

LEON

Operator Manual



Land Scraper MODEL 1700

LEON'S MFG. COMPANY INC.

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Leon's Mfg. Company Inc.
"Home of Quality Leon & Ramrod Products"

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SALES / SERVICE BULLETIN

IMPORTANT

The M1700 LAND Scraper Operator Manual provides the recommended operation and service instructions for your Leon Box Scraper. Please follow all recommendations and warnings as detailed in the manual and in this bulletin.

The M1700 BOX Scrapers are rated and recommended for use with tractors having a rated drawbar of 200HP to 425 HP (2WD or 2WD/FWA tractors)

THE SCRAPER MUST NOT BE OPERATED WITH ANY 4WD TRACTOR OR ANY TRACTOR THAT EXCEEDS A DRAWBAR RATING OF 430HP.

WARRANTY FOR THE SCRAPER WILL BE VOID IF A LARGER TRACTOR THAN RECOMMENDED IS USED WITH THE SCRAPER.

Your implement has been designed to give you years of satisfactory service. Safe, successful operation and long life depend on the proper precautions and the proper care given to your implement. Please read the operator manual carefully and follow the instructions provided to ensure long life of your implement. Correct operation and maintenance will save you time and expense.

For additional information contact the Sales/Service Department at Leon's.

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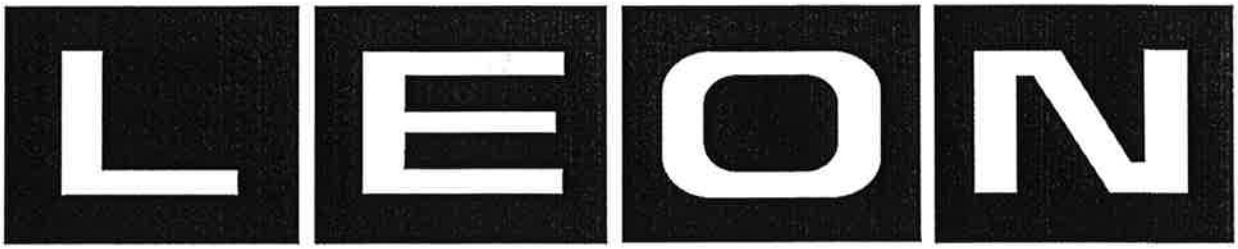


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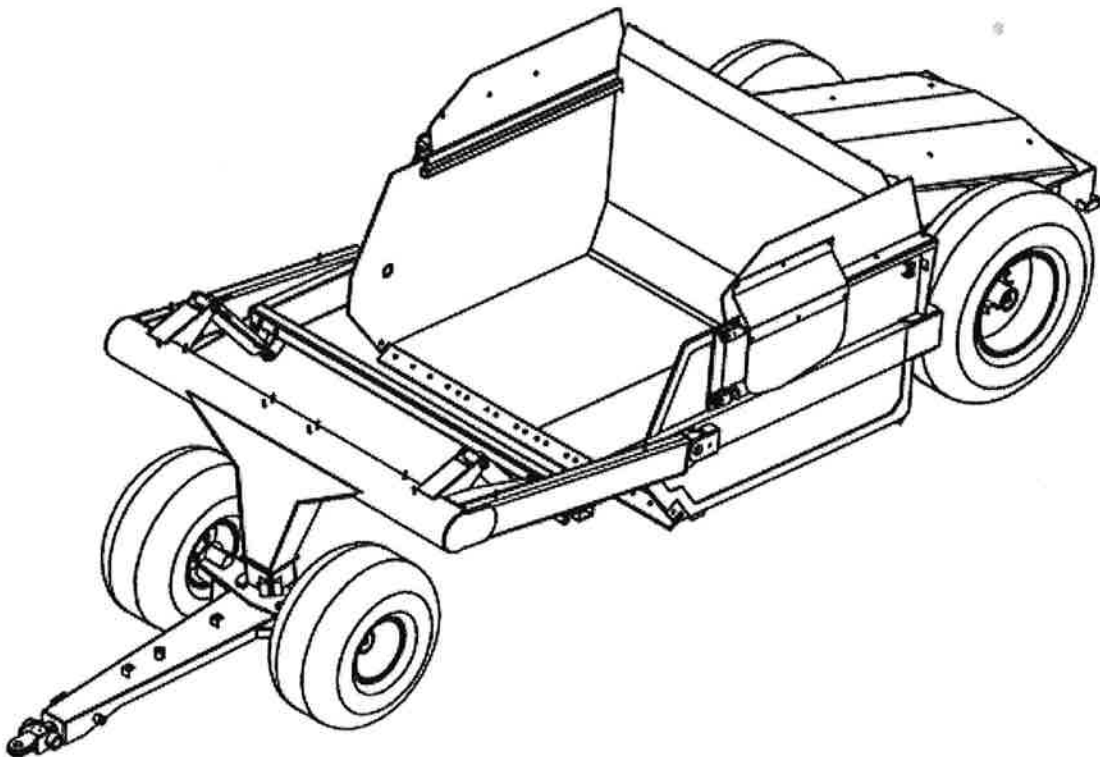
Introductions

This manual provides recommended operation and service instructions for your LEON M1700 Land Scraper.

The M1700 Land Scraper is rated for use with tractors having a minimum drawbar of 200 HP and maximum of 425 HP. The heaped capacity is 16.93 cu. Yards.

Your implement has been designed to give you years of satisfactory service. Safe, successful operation and long life depend on the proper precautions and the proper care given to your implement. Please read this manual carefully and follow the instructions provided to ensure long life of your implement. Correct operation and maintenance will save you time and expense. For additional information, see your dealer.

With proper operation, your implement will give maximum performance, low maintenance and long life. Please read the warranty page carefully, fill-in the required information and return warranty card so your dealer can give your prompt, efficient service when you order parts.



Operation Instructions

The LEON land Scraper, upon delivery, had Gulf Duratran hydraulic oil in all cylinders. It is our understanding that such oil is compatible with all factory recommended gear and hydraulic oil. Before operating, the Land Scraper should be greased at all grease fitting points. After connecting the hydraulic hoses to the tractor, retract the lift cylinders and remove the transport lock pins. Take care to keep dirt out of the oil when connecting or disconnecting any oil line, as dirt contributes to the failure of hydraulic components.

BEFORE OPERATING THE SCRAPER

REMOVE THE TRANSPORT LOCK PIN

- Lubricate all wheel bearings, pins and rollers.
- Check and adjust tire pressure as listed below.
- Check wheel bolt torque as listed below.
- Hitch Land Scraper to tractor and cycle operate the entire unit while empty. Stop tractor and make adjustments as required.
- Cycle all hydraulic functions several times to ensure proper operation of hydraulics. Ensure to raise the Front Gate to fully open before cycling the push gate. When all the cylinders are retracted, check the tractor oil level, adding to maintain normal levels.
- After eight (8) hours of work, all bolts should be checked and tightened if necessary.
- Every eight (8) hours all grease fittings should be lubricated.
- After thirty (30) hours operation, all bolts should be re-checked and tightened if necessary.

WHEEL BOLT TORQUE IMPORTANT

Tighten all wheel bolts before using the units and check again after the first few loads. Tight the wheel bolts to:

5/8 bolts	180 ft.-lbs.
3/4 bolts	320 ft.-lbs.

TIRE PRESSURE

Tire Size	PSI
16.5L x 16.1 – 10 Ply Rib Implement	32
21.5L x 16.1 – 10 Ply Rib Implement	38
21.5L x 16.1 – 10 Ply AWT	32
18.4 x 26 – 10 Ply Rib Implement	36
23.1 x 26 – 10 Ply Rib Implement	36

Sequence of Operation

REMOVE THE TRANSPORT LOCK PIN

To fill the bucket:

1. Open the front gate (apron) by energizing the hydraulics through the sequence valve. When it reach maximum opening, *STOP* the hydraulics.
2. Lower the Land Scraper to desired cutting depth by energizing the hydraulics through the lifting cylinders while moving forward,
3. When the bucket is full, raise the Land Scraper by energizing hydraulics reversely through the lifting cylinders, and close the front gate to prevent spillage,
4. Transport to required dumping area

To empty the bucket:

1. Lower the Land Scraper to give required spread depth
2. Open the front gate by energizing hydraulics in the front gate cylinders through the Sequence valve.
3. When the front gate is fully open, the Sequence valve will allow the hydraulics to energize the rear push gate cylinders and the rear gate will start moving forward to eject the load.
4. When the bucket is empty, reverse the hydraulic cycle in order to move back the push cylinder to its closed position. This will also close the front gate. The sequence valve is designed to protect the push gate from running into the front gate.
5. The sequence valve is preset at the factory.
6. Spread depth is controlled by the height of Land Scraper and tractor speed.

Operating Tips

For efficient Land Scraper operation:

1. Plan work to load scraper downhill
2. Eliminate excess turns,
3. Load scraper in direction of where load is to be dumped,
4. Do not spend unnecessary time in trying for heaping loads – you may sacrifice this gain in cubic yards by a longer time cycle,
5. Do not cut too deep – deep cuts increase the voids and reduce the pay load. Large chunks in the scraper make poor spreading material,
6. Maintain a downslope in cut – do not cut horizontal layers off the top,
7. On side hill cuts, keep inside of cut, deeper than outside,
8. Maintain a smooth hauling road,
9. Do not raise Land Scraper any higher than necessary when hauling - increasing Land Scraper height reduces the scraper's stability,
10. In constructing a fill, keep shoulders high and center low – this provides drainage toward center and prevents the scraper from sliding over the side of the fill.

Pre-Delivery Inspection

- Check the wheel torque requirements.
- Check and adjust the tire inflation pressure as per requirements on.
- Lubricate all rotating parts with premium quality multi-purpose grease where applicable.
- Ensure that the safety SMV emblem have been installed properly.
- Ensure that all bolts and fasteners are in place and properly tightened.
- Hook up the scraper and perform a test run. Ensure that the area around the scraper is clear of obstacles and other people.
- Cycle the hydraulics and raise and lower the Front Gate ensuring that no interference occurs.
- Cycle the hydraulics and raise and lower the Goose Neck ensuring that no interference occurs.
- Cycle the hydraulics and push the Rea Gate forward and backward ensuring that no interference occurs.

Safety

This symbol calls your attention to instructions concerning your personal safety. It is found throughout the manual as well as on the machine to point out specific hazards and ways to avoid them. Always follow the instructions to



minimize the risk of personal injury or death.

OPERATING

- In addition to equipment configuration and design, hazard control and accident prevention depend on awareness, concern, prudence and proper training of personnel in the operation, maintenance, transport and storage of equipment.
- Always shut off tractor engine, shift to "PARK" position or shift to neutral, set brakes and allow scraper to completely stop before dismounting tractor or working around the machine.
- Remove tractor start key when tractor and scraper will be unattended for adjustments or maintenance.
- Do not attempt to lubricate or adjust scraper while machine is in operation.
- Machinery operation should be performed only by persons who are trained and qualified to do so and are knowledgeable of the scraper.
- Only the operator should be permitted on the tractor (unless the tractor has a factory installed passenger seat) when the tractor and scraper are in motion. Never permit anyone to ride in or on the scraper at any time.
- Avoid wearing loose-fitting clothing or jewelry when working around the scraper and tie up long hair that can entangle in moving parts.
- Wear personal protective equipment (PPE) such as, but not limited to, protection for eyes, lungs, ears, head, hands and feet when operating, servicing or repairing equipment.
- Be sure bystanders are clear before engaging and operating the tractor or scraper.
- Do not leave tractor or scraper unattended with tractor engine running.
- Never attempt to operate the scraper unless sitting in the tractor driver's seat.
- Keep all guards and shields in place when scraper is in operation.
- Do not stand between tractor and scraper to install hitch pin when tractor is running.
- Regulate ground speed to field conditions, and maintain control at all times.
- Be sure tractor has sufficient weight to operate scraper on public roads, on hillsides and under any other adverse conditions.
- Do not allow children to ride on, play on, or operate equipment. Always keep children away from equipment operating, servicing and storage areas.
- Be sure tractor is in safe operating condition and has adequate braking capabilities.
- Tractor should be equipped with rollover protective structure (ROPS), enclosed cab and seat belts. Use seat belts during operation.
- Detach and store scraper where children do not normally play. Always block the wheels and ensure that the hitch jack is stable and secured to scraper properly.

