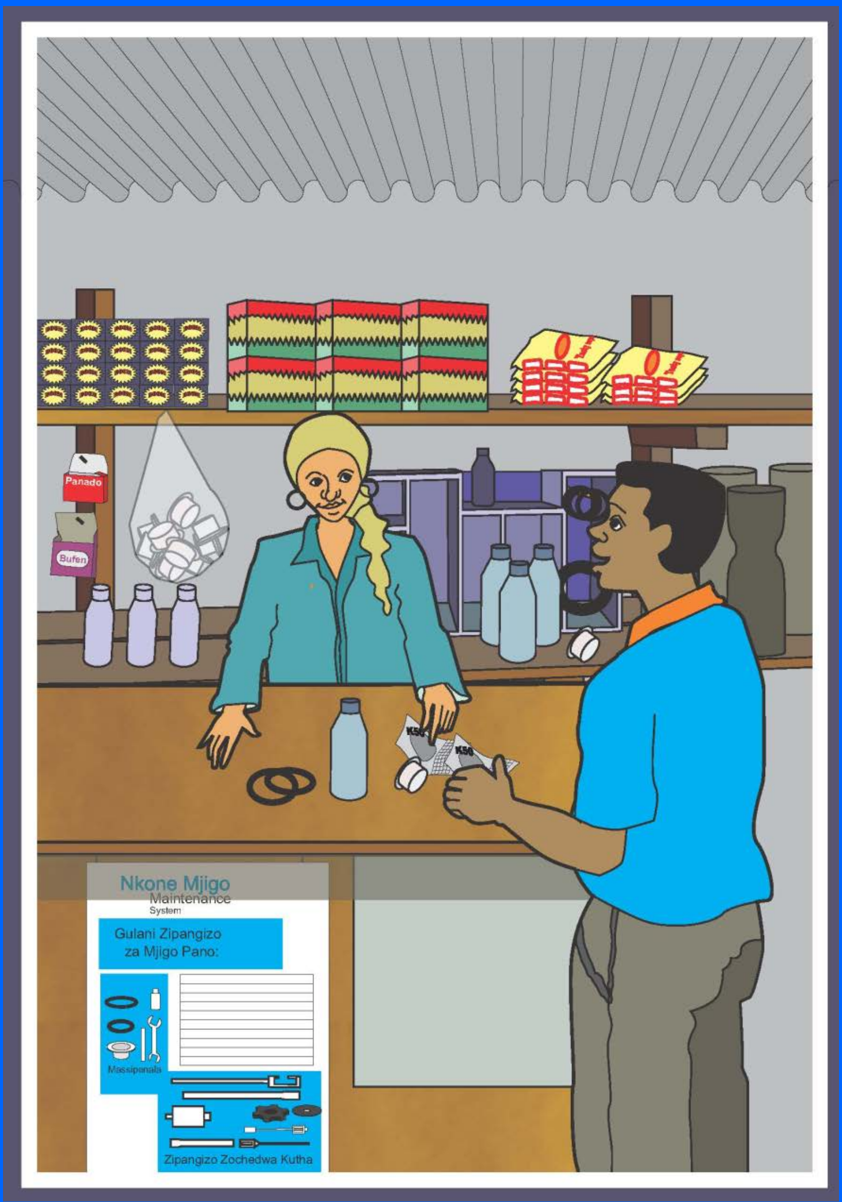
Boma la Malawi

Kupereka Madzi Kumudzi Kayendetsedwe ndi kakonzedwe ka Mijigo Buku 6

# Buku la maphunziro kwa eni Mashopu Ogulitsa Zipangizo za Mjigo wa Afridev




**Unduna Wa Ulimi, Ulimi Wothirira ndi Chitukuko Cha Madzi**

**March 2015**

Kupereka Madzi Kumudzi Kayendetsedwe ndi kakonzedwe ka Mijigo Buku 6

# Buku la maphunziro kwa eni Mashopu Ogulitsa Zipangizo za Mjigo wa Afridev

Unduna Wa Ulimi, Ulimi Wothirira ndi Chitukuko Cha Madzi

March 2015

Ministry of Agriculture, Irrigation and Water Development
Tikwere House,
City Centre,
P/Bag 390,
Lilongwe 3,
Malawi
Telephone No.: (265) 1 770 211 / 770 233 / 770 344 / 770 447
Fax No.: (265) 01 773 737
E-mail: secretary@irriwater.org

Tsiku losindikiza: March 2015
40p
Kupereka Madzi Kumudzi Kayendetsedwe ndi kakonzedwe ka Mijigo Buku 6

Bukuli lasindikizidwa ndi Unduna wowona za Ulimi, Ulimi Wothirira ndi Chitukuko cha Madzi Ndi Thandizo Lochokera ku Boma la Japan Mndondomeko Yolimbikitsa Kuti Anthu Akumudzi Azitha Kuyendetsa ndi Kukonza Okha Mijigo mu Ntchito yopereka Madzi aukhondo kumadera a Kumidzi

Bukuli lizagwira ntchito ndi chilamulo chochokera ku Unduna wa Ulimi, Ulimi Wothirira ndi Chitukuko cha Madzi ngati eni ake. Ndipo Undunawu ukuloleza wina aliyense kugwiritsa ntchito Bukuli pokhapokha ngati ntchitoyo ikupindulira anthu. Gawo kapena chithunzi chilichonse chikhonza kuchulukitsidwa pofuna kukwaniritsa zosowa za kumudzi popanda chilolezo kuchoka ku Unduna wa Ulimi, Ulimi Wothirira ndi Chitukuko Cha Madzi pokhapokha ngati zochulukitsidwazo:

(a) Zigawidwa mwaulere komanso zipindulira anthu posamala mijigo
(b) Ngati sizikugwiritsidwa ntchito ndi cholinga chopeza phindu
(c) Ngati kungowerenga ndi cholinga chopeza chiziwitso.

Ngati mungapeze zina zofunika kusintha kapena kukonza buku limeneli, kapena kusindikiza kapenanso kugwiritsa ntchito Bukuli ndi cholinga chopeza phindu chonde pemphani chilolezo kuchokera kwa Mkulu Wowona Ntchito yopereka Madzi mu Unduna Woona za Ulimi, Ulimi Wothitrira ndi Chitukuko cha Madzi pa Nambala ili pamwambapa kapena lembani kalata pa keyala ili pamwambapa:

Director of Water Supply Services
Ministry of Agriculture, Irrigation and Water Development

Country Representative of JICA Malawi Office
Telephone No: (265) 01 771 554 / 644 / 945

# Zamkatimu


**CHIYAMBI** ..... v

**KUTHOKOZA** ..... vi

**Kuwona m'mene bukuli lalembedwera** ..... vii

**Phunziro I: Zoyenera kuphunzira** ..... 1

**Gawo 1: Chiyambi cha maphunziro kwa eni mashopu** ..... 1

1.1 Khumbo ..... 1

1.2 Cholinga cha maphunziro ..... 1

1.3 Ntchito ndi undido ..... 1

**Gawo 2: Maina azipangizo za mjigo wa Afridev ndi ntchito zake** ..... 2

2.1 Zipangizo za pamwamba ..... 3

2.2 Zipangizo zokhala pansi ..... 4

**Gawo 3: Kumasula ndi kubwezeretsa mjigo** ..... 6

3.1 Zida zomasulira ndi kubwezeretsera pampu ..... 6

3.2 Kumasula ..... 6

3.3 Kubwezeretsa ..... 8

**Gawo 4: Kupanga bizinesi** ..... 11

4.1 Kodi wabizinesi ndi ndani? ..... 11

4.2 Zimene zingapangitse kuti wabizinesi achite bwino ..... 11

4.3 Kugula/Kuwoda zipangizo zikatha ..... 11

4.4 Kayikidwe ka katundu ..... 14

4.5 M'mene mungalembele lisiti ..... 14

4.6 Kagulitsidwe ..... 16

4.7 Kutsatsa ..... 18

**Phunziro II: Maphunziro ndi zigawo** ..... 19

Mutu 1 (M1-S1) ..... 20

Mutu 2 (M1-S2) ..... 22

Mutu 3 (M1-S3) ..... 23

Mutu 4 (M1-S4) ..... 24

**Phunziro III: Ndondomeko ya maphunziro** ..... 26

**Masamba Owonjezera ............................................................................................................29**

Tsamba lowonjezera 1: Chitsanzo cha m'mene Bini khadi imaonekera ....................................30

Tsamba lowonjezera 2: Chitsanzo cha lisiti ..........................................................................31

Tsamba lowonjezera 3: ZOGULITSA PA MWEZI .........................................................................32

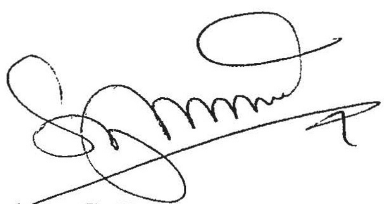
# CHIYAMBI

Kupereka madzi aukhondo kukadalibe ngodya imodzi yachitukuko imene boma la Malawi likuikapo chidwi, ndipo kukhazikitsa kwa mashopu ogulitsa zipangizo za mijigo mdziko lonse ndi njira imodzi yokwaniritsira masomphenyawa. Ngakhale kuti makomiti oyangánira madzi kumudzi apatsidwa mphamvu yotengapo gawo losamalira mjigo wawo ndikovuta kwaiwo kusamalira mjigo wawo ngati zipangizo zokonzera Mjigo sizikupezeka. Kotelo kuti kugulitsidwa kwa zipangizo ndi eni Mashopu mmadera onse adziko lino nkofunika kwambiri kwa anthu akumudzi kuti ntchito yoyendetsa ndi kukonza mijigo ikhale yopitilira mtsogolo.

