OWNER'S MANUAL

ASSEMBLY - OPERATING - MAINTENANCE - REPAIR

HEAVY DUTY 6 - WAY DOZER BLADE

FOR SKID STEERS OVER 50 HP

EQUIPPED WITH UNIVERSAL MOUNT AND
ELECTRICAL CONTROL KIT

BLADE:	MODEL NO.
6’ DOZER BLADE	35-22802
7’ DOZER BLADE	35-22803
8’ DOZER BLADE	35-22804

OPTIONAL EQUIPMENT:	MODEL NO.
BLADE EXTENSION KIT 6'	34-02510
BLADE EXTENSION KIT 7'	34-02610
BLADE EXTENSION KIT 8’	34-04210

Record and Retain the Model
and Serial Numbers of your
Spartan Dozer

MODEL

_____

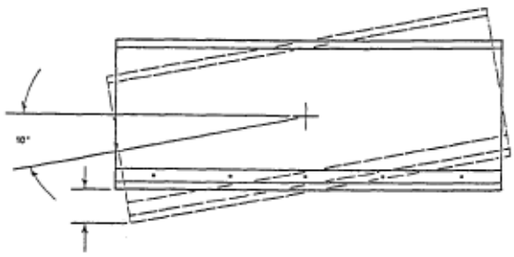
SERIAL

_____

Spartan Equipment
Joppa, MD 21085
1.888.888.1085
www.spartanequipment.com

6- Way Blade Specifications

6-Way Blade Specifications



10° Tilted Cut Depth	Blade Length	Blade Cut Width When Angled 30°
6' Blade = 6 1/4" Cut Depth	6' (72")	62 1/4"
7' Blade = 7 5/16" Cut Depth	7' (84")	72 1/2"
8' Blade = 8 3/8" Cut Depth	8' (96")	82 1/4"

NOTE: ALL BLADES COME WITH ELECTRICAL CONTROL KIT, SKID SHOES, TRIP SPRINGS, REPLACEABLE CUTTING EDGE AND LOCK.OUT BOLTS. (ALL HYDRAULICS INCLUDED.)

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST.

1. The Part Number
2. The Part Description
3. The Model Number
4. The Name of Item - Dozer

Limited Warranty

All Spartan Equipment products have been manufactured from the very finest materials and by skilled workmen, therefore, Spartan Equipment guarantees products against defective workmanship and materials for a period of one year from the date of purchase.

This warranty is not a service guarantee, nor is it any assurance that the product is perfectly designed or perfectly built; neither is it an expression of any belief that the product cannot be improved. Further, this warranty is not a guarantee against hazards such as wear, tear, misuse or misfortune nor against problems arising from incorrect set-up or servicing and is not a guarantee that the performance will meet the expectations of the purchaser.

This warranty is void should the product be repaired or modified in any way not authorized by Spartan Equipment.

There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose other than the extent permitted by law any and all implied warranties are excluded. This is the exclusive remedy and liability for consequential damages under any and all warranties are excluded to the extent exclusion is permitted by law.

Components such as pumps, winches, hoses, etc., will carry only their respective manufacturer's warranty. This warranty does not cover any merchandise which, in the opinion of the company, has been subject to negligent handling, misuse, or accident.

Warranty claims on components will not be approved and credit issued until defective items are returned to the factory (PREPAID) and our respective supplies have approved our Warranty Claims. When credit is received by Spartan Equipment we will issue credit in an amount equal to that received from the component supplier. Spartan Equipment cannot warrant any merchandise, which, in the opinion of the company, has been subjected to negligent handling, misuse, or accident. All Warranty Claims must be submitted in writing. Written approval from the company must be obtained before any merchandise and warranty parts are returned to the factory.

Spartan Equipment reserves the right to make changes, improvements, and modifications at any time without incurring the obligation to make such changes, improvements, and modifications on any products sold previously.

Spartan Equipment
503 Pulaski Highway
Joppa, MD 21085
1.888.888.1085

Most equipment accidents can be avoided by following simple safety precautions. These precautions, if followed at all times, will help you operate your dozer safely.

1. Do not attempt to start the loader engine while standing beside the loader. Always start the engine while sitting in the loader operator's seat.
2. Always stop the engine when leaving the loader.
3. Do not allow anyone but the operator to ride on the leader-dozer,
4. Do not make mechanical adjustments while the unit is in motion, the blade is raised, or the engine is running.
5. Do not attempt to repair or tighten hydraulic hoses when under pressure, when the loader engine is running, or when the blade is raised.
6. Do not dismount from the loader and leave the dozer blade raised.
7. Do not get under the blade when the dozer blade is raised.
8. When parking, make sure the parking brakes are set and the dozer blade is fully lowered.
9. Exercise extreme caution when operating the loader with the dozer blade on the sides of a hill.
10. Do not over speed the loader 'With dozer blade. Damage to the loader and dozer blade will result, and personal injury may occur.
11. When in transport keep blade at the lowest possible position.
12. Wear eye protection when operating the loader 'With dozer blade. Small stones etc. may be thrown toward the operator when trip springs return blade to the operating position.

Inspecting the Hydraulic System Hoses

⚠WARNING Escaping fluid under pressure can have sufficient force to penetrate the skin and cause serious injury. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, not your hands, to search for suspected leaks. Be sure to relieve all pressure before disconnecting lines. Be sure all connections are tight and that all lines and hoses are not damaged before applying pressure to the system.

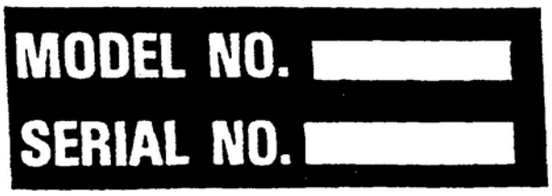
When tightening connections, always use two wrenches.

IMPORTANT: Do not over·tighten the fittings. Make them just tight enough to prevent leaks.

NEVER use teflon tape on pipe thread fittings. Always use a paste type sealer.

Whenever you see this symbol  it means:
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Serial Number Plate



GENERAL INFORMATION

The doter blade is designed for quick, easy installation on the skid steer. Trip springs, blade trip lock out and skid shoes are standard equipment with each blade.

CONTROLS

The lift, tilt and hydraulic angle are operated by the controls located on the skid steer.

OPERATION

Operation of the dozer blade will depend greatly on the type of work it is used to do, the location and numerous operational factors. There are several basic points, however, which will aid to better dozer blade operation:

(1) Blades are designed for moving snow and loose dirt. Do not abuse blade by prying rocks or stumps with high impact loads.

(2) Skid shoes when used for snow removal, should be set properly to avoid gouging of the surface material.

(3) Use the unit wisely. Do not overload the loader dozer blade capacity.

(4) Use the float position to remove material without moving the actual surface material of the area.

(5) For back blading, always use the float position on the control valve.

(6) Always use the float position when moving snow.

(7) Check torque on all bolts and check entire unit over thoroughly after first hour of operation and periodically thereafter.

(8) Repair any hydraulic oil leak promptly to avoid damage to the hydraulic system and loss of hydraulic oil.

(9) Replace the hydraulic hoses and fittings immediately if they are cut or damaged.

(10) Check all mounting and assembly bolts periodically and tighten if necessary.

(11) Check all parts and pins in the blade. Repair or replace any damaged or worn parts.

BLADE ASSEMBLY AND MOUNTING INSTRUCTIONS

ATIACH THE MOUNT TO THE LOADER

(1) Attach the mount to the loader universal mount. Lock the mount onto the universal mount with the locking handles. Make sure the locking wedges are locked into the mount. SEE FIG. I.

