Holder

Wurster Kid

A12

Betriebsanleitung

ab Masch. Nr. 11 000

Operating Instructions

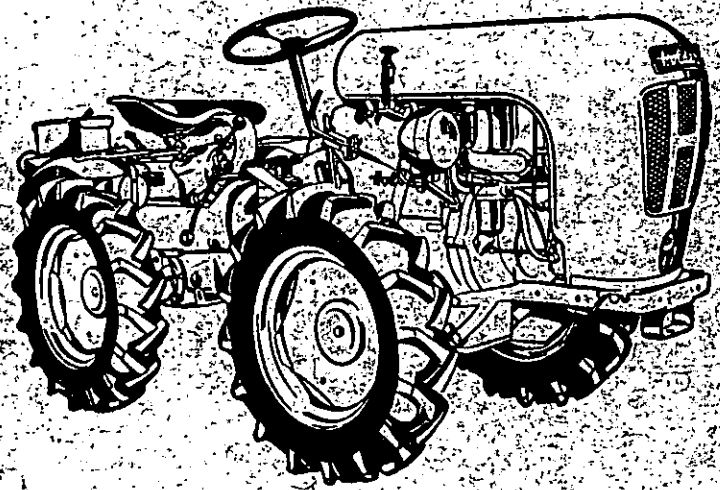
from mach. no. 11 000

Notice d'emploi

à partir de tracteur no. 11 000

Instrucciones de servicio

a partir del tractor no. 11 000



kauf ins Ausland durch:
portation par:
Export sales through:
Exportación por:
EBRÜDER HOLDER · Maschinenfabrik
7418 Metzingen/Württ. · Western Germany

Verkauf im Inland durch:
Ventes intérieures par:
Home market sales through:
Ventas interiores por:
Holder GmbH · Maschinenfabrik
7067 Grunbach bei Stuttgart

A) Description

Your new 12 h. p. Holder four-wheel drive diesel tractor A 12, is a special-purpose machine for row crop cultivation. It is equipped with a hydraulic implement lift to facilitate raising and lowering of the attachments for the operator. **Narrow, compact design, four-wheel drive** and the **articulated (pivot-joint) steering mechanism** are the principal features which distinguish the A 12 from other models in the Holder range and from tractors of other makes in general.

Drive from the engine is transmitted via a **jointed shaft** (articulation pivot) to the **clutch** and from there to the **rear gearbox** which houses the gears for the different speeds and the drive for the power take-off shaft fitted to the rear. The front differential is also driven by the gearbox at the rear via a jointed shaft.

Correct handling and conscientious maintenance will keep your A 12 tractor ready for duty at all times and guarantee outstanding performance on all farming jobs, as well as long service life.

Our distributor will instruct you in the handling of the machine before handing it over. Nevertheless, we advise you to study this brief instruction manual as well as the hints given in the SACHS engine manual before taking the tractor into service. This little extra trouble will save you time, money and unnecessary inconveniences.

Please leave important repair works to a HOLDER or FICHTEL & SACHS Service Station.

B) Technical Specifications: Type A 12, from Machine No. 11 000

Tractor:

Design: Monobloc construction, with articulated steering and four-wheel drive

Engine:

Maker: Fichtel & Sachs AG, Schweinfurt/Main

Model Code: D 600 L

Type: 2-stroke diesel with direct injection

No. of cylindres: 1 — capacity 604 cc

Cooling: Air, by axial blower

Engine rpm: 2,200

Rating: 12 h. p.

Fuel consumption: 1¼—4½ pints/h according to load

Filter: Oilbath air filter
For further details, see Sachs diesel manual

Clutch: Fichtel and Sachs, single-plate dry clutch K 5/D

Gearing: 2 spur wheel differentials with 6 forward and 3 reverse gears

Speeds, m. p. h. with tyres

a) 5.00 x 16 AS		b) 5.50 x 16 AS	
forward	reverse	forward	reverse
1st 0,78	0,78	0,81	0,81
2nd 1,26	1,26	1,30	1,30
3rd 2,18	2,18	2,25	2,25
4th 3,05		3,16	
5th 4,89		5,08	
6th 8,50		8,81	

Gear oil: SAE 80

Front gearbox: 5 pints

Rear gearbox: 2 gal.

