

# Parts and Operators Manual



## STM Super Flail 30" Electric Clutch Model

Revised Edition - January 2010

**Simon Tullett Machinery Company Limited**

Tel: 01789 488450 • Fax: 01789 488032 • Email: [sales@st-mach.com](mailto:sales@st-mach.com) • [www.st-mach.com](http://www.st-mach.com)

## STM Super Flail 30"

### **BELT ADJUSTMENTS**

To adjust either the engine-driven belt or gearbox drive belt, remove the guard (4)

#### Engine-driven belt

Electric Clutch models: tighten nut to keep washer level with face of endplate [see figure 2]

**Do not over-tension!**

#### Gearbox belt

Slacken bearing lockbolts (58) and corresponding lockbolts on bottom bearing.

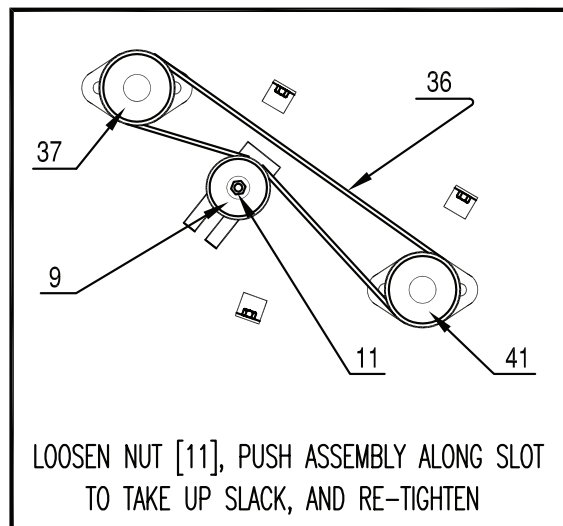
Adjust twin pulley by means of screw (97). Do not over-tighten!

Tighten all bearing bolts and locknuts and re-fit guard.

#### Twin rotor drive belts

Remove guard (7), slacken locknut (11) in centre of flat pulley (9), and pull up by hand. Tighten locknut. (See illustration below). **Do not over-tension belts!**

fig 1



### **BELT REPLACEMENT**

#### Engine-driven belt

##### **Electric Clutch models:**

Remove guard (4): Undo and remove nut, washer and spring shown in illustration below. This slackens off the electric clutch pre-tension mechanism.

Take out the four countersunk bolts (60) and bearing bolts (58).

Remove bearing plate (57), slacken bottom bearing bolts (58) and slacken back twin pulley (56).

Replace belt and re-fit the bottom and top bearing bolts in reverse order.

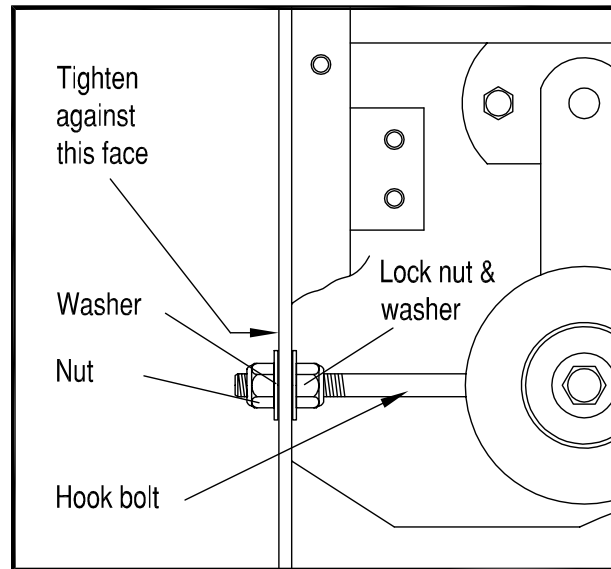
Re-assemble belt tensioner: spring, then washer and finally tighten the nut until the washer is level with the face of the endplate. [See illustration]

This will give the required tension for the electric clutch.

## STM Super Flail 30"

### **BELT REPLACEMENT** *Electric Clutch models: [continued]*

fig 2



*Illustration for pre-tensioning pulley on Electric Clutch models*

### **BELT REPLACEMENT** *[Engine driven belt]....continued*

#### **Non-Electric Clutch models:**

*Remove guard (4): take out the four countersunk bolts (60) and bearing bolts (58).*

*Remove bearing plate (57), slacken bottom bearing bolts (58) and slacken back twin pulley (56).*

*Replace belt and re-fit in reverse order.*

*Check belt tension is correct - DO NOT OVER-TIGHTEN!*

#### **Rotor belts**

*Remove guard (7), slacken adjuster pulley (9) to bottom of slide and remove belts.*

