



OWNERS MANUAL FOR

***VIRAT 13HP***  
***POWER TILLER***  
*Proudly Made-In-India*

Log book no..... Chassis No..... Engine No.....  
Name.....Address.....  
.....Phone no.....

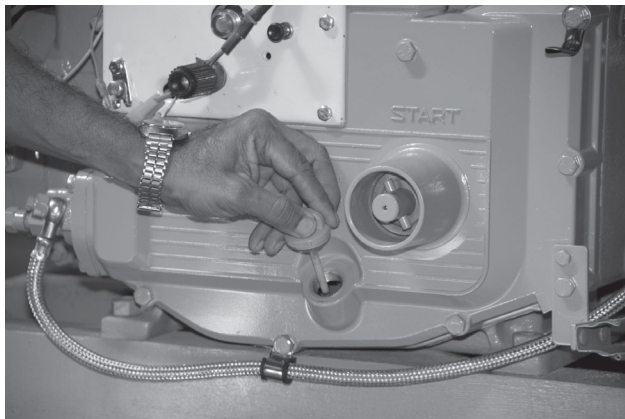
## General Specifications

Model	SHRACHI VIRAT 13 HP
Type	HORIZONTAL, WATER COOLED, 4 STROKE DIESEL ENGINE
Output/Rated rpm (HP/rpm)	13/2400
Bore x Stroke (mm)	95 x 95
Displacement (cc)	673
Compression Ratio	18:1
Fuel Consumption (gms/HP.hr)	190
Net Weight (kgs)	130
Starting Method	Manual
Air Cleaner	Oil bath type
Cooling System	Pressurized condenser type
Cranking direction	Counter-clock wise, facing fly wheel.
Lubrication system	Trochoid pump with relief valve
Fuel tank capacity (Ltr)	11
Cooling water capacity (Ltr)	3.2
Lubricant oil capacity (Ltr)	2.8
Dimension L x W x H (mm)	880 x 416 x 620
Lamp(VxW)	12V x 35/35W (2 Lamps)
Standard pulley dia (mm)	120

**NOTE :** *As per company's policy of Continuous improvements, the specifications given in this booklet are subjected to change or withdrawal at any time without notice and the Company accepts no responsibilities for any discrepancies which may occur between actual specifications and description contained in this publication.*

## Preparation for Starting

With engine in a horizontal position, remove oil filler cap and fill oil up to the filler port. Make sure engine is horizontal.



Remove the air cleaner Bottom bowl and fill up to oil level line with fresh engine oil.



Fill the fuel tank with high quality diesel fuel through the fuel screen. The use of fuel which is contaminated with dust or other impurities will reduce the life of the engine and damage the fuel injection pump.



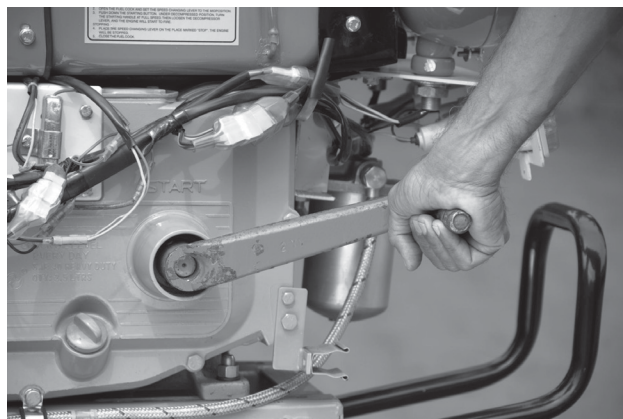
Remove the pressure cap and fill the condenser with clean water (without sand or other impurities.)



Coolant Tank as shown in the figure. Maximum level of coolant will be maintained. Do not touch the radiator cap for filling the Coolant. Fill only in the reservoir tank.

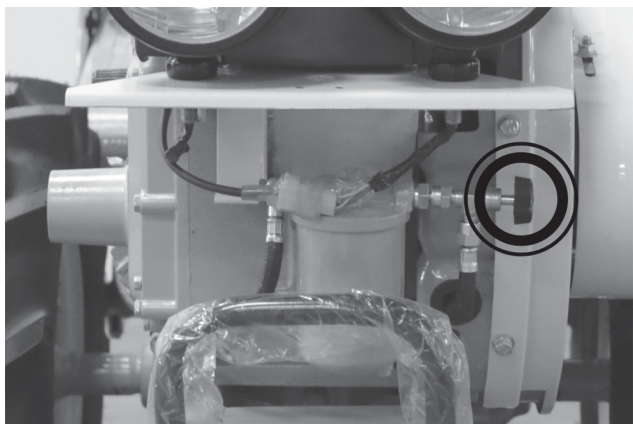
## Starting

Take the starting handle from the holder and attach it to the starting shaft. While pressing the decompression lever with the left hand, turn the starting handle to distribute the oil to all moving parts. This requires about 10 revolutions of the handle.



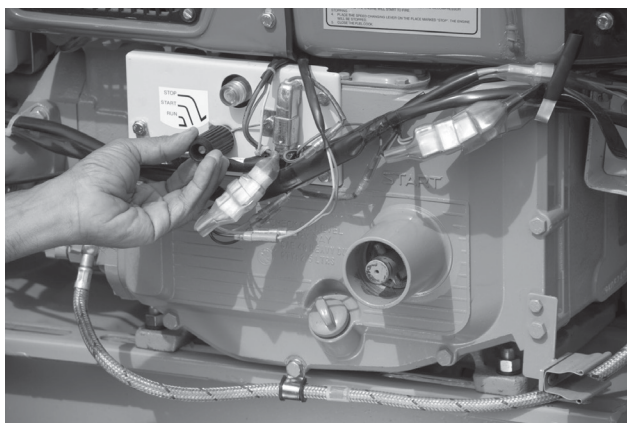


Open the fuel cock to enable fuel to flow to the injection pump through fuel filter.

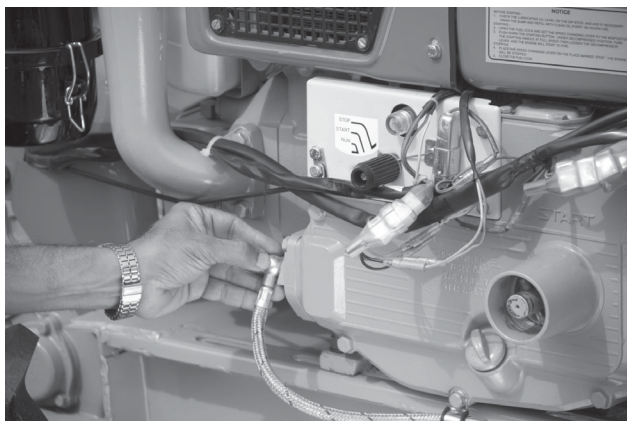


## Starting Engine

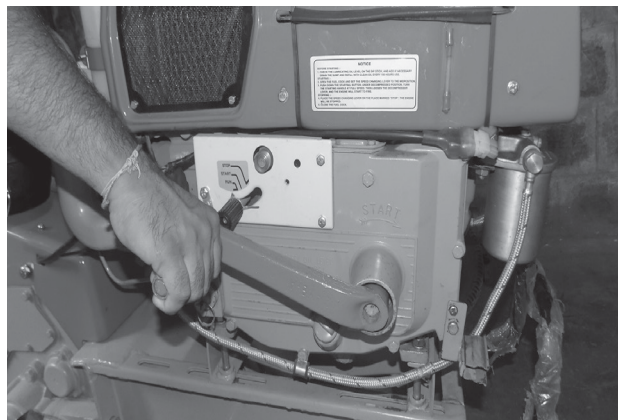
Set the speed control lever at **START** position.



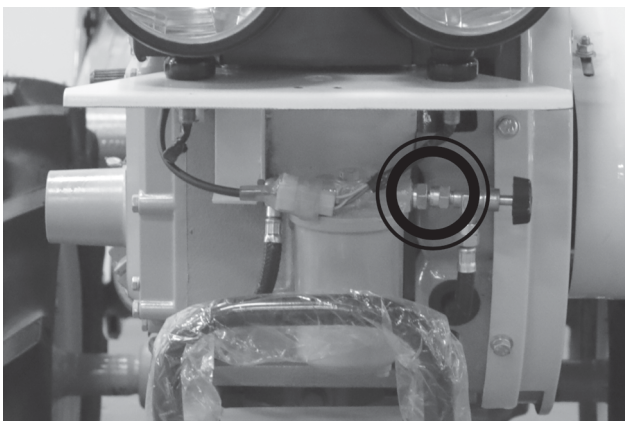
While turning the decompression lever with the left hand, turn the fly wheel with the starting handle. When you feel it has sufficient inertia, release the decompression Lever and turn the handle with more force until the engine starts.



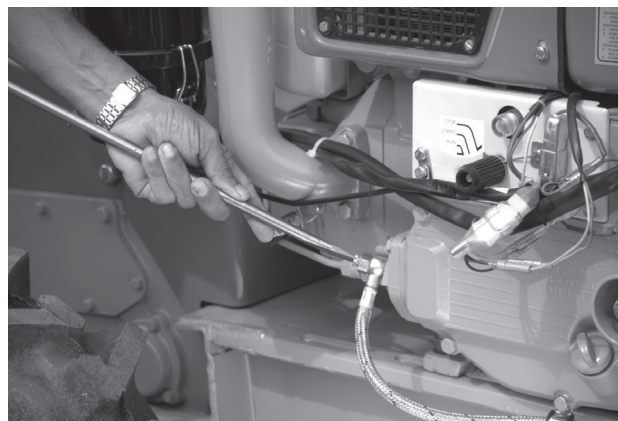
After starting, the engine requires 5 to 10 minutes of warm-up time at 1500 R.P.M. After warm-up period, apply load to the engine at the proper speed.



When there is no injection sound, it may be due to air in the fuel line. Loosen the air vent screws (2) on the fuel filter and allow fuel to escape until it is free of air bubbles. Re-tighten the air vent screws.

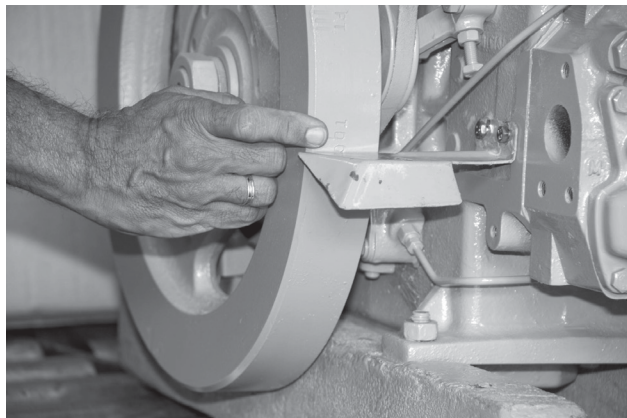


Loosen the air vent screw (2 places) on injection pump and re-tighten the screw when air-free fuel is emitted.

