

# Operator's Manual

## AUTO ALIGN BALE SKOOP

### Models

4-5SR

6SR

10SR

PATENTED MACHINE  
THROUGH  
**PRO AG DESIGN**  
INC.

***PLEASE READ CAREFULLY BEFORE  
OPERATING MACHINE!***

# IMPORTANT!!!: READ THIS MANUAL BEFORE OPERATING THE BALE SKOOP

This operator's manual is for the Auto Align Bale Skoop 4-5SR, 6SR and 10SR, featuring the auto alignment system. The Bale Skoop will be referred to as a stacker and retriever.

This product is manufactured by:

Pro Ag Designs  
5350 Love Lane  
Bozeman, MT 59715  
(406) 587-9394

## TO THE OWNER

The way you operate and maintain your Bale Skoop will have much to do with its successful performance. Be sure to read the Adjusting and Operating Instructions in this manual.

Whenever the terms "left" and "right" are used, it should be understood to mean from a position behind and facing the Bale Skoop.

Your new Bale Skoop is designed to meet today's exacting operating requirements. The ease of operation lightens your work load and shortens your hours on the job.

## INTRODUCTION

Read this manual carefully to acquaint yourself with the operating procedures and lubrication requirements needed to assure top performance.

The Bale Skoop 4-5SR is a machine designed to stack four 4X4 big square bales on or off strings, or five 3x4 bales on strings. The 6SR model is designed to pick up six 32"X32" bales on or off strings. The 10SR model is designed to pick up ten 2X3 bales off strings in pairs of two.

This machine will also retrieve bales and move them to a different location if desired.

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!! WORK SAFELY-FOLLOW THESE RULES

!! --This symbol is used to call your attention to instructions concerning your personal safety. Be sure to follow these instructions.

1. Improper use of the Bale Skoop can cause serious injury or death.
2. Follow all safety instructions provided in the operators manual of your tractor for the safe use and operation of your tractor.
3. Always install the safety pin and quick clip to secure the hitch when towing the Bale Skoop behind a tractor down a road or highway.
4. Do not walk or work under raised bed or loader unless it is securely blocked in position.
5. Before starting the tractor engine, be sure that everyone is clear of the Bale Skoop and tractor. Do not allow riders on the machine.
6. Hydraulic fluid escaping under pressure can penetrate human skin. The fluid can also infect a break in human skin. If injured by escaping fluid, see a doctor at once. A serious infection can result from delay. For your safety, observe the following:
  - (a) Before starting the tractor engine, make sure that all connections are tight, and hose lines are in good condition.
  - (b) Before disconnecting hoses, lower loader and bed to a secure resting position, shut off engine, and relieve all pressure.
  - (c) To find a leak under pressure, use a piece of wood or cardboard. Never use bare hands.
7. Never allow a person to stand next to the stacks, as a stack may fall over when being dumped. Make sure everyone is at least 25' (feet) from stacking area.
8. Use a tractor large enough to handle the load. Sixty or more horsepower on flat ground and 80 or more horsepower on hilly ground is recommended.

9. Securely attach a Slow Moving Vehicle sign to the rear of the Bale Skoop when pulling on a public highway.
10. Before servicing the Bale Skoop, lower the bed and loader to their lowest position, turn off the hydraulics and turn off the tractor motor.
11. A safety chain is not provided with the Bale Skoop, if towing down a public highway, obtain one and run through the opening below the hitch brace shown on page 7 and then to the tractor.
12. Operate the Bale Skoop from the operators seat only.
13. Avoid loose fill, rocks and holes: They can be dangerous for the Bale Skoop's operation or movement.
14. Be extra careful when working on inclines and avoid when possible.
15. Avoid overhead wires or obstacles when loader or bed is raised.
16. Allow for the Bale Skoop's length when making turns.
17. Visually check for hydraulic leaks and broken, missing, or malfunctioning parts and make necessary repairs.
18. Before disconnecting hydraulic lines, relieve all hydraulic pressure.
19. Observe Caution and Danger decals on Bale Skoop (see page 9 for locations).
20. Be certain anyone operating the Bale Skoop is aware of safe operating practices and potential hazards.
21. Top of Bed and Loader are very slippery. Do not walk, stand or crawl on them.
22. Please contact Pro Ag Designs for any safety concerns you may have with this product.
23. Always return the Bale Skoop to the in-line position when traveling on the road or when traveling between the bales and the stack.
24. Install safety warning light to indicate if the Bale Skoop is in offset position.

### HOOKING UP BALE SKOOP TO TRACTOR

Male quick couplers need to be secured to the ends of the hoses to match the tractors female quick couplers. Ask the tractor dealer for the proper ends.

The hoses are marked with a "BB & BL", "MA & MB", or "HB & HR" etched into the steel of the hose ends. Connect the "BB & BL" ends into one set of hydraulics, the "MA & MB" ends into one set and the "HB & HR" ends into one set.

The first time the hydraulics are operated the Bale Skoop will require seven gallons of hydraulic oil to fill all the hoses and the cylinders. Be sure to replenish the oil checking fluid level as outlined in the tractor operator's manual and filling to the proper level. Fully extend and retract the hydraulic cylinders by raising and lowering the bed and the loader (hold the loader cylinder lever in position until the alignment arms also swing in or out). Also move the hitch from side to side to fill that cylinder. Do each motion two or three times to make sure the system is full of oil. Recheck the level of oil in the tractor with all the cylinders fully retracted (the bed and loader down, arms out, and the hitch to the in-line position), add oil as necessary.

When the hydraulics are first operated it will probably be necessary to adjust the pressure valves in the hydraulic system. Be sure to read the instructions in the section under hydraulic adjustment.

Install the hitch pin through the tractor hitch and Bale Skoop hitch. The hitch pin must have a securing nut or pin on it to keep it from working out of the hitch hole. The top of the tractor hitch should be approximately 17" off the ground for the best performance of the Bale Skoop.

To help acquire more offset for more clearance between bales and tractor the drawbar on the tractor may be swung to the right side.

## HYDRAULIC VALVE ADJUSTMENTS

The valve bank located on the Bale Scoop just under the bed is used to sequence the loader and alignment arms on the 6SR and 4-5SR. Also this valve bank and the four way valve connected to the loader, control the action of the grab hooks on the 10SR. The valves on the valve bank are correctly adjusted for the 4-5SR and 6SR if when the control lever is engaged the alignment arms close first and then the loader raises. When the control lever is engaged in the opposite direction the alignment arms should open all the way first and then the loader should lower. The correct adjustments for the 10SR are that when the control lever is engaged the alignment arms close, the grab hooks engage and then the loader raises. After the loader is horizontal the grab hooks will disengage all the way and then the loader will go all the way up. When the control lever is engaged in the opposite direction the alignment arms will open all the way and the loader will then lower. ~~The grab hooks will only engage if the loader is lowered to it's lowest position.~~ This and the alignment arms opening whenever the loader is lowered allows the 10SR operator to lift the loader halfway and lower it again opening the alignment arms and leaving the grab hooks engaged so that the second bale can be picked up.

Description of the valves and function:

Valve 1. Manifold valve used to hold the other valves and direct the flow of oil.

Valve 2. Counter Balance valve which will cause the alignment arms to open first before the loader is lowered. Turning the adjustment screw out increases the pressure needed in the hydraulic line before the loader will lower. This is necessary when the loader lowers (not the same as sagging) before the alignment arms are open.

Valve 3. The Sequence Check valve causes the alignment arms to close first and then the loader to raise. Turning the adjustment screw in increases the amount of pressure on the bale by the alignment arms before the loader will raise.

Valve 4. Counter Balance valve which holds the loader up while the alignment arms open. Turning the adjustment screw out will hold the loader up if the loader is sagging while the alignment arms are being opened.

Valve 5. Sequence valve which allows the alignment arms to close first before the grab hooks engage. Turning the adjustment screw in increases the amount of pressure needed in the hydraulic lines to engage the grab hooks. Use this adjustment when the grab hooks engage before the alignment arms have finished squeezing the bale. The pressure setting on this valve needs to be lower than valve 3 so that the grab hooks engage before the loader raises.

Valve 6. Check valve which causes the oil to flow in the right direction.

Trouble Shooting Chart

Problem	Solution
Loader will not raise.	Turn adjustment screw out on valve #3.
Bales aren't held tight by alignment arms.	Turn adjustment screw in on valve #3.
Loader sags while alignment arms open.	Turn adjustment screw out on valve #2.
Loader lowers before alignment arms are open.	Turn adjustment screw out on valve #4.
Loader will not Lower.	Turn adjustment screw in on either or both of valves #2 and #4.
Grab hooks engage before alignment arms close.	Turn adjustment screw in on valve #5.
Grab hooks will not engage.	Check to see if 4-way valve is pushed in by spring when loader is down.
Grab hooks will not disengaged.	Check to see if 4-way valve is pushed out by spring when loader is in the horizontal position.



## STACKING BALES

After the hoses are connected and the hitch pin secured, you are now ready to stack some bales. Pull the Bale Skoop into the field you are going to stack, remove the safety pin and move the hitch until the Bale Skoop is in the offset position. Lower the loader and open the alignment arms (by keeping same hydraulic lever engaged). Drive tractor along side of a bale until the bale is between alignment arms. Bales may be picked up in the same direction the baler has gone if the right alignment arm is used to push the end of the bale to cause it to swing between alignment arms. Once the bale is between the arms, reverse the loader hydraulic lever, allowing the alignment arms to squeeze the bale and the loader to raise the bale. Once the loader is up, reverse the lever until the alignment arms are open. Allow the bale to slide back onto the bed of the Bale Skoop. Lower the loader for the next bale.

After the fourth bale (4X4 bales - the fifth for 3X4 bales, the sixth for 32"X32" bales, or the fifth pair of 2X3 bales) has been raised by the loader, open the alignment arms to allow the bale to slide against the previously loaded bale and then re-close arms. The Bale Skoop can now be pulled to the stacking location. The load can be stacked with the hitch in the in-line or offset position. Be certain that no one is behind the Bale Skoop when you are moving in reverse. The load is set onto the ground by raising the bed to the vertical position, and then opening the alignment arms (allow the loader to slightly lower away from top bales - do not lower loader all of the way!). Pull the stacker forward until teeth are out from under the stack. Lower the bed and you are ready to go pick up another load. Stacks may be set next to each other for better stability.

**!!CAUTION!!** When picking up bales, be sure that the bed is held down tightly by the bed cylinders.

**!!CAUTION!!** When lowering the bed, watch to make sure loader does not crash into the hitch or frame of stacker. Do not lower loader all the way when bed is not securely on the frame in the down position.

Bales may not slide well at first. Allow a couple of loads for slides to get slippery. If bales do not slide, raise main bed to help them slide.

## MAINTENANCE AND LUBRICATION

### Hydraulic System Maintenance

Hydraulic fluid should be maintained at the proper level at all times. The level should be checked with the cylinders fully retracted. Use fluid as recommended in your Tractor Operator's Manual.

Service the hydraulic filters regularly as outlined in the Tractor Operators Manual. More frequent servicing may be required in dusty conditions.

!! Before servicing the Bale Skoop, drop the bed and loader to their lowest position, turn off hydraulics, and turn off the tractor motor.

