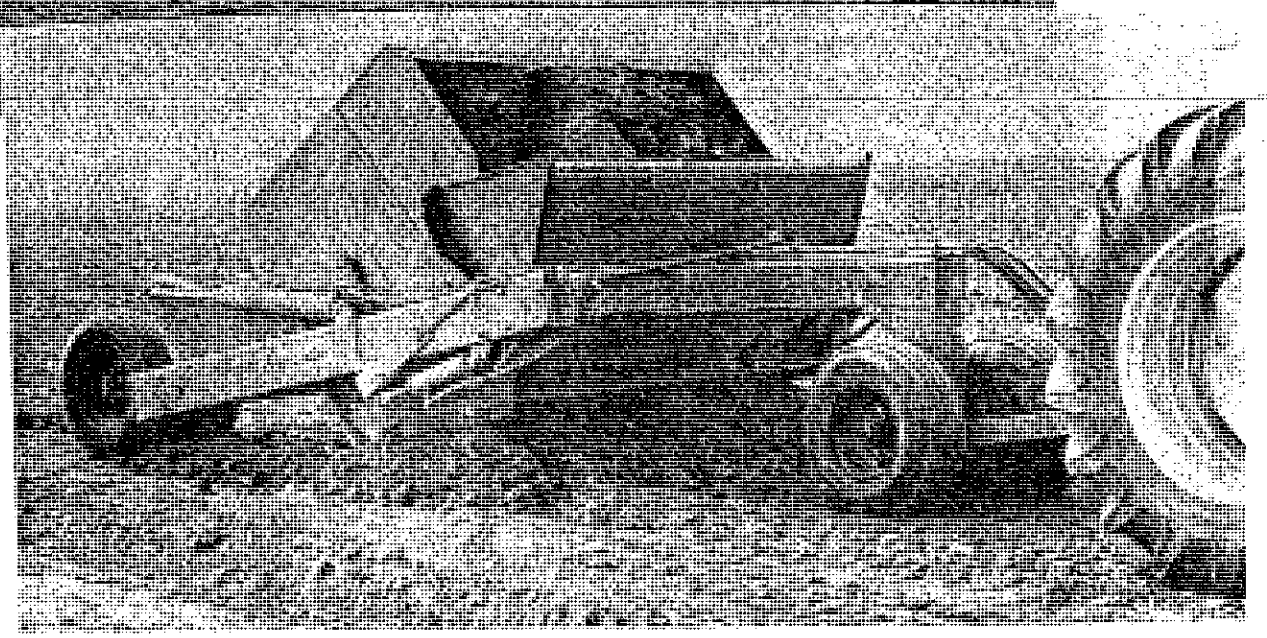
ASSEMBLY AND OPERATION INSTRUCTIONS

Eversman SCRAPER

MODELS 700 - 7 - YARD SIZE

AND 900 - 9 - YARD SIZE



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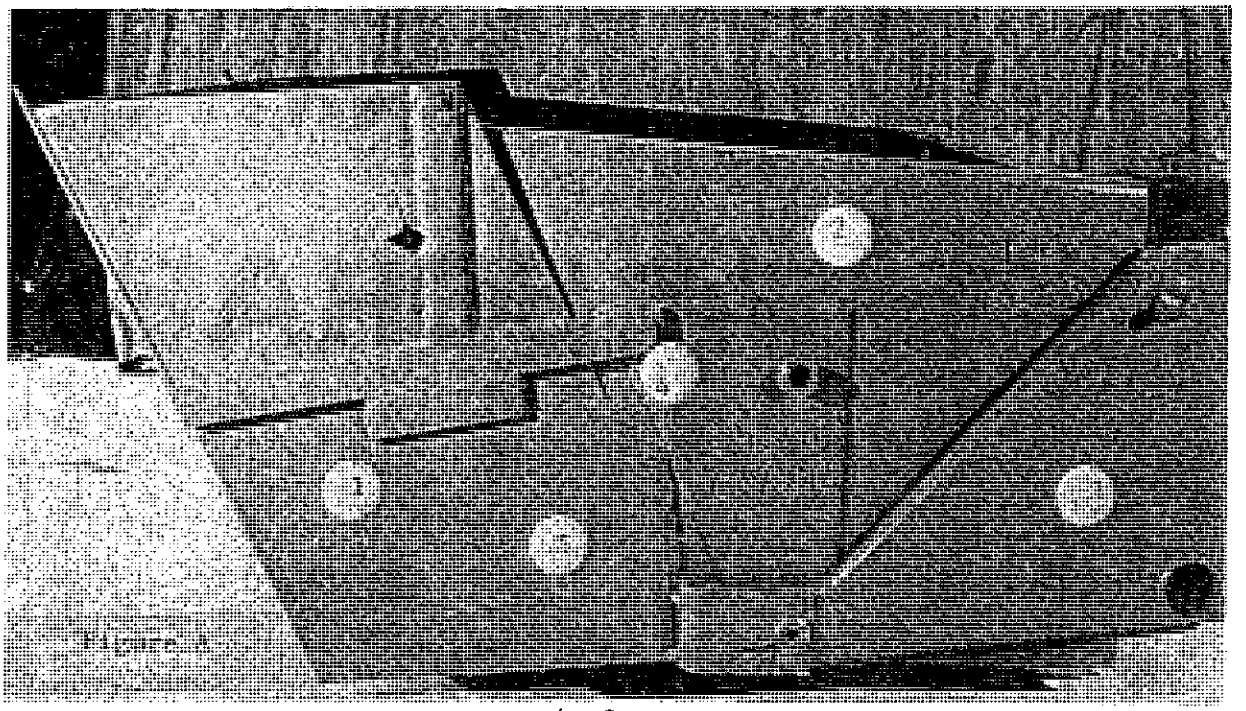

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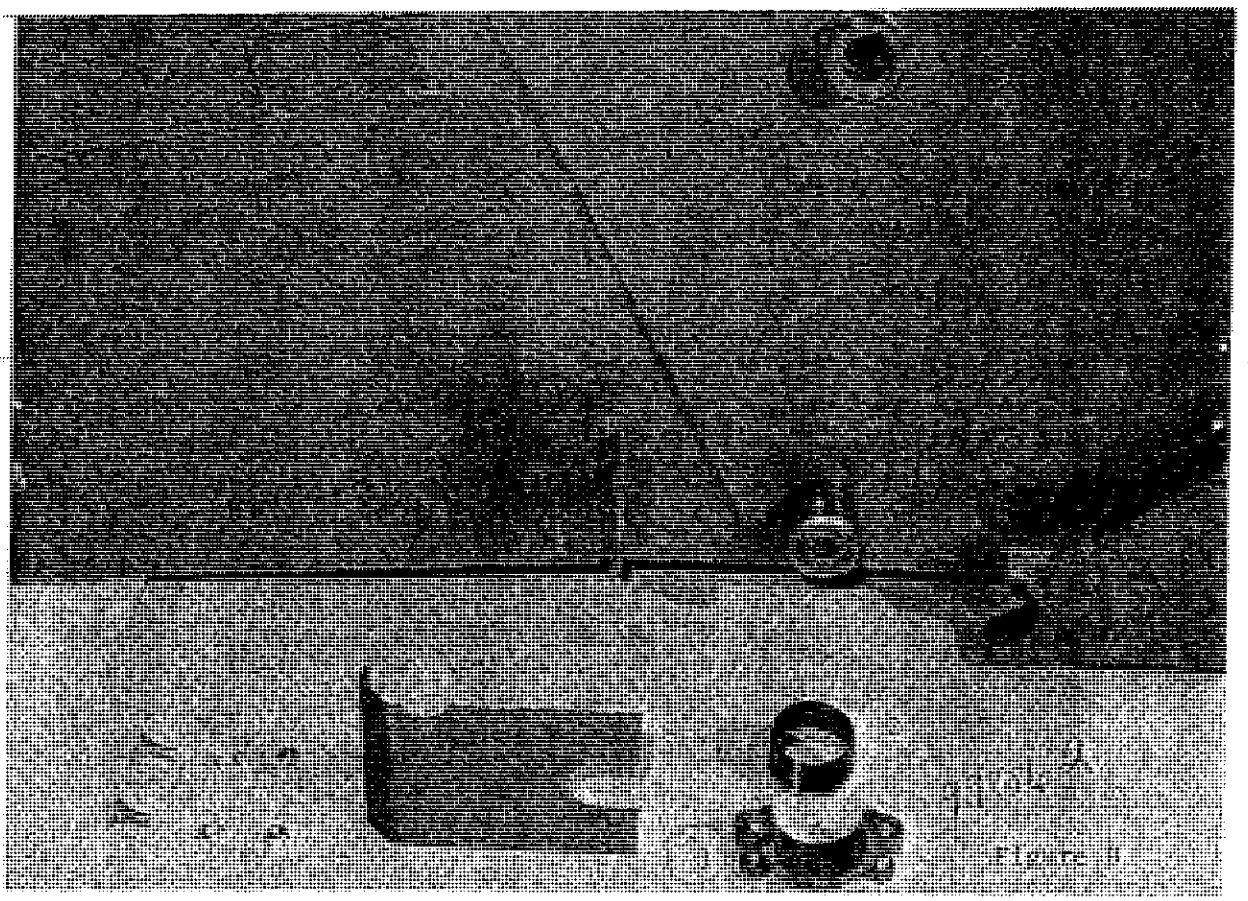
1 - Gate
2 - Bucket
3 - Lift Pipe
4 - Gate Pivot Pin
5 - Wear Plate



1 - Pivot Plate
2 - Bearing Insert
3 - Bearing Cap

ASSEMBLY INSTRUCTIONS:

The pictures and assembly details will cover the Model 900 Scraper. All will also pertain to the Model 700 except where shown.

Since many of the parts are heavy, it will save assembly and handling time to provide a safe overhead lifting device.

The "left-hand" side is determined by standing behind the scraper and facing the direction it will travel.

Proceed carefully and thoughtfully with assembly to prevent injury.

Figures A and B

1. Set bucket on wood blocks, on a flat, level surface before starting.
2. The gate is attached to the bucket with 2 - gate pivot pins, using 1-1/2" locknuts on the inside of the bucket.
3. The bearing caps (3) Figure B, are shipped bolted in place to the lift pipe. Remove them from lift pipe.
4. Grease bucket pins and bearing inserts and install inserts over bucket pins, slide lift pipe into place, and replace the bearing caps. Note that the flange on the bearing cap is facing to the outside. Tighten bolts securely.
5. Assemble pivot plates over bucket pins, and secure with 1/2 X 1-1/4 carriage bolts, nuts and lockwashers. Thoroughly tighten bolts.

Note: The pivot pin locknuts on the inside of the bucket are frequently found to be loose during field operation. After final assembly of the scraper, it is recommended that the locknuts be carefully checked and thoroughly tightened with a long-handled wrench, preferably by someone working on the inside of the bucket.

1 - Siderail

2 - Pivot Pin Bracket

3 - Pivot Arm Spacer and 1 X 5" N.F. Hi-Strength Bolt

4 - 1 X 5-1/2" Hex Bolt

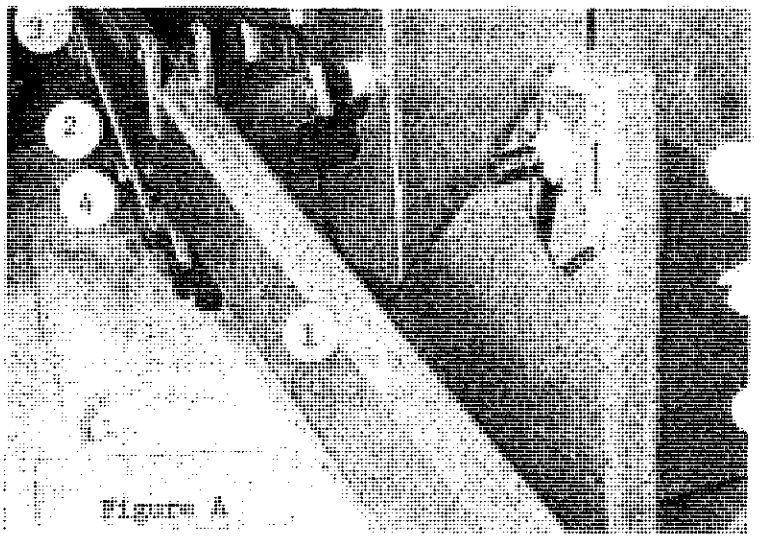


Figure A

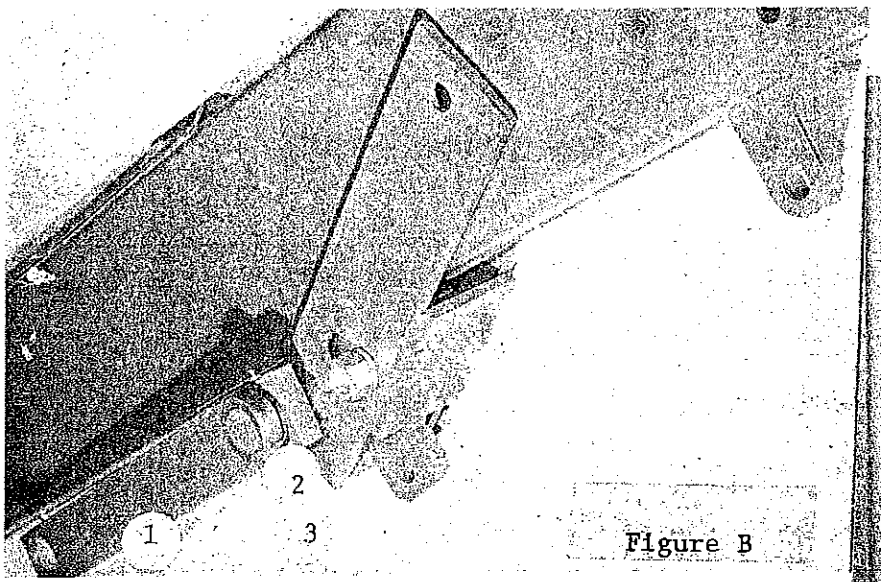


Figure B

1 - Control Link 3 - Bucket Roller

2 - Snap Ring

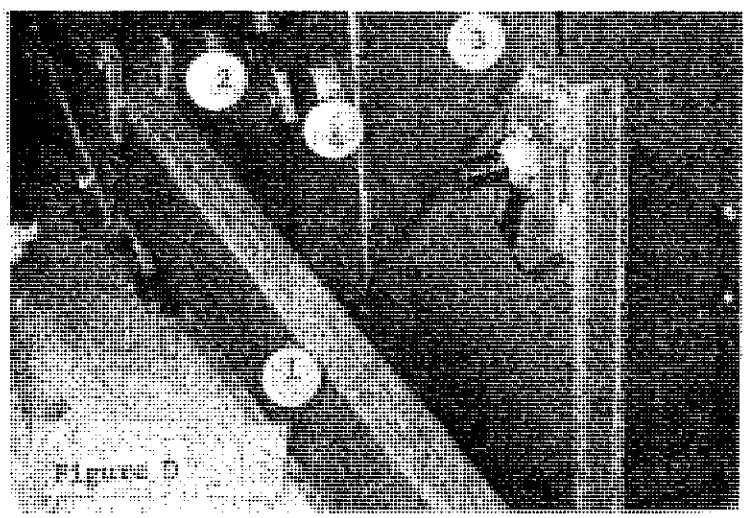


Figure D

1 - Siderail 3 - Bucket

2 - Control Link 4 - Rear Link Pin

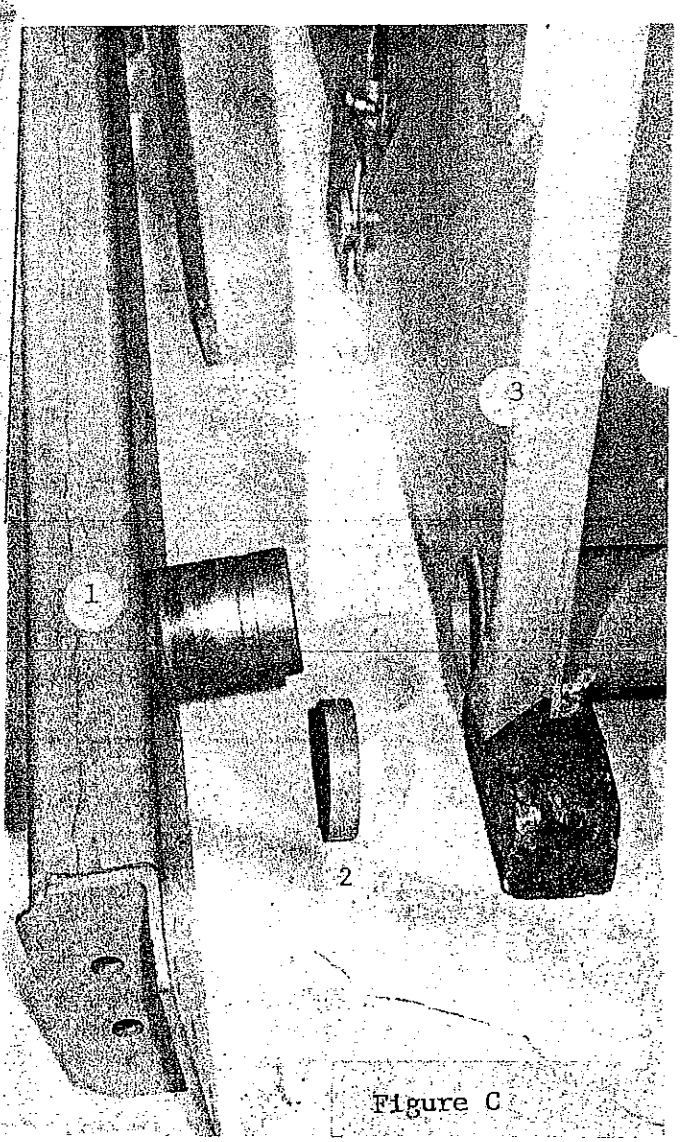
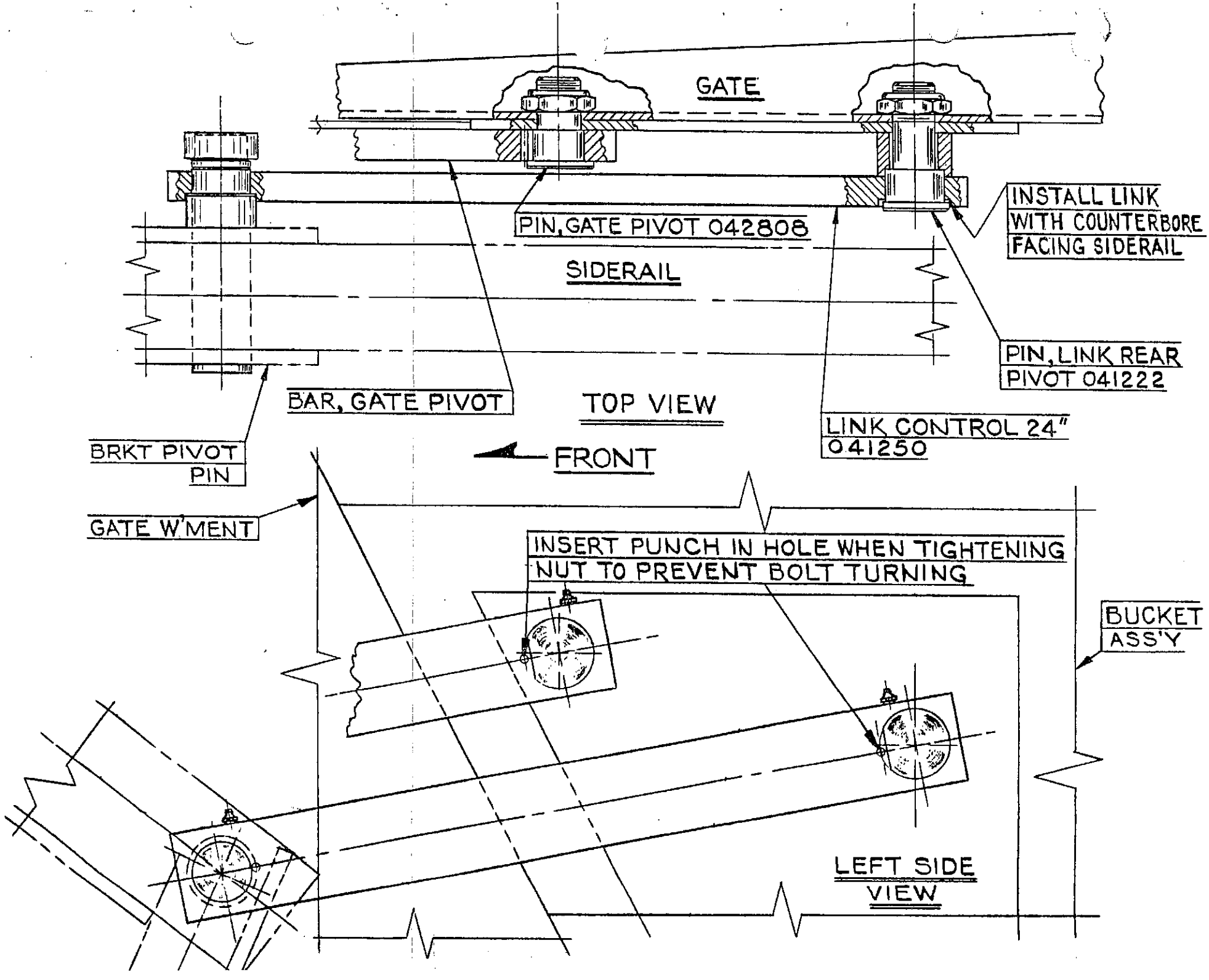
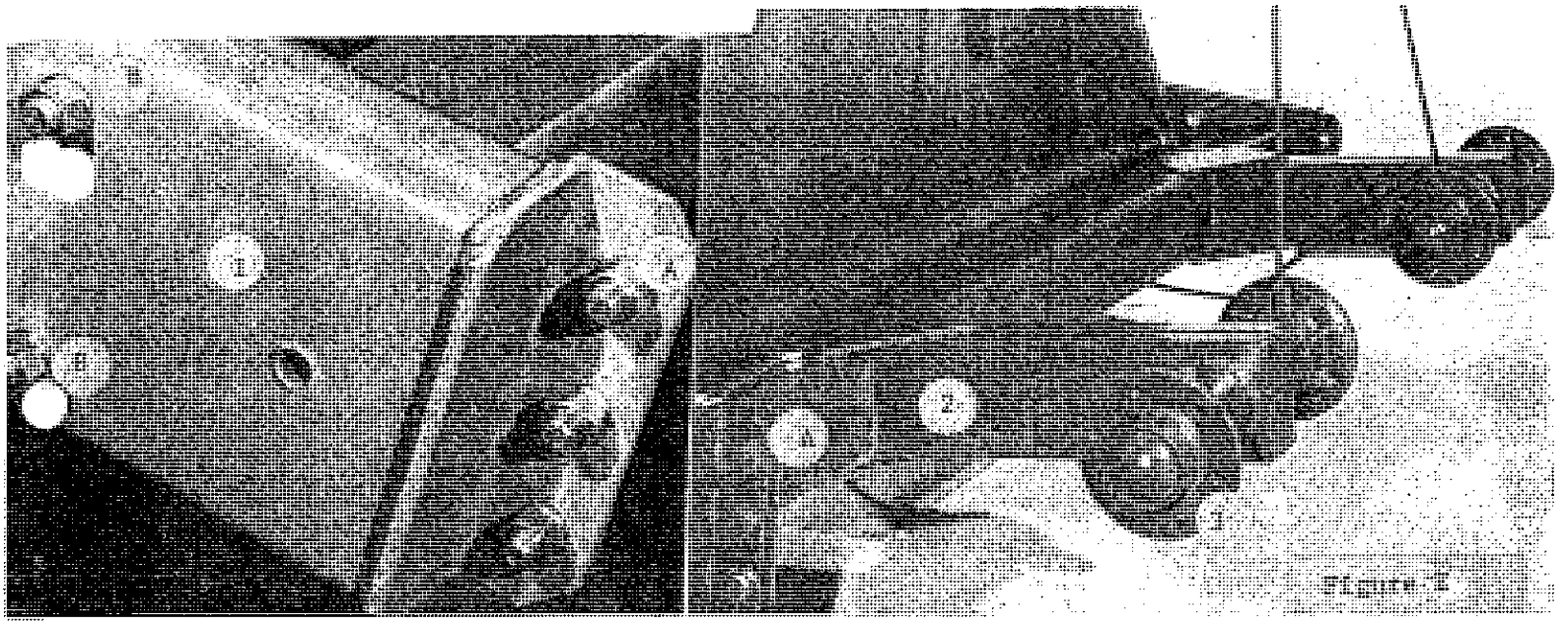