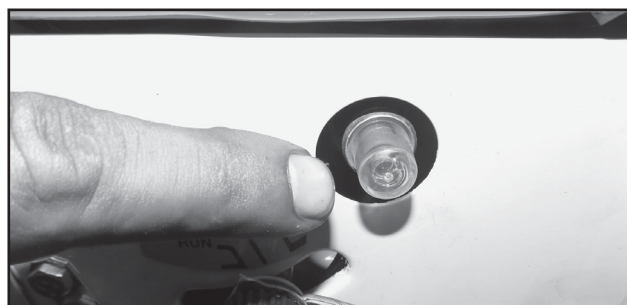




Turn the flywheel until the maximum compression (T.D.C.) point can be felt through the priming lever. At that point, operate priming lever about 10 times or until injection sound is heard. The engine is then ready to start.



Observe Oil Level Indicator on the upper side of the Gear Case. Blue Colour means normal condition. If the Level Indicator shows Red Colour, Stop the Engine immediately and check the oil level in the crank case and Lubrication system.

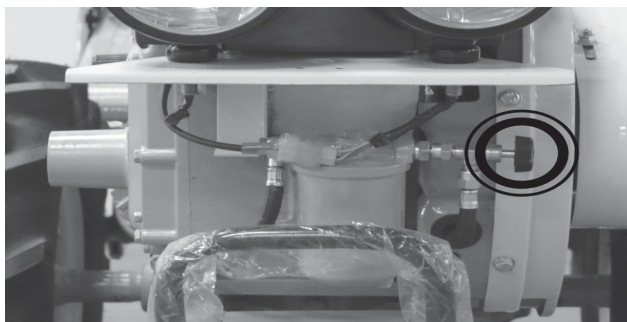


## Stopping Engine

Set the speed control lever at **STOP** position. Engine will stop. Do not use decompression lever for the purpose of stopping.



Turn the fuel cock lever to the close position



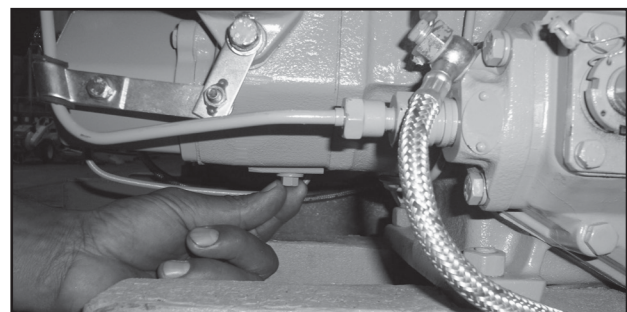
Never open the Condenser pressure cap during or just after running the Engine.



## Starting in Cold Weather

In cold weather, it is hard to start engine, because the viscosity of the engine oil increases. When the atmospheric temperature is below zero, use engine oil of low viscosity or multi-grade (10w - 30).

After running in cold weather, never fail to drain the water from the engine. If the water is not drained, the water will freeze and break the cylinder head and crankcase. It is not necessary to drain water from the crankcase when anti-freeze is used.



## Storage

- Set the flywheel at 40° - 45° position before T.D.C. Turn the flywheel and stop where you feel resistance.
- Store the engine in a clean, dry place during long periods of storage.

## Replacement of Pulley

- It will sometimes be necessary to change the engine pulley or the driver pulley to obtain more or less speed, which means respectively less or more **Torque** or turning force at the driven machine shaft.
- The formula relating pulley diameters, speed in revolutions per minute, and torque in lb. ft. or kg. - mtr. is :

$$\frac{\text{Driver (Diameter)}}{\text{Driven (Diameter)}} = \frac{\text{Driven (R.P.M)}}{\text{Driver (R.P.M)}}$$

### Torque

Driver (lb. - ft.)  
Driven (lb. - ft.)

- After selection of the correct pulleys, the engine speed should be adjusted to obtain the exact power required by the driver machine.

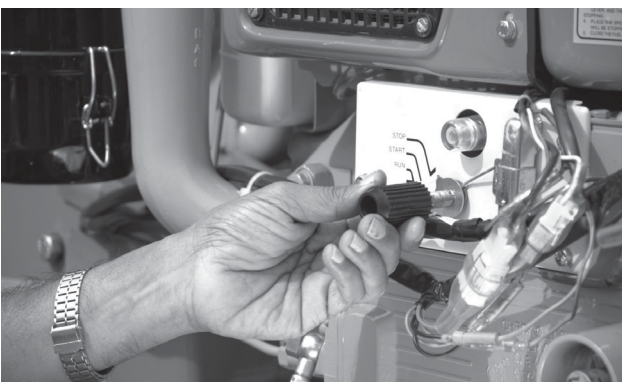
## Lighting

The head lamp and the working lamp can be controlled remotely means of the remote control switch located on the tiller handle.

To facilitate electrical connection, all of the lead wires for the lighting systems are gathered on the upper section of the speed control guide plate.

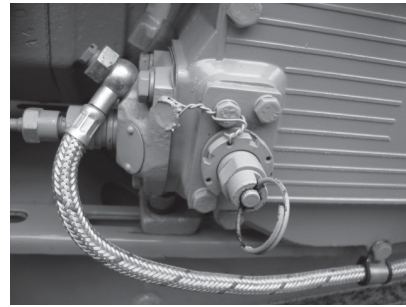
## Remote Control Cable

When the engine is mounted on as tiller, the speed of the engine can be controlled from the tiller handle by connecting the speed control lever to the remote control lever with the remote control cable.



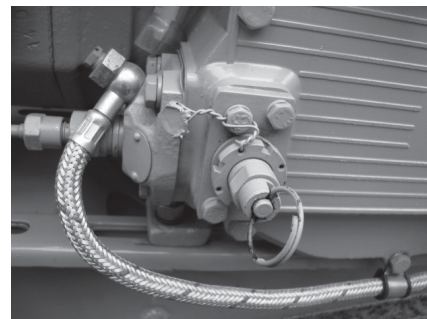
## IMPORTANT

### CAUTION (SHRACHI VIRAT 13HP)

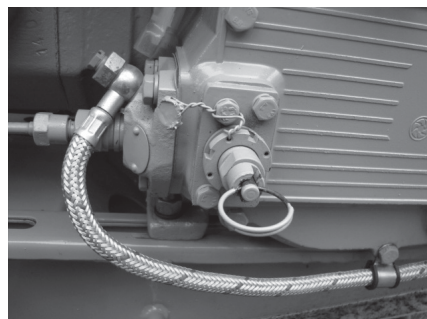


Sealed Fuel Adjuster

Do not tamper the fuel adjuster setting which has been set at factory in order to get the best performance of the engine. Company is not responsible for any change in engine performance in case of tampering of the fuel adjuster setting



Plunger ring in normal position (Fig. 1)



Plunger ring in excess fuel position (Fig. 2)

During cold starting of the engine, pull the fuel adjuster plunger by the ring provided and position the ring on the fuel adjuster body as shown in Fig. 2. Crank the engine three to four times which will ensure more fuel during cold starting.

**IMPORTANT :** Before starting of the engine ensure that the plunger is in normal position as shown in Fig. 1.



# Maintenance

## Daily CHECK

### Before Operation

- Fill engine oil up to oil level line in crank case and air cleaner.
- Fill water up to the neck of the condenser
- Do not run the engine faster than the rated speed (2,200 RPM).

### During Operation

- After starting, warm up engine for 5 to 10 minutes at 1,500 RPM.
- Never open the pressure cap during or just after running. Before opening, relieve the pressure by pulling pressure relief lever.
- Check oil level indicator on the upper side of the gear case. Blue means normal condition. If fuel indicator shows red, stop the engine immediately and check the oil level in the crank case and lubrication system.

### After Operation

- **Do not use the decompression lever for stopping engine.**
- **Tighten all loose nuts and bolts.**
- NOTE: Change engine oil in new engine after 2 hours, once again after 10 hours, and once again after 30 hours. Change oil immediately after running. Clean oil filter mesh assembly at each oil change, with clean diesel oil

### After First 30 Hours of Operation

- Check every part of the engine and tighten loose parts.
- Replace engine oil with new oil while the engine is warm just after running. Engine oil requirements are as follows:

#### Temperature

#### Lubricating Oil

Under 0°C, (Under 32°F).... SAE 10w

0°C - 10°C, (32° to 50°F).... SAE 20w

0°C - 25°C, (32° to 77°F).... SAE 10w

0°C - 35°C, (32° to 95°F).... SAE 20w - 40

- Clean inner side of Air Cleaner and element with solvent and fill with fresh oil.
- If the engine runs in dusty areas, check the air cleaner and clean it everyday.

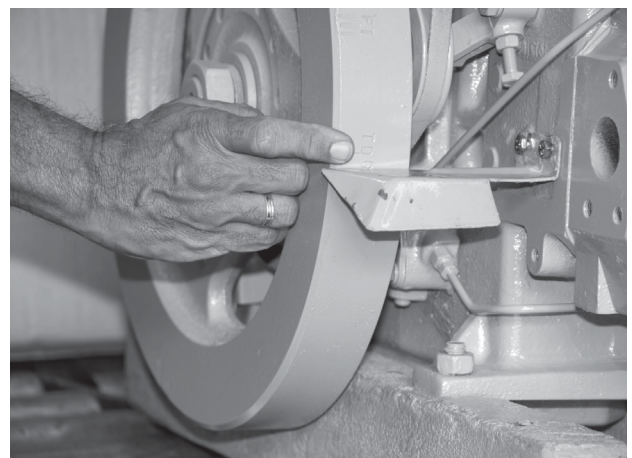
### Every 100 Hours

- Drain oil while the engine is still warm and fill with new oil.
- Tension is correct when the belt can be deflected 12 mm (1/2") with some pressure.
- Clean the inside of the air cleaner and exchange the oil.
- Wash the fuel filter element with solvent.
- Wash the inside of the fuel tank with solvent.

