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**DEUTSCHER MOWERS**

# DEUTSCHER XF480

OWNER'S MANUAL



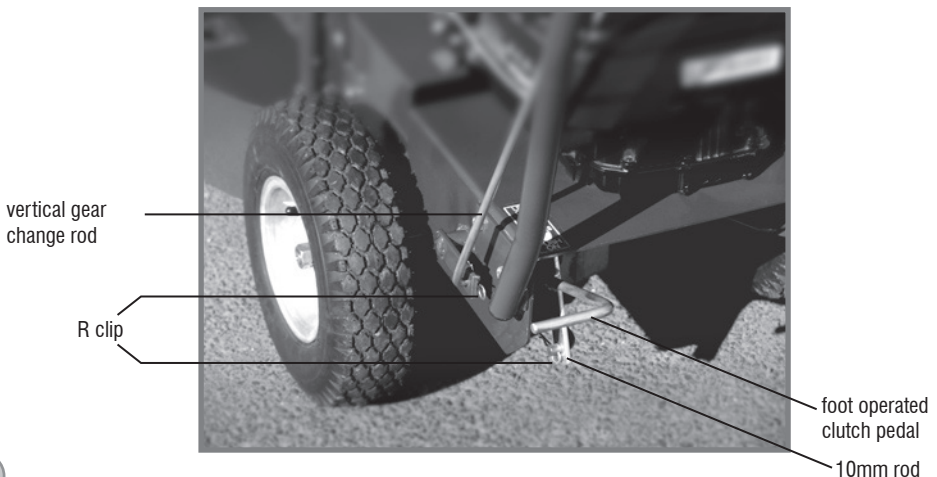
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## INITIAL ASSEMBLY

### ***(Tools Required: Two 13mm open-ended spanners)***

1. Remove the mower from the packaging and visually check for damage.
2. Raise the mower handle to its normal position until the holes in the plates at the bottom of the handles align with the holes in the engine mounting plate. Insert the 8mm x 20mm bolts in the two holes, attach nuts then tighten all four handle attachment bolts.
3. Insert the end of the vertical gear change rod on the left side of the handle through the hole in the short lever on the left side of the engine plate, then insert an R clip through the small hole in the end of the rod.
4. Raise the foot operated clutch pedal and insert the end of the 10mm rod under the engine plate into the hole in the end of the clutch pedal lever. Insert an R clip into the hole in the end of the rod.
5. Thread the mower cord through the guide on the righthand handle.



# SAFETY INSTRUCTIONS



1. Know your controls. Read the owners manuals thoroughly. Learn how to stop the engine quickly in an emergency.
2. Inspect the area to be mown, remove all debris and obstacles that may be in the path of the mower. Do not attempt to shift obstacles while engine is running.
3. To avoid sunburn, apply sunscreen; wear appropriate clothing, a hat and sunglasses.
4. **Damaged blades and worn bolts are major hazards.** Before starting, always visually inspect to see that blades, blade bolts and cutter assemblies are not worn or damaged. Replace worn or damaged blades and bolts in sets top preserve balance.
5. Do not allow children or people unfamiliar with these instructions to use the mower.
6. With prolonged use, hearing protection should be worn.
7. Never mow while barefoot or wearing open sandals or thongs. Wear long trousers and heavy duty shoes.
8. It is advisable to wear suitable eye protection when operating the mower.
9. Refuel outdoors only, well clear of any sources of ignition, including pilot lights on gas appliances. Do not smoke while refuelling engine. Add fuel before starting the engine. Never remove the fuel tank cap or add petrol while the engine is running or while the engine is hot. If petrol is spilled, do not attempt to start the engine but move the machine away from the area of the spill and avoid creating any source of ignition until the petrol vapours have dissipated.
10. Before starting the engine, ensure blades are disengaged by checking that the foot pedal is in its highest position.
11. Start the mower carefully according to instructions. Keep feet well away from the blades and do not stand in front of the discharge chute.
12. Never mow while people or pets are nearby.
13. Mow only in daylight. Stay alert for holes in the terrain and other hidden hazards.
14. Keep bystanders away from the mower when it is operating.
15. Avoid operating the equipment in wet grass, where feasible.
16. Do not put hands and feet near or under rotating parts. Keep clear of the discharge opening at all times.
17. Never pick up or carry a mower while the engine is running.
18. Use extreme caution when reversing or pulling mower towards you.
19. Do not carry passengers.
20. Walk, never run.