WARNING:

DO NOT OPERATE THE SCRAPER WITH A TRACTOR EXCEEDING THE 425 HP DRAWBAR RATING. WARRANTY WILL BE VOID IF THE SCRAPER IS OPERATED WITH THESE TYPE OF TRACTORS.

Maintenance

- Always follow proper safety precautions.
- Never attempt any service, maintenance, adjustment or repair unless you have been properly trained and are qualified to do so.
- Always shut off the tractor, engage the park brake and take steps to ensure no person can start up the machine while you are working on it.
- Check wheel bolts hourly for the first day of operation and every 50 hours of operation thereafter.
- Check tires daily for sign of damage or noticeably low air pressure. Every 50 hours check the tire pressure. Grease walking beam bearings every 8 hours and wheel bearings every 50 hours with premium quality multi-purpose grease.

Lubrication and Check Summary

1. 8 hours of operation:

- Grease all grease fittings as indicated by the Decals
- Grease the Hitch pivot
- Check tires

2. 50 hours of operation:

- Check wheel bolts
- Check air pressure
- Grease wheel bearings

Specifications

TIRES AND WHEELS

	FRONT	REAR
TIRES	21.5 x 16.1-10 Ply Rib Implement	18.4 x 26-10 Ply Rib Implement
RIMS	W16C x 16.1x 8-bolts	W16L x 26-10 bolts
HUBS	8-bolts	Complete Assembly, H-1010-11

CYLINDERS

	Lift Cylinders	Push Gate Cylinders	Front Gate Cylinder
Bore Diameter (inch)	4.00	3.00	3.00
Shaft Diameter (inch)	2.00	2.25	1.50
Stroke (inch)	20.75	67.00	12.00
Design Pressure (psi)	3000		
Test Pressure (psi)	3500		

Delivery Checklist

Pre-Delivery:

- _____ Verify Tires Pressure
- _____ Verify Wheel Torque
- _____ Inspect all Lubrication Points
- _____ Inspect all Hydraulic Hoses and Fittings
- _____ Inspect all Hydraulic Cylinder Pins
- _____ Verify Hydraulic Tighten Torque

DEALER REPRESENTATIVE: _____

DATE: _____

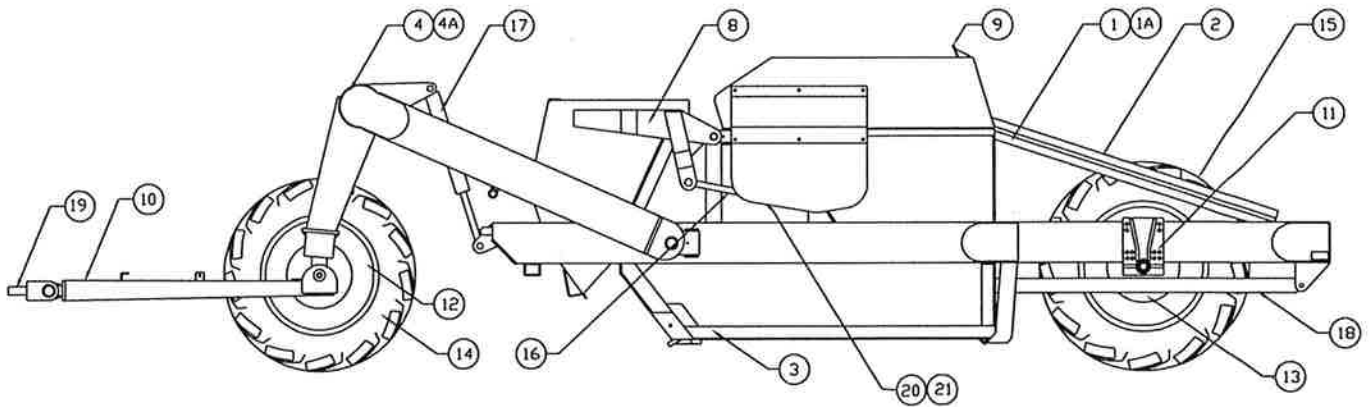
Customer Delivery :

- _____ Review Safety Procedures regarding Bale Handler Operation
- _____ Review Operator's and Part's Manual
- _____ Review proper Operating Procedure
- _____ Review the Assembly Procedure
- _____ Review general Adjustment and Setup procedure
- _____ Discuss Road and Highway Transportation Requirements and Regulations

DEALER REPRESENTATIVE: _____

DATE: _____

1700 SCRAPER ASSEMBLY

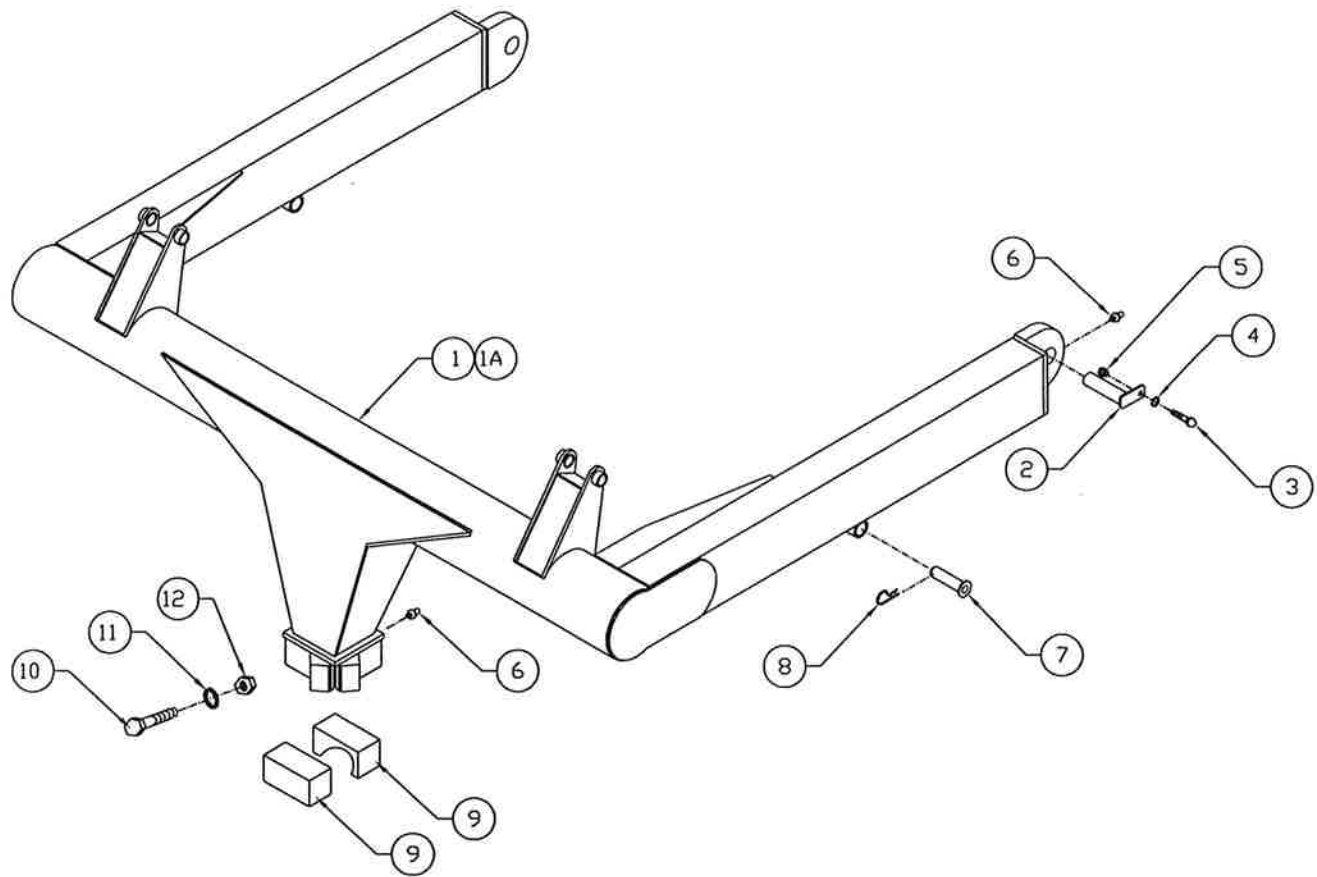


REF. NO.	PART #	QTY.	DESCRIPTION
1	1850795	1	REAR COVER BRACE - LEFT
1A	1850796	1	REAR COVER BRACE - RIGHT
2	1850652	1	REAR COVER
3	1850525	1	MAIN FRAME
4	1850850	1	FRONT FRAME (PRIOR TO JAN/2011)
4A	1851850	1	FRONT FRAME (JAN/2011)
7			
8	1850600	1	FRONT GATE
9	1850560	1	REAR GATE
10	1850501	1	HITCH POLE
11	1850731	2	REAR AXLE - 6 BOLT MOUNT
12	1135024	2	RIM, W16C x 16.1, 8 BOLT
13	1135018	2	RIM, W16 x 26, 10 BOLT
14	1135040	2	TIRE, 21.5 x 16.1 - 10 PLY
15	1135048	2	TIRE, 18.4 x 26 - 10 PLY
16	1125650	2	FRONT GATE CYLINDER, R2-30L2-12
16A	1850440	2	FRONT GATE CYLINDER, CW-3.00-12.00-1.50(ORB)
17	1125665	2	LIFT CYLINDER, R2-40-20.75
17A	1850450	2	LIFT CYLINDER, CW-4.00-20.75-2.00(ORB)
18	1125680	2	REAR PUSH CYLINDER, R2-30L-67
18A	1850460	2	REAR PUSH CYLINDER, CW-3.00-67.00-2.25(ORB)
19	1850706	1	HITCH TONQUE
20	1850645	1	SIDE COVER - LEFT
21	1850748	1	SIDE COVER - RIGHT

