



DEUTSCHER MOWERS



OWNER'S MANUAL

H660

SAFETY INSTRUCTIONS!



BEFORE STARTING:

- Know your controls. Read the owners manuals thoroughly. Learn how to stop the engine quickly in an emergency.
- 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 mower is going.
- Apply sunscreen; wear appropriate clothing, a hat and sunglasses to avoid sunburn.
- **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 to preserve balance.
- Do not allow children or people unfamiliar with these instructions to use the mower.
- With prolonged use, hearing protection should be worn.
- Never mow while barefoot or wearing open sandals, or thongs. Wear long trousers and heavy shoes.
- It is advisable to wear suitable eye protection when operating the mower.
- Refuel outdoors only. Do not smoke while refuelling engine. Add fuel before starting the engine. Never remove cap off the fuel tank or add petrol while the engine is running or 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.

STARTING:

- Disengage all blades and drive clutches and shift gear lever into neutral before starting the engine.
- Start the mower carefully according to instructions and with feet well away from blades and not in front of the discharge chute.

OPERATION:

- Never mow while people, especially children, or pets are nearby.
- Mow only in daylight or in good artificial light. Stay alert for holes in the terrain and other hidden hazards.
- Never direct discharge of material towards bystanders.
- Avoid operating the equipment in wet grass, where feasible.
- Do not put hands and feet near or under rotating parts. Keep clear of the discharge opening at all times.
- Never pick up or carry a mower while the engine is running.
- Use extreme caution when reversing or pulling mower towards you.
- Do not carry passengers.
- Walk, never run.
- Slopes:
Do not mow excessively steep slopes.
Exercise extreme caution when on slopes.
For pedestrian controlled mowers, mow across the face of slopes, never up and down and exercise extreme caution when changing direction on slopes.
- Use low throttle settings when engaging the ground drive, especially in high gears.
Reduce speed on slopes and in sharp turns to prevent overturning or loss of control.
- Stop the blades when crossing surfaces other than grass and when transporting the mower to and from the area to be mowed.
- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
- Stop the engine:
Whenever you leave the mower, even for an instant.
Before refuelling.
- Stop the engine and disconnect the spark-plug lead, or turn off and remove key:
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.

- Use care when pulling trailing seat,
Use only approved drawbar hitch points. Do not use on public roads.
Do not turn sharply; use care when reversing.
 - Watch out for traffic when crossing or near roadways.
 - Before leaving the operator's position:
Disengage the cutter engagement lever,
Change into neutral and set the parking brake,
Stop the engine and or remove key.
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- **Do not modify mower in any way, or use the mower with out the shields and guards in place, they are for your protection.**

MAINTENANCE and STORAGE:



- 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 the fire hazard, keep the engine, silencer, battery compartment and petrol storage are free of grass, leaves, or excessive grease.
- Replace worn or damaged parts for safety;
- Replace faulty silencers.
- If the fuel tank has to be drained, do this out-doors.
- 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.
- Store fuel in a cool place in a container specifically designed for the purpose. In general, plastic containers are unsuitable.
- When the mower is to be parked, stored or left unattended, lower the cutting deck.

SPECIFICATIONS:

ENGINE: Honda and Briggs and Stratton engines are used, see engine owner's manual supplied with the mower.

GEARBOX: Deutscher HD120, with two forward gears and reverse, incorporating a differential gearbox in an oil bath alloy housing.

Recommended oil	EPX 85w/140
Capacity:	750ml

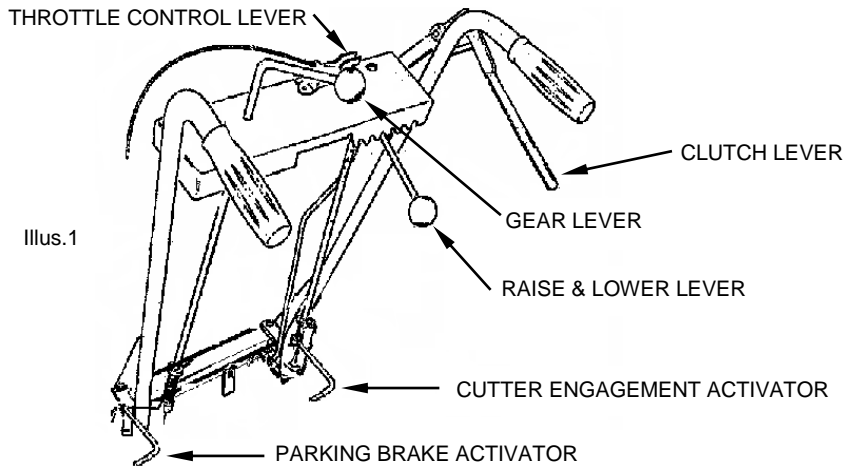
SPEED RANGE:	Low gear:	2.18kph @ 2500rpm.
	High gear:	4.18kph @ 2500rpm.
	Reverse gear:	1.67kph @ 2500rpm.

TYRES:	Rear: 13-500-6	Pressure, 20psi
	Front 250 x 4	Pressure, 20psi

CUTTING HEAD: 660mm cut, 2 x blades,
6 cutting hight positions from 30mm-88mm.

GENERAL: Length: 1600mm, Width: 640mm, Height: 960mm, Weight:120kg

CONTROLS: illus. 1



PRE-START CHECK:

Your Deutscher Mower comes to you tested and ready to operate, with engine and gearbox filled with oil.

