

Operator's Manual

and

Parts Book

Bale Forks

Models 50, 100, 110, 120, 150, 180, 200, 210

**Effective 28 Aug 03
Revision "B"**

Read and understand before operation.

HOELSCHER

HOELSCHER, INC
PO Box 195 - 312 S Main
Bushton, KS 67427
620-562-3575

Take note! This SAFETY ALERT SYMBOL found throughout this manual, and on safety signs, is used to call your attention to instructions involving your personal safety and the safety of others. Failure to follow these instructions can result in injury or death.



This symbol means:

-ATTENTION!

-BECOME ALERT!

-YOUR SAFETY IS INVOLVED!

SIGNAL WORDS: Note the use of the signal words DANGER, WARNING, and CAUTION with the safety messages. The appropriate signal word for each has been selected using the following guidelines.

⚠ DANGER

DANGER, indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

⚠ WARNING

WARNING, indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

⚠ CAUTION

CAUTION, indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have questions not answered in this manual, or require additional copies of this manual or safety signs, please contact your dealer or Hoelscher, Inc. PO Box 195, Bushton, KS 67427. Telephone 620-562-3575

Safety Precautions

Almost without exception, accidents are caused by operator error. The operator is responsible for following these safety tips and to use good judgment in the operation of this, and any other machine.

- * Be sure every operator reads and understands this manual before attempting to use the fork. As with any machine, it requires a careful and competent operator. Read all decals which are on the machine. They are for your information and protection.
- * Keep your body and clothing away from moving parts.
- * Do not start the machine until you are sure that everyone is clear. Never allow anyone to ride on the fork. Be sure there are no tools or other loose items on the fork or loader before raising. Objects could fall and hit someone.
- * Mount the fork to a tractor with a wide front axle only.
- * Never leave a running machine unattended.
- * Do not travel on the road with bales on the fork. The tractor may tip if the brakes are applied quickly or if a rapid turn is made.
- * Travel at a safe speed for conditions at hand. A loader and attachment will raise the center of gravity of the tractor and braking efficiency will be less. Always keep the fork as low as practical when traveling, to prevent the tractor from tipping.
- * Do not walk or stand under the fork unless it is securely blocked.
- * Periodically check bolts, pins, brackets, etc. for fatigue and proper torque.
- * Be sure that the fork is mounted properly to the loader, especially when using a quick-attach mounting.
- * Never jerk the hydraulic control levers when raising or lowering the fork.
- * Relieve hydraulic pressure before disconnecting hoses to prevent hydraulic fluid from spraying you.
- * Never use your hands to locate a hydraulic leak. Hydraulic fluid escaping under pressure can penetrate the skin. Openings in the skin and minor cuts are susceptible to infection from hydraulic fluid. Hydraulic fluid can cause Gangrene. If injured by escaping fluid, seek medical attention at once from a physician familiar with this type of injury.

Warranty

MANUFACTURER'S WARRANTY

Each new machine produced by **HOELSCHER, INC.**, is eligible to be covered by a manufacturer's warranty.

If the machine has not been altered, abused, or neglected, and has been properly assembled, adjusted, serviced, and operated, it is guaranteed against defective material and workmanship, for a period of 12 months after the date of retail sale. It is the customer's responsibility to verify that the correct mounting brackets, hydraulic system, etc., are in use.

HOELSCHER, INC., at its option, shall repair or replace any defective part, which has been reported in writing to **HOELSCHER, INC.**, within 60 days of the failure. The Warranty Registration Number must be included.

Replacement parts will be shipped, freight prepaid, by regular ground delivery services. These shipments (including the cost of the part, plus freight) will be invoiced to the customer. If the defective part is returned to **HOELSCHER INC.**, freight prepaid, and the part is deemed defective, the amount of the invoice will be credited to the customer's account. When returning defective parts, freight must be prepaid. If next day delivery service is requested by the customer, any additional charges will be invoiced at the customer's expense.

This warranty does not apply to tires or other consumable items which are used on **HOELSCHER, INC.** products.

This warranty is in lieu of all other warranties, whether expressed, implied, or statutory. **HOELSCHER** equipment is not warranted for merchantability or fitness of purpose. **HOELSCHER, INC.** is not liable for consequential damages on account of any of its products.

Installation

The fork will be assembled, except for loader brackets, hydraulic hoses, and the side-rail, if necessary. (some models do not require a side-rail)

Measure the center to center distance between the loader arms and bolt the mounting brackets to the fork frame using this dimension. See page 5. Mounting brackets for various loaders are available from Hoelscher, Inc., however a perfect match for every model can not be guaranteed. Check the dimensions of the mounting brackets and compare to a bucket or other attachment that fits the loader before using the brackets. Damage may result if these brackets are not correct for the loader.

Three hydraulic circuits are required on your loader tractor. One circuit raises and lowers the loader, one circuit tilts the attachment (fork), and the third circuit operates the hooks on the fork. If your tractor does not have three circuits available, it will be necessary to add a valve, or use a solenoid controlled diverter valve.

Before using the fork, check all bolts and fittings to be sure that they are properly installed.

After the fork has been installed on the loader, raise it up and tilt it up and down, checking for any binding that may occur between the loader and loader brackets. If any binding does occur, it must be remedied before damage occurs.



CAUTION Damage to equipment, or injury to persons could occur if the fork is not properly attached to the loader. The fork could become detached from the loader and fall.

Operation

Operation of the fork is relatively simple, however experience is very important in making a tight, straight stack. The fork, along with operator skill, will allow you to move bales without manual labor.

To pick up bales, place the fork on top of the package of bales and engage the hooks by operating the proper hydraulic control lever of the tractor. Only slight down pressure on the fork is necessary. Do not force the fork down so hard that weight is transferred from the tractor to the fork.

To place the package of bales in a stack or on a trailer, set the fork in the desired location and disengage the hooks by moving the tractor's hydraulic control lever in the opposite direction. Packages of bales may be stacked tight together by approaching the stack at a slight angle, then turning into the previous package to force the bales together. Use only slight force when doing this because excessive side-force may cause damage to the loader or fork.

There are many satisfactory methods for stacking with a bale fork. If a barn or shed is used, the stack may be built practically straight up. If the stack is outside, in high wind or rain areas, more taper should be used. Location and operator skill will determine the success of any method used. Stack height depends on the lifting height of the loader, and the density of the bales. Soft bales can not be stacked as high as denser bales. A high density bale is important for a solid stack, however, softer bales may be used if the stack is built with more taper. See page 8. Extra hooks may be added to the fork if there is difficulty in gripping the bales. The following pages will help explain the operation and use of each style of fork.

Do not use the fork for any other purpose than moving bales.



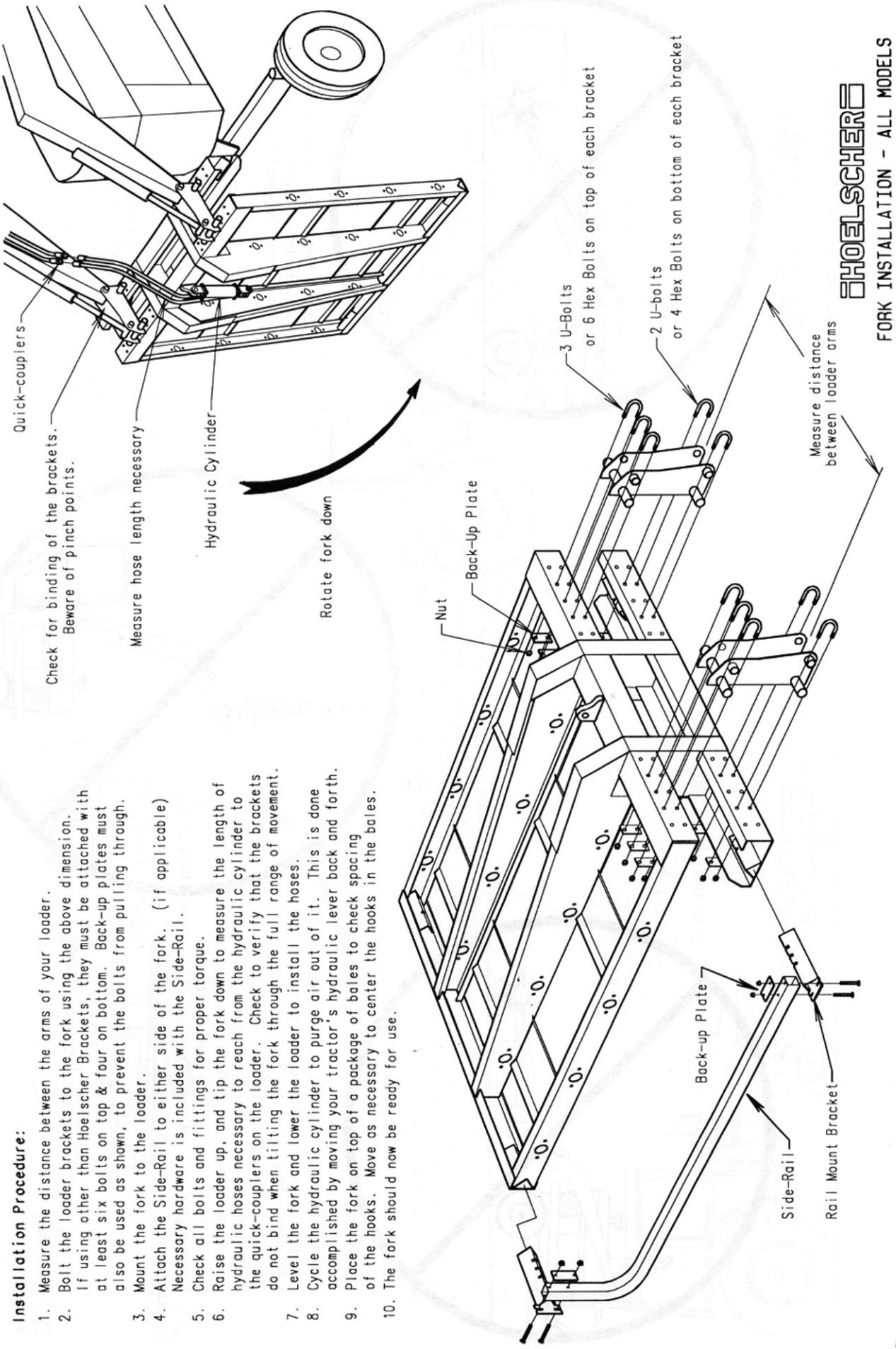
CAUTION Never allow anyone to ride on the fork, or to stand or walk under it. The fork, or bales could drop unexpectedly. Always keep the fork as low as possible, and travel at a speed safe for conditions at hand, to prevent overturning the tractor.

