	
WA-5A-13	Gasket	1	
WA-5A-14	Lug	1	
WA-5A-15	Lug	1	
WA-5A-16	Pin	5	
WA-5A-17	Pin	1	
WA-5A-18	Plug	1	
WA-5A-19	Plug	4	
WA-5A-20	Plug	1	
WA-5A-21	Plunger	1	
WA-5A-22	Rail	1	
WA-5A-23	Rail	1	
WA-5A-24	Rail	1	
WA-5A-25	Spring	1	
WA-5A-26	Spring	3	
WA-5A-27	Spacer (Marina)	1	
WA-5A-28	Spacer (Marina)	1	
WA-5A-29	Trunnion	2	
WA-5A-30	Washer	1	
WA-5A-31	Washer	2	

TRANSMISSION COVER

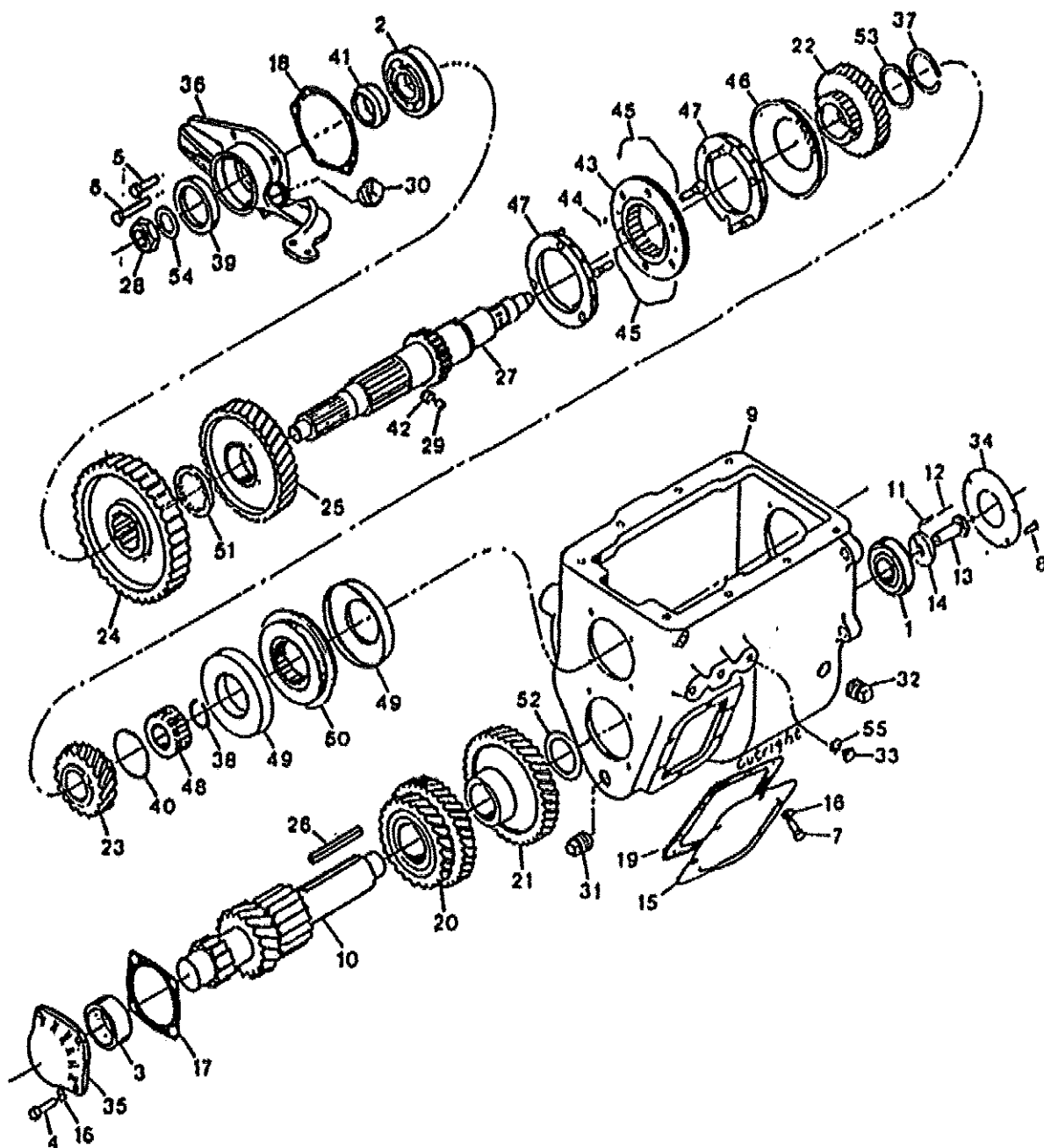


TRANSMISSION

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
WA-5-0	Transmission Assembly	1	
WA-6-1	Bearing	1	
WA-6-2	Bearing Assembly	1	
	Ring	1	
WA-6-3	Bearing	1	
WA-6-4	Bolt	4	
WA-6-5	Bolt	4	
WA-6-6	Bolt	1	
WA-6-7	Bolt Assembly	12	
WA-6-8	Bolt Assembly Magnet	4	
WA-6-9	Case Assembly Countershaft Group	1	
WA-6-10	Countershaft	1	
WA-6-11	Pin	1	
WA-6-12	Pin	1	
WA-6-13	Screw	1	
WA-6-14	Washer	1	
WA-6-15	Cover	2	
WA-6-16	Gasket	16	
WA-6-17	Gasket	1	
WA-6-18	Gasket	1	
WA-6-19	Gasket	2	
WA-6-20	Gear	1	
WA-6-21	Gear	1	
WA-6-22	Gear	1	
WA-6-23	Gear	1	
WA-6-24	Gear	1	
WA-6-25	Gear	1	
WA-6-26	Key	1	
WA-6-27	Mainshaft	1	
WA-6-28	Nut	1	
WA-6-29	Pin	1	
WA-6-30	Plug	1	
WA-6-31	Plug	1	
WA-6-32	Plug	1	

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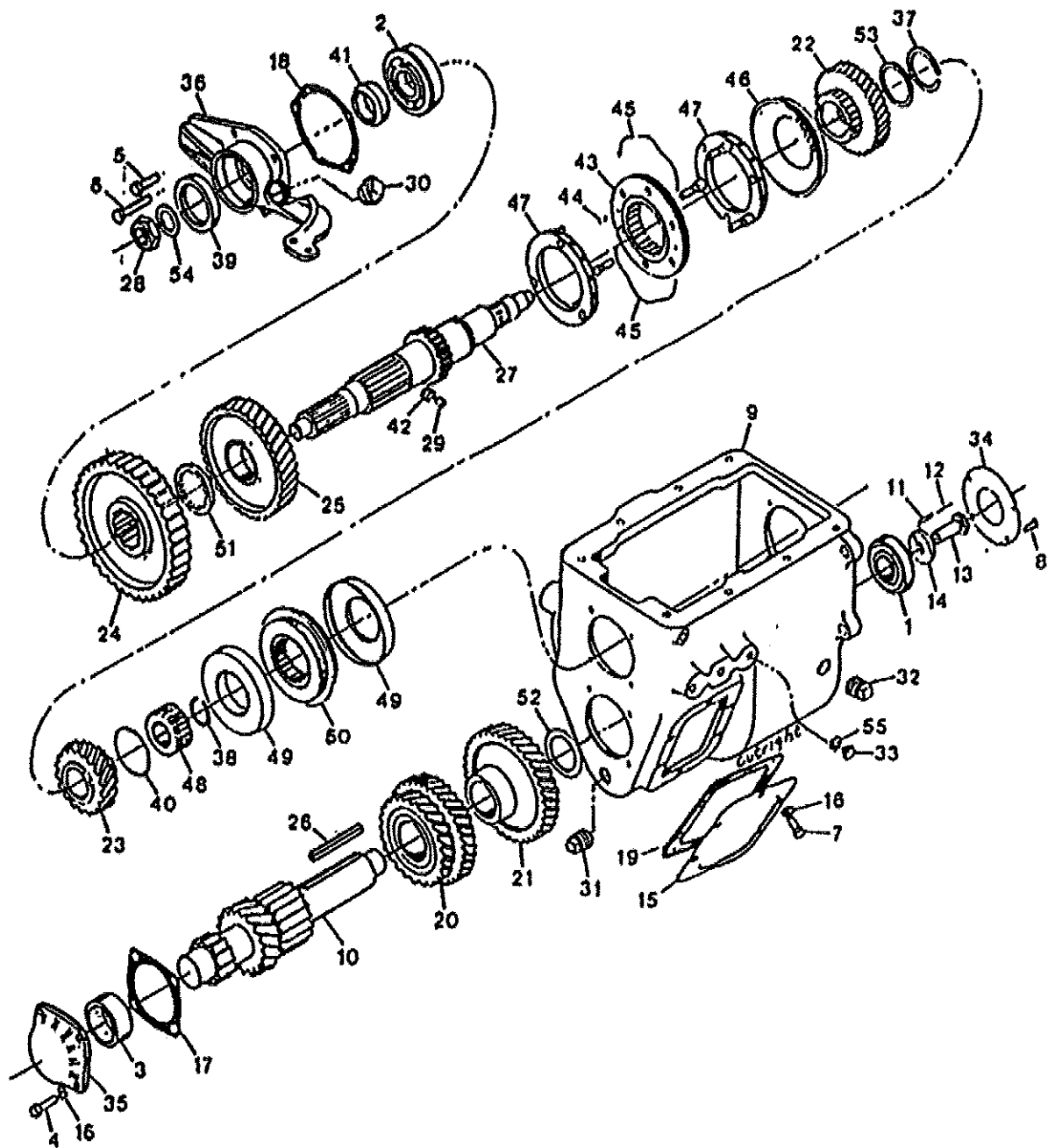
TRANSMISSION



TRANSMISSION

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
WA-6-33	Plug	3	
WA-6-34	Retainer	1	
WA-6-35	Retainer	1	
WA-6-36	Retainer Assembly	1	
WA-6-37	Ring	1	
WA-6-38	Ring (.087)	1	
WA-6-38	Ring (.090)	1	
WA-6-38	Ring (.093)	1	
WA-6-38	Ring (.096)	1	
WA-6-39	Seal	1	
WA-6-40	Shim (.010)	1	
WA-6-41	Shim (.015)	1	
WA-6-41	Spacer	1	
WA-6-42	Spring Synchronizer Assembly	1	
WA-6-43	Clutch Assembly	1	
WA-6-44	Pin	2	
WA-6-45	Spring	2	
WA-6-46	Ring	1	
WA-6-47	Ring Assy. Synchronizer Assy.	2	
WA-6-48	Gear	1	
WA-6-49	Ring	2	
WA-6-50	Synchronizer Assy.	1	
WA-6-51	Washer	1	
WA-6-52	Washer	1	
WA-6-53	Washer	1	
WA-6-54	Washer	1	
WA-6-55	Washer	3	

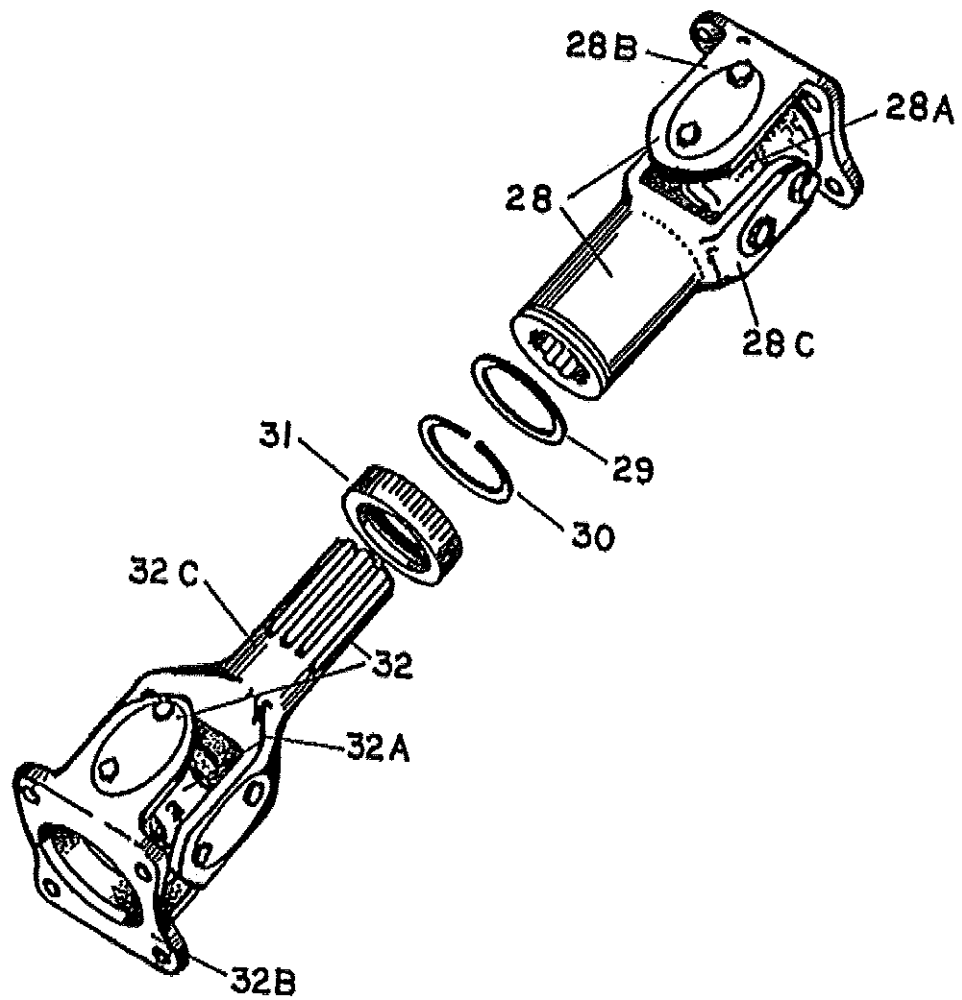
TRANSMISSION



DRIVE SHAFT

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
W8-28	Slip Joint & Flange Yoke Assy.	1	
W8-28A	Joint & Bearing Kit	1	
W8-28B	Yoke - Front Flange	1	
W8-28C	Sleeve Yoke Assy.	1	
W8-29	Washer - Cork	1	
W8-30	Washer - Steel	1	
W8-31	Dust Cap	1	
W8-32	Slip Stub Yoke & Flange Assy.	1	
W8-32A	Yoke - Slip Stub	1	
W8-32B	Journal & Bearing Kit	1	
W8-32C	Slip Stub Flange	1	

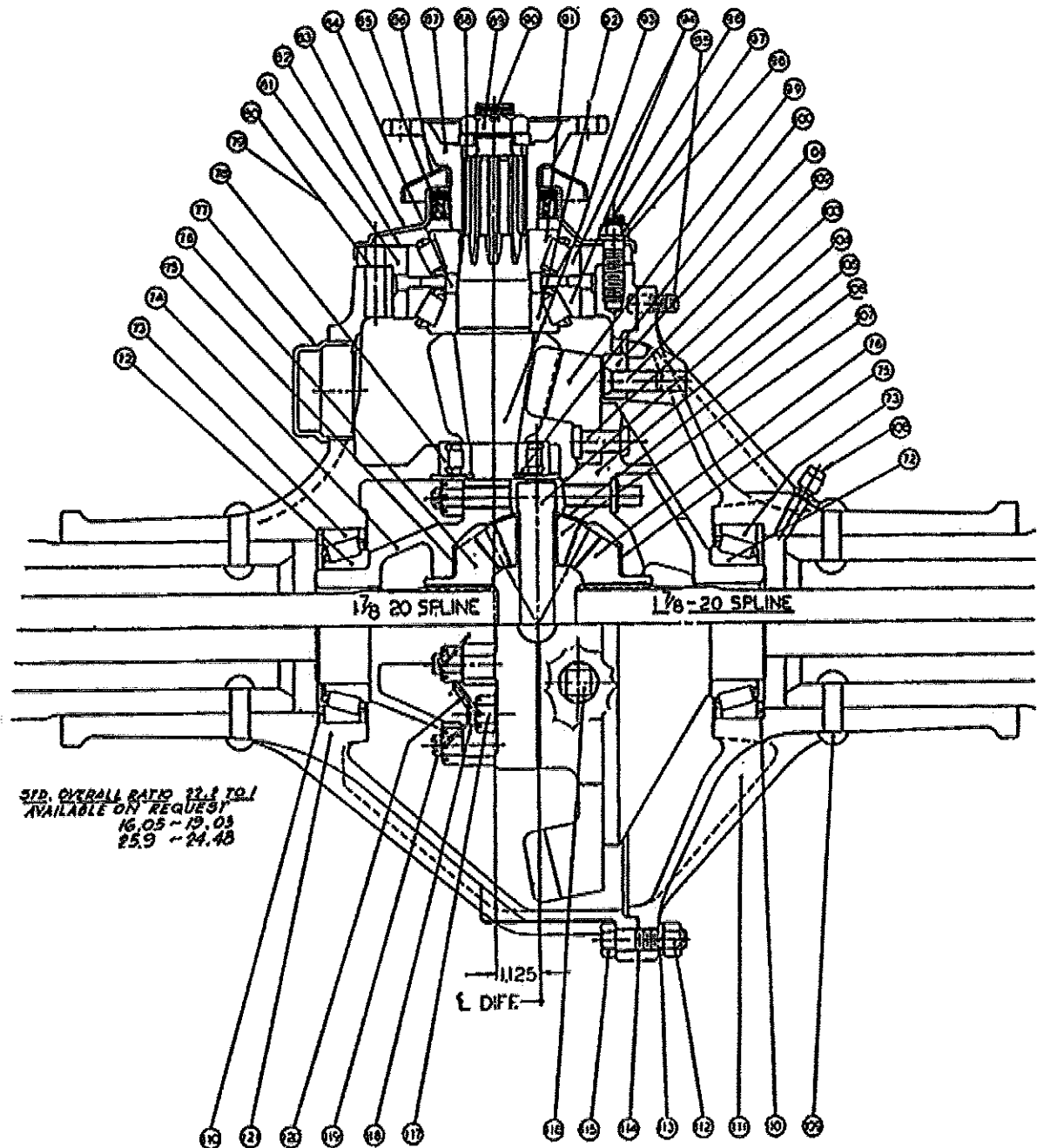
DRIVE SHAFT



DIFFERENTIAL ASSEMBLY

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
W10-72	Cone - Diff. Bearing	2	
W10-73	Cup - Diff. Bearing	2	
W10-74	Diff. Case - Plain Half	1	
W10-75	Washer - Diff. Side Gear - Trust	2	
W10-76	Gear - Diff. Side	2	
W10-77	Plug - Diff. Carrier Inspection	1	
W10-78	Bearing - Bevel Pinion - Rear	1	
W10-79	Shim - Bevel Pinion Cage	VAR.	
W10-80	Gasket - Pinion Brg. Cage	1	
W10-81	Cage - Pinion Brg.	1	
W10-82	Gasket - Pinion Brg. Cage	1	
W10-83	Cover - Bevel Pinion Brg. Cage	1	
W10-84	Shim - Bevel Pinion Bearing	VAR.	
W10-85	Oil Seal- Bevel Pinion	1	
W10-86	Slinger - Companion Flange	1	
W10-87	Flange - Companion	1	
W10-88	Washer - Bevel Pinion Nut	1	
W10-89	Nut - Bevel Pinion	1	
W10-90	Cotter - Bevel Pinion Nut	1	
W10-91	Cone - Bev. Pinion Nut -Front BRG.	1	
W10-92	Cone - Bev. Pinion - Front Brg.	1	
W10-93	Pinion - Bevel Drive	1	
W10-94	Cup-Bevel Pinion-Front Bearing	2	
W10-95	Stud-Diff. Carrier Flange	2	
W10-96	Stud-Pinion Bearing Cage	8	
W10-97	Nut-Pinion Bearing Cage	8	
W10-98	Lockwasher-Pinion Bearing Cage	8	
W10-99	Gear - Bev. Drive	1	
W10-100	Lock Ring - Bev. Pinion-Rear Brg.	1	
W10-101	Thrust Block - Bev. Gear	1	
W10-102	Pin - Bev. Gear Thrust Block	1	
W10-103	Rivet-Diff. Case to Bev. Gear	12	
W10-104	Spider - Differential	1	
W10-105	Differential Case - Flange Half	1	
W10-106	Washer - Diff, Pinion Thrust	4	
W10-107	Pinion Differential	4	
W10-108	Oil Breather-Diff. Carrier Cover	1	
W10-109	Rivet-Housing Tube	16	
W10-110	Spacer-Diff. Bearing Cup	VAR.	
W10-111	Differential Carrier Cover	1	
W10-112	Nut-Diff. Carrier Flange	12	
W10-113	Lockwasher - Diff. Carrier Flange	12	
W10-114	Gasket-Diff. Carrier Flange	1	
W10-115	Bolt-Diff. Carrier Flange	10	
W10-116	Plug-Diff. Carrier Oil Drain	1	
W10-117	Nut-Diff. Case Bolt	12	
W10-118	Bolt-Diff. Case Short	4	
W10-119	Bolt-Diff. Case Long	8	
W10-120	Lockwire - Diff. Case Bolt	1	
W10-121	Carrier - Differential	1	

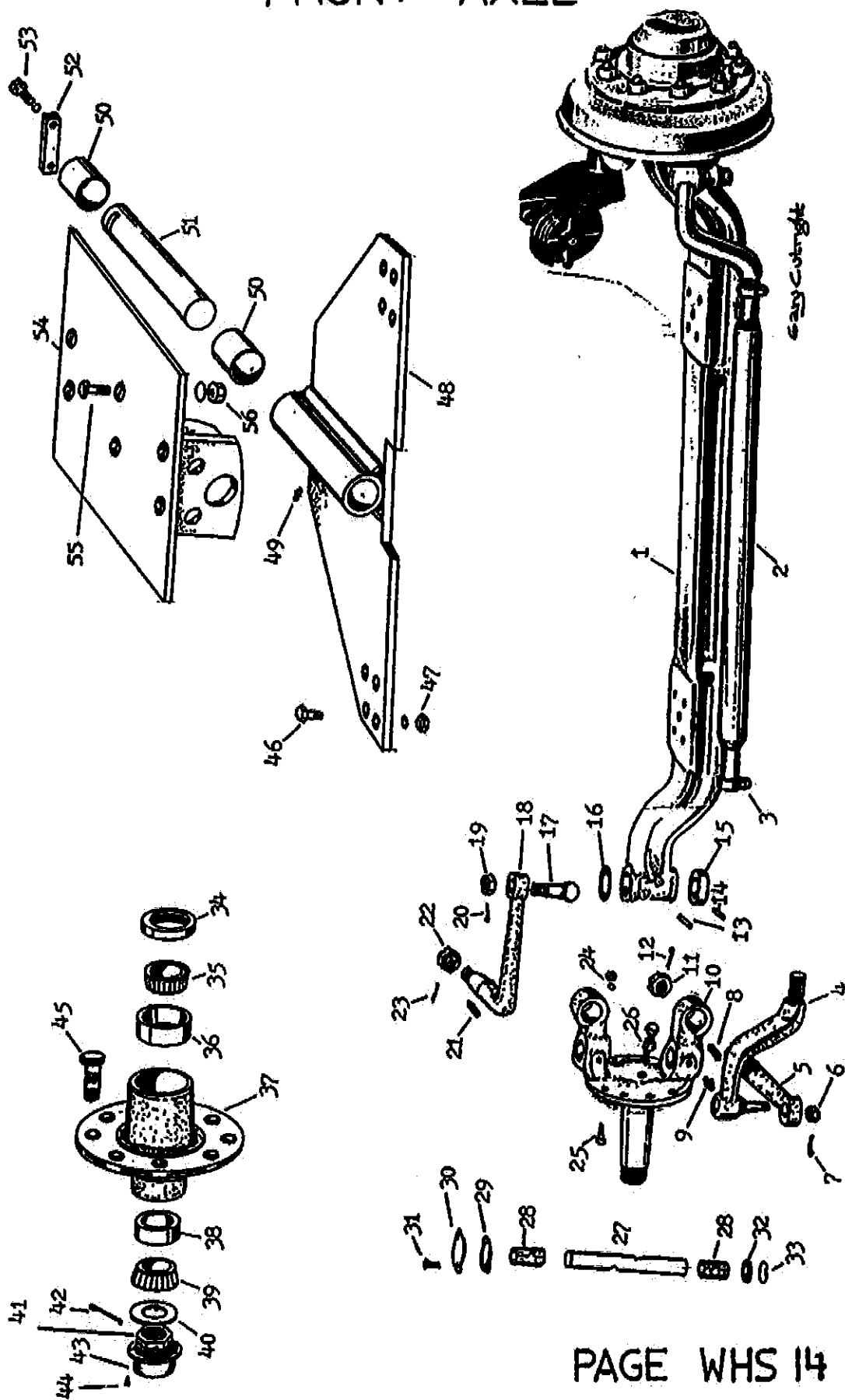
DIFFERENTIAL ASSEMBLY



PLANETARY ASSEMBLY

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
W12-16	Retainer, Hub Brg. Oil Seal	2	
W12-17	Oil Seal, Hub Brg.	2	
W12-18	Oil Slinger	2	
W12-19	Cup, Hub Brg. Inner	2	
W12-20	Cone, Hub Brg. Inner	2	
W12-21	Cap Screw - Planet Ring Gear	16	
W12-22	Lockwire - Ring Gear Cap Screw	8	
W12-23	Lock - Planetary Ring Gear	2	
W12-24	Plug - Planetary Dr. Oil Drain	2	
W12-25	Hub	2	
W12-26	Gear - Planet Ring (52)	2	
W12-27	Cup - Hub Brg. Outer	2	
W12-28	Cone - Hub Brg. Outer	2	
W12-29	Lockwasher - Planetary Spider Cover	16	
W12-30	Capscrew - Planetary Spider Cover	16	
W12-31	Hub - Planetary Ring Gear	2	
W12-32	Nut - Hub Brg.	2	
W12-33	Pin - Planetary Sun Gear Washer	4	
W12-34	Washer - Planetary Sun Gear	2	
W12-35	Snap Ring - Sun Gear Retainer	2	
W12-36	Thrust Button - Dr. Joint	2	
W12-37	Cover - Planetary Gear Spider	2	
W12-38	Shaft - Axle	2	
W12-39	Gear - Planetary Sun (20)	2	
W12-40	Plug - Planetary Dr. Oil Level	2	
W12-41	Washer-Planetary Pinion Thrust - Outer	6	
W12-42	Pinion - Planetary (16T)	6	
W12-43	Lock - Hub Bearing Nut	4	
W12-44	Washer -Planetary Pinion Thrust-Inner	6	
W12-45	Spindle - Wheel Brg.	2	
W12-46	Gasket-Planetary Gear Spider Cover	2	
W12-47	Shaft - Planetary Pinion	6	
W12-48	Spider - Planetary Gear	2	
W12-50	Nut-Planetary Spider to Hub Stud	24	
W12-51	Lockwasher -Spider To Hub Stud	24	
W12-52	Stud-Planetary Spider To Hub	24	
W12-53	Gasket-Planetary gear Spider to Hub	2	
W12-54	Nut - Wheel	24	
W12-55	Stud - Wheel	24	
W12-56	Capscrew	20	
W12-57	Lockwire -Brake Drum Capscrew	2	
W12-58	Brake Drum	2	
W12-65	Bolt - Spindle to Housing	24	
W12-66	Washer - Spindle to Housing Bolt	25	
W12-67	Seal - Spindle to Housing	2	
W12-68	Retainer - Axle Shaft Oil Seal	2	
W12-69	Oil Seal - Axle Shaft	2	
W12-70	Nut - Spindle to Housing Bolt	24	
W12-71	Tube - Axle	2	

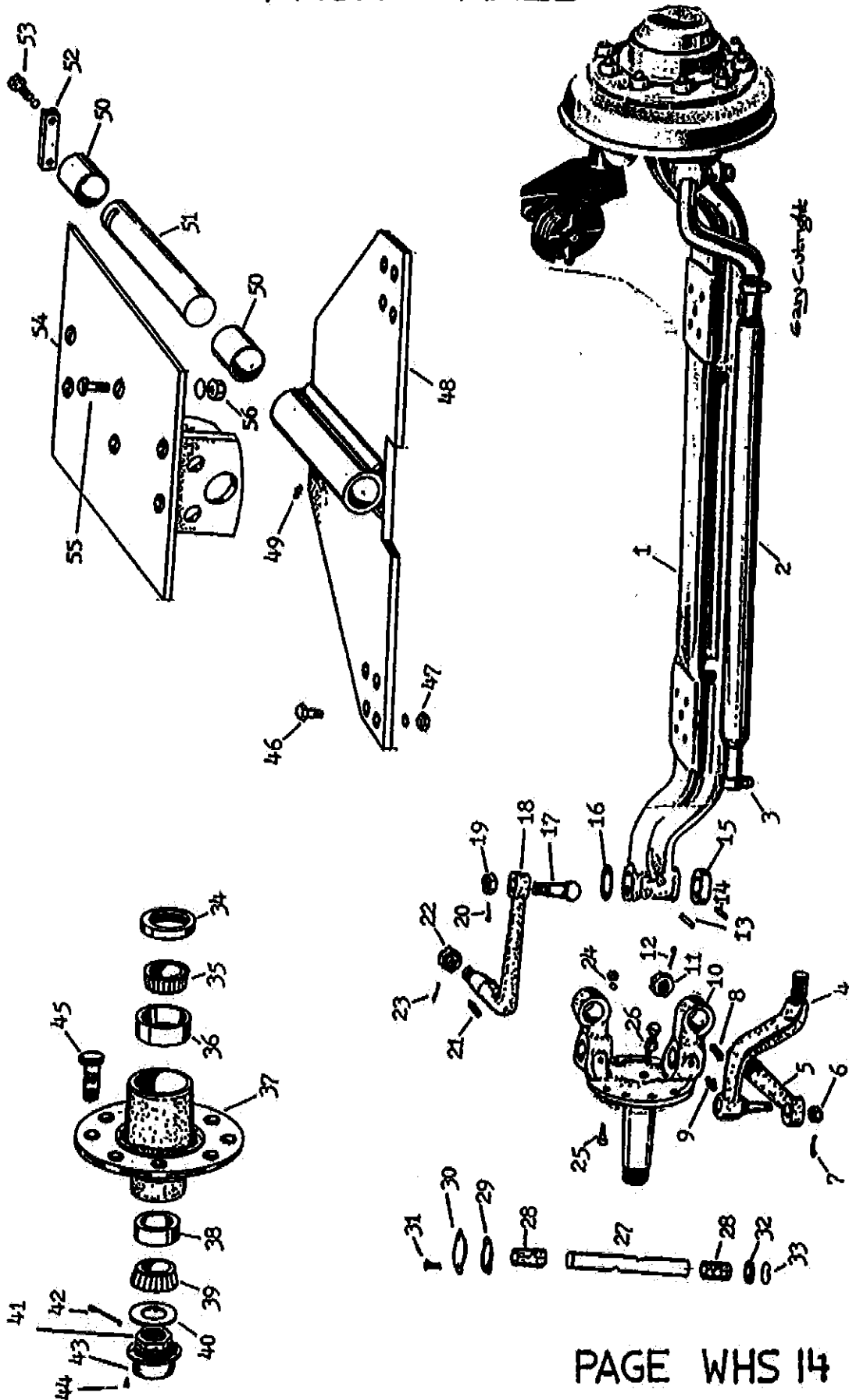
FRONT AXLE



FRONT AXLE

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
W14-1	Axle - Center	1	
W14-2	Cross Tube	1	
W14-3	Clamp & Bolt Assy - Cross Tube	2	** W14-4 Parts
W14-4	End - Cross Tube [Assemblies] **	2	4A - Stud
W14-5	Arm - Cross Tube	2	4B - Bearing
W14-6	Nut - Cross Tube Stud	2	4C - Felt
W14-7	Cotter Key - Cross Tube Stud Nut	2	4D - Seat
W14-8	Key - Cross Tube Arm	2	4E - Spring
W14-9	Fitting - Lubrication	2	4F - Plug
W14-10	Steering Knuckle [Specify R.H. or L.H.]	2	4G - Lock Ring
W14-11	Nut - Cross Tube Arm	2	4H - Boot
W14-12	Cotter Key - Cross Tube Arm Nut	2	
W14-13	Retainer - Knuckle Pin	2	
W14-14	Retainer - Knuckle Pin	2	
W14-15	Bearing - Knuckle Thrust	2	
W14-16	Shim - Steering Knuckle	VAR.	
W14-17	Ball - Steering Arm	1	
W14-18	Arm - Steering	1	
W14-19	Nut - Steering Arm Ball	1	
W14-20	Cotter Key - Steering Arm Ball Nut	1	
W14-21	Key - Steering Arm	1	
W14-22	Nut - Steering Arm	1	
W14-23	Cotter Key - Steering Arm Kit	1	
W14-24	Nut & L.W. - Backing Plate	16	
W14-25	Bolt - Backing Plate	16	
W14-26	Steering Knuckle Stop Screw Ass.	2	
W14-27	Pin - Steering Knuckle	2	
W14-28	Bushing - Steering Knuckle Pin	4	Specify Upper or Lower
W14-29	Gasket - Steering Knuckle Dust Cover	2	
W14-30	Dust Cover - Knuckle Pin	2	

