Original Instructions

TRU-TURF

R52-11TC-2 GOLF ROLLER MANUAL

Contents

Revised 10/Aug/2013

The products detailed in this manual conform to the following standards:
Machinery Directive 2006/EC Annex VIII,
EMC Directive 2004/108/EC / Article 10.1 & EN ISO 4254-1:2009
CE Declaration is available on the Tru-Turf website.

Separate Engine Owners Manual Included

CE

Important

Please read and understand before operating machine.

1. Pre-check all nuts, bolts, grub screws for tightness prior to operating machine.

2. Understand the operating procedures and the controls before operating.

3. Use the machine to roll 18-36 greens then check that all nuts, bolts etc. are tight. If loose and the Loctite seal has been broken, treat item as per Loctite instructions, reseal, then tighten securely.

4. Loose transmission and drive roller sprockets will cause damage to shafts and keyways. Ensure they are correctly tightened at all times.

5. Change the transmission oil after 50 hours of operation, then as per the servicing schedule.

We use and recommend Penrite Synthetic 5 SAE 5W-60. Available through our dealer network.

U.S.A. customers contact your dealer or visit www.truturf.com to find your nearest dealer.

Australian customers call 07 5594 7199.

International customers contact your dealer or visit www.truturf.com to find your nearest dealer.

Machine Information Record

Congratulations on your investment in the RS48-11E Roll 'n' Spike Golf Green Roller and your move to smoother, faster, more consistent putting Greens.

The following operation and maintenance manual has been prepared for use with the R52-TC-2 Golf Green Roller.

It is intended as a guide and supplemental updates to the manual may take place at a future date, without prior notice.

This machine is engineered to be simple to operate and easy to maintain.

If you have any questions or concerns that this manual does not address, please feel free to contact your distributor.

To check for updates to this manual please go to the Tru-Turf website www.truturf.com.

Click on OWNERS, then MANUALS, then select the model that matches your machine.

Distributor Information

Name: _____

Address: _____

_____

Telephone: _____

Fax: _____

Email: _____

Machine Information

Model. **R52-11TC-2 Golf Green Roller**

Serial No. _____

Engine No. _____

Transmission No. _____

Purchase Date No. _____

Safety Information

Safety Information

Safety is of the utmost importance when operating turf equipment.

To ensure safe operation of the R52-11TC-2 Golf Green Roller, please follow the following safety guidelines.

- Always make a pre-operation inspection before you start the engine. If this procedure is not carried out damage to property or personnel may occur.

- Keep children, pets and inexperienced personnel away from the machine. This machine should only be operated by trained and skilled personnel - check with your supervisor if you are unsure.

- Know how to stop the engine when in motion. Read and understand engine manufacturers manual, as supplied.

- Never permit inexperienced operators to use the machine. This machine requires certain knowledge and expertise to operate it; you must be a trained person to use this machine. Unskilled persons can harm themselves and others if they operate this machine.

- When lifting/raising the seat, always tilt it completely forwards until the base makes contact with the limit stops on the frame. Doing this reduces the risk of the seat falling backwards.

- Do not use in enclosed areas unless well ventilated. Carbon monoxide gases are dangerous if inhaled, it can cause death; use the machine outdoors.

- When transporting the roller, make sure the trailer lock down mechanism is secure to prevent premature release of the catch.

  If the trailer catch is not correctly engaged while towing and releases accidentally, the front of the roller can drop and come in contact with the ground, causing the machine to move dangerously in any direction, this could cause bodily injury.

  When carrying out maintenance ensure the catch is engaged correctly; if it is not the trailer arm could fly up making contact with a person(s) causing serious injury.

- **This machine is equipped with a Safety Interlock System.**
  This operates similar to Ride On Mowers where if the operator attempts to leave the seat while the engine is running and has not fully engaged the parking brake the engine will stop.

- When engine is running, always keep hands and loose clothing away from rotating shafts, chains and sprockets in the transmission area.

  If hair, clothing or loose objects become entangled on a rotating shaft serious bodily injury could occur. Stop engine before opening safety cover fitted to the transmission area.

Never ride on the machine when machine is being towed.

Operator: remember it is your responsibility to be aware of your surroundings.

To avoid accidents, think safe and operate safe.

When stopping and before getting off the machine always apply the Park Brake.

Warranty

Universal Conditions

Tru-Turf Pty. Ltd. (Tru-Turf) will repair or replace any item or part of a Tru-Turf Golf Greens Roller that is defective in workmanship or material for a period of twenty four (24) months or unless otherwise stated, from the date of delivery of the new product to the original end user. Items identified as warrantable will be repaired or replaced by an approved Tru-Turf Dealer.

Products Protected By This Warranty

This Warranty relates to the following products manufactured by Tru-Turf, listed by model series;

a. GR, RS, RB, R52 Series Golf Greens Rollers.

b. TR66 Series Triplex Roll 'n' Spike heads and mower attachment hardware.

c. SR72 Sports ground roller.

d. MT5000 Series Totes are covered for a period of twelve (12) months.

Ensure that your Dealer has completed and submitted the Online Warranty Registration and Inspection Report Form applicable to your unit.
This will ensure that it has been sent directly to Tru-Turf for registration.

Parts Warranted by OEM Suppliers to Tru-Turf

Specific component parts supplied to Tru-Turf Pty. Ltd. by OEM suppliers are covered by that supplier's Warranty. These parts and components include Eaton Transmissions, Honda Engines, Sevcon & Curtis Controllers & Foot Pedals, Falk Gearboxes & Electric Motors. **Only Tru-Turf manufactured parts qualify for the twenty four (24) month warranty.**

Normal Wear and Tear

Tru-Turf will not repair or replace parts that are subject to normal wear and tear and or that are subject to regular maintenance intervals as specified in the product Operator's Manual. These parts include, but are not limited to, oils, filters, tyres, shafts, bearings, blades, spikers, slicers, brakes, belts, hoses, spark plugs, drive chains, sprockets, drive rollers & smoothing rollers.

Other Items Not Covered By This Warranty.

Tru-Turf will not repair or replace any item that has been damaged by accident, lack of reasonable care and protection or lack of suitable storage.

Tru-Turf will not warrant parts that have been altered or modified, nor aftermarket parts fitted without written Tru-Turf approval. Tru-Turf will not warrant used parts that are installed in place of failed parts.

Tru-Turf will not warrant parts that have not been installed by an approved Tru-Turf dealer, nor will Tru-Turf warrant parts that have not been maintained per the Operator's Manual.

The product is to be made available for Warranty repairs at the approved Tru-Turf dealer's premises or by arrangement with the approved dealer.

Service calls, overtime-labour rates and freight costs related to the return of the faulty product to Tru-Turf or its agents are not included.

Tru-Turf shall not be liable for any consequential loss, damage or costs incurred by or incidental to the failure of any new part supplied with the original purchase or any new part supplied as a replacement for any failed part.

Ensure that your Dealer completed and submitted the Online Warranty Registration and Inspection Report Form applicable to your unit. This will also ensure that it has been sent directly to Tru-Turf for registration.

This record must be referred to along with the reasons why the purchaser believes that the product or a part is defective in the categories of faulty material or workmanship.

Acceptance or rejection of the Warranty Claim is entirely at the discretion of Tru-Turf or their OEM Suppliers who warrant their own part/s.

The Warranty Registration and Inspection Report Form along with the TRU-TURF Pty. Ltd. Warranty Terms & Conditions statement are available for viewing, download or printing as a ready reference by simply clicking the link provided on our website.

The Warranty Registration and Inspection Report Form must be signed by both the Dealer Rep and the Customer and returned or any warranty claim/s will be denied.

No person or organisation has the authority to modify the terms or conditions or limitations of this Warranty without the written consent of Tru-Turf.

Assembly

Initial Assembly

When you receive the crate, the machine will be broken down into components ready for assembly. If you run into any problems during assembly, please feel free to call your local distributor or agent.

List of Components

QTY	Description
1	Operation, Maintenance and Parts Manual
1	Machine Frame/Body
1	Drivers Seat
2	Armrests
4	$^{5}/_{16}$" x $^{3}/_{4}$" UNC Bolts
2	Tires mounted on Wheel Rim
1	Steering Joystick
1	Dampener Strut (attached to main body end)
1	Left-side Trailer Arm
1	Right-side Trailer Arm
2	30mm External Circlips
1	Drawbar Coupling Assembly
2	$^{3}/_{8}$" x $1^{1}/_{2}$" UNF ZP Bolts
2	$^{3}/_{8}$" UNF Nyloc Nuts

Assembly

Assembly Procedure

Step 1: Mounting the seat to the seat base.

- Fit the armrests to the seat pan using the supplied screws, make sure the screws are all tightened.
- Place the assembled seat on the seat base plate and use the four 5/16" x 3/4" UNC bolts supplied to fasten the seat to the seat base.

Step 2: Mount the steering joystick to the steering shaft.

- Select the steering joystick.
- Slide the joystick into the slot on the top of the steering shaft, already installed in the steering column directly in front of the foot pedal controls, insert the 3/8" bolt into the bottom bolt hole, select a comfortable operating position, joystick forward for extra operating room or back for less, once determined insert the other 3/8" bolt into the upper hole and tighten both bolts securely.

Step 3: Attaching the left-hand trailer arm to machine body.

- Locate the trailer arm support axle 30mm in diameter (1¼") which extends out on the left side of the machine, remove the circlip from the support axle. Oil machined portion. Slide the left hand side trailer arm, onto the axle, replace the circlip, ensuring the circlip is located in the groove correctly.

Step 4: Attaching dampener strut and right hand trailer arm.

- Locate the trailer arm support axle 30mm in diameter (1¼") which extends out on the right side of the machine, remove the circlip from the axle. Hold the right side trailer arm in the vertical position and slide it part way onto the axle. Locate dampener strut, remove packing from the unattached end.
- Apply thread lock "Loctite" to the M10 bolt attached to the dampener strut. Screw the M10 bolt into the strut support on the trailer arm.
- If necessary use a soft headed hammer and tap the trailer arm onto the axle until the circlip groove is revealed, fit the circlip, ensuring it is located in the groove correctly.

Step 5: Attaching draw bar to trailer arms.

- Locate the draw bar assembly.
- Gather the ends of the right and left trailer arms.
- Place the draw bar assembly between the trailer arms and align the holes, ensure the bend is upwards.
- Place one 2½" x 3/8" bolt through each hole, fit 3/8" Nyloc nut to each bolt and tighten securely.
- Test to ensure the trailer catch is correctly locking the trailer arms in the down position and the catch locking pin fits correctly when transporting the roller, for safety.

Step 6: Attaching wheels to trailer arms.

- Locate the two wheels for the left and right side trailer arms.
- Check tires for the correct air pressure, approximately 18psi. Do not exceed this pressure. The tires act as the suspension, hence the low P.S.I.
- Remove wheel nuts from both hubs, slide wheels onto hub with air valves facing outwards. Replace wheel nuts and tighten securely.
- Ensure the taper on the nuts, mate into the wheel tapers correctly.

Assembly

Step 7: Correct dampener strut operation

- When the roller is in the trailing position:
  1. carefully hold the draw bar assembly,
  2. lower machine until the front rests on the ground,
  3. release the locking catch,
  4. gently with a firm grip begin to raise the draw bar,
  5. when it has travelled sufficiently the dampener strut will take over and prevent the trailer arms rapidly rotating on it's axle, allowing the roller to lower to the surface gently.

This prevents the operator from being injured.
When the roller is resting on the ground push the trailer arms back gently, (do not use excessive force) until the trailer arms will travel no further.
The dampener strut is designed to hold the trailer arms back behind the operator with the wheels off the ground.

Step 8: Replace engine oil

- A tag is placed on the engine's On/Off switch indicating you must fill the machine with oil prior to operation. Low oil level will cause the engine to stop on steep hills, the engine cut off safety switch is designed this way to protect the engine from damage if low in oil.

- The oil in the engine upon delivery (if not pre-delivered) is to prevent the inside of the engine from corroding, replace it with the correct engine oil, as per the manufacturers specifications.

Step 9: Transmission oil tank breather.

- Unscrew the plastic plug if fitted from the top of the tank and replace it with the anti-splash breather supplied.
  Seal damage and oil leakage will occur if the breather is not installed.
  If this is not done damage to the seals in the transmission will occur.

Step 10: Lubricate smoothing head pivot bearings.

- There is a grease nipple or zirk located on both smoothing head centre ball joint swivels.
  Apply grease to lubricate fittings.

- When rolling of the green is completed, move the roller onto the fringe, stop the engine, lock the trailer into the towing position, connect it to the towing vehicle then move off to the next green to be rolled.

Step 11. Check.

- Oil filter/housing for leaks & tightness.
- Check all oil line fittings for leaks & tightness.
- Check to ensure nothing is chaffing the oil lines, eg. Transmission cover.
- Check bolts fitted to the oil filter housing, for tightness.

Do not put the trailer down into the towing position on the green; damage may occur to the green from the roller tires and body.

Remember turn off the fuel cock whilst towing the roller

Operation procedures

Operation procedures

Pre-operation checks

- Check engine as per Honda manual.
- Ensure steering joystick has no looseness.
- Check that foot pedal depresses under normal foot pressure in both directions and returns to the neutral position. (Similar resistance to a motor vehicle clutch). If this action is not smooth, check the yoke and transmission struts for correct operation.
- Ensure that the draw bar locking catch mechanism is securely locked to the main draw bar and the safety pin is fitted when trailing the roller.
- Check and tighten grub screws fitted to the end bearing lock rings on the rubber coated drive roller and the spiker shaft bearings & pivot bearings on each smoothing head.
- Grease lightly bearings fitted to drive roller, spiker shaft and Smoothing Head pivot bearings. Replace plastic caps if fitted.
- Grease rod ends, sparingly.
- Check tire pressure for proper operating pressure (18psi). Do not over inflate.
- Check for oil and fuel leaks - rectify before using machine.
- Lubricate the drive chain with a suitable chain lubricant.

Standard operation procedures

- Inspect and check that the roller is serviceable prior to departing from workshop.
- Use a suitable towing vehicle to move roller from green to green.
- Maximum recommended towing speed would be equal to a motorized golf buggy. Approximately 4mph/7kph. Towing at excess speed or across rough terrain may cause damage to the machine and trailer.
- When approaching the green do not tow the roller onto the green to set up, put the roller on the fringe of the green. Put trailer in the up position, start up the roller and drive it onto the green.
- Greens can be rolled in any direction; take care to ensure there are no crease lines produced on the surface.
- It is recommended that you place the smoothing head rollers on the high side of the green when rolling. This increases the weight on the rubber drive roller and gives better traction, it also reduces slipping or spinning of the drive roller on the green, depending also on the operators ability.
  Whilst becoming familiar with the roller, set the throttle at about $^{1}/_{2}$ - $^{3}/_{4}$ speed. Press the left or right foot pedal down gently but not suddenly.
  Be smooth with your action, hold in this position until nearing the edge of the green, then take your foot gently off the pedal, the roller will come to a stop.
  Rest your other foot on the opposite pedal and gently apply the pressure to the pedal.
  It then starts to move the roller in the opposite direction. Once again be gentle with the pedal, but not sudden.
  By using the left and right pedal in this manner, will ensure there is no damage to the green and less wear and tear on the equipment and operator.
- The correct procedure for rolling the green is:

  (a) Select the correct direction to roll the green, remember this roller can roll the greens in all directions.

  (b) Start on one side of the green and work your way across the green in a zigzag fashion, slightly overlapping each lap you roll: this makes sure you don't miss any part of the green and all of the green is rolled. Avoid coming back across the green to roll missed areas if possible. You should be able to complete the rolling of 18 greens in the same time or quicker than by mowing using a triplex mower.

Operation procedures

- When rolling of the green is completed, move the roller onto the fringe, stop the engine, lock the trailer into the towing position, connect it to the towing vehicle then move off to the next green to be rolled. Do not put the trailer down into the towing position on the green; damage may occur to the green from the roller tires and body.

- Remember turn off the fuel cock whilst towing the roller.

This machine is equipped with a Safety Interlock System.
This operates similar to Ride On Mowers where if the operator attempts to leave the seat while the engine is running and has not fully engaged the parking brake the engine will stop.

Park brake

- The park brake lever operates on an over centre principal.
- To engage the park brake, pull the park brake lever fully up and back.
- The park brake lever will remain in this ON position.
- To disengage the park brake, push the park brake lever fully forward and down.
- The park brake lever will remain in this OFF position.
- Always operate the roller with the park brake OFF.

Caution: Do not operate the roller with the park brake engaged as this will damage park brake components.

Starting the Engine
The engine will not start unless the Park Brake lever is in the fully engaged or On position.

Refer to the included Honda user manual for correct engine starting and running procedure.

Points to remember

- Make sure the roller is serviceable before rolling.
- Start rolling from the fringe of the green.
- Smooth operation on the foot pedals.
- Pick a point on the other side of the green to roll to.
- Do not look at the green close to the roller; it makes it difficult to steer the roller straight; look well ahead.
- Use 1/2 throttle until you are proficient at operating the roller.
- Once you choose your rolling line hold the joystick steady, correcting direction gently as required.
- Move the steering joystick a little at a time to change direction; excessive movement of the joystick makes it difficult to maintain a straight line.
- Roll in straight lines.
- Do not leave the engine running with the roller parked on the green; the engine vibration will cause roller depression marks on the green.
- Move off the green when rolling is complete before putting the trailer in the down position.
- When rolling steep greens and the engine stops, check engine oil level. The engine is fitted with a safety switch; when the engine oil level is low the engine will stop.

When stopping and before getting off the machine always apply the Park Brake.

Maintenance

Maintenance

- Stop engine before performing any maintenance.
- Service the Honda engine according to the manufacturers maintenance schedule.

Removing / Replacing Transmission Cover

WARNING! The **engine must be stopped** before performing the following procedure.

To remove the transmission cover.

- Insert the key supplied with the machine into the latch at the rear of the transmission cover.
- Rotate the key counterclockwise (to the left) until it stops, there will be some initial resistance encountered, this is normal.
- Lift the rear of the transmission cover up enough to clear the latch bracket, then carefully slide the transmission cover towards the rear until it stops.
- Before lifting the transmission cover away check the locating pin at the front of the transmission cover is clear of the rubber grommet in the transmission cover.

To replace the transmission cover.

- Lower the transmission cover over the transmission and onto the body.
  To prevent the transmission cover making contact with the locating pin while lowering the transmission cover ensure the front inside of the transmission cover is held against the front of the engine coupling.
- After the transmission cover is lowered, slide it forward and at the same time check the locating pin is aligning with the rubber grommet at the front of the transmission cover, continue to slide it forward until it stops.
- Lift the rear of the transmission cover up to clear the latch bracket and at the same time slide the transmission cover forward. Now lower the rear of the transmission cover onto the body.
- Insert the key supplied with the machine into the latch at the rear of the transmission cover.
- Rotate the key clockwise (to the right) until it stops, there will be some resistance encountered in the last stage of rotating the key, this is normal.
  It is essential that effort is applied to overcome the latch resistance as this is the point at which the latch mechanism pulls the transmission cover down slightly onto the body. This ensures the transmission cover can not become loose.

Testing Park Brake

1. Stop the machine safely on level flat ground & engage the park brake.
2. Switch off & dismount from the machine.
3. Try to push the machine manually.

Result: Park brake must prevent machine from moving. If machine moves, parking brake needs to be adjusted. Adjust park brake by rotating the knob on the end of the lever in a clockwise direction when looking directly at the end of the lever.

Adjusting the Pedals

If the direction foot pedals become unbalanced for any reason it can be adjusted as follows.
Remove the transmission cover.
It will be necessary to have the engine running while performing this process, take care to keep all limbs and clothing well away from the rotating shaft and coupling.

- Using the correct spanner release the lock nut on the gas strut.
- Rotate each strut to return the pedals to a central position while at the same time ensuring that the transmission is not engaging when in the central neutral position.
- Reset the locknut after performing this procedure to both struts.

Maintenance

Transmission (pump, Eaton 11)

- Initially, change the oil at 50 hours running time, then;
- Change oil every 500 hours or annually, whichever occurs first.
- Change hydraulic oil filter every 500 hours or annually, whichever occurs first.
- Only use the manufacturer's recommended replacement oil filter .
- When fitting the filter, follow the instructions supplied with the filter. This will ensure that the filter remains tight and that no leaks occur.
- Check all hard line oil pipes for rubbing, excessive vibration, leaks and tightness on a regular basis.
- Check transmission oil level on oil tank sight glass. Oil level should remain at a minimum of 25mm (1") and at a maximum of 40mm (1.5") from the top of the tank.
- Oil Capacity including filter is 6 liters or 5.3 U.S. quarts. For the ultimate performance we use and recommend the Penrite synthetic 5 SAE 5W-60 transmission oil. (Part No. R5226)

Storing

- It is important to store this roller in the towing position. This ensures the trailer strut is in the closed position, protecting the shaft from corrosion, then failure and also the weight is taken off the roller bearings.

Service of the drive chain system

- Replacement - Some chains look a like, but they are not, use only the chain and sprockets recommended as per the correct spare parts number. Wrong pitch drive chain fitted will cause excessive sprocket wear and possible drive failure.
- Tensioning the drive chain - No adjustment is required; the chain tension is automatically adjusted.

Lubrication

- Lubricate drive chain with a chain lube such as ***Molykote, Innox*** or ***ChunkaRocol ITW.*** Spray on the inside of the chain so that the lubricant is forced into each roller and around each pin prior to rolling of the Greens.

Service of smoothing roller bearings

- Whilst the Roller is suspended by the Trailer, check operational smoothness of the bearings fitted to each smoothing roller by rotating the rollers by hand. If bearing tightness, roughness or excessive looseness is detected, replace the faulty bearings.

- If bearings are faulty

  (a) Remove the complete smoothing head unit assembly from the machine, undo the four swivel mount bolts on the upper body and disconnect the steering rod, wheel the roller away until the total head assembly is exposed to work on.

  (b) Remove roller shaft bolts from end plates, remove rollers from the heads.

  (c) Fit new bearings, replace rollers into the heads, lubricate shaft bolts with an anti seize compound before installing them. Tighten securely and ensure rollers rotate freely when fully tightened.

  or

  If the rollers are a sealed type remove the roller and replace with a complete new roller.

  (d) If the connecting rods are removed or lengths altered ensure they are correctly adjusted so that the three heads are parallel to each other when in the straight ahead position. Adjust if necessary

Maintenance

Changing engine oil

Change oil and service as per the manufacturers Servicing Schedule enclosed as a separate insert to this manual.

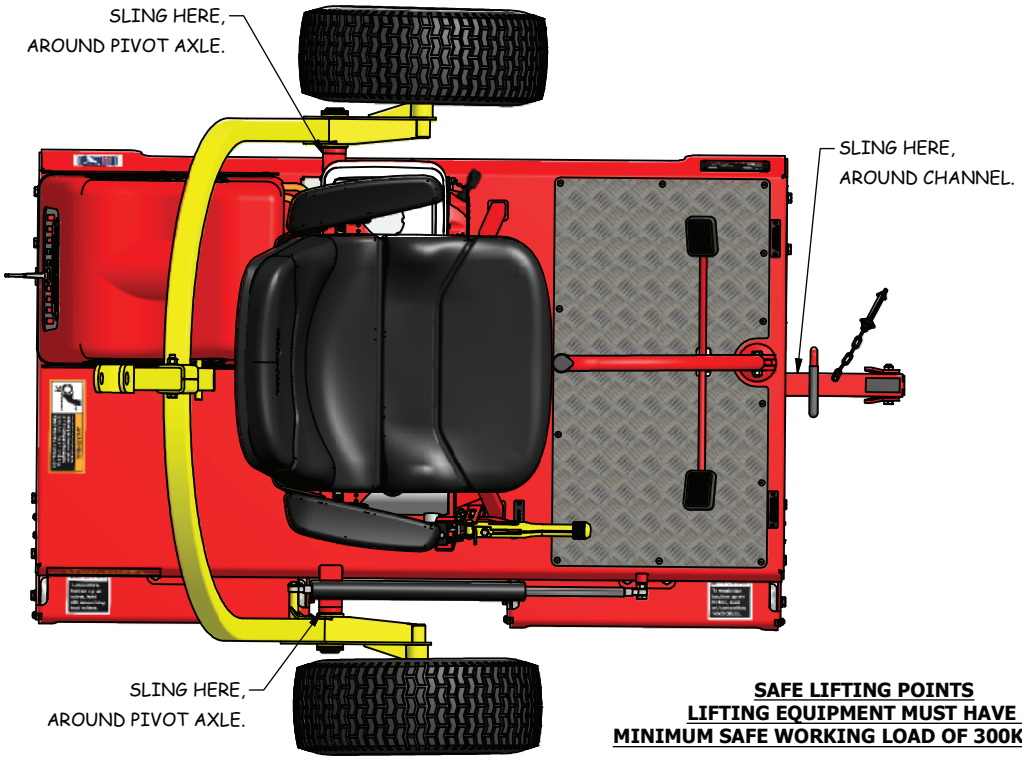
Changing transmission oil

Ongoing Maintenance, Lubricant and Replacement Schedule (below)

Note. Areas indicated with a * need to be changed when defective or as required. This may be before the recommended replacement schedule.
Please replace all parts as necessary.