### Every 300 Hours

- When the flywheel is T.D.C. on the compression stroke, mark in line with timing indicator, and then adjust valve clearance to Shrachi Virat 13hp 0.40mm Inlet & 0.45mm outlet for 130DI.
- Adjust injection pressure of nozzle to standard pressure as follows:

(250 <sup>+8</sup> Kg/cm<sup>2</sup> - SHRACHI VIRAT 13HP)





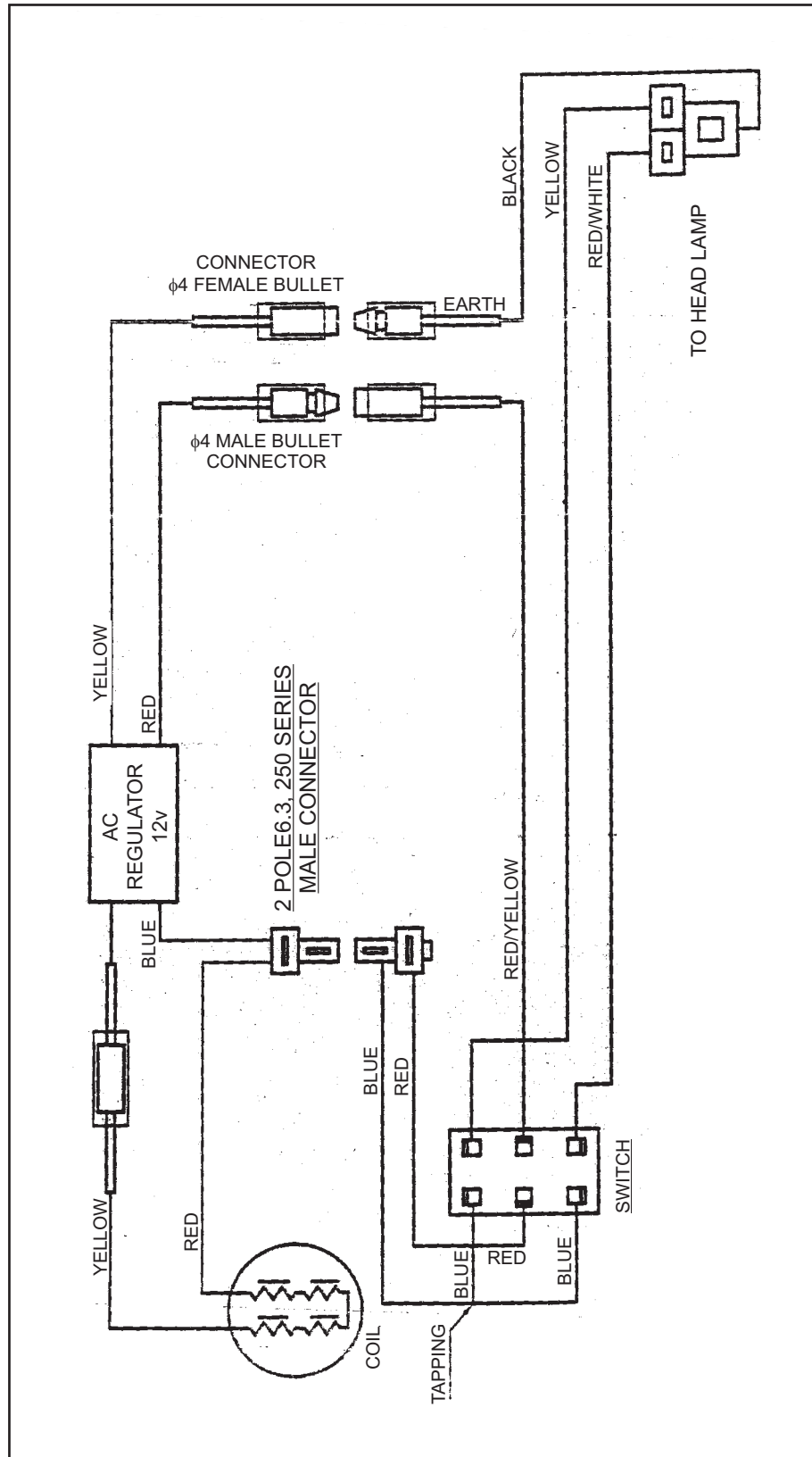
## ROUTINE MAINTENANCE

Checking Time Item	After Delivery	DAILY			Storage for a Long Time	After First 10 Hours	After First 30 Hours	Every 100 Hours	Every 300 Hours
		Before operation	Operating	After Operation					
Fixing Parts	○			○	○		○	○	
External Appearance	○			□	□				
Engine Oil	●	○				◎	◎	◎	
Air Cleaner Oil	●	○					□ ◎	□ ◎	
Fuel	●	●		●	▲				
Coolant	●	●	●	▲	▲				
Cooling Fan	○								
Oil Level Indicator	○		○						
Exhaust Gas	○		○						
Noise & Vibrations	○		○						
Engine Speed	○		○						
Head Lamp	○		○						
Fuel Filter								□	
Fuel Tank									□
Fan Belt Tension	○							△	
Valve Clearance									△
Nozzle Pressure									△

Operate The New Engine Under Minimum Load During The First Fifty Hours

○ ..... Check      △ ..... Adjust      □ ..... Clean up      ◎ ..... Change      ● ..... Supply      ▲ ..... Drain

# ELECTRICAL SCHEMATIC DIAGRAM



**Below shown all the implements are common for  
Shrachi Virat 13 HP Power Tiller**

### 1. PUDDLING OPERATION

Puddling operation is done before transplanting the paddy seedlings. For this field operation power tiller is fitted with Lugged wheels or drum type cage wheels depending upon the soil conditions after removing the Rubber Tyres for better traction. Rotary is fitted with Bent tynes. Tail wheel is also to be replaced with tail wheel float for adjusting the depth. Minimum two puddling operations are required and at least 8-10 cms of water should be available in the field for best puddle and proper levelling of the field.

Field Coverage / Day	2.5 to 3 acres
Average Fuel Consumption	1.25 to 1.50 ltrs / hr
Depth of Tilling	150 to 225 mm (6 to 9 inches)
Width of Rotary	540 to 600 mm (21 to 24 inches)

### 2. DRY TILLING

In case of dry tilling either bent or straight tynes can be fitted depending upon the moisture in the field. Normally this operation is done immediately after harvest to remove the roots or weeds in the field or loosening the soil for better aeration. Dry tilling is also done prior to planting seeds for dry crops such as Ground nut, jowar, chillies etc. Also for intercultivation, dry tilling operation is done.

Field Coverage / Day	2 to 2.5 acres
Average Fuel Consumption	1.5 to 1.75 ltrs / hr
Depth of cut	125 to 200 mm (5 to 8 inches)
Rotary Width	540 mm to 600 mm (21 to 24 inches)

### 3. CULTIVATOR

Five tyne Cultivator fitment is commonly used as a secondary tillage equipment mostly in dry lands for loosening the soil, removal of crop roots, weeds and for Intercultivation in orchards etc. A little moisture in the field increases the tilling efficiency.

Field Coverage/Day	2.5 to 3 acres
Average Fuel Consumption	1.25 to 1.5 ltrs / hr
Depth of cut	100 mm to 150 mm (4 - 6 inches)
Width of cut	600 mm (24 inches)

*The performance of the product stated are under Standard Test Conditions. Design and specifications may change due to continuous improvement.*



## 4. TWO SHARE PLOUGH

This attachment has two shares to plough tilling in unidirection where as coverage is twice compared to reversible Mould Board plough. Suitable for ploughing virgin land which is not tilled for long period. Tills the soil which has deep roots, unwanted plants, shrubs and weeds.

Field Coverage / Day	1 to 1.5 acres
Depth of cut	200-250 mm (8-10 inches)
Width of cut	300 mm (12 inches)
Average Fuel Consumption	1.5 - 2 ltrs / hr

## 5. RIDGER (FURROWER)

The Ridger is used for making ridges for row crops such as Sugercane, Potato, chillies, tobacco, banana etc. as well as for opening furrows for water flow. The ridger should be used when the soil is slightly moist and used only after tilling the land once or twice.

The Ridger is fitted on the Rotary assembly with the help of a special bolt & nut.

Field Coverage / Day	1 to 1.25 acres
Average Fuel Consumption	1.5 to 2 ltrs / hr
Depth of Furrow (adjustable)	250 to 300 mm (10 - 12 inches) max
Width of Furrow (adjustable)	375 to 450 mm (15 - 18 inches) max

## 6. SHORTER ROTARY (340 MM)

Power Tiller fitted with a shorter rotary (340 mm) and extended lugged wheel is used for inter cultivation operation for deweeding and loosening the soil in Sugar cane fields.

A smaller furrower specially designed for Sugar cane field, can be used for bund formation which also helps in irrigation.

After Sugar cane harvesting, shorter rotary can be used for removing stubbles.

The stubble is pulverised and is mixed with the soil thereby forming organic manure.

Field Coverage / day	1.5 to 2 acres
Short Rotary Width	340 mm (13 inches)
Attachment : 1 smaller furrower 2. Extended lugged wheel	1 No. 1 Pair
No. of tynes	10 Nos.
Average Fuel Consumption	1.5 to 2 ltrs / hr

## 7. TRANSPORTATION

Trailer of 1.5 tons capacity can be fitted for transport of goods.

### **Type of Trailers :**

- Standard
- Mechanical Tipping
- Hydraulic Tipping
- Garbage trailer for collection of Garbage & Transportation.
- Water tanker of capacity 1000 ltrs can also be fitted to Power Tiller for carrying drinking water.

Capacity	1.5 tons
Type	Non Tipping / Tipping
Accessories Required	Hitch Bracket Assembly Handle Weight Assembly
Average Fuel Consumption	1.0 - 1.25 ltrs/hr

## 8. PUMPING

### **1. Domestic Water Pump**

Pumping water from irrigation canals, rivers and wells, etc.,

### **2. Self Priming Pump**

Self Priming Pump with tanker can be fitted for cleaning septic tanks; Cess pools, clogged drainage, community wells etc.,

Suction Head (Height)	25 feet
Delivery Head (Height)	25 - 30 feet
Discharge	440 ltr/min.
Average Fuel Consumption	1.25 - 1.5 ltrs / hr

## 9. SPRAYING

The sprayer is used for spraying pesticides and insecticides to avoid the pests in following areas :

(1) Coconut, (2) Chikku, (3) Pomagranate, (4) Grapes, (5) Guava, (6) Banana, (7) Papaya, (8) Mango

Discharge (Free Flow)	36 ltrs / min
Average Fuel Consumption	1.25 - 1.5 ltrs / hr

*The performance of the product stated are under Standard Test Conditions. Design and specifications may change due to continuous improvement.*

## 10. AUGER DIGGER

Attachment used for making holes varying from 6 - 8 inch in diameter & 18 x 24 inch deep in – with 15 - 20% moisture soil

### **Mostly used for Planting :**

- |           |                |
|-----------|----------------|
| 1. Banana | 2. Papaya      |
| 2. Mango  | 4. Pomagranate |
| 5. Guava  | 6. Chikku      |

Capacity	12 - 15 holes / hr
Average Fuel Consumption	1 ltr / hr

## 11. BUND FORMATION

Bent tynes are to be fitted to the rotary while doing reverse tilling operation. There must be sufficient moisture in the soil. Bund formation can be done by reverse tilling around the plants & trees.

