

MOTORNA PRSKALICA

Villager PS 20

ORIGINALNO UPUTSTVO ZA UPOTREBU



Upozorenje za korisnike

1. Benzinski motor mora se koristiti sa smešom goriva u odnosu 40:1 benzina i ulja za 2-taktne motore.
2. Rad sa malom brzinom obrtanja u trajanju od 3 do 5 minuta - nakon startovanja i u istom trajanju pre zaustavljanja je veoma bitan. To je u cilju sprečavanja oštećenja na nekim delovima, a i zbog mogućeg povredjivanja zbog naglog pokretanja motora.
3. Zabranjen je rad sa velikim brzinama obrtanja – bez opterećenja. Strogo je zabranjeno zaustavljanje motora pri velikim brzinama.
4. Pri sipanju goriva, motor mora biti zaustavljen, izvori vatre moraju biti udaljeni i zabranjeno je pušiti.
5. U cilju izbegavanja električnog udara, nemojte dodirivati kapicu svećice ni provodnike za vreme rada motora.
6. Površine auspuha i cilindra su veoma vruće, zato ni rukom ni telom nemojte da im prilazite. Naročito decu treba držati van domašaja motora.
7. Nemojte startovati motor- bez vode u rezervoaru za hemikalije.

MERE PREDOSTROŽNOSTI



Nemojte pozajmiti niti dati uređaj - bez Uputstva za upotrebu. Uverite se da svako ko koristi ovu prskalicu pročita i shvati informacije koje su sadržane u ovom uputstvu.

Bezbedna upotreba prskalice

1. Rukovaoc

Rukovaoc mora biti u dobroj fizičkoj kondiciji i dobrog mentalnog zdravlja.

Uređaj ne bi smele da koriste sledeće osobe:

- (1) Pacijenti sa psihičkim smetnjama
- (2) Osobe pod dejstvom alkohola, droga ili lekova
- (3) Osobe ispod min granice starosti, kao ni starije osobe (koje nisu u dobroj kondiciji)
- (4) Osobe koje su upravo imale veliki fizički napor ili nisu dovoljno spavale.
- (5) Umorne osobe i pacijenti i ostale osobe koje nisu u stanju da normalno upravljaju uređajem.
- (6) Osobe koje nisu upoznate sa radom uređaja.

2. Propisna odeća

Da bi se smanjio rizik od povredjivanja, rukovaoc mora da nosi propisnu zaštitnu odeću.

- Moraju se nositi odeća i rukavice kako be se izbegao kontakt sa pesticidima.
- Moraju se koristiti zaštitne naočare kako bi zaštitili oči, a

takodje i zaštitna maska radi zaštite od trovanja.

- Buka koju proizvodi uređaj može oštetiti Vaš sluh, tako da se moraju koristiti zaštitna sredstva za uši.
- Zatitna maska za lice se takodje treba koristiti kako bi se zaštitili od prašine i pesticida.



3. Upotreba uređaja

Prskanje

(1) Dobro je izvoditi rad za vreme hladnog vremena sa malim vetrom. Na primer rano ujutru, ili kasno popodne. Ovo može smanjiti isparavanje i raznošenje hemikalija i poboljšati efekat zaštite.

(2) Rukovaoc treba da se kreće u pravcu vetra.

(3) Ukoliko je na Vaša usta ili oči prsnula hemikalija, isperite ih čistom vodom i javite se lekaru.

Ukoliko rukovaoc ima glavobolju ili vrtoglavicu, odmah prestanite sa radom i javite se lekaru.

Sipanje goriva



Sipanje goriva
Vaša prskalica koristi mešavinu benzina i 2-taktnog ulja.

- Nemojte pušiti niti približavati nikakav otvoreni plamen blizu goriva niti blizu prskalice.
- Nikada nemojte dopunjavati dok je uređaj vruć ili dok radi.
- Nikada nemojte prosuti gorivo na uređaj. Ukoliko dodje do prosipanja ili kapljanja na uređaj-odmah obrišite (pre početka startovanja).

Upozorenje:

Nemojte dodirivati auspuh, svećicu ili neki drugi metalni deo motora, dok motor radi ili neposredno posle isključivanja motora. Ovi metalni delovi postižu visoke temperature za vreme rada i ukoliko ih dotaknete – može doći do ozbiljnih opekotina.

Nakon rada, operite Vaše ruke i očistite svu odeću. Znaete da zaostale hemikalije mogu ostaviti fleke na svemu što dodirnete.



Tehničke karakteristike:

Naziv	Karakteristike
LxWxH (mm)	450x340x605
Neto masa (kg)	9.8
Kapacitet rezervoara za hemikalije (L)	20
Zapremina apsorpcije vode(L)	≥7
Radni pritisak (Mpa)	0-2.5
Tip goriva	Mešavina benzina i ulja (40:1)
Tip startovanja	Potezni starter

2. Osnovna primena

Prskalica je prenosiv fleksibilan i efikasan uređaj za zaštitu biljaka. Prevažodno se koristi za zaštitu i lečenje od bolesti i štetočina biljaka kao što su: pamuk, pirinač, pšenica, drvenasto voće, drveće čajeva, drveće banana itd. Takodje se može koristiti u hemijskom tretmanu korova, epidemiološkoj prevenciji, sanitarnoj zaštiti u gradovima, zaštiti povrća, itd.

3. Glavne karakteristike

3.1 Ovaj uređaj radi po principu stepena prenosa za kontrolisanje (smanjenje) brzine, tako da je vrlo izdržljiv.

3.2 Glavni deo je klipna pumpa dvostrukog (dvosmernog) dejstva. Konstrukcija je jednostavna i kompaktna i laka je za održavanje.