*ALWAYS REPLACE THESE BELTS IN PAIRS.*

*Adjust belt tension as above and refit guard.*

### **LUBRICATION**

#### **Gearbox**

*Remove level plug and fill through plug hole with gear oil EP80/140*

#### **Bearings**

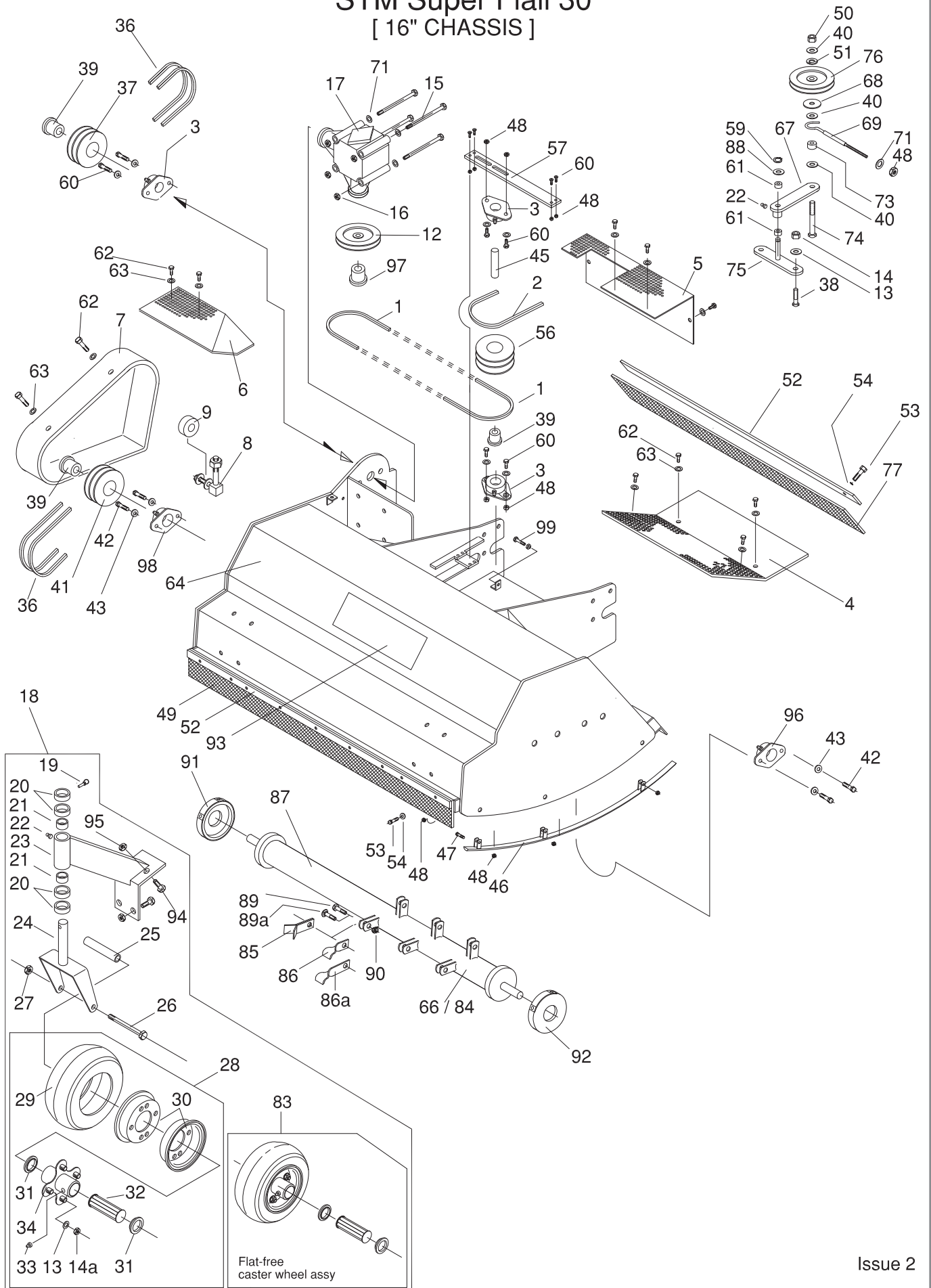
*Nos 95 (2 off) and 3 (3 off) - give 2 or 3 shots with a hand-held grease gun every 500 hours.*

