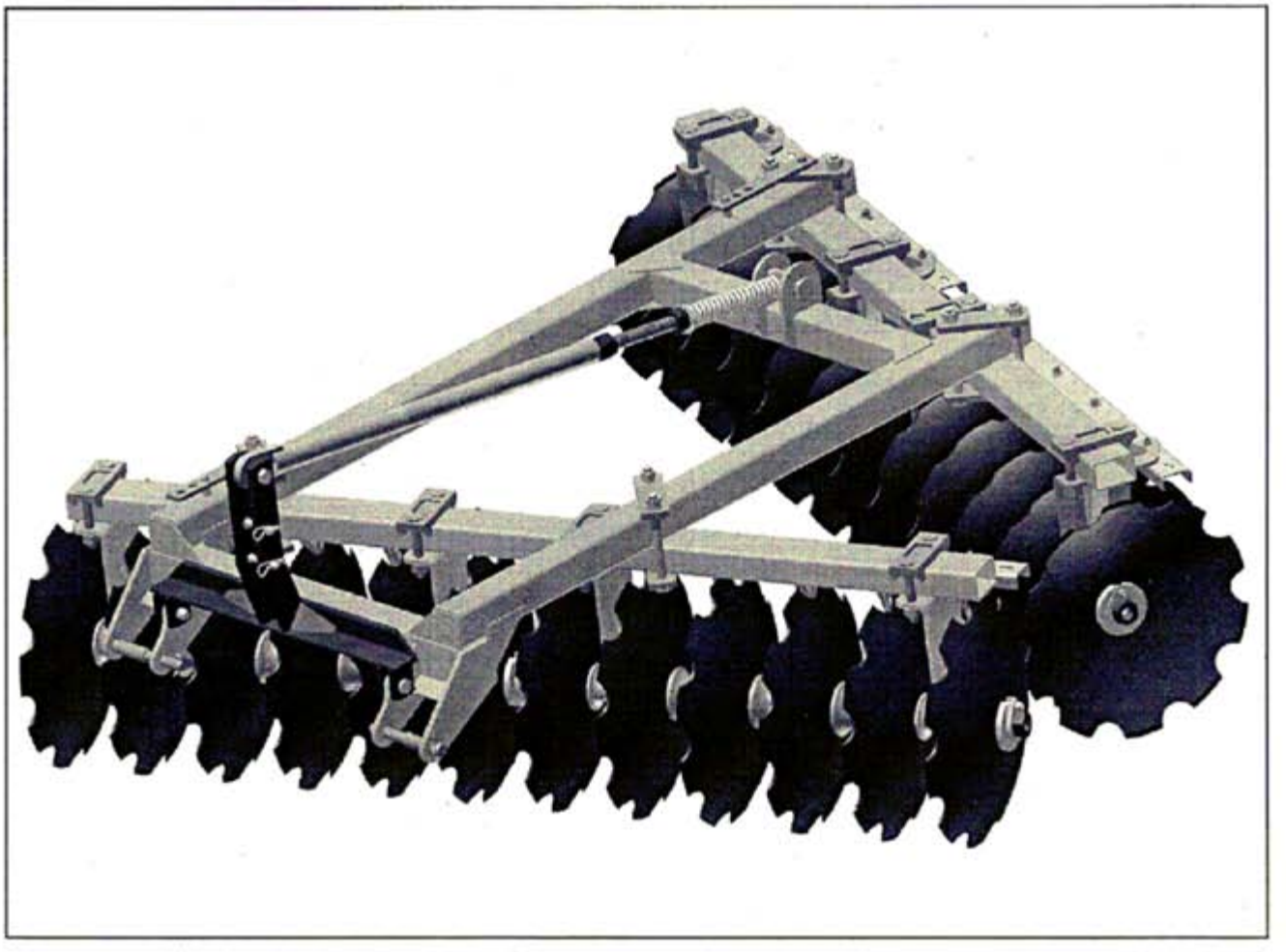
KELLO-BILT

INSTRUCTIONS MANUAL



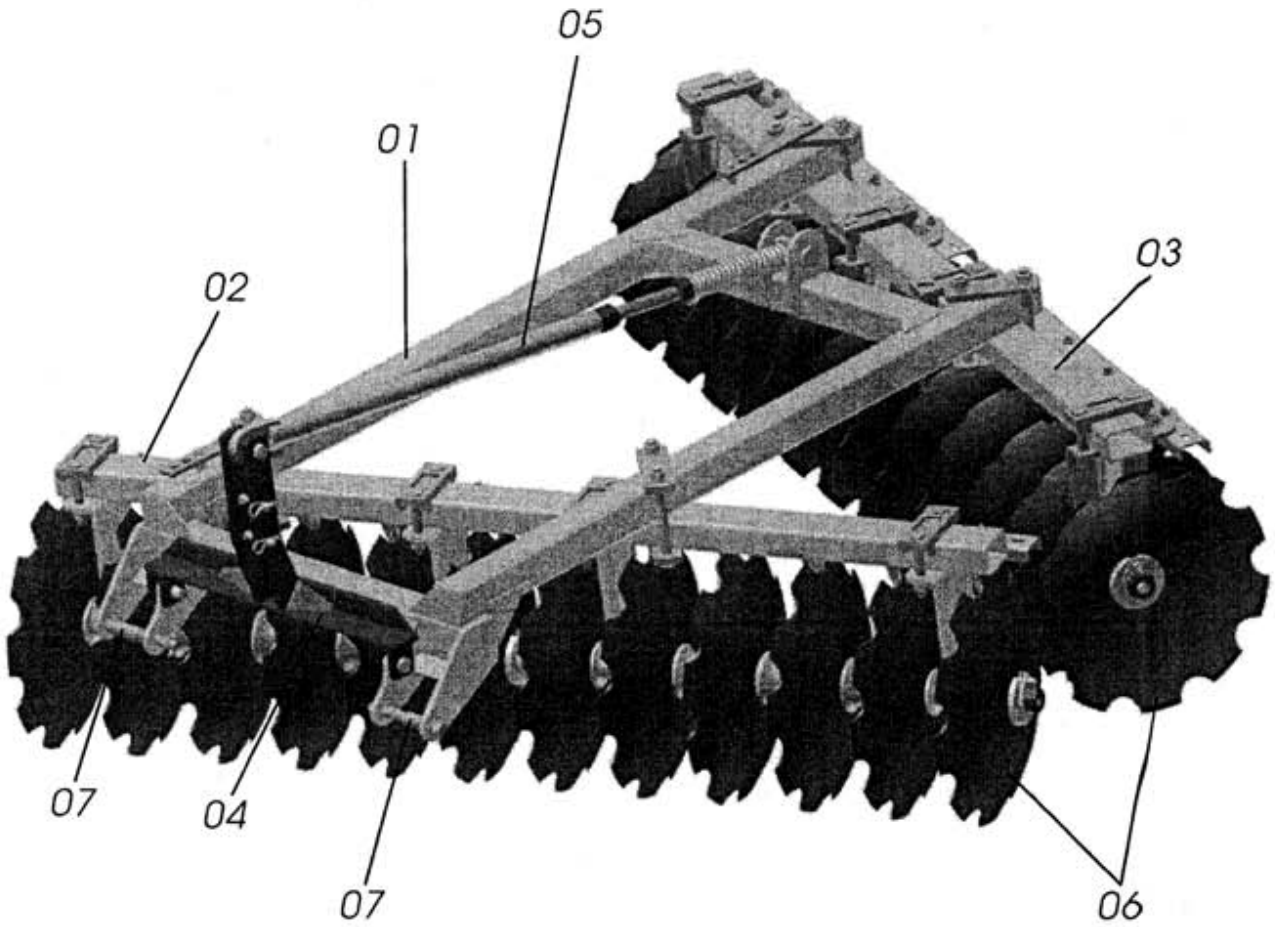
Kello Bilt Series 95

3 Point Hitch

Mounted Offset Disc Harrow

COMPONENTS

01 - Frame
02 - Front Gang Carrier
03 - Rear Gang Carrier
04 - Upper Hitch
05 - Stabilizer
06 - Notched Disc Blades
07 - Hitch Pins



ASSEMBLY

In order to facilitate the transport, the disk harrow comes generally disassembled, therefore; we describe the necessary instructions with all details and procedures for assembling the disc harrow.