## 21. SLOPES

- Do not mow excessively steep slopes.
- Exercise extreme caution when on slopes.
- Mow across the face of slopes, never up and down and exercise extreme caution when changing direction on slopes.
- Never leave the mower unattended on a slope.

22. Normally start mowing in low gear until you are sure of the speed needed for the task.

23. Stop the blades when crossing surfaces other than grass and when transporting the mower to and from the area to be mowed.

24. Do not operate the engine in a confined space where dangerous fumes can collect.

25. Stop the engine before refuelling and whenever you leave the mower.

26. Watch out for traffic when crossing or near roadways.

## 27. STOP THE ENGINE AND DISCONNECT THE SPARK-PLUG LEAD

- Before clearing blockages or unclogging chute:
- Before checking, cleaning or working on the mower:
- After striking a foreign object. (Inspect the mower for damage and make repairs before restarting and operating the mower).
- If mower starts to vibrate abnormally, stop the engine immediately.

## 28. STORAGE SAFETY

- Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- Do not use pressure-cleaning equipment.
- Never store the equipment with petrol in the tank inside a building where fumes can reach an open flame or spark.
- Allow the engine to cool before storing in any enclosure.
- To reduce fire hazard, keep the engine, muffler and petrol storage area free of grass, leaves, or excessive grease.
- If the fuel tank has to be drained, do this out-doors and away from sources of ignition.
- Store fuel in a cool place in a designated fuel container. Metal containers are preferred and only plastic containers specifically designed for holding fuel are suitable.
- Turn fuel tap off when storing the mower.

## 29. MAINTENANCE SAFETY

- Replace worn or damaged parts for safety, especially the blades.
- Replace faulty muffler.
- Do not change the engine governor settings or over speed the engine. Operating an engine at excessive speed can increase the hazard to personal injury.
- Be careful during adjustment of the mower to prevent entrapment of the fingers between moving blades and fixed parts of the mower.

***Do not modify this mower in any way, or use the mower without shields or guards in place. They are for your protection!***

# SPECIFICATIONS & CONTROLS

## SPECIFICATIONS

### MODEL No:

**36218** XF480 with 850 series Briggs and Stratton engine.

**36216** XF480 with a GSV190 Honda engine.

Consult engine owners manual for engine specifications.

### TRANSAXLE:

High and Low gear plus a differential is incorporated in the transaxle. A clutch lever to engage and disengage the drive belt is positioned on the right hand handle. A gear change lever is provided on the left side of the control panel.

### MOWER SPEED:

Low gear: 2.9 kph @ 3000rpm.

High gear: 4.2 kph @ 3000rpm.

### TYRES:

Rear: 410 –350 - 6      Pressure, 25psi

Front: 170 dia          Solid rubber tyre

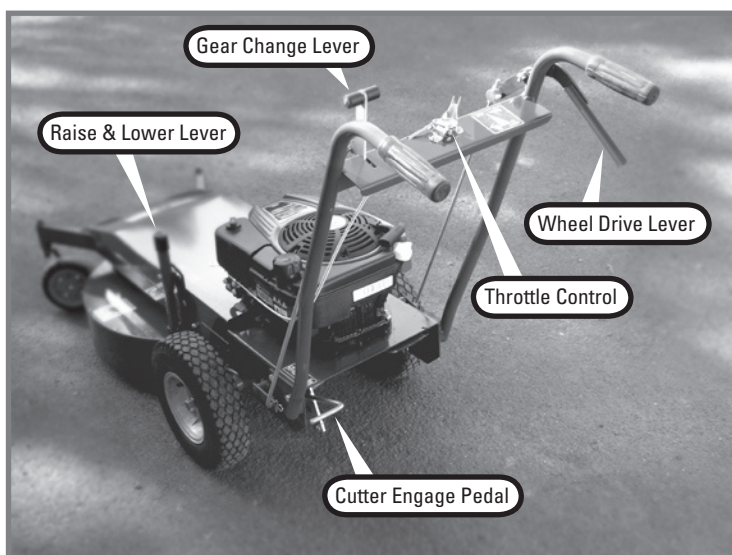
### CUTTING HEAD:

480mm cut, 2 x blades, 7 cutting height positions from 22mm- 75mm.