3.3 Ovaj uređaj radi sa visokim pritiskom, velikim protokom i i

dobrom efikasnošću, pa je zaštitni efekat – vrlo uočljiv.

3.4 Glavni delovi za prskanje su tri mlaznice koje su razvijene u našoj fabrici. Pa je opseg prskanja vrlo širok.

4. Glavna struktura

Ovaj uređaj se uglavnom sastoji od pet delova:

4.1 Motor. To je pogonski izvor ovog uređaja. Povezan je sa klipnom pumpom preko usporavajućeg sredstva i povezan sa ramom preko donjeg nosača.

4.2 Klipna pumpa. To je srce uređaja. Svaki njen parametar će direktno uticati na karakteristike celog uređaja. Povezana je sa motorom i sa ramom.

4.3 Ram. To je nosač uređaja.

4.4 Rezervoar za hemikalije. Koristi se za smeštanje hemijskih tečnosti.

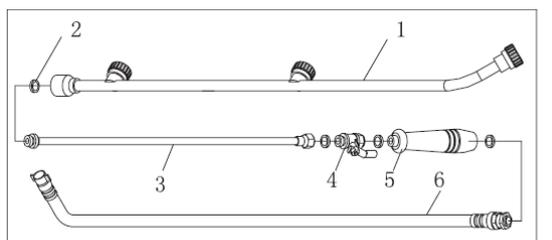
4.5 Delovi za prskanje. Uglavnom se sastoje od sklopa plastične cevi, ručke, ventila, prave cevi za prskanje, dugačke mlaznice za prskanje, itd. I koristi se za prskanje u vidu magle.

5. Radne instrukcije

5.1 Priprema pre starta

5.1.1 Povezivanje delova za prskanje. Pre startovanja svi spojevi treba da budu pravilno montirani (pogledati sl.1)

1. Dugačka mlaznica za prskanje
2. Podloška (zaptivka)
3. Prava cev za prskanje
4. Ventil
5. Rukohvat
6. Plastična cev.



Sl.1

5.1.2 Proverite da li su sve instalacije obavljene korektno i da li su stabilne.

5.1.3 Za nove, ili dugo uskladištene uredjaje, ulje iz cilindra mora se prvo ukloniti. Način uklanjanja: Izvadite svećicu (pre toga otkačite kabal), upotrebite prst da bi zatvorili otvor za svećicu i povucute starter snagom dovoljnom da izbacite ulje.

5.1.4 Proverite varnicu na svećici. Normalno je da varnica bude plava.

5.1.5 Proverite da li je prečistač vazduha - čist. Zaprljani prečistač vazduha će uticati na količinu

ulaznog vazduha, a to može uticati na performanse motora.

5.1.6 Pre startovanja pripremite hemikaliju prema uputstvu proizvođača, a zatim je sipajte u rezervoar.

5.2 Pokretanje

5.2.1 Sipanje goriva.

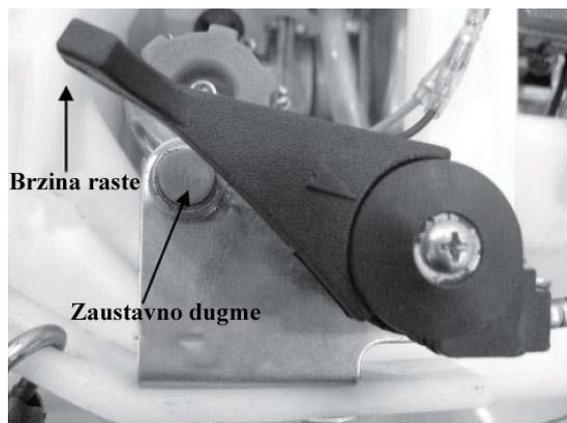
Ovaj motor je jednocilindrični dvotaktni motor. Gorivo je mešavina benzina i specijalnog ulja za dvotaktne motore koje se ne može zameniti nekom drugom vrstom. Odnos benzina i ulja je 40:1. Uz uredjaj (kod nekih modela) dobija se boca sa skalom pogodna za sipanje.

5.2.2 Pritiskajte pumpu za injektovanje goriva dok se ne napuni (videti sl.2)



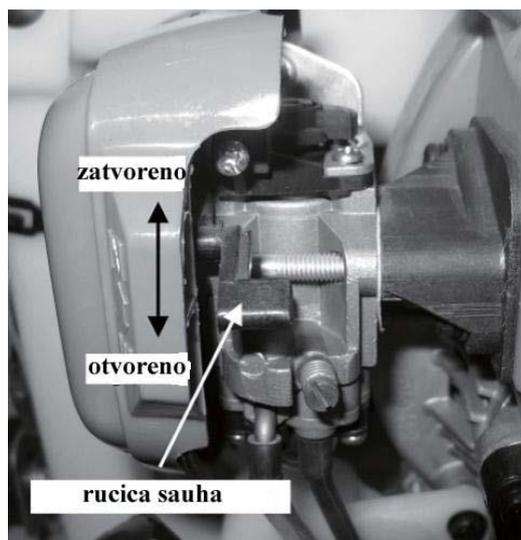
Sl. 2

5.2.3 Stavite ručicu goriva na startnu poziciju (otprilike jedna trećina od ukupne skale) – pogledati sl.3.



Sl.3

5.2.4 Regulirajte ručicu sauha (pogledati sl.4) da bi zatvorili u zimskom periodu i pri prvom startovanju, do potpuno otvorene pozicije kada je motor vruć.