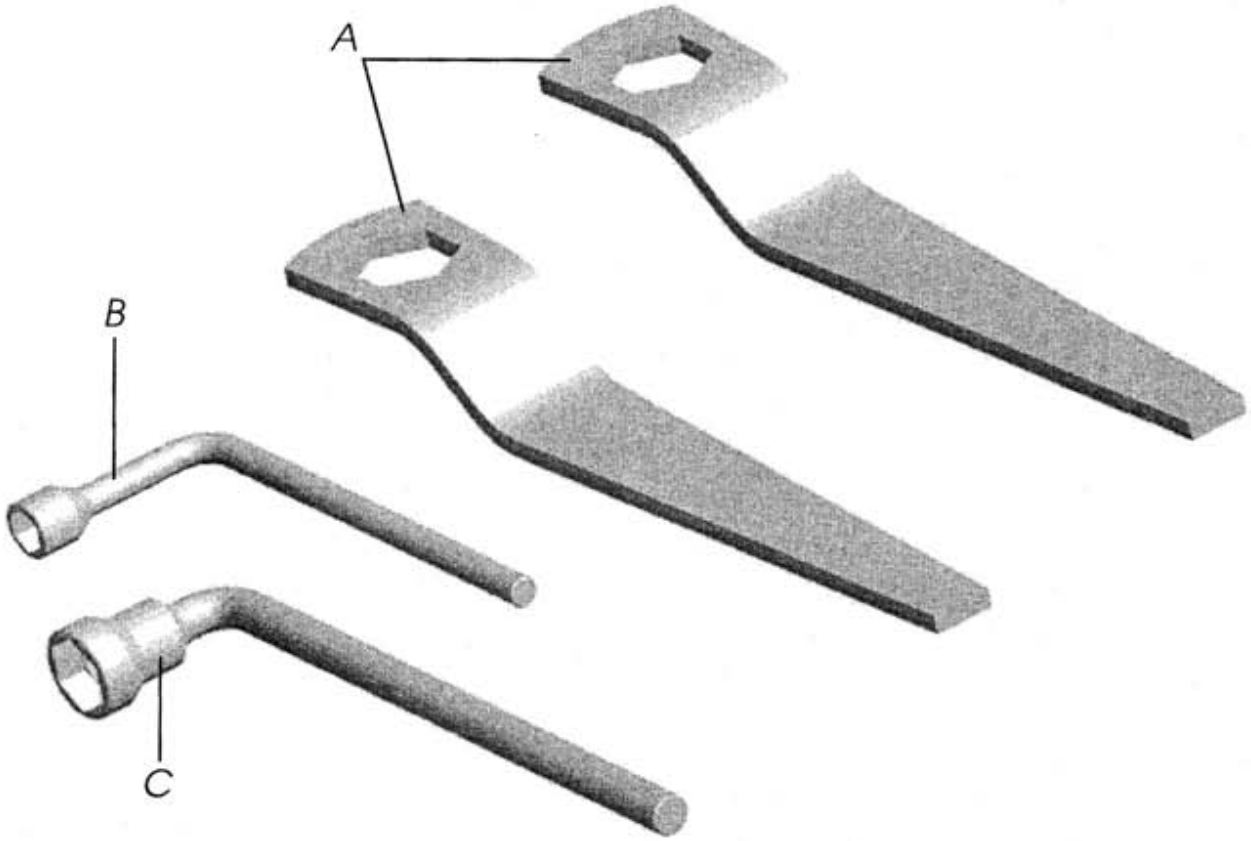
Initially place all the parts in clean area enabling the easy identification. Check the quantity with the packing list that is inside the shipping box.

How to Use the Wrenches

Wrench (A) is used to tighten nuts of the disc gangs, one to hold the axle nut in one side, while tighten the other onto the opposite side, avoid the axle to turn around. See illustration on page 12.

Wrench (B) is used to tighten bolts and nuts of the bearing assemblies.

Wrench (C) is used to tighten nuts on the frames and standards.