Maintenance

Very little normal maintenance is required to keep this unit operational. No lubrication is required on the fork. Periodically inspect the entire machine for loose bolts or fittings, or damaged or worn parts. Replace any damaged or missing safety signs on the unit.

Installation Procedure:

1. Measure the distance between the arms of your loader.
2. Bolt the loader brackets to the fork using the above dimension.
- If using other than Hoelscher Brackets, they must be attached with at least six bolts on top & four on bottom. Back-up plates must also be used as shown, to prevent the bolts from pulling through.
3. Mount the fork to the loader.
4. Attach the Side-Rail to either side of the fork. (if applicable)
- Necessary hardware is included with the Side-Rail.
5. Check all bolts and fittings for proper torque.
6. Raise the loader up, and tip the fork down to measure the length of hydraulic hoses necessary to reach from the hydraulic cylinder to the quick-couplers on the loader. Check to verify that the brackets do not bind when tilting the fork through the full range of movement.
7. Level the fork and lower the loader to install the hoses.
8. Cycle the hydraulic cylinder to purge air out of it. This is done accomplished by moving your tractor's hydraulic lever back and forth.
9. Place the fork on top of a package of bales to check spacing of the hooks. Move as necessary to center the hooks in the bales.
10. The fork should now be ready for use.

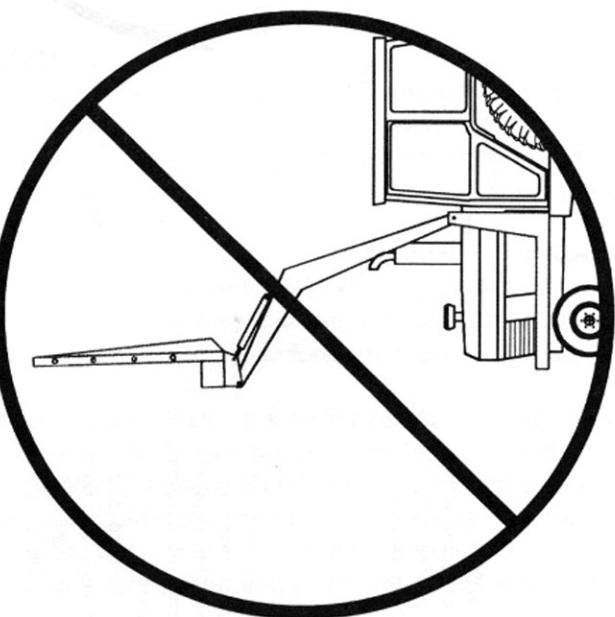


SHOEL SCHEER
OPERATING PRECAUTIONS



Do not push or pull with the fork.
Structural damage may result. Also
this may cause the tractor to tip.

Keep the fork as low as practical at all
times to reduce the possibility of tipping
or contacting over-head obstructions.
Braking efficiency will also be less if
the center of gravity is raised.

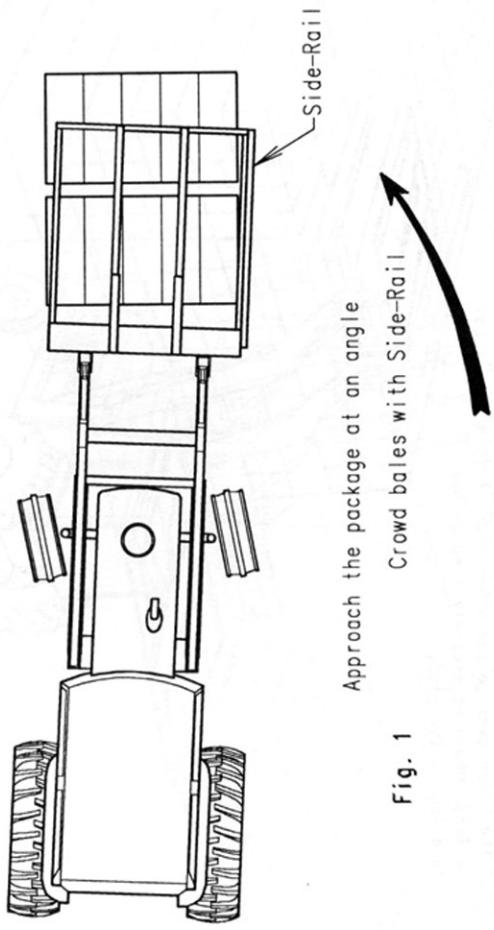


Do not force the fork down on the bales.
The weight of the fork and loader is
sufficient. Never lower the front of the
fork first. Verify that the fork is flat
on the bales before engaging the hooks.
Never raise the front of the tractor by
forcing the fork down. This causes extreme
stress on the fork and brackets.



Note:

The Side-Rail may be mounted on either side of the fork, depending on operator discretion. Secure clamping of the bales is dependent upon the operator's skill and density of the bales. Tight bales will handle and stack better than loose bales.



Approach the package at an angle

Crowd bales with Side-Rail

Fig. 1

To pick up "accumulated" bales:

Approach the package of bales at a slight angle, as shown in Fig. 1, with the fork 2"-4" above the package. When the fork is over the package, crowd the bales together with the side-rail and shove the first group of five bales together with the second group. Then lower and level the fork on top of the package and engage the hooks into the bales.

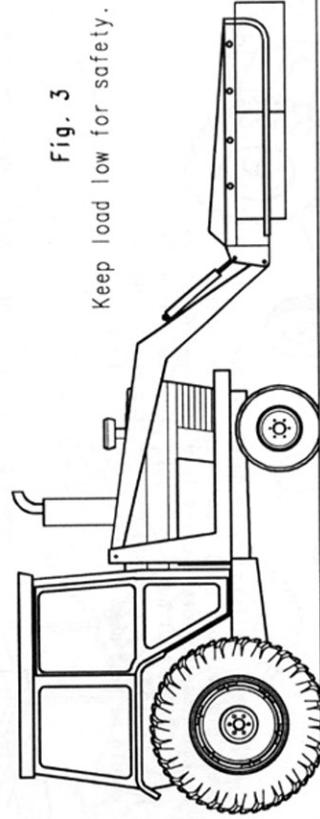
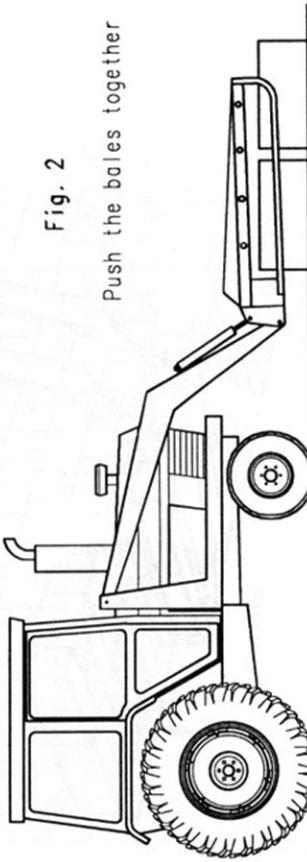


Fig. 3
Keep load low for safety.