1700 MAIN FRAME

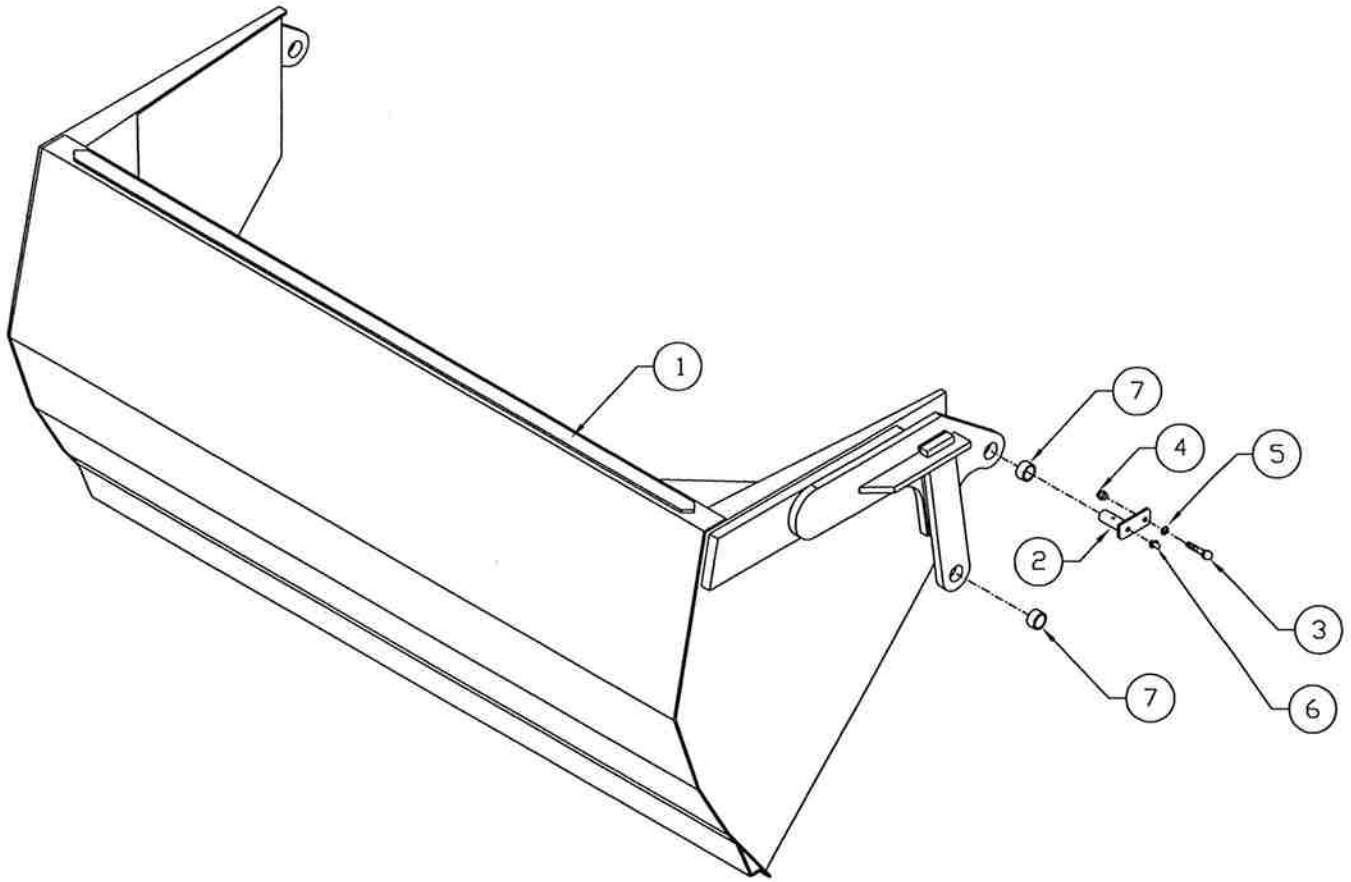
REF. NO.	PART #	QTY.	DESCRIPTION
1	1850525	1	MAIN FRAME
2	1102365	2	DOME HEAD BOLT, 3/4" UNC x 2" LG. -GRADE 8
3	1102364	14	DOME HEAD BOLT, 3/4" UNC x 3" LG. -GRADE 8
4			
5			
6	1162836	1	CORNER CUTTING EDGE, 3/4" x 7" x 23 7/8", LEFT HAND
7	1162835	1	CORNER CUTTING EDGE, 3/4" x 7" x 23 7/8", RIGHT HAND
8	1162845	1	CENTER CUTTING EDGE, 3/4" X 10" x 54"
9	1850647	2	PUSH CYLINDER CLAMP
10	1850646	2	PUSH CYLINDER GUARD
11	1850731	2	REAR AXLE - 6 BOLT MOUNT
11A	1850615	2	REAR AXLE - 4 BOLT MOUNT
12	1102545	50	HEX NUT, 3/4" UNC
13	1102596	22	LOCKWASHER, 3/4" DIA.
14	1102150	4	HEX HEAD BOLT, 3/4" UNC x 1 1/2" LG.
15	1102186	12	HEX HEAD BOLT, 3/4" UNC x 9" LG. -GRADE 8

1700 FRONT FRAME



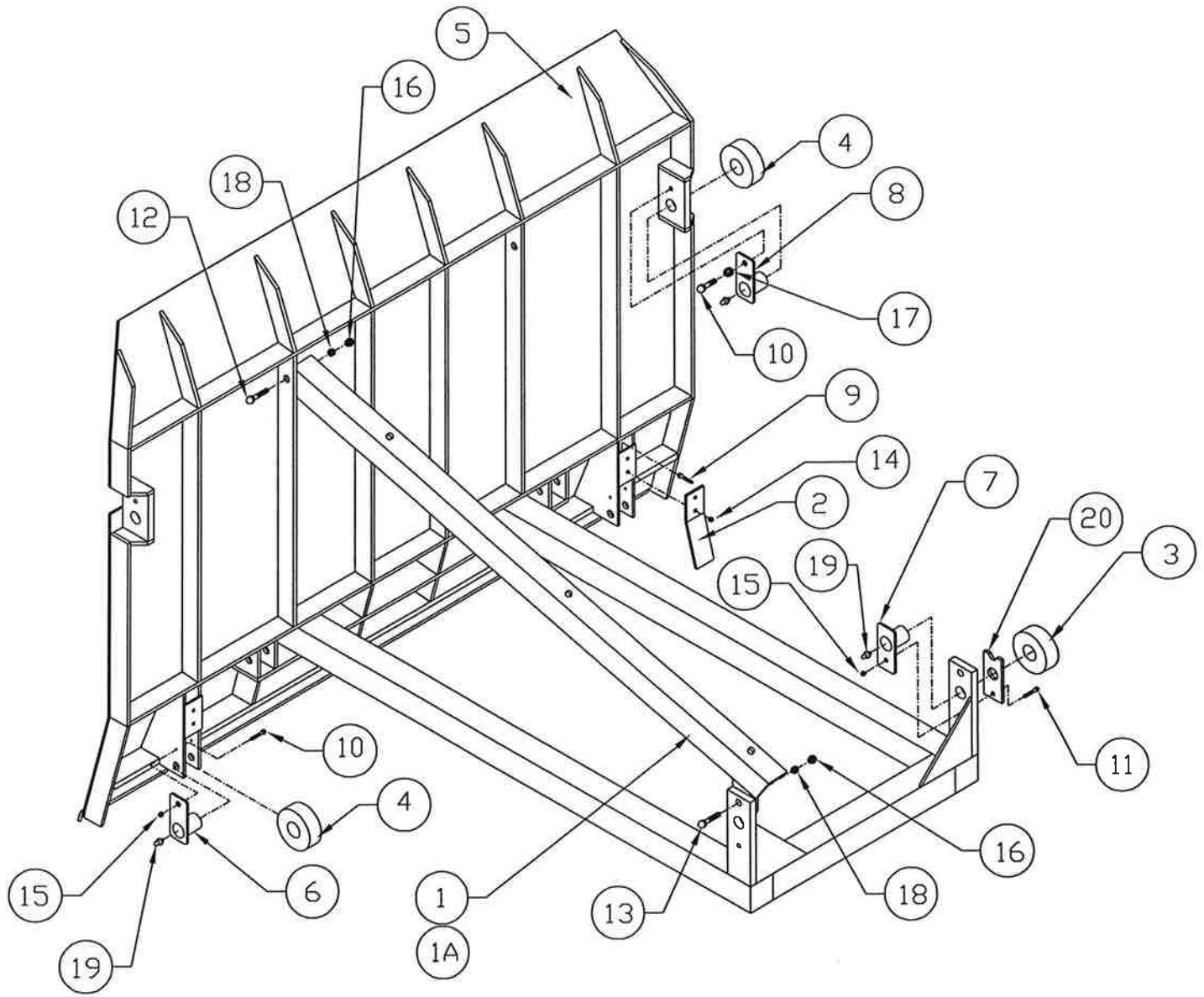
REF. NO.	PART #	QTY.	DESCRIPTION
1	1850850	1	FRONT FRAME (PRIOR TO JAN-2011)
1A	1851850	1	FRONT FRAME (JAN-2011)
2	1850659	2	MAIN PIVOT PIN
3	1102053	2	HEX HEAD BOLT, 1/2" UNC X 2" LG.
4	1102592	2	LOCKWASHER, 1/2" DIA.
5	1102535	2	HEX HEAD NUT, 1/2" UNC
6	1122797	3	GREASE NIPPLE, 1/8" NPT
7	1850174	2	TRANSPORT SAFETY PIN, ϕ 1 1/2" x 5 3/4" LG.
8	1102775	2	HAIR PIN, ϕ 1/4"
9	1144242	2	COUPLING SOCKET
10	1102204	4	HEX HEAD BOLT, 7/8" UNC X 7" LG.
11	1102598	4	LOCKWASHER, 7/8" DIA.
12	1102550	4	HEX HEAD NUT, 7/8" UNC

1700 FRONT GATE



REF. NO.	PART #	QTY.	DESCRIPTION
1	1850600	1	FRONT GATE
2	1850685	2	FRONT GATE PIVOT PIN
3	1102051	2	HEX HEAD BOLT, 1/2" UNC X 1 1/2" LG.
4	1102535	2	HEX NUT, 1/2" UNC
5	1102592	2	LOCKWASHER, 1/2" DIA.
6	1122797	2	GREASE NIPPLE, 1/8" NPT
7	1115548	4	BUSHING, 1 7/8" O.D. x 1 1/2" I.D. x 1" LG.