### DIMENSIONS:

Length:1620 mm, Width 550 mm, Height: 965 mm, Weight:73 kg

## CONTROLS



## PRE-START CHECK:

**Ensure engine oil is at the correct level before starting. See engine manual for instructions. Your Deutscher Mower comes to you with the transmission filled with oil.**

- Use fresh unleaded petrol. Do not mix oil with petrol.
- Read all safety instructions and know how to stop the engine quickly in any emergency.
- Know your controls – Where they are and their function

## STARTING AND STOPPING:

**TO START THE ENGINE:** First ensure the blades are disengaged. (Pedal up) and the fuel tap is turned on.

- When engine is cold, move the throttle lever to the FAST position.
- When engine is hot, move throttle lever to mid throttle position.
- Slowly pull the starter cord until the starter pawls engage and the rope stops, then pull with sufficient force to overcome the engine compression. Lower the cord back to the guide on the mower handle.
- Once the engine is running, move the throttle lever to the desired operating position.

**TO STOP THE ENGINE:**

- Push the throttle lever to the STOP position.

## OPERATING:

With the mower on relatively level ground and the area clear of bystanders and debris.

- **Engaging cutters:** With the engine running at fast speed, slowly push down on the “cutter engagement pedal” with your left foot.
- **Selecting forward speed:** With the cutters engaged and no pressure on the clutch lever on the right handle, pull backwards on the “gear change lever” to select slow speed, to the centre for “neutral” speed or forward for high speed. If the gear does not engage easily, move the mower forward a short distance while applying light pressure on the lever.
- **Selecting height:** Stand to the left of the mower handle and keep your feet well clear of the mowing deck. Lift the “Raise and Lower” lever and move it to the desired height setting. ( Fully back towards the rear of the mower for mowing long grass.) Release the lever and ensure the pin engages in one of the slots in the quadrant.
- **Adjusting the throttle control to the desired position:** Best cutting is achieved at a high throttle setting and slow forward speed, but to minimise cutting time the fast forward speed may be selected.
- **Driving forward:** Once the appropriate gear is selected, slowly squeeze the lever on the right handle and the mower will move. If the drive is slipping on steep slopes, the nuts on the wheel drive rod can be adjusted. (See Maintenance section).
- **Moving backwards:** Warning, be very careful of your footing when pulling the mower backwards. Release the clutch lever on the right handle and pull backwards slowly. This is much easier with the gear lever set to neutral.
- **Warning:** Never leave the mower running whilst unattended. Always turn off the mower to clear debris or check the mower.

# MOWING AND TRANSPORTING

## MOWING ON SLOPES:

- Reduce speed on slopes and in sharp turns to prevent overturning and loss of control. Mow across the face of slopes, never up and down.
- Maintain a firm grip on the handles, as the mower will run away if released.
- Wear suitable boots for the terrain. Do not continue mowing if you are slipping while walking. Exercise extreme caution if the grass is damp.
- Do not mow an area with a slope greater than 12 degrees to the horizontal.
- Be extremely cautious when pulling the mower backwards. This is particularly important on slopes. Wear strong non-slip footwear and keep well back from the mower.
- Never leave the mower parked on a slope. This applies even if you leave the mower for an instant.

## TRANSPORTING

Always turn the fuel tap off when transporting.

It is easier to transport the mower in a trailer, using ramps to drive the mower into position. Select “low” gear and a low throttle setting when driving up ramps. Ensure the ramps are not too steep or slippery. Firmly tie the mower in position once it is in the trailer.

The XF480 mower will fit in the back of a family sized station wagon, with the handle folded down. Never attempt to lift the mower on your own, and always secure the mower from moving once it is in place.