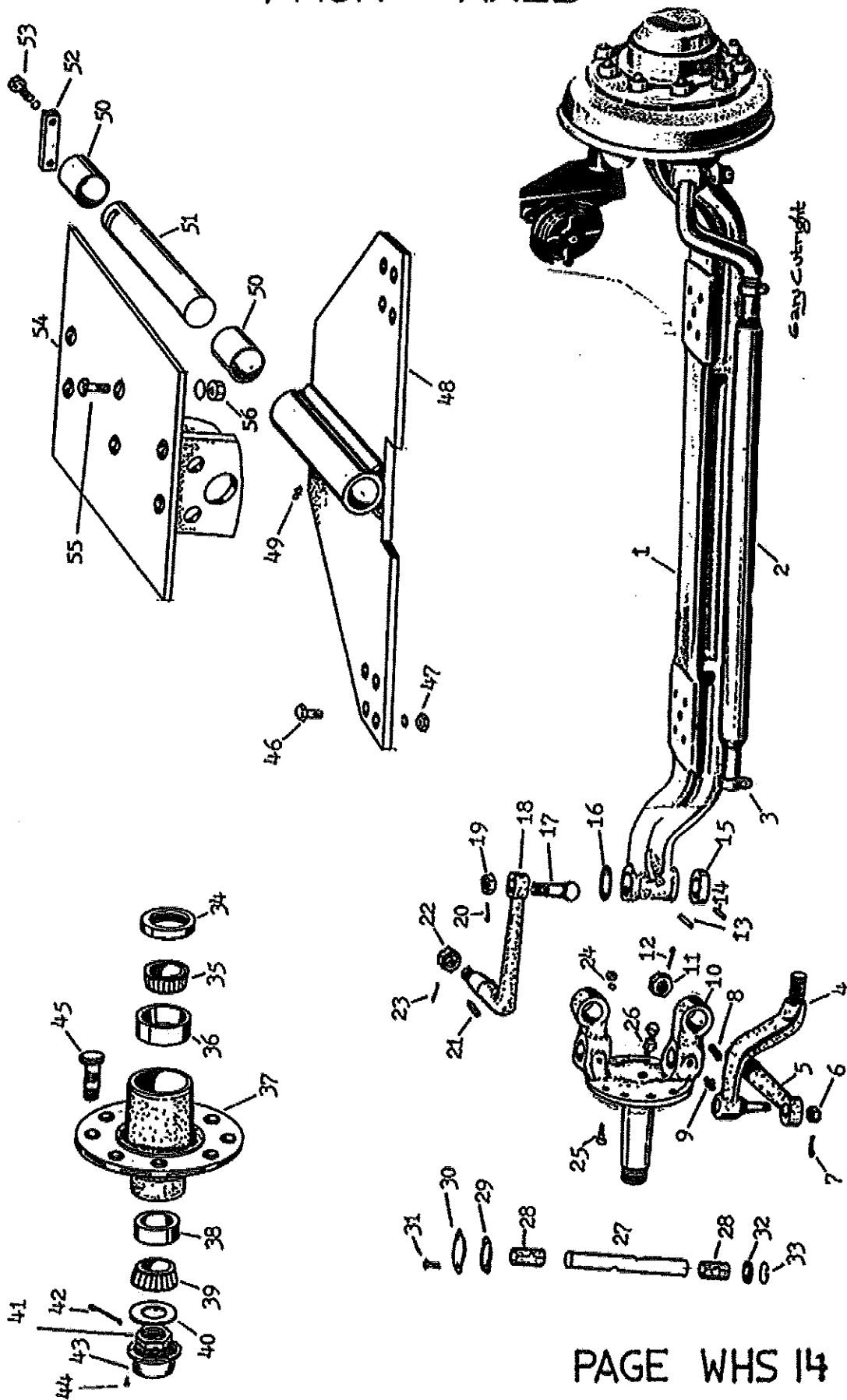
FRONT AXLE



FRONT AXLE

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
W14-31	Screw - Dust Cover	4	
W14-32	Plug - Steering Knuckle Pin	2	
W14-33	Ring - Locking, Steering Knuckle Pin	2	
W14-34	Seal - Hub Inner	2	
W14-35	Cone - Hub Inner	2	
W14-36	Cup - Hub Inner	2	
W14-37	Hub	2	
W14-38	Cup - Hub Outer	2	
W14-39	Cone - Hub Outer	2	
W14-40	Washer - Hub	2	
W14-41	Nut - Hub Bearing Retainer	2	
W14-42	Cotter Key - Hub Brg. Nut	2	
W14-43	Dust Cover - Hub.	2	
W14-44	Screw - Hub Dust Cover	12	
W14-45	Stud & Nut - Wheel & Brake Drum	20	
W14-46	Bolt - Oscillating Pad to Axle	8	
W14-47	Nut & L.W. - Pad to Axle Bolt	8	
W14-48	Pad - Oscillating	1	
W14-49	Fitting - Lubrication	1	
W14-50	Bushing - Oscillating Shaft	2	
W14-51	Shaft - Oscillating	1	
W14-52	Keeper - Oscillating Shaft	1	
W14-53	Bolt & L.W. - Oscillating Shaft Keeper	2	
W14-54	Oscillating Mount	1	
W14-55	Bolt - Oscillating Mount	4	
W14-56	Nut & L.W. - Oscillating Mount Bolt	4	

FRONT AXLE

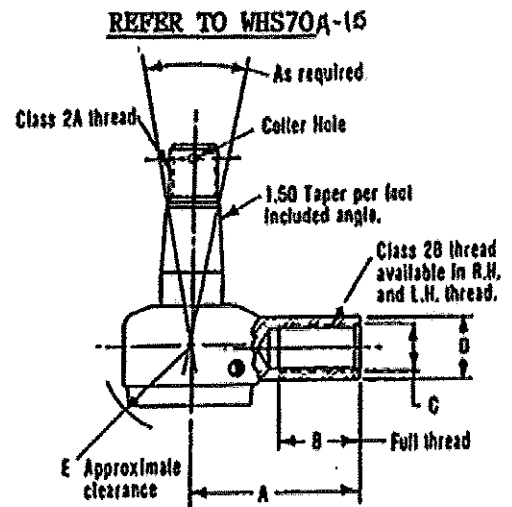
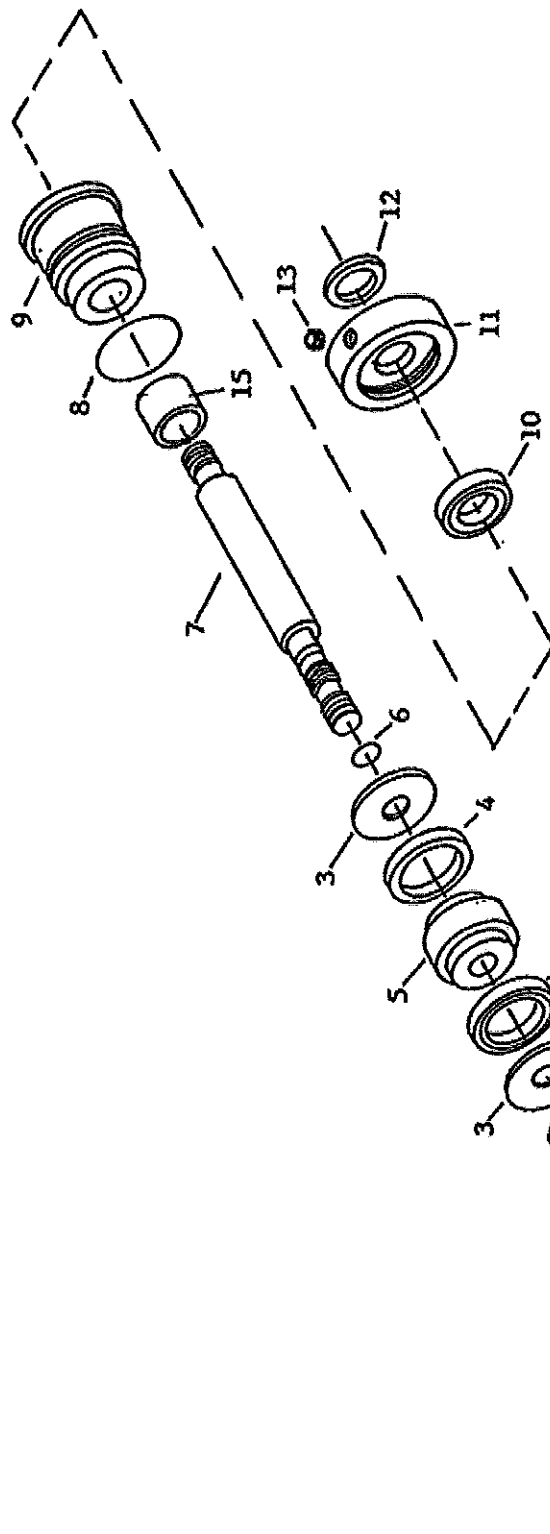


STEERING CYLINDER

PART NO	DESCRIPTION	NO. REQD.	REMARKS
W 16A-0	Cylinder Assembly		
W 16A-1	Tube Assy.	1	
W 16A-2	Nut	1	
W 16A-3	Follower Plate	2	
W 16A-4	U - Cup	2	
W 16A-5	Piston	1	
W 16A-6	O - Ring	1	
W 16A-7	Rod	1	
W 16A-8	O - Ring	1	
W 16A-9	Head	1	
W 16A-10	U - Cup	1	
W 16A-11	Head Cup	1	
W 16A-12	Wiper	1	
W 16A-13	Set Screw	1	
W 16A-14	Seal Kit	1	Not Shown
WHS16A-15	Spacer	1	

STEERING CYLINDER

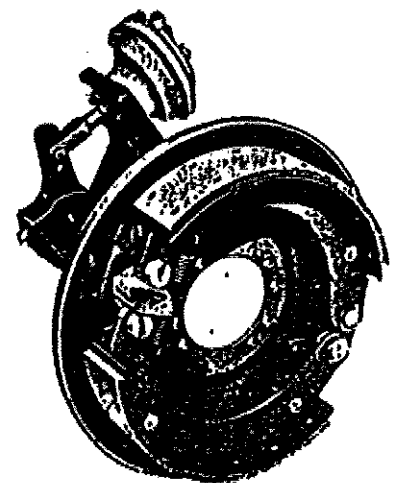
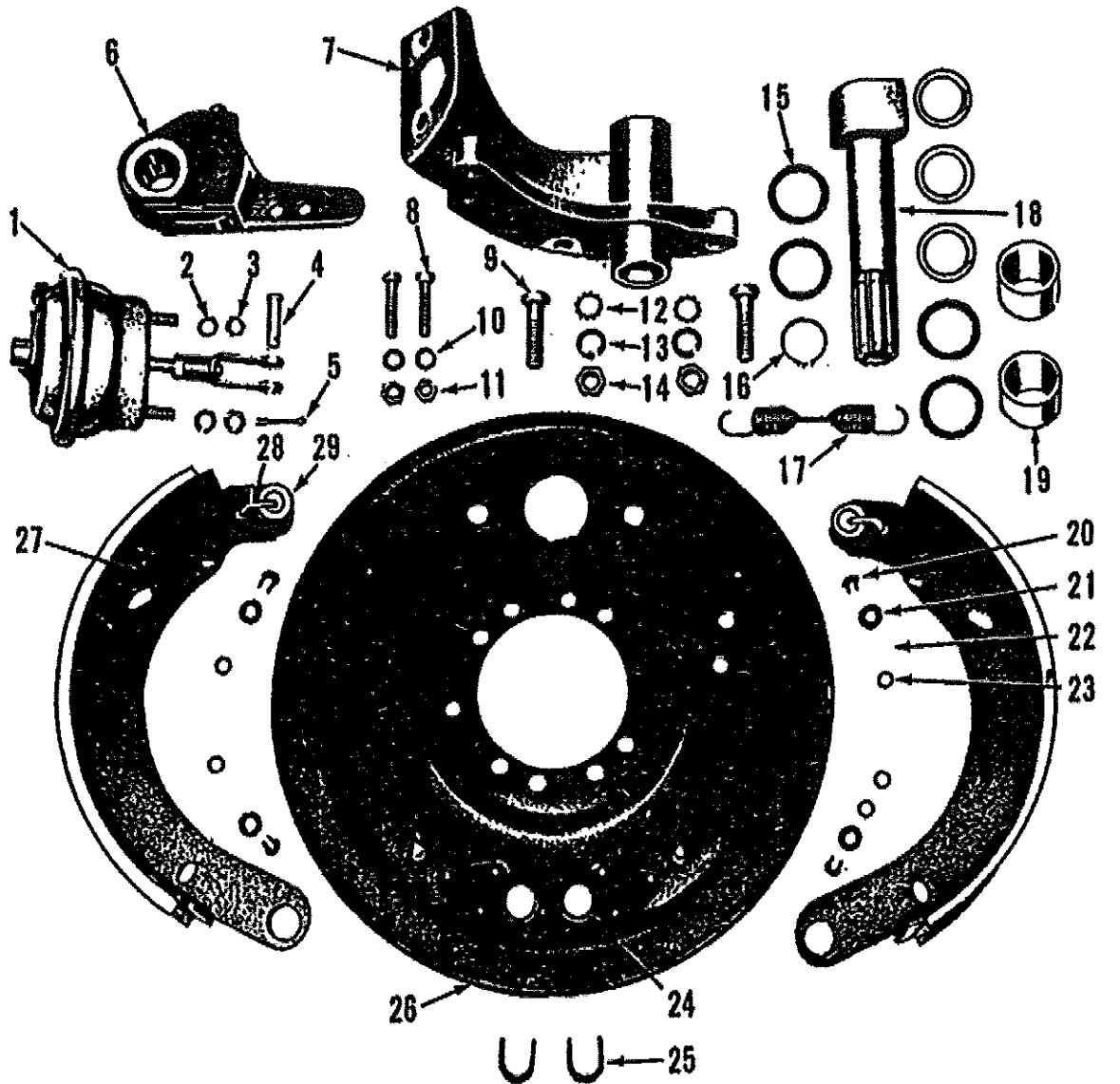
Specifications Type II
Vertical Socket With
Internal Threaded Stem



FRONT BRAKE ASSEMBLY

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
W22-1	Chamber - Brake Assy.	1	
W22-2	Washer - Brake Chamber Stud Nut	2	
W22-3	Nut - Brake Chamber Stud	2	
W22-4	Pin - Brake Chamber Yoke	1	
W22-5	Key - Chamber Yoke Pin, Cotter	1	
W22-6	Lever - Enclosed Adjustable T.D.A.	1	
W22-7	Bracket - Camshaft & Chamber	1	
W22-8	Bolt-Camshaft Bracket - Small	2	
W22-9	Bolt Camshaft Bracket - Large	2	
W22-10	Washer-Camshaft Bracket Bolt - Small	2	
W22-11	Nut-Camshaft Bracket Bolt-Small	2	
W22-12	Washer-Camshaft Bracket Bolt-Shakeproof	2	
W22-13	Washer - Camshaft Bracket Bolt - Large	2	
W22-14	Nut -Camshaft Bracket Bolt-Large	2	
W22-15	Washer - Camshaft Spacing	VAR.	
W22-16	Ring-Camshaft & Lever Lock	1	
W22-17	Spring-Brake Shoe Return	1	
W22-18	Shaft-Cam	1	
W22-19	Bushing - Camshaft	2	
W22-20	Washer - Guide Pin "C"	4	
W22-21	Washer - Guide Pin Thick	4	
W22-22	Washer - Guide Pin Thin	4	
W22-23	Washer - Guide Pin Spring	4	
W22-24	Pin - Brake Anchor	2	
W22-25	Washer - Anchor Pin "C"	2	
W22-26	Plate - Brake Backing	1	
W22-27	Shoe-Brake & Lining Assy. (Kit Includes Lining & Rivets Only)	1	
W22-28	Retainer - Brake Shoe Roller	2	
W22-29	Roller - Brake Shoe	2	
W22-30	Brake Drum	1	

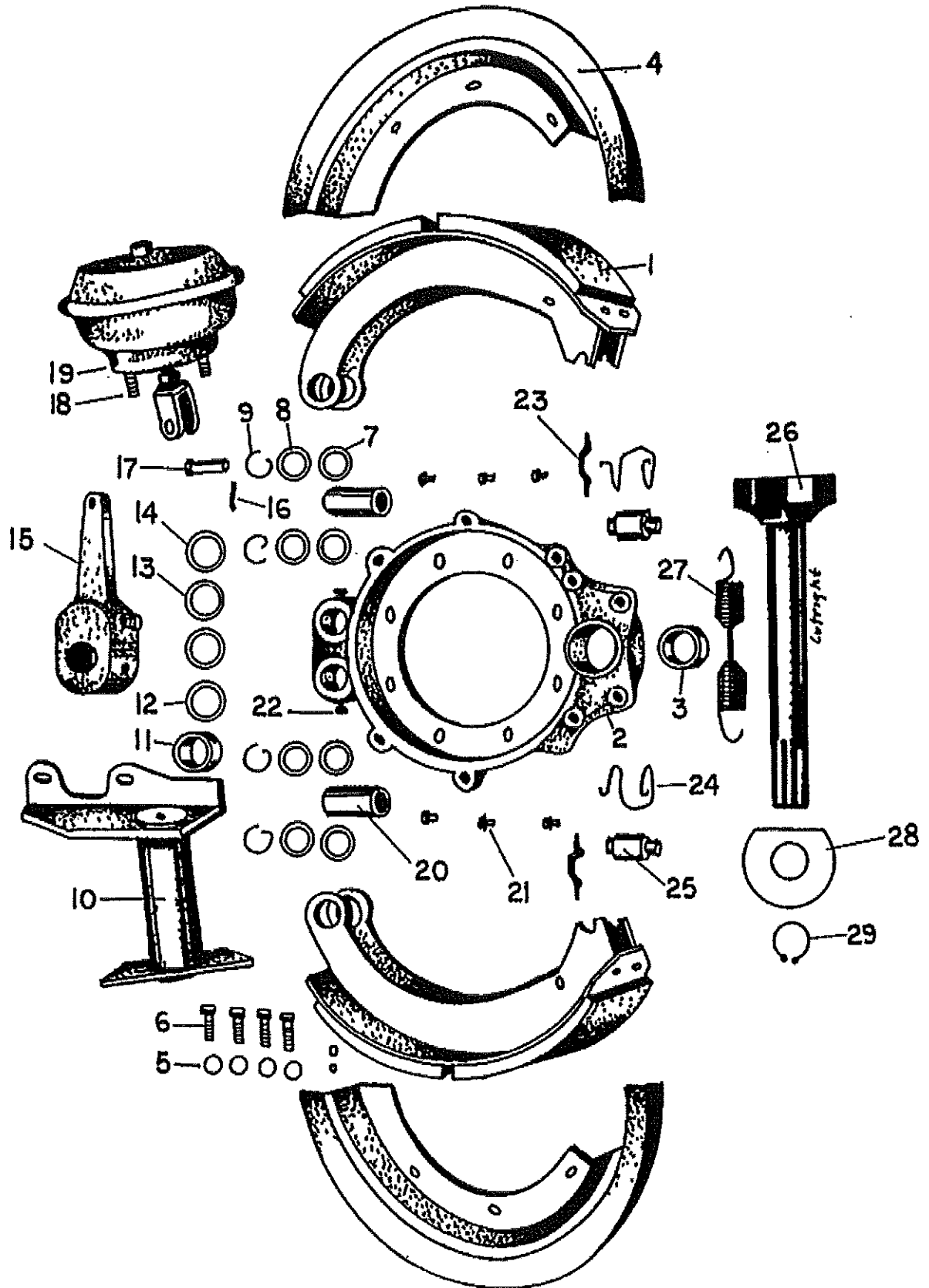
FRONT BRAKE ASSEMBLY



REAR BRAKE ASSEMBLY

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
W24-1	Brake Shoe & Lining	2	
W24-2	Brake Spider Assy.	1	
W24-3	Brake Spider Bushing	1	
W24-4	Dust Shield	2	
W24-5	Cam Bracket & Spider Screw Washer	4	
W24-6	Cam Bracket & Spider Screw	4	
W24-7	Anchor Pin Felt Retainer	4	
W24-8	Anchor Pin Felt	4	
W24-9	Anchor Pin Lock Ring	4	
W24-10	Camshaft & Chamber Bracket Assy.	1	
W24-11	Camshaft Bracket Bushing	1	
W24-12	Camshaft Oil Seal Felt	1	
W24-13	Camshaft Felt Washer	1	
W24-14	Camshaft Spacing Washer	1	
W24-15	Slack Adjuster lever Assy.	1	
W24-16	Br. Chamber Yoke Pin Cotter Key	1	
W24-17	Br. Chamber Yoke Pin	1	
W24-18	Br. Chamber Stud Nut	2	
W24-19	Br. Chamber Assy.	1	
W24-20	Br. Anchor Pin	2	
W24-21	Dust Shield & Spider Screw	6	
W24-22	Br. Anchor Pin Lock Screw	2	
W24-23	Br. Shoe Return Spring Pin	2	
W24-24	Br. Shoe Roller Retainer	2	
W24-25	Br. Shoe Roller	2	
W24-26	Camshaft	1	
W24-27	Br. Shoe Return Spring	1	
W24-28	Br. Camshaft Washer	1	
W24-29	Br. Camshaft Lock Ring	1	

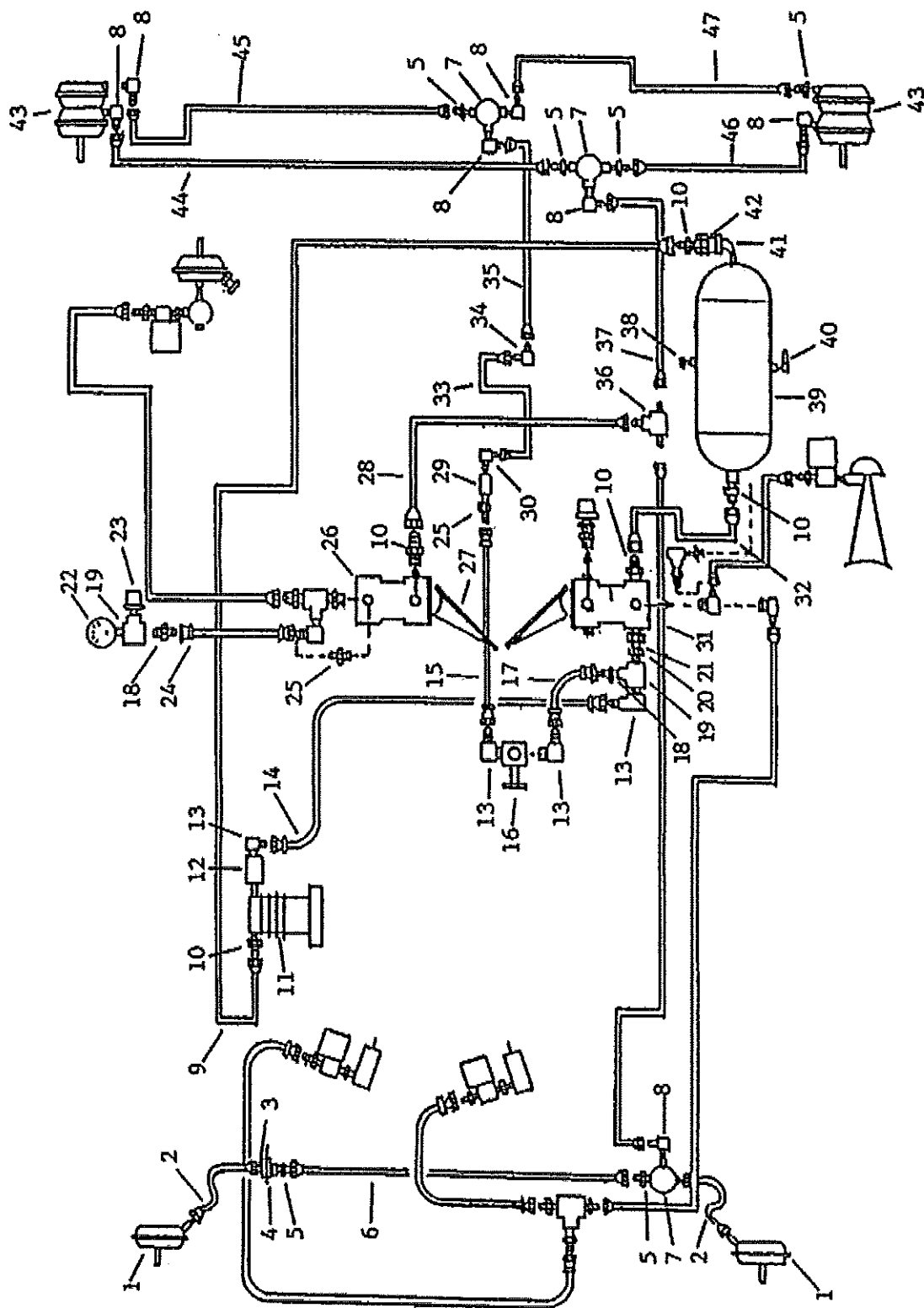
REAR BRAKE ASSEMBLY



AIR SYSTEM STANDARD

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS26A-1	BRAKE CHAMBER -FRONT	2	
WHS26A-2	FLEXIBLE BRAKE HOSE	2	
WHS26A-3	HOSE ADAPTER	1	
WHS26A-4	TERMINAL BOLT ASS.	1	
WHS26A-5	FITTING	6	
WHS26A-6	FRONT BRAKE LINE	1	
WHS26A-7	QUICK RELEASE VALVE	3	
WHS26A-8	FITTING	7	
WHS26A-9	COMPRESSOR LINE (PRESS)	1	
WHS26A-10	FITTING	5	
WHS26A-11	COMPRESSOR	1	
WHS26A-12	GOVERNOR	1	
WHS26A-13	FITTING	4	
WHS26A-14	HOSE (GOVERNOR TO TREADLE)	1	
WHS26A-15	HOSE (MAXI LINE OUTLET)	1	
WHS26A-16	MAXI VALVE	1	
WHS26A-17	HOSE (MAXI LINE INLET)	1	
WHS26A-18	FITTING	2	
WHS26A-19	FEMALE PIPE TEE	2	
WHS26A-20	HEX NIPPLE	1	
WHS26A-21	BUSHING	1	
WHS26A-22	PRESSURE GAUGE	1	
WHS26A-23	LOW PRESSURE SWITCH NC	1	
WHS26A-24	HOSE (GAUGE TO TREADLE)	1	
WHS26A-25	FITTING	2	
WHS26A-26	TREADLE VALVE	1	
WHS26A-27	FOOT PEDAL	1	
WHS26A-28	SERVICE BRAKE LINE	1	
WHS26A-29	PIPE UNION	1	
WHS26A-30	FITTING	1	
WHS26A-31	BRAKE LINE (TEE TO QUICK) FRONT	1	
WHS26A-32	AIR LINE - TANK TO TREADLE	1	
WHS26A-33	MAXI BRAKE LINE - 1ST	1	
WHS26A-34	FITTING	1	

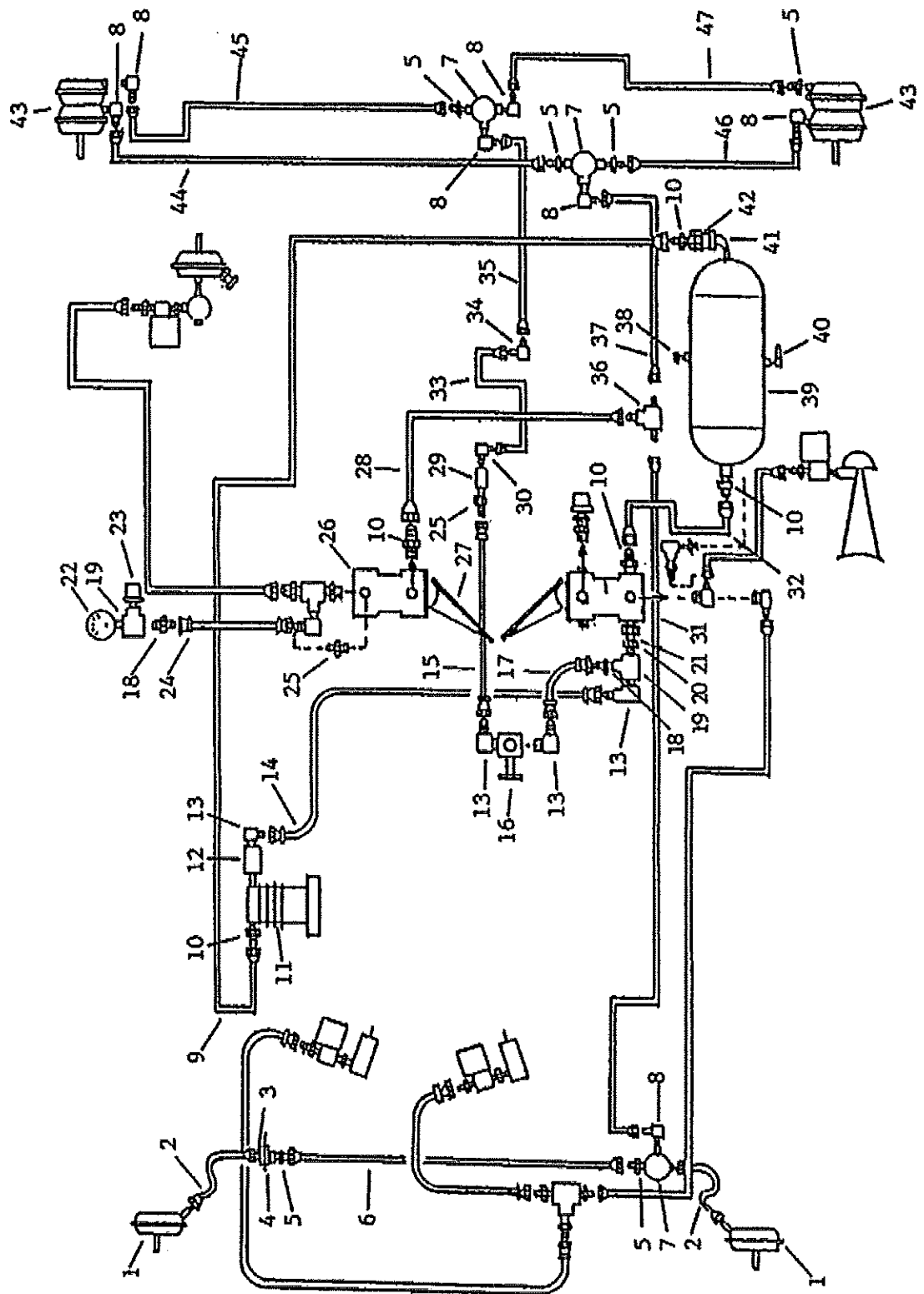
AIR SYSTEM STANDARD



AIR SYSTEM STANDARD CONT.