*DO NOT OVER-GREASE*

*Caster wheels: (swivel and axle nipples) - lubricate every 12-14 hours.*

# STM Super Flail 30

## [ 16" CHASSIS ]



### STM Super Flail 30"

| Drawing ref | Part No. | Description                       |
|-------------|----------|-----------------------------------|
| 1           | 10218    | Belt (Gearbox)                    |
| 2           | 10002    | Belt (Engine)                     |
| 3           | 10003    | Bearing LFTC25A                   |
| 4           | 10004    | Guard                             |
| 5           | 10226    | Guard                             |
| 6           | 10225    | Guard                             |
| 7           | 10007    | Guard                             |
| 8           | 10470    | Adjuster block                    |
| 9           | 10009    | Pulley                            |
| 10          |          |                                   |
| 11          |          |                                   |
| 12          | 10012    | Pulley                            |
| 13          | PL       | Spring washer - 8mm               |
| 14          | PL       | Hex nut - 8mm                     |
| 15          | PL       | Bolt                              |
| 16          | PL       | Nyloc nut                         |
| 17          | 10013    | Gearbox                           |
| 18          | 46079    | Caster assy complete (inc. 19-28) |
| 19          | 04066-01 | Quick pin                         |
| 20          | 43037-01 | 1/2" Spacer (Caster yoke)         |
| 21          | 48100-01 | Bronze bearing                    |
| 22          | 48114-04 | Grease nipple                     |
| 23          | 10014    | Support assembly (inc. 21 & 22)   |
| 24          | 45006    | Caster yoke                       |
| 25          | 43022    | Sleeve (Caster wheel bearing)     |
| 26          | 04001-37 | Bolt                              |
| 27          | 04021-07 | Hex locknut: 1/2" x 13            |
| 28          | 48307    | Wheel assy (inc. 13-14 & 29-34)   |
| 29          | 481774   | Tyre only (Caster wheel)          |
| 30          | 481772   | Rim only (Caster wheel)           |
| 31          | 481770   | Bearing retainer (Caster wheel)   |
| 32          | 481769   | Roller bearing (Caster wheel)     |
| 33          | 48114-03 | Grease nipple                     |
| 34          | 481768   | Hub assy - inc. Bolts             |
| 35          | 481773   | Inner tube only (Caster wheel)    |
| 36          | 10015    | SPZ Belts                         |
| 37          | 10016    | Pulley                            |
| 38          | PL       | Bolt: M8 x 30mm                   |
| 39          | 10117    | Taper hub lock                    |
| 40          | PL       | Washer: 10 x 21                   |

## STM Super Flail 30"

| Drawing ref | Part No. | Description                          |
|-------------|----------|--------------------------------------|
| 41          | 10019    | Pulley                               |
| 42          | PL       | Bolt                                 |
| 43          | PL       | Shakeproof washer                    |
| 44          |          |                                      |
| 45          | 10021    | Shaft                                |
| 46          | 10022    | Skid                                 |
| 47          | PL       | Bolt M8 x 30mm                       |
| 48          | PL       | Nut M8                               |
| 49          | 10223    | Rubber flap (front) 34" x 5"         |
| 50          | PL       | Hex nut: 3/8"                        |
| 51          | PL       | Spring washer 3/8"                   |
| 52          | 10222    | Flap retainer                        |
| 53          | PL       | Bolt: M8 x 20mm                      |
| 54          | PL       | Spring washer: 8mm                   |
| 55          |          |                                      |
| 56          | 10026    | Twin pulley                          |
| 57          | 10027    | Bearing plate                        |
| 58          | 10028    | Bolt                                 |
| 59          | 04050-02 | retainer ring                        |
| 60          | 10029    | Bolt                                 |
| 61          | 48100-05 | Bronze BRG                           |
| 62          | PL       | Bolt: M6 x 20mm                      |
| 63          | PL       | Spring washer: 6mm                   |
| 64          | 10219    | Flail head (cowling only)            |
| 65          | 10031    | Bolt                                 |
| 66          | 10220    | Flail shaft assembly: Twisted flails |
| 67          | 46081    | Idler arm                            |
| 68          | PL       | Washer: 3/8 x 2"                     |
| 69          | 44101    | Eye bolt                             |
| 70          | 48807    | Spring                               |
| 71          | PL       | Washer: 24 x 10 x 3                  |
| 72          |          |                                      |
| 73          | 43063    | Sleeve                               |
| 74          | PL       | Bolt: 3/8 x 3"                       |
| 75          | 10043    | Idler pivot                          |
| 76          | 10239    | Pulley assy inc. bearing & bush      |
| 77          | 10178    | Rear flap                            |
| 78          |          |                                      |
| 79          |          |                                      |
| 80          |          |                                      |

### STM Super Flail 30"

| Drawing ref | Part No. | Description                           |
|-------------|----------|---------------------------------------|
| 81          |          |                                       |
| 82          |          |                                       |
| 83          | 009275   | Flat free caster assy                 |
| 84          | 10221    | Flail shaft assy: back to back flails |
| 85          | 10036    | Single back to back flail (48)        |
| 86          | 10037    | Single twisted flail (24)             |
| 86a         | 10082    | Single twisted flail long             |
| 87          | 10038    | Shaft                                 |
| 88          | PL       | Flat washer                           |
| 89a         | 12615    | Coach bolt / nut                      |
| 89          | 10039    | Bolt (special)                        |
| 90          | 10040    | Nut (special)                         |
| 91          | 10041    | Grass guard                           |
| 92          | 10227    | Grass guard (slotted)                 |
| 93          | 10224    | STM decal                             |
| 94          | PL       | Bolt: 5/16 x 3/4"                     |
| 95          | PL       | Nut: 5/16"                            |
| 96          | 10044    | bearing (shaft)                       |
| 97          | 10045    | Taper hub lock                        |
| 98          | 10490    | Bearing (shaft)                       |
| 99          | PL       | Bolt                                  |
| 100         |          |                                       |

PL - Purchase Locally