## TO FOLD THE HANDLE:

- Remove the rear handle attachment bolts on each side of the engine mounting plate,
- Withdraw the clip from the lower end of the gear change lever control rod, and move the rod clear of the lower lever.
- Disengage the starting cord from the guide on the right hand handle and allow the starting handle to withdraw to the engine cover.
- Loosen the front two handle attachment bolts while holding the handle to prevent it falling.
- Fold the handle forward. Ensure that the handle clears the “raise and lower” lever as it is lowered onto the front cover. Place a rag or other soft material under the handle if you wish to protect the paint on the front cover.

# MAINTENANCE

Part	Task	Frequency		
		8 hrs	20 hrs	100 hrs
Engine	Refer to Engine Manual			
Transaxle	Check oil level		X	
Cutter spindle	Check sealed bearings			X
King pins	Oil	X		
Raise & lower frame slides	Grease		X	
Blades and drive belts	Check, replace if necessary		X	
Clutch control linkages	Oil	X		
Height control linkages	Oil	X		
Throttle cable	Oil	X		

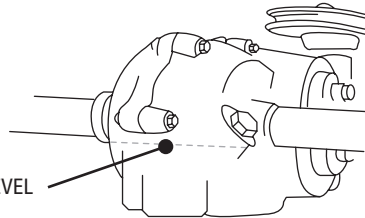
Note: If ABNORMAL NOISES OR VIBRATIONS ARE HEARD OR OBSERVED, STOP THE MOWER AND CHECK IMMEDIATELY. DO NOT WAIT FOR THE NEXT SCHEDULED SERVICE

## GEARBOX

Use gear oil 85W140

Capacity = 750ml

FILL GEAR BOX TO THIS LEVEL



## KING PINS: FRONT WHEELS

Oil every 8 hours, by applying a few drops of oil on the upper and lower bronze bushes.

## TRANSAXLE BELT ADJUSTMENT:

When adjusting the belts ensure the mower is turned off and the spark plug lead removed.

Ensure the engine is not hot, to avoid contact with hot surfaces.

Remove the top cover so you have access to both cutter & transmission belt.

Check the tension on the transaxle belt with the hand clutch engaged.

To adjust the belt, loosen the bolt that holds the idler pulley (pt no 1518) to the Clutch pivot plate (pt no 3526) and move the pulley along the slot in the pivot plate and re-tighten the centre bolt.

Run & test your mower to ensure you have the belt tight enough to drive the mower and will not drive when lever is released.

To test the drive, simply start the engine on level ground, put the gear lever into "low" speed and try holding the mower back while slowly squeezing the drive lever on the right handle. If the drive still slips, slightly more adjustment may be needed.



- Before any inspection or replacements of the belts and associated parts turn engine off and remove the spark plug lead from the spark plug.
- Be careful during adjustment of the mower to prevent entrapment of the fingers between blades, pulley's and fixed parts of the mower.
- Only replace the spark plug lead once all adjustments are completed and guards are replaced.



### Transaxle Belt Replacement

When replacing the belts ensure the mower is turned off and the spark plug lead removed. Ensure the engine is not hot, to avoid contact with hot surfaces.

Remove the top cover by removing the 4 screws.

Loosen the centre bolt on the idler pulley and move the pulley along the slot so the belt is loose.

Remove the old belt and replace belt (pt no 1579) ensuring the belt is around the pulleys and inside the guide pins.

Move pulley along the slot until the correct tension is achieved so the mower drives when engaged and stops when disengaged.

Refit top cover and fit lead to spark plug. Run and test.