You must employ safe work practises at all times when performing any assembly or service tasks on the machine. Should there be any need to lift the machine only use the points as detailed below.

Description	Pre-Delivery	Pre-Operating	12 Monthly
Check Engine oil	√	√	
Check Transmission Oil Level	√	√	
Beware of contaminants entering the transmission	√	√	
Lubricate drive chain with WD40 or equivalent	√	√	
Check Tires Max 18 P.S.I.	√	√	
Check Gas	√	√	
Check Smoothing Roller Bearing	√	√	
Check Drive Roller Bearings	√	√	
Check for loose Nuts and Bolts	√	√	
Renew Engine Oil	as per manufacturers Handbook		
Renew Transmission Oil - See page 1 for correct oil	every 500hrs or...		√
Renew Transmission Oil Filter	*		√
Renew Smoothing Roller Bearings	*		√
Renew Drive Roller Bearings	*		√
Renew Chain Tensioner Sprocket Bearings	*		√
Renew Drive Chain	*		√
Replace Foot Pedal Struts	*		
Replace Trailer Strut	*		



SAFE LIFTING POINTS
LIFTING EQUIPMENT MUST HAVE A MINIMUM SAFE WORKING LOAD OF 300Kg [660lb)

Fault Finding

Fault Finding

Roller will not move one or either way, check:

- Chain is okay
- Sprockets are not worn or slipping on the shaft
- Foot control is operating - check all arms are secure
- For Sheared Sprocket Keys
- Rubber coupling broken

Roller will not steer, check:

- Woodruff Key is in place and not sheared
- Rod ends are connected to smoothing roller head and the steering arm
- Rod ends are not broken or seized
- Centre swivel bearing on top centre of each smoothing roller head has not seized
- Connecting rod are in place and serviceable

Roller has excessive vibration, check:

- Disconnect engine-to- transmission and isolate the drive chain to determine whether the problem is in the engine or in the transmissions
- If engine is at fault contact your nearest engine agent for rectification
- If the transmission is at fault, repair or replace as necessary, or seek professional advice from a local Eaton Service Center
- Any out of alignment between engine and transmission.
- For damaged engine and transmission couplings

Smoothing rollers seized, check:

- Bearings have not seized
- Replace if necessary
- Accumulated dry debris is not locking the smoothing rollers.

Rubber drive roller will not rotate, check:

- Roller shaft end bearings have not seized
- Broken chain
- Slipping sprockets
- the Park Brake is not locked on

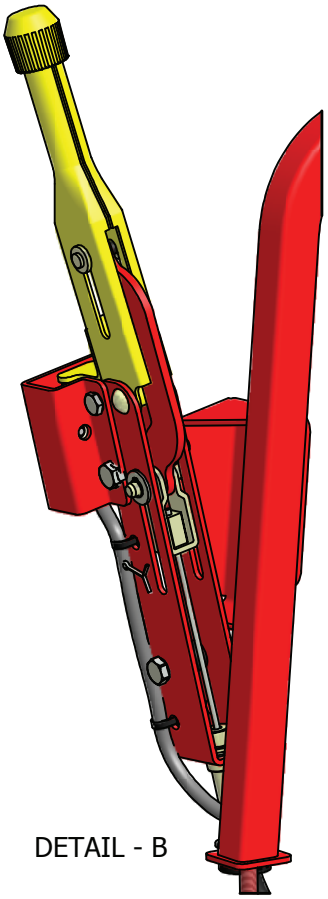
Operating Positions

R52-11TC-2 ROLL POSITIONS

R52-11TC-2 TOW POSITIONS

Park Brake

R52-11TC-2
PARK BRAKE SYSTEM



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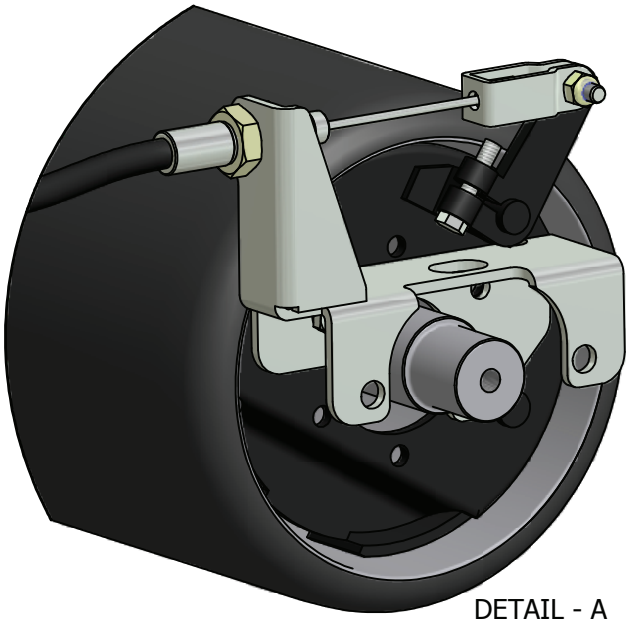

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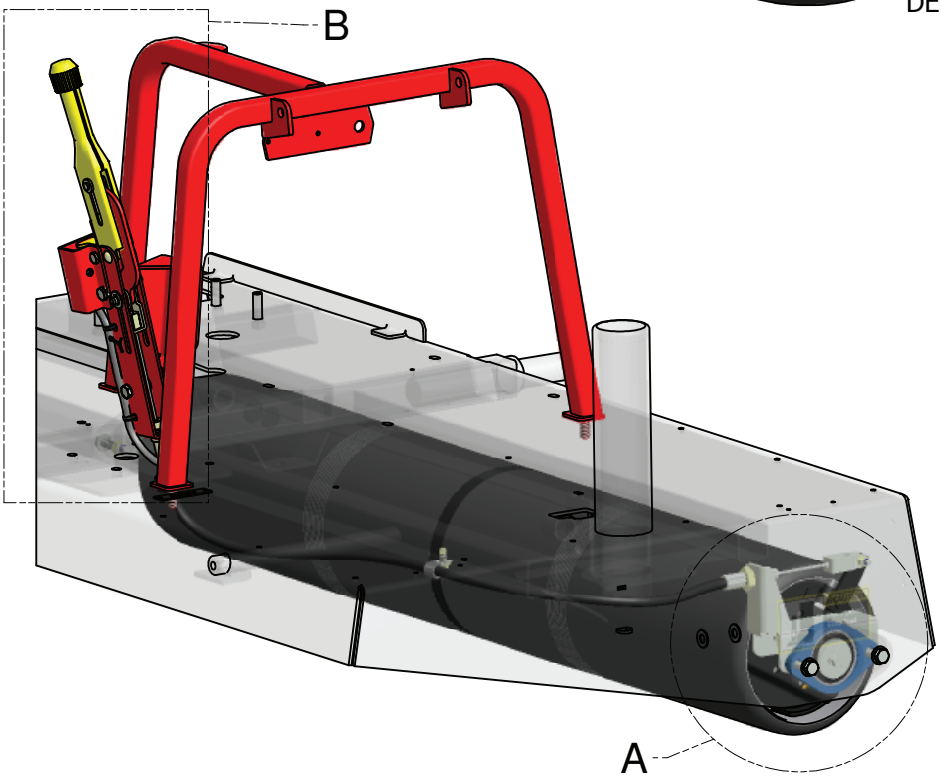
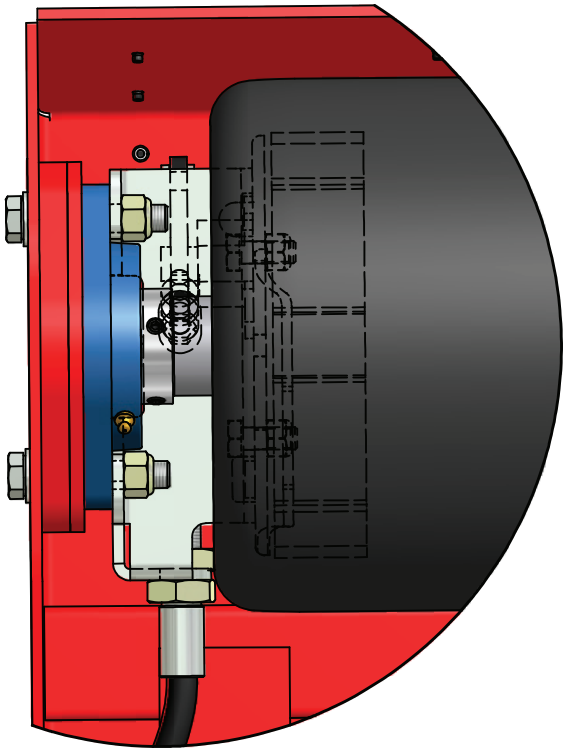
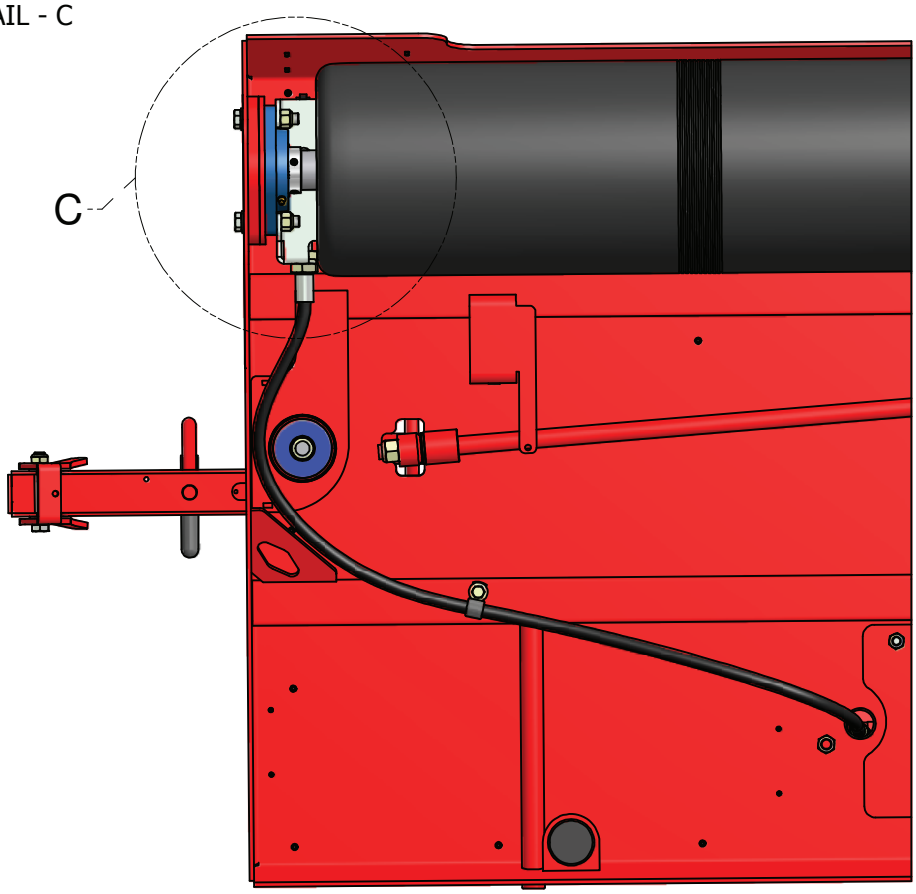


Park Brake

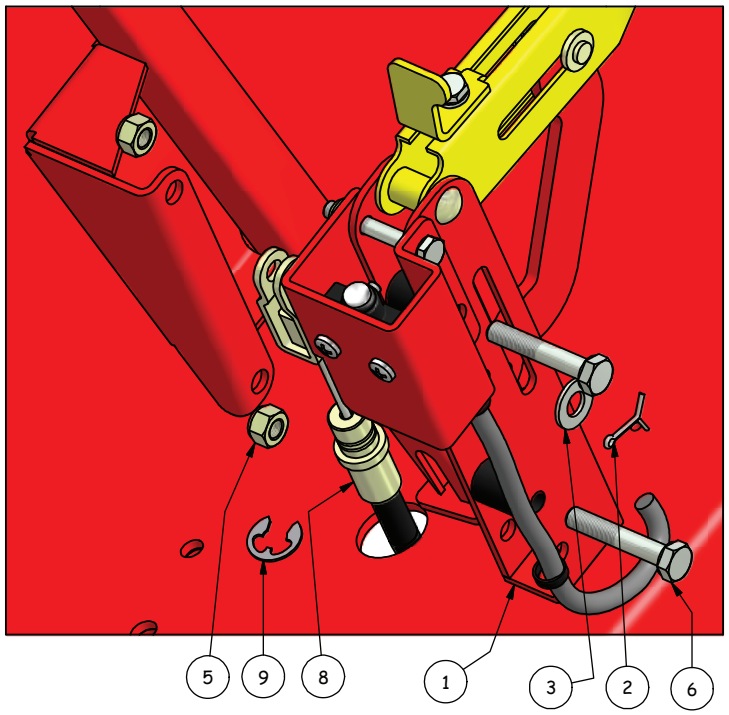


R52-11TC-2
PARK BRAKE SYSTEM

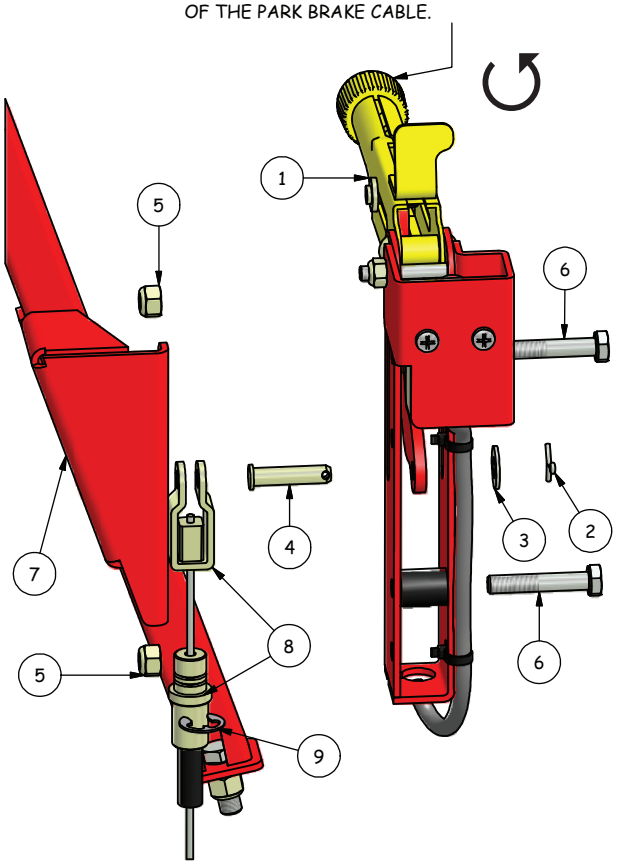
DETAIL - C

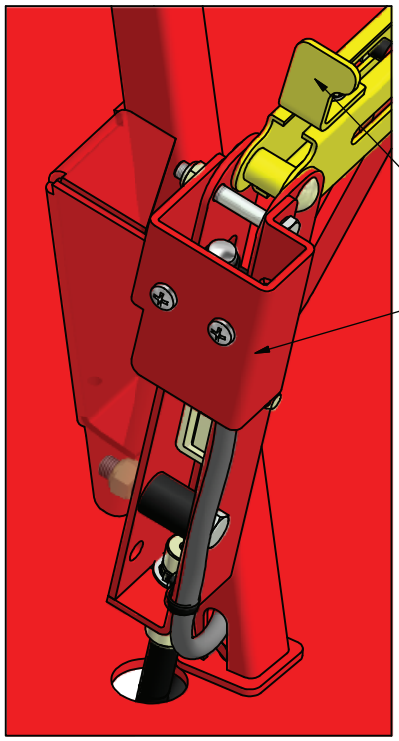


Park Brake Lever



IF PARK BRAKE IS SLIPPING. TURN KNOB IN DIRECTION SHOWN BY THE ARROW TO INCREASE THE TENSION OF THE PARK BRAKE CABLE.

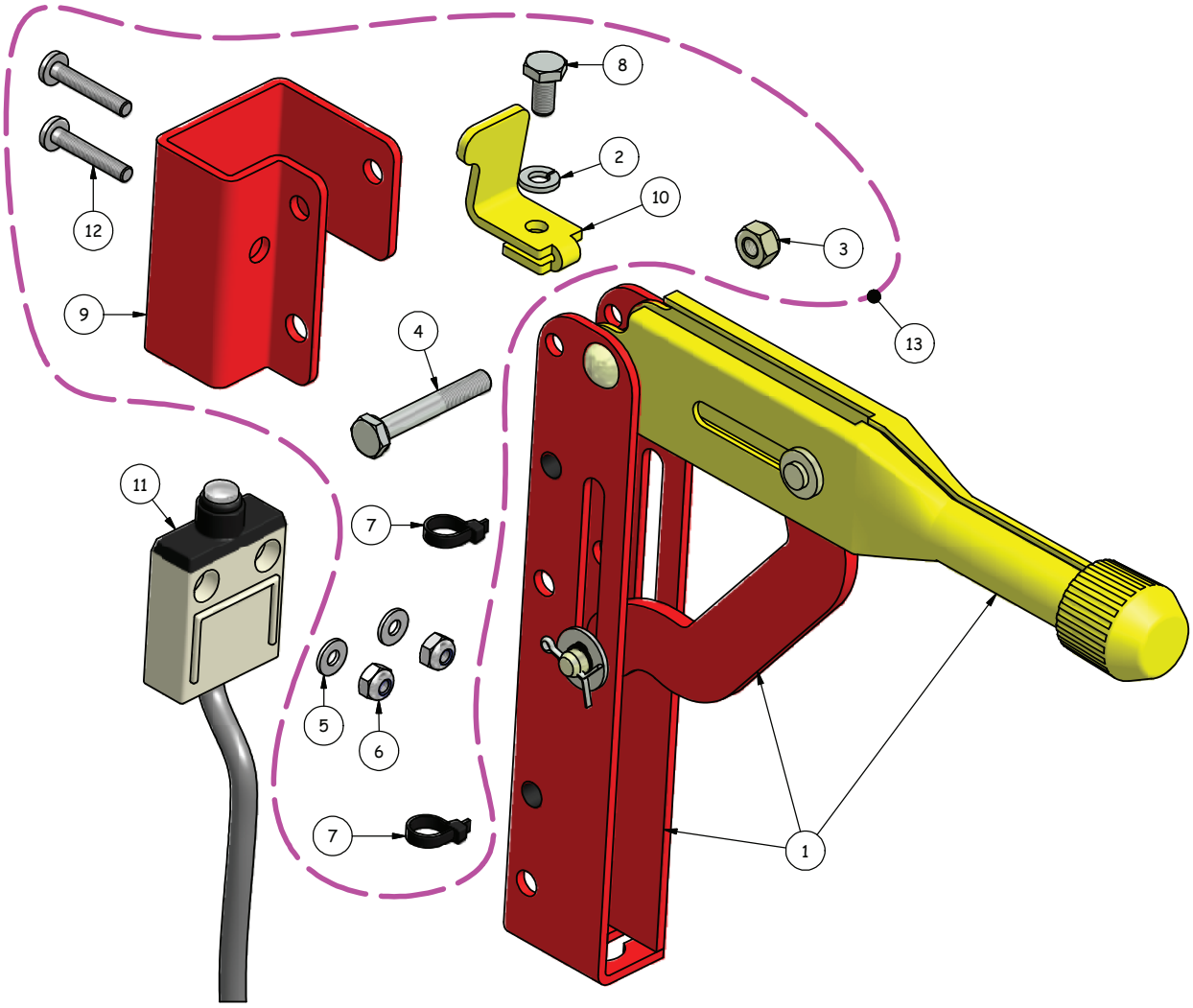




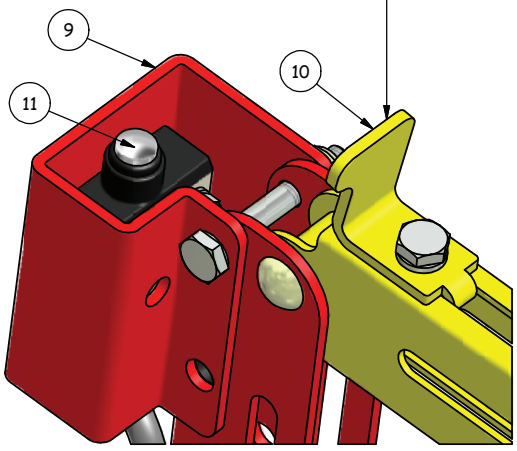
REFER TO NEXT PAGE FOR SWITCH & BRACKET DETAILS

R52-11TC-2 PARK BRAKE LEVER ATTACHING - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R7024	HANDBRAKE LEVER
2	1	R8036	SPLIT PIN M2-5X20 ZP
3	1	R8046	5/16 x 3/4 WASHER ZP
4	1	R8383	SLIDE PIN - HANDBRAKE LEVER
5	2	R8054	5/16 UNF NYLOC NUT
6	2	R8139	5/16 x 1.3/4 UNF BOLT ZP
7	1	R9090	SEAT FRAME WITH BRAKE MOUNT
8	1	T7034	CABLE ASSY - PARK BRAKE
9	1	R8349	CIRCLIP PARK BRAKE CABLE

Park Brake Lever & Switch



THIS ITEM IS SET AT THE FACTORY AND DOES
NOT NORMALLY REQUIRE SERVICING OR ADJUSTMENT.



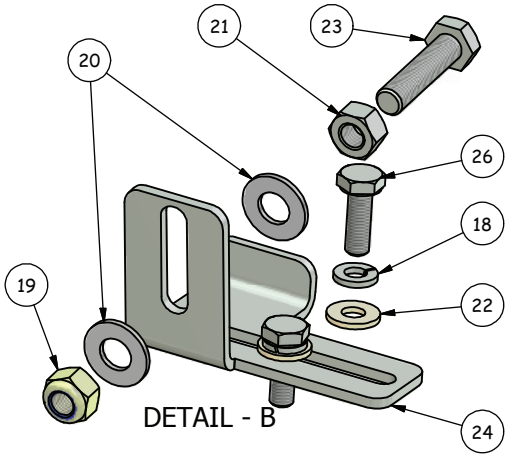
R7024 PARK BRAKE LEVER & SWITCH - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R7024	HANDBRAKE
2	1	R8050	1/4 SPRING WASHER ZP
3	1	R8053	1/4 UNF NYLOC NUT
4	1	R8061	1/4 x 1 3/4 HEX BOLT UNF ZP
5	2	R8143	3/16 x 7/16 WASHER SS
6	2	R8250	3/16 UNF NYLOC NUT SS
7	2	R8273	CABLE TIE 100 X 2.5
8	1	R8387	1/4" UNF x 1/2" HEX SET SCREW
9	1	R8392	MOUNT BRACKET - SWITCH
10	1	R8393	SWITCH ACTIVATE BRACKET
11	1	R8394	SWITCH
12	2	R8398	3/16" x 1-1/8" UNF MACHINE SCREW
13		R9096	MOUNTING KIT - PARTS AS SHOWN

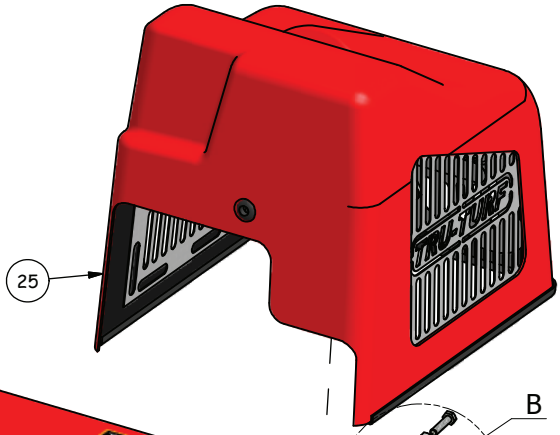
THE FOLLOWING INSTRUCTIONS MUST BE PERFORMED TO CORRECTLY SETUP THE ACTIVATING BRACKET.