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS26A-35	MAXI BRAKE LINE - 2ND	1	
WHS26A-36	UNION TEE	1	
WHS26A-37	BRAKE LINE (TEE TO QUICK) REAR	1	
WHS26A-38	POP OFF PRESSURE RELIEF VALVE	1	
WHS26A-39	STORAGE TANK (AIR)	1	
WHS26A-39A	BRACKETS	2	
WHS26A-40	PET COCK	1	
WHS26A-41	STREET ELL	1	
WHS26A-42	ONE WAY CHECK VALVE	1	
WHS26A-43	REAR BRAKE CHAMBER	2	
WHS26A-44	MAXI BRAKE LINE (R.H. REAR)	1	
WHS26A-45	RIGHT HAND REAR BRAKE LINE	1	
WHS26A-46	LEFT MAXI BRAKE LINE	1	
WHS26A-47	LEFT HAND REAR BRAKE LINE	1	

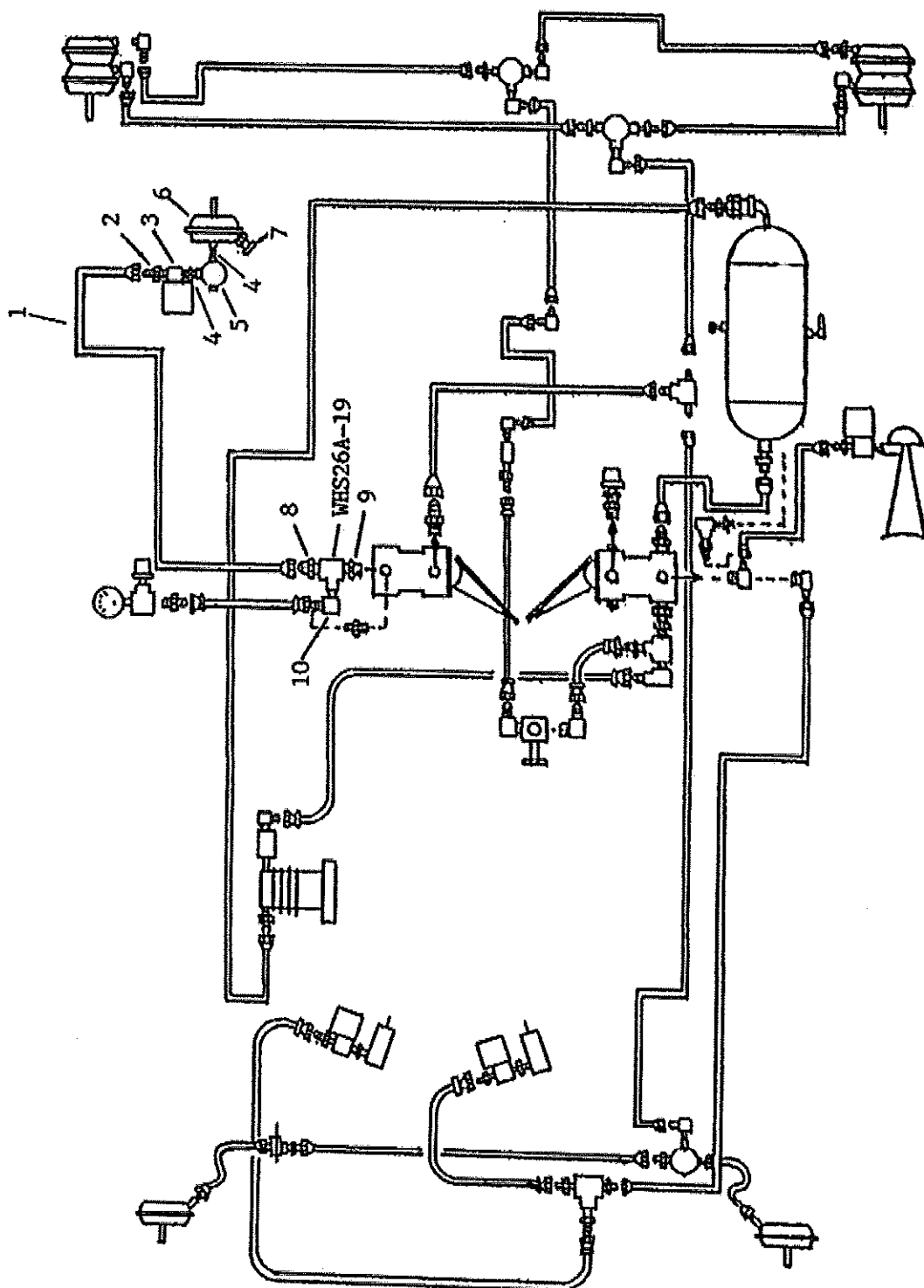
AIR SYSTEM STANDARD



AIR TRUCK HITCH OPTION

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS26B-1	TRUCK HITCH LINE	1	
WHS26B-2	FITTING	1	
WHS26B-3	SOLINOID (AIR)	1	
WHS26B-4	HEX NIPPLE	2	
WHS26B-5	QUICK RELEASE VALVE	1	
WHS26B-6	AIR POD	1	
WHS26B-7	POP OFF RELIEF VALVE	1	
WHS26B-8	FITTING	1	
WHS26B-9	HEX NIPPLE	1	
WHS26B-10	FITTING	1	

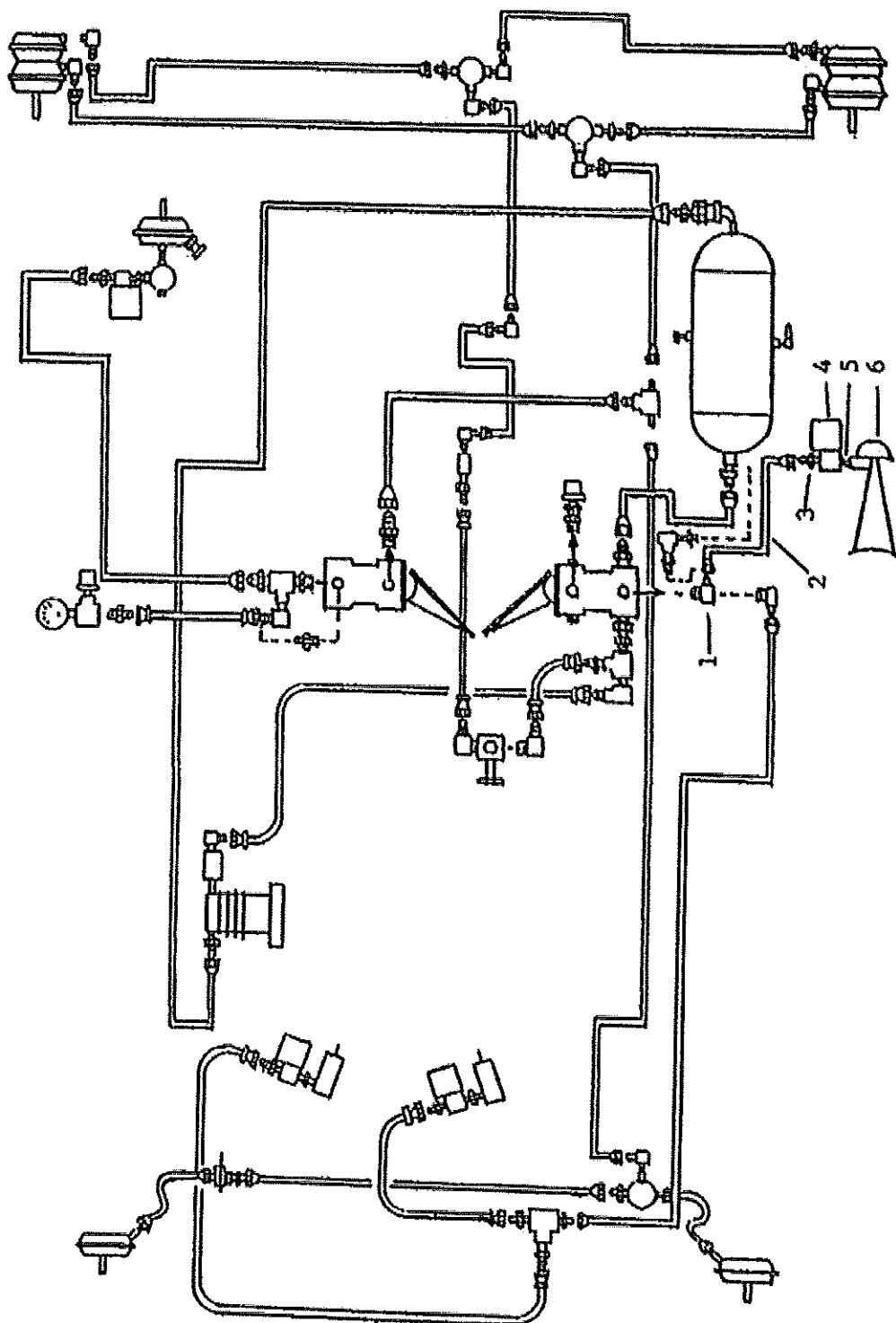
AIR TRUCK HITCH OPTION



AIR HORN OPTION

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS26C-1	FITTING	1	
WHS26C-2	HORN AIR LINE	1	
WHS26C-3	FITTING	1	
WHS26C-4	SOLINOID (AIR)	1	
WHS26C-5	HEX NIPPLE	1	
WHS26C-6	HORN	1	

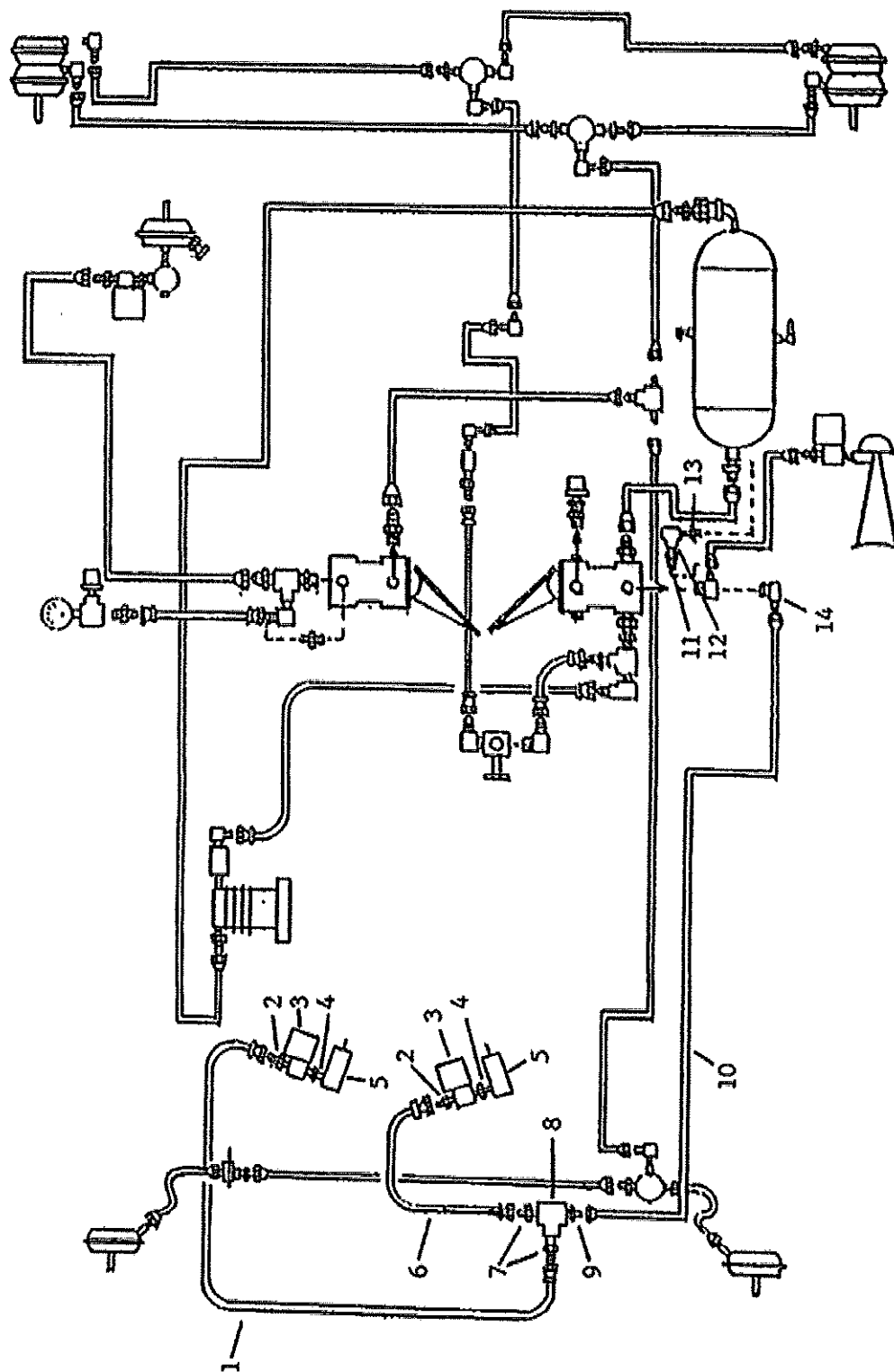
AIR HORN OPTION



ONE MAN WITH AIR HORN

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS26D-1	HOSE (RIGHT SIDE)	1	
WHS26D-2	FITTING	2	
WHS26D-3	SOLINOID (AIR)	2	
WHS26D-4	HEX NIPPLE	2	
WHS26D-5	AIR CYLINDER	2	
WHS26D-6	HOSE (LEFT SIDE)	1	
WHS26D-7	FITTING	2	
WHS26D-8	FEMALE TEE	1	
WHS26D-9	FITTING	1	
WHS26D-10	AIR LINE	1	
WHS26D-11	FITTING	2	
WHS26D-12	FEMALE TEE	1	
WHS26D-13	BUSHING	1	
WHS26D-14	FITTING	1	

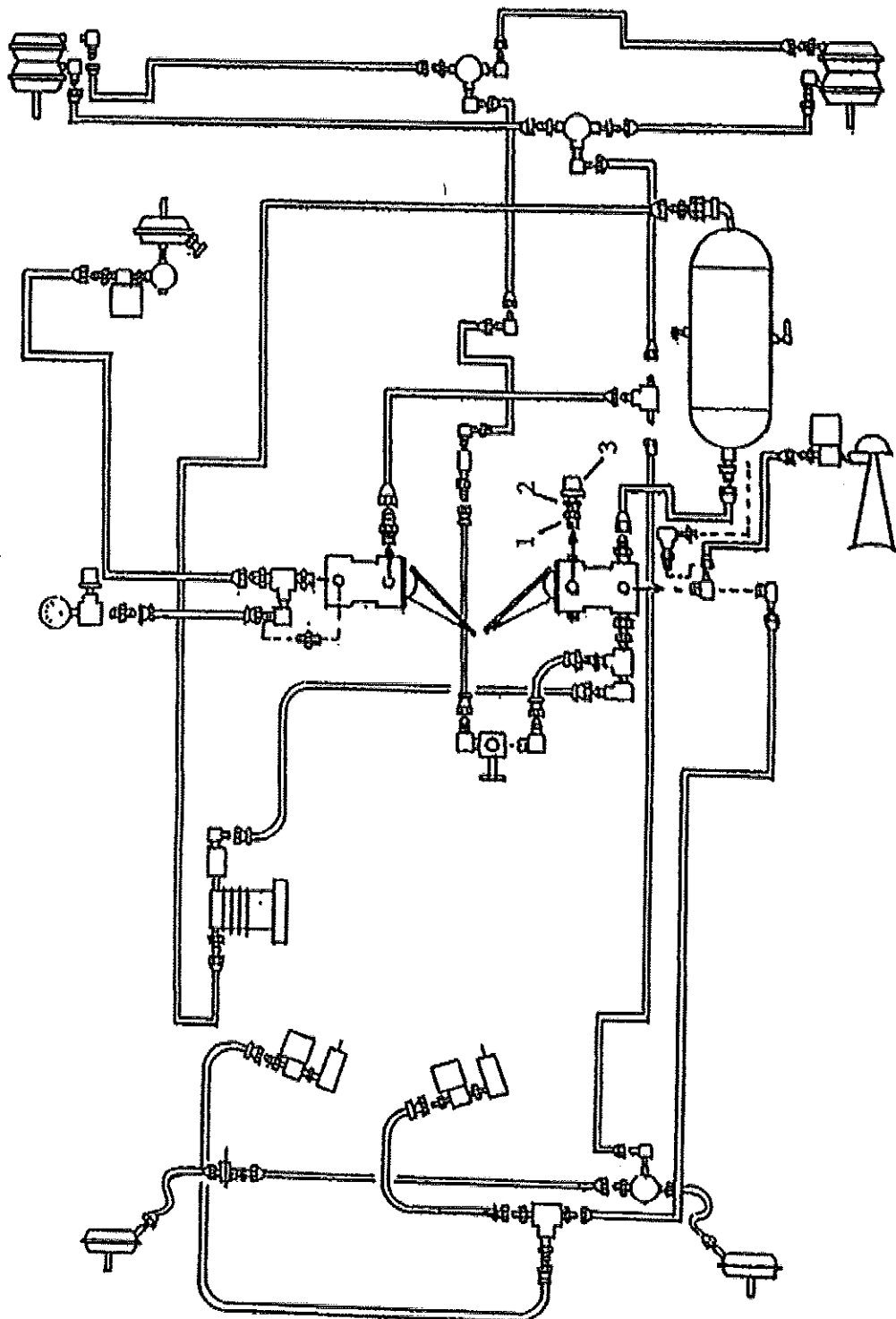
ONE MAN WITH AIR HORN



LIGHTING OPTION

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS26E-1	BUSHING	1	
WHS26E-2	BUSHING	1	
WHS26E-3	AIR PRESSURE SWITCH NO	1	

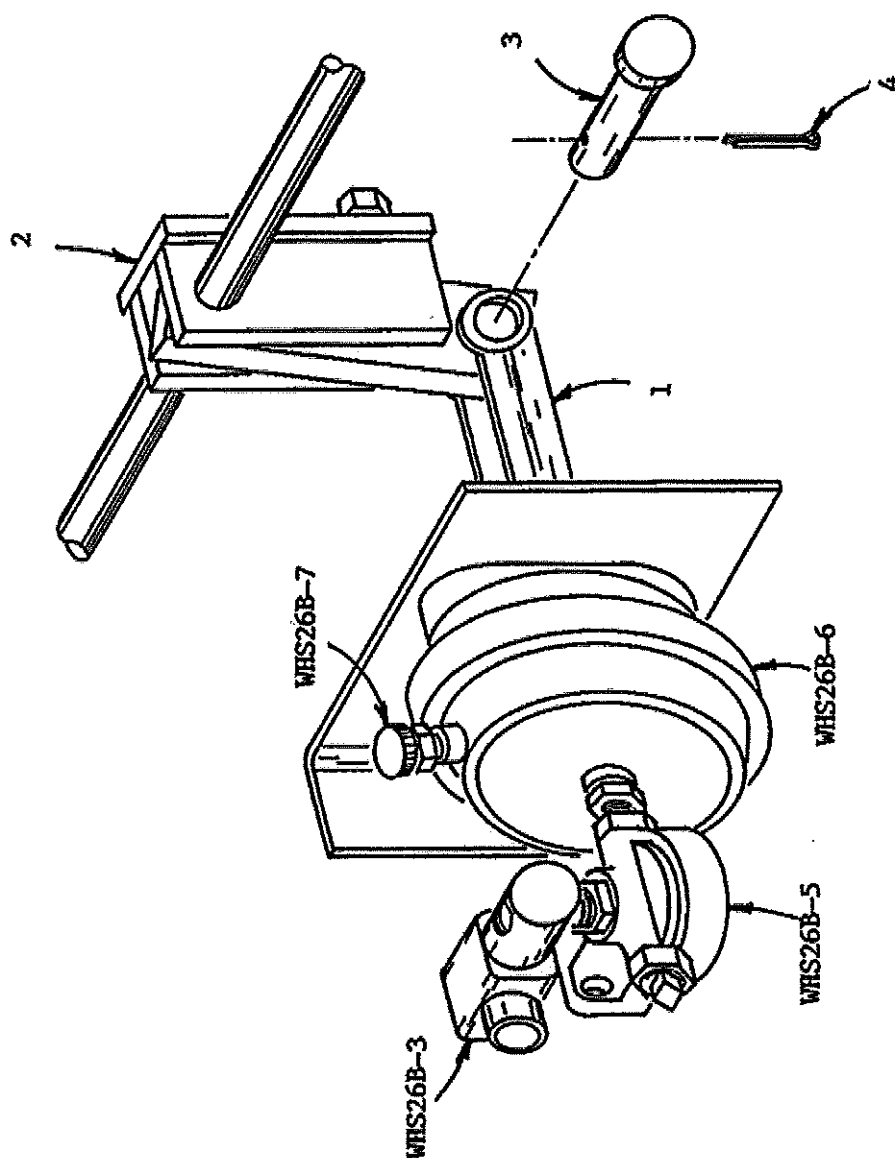
LIGHTING OPTION



AIR TRUCK HITCH

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS26F-1	YOKE, TRUCK HITCH	1	
WHS26F-2	LEVER, TRUCK HITCH	1	
WHS26F-3	PIN, YOKE	1	SAME AS W22-4
WHS26F-4	PIN, COTTER	1	SAME AS W22-5

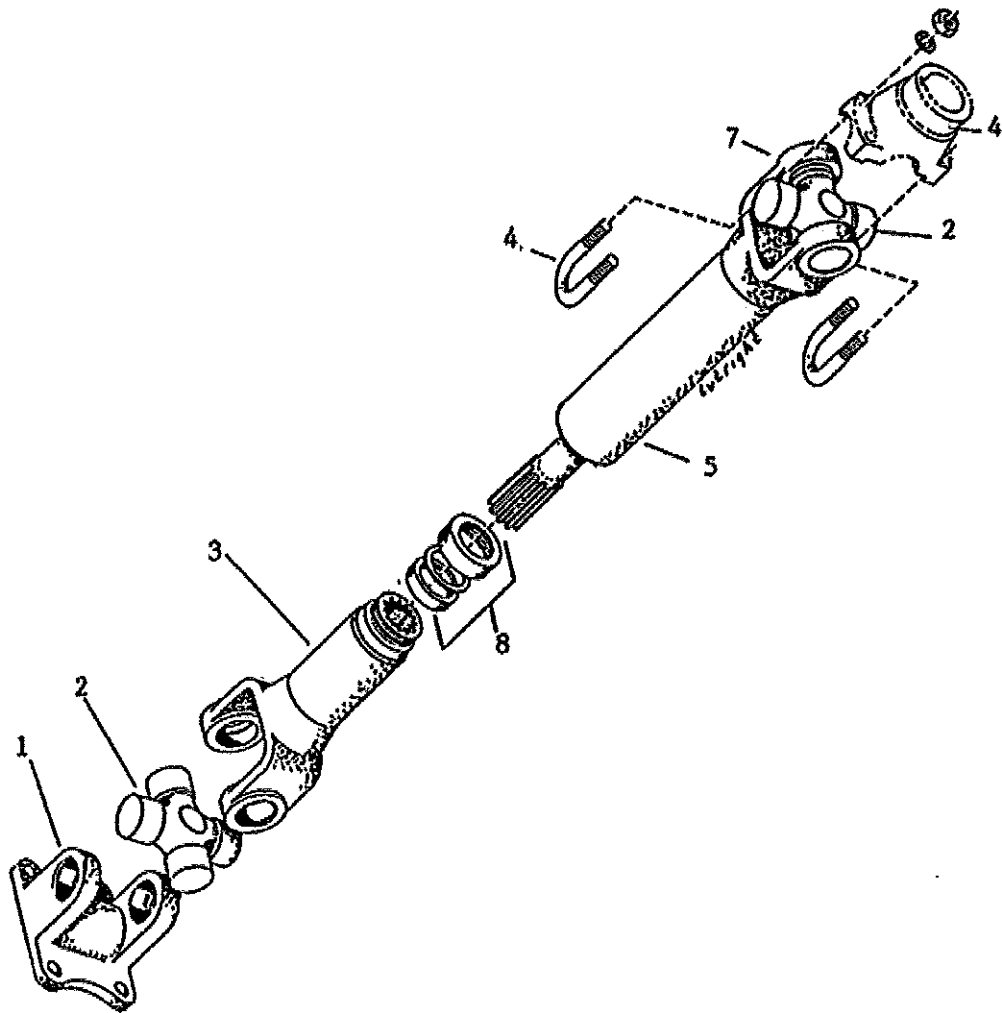
AIR HITCH DETAIL



P.T.O. DRIVE SHAFT

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
WHS30B-1	Yoke - Flanged	1	
WHS30B-2	Snap Ring & Cross Kit	2	
WHS30B-3	Slip Spline Assembly	1	
WHS30B-4	Yoke & U Bolts	1	
WHS30B-5	Shaft, Stub & Engine Drive Adaptor	1	Specify Length
WHS30B-6	Bolt & L.W. - Engine Adaptor	4	Not Shown
WHS30B-7	End Yoke	1	
WHS30B-8	Dust Cover	1	

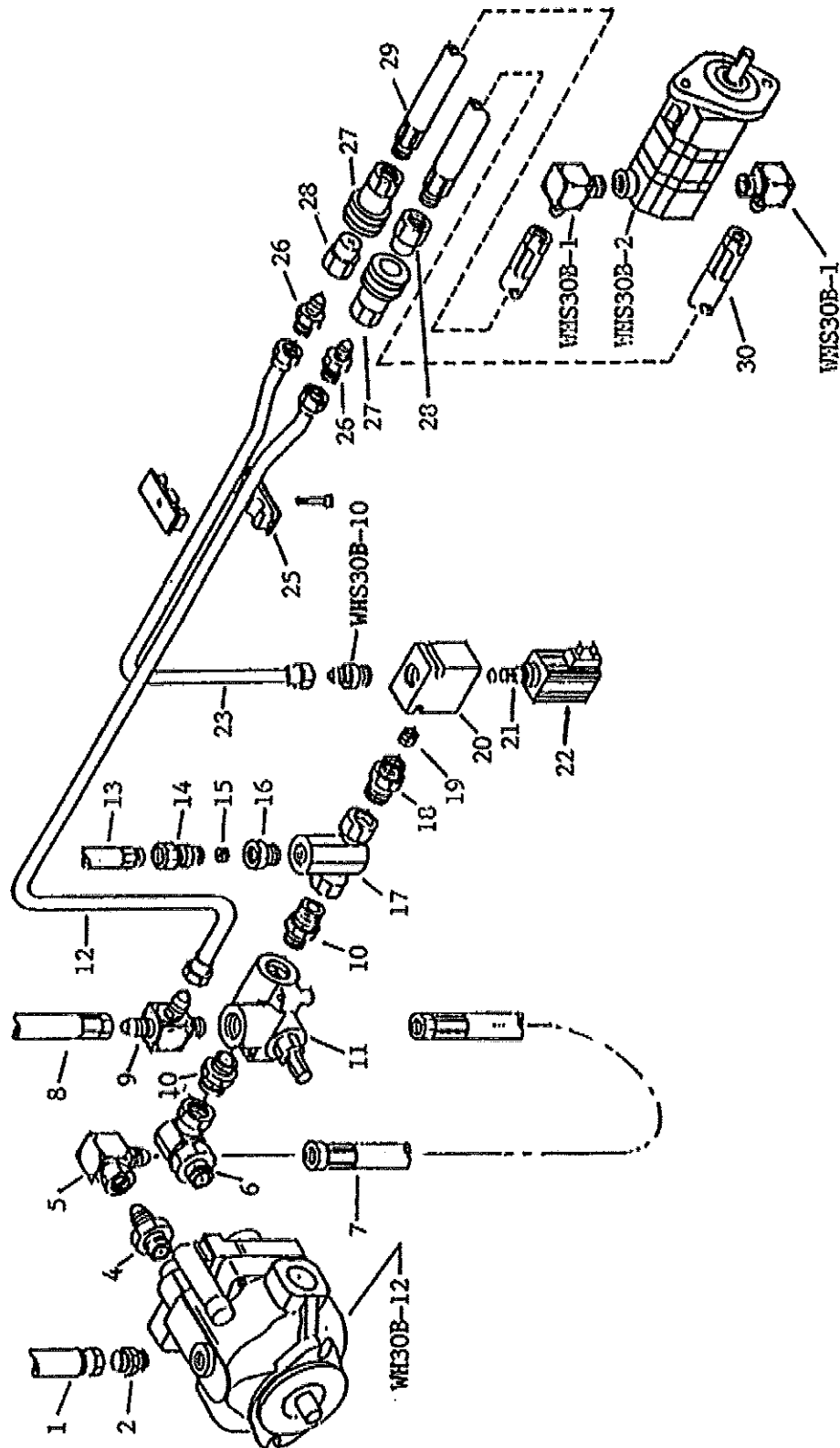
P. T. O. DRIVE SHAFT



HYDRAULIC SYSTEM HOPPER

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS30C-1	HOSE	1	
WHS30C-1A	FITTING - HOSE	2	
WHS30C-2	FITTING	1	
WHS30B-12	REAR PUMP	1	
WHS30C-4	FITTING	1	
WHS30C-5	FITTING	1	
WHS30C-6	FITTING	1	
WHS30C-7	HOSE	1	
WHS30C-8	HOSE	1	
WHS30C-9	FITTING	1	
WHS30C-10	FITTING	2	
WHS30C-11	RELIEF VALVE	1	
WHS30C-12	HOPPER TUBE RETURN	1	
WHS30C-13	HOSE	1	
WHS30C-13A	FITTING -HOSE	2	
WHS30C-14	FITTING	1	
WHS30C-15	ORIFICE	1	
WHS30C-16	REDUCER	1	
WHS30C-17	TEE	1	
WHS30C-18	FITTING	1	
WHS30C-19	ORIFICE	1	
WHS30C-20	SOLENOID BLOCK	1	
WHS30C-21	VALVE	1	
WHS30C-22	COIL	1	
WHS30C-23	HOPPER TUBE PRESSURE	1	
WHS30B-10	FITTING	1	
WHS30C-25	CLAMP	1	
WHS30C-26	FITTING	2	
WHS30C-27	FEMALE QUICK CONNECT	2	
WHS30C-28	MALE QUICK CONNECT	2	
WHS30C-29	HOSE	1	
WHS30C-30	HOSE	1	
WHS30B-1	FITTINGS	2	
WHS30B-2	MOTOR	1	

