

# *The* **Handy**



## **OPERATOR'S MANUAL AND PARTS LIST PETROL CHAINSAW - THPCS16**

Sales & Helpline 01793 333220

[www.thehandy.co.uk](http://www.thehandy.co.uk)

**Before use please read & understand this manual, paying particular attention to the safety instructions.**

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# SAFETY INSTRUCTIONS

Read and understand the owner's manual and labels affixed to the chainsaw. Learn its application and limitations as well as the specific potential hazards. Retain these instructions for reference.

- Use safety footwear, protective clothing and a helmet with eye and ear protection.
- Do **not** operate the chainsaw if you are tired, ill or under the influence of alcohol or drugs.
- Do **not** smoke when using the chainsaw and ensure caution when handling fuel. We recommend you fuel the saw at least 3m away from where you wish to work in case any spilt fuel ignites when starting the engine.
- Ensure that bystanders, children and pets keep well away when starting or cutting - at least 10m.
- Inspect the chainsaw, and in particular the bar and chain, before use for any worn or damaged parts. Do not use until the parts are repaired or replaced.
- Before starting the engine make sure the chain is not in contact with anything and have a clear work area and secure footing.
- Hold the chainsaw firmly with both hands when using and keep all parts of your body away from the machine. Put the scabbard on for transportation.
- Always carry the chainsaw with the engine stopped, the bar and chain to the rear and the muffler away from your body.
- Beware of small branches and saplings whipping back towards you as you cut. When cutting a limb which is under tension, be alert to the possibility of the limb springing back when the tension is released.
- Do **not** cut in high wind, bad weather or poor visibility. Check the tree for dead branches which could fall during operation.
- **NEVER** operate the chainsaw in a tree unless you are specially trained to do so.

**Always shut off the engine before setting it down.**

## A word about KICKBACK -

Kickback can occur when the nose or tip of the guide bar touches an object, or when the wood closes in and pinches the saw chain.

Do not rely solely on the safety devices built into your chainsaw.

- Keep a good grip on the saw with both hands - this will help you maintain control should kickback occur.
- Ensure that the area in which you are cutting is clear and free from obstructions so that the tip does not make contact with another log or obstruction.
- Always cut at high engine speeds and do not overreach or cut above shoulder height.
- Follow the manufacturer's guidelines for sharpening and maintaining the chain and only use replacement bars and chains specified.



## WARNING SYMBOLS

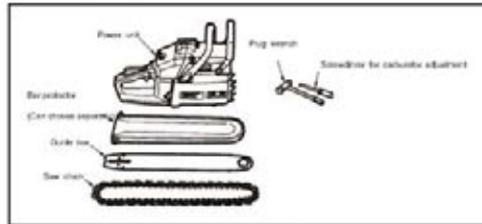
	<p>Oil and Fuel Mixture</p> <p>Position - Fuel Cap</p>
	<p>Chain Oil</p> <p>Position - Oil Cap</p>
	<p>On/Off Switch. Setting to "O" position stops the engine immediately.</p> <p>Position - Rear left of the unit.</p>
	<p>Starting the Engine. Follow instructions in handbook (OPERATION) for cold and warm starting</p> <p>Position - Upper right of air cleaner cover</p>
<p>H L T</p>	<p>High Speed Adjustment Screw Slow Speed Adjustment Screw Idle Adjustment Screw</p> <p>Position -Left Side of Rear Handle</p>
	<p>Direction of Release of Chain Brake. White Arrow = Released Black Arrow = Activated.</p> <p>Position - Front of Chain Cover</p>