This operation is to be carried out only after specific training is given to the operator.

## 12. GENERATOR

The engine can be used as a Prime mover to couple with suitable standard Generator available in the market.

### **The Generator can be used for operating :**

1. Submersible Pumpsets
2. Water Pump
3. Domestic Requirements

Generator Capacity	7.5 kVA
Average Fuel Consumption	1.5 to 1.75 ltrs / hr



### 13. FERTILIZER CUM SEED DRILL ATTACHMENT

This is an exclusive attachment fitted to the Tiller after removing rotary assembly. It is used for sowing seeds and spreading of fertilizer in a row. It consists of separate boxes for seed and fertilizer, a shoe type furrower and a spliced ground wheel.

It is suitable for sowing seed of Wheat, Soya Bean, Bengal Gram etc.,

Field Coverage / Day	1.25 to 2.25 acres
Average Fuel Consumption	1.25 ltrs/hr
Working Width	660-900 mm

### 14. CAGE WHEEL K TYPE

This wheel is very effective in fields where the soil is loose and sinking.

### 15. MULTI-PURPOSE BRACKET

**With a multi purpose bracket following 4 implements can be used :**

1. Cage Wheel / Lugged Wheel
2. Sprayer Unit
3. Water Pump
4. A.C. Generator

### 16. BULLOCK TYPE INTER CULTIVATOR WITH SHRACHI VIRAT 13HP POWER TILLER

Inter-cultivation, also known as interculturing, is the cultivation of soil between crop rows. In other words, the soil between two rows of crop is ploughed using dedicated plough equipment for weeding, improving soil aeration and loosening the soil compaction.

#### KEY FEATURES

- 1.25-2 acres can be cultivated in 1 hour
- Average diesel consumption is 1-1.25 ltrs / hr of operation

#### KEY BENEFITS

- A simple design attachment helps for inter cultivation in between the rows of cotton crops.
- Weeds / unwanted grass / plants are removed by using this attachment without damaging the main cotton crop.
- A person can stand on the attachment and drive the tiller.
- The field can be levelled using a Blade in the place of cultivator.

## 17. REAPER WITH SHRACHI VIRAT 13HP POWER TILLER

A reaper attachment is used for cutting of crops at harvest time.

### **KEY FEATURES**

- Reaper fitted at the front of the tiller is driven through a belt connected to engine pulley
- Reaper cuts the crop 5 ~ 7.6 cms above the ground level.
- Width of the cut is 120 ~ 150 cms and is very economical in operations.
- 0.35 ~ 0.5 acres can be covered in 1 hour of operation.
- Average diesel consumption is 1.5 ~ 1.75 lts / hr
- Cut crops are collected manually.

### **KEY BENEFITS**

- Reaper fitted with the tiller is the best replacement for manual reaping.
- Saves labour & time for cutting the crops.
- Very easy to operate the reaper fitted with the tiller.
- The cut crops are carried to one side of the tiller operator by a conveyor belt.

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## 18. AXIAL FLOW THRESHER FITTED WITH SHRACHI VIRAT 13HP POWER TILLER

### **KEY FEATURES**

- Grain output - 1500 kgs / hr.
- Straws are thrown out to 4.6 ~ 7.6 meter away with the help of a powerful fan.
- These can be collected in gunny bags or directly into a trailer
- Average diesel consumption is 1.5 ~ 2.25 lts / hr.
- Threshers are fitted with 6x16 pneumatic tyres for easy transportation.
- A platform is provided for a person to stand and feed.

### **KEY BENEFITS**

- Ideal replacement for manual method of threshing.
- Post threshing the grains can be collected in a tray / bag.
- Grains come out cleaned after passing through a sieve and fan.
- Threshers are fitted with pneumatic tyres for easy transportation.
- A platform is provided for a person to stand and feed.
- Blowers are made available on request for very fine cleaning.

## GENERAL INSTRUCTIONS SERVICE AND LOG BOOK

This Book is a record for the use of your Power Tiller, proper and regular entries in this book will :

1. Help you to get the Power Tiller Serviced at the right time.
2. Help our mechanics to know the condition of your Power Tiller better and thus take timely action to prevent costly breakdowns.
3. Thus helps you to get much longer life for the Power Tiller.
4. Customers are requested to maintain a log book for recording no. of working hrs. fuel used, lub oil used etc.
5. As per company's policy of continuous improvements, specification given in the booklet are subject to change or withdrawal at any time without notice.

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## USE GENUINE SPARES AND RECOMMENDED OIL

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### LUBRICATION CHART

Sl. No.	Application	Indian Oil
1.	Engine Oil	20W/40
2.	Air Cleaner	20W/40
3.	Gear Box Oil	EP-90/140
4.	Rotary Chain Case Oil	EP-90/140
5.	Grease Multipurpose	MP



## PREFACE

Dear Customer,

Thank you for your selection of **SHRACHI VIRAT 13HP POWER TILLER**. You are now the proud owner of India's largest selling and most sought after Power Tiller.

This Power Tiller is a product of SHRACHI Quality Engineering & Manufacturing.

Utmost care is taken during the manufacturing process to ensure high quality, reliability and trouble free service. We are confident that your Power Tiller gives you satisfactory performance.

To get the best from your Power Tiller, we request you to read this Service Log Book carefully and do periodically check as directed in the book and do the servicing as recommended by us.

We are offering 3 free services. Kindly make use of these free services to get the maximum advantage.

With your SHRACHI VIRAT 13HP Power Tiller, we wish you happiness and prosperity.

## STANDARD TOOL KIT FOR POWER TILLER

1. TOOL BAG
2. CUTTING PLIER
3. SCREW DRIVER
4. TUBULAR SPANNER (18 x 22)
5. TOMMY BAR
6. DOUBLE END SPANNER  
(10 X 11 - 1 No., 12 X 13 - 1 No., 16 X 17 - 1 No. 18 X 19 - 1 No., 22 X 24 - 1 No.)
7. RING SPANNER 14 x 17

Note : Suitable tools will be supplied whenever design changes occurs.

### THIS SERVICE LOG BOOK CONTAINS :

- A) General instructions of the service log book (inner front cover page)
- B) Sale intimation Card
- C) Parts & Maintenance chart of Water Cooled Tiller.
- D) Routine maintenance of the SHRACHI VIRAT 13HP POWER TILLER
- E) Free service coupons
- F) Warranty Card

## CUSTOMER SATISFACTION

In case of Complaints unattended please feel free to contact us at :

### ADDRESS

BTL EPC LTD.  
2, Jessore Road, Dumdum  
Kolkata- 700028.

## PRE-DELIVERY INSPECTION REPORT

**BEFORE THE TILLER IS DELIVERED, PLEASE ENSURE THAT THE FOLLOWING WORK HAS BEEN CARRIED OUT**

Engine No.....Chassis No.....Date.....S.No.....

<b>PRE-DELIVERY INSPECTION OF SHRACHI VIRAT 13HP POWER TILLER</b>	<b>CHECK &amp; Tick (✓)</b>
Check Engine oil SAE 20W 40 - 2.8 Lts Level	
Check Aircleaner oil SAE 20W 40 upto the level mark	
Check Water level	
Check the Fan Belt Tension 1"	
Check up all the bolts and nuts	
Check Water leakage	
Check Oil leakage	
Check Fuel tank for any dust inside	
Check Fuel filter for any leakage	
Check valve clearance 0.40 mm inlet, 0.45 mm exhaust	
Check condenser grill and fan for any dust	
Check oil level indicator for proper functioning	
Crank the engine many times for oil circulation before starting	
Check the running of the engine	
Check Exhaust smoke condition	
Check for abnormal sound in engine	
Check for abnormal vibration of tiller	
Check engine speed and hunting (fluctuation)	
Check Headlight for its working	
Check Rotary chain case oil SAE 90 - 0.5 Lts Level	
Tighten the tyne bolts and wheel nuts	
Check whether grease has been filled in the rotary grease cup	
Check the gear box oil SAE-90 (5.5 Lts.)	
Grease the tail wheel bearings	
Check the main clutch adjustment, break adjustment, side clutch adjustment	
Check the functions of the main clutch, brake, side clutch and the engagements of the gears.	
The clutch should be operated 3 to 4 times when the Tiller has been stored for a long time getting free from rust and dust.	

REMARKS :

MECHANIC NAME :

ENGINE No. :

MECHANIC CONTACT No.:

CHASSIS No. :

DEALER SIGNATURE WITH SEAL

MECHANIC SIGNATURE

## ROUTINE MAINTENANCE FOR POWER TILLER

ITEM	Before Sale	50 Hrs / 60 Days	150 Hrs / 120 Days	250 Hrs / 180 Days	350 Hrs / 240 Days	450 Hrs / 300 Days
ENGINE OIL	C	R	C	R	C	R
AIR CLEANER BOWL	C	R	R	R	R	R
TRANSMISSION OIL	C	R	C	R	C	R
ROTARY CHAIN CASE	C	R	C	R	C	R
AIR CLEANER	C	R	R	R	R	R
FUEL FILTER	C	CLEAN	CLEAN	CLEAN	CLEAN	CLEAN
PRIMARY FUEL FILTER IN FUEL TANK	C	CLEAN	CLEAN	CLEAN	CLEAN	CLEAN
RADIATOR GRILL	C	CLEAN	CLEAN	CLEAN	CLEAN	CLEAN
SHIFTER LEVER	C	LUBRICATE	LUBRICATE	LUBRICATE	LUBRICATE	LUBRICATE
SIDE CLUTCH CABLES	C	LUBRICATE	LUBRICATE	LUBRICATE	LUBRICATE	LUBRICATE
THROTTLE CABLE	C	LUBRICATE	LUBRICATE	LUBRICATE	LUBRICATE	LUBRICATE
TAPPET CLEARANCE	C	C & A	C & A	C & A	C & A	C & A
DECOMPRESSION LEVER	C	C & A	C & A	C & A	C & A	C & A
SIDE CLUTCH	C & T	C & A	C & A	C & A	C & A	C & A
MAIN CLUTCH	C & T	C & A	C & A	C & A	C & A	C & A
BRAKE	C & T	C & A	C & A	C & A	C & A	C & A
V BELT TENSION	C & T	C & A	C & A	C & A	C & A	C & A
FAN BELT TENSION	C & T	C & A	C & A	C & A	C & A	C & A
ENGINE MOUNTING BOLTS	C & T	C & T	C & T	C & T	C & T	C & T
CYLINDER HEAD BOLTS	C & T	C & T	C & T	C & T	C & T	C & T
ROTARY TYNE BOLTS	C & T	C & T	C & T	C & T	C & T	C & T
ROTARY CONNECTING CASE BOLTS	C & T	C & T	C & T	C & T	C & T	C & T
WHEEL BOLTS	C & T	C & T	C & T	C & T	C & T	C & T

C - CHECK, R - REPLACE, C & A - CHECK & ADJUST, C & T - CHECK & TIGHTEN,

After 450 hrs/300days,next every 100 hrs repeat the 150 hrs & 250 hrs service alternately.