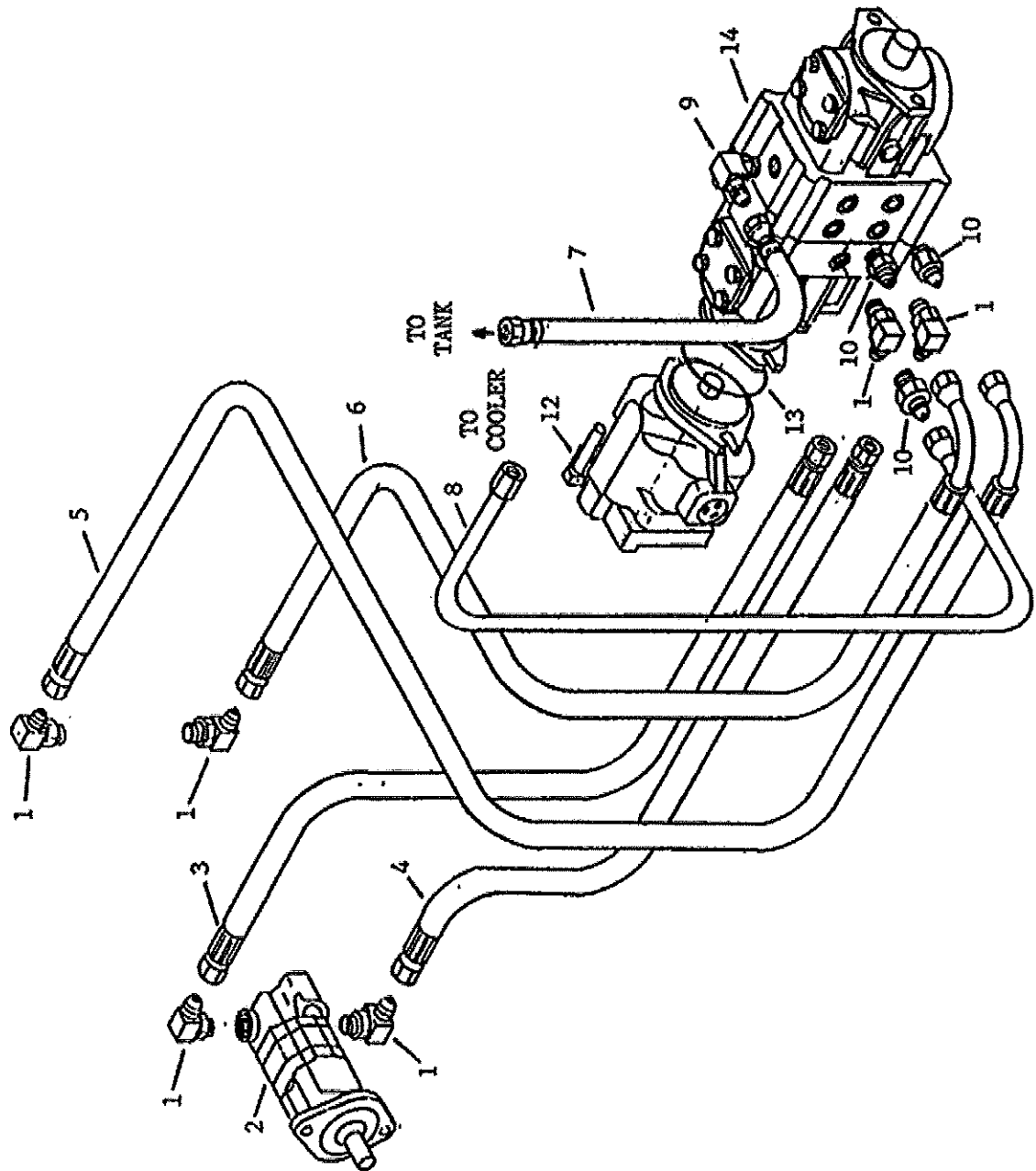
HYDRAULIC SYSTEM HOPPER



HYDRAULIC SYSTEM CONVEYORS

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS30D-1	FITTING	4	
WHS30D-2	MOTOR	2	
WHS30D-3	HOSE-PRESSURE	1	
WHS30D-4	HOSE	1	
WHS30D-5	HOSE	1	
WHS30D-6	HOSE -PRESSURE (R.H.)	1	
WHS30D-7	HOSE	1	
WHS30D-8	TUBE	1	
WHS30D-9	FITTING	1	
WHS30D-10	FITTING	3	
WHS30D-12	PUMP	1	
WHS30D-13	O-RING	1	
WHS30D-14	PUMP	1	
WHS30D-15	CLAMP	1	
WHS30D-16	SEAL KIT FOR TANDEM PUMP	1	*
WHS30D-17	SEAL KIT FOR REAR PUMP	1	*
WHS30D-18	SEAL KIT FOR HYDRAULIC MOTOR	1	*
	* SERVICED BY ENGINE MANUFACTURER ONLY		

HYDRAULIC SYSTEM CONVEYORS



WHS30D

FRONT HOPPER

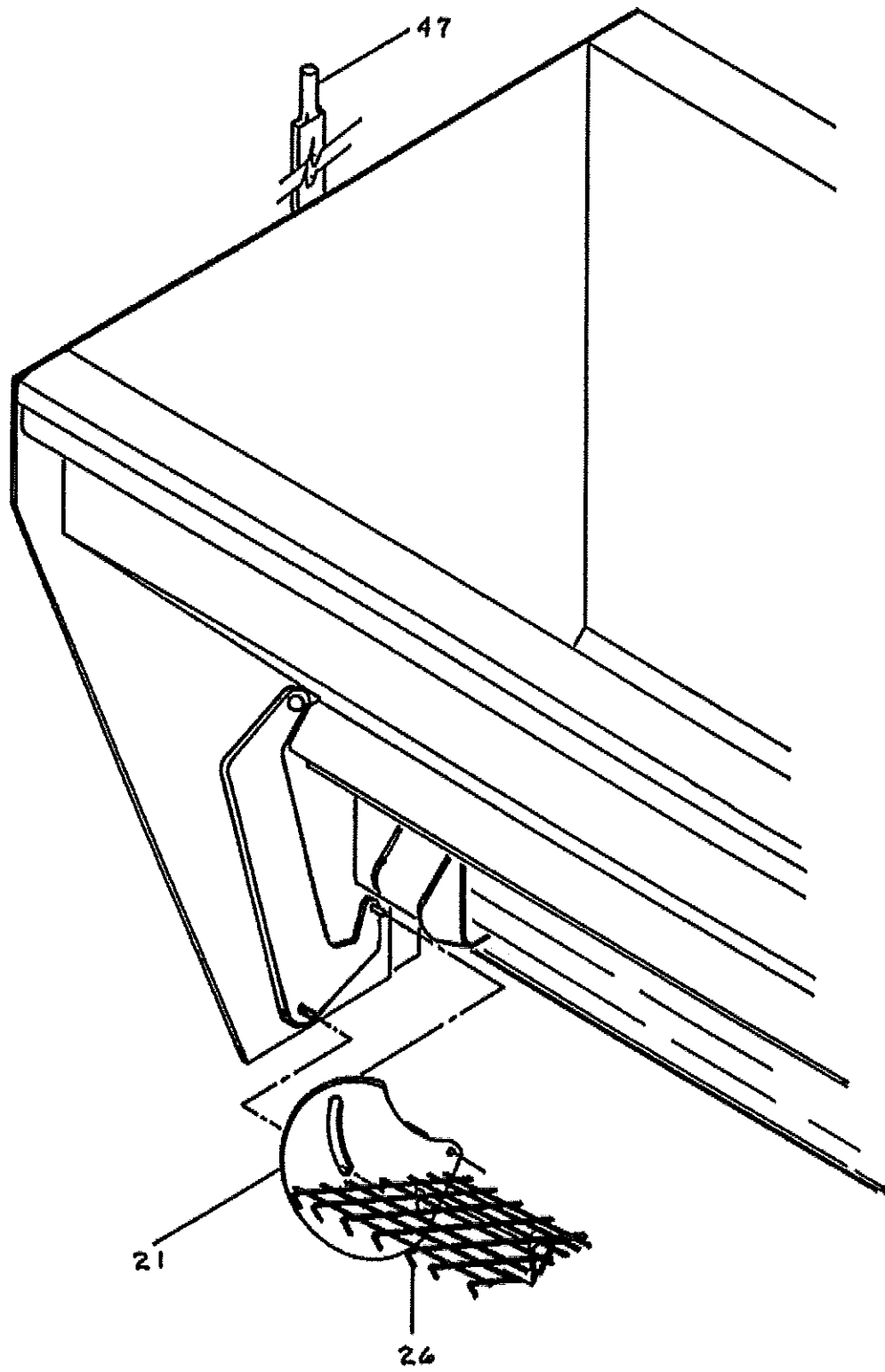
The following parts vary in their requirements according to hoppers

Part No.	Description	Hoppers Size & Parts REQD.						
		10'6"	11'6"	12'6"	13'6"	14'6"	15'6"	16'
W38-27	Bearing - Gate Control	3	3	4	4	4	4	4
W38-28	Fitting - Brg. Lubrication	3	3	4	4	4	4	4
W38-29	Bolt - Brg. Mounting	6	6	8	8	8	8	8
W38-30	Nut & L.W. - Brg. Bolt	6	6	8	8	8	8	8
W38-31	Set Screw - Bearing	3	3	4	4	4	4	4
W38-32	Spring - Gate Latch Assy.	13	15	17	19	19	20	20
W38-33	Screen - Grizzly 12X30	2	2	2	2	2	2	2
W38-33A	Screen - Grizzly 18X30			2	2	2	2	2
W38-33B	Screen - Grizzly 45X30			2				
W38-33C	Screen - Grizzly 50X30	2	2	2	2			
W38-33D	Screen - Grizzly 56X30				2			
W38-33E	Screen - Grizzly 62X30					2		
W38-33F	Screen - Grizzly 64X30						2	
W38-34R	Gate - Radial, 6" R.H.	2	3	4	5	4	5	2
W38-34L	Gate - Radial, 6" L.H.	3	4	5	6	5	6	4
W38-35R	Gate - Radial, 12" R.H.	3	3	3	3	4	4	4
W38-35L	Gate - Radial, 12" L.H.	3	3	3	3	4	4	5
W38-36	Gate - Radial, 12" Center	2	2	2	2	2	2	2
W38-37	Gate Latch Assembly	13	15	17	19	19	20	20
W38-38	Knob - Gate Latch Assembly	13	15	17	19	19	20	20
W38-39	Lock - Gate Open	13	15	17	19	19	20	20
W38-40	Set Screw - Gate Open Lock	13	15	17	19	19	20	20
W38-41	Lock - Gate Closed (welded)	13	15	17	19	19	20	20
W38-42	Rod - Gate Adjusting	13	15	17	19	19	20	20
W38-43	Rod - Clevis w/Jam Nut	13	15	17	19	19	20	20
W38-44	Clevis - Adjusting Rod	13	15	17	19	19	20	20

FRONT HOPPER

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
W38-1	Hopper	1	Specify Size
W38-2	Guard - Chain	1	
W38-3	Pin - Chain Guard	1	
W38-4	Hinge Pin - Chain Guard	2	Welded in Place
W38-5	Baffle	2	
W38-6	Shaft - Main Gate Control	1	Specify Size
W38-7	Lever - Gate Control Shaft	1	Welded to Shaft
W38-8	Clevis - Reach Rod	1	
W38-9	Pin - Reach Rod Clevis	1	
W38-10	Cotter Pin - Reach Rod Clevis	1	
W38-11	Rod - Adjusting W/Jam Nut	1	
W38-12	Reach Rod - Gate Control Lever	1	
W38-13	Hinge Pin - Radial Gates	2	Specify Hopper
W38-20	Pins-Radial Gate Hinge Retaining	2	
W38-21	Frame - Spread Screen	1	Specify Hopper
W38-22	Bolt-Spread Screen Frame Mounting	2	
W38-23	Nut & L.W.-Frame Mounting Bolt	2	
W38-24	Bolt - Spread Screen Adjusting	2	
W38-25	Nut & L.W.-Spread Screen Adj. Bolt	2	
W38-26	Screen - Lower Spread	1	Specify Hopper
W38-45	Pin-Clevis, Gate Adj. Rod	*VAR.	*See W38-44
W38-46	Cotter Pin - Clevis	*VAR.	*See W38-44
W38-47	Front Hopper/Screen(Retractable)		See W38 A
	Note: All parts on this page, the left and right hands are determined from the front of the machine.		

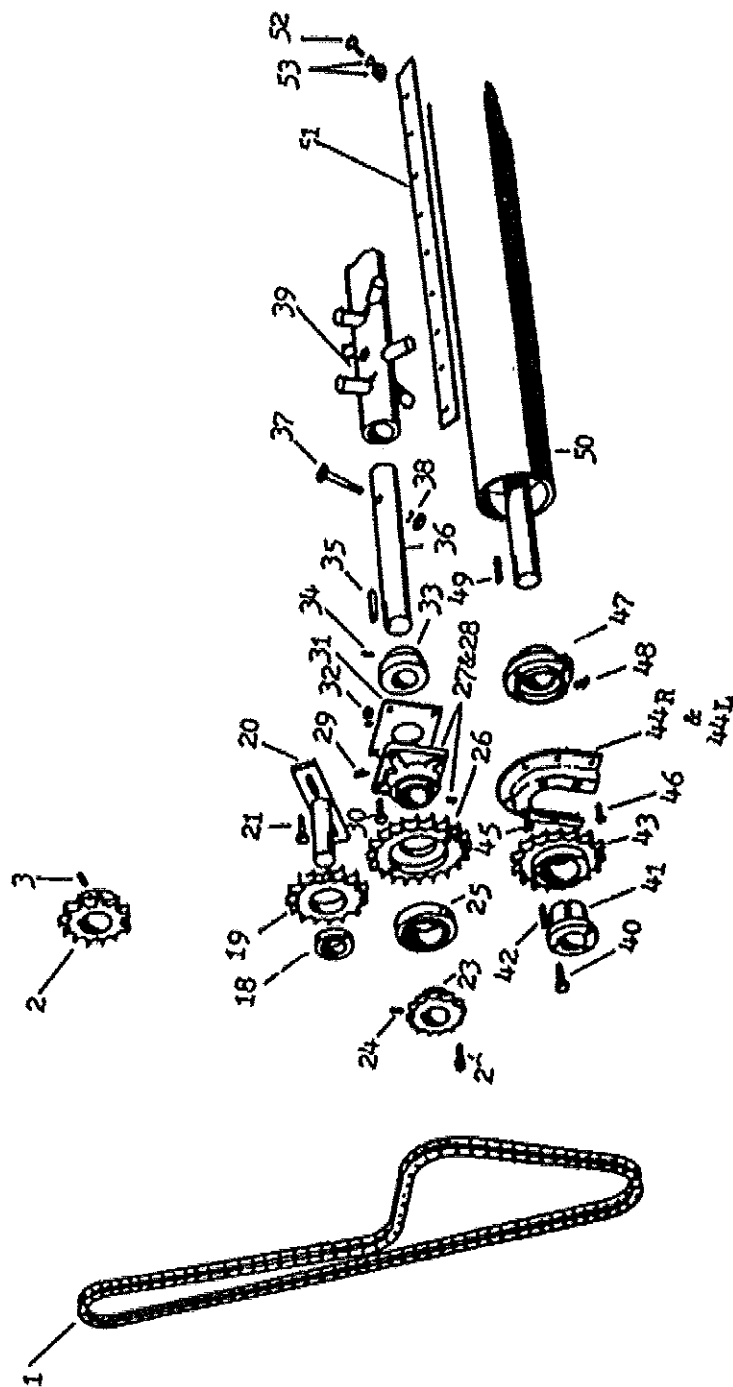
FRONT HOPPER / SCREEN (RETRACTABLE)



SPROCKET & HOPPER DRIVE

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
	<u>NOTE:</u> Hopper parts are left & right from the front of the machine.		
W40-1	Chain - Roll & Auger Drive	1	
W40-2	Sprocket - Hopper Drive	1	
W40-3	Set Screw - Hopper Dr. Sprocket	1	
W40-5	Key Sprocket	1	
W40-10	Motor (See Page WHS-36)	1	
W40-18	Bearing - Idler Sprocket	1	
W40-19	Idler Sprocket	1	
W40-20	Shaft - Idler Sprocket	1	
W40-21	Screw & L.W. - Idler Spk. Shaft	2	
W40-22	Screw - Freewheel Sprk. Locking	2	
W40-23	Sprocket - Auger Drive	1	
W40-24	Set Screw - Auger Dr. Sprk.	1	
W40-25	Bearing - Freewheel Sprocket	1	
W40-26	Sprocket - Freewheel	1	
W40-27	Bearing - Auger Stub Shafts	2	
W40-28	Set Screw - Auger Shaft Bearings	2	
W40-29	Fittings - Bearing Lub.	2	
W40-30	Bolt - Bearing Mounting	8	
W40-31	Wear Plate - Fixed	2	
W40-32	Nut & L.W. - Bearing & Plate Mount	8	
W40-33	Wear Collar - Auger	2	
W40-34	Set Screw - Auger Wear Collar	2	
W40-35	Key-RT. Hand stub Shaft	1	
W40-36R	Shaft - Auger Stub-R.H. (Keyed)	1	
W40-36L	Shaft - Auger Stub L.H. (Plain)	1	
W40-37	Bolt - Auger	2	
W40-38	Nut & L.W. - Auger Bolt	2	
W40-39	Auger	1	
W40-40	Bolt - Taper Lock to Roll Sprk.	3	
W40-41	Taper Lock-Spread Roll To Sprk.	1	
	Continued To Next Page.....		

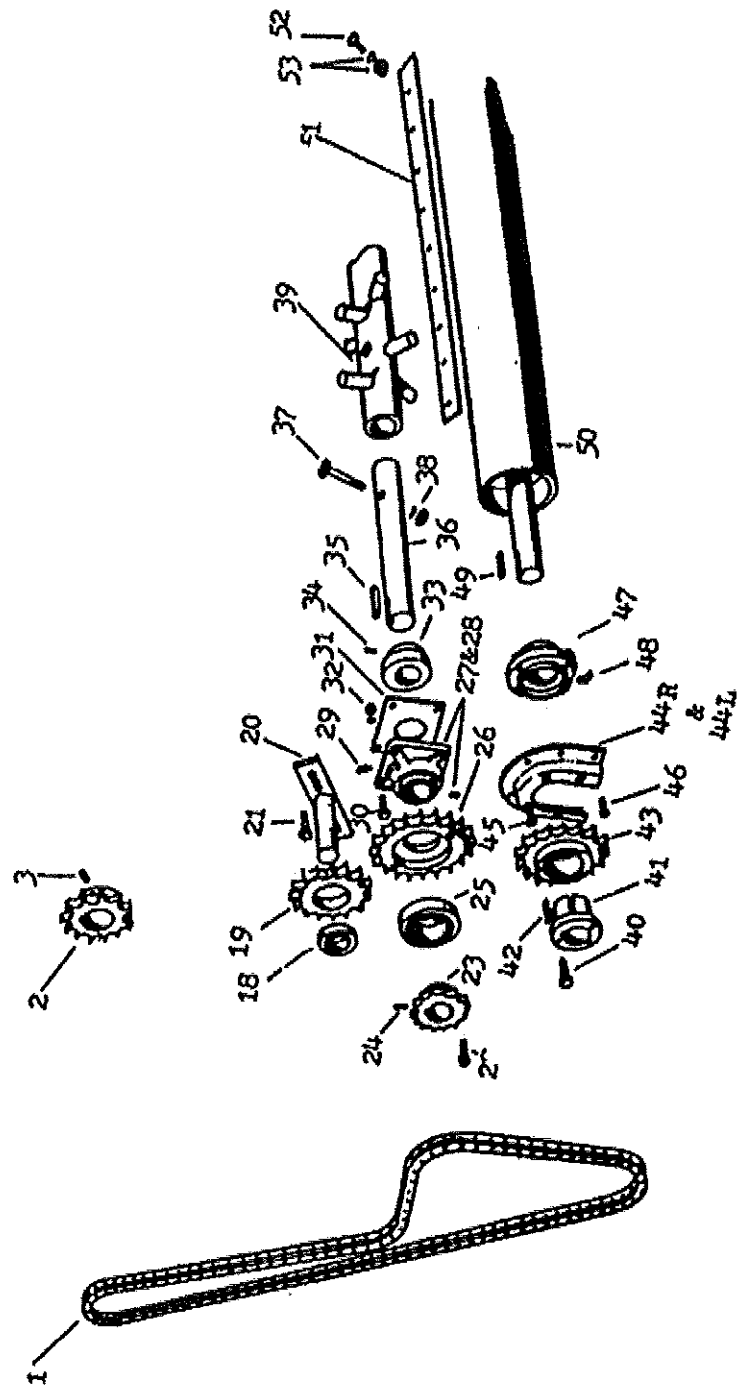
SPROCKET & HOPPER DRIVE



SPROCKET & HOPPER DRIVE

PART NO	DESCRIPTION	NO. REQD.	REMARKS
W 40-42	Key - Taper Lock to Roll Sprocket	1	
W 40-43	Sprocket - Spread Roll	1	8 OP 18
W 40-44R	Shield - Spread Roll - Right Hank	1	See Note Above
W 40-44L	Shield - Spread Roll - Left Hand	1	" " "
W 40-45	Screw - Bearing Mount	8	
W 40-46	Bolt & L.W. - Shield Mounting	12	
W 40-47	Bearing - Spread Roll	2	
W 40-48	Fitting - Bearing Lubrication	2	
W 40-49	Key-Roll to Taper Lock	1	
W 40-50	Spread Roll (Integral Shaft)	1	Specify Hopper
W 40-51	Seal - Spread Roll	1	Specify Hopper
W 40-52	Bolt - Seal Retaining	Var	22 - 16 ft.
W 40-53	Nut & L.W. - Seal Retaining	Var.	22 - 16 ft.

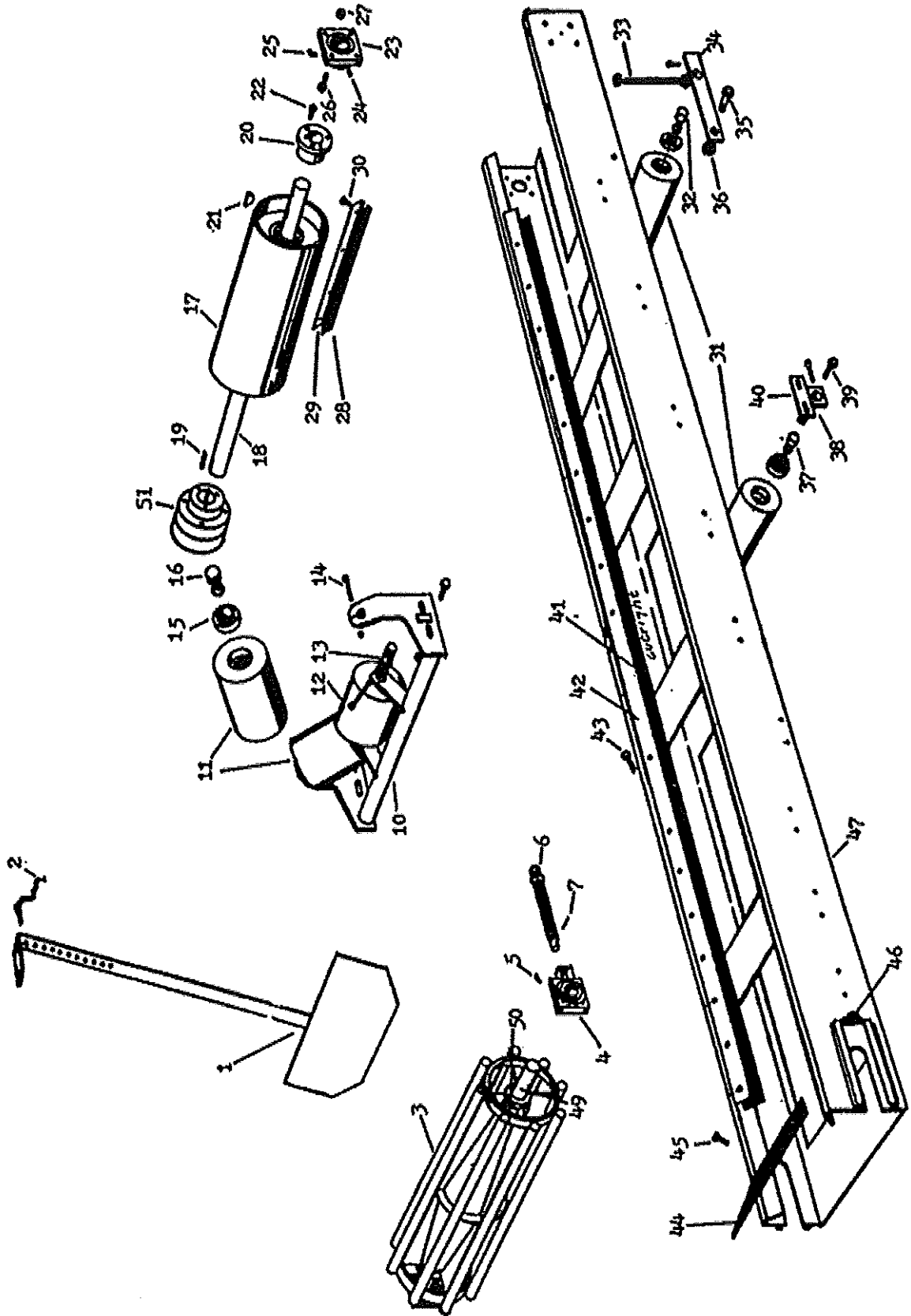
SPROCKET & HOPPER DRIVE



CONVEYOR

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
W42-1	Control Gate - Rear Hopper	2	
W42-2	Pin Assy. - Control Gate Position	2	
W42-3	Tail Pulley - Self - Cleaning	2	
W42-4	Bearing - Tail Pulley Adjustable	4	
W42-5	Fitting - Tail Pulley Brg. Lub.	4	
W42-6	Screw - Tail Pulley Adjustable	4	
W42-7	Pin - Tail Pulley Adj. Screw	4	
W42-10	Frame - Troughing Idler	14	
W42-11	Roll- End, Troughing Idler	28	
W42-12	Roll- Middle, Troughing Idler	14	
W42-13	Shaft - Center	28	
W42-14	Screw & Jam Nut Assy-Shaft	68	
W42-15	Bearing - Idler Roll	108	
W42-16	End Shaft - Troughing Idler	28	
W42-17	Head Pulley	2	
WH42-18	Shaft-Head Pulley	2	
W42-19	Key-Head Pulley Shaft	2	
W42-20	Taper Lock - Head Pulley Shaft	4	
W42-21	Key-Taper Lock to Head Pulley	4	
W42-22	Bolt & L.W. - Lock to Head Pulley	12	
W42-23	Bearing - Head Pulley Shaft	4	
W42-24	Set Screw - Head Pulley Bearing	4	
W42-25	Fitting - Head Pulley Bearing	4	
W42-26	Bolt-Head Pulley Mounting	16	
W42-27	Nut & L.W-Head Pulley Bolt	16	
W42-28	Lagging - Head Pulley Cleaning	2	
W42-29	Bracket - Head Pulley Lagging	2	
W42-30	Bolt & L.W. - Head Pulley Lagg	8	
W42-31	Roll - Idler	6	
W42-32	End Shaft - Tightener Idler	4	
W42-33	Bolt Assy. -Tightener Idler Adj.	4	
W42-34	Mount - Tightener Idler	4	
W42-35	Bolt-Hinging Tightener Idler	4	
W42-36	Nut-Tightener Idler Mount	4	
W42-37	End Shaft - Idler Roll	8	
W42-38	Mount - Idler Rolls	8	
W42-39	Bolt - Roll Mounting	72	
W42-40	Nut & L.W - Roll Mounting	72	
W42-41	Lagging - Conveyor Side	4	
W42-42	Strip - Lagging Holdown	4	
W42-43	Bolt & L.W. - Lagging Strip	68	
W42-44	Lagging - Conveyor End	2	
W42-45	Bolt-Conveyor End Lagging	6	
W42-46	Nut-Tail Pulley Adj. Bolt	4	
W42-47	Frame Conveyor	2	
W42-48	Belt Assembly - Conveyor	2	
W42-49	Shaft-Tail Pulley	2	
W42-50	Set Screw - Tail Pulley Shaft	4	
W42-51A	Coupler	2	
W42-52A	Bushing	2	Not Shown
W42-53A	Bushing	2	Not Shown