- Read all safety instructions and know how to stop engine quickly in any emergency.
- Know your controls – Where they are and their function.
- Use fresh unleaded petrol. Do not mix oil with petrol.
- Ensure drive and cutter mechanisms are placed in neutral or disengaged.

OPERATION:

TO START THE ENGINE (Manual start):

- When engine is cold, move throttle lever to CHOKE position.
- When engine is hot, move throttle lever to high throttle position.
- Slowly pull starter cord until starter pawls engage and rope stops then pull with force to turn engine over, and release cord.
- Once engine is running shift throttle lever from Choke position to desired operating position.

TO STOP THE ENGINE:

- Push throttle lever to STOP position.

TO START THE ENGINE (Electric starter version):

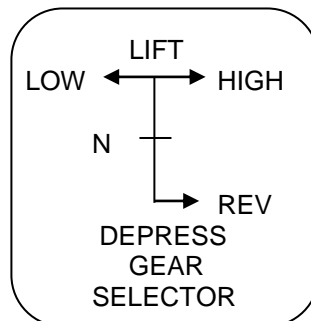
- When engine is cold, move throttle lever to CHOKE position.
- When engine is hot, move throttle lever to high throttle position.
- Turn key to start position and release once engine is running.
- Once engine is running shift throttle lever from Choke position to desired operating position.

TO STOP THE ENGINE:

- Turn key to OFF position.

TO DRIVE MOWER:

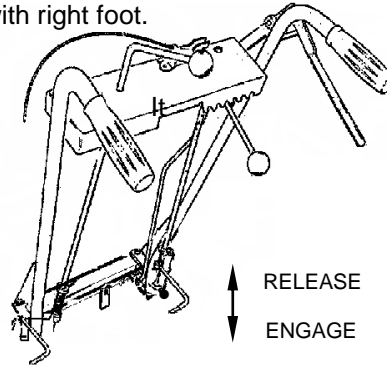
- Release park brake.
- Select gear, Low forward: Raise and turn left
High forward: Raise and turn right
Reverse: Push down and turn right
- Clasp clutch lever and hold to hand grip, releasing, to stop. **WARNING!** Use low throttle settings when engaging the traction-clutch, especially in high gears.



TO ENGAGE CUTTER DRIVE:

- Set throttle setting to a position as not to stall engine on engagement.
- Place right foot on lever and press down and lock into position.
- To release, knock lever up with right foot.

ILLUS. 2



MOWING ACROSS SLOPES AND REVERSING

- As mentioned in the Safety Instructions, 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.
- 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 10 degrees to the horizontal.
- Be extremely cautious when reversing. This is particularly important on slopes. Wear non slip footwear and keep well back from the mower to ensure your footing is steady. Instantly release the drive lever if you feel yourself slipping.
- Ensure the engine is turned off AND THE PARKING BRAKE IS ENGAGED before leaving a mower parked on a slope. This applies even if you leave the mower for an instant.

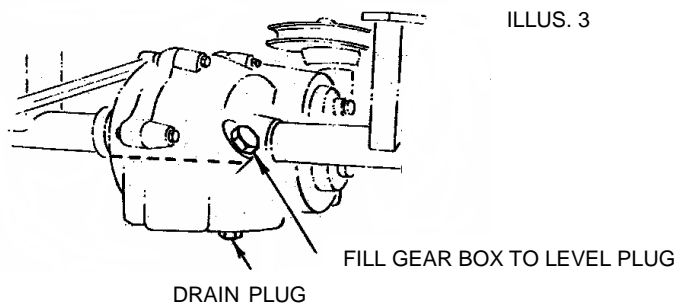
TRANSPORTING AND LIFTING THE MOWER

It is far safer to use ramps or a lifting device to put the mower onto a trailer or utility tray, rather than attempting to lift it. Never attempt to lift the mower on your own.

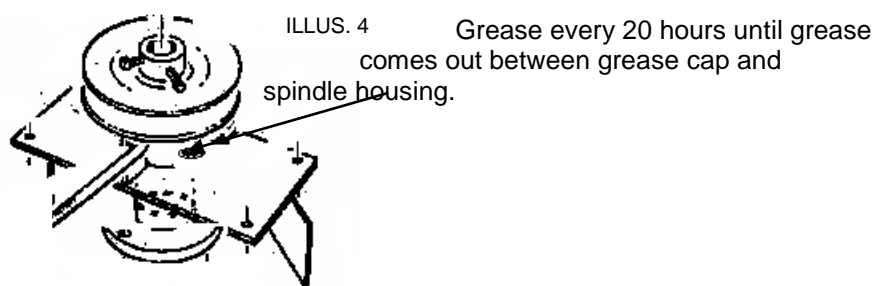
LUBRICATION CHART				
Lubrication.		Daily	20hrs	100hrs
Engine,	Refer engine manual.			
Gearbox				
Check			X	
Change	Gear oil	EPX 85w/145		X
Cutter spindle	Grease		X	
King pins	Grease		X	
Raise & lower frame slides	Grease		X	
Gear control linkages	Oil	X		
Clutch control linkages	Oil	X		
Height control linkages	Oil	X		
Throttle cable	Oil	X		

GEARBOX:

Use gear oil 85w/140 Capacity = 750ml



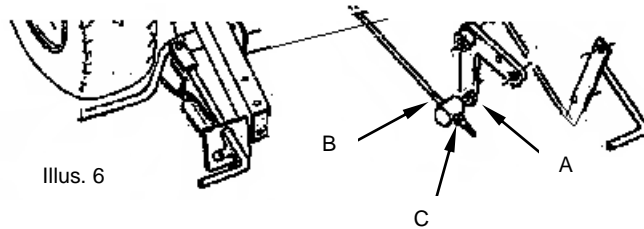
CUTTER SPINDLE:





- Before any inspection or replacements of the belts and associated parts turn engine off and pull spark plug lead off spark plug.
- Be careful during adjustment of the mower to prevent entrapment of the fingers between moving blades and pulley's fixed parts of the mower.