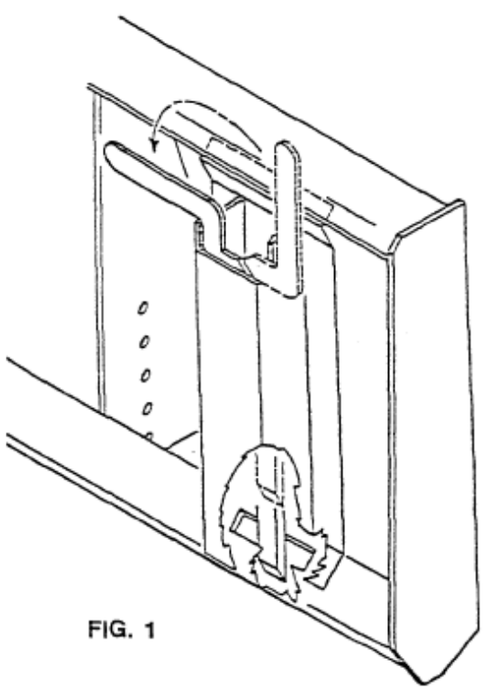


FIG. 1

ASSEMBLE THE SUBFRA.ME TO THE SWIVEL

(1) Assemble the subframe to the swivel weldment. Use the 2 *1/2* O.D. bushing, pin weldment, and end plate. Tighten the 1 *1/4* slotted hex hd. nut on to the pin. Tighten the nut. (Do not over tighten.) The subframe must rotate freely. Lock the nut to the pin weldment using a *1/4* x 2 cotter pin. See Fig. 2.

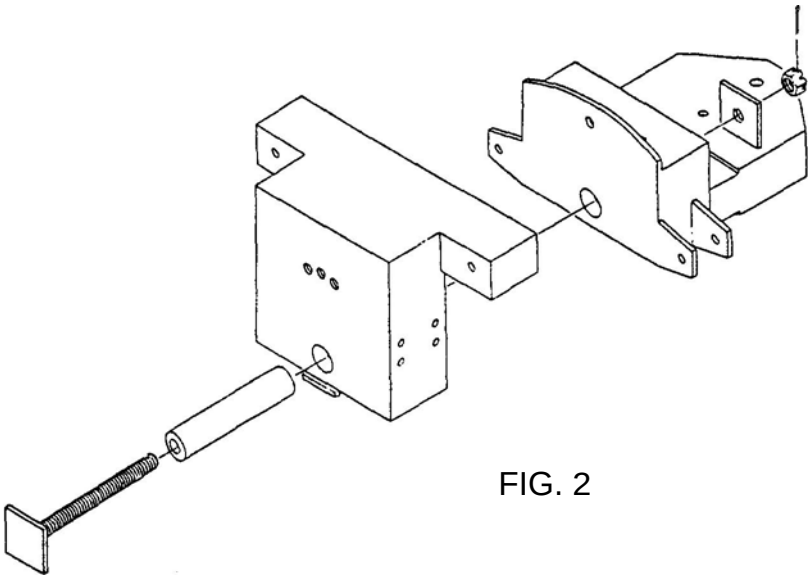


FIG. 2

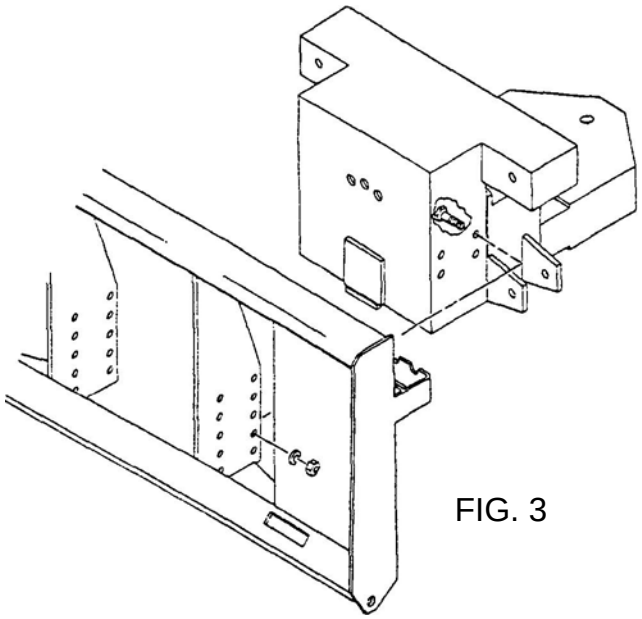


FIG. 3

(2) Align the swivel with the mount and tighten the (8) capscrews that secure the subframe to the mount.

ATTACH THE PIVOT TO THE SUB-FRAME (1) Raise the front of the sub-frame approximately 6''-8'' and place a block under the mount. This will make it easier to attach the pivot.

(2) Slide the pivot onto the front of the sub-frame and secure with a 1 ¼" x 6 ½" pin and a 1 ¼" x 2" cotter pin. As shown in FIG. 4

ATTACH THE SUB FRAME *A...ND* SVVIVEL TO THE MOUNT

(1) Attach the sub frame and swivel to the mount. Use *(4) 5/8-11* x 1 *3/4* hex hd. capscrews, nuts and lockwashers on each side. The mount and swivel are made to adjust for mounting on the skid steer loaders. Use the upper set of holes when mounting the dozer for snow removal. Use the lower holes when mounting the dozer for moving material that requires more below grade cut. As shown in FIG. 3.

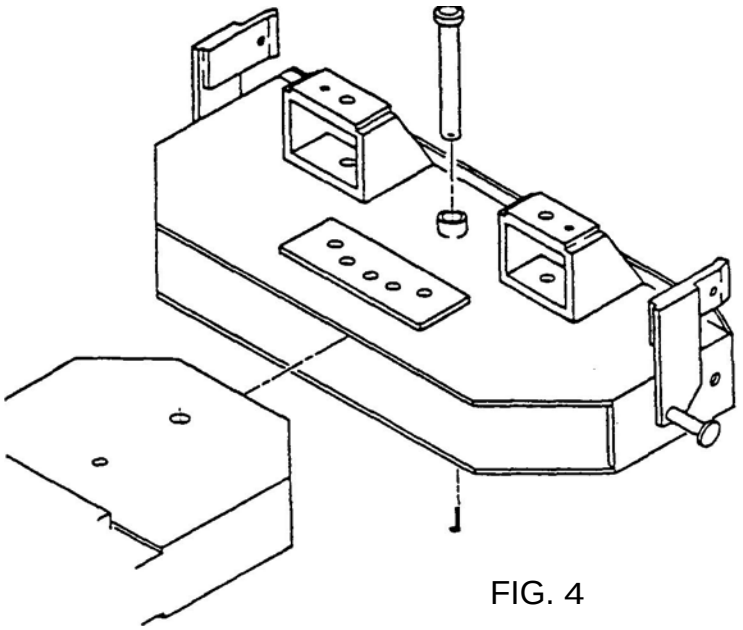


FIG. 4

6.

ATIACH THE BLADE TO THE PIVOT

(1) Attach the blade to the pivot using (2) 3/4-10 x 4" hex hd. capscrews, bushings, flatwashers, lock-washers and nuts as shown in FIG. 5. Tighten securely.

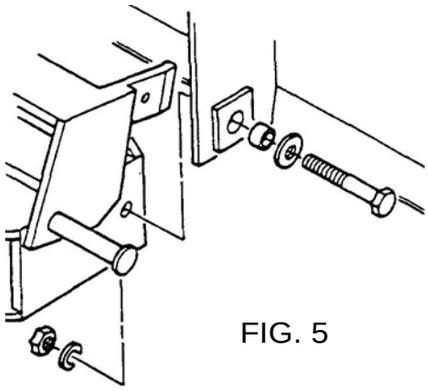


FIG. 5

ATIACH THE TRIP SPRINGS

(1) Hook one end of each spring on the spring retainers located on each side of the pivot assembly.

(2) Thread a ½" nut unto each eyebolt approximately 1" down from the end.

(3) Hook the eyebolts to the other end of the springs. Hold the blade in the upright position against the stops and insert one eyebolt through the hole in the spring retainer at the top of the blade. Secure the eyebolt to the spring retainer with a *1/2"* nut Attach the other springs to the retainer in the same manner. See FIG. 6.

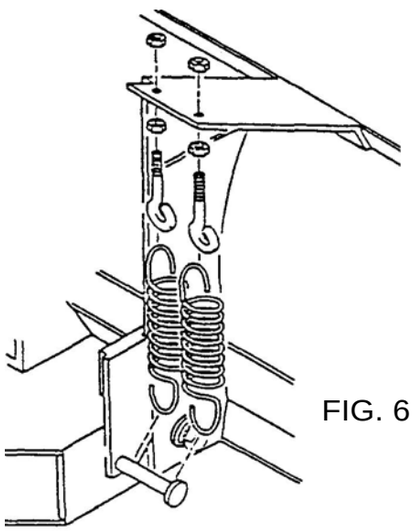


FIG. 6

(4) Adjust the spring tension according to the type of material to be moved (moving snow requires less tension than dirt, etc.) and lock the nuts.

