

# Reese 3400 Drum Mower Operators Manual





**New Zealand** 

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Dear Valued Owner,

Congratulations and thank you. You have just made an excellent investment.

Your new Reese Mower has been designed and engineered to give years of dependable service. Every consideration has been taken to incorporate the latest technology, thus ensuring optimum performance is achieved, whilst retaining our company desire to produce user friendly, low maintenance solutions.

It has often been said "when all else fails-read the operators manual" and to ensure you get the best from your new Reese Mower it is very important that you thoroughly read through the entire contents of the manual. Please also pay attention to the maintenance recommendations, understand the hydraulic system and consider the design features and their specific functionality.

If your new mower is maintained to a high standard and used as per this operator's manual you should be rewarded with many years of quality service.

Your local dealer carries an extensive range of genuine Reese spare parts and consumables that also have been engineered to provide long service and life. It is important that only genuine parts are used on your mower. We give you our commitment that we will support this machine with spare parts backup for well beyond its designed life.

Thank you for making your investment in our expertise.

Yours Sincerely,

Ross Simpson

Director Reese Agri



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# A. SAFETY SECTION

# ! WARNING !

The operation and adjustment of the Reese Machine requires a complete knowledge of the contents of this handbook. To avoid personal injury please ensure that all personnel are thoroughly conversant with all details before commencement of operation or maintenance.

# A.1. General Safety Instructions

All implements with moving parts are potentially hazardous. All operators of such machinery should operate in a cautious, safe, and responsible manner. The manufacturer has sought to design this implement with safety as a primary objective. All safety guarding should remain on the implement during operation and all warnings should be adhered to at all times.

<u>BEFORE OPERATING</u> you must read and understand the manual carefully to ensure a safe working environment.

You will notice that both the manual and the mower contain decals and messages labeled either 'CAUTION', 'WARNING', 'DANGER', or 'IMPORTANT':

**⚠** CAUTION

The lowest level of safety message. Warns of possible injury. Decals located on the equipment with this signal word are Black and Yellow.

**▲** WARNING

Serious injury or possible death! Decals are Red/Yellow and Black.

A DANGER

Imminent death/critical injury. Decals are Red and White.

IMPORTANT

Important information regarding setup or operation.

#### **Follow Safety Instructions:**

Carefully read all safety messages in this manual and on your machine safety signs. Replace missing or damaged safety signs, these can be ordered from your local Reese dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate it without instruction. Keep your machine in proper working condition. Unauthorized modifications to the





machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your Reese dealer.

#### **Wear Protective Clothing**

Wear close fitting clothes and safety equipment appropriate to the job. Wear suitable hearing protective device as prolonged exposure to loud noise can cause impairment or loss of hearing. Wear safety gloves when working with blades as they can have sharp edges.

Operating equipment safely requires the full attention of the operator. Do not wear radio headphones while operating machine.



# A.2. Operator Safety Instructions

#### No riders or Children Operators

Allow no children on or near the folding mower or tractor. Allow no riders on tractor or implement. Falling off may cause serious injury or death from being run over by tractor or mower or contact with rotating blades. They are subject to injury such as being struck by foreign object and being thrown off the machine. They also obstruct the operators view.



#### **Moving Parts and Flying Object Dangers**

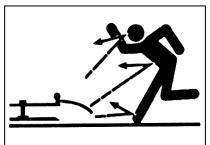
Do not leave tractor with the mower still operating. There are many moving parts including the PTO shaft, gearbox, belts, pulleys, and blades that could cause serious injury or death. Ensure the rotors have come to a complete stop before approaching the machine and/or making any adjustments.

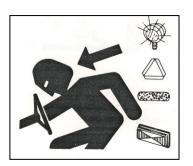
A DANGER Ensure during operation all safety guards are fitted to minimize the risk of flying objects. Beware of passerby's when operating so that no injury or death will occur from a flying object.



# **Transport Safety**

Slow moving tractors and equipment can create a hazard when driven on public roads. They are difficult to see, especially at night. This could lead to personal injury or death if a collision with a vehicle occurs.







Whenever driving on public roads, use flashing warning lights. Provide extra lighting at night on machine and tractor. An implement safety lighting kit is available from Reese Engineering.

Always display SMV decal during transport. Follow local traffic codes.

▲ CAUTION The Reese 3400 Mower should not be towed at speeds greater then 30 km/h. Never transport at any speed which does not permit adequate control of steering and stopping.

When transporting ensure the transport pin is correctly located and the side flaps are lifted and secured. See section D.4 for more details on transporting. Ensure the PTO is not engaged and is safely secured as per the PTO manufacturer's operation manual.

#### **Practice Safe Maintenance**

Understand service procedure before doing work. Keep area clean and dry.

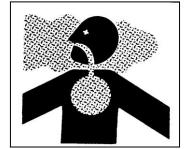
Never lubricate, service, or adjust machine while it is moving. Keep hands, feet and clothing from power driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Allow machine to cool.

Securely support any machine elements that must be raised for service work. Block up or support raised machine and all lifted components securely before putting hands or feet under or working underneath any lifted component to prevent rushing injury or death from sudden dropping or inadvertent operation of controls. Make certain area is clear before lowering or folding.



Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

Remove paint before welding or heating. Avoid potentially toxic fumes and dust when sanding, repainting or welding. Do all work outside or in a well-ventilated area. Dispose of paint and solvent properly.



Avoid heating near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut when heat goes beyond the immediate flame, which could result in severe burns to yourself and bystanders.

Avoid high-pressure fluids. Escaping fluid under pressure can cause injury. Relieve pressure before disconnecting hydraulic or other lines.



#### **Dispose of Waste Properly**



Improper disposing of waste can threaten the environment and ecology. Use leak-proof equipment when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source. Use the manufacturer's directions on the correct way to recycle or dispose of waste and be aware of local law regarding waste disposal.

# A.3. Decal Locations and Descriptions

Decals have been included to provide both information and warning signs for the operator and other personal near the machine. It is important that if any of these decals are damaged or removed that they must be replaced by the operator <u>before</u> the machines is used.

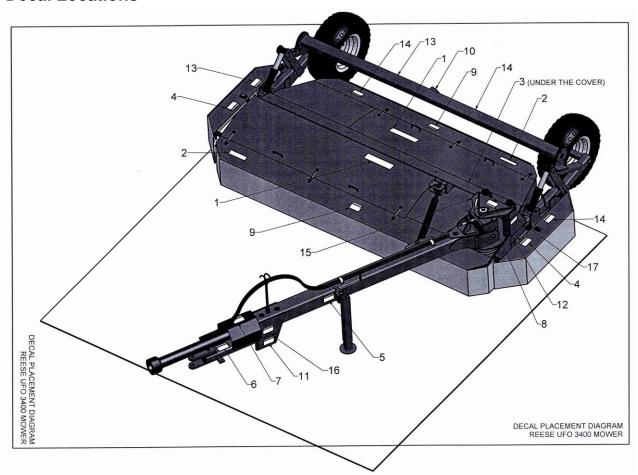
#### **Decal List**

See the table below for a complete list of the decals used on the 3400 Mower. This is accompanied with a diagram showing the placement of the mower and then a complete description of each decal.