CONVEYOR

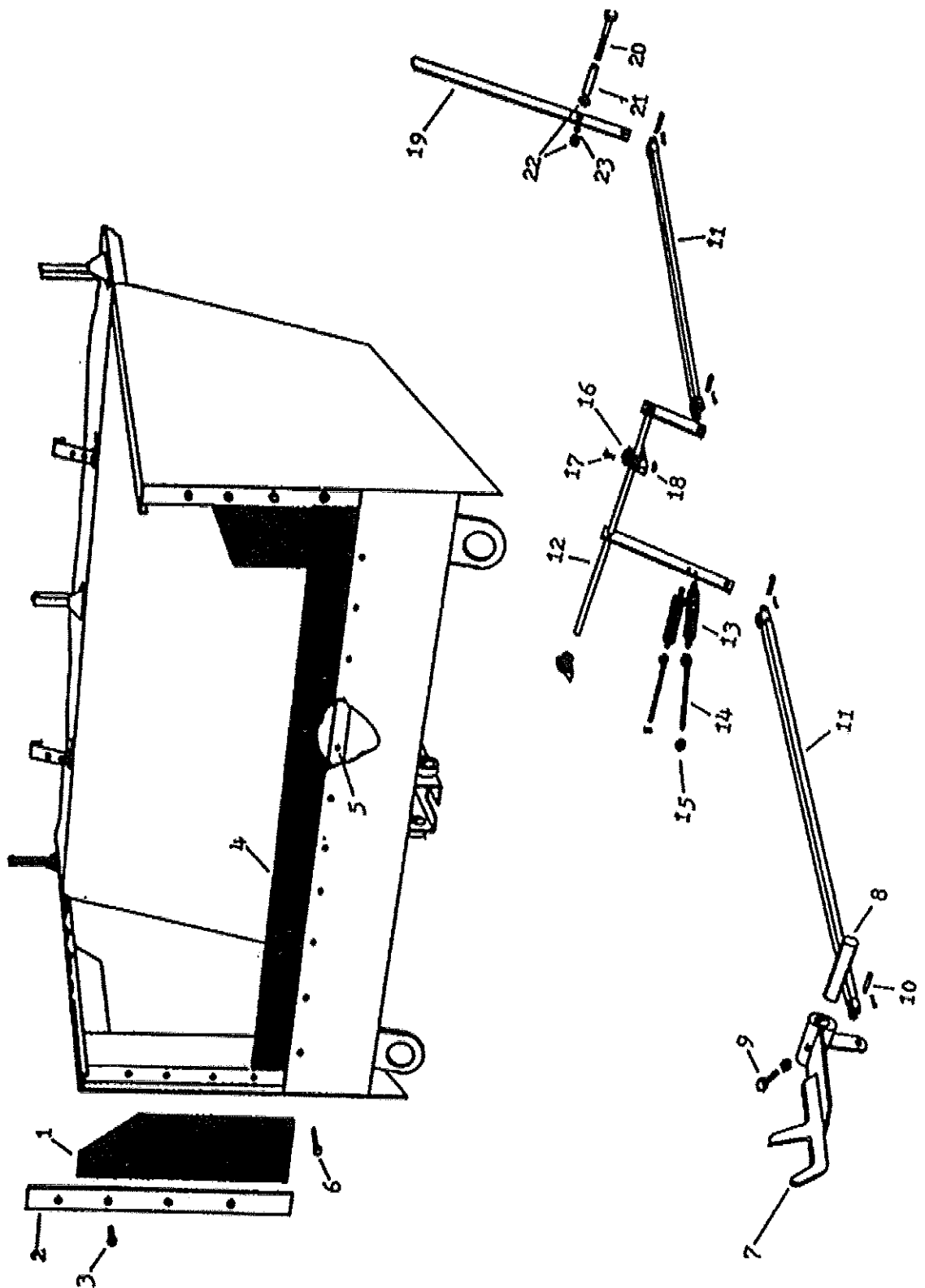


REAR HOPPER

TRUCK HITCH

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
W44-1	Seal, Rubber - Vertical	2	
W44-2	Attachment Strip - Vertical Seal	2	
W44-3	Capscrew & L.W. - Vertical Strip	8	
W44-4	Seal, Rubber - Horizontal	1	
W44-5	Attachment Strip - Horizontal Seal	1	
W44-6	Bolt, Nut & L.W. - Horizontal Strip	11	
W44-7	Truck Hitch	1	
W44-8	Hinge Pin - Truck Hitch	1	
W44-9	Bolt & Lock Nut - Hitch Hinge Pin	1	
W44-10	Clevis Pin & Key - Reach Rod	4	
W44-11	Reach Rod - Truck Hitch Control	2	
W44-12	Cross Shaft Assembly-Truck Hitch Cont.	1	
W44-13	Spring - Return, Truck Hitch	2	
W44-14	Adjuster - Return Spring	2	
W44-15	Nut Adjuster	2	
W44-16	Bearing - Cross Shaft	2	
W44-17	Bolt - Bearing Mounting	4	
W44-18	Nut & L.W. - Bearing Mounting	4	
W44-19	Lever - Truck Hitch Control	1	
W44-20	Bolt - Lever Hinging	1	
W44-21	Tube - Lever Hinging	1	Welded in Place
W44-22	Nut - Hinging Bolt	2	
W44-23	Lockwasher - Hinging Bolt	1	

REAR HOPPER & TRUCK HITCH



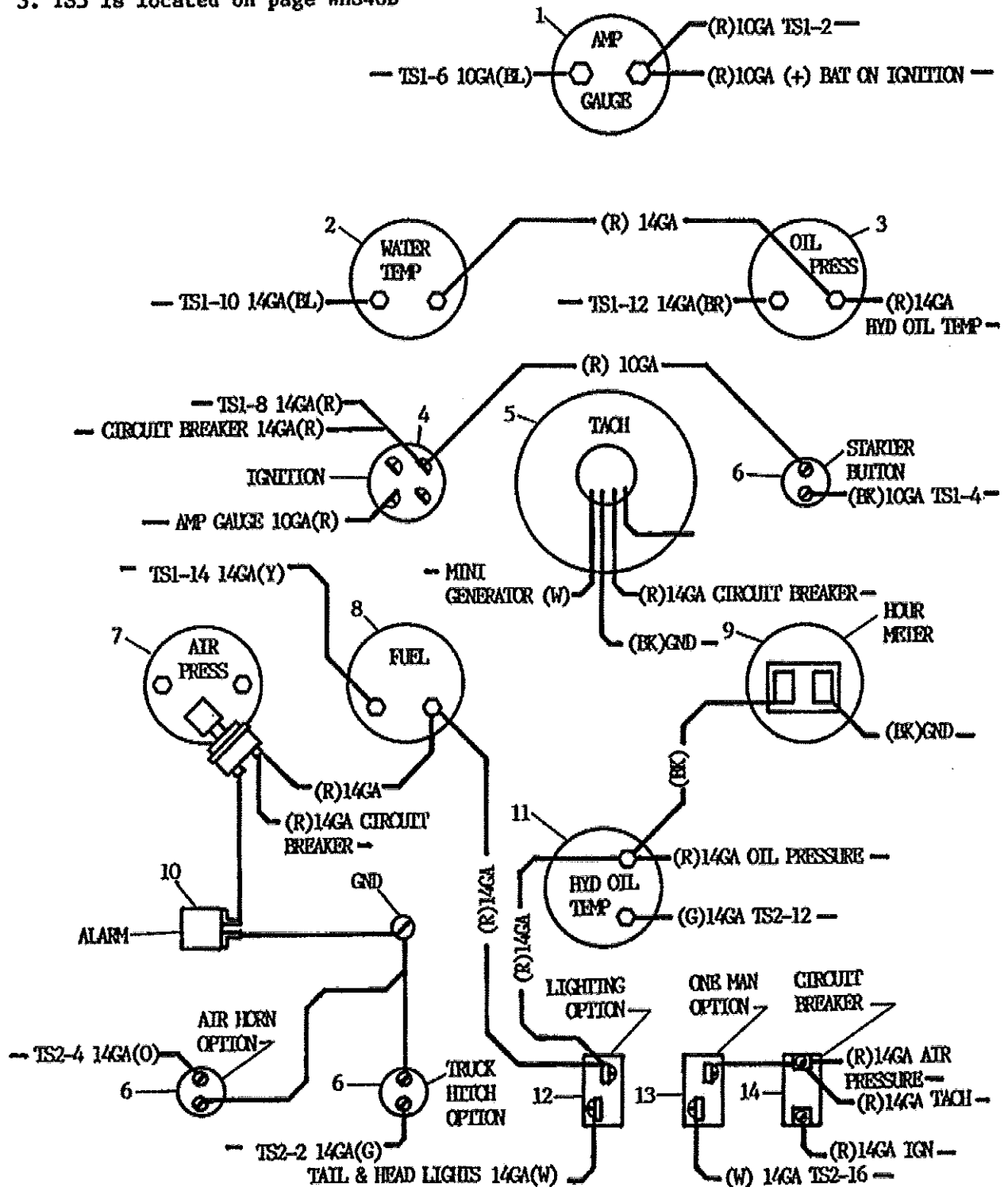
WIRING DIAGRAM CONTROL PANEL

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS46A-1	AMMETER	1	
WHS46A-2	WATER TEMPERATURE GAUGE	1	
WHS46A-3	OIL PRESSURE GAUGE	1	
WHS46A-4	IGNITION SWITCH	1	
WHS46A-5	TACHOMETER	1	
WHS46A-6	PUSH BUTTON SW (OPTIONS)	(1) (2)	
WHS46A-7	AIR PRESSURE GAUGE	1	SEE WHS26A-22
WHS46A-8	FUEL GAUGE	1	
WHS46A-9	HOURLY METER	1	
WHS46A-10	ALARM	1	
WHS46A-11	HYDRAULIC OIL TEMP GAUGE	1	
WHS46A-12	TOGGLE SWITCH (OPTION)	1	
WHS46A-13	TOGGLE SWITCH (OPTION)	1	
WHS46A-14	CIRCUIT BREAKER	1	
WHS46A-15	SENDER (TACHOMETER) NOT SHOWN	1	SEE ENGINE MFG FOR CORRECT SENDER APPLICATION.

WIRING DIAGRAM CONTROL PANEL

NOTE:

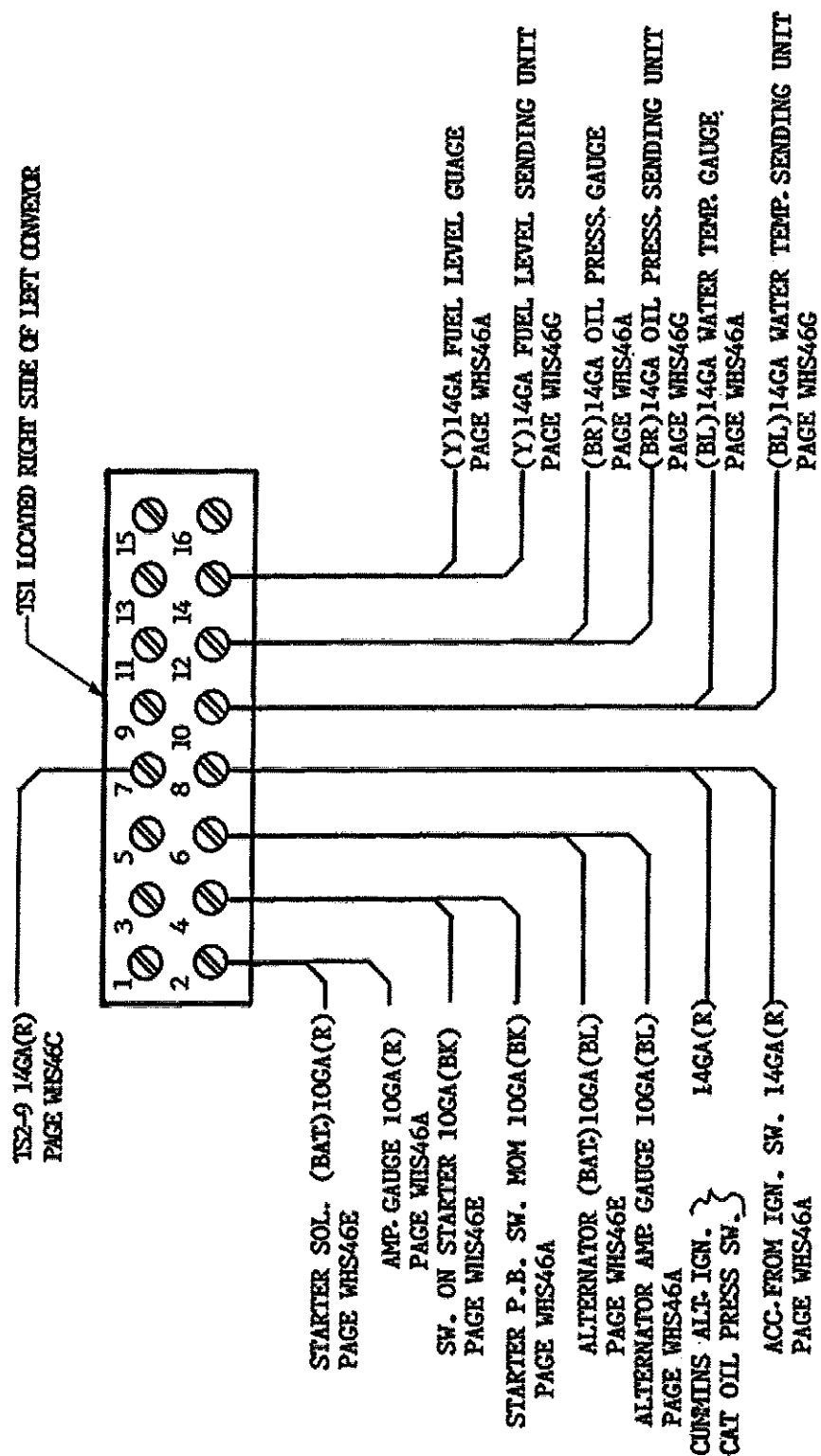
1. TS1 is located on page WHS46B
2. TS2 is located on page WHS46C
3. TS5 is located on page WHS46D



WIRING DIAGRAM TERMINAL STRIP I

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS46B	TERMINAL STRIP 16 TERMINAL	1	

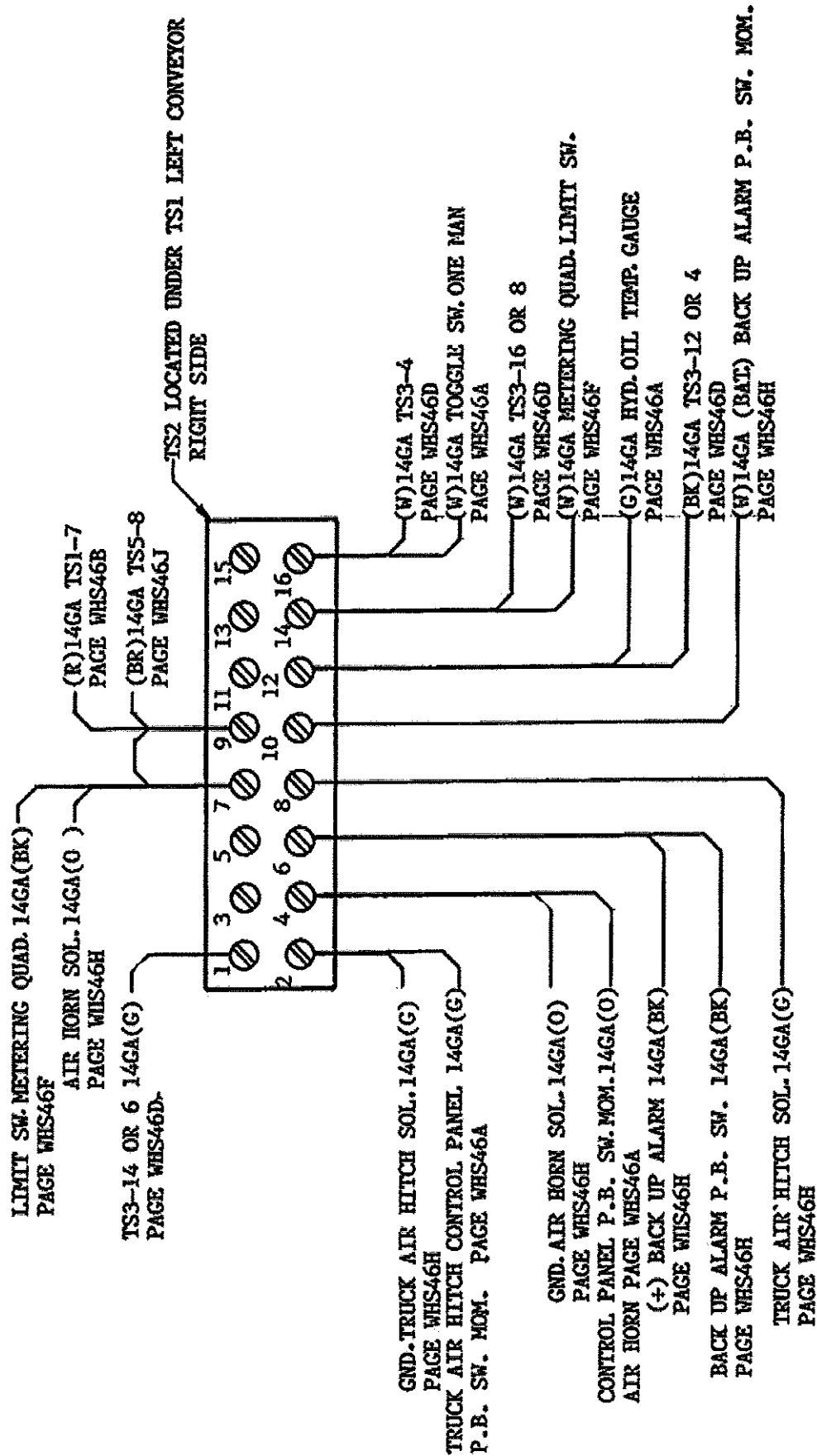
WIRING DIAGRAM TERMINAL STRIP I



WIRING DIAGRAM TERMINAL STRIP 2

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS46C	TERMINAL STRIP 16 TERMINAL	1	

WIRING DIAGRAM TERMINAL STRIP 2



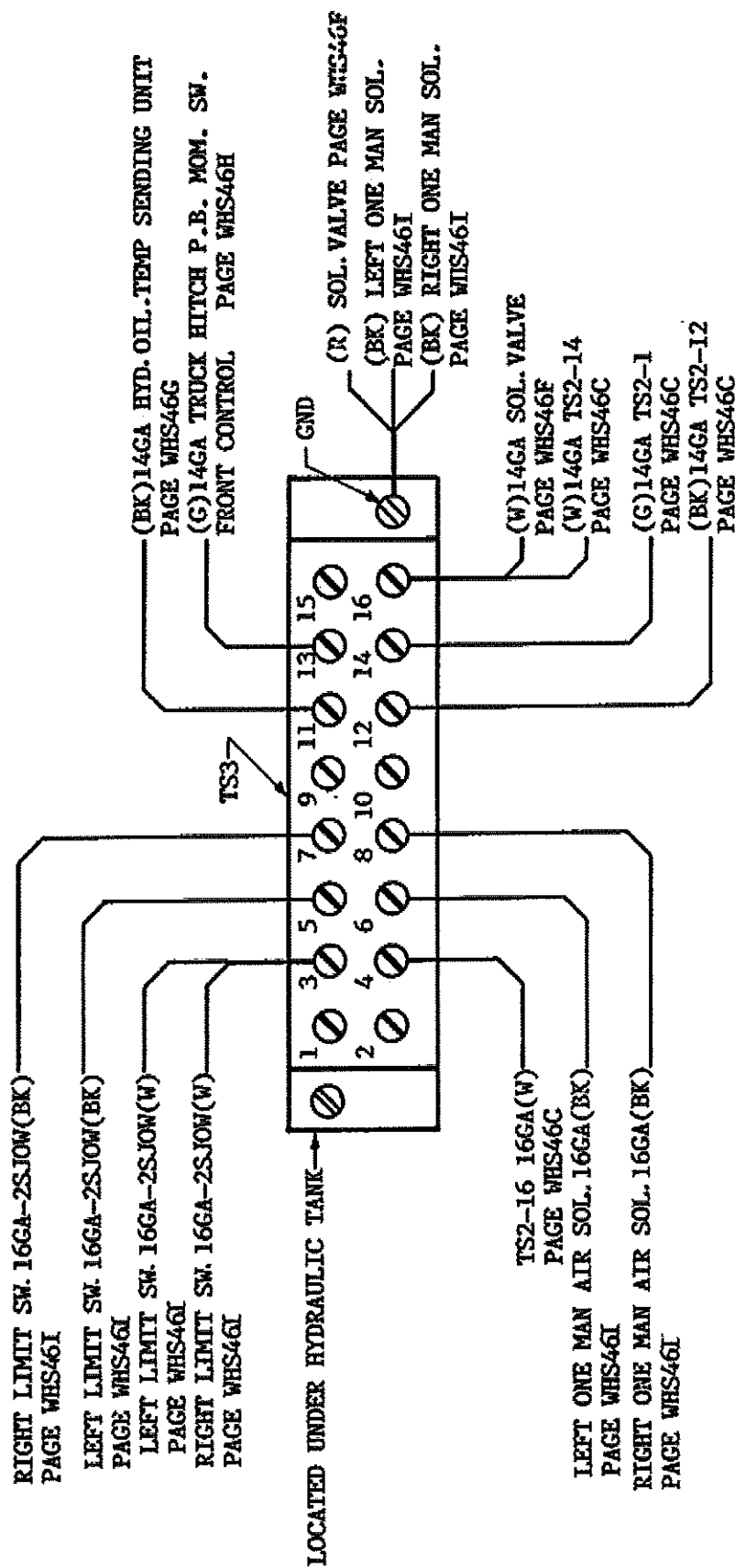
WIRING DIAGRAM TERMINAL STRIP 3

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS46D	TERMINAL STRIP 16 TERMINAL	1	

WIRING DIAGRAM TERMINAL STRIP 3

NOTE:

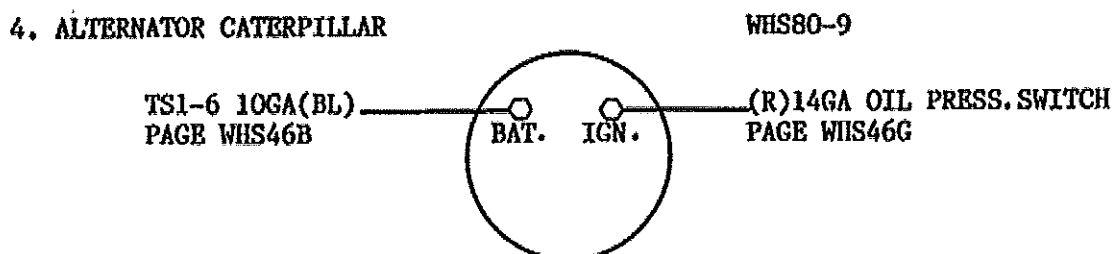
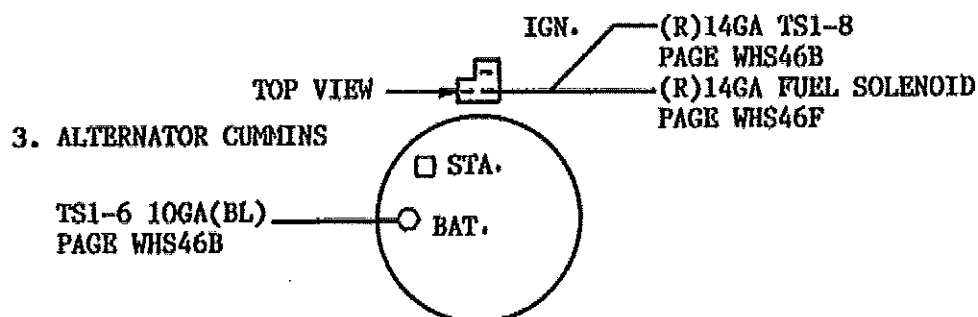
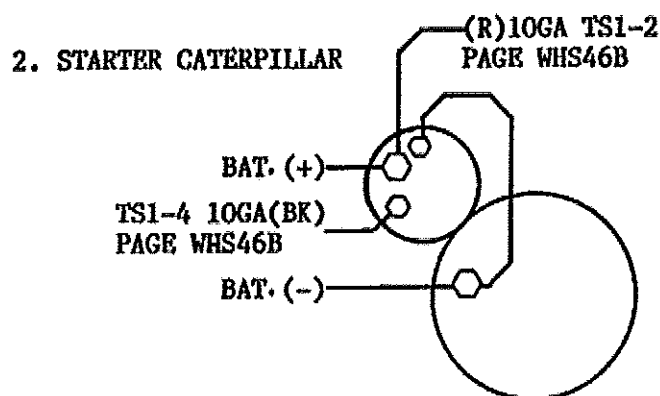
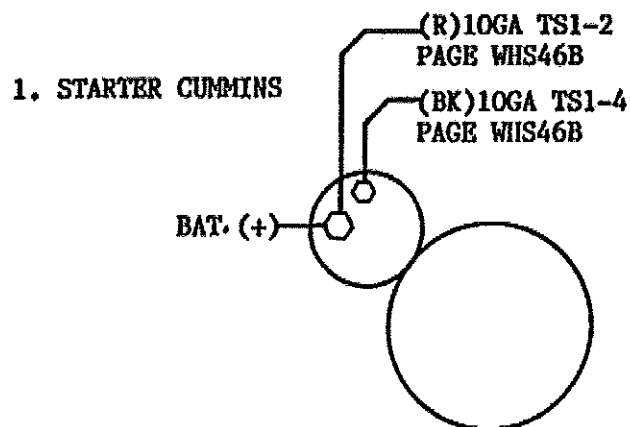
1. STANDARD 8 TERMINAL STRIP USED
2. ONE MAN OPTION 16 TERMINAL STRIP USED



WIRING DIAGRAM STARTER & ALT.

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS46E-1	CUMMINS STARTER	1	
WHS46E-2	CATERPILLAR STARTER (OPTION)	1	CATERPILLAR ENGINE OPTION
WHS46E-3	ALTERNATOR CUMMINS	1	
WHS46E-4	ALTERNATOR CATERPILLAR	1	CATERPILLAR ENGINE OPTION

WIRING DIAGRAM STARTER & ALT.

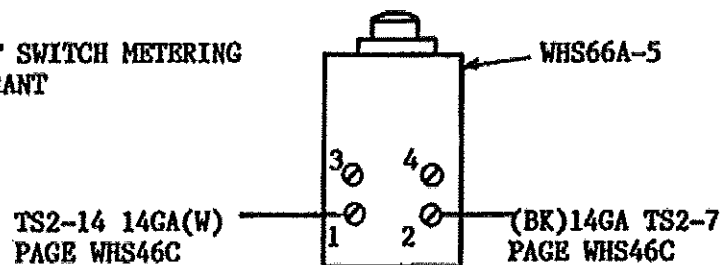


WIRING DIAGRAM

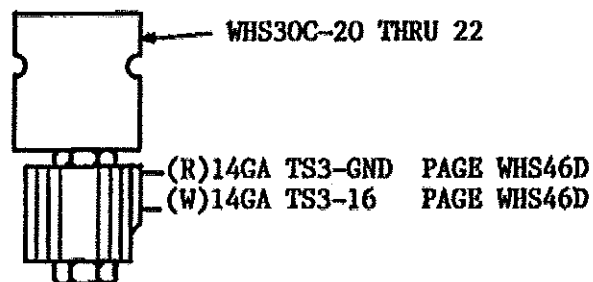
PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS66A-5	LIMIT SWITCH	1	
WHS30C-20- 22	SOLENOID VALVE	1	
WHS46F-1	FUEL SOLENOID-CUMMINS	1	
WHS46F-2	FUEL SOLENOID-CATERPILLAR	1	CAT ENGINE OPTION

WIRING DIAGRAM

LIMIT SWITCH METERING QUADRANT



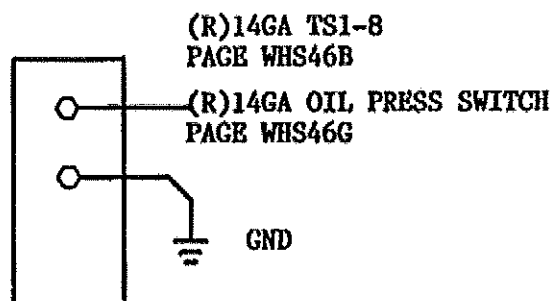
SOLENOID VALVE METERING QUADRANT



1. FUEL SOLENOID-CUMMINS



1. FUEL SOLENOID-CATERPILLAR



WIRING DIAGRAM

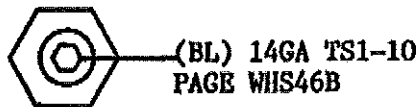
PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS46G-1	WATER TEMP SENDING UNIT	1	
WHS46G-2	MIN GENERATOR FOR TACH	1	
WHS46G-3	OIL PRESS SENDING UNIT	1	
WHS46G-4	HYD. OIL TEMP SENDING UNIT	1	
WHS46G-5	FUEL LEVEL SENDING UNIT	1	
WHS46G-6	OIL PRESS SWITCH (CAT ONLY)	1	

WIRING DIAGRAM

1. WATER TEMP SENDING UNIT

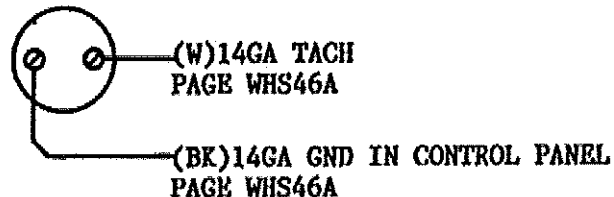
CUMMINS LOCATED
TOP OF ENGINE

CATERPILLAR LOCATED
AT WATER PUMP



2. MINI GENERATOR FOR TACH

LOCATED LEFT FRONT
BOTH ENGINES



3. OIL PRESS SENDING UNIT

CUMMINS LOCATED ON
OIL FILTER UNIT

CATERPILLAR LOCATED
ON RIGHT SIDE OF ENG.



