

OPERATOR'S HANDBOOK & SPARE PARTS LIST

ALLEN Moto Standard TRACTOR



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£1-00 per copy

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Dear Customer,

You have now taken delivery of your ALLEN MotoStandard Tractor, and we are certain that you will be very satisfied with your choice. Not only will it fulfil all your expectations, but its versatility and the scope of the work you will now be able to undertake, will make it indispensable to you in many different ways.

The ALLEN MotoStandard Tractor has been designed by practical engineers, and it is built throughout by skilled tradesmen using high-grade materials and the latest production methods. Although maintenance has been reduced to a minimum, it goes without saying that proper service must be carried out as specified, to ensure that your machine is always ready for immediate use in a long working life.

We earnestly request you, therefore, to read this handbook thoroughly, carefully noting the information, suggestions and hints contained therein. By doing this, we are confident that your ALLEN MotoStandard Tractor will never fail to give you reliable, lasting service.

JOHN ALLEN & SONS (OXFORD) LIMITED.

THE GUARANTEE for your ALLEN MotoStandard

The ALLEN MotoStandard Tractor is based on a highly-developed design, the quality of which is guaranteed by the manufacturers. However, despite rigorous inspection at every stage of manufacture it is possible for isolated defects in material or assembly to show themselves, and the terms of the Guarantee extend to the replacement of relevant part(s) without charge. The period of Guarantee which covers the machine and the engine is SIX MONTHS, and any claim must be made through an official MotoStandard Distributor.

The manufacturers of the electrical equipment and battery as used on the tractor also undertakes to replace any component or battery which fails within their own Guarantee period of SIX MONTHS.

CHASSIS No.

The manufacturer's plate for your ALLEN MotoStandard Tractor is mounted on the right-hand (off-side) of the chassis, facing forward. Ensure that the plate is not lost or damaged, and remains legible. As required for all licensed vehicles, the chassis number is, in addition, stamped into the actual chassis of the machine.

ENGINE No.

This is embossed, together with details of the vehicle's specification, on the engine plate, which is located on the right-hand side of the crankcase. Again, this plate should not be lost or become illegible.

HOW TO OPERATE THE MOTOSTANDARD

Opening engine cover.

Lift up the front of the engine cover with one hand until the locking catch is freed. With the other hand, draw the engine cover forward from under the steering wheel. The cover can then be hinged upwards.

Closing engine cover.

The cover is first pushed back until the strut is located behind the engine side of the instrument panel. The front of the cover is then pushed down until the locking catch engages and the cover is held firmly.

Oilbath air filter.

Before the engine is run, the lower section of the filter should be removed by loosening the two spring clips, and filled with SAE.30 motor oil.

The level of the oil in the lower section of the filter should be approximately .2" ($\frac{1}{2}$ cm.) higher than the base of the removable insert.

Check regularly to ensure that the oil in the lower section of the filter is not contaminated by dirt. This check should be carried out daily during periods of dry weather, and either weekly or monthly in other circumstances, depending on the quantity of dust present in the working area and the amount of work done since the last check. In any case, the oil should be changed after 30 hours. Use only the prescribed grade and quantity, as excessive oil in the filter can be as harmful as too little.

In normal conditions the oil level need not be topped up between changes. A correctly filled and maintained filter should not lose oil.

Always stop the engine before working on the air filter.

Engine oil level.

It is essential to maintain an adequate supply of branded motor oil to this high-performance four-stroke engine. If used in temperatures above 68° F (20° C), SAE.40 oil should be used. The oil level dipstick is located in the screw cap on the left-hand side of the engine adjacent to the dynastarter. Check the oil level daily with the engine stopped. Remove dipstick, wipe, re-insert and check oil level recorded. If the oil level has fallen to the lowest mark on the dipstick, add oil until the level again reaches the uppermost mark.

Too much oil in the crankcase can be as harmful to the engine as too little. In addition, only recommended motor oils should be used.

<u>Oil grades.</u>	For outside temperatures up to 68° F (20° C)	-	SAE.30
	" " " above " "	-	SAE.40

All-weather grade for temperatures not exceeding 68° F (20° C) - SAE.10W/30.

Oil capacity. Approx. 2½ pints (1.2 litres). Check oil level daily.

Oil change. First oil change after five working hours; then every 30 hours (see also under 'Service & Maintenance').

Fuel. Remove cap of tank and fill with commercial grade petrol. To prevent contamination of the fuel lines, petrol cock, or carburettor, it is advisable to keep petrol in clean cans, and to fill through a gauze or sieve. Super grade petrol may be used, but it is in no way essential.

Fuel tank capacity. Approx. 13½ pints (7.5 litres).

To open petrol tap.

When knurled knob "R" (Fig. 1) on the petrol tap is turned fully to the left, petrol can flow from the fuel tank to the carburettor.

To close petrol tap.

Always close tap after stopping engine. This is done by turning the knurled knob "R" fully to the right.

Carburettor tickler knob.

To fill the float chamber the petrol tap should be turned on, and the knob "V" (Fig. 2) pressed down until petrol appears at the carburettor.

Engine speed governor.

The mechanical engine speed governor "D" (Fig. 1) has been accurately set at Works, and has two functions to perform :-

- maintenance of constant engine speeds represented by given settings of the hand throttle lever
- preventing overspeeding, which could have a serious effect on the life of the engine

Correct functioning of the engine speed governor "D" (Fig. 1) can only be guaranteed, however, if spring "F" is not replaced by any other rod, wire, or stronger spring.

Adjustment of throttle cable.

If the correct results are not obtained when the throttle lever is moved from "slow" to "full", it may be necessary to adjust the throttle cable. Loosen locknut "K" (Fig. 1), make the appropriate adjustment to setting screw "S" (Fig. 1), and re-tighten the locknut.

Adjustment of idling speed.

If the engine runs too fast or too slow when the throttle control is at the "slow" position, adjustment should be carried out by turning the idling speed adjustment screw "L" (Fig. 2).

GEARBOX:

All shafts and gearwheels forming the MotoStandard gearbox, rear axle and power take-off are fully enclosed in an oilbath. Apart from regular oil changes, the drive system therefore requires no servicing.

Check gearbox oil level daily. Remove screw cap "P" (Fig. 3) which has a built-in dipstick. Wipe dipstick and replace cap. If the oil level reaches the marking on the dipstick, then no oil need be added. Otherwise, add oil immediately, but do not overfill. Always screw the cap home tightly.

The first gearbox oil change should be carried out after 30 hours of operation, with subsequent changes after every 200 hours.

Oil grade: SAE.90/Hypoid. Oil capacity: approx. 2.6 pints (1.5 litres).

Check gearbox oil level every 10 - 20 hours of operation.

INSTRUMENT PANEL and CONTROLS (Fig. 4).

All pedals and hand controls are well laid out and easily-operated from the driving position.

- | | |
|-------------------------------|----------------------------------|
| A. Clutch pedal | H. Handbrake lever |
| B. Brake pedals | I. Differential lock lever |
| C. Ignition and light switch | J. Gear change lever |
| D. Ignition cut-out switch | K. Transfer box selector lever |
| E. Horn button | L. Power take-off selector lever |
| F. Flashing indicator control | M. Choke |
| G. Throttle lever | N. Ignition warning lamp |

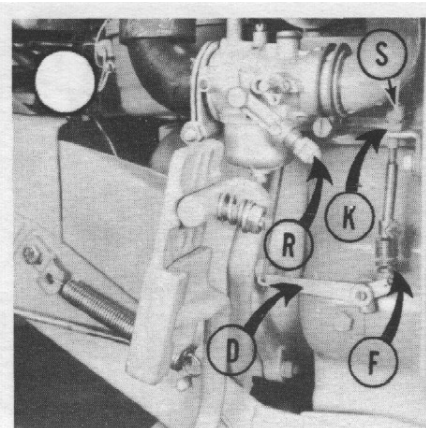


Fig. 1

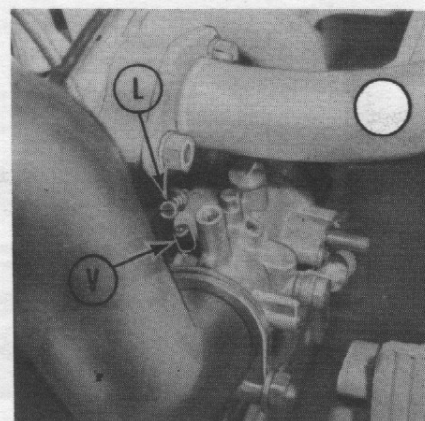


Fig. 2



Fig. 3

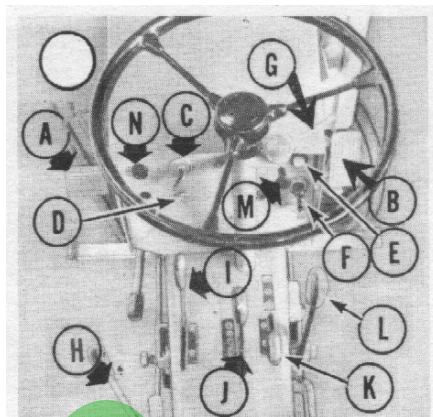


Fig. 4

CLUTCH PEDAL "A" (Fig. 4). Power from the engine is transmitted to the gearbox by means of a single dry-plate clutch. The clutch pedal should be depressed only when it is desired to release or engage the clutch. It should never be used to rest the left foot while the vehicle is in motion, as this will cause the clutch to slip and introduce unnecessary wear with the likelihood of extra expenditure on servicing.

BRAKE PEDALS "B" (Fig. 4). By using the two brake pedals the rear wheels can be braked either together, or separately. When travelling on the public highway it is essential that the upper and lower brake pedals be combined by folding down the footrest mounted on the upper pedal.

Use of brakes for steering (off public highway). The footrest on the upper brake pedal should be folded up so that the two brake pedals can be depressed separately. Operate the upper pedal when turning right and the lower pedal when turning left. Do not rest the feet on the brake pedals when the latter are not in use, as this will cause excessive wear on the brake linings.

IGNITION and LIGHT SWITCH "C" (Fig. 4). This multi-purpose switch has the following functions :-

Ignition key vertical and withdrawn :	Lights off
" " inserted half-way :	Ignition on
" " depressed completely :	Dynastarter operates. Release ignition key as soon as the engine has started,
" " turned to position 1 :	Headlamps on
" " " " " " 2 :	Parking lamps on

IGNITION CUT-OUT SWITCH "D" (Fig. 4). When starting engine make sure that this switch is in the 'on' position. To stop engine move switch to 'off' position.

HORN BUTTON "E" (Fig. 4). If the ignition is turned on, the horn will sound when the button is depressed.

FLASHING INDICATOR CONTROL "F" (Fig. 4). Always give ample warning of your intention to turn when driving the MotoStandard on the road. Lever vertical: no signal given. Lever moved to left or right: the corresponding flashing indicator is illuminated.

Support bar for lamps and flashing indicators. When working with the MotoStandard among trees or shrubs planted on rows, the lamps or flashing indicators could be damaged by overhanging branches. Accordingly the lamp support bar has been arranged to hinge forward. When travelling on the public highway, however, the lamps should always be brought back to their normal position.

THROTTLE LEVER "G" (Fig. 4). Operation of this lever enables the engine intake to be changed from the 'idling' to the 'full' position, and the road speed of the machine varied accordingly.

HANDBRAKE LEVER "H" (Fig. 4). The handbrake lever should be pulled up until the desired braking effect is obtained. The lever will remain at this setting. The handbrake operates on both rear wheels via the transmission. To release, squeeze the catch towards the brake lever and move the latter downwards as far as possible. **Important:** Avoid starting off with the handbrake engaged.

DIFFERENTIAL LOCK LEVER "I" (Fig. 4). The positions 'differential' and 'lock' are marked adjacent to the lever. Always depress the clutch pedal before operating this lever. With the lever at 'differential' the rear axle of the machine operates with the normal differential effect for travelling on roads or negotiating turns. Should one rear wheel spin or slide when hauling a heavy load across country, the lever may be moved to 'lock' after depressing the clutch pedal. The rear axle then becomes rigid and the full power of the engine is transmitted to both wheels.

Remember: For turning on made-up roads always select 'differential'. If 'lock' is selected to overcome wheel spin, return the lever to 'differential' as soon as possible.

GEAR CHANGE LEVER "J" (Fig. 4). The gate pattern is shown to the left of the lever. The gear ratios have been chosen so that the clutch pedal may be depressed once only for selection of the correct ratio for travel or working. No further gear changing is necessary, as the MotoStandard can start without difficulty from a standstill in any gear.

TRANSFER BOX SELECTOR LEVER "K" (Fig. 4). This lever enables overall gear ratios 1 or 11 to be selected. Lever positions are marked adjacent to the lever.

The transfer box lever may be moved from position 1 to position 11 while the tractor is in motion, provided that the clutch pedal is first depressed, but the change-down from position 11 to position 1 should not be made unless the machine is at rest.

The following gear ratios are available by moving the gear change lever "J" and the transfer box selector lever "K" to the appropriate positions :-

<u>Desired gear ratio</u>	<u>Gear lever position</u>	<u>Transfer box position</u>	<u>Speed</u>
1st. gear (forwards)	1st. gear	Position 1	App. 1.24 m.p.h. (2.0 k.p.h.)
2nd. gear (forwards)	1st. gear	Position 11	" 2.67 m.p.h. (4.3 k.p.h.)
3rd. gear (forwards)	2nd. gear	Position 1	" 4.35 m.p.h. (7.0 k.p.h.)
4th. gear (forwards)	2nd. gear	Position 11	" 7.49 m.p.h. (12.5 k.p.h.)
Reverse (slow)	Reverse	Position 1	" 2.18 m.p.h. (3.5 k.p.h.)
Reverse (fast)	Reverse	Position 11	" 3.73 m.p.h. (6.0 k.p.h.).

POWER TAKE-OFF SELECTOR LEVER "L" (Fig. 4).

- (a) Selector lever in position '0' = power take-off disconnected
- (b) Selector lever pushed forward = power take-off governed by engine speed (implement drive)
- (c) Selector lever drawn back = power take-off governed by road speed (trailer drive)

CHOKE "M" (Fig. 4). When starting the engine from cold, pull out the choke knob as far as it will come. This closes the cold start in the carburetter. As soon as the engine is running push the knob fully home to its original position, thus re-opening the cold start valve. If the engine is stopped for a short while only when thoroughly warm, it should not be necessary to operate the choke control. In addition, during the summer months the engine will normally start from cold with little or no use of the choke.

Warning: fuel consumption will rise steeply and engine power output will drop if the choke control is not pushed fully home after the engine has been started.

WARNING LAMP "N" (Fig. 4). With the ignition key partly depressed, the ignition system is switched on and the warning lamp glows. When the engine is running the dynastarter begins to produce electric current to charge the battery, and the warning lamp is extinguished. If the warning lamp continues to glow with the engine turning over fairly fast (throttle $\frac{1}{4}$ to fully open), a fault is indicated in the electrical system and the advice of a qualified motor electrician should be sought.

HOW TO DRIVE THE MOTOSTANDARD

Before starting off

- Check oil level in lower section of air filter
- Check engine oil level
- Check gearbox oil level
- Fill fuel tank with petrol containing no dirt or impurities, and open fuel tap
- Depress carburetter tickler knob until petrol appears at the carburetter
- Pull out choke (if starting from cold)
- Set hand throttle at idling speed or slightly open
- Place gear lever in position '0' = neutral

Starting the engine

- Depress ignition key fully, wait for engine to run and then release key
- Push back choke fully
- Allow engine to warm up for 1 - 2 minutes

Moving off

Depress clutch pedal
Select the appropriate gear (see table of gear ratios)
Release handbrake
Take foot gradually off clutch pedal, at the same time advancing the hand throttle lever slowly and smoothly
Maintain vehicle at the desired speed by moving the hand throttle

Stopping the machine

Return hand throttle to idling position
Depress clutch pedal
Operate footbrake
When at rest, apply handbrake
Return gear lever to '0' position = neutral

Switching off the engine

Place ignition cut-out switch in 'off' position
Turn ignition key to vertical position and remove
Turn off petrol tap
Ensure that the handbrake is holding the vehicle securely

CONTINUOUSLY ADJUSTABLE REAR WHEEL TRACK

The track of the rear wheels may be adjusted over a wide range by the adjustable hubs in the rear wheels. When ploughing, the track should be set so that the inner edge of each rear wheel coincides with the inner edge of the corresponding front wheel. For working in cultivated rows or with the rotary hoe the outer edges of each front and rear wheel should be made to coincide.

To adjust the track, loosen with the wheel-brace the clamping bolts on the inner side of each adjustable hub. If necessary, loosen also the bolts securing the wheel weights. Turn the adjustable hub spindle with the wheel-brace until the desired track measurement is reached. Always locate both rear wheels at an equal distance from the centre-line of the vehicle.

Next, re-tighten the clamping bolts on the inner side of the hubs. Failure to do this will cause damage to the adjustable hubs and hub centres. The adjustable hubs require very little maintenance. From time to time a little grease should be applied to the hub centres, axles and adjustment spindles after they have been wiped clean.

GEARBOX POWER TAKE-OFF.

Drive is taken to implements from the rear power take-off point. Before any implement is connected the drive joint on the implement and the inner faces of the power take-off coupling should be cleaned and lightly greased.

Before offering up the implement the locking pin should be lifted and turned to one side to retain it in the withdrawn position. The implement drive connection should then be pushed into the power take-off joint until it is fully home. The locking pin can then be replaced. Following this, the implement should be rotated slightly to left and right to ensure that the locking pin has engaged in the corresponding hole in the implement. Before attempting to connect any implement to the tractor the power take-off selector lever "L" (Fig. 4) should always be placed in position '0' thus disconnecting the drive to the power take-off.

To connect the engine to the power take-off, set the throttle to the idling position, depress the clutch pedal and move the power take-off selector "L" to the appropriate position. If the selector lever is drawn back, drive to the power take-off point is governed by road speed. If the selector lever "L" is pushed forward, drive to the power take-off is governed by engine speed.

	<u>Power take-off speed @ engine speed</u>	<u>Direction of rotation</u>
	= 3,800 r.p.m.	
Power take-off selector lever to rear (governed by road speed)	1st. gear app. 500 r.p.m.	anti-clockwise
	2nd. gear app. 860 r.p.m.	anti-clockwise
	3rd. gear app. 1400 r.p.m.	anti-clockwise
	4th. gear app. 2300 r.p.m.	anti-clockwise
	Slow reverse gear app. 750 r.p.m.	clockwise
	Fast reverse gear app. 1100 r.p.m.	clockwise
Power take-off lever to front (governed by engine speed)	Transfer box lever pos. 1 app. 685 r.p.m.	anti-clockwise
	Transfer box lever pos. 11 app. 1150 r.p.m.	anti-clockwise

TRACING FAULTS, WITH REMEDIES

Cause: Battery run down, interruption in power supply or earth connection, failure of dynastarter to operate.

Remedy: Check all cable connections, then attempt to start engine by means of emergency start device. Tie a large knot at one end of a suitable hemp or nylon rope (approx. 40" - 60" long, (1 - 1.5 m.). Attach the knotted end of the rope to the slot in the rope start pulley mounted on the front of the engine. Wind the rope several times round the pulley. To start the engine take up a position with one foot placed firmly on the front wheel. Rest one hand on the engine cover and with the other hand pull vigorously on the rope. Before this method of starting is attempted the ignition must be switched on and the engine ready to start. The procedure should be repeated if the engine does not start after the first attempt.

If the battery has merely run down because the lights were left on all night or for some similar reason, the dynamo will recharge the battery as soon as the engine has been started. If the battery does not regain its charge, however, a battery charger must be used.

<u>FAULT</u>	<u>CAUSE</u>	<u>REMEDY</u>
Cold engine will not start	Fuel tank empty Petrol tap closed Airlock in petrol line Petrol line blocked Tank outlet clogged with dirt Dirt in carburetter Cold start valve open Ignition cable defective or loose Plug lead loose Plug gap excessive Dynastarter slipping	Refill Open Depress carburetter tickler until petrol appears Petrol line must be blown through Clean outlet and gauze Clean carburetter, blow out jets Operate choke control Replace or tighten Tighten well down at sparking plug Reset to 0.5 mm. (.020"). Check V belt tension
Warm engine will not start	Cold start valve closed (For remaining causes, see under 'Cold engine will not start').	Push back choke control
Engine runs excessively hot	Fan or cooling fins blocked Oil level too low in crankcase, oil has become contaminated Oilbath air filter clogged or not filled with oil	Clean out fan or cooling fins Add oil to correct level, if necessary change oil Clean out and add oil if necessary
Engine lacks power	Cold start valve not fully open Oilbath air filter clogged Exhaust pipe choked with carbon Throttle lever inoperative on 'full' setting Engine speed governor jammed Cylinder head gasket faulty, or cylinder head loose	Push back choke control fully Clean out Decarbonise Adjust throttle cable Clean out, but do not dismantle or disturb setting Replace gasket or tighten head bolts

WARNING: If your tractor fails in any way not easily traceable from the above chart, always consult your dealer immediately, who is trained and experienced in fault tracing.

SERVICE AND MAINTENANCE

If your MotoStandard Tractor is to perform well and to be ready for immediate use over a long period, it will require some care and attention. If you cannot yourself carry out the tasks listed below, please ask your dealer to do the work as it becomes due. This will save money in the long run by ensuring that the machine never fails when it is most needed, and it will reduce the likelihood of unexpected repair bills.

After the first 5 hours of operation, check all nuts and bolts throughout the engine and chassis, and tighten where necessary.

ENGINE - after the first 5 hours of operation, change the engine oil. The oil change should be made while the engine is warm. Drain off the old engine oil by removing a plug underneath the engine. This plug can be reached through an aperture provided in the chassis. When all the old oil has been drained, replace and tighten the drain plug, then fill with fresh oil to the uppermost mark on the dipstick. Subsequent oil changes should be made after every 30 hours of operation.

Oil grades: If outside temperature does not exceed 68°F (20°C) = SAE.30
If outside temperature normally exceeds 68°F (20°C) = SAE.40

All-weather grade for temperature not exceeding 68°F (20°C) = SAE.10W/30

Check oil level daily (add more oil immediately if required)

After every 30 hours of operation dismantle the oilbath air filter and clean all parts thoroughly in petrol. Replace the filter element if washing in petrol no longer cleans it completely. A blocked filter element causes a drop in engine power and increased fuel consumption. Before replacing the new or cleansed filter element coat the wire mesh thoroughly with SAE.30 motor oil, shake off excess oil, and insert the element upwards into the upper part of the air filter.

The oil level in the lower section of the filter should be $.2''$ ($\frac{1}{2}$ cm.) above the base of the insert. Use SAE.30 motor oil. If outside temperatures exceed 68°F (20°C) use SAE.40 oil instead, and in winter use SAE.10W/30 oil. It is sufficient to clean out the filter every 30 hours, but the oil should be changed more frequently if there is a great deal of dust in the atmosphere.

After every 50 hours of operation it is recommended that the fuel line, tank, petrol tap, carburetter and sparking plug be cleaned. This is essential to avoid damage to the engine.

Fuel tank: wash through with clean petrol ($\frac{3}{4}$ - $1\frac{1}{2}$ pints = $\frac{1}{2}$ - 1 litre), after removing outlet nipple.

Fuel line: wash through with petrol and blow out. If cracked or leaking replace immediately. When refitting, keep line clear of vehicle's exhaust system.

Petrol tap: dismantle and thoroughly clean with petrol. Blow out with compressed air. Re-assemble and refit to carburetter. Pay particular attention to the condition of the gasket between tap and carburetter.

Carburetter: dismantle and clear out all traces of dirt from lower section. Blow out jets or clean by passing a bristle through the jet orifices. On no account employ a needle or wire for jet cleaning. Before refitting carburetter, check all gaskets and renew if necessary.

Sparking plug: unscrew to remove. Use a wire brush to clean off any deposits adhering to the electrodes. Check the spark gap and reset if necessary to 0.4 - 0.5 mm. ($0.016''$ - $0.020''$), or approximately the thickness of a postcard. Renew the plug after every 100 hours of work. Sparking plugs with a heat value of 190 and a 14×1.25 mm. thread $\times \frac{1}{2}''$ reach should be used.

Throttle cable: if the hand throttle becomes stiff to operate, apply a few drops of sewing machine oil to the cable. As the oil penetrates the Bowden cable the throttle control will begin to move more freely.

Choke cable: if the cable is detached from the carburetter during maintenance, its operation must be re-matched exactly to the settings of the choke control when refitted. The setting is correct when operation of the choke control moves the cold start valve in the carburetter from the completely 'closed' to the 'open' position.

Fan and cooling fins: if the tractor is used a great deal where dust is generated, there is a tendency for the dust to adhere to the blades of the fan, and to the cooling fins around the cylinder. This has an injurious effect not only on power output, but also on motor life. We recommend, therefore, that the cooling system be thoroughly cleaned when necessary.

Dynastart V-belt:

The tension should be checked at intervals. If the belt is too slack the dynastarter belt pulley will slip and the engine will start with difficulty, or not at all. In addition, the battery may not be charged when the engine is running.

To adjust the tension of the V-belt, loosen securing bolts "A" and "B" (Fig. 5). Move the dynastarter outwards until the V-belt seats firmly within the pulleys. Tighten securing bolt "B" first, followed by bolt "A". The belt is in correct tension when it can be pressed in for a distance of approx. $.4''$ (10 mm.) with the thumb at point "C".

Valve clearances and ignition advance and retard:

These will require adjustment only in the case of serious failure, when the work should be entrusted to an experienced service engineer.

Valve clearances (engine cold):

Inlet: $.006''$ - $.008''$ (0.15 - 0.20 mm.)

Exhaust: $.008''$ - $.010''$ (0.20 - 0.25 mm.)

Ignition advance: $\frac{1}{4}''$ before T.D.C. (3.1 - 3.3 mm.)

Contact breaker gap: $.016''$ (0.4 mm.)

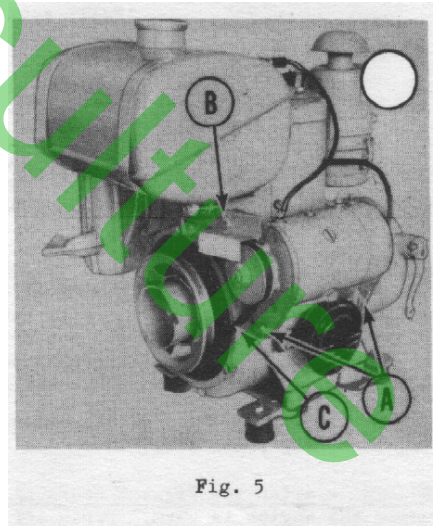


Fig. 5

GEARBOX

The gearbox oil should be changed after the first 30 hours of operation, preferably after the vehicle has been operated or driven for one hour. The oil is then warm, and can be drained more easily. To drain the gearbox remove cap "P" (Fig. 3), then unscrew the drain plug and allow the oil to escape. Re-tighten drain plug. Fill gearbox with fresh oil until the mark on the dipstick is reached. Subsequent oil changes should be made every 200 hours.

Gearbox oil: SAE.90/Hypoid

Capacity: app. 1.5 litres (2.6 pints).

Check oil level daily or every 10 - 20 hours of operation.

CHASSIS

The front axle, king pins and front wheels are provided with grease nipples for correct lubrication.

Position of grease points:

1. Front axle, top centre	4. Clutch shaft
2. Left king pin (inside)	5. Clutch bearing
3. Right king pin (inside)	6. Outer gearbox power take-off brackets

Before using the grease gun clean dust and dirt carefully from the nipples to avoid the entry of any particles into the parts being lubricated. After greasing, again wipe the nipples to prevent dust adhering to the excess grease. If grease is forced out of the king pins or axle bearings, however, it should not be removed as it constitutes a protection against the ingress of water, dust or dirt.

From time to time other moving parts on the MotoStandard should be given a few drops of oil.

Brake. The hexagon nut should be tightened to adjust the brake. When the brake pedal is freed the brake drum should not be in contact with the linings. Both brake bands - left, and right-hand - should be adjusted to the same degree.

Wheels and tyres. Before every journey ensure that the wheels are secure on their hubs, and check tyre pressures.

Front tyres: 18 lbs. per sq. inch (1.25 atü).

Rear tyres: 14 lbs. per sq. inch (1.0 atü).

MOUNTING FRONT POWER TAKE-OFF SHAFT.

To fit the front power take-off a certain degree of mechanical aptitude is necessary, and the following assembly instructions should be followed precisely :-

Open up the cable clips attaching the headlamp cables to the side tubes of the engine cover frame. Next remove the hexagon nuts (two on each side) which secure the engine cover frame to the chassis. Pull the cover and frame forwards and lay it on the ground in front of the tractor with the lower end pushed beneath the front axle. Do not disconnect any cables from the headlamps or flashing indicators.

Take off the emergency rope start pulley. The locking plate must first be removed. Remove the hexagon nut and Allen screws. Replace locking plate and hexagon nut.

IMPORTANT: The hexagon nut must be mounted on the crankshaft so that the collar on the nut faces forward, i.e. towards the front power take-off shaft when it is fitted.

Mount clutch dome "D" (Fig. 6), (12-slot), in place of the rope start pulley. Place spring washers in position, and tighten the two Allen screws attaching the clutch dome to the V-belt pulley.

Remove hexagon nuts "E" (Fig. 6), V-belt tensioner "F" and V-belt shield "G", and detach V-belt from dyna-starter.

Insert take-off shaft "H" (Fig. 7) into clutch body "D" (Fig. 6). While doing so, ensure that the clutch plates are precisely lined up and engage with the slots in the clutch body. Attach the take-off shaft housing at the three mounting points provided on the engine cooling fan housing, using three hexagon bolts. Three tapped holes "J" (Fig. 6) are provided for this purpose in the engine cooling fan housing. Toothed locking washers should be inserted between the hexagon bolts and the power take-off housing to prevent these bolts from turning.

A slightly longer hexagon bolt is included, for use at the uppermost take-off attachment point, since here

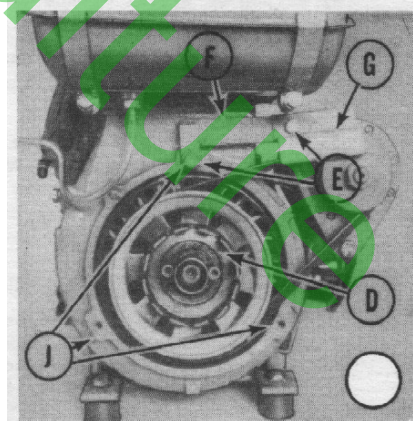


Fig. 6

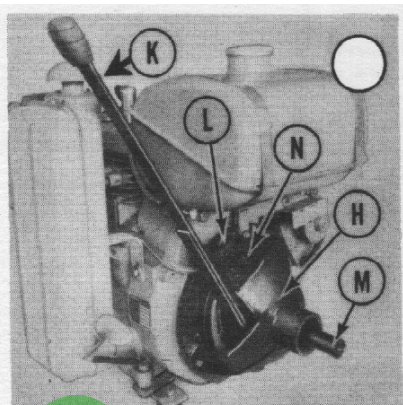


Fig. 7

the V-belt tensioner "F" (Fig. 6) must also be fitted between the attachment point and the toothed locking washer. Replace belt shield "G" (Fig. 6) and check belt tension. Refer if necessary to the section 'Service & Maintenance' and also the section headed 'Dynastart V-belt'.

Check that play in the front power take-off clutch is correct. This is done by pressing down release lever "K" (Fig. 7) and locking it in place behind retaining plate "L". In this position the clutch is freed, and the front power take-off shaft should rotate easily if turned at the stub end "M". If this is not the case, the clutch clearance must be reset.

Move release lever "K" to the right and allow it to return to its original position. Unscrew both securing screws "N" on retaining plate "L" a few turns. Press down retaining plate approx. 2/3 mm (.68" - .12") towards the engine block and retighten the securing screws.

Press the release lever down once more and secure behind retaining plate "L". If the power take-off shaft still turns with difficulty, the procedure must be repeated.

Remount the engine cover on its frame. Insert key in slot on power take-off stub shaft and push on the V-belt pulley. Replace hexagon bolt with spring washer and cover plate, and tighten down securely.

32-in. ROTARY GRASS CUTTER:

The inter-axle rotary mower is driven from the front power take-off of the tractor. This implement can be fitted in very little time, without special tools. The following instructions should be adhered to.

Turn the front wheels of the machine somewhat to the right. Place the mower in position between the axles, and turn the front wheels back to the straight-ahead position.

Lift the mower until the projections can be inserted in the slides formed on the chassis, and secure by tightening the clamping bolts in the locating holes on the projections. These clamping bolts should previously have been screwed home into the horizontal attachment slides.

Screw the spindle of the guide pulley carrier a few turns into the threaded boss. Lift the guide pulley carrier and attach to the two threaded studs on the front axle with ball-ended nuts. The wheel-brace can be used to tighten the threaded spindle on the guide pulley carrier.

Next, screw the threaded spindle clockwise fully home into the boss. The V-belt can now be offered up to the pulleys. Draw the V-belt forward in a straight line, pass over the left-hand and right-hand guide pulleys and the belt pulley mounted on the front take-off shaft. On no account must the V-belt be twisted, and it must seat correctly in the grooves of the blade drive pulleys on the mower. The belt should lead from the left-hand blade drive pulley forward past the right-hand face of the tensioning pulley (the terms left-hand and right-hand are taken to refer to the normal direction of travel of the tractor).

The threaded spindle can now be tightened with the wheel-brace until the compression spring begins to relieve pressure on the threaded spindle and the V-belt thus attains the correct pre-tension. This can be seen from the freeing of the shim washer on the outer end of the spindle.

To ensure safety when the belt drive is working, we have produced a protective cover for the guide pulleys and power take-off which should always be fitted to the tractor when the rotary mower is in use. This cover is simply inserted into the slot on the guide pulley carrier and offers complete security whenever the front power take-off is in use.

WORKING WITH THE ROTARY MOWER:

Warning: With the vehicle's engine running and the front power take-off engaged the cutter blades beneath the apron of the rotary mower are constantly in motion. To prevent accidents take great care to ensure that no person puts a hand or foot under the apron at any time.

Ensure - that the rotating cutter blades do not come into contact with any obstacles such as border stones, path edging, tree roots, fallen branches, etc.

ADJUSTMENT OF CUTTING HEIGHT:

The rotary mower can be adjusted to give three different cutting heights. For this purpose each wheel carrier on the mower has three holes :

After each adjustment of wheel position the thumbscrew on the drawbar should be adjusted until the lower edge of the mower runs horizontally.

HOW TO MOW:

It is recommended that the rear track of the machine be altered to bring both rear wheels within the cutting width of the rotary mower. On no account tread directly on the mower apron.

Before starting the engine check that the front power take-off is disconnected.

Raise the rotary mower to allow the tractor to be driven to the place where mowing is to begin. To do this, pull back the hand lever and the mower will automatically lock in the raised position under the chassis.

Release the mower only when actually positioned over grass - never on gravel or dirt paths. Press lightly with the heel on the locking catch, and the mower will lower itself to the ground.