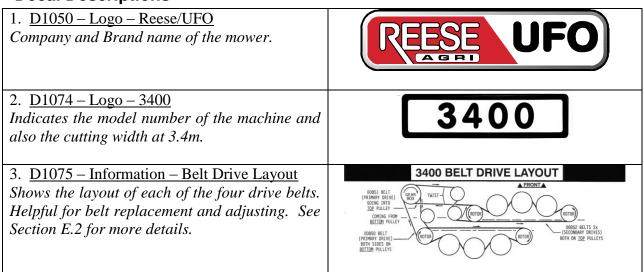
Item	Part #	Qty	Type	Description
1	D1050	2	Logo	Reese/UFO
2	D1074	2	Logo	3400
3	D1075	1	Information	Belt Drive Layout
4	D1076	2	Danger	Thrown Object Hazard
5	D1260	1	Important	Drawbar Stand Positions
6	D1261	1	Warning	PTO Entanglement
7	D1262	1	Warning	Rotating Parts
8	D1263	3	Caution	Pinch Point
9	D1265	2	Important	Belt Covers
10	D1268	1	Reflect	Slow Moving Vehicle (SMV)
11	D1269	1	Important	Power/Weight 3400
12	D1272	1	Important	Transport Pin Placement
13	D1300	3	Danger	Rotating Parts
14	D1401	2	Warning	Rotating Blade
15	D1402	1	Warning	Farm Tractors
16	D1503	1	Important	Check PTO
17	D1008	1	Caution	Avoid Injury
18	D1518	21	Information	Grease Point



#### **Decal Locations**



# **Decal Descriptions**





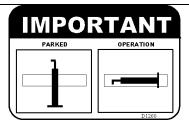
#### 4. D1076 – Danger – Thrown Object Hazard

To prevent serious injury or death from thrown objects follow the given instructions; do not operate with deflectors removed, do not point discharge towards people, animals, or building when operating, use special care when operating in populated or congested areas.

# THROWN OBJECT HAZARD To prevent serious injury or death from thrown object: Do not operate with deflectors removed Do not point discharge towards people, animals, or building when operating. Use special care when operating in populated or congested areas.

### 5. <u>D1260 – Important – Drawbar Stand</u> Positions

The drawbar stand can be locked in two positions. Lock it at right angles to the drawbar when machine is parked. Always lock it horizontally with the drawbar when the machine is connected to tractor.



#### 6. <u>D1261 – Warning – PTO Entanglement</u>

Rotating Parts Warning – always operate with guards in place. Never remove guards while PTO is engaged.



#### 7. D1262 – Warning – Rotating Parts

Rotating Parts Warning – Always operate with guards in place never remove guards while PTO is engaged.



#### 8. D1263 – Caution – Pinch Points

Be aware of a 'pinch point' for fingers or hands.



#### 9. D1265 – Important – Belt Covers

Ensure belt covers are present during operation. Do not open covers while the belts are running.

# IMPORTANT - ENSURE BELT COVER IS PRESENT DURING OPERATION.

- DO NOT OPEN WHILE BELTS ARE RUNNING

# 10. D1268 – Reflective – SMV

Always display the SMV reflective decal when transporting and operating. Keep clean and visible.





#### 11. D1269 – Important – Power/Weight

Provides information regarding the power required to run the machine and the weight of the machine.

#### 12. D1272 – Important – Transport Pin Placement

Indicates the correct usage of the transport pin. You must engage this pin during transport. See section D.4 for more details.

#### 13. D1300 – Danger – Rotating Parts

Do not leave tractor seat until machine has stopped. Make adjustments only when machine has stopped and PTO is secured to prevent inadvertent engagement.

### 14. D1401 - Warning - Rotating Blade and Moving Part Hazard

To prevent serious injury or death from moving parts;

- Close and secure guards and shields before starting.
- Keep hand, feet, hair and clothing away from moving parts.
- Do not point discharge toward people, animals or buildings when operating.
- Disconnect and lockout power source before adjusting or servicing.
- Do not stand or climb on machine when operating.

# IMPORTANT

3400 MOWER TRACTOR REQUIREMENTS

Power Requirement (min): 80 HP Machine Weight: 1180 kg Hydraulic Pressure Required (min): 900 psi Hose Ports Required (min): 4

# IMPORTANT

ENSURE LOCKING PIN IS CORRECTLY LOCATED DURING TRANSPORT







**ROTATING PARTS** DO NOT LEAVE TRACTOR SEAT UNTIL MACHINE HAS STOPPED.

MAKE ADJUSTMENTS ONLY WHEN MACH-INE HAS STOPPED AND PTO IS SECURED TO PREVENT INADVERTANT ENGAGEMENT.

# WARNING







#### **ROTATING BLADE &** MOVING PART HAZARD

To prevent serious injury or death from moving parts:

- Close and secure guards and shields
- before starting.

  Keep hand, feet, hair and clothing away from moving parts
- Do not point discharge toward people, animals or buildings when operating.
   Disconnect and lockout power source
- before adjusting or servicing.
   Do not stand or climb on machine when operating.



#### 15. D1402 – Warning – Read Manual

Farm Tractors and Allied Machinery if operated incorrectly can cause serious injury or death! Do not attempt to operate the equipment until the operator's manual has been thoroughly read and understood or you have had thorough instructions on the hazards and safety features of his machine.

Note: Decal in both English and Spanish

# **WARNING**

Farm Tractors and Allied Machinery if operated incorrectly can cause <u>serious</u> <u>injury or death!</u>

Do not attempt to operate the equipment until the operator's manual has been thoroughly read and understood or you have had thorough instructions on the hazards and safety features of this machine

# A ADVISO

Tractores de la granja y maquinari'a aliadas, cuando heco funcionar incorrectamente, pueden resultar en los herios serios o

muerte!

io intente hacer funcionar el equipaje hasta Ud. ha lei'do y entendido el manual del operado completamente o Ud. teni'a nstrucciones completas sobre los peligros y las cara'etisticas de seguridad de esta

D1402

#### 16. D1503 – Important – PTO Setup

Check front PTO shaft has 180mm compression available when Mower is attached to tractor on level ground. See Section C.4.3 for more details.

#### 17. D1008 – Caution – Avoid Injury

To Avoid injury or Machine Damage:

- Do not operate or work on the machine without reading and understanding the operators manual.
- Keeps hands, feet, hair and clothing from rotating parts.
- Do not allow riders on the machine.
- Avoid unsafe operation/maintenance.
- Disengage power source and shut off engine before removing guards, servicing, or unclogging machine.
- Keep unauthorized people away from machine.
- Keep all guards in place when machine is in use.
- If manual is missing, contact dealer for replacement.
- Remove Pressure on any hydraulic system before repairing, adjusting, or disconnecting.

# **IMPORTANT**

Check front PTO shaft has 80mm Compression available when Mower is attached to tractor on level ground. - See Operators Manual -

D1503

# **CAUTION**

# TO AVOID INJURY OR MACHINE DAMAGE:

- Do not operate or work on this machine without reading and understanding the operator's manual.
- Keep hands, feet, hair and clothing away from moving parts
- Do not allow riders on machine
- Avoid unsafe operation/maintenance.
- Disengage power source and shut off engine before removing guards, servicing or unclogging machine.
- Keep unauthorised people away from machine.
- Keep all guards in place when machine is in use
- If manual is missing, contact dealer for replacement.
- Remove pressure on any hydraulic system before repairing, adjusting, or disconnecting

# 18. <u>D1518 – Information – Grease Point</u>

Indicates points that require regular greasing. See section D.1 for more details.





#### **B. INTRODUCTION SECTION**

# B.1. To the Operator/Owner

This Operations Manual has been written to provide information that will lead to the safe use, correct setup, proper operation and maintenance of the Reese 3400 Hay and Silage Mower. Please ensure that anybody operating or servicing this machine reads and understands the manual thoroughly. The Reese 3400 Mower contains several significant developments on the existing Reese/UFO Mower range which means even if you are an existing Reese/UFO owner/operator you will need to read the manual to understand these changes.

The manual also includes a section covering some *Mowing Hints* which covers some commonly asked questions regarding mowing/topping problems. If you do have any problems regarding your Reese 3400 Mower please contact your local Reese dealer.

