

USER'S MANUAL ENGINE BLACK BULL



ELECTRIC START

**BLACK
BULL**
CORS-AIR motors



HAND START



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INDEX

IDENTIFICATION OF THE OWNER AND INTRODUCTION	3
TECHNICAL AND STRUCTURAL FEATURES	4
MAIN TORQUES	5
ASSEMBLY	6
ADJUSTMENT CARBURETOR / RUNNING IN	7
MAINTENANCE	8
TENSION OF REDUCTION BELT	9
WARRANTY	10
TROUBLE SHOOTING	11
IMPORTANT ADVICE	12
SCHEME FOR ELECTRIC SYSTEM	13
PARTS	14-18
NOTES	19

IDENTIFICATION OF THE OWNER

Owner

Address

Serial number

Reseller

Address

Owner's signature

Reseller's signature and stamp

Date of sale

Introduction:

Thank you for choosing our engine BLACK BULL CORS-AIR ENGINE.

We tried to do everything possible to give accurate and up date technical information in this manual.

The Company reserve the right to make technical and aesthetic changes without notice in order to improve quality of product.

The information written here is the exclusive property of CORS-AIR.

So they are not allowed reproduction or replication in whole or part without the express permission of the CORS-AIR.

This manual has been prepared to provide technical information necessary for the installation and repair of motors.

We invite you to spend some time reading this to avoid risks to the health and safety of people and economic damage.

Furthermore, we invite you to deliver this manual together with the engine if you sell it, so it can be useful for the next owner as well.

The manufacturer and the resellers are ready to answer your questions and, if necessary, to solve every problem, because YOUR AND THE OTHER PEOPLE'S SAFETY IS THE MOST IMPORTANT THING FOR US.

BLACK BULL engine

CYCLE	TWO STROKE
TOTAL DISPLACEMENT	235 C.C.
BORE	70mm
STROKE	61mm
COMPRESSION RATIO	10.5:1
COOLING	BY AIR
PEAK RPM max.	8000 RPM
PISTON	WITH TWO PISTON RINGS
HEAD	IN ALLOY WITH HIGH PERCENTAGE OF SILICONAN HEMISPHERIC COMBUSTION CHAMBER, WITH SQUISH
CRANKCASE	MOLTEN IN G-AL SI 9 UNI 3051 ALLOY SUBSEQUENTLY TREATED AND ANODIZED AGAINST SEA SALT
CONNECTING ROD	IN COPPER PLATED STEEL 18 NI CR MO5 JOINED TO THE DRIVE SHAFT THROUGH VERY PRECISE HIGH SPEED SILVER-PLATED ROLLER BEARINGS
CARBURATOR	DIAPHRAGM
FEEDING	SIX BLADE REED-VALVE SYSTEM CONNECTED TO THE CRANKCASE
ELECTRONIC IGNITION	CDI (ELECTRIC VERSION)
SPARK PLUG	NGK BR8ES OR SIMILAR
SYSTEM	SIX PORT DISTRIBUTION AND EXHAUST WITH BOOSTER
CYLINDER	IN ALLOY WITH NIKASIL COATING
REDUCTION	WITH POLY V BELT AVAIBLE IN 1:3.0
CYLINDER HEAD TEMPERATURE	MAX TEMPERATURE 230°C MEASURED UNDER SPARK PLUG EXHAUST GAS TEMPERATURE NOT EXCEEDING 590 C°
ENGINE MOUNTING	BY 5 SHOCK ABSORBING RUBBER MOUNTS
ROTATION	COUNTERCLOCKWISE
DRIVE SHAFT	IN 18 NI CR MO5 WITH 5 THERMIC TREATMENTS ON EVERY COMPONENT
ROLLER BEARINGS	FIT FOR HIGH SPEED CLASS C3
SEAL RING	IN VITON WITH VERY HIGH RESI STANCE AND LONG DURATION
FUEL	MIXTURE 2.5% WITH SYNTHETIC OIL, SUGGESTED BRANDS: MALLOSSI 7.1—WLADOIL K2T—ELF 2T MOTO
OIL	2.5% - 3%
ENGINE WEIGHT	HAND START KG 12,55 + KG 4,50 FOR THE EXHAUST ELECTRIC START (WITHOUT BATTERY RECHARGE) KG 13,40 + KG 4,50 FOR THE EXHAUST

MAIN TORQUES

MAIN TORQUES	Kg. m	(Nm)
NUTS TO FIX THE HEAD	2,2	22
NUTS TO FIX HALF-CRANKCASE	1,2	12
NUTS TO FIX THE PINION (SMALL PULLEY)	3,5	35
NUTS TO FIX IGNITION HANDWHEEL (manual version)	4,5	45
NUTS TO FIX IGNITION HANDWHEEL (electric version)	2,5	25
GAP BETWEEN COIL AND HANDWHEEL	MIN. 0,3 mm MAX. 0,4 mm	
TIGHTENING OF REED VALVES PLATE	1,2	12
PISTON RINGS GAP TOLLERANCE	0,3 mm	

IMPORTANT: remember that the battery of the electric start should be recharged before starting the engine.