Choncho kuti agwire bwino ntchito yawo, eni Mashopuwa sakuyenera kungogulitsa zipangizo kokha komanso akuyenera kudziwa zipangizozi komanso kukhala ndi luso lochita bizinesi. Choncho nkofunika kuti eni mashopu alandire maphunziro asanayambe kugulitsa zipangizo za Mjigo m'madera awo.

Kolingana ndi zimene zaphunziridwa mbuyomu pantchito ngati yomweyi komanso kutengera kapezedwe ka ndalama, bukuli ndilokwanira kuphunzitsira eni mashopu. Lafotokoza zoyenera kuphunziridwa komanso m'mene wophunzitsa angaphunzitsire gawo lililonse.

Maphunziro kwa eni mashopu ndi gawo limodzi lofunika kwambiri pa ntchito yolimbikitsa kuti anthu kumudzi azitha kukonza ndi kuyendetsa okha mijigo ndipo bukuli lalongosola momveka bwino mmene ntchitoyi ingagwiridwire. Ngati muli ndi maganizo othandiza mmene tingalembere bwino bukuli, ali olandiridwa ndipo tumizani maganizo anu kwa Mlembi Wowona za Chitukuko cha Madzi.



Sandram C. Y. Maweru

SECRETARY FOR IRRIGATION AND WATER DEVELOPMENT

# KUTHOKOZA

Bukuli lasindikizidwa ndi ndondomeko “Yolimbikitsa kuti anthu akumudzi azikonza ndi kuziyendetsera okha ntchito za madzi ndi thandizo lochokera ku Japanese International Coorperation Agency (JICA).

Misonkhano yambiri inachitika ndipo anthu ambiri komanso mabungwe osiyanasiyana aboma ngakhalenso omwe siaboma anatengapo mbali popereka luso lao ndi upangiri pa nthawi yolemba bukuli. Choncho Unduna wowo za Ulimi, Ulimi wothirira ndi Chitukuko cha Madzi ukuthokoza mabungwe onse chifukwa chololа anthu awo kutenga nawo mbali polemba bukuli.

Undunawu ukuthokoza JICA chifukwa chothandiza pa ntchito yolemba bukuli ndi ena onse omwe sitinakwanitse kuwatchula apa koma anathandiza mnjira zosiyanasiyana.

# Kuwona m'mene bukuli lalembedwera

Bukuli lalembedwa kuti lithandize kuphunzitsa eni mashopu. Maphunziro amenewa atha kukhalanso oyamba kwa eni mashopu.

Bukuli lalembedwa pogwiritsa ntchito maganizo amabungwe omwe amaona za nkhani ya kayendetsedwe ndi kasamalidwe ka mjigo ngati, InterAide ndi UNICEF.

Mowonjezera zina zomwe zalembedwa mbukuli zachokera mu SOMAP la ku Zambia.

Bukuli lalembedwa mmagawo anayi amene akuyenera kuphunzitsidwa mmasiku awiri. Magawo ake ali motere:

Phunziro I. Zoyenera kuphunzira

- Gawo 1: Chiyambi cha maphunziro kwa eni mashopu
- Gawo 2: Maina azipangizo za mjigo wa Afridev ndi ntchito zake
- Gawo 3: Kumasula ndi kubwezeretsa mjigo
- Gawo 4: Kupanga bizinesi

Phunziro II. Maphunziro ndi zigawo.

- Mutu 1: Chiyambi cha maphunziro kwa eni ake mashopu
- Mutu 2: Maina azipangizo za mjigo wa Afridev ndi ntchito zake
- Mutu 3: Kumasula ndi kubwezeretsa mjigo
- Mutu 4: Kupanga bizinesi

Phunziro III. Ndondomeko ya maphunziro

# Phunziro I: Zoyenera kuphunzira

## Gawo 1: Chiyambi cha maphunziro kwa eni mashopu

### 1.1 Khumbo

Mashopu ogulitsa zipangizo za mijigo ndi ofunika kwambiri mdziko lino kuti zipangizo za mjigo zizipezeka mmadera akumudzi mosavuta. Kupezeka pa malo abwino kwa mashopu amenewa nkofunika pantchito yowonetsetsa kuti mijigo isamafe komanso akomiti kapena mabungwe oyendetsa/kuyangánira Mijigo azitha kupeza zipangizo mosavuta.

### 1.2 Cholinga cha maphunziro

Cholinga cha maphunzirowa ndi kupereka upangiri kwa eni mashopu omwe asankhidwa pankhani ya kasamalidwe ka zipangizo za mijigo ndikuwapatsa upangiri wa mmene angapangire bizinesi komanso kagulitsidwe ka zipangizo.

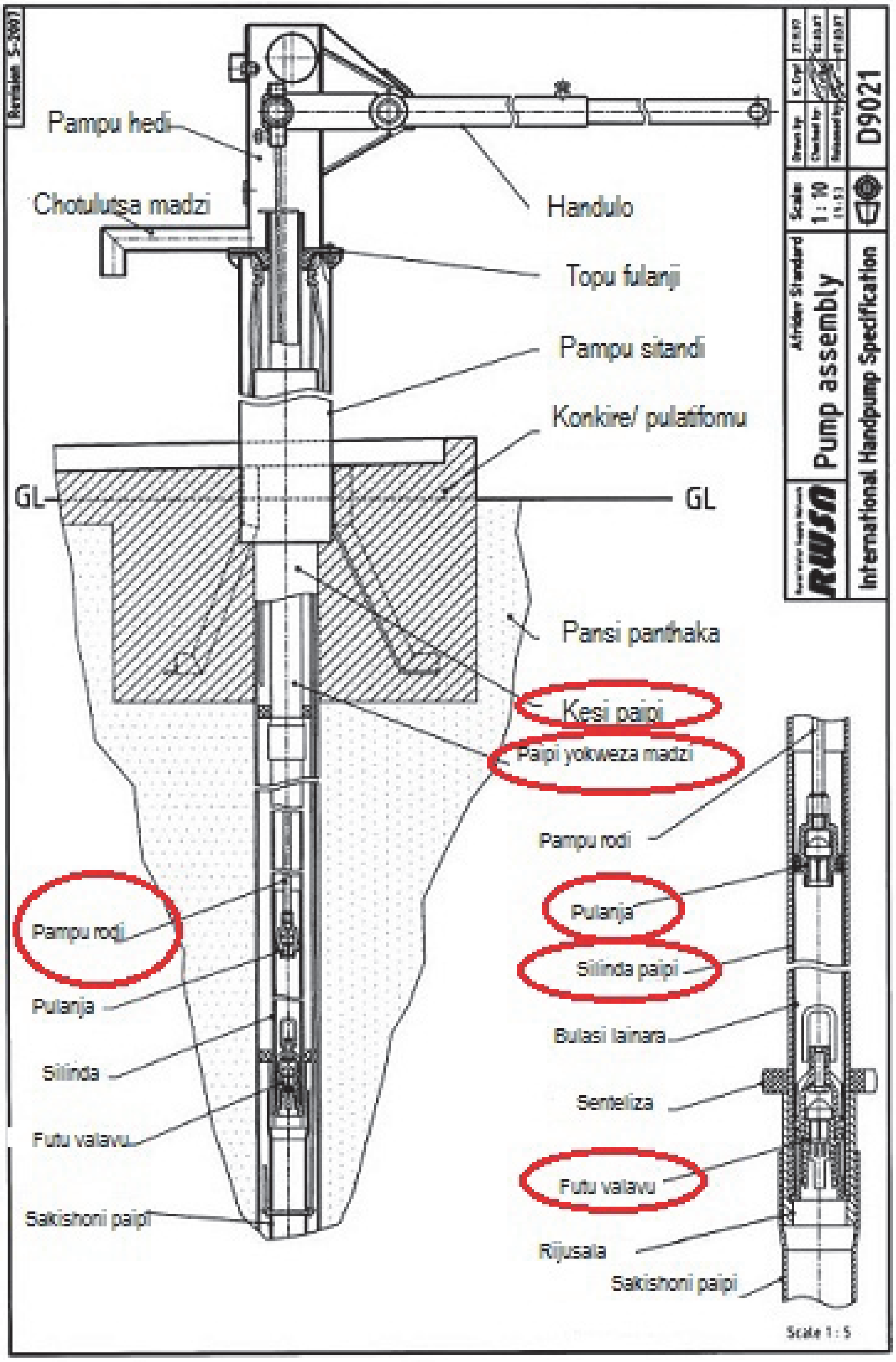
### 1.3 Ntchito ndi undido

Mwini wake shopu ali ndi ntchito ndi udindo zotsatirazi pamene akusunga ndi kugulitsa zipangizo za mjigo.