Dealers Name: \_\_\_\_\_\_
Address: \_\_\_\_\_\_
Phone No: Business: \_\_\_\_\_\_ Private: \_\_\_\_\_\_
Date of Purchase: \_\_\_\_\_\_
Model: \_\_\_\_\_\_ Serial Number: \_\_\_\_\_\_

### B.2. The REESE 3400 Drum Mower

At point of purchase fill in the following details:

The Reese 3400 Mower is a trailed machine designed to cut a maximum width of 3.4m (11'2") and still allow it to pass through a 12' gate without having to dismount from the tractor. A gearbox has been mounted on top of the mower to ensure a compact primary gear drive. Of the two hydraulic circuits, the first one is utilized to change from the offset mowing position to the central transport configuration. The second circuit is utilized to raise and lower the mower from transport to mowing height. With the four drums at ground level, the cutting height is set at 25mm (1"). With the second hydraulic circuit, the mowing height can be set and maintained at any level between 25 and 300mm. The mowing-or topping height can be mechanically set independently at 50, 100, 150 and 200mm (2", 4", 6", and 8") using the topping pins.

The second circuit is utilized to raise and lower the mower from transport or to the desired mowing height. A hydraulic suspension system is also incorporated, optimizing the ground following properties at the same times as protecting the spindles from being overloaded.



# **Technical Specifications**

**CUTTING WIDTH** 3.4 metres (11'2")

NUMBER OF ROTORS 4

NUMBER OD DOUBLE 12

**EDGE BALDES** 

POWER REQUIREMENT From 80 HP

(at 540 rpm)

ROTOR RPM 1950

(at 540 rpm)

TRACTOR LINKAGE Trailed

**HEIGHT ADJUSTMENT** 25-300mm (1" – 12")

**TYRES** 10.0/75 x 15.3

**WEIGHT** 1180kg (2620lbs)

MIN. HYDRAULIC 900psi
PRESSURE REQUIRED

STONE GUARDS Standard

TRANSPONRT WIDTH 3.42 metres (11'3")

# B.3. Warranty

# **Warranty Procedures**

The warranty card on your Reese 3400 Mower is included with this manual. Please ensure that the registration card is correctly filled in.

The owner must ensure the dealer, upon delivery of the machine, has completed the **WARRANTY REGISTRATION CARD**. This must be signed by the owner and returned to the factory promptly. **Failure to carry out this function could nullify warranty claim opportunities against the factory in the future**. Warranty claims will only be accepted for registered products.

# **Warranty Agreement**

REESE warrants that the machine delivered shall conform to the specifications set out in this Handbook.

Reese make no warranty of salability or fitness for a particular use, nor is there any other express or implied warranty.



Subject to such other conditions, warranties, and/or undertakings which may apply from time to time under any applicable law, REESE warrants with respect to each new REESE Machine sold by its accredited agents, that for a period of twelve months from date of original retail sale, REESE will repair or replace free of charge any part found to be defective in factory materials or workmanship under normal use and operation within the United Sates of America, Canada, Australia and New Zealand provided that;

#### 1. The Machine

- a. Has been properly assembled and adjusted.
- b. Has been properly used and operated within the capacity and operating limitations specified by the manufacturer thereof, and
- c. Has been properly maintained and cared for.
- 2. This Warranty applies to a direct purchase from an authorized REESE dealer. If any defect or fault shall arise such purchaser must return the defective work or Machine to an authorized REESE dealer within ten working days of such defect or fault arising.
- 3. In the event of the purchaser attempting to repair or replace the work or product without prior written consent of an authorized Reese distributor this guarantee shall become void. REESE may replace or repair any damaged product or work at its discretion.
- 4. In respect of such machine this warranty does not apply to
  - a. Misuse or carelessness in handling,
  - b. Noncompliance to REESE's operating and maintenance instruction,
  - c. Unauthorized repairs or alterations,
  - d. Consequential damage resulting from misuse or initial faults.
  - e. Parts subjected to wear or damages as a result of normal operation i.e. cutting blades, blade pivot bolts, tines, tyres, belts, hydraulic components.
- 5. Any disputes in relation to this contract or product shall be governed by New Zealand law and shall be determined in New Zealand courts.

# **B.4.** Parts Ordering and Maintenance Procedures

Ensure you always purchase genuine Reese factory supplied parts. There are several suppliers of blades, and belts on the market but all Reese blades and belts are made uniquely for Reese applications. Failure to purchase genuine parts could lead to poor performance and/or invalid warranty claims.

Genuine Reese parts can be ordered through the approved Reese Dealer in your area. Reese dealers will carry a range of common mower parts and consumables (i.e. blades, blade bolts, belts, tines). If the dealer does not carry the required part(s) in stock they can expect a two to three day supply of most parts within New Zealand, Australia and the USA.

When ordering spare parts, quote the model and serial number of the mower and use the Reese part number given in the parts section. Reference to the right hand and left hand is taken from behind in the direction of travel.



# C. ASSEMBLY AND SETTING UP SECTION

# C.1. Delivery Checklist

All machinery has been pre-tested after assembly at the Reese factory. For shipping purposes the Reese 3400 Mower is partially disassembled for crating. For delivery around New Zealand the machine will require virtually no assembly but is palletized.

Upon delivery of your assembled Reese 3400 mower ensure the following parts are supplied:

1x Primary PTO Shaft

1x Reese 3400 Drum Mower Operators Manual

1x Reese 3400 Mower

# C.2. Assembly from Crate

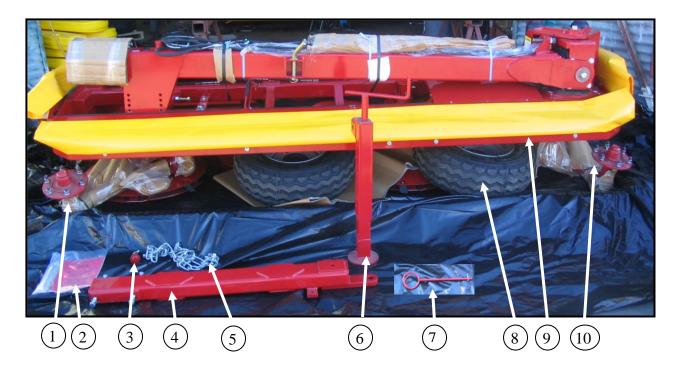
When transported in a container, the Reese 3400 Mower is crated and standing on its side in the container. **NOTE: ENSURE CRATE IS ON ITS BASE BEFORE DISMANTLING CRATE – NOT ON ITS SIDE.** 

#### **Parts List**

Before starting to assemble the Reese 3400 Mower from a crate ensure no parts are missing. See a complete list of parts below.

Item#	Qty	Part Description
1	1	LH Wheel Arm
2	1	Operations Manual
3	1	Drawbar Ram Pin
4	1	Drawbar Extension
5	2	Safety Chains with "D" shackles at each end
6	1	Drawbar Stand
7	1	Hydraulic Hose Stand
8	2	Transport Wheels (15.3")
9	1	3400 Mower
10	1	RH Wheel Arm
NS	1	Front Belt Cover
NS	1	Torsion Bar
NS	1	Primary PTO Shaft





# **Assembly Instructions**



The mower has many heavy parts that can cause injury or death if they fall on you. During assembly

- Ensure protective gear is worn.
- Ensure large parts are handled with overhead cranes or lifting devices
- Ensure all parts are secured at all times.
- 1) Once all parts are accounted for and unwrapped assemble as below. (**Note**: the mower will remain on the crate base until fully assembled)
- 2) Remove crate stands from rear wheel arms. These can be discarded but do not discard the pins. The 32mm pin (1 ½" with square plate on one end) is reused as pivot pin for the wheel arm. The 25mm pin (1" plain with 2 holes) is reused in the wheel rams.



2. Crate stands to be removed and discarded.



3) Fit *Left Hand* and *Right Hand Wheels Arms* using pins securing the crate stands above. Ensure the arms are put on the correct side to ensure the wheels are mounted inside the arms.