ASSEMBLY:

You can install the engine on the frame by using 4 rubber mounts of 40 x 30 mm between the back flange and the engine mount.

IT IS PEREMPTORY TO INSTALL ALSO THE 5th RUBBER MOUNT (20x30),

fixing it in the proper hole located under the reduction flange, through an angular square. This device will permit to evenly distribute the vibrations of the engine on every part of the frame.

If 5th rubber mount will not be installed, WARRANTY WILL BE OVER.

To attach the propeller use only bolts of class 10.8 (100 Kg) and make sure that their length is enough to exit from the reductor-pulley. Tighten the 6 bolts M8 in a cross, at 1.5 Kg.m. (15Nm). Re-check the torque of the bolts after the first hour of engine's working.

We suggest not to use a variable pitch carbon prop, because the big hub pushes the prop too forward, with possible damages to pulley and bearings.

For the connection between the carburetor and the fuel tank use a proper hose of the right diameter.

The length of the fuel line should not be longer than 80 cm.

It is advisable to install a manual primer bulb to get the fuel to the carburetor before for starting. This device will allow the fuel to arrive to the carburettor, protecting in this way the battery.

IMPORTANT NOTES

DO NOT try to start the engine without the propeller.

DO NOT start the engine with loose bolts or parts, since this can cause the detaching of the propeller, the ovalization of the propeller holes, the damage of the electric start and the breakage of the rubber mounts.

BATTERY must be loaded and use a 6 Ah battery.

IMPORTANT! BEFORE FLYING CHECK ALWAYS EVERY PART OF YOUR CRAFT, FROM ENGINE TO FRAME.

Verify that there are no damaged electric wires, that there are no leaks from hoses, tank, carburettor or engine's crankcase, that the propeller is not damaged or loose, that the exhaust-pipe has no cracks, that the frame is not bent or broken because of falls, that rubber mounts are not cracked, that the reduction belt is not loose and every bolt is tight.

Finally you can start the engine, leaving it to warm up at a speed of 3000 to 4000 rpm with head temperature at least 120 °C, before start taking off so to avoid piston seizing.

FUEL

Use for the mixture only premium gas for cars 98 octane, together with good-quality, synthetic oil for mixtures at a quantity of 2.5% .

DO NOT USE MIXTURE ALREADY DONE AT PETROL PUMPS.

When you prepare the mixture, make sure that the can has not dirt or water in it, filter the fuel with cotton white textile into a clean can and then add the oil.

Never run the engine without the air-filter, because dirt and dust raised by the propeller can damage it.

ADJUSTMENT OF THE WALBRO CARBURETTOR

The carburetor will arrive you with a base adjustment, should you need to make any other settings play gently on levels like you are moving a clock by each single minute. The carburettor has two mixture adjustment screws, 1 marked L adjusting low speed and 1 marked H for high speed.

In order to make the adjustment, gently tighten clockwise then unscrew:

L screw not less than 1/2 turn,
H screw not less than 1+1/2 turn

adjustment with filter Air Box, use the original CORS-AIR Air Box.

Furthermore, use always the safety cables the air box is equipped with. These adjustments can be different on the basis of weather conditions and flight altitudes.

Ideal mixture is reached when the insulator of the spark plug is coffee brown; if the colour is black, the mixture is too rich, therefore turn screw H clockwise 1 minute back like you are playing on a clock; If the spark plug is grey/white, the mixture is lean, therefore turn screw H and L counterclockwise until you get the coffee brown color.

Remember that if the mixture is too lean, THE PISTON CAN SEIZE.

You can see better the colour of the spark plug by keeping the engine for 30 seconds at maximum speed and switching it off suddenly without letting it slow down.

Once you have found the perfect adjustment do not change it unless you change flight place or climate conditions, since register screws can be damaged by continuous adjustments.

RUNNING-IN

All CORS-AIR engines, before being delivered, are subject to a severe quality-check, in order to verify if all the components respect the fixed parameters, but a further running-in is anyway necessary.

A GOOD RUNNING-IN WILL PROLONG THE LIFE OF YOUR ENGINE.

Go to a quiet place, put a thick rubber carpet under your unit to avoid that stones or other things damage the propeller by putting it on earth and let the engine work at a speed of 2500 rpm for 5 minutes, then regulate speed at 3000/3500 rpm for 15 minutes, then at 4000 rpm for other 15 minutes.

Switch off the engine and check that there are no loose nuts or bolts and that every component is ok.

BE CAREFUL NOT TO TOUCH HOT PARTS (POWER UNIT AND EXHAUST PIPE).

Start the engine again and take it step by step to 4000 rpm for 5 minutes, then accelerate to 4500 rpm for 15 minutes. During the first 10 hours, do not subject the engine to extreme efforts and speed.

