Operator's Manual

FARMI JL 410

skidding winch

Safety precautions

Read before operating this machine! It is the owner's responsibility to instruct all equipment operators and support personnel in the operation of this winch.

- **Do not attempt to operate this winch without proper training!**
- **Do not operate this machine until the owner's manual has been fully read and understood.**
- **Keep hands, feet and clothing away from power driven parts!**
- **Ensure that the cable is in good condition before operating the winch. If the cable breaks, parts of it can fly both toward the operator and away from the winch. Ensure that all bystanders are out of reach of the cable when the winch is used.**
- **Never handle cable without first shutting off the power take-off!**
- **Always lock the cable underneath the lower snatchblock for transport.**
- **Do not use the winch for other uses than winching and skidding trees.**
- **Check the moving parts. They should be fastened in place, in good working condition and all shields and guards must be in place.**
- **Familiarize yourself with the controls and how to stop the winch and tractor in an emergency.**
- **Do not let children or incapable persons operate the winch.**
- **Do not wear loose clothing, loose sleeves, neckties or long uncovered hair around moving parts of machinery.**
- **Park the winch and tractor on level ground for winching.**
- **Operate the winch from a control rope from at least 6 feet to the side of the machine. Do not operate the winch from the tractor seat if there is no protective shield between the seat and the winch.**
- **Ensure that other people do not become endangered when you are using the winch.**
- **Do not leave the tractor running unattended.**
- **Disengage the P.T.O and turn the tractor off before you service the winch. Remove the keys so the tractor cannot be started up accidentally.**
- **Use only original parts replacements. Do not make any modifications.**
- **Inform anyone who works with the winch about the risks and how they can avoid accidents.**
- **Stay alert! Do not operate the winch when fatigued.**
- **Do not winch at sideways angles exceeding 30 degrees.**
- **Failure to heed the warnings printed on the winch or in the operators manual might result in serious injury or death!**

WARNING

Read and understand the operator's manual before assembling or operating this unit.

1. Keep all shields in place.
2. Before servicing the machine, ALWAYS disengage the PTO-shaft and wait for all movement to stop.
3. Before handling the wire cable, disengage the PTO-shaft.
4. Keep hands, feet and clothing away from power driven parts.
5. Keep all other people away from the reach of the cable.
6. Observe safety recommendations in operator's manual.

WARNING

1. Before operating the machine, make sure that the wire cable is free of defects.
2. Operate the winch from the control ropes standing at least 6 feet to the side of the machine.
   *DO NOT operate the winch from the tractor seat if there is no protective shield between the seat and the winch.
3. Park the winch and tractor on level ground for winching.
4. Use the machine only for winching trees.
5. Do not winch from sideways angles exceeding 30 degrees.

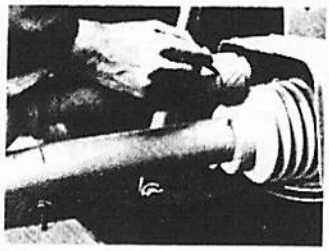
Skidding winch JL 410

Read and understand these instructions before operating the winch and follow the safety regulations.

MOUNTING

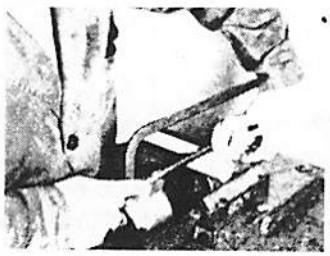
The winch can be mounted to the 3-point linkage of any tractor.

1. Connect winch top link arm to the top link point of the tractor. Lock the top link point if it is connected with the tractor's hydraulic lift system, before mounting the top link arm. Separate brackets are available. Lock the pin with the lynch pin.
2. Connect the lower links.
3. Connect the top links to the winch.
4. Connect the PTO-shaft to the tractor's PTO and lock it. Check that the PTO-shaft length is correct.
5. Connect the PTO-shaft to the sprocket shaft of the winch and lock it.