# SALE INTIMATION AND INSTALLATION TRAINING CERTIFICATE

Service Log Book No.

Dealership Name and Address

<b>Customer Name and Address</b>	
Name	
Father / Husband Name	
Door No.	
Street Name	
Village	
Taluk / Mandal	
District	
State	
Pin Code	
Lane Line No.	
Mobile No.	

The following machine was sold to the above customer as per the details given.

Product	Model
Chassis No.	Engine No.
Invoice No.	Date
Date of Sale	
Dealer Invoice No.	Date

Dealer Signature and Seal

Customer Declaration

1. The above machine was delivered to me in fully working condition to my satisfaction.
2. All Free Spares and tools were delivered. Dealer explained about Free services.
3. Machine details and operation details were explained to me and training on operation was done on \_\_\_\_\_ at my residence. Dealer Mechanic Name \_\_\_\_\_
4. I read warranty conditions in overleaf page and fully understood.

Customer Signature

Date :

**CUSTOMER COPY**

- I. For a period of 1 Year working of the Power Tiller or its Engine, from the date on which a SHRACHI VIRAT 13HP Power Tiller is delivered. BTL EPC LTD, will replace or repair any part or parts thereof, if the company is satisfied on examination of the parts to have been defective in material or workmanship. PROVIDED THAT (A) The purchaser fills in the Warranty Card and obtains authorised dealer's signature with the date in the card at the time of taking delivery of SHRACHI VIRAT 13HP Power Tiller. (B) The purchaser upon discovery of any defect in the Tiller should without in any manner dismantling or repairing of his own accord, immediately notify the authorised dealer in the territory in which SHRACHI Power Tiller was purchased, of the defects together with particulars such as Chassis No. Engine No. & date of purchase.
- ii. This Warranty will not apply to : (a) The Tiller used for any purpose other than genuine agricultural use of the first original owner user. (b) Defective part or parts which in the option of BTL EPC LTD., has or have been injured by wear and tear. (c) Any part or parts damaged due to improper use, negligence or accident including entry of water into the cylinder, Crank-case, Gear-case and Chain-case, (d) Tiller damaged during operation with attachments other than those supplied by BTL EPC LTD. (e) Components such as Tynes, Tyres V, Belts Bowden wires, Oil Seal, 'O' Rings, Rubber and Electrical Components and proprietary items like Ball Bearings, fuel injection items etc. If periodic services are not done within stipulated time.
- iii. The Company will not be responsible for any items of expense which the owner may incur in removing or having removed or in replacing or having replaced any part or parts to be sent for inspection or having fitted any new parts supplied in lieu thereof initially the dealer will replace parts collecting from the owner actual cost of parts and labour. After parts are inspected by BTL EPC LTD., re-imbursement of the amount less sales tax and incidental expenses will be made through the Dealers to the owner only on parts accepted under Warranty and not labour charges.
- iv. During the period of Warranty, all repairs and replacement should be carried out by our authorised representatives or authorised dealer's representatives only. BTL EPC LTD. will not be responsible for changes caused by VIRAT 13HP Power Tiller or its components during repairs carried out by unauthorised persons.
- v. This Warranty is given expressly in lieu of and excludes every condition of Warranty, whether statutory or otherwise. Also every form of liability or loss or damages direct or consequential or for any injury or accident resulting from defective material, faulty workmanship or otherwise, is expressly excluded.
- vi. The power tiller / tractor / product has to be got to the dealer's place for free service / warranty repair. However in case the free service / warranty repair is carried out at the customer's place then to and fro travelling expenses, will be payable by the customer.
- vii. Under free service only the labour charges towards the service are free. Any consumable parts / oil etc are chargeable.
- viii. The decision of BTL EPC LTD., in settling the warranty is final in all respects.
- ix. All disputes are subject to Kolkata Courts Jurisdiction.



# SALE INTIMATION AND INSTALLATION TRAINING CERTIFICATE

Service Log Book No.

Dealership Name and Address

<b>Customer Name and Address</b>	
Name	
Father / Husband Name	
Door No.	
Street Name	
Village	
Taluk / Mandal	
District	
State	
Pin Code	
Lane Line No.	
Mobile No.	

The following machine was sold to the above customer as per the details given.

Product	Model
Chassis No.	Engine No.
Invoice No.	Date
Date of Sale	
Dealer Invoice No.	Date

Dealer Signature and Seal

Customer Declaration

1. The above machine was delivered to me in fully working condition to my satisfaction.
2. All Free Spares and tools were delivered. Dealer explained about Free services.
3. Machine details and operation details were explained to me and training on operation was done on \_\_\_\_\_ at my residence. Dealer Mechanic Name \_\_\_\_\_
4. I read warranty conditions in overleaf page and fully understood.

Customer Signature

Date :

COMPANY COPY

- I. For a period of 1 Year working of the Power Tiller or its Engine, from the date on which a SHRACHI VIRAT 13HP Power Tiller is delivered. BTL EPC LTD, will replace or repair any part or parts thereof, if the company is satisfied on examination of the parts to have been defective in material or workmanship. PROVIDED THAT (A) The purchaser fills in the Warranty Card and obtains authorised dealer's signature with the date in the card at the time of taking delivery of SHRACHI VIRAT 13HP Power Tiller. (B) The purchaser upon discovery of any defect in the Tiller should without in any manner dismantling or repairing of his own accord, immediately notify the authorised dealer in the territory in which SHRACHI Power Tiller was purchased, of the defects together with particulars such as Chassis No. Engine No. & date of purchase.
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- iii. The Company will not be responsible for any items of expense which the owner may incur in removing or having removed or in replacing or having replaced any part or parts to be sent for inspection or having fitted any new parts supplied in lieu thereof initially the dealer will replace parts collecting from the owner actual cost of parts and labour. After parts are inspected by BTL EPC LTD., re-imbursement of the amount less sales tax and incidental expenses will be made through the Dealers to the owner only on parts accepted under Warranty and not labour charges.
- iv. During the period of Warranty, all repairs and replacement should be carried out by our authorised representatives or authorised dealer's representatives only. BTL EPC LTD. will not be responsible for changes caused by VIRAT 13HP Power Tiller or its components during repairs carried out by unauthorised persons.
- v. This Warranty is given expressly in lieu of and excludes every condition of Warranty, whether statutory or otherwise. Also every form of liability or loss or damages direct or consequential or for any injury or accident resulting from defective material, faulty workmanship or otherwise, is expressly excluded.
- vi. The power tiller / tractor / product has to be got to the dealer's place for free service / warranty repair. However in case the free service / warranty repair is carried out at the customer's place then to and fro travelling expenses, will be payable by the customer.
- vii. Under free service only the labour charges towards the service are free. Any consumable parts / oil etc are chargeable.
- viii. The decision of BTL EPC LTD., in settling the warranty is final in all respects.
- ix. All disputes are subject to Kolkata Courts Jurisdiction.

# SALE INTIMATION AND INSTALLATION TRAINING CERTIFICATE

Service Log Book No.

Dealership Name and Address

<b>Customer Name and Address</b>	
Name	
Father / Husband Name	
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Lane Line No.	
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The following machine was sold to the above customer as per the details given.

Product	Model
Chassis No.	Engine No.
Invoice No.	Date
Date of Sale	
Dealer Invoice No.	Date

Dealer Signature and Seal

Customer Declaration

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2. All Free Spares and tools were delivered. Dealer explained about Free services.
3. Machine details and operation details were explained to me and training on operation was done on \_\_\_\_\_ at my residence. Dealer Mechanic Name \_\_\_\_\_
4. I read warranty conditions in overleaf page and fully understood.

Customer Signature

Date :

**DEALER COPY**

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- ii. This Warranty will not apply to : (a) The Tiller used for any purpose other than genuine agricultural use of the first original owner user. (b) Defective part or parts which in the option of BTL EPC LTD., has or have been injured by wear and tear. (c) Any part or parts damaged due to improper use, negligence or accident including entry of water into the cylinder, Crank-case, Gear-case and Chain-case, (d) Tiller damaged during operation with attachments other than those supplied by BTL EPC LTD. (e) Components such as Tynes, Tyres V, Belts Bowden wires, Oil Seal, 'O' Rings, Rubber and Electrical Components and proprietary items like Ball Bearings, fuel injection items etc. If periodic services are not done within stipulated time.
- iii. The Company will not be responsible for any items of expense which the owner may incur in removing or having removed or in replacing or having replaced any part or parts to be sent for inspection or having fitted any new parts supplied in lieu thereof initially the dealer will replace parts collecting from the owner actual cost of parts and labour. After parts are inspected by BTL EPC LTD., re-imbursement of the amount less sales tax and incidental expenses will be made through the Dealers to the owner only on parts accepted under Warranty and not labour charges.
- iv. During the period of Warranty, all repairs and replacement should be carried out by our authorised representatives or authorised dealer's representatives only. BTL EPC LTD. will not be responsible for changes caused by VIRAT 13HP Power Tiller or its components during repairs carried out by unauthorised persons.
- v. This Warranty is given expressly in lieu of and excludes every condition of Warranty, whether statutory or otherwise. Also every form of liability or loss or damages direct or consequential or for any injury or accident resulting from defective material, faulty workmanship or otherwise, is expressly excluded.
- vi. The power tiller / tractor / product has to be got to the dealer's place for free service / warranty repair. However in case the free service / warranty repair is carried out at the customer's place then to and fro travelling expenses, will be payable by the customer.
- vii. Under free service only the labour charges towards the service are free. Any consumable parts / oil etc are chargeable.
- viii. The decision of BTL EPC LTD., in settling the warranty is final in all respects.
- ix. All disputes are subject to Kolkata Courts Jurisdiction.