- Remove nut "A" from adjustment pivot and remove from crank arm.
- Remove belt from pulleys and slide over clutch adjustment rod.
- To fit new belt, place belt over clutch adjustment rod and rap around pulley's.
- Replace adjustment pivot to crank arm and tighten nut "A".
- Adjust clutch: See CLUTCH ADJUSTMENT.



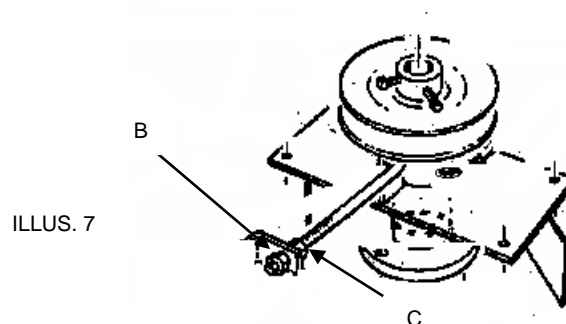
CUTTER BELT:

REPLACEMENT



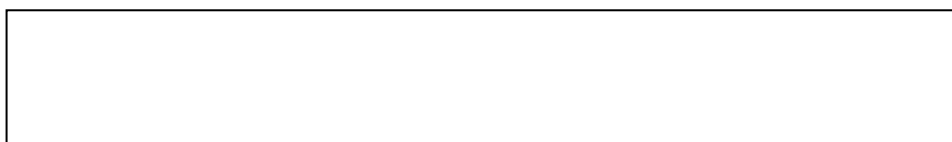
- Before replacements of the belts and associated parts turn engine off and pull spark plug lead off spark plug.
- Be careful during adjustment of the mower to prevent entrapment of the fingers between moving blades, pulley's and fixed parts of the mower.

- Remove belt guide (H57) by unbolting from engine mount.
- Remove gearbox belt from engine pulley.
- Ensure cutter belt is disengaged.
- Move cutter height lever to mid height position.
- Loosen "C" nut and brake lever stop to ensure belt is loose.
- Remove old belt and replace new belt feeding it around the pulleys and keeping the belt on the inside of the guide pins.
- Place cutter in engaged position and adjust belt by adjusting nuts "C" & "B".
- Belt should have 20mm slack. **DO NOT OVER TIGHTEN!**
- Adjust brake lever stop to ensure cutter spindle stops when disengaged.
- Replace gearbox belt and refit belt guide. (Note : Belt guide bolted inside engine mounting plate.)
- Run and test to ensure all adjustments are correct.



CUTTER SPINDLE BRAKE:

ADJUSTMENT





- Before replacements of the belts and associated parts turn engine off and pull spark plug lead off spark plug.
- Be careful during adjustment of the mower to prevent entrapment of the fingers between moving blades, pulley's and fixed parts of the mower.

- Loosen nut holding brake lever stop to chassis and slide forward until brake pad prevents cutter pulley from rotating when cutters are disengaged.
- Make sure brake pad is clear of cutter pulley when engaged.
- Tighten nut holding brake lever stop to chassis.

CLUTCH ADJUSTMENT FOR TRANSMISSION: See illus. 6

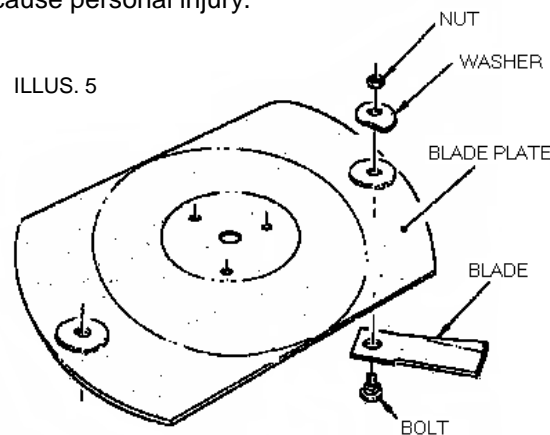
- Loosen nut "C" and tighten nut "B".
- Make sure belt is entirely free when clutch lever is disengaged.
- DO NOT OVER-TIGHTEN BELT.