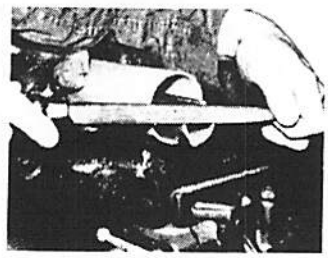


Connect one shaft half to the tractors PTO. Lay the other PTO half on its side so that the end of the shaft is one inch from the PTO-end of the winch. Mark lengths required.

Cut the plastic shield.



Cut profile tube by same length.



File sharp edges.

6. Lift the winch until the PTO-shaft is in an approximately horinzontal position. Pull out the supporting legs and secure the legs with their pins.
7. Lower the winch so that it is standing with the legs on the ground.
8. Adjust the top link arm to such a length that the winch leans slightly toward the tractor. Note: The winch drum will not free wheel easily if the JL 410 winch leans away from the tractor.
9. Pull out a few feet of the cable rapidly. There is risk for tangle and kinks on the cable if the drum does not stop turning when the pull is discontinued. You should turn the drum brake down until you can notice sufficient resistance on the cable. See "Brake adjustment".
10. Every new cable should be pulled out all the way and winched in with a heavy load. This tightens the cable on the drum and increases the cable lift. This procedure should be repeated always if the cable is loose on the drum and is developing kinks or the cable is mixed up.

BEFORE RUNNING THE WINCH CHECK:

1. The wire rope
   — that it is firmly and properly fastened,
   — that it is faultless (breaking risk),
   — that the wire lock's guard pipe is in its place,
   — that its length is suitable, avoid using too long a wire.
2. The machine fastening
   — that all the pins and lynch pins are placed
   — that the tension of the lower link's side chains is correct,
   — that the tractor's top link point is locked (with a separate bracket, if needed).
3. The PTO-shaft
   — that its length is right and that it is correctly fastened,
   — that the guard is fastened.
4. Chain tightening, drum brake and latch brake, see Service Instructions
5. The clutch must be correctly adjusted and lubricated. Check that the return spring disconnects the clutch.

SAFETY PRECAUTIONS

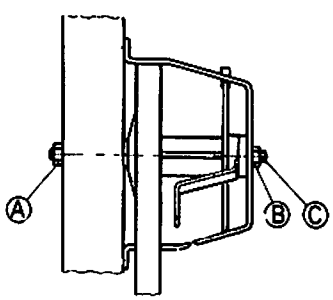
1. Choose as even a hauling route as possible. Avoid steep slopes, especially when winching from the side. Check that the log haulage way is clear and that the tractor's brake is on.
2. The driver's safest place is obliquely backwards from the winch, where the visibility is good. Do not allow any outsiders near the working area. The assistant's safest place is behind the load.
3. Engage and disengage the clutch gradually.
   — Avoid an unnecessary strong pull, the tractor can turn over.
   — Adjust the inwinching speed according to the conditions.
   — Use a shield between the seat and the winch (e.g. safety cab).
   — Keep the tractor's PTO-shaft uncoupled when driving.
   — Use agreed gestures when working in groups.
   — When starting to winch, unwind the cable entirely and wind it up again together with the load.

SERVICE

Servicing is easy, because the wire drum, main spocket and snatchblock are fitted with selflubricating bearings. There are only 4 points requiring lubrication:

1. The grease fitting, picture number 30. Put in good quality vaseline at the beginning of every work period, thus the drive axle bearings and the snatchblock guard bearing will be greased.
2. Oil the roll chain once a day, but take care that the clutch linings do not get oiled.
3. Grease the rollers with vaseline at least once every work period.
4. Oil the latch axle through the hole on the bearing socket.