Sl. 4

5.2.5 Lagano povucite starter 3-5 puta da bi gorivo došlo do cilindra. Sauh u zatvorenoj poziciji, (lagano se vuče starter dok se ne oseti otpor, zatim povucite brzo dok se ne „javi“ motor) da bi startovali motor. Napomena: Nakon startovanja startni kanap treba da se vrati polako rukom. Ukoliko se kanap

prebrzo vrati, može doći do oštećenja startera.

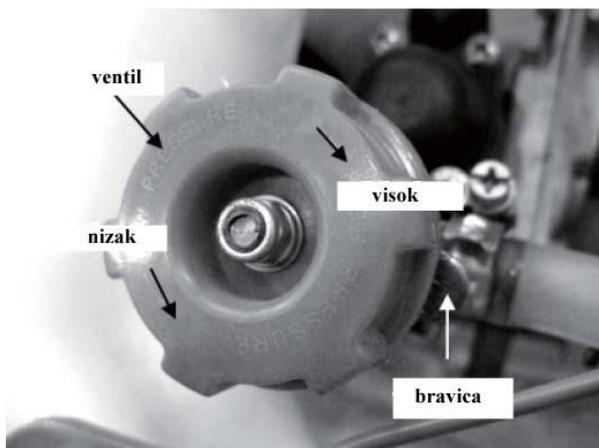
5.2.6 Nakon startovanja povucite sauh lagano na potpuno otvorenu poziciju. Postavite ručicu gasa na propisnu poziciju da bi se radilo na malom broju obrtaja 3-5 minuta, zatim otpočnite prskanje.

5.2.7 Novi uređaj ne bi trebalo da radi na potpuno otvorenoj poziciji - prva 4 sata. Brzina treba da se reguliše na 4000-5000 o/min – to omogućava dobar rad motora i pouzdano obavljanje posla.

5.3 Prskanje

5.3.1 Sipajte hemikaliju. Pre sipanja hemijske tečnosti, prskajte sa vodom da bi proverili da li ima curenja. Kada dodajete hemijsku tečnost, to se ne sme raditi brzo niti da bude prepuno. Tečnost mora da prodje kroz filter kako bi se izbeglo da strana materija prodre u rezervoar - što može prouzrokovati kvar uređaja ili blodadu mlaznice. Nakon završetka dodavanja tečnosti zavijte poklopac rezervoara da bi izbegli curenje. Motor se ne mora zaustaviti (kada dopunjavate hemikaliju), ali se mora smanjiti na nizak broj obrtaja. (i ne u položaju za prskanje).

5.3.2 Regulacija pritiska. Kada je brzina motora 5000-6000 o/min, regulišite izlazni pritisak vode klipne pumpe. Ovo je fabrički podešeno. Ukoliko je neophodno podešavanje, molimo Vas da ovu proceduru obavite prema instrukcijama na sl.5.



Sl. 5

5.3.3 Prskanje. Stavite uređaj na ledja. Regulirajte ručicu gasa da bi podesili da uređaj radi na oko 6500 o/min i uključite ručicu ventila za prskanje, zatim započnite operaciju prskanja.

5.3.4 Neke važne napomene u vezi prskanja:

a- Cev za prskanje njišite rukom nakon uključivanja ručice ventila. Da bi se sprečilo da hemikalija izazove štetu, strogo je zabranjeno prskati samo jednu tačku.

b-Rukovaoc treba da se kreće u pravcu vetra. Cev prskanja treba da bude pod uglom od 15° u odnosu na podlogu.

c-Za vreme prskanja treba da se njiše kontinualno levo-desno do dostizanja opsega prskanja. Brzinu hoda treba uskladiti sa sa brzinom njihanja.

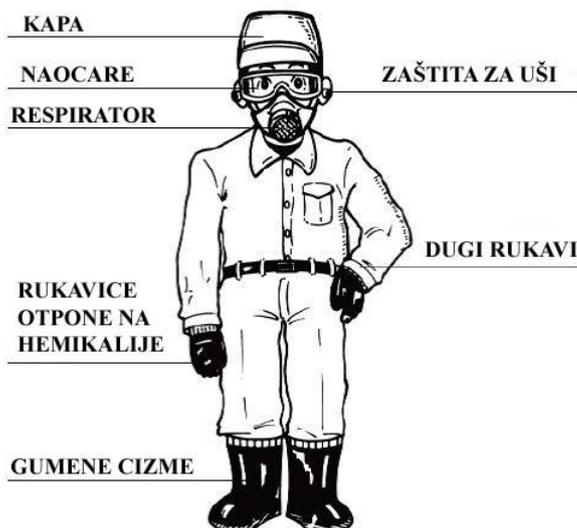
d-Zaustavljanje. Smanjite brzinu. Nakon 3- 5 minuta pritisnite stop prekidač.

6.1 Pažljivo pročitajte ovo uputstvo: Upoznajte se kako da pravilno rukujete ovim uređajem, pre nego

što počnete da ga koristite. Ukoliko imate nedoumica- obratite se ovlašćenom servisu.

6.2 Zaštitna odeća

- Nosite zaštitnu kapu sa obodom
- Nosite zaštitne naočare
- Koristite zaštitnu masku sa gazom
- Nosite duge rukavice
- Koristite zaštitni mantil protiv otrova
- Nosite čizme



6.3 Sledeće osobe ne bi smele da koriste uređaj:

- Psihički bolesnici
- Osobe pod dejstvom alkohola, droge ili lekova
- Osobe koje su mlađe od min starosne granice za rukovanje uređajem (pogledati lokalne zakone) ili starije osobe (one koje zbog podmaklih godina nisu u stanju da pravilno upravljaju uređajem).

d. Osobe koje nisu upoznate sa pravilnim upravljanjem uredjaja.

e. Umorne osobe ili pacijenti koji nisu u stanju da normalno upravljaju uredjajem.

f. Osobe koje su upravo imale fizički napor ili koje nisu dovoljno spavale.

g. Žene koje doje bebu ili trudnice

6.4. Izbegnite požar

a-Plamen niti varnica ne smeju biti u blizini uredjaja

b-Uredjaj nemojte dopunjavati dok radi, niti dok je još uvek – vruć.

c- pazite da ne prospete ili kapnete gorivo na uredjaj. Ukoliko se to ipak desi, obrišite pre startovanja uredjaja. Nakon što ste sipali gorivo, prvo dobro dotegnite poklopac rezervoara goriva, a zatim se pomerite najmanje 3m od mesta sipanja goriva, kako bi pokrenuli uredjaj.