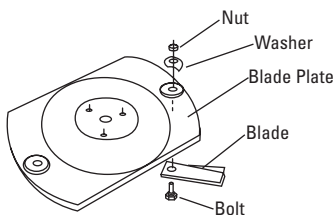
### CUTTER BELT: REPLACEMENT, including BLADE BRAKE ADJUSTMENT

(Tools required...2 x 18mm open ended spanners, 2 x 11mm open ended spanners, 1 x phillips head screwdriver. )

- To replace the cutter belt, first remove the top cover. Next ensure that the drive belt is disengaged, by raising the foot pedal on the rear of the mower.
- Fully loosen the front 1/4" nut on the blade brake rod alongside the left rail of the mower.
- Loosen the two large 12mm nuts on the threaded rod attached to the cutter spindle. Wind the nuts by hand on the threaded rod to allow the cutter deck to be pushed fully back in its slides.
- Remove the transaxle drive belt as described above.
- Install a new blade drive belt and then replace the transaxle drive belt.
- Readjust the two 12mm nuts by hand tightening them, engaging the blade drive foot pedal and checking the belt tension. The easiest way to test the tension is to squeeze the belt together somewhere near the centre between the two pulleys. The belt should only move in about 15mm on each side.
- Securely lock the two 12mm nuts.
- Re-adjust the blade brake rod by engaging the clutch and moving the brake pad so it is 1-2 mm clear of the spindle pulley. Tighten the 1/4" nuts.
- Test run the mower, keeping well clear of the drive belts. Ensure that the blade brake operates when the blade drive clutch is disengaged.

### BLADES

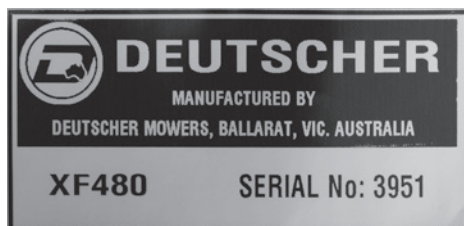
- It is important that you visually inspect the blades, bolts and nuts to ensure that they are in a safe operating condition; this should be done before each mowing period.
- Always replace blades and bolts in kit form to prevent any vibration that may damage the mower and cause personal injury.



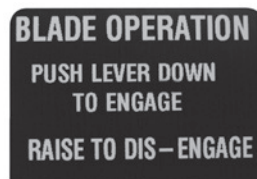
## MOWER DECALS



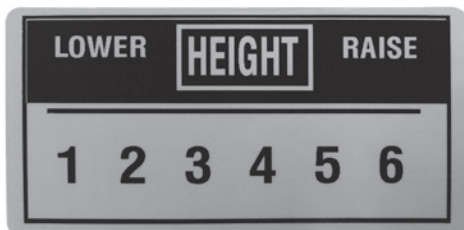
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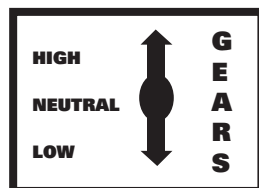
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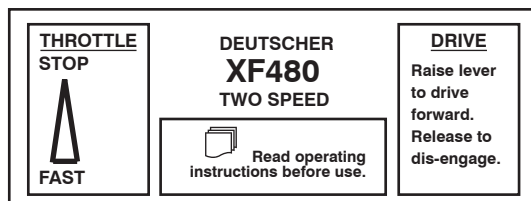
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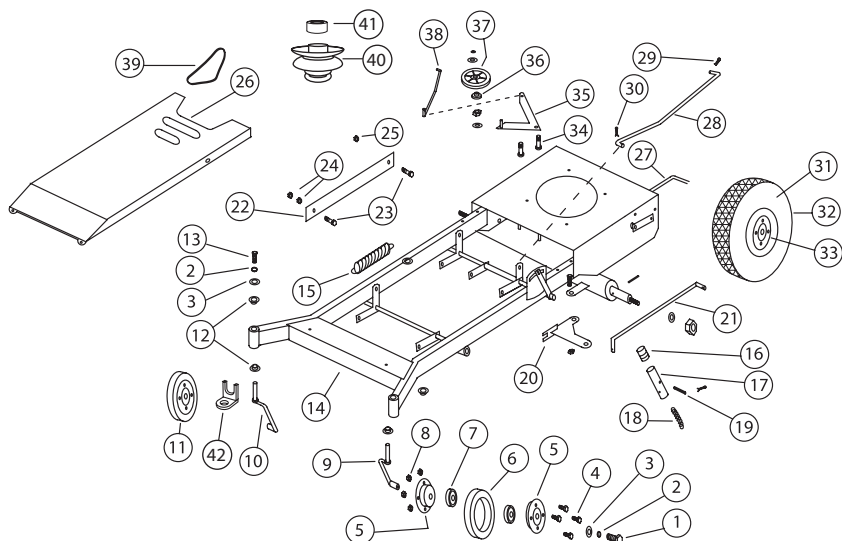
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# EXPLODED VIEWS AND PARTS LISTS