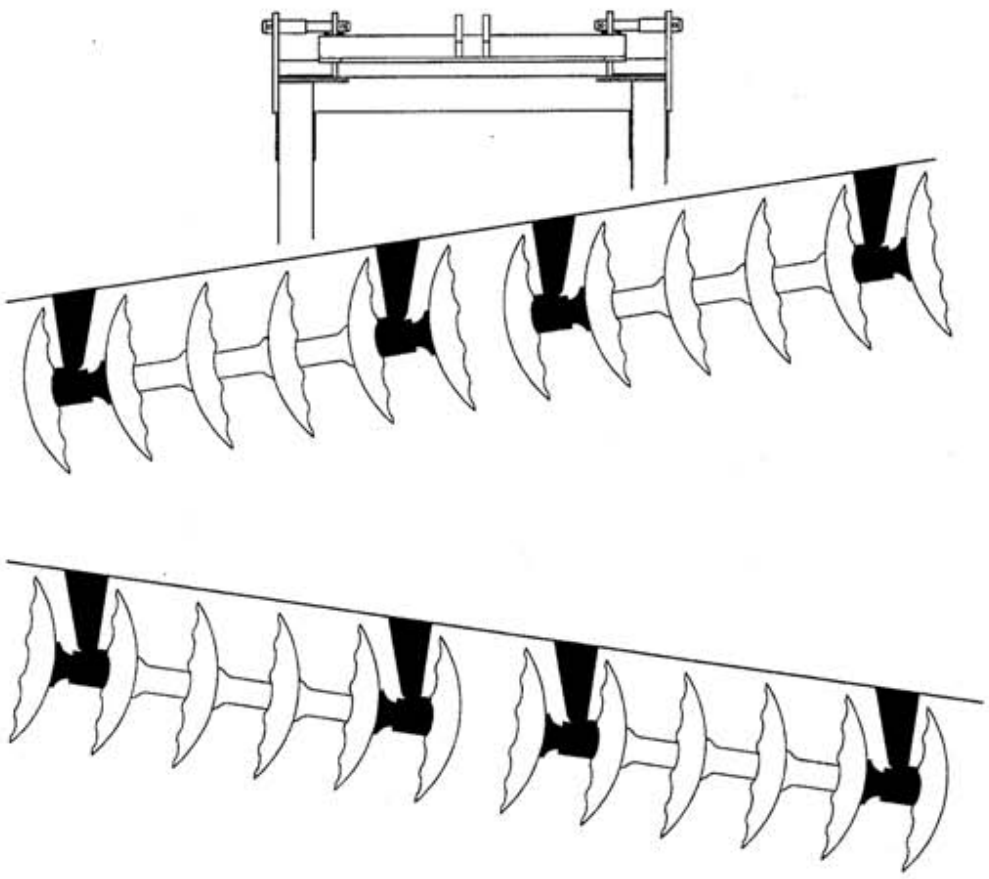
Attention: WE RECOMMEND TO WEAR GLOVES, ESPECIALLY IN THE ASSEMBLY OF THE DISC GANGS.

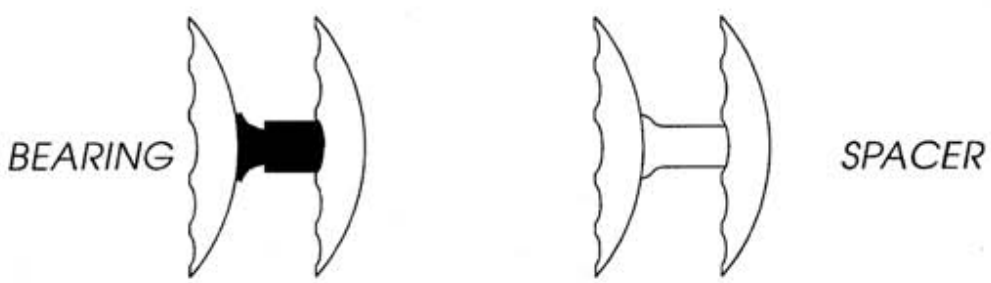
ASSEMBLY

Disc Gang Assembly

- Before starting the disc gang assembly verify the correct positioning of the bearings and spacers.

Assembly Scheme of Bearings and Spacer Spools.





ASSEMBLY

Sequence of Disc Gang Assembly

Refers to the illustration of the next page.

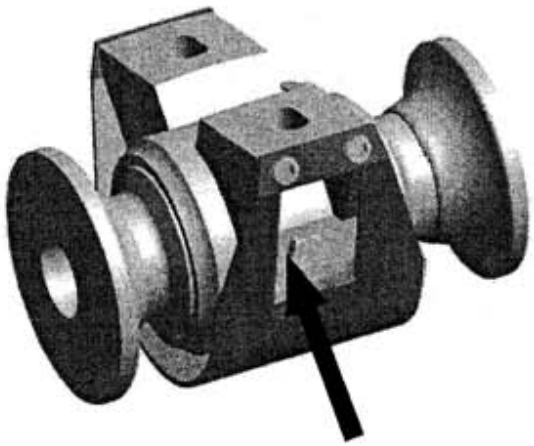
- Place the outer lock (A) to the axle (B).

- Install nut (C) slightly tightened.

- Install the discs (D), bearings (E) and spacers (F), following the illustrations of previous page.

Important:

- **BEARINGS AND SPACERS HAVE CONCAVE AND CONVEX ENDS. CURVATURES MUST MATCH WITH DISCS. OTHERWISE GANGS WILL NOT STAY TIGHT AND MAY CAUSE DAMAGE.**
- **NOTE: CONCAVE AND CONVEX FLANGES ON THE BEARING ASSEMBLIES ARE FACTORY MOUNTED TO CORRESPOND TO THE FRONT AND REAR GANGS IN ORDER TO HAVE OIL FILL PLUGS OR GREASE FITTINGS ALWAYS FACING TO THE REAR.**
- **OIL BATH STANDARD BEARINGS.**



PLUG BACKWARDS.

- Install the inner lock (G) and other nut (C-1).

- Install the bolt (H) which fix the nut lock (I) together with spring washers and nuts. Only on the external side of the gangs.