- Kugula zipangizo za mjigo kwa opikulitsa
- Kusunga zipangizo za mjigo zokwanira
- Kugulitsa zipangizo za mjigo pa mtengo wovomerezeka
- Kugula zipangizo zolimba za mjigo
- Kugwira ntchito limodzi ndi Amakaniki pofuna kuwonetsetsa kuti zipangizo zoyenera zikupezeka ndi kuthandizana kutsatsa malonda antchito za amakaniki ndi za eni mashopu mdera lawo.

## Gawo 2: Maina azipangizo za mjigo wa Afridev ndi ntchito zake

Zipangizo za mjigo wa Afridev zalembedwa m'musimu mu chithunzichi:




**Chinthuzi 1: Mjigo wa Afridev** [1]

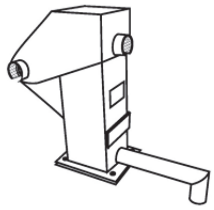
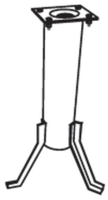
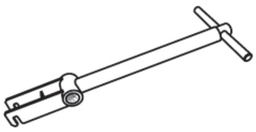
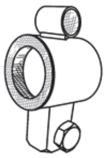
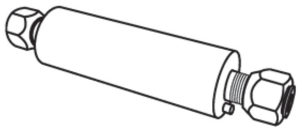
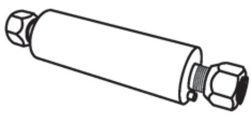
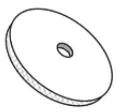
[1] This figure is modified based on the drawing No. D9021 of Installation and Maintenance Manual for the Afridev Hand pump Revision 2- 2007, SKAT-RWSN

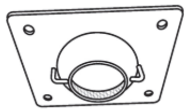
Mjigo wa Afridev uli ndi zigawo ziwiri “Chapamwamba” ndi “Chapansi”

Maina ndi ntchito yake ya zipangizo ali m’musimu:

## 2.1 Zipangizo za pamwamba

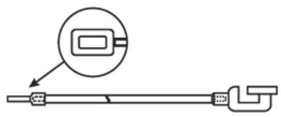
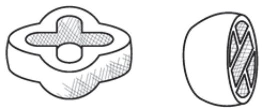
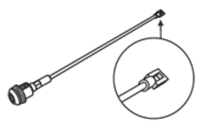
**Tebulo 1: Maina a zipangizo za pamwamba**

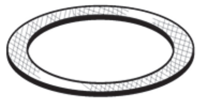
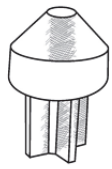
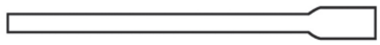
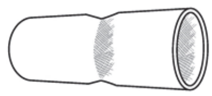
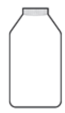
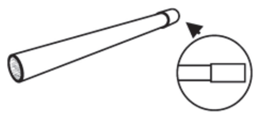
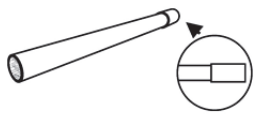
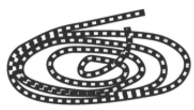
| No. | MBALI<br>English / Chichewa | NTCHITO YAKE | CHITHUNZI |
|---|---|---|---|
| 1 | Pump head and cover / Hedipampu chi vindikilo | Chimatsekera zipangizo zonse zapamwaba kuteteza ku fumbi, zinyatsi kuti zitsalowe mu pampu, komanso hang’a asembule komanso kugwira handulo. |  |
| 2 | Pump pedestal / Pampupedesitilo | Thunthu la mjigo lomwe limasunga zipangizo za pamwamba komanso zapansi |  |
| 3 | T/bar / handulo | Imathandiza kujiga madzi. Itha kusinthidwa malingana ndi kutalika kwa mjigo |  |
| 4 | Hanger Assembly / Hang'aAsembule | Kugwira ma rodi kapena kunyamula ma rodi kuti asagwe |  |
| 5 | Fulcrum pin / Fakulamupini | Kulumikiza handulo ku hedi pampu imagwira komanso imathandizira kupopa madzi |  |
| 6 | Hanger pin / Hang'apini | Kulumikiza kumapeto kwake kwa handulo pothandizira kujiga |  |
| 7 | Bush bearing / BushiBelingi | Kulola kuti fakalamu pini ndi hang’a pini ziziyenda bwino zitsulo osadyewa. Amayenera kukhala anayi mupampu awiri ku fakalamu pini ndi awiri ku hang’a pini | |
| 8 | Rubber flapper / LabalaFulapa | Amakhala pamwamba pa marodi kuti zinyalala zisalowe mu pampu komanso kuti madzi asamataike |  |

| No. | MBALI English / Chichewa | NTCHITO YAKE | CHITHUNZI |
|---|---|---|---|
| 9 | Rubber Cone / Labalakoni | Amakhala pakati pa pampu hedi ndi pedesitilo koma amagwira ntchito yoteteza kuti madzi asataikire mu pampu hedi ndi pedesitilo | |
| 10 | Steel cone plate / KoniPuleti | Mbale ya chitsulo yomwe imagwira mapaipi kuti asagwe |  |
| 11 | Top sleeve(collar) / Topusilivi | Imathandiza kuti mapaipi asagwere kuchoka mu labala koni | |

## 2.2 Zipangizo zokhala pansi

**Tebulo 2: Maina azipangizo za pansi**

| No. | MBALI English / Chichewa | NTCHITO YAKE | CHITHUNZI |
|---|---|---|---|
| 12 | Pump rod / Pampurodi | Kulumikiza pulanja kuti izitha kupopa madzi pamwamba |  |
| 13 | Rod Centralizer / RodiSentelelaiza | Imakhala polumikiza ma rodi ndipo imamanga komanso kuthandiza kuti marodi azikhala pakati komanso asamakhulane ndi mapaipi |  |
| 14 | Plunger / Pulanja | Imalumikizidwa ku ma rodi ndipo imathandiza kutunga madzi mothandizana ndi handulo pojiga |  |
| 15 | Foot-Valve / FutuValavu | Imathandiza kuti madzi asamabwerere akajigidwa | |
| 16 | U-Seal / U-Silo | Imayikidwa ku pulanja wa pulasitiki yekha basi, madzi amakhala m'mwamba mwa pulanja potunga madzi kupititsa | |

| No. | MBALI | NTCHITO YAKE | CHITHUNZI |
|---|---|---|---|
| | English / Chichewa | | |
| | | m'mwamba. | |
| 17 | Cup-seal / Kapu-Silo | Imayikidwa ku thunthu la pulanja wachitsulo basi; Kusunga madzi mwamba mwa pulanja komanso kupititsa madzi m'mwamba | |
| 18 | O-ring / O-ring'i | Imayikidwa ku futu vavu kuteteza kuti madzi amene ali mu Silinda asabwerere mu mjigo koma kutii asungike. |  |
| 19 | Bobbin / Bobini | Imayikidwa mkati mwa pulanja ndi futu vavu;amagwira ntchito yotsegula ndi kutseka madzi munjira imodzi komanso kutseka madzi kuti asamabwere pansi |  |
| 20 | Rising main / Mapaipi | Mapaipi omwe mumadutsa madzi kuchokera mu silinda mpaka ku sipawuti |  |
| 21 | Double end socket / Dabulosoketi | Kulumikizitsa mapaipi akaduka kumatila mapaipi |  |
| 22 | Solvent cement / Soventisementi | Kulumikizitsa mapaipi akaduka kumatila mapaipi |  |
| 23 | Rising main centraliser / Sentelelaiza wa ma paipi | Amayika pamtunda wa mamita atatu aliwonse, masenteleza awa amathandiza kuti mapaipi asagwedere mumapaipi akulu akulu amumjigo | |
| 24 | Cylinder assembly / SilindaAsembule | Chida chofunika kwambiri mu mjigo, silinda imatunga madzi mumjigo komanso kutumiza kumwamba kwa mjigo |  |
| 25 | Suction pipe / Sakishonipaipi | Imayikidwa pansi pa silinda kuti izitunga madzi kupititsa mu silinda, komanso kuteteza mchenga kuti usamalowe musilinda |  |
| 26 | Rope(nylon rope 6mm) / Chingwe | Chimalumikizidwa ku sakishoni paipi koma chimadutsa mu paipi senteleza mpaka pa koni puleti kuteteza kuti mapaipi ngati alekana asagwere mu mjigo |  |

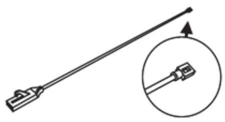
# Gawo 3: Kumasula ndi kubwezeretsa mjigo

## 3.1 Zida zomasulira ndi kubwezeretsera pampu

Zida zofunikira pomasula ndi kubwezeretsa pampu ndi izi zili m'musimu:

- Sipanala ya bowo
- Sipanala ya fulati
- Mbedza yowedzera ma rodi

**Tebulo 3: Maina azida zomasulira ndi kubwezeretsa pampu**

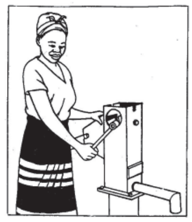
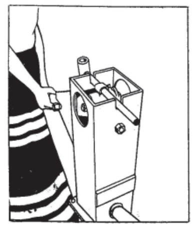
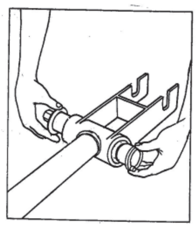
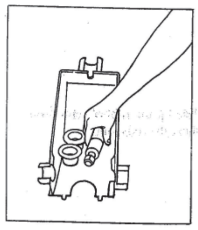
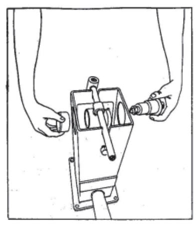
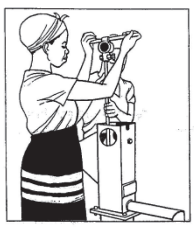
| No. | MBALI<br>English / Chichewa | NTCHITO YAKE | CHITHUNZI |
|---|---|---|---|
| 1 | Socket spanner number 24/ Supanarayabowo | Kuchotsera hedi kavala komanso kugwira hang'a asembule nthawi imene mukuchotsa ma rodi | |
| 2 | Flat spanner 17/19 / Supanarayafulati | Kutchotsa ma bauti pakati pa hedi ndi pedesitilo | |
| 3 | Fishing tool / Mbedza | Kuwedza fotu valavu ndi ma rodi |  |

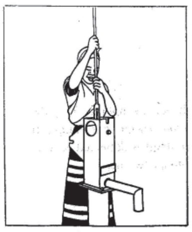
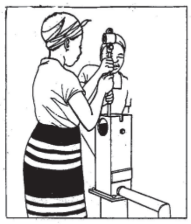
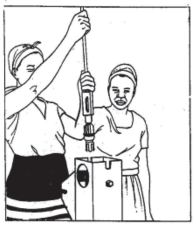
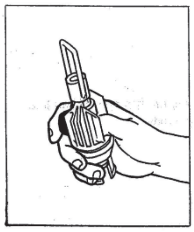
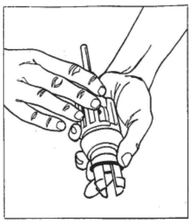
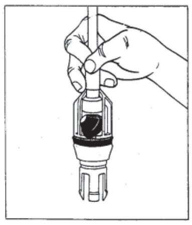
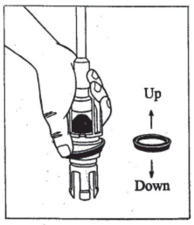
## 3.2 Kumasula

Njira zofunika kutsata pomasula zili mmusimu:

**Tebulo 4: Njira zoyenera kutsata pomasula Mjigo**

| No. | Njira | Chithunzi | No. | Njira | Chithunzi |
|---|---|---|---|---|---|
| 1 | Musanayambe sambani m' manja komanso tungani madzi mundowa osukira zipangizo pobwezeretsa | | 2 | Masulani bauti ya pa hedi kavala osati kumalizitsa ayi | |

| No. | Njira | Chithunzi | No. | Njira | Chithunzi |
|---|---|---|---|---|---|
| 3 | Chotsani kavala | | 4 | Masulani manati awiri a hang’ ala pini |  |
| 5 | Masulani manati awiri a fakalamu pini | | 6 | Lowetsani sipanala ya bowo padiso la hang’ala |  |
| 7 | Kwezani ndi kuchotsa handulo. Samalani! Pamene mukuchotsa handulo onetsetsani kuti ma bushi bering’i ndi pini asagwere pansi chifukwa zimatha kusweka pasimenti. | | 8 | Chotsani fakalamu pini ndi bushi bering’i |  |
| 9 | Chotsani fakalamu pini ndi bushi bering’i. |  | 10 | Ikani zipangizo zonse mu kavala kuwopa kuti zingasowe. |  |
| 11 | Kokani hang’ala ndi rodi yoyamba. |  | 12 | Kwezani laba senteleza pamene alumikizana ma rodi. | |
| 13 | Lekanitsani ndi kuchotsa ma rodi. Kumbukirani kuyika ma rodi mundondomeko yake m’mene mwachotsera. Rodi yomaliza kutulutsa ikhale yoyamba | | 14 | Chotsani pulanja | |

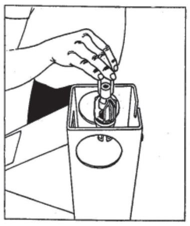
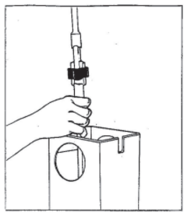
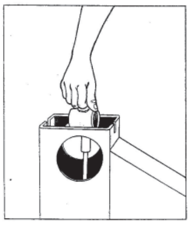
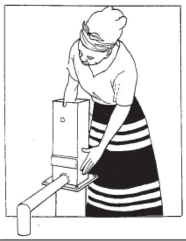
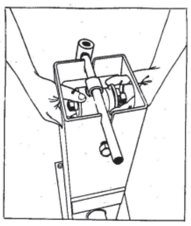
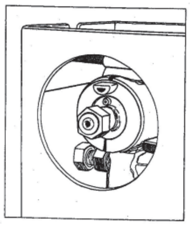
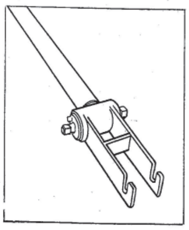
| No. | Njira | Chithunzi | No. | Njira | Chithunzi |
|---|---|---|---|---|---|
| | kubwezeretsa. | | | | |
| 15 | Lowetsani mbeza ndi kulumikiza ku marodi. |  | 16 | Pang’ono pang’ono lowetsani rodi yomaliza kufikira mutamva kuti mwakola futu valavu |  |
| 17 | Chotsani ma rodi onse, mbedza ndi futu vavu |  | 18 | Kankhani bobini kuti mutulutse mu futu vavu pogwiritsa ntchito chikhatho chanu. Ngati bobini watha sinthani ndi kuyika wina watsopano |  |
| 19 | Chotsani O-ring’i ku futu valavu. Ngati O-ring’i watha sinthani ndikuyika watsopano. |  | 20 | Kankhani bobini mu pulanja ndi chikhatho chanu. Ngati bobini watha sinthani ndikuyika watsopano |  |
| 21 | Mosamala chotsani U-silo.Ngati U-silo watha sinthani ndi watsopano. Onetsetsani kuti mphako zayang’ana m’mwamba |  | | | |

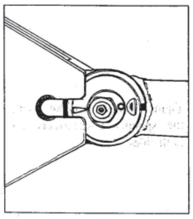
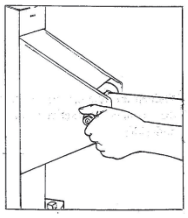
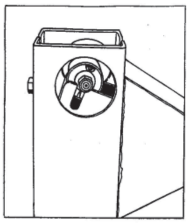
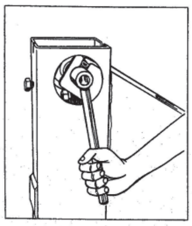
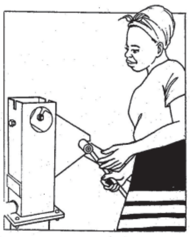
Kuchokera: Njira zomasulira ndi kubwezeretsa zachokera mu gawo la chinayi la Kukonzanso mjigo wa AFRIDEV, Buku la anthu ammudzi lokhudza za madzi ndi ukhondo BUKHU LA ANTHU A M’MUDZI LOKHUDZA ZA MADZI NDI UKHONDO.

## 3.3 Kubwezeretsa

Njira zofunika kutsata pobwezeretsa zili m’musimu:

**Tebulo 5: Njira zoyenera kutsata pobwezeretsa**

| No. | Step | Illustration | No. | Step | Illustration |
|---|---|---|---|---|---|
| 1 | Tsukani futu valavu, pulanja ndi marodi. Gwiritsani ntchito madzi oyera potsuka. | | 2 | Kuti mubwezeretse pampu m'malo mwake choyamba ponyani futu valavu mumjigo. Onetsetsani kuti ngowe yayang'ana mwamba. |  |
| 3 | Ikani pulanja ndi ma pampu rodi pamodzi ndi kulowetsa mujigo. | | 4 | Onetsetsani kuti rodi senteleza wakhala m'malo mwake molumikiza ma rodi |  |
| 5 | Lumikizani ma rodi onse mpakana mutalumikiza hang'a rodi |  | 6 | Onetsetsani kuti futu valavu wakhala m'malo mwake pokhala marodi pansi mumjigo |  |
| 7 | Lowetsani sipanala ya bowo pa diso la hang'ala kuti igwire ma rodi kenaka ikani hang'a pini ndi bushi bering'i. Ngati ma bushi bering'i atha kapena kusweka sinthani ndikuyika atsopano. |  | 8 | Zunguzani ma hang'ala pini ndi bushi bering'i kuti akhale mofanana poyika. |  |
| 9 | Bwezeretsani fakalamu pini ndi bushi beringí ku handulo. Ngati ma bushi beringí atha kapena kusweka sinthani ndikubwezeretsa ndi atsopano. |  | 10 | Bwezeretsani handulo m'malo mwake. | |

| No. | Step | Illustration | No. | Step | Illustration |
|---|---|---|---|---|---|
| 11 | Onetsetsani kuti mitu ya ma pini a bushi bering'i akhala bwino m'mutu wa mjigo. komanso onetsetsani kuti pini wasuntha chakumanja komwe kuli kadzenje |  | 12 | Mangitsani fakalamu pini ndi manja. |  |
| 13 | Kankhani handulo pansi kuti ma pini akhale m'malo mwake. Onetsetsani kuti hang'a pini wakhala m'malo mwake moyenera. Chotsani sipanala |  | 14 | Mangitsani manati a hang'ala ndi sipanala mbali zonse. |  |
| 15 | Mangitsani manati afakalamu pini ndi sipanala mbali zonse |  | 16 | Bwezeretsani kavala. | |
| 17 | Mangitsani nati ya kavala. | | 18 | Jigani madzi mpaka atuluke oyera musanamwe | |

Kuchokera: Njira zomasulira ndi kubwezeretsa zachokera mu gawo la chinayi la Kukonzanso mjigo wa AFRIDEV, Buku la anthu ammudzi lokhudza za madzi ndi ukhondo BUKHU LA ANTHU A M'MUDZI LOKHUDZA ZA MADZI NDI UKHONDO.