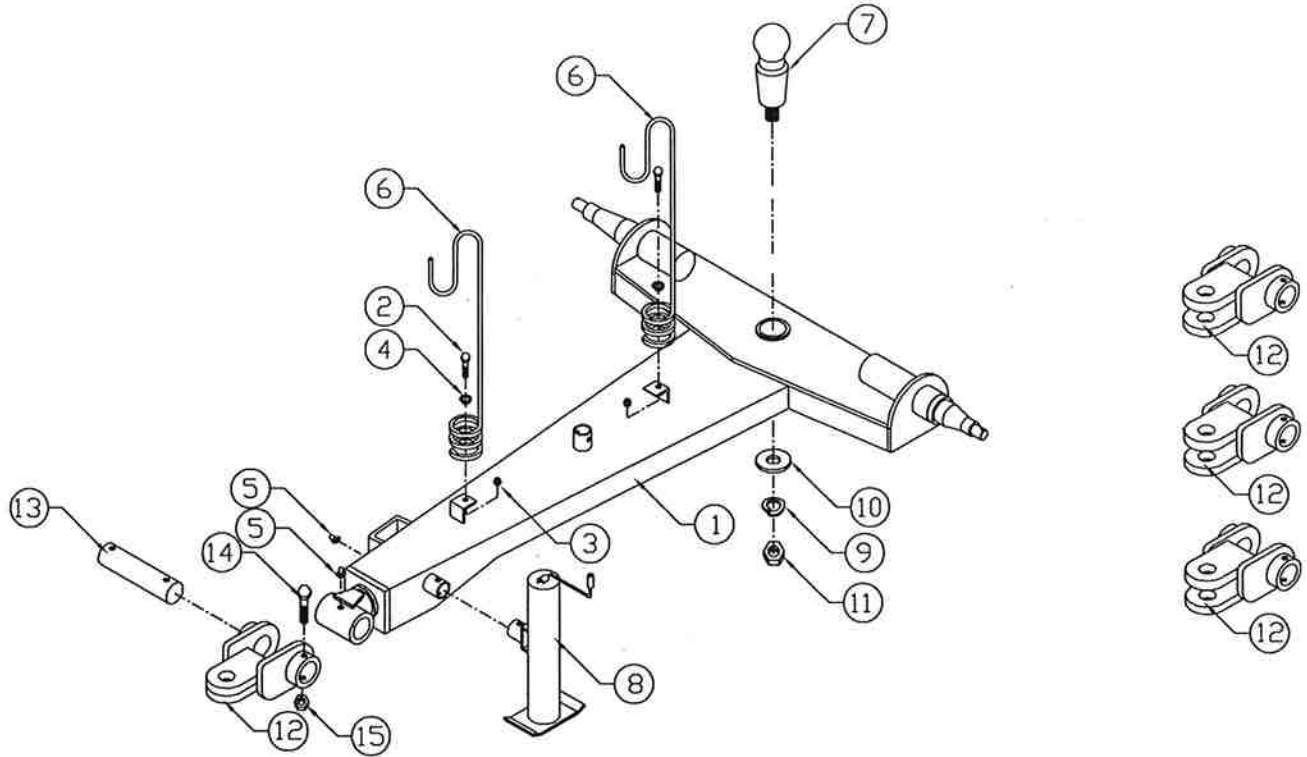
1700 REAR GATE



1700 REAR GATE

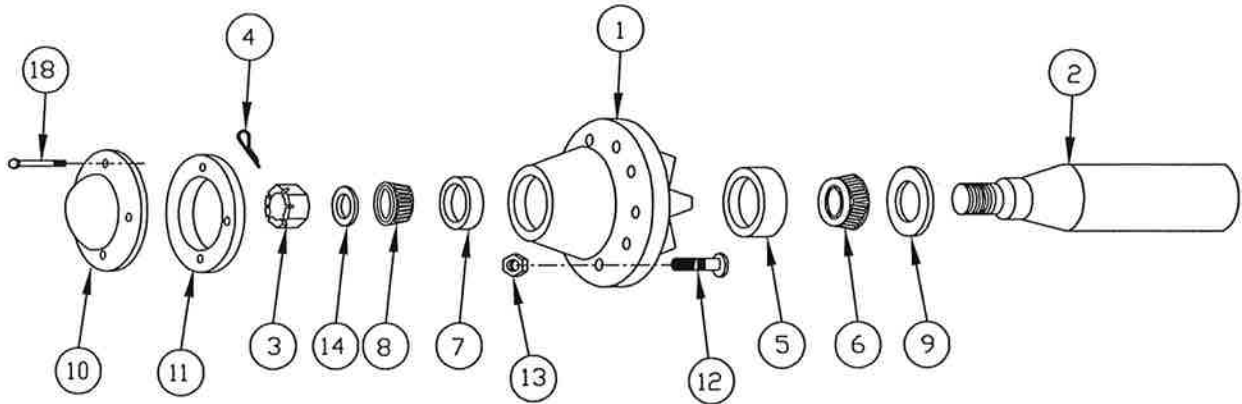
REF. NO.	PART #	QTY.	DESCRIPTION
1	1850795	1	REAR GATE BRACE-LEFT
1A	1850796	1	REAR GATE BRACE-RIGHT
2	1850623	2	REAR GATE ROLLER SCRAPER
3	1850690	2	GATE ROLLER, 4" DIA., CHAMFERED
4	1175572	4	GATE ROLLER, 4" DIA.
5	1850560	1	REAR PUSH GATE
6	1105667	2	ROLLER PIN, 1 1/2" DIA X 3 1/4" LG.
7	1850687	2	ROLLER PIN, 1 1/2" DIA X 3 3/8" LG.
8	1850171	2	ROLLER PIN, 1 1/2" DIA. x 3 1/8" LG.
9	1102001	4	HEX HD. BOLT 3/8" UNC x 1" LG.
10	1102050	4	HEX HD BOLT 1/2" UNC x 1 1/4" LG
11	1102055	2	HEX HD BOLT 1/2" UNC x 2 1/2" LG.
12	1102102	2	HEX HD BOLT 5/8" UNC x 2" LG.
13	1102103	2	HEX HD BOLT 5/8" UNC x 2 1/2" LG.
14	1102526	4	HEX LOCKNUT, 3/8" UNC
15	1102537	4	HEX LOCKNUT, 1/2" DIA.
16	1102540	4	HEX NUT, 5/8" UNC
17	1102592	2	LOCKWASHER, 1/2" DIA.
18	1102594	4	LOCKWASHER, 5/8" DIA.
19	1122797	6	GREASE NIPPLE, 1/8" NPT
20	1850669	2	SPACER BLOCK

1700 HITCH POLE



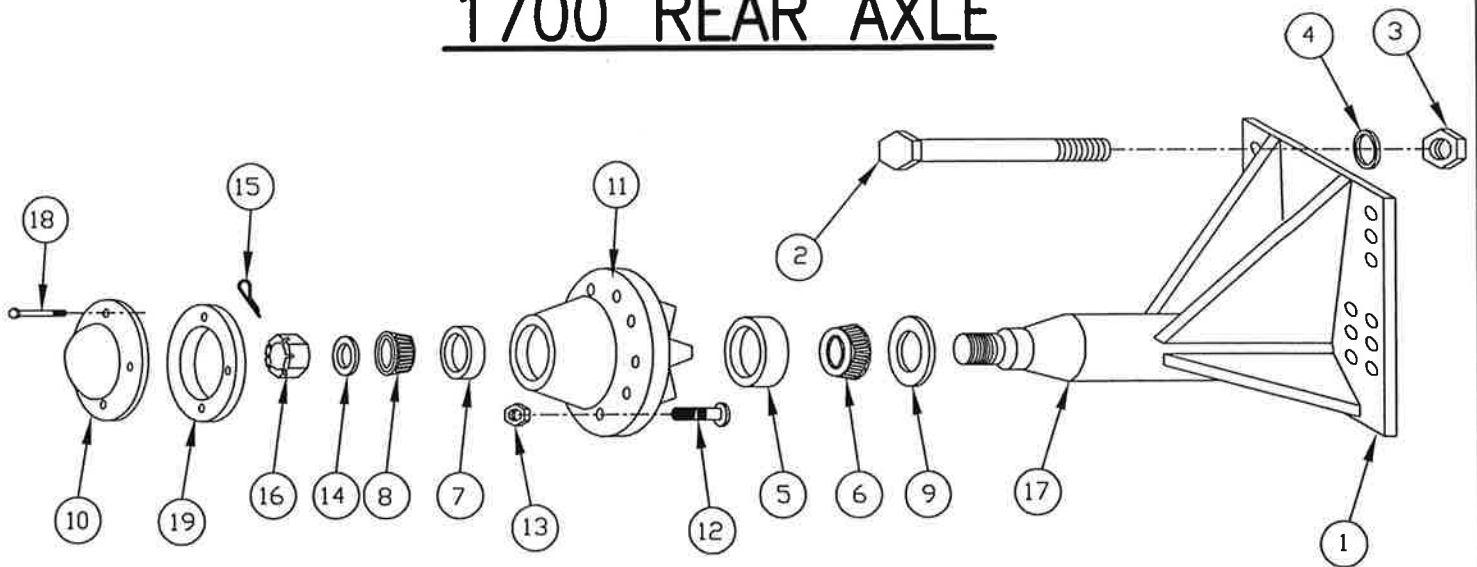
REF. NO.	PART #	QTY.	DESCRIPTION
1	1850501	1	HITCH POLE
2	1102051	2	HEX HEAD BOLT -1/2" UNC x 1 1/2" LG.
3	1102535	2	HEX NUT -1/2" UNC
4	1102592	2	LOCKWASHER -1/2"
5	1122798	2	GREASE NIPPLE, STRAIGHT LONG BASE, 1/8" NPT
6	1105556	2	HOSE HOLDER - SPRING TYPE
7	1850655	1	COUPLING BALL
8	1760396	1	HITCHJACK
9	1102606	1	LOCKWASHER -1 1/2"
10	1850668	1	FLATWASHER -3 7/8" O.D. X 1 9/16" I.D.
11	1105246	1	HEX NUT -1 1/2" UNF
12	1850706	1	HITCH TONQUE
12	1850820	1	HITCH CLEVIS - 2" PIN - 2" SPACE
12	1850825	1	HITCH CLEVIS - 2" PIN - 2 1/2" SPACE
12	1850830	1	HITCH CLEVIS - 2" PIN - 3" SPACE
13	1850704	1	TONQUE PIN
14	1102156	2	HEX HEAD BOLT -3/4" UNC x 4 1/2" LG.
15	1102551	2	HEX LOCK NUT -3/4" UNC

1700 FRONT AXLE



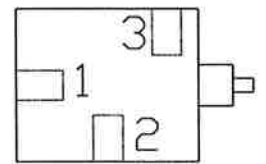
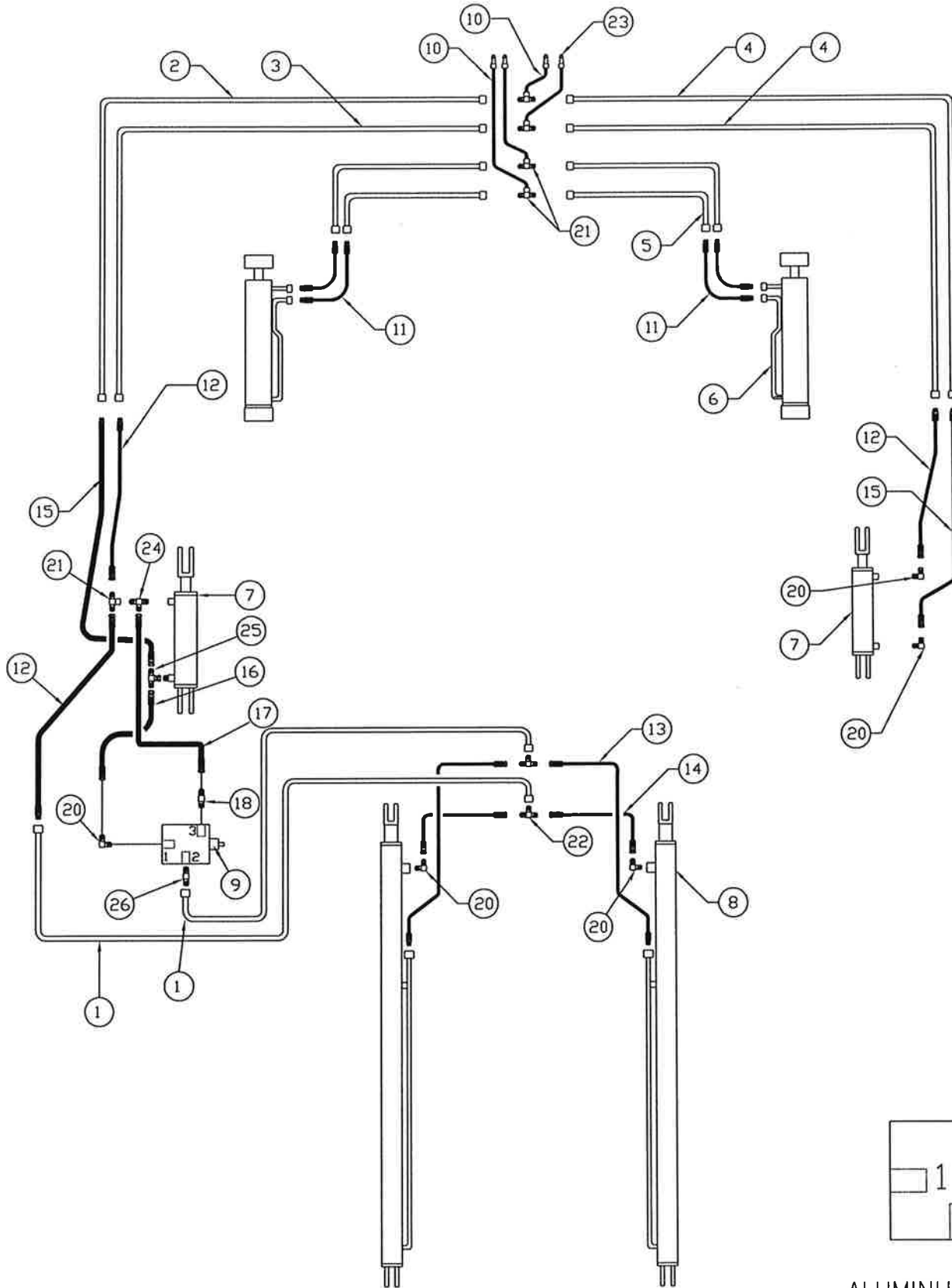
REF. NO.	PART #	QTY.	DESCRIPTION
1	1135551	1	HUB - 8-BOLT
2	1784199	1	SPINDLE - 3 1/2" DIA. X 17 3/8" LG
3	1135398	1	CASTELLATED HEX NUT, 1 1/4" - 12UNF
4	1102762	1	COTTER PIN
5	1135312	1	INNER CUP
6	1135311	1	INNER CONE
7	1135314	1	OUTER CUP
8	1135313	1	OUTER CONE
9	1135306	1	GREASE SEAL
10	1135329	1	DUST CAP
11	1135326	1	DUST CAP SEAL
12	1102664	8	WHEEL BOLT STUDS
13	1135505	8	WHEEL NUTS, 5/8" UNF HEX TAPERED
14	1135397	1	WASHER, 1 1/4" DIA.
15	1101949	4	HEX HEAD BOLT, 5/16" UNC x 3/4"
	1135040	1	TIRE, 21.5 x 16.1 -10 PLY AWT - RIB IMPLEMENT
	1135024	1	RIM, W18C X 16.1 -8 BOLT
	1135150	1	VALVE STEM
OPTIONAL	1135047	1	TIRE, 21.5 x 16.1 -12 PLY AWT -DIAMOND IMPLEMENT