Figure C

1 - Siderail 3 - Lift Pipe

2 - Spacer


GATE
INSTALL LINK WITH COUNTERBORE FACING SIDERAIL
PIN, GATE PIVOT 042808
SIDERAIL
PIN, LINK REAR PIVOT 041222
BAR, GATE PIVOT
TOP VIEW
LINK CONTROL 24" 041250
BRKT PIVOT PIN
FRONT
GATE W'MENT
INSERT PUNCH IN HOLE WHEN TIGHTENING NUT TO PREVENT BOLT TURNING
BUCKET ASS'Y
LEFT SIDE VIEW



1 - Siderail
2 - Rear Frame
3 - Rear Spindle and Hub Assembly

Figure A - The pivot pin bracket is assembled with a 1 X 5" N.F. hi-strength bolt and spacer through the siderail. Install a 1 X 5-1/2" hex bolt in the pivot pin bracket under the siderail. This bolt must be installed on both the 700 and 900 scrapers except when the spreading cylinders are in use. (Refer to Optional Equipment Section.)

Figure B - On the inside of the siderail, the control link is assembled to the pin bracket with a snap ring. The rollers are slipped on the pin, and held in place by the gate after complete assembly. Important - See page 3-A for control link assembly.

Figure C - Thoroughly grease the stub shaft welded on the inside of the siderail, slide the pivot bearing spacer over the stub shaft, and insert shaft into lift pipe. (a)

Figure D - The control link is attached to the bucket with the rear link pin and a 1-1/2" locknut. Insert punch in hole of link to hold head of pin while tightening the locknut on the inside of the bucket. Refer to note on page 2 regarding the absolute necessity of thoroughly tightening the locknuts inside the bucket.

Figure E - The rear frame completes the assembly by securing it to the siderails with 2 - 3/4 X 5" hi-strength hex head bolts, and 3 - 3/4 X 2-1/4 hi-strength hex head bolts on each side. Refer to bolt (A) in Figure E. If these two top 3/4 X 2-1/4" bolts are inserted first on both sides they will stabilize the rear frame and the siderail connection so that the rest of the bolts can be installed without difficulty.

Note: Do not tighten the 10 bolts which connect the rear frame to the siderails until the gooseneck is assembled. Before lifting the rear frame into place, observe from Figure E that the welded arms are tilted upward. If the rear frame is turned over, and these arms are slanted down, it will be impossible to lower the cutting bit enough to make a cut. The rear spindles and hubs are factory assembled. The 4 rear wheels and tires can be installed at this time.

IMPORTANT: The 2 bolts marked (B) in Fig. E must have the heads on the inside in order to avoid interference with the lift pipe.

Note (a): The pivot bearing spacer - 2, Fig. C - will be welded to the siderail shaft on Model 700 scrapers.

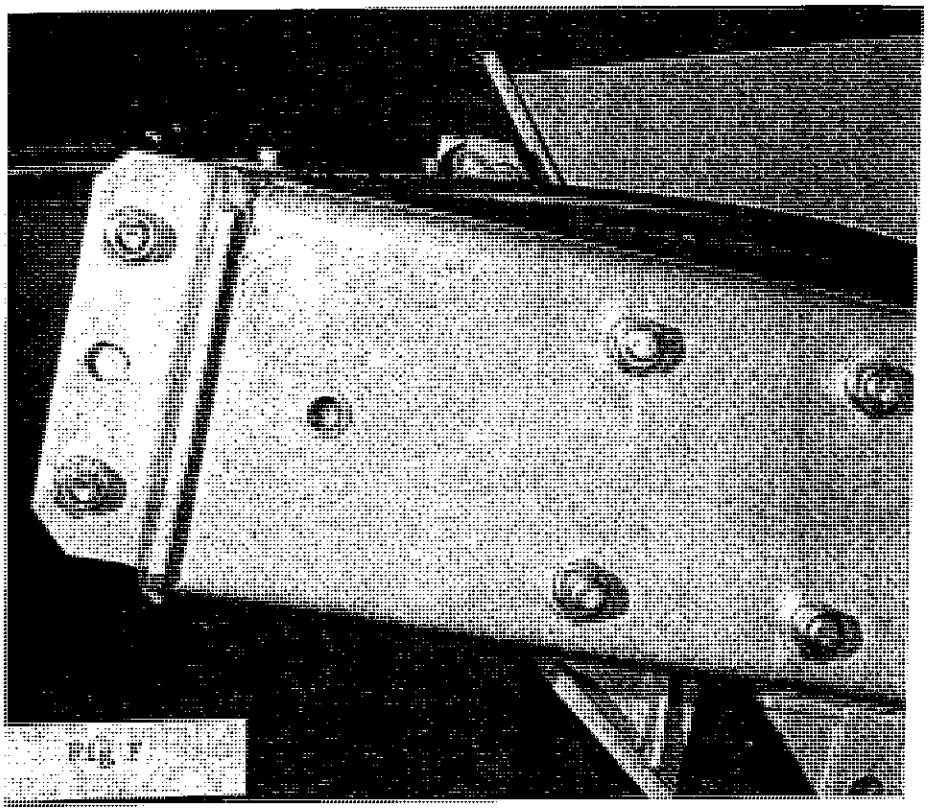


Fig. F

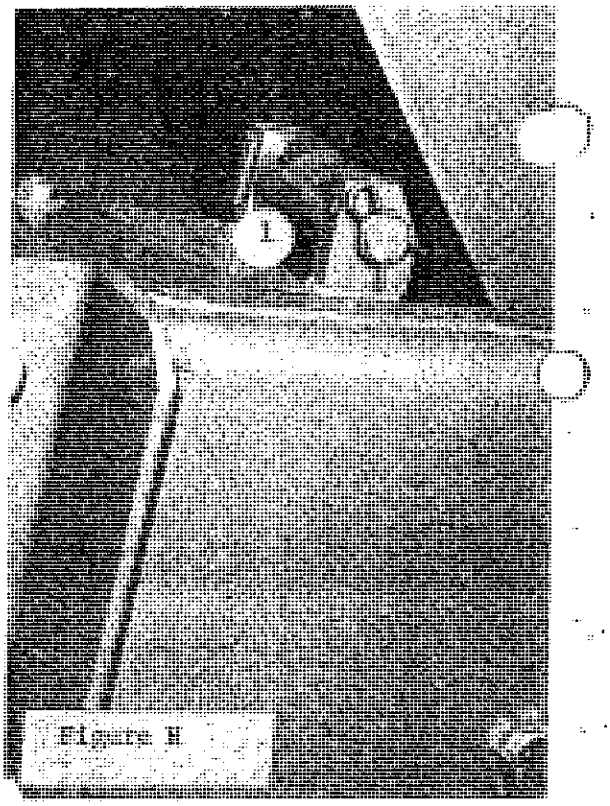


Figure H

1 - Gate Roller Assembly

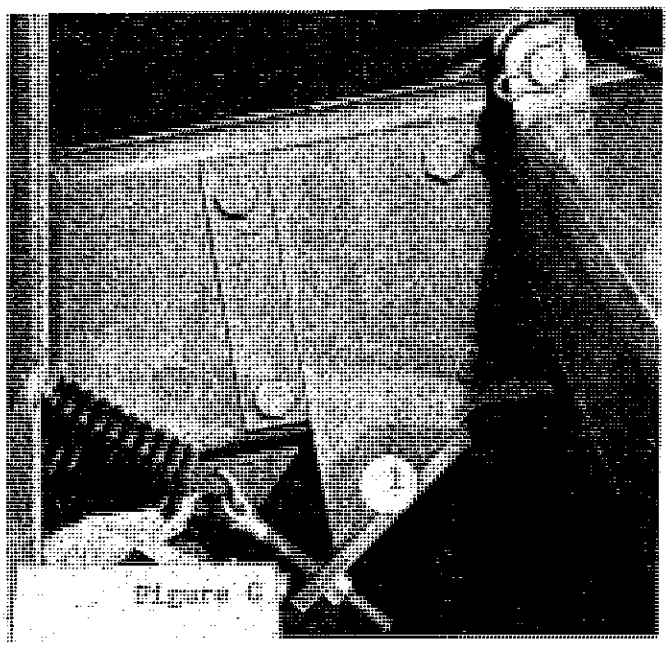


Figure G

1 - Spring Anchor Bracket

Figure F - Lift gooseneck weldment into place and assemble to siderails with 2 - 3/4 X 2-1/4" hi-strength hex bolts at front, and 2 - 3/4 X 5" hi-strength bolts at rear of gooseneck plate. Note from Fig. G that the heads of these bolts are on the inside to avoid interference with the gate spring. (The center hole in the siderail is a tooling hole only.)

Figure G - The spring anchor bracket is installed at this time on the inside of the siderails with 2 - 3/4 X 5-1/2" hi-strength hex bolts - with the bolt heads on the inside. The chain and spring will be assembled later.

IMPORTANT - Do not tighten the siderail to gooseneck bolts at this time.

Figure H - The gate roller assemblies are factory installed and shipped in place.

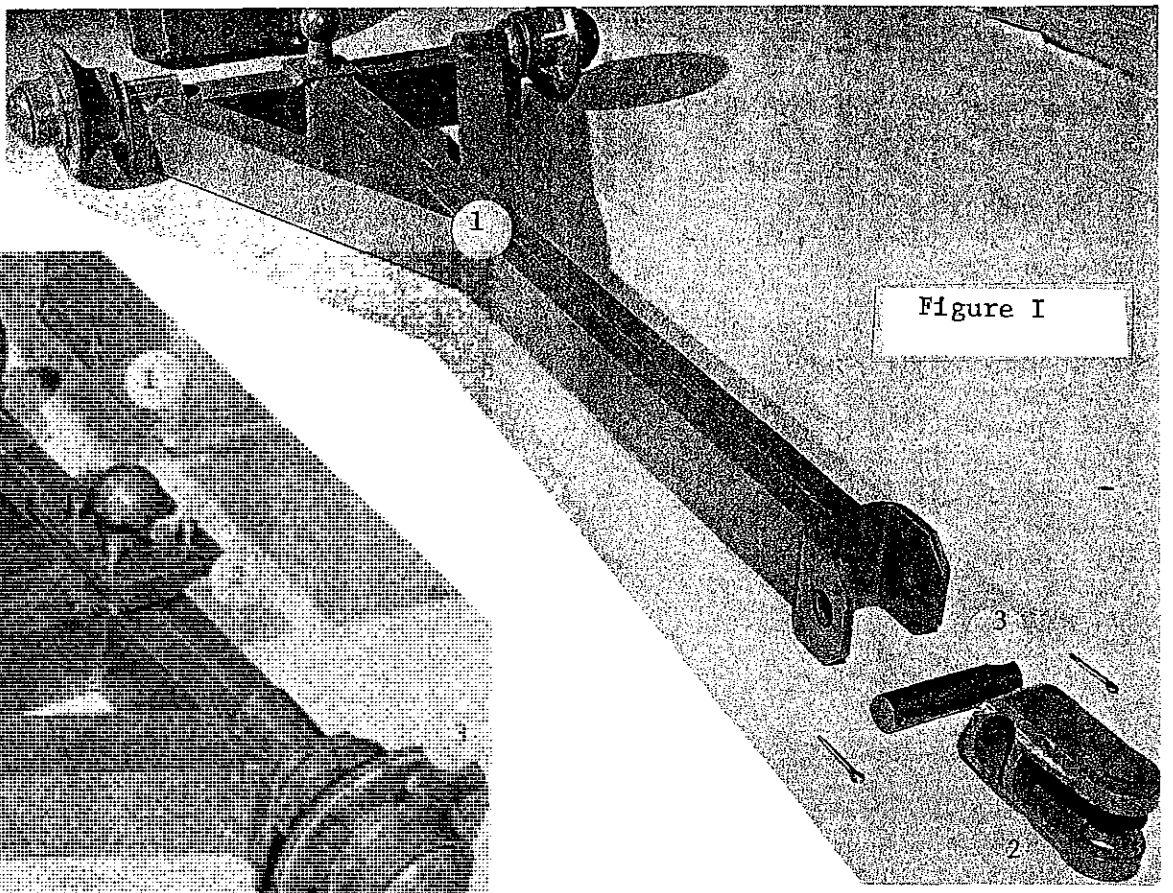


Figure I

1 - Dolly Tongue
2 - Hitch Clevis
3 - Clevis Pin

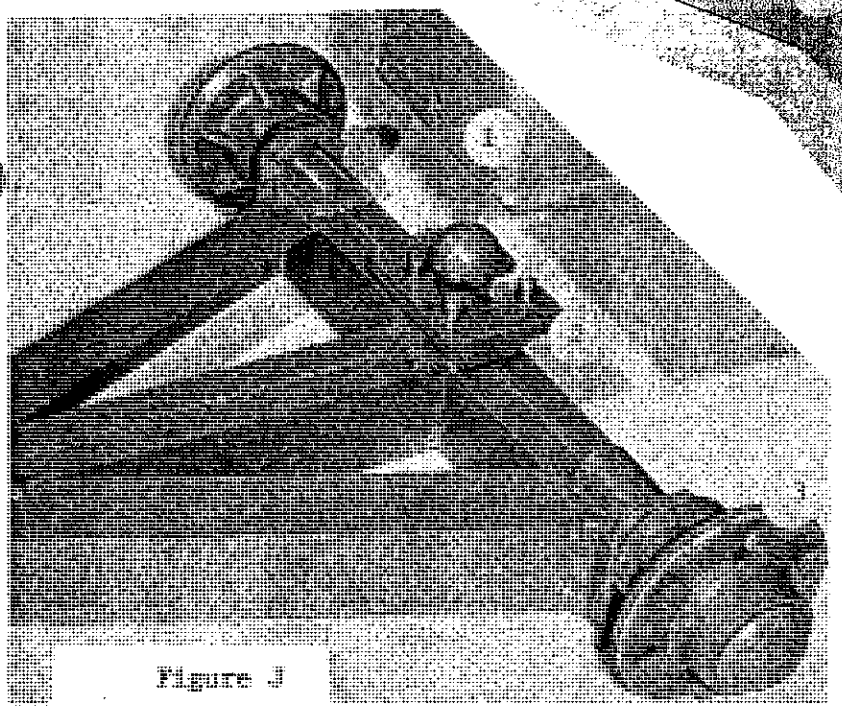


Figure J

1 - Gooseneck 2 - Ball Keeper Plate
3 - Dolly Hub

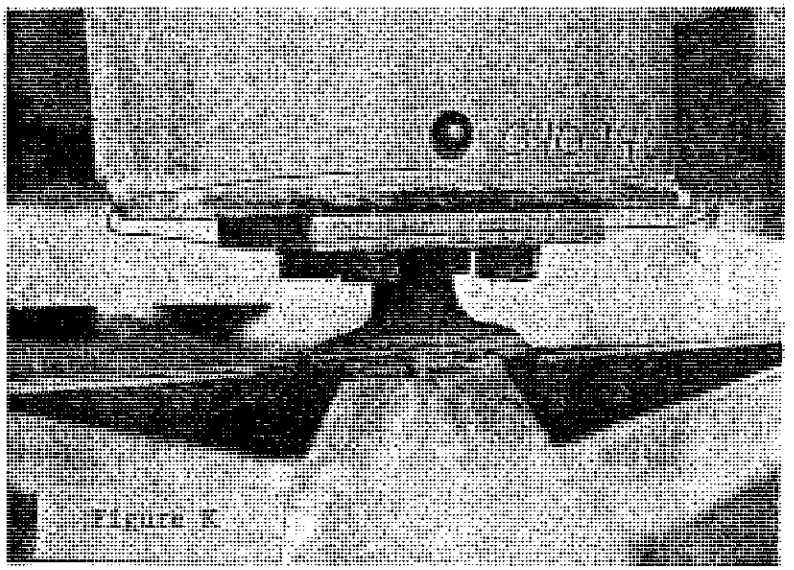


Figure K

Figure I

Move the dolly tongue in place under the gooseneck. Install hitch clevis to dolly with the clevis pin and 2-1/4 X 2" cotters.

Figures J & K

Connect dolly tongue ball to gooseneck with ball keeper plate and 4 - 3/4 X 1-3/4" cap screws. Note that the opening in the keeper plate is to the rear.

IMPORTANT - The dolly hubs are factory assembled and prelubricated.

Figure J is the 6-bolt hub used on the Model 700 Scraper.