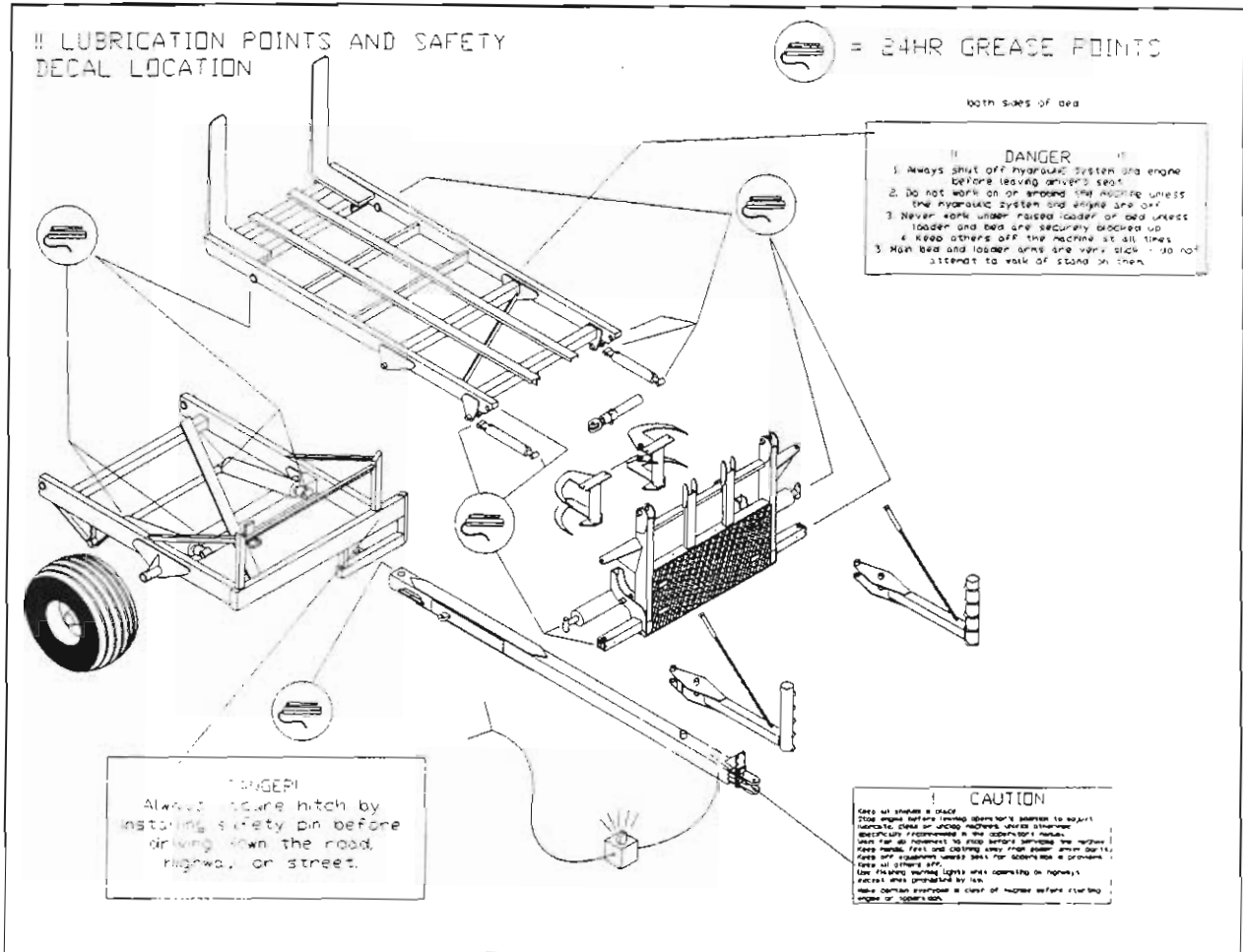
### Daily Maintenance Check

1. Lubricate all pivot points. Find grease zerks pages 10 to 20. Refer to Lubrication Points below.
2. Check to make sure all pins and bolts are secure and in their proper place.
3. Check all pivot pins for loss of retaining pins and cotters. Replace worn pivot pins.
4. Straighten hoses which are kinked or chafing. Correct any hydraulic leaks immediately.
5. Check the hydraulic fluid level.
6. Keep the machine clean from mud and dirt - especially around the pivot points.

!! Repack wheel bearings yearly or more often as required in harsh conditions.

!! Check wheel bearings after 100 hours of use for a snug fit, tighten wheel bearing nut if necessary.

!! Check tightness of lug nuts after 20 hours. Tighten as necessary.



!! Lubrication Points and Safety Decal Location

1. Two grease zerks are located on the bed pivot.
2. Grease zerks are located on the pivots of the bed, loader and alignment cylinders.
3. One grease zerk is on the center hitch pivot.
4. Two grease zerks are located on the bed where the loader pivots.
5. Two grease zerks are located at the points where the alignment arms pivot.

These five locations should be greased daily.

TEXT OF DANGER AND CAUTION DECALS  
Decal location shown on page 6.

DANGER

Always shut off hydraulic system and engine before leaving drivers seat.

Do not work on or around the Bale Skoop unless the hydraulic system and engine are off.

Never work under raised loader or bed unless the loader and bed are securely blocked up.

Keep others off machine at all times.

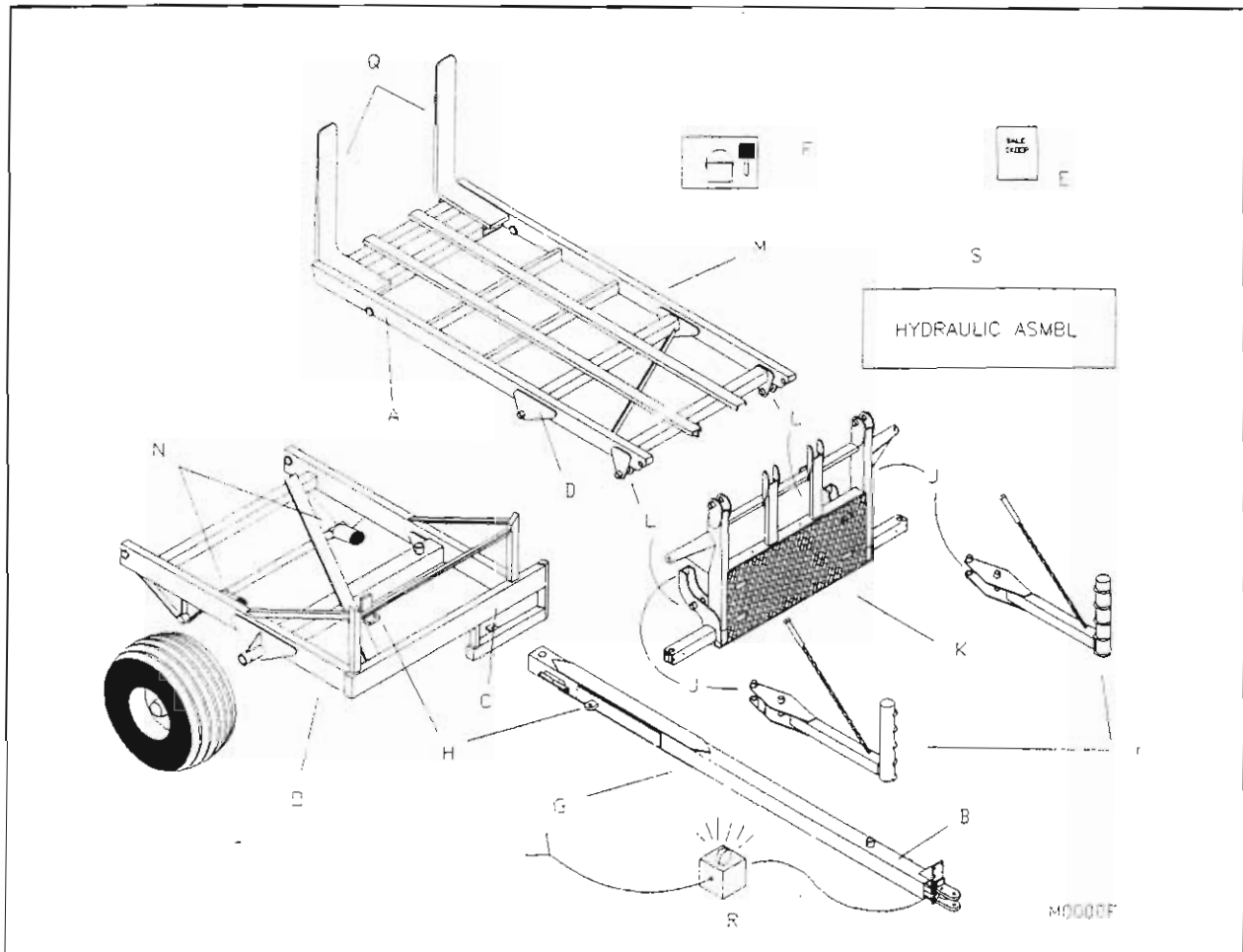
Main bed and loader arms are very slick - do not attempt to walk or stand on them.

DANGER

Always secure hitch by installing safety pin before driving down the road, highway, or street.

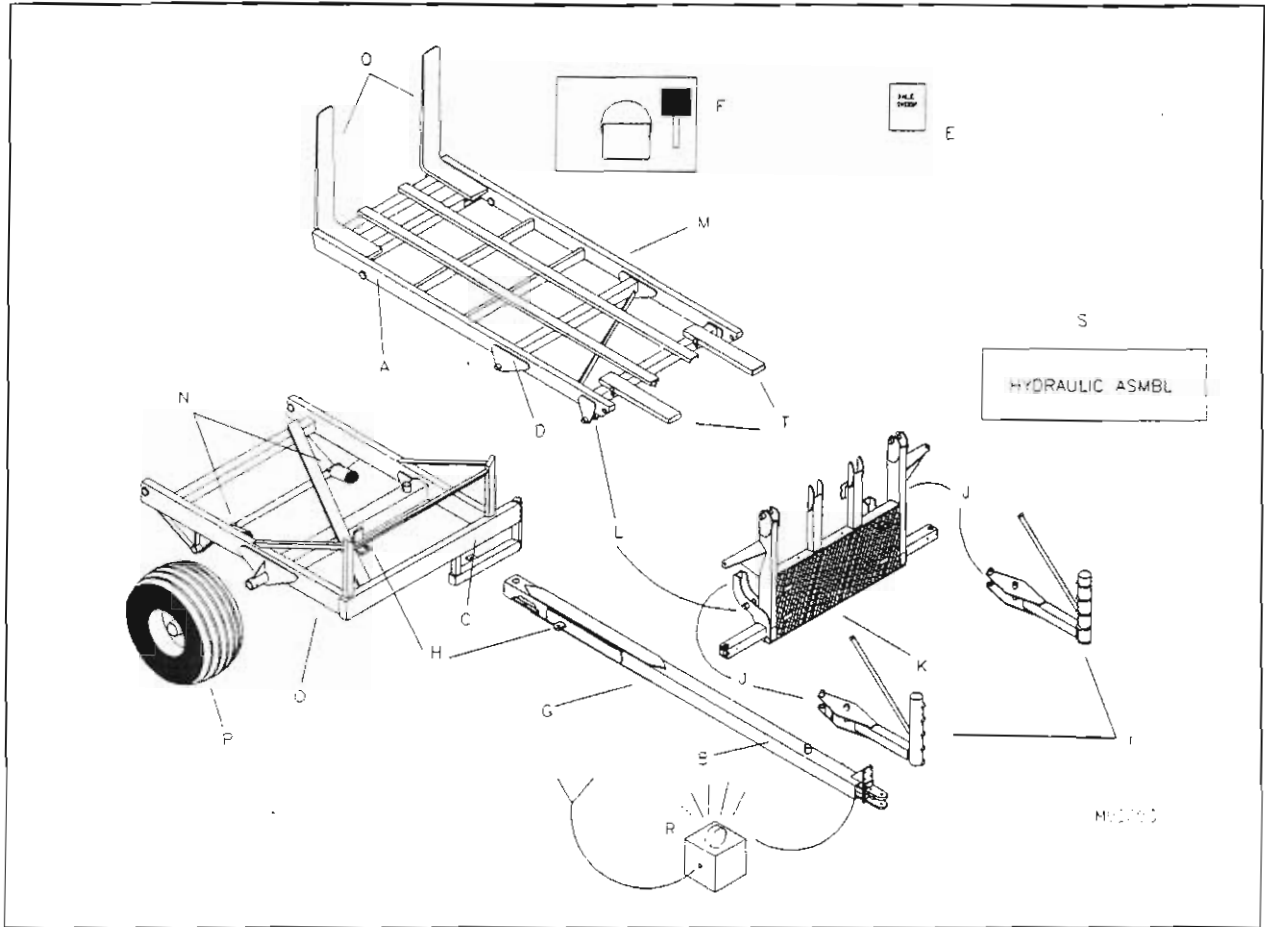
CAUTION

1. Keep all shields in place.
2. Stop engine before leaving operator's position to adjust, lubricate, clean or unclog machines, unless otherwise specifically recommended in the "operator's manual".
3. Wait for all movement to stop before servicing the machine.
4. Keep hands, feet and clothing away from power driven parts.
5. Keep off equipment unless seat for operation is provided.
6. Keep all others off.
7. Use flashing warning lights when operating on highways except when prohibited by law.
8. Make certain everyone is clear of machine before starting engine or operating the Bale Skoop.