# LOG SHEET

( Fill this sheet after carrying out each service)

Services done	Hours run	Job card no.	Date	Signature & dealer seal
Pre delivery inspection				
Installation				
1st free service/50hrs/60days				
2nd free service/300hrs/180days				
3rd free service/500hrs/360days				

Please ensure all ROUTINE MAINTENANCE FOR POWER TILLER are carried out as mentioned in this Log book



# LOG SHEET

( Fill this sheet after carrying out each service)

[illegible]

Please ensure all ROUTINE MAINTENANCE FOR POWER TILLER are carried out as mentioned in this Log book

# SHRACHI VIRAT 13HP POWER TILLER

## 1ST SERVICE COUPON (60DAYS or 50 Hrs.)

LOG BOOK NO :	JOB CARD NO :	
INVOICE NO :	RSO/CA INVOICE NO :	
ENGINE NO :	CHASSIS NO :	
DATE OF SALE :	DATE OF SERVICE :	HOURS RUN :

OWNER NAME & ADDRESS	CONTACT NO :
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<b>REPLACE</b>	A-ENGINE OIL	3 Lit	SAE40/20w40
	B- AIR CLEANER BOWL OIL	200 ML	SAE40/20w40
	C TRANSMISSION OIL	5.5 Lit	SAE90
	D-ROTARY CHAIN CASE OIL	500 ML	SAE90
<b>CLEAN</b>	A-AIR CLEANER		
	B-FUEL FILTER BOWL		
	C-PRIMARY FUEL FILTER IN FUEL TANK		
	D-RADIATOR GRILL		
<b>LUBRICATION</b>	A-SHIFTER LEVER		
	B-SIDE CLUTCH CABLES		
	C-THROTTLE CABLE		
	D-DECOMPRESSION LEVER		
	E-TAIL WHEEL CAP, THRUST BEARING		
	ROTARY SHAFT BEARING COVER		
<b>CHECK</b>	A-THROTTLE CABLE		
	B-TAPPET CLEARANCE	IN. 0.25 MM EX 0.40 MM (VWH/072)	
		IN. 0.40 MM EX 0.45 MM (130DI)	
	C-FAN BELT	1/2 INCH	
	D-SIDE CLUTCH	FREE PLAY - 2 TO 3 MM	
	E- MAIN CLUTCH	FREE PLAY 1.2 INCH	
	F- BRAKE		
	G-V-BELT TENSION	1 INCH	
	H-STAND		
<b>CHECK &amp; TIGHT</b>	A- ENGINE MOUNTING BOLTS		
	B-ENGINE FRAME BOLTS		
	C-CYLINDER HEAD BOLTS	11 to 12 KgM	
	D-ROTARY TYNE BOLTS & NUTS		
	E-ROTARY CONNECTING CASE BOLTS		
	F- WHEEL NUTS		
	G-AXLE BOLTS		

The above service are carried out to my satisfaction.

**CUSTOMER SIGNATURE**

**DEALER SIGNATURE**

DEALER SEAL;

**CUSTOMER COPY**

# SHRACHI VIRAT 13HP POWER TILLER

## 1ST SERVICE COUPON (60DAYS or 50 Hrs.)

LOG BOOK NO :	JOB CARD NO :	
INVOICE NO :	RSO/CA INVOICE NO :	
ENGINE NO :	CHASSIS NO :	
DATE OF SALE :	DATE OF SERVICE :	HOURS RUN :

OWNER NAME & ADDRESS	CONTACT NO :
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<b>REPLACE</b>	A-ENGINE OIL	3 Lit    SAE40/20w40
	B- AIR CLEANER BOWL OIL	200 ML   SAE40/20w40
	C TRANSMISSION OIL	5.5 Lit    SAE90
	D-ROTARY CHAIN CASE OIL	500 ML   SAE90
<b>CLEAN</b>	A-AIR CLEANER	
	B-FUEL FILTER BOWL	
	C-PRIMARY FUEL FILTER IN FUEL TANK	
	D-RADIATOR GRILL	
<b>LUBRICATION</b>	A-SHIFTER LEVER	
	B-SIDE CLUTCH CABLES	
	C-THROTTLE CABLE	
	D-DECOMPRESSION LEVER	
	E-TAIL WHEEL CAP, THRUST BEARING	
	ROTARY SHAFT BEARING COVER	
<b>CHECK</b>	A-THROTTLE CABLE	
	B-TAPPET CLEARANCE	IN. 0.25 MM   EX 0.40 MM (VWH/072)
		IN. 0.40 MM   EX 0.45 MM (130DI)
	C-FAN BELT	1/2 INCH
	D-SIDE CLUTCH	FREE PLAY - 2 TO 3 MM
	E- MAIN CLUTCH	FREE PLAY 1.2 INCH
	F- BRAKE	
	G-V-BELT TENSION	1 INCH
	H-STAND	
<b>CHECK &amp; TIGHT</b>	A- ENGINE MOUNTING BOLTS	
	B-ENGINE FRAME BOLTS	
	C-CYLINDER HEAD BOLTS	11 to 12 KgM
	D-ROTARY TYNE BOLTS & NUTS	
	E-ROTARY CONNECTING CASE BOLTS	
	F- WHEEL NUTS	
	G-AXLE BOLTS	

The above service are carried out to my satisfaction.

**CUSTOMER SIGNATURE**

**DEALER SIGNATURE**  
DEALER SEAL;

**COMPANY COPY**

# SHRACHI VIRAT 13HP POWER TILLER

## 1ST SERVICE COUPON (60DAYS or 50 Hrs.)

LOG BOOK NO :	JOB CARD NO :	
INVOICE NO :	RSO/CA INVOICE NO :	
ENGINE NO :	CHASSIS NO :	
DATE OF SALE :	DATE OF SERVICE :	HOURS RUN :

OWNER NAME & ADDRESS	CONTACT NO :
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<b>REPLACE</b>	A-ENGINE OIL	3 Lit    SAE40/20w40
	B- AIR CLEANER BOWL OIL	200 ML   SAE40/20w40
	C TRANSMISSION OIL	5.5 Lit    SAE90
	D-ROTARY CHAIN CASE OIL	500 ML   SAE90
<b>CLEAN</b>	A-AIR CLEANER	
	B-FUEL FILTER BOWL	
	C-PRIMARY FUEL FILTER IN FUEL TANK	
	D-RADIATOR GRILL	
<b>LUBRICATION</b>	A-SHIFTER LEVER	
	B-SIDE CLUTCH CABLES	
	C-THROTTLE CABLE	
	D-DECOMPRESSION LEVER	
	E-TAIL WHEEL CAP, THRUST BEARING	
	ROTARY SHAFT BEARING COVER	
<b>CHECK</b>	A-THROTTLE CABLE	
	B-TAPPET CLEARANCE	IN. 0.25 MM   EX 0.40 MM (VWH/072)
		IN. 0.40 MM   EX 0.45 MM (130DI)
	C-FAN BELT	1/2 INCH
	D-SIDE CLUTCH	FREE PLAY - 2 TO 3 MM
	E- MAIN CLUTCH	FREE PLAY 1.2 INCH
	F- BRAKE	
	G-V-BELT TENSION	1 INCH
	H-STAND	
<b>CHECK &amp; TIGHT</b>	A- ENGINE MOUNTING BOLTS	
	B-ENGINE FRAME BOLTS	
	C-CYLINDER HEAD BOLTS	11 to 12 KgM
	D-ROTARY TYNE BOLTS & NUTS	
	E-ROTARY CONNECTING CASE BOLTS	
	F- WHEEL NUTS	
	G-AXLE BOLTS	

The above service are carried out to my satisfaction.

**CUSTOMER SIGNATURE**

**DEALER SIGNATURE**  
DEALER SEAL;

**DEALER COPY**

# SHRACHI VIRAT 13HP POWER TILLER

## 2ND SERVICE COUPON (180 DAYS or 300 Hrs.)

LOG BOOK NO :	JOB CARD NO :	
INVOICE NO :	RSO/CA INVOICE NO :	
ENGINE NO :	CHASSIS NO :	
DATE OF SALE :	DATE OF SERVICE :	HOURS RUN :

OWNER NAME & ADDRESS	CONTACT NO :
----------------------	--------------

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<b>REPLACE</b>	A-ENGINE OIL	3 Lit	SAE40/20w40
	B- AIR CLEANER BOWL OIL	200 ML	SAE40/20w40
	C TRANSMISSION OIL	5.5 Lit	SAE90
	D-ROTARY CHAIN CASE OIL	500 ML	SAE90
	E-FUEL FILTER		
<b>CLEAN</b>	A-AIR CLEANER		
	B-FUEL FILTER BOWL		
	C-PRIMARY FUEL FILTER IN FUEL TANK		
	D-RADIATOR GRILL		
	E-DIESEL TANK		
<b>LUBRICATION</b>	A-SHIFTER LEVER		
	B-SIDE CLUTCH CABLES		
	C-THROTTLE CABLE		
	D-DECOMPRESSION LEVER		
	E-TAIL WHEEL CAP, THRUST BEARING		
	ROTARY SHAFT BEARING COVER		
<b>CHECK</b>	A-THROTTLE CABLE		
	B-TAPPET CLEARANCE	IN. 0.25 MM	EX 0.40 MM (VWH/072)
		IN. 0.40 MM	EX 0.45 MM (130DI)
	C-FAN BELT	1/2 INCH	
	D-SIDE CLUTCH	FREE PLAY - 2 TO 3 MM	
	E- MAIN CLUTCH	FREE PLAY 1.2 INCH	
	F- BRAKE		
	G-V-BELT TENSION	1 INCH	
	H-STAND		
	I -FUEL INJECTION TIMING		
	J-NOZZLE PRESSURE		
	K-DECOMPRESSION LEVER		
	L-ROTARY CHAIN TENSION		
<b>CHECK &amp; TIGHT</b>	A- ENGINE MOUNTING BOLTS		
	B-ENGINE FRAME BOLTS		
	C-CYLINDER HEAD BOLTS	11 to 12 KgM	
	D-ROTARY TYNE BOLTS & NUTS		
	E-ROTARY CONNECTING CASE BOLTS		
	F- WHEEL NUTS		
	G-AXLE BOLTS		
	H-ADJUST ROTARY CHAIN TENSION		
	I -ALL EXTERNAL BOLTS, NUTS & SCREW		

The above service are carried out to my satisfaction.