Also during normal use excessive loads (ex. tandems with passenger) can force the engine with possible damages to the engine itself. **ALWAYS CHECK** at sight your unit before and after every flight, for loose parts or damage.

During the run-in period vary the power often for a proper piston ring setting.

Your Black Bull could also be equipped with a Tryton carburettor, specially adapted for the Cors-Air engines; it's a top quality membrane carburettor, 100% made in Italy, that grants an optimal performance, with decreased consumption and a better atomization of the mixture fuel/air. It's a little more sensitive to settings and is suggested for a competition use or for pilots skilled in mechanics who want the best results.

If you have a Walbro carb and you want to upgrade to a Tryton carb, these are the necessary steps:

- remove the black pressure tube and close the hole with a screw.
- change the reed valve and its gaskets

The standard carb settings are 35 minutes for the L screw and 1,35 (one turn and 35 minutes) for the H screw. The carburation must be done with the hot engine. After you keep the engine for 20 seconds at full RPM, switch it off suddenly and check the colour of the spark plug; it should be coffee-brown. If it's black you can close a little the H screw, if it's white you should open slightly the H screw. Once it's done, you should let the engine run at idle for 10 seconds and give full throttle suddenly. The engine should increase the rpm smoothly. If there is a "hole" and then it gets the rpm, it means the idle is lean, so the L screw should be opened a little. If it runs rough as a 4-stroke engine, it means it's too rich, so you should close slightly the L screw.

Once found the right carburation, you can take care of the idle screw. The idle should be around 2000 rpm; if it's higher switch off the engine and unscrew slightly the idle screw. Switch the engine on and check the rpm. If the rpm are less than 2000, close a little the idle screw, with the engine off. This way you'll find the correct idle setting.

Technical features:

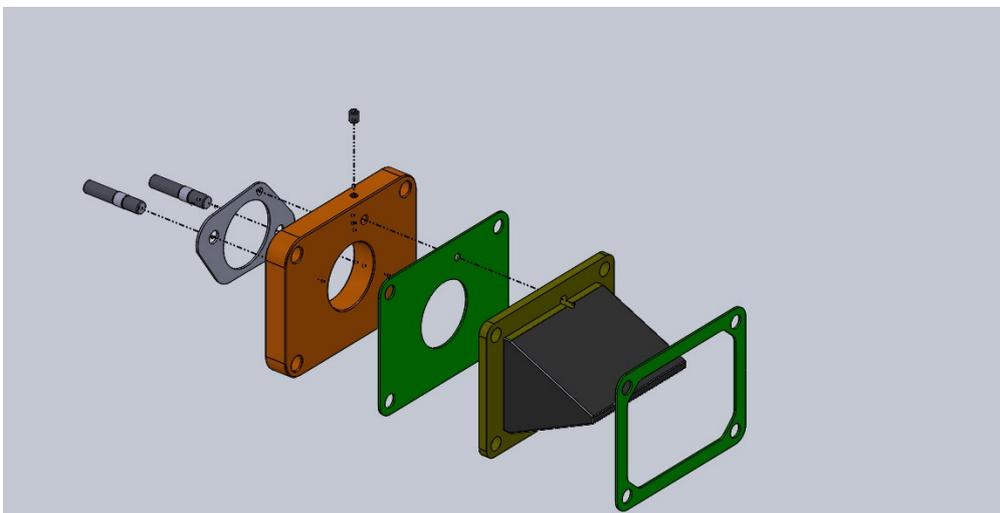
Venturi diameter: 29 mm

Opening: butterfly

Casing: casting

Opening pressure: 0.8 bar

Closing pressure: 0.65 bar



MAINTENANCE

AFTER THE FIRST HOUR OF RUNNING, CHECK THE BELT TENSIONING AND IN CASE RE-TENSIONING IT.

AFTER THE FIRST 2 HOURS, TIGHTEN HEAD NUTS (IN CROSS ORDER) WITH A TORQUE WRENCH AT 2.2 Kg.m (22Nm).

AFTER THE FIRST 3 HOURS OF ENGINE RUNNING MAKE A NEW BELT CHECK UP AND IN CASE RETENSIONING IT.

IF WHEN YOU TENSION THE BELT, YOU SEE A PLAY ON DRIVE SHAFT IT IS NORMAL BECAUSE YOUR ENGINE IS EQUIPPED WITH ROLL BEARINGS.

Please note that if you find black dust inside pinion and/or rubber inside pinion's groove, it means that belt is not well tensioned and need to be tightened.

Every 20 hours check:

- The condition and gap (0,7 mm) of the spark plug electrode
- Clean the air-filter, in case you have a fuel filter before carburetor, clean it also.
- The torque of every bolt
- The tension and condition of the reduction belt
- Fuel lines and wiring
- That the cord of the starter has no abrasions
- Grease the link-spheres between the manifold and the exhaust pipe with lubricating cooper-grease suitable for high temperature (up to 1100°).
If you can't find it on the market, please ask to you dealer.