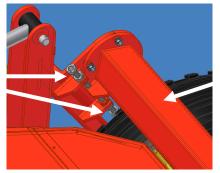


4. Fit wheel rams as shown.

3. Fit wheel arms as shown.

- 5. Fit transport wheels as shown.
- 4) Fit the *Wheel Rams* onto the *Wheel arms* (spear ends towards rear).
- 5) Fit *Transport Wheels* onto wheel arms.
- 6) Fit *Torsion Bar* between wheel arms. Ensure the bar is orientated correctly so that the torsion bolt will engage against the tab on the torsion bar. Tighten the left hand (viewing from behind) bolt/nuts securely. During assembly set the torsion bar in the neutral position. (Note: The bar may need to be torqued when topping. See section C.4.2 for more details). To set the torsion bar in the neutral position ensure the wheels are level and simply secure the bar where it sits naturally. Ensure the torsion bolts are properly secured.

Torsion bolts



6. Set Torsion Bar in neutral position.



Ensure the drawbar is secured and handled with overhead cranes or lifting devices

# **FALLING OBJECT HAZARD**

- 7) Secure main drawbar from above using an overhead crane or forklift and a strop.
- 8) Remove drawbar securing clamp and discard.
  - 7. Secure drawbar with a strop from above.



8. Remove drawbar securing clamp and discard.



- 9) Raise drawbar slightly to allow it to swing out in front of mower by clearing the front panel work.
- 10) Fit the *Drawbar Ram* using the loose pin supplied (spear end towards rear). Note that there are two mounting positions for the ram on the main frame. The outside holes is for tractors with wheel base up to 2.4m, the inside one for wider based tractors. See Section C.4.5 for more details
- 11) Fit the *Drawbar Stand* and extend to take the weight of the drawbar.
- 12) Remove overhead strop.
- 13) Fit *Hydraulic Hose Mount* into boss on main drawbar.
- 14) Run all four hoses through the *Hydraulic Hose Mount*.
- 15) Fit *Drawbar Extension* onto front of main drawbar. There are several height options available. See Section C.4.4 for guidelines on determining the height required.
- 16) Fit Safety Chains onto Drawbar Extension. They fit on the 'wing' like extensions on either side of the drawbar.
- 17) Fit *PTO Shaft* to intermediate drive head at the end of the main drawbar. Ensure the wide angle CV joint will fit on the tractor rather then the mower.
- 18) Fit Front Belt Cover.
- 19) Attach mower to tractor and fit the four hydraulic hoses to the tractor hydraulics. Note that there are **two sets** of hoses; the smaller hoses are for the *Drawbar Ram* and the larger set for the *Wheel Rams*.



- Ensure the operator is aware of local road regulations.
- Ensure all personal are clear of the machine before raising, lowering, offsetting or transporting.
- 20) By engaging the *Wheel Rams* (larger hoses) carefully raise the mower off the pallet by dropping the transport arms.
- 21) By engaging the *Drawbar Ram* (smaller hoses) lock the mower in a fixed position behind the tractor.
- 22) Drive mower off the crate base.





NOTE: THE MOWER IS NOT YET READY FOR ENGAGEMENT OR OPERATION. THE MACHINE IS NOW READY FOR 'SETTING UP'. SEE SECTION C.4.



# **SETUP REQUIRED**

- The mower is **NOT** ready for engagement or operation.
- The machine is now ready for **SETUP**.

# C.3. Assembly from Pallet

For New Zealand customers the mower will be supplied almost fully assembled. However the following assembly will be required:

- 1) Fit *Transport Wheels* onto wheel arms.
- 2) Remove *Topping Pins* from under wheel arms and place them in 'mowing' position.



Ensure the drawbar is secured and handled with overhead cranes or lifting devices

#### **FALLING OBJECT HAZARD**

- 3) Secure main drawbar from above using an overhead crane or forklift and a strop.
- 4) Swing out in front of mower by clearing the front panel work.
- 5) Fit the *Drawbar Ram* using the loose pin supplied (spear end backwards). Note that there are two mounting positions for the ram on the main frame. The outside holes is for tractors with wheel base up to 2.4m, the inside one for wider based tractors. See Section C.4.5 for more details
- 6) Fit the *Drawbar Stand* and extend to take the weight of the drawbar.
- 7) Remove overhead strop.
- 8) Fit *Hydraulic Hose Mount* into boss on main drawbar.
- 9) Run all four hoses through the *Hydraulic Hose Mount*.
- 10) Fit *Drawbar Extension* onto front of main drawbar. There are several height options available. See Section C.4.4 for guidelines on determine the height required.



- 11) Fit *PTO Shaft* to intermediate drive head at the end of the main drawbar. Ensure the wide angle CV joint will fit on the tractor rather then the mower.
- 12) Fit Front Belt Cover.
- 13) Attach mower to tractor and fit the four hydraulic hoses to the tractor hydraulics. Note that there are **two sets** of hoses; the smaller hoses are for the *Drawbar Ram* and the larger set for the *Wheel Rams*.



# TRANSPORT SAFETY

- Ensure the operator is aware of local road regulations.
- Ensure all personal are clear of the machine before raising, lowering, offsetting or transporting.
- 14) By engaging the *Wheel Rams* (larger hoses) carefully raise the mower off the pallet by dropping the transport arms.
- 15) By engaging the *Drawbar Ram* (smaller hoses) lock the mower in a fixed position behind the tractor.
- 16) Drive mower off the crate base.



# **SETUP REQUIRED**

- The mower is **NOT** ready for engagement or operation.
- The machine is now ready for **SETUP**.

# C.4. Setting up

There are several key areas that need attention during setup of the Reese 3400 Mower. Failure to follow these guidelines could lead to the breakage or premature wear of belts, uneven cutting, mower drag and other negative side effects. It is recommended that the following steps to setting up the Reese 3400 Mower be done in the order given. Failure to follow these guidelines could result in damage to machine, poor operational results and/or declined warranty claims.

Several steps of the setup process are directly related to the height of the hitch point on the tractor. Therefore if the mower is being used on a different tractor these settings may need adjusting; Setting the Drawbar Angle, Setting the Drawbar Extension Level, Setting the Drawbar Ram, Ensuring the Hydraulics are Operating Correctly.

# 1) Tensioning the Belts

All four belts can be tensioned individually and need to be checked for tension before operation. The belts should be 'drum tight', tension them up a tight as they go.

**IMPORTANT**: It is VERY important to note that a "V" belt will stretch up to 80% of its overall stretch in its first hour of use. Therefore in the first hour of operation of the Reese



**MOVING OBJECT HAZARD** 

The mower has many moving parts which can cause serious injury and/or death.

- Never remove safety covers while machine is still in operation or engaged with the tractor.
- Care must be taken with setting/ replacing belts to ensure personal does not become entangled or appendages trapped.



3400 Mower the belts need to be checked for tension two or three times. It is also recommended that in the first day of use the belts need to be checked for tension two or three further times. See Section D.1 on Servicing for more details on how to look after your "V" belts.

Reese UFO Drive Belts have been developed in conjunction with world leading belt manufacturers to meet the requirements of the Reese UFO products. They are custom built high strength belts which are not available from other retailers or from other belt brands. DO NOT attempt to fit belts without the Reese label.

### 2) Setting the Torsion Bar

The *Torsion Bar* serves two functions; to ensure the wheel arms operate togeather, and to keep the mower sitting level (width ways) during topping. Note: If mowing no adjustment to the *Torsion Bar* should be required.

It can be observed, when the mower is in topping position, that before the *Torsion Bar* is adjusted (torqued) the mower may droop in the front right hand corner (looking from the rear). The result of setting the torsion bar is to lift the front corner of the mower, hence bringing the front edge parallel with the ground.

#### To do this:

- Ensure the bolts in the slotted holes on the right hand side of the torsion bar are loose
- Have the mower on a level surface preferably a concrete pad.
- Move the mower out into mowing position (i.e. extend the Drawbar Ram)
- Lower the mower onto its topping pins set at the required topping height (Note: when mowing the mower is running on its skids therefore it is unnecessary to adjust the torsion bar).