BLADES:



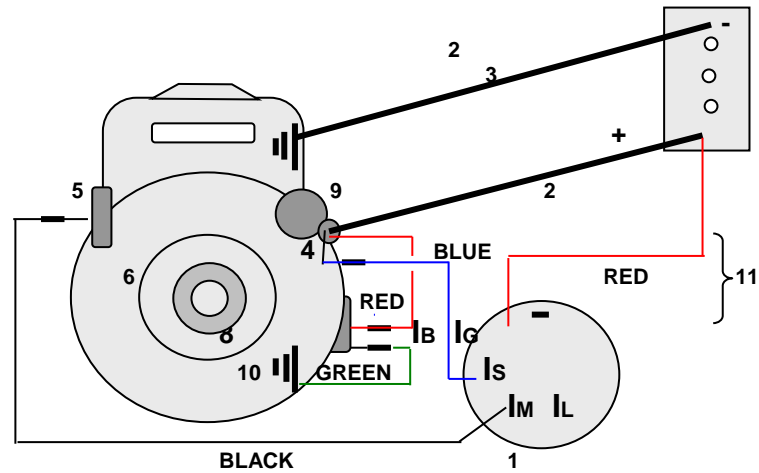
- Before any inspection or replacements of the blades and associated parts turn engine off and pull spark plug lead off spark plug.
- Be careful during adjustment of the mower to prevent entrapment of the fingers between moving blades and fixed parts of the mower.

- 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 as to prevent any vibrations that may damage the mower and cause personal injury.



WIRING DIAGRAM:

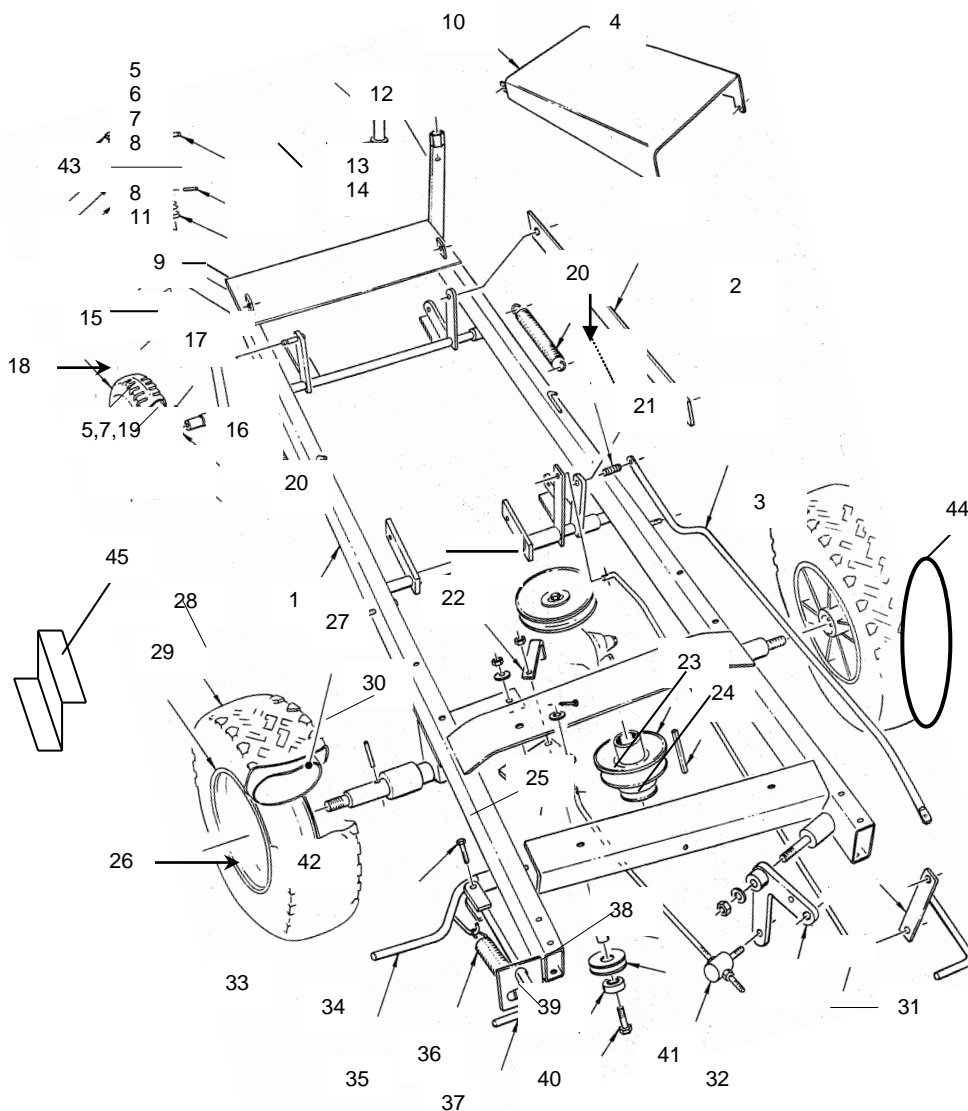
HONDA GXV390K1 DAEU



Illus. No.	Part No.	Description.	Illus. No.	Part No.	Description.
1	T316	Key Switch	8		Regulator
2	R323	Cable 330mm	9		Starter Motor
3	H315	Battery 12volt	10		Earth, regulator
4		Solenoid, starter	11	R322	Loom assembly
5		Stop switch	12	T302	Solenoid
6		Engine	13		Alternator wire
7		Engine mount, Earth	14	R312	Cable 170mm
			15	R324	Loom assembly