## SPECIFICATIONS

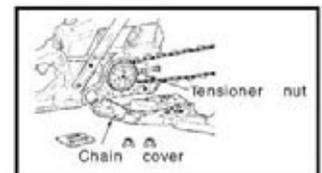
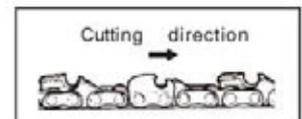
Displacement (cm <sup>3</sup> )	37.2
Fuel Mixture	25:1
Fuel Tank Capacity(ml)	310
Chain Oil	Specialist Chain Oil
Oil Tank Capacity (ml)	210
Carburettor	Diaphragm (Walbro WT)
Ignition System	Electronic
Spark Plug	M7
Oil Feeding System	Automatic Pump
Sprocket (Teeth & Pitch)	6T x 3/8"
Dimensions (LxWxH)	370x235x270
Dry Weight (Power Unit)	4.15kg
Guide Bar	Sprocket Nose - 14"/35cm
Chain	Oregon 91VG
Pitch	3/8"/9.53mm
Gauge	0.05"/1.27mm

# ASSEMBLY AND FUEL

Your chainsaw package contains: Power Unit and separate Side Cover, Guide Bar, Saw Chain, Scabbard, Mixing Bottle, Plug Wrench and Screwdriver for carburettor adjustment.



- **Wearing gloves** locate the guide bar onto the chainsaw making sure that the hole on either side of the slot locates over the adjuster pin.
- Fit the chain over the sprocket and into the groove on the guide bar, paying attention to the correct direction of the chain.
- With the side cover in your hand pull the chain brake lever back to release the chain brake.
- Fit the chain cover to the power unit and fasten the nuts to finger tightness.
- Turn the tensioner screw clockwise until the chain fits snugly on the underside of the bar.
- Tighten the nuts securely with the bar tip held up. **Using gloves**, check the chain for smooth rotation and correct tension while moving by hand. If necessary re-adjust loosening the side cover nuts.
- Tighten the tensioner screw and secure nuts as above.

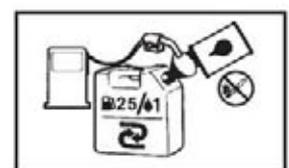


**Note:** A new chain will stretch during its first use. Turn off the engine then check and readjust the chain frequently.

## FUEL

**Petrol is very flammable. Avoid smoking or fuelling the chainsaw anywhere near a flame or sparks. Allow the engine to cool before re-fuelling. Fuel the engine at least 3m away from your work area.**

- Use a ratio of 25:1 unleaded petrol to 2-stroke mineral oil. For semi-synthetic or synthetic use the manufacturer's ratio. Mix in an appropriate mixing bottle.
- Unscrew the fuel cap, and fuel the machine to 80% capacity. Fasten the fuel cap tightly and wipe up any spillage.
- Ensure that any stored petrol/oil mixture ( 2-stroke) is clearly marked in separate can and only stored for 4-6 weeks. If the chainsaw is not going to be used for a long period, drain the mixture from the fuel tank, start the engine and drain the carburettor of any remaining fuel.
- Dispose of any unwanted 2-stroke mixture at an authorised recycling point.

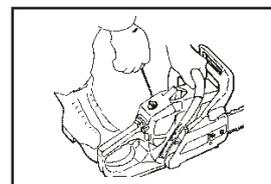
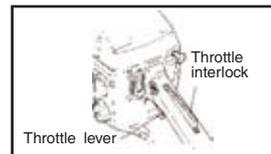
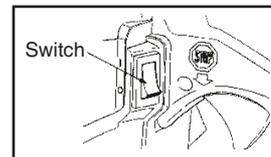


## CHAIN OIL

Use SAE 10W-30 motor oil all year round or SAE30-40 in summer and SAE20 in winter.

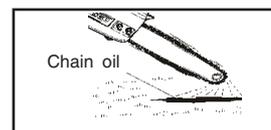
# OPERATION

- Fill fuel and oil tanks respectively - tighten caps securely.
- Set the switch to "I" position.
- Gently depress the primer pump bulb ( to right of rear handle) 7-10 times until fuel comes into the bulb.
- Pull out the choke knob to the second stage position. The choke will close and the throttle lever will then be set in the starting position. (When restarting a warm engine, set the choke knob to the first stage position).
- Once the choke knob has been pulled out, it will not return to the operating position even if you press down on it with your finger. When you wish to return the choke knob to the operating position, squeeze the throttle lever instead.
- Whilst holding the saw securely on the ground, with the tip clear of the ground, pull the starter rope vigorously.
- When the engine has ignited/fired, push in the choke knob to the first stage position, then pull the starter again to start the engine.
- Allow the engine to warm up with the throttle lever squeezed slightly.