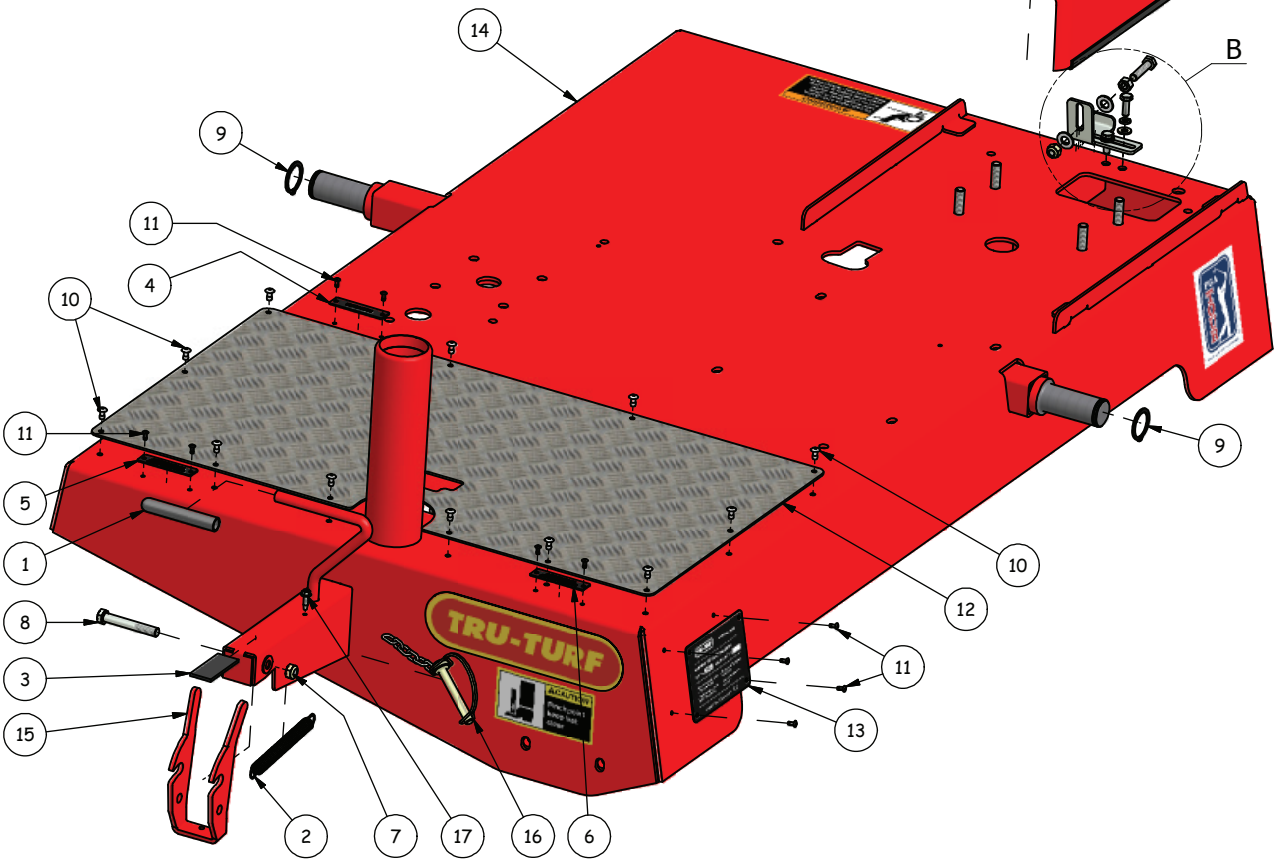
1. AFTER FITTING THE SWITCH AND BRACKETS TO THE LEVER PERFORM THE FOLLOWING STEPS.
2. ENSURE THE LEVER HANDLE IS IN THE FULLY ENGAGED POSITION.
3. SLIDE THE ACTIVATING BRACKET DOWN THE HANDLE UNTIL IT JUST MAKES CONTACT WITH THE TOP OF THE PLUNGER ON THE SWICH.
4. SLIDE THE BRACKET DOWN A FURTHER 2mm ONLY. DO NOT EXCEED THIS DISTANCE, DOING SO MAY PREVENT THE SYSTEM FROM FUNCTIONING CORRECTLY AND DAMAGE THE SWITCH.

Upper Body

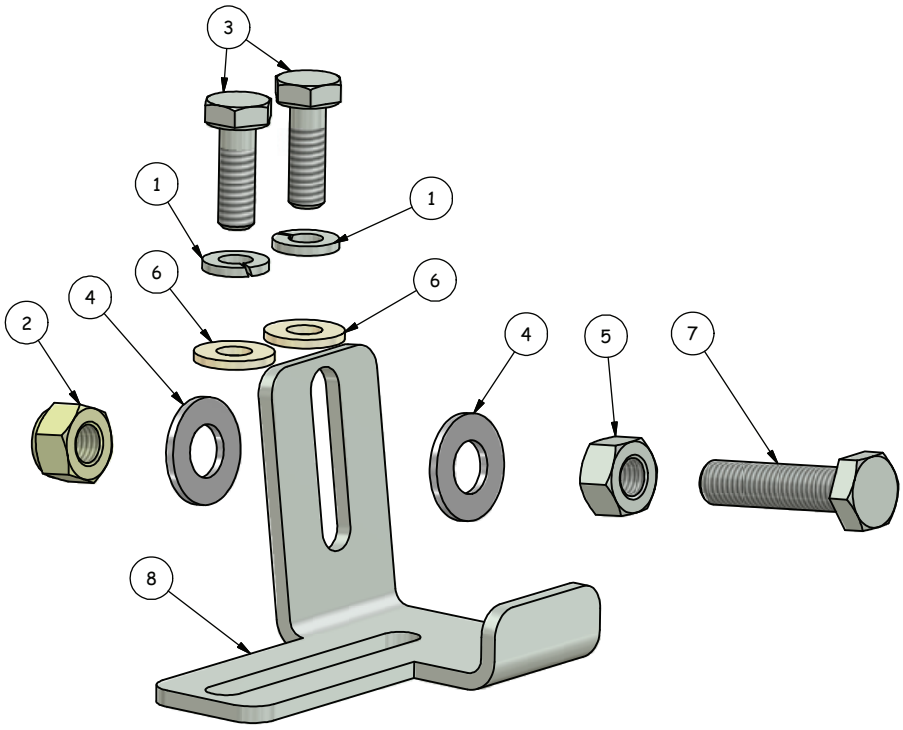
R52-11TC-2 UPPER BODY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R5014	GRIP HAND
2	1	R5049	SPRING CATCH
3	1	R5159	RUBBER TRAILER REST
4	1	R6023	PLATE PARK BRAKE
5	1	R6024	PLATE MOVE RIGHT
6	1	R6025	PLATE MOVE LEFT
7	1	R8056	3/8 UNF NYLOC T-TYPE NUT
8	1	R8072	3/8 x 2.1/2 UNF BOLT ZP
9	2	R8082	CIRCLIP EXT BLK 30mm
10	12	R8134	6-6 RIVET
11	10	R8260	RIVET 5-4 BLACK
12	1	T7002	FOOT PLATE CHECKER
13	1	T7038	PLATE SERIAL NUMBER
14	1	T7028	BODY
15	1	E7030	TRAILER CATCH
16	1	R6017	DRAWBAR SAFETY PIN & CHAIN
17	1	R8081	10-24x16 TEK SCREW ZP
18	2	R8050	1/4 SPRING WASHER ZP
19	1	R8054	5/16 UNF NYLOC NUT
20	2	R8142	5/16 x 3/4 WASHER SS
21	1	R8175	5/16 HEX NUT UNF ZP
22	2	R8200	WASHER 1/4 x 9/16 x 1/16
23	1	R8339	5/16 x 1-1/4 UNF BOLT ZP
24	1	R8341	BRACKET LATCH TRANS COVER
25	1	T7040	TRANSMISSION COVER ASSY
26	2	R8137	1/4 x 3/4 UNF BOLT ZP

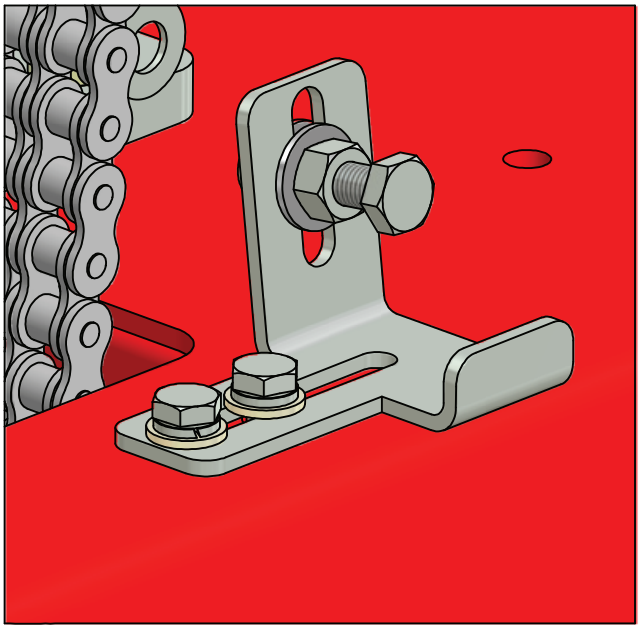






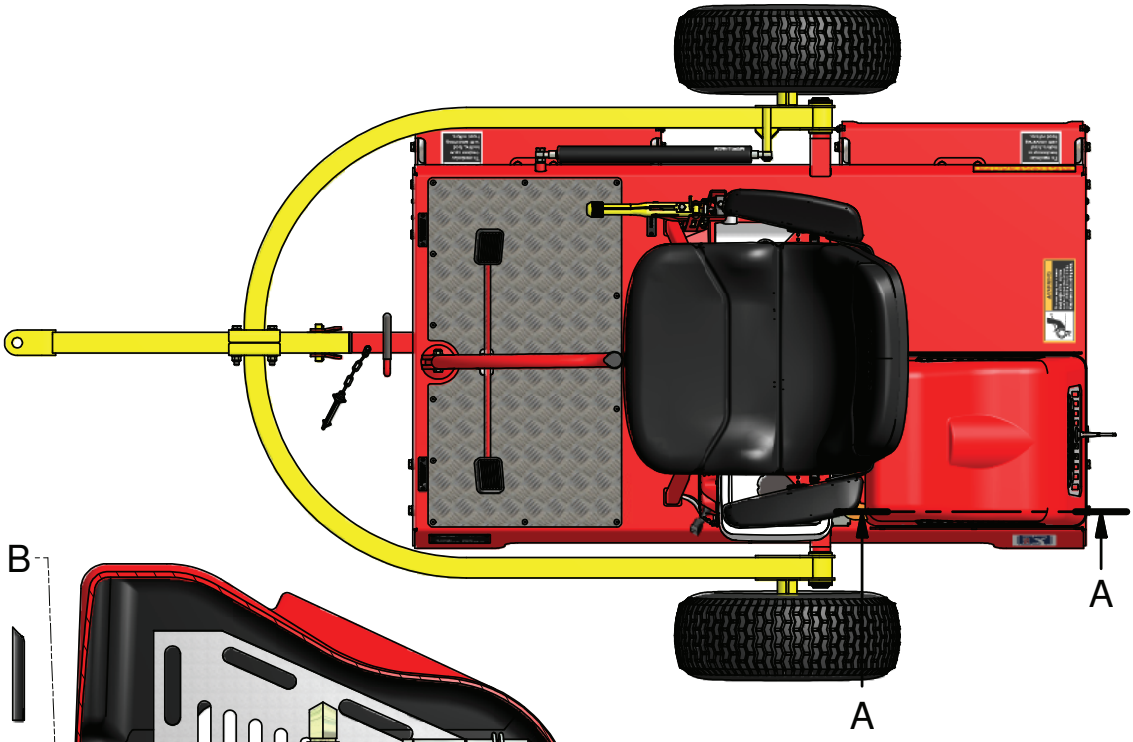
Transmission Cover Rear Latch Bracket

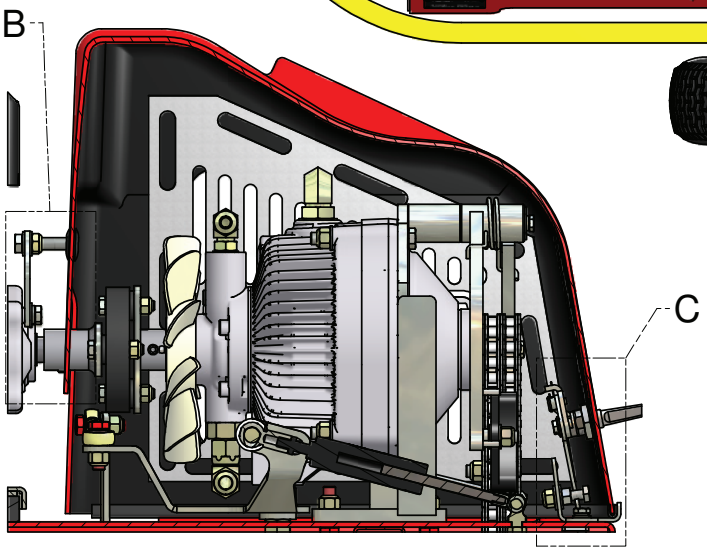




TRANSMISSION COVER REAR LATCH BRACKET ASSY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	2	R8050	1/4 SPRING WASHER ZP
2	1	R8054	5/16 UNF NYLOC NUT
3	2	R8118	1/4 x 3/4 UNC BOLT ZP
4	2	R8142	5/16 x 3/4 WASHER SS
5	1	R8175	5/16 HEX NUT UNF ZP
6	2	R8200	WASHER 1/4 x 9/16 x 1/16
7	1	R8339	5/16 x 1-1/4 UNF BOLT ZP
8	1	R8341	BRACKET LATCH TRANS COVER

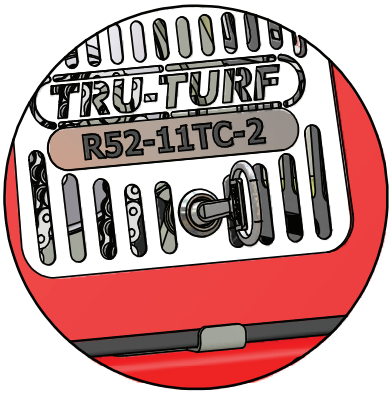
Transmission Cover Latch System

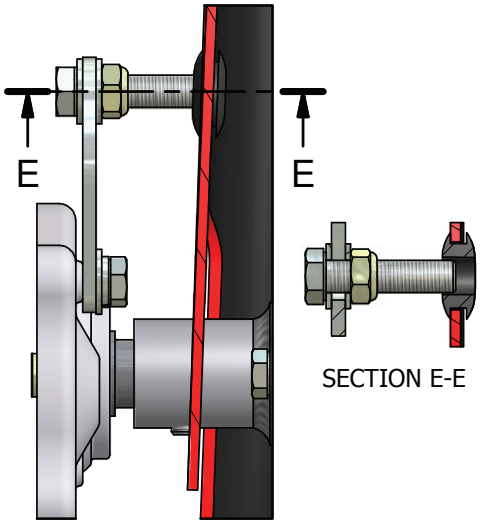




SECTION A-A

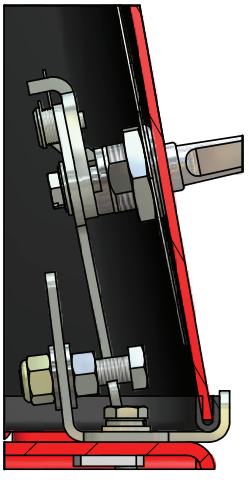
DETAIL - D



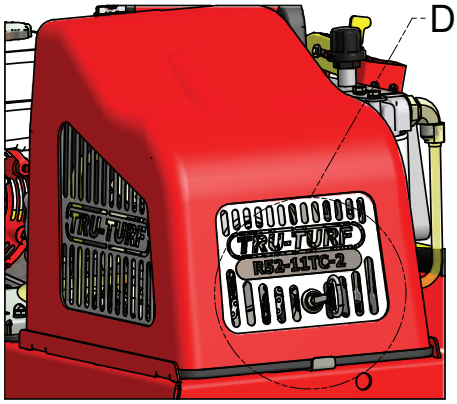


DETAIL - B

SECTION E-E

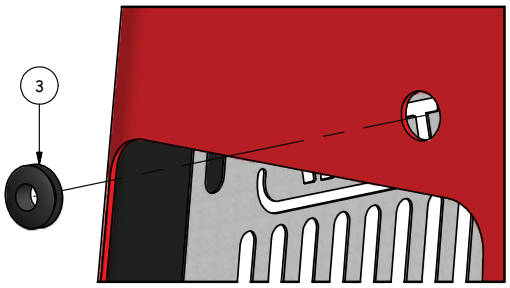


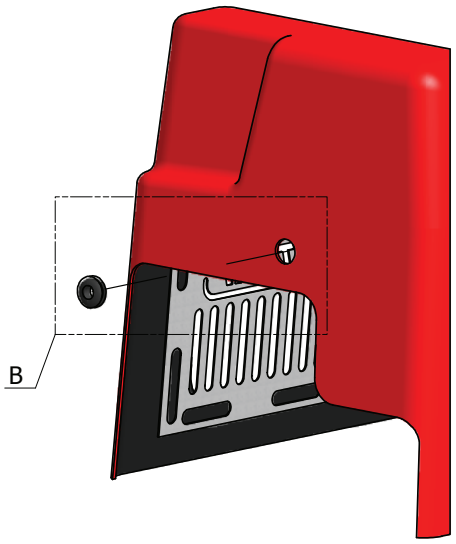
DETAIL - C



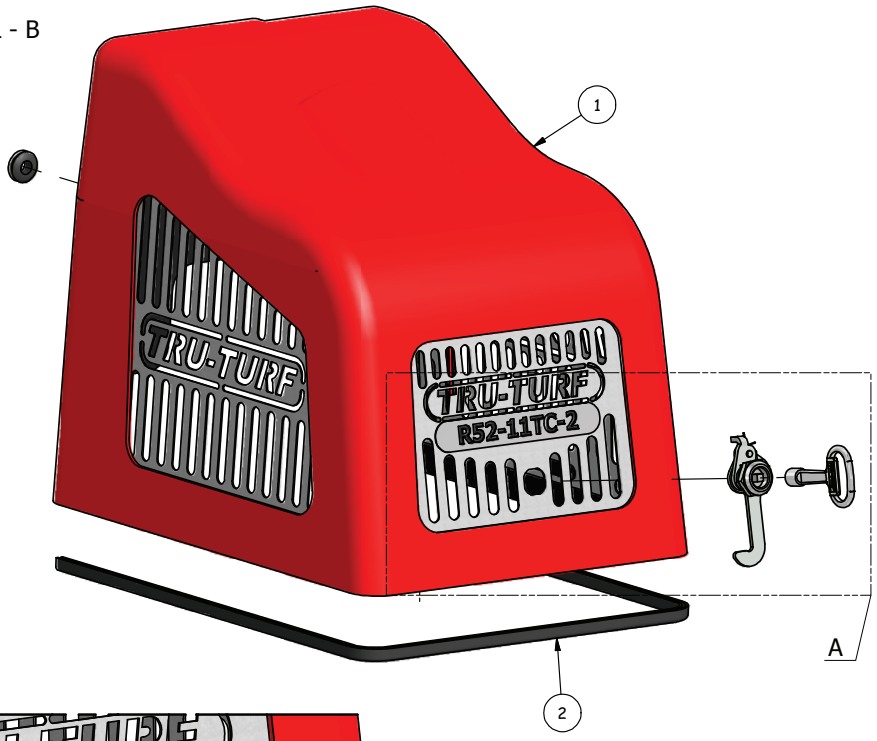
Transmission Cover & Latch

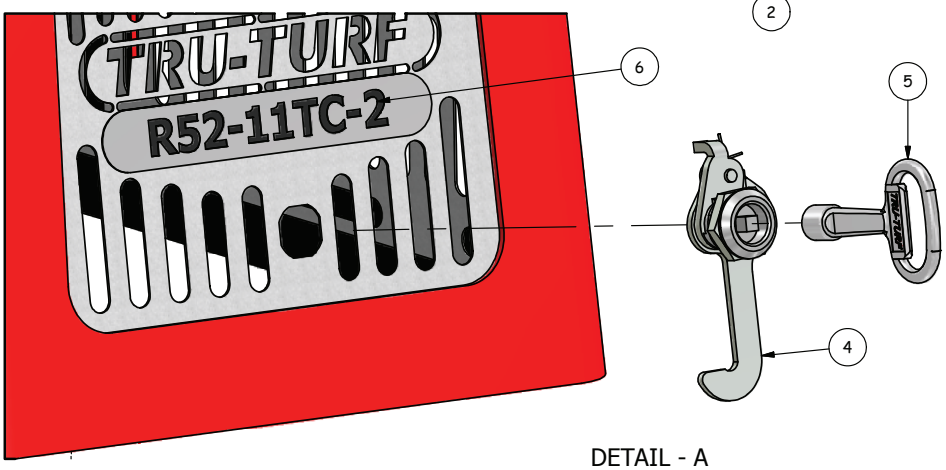
T7040 TRANSMISSION COVER ASSY R52-11TC-2 - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R9089	TRANSMISSION COVER
2	1	R5241	EDGE PROTECTOR
3	1	R8342	RUBBER GROMMET
4	1	R8343	LATCH
5	1	R8346	KEY
6	1	T7039	BADGE