(5) For moving dirt and material other than snow the blade can be locked. Use (2) *1/2-13* x *1-1/2* hex hd. capscrews, lockwashers and nuts.

(6) Do not operate with blade locked when moving snow. Remove 1/2-13 x 1 1/2 hex hd. capscrews lockwashers and nuts. (lock bolts). Blade must be allowed to trip.

ASSEMBLE AND ATTACH HYDR~ULIC ANGLE CYLINDERS

(1) Insert a 1/4-3/8 hex red. bushing into the front and rear ports of both cylinders. Use pipe compound on threads.

(2) Insert a 1/4 x 45° steel st. elbow into the rear ports on both cylinders. Use pipe compound on the threads. See FIG. 7.

(3) Insert a ¼" close nipple and hex fitting into the front ports on both cylinders. Use pipe compound on the threads. See FIG. 7.

NOTE: Tighten the hex fittings and nipples very tightly into the cylinders.

(4) Attach the rear of the angle cylinders to the sub-frame and the rod end of the angle cylinders to the pivot assembly. Use a pin weldment and secure with a 3/8-16 x 1 ¼ hex hd. capscrew, lockwasher, and nut. Both cylinders and both ends. See FIG 7.

(5) Connect the (2) 1/4 x 10" hydraulic hoses to the angle cylinders as shown in FIG. 7. Use pipe compound on the threads.

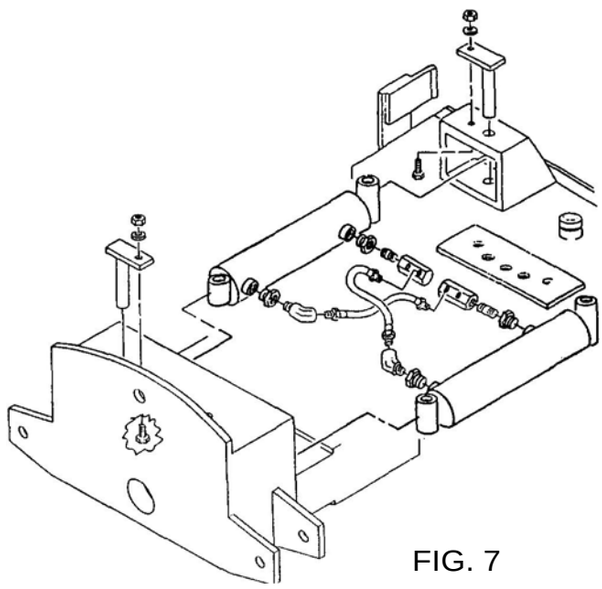


FIG. 7

ASSEMBLE AND ATTACH

HYDRAULIC TILT CYLINDERS

(1) Assemble a *1/4* x 90^0 steel st. elbow into the rod end lower ports of the R.H. and L.H. tilt cylinders. Use thread sealant on the threads and position the elbows as shown in FIG. 8.

(2) Assemble a *1/4* x 2 *1/2* pipe nipple, hex fitting and a *14* x 90^0 steel st. elbow to the barrel end upper ports of the R.H. and L.H. tilt cylinders. Use thread sealant on the threads and position the fittings as shown in FIG. 8.

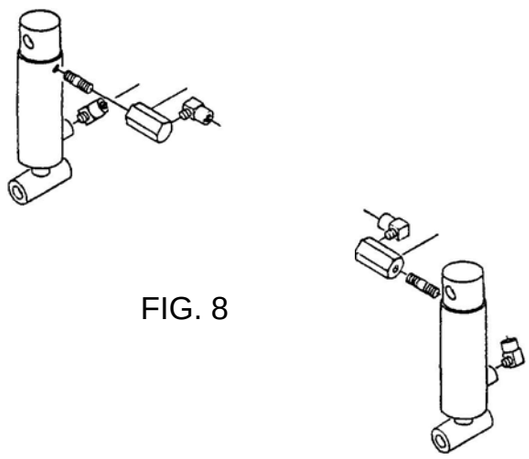


FIG. 8

(3) Attach the hydraulic tilt cylinders to the swivel weldment use (2) 1 x 4 112" clevis pins and 3/16 X 1 112 cotter pins. Attach the tilt cylinder rod ends to the subframe use (2) 1 X 4 112 clevis pins and 3/16 X 1 1/2 cotter pins. See FIG. 9

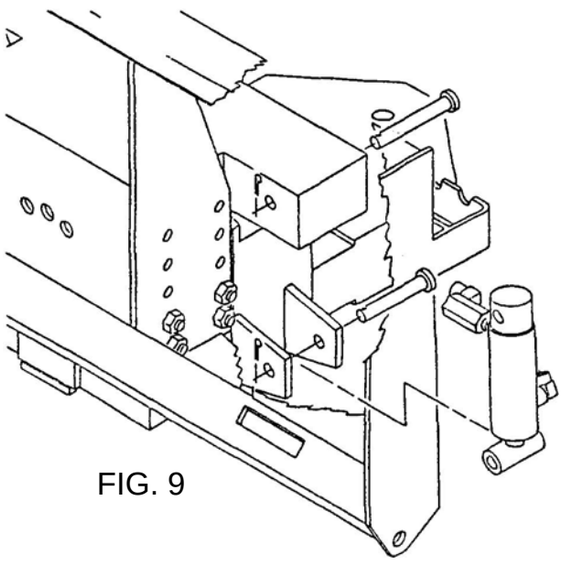


FIG. 9

ASSEMBLE AND ATTACH MANIFOLD

(1) Install (2) 9/16-18 ORBM x *1/4* NPTF adapters into the two top ports of the manifold. Install a 9/16-18 ORBM x 1/4 NPTM adapter, and a 114 steel pipe tee to the bottom port of the manifold. See FIG. 10

(2) Attach the manifold assembly to the top plate of the swivel weldment using (2) 5/16-18 x 1 hex hd. capscrews and lockwashers. See FIG. 10