Typically the front right hand corner will be dropping slightly. If this is the case the rear torsion bolt will need to be advanced towards to torsion bar forcing the bar to turn clockwise. Continue to torque the bar until the front right and left corners of the mower frame are the same height above the ground (see figure below). Once the mower is level retain the positions of the two *torsion bolts* using the nuts and tighten the four bolts/nuts to secure the *torsion bar* to the *wheel arm*.





# 3) Cutting the PTO Shaft to Length

The primary PTO shaft provided will need to be fitted and checked for length before operation. The required length with vary depending on the model of tractor and hitch distance. Reese will not accept any warranty claim caused by poor primary PTO shaft set up, or failure to cut to length correctly, or misuse.

Reese has sourced and supplied a PTO Shaft from a reputable third party manufacturer. Ensure the operator has read and understood the Instructions Manual that is supplied with the PTO shaft. The details below are a guide only and Reese will not be liable for failures if the operator has not followed the manufacturer's instructions carefully. <u>Always</u> follow the instructions supplied by the PTO manufacturer.



The PTO Shaft can be an entanglement hazard and cause serious injury.

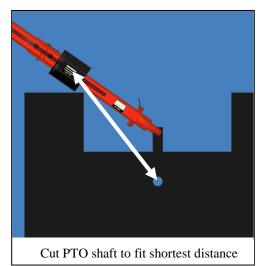
- Never handle a PTO shaft while it is engaged.
- Never engage a PTO shaft without all its safety guards present.

#### **Features of the Drive Shafts Provided**

- The primary PTO shaft has a wide angle CV joint at one end and a standard joint at the other. The wide angle joint should be fitted to the tractor while the standard joint to the mower. The wide angle joint will allow a maximum turn angle of 80°.
- The supplied PTO also has an inbuilt preset slip clutch which will prevent too much power being transmitted from large tractors to the mower.
- The secondary drive shaft mounted inside the drawbar is also fitted with a free wheeling device to allow the machine, after use, to slow down under its own inertia rather then suddenly stopping when the PTO is disengaged.

## **Cutting the Primary Shaft to Length**

- Remove the primary PTO.
- Maneuver the tractor/mower is such a way so that the intermediate drive head cover is almost touching the right rear wheel of the tractor (when sitting in the cab). This indicates the shortest length required of the primary PTO shaft.
- If required cut down the PTO shaft to fit the above distance. Cut it about 40mm shorter to prevent the shaft ever 'bottoming out' and damaging the intermediate drive head.
- NOTE: Ensure that when the PTO is at its max length (i.e. when the drawbar is straight behind that tractor) there is still ½ of the tube length overlapping.

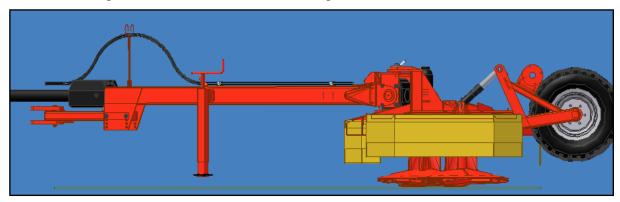




# 4) Setting the Drawbar Extension Height and Drawbar Angle

Now that the mower is sitting parallel to the ground when viewing from the front and back it now needs to sit parallel to the ground looking from the side. This will prevent paddock scalping and maintain even cutting heights between the front and rear drums. The height of the under-drum-skid should be equal front and back.

Because of the range of tractor hitch point heights between different tractor models and different countries there are two available adjustments to ensure the mower is sitting level: the drawbar angle, and the drawbar extension height.



The following setup should be done when the mower is resting on its skids (i.e. at mowing height) and hitched on the tractor.

# a) First determine the height of the Drawbar Extension.

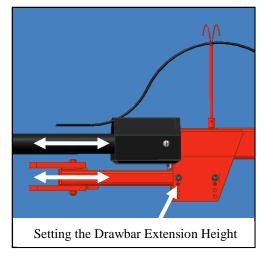
There are four mounting heights for the drawbar. The drawbar can be mounted upside down if required. Determine which setting will suit the tractor best to ensure the PTO shaft extends parallel with the drawbar extension to the tractor.

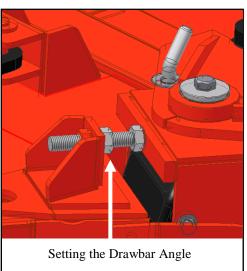
If the drawbar extension needs to be moved ensure the drawbar is supported on the stand and that the PTO and hydraulic hoses are disengaged from the tractor.

#### b) Second set the Drawbar Angle

Once the drawbar extension height is adjusted, the adjustment bolt at the mower end of the drawbar is used to ensure the skids are sitting level to the ground.

NOTE: This bolt should only be adjusted with the drawbar hitched to the tractor and the mower offset to the side of the tractor and at cutting height. (Hint:







Lower the machine onto a block placed under a drum to take the weight off the bolt whilst adjusting.)

Keep adjusting until the under-drum-skids are level with the ground – front to back.

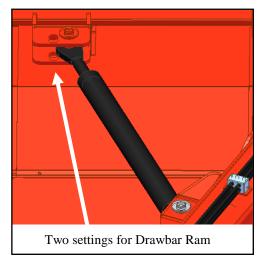
#### 5) Setting the Drawbar Ram

There are two settings for the drawbar ram on the mainframe. The outside hole is for tractors with wheel base up to 2.4m, the inside one for wider based tractors. Select the correct setting for the tractor being used.

Move the mower from *transport* to *mowing* position using the drawbar ram:

<u>Mowing Position</u> - ensure that in *mowing* position the inside edge of the mower is outside the tractor wheel track.

<u>Transport Position</u> – ensure that the locking pin (directly above the gearbox) can be engaged when the mower is in transport position behind the tractor.



# 6) Ensuring the Hydraulics are Set and Operating Correctly

The Reese 3400 Mower has an advanced hydraulic system that serves several functions.

Of the two hydraulic circuits, the first one is utilized to change from the offset mowing position to the central transport configuration. The second circuit is utilized to raise and lower the mower from transport to mowing height. With the fours drums at ground level, the cutting height is set at 25mm (1"). With the second hydraulic circuit, the mowing height can be set and maintained at any level between 25 and 300mm. The mowing-or topping height can be mechanically set independently at 50, 100, 150 and 200mm (2", 4" 6", and 8") using the topping pins. The second circuit is also a hydraulic suspension system, optimizing the ground following properties at the same times as protecting the spindles from being overloaded.

#### NOTE:

- The hydraulics should only be tested and adjusted after all the other setup procedures have been completed.
- In most conditions and situations the hydraulic pressure will NOT need to be adjusted. However if the user feels the hydraulic setup is not ideal for their particular conditions or has been set incorrectly the following information will be useful.
- In most cases the initial setup of the hydraulics will not need to be readjusted again.

To ensure the operator is comfortable with the hydraulic system and the hydraulics are set correctly for the tractor, complete the following checks.



- a) Operate the *Drawbar Ram* to move the mower between transport and mowing position. Ensure the movement is smooth and moves through its full range of movement.
- b) Operate the *Wheel Rams* to raise and lower the mower. The movement should be smooth, with both wheel arms operating togeather.

#### Correlation between Hydraulic Pressure and Drum Weight

**NOTE**: We **DO NOT** recommend that the pressure relief cartridge be adjusted except by an experienced technician.

The bulk of the mower weight is carried by the wheels and drawbar. The weight portion of the drums on the ground is factory set at a recommended level of 150kg (330lbs). This level of ground contact can be varied to suit local conditions by adjusting the pressure setting on the pressure relief cartridge. This cartridge can be found underneath the removable rear LH cover.