Push the bales together
Fig. 2



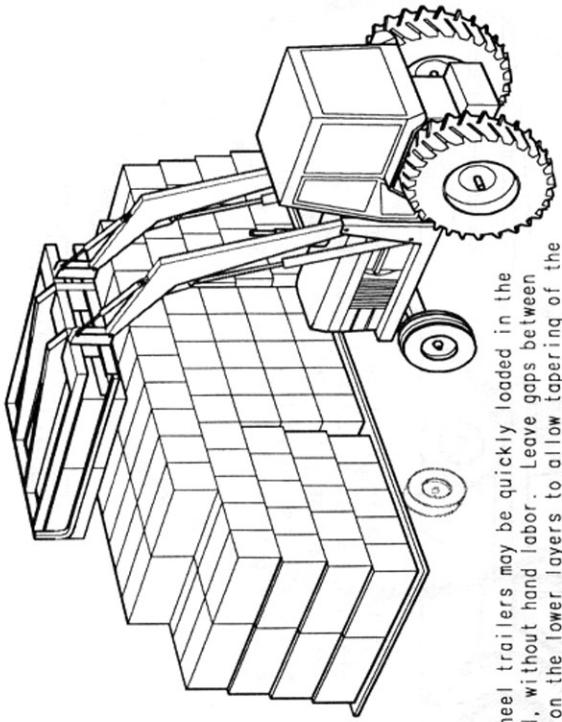
When transporting the bales, keep the fork low.

Always travel at a safe and responsible speed.

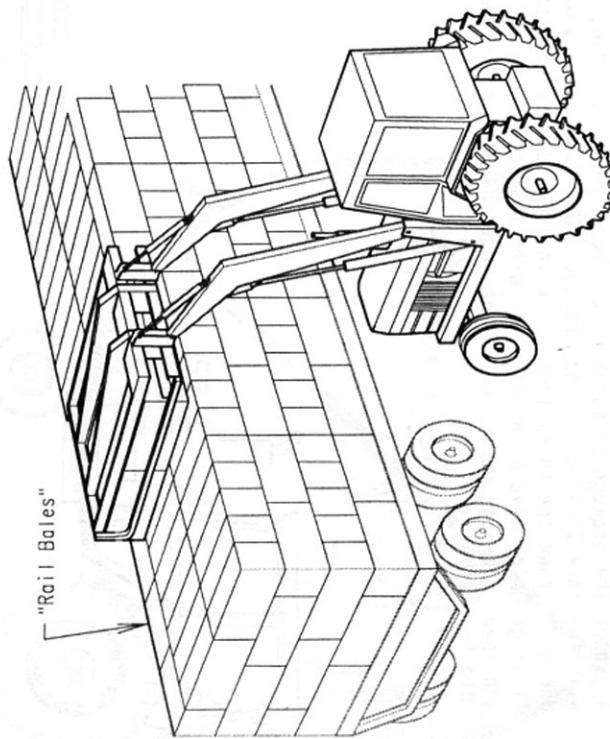
The increased weight on the front axle, and possible increased height, reduces the stability of the tractor and its braking efficiency.

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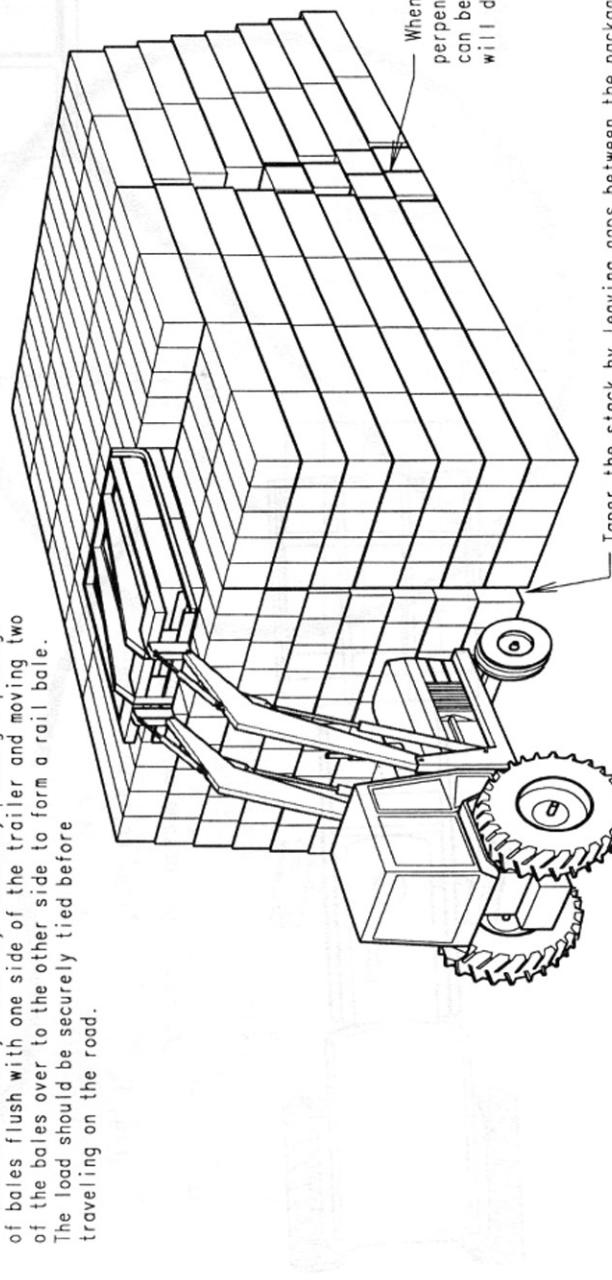
PICKING UP ACCUMULATED BALES



Four wheel trailers may be quickly loaded in the field, without hand labor. Leave gaps between packages on the lower layers to allow tapering of the load. Drive cautiously when pulling these trailers. Bales are not interlocked and may topple off. Bales should be tied down if traveling on the road.



Semi-trailers may be easily loaded by placing a package of bales flush with one side of the trailer and moving two of the bales over to the other side to form a rail bale. The load should be securely tied before traveling on the road.

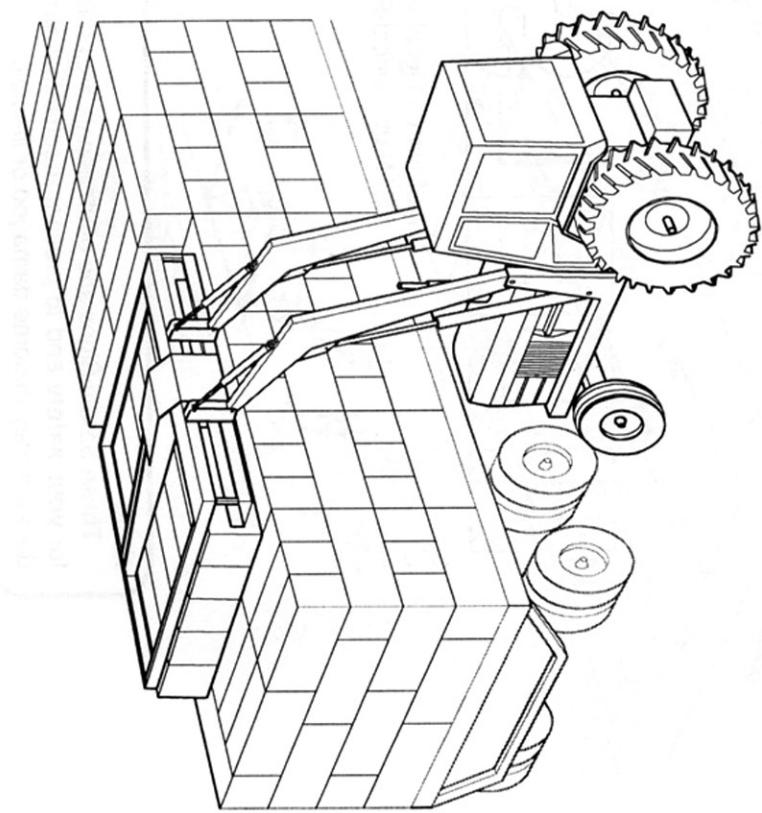


If the Side-Rail is on the "right" side of the fork, start stacking from left to right. By leaving gaps between each package on the lower layers, the stack can be tapered, which increases stability. When retrieving bales from the stack, the Side-Rail may be removed to allow picking bales from any location.

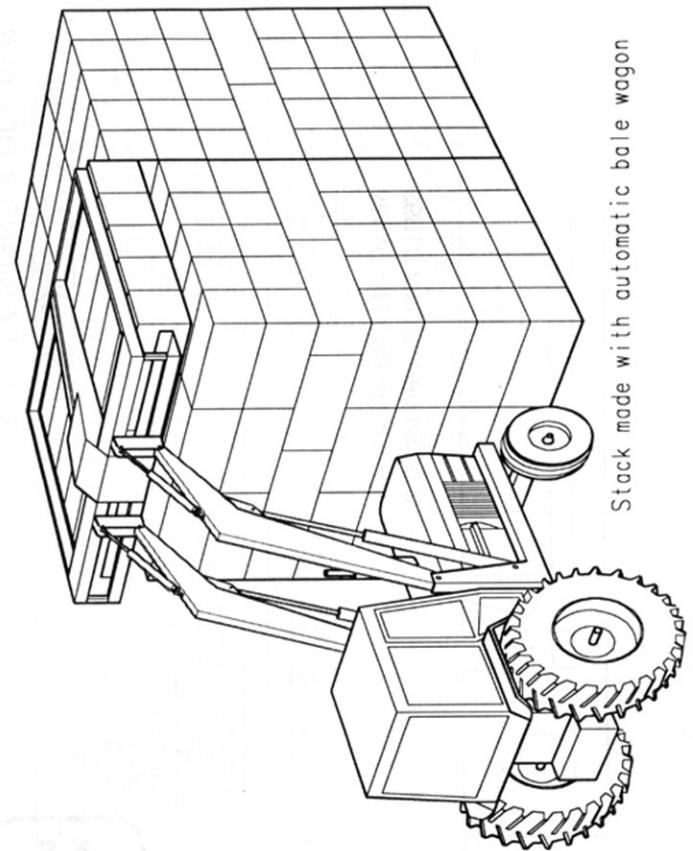
When starting a stack, it is helpful to place bales perpendicular to the stack. This forms a pyramid, and can be done with the fork. Experience and conditions will dictate the shape of the stack.