DETAIL - B

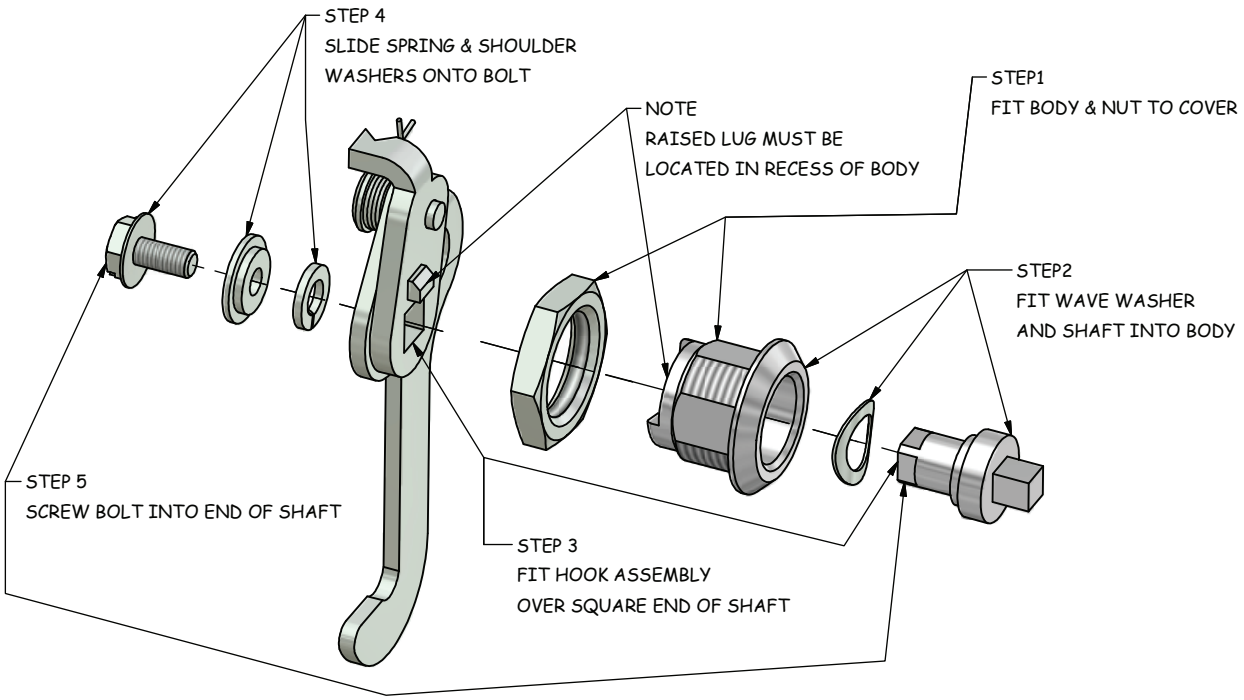


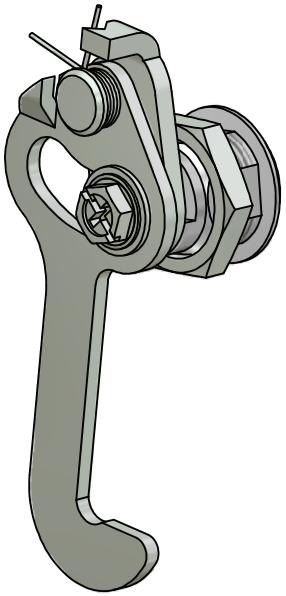


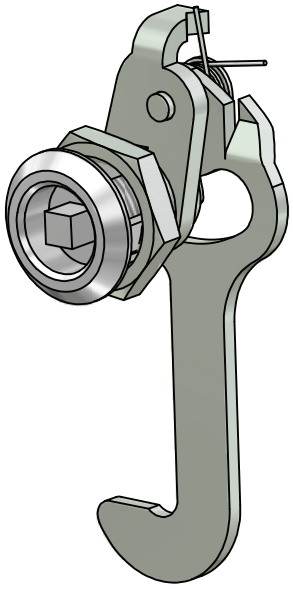
DETAIL - A

Latch Assembly

R8343 LATCH ASSEMBLY DETAIL

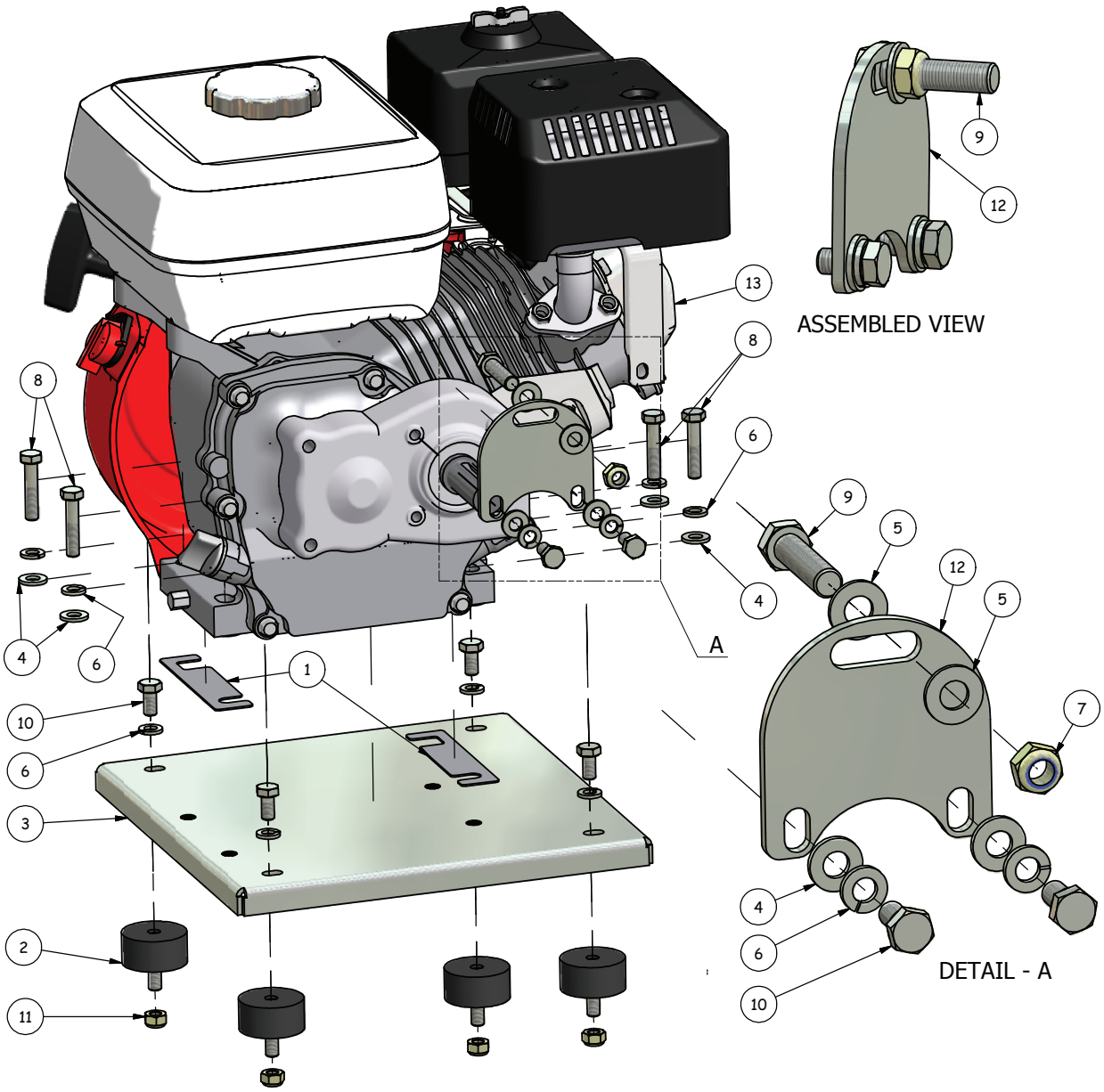






Engine

R52-11TC-2 ENGINE MOUNTING REAR - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	WILL VARY	R5085	ADJUSTING SHIM ENGINE MOUNT
2	4	R5142	RUBBER ISOLATION ENGINE MOUNT
3	1	R5149	ENGINE MOUNT PLATE
4	6	R8046	5/16" X 11/16" FLAT WASHER ZP
5	2	R8048	3/8 x 3/4 WASHER ZP
6	10	R8051	5/16 SPRING WASHER ZP
7	1	R8056	3/8 UNF NYLOC T-TYPE NUT
8	4	R8065	5/16 x 1-1/2 UNF BOLT ZP
9	1	R8070	3/8 x 1.1/2 UNF BOLT ZP
10	6	R8083	M8 x 16 BOLT ZP
11	4	R8256	M8 NYLOC NUT ZP
12	1	R8340	PLATE LOCATOR TRANS COVER
13	1	R9001	GX200 ENGINE HONDA

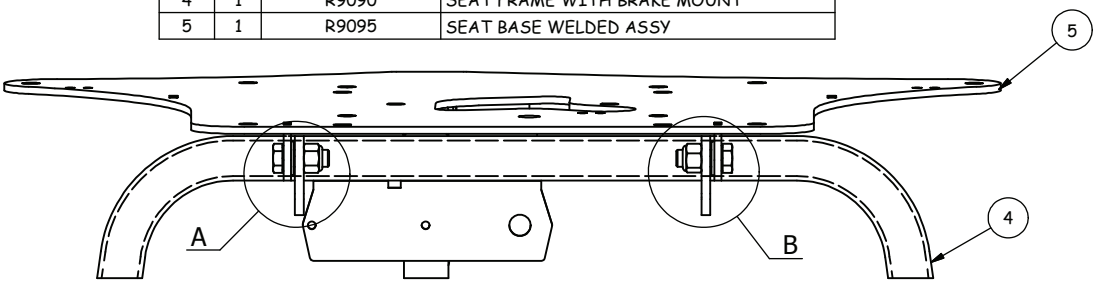


Seat & Frame

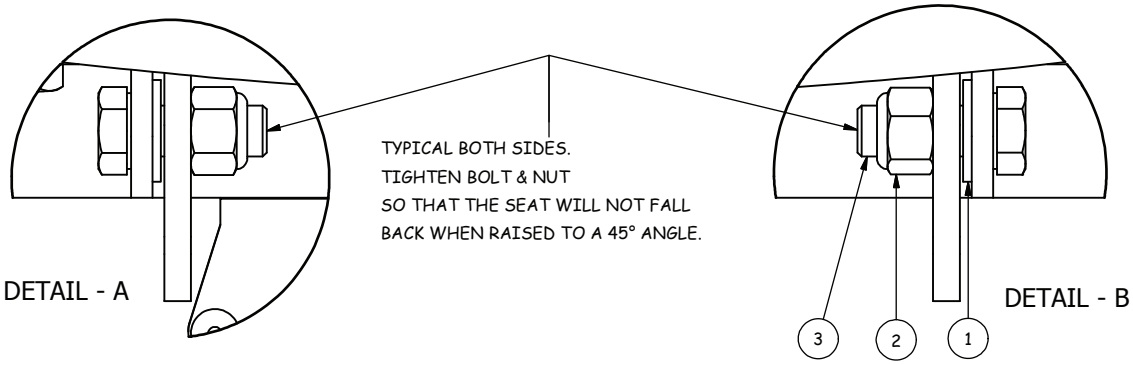
SEAT & FRAME ASSEMBLY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	E7067	LIGHT SWITCH
2	1	R5016	CATCH RUBBER
3	1	R5129	METER HOUR TACHO
4	1	R5239	LATCH HOOK
5	1	R6013	BUFFER STOP
6	2	R8048	3/8 x 3/4 WASHER ZP
7	4	R8051	5/16 SPRING WASHER ZP
8	2	R8054	5/16 UNF NYLOC NUT
9	5	R8055	3/8 UNF NYLOC NUT P-TYPE
10	2	R8067	3/8 x 1 UNF HEX BOLT ZP
11	4	R8068	5/16 x 3/4 UNC BOLT ZP
12	1	R8075	M4 x 40 COTTER PIN ZP
13	2	R8076	RIVET ALUMINIUM
14	2	R8077	5-4 RIVET ALUMINIUM BLACK
15	2	R8139	5/16 x 1.3/4 UNF BOLT ZP
16	1	R8256	M8 NYLOC NUT ZP
17	2	R8330	LED WORK LIGHT (Optional)
18	1	R9090	SEAT FRAME WITH BRAKE MOUNT
19	1	R9091	TRU-TURF SEAT C/W ARM RESTS
20	2	R8050	1/4 SPRING WASHER ZP
21	1	R8397	SEAT SWITCH
22	2	R8399	1/4" X 1/2" UNC MACHINE SREW ZP
23	1	R9092	SEAT PAN
24	1	R9098	ARMRESTS ASSY COMPLETE
25	1	R9095	SEAT BASE
26	1	R8270	LOOM FOR WORK LIGHTS

Seat Frame

R9090 SEAT FRAME ASSY & ADJUSTING HINGE BOLTS - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	2	R8048	3/8 x 3/4 WASHER ZP
2	5	R8055	3/8 UNF NYLOC NUT P-TYPE
3	2	R8067	3/8 x 1 UNF HEX BOLT ZP
4	1	R9090	SEAT FRAME WITH BRAKE MOUNT
5	1	R9095	SEAT BASE WELDED ASSY

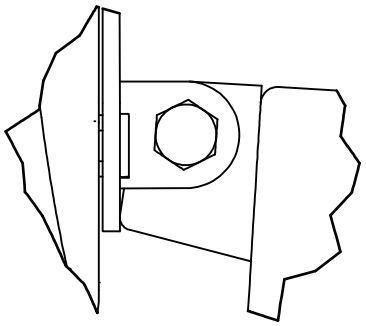


FRONT VIEW

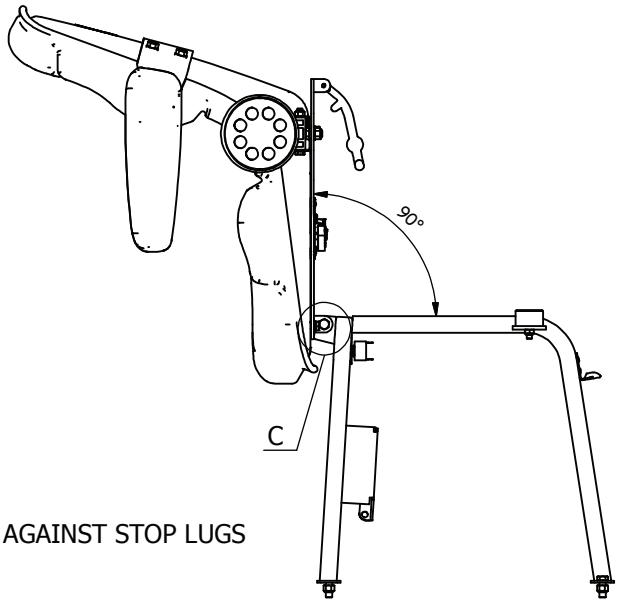


DETAIL - A

DETAIL - B



DETAIL - C

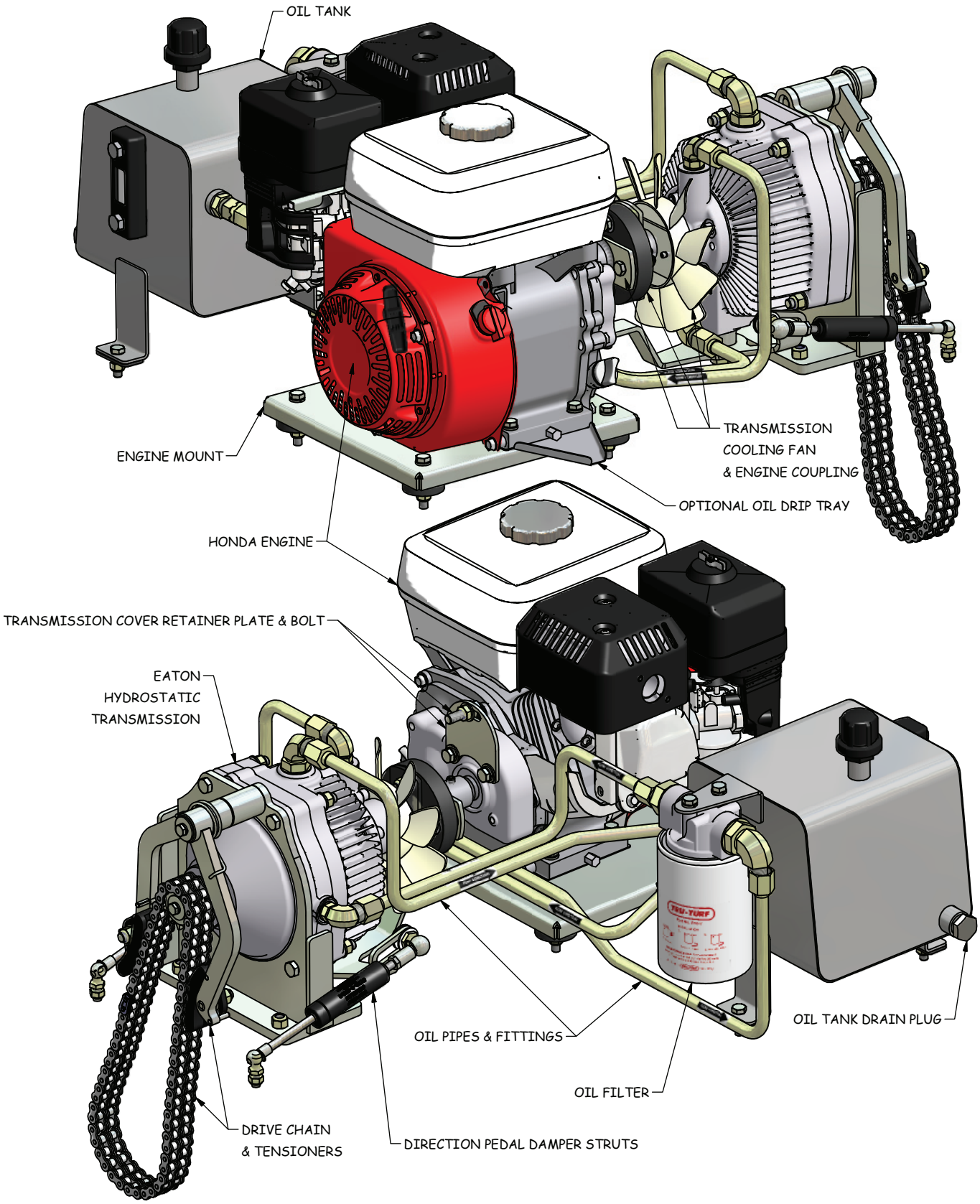


SEAT RAISED AGAINST STOP LUGS

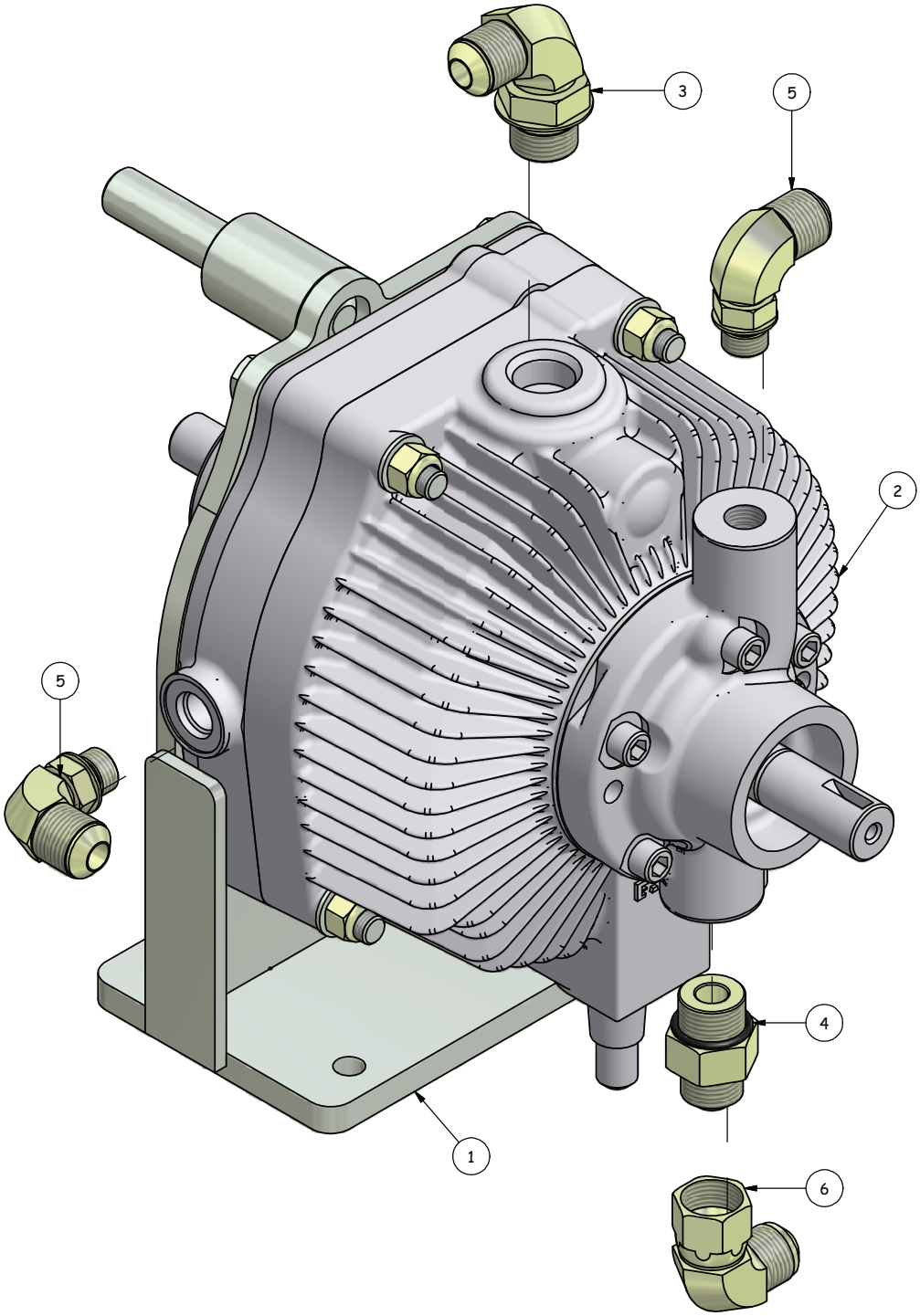
Seat

R9091 SEAT ASSEMBLY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	4	3/8UNCX0.75BLTZP	3/8-16 UNC - 0.75 BOLT ZP
2	4	R8052	3/8 SPRING WASHER ZP
3	1	R9098	ARMRESTS ASSY COMPLETE
4	1	R9094	ARMREST RH
5	1	R9093	ARMREST LH
6	1	R9097	MOUNT BRACKET ARMRESTS
7	1	R9092	SEAT PAN
8	1	R6057	STICKER TRU-TURF
9	2	R8399	1/4" X 1/2" UNC MACHINE SREW ZP
10	2	R8050	1/4 SPRING WASHER ZP
11	1	R8397	SEAT SWITCH

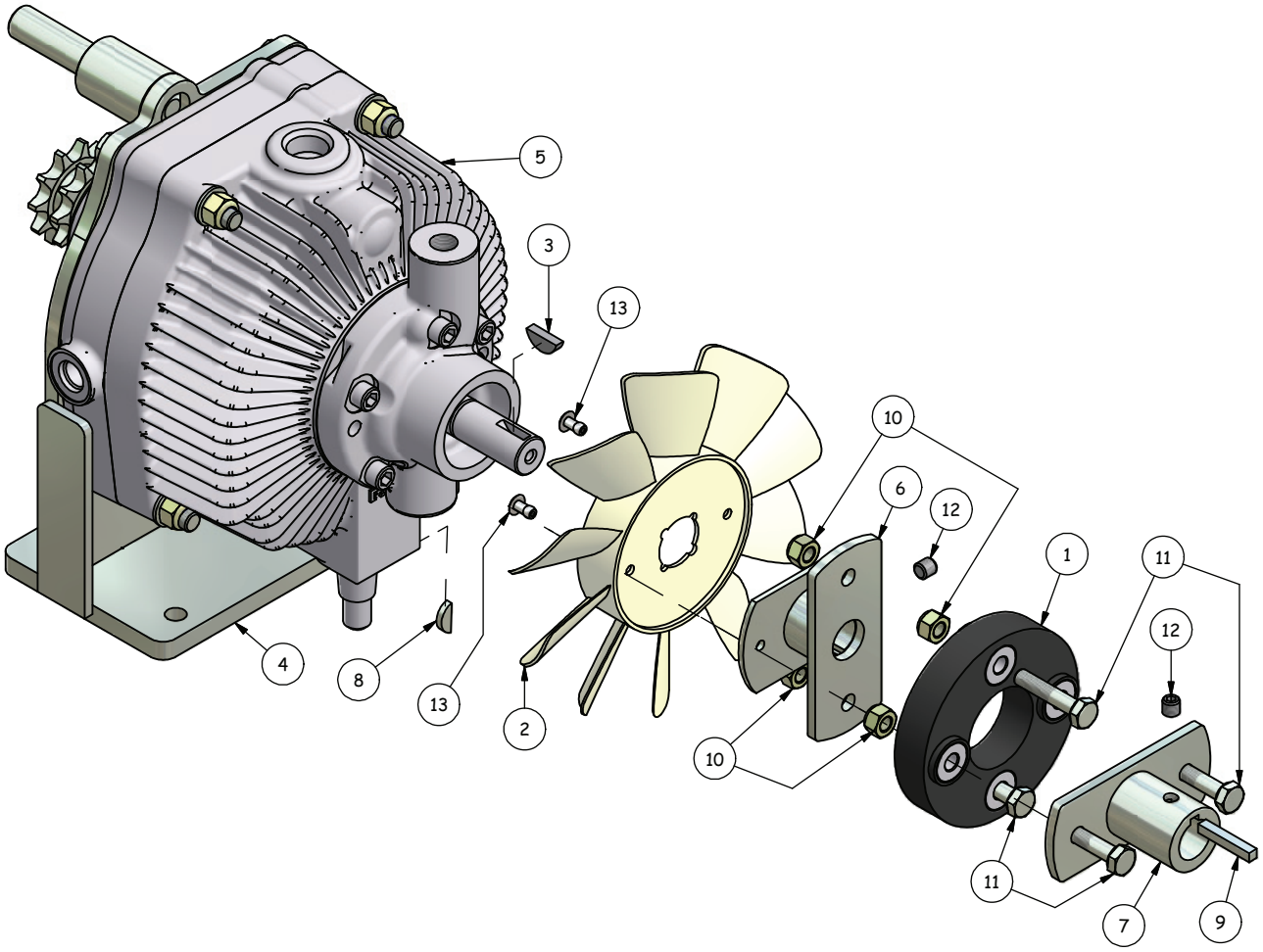
Drive Train Assembly



EATON 11 TRANSMISSION - OIL PIPE FITTINGS PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R5131	EATON 11 TRANSMISSION BRKT
2	1	R5133	EATON 11 HYDROSTATIC TRANSMISSION
3	1	R5227	FITTING 90 DEG ELBOW
4	1	R5230	FITTING STRAIGHT
5	2	R5233	FITTING 90 DEG ELBOW
6	1	R5234	FITTING 90 DEG ELBOW