Engage front power take-off by pushing the release lever to the right and releasing. Select 1st. or 2nd. gear and commence mowing.

Mow all round large areas, working towards the centre to avoid turn marks on the grass. Do not attempt to mow if the grass is very wet, or else the grass cut off by the mower blades will tend to collect under the mower apron. Do not cut grass too short in very hot weather or the ground will dry out. When mowing is finished, disconnect the front take-off drive and raise the mower.

Special note: The front power take-off release lever can be locked with a special padlock so that children or unauthorised persons cannot operate the lever. The lock is inserted through a hole in the retaining plate, the key given a quarter-turn and removed, whereupon the front power take-off cannot be engaged.

SERVICE & MAINTENANCE OF THE INTER-AXLE ROTARY MOWER:

If the rotary mower is to be ready for use, in good working order and free from the likelihood of failure it will naturally require a certain amount of care and maintenance. You are therefore asked to study the suggestions made below.

Belt tensioning: if the compression spring acting on the threaded spindle is no longer able to maintain the V-belt at the correct tension, adjustment must be made with the wheel brace on the threaded spindle.

Lubrication: after every 30 hours of operation apply grease to:- two nipples on the cutter blade shafts; two nipples on the guide pulleys; two nipples on the tensioning pulleys. Clean and lightly grease the threaded spindle. The wheels of the mower have ball bearings requiring no maintenance.

Cutter blades: When regrinding always follow the original pattern, removing material equally from either end of the blade to avoid imbalance. This work should only be carried out by an expert, failing which new blades should be fitted.

ATTACHMENT OF HAND LIFTING GEAR.

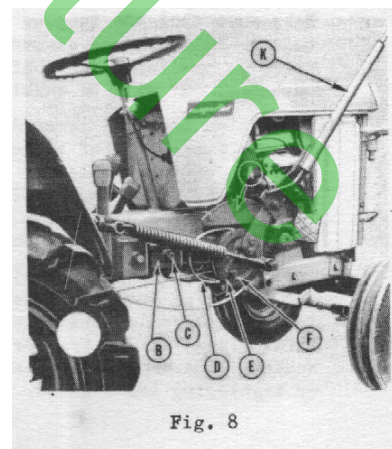
The lifting gear and associated coil spring and pivot block can be fitted to the MotoStandard chassis in a few minutes without special skill, provided that the following order of work is adhered to :-

Insert hand lifting arm "A" (Fig. 8) into the longitudinal recess "B" on the chassis of the tractor and secure by tightening bolt "C".

Pass lifting cable "D" from the lower front to the upper rear of cable pulley "E". Insert the end of the cable into the pulley and secure there by tightening bolt "F".

Draw lifting cable "D" out until taut, making sure that it is properly located in the groove of the pulley. Now pass the cable rearwards between the two seat bracing struts to the trailer coupling.

The lifting pivot block is attached to the trailer coupling by means of the four hexagon bolts "G" (Fig. 9). To accept these bolts, four threaded holes will be found in the upper part of the trailer coupling.



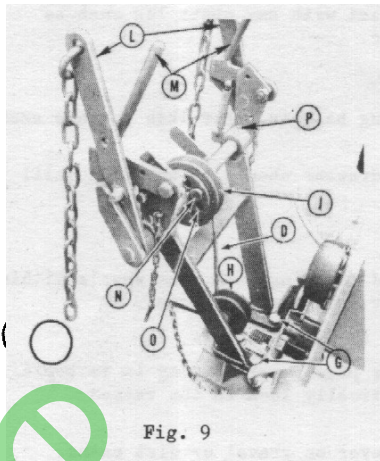


Fig. 9

Check as follows that the lifting cable "D" (Fig. 8) is correctly tensioned, and that the hand lifting gear will function correctly :-

- (a) Release lever "K" and push forward
- (b) Press locking mechanism "M" forward and down until lifting arms "L" can be lowered
- (c) Pull lever "K" back again as far as it will travel. As this movement is made the lifting arms "L" should be raised and should engage with the locking mechanism "M". If this does not occur, increase tension by advancing tensioning pulley "J" by one hole in relation to disc "O".

SERVICE AND MAINTENANCE.

At intervals apply a little grease to both nipples "P" (Fig. 9) on the lifting arm bearings. Lubricate guide pulley "H" by applying a few drops of oil through the hole in the cable pulley hub. The parts subject to friction on pulley hub "E" (Fig. 8) should also be oiled from time to time.

ATTACHMENT OF SIDE MOWER.

If it is intended to use the side mower attachment manufactured for the tractor, the coil-spring operated hand lifting gear must first be mounted on the chassis, and the pivot block on the trailer coupling.

Proceed as follows to attach the side mower mechanism :-

Remove cap from gearbox power take-off shaft

If necessary clean and lightly grease inside shaft end.

Lift up locking pin on the rear p.t.o. and turn to one side. The pin will remain in this position.

Clean and lightly grease the mower connecting shaft. The splined section should be similarly treated.

Insert the mower connecting shaft into power take-off shaft.

Release the locking pin and move the mower to and fro slightly so that the locking pin can enter the hole in the mower connecting shaft, thus ensuring that the mower is securely attached.

Connect mower lifting arm "E" (Fig. 10) by means of crosspiece "F" to the two lifting bars "G".

Make sure that the tongues on the crosspieces are outside the lifting bars. Note, however, that no bolt head or excess length of screw thread should protrude on the inner faces of lifting bars "G", or the locking mechanism "H" will be unable to function.

With lifting bars "G" lowered and the mower beam flat on the ground, the length of attachment rod "E" should be adjusted by means of turnbuckle "J" so that the longitudinal eye in the rod has 2 - 3 mm. (0.079" - 0.12") play at crosspiece "F". When this adjustment has been made the turnbuckle "J" should be prevented from turning by tightening wingnut "K".

Adjusting screw "L" (Fig. 11) on the mower beam lift lever "M" should be turned against stop "N" until the mower beam is initially raised parallel to the ground when the hand lifting gear of the tractor is operated. When this has been achieved the adjusting screw should be prevented from moving by tightening the locknut.

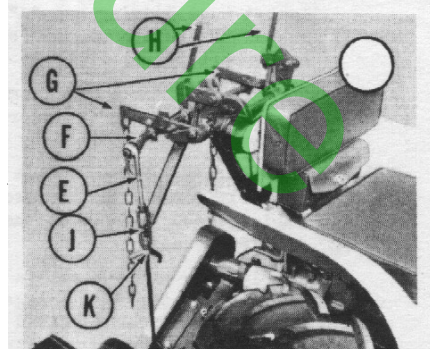


Fig. 10

ADJUSTMENT OF CUTTING ANGLE - MOWING TECHNIQUE.

Mowing can proceed in either 1st. or 2nd. gear. First engage take-off by moving selector lever. Commence mowing slowly until you have determined which gear and what speed will give the best results on the field to be mown.

The mower beam is set to the 'normal' position at the Works. However, the cutting angle and thus the cutting height may require alteration depending on soil or grass conditions. For this purpose, five holes have been drilled in mower beam pivot bearing "O" (Fig. 12). Remove securing bolt "P" and move the beam pivot in relation to its support bearing. Replace securing bolt in a different hole and tighten to hold both parts firmly.

MOWING POSITION - SWATH POSITION.

When mowing, pull back on hand lever at the end of each pass. The lever will lock in position and the mower beam will be raised from the mowing position and secured in the swath position. The tractor can then be turned and brought to face the crop for the next pass. It may also be noted that either upward and downward mowing of slopes, provided they are not too steep, can be carried out with the mower beam in this position, although preferably for short periods only.

TRAVELLING POSITION.

Proceed as follows to raise the mower beam to the travelling position :-

Return the swath clearer to a vertical position and withdraw sideways from the outer shoe.

Attach the blade cover to the mower beam to prevent accidents.

Pull back the hand lifting gear until it locks. From here raise the mower beam by hand at one end until it is vertical at one side.

Pass threaded retaining rod through the hole in the mower beam and secure with washer and wing nut.

SERVICE & MAINTENANCE.

After the first 1 - 2 hours of mowing, all screws and nuts on the mower beam should be checked and tightened where necessary.

Lubrication and oiling.

Every 3 - 5 hours of operation, anti-friction grease should be applied with the gun to nipples "U" (Fig. 13).

While mowing, especially during the summer months when temperatures are high, a little grease or thick oil should be applied every hour or so to the cutter blade runners in both upper and lower guide arms, and also to all blade friction surfaces, the inner shoe guides and the rear edge of the lower springs.

Adjustment of V-belt tension.

Check the tension of both V-belts (Fig. 14) after one hour's mowing. The tension is correct if the belts can be pressed in about 0.4" (1 cm.) with the thumb. If normal wear has increased the length of the belts, they must be adjusted.

First loosen hexagon nuts "V" (Fig. 14) by a number of turns. Also loosen locknut "K", until the tensioning screw can be tightened with a spanner.

Continue tightening until the V-belts are correctly tensioned, i.e. can be pushed in approx. 0.4" with the thumb. Tighten locknut "K" so that the tensioning screw cannot become loose.

Replace belt cover and tighten securing screws.

Check V-belt tension subsequently every 10 hours of operation.

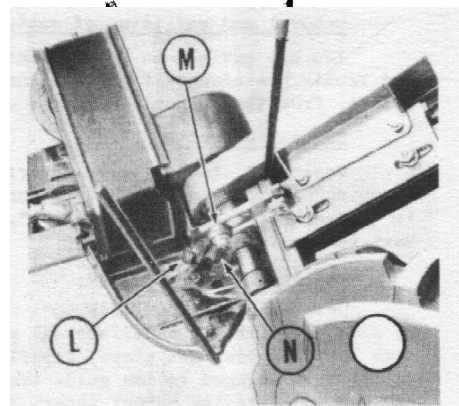


Fig. 11

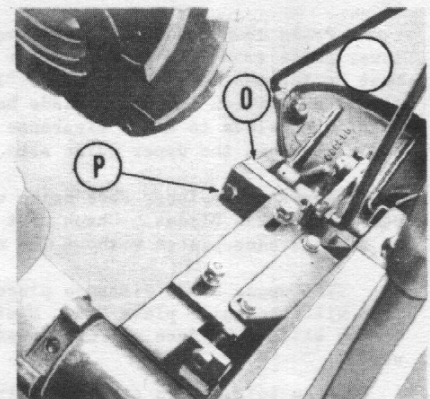


Fig. 12

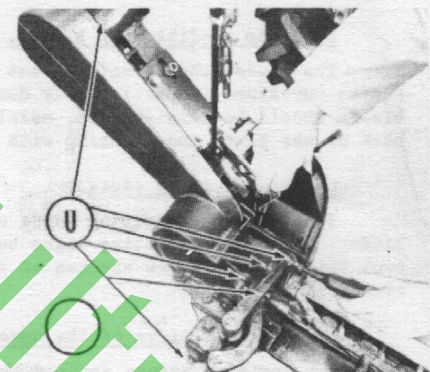


Fig. 13

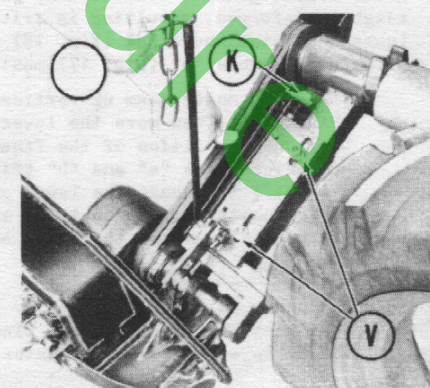


Fig. 14

Removal and refitting of cutter blades.

You are advised to become familiar with the following maintenance and repair procedures if you are anxious always to obtain good mowing results from the twin-blade cutter unit.

Removal of cutter blades.

Unscrew distance piece centering bolts "g" (Fig. 15). Remove securing nut "c" and detach drive unit "d". Turn upper drive arm "a" to rear, using special tool "b". Take off upper blade "i". Next remove lower blade "h".

Refitting cutter blades.

Unscrew centering bolts "g". Now insert the lower blade "h" in such a way that the cylindrical part of the blade makes contact with the rear distance piece, ensuring meanwhile that the running guides have engaged in the guide arms. Next take the upper blade "i" and in a similar manner insert the cylindrical section of the blade head into the corresponding distance piece as far as it will go.

Press down the upper blade over its whole length so that it lies beneath the projections on the lower guide arms "k", and the outer shoe guide plate. In addition, the head plates of both blades must be located under guide plate "l" in the inner shoe. There should be approx. 0.02" (.5 mm.) clearance between the upper blade head plate and the lower edges of the guide plate. The plate is mounted in slots to allow clearance to be adjusted. Next, place both blades at their mid-positions and clamp down the upper guide arms using the special wrench provided.

Replace the inner shoe drive unit "d" which is set at the works to line up exactly with the mid-position of the blades. Check that the holes in both guide arms correspond exactly with the studs on the distance pieces without the necessity of introducing any sideways movement of the arms.

The upper blade distance piece must lie flat on the head plate and should not come into contact with the guide plate "l". Similarly, the lower blade distance piece should lie flat in position on the sliding surface of rear mower beam "m". Neither distance piece should appear tilted in any way.

When both blades are correctly centred and the cylindrical sections of both blade heads are in contact with the distance pieces, tighten the centering bolts "g" on both distance pieces so that they locate correctly in the indentations on the blade heads.

Checking condition of blades.

The blades should not be bent or twisted either in a horizontal or a vertical plane. Small radius curvature is particularly dangerous since it cannot be equalised by the upper guide arms. The blades should be straightened, mainly at the head end, by striking with a hammer or deforming the back of the blade and checking with a straight-edge.

Checking cutting edges.

The individual cutting edges on each blade must also remain straight and in the same plane as the blade. Blades with cutting edges bent up or down will cut untidily and wear rapidly. Straighten bent cutters with a few strokes of the hammer. Check flatness and alignment of cutters with a straight-edge.

Relative positions of the mower blades when assembled.

The spring pressure applied by the upper guide arms (Fig. 16) to the mower blades is entirely absorbed by Silentbloc bushes "b" (Fig. 17) on the lower guide arms. After a considerable period of use, these Silentbloc bushes become slightly deformed, resulting in friction between the blade cutting edges and the inner and outer shoes "a" (Fig. 18) and "b" (Fig. 19). When this occurs Silentbloc bushes "b" (Fig. 17) must immediately be adjusted.

Stand the mower beam up vertically. Loosen lower guide clamping bolt "c" (Fig. 17). Then move the lower guide arms up or down until the correct horizontal position of the final cutters is reached in relation to inner and outer shoes "a" and "b" (Fig. 18). Re-tighten clamping bolts "c" (Fig. 17) to secure the lower guide arms firmly. Following this check that the mower blades are correctly positioned over the whole length of the mower beam as shown in Figs. 19/20.

Guide arm clearance.

The upper guide arms "a" (Fig. 21) should at no point contact the rear part "b" of the cutter blade. If this occurs the guide arms should be straightened or material removed.

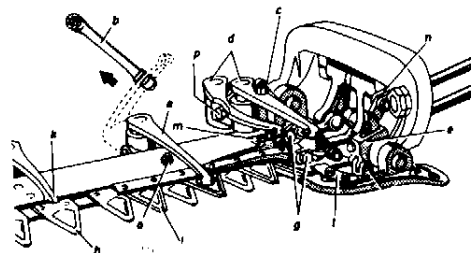


Fig. 15



Fig. 16



Fig. 17



Fig. 18

Plan position of cutter blades

When assembled the blades should project forward to exactly the same extent. If there is a discrepancy exceeding 0.079" (2 mm.) the upper guide arms must be bent to a smaller radius (Fig. 23) or straightened somewhat (Fig. 24).

Upper guide arm pressure.

IMPORTANT. Sharp blades and lower guide arm pressure is always better than blunt blades and an increase in pressure.

In normal circumstances the upper guide arms should always exert sufficient pressure on the blades. For arduous working conditions, such as very tough or very fine grass, pressure can be increased by turning nut "o" (Fig. 15) or "c" (Fig. 16) very slightly to the right. Turning to the left will, of course, lower the pressure. Whenever pressure is altered, the procedure described under 'Relative positions of the mower blades when assembled' should be repeated and checked.

The rear face of bearing sleeve "a" (Fig. 25) must in all cases lie 2.5 - 3.5 mm. (.0098" - .0137") in advance of the rear face of lower spring "b".

Guide unit pressure on inner shoe

This guide unit is held together by securing nut "c" (Fig. 15) and the complete unit "d" centred on the inner shoe by two centering marks. The unit is mounted on Silentbloc bushes and engages with studs on the distance pieces. The pressure setting is correct if the straight guide arm "d" can just be lifted by hand. The curved guide arm "d" should have somewhat less pressure than the straight arm.

To adjust this pressure, loosen clamp bolt "p" and push or strike the guide arms so that they move slightly downwards until the desired pressure is attained. Re-tighten clamp bolt and check pressure as described above. Raise the guide arms slightly if the pressure was originally too high. No knocking sounds should be audible when the cutter blades are operating.

The head plates of both blades are retained by a guide plate "l" to provide a safety factor should the blades be subjected to heavy external pressure.

A clearance of 0.02" (.5 mm.) should be maintained between the upper blade head plate and the lower face of the guide plate. If necessary, shift the guide plate in the slots provided.

Regrinding mower blades

Always keep the blades sharp. Time spent in regrinding will be recovered by good results and speed of moving.

Grinding angles: normal, 40°; stony or sandy ground, 45°

Do not burn the blades when regrinding; aim merely to restore a sharp edge. You will soon establish the best grinding angle for your own land.

REDUCTION GEAR HUBS

If the standard adjustable-track hubs are replaced by reduction gear hubs, the speeds in each gear as shown in the operator's handbook are reduced to approx. 1/3rd. of the printed values. The reduction hubs are normally used to obtain the best results with the rotary cultivator.

PITTING THE REDUCTION GEAR HUBS

1. Loosen the nuts holding the rear wheels, and jack or prop the rear axle of the tractor until the rear wheels can be removed.
2. Open up the tab washer on the end of the axle, remove the nut and cover disc, loosen clamp bolt and withdraw wheel centre from the axle.
3. Push on reduction gear hub with wheel studs outwards in place of the wheel centre. It is essential to note that the hole formed in the reduction gear hub to accommodate the track adjustment spindle must lie between two of the three brake drum securing bolts. If this is not so, the end of the spindle will press on the head of the brake drum bolt and correct adjustment of track width will not be possible. Attach threaded spindle and cover disc to the reduction gear hub. Replace tab washer and hexagon nut. Turn over washer to secure nut.
4. Remove three gearcase clamping bolts and nuts from bottom of gearcase, these being one in



Fig. 19



Fig. 20



Fig. 21



Fig. 22

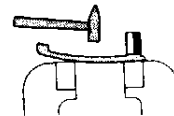


Fig. 23

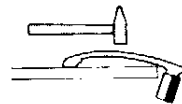


Fig. 24

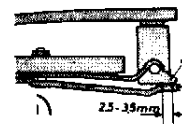


Fig. 25

front of, and two behind the oil drain plug; with the three longer bolts provided fit the reduction hub hitch, with the hitch itself facing the rear. When fitting the longer bolts it may be necessary to remove one of the brake bands.

5. Replace wheels, tightening wheel nuts securely.

OPERATION OF THE REDUCTION GEAR HUBS

Reduction gear disengaged (speeds as before): insert pin bolt into the hole between the inner and outer halves of the hubs and secure with 'R' clip between the hub halves.

Reduction gear engaged (speeds in gears reduced to 1/3rd. of former values): pass the pin bolt through the sprung bracket on the hitch and the hole in the inner half of the reduction gear hub. Secure with 'R' clip. Ensure that the pin bolt is pulled back by the spring until the 'R' clip will allow no further movement.

NOTE: Both reduction gear hubs must always be adjusted similarly, i.e. the reduction gears on each side of the tractor must be engaged or disengaged at the same time.

If the pin bolt is inserted neither between the hitch and the inner reduction gear hub, nor between the two halves of the hub, no power will be transmitted to the wheels from the gearbox and the hubs will turn freely. As stated previously, the differential lock should not be engaged when turning, and this particularly applies when the reduction hubs are engaged.

Track alteration:

When increasing or decreasing the rear wheel track, the retaining bolts on the gearbox bracket will accommodate whatever track is selected. Alterations are carried out as before by turning the threaded spindle, but the clamp bolt is no longer fitted to the reduction gear hubs.

SERVICING THE HUBS: After every 50 hours of operation grease the hubs through nipples on the inner halves. In addition, clean and lightly grease the threaded spindles.

REAR P.T.O. EXTENSION:

Remove the cap over the rear power take-off shaft.

If necessary, clean out internally and lightly grease (do not use old engine oil or similar).

Draw up locking pin and turn to one side until the pin remains in the raised position.

Clean and lightly grease the universal joint connector, and push into the power take-off shaft.

Release locking pin and move the universal joint to and fro until the pin engages in hole, and secures the joint firmly.

Service & maintenance of the rear P.T.O. Extension: After every 20 hours of operation, apply grease to the central nipple located beneath the flexible rubber sleeve.

DRAWBAR WITH DEPTH CONTROL.

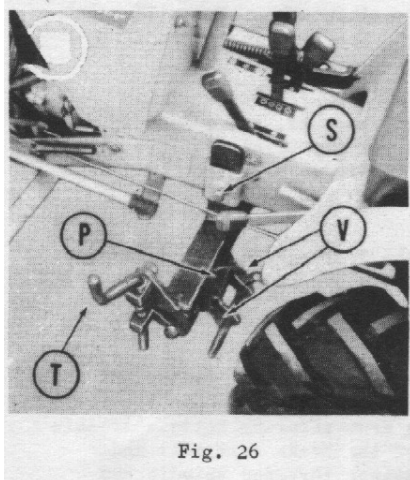


Fig. 26

A number of implements designed to be drawn behind the MotoStandard can be mounted on this drawbar. The drawbar itself is attached to the tractor as follows :-

Unscrew the securing bolts "S" (Fig. 26) on the left and right-hand recesses on the chassis to a sufficient extent to enable the tongues of the drawbar to be inserted from beneath.

The tongues should be moved upwards in the recesses until they are flush with the upper surface of the chassis frame or about a finger-breadth below this. This positioning is important to allow the adjustment spindle its full range of travel.

Tighten securing bolts "S" with the wheel-brace.

Adjustment:

Height adjustment is provided by depth control spindle "T".

When working on a slope, locating screws "V" must be set so that the plough bearing "P" is rigidly mounted in relation to the drawbar.

When working a flat field, plough bearing "P" must be set at locating screws "V" so that movement is possible in relation to the drawbar.

Two-way Ploughs.

Offer up the ploughs from the rear above the rear axle of the tractor until the plough bearing on the drawbar is reached.

Attach the plough beam with bolts and locking pin to the plough bearing (Fig. 27). Connect the hand lifting gear chain to the ploughs. Do not set up the chains too short or the ploughs will have insufficient free play to go deep.

Basic lining-up procedure for two-way ploughs.

Let down both ploughs (for the sake of maximum accuracy this work should only be carried out on a completely level surface such as asphalt or concrete - see Fig. 28).

Turn the depth control spindle "U" until the blade tip "S" and slip heel "T" are level and parallel.

By loosening adjustment screws "V" (shown for clarity on the first plough in Fig. 28) bring the second plough down to rest on the ground surface level with the first.

Adjust locating screws "V" (Fig. 27) so that on level ground the blades of the ploughs are perpendicular to the ground.

If the angle or stability of the furrow wall is unsatisfactory the locating screws "V" (Fig. 27) should be adjusted until ploughing proceeds satisfactorily.

Correct dimensions for setting up the blade coulter and disc coulter are given in the tables below :-

Blade coulter (Fig. 29)

- (a) Coulter tip precedes blade tip by ... 1.18" (30 mm.)
- (b) Coulter tip located above blade tip by ... 1" (25 mm.)
- (c) Coulter angle to direction of ploughing ... approx. 115°
- (d) Coulter lead-in (fallow land) ... 3 - 13 mm. (.12" - .51")
- (e) Coulter angle of advance (fallow land) ... 0 - 2 mm. (0" - .08")

Disc coulter (Fig. 30)

- (a) Disc centre precedes blade tip by ... 0" - 9.84" (0 - 250 mm.)
- (b) Disc centre above ground level ... min. 2.17" (55 mm.)
- (c) Lower edge of disc enters ground to the maximum extent made possible by setting (b)
- (d) Disc lead-in (fallow land)39" - .79" (10 - 20 mm.)

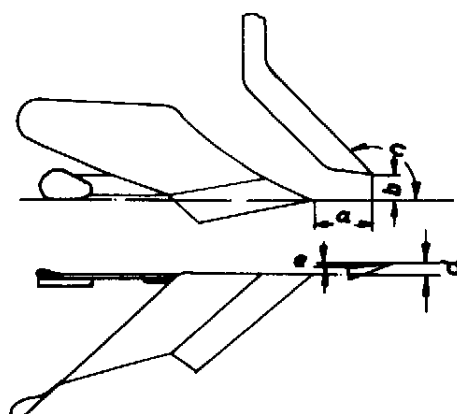


Fig. 29

The dimensions given above should be adhered to wherever possible.

However, when working heavy soil or ploughing-in stubble or uncropped manure, it is best to set the front tools as far forward as possible.

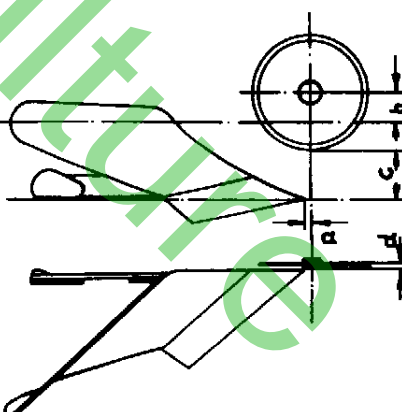


Fig. 30

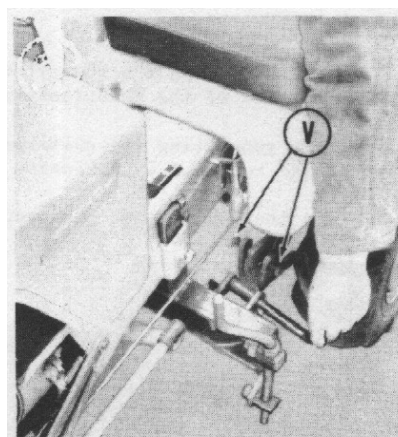


Fig. 27

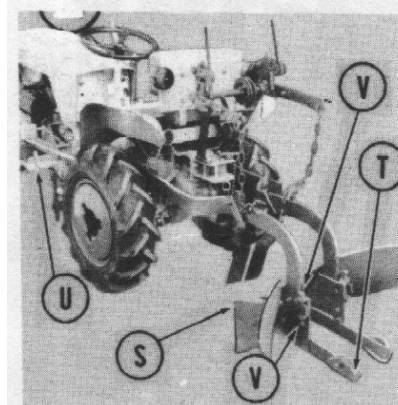


Fig. 28

ROTARY CULTIVATOR:

Before attaching the rotary cultivator the rear p.t.o. extension must be fitted to the rear power take-off shaft of the MotoStandard Tractor.

Before connecting the cultivator unit clean both outer and inner surfaces of the drive shaft and also of the rear p.t.o. extension, and lightly grease if necessary.

Place the hoe unit on the ground and attach the lifting gear chains. Secure bolts with split pins.

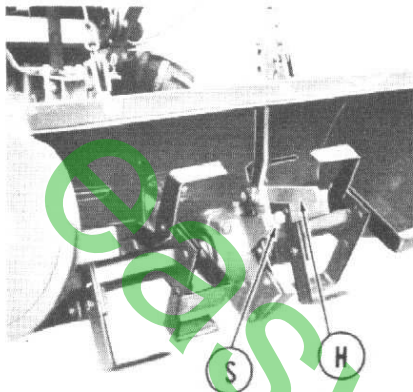


Fig. 31

Adjustment of cultivator hood for depth.

A support projection provided with several holes will be found on the top of the hoe unit. Removal of the swivel pin permits the height of the hood in relation to the cultivator to be adjusted. The hood should be positioned so that when in use the side panels just penetrate the soil.

Adjustment of working depth.

Whether deep cultivating or hoeing, the depth control fitted to the cultivator drive unit ensures constant depth of working.

Loosen clamp screw "S" (Fig. 31) and regulate hoeing depth by moving hand lever "H" up or down as required.

Upward movement = shallow working

Downward movement = deeper working

If continually working on deep cultivating the depth control can be removed. Cultivate in first gear, with power take-off selector lever pushed forward, so that the power take-off is governed by engine speed.

ALWAYS engage the reduction gear hubs when deep cultivating. See instructions under 'Reduction gear hubs'.

ROTARY CULTIVATOR UNIT - SERVICE & MAINTENANCE.

All shafts and gear wheels on the cultivator are fully enclosed in an oilbath. Accordingly, very little maintenance is required.

At intervals, and frequently if the cultivator unit is in constant use, the oil level in the gear drive should be checked. It should always reach the mark on the dipstick when the hoe unit is horizontal. Top up if required.

First oil change: after 10 hours' cultivating, then after every 100 hours.

Grade: SAE.90/Hypoid gearbox oil. Capacity: app. 2/5ths. of a pint (0.25 litres).

Check oil in cultivator unit drive after every 10 hours of operation.

RAKE HARROW (Seed Harrow).

After sowing it is the task of this harrow to keep the soil porous and prevent the growth of weeds. Large clods of earth, provided that the soil is not too wet or too dry, will also be broken up by contact with the tynes of the harrow. The effect becomes more pronounced as speed increases, thus it is desirable to harrow at a fairly high speed.

Attach support beam "T" (Fig. 32) to drawbar arms "Z".

Connect harrow springs and lifting gear chains to the support beam.

DISC HARROW (8 discs).

Both sets of discs should be attached to the rear drawbar "G" (Fig. 33) in such a way that the inner discs of each set are as close together as possible. The disc set with the shorter arm

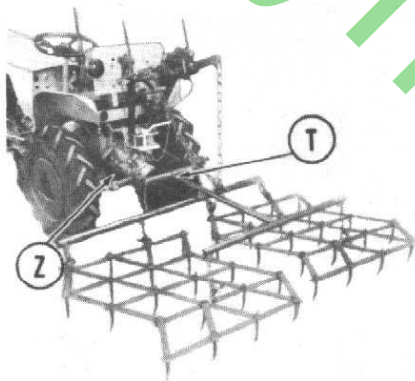


Fig. 32

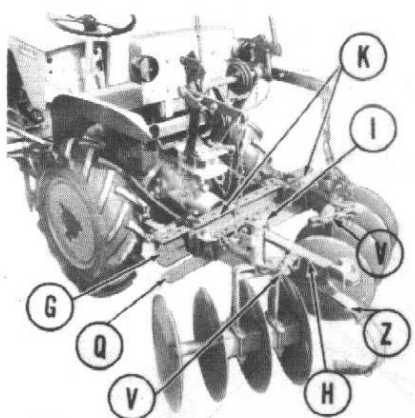


Fig. 33

should be mounted on the right, and that with the longer arm on the left.

Mount crossbar "Q" under both unit arms by means of clamps "K".

Attach support bar "H" by means of clamp "I" to crossbar "Q". Attach cultivator tool "Z" to the outer end of the support bar "H".

DISC ADJUSTMENT.

Running angle: adjust both sets of discs by means of pivots "V" (Fig. 33) until the units run at an angle to the direction of travel governed by the intersection of the rear edge of one disc with the front face of the next.

Slope: using adjustment screws "E" (Fig. 34) set the slope of the units so that the inner discs of both left and right-hand sets work at a slightly greater depth than the outer discs.

Working depth: control the working depth by bending the cultivator support rod upwards or downwards.

SPRING-TYED CULTIVATOR:

This implement, normally required in the spring, is used to loosen, break up and aerate the soil after the drying-up process of autumn. It has, of course, many further uses.

Assemble the cultivator so that the front crossbeam has three tools and the rear crossbeam two tools - all mounted equidistantly.

Attach the lengthwise support beams "L" (Fig. 35) to the rear drawbar and secure the bolts with split pins.

Connect the lifting gear chains. These should not be too short.

CULTIVATOR ADJUSTMENT:

Working depth: attach running wheels "S" (Fig. 35) to their rods. As these wheels are raised, the working depth of the cultivator is increased.

Depth control spindle: this is used to ensure that each of the cultivator tools operates at the same depth.

FRONT TOOL FRAME:

The front tool frame (FRO) is fitted by inserting the 'U' shaped bracket on the end of the tool frame into the sockets on either side of the waist of the tractor, and by lightly tightening the retaining bolts. The clamp on top of the frame is then released and reassembled, clamping the tool frame to the front axle pivot pin. The bolts on the rear attachment sockets are then tightened, and the tool frame is ready to accept the front-mounted implements which are used in conjunction with it.

FRONT-MOUNTED TOOLBAR AND GRADER/SNOW PLOUGH:

The front-mounted toolbar (FHS) or the Grader/Snow Plough (RAUK) are mounted on the front tool frame by removing the two long implement retaining pins, aligning the mounting holes, and securing with the implement retaining pins.

These attachments are complete with a lifting cable which should be connected to the hand lift. If the tractor is fitted with a lift jack the cable between this and the hand lift should first be disconnected at the hand lift end and the cable from the front-mounted implement connected up.

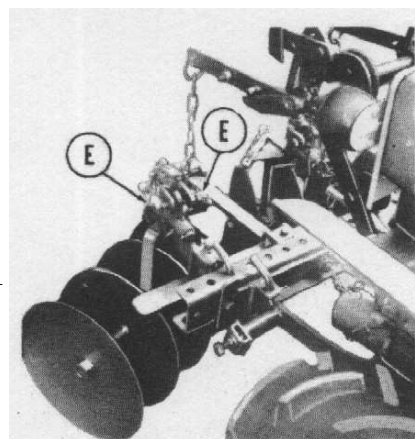


Fig. 34

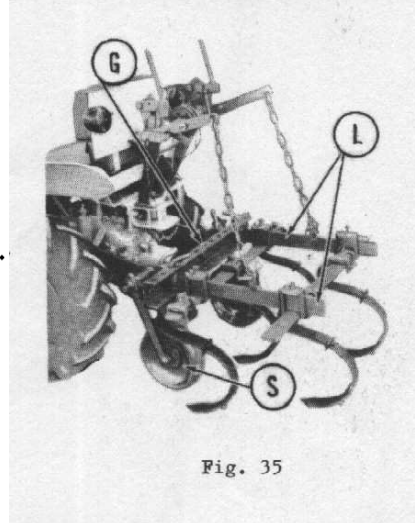


Fig. 35

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S P E C I F I C A T I O N

ALLEN MotoStandard TRACTOR, 1030

9 b.h.p.