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Taper the stack by leaving gaps between the packages on the lower layers. Reduce the gap on each succeeding layer. Looser bales require more taper for a stable stack. Locate the stack on the levelest area available.



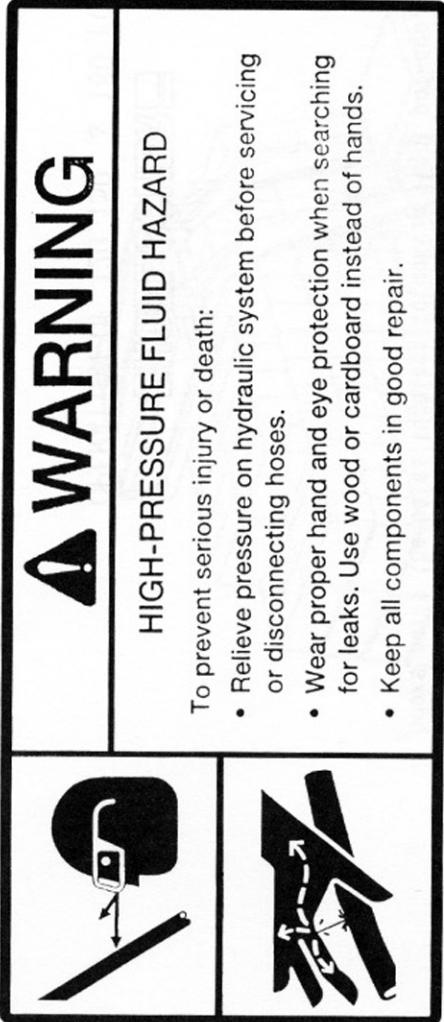
When loading semi-trailers, the bales must be rearranged after placing them with the fork. By setting the bales close to the persons on the trailer, each bale will not need to be carried far. Be extremely careful when placing the bales on the trailer, so that you do not push the person off.



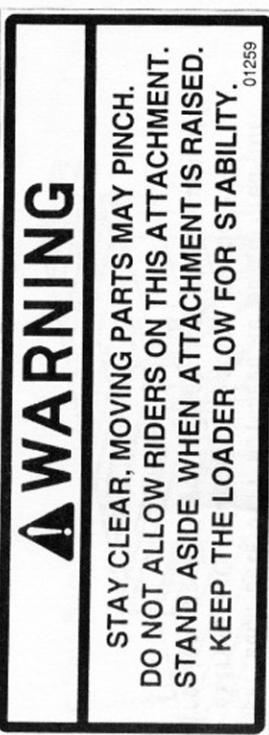
Use the fork to increase the height of the stack, or to remove bales from the stack. The action of the hooks pulls the bales together to make a tight package.

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OPERATION OF 120, 150, & 180 FORK



Safety Sign-WARNING-Part No: 01896



Safety Sign-WARNING-Part No: 01259

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2.5" Name Decal-Part No: 01122
1.5" Name Decal-Part No: 01253

2.5" Stripe-Part No: 01593
1.5" Stripe-Part No: 01499

Note:

These Safety Signs and other decals are attached to this equipment for **your safety** and to prevent mechanical damage. Replace these decals if they become damaged or illegible.

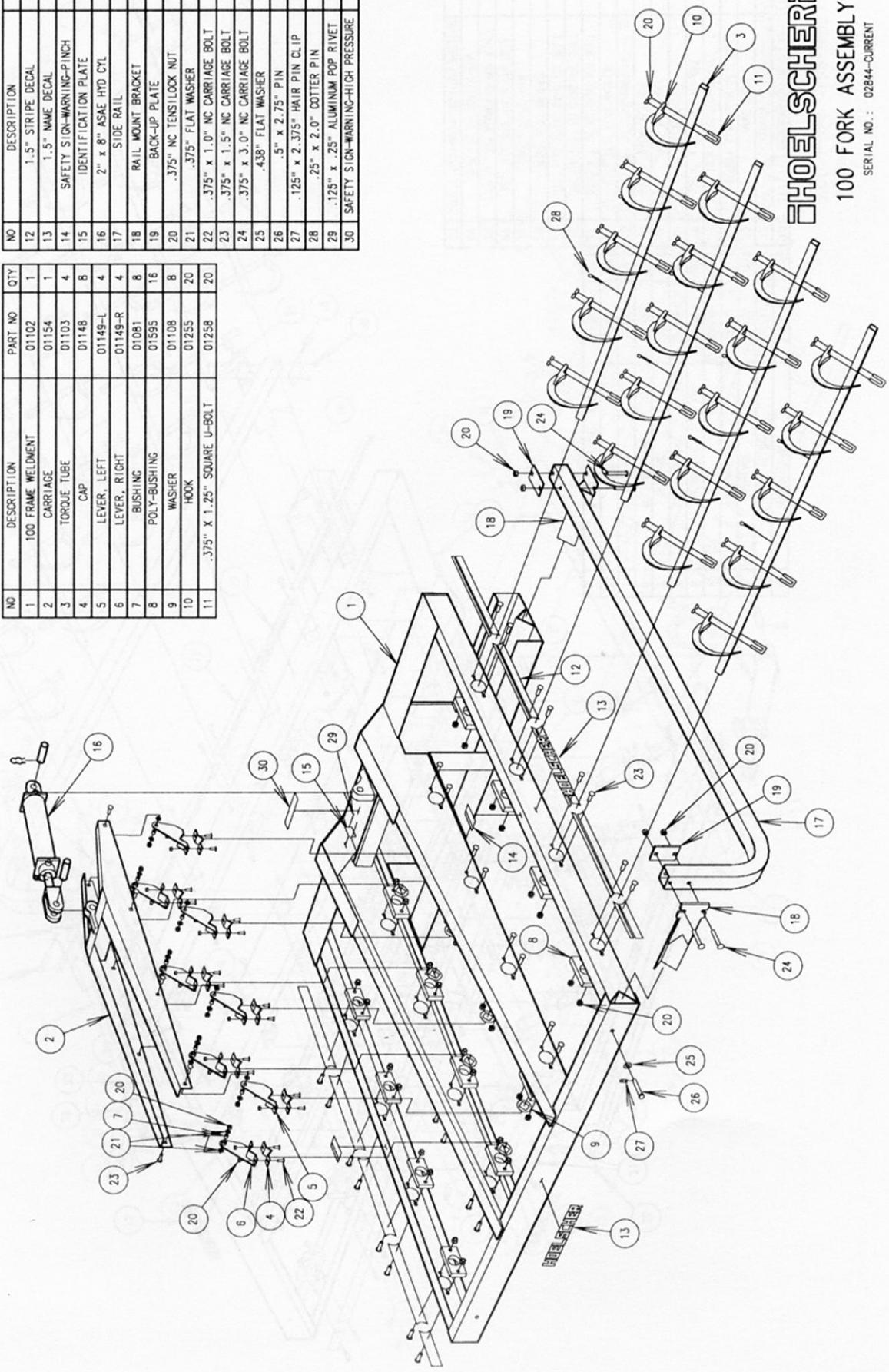
HOEELSCHER
SAFETY SIGNS & DECALS
BALE FORKS

100 FORK ASSEMBLY

SERIAL NO. : 02844-CURRENT

HOELSCHER

NO	DESCRIPTION	PART NO	QTY	DESCRIPTION	PART NO	QTY
1	100 FRAME WELDMENT	01102	1	1.5" STRIPE DECAL	01499	4
2	CARRIAGE	01154	1	1.5" NAME DECAL	01253	3
3	TORQUE TUBE	01103	4	SAFETY SIGN-WARN HIGH PRESSURE	01259	2
4	CAP	01148	8	IDENTIFICATION PLATE	01254	1
5	LEVER, LEFT	01149-L	4	.2" x .8" ASAE HYD CYL	01922	1
6	LEVER, RIGHT	01149-R	4	SIDE RAIL	01110	1
7	BUSHING	01081	8	RAIL MOUNT BRACKET	01111	2
8	POLY-BUSHING	01595	16	BACK-UP PLATE	01112	2
9	WASHER	01108	8	.375" NC TENSIL-LOCK NUT	01443	100
10	HOOK	01255	20	.375" FLAT WASHER	01444	16
11	.375" X 1.25" SQUARE U-BOLT	01258	20	.375" x 1.0" NC CARRIAGE BOLT	01448	16
12				.375" x 1.5" NC CARRIAGE BOLT	01455	40
13				.375" x 3.0" NC CARRIAGE BOLT	01457	4
14				.438" FLAT WASHER	01486	4
15				.5" x 2.75" PIN	01487	2
16				.125" x 2.375" HAIR PIN CLIP	01488	2
17				.25" x 2.0" COTTER PIN	01489	8
18				.125" x .25" ALUMINUM POP RIVET	01452	2
19				SAFETY SIGN-WARN-HIGH PRESSURE	01896	1