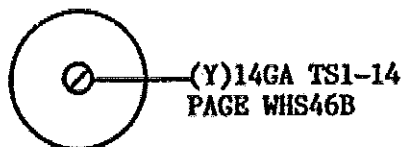
4. HYD. OIL TEMP SENDING UNIT

LOCATED IN HYD.
OIL TANK



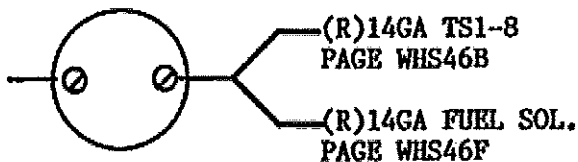
5. FUEL LEVEL SENDING UNIT

LOCATED IN FUEL
TANK



6. OIL PRESS SWITCH-CATERPILLAR ONLY

ALT IGN 14GA(R)
PAGE WHS46E

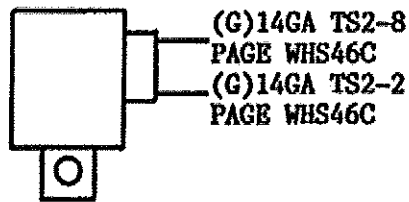


WIRING DIAGRAM

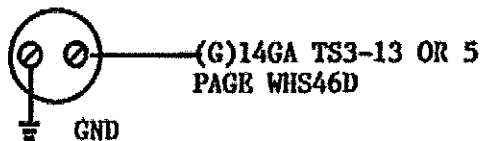
PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS46H-1	AIR SOLENOID	1	
WHS46H-2	PUSH BUTTON SWITCH MOMENTARY	1	
WHS46H-3	AIR SOLENOID	1	
WHS46H-4	BACK UP ALARM	1	
WHS46H-5	PUSH BUTTON SWITCH MOMENTARY	1	

WIRING DIAGRAM

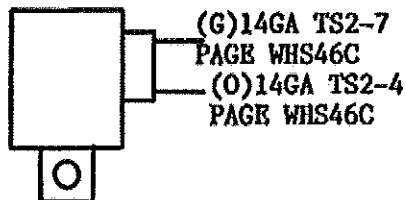
1. TRUCK HITCH AIR SOLENOID WHS26E-3



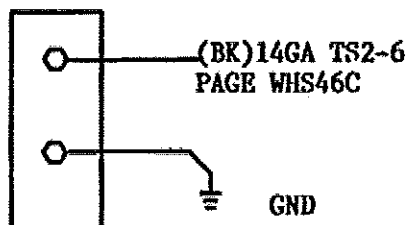
2. TRUCK HITCH FRONT PUSH BUTTON SWITCH MOMENTARY



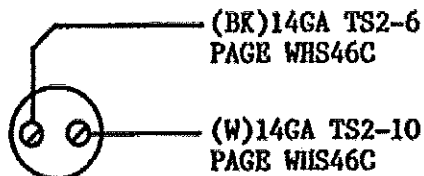
3. AIR HORN AIR SOLENOID WHS26C-4



4. BACK UP ALARM



5. BACK UP ALARM PUSH BUTTON SWITCH MOMENTARY

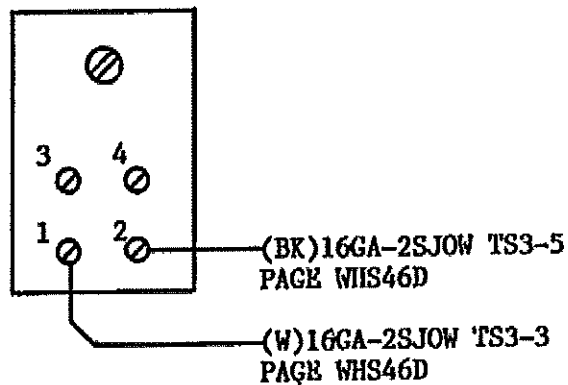


WIRING DIAGRAM ONE MAN OPTION

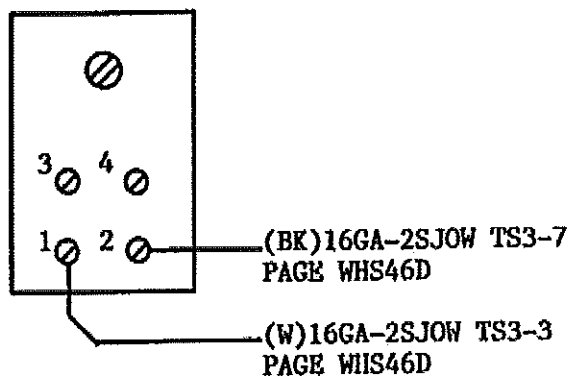
PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS46I-1	LIMIT SWITCH	2	
WHS46I-2	AIR SOLENOID	2	

WIRING DIAGRAM ONE MAN (OPTION)

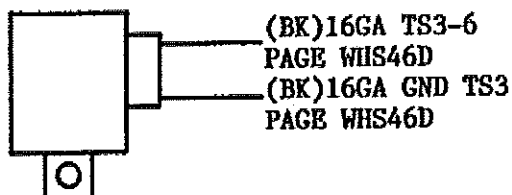
1. LEFT SIDE HOPPER LIMIT SWITCH ONE MAN



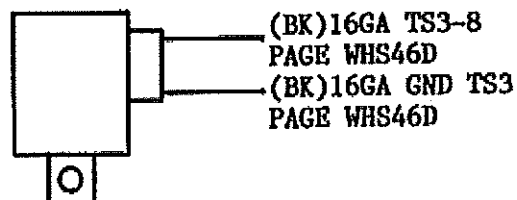
1. RIGHT SIDE HOPPER LIMIT SWITCH ONE MAN



2. AIR SOLENOID LEFT SIDE ONE MAN WHS26D-3



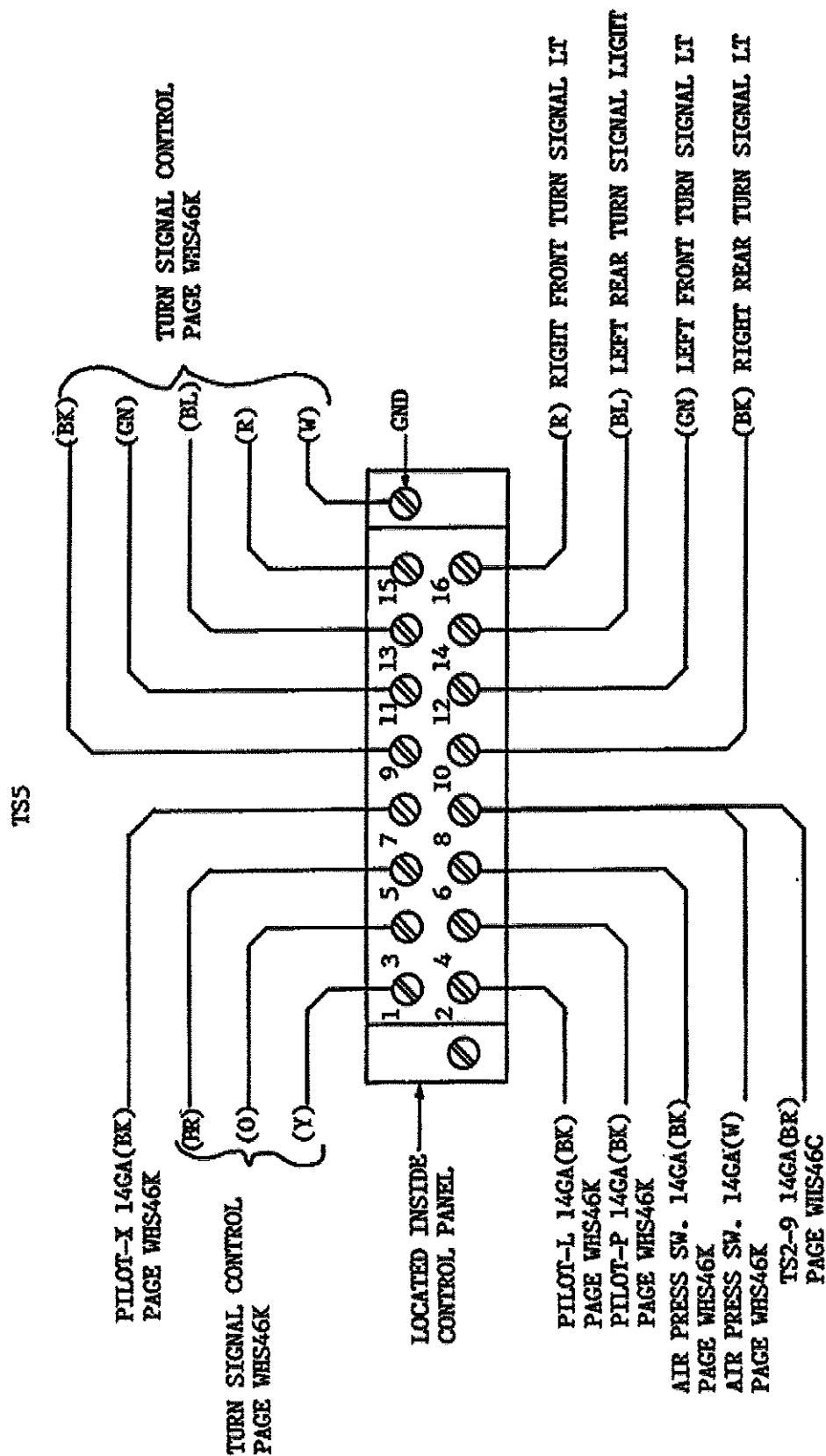
2. AIR SOLENOID RIGHT SIDE ONE MAN WHS26D-3



WIRING DIAGRAM TERMINAL STRIP 5

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS45J-1	TERMINAL STRIP 8 OR 16 TERMINALS	1	8 FOR STANDARD 16 FOR ONE MAN OPTION

WIRING DIAGRAM TERMINAL STRIP 5

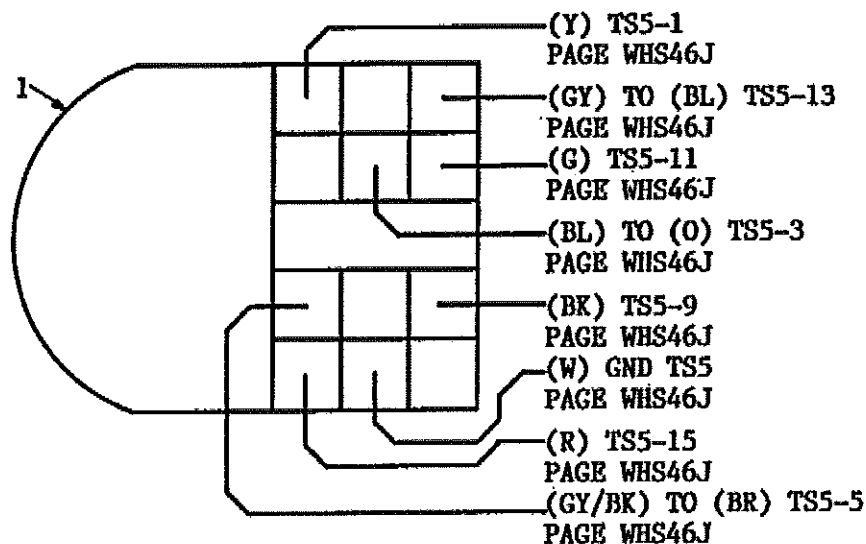


WIRING DIAGRAM LIGHTING OPTION

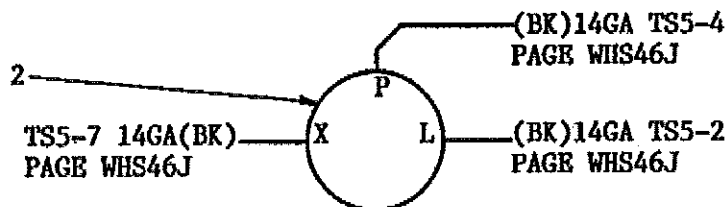
PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS46K-1	TURN SIGNAL ACTUATOR	1	SEE PAGE WHS26E
WHS46K-2	PILOT	1	
WHS46K-3	AIR PRESSURE SWITCH	1	

WIRING DIAGRAM LIGHTING OPTION

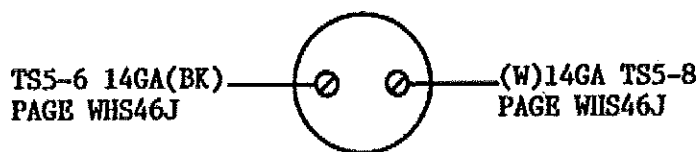
TURN SIGNAL CONTROL STEERING COLUMN

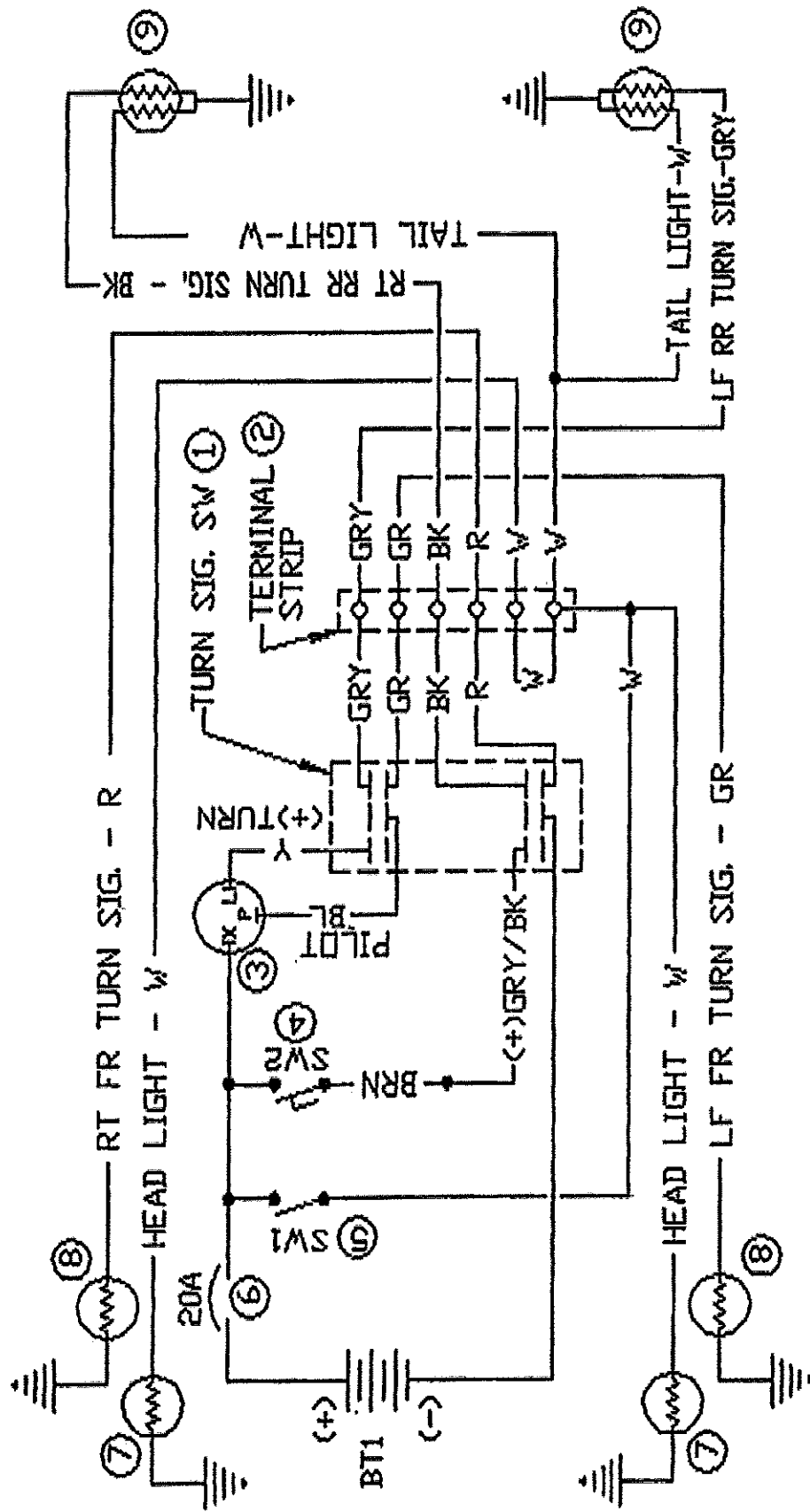


PILOT INSIDE CONTROL PANEL



AIR PRESSURE SWITCH BRAKE POD WHS26E-3





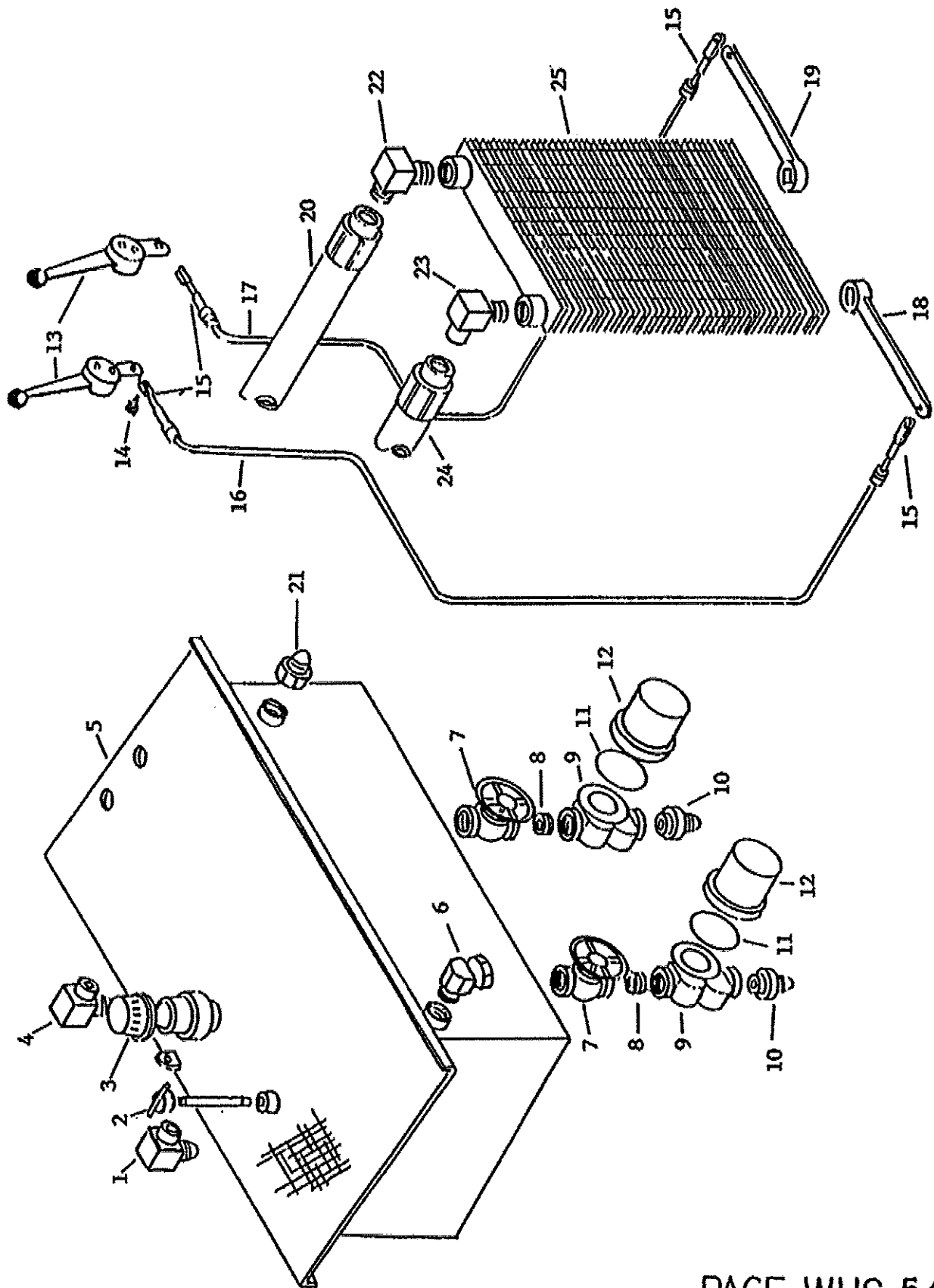
W.H. MANUFACTURING CO. P.O.BOX 4845 POCATELLO, IDAHO 83201	WIRING DIAGRAM LIGHTING OPTION	CHIP SPREADER
DATE: 08-23-94 SCALE: N/A	DRAWN BY: S.M. SMITH	VHS-48

PART NO.	QTY	DESCRIPTION	NO.
WHS48-1	1	TURN SIGNAL SWITCH	FLL7-7900
WHS48-2	1	TERMINAL STRIP	M-428
WHS48-3	1 1	FLASHER FLASHER RECEPTICLE	FLL7-550 PLK52-256
WHS48-4	1	SWITCH (BRAKES)	76052
WHS48-5	1	SWITCH (LIGHTS)	551840
WHS48-6	1	20 AMP BREAKER	W23-X141G-20
WHS48-7	2	WORK LIGHT	TKL80360
WHS48-8	2	TURN SIGNAL	FLL7-8779
WHS48-9	2 2	STOP/TAIL LIGHT STEEL BRACKET	PET426KR TKL40720

OIL COOLER TANK AND CONTROLS

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS54A-1	FITTING CASE DRAIN	1	SEE PAGE WHS30C-1
WHS54A-2	MAGNETIC DIP STICK	1	
WHS54A-3	VENTED FILL CAP	1	
WHS54A-4	FITTING-HOPPER RETURN	1	SEE PAGE WHS30C-8
WHS54A-5	OIL RESERVOIR	1	
WHS54A-6	FITTING - POWER STEERING RETURN	1	SEE PAGE WHS70A-8
WHS54A-7	GATE VALVE	2	
WHS54A-8	NIPPLE	2	
WHS54A-9	FILTER HOUSING	2	
WHS54A-10	FITTING	2	SEE PAGES WHS30B-7 WHS30C-7
WHS54A-11	O-RING (FILTER)	2	
WHS54A-12	FILTER	2	
WHS54A-13	CONTROL LEVER	2	
WHS54A-14	CLEVIS PIN W/COTTER	4	
WHS54A-15	CLEVIS	4	
WHS54A-16	CABLE - PUMP CONTROL L.H.	1	
WHS54A-17	CABLE - PUMP CONTROL R.H.	1	
WHS54A-18	SWASH PLATE LEVER L.H.	1	
WHS54A-19	SWASH PLATE LEVER R.H.	1	
WHS54A-20	COOLER LINE - COOLER TO TANK	1	
WHS54A-21	FITTING - COOLER RETURN LINE - TANK	1	
WHS54A-22	FITTING - COOLER RETURN LINE - COOLER	1	
WHS54A-23	FITTING - COOLER FEED LINE	1	WHS54-5
WHS54A-24	COOLER LINE - COOLER TO PUMP	1	SEE PAGE WHS30B-8
WHS54A-25	COOLER	1	

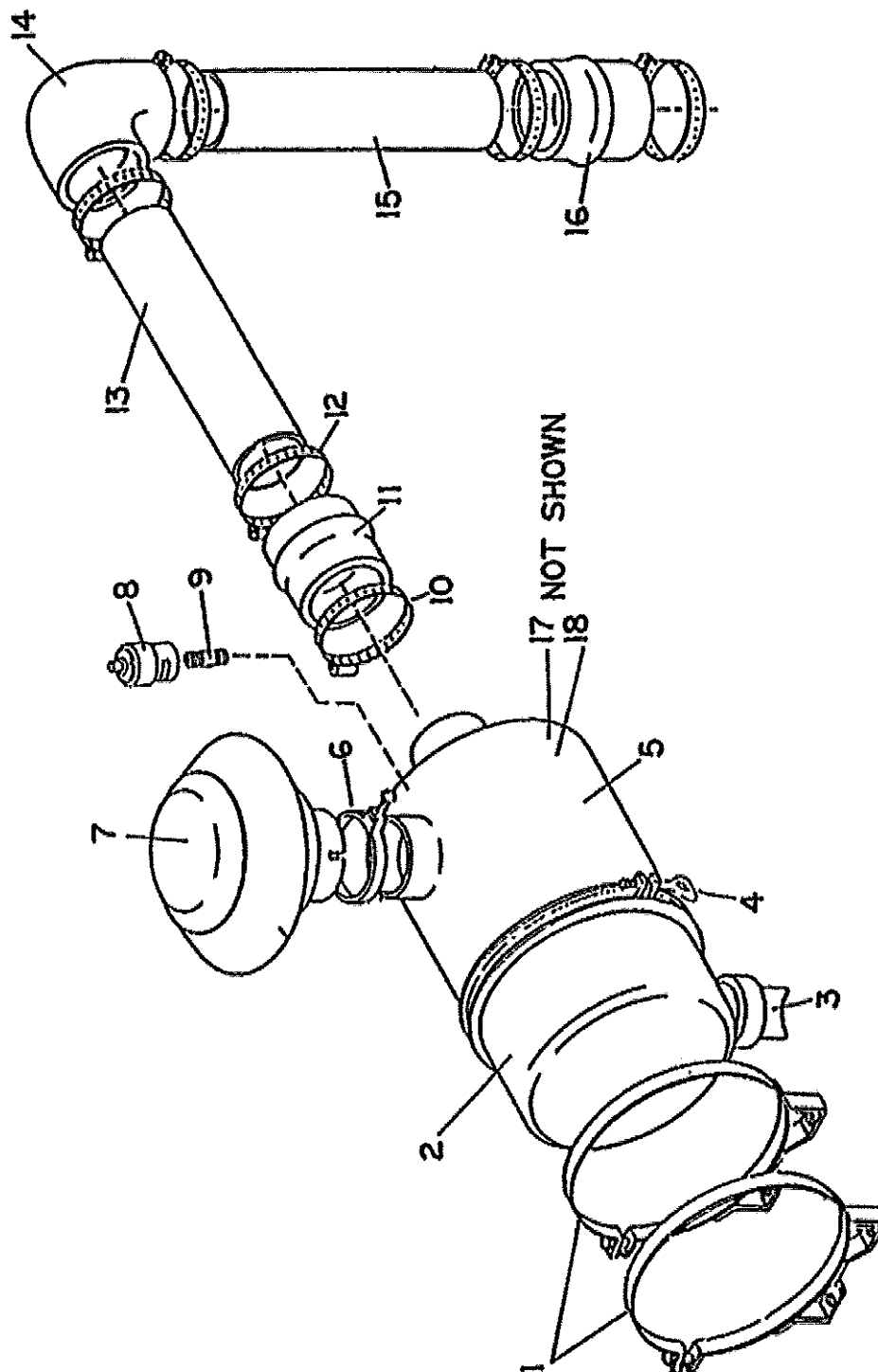
OIL COOLER, TANK AND CONTROLS



AIR FILTER

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
WH58-0	Air Filter Assembly	1	
WH58-1	Clamps	2	
WH58-2	Dust Cover	1	
WH58-3	Dust Ejector	1	
WH58-4	Clamp - Dust Cover	1	
WH58-5	Main Body	1	
WH58-6	Clamp - Bonnet	1	
WH58-7	Bonnet	1	
WH58-8	Indicator	1	
WH58-9	Fitting - Indicator	1	
WH58-10	Clamp	1	Specify Engine
WH58-11	Hump Reducer	1	Specify Engine
WH58-12	Clamp	4	Specify Engine
WH58-13	Pipe	1	Specify Engine
WH58-14	Elbow	1	Specify Engine
WH58-15	Pipe	1	Specify Engine
WH58-16	Connector	1	Specify Engine
WH58-17	Main Element	1	
WH58-18	Safety Element	1	

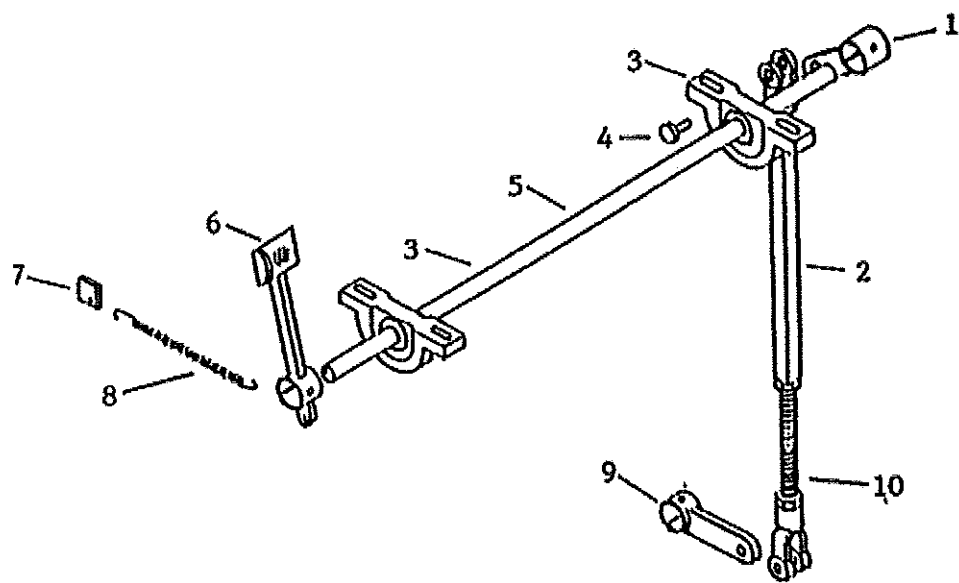
AIR FILTER



CLUTCH SHAFT AND LEVER

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS62A-1	LEVER (UPPER)	1	
WHS62A-2	LINK	1	
WHS62A-3	BEARING	2	
WHS62A-4	CLEVIS PIN	2	
WHS62A-5	CROSS SHAFT	1	
WHS62A-6	PEDAL ASSEMBLY	1	
WHS62A-7	HOOK (SPRING)	1	
WHS62A-8	SPRING	1	
WHS62A-9	LEVER (LOWER)	1	
WHS62A-10	CLUTCH LINKAGE	1	