ENGINE Type	Gutbrod-MAG 1030 4-stroke, with carburettor
No. of cylinders	1, vertical
Bore	75 mm.
Stroke	68 mm.
Cubic capacity	300 c.c.
Compression ratio	7 to 1
Output	9 b.h.p. at approx. 3,800 r.p.m.
Max. torque	1.7 mkg. (12.3 ft./lb.) at 2,800 r.p.m.
Min. fuel consumption	280 g (9 $\frac{3}{4}$ oz.) hp/hr

<u>Lubrication</u>	oil sump in crankcase
<u>Cooling</u>	air, with engine-driven fan
<u>Timing</u>	Inlet opens: 16° b.t.d.c.; closes 56° a.t.d.c. Exhaust opens: 62° b.t.d.c.; closes 6° a.t.d.c.
Valve clearances (cold engine)	Inlet: 0.15 - 0.20 mm. (.0059 - .0079") Exhaust: 0.20 - 0.25 mm. (.0079 - .0098")
Engine oil capacity	1.2 litres (2 $\frac{1}{4}$ pints)
Oil grades	for temperatures up to 20°: SAE.30 HD for temperatures above 20°: SAE.40 HD during winter months: SAE.10W/30 HD
Air filter	oilbath type
Oil grade for use in air filter	SAE.30 HD

<u>Carburettor</u>	Bing 8/25/33
Main jet	100
Idling jet	70
Idling corrector jet	100
Mixture barrel	8
Idling air control screw	1 $\frac{1}{2}$ turns open
Fuel tank capacity	7.5 litres (13 $\frac{1}{4}$ pints)

<u>Electrical equipment</u>	
Ignition	flywheel magneto
Contact breaker gap	0.4 mm (.016")
Ignition advance	3.1 - 3.3 mm (.122 - .129") b.t.d.c.
Sparking plug	heat value 190
Plug gap	0.5 mm (.02")
Starter	Bosch dynastarter
Dynamo	90 watt
Battery	12 volt 18 amp/hr

<u>Transmission</u>	
Clutch	Fichtel & Sachs K 3.5
Clutch type	Single dry plate
Gearbox	4 forward and 2 reverse speeds, and differential lock
Gear ratios	1st : 149:1 2nd. : 88:1 3rd : 54:1 4th : 32:1 1st reverse : 100:1 2nd " : 60:1
Drive to rear axle	Cardan shaft
Gearbox oil capacity	1.5 litres (2.6 pints) SAE.90/Hypoid
Oil change	First: after 30 hours of operation. Subsequently after every 200 hours

<u>Chassis</u>	
Front tyres	3.50 - 8 AM
Rear tyres	6 - 12 AM
Front tyre pressure	18 p.s.i. (1.25 atu)
Rear tyre pressure	14 p.s.i. (1.0 atu)
Rim size (front)	2.50 A x 8

SPECIFICATION of ALLEN MotoStandard Tractor, 1030

(Con'd.)

Rim size (rear)	5 JA x 12
Steering gear	Segment and pinion
Steering gear ratio	3.1:1
<u>Brakes</u>	
Foot brake	Mechanical, external contracting on both rear wheels or on each wheel separately for steering purposes
Hand brake	Mechanical disc on transmission to rear wheels
<u>Dimensions</u>	
Overall length	1660 mm (5'-5½")
Overall width	700 - 800 mm (2'-3¼" - 2'-7½")
Overall height	920 mm (3'-0¼")
Min. turning circle	without use of brakes app. 3.6 m (11'-9"); using brakes app. 3.4 m (11'-2")
<u>Axle loadings and weights</u>	
Max. permitted axle load (front)	200 kg. (3 cwt. 3 qr. 20 lb.)
(rear)	360 kg. (7 cwt. 0 qr. 10 lb.)
Unladen weight (without driver)	265 kg. (5 cwt. 0 qr. 24 lb.)
(max. with driver)	340 kg. (6 cwt. 2 qr. 22 lb.)
No. of seats	1
Max. speed	approx. 12.5 k.p.h. (7.8 m.p.h.)
Permitted total weight	560 kg. (12 cwt. 0 qr. 3 lb.)
<u>Other dimensions</u>	
Wheelbase	1100 mm. (3'-7½")
Front track	585 mm. (1'-11¼")
Rear track	490 - 650 mm. (1'-7¼" - 2'-1½") continuously variable
Ground clearance	front, 230 mm. (9"), rear, 200 mm. (7¾").
Clearance beneath chassis	370 mm. (14½")
Height of trailer coupling	470 mm. (18½")
Height of front power take-off	480 mm. (18¾")
Height of rear power take-off	315 mm. (12, 4/10")
Mac. trailer weight (without brakes)	185 kg. (3 cwt. 2 qr. 16 lb.)
(with brakes)	900 kg. (17 cwt. 2 qr. 24 lb.)
Max. downward load on coupling	80 kg. (1 cwt. 2 qr. 8 lb.)
<u>Electrical equipment</u>	
Headlamp main beam	12 volt 15 watt
Parking lamps	12 volt 4 watt
Rear lamps	12 volt 5 watt
Flashing direction indicators	(4), 12 volt 18 watt
Ignition warning lamp	12 volt 2 watt
Horn	Bosch, 12 volt
<u>Speeds in gears at 3,800 r.p.m.</u>	
	1st. 2.0 k.p.h. (1.24 m.p.h.)
	2nd. 4.3 k.p.h. (2.67 m.p.h.)
	3rd. 7.0 k.p.h. (4.35 m.p.h.)
	4th. 12.5 k.p.h. (7.80 m.p.h.)
	1st. reverse: 3.5 k.p.h. (2.18 m.p.h.)
	2nd. reverse: 6.0 k.p.h. (3.73 m.p.h.)
<u>Power take-off shafts</u>	
Front (available as accessory fitment)	direction of rotation: clockwise
Rear (engine speed 3,800 r.p.m.)	speed as engine speed; shaft can be disengaged
	1st. gear = app. 500 r.p.m.
	2nd. gear = app. 860 r.p.m.
	3rd. gear = app. 1,400 r.p.m.
	4th. gear = app. 2,300 r.p.m.
	1st. reverse gear = app. 750 r.p.m.
	2nd. reverse gear = app. 1,100 r.p.m.
(governed by actual road speed)	Transfer box lever, pos. 1 = 685 r.p.m.) governed by
	" " " " 11 = 1,150 r.p.m.) engine speed
<u>Direction of rotation of shaft</u>	
	1st., 2nd., 3rd., & 4th. gears: anti-clockwise
	1st. & 2nd. reverse gears: clockwise

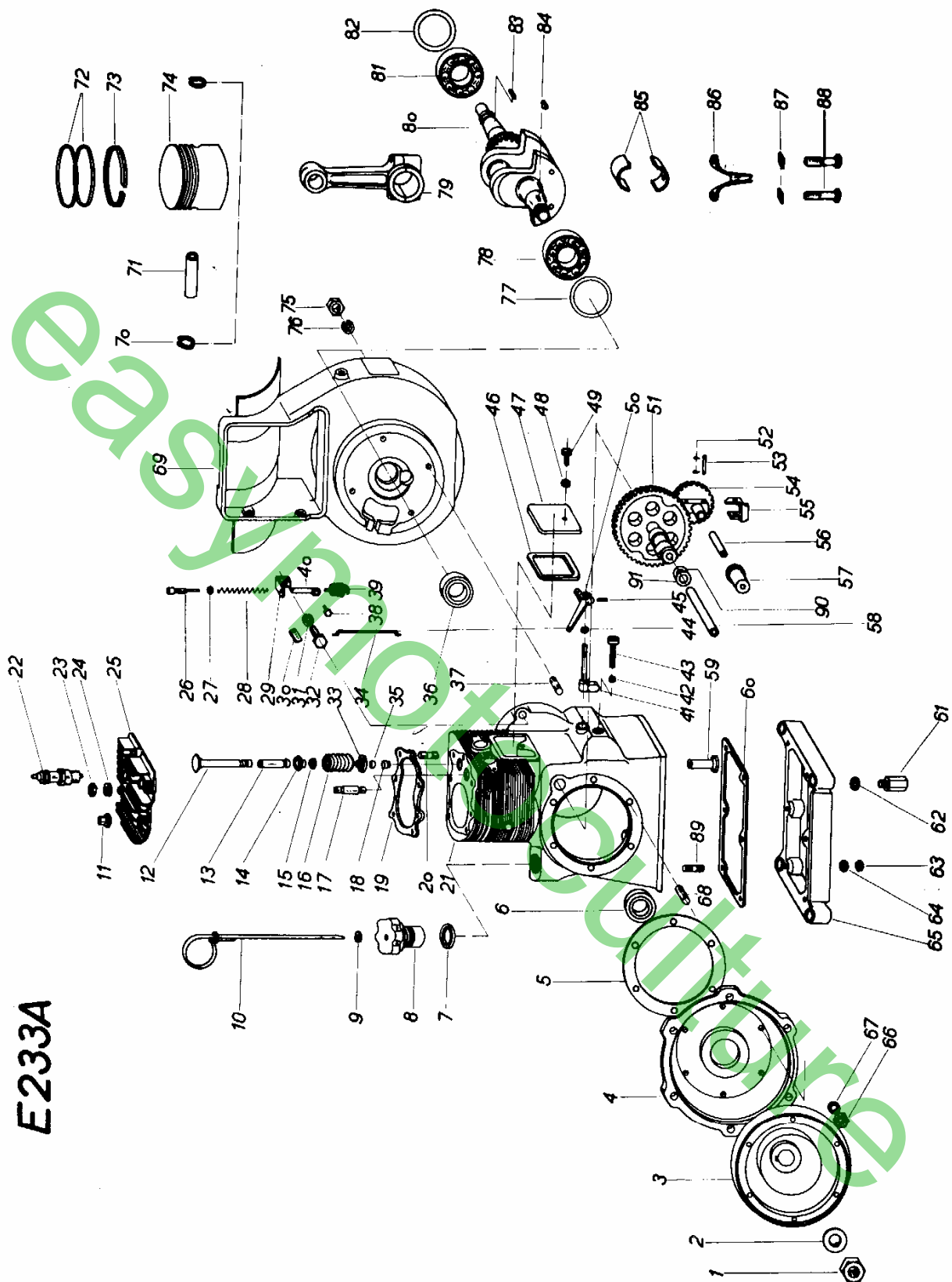
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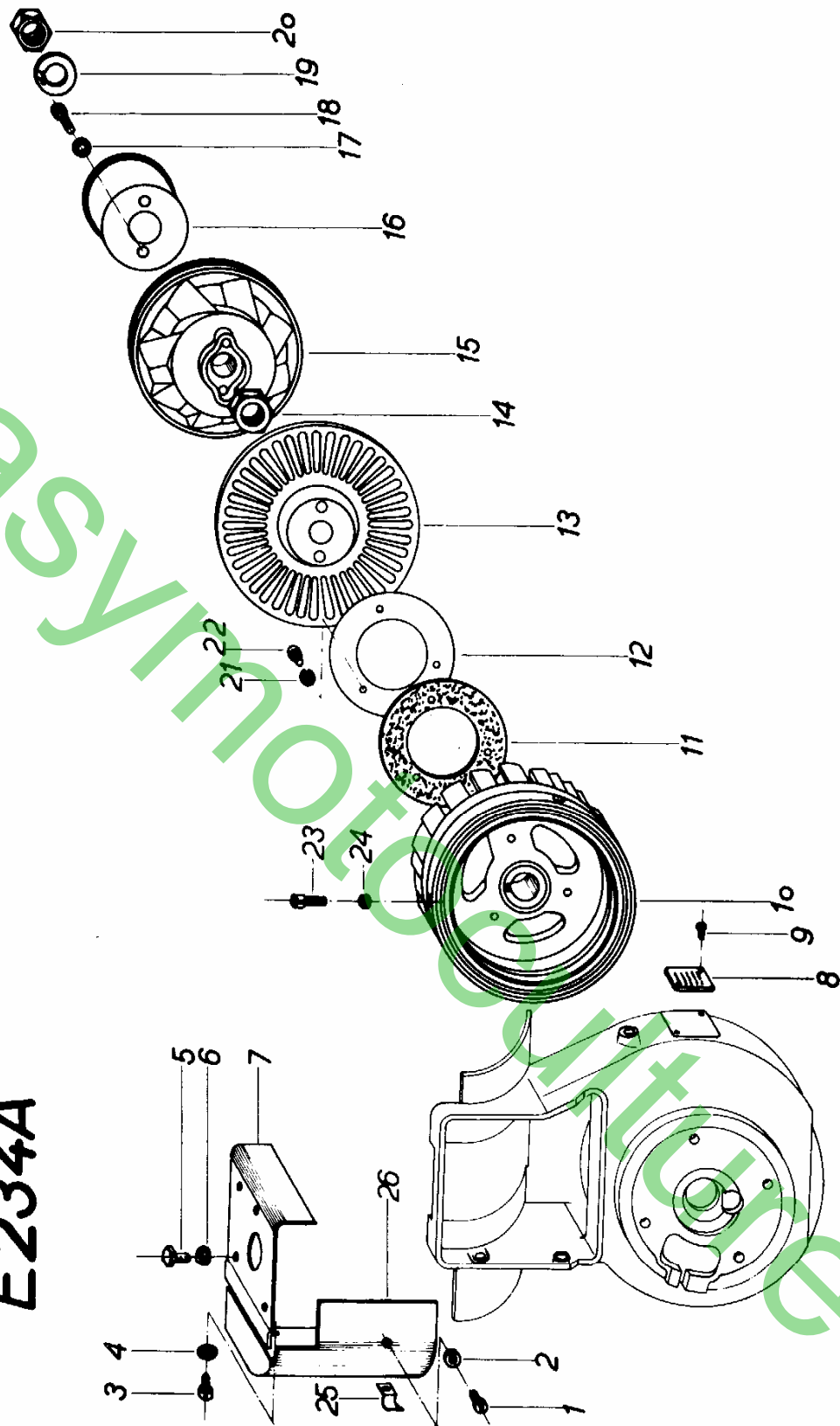
CYLINDER, CRANKSHAFT, PISTON				E 233 Aa/64
Symbol No.	Part No.	Description	Qty.	
1	M 20 x 1.5 DIN 936	Hexagon nut	1	
2	00.11.051	Locking washer	1	
3	59.02.003	Flywheel disc	1	
4	59.04.008	Housing	1	
5	59.04.027	Gasket	1	
6	30 x 42 x 7 B1	Radial seal	1	
7	A 30 x 38 DIN 7603	Flat leather sealing ring	1	
8	59.04.802	Breather cap compl. (3003 x 30)	1	
9	59.04.026	Sealing washer (73 x 121)	1	
10	59.04.804	Oil dipstick compl. (3053 x 31)	1	
11	00.06.115	Nut with bush	4	
12	59.08.023	Exhaust valve	1	
13	59.08.022	Inlet valve	1	
14	59.08.005	Exhaust valve guide (213 x 47)	1	
15	59.08.006	Valve spring collar, top (561 x 6)	2	
16	59.08.004	Circclip (554 x 82)	2	
17	59.08.018	Valve spring (223 x 83)	2	
18	59.08.002	Inlet valve guide (213 x 47)	1	
19	59.08.014	Tappet, in sizes from 2.40 - 3.10 at 0.05 mm intervals	2	
20	59.03.003	Cylinder head gasket (769 x 206)	1	
21	M 10 x 30 DIN 939	Stud, 8 g	7	
22	59.02.004	Cylinder block (575 x 72)	1	
23	M 14 x 1.25/175	Sparkling plug with sealing ring	1	
24	10 DIN 934	Hexagon nut	7	
25	59.03.002	Washer	1	
26	58.07.804	Cylinder head (1712 x 124)	1	
27	M 7 DIN 934	Adjusting screw compl. (123 x 14)	1	
28	00.30.014	Hexagon nut	1	
29	59.07.038	Cable return spring (80 x 351)	1	
30	59.07.007	Throttle cable stop	1	
31	E 8 DIN 127	Control lever	1	
32	M 8 x 15 DIN 933	Spring washer	1	
33	59.08.025	Hexagon bolt	2	
34	58.07.032	Valve spring collar, lower	1	
35	59.08.024	Control rod	1	
36	30 x 42 x 7 B 1	Valve cone beater	1	
37	M 8 x 18 DIN 939	Radial sealing ring	1	
38	M 5 x 8 DIN 933	Stud, 8 g	4	
39	00.31.003	Hexagon bolt 5 D	1	
40	58.07.024	Control spring (349 x 3)	1	
41	59.07.802	Control eye bracket (718 x 45)	1	
42	C 8 x 12 DIN 7603	Control lever, inner, compl. (9203 x 61)	1	
43	M 8 x 25 DIN 912	Sealing ring	1	
44	6 x 0.7 DIN 471	Allen screw	1	
45	AM 6 x 10 DIN 916	Spring washer	1	
46	58.08.017	Set screw	1	
47	59.04.031	Valve chamber gasket (534 x 25)	1	
48	C 8 x 12 DIN 7603	Valve cover	1	
49	M 8 x 15 DIN 933	Sealing ring	1	
50	59.07.021	Hexagon bolt 8 g	1	
		Control lever	1	

CYLINDER, CRANKSHAFT, PISTON				E 233 Aa/64
Symbol No.	Part No.	Description	Qty.	
51	59.19.022	Crankshaft (717 x 96)	1	
52	0.8 x 12 DIN 94	Pin	4	
53	40.11 x 28 x 24 DIN 1433	Headless bolt	2	
54	58.07.001	Control piston (608 x 134)	1	
55	59.07.004	Balance weight (179 x 28)	2	
56	59.07.002	Control shaft (611 x 28)	1	
57	59.07.006	Control tappet (3189 x 2)	1	
58	59.19.021	Crankshaft inner shaft (630 x 1)	1	
59	59.08.013	Valve tappet (344 x 183)	2	
60	57.04.015	Gasket (626 x 128)	1	
61	00.04.081	Closure plug	1	
62	C 14 x 18 DIN 7603	Sealing ring	1	
63	M 8 DIN 934	Hexagon nut	1	
64	A 8 x 4 DIN 6788	Slotted washer	6	
65	59.04.030	Oil sump	1	
66	M 8 DIN 934	Hexagon nut	6	
67	B 8 DIN 127	Spring washer	6	
68	M 8 x 20 DIN 939	Stud, 8 g	6	
69	59.06.021	Fan housing	1	
70	A 20 DIN 73123	Piston pin circlip	2	
71	D 20 x 14 x 66 DIN 73121	Piston pin	1	
72	59.01.012	Piston ring 75.00 mm dia.	2	
	59.01.012/1	- do - , 1st oversize 75.50 mm	2	
	59.01.012/2	- do - , 2nd oversize 76.00 mm	2	
	59.01.012/3	- do - , 3rd oversize 76.50 mm	2	
73	59.01.015	Oil scraper ring 75.00 mm dia.	1	
	59.01.015/1	- do - , 1st oversize 75.50 mm	1	
	59.01.015/2	- do - , 2nd oversize 76.00 mm	1	
	59.01.015/3	- do - , 3rd oversize 76.50 mm	1	
	59.01.804	Piston compl. 75.00 mm dia.	1	
	59.01.804/1	Piston, 1st oversize 75.50 mm	1	
	59.01.804/2	Piston, 2nd oversize 76.00 mm	1	
	59.01.804/3	Piston, 3rd oversize 76.50 mm	1	
75	M 8 DIN 934	Hexagon nut	4	
76	B 8 DIN 127	Spring washer	4	
77	00.20.110a	Shim, 0.1 mm thick	1	
78	00.20.110b	Shim, 0.2 mm thick	1	
79	6206 DIN 625	Grooved ball bearing	1	
80	59.01.003/008	Connecting rod (both halves, not available separately)	1	
81	59.01.018	Crankshaft	1	
82	6206 DIN 625	Grooved ball bearing	1	
	00.20.110a	Shim, 0.1 mm thick	1	
	00.20.110b	Shim, 0.2 mm thick	1	
83	A 4 x 4 x 32 DIN 6886	Key	1	
84	5 x 6.5 DIN 6888	Disc key	1	
85	59.01.005/007	Beatings, 31.725 mm (529 x 17/18)	1	
	59.01.005/007a	- do - , 31.475 mm (529 x 17/18 R 1)	1	
	59.01.005/007b	- do - , 31.225 mm (529 x 17/18 R 2)	1	
	59.01.005/007c	- do - , 30.975 mm (529 x 17/18 R 3)	1	
	59.01.005/007d	- do - , 30.725 mm (529 x 17/18 R 4)	1	
86	59.01.017	Oil splash fingers (530 x 1)	1	
87	00.11.063	Locking washer (641 x 64)	2	
88	58.01.020 SW 12	Hexagon bolts	2	
89	M 8 x 25 DIN 939	Stud, 8 g	2	
90	00.20.019	Shim, 0.2 or 0.3 mm thick	6	
91	00.20.007	Washer	3	
	59.00.800	Gasket set for MAG 1030 engine, comprising E 233 A Drg. No. 5	1	
		E 198 D Drg. No. 17	1	

E233A



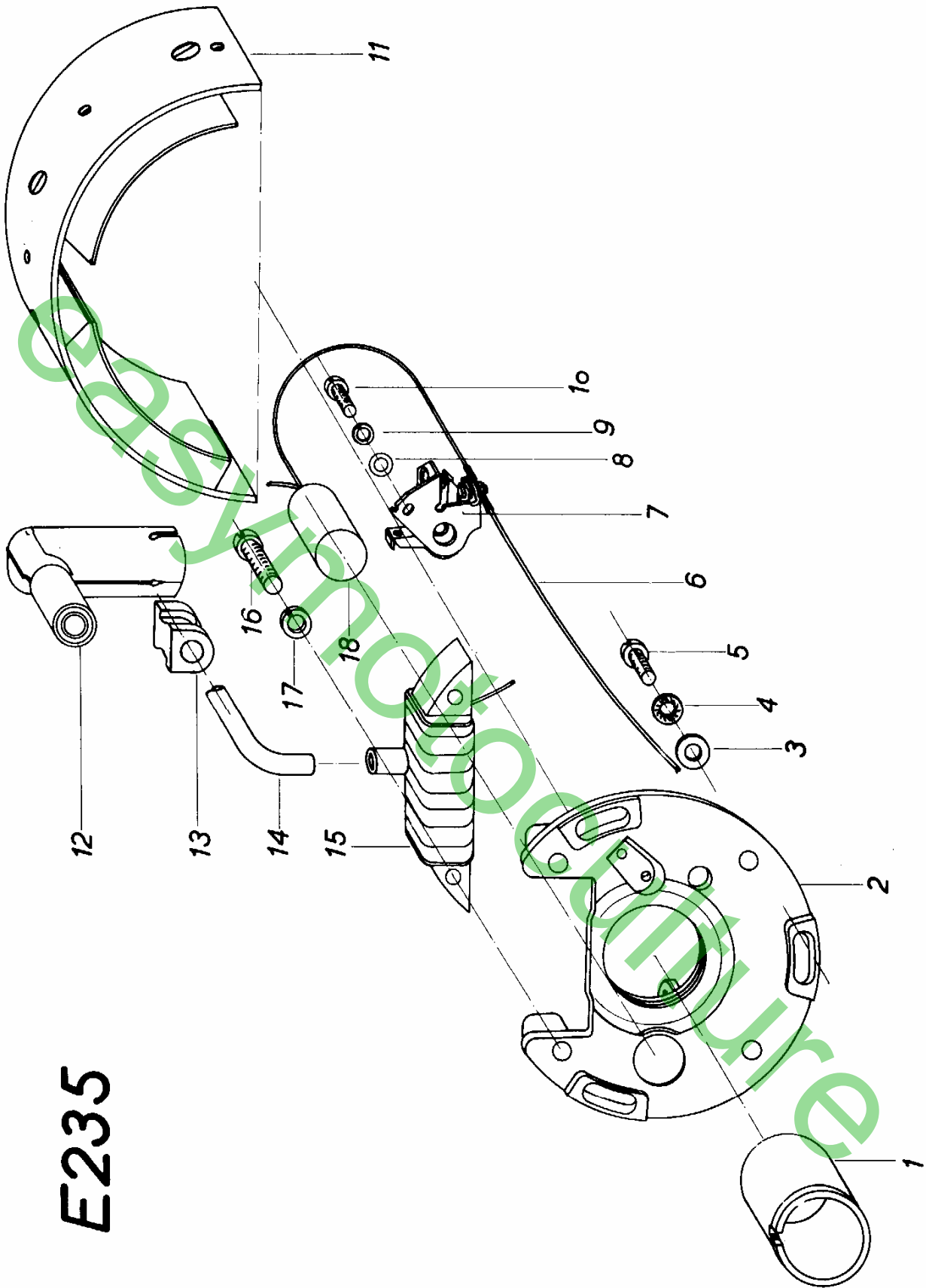
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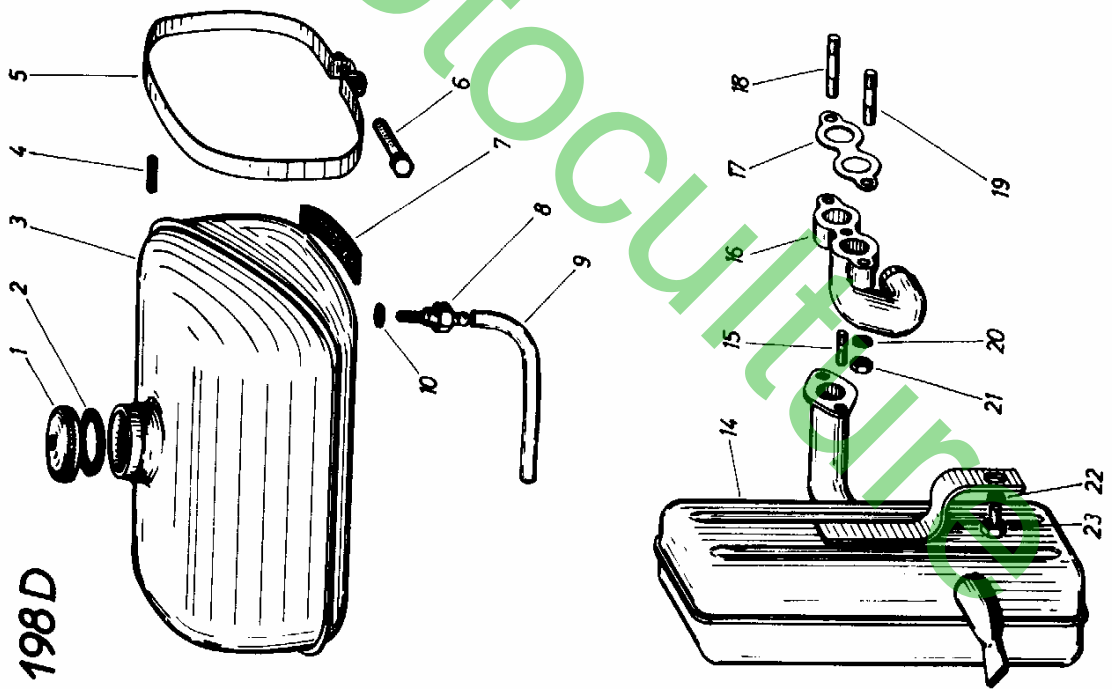
MAG 1030 COOLING FAN				E 234 A/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	AM 6 x 10 DIN 84	Round-headed screw	1				
2	6.4 DIN 125	Washer	1				
3	AM 6 x 10 DIN 84	Round-headed screw	2				
4	6.4 DIN 125	Washer	2				
5	M 8 x 15 DIN 933	Hexagon bolt 8 G	4				
6	B 8 DIN 127	Spring washer	4				
7	59.06.037	Baffle	1				
8	00.42.061	Manufacturer's plate	1				
9	2 x 4 DIN 1476	Spiral nails	2				
10	59.06.026	Fan rotor	1				
11	59.06.004	Sealing ring (543 x 3)	1				
12	59.06.003	Cover plate	1				
13	57.06.005	Outer cover	1				
14	M 22 x 1.5 DIN 938	Hexagon nut	1				
15	57 18.007	V-belt pulley	1				
16	57.18.008	Starter drum	1				
17	8.4	Schnorr washer	2				
18	M 8 x 30 DIN 6912	Allen screw	2				
19	00.11.086	Locking washer	1				
20	00.06.034	Hexagon nut	1				
21	B 6 DIN 127	Spring washer	3				
22	AM 6 x 10 DIN 84	Round-headed screw	3				
23	M 6 x 22 DIN 912	Allen screw, 8 G	3				
24	6 DIN 7980	Spring washer	3				
25	00.80.382	Spring securing clip 1 x 8 DIN 72571	1				
26	59.06.806	Fan baffle compl.	1				

FLYWHEEL MAGNETO MZ/USE 1/143 (1/1) E 235b/64				
Symbol No.	Part No.	Description	Qty.	
1	LMNC 6 T 5 X	Cam (1 212 202 101)	1	
2	LMPT 18 T 12 Z	Baseplate compl. (1 217 032 157) comprising parts Nos. 2 - 10 & 15 - 18	1	
3	5 DIN 1440	Washer	3	
4	A 5.3 DIN 6798	Slotted Washer	3	
5	AM 5 x 15 DIN 84	Cheese-headed screw	3	
6	WEA 220 Z 31 Z	Short-circuit lead (1 214 440 005)	1	
7	LMKT 2 SORT 3	Set of contacts, comprising contact mounting plate and make and break lever (1 217 013 003)	1	
8	4.3 DIN 433	Washer	1	
9	B 4 DIN 127	Spring washer	1	
10	M 4 x 10 DIN 84	Screw	1	
11	MZBE 1 T 1 Z	Segment magnet (2 204 223 000)	1	
12	00.80.052	Spark plug connector	1	
13	59.06.023	Rubber Insert	1	
14	WEA 220 Z 33 Z	Lead to plug (1 214 410 006)	1	
15	MZAN 4 T 1 Z	Ignition stator and winding (2 204 210 040)	1	
16	N 5 x 28 DIN 84	Screw	2	
17	B 5 DIN 127	Spring washer	2	
18	LMKO 1 Z 3 Z	Suppressor (2 677 330 102)	1	

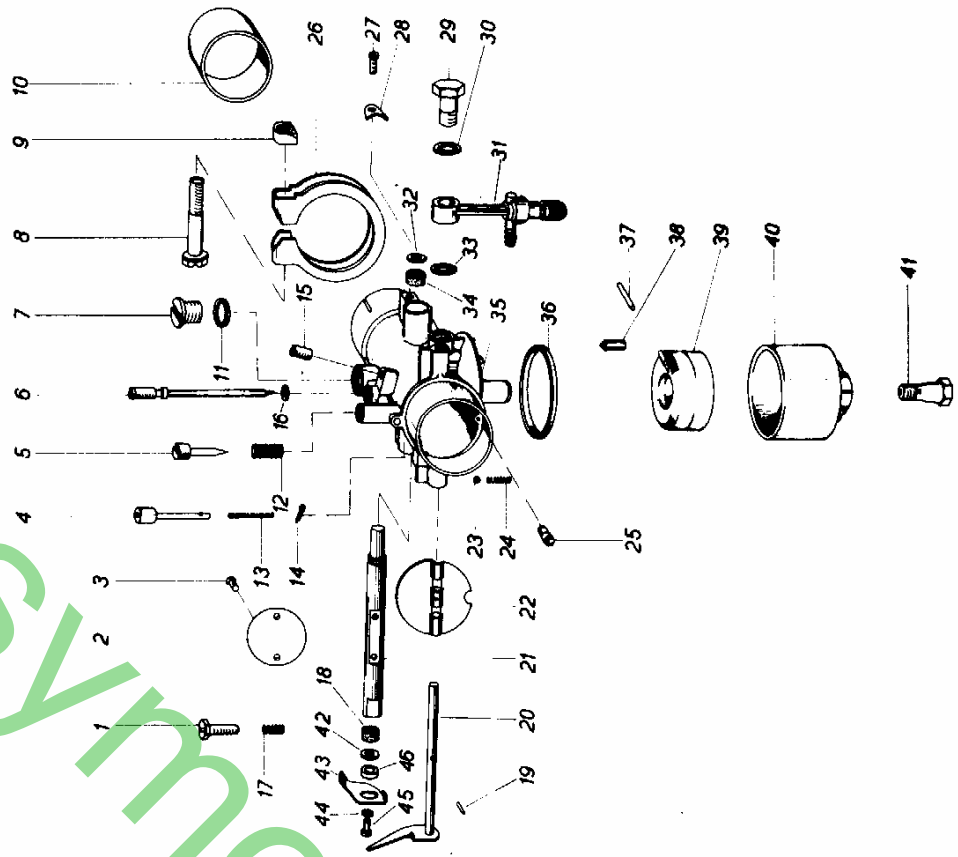
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E198D