Pressure Gauge

Pressure Relief Cartridge

**Note**: The reading of the required pressure from the gauge should be made only at the time that the mower is being **lowered** to mowing height. The actual 'pressure readings' are unimportant. The gauge indicates when there is full pressure during lifting and regulated pressure during lowering.

#### The Effect of the Accumulators

You will notice that in the Wheel Ram Hydraulic circuit there is two 1.5L accumulators. The purpose of these is to help prevent the mower from damage during mowing/topping by essentially operating as an oil relief valve. Because the oil is in a 'closed' line during mower/topping without the accumulators the mower would sit rigid on the ground and feel the full force of any impacts with the ground. However because there accumulators are preloaded with the required pressure — when the mower hits an obstacle (i.e undulating ground, rock, etc..) the oil in line will force its way into the accumulators allowing the mower to ride over the obstacle.



Before raising or lowering the mower ensure all personal a well clear. Never hydraulically reposition the mower without knowing exactly where all personal are.



#### **To Adjust the Ground Pressure**

**Note**: Adjusting the ground pressure is a two person job, one operating the hydraulics from the tractor and one adjusting the relief valve from behind the mower.

- 1. Setup the mower in mowing position. That is with the mower on the tractor hitch, the drawbar ram fully extended, and the mower out to the right hand side of the tractor.
- 2. Raise and lower the machine several times to ensure there is no air in the line. You will also note that there will be a delay in the response of the mower when powering the hydraulics from the tractor, this is due to the effect of the accumulators in the circuit.
- 3. The aim is to have the mower lower smoothly and slowly enough so it lands gently on the ground or topping pins.
- 4. To adjust the relief valve you will need to loosen the nut and use an appropriate allen key. Adjustments should be made while the machine is being lowered.
- 5. Turning the valve CLOCKWISE will DECREASE the ground pressure and cause the mower to lower more slowly. Turning the valve ANIT-CLOCKWISE will INCREASE the ground pressure and cause the mower to lower more quickly.
- 6. While the mower is lowering slowly turn the valve clockwise until the mower stops dropping this means there is not sufficient weight to lower the mower to the ground i.e. too light.
- 7. Now turn the valve back (anti-clockwise) about 1/8<sup>th</sup> of a turn and observe the machine starting to lower again.
- 8. If the machine lowers gently to the ground/topping pins and the operator is happy with the lowering speed (i.e. not to slow or too fast) then lock off the valve with the valve nut and the hydraulic setup is complete.
- 9. If the machine lowers too heavily or too fast then return to step 7.
- 10. If the machine lowers too slowly or doesn't reach the ground/topping pins then return to step 6 but don't turn the valve as far in step 7.

# 7) Greasing and Lubrication Prior to Initial Use

Section D.1 gives more details regarding the lubrication and servicing of the Reese 3400 Mower.

Before initial use – grease the following points (refer diagram in Section D1.7)

- PTO Shaft
- Drive Shaft Inside Drawbar
- Intermediate Drive Head
- Gearbox/Drawbar Pivot Bottom
- Idler Arms
- Wheel Bearings
- Hydraulic Cylinder Eyes
- Wheel Arm pivots

#### Also grease

- Sliding areas on wheel arms
- All adjustment and locking pins
- PTO Shaft sliding member (after checking PTO shaft length see Section C4.3).



# C.5. Pre Operation Checklist

Once the setup is complete follow the following pre-operation checklist:

- a) Ensure the operator has read and understood the manual particularly the safety sections.
- b) Check blade bolts are securely tightened.
- c) Check that all bolts and fasteners are securely tightened.
- d) Ensure the torsion bolt and the adjustor bolts are secured properly.
- e) Check tyres are inflated to 70 psi (or to suit your conditions)
- f) Check that there are no loose or foreign items in the belt trays.
- g) Ensure the machine is properly serviced as described in Section D.1
- h) Check that all belts are tensioned correctly and free to run.

# C.6. Safety Inspections

Before operating complete the following safety inspection:

- a) Ensure belt covers (front and rear) are fitted and secured using the rubber latches.
- b) Ensure side skirt mounts are folded down.
- c) Ensure all four skirts are present.
- d) Ensure all PTO drive covers are present and fitted securely.
- e) Ensure both safety chains are connected to the tractor.



#### D. OPERATION SECTION

# D.1. Servicing

## 1) Prior to Initial Use

• Grease the following points (refer diagram in Section D.1.7)

0	PTO Shaft	2 pts
0	Drive Shaft Inside Drawbar	3 pts
0	Intermediate Drive Head	1 pt
0	Gearbox/Drawbar Pivot Bottom	2 pts
0	Idler Arms	4 pts
0	Wheel Bearings	2 pts
0	Hydraulic Cylinder Eyes	4 pts
0	Wheel Arm pivots	2 pts

- Also grease
  - o Sliding areas on wheel arms
  - o All adjustment and locking pins
  - o PTO Shaft sliding member (after checking PTO shaft length see Section C.4.3)
- Apply a few drops of oil to all bolts and threaded adjusters.

# 2) Daily or after each 40 hectares (100 acres) of cutting

- Grease
  - Wheel Arm Pivots

2 pts

• Check Blades for wear and reverse, sharpen or replace as necessary.

**NOTE**: Under severe conditions the blades will need to be checked more often. The machine will still cut when the blades are blunt but there will be extra expense of fuel and load on components.

• Check belts for tension – see maintenance

# 3) Weekly or after each 200 hectares (500 acres) of cutting

- Perform all operations listed in "Prior to Initial Use" servicing.
- Check all nuts and adjustments for tightness, paying particular attention to the 1" UNF nut attaching the main vee pulleys. Mower pivot nuts should be as tight as practical but still allow the machine to be moved into transport/operating position.
- Check oil level in the gearbox and top up if required. For oil type and quantity see Section E.7.

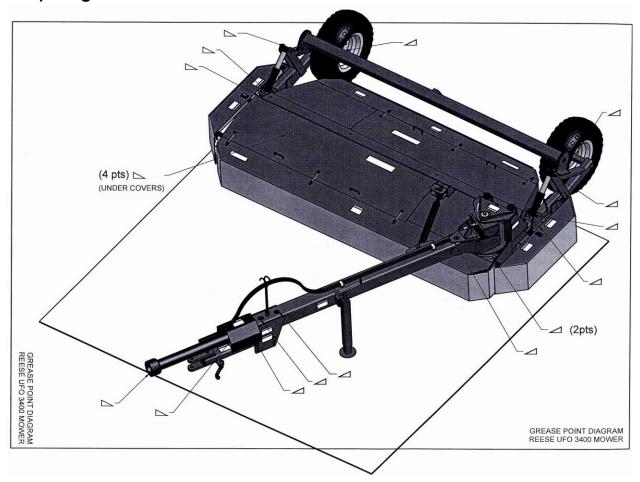
# 4) Annually before each Season

- Perform all operations listed in "Prior to Initial Use" servicing.
- Check all rotating components for smooth and free rotation.
- Check nuts and adjustments for tightness.
- Check "V" belts for obvious damage or wear and replace if damaged.
- Fit new set of blades and blade bolts.
- Grease



- Primary and secondary drive belt adjustment crank pivot bosses under main cover.
- Check wheel bearings for side movement, adjust and re-grease if necessary.
- Check for early signs of drum bearing wear by simply lifting the edge of each drum and observing any movement.

# 5) Diagram of Grease Points





# D.2. Operation

# **MARNING MARNING**

# AVOID INJURY OR MACHINE DAMAGE

- Do not operate or work on the machine without reading and understanding the operators manual.
- Keeps hands, feet, hair and clothing from rotating parts.