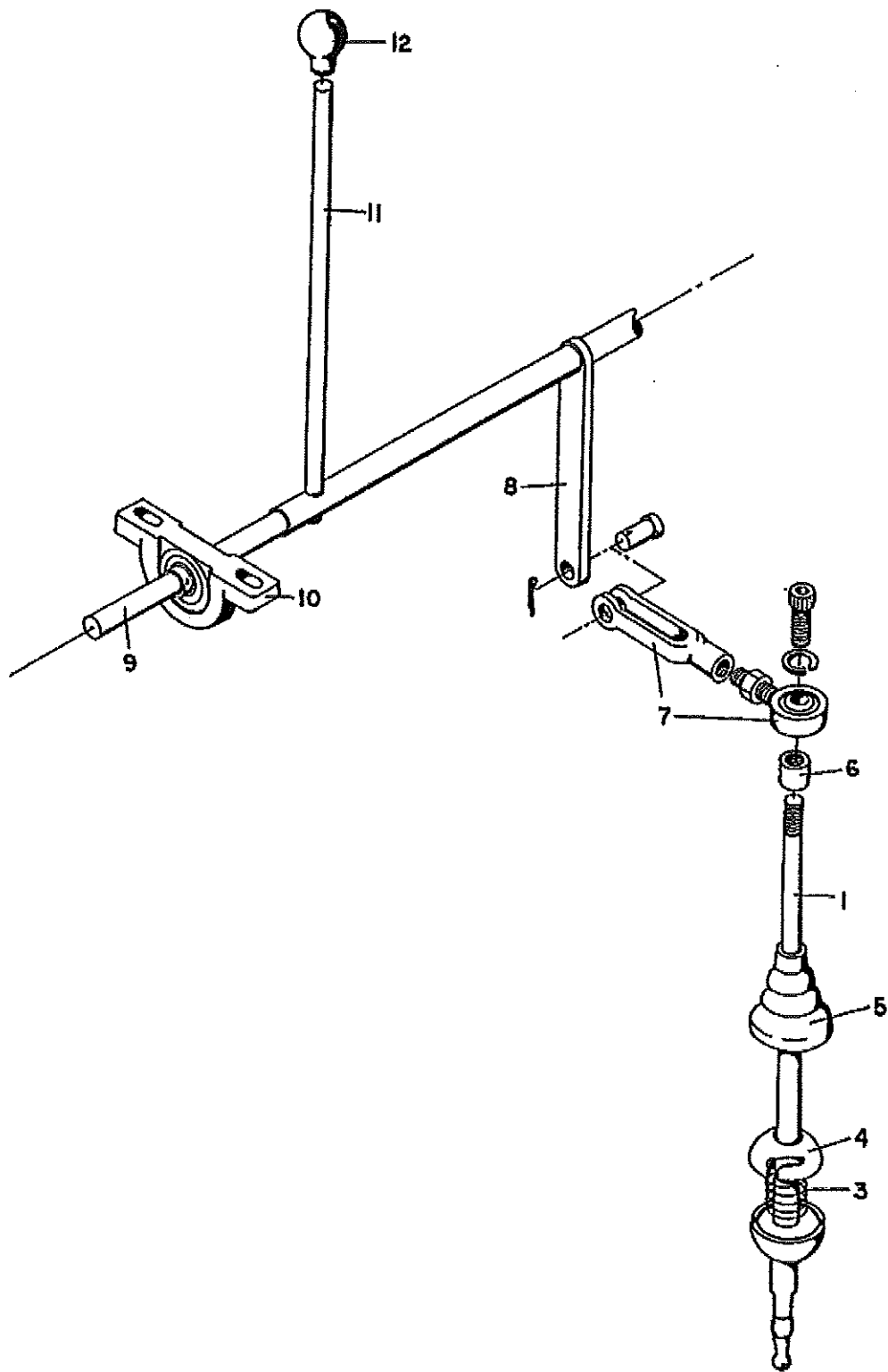
CLUTCH SHAFT AND LEVER



SHIFTER

PART NO.	DESCRIPTION	NO. REQD.	REMARKS
WHS64-0	Shifter Assembly	1	Items 1 Thru 12
WHS64-1	Shift Stick	1	
WHS64-2	Cup - Spring	1	
WHS64-3	Spring	1	
WHS64-4	Lock	1	
WHS64-5	Rubber Seal	1	
WHS64-6	Sleeve (Threaded)	1	
WHS64-7	Clevis	1	
WHS64-8	Lever Arm	1	
WHS64-9	Cross Shaft	1	
WHS64-9a	Cross Shaft (Dual)	1	
WHS64-10	Bearings	2	Not Shown
WHS64-11	Shift Lever	1	
WHS64-12	Rubber Knob	1	
WHS64-13	Shift Pattern	1	(2 Repd For Dual)

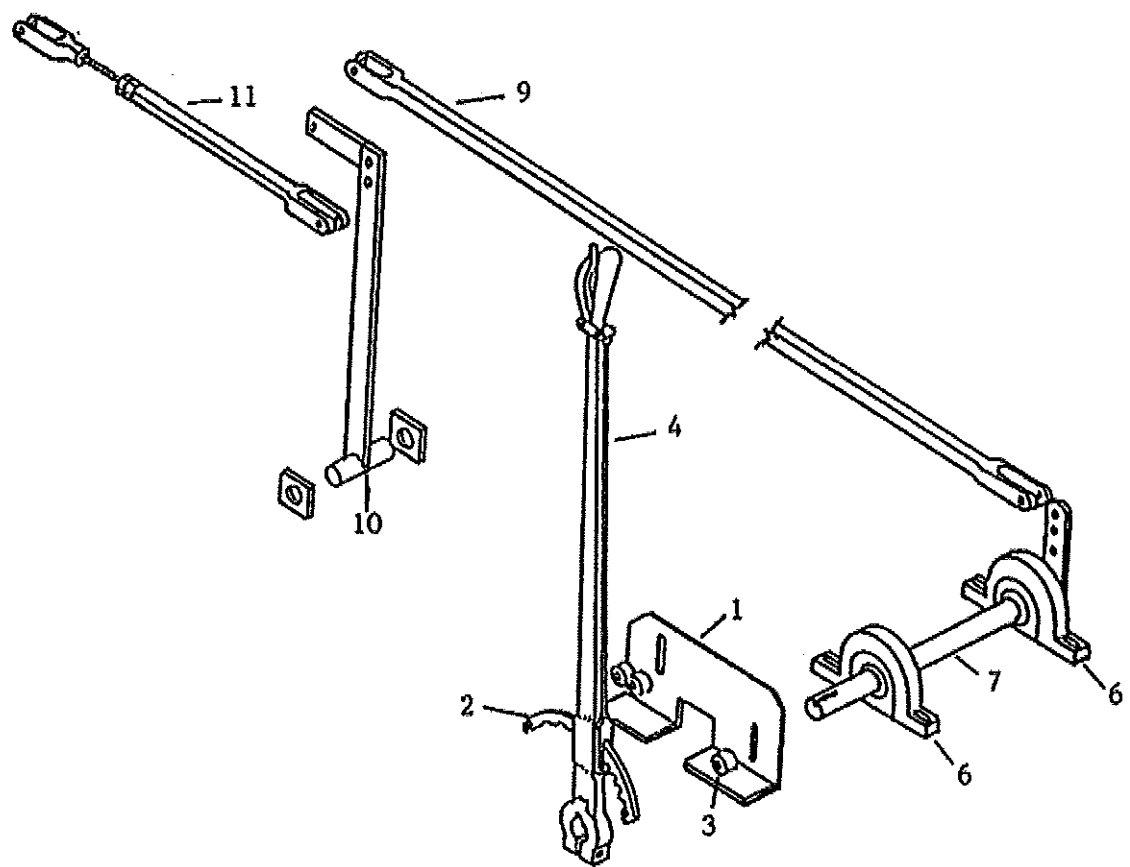
SHIFTER



METERING QUADRANT

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS66A-1	BRACKET	1	
WHS66A-2	QUADRANT	1	
WHS66A-3	BUSHING	3	
WHS66A-4	LEVER	1	
WHS66A-5	SWITCH	1	
WHS66A-6	BEARINGS	2	
WHS66A-7	SHAFT	1	
WHS66A-8	SHAFT DUAL	1	
WHS66A-9	LINK	1	
WHS66A-10	PIVOT LEVER	1	
WHS66A-11	MAIN GATE LINK ARM	1	
WHS66A-12	CLEVIS PIN	4	

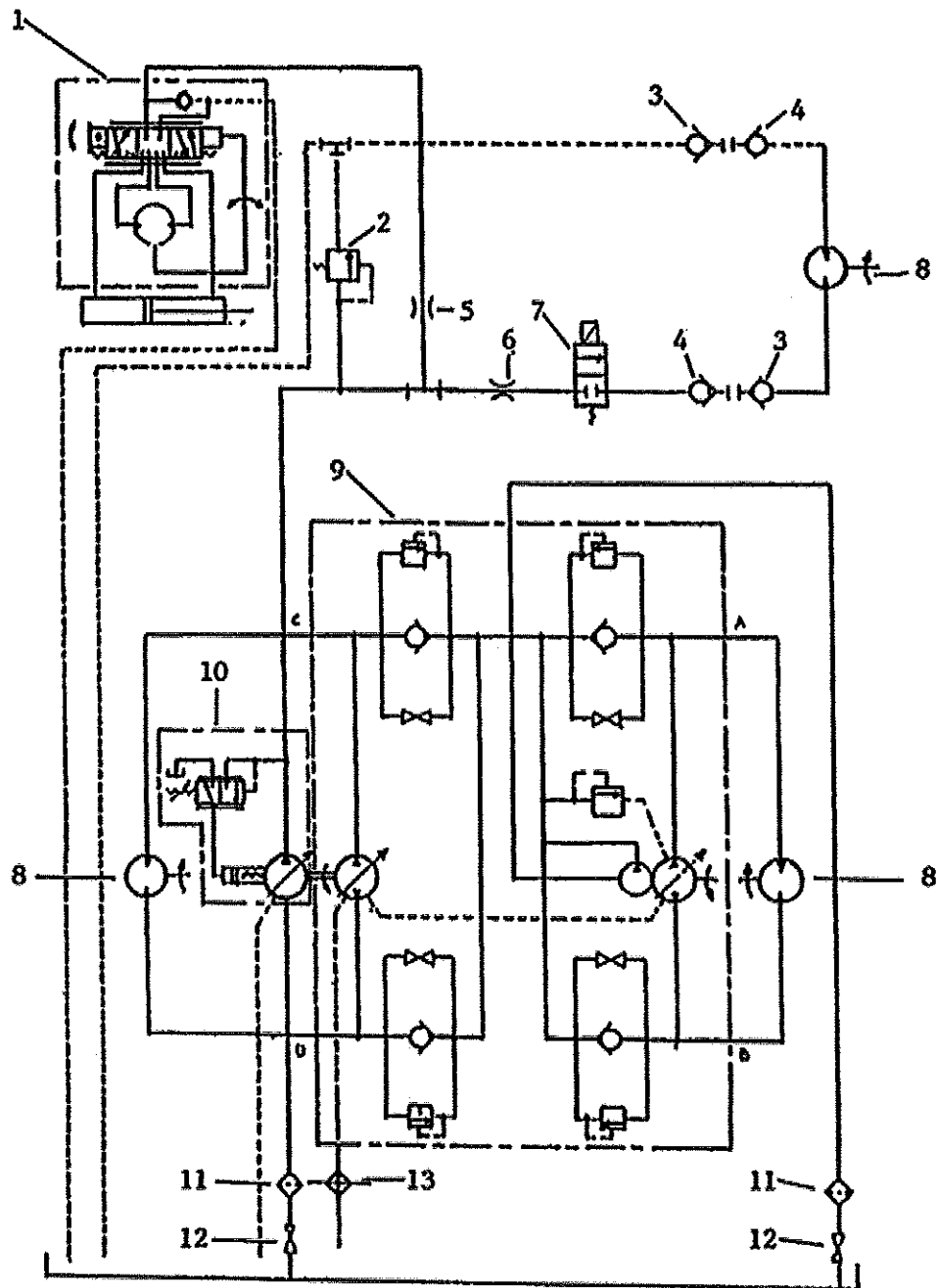
METERING QUADRANT



HYDRAULIC SCHEMATIC

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS68A-1	ORBITROL	1	WHS70A-6
WHS68A-2	RELIEF VALVE	1	WHS30C-11
WHS68A-3	FEMALE QUICK COUPLER	2	WHS30C-27
WHS68A-4	MALE QUICK COUPLER	2	WHS30C-28
WHS68A-5	ORIFICE	1	WHS30C-15
WHS68A-6	ORIFICE	1	WHS30C-19
WHS68A-7	SOLINOID VALVE	1	WHS30C-20
WHS68A-8	MOTOR HYDROSTATIC	3	WHS30B-2
WHS68A-9	PUMP - TANDEM HYDROSTATIC	1	WHS30B-14
WHS68A-10	PUMP - HYDROSTATIC	1	WHS30B-12
WHS68A-11	FILTER	2	WHS54A-12
WHS68A-12	GATE VALVE	2	WHS54A-7
WHS68A-13	OIL COOLER	1	WHS54A-25

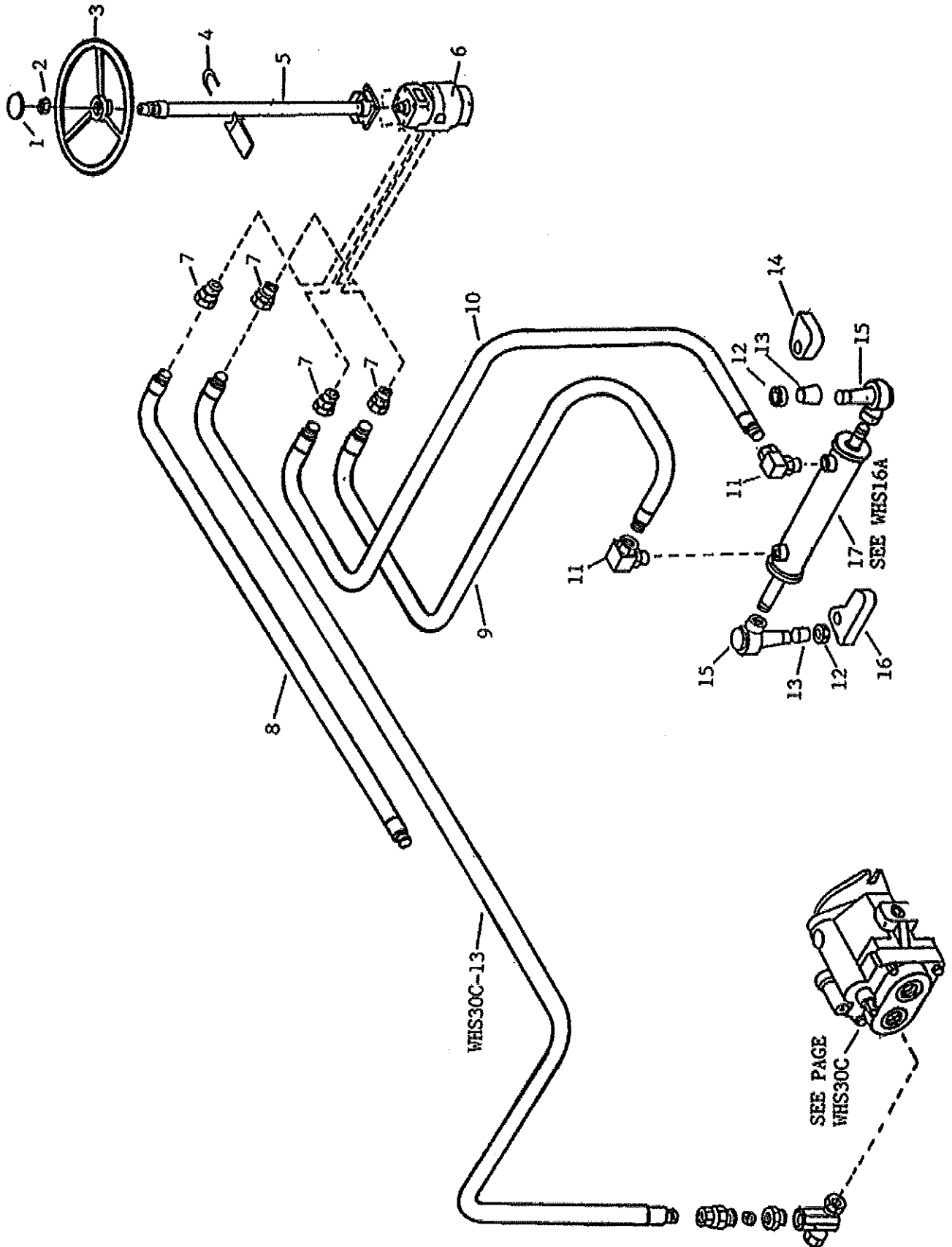
HYDRAULIC SCHEMATIC



POWER STEERING SYSTEM

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS70A-1	METAL CAP	1	
WHS70A-2	WHEEL NUT	1	
WHS70A-3	STEERING WHEEL	1	
WHS70A-4	COLUMN BRACKET	1	
WHS70A-5	STEERING COLUMN	1	
WHS70A-6	ORBITROL	1	
WHS70A-7	FITTING	4	
WHS70A-8	HOSE RETURN	1	
WHS70A-9	HOSE - RIGHT PORT	1	
WHS70A-10	HOSE - LEFT PORT	1	
WHS70A-11	FITTING	2	
WHS70A-12	NUT CASTLE	2	
WHS70A-13	RUBBER BOOT	2	
WHS70A-14	LUG	1	
WHS70A-15	STEERING KNUCKLE	2	
WHS70A-16	LUG	1	
WHS70A-17	CYLINDER	1	
WHS70A-18	SEAL KIT FOR ORBITROL	1	NOT SHOWN
WHS30C-13	HOSE PRESSURE	1	

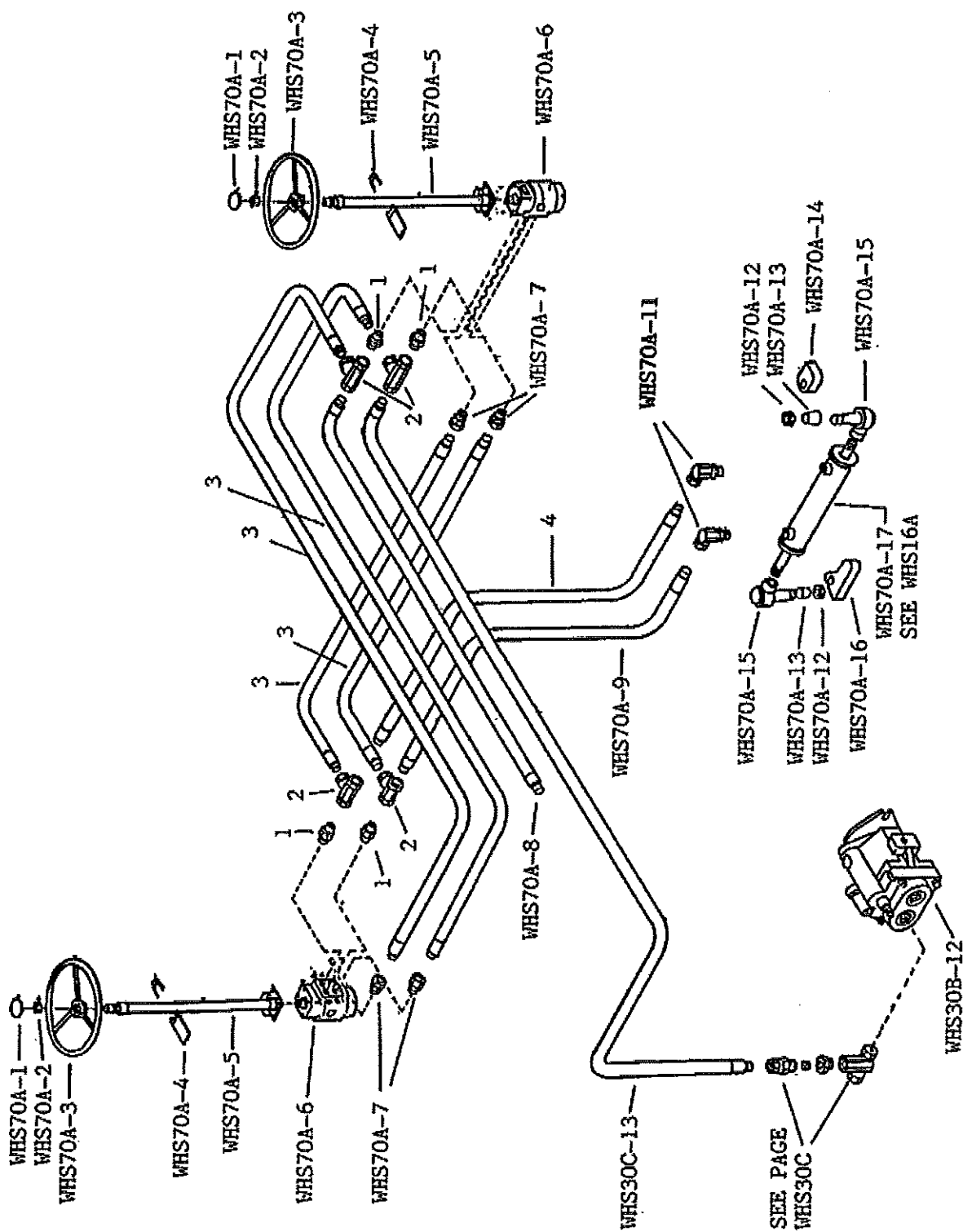
POWER STEERING SYSTEM



STEERING SYSTEM (DUEL CONTROL)

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS70B-1	FITTING	4	
WHS70B-2	TEE FITTING	4	
WHS70B-3	HOSE - LEFT PORT	4	
WHS70B-4	HOSE	1	
WHS70A-1	METAL CAP	2	
WHS70A-2	WHEEL NUT	2	
WHS70A-3	STEERING WHEEL	2	
WHS70A-4	COLUMN BRACKET	2	
WHS70A-5	STEERING COLUMN	2	
WHS70A-6	ORBITROL	2	
WHS70A-7	FITTING	4	
WHS70A-8	HOSE RETURN	1	
WHS70A-9	HOSE - RIGHT PORT	1	
WHS70A-11	FITTING	2	
WHS70A-12	CASTLE NUT	2	
WHS70A-13	RUBBER BOOT	2	
WHS70A-14	LUG	1	
WHS70A-15	STEERING KNUCKLE	2	
WHS70A-16	LUG	1	
WHS70A-17	CYLINDER	1	
WHS30C-13	HOSE PRESSURE	1	

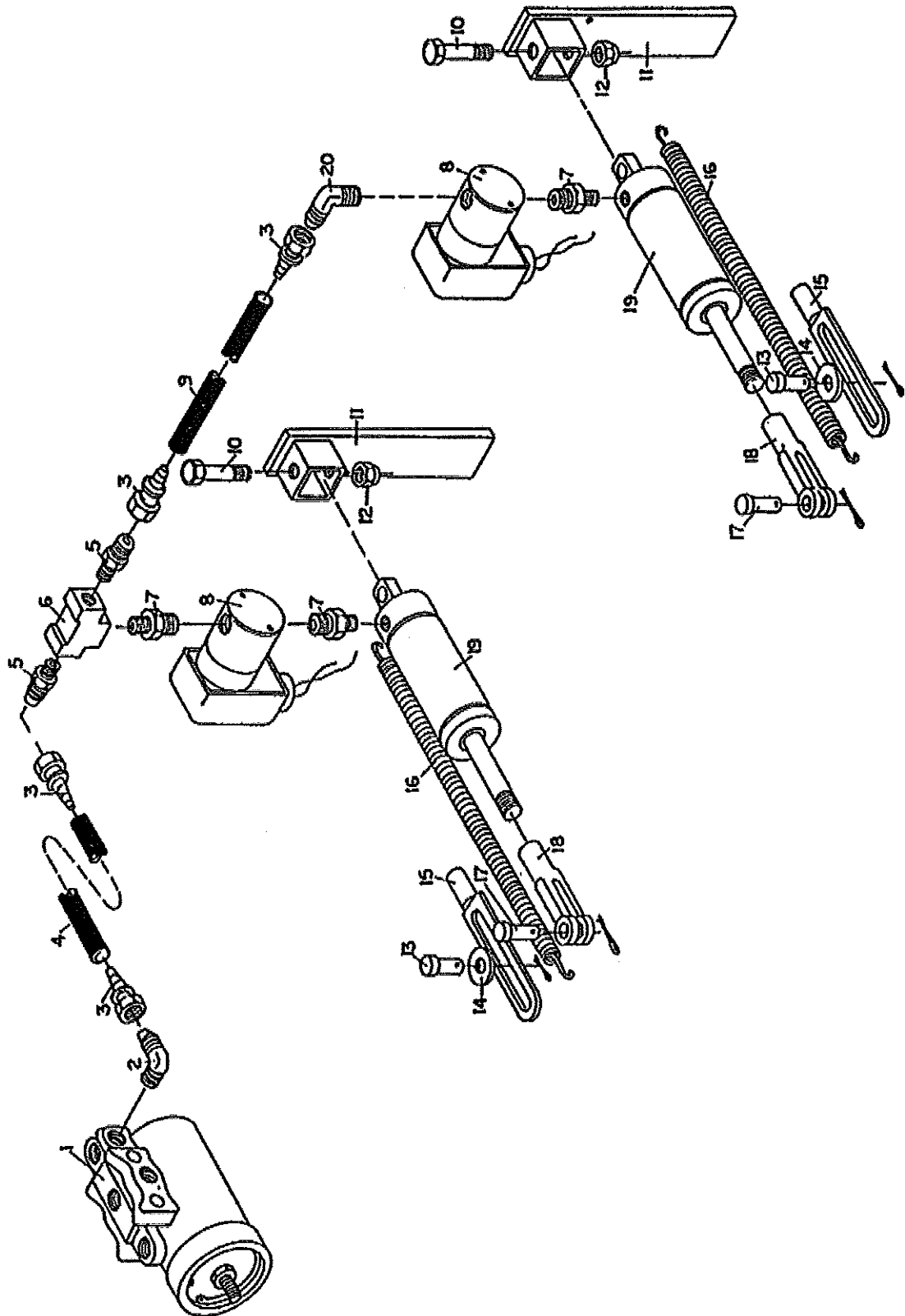
POWER STEERING DUEL CONTROL



ONE MAN CONTROL - AIR SYSTEM

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS 72-1	Govenor	1	Same as W 26-7
WHS 72-2	Fitting 90°	1	
WHS 72-3	Press-on Hose Fitting	4	
WHS 72-4	Hose (Rubber)	1	
WHS 72-5	Fitting	2	Same as W 50-7
WHS 72-6	Tee	1	
WHS 72-7	Reducer	3	
WHS 72-8	Solenoid	2	
WHS 72-9	Hose (Rubber)	1	
WHS 72-10	Bolt	2	
WHS 72-11	Bracket	2	
WHS 72-12	Nut	2	
WHS 72-13	Clevis Pin	2	
WHS 72-14	Washer	2	
WHS 72-15	Slotted Clevis	2	
WHS 72-16	Spring	2	
WHS 72-17	Clevis Pin	2	
WHS 72-18	Clevis	2	
WHS 72-19	Air Cylinder	2	
WHS 72-20	Fitting 90°	1	

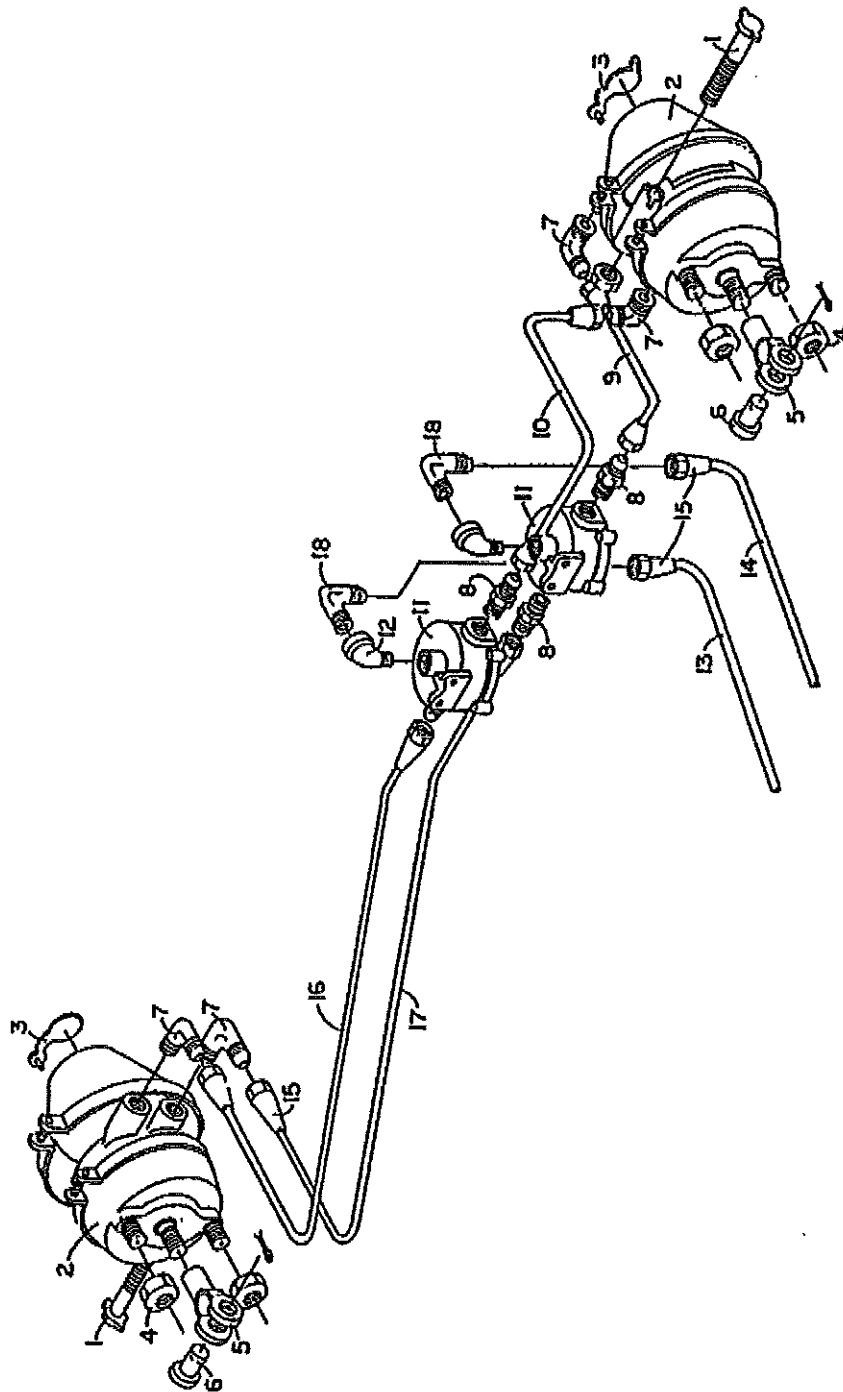
ONE MAN CONTROL - AIR SYSTEM



REAR AXLE - AIR SYSTEM

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS 74-1	Safety Bolt & Nut	2	Same as W 26-2
WHS 74-2	Maxi Brake Chambers	2	
WHS 74-3	Safety Bolt Cover	2	
WHS 74-4	Nut	4	
WHS 74-5	Clevis	2	
WHS 74-6	Clevis Pin	2	
WHS 74-7	Fitting 90° Brass	4	
WHS 74-8	Fitting Brass	3	
WHS 74-9	Steel Air Line	1	
WHS 74-10	Steel Air Line	1	
WHS 74-11	Quick Release Valve	2	
WHS 74-12	Street L	2	
WHS 74-13	Steel Air Line (Maxi Brake)	1	
WHS 74-14	Steel Air Line (Service Brake)	1	
WHS 74-15	Tube Nut	16	
WHS 74-16	Steel Air Line	1	
WHS 74-17	Steel Air Line	1	
WHS 74-18	Fitting 90° Brass	2	
WHS 74-19	Fitting 90° Brass	1	