To check the oil supply:

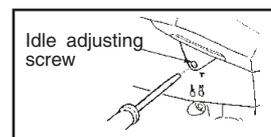
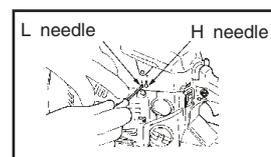
-run the chainsaw at medium speed and see if chain oil is sprayed off as shown in image.



To adjust the carburettor:

- the carburettor has been factory adjusted but it may require fine tuning depending on operating conditions. Before adjusting ensure that the air/fuel filters are clean and the fuel properly mixed.

- Stop the engine and screw in both the H and L needles until they stop. Then unscrew them an initial number of turns as shown below:
  - H needle -  $\frac{3}{4} \pm \frac{3}{8}$
  - L needle -  $1\frac{1}{2} \pm \frac{1}{4}$
- Start the engine and allow it to warm up at half-throttle.
- Turn the L needle slowly clockwise to find a position where the idling speed is maximum, then set the needle back a quarter ( $\frac{1}{4}$ ) turn counterclockwise.
- Turn the idling adjusting screw T (sits above H & L) counterclockwise so that the saw chain does not turn. If the idling speed is too slow, turn the screw clockwise.
- Make a test cut and adjust the H needle for best cutting power, not for maximum speed.



# OPERATION, cont'd

## To stop the engine:

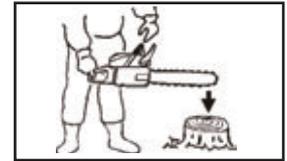
Release the throttle lever to allow the engine to idle for a few minutes, then set the switch to "O" position.

## CHAIN BRAKE

This machine is equipped with an automatic brake to stop the saw chain rotation upon kickback. The brake is automatically operated by inertia in certain kick-back situations, which acts on the weight fitted inside the front guard.

The brake can also be operated manually with the front guard turned down to the guide bar.

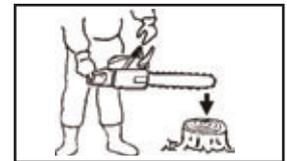
To release the brake, pull up the front guard toward the front handle until a "click" sound is heard.



To confirm brake operation:

- turn off the engine and, holding the saw horizontally, release your hand from the front handle, hit the tip of the guide bar against a piece of wood or stump, and confirm automatic brake operation.

When the brake engages during operation, immediately release the throttle lever to stop the engine as continuing to run at high speed may cause the clutch to overheat.

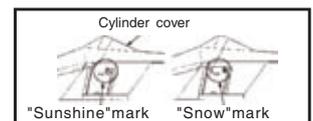


## CARBURETTOR ANTI-FREEZE MECHANISM

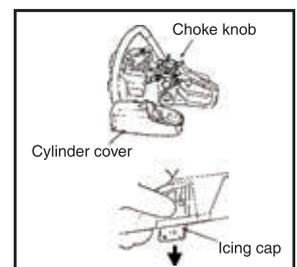
Operating chainsaws in temperatures of 0-5°C at times of high humidity may result in ice forming within the carburettor, and this in turn may cause the output power of the engine to be reduced or for the engine to fail.

This chainsaw has been designed with a ventilation hatch on the right side of the surface of the cylinder cover to allow warm air to be supplied to the engine and prevent icing up.

Under normal circumstances the saw should be used in the normal operating mode (the mode in which it is set by the factory). However, if the possibility of icing exists, then the unit should be set in the anti-freeze mode before use.