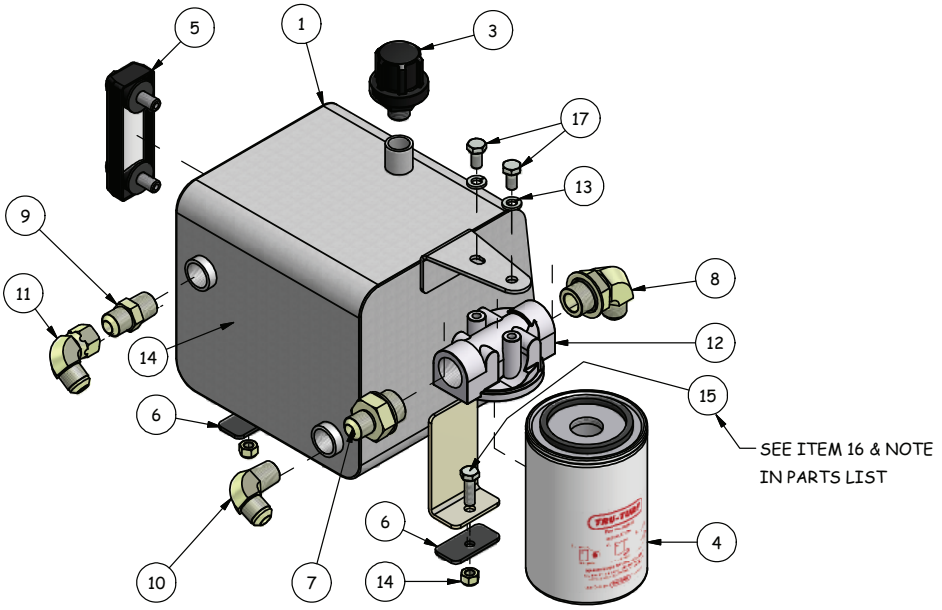


Fan & Coupling

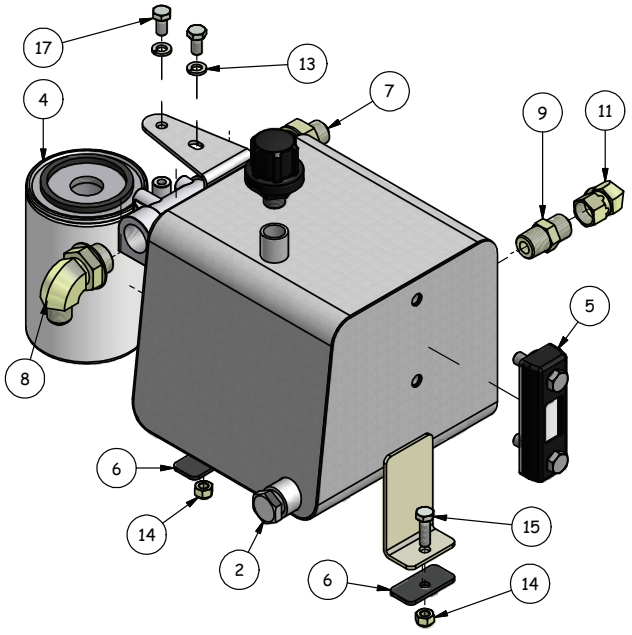


EATON 11 TRANSMISSION COOLING FAN & DRIVE COUPLING ASSEMBLY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R5031	TRANSMISSION COUPLING RUBBER ASSY
2	1	R5033	FAN COOLING TRANSMISSION
3	1	R5089	KEY WOODRUFF 3/16" x 3/4"
4	1	R5131	EATON 11 TRANSMISSION BRKT
5	1	R5133	EATON 11 HYDROSTATIC TRANSMISSION
6	1	R5139	COUPLING EATON 11 TRANS
7	1	R5140	ENGINE DRIVE COUPLING HONDA
8	1	R5156	WOODRUFF KEY 1_8 x 5_8
9	1	R5195	KEY SHAFT HONDA ENGINE
10	4	R8054	5/16 UNF NYLOC NUT
11	4	R8065	5/16 x 1-1/2 UNF BOLT ZP
12	2	R8079	5/16 x 5/16 GRUB SCREW BLK
13	2	R8134	6-6 RIVET

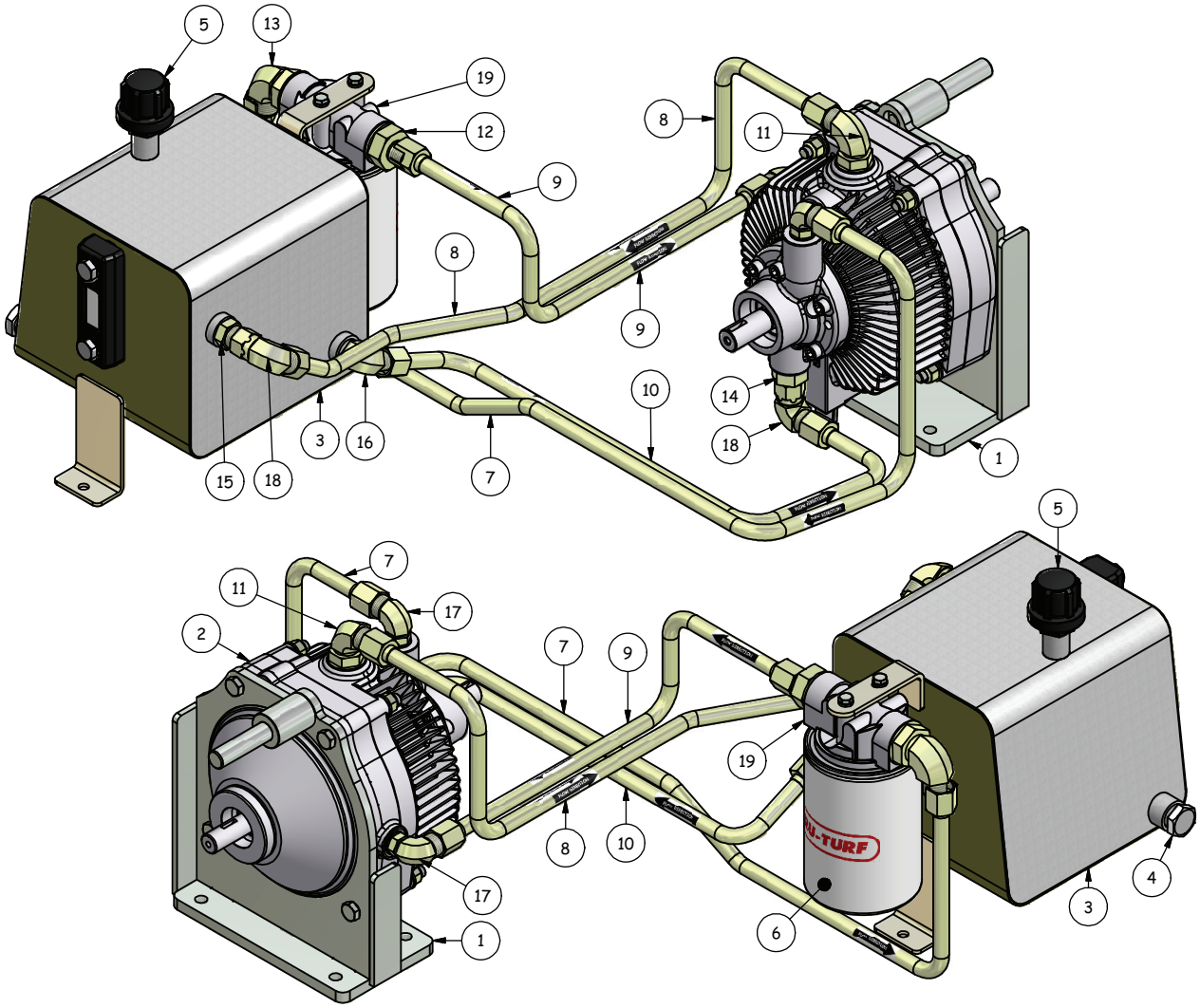
Oil Tank & Fittings



OIL TANK & FITTINGS - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R5143	OIL TANK
2	1	R5145	PLUG TANK DRAIN 1/2" BSP
3	1	R5144	BREATHER OIL TANK
4	1	R5147	CARTRIDGE FILTER TRANSMISSION OIL TANK
5	1	R5148	SIGHT GAUGE COMPLETE TRANS OIL TANK
6	2	R5197	RUBBER STRIP OIL TANK MOUNT
7	1	R5228	FITTING STRAIGHT
8	1	R5229	FITTING 90 DEG ELBOW
9	1	R5231	FITTING STRAIGHT
10	1	R5232	FITTING 90 DEG ELBOW
11	1	R5234	FITTING 90 DEG ELBOW
12	1	R8013	HOUSING FILTER TRANSMISSION OIL TANK
13	2	R8051	5/16 SPRING WASHER ZP
14	2	R8054	5/16 UNF NYLOC NUT
15	2	R8064	5/16 x 1.0 UNF BOLT ZP
16	1	R8084	5/16 x 2-3/4 UNF (FOR R52-11TC ONLY SUBSTITUTE FOR REAR BOLT R8064)
17	8	R8083	M8 x 16 BOLT ZP



Oil Tank & Pipes

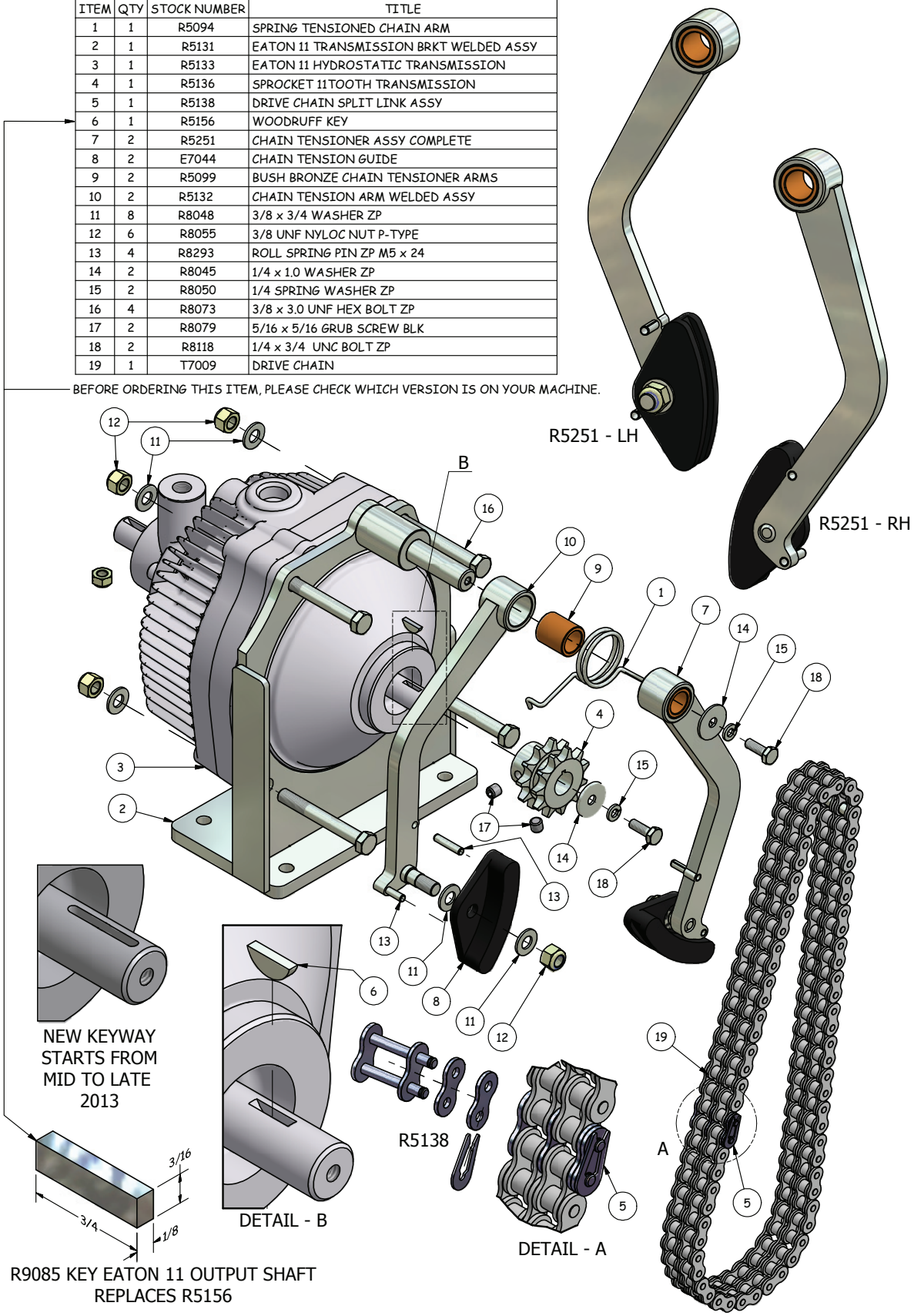


TRANSMISSION, TANK & OIL PIPES ASSEMBLY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R5131	EATON 11 TRANSMISSION BRKT
2	1	R5133	EATON 11 HYDROSTATIC TRANSMISSION
3	1	R5143	OIL TANK
4	1	R5145	PLUG TANK DRAIN
5	1	R5144	BREATHER OIL TANK
6	1	R5147	CARTRIDGE FILTER TRANSMISSION OIL TANK
7	1	R5152	PIPE TRANS-PUMP TO OIL FILTER
8	1	R5153	PIPE TRANSMISSION TO OIL TANK
9	1	R5154	PIPE OIL FILTER TO ACCELERATION VALVES
10	1	R5178	PIPE OIL TANK TO TRANS-PUMP
11	1	R5227	FITTING 90 DEG ELBOW
12	1	R5228	FITTING STRAIGHT
13	1	R5229	FITTING 90 DEG ELBOW
14	1	R5230	FITTING STRAIGHT
15	1	R5231	FITTING STRAIGHT
16	1	R5232	FITTING 90 DEG ELBOW
17	2	R5233	FITTING 90 DEG ELBOW
18	2	R5234	FITTING 90 DEG ELBOW
19	1	R8013	HOUSING FILTER TRANSMISSION OIL TANK

Chain Tensioner & Chain

R52-11TC-2 CHAIN & TENSIONERS - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R5094	SPRING TENSIONED CHAIN ARM
2	1	R5131	EATON 11 TRANSMISSION BRKT WELDED ASSY
3	1	R5133	EATON 11 HYDROSTATIC TRANSMISSION
4	1	R5136	SPROCKET 11TOOTH TRANSMISSION
5	1	R5138	DRIVE CHAIN SPLIT LINK ASSY
6	1	R5156	WOODRUFF KEY
7	2	R5251	CHAIN TENSIONER ASSY COMPLETE
8	2	E7044	CHAIN TENSION GUIDE
9	2	R5099	BUSH BRONZE CHAIN TENSIONER ARMS
10	2	R5132	CHAIN TENSION ARM WELDED ASSY
11	8	R8048	3/8 x 3/4 WASHER ZP
12	6	R8055	3/8 UNF NYLOC NUT P-TYPE
13	4	R8293	ROLL SPRING PIN ZP M5 x 24
14	2	R8045	1/4 x 1.0 WASHER ZP
15	2	R8050	1/4 SPRING WASHER ZP
16	4	R8073	3/8 x 3.0 UNF HEX BOLT ZP
17	2	R8079	5/16 x 5/16 GRUB SCREW BLK
18	2	R8118	1/4 x 3/4 UNC BOLT ZP
19	1	T7009	DRIVE CHAIN

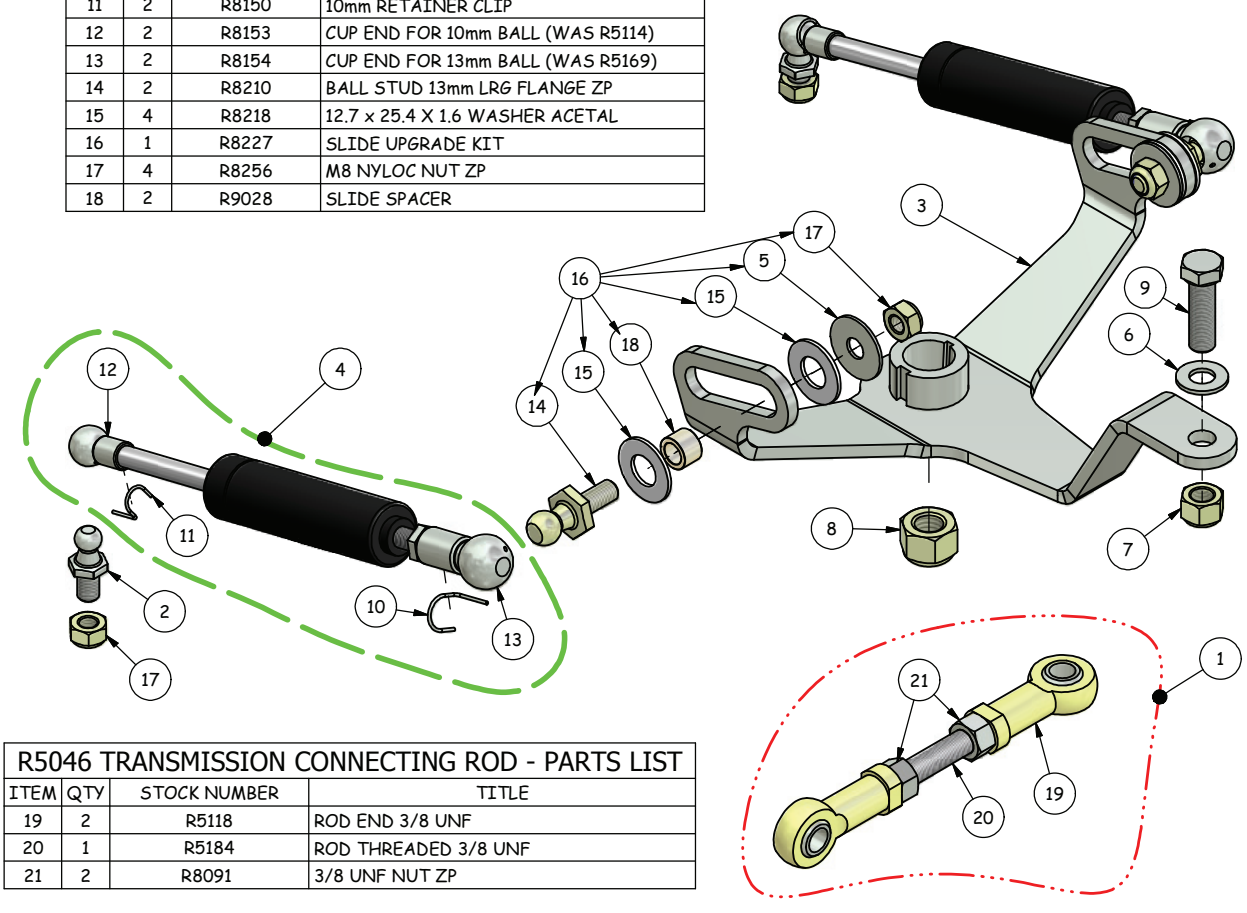
BEFORE ORDERING THIS ITEM, PLEASE CHECK WHICH VERSION IS ON YOUR MACHINE.



Yoke & Struts

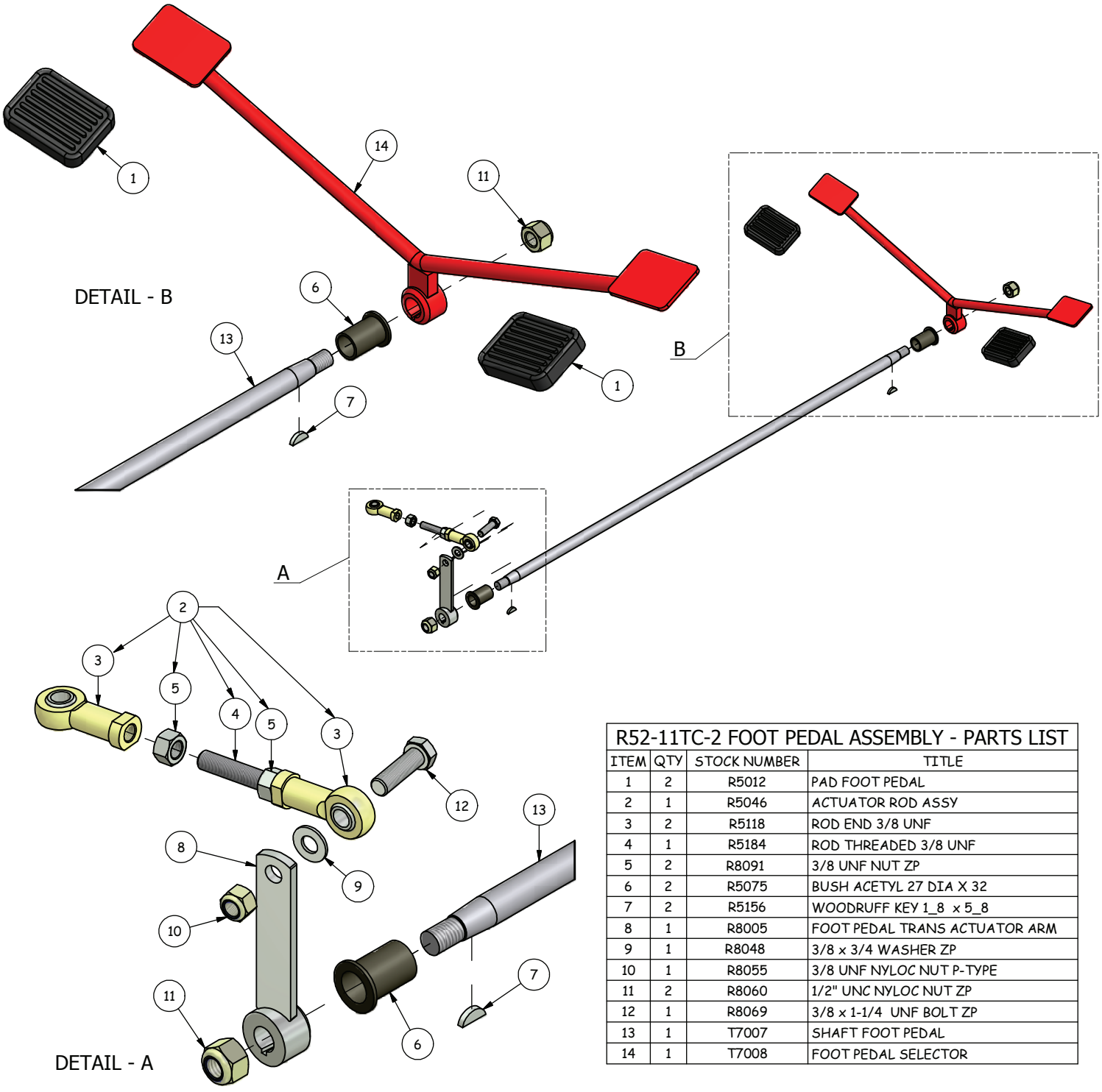
YOKE & STRUTS - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R5046	CONNECTING ROD ASSY
2	2	R5108	BALL STUD 10mm SMALL FLANGE ZP
3	1	R5171	TRANSMISSION YOKE
4	2	R5173	GAS STRUT COMPLETE ASSY
5	2	R8047	5/16-1.0 FLAT WASHER ZP
6	1	R8048	3/8 x 3/4 WASHER ZP
7	1	R8055	3/8 UNF NYLOC NUT P-TYPE
8	1	R8060	1/2" UNC NYLOC NUT ZP
9	1	R8069	3/8 x 1-1/4 UNF BOLT ZP
10	2	R8149	13mm RETAINER CLIP
11	2	R8150	10mm RETAINER CLIP
12	2	R8153	CUP END FOR 10mm BALL (WAS R5114)
13	2	R8154	CUP END FOR 13mm BALL (WAS R5169)
14	2	R8210	BALL STUD 13mm LRG FLANGE ZP
15	4	R8218	12.7 x 25.4 X 1.6 WASHER ACETAL
16	1	R8227	SLIDE UPGRADE KIT
17	4	R8256	M8 NYLOC NUT ZP
18	2	R9028	SLIDE SPACER

Refer to the Maintenance section for instructions regarding the adjustment of the struts



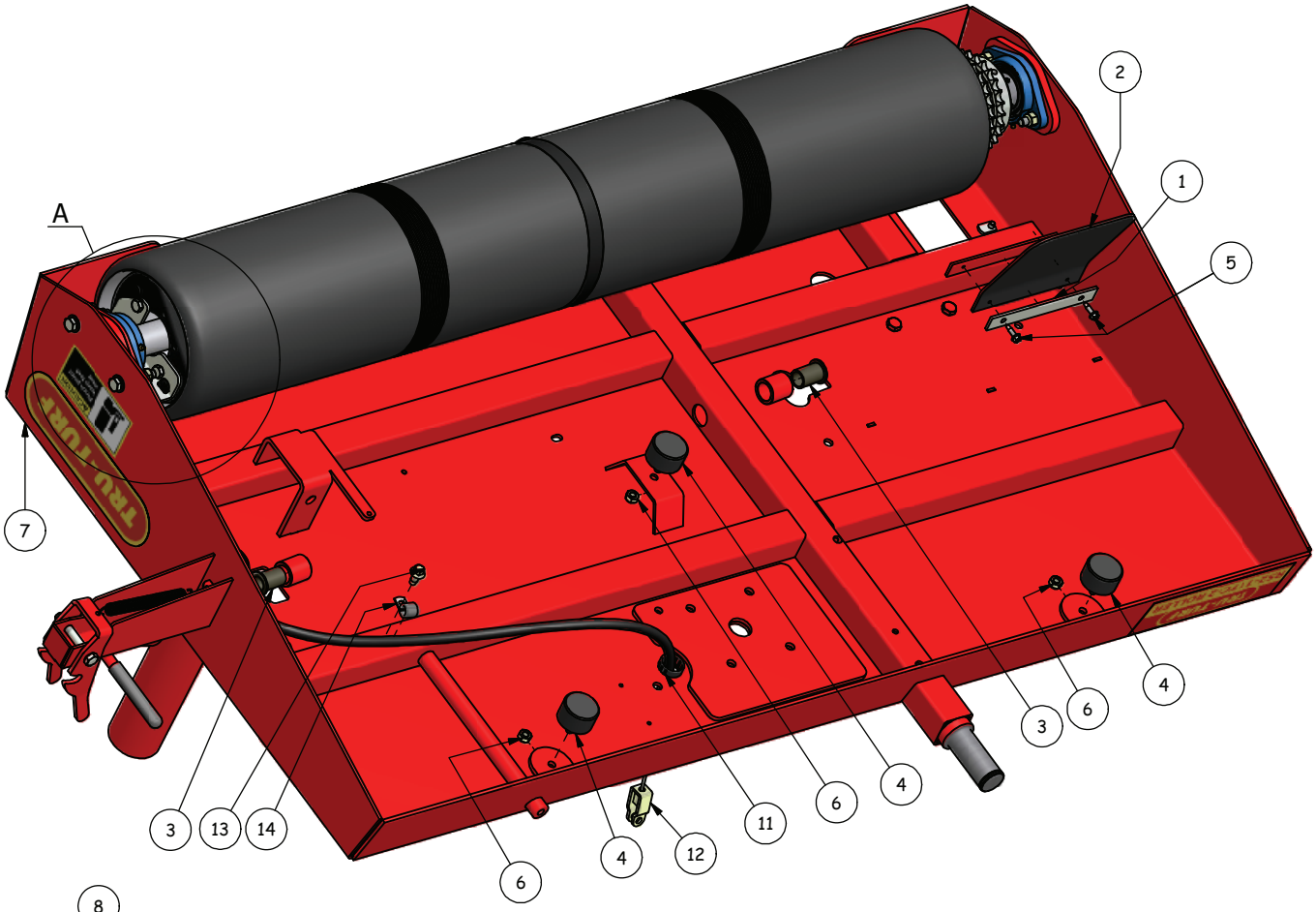
R5046 TRANSMISSION CONNECTING ROD - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
19	2	R5118	ROD END 3/8 UNF
20	1	R5184	ROD THREADED 3/8 UNF
21	2	R8091	3/8 UNF NUT ZP