PERIODIC SERVICE

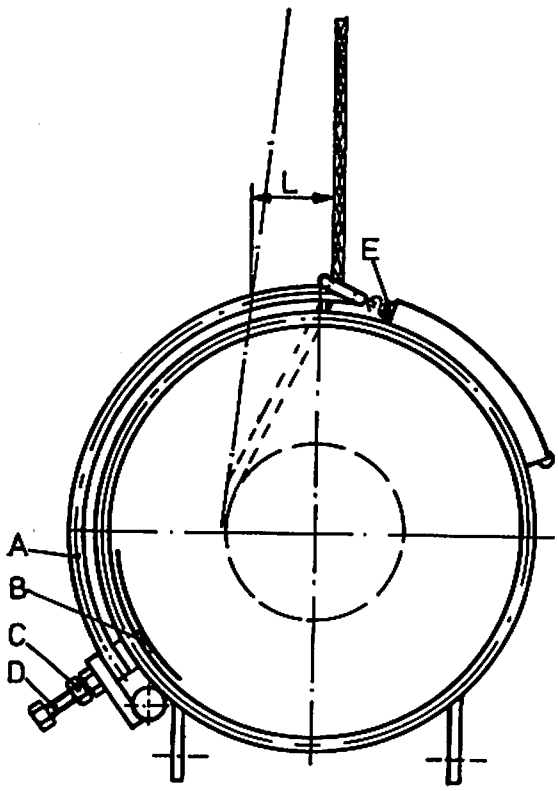


1. Clutch adjustment
   Adjust the clutch lever always to such a position that the clutch grips well, but also frees itself when the clutch lever is not in use. Make the adjustment in the following way:

a) Loosen the hexagon screws, key distance 36 mm, on the drum axle ends.
b) Adjust the clutch by turning the axle, keysize 14 mm. The clutch tightens clockwise, loosens counterclockwise.
c) After adjustment, retighten the screws.

BRAKE ADJUSTMENT

Always adjust the drum brake so that it slows down the drum lightly while pulling out the rope. This will prevent the drum from rotating freely and entangeling the rope. The brake must not be so adjusted that it makes hard pulling out the rope.



For adjusting
- — loosen locking nut C
- — wind adjustment bolt D so that the brake A remains totally springloaded hanging on the friction piece B and is not in touch with any other parts.
- — dimension L has now to be min one inch (25 mm)
- — tighten locking nut C.

In case the brake does not work
- — check adjustment
- — check that the friction piece is clean
- — check that the spring E is good, change when needed.

Tightening the roller chain

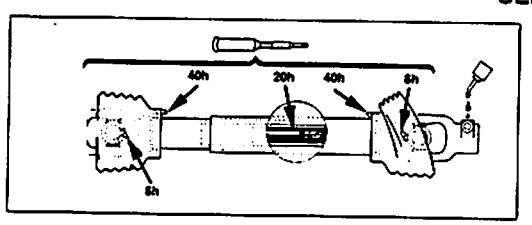
Adjust by moving the chain tightener in the following way:

a) Loosen the 2 hexagonal bolts, which lock the chain tightener.

b) Move the tightener toward the chain until the chain is suitably tight. The roller chain must have some slack to run properly (the chain has a tendency to come off the sprocket if it is too tight).

c) Retighten the bolts.

SERVICE



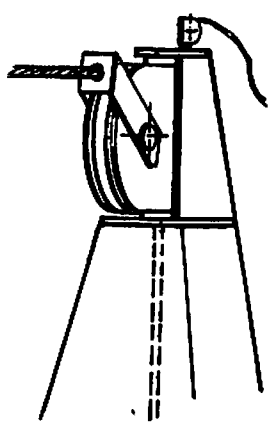
Grease the PTO-shaft as shown on illustriation below.

Grease the lower sprocket bearing once a month.

Oil the brake ratchet latch once a week.

LIGHTLY oil the roller chain once a month with chainsaw bar and chain oil.

DO NOT use much oil because it may run into the clutch. If oil does get into the clutch, the entire winch mechanism has to be taken apart to remove the oil from the clutch.