## Gawo 4: Kupanga bizinesi

### 4.1 Kodi wabizinesi ndi ndani?

Mawuwa amafotokoza munthu, amene wapeza mwai ndipo amaugwiritsa ntchito mwayiwu posonkhanitsa chuma ndikuyamba kuchita malonda ndi cholinga chofuna kupeza phindu. Onse amene amachita malonda ali mgulu la anthu ochita buzinesi

### 4.2 Zimene zingapangitse kuti wabizinesi achite bwino

Zinthu zimene zingapangitse kuti wabizinesi achite bwino zafotokozedwa m'musimu:

- Osaka mwai
- Kufikira zofunika pa nthawi yake
- Saphwanya pangano la bizinesi
- Amakhumba kuchita bwino pa bizinesi
- Kulola kutenga tsoka
- Kusaka uthenga
- Kupanga ma pulani ndi kuwakwaniritsa pa ntchito
- Kudekha, kugwirizana ndi khalidwe la bwino
- Kudzikhulupilira
- Kukhala wachilungamo

### 4.3 Kugula/Kuwoda zipangizo zikatha

Eni mashopu ambiri amalephera kuwodanso zipangizo zikatha makamaka akamayamba kumene bizinesi.

Zotere zimachitika chifukwa chakuti makasitomala sanawadziwe komanso kuti shopu imeneyi imagulitsa zipangizo za mjigo;
Zinthu zimene zili m'musimu zimayenera kuti mwini shopu akhale nazo mu umunthu ngati akuyamba bizinesi kuti azitha kukawodanso zipangizo zina:

**1) Nthawi imene watenga kukapikula ndi kuika pa alumale yogulitsira**

- Nthawi zina zimatheka kuti washopu yaying'ono amatha kuyenda kukawoda/kupikula zipangizo ku mashopu akuluakulu. Ngati zili chonchi ndalama zimene wawononga zoyendera aziwerengere kuti aziyenda kangati kuti azikatenga katundu akatha.

- Poganizira nthawi yokawoderanso, mwini wake shopu atha kudziwa nthawi imene angakawodenso zipangizo pogwiritsa ntchito ma bini khadi. Njira ya m'mene mungalembere bini khadi zasonyozedwa m'musimu. Onani chitsanzo cha bini khadi **Tsamba lowonjezera 1** ndi m'mene mungamagwiritsire ntchito.

**Bokosi 1**

Njira zimene mungatsate kuti muzilemba bini khadi zili m'musimu.

**a)** Lembani bini khadi imodzi pa mtundu wa chipangizo, pamene zafika mushopu

**b)** Lembani dzina la chipangizo, kuchuluka kwake, tsiku mwatengera powona lisiti komanso mtengo wake wogulira.

**c)** Werengerani kuti mukukawodanso ndipo chulukitsani zimene mumatengazo ndi 0.25 komanso kulemba mu bini khadi iliyonse.

**d)** Sungani ma bini khadi omwe mwalemba mushopumo malo abwino.

**e)** Ngati nthawi yafika yoti mukapikule mwini wa shopu ayambenso njira ija ya kubwezeretsa zipangizo.

Chitsanzo cha bini khadi yolembedwa kale.

Mtengo wogulira kuchokera ku mashopu akuluakulu

Mtengo wogulira kuchokera ku mashopu akuluakulu

Katundu amene alipo x 0.25

Chitsanzo cha bini khadi [2]

BINI KHADI

| Dzina: O-ringi za pampu ya Afridev | | S/No.: A-17 | | | | | |
|---|---|---|---|---|---|---|---|
| Mtengo wogulira (MK) | | Mtengo wogulitsira (MK) | | Katundu amene alipo | | Kuwodanso [1] | |
| Tsiku [2] | | Tsiku [3] | | Tsiku [4] | | Tsiku [5] | |
| 10/01/2014 | 120 | 25/01/2014 | 150 | 20/01/2014 | 8 | 20/01/2014 | 2 |
| | | | | | | | |
| | | | | | | | |

[2]This sample format is extracted from the document of "Supply Chain Management Manual 2nd Edition 2012, National Rural Water Supply and Sanitation Programme, Government of Zambia" and modified for the Project.

| Tsiku | Zinthu zanji (Nambala ya lisiti.) | Zolandira | Zogulitsa | Zotsala |
|---|---|---|---|---|
| 20/01/2014 | Invoice No. ********* | 8 | | 8 |
| 25/01/2014 | Receipt No. ********* | | 2 | 6 |
| 10/02/2014 | Receipt No. ********* | | 1 | 5 |
| 15/02/2014 | Receipt No. ********* | | 2 | 3 |
| 20/02/2014 | Receipt No. ********* | | 1 | 2 |
| 22/02/2014 | Invoice No. ********** | 6 | | 8 |
| | | | | |
| | | | | |
| | | | | |

Nambala ya lisiti limene watenga kasitomala

Nambala ya lisiti kuchokera ku mashopu akuluakulu

Ngati zotsala zafika pakuti tikawodenso mwini wa shopu ayambe njira zokawodanso katundu wina

[1]: Katundu amene alipox x 0.25

[2]: Tsiku lowodera

[3]: Tsiku loyambira kugulitsa

[4]: Tsiku lobwerera katundu

[5]: Tsiku lobwerera katundu

### 2) Alumale amene alipo

Ngati shopu, ili ndi zinthu zina, malo amakhala osakwanira, ndipo zimakhala zovuta kupikula katundu wambiri.

Munjira zina mwini wa shopu malingana ndi nthawi imene wakhala akupanga bizinesi amadziwa nthawi imene katundu amatha.

## 4.4 Kayikidwe ka katundu [3]

### 1) Kuyika katundu m'magulu

Katundu wofanana ayenera kuyandikana. Zimathandiza kupeza katundu mwachangu kwa mwini wa shopu ndi omuthandiza ngakhalenso ogula pazimene akufuna.

### 2) M'mene muyikire katundu pa shelufu

Ndi bwino kuti katundu wofanana azikhala pamodzi koma osasakaniza. Zipangizo zosiyanasiyana zizikhala mundondomeko ngati kuika mu mashelufu athabwa kusiyanitsa kupangira kuti tizipangizo ting'ono ting'ono tisasowe.

### 3) Ikani zizindikiro pa chipangizo

Mukayika chizindikiro pa chipangizo zimathandiza mwini shopu ndi ogula kuti awone zipangizo mwachangu. Dzina la chipangizo ndi siliyo nambala ziikidwe pa chipangizo chilichonse ndi kuyika pambali pa shelufu pa chipangizo chilichonse.

### 4) Onetsetsani mitengo ya zipangizo yayikidwa

A price list should be displayed on the wall or counter of a retail shop.

## 4.5 M'mene mungalembele lisiti

Mwini shopu apereke lisiti kwa makasitomala ndi kusunga buku lokhala ndi mapepala oti mukalemba azitsala awiri. Lisiti ndi umboni wokwanira woti zinthu zalipilidwa.

Ndibwino kulemba lisiti pazifukwa izi:

- Kusunga kaundula wa bizinesi.
- Umakhala ngati umboni woti kasitomala waguladi katudu ku shopu yanu pakakhala kuti akufuna kusintha.
- Kuwona katundu amanene mungakawode ndi kutha mwachangu

[3] The following descriptions are extracted from the document of "Supply Chain Management Manual 2nd Edition 2012, National Rural Water Supply and Sanitation Programme, Government of Zambia" and modified for the project

Lisiti labwino limayenera kukhala ndi izi:

- Siliyo nambala
- Chidindo (Ngati kasitomala akufuna)
- Nambala ya lamya ndi keyala
- Tsiku
- Lisayinidwe lisiti ndi wogulitsa

M'mene mungalembere lisiti ili mu bokosi 2. Chitsanzo cha lisiti lopereka munthu akagula katundu onani **Tsamba lowonjezera 2** Chitsanzo cha lisiti.

**Bokosi 2**

Chitsanzo cha lisiti.