## XF480 CHASSIS AND COMPONENTS

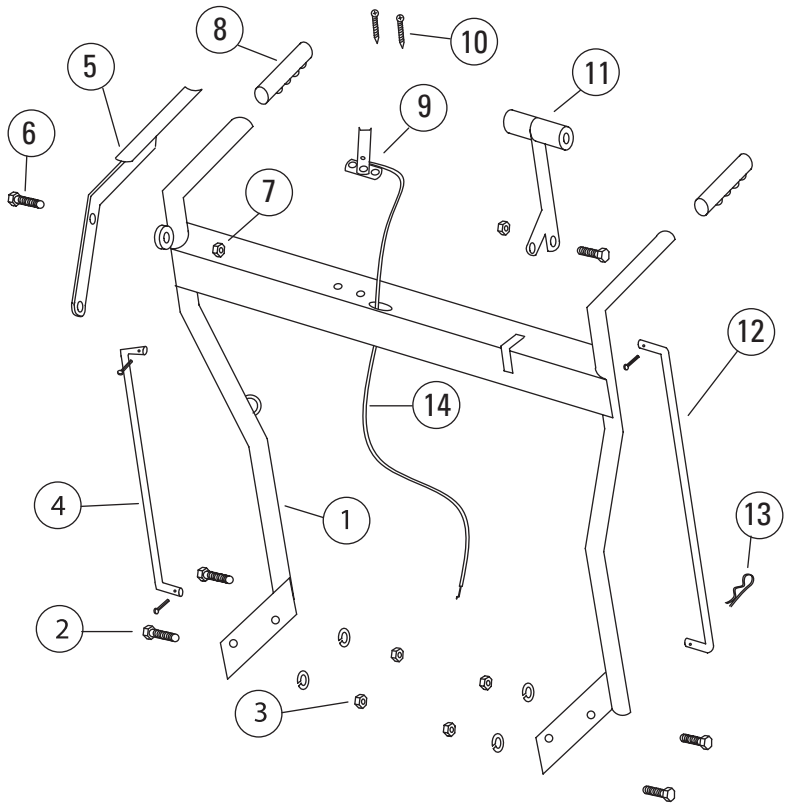


Item No	Part No	Part Description ( Qty )	Item No	Part No	Part Description ( Qty )
1	1017	Bolt M8 x 20	22	3541	Connecting rod, deck lift
2	1018	Spring washer 8mm	23	3014	Bolt M8 x 40
3	1144	Plain washer 8mm	24	1099	Nyloc nut M8
4	1485	Bolt ¼" x 1" W	25	1099	Nyloc nut M8
5	1482	Wheel half (4)	26	3539	Top cover
6	1838	Front tyre	27	3560	Blade engage foot pedal
7	1484	Front wheel bearing (4)	28	3544	Clutch rod (cutter engage)
8	1486	¼" W nut	29	1184	R clip
9	3258	King pin & stub axle, RH	30	1341	Split pin
10	3257	King pin & stub axle, LH	31	1918	Rear tyre
11	<b>Y555</b>	<b>Front wheel Assy.</b>	32	RD204	Tube
12	3015	Flanged bronze bush (4)	33	Z81	Rear wheel rims
13	1017	Bolt M8 x 20	34	3570	Coach bolt
14	3562	Chassis welded assembly	35	3526	Clutch pivot plate, wheel drive
15	1487	Deck lift spring	36	3565	Pulley bush
16	1978	Cap, height lever	37	<b>1518</b>	<b>Idler pulley</b>
17	1979	Outer tube, height adjust lever	38	3237	Horizontal clutch rod (transmission)
18	3011	Spring, height adjust lever	39	<b>1579</b>	<b>Transmission belt</b>
19	3254	Bolt, 6mm x 40, HT.	40	3354	Engine Pulley
20	3230	Gear change lever	41	3367	Collar (Honda Engine only)
21	3240	Gear rod, horizontal	42	3553	Front Wheel Castor Lock