- Now, using the axle nut wrenches (A), from page 9, tighten the disc gang as follow:

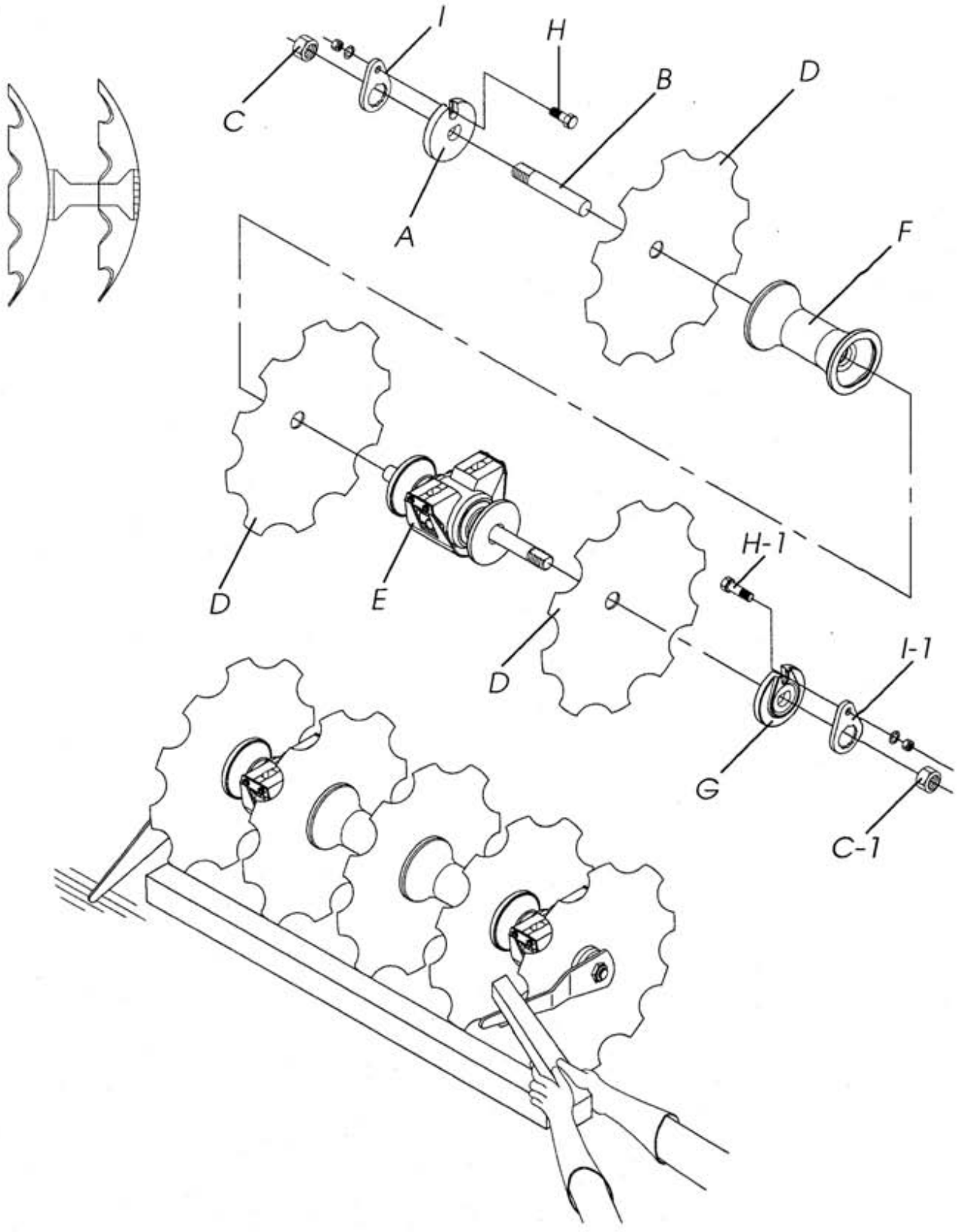
1º) Place one wrench on the convex side of the disc gang (locked side), letting the wrench cable on the ground.

2º) On the concave side, use the other wrench and make the gang tightening beating in the cable of the wrench to get the maximum tightening.

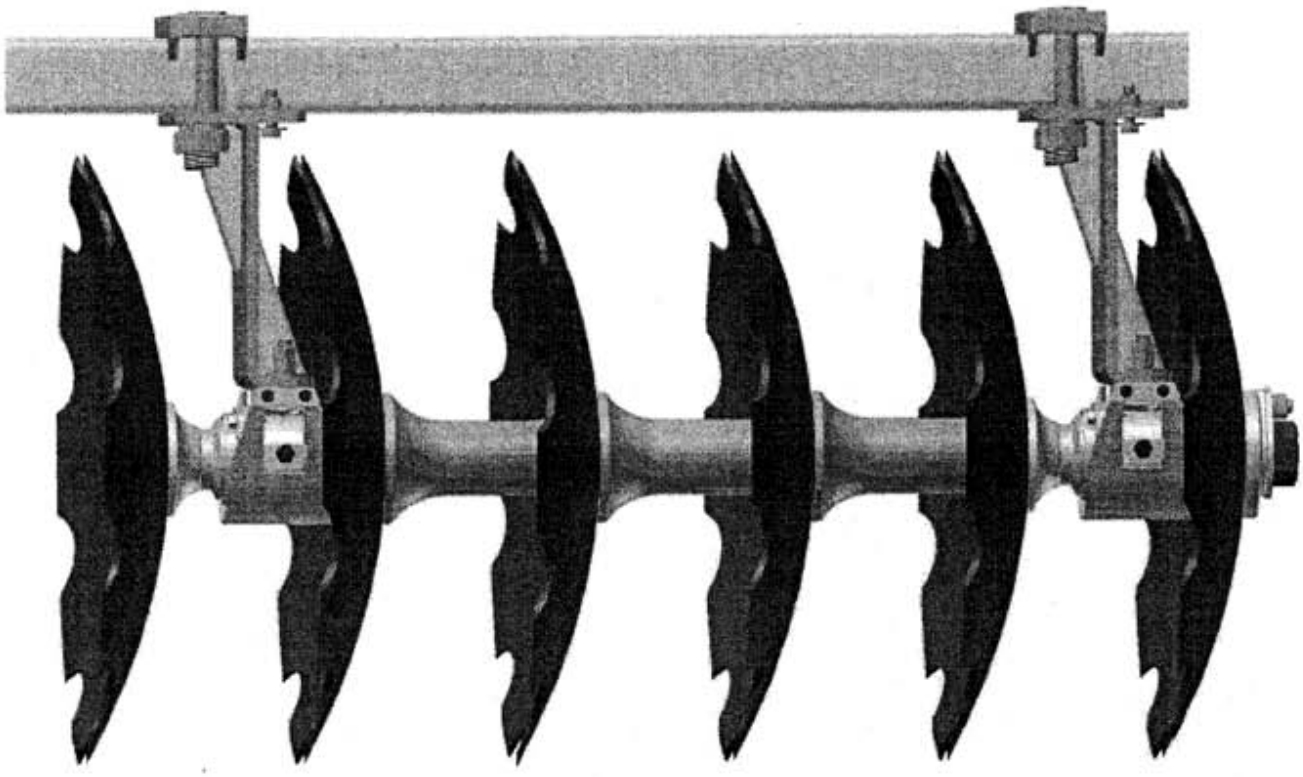
3º) Observe that for the disc gangs tightening they should be sustained with a piece of wood or other object, to avoid rolling over movement.