**CUSTOMER SIGNATURE**

**DEALER SIGNATURE**  
DEALER SEAL;

**CUSTOMER COPY**



## SHRACHI VIRAT 13HP POWER TILLER

## 2ND SERVICE COUPON (180 DAYS or 300 Hrs.)

**JOB CARD NO :**

**RSO/CA INVOICE NO :**

**CHASSIS NO :**

**HOURS RUN :**

**CONTACT NO :**

A-ENGINE OIL	3 Lit	SAE40/20w40
B- AIR CLEANER BOWL OIL	200 ML	SAE40/20w40
C TRANSMISSION OIL	5.5 Lit	SAE90
D-ROTARY CHAIN CASE OIL	500 ML	SAE90
E-FUEL FILTER		

A-AIR CLEANER  
B-FUEL FILTER BOWL  
C-PRIMARY FUEL FILTER IN FUEL TANK  
D-RADIATOR GRILL  
E-DIESEL TANK

A-SHIFTER LEVER  
B-SIDE CLUTCH CABLES  
C-THROTTLE CABLE  
D-DECOMPRESSION LEVER  
E-TAIL WHEEL CAP, THRUST BEARING  
ROTARY SHAFT BEARING COVER

A-THROTTLE CABLE	
B-TAPPET CLEARANCE	IN. 0.25 MM EX 0.40 MM (VWH/072)
	IN. 0.40 MM EX 0.45 MM (130DI)
C-FAN BELT	1/2 INCH
D-SIDE CLUTCH	FREE PLAY - 2 TO 3 MM
E- MAIN CLUTCH	FREE PLAY 1.2 INCH
F- BRAKE	
G-V-BELT TENSION	1 INCH
H-STAND	

A- ENGINE MOUNTING BOLTS	
B-ENGINE FRAME BOLTS	
C-CYLINDER HEAD BOLTS	11 to 12 KgM
D-ROTARY TYNE BOLTS & NUTS	
E-ROTARY CONNECTING CASE BOLTS	
F- WHEEL NUTS	
G-AXLE BOLTS	
H-ADJUST ROTARY CHAIN TENSION	
I -ALL EXTERNAL BOLTS, NUTS & SCREW	

**DEALER SIGNATURE**  
**DEALER SEAL:**

35

# SHRACHI VIRAT 13HP POWER TILLER

## 2ND SERVICE COUPON (180 DAYS or 300 Hrs.)

LOG BOOK NO :	JOB CARD NO :	
INVOICE NO :	RSO/CA INVOICE NO :	
ENGINE NO :	CHASSIS NO :	
DATE OF SALE :	DATE OF SERVICE :	HOURS RUN :

OWNER NAME & ADDRESS	CONTACT NO :
----------------------	--------------

<b>REPLACE</b>	A-ENGINE OIL	3 Lit	SAE40/20w40
	B- AIR CLEANER BOWL OIL	200 ML	SAE40/20w40
	C TRANSMISSION OIL	5.5 Lit	SAE90
	D-ROTARY CHAIN CASE OIL	500 ML	SAE90
	E-FUEL FILTER		
<b>CLEAN</b>	A-AIR CLEANER		
	B-FUEL FILTER BOWL		
	C-PRIMARY FUEL FILTER IN FUEL TANK		
	D-RADIATOR GRILL		
	E-DIESEL TANK		
<b>LUBRICATION</b>	A-SHIFTER LEVER		
	B-SIDE CLUTCH CABLES		
	C-THROTTLE CABLE		
	D-DECOMPRESSION LEVER		
	E-TAIL WHEEL CAP, THRUST BEARING		
	ROTARY SHAFT BEARING COVER		
<b>CHECK</b>	A-THROTTLE CABLE		
	B-TAPPET CLEARANCE	IN. 0.25 MM	EX 0.40 MM (VWH/072)
		IN. 0.40 MM	EX 0.45 MM (130DI)
	C-FAN BELT	1/2 INCH	
	D-SIDE CLUTCH	FREE PLAY - 2 TO 3 MM	
	E- MAIN CLUTCH	FREE PLAY 1.2 INCH	
	F- BRAKE		
	G-V-BELT TENSION	1 INCH	
	H-STAND		
	I -FUEL INJECTION TIMING		
	J-NOZZLE PRESSURE		
	K-DECOMPRESSION LEVER		
	L-ROTARY CHAIN TENSION		
<b>CHECK &amp; TIGHT</b>	A- ENGINE MOUNTING BOLTS		
	B-ENGINE FRAME BOLTS		
	C-CYLINDER HEAD BOLTS	11 to 12 KgM	
	D-ROTARY TYNE BOLTS & NUTS		
	E-ROTARY CONNECTING CASE BOLTS		
	F- WHEEL NUTS		
	G-AXLE BOLTS		
	H-ADJUST ROTARY CHAIN TENSION		
	I -ALL EXTERNAL BOLTS, NUTS & SCREW		

The above service are carried out to my satisfaction.

**CUSTOMER SIGNATURE**

**DEALER SIGNATURE**  
DEALER SEAL;

**DEALER COPY**

# SHRACHI VIRAT 13HP POWER TILLER

## 3RD SERVICE COUPON (360 DAYS or 500 Hrs.)

LOG BOOK NO :	JOB CARD NO :	
INVOICE NO :	RSO/CA INVOICE NO :	
ENGINE NO :	CHASSIS NO :	
DATE OF SALE :	DATE OF SERVICE :	HOURS RUN :

OWNER NAME & ADDRESS	CONTACT NO :
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<b>REPLACE</b>	A-ENGINE OIL	3 Lit	SAE40/20w40
	B- AIR CLEANER BOWL OIL	200 ML	SAE40/20w40
	C TRANSMISSION OIL	5.5 Lit	SAE90
	D-ROTARY CHAIN CASE OIL	500 ML	SAE90
	E-FUEL FILTER		
<b>CLEAN</b>	A-AIR CLEANER		
	B-FUEL FILTER BOWL		
	C-PRIMARY FUEL FILTER IN FUEL TANK		
	D-RADIATOR GRILL		
	E-DIESEL TANK		
<b>LUBRICATION</b>	A-SHIFTER LEVER		
	B-SIDE CLUTCH CABLES		
	C-THROTTLE CABLE		
	D-DECOMPRESSION LEVER		
	E-TAIL WHEEL CAP, THRUST BEARING		
	ROTARY SHAFT BEARING COVER		
<b>CHECK</b>	A-THROTTLE CABLE		
	B-TAPPET CLEARANCE	IN. 0.25 MM	EX 0.40 MM (VWH/072)
		IN. 0.40 MM	EX 0.45 MM (130DI)
	C-FAN BELT	1/2 INCH	
	D-SIDE CLUTCH	FREE PLAY - 2 TO 3 MM	
	E- MAIN CLUTCH	FREE PLAY 1.2 INCH	
	F- BRAKE		
	G-V-BELT TENSION	1 INCH	
	H-STAND		
	I -FUEL INJECTION TIMING		
	J-NOZZLE PRESSURE		
	K-DECOMPRESSION LEVER		
	L-ROTARY CHAIN TENSION		
<b>CHECK &amp; TIGHT</b>	A- ENGINE MOUNTING BOLTS		
	B-ENGINE FRAME BOLTS		
	C-CYLINDER HEAD BOLTS	11 to 12 KgM	
	D-ROTARY TYNE BOLTS & NUTS		
	E-ROTARY CONNECTING CASE BOLTS		
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## SHRACHI VIRAT 13HP POWER TILLER

### 3RD SERVICE COUPON (360 DAYS or 500 Hrs.)

**JOB CARD NO :**

**RSO/CA INVOICE NO :**

**CHASSIS NO :**

**HOURS RUN :**

**CONTACT NO :**

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	C TRANSMISSION OIL	5.5 Lit	SAE90	
	D-ROTARY CHAIN CASE OIL	500 ML	SAE90	
	E-FUEL FILTER			
CLEAN	A-AIR CLEANER			
	B-FUEL FILTER BOWL			
	C-PRIMARY FUEL FILTER IN FUEL TANK			
	D-RADIATOR GRILL			
	E-DIESEL TANK			
LUBRICATION	A-SHIFTER LEVER			
	B-SIDE CLUTCH CABLES			
	C-THROTTLE CABLE			
	D-DECOMPRESSION LEVER			
	E-TAIL WHEEL CAP, THRUST BEARING ROTARY SHAFT BEARING COVER			
CHECK	A-THROTTLE CABLE			
	B-TAPPET CLEARANCE	IN. 0.25 MM	EX 0.40 MM (VWH/072)	
		IN. 0.40 MM	EX 0.45 MM (130DI)	
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	E- MAIN CLUTCH	FREE PLAY 1.2 INCH		
	F- BRAKE			
	G-V-BELT TENSION	1 INCH		
	H-STAND			
	I -FUEL INJECTION TIMING			
	J-NOZZLE PRESSURE			
	K-DECOMPRESSION LEVER			
	L-ROTARY CHAIN TENSION			
	CHECK & TIGHT	A- ENGINE MOUNTING BOLTS		
		B-ENGINE FRAME BOLTS		
C-CYLINDER HEAD BOLTS		11 to 12 KgM		
D-ROTARY TYNE BOLTS & NUTS				
E-ROTARY CONNECTING CASE BOLTS				
F- WHEEL NUTS				
G-AXLE BOLTS				
H-ADJUST ROTARY CHAIN TENSION				
I -ALL EXTERNAL BOLTS, NUTS & SCREW				

The above service are carried out to my satisfaction.

DEALER SEAL:

**COMPANY COPY**

# SHRACHI VIRAT 13HP POWER TILLER

## 3RD SERVICE COUPON (360 DAYS or 500 Hrs.)

LOG BOOK NO :                                      JOB CARD NO :  
 INVOICE NO :                                      RSO/CA INVOICE NO :  
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	D-RADIATOR GRILL	
	E-DIESEL TANK	
<b>LUBRICATION</b>	A-SHIFTER LEVER	
	B-SIDE CLUTCH CABLES	
	C-THROTTLE CABLE	
	D-DECOMPRESSION LEVER	
	E-TAIL WHEEL CAP, THRUST BEARING	
<b>CHECK</b>	ROTARY SHAFT BEARING COVER	
	A-THROTTLE CABLE	
	B-TAPPET CLEARANCE	IN. 0.25 MM    EX 0.40 MM (VWH/072)
		IN. 0.40 MM    EX 0.45 MM (130DI)
	C-FAN BELT	1/2 INCH
	D-SIDE CLUTCH	FREE PLAY - 2 TO 3 MM
	E- MAIN CLUTCH	FREE PLAY 1.2 INCH
	F- BRAKE	
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	G-AXLE BOLTS	
	H-ADJUST ROTARY CHAIN TENSION	
	I -ALL EXTERNAL BOLTS, NUTS & SCREW	

The above service are carried out to my satisfaction.