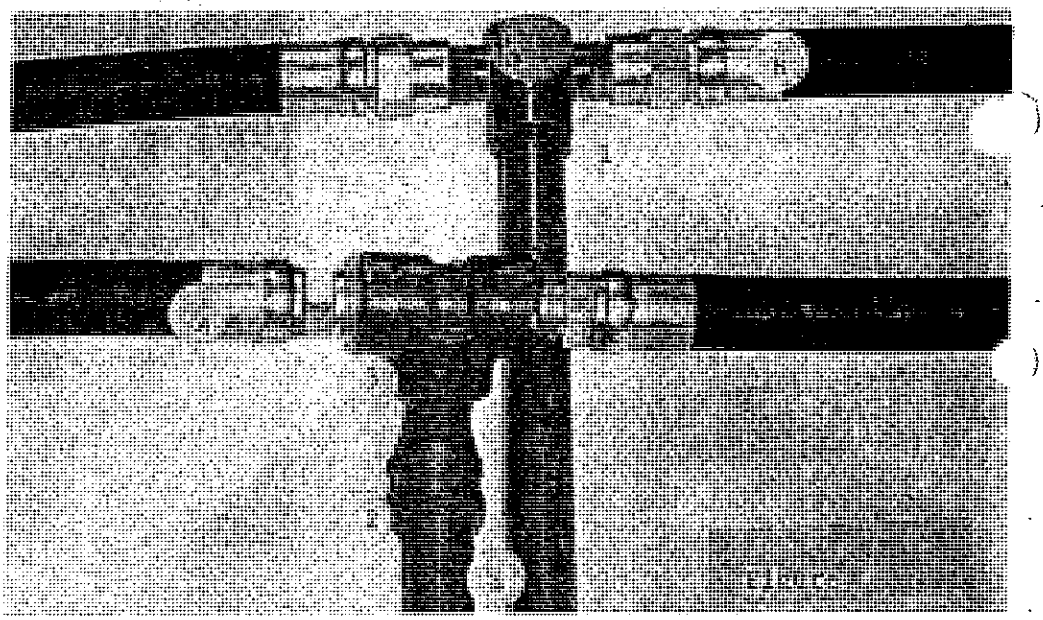
On Model 900 Scrapers, the dolly tongue will have 8-bolt hubs installed.

The 6-bolt dolly wheels can now be assembled to the dolly tongue hubs for the Model 700 Scraper, or the 8-bolt wheels for the Model 900 Scraper.

HYDRAULIC COMPONENTS ASSEMBLY

Before starting the hydraulic line installations, set one complete line of components aside and pre-assemble it before the other line is started.

IMPORTANT - Line A must go from the tractor control valve to the Front Port on both bucket cylinders. Line B must be connected to the Rear Ports of the cylinders. If these lines are crossed, the lift pipe can be twisted permanently and damaged beyond repair.



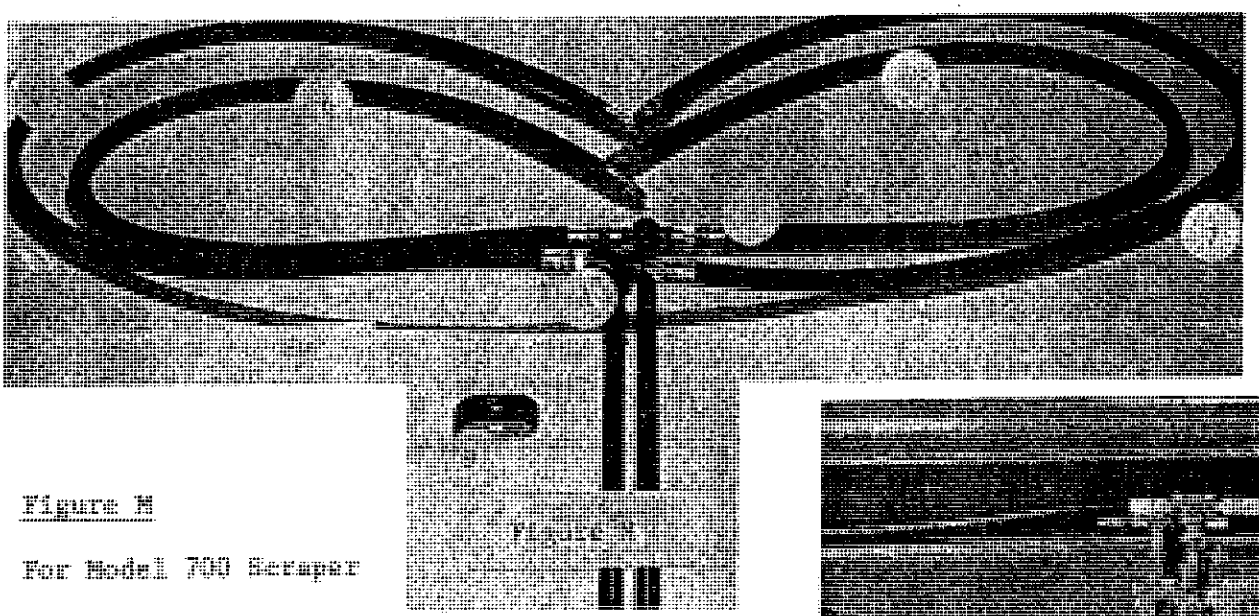


Figure L

1 - 1/2" Special Tee
2 - 1/2 X 45° Street Elbow
3 - 1/2 X 90° Street Tee
4 - 1/2 X 47" Pipes

Figure M

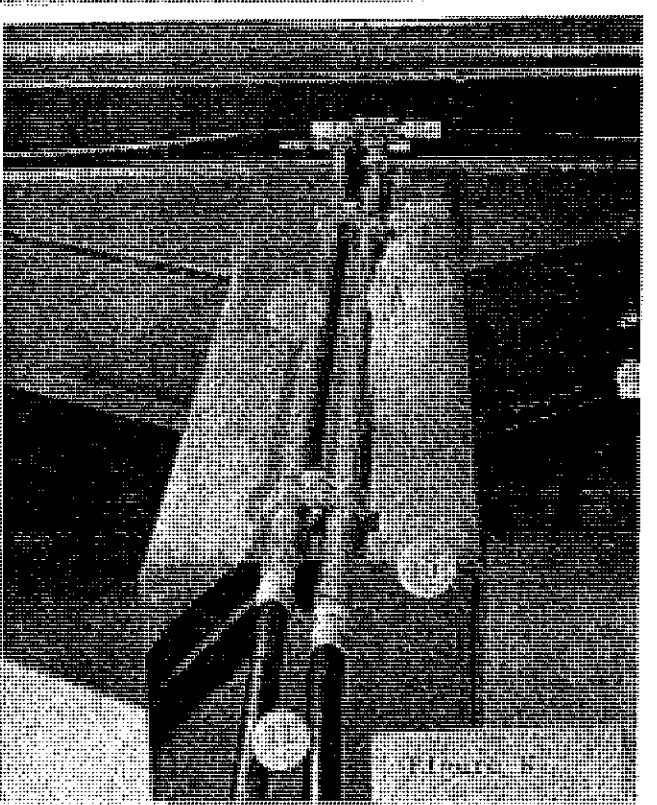
For Model 700 Scraper

5 - 87-1/2" Hose
6 - 113-1/2" Hose

9 - Pipe Clip

For Model 900 Scraper

7 - 103" Hose
8 - 130" Hose



Use pipe dope when connecting fittings to the pipes. The pipes are secured to the gooseneck by 1/2 X 1-1/4 hex head bolts and lockwashers and the 2 pipe clips.

10 - Gooseneck 11 - 96" Hoses

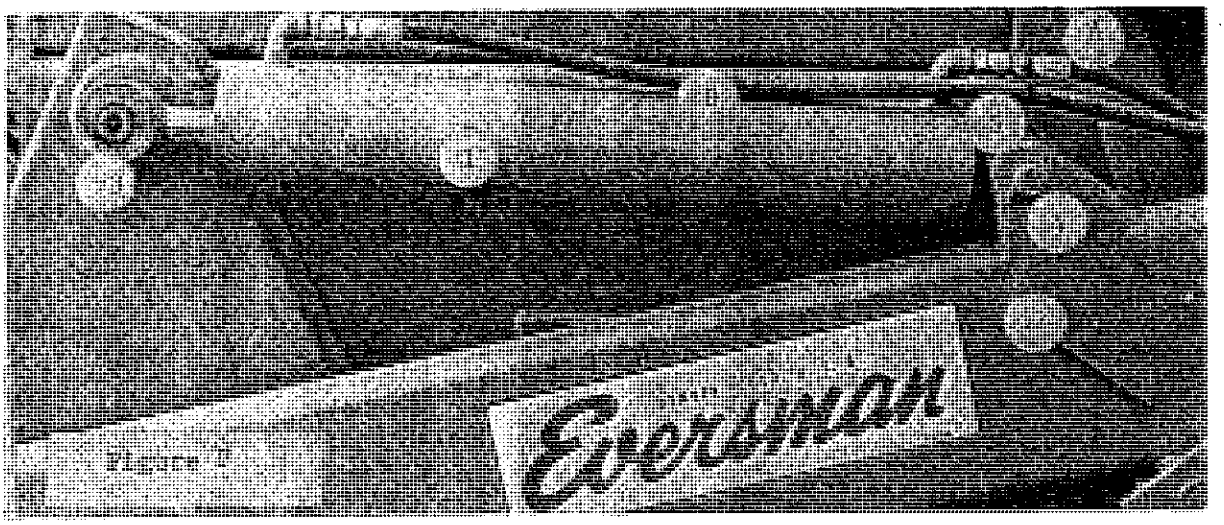


Figure P - Assemble cylinder to siderail with 1-1/4 X 6" pin and 2 - 1/4 X 2" cotters; and to lift pipe with snap ring. Secure hoses in place with plastic ties.

1 - 4-1/2" bore, 24" stroke cylinder
2 - Siderail
3 - Snap ring
4 - 1-1/4 X 6" Pin
5 - Plastic Tie
8 - Pipe Clips

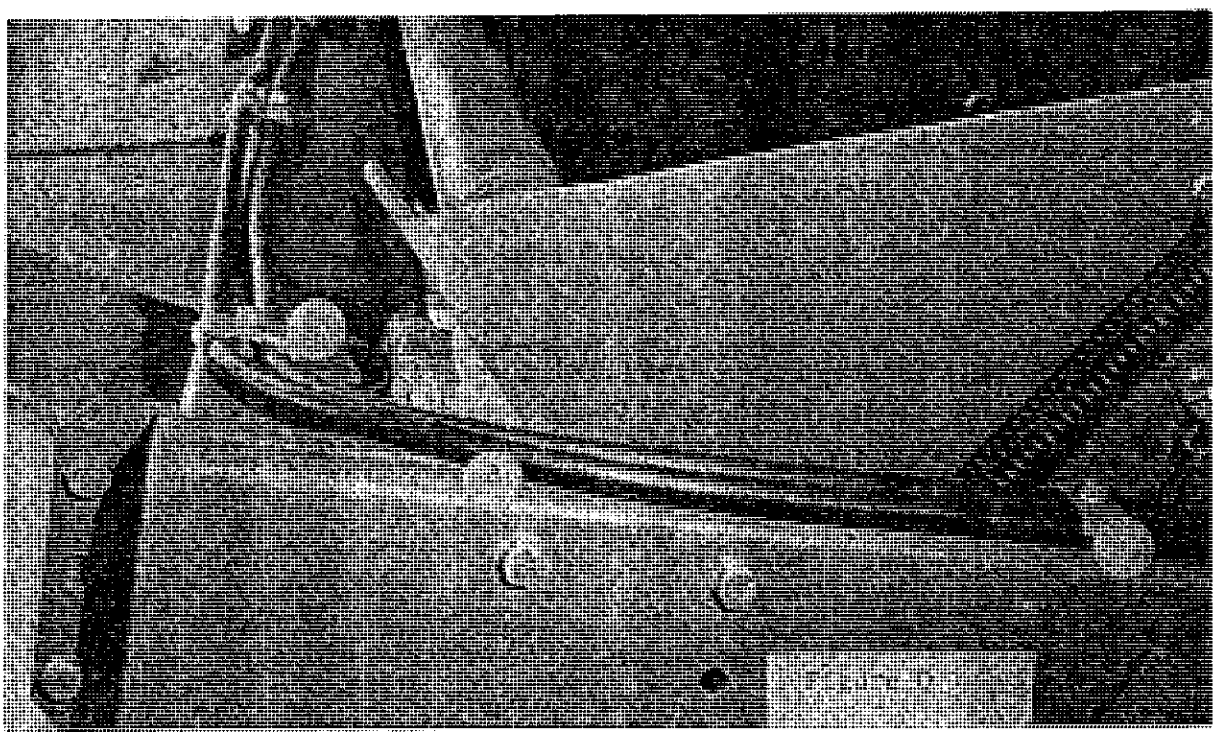
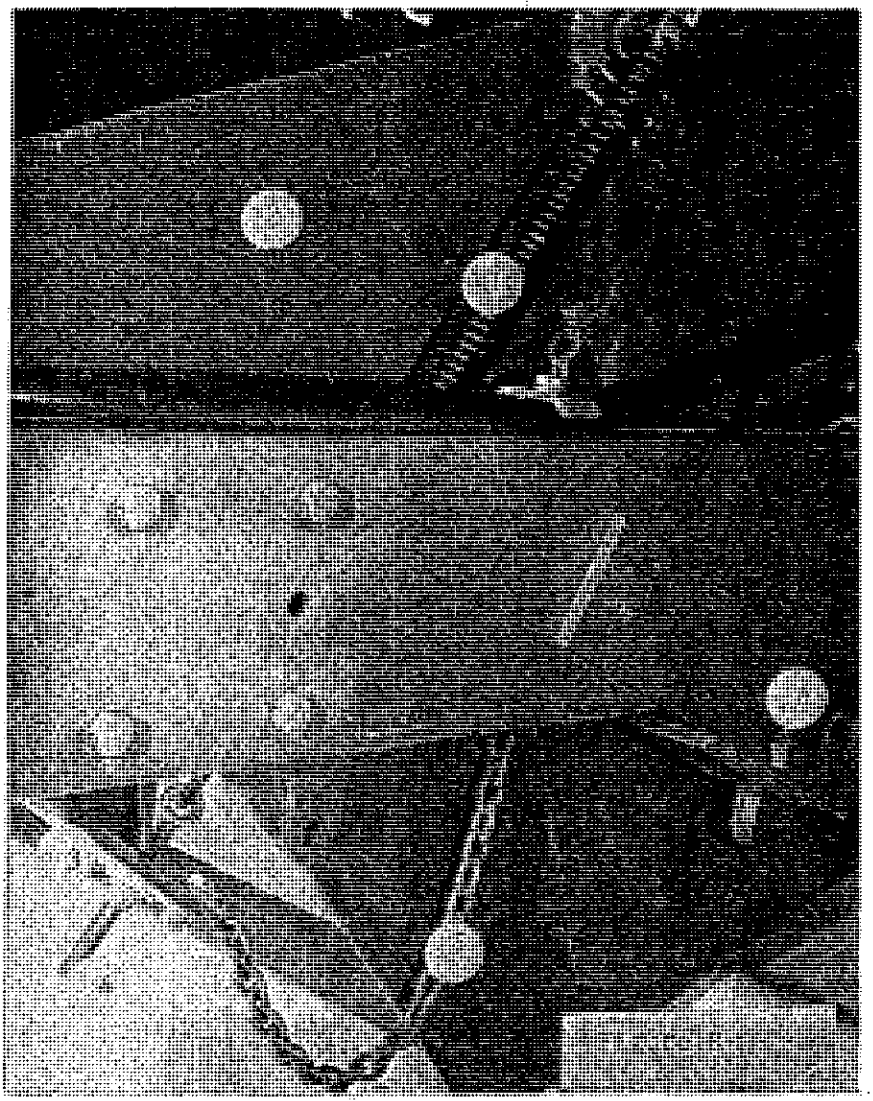


Figure Q - Fasten hoses to siderail and gooseneck with pipe clips and 1/2 X 1-1/4 hex head bolts.



Note: At this point, check to be sure the pivot arm bolts are installed on both siderails - refer to point A on Figure R.

Gate Closure Spring and Limit Chain Assembly:

Figure R

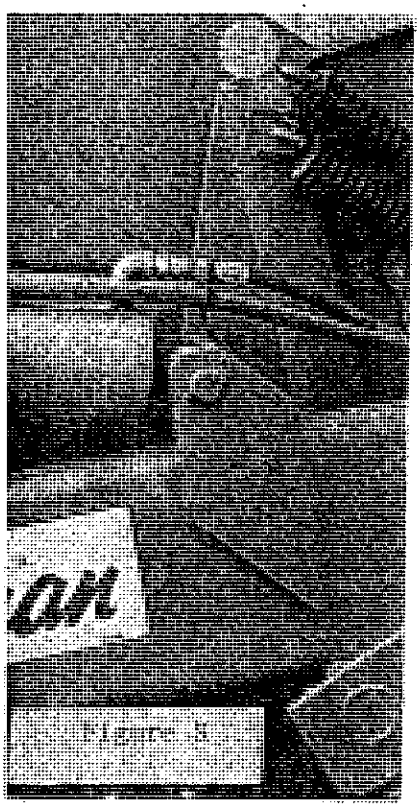
408001

1 - Gate Spring
2 - Gate
3 - Spring Anchor Bracket
4 - Eyebolt
5 - Limit Chain

Model 700 Scraper

The Model 700 uses one gate spring on each side which is attached to the gate post with a 1" flat washer and 1/4 X 2" cotter, and to the spring anchor plate with the eyebolt and a 5/8 flat washer, lockwasher and hex nut. Run the nut on the eyebolt full length of thread.

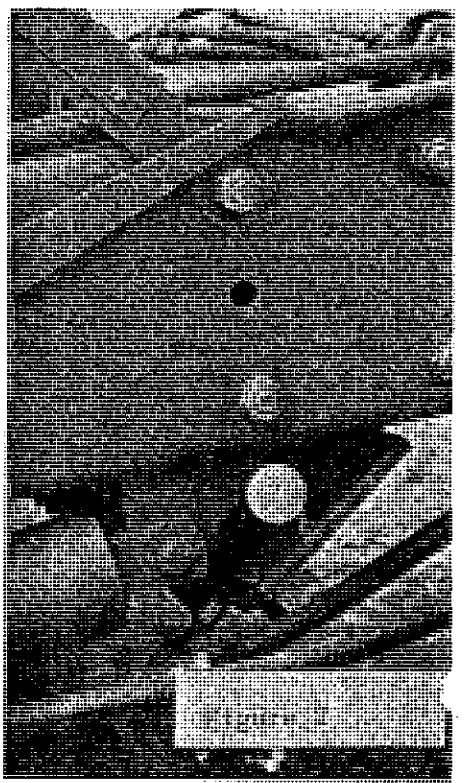
On both models, attach limit chain to bracket on gate angle and to spring anchor plate with 1/2 X 1-1/2" hex bolts and a 1/2" flat washer.



1 - Upper Spring Bracket

Figures S & T

The Model 900 Scraper uses a double spring on each side. The springs are assembled to the gate post with the upper spring bracket and a 1/4 X 2" cotter, and to the spring anchor bracket with the lower spring bracket and a 5/8 hex nut - run full length of thread.



2 - Lower Spring Bracket

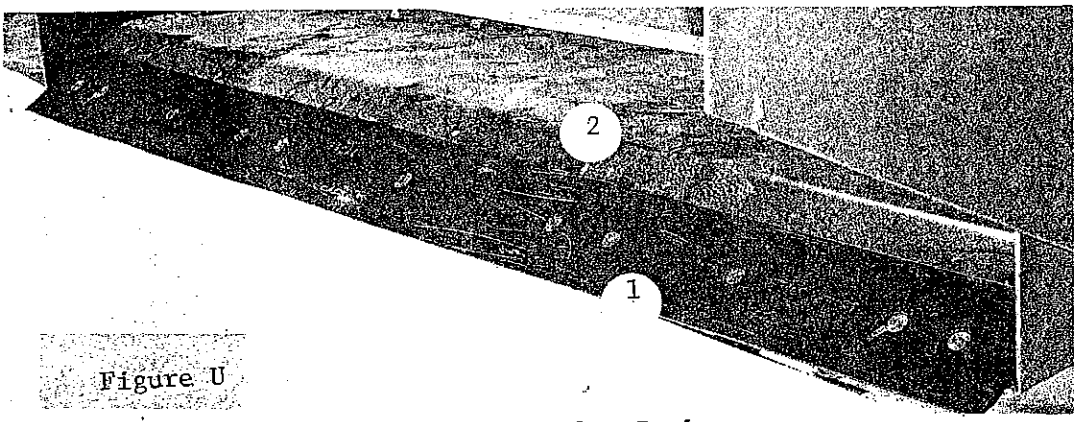


Figure U

1 - Cutting Bit 2 - Bucket

Figure U V021450

1 - Cutting Bit
2 - Bucket

The reversible and replaceable cutting bit is attached to the bucket with 1/2 X 1-3/4" plow bolts, 1/2" nuts and lockwashers.