E176C



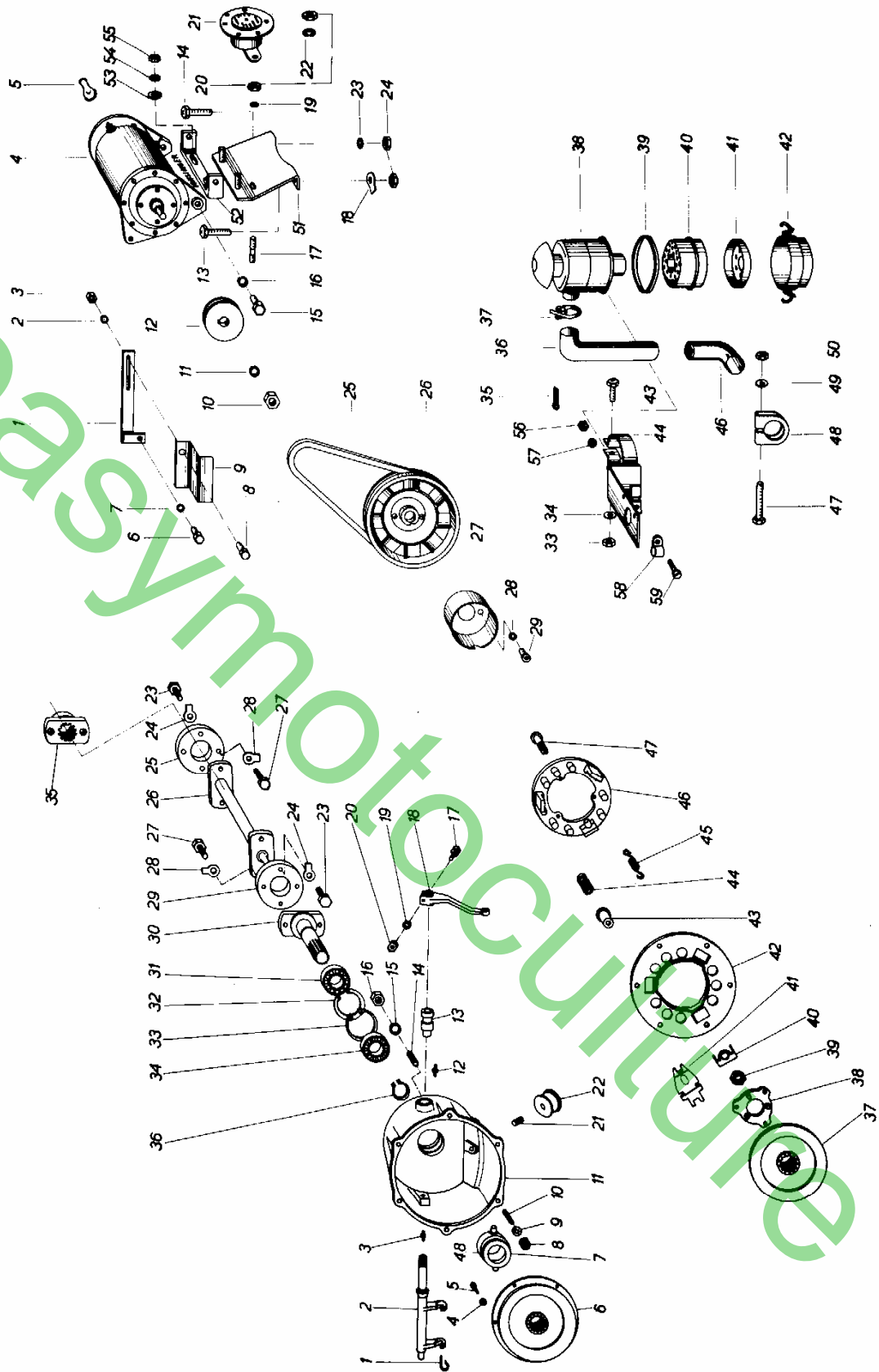
PETROL TANK, EXHAUST SYSTEM				E 198 D/64		BING CARBURETTOR B/25/33		E 176 C/64	
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.		
1	00.38.012	Cap with seal 40 DIN 73400	1	1	8/25/33	Carburettor complete (MAG 1030)	1		
2	00.38.015	Cap seal alone	1	2	40 - 440	Idling adjustment screw	1		
3	50.16.817	Petrol tank compl.	1	3	57 - 835	Throttle flap	1		
4	8 x 24 DIN 1481	Clamping sleeve	4	4	40 - 304	Round-headed counterbunk screw	2		
5	60.70.031	Norma clamping band SP 742 211/20	2	5	48 - 926	Trielder	1		
6	M 8 x 50 DIN 933	Hexagon bolt	2	6	50 - 013	Air regulating screw	1		
7	50.16.006	Band separator	4	7	44 - 308	Idler jet, 70 (quote No. on jet)	1		
8	00.38.039	Screw-in nipple with filter	2	8	50 - 154	Closure screw	1		
9	00.38.042	PVC fuel line, 5/8 dia. x 450	1	9	40 - 626	Clamping bolt	1		
10	C 14 x 18 DIN 7603	Sealing ring	2	10	42 - 611	Nut	1		
14	59.15.900	Exhaust system, complete	1	11	66 - 250	Insulating sleeve	1		
15	M 8 x 15 DIN 939	Stud	1	12	65 - 143	Sealing ring	1		
16	59.09.002	Curved intake manifold	1	13	60 - 075	Spring	1		
17	59.03.008	Inlet manifold seal (759 x 207)	1	14	60 - 023	Trielder spring	1		
18	M 8 x 35 DIN 939	Stud	1	15	49 - 020	Split pin	1		
19	M 8 x 30 DIN 939	Stud	1	16	50 - 321	Set screw	1		
20	B 8 DIN 127	Spring washer	3	17	65 - 050	Sealing ring	1		
21	M 8 SW 12	Hexagon nut	3	18	65 - 544	Sealing sleeve	1		
22	8.4 DIN 125	Washer	1	19	49 - 305	Tensioning pin	1		
23	M 8 x 20 DIN 933	Hexagon bolt	1	20	52 - 981	Gold start shaft with lever	1		
				21	52 - 382 - 201	Throttle shaft with flap	1		
				22	57 - 845	Gold start flap	1		
				23	51 - 389	Ball	1		
				24	60 - 021	Spring	1		
				25	44 - 021	Corrector jet, 100 (quote No. on jet)	1		
				26	59 - 080	Clamp ring	1		
				27	40 - 354	Cheese-head screw	1		
				28	57 - 197	Retaining plate	1		
				29	50 - 125	Securing bolt	1		
				30	65 - 121	Sealing ring	1		
				31	00.38.828	Petrol tap	1		
				32	56 - 095	Washer	1		
				33	65 - 121	Sealing ring	1		
				34	65 - 544	Sealing sleeve	1		
				35	8/25/33	Carburettor body	1		
				36	66 - 452	Gasket	1		
				37	52 - 055	Pin	1		
				38	47 - 056	Float needle	1		
				39	35 - 217	Float	1		
				40	30 - 540	Float chamber	1		
				41	44 - 915	Main jet, 100 (quote No. on jet)	1		
				42	56 - 095	Washer	1		
				43	57 - 498	Stop lever	1		
				44	61 - 672	Spring washer	1		
				45	40 - 306	Round-headed screw	1		
				46	55 - 227	Distance piece	1		

CLUTCH AND CARDAN SHAFT				E 199 B/64
Symbol No.	Part No.	Description	Qty.	
1	000.99.295	Halfpin spring	2	
2	14.17.002	Withdrawal lever	1	
3	AM 6 DIN 71412	Ball grease nipple	1	
4	B 6 DIN 127	Spring washer	6	
5	M 6 x 15 DIN 933	Hexagon screw 8 G	6	
6	1881.069.003	Clutch thrust pad complete (Parts 38 - 47)	1	
7	1844.007.000	Graphite ring	1	
8	M 8 DIN 934	Hexagon nut	1	
9	B 8 DIN 127	Spring washer	6	
10	M 8 x 25 DIN 939	Set screw 8 G	6	
11	16.17.001	Clutch housing	1	
12	AM 8 x 1 DIN 71412	Ball grease nipple	1	
13	85.17.006	Bush	1	
14	M 10 x 25 DIN 551	Set screw	1	
15	A 10.5 DIN 6798	Slotted washer	1	
16	M 10 DIN 934	Hexagon nut	1	
17	M 6 x 25 DIN 931	Hexagon screw 8 G	1	
18	16.24.001	Clutch operating lever	1	
19	B 6 DIN 127	Spring washer	1	
20	M 8 DIN 934	Hexagon nut	1	
21	M 10 x 15 DIN 939	Set screw	1	
22	00.37.009	Metallastik mounting	1	
23	M 8 x 22 DIN 933	Hexagon bolt 10 K	4	
24	8.4 DIN 93	Turnover washer	4	
25	00.37.017	Cardan shaft disc	1	
26	16.33.800	Cardan shaft complete	1	
27	M 8 x 22 DIN 933	Hexagon bolt 10 K	1	
28	8.4 DIN 93	Turnover washer	1	
29	00.37.017	Cardan shaft disc	1	
30	16.33.001	Cardan shaft coupling flange	1	
31	16005 DIN 625	Grooved ball bearing	1	
32	47 x 1.75 DIN 472	Circclip	1	
33	47 x 1.75 DIN 472	Circclip	1	
34	6006 RS DIN 625	Grooved ball bearing	1	
35	16.33.007	Circclip	1	
36	25 x 1.2 DIN 471	Cardan shaft coupling flange	1	
37	1864.048.104	Circclip	1	
38	1863.019.200	Clutch disc (1864.048.004)	1	
39	1815.065.000	Withdrawal ring	3	
40	1820.035.000	Adjusting nut	3	
41	1806.045.000	Pivot bracket	3	
42	1801.083.000	Lever	1	
43	1814.013.000	Clutch spring bush	6	
44	1805.085.000	Main spring	6	
45	1825.095.000	Withdrawal spring	3	
46	1802.067.000	Pressure plate	3	
47	1809.020.000	Centering bolts	3	
48	1859.008.000	Clutch pressure ring complete (Parts 7 & 48)	1	
-	1844.019.100	Ring housing	1	

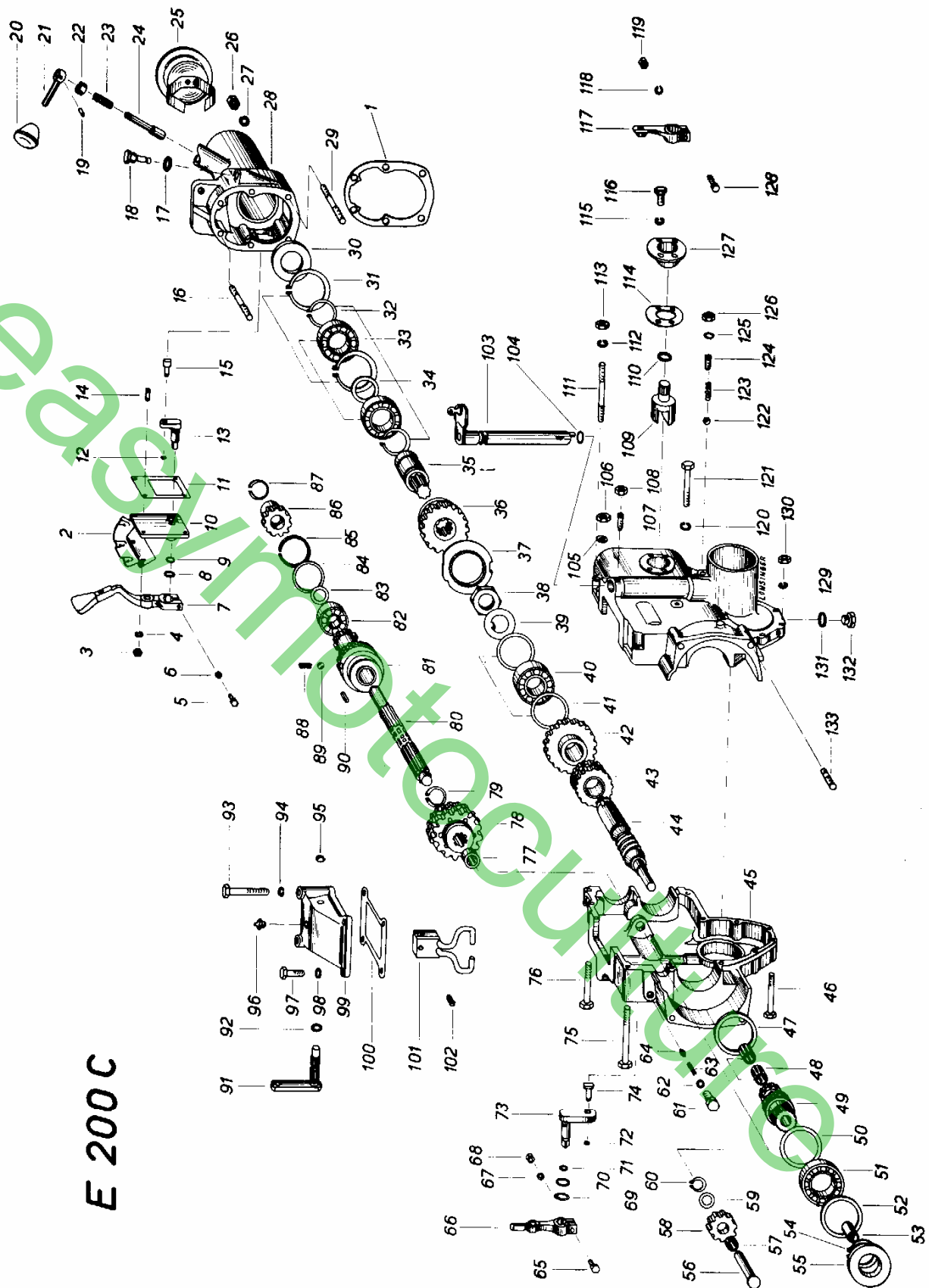
STARTER UNIT AND AIR FILTER				E 207 B/64
Symbol No.	Part No.	Description	Qty.	
1	57.18.801	Belt tensioner complete	1	
2	B 8 DIN 127	Spring washer	1	
3	M 8 DIN 934	Hexagon nut	1	
4	00.81.849	Dynastarter LA/EG 90/12/3800 + 0.8 R 1	1	
	WSK 54 SORT 3	Carbon brush (set)	4	
	WSF 40/1 x	Brush spring	4	
	LAVU 2 E 1 x	Closure band	1	
5	00.80.105	Protective cap WNK 500/4 x	3	
6	M 8 x 20 DIN 933	Hexagon bolt 8 G	1	
7	B 8 DIN 127	Spring washer	1	
8	M 8 x 25 DIN 931	Hexagon bolt 8 G	1	
9	57.18.005	Belt guard	1	
10	M 14 x 1.5 DIN 934	Hexagon nut	1	
11	B 14 DIN 127	Spring washer	1	
12	78.18.010	Belt pulley	1	
13	M 10 x 50 DIN 931	Hexagon bolt 8 G	1	
14	M 10 x 45 DIN 931	Hexagon bolt 8 G	1	
15	M 10 x 25 DIN 933	Hexagon bolt 8 G	2	
16	B 10 DIN 127	Spring washer	1	
17	M 8 x 28 DIN 939	Stud 8 G	1	
18	00.11.083	Locking washer	1	
19	8.4 DIN 125	Washer	2	
20	M 8 DIN 934	Hexagon nut	1	
21	00.80.248	Horn, HO/FCH 12/1	1	
22	B 8 DIN 127	Spring washer	1	
23	B 10 DIN 127	Spring washer	1	
24	M 10 DIN 934	Hexagon nut	2	
25	00.75.041	V-belt, 9 5 x 750 mm	1	
26	57.18.007	Belt pulley	1	
27	57.18.008	Starter drum	2	
28	8.4	Schnorr washer	2	
29	M 8 x 30 DIN 6912	Allen screw	2	
30	M 8 DIN 934	Hexagon nut	1	
31	8.4 DIN 125	Washer	1	
32	00.75.021	Hose clip fastening, 8 mm	1	
33	00.14.066	Rubber hose, right-angle bend, 2 C 1	1	
34	00.75.020	Hose clip, 8 mm	1	
35	00.14.813	Oilbath air filter, Soparis BH 107, comprising parts 38 - 42	1	
36	00.14.031	Filter body	1	
37	00.14.032	Rubber sealing ring	1	
38	00.14.033	Filter element	1	
39	00.14.034	Oil level baseplate	1	
40	00.14.035	Filter base	1	
41	M 8 x 25 DIN 931	Hexagon bolt 5 D	1	
42	59.16.805	Air filter bracket, complete	1	
43	59.09.004	Right-angle intake pipe	1	
44	M 8 x 60 DIN 931	Hexagon bolt 5 D	1	
45	84.14.001	Tube clamp	1	
46	8.4 DIN 125	Washer	1	
47	M 8 DIN 934	Hexagon nut	1	
48	59.18.801	Starter bracket compl. (parts 51-55)	1	
49	59.18.805	Starter bracket	1	
50	58.18.003	Attachment bracket	1	
51	10.5 DIN 125	Washer	2	
52	B 10 DIN 127	Spring washer	2	
53	M 10 DIN 934	Hexagon nut	2	
54	M 4 DIN 934	Hexagon nut	2	
55	A4.3 DIN 6798	Slotted washer	1	
56	00.70.009	Tube clamp RS 1100 5/9	1	
57	M 4 x 12 DIN 84	Cheese-headed screw	1	

E 207B

E 199B



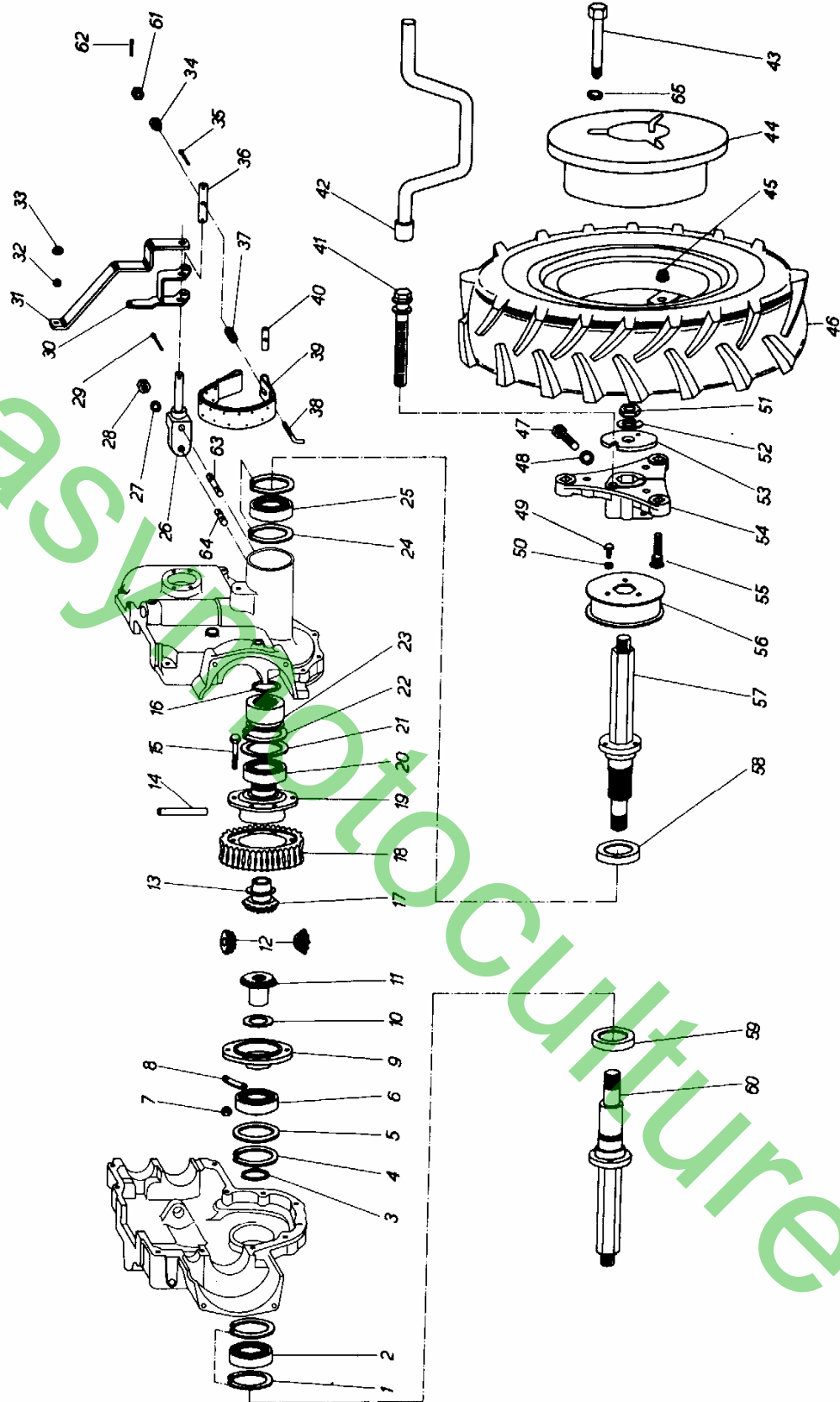
E 200 C



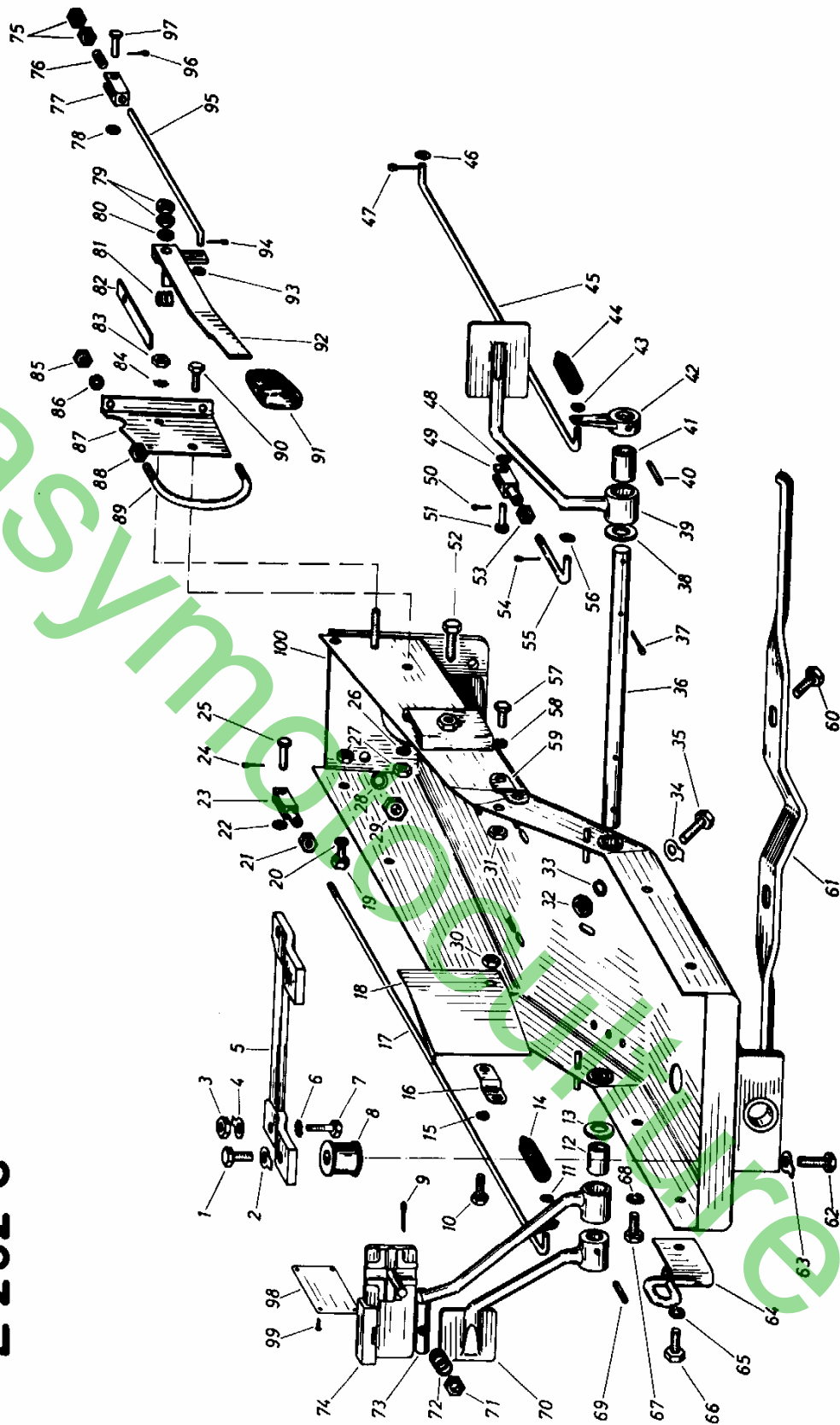
GEARBOX				E 200 C/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	16.19.010	Takeoff housing gasket	1	69	14 x 1 DIN 471	Circlip	1
2	16.19.089	Selector lever gate	1	70	00.20.056	Washer	1
3	M 6 DIN 934	Hexagon nut	1	71	00.25.022	O-ring OR 14.3 - 2.4	1
4	B 6 DIN 127	Spring washer	4	72	8 DIN 9045	Spring ring	1
5	M 6 x 25 DIN 931	Hexagon bolt 8 G	1	73	75.19.491	Cam piece	1
6	B 6 DIN 127	Spring washer	1	74	75.19.086	Bolt	1
7	16.19.036	Clutch lever	1	75	M 8 x 90 DIN 931	Hexagon bolt 8 G	1
8	00.10.009	Spacing washer	1	76	00.02.076	Hexagon aligning bolt	1
9	00.25.022	O-ring OR 14.3 - 2.4	1	77	8K 1816	Needle bearing bush	2
10	16.19.068	Cover plate	1	78	16.19.831	Step-up gear wheel	1
11	16.19.065	Paper gasket	1	79	A 24 x 1.2 V	V-section circlip	1
12	8 DIN 9045	Spring circlip	1	80	75.19.200	Layshaft	1
13	16.19.067	Cam piece	1	81	75.19.197	Layshaft pinions	1
14	M 6 x 15 DIN 939	Stud 8 G	1	82	6204 N DIN 625	Grooved ball bearing	1
15	16.19.068	Bolt	4	83	00.20.150	Shim, 0.2 mm thick	1
16	M 8 x 65 DIN 939	Stud 8 G	1	84	00.20.060	Shim, 0.3 mm thick	1
17	C 25 x 32 DIN 7603	Stud 8 G	2	85	00.20.060	Washer	1
18	16.19.830	Filler cap sealing ring	1	86	Sp 47 DIN 5417	Spring ring	1
19	4 x 20 DIN 1473	Oil level dipstick complete	1	87	16.19.066	Cutter drive pinion	1
20	00.36.022	Round cotter pin	1	88	00.30.022	V-section circlip	1
21	00.04.049	Lever knob, red	1	89	10.01.4 DIN 5401	Coil spring	1
22	75.19.018	Eyebolt	1	90	A 6 x 6 x 22 DIN 6885	Steel ball	1
23	00.30.032	Guide bush	1	91	15.19.821	Key	1
24	16.19.053	Coil spring	1	92	00.25.028	Change lever shaft complete	1
25	75.19.845	Limit bolt	1	93	M 10 x 80 DIN 931	Packing ring	1
26	M 8 DIN 934	End cap complete	1	94	B 10 DIN 127	Hexagon bolt 8 G	1
27	B 8 DIN 127	Hexagon nut	6	95	00.40.070	Circlip	1
28	16.19.062	Spring washer	1	96	00.75.030	Closure plug	1
29	M 8 x 80 DIN 939	Takeoff shaft housing	1	97	M 10 x 30 DIN 931	Breather valve	1
30	35 x 62 x 8 B 1	Stud 8 G	4	98	B 10 DIN 127	Hexagon bolt 5 D	1
31	62 x 2 DIN 472	Radial seal	1	99	16.19.003	Spring washer	2
32	35 x 1.5 DIN 471	Circlip	2	100	16.19.020	Gear change pivot head	1
33	6007 DIN 625	Circlip	2	101	75.05.832	Gasket	1
34	00.20.099	Grooved ball bearing	1	102	M 8 x 10 DIN 553	Selector fork complete	1
35	16.19.827	Spacer	1	103	16.19.808	Conical end setscrew	1
36	16.19.058	Takeoff shaft complete	1	104	00.25.005	Release lever shaft complete	1
37	16.19.062	Takeoff shaft gear pinion	1	105	10.5 DIN 125	Packing ring	1
38	00.06.103	Centring disc	1	106	M 10 DIN 934	Washer	1
39	00.06.103	Hexagon nut	1	107	M 8 x 20 DIN 417	Hexagon nut	1
40	3206 DIN 628 D	Locking washer	1	108	BM 8 DIN 439	Extended setscrew	1
41	00.21.008	Taper contact ball bearing	2	109	16.19.057	Hexagon nut	1
42	16.19.051	1st gear pinion	1	110	00.25.011	Brake peg	1
43	16.19.050	2nd and reverse pinions	1	111	00.01.021	Stud	1
44	16.19.061	Worm drive shaft	1	112	B 8 DIN 127	Spring washer	1
45	16.19.824	Gearbox casing complete	1	113	M 8 DIN 934	Hexagon nut	1
46	M 8 x 65 DIN 931	Hexagon bolt 8 G	6	114	75.19.015	Bearing cap seal	1
47	00.20.045	Washer	1	115	B 6 DIN 127	Spring washer	1
48	15 x 15 x 24	Needle roller cage	2	116	M 6 x 15 DIN 933	Hexagon bolt 5 D	1
49	00.20.107	Step-up pinion	1	117	16.08.037	Brake lever	1
50	00.20.107	Shim, 0.2 mm thick	1	118	M 6 DIN 127	Spring washer	1
51	00.20.107	Shim, 0.3 mm thick	1	119	M 6 DIN 934	Hexagon nut	1
52	6008 DIN 625	Grooved ball bearing	1	120	B 6 DIN 127	Spring washer	1
53	00.20.045	Washer	1	121	M 6 x 70 DIN 931	Hexagon bolt 5 D	1
54	16.19.072	Plug	1	122	8 DIN 5401	Steel ball	1
55	40 x 1.76 DIN 471	Circlip	1	123	000.99.271.28	Clutch spring	1
56	40 x 08 x 7 B 1	Radial seal	1	124	M 10 x 20 DIN 551	Setcrew	1
57	75.19.021	Intermediate pinion shaft	1	125	C 10 x 14 DIN 7603	Oil seal	1
58	K 15/13	Needle roller cage	1	126	BM 10 DIN 439	Hexagon nut	1
59	82.19.025	Intermediate pinion	1	127	75.19.047	Bearing cap	1
60	15 x 1 DIN 471	Thrust washer	1	128	M 8 x 30 DIN 931	Hexagon bolt 8 G	1
61	75.19.204	Circlip	1	129	B 8 DIN 127	Spring washer	1
62	C 12 x 16 DIN 7003	Bolt	1	130	M 8 DIN 934	Hexagon nut	1
63	000.99.271.27	Oil seal	1	131	C 18 x 22 DIN 7603	Oil seal	1
64	75.19.211	Stop bolt	1	132	M 18 x 1.6 DIN 7604	Drain plug	1
65	M 6 x 30 DIN 931	Selector lever	1	133	M 10 x 25 DIN 939	Stud 8 G	4
66	16.19.009	Hexagon bolt 8 G	1				
67	B 6 DIN 127	Spring washer	1				
68	M 8 DIN 934	Hexagon nut	1				

DIFFERENTIAL, REAR AXLE, WHEELS				DIFFERENTIAL, REAR AXLE, WHEELS			
E 201 Ba/64				E 201 Ba/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	68 x 2.5 DIN 472	Circclip	2	35	4 x 25 DIN 94	Split pin	4
2	6008 DIN 625	Grooved ball bearing	1	36	16.08.021	Bolt	2
3	40 x 1.75 DIN 471	Circclip	1	37	00.30.011	Coil spring	2
4	68 x 2.5 DIN 472	Circclip	1	38	18.08.044	Lever bolt	2
5	00.20.107	Spacing washer	1	39	16.08.801	Brake band complete	2
6	6008 DIN 625	Grooved ball bearing	1	39A	16.08.039	Brake lining	2
7	16.19.805	Compl. differential (parts 7 - 15, 17 - 19)	1	40	C3 x 8 DIN 7338	Rivet	14
8	M 8 DIN 934	Hexagon nut	6	41	00.15.002	Pin	2
9	16.19.037	Keeper	3	42	16.23.030	Threaded spindle	1
10	00.20.031	Differential component (suppl. only with 18, 19)	1	43	00.40.800	Wrench	1
11	16.19.014	Spacing washer	1	44	16.29.004	Wheel bolt	6
12	16.19.013	Large bevel gears	1	45	AM 14 x 1.5 DIN 74381	Conical centering nut	2
13	00.20.032	Small bevel gears	1	46	16.29.803	6 - 12 wheel complete with tyre	6
14	16.19.015	Planet axle	1	46A	16.29.804	Rim 51A x 12 complete	2
15	00.02.001	Hexagon through bolt	6	46B	00.75.086	Tyre 6-12 AS	2
16	40 x 1.75 DIN 471	Circclip	1	46C	00.75.087	Inner Tube for 6-12 AS	2
17	16.19.014	Large bevel gears	1	47	00.75.030	Tyre valve 3/8	2
18	16.19.829	Differential component (suppl. only with 9, 19)	1	48	M 12 x 1.4 x 50 DIN 960	Hexagon bolt 8 G	2
19	16.19.829	Differential component (suppl. only with 9, 19)	1	49	B 12 DIN 127	Spring washer	2
20	6008 DIN 625	Grooved ball bearing	1	50	B 8 DIN 127	Spring washer	2
21	00.20.107	Spacing washer	1	51	M 20 x 1.5 DIN 936	Hexagon nut	6
22	58 x 2.5 DIN 472	Circclip	1	52	00.11.006	Locking washer	2
23	75.19.232	Locking sleeve	1	53	16.29.012	Cover plate	2
24	68 x 2.5 DIN 472	Circclip	2	54	16.29.001	Adjusting flange	2
25	6008 DIN 625	Grooved ball bearing	1	55	00.04.020	Wheel flange bolt	6
26	16.08.007	Brake lever bearing	2	56	16.08.800	Brake drum complete	2
27	B 10 DIN 127	Spring washer	4	57	16.19.045	Halfshaft, left	1
28	M 10 DIN 934	Hexagon nut	2	58	48 x 68 x 10 BASLFg	Radial oil seal	1
29	4 x 25 DIN 94	Split pin	1	59	48 x 68 x 10 BASLFg	Radial oil seal	1
30	16.08.805	Steering brake lever left, complete	1	60	16.19.044	Halfshaft, right	1
31	16.08.804	Steering brake lever right, complete	1	61	BM 8 DIN 439	Hexagon nut	2
32	16.08.027	Protecting bracket	2	62	2 x 15 DIN 94	Split pin	2
33	B 8 DIN 127	Spring washer	2	63	M 10 x 45 DIN 939	Stud 8 G	2
34	M 8 DIN 934	Hexagon nut	2	64	M 10 x 25 DIN 939	Stud 8 G	2
	16.08.022	Adjusting nut	2	65	C14.5 DIN 74381	Spring washer	6