1700 REAR AXLE



REF. NO.	PART #	QTY.	DESCRIPTION
1	1850731	1	REAR AXLE
2	1102186	6	HEX HEAD BOLT, 3/4" UNC x 9" LONG, GRADE 8
3	1102545	6	HEX HEAD NUT, 3/4" UNC
4	1102596	6	LOCKWASHER, 3/4" DIA.
5	1135316	1	INNER CUP
6	1135317	1	INNER CONE
7	1135318	1	OUTER CUP
8	1135319	1	OUTER CONE
9	1135320	1	GREASE SEAL
10	1135321	1	DUST CAP
11	1135322	1	HUB - 10-BOLT
12	1135323	10	WHEEL BOLT STUDS
13	1135324	10	WHEEL NUTS, 3/4" UNF HEX FLANGED, GRADE 8
14	1135397	1	WASHER, 1 1/4" DIA.
15	1102762	1	COTTER PIN
16	1135398	1	CASTELLATED HEX NUT, 1 1/4" - 12UNF
17	1784199	1	SPINDLES, 3 1/2" DIA. x 17 3/8" LG.
18	1135325	4	HEX HEAD BOLT, 5/16" UNC x 1/2" LG. (DUST CAP)
19	1135326	1	DUST CAP SEAL
	1135315	1	HUB ASSEMBLY (ITEMS 5, 6, 7, 8, 9, 10, 11, 12, 13, 18, 19)
	1135048	1	TIRE, 18.4 x 26, 10 PLY (NOT SHOWN)
	1135018	1	RIM, W16 x 26, 10 BOLT (NOT SHOWN)
	1135155	1	VALVE STEMS (NOT SHOWN)

1700 HYDRAULIC ASSEMBLY



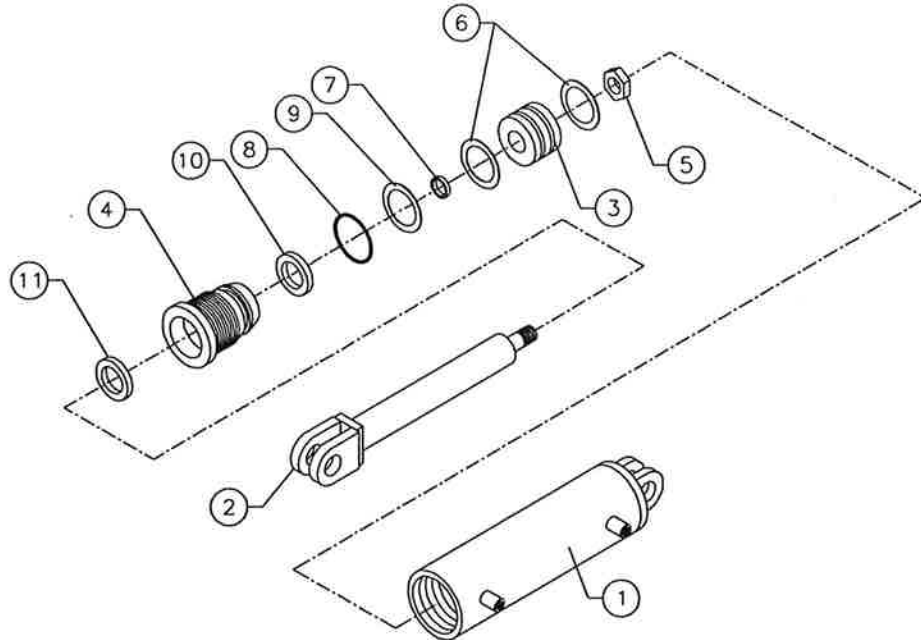
ALUMINUM HOUSING
SEQUENCE VALVE

1700 HYDRAULIC ASSEMBLY

REF. NO.	PART #	QTY.	DESCRIPTION
1	1125700	2	HYDRAULIC TUBE, 1/2" DIA. X 101 15/16", 3/4"-16 JICF(2)
2	1125701	1	HYDRAULIC TUBE, 1/2" DIA. X 136 1/4", 3/4"-16 JICF(2)
3	1125702	1	HYDRAULIC TUBE, 1/2" DIA. X 132 1/4", 3/4"-16 JICF(2)
4	1125703	2	HYDRAULIC TUBE, 1/2" DIA. X 136 1/4", 3/4"-16 JICF(2)
5	1125704	4	HYDRAULIC TUBE, 1/2" DIA. X 43", 3/4"-16 JICF(2)
6	1850450	2	LIFT CYLINDER
7	1850440	2	FRONT GATE CYLINDER
8	1850460	2	REAR PUSH CYLINDER
9	1127071	1	SEQUENCE VALVE (PARKER-ECJ) - ALUMINUM HOUSING
10	1123426	4	HYDRAULIC HOSE, 1/2" x 168"LG., 1/2" NPTM X 3/4"-16 JICM
11	1127537	4	HYDRAULIC HOSE, 1/2" x 24"LG., 3/4"-16 JICM X #8 ORBM
12	1123428	3	HYDRAULIC HOSE, 1/2" x 30"LG., 3/4"-16 JICM X 3/4"-16 JICF
13	1123434	2	HYDRAULIC HOSE, 1/2" x 48"LG., 3/4"-16 JICF X #8 ORBM
14	1123435	2	HYDRAULIC HOSE, 1/2" x 40"LG., 3/4"-16 JICF(2)
15	1123430	2	HYDRAULIC HOSE, 1/2" x 44"LG., 3/4"-16 JICM x 3/4"-16 JICF
16	1124530	1	HYDRAULIC HOSE, 1/2" x 16 1/2" LG., 3/4" JICFSW(2)
17	1124520	1	HYDRAULIC HOSE, 3/8" x 27" LG., 3/4" JICFSW(2)
18	1124363	1	CONNECTOR, 9/16" ORBM X 3/4" JICM
19			
20	1123210	5	ELBOW 90° - #8 ORBMSW X #8 JICM
21	1124401	5	TEE, 3/4"-16 JICM(2) x 3/4"-16 JICF
22	1122828	2	TEE, 3/4"-16 JICM(3)
23	1127011	4	MALE COUPLER TIPS, 1/2" NPTM
24	1123372	1	TEE, 3/4"-16 ORBM x 3/4"-16 JICM(2)
25	1124739	1	TEE, 3/4"-16 JICM(2) x 3/4"-16 ORBM
26	1123212	1	CONNECTOR, 3/4" ORBM X 3/4" JICM