- Ensure the engine is turned off and remove the cover to the air filter, remove the air filter and then remove the choke knob from the cylinder cover.
- Loosen the screws holding the cylinder cover in place ( 3 on inside, 1 on outside) and remove cylinder cover.
- Press your finger down on the icing cap located on the right hand side of the cylinder cover to remove the icing cap.
- Adjust the icing cap so the the "snow" mark faces upward and return it to its original position in the cylinder cover.
- Fix the cylinder cover back, screw, and the replace choke knob, air filter and air filter cover.



# OPERATING TIPS

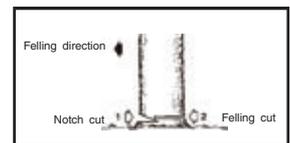
**Always follow the safety regulations. The chainsaw must only be used for cutting wood. Do not use to cut other material. Vibrations and kickback vary with different materials and the requirements of the safety regulations would not be respected. Do not use the chainsaw as a lever for lifting, moving or splitting objects, Do not lock it over fixed stands. It is forbidden to hitch tools or applications to the PTO other than those specified by the manufacturer.**

It is not necessary to force the saw into the cut. Apply only light pressure whilst running the engine at full throttle.

- When the saw chain is caught in the cut, do not attempt to pull it out by force, but use a wedge or a lever to open up the cut.
- The saw is equipped with a chain brake that will stop the chain in the event of kickback. You must check the chain brake operation before each use by running the saw at full throttle for 2 seconds then pushing the front handle forward. The chain should stop immediately. If the chain is slow to stop or does not stop, replace the brake band and clutch drum before using.
- Removal of safety devices, inadequate maintenance or incorrect replacement of the bar or chain may increase the risk of injury due to kickback.

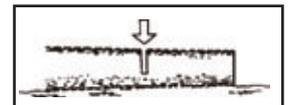
## To fell a tree:

- Decide on the felling direction, considering the wind, lean of the tree, location of heavy branches and ease of completing the task after felling.
- Clear the area around the tree and make sure you have a good foothold and retreat path.
- Make a notch cut one-third of the way into the tree on the felling side.
- Make a felling cut from the opposite side at a slightly higher level than the notch.



## Limbing:

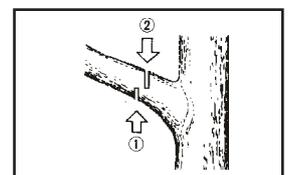
- Be alert to the rolling over of a cut log, especially when working on a slope. Stand on the uphill side of the log.
- If the log is lying on the ground, cut down halfway through then turn the log over and cut from the other side.
- If the log is free of the ground, it is sometimes easier to cut from the bottom up and finish the cut from the top down.



Use the same principle when cutting limbs from a fallen tree that are still attached or from a standing tree.

**Watch out for the springing back of a cut limb. Do not overreach or cut above shoulder height. Always use both your hands to hold the saw.**

**Do not use this chainsaw from a ladder or any other insecure support.**



# MAINTENANCE

**Before clean, inspecting or repairing the chainsaw, ensure that the engine has stopped and is cool. Disconnect the spark plug to prevent accidental starting.**

## After each use:

**Air Filter** - Dust on the cleaner surface can be removed by tapping the corner of the cleaner on a hard surface, To clean dirt in the meshes, split the cleaner in half and brush in petrol. If using compressed air, blow from the inside. To reassemble the cleaner halves press the rim until it clicks.

**Oiling Port** - Dismount the guide bar and check the oiling port for clogging.

**Guide Bar** - Whilst the guide bar is off, remove sawdust from the bar groove and the oiling port. Grease the nose sprocket from the feeding port on the tip of the bar.

**Other** - Check for fuel leakage, loose fastenings and damage to major parts. especially handle joints and guide bar mounting. If any defects are found have them repaired before using the saw again.