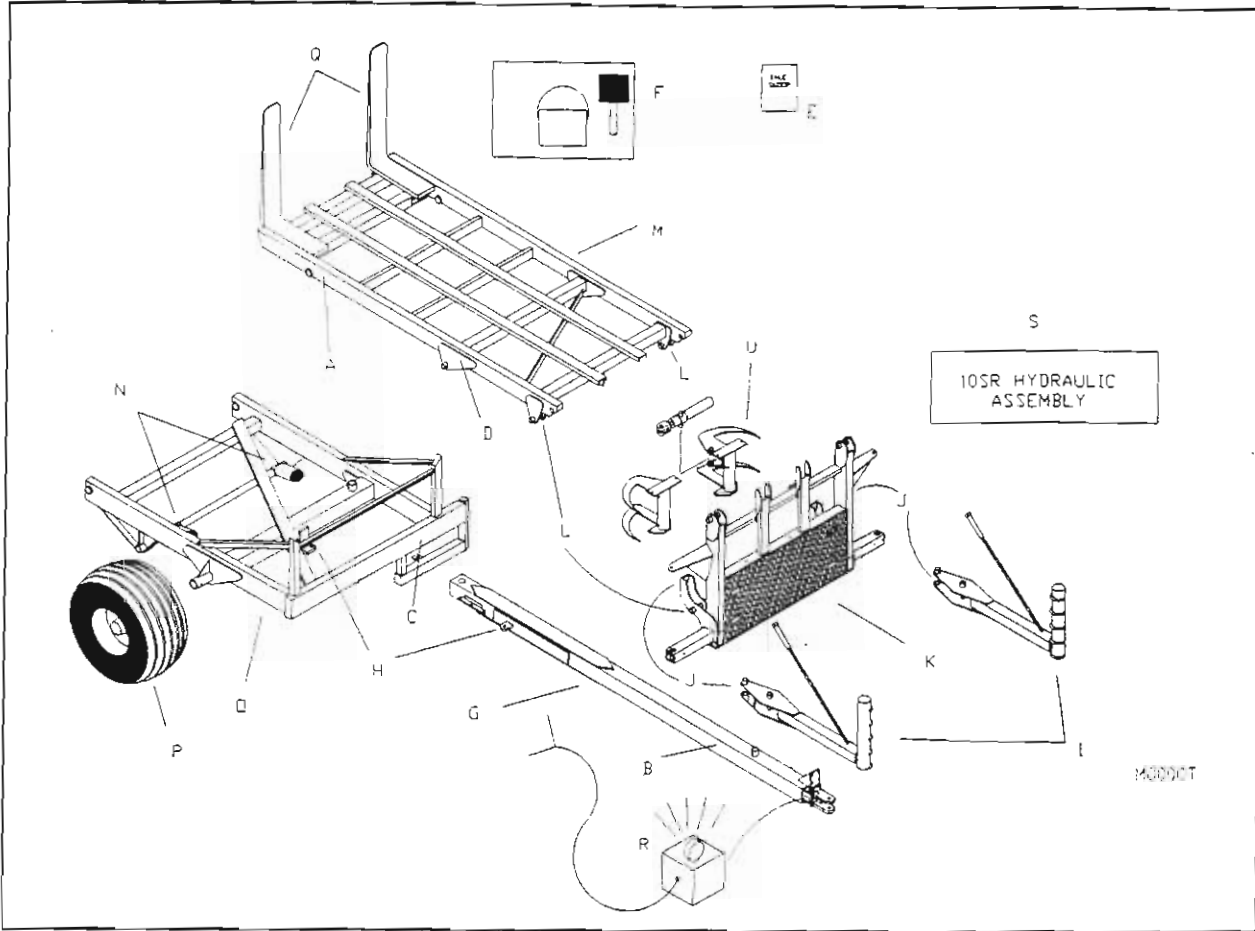
**AUTO ALIGN BALE SKOOP MODEL 4-5SR**

LTR	PART NO	PART NAME	SIZE	PAGE
A	DL-NMBS4-5	Name AA BS 4-5		-
B	DL-YCS-HTC	Yellow Caution Stkr	4 X 6	8-9
C	DL-RDD-FRM	Red Danger Decal	5 X 5	8-9
D	DL-RDS-BED	Red Danger Stickers	3 X 6	8-9
E	DC-OPAABS	Operators Manual		-
F	M1000	Paint Job		-
G	M6000	Hitch Assembly		18
H	HCT3X14	Hitch Cylinder	HCT 3 X 14	-
I	M3000F	LONG ALGMT ASMB'L		14
J	MB000	ALGMT CLNDR ASMBL		22
K	M2000	Loader Assembly		13
L	M9000	Loader Cyl Asbly		20
M	M4000	Bed Assembly		16
N	MA000	BED CYLINDER ASB'L		21
O	M7000	Frame Assembly		19
P	M5000	WHEEL ASMBL		17
Q	FT1HX8X48	LONG FORKLIFT TEETH	1 1/2 X 8 X 48	-
R	MI000	Warning Lite Asbly		28
S	MF000	STNDRD HYDRCLC ASMBL		23



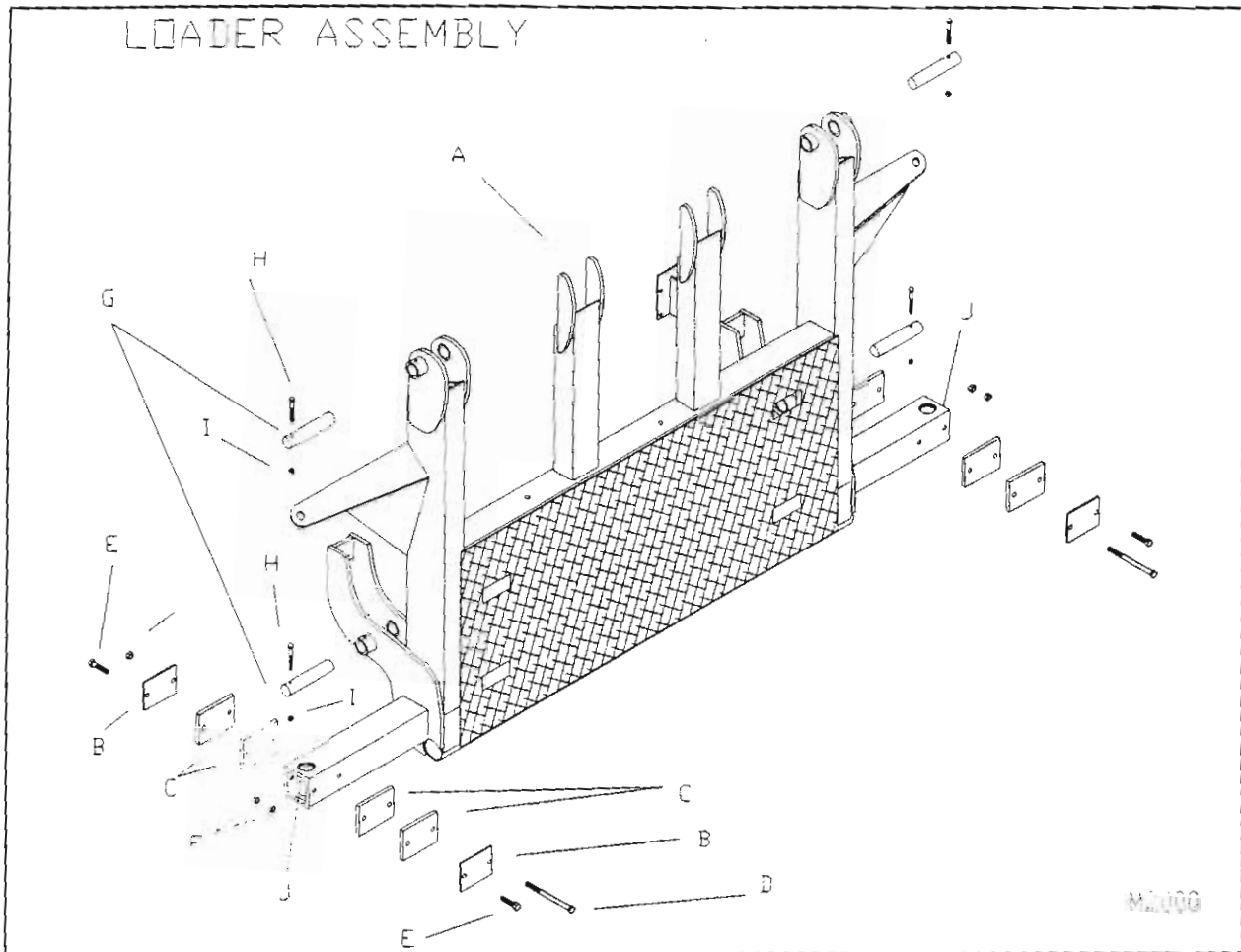
**AUTO ALIGN BALE SKOOP MODEL 6SR**

LTR	PART NO	PART NAME	SIZE	PAGE
A	DL-NMBS6	Name AA BS 6	2 X RM BOLD	-
B	DL-YCS-HTC	Yellow Caution Stkr	4 X 6	8-9
C	DL-RDD-FRM	Red Danger Decal	5 X 5	8-9
D	DL-RDS-BED	Red Danger Stickers	3 X 6	8-9
E	DC-OPAABS	Operators Manual		-
F	M1000	Paint Job		-
G	M6000	Hitch Assembly		18
H	HCT3X14	Hitch Cylinder	HCT 3 X 14	-
I	M3000S	SHORT ALGMT ASMB'L		15
J	MB000	ALGMT CLNDR ASMBL		22
K	M2000	Loader Assembly		13
L	M9000	Loader Cyl Asbly		20
M	M4000	Bed Assembly		16
N	MA000	BED CYLINDER ASB'L		21
O	M7000	Frame Assembly		19
P	M5000	WHEEL ASMBL		17
Q	FT1HX8-100	SHT FORK LIFT TEETH	11/2X8X24X32	-
R	MI000	Warning Lite Asbly		28
S	MF000	STNDRD HYDRLC ASMBL		23
T	MG000	Bed Extention AsmbL		25