Every 50 hours check:

- Same controls of the 20 hours and furthermore
- The torque of the engine's crankcase nuts
- Change spark plug
- Change the petals of the reed valve
- The reduction belt and the play of the pulley and change them in case of need
- The condition of the starter gears (version with electric start)
- Once a year (independently from flight hours) change the diaphragm of the carburetor

N.B. It is advisable to keep records of all maintenance in a log book for the engine.

It is also advisable to install an instrument (CHT) to control the head temperature at sight, it is important because you can understand when your engine is running at the proper temperature before taking off.

If you install also an EGT probe you will be able to check the temperature of exhaust gas and avoid the engine seizure. The max. temperature of exhaust gas is 590 C°

DO NOT EXCEED THIS TEMPERATURE

TENSION OF THE REDUCTION BELT DRIVE - USE CAUTION

Attention: a belt which is “over tensioned” can do permanent damage to the bearings inside of the pulley hubs and drive shaft.

Therefore we strongly suggest for you to follow carefully these instructions.

Before adjusting the belt take a felt pen or marker and make a small sign on the cam shaft and on the front of the reduction plate.

This is your Zero or start point and from here you will be able to clearly see how much you move the eccentric tensioning cam in relation to the reduction plate.

Remember “these are Fine adjustments” and we suggest not to rotate the cam any more than 1 mm per adjustment.

After each adjustment you can try to start the engine and check the result.

If the engine does not start well then it usually means the belt is still too loose and is slipping - in this case repeat the operation by tensioning the belt another 1 mm.

Consider that if the belt slips a little, but the engine still starts fine, then the tension is correct.

Belt tension always increases automatically when the engine is running because of thermal expansion in the pulleys.

Once you have found the correct tension , do not adjust it any more.

In case of doubts please contact your paramotor dealer – or CORS-AIR.

To adjust the belt do the following:

Loosen the safety bolt located high up behind the reduction mounting plate and the side bolt.

Once these are loosened then you can turn the cam with a n.27 mm size wrench - careful to observe the 1 mm increments.

Once you have finished turning the cam remember to re-tighten the safety bolts, first the exagonal bolt, by keeping firm the cam with the wrench, and then the side bolt.

Should you notice any black rubber dust inside small pulley (pinion), your belt needs to be re-tensioned because it is loosing.

IGNITION (ONLY FOR ENGINE WITH HAND START)

In case the coil and/or the handwheel must be changed, it is compulsory to turn to your dealer or to trained personnel, even if this operation can appear simple at the first sight, since the timing of the engine, if wrong, can change the performance and cause damage to the engine.

To check the timing: the distance between the coil and the flywheel magnet is 0,40 mm.

WARRANTY

CORS-AIR engines are manufactured with top-quality material, therefore warranty is valid also for their accessories.

DURATION OF WARRANTY

1 YEAR beginning from the date of sell or exit from CORS-AIR

Warranty includes spare parts and labour, transport excluded.

WARRANTY IS VOID IN THE FOLLOWING SITUATIONS:

- Alterations to the engine not approved by CORS-AIR.
- Wear&tear of components of the engine due to the instructions within the product manual not being adhered to.
- Accidental falls, crash or dropping of the engine or its components.
- Overheating and seizure of the engine due to prolonged high speed running of the engine, running with excessive loads, running with inadequate loads, running with insufficient oil in the petrol (for a wrong tuning of the carburettor) or running with petrol only (oil mixture omitted).
- The presence of dirt, sand or foreign bodies in the carburettor of the engine.
- Corrosion through bad storage of the engine or inadequate preparation for storage of the engine.
- Running the engine without an air-filter fitted to the carburettor.
- Miss-assembly of engine parts or components not assembled by CORS-AIR but by the manufacturer of the paramotor or by the end user, supplied disassembled for packing and transport purposes, included all electrical or electronic components including electric starter.
- Corrosion of the engine or components emanating from stone chips or any other impact or abnormal stress damage.
- Work other than the maintenance set out in the product manual having been carried out on the engine by anyone other than CORS-AIR or official dealers.
- Incidental or consequential loss or damage.
- Service bulletins from CORS-AIR not having been adhered to.
- Engine used for racing use.

CORS-AIR AND ITS RESELLERS REMAIN AT YOUR DISPOSAL FOR EVERY INFORMATION AND ADVICE ABOUT THE USE OF THE ENGINE.