Intermediate housing: 1½ pints

Differential lock: for front axle, operated by hand lever

Steering: 4-wheel ZF, easily operated oilbath worm steering 1 : 24

Min. inner turning radius: approx. 2½ ft.

Brakes: foot brake: internal expanding, acting on rear wheels

Hand brake: internal expanding, acting on front wheels

Overall dimensions and weight:

With tyres 5,00 x 16 AS		5,50 x 16 AS
Length	7′2″	7′2″
Overall width narrow/wide	2′6″/3′2″	2′7″/3′3″
Height	3′8″	3′7″
Weight, lbs	1,500	1,520
Ground clearance	10″	10½″
Ground pressure:		
a) Front axle	990 lbs	995 lbs
b) Rear axle	505 lbs	510 lbs
Wheel base	3′9″	

Lighting: (Export)	2 headlamps with distance, dipped and parking lights	1 horn
	2 rear lights with brake lights	1 socket for trailer lighting

---

Hydraulic system: Bosch hydraulic pump, Type HYZD 9 AR 6

Output: approx. 230 mkg

Oil in hydraulic housing: just under 1 gal. SAE 20

PTO: operated by control lever
Clockwise rotation,
Splined shaft, profile to DIN 9611,
Speeds: I: 540 r. p. m.
II: 920 r. p. m.

Fuel tank: approx. 2½ gal. diesel fuel

Lubricating oil tank: approx. 4 pints SAE 20 HD-oil

Electr. system: Bosch starter, Type EGE 1,3/12 R 5

Bosch dynamo, type LI/GGVGO/12/3000 R 2
90 W, 12 V
Battery 56 ah

Steering: ZF-worm steering 1 : 20 up to mach. no. 11385

ZF-worm steering 1 : 24 from mach. no. 11386

approx. ½ pint SAE 80 oil

C) Taking Tractor into Service

I) General:

Before you take tractor into service, check that all lubricating points are properly greased and that oil level is correct everywhere (see lubrication chart page 10). Before applying the grease gun, wipe the protective paint off the nipples. Pour in fuel through a funnel with fine-mesh strainer or a clean cloth. Even minute dust or dirt particles in fuel or oil will reduce the life of your machine. That is why scrupulous cleanliness is very important. Never store fuel or oil in open containers. Before filling in oil or fuel, wipe all dirt and dust off the filling inlet.

II) Starting: (The illustrations from page 64 correspond)

1. Gear lever (11) in neutral.
2. Move throttle lever (7) upwards to ¾ position.
3. Pull out blue knob on engine (17) (photo A 12/60 - 41) but only when throttle is in ¾ position. "Knob" returns automatically when engine starts up.
4. Insert key (3) into ignition, red charging lamp (16) should now light up.
5. Starter knob (4)

   a) When ambient temperature exceeds 50° F, pull out knob for about 5—10 seconds to start engine. As soon as engine fires, release knob. If engine fails to start, repeat starting process after interval of approx. 30 seconds. When engine is running, adjust throttle lever (7) to desired speed.

   b) When ambient temperature lies below 50° F, first pull out starter by approx. ½ in. until slight resistance is felt. Glow starter control lamp (18) should now light up brightly, then pull starter switch all the way out for 5—10 seconds to start engine. As soon as engine fires, release starter knob. If engine fails to start, wait approx. 1 minute, then repeat (glow starting, followed by starting). Adjust throttle lever (7) to desired speed.

   In very cold weather, it is advisable to step on the clutch pedal when starting the engine, to disconnect the engine from clutch and gearbox thus facilitating starting.

6. Manual starting.
   If the electrical starter fails the tractor can be started by means of crank handle.

   Cold Engines: Screw off preglower plug, crank engine several times with crank handle. Insert ignition cord thus into holder that its red end is visible. Insert holder with ignition cord into cylinder head in place of preglower plug and crank vigorously with handle.

   Warm Engines: When starting warm engines resp. during summer months the use of ignition cords is hardly necessary. The screwing out of the preglower plug can thus be spared.