**AUTO ALIGN BALE SKOOP MODEL 6SR**

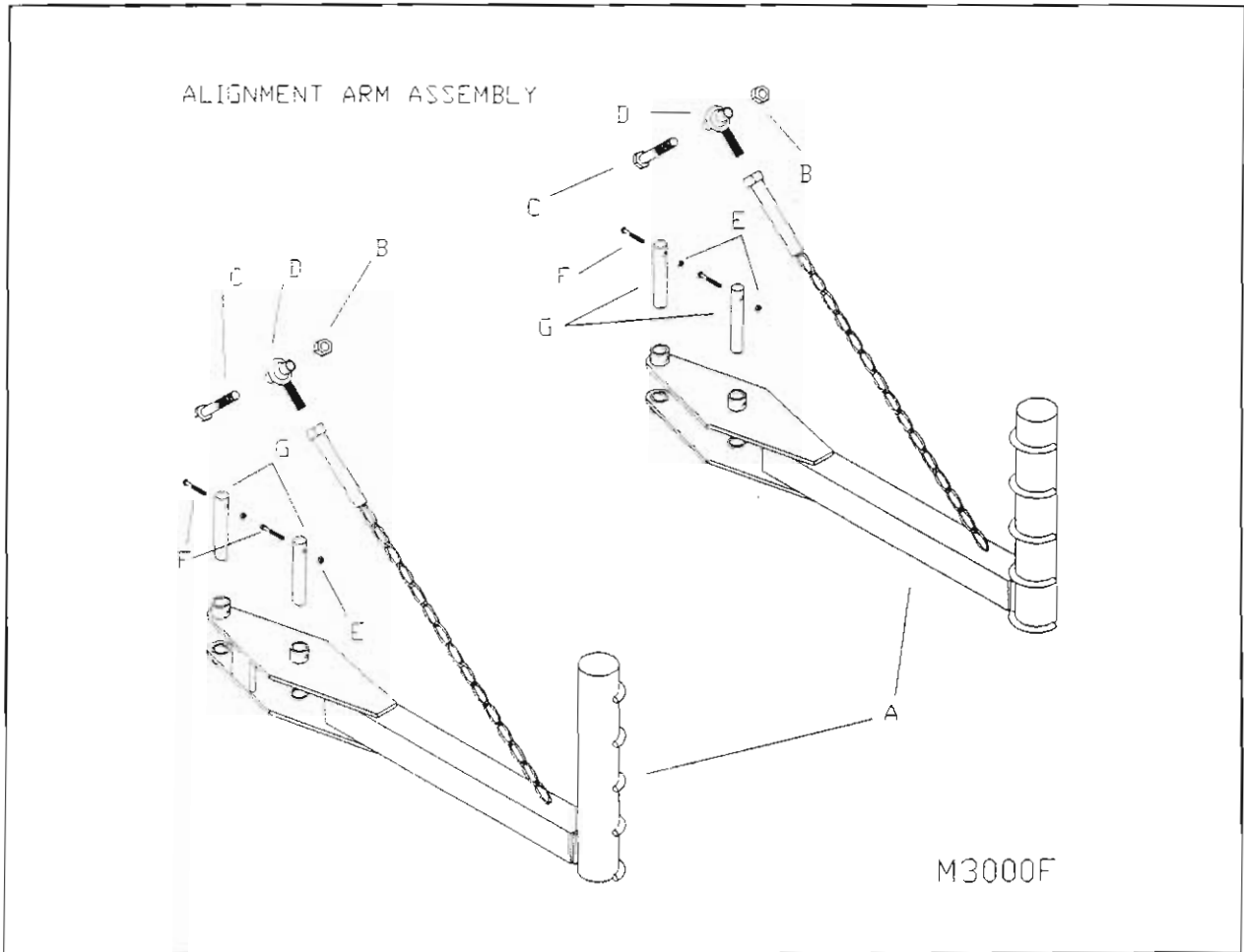
LTR	PART NO	PART NAME	SIZE	REQ'D
A	DL-NMBS10	Name AA BS 10		-
B	DL-YCS-HTC	Yellow Caution Stkr	4 X 6	8-9
C	DL-RDD-FRM	Red Danger Decal	5 X 5	8-9
D	DL-RDS-BED	Red Danger Stickers	3 X 6	8-9
E	DC-OPAABS	Operators Manual		-
F	M1000	Paint Job		-
G	M6000	Hitch Assembly		18
H	HCT3X14	Hitch Cylinder	HCT 3 X 14	-
I	M3000T	LONG ALGMT ASMB'L		14
J	MB000	ALGMT CLNDR ASMBL		22
K	M2000	Loader Assembly		13
L	M9000	Loader Cyl Asbly		20
M	M4000	Bed Assembly		16
N	MA000	BED CYLINDER ASB'L		21
O	M7000	Frame Assembly		19
P	M5000	WHEEL ASMBL		17
Q	FT1HX8X48	LONG FORKLIFT TEETH	1 1/2 X 8 X 48	-
R	MI000	Warning Lite Asbly		28
S	MF000	STNDRD HYDRCLC ASMBL		23
T	ME000	10 HYDRULIC ASM'L		23
U	MH000	Grab Hook Asmbl		26



**LOADER ASSEMBLY**

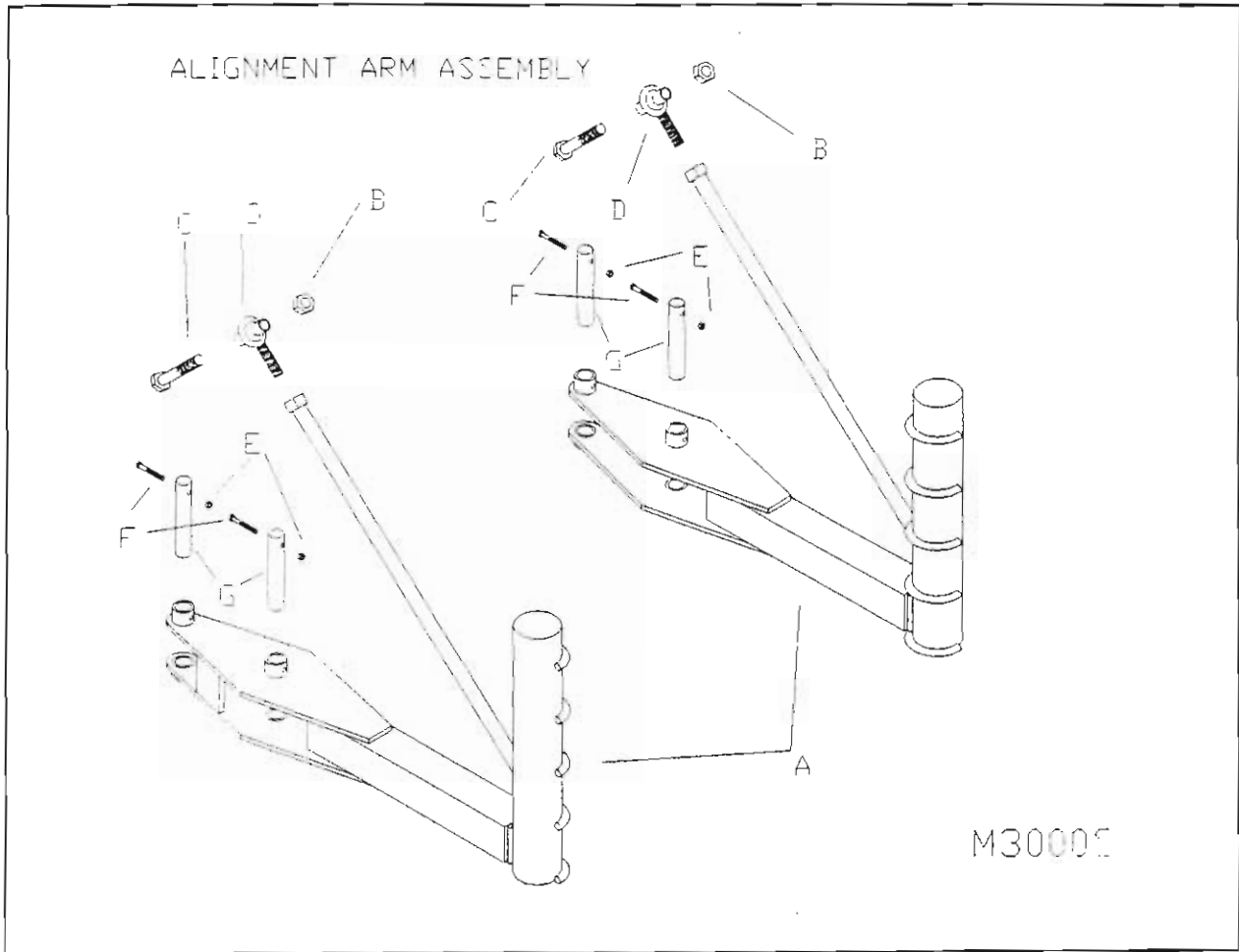
LTR PART NO	PART NAME	SIZE	REQ'D
A M2100	Loader Weldment		01
B FQX5-100	Slider Hldr Plate	1/4X5X3 7/8	04
C UHPH-100	Alignment Slider	1/2X4 1/8X5 1/2	08
D BMHX7H	LONG SLDR BOLTS	1/2 X 7 1/2	02
E BMHX2Q	Alnmt Otsd Slldr Blts	1/2 X 2 1/4	04
F NNH	Alignmt Slider Nuts	1/2	06
G RC17S-100	Bed Loader Pin	1 7/16 X 7	04
H BM3EX3	Pin Holder Bolt	3/8 X 3	04
I NN3E	Pin Holder Nut	3/8	07
J GZQ28	Grease Zerk	1/4 X 28	02
K FEX1-100	Hose Clamp	1/8 X 1 X 3	03





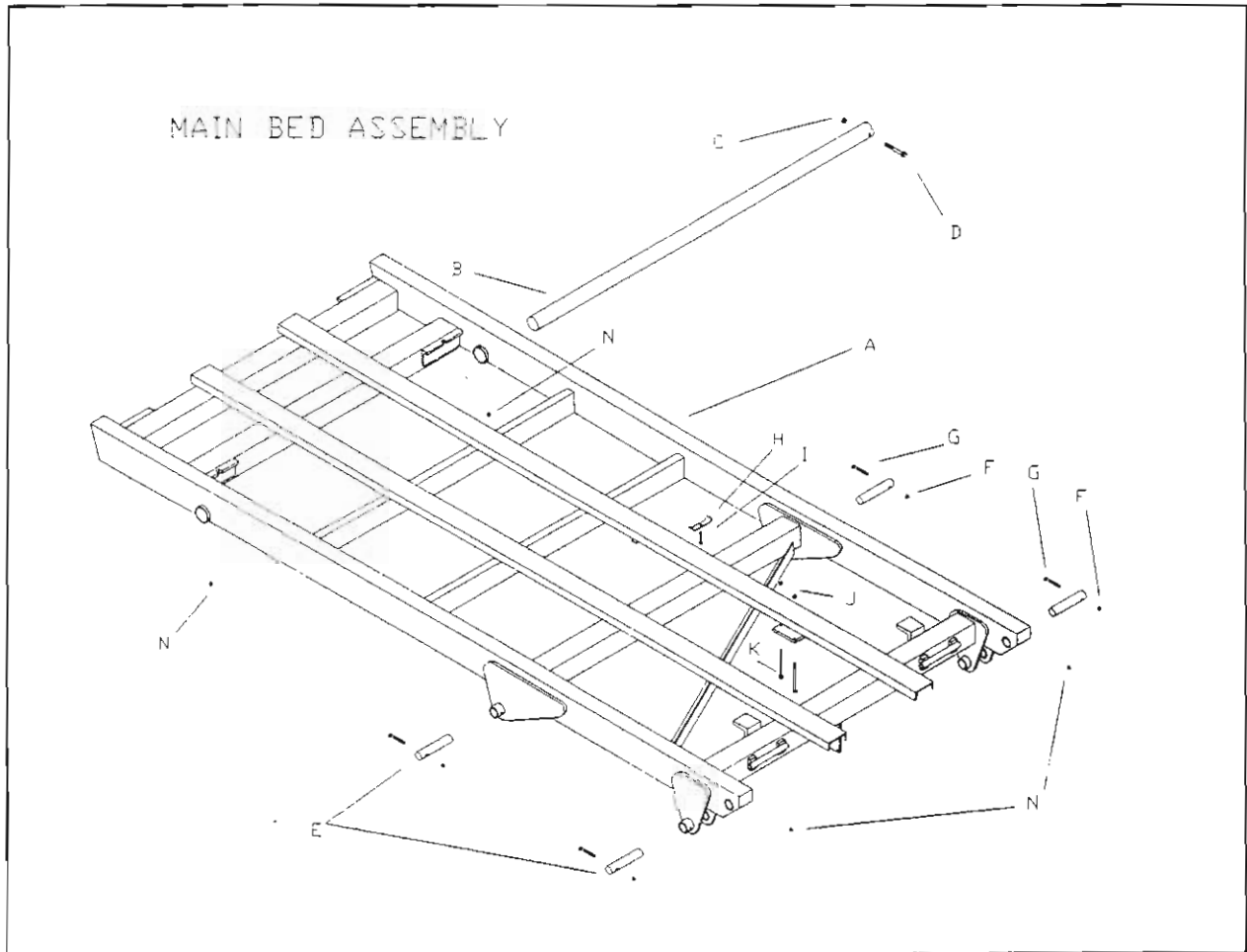
ALIGNMENT ARMS FOR MODELS 4-5SR AND 10SR