Foni nambala ndi Adiresi

Tsiku logulitsa

Siliyo nambala

Chitsanzo cha lisiti [4]

******************************Hardware shopu

Adiresi ya shopu:

P.O. Box ......, Tel. , Fax. , E-mail:

| | | |
|---|---|---|
| Tsiku | 2014.01.20 | No. 100101 |
| | | |
| Kulandira kuchokera kwa | Dzina: Mr. *********** | |
| | TA: Mkanda | Boma: Mchinji |
| Kulipila za | 5 pieces of U-seal | |
| | | |
| Zonse | 1,200MK | |
| Lembani mumalemba | On thousand two hundred Malawi Kwacha Only | |
| Kashi/Cheke | Cheke nambala. | Tsiku la cheke |
| Dzina lawogulitsa | ************** | |
| Saini | | |

Saini yawogulitsa

[4]This sample format is extracted from the document of "Supply Chain Management Manual 2nd Edition 2012, National Rural Water Supply and Sanitation Programme, Government of Zambia" and modified for the Project.

## 4.6 Kagulitsidwe [5]

Kagulitsidwe ka zipangizo kayenera kukhala motere:

### 1) Kutsimikiza zipangizo

#### a. Kutsimikiza mitundu ya zipangizo;

Ngati kasitomala wafika ku shopu, Mwini shopu (kapena womuthandiza) choyamba atsimikize mtundu ndi kuchuluka kwa zipangizo zimene kasitomala akufuna.

Popewa kusamvana, m'ndandanda wa zipangizo za mjigo wa Afridev ugwire ntchito pozindikira zipangizo. Amalangizidwanso mwini shopu (ndi kapena womuthandiza) kuwonetsa zipangizo zenizeni kwa makasitomala.

#### b. Kutsimikiza zipangizo zomwe zilipo

Mwini shopu (kapena othandiza) ayenera kudziwitsa makasitomala zipangizo zomwe anayitanitsa zilipo, kotero mwini shopu (kapena omuthandiza) amayenera kudziwa katundu amene watsala.

Ngati zipangizo zimene munawoda zatha mwini wa shopu (ndi kapena omuthandiza) adziwitse makasitomala tsiku limene akuyembekeza kulandira katundu.

### 2) Kulandila ndalama ndi kulemba lisiti

#### a. Kutsimikiza mtengo

Mwini shopu (kapena omuthandiza) apereke zipangizo zomwe alembera pa lisiti.

#### b. Kulandila ndalama ndi kulemba lisiti

Mwini shopu (kapena omuthandiza) apereke lisiti lowona pambuyo pake. Lisiti lina lisale m'bukumo.

#### c. Kusungitsa ndalalama

Mwini shopu akaike ndalama zomwe apereka makasitomala ku banki. Ndalama zonse mushopu zikhale mu bokosi lokhala ndi makiyi kufikira pamene mukukaika ku banki.

---

[5](The following descriptions are extracted from the document of "Supply Chain Management Manual 2nd Edition 2012, National Rural Water Supply and Sanitation Programme, Government of Zambia" and modified for the project.)

### 3) Kupereka zipangizo

#### a. Kupereka zipangizo

Mwini shopu (kapena omuthandiza) apereke zipangizo zomwe alembera pa lisiti.

#### b. Zowonjezera zolemba pa bini khadi

Mwini wa shopu awonjezere zolemba mu bini khadi yogulitsira ndi kasamalidwe ka zipangizo.

### 4) Kusunga kaundula

Mauthenga okhuza kawodedwe ka zipangizo ayenera kulembedwa bwino m'marekodi ndi kusungidwa momwe afotokozera m'musimu.

#### a. Khadi lowodera ndi lolandira.

- Owerengera ndalama ndi amene amakhala ndi khadi lowodera ndi lolandilira katundu.
- Malo osungira zipangizo mchigawo asunge jubuliketi khadi ndi tripoleti cholandilira.
- Pa boma posungira akhale ndi tripoleti khadi ndi jubuliketi noti.

#### b. Zowonjezera mu bini khadi.

Wosunga ma kiyi akumene kumakhala zipangizo awonenso ndizowonjezera alembe mu bini khadi pamene akupereka zipangizo. (**Tsamba lowonjezera 1**: Chitsanzo cha bini khadi)

#### c. Kulembera zogulitsa pa mwezi

Mwini shopu alembe mwachidule zogulitsa pa mwezi (fomu yogwiritsa ntchito polemba zogulitsa pa mwezi onani **Tsamba lowonjezera 3:** Kulemba zogulitsa pa mwezi).

Chitsanzo cha momwe mungalembere zogulitsa pa mwezi mu bokosi la chitatu.

**Bokosi 3**

KULEMBA ZOGULITSA PA MWEZI ULIWONSE

Dzina la shopu: ***** hardware

Boma: Mchinji

TA: Mkanda

Mwezi ndi Chaka: December, 2013

| Tsiku | Zinthu zochitika | Zogulitsa |
|---|---|---|

| | | Mtengo wa chimodzi | Kuchuluka | Zonse |
|---|---|---|---|---|
| 02/12 | Fakalamu pini | 3,080 | 1 | 3,080 |
| 05/12 | O-ring’i | 160 | 5 | 800 |
| 12/12 | Bushi Bering’i | 440 | 2 | 880 |
| 25/12 | O-ring’i | 160 | 3 | 480 |
| | | | | |
| | | | | |
| | | | Zonse pa mwezi | 5,240 |

Mtengo wa chimodzi umachokera pa mndanda wa mitengo ya zipangizo za mjigo”

## 4.7 Kutsatsa

Kutsatsa malonda kwa eni mashopu ogulitsa zipangizo za mjigo kuzichitika mothandizana ndi aku Boma malingana ndi mmene zalembedwera mbuku la kakhazikitsidwe ka mashopu ogulitsa zipangizo. Komabe munthu wochita bizinesi sangasiyile munthu wina nkhani yakutsatsa malonda abizinesi yake. Kuwonjezera apo kutsatsa zipangizo za mjigo kwa anthu akumudzi ndi njira ina yabwino yotsatsira malonda ena opezeka mushopu ndipo bizinesi imatha kupita patsogolo.

Zinthu zimene zili m’musimu nzofunika potsatsa :

- Bizinesi khadi
- Lisiti yovomerezedwa yokhala ndi dzina la mwini wa shopu, komwe ikupezeka ndi
- Zikwangwani
- Kupanga mgwirizano ndi Amakaniki. Chifukwa Amakaniki adera amakumana ndi makasitomala ofuna kugula zipangizo komanso ndi amene ali ndi luso lokonzera mijigo, choncho kupanga ubale ndi amakaniki ndi njira imodzi yabwino yotsatsira malonda.

Zitsanzo zimenezi zotsatsira malonda zikupezeka mbuku la maphunziro akukhazikitsa mashopu.

# Phunziro II: Maphunziro ndi zigawo

| | | |
|---|---|---|
| **Nambala ya buku.** | | 1 |
| **Dzina la buku** | | Maphunziro a eni mashopu ogulitsa zipangizo za mjigo |
| **Ophunzira** | | Eni mashopu oyamba kumene kugulitsa zipangizo za mjigo |
| **Cholinga** | | • Kuwapatsa luso eni mashopu la mmene angagulitsire zipangizo za mjigo<br>• Kukweza luso lawo lakachitidwe ka bizinesi |
| **Ophunzitsa** | | Alangizi a za madzi ndi alangizi achitukuko |
| **Nthawi / Kutalika kwake** | | Masiku awiri |
| **Mabuku ogwiritsa ntchito** | | ▪ Buku la Lophunzitsira eni mashopu<br>▪ COMMUNITY HAND BOOK ON WATER AND SANITATION AFRIDEV VERSION (SECTION 4 AFRIDEV HANDPUMP MAINTENANCE) |
| **Zida zina ndi zipangizo zogwiritsira ntchito** | | Maina azipangizo za mjigo wa Afridev , chitsanzo cha bini khadi, chitsanzo cha lisiti, mitengo ya zipangizo za mjigo, zogulitsa za pa mwezi, chithunzi cha mjigo wa Afridev, Filipi chati, Zolembera, Bobini, U-silo, Kapu-silo, Fakalamu pini, Hang'a pini, Hang'a asembule, Bushi beringi, Rodi senteleza, Rodi, Mbedza, Pulanja ya pulasitiki, Pulanja ya chitsulo, Dabulo endi soketi, Raba fulapa, Raba koni, Koni puleti Sipanala ya fulati, Sipanala ya bowo,Mbeza yowedzera ma rodi |
| **No.** | **Mutu** | **Zochita** |
| 1 | Chiyambi cha maphunziro kwa eni ake mashopu | Kukambirana |
| 2 | Maina azipangizo za mjigo wa Afridev ndi ntchito zake | Kukambirana<br>Kukambirana m'magulu |
| 3 | Kumasula ndi kubwezeretsa mjigo | Kuyeselera |
| 4 | Kupanga bizinesi | Kukambirana<br>Kukhala m'magulu |