III) Driving:

Before using gear lever, first put throttle lever (7) in neutral. Step on clutch pedal (8) to declutch, then pre-select desired gear with lever (12), finally engage gear lever (11).

If the selected gear proves difficult to engage, depress clutch pedal (8) a second time (never use force). Release hand brake (10) and clutch pedal (8) slowly. Control speed within selected gear range with throttle.

IV) Braking:

The foot brake (9) is for use when the tractor is moving and acts on the rear wheels. The hand brake (10) (fixable brake) stops and locks the front wheels. To release the hand brake lever (10), press handle outwards. When parking the tractor on rising ground, additionally engage 1st forward or 1st reverse gear. If the engine remains switched on, place chocks under the wheels. All trailers towed by the tractor must be fitted with reliable trailer brakes in good working order, unless they are braked by a second person. Trailers must additionally be equipped with hand (parking) brakes.

In general, always comply strictly with your local traffic and safety regulations.

V) Differential Lock:

The differential lock rigidly links the two front wheels to prevent either of them from slipping. To apply the differential lock, press lever (13) for differential lock to the right and outwards. With the differential lock on, i. e. with both front wheels rigidly linked, the tractor must only be steered straight ahead. As soon as the lever is released, the spring-loaded differential lock is automatically released.

VI) Track Width Adjustment:

To alter track width, change over both pairs of wheels from right to left, making sure that the arrow on the tyre always points forward. Mudguards can be adjusted on their brackets to suit altered track width by slackening their retaining wingnuts. Tyres of all four wheels should always be of the same size.

VII) Hydraulic Implement Lift:

The hydraulically-actuated lifting arms (62) are operated by means of lever (15). Press lever down to "Senken" (2—3) ("Lower") to lower implements, pull up to "Heben" (1) ("Raise") to lift implements. The intermediate lever position locks the implements in position. At the end of the downward swing (3), the lever (15) can be felt to engage against a stop. The lever should only be operated when the tractor is running, since the hydraulic pump runs with the gearing.

Caution:

If tractor with implement attached is parked unattended or shut off for any length of time (even during working breaks), any raised implement must be lowered to the ground to prevent accidents.

Maintenance: The hydraulic housing holds just under 1 gal. SAE 20 engine oil. First oil change after 50 operating hours, then every 1,000 op. hours. Check oil level every 250 operating hours. With the tractor on level ground, the oil level should be up to lower edge of the filter cover.

The circulation plate filter for the hydraulic system should be cleaned before each oil change. The venting filter (22) should be rinsed in motor petrol every 250 operating hours and blown out with an air jet, then allowed to dry thoroughly before refitting.

Fault:	Cause:	Remedy:
Noise in the hydraulic system	Too little oil in oil container (pump sucks in oil-air-mixture)	Top up with oil Oil change
	Water in oil	Remove foreign bodies,
	Foreign bodies in suction pipe	if necessary oil change, clean filter

The PTO drive is controlled by lever (14) independently from the tractor gear, and its speed can be changed from idling to 540 rpm standard speed or to 920 rpm.

The PTO guard cover (57) can be taken off, after slackening 2 bolts (58), by twisting it briefly to the left (bayonet fitting). Take off the cover only to mount or operate PTO-driven implements.

Never take off the PTO guard (65) itself.

The **towing hitch** (64) takes the trailer or other towbars. Always fit the captive hitch bolt into the hole in the tow-bar and secure with cotter (55).

The A 12 tractor has a comparatively small turning circle. **But take care never to turn the steering wheel too far, or the trailer towbar will bend and damage the side plates of the hitch and this may cause accidents.**

The mounting plate (60) is fixed to the tractor by 4 bolts (59). The wedge-type lever bolt lock (61) rapidly attaches all implements. Gentle tapping with a hammer will lock and wedge the attachments securely.

VIII) General Remarks:

Careful servicing and correct handling prolong tractor life and ensure that it is always ready for service. After the first few days' service, tighten all screws, nuts and bolts.

a) Engine: see Fichtel and Sachs manual, 600 L (air-cooled).

Fuel: Use only good quality, branded diesel fuel. Dirty fuel is the main cause of premature wear of pump components, jets, etc. That is why scrupulous cleanliness is important. When filling the tank from a can, it is advisable to use a funnel with filter.