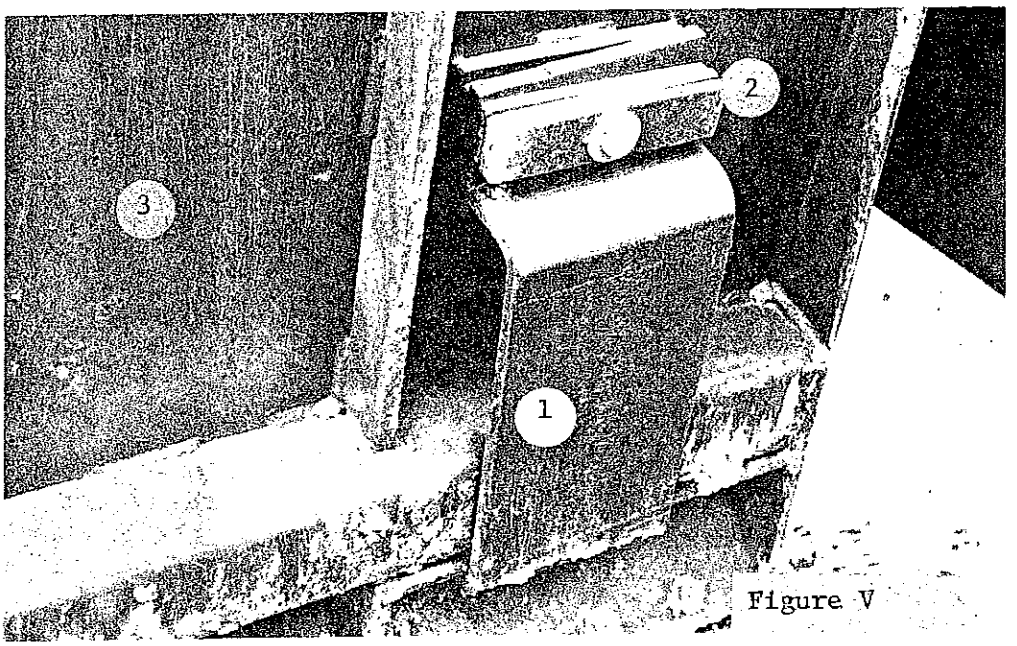


Figure V

Figure V

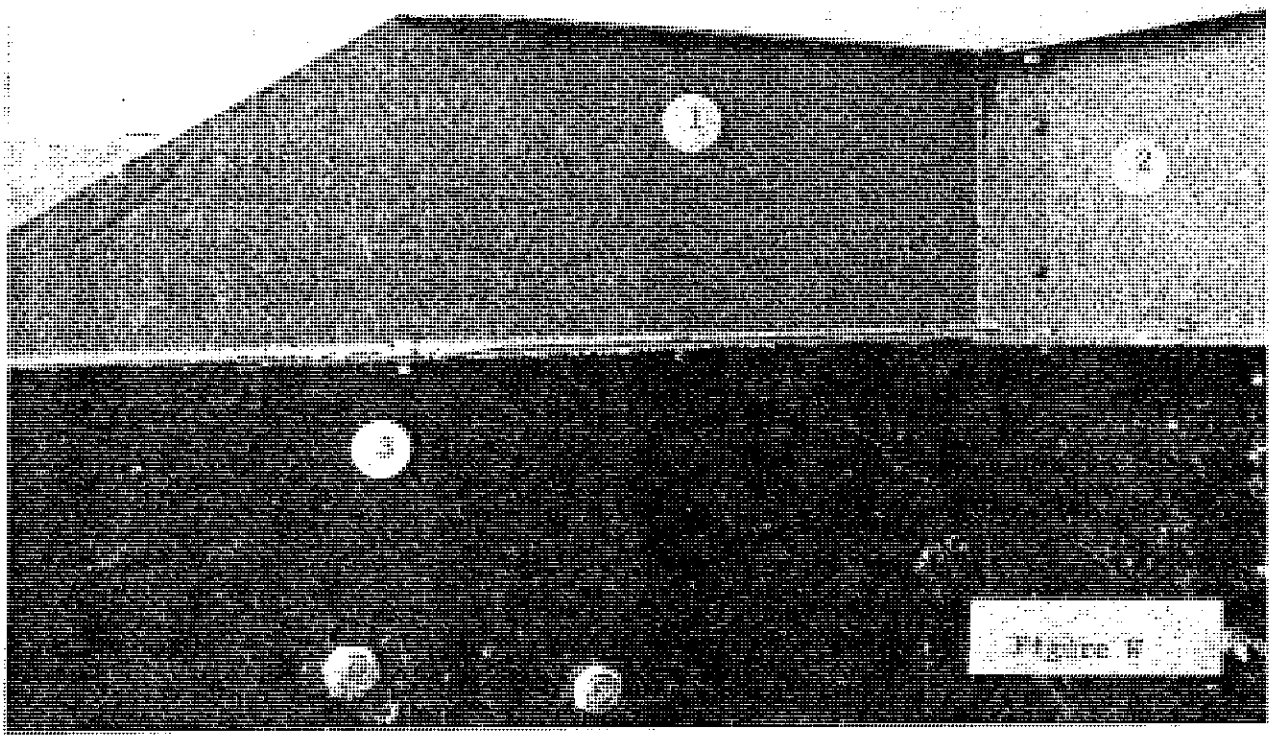
1 - Stabilizer
2 - Spacer
3 - Bucket

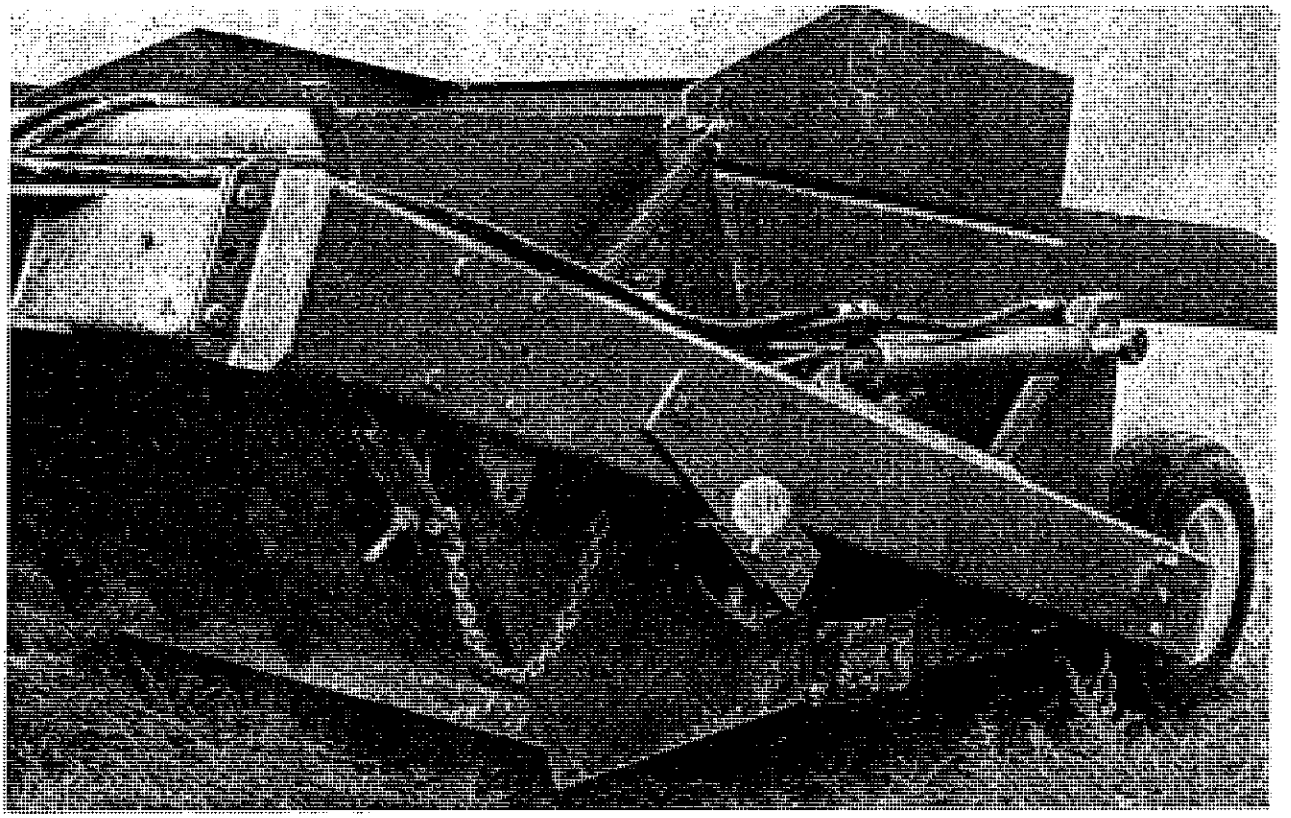
The stabilizers are assembled under the bucket with spacer bars and a 1/2 X 2-1/2" hex bolt. See section on Operating Instructions for correct adjustment of the stabilizers.

Figure W

1 - End Sideboard
2 - Rear Sideboard
3 - Bucket

The bucket extension sideboards are standard on the Model 900 Scraper and optional on the Model 700. They are assembled to the bucket with 1/2 X 1" hex bolts, nuts and lockwashers.





SPECIAL NOTES - IMPORTANT - FOLLOW THESE INSTRUCTIONS

Referring back to the detail assembly instructions, the bolts at the four corners of the siderails must now be thoroughly tightened as follows:

a) While the bolts are still loose, center the bucket and gate in the middle of the frame so there is equal clearance on both sides. Lower the bucket to approximately 1/2" from the floor and be certain the bit is the same height on both sides. The lower bolt connecting the siderails to the gooseneck, point A in photo above, should be approximately 39-1/2" above the floor.

b) Run the bucket through several cycles slowly, from full dump position to full cut.

c) Check to be certain the bucket and gate are still centered. (There is sufficient tolerance in the bolted connections to actually throw the bucket or gate far enough off center to cause interference.)

d) Then thoroughly tighten all corner bolts, progressively, as you move around the scraper. If bolts at one corner are completely tightened before moving to the next corner it is possible to pull the frame out of line. Hence, tighten each bolt several turns and then move on to the next, continuing until all are tight. Then run scraper through full cycle 4 or 5 times and retighten all bolts.

e) Be certain all zerks are well lubricated. Check hydraulic oil reservoir in tractor after cylinder hoses and oil lines are full.

f) In order to lift the 700 and 900 buckets to dump with a full load, the tractor hydraulic system must develop at least 2000 PSI.

g) Be certain all air is bled from the hydraulic system, since air pockets can produce erratic operation. After filling the scraper oil lines and cylinders, it will probably be necessary to check, and refill, the tractor hydraulic reservoir.

h) Once again, check point B, in photo above, to be certain the two 1 X 5-1/2" bolts through the pivot pin brackets are installed and tight.

i) Check inflation of all six tires - inflate to 50 PSI.

Assembly Details for the Optional "Spreading Scraper" Hydraulic Kit

The addition of two - 8" stroke cylinders to the standard Model 700 and 900 Scrapers enables the operator to precisely control the spread during dumping. For this operation two tractor control valves are required.

The following hydraulic components are ordered as an optional kit, and can be installed on the 700 or 900 scrapers at any time the owner wishes.

As was the case with the bucket hydraulic lines, before starting the spreading hydraulic installations, set one complete line of components aside and pre-assemble it before the other line is started.

IMPORTANT

Line A must go from the tractor control valve to the rear ports of both spread cylinders.

Line B must be connected to the front ports of both cylinders.

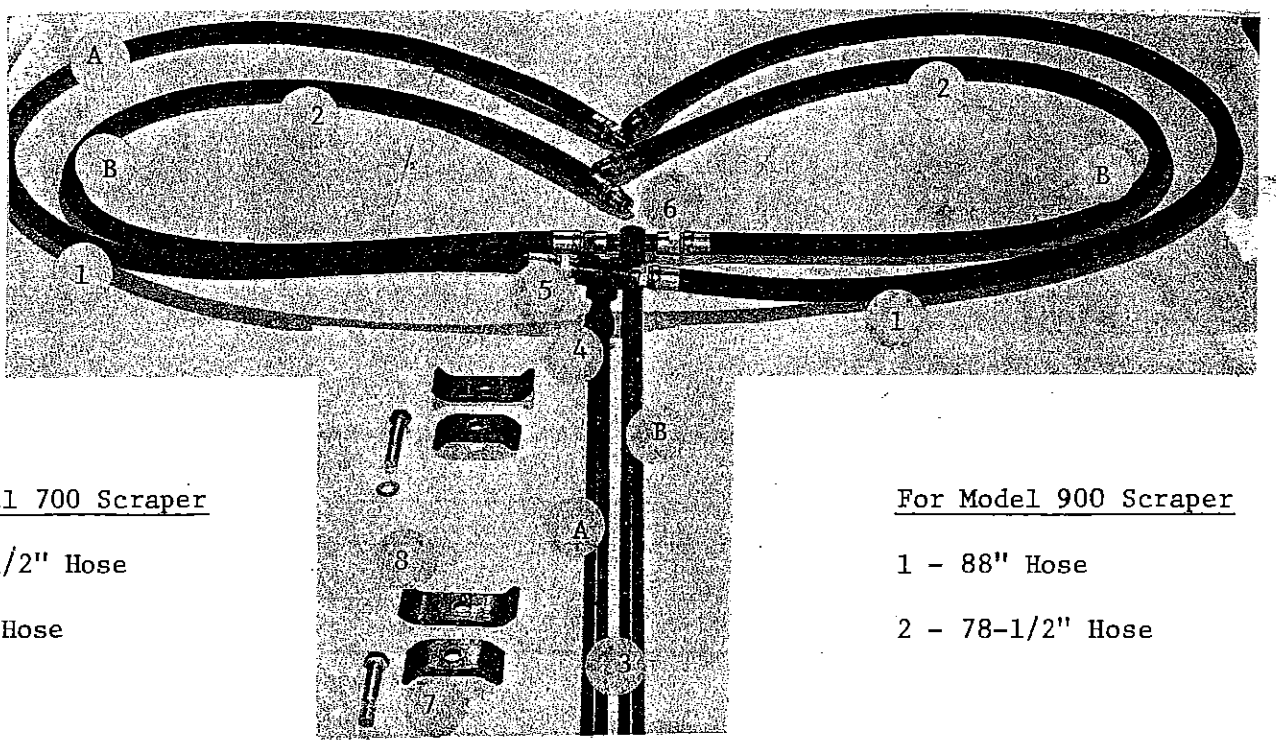


Figure A A

For Model 700 Scraper

1 - 78-1/2" Hose

2 - 66" Hose

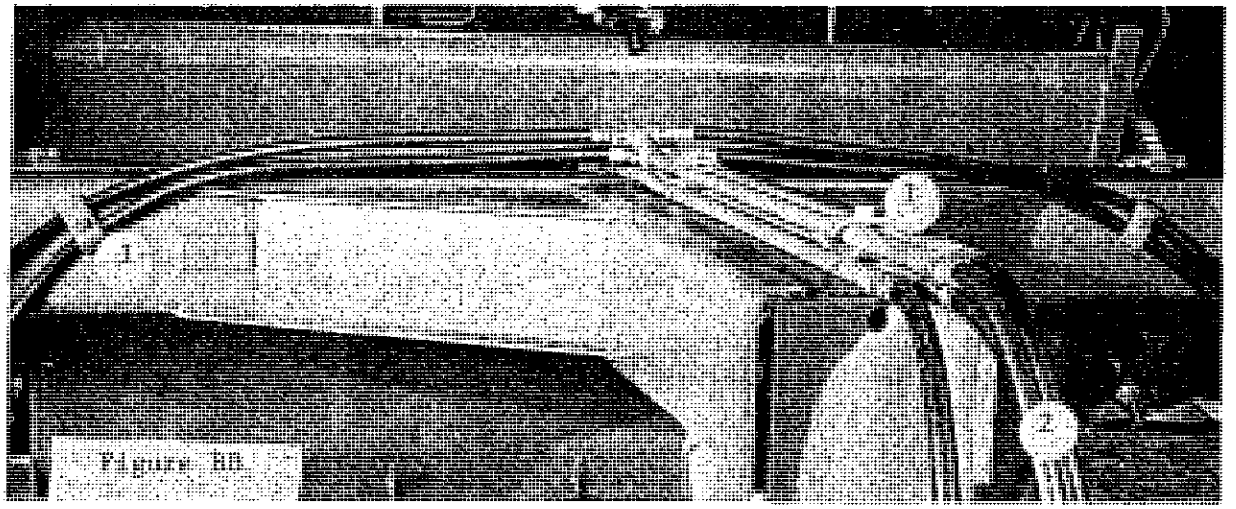
For Model 900 Scraper

1 - 88" Hose

2 - 78-1/2" Hose

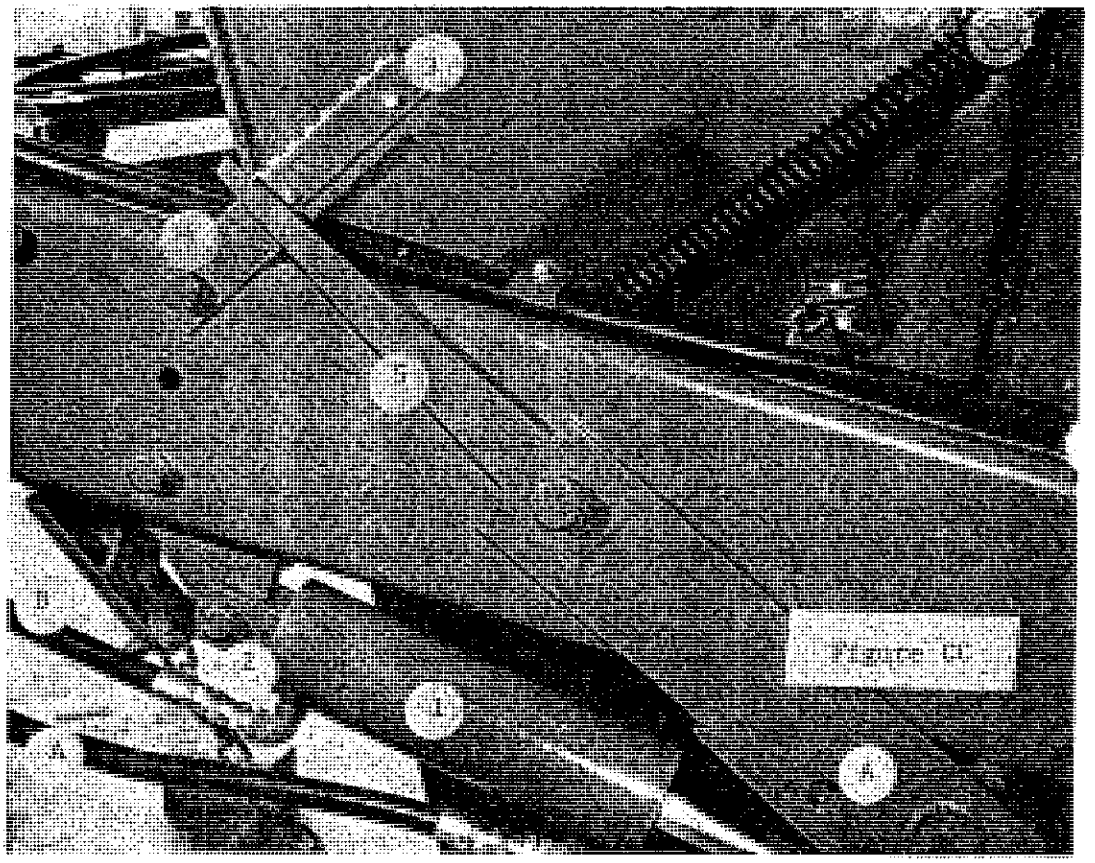
3 - 1/2 X 37" Pipe
4 - 1/2 X 45° Street Elbow
5 - 1/2 X 90° Street Elbow
6 - 1/2" Special Tee
7 - Top Pipe Clip
8 - Middle Pipe Clip

Use pipe dope when connecting fittings to the pipes.



1 - Pipe Clip 2 - 96" Hose

Secure hoses to gooseneck with pipe clips and 1/2 X 2-1/2" bolts. Assemble hoses to front of oil pipes.