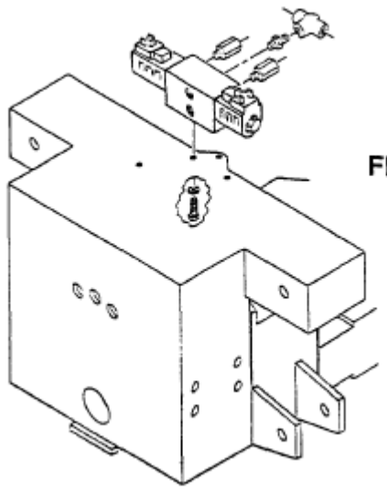


FIG. 10

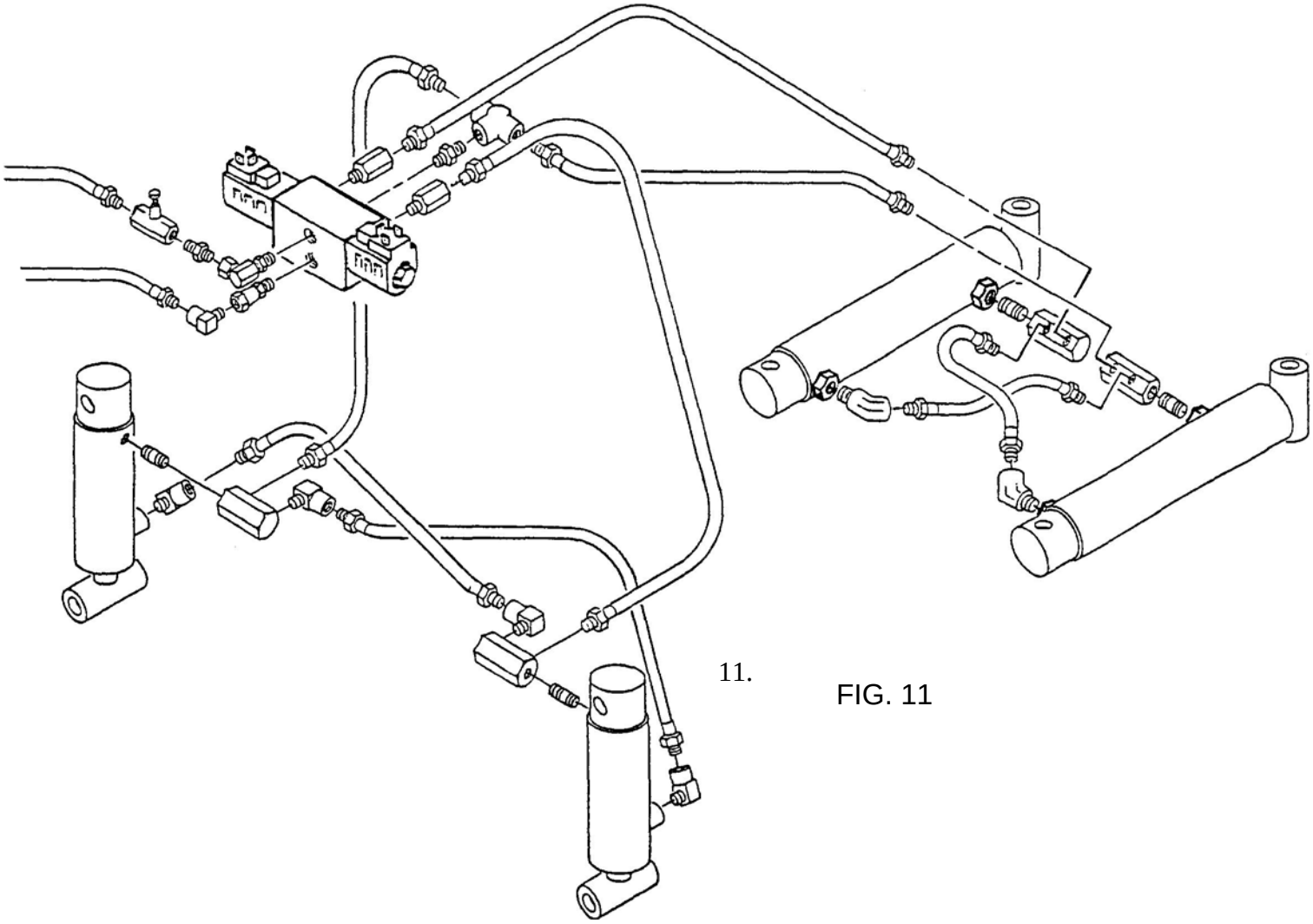
(3) Connect a *1/4* x 18" hydraulic hose from the 1/4 x 90° steel st. elbow in the lower port of the R.H. tilt cylinder to the 114 x 90^0 steel st. elbow in the hex fitting in the top port of the L.H. tilt cylinder. See FIG. 11

(4) Connect a *1/4* x 18" hydraulic hose from the *.1/4* x 90^0 steel st. elbow in the lower port of the L.H. tilt cylinder to the *1/4* x 90^0 steel st. elbow in the hex fitting in the top port of the R.H. tilt cylinder. See FIG. 11

(5) Connect a *1/4* x 18" hydraulic hose from the adapter on the R.R. side of the manifold to the hex fitting at top of the R.H. tilt cylinder. See FIG. 11

(6) Connect a *1/4* x 14" hydraulic hose from the port on the L.R. side of the pipe tee to the hex fitting at the top of L.R. tilt cylinder. See FIG. 11

(7) Connect a *1/4* x 18" hydraulic hose from the adapter on the L.H. side of the manifold to the hex fitting at the front of the L.H. angle cylinder. See FIG. 11



11.

FIG. 11

(8) Connect a *1/4* x 18" hydraulic hose from the port on the R.H. side of the pipe tee to the hex fitting at the front of the R.H. angle cylinder. See FIG. 11

(9) Assemble a 9/16-18 ORBM x 114 NPTF 90° swivel union, hex pipe nipple and needle valve into the top rear port of the manifold. Position as shown. See FIG. 11

(10) Assemble a 9/16-18 ORBM x *1/4* NPTF adapter and *1/4* x 90 ° st. elbow into the bottom rear port of the manifold. Position as shown. See FIG. 11

(11) Attach a 1/4 x 66 hydraulic hose to the fittings in the rear top and bottom ports of the manifold. See FIG. 11

⚠ CAUTION Check all hoses and fittings for proper clearance. Make sure hoses and fittings will not be damaged during operation of the blade.

FOR SKID STEERS EQUIPPED WITH BALL TYPE COUPLERS

12.

NOTE: QUICK COUPLERS NOT SUPPLIED WITH BLADE.

(l) Attach a *1/2"* quick coupler male onto the hose from the upper rear port of the manifold. Use a 3/8 to 1/2 hex reducing bushing and a 3/8 x 90^0 steel st. elbow on the hose.

Attach a 1/2" quick coupler female onto the hose from the lower rear port of the manifold. Use a 3/8 to 1/2 hex reducing bushing and a 3/8 x 90^0 steel st. elbow on the hose. Use a thread sealant on the threads. See FIG. 12

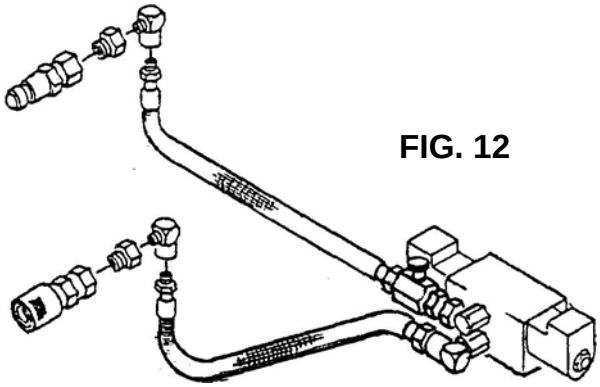


FIG. 12

(2) Connect the hoses to the corresponding remote hydraulic outlets on the Loader frame.

Do not attach hoses to the High Flow lines on Skid Steers equipped with High Flow Option.

FOR SKID STEERS EQUIPPED WITH FLUSH FACE COUPLERS

NOTE: QUICK COUPLERS NOT SUPPLIED WITH BLADE.

(1) Attach a *1/2"* flush face coupler male onto the hose from the upper rear port of the manifold. Use a *1/2-14* NPTF x 1-1/16-12 male ORB .ADAPTER, 1/2-14 NPTM x 3/8-18 'N"'PTF reducing bushing and a 3/8 x *90^0* steel 51 elbow on the hose.

(2) Attach a 1/2"flush face coupler female onto the hose from the lower rear port of the manifold. Use a *1/2-14* NPTF x *1-1/16-12* male ORB adapter, 1/2-14 NPTM x 3/8-18 NPTM reducing bushing and a 3/8 x 90^0 steel st elbow on the hose. Use a thread sealant on the threads.
See FIG. l3

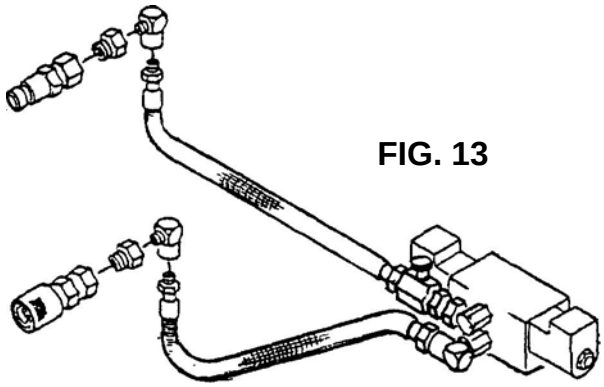


FIG. 13

(3) Connect the hoses to the corresponding remote hydraulic outlets on the Loader fume.

Do not attach hoses to the High Flow lines on Skid Steers equipped with High Flow Option.

(1) Attach the dozer control cord connectors to the solenoid valves in the manifold assembly. Make sure the gaskets are in place and tighten the screws. Do not over tighten the screws. See FIG. 14

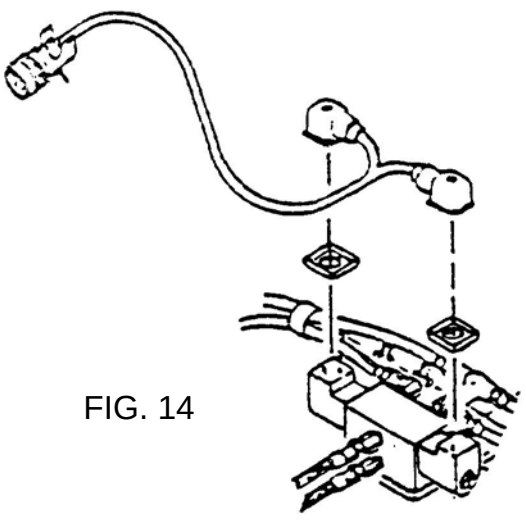


FIG. 14

A TTACH THE ELECTRICAL CONTROL HAR.NESS TO THE SKID STEER

(1) Attach the switch and mount assembly to the L.H. control lever. Secure the switch mount assembly to the control lever using a #16 hose clamp. See Fig. 15.