LTR PART NO	PART NAME	SIZE	REQ'D
A M3100F	Long Alnmt Arm Wldm		01
B NN1	Ball Joint Nut	1	02
C BM1X4	Ball Joint Bolt	1 X 4	02
D BJS1X12	Ball Joint Screw	1 X 12	02
E NN3E	Pin Holder Nut	3/8	04
F BM3EX3	Pin Holder Bolt	3/8 X 3	04
G RC17S-101	Alnmt Arm Pin	1 7/16 X 8 1/4	04



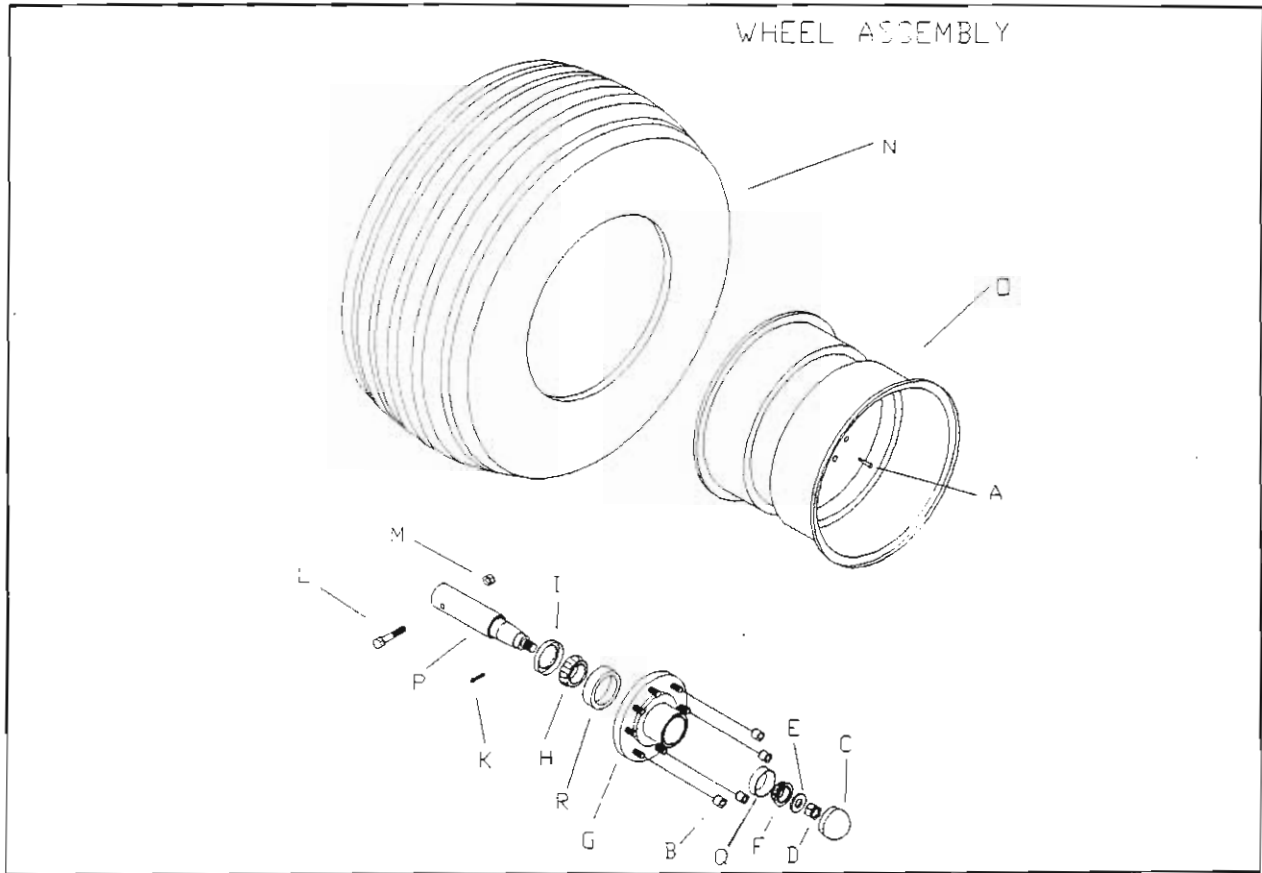
**ALIGNMENT ARMS FOR MODEL 6SR**

LTR	PART NO	PART NAME	SIZE	REQ'D
A	M3100S	Sht Alnmt Arms Wldmt		01
B	NN1	Ball Joint Nut	1	02
C	BM1X4	Ball Joint Bolt	1 X 4	02
D	BJS1X12	Ball Joint Screw	1 X 12	02
E	NN3E	Pin Holder Nut	3/8	04
F	BM3EX3	Pin Holder Bolt	3/8 X 3	04
G	RC17S-101	Alnmt Arm Pin	1 7/16 X 8 1/4	04



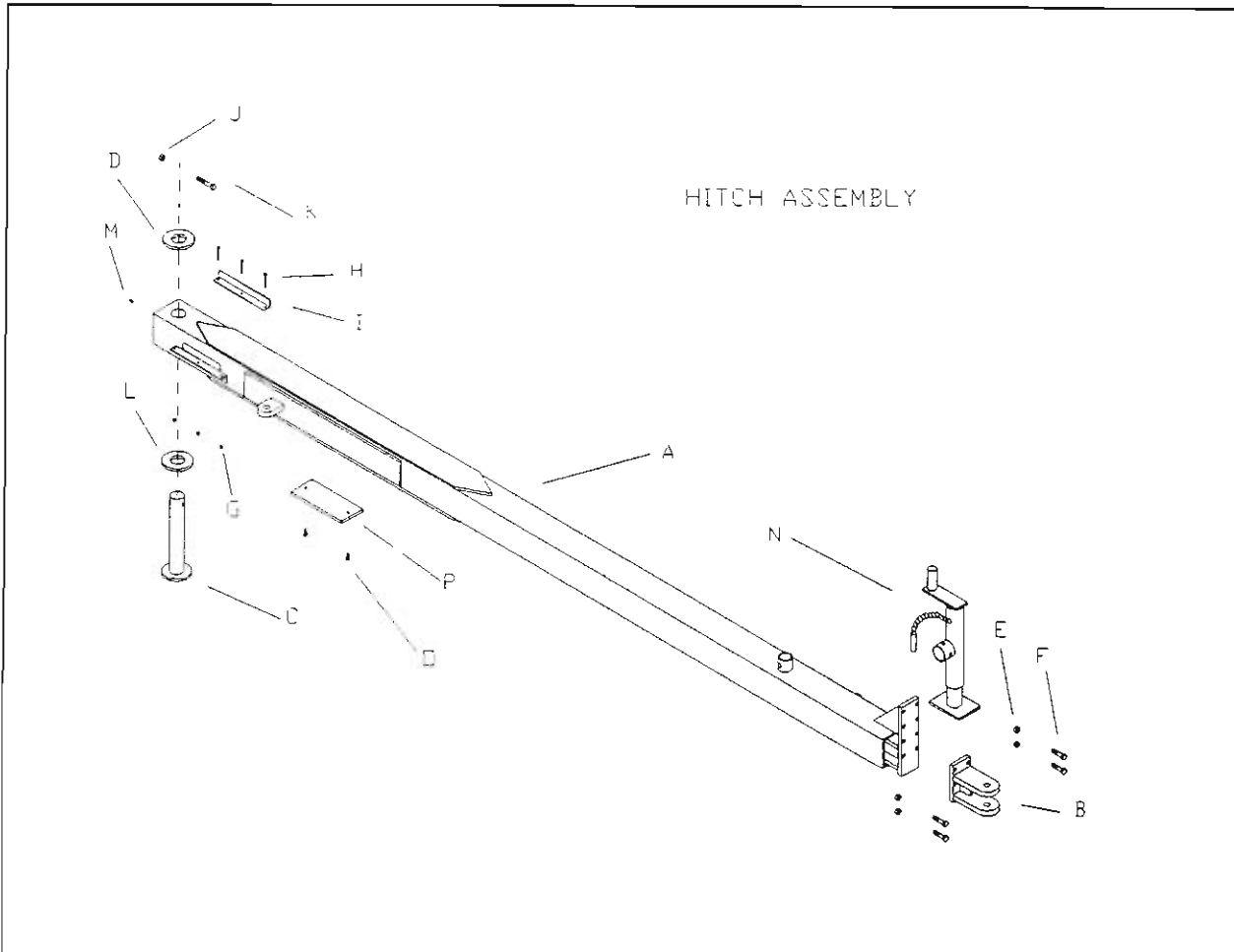
**BED ASSEMBLY FOR ALL MODELS**

LTR	PART NO	PART NAME	SIZE	REQ'D
A	M4200	Bed Weldment		01
B	RC27S-102	Bed Pivot Shaft	2 7/16 X 76	01
C	NNH	Bed Shaft Nut	1/2	01
D	BMHX4	Bed Shaft Bolt	1/2 X 4	01
E	RC17S-100	Bed Loader Pin	1 7/16 X 7	04
F	NN3E	Pin Holder Nut	3/8	04
G	BM3EX3	Pin Holder Bolt	3/8 X 3	04
H	FEX1-100	Hose Clamp	1/8 X 1 X 3	03
K	BM3EX5	Manifold Bolts	3/8 X 5	02
N	GZQ28	Grease Zerk	1/4X28	04