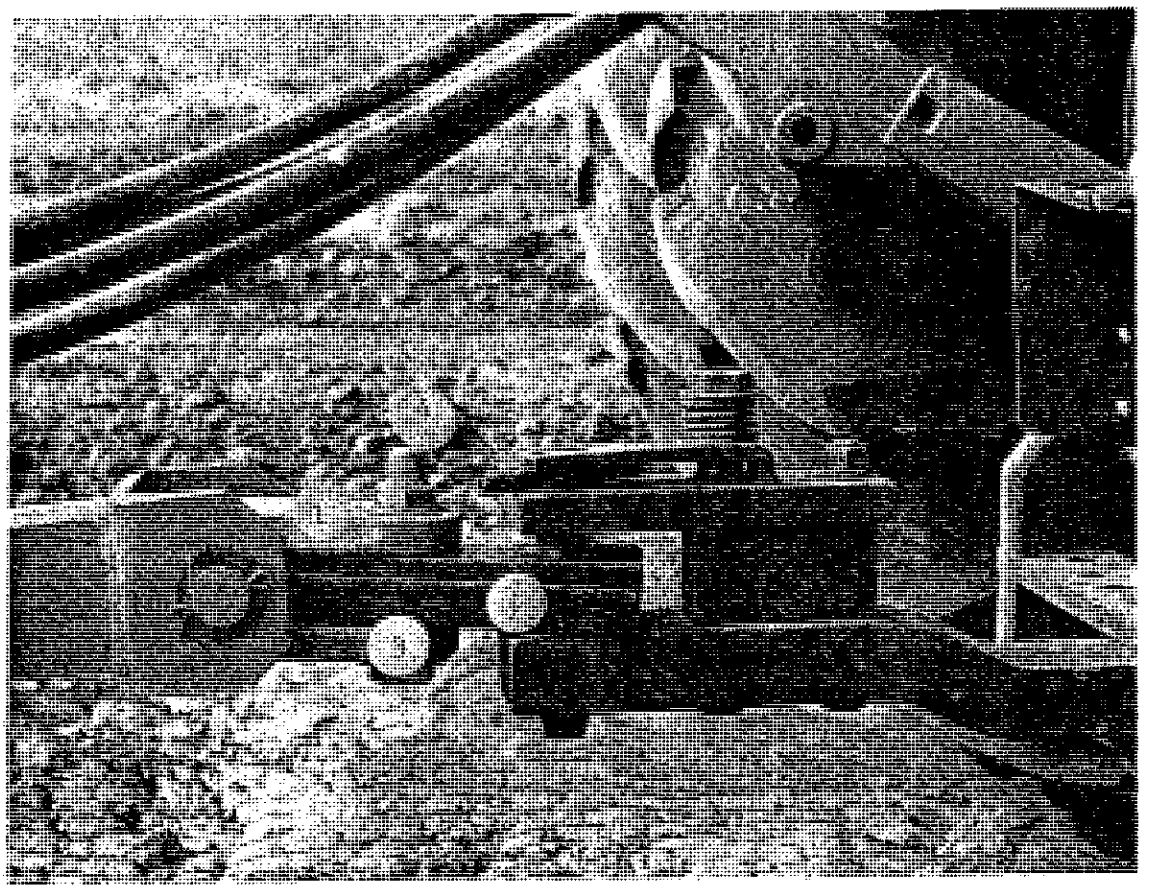
1 - 8" Stroke Cylinder 2 - 1/2" Swivel 3 - Indicator Bracket
4 - Indicator Arm 5 - Pointer

The cylinder is assembled to siderail with 1-1/2" cylinder pins. Connect Line A hoses to rear ports of cylinder on both sides of scraper with swivel fittings, and Line B hoses to the front cylinder ports. Assemble indicator bracket to indicator arm with 1/4 X 3/4 hex bolts; and to siderail with existing siderail bolt. Attach pointer arm to pin bracket and siderail with existing bolt. IMPORTANT - When the spreading kit is installed, note that the 1 X 5-1/2" bolts through the pivot pin bracket, point A, are removed. The spread cylinder will be inoperable if these bolts are left in.

OPTIONAL EQUIPMENT

Drawbar Adaptor Kit - #045117

This kit should be ordered for those tractors which use hammer strap-type drawbars.



1 - Clevis

2 - Adaptor Bar

3 - Spacer

4 - 1 X 5-1/2 Hex Head Bolt

The adaptor bar is secured to the clevis casting with a spacer and a 1 X 5-1/2 hex head bolt, 1" flat washer and 1" hex nut.

The bar has a 1-7/16" hole for attaching to the tractor drawbar, with pin provided on the tractor.

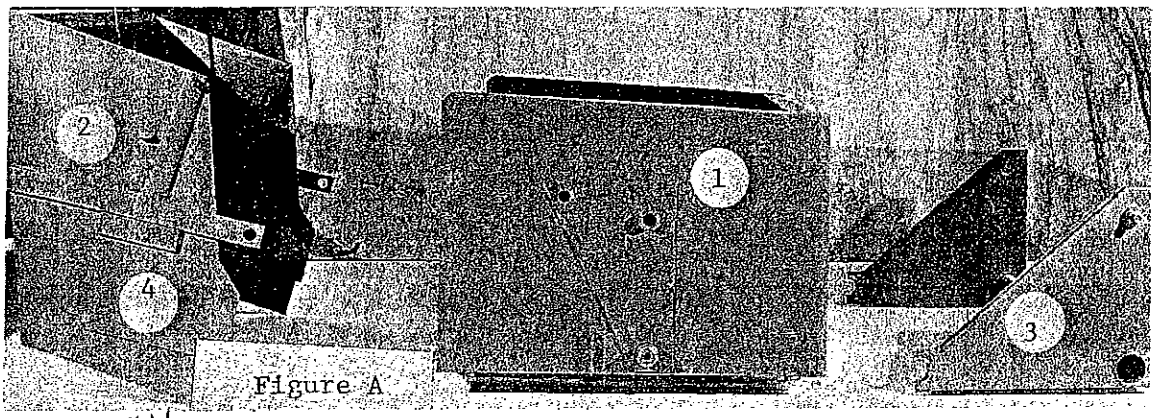


Figure A

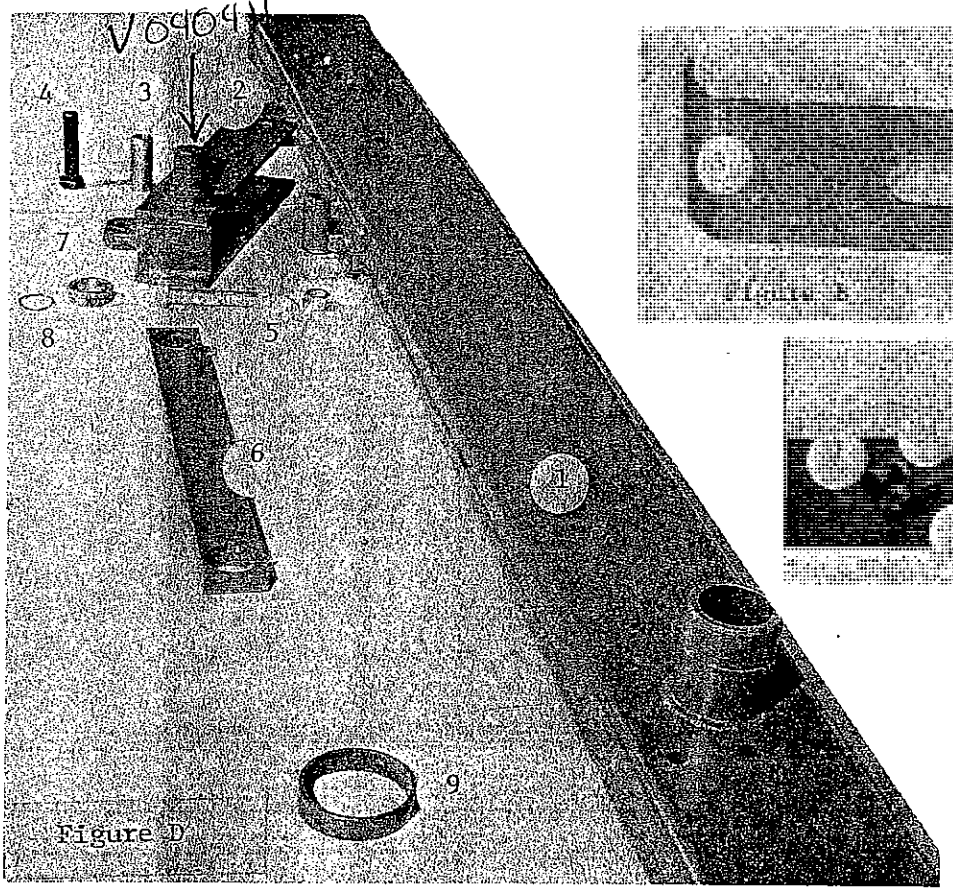
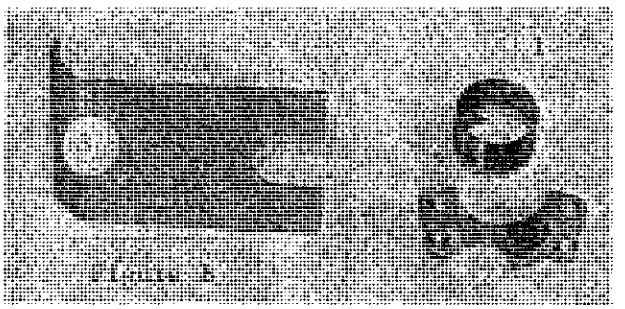
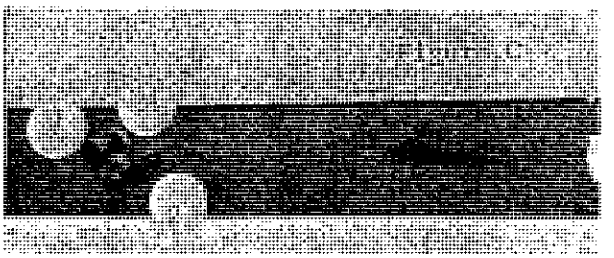
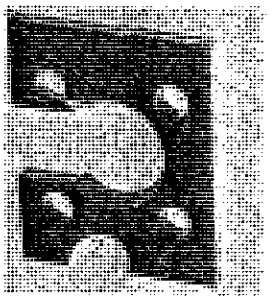
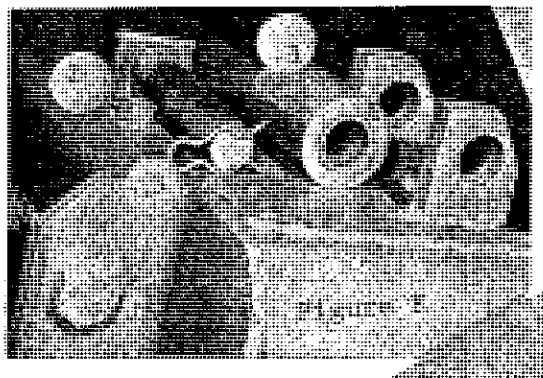


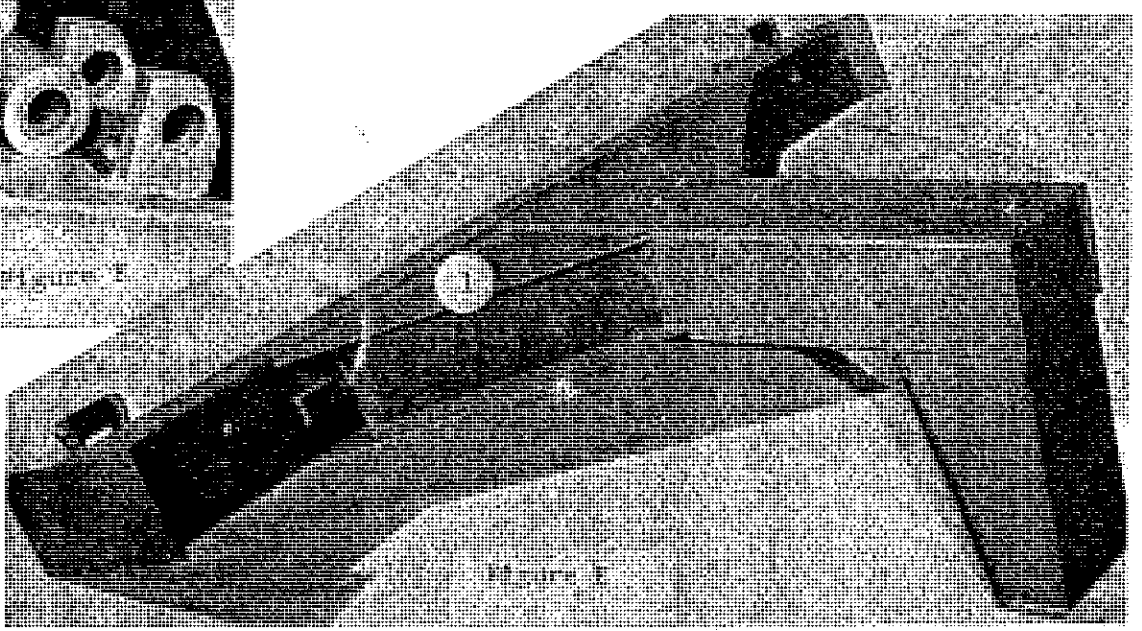
Figure D











PARTS LIST

Models 700 and 900 Scrapers

Fig. No.	Ref. No.	Description	Part Number 900	No. Req.	700	No. Req.
A	1	Bucket	042921	1	042938	1
	2	Gate	042827	1	042845	1
	3	Lift Pipe	041241	1	041236	1
	4	Wear Plate	042834	2	042834	2
B	1	Bearing Insert	022050	2	022050	2
	2	Bearing Cap (a)	041217	2	041217	2
	3	Bucket Pivot Plate	042935	2	042935	2
		Bolt 057318				
C	1	Gate Pivot Pin	042808	2	042808	2
	2	Link Rear Pivot Pin	041222	2	041222	2
	3	1-1/2 NF Lock Nut	064596	4	064596	4
D	1	R.H. Siderail	040540	1	040540	1
	-	L.H. Siderail	040541	1	040541	1
	2	R.H. Pivot Bracket	044624	1	044624	1
	-	L.H. Pivot Bracket	044625	1	044625	1
	3	Pivot Arm Spacer	040588	2	040588	2
	4	1 X 5-1/2 N.C. Bolt	055646	2	055646	2
	5	1 X 5 N.F. Hi-Strength Bolt	059642	2	059642	2
	6	24" Control Link	041250	2	041250	2
	7	Roller	030560	2	030560	2
	8	Snap Ring	021510	2	021510	2
	9	Siderail Spacer (b)	040538	2	040538	2
E	1	Gooseneck	040554	1	040523	1
	2	Ball Keeper Plate	025251	1	025251	1
		Repair Kit	040490			
F	1	Roller	040486	2	040486	2
	2	Pin	040489	2	040489	2
	3	Pin Clip	040492	2	040492	2

(a) If the casting welded to the lift pipe must be replaced, order Bearing Kit #041215, which includes the casting and the bearing cap.

(b) This spacer will be welded to the siderail tube on Model 700 scrapers.