6.5 Operacija prskanja

a-Prskanje treba izvoditi za vreme hladnog vremena, kada ima malo vetra. Na primer, u rano jutro ili kasno popodne. To će smanjiti isparavanje i razbacivanje hemikalija i poboljšati efekat prskanja.

b-Rukovaoc treba da se kreće u pravcu vetra.

c-Pregledajte radnu oblast pre početka rada. Ona mora biti čista. Proverite da li u zoni rada ima potencijalnih opasnosti kao što su kamenje, ili metalni predmeti. Posmatrači i saradnici moraju biti upozoreni a deci i životinjama treba zabraniti pristup na manje od 15 m od mesta prskanja dok je prskalica u

radu. Cev prskalice se ne sme usmeravati u pravcu ljudi ili životinja.

d-Ukoliko hemikalije prsnu po Vašim usnama ili očima, isperite ih čistom vodom i odmah se obratite lekaru.

e-Ukoliko rukovaoc ima glavobolju ili vrtoglavicu, treba da odmah prekine sa radom i obrati se lekaru.

f-Zbog bezbednosti rukovaoca, posao prskanja /zapašivanja, se treba obavljati po strogo definisanim instrukcijama hemijskih i poljoprivrednih zahteva. Strogo je zabranjeno prskati ekstremno otrovnim hemikalijama.

7 Problemi i rešenja

7.1 Problemi i rešenja u vezi motora, pogledajte sledeću tabelu.

Problem	Uzrok	Rešenje
Nema starta	Propušteno da se pritiska injekciona pumpa goriva	Pritiskajte kontinualno
	Voda u gorivu	Zamenite gorivo
	Naslage čadji na svećici	Zamenite svećicu
	Loš kontakt između kabla i svećice	Proverite
Može da startuje, ali ne može da radi na velikim brzinama	Sauh nije potpuno otvoren	Otvorite potpuno
	Loš odnos u mešavini goriva	Zameniti
	Voda u gorivu	Zameniti gorivo
Može da radi, ali nema dovoljnu efikasnost	Filter prečistača vazduha – zaprljan	Proverite i očistite
	Oko cilindra i auspuha ima naslaga čadji	Uklonite čadj
	Klip, karika, cilindar su ozbiljno pohabani	Zameniti
Zastavlja se tokom rada	Potrošeno gorivo	Dodajte gorivo
	Labav kabal svećice	Proverite i dodegnite
	Svećica pokrivena čadju	Zamenite svećicu
	Filter zapušen	Očistiti
	Voda u gorivu	Zamenite gorivo
	Otvor za vazduh u rezervoaru-zapušen	Očistiti

7.2 Problemi i rešenja za prskanje

Problem	Uzrok	Rešenje
Tečnost ne može da izadje	Ulazni i izlazni ventil - zapušeni	Zamenite ili očistite
	Oštećenje zaptivača	Zamenite
	Oštećenje 6004Z ležaja	Zamenite
	Oštećenje klipa	Zamenite
Pritisak i zapremina (protok) nisu dovoljni	Regulacija pritiska nije dovoljna	Regulišite
	Elastična sila regulacione opruge nije dovoljna	Zamenite
	Pohabana kugla od nerdjajućeg čelika	Zamenite
	Sedište regulacionog ventila pritiska - pohabano	Zamenite
Pristisak je dovoljan, ali prskanje nije dovoljno	Pohaban klip	Zamenite
	Dužina kretanja klipa nije dovoljna	Zamenite
	Ulazni i izlazni ventil-pohabani	Zamenite
	Delovi za prskanje - zapušeni	Očistite
Mlaz prskanja nije ravnomeran	Otvori za prskanje pohabani	Zamenite
	Zapušeni otvori za prskanje	Očistite

8. Održavanje i skladištenje na duži period

8.1 Dnevno održavanje

Sledeće održavanje treba da bude uradjeno posle svakog dana

8.1.1 Očistite površine uređaja

8.1.2 Očistite rezervoar za hemikalije čistom vodom i osušite ga.

8.1.3 Proverite sve spojeve i da li postoji curenje vode ili goriva. Ukoliko postoji curenje odmah se mora izvršiti popravka.

8.1.4 Proverite sve vijke – da li su na broju i da li ima olabavljenih. Ukoliko nedostaju– stavite nove, a ukoliko nisu dotegnuti-dotegnite ih.

8.1.5 Ulje za podmazivanje treba da bude ubrizgano u otvor za ulje nakon svakih 24 sata rada.

8.1.6 Ovaj uređaj nakon održavanja treba da bude stavljen na suvo i provetreno mesto. To treba da bude daleko od izvora vatre, a treba izbegavati i sunčevu svetlost.

8.2 Dugotrajno skladištenje

8.2.1 Očistite pažljivo površinu uređaja

8.2.2 Ispraznite gorivo iz rezervoara i karburatora u potpunosti, isključite sauh, povucite starter 3-5 puta.

8.2.3 Izvadite svećicu (pre toga skinite kabal) i sipajte malo ulja u cilindar, zatim povucite starter 2-3 puta lagano, na kraju vratite svećicu.