- Finally mount the bolts (H-1) and the nut locks (I-1), using the spring washer and nut.

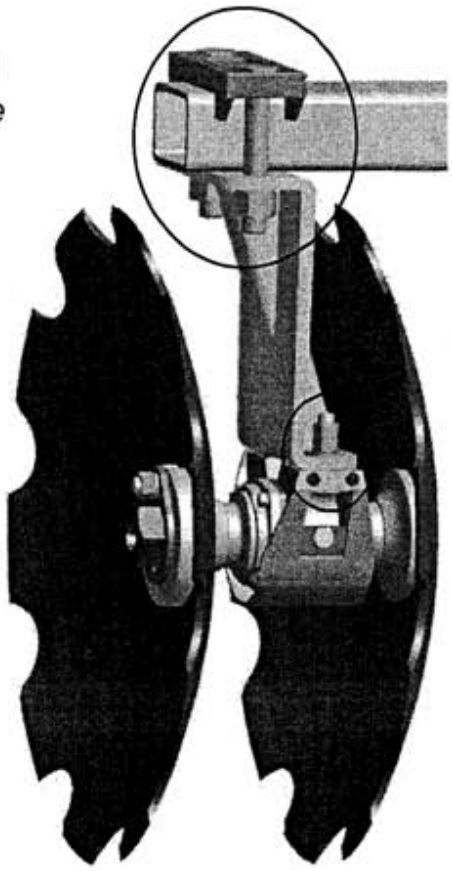
ASSEMBLY



ASSEMBLY



Detail of the assembly of the standard to the carrier tube and of the bearing to the bolt on hangers.

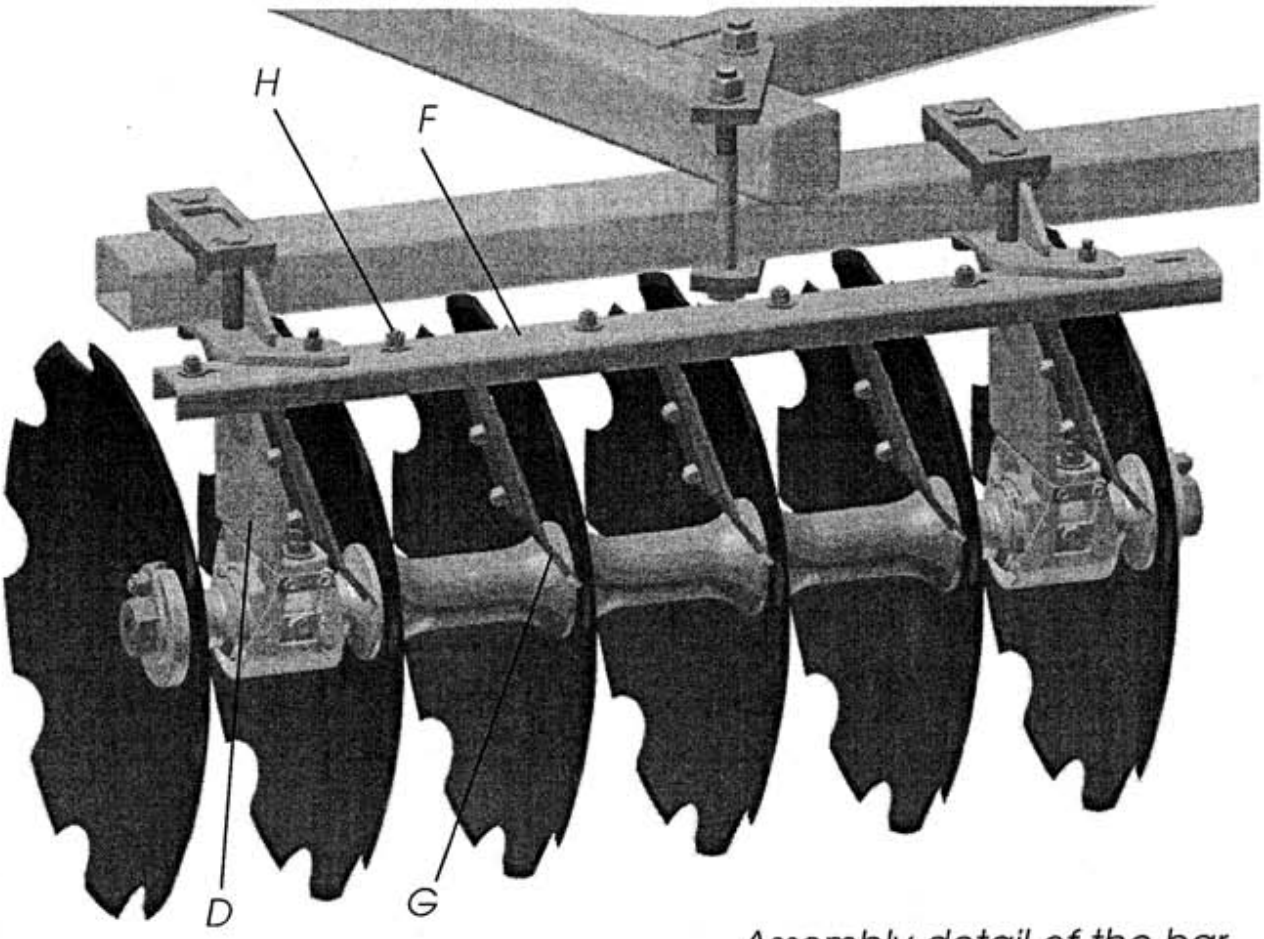


Note: AT FIRST ASSEMBLE THE FRONT CARRIER TO THE FRAME AND THEN ASSEMBLE THE REAR CARRIER. OBSERVE THE CORRECT POSITION OF EACH DISC GANG IN THE CARRIERS. AS PREVIOUSLY MENTIONED, DO NOT TOTALLY TIGHTEN THE BOLTS OF THE BOLT ON HANGERS TO THE CARRIER TUBE.