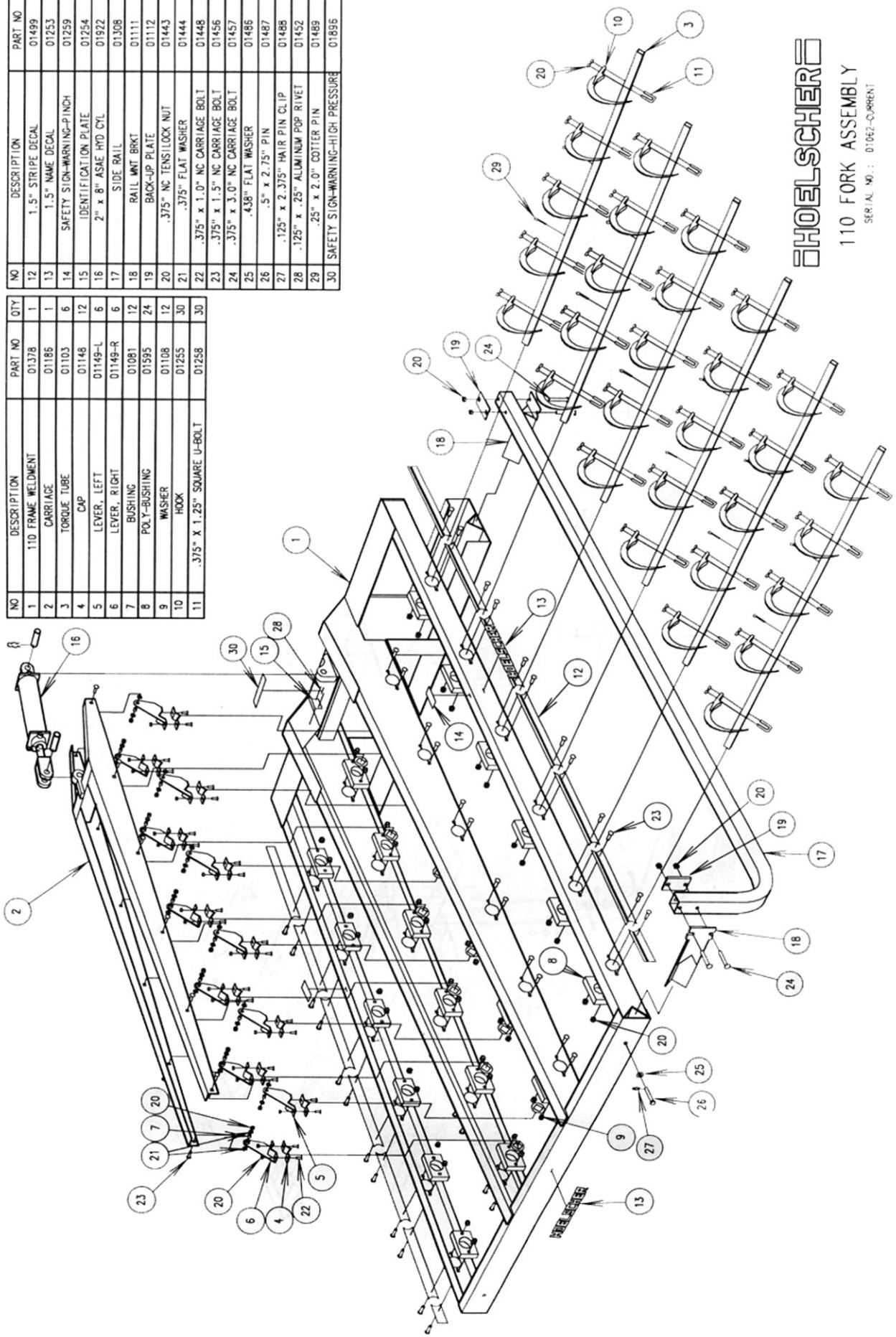


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110 FORK ASSEMBLY

SERIAL NO.: 01062-QJRFN1

NO	DESCRIPTION	PART NO	QTY	DESCRIPTION	PART NO	QTY	
1	110 FRAME WELMENT	01378	1	12	1.5" STRIPE DECAL	01499	4
2	CARRIAGE	01186	1	13	1.5" NAME DECAL	01253	3
3	TORQUE TUBE	01103	6	14	SAFETY SIGN-WARNING-PINCH	01259	2
4	CAP	01148	12	15	IDENTIFICATION PLATE	01254	1
5	LEVER, LEFT	01149-L	6	16	.2" x .8" ASME HMD CYL	01922	1
6	LEVER, RIGHT	01149-R	6	17	SIDE RAIL	01308	1
7	BUSHING	01081	12	18	RAIL MNT BRKT	01111	2
8	POLY-BUSHING	01595	24	19	BACK-UP PLATE	01112	2
9	WASHER	01108	12	20	.375" NC TENSLOCK NUT	01443	48
10	HOOK	01255	30	21	.375" FLAT WASHER	01444	24
11	.375" X 1.25" SQUARE U-BOLT	01258	30	22	.375" x 1.0" NC CARRIAGE BOLT	01448	24
23				23	.375" x 1.5" NC CARRIAGE BOLT	01456	60
24				24	.375" x 3.0" NC CARRIAGE BOLT	01457	4
25				25	.458" FLAT WASHER	01456	4
26				26	.5" x 2.75" PIN	01487	2
27				27	.125" x 2.375" HAIR PIN CLIP	01488	2
28				28	.125" x .25" ALUMINUM POP RIVET	01452	2
29				29	.25" x 2.0" COTTER PIN	01489	12
30				30	SAFETY SIGN-WARNING-HIGH PRESSURE	01896	1