8.2.4 Ubacite ulje za podmazivanje u menjač i karter.

8.2.5 Plastični delovi se ne smeju izlagati sunčevoj svetlosti niti pritiskati teškim predmetima.

8.2.6 Pokrijte uređaj kako bi zaštilili od prašine i skladištite na suvom i čistom mestu.



Akcionarsko društvo za ispitivanje kvaliteta KVALITET Niš
 Акционарско друштво за испитивање квалитета КВАЛИТЕТ Ниш
 Joint-stock company for quality testing KVALITET Niš



SERTIFIKAT O USAGLAŠENOSTI Broj: **P07190550100**
 CERTIFICATE OF CONFORMITY No.

Podnosilac zahteva: AGROMARKET D.O.O.
Applicant: 34231 KRAGUJEVAC-KORIČANI
 KRALJEVAČKOG BATALJONA 235/2

Proizvod: MOTORNA PRSKALICA
Product:

Oznaka tipa/modela: PS20
Type:

Robna marka: Villager
Trademark:

Proizvodjač: Villager D.O.O
Manufacturer: SLOVENIJA

Vrednovana dokumentacija *Evaluated documentation:*

Dokument: 071317800
Document:

Izdat od: "Kvalitet" a.d. Niš
Issued by:

Na osnovu gore navedene dokumentacije utvrđeno je da gore navedeni proizvod zadovoljava zahteve referentnih standarda koji su navedeni u spisku standarda 'Pravilnika o elektromagnetskoj kompatibilnosti' (Sl. glasnik RS, 25/2016).

On the basis of the above mentioned documentation it is found that above mentioned product fulfils the requirements of the referent standards cited in list of standards of the 'Rulebook on Electromagnetic Compatibility' (Official Gazette RS, 25/2016).

Nastale promene u specifikaciji, tipu/modelu, komponentama, elektricnim karakteristikama proizvoda koji uticu na usaglašenost sa navedenim tehničkim propisom i/ili standardom moraju se prijaviti "Kvalitet" a.d. Niš.

Any changes occur in the specification, type/model, components of the design, electrical construction which may influence on conformity to the above mention tehnicl regulation and/or standard, shall be forwarded to "Kvalitet".

Mesto i datum izdavanja: **Važi do:**
Place and date: *Valid until:*
 Niš, 23.12.2019. 22.12.2024.



Generalni direktor

Vladimir Vukašinović
 Vladimír Vukašinović, dipl.inž.

Ovaj dokument važi samo za proizvode koji su istovetni sa proizvodima koji su bili predmet vrednovanja.

Bul. Svetog Cara Konstantina 82-86, Niš 18000, Srbija, Tel: (018)550-766, 550-624, Fax: (018)550-636, 550-068
 e-mail: office@kvalitet.co.rs, http://www.kvalitet.co.rs

Deklaracija o usaglašenosti



Prema Direktivi 2006/42/EC o bezbednosti mašina, Aneks II A

Villager

Villager d.o.o.
Kajuhova 32 P, 1000 Ljubljana, SLO

Opis mašine:

LEDNA MOTORNA PRSKALICA PS 20

Izjavljujemo pod punom odgovornošću da je pomenuti proizvod dizajniran i proizveden u skladu sa:

- Direktiva 2006/42/EC o bezbednosti mašina
- Direktiva 2014/30/EU o elektromagnetnoj kompatibilnosti
- Direktiva 97/68/EC_2012/46/EU o emisiji gasova i zagadjujućih materijala iz motora sa unutrašnjim sagorevanjem

Harmonizovani i drugi standardi:

EN 809:1998+A1

Odgovorna osoba ovlašćena za sastavljanje tehničke dokumentacije: Zvonko Gavrilov, na adresi kompanije Villager D.O.O, Kajuhova 32 P, 1000 Ljubljana

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Lice ovlašćeno da sačini izjavu u ime proizvođača

Zvonko Gavrilov

KNAPSACK POWER SPRAYER

Villager PS 20

Original instructions manual



Warning to Users

1. The gasoline engine must use mixed fuel with volume rate of 40:1 for gasoline to two-stroke automobile oil.
2. 3 to 5 minutes' low speed rotation after start and before stop is very necessary. In order to prevent damage of some parts or body harm caused by violent movement of the engine.
3. High-speed rotation without load must be prohibited! It is strictly prohibited to stop the engine suddenly at high speed.
4. When adding fuel, the engine should stop, fire sources must be far away and smoking is prohibited.
5. In order to avoid electric shock, do not touch the cap of spark plug and the conducting wire during the rotation of the engine.
6. The surface of the muffler and the cylinder is very hot, so neither the hands nor the body approaches them. Especially children should be far away from the engine.
7. Don't start the engine without water in the chemical tank.

SAFETY PRECAUTION

Do not lend or rent your sprayer duster without the Owner's Manual. Be sure that anyone using your sprayer reads and understands the information contained in this manual.

**Safe use of the sprayer:****1.The operator**

The operator must be in good physical condition and mental health.

Following personnel can't use the machine.

- (1) Mental patients.
- (2) Drunk.
- (3) Under age or old person.
- (4) Person who have just exercised strenuously or slept not enough.
- (5) Tired person or patient and others who can't operate the machine normally.
- (6) Person with no knowledge of the machine.

2.Proper clothing

To reduce the risk of injury, the operator should wear proper protective apparel.