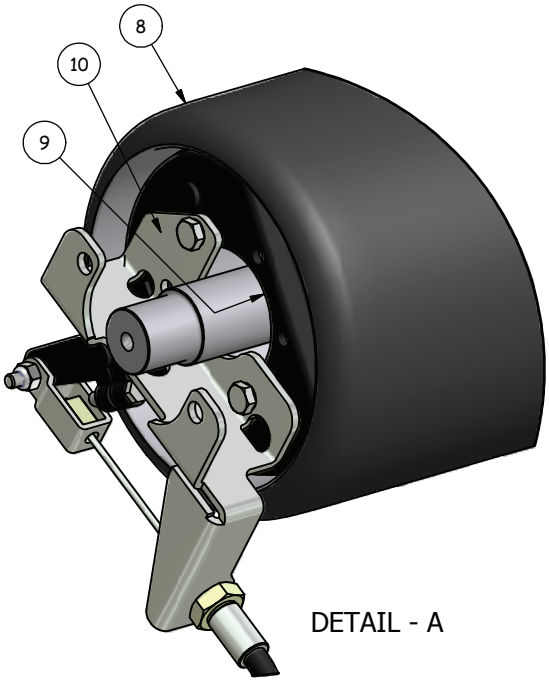
Foot Pedal Control



R52-11TC-2 FOOT PEDAL ASSEMBLY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	2	R5012	PAD FOOT PEDAL
2	1	R5046	ACTUATOR ROD ASSY
3	2	R5118	ROD END 3/8 UNF
4	1	R5184	ROD THREADED 3/8 UNF
5	2	R8091	3/8 UNF NUT ZP
6	2	R5075	BUSH ACETYL 27 DIA X 32
7	2	R5156	WOODRUFF KEY 1_8 x 5_8
8	1	R8005	FOOT PEDAL TRANS ACTUATOR ARM
9	1	R8048	3/8 x 3/4 WASHER ZP
10	1	R8055	3/8 UNF NYLOC NUT P-TYPE
11	2	R8060	1/2" UNC NYLOC NUT ZP
12	1	R8069	3/8 x 1-1/4 UNF BOLT ZP
13	1	T7007	SHAFT FOOT PEDAL
14	1	T7008	FOOT PEDAL SELECTOR

Underbody



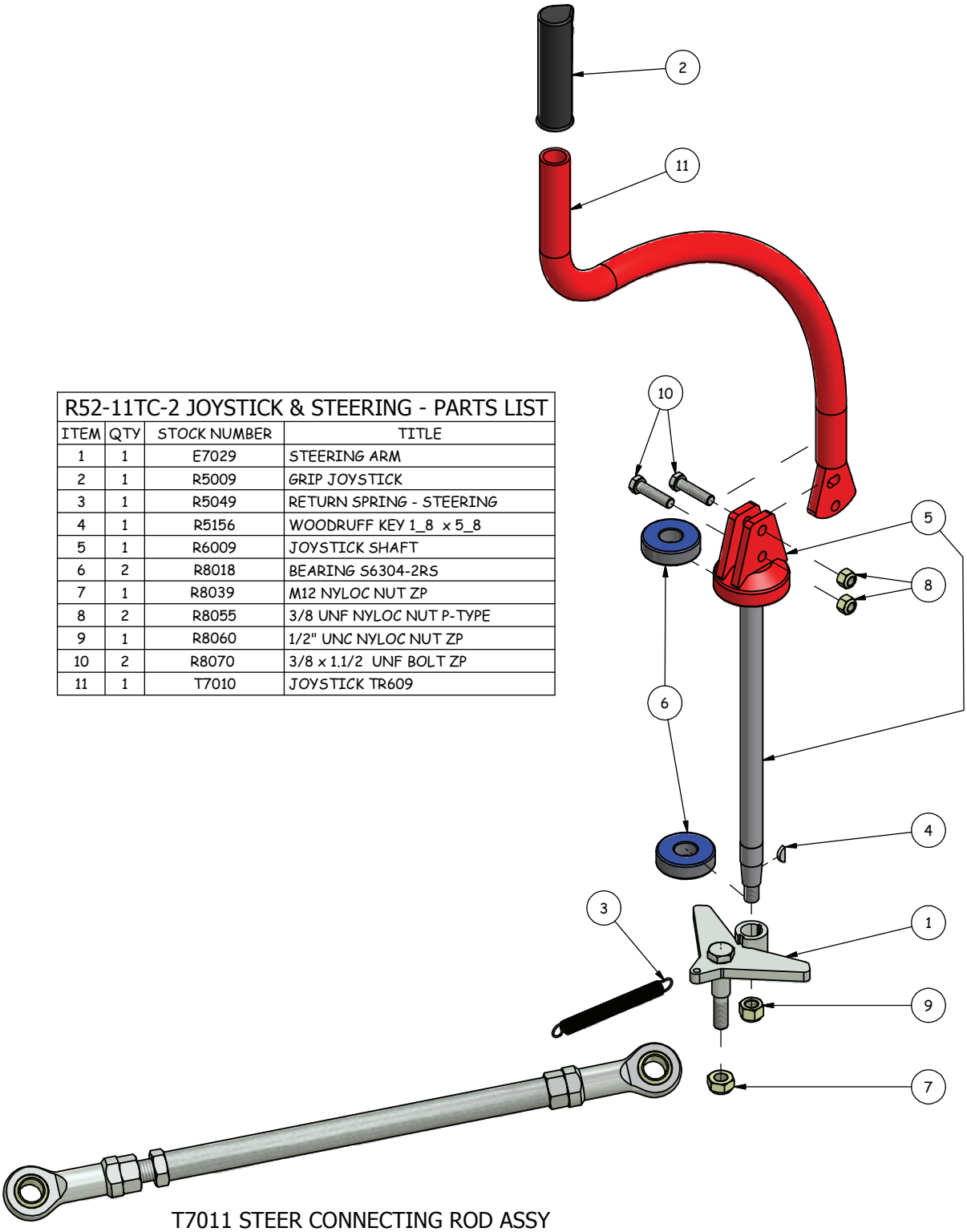


DETAIL - A

R52-11TC-2 UNDER BODY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R5061	STRAP MUDFLAP SCREW ON
2	1	R5071	MUD FLAP
3	2	R5075	BUSH ACETYL 27 DIA X 32
4	3	R6013	BUFFER STOP UNDER BODY
5	2	R8081	10-24x16 TEK SCREW ZP
6	3	R8256	M8 NYLOC NUT ZP
7	1	T7028	WELDED BODY ASSY
8	1	E7034	FLEX TUBE DRIVE ROLLER COMPLETE ASSY
9	1	R7020	BRAKE DRUM MECH DRIVE ROLLER
10	1	R7021	DRUM BRAKE MOUNT BRACKET
11	1	R8344	RUBBER GROMMET BRAKE CABLE
12	1	T7034	CABLE ASSY - PARK BRAKE DRUM TYPE
13	1	R8035	10-12 x16 TEK SCREW ZP
14	1	E7076	P CLIP

Joystick & Steering Components

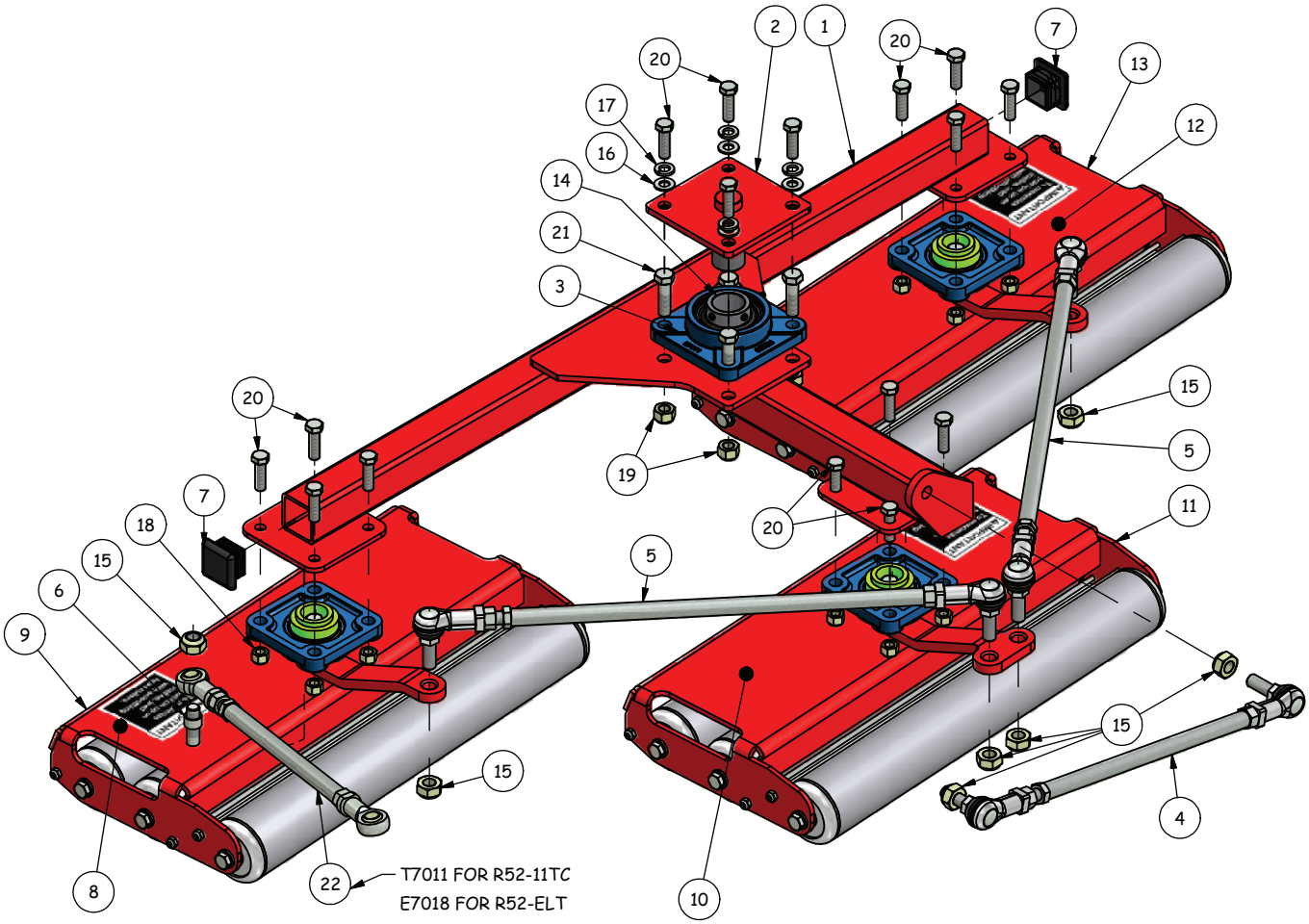
R52-11TC-2 JOYSTICK & STEERING - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	E7029	STEERING ARM
2	1	R5009	GRIP JOYSTICK
3	1	R5049	RETURN SPRING - STEERING
4	1	R5156	WOODRUFF KEY 1_8 x 5_8
5	1	R6009	JOYSTICK SHAFT
6	2	R8018	BEARING S6304-2RS
7	1	R8039	M12 NYLOC NUT ZP
8	2	R8055	3/8 UNF NYLOC NUT P-TYPE
9	1	R8060	1/2" UNC NYLOC NUT ZP
10	2	R8070	3/8 x 1.1/2 UNF BOLT ZP
11	1	T7010	JOYSTICK TR609



T7011 STEER CONNECTING ROD ASSY

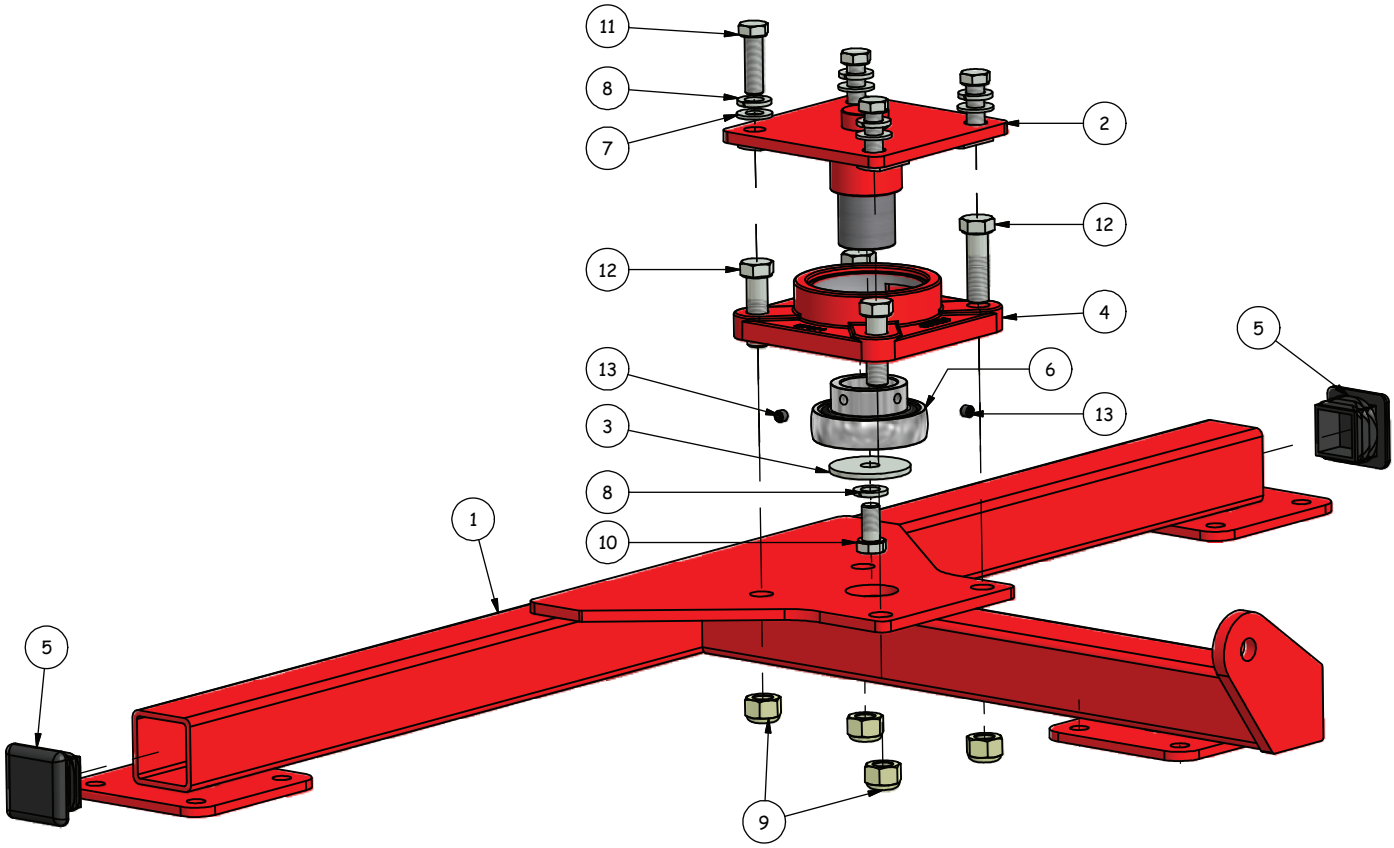
Smoothing Heads

R52-11TC-2 E7179 TRI HEAD SMOOTHING ROLLERS - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	E7008	SMOOTHING HEAD 'T' FRAME
2	1	E7009	SHAFT PIVOT WELDED ASSY
3	1	E7011	HOUSING FS206 4 HOLE
4	1	E7016	STABILISER ROD ASSY
5	2	E7017	CONNECTING ROD SMOOTHING HEADS
6	1	E7028	SPACER TUBE
7	2	E7033	END CAP PLASTIC - 40x40
8	1	E7166	SMOOTHING TRI HEAD FRONT ASSY
9	1	E7156	SMOOTHING TRI HEAD FRONT COVER
10	1	E7167	SMOOTHING TRI HEAD CENTRE ASSY
11	1	E7157	SMOOTHING TRI HEAD CENTRE COVER
12	1	E7168	SMOOTHING TRI HEAD REAR ASSY
13	1	E7158	SMOOTHING TRI HEAD REAR COVER
14	1	R5078	BEARING SB206
15	7	R8039	M12 NYLOC NUT ZP
16	4	R8048	3/8 x 3/4 WASHER ZP
17	4	R8052	3/8 SPRING WASHER ZP
18	12	R8055	3/8 UNF NYLOC NUT P-TYPE
19	4	R8057	7/16 UNF NYLOC NUT ZP
20	16	R8069	3/8 x 1-1/4 UNF BOLT ZP
21	4	R8172	7/16 x 1.1/2 UNF HEX BOLT ZP
22	1	T7011	STEER CONNECTING ROD ASSY FOR R52-11TC



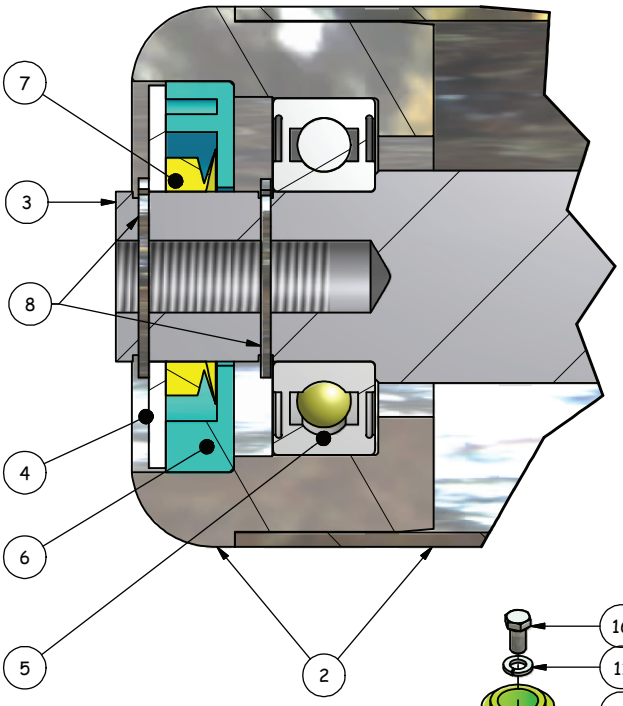
Pivoting Head

E109 'T' FRAME ASSEMBLY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	E7008	SMOOTHING HEAD 'T' FRAME
2	1	E7009	SHAFT PIVOT WELDED ASSY
3	1	E7010	WASHER M10x43x3
4	1	E7011	HOUSING FS206 4 HOLE
5	2	E7033	END CAP PLASTIC - 40x40
6	1	R5078	BEARING SB206
7	4	R8048	3/8 x 3/4 WASHER ZP
8	5	R8052	3/8 SPRING WASHER ZP
9	4	R8057	7/16 UNF NYLOC NUT ZP
10	1	R8066	3/8 x 3/4 UNF BOLT ZP
11	4	R8069	3/8 x 1-1/4 UNF BOLT ZP
12	4	R8172	7/16 x 1.1/2 UNF HEX BOLT ZP
13	2	R8312	M6 x 6 GRUB SCREW BLACK



Smoothing Head Exploded

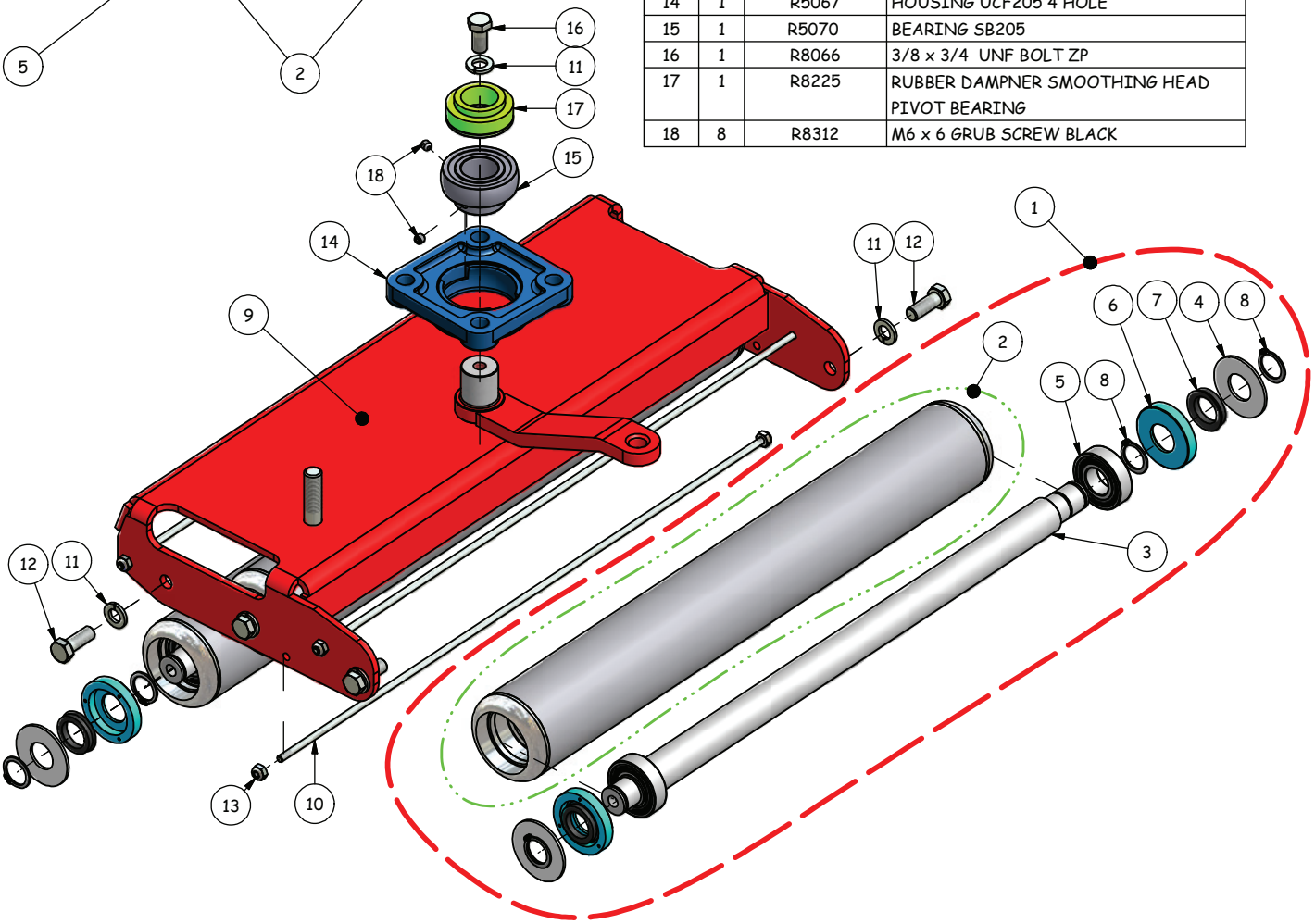
SECTION DETAIL - ITEM 1
(SMOOTHING ROLLER COMPLETE)



E7149 SMOOTHING ROLLER ASSEMBLY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
2	1	E7134	TUBE & ENDS SMOOTHING ROLLER TRI HEAD
3	1	E7135	SHAFT SMOOTHING ROLLER TRI HEAD
4	2	R8209	SHIELD - END CAP 63.5 DIA
5	2	R8212	BEARING - END CAP SMOOTHING ROLLERS
6	2	R8213	SEAL INSERT - END CAP
7	2	R8214	SEAL V-RING V20A
8	4	R8215	CIRCLIP EXTERNAL - SHAFT ENDS

E7166 SMOOTHING HEAD FRONT ASSY &
E7167 SMOOTHING HEAD CENTRE ASSY
ARE NOT SHOWN.