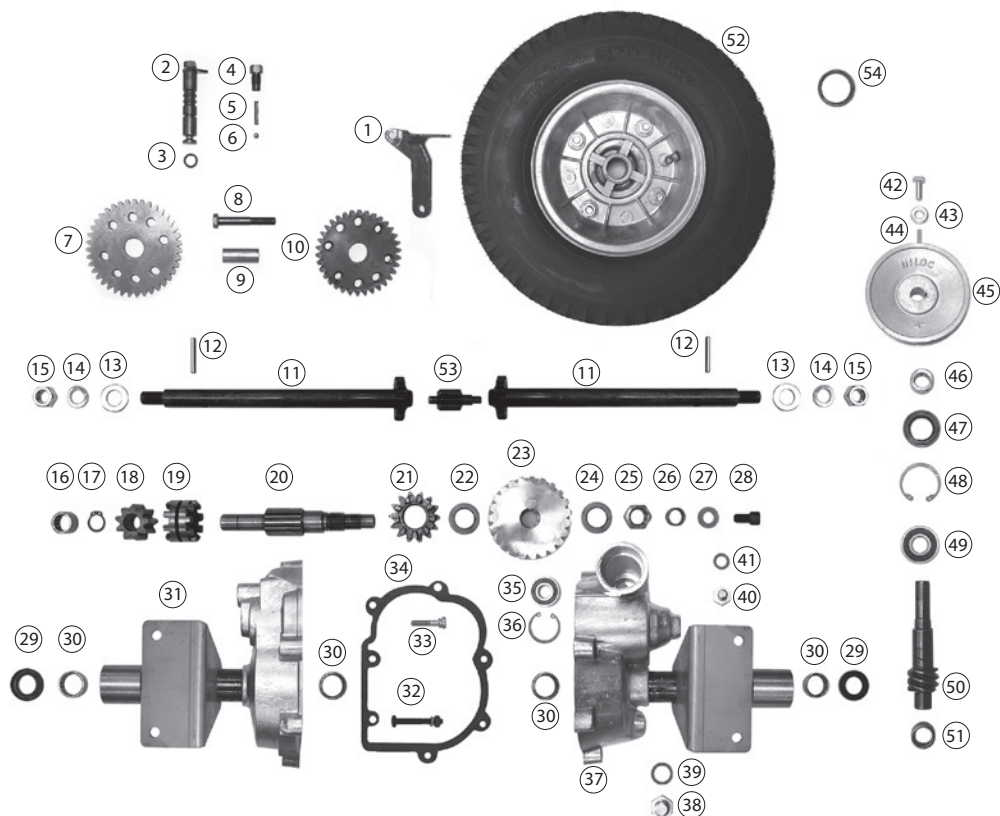
# EXPLODED VIEWS AND PARTS LISTS

## XF560 HANDLE & CONTROLS



Item No	Part No.	Part Description	Item No	Part No.	Part Description
1	3547	Handle assembly	8	1586	Rubber handle grip
2	1017	Bolt M8 x 20	9	1584	Throttle control
3	1072	M8 plain nut	10	1153	Screw, self threading
4	3554	Vertical clutch rod – wheel drive	11	3246	Gear change lever assy
5	3546	Clutch lever, on handle	12	3245	Gear change vertical rod
6	3014	Bolt M8x40	13	1184	R clip
7	1099	Nut M8 Nyloc	14	1580	Cable assembly