## Mutu 1 (M1-S1)

| | |
|---|---|
| **Nambala ya Buku. / Dzina** | **1/ Maphunziro a eni mashopu ogulitsa zipangizo za mjigo** |
| **Mutu 1** | **Chiyambi cha maphunziro kwa eni ake mashopu** |
| **Mbiri ya mphunzitsi woyenera** | Katswiri wa maphunziro akhale ndi nzeru ndi luso lodziwa ntchito yakagwiridwe kakumudzi, kayendetsedwe ndi kasamalidwe ka madzi am'midzi ndi zina |
| **Cholinga** | • Kuwapatsa mpata ophunzira kuti adziwane wina ndi mnzake, kukhazikika ndi kukhala omasuka<br>• Kudziwitsa ophunzira kuti adziwe cholinga cha maphunziro ndi udindo wawo pankhani yogulitsa zipangizo za mjigo |
| **Zoyembekezera** | • Kwa ophunzira kudziwa zolinga za maphunziro<br>• Kwa ophunzira kudziwa udindo wa eni mashopu kwa anthu akumudzi |
| **Nthawi/ kutalika kwake** | Maola awiri tsiku loyamba |
| **Malo ovomerezeka** | Holo yaying'ono bwino. Yokhala ndi mazenera ndi mipando yoti itha kusunthidwa. Kukhala mozungulira ngati bwalo kuti aliyense adzitha kuwona mnzake |
| **Njira yophunizitsira** | Kukambirana |
| **Zipangizo zofunika** | Fulipi chati pepala ndi fulipi chati bolodi, zolembera za mtundu wa maka |
| **Zolandira** | Buku lophunzitsira eni mashopu ogulitsa zipangizo za mjigo |
| | |
| **Njira zophunzitsira** | |
| **Njira yoyamba: Kutsegulira ndi kudziwana** | *Mphunzitsi afunse ophunzira kuti atsegulire maphunziro pakudzichula dzina ndi udindo omwe ali nawo.*<br>**1. Mphunzitsi auze ophunzira kuti apange izi:**<br>1) Kudzichula dzina<br>2) Kukambirana ndondomeko ya maphunziro<br>3) Kulemba zoyembekezera<br>4) Kulemba nkhawa zawo<br>***Mphunzitsi azalemba mayankho onse papepala ndi kukambirana ndi ophunzira.***<br>**2. Mphunzitsi afunse ophunzira mafunso awa;**<br>1) Chifukwa chiyani tikufuna kuphunzira?<br>2) Kodi akuyembekezera zotani pa maphunziro amenewa?<br>***Mphunzitsi alembe mayankho afunso loyamba ndi lachiwiri papepala asanayambe kukambirana kenako ndi kukambirana akamaliza*** |
| **Njira ya chiwiri: Ntchito ndi udindo wa eni ake shopu** | ***Mphunzitsi afotokozere ntchito ndi udindo wa eni mashopu mokambirana*** |

<table>
<tr><th colspan="2">Zolemba za mphunzitsi</th></tr>
<tr><td colspan="2"></td></tr>
<tr><td rowspan="2">Masamba Owonjezera</td><td>Tsamba lowonjezera 1:</td></tr>
<tr><td>Tsamba lowonjezera 2:</td></tr>
</table>

## Mutu 2 (M1-S2)

| | |
|---|---|
| **Nambala ya Buku. / Dzina** | **1/ Maphunziro a eni mashopu ogulitsa zipangizo za mjigo** |
| **Mutu 2** | **Maina azipangizo za mjigo wa Afridev ndi ntchito zake** |
| **Mbiri ya mphunzitsi** | Katswiri wa maphunziro, akhale ndi nzeru ndi luso lodziwa ntchito yakagwiridwe kakumudzi, kayendetsedwe ndi kasamalidwe ka madzi m'midzi ndi zina |
| **Cholinga** | • Kufotokozera zipangizo za pa mjigo ndi ntchito zake<br>• Kulola ophunzira kuti adziwe zipangizo za mjigo wa Afridev |
| **Zoyembekezera** | • Kwa ophunzira kudziwa maina azipangizo ndi ntchito yake |
| **Nthawi/ kutalika kwake** | Maola awiri pa tsiku loyamba |
| **Malo ovomerezeka** | Holo yaying'ono bwino. Yokhala ndi mazenera ndi mipando yoti itha kusunthidwa. Kukhala mozungulira ngati bwalo kuti aliyense adzitha kuwona mnzake |
| **Njira yophunzitsira** | Kukambirana<br>Kukambirana m'magulu |
| **Zipangizo zofunika** | Maina azipangizo, fulipi chati ndi fulipi chati bolodi, zolembera za mtundu wa Maka, chithunzi cha mjigo wa Afridev |
| **Zolandira** | Buku lophunzitsira eni mashopu ogulitsa zipangizo za mjigo |
| | |
| **Njira zophunzitsira** | |
| **Njira yoyamba: Kufotokoza za zipangizo** | ***Mphunzitsi ayambe kufunsa ophunzira zomwe akuona pa chinthunzi. Pogwiritsa ntchito chinthunzi mphunzitsi afotokonzere zigawo za mjigo, zapamwamba ndi zapansi*** |
| **Njira yachiwiri: Kutchula maina azipangizo ndi ntchito zake** | ***Kupereka mapepala amjigo wa Afridev ndi ntchito zake.<br>Apatseni mpata ophunzira kuti awerenge kenaka funsani ophunzira kuti atchule maina awiri azipangizo ndi ntchito zake.***<br>1) Pogwiritsa ntchito chithunzi cha mjigo wa Afridev ophunzira anene zomwe akuona.<br>2) Apatseni mapepala osalemba ophunzira kuti alembe maina azipangizo zomwe akudziwa.<br>3) Mphunzitsi adzafunsa ophunzira kuti zomwe alemba akaike pa chithunzi pamene pali chipangizo alembacho.<br>4) Mokambirana, funsani ophunzira ngati zomwe alemba ndi kuika pa chithunzi zili zolondola<br>***Mphunzitsi adzanena <u>ZIPANGIZO ZOSACHEDWA KUTHA,</u> akambe kwambiri pa nkhani ya kusunga zipangizo.*** |
| **Zolemba aphunzitsi:** | |
| | |
| **Masamba Owonjezera** | Tsamba lowonjezera 1: |
| | Tsamba lowonjezera 2: |

## Mutu 3 (M1-S3)

| | |
|---|---|
| **Nambala ya Buku. / Dzina** | **1/ Maphunziro a eni mashopu ogulitsa zipangizo za mjigo** |
| **Mutu 3** | **Kumasula ndi kubwezeretsa mjigo** |
| **Mbiri ya mphunzitsi** | Katswiri wa maphunziro, akhale ndi nzeru ndi luso lodziwa ntchito yakagwiridwe kakumudzi, kayendesedwe ndi kasamalidwe ka madzi m'midzi ndi zina. |
| **Cholinga** | • Kudziwa kumasula mjigo<br>• Kudziwa kubwezeretsa zipangizo za mjigo |
| **Zoyembekezera** | • Kwa ophunzira kudziwa mmene anga masulire ndi kubwezeretsa mjigo |
| **Nthawi/ kutalika kwake** | Maola awiri ndi theka tsiku loyamba |
| **Malo ovomerezedwa** | Mjigo umene uli pafupi ndi pamene pakuchitikira maphunziro |
| **Njira yophunizitsira** | Kuyeselera kumasula ndi kubwezeretsa mjigo |
| **Zipangizo zofunika** | Sipanala ya fulati, sipanala ya bowo ndi mbeza |
| **Zolandira** | Buku lophunzitsira eni  mashopu ogulitsa zipangizo za mjigo |
| | |
| **Njira zophunzitsira** | |
| **Njira yoyamba: Kumasula mjigo** | ***Ophunzira amasule mjigo pamene <u>mphunzitsi akutsogolera.</u> Mphunzitsi nthawi zonse adzifunsa ophunzira kuti adzinena chipangizo chomwe amasula ndi kuwafunsa kuti anene ntchito zake.*** |
| **Njira ya chiwiri: Kubwezeretsa mjigo** | ***Ophunzira abwezeretse zipangizo za mjigo <u>mphunzitsi adzitsogolera</u>*** |
| **Zolemba aphunzitsi:** | |
| | |
| **Masamba Owonjezera** | Tsamba lowonjezera 1: |
| | Tsamba lowonjezera 2: |