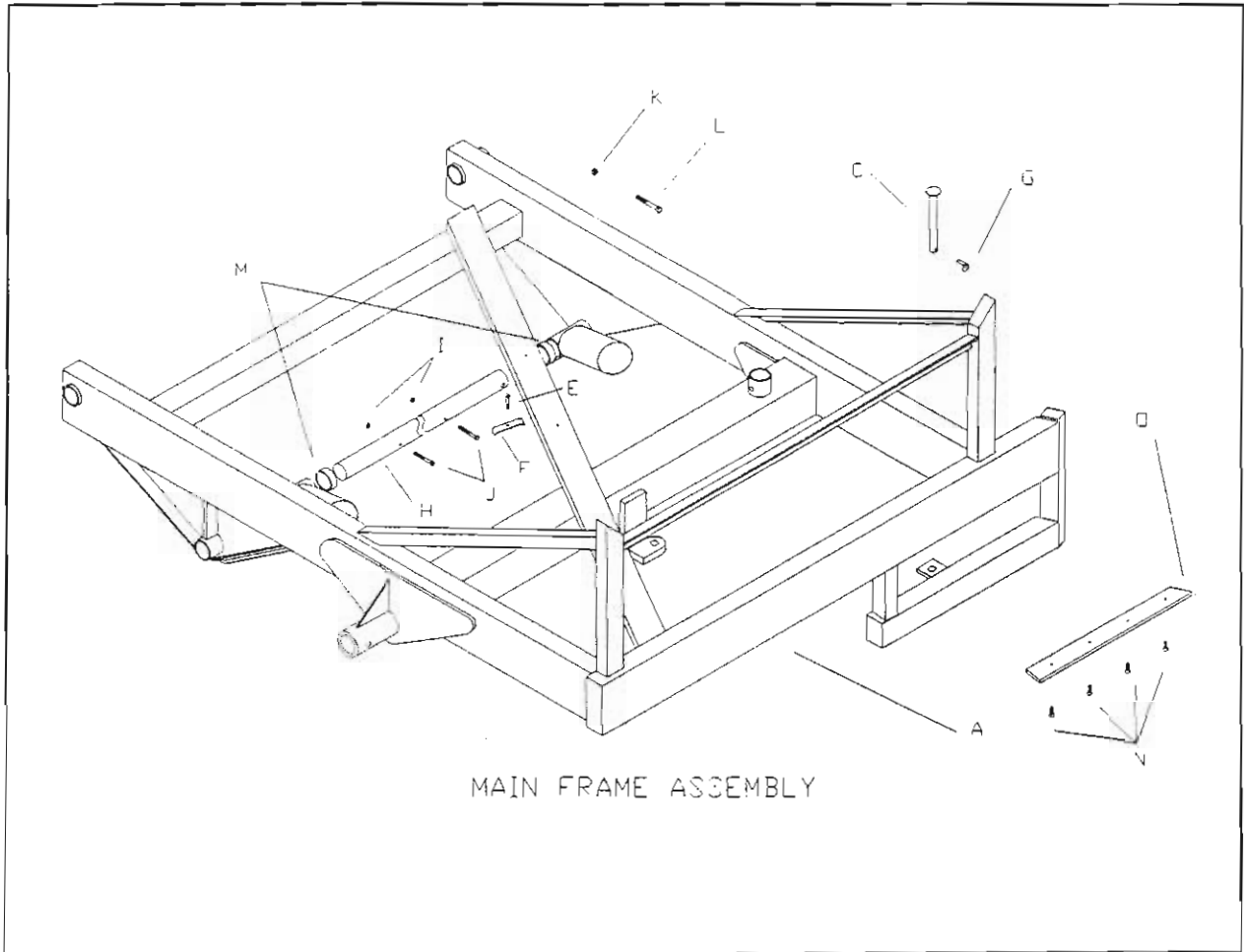
**WHEEL ASSEMBLY**

LTR	PART NO	PART NAME	SIZE	REQ'D
A	VS1	VALVE STEM	VS1	02
B	NL101	Lug Nuts	5/8 WHEEL NUT	16
C	DC101	DUST CAP	1609	02
D	NS101	SPINDLE NUT	3/4 NUT	02
E	WS101	SPINDLE WASHER	3/4 WASHER	02
F	B0101	OTSD CONE BERING	506849	02
G	HD101	HUB	AH60880F	02
H	BI101	Inside cone bearing	501349	02
I	SL101	SEAL	SL275	02
K	CP3SX2	Cotter pin	3/16 X 2	02
L	BM5EX4H	Spindle Hldg Blt	5/8 X 4 1/2	02
M	NN5E	Spindle Holding Nut	5/8	02
N	TR-2	Tire High Floatation	21.5 L X 16.1 SL	02
O	WH-2	Wheel High Floatn.	W16C X 16.1 X 8	02
P	SP-2	Spindle High floatat	AS6000F	02
Q	RO101	OTSD BEARING RACE	506810	02
R	RI101	INNER BEARING RACE	501310	02
HUB KIT INCLUDES LETTERS: C, F, G, H, I, Q, R				
J	M5100	HUB KIT	AH60880FCOMP	02



**HITCH ASSEMBLY**

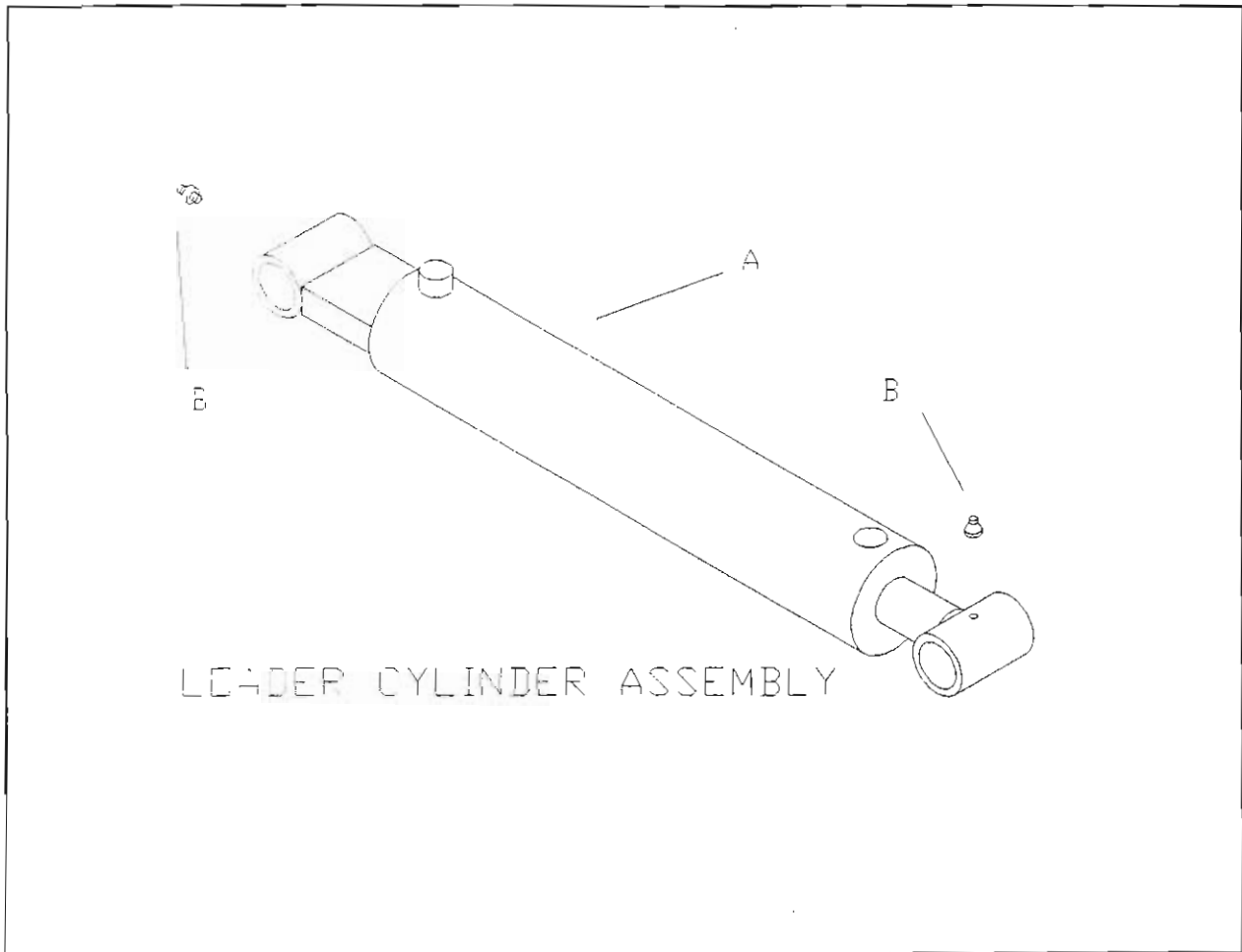
LTR	PART NO	PART NAME	SIZE	REQ'D
A	M6300	Hitch Weldment		01
B	M6100	Adtbl Htch Pvt Wdmt		01
C	M6200	Hitch Pin Weldment		01
D	UHPH-104	UPPER PVT WASHER	1/2X31/2IDX51/4	01
E	NN5E	Hitch Adjusting Nut	5/8	04
F	BM5EX2H	Hitch Adjusting Bolt	5/8 X 2 X 2 1/2	04
G	NN5S	Hitch Hose Nut	5/16	03
H	BM3EX2H	Hitch Hose Bolt	3/8X21/2	03
I	A1HX1HXE-100	Hitch Hose Clamp	11/2X11/2X1/8X1	01
K	BM5EX4	Hitch bolt	5/8 X 4	01
L	UHPH-103	LWR PVT WASHER	1/2X21/2IDX51/4	01
M	GZQ28	Grease Zerk	1/4 X 28	04
N	J-1	Jack	J-1	01
O	BM3EX1	Hitch Slider Bolts	3/8 X 1	02
P	UHPH-101	Hitch Slider	1/2 X 5 X 12	01



MAIN FRAME ASSEMBLY

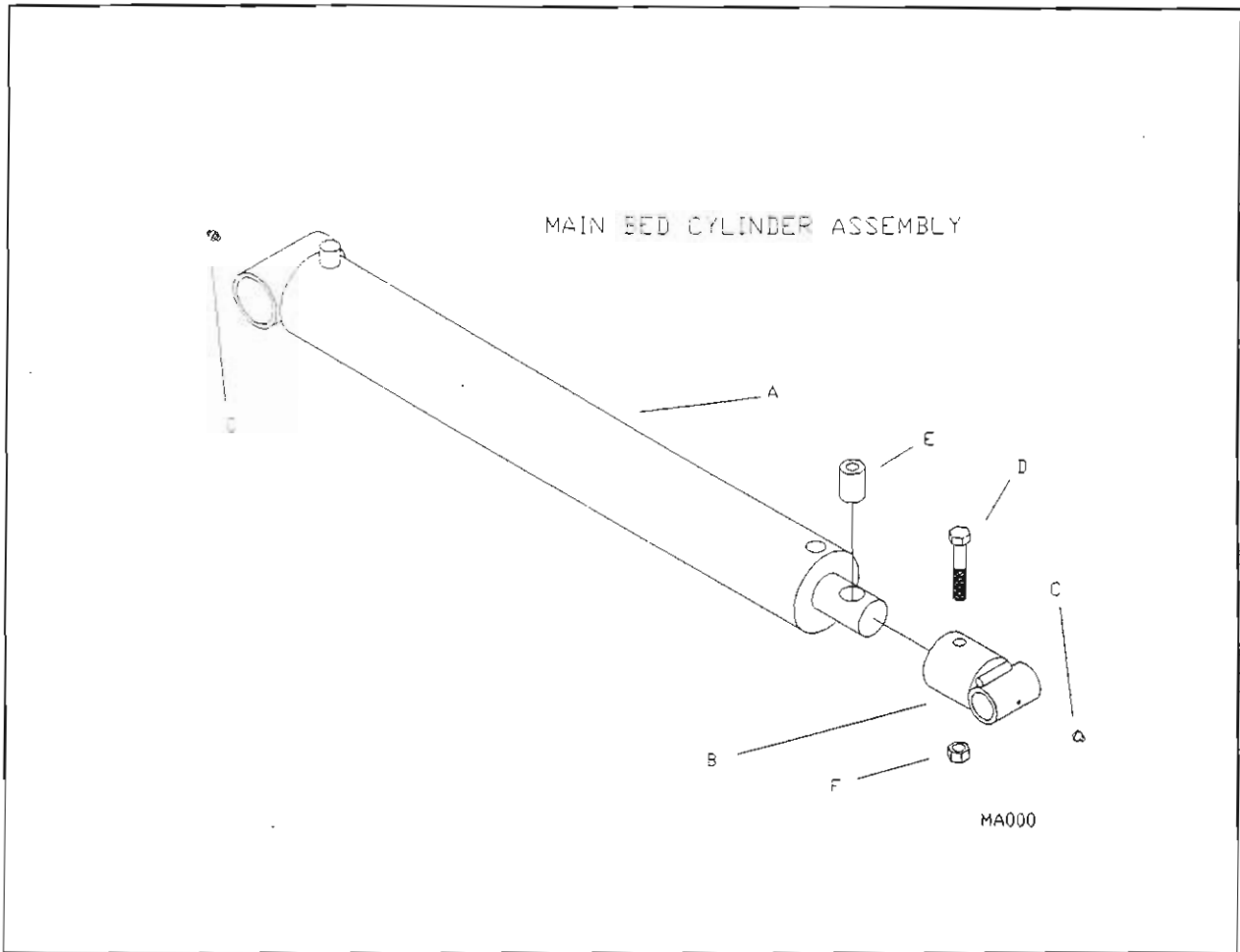
**FRAME ASSEMBLY**

LTR	PART NO	PART NAME	SIZE	REQ'D
A	M7300	Frame Weldment		01
C	M7200	Safety Pin Weldment		01
F	FEX1-100	Hose Clamp	1/8 X 1 X 3	03
G	QC3E	Quick Clip	3/8	01
H	RC27S-100	Hoist Shaft	2 7/16 X 76	01
I	NN3E	CLAMP NUT	3/8	03
J	BM3EX3H	Hoist Shaft Bolt	3/8 X 3 1/2	02
K	NNH	Hoist Pivot Nut	1/2	01
L	BMHX4	Hoist Pivot Bolt	1/2 X 4	01
M	TC2HX3X1	Hoist Spacer	2 1/2 ID X 3 OD X 1	02
N	BSC3EX1	Frame Slider Bolts	3/8 - 16 X 1	04
O	UHPH-102	Frame Slider	1/2 X 3 X 29	01