- Do not allow riders on the machine.
- Avoid unsafe operation/maintenance.
- Disengage power source and shut off engine before removing guards, servicing, or unclogging machine.
- Keep unauthorized people away from machine.
- Keep all guards in place when machine is in use.
- Remove Pressure on any hydraulic system before repairing, adjusting, or disconnecting

The operator should be fully aware of the operational limits of the machine and the dangers of using such a large heavy mower. The operator should determine and understand the turning limits of the mower and PTO shaft. The mower should be used to suit the conditions of; soil type, moisture content, ground contour, crop type, crop density, and the tractor unit being used.

- a) Ensure the Machine has been setup and serviced as detailed in Sections C.4 and D.1
- b) Use the tractor remotes to move the mower into the offset mowing position.
- c) Raise the machine and reposition the height adjustment pins to give the desired cutting height. Alternatively, lower the mower to the required cutting height and close the tractor controls for the height setting.
- d) Fit the PTO and check that the operator is familiar with the turning limits of the machine and the PTO shaft.
- e) Lift the mower sufficiently to clear the cutting blades from the crop. Engage the PTO gradually and accelerate to 540rpm.
- f) Mow around the field in a clockwise direction at a speed which is comfortable to operate. Use the tractor hand throttle to maintain constant revs. The mower may be lifted while mowing to clear very uneven ground or to avoid obstacles. On pugged or irregular ground the hydraulic suspension will be seen operating thus reducing vibration through the mower and maintaining maximum wheel contact with the ground.
- g) Avoid very sharp cornering as this places additional strain on the PTO shaft and the tractor tyre may foul the mower drawbar. Very sharp cornering also causes the outer end of the mower to go backward in the windrow which in some heavily matted crops can cause wrapping around the drum.
- h) The cleanest cut will always be when cutting close to the ground. Use sharp blades for a clean cut interchange blades between drums to use both edges or sharpen regularly with grinder.
- i) The mower drums are belt driven and care must be taken to ensure the belts are adjusted after initial run in time of no more than one hour. Belts should be checked for any required adjustments on a regular basis. If using high HP tractors (over 140HP) care should be taken to limit the load on the belts when engaging the PTO and during use.



j) Check all bolts and nuts for tightness after the initial bedding in period. In particular the 1" UNF nuts securing the main drive pulley and drum spindles – at the end of the first days works is a ideal time.

# D.3. Mowing Hints

# 1) Ragged Windrow

- Ensure PTO revs are at 540 rpm
- Check belt tension belts may be slipping

# 2) Rough Stubble

- Ensure PTO revs are at 540 rpm
- Check blades to see if the are blunt or bent
- Check that the drums are level with the ground. (See section...)

# 3) Cut Uneven - Scalloped

- Mower is tilted too far forward (or rearward). See section...
- Hydraulic suspension set too light allowing the mower to bounce. Adjust the pressure setting on the relief cartridge to allow the drums to carry some more weight. A slight rotation (usually no more then only 1/20 of a turn) should suffice and correspond with a lower pressure reading on the gauge. (See also Section C.4.7)

# 4) Uncut Stalks (Stripping)

Maybe evident when cutting high (topping, especially late season in tough crops)

- Ensure blades are sharp
- In light crops slow down mower rpm. Sometimes the turbulence of the blades can blow the grass over before it cuts it.
- In heavy crops ensure PTO revs are at least 540rpm (up to 600rpm is ok).
- Mower slewing across behind the tractor. See next point.

# 5) Mower slewing across behind tractor

This machine is held offset from the tractor purely by ground contact of the tyres. This problem will occur if:

- The forwards speed is too fast for the density of crop being cut.
- PTO rpm is below 540.
- Belt tension is incorrect and slippage occurs (this will usually show up as discolouration of the drum "V" pulley due to frictional heat).
- Blades are blunt or in poor condition.
- Cutting very low and drum skids are dragging on the ground with too much ground pressure.

# 6) Crop wrapping around drums

- Maintain PTO rpm especially when cornering.
- Avoid sharp cornering especially in matted crops.



# D.4. Transporting



#### **TRANSPORTING**

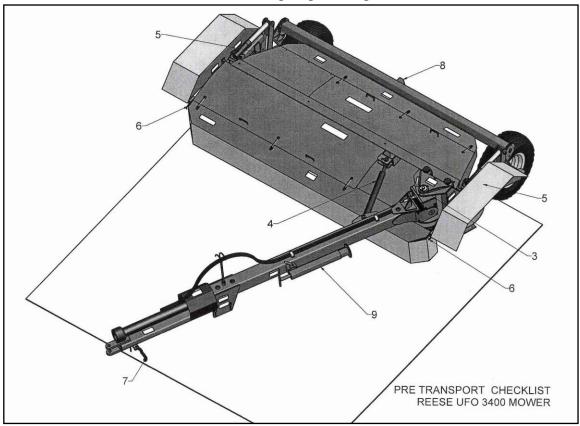
Before transporting the Reese 3400 Mower:

- Ensure the operator is aware of local road rules that apply to farm machinery.
- Complete the pre transport checklist below.
- 3400 Transport Width: 3.36m (11')

**NOTE**: It is the owner/operators responsibility to ensure compliance with transport legislation in your area. Reese will not accept liability for any failure to meet those regulations.

Pre Transport Checklist (refer to following diagram)

- 1. Ensure the operator is aware of local road rules relating to traveling speed, transport width, visibility and light requirements, etc...
- 2. Position the mower in the transport position directly behind the tractor.
- 3. Engage the drawbar locking pin in the 'transport lock' position.
- 4. Shutoff the drawbar ram hose tap.
- 5. Engage topping pins.
- 6. Lift the side skirt mounts and engage locking pins.
- 7. Ensure the drawbar safety chains are fitted to the tractor hitch point.
- 8. Ensure the SMV reflective decal is fitted and visible from the rear of the machine.
- 9. Ensure the Drawbar Stand is in transport position parallel with the drawbar.





# E. MAINTENANCE SECTION



#### MAINTENANCE HAZARDS

- Practice Safe Maintenance
- Ensure protective gear is worn.
- Ensure large parts are handled with overhead cranes or lifting devices
- Ensure all parts are secured at all times.
- All hydraulically elevated equipment must be supported or lowered to the ground.
- Avoid injuries but keeping the maintenance area clear of obstacles.

# E.1. Storage Recommendations

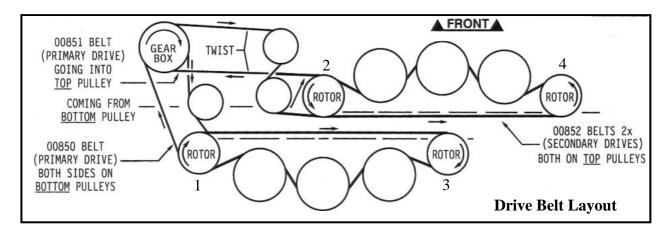
Storage is the key factor in the maintenance requirement of all machinery. It is recommended that the Reese 3400 Mower:

- Be stored under cover (to reduce storage area, the drawbar can be folded across the front of the mower).
- Be cleared of grass and dirt which will accelerate corrosion.
- Should have rubber base components (tyres and belts) protected from direct sunlight.
- Release the tension on all belts.

# E.2. Fitting a Set of "V" Belts

NOTE: The drive belts used on Reese Mowers do not offer any carcinogenic hazard to the operator as stated by the belt manufacturers.

The diagrams below indicate the layout of the four drive belts used on the UFO 3400. Ensure when the belts are fitted that they meander through the pulley's as shown.



Remove the top and bottom panels as required. Lift the mower so the under-drum-skids clear the ground. Ensure the mower is well secured off the ground to avoid injury during repairs and maintenance.



#### **Primary Drives**

• The longer primary V-Belt (00851) has to be fitted first. Running from the top gearbox pulley to the bottom pulley on drum number 2 in a figure eight configuration (to reverse the rotation direction). The idler adjustment screw will need to be released to enable the belt to be fitted.

NOTE: From the belt layout diagram above – where the twisted belt portions should be located. The belt cross-over point should be kept free by slight inclination of the two idlers. The small deflection roller will push the longer belt stretch down by pushing on the inside of the belt.