Fuel Filter: Drain off fuel. Unscrew filter (28) cap and lift out filter top. If necessary, clean lower half of filter. Fit new microfilter element. Press lower half of filter firmly upwards and screw together again.

Note: **The micronic fuel filter element itself cannot be cleaned, and must be replaced when dirty.**

The element (Order No. 000 020 00 20) must be replaced at least every 1,000 working hours. In particularly dusty working conditions, filter life is correspondingly shorter, i.e. the element must be replaced sooner.

Venting Fuel System: consult Fichtel and Sachs engine manual.

b) Exhaust: It is advisable to take off and dismantle the exhaust every 250 working hours or so for decarbonising. Under very heavy duty conditions, the exhaust may need cleaning at shorter intervals.

To do so, take off four hexagon nuts (46), fig. A 12/60-41 and 1 hexagon nut retaining the exhaust casing, it can then be taken off engine and gearbox. Dismantle as shown in fig. F 13/60-16, thoroughly clean all ducts, etc. Fig. F 13/60-14 shows how to clean the exhaust slot on the engine with a piece of wood (75). Make sure that piston (73) closes and covers the cylinder end of the slot while you clean it.

c) Cooling Air Circulation: Check daily that the cooling air flows freely from cylinder (77). Check that the vee belt driving the axial blower gives by max. ½ in. when pressed. If necessary, tighten belt (see Fichtel and Sachs manual). Never clean the cooling air ducts with diesel fuel or other oily liquids, as any grease will act as a dust trap and reduce cooling efficiency.

d) Battery: — To take off: remove bolt (72). Lift battery (42) complete with cover over exhaust, take cable off lower cable entry and disconnect (fig. F 13/60 - 10). Carefully lift off battery cover. — The battery should be checked every four weeks, in tropical countries once a fortnight. Acid level should be about ½ in. above plates (note level mark). — Top up with distilled water only. — Lightly grease terminals with acid-free vaseline. Fill battery only with pure sulphuric acid for batteries, specific gravity at temperature of 68° F — 1.28 = 32° Bé (in tropical countries 1.23 = 27° Bé). — When charging battery, take off screw plugs (e. g. battery type 6 De 4 = 2.5 Amp.).

e) Air Filter (Oilbath air filter): Filter cleaning intervals will depend on working conditions, if necessary, clean filter daily. — To clean, take off eyebolt (79) and lift off complete air filter. Take off wingnut, then remove cover. Thoroughly rinse element (81) and casing (80) in clean diesel fuel, then dry well. Never rinse the filter in motor petrol, water, suds or hot liquids. Fill oilbath casing (80) up to arrow mark (fig. F 7/60 - 70) with clean SAE 20 oil. Then replace cover with element and tighten wingnut. Mount the complete filter on engine air intake (78) and tighten with bolt (79). Take care not to bend or damage the stud in the centre of the filter during cleaning.

Attention:

Never top up oil. A filter of the correct size for the engine and correctly maintained does not lose oil. The oil level should be checked only one hour after stopping, and not with the engine still warm. It takes one hour until all the oil from the filter insert in the oil-bath chamber (J) flows back into the oil-bath and the check should therefore not be made earlier.

Continuous action of the dust, vibration, climatic changes, neglected maintenance and similar causes account for deterioration of the filter element after some period because a filter is also subject to wear. The presence of parts from the element in the oil-bath indicates the necessity of replacing the filter.

f) Gearing:

Gearbox, front, rear and intermediate housing.

First oil change after 500 operating hours, then after every 1000 hours.

Oil sight glasses (25 and 34) are fitted to the gearbox at front and rear. With the tractor on level ground, the oil level should be up to the centre of the sight glass.

Fill front section of gearbox with 5 pints, rear section with 2 gals. gear oil, grade SAE 80.

Gearbox, front:	oil drain plug (33)	oil filler cap (24)
Gearbox, rear:	oil drain plug (35)	oil filler cap (37)
Intermediate housing:	oil drain plug (39)	oil filler cap (40)

All metal parts moving on metal (e. g. throttle lever — clutch shaft bearing etc.) should now and then be dabbed with oil.