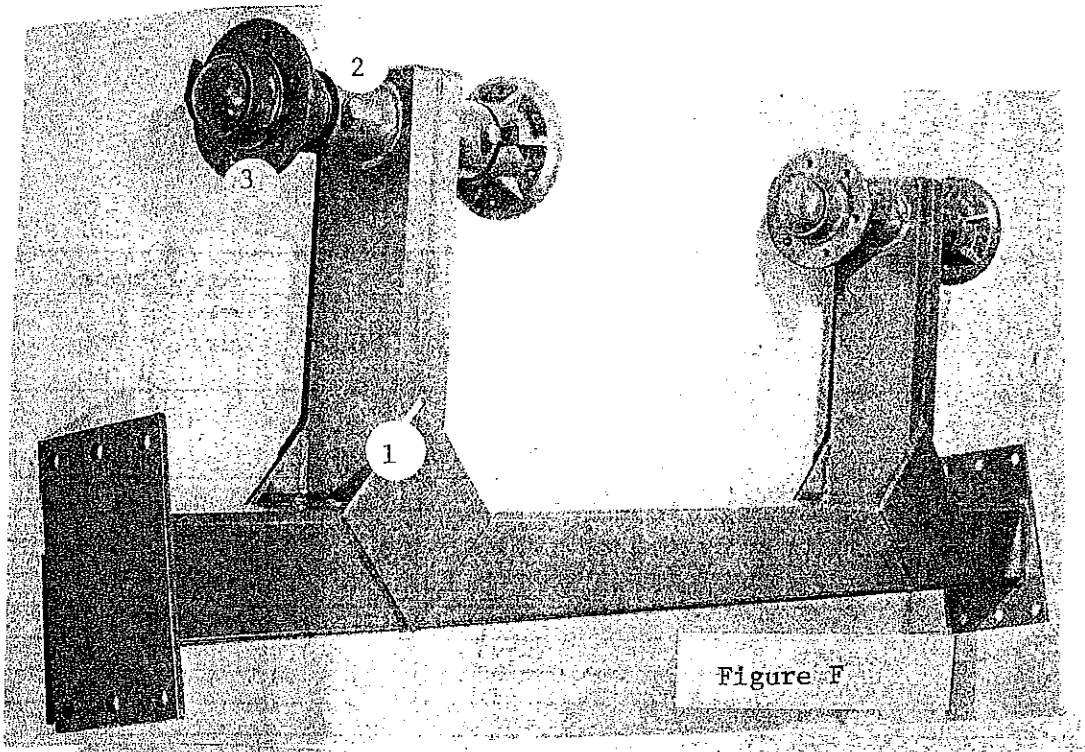


Figure F

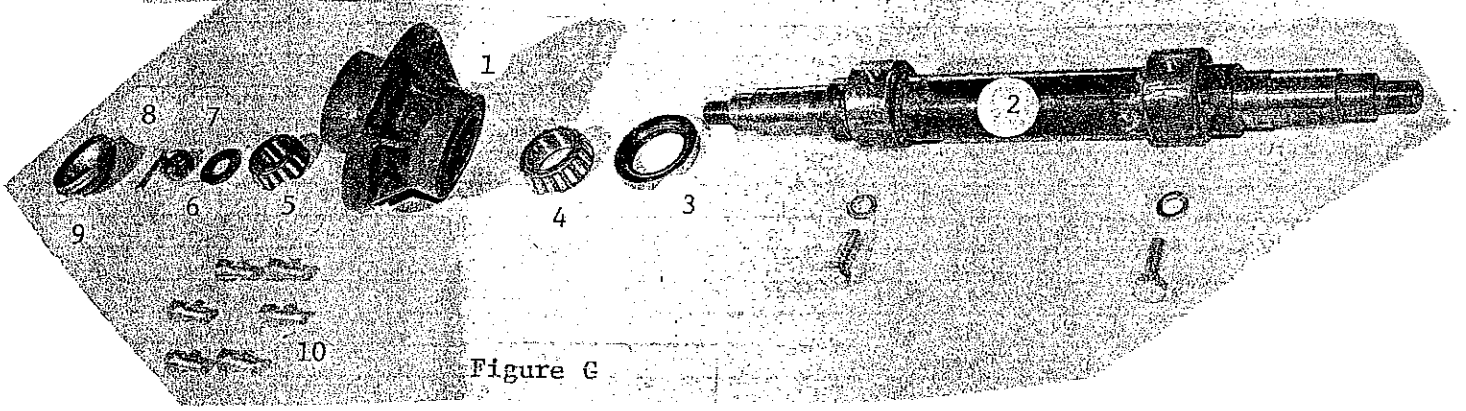


Figure G

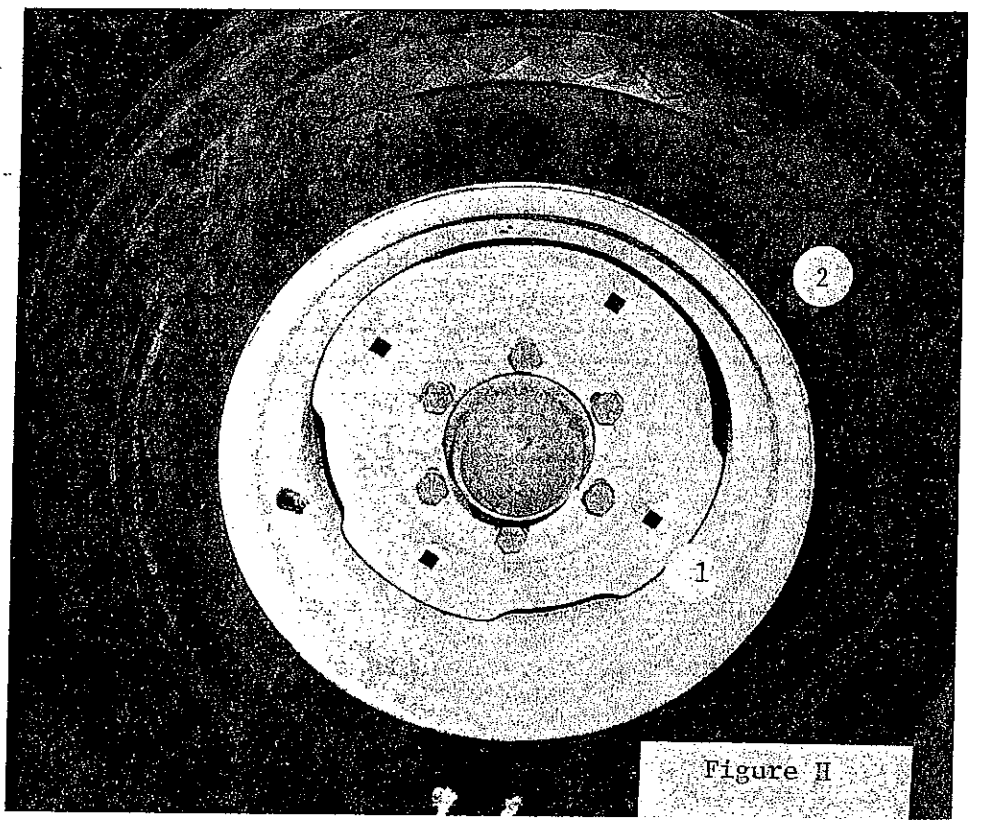


Figure H

Fig. No.	Ref. No.	Description	Part Number 900	No. Req.	700	No. Req.
F	1	Rear Frame	040545	1	040510	1
	2	Rear Spindle	040815	2	040815	2
	3	6-Bolt Hub Assembly,Q-817	044115	4	044115	4
G	1	Hub Casting Q-817	040820	4	040820	4
	2	Rear Spindle	040815	2	040815	2
	-	5/8 X 1-1/4 Hex Bolt	055312	4	055312	4
	3	Seal	040832	4	040832	4
	4	Inner Bearing Cone	040826	4	040826	4
	5	Outer Bearing Cone	040828	4	040828	4
Race 129770	-	Inner Bearing Cup 040827	040823	4	040823	4
129780 Race	-	Outer Bearing Cup 040829	040825	4	040825	4
	6	7/8 Flat Washer	030620	4	030620	4
	7	7/8 Slotted Nut	062567	4	062567	4
	8	5/32 X 1-1/2 Cotter	063734	4	063734	4
	9	Hub Cap 129840	~~040831~~	4	040831	4
	10	9/16 X 1-3/4 Wheel Bolt	007009	24	007009	24
	-	Bearing Repair Kit for 6-Bolt Hub	044116	1	044116	1
H	1	16 X 8 6-Bolt Wheel	590321	4	-----	-
	1A	15 X 8 6-Bolt Wheel	----	-	590410	4
	2	11 X 16, 10-Ply Tubeless Tire (Optional)	590324	4	-----	-
	2A	9.5L X 15, 8-Ply Tubeless Tire (Opt.)	----	-	590780	4

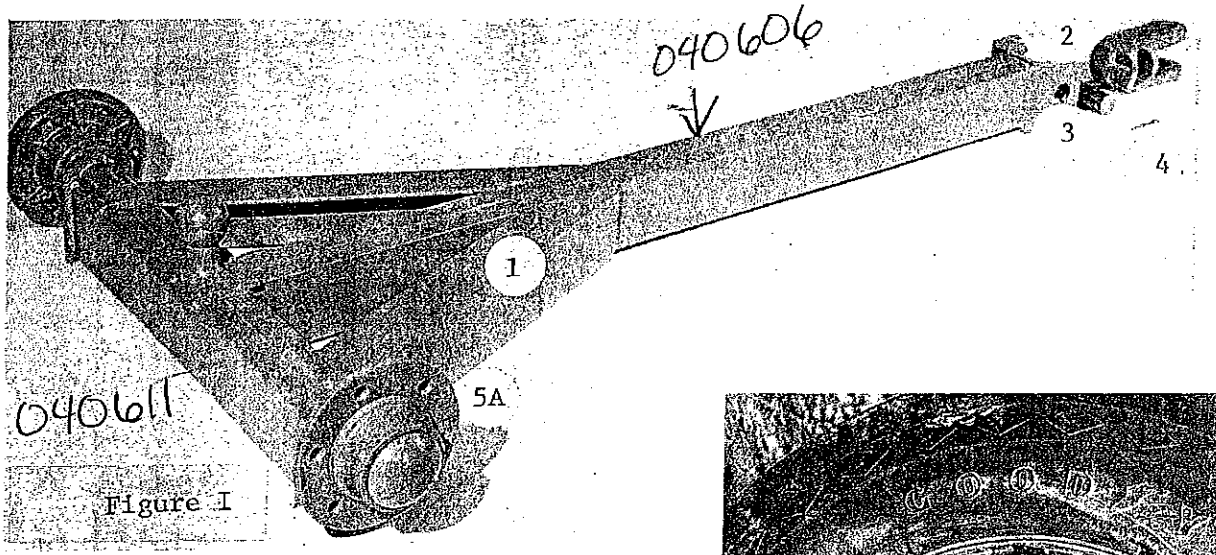


Figure I

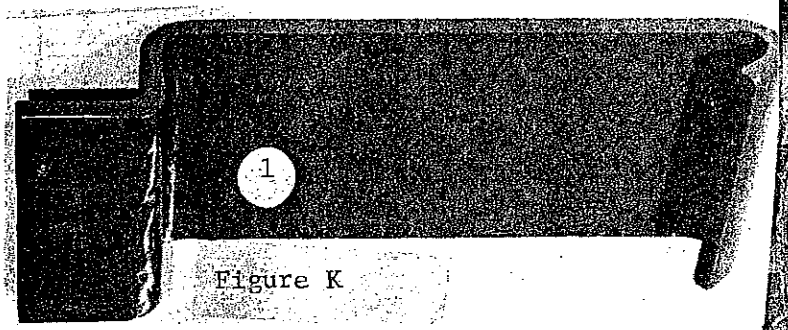


Figure K

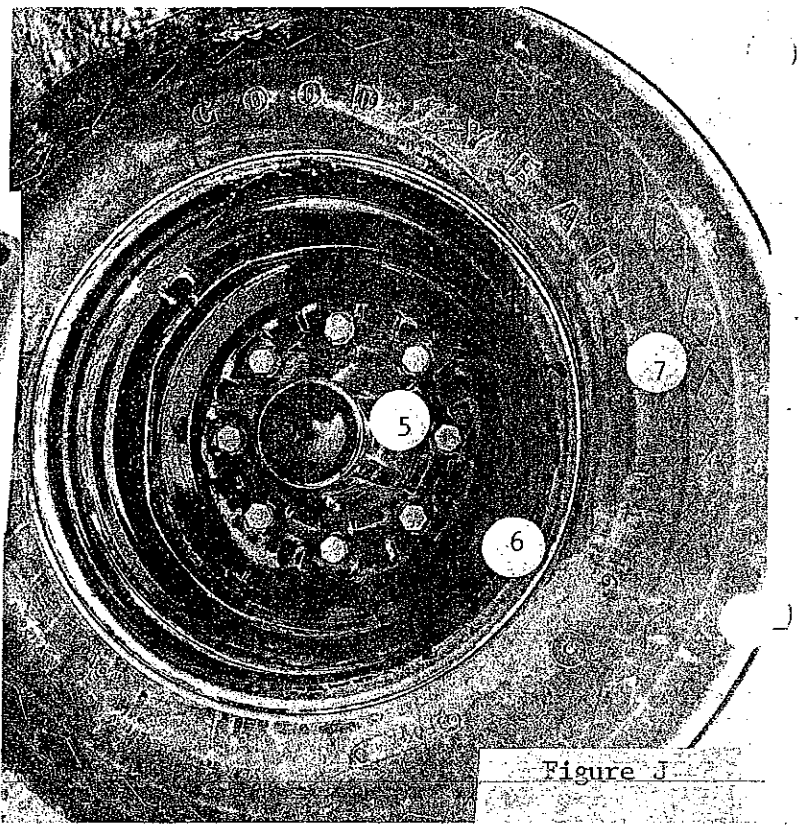
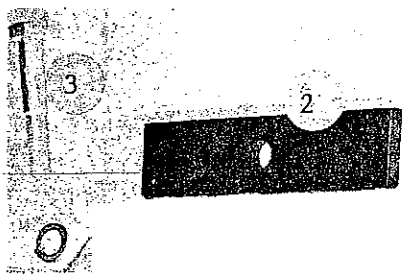


Figure J



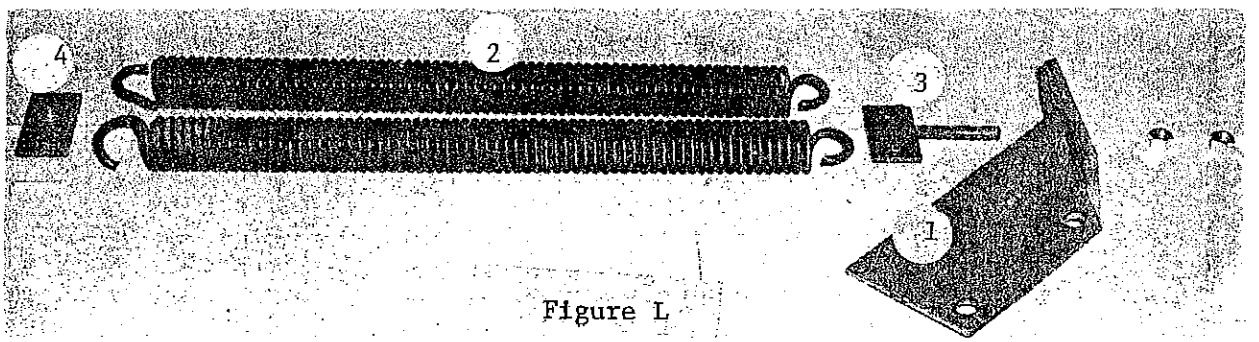
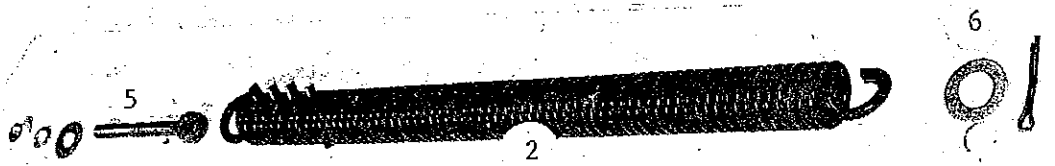


Figure L



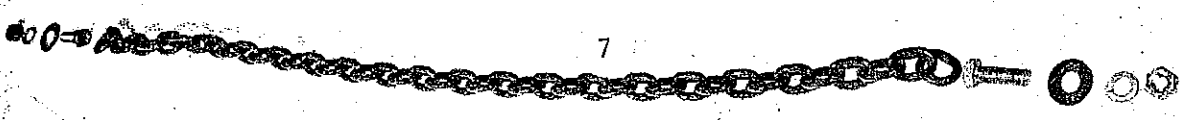


Fig. No.	Ref. No.	Description	Part Number 900	No. Req.	700	No. Req.
I&J	1	Dolly Tongue	040631	1	040631	1
	2	Clevis Casting	040629	1	040629	1
	3	1-1/2 X 6-1/4" Clevis Pin	040641	1	040641	1
	4	1/4 X 2" Cotter	063764	1	063764	1
	5	8-Bolt Hub Assembly Q-870	044136	2	----	-
	-	8-Bolt Hub Casting Q-870	040833	2	----	-
	5A	6-Bolt Hub Assembly Q-817	----	-	044115	2
	-	6-Bolt Hub Casting Q-817	----	-	040820	2
	-	Seal	040836	2	040832	2
	-	Inner Bearing Cone	040827	2	040827	2
	-	Outer Bearing Cone	040829	2	040829	2
	-	Inner Bearing Cup	040823	2	040823	2
	-	Outer Bearing Cup	040825	2	040825	2
	-	7/8 Flat Washer	030620	2	030620	2
	-	7/8 Slotted Nut	062567	2	062567	2
	-	5/32 X 1-1/2 Cotter	063734	2	063734	2
	-	Hub Cap 129840	040831	2	040831	2
	-	9/16 X 1-3/4 Wheel Bolt	007009	12	007009	12
	-	Bearing Repair Kit for 8-Bolt Hub	044137	1	----	
	-	Bearing Repair Kit for 6-Bolt Hub	----	-	044116	1
	-	Replacement Spindle Only	040632	1	040632	1
	-	Replacement Hitch Ball	040606	1	040606	1
	6	16 X 10 8-Bolt Wheel	040835	2	----	-
	6A	15 X 8 6-Bolt Wheel	----	-	590410	2
	7	11 X 16 10-Ply Tubeless Tire (Optional)	590324	2	----	-
	7A	9.5 X 15 8-Ply Tubeless Tire (Optional)	----	-	590780	2
K	1	Bucket Stabilizer	042931	2	042931	2
	2	Spacer	042940	8	042940	8
	3	1/2 X 2-1/2" Bolt	055222	2	055222	2
L	1	Spring Anchor Weldment	040558	2	040558	2
	2	Spring 2¼ x 27 Gate Side	408000	4	408000	2
	3	Lower Spring Bracket	040575	2	----	-
	4	Upper Spring Bracket	040574	2	----	-
	-	1/4 X 2" Cotter Key	063764	2	063764	2
	5	5/8 X 5-3/4 Eyebolt	527500	2	527500	2
	6	5/8" Flat Washer	----	2	----	2
	-	1/4 X 2" Cotter Key	063764	2	063764	2
	7	Chain	042831	2	042831	2

Figure M

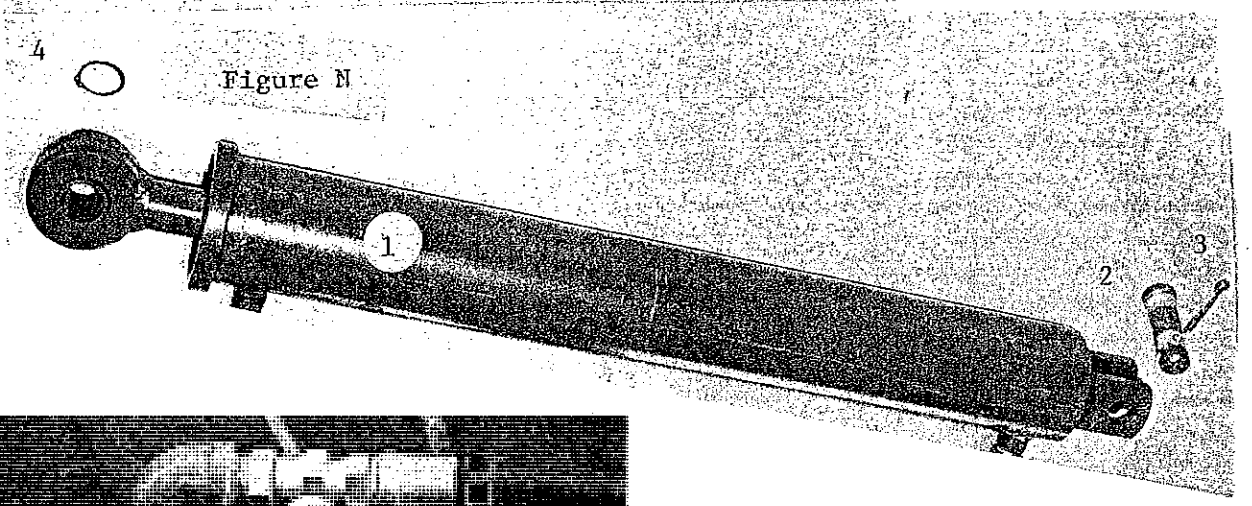
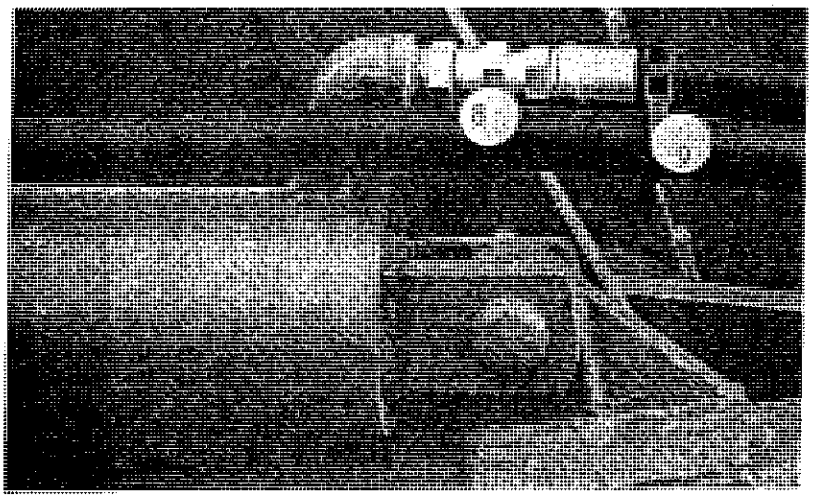