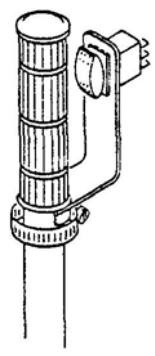


FIG. 15

(1) Attach the wire harness receptacle mount to the inside of the L.H. loader lift arm in the same area as the bracket for the remote outlets. See FIG. 16

Make sure the mount bracket does not interfere with the operator cab or fender.

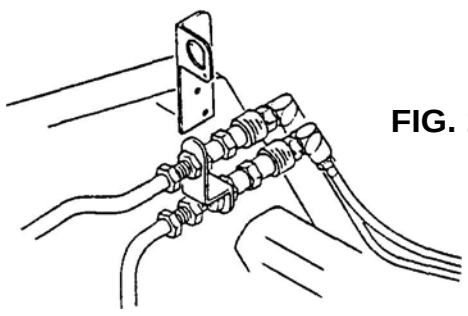


FIG. 16

(3) Attach the receptacle to the receptacle mount using a 1 *1/2"* lockwasher and 1 *1/2"-18* hex nut and tighten securely. See FIG. 17

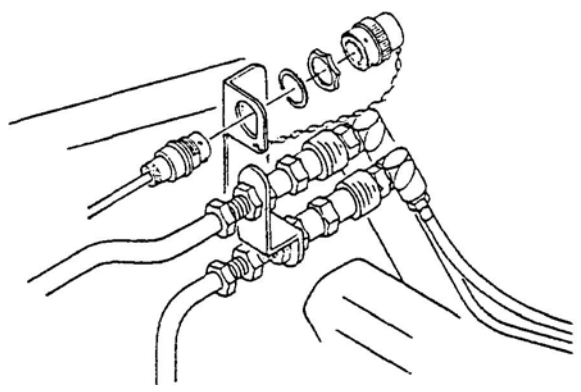


FIG. 17

(4) Route the wire harness up the L.H. loader lift arm. Follow the auxiliary outlet tube lines.

(5) Route the wire harness to the rear of the loader lift arm and down the L.H. upright of the loader frame.

(6) Route the wire harness forward on the L.H. side of the skid steer.

(7) Attach the connector on the wire harness to the switch mounted on the L.H. control lever. Secure the wire harness to the switch mount and the control lever with plastic tie straps. See FIG. 18

Make sure the wire harness from the switch to the receptacle has enough length to hinge at the rear of the lift arm vs. the loader upright. Make sure the wire harness is positioned so that it will not be cut or damaged during movement of the loader lift arm, control lever or at any location between during operation of the skid steer.

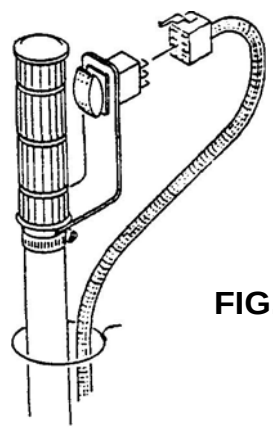


FIG. 18

(8) Secure the wire harness to the auxiliary tube lines on the lift arm and other locations as required using the plastic tie straps provided.

(9) Connect the black wire in the short (2 wire) portion of the wire harness to a key hot (+) wire or terminal on the skid steer.

(l0) Connect the white wire in the short (2 wire) portion of the wire harness to a good ground (-) location:

⚠ CAUTION Make sure all of the wire harness is positioned and secured so that it cannot be damaged during operation of the skid steer.

⚠WARNING Make sure the wire harness is positioned and secured to the skid steer control lever so that it will not interfere with the operation of the control lever.

(11) Plug the connector on the dozer control cord into the connector on the Loader frame. Make sure the connector is locked in place.

(12) Tie the two hoses and the control cord together using at least three of the nylon ties supplied as shown. See FIG. 19

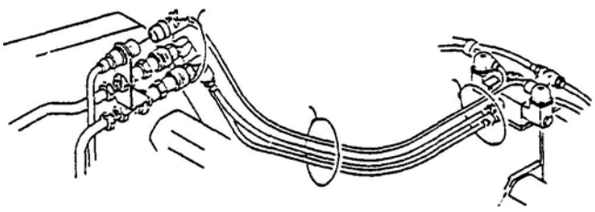


FIG. 19

(13) Secure the dust cap to the receptacle mount bracket. Use a *1/8* x 3/4 cotter pin to secure the chain to the bracket. Place the cotter pin thru the second from the end link of the chain.

DOZER BLADE OPERATION

(1) Start the Loader and raise the B lade slightly.

(2) The auxiliary (remote) outlet control on the skid steer is used to angle the blade right and left and tilt the blade up and down.

(3) The switch mounted to the L.H. control handle on the skid steer is used to select blade angle or tilt.

(4) Cycle the blade angle and tilt several times to purge the air from the hydraulic system after initial assembly.

ATTACH THE SKID SHOES

(1) Assemble the skid shoe washers and spacers on skid shoe shaft. Arrange the washers and spacers below the skid shoe holder on the rear of the blade to allow for the desired blade clearance. Secure the skid shoes to the holders with the lynch pin on both sides as shown in FIG. 20.

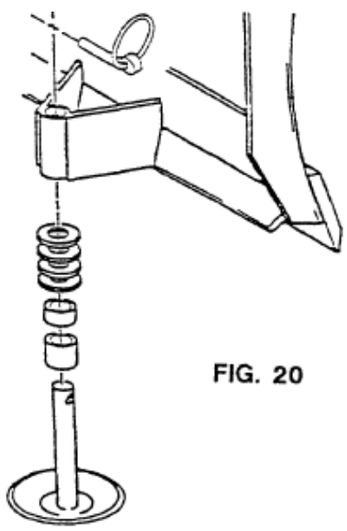


FIG. 20

18.

ATTACH (OPTIONAL) BLADE EXTENSION

(1) Attach the blade extension to the top of the blade. Use a *1/2-13* x 1114 hex hd. capscrew, nut, lock-washers and (2) flatwashers in each hole as shown in FIG. 21. Tighten securely.

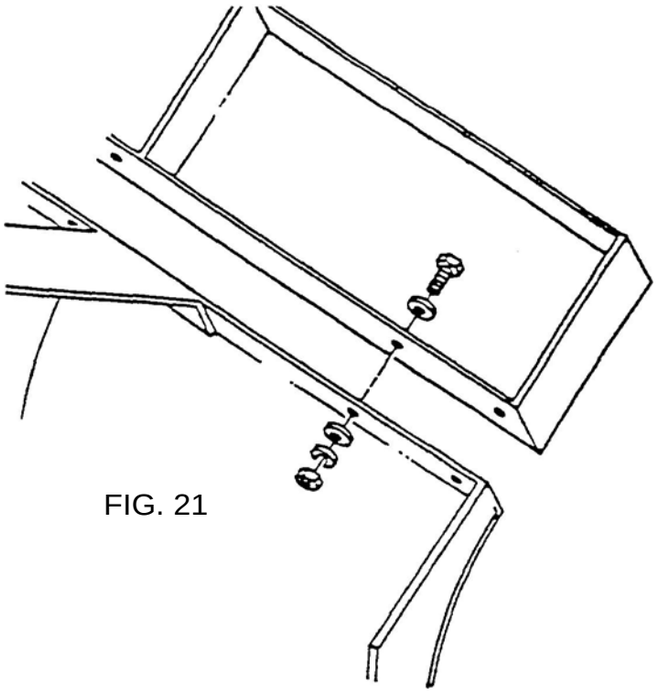


FIG. 21

LUBFJCATION AND tv1AINTENANCE

The dozer blade is designed for a minimum amount of maintenance.