## Periodical Service Points:

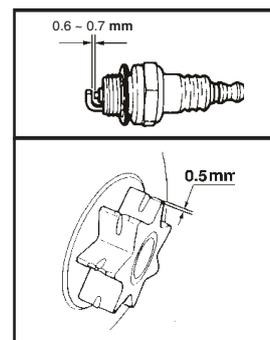
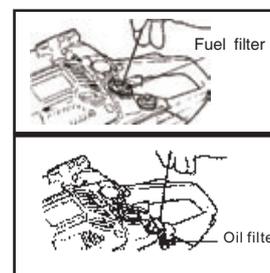
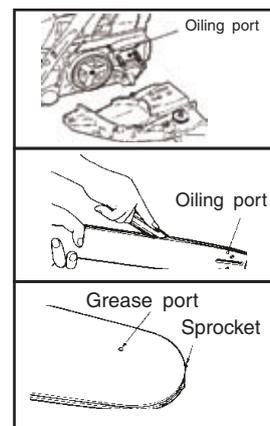
**Cylinder Fins** - Dust clogging between the cylinder fins will cause overheating. Check and clean the cylinder after removing the air cleaner and cylinder cover. Be careful not to allow dust or dirt to enter the air intake.

**Fuel Filter** - Using a wire hook take out the filter from the filler port. Use a pair of long-nose pliers to hold the suction pipe then, disassemble the filter and wash with petrol or replace if necessary.

**Oil Tank** - With a wire hook, take out the oil filter through the filler port clean with petrol. When putting back ensure that it comes to the front right corner. Clean off any dirt in the tank.

**Spark Plug** - Clean the electrodes with a wire brush and reset the gap to 0.65mm as necessary.

**Sprocket** - Check for cracks and excessive wear with the chain drive. If worn replace with anew one. Never fit a new chain on a worn sprocket, or a worn chain on a new sprocket.



# BAR AND CHAIN MAINTENANCE

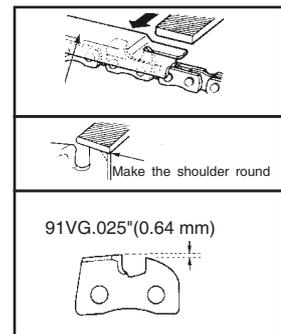
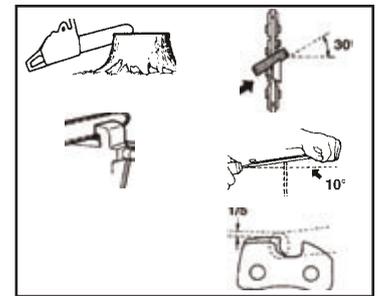
## Chain:-

### The chain needs sharpening when: -

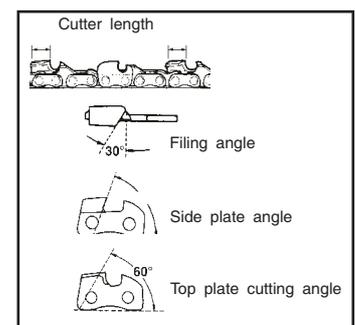
- you need to exert extra force for the saw to cut,
- the cut path does not go straight.
- vibration increases,
- Fuel consumption increases,
- sawdust becomes powder-like.

### Always wear safety gloves when touching the bar and chain.

- Check the chain for cracks and damaged rivets. Replace any damaged or worn parts, matching the new parts to the shape and size of the original.
- Ensure the chain is held securely and the engine stopped.
- Use a round file of the proper size for the chain - chain type 91VG, file size 5/32in (4mm).
- Place the file on the cutter and push forward. The file only sharpens on the forward stroke - lift the file off the cutter on the backstroke. Keep the file position as illustrated and avoid touching the tie straps and links with the file.
- After each link has been filed, check the depth gauge and file it to the proper level.
- Depth gauge standard - 91VG.025" (0.64mm)

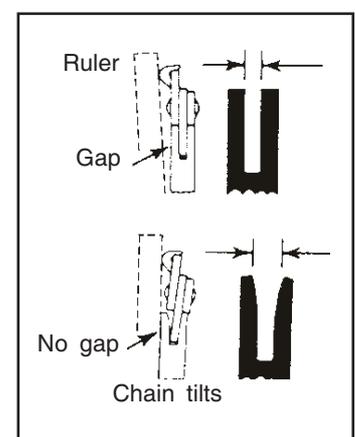


- Be sure to round off the front edge of the depth gauge to reduce the chance of kickback or breakage. Make sure every link has the same length and edge angles as shown. Check using an appropriate gauge checker.