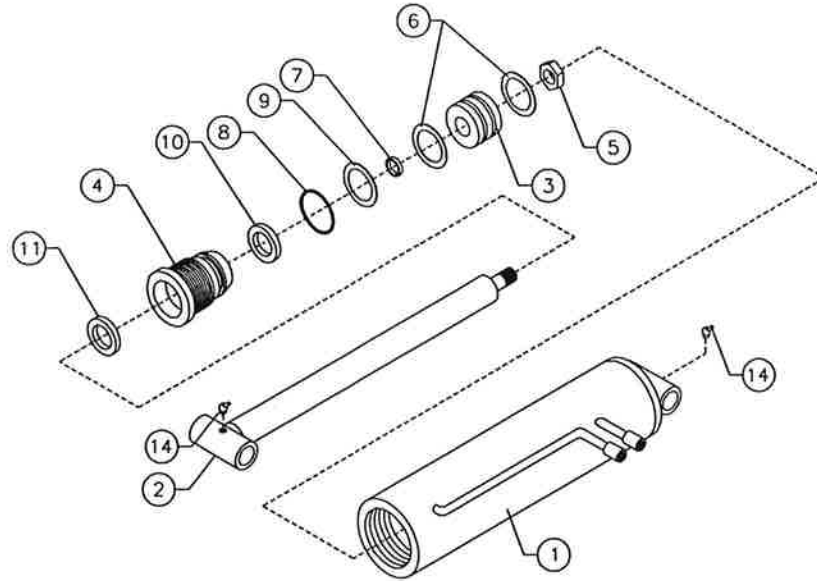
ALUMINUM HOUSING
SEQUENCE VALVE

1700 FRONT GATE CYLINDER



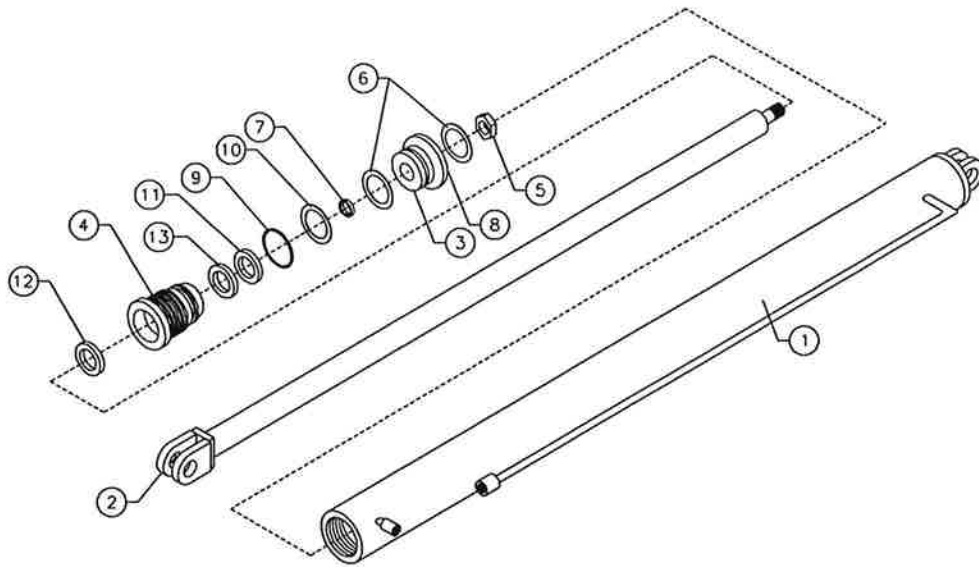
REF. NO.	PART #	QTY.	DESCRIPTION
	1850440	1	CYLINDER ASSEMBLY CW-3.00-12.00-1.50
1	1850441	1	CYLINDER BARREL
2	1850442	1	CYLINDER SHAFT
3	1125653	1	PISTON
4	1125654	1	GLAND
5	1125655	1	ROD NUT, 1" - 14 UNF, GRADE 8 LOCKNUT
6	1125656	2	PISTON SEAL (D)
7	1125657	1	PISTON SEAL (S)
8	1125658	1	GLAND STATIC SEAL
9	1125659	1	GLAND STATIC SEAL BACKUP
10	1125660	1	ROD SEAL
11	1125661	1	ROD WIPER
	1125662	1 SET	SEAL KIT (CONSISTS OF ITEMS: 6, 7, 8, 9, 10, 11)
	1850662	2	PIN, 1 1/2" DIA. x 2 1/2" LG.
	1850663	2	PIN, 1 1/2" DIA. x 2 1/2" LG., GREASE NIPPLE
	1122797	2	GREASE NIPPLE, 1/8" NPT

1700 LIFT CYLINDER



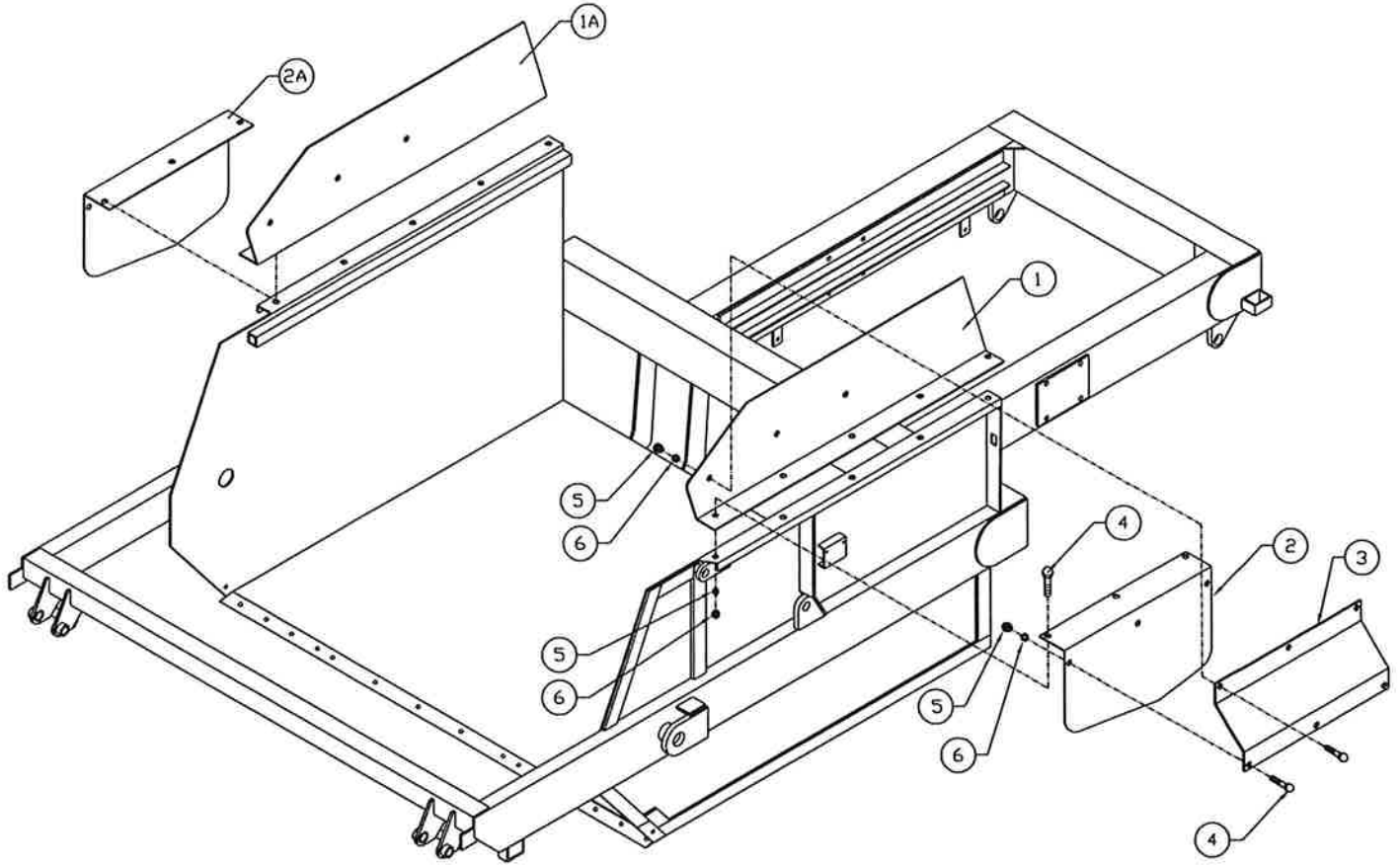
REF. NO.	PART #	QTY.	DESCRIPTION
	1850450	1	CYLINDER ASSEMBLY CW-4.00-20.75-2.00
1	1850451	1	CYLINDER BARREL
2	1850452	1	CYLINDER SHAFT
3	1125668	1	PISTON
4	1125669	1	GLAND
5	1125670	1	ROD NUT, 1" -14 UNF GRADE 8, LOCKNUT
6	1125672	2	PISTON SEAL (D)
7	1125657	1	PISTON SEAL (S)
8	1125673	1	GLAND STATIC SEAL
9	1125674	1	GLAND STATIC SEAL BACKUP
10	1125660	1	ROD SEAL
11	1125661	1	ROD WIPER
14	1122787	2	GREASE ZERKS, 1/4" - 28 UNF, STRAIGHT
	1125671	1 SET	SEAL KIT (CONSISTS OF ITEMS: 6, 7, 8, 9, 10, 11)
	1850661	2	PIN, 1 1/2" DIA. X 8 1/4" LG.

1700 REAR PUSH CYLINDER



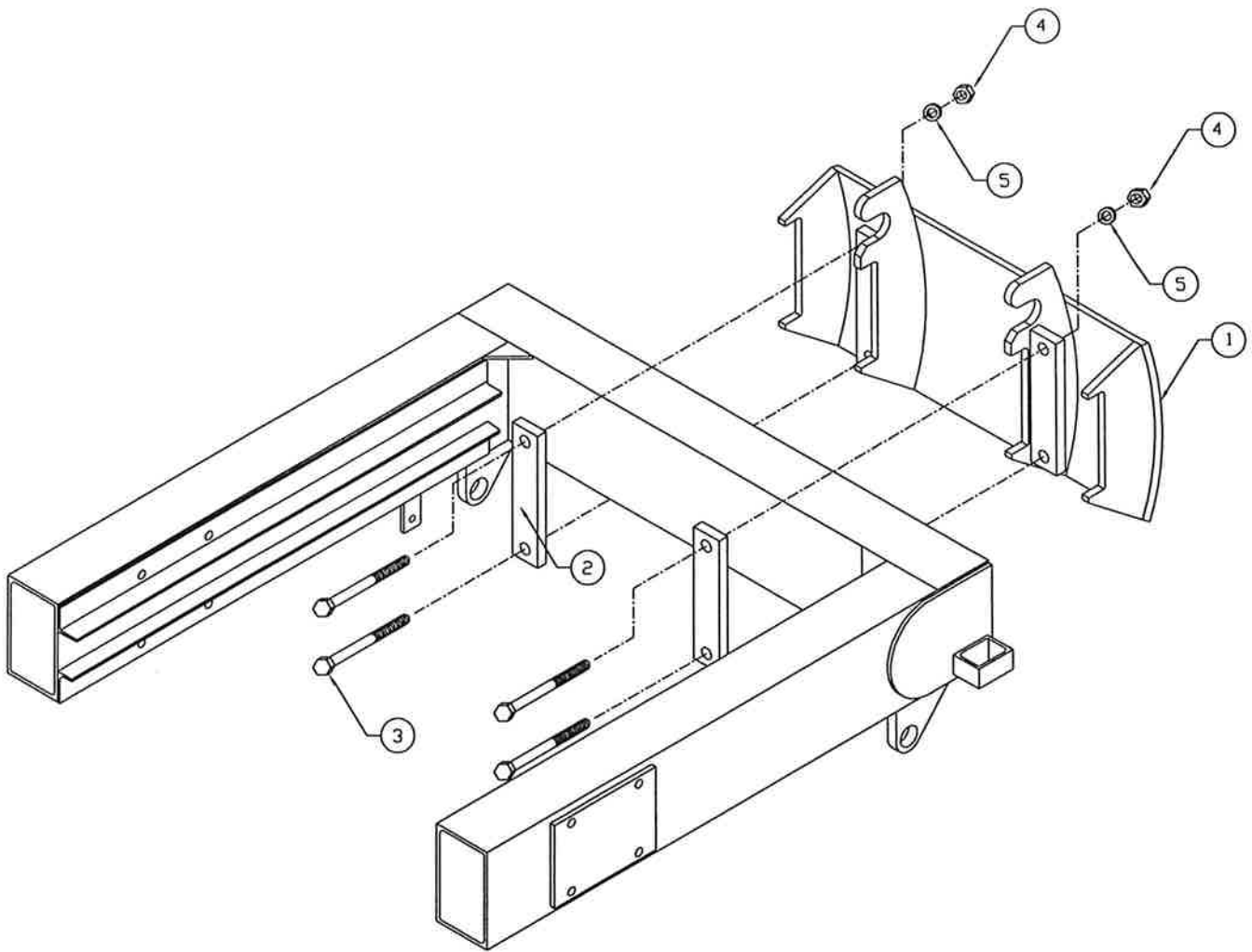
REF. NO.	PART #	QTY.	DESCRIPTION
	1850460	1	CYLINDER ASSEMBLY CW-3.00-67.00-2.25
1	1850461	1	CYLINDER BARREL
2	1850462	1	CYLINDER SHAFT
3	1125683	1	PISTON
4	1125684	1	GLAND
5	1125685	1	ROD NUT, 1 1/4" - 12 UNF, GRADE 8 LOCKNUT
6	1125656	2	PISTON SEAL (D)
7	1125687	1	PISTON SEAL (S)
8	1125688	1	WEAR RING
9	1125689	1	GLAND STATIC SEAL
10	1125690	1	GLAND STATIC SEAL BACKUP
11	1125691	1	ROD SEAL
12	1125692	1	ROD WIPER
13	1125693	1	WEAR RING
	1125686	1 SET	SEAL KIT (CONSISTS OF ITEMS: 6, 7, 8, 9, 10, 11,12, 13)
	1850667	1	GROOVE PIN, 1" DIA. x 2 1/2" U.L.
	1225628	1	GROOVE PIN, 1" DIA. x 3 5/8" U.L.
	1500115	4	PIN RETAINER

1700 OPTIONAL SIDE EXTENSION KIT



REF. NO.	PART #	QTY.	DESCRIPTION
1	1850644	1	SIDE EXTENSION-LEFT
1A	1850752	1	SIDE EXTENSION-RIGHT
2	1850645	1	SIDE COVER-LEFT
2A	1850748	1	SIDE COVER-RIGHT
3	1850650	2	BRACE
4	1102100	22	HEX HEAD BOLT, 5/8" UNC x 1 1/2" LG.
5	1102540	22	HEX NUT, 5/8" UNC
6	1102594	22	LOCKWASHER, 5/8" DIA

1700 OPTIONAL PUSH BUMPER KIT



REF. NO.	PART #	QTY.	DESCRIPTION
1	1850672	1	PUSH BUMPER
2	1850676	2	STRAPS
3	1102046	4	HEX HEAD BOLT, 1" UNC x 10" LG.
4	1102555	4	HEX NUT, 1" UNC
5	1102600	4	LOCKWASHER, 1" DIA.