E 201B



E202C



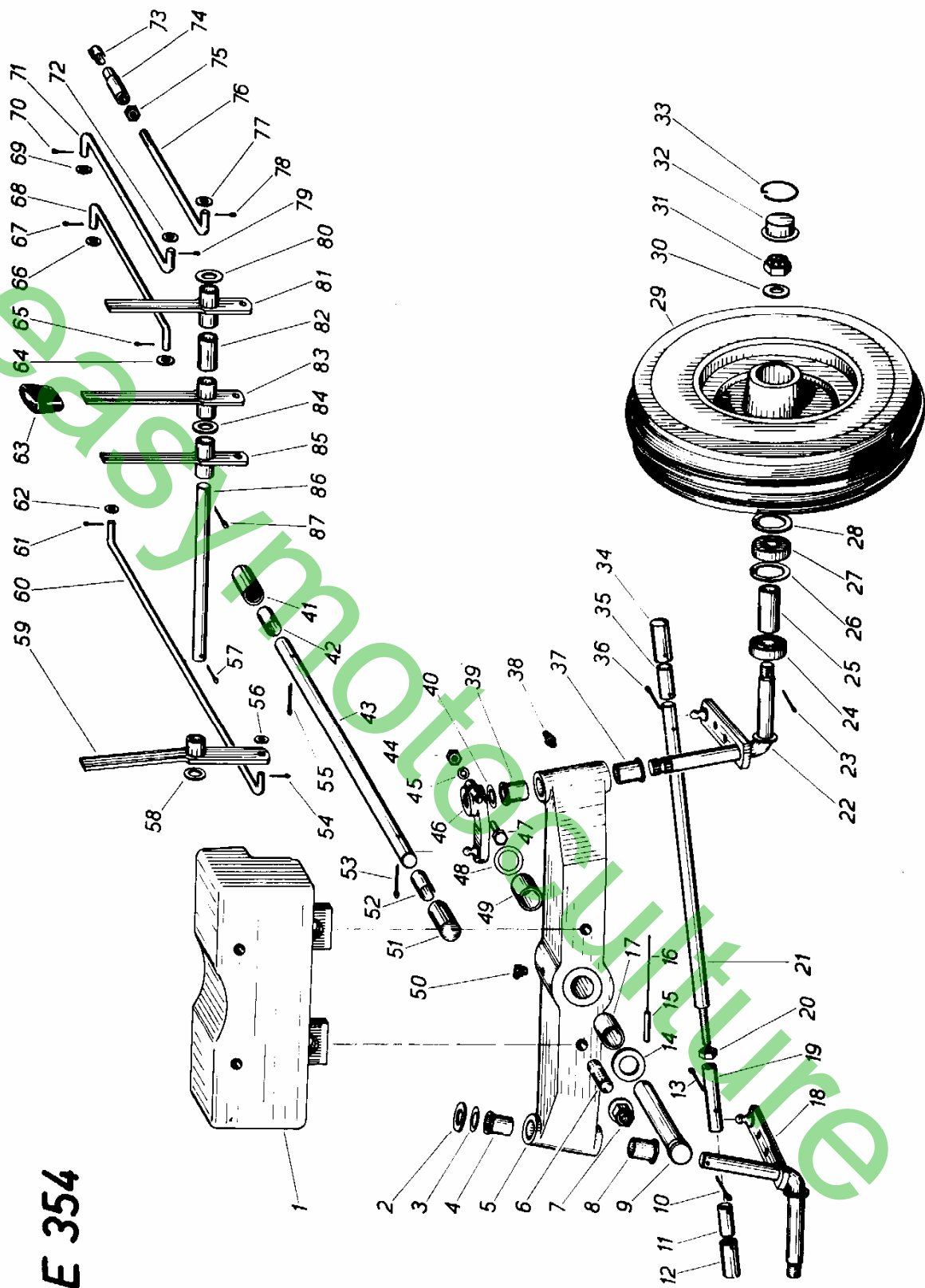
CHASSIS FRAME, PEDALS, HANDBRAKE			E 202 C/64	
Symbol No.	Part No.	Description	Qty.	
1	M 10 x 18 DIN 933	Hexagon bolt	2	
2	00.11.083	Locking washer	2	
3	M 10 DIN 934	Hexagon nut	2	
4	00.11.083	Locking washer	2	
5	16.11.802	Engine mounting complete	1	
6	10.5	Schnorr washer	2	
7	M 10 x 50 DIN 931	Hexagon bolt	2	
8	00.37.009	Metallastik flexible mounting (No. 52 18 002)	1	
9	2 x 15 DIN 94	Split pin	1	
10	M 8 x 20 DIN 933	Hexagon bolt	1	
11	6.4 DIN 125	Washer	1	
12	00.23.009	Bearing	1	
13	19 DIN 125	Washer	1	
14	00.31.020	Tension spring	1	
15	B 8 DIN 127	Spring mounting bracket	1	
16	16.24.022	Brake rod, right	1	
17	16.08.013	Air guide baffle	1	
18	16.25.016	Hexagon bolt	4	
19	M 8 x 15 DIN 933	Hexagon nut	4	
20	B 8 DIN 127	Spring washer	4	
21	M 6 DIN 934	Washer	1	
22	G 6 x 12 DIN 71752	Yoke end bracket	1	
23	1.5 x 15 DIN 94	Split pin	1	
24	6h11 x 20 x 14.5 DIN 1434	Bolt	1	
25	B 8 DIN 127	Spring washer	1	
26	M 8 DIN 934	Hexagon nut	3	
27	B 10 DIN 127	Spring washer	4	
28	M 10 SW 14	Hexagon nut	4	
29	M 8 DIN 934	Hexagon nut	1	
30	M 8 DIN 934	Hexagon nut	1	
31	M 10 DIN 934	Hexagon nut	1	
32	B 10 DIN 127	Spring washer	2	
33	00.11.083	Locking washer	2	
34	M 10 x 15 DIN 933	Hexagon bolt	1	
35	16.24.019	Brake cross-shaft	1	
36	5 x 30 DIN 94	Split pin	1	
37	19 DIN 125	Washer	1	
38	16.24.034	Clutch pedal	1	
39	9 x 32 DIN 1481	Tensioning sleeve	1	
40	00.23.009	Bearing	1	
41	16.24.038	Brake rod lever	1	
42	6.4 DIN 125	Washer	1	
43	00.31.020	Tension spring	1	
44	16.08.012	Brake rod, left	1	
45	6.4 DIN 125	Washer	1	
46	2 x 15 DIN 94	Split pin	1	
47	6 DIN 1440	Washer	1	
48	G 6 x 12 DIN 71752	Yoke end bracket	1	
49	1.5 x 15 DIN 94	Split pin	1	
50			1	

CHASSIS FRAME, PEDALS, HANDBRAKE			E 202 C/64	
Symbol No.	Part No.	Description	Qty.	
51	6h 11 x 20 x 14.5 DIN 1434	Bolt	1	
52	BM 12 x 25 DIN 564	Hexagon bolt w. conical centering up (SW 19)	3	
53	M 6 DIN 934	Hexagon nut	1	
54	2 x 15 DIN 94	Split pin	1	
55	16.24.016	Connecting link	1	
56	6.4 DIN 125	Washer	1	
57	M 8 x 20 DIN 933	Hexagon bolt	1	
58	B 8 DIN 127	Spring washer	1	
59	16.24.022	Spring attachment bracket	1	
60	M 10 x 25 DIN 933	Hexagon bolt	1	
61	16.25.010	Footrest	1	
62	M 10 x 13 DIN 933	Locking washer	2	
63	00.11.083	Crank holder	2	
64	16.25.807	Spring washer	2	
65	B 10 DIN 127	Hexagon bolt	1	
66	M 10 x 18 DIN 933	Hexagon bolt	1	
67	M 10 x 16 DIN 933	Hexagon bolt	1	
68	B 10 DIN 127	Spring washer	3	
69	8 x 32 DIN 1481	Tensioning sleeve	1	
70	16.24.036	Small brake pedal	1	
71	M 8 DIN 934	Hexagon nut	1	
72	00.30.068	Coil spring	1	
73	16.24.037	Brake pedal lever	1	
74	15.24.813	Brake pedal footplate, complete	1	
75	M 6 DIN 934	Hexagon nut	1	
76	00.30.041	Coil spring	1	
77	16.08.036	Yoke piece	1	
78	6 DIN 1440	Washer	1	
79	M 13 DIN 936	Hexagon nut	1	
80	13 DIN 125	Washer	1	
81	00.30.006	Coil spring	1	
82	16.08.019	Clamp lever	1	
83	A 12.6 DIN 6798	Hexagon nut	1	
84	M 12 DIN 934	Slotted washer	2	
85	M 8 DIN 934	Hexagon nut	2	
86	B 8 DIN 127	Spring washer	2	
87	16.08.018	Support plate	1	
88	M 8 DIN 934	Hexagon nut	1	
89	16.08.020	Strut	1	
90	M 8 x 20 DIN 933	Hexagon bolt	1	
91	73.99.059	Hand lever knob, red	1	
92	16.08.306	Hand brake lever complete	1	
93	6.4 DIN 125	Washer	1	
94	2 x 15 DIN 94	Split pin	1	
95	16.08.011	Brake rod	1	
96	1.5 x 15 DIN 94	Split pin	1	
97	6h11 x 28 x 24.5 DIN 1434	Bolt	1	
98	00.42.034	Manufacturer's plate	1	
99	2.6 x 6 DIN 1476	Semi-circular threaded nails	1	
100	16.25.800	Chassis frame, complete	1	

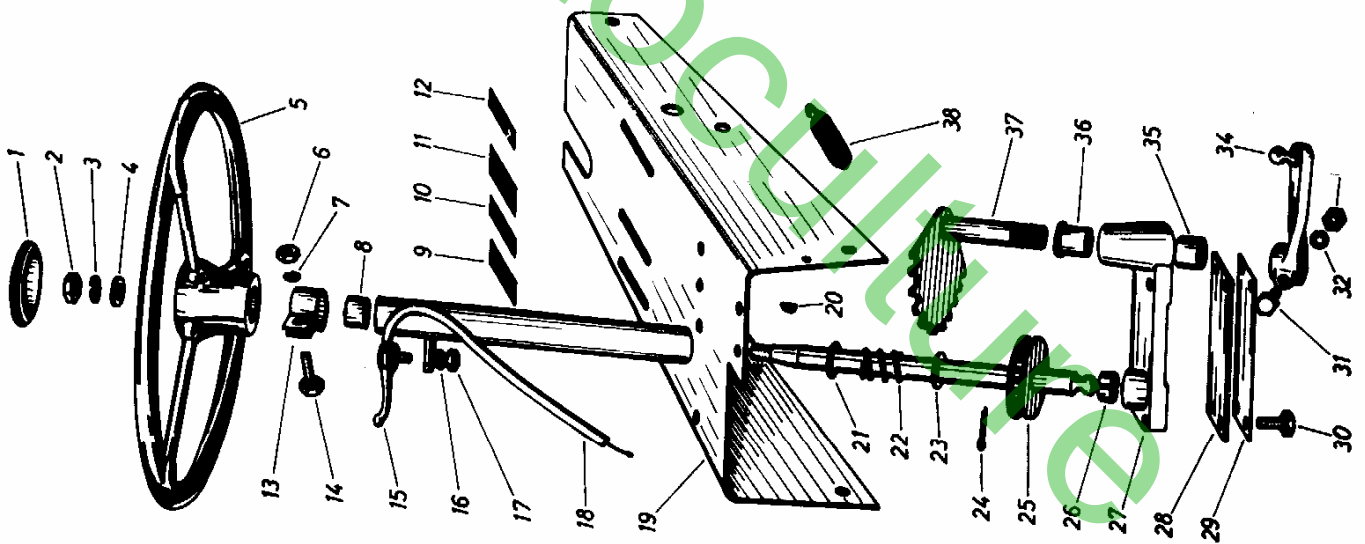
CHASSIS FRAME, PEDALS, HANDBRAKE			E 202 C/64
Symbol No.	Part No.	Description	Qty.
51	8h 11 x 20 x 14.5 DIN 1434	Bolt	1
52	B 12 x 25 DIN 964	Hexagon bolt w. conical centering tip (SW 19)	3
53	M 6 DIN 934	Hexagon nut	1
54	2 x 15 DIN 94	Split pin	1
55	16.24.016	Connecting link	1
56	6.4 DIN 125	Washer	1
57	M 8 x 20 DIN 933	Hexagon bolt	1
58	B 8 DIN 127	Spring washer	1
59	16.24.022	Spring attachment bracket	1
60	M 10 x 25 DIN 933	Hexagon bolt	1
61	16.25.010	Footrest	1
62	M 10 x 15 DIN 933	Hexagon bolt	2
63	00.11.083	Locking washer	2
64	16.25.807	Crank holder	2
65	B 10 DIN 127	Spring washer	1
66	M 10 x 18 DIN 933	Hexagon bolt	1
67	M 10 x 15 DIN 933	Hexagon bolt	1
68	B 10 DIN 127	Spring washer	3
69	8 x 32 DIN 1481	Tensioning sleeve	1
70	16.24.038	Small brake pedal	1
71	M 8 DIN 934	Hexagon nut	1
72	00.30.068	Coil spring	1
73	16.24.037	Brake pedal lever	1
74	15.24.813	Brake pedal footplate, complete	1
75	M 6 DIN 934	Hexagon nut	2
76	00.30.041	Coil spring	1
77	16.08.036	Yoke piece	1
78	6 DIN 1440	Washer	1
79	M 12 DIN 936	Hexagon nut	2
80	13 DIN 125	Washer	1
81	00.30.066	Coil spring	1
82	16.03.019	Clamp lever	1
83	M 12 DIN 934	Hexagon nut	1
84	A 12.6 DIN 6798	Slotted washer	1
85	M 8 DIN 934	Hexagon nut	2
86	B 8 DIN 127	Spring washer	1
87	16.08.018	Support plate	2
88	M 8 DIN 934	Hexagon nut	1
89	16.08.020	Strut	2
90	M 8 x 20 DIN 933	Hexagon bolt	1
91	73.99.069	Hand lever knob, red	1
92	16.08.806	Hand brake lever complete	1
93	6.4 DIN 125	Washer	1
94	2 x 15 DIN 94	Split pin	1
95	16.08.011	Brake rod	1
96	1.5 x 15 DIN 94	Split pin	1
97	6h11 x 28 x 24.5 DIN 1434	Bolt	1
98	00.42.034	Manufacturer's plate	1
99	2.6 x 6 DIN 1476	Semi-circular threaded nails	4
100	16.25.800	Chassis frame, complete	1

FRONT AXLE, GEAR CHANGE AND SELECTOR LEVERS				E 354/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	16-49.808	Front ballast weight	1	47	M6 x 40 DIN 931	Hexagon bolt	1
2	21 DIN 125	Washer	1	48	00.20.118	Spacing washer 0.3 mm	as req
3	00.20.150	Spacing washer 0.3 mm	as req	49	00.23.118	Cylindrical bearing	1
4	00.23.003	Bush	1	50	DN 8 x 1 DIN 71412	Ball-type grease nipple	1
5	16-27.814	Front axle (with parts 4, 8, 17, 37, 39, 49)	1	51	16-27.025	Rubber sleeve	1
6	M 14 x 1.5 x 35 DIN 833	Stud	2	52	16-27.023	Socket joint sleeve	1
7	AM 14 x 1.5 DIN 74361	Centering nut	2	53	3 x 40 DIN 94	Split pin	1
8	00.23.003	Bush	1	54	3 x 20 DIN 94	Split pin	1
9	16-25.027	Pin	1	55	3 x 40 DIN 94	Split pin	1
10	5 x 30 DIN 94	Split pin	1	56	105 DIN 125	Washer	1
11	16-27.023	Socket joint sleeve	1	57	4 x 20 DIN 94	Split pin	1
12	16-27.025	Rubber sleeve	1	58	13 DIN 125	Washer	1
13	3 x 40 DIN 94	Split pin	1	59	16.19.833	Power takeoff selector lever compl.	1
14	25 DIN 125	Washer	1	60	16.19.073	Gearchange rod	1
15	6 x 32 DIN 1481	Retaining sleeve	1	61	3 x 20 DIN 94	Split pin	1
16		Securing wire 2 mm dia., 115 mm long	1	62	10.5 DIN 125	Washer	1
17	00.23.118	Cylindrical bearing	1	63	73.99.059	Hand grip, red	4
18	16-27.832	Stub axle, right, complete	1	64	10.5 DIN 125	Washer	1
19	16-27.004	Adjustable section	1	65	3 x 20 DIN 94	Split pin	1
20	M 14 x 1.5 DIN 936	Hexagon nut	1	66	10.5 DIN 125	Washer	1
21	16-27.036	Track rod	1	67	3 x 20 DIN 94	Split pin	1
22	16-27.831	Stub axle, left, complete	1	68	16.19.035	Gearchange rod	1
23	4 x 30 DIN 94	Split pin	2	69	10.5 DIN 125	Washer	1
24	6204 DIN 625 RS	Ball bearing	2	70	3 x 20 DIN 94	Split pin	1
25	17.27.009	Distance piece	2	71	16.19.005	Gearchange rod	1
26	47 x 1.75 DIN 472	Circlip	2	72	10.5 DIN 125	Washer	1
27	6204 DIN 625	Ball bearing	2	73	00.15.005	Socket joint spring clip	1
28	47 x 1.75 DIN 472	Circlip	2	74	00.15.008	Hexagon nut	1
29	17.27.007	Wheel rim, 2.50 A-8	2	75	M 10 DIN 934	Differential lock rod	1
	(00.75.088)	Front tyre, 3.50-8 AM	2	76	16.19.026	Washer	1
	(00.75.089)	Tube, 3.50-8, with valve	2	77	10.5 DIN 125	Washer	1
	00.75.050	Valve insert 38 DIN 7757	2	78	3 x 20 DIN 94	Split pin	1
	00.75.051	Valve cap DIN 7757	2	79	3 x 20 DIN 94	Split pin	1
30		Washer	2	80	13 DIN 125	Washer	1
31	M 16 x 1.5 DIN 937	Castellated nut	2	81	16.19.811	Gear lever complete	1
32	17.27.006	Push-on cap	2	82	16.19.033	Bearing tube	1
33	00.11.012	Wire circlip	2	83	16.19.810	Gear lever complete	1
34	16.27.025	Rubber sleeve	2	84	13 DIN 125	Washer	1
35	16-27.023	Socket joint sleeve	1	85	16.19.811	Gear lever complete	1
36	3 x 40 DIN 94	Split pin	1	86	16.19.032	Pivot rod	1
37	00.23.003	Bush	1	87	4 x 20 DIN 94	Split pin	1
38	AM 8 x 1 DIN 71412	Ball-type grease nipple	2				
39	00.23.003	Bush	1				
40	00.20.150	Spacing washer 0.3 mm	as req				
41	16-27.025	Rubber sleeve	1				
42	16-27.023	Socket joint sleeve	1				
43	16-27.001	Steering arm	1				
44	M 6 DIN 934	Hexagon nut	1				
45	B 6 DIN 127	Spring washer	1				
46	16-27.815	Upper steering arm pivot lever compl.	1				

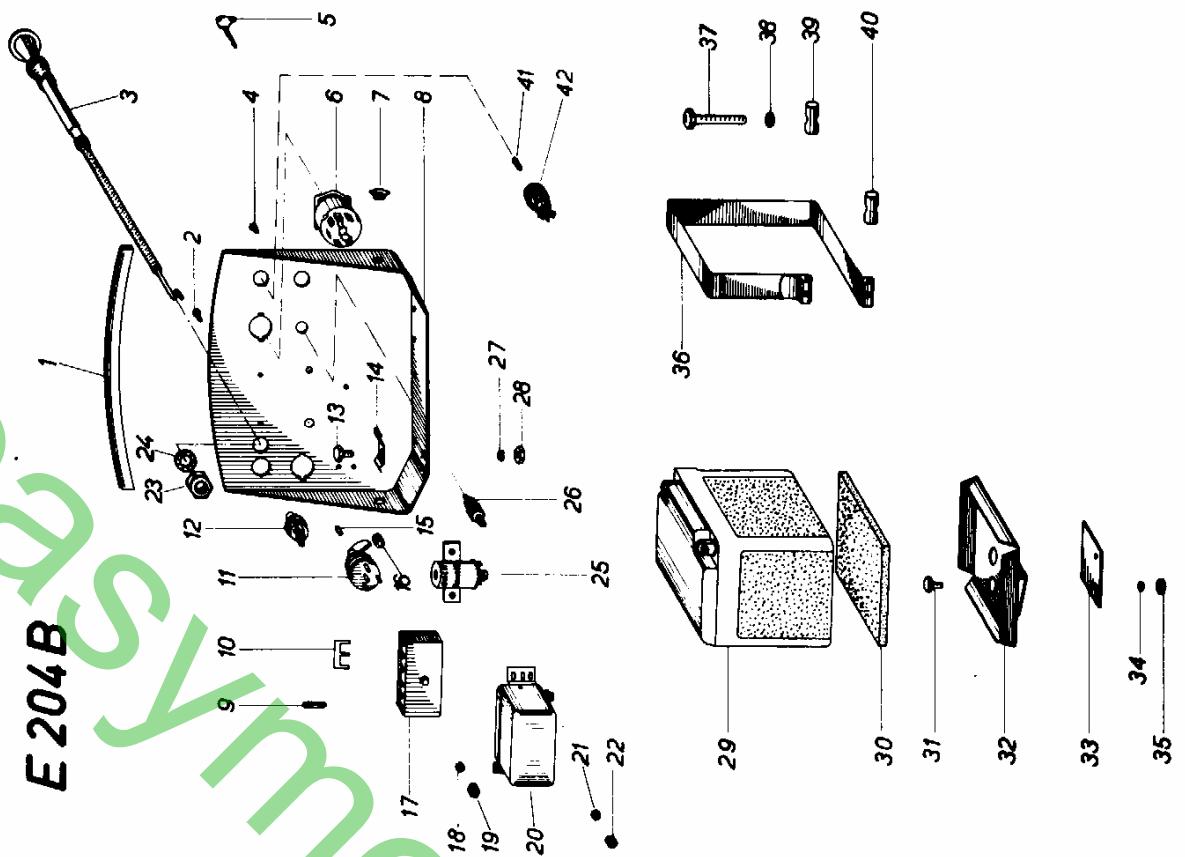
E 354



E 353



E 204B



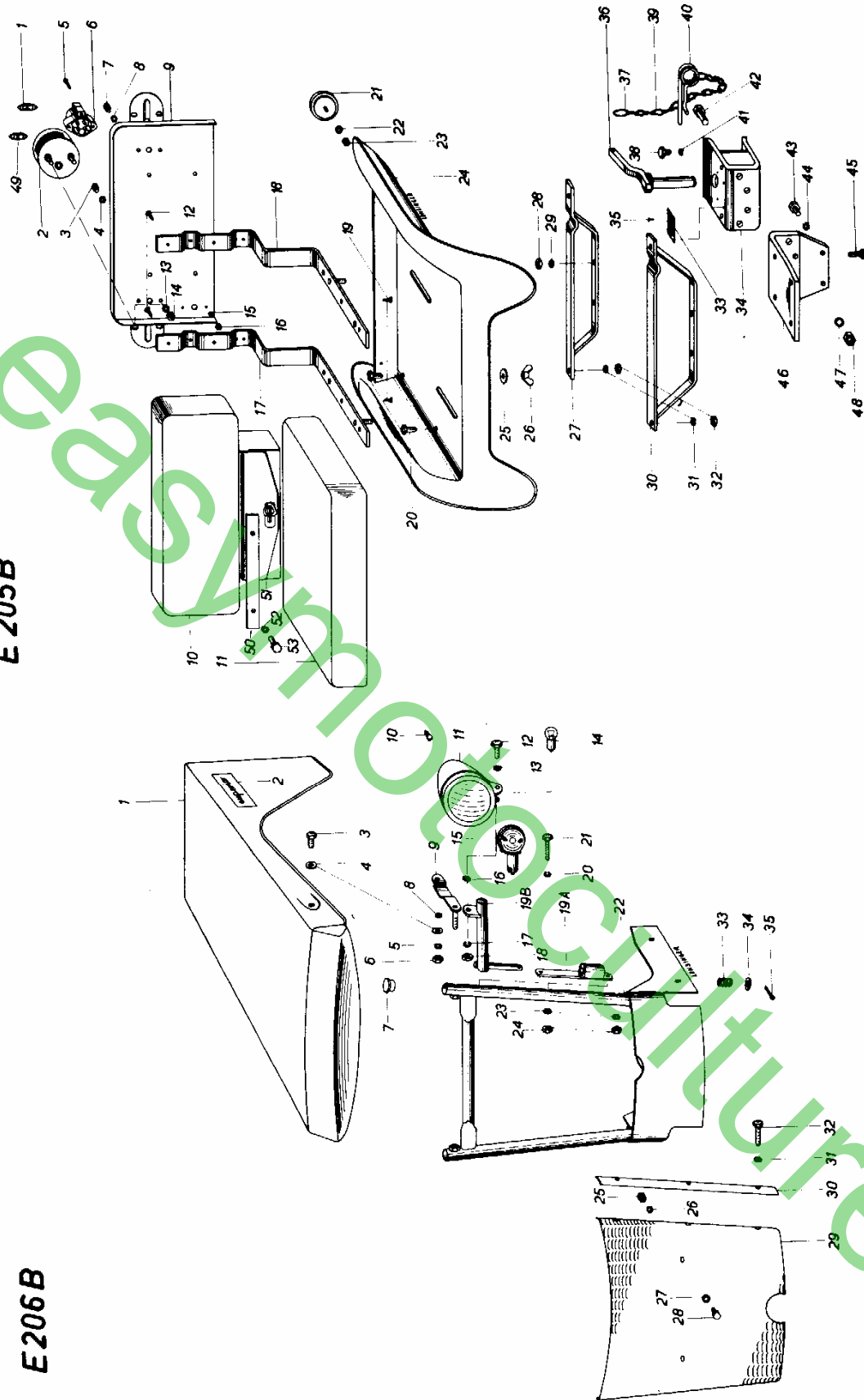
STEERING				E 353/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	00.70.004	Watertight cap A 50.0/1	1	1	00.37.012	Rubber mounting strip	1
2	M 12 DIN 936	Hexagon nut	1	2	M 5 x 15 DIN 84	Cheese-headed screw	2
3	B 12 DIN 127	Spring washer	1	3	16.11.808	Starter pull	1
4	13 DIN 125	Washer	1	4	M 5 x 15 DIN 84	Cheese-headed screw	3
5	00.70.001	Steering wheel with cap 350 ASG DIN 18	1	5	00.80.256	Ignition key SHES 3 L 1 x	1
6	M 8 DIN 934	Hexagon nut	1	6	00.80.247	Ignition/light switch SH/KSA 4/1	1
7	B 8 DIN 127	Spring washer	1	7	00.34.010	Rubber plug	2
8	00.23.011	Bush	1	8	16.46.805	Metal panel, complete	1
9	00.42.099	Gate position indicator	1	9	00.80.264	Fuse, NSG 10/1 Z	1
10	00.42.049	Gate position indicator	1	9A	00.80.997	Fuse, NSG 3/3 Z	5
11	00.42.048	Gate position indicator	1	10	00.80.265	Connecting link VMEA 20 L 1 x	1
12	00.42.052	Gate position indicator	1	11	00.80.246	Flasher unit SH/WH 2/2 (switch)	1
13	16.46.009	Clamp	1	12	00.80.249	Horn push SH/F/TD 8/1	1
14	M 8 x 20 DIN 933	Hexagon bolt	1	13	M 6 x 20 DIN 931	Hexagon bolt 8 G	5
15	00.75.162	Throttle control H 14 a RSt 12 z K	1	14	16.38.041	Double-aided clip	1
16	B 6 DIN 127	Spring washer	1	15	00.80.228	Bulb for warning lamp NGL 893/1 Z	1
17	M 6 DIN 934	Hexagon nut	1	16	00.34.008	Rubber bush	1
18	16.11.800	Bowden cable for throttle, complete	1	17	00.80.283	Fusebox SEA 18 L 1 Z	1
19	16.25.802	Chassis upper section, complete	1	18	B 5 DIN 127	Spring washer	1
20	5 x 6.5 DIN 6888	Key	1	19	M 5 DIN 934	Hexagon nut	2
21	19 DIN 125	Washer	1	20	00.80.848	Voltage regulator BS/ZDA 60-90/12/3	3
22	00.30.034	Coil Spring	1	21	B 5 DIN 127	Spring washer	1
23	19 DIN 125	Washer	1	22	M 5 DIN 934	Hexagon nut	1
24	00.30.034	Split pin	1	23	M 10 x 1 DIN 936	Hexagon nut	1
25	16.27.806	Steering column complete	1	24	f 10.5 DIN 6788	Locking washer	1
26	16.27.028	Bearing bush (2 halves)	1	25	00.80.399	Flasher power unit 0338200020	1
27	16.27.026	Column bearing support bracket	1	26	00.80.001	Ignition cutout button	1
28	16.27.043	Insert	1	27	B 6 DIN 127	Spring washer	1
29	16.27.042	Retaining plate	1	28	M 6 DIN 934	Hexagon nut	5
30	M 8 x 25 DIN 931	Hexagon bolt	4	29	00.81.827	Battery BA/12/18/1	1
31	M 6 x 40 DIN 931	Hexagon bolt	1	30	00.75.180	Underlay	1
32	B 6 DIN 127	Spring washer	1	31	M 6 x 20 DIN 931	Hexagon bolt 8 G	2
33	M 6 DIN 934	Hexagon nut	1	32	16.38.803	Battery carrier complete	1
34	16.27.807	Steering arm complete	1	33	16.38.010	Sub-plate	2
35	00.23.004	Bush	1	34	B 6 DIN 127	Spring washer	2
36	00.23.003	Bush with collar	1	35	M 6 DIN 934	Hexagon nut	1
37	16.27.805	Segment, complete	1	36	84.05.101	Strap	1
38	00.31.026	Tension spring	1	37	M 8 x 100 DIN 933	Hexagon bolt 8 G	1
				38	8.4 DIN 125	Washer	1
				39	00.15.002	Pin	1
				40	00.15.001	Tapped pin	1
				41	00.80.228	Bulb NGL 893/1 Z	1
				42	00.80.165	Ignition warning lamp holder LE/11 14/2	1

EQUIPMENT PANEL BATTERY				E 204 B/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	00.37.012	Rubber mounting strip	1	1	00.37.012	Rubber mounting strip	1
2	M 5 x 15 DIN 84	Cheese-headed screw	2	2	M 5 x 15 DIN 84	Cheese-headed screw	2
3	16.11.808	Starter pull	1	3	16.11.808	Starter pull	1
4	M 5 x 15 DIN 84	Cheese-headed screw	3	4	M 5 x 15 DIN 84	Cheese-headed screw	3
5	00.80.256	Ignition key SHES 3 L 1 x	1	5	00.80.256	Ignition key SHES 3 L 1 x	1
6	00.80.247	Ignition/light switch SH/KSA 4/1	1	6	00.80.247	Ignition/light switch SH/KSA 4/1	1
7	00.34.010	Rubber plug	2	7	00.34.010	Rubber plug	2
8	16.46.805	Metal panel, complete	1	8	16.46.805	Metal panel, complete	1
9	00.80.264	Fuse, NSG 10/1 Z	1	9	00.80.264	Fuse, NSG 10/1 Z	1
9A	00.80.997	Fuse, NSG 3/3 Z	5	9A	00.80.997	Fuse, NSG 3/3 Z	5
10	00.80.265	Connecting link VMEA 20 L 1 x	1	10	00.80.265	Connecting link VMEA 20 L 1 x	1
11	00.80.246	Flasher unit SH/WH 2/2 (switch)	1	11	00.80.246	Flasher unit SH/WH 2/2 (switch)	1
12	00.80.249	Horn push SH/F/TD 8/1	1	12	00.80.249	Horn push SH/F/TD 8/1	1
13	M 6 x 20 DIN 931	Hexagon bolt 8 G	5	13	M 6 x 20 DIN 931	Hexagon bolt 8 G	5
14	16.38.041	Double-aided clip	1	14	16.38.041	Double-aided clip	1
15	00.80.228	Bulb for warning lamp NGL 893/1 Z	1	15	00.80.228	Bulb for warning lamp NGL 893/1 Z	1
16	00.34.008	Rubber bush	1	16	00.34.008	Rubber bush	1
17	00.80.283	Fusebox SEA 18 L 1 Z	1	17	00.80.283	Fusebox SEA 18 L 1 Z	1
18	B 5 DIN 127	Spring washer	1	18	B 5 DIN 127	Spring washer	1
19	M 5 DIN 934	Hexagon nut	2	19	M 5 DIN 934	Hexagon nut	2
20	00.80.848	Voltage regulator BS/ZDA 60-90/12/3	3	20	00.80.848	Voltage regulator BS/ZDA 60-90/12/3	3
21	B 5 DIN 127	Spring washer	1	21	B 5 DIN 127	Spring washer	1
22	M 5 DIN 934	Hexagon nut	1	22	M 5 DIN 934	Hexagon nut	1
23	M 10 x 1 DIN 936	Hexagon nut	1	23	M 10 x 1 DIN 936	Hexagon nut	1
24	f 10.5 DIN 6788	Locking washer	1	24	f 10.5 DIN 6788	Locking washer	1
25	00.80.399	Flasher power unit 0338200020	1	25	00.80.399	Flasher power unit 0338200020	1
26	00.80.001	Ignition cutout button	1	26	00.80.001	Ignition cutout button	1
27	B 6 DIN 127	Spring washer	1	27	B 6 DIN 127	Spring washer	1
28	M 6 DIN 934	Hexagon nut	5	28	M 6 DIN 934	Hexagon nut	5
29	00.81.827	Battery BA/12/18/1	1	29	00.81.827	Battery BA/12/18/1	1
30	00.75.180	Underlay	1	30	00.75.180	Underlay	1
31	M 6 x 20 DIN 931	Hexagon bolt 8 G	2	31	M 6 x 20 DIN 931	Hexagon bolt 8 G	2
32	16.38.803	Battery carrier complete	1	32	16.38.803	Battery carrier complete	1
33	16.38.010	Sub-plate	2	33	16.38.010	Sub-plate	2
34	B 6 DIN 127	Spring washer	2	34	B 6 DIN 127	Spring washer	2
35	M 6 DIN 934	Hexagon nut	1	35	M 6 DIN 934	Hexagon nut	1
36	84.05.101	Strap	1	36	84.05.101	Strap	1
37	M 8 x 100 DIN 933	Hexagon bolt 8 G	1	37	M 8 x 100 DIN 933	Hexagon bolt 8 G	1
38	8.4 DIN 125	Washer	1	38	8.4 DIN 125	Washer	1
39	00.15.002	Pin	1	39	00.15.002	Pin	1
40	00.15.001	Tapped pin	1	40	00.15.001	Tapped pin	1
41	00.80.228	Bulb NGL 893/1 Z	1	41	00.80.228	Bulb NGL 893/1 Z	1
42	00.80.165	Ignition warning lamp holder LE/11 14/2	1	42	00.80.165	Ignition warning lamp holder LE/11 14/2	1