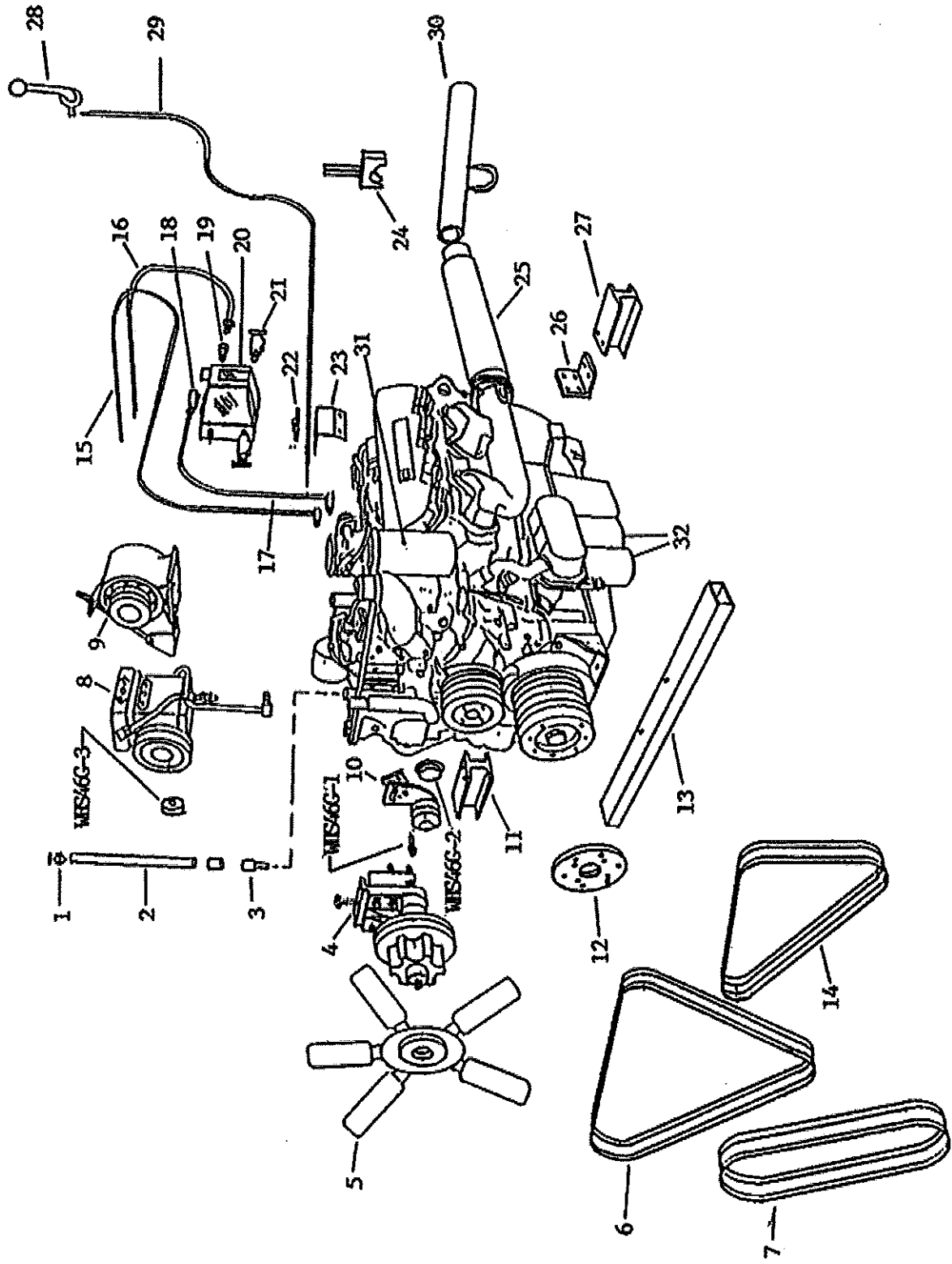
REAR AXLE - AIR SYSTEM



ENGINE ATTACHMENTS

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS80-0	CATERPILLAR ENGINE ASSEMBLY	1	
WHS80-1	OIL CAP	1	
WHS80-2	OIL TUBE	1	
WHS80-3	ADAPTER	1	
WHS80-4	PULLEY ASSEMBLY (FAN)	1	
WHS80-5	FAN	1	
WHS80-6	BELTS-COMPRESSOR AND ALTERNATOR DRIVE	2	
WHS80-7	BELTS-FAN DRIVE	2	
WHS80-8	COMPRESSOR	1	
WHS80-9	ALTERNATOR	1	
WHS80-10	IDLER PULLEY ASSEMBLY	1	
WHS80-11	I-BEAM (R.H.)	1	
WHS80-12	P.T.O. ADAPTER	1	
WHS80-13	FRONT ENGINE MOUNT	1	
WHS80-14	BELTS-WATER PUMP	2	
WHS80-15	FUEL RETURN LINE	1	
WHS80-16	FUEL TANK TO WATER SEPARATOR	1	
WHS80-17	FUEL LINE WATER SEPARATOR TO FUEL PUMP	1	
WHS80-18	FITTING	1	
WHS80-19	FITTING	3	
WHS80-20	WATER SEPARATOR	1	
WHS80-21	PET COCK	2	
WHS80-22	CABLE CLAMP	2	
WHS80-23	THROTTLE CABLE BRACKET	1	
WHS80-24	MUFFLER CLAMP	2	
WHS80-25	MUFFLER	2	
WHS80-26	REAR ENGINE MOUNT	2	
WHS80-27	I-BEAM (L.H.)	1	
WHS80-28	THROTTLE CONTROL LEVER	1	
WHS80-29	THROTTLE CABLE	1	
WHS80-30	EXTENSION PIPE	2	
WHS80-31	FUEL FILTER	1	
WHS80-32	OIL FILTERS	2	

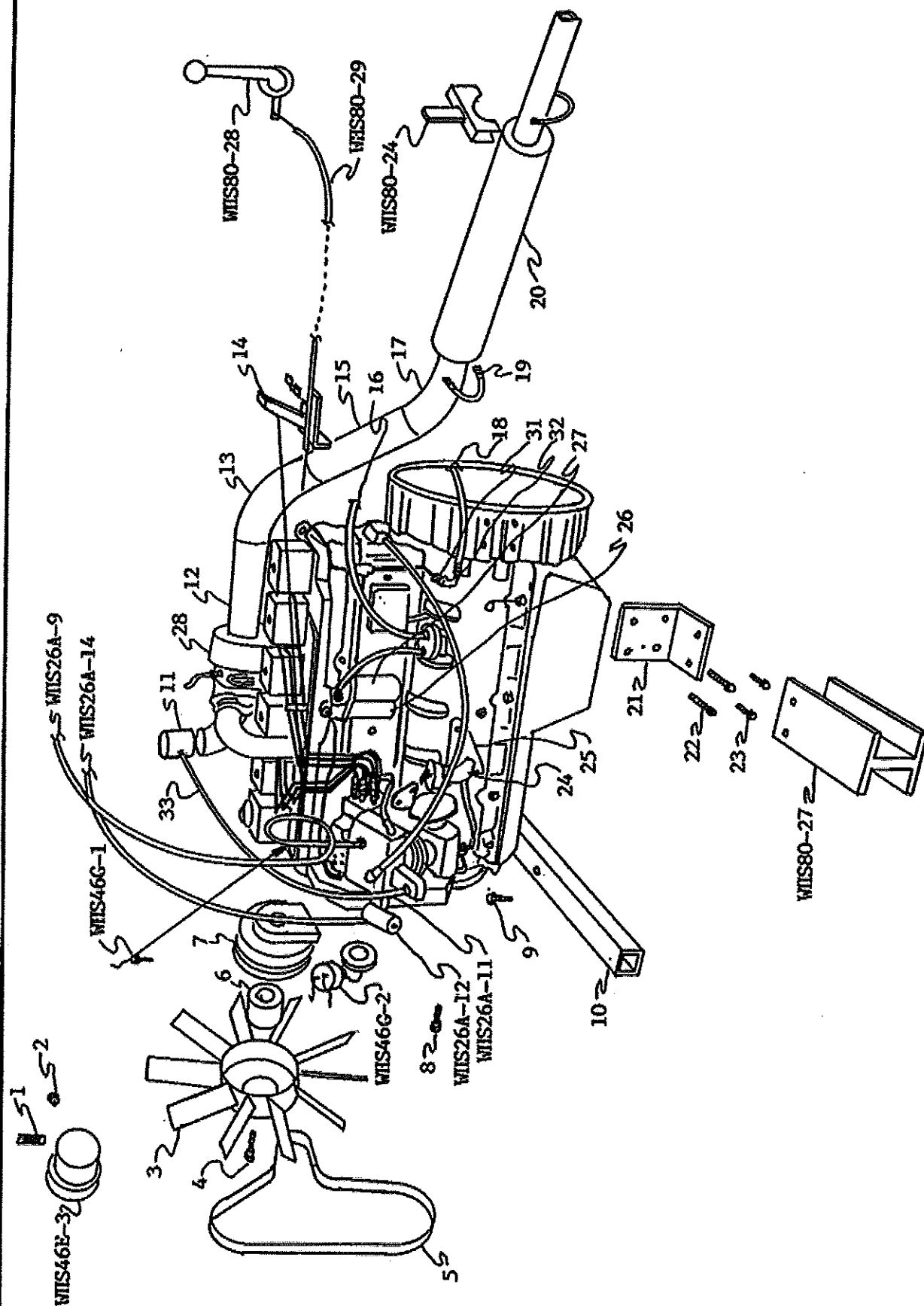
ENGINE ATTACHMENTS



ENGINE ATTACHMENTS CUMMINS

WHS26A-9	AIR LINE	1	
WHS26A-11	AIR COMPRESSOR	1	
WHS26A-12	GOVERNOR	1	
WHS26A-14	AIR LINE	1	
WHS46E-1	STARTER	1	NOT SHOWN
WHS46E-3	ALTERNATOR	1	
WHS46G-1	WATER TEMPERATURE SENDING UNIT	1	
WHS46G-2	TACHOMETER SENDING UNIT	1	
WHS80-11	I-BEAM (R.H.)	1	NOT SHOWN
WHS80-24	MUFFLER CLAMP	1	
WHS80-27	I-BEAM (L.H.)	1	
WHS80-28	THROTTLE CONTROL LEVER	1	
WHS80-29	THROTTLE CABLE	1	
WHS80A-1	DIODE	1	
WHS80A-2	NUT (ALTERNATOR)	1	
WHS80A-3	FAN	1	
WHS80A-4	BOLTS (FAN)	4	
WHS80A-5	FAN BELT	1	
WHS80A-6	FAN SPACER	1	
WHS80A-7	FAN ADAPTOR	1	
WHS80A-8	BOLT (PTO)	4	
WHS80A-9	BOLT (MOTOR MOUNT)	1	
WHS80A-10	MOTOR MOUNT FRONT	1	
WHS80A-11	UNION	1	
WHS80A-12	EXHAUST PIPE	1	
WHS80A-13	ELBOW (EXHAUST)	1	
WHS80A-14	THROTTLE CABLE BRACKET	1	
WHS80A-15	EXHAUST PIPE	1	
WHS80A-16	FUEL LINE (FEED)	1	
WHS80A-17	ELBOW (EXHAUST)	1	
WHS80A-18	FUEL LINE (RETURN)	1	
WHS80A-19	EXHAUST CLAMP	1	
WHS80A-20	MUFFLER	1	
WHS80A-21	REAR ENGINE MOUNT (L.H.)	1	
WHS80A-22	BOLTS (UPPER REAR)	4	
WHS80A-23	BOLTS (LOWER REAR)	4	
WHS80A-24	OIL FILL TUBE	1	
WHS80A-25	O-RING	1	NOT SHOWN
WHS80A-26	FUEL FILTER	1	
WHS80A-27	FUEL WATER SEPARATOR	1	
WHS80A-28	TURBO	1	
WHS80A-29	OIL FILTER	1	NOT SHOWN
WHS80A-30	REAR ENGINE MOUNT (R.H.)	1	NOT SHOWN
WHS80A-31	FITTING	1	
WHS80A-32	FITTING	1	
WHS80A-33	AIR LINE HOSE	1	
WHS80A-34	FILL CAP	1	

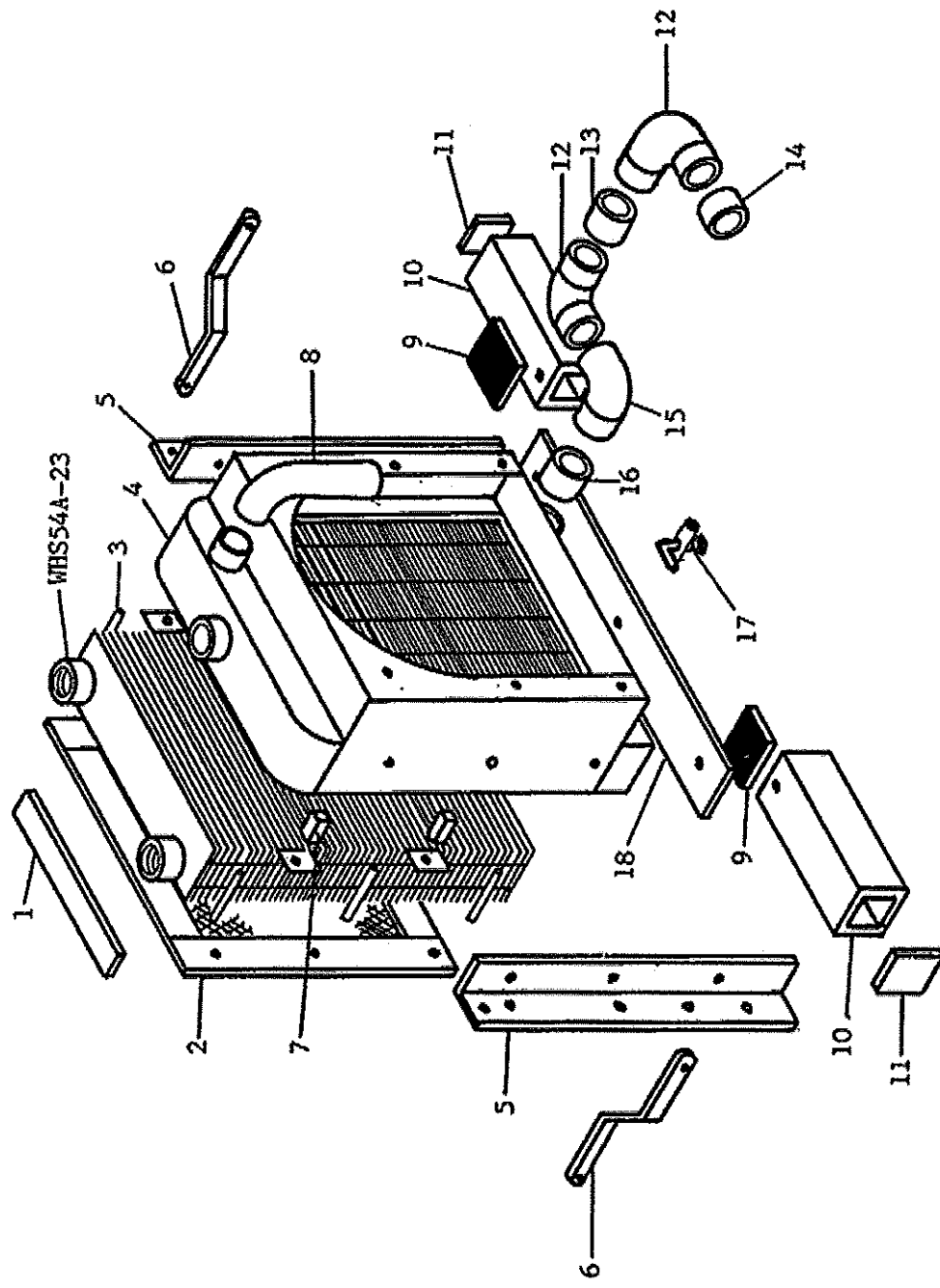
ENGINE ATTACHMENTS CUMMINS



RADIATOR CUMMINS

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS82-1	COVER	1	
WHS82-2	ROCK SCREEN ASSEMBLY	1	
WHS82-3	COOLER SPACER	6	
WHS82-4	RADIATOR	1	
WHS82-5	MOUNTING BRACKET	2	
WHS82-6	UPPER MOUNT	2	
WHS82-7	STAND OFFS	4	
WHS82-8	HOSE	1	
WHS82-9	DAMPER	2	
WHS82-10	SUPPORT TUBE	2	
WHS82-11	END CAP	2	
WHS82-12	ELBOW	2	
WHS82-13	PIPE	1	
WHS82-14	HOSE	1	
WHS82-15	STREET ELBOW	1	
WHS82-16	HOSE	1	
WHS82-17	PET COCK	1	
WHS82-18	BOTTOM BRACKET	1	

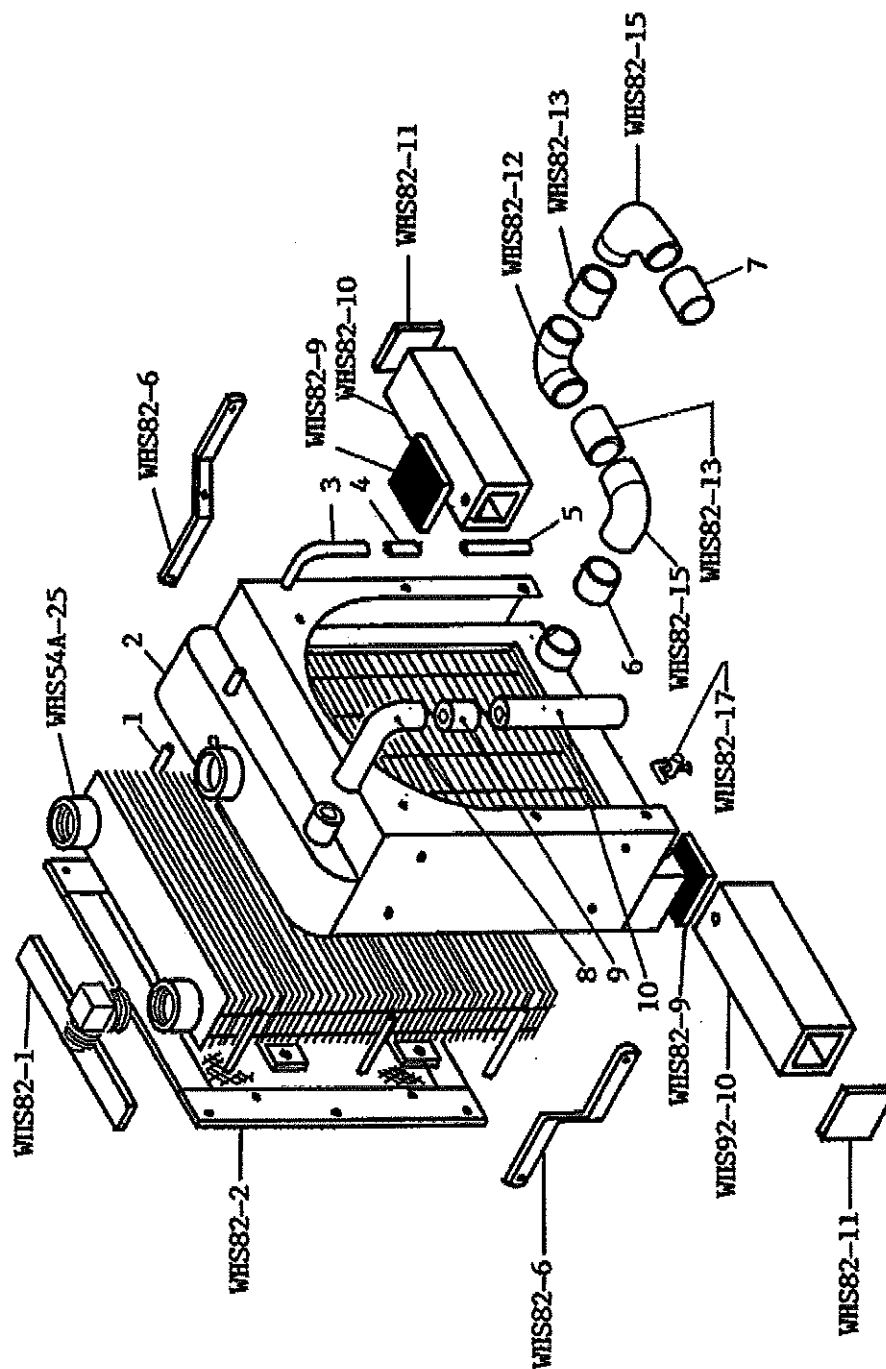
RADIATOR CUMMINS



RADIATOR CATERPILLER

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS82A-1	COOLER SPACER	6	
WHS82A-2	RADIATOR	1	
WHS82A-3	HOSE	1	
WHS82A-4	PIPE	1	
WHS82A-5	HOSE	1	
WHS82A-6	HOSE	1	
WHS82A-7	HOSE	1	
WHS82A-8	HOSE	1	
WHS82A-9	PIPE	1	
WHS82A-10	HOSE	1	

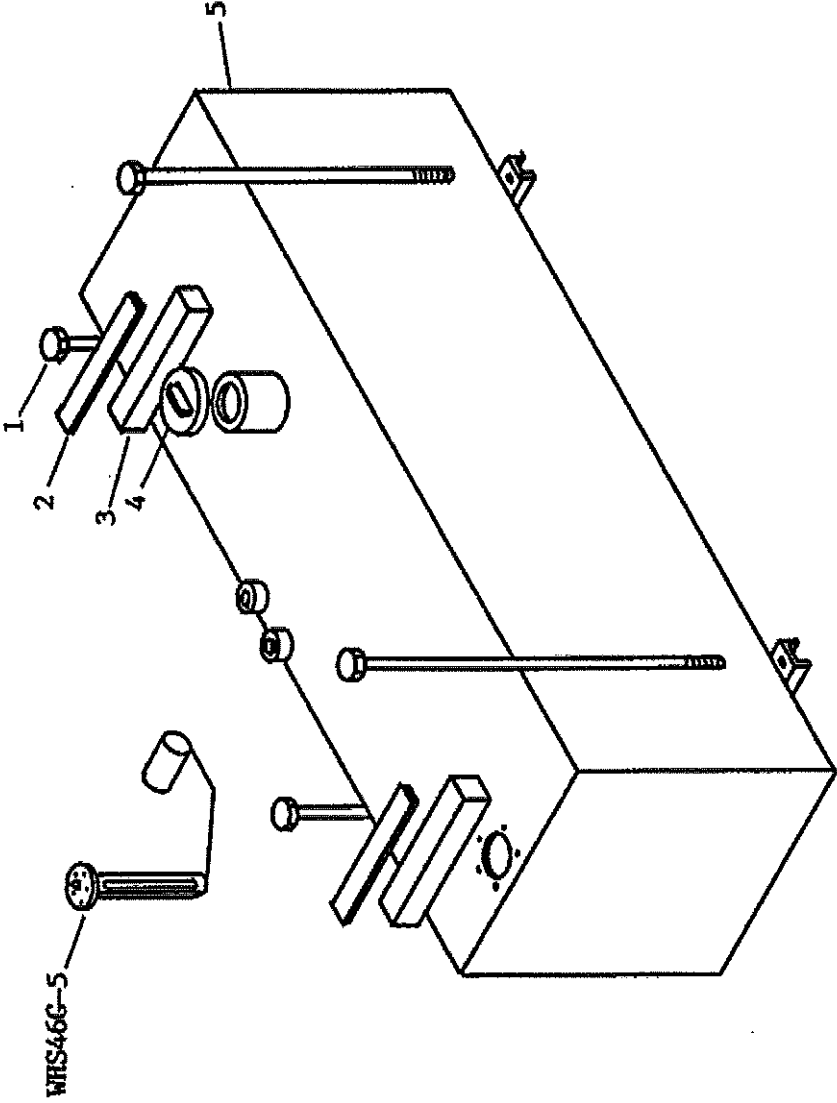
RADIATOR CATERPILLER



FUEL TANK

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS84-1	ROD	4	NOT SHOWN
WHS84-2	DAMPER	2	
WHS84-3	SPACER	2	
WHS84-4	CAP	1	
WHS84-5	FUEL TANK	1	
WHS84-6	FITTINGS	2	

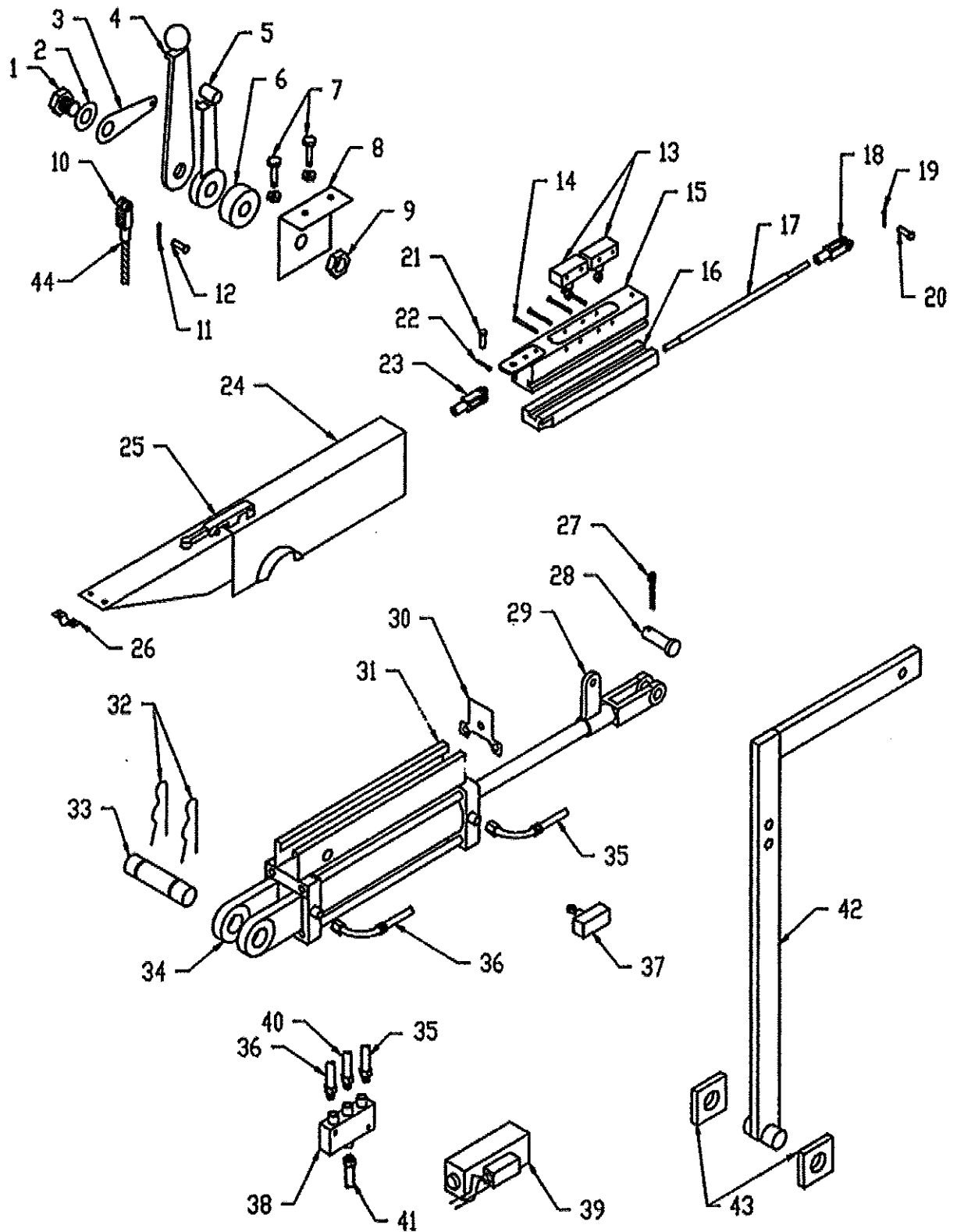
FUEL TANK



HYDRAULIC METERING QUADRANT

PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS86-1	TENSION BOLT	1	
WHS86-2	WASHER	1	
WHS86-3	CABLE LINK	1	
WHS86-4	HANDLE	1	
WHS86-5	METERING LOCK	1	
WHS86-6	CONTROL BODY	1	
WHS86-7	BOLTS AND NUTS	2	
WHS86-8	MOUNT BRACKET	1	
WHS86-9	MOUNT BOLT	2	
WHS86-10	CLEVIS	1	
WHS86-11	COTTER PIN	1	
WHS86-12	CLEVIS PIN	1	
WHS86-13	MICRO SWITCH	2	
WHS86-14	SCREW	4	
WHS86-15	ACTUATING MOUNTING GROUP	1	
WHS86-16	REACTION PLATE	1	
WHS86-17	REACTION ROD	1	
WHS86-18	CLEVIS	1	
WHS86-19	COTTER PIN	1	
WHS86-20	CLEVIS PIN	1	
WHS86-21	CLEVIS PIN	1	
WHS86-22	COTTER PIN	1	
WHS86-23	CLEVIS	1	
WHS86-24	SWITCH COVER	1	
WHS86-25	COVER LATCH	1	
WHS86-26	CABLE CLAMP	1	
WHS86-27	COTTER PIN	1	
WHS86-28	CLEVIS PIN	1	
WHS86-29	CLEVIS	1	
WHS86-30	STOP BRACKET	1	
WHS86-31	ACTUATING BRACKET	1	
WHS86-32	HAIR PIN	1	
WHS86-33	MOUNTING SHAFT	1	
WHS86-34	CYLINDER	1	
WHS86-35	HOSE	1	

HYDRAULIC METERING QUADRANT



PART NO	DESCRIPTION	NO. REQD.	REMARKS
WHS86-36	HOSE	1	
WHS86-37	MICRO SWITCH	1	
WHS86-38	VALVE BASE	1	
WHS86-39	SPOOL VALVE	1	
WHS86-40	HOSE	1	
WHS86-41	HOSE	1	
WHS86-42	LINK ARM LEVER	1	
WHS86-43	HINGE	2	
WHS86-44A	CABLE (SINGLE CONTROL MACHINE)	1	
WHS86-44D	CABLE (DUEL CONTROL MACHINE)	1	

HYDRAULIC METERING QUADRANT