- Clothing and gloves must be wear to avoid contacting pesticide .
- Wear glasses and gauze mask to protect your eye and; Wear the gauze mask to prevent from poisoning.
- The machine noise may damage your hearing ,so wear ear mufflers to protect your hearing.
- Pay attention to wear a face mask to protect against pesticide.

3.The use of the machine**Spray operation**

(1) It is fine to carry out operation during cool weather with little wind. For example, in the early morning or in the late afternoon.

This can reduce the evaporation and drift of chemicals and improve the protecting effect.

(2) Operator should move windward.

(3) If your mouth or eyes are splattered with chemicals, wash them with clean water and go to see a doctor.

(4) If the operator has a headache or dizziness, stop working at once and go to see a doctor in time.

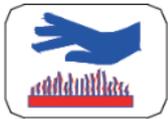
Fueling



Your sprayer uses oil-gasoline mixture.

- Do not smoke or bring any fire or flame near the fuel or the sprayerduster.
- Never refuel the machine when it is hot or running.
- Never pour fuel on the machine. If you do, be sure clean them off.

Warning



Never to touch the muffler, spark plug, or other metallic parts of the engine while the engine is in operation or immediately after shutting down the engine. These metallic parts reach high temperatures during operation and doing so could result in serious burns.



After working, wash your hands and clean all of clothing. You know that the remaining pesticide can stain what you touch.

Technical Specification

Name	Specification
LxWxH (mm)	450x340x605
Net Weight (kg)	9.8
Chemical tank Capacity (L)	20
Volume of water Absorption (L)	≥7
Working pressure (Mpa)	0-2.5
Fuel Type	Gasoline/oil mixture (40:1)
Type of Start	Recoil Starter

2. Main Application

This Knapsack Power Sprayer is one kind of portable, flexible and efficient machinery for plant protection. It is mainly used in prevention and cure of diseases and pests of plants such as cotton, rice, wheat, fruit trees, tea trees, banana trees, etc. It can also be used for chemical weeding, epidemic prevention, sanitation protection in cities, vegetable protection, etc.

3. Main Features

3.1 This machine adopts gear structure to decrease speed, so it is very durable.

3.2 The main part is the plunger pump of two directions' type. The structure is simple and compact, so it is easy for the maintenance.

3.3 This machine has high pressure, big flow and good efficiency, so the protection effect is very obvious.

3.4 The main spraying parts are three nozzles, which are developed

and only adopted by our factory in our country. So the spraying range is wide.

4. Main Structure

This machine mainly consists of five parts:

4.1 Engine. It is power source of the machine. It is connected with the plunger pump through the decelerating device and connected with the frame through bottom support.

4.2 Plunger Pump. It is the heart part of the machine; its every parameter will directly influence the whole machine's property. It is connected with the engine and with the frame.

4.3 Frame. It is the support part of the machine.

4.4 Chemical Tank. It is used for holding chemical liquid.

4.5 Spraying Parts. It mainly consists of plastic tube assembly, handle, valve, straight spraying tube assembly and long spraying

nozzle etc, and used for mist spraying.

5. Operating Instruction

5.1 Preparation before start

5.1.1 Connecting of spraying parts. Before start, all the connections should be correct, the method is as Figure 1.

1. Long Spraying Nozzle
2. Washer
3. Straight Spraying Tube
4. Valve
5. Handle
6. Plastic Tube

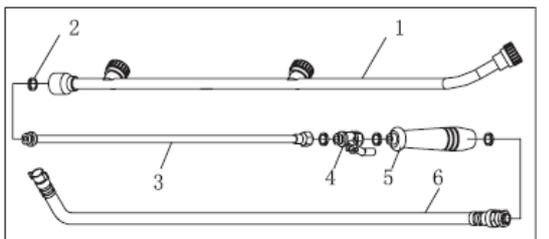


Figure 1

5.1.2 Check if all the installations are correct and stable.

5.1.3 For new or long storage machines, oil sealed in the cylinder must be removed first.

The removing method: Take off the spark plug, use the lift thumb to stop the spark plug hole and pull the starter with strength to spray the oil out.

5.1.4 Check the sparks of the spark plug.

Normally the sparks should be blue.

5.1.5 Check if the air cleaner is clean.

Dirty air cleaner will influence the volume of incoming air that can

cause the bad performance of the engine.

5.1.6 Before start, mix medicament according to the medicament instruction book, then pour in the chemical tank.

5.2 Start

5.2.1 Adding fuel. This gasoline engine is the type of single-cylinder and two-stroke.

The fuel is the mixture of gasoline and two-stroke automobile oil that can not be replaced by any other kind. The ratio between gasoline and oil is 40:1. One fuel adding bottle is supplied (for some models). It has scales for the conveyance.

5.2.2 Push the fuel-injecting pump continuously until the fuel is full i.e. fuel flows out of the transparent tube.

See Figure 2.

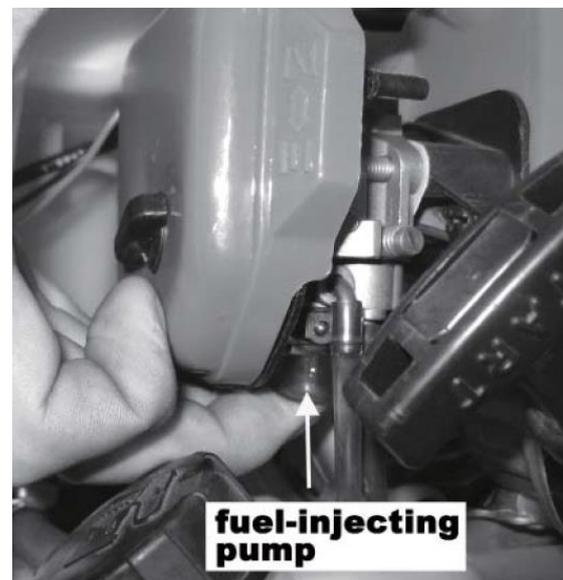


Figure 2

5.2.3 Put the fuel handle on the starting position (about one third of the whole scale).

See Figure 3.

