

ARBORIST 200 & ARBTRAK 200

OPERATORS MANUAL



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Arb/ArbTrak 200 Models 1. INTRODUCTION AND PURPOSE 1-1

INTRODUCTION

This manual explains the proper operation of your machine. Read these instructions thoroughly before operating and maintaining the machine. Failure to do so could result in personal injury or equipment damage. Consult your GreenMech supplier if you do not understand the instructions in this manual.



CAUTION! This symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury to yourself or others, and carefully read the message that follows.

Keep this manual in the box provided and treat as part of the machine. Locate and note here the serial number and quote it in any communications. This is important when ordering spares. Remember to include all numbers and letters.

Fig 1.1 Serial Number plate.



VIN Number.....

Serial Number.....

Write in the number!

This manual covers the following models.

Instructions refer to all models and integral engine models, except where stated for specific type (for example:- Road-Tow, ArbTrak,).

Paragraphs numbered with letter suffixes are alternatives for different model types.

Arborist 200 trailed (Road-Tow) chipper – stop bar & buttons, diesel engine

ArbTrak 200 self-propelled tracked chipper, - stop bar & buttons, diesel engine

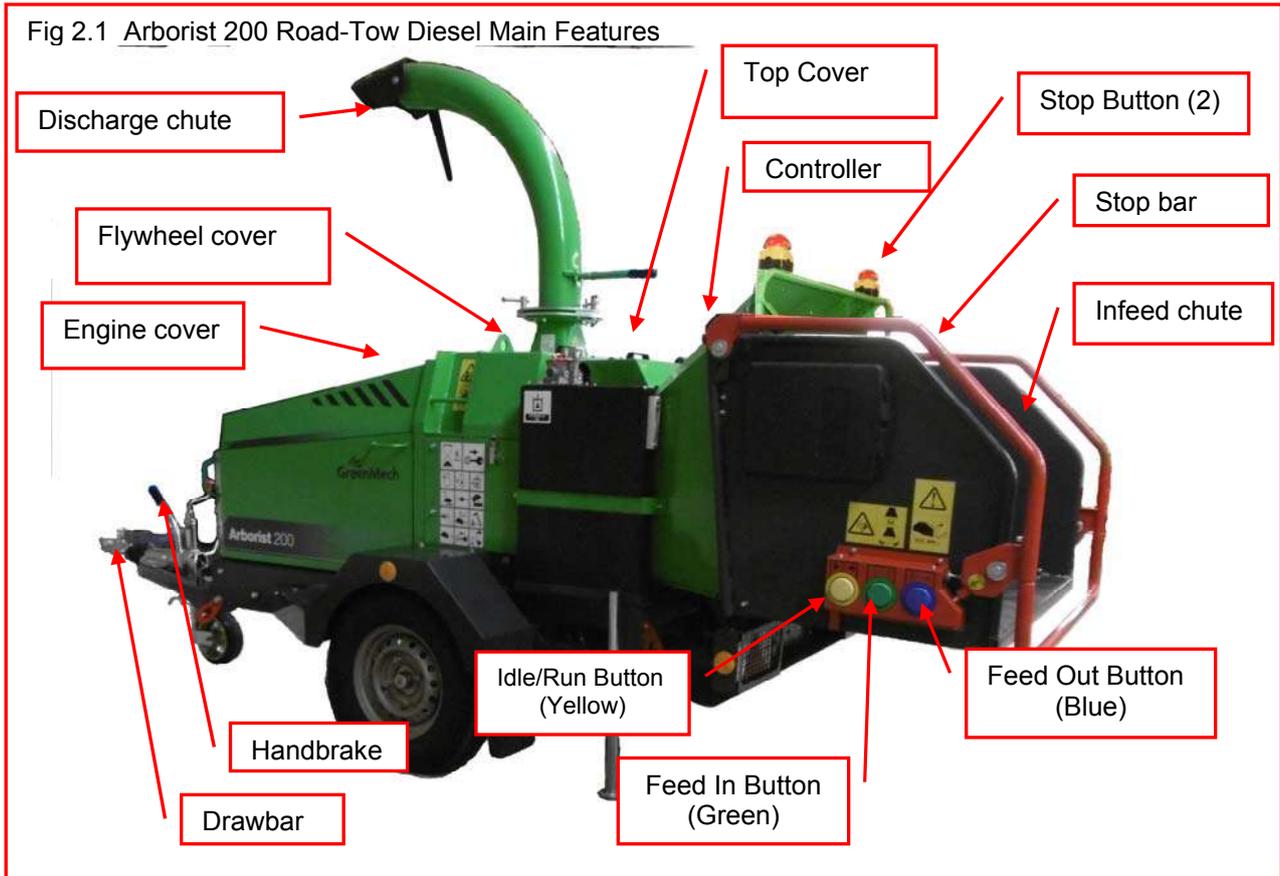
The information in this manual is correct at the time of publication. However, in the course of development, changes to machine specifications are inevitable. Should you find any information to vary from the machine in your possession please contact your GreenMech dealer for up to date information.

This manual may contain standard and optional features and is not to be used as a machine specification.

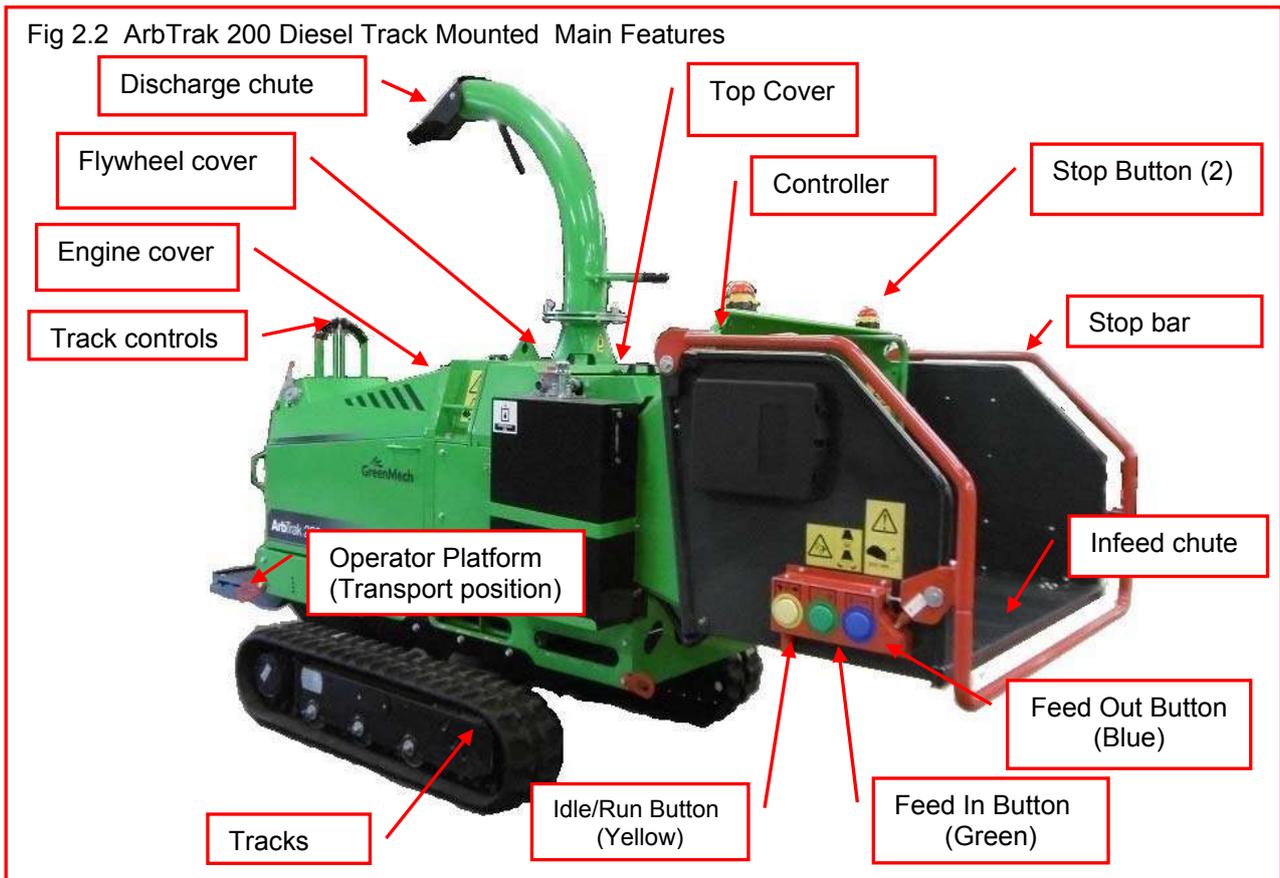
PURPOSE



CAUTION! This machine is designed solely to chip wood and must not be used for any other purpose. The machine should only be used by trained operators who are familiar with the content of this instruction manual. It is potentially hazardous to fit or use any parts other than genuine GreenMech parts. The company disclaims all liability for the consequences of such use, which in addition voids the machine warranty.



TECHNICAL SPECIFICATIONS Arborist 200 Road Tow model	
Max Capacity	200mm X 280mm (8inch x 11inch)
Infeed Chute	1200mm x 840mm
Speed	1500 rpm
Chipping Blades	4 round disc blades
Feed Rollers	2 x Hydraulic
Power Control	No-Stress Electronic Feed Roller Controller
Hydraulic capacity	27 Lt
Fuel Capacity	27Lt
Power Unit	45HP Kubota diesel
Sound Power Lwa	116dB(A)
Sound Pressure LPa	92dB(A)
Length	3990mm
Width	1440mm
Height (Work)	2695mm
Weight	1260kg



TECHNICAL SPECIFICATIONS ArbTrak 200 Track mounted model	
Max Capacity	200mm X 280mm (7.5inch x 11inch)
Infeed Chute	1200mm x 840mm
Speed	1500 rpm
Chipping Blades	4 round disc blades
Feed Rollers	2 x Hydraulic
Power Control	No-Stress Electronic Feed Roller Controller
Hydraulic capacity	42 Lt
Fuel Capacity	31Lt
Power Unit	45HP Kubota diesel
Track Size	1430mm x 280mm x 340mm
Sound Power Lwa	T B C
Sound Pressure LPa	T B C
Length	3230mm
Width	1410mm
Height (Work)	2612mm
Weight	1600kg

Noise

Noise levels vary depending on type of material being processed. Also duration of operation is variable. Noise emission tests have been carried out and the guaranteed sound power level (**L_{wa}**) is displayed on the CE plate of each model as follows:

ArbTrak 200 – 116dB(A)

Minimise noise by switching to idle or stopping the engine whenever chipping is not in progress.



CAUTION! Operators must wear appropriate ear protection. Bystanders must be kept away from proximity of machine.

Lifting Points

There is a single central lifting point by the base of the discharge chute.



CAUTION! Lift with extreme care. The machine may tilt because the single lifting point may not be directly over the centre of gravity.

Drawbar and hitch - Road Tow models

Ball type hitch with overrun brake and safety cable.



CAUTION! Ensure that the towing vehicle is correctly suited to the trailer weight and drawbar (nose) loading. If necessary check with national vehicle legislation.

**ENSURE! :**

All Operators must be fully trained in the use of their machine.
(Certificated Operator training courses are available on request.)
 Operators Manual is read and understood.
 Enclosed HSE guidance notes are read and understood.
 Appropriate Personal Protective Equipment (PPE) is worn, including non-snag clothing, gloves, eye and hearing protection.
 Machine is positioned on level ground and machine is level with infeed chute at not less than 600mm (23.62 inches) above ground level (fig 3.4.3).
 Handbrake is applied and if necessary wheels are chocked, when machine is detached from towing vehicle.
 All guards are fitted and in good condition.
 Blades are in good condition and secure.
 All blades are sharpened or replaced in "Sets".
 All fasteners are checked regularly for tightness.
 Only "WOODEN" materials free of nails etc., are fed into machine.
 Correct First Aid Kit including large wound dressing is available on site.
 Fire extinguisher is available on site.

**NEVER! :**

Work on machine until chipper flywheel is stationary and engine or PTO has stopped.
 Operate machine without protective clothing (Eye protection, Earmuffs, and Gloves), or high visibility clothing when working on roadside.
 Operate with loose articles of clothing, including loose cuffs on gloves.
 Work under a raised component without adequate safety support.
 Operate machine with untrained personnel or with individuals present who are not involved in chipping work operation.
 Leave machine unattended with engine running at full operating speed. (See section 4)
 Put any part of your body into infeed chute while machine is running.
 Operate machine whilst under the influence of alcohol or drugs.
 Operate machine inside a building or confined space.
 Climb on infeed chute.
 Impede or obstruct Stop control.

**ALWAYS! :**

Check machine before starting (see Section 4 Preparation and Section 5.1 Operation: Pre-work checks).
 Be aware of potential hazards in work area, i.e. uneven ground, tree roots, trip/slip hazards, obstructions and type of materials being fed into machine.
 Feed from a side.
 Keep clear of discharge area.
 Have a second trained operator within easy reach of machine.
 Maintain strict discipline at all times.
 Service machine at specified periods. (see Section 6: Routine Maintenance).
 Note direction of discharge chute and if necessary note wind direction to prevent debris from being blown into highway or where it could affect members of the public.
 Keep machine level.
 Check route to worksite for gradients, undulations and obstructions.
 Remove key before doing any maintenance.

3.4 Safety Controls and Switches

Emergency Stop Bar and buttons (fig 3.4.1)

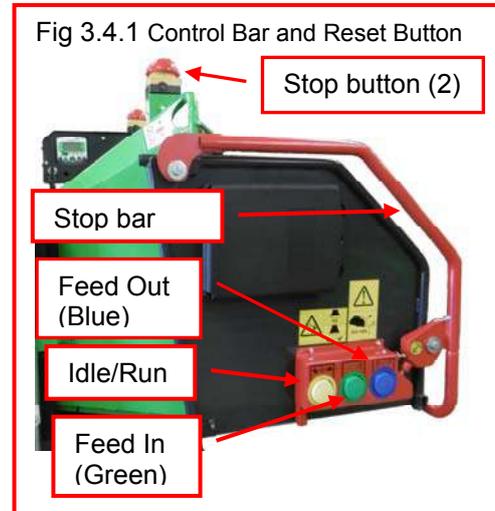
In the event of an emergency, push stop bar right in or press either stop button to STOP feed rollers.

Once the emergency has been rectified, pull Red stop buttons back up if down.

Press Green button to restart rollers to continue Feed In, or press and hold Blue button to Feed Out to eject material. Stop bar returns to work position but does not restart feed rollers.

If stop be tripped accidentally in normal working conditions, i.e. NOT an emergency, then Feed In can be recovered by pressing Green button.

To reverse feed rollers (Feed Out) press and hold Blue button. To regain Feed In press Green button.



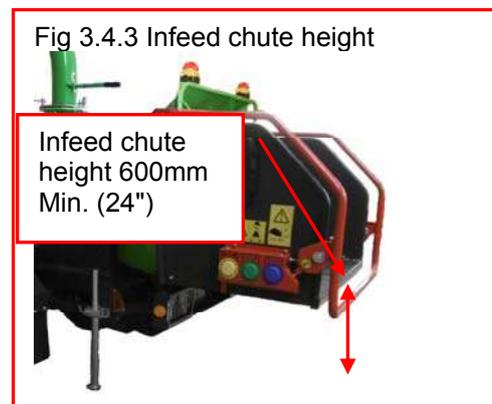
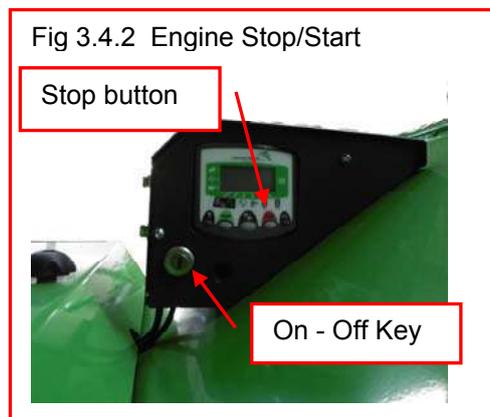
3.4.2 Engine Stop button (fig 3.4.2).

To stop engine, press red stop button on control unit, and/or turn key anticlockwise to '0' position.

To restart, reset key clockwise to 1.

To disable machine, remove key.

CAUTION! Do not restart engine until hazard has been removed.



3.5 Control cut-outs

Cut-out switch under engine cover prevents starting with covers removed. Engine overheating is protected by thermal cut-out switch in coolant circuit. Low engine oil pressure is protected by pressure switch in engine oil pump.

3.6 No Stress system

Speed sensor disables feed roller FEED IN or FEED OUT mode when engine speed is below factory pre-set value.

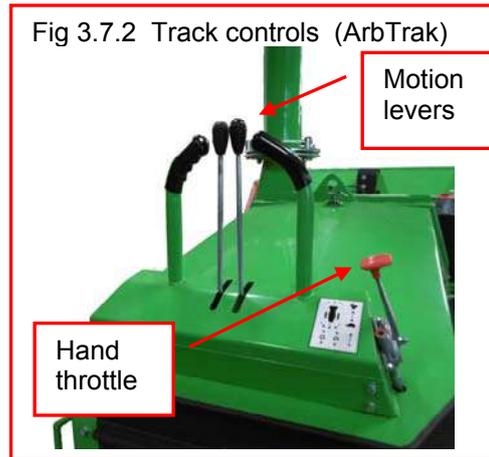
Overload sensor stops and restarts rollers during Feed In.

3.7 Tracking Controls ArbTrak

A two position toggle switch selects either tracking or chipping. In track mode No Stress system will not allow feed rollers to operate.

Select Track for tracking motion (Fig 3.7.1) Lever controls operate drives to tracks. (Fig 3.7.2) Push for forward motion. Pull for reverse motion. Use hand throttle (fig 3.7.2) to control travelling speed.

Note: Chipper flywheel runs whenever engine is running, unless drive belt clutch is released. (See 5.9)



3.8 SYMBOLS on the MACHINE

These relate to operator safety, correct use and maintenance of machine. Check that all personnel understand and are familiar with meanings before using machine.

Important Safety symbols

Take correct action shown on display box below stated hazard box (see table)



Caution!		Remove Key		Do NOT start engine	
Caution!	Beware flying object hazard	Beware noise hazard	Beware trapping hazard	Brakes off -incorrect	
Read instruction manual	Wear helmet & visor	Wear ear protectors	Wear proper clothes	Brakes on -correct	
Machine not level -incorrect	Beware flying object hazard	Beware flying object hazard	Beware exposed drives hazard	Caution!	
Machine level -correct	Keep bystanders away	Position and lock discharge chute	Fit all guards	Keep nuts tight	

Important Operating Checks Notice

Before use carry out daily stated checks in order shown (see table)

Daily Checks

Every 8 Hours – Daily checks		Remove key stop engine
1. Check coolant level	2. Check engine oil level	3. Check hydraulic oil level
4. Check machine is level	5. Check brakes are on	6. Check chipper flywheel is clear of debris
7. Check all guards are in place	8. Check infeed chute is clear of debris	9. Lock discharge chute
10. Check stop bar	11. Start engine	12. Increase from Idle to Run

Important Safety Information

Caution! Beware of thrown object hazard

Action: Stand to side of infeed chute, NOT in centre.

Caution! Beware of thrown object hazard

Action: Keep away from fast discharge chute

Face shield must be worn

Wear face shield

Lift Point

Sound level

120 dB

Ear defenders must be worn

Ear defenders must be worn

Wear ear protectors when operating this machine

Caution!

Do not climb into infeed chute

Caution! Infeed chute trapping hazards

Keep hands clear. Do not climb in

Caution!

Do NOT operate with infeed chute at less than 600mm from ground (bottom stop bar).

Transport Lock

Lock this component before moving machine

Caution! Beware Crushing hazard!

Do NOT work or park directly up or down slope.

Caution!

Do NOT drive up or down slopes of more than 20°

Maintenance Information

Radiator cleaning

8 Hours Check radiator screen	40 Hours Blow out radiator core

Diesel Filler

Hydraulic Filler

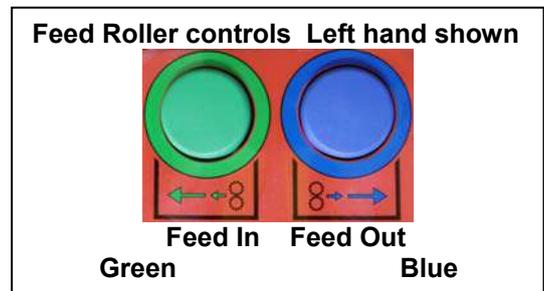
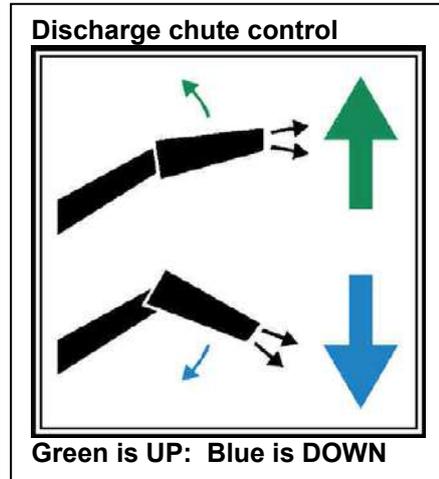
Grease point

High temperature Grease 40 hours

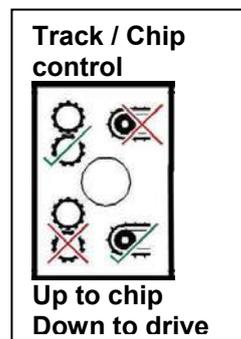
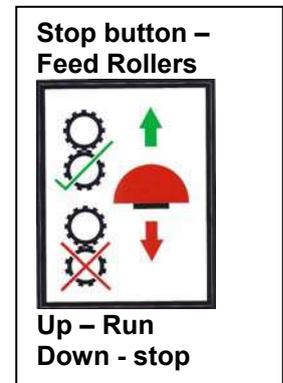
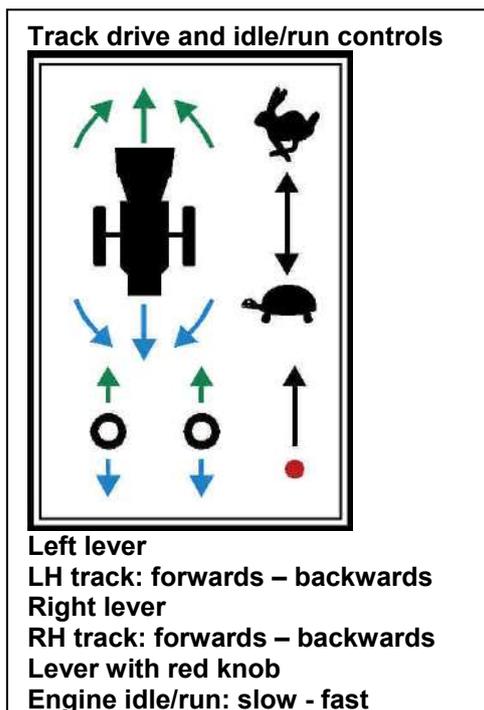
Operating Information

Chipper Flywheel cleaning

Caution!	Read Manual!	Remove key
Caution! Sharp edges	1) Wear protective gloves	2) Release cover bolts
3) Open chipper covers	4) Lock / Block flywheel	5) Clean blade nut and bolt recess
6) Remove blade nut	7) Clean blade spigot and flywheel recess	8) Replace and Tighten to 200Nm
9) Replace all covers	10) Secure covers	11) Replace key



ArbTrak model
Additional operating controls for tracking -



Arborist/Trak 200 Models 4. MACHINE PREPARATION 4-1

4.1 Initial Fuelling and Parking

Fill fuel tank with correct fuel (Fig 4.1).
Top up hydraulic tank if necessary, with correct oil.
See Section 6.

Road-Tow models

Position chipper on firm and level ground.
Apply vehicle handbrake.
If machine is detached from vehicle, set jockey wheel clamp to allow jack screw to lift drawbar clear of vehicle hitch, apply trailer handbrake (fig 4.2) and chock wheels.

Set drawbar jockey wheel height to level machine body and obtain correct infeed chute height.

Lower and secure rear stand.

ArbTrak model

Position machine so that body is level.

4.2 Infeed Chute

- 1) Release infeed chute catches (Fig 4.2), and gently lower infeed chute to work position.
- 2) Check height of infeed chute for safe working height (Fig 3.4.3)

4.3 Number not used

Fig 4.1. Fuel Tank



Fig 4.2 Infeed Chute Catches



CAUTION! Infeed chute must not be used at less than 600mm from ground. (fig 3.4.3). Adjust drawbar of Road tow models as necessary.

CAUTION! Before travelling, always fold up and secure infeed chute flap.

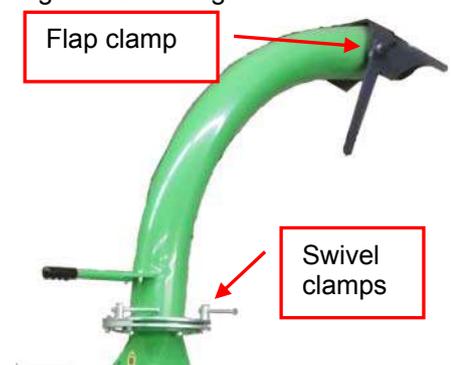
4.4 Discharge Chute (Fig. 4.4)

Release swivel clamps, point chute in desired direction away from infeed chute and tighten clamps.

Set flap at desired height and tighten clamp.

CAUTION! Do not point discharge chute towards infeed area.

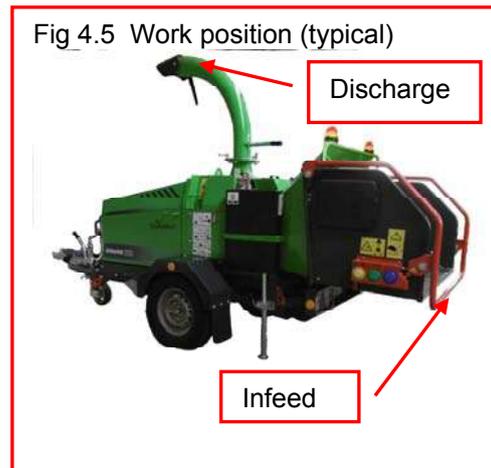
Fig 4.4. Discharge Chute



Arborist/Trak 200 Models 4. MACHINE PREPARATION 4-2

4.5 Work Position (Typical)

Typical work position (fig 4.5) shown with infeed chute down and discharge chute pointing away from infeed.



CAUTION! When **tracked model** is driven on tracks, ensure chute points away from driver.

5.1 Pre-Work Checks:

Check machine is stationary, Key in OFF position or removed, and hand brake applied if separated from vehicle.

Check that machine is level and infeed chute is not less than 600mm from ground (fig 3.4.3).

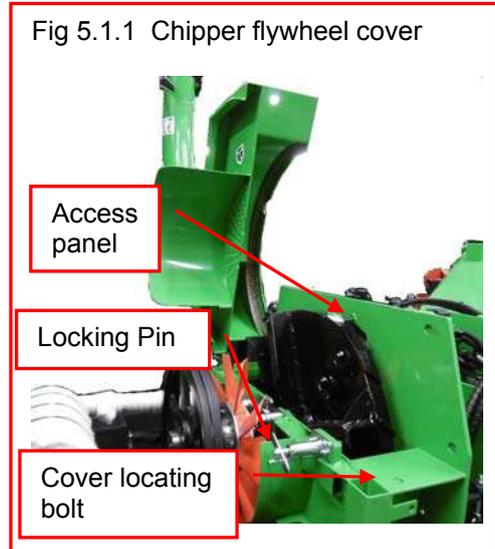
Check engine oil level (See Engine instruction manual).

Check hydraulic oil level (See Section 6).

Check fasteners for tightness and hydraulic connections for leaks.

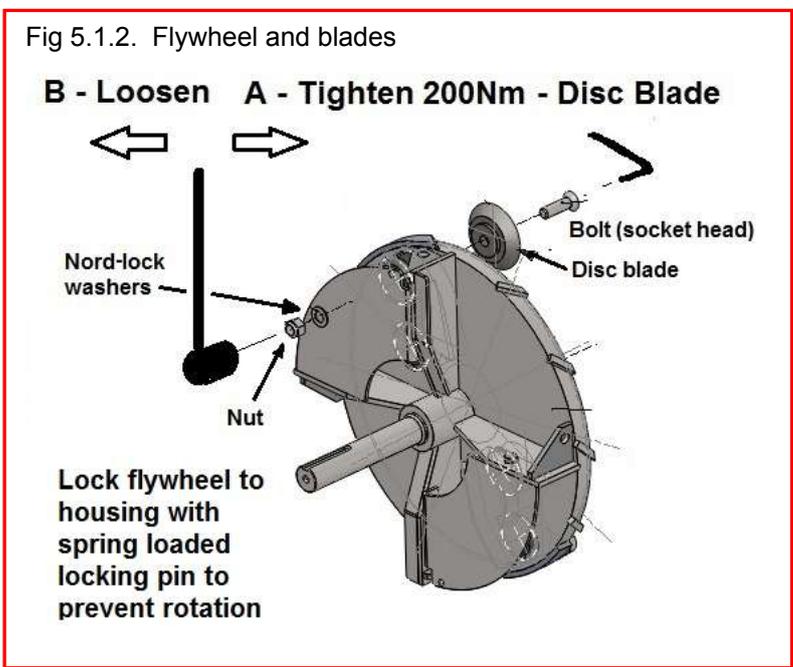
Check condition of blades as follows:

- 1) Raise engine cover. Check nothing is rotating.
- 2) Remove bolt retaining chipper flywheel cover.
- 3) Using discharge chute handle as a lever, swing back cover onto stop to expose chipper flywheel and blades. (fig 5.1.1)



CAUTION! Beware sharp edges of blades and unexpected movement.

- 4) Release Locking pin to spring towards chamber to prevent flywheel from turning.
 - 5) Remove any loose wood material.
 - 6) Retract locking pin and carefully rotate chipper flywheel to check tightness of blade bolts and condition of blades (fig 5.1.2).
 - 7) If any bolts are loose, refer to Maintenance Section 6.7 for further action.
 - 8) Retract and turn locking pin to prevent it springing back and replace chipper flywheel cover.
 - 9) Tighten all bolts securely.
 - 10) Remove any loose material and dust from radiator and engine bay
 - 11) Replace all covers and secure. Check discharge chute is in desired position pointing away from infeed and all clamps are tight. (see Section 4.4)
- Check work area and erect signs and cone off discharge area if necessary. Check **ALL** safety procedures have been followed.



CAUTION! Always work with chipper level, preferably with the infeed direction slightly down the slope to minimise the risk of material falling back out.

5.2 Starting Machine (Fig 5.2)

CAUTION! Beware sharp edges and dust. Wear protective gloves and eye shield!

Check all other personnel are clear of machine.

Check that feed roller stop bar is free in STOP position to make the machine safe, and both feed roller Stop buttons in Up (Run) position.

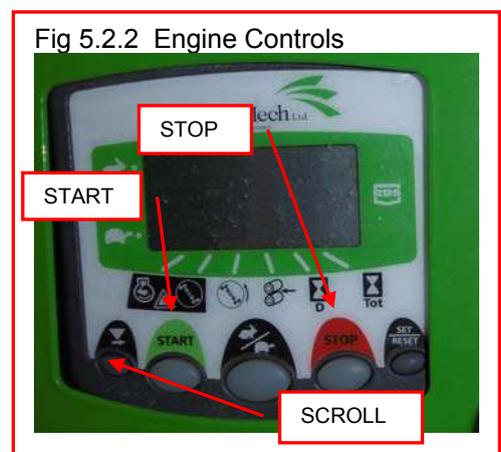
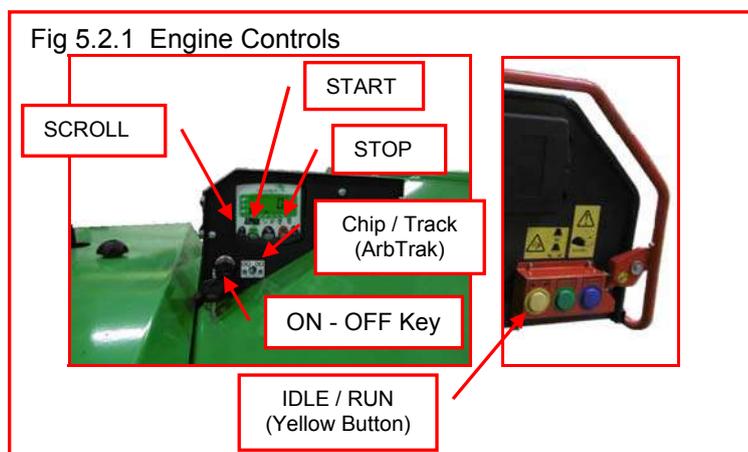
Diesel Engine (Fig 5.2.1 Fig 5.2.2)

Turn the ON - OFF key to position I. Wait for the pre-glow countdown to cease and chipper speed 0 rev/min to be displayed.

Press and hold green START button to start chipper. **ArbTrak** only - Set to 'Chip'

Press IDLE/RUN knob (yellow) to increase speed to operating speed.

Press Green FEED IN button when ready to start loading chipper.



5.3 Stopping Machine

- 1) Push stop bar to STOP position, or press down red feed roller Stop button.
- 2) Set yellow knob to IDLE and allow chipper flywheel to slow down (fig 5.2).
- 3) Press red STOP button on controller to stop engine.
- 4) Switch ON - OFF key to position 0.
- 5) Wait for chipper flywheel to stop.

CAUTION! Chipper flywheel will take several seconds to stop due to its inertia.

5.4 Blockages

Stop engine and REMOVE key to secure place.

⚠ CAUTION! Chipped material is inflammable. Expect large volume and prevent from falling into engine compartment. All material must be removed.

Open chipper chamber. See 5.1 Pre-work checks.

Look into chamber to identify problem if possible, before reaching in.

Open discharge chute and fold down at hinge to inspect and clear.

Clean out discharge chute thoroughly with a suitable rod to pass around bends as necessary.

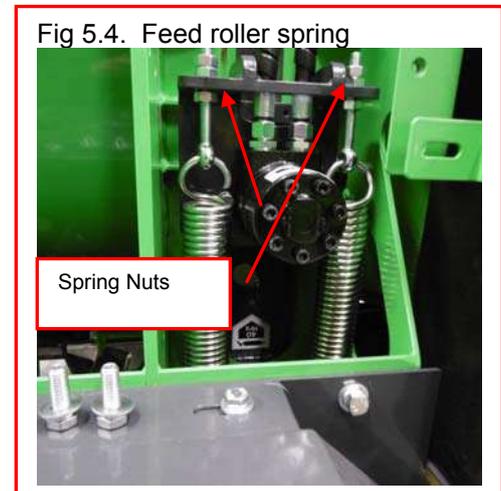
⚠ CAUTION! Beware sharp edges of blades and unexpected movement of flywheel due to resistance of engine. Wear protective gloves.

Check if chipper flywheel is free to rotate. Pull top of flywheel in operating direction of rotation. If so proceed to 6 below.

If flywheel does NOT rotate freely, proceed as follows:

- 1) Remove side cover and loosen nuts to release feed roller spring (Fig 5.4) and pull roller away from fixed roller.
 - 2) Inspect blades from infeed chute and if necessary enter with care to clear material.
 - 3) Carefully remove excess loose material from around chipper flywheel and note any obstructions.
 - 4) Carefully rotate chipper flywheel in reverse direction by full revolution to release blocked material. Use bar against paddle blades for aid.
 - 5) Carefully remove all material, checking for obstructions. Check rotation of chipper Flywheel. Check condition of blades. See 5.1.6
- Note:** Always attempt to find reason for blockage. e.g. blunt blades, slack drive belts.
- 6) Re-assemble all covers with correct fasteners and check for security.
 - 7) Start machine as 5.2 and check operation.

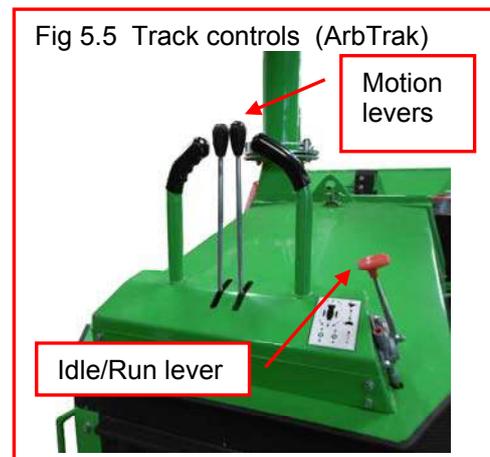
Note: If machine will not run, repeat process or contact dealer for technical advice.



5.5 Moving ArbTrak tracked model

Set Chip / Track to Track (Fig 5.2.1)
 Push both motion levers together to start forward movement (Fig 5.5).
 Adjust Idle/Run lever to increase speed and decrease speed.
 Push left or right lever to steer.
 At work site ensure body is level.
 Adjust Idle/Run to slow engine.

Note: Drive with track motors at rear when possible.

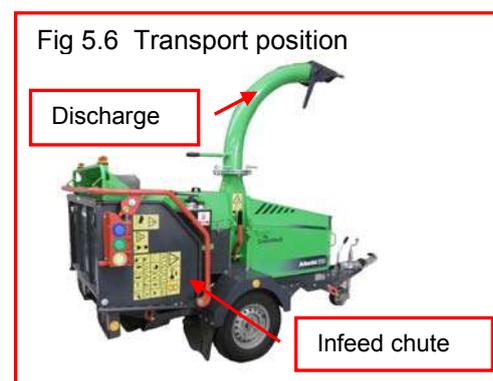


Cautions for ArbTrak tracked model

-  CAUTION! Do not leave machine parked directly up or down slope.
-  CAUTION! Avoid static turns on hard surfaces. This will rapidly wear tracks
-  CAUTION! Point discharge chute away from driver. Over long journeys, engage chipper drive to blow out build up of exhaust gas.
-  CAUTION! Do not drive directly up slopes exceeding 20 degrees. Slopes up to 30 degrees may be traversed with care.

5.6 Preparing For Transport On Completion Of Work (Fig 5.6)

Check that engine has stopped and chipper flywheel is stationary.
 Remove surplus material from infeed chute and all machine surfaces.
 Fold infeed chute into transport position.
 Unlock, lift and secure covers to remove debris.
 Replace and secure covers.
 Raise rear stand and lock securely.
 Swivel discharge chute into transport position, normally facing forward, and secure.
 If detached, re-attach trailer to vehicle, raise jockey wheel, connect safety cable and electric services.



5.7 Operating Hints

Check that chipper flywheel is at full speed, rpm readout should be above 2300 rpm.

NOTE: “No Stress” system will only allow FEED IN (Forwards) and FEED OUT operation of feed rollers when machine is running at FULL operating speed and not overloaded. Reduce chipper speed to IDLE whilst further material is collected for chipping.

Take care when feeding wood into machine to allow for awkward shapes to “KICK” when contacting feed rollers.

Position end of larger sections of wood inside infeed chute and then support other end whilst pushing wood into feed rollers.

NOTE: If chipper becomes blocked do not continue to feed. It will make removal of blockage more difficult. See 5.4.



CAUTION! Do not release discharge chute clamps when chipping is in progress. Elevation of discharge is altered by means of adjustable flap (fig. 4.4).



CAUTION! Keep working area around the machine clear at all times and check only authorised personnel are present.

5.8 Adjustable Speed Feed Roller Control (standard on ArbTrak)

When chipping wood sizes larger than 150mm diameter it is necessary to reduce feed roller speed to suit material being chipped. Control knob is in centre of top cover.

Turn control knob (fig 5.8) to adjust speed.

Fig 5.8 Adjustable feed roller control



Standard on ArbTrak

5.9 Flywheel drive clutch

A flywheel clutch is fitted which disengages belt drive to flywheel whilst maintaining all other operations, allowing engine to be started and run without chipper flywheel.

Clutch may be used with care to free blocked flywheel.

Clutch disengaged enables Arbtrak machine to be driven to safe area to check flywheel for blockages and other malfunctions.

Pull lever (Fig 5.9) downwards to disengage belts.

Push lever fully up to re-engage.

Fig 5.9 Belt release clutch



Clutch engaged



Clutch disengaged

ROUTINE MAINTENANCE SCHEDULE

⚠ CAUTION! Always remove key and check for rotation before carrying out any maintenance.

Note: Engine cover is secured closed with key. All other covers are bolted. Replace and secure all covers when task is completed.

Instructions refer to all models and integral engine models except where stated for specific type (e.g. Road-Tow, ArbTrak,).

Action	Section	Page
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Action	Section	Page
DAILY		
Check engine oil level and coolant (ref: engine manual)	6.2 – 6.3	6-5
Check hydraulic oil level	6.4	6-5
Check fuel level	6.5	6-5
Check all drive belts	6.6	6-5
Check condition of blades and retaining bolts	6.7	6-6
Note: Special tools may be required		
Clean radiator screen and around radiator	6.8	6-7
Check feed roller stop bar function	3.4	3-2
Check condition of tracks (ArbTrak)	Refer to track manual	
Check track gear, nuts, rollers and bearings (ArbTrak)	Refer to track manual	

First 50 hours

Check drive belt tensions	6.9	6-7
Check battery levels	6.13	6-8
Check wheel and tyre condition and pressures (Road-Tow)	6.14	6-8
Check brake condition and operation (Road-Tow)	6.15	6-9
Check hydraulic connections	6.18	6-9
Check all mountings	6.19	6-9
Check feed roller stop bar function	3.4	3-2
Service engine	Refer to engine manual	

Weekly in addition to Daily actions

Blow out radiator core with air line	6.8	6-7
Check drive belt tension	6.9	6-7
Steam clean machine	6.10	6-7
Clean air cleaner	6.11	6-7
Check electrical connections	6.12	6-8
Check battery levels	6.13	6-8
Check feed roller stop bar function	3.4	3-2
Check wheel and tyre condition and pressures (Road-Tow)	6.14	6-8
Check and adjust brakes (Road-Tow)	6.15	6-9
Grease all bearings and pivots	6.16, 6.1	6-9
Check hydraulic connections	6.18	6-9
Check all mountings	6.19	6-9

250 hours in addition to Daily and Weekly actions

Check all fluid levels	6.2, 6.3, 6.4	6-5
Check brake condition and operation (Road-Tow)	6.15	6-9
Check condition of bearings and pivots	6.16	6-9
Service engine	Refer to engine manual	
Check axle mounting bolts for tightness	6.19	6-9
Check track gear units, rollers and bearings (ArbTrak)	Refer to track manual	
Replace return filter element	6.20	6-9

1000 hours in addition to 250 hour actions

Change hydraulic oil when replacing filter element

6.21

6-10

ENGINE MAINTENANCE**REFER TO ENGINE MANUAL****WHEELS AND BRAKES****REFER ALSO TO AL-KO CHASSIS MANUAL****All references to wheels and brakes apply also to optional trailers.****Tyre Pressure 2.7 bar (40 lb/in²)****TRACK MAINTENANCE (ArbTrak)****REFER TO TRACK MANUAL****Recommended lubricants****Specification**

Hydraulic Oil

ISO 32

Grease

Complex grease EP2 (high temperature)

Gearbox Oil (TMP)

EP90

Engine

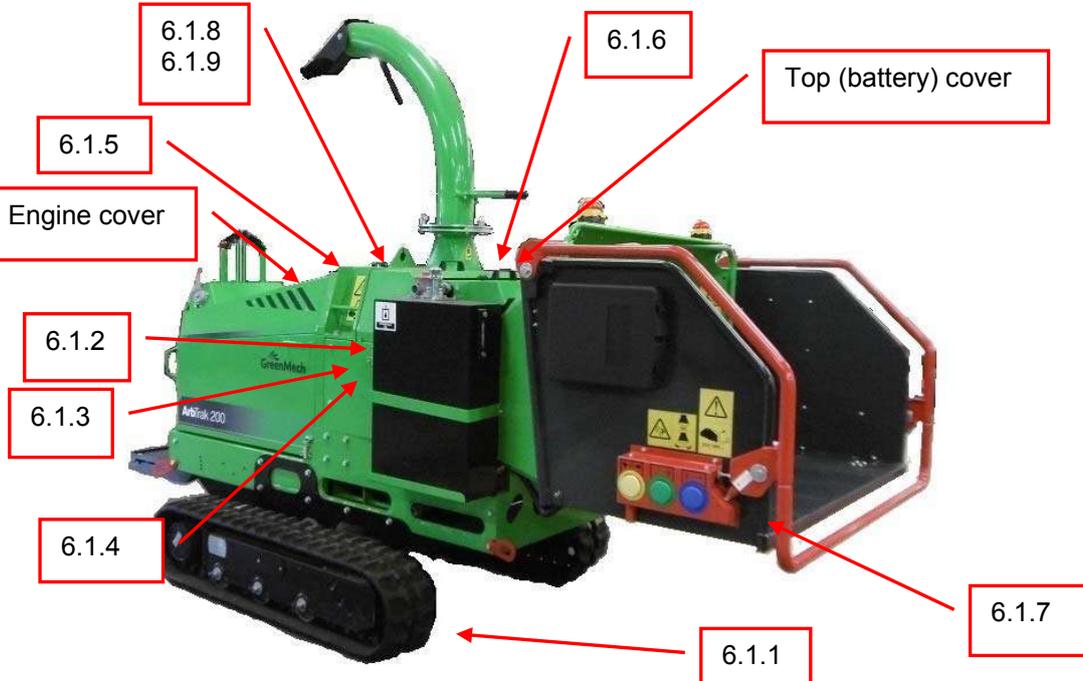
SAE 15W-40 APICD

6.1 Lubrication Points (see 6.14)

Fig 6.1a Lubrication points Arborist 200 Road-Tow model



Fig 6.1b Lubrication points ArbTrak 200 tracked model



Grease except where stated - All models (except where stated)

6.1.1	Drawbar (Road-Tow)	2 nipples
	Tracks (ArbTrak)	See track manual
6.1.2	Feed roller slide	Clean and grease sparingly
6.1.3	Sliding Feed roller bearing	1 nipple under top cover
6.1.4	Fixed Feed roller bearing	1 nipple under side cover under spring
6.1.5	Chipper flywheel front bearing	1 nipple (Fig 6.1.3) under flywheel cover
6.1.6	Chipper flywheel rear bearing	1 nipple (Fig 6.1.2) under flywheel cover
6.1.7	Feed Roller stop bar	Clean and grease sparingly
6.1.8	Drive Belt Tensioning pivot	1 nipple under engine cover (Fig 6.1.3)
6.1.9	Drive belt idler pulley	1 nipple under engine cover (Fig 6.1.3)

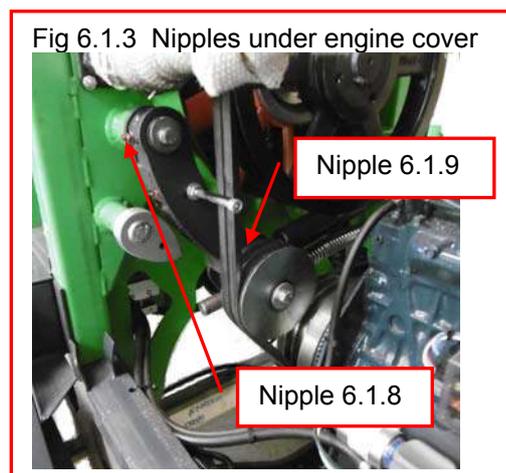
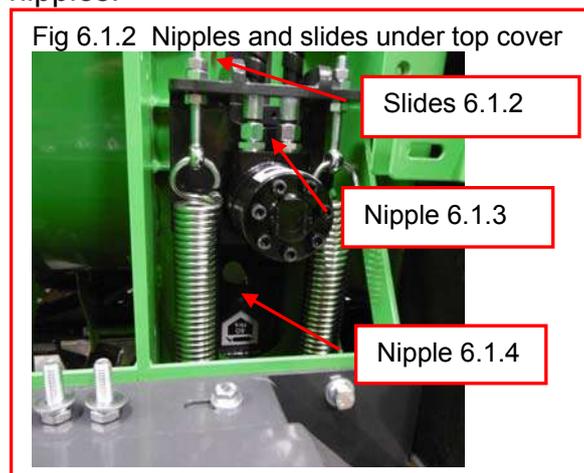
Note 1: Do not over-grease bearings as damage to seals may occur.

40 hours requires only one full pump of hand operated cartridge gun.

Note 2: Use high temperature grease on chipper flywheel bearings.

Detail of nipples under top, side, flywheel and engine covers (all models).

Note: There are additional covers under top cover which need removal to access grease nipples.



6.2 Engine Oil (Under engine cover)

Check daily (fig 6.2). Refer to engine manual to refill.

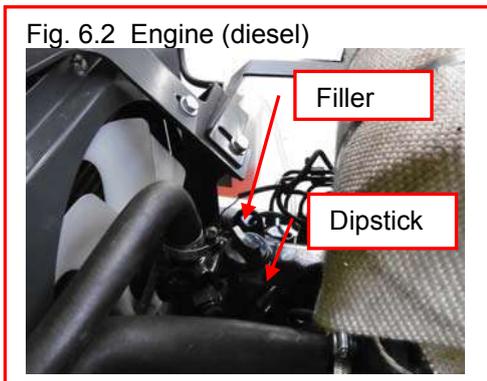


Fig.6.3 Coolant (diesel)



6.3 Coolant (under Engine cover)

Check daily, both radiator and overflow tank (fig 6.3). Refill as required. Check antifreeze.

CAUTION! Do not remove cap when engine is hot.

6.4 Hydraulic Oil

Check daily (fig 6.4). If below mark check for leaks and refill to correct level.

1000 hours. Change oil (see 6.21). Replace filter (6.18)

Fig. 6.4 Hydraulic Oil



6.5 Fuel Level (Section 4.1)

Check daily before work and fill as required.

CAUTION! Use clean fuel only. If in doubt, use a funnel with a filter.
CAUTION! Do not use any form of synthetic fuel.

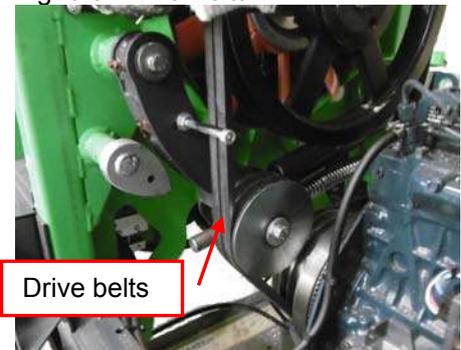
6.6 Drive Belts (Under engine cover)

Chipper flywheel drive tensioning is automatic and does not require any routine attention.

Check daily (Fig 6.6), before work, condition of all drive belts and replace if worn.

See section 6.9 for adjustment and replacement instructions.

Fig. 6.6 Drive Belts



6.7 Disc Blade Cleaning - Replacement

Blade design permits relocation in at least two rotated positions before regrinding or replacement is required.

- 1 Check engine is switched off, and start key removed.
- 2 Raise engine cover, and check any rotation has stopped.

⚠ CAUTIONS for Blade cleaning

- Blades have sharp edges. Wear protective gloves.
- Flywheel paddles and vanes create shearing and trapping points at edges of exposed housing. Do not place hands or fingers on or near flywheel and housing edges.
- Flywheel rotation is resisted by engine compression in either direction. Beware unexpected movement when manually rotating flywheel between blade positions.
- Tools can slip if not fully engaged. Clean fasteners thoroughly before applying tools.
- Ensure flywheel is prevented from rotating when applying force to tools on blade fasteners.

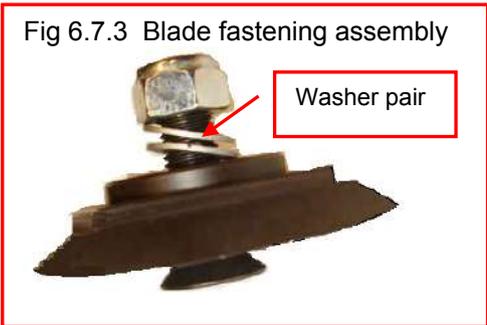
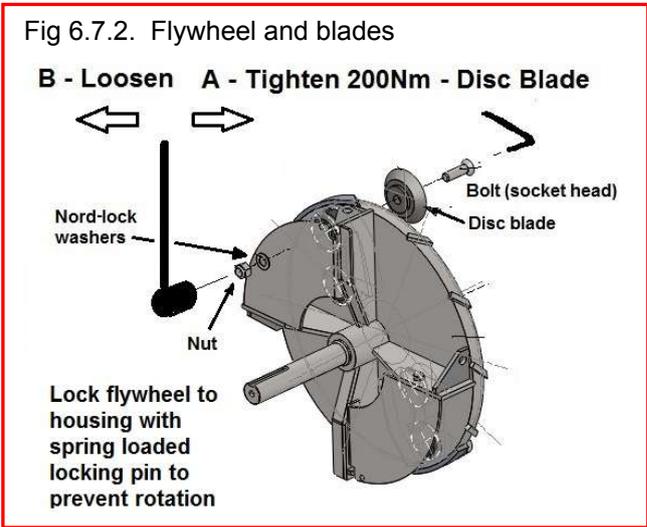
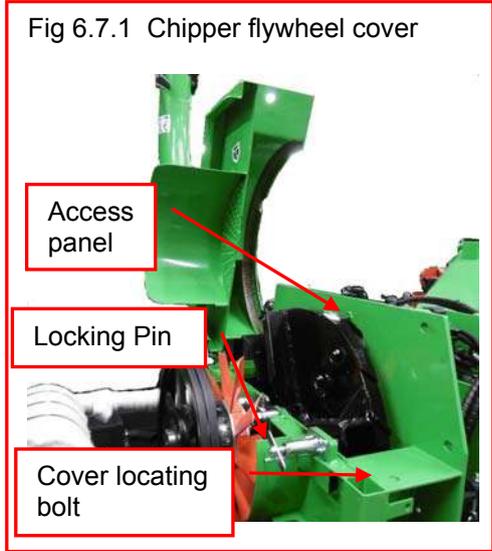
Follow procedure as on symbol instructions (Section 3.8):

- 1) Wear protective gloves.
- 2) Remove flywheel cover bolt.
- 3) Using discharge chute handle as a lever, swing back cover on to stop to expose flywheel and blades. (fig 5.1.1 and fig 6.7.1).
- 4) Locate and retract flywheel locking pin, and carefully turn flywheel until locking pin engages hole in flywheel to prevent movement). Remove access panel(s) to reveal blade bolts.
- 5) Thoroughly clean debris from nut faces and bolt head socket.
- 6) Using socket tool, loosen nut anticlockwise. Support blade bolt with hexagon key as required and remove blade and fasteners (fig 6.7.2).
- 7) Thoroughly clean debris from flywheel blade housing and all components to be replaced. Inspect condition of nuts and bolts and replace if any signs of wear. (Fig 6.7.3 and fig 6.7.4)
- 8) Replace blade with Nord-Lock washers ensuring that flywheel is blocked for opposite rotation. Tighten to correct torque: 200Nm.
- Retract locking pin and carefully rotate to next blade and repeat next blade removal (from 4 above) until all blades cleaned and replaced securely.
- 9) Replace all covers.
- 10) Check all covers are secure.
- 11) Replace key to start machine.

⚠ CAUTION! Blades must only be sharpened by grinding angled back face on a bench grinder. Grinding of front face will upset gap, which is factory set. Do not sharpen with hand held equipment.

All blades must be sharpened in “sets” with equal amounts removed to maintain balance. See 6.24

Note. If any blades are worn below flat annular section a complete set should be replaced.



6.8 Radiator (under engine cover)

Daily

Check radiator for debris. (fig.6.8)

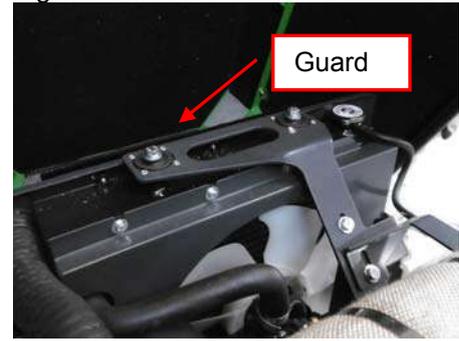
Lift out guard and clean.

50 hours or weekly

In addition to above, blow out radiator core from back with suitable airline and clear from front.

CAUTION! A build up of debris risks overheating of engine and a risk of fire.

Fig.6.8 Radiator



6.9 Drive belts

Belt Replacement

Remove engine cover.

Chipper Drive

- 1 Release flywheel drive clutch (See 5.9 and Fig 6.9.1)
 - 2 Remove all belts and discard.
 - 3 Fit new set of belts ensuring they lay snugly in grooves of all three pulleys.
 - 4 Re-engage drive clutch (5.9)
- Check alignment and tension before starting chipper.

Feed Roller Pump drive –

- 1 Remove chipper drive belts from engine pulley.
- 2 Release 2 bolts in slotted pump mounting plate to permit belt adjustment or removal (Fig 6.9.2).
- 3 Remove old belts and fit new set of belts ensuring they lay snugly in pulley grooves.
- 4 Re-tension belts using adjusting nuts and check tension
- 5 Replace all covers and secure.

Fig 6.9.1 Chipper Belt

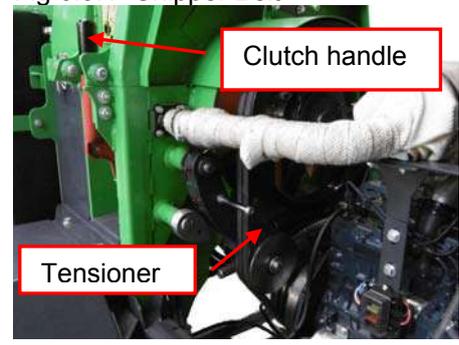
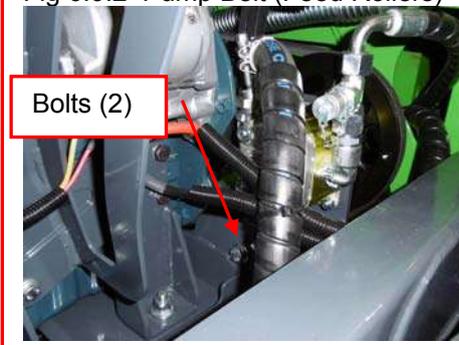


Fig 6.9.2 Pump Belt (Feed Rollers)



6.10 Steam Cleaning

Weekly and every 250 hours

- 1 Check all covers are fitted and closed.
- 2 Steam clean machine surfaces.
- 3 Clean electrical components with a damp rag, spray with WD40 and then wipe with dry rag.

CAUTION! Do not steam clean directly on to electrical components, e.g. control boxes.

6.11 Air Cleaner (under engine cover)

Weekly (Refer to engine manual)

- 1 Remove cover clips (fig 6.11) and release.
- 2 Slide out element and either blow out with air-line or gently tap on smooth ground to release debris.
- 3 Replace cover.

Fig 6.11 Air Cleaner (Diesel)



6.12 Electrical connections**Weekly**

Check all wiring loom connections are secure.



CAUTION! Poor connections will affect engine security cut-outs and may prevent starting.

6.13 Battery**First 50 hours and weekly**

- 1 Remove top battery cover.
- 2 Release stays to access battery.
- 3 Check electrolyte level and top up if required.
- 4 Reposition battery, and secure stays.
- 5 Refit cover and secure.

Removal

- 1 First disconnect negative (-) cable (black cap).
- 2 Disconnect positive (+) cable (red cap).
- 3 Remove clamp and carefully lift out battery.
- 4 Replace by connecting positive cable before negative.
- 5 Secure battery as 6.13.4 above.

Fig 6.13 Battery



CAUTION! Gases are explosive. Electrolyte is corrosive. Avoid sparks and spillage.

6.14 Tyres and Wheels (Inc Trailer)**50 hours and 250 hours**

Check condition of tyres.

Check pressures and inflate to 2.7bar (40lb/in²) pressure as required.

Check wheel nuts are tight to 110Nm (80lbf) torque.

6.14.1 Tyre sealant

Tyres installed with Air-Seal Products water based sealant have either green valve cap or green ring around valve. Tyres will operate in same fashion as normal pneumatic tyre.

Note If valve core is depressed to deflate tyre, valve recess may become blocked with plug of sealant. To unblock either remove valve core to allow air to blow plug out or alternatively blow plug back into tyre with airline.

For replacement supply, consult GreenMech or distributor.

6.15 Brakes**50 hours, weekly and 250 hours**

Check operation and effectiveness of overrun and handbrake.

100 hours**Adjust brakes as follows:**

- 1 Chock machine, release handbrake fully off and check drawbar is fully extended.
- 2 Jack up both wheels and support on axle stands.
- 3 Remove inner bung (fig 6.15.1) to expose adjuster 'starwheel'.
- 4 Adjust starwheel with screwdriver until tight whilst rotating each wheel forwards until tight.
- 5 Slacken until wheel rotates freely in forward direction.

Fig 6.15.1 Brake adjustment





CAUTION! Reverse rotation of wheel may prevent correct adjustment.

6 Check brake linkage has 4 to 6mm movement at cable.

7 Repeat for opposite wheel.

8 Check balance bar is straight and pulls both cables evenly (fig 6.15.2).

9 Adjust ball nut to remove any slack from brake rod.

Note: Servicing of brakes may be required more often if above average mileage is covered.

Refer to AL-KO brake manual or GreenMech for details for brake shoe replacement and other servicing

6.16 Bearings and Pivots weekly

See paragraph 6.1 for routine lubrication.

250 hours

Check rotating components for excessive movement and noise in operation.

Replace as required.

Note: Wheel bearings are maintenance free and do not require attention.

6.17 Paragraph number not used.

6.18 Hydraulic connections

50 hours

With circuit diagram to follow hose routings, check all hoses and connections for leaks and damage.

Replace any worn or damaged hoses with correct type and length.

Check routing before removal.

Replace hose free of strains, twists or kinks.



CAUTION! Ensure any residual pressure is released before dismantling.



CAUTION! Ensure hoses are refitted free of twists and kinks.

6.19 Mountings

250 hours

Check that all mounting bolts are tight.

6.20 Hydraulic Return Filter

250 hours (Fig 6.20)

1 Check oil is cool.

2 Unscrew filter cover (spring under cover) and carefully lift out element; it may require gentle prising out, discard safely (fig 6.20).

3 Fit new filter element to correct specification and replace cover and spring.



CAUTION! Do not overtighten.

Fig 6.15.2 Brake adjustment

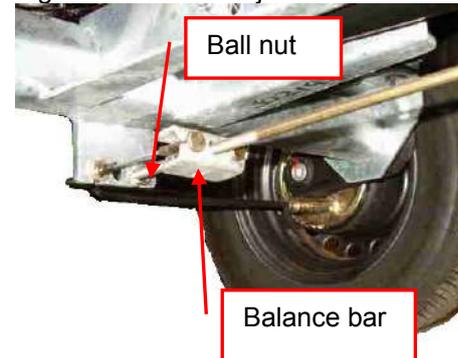
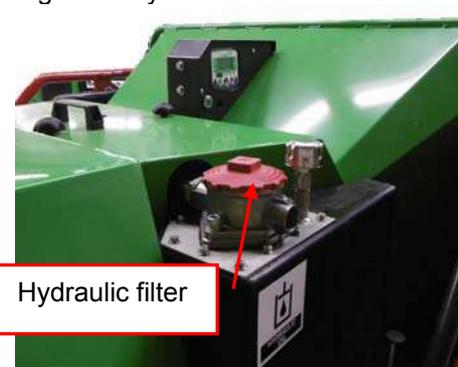


Fig 6.20 Hydraulic Return Filter



6.21 Hydraulic Oil change

1000 hours

Remove hydraulic oil with suction pump at filter/filler and replace with new oil and filter of correct specification.

Replace suction filter.

Dispose of waste oil according to local authority environmental procedures.

6.22 Fuses and No Stress system

There are two fuses.

A 40 amp in-line fuse protects engine pre-heat and start circuit.

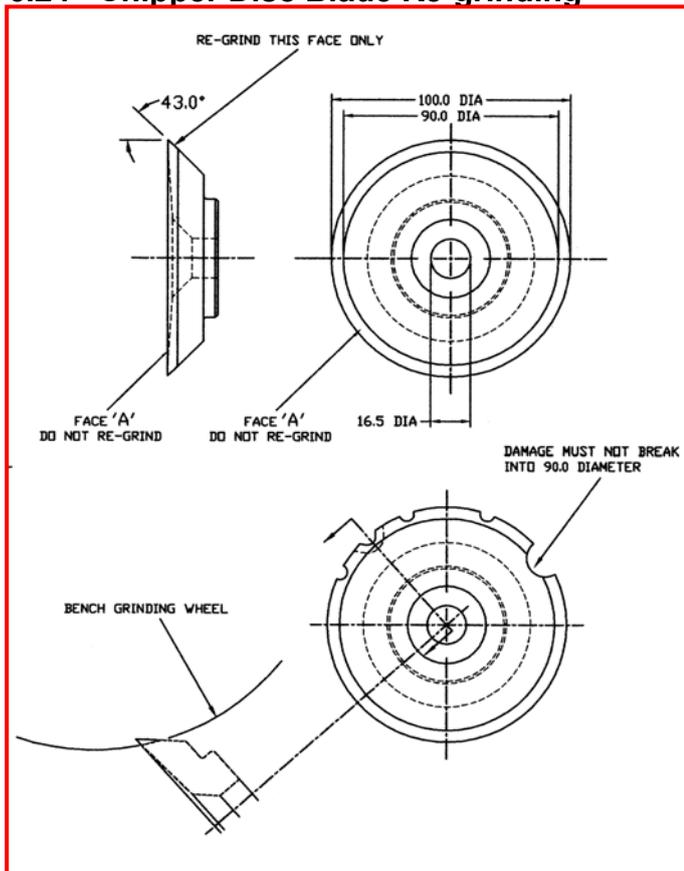
A 20 amp fuse protects No Stress Power Protection System.

Note Operating speeds for No Stress system are factory set for particular machine builds and must not be readjusted.

6.23 Fault finding

Fault	Check	Action	Page
Engine will not start	Battery	Recharge	6-8
	Fuel	Fill tank	6-5
	Oil pressure	Check Oil level	6-5
	Thermal cut-out	Check operation	6-5
	Fuses	Check	6-11
Engine not at correct speed	Engine control	Check operation	5-2
Chipper flywheel will not start	Drive Clutch	Engage	5-5
	Drive belts	Replace	6-7
Feed rollers do not turn	Stop bar	Check	3-2
	Chip/Track switch (ArbTrak model only)	Select 'Chip'	5-2
	Hydraulics	Check solenoid valve	
Feed will not reverse	Stop bar	Reset and check	3-2
	Hydraulic valve	Check operation	
Discharge does not flow	Discharge chute	Check for blockage	5-3
	Chipper flywheel	Check for blockage	5-3
Unusual noise(s)	Chipper flywheel and bearings	Check and replace	5-3 6-9

6.24 Chipper Disc Blade Re-grinding



Examine set of chipper disc blades for damage. If front face 'A' is worn, blade must be scrapped. If chips have broken off cutting edge they can be re-dressed provided that they do not go inside 90mm diameter area.

Always regrind worst damaged blade first, as this will establish target weight for remaining blades.

If large chips exist over less than 30% of circumference, blade may be re-ground provided large damaged area is not used for chipping.

Chips may be repaired by grinding a cutting edge around damaged area using a bench grinder.

With chipper blade mounted on a mandrel re-grind remainder of cutting edge at 43° as shown

Re-grind in increments of approximately 0.01mm (0.004") until sharp edge is restored.

If re-grinding breaks into 90mm diameter area, blade must be scrapped.

After re-grinding weight of blades within a set must not vary by more than +/- 1gm (0.03oz). Weight of each blade must not be less than 560gm (20oz)

Note: Disc Blades use a patent Nord-Lock washer pair together with a thinner Nyloc type locking nut at an increased torque setting of 200Nm.

See fig 6.7.3 and Fig 6.7.4.

Ensure that both washers are assembled as a pair with faces of fewer teeth facing each other (fig 4). Thread lubricant is recommended to ensure even torque. Do not use thread adhesive (e.g. Loctite).

Reuse:

Nord-Lock washers can normally be re-used when cleaned and re-lubricated.

Nyloc nuts should always be inspected for damage before reuse.

7.1 Storage

Thoroughly clean machine and note any replacement parts required.

Carry out 250 hour service if not already done. Refer to Section 6

Fit replacement parts when available.

Remove battery (where fitted)

Refer to 6.13

Drain fuel (engine models)

If machine is to be stored for more than 3 months, place on axle stands to remove weight from wheels*.

7.2 Removal from Storage

Charge battery and refit

Refer to 6.13

Check tyre pressures*

Refer to 6.14

Check brake operation*

Refer to 6.15

Carry out machine preparation as necessary

Refer to Section 4

*If applicable

8 Disposal

When machine is finally scrapped, the following items should be disposed of only at authorised waste disposal facilities.

Engine oil. Hydraulic oil. Antifreeze. Battery. Tyres Tracks (as applicable).

If in doubt, consult Local Authority environmental department.

Major non-ferrous items such as covers and hydraulic hoses may also be disposed of separately.

WARRANTY POLICY

PERIOD OF WARRANTY

All new machinery is supplied with a 3 year parts and labour warranty from original date of purchase.

LIMITATIONS

This warranty applies only to manufacturing defect and **does not** cover repairs or costs due to:

1. Normal wear and tear.
2. Routine maintenance or adjustment.
3. Damage caused by improper handling/abuse/misuse or neglect.
4. Lack of or over lubrication
5. Overheating due to lack of maintenance.
6. Damage due to fittings/fasteners becoming loose/detached through lack of maintenance.
7. Damage caused by cleaning with water.
8. Machines serviced or repaired by non-authorized GreenMech dealers.
9. Machines incorrectly assembled or adjusted.
10. Damage caused by improper use of the machine.
11. Items/parts that are not normally covered by the warranty, including but not limited to: Blade and Blade Assemblies - Belts - Filters - Clutch Assemblies - Lubricants - Wheels & Tyres - Axles - Batteries - Bearings - Dampers - Paint
12. Consequential loss, damages or costs.

MAINTENANCE

Maintenance carried out during the warranty period should be carried out as per section 6 of the machine owner's manual and by an authorised GreenMech dealer.

ENGINES

This is covered by the manufacturer of the engine. Please refer to the separate warranty conditions as supplied with the owner's manual.

All warranty repairs must be carried out by an authorised GreenMech dealer, except for engines, please refer to separate warranty terms supplied with the engine owner's manual.





ENGINE - 2 YEAR/2000HOUR WARRANTY AGREEMENT TERMS, CONDITIONS AND EXCLUSIONS ALL ENGINE MODELS

Kubota (UK) Limited (The Company) guarantees all products supplied by them against any defect in material, manufacture and assembly. Each of the Company's Dealers (The Supplier) is required to give the benefit of the above warranty to the RETAIL PURCHASER of the new goods supplied by the Company as follows;

The warranty period as detailed below will commence from the date of product installation.

The product should be registered for warranty on K-net by the Supplier prior to delivery and the resulting "Warranty & Installation Certificate" printed twice in readiness for completion with the Purchaser on the day of product installation.

During product installation these warranty terms and conditions should be carefully explained to the Purchaser by the Supplier, after which both copies of the "Warranty & Installation Certificate" should be signed by the Purchaser indicating their acceptance of the products installation and warranty agreement. The Supplier's representative installing the product should then acknowledge the Purchaser's agreement and signature by counter signing both copies of the "Warranty & Installation Certificate". The first copy of the "Warranty & Installation Certificate" should be retained by the purchaser and the second copy to be retained by the dealer and attached to the PDI record and safely filed for future reference and inspection by Kubota UK Limited.

This Kubota warranty agreement may be invalidated where the following has been found to apply:

- a) Where the product has been used to unreasonably perform tasks that demand more than the design and strength limitation.
- b) The product has undergone modifications not approved by Kubota.
- c) Conditions of usage can be determined to be abnormal.
- d) Normal maintenance has not been completed correctly in accordance with the manufacturer's requirements as detailed in the machines operator manual.
- e) No liability is accepted by Kubota in respect of machine or component failure when it can be determined that such failure was the result of using equipment with one or more attachments not given prior application approval by them.

A warranty in respect of any spare or replacement part (whether supplied by Kubota following a sale or pursuant to a Warranty claim) is covered to the greater of the following periods: (Parts & Labour costs)

- a) One year from the date that the part was purchased. Labour will only be covered if the part has been fitted by an authorised Kubota Dealership. Only genuine Kubota parts can be claimed for in any parts warranty claim.
- b) The remainder of the warranty period which is applicable to the product into which the part is incorporated.

GENERAL CONDITIONS

It should be noted that normal maintenance services such as belt or operational adjustments and the supply of materials used in any such service, are not covered by the terms of the Warranty.

In no event will the user be entitled to recover under this Warranty for incidental or consequential damages, including, but not limited to inconvenience, rental or replacement equipment, loss of profit or other commercial loss.

Only authorised Kubota Dealers can offer you the protection afforded by your Warranty and where possible you should request the assistance of the original Supplier to carry out repairs.

If, however you move to another area or your machine is working temporarily at some distance from the Supplier from whom it was purchased, you are recommended to obtain from the original Supplier the name and address of the Kubota Dealer nearest to your location and ask for arrangements to be made for any Warranty repairs to be carried out by them.

In the case of making a claim under this warranty, the procedure to adopt is as follows;

- a) Notify the Kubota Dealer from whom you obtained the equipment within 24 hours of failure or as soon as practicably possible. The product should not be used further if other consequential damage could occur or if a safety concern exists.
- b) Make the product available for inspection by a Dealer Technician.
- c) Make all maintenance records or similar evidence available for inspection by the Kubota Dealer to demonstrate that the product has been maintained correctly according to the operator's manual schedule using the correct Kubota lubricant.
- d) If the product/component has been dismantled or tampered with prior to the Dealer technician's inspection, warranty may be void.
- e) Any replacement parts being claimed for must be genuine Kubota parts.

Please note that lubricant, fuel and coolant samples are frequently needed to determine the cause of failure and therefore the machine should be presented with all the original fluids and their levels unchanged and undiluted

If the failure is found to be the result of faulty manufacture or assembly the failed components will be replaced entirely free of charge. Kubota Dealers are requested to submit their warranty claim upon Kubota within 28 days and return any defective parts and fluid samples immediately if requested.

In accordance with the Company policy of continuous improvements to its products, alteration in specification may be made at any time without notice and the Company shall not accept responsibility for any discrepancies which may occur between the specification of its products and the description thereof in its publications.

WARRANTY PERIOD

The full and maximum warranty term will be two years or two thousand hours whichever comes first and is subject to the exclusions shown below;

EXCLUSIONS applicable to the first year or up to 1000hrs use;

Includes all serviceable items and any component subject to fair wear and tear, such as;

Filters (air, fuel, hydraulic)	Fan belts,
Glow plugs	Fuses
Lubricants and antifreeze +	Fuel Injection Equipment*

- + Lubricants and Coolants will be accepted if lost or contaminated as a consequence of a warrantable failure and repair. Only the specified Kubota lubricants should be used and will be accepted.
- * Injection equipment warranty claim will only be accepted if supported by a written report from a Bosch or Denso Diesel Agent that clearly identifies the warrantable defect.

ADDITIONAL EXCLUSIONS in second year or after first 1000 operational hours
whichever occurs first:

Radiator	Paintwork
Thermostat	Electrical components
Water pump	Hoses and pipes

This guarantee is given in addition to any rights you may have against Kubota (UK) Ltd, or the Supplier from whom you purchased the product, and does not affect or prejudice any rights you may have under the Sale of Goods Act, or in general.

**Safety Guides and Checklist as
Transcribed from and Advised by
Arboriculture & Forestry Advisory Group
and Issued as Leaflet AFA604(rev1) by
HSE, issued 04/14**

INTRODUCTION

This leaflet covers the safe working practices to be followed when operating a wood chipper.

It does not cover a combination of machines working within each other's risk zones (see AFAG leaflet 605 *Mechanical roadside processing*)

You can use this leaflet, along with the manufacturer's handbook, as part of the risk assessment process to help identify the controls to put in place when using a wood chipper.

You must also assess the effect of the site and the weather as well as following this guidance

All operators must have had appropriate training in how to operate the machine and how to carry out the tasks require (see AFAG leaflet 805 *Training and certification*)

PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. Use the following PPE
 - A Safety Helmet, complying with EN 397, if identified as required in the risk assessment.
 - Eye Protection (a mesh visor complying with EN1731 or safety glasses to EN166)
 - Hearing protection (complying with EN352) where noise level exceeds 85 dB(A) (see HSE pocket card INDG363 *Protect your hearing or lose it!*)
 - Gloves with long, close-fitting cuffs that can be tucked into sleeves

- Safety Boots with good grip and ankle support (complying with EN345-1)
- Non-Snag Outer Clothing appropriate to prevailing weather conditions. High-visibility clothing (complying with EN471) should be worn when the risk assessment identifies that it is needed.

2. Each person should carry a personal first-aid kit including a large wound dressing (see HSE leaflet INDG214 *first aid at work; Your questions answered*).
3. Hand cleaning material such as waterless skin cleanser or soap, water and paper towel should be readily available.

THE MACHINE

4. Before working with a machine, check it has been properly converted from any transport mode.
5. Ensure guards for dangerous parts (e.g. belts, pulleys, shafts etc) are secure and undamaged.
6. Ensure protective devices, such as the infeed control bar (incorporating the stopping device), are working correctly (see HSE leaflet AI S 38 *Power-fed mobile wood chippers: Operator protection at infeed chutes*).
7. Ensure any lock for the chipping components has been disengaged;
8. Ensure the infeed hopper is clear of any materials.
9. Ensure Noise warning signs are in place.
10. For machines driven by a power take-off (PTO) shaft, before starting ensure:

- The PTO shaft is fitted with a suitable guard complying with EN1152, that encloses the shaft along its full length from tractor to machine.
- The guard is correctly fitted and in effective working order see AIS40 ***Power take-offs and power take-off drive shafts;***
- The PTO speed is suitable for the machine.

SELECTING THE WORK AREA

11. Select as firm a surface as possible and stabilise the machine
12. Ensure ventilation is adequate and any exhaust fumes are vented into open air if working in an enclosed space.
13. Where appropriate, if the chipper is detached from the tow vehicle, apply the handbrake and, if necessary, chock the wheels.
14. On all reasonably foreseeable approaches to the worksite, erect warning and prohibition signs conforming to the Health and Safety (Safety Signs and Signals) Regulations 1996, indicating a hazardous worksite and that unauthorised access is prohibited. In areas of very high public access, a risk assessment may indicate that additional controls (e.g. barrier tape, barriers, extra manning) are required.
15. Ensure all operations near to highways are adequately signed with the appropriate notices as specified in the Department of Transport's ***Safety at street works and road works : A Code of Practice.***
16. Ensure that the discharge chute is positioned to prevent chips being blown onto the highway during roadside operations, or in any direction where they can affect colleagues or members of the public.
17. Position the chipper so that operators do not have to stand on embankments/slopes when feeding material into the machine

EMERGENCY PROCEDURES

18. Ensure a designated and responsible person knows the daily work programme and agree with them a suitable emergency contact procedure. Where reasonably practicable use a mobile phone or radio and pre-arrange call-in system.
19. Ensure the operators can provide the emergency services with enough detail for them to be found in the event of an accident, e.g. the grid reference, the distance from the main road, the type of access (suitable for car/four-wheel drive/emergency service vehicles). In urban areas street names are essential. Know the location details before they are needed in an emergency.

OPERATION

20. Make sure the cuffs of gloves are close fitting or tucked into you're sleeves to stop them being caught on material as it is fed into the chipper.
21. Set the engine speed (and set the stress control if fitted) to obtain optimum performance.
22. Check that material to be chipped is free from stones, metal and foreign objects.
23. Stand to one side of the infeed rollers to avoid being hit by ejected material.
24. Let material go as soon as it is engaged in the infeed rollers or chipping components.

Page 2

25. Use a push stick at least 1.5 metre long, for both short produce and for the last piece of produce to be chipped.

26. Do not put any part of your body (including hands or feet), into the infeed hopper while the machine is running.
27. Always follow the manufactures' instructions for dealing with blockages on the machine.
28. Keep the area of ground in front of the infeed hopper free from debris to prevent any tripping hazard.
29. Remove the engine start key when the machine is left unattended or when undertaking any maintenance.

FUELLING

30. Stop engine and, if necessary allow the machine to cool before refuelling.
31. Petrol vapour is invisible and can flow considerable distances from spillage or fuelling sites. Maintain a safe distance from any source of ignition at all times.
32. Store fuel to avoid vapour ignition from any source such as fires, people smoking or the wood chipper. Select a site shaded from direct sunlight and away from watercourses and drains.
33. Containers must be clearly labelled and have securely fitting caps. Plastic containers must be designed and approved for use with petrol or diesel fuel.
34. Replace the fuel cap securely.
35. Keep fuel from contacting the skin. If fuel gets into the eyes wash out with sterile water immediately and seek medical advise

Maintenance

36. Ensure the machine is carried out in accordance with the manufacture's handbook.

37. Check chipping components and knives each day for damage and wear.
38. Wear gloves when handling knives.
39. Before working on knives, confirm that the engine is switched off, the start key removed, and the chipping component is stationary.
40. Before opening any guard/cover or reaching into the infeed hopper or discharge chutes make sure that the engine is switched off, start key removed and dangerous parts have come to a stand still.
41. Knives must be changed or reversed if damaged or blunt. Knives must be scrapped when worn to the minimum size specified by the manufacturer.

42. When new/sharpened knives are fitted, ensure that there is the recommended clearance between the knives and the anvil.

MOVING THE MACHINE

43. Stop the engine and remove the start/stop key.
44. Lock the chipping components.
45. Secure the infeed hopper and the chip discharge chute in the transport position.
46. Check the towing bracket, attach, then lift and secure the jockey wheel.
47. Connect the electrics and the safety chain/s to the towing vehicle.

Page 3

48. Ensure that the load is secure and that people are in a safe position before moving off.

Further Reading

Noise: Don't lose your hearing!

INDG363(rev2)

HSE Books 2012

www.hse.gov.uk/pubns/indg363.htm

First aid at work: Your questions answered

Leaflet INDG2114(rev1)

HSE books 2009

www.hse.gov.uk/pubns/indg214.htm

Safety signs and signals. The Health and Safety (Safety Signs and Signals) Regulations 1996. Guidance on Regulations L64 (Second edition) HSE Books 2009 ISBN 978 0 7176 6359 0

www.hse.gov.uk/pubns/books/164.htm

Power-fed mobile wood chippers: Operator protection at infeed chutes AIS38 HSE 2013

www.hse.gov.uk/pubns/ais38.htm

Power take-offs and power take-off drive shafts AIS40 HSE Books2012

www.hse.gov.uk/pubns/ais40.htm

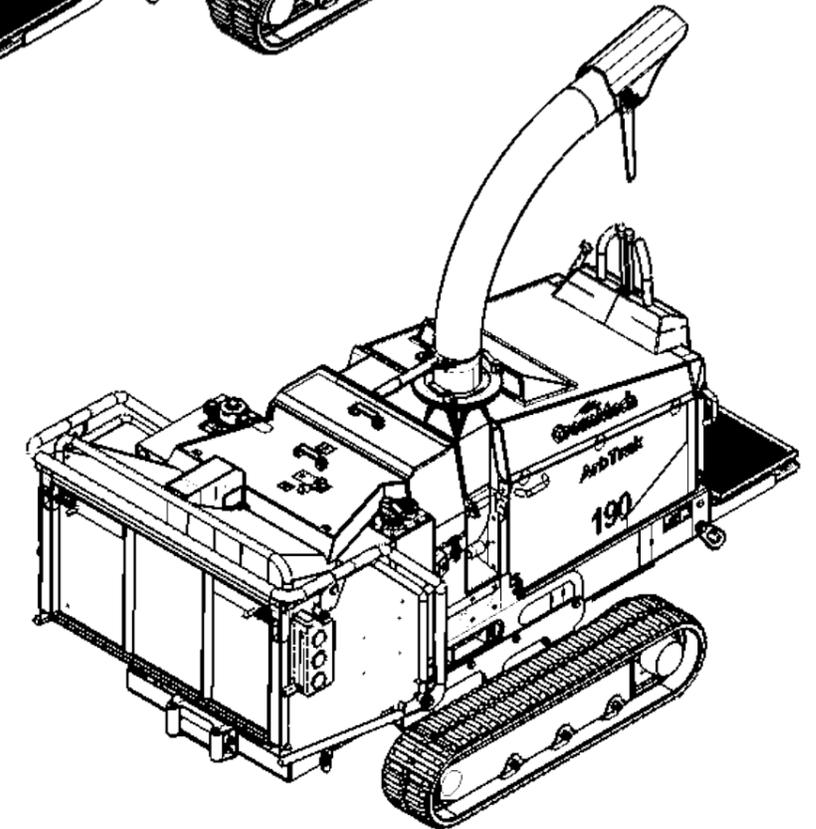
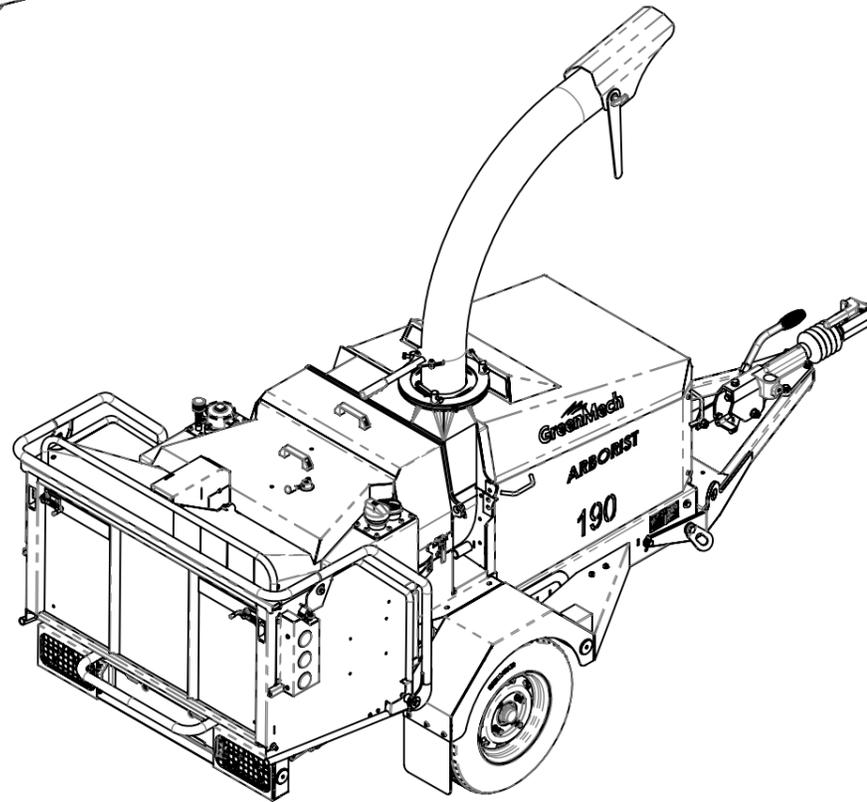
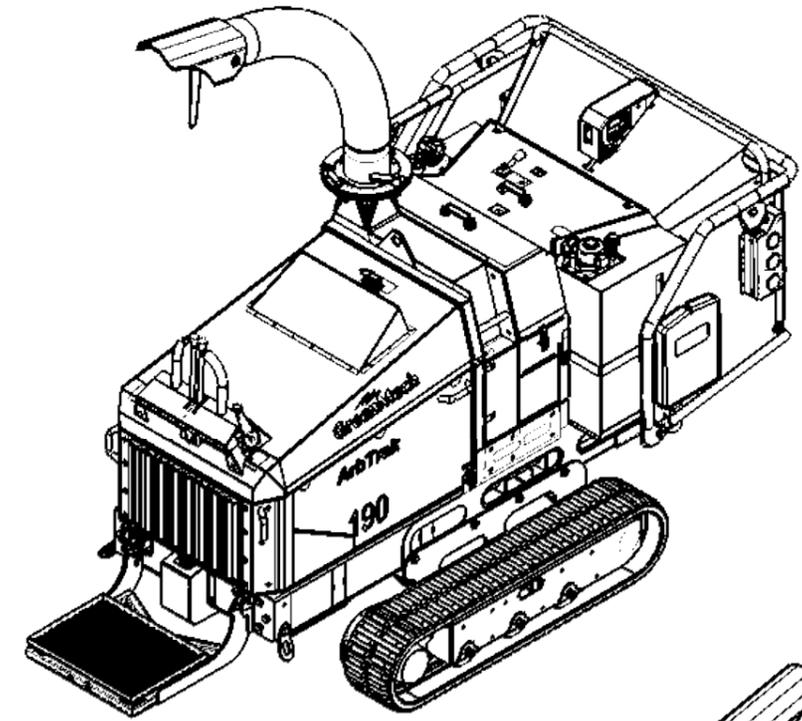
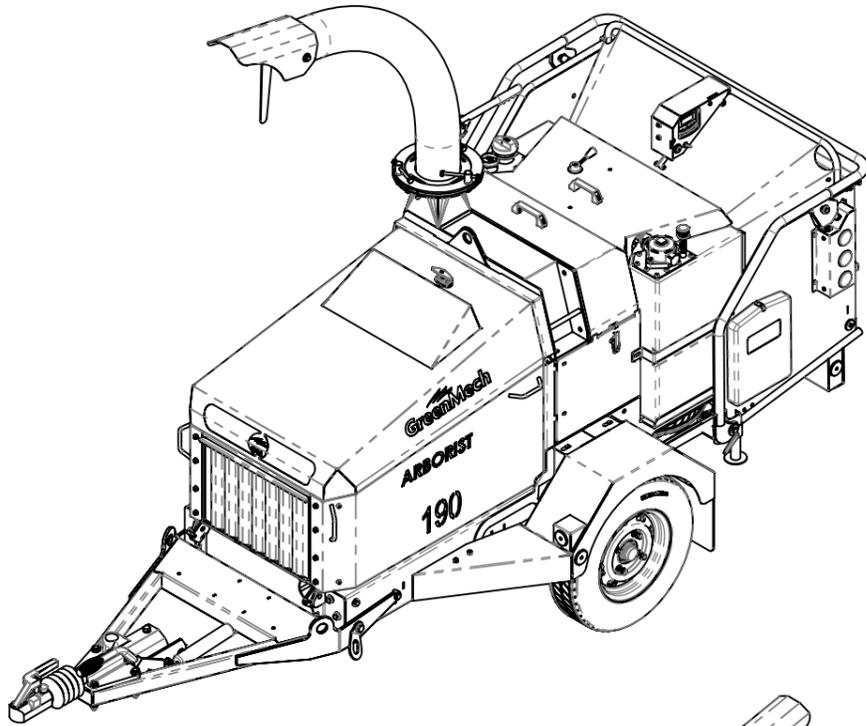
Treework webpages:

www.hse.gov.uk/treework

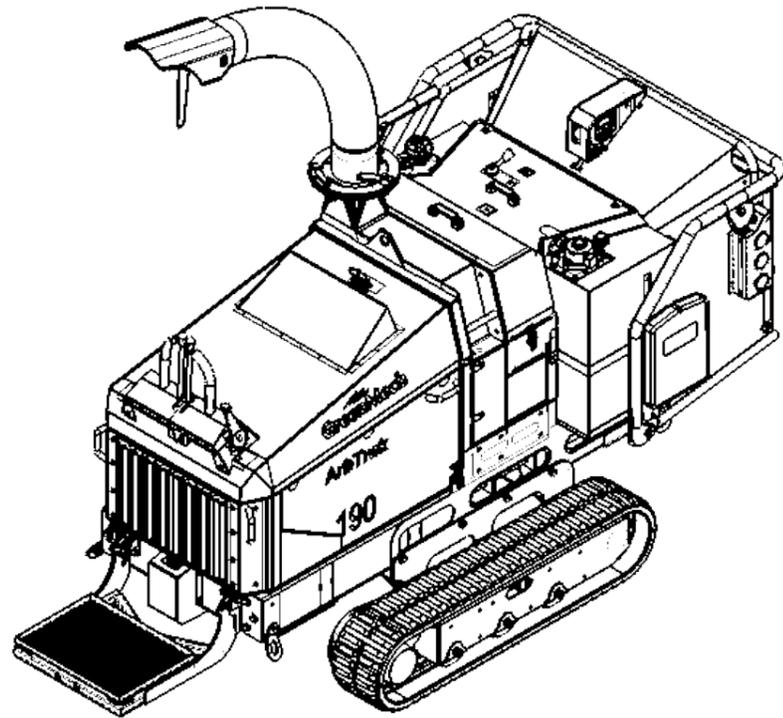
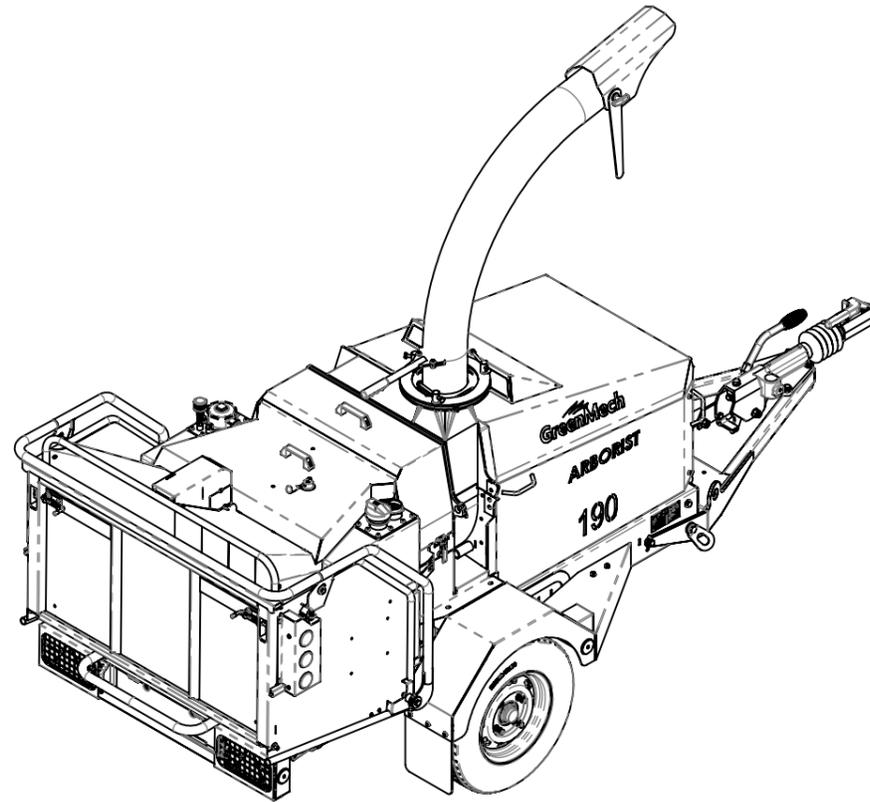
ARB190 SERIES

ARBORIST 190 & ARBTRAK 190

POWERED BY
KUBOTA 4 CYLINDER
44HP V1505T DIESEL



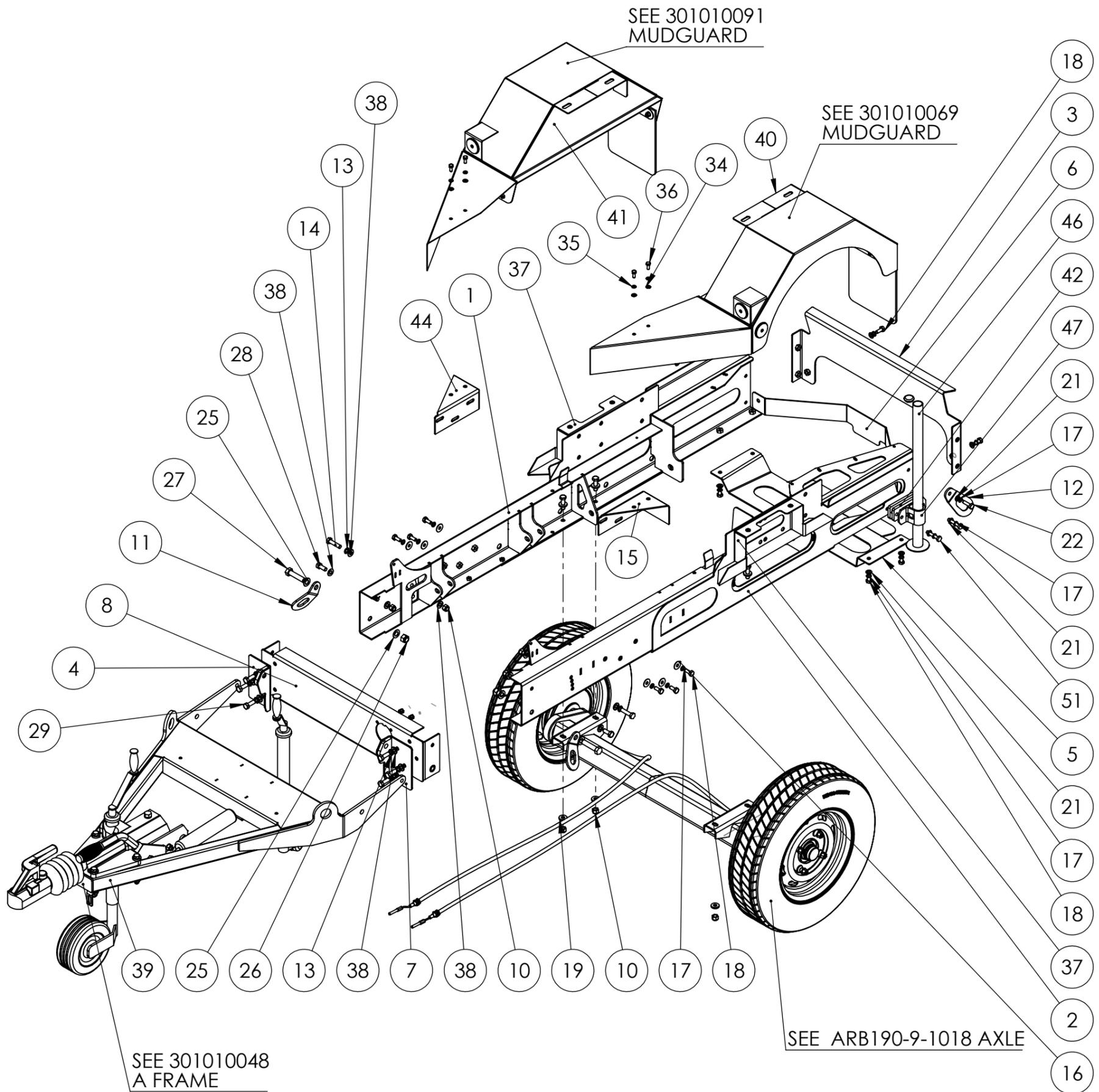
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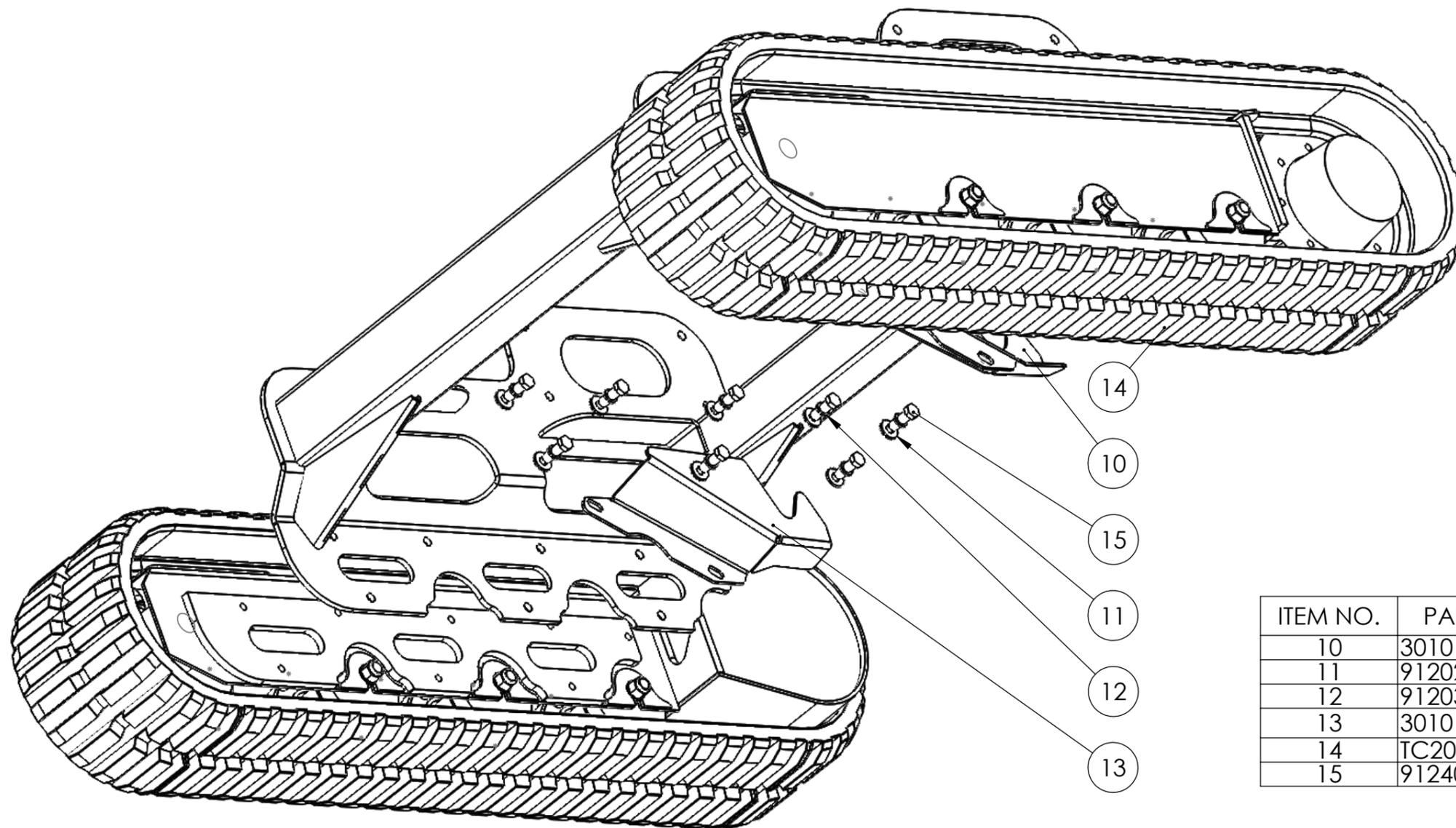
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1	301010125	RIGHT CHASSIS RAIL	1
2	301010126	LEFT CHASSIS RAIL	1
3	301010006	CHASSIS REAR END PLATE	1
4	301010078	RIGHT HAND BONNET CHASSIS PIVOT	1
5	301010065	SPARE WHEEL SUPPORT	1
6	301010066	SPARE WHEEL RETAINER STRAP	1
7	301010078 OH	BONNET CHASSI PIVOT	1
8	301010026	CHASSIS FRONT BEAM	1
11	301010110	FRONT TIE DOWN BRACKET	2
12	301010002	REAR TIE DOWN BRACKET	2
13	91203	M12 S/WASHER	8
14	91250	M12 X 50	2
15	301010080	LEFT MUDGUARD STEP BRACE	1
16	91002-R	M10 LARGE WASHER	6
17	91003	M10 SPRING WASHER	17
18	91025	M10 X 25 SET	12
19	91202HD	M12 HD WASHER	8
20	91245	M12 X 45 HEX BOLT	4
21	91002	M10 FLAT WASHER	11
22	91035	M10 X 35	2
23	91030	M10 X 30	1
24	90502	M5 B WASHER	1
25	91602	M16 FLAT WASHERS	4
26	91601	M16 NYLOC NUTS	2
27	91670	M16 X 70	2
28	91230	M12 X 30	2
29	91235	M12 X 35 SET	6
31	90801	M8 NYLOC NUT	2
32	90801PT	M8 PLAIN THIN NUT	2
34	90802	M8 A WASHER	4
35	90803	M8 SPRING WASHER	4
36	90820	M8 X 20 SET	4
37	301010086	MUDGUARD SUPPORT	2
38	91202	M12 A WASHER	14
39	301010320	A FRAME	1
40	301010322	LEFT HAND MUDGUARD	1
41	301010324	RIGHT HAND MUDGUARD	1
42	301010011	JACK LEG PACKER	2
44	301010092	FORWARD MUDGUARD SUPPORT	1
45	ARB190-9-1018	SUPER RIDE AXLE	1
46	EC150069	JACK LEG	1
47	EC150068	JACK LEG MOUNT	1
51	91055	M10 X 55	2



ARBORIST 190 CHASSIS ASSEMBLY

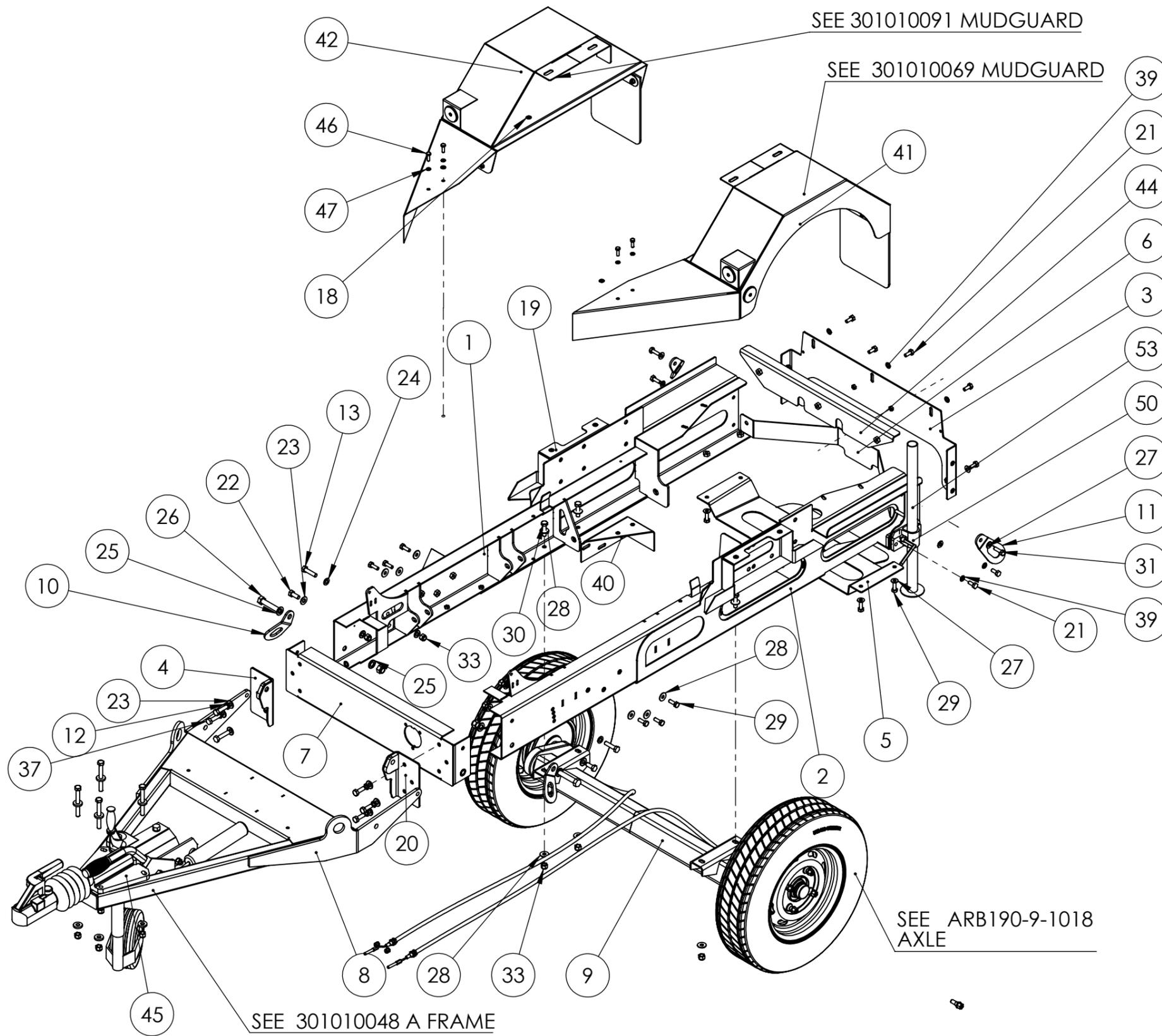
301010124
PRE NEW INFIED & FLAP



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
10	301010250	LEFT TRACK HOSE GUIDE	1
11	91202C	M12 C WASHER	16
12	91203	M12 SPRING WASHER	16
13	301010250 OH	RIGHT TRACK HOSE GUIDE	1
14	TC204901-3	RUBBER TRACK (3 IDLER)	2
15	91240F	M12 x 40 X 1.25	16

FOR ALL TRACK COMPONENTS
 OTHER THAN RUBBER TRACKS
 SEE GEMMO SPECIFICATION DOCUMENTS

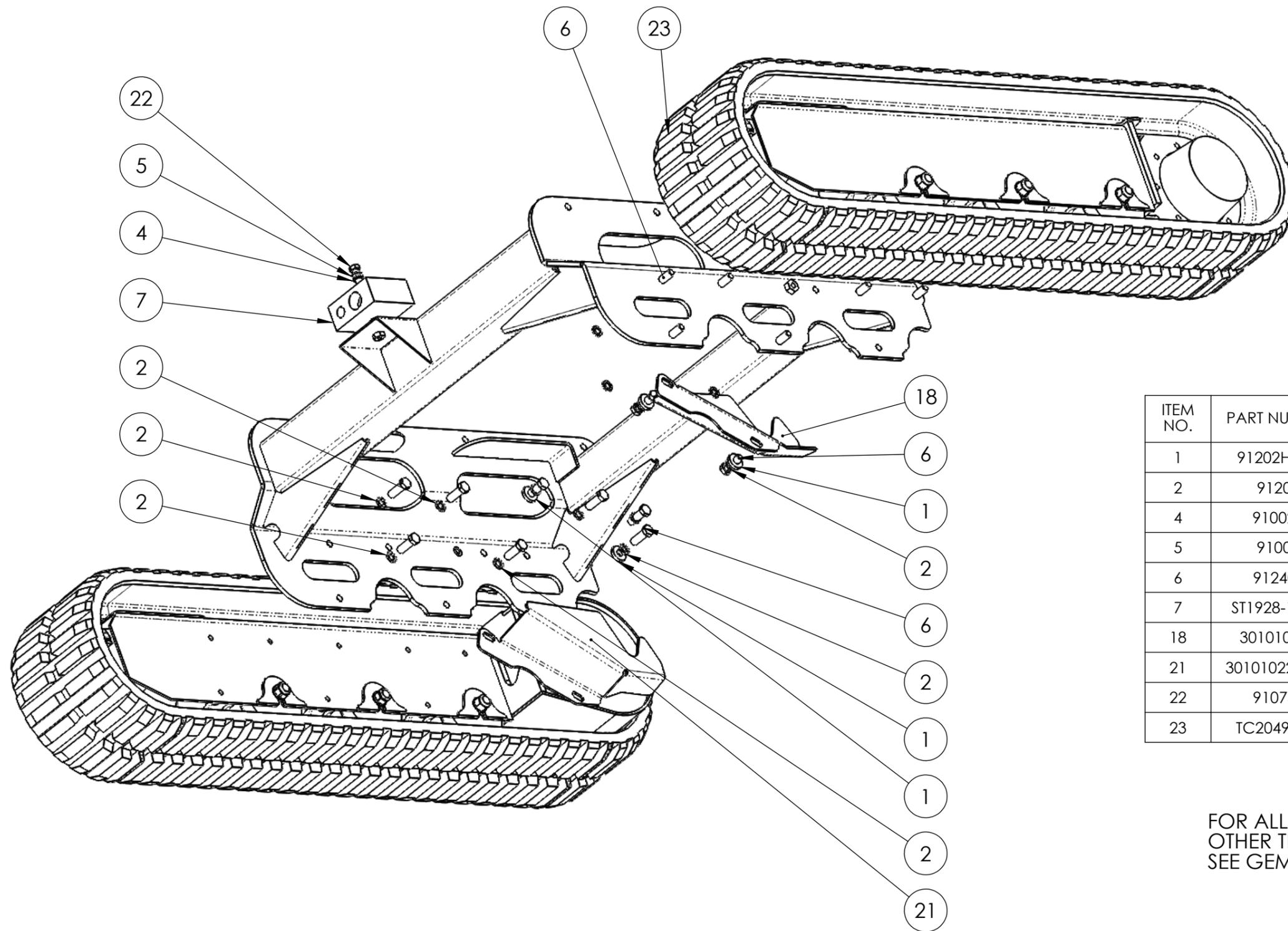
TRACK CHASSIS SUBFRAME
 301010200
 ARBTRACK 190



ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	301010023	RIGHT CHASSIS RAIL	1
2	301010024	LEFT CHASSIS RAIL	1
3	301010021	CHASSIS REAR END PLATE	1
4	301010078	RIGHT HAND BONNET CHASSIS PIVOT	1
5	301010065	SPARE WHEEL SUPPORT	1
6	301010066	SPARE WHEEL RETAINER STRAP	1
7	301010026	CHASSIS FRONT BEAM	1
8	301010048	A FRAME	1
9	ARB190-9-1018	SUPER RIDE AXLE	1
10	301010110	FRONT TIE DOWN BRACKET	2
11	301010002	REAR TIE DOWN BRACKET	2
12	91203	M12 S/WASHER	6
13	91250	M12 X 50	2
14	91002	FLAT WASHER	1
15	91601	NYLOC NUT	2
16	91235	M12 X 35 SET	3
17	90801PT	M8 PLAIN THIN NUT	2
19	301010086	MUDGUARD SUPPORT	2
20	301010138	LEFT HAND CHASSIS BONNET PIVOT	1
21	91025S	M10 X 25 SET	7
22	91230S	M12 X 30 SET	2
23	91202C	M12 C WASHER	8
24	91202A	M12 A WASHER	3
25	91602A	M16 A WASHER	4
26	91680	M16 X 80	2
27	91002C	M10 C WASHER	9
28	91002HD30	M10 30MM HD WASHER	14
29	91030S	M10 X 30 SET	10
30	91245S	M12 X 45 SET	4
31	91035S	M10 X 35 SET	3
32	91202	M12 A WASHER	3
33	91201	M12 NYLOC NUT	12
34	91206HD	12MM HD WASHER	8
35	912110	M12 X 110	4
36	91030	M10 X 30	1
37	91255	M12 X 55	3
38	90801	M8 NYLOC NUT	2
39	91002A	M10 A WASHER	5
40	301010159	LEFT MUDGUARD STEP BRACE	1
41	301010322	LEFT HAND MUDGUARD	1
42	301010324	RIGHT HAND MUDGUARD	1
43	301010160	RIGHT MUDGUARD STEP BRACE	1
44	301010109	CHASSIS REAR ADJUSTMENT PLATE	1
45	C200322-1	BRADLEY MK3 HU3H HITCH	1
46	90825S	M8 X 25 SET	4
47	90803	M8 SPRING WASHER	4
48	301010011	JACK LEG PACKER	2
49	C200345-1	WHEEL & TYRE	1
50	EC150068	JACK LEG MOUNT	1
53	EC150069	JACK LEG	1

ARBORIST 190
 MAIN CHASSIS ASSEMBLY
 301010022

NEW INFED & FLAP



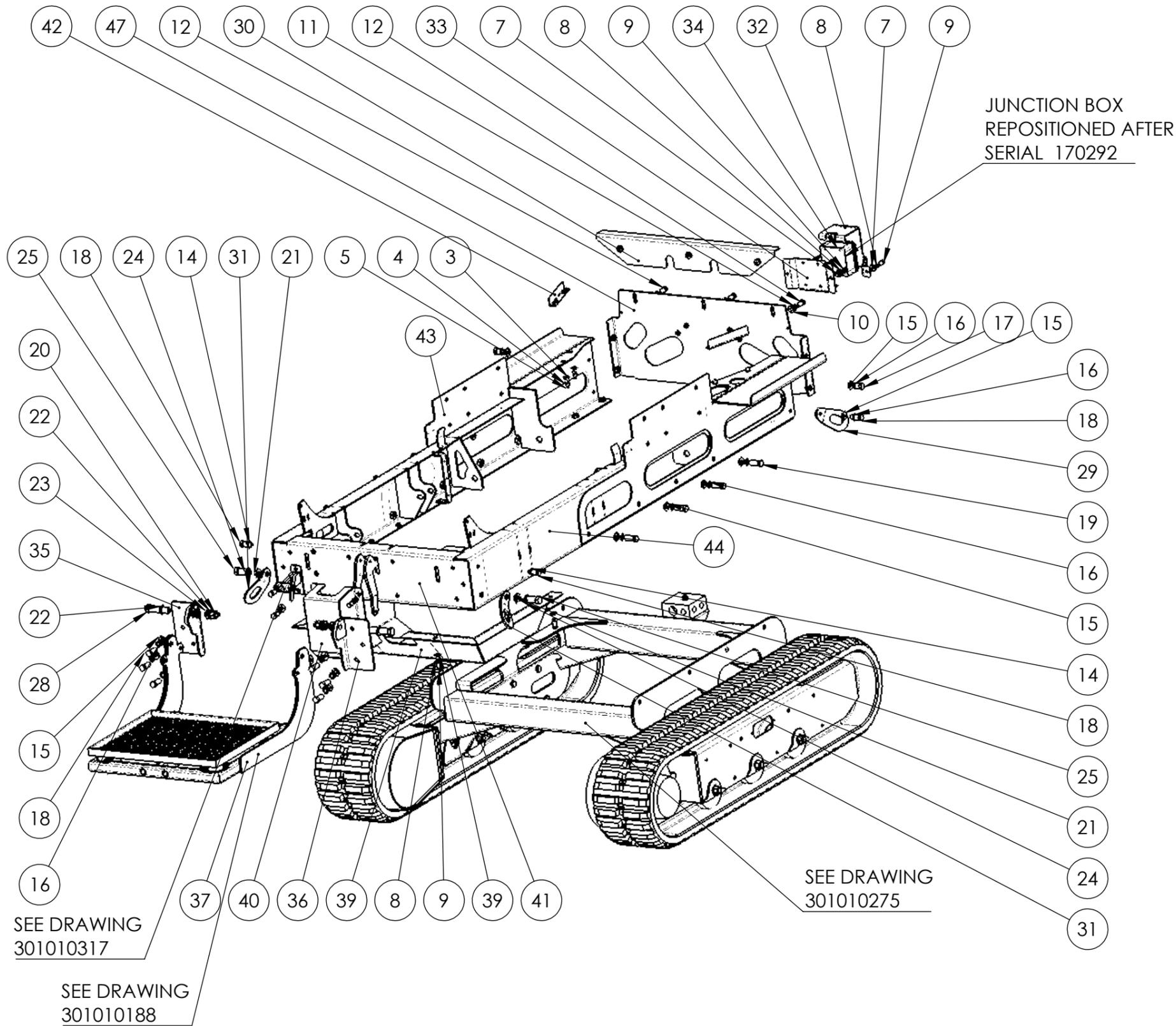
ITEM NO.	PART NUMBER	DESCRIPTION	Complete /QTY.
1	91202HD30	M12 30MM HD WASHER	4
2	91203	M12 S/WASHER	16
4	91002B	M10 B WASHER	1
5	91003	M10 SPRING WASHER	1
6	91240F	M12 X 40 X 1.25	16
7	ST1928-1-106	MANIFOLD BLOCK	1
18	301010227	RIGHT HAND TRACK HOSE GUIDE	1
21	301010227 OH	LEFT HAND TRACK HOSE GUIDE	1
22	91075S	M10 X 75 SET	1
23	TC204901-3	RUBBER TRACK	2

FOR ALL TRACK COMPONENTS
OTHER THAN RUBBER TRACKS
SEE GEMMO SPECIFICATION DOCUMENTS

TRACKED CHASSIS SUBFRAME

301010275

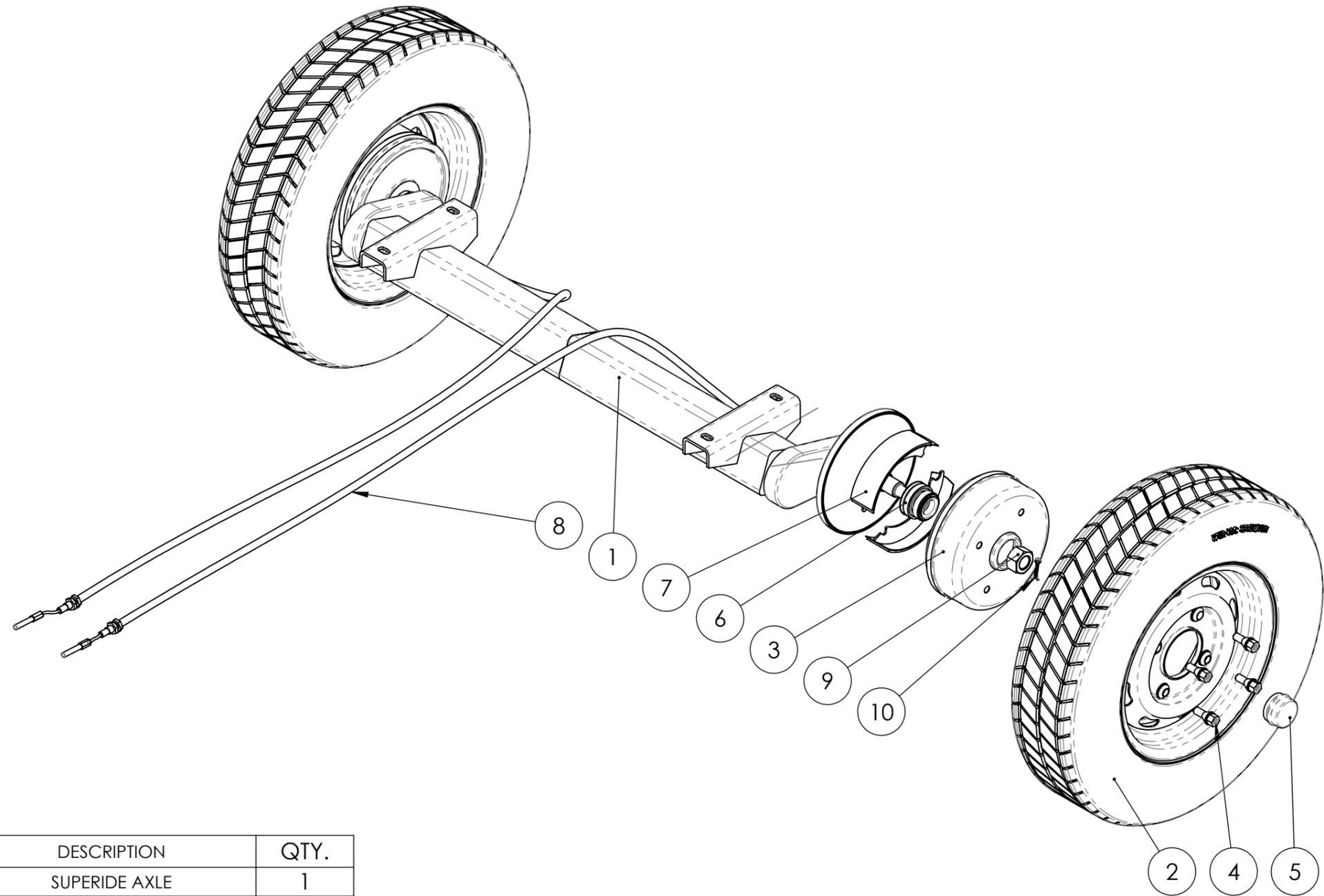
ARB190 & 200



ITEM NO.	PART NUMBER	REFERENCE NUMBER	DESCRIPTION	QTY.
3	90602R20	FASTENERS	M6 X 20mm OD WASHER	4
4	90603	FASTENERS	M6 SPRING WASHER	4
5	90620S	FASTENERS	M6 X 20 SET	4
6	90802A	FASTENERS	M8 A WASHER	4
7	90802C	FASTENERS	M8 C WASHER	8
8	90803	FASTENERS	M8 SPRING WASHER	12
9	90820S	FASTENERS	M8 X 20 SET	12
10	91002C	FASTENERS	M10 C WASHER	5
11	91003	FASTENERS	M10 SPRING WASHER	5
12	91025S	FASTENERS	M10 X 25 SET	5
13	91201	FASTENERS	M12 NYLOC NUT	2
14	91202B	FASTENERS	M12 B WASHER	4
15	91202C	FASTENERS	M12 C FLAT WASHER	18
16	91203	FASTENERS	M12 SPRING WASHER	18
17	91230S	FASTENERS	M12 X 30 SET	2
18	91235S	FASTENERS	M12 X 35 SET	10
19	91240S	FASTENERS	M12 X 40 SET	8
20	91601	FASTENERS	M16 NYLOC NUT	2
21	91602A	FASTENERS	M16 A WASHER	2
22	91602B	FASTENERS	M16 B FLAT WASHER	4
23	91602N30	FASTENERS	M16 30MM NYLON WASHER	6
24	91603	FASTENERS	M16 SPRING WASHER	2
25	91645S	FASTENERS	M16 X 45 SET	2
26	91655S	FASTENERS	M16 X 55 SET	0
27	91660	FASTENERS	M16 X 60	0
28	91680S	FASTENERS	M16 X 80 SET	2
29	301010002		REAR TIE DOWN BRACKET	2
30	301010109		CHASSIS REAR ADJUSTMENT PLATE	1
31	301010110		FRONT TIE DOWN BRACKET	2
32	301010328		CONTROL BOX COVER	1
33	301040109		JUNCTION BOX MOUNT	1
34	900950053		SAFETY SWITCH JUNCTION BOX	1
35	301010078		RIGHT HAND BONNET CHASSIS PIVOT	1
36	301010078 OH		LEFT HAND BONNET CHASSIS PIVOT	1
37	301010188		PLATFORM BASE	1
38	301010212		WINCH FRAME	1
39	301010218		TRACK VALVE COVER	1
40	301010222		LINKAGE COVER	1
41	301010229		CHASSIS FRONT BEAM	1
42	301010254		TANK STOP	2
43	301010255		RIGHT HAND CHASSIS RAIL	1
44	301010256		LEFT HAND CHASSIS RAIL	1
45	301010275		TRACKED CHASSIS SUBFRAME	1
46	301010317		PLATFORM PLUNGER STOP	1
47	301010329		CHASSIS REAR END PLATE	1

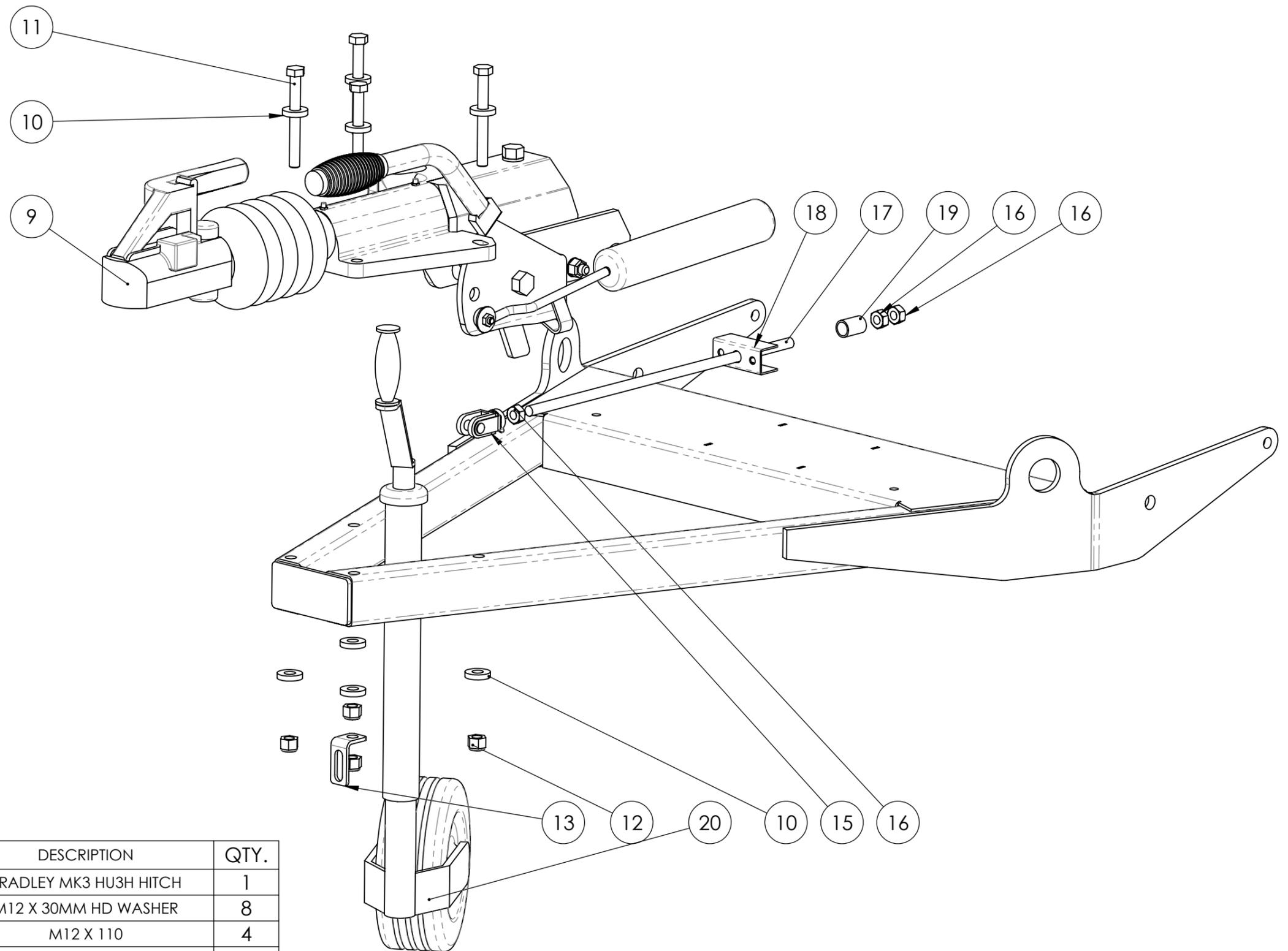
ARBTRACK 190 CHASSIS ASSEMBLY

301010260



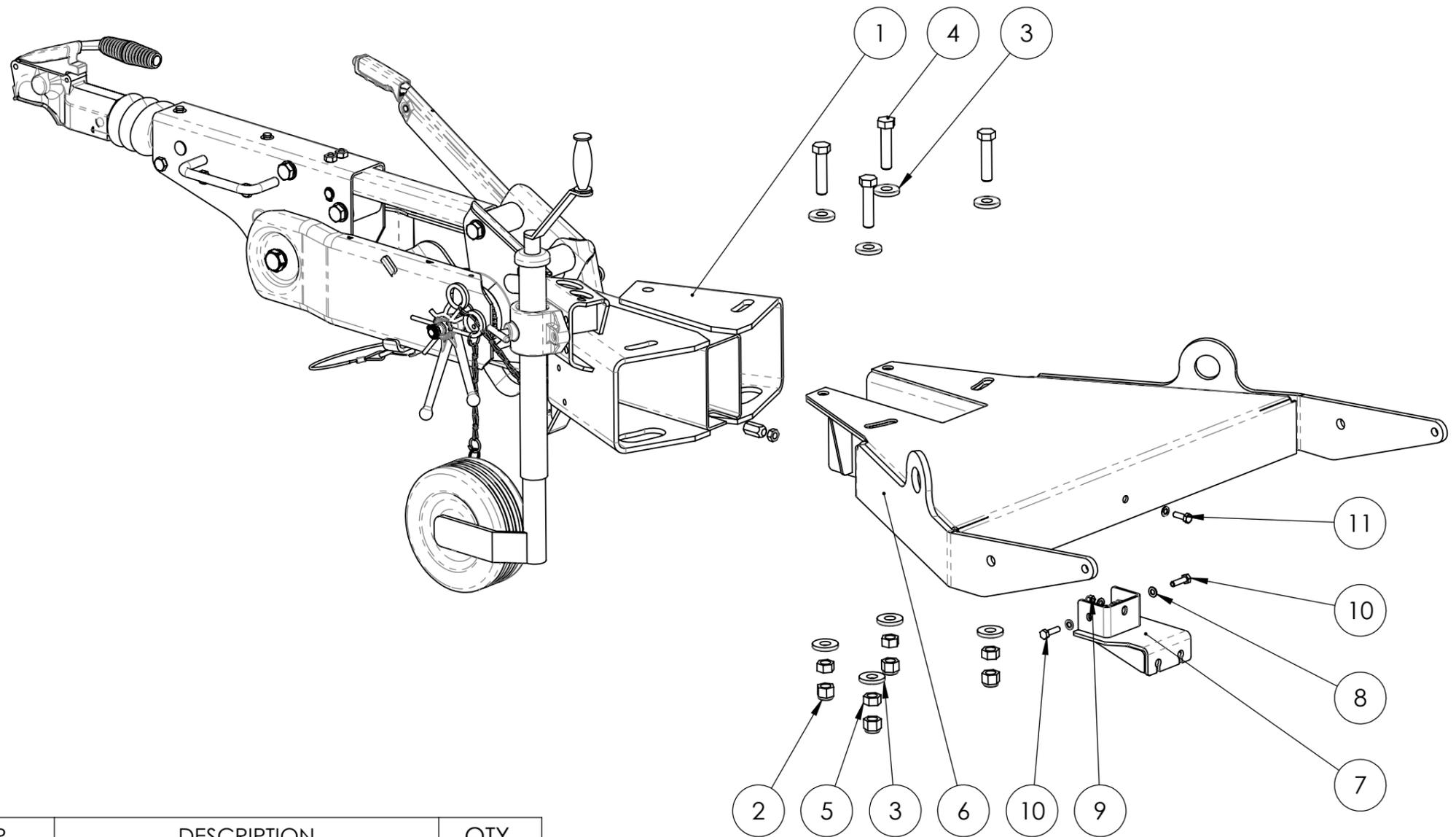
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ARB190-9-1018	SUPERIDE AXLE	1
2	C200345-152	WHEEL & TYRE	2
3	ECM151002-1	WHEEL HUB	2
4	C203114-24053	WHEEL STUD	8
5	ECM151002-3	HUB CAP	2
6	ECM151002-2	WHEEL BEARING KIT	2
7	C203114-2	BRAKE SHOES 200 x 50 (1 SET)	2
8	C200347-8	BRAKE CABLE X 1660	2
9	900940059	M20 LOCKING CASTLE NUT	2
10	900940061	SPLIT PIN	2

SUPER RIDE AXLE
ARB190-9-1018



ITEM NO.	PART NUMBER	REFERENCE NUMBER	DESCRIPTION	QTY.
9	C200322-1		BRADLEY MK3 HU3H HITCH	1
10	91202HD30	FASTENERS	M12 X 30MM HD WASHER	8
11	912110	FASTENERS	M12 X 110	4
12	91201	FASTENERS	M12 NYLOC NUT	4
13	301010135		CHECK CABLE GUIDE	1
15	12 X 24 CLEVIS	FASTENERS	12 X 24 CLEVIS	1
16	91201P	FASTENERS	M12PLAIN NUT	3
17	900940314		COMPENSATOR ROD	1
18	900940315		COMPENSATOR	1
19	900940316		COMPENSATOR TUBE	1
20	C150104-B		JOCKEY WHEEL	1

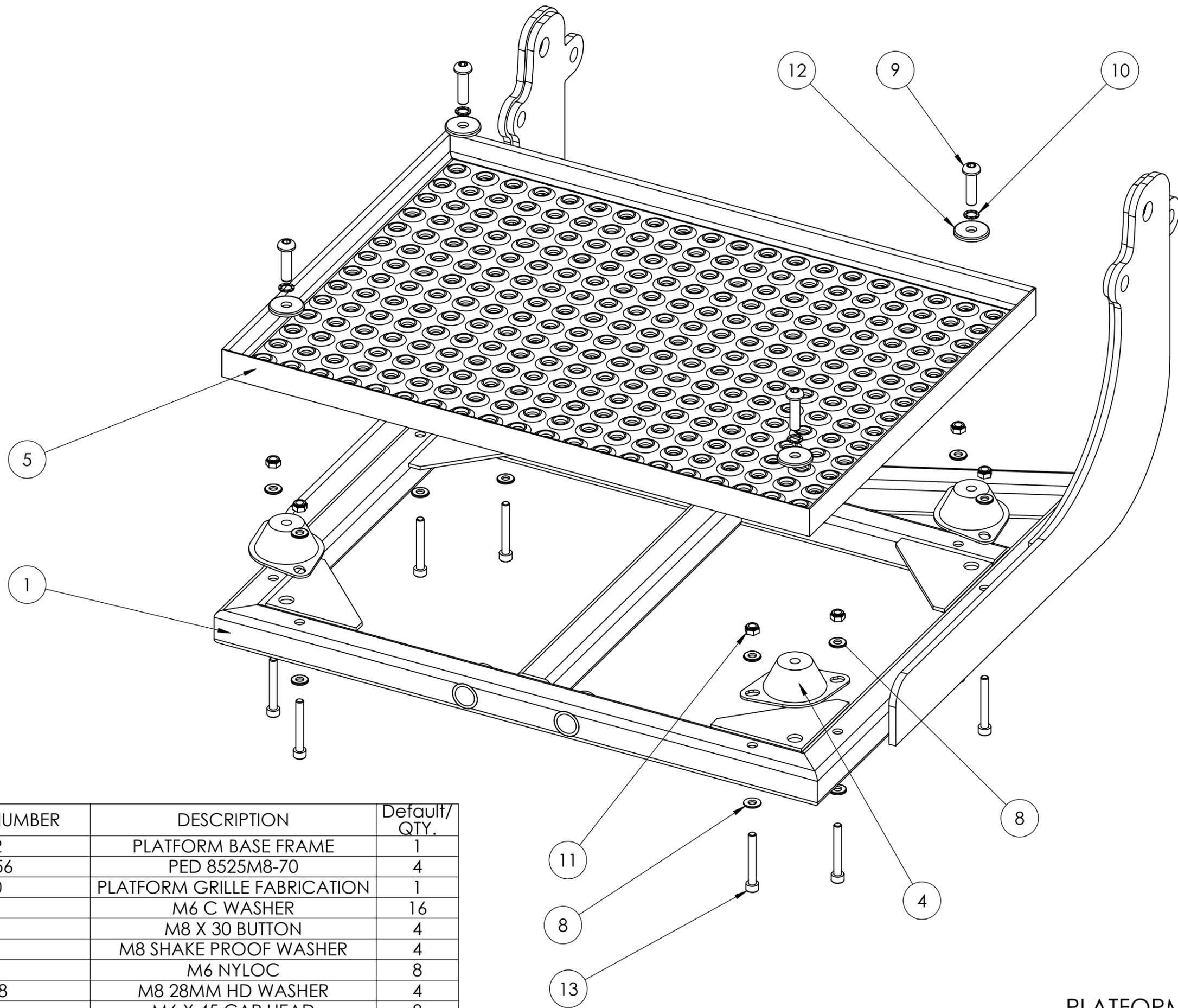
A FRAME
 301010048
 ARBORIST 190 & 200



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ALKO 161 VB-2 400ARM	ADJUSTABLE HITCH 161 VB-2 - 20- 2425-1 A	1
2	91601	M16 NYLOC NUT	4
3	91602HD40	M16 40MM HD WASHER	8
4	91670	M16 X 70	4
5	91601P	M16 PLAIN NUT	4
6	4005215	STUBBY A FRAME ARB190/200 FABRICATION	1
7	4007431	BRAKE CABLE ANCHOR	1
8	90802A	M8 A WASHER	6
9	90801	M8 NYLOC NUT	3
10	90830S	M8 X 30 SET	2
11	90825S	M8 X 25 SET	1

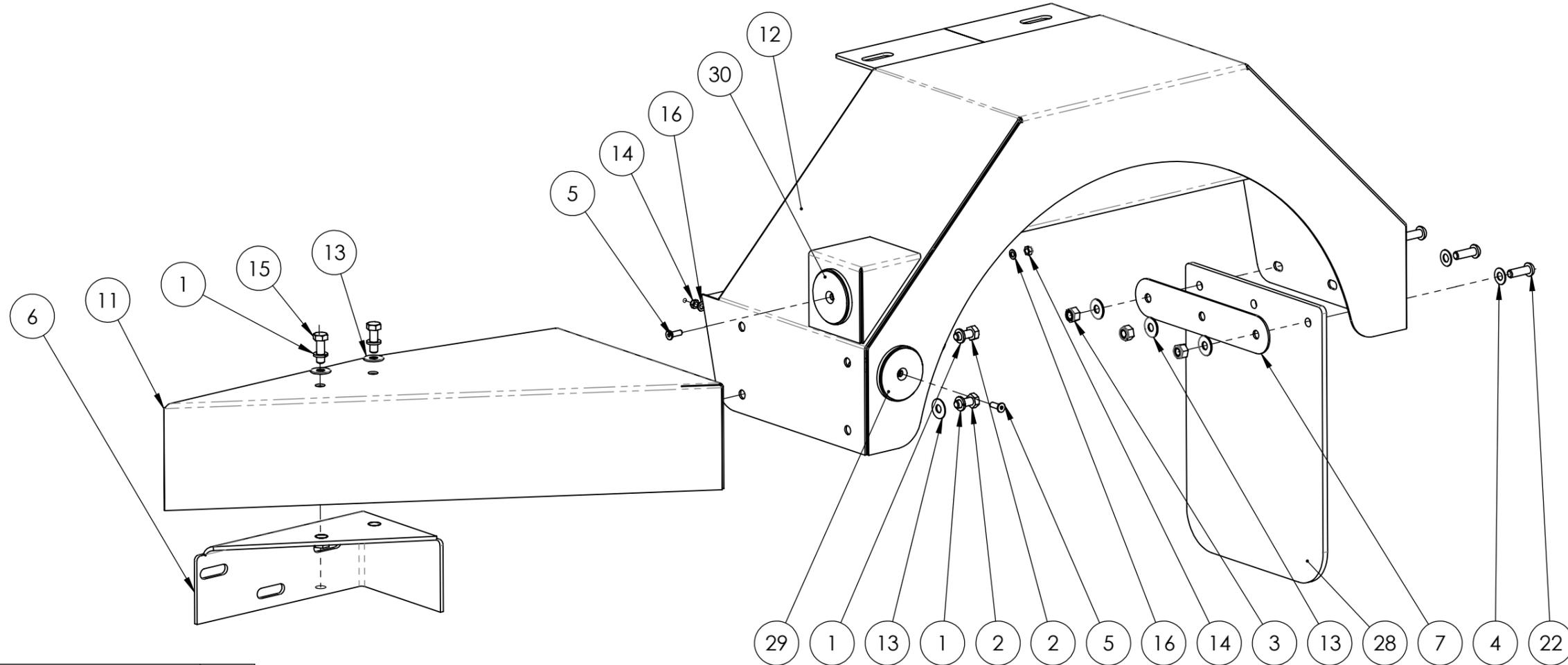
STUBBY A FRAME ARB190/200 ASSEMBLY

4005819



ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	301010182	PLATFORM BASE FRAME	1
4	STC1928956	PED 8525M8-70	4
5	301010180	PLATFORM GRILLE FABRICATION	1
8	90602C	M6 C WASHER	16
9	60830	M8 X 30 BUTTON	4
10	90804E	M8 SHAKE PROOF WASHER	4
11	90601	M6 NYLOC	8
12	90802HD28	M8 28MM HD WASHER	4
13	70645	M6 X 45 CAP HEAD	8

PLATFORM BASE
301010188
ARBTRAK 190 & 200

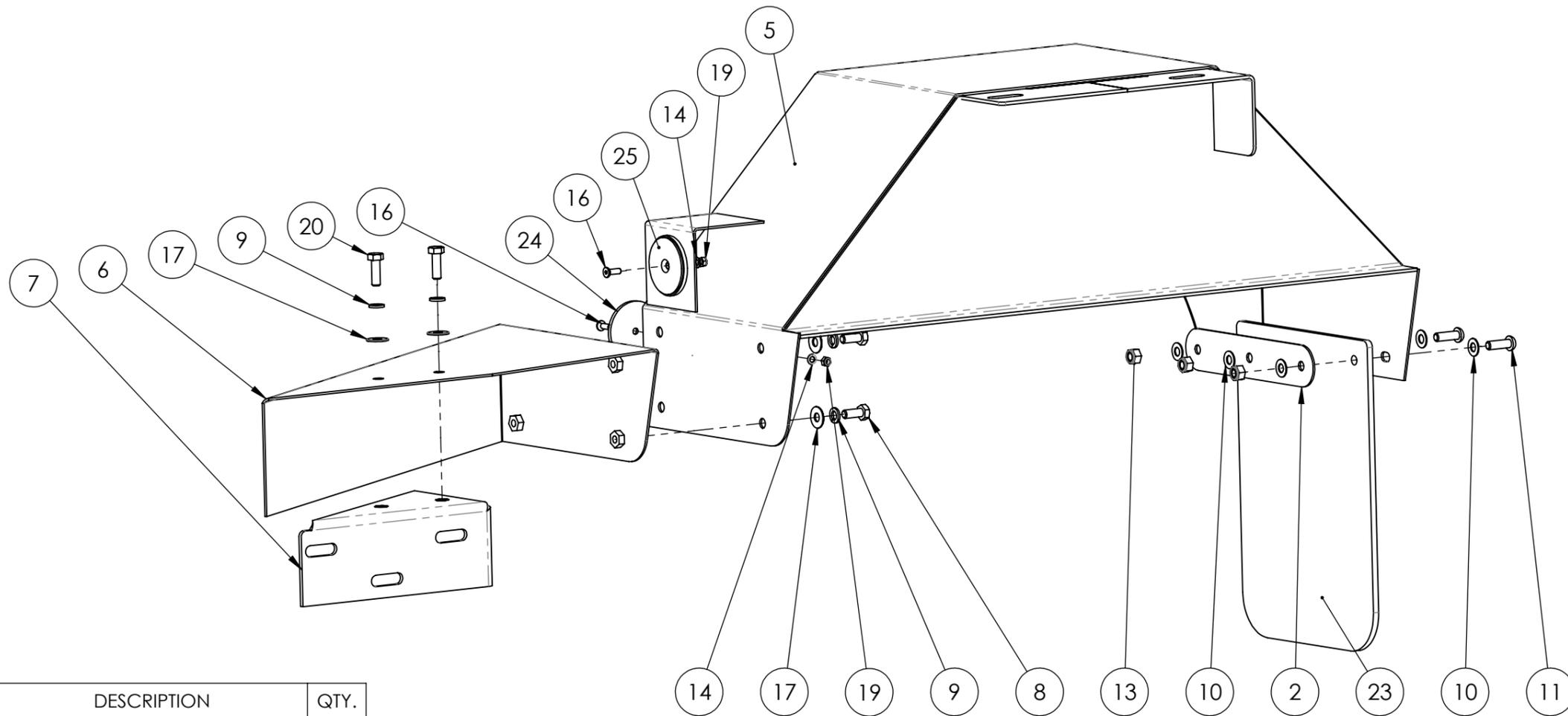


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	90803	M8 SPRING WASHER	6
2	90820	M8 X 20 SET	4
3	90801	M8 NYLOC NUT	3
4	90802B	M8 B WASHER	3
5	80516	M5 X 16 CSK	2
6	301010157	LEFT MUDGUARD STEP BRACE	1
7	301010073	MUDFLAP RETAINER PLATE	1
11	301010072	LEFT HAND MUDGUARD STEP	1
12	301010069	LEFT HAND MUDGUARD	1
13	90802C	M8 C WASHER	9
14	90501T	M5 THIN NYLOC NUT	2
15	90825	M8 X 25 SET	2
16	90502A	M5 A WASHER	2
22	60825	M8 X 25 BUTTON HEAD	3
28	MK2 QTT-1-1001	RUBBER MUDFLAP	1
29	GM-1001-RYR	AMBER REFLECTOR	1
30	GM-1001RWR	WHITE REFLECTOR	1

LEFT HAND MUDGUARD ASSEMBLY

301010157

ARBORIST 190 & 200

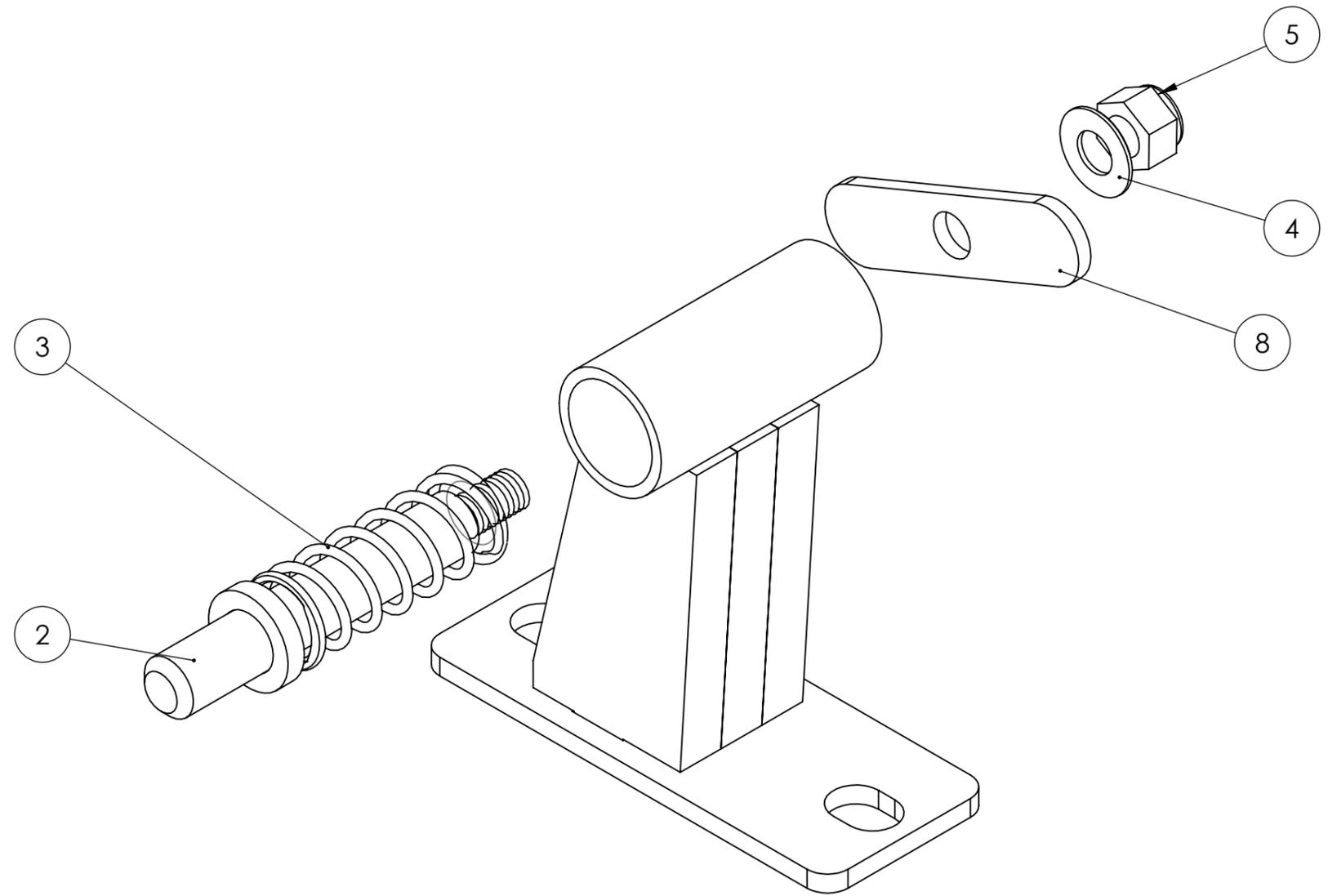


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
2	301010073	MUDFLAP RETAINER PLATE	1
5	301010091	RIGHT HAND MUDGUARD	1
6	301010154	RIGHT HAND MUDGUARD STEP	1
7	301010160	RIGHT MUDGUARD STEP BRACE	1
8	90820	M8 X 20 SET	4
9	90803	M8 SPRING WASHER	6
10	90802B	M8 B WASHER	6
11	60825	M6 X 25 BUTTON HEAD	3
13	90801	M8 NYLOC NUT	3
14	90502A	M5 A WASHER	2
16	80516	M5 X 16 CSK	2
17	60825	M8 X 25 BUTTON	0
17	90802C	M8 C WASHER	6
19	90501T	M5 THIN NYLOC NUT	2
20	90825	M8 X 25 SET	2
23	MK2 QTT-1-1001	RUBBER MUDFLAP	1
24	GM-1001-RYR	AMBER REFLECTOR	1
25	GM-1001RWR	WHITE REFLECTOR	1

RIGHT HAND MUDGUARD ASSEMBLY

301010090

ARBORIST 190 & 200

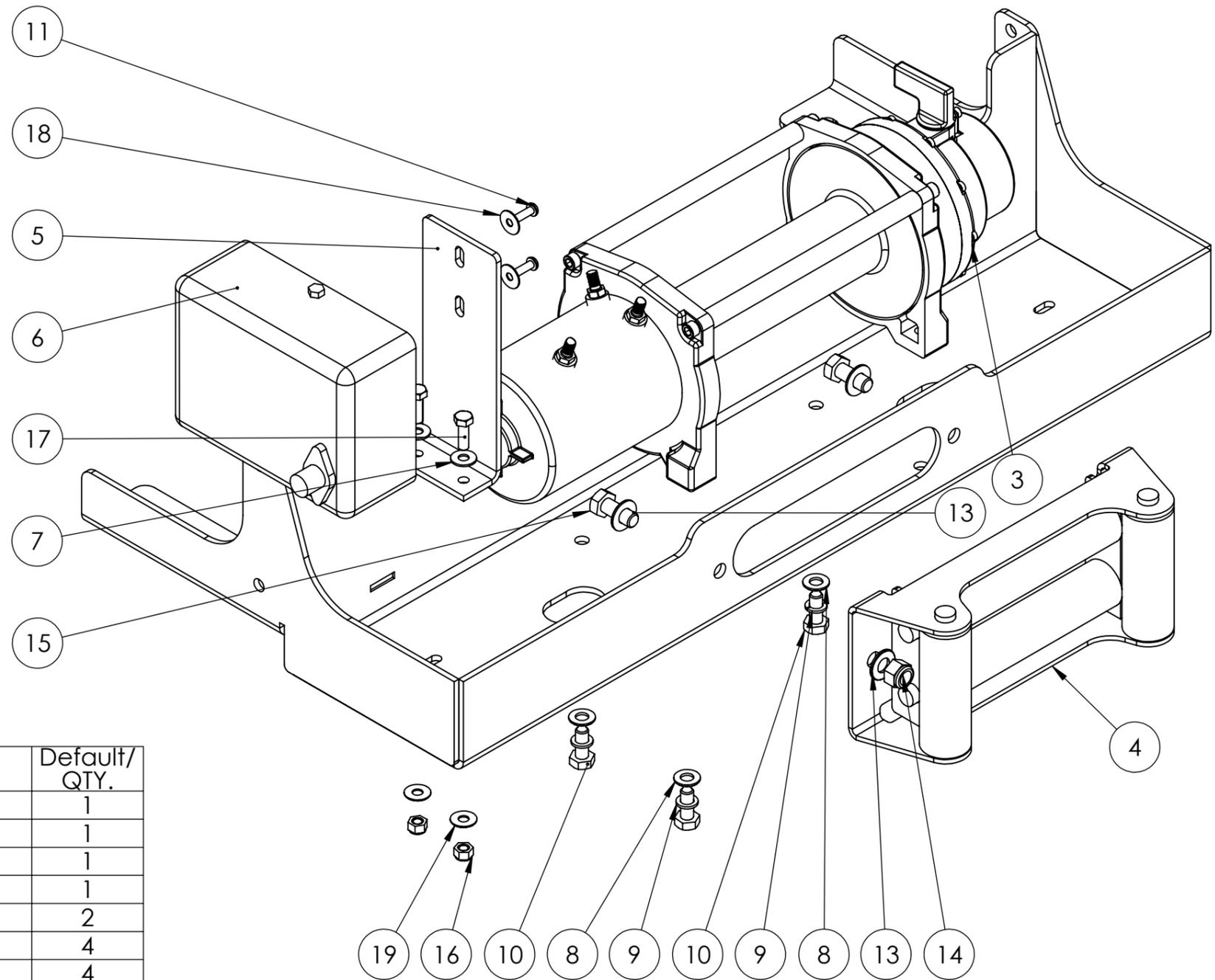


ITEM NO.	PART NUMBER	DESCRIPTION	Bare/QTY.
2	301010220	LOCKING PIN	1
3	900930405	PLATFORM PLUNGER SPRING	1
4	90802	M8 A WASHER	1
5	90801	M8 NYLOC NUT	1
8	301020037	PLUNGER HANDLE	1

PLATFORM PLUNGER STOP

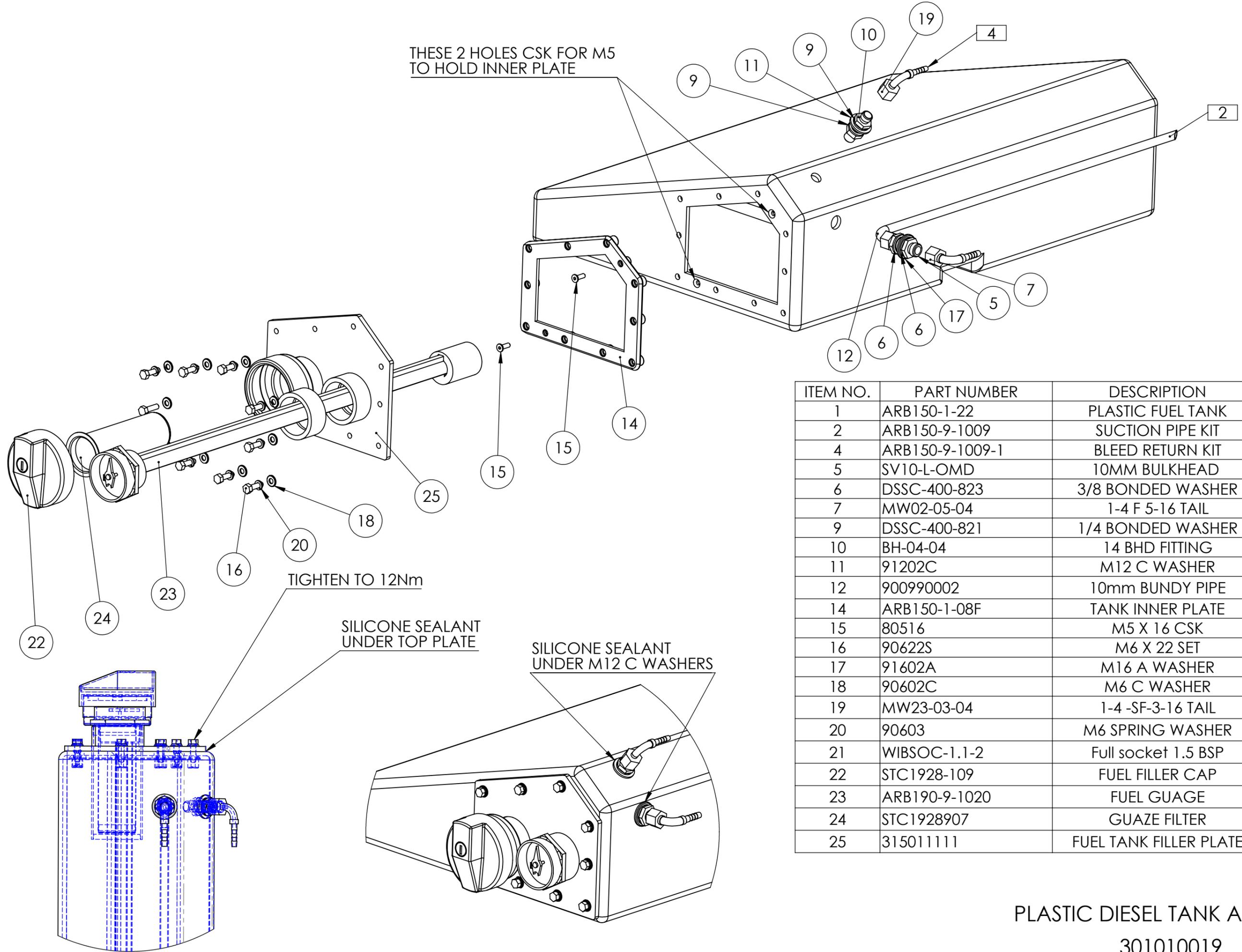
301010317

ARBTRAK 190 & 200



ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
3	ST1928126	WARN 8K WINCH	1
4	STC1928126-5	4 ROLLER FAIRLEAD	1
5	301010215	WINCH ELECTRICS BRACKET	1
6	ST1928126-1	WINCH ELECTRICS	1
7	90802-c	M8 C WASHER	2
8	91002	FLAT WASHER	4
9	91003	M10 SPRING WASHER	4
10	91025	M10 X 25 SET	4
11	60620	M6 X 20 BUTTON	2
13	91202	M12 A WASHER	4
14	91201	M12 NYLOC NUT	2
15	91230	HEX HD BOLT	2
16	90801	M8 NYLON NUT	2
17	90825	M8 X 25 SET	2
18	90602	M6 x 25mm WASHER	2
19	90802C	M8 C WASHER	2

WINCH FRAME
 301010212
 ARBTRAK 190 & 200



THESE 2 HOLES CSK FOR M5
TO HOLD INNER PLATE

TIGHTEN TO 12Nm

SILICONE SEALANT
UNDER TOP PLATE

SILICONE SEALANT
UNDER M12 C WASHERS

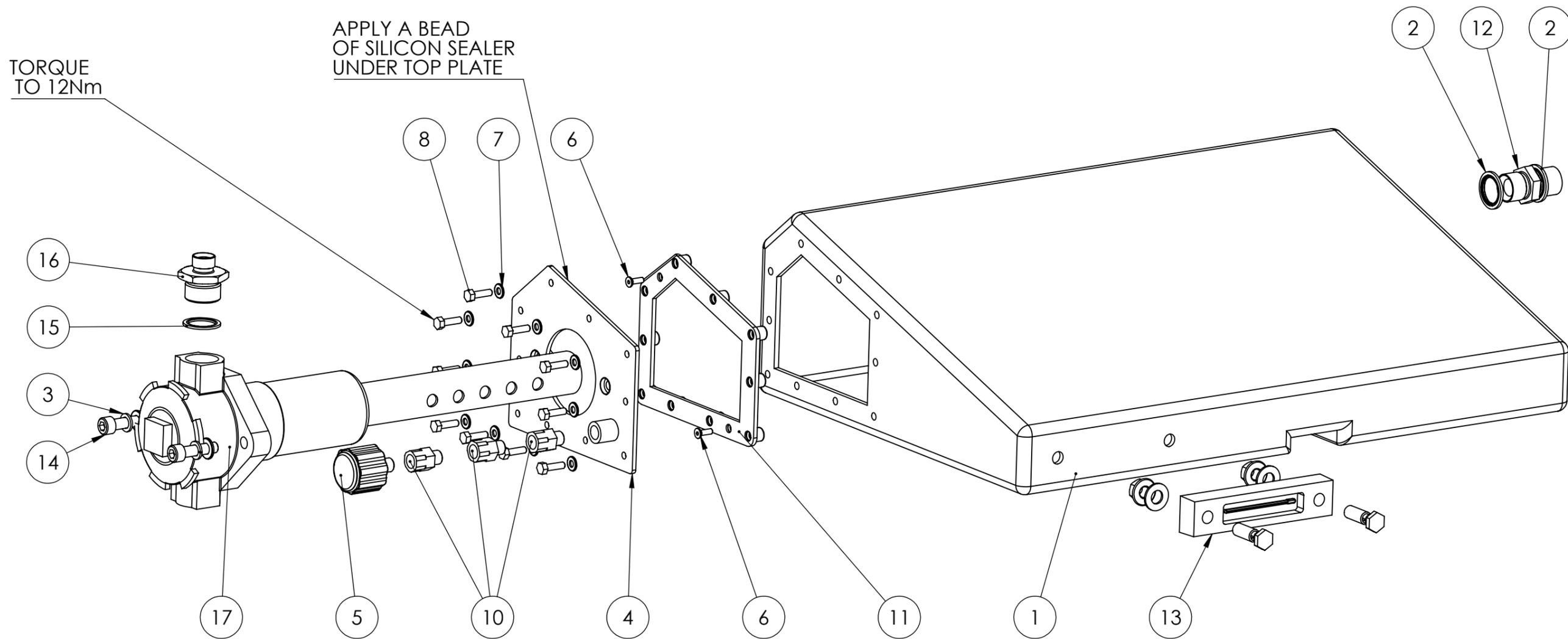
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ARB150-1-22	PLASTIC FUEL TANK	1
2	ARB150-9-1009	SUCTION PIPE KIT	1
4	ARB150-9-1009-1	BLEED RETURN KIT	1
5	SV10-L-OMD	10MM BULKHEAD	1
6	DSSC-400-823	3/8 BONDED WASHER	2
7	MW02-05-04	1-4 F 5-16 TAIL	1
9	DSSC-400-821	1/4 BONDED WASHER	2
10	BH-04-04	14 BHD FITTING	1
11	91202C	M12 C WASHER	1
12	900990002	10mm BUNDY PIPE	1
14	ARB150-1-08F	TANK INNER PLATE	1
15	80516	M5 X 16 CSK	2
16	90622S	M6 X 22 SET	10
17	91602A	M16 A WASHER	1
18	90602C	M6 C WASHER	10
19	MW23-03-04	1-4 -SF-3-16 TAIL	1
20	90603	M6 SPRING WASHER	10
21	WIBSOC-1.1-2	Full socket 1.5 BSP	1
22	STC1928-109	FUEL FILLER CAP	1
23	ARB190-9-1020	FUEL GUAGE	1
24	STC1928907	GUAZE FILTER	1
25	315011111	FUEL TANK FILLER PLATE	1

PLASTIC DIESEL TANK ASSEMBLY

301010019

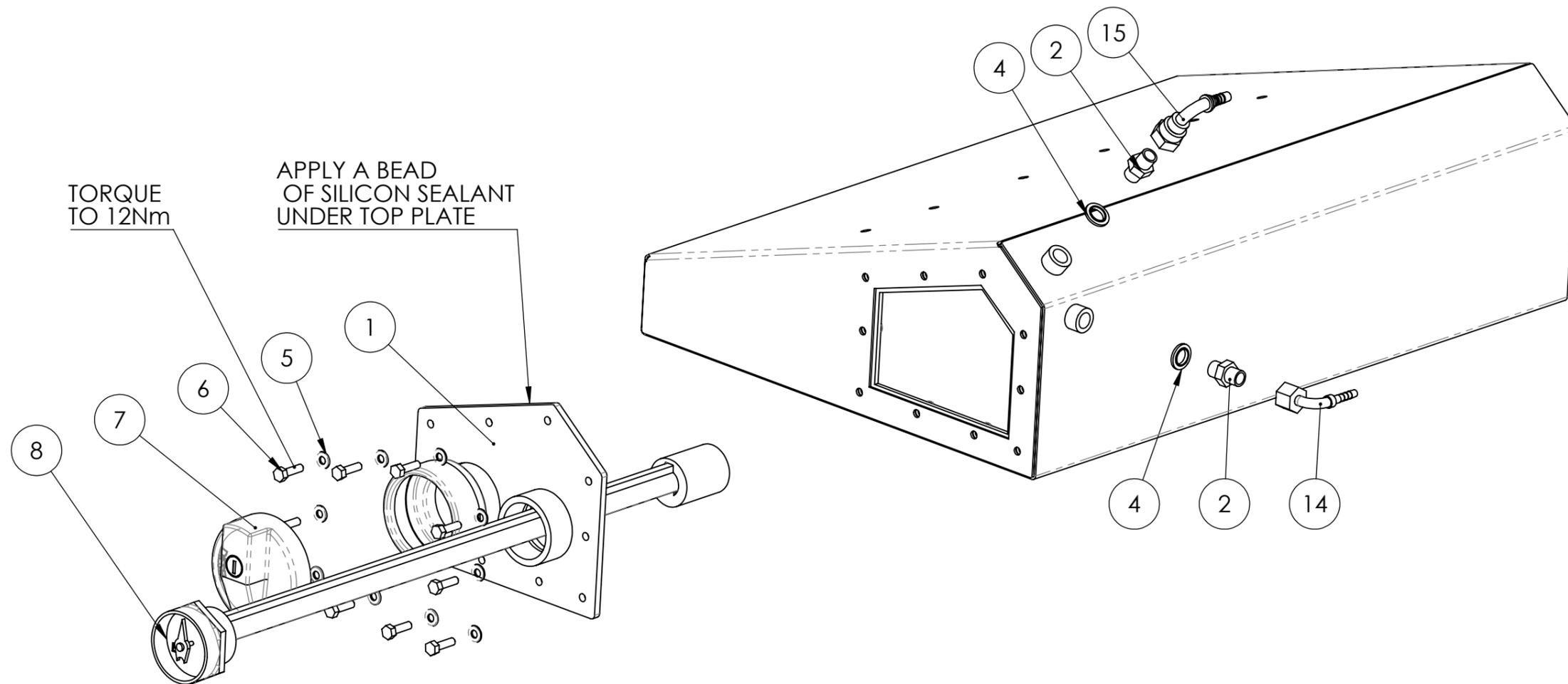
ARB190

PRE NEW INFEED & FLAP



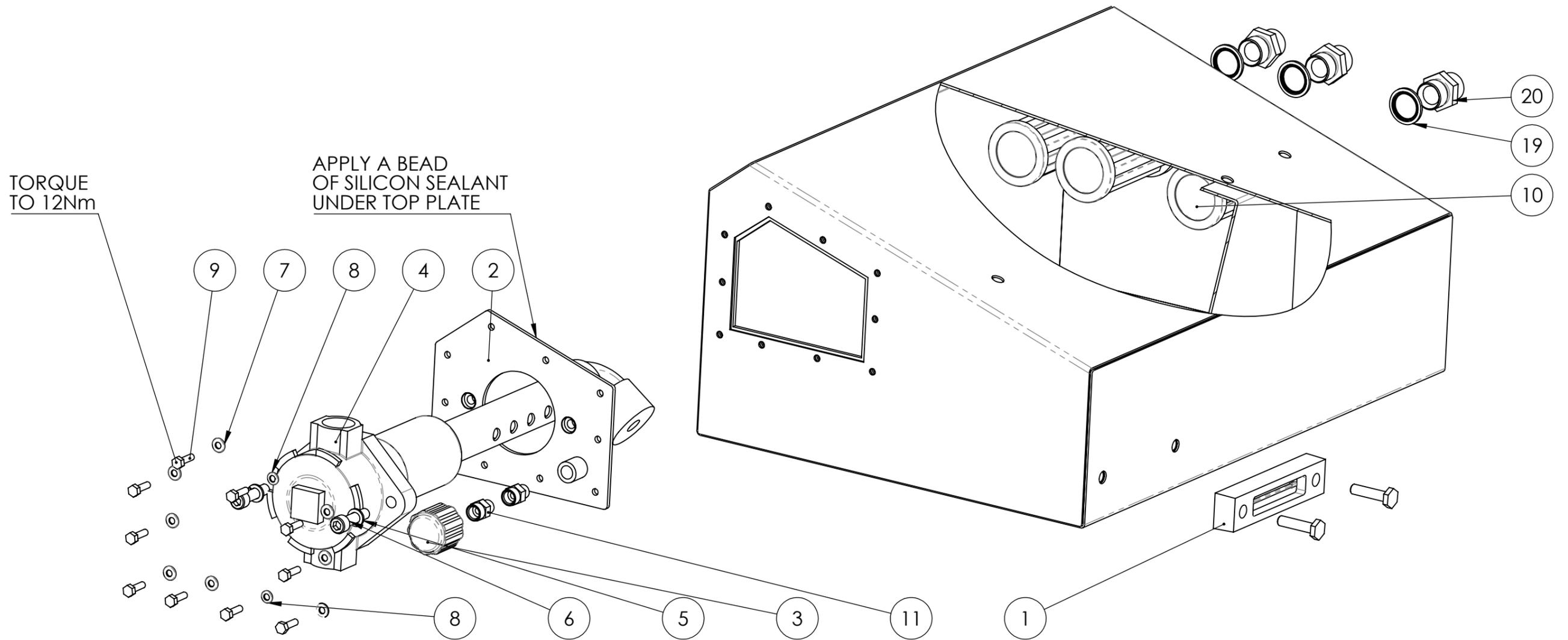
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	900990012	PLASTIC HYDRAULIC TANK	1
2	DSSC-400-827	BONDED WASHER	3
3	91003	M10 SPRING WASHER	2
4	ARB150-1-140	TOP PLATE FAB	1
5	ST1928-1-150	UCC TANK BREATHER	1
6	80516	M5 X 16 CSK	2
7	90602C	M6 C WASHER	10
8	90622S	M6 X 22 SET	10
9	91002A	M10 A WASHER	2
10	MF-04-04	EXTENSION	3
11	ARB150-1-08F-1	TANK INNER PLATE	1
12	BH-12-12	BULKHEAD FITTING	1
13	C5351650	TANK GAUGE	1
14	71040	M10 X 40 CAP	2
15	DSSC-400-830	1" BONDED WASHER	1
16	MM-16-08	1"- 1-2" MALE ADAPTOR	1
17	ST1928-111	RETURN FILTER ASSY	1

ARBORIST 190 & 200
HYDRAULIC OIL TANK
301010020



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	315011111	FUEL TANK FILLER PLATE	1
2	MM-04-04	1/4 MALE ADAPTOR	2
3	WIBSOC 1-4	1-4 WELDED SOCKET	2
4	DSSC-400-821	1/4 BONDED WASHER	2
5	90602C	M6 C WASHER	10
6	90622	M6 X 22 SET	10
7	STC1928-109	FUEL FILLER CAP	1
8	ARB190-9-1020	FUEL GAUGE	1
14	MW23-03-04	1-4SF-3-16 TAIL	1
15	KW11-05-04	1-4SF-5-16 HOSE TAIL	1

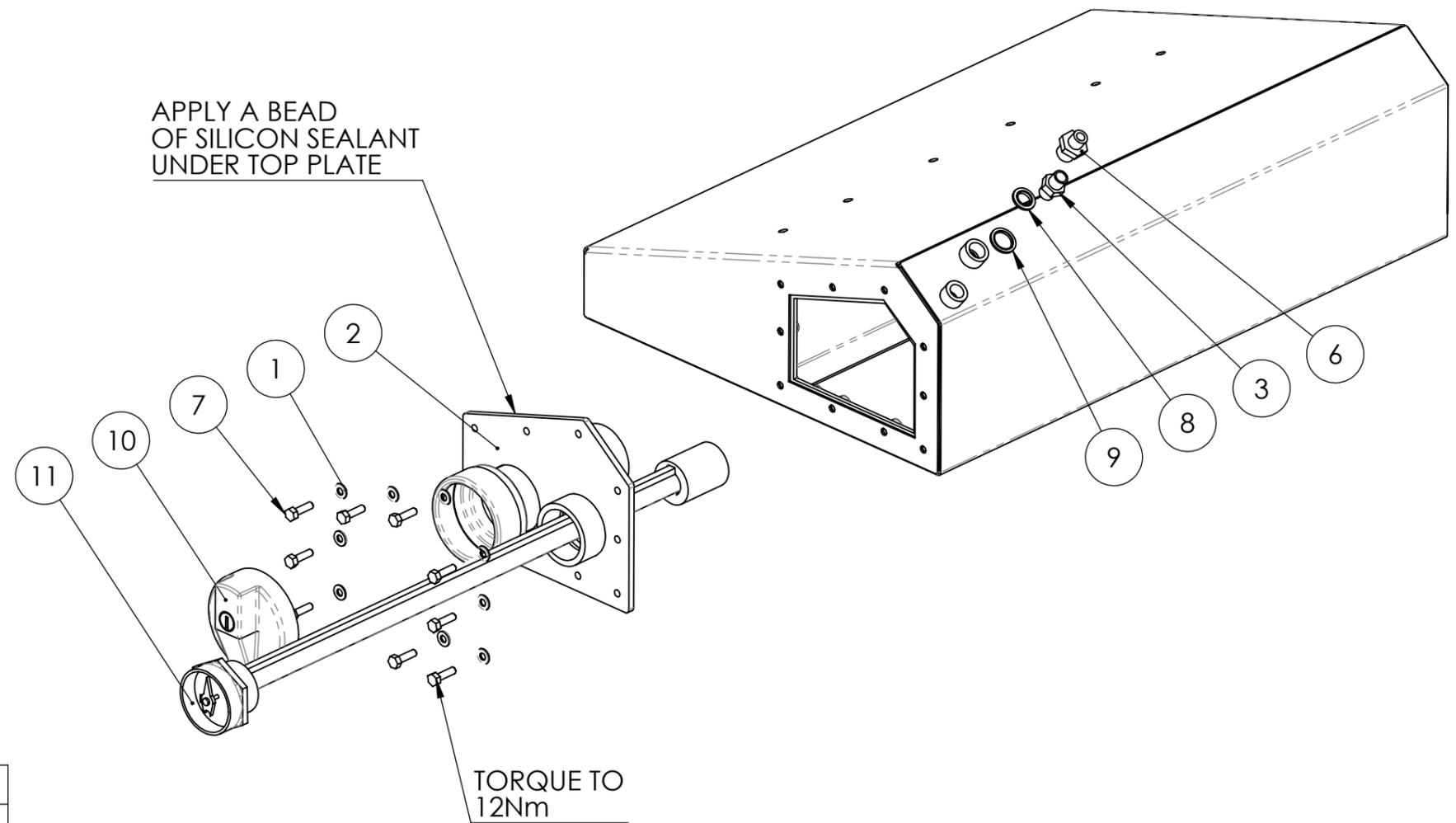
FUEL TANK 32LTR
 301010179
 ARBTRAK 190
 TOP BAR



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	C5351650	TANK GAUGE	1
2	ARB150-1-140	TOP PLATE FAB	1
3	ST1928-1-150	UCC TANK BREATHER	1
4	ST1928-111	RETURN FILTER ASSY	1
5	91003	M10 SPRING WASHER	2
6	71040	CAP HD BOLT	2
7	90602C	M6 C WASHER	8
8	90602A	M6 A WASHER	2
9	90622	M6 X 22 SET	10
10	C200315	SUCTION FILTER	3
18			2
19	DSSC-400-827	BONDED WASHER	3
20	MM-12-12	3/4-3/4BSP MM ADAPTOR	3

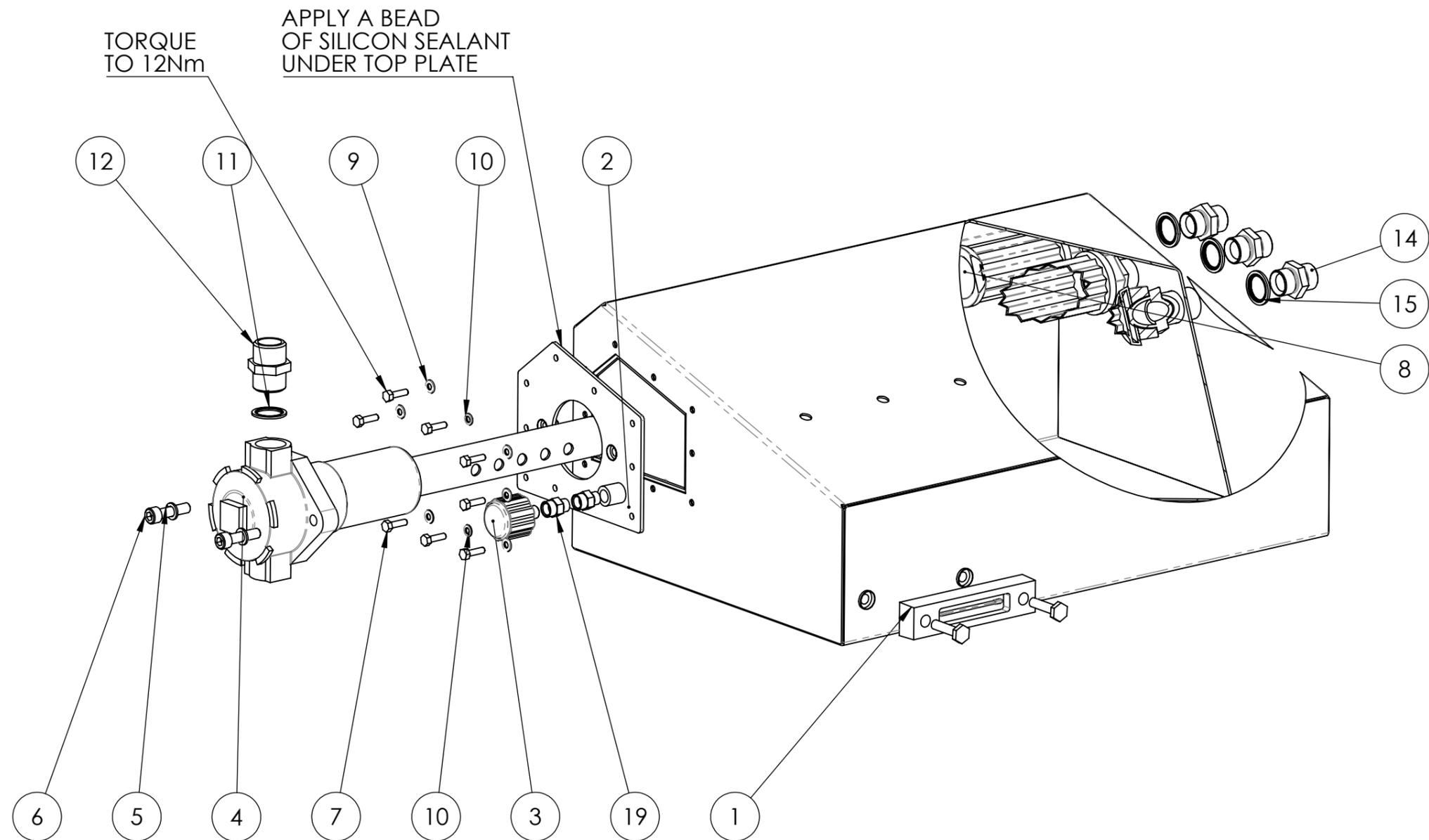
HYDRAULIC OIL TANK 50LTR

301010175
TOP BAR



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	90602C	M6 C WASHER	10
2	315011111	FUEL TANK FILLER PLATE	1
3	DSSC-400-821	1/4 MALE ADAPTOR	1
4	WIBSOC 1-4	1-4 WELDED SOCKET	1
5	WIBSOC 3-8	3-8 WELDED SOCKET	1
6	MM-06-04	1-4 - 3-8 M / M	1
7	90622	M6 X 22 SET	10
8	DSSC-400-821	1/4 BONDED WASHER	1
9	DSSC-400-823	3/8 BONDED WASHER	1
10	STC1928-109	FUEL FILLER CAP	1
11	ARB190-9-1020	FUEL GUAGE	1

FUEL TANK 30 Ltr
 301010261
 ARBTRAK190
 BOTTOM BAR

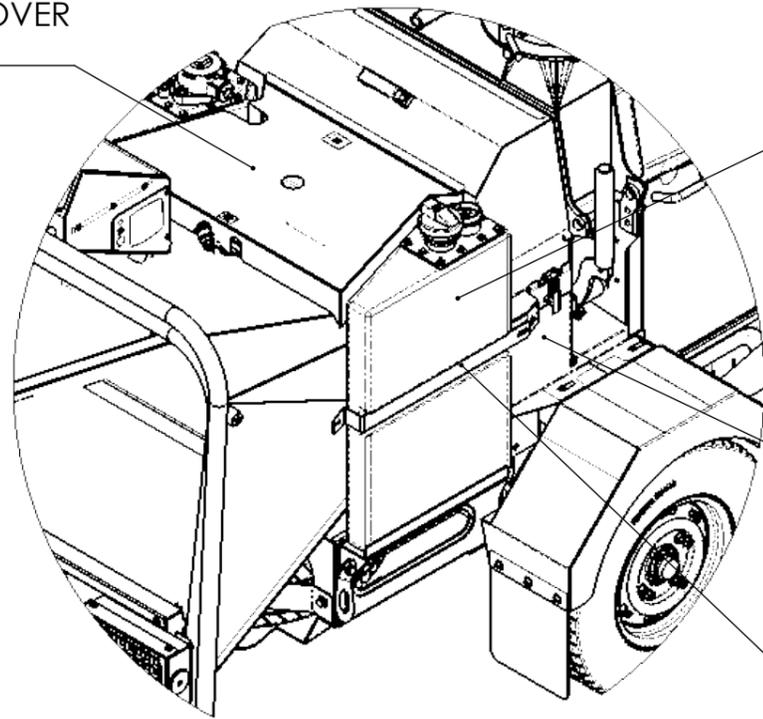


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	C5351650	TANK GAUGE	1
2	ARB150-1-140	TOP PLATE FAB	1
3	ST1928-1-150	UCC TANK BREATHER	1
4	ST1928-111	RETURN FILTER ASSY	1
5	91003	M10 SPRING WASHER	2
6	71040	CAP HD BOLT	2
7	90622	M6 X 22 SET	10
8	C200315	SUCTION FILTER	3
9	90602C	M6 C WASHER	8
10	90602A	M6 A WASHER	2
11	DSSC-400-830	1" BONDED WASHER	1
12	MM-16-16	1-1-MALE ADAPTOR	1
13	301010139	HYDRAULIC TANK BAFFLE	1
14	MM-12-12	3/4-3/4BSP MM ADAPTOR	3
15	DSSC-400-827	BONDED WASHER	3

HYDRAULIC OIL TANK 53LTR

301010270
ARBTRAK 190

REAR TOP COVER
301010056



PLASTIC DIESEL TANK
301010019

RIGHT SIDE COVER
301010132

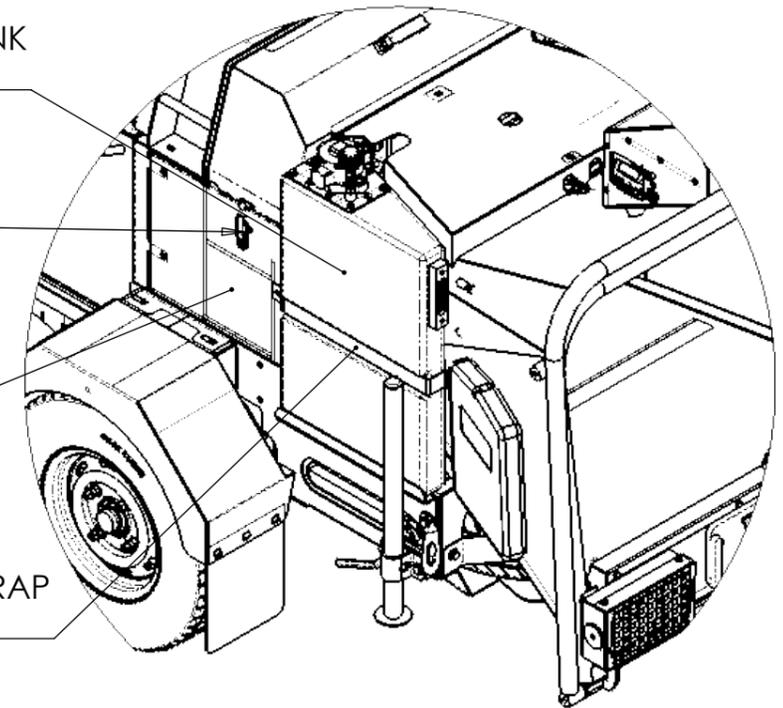
FUEL TANK STRAP
301010061

PLASTIC HYDRAULIC TANK
301010020

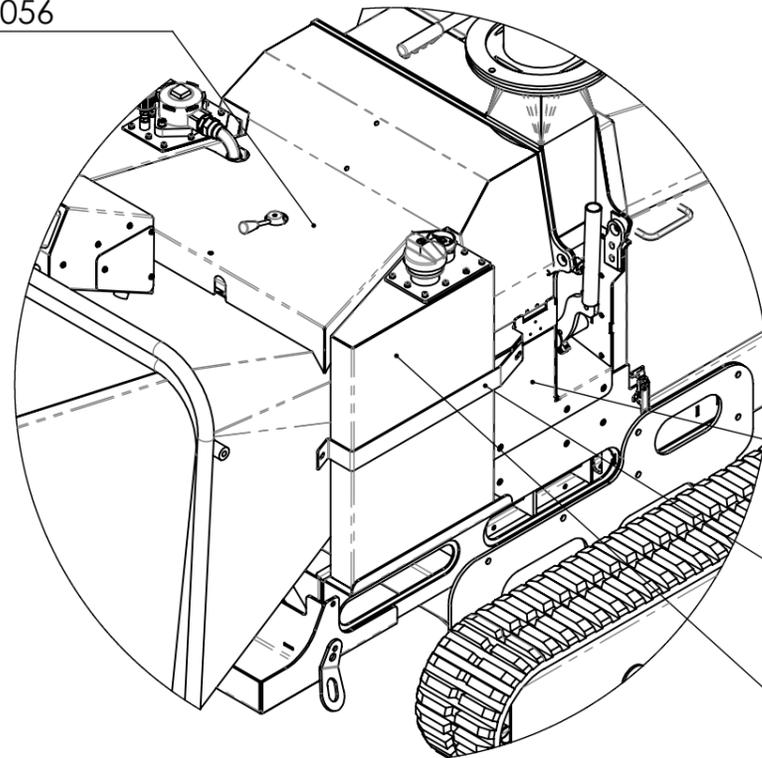
PANEL CATCHES
900900001
EVERY INSTANCE

LEFT SIDE COVER
301010131

HDRAULIC TANK STRAP
301010032



REAR TOP COVER
301010056



RIGHT SIDE COVER
301010227

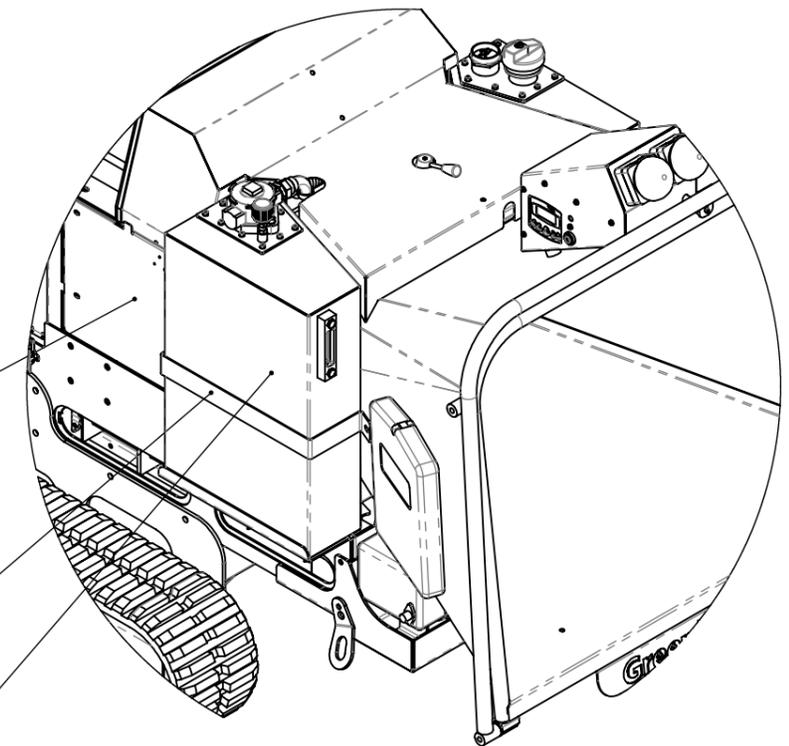
FUEL TANK STRAP
301010205

STEEL FUEL TANK
301010179

LEFT SIDE COVER
301010131

HYDRAULIC TANK STRAP
301010206

HYDRAULIC STEEL TANK
301010175



ARB190
TOP BAR
COVERS

REAR TOP COVER
301010146

REAR TOP COVER
301010151

PLASTIC HYDRAULIC TANK
301010020

PLASTIC DIESEL TANK
301010019

PANEL CATCHES
900900001
EVERY INSTANCE

HYDRAULIC TANK STRAP
301010088

DIESEL TANK STRAP
301010087

LEFT SIDE COVER
301010131

RIGHT SIDE COVER
301010132

REAR TOP COVER
301010146

REAR TOP COVER
301010151

STEEL HYDRAULIC TANK
301010270

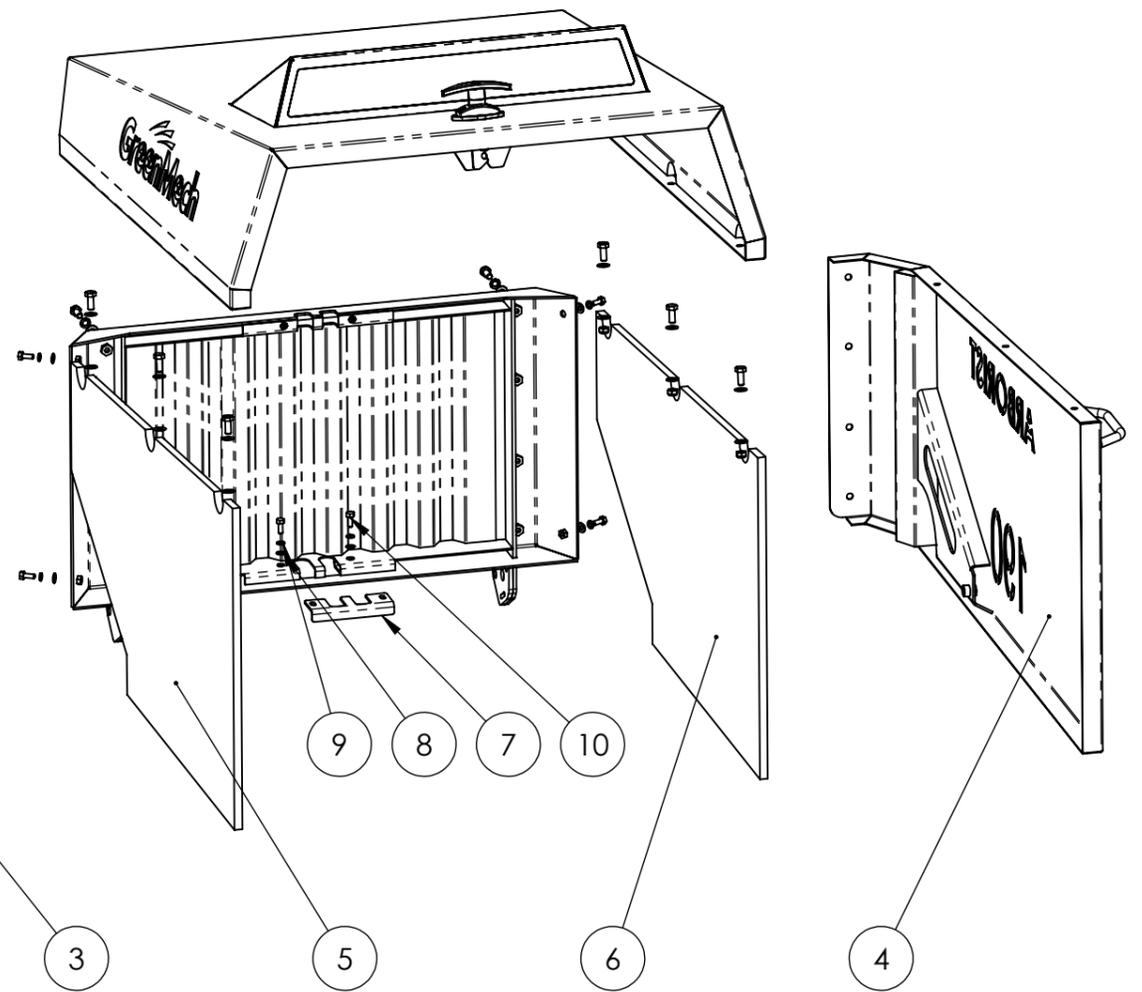
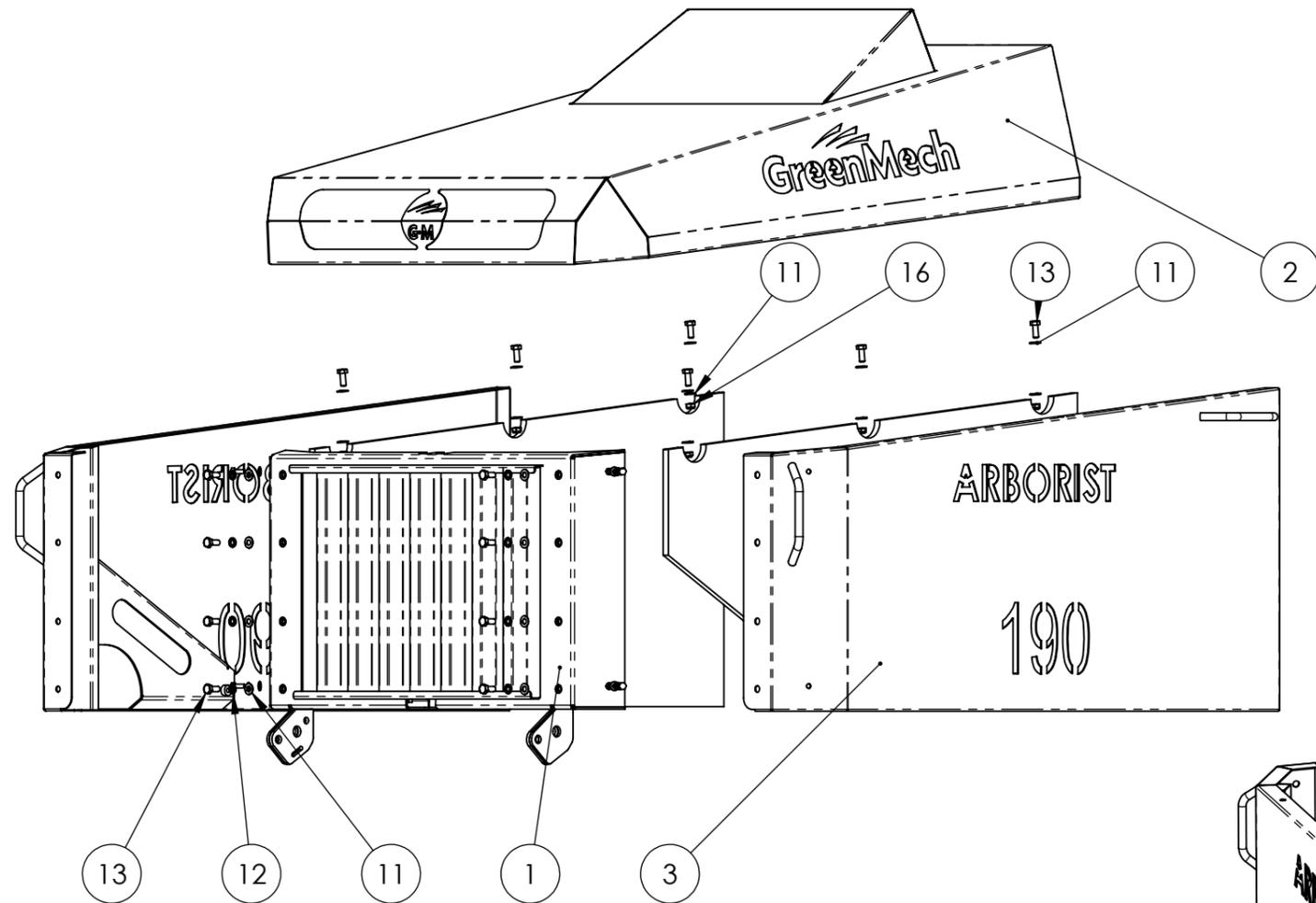
STEEL DIESEL TANK
301010261

HYDRAULIC TANK STRAP
301010268

DIESEL TANK STRAP
301010267

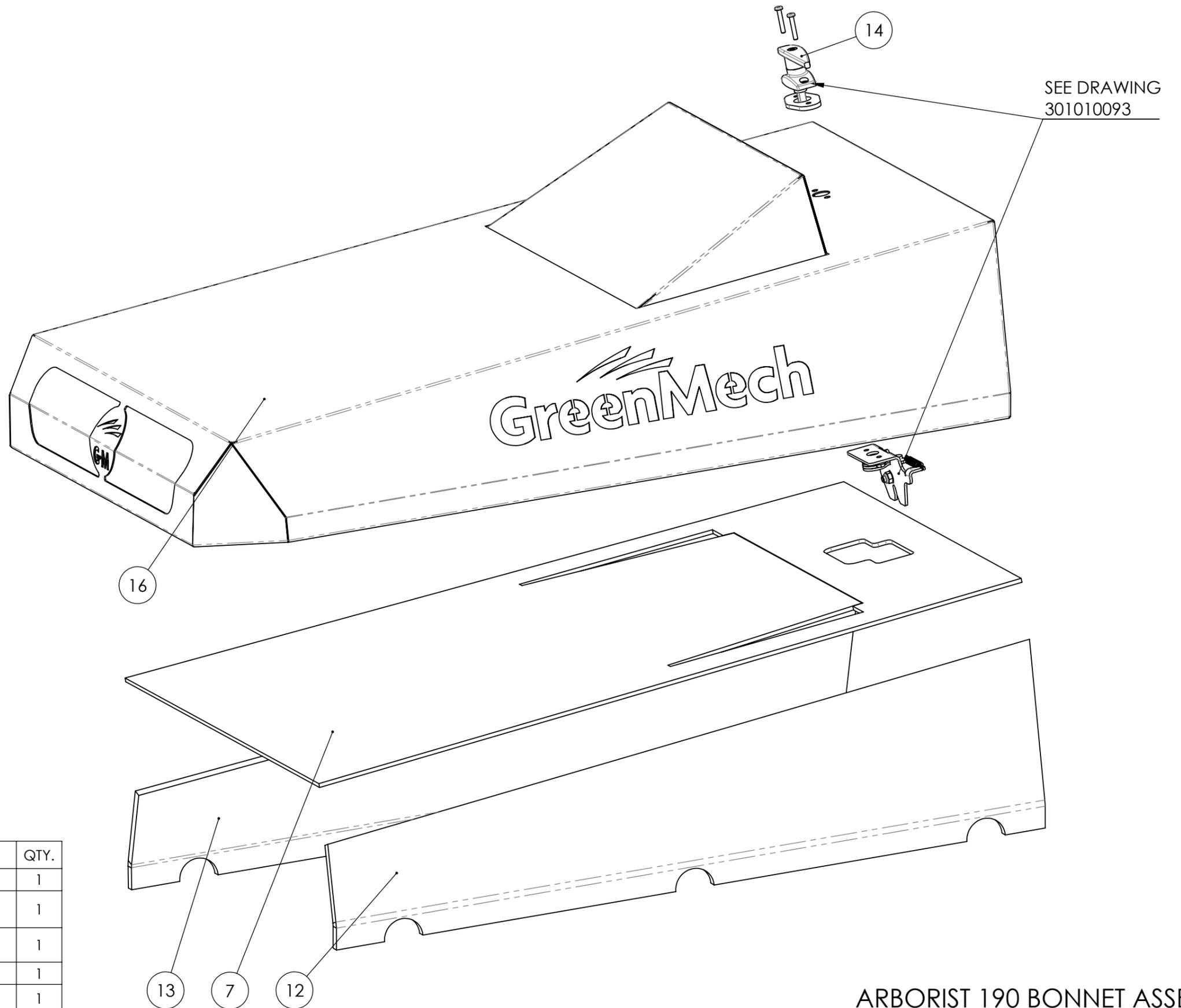
LEFT SIDE COVER
301010131

RIGHT SIDE COVER
301010227



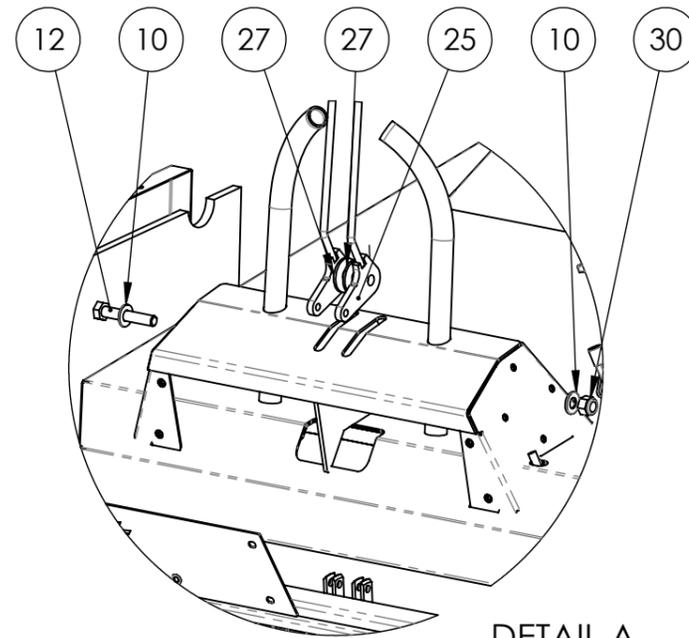
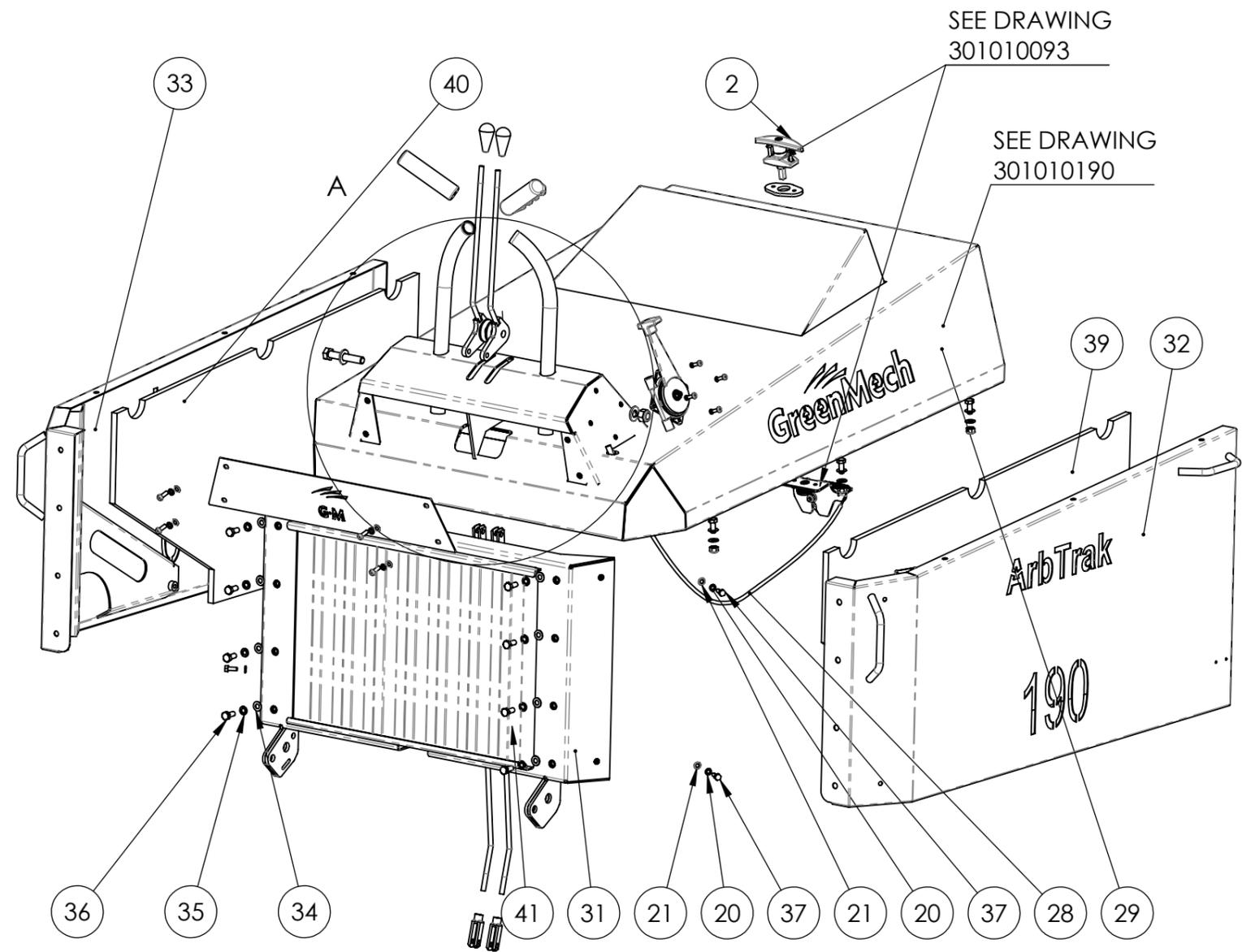
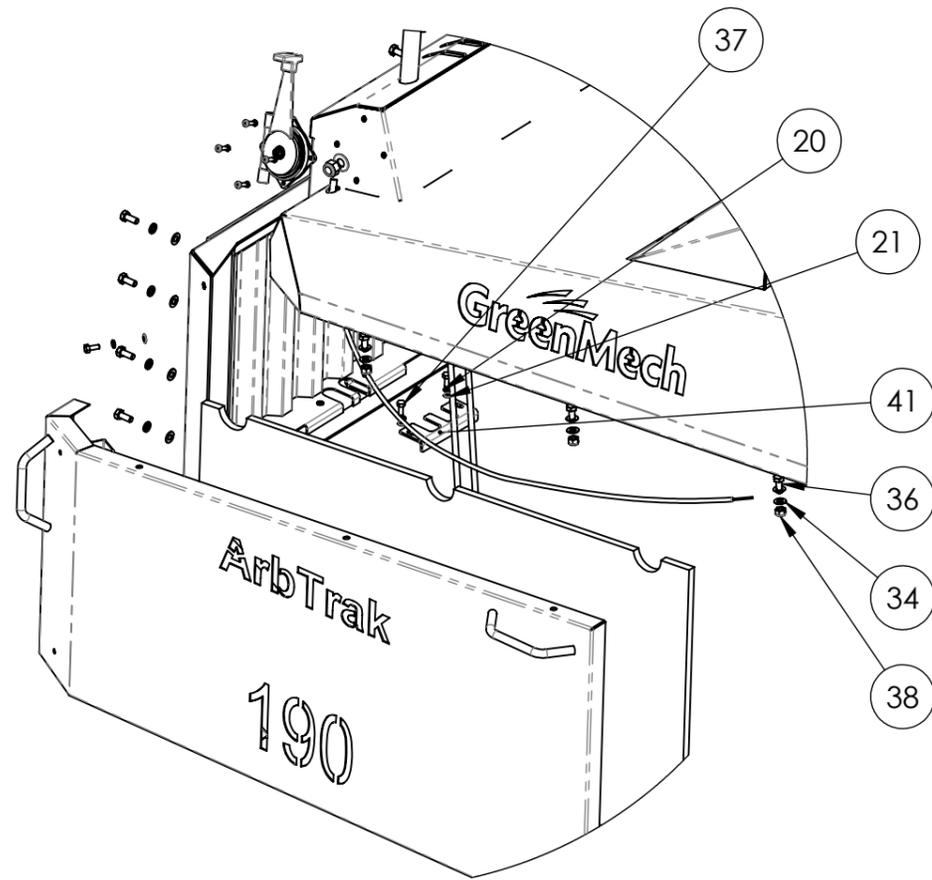
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	301010064	RADIATOR GRILLE	1
2	301010332	ARBORIST 190 BONNET ASSEMBLY	1
3	301010037	LEFT SIDE PANEL	1
4	301010039	RIGHT SIDE PANEL	1
5	ARB190-9-1032 LH	LEFT SIDE PANEL BARRIER FOAM	1
6	ARB190-9-1032 RH	RIGHT SIDE PANEL BARRIER FOAM	1
7	301010207	CONTROL ROD GUIDE SUPPORT	1
8	90602B	M6 B WASHER	2
9	90603	M6 SPRING WASHER	6
10	90616S	M6 X 16 SET	6
11	90802B	M8 B WASHER	20
12	90803	M8 SPRING WASHER	8
13	90820S	M8 X 20 SET	14
15	90602C	M6 C WASHER	4
16	90801T	M8 THIN NYLOC NUT	6

ARBORIST 190 GRILLE & BONNET
301010331



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
7	ARB190-9-1031	BONNET BARRIER FOAM	1
12	ARB190-9-1033LH	BONNET SIDE PANEL BARRIER FOAM	1
13	ARB190-9-1033RH	BONNET SIDE PANEL BARRIER FOAM	1
14	301010093	BONNET LATCH ASSEMBLY	1
16	301010028	BONNET	1

ARBORIST 190 BONNET ASSEMBLY
301010332

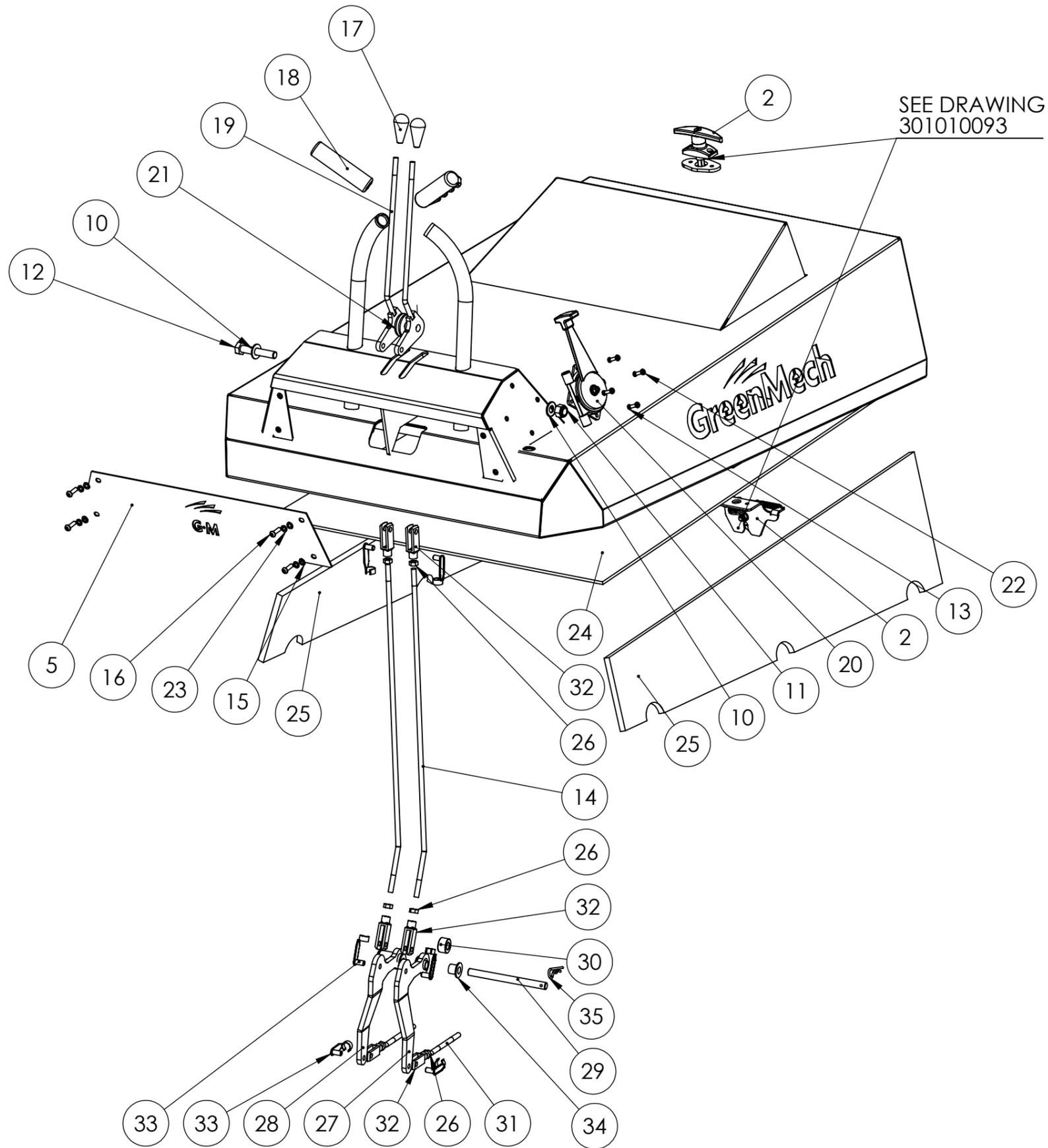


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
2	301010093	BONNET LATCH ASSEMBLY	1
10	91202C	M12 FLAT WASHER	2
12	91270	M12 X 70 BOLT	1
20	90603	M6 SPRING WASHER	4
21	90602B	M6 B WASHER	4
22	60620	M6 X 20 BUTTON	4
28	900960051	ARBTRAK THROTTLE CABLE	1
30	91201	M12 NYLOC NUT	1
31	301010064	RADIATOR GRILLE	1
32	301010197	LEFT SIDE PANEL	1
33	301010198	RIGHT SIDE PANEL	1
34	90802B	M8 B WASHER	20
35	90803	M8 SPRING WASHER	8
36	90820	M8 X 20 SET	14
37	90616	M6 X 16 SET	6
38	90801	M8 NYLOC NUT	6
39	ARB190-9-1032 LH	LEFT SIDE PANEL BARRIER FOAM	1
40	ARB190-9-1032 RH	RIGHT SIDE PANEL BARRIER FOAM	1
41	301010207	CONTROL ROD GUIDE SUPPORT	1

ARBTRAK 190 BONNET

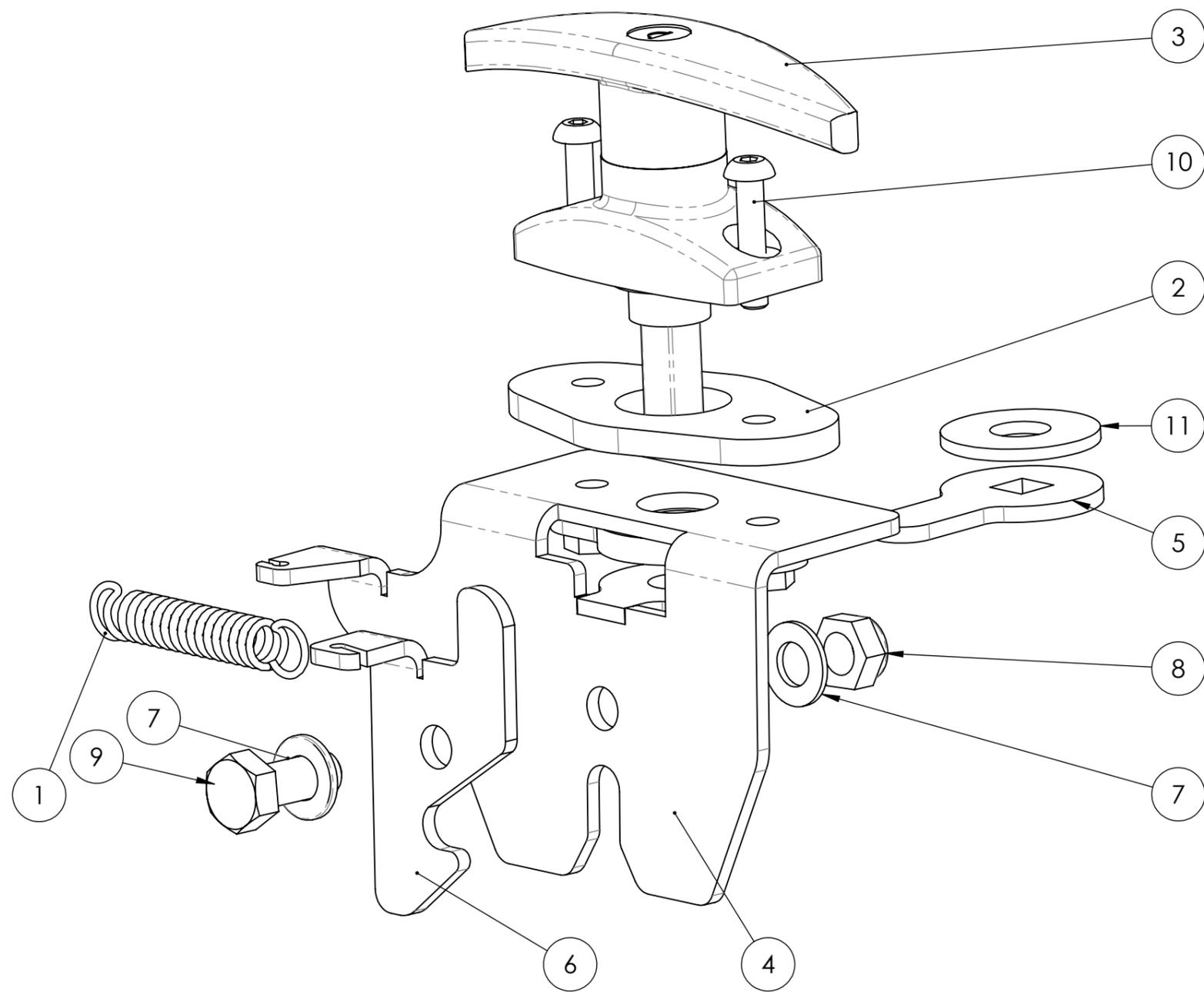
301010333

DETAIL A
SCALE 1 : 8



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
2	301010093	BONNET LATCH ASSEMBLY	1
5	301010244	CONSOLE FRONT COVER	2
10	91202	M12 A WASHER	2
11	91201	M12 NYLOC NUT	1
12	91270	M12 X 70	1
13	90503	M5 SPRING WASHER	4
14	301010243	LINK ROD	2
15	90602B	M6 B WASHER	4
16	60620	M6 X 20 BUTTON	4
17	900900410	LEVER KNOB	2
18	9227	PLASTIC HANDLE GRIP	2
19	301010209	CONTROL LEVER	2
20	900960303	THROTTLE LEVER	1
21	91202N40	M12 40MM NYLON WASHER	2
22	60516	M5 X 16 BUTTON	4
23	90603	M6 SPRING WASHER	4
24	900920051	BONNET BARRIER FOAM	1
25	900920052	BONNET SIDE PANEL BARRIER FOAM	2
26	90801P	M8 PLAIN NUT	6
27	301010201	LOWER PIVOT	1
28	301010201 OH	LOWER PIVOT	1
29	301010237	LINKAGE PIVOT PIN	1
30	301010202	LINKAGE PIVOT SPACER	1
31	301010252	LINK ROD	2
32	900930305	LONG CLEVIS	6
33	LONG CLEVIS PIN 8mm	INCLUDED WITH ABOVE	4
34	900910127	16odx12.2id x 17 BUSH	4
35	9105M	MEDIUM R CLIP	1

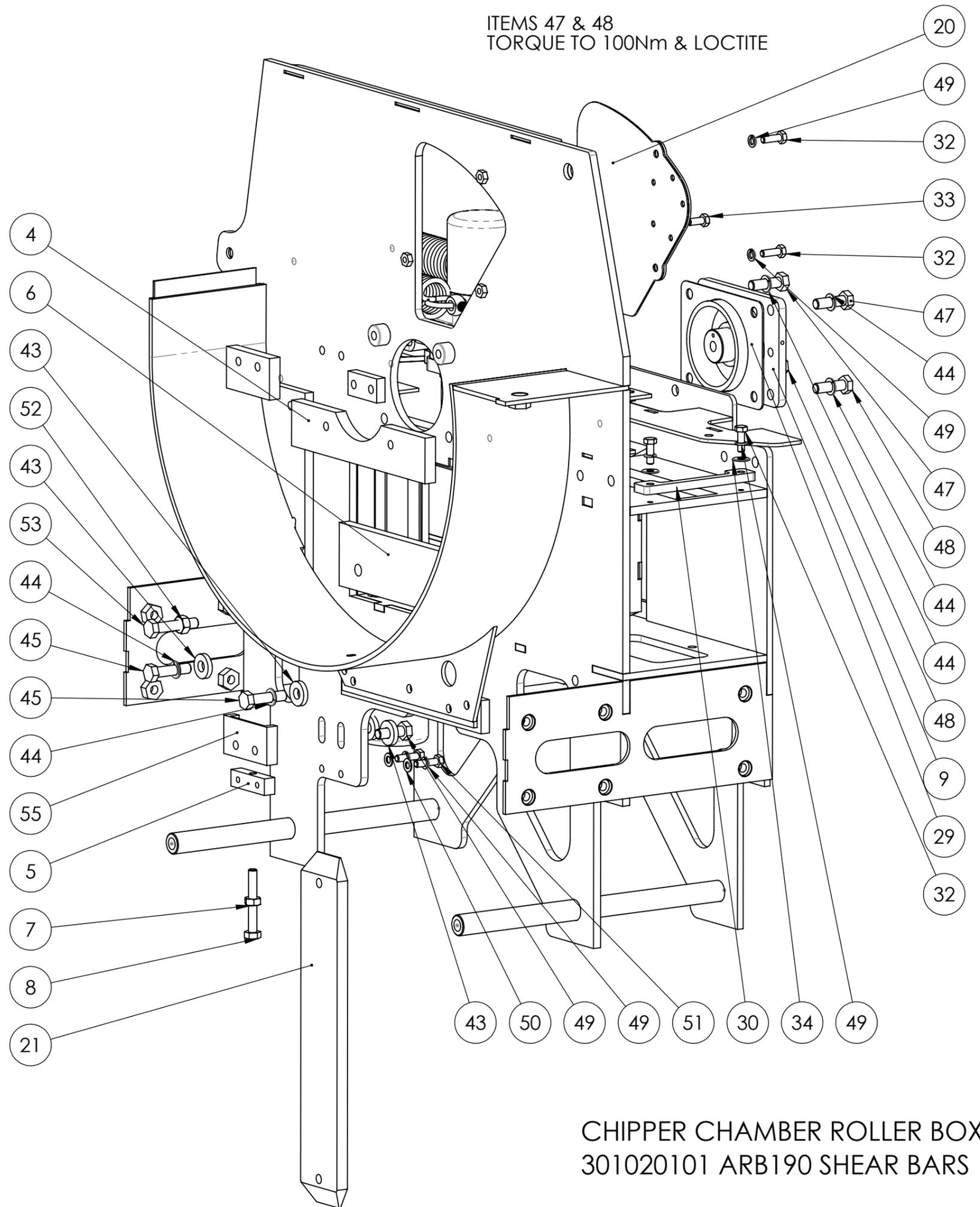
301010190
ARBTRAK 190 BONNET



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	900930001	TENSION SPRING	1
2	301010097	BOLT PLATE	1
3	C170101	BONNET HANDLE	1
4	301010095	BONNET LATCH MOUNT	1
5	301010096	LATCH STRIKER PLATE	1
6	301010100	LATCH LOCK PLATE	1
7	90802A	M8 A WASHER	2
8	90801T	M8 THIN NYLOC NUT	1
9	90820	M8 X 20 SET	1
10	60525	M5 x 25 BUTTON	2
11	91002HD30	M10 30MM HD WASHER	1

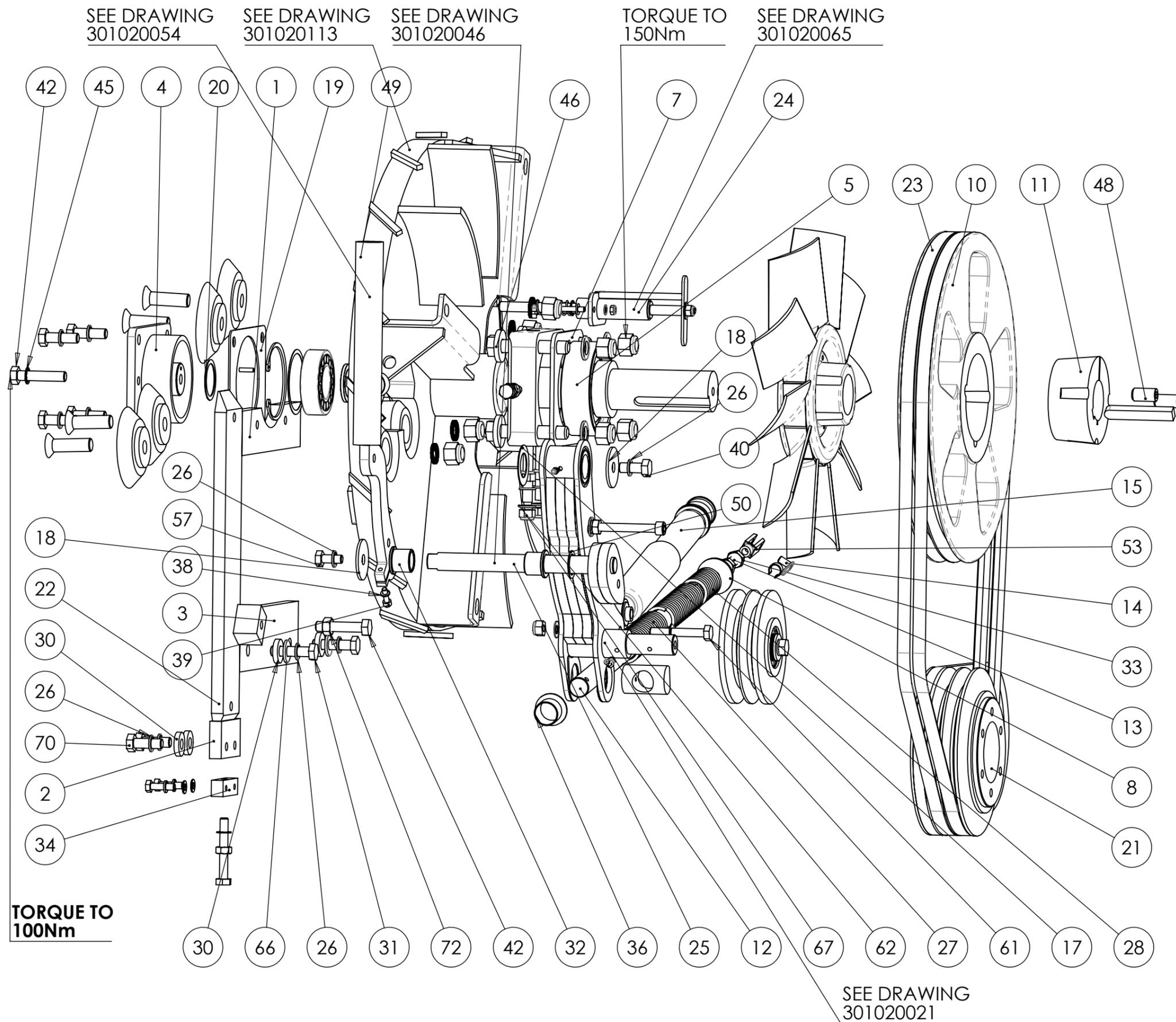
BONNET LATCH ASSEMBLY
 301010093
 ARB190 & 200

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
4	EC1928-2-31	TOP SHEAR BAR	1
5	CM170-2-37	SHEARBAR LOCK	1
6	EC1928-2-29	LOWER SHEAR BAR	1
7	91001P	M10 PLAIN NUT	1
8	91075S	M10 X 75 SET	1
9	MK2 EC130-2-22	STUB AXLE- FLYWHEEL BEARING HOUSING	1
20	301020027	SERVICE COVER PLATE	1
21	CM220-2-31	VERTICAL SHEAR BAR	1
29	301010046	BEARING SPACER PLATE	1
30	301030112	CARRIAGE STOP PLATE	1
49	90803	M8 SPRING WASHER	7
32	90825S	M8 X 25 SET	4
33	90820S	M8 X 20 SET	1
34	90802C	M8 C WASHER	2
43	91202HD30	M12 30MM HD WASHER	4
44	91203	M12 S/WASHER	9
45	91250	M12 X 50	2
46	71250	M12 X 50 CAP	1
47	91240S	M12 X 40 SET	2
48	91240F	M12 X 40 X 1.25	2
49	91235S	M12 X 35 SET	2
50	90802A	M8 A WASHER	2
51	90830S	M8 X 30 SET	2
52	91201P	M12PLAIN NUT	1
53	91260S	M12 X 60 SET	1
55	CM170-2-32	SHEAR BAR CLAMP	1



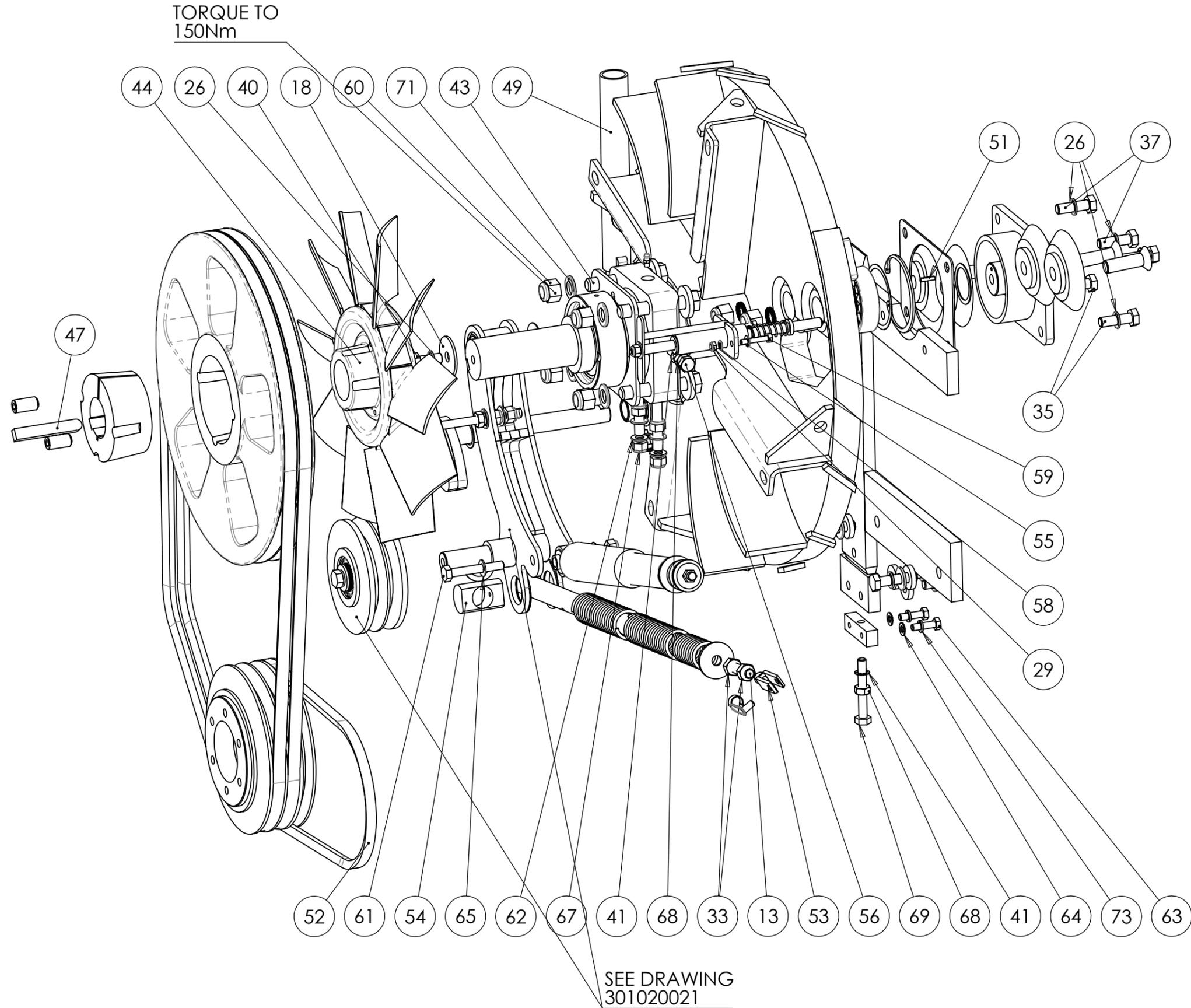
CHIPPER CHAMBER ROLLER BOX
301020101 ARB190 SHEAR BARS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	EC1928-2-31	TOP SHEAR BAR	1
2	CM170-2-32	SHEAR BAR RETAINER	1
3	EC1928-2-29	LOWER SHEAR BAR	1
4	MK2 EC130-2-22	STUB AXLE- FLYWHEEL BEARING HOUSING	1
5	STC1928262	SHPERICAL BEARING	1
6	GNS500	GREASE NIPPLE	1
7	STC-2-61	CLAMP PLATE	1
8	9120245	45 DIA WASHER	1
9	301020113	4 CUTTER FLYWHEEL	1
10	ARB190-9-1005	TAPERLOCK PULLEY SPB 400 x 2	1
11	900980053	TAPER LOCK BUSH 3020x50	1
12	301020062	TENSIONER BAR	1
13	912AT	M12 X 70 ALL THREAD	1
14	CLEVIS PIN	INCLUDED WITH ABOVE	1
15	C170632	DAMPER	1
16	301020021	BELT TENSIONER BRACKET	1
17	301020038	TENSION ARM SHIM	2
18	301020051	CAP WASHER	2
19	301010046	BEARING SPACER PLATE	1
20	102020048	SPACER SHIM	1
21	301060059	ENGINE PULLEY	1
22	CM220-2-31	VERTICAL SHEAR BAR	1
23	EC1928-112	DRIVE BELT SPB1850	2
24	3020113	FLYWHEEL SPRING BOLT LOCK	1
25	301020046	DE TENSION SHAFT	1
26	91203	M12 S/WASHER	10
27	EC1928116	FULL COIL SPRING	2
28	EC1928116-1	HALF COILED SPRING	1
29	90601	M6 NYLOC	2
30	91202HD30	M12 30MM HD WASHER	4
31	91250	M12 X 50	2
32	900910021	OILITE BUSH	2
33	91201P	M12PLAIN NUT	2
34	CM170-2-37	SHEARBAR LOCK	1
35	91240F	M12 X 40 X 1.25	2
36	EC1928-2-70	TENSIONER SRING SEAT	1
37	91240S	M12 X 40 SET	2
38	90603	M6 SPRING WASHER	1
39	70620	M6 X 20 CAP	1



301020113 FLYWHEEL DRIVE DETAIL
ARB190

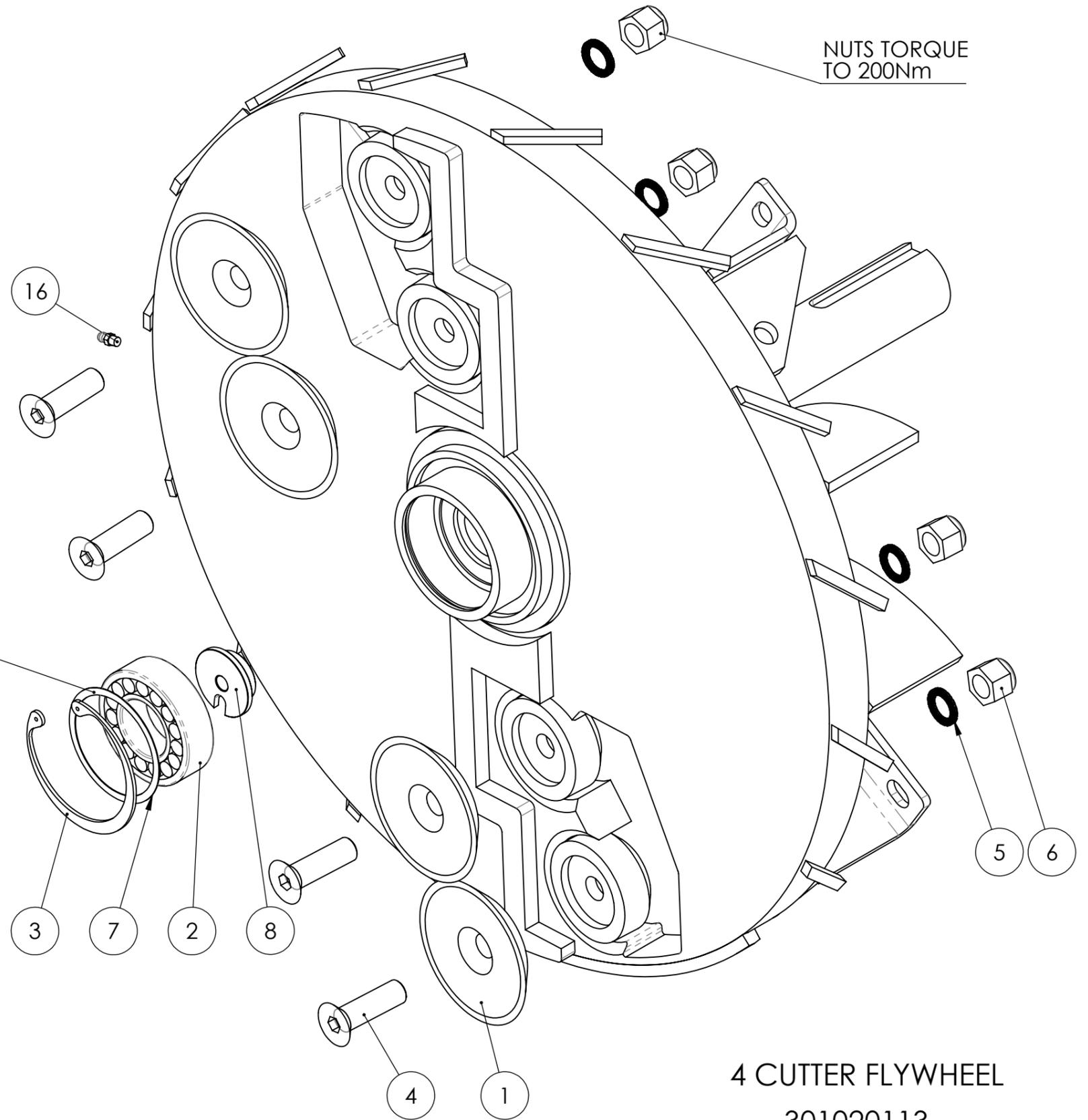
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
40	91230S	M12 X 30 SET	1
41	91004	M10 INTERNAL SHAKE PROOF WASHER	3
42	91260S	M12 X 60 SET	2
43	916100	M16 x 100	4
44	STC1928911	400mm DIA FAN	1
45	91204	M12 INTERNAL SHAKE PROOF WASHER	1
46	91606HD	16mm HD WASHER	4
47	KS141080	KEY 14 X 10 X 80	1
48	4004667	TAPERLOCK GRUBSCREW	2
49	301020054	DE TENSION HANDLE	1
50	301020053	PULLEY SHIM	1
51	CP418	COILED PIN 4 X 18	1
52	900980055	PUMP BELT SPA 1030	1
53	STC1928104	LONG CLEVIS	1
54	EC1928-2-69	TENSIONER EYE	1
55	90602C	M6 C WASHER	2
56	91040	M10 X 40 BOLT	2
57	91025S	M10 X 25 SET	1
58	90602B	M6 B WASHER	2
59	90635S	M6 X 35 SET	2
60	91601	M16 NYLOC NUT	4
61	91070	M10 X 70	1
62	91002A	M10 A WASHER	4
63	90830S	M8 X 30 SET	2
64	90802A	M8 A WASHER	2
65	91002B	M10 B WASHER	2
66	91202C	M12 C WASHER	2
67	91001	M10 NYLOC NUT	6
68	91001P	M10 PLAIN NUT	3
69	91075S	M10 X 75 SET	1
70	91235S	M12 X 35 SET	2
71	91602A	M16 A WASHER	4
72	91201P	M12PLAIN NUT	1
73	90803	M8 SPRING WASHER	2
74	91002C	M10 C WASHER	1



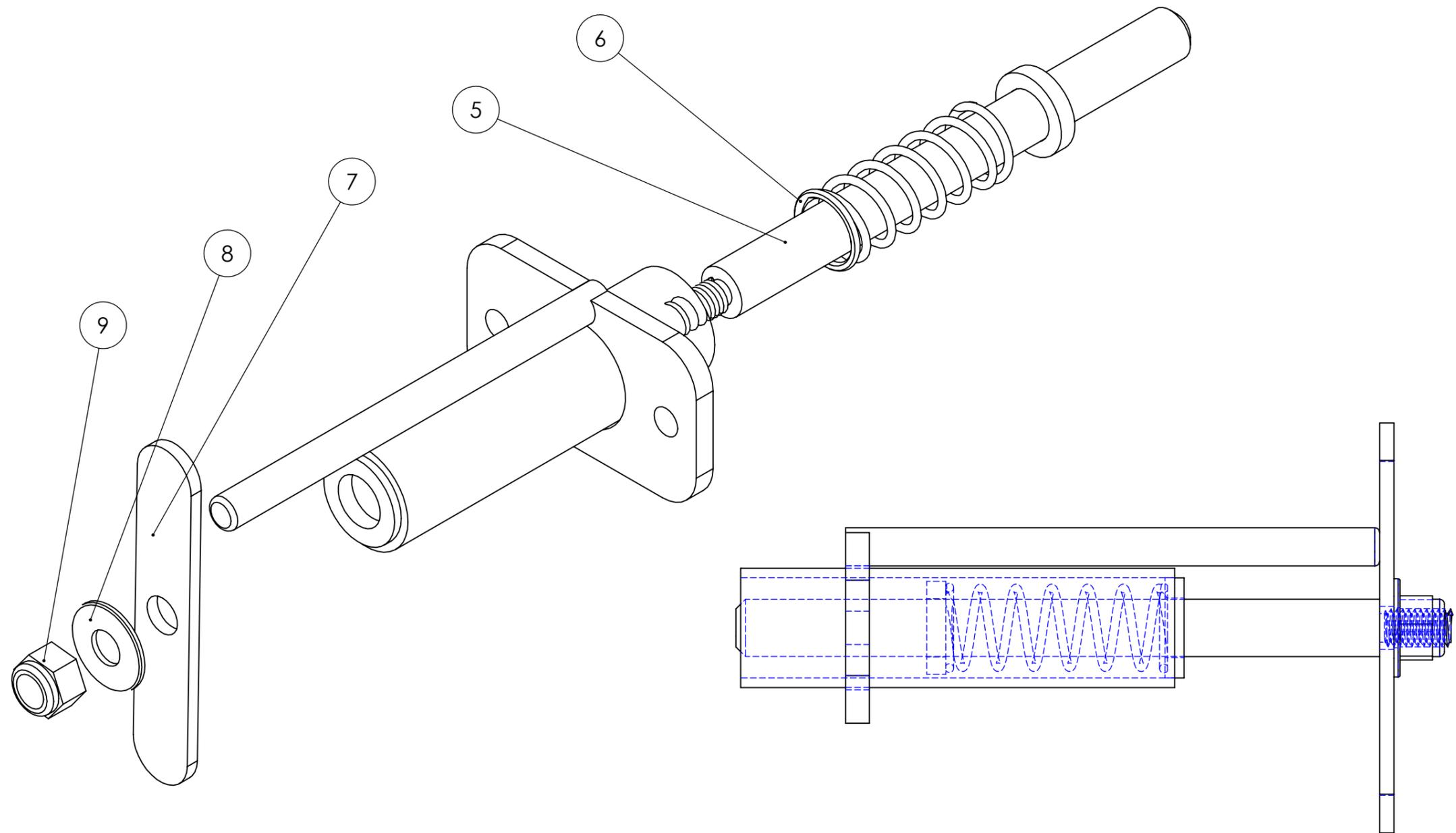
301020113 FLYWHEEL DRIVE DETAIL
ARB190

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	C202503	ROUND CUTTER	4
2	EC1523200	40 ID SPHERICAL BEARING	1
3	C252120	INTERNAL CIRCLIP 90 x 2.5	1
4	81655	M16 X 55 CSK	4
5	4001951	NORDLOCK WASHER	4
6	91601	M16 NYLOC NUT	4
7	SH8070.5	SHIM 80 OD X 70 ID X .5	1
8	4001904	BEARING LOCK NUT	1
16	GN500	M6 GREASE NIPPLE	1

SHIM NOT ALWAYS
REQUIRED



4 CUTTER FLYWHEEL
301020113
ARB190 & 200

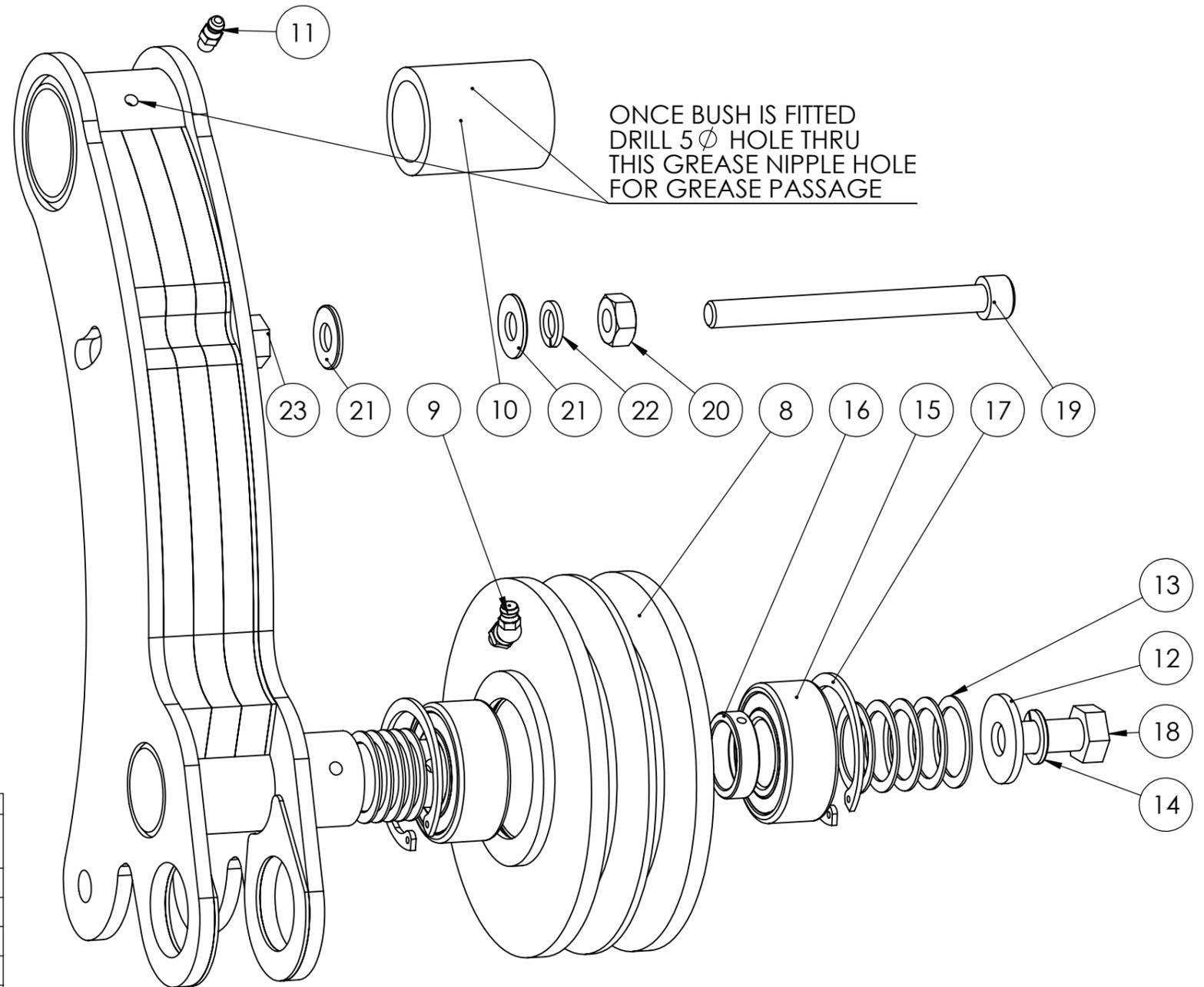


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
5	QC160-2-154	LOCKING PIN	1
6	900930405	PLUNGER SPRING	1
7	301020037	PLUNGER HANDLE	1
8	90802C	M8 C WASHER	1
9	90801	M8 NYLOC NUT	1

FLYWHEEL SPRING BOLT LOCK

301020065

QUANTITY OF (ITEM 13) TENSION PULLEY SHIM
MAY DIFFER FROM DRAWING

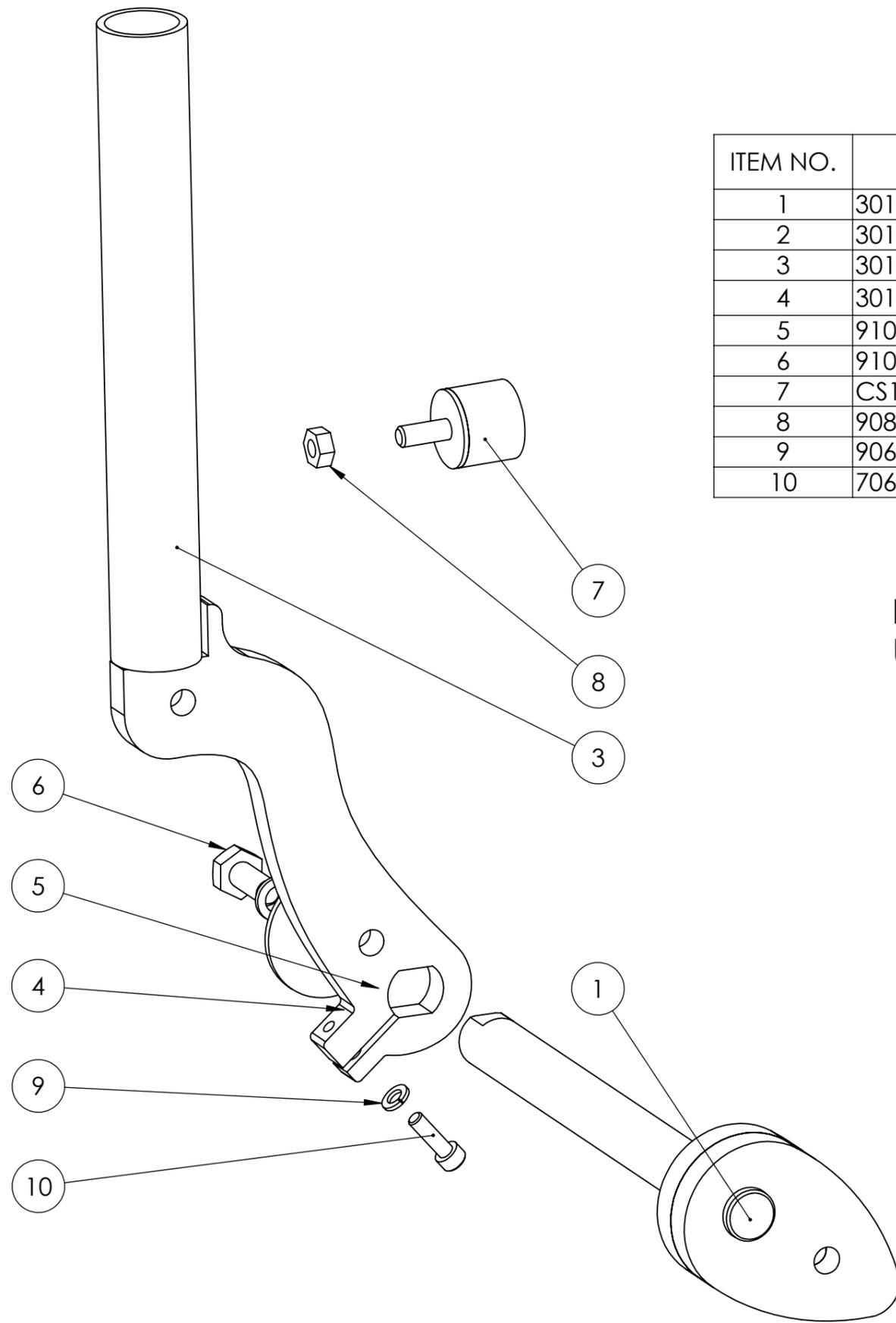


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
6	301020130	PULLEY FULL KIT ITEMS (8/15/16/17)	1
8	301060060	IDLER PULLEY	1
9	GNS135	M6-135 GREASE NIPPLE	1
10	900910126	OILITE BUSH	1
11	GNS500	GREASE NIPPLE	1
12	301020052	PULLEY CAP WASHER	1
13	301020053	PULLEY SHIM	10
14	91203	M12 S/WASHER	1
15	900910180	3205ZZ BEARING	2
16	QC160-6-94	BEARING SPACER	1
17	900890125	INTERNAL CIRCLIP	2
18	91230S	M12 X 30 SET	1
19	710110	M10 X 110 CAP	1
20	91001P	M10 PLAIN NUT	1
21	91002C	M10 C WASHER	2
22	91003	M10 SPRING WASHER	1
23	91001	M10 NYLOC NUT	1

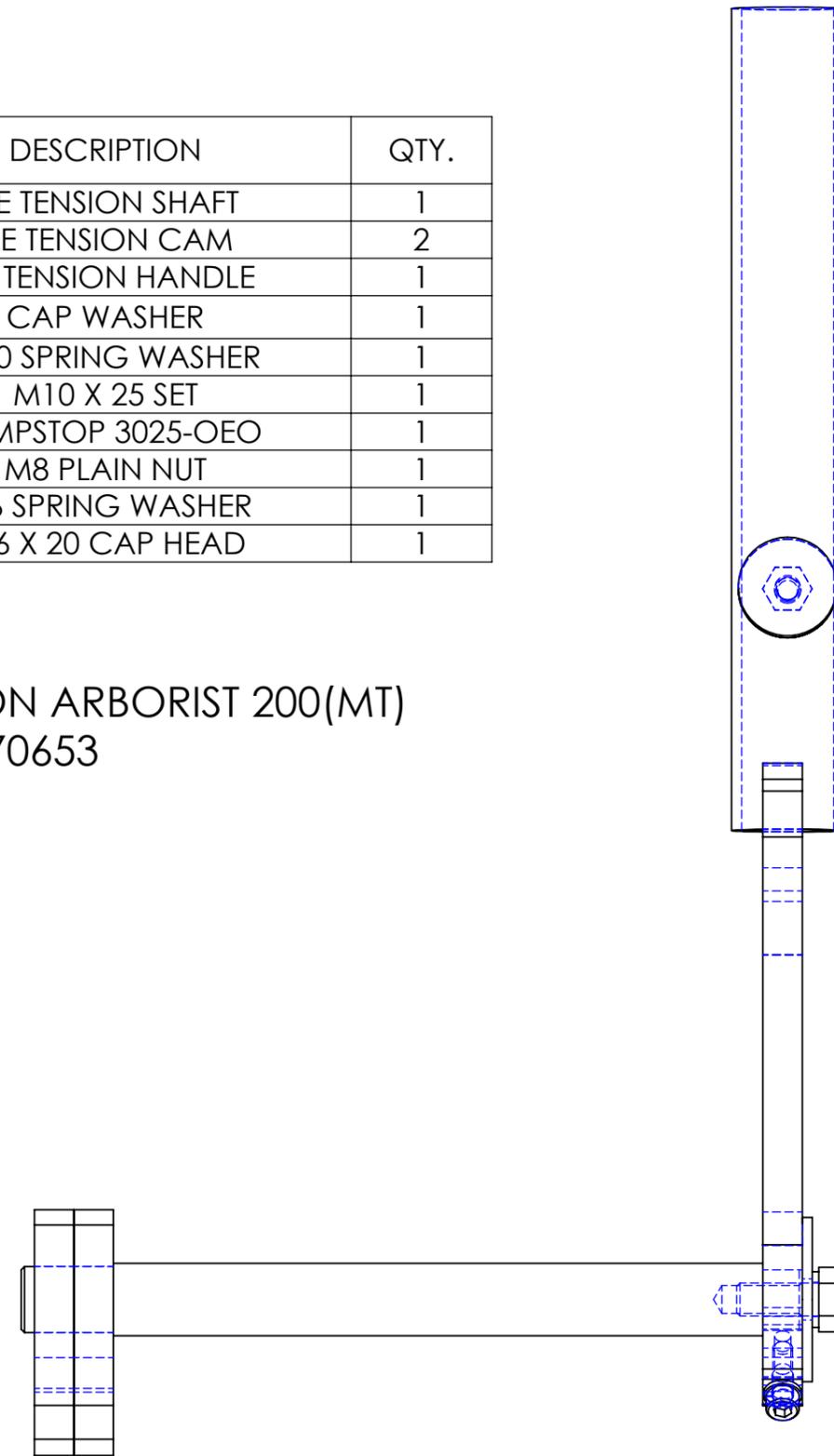
BELT TENSIONER BRACKET

301020021

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	301020046	DE TENSION SHAFT	1
2	301020044	DE TENSION CAM	2
3	301020054	DE TENSION HANDLE	1
4	301020051	CAP WASHER	1
5	91003	M10 SPRING WASHER	1
6	91025	M10 X 25 SET	1
7	CS100-6-14	BUMPSTOP 3025-OEO	1
8	90801P	M8 PLAIN NUT	1
9	90603	M6 SPRING WASHER	1
10	70620	M6 X 20 CAP HEAD	1

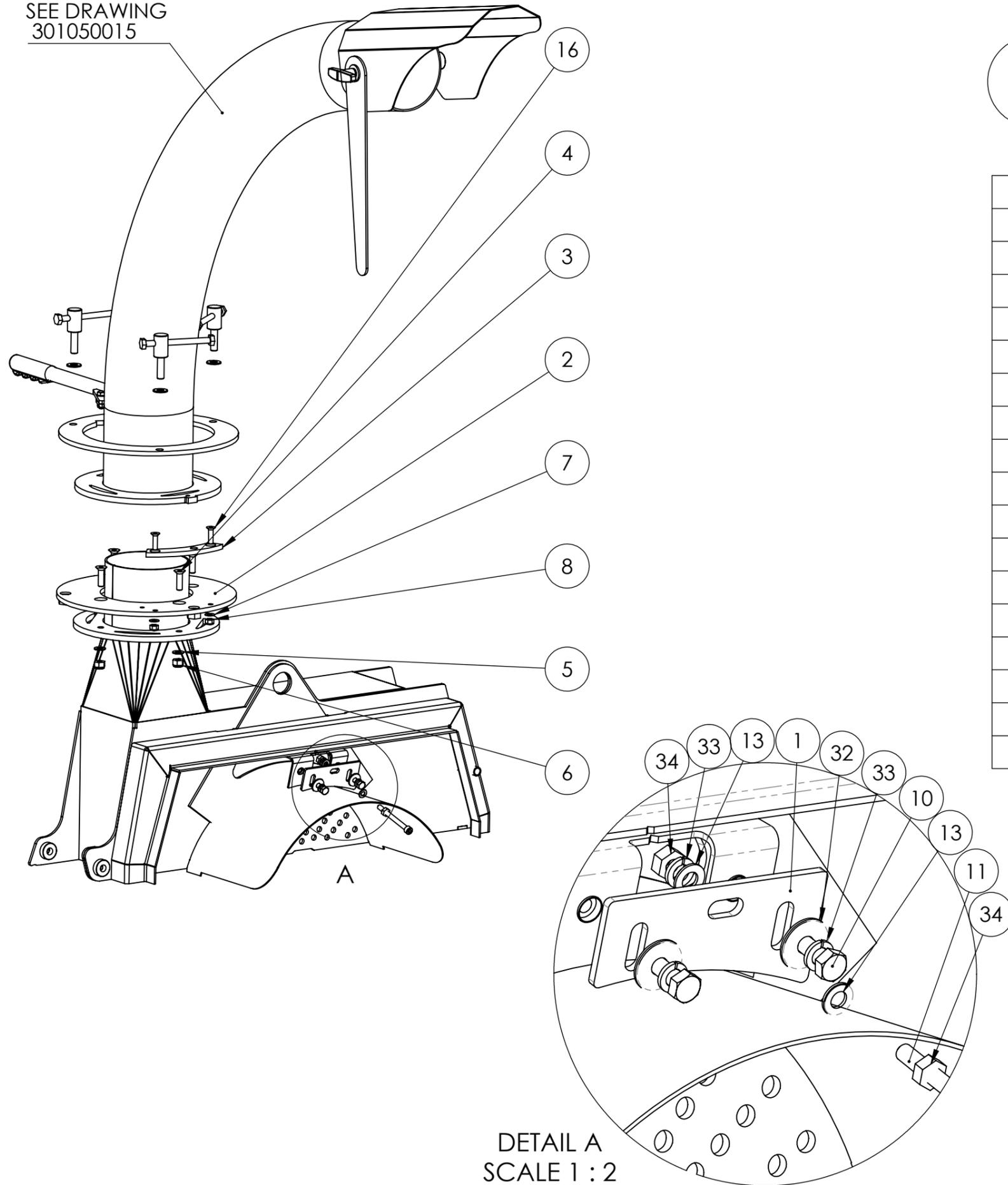


ITEM 1 ONLY USED ON ARBORIST 200(MT)
UP TO SERIAL NO: 170653



DE TENSION SHAFT
301020046
ARB190 & 200

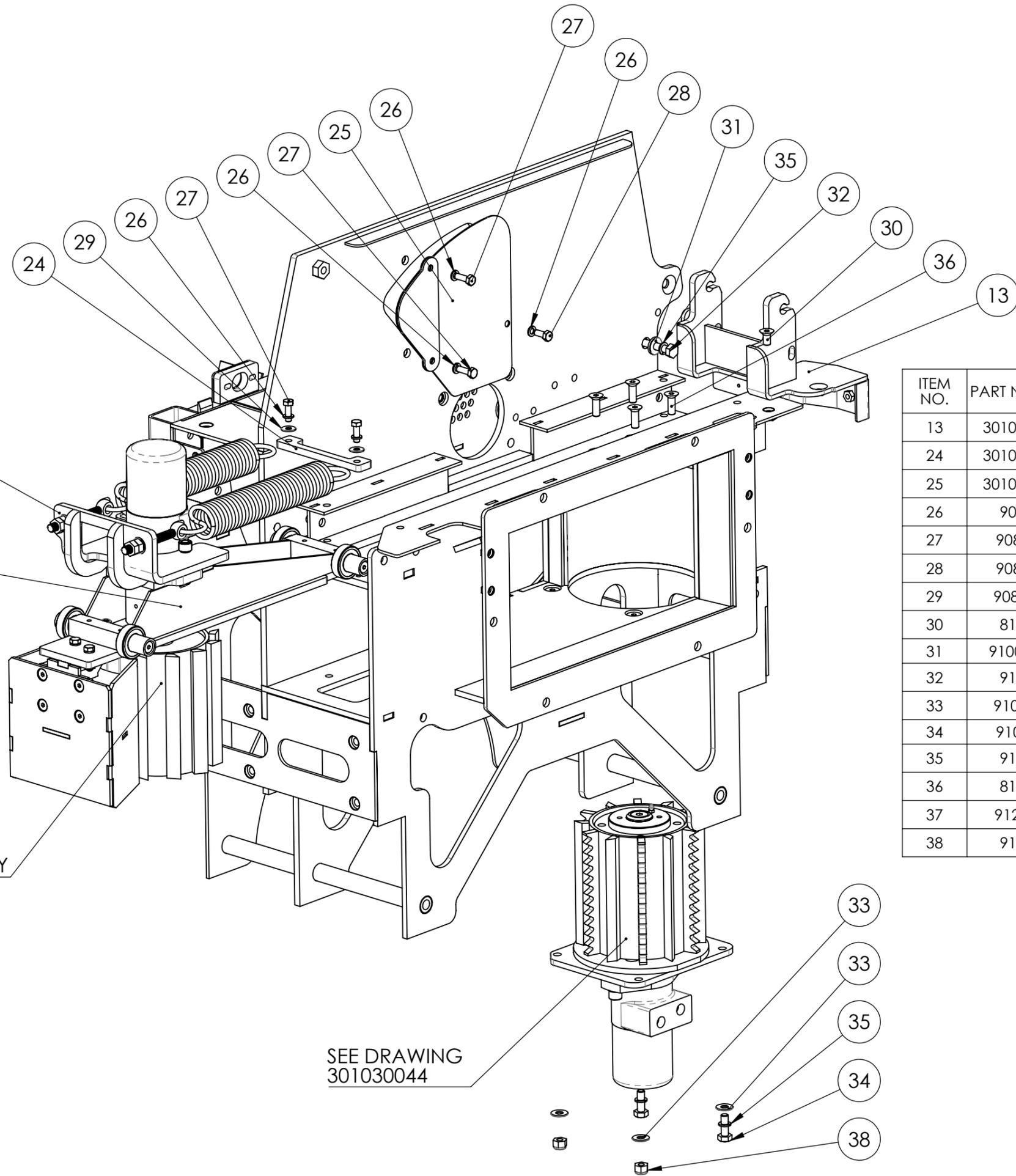
SEE DRAWING
301050015



ROUND DISCHARGE
REPLACED SQUARE DISCHARGE
AS OF 10/2015

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	301020059	BONNET CATCH PLATE	1
2	MK2 ST1928-2-88	LOCATION RING	1
3	CM170-5-14	QUADRANT	1
4	81035	C/SUNK HD BOLT	4
5	91002A	M10 A WASHER	4
6	91001	M10 NYLOC NUT	4
7	90802B	M8 B WASHER	2
8	90801	M8 NYLOC NUT	2
10	90825S	M8 X 25 SET	2
11	70890	M8 X 90 CAP	1
13	90802A	M8 A WASHER	2
14	EC1928-2-25	SQUARE TO ROUND	1
15	301050015	TUBULAR DISCHARGE CHUTE	1
16	80830	M8 X 30 CSK	2
32	90802R25	M8 25MM REPAIR WASHER	2
33	90803	M8 SPRING WASHER	3
34	90801P	M8 PLAIN NUT	2

301020095
UPPER CHIPPER CHAMBER/ DISCHARGE
ARB190



SEE DRAWING
301030134

SEE DRAWING
301030103

SEE DRAWING
301030043 ASSEMBLY

SEE DRAWING
301030044

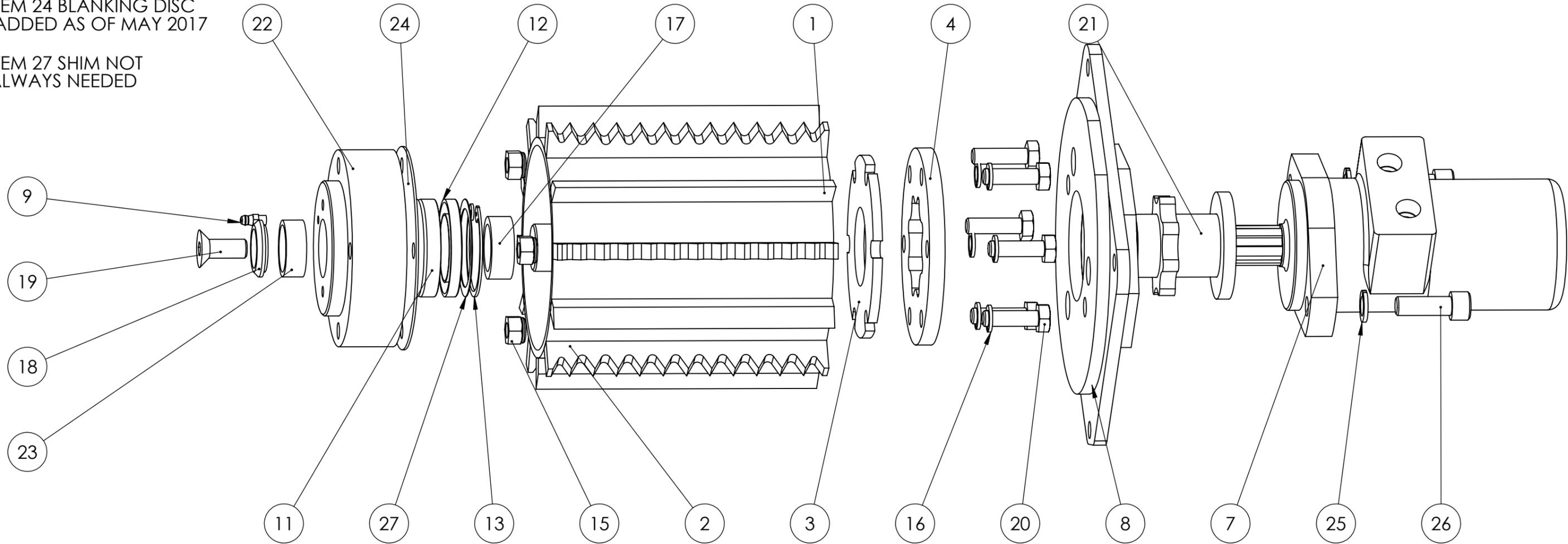
ITEM NO.	PART NUMBER	REFERENCE NUMBER	DESCRIPTION	QTY.
13	301030138		SPRING ANCHOR	1
24	301030112		CARRIAGE STOP PLATE	1
25	301020027		SERVICE COVER PLATE	1
26	90803	FASTENERS	M8 SPRING WASHER	5
27	90825S	FASTENERS	M8 X 25 SET	4
28	90820S	FASTENERS	M8 X 20 SET	1
29	90802C	FASTENERS	M8 C WASHER	2
30	81020	FASTENERS	M10 X 20 CSK	1
31	91002HD	FASTENERS	M10 HD WASHER	1
32	91070	FASTENERS	M10 X 70	1
33	91002C	FASTENERS	M10 C WASHER	4
34	91030S	FASTENERS	M10 X 30 SET	2
35	91003	FASTENERS	M10 SPRING WASHER	3
36	81030	FASTENERS	M10 X 30 CSK	4
37	91201H	FASTENERS	M12 HANKBUSH	14
38	91001	FASTENERS	M10 NYLOC NUT	2

CHIPPER CHAMBER ROLER BOX

301020101
ARB190 ROLLERS

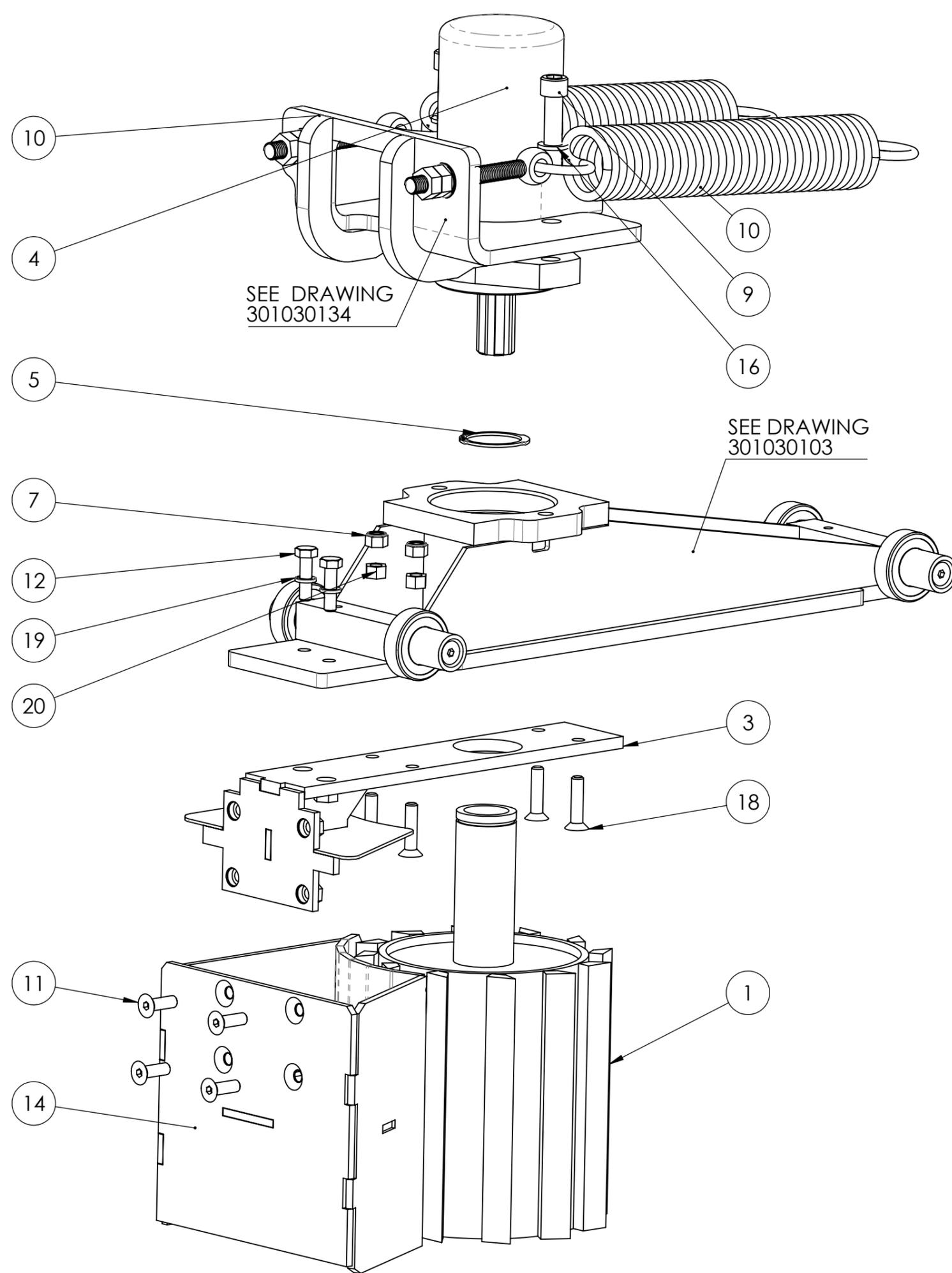
ITEM 24 BLANKING DISC
ADDED AS OF MAY 2017

ITEM 27 SHIM NOT
ALWAYS NEEDED