OPTIONAL THIRD LINE

KIT # - 1850700

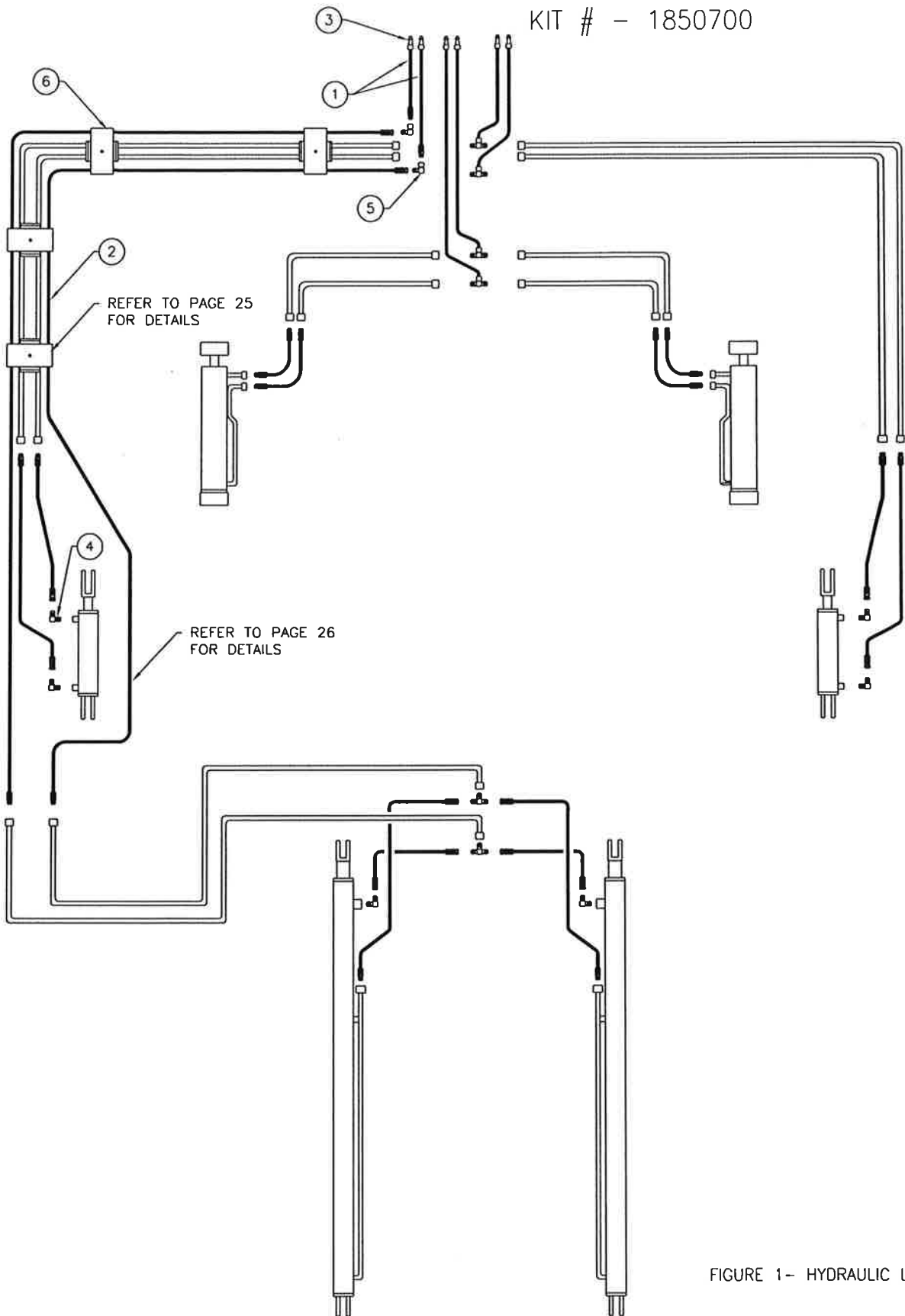


FIGURE 1- HYDRAULIC LAYOUT

OPTIONAL THIRD LINE

KIT # - 1850700

REF. NO.	PART #	QTY.	DESCRIPTION
1	1123426	2	HYDRAULIC HOSE, 1/2" x 168"LG., 1/2" NPTM x 3/4" JICM
2	1125713	2	HYDRAULIC HOSE, 1/2" x 192"LG., 3/4" JICF x 7/8" JICM
3	1127011	2	MALE COUPLER TIPS, 1/2" NPTM
4	1123442	2	ELBOW, 90°, 3/4" ORBM x 3/4" JICM
5	1122791	2	ELBOW, 90°, 3/4" JICM x 3/4" JICF
6	1850691	1	SPACER PIPE, 3/8" STD BLACK PIPE, 1 1/2" LG.
7	1102027	1	HEX HEAD BOLT, 5/16" UNC X 3 1/2" LG.
8	1102608	1	FLATWASHER, 5/16" DIA
9	1102521	1	LOCKNUT, 5/16" UNC
10			

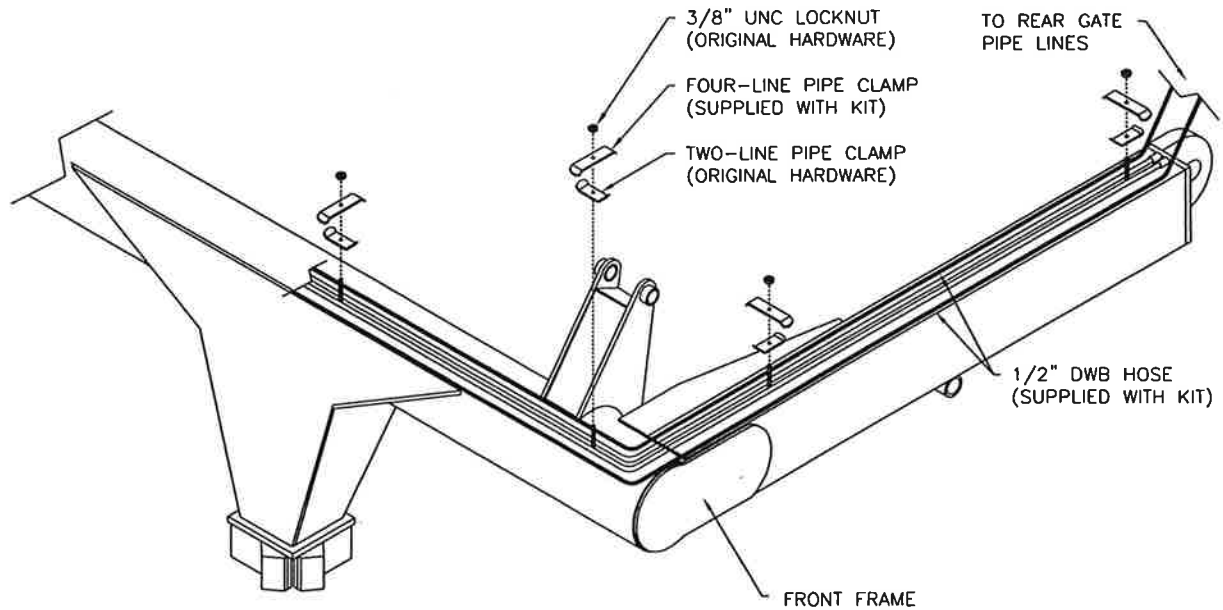


FIGURE 2- ATTACHMENT OF HOSES TO FRONT FRAME

OPTIONAL THIRD LINE

KIT # - 1850700

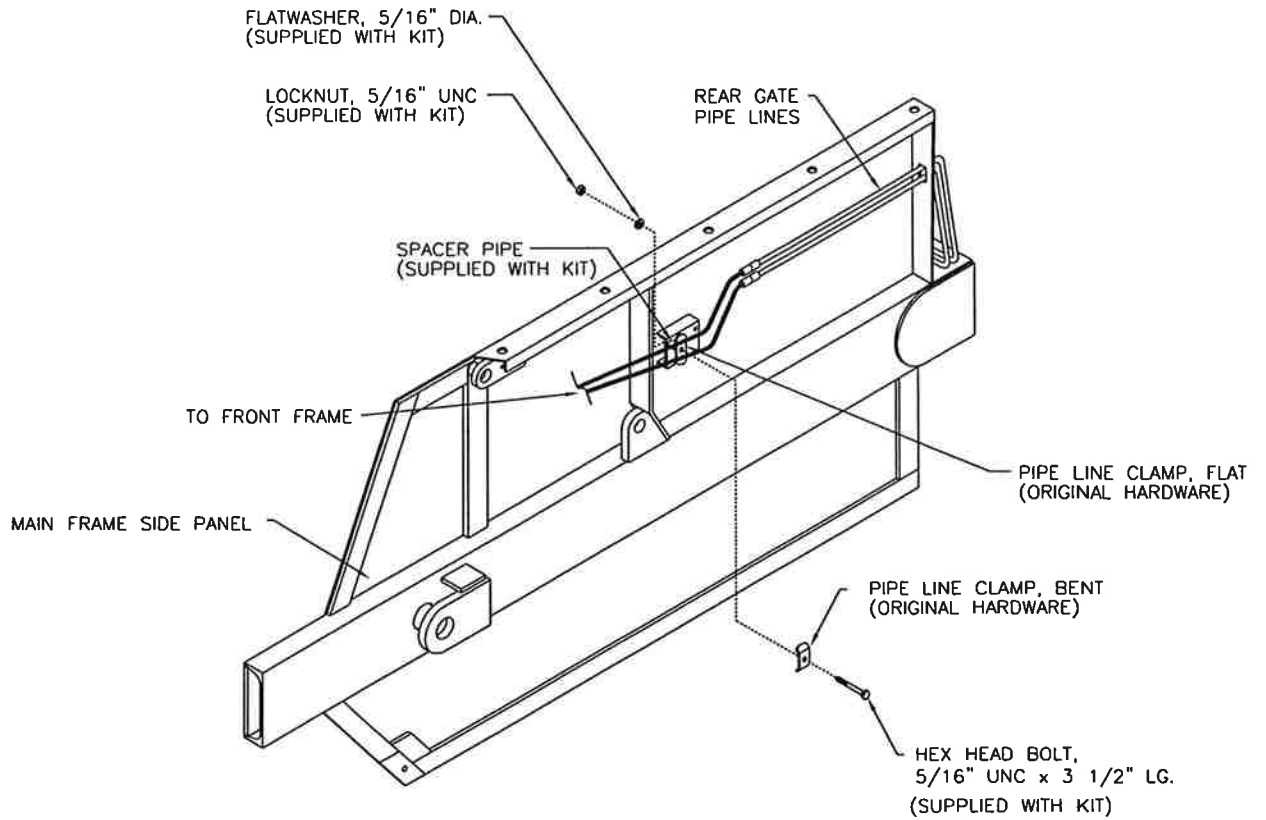
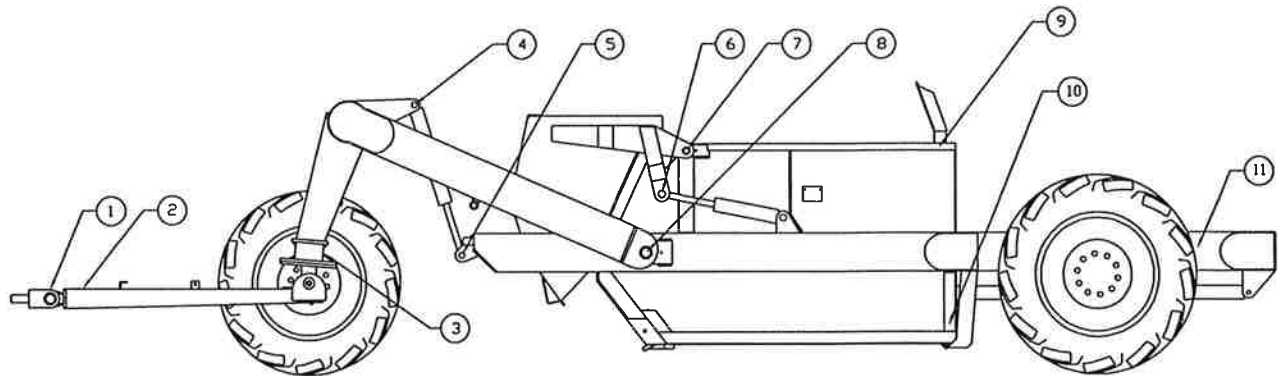