TROUBLE SHOOTING

CHECK		PROBLEMS					SOLUTION
		DON'T START	FLOODED	DON'T HOLD IDLE SPEED OR HAS IRREGULAR SPEED	CANNOT REACH MAXIMUM SPEED	HEAD IS DE-CARBONED	
ENGINE	SWITCH ON/OFF						
	CONNECTION OF CABLE OF THE SPARK PLUG						
	CORRECT SPARK PLUG GAP						
	CONNECTIONS OF THE ELECTRIC PLANT						
	THE FUEL ARRIVES CORRECTLY FROM THE TANK TO THE CARBURETTOR						
							DISMANTLE THE SPARK PLUG AND DRY IT
							BEFORE REASSEMBLING SPARK PLUG, TAKE OFF THE FUEL LINE FROM CARBURETOR AND START THE ENGINE 2/3 TIMES
	THE REED VALVE PETALS ARE OPENED OR BROKEN						
							CLEAN AND ADJUST THE CARBURETTOR
	CABLE PULLING THROTTLE IS NOT FULLY OPEN						
	CLEAN THE CARBURETOR NETS inside						
	THERE IS NO TANK-FILTER RESTRICTION IN THE FUEL PIPE						
	SPARK PLUG						
							CHANGE HEAD GASKET AND THE CYLINDER GASKET

SOME FINAL IMPORTANT ADVICE

NEVER switch on the engine with people near propeller, or to sides.

The BREAKAGE of a propeller can cause very severe hurts even several metres away.

DO NOT keep engine at peak rpm after the take off, except for the absolutely necessary time and for emergencies (obstacles or sudden wind).

REMEMBER that the longer the propeller is and more thrust you get but less cooling system is granted to the engine which it will operate under stress.

So keep under control the temperature of the engine with proper instruments (CHT under spark plug and we recommend also EGT of the exhaust gas—check page. 5 for the correct engine temperature)

In addition, dismantle the propeller at regular intervals and check that it is perfectly balanced, since an unbalanced propeller, even slightly, creates micro-vibrations which are not felt by the pilot, but can damage seriously parts of the engine with consequent breakages.

Please do NOT forget that the propeller has mass and a considerable inertial moment, so it's advisable not to vary suddenly the RPM of the engine, both in flight and on the ground.

These violent stresses could cause damages to the reduction, to the engine, to the belt and also possible deformations to the fixing holes of the propeller.

Once you have found the perfect carburation, DO NOT modify it unless you change flying place going to much higher or lower altitudes or unless climate and temperature are very different from the ones where you fly usually.

DO NOT FLY in bad weather conditions, you'll fly the day after.

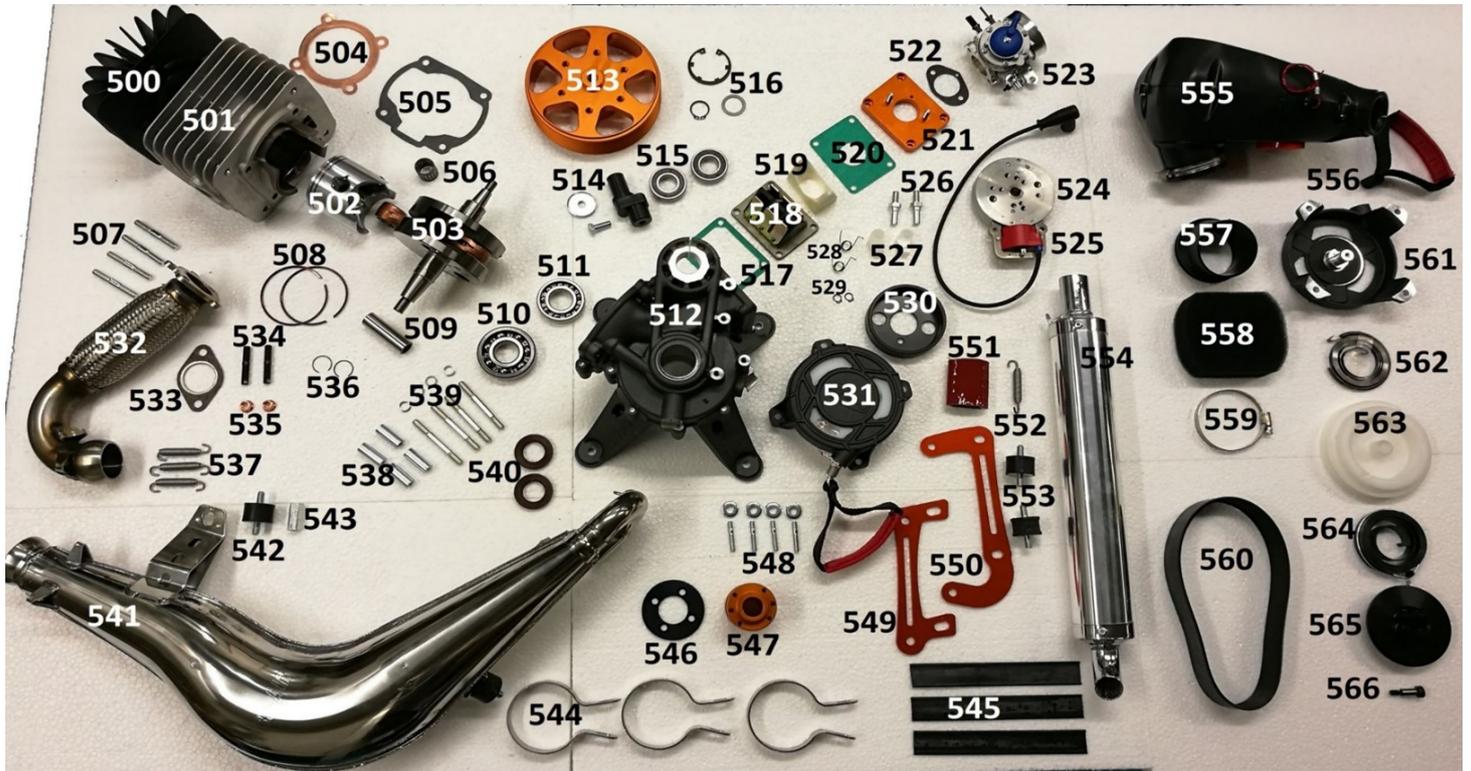
REMEMBER: FLIGHT IS FOR FUN, NOT FOR RISKING YOUR LIFE! HAVE A GOOD FLIGHT AND ENJOY YOURSELF.