## Guide Bar:-

- Reverse the bar occasionally to ensure even wear.
- The guide bar should always be square. Check for wear by applying a ruler to the outside of the a cutting link. There should be a gap between them. If not, the guide bar is worn and should be replaced.

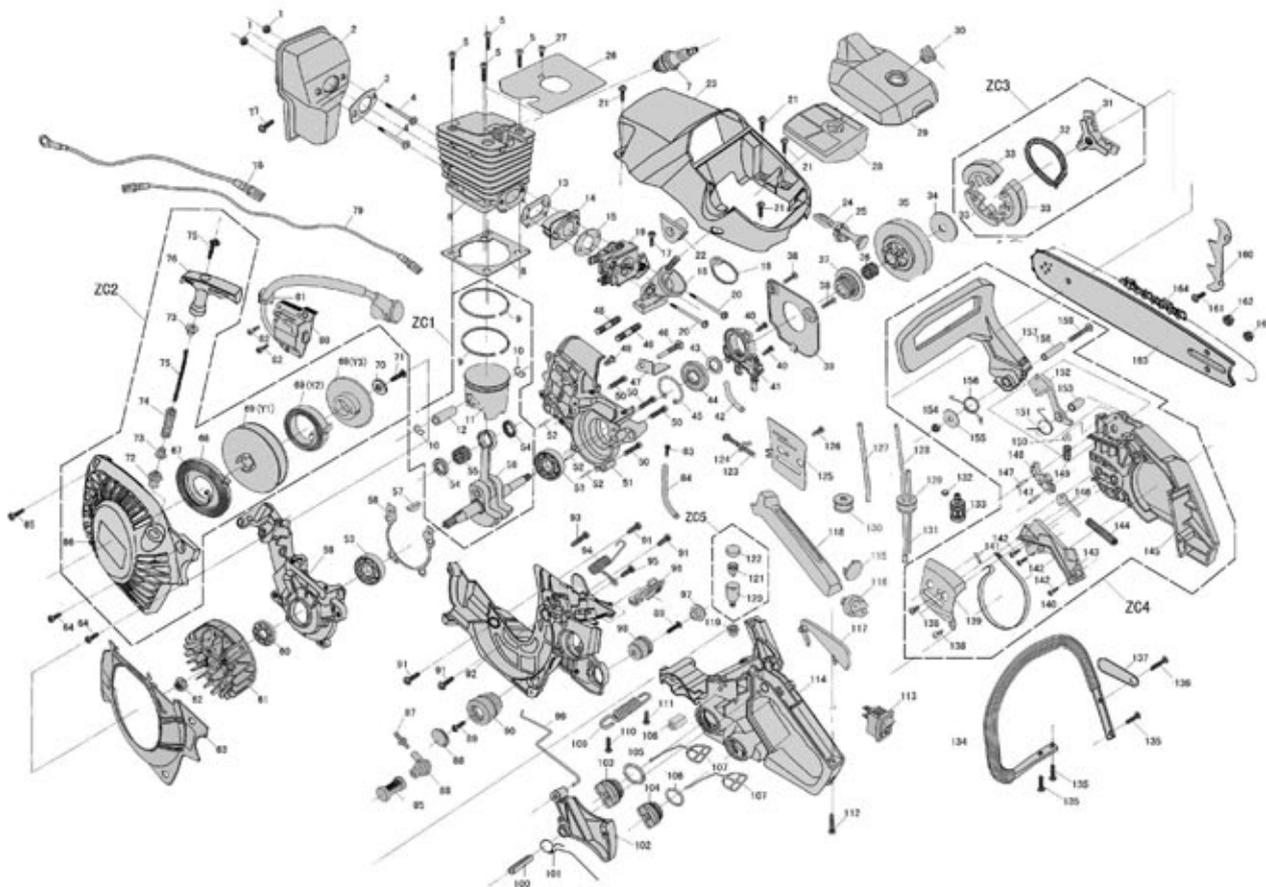


# TROUBLE SHOOTING

<b>Starting Failure</b> (Make sure Icing Prevention System is not working)	Check fuel for water or substandard mixture. Check for engine flooding.  Check spark ignition.	Replace with correct fuel.  Remove and dry spark plug. Pull starter again with no choke. Replace with a new plug.
<b>Lack of Power/          Poor Acceleration/          Rough Idling</b>	Check fuel for water or substandard mixture. Check air filter and fuel filter for clogging. Check carburettor for inadequate adjustment.	Replace with correct fuel.  Clean.  Readjust speed needles.
<b>Oil Does Not Come Out</b>	Check oil for substandard quality. Check oil passage and ports for clogging.	Replace. Clean.

**If the chainsaw still does work correctly, please consult an authorised service dealer.**

# PARTS DIAGRAM AND LIST



No	Part No	Description	Qty	No	Part No	Description	Qty