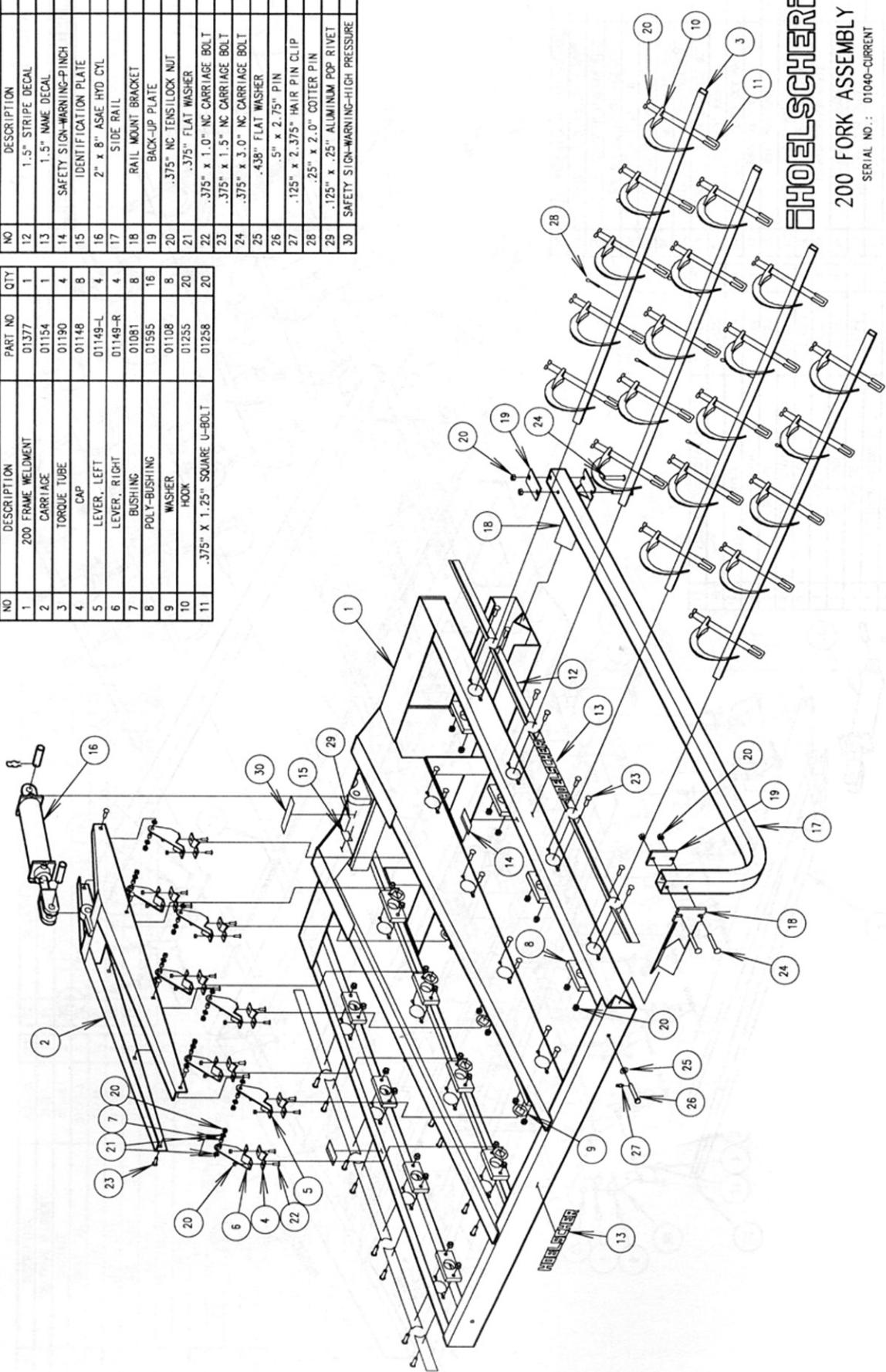


SERIAL NO.: 01040-CURRENT

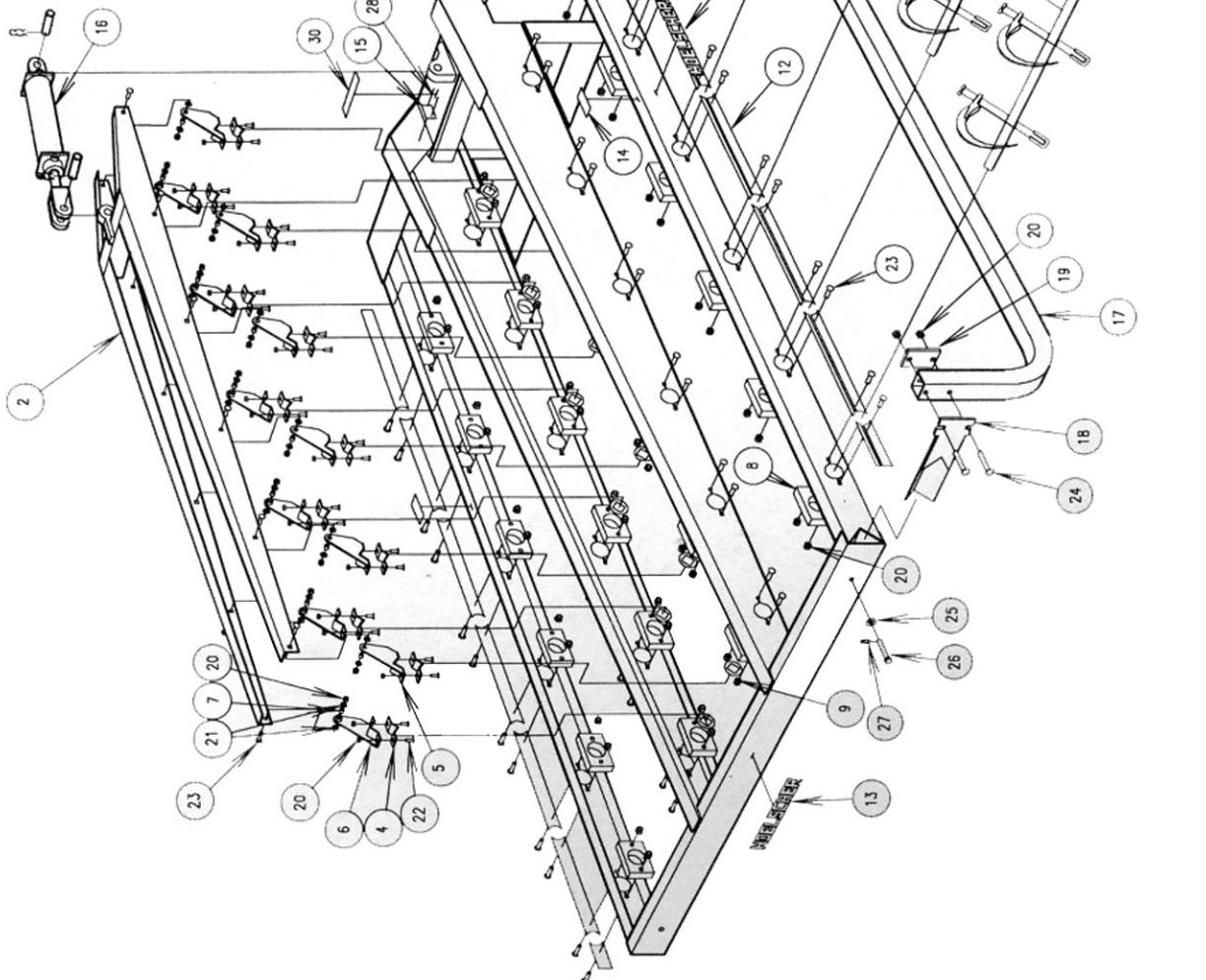
200 FORK ASSEMBLY

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NO	DESCRIPTION	PART NO	QTY	NO	DESCRIPTION	PART NO	QTY
1	200 FRAME, WELDMENT	01377	1	12	1.5" STRIPE DECAL	01499	4
2	CARRIAGE	011154	1	13	1.5" NAME DECAL	01253	3
3	TORQUE TUBE	011190	4	14	SAFETY SIGN-WARNING-PINCH	01259	2
4	CAP	011448	8	15	IDENTIFICATION PLATE	01254	1
5	LEVER, LEFT	01149-L	4	16	2" x 8" ASAE HYD CYL	01922	1
6	LEVER, RIGHT	01149-R	4	17	SIDE RAIL	01110	1
7	BUSHING	01081	8	18	RAIL MOUNT BRACKET	01111	2
8	POLY-BUSHING	01595	16	19	BACK-UP PLATE	01112	2
9	WASHER	01108	8	20	.375" NC TENSILOCK NUT	01443	100
10	HOOK	01255	20	21	.375" FLAT WASHER	01444	16
11	.375" X 1.25" SQUARE U-BOLT	01258	20	22	.375" x 1.0" NC CARRIAGE BOLT	01448	16
				23	.375" x 1.5" NC CARRIAGE BOLT	01456	40
				24	.375" x 3.0" NC CARRIAGE BOLT	01457	4
				25	.438" FLAT WASHER	01466	4
				26	.5" x 2.75" PIN	01487	2
				27	.125" x 2.375" HAIR PIN CLIP	01488	2
				28	.25" x 2.0" COTTER PIN	01489	8
				29	.125" x .25" ALUMINUM POP RIVET	01452	2
				30	SAFETY SIGN-WARNING-HIGH PRESSURE	01895	1



NO	DESCRIPTION	PART NO	QTY	NO	DESCRIPTION	PART NO	QTY
1	210 FRAME WELDMENT	01187	1	12	1.5" STRIPE DECAL	01499	4
2	CARRIAGE	01186	1	13	1.5" NAME DECAL	01253	3
3	TORQUE TUBE	01190	6	14	SAFETY SIGN-WARN INC-PINCH	01259	2
4	CAP	01148	12	15	IDENTIFICATION PLATE	01254	1
5	LEVER, LEFT	01149-L	6	16	2" x 8" ASAE HYD CTL	01922	1
6	LEVER, RIGHT	01149-R	6	17	SIDE RAIL	01308	1
7	BUSHING	01081	12	18	RAIL MNT BRKT	01111	2
8	POLY-BUSHING	01995	24	19	BACK-UP PLATE	01112	2
9	WASHER	01108	12	20	.375" NC TENS/LOCK NUT	01443	148
10	HOOK	01255	30	21	.375" FLAT WASHER	01444	24
11	.375" X 1.25" SQUARE U-BOLT	01258	30	22	.375" x 1.0" NC CARRIAGE BOLT	01448	24
12				23	.375" x 1.5" NC CARRIAGE BOLT	01456	60
13				24	.375" x 3.0" NC CARRIAGE BOLT	01457	4
14				25	.438" FLAT WASHER	01486	4
15				26	.5" x 2.75" PIN	01487	2
16				27	.125" x 2.375" HAIR PIN CLIP	01488	2
17				28	.125" x .25" ALUMINUM POP RIVET	01452	2
18				29	.25" x 2.0" COTTER PIN	01489	12
19				30	SAFETY SIGN-WARN INC-HIGH PRESSURE	01896	1