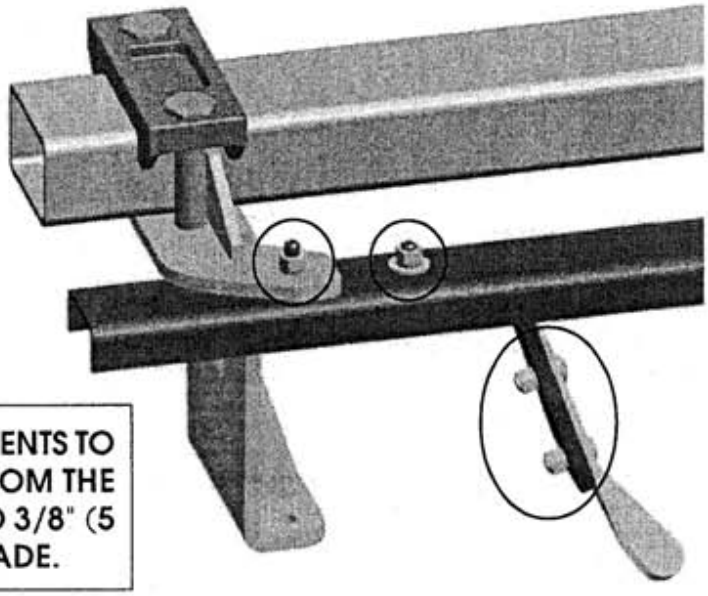
DO THE SAME PROCEDURE ON THE OTHER DISC GANGS.

ASSEMBLY

Assemble the bar of the scrapers (F) to the bolt on hangers (D). Assemble the scrapers (G), through the bolts (H) and flat washers that are placed underneath the bar of the scrapers. Mount a flat washer and nut by the top. Observe the position of the scrapers with their extremity towards the concave side of the discs.



Assembly detail of the bar and scraper.

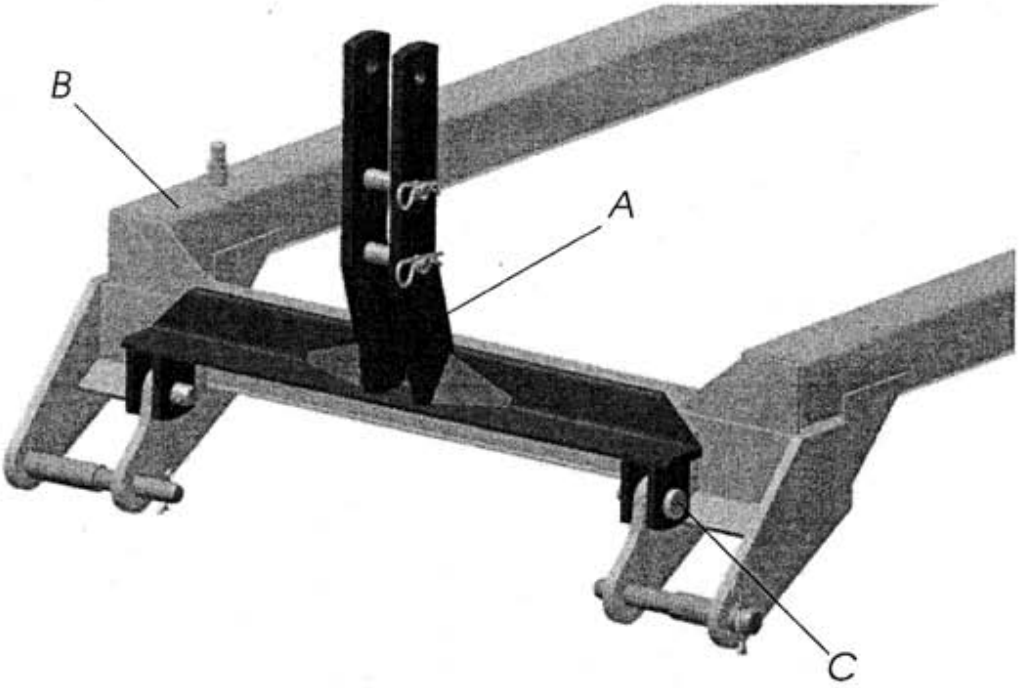


Note: THE SCRAPERS ALLOW ADJUSTMENTS TO BRING NEAR OR KEEP AWAY FROM THE DISC BLADES, PLACING 1/8" TO 3/8" (5 TO 9 MM) AWAY FROM DISC BLADE.