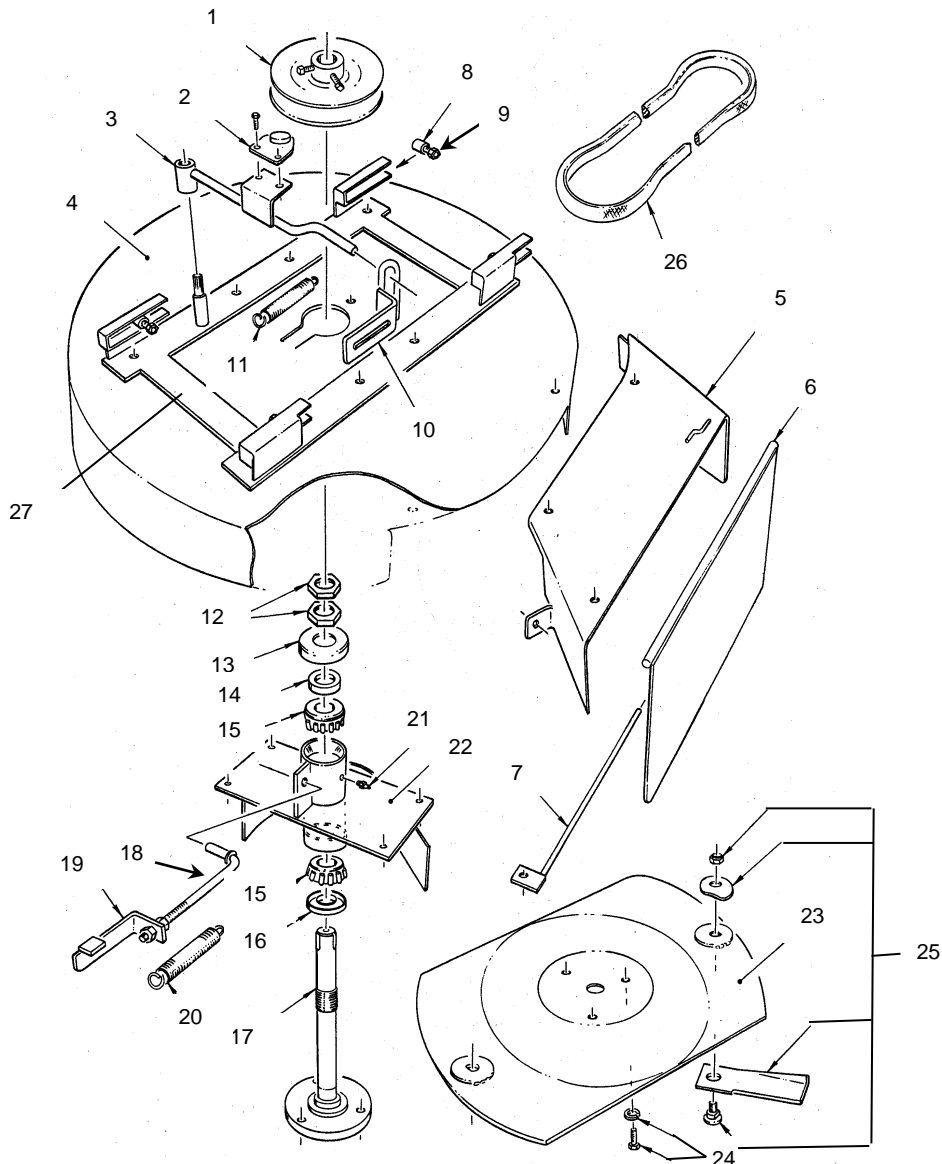
WARNING: Incorrect wiring may result in damage to the engines electrical system.
Only qualified and or competent electrical technicians should attempt any repairs or alterations.