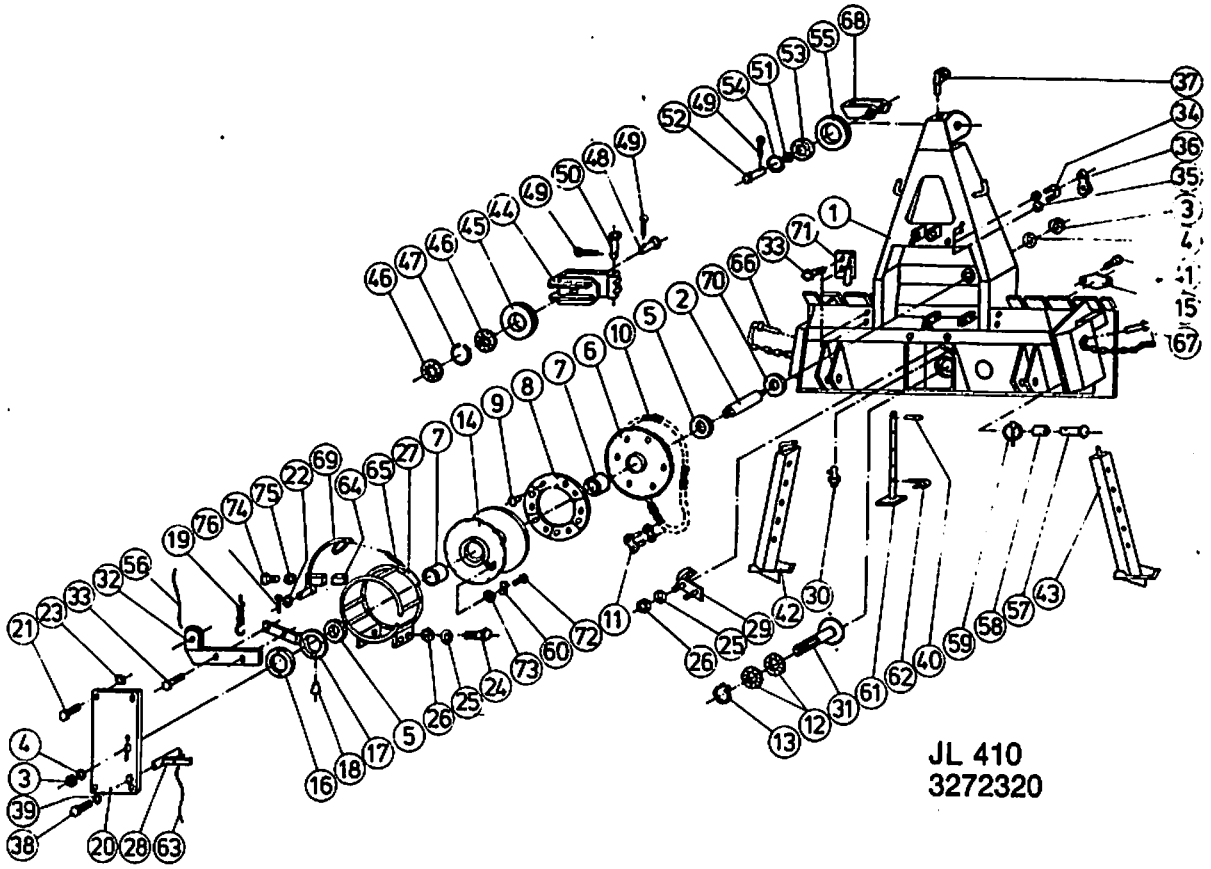
REPLACING THE CABLE

The cable should be replaced when it developes kinks or shows signs of wear.