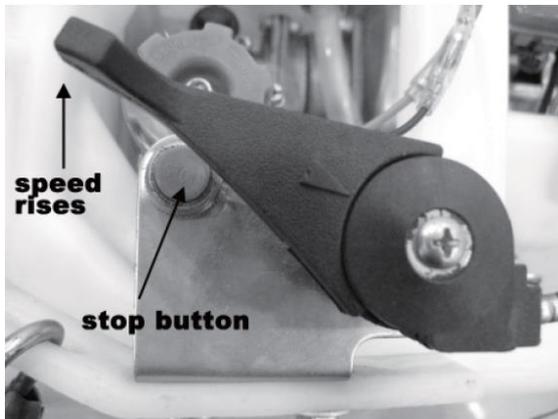


Figure 3

5.2.4 Regulate the choker (see Figure 4) to close position in winter and at the first time to full open position when the engine is hot.

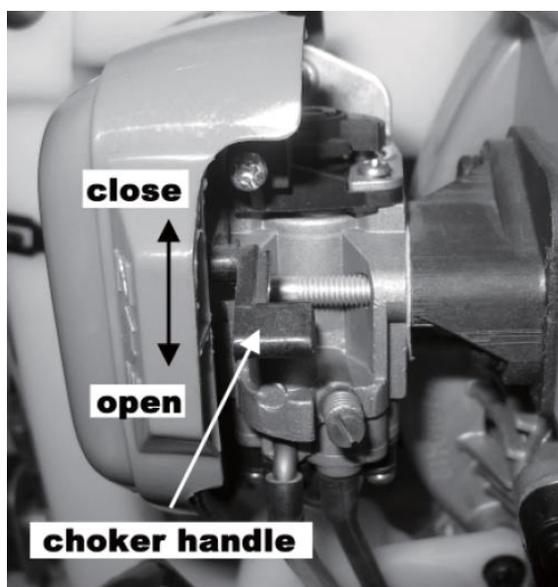


Figure 4

5.2.5 Pull the starter lightly for 3-5 times to make the fuel into the

cylinder. Then pull it fast to start the engine. Note: After start, the start rope should be contracted back slowly with hand's help. If the rope contracts back fast, it may cause damage of the starter.

5.2.6 After start, put the choker slowly to full open position.

5.2.6 Regulate the fuel handle to a proper position to run at low speed for 3-5 minutes, then make spraying operation.

5.2.7 New machine should not work at full open position within the first 4 hours. The speed should be controlled at 4000-5000r/min, thus enabling the engine to have a good match and do reliable job.

5.3 Spraying

5.3.1 Adding chemical liquid Before adding chemical liquid, spray which water to test if there is leakage. When adding chemical liquid, it should be neither very fast nor excessive full. The liquid must be assured to be through the filter in order to avoid foreign matter coming into the chemical tank to cause coming into the chemical tank to cause machinery breakdown or nozzle block.

After finish of adding liquid, screw down chemical tank lid in order to avoid leakage, when adding liquid, the machine need not stop, but should be at low speed.(i. e. not at spraying position)

5.3.2 Pressure regulation. When the engine's speed is 5000-6000r/min,

regulate the coming out water pressure of plunger pump. This has been done before leaving the factory. If it is necessary to regulate, please do this procedure as per the instruction of Figure 5.

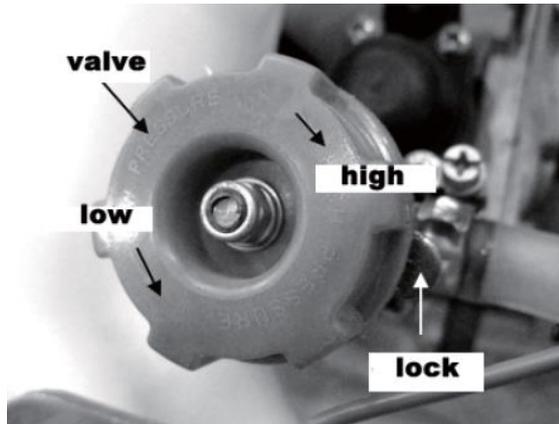


Figure 5

5.3.3 Spraying. Put the machine on the back. Regulate the fuel handle to let the machine run at about 6500r/min and turn on the handle spraying valve, then start spraying operation.

5.3.4 Some important notes for spraying operation:

a-Swing the spraying tube with hand after turning on the handle valve. In order to avoid chemical harm, it is strictly prohibited to spray only at one place.

b-Operator should face to wind. The spraying tube should form about 15° angle with level.

c-During spraying, the spraying tube should be swung continuously between the left and the right to increase spraying range.

Advanced steps should cooperate with the swing speed.

d-Stop. Decrease speed. This can wash the parts inside the machine. Finally push the stops witch after 3 to 5 minutes' running of the engine.

6.Safe Operation

6.1 Read the instruction book carefully.

Inquire the local retailers if there is anything confused.