CHASSIS



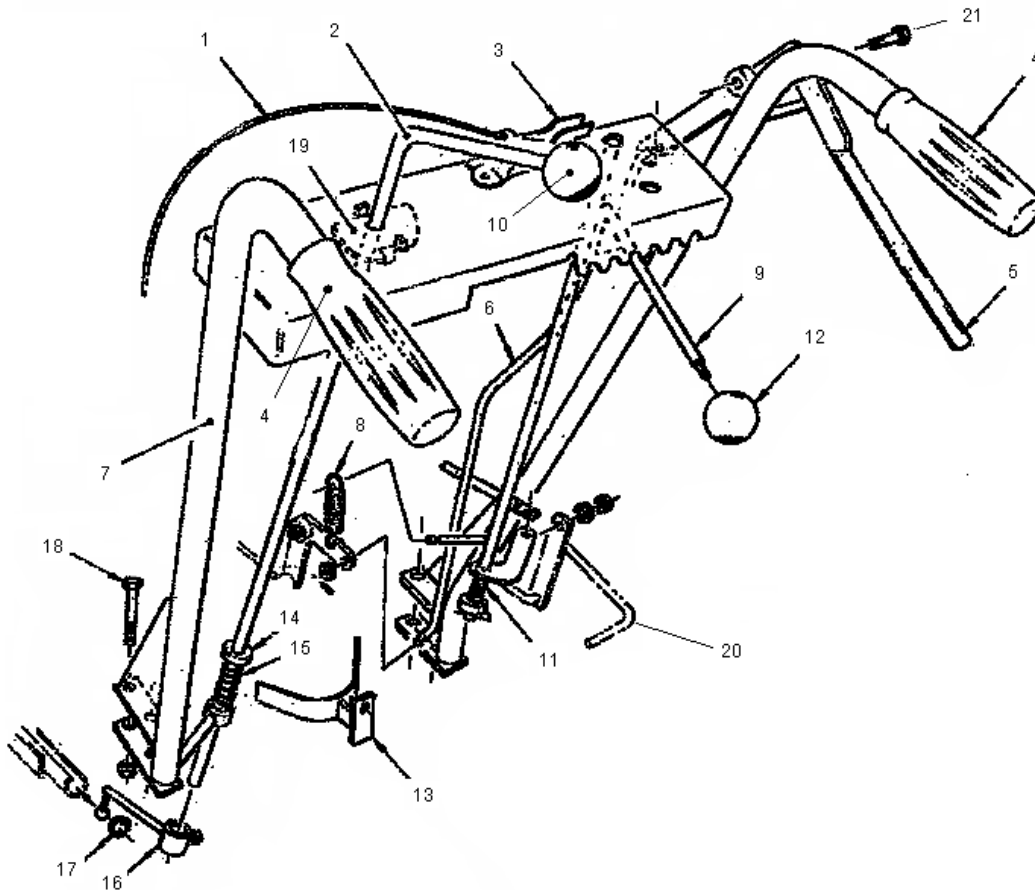
ILLUS	PART No.	DESCRIPTION	ILLUS	PART No.	DESCRIPTION
1	H600	Chassis	23	H06	Pulley, engine
2	H602	Rod, conn. Raise & low.	24	RD126	Key
3	H603	Rod, conn. R&L rear	25	H58	Plate, clutch pulley
4	H604	Top cover, B&S.	26	HD121	Wheel complete
-	H605	Top cover, Honda	27	T564	Tube 13-500-6
5	Y558	Bolt 8mm x 20	28	HD122	Tyre 13-500-6
6	H607	Spring washer 8mm	29	HD123	Rim
7	H608	Flat washer 8mm	30	HD79	Pin, axle drive
8	H609	Bush	31	H617	Activator, blades
9	H622	King pin & stub axle LH	32	H618	Rod, cutter engage.
10	H623	King pin & stub axle RH	33	H12	Brake rod
11	H624	Washer Brass	34	H50	Spring
12	H614	Lock pin	35	H03	Activator, brake
13	H506	Roll pin	36	H60	Bearing 6202drs
14	H615	Spring	37	H621	Bolt & nut
15	H512	Tyre 250-4	38	1512	Stepped bush
16	Y556	Rim & bearings	39	H61	Pulley
17	H513	Tube 250-4	40	H48	Pin, pivot