STORAGE OF THE ENGINE FOR A LONG TIME

In case the engine is not used for a long time, act like this:

- Empty the fuel tank, included the fuel lines and the carburetor.
- Disassemble the battery (version with electric start).
- Unscrew the spark plug and pour into the hole a teaspoon of oil for engines, then re-install the spark plug letting the propeller turn slowly by hand for 2 or 3 times completely.
- Disassemble the propeller.
- Loosen the reduction belt.
- Plug the hole of the exhaust pipe.
- Cover everything with a cloth and put it in a dry place.
- Once a month charge the battery and let the pinion of the drive shaft turn by hand 2 or 3 times completely.

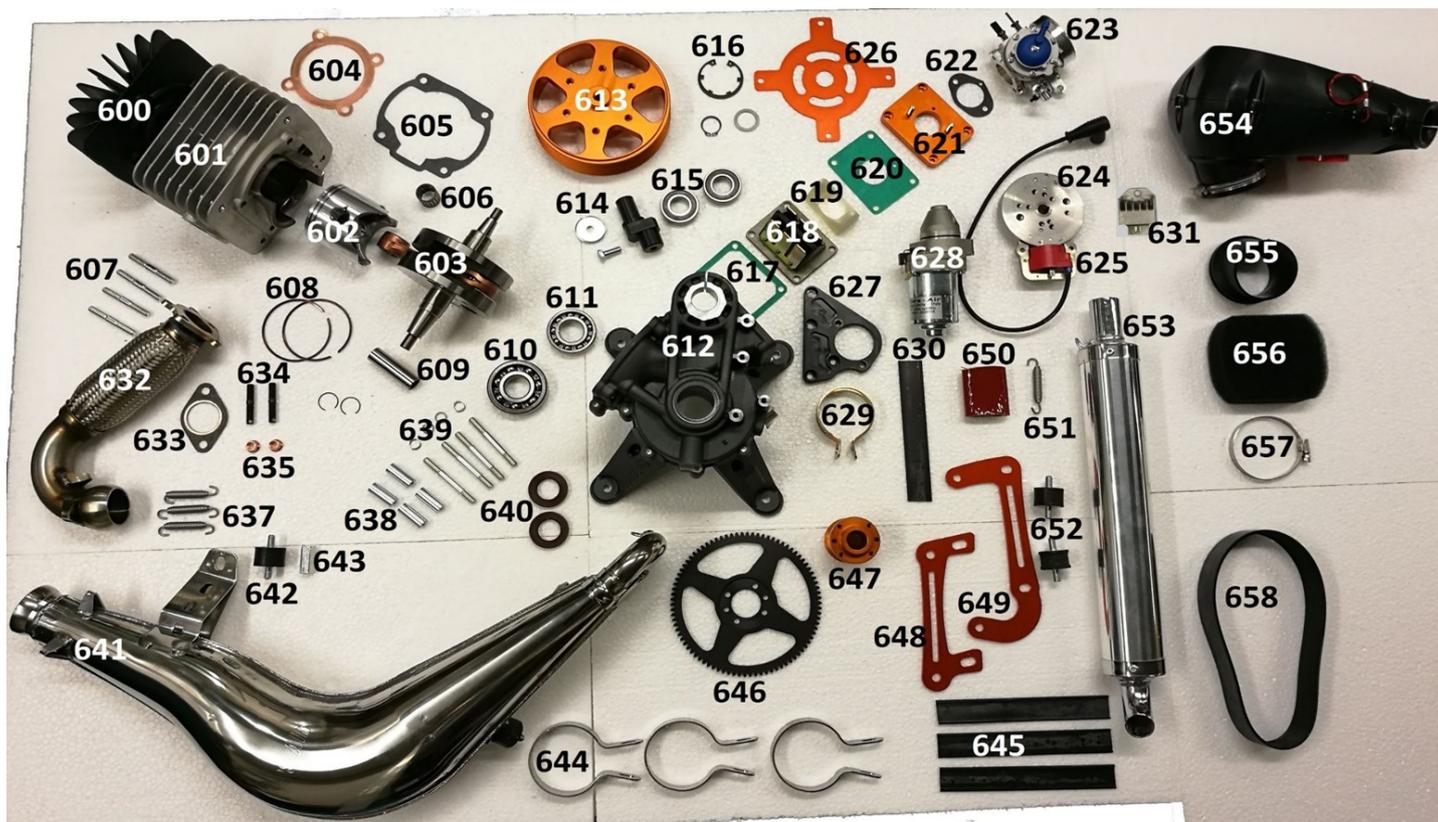
Black Bull hand start



Art.	Descrizione	Description
500	TESTA CILINDRO	CYLINDER HEAD
501	CILINDRO	CYLINDER
502	PISTONE	PISTON
503	ALBERO MOTORE	DRIVE SHAFT
504	GUARNIZIONE TESTA	HEAD GASKET
505	GUARNIZIONE CILINDRO	CYLINDER GASKET
506	GABBIETTA A RULLI	NEEDLE BEARING
507	PRIGIONIERI TESTA/CILINDRO (4 PZ)	TIE-RODS OF HEAD/CYLINDER (4 PCS)
508	SEGMENTI PISTONE (2 pcs.)	PISTON RINGS (2 pcs.)
509	SPINOTTO PISTONE	PISTON PIN
510	CUSCINETTO FRONTALE	FRONT BEARING
511	CUSCINETTO POSTERIORE	REAR BEARING
512	CARTER (completo di prigionieri, paraolio e cuscinetti albero)	CRANKCASE (complete of tie rods, oil seals and bearings for drive shaft)
513	PULEGGIA	PULLEY
514	ECCENTRICO	CAM SHAFT
515	CUSCINETTI PULEGGIA (2 PZ)	PULLEY BEARINGS (2 PCS)
516	DISTANZIALE 20/28X1.5	SPACER 20/28X1.5
	SEEGER PER PULEGGIA Ø 50X1.7	SEEGER FOR PULLEY Ø 50X1.7
	SEEGER Ø 20X1.2	SEEGER Ø 20X1.2
517	GUARNIZIONE PACCO LAMELLARE	REED VALVE GASKET
518	PACCO LAMELLARE	REED VALVE
519	GUIDAFLUSSO	FLOW GUIDE

520	GUARNIZIONE PIASTRINA CARBURATORE	GASKET OF CARB FLANGE
521	PIASTRINA BASE CARBURATORE	FLANGE FOR CARBURETOR BED
522	GUARNIZIONE OVALE CARBURATORE	OVAL CARB GASKET
523	CARBURATORE TRYTON	TRYTON CARBURETOR
524	VOLANTINO	FLYWHEEL
525	BOBINA	COIL