(1) Check torque on all bolts and check entire unit over thoroughly after first hour of operation and periodically thereafter.

(2) Repair any hydraulic oil leak promptly to avoid damage to the hydraulic system. and loss of hydraulic oil.

(3) Check the level of hydraulic oil in the Loader daily and add oil if necessary.

(4) Replace the hydraulic hoses and fittings immediately if they are cut or damaged.

(5) Check all mounting and assembly bolts periodically and tighten if necessary.

(6) Check all parts and pins in the blade. Repair or replace any damaged or worn parts.

DOZER BLADE REMOVAL

(1) Lower the blade to the floor and place a 4-6" block under the mount

(2) Disconnect the hydraulic hoses.

(3) Disconnect the hydraulic control cord.

(4) Unlock the handles for the mount and remove the dozer mount from the Loader in the same manner as removing the bucket.

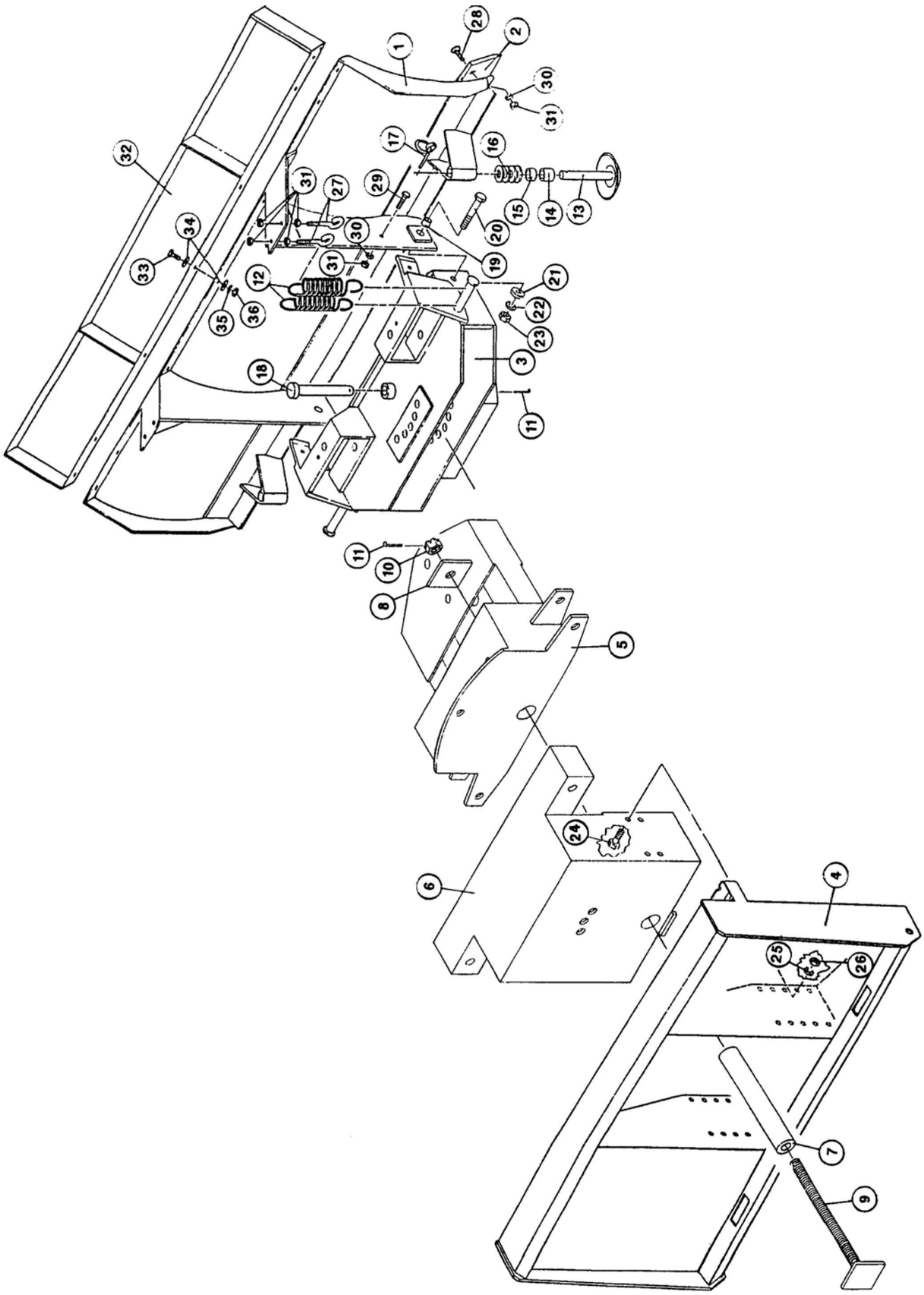
STORAGE

(1) Check the hydraulic hoses for damage and replace as necessary. Check all bolts and pins for wear and replace if necessary. Check the cutting edge for wear and replace as required.

(2) Store in a dry, clean storage area.

(3) Protect the exposed rods on the blade cylinders with grease or like material to prevent rust.

BLADE ASS1Y AND REPAIR PARTS



REPAIR-PARTS-BLADE

REFERENCE NUMBER	DESCRIPTION	PART NUMBER	NUMBER REQUIRED
1	6' BLADE W/CUTTING EDGE	18961	1
	7' BLADE W/CUTTING EDGE	19225	1
	8' BLADE W/CUTTING EDGE	19226	1
2	6' CUTTING EDGE-1/2"x 4" SINGLE BEVEL	14758	1
	7' CUTTING EDGE-1/2"x 4" SINGLE BEVEL	14782	1
	8' CUTTING EDGE-1/2"x 4" SINGLE BEVEL	15263	1
3	PIVOT	16683	1
4	MOUNT	18348	1
5	SUBFRAME	18965	1
6	SWIVEL	18972	1
7	BUSHING	18985	1
8	PLATE	18952	1
9	PIN	18986	1
10	1 1/4-12 SLOTTED HD. NUT	102457	1
11	1/4 X 2 COTTER PIN	101224	2
12	TRIP SPRING	100246	4
13	SKID SHOE	10229	2
14	BUSHING	10272-3	2
15	BUSHING	10272-1	2
16	1" FLATWASHER	100237	8
17	1/4 X 1 3/4 LYNCH PIN	101307	2
18	PIVOT PIN	16712	1
19	BUSHING	16711	2
20	3/4-10 X 4 HEX HD. CAPSCREW	101330	2
21	3/4 FLATWASHER	100252	2
22	3/4 LOCKWASHER	100170	2
23	3/4-10 HEX NUT	100169	2
24	5/8-11 X 1 3/4 HEX HD. CAPSCREW	100442	8
25	5/8 LOCKWASHER	100077	8
26	5/8-11 HEX NUT	100239	8
27	1/2-13 X 6 EYE BOLT	100249	4