ASSEMBLY

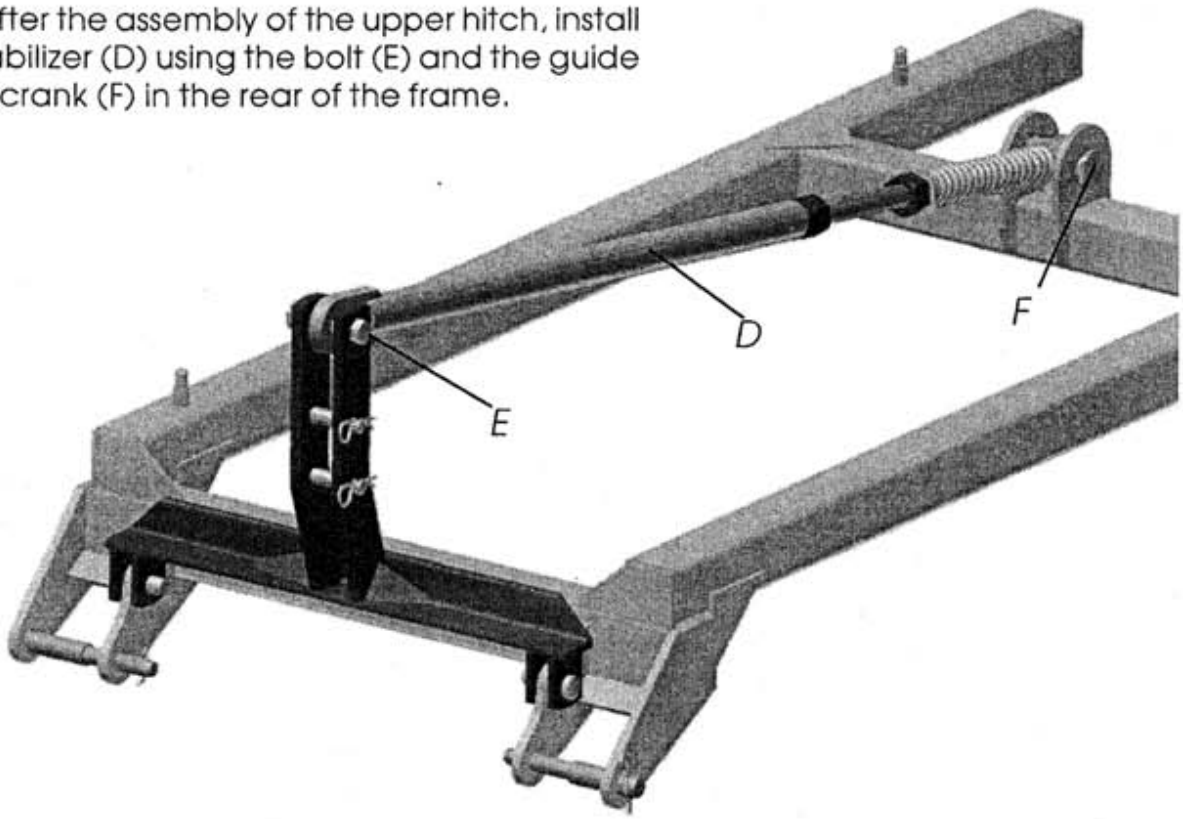
Mounting the Hitch

Install the upper hitch (A) in the frame (B), securing with pins (C).



Mounting the Stabilizer Set

After the assembly of the upper hitch, install the stabilizer (D) using the bolt (E) and the guide of the crank (F) in the rear of the frame.



OPERATIONS - Important Points

- Retighten nuts and bolts after the first day of service, as well as verify the conditions of all pins and cotter pins. Then tighten at every 24 hours of service.

- Observe with attention the lubrication intervals of the bearings.

- Special attention should be given to the disc gangs, tightening daily during the first week of use. Thereafter, tighten periodically.

- Only work the harrow with tractor of appropriate size.

- Choose a speed that allows the tractor to maintain certain power reservation, being guaranteed against unexpected efforts.

- Speed is relative to the tractor gear engagement and it can only be determined by the local conditions. We adopted an average of 6,0 to 8,0 km per hour, which is not advisable to exceed maintaining the job efficiency and avoiding possible damages to the harrows.

- When discing, raise harrow out of ground before making turns. The angle formed by the disc gangs transfer so much stress to the implement and the consequence will overload all components of the hitch.

- When uncoupling the harrow from the tractor, check for its safe parking.

- Remove any wood piece or object stuck on the disc blades.

- As previously mentioned, the disc harrow possesses several adjustments, even so, only the local conditions can determine the best adjustment of the same one.

MAINTENANCE

Lubrication

The simplest way to lengthen the useful life of your harrow and to avoid working interruptions is to perform a correct lubrication scheme, as we describe below.

1) At every 24 hours of service, lubricate the articulations through the grease fittings, in the following way:

- Be sure about the lubricant quality, with relation to its efficiency and purity, avoiding the use of products contaminated by water, earth, etc...

- Remove the remainder old grease around the articulations.

- Clean the grease fittings with a cloth before introducing the lubricant and substitute the defective ones.

- Introduce an enough amount of new grease.

- Use grease of medium consistency. Use NLGI grade 2-EP Multi-purpose.

2) The lubrication of the greasable roller bearings should be done at the same above mentioned period. (24 hours).

2.1) The oil bath roller bearings works in constant lubrication, but nevertheless it is necessary to give them the following attention:

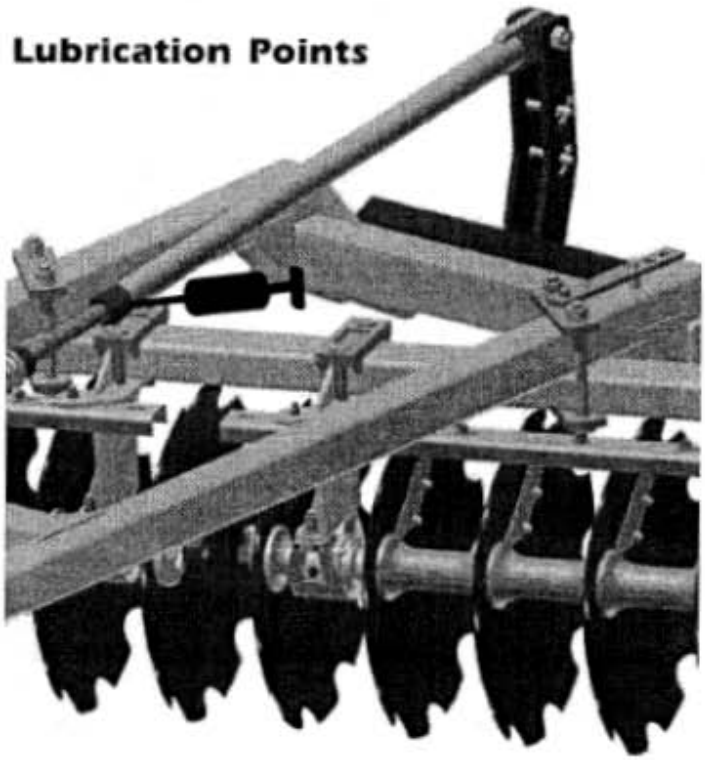
- In a flat place verify the oil level of each bearing, before using the harrow for the first time and everyday of the first week.

- Afterwards verify weekly.