18	H616	Wheel complete	41	H47	Arm, crank
19	T588	Bearing 6203	42	H621	Bolt, pivot
20	D50	Spring	43	R13	Grease nipple
21	R87	Spring	44	H09	Gear box belt.

CUTTER ASSEMBLY



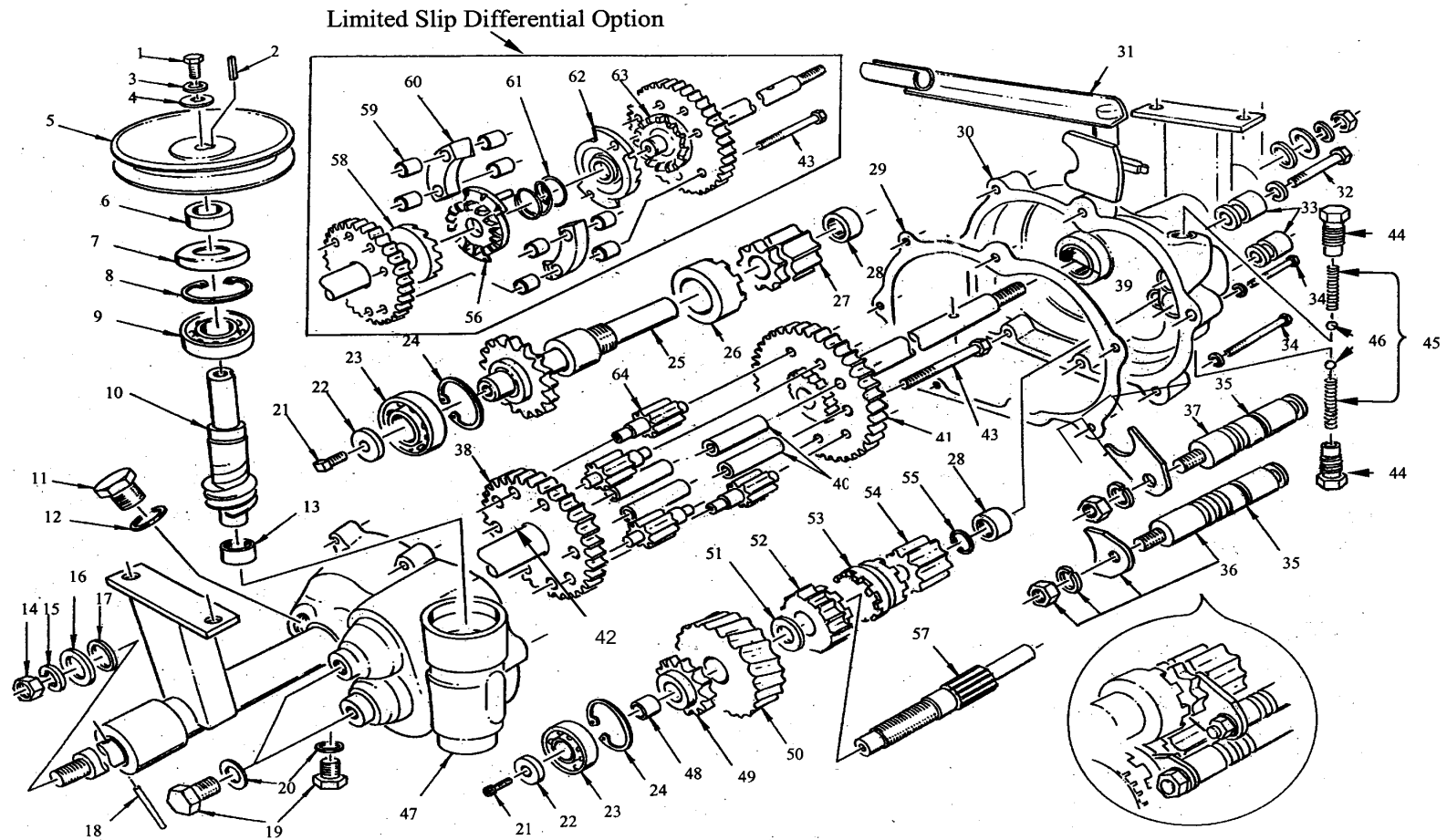
ILLUS	PART No.	DESCRIPTION	ILLUS	PART No.	DESCRIPTION
1	D10	Pulley	15	G33	Bearing 30205
2	Y543	Brake pad	16	G34	Seal
3	H28	Brake lever	17	H29	Spindle & flange
4	H610	Main guard	18	H632	Push rod
5	H611	Side chute	19	H631	Connector, push rod
6	H612	Flap,	20	D50	Spring
7	H613	Hinge bar	21	R13	Grease nipple
8	Y537	Pin x 4	22	H27	Housing, spindle
9	H23	Nut x 4	23	D5/26	Blade plate
10	H19	Brake lever stop	24	G36	Bolt, blade plate x 3
11	H15	Spring	25	H650	Blade N,B,W x 2
12	G30	Lock nut		H651	Blade x 2
13	G31	Dust cap		H652	Nut,bolt & washer.x 2
14	G32	Spacer	26	R14	V-belt, cutter,B66
	H660	Cutting deck complete	27	H20	Raise & Lower frame
				H661	Main Guard Inc