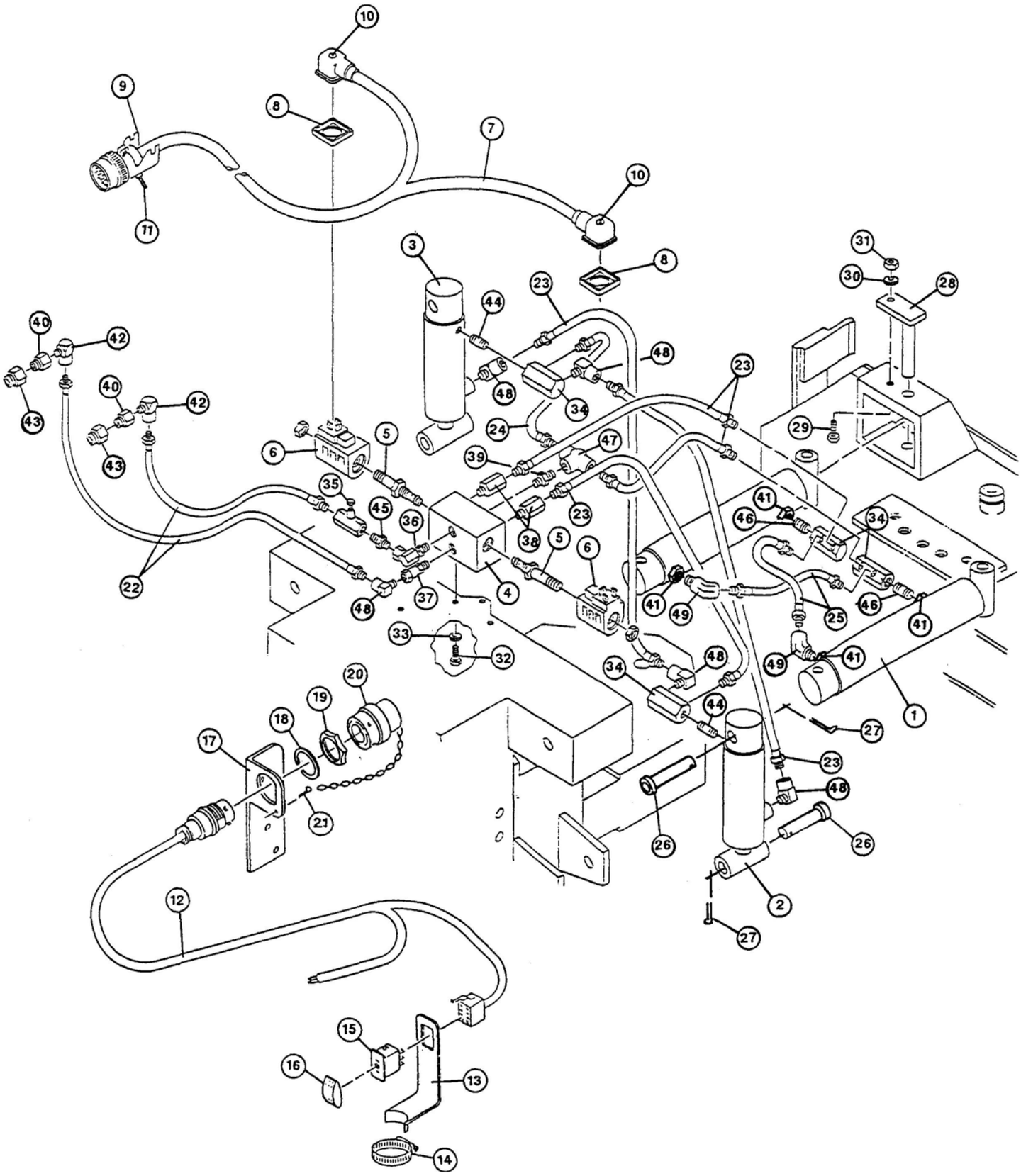
REPAIR-PARTS-BLADE

REFERENCE NUMBER	DESCRIPTION	PART NUMBER	NUMBER REQUIRED
28	*1/2-13* X 2 *1/4* PLOW BOLT	101938	*6
29	*1/2-13* X 1 *1/2* HEX HD. CAPSCREW	100057	2
30	*1/2* LOCKWASHER	100076	*8
31	*1/2-13* HEX NUT	100087	*16
32	6' BLADE EXTENSION (OPTIONAL)	14784	1
	7' BLADE EXTENSION (OPTIONAL)	14789	1
	8' BLADE EXTENSION (OPTIONAL)	15265	1
33	*1/2* -13 X 1 *1/4* HEX HD. CAPSCREW (OPT)	100056	**8
34	*1/2* FLATWASHER (OPTIONAL)	100081	**16
35	*1/2* LOCKWASHER (OPTIONAL)	100076	**8
36	*1/2-13* HEX NUT (OPTIONAL)	100087	**8

* NUMBER REQUIRED IS SHOWN FOR 6' UNIT
7' UNIT REQUIRES 7 OF REF. 28, 9 OF REF. 30 AND 17 OF REF. 31. 8' UNIT REQUIRES 8 OF REF. 28, 10 OF REF. 30 AND 18 OF REF. 31.

** NUMBER REQUIRED IS SHOWN FOR 6' UNIT
7' UNIT REQUIRES 9 OF REF. 33, 18 OF REF. 34, 9 OF REF. 35 AND 9 OF REF.36.
8' UNIT REQUIRES 10 OF REF. 33, 20 OF REF. 34, 10 OF REF. 35 AND 10 OF REF. 36.

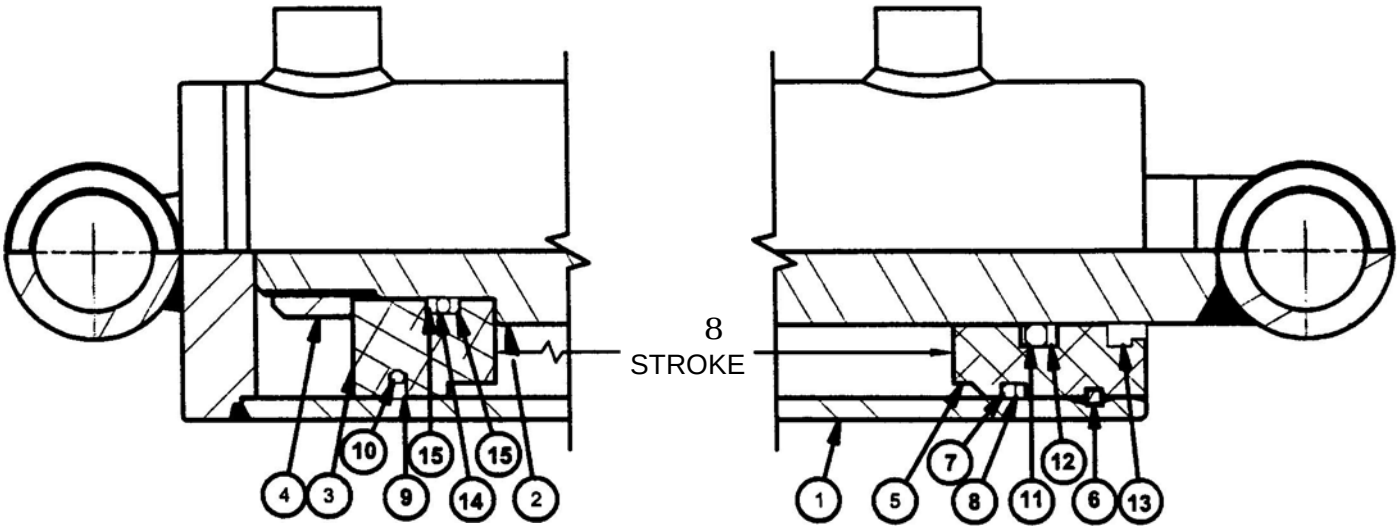
HYDRAULIC ASSIY AND REPAIR PARTS



REPAIR PARTS - HYDRAULICS

REFERENCE NUMBER	DESCRIPTION	PART NUMBER	NUMBER REQUIRED
1	ANGLE CYLINDER	102273	2
2	TILT CYLINDER-R.H.	102526-1	1
3	TILT CYLINDER-L.H.	102526-2	1
4	MANIFOLD ASS'Y	102474	1
5	SOLENOID VALVE N/C	102459	2
6	COIL	102472	2
7	WIRE HARNESS	102475	1
8	GASKET	102490	2
9	ST. STRAIN RELIEF	102491	1
10	BOLT	102492	2
11	NYLON TIE	100257	5
12	WIRE HARNESS	102477	1
13	SWITCH MOUNT	18747	1
14	#16 HOSE CLAMP	100138	1
15	SWITCH	102485	1
16	ACTUATOR	102486	1
17	RECEPTACLE MOUNT	18750	1
18	1 1/2 LOCKWASHER	102488	1
19	1 1/2-18 NUT	102489	1
20	PROTECTIVE CAP	102484	1
21	1/8 X 3/4 COTTER PIN	101456	1
22	1/4 X 66 HYD. HOSE 3/8 M X 1/4 MS	101232	2
23	1/4 X 18 HYD. HOSE 1/4 M X 1/4 MS	102550	5
24	1/4 X 14 HYD. HOSE 1/4 M X 1/4 MS	100681	1
25	1/4 X 10 HYD. HOSE 1/4 M X 1/4 MS	100976	2
26	1 X 4 1/2 CLEVIS PIN	102548	4
27	3/16 X 1 1/2 COTTER PIN	100580	4
28	CYLINDER PIN	16731	4
29	3/8-16 X 1 1/4 HEX HD. CAPSCREW	100046	4
30	3/8 LOCKWASHER	100076	4
31	3/8-16 HEX NUT	100085	4
32	5/16-18 X 1 HEX HD. CAPSCREW	100040	2
33	5/16 LOCKWASHER	100073	2
34	HEX FITTING	12806	4
35	NEEDLE VALVE	101547	1
36	9/16-18 ORB X 1/4 F/M 90 DEG. S.U.	101002	1
37	9/16-18 ORB X 1/4 F/M S.U.	101278	1
38	9/16-18 ORB X 1/4 NPTF ADAPTOR	101001	2
39	9/16-18 ORB X 1/4 NPTM ADAPTOR	102310	1
40	1/2-14 X 3/8-18 HEX RED. BUSHING	100200	2
41	3/8 X 1/4 HEX RED. BUSHING	100105	4
42	3/8 X 90 DEG. STEEL ST. ELBOW	100540	2
43	1/2-14 INT. PIPE X 1 1/16-12 ORBM	102436	2
44	1/4 X 2 1/2 EXTENDED PIPE NIPPLE	102549	2
45	1/4-18 EXT. PIPE X 1/4-18 EXT. PIPE NIPPLE	102240	1
46	1/4 CLOSE NIPPLE	100104	2
47	1/4 STEEL PIPE TEE	100589	1
48	1/4 X 90 DEG. STEEL ST. ELBOW	100539	5
49	1/4 X 45 DEG. STEEL ST. ELBOW	100588	2