## Mutu 4 (M1-S4)

| | |
|---|---|
| **Nambala ya Buku. / Dzina** | **1/ Maphunziro a eni mashopu ogulitsa zipangizo za mjigo** |
| **Mutu 4** | **Kupanga bizinesi** |
| **Mbiri ya mphunzitsi** | Katswiri wa maphunziro, akhale ndi nzeru ndi luso lodziwa ntchito yakagwiridwe kakumudzi, kayendetsedwe ndi kasamalidwe ka madzi am'midzi ndi zina |
| **Cholinga** | • Kuzindikiritsa ophunzira kuti wa bizinesi ndi ndani<br>• Kuzindikiritsa ophunzira za udindo wawo pazakagulitsidwe kazipangizo kumudzi ndi kusunga marekodi |
| **Zoyembekezera** | • Kukhazikitsa ma shopu ogulitsa zipangizo za mjigo kumidzi |
| **Nthawi/ kutalika kwake** | Maola asanu ndi limodzi pa tsiku lachiwiri |
| **Malo ovomerezeka** | Holo yaying'ono bwino. Yokhala ndi mazenera ndi mipando yoti itha kusunthidwa. Kukhala mozungulira ngati bwalo kuti aliyense adzitha kuwona mnzake |
| **Njira yophunzitsira** | Kukambirana m'magulu ndi kuchita sewero |
| **Zipangizo zofunika** | Maina azipangizo za mjigo wa Afridev , Chitsanzo cha bini khadi,Chitsanzo cha lisiti, Mitengo ya zipangizo za mjigo, zogulitsa za pa mwezi, chithunzi cha mjigo wa Afridev, Filipi chati, Zolembera, Bobini, U-silo, Kapu-silo, Fakalamu pini, Hang'a pini, hang'a asembule, Bushi bering'i, Rodi senteleza, Rodi, Mbedza, Pulanja ya pulasitiki, Pulanja ya chitsulo, Dabulo endi soketi, Raba fulapa, Raba koni, Koni puleti sipanala ya fulati, Sipanala ya bowo, Mbedza yo wedzera ma rodi |
| **Zolandira** | Buku la lophunzitsira eni mashopu ogulitsa zipangizo za mjigo |
| | |
| **Njira zophunzitsira** | |
| **Njira yoyamba: Kodi munthu wa bizinesi ndindani?** | ***Mphunzitsi afunse ophunzira kuti bizinesi ndi chiyani?*** |
| **Njira ya chiwiri: Zomuyenereza kuti akhale wabwino pa bizinesi** | ***Mphunzitsi afunse ophunzira kuti akhale m'magulu ndi kukambirana zomuyenereza mwini shopu kuti adzigulitsa zipangizo.***<br>***Amate zomwe akambirana m'magulu pabolodi ndi kusiyanitsa mayankho awo ndi amphunzitsi*** |
| **Njira ya chitatu: Kuwodanso zipangizo zina** | ***Mphunzitsi afunse ophunzira kuti angadziwe bwanji nthawi yofuna kuwodera katundu asanathe.***<br>***Amate zomwe akambirana m'magulu pabolodi ndi kusiyanitsa mayankho awo ndi awa aphunzitsi.***<br>***Mphunzitsi afotokozere ophunzira kuti azigwiritsa ntchito bini khadi pa kasamalidwe ka zipangizo*** |
| **Njira ya chinayi: Kasamalidwe ka zipangizo** | ***Mphunzitsi afotokozere ophunzira m'mene angayikire zipangizo mushopu yawo.*** |

| | |
|---|---|
| **Njira ya chisanu: M'mene angalembere lisiti** | ***Mokambirana funsani kuti lisiti ndi chiyani?***<br>***Lembani mayankho ndi kukambirana ndi ophunzira ndi kusankha yankho labwino.***<br><br>***Mphunzitsi afunse ophunzira kuti akhale m'magulu ndi kukakambirana izi.***<br>1) Chifukwa chiyani muyenera kulemba lisiti?<br>2) Kodi ndi zinthu ziti zimafunika kulemba pa lisiti? |
| **Njira ya chisanu ndi chimodzi: Kuchita sewero la m'mene angagulitsire zipangizo za Mjigo mushopu** | ***Mphunzitsi afunse anthu awiri kapena angapo kuti akhale ndi udindo wa mwini shopu ndi ena kukhala kasitomala ogula.***<br>***Ena mwa ophunzira azingowonerera ndi kupereka ndemanga pazomwe aona.***<br><br>***Mphunzitsi aone zinthu izi ndi kukambirana ndi ophunzira pa zomwe awona.***<br>1) Kukhala ndi chidwi chodziwa zipangizo zomwe kasitomala wafunsa<br>2) Kutha kulemba lisiti labwino<br>3) Kutha kupanga ma pulani ndi kuwoda zipangizo zosachedwa kutha<br>4) Kulandila makasitomala bwino ndi kupanga ubale<br>5) Kutha kulemba Lisiti |
| **Zolemba aphunzitsi:** | |
| | |
| **Masamba Lowonjezera** | Tsamba lowonjezera 1: |
| | Tsamba lowonjezera 2: |

## Phunziro III: Ndondomeko ya maphunziro

| NTHAWI | NTCHITO | NJIRA YOPHUNZITSIRA | WOPHUNZITSA |
|---|---|---|---|
| **TSIKU LOYAMBA** | | | |
| 8:00am – 10:00am | ▪ Mau otsegulira ndi Kufotokoza Chiyambi<br>❖ Mawu otsegulira<br>❖ Kudzichula dzina aliyense payekha<br>❖ Kukambirana za ndondomeko ya maphunziro<br>❖ Zoyembekezera ndi nkhawa za ophunzira<br>▪ Ntchito ndi udindo wa eni mashopu | Kukambirana | |
| **10:00-10:15am** | | **KUPUMA** | |
| 10:1512:00pm | ▪ Kufotokoza chiyambi cha pampu ya Afridevu<br>❖ Maina ndi ntchito ya zipangizo za mjigo<br>❖ Kumasula ndi kubwezeretsa mjigo wa Afridev | Kukambirana | |
| **12:00 – 1:00pm** | | **KUPUMA** | |
| 1:00 - 3:30pm | ❖ Kumasula mjigo<br>❖ Kubwezeretsa mjigo | Kuyesera<br>Kuchitira limodzi pagulu | |
| **3:30- 4:00pm** | | **KUPUMA** | |
| 4:00 – 4:30pm | ▪ Nthawi ya mafunso | Kukambirana | |
| **TSIKU LACHIWIRI** | | | |
| 8:00 – 10:00am | ▪ Kukumbutsana zimene taphunzira dzulo<br>▪ Bizinesi<br>❖ Kodi munthu wa bizinesi ndindani?<br>❖ Zomuyenereza kukhala wa bizinesi wabwino ndi ziti? | Kukambirana | |
| **10:00-10:15am** | | **KUPUMA** | |
| 10:15- 12:00pm | ▪ Bizinesi<br>❖ Kuwodanso zipangizo<br>❖ Kuyala zipangizo pa alumale mushopu<br>❖ Mmene mungalembere lisiti? | Kukambirana | |
| **12:00 – 1:00pm** | | **NKHOMALIRO** | |
| 1:00- 3:00pm | ❖ Udindo umene ungachitidwe pa nkhani yogulitsa zipangizo | Kukambirana | |

| | | | |
|---|---|---|---|
| **3:00 – 3:15pm** | | **KUPUMA** | |
| 3:15- 4:00pm | ▪ Nthawi ya mafunso<br>▪ Kupereka satifiketi<br>▪ Kupereka zipangizo zoyambira<br>▪ Mau otsekera | Kukambirana<br><br><br>Zoyankhula | |

# Masamba Owonjezera

## Tsamba lowonjezera 1: Chitsanzo cha m'mene Bini khadi imaonekera [6]

BINI KHADI

| Dzina: | | | Ia Afridev pump S/No.: | | | | |
|---|---|---|---|---|---|---|---|
| Mtengo wogulira (MK) | | Mtengo wogulitsira (MK) | | Kuchuluka kwa katundu amene Mwawoda | | Mulingo wofunika Kuwodanso[1] | |
| Tsiku [2] | | Tsiku [3] | | Tsiku [4] | | Tsiku [5] | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Tsiku | Fotokozerani zomwe mwawoda | Katundu amene Mwawoda | Kutundu amene Mwagulitsa | Katundu Wotsala |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

[1]: Kuwodanso x 0.25

[2]: Tsiku lowodera, osati tsiku lolandilira katundu

[3]: Tsiku logulitsira katundu

[4]: Tsiku lolandira katundu

[5]: Tsiku lolandira katundu

[6]This format is extracted from the document of "Supply Chain Management Manual 2nd Edition 2012, National Rural Water Supply and Sanitation Programme, Government of Zambia" and modified for the Project.

## Tsamba lowonjezera 2: Chitsanzo cha lisiti [7]

(Dzina la opikulitsa)

Keyala:

P.O. Box ......, Tel. , Fax. , E-mail:

| | | | |
|---|---|---|---|
| Tsiku | | No. | |
| | | | |
| Kulandira kuchokera kwa ndani | Dzina: | | |
| | Mfumu yaikulu: | | |
| Kulipira chifukwa cha | | | |
| | | | |
| Mtengo | | | |
| Mtengo mumalemba | | | |
| Kashi/Cheke | Nambala ya Cheke. | Kashi/Cheke | |
| Dzina lawogulitsa | | | |
| Saini | | | |

Tsamba Loyamba: Kwa wopikula zipangizo, Tsamba Lichiwiri: Kwa Wopukulitsa, Tsamba Lachitatu: Lotsala mbuku

[7]This format is extracted from the document of "Supply Chain Management Manual 2nd Edition 2012, National Rural Water Supply and Sanitation Programme, Government of Zambia" and modified for the Project.

## Tsamba lowonjezera 3: ZOGULITSA PA MWEZI [8]

Dzina la shopu:

Boma:

Mfumu yaikulu:

Mwezi ndi Chaka:

| Tsiku | Zolemba | Zogulitsa | | |
|---|---|---|---|---|
| | | Mtengo wa chimodzi | Kuchuluka | Zonse |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | Zonse pa mwezi | |

[8] This format is extracted from the document of "Supply Chain Management Manual 2nd Edition 2012, National Rural Water Supply and Sanitation Programme, Government of Zambia" and modified for the Project.

**Mabuku a Kayendetsedwe ndi kakonzedwe ka Mijigo mu ntchito yopereka Madzi Kumudzi** analembedwa pofuna kuthandiza ochita mapulani, oyangánira ndi onse okhudzidwa ndi ntchito yopereka madzi kudzera ku pampu ya Afridevu m’Malawi.