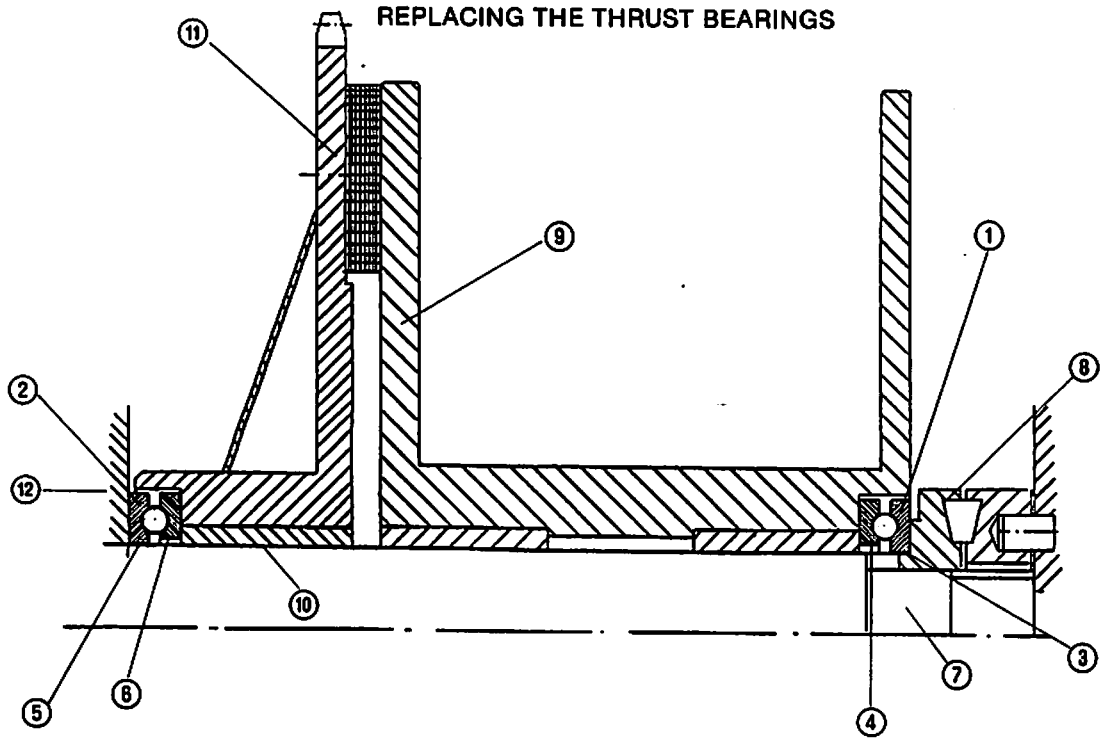
Note from picture how the cable should be run through the winch frame to the upper pulley. The cable goes through a hole in the frame to the upper pulley. Aslo tighten new cable as described in mounting instruction 10.

Replace JL 250 cable with 3/8" cable.

Steel core cable of good quality should be used.



REPLACING THE THRUST BEARINGS



1. Thrust bearing
2. Thrust bearing
3. Smaller inside dia goes towards the clutch half
4. Bigger inside dia goes towards the drum
5. Smaller inside dia goes towards the frame
6. Bigger inside dia goes towards the sprocket
7. Drum axle
8. Clutch
9. Wire drum
10. Bearing
11. Sprocket
12. Winch frame

SPARE PART LIST JL 410

No. 3272320

No.	Order No.	Part.		Pcs
1	1272295	Frame		1
2	3272275	Drum axle		1
3	5211010	Nut M 24	SFS 2067	2
4	5220010	Washer	SFS 2042	2
5	5454206	Thrust bearing	51209	2
6	2272270	Main sprocket		1
7	5456205	Bearing	ø45/55—45	3
8	4272274	Friction piece		6
9	5283001	Rivet	ø1/4" x 3/4"	12
10	5482001	Roller chain 83 links	5/8" DIN 8187	1
11	5482004	Chain link	5/8" DIN 8187	1
12	5451130	Bearing	6007Z	2
13	5223006	Circlip	ø35 x 2,5 DIN 471	1
14	3272269	Rope drum		1
15	4272021	Cover		1
16	3272277	Clutch half		1
17	4272311	Clutch half		1
18	4066023	Roller		1
19	9461301	Clutch return spring		1
20	4272291	Axle support		1
21	5206211	Bolt	M16 x 40 SFS 2064	4
22	5220006	Washer	M 14	2
23	5211007	Nut	M 16	4
24	5206023	Nut	M 10 x 30	4
25	5220004	Washer	M 10	6
26	5211004	Nut	M 10	6
27	3272282	Drum cover		1
28	4272303	Latch		1
29	4272019	Chain tightener		1
30	5240105	Grease fitting	R 1/8"	1
31	4056218	Axle		1
32	4272278	Clutch lever		1
33	5206051	Bolt	M 10 x 20	4
34	5481306	Shackle	5/16"	1
35	5211002	Nut	M 6	4
36	5481606	Pulley	ø 35	1
37	4272105	Pulley		1
38	5206011	Bolt	M 8 x 16	1