FIGURE 3- ATTACHMENT OF HOSES TO MAIN FRAME

DAILY GREASE LOCATIONS



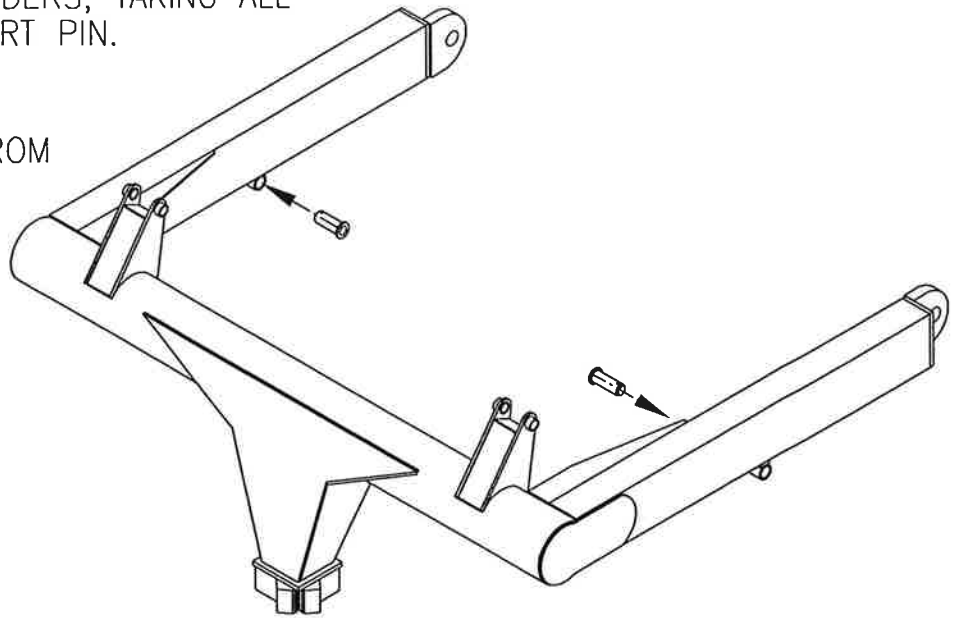
NOTES: 1. EVERY EIGHT HOURS ALL GREASE FITTINGS SHOULD BE LUBRICATED.

REF. NO.	QTY.	DESCRIPTION
1	1	FRONT HITCH PIVOT
2	1	FRONT HITCH SWIVEL
3	1	BALL PIVOT
4	2	LIFT CYLINDER BARREL CROSS TUBE
5	2	LIFT CYLINDER SHAFT CROSS TUBE
6	2	FRONT GATE ARM
7	2	FRONT GATE PIVOT
8	2	FRONT FRAME PIVOT
9	2	REAR GATE TOP ROLLER
10	2	REAR GATE BOTTOM ROLLER
11	2	REAR GATE BACK ROLLER

1700 TRANSPORT PIN

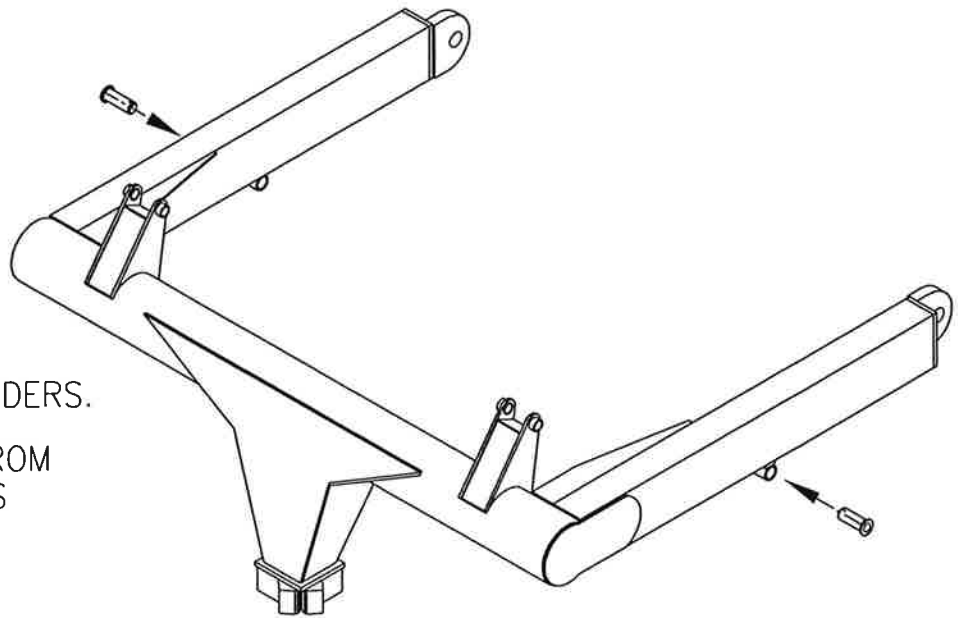
PIN POSITION FOR WORK MODE

1. FULLY RETRACT LIFT CYLINDERS, TAKING ALL PRESSURE OFF THE TRANSPORT PIN.
2. REMOVE TRANSPORT PIN.
3. INSERT TRANSPORT PIN FROM INSIDE OF FRONT FRAME AS SHOWN TO THE RIGHT.
4. BEGIN WORK MODE.

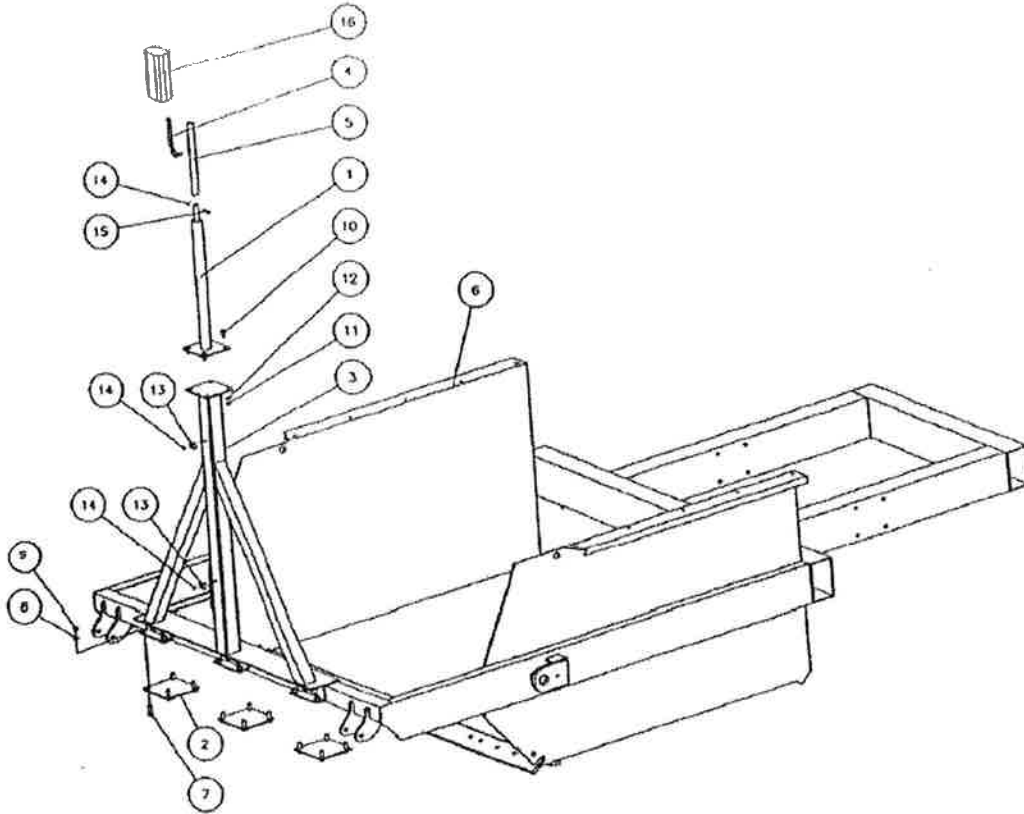


PIN POSITION FOR TRANSPORT MODE

1. REMOVE TRANSPORT PIN.
2. FULLY RETRACT LIFT CYLINDERS.
3. INSERT TRANSPORT PIN FROM OUTSIDE OF FRONT FRAME AS SHOWN TO THE RIGHT.
4. BEGIN TRANSPORT MODE.



LASER MAST MOUNT KIT



REF. NO.	PART #	QTY.	DESCRIPTION
1	1125695	1	HYD. CYLINDER R2-20L-24
2	1850757	3	FOUR HOLE PLATE
3	1850753	1	LASER MAST WELD 3D
4	1850766	1	SENSOR GUIDE
5	1850764	1	TOP PIPE
6	1850525	1	MAIN FRAME
7	1102151	12	HEX. HEAD BOLT, 3/4" UNC X 2" LG
8	1102596	12	LOCKWASHER, 3/4" DIA.
9	1102545	12	HEX. NUT 3/4" UNC
10	1102051	4	HEX. HEAD BOLT, 1/2" UNC X 1 1/2" LG.
11	1102535	4	HEX. NUT, 1/2" UNC
12	1102592	4	LOCKWASHER, 1/2" DIA.
13	1707130	2	TWO LINE CLAMP
14	1102536	3	HEX. LOCKNUT, 3/8" UNC
15	1102003	1	HEX. HEAD BOLT, 3/8" UNC X 2" LG.
16	NOT SUPPLIED	1	SENSOR
17	1123152	2	HYD.HOSE 3/8" DWB, 264" LG, 9/16" ORBM X 1/2" NPTM
18	1127011	2	MALE COUPLER TIPS, 1/2" NPTM