Maintenance Chart

Daily, weekly resp. monthly control	Every 50 op. hours	Every 250 op. hours	Every 500 op. hours	Every 1000 op. hours
Daily	Tighten all **bolts, screws** and nuts on new tractor.	Tighten all screws, bolts and nuts.	Tighten all bolts, screws and nuts.	Oil change quantities before.
Air filter (26): If conditions are dusty, clean daily.	Then every 500 op. hours.	Take apart exhaust and clean.	1st oil change Gearbox front 5 pts. Gearbox rear 2 gals. Intermediate housing 1½ pts. } SAE 80	Replace micronic fuel filter element.
Oil tank: Check level (38) on sight glass (50), top up as necessary (SAE 20 HD-oil). Min. level red mark (51). Daily topping up recommended.	Apply grease gun to all nipples (S) marked on lubrication chart.	Check oil level for hydraulic pump in hydraulic housing, top up as required (SAE 20).	Replace micronic filter element in fuel filter if clogged.	Change hydraulic oil 1 gal. SAE 20 HD-oil
Vee belt tension: Test daily.	Where danger of fire is present, take apart and clean exhaust – under normal conditions every 250 op. hours.	Rinse venting filter (22) for hydraulics in motor petrol to clean.		Clean circulation plate filter for hydraulic system.
Fuel: Top up daily.	Check oil level (tractor standing level) and top up as required.	Top up with SAE 20 HD-oil.		Clean engine oil filter.
Tyre pressure: Check daily, on metalled road 29 lbs/sq. in., on soft wet coil can be reduced to min. 14,5 lbs/sq. in. Check stop bolt (67).	Gearbox front Gearbox rear Intermediate housing } SAE 80	**Steering:** Top up with SAE 80 gear oil through oil filling opening no. 23 (fig. no. A 12/60-38).		Change oil (SAE 20) in engine auxiliaries casing.
Weekly	First change of the hydraulic oil after 50 op. hours (approx. 1 gal. SAE 20 HD-oil) – afterwards every 1.000 op. hours.			
Battery: Only in tropical countries check weekly, otherwise				
Monthly				

Engine: See Fichtel & Sachs Manual – Maintenance Chart

Air Filter with Cyclone Preselector (Export) from machine No. 13145.

The functioning of the Cyclone Preselector (C) ill. A 12/61—148, page 50b is similar to that of a centrifuge. The best dust selection in the Cyclone Preselector is obtained by means of a higher engine revolution number, i. e. with high air suction velocity. The sucked in air is caused to revolve by means of respective deflectors whereby coarse dust particles are thrown out through an aperture and the fine particles are absorbed through the oil bath air filter.

The cleaning of the air filter depends on dust development, if necessary clean daily. Otherwise as described under (e) page 8 and 9.

Oil Tank for Engine Oil from machine No. 1345.

As can be seen from ill. A 12/61—148, the new oil tank (e) is mounted above the engine. (Capacity 3 litres — 0,66 gal.) The oil level can be checked through the sight glass (d). **The oil tank should be daily filled with fresh oil.** According to Fichtel & Sachs manual the engine oil fine filter (85) ill. A 12/60—37 should be cleaned **every 200 operating hours,** whereby the oil of the engine oil tank must be drained, the oil tank cleaned and refilled with fresh oil. (See Fichtel & Sachs manual).

Blinking System from machine No. 12756.

The fitting of the blinking system has caused an alteration of dashboard and fuse box.

3 = Key for fuse box, at same time switch-key for parking and driving light.

4 = Preglower starter (draw out halfway: cease of glowing, draw out completely: start)

5 = Push button for horn

16 = Control lamp (fourfold)

- v = green = oil pressure (not connected)
- y = red = charge control lamp
- z = orange = driving light
- x = blue = control for trailer blinking system

16a = Switch for blinking system

The switch can be turned to the right and left which causes the blinkers to flash.

Driving with attached trailer,

specially drive axle trailer,

or any other vehicle,

on your own peril!

D) Attaching Implements

I) Trailed Implements

To attach trailed implements to the A 12 tractor requires the

a) Holder Implement Mounting Assembly, type 300/1.