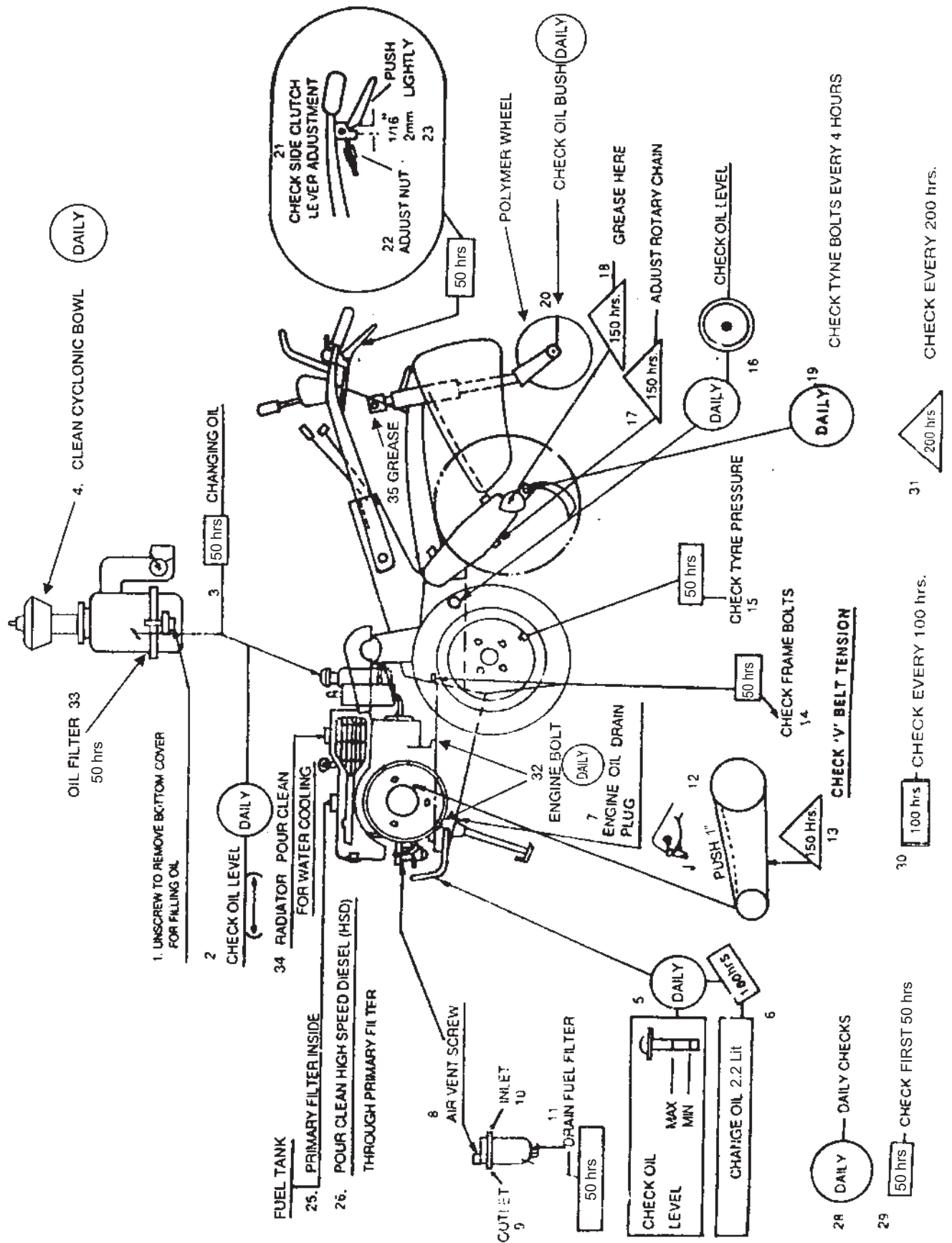
**CUSTOMER SIGNATURE**

**DEALER SIGNATURE**  
DEALER SEAL;

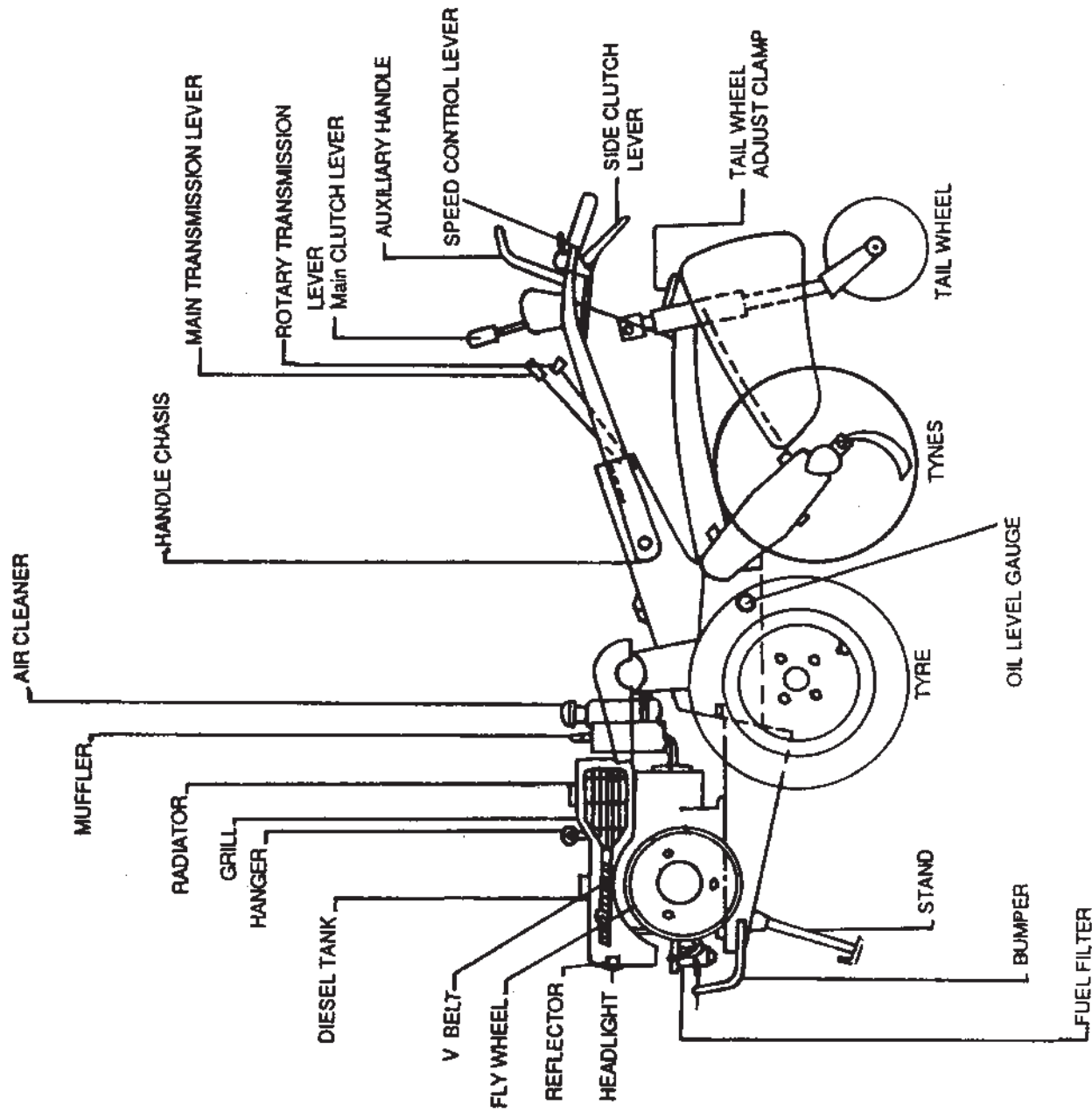
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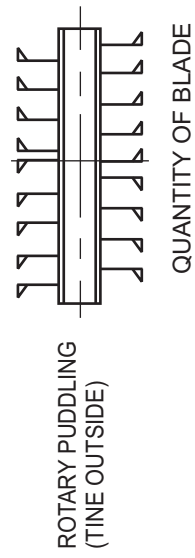
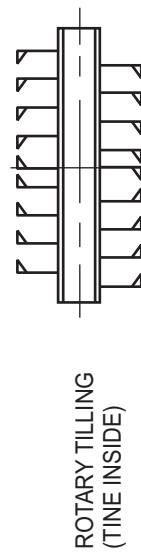
# MAINTENANCE OF SHRACHI VIRAT 13HP POWER TILLER WATER COOLED DIESEL ENGINE



# PARTS OF SHRACHI VIRAT 13HP POWER TILLER WATER COOLED DIESEL ENGINE



## BLADE MOUNTING METHOD



## **INSTRUCTIONS TO DEALER :**

1. Before using please study this book thoroughly.
2. Explain briefly to your customer/Mechanic regarding the maintenance of tiller as per service log book, before delivering the Tiller.
3. If the book is lost by the Dealer/Mechanic/customer. BTL EPC LTD. is not responsible for any service guarantee/replacement of items under Warranty.
4. Advise your mechanic to brief the maintenance of this service log book (Service log sheet) at the customer's place.
5. PDI should be done on receipt of machine as per Check sheet in this book.
6. Before delivering the tiller fill up all the columns and obtain the customer's signature in the sale intimation card & training certificate. After your Signature with seal, please retain one copy with you leaving one copy for customer record.
7. Installation should be done in customer place as per check sheet already circulated to you. After training photo along with customer, your mechanic and machine should be uploaded into sales force.
8. After completion of each free service get customer signature on Service coupon (BTL EPC LTD. copy) & job card (generated in sales force) – both should be filled in dealership for verification

**Note – As per company's policy of continuous improvements, specification given in the booklet are subject to change or withdrawal at any time without notice.**

# **NOTES**



# **SHRACHI VIRAT 13HP OPERATION MANUAL**

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