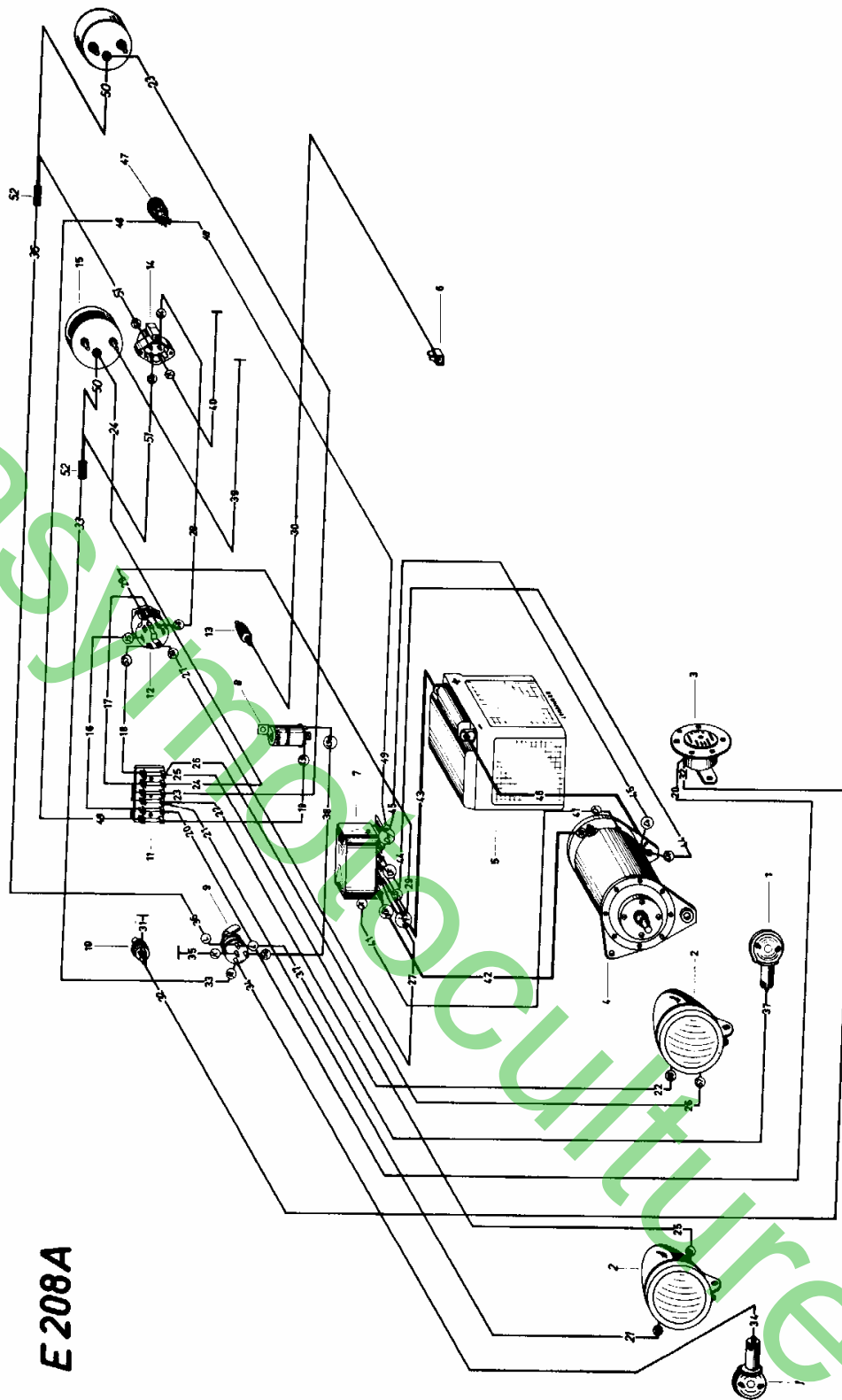
ENGINE COVER, HEADLAMPS, FLASHING INDICATORS E 206 B/64				SEAT, SEAT MOUNTING, TRAILER COUPLING E 205 B/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	16.46.800	Engine cover, upper section, compl.	1	1	00.80.379	Bulb K 1210	2
2	00.42.057	SUPERIOR nameplate	2	2	00.80.398	Rear flasher/humber plate lamp SBK 106	2
3	M 10 x 25 DIN 933	Hexagon bolt 5 D	2	3	M 8 x 10 DIN 933	Hexagon bolt 5 D	2
4	10.5 DIN 125	Washer	4	4	A 8.4 DIN 6798	Slotted washer	2
5	B 10 DIN 127	Spring washer	2	5	AM 4 x 25 DIN 84	Cheese-headed screw	2
6	M 10 DIN 934	Hexagon nut	2	6	00.80.261	Terminal plug 12/4 A	1
7	00.34.015	Rubber plug	2	7	00.80.384	Hexagon screw 5 D	2
8	78.24.042	Spacer	2	8	M 8 x 10 DIN 933	Hexagon washer	2
9	78.24.817	Lever complete	2	9	16.53.812	Number plate carrier compl.	1
10	00.80.393	Bulb Q 1215	2	10	16.53.800	Backrest	1
11	00.80.394	Bulb HL 124	2	11	16.53.801	Seat cushion	1
12	00.80.401	Headlamp 85/70-T CR	2	12	5 x 95 DIN 97	Countersunk wood screw	4
13	00.80.402	Glass (E 1.6021.02)	2	13	16.4 DIN 6798	Slotted washer	4
14	00.80.403	Sealing ring (E 1.4315.04)	2	14	M 6 DIN 934	Hexagon nut	4
15	00.80.404	Spring ring (E 1.1977.02)	6	15	B 4 DIN 127	Spring washer	2
16	00.80.405	Lamp mount spring (E 1.3351.04)	2	16	M 4 DIN 934	Hexagon nut	2
17	00.80.406	Glass retaining ring with screw (E 1.3376.03)	2	17	16.53.809	Backrest support, right, compl.	1
18	00.80.407	Reflector (E 1.6071.02)	2	18	16.53.810	Backrest support, left, compl.	1
19	00.80.408	Main beam lampholder (E 1.3398.02)	2	19	5 x 25 DIN 97	Countersunk wood screw	6
20	00.80.409	Parking lamp holder (E 1.9878.02)	2	20	M 8 x 20 DIN 933	Hexagon bolt 8 G	4
21	M 8 x 22 DIN 933	Hexagon bolt	2	21	00.75.090	Rear lamp R 13	2
22	M 8 x 4 DIN 6798	Slotted washer	2	22	A 5.3 DIN 6798	Slotted washer	2
23	00.80.263	Bulb R 1218	2	23	M 5 DIN 934	Hexagon nut	2
24	00.80.262	Flasher lamp BL 82	2	24	16.53.013	Seat pan	1
25	00.80.340	Flasher housing complete	2	25	R 9.5 DIN 440	Washer	2
26	A 8.4 DIN 6798	Slotted washer	2	26	M 8 DIN 315	Wing nut	2
27	B 8 DIN 127	Spring washer	2	27	16.53.802	Rear crosspiece compl.	1
28	M 8 DIN 934	Hexagon nut	2	28	M 8 DIN 934	Hexagon nut	2
29	16.38.838	Headlamp bracket left compl	1	29	B 8 DIN 127	Spring washer	2
30	16.38.839	Headlamp bracket right, comprising parts Nos. 19, 19A, 33 - 35	1	30	16.53.803	Front crosspiece compl.	1
31	16.38.835	Mounting slot left complete	1	31	B 8 DIN 127	Spring washer	4
32	16.38.836	Mounting slot right complete	1	32	M 8 DIN 934	Hexagon nut	4
33	16.38.853	Carrier tube left complete	1	33	00.42.027	Manufacturer's plate	1
34	16.38.852	Carrier tube right complete	1	34	16.49.800	Trailer coupling complete	1
35	B 6 DIN 127	Spring washer	4	35	2.6 x 6 DIN 1476	Semi-circular spiral nail	1
36	M 6 x 45 DIN 931	Hexagon bolt	4	36	16.42.802	Coupling pin complete	2
37	16.46.802	Engine cover, front section, compl.	1	37	84.74.063	Ring	1
38	A 6.4 DIN 6798	Slotted washer	6	38	M 10 x 20 DIN 933	Hexagon bolt 8 G	4
39	M 6 DIN 934	Hexagon nut	6	39	84.49.063	Chain	1
40	M 6 DIN 127	Spring washer	2	40	00.17.018	Spring securing pin	1
41	6.4 DIN 125	Washer	2	41	B 10 DIN 127	Spring washer	4
42	M 6 x 15 DIN 933	Hexagon bolt 8 G	2	42	M 12 x 35 DIN 931	Hexagon bolt 8 G	4
43	78.24.027	Engine cover grille	2	43	M 10 x 25 DIN 933	Hexagon bolt 8 G	4
44	16.46.012	Securing strip	1	44	B 10 DIN 127	Spring washer	2
45	A 6.4 DIN 6798	Slotted washer	2	45	M 8 x 25 DIN 931	Hexagon bolt 5 D	2
46	M 6 x 45 DIN 931	Hexagon bolt 8 G	2	46	16.49.015	Mounting bracket	1
47	00.30.039	Coil spring	2	47	B 12 DIN 127	Spring washer	4
48	13 DIN 125	Washer	2	48	M 12 DIN 934	Hexagon nut	4
49	4 x 20 DIN 94	Split pin	2	49	00.80.260	Bulb K 1218	2
50				50	00.40.042	Stiffener	2
51				51	00.40.801	Toolbox	1
52				52	B 8 DIN 127	Spring washer	2
53				53	M 8 x 15 DIN 933	Hexagon bolt	2

E 205B

E 206B



E208A

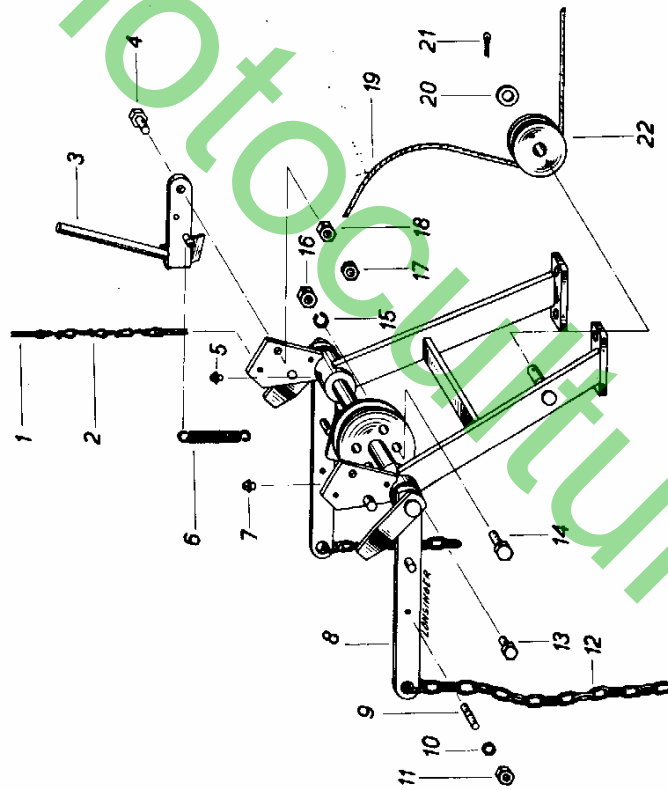


ELECTRICAL SYSTEM				E 208 A/64
Symbol No.	Part No.	Description	Qty.	
29	16.38.809	regulator 50 - ignition switch 50 (red)	1	
30	16.38.819	cutout button - engine ignition (brown)	1	
31	16.38.828	horn button - earth (brown)	1	
32	16.38.827	horn button - horn (brown)	1	
33	16.38.820	flasher switch R - terminal socket 58 (black)	1	
34	16.38.834	flasher switch R - r. h. indicator (black)	1	
35	16.38.822	flasher switch K - earth (brown)	1	
36	16.38.849	flasher switch L - terminal socket 58 (red)	1	
37	16.38.834	Cabling: flasher switch L - 1. h. indicator (black)	1	
38	16.38.816	flasher unit 48a - flasher switch 54 (black)	1	
39	16.38.837	rear number plate lamp - earth (brown)	1	
40	16.38.830	terminal socket 31 - earth (brown)	1	
41	16.38.808	regulator earth 31 - dynastarter (black)	1	
42	16.38.847	regulator 30b - dynastarter (black)	1	
43	16.38.805	battery+ - regulator B+/30 (black)	1	
44	16.38.807	regulator DF - dynastarter DF (red)	1	
45	16.38.833	regulator D+ 61 - dynastarter D+ (red)	1	
46	16.38.804	battery - - earth (black)	1	
-	16.38.051	left headlamp insulating sleeve 10 mm dia. x 800 mm	1	
-	16.38.050	rt. headlamp insulating sleeve 10 mm dia. x 1150 mm	1	
-	16.38.053	number plate lamp insulating sleeve 12 mm x 1280 mm	1	
-	16.38.052	regulator/dynastarter insul. sleeve 18 mm x 280 mm	1	
-	00.75.001	Cable tie	10	
47	00.80.165	ignition warning lamp 1E/11 14/2	1	
48	16.38.845	fuse - warning lamp (black)	1	
49	16.38.846	regulator D+ - warning lamp (red)	1	
50	16.38.055	cable to rear flashing indicator (black)	2	
51	16.38.059	cable to terminal socket 58 (black)	2	
52	00.80.823	Connector, single-sided	2	

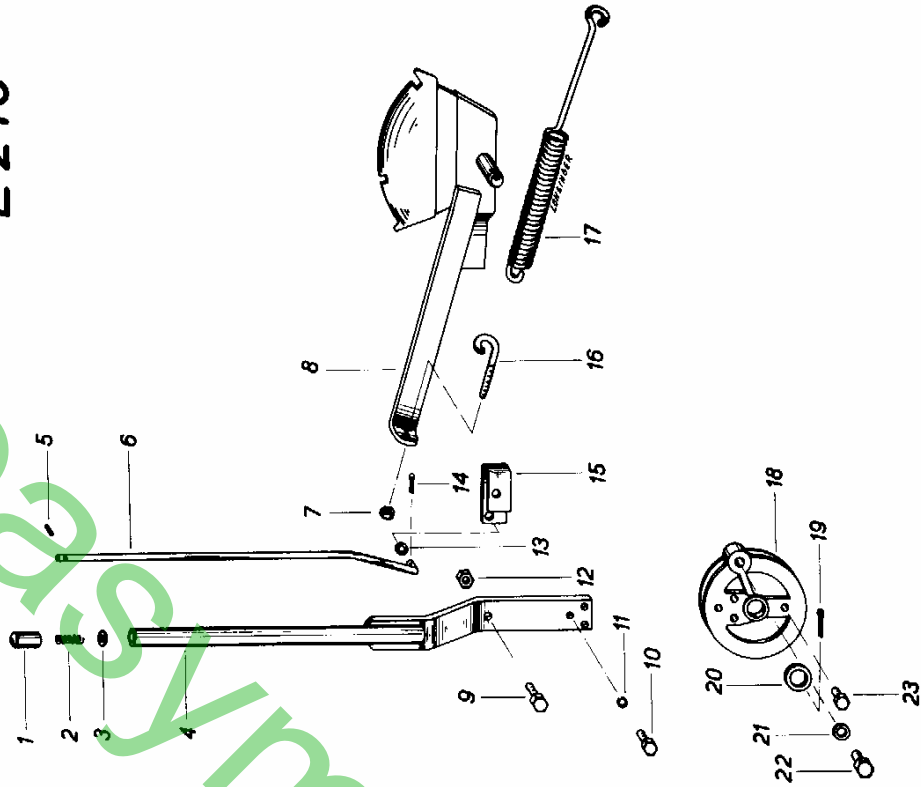
ELECTRICAL SYSTEM			E 208 A/64
Symbol No.	Part No.	Description	Qty.
1	00.80.262	Flashing indicator BL 82	2
2	00.80.401	Headlamp 85/70 7 CR	2
3	00.80.248	Horn HO/FCH 12/1	1
4	00.81.849	Dynastarter LA/EG 90/12/3800+ 0.8 R 1	1
5	00.81.827	Battery BA/12/18/1	1
6	00.80.823	Connector, single-sided	1
7	00.80.848	Voltage regulator RS/ZDA 60-90/12/3	1
8	00.80.399	Flasher power unit 0336 200 020	1
9	00.80.246	Flasher switch SH/WH2/2	1
10	00.80.249	Horn button & switch SH/F/TD 9/1	1
11	00.80.283	Fusebox SEA 18 L 1 Z	1
12	00.80.247	Ignition and light switch SSH 4 L 12 Z	1
13	00.80.001	Ignition cutout button	1
14	00.80.261	Terminal socket 12/4 A	1
15	00.80.398	Rear number plate lamp SBK 106	2
16	16.38.811	Cabling: ignition 15 - fuse (black)	1
17	16.38.813	ignition 58 - fuse (yellow)	1
18	16.38.814	ignition 57 - fuse (white)	1
19	16.38.815	fuse-flasher unit 49 (black)	1
20	16.38.826	fuse-horn (black)	1
21	16.38.831	fuse - dipped beam 58 right (yellow)	1
22	16.38.831	fuse - dipped beam 58 left (yellow)	1
23	16.38.824	fuse - number plate lamp left (grey)	1
24	16.38.823	fuse - number plate lamp right (grey)	1
25	16.38.825	fuse - main beam 57 right (white)	1
26	16.38.825	fuse - main beam left (white)	1
27	16.38.810	regulator B +/30 - ignition switch 30 (red)	1
28	16.38.821	ignition 58 - terminal socket 54 (yellow)	1

LIFT JACK				HAND LIFT			
E 242a/64				E 243a/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	5 x 30 DIN 94	Split pin	4	1	16.55.008	Thumb release catch	1
2	84.49.063 (A)	Chain	2	2	00.30.043	Release catch spring	1
3	16.55.854	Locking mechanism compl., left	1	3	10.5 DIN 125	Washer	1
-	16.55.855	Locking mechanism compl., right	1	4	16.55.800	Release/lift lever compl.	1
4	M 10 x 35 DIN 931	Hexagon bolt	2	5	3 x 20 DIN 1481	Stop pin	1
5	D 6 DIN 3402	Grease nipple	1	6	16.55.010	Release rod	1
6	16.55.156	Tension spring	2	7	M 8 DIN 934	Hexagon nut	1
7	D 6 DIN 3402	Grease nipple	1	8	16.55.801	Adjusting segment compl.	1
8	16.55.817	Lifting arm compl.	1	9	M 8 x 20 DIN 933	Hexagon bolt	1
9	M 10 x 25 DIN 938	Stud, 8 G	2	10	M 8 x 25 DIN 931	Hexagon bolt 8 G	3
10	B 10 DIN 127	Spring washer	2	11	B 8 DIN 127	Spring washer	3
11	M 10 DIN 934	Hexagon nut	2	12	BM 8 DIN 439	Hexagon nut 5 D	2
12	16.55.853	Lifting chain compl.	2	13	8.4 DIN 125	Washer	1
13	M 8 x 20 DIN 933	Hexagon bolt 5 D	1	14	2 x 15 DIN 94	Split pin	1
14	M 10 x 45 DIN 931	Hexagon bolt 5 D	2	15	16.55.009	Locating bracket	1
15	B 10 DIN 127	Spring washer	2	16	16.55.041	Spring hook	1
16	M 10 DIN 934	Hexagon nut	2	17	00.31.027	Tension lifting spring	1
17	BM 10 DIN 439	Hexagon nut	2	18	16.55.015	Lifting cable pulley	1
18	M 10 DIN 934	Hexagon nut	2	19	5 x 30 DIN 94	Split pin	1
19	00.99.026	Wire cable	1	20	20 DIN 1440	Washer	1
20	15 DIN 125	Washer	1	21	13 DIN 125	Washer	1
21	3 x 20 DIN 94	Split pin	1	22	M 12 x 30 DIN 931	Hexagon bolt 8 G	1
22	16.55.018	Guide pulley	1	23	M 8 x 35 DIN 931	Hexagon bolt 8 G	1

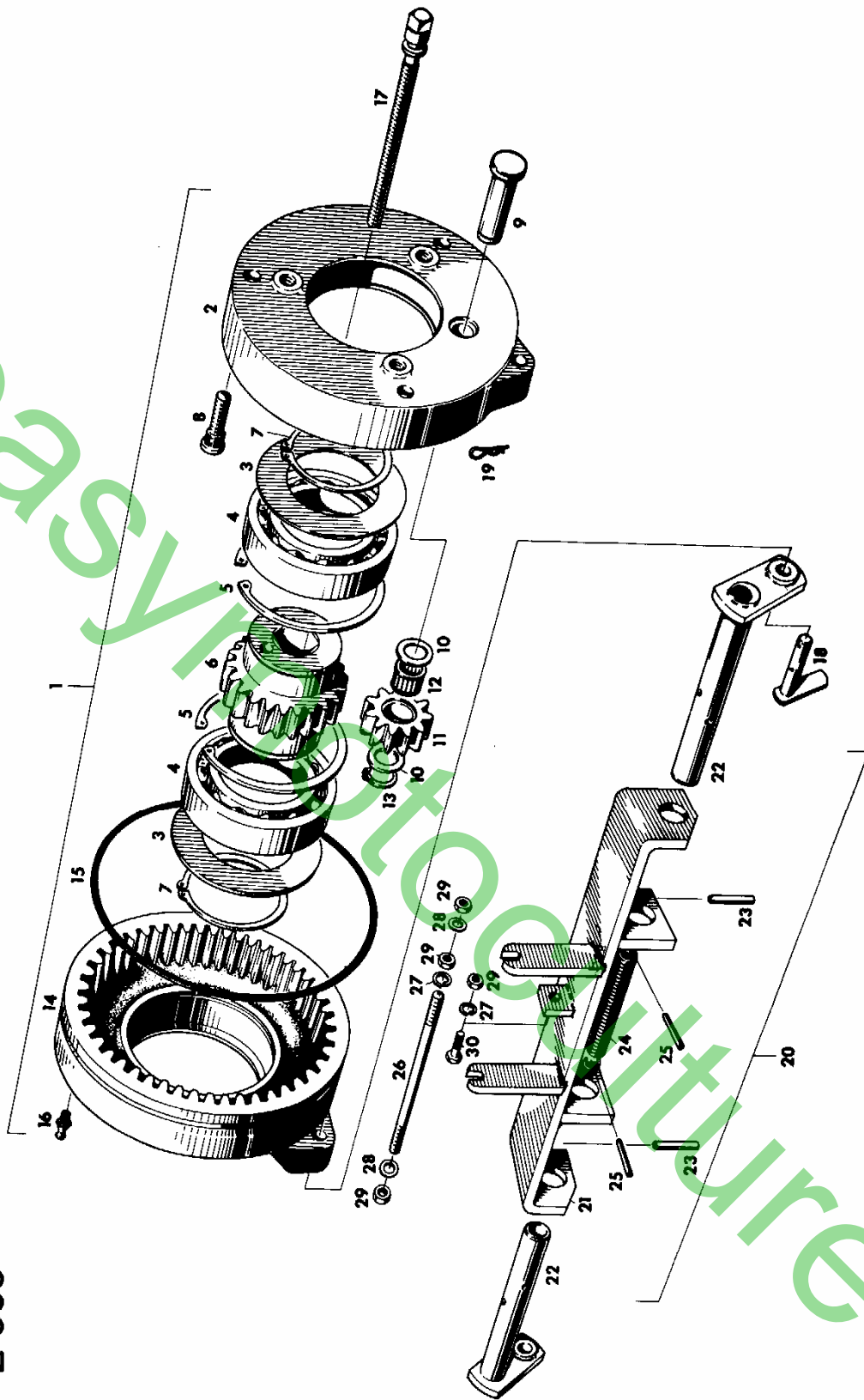
E 242



E 243



E 355

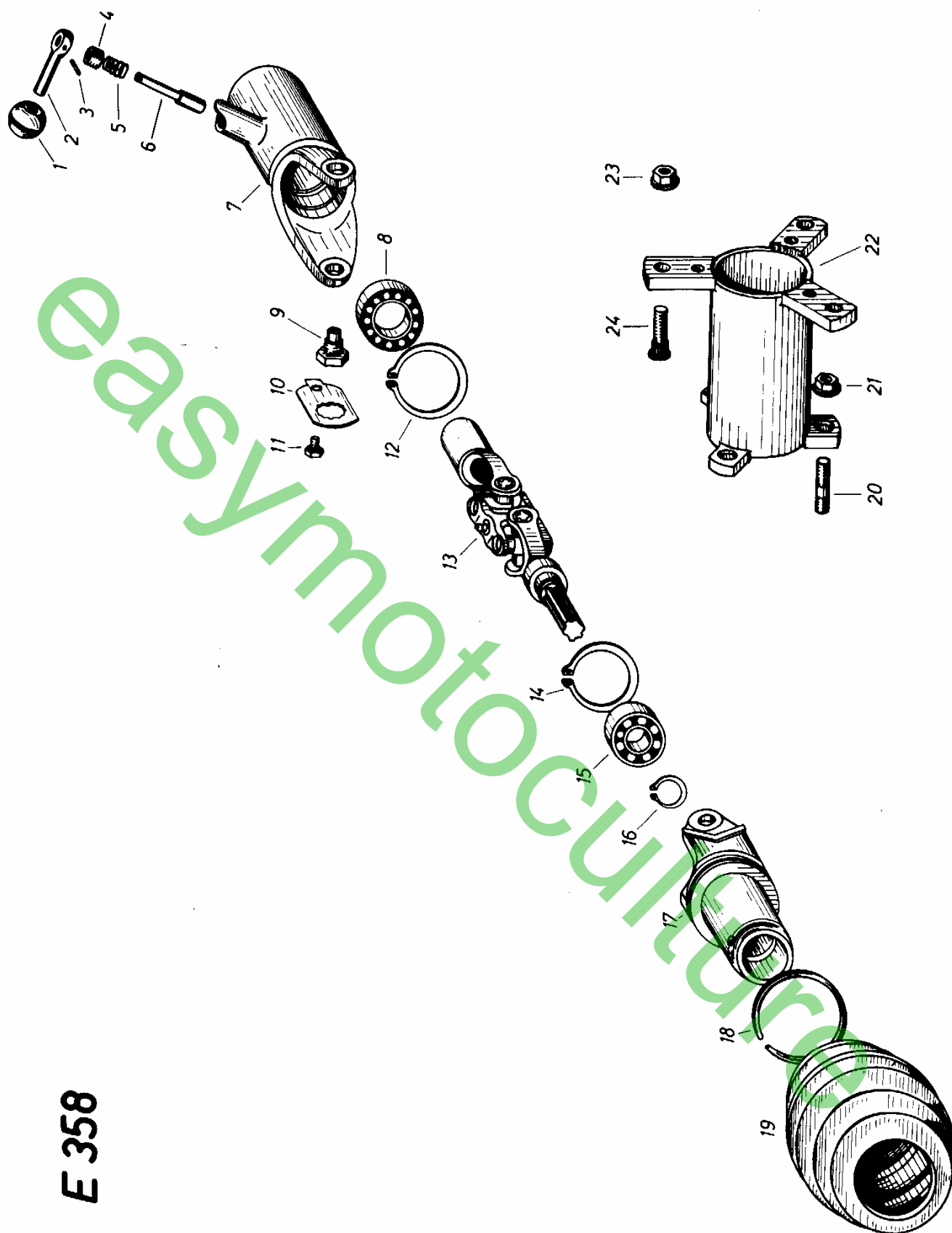


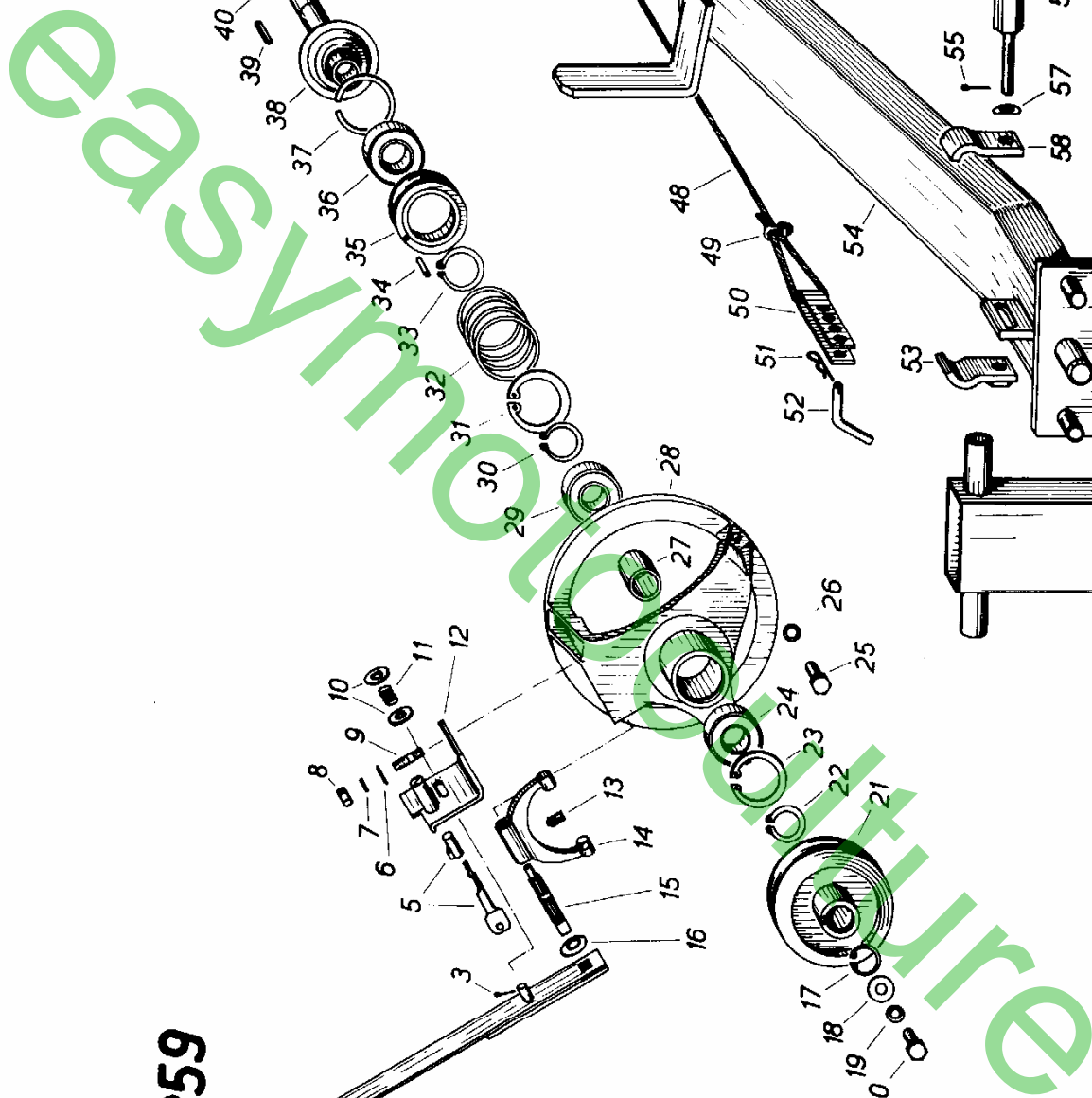
REDUCTION HUB COMPLETE WITH HITCH				E 355/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	16.29.805	Reduction gear hub compl.	2				
2	16.29.008	Outer casing half	2				
3	16.29.010	Sealing disc	4				
4	6015 DIN 625	Grooved ball bearing	4				
5	SB 115	Circclip	4				
6	16.29.007	Sun wheel	2				
7	SW 75	Circclip	4				
8	M 14 x 1.5 x 30 DIN 833	Stud 8 G	6				
9	16.29.011	Pin	2				
10	78.29.015	Thrust washer	4				
11	16.29.006	Planet wheel	2				
12	K 18 x 24 x 13	Needle roller cage	2				
13	18 x 1.2 DIN 471	Circclip	2				
14	16.29.009	Annulus	2				
15	00.25.032	Packing ring R 210-5	2				
16	CM 8 x 1 DIN 71412	Ball-type grease nipple galvanised	2				
17	16.29.030	Threaded spindle	2				
18	17.29.808	Locking pin complete	2				
19	00.17.002	Split pin	2				
20	16.29.815	Hub locking mechanism complete	1				
21	16.29.814	Mounting bracket complete	1				
22	16.29.813	Sliding pin complete	2				
23	S x 36 DIN 1481	Securing pin	2				
24	00.31.020	Tension spring	1				
25	S x 24 DIN 1481	Locking pin	2				
26	00.01.021	Stud	1				
27	B 8 DIN 127	Spring washer	2				
28	8.4 DIN 125	Washer	2				
29	M 8 DIN 934	Hexagon nut	4				
30	M 8 x 30 DIN 931	Hexagon bolt	1				

REAR P.T.O. EXTENSION and TWIN REAR WHEEL MOUNTING E 358/64			
Symbol No.	Part No.	Description	Qty.
1	00.36.022	Round knob, red	1
2	00.04.049	Eyebolt	1
3	4 x 20 DIN 1473	Cotter	1
4	75.19.016	Threaded guide bush	1
5	00.30.032	Coil spring	1
6	16.19.053	Stop	1
7	16.73.032	Joint outer swivel, long	1
8	6007 2 RS	Grooved ball bearing	1
9	16.73.033	Swivel pin	2
10	00.20.013	Locking plate	2
11	M 8 x 10 DIN 933	Hexagon bolt	2
12	62 x 2 DIN 472	Circlip	1
13	16.73.818 ✓	Inner universal, complete	1
14	52 x 2 DIN 472	Circlip	1
15	6205 2 RS	Grooved ball bearing	1
16	25 x 1.5 DIN 471	Circlip	1
17	16.73.031	Joint outer swivel, short	1
18	85 DIN 9045	Spring ring	2
19	16.73.003	Flexible bellows	1
20	M 14 x 1.5 x 35 DIN 833	Stud	1
21	AM 14x1.5 DIN 74361	Nut with shoulder	6
22	16.29.812	Double flange piece, complete	2
23	AM 14 x 1.5 DIN 74361	Nut with shoulder	6
24	00.04.020	Wheel bolt (M 14 x 1.5 x 45)	6

Symbol No.	Part No.	Description	Qty.