526	PERNI AGGANCI (2 PZ)	DOGS PIN (2 PCS)
527	AGGANCI AVVIATORE (2 PZ)	STARTER DOGS (2 PCS)
528	MOLLE AGGANCI (2 PZ)	DOGS SPRINGS (2 PCS)
529	SEEGER (2 PZ)	SEEGER (2 PCS)
530	TAZZA MOLLE	SPRING BOWL
531	AVVIATORE COMPLETO SENZA VOLANTINO	COMPLETE FLASH STARTER WITHOUT FLYWHEEL
532	COLLETTORE CON FLEX PIPE	MANIFOLD WITH FLEX PIPE
533	GUARNIZIONE MARMITTA	EXHAUST GASKET
534	PRIGIONIERI MARMITTA	EXHAUST STUDS
535	DADI SCARICO	EXHAUST NUTS
536	SEEGER PISTONE	SEEGERS FOR PISTON
537	MOLLE MARMITTA (3 PZ)	EXHAUST SPRINGS (3 PCS)
538	COLONNETTE PRIGIONIERI CILINDRO (4 PZ)	NUTS OF TIE-RODS OF CYLINDER (4 PCS)
539	PRIGIONIERI CARTER (4 PZ)	TIE-RODS OF CRANKCASE (4 PCS)
540	PARAOLIO (2 PZ)	OIL SEALS (2 PCS)
541	PANCIA MARMITTA	EXHAUST
542	SILENT BLOCK MARMITTA 3° PUNTO	RUBBER MOUNT FOR 3RD FIXING POINT OF EXHAUST
543	COLONNETTA 3° PUNTO MARMITTA	LONG NUT FOR 3RD FIXING POINT OF EXHAUST
544	COLLARI SILENZIATORE (3 PZ)	MUFFLER CLAMPS (3 PCS)
545	GUARNIZIONI COLLARE SILENZIATORE (3 PZ)	GASKETS FOR MUFFLER CLAMPS (3 PCS)
546	DISCO PIGNONE	PINION DISK
547	PIGNONE	PINION
548	PRIGIONIERI CARTERINO FLASH STARTER	SCREWS FOR FLASH STARTER CRANKCASE
549	STAFFA MARMITTA ANTERIORE	FRONT EXHAUST FLANGE
550	STAFFA MARMITTA POSTERIORE	BACK EXHAUST FLANGE
551	TUBO DI SILICONE	SILICON TUBE
552	MOLLA SILENZIATORE	MUFFLER SPRING
553	SILENT BLOCK MARMITTA (2 PZ)	EXHAUST RUBBER MOUNTS (2 PCS)
554	SILENZIATORE	MUFFLER
555	AIR BOX COMPLETO	COMPLETE AIRBOX
556	MANIGLIA AVVIATORE IN TESSUTO	HANDLE IN FABRIC
557	FLANGIA IN GOMMA X AIR BOX	RUBBER JUNCTION
558	SPUGNA INTERNA AIRBOX	INTERNAL FOAM
559	COLLARE FLANGIA AIR BOX	METALLIC CLAMP FOR RUBBER JUNCTION
560	CINGHIA 15 GOLE 559	BELT 15 GROOVES 559
561	CARTERINO AVVIATORE DOPPIA MOLLA	FLASH STARTER CRANKCASE
562	MOLLA RIAVVOLGIMENTO	RECOIL SPRING
563	PULLEGGIA AVVIATORE DOPPIA MOLLA	FLASH STARTER PULLEY
564	MOLLA GRANDE	BIG SPRING
565	TRASCINATORE	PULLEY DRIVER
566	VITE TRASCINATORE	PULLEY DRIVER BOLT