## XF480 GEARBOX COMPONENTS



# EXPLODED VIEWS AND PARTS LISTS

## XF480 GEARBOX COMPONENTS

Item No.	Part No.	Part Description	Qty	Item No.	Part No.	Part Description	Qty
--	1886	Gearbox complete	1	27	1637	Washer	1
1	3230	Gear selector arm	1	28	1663	Screw	1
2	1691	Selector tappet	1	29	1659	Seal, axle 7/8"x1,3/8"x1/4"	2
3	1690	O- Ring	1	30	1699	Bearing, needle, roller	4
4	1705	Spring holder	1	31	3567	Left Hand Housing	1
5	1706	Spring	1	32	1689	Bolt 1/4 x 2"	6
6	1707	Ball	1	33	1639	Bolt 1/4 x 1 1/4"	1
7	1701	Low crown gear	1	34	1672	Gasket	1
8	1704	Bolt diff	4	35	1664	Bearing 6202	1
9	1700	Spacer, diff.	4	36	1665	Circlip 35mm	1
10	1739	High crown gear	1	37	3568	Right Hand Housing	1
11	3549	Axle	2	38	1654	Plug 3/4" UNF	1
12	1501	Drive pin, axle	2	39	1655	Fibre washer 3/4"	1
13	1315	Flat washer	2	40	1661	Plug, 1/2" BSF	2
14	1658	Spring washer	2	41	1662	Fibre washer 1/2"	2
15	1657	Nut, axle 5/8" UNF	2	42	1100	Screw	1
16	1671	Bearing, roller B98	1	43	1642	Washer	1
17	1721	Circlip, 14mm	1	44	1640	Key	1
18	1720	Pinion, low gear	1	45	1643	Pulley	1
19	1719	Double clutch	1	46	1650	Spacer	1
20	1723	Spindle	1	47	1651	Seal 25x40x7	1
21	1740	High gear pinion & clutch	1	48	1652	Circlip 40mm	1
22	1717	Hardened washer	1	49	1484	Bearing 6203	1
23	1716	Bronze worm gear	1	50	1653	Input spindle	1
24	1015	Washer	1	51	1656	Bearing roller B128	1
25	3286	14mm nut	1	52	1956	Rear wheel complete	1
26	1714	Bearing sleeve	1	53	1730	Diff spider gear	2
				54	3550	Seal Protector	2

# WARRANTY POLICY

- DEUTSCHER MOWERS PTY. LTD. will repair or replace, free of charge, any mower or part of a mower that is defective in materials or workmanship (or both) for a period of 24 months from the date of purchase. If parts or units are replaced, the replacement period will be no longer than 3 months.
- This does not cover normal wear, abuse or servicing procedures not in accordance with the user's manual. Parts such as blades, blade bolts, tyres and v-belts, that can be subject to use beyond their normal intended working limits, are also excluded.
- This warranty is void if parts other than genuine parts have been used or if repairs or modifications have been made without the manufactures written authority.
- This warranty does not obligate the manufacturer, agents or dealers to cover transport costs incurred in the repair or replacement of any defective part. It does not obligate the manufacturer, agents or dealers to cover any other costs associated with making the warranty claim. (eg telephone calls )
- The engine on this mower is covered by the engine manufacturer's warranty supplied with the mower. For your nearest engine dealer,

Briggs & Stratton: 1800 650 042

Honda M.P.E.: 1800 809 327

To claim a warranty the owner must return the mower (at the owners expense) to an authorized dealer , then give the authorized dealer a clear explanation of the defect. A list of authorized dealers can be found on the Deutscher Mowers website or the location of the nearest authorized dealer can be determined by telephoning the telephone number listed below.

Our goods come with guarantees that cannot be excluded under Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

The benefits to the owner given by this warranty are in addition to other rights and remedies of the owner under a law in relation to goods or services to which the warranty relates.

## FOR YOUR RECORD

Model: **XF480**

Serial Number: ..... Date of Purchase: .....

Mower Purchased From: .....

**Remember: Proof of purchase is the responsibility of the owner and is necessary prior to warranty work being undertaken. Only warranty work performed by an authorized dealer using genuine spare parts will be eligible for payment, and claims may not be accepted if abuse or other damage has occurred that is not considered as normal wear and tear.**

The manufacturer reserves the right to alter, change or vary the specifications of the mower or any of the component parts at any time without notice.

Manufactured in Australia by: **DEUTSCHER MOWERS PTY LTD**, 731Creswick Rd, Ballarat, 3350

Telephone : 03 5339 5708 Fax: 03 5339 3189 [www.deutschermowers.com.au](http://www.deutschermowers.com.au)