**LOADER CYLINDER ASSEMBLY**

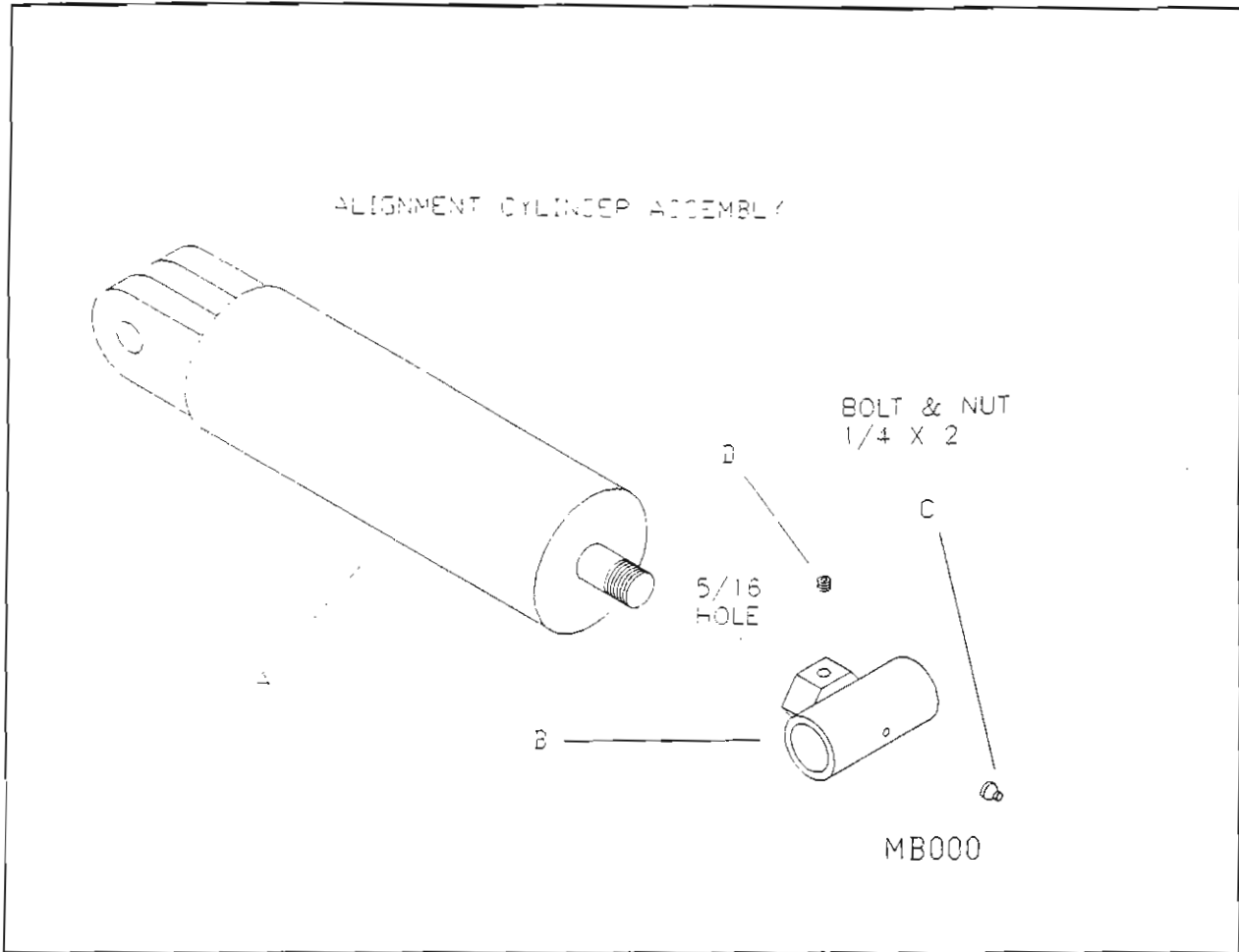
<b>LTR PART NO</b>	<b>PART NAME</b>	<b>SIZE</b>	<b>REQ'D</b>
A F1X3X3Q	Butt Spacer	1 X 3 X 3 1/4	02
B TC1HX2-100	Loader Rod Pivot	1 1/2 X 2 X 2 7/8	04
C HCW3X20-100	Loader Cylinder	HCW 3 X 20	02
D GZQ28	Grease Zerck	1/4 X 28	04



**BED CYLINDER ASSEMBLY**

LTR	PART NO	PART NAME	SIZE	REQ'D
A	MA100	Bed Cylinder Wdmt		02
B	MA200	Bed Cylndr Rd Wdmt		02
C	GZQ28	Grease Zerk	1/4 X 28	04
D	BM5EX4	Bed Rod Bolt	5/8 X 4	02
E	TC5EX1QX13Q	Bed Rod bushing	5/8X1 1/4X1 3/4	02
F	NN5E	Bed Rod Nut	5/8	02

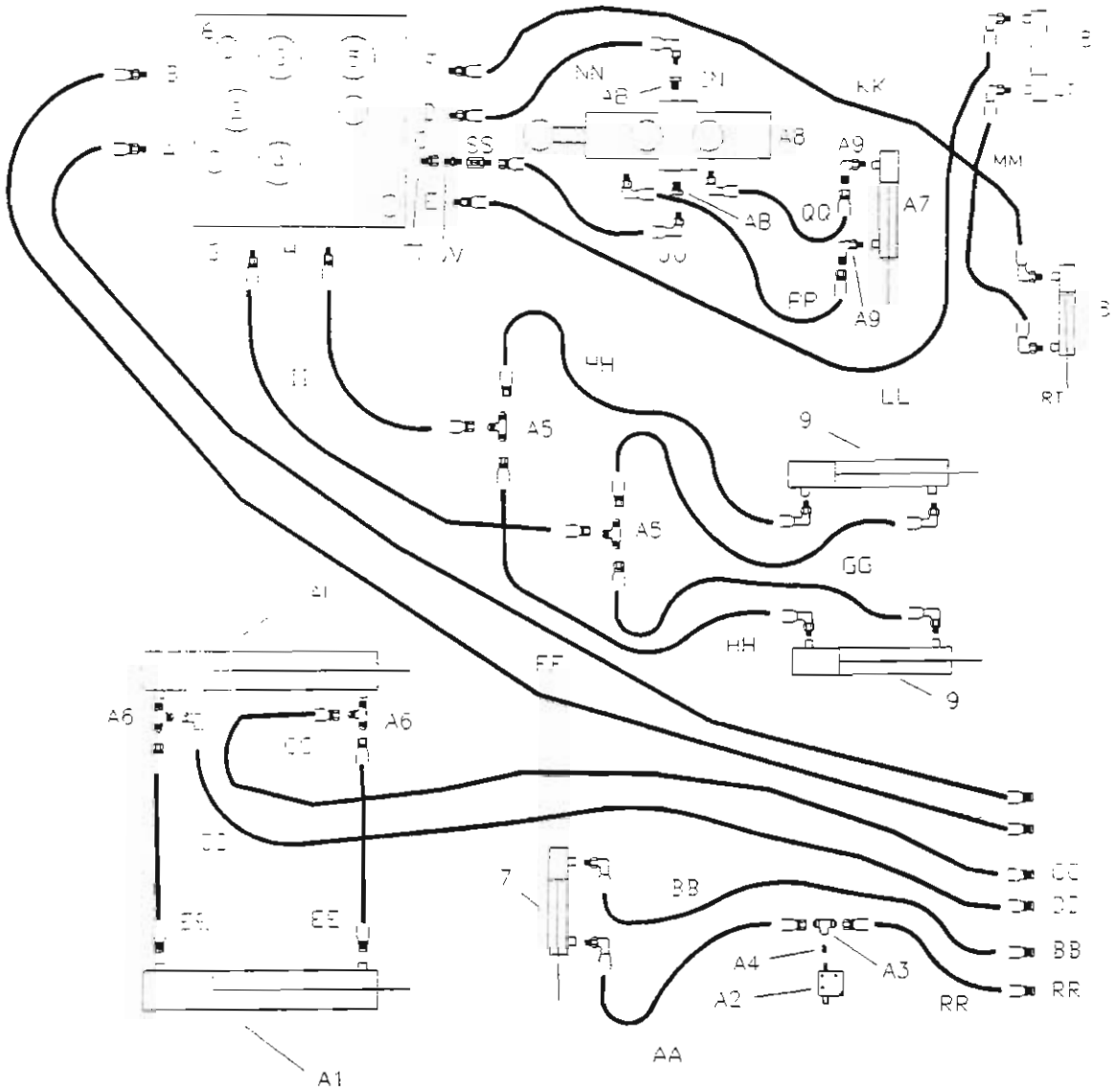




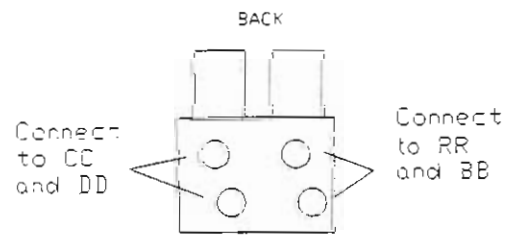
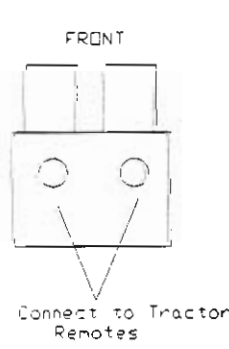
ALIGNMENT CYLINDER ASSEMBLY

LTR	PART NO	PART NAME	SIZE	REQ'D
A	CMS3HX8	RT ALINGMENT CYL	PMS-AM-2562	00
A	CMS3QX8	LT ALIGNMENT CYL	PMS-AM-2568	01
B	MB100	Alnmt Cyl Slv Wdmt		02
C	GZQ28	Grease Zerk	1/4 X 28	02
D	BMQX2	BOLT MACHINE	1/4X2	02
D	NNQ	ALNMT CLDR NUT	1/4	02