This is fitted by quick clamping wedge bars to the A 12 as shown in fig. A 12/61 - 145, p. 96. The two draft links (Z) are fitted into the desired hole of the hydraulic lift arms and secured by spring clips. To obtain the steepest lifting angle, fit the depth setting spindle into the specially provided lowest hole (b_1) of the implement lift, see fig. A 12/61 - 145.

Move ratchet lever (0) out of the way to right or left, so that it will not hamper the driver. The driver must keep the plough body constantly in view when lifting it clear. Caution: the fully-raised plough body is level with the driver's head.

(A 12/61 - 147)

Working depth, for instance for ploughing, is set by depth adjustment spindle (d). The caster wheels (f_1 - f_2), which are adjustable for height, control the fine working depth setting.

To limit implement side swing, two chains (p) are fitted crosswise and can be suspended in three different positions (s), see fig. A 12/61 - 145. Where implements are attached by the mounting assembly, type 300/1, side swing is controlled by chain (p), and setscrews (v) must be run down firmly against cross frame (g) without any play.

Depending on the implement attached and the job in hand, one or two mounting clamps on the cross frame remain unused and can be fixed to the frame in any position.

b) Ploughing with Reversible Plough, type 303/BM 8 S 4.

This type of plough is mainly used in open, unobstructed fields. Since it does not need to be raised very high, it is advisable to use lifting position x (fig. A 12/61 - 148).

To attach the reversible plough, fit one of the two mounting clamps (e) of the implement mounting assembly into the centre hole of the cross frame and secure with locking bolt (fig. A 12/61 - 145).

A plough body worn bright by use gives the best results. The factory-new plough is protected by an anti-corrosion coating which should be removed from the cutting faces, particularly for ploughing in wet soil. Once the plough has become bright through intensive use, its cutting edges should be preserved by a light coating with an anti-corrosion agent, oil or grease.

Spindle (d) sets ploughing depth.

Ratchet lever (0) sets the plough vertical to the ground. Necessary side play (horizontal swing) is set by chains fitted crosswise which can be arranged in 3 different positions (s).

Under normal working conditions, the plough should always be straight and not tilt to either side (set by ratchet lever 0).
Once the first furrow has been turned, the two land wheels run alongside the edge of the furrow. Consequently, the plough will lean into the furrow to an extent dictated by working depth. That is why any tilting of the plough body should be corrected after the first one or two furrows have been turned.
Similarly, on completion of one or two furrows, ploughing depth should have adjusted itself so that the caster wheels only contact the soil under load when running over uneven ground, but normally only roll along lightly without exerting any marked ground pressure.
For ploughing, use the floating position of the hydraulic lift, i. e. engage hydraulic control lever in position 3 (see p. 60).
To reduce the slicing bite travel at the start of each furrow, but most important of all to enable the plough to bite properly into dry hard, heavy or heavily overgrown soil, we recommend use of one attachment weight, type 044/1 per plough body.
Weighted down in this way, the plough rides better in the furrow, and will work steadily parallel to the ground.
When turning, never attempt a smaller turning circle than allowed by the play in the implement coupling link, otherwise the link will bend or fracture.
Whenever possible, site furrows so that they run straight.

II) PTO-driven Implements

a) e. g. offset rotary hoe, type 383/3 etc.
see separate instructions.

Help to Prevent Accidents

Inexperience and negligence are the main causes of accidents with tractors. That is why it is essential that even experienced tractor drivers should at first drive the A 12 with extra care and caution, until they have acquired the "feel" of the vehicle and can handle it with absolute safety. Driving a farm tractor requires extra skill in negotiating slippery, muddy, deeply rutted and steep roads and tracks. Remember, a tractor is much faster than a team of animals and, therefore needs greater care in loading, distribution and fastening of trailer loads, particularly on rising ground. Overloading the vehicle beyond its own weight and traction capacity is highly dangerous. What counts in determining a safe load is not tractor or trailer capacity, but the limit at which you can safely control both vehicles and brake them securely on all types of ground, without any danger of toppling over tractor or trailer.

Registration, Tax, Insurance:

These vary from country to country. Consult your Holder distributor or ask your nearest road traffic authority. Always scrupulously obey your local road traffic code.