6.2 Protective clothing:

a-Wear fl angled cap

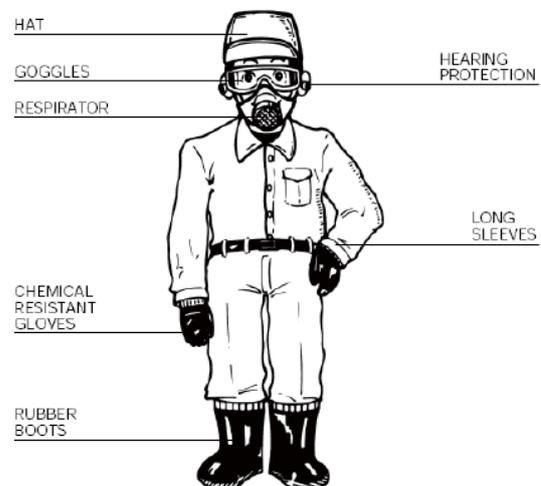
b-Wear dirt/fog-proof glasses

c-Wear gauze mask

d-Wear coat guarding against poisons

e-Wear long-sleeve gloves

f-Wear boots



6.3 Following personnel cannot operate the machine.

a-Mental patients

b-Drunk or persons under influence of drugs or patients that use some medications

c-Underage or old persons

d-Persons without knowledge of the machine

e-Tired persons or patients and others who cannot operate the machine normally.

f-Persons who have just exercised strenuously or slept un-enough and also the women giving the breast to baby or being pregnant.

c-If chemical spattered into mouth or eyes, wash them with clean water and then go to see the doctor.

d-If the operator has headache or dizziness, stop working immediately and go to see the doctor in time.

e-For the operator's safety, spraying must be carried out strictly according to the instruction of the chemicals. It is strictly prohibited to spray extreme poisonous chemicals.

6.4 Avert fire

a-Do not make fire or smoke nearby the machine.

b-Never refuel the machine when it is hot or running.

c-Never pour fuel on the machine. If you do, please clean it off. After adding fuel, please screw down the fuel tank lid, then move the machine to another place for start (at least 3m from pouring point).

6.5 Spraying operation

a-Chemical-spraying should be performed under cool weather with little wind. For example, in the early morning or in the late afternoon. This can reduce evaporations and drift of chemicals and improve protecting effect.

b-The operator should move towards winds.

7. Trouble Shooting

7.1 Trouble and trouble shooting of the engine, see the following list:

Problem	Cause	Remedy
Fail to start	Fail to push the fuel-injecting pump	Push continuously
	Water mixed with fuel	Replace the fuel
	Deterioration or carbon deposit of spark plug	Replace the plug
	Bad contact between spark plug and lead wire	Check
It can start but can not run at high speed	The choker is not on the full open position	Open the full position
	Wrong ratio of fuel	Replace
	Water in fuel	Replace the fuel
It can run but does not has enough efficiency	The filter of air cleaner is dirty	Check and clean
	Outlet of cylinder and muffler have deposit of carbon	Remove the carbon
	Piston, piston ring, cylinder have been worn seriously	Replace
Stop while running	Fuel used up	Adding fuel
	The lead wire of plug loose	Check and replace firmly
	Plug covered with carbon	Replace the plug
	The filter clogged	Clean
	Water in fuel	Replace fuel
	The air hole in the tank lid clogged	Clean

7.2 Trouble and trouble shooting of spraying.

Problem	Cause	Remedy
Liquid can not be out	Inlet valve and outlet valve blocked	Replace or clean
	Damage of washer	Replace
	Damage of 6004Z bearing	Replace
	Damage of Piston	Replace
Sprayer volume and pressure are	Pressure regulated not enough	Regulate
	Elastic force of regulating spring not enough	Replace
	Corrosion resistant steel ball worn	Replace
	Pressure regulating valve seat worn	Replace
Pressure is enough but spraying is not enough	Piston worn	Replace
	Piston running distance not enough	Replace
	Inlet valve and outlet valve worn	Replace
	Spraying parts clogged	Clean
Spraying mist is not even	The holes of spraying sheet worn	Replace
	Spraying parts clogged	Clean

8.Maintenance and Long Time Storage

8.1 Daily maintenance

The following maintenance should be done after daily job.

8.1.1 Clean the surface of the machine.

8.1.2 Clean chemical tank with clean water and dry it.

8.1.3 Check all the connections whether there is leakage of water or fuel. If there is leakage, remedy procedures are very necessary.

8.1.4 Check all the screws to see if they are loose or lost. If there is, please screw tightly or replace.

8.1.5 Lubricating oil should be injected into the oil inlet after every 24-hour's operation.

8.1.6 This machine after maintenance should be put in dry and ventilating place. It must be far away from fire source and avoid sunlight.

8.2 Long term storage

8.2.1 Clean the machine surface carefully.

8.2.2 Discharge fuel in the tank and carburetor entirely, turn off the choker, pull the starter 3-5 times.

8.2.3 Remove the spark plug and pour some oil into the cylinder, then pull the starter for 2-3 times lightly, finally put on the spark plug.

8.2.4 Inject lubricating oil into the gearbox and crankcase.

8.2.5 All the plastic parts must neither exposed to the sunlight nor pressed by heavy matter.

8.2.6 Cover the machine with plastic dustcoat and store in a dry and clean place.

EC DECLARATION OF CONFORMITY

According to the EC Machinery Directive 2006/42/EC of 17 May 2006, Annex II A

Villager®

Villager d.o.o.
Kajuhova 32 P, 1000 Ljubljana, SLO

Description of the machinery

KNAPSACK POWER SPRAYER Villager PS 20

We declare under full responsibility that the below mentioned product is designed and manufactured in accordance with:

- Directive 2006/42/EC on safety of machinery
- Directive 2014/30/EU on electromagnetic compatibility
- Directive 97/68/EC_2010/26/EU on the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery

The harmonized and other standards:

EN 809:1998+A1

The responsible person authorized to compile the technical documentation: Zvonko Gavrilov, at the company Villager D.O.O, Kajuhova 32 P, 1000 Ljubljana

Place / date: Ljubljana, 17.05.2016

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