E 358



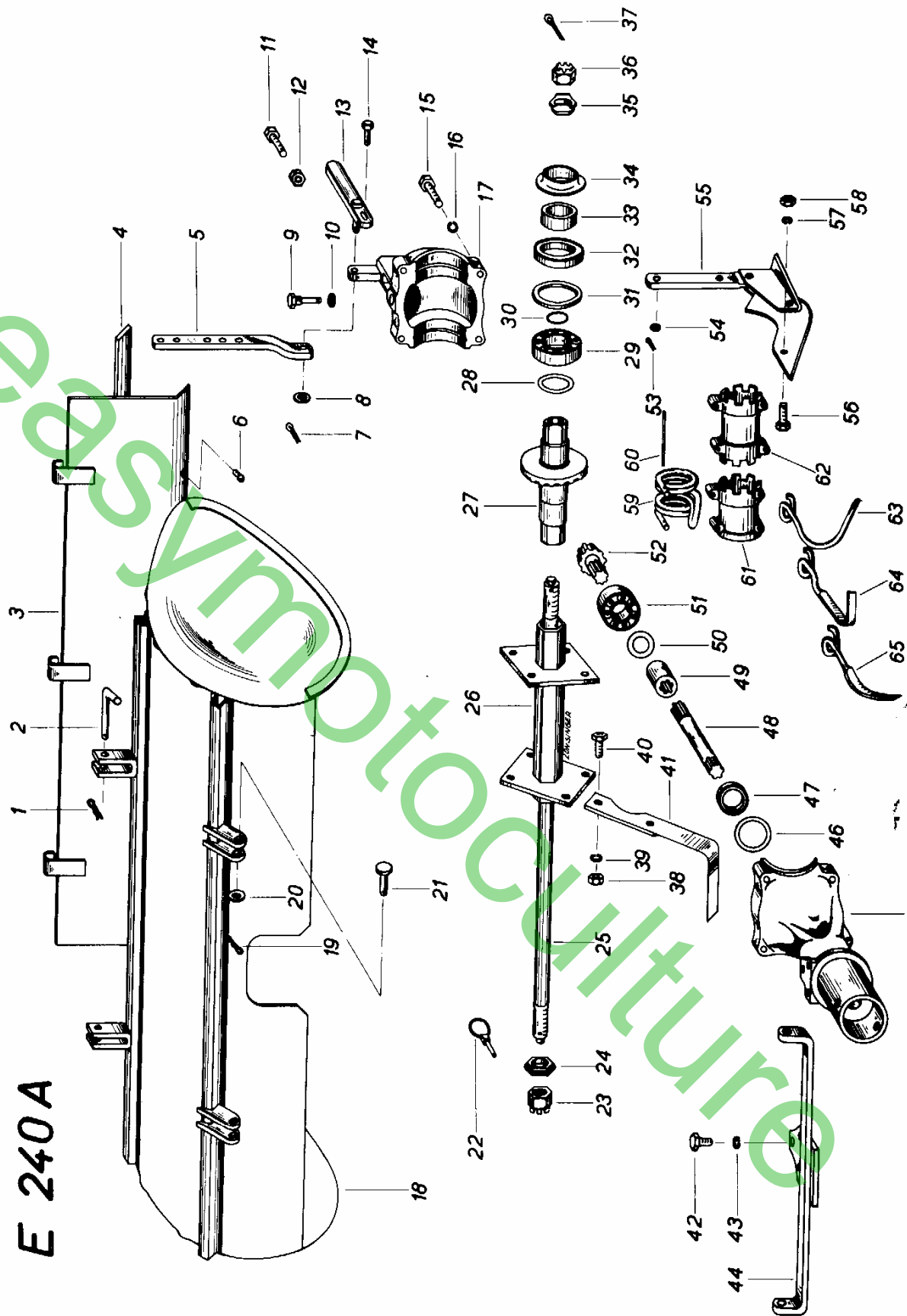


E 359

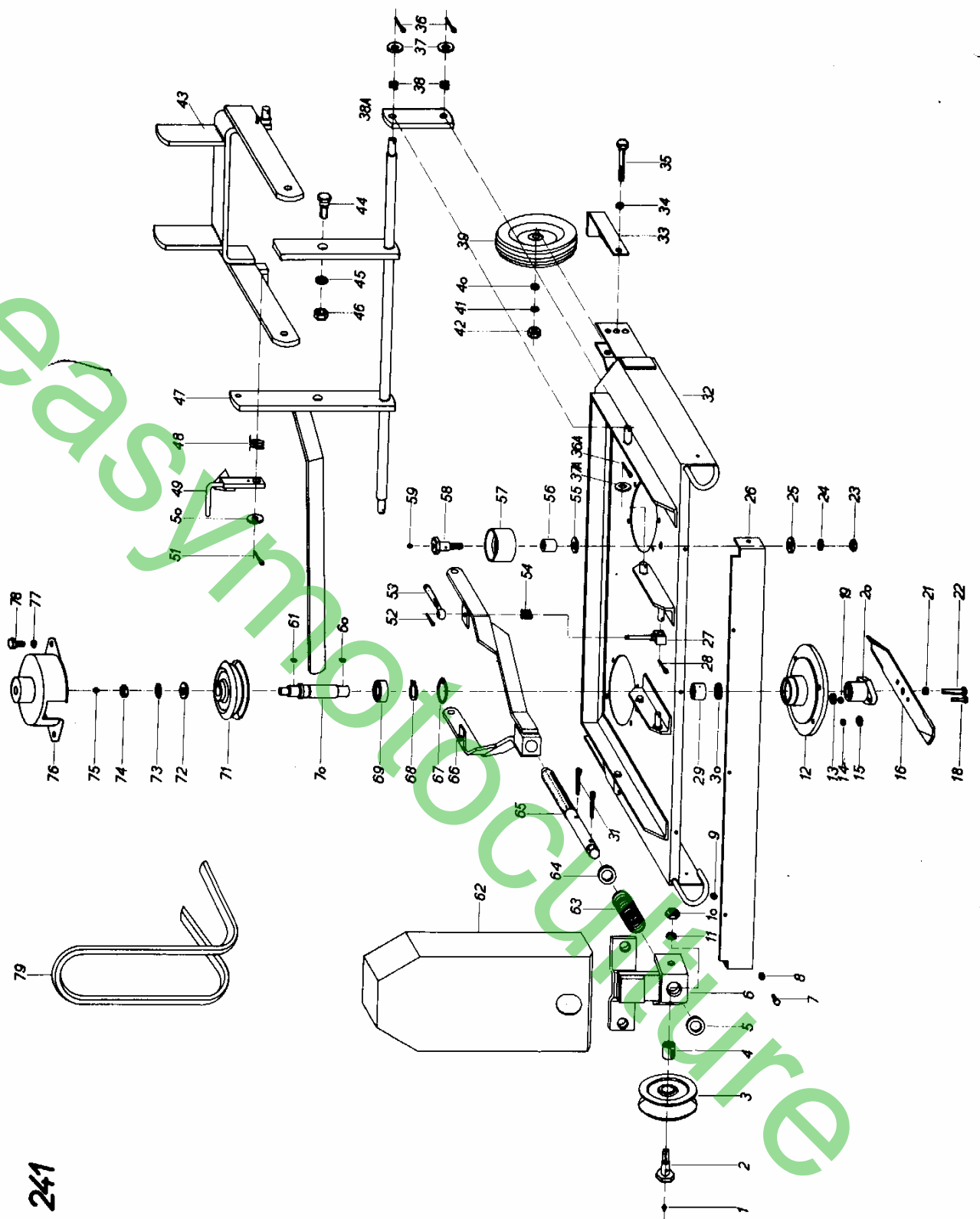
FRONT P. T. O. and FRONT TOOL FRAME				E 359/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	73.99.059	Hand grip, red	1	32	00.30.051	Clutch spring	1
2	16.20.804	Release lever complete	1	33	30 x 1.5 DIN 471	Circlip	1
3	3 x 20 DIN 94	Split pin	1	34	3 x 18 DIN 1481	Keeper pin	1
5	7 mm	Burgwächter barrel lock + 2 keys	1	35	16.20.013	Thrust ring	1
6	8.4 DIN 125	Washer	2	36	6006 2 RS	Grooved ball bearing	1
7	B 8 DIN 127	Spring washer	2	37	SB 55	Spring ring	1
8	M 8 DIN 934	Hexagon nut	2	38	16.20.014	Pressure plate	1
9	M 8 x 18 DIN 939	Stud	2	39	A 8 x 7 x 40 DIN 6885	Key	1
10	10.5 DIN 126	Washer	2	40	16.20.025	Drive shaft	1
11	00.30.075	Coil spring	1	41	00.26.001	Internally slotted disc	6
12	16.20.805	Stop bracket complete	1	42	00.38.028	Clutch disc	5
13	M 8 x 15 DIN 553	Setcrew	1	43	82.17.007	Counter-pressure plate	1
14	701.29.005	Release fork	1	44	48 x 1.75 DIN 471	Circlip	1
15	16.20.016	Fork shaft	1	45	16.20.035	Pin	1
16	20 mm	Schnorr washer	1	46	6200 2 RS	Grooved ball bearing	1
17	J 25 x 1.2 DIN 472	Circlip	1	47	16.20.810	Clutch dome complete	1
18	701.19.144	Washer	1	48	00.99.021	Wire cable 6 mm dia. x 950 mm (to DIN 656)	1
19	16.20.016	Spring washer	1	49	00.99.816	Cable end fastening (6 DIN 741)	1
20	M 8 x 22 DIN 553	Hexagon bolt	1	50	16.59.008	Yoke piece	1
21	16.77.041	Belt pulley	1	51	00.17.002	Split pin	1
22	25 x 1.2 DIN 471	Circlip	1	52	16.59.005	Removeable pin	1
23	J 47 x 1.75 DIN 472	Circlip	1	53	16.59.800	Clip, complete	1
24	6005 RS	Grooved ball bearing	1	54	16.59.819	Implement arm complete	1
25	M 8 x 30 DIN 931	Hexagon bolt	1	55	3 x 20 DIN 94	Split pin	1
-	M 8 x 25 DIN 933	Hexagon bolt	2	56	16.59.803	Bolt with tommy bar	1
26	A 8.4 DIN 6788	Slotted washer	3	57	B 12 DIN 137	Spring washer	1
27	16.20.027	Distance piece	1	58	16.59.010	Clip	1
28	16.20.026	Takeoff shaft housing	1	59	16.59.820	Front section complete	1
29	6005 RS	Grooved ball bearing	1	60	AM 14 x 1.5 DIN 74361	Nut with shoulder	2
30	25 x 1.2 DIN 471	Circlip	1	61	701.73.440	Split pin	2
31	J 47 x 1.75 DIN 472	Circlip	1	62	16.59.802	Locking pin	2

ROTARY CULTIVATOR				E 240 A/64			
Symbol No.	Part No.	Description	Qty	Symbol No.	Part No.	Description	Qty
1	00.17.002	Split pin	2	35	75.73.031	Washer	1
2	701.73.423.00	Securing pin	3	36	M 20 x 1.5 DIN 935	Castellated nut	1
3	16.73.803	Striker plate complete	1	37	4 x 40 DIN 94	Split pin	1
4	75.23.072	Stiffener	1	38	M 8 DIN 934	Hexagon nut	16
5	16.73.019	Support strap	1	39	B 8 DIN 127	Spring washer	16
6	AM 8 x 10 DIN 86	Round-head screw	3	40	M 8 x 30 DIN 931	Hexagon bolt 8 G	16
7	4 x 25 DIN 94	Split pin	1	41	16.73.028	Hoe tool left	8
8	12 DIN 1440	Washer	1	42	16.73.027	Hoe tool right	8
9	75.73.801	Oil dipstick complete	1	43	M 10 x 22 DIN 933	Hexagon bolt 5 D	3
10	C 14 x 18 DIN 7603	Filler sealing ring	1	44	B 10 DIN 127	Spring washer	3
11	M 10 x 45 DIN 933	Hexagon bolt 5 D	1	45	16.73.806	Hood attachment bracket complete	1
12	M 10 DIN 934	Hexagon nut	1	46	16.73.804	Hoe drive unit complete, supplied only with parts 15, 16 and 17	1
13	16.73.807	Adjusting lever complete	1	47	00.20.151	Spacing washer	as req.
14	88.11 x 25 x 20 DIN 1436	Pin bolt with oversize head	1	48	B 1 30 x 40 x 7	Radial oil seal	1
15	M 8 x 50 DIN 931	Hexagon bolt 8 G	4	49	75.73.051	Drive shaft	1
16	B 8 DIN 127	Spring washer	4	50	75.73.046	Clutch sleeve	1
17	16.73.804	Hoe drive housing complete, supplied only with parts 15, 16 & 45	1	51	00.35.013	Seal	1
18	16.73.817	Hood complete	1	52	3205 DIN 628	Thrust race	1
19	00.17.002	Split pin	2	53	75.73.042	Drive pinion	1
20	14 DIN 1440	Washer	2	54	2 x 16 DIN 94	Split pin	1
21	14 b 11 x 40 x 32 DIN 1436	Oversize pin bolt	2	55	8 DIN 1440	Washer	1
22	75.73.819	Locking pin with loop complete	1	56	16.73.805	Hoe positioning tool complete	1
23	M 20 x 1.5 DIN 935	Castellated nut	1	57	M 10 x 25 DIN 933	Hexagon bolt 5 D	1
24	75.73.021	Washer	1	58	B 10 DIN 127	Spring washer	1
25	00.02.068	Shaft	1	59	M 10 DIN 934	Hexagon nut	1
26	16.73.819	Double tool mounting plate complete	2	60	75.73.038	Tool mounting spring	4
27	75.73.827	Hoe shaft complete	1	61	00.75.017	Safety wire	4
28	00.20.151	Spacing washer	as req.	62	75.73.037	Hoe drive hub, inner	2
29	6008 DIN 625	Grooved ball bearing	2	63	75.73.036	Hoe drive hub, outer	2
30	00.25.033	Packing ring	2	64	75.73.040	Short pointed tine	4
31	00.20.045	Washer	2	65	75.73.064	Jointer tine, left-hand	4
32	48 x 68 x 10 BAFGL	Radial Oil Seal	2	-	75.73.065	Jointer tine, right-hand	4
33	75.19.030	Sleeve	2	65	75.73.067	Deep tilling tine, left-hand	4
34	75.73.006	Cover disc	2	-	75.73.067	Deep tilling tine, right-hand	4

E 240A



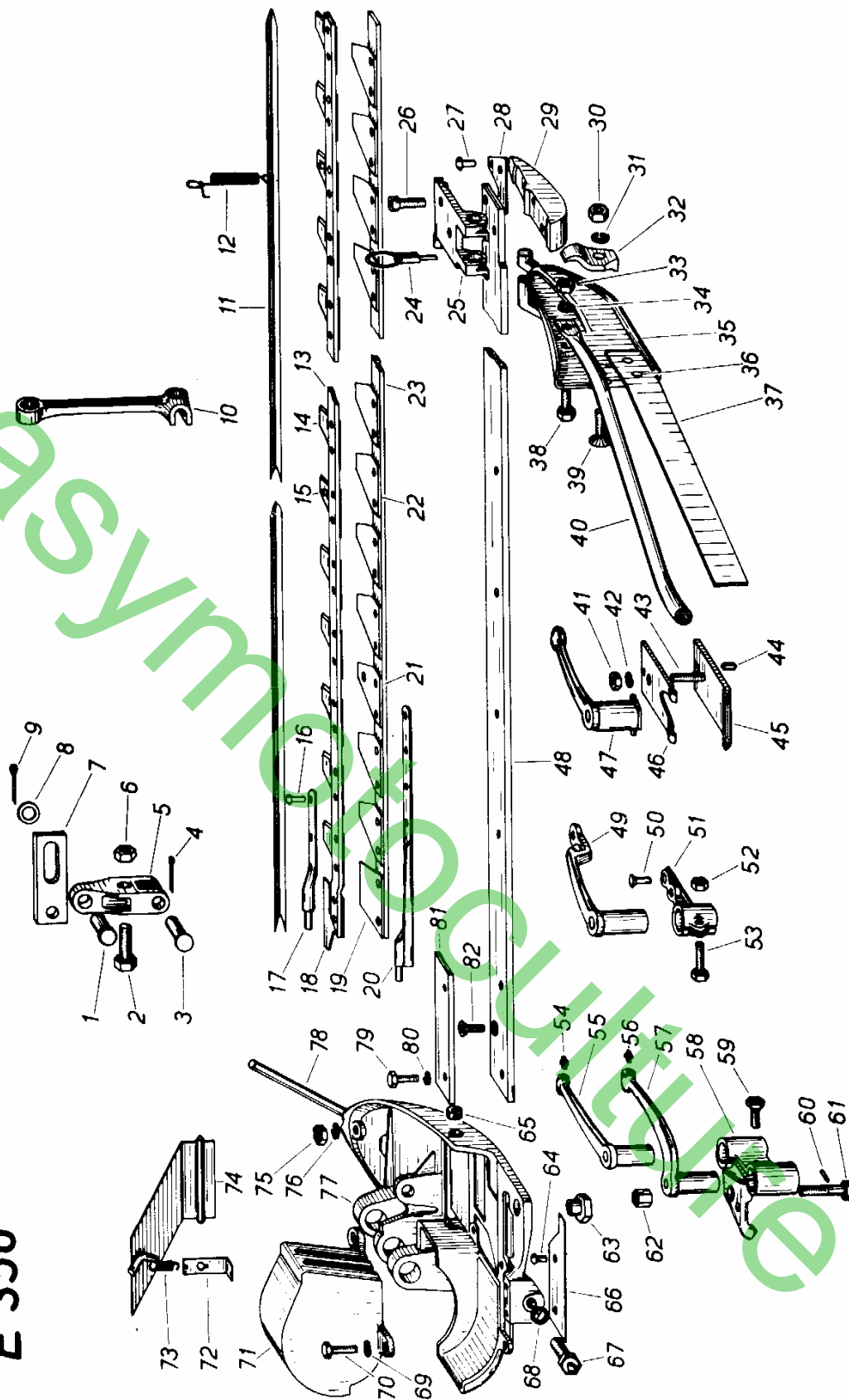
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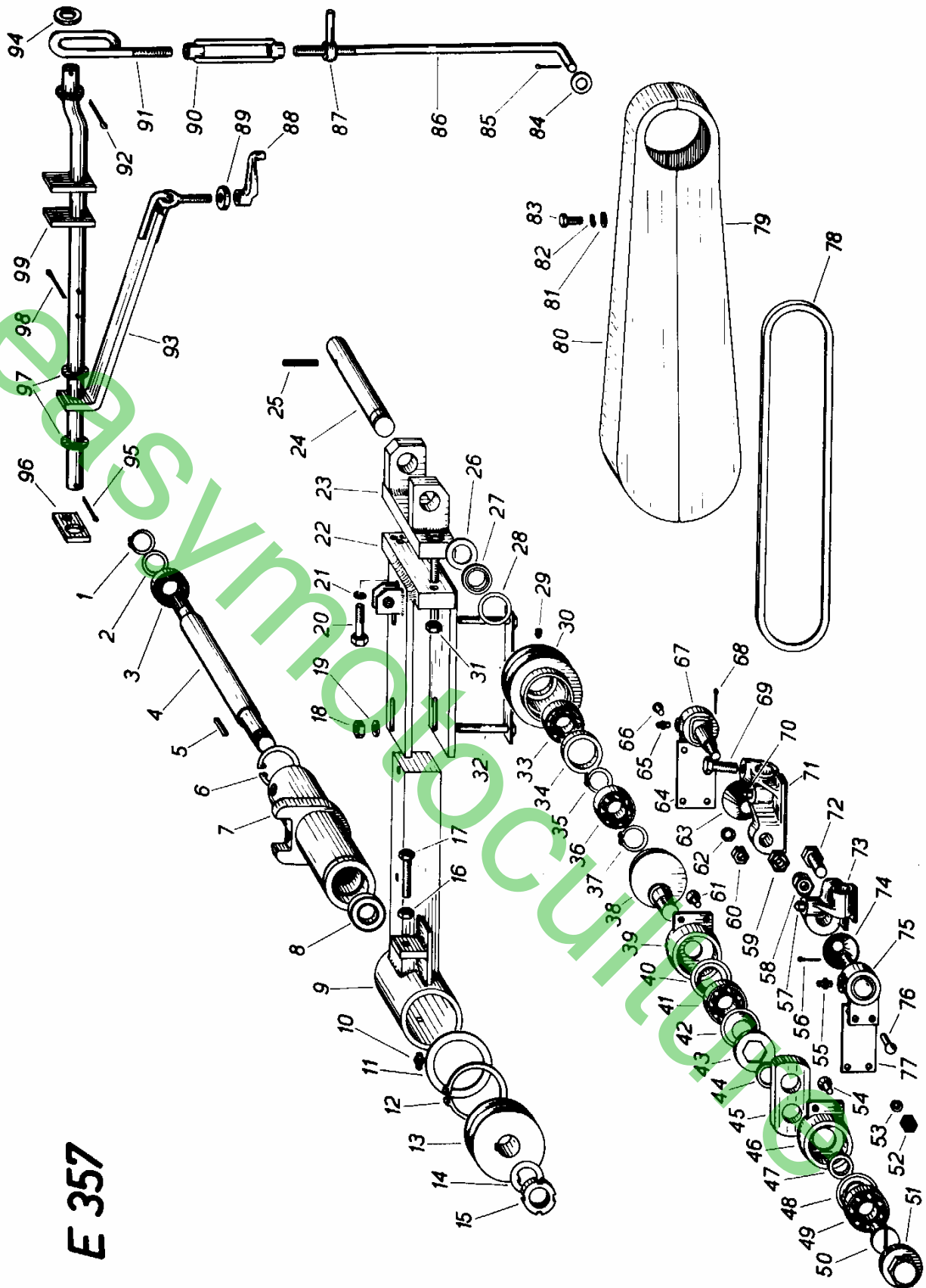
32" TWIN-BLADED ROTARY GRASS CUTTER				32" TWIN-BLADED ROTARY GRASS CUTTER			
E 241a/64				E 241a/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	D 6 DIN 3402	Grease nipple	2	41	B 12 DIN 127	Spring washer	2
2	16.77.043	Bearing bolt	2	42	M 12 DIN 934	Hexagon nut	2
3	16.77.042	Guide pulley	2	43	16.77.823	Lifting gear carrier complete	1
4	RNA 6901	Needle roller bearing without inner bush	2	44	16.77.064	Belt	2
5	22 DIN 1440	Washer	1	45	B 14 DIN 127	Spring washer	2
6	16.77.828	Guide roller bracket complete	1	46	M 14 x 1.5 DIN 936	Hexagon nut	2
7	M 6 x 15 DIN 933	Hexagon bolt	3	47	16.77.824	Lifting arm complete	1
8	M 6 x 12 DIN 933	Hexagon bolt	2	48	00.30.054	Torsion spring right	1
9	M 6 DIN 127	Spring washer	5	-	00.30.111	Torsion spring left	1
10	M 12 DIN 934	Hexagon nut	2	49	16.77.878	Latch, complete, right-hand	1
11	B 12 DIN 127	Spring washer	2	-	16.77.879	Latch, complete, left-hand	1
12	16.77.029	Bearing flange	2	50	15 DIN 125	Washer	2
13	M 8 DIN 934	Hexagon nut	4	51	3 x 20 DIN 94	Split pin	2
14	B 8 DIN 127	Spring washer	8	52	D 13 x M 10 DIN 99	Split pin	2
15	M 8 DIN 934	Hexagon nut	8	53	00.30.056	Taper handle	2
16	16.77.086	Hexagon screw	2	54	00.10.012	Coil spring	2
17	M 8 x 25 DIN 931	Currier blade	2	55	RNA 8901	Washer	1
18	B 8 DIN 127	Hexagon screw	2	56	16.77.101	Needle roller bearing without inner bush	1
19	16.77.026	Spring washer	2	57	16.77.043	Tensioning pulley	1
20	B 10 DIN 127	Currier hub	2	58	16.77.043	Bearing bolt	1
21	M 10 x 40 DIN 933	Spring washer	1	59	D 6 DIN 3402	Grease nipple	1
22	M 12 DIN 934	Hexagon screw	1	60	4 x 6.5 DIN 6888	Key	2
23	B 12 DIN 127	Hexagon nut	1	61	4 x 6.5 DIN 6888	Front belt cover complete	1
24	00.10.012	Washer	1	62	16.77.837	Tensioning spring	1
25	00.10.012	Washer	1	63	16.77.035	Washer	1
26	16.77.116	Grass trap plate	1	64	22 DIN 1440	Drawbolt	1
27	16.77.090	Swivel bolt	2	65	16.77.839	Drawbar complete	1
28	3 x 20 DIN 94	Split pin	2	66	16.77.829	Circlip	1
29	HK 2520	Needle roller sleeve	2	67	47 x 1.75 DIN 472	Circlip	1
30	SD 25 x 32 x 4	Needle roller keeper ring	2	68	25 x 1.2 DIN 471	Circlip	2
31	6 x 40 DIN 94	Split pin	2	69	6005 DIN 625	Grooved ball bearing	2
32	16.77.830	Rotary mower baseplate complete	1	70	16.77.031	Drive shaft	2
33	16.77.840	Grass deflector left complete	1	71	1.77.030	Belt pulley	2
34	16.77.839	Grass deflector right complete	1	72	15 DIN 125	Washer	2
35	13 DIN 125	Washer	2	73	B 14 DIN 127	Spring washer	2
36	M 12 x 65 DIN 931	Hexagon bolt	2	74	M 14 x 1.5 DIN 936	Hexagon nut	2
36A	3 x 20 DIN 94	Split pin	4	75	AM 8 x 1 DIN 71412	Ball-type grease nipple	2
37	15 DIN 125	Washer	4	76	16.77.846	Belt cover left, complete	1
37A	15 DIN 125	Washer	4	-	16.77.845	Belt cover right, complete	1
38	00.35.080	Coil spring	2	77	8.4 DIN 125	Washer	8
38A	16.77.057	Pivot bracket	2	78	M 8 x 25 DIN 931	Hexagon bolt	8
39	79.29.003	Wheel, complete, 150 x 30	2	79	12.5 x 2850	V-belt	1
40	13 DIN 125	Washer	2				

48" RECIPROCATING MOWER				E 356/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	14h 11 x 30 x 25 DIN 1454	Pin	1	38	M 8 x 20 DIN 933	Hexagon bolt	1
2	M 14 x 40 DIN 933	Hexagon bolt	1	39	M 10 x 30 DIN 608	Csk. screw with square end	1
3	GB 448-2	Pin	1	4	GB 1650 U	Swathe deflector tube	1
4	4 x 25 DIN 94	Split pin	1	41	M 10 DIN 936	Hexagon nut	4
5	GB 347-1	Lifting lever	1	42	B 10 DIN 127	Spring washer	2
6	M 14 DIN 934	Hexagon nut	1	43	GB 2613	Stud	2
7	16.77.178	Adjustment piece	1	44	GB 2618	Peg	2
8	14 DIN 1440	Washer	1	45	GB 2612	Lower spring	2
9	4 x 25 DIN 94	Split pin	1	46	GB 2611	Upper spring	2
10	GB 2640	Special wrench	1	47	GB 2810	Blade guide arm upper	2
11	GB 1909	Blade protecting strip complete	1	48	GB 14188	Beam carrier element	1
12	DME 1407 C	Upper blade compl. (parts 13 - 18)	1	49	GB 3670	Blade guide arm lower (centre of beam)	1
13	GB 12067	Blade backing strip, upper	1	-	GB 2820A	Blade guide arm lower (blade head end)	4
14	GB 2730	Blade cutter	13	50	9 x 35 DIN 661	Csk. rivet	2
15	GB 2731 U	Cutter with stud	2	51	GB 2722	Holder	2
16	GB 2717-1	Domed rivet for upper blade (6 x 23) csk.	1	52	M 8 DIN 934	Hexagon nut	2
17	GB 2717-2	ditto (6 x 26)	1	53	M 8 x 35 DIN 931	Hexagon bolt	1
18	GB 2717-3	ditto (6 x 30)	1	54	AM 8 x 1 DIN 71412	Ball type grease nipple	1
19	GB 2717-4	ditto (6 x 35)	1	55	GB 1823 U	Guide arm inner (with part 54)	1
20	GB 2717-5	ditto (6 x 14)	1	56	AM 8 x 1 DIN 71412	Ball type grease nipple	1
21	GB 2645	Blade head, upper	29	57	GB 1824 U	Guide arm outer (with part 56)	1
22	DME 1407 D	Blade head baseplate	1	58	GB 1822 AU	Holder complete (with part 59)	1
23	6 x 18 DIN 861	Lower blade compl. (parts 16, 19 - 23)	1	59	M 12 x 30 DIN 933	Hexagon bolt	1
24	6 x 11 DIN 861	Domed rivet for lower blade, csk.	1	60	3 x 12 DIN 1461	Pin	1
25	6 x 18 DIN 860	Domed rivet for lower blade, csk.	1	61	GB 1828	Hexagon bolt	1
26	GB 2717-5	Domed rivet for lower blade (6 x 14) csk.	2	62	BM 12 DIN 6390	Hexagon nut	1
27	GB 27029	Blade head plate	8	63	GB 1882	Bolt	1
28	GB 2659 B	Blade head, lower	29	64	7 x 26 DIN 661	Csk. rivet	1
29	GB 2731 U	Blade cutter with stud	1	-	7 x 22 DIN 661	Csk. rivet	1
30	GB 2730	Blade cutter with extended stud	1	65	GB 1886	Adjusting screw	1
31	GB 2730	Blade cutter only	1	66	GB 1817	Shoe plate	1
32	GB 2730	Blade backing strip, lower	14	67	GB 1689 S	Hexagon bolt with peg	1
33	GB 12068	Folding safety catch pin	1	68	B 12 DIN 127	Spring washer	1
34	GB 1836	Coupling piece	1	69	B 8 DIN 127	Spring washer	1
35	5 x 38 DIN 661	Allen screw	1	70	M 8 x 20 DIN 933	Hexagon bolt	2
36	M 10 x 25 DIN 6912	Rivet	2	71	GB 1681	Protective cover	1
37	5 x 38 DIN 661	Rivet	2	72	GB 1688	Securing bracket	1
38	GB 6292-1 R	Plate for end cutter	1	73	GB 1687	Cover plate	1
39	M 10 DIN 934	Hexagon nut	1	74	GB 1685 S	Cover plate	1
40	B 10 DIN 127	Spring washer	1	75	M 12 DIN 934	Hexagon nut	1
41	GB 1852	Tube clamp	1	76	B 12 DIN 127	Spring washer	1
42	M 8 DIN 934	Hexagon nut	1	77	GB 1680	Inner shoe with shoe plate	1
43	B 8 DIN 127	Spring washer	1	78	GB 1590 U	Deflector complete (with parts 76 and 77)	1
44	GB 1837	Deflector mounting plate	1	79	M 10 x 30 DIN 931	Hexagon bolt	2
45	7 x 22 DIN 661	Rivet	1	80	B 10 DIN 127	Spring washer	2
46	GB 1838	Deflector blade	2	81	GB 1883	Mounting plate	1
47			1	82	M 10 x 20 DIN 7991	Csk. Allen screw	1

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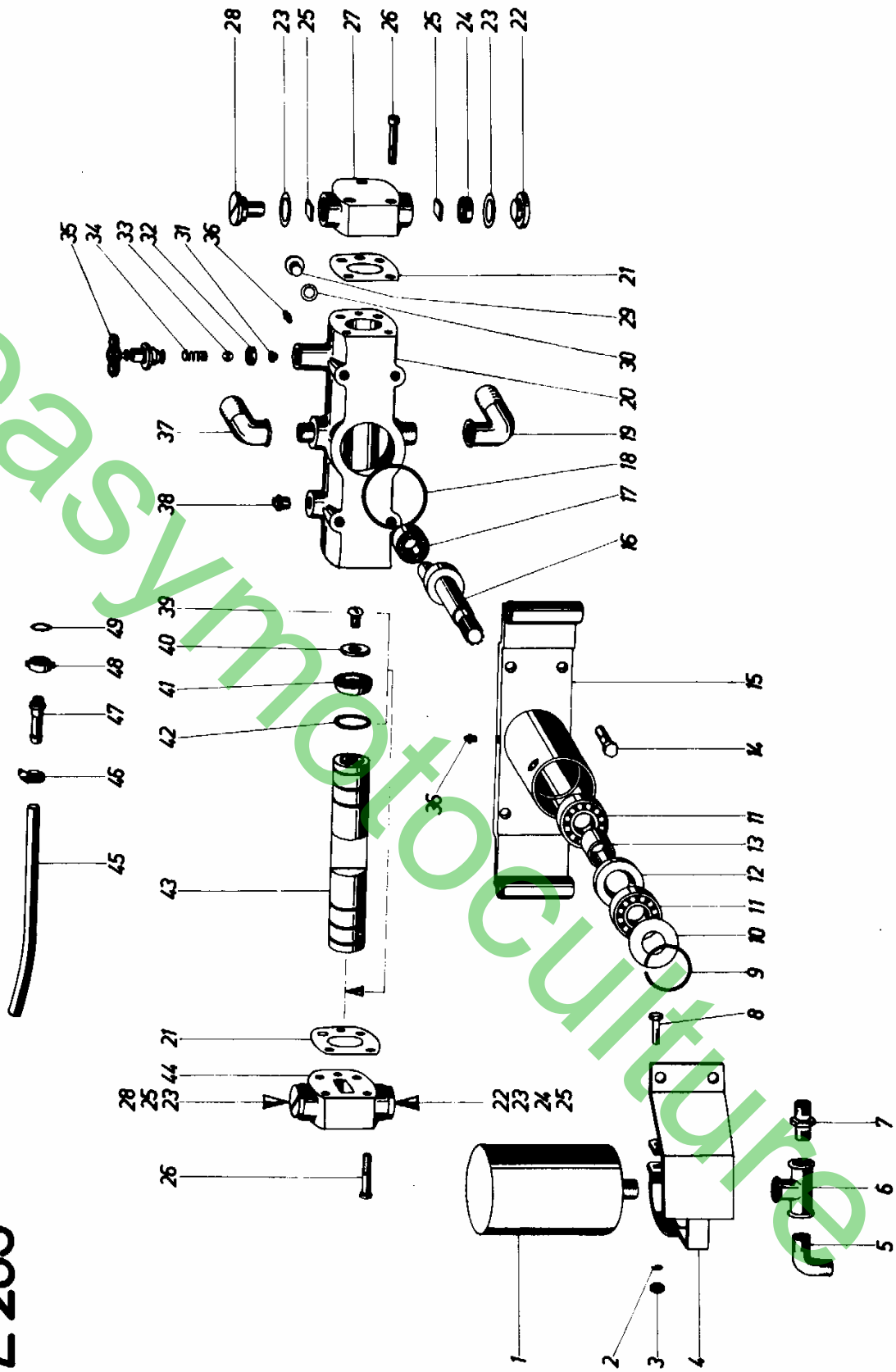
E 357