Black Bull electric start



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	SEEGER Ø 20X1.2	SEEGER Ø 20X1.2
617	GUARNIZIONE PACCO LAMELLARE	REED VALVE GASKET
618	PACCO LAMELLARE	REED VALVE
619	GUIDAFUSSO	FLOW GUIDE

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621	PIASTRINA BASE CARBURATORE	FLANGE FOR CARBURETOR BED
622	GUARNIZIONE OVALE CARBURATORE	OVAL CARB GASKET
623	CARBURATORE TRYTON	TRYTON CARBURETOR
624	VOLANTINO	FLYWHEEL
625	BOBINA	COIL
626	COPERCHIO ACCENSIONE	IGNITION COVER
627	FLANGIA MOTORINO ELETTRICO	FLANGE FOR ELECTRIC STARTER
628	MOTORINO ELETTRICO	ELECTRIC STARTER
629	COLLARE KIT DI SICUREZZA	CLAMP OF SAFETY KIT
630	GOMMA COLLARE	RUBBER FOR CLAMP
631	REGOLATORE	REGULATOR
632	COLLETTORE CON FLEX PIPE	MANIFOLD WITH FLEX PIPE
633	GUARNIZIONE MARMITTA	EXHAUST GASKET
634	PRIGIONIERI MARMITTA	EXHAUST STUDS
635	DADI SCARICO	EXHAUST NUTS
636	SEEGER PISTONE	SEEGERS FOR PISTON
637	MOLLE MARMITTA (3 PZ)	EXHAUST SPRINGS (3 PCS)
638	COLONNETTE PRIGIONIERI CILINDRO (4 PZ)	NUTS OF TIE-RODS OF CYLINDER (4 PCS)
639	PRIGIONIERI CARTER (4 PZ)	TIE-RODS OF CRANKCASE (4 PCS)
640	PARAOILIO (2 PZ)	OIL SEALS (2 PCS)
641	PANCIA MARMITTA	EXHAUST
642	SILENT BLOCK MARMITTA 3° PUNTO	RUBBER MOUNT FOR 3RD FIXING POINT OF EXHAUST
643	COLONNETTA 3° PUNTO MARMITTA	LONG NUT FOR 3RD FIXING POINT OF EXHAUST
644	COLLARI SILENZIATORE (3 PZ)	MUFFLER CLAMPS (3 PCS)
645	GUARNIZIONI COLLARE SILENZIATORE (3 PZ)	GASKETS FOR MUFFLER CLAMPS (3 PCS)
646	DISCO PIGNONE	PINION DISK
647	PIGNONE	PINION
648	STAFFA MARMITTA ANTERIORE	FRONT EXHAUST FLANGE
649	STAFFA MARMITTA POSTERIORE	BACK EXHAUST FLANGE
650	TUBO DI SILICONE	SILICON TUBE
651	MOLLA SILENZIATORE	MUFFLER SPRING
652	SILENT BLOCK MARMITTA (2 PZ)	EXHAUST RUBBER MOUNTS (2 PCS)
653	SILENZIATORE	MUFFLER
654	AIR BOX COMPLETO	COMPLETE AIR BOX
655	FLANGIA IN GOMMA X AIR BOX	RUBBER JUNCTION
656	SPUGNA INTERNA AIR BOX	INTERNAL FOAM AIR BOX
657	COLLARE FLANGIA AIR BOX	METALLIC CLAMP FOR RUBBER JUNCTION
658	CINGHIA 15 GOLE 559	BELT 15 GROOVES 559

NOTES:

A large rectangular area with a dotted border, containing 20 horizontal dotted lines for writing notes.