NOTE: THIS PLUG IS FOR HOLES C AND D ON 4SP & 6SP



ELECTRIC DOUBLE SELECTOR VALVE

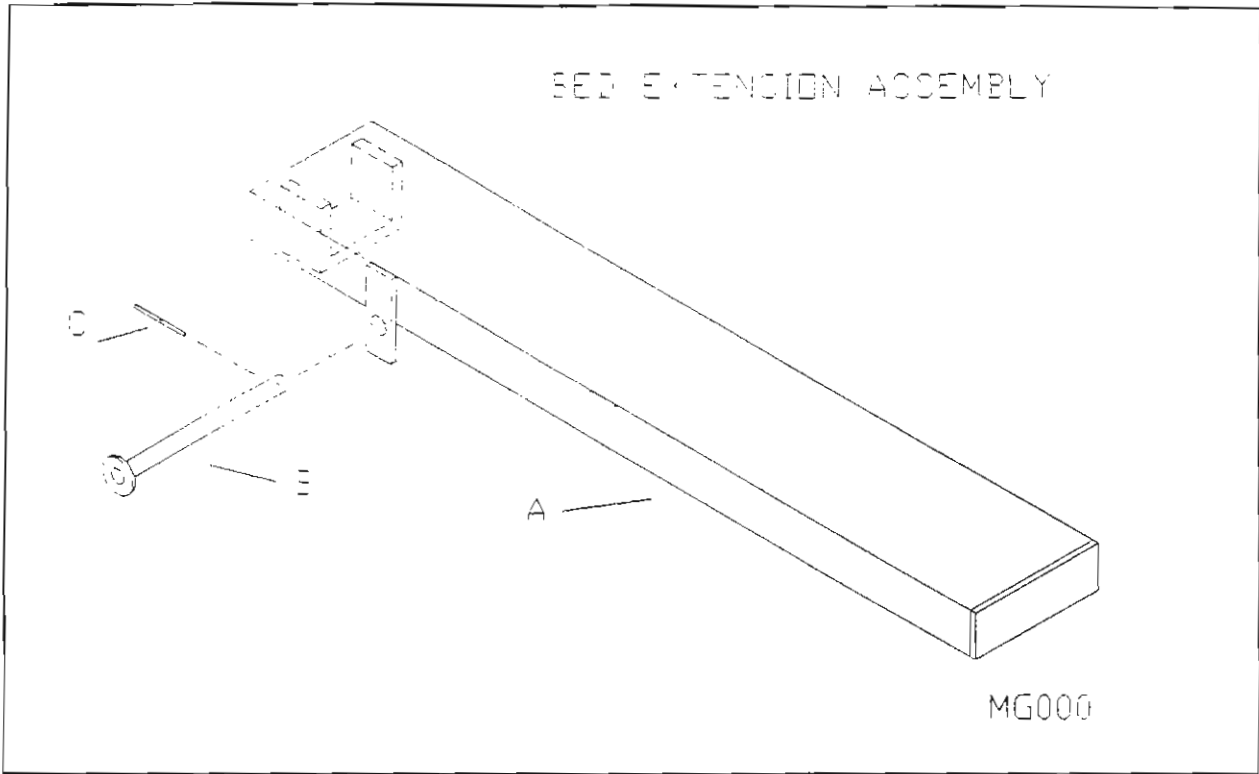


HYDRAULIC ASSEMBLY FOR MODELS 4-5SR, 6SR, AND 10SR

LTR	PART NO	PART NAME	SIZE	REQ'D
1	MF100	MANIFOLD VALVE	D-3403	01
2	HCB-S-CNEA-LHN	COUNTER BALANCE	CBEA-LHN	02
3	HS-S-SCEA-LAN	SEQUENCE CHECK	SCEA-LAN	01
5	HS-S-RSFG-LAN	SEQUENCE	RSFC-LAN	01
6	HC-S-CXCD-XZN	CHECK VALVE	CXCD-XZN	01
7	HCT3X14	HITCH CLNDR ASMBL		00
8	MB000	ALIGNMT CLNDR ASMBL		00
9	M9000	LOADER CLNDR ASMBL		00
A1	MA000	BED CLNDR ASMBL		00
A2	HPS-D	PRESSURE SWITCH	3000	01
A3	HT-I-858-FS	PRESSURE TEE	858-FS-08X08	01
A4	HA-I-24SB08X04	PRESSURE ADPTR	24SB-08X04	01
A5	HT-I-844-FS	LOADER TEE	844-FS-08	02
A6	HT-I-851-FSO	BED TEE	851-FSO-08X08	02
AA	MF200	HITCH ROD HS	1/2 X 276	01
BB	MF300	HITCH BUT HOSE	1/2 X 300	01
CC	MF400	BED ROD HOSE	1/2 X 348	01
DD	MF500	BED BUT HOSE	1/2 X 312	01
EE	MF600	BD CLNDR CNTG HS	1/2 X 57	02
FF	MF700	MANIFOLD HOSE	1/2 X 432	02
GG	MF800	LOADER ROD HS	1/2 X 54	02
HH	MFA00	LOADER BUT HS	1/2 X 36	02
II	MF900	LOADER HS	1/2 X 21	02
KK	MFC00	RT ALIGNMT BUT HS	1/2 X 114	01
LL	MFD00	LT ALGNMT ROD HS	1/2 X 131	01
MM	MFE00	ALGMT CONTR HS	1/2 X 70	01
RR	MFB00	PRESSURE HS	1/2 X 48	01
XX	HA-I-721-FSO	MANIFOLD PLUG	721-FSO-08	02

ADDITIONAL PARTS NEEDED FOR THE 10SR MODEL

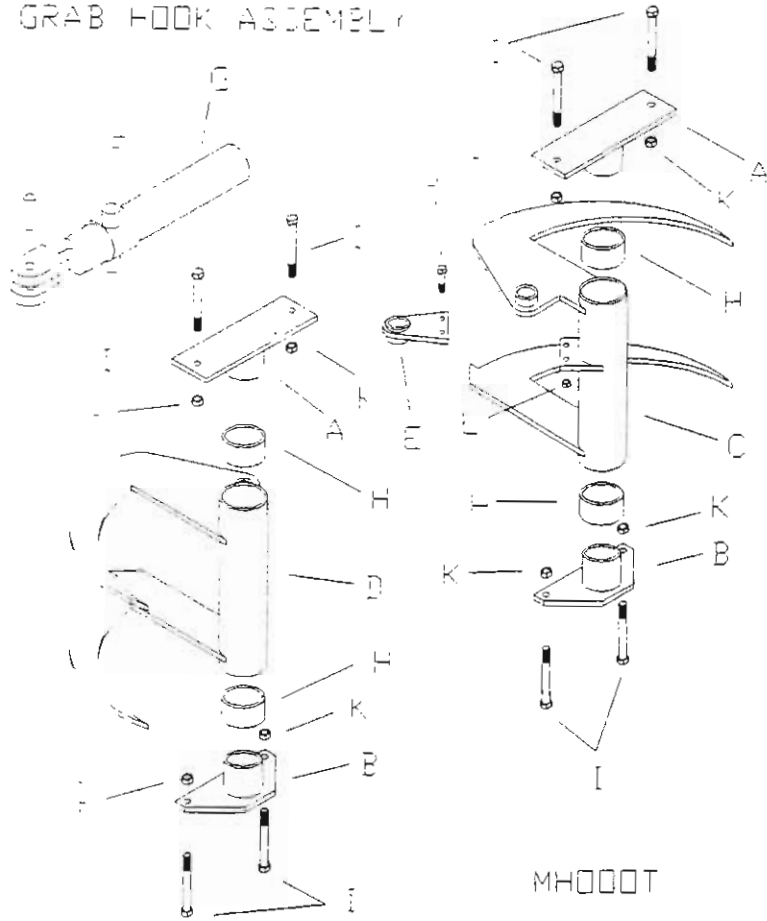
LTR	PART NO	PART NAME	SIZE	REQ'D
A7	HCCB2HX18	GRAB CLNDR ASMBL		00
A8	HVDASS	GRAB VALVE	400	01
A9	HA-I-849-FSO	GRAB CLNDR ADPTR	849-FSO-08X06	02
AB	HA-I-24SB12X08	4-WAY REDUCER	24SB-12X08	02
NN	MEA00	4-WAY IN HS	1/2 X 36	02
PP	MEB00	GRAB ROD HS	1/2 X 40	01
QQ	MEC00	GRAB BUT HS	1/2 X 50	01
SS	HCKVH	GRAB CHECK	1/2 INLINE	01
TT	HA-I-60SB	GRAB CHECK ADAPTER	60SB-08X08	01
UU	MED00	4-WAY OUT HS	1/2 X 34	01
VV	HA-I-24SA	GRAB CHECK NIPPLE	24SA-08	01



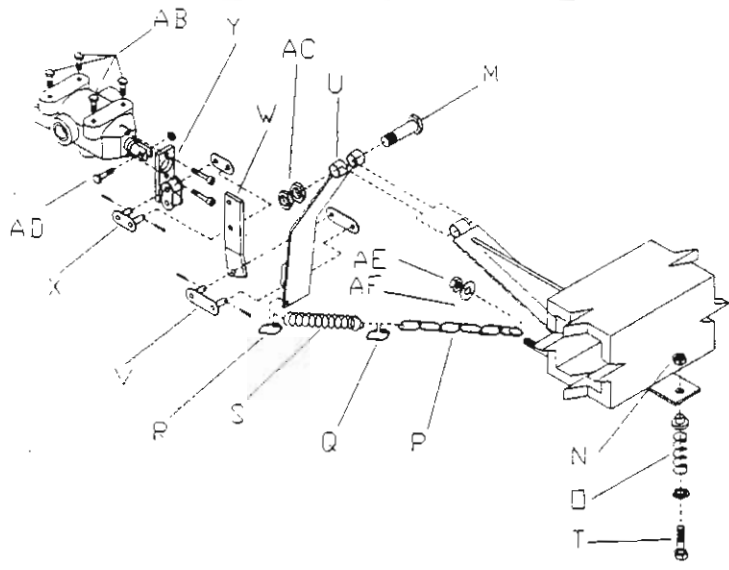
**BED EXTENTION FOR THE 6SR MODEL**

<b>LTR PART NO</b>	<b>PART NAME</b>	<b>SIZE</b>	<b>REQ'D</b>
A MG100	Bed Extsn Wdmt		01
B RC5E-101	EXT HOLDING PIN	5/8 X 8	02
C CPEX2	EXT PIN HOLDER	1/8 X 2	02

### GRAB HOOK ASSEMBLY



MH000T



A	MH100	Upper Pivot Wdmt		01
AB	BM3EX1	4-WAY BOLTS	3/8 X 1	04
AC	NNC5E	CONTROL PIN NUTS	5/8 NC	02
AD	BMQX1	4-WAY LVR CNTG BOLT	1/4 X 1	01
AE	NN3E	CHAIN CNTG NUT	3/8	01
AF	FW3E	CHAIN CNTG WASHER	3/8	01
B	MH200	Lower Pivot Wdmt		01
C	MH300	Right Hook Wdmt		01
D	MH400	Left Hook Wdmt		01
E	MH500	Tunion Pvt Hldr Wdmt		01
F	RC1-101	Hook Rod Pin	1 X 3	01
G	HC2HX18	Hook Clndr	2 1/2 X 18	01
H	UPTC3X3HX3	Grab Hook Bushing	3 X 3 1/2 X 3	04
I	BM5EX5H	Hook Plate Bolts	5/8 X 5 1/2	08
J	BMHX2	Hook Clndr Bolts	1/2 X 2	02
K	NN5E	Hook Plate Nuts	5/8	08
L	NNH	Hook Clndr Nuts	1/2	02
M	RC5E-103	CONTROL PIN	5/8X4	01
N	NNQ	Valve Push nut	1/4	01
O	SC1X2	Valve Push Spring	1 X 2	01
P	CQX6	Pull Spring Chain	1/4 X 6	01
Q	CL1X2	Pull Spring Chain co	1 X 2	01
R	CL1HX2	Pull Spring Valve Co	1 1/2 X 2	01
S	SE1X7	Valve Pull Spring	1 X 7	01
T	BMQX3	VALVE PUSH BOLT	1/4 X 3	01
U	MH600	4-WAY CNTRL LVR WDMT		01
V	CRCL2-80	CNTRL CNCTG LINK	2-80	01
W	F3EX1-101	4-WAY LEVER	3/8 X 1 X 8	01
X	CRCL80	4WAY CNTG LINK	80	01
Y	MH700	4WAY PIVOT WDMT		01
Z	CP3SX2	CONTROL PIN HOLDER	3/16 X 2	01