HANDLE BARS & CONTROLS



ILLUS	PART No	DESCRIPTION	ILLUS	PART No	DESCRIPTION
1	D130	Cable, throttle	12	D42	Knob, 3/8" id
2	H53	Gear lever	13	H57	Guide, g/box belt
3	Z08	Lever, throttle	14	H54	Collar
4	D19	Hand grip	15	H55	Spring
5	H627	Clutch lever	16	H56	Selector arm & ball
6	H46	Vert. Clutch rod	17	H69	Circlip, int. 19mm
7	H628	Handle bars	18	H630	Bolt, nut & washer
8	H50	Spring	19	H52	Gear selector plate
9	H629	Height lever	20	H617	Activator, blades
10	Y13	Knob, 1/2" id	21	H621	Pivot bolt & nut
11	D134	Spring			

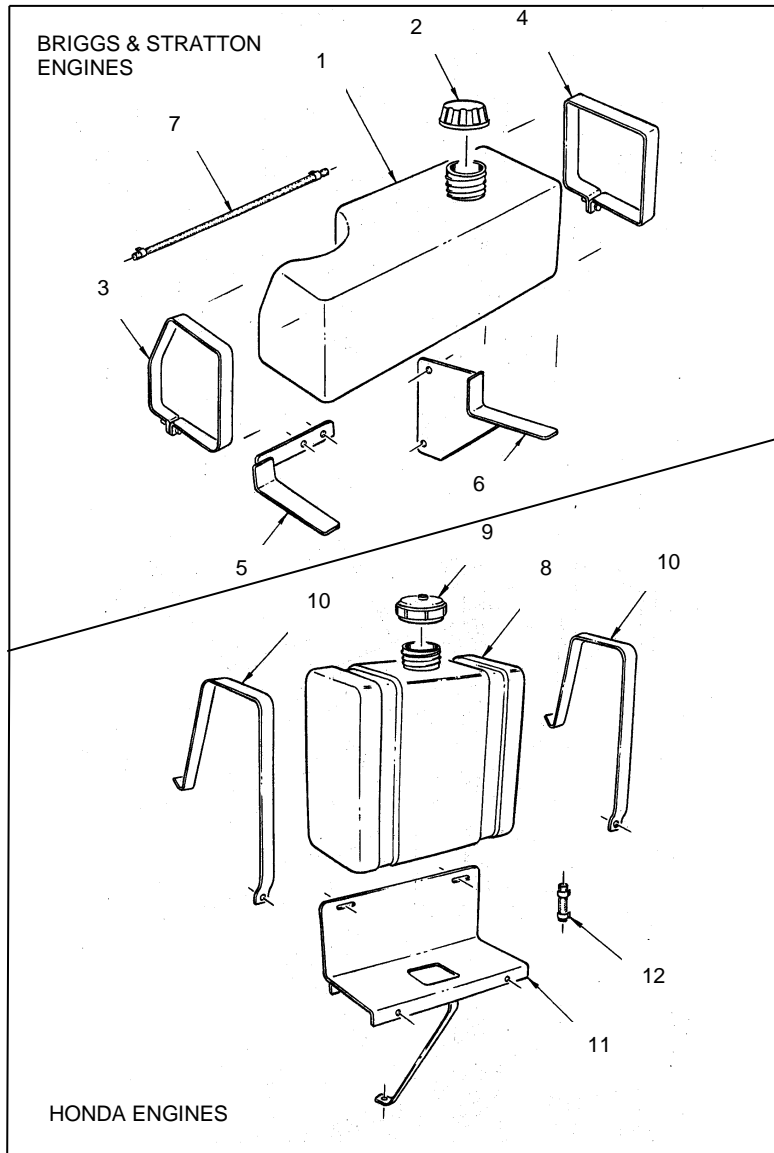
GEARBOX ASSEMBLY



GEARBOX ASSEMBLY

LLUS	PART No	DESCRIPTION	QTY	ILLUS	PART No	DESCRIPTION	QTY
1	HD105	Screw, pulley	1	36	HD80	Selector tappet Forward	1
2	HD107	Key	1	37	HD81	Selector tappet reverse	1
3	H631	Spring washer	1	38	HD77	High crown gear	1
4	HD106	Washer	1	39	Z50	Bearing, needle, axle	4
5	HD108	Pulley	1	40	MRD179	Spacer, diff.	4
6	HD109	Spacer	1	41	HD76	Low crown gear	1
7	HD110	Seal 25x40x7	1	42	HD78	Axle	2
8	HD111	Circlip 40mm	1	43	HD75	Bolt, diff	4
9	HD112	Bearing 6203	1	44	HD84	Spring holder	2
10	HD113	Input spindle	1	45	HD83	Spring	2
11	HD104	Plug 3/4" UNF	1	46	HD82	Ball	2
12	HD116	Fibre washer 3/4"	1	47	HD103	Housing R.H.	1
13	RD194	Bearing roller B128	1	48	HD115	Sleeve, bearing	1
14	RD174	Nut, axle 5/8" UNF	2	49	HD92	Reverse gear 13 teeth	1
15	HD124	Spring washer	2	50	HD91	Bronze worm gear	1
16	RD175	Flat washer	2	51	HD114	Washer, hardened	1
17	DD90	Seal, axle 7/8"x1,3/8"x1/4"	2	52	HD90	High gear pinion & clutch	1
18	HD79	Drive pin, axle	2	53	HD88	Double clutch	1
19	MDD98	Plug, 1/2" BSF	3	54	HD87	Pinion, low gear	1
20	HD117	Fibre washer 1/2"	3	55	HD86	Circlip, 14mm	1
21	HD95	Screw	2	56	HD153	Sliding clutch with pins L.H.	1
22	HD94	Washer	2	57	HD89	Forward spindle	1
23	Z35	Bearing 6202	2	58	HD152	Axle & clutch L.H. LSD	1
24	HD93	Circlip 35mm	2	59	HD150	Spacer	8
25	HD101	Reverse spindle & gear	1	60	HD156	Clutch spreader bar	2
26	HD100	Reverse clutch	1	61	HD157	Spring	1
27	HD99	Reverse sliding gear	1	62	HD154	Sliding clutch R.H.	1
28	HD85	Bearing, roller B98	2	63	HD155	Axle & clutch R.H. LSD	4
29	HD71	Gasket	1	64	RD178	Diff spider gear	4
30	HD98	Housing L.H.	1	65	HD74	Bolt, 5/16"x1-1/4"w	1
31	HD70	Gear selector arm	1	--	HD151	Bar tread tyre LSD	2
32	HD97	Bolt, selector	2	--	HD120	Gearbox complete	1
33	HD96	Selector guide	2	--	HDL120	Gearbox complete LSD	1
34	YD72	Bolt, housing, 1/4"x2"UNF	6				
35	RD133	O-ring	2				

FUEL TANKS / SUNDRY PARTS



ILLUS	PART No	DESCRIPTION	PARTS NOT ILLUSTRATED
1	R260	Tank, 6.5lt	D2720 Paint, Deutscher Green 1lt tin
2	R261	Cap, fuel tank	H641 Decal set
3	R262	Strap, angle	
4	R263	Strap, square	
5	R264	Bracket, rear	
6	R265	Bracket, front	
7	R266	Hose & clamps	
8	R280	Tank, 6.5lt	
9	R281	Cap, fuel tank	
10	R282	Strap	
11	H283	Bracket, tank	
12	R284	Hose & clamps	

- DEUTSCHER MOWERS PTY. LTD. Will warrant the repair or replacement, free of charge, any parts of the mower, that are defective in materials or workmanship or both for a period of:
12 months from the date of purchase.
- This does not cover normal wear abuse or incorrect service procedures as set out in the owners manual. Parts such as blades, blade bolts, tyres and v-belts, which can be subjected, to use beyond their normal intended working capacity are also excluded.
- This warranty is void if parts other than genuine have been used or if repairs or modifications have been made without the manufactures written authority.
- This warranty does not obligate the manufacture, agents or dealers to cover transport costs incurred in the repair or replacement of any defective part.
- The engine on this mower is covered by the engine manufactures warranty supplied with the mower. For your nearest engine dealer, Phone: Briggs & Stratton: 1800 650 042
Honda M.P.E.: 1800 809 327

**All claims to be referred to Rover Mowers
Limited as warranty agents for the manufacturer.**

**NATIONAL CUSTOMER SERVICE
ROVER MOWERS LIMITED
CURTIN AVENUE WEST
EAGLE FARM, QLD 4009
PHONE: 07 3213 0233
FAX: 1800 806 659**

FOR YOUR RECORD:

Model of Mower:.....H660.....

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 under taken. An authorised dealer using genuine spare parts must carry out repairs or your warranty will be void.

Manufactured in Australia by:
DEUTSCHER MOWERS PTY LTD
711 Creswick Road, Ballarat 3350