HYDRAULIC CYLINDER ASSEMBLY AND REPAIR PARTS



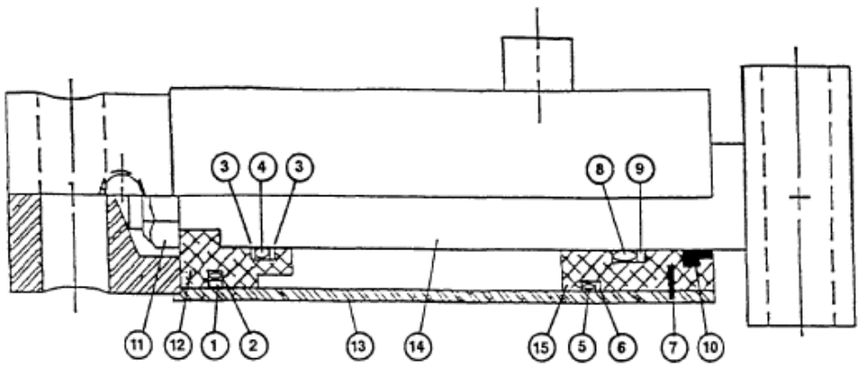
CYLINDER PIN 102273

REFERENCE NUMBER	DESCRIPTION	PART NUMBER	NUMBER REQUIRED
1	2 1/2" MD BARREL ASSY	103345	1
2	1 1/4" SHAFT ASSY	103346	1
3	2 1/2" PISTON 13/16" SHAFT CUT (SLP)	103347	1
4	3/4" FULL LOCK NUT	102206	1
5	2 1/2" MD HEAD 1 1/4" SHAFT (ORG/BAK)	103348	1
6	1/8" KEYSTOCK	103350	1
7	O-RING		1
8	BACKUP		1
9	SLIPPER SEAL		1
10	O-RING		1
11	O-RING		1
12	BACKUP		1
13	DUST SEAL		1
14	O-RING		1
15	BACKUP		2

ITEMS 7 THRU 15 IN QUANTITIES SHOWN
ARE INCLUDED IN SEAL KIT P/N 103349
THESE ITEMS ARE NOT AVAILABLE SEPARATELY.

CYLINDER DIA.	2 1/2
ROD DIA.	1 1/4
STROKE	8
RETRACTED LENGTH	14 3/8
EXTENDED LENGTH	22 3/8

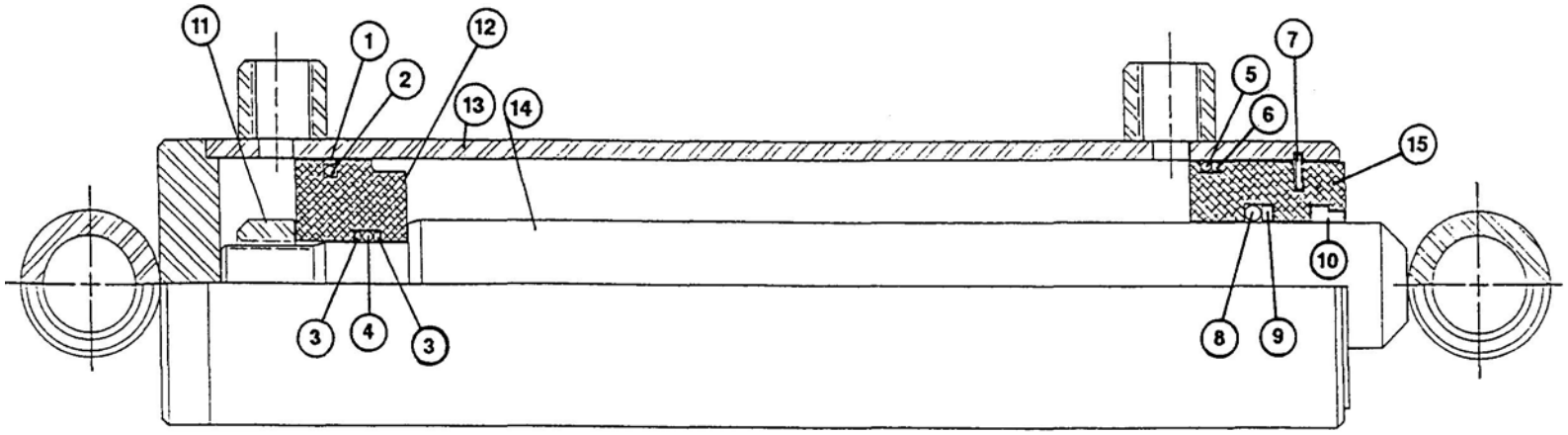
19. HYDRAULIC CYLINDER ASSEMBLY AND REPAIR PARTS



CYLINDER P/N 102526-1, 102526-2

REFERENCE NUMBER	DESCRIPTION	PART NUMBER	NUMBER REQUIRED
1	PISTON RING	102333	1
2	O-RING	102334	1
3	BACK-UP	102896	2
4	O-RING	102895	1
5	O-RING	102337	1
6	BACK-UP	102338	1
7	SNAP RING	102339	1
8	O-RING	102894	1
9	BACK-UP	102897	1
10	WIPER	102342	1
11	3/4-16 LOCKNUT	102206	1
12	PISTON	102876	1
13	BARREL R.H.	102527-1	1
	BARREL L.H.	102527-2	1
14	ROD	102528	1
15	HEADGLAND	102875	1
	ITEMS 1 THRU 10, IN QUANTITIES SHOWN ARE		
	INCLUDED IN SEAL KIT P/N 102874.		
	THESE ITEMS ARE NOT AVAILABLE SEPARATELY.		
	CYLINDER DIAMETER—2 1/2		
	ROD DIAMETER—1 1/4		
	STROKE—4		
	RETRACTED LENGTH—10 3/8		
	EXTENDED LENGTH—14 3/8		

HYDRAULIC CYLINDER ASSEMBLY AND REPAIR PARTS



CYLINDER P/N 102273

REFERENCE NUMBER	DESCRIPTION	PART NUMBER	NUMBER REQUIRED
1	PISTON RING	102333	1
2	O-RING	102334	1
3	BACK-UP	102335	2
4	O-RING	102336	1
5	O-RING	102337	1
6	BACK-UP	102338	1
7	SNAP RING	102339	1
8	O-RING	102340	1
9	BACK-UP	102341	1
10	WIPER	102342	1
11	3/4-16 LOCKNUT	102206	1
12	PISTON	102343	1
13	BARREL	102344	1
14	ROD	102345	1
15	HEADGLAND	102346	1

ITEMS 1 THRU 10, IN QUANTITIES SHOWN
ARE INCLUDED IN SEAL KIT P/N 102328
THESE ITEMS ARE NOT AVAILABLE SEPARATELY

CYLINDER DIA.	2 1/2
ROD DIA.	1 1/4
STROKE	8
RETRACTED LENGTH	14 3/8
EXTENDED LENGTH	22 3/8