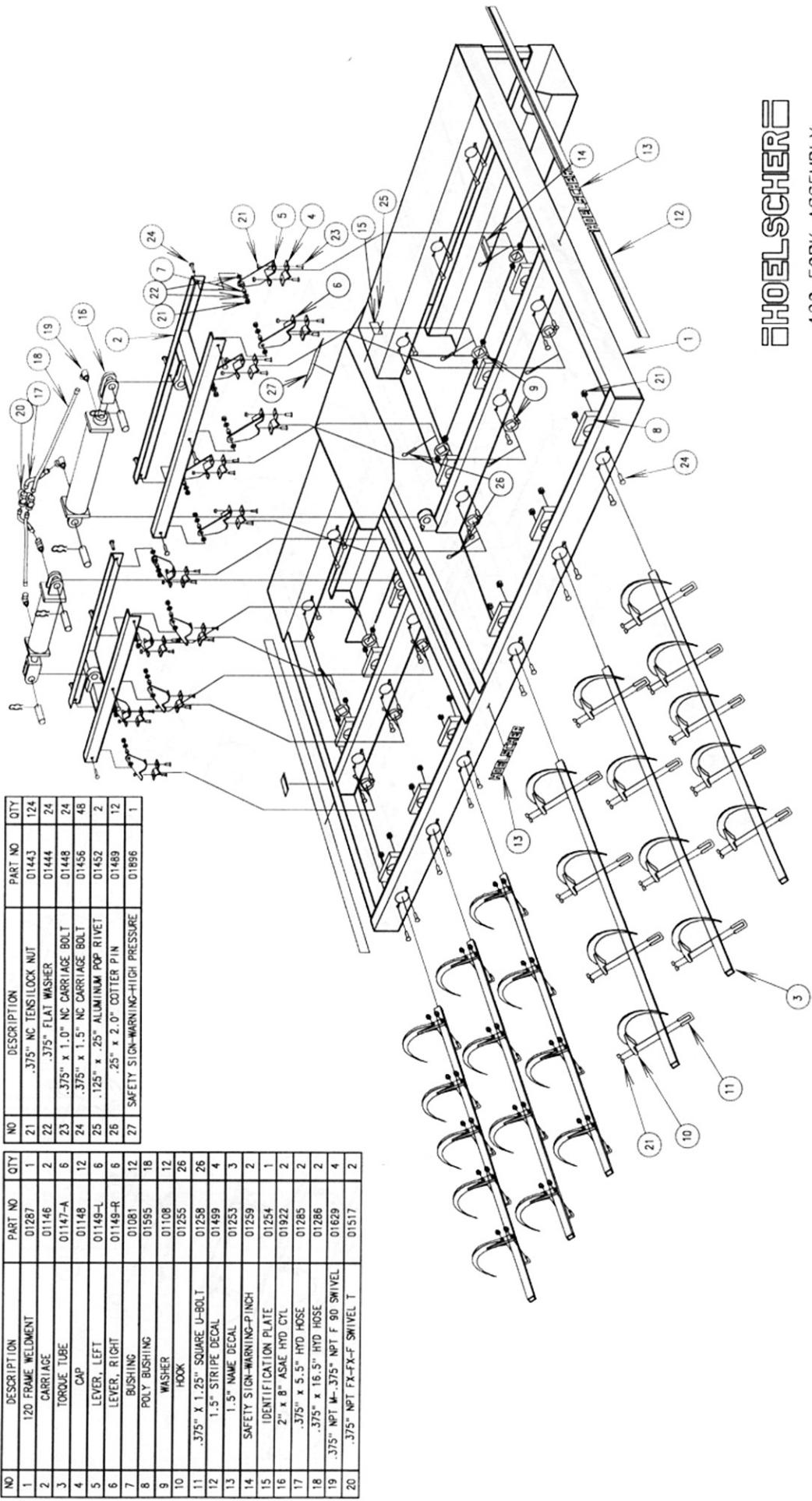
HOELSCHERE

210 FORK ASSEMBLY
SERIAL NO.: 0001-C86EN

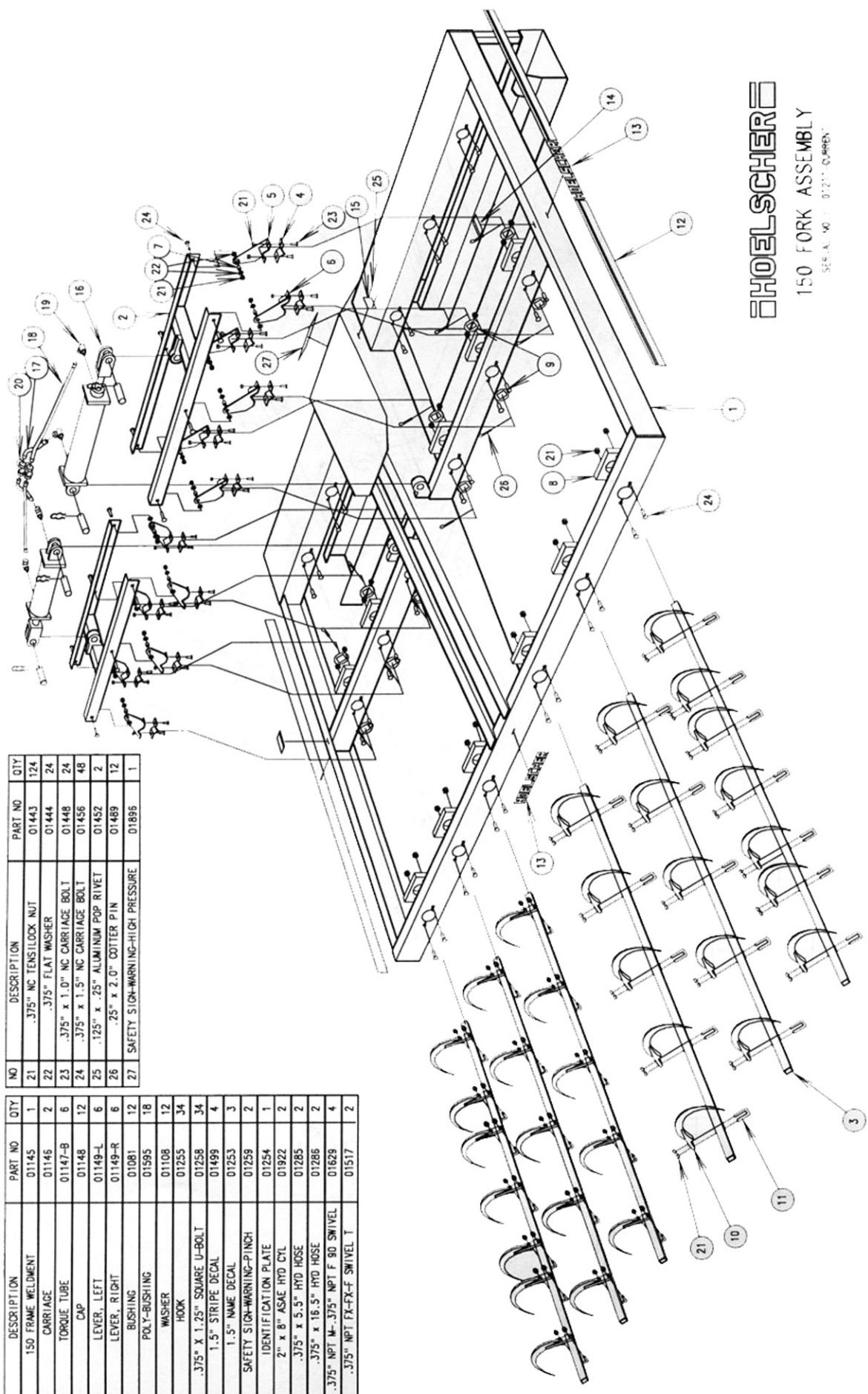
HÖÖLSCHE

120 FORK ASSEMBLY

SERIAL NO.: 01023-CURRENT



NO	DESCRIPTION	PART NO	QTY	DESCRIPTION	PART NO	QTY
1	150 FRAME WELDMENT	01145	1	.375" NC TENSILLOC NUT	01443	124
2	CARRIAGE	01146	2	.375" FLAT WASHER	01444	24
3	TORQUE TUBE	01147-B	6	.375" x 1.0" NC CARRIAGE BOLT	01448	24
4	CAP	01148	12	.375" x 1.5" NC CARRIAGE BOLT	01456	48
5	LEVER, LEFT	01149-L	6	.125" x .25" ALUMINUM POP RIVET	01452	2
6	LEVER, RIGHT	01149-R	6	.25" x 2.0" COTTER PIN	01489	12
7	BUSHING	01081	12	SAFETY SIGN-WARNING-HIGH PRESSURE	01896	1
8	POLY-BUSHING	01595	18			
9	WASHER	01108	12			
10	HOOK	01255	34			
11	.375" x 1.25" SQUARE U-BOLT	01256	34			
12	1.5" STRIPE DECAL	01499	4			
13	1.5" NAME DECAL	01253	3			
14	SAFETY SIGN-WARNING-P INCH	01259	2			
15	IDENTIFICATION PLATE	01254	1			
16	2" x 8" ASAE HYD CYL	01922	2			
17	.375" x 5.5" HYD HOSE	01285	2			
18	.375" x 16.5" HYD HOSE	01286	2			
19	.375" NPT M-.375" NPT F 90 SWIVEL	01629	4			
20	.375" NPT FX-F SWIVEL T	01517	2			