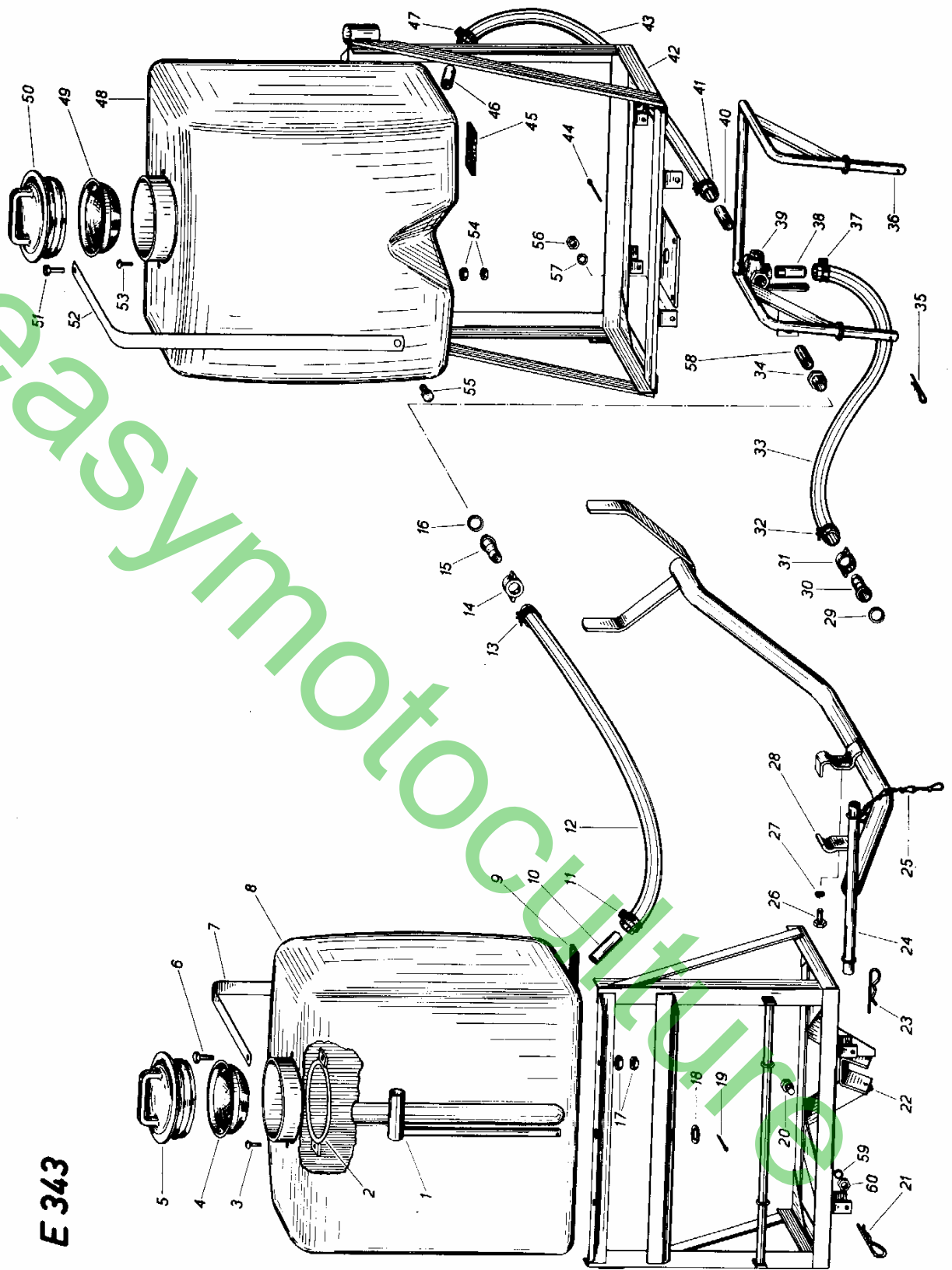
MOWER BLADE DRIVE				E 357/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	25 x 1.2 DIN 471	Circclip	1	52	M 8 DIN 934	Hexagon nut	2
2	75.44.016	Ring	1	53	B 8 DIN 127	Spring washer	2
3	6005 RS	Annular grooved ball bearing	1	54	GB 956	Screw	2
4	75.44.015	Belt drive shaft	1	55	BM 10 x 1 DIN 71412	Ball type grease nipple	1
5	8 x 7 x 32 DIN 6885	Key	1	56	3 x 28 DIN 94	Split pin	1
6	47 x 1.75 DIN 472	Circclip	1	57	GB 2616	Projecting stud	1
7	16.77.162	Outtrigger housing	1	58	M 14 x 1.5 DIN 937	Castellated nut	1
8	6005 RS	Annular grooved ball bearing	1	59	M 14 x 1.5 DIN 937	Castellated nut	1
9	16.77.894	Clamping bush	1	60	M 8 DIN 934	Hexagon nut	2
10	AM 8 x 1 DIN 71412	Grease nipple	1	61	GB 956	Screw	2
11	75.44.017	Ring	1	62	B 8 DIN 127	Spring washer	2
12	65 x 2.5 DIN 471	Circclip	1	63	GB 2671	Cover seal	1
13	16.77.282	V-belt pulley	1	64	GB 27027	Spring plate	1
14	24 DIN 462	Locking washer with internal protection	1	65	BM 10 x 1 DIN 71412	Ball type grease nipple	1
15	M 24 x 1.5 DIN 1304W	Splined nut	1	66	6 x 15 DIN 661	Csk. rivet	2
16	M 10 DIN 934	Hexagon nut	1	67	GB 933 U	Ball joint compl. (with parts 59, 63, 65 and 68)	1
17	M 10 x 50 DIN 933	Hexagon bolt	1	68	3 x 28 DIN 94	Split pin	1
18	M 10 DIN 934	Hexagon nut	4	69	GB 2676	Hexagon bolt	1
19	10.5 DIN 123	Washer	2	70	GB 2817	Projecting stud	1
20	M 10 x 40 DIN 931	Hexagon bolt	1	71	GB 2876	Rear centre section compl. (with parts 69 and 70)	1
21	B 10 DIN 127	Spring washer	1	72	GB 2774 U	Hexagon bolt	1
22	17.77.805	Outtrigger arm complete	1	73	GB 2772 U	Front centre section compl. (with parts 67 and 72)	1
23	17.77.807	Swivel bracket complete	1	74	GB 2671	Cover seal	1
24	GB 27023	Bearing shaft	1	75	GB 892 U	Ball joint compl. (with parts 55, 56, 58 and 74)	1
25	3 x 40 DIN 1481	Clamping sleeve	1	76	6 x 15 DIN 661	Csk. rivet	2
26	25 DIN 1440	Washer	1	77	GB 27027	Spring plate	1
27	GB 27026	Radial seal	1	78	9.5 x 1025	Duplex set of V-belts	2
28	AS 42	Pey multi-layer ring	1	79	16.77.274	Belt cover, lower half	1
29	M 6 x 8 DIN 563	Grub screw (pointed)	1	80	16.77.273	Belt cover, upper half	1
30	GB 27024	V-belt pulley	1	81	8.4 DIN 125	Washer	4
31	M 10 934	Hexagon nut	1	82	B 8 DIN 127	Spring washer	4
32	17.77.806	Plug-in bolt set	1	83	M 8 x 15 DIN 933	Hexagon bolt	1
33	6205 DIN 625	Grooved ball bearing	1	84	13 DIN 125	Washer	1
34	GB 27025	Spacer bush	1	85	4 x 25 DIN 94	Split pin	1
35	A 25 x 1.2 DIN 471	Circclip	1	86	16.77.192	Lifting rod	1
36	6205 DIN 625	Grooved ball bearing	1	87	16.77.185	Hand grip	1
37	A 25 x 1.2 DIN 471	Circclip	1	88	BM 52507	Shaft crank	1
38	GB 27021	Shaft flange	1	89	BM 62506	Washer	1
39	GB 27022	Shaft bearing housing	1	90	BM 12 x 125 DIN 1480	Timbuckle	1
40	6205 IV	Nilox ring	1	91	16.77.184	Lifting shaft end loop	1
41	6205 DIN 625	Annular grooved ball bearing	1	92	5 x 30 DIN 94	Split pin	1
42	6205 IV	Nilox ring	1	93	17.77.810	Securing bracket compl.	1
43	GB 2603	Spiral cut ring	1	94	21 DIN 125	Washer	1
44	GB 2604	Spacing bush (set = 4 off)	1	95	5 x 30 DIN 94	Split pin	1
45	GB 2605A	Shaft mounting	1	96	16.77.171	Screw-on plate	1
46	GB 27022	Shaft bearing housing	1	97	21 DIN 125	Washer	2
47	GB 2606	Spacing bush	1	98	5 x 30 DIN 94	Split pin	2
48	6206 IV	Nilox ring	1	99	16.77.866	Lifting arm compl.	1
49	6206 DIN 625	Annular grooved ball bearing	1				
50	GB 2807	Shaft end screw	1				
51	GB 2808	Cover	1				

TWIN-PISTON HIGH PRESSURE PUMP				E 265/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	16.99.832	Air reservoir complete	1	28	16.99.125	Valve cap, upper 35 x 31.5, threaded M 25 x 1.5	7
2	B 8 DIN 127	Spring washer	1	29	16.99.126	Overflow plug 20 mm dia. x 10 thr. M 14	1
3	M 8 DIN 934	Hexagon nut	1	30	00.23.144	Paper washer 14 x 20 x 0.5	1
4	16.99.831	Air reservoir clamp	1	31	16.99.127	Pressure relief plunger	1
5	00.23.071	Long pipe bend threaded 1/2" ext.	1	32	16.99.128	Pressure limiter 1/2" x 6.5	1
6	00.23.073	T-piece 1/2" int. thread	1	33	00.23.145	Pressure relief ball 12 mm dia.	1
7	00.23.074	Double nipple, 1/2" ext. thread	1	34	00.23.146	Pressure relief spring 13 mm dia. x 20	1
8	M 8 x 35 DIN 931	Hexagon bolt	1	35	00.23.147	Pressure control wheel	1
9	52 dia. x 2.5	Spring ring	1	36	G 8 DIN 3402	Grease nipple	2
10	16.99.116	Cover disc 25.5/32 mm dia. x 1	1	37	00.23.149	Bend, thr. 1/2" int. + 1/2" ext.	1
11	6205 DIN 625	Ball bearing	2	38	00.23.072	Plug, 1/2"	1
12	30 x 52 x 10 B16g DIN 6503	Radial seal	1	39	M 10 x 15 DIN 98	Domed-head screw	2
13	16.99.117	Spacer bush 25/30 dia. x 25 mm	1	40	16.99.129	Washer 10 x 30 x 3	2
14	M 12 x 25 DIN 931	Hexagon bolt	1	41	T 35 x 21 x 8 x 2.5	Pump barrel cup washer	2
15	16.99.118	Flange housing	1	42	29 x 35 x 3	O-ring	6
16	16.99.119	Cam	1	43	16.99.130	Double piston, tapped holes, 35 mm dia. x 210 mm	1
17	4203	Grooved ball bearing	1	44	16.99.131	Valve body	1
18	00.23.141	Packing ring 3 mm dia. x 225	1	45	00.23.161	Pressure pipe 16/17.5 mm dia. x 300 mm	1
19	00.23.077	Bend, threaded 1/2" int. + 1/2" ext.	1	46	00.23.098	Hose clip 15 - 21 mm dia.	2
20	16.99.120	Pump housing with unions	1	47	00.23.052	Hose nozzle	2
21	00.23.142	Valve chest paper gasket 62 x 70 x 0.5 mm	2	48	00.23.053	Cap nut, threaded 1/2"	2
22	16.99.121	Lower valve cap 35 mm dia. x 13, threaded M 25 x 1.5	2	49	00.23.054	Leather sealing ring 12 x 18 mm dia. x 2	2
23	00.23.143	Paper washer 25 x 30 x 0.5 mm	4				
24	16.99.122	Valve insert M 25 x 1	2				
25	16.99.123	Valve tappet 15 x 15 x 3	4				
26	M 8 x 45 DIN 912	Imbus screw	6				
27	16.99.124	Valve body	1				

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E 343



SPRAY TANKS (FRONT and REAR)			E 343/64
Symbol No.	Part No.	Description	Qty
1	16.99.823	Mounting bracket front complete	1
2	16.99.877	Filter mount complete	1
3	M 5 x 15 DIN 84	Round-headed screw	2
4	16.99.134	Filter sieve, 160 mm dia.	1
5	16.99.135	Filter cap, 160 mm dia.	1
6	M 8 x 35 DIN 933	Hexagon bolt	2
7	16.99.136	Retaining strap	2
8	16.99.243	50 litre (11 gall.) tank	1
9	50.16.006	Underlay strip	6
10	16.99.139	Outlet pipe	1
11	00.23.078	Hose clip 26 - 29 mm dia.	1
12	00.23.164	Outlet hose incl. dia. 18 mm, 2600 mm long	1
13	00.23.078	Hose clip 26 - 29 mm dia.	1
14	00.23.082	Cap nut, ¾"	1
15	00.23.081	Hose nozzle, incl. dia. 15 mm	1
16	00.23.083	Sealing ring 18/24 mm dia. x 2	1
17	M 8 DIN 934	Hexagon nut	4
18	17 DIN 125	Washer	1
19	3 x 25 DIN 94	Split pin	2
20	M 8 x 15 DIN 933	Hexagon bolt	2
21	701.73.440	Split pin	1
22	16.99.873	Tank frame complete	1
23	701.73.440	Split pin	1
24	16.99.839	Frame carrier	1
25	84.49.063	6 link chain, 170 mm long	1
26	M 10 x 35 DIN 933	Hexagon bolt	1
27	B 10 DIN 127	Spring washer	1
28	16.99.090	Spring clip, right	1
29	00.23.083	Sealing ring 18/24 mm dia. x 2	1
30	00.23.081	Nozzle, incl. dia. 15 mm	1
31	00.23.082	Cap nut, ¾"	1
32	00.23.078	Hose clip 26 - 29 mm dia.	1
33	00.23.164	Hose, 600 mm long x 18 mm incl. dia.	1
34	00.23.084	Reduction union, ¾" - ½"	1
35	701.73.440	Split pin	2
36	16.99.827	Main carrier complete	1

SPRAY TANKS (FRONT and REAR)			E 343/64
Symbol No.	Part No.	Description	Qty.
37	00.23.078	Hose clip 26-29 mm	1
38	00.23.079	Half double nipple, $\frac{1}{2}$ "	1
39	00.23.802	Conical 3-way tap, $\frac{1}{2}$ ", with square-ended key	1
-	00.23.029	Square-ended key SW 14	1
40	00.23.079	Half double nipple, $\frac{1}{2}$ "	1
41	00.23.078	Hose clip 26-29 mm	1
42	16.99.872	Tank frame complete	1
43	00.23.164	Hose, 18 mm int. dia., 440 mm long	1
44	4 x 45 DIN 34	Split pin	2
45	50.16.006	Underlay strip	6
46	16.99.139	Outlet pipe	1
47	00.23.078	Hoseclip 26-29 mm	1
48	16.99.243	Tank, 50 litres cap. (11 gall.)	1
	16.99.877	Filter mount complete (as part No. 2)	1
49	16.99.134	Filter gauze 160 mm dia.	1
50	16.99.135	Tank cap 160 mm dia.	1
51	M 8 x 35 DIN 933	Hexagon bolt	2
52	16.99.136	Retaining strap	2
53	M 5 x 15 DIN 84	Cheese-head screw	2
54	M 8 DIN 934	Hexagon nut	4
55	M 8 x 15 DIN 933	Hexagon bolt	2
56	M 8 DIN 934	Hexagon nut	2
57	B 8 DIN 127	Spring washer	2
58	00.23.061	Threaded nipple, $\frac{1}{2}$ "	1
59	B 8 DIN 127	Spring washer	2
60	M 8 DIN 934	Hexagon nut	2

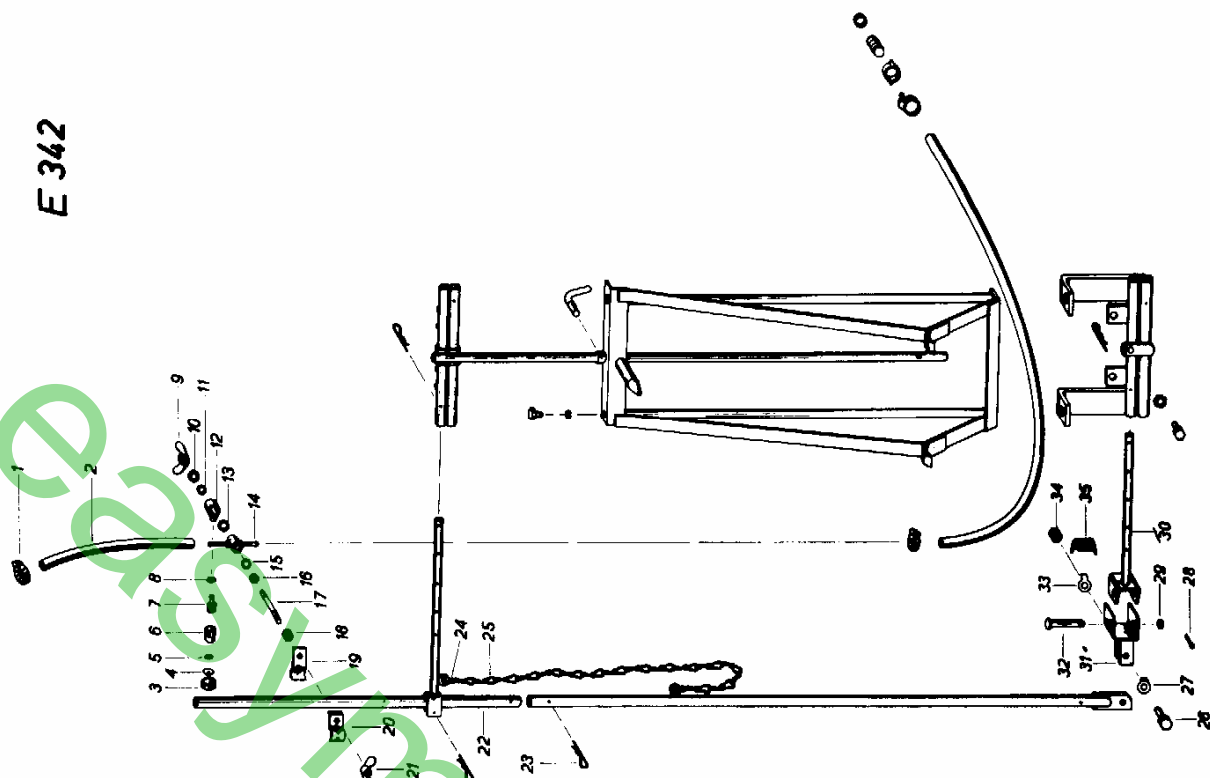
SPRAY UNIT (BASIC EQUIP. - NT) E 341/64

Symbol No.	Part No.	Description	Qty.
1	00.23.098	Hose clip 15/21 mm dia.	8
2	00.23.161	Pressure hose 10/17,5 mm dia. x 480 mm long	4
-	00.23.803	Swivel nozzle with 2 jets compl., comprising parts 3-21; part 14; nozzle holder, 2 jets	4
-	00.23.804	Swivel nozzle with single jet, compl., comprising parts 3-21; part 14a; nozzle holder, 1 jet	2
3	00.23.050	Cap nut	6
4	00.23.041	Jet disc, 1.2 mm dia.	6
5	00.23.039	Mipolan sealing ring, 9/14 mm dia. x 2	6
6	00.23.048	Jet body	6
7	00.23.049	Spinner body	6
8	00.23.047	Leather sealing ring, 10/15 mm dia. x 2	6
9	00.23.048	Wingnut	6
10	00.23.043	Mipolan sealing ring 10/15 mm dia. x 2	6
11	00.23.043	Swivel piece	6
12	00.23.046	Mipolan sealing ring, 8/17 mm dia. x 2	6
13	00.23.045	Swivel piece	6
14	00.23.044	Mipolan sealing ring, 13/19 mm dia. x 2	6
15	00.23.051	Nozzle holder, 1 jet	6
16	00.23.043	Nozzle holder, 2 jets	6
17	00.23.040	Mipolan sealing ring, 8/17 mm dia. x 2	4
18	00.23.040	Stud	4
19	00.23.057	Hexagon nut	2
20	00.23.058	Clip, flat	6
21	00.23.058	Clip with projection	6
22	00.23.058	Wingnut	6
23	00.23.058	Split pin	6
24	00.23.058	Upper runner	6
25	00.23.058	Extension tube complete	2
26	00.23.058	Split pin	2
27	00.23.058	Hexagon bolt	1
28	00.23.058	Tommy bar	1
29	00.23.058	Spring washer	2
30	00.23.058	Tommy bar	2
31	00.23.058	Spring washer	2
32	00.23.058	Tommy bar	2
33	00.23.058	Spring washer	2
34	00.23.058	Tommy bar	2
35	00.23.058	Spring washer	2
36	00.23.058	Tommy bar	2
37	00.23.058	Spring washer	2
38	00.23.058	Tommy bar	2
39	00.23.058	Spring washer	2
40	00.23.058	Tommy bar	2
41	00.23.058	Spring washer	2
42	00.23.058	Tommy bar	2
43	00.23.058	Spring washer	2
44	00.23.058	Tommy bar	2
45	00.23.058	Spring washer	2
46	00.23.058	Tommy bar	2
47	00.23.058	Spring washer	2
48	00.23.058	Tommy bar	2

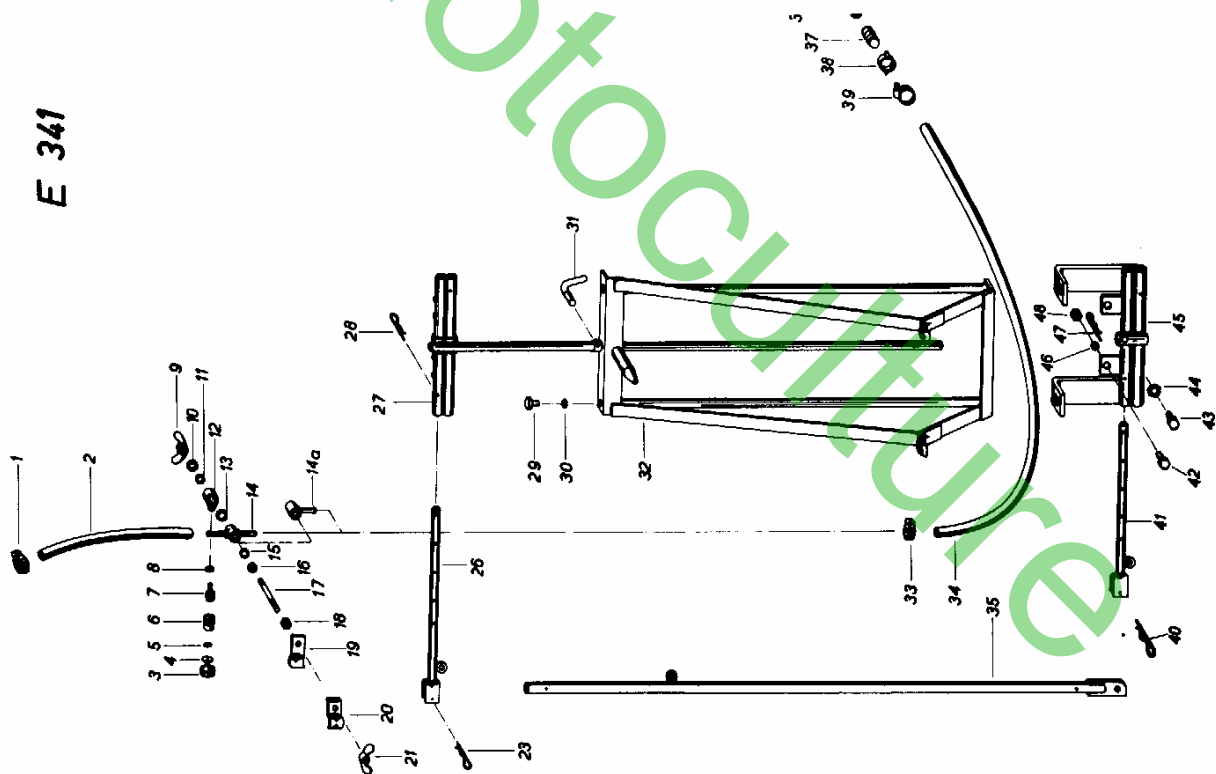
SPRAY UNIT - ACCESSORY KIT E 341/64

Symbol No.	Part No.	Description	Qty.
1	00.23.089	Hose clip 15/21 mm	4
2	00.23.161	Pressure hose 10/17,5 mm dia. x 480 mm long	2
-	00.23.803	Swivel nozzle with 2 jets compl. (parts 3-21)	2
3	00.23.050	Cap nut	2
4	00.23.041	Jet plate 1.2 mm dia.	2
5	00.23.039	Mipolan sealing ring 9/14 mm dia. x 2	2
6	00.23.048	Jet body	2
7	00.23.049	Spinner body	2
8	00.23.047	Leather sealing ring, 10/15 mm dia. x 2	2
9	00.23.048	Wingnut	2
10	00.23.043	Mipolan sealing ring 10/15 mm dia. x 2	2
11	00.23.043	Swivel piece	2
12	00.23.046	Mipolan sealing ring 8/17 mm dia. x 2	2
13	00.23.045	Swivel piece	2
14	00.23.044	Mipolan sealing ring 13/19 mm dia. x 2	2
15	00.23.043	Nozzle holder, 2 jets	2
16	00.23.043	Mipolan sealing ring, 8/17 mm dia. x 2	2
17	00.23.040	Stud	2
18	00.23.040	Hexagon nut	2
19	00.23.057	Clip, flat	2
20	00.23.058	Clip with projection	2
21	00.23.058	Wingnut	2
22	00.23.058	Extension	2
23	00.23.058	Split pin	2
24	00.23.058	Spring washer	2
25	00.23.058	Chain, type C	2
26	00.23.058	Hexagon bolt	2
27	00.23.058	Keeper plate	2
28	00.23.058	Split pin	2
29	00.23.058	Washer	2
30	00.23.058	Spring-loaded pivot	2
31	00.23.058	Outer pivot	2
32	00.23.058	Pivot pin	2
33	00.23.058	Keeper plate	2
34	00.23.058	Hexagon nut	2
35	00.23.058	Tension spring	2

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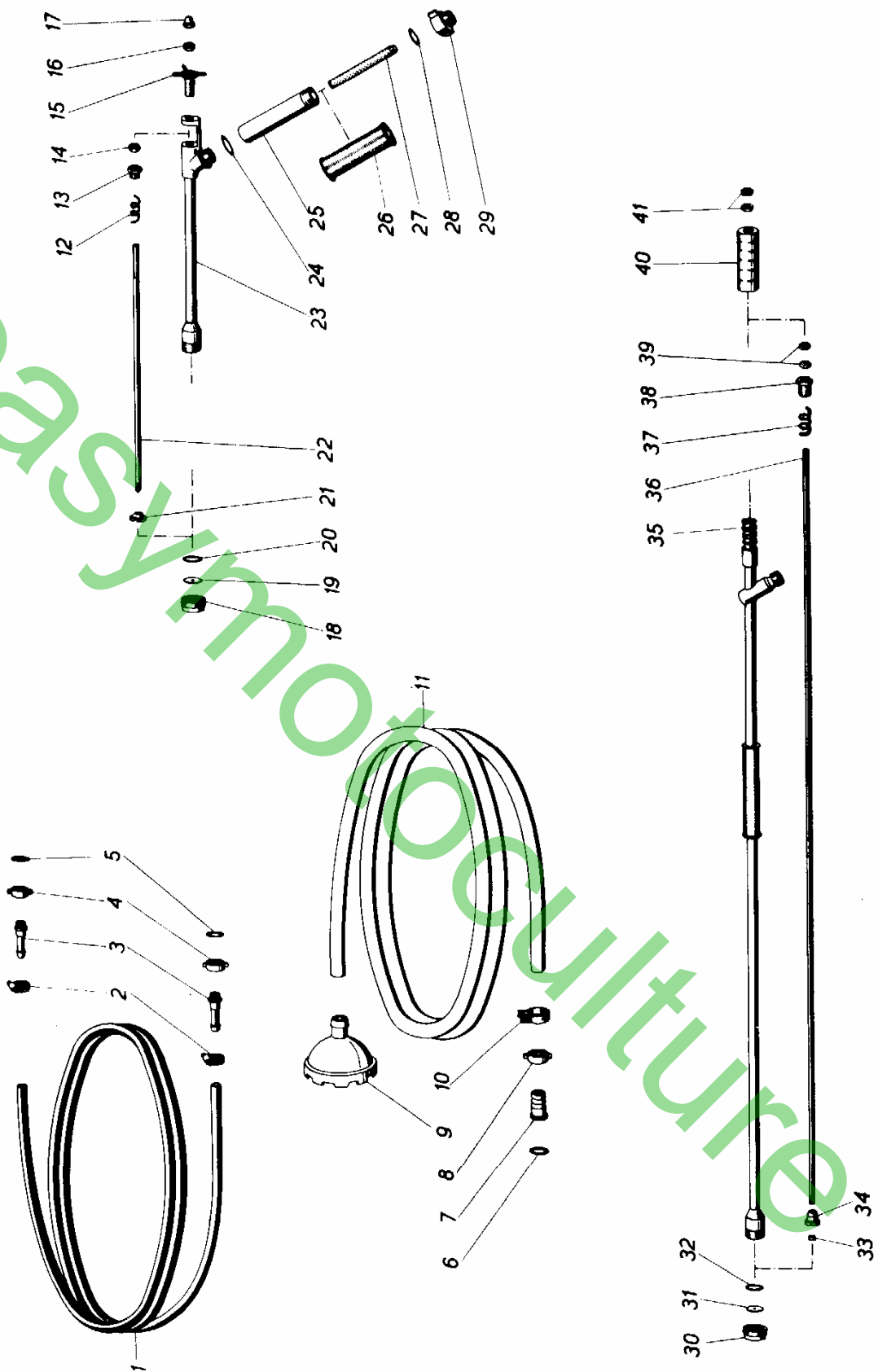


E 341

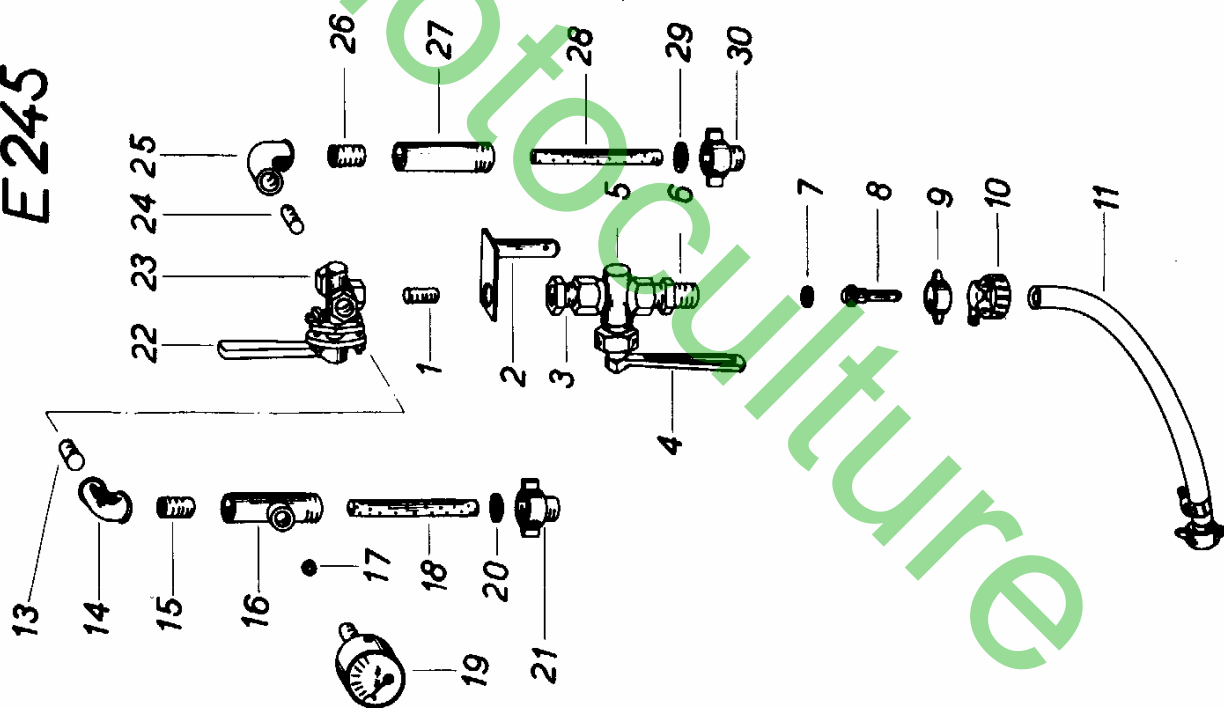


SPRAY UNIT FITTINGS				E 249A/64			
Symbol No.	Part No.	Description	Qty.	Symbol No.	Part No.	Description	Qty.
1	00.23.161	Pressure Hose	1	25	00.23.130	Filter sleeve, thr. $\frac{1}{8}$ " int., M24 x 1.5 ext.	1
2	00.23.098	Hose length, 10 mm x 10/17.5 mm dia.	2	26	00.23.129	Rubber hand grip $\frac{3}{4}$ "/28 mm dia. x 100 mm	1
3	00.23.052	Hose clip, 15-21 mm	2	27	00.23.066	Filter, thr. $\frac{1}{8}$ "	1
4	00.23.053	Nozzle for 10 mm hose	2	28	00.23.076	Sealing ring, 16/23 mm dia. x 3	1
5	00.23.054	Cap nut, $\frac{1}{8}$ " thread	2	29	00.23.065	Wingnut for filter, M 24 x R $\frac{1}{4}$ "	1
6	00.23.083	Sealing ring, 12/18 mm x 2	1	30	00.23.119	Cap nut, $\frac{1}{8}$ " thread	1
7	00.23.081	Outlet hose from Tank	1	31	00.23.130	Jet plate, 1.2 mm	1
8	00.23.082	Sealing ring 18/24 mm x 2	1	32	00.23.121	Sealing ring, 19/24 mm dia. x 2	1
9	00.23.818	Nozzle, 15 mm int. dia.	1	33	00.23.122	Plug	1
10	00.23.078	Cap nut, $\frac{1}{8}$ "	1	34	00.23.123	Spinner body	1
11	00.23.164	Intake orifice complete, 18 mm int. dia.	1	35	00.23.124	Gun tube with rubber hand grip	1
12	00.23.137	Hose clip, 28-29 mm	1	36	00.23.125	Jet rod	1
13	00.23.136	Hose, 18 x 2.5 x 3500 mm long	1	37	00.23.126	Plug packing, 3 mm dia. x 100 mm	1
14	M 5 DIN 934	Hand Spray Gun	1	38	00.23.127	Plug nut, $\frac{1}{8}$ " thread	1
15	00.23.135	Plug packing, 115 mm x 3 mm dia.	1	39	M 5 DIN 934	Hexagon nut	2
16	M 5 DIN 934	Plug nut, 3/8" thread	1	40	00.23.128	Adjusting handle	1
17	M 5 DIN 917	Hexagon nut	1	41	M 5 DIN 934	Hexagon bolt	2
18	00.23.119	Adjusting spindle, 3/8" thread	1				
19	00.23.120	Hexagon nut	1				
20	00.23.121	Cap nut, $\frac{1}{8}$ " thread	1				
21	00.23.134	Jet disc, 1.2 mm	1				
22	00.23.133	Sealing ring, 19/24 mm x 2	1				
23	00.23.132	Spinner body	1				
24	00.23.131	Jet rod	1				
		Gun body	1				
		Sealing ring 19/28 mm dia. x 2	1				

E 249 A



E245



E 245a/64

Symbol No.	Part No.	Description	Qty.
1	00.23.059	Nipple, threaded 3/8"	1
2	16.99.834	Control unit holder complete	1
3	00.23.062	Reducing union, 3/8" int., 1/2" ext.	1
4	00.23.013	Square-ended key, 12 mm	1
5	00.23.063	Friction tap with plug, 1/2"	1
6	00.23.1061	Double nipple, 1/2"	1
7	00.23.064	Leather sealing ring 12/18 x 2 mm	2
8	00.23.052	Nozzle for 10 mm hose	2
9	00.23.053	Cap nut, 1/2" thread	2
10	00.23.098	Hose clip 15/21 mm	2
11	00.23.161	Pressure hose, 10/17.5 x 1100 mm	1
13	00.23.059	Threaded nipple, 3/8"	1
14	00.23.060	Reducing bend, 3/8" int., 1/2" ext.	1
15	00.23.061	Threaded nipple 1/2"	1
16	00.23.067	Filter sleeve with brazed-on union	1
17	00.23.069	Leather sealing ring 4/10 x 2 mm	1
18	00.23.066	Filter gauze, threaded R 1/2"	1
19	00.23.068	Pressure gauge 0-40-80 at	1
20	00.23.076	Leather sealing ring 16/23 x 3 mm	1
21	00.23.065	Filter wingnut	1
22	00.23.068	Square-ended key, 8 mm	1
23	00.23.067	3-way tap with plug, 3 x 3/8"	1
24	00.23.059	Threaded nipple, 3/8"	1
25	00.23.060	Reducing bend, 3/8" int., 1/2" ext.	1
26	00.23.061	Threaded nipple 1/2"	1
27	00.23.064	Filter sleeve, thr. 24 mm ext., 1/2" int.	1
28	00.23.066	Filter gauze, threaded R 1/2"	1
29	00.23.076	Leather sealing ring, 16/23 x 3 mm	1
30	00.23.065	Filter wingnut	1

[illegible]