Figure N



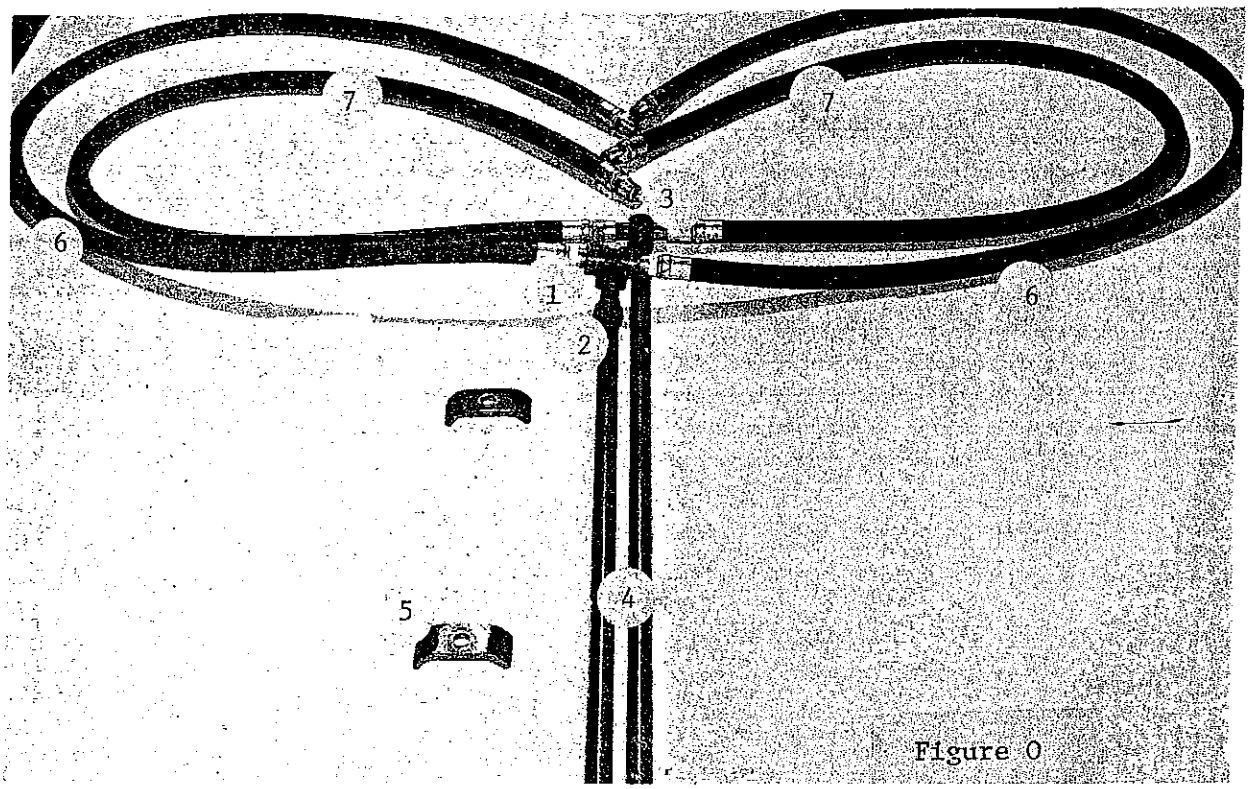
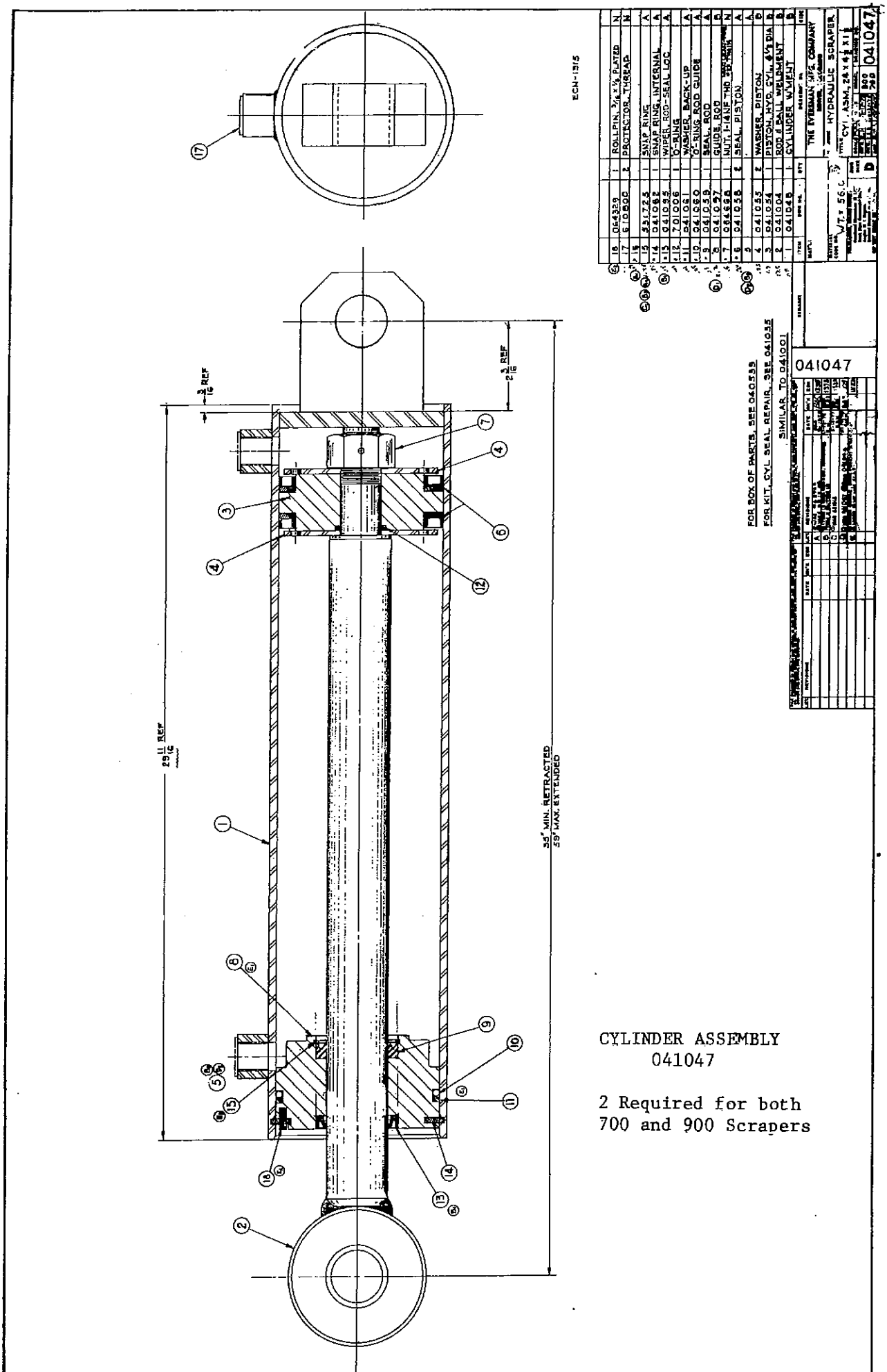
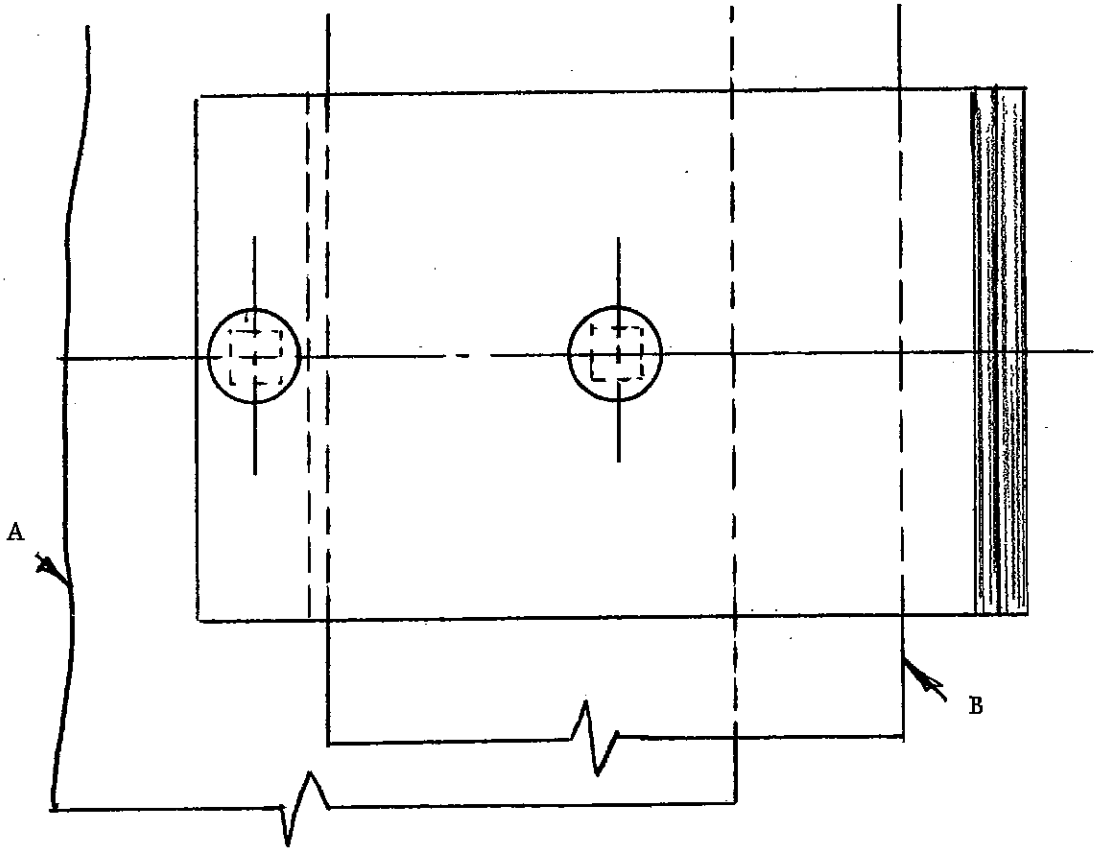


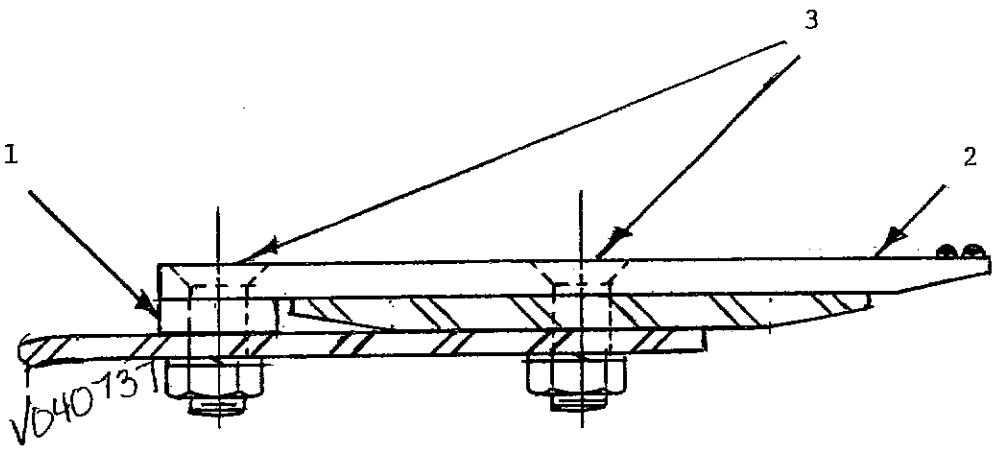
Figure O

Fig. No.	Ref. No.	Description	Part Number 900	No. Req.	700	No. Req.
M	1	Cutting Bit	042926	1	021450	1
	–	1/2 X 1-1/4" Plow Bolt	059776	13 Nut	059776 064613	~~13~~ 11
N	1	4-1/2" Bore, 24" Stroke Cylinder Assembly (See cylinder parts details page P-9)	041047	2	041047	2
	2	1-1/4 X 6" Clevis Pin	041056	1	041056	1
	3	1/4 X 2" Cotter	063764	1	063764	1
	4	Snapring	021880	2	021880	2
O	1	1/2 X 90° Street Elbow	622320	1	622320	1
	2	1/2 X 45° Street Elbow	622020	1	622020	1
	3	Special 1/2" Tee	041089	1	041089	1
	4	1/2 X 47" Pipe	040432	2	040432	2
	5	Pipe Clip	705800	6	705800	6
	6	103" Hose	041082	2	----	–
	6	87-1/2" Hose	----	–	041086	2
	7	130" Hose	041079	2	----	–
	7	113-1/2" Hose	----	–	041083	2
	–	96" Hose (To Tractor)	041017	2	041017	2
	8	1/2" Male-Female Swivel Fitting	710402	4	710402	4
	9	Hose Clamp Tie	041093	2	041093	2


041047
CYLINDER ASSEMBLY
041047
2 Required for both
700 and 900 Scrapers

OPTIONAL FROST BIT KIT #040568





040568 FROST BIT KIT, 1-REQUIRED FOR BOTH 700 AND 900 SCRAPERS

Ref. No.	Description	Part Number	No. Req.
A	Scraper Bucket	-----	-
B	Reversible Cutting Bit	-----	-
	FROST BIT KIT	040568	1
1	Spacer Bar	040569	5
2	Frost Bit V040737	040570	5
3	1/2 X 1-3/4 Plow Bolt	059778	10
-	1/2 Lock Washer	063138	10
-	1/2 Hex Nut	061938	10

Note: Frost Bit Kit for 900 scraper, effective Serial No. 1197 is 040736.

OPTIONAL SPREADING HYDRAULIC KIT

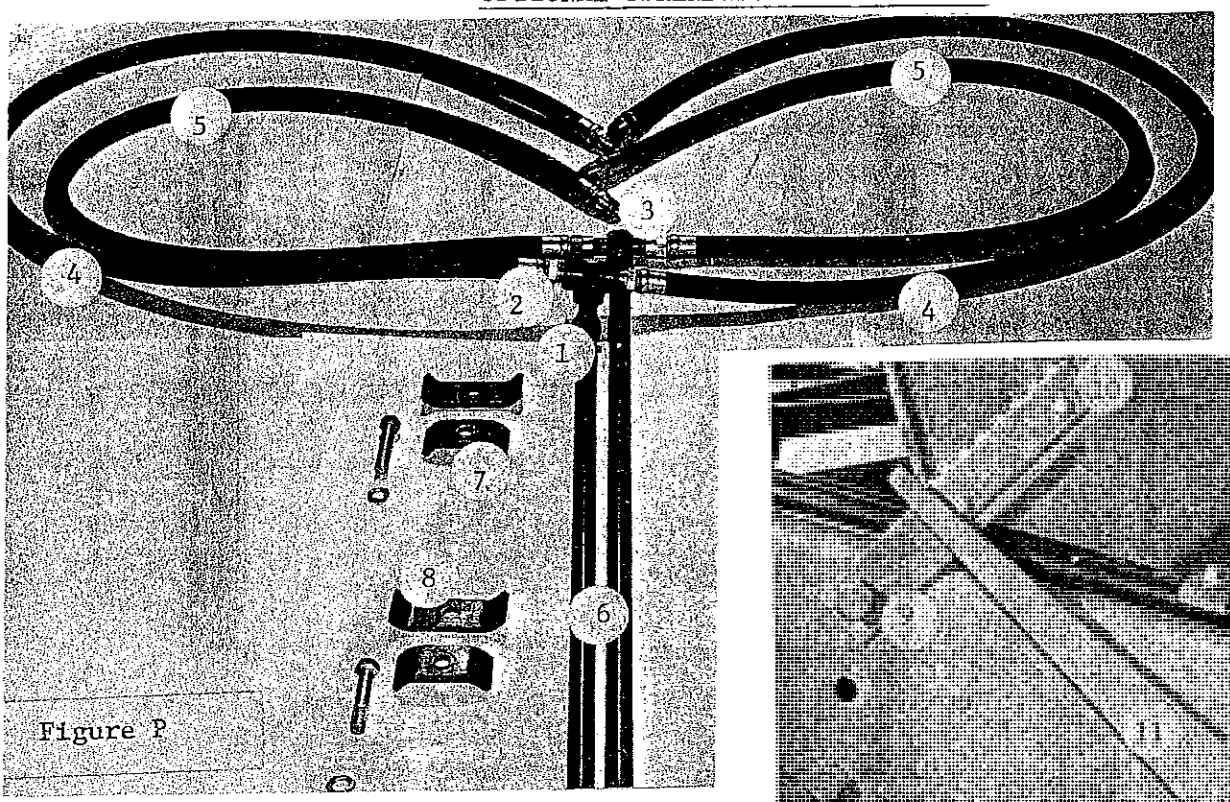
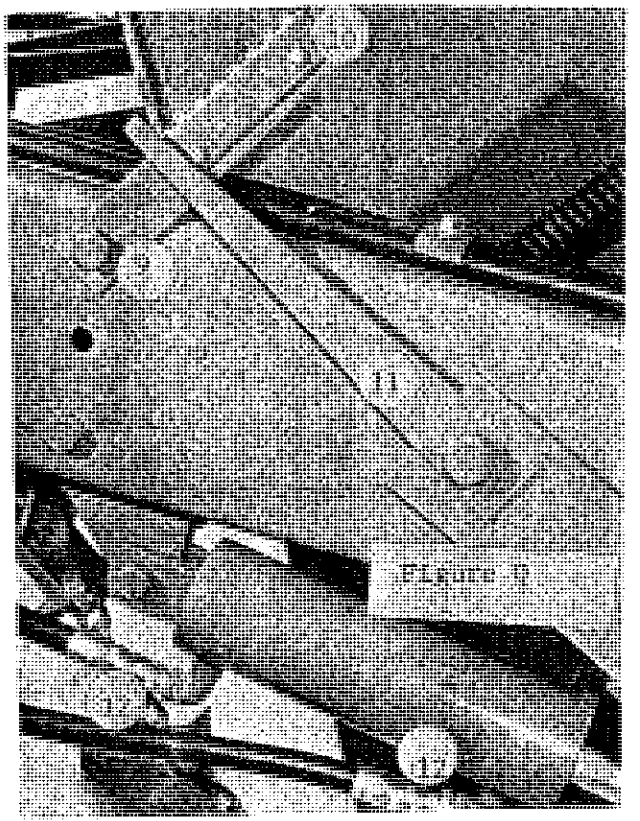


Figure P



311021 CYLINDER ASSEMBLY, 3-1/2" BORE, 8" STROKE

Figure R

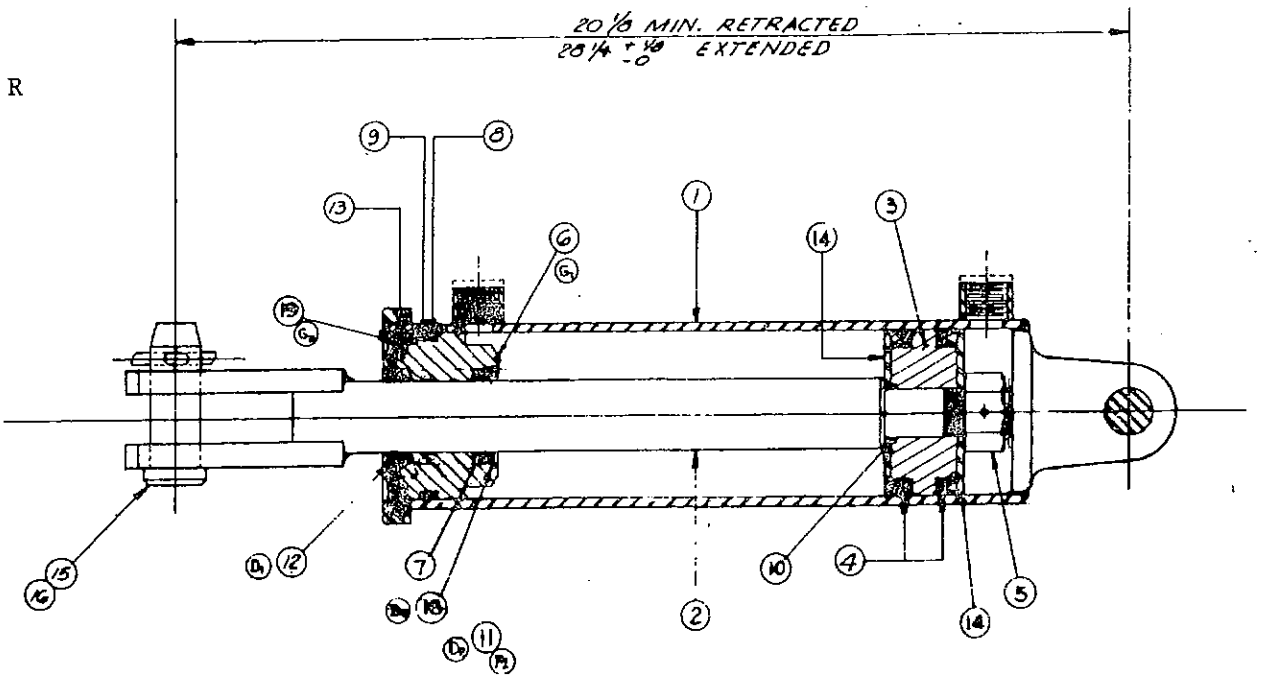
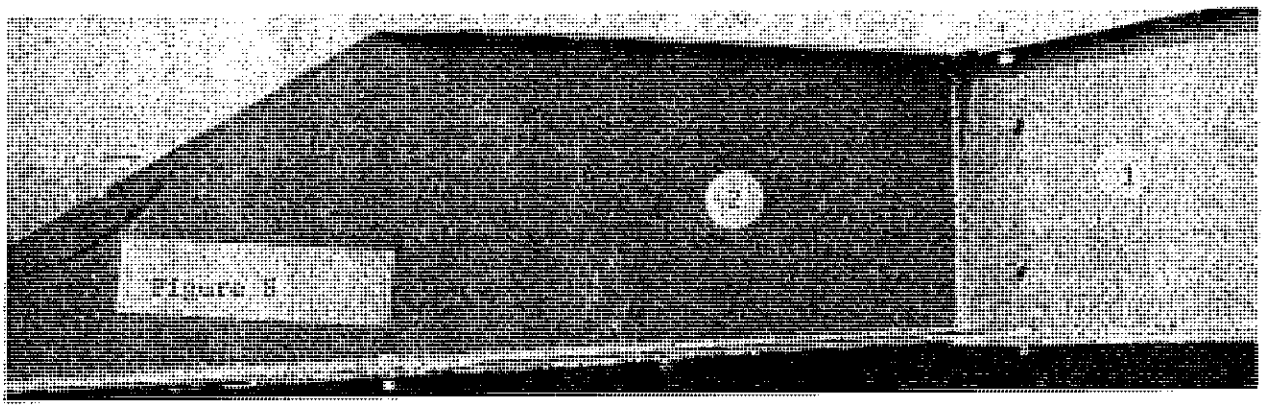