• The shorter Primary V-Belt (00850) has to be fitted last, running from the lower gearbox pulley to the lower pulley on drum number 1. Again, the idler adjustment screw will need to be released to enable the belt to be fitted.

#### **Secondary Belts**

Both Long secondary V-belts (00852) are identical and should be running in the top pulleys of the drums. Therefore these long secondary belts should be disassembled last and assembled first.

- Place the V-belt under drum no 1 and no 3 and fit the top drum V pulley.
- Meander the surplus belt length through the idler pulleys as per the belt layout scheme. The idler adjustment screw will need to be released to enable the belt to be fitted.
- Repeat the above process for the front secondary belt around drum no 2 and no 4.

Tighten belt adjuster lock nuts and crank pivot nut.

Refit the front and rear bottom panels. The front bottom panels must be fitted first. Then the rear panels on top of the overlap of the front panels. This ensures an unimpeded path for the mown crop.

# E.3. Belt Tension Adjustment

All belts are completely independent and adjustment of one does not affect the other. Each belt has a belt adjustment crank. Belt tension is adjusted by the threaded adjustor rod acting on the adjustment crank of one of the idler pulleys. Belts should be operated as tight as practical to avoid slippage and excessive belt flap.

# E.4. Replacement of Drum Bearing

- Remove the front and rear bottom panels and the top cover.
- Lift the machine and securely support both ends (a clearance of 600mm (24") is required beneath the machine).
- Slacken the vee belts and pull them clear of the drum vee pulley of the drum to be removed.
- Remove the 1" UNF nyloc spindle nut and thick washer.
- Remove the 4" x ½" UFO spindle bolts.
- Drive the drum spindle down through the spindle clevis plates using a piece of tube as a thread protector. The drum and spindle will drop clear of the machine body.



- Support the drum in 2 or 3 places approximately 500mm (20") above the ground (on 20L 5 gal drums as suggestion).
- Drive spindle through the drum using the thread protector as above.
- Remove the bearings from the drum tube by using a suitable drift 500mm (20") of 25mm (1") rod.
- Fit new genuine bearings after ascertaining that the bearings surfaces and spacer tubes are undamaged.
- Reassemble the machine in the reverse order.

**Note**: Ensure the drum skid is fitted the correct way i.e. with the stone guards to the front edge of the drum. Tighten the 1" spindle nut (using a 750mm (30") extension tube on the wrench) before tightening the two spindle lock bolts.

**Hint**: If at any time two adjacent drums are removed, refit then in opposite position. Drums will each rotate in opposite directions and double their life. If the drums are switched make sure the blades are also changed for the direction change.

# E.5. Replacement of Cutting Blades

Looking from above, drum 1 and 3 rotate clockwise and the other two drums anti-clockwise. There are LH and RH blades which need to be fitted to the correct drum. Replacement blades should be assembled in such a way that the leading cutting edge is downwards. Blades can be reused upside down on the same drum to provide a new cutting edge.

# E.6. Drum Repairs

Drums have been balanced and drum repair which involves welding must be done with care to preserve this situation. An unbalanced drum will create vibration and may damage the mower. The plate accommodating the blade attachment bolt is a high tensile abrasion resistant steel and should be welded with high tensile mig wire or low hydrogen rods.

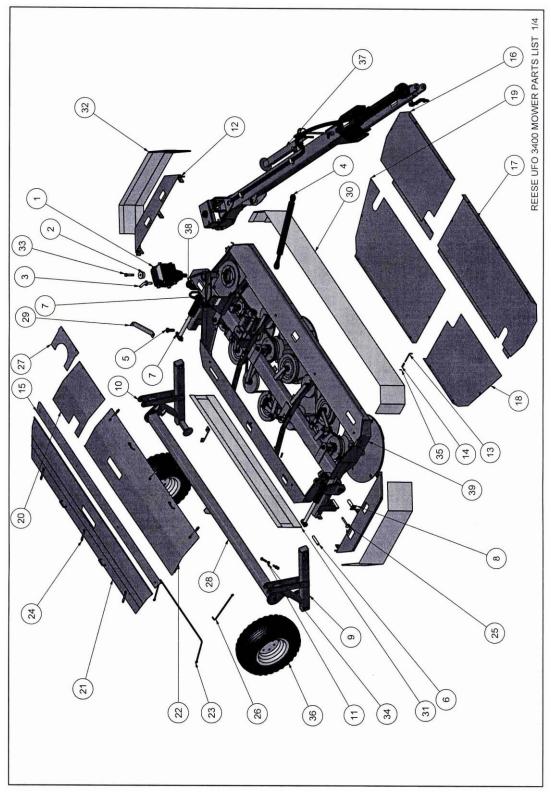
#### E.7. Gearbox Oil

The gearbox requires a total of 3.1 litres of oil SAE 90 EP. One level plug is situated at the front face of the gearbox and two filler plugs at the top.



# F. PARTS SECTION

# F.1. Parts List 1: Mower Parts

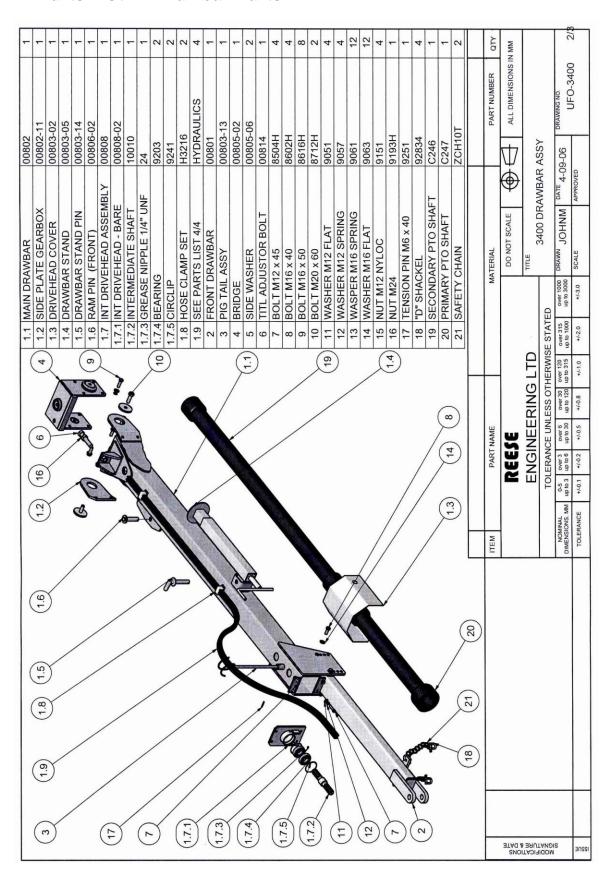




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00824 00824-12						
00824-12						
LOCK PIN SPRING 00824-13 3						
TOP RIDGE ASSY 00833 1						
BOTTOM PANEL FRONT LH 00835 1						
BOTTOM PANEL FRONT RH 00836 1	·					
BOTTOM PANEL REAR RH 00838 1						
BOTTOM PANEL REAR LH 00839 1						
COVER FRONT LH 00840 1						
REAR COVER ASSY 00841 1						
FRONT COVER RIGHT ASSY 00842 1						
REAR COVER STAY 00843 1						
RUBBER LATCH 00844 6						
TOPPING PIN 00848 2						
FRONT COVER STAY 00853 1						
COVER - GEARBOX 00854 1						
BOTTOM PANEL STAY 00857 2						
FRONT SKIRT 00867-01 1						
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F	+/-0.1 +/-0.2 +/-0.5	+/-2.0 +/-3.0	SCALE APPR	APPROVED		



#### F.2. Parts List 2: Drawbar Parts





# F.3. Parts List 3: Pulley's and Rotors Parts

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# F.4. Parts List 4: Hydraulic Circuit Parts