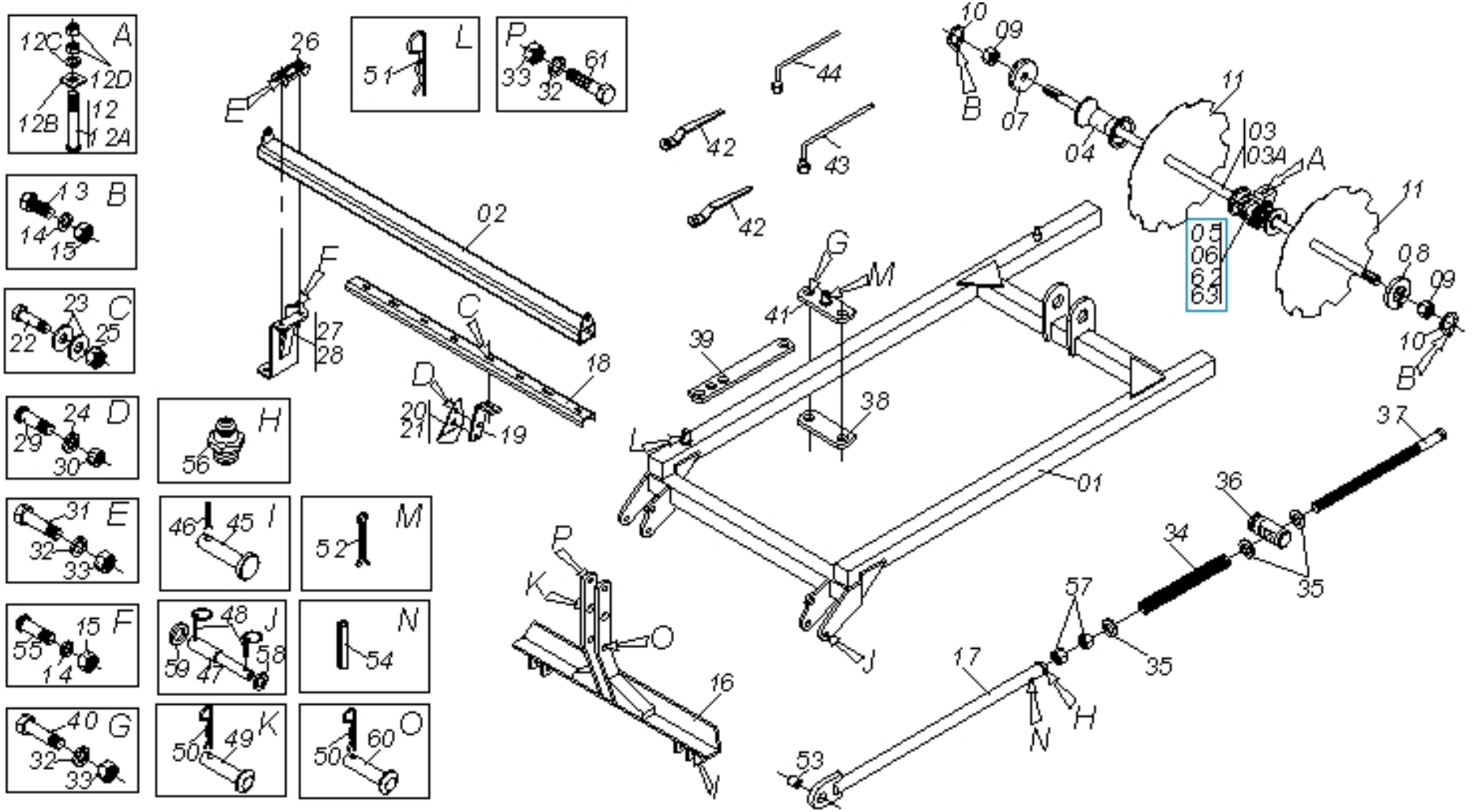
- Change the whole oil every 1,000 hours of service.

- Use only SAE 90 mineral gear oil.

Lubrication Points



ITEM	CODE	DESCRIPTION	QT



01	0511067671	FRAME GHD-2 3009A	01
02	0511067669	120 X 180 TUBE	02
03	0511021790	1.1/2" X 1285 AXLE	04
03A	0541014457	1.1/2" AXLE	04
04	0502010621	8.8" 1-1/2" SPACER	12
05	0501044315	9" X 1-1/2" OIL BATH BEARING	04
06	0501044316	DM OL 225 1.1/2" PR BEARING ASSY	04
07	0502010871	1-1/2" EXTERNAL AXLE WASHER	04
08	0502010872	1-1/2" INNER AXLE WASHER	04
09	0501010110	1.1/2" NUT	08
10	0501018592	1-5/8" 2.4" NUT LOCK	08
11	0602030421	24" X 6 NOTCHED DISC	24
12	0501042160	5/8" X 76 BOLT ASSY	16
12A	0501011234	5/8" X 3" BOLT	16
12B	0501010947	5/8" SQUARE WASHER	16
12C	0501012140	FLAT WASHER	16
12D	0503010013	5/8" NUT	32
13	0503013842	5/8" UNC X 1-3/4" BOLT	08
14	0503010027	5/8" SPRING WASHER	16
15	0503010013	5/8" NUT	16
16	0511067675	DRAWBAR	01
17	0511067670	1270 ADJUSTMENT BAR	01
18	0551011371	BAR FIXER SCRAPER	04
19	0541015258	SCRAPER BODY	22
20	0541015256	SCRAPER	11
21	0541015257	SCRAPER	11
22	0501019219	1/2" X 1-3/4" BOLT	22
23	0511017302	FLAT WASHER	44
24	0503010019	1/2" SPRING WASHER	44
25	0503010060	1/2" NUT	22
26	1902012323	BRACKET FIXER	08
27	0511065942	RH FRONT BRACKET	04
28	0511065266	LH FRONT BRACKET	04
29	0501010243	1/2" X 1-1/2" BOLT	44
30	0503010020	1/2" NUT	44
31	0503013113	1" X 6" BOLT	16
32	0503010012	1" SPRING WASHER	25
33	0501010059	1" NUT	25
34	0503032857	40 X 510 X 12,7 COMPRESSION SPRING	01

35	0501012694	FLAT WASHER	03
36	0501018141	GUIDE	01
37	0501069398	CRANK	01
38	0551011384	FRAME LOCK PLATE	06
39	0551011379	REGULATOR PLATE	02
40	0503014180	1" X 10 BOLT	08
41	0511067691	FRAME LOCK PLATE	02
42	0501011432	1-1/2" AND 1-5/8 GANG BOLT WRENCH	02
43	0501061617	1" GANG BOLT WRENCH	01
44	0501068273	5/8" WRENCH	01
45	0551011458	28,50 X 90 PLUGER	02
46	0503010571	1/4" X 1.1/2" COTTERPIN	02
47	0551011381	LOWER PIN	02
48	0503030430	7/16 X 2" PIN LOCK	04
49	0521010545	1.2" X 5.1" COUPLING SHAFT	01
50	0503031035	HAIR PIN	02
51	0503030012	HAIR PIN	02
52	0503010131	3/16" X 1-1/2" COTTERPIN	02
53	0551011385	26,5 X 38,1 SLEEVE	01
54	0503010292	0.2" X 1.6" SPRING PIN	01
55	0503011267	5/8" X 1.1/2" BOLT	08
56	0503010002	GREASE FITTING	01
57	0521011696	1.1/2" LEFT 38 NUT	02
58	0511017480	FLAT WASHER	02
59	0521011100	FLAT WASHER	02
60	0521010580	0.9" X 4.7" COUPLING SHAFT	01
61	0501010372	1" X 5-1/2" BOLT	01
62	0501044317	CM GX 225 1.1/2" PR BEARING ASSY	04
63	0501044318	225 X 1.1/2" BEARING ASSY	04