Fig. No.	Ref. No.	Description	Part Number 900	No. Req.	700	No. Req.
P&Q	–	SS Hydraulic Kit	041090	1	041081	1
	1	1/2 X 45° Street Elbow	622020	1	622020	1
	2	1/2 X 90° Street Elbow	622320	4	622320	4
	3	1/2" Special Tee	041089	1	041089	1
	4	78-1/2" Hose	041084	2	041084	2
	5	66" Hose	------	–	041085	2
	5A	88" Hose	041087	2	------	–
	6	1/2 X 37" Pipe	041009	2	041009	2
	7	Pipe Clip	705800	4	705800	4
	8	Pipe Clip	413100	2	413100	2
	–	1/2 X 2-1/2" Bolt	055222	2	055222	2
	9	Indicator Bracket	044613	2	044613	2
	10	Indicator Arm	044614	2	044614	2
	11	Pointer	044633	2	044633	2
	12	1/2" Male-Female Swivel Fitting	710402	4	710402	4
	–	96" Hose (To Tractor)	041017	2	041017	2
R	–	Depth Control Cylinder (3-1/2 X 8" Stroke)	311021	1	311021	1
	1	Cylinder Barrel	311016	1	311016	1
	2	1-1/2" Piston Rod Weldment	311022	1	311022	1
	3	3-1/2" Piston	041063	1	041063	1
	4	Piston Seal	041033	2	041033	2
	5	Lock Nut	064668	1	064668	1
	6	1-1/2" Dia. Rod Guide	041077	1	041077	1
	7	Rod Seal	041059	1	041059	1
	8	Rod Guide O-Ring	401004	1	401004	1
	9	Back-up Washer	030460	1	030460	1
	10	Piston O-Ring	701006	1	701006	1
	12	Rod Seal Wiper	041095	1	041095	1
	13	Internal Snapring	401008	1	401008	1
	14	Piston Washer	041064	2	041064	2
	15	Clevis Pin	701026	2	701026	2
	16	1/4 X 2" Cotter	063764	2	063764	2
	17	Thread Protector	610800	1	610800	1
	18	Snapring	531725	1	531725	1
	19	3/16 X 1/2 Roll Pin	064329	1	064329	1
		Cylinder Seal Repair Kit	041034	1	041034	1

044613
043608
} 044623 assy



OPTIONAL DRAWBAR KIT #045117

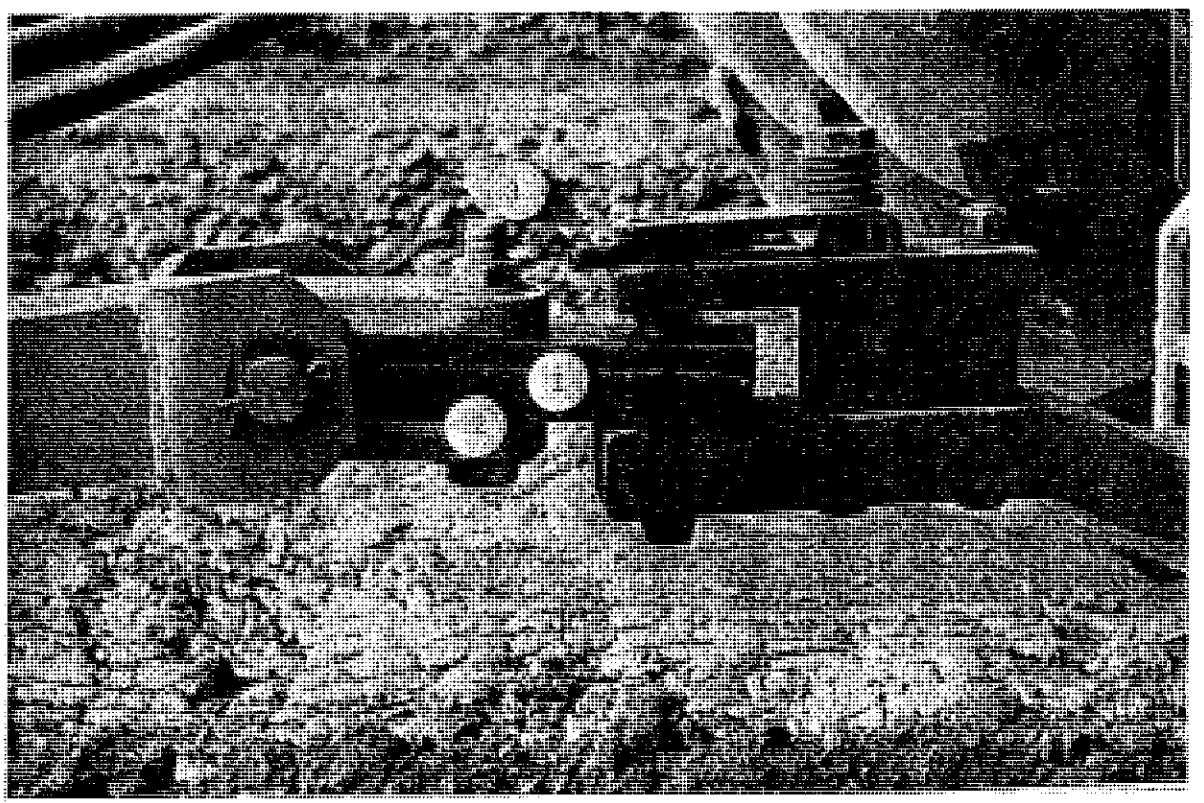
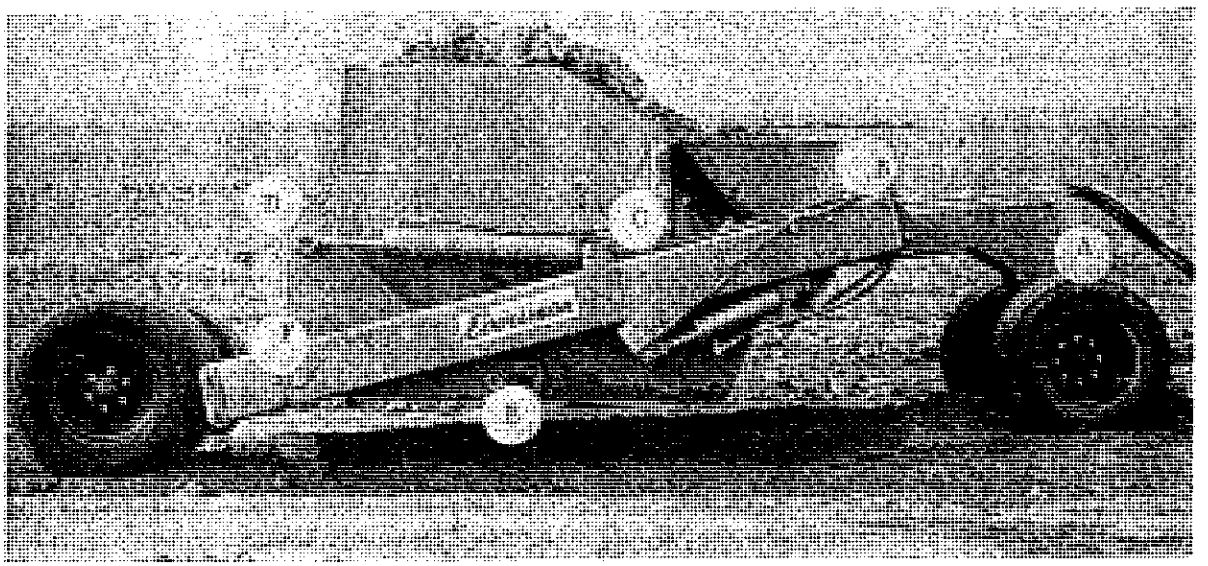


Fig. No.	Ref. No.	Description	Part Number 900	No. Req.	700	No. Req.
S	1	Rear Sideboard	042944	1	042943	1
	2	R.H. Sideboard	042942	1	042942	1
	-	L.H. Sideboard	042941	1	042941	1
	-	1/2 X 1" Hex Bolt	055210	15	055210	15
Note: Sideboards are standard on Model 900; optional on Model 700						
		Miscellaneous Parts				
		SMV Decal	600252	1	600252	1
		"Eversman 900" Decal	043606	1	---	-
		"Eversman 700" Decal	---	-	043613	1
		"Eversman" 5-1/2 X 19" Decal	022710	2	022710	2
		Red Reflective Tape	600504	2	600504	2
		Red Plastic Deflector	600505	2	600505	2
		Amber Plastic Deflector	600506	2	600506	2
Optional - Drawbar Kit - 045117 - For Hammer Strap Drawbars						
	1	Drawbar Adaptor (For 1-3/8"Dia.Pin)	044023	1	044023	1
	2	Clevis Spacer (1-3/8" O.D.)	044024	1	044024	1
	3	1 X 5-1/2" Hex Bolt	055646	1	055646	1
	4	1" Flat Washer	063543	2	063543	2



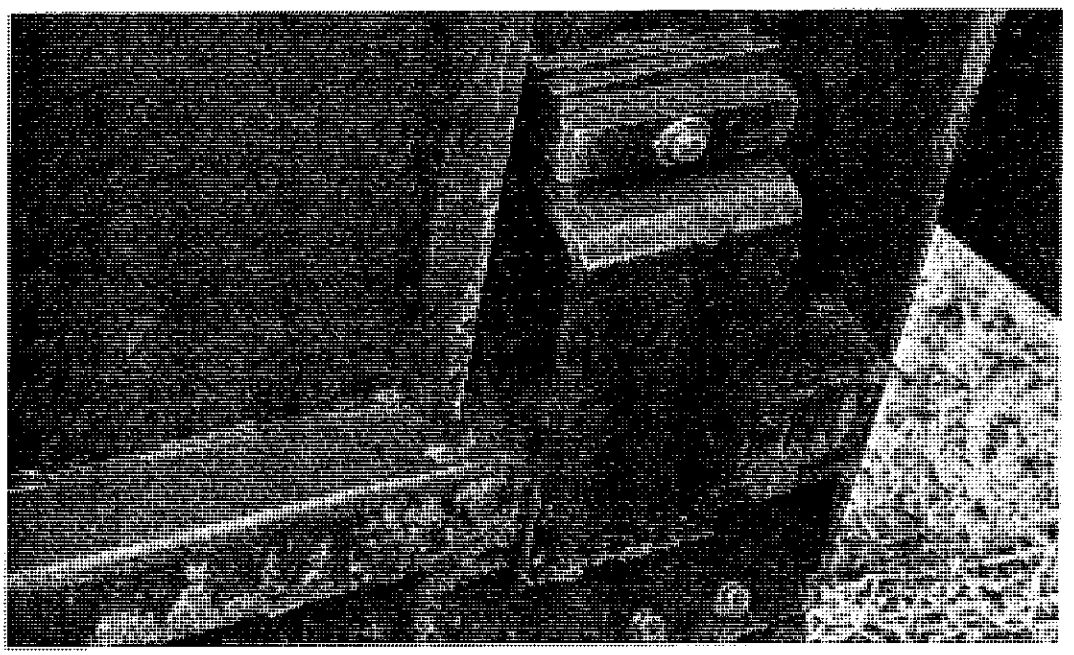
Lubrication

1. Grease all zerks on wheel hubs each week.

2. Grease all other zerks, on ball hitch (A); gate rollers (B); links (C); cylinder ball joints (D); bucket bearings (E); rear lift pipe (F). This should be done each day after heavy usage.

Hydraulic System

After assembly and before starting field operations, the hydraulic system should be bled to remove all air. Erratic operation is possible on both cutting and spreading cycles if there is excessive air in the system. Cycle the spreading cylinders through the full 8" stroke before mounting on the scraper.



Stabilizer

The purpose of the stabilizers is to prevent side-to-side wobble of the bucket when loading. They should be set only low enough to accomplish a smooth cut, depending on the soil conditions. If they are set too low, below the bottom of the bucket, they will impair the cutting ability of the bit. In heavy soils, they should run almost flat; in average conditions about an inch below the bucket reinforcement, and set somewhat deeper in loose or sandy soils.

OPERATING INSTRUCTIONS

The Eversman Scraper will work under a very wide variety of soil and moisture conditions, however, dirt moving is primarily a dry soil operation. If the soil sticks to the wheels and builds up excessively, it is too wet to work. Excessive slippage, unnecessary power consumption, and over compaction of the fill areas may result. The questions of top soil removal, proper finished grade and balancing out your cuts and fills can be answered by your local, state, or federal technicians if you are in doubt.

It does not require any special skill or training to operate the Eversman Scraper. However, a little experience plus good management can help get the job done more quickly. The TOTAL YARDS MOVED PER HOUR depend on:

(1) Having a Definite Planned Program, and following it.

(2) The Average Load Size.

(3) The Hauling Distance.

(4) The Speed of Operations (or total time per cycle).

(5) The amount of Lost Time from interruptions, unnecessary stops, etc.

It will pay in time and fuel saved to lay out a definite program before you start your project, especially on field leveling or terracing. Some suggestions on planning "cut-haul-fill" patterns are covered below under "Field Grading".

FIELD GRADING

Determine, before you start operations, the areas to be cut and filled, the depth of each cut and fill, and the best haul-route pattern. It is cheaper to haul in two directions from the same cut, if possible. There are, in general, three "cut-haul-fill" patterns. Sometimes they can be combined at a definite saving.

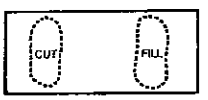


Figure A

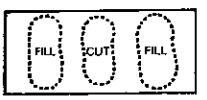


Figure B

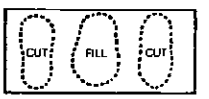


Figure C

If you can work the plan shown in Figure B or C, rather than A, it will save travel and turning time. It may be possible to reduce empty travel time by combining several cuts, hauls and fills on the field in one overall or continuous circuit.

FIELD FINISHING

After completing your dirt moving work, you still must finish your field by smoothing, especially the cut and fill areas. A few times over the field with an Eversman Land Smoother will wipe out the rough spots and surface irregularities.

AFTER EXTENSIVE EARTH MOVING and land forming, you should consider the need to: (a) use a subsoiler or pan breaker if moisture conditions and heavy traffic have caused excessive compaction; (b) apply proper fertilizer to the cut areas; (c) plant an annual crop the first season while permitting the fill areas to settle; (d) recheck the grades and correct any settlement by again leveling before planting a perennial crop; (e) maintain the correct surface (and produce a good seedbed) by always using a land smoother ahead of your seeder. It takes time, money and effort to establish correct grades on your fields. Erosion and tillage operations cause surface irregularities. To protect your investment, keep the surface smooth and maintain correct grades by using an Eversman Land Leveler.

LOADING

The size of your loads will depend on: (1) the tractor power and traction; (2) the soil conditions; and (3) your operating skill and procedure. Your average load size can usually be increased with practice. While the Eversman Model 700 can be heaped to a 7-yard capacity (with sideboards) and the 900 to 9 yards, in general, more yards per hour can be moved by taking the largest load you can pick up quickly, then hauling, unloading, and returning as fast as you can safely.

Under some conditions (like loading sand) speed may help in heaping the load; while in others, power is more often a factor. Generally, it is preferable to make long, thin, smooth cuts and keep the tractor moving. It is better for succeeding loads to keep the cut area relatively smooth.

Normally, the best gear for loading is the highest gear in which the tractor will spin the wheels before stalling the engine. When possible, make the cut in the same direction as you haul to save time and avoid turning with a full load. Start to make your cut as you approach a slight ridge, or high spot. It requires power to take the dirt back, and up, in the bucket, which can best be supplied by cutting into the ridge.

HAULING

If the field or work area is rough or the distance to haul is rather long, it will be worthwhile to make a smooth hauling lane and possibly a separate return path so you can haul and return in a high gear. (For route patterns, see Field Grading.) As you leave the loading area, raise the load to the hauling position.

SPREADING AND DUMPING - MODELS 700 or 900

A single-control valve on the tractor operates both the bucket and the gate. The gate of the Eversman Scraper opens automatically, as the bucket is actuated backward and upward toward a near vertical position. The bucket can be stopped at any point to vary the thickness of the spread soil.

A compromise was made on the design specifications of the Eversman, whereby the range on the thin side of the spreading was reduced in order to both (1) provide greater transport clearance; and (2) to reduce the initial cost by eliminating the need for a second control valve on the tractor, and a separate hydraulic cylinder to regulate the opening and closing of the gate. In dry, light soils, the bucket will start to dump as soon as the gate opens. However, in heavier and damp, sticky soils, the bucket must be rotated further back before the load starts to dump. This might result in a thicker, more concentrated spreading than desired. The soil, however, can be distributed over a wider area, in a thinner layer, by crossing the fill on a succeeding trip, with the bucket in its lowest position. The best way to actually distribute the soil over the fill area is with a land smoother, after all dirt moving is completed.

When dumping, it is recommended that the highest possible speed be maintained through the fill area, and that the bucket be gradually opened, rather than to open it quickly by moving the control valve handle rapidly from the hauling position to the full dump position.

LOADING WITH SPREADING HYDRAULIC KIT INSTALLED

Two tractor control valves are required, one to operate the bucket cylinders and the second one for the spreading cylinders.

The spreading scraper operation will require the tractor driver to make several trips to familiarize himself with the loading, dumping, spreading and transporting controls for both the bucket cylinders and the spreading cylinders. On each individual field, judgment must be used depending on the soil consistency and moisture, as to the depth of spread possible. Furthermore, it will take a few loads to determine the most effective bucket setting to attain the desired results.

Before the operator takes the spreading scraper to the field, there are several important factors he should understand.

1. Remove the frost bit since precision spreading is not possible with this installed.

2. The spreading cylinders are not used for the loading operation.

3. The spreading cylinders must be extended to the full 4" stroke, and then left there while loading. If this is not done, the cutting bit will enter the ground at too steep an angle which increases draft and also results in a rough, uneven cut. It is recommended that the operator form the habit of extending the spread cylinders just as soon as he completes his spreading and dumping cycle, and before he starts his return run to the cut area. This will always assure him of having the bucket at the correct angle when it is lowered to cut.

4. Keep in mind that the spreading cylinders do not open, or close, the gate. The exclusive, and patented, automatic gate control mechanism opens and closes the gate so that it will always be in the correct position relative to the movement of the bucket. This automatic control permits one hydraulic control valve on the tractor to operate for loading and transporting. The second tractor control valve is required only for spreading.

5. When loading, the depth and length of cut are factors of the tractor speed and power available, as well as the soil density and moisture content.

TRANSPORTING WITH LOAD

After filling the bucket, extend the bucket cylinders to raise the scraper. The gate will follow the movement of the bucket to reach a normal closing position. The spreading cylinders are not actuated when lifting the bucket to transport.

DUMPING AND SPREADING WITH SPREADING HYDRAULIC KIT INSTALLED

Before starting field work, the operator should run the bucket cylinders and the spreading cylinders through several cycles so that he has a clear picture of what is occurring with each adjustment he makes.

First, leave the spreading cylinders fully extended and extend the bucket cylinders only. As the bucket cylinders are extended and the bucket is rotating, the cutting bit will maintain a nearly constant level above the ground - until the very end of the stroke, at which point the bit is elevated rapidly. As the bucket rotates, the gate will automatically open - without touching the spreading cylinder's control valve.

Then, study the function of the spreading cylinders. As they are retracted, they lower the bit closer to the ground. The pointer on the indicator bracket shows the operator the relative height of the cutting bit. When the pointer is at the top line of the indicator, the scraper cylinders are fully retracted - the cutting bit is at ground level - the lowest position possible.

On the other hand, when the pointer is at the lower position on the indicator, the scraper cylinders are fully extended and the cutting bit is at its highest position above the ground. The indicator pointer, therefore, shows the operator the relative height of the cutting bit.

Somewhere within the range of the two cylinder adjustments, is the point at which the desired dump and spread is obtained. This point will depend on the moisture of the soil and the consistency and density of the soil. Dry, loose soil will flow out as soon as the bucket starts to rotate and the gate starts to open. Spreading is then easily accomplished by controlling the bit height with the spreading cylinders. In general, the bucket should be rotated to about half-way through the dump cycle to achieve the best spreading results.

However, heavy, sticky wet soil will be much slower to leave the bucket, and spreading accurately and to a pre-determined depth, might even be impossible under these adverse conditions.

The operator must learn to make his adjustments depending on the individual field and soil conditions. As mentioned under "Loading", it is recommended that the operator form the habit of <u>immediately extending</u> the spreading cylinders to the full 4" stroke as soon as he has emptied the bucket and <u>before</u> he returns to the cut area to re-load.

OTHER *Eversman* PRODUCTS

The Model 2400—plane profitability.
Covers up to 150 acres a day with a 24' wide blade at 5 to 7 miles per hour and transports with wings folded to 12' overall width. 16' and 12' models also available.

The Eversman Plane is the best investment non-irrigated growers can make to conserve fuel, save time and eliminate those extra passes to construct a seedbed.

Nothing can match the productivity of this machine. You can stay ahead of the planter while preparing an excellent seedbed and insure increased yields on smooth, well-drained fields.

Many owners have worked directly on plowed ground—thus realizing substantial savings in both fuel and time.

The Model 12-30 Eversman Minimum Tillage System —the first 12-row rotary tillage machine with a flexible frame and folding wings. Designed for maximum production, multiple operations, unmatched transportability and maneuverability. Remarkably low power requirement. Call or write for full details.