1	TH159-1	Nut Muffler	2	2	TH159-2	Muffler Assy	1
3	TH159-3	Gasket	1	4	TH159-4	Stud	2
5	TH159-5	Screw	4	6	TH159-6	Cylinder	1
7	TH159-7	Spark Plug	1	8	TH159-8	Gasket	1
13	TH159-13	Gasket	1	14	TH159-14	Boot Intake	1
15	TH159-15	Gasket	1	16	TH159-16	Carburettor	1
17	TH159-17	Screw	1	18	TH159-18	Grommet, inner	1
19	TH159-19	Washer Air Filter	1	20	TH159-20	Screw	2
21	TH159-21	Screw	4	22	TH159-22	Support,Speed Adjust	1
23	TH159-23	Top Cover	1	24	TH159-24	Choke Knob	1
25	TH159-25	Support,Choke Knob	1	28	TH159-28	Air Filter	1
29	TH159-29	Air Filter Cover	1	30	TH159-30	Air Filter Knob	1
34	TH159-34	Washer Clutch	1	35	TH159-35	Sprocket	1
36	TH159-36	Bearing Needle	1	37	TH159-37	Gear Worm	1
38	TH159-38	Screw	2	39	TH159-39	Cover,Oil Pump	1
40	TH159-40	Screw	2	41	TH159-41	Oil Pump	1
42	TH159-42	Hose Oil Outlet	1	43	TH159-43	Washer Oil Pump	1
44	TH159-44	Large Oil Seal	1	45	TH159-45	Ring	1
46	TH159-46	Screw	1	47	TH159-47	Chain Catcher	1
48	TH159-48	Stud	2	49	TH159-49	Fuel Injection Nozzle	1
50	TH159-50	Screw,crankcase	4	51	TH159-51	Right Crankcase	1