DHOELSCHER

150 FORK ASSEMBLY

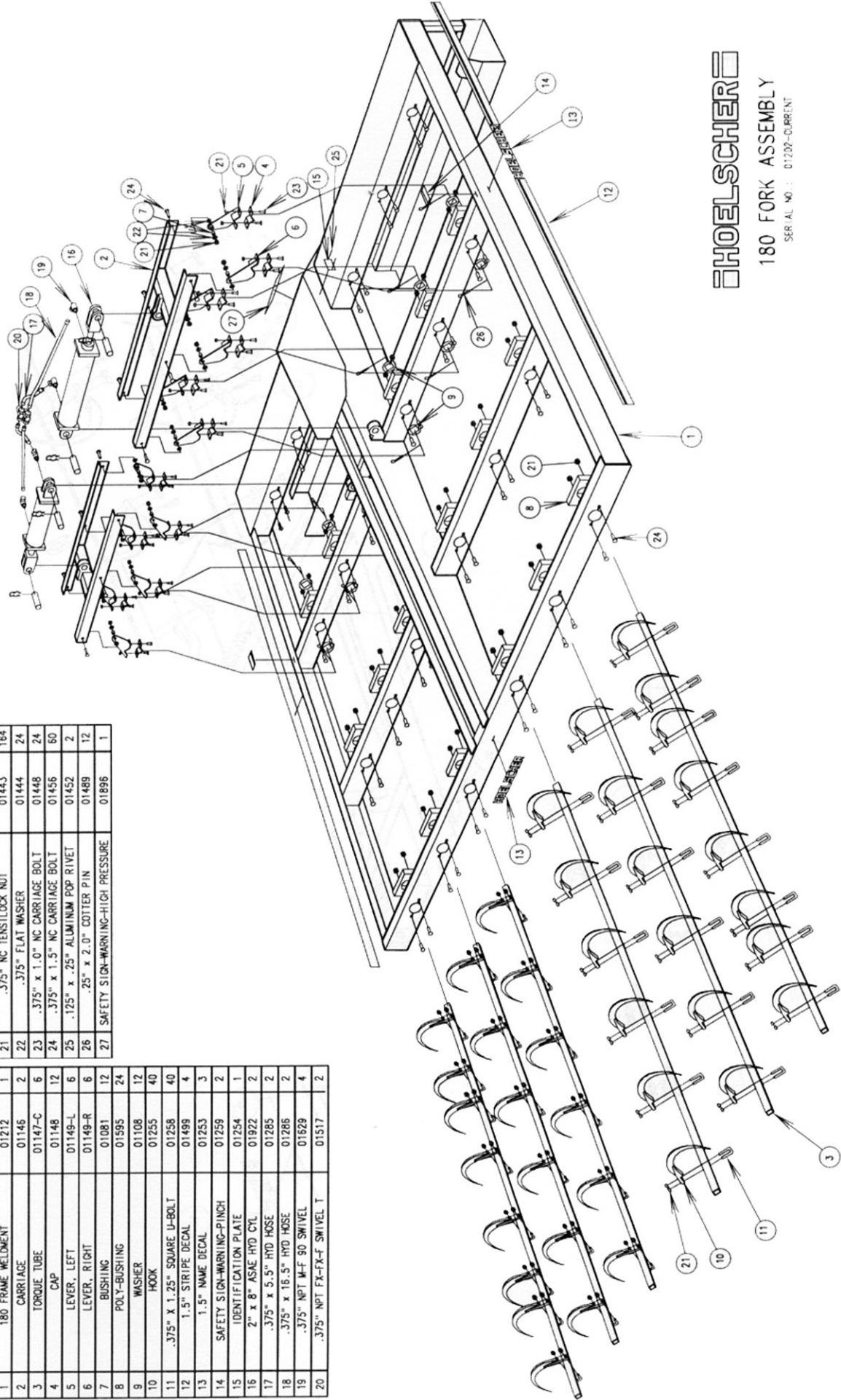
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HOELESCHER

180 FORK ASSEMBLY

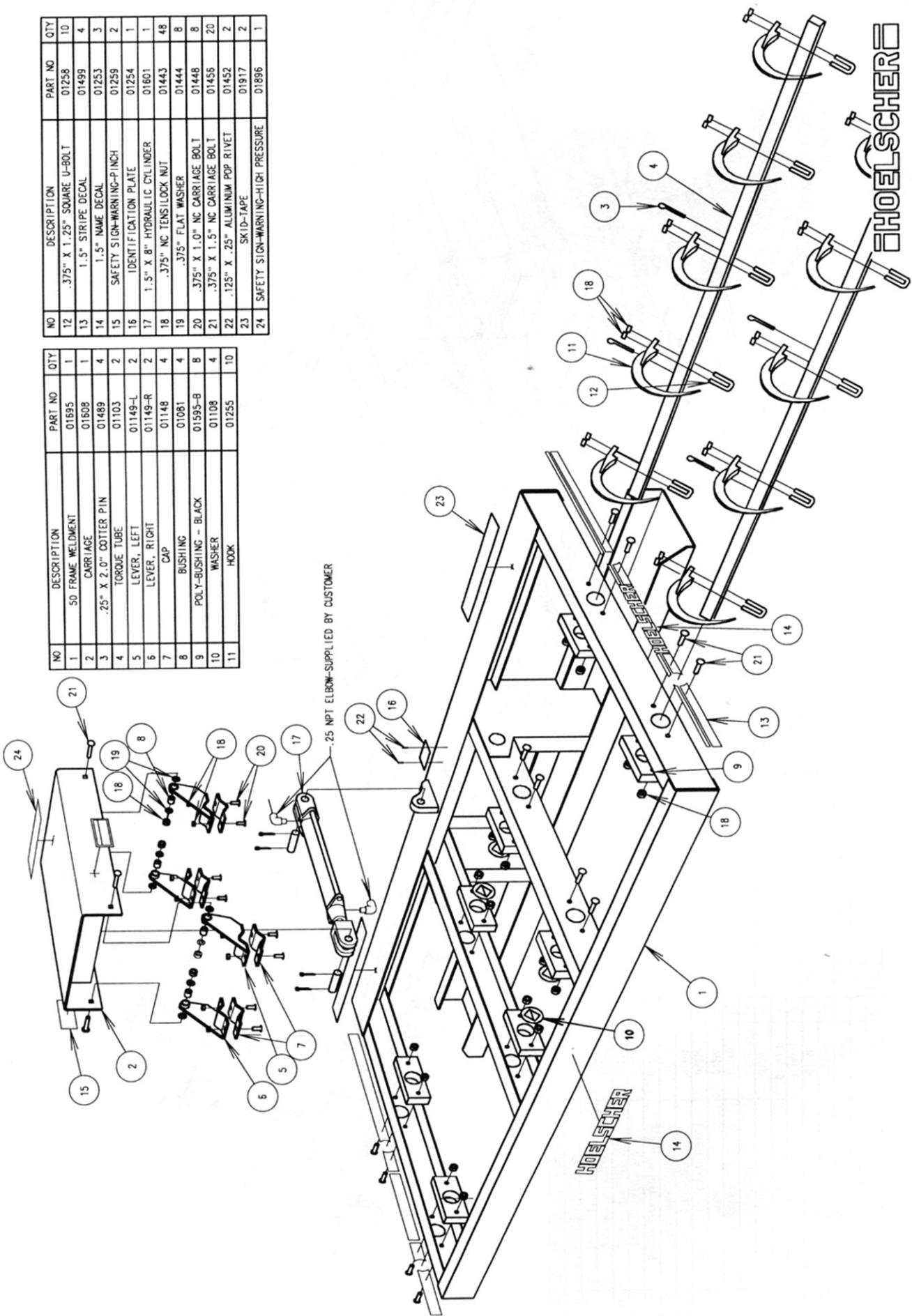
SERIAL NO.: 01202-CURRENT

NO	DESCRIPTION	PART NO	QTY	NO	DESCRIPTION	PART NO	QTY
1	180 FRAME WELDMENT	01212	1	21	.375" NC TENSILock NUT	01443	164
2	CARRIAGE	01145	2	22	.375" FLAT WASHER	01444	24
3	TORQUE TUBE	01147-C	6	23	.375" x 1.0" NC CARRIAGE BOLT	01448	24
4	CAP	01148	12	24	.375" x 1.5" NC CARRIAGE BOLT	01456	60
5	LEVER, LEFT	01149-L	6	25	.125" x .25" ALUMINUM POP RIVET	01452	2
6	LEVER, RIGHT	01149-R	6	26	.25" x 2.0" COTTER PIN	01489	12
7	BUSHING	01081	12	27	SAFETY SIGN-WARNING-HIGH PRESSURE	01896	1
8	POLY-BUSHING	01595	24				
9	WASHER	01108	12				
10	HOOK	01255	40				
11	.375" x 1.25" SQUARE U-BOLT	01258	40				
12	1.5" STRIPE DECAL	01499	4				
13	1.5" NAME DECAL	01253	3				
14	SAFETY SIGN-WARNING-PINCH	01259	2				
15	IDENTIFICATION PLATE	01254	1				
16	2" x 8" ASAE HYD CYL	01922	2				
17	.375" x 5.5" HD HOSE	01285	2				
18	.375" x 16.5" HD HOSE	01286	2				
19	.375" NPT MF 90 SWIVEL T	01629	4				
20	.375" NPT FK-FK-F SWIVEL T	01517	2				



50 FORK ASSEMBLY

SERIAL NO.: 01142-CURRENT



HOELSCHER

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