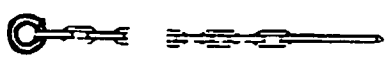
No.	Order No.	Part.		Pcs
39	5220023	Washer	M8 SFS Bv 157	1
40	5284022	Spring sprint	ø8 x 50	1
41	5206020	Bolt	M 10 x 16	2
42	3272240	Supporting leg		1
43	3272239	Supporting leg		1
44	2088001	Lower snatchblock house		1
45	4088005	Lower snatchblock		1
46	5451121	Bearing	6200Z	2
47	9463501	Spring		1
48	9282021	Snatchblock pin		1
49	5281321	Split pin	ø6 x 40	3
50	9282007	Pin		1
51	4238071	Sleeve		2
52	9282308	Snatchblock pin		1
53	5451111	Bearing	6305 2Z	1
54	5223112	Circlip for hole	ø6 x 2 DIN 472	1
55	4228122	Snatchblock		1
56	0272161	Clutch rope	ø6—3500	1
57	9282018	Link arm pin		2
58	4029379	Sleeve		2
59	5284215	Ring pin	ø10	2
60	4272316	Key	22 x 43	1
61	3227027	Standing support		1
62	5284214	Pin		1
63	0272162	Latch rope	ø6—2500	1
64	4272319	Friction piece		1
65	9461102	Brake spring		1
66	8282201	Pin		1
67	8282202	Pin		1
68	3272263	Finger protector		1
69	3272286	Drum brake		1
70	4272281	Ring		1
71	4272308	Attachment for stand. support		1
72	5206014	Bolt	M 8 x 40	1
73	5211708	Nut	M 8	1
74	5206015	Bolt	M 8 x 50 SFS 2064	1
75	5211003	Nut	M 8	1
76	5281312	Split pin	ø4 x 30	1

FARMI WINCHING ACCESSORIES

1) SKIDDING CHAIN JK 104

The JK 104 is a short and lightweight chain for pulling tops or for adding on to other Farmi chains.
Breaking strength: 6000 lbs.
Weight: 2.5 lbs. Length: 38" plus 9" pin

2) SKIDDING CHAIN JK 208



The Farmi skidding chains are made of alloy steel and have a breaking strength of 7000 lbs. The chains have a pin on the end of the chain to make it easier to pass the chain underneath the tree.
Weight: 4.5 lbs. Length 68" plus 9" pin

3) SKIDDING CHAIN JK 248

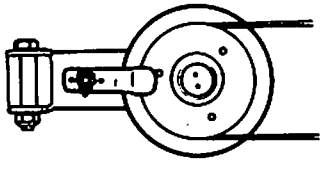
The lightweight but remarkably strong JK 248 has a breaking strength in excess of 15,00 lbs. The

JK 248 can be used on all Farmi winch models. The chains have a pin on the end of the chain to make it easier to pass the chain underneath the log.
Weight: 7 lbs. Length: 80" plus 9" pin

4) FARMI KEYHOLE SLIDERS LL 2

The Farmi keyhole sliders are used with the Farmi skidding chains. Keyhole sliders are available as extra equipment.

5) FARMI SELF-RELEASING SNATCHBLOCK TP 11



When obstacles prevent direct winching or when remaining trees are to be protected from damage a self-releasing snatchblock should be used. The Farmi snatchblock releases the cable when the load reaches it. The snatch-block is attached to an anchor tree with a plastic covered cable which prevents damage to the tree. The automatic cable release works only when the pulley is turned upside down, that is, when the release mechanism faces the ground. The self-releasing snatchblock can be used with 7/16" and smaller cable.

6) SKIDDING GRAPPLE FARMI JS 3

The grapple can be used on all Farmi skidding attachments. The grapple will grip automatic-ally when the forward motion has begun. The advanced 3 progend design reduces risk of getting hooked up behind stumps and roots as the cone-shaped grapple stears the log around obstacles. The grapple also reduces the tendecy of the log to dig in the ground when pulled up hill. The grapple has 6 points which ensures a secure grip. The points are also defigned to release the log effortlessly at the end of the pull as the points will work themselves out when the top of the grapple is moved back and forth sideways. The grapple has a swivel loop hookup. Weight: 20 lbs.
Width closed: 8" Largest opening: 21"

7) SKIDDING GRAPPLE FARMI JS 3-P

The skidding grapple is used when the tree lies flat and it is hard to get a choker chain under it.
Weight: 23 lbs. Largest opening 25"

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