# PARTS LIST

No	Part No	Description	Qty	No	Part No	Description	Qty
52	TH159-52	Pin	3	53	TH159-53	Bearing	2
57	TH159-57	Key,flywheel	1	58	TH159-58	Gasket	1
59	TH159-59	Left Crankcase	1	60	TH159-60	Small Oil Seal	1
61	TH159-61	Flywheel	1	62	TH159-62	Nut Flywheel	1
63	TH159-63	Baffle,fan	1	77	TH159-77	Screw	1
78	TH159-78	Wire	1	79	TH159-79	Wire-stop	1
80	TH159-80	Electronic Ignition	1	81	TH159-81	Support, Electronic Ignition Wire	1
82	TH159-82	Screw	2	83	TH159-83	Screw	1
84	TH159-84	Vent	1	85	TH159-85	Oil Filter Assy	1
86	TH159-86	Cover	1	87	TH159-87	Tube Union	1
88	TH159-88	Plug Pad (small)	1	89	TH159-89	Screw	2
90	TH159-90	Pad, rubber cushioning (long)	1	91	TH159-91	Screw	4
92	TH159-92	Support	1	93	TH159-93	Screw	1
94	TH159-94	Spring Handle	1	95	TH159-95	Screw	1
96	TH159-96	Support-rod	1	97	TH159-97	Plug-pad (large)	1
98	TH159-98	Pad, rubber cushioning (short)	1	99	TH159-99	Rod,throttle	1
100	TH159-100	Pin,trigger	1	101	TH159-101	Spring,trigger	1
102	TH159-102	Trigger	1	103	TH159-103	Fuel Cap	1
104	TH159-104	Oil Cap	1	105	TH159-105	Washer, fuel cap	1
106	TH159-106	Washer, oil cap	1	107	TH159-107	Retainer	2
108	TH159-108	Pad, rubber	1	109	TH159-109	Spring Support	1
110	TH159-110	Screw	1	111	TH159-111	Screw	1
112	TH159-112	Screw	1	113	TH159-113	Switch, stop	1
114	TH159-114	Fuel Tank	1	115	TH159-115	Ornament Cover	1
116	TH159-116	Primer Bulb	1	117	TH159-117	Lever, trigger	1
118	TH159-118	Cover, Rear Handle	1	119	TH159-119	Support, balance	1
123	TH159-123	Screw	1	124	TH159-124	Spigot	1
125	TH159-125	Oil Outlet Plate	1	126	TH159-126	Screw	1
127	TH159-127	Pipe	1	128	TH159-128	Fuel Pipe	1
129	TH159-129	Grommet	1	130	TH159-130	Support-hose Fuel	1
131	TH159-131	Oil Pipe Bulb	1	132	TH159-131	Ring-hose Fuel	1
133	TH159-133	Fuel Filter Assy	1	134	TH159-134	Handle	1
135	TH159-135	Handle Screw	3	136	TH159-136	Handle Screw	1
137	TH159-137	Plate-handle Spring	1	160	TH159-160	Spike	1
161	TH159-161	Spike Screw	1	162	TH159-162	Bar Flange Screw	2
163	TH159-163	Bar	1	164	TH159-164	Chain Assy	1
165	TH159-165	Crankshaft Assy	1	166	TH159-166	Starter Assy	1
167	TH159-167	Clutch Assy	1	168	TH159-168	Brake System Assy	1
169	TH159-169	Balance Assy	1				

## EC Declaration of Conformity

### Declaration of conformity

Pursuant to the regulations of the following EC Directives:

- Electromagnetic Compatibility Directive 2004/108/EC
- Machinery Directive 2006/42/EC
- Noise Directive 2000/14/EC

**Handy Distribution Ltd** hereby declares that the product:

Machine type: **Petrol Chain Saw**

Machine model: **THPCS16**

Engine displacement: **37.2cm<sup>3</sup>**

Power: **1.2kW**

Cutting length: **380mm**

Max speed: **10,000/min**

Mass in kg: **6.0kg**

Conforms to the main safety requirements of the EC Directives listed above.

This conformity is based on the following standards and normative documents:

EN ISO 11681-1:2008

EK9 2007-18:2007-05-31

EN ISO14982:1998

The conformity assessment procedure followed was in accordance with Annex III of the Directive 2000/14/EC.

Calculated Sound Power Level: 106.6 dB (A) K=3.4 dB (A)

Guaranteed Sound Power Level: 113 dB (A)

The responsible person, based within the EC, is identified below

Name: Mr. Simon Belcher

Title: Managing Director

Company: Handy Distribution Ltd

Address: Holey Drive, Stratton St Margaret, Swindon, Wiltshire, SN3 4NS

Signature :

Date: 15th Aug 2010





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