E7166 SMOOTHING HEAD ASSEMBLY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	3	E7149	SMOOTHING ROLLER ASSY - TRI HEAD
9	1	E7156	SMOOTHING HEAD STEERING
10	3	E7170	ROD SCRAPER 3/16
11	7	R8052	3/8 SPRING WASHER ZP
12	6	R8067	3/8 x 1 UNF HEX BOLT ZP
13	6	R8250	3/16 UNF NYLOC NUT SS
14	1	R5067	HOUSING UCF205 4 HOLE
15	1	R5070	BEARING SB205
16	1	R8066	3/8 x 3/4 UNF BOLT ZP
17	1	R8225	RUBBER DAMPNER SMOOTHING HEAD PIVOT BEARING
18	8	R8312	M6 x 6 GRUB SCREW BLACK



Smoothing Roller Bearings & Seals - Replacing

REMOVE & REPLACE BEARINGS AND INSERTS AT BOTH ENDS OF THE ROLLER BY CAREFULLY READING THE FOLLOWING INSTRUCTIONS AND PERFORMING THE STEPS SHOWN.

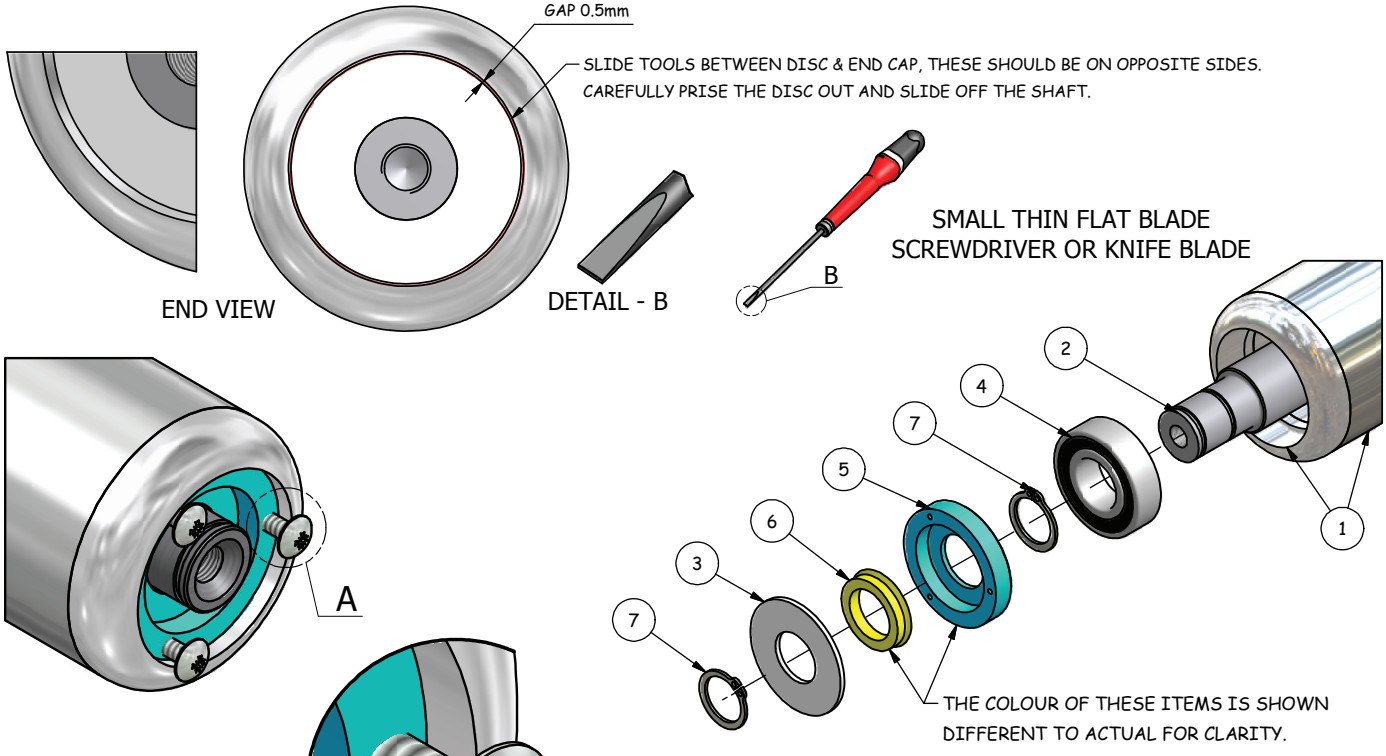
1. Remove Circlip, Plastic Washer and V Seal (Items 7, 3 & 6) to expose Plastic Insert (Item 5). Repeat for other end.

   TAKE CARE NOT TO DAMAGE THE CIRCLIPS, SHIELDS & V SEALS AS THESE ARE REUSED

2. The exposed Plastic Insert (Item 5) can now be removed by one of the following methods:
   - Insert is loose to touch... invert & it should fall out OR.
   - Insert has resistance to movement or has been siliconed in. Insert self tapping screws in each of the three (3) holes shown. Using a small pry bar or flat bladed screw driver under the head of the screw, lever the insert out using equal pressure at each point. Failing that, continue to screw the self tappers in, in turn pushing the insert out.
3. Remove the second Circlip (Item 7) at both ends.
4. Insert a 3/8" bolt into the end of the shaft (item 2), lightly press on the head of the bolt until the bearing (item 4) becomes free from the end of the roller tube (item 1).

TAKE CARE NOT TO DAMAGE THE END OF THE SHAFT, AS BEARING & CIRCLIP MAY NOT FIT CORRECTLY

5. Remove the shaft from the roller and slide the bearing (item 4) off the shaft.
6. Slide the shaft back into the roller and thru the bearing (item 4), and repeat step 4.



E7149 - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	E7134	TUBE & ENDS SMOOTHING ROLLER TRI HEAD
2	1	E7135	SHAFT SMOOTHING ROLLER TRI HEAD
3	2	R8209	SHIELD - END CAP
4	2	R8212	BEARING - END CAP
5	2	R8213	SEAL INSERT - END CAP
6	2	R8214	SEAL V-RING V20A
7	4	R8215	CIRCLIP EXTERNAL - SHAFT ENDS

Smoothing Roller Bearings & Seals - Replacing

ROLLER ASSEMBLY INSTRUCTIONS

1. Lightly press one of the supplied new bearings into the end cap of the roller.

2. Slide the shaft into the roller and thru the bearing.
   Install a circlip against the bearing ensuring it is correctly seated in the circlip groove in the end cap.

3. Repeat steps 1 & 2 for the other end.

4. Fit the supplied new inserts (2 per roller supplied) into each end cap, note that the holes must face out, lightly press each insert intil seated against the shoulder in the roller tube end cap.

5. Apply a smear of grease to the face of the inserts and on the ends. This is to prevent the seals from being damaged due to friction and to assist with sliding the seals onto the shaft.

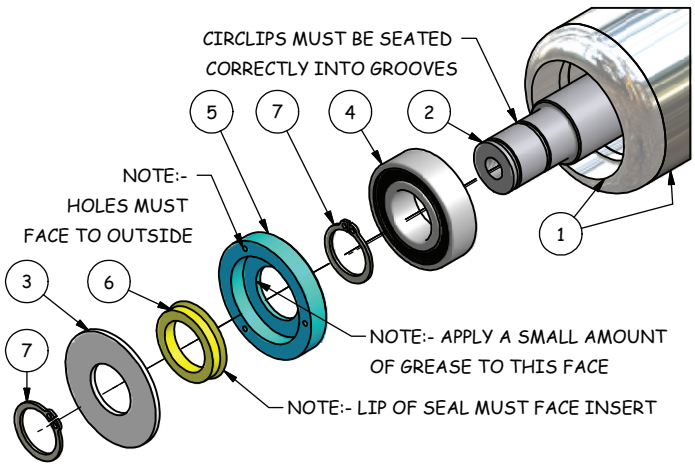
6. Slide the 'V' seals back onto the shaft at each end, until they contact the insert.
   Ensure the lip of the seal is facing and against the insert.

7. Slide a plastic washer (previously removed) on to the shaft, one (1) at each end.

8. Fit the circlips (previously removed) on to the shaft, one (1) at each end.

9. Before reinstalling the roller into the smoothing head, check that the roller turns smoothly on the shaft but with a slight resistance.

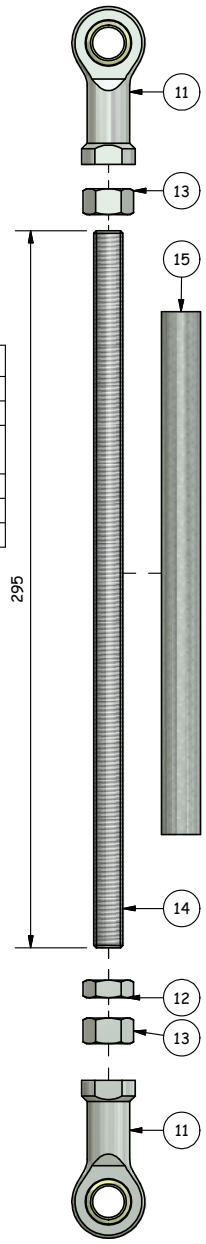
NOTE - TWO (2) ADDITONAL CIRCLIPS ARE INCLUDED IN THE KIT IN CASE OF DAMAGE.



Connecting Rods

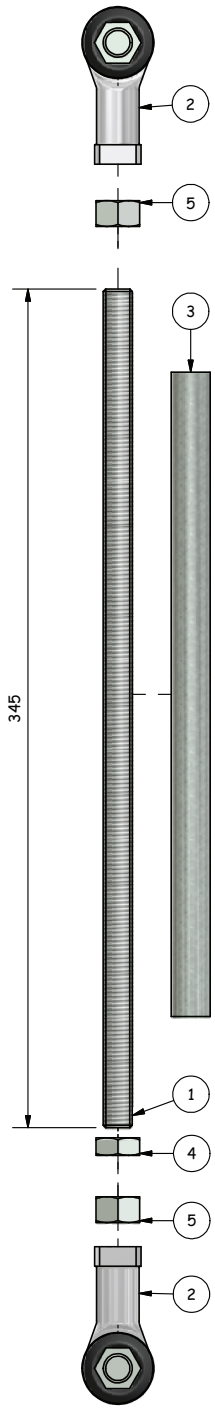
E7016 - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	E7015	ROD THREADED
2	2	E7019	ROD END FEMALE STUDDED M12X1.75
3	1	E7025	TUBE TIE ROD STABILISER
4	1	R8086	M12 HALF NUT ZP
5	2	R8087	M12 FULL NUT ZP

E7017 - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
6	2	E7019	ROD END FEMALE STUDDED M12X1.75
7	1	E7023	ROD THREADED M12
8	1	E7024	TUBE CONNECTING ROD
9	1	R8086	M12 HALF NUT ZP
10	2	R8087	M12 FULL NUT ZP

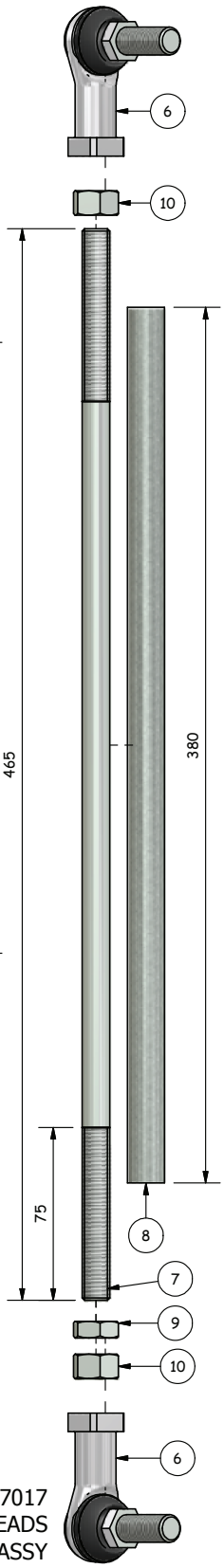


T7011
R52-11TC-2 STEER CONNECTING ROD ASSY

T7011 - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
11	2	E7020	ROD END FEMALE M12
12	1	R8086	M12 HALF NUT ZP
13	2	R8087	M12 FULL NUT ZP
14	1	T7012	ROD THREADED STEERING
15	1	T7013	TUBE TIE ROD STEERING

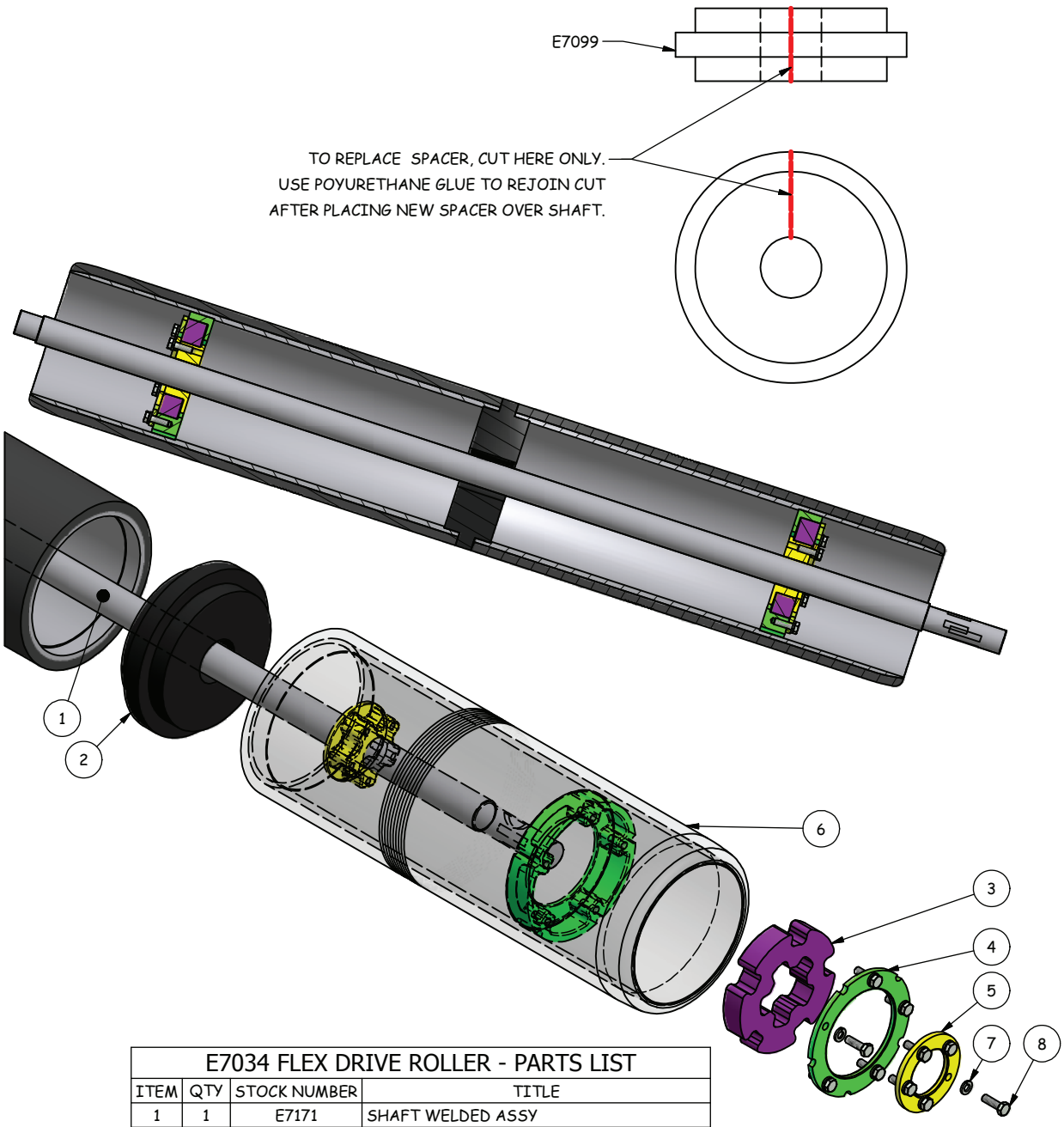


E7016
STABILISER ROD ASSY
TRI HEAD ASSY



E7017
CONNECTING ROD SMOOTHING HEADS
TRI HEAD ASSY

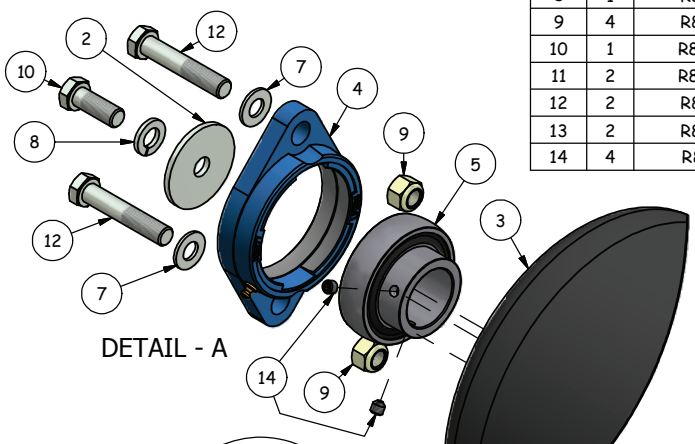
Drive Roller



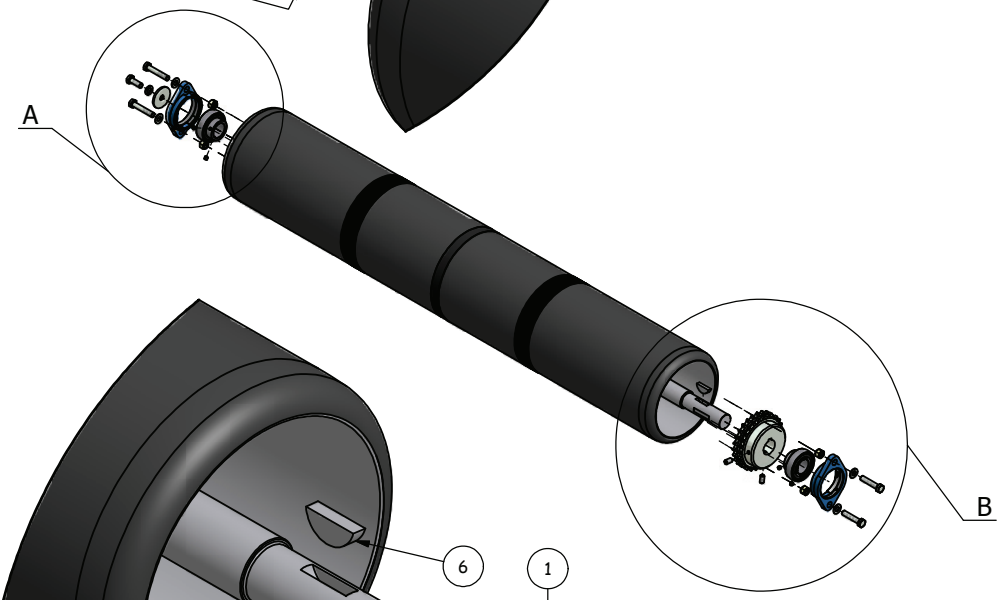
E7034 FLEX DRIVE ROLLER - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	E7171	SHAFT WELDED ASSY
2	1	E7099	FLEX TUBE DRIVE ROLLER CTR SPACER
3	2	E7116	DRIVE CENTRE INSERT
4	2	E7102	OUTER CLAMP RING
5	2	E7103	INNER CLAMP RING
6	2	E7175	TUBE & DRIVE RUBBER COATED ASSY
7	20	R8051	5/16 SPRING WASHER ZP
8	20	R8139	5/16 x 1.0 UNF BOLT ZP

Drive Roller Sprocket & Bearings

R52-11TC-2 DRIVE ROLLER - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	E7131	SPROCKET DRIVE ROLLER TYPE 08B2
2	1	E7010	WASHER M10x43x3
3	1	E7034	FLEX TUBE DRIVE ROLLER ASSY
4	2	R5077	HOUSING BLF206 2 HOLE
5	2	R5078	BEARING SB206
6	1	R5087	KEY WOODRUFF
7	4	R8048	3/8 x 3/4 WASHER ZP
8	1	R8052	3/8 SPRING WASHER ZP
9	4	R8055	3/8 UNF NYLOC NUT P-TYPE
10	1	R8067	3/8 x 1 UNF HEX BOLT ZP
11	2	R8096	3/8 x 1-3/4 UNF BOLT ZP
12	2	R8097	3/8 x 2.0 UNF BOLT ZP
13	2	R8208	M8 x 16 GRUB SCREW Cup Point
14	4	R8312	M6 x 6 GRUB SCREW BLACK

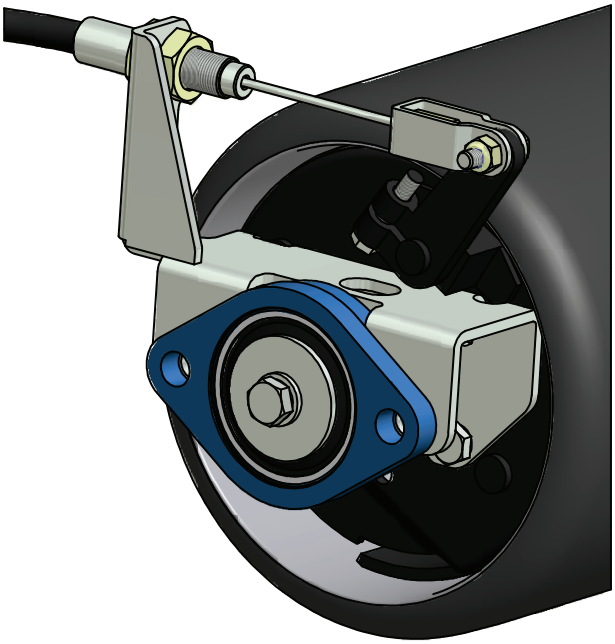


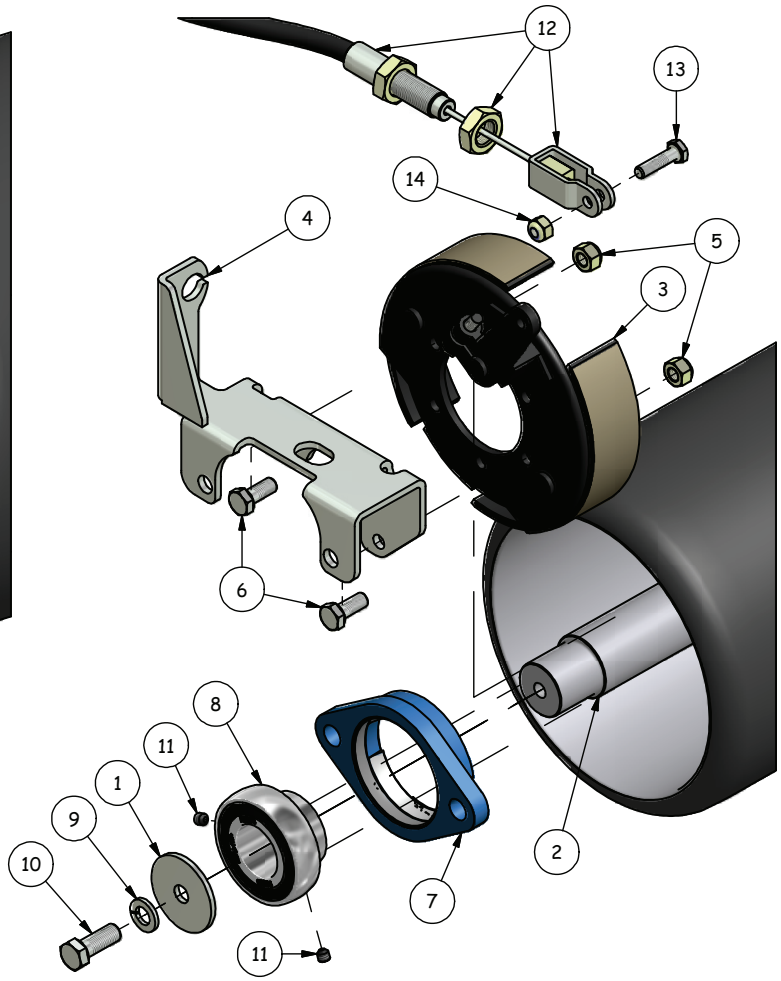
DETAIL - A

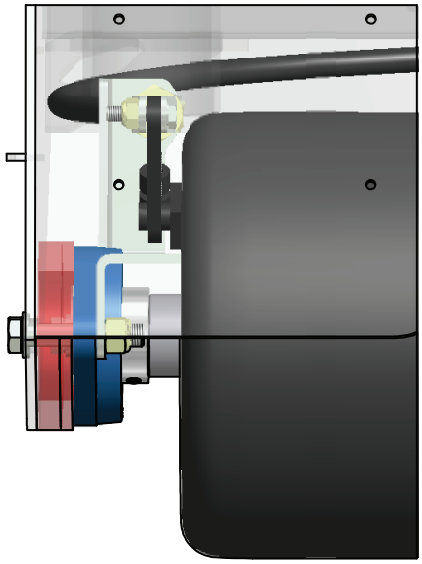


DETAIL - B

Park Brake



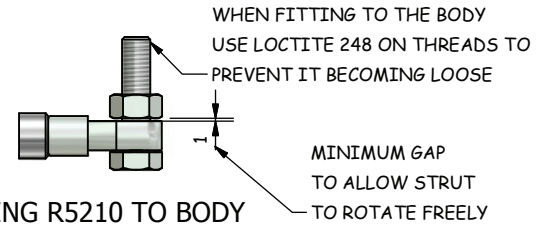




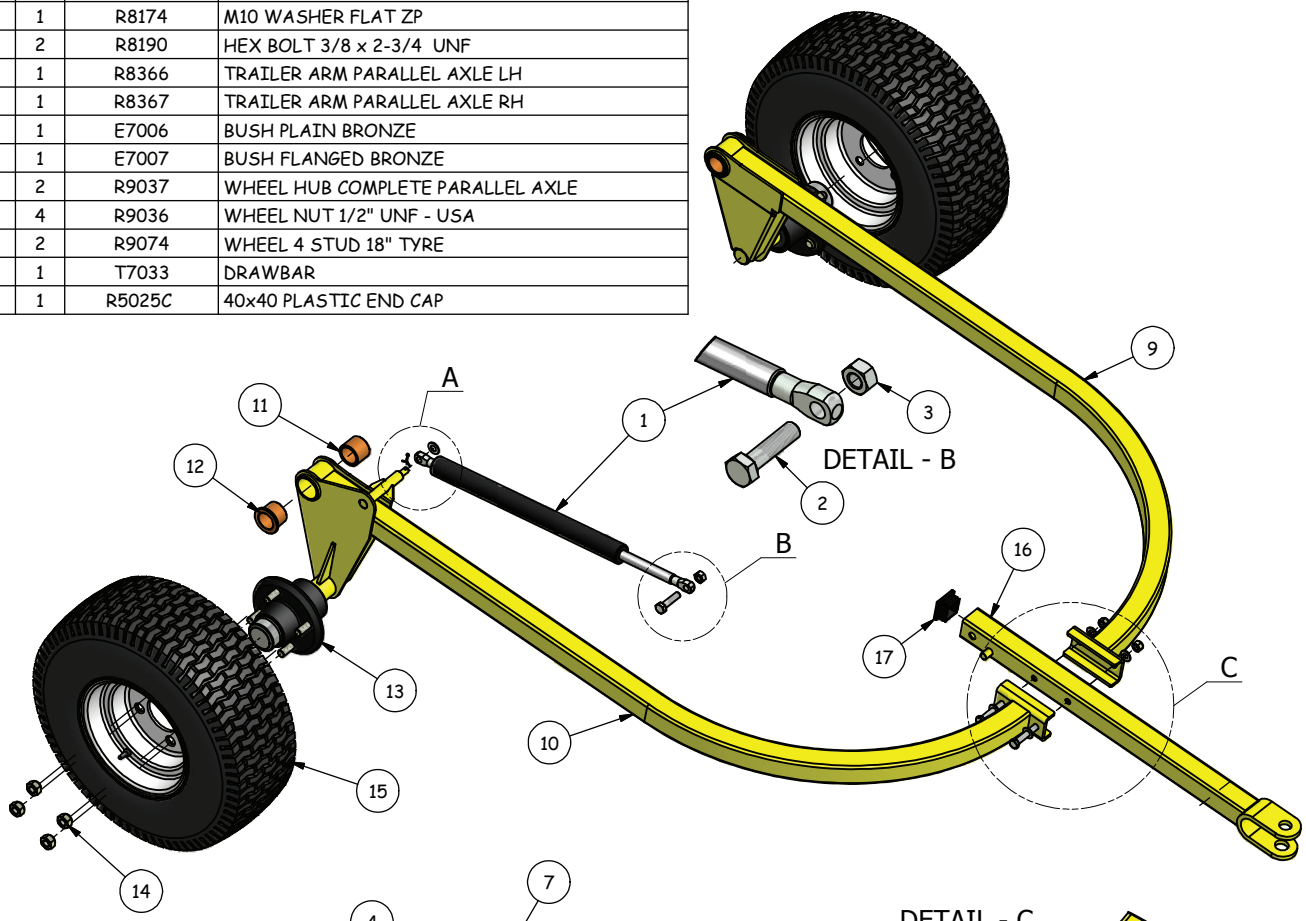
R52-11TC-2 PARK DRUM BRAKE & DRIVE ROLLER ASSY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	E7010	WASHER M10x43x3
2	1	E7034	FLEX TUBE DRIVE ROLLER ASSY
3	1	R7020	BRAKE DRUM MECH DRIVE ROLLER
4	1	R7021	DRUM BRAKE MOUNT BRACKET
5	2	R8054	5/16 UNF NYLOC NUT
6	2	R8177	5/16 x 3/4 UNF BOLT ZP
7	2	R5077	HOUSING BLF206 2 HOLE
8	2	R5078	BEARING SB206
9	1	R8052	3/8 SPRING WASHER ZP
10	1	R8067	3/8 x 1 UNF HEX BOLT ZP
11	4	R8312	M6 x 6 GRUB SCREW BLACK
12	1	T7034	CABLE ASSY - PARK BRAKE DRUM TYPE
13	1	R8033	1/4" UNF HEX HEAD BOLT ZP
14	1	R8053	1/4 UNF NYLOC NUT

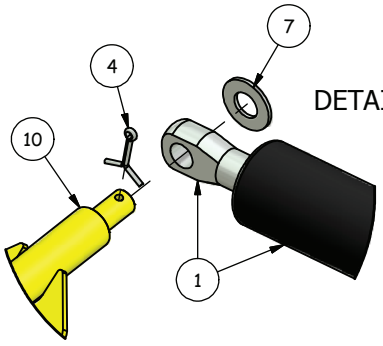
Parallel Axle Trailer Assembly

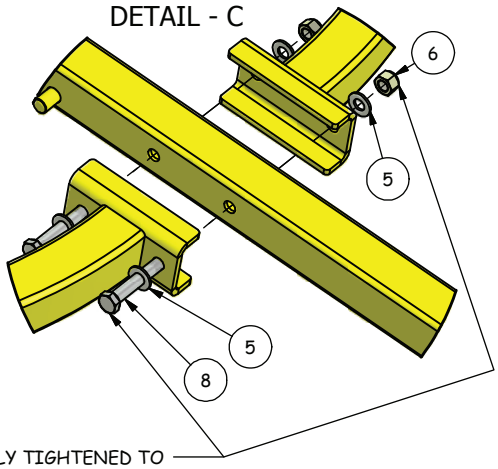
R52-11TC-2 TRAILER PARALLEL AXLES ASSY - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R5210	GAS STRUT ASSY
2	1	R8038	M10 x 40 BOLT ZP
3	1	R8088	M10 NUT ZP
4	1	R8036	SPLIT PIN
5	4	R8048	3/8 x 3/4 WASHER ZP
6	2	R8055	3/8 UNF NYLOC NUT P-TYPE
7	1	R8174	M10 WASHER FLAT ZP
8	2	R8190	HEX BOLT 3/8 x 2-3/4 UNF
9	1	R8366	TRAILER ARM PARALLEL AXLE LH
10	1	R8367	TRAILER ARM PARALLEL AXLE RH
11	1	E7006	BUSH PLAIN BRONZE
12	1	E7007	BUSH FLANGED BRONZE
13	2	R9037	WHEEL HUB COMPLETE PARALLEL AXLE
14	4	R9036	WHEEL NUT 1/2" UNF - USA
15	2	R9074	WHEEL 4 STUD 18" TYRE
16	1	T7033	DRAWBAR
17	1	R5025C	40x40 PLASTIC END CAP



FITTING R5210 TO BODY



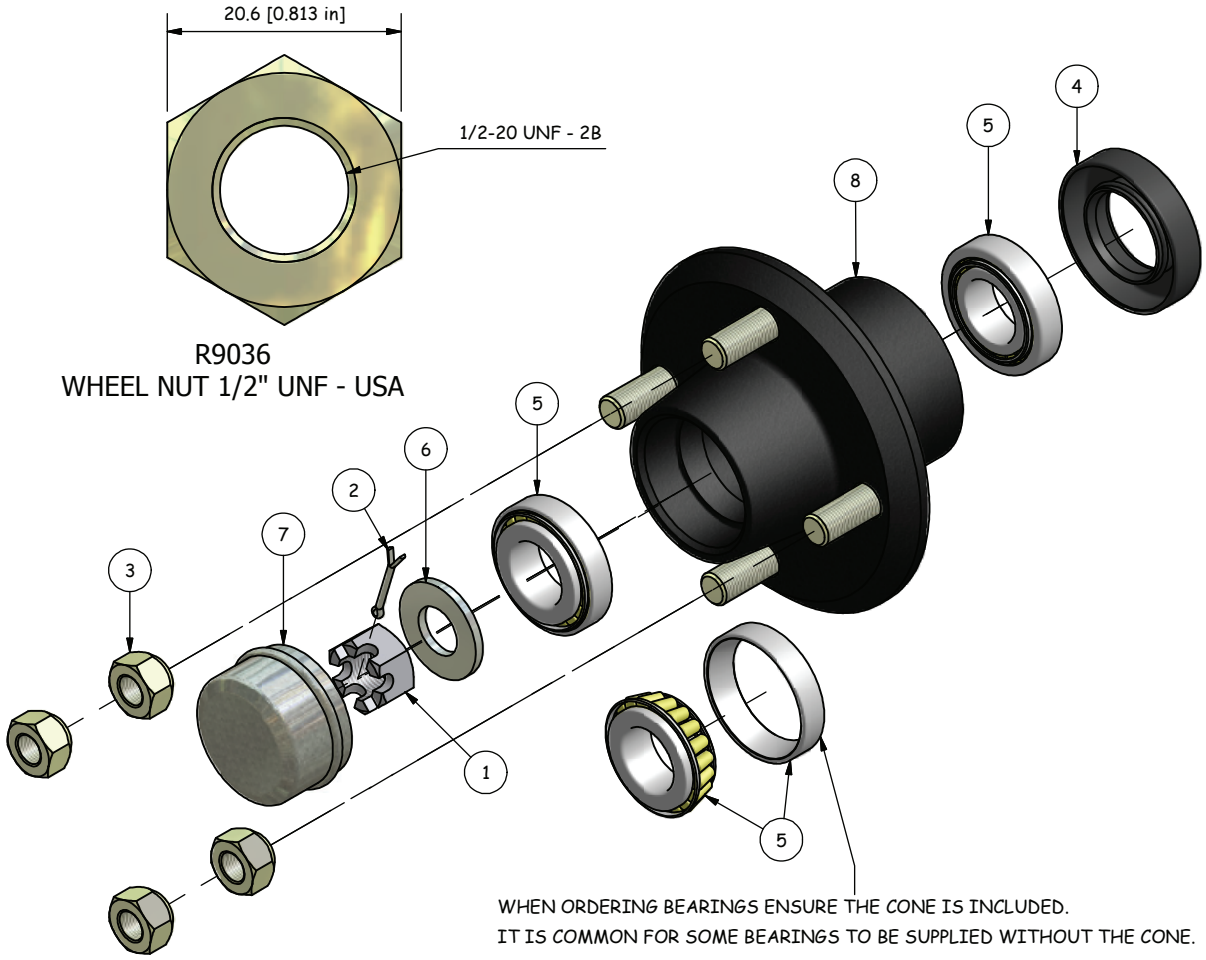




WHEN TRAILER DRAWBAR IS BEING ASSEMBLED THESE BOLTS & NUTS MUST BE CORRECTLY TIGHTENED TO 47 FOOT-POUNDS OR 63.7n-M. IF NOT SUFFICIENTLY TIGHT THE DRAWBAR CAN BECOME LOOSE AND THE HOLES WILL WEAR MAKING IT DANGEROUS WHEN TOWING OR RAISING / LOWERING THE TRAILER.

Hub Assembly Parallel Axle

R9037 HUB COMPLETE PARALLEL AXLE - PARTS LIST			
ITEM	QTY	STOCK NUMBER	TITLE
1	1	R9033	CASTLE NUT-STUB AXLE 3/4-16 UNF
2	1	R9034	SPLIT PIN-STUB AXLE
3	4	R9036	WHEEL NUT 1/2" UNF - USA
4	1	R9029	SEAL INNER HUB CR 12610
5	2	R9030	BEARING TAPER ROLLER L44643
6	1	R9032	WASHER-STUB AXLE
7	1	R9035	HUB BEARING CAP
8	1	R9038	HUB TRAILER PARALLEL AXLE



Labels

T7038

R9102

R6059

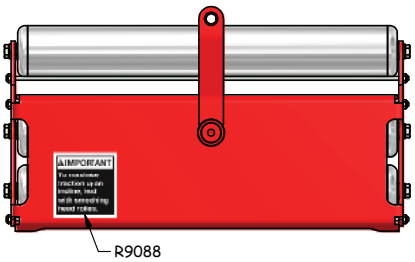
R9086

R9088

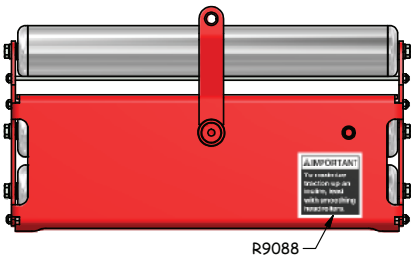
R9087

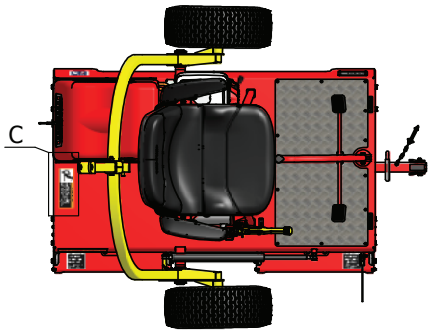
R6057

Labels

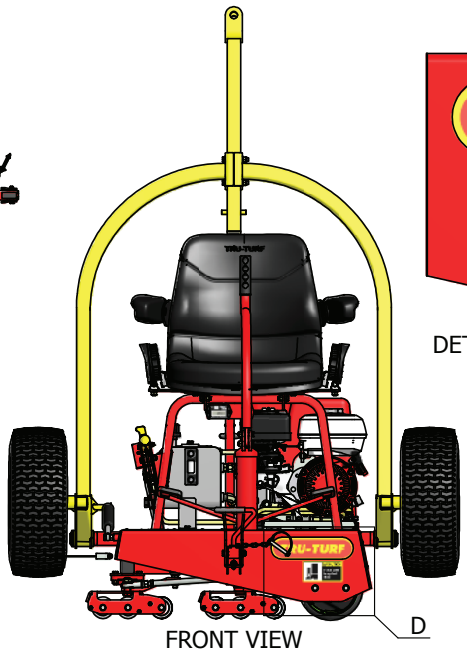


SMOOTHING HEADS

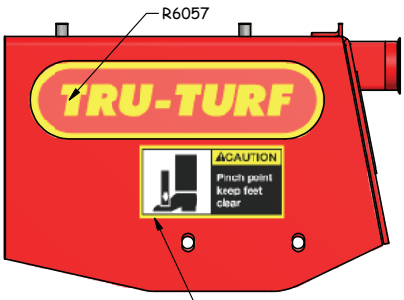




TOP VIEW



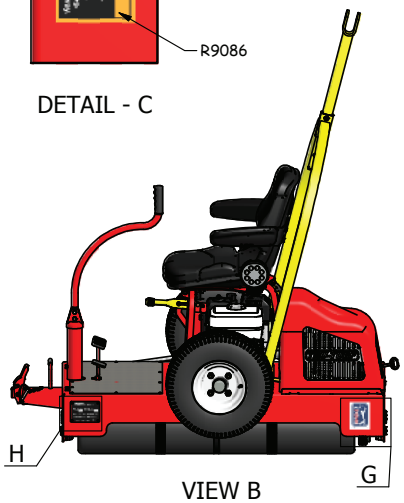
FRONT VIEW



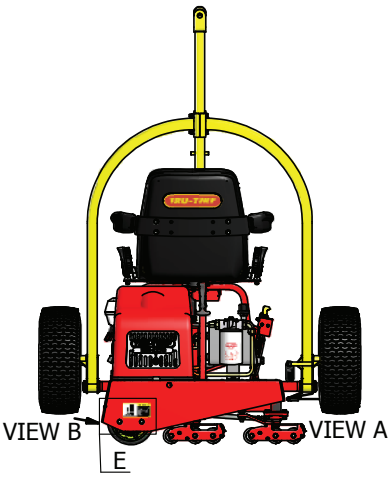
DETAIL - D

DETAIL - C

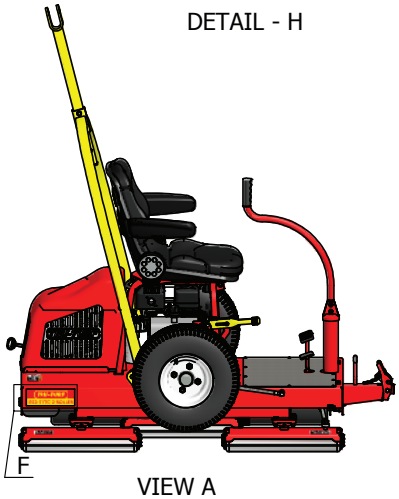
DETAIL - H



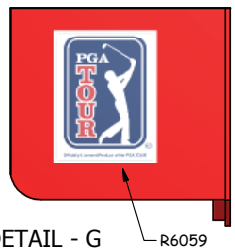
VIEW B



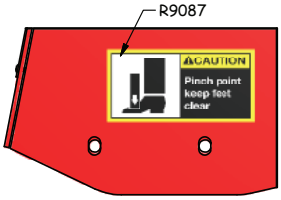
REAR VIEW



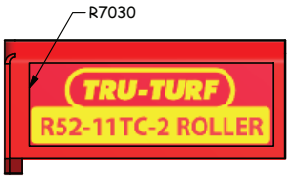
VIEW A



DETAIL - G



DETAIL - E



DETAIL - F

Sample Inspection Report

Warranty Registration & Inspection Report

Any units not registered with Tru-Turf Pty. Ltd. are not eligible for warranty claims. This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery. Please email, fax or mail asigned and dated copy of the completed form to Tru-Turf Pty. Ltd.

Dealer Information

Dealer ID

Dealer

Contact

Email

Customer Information

Customer

Contact

Address

State

Zip/Postcode

Country

Email

Phone

Mark when completed

- ☐ Red Cap on Oil Tank has been removed and replaced by the Black Breather Cap.
- ☐ Transmission Oil checked at correct level.
- ☐ Engine Oil checked at correct level.
- ☐ Tire pressures checked to a maximum 18psi (124kPa).
- ☐ Drive Chain lubricated with a water-displacing solvent (WD40, CRC etc.).
- ☐ Drive Chain tension is correct.
- ☐ Nuts, Bolts, Grub Screws are tightened.
- ☐ Bearings have been lubricated and rotate freely.
- ☐ Sprockets for Transmission and Drive Roller are tight.
- ☐ Trailer Arm Pivot Bushes have been greased.
- ☐ "Important Notice" regarding the correct oils to be used in the Transmission has been read and complied with.
- ☐ All Safety Decals have been installed and are legible. Operating and Safety Instructions have been read and understood.
- ☐ Transmission Guard is in place and secured.
- ☐ Seat, Joystick, Trailer Arms, Dampener Struts, Drawbar, Wheels and Tires are correctly assembled, installed and secured.

Inspection Report & Safety Check

Model No.

Serial No.

Delivery Date

☐ The above equipment and operator's manual have been received by the buyer and they have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Submit Claim Form

Sample Claim Form

Warranty Claim Form

Dealer Information

Dealer ID

Dealer

Contact

Email

Customer Information

Customer

Contact

Address

State

Zip/Postcode

Country

Email

Phone

Machine Information

Model No.

Serial No.

Hour Meter Reading

Job/Repair Order Number

Unit Failure Date

Repair Start Date

Repair Completion Date

Hours spent on repair

Issue Details

Describe the complaint, cause and corrective action

Cause of issue

Type of issue

Manufacturer's parts used

Quantity | Part No. | Description | Price | Sub-Total $

Add Part

Total $

Additional Parts and Charge

Quantity | Part No. | Description | Price | Sub-Total $

Add Part

Total $

Labour Charges

Hours | Description | Rate / Hour | Sub-Total $

Add Item

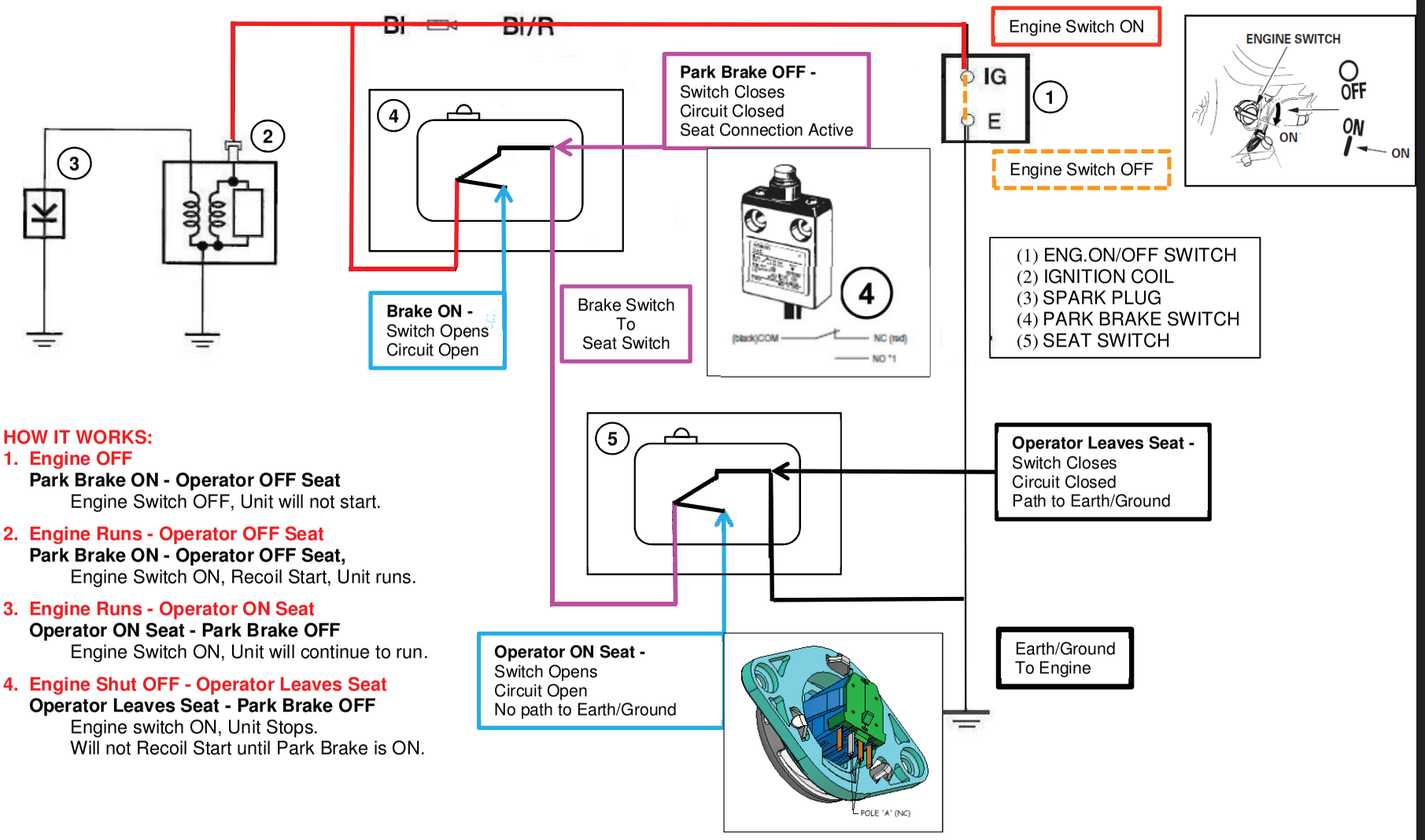
Total $

Claim Total $

Submit Claim Form

Schematic Diagram - Safety Interlock Circuit

SCHEMATIC DIAGRAM OF SAFETY INTERLOCK CIRCUIT & OPERATOR PRESENCE SYSTEM



HOW IT WORKS:

1. **Engine OFF**
   Park Brake ON - Operator OFF Seat
   Engine Switch OFF, Unit will not start.
2. **Engine Runs - Operator OFF Seat**
   Park Brake ON - Operator OFF Seat,
   Engine Switch ON, Recoil Start, Unit runs.
3. **Engine Runs - Operator ON Seat**
   Operator ON Seat - Park Brake OFF
   Engine Switch ON, Unit will continue to run.
4. **Engine Shut OFF - Operator Leaves Seat**
   Operator Leaves Seat - Park Brake OFF
   Engine switch ON, Unit Stops.
   Will not Recoil Start until Park Brake is ON.

16 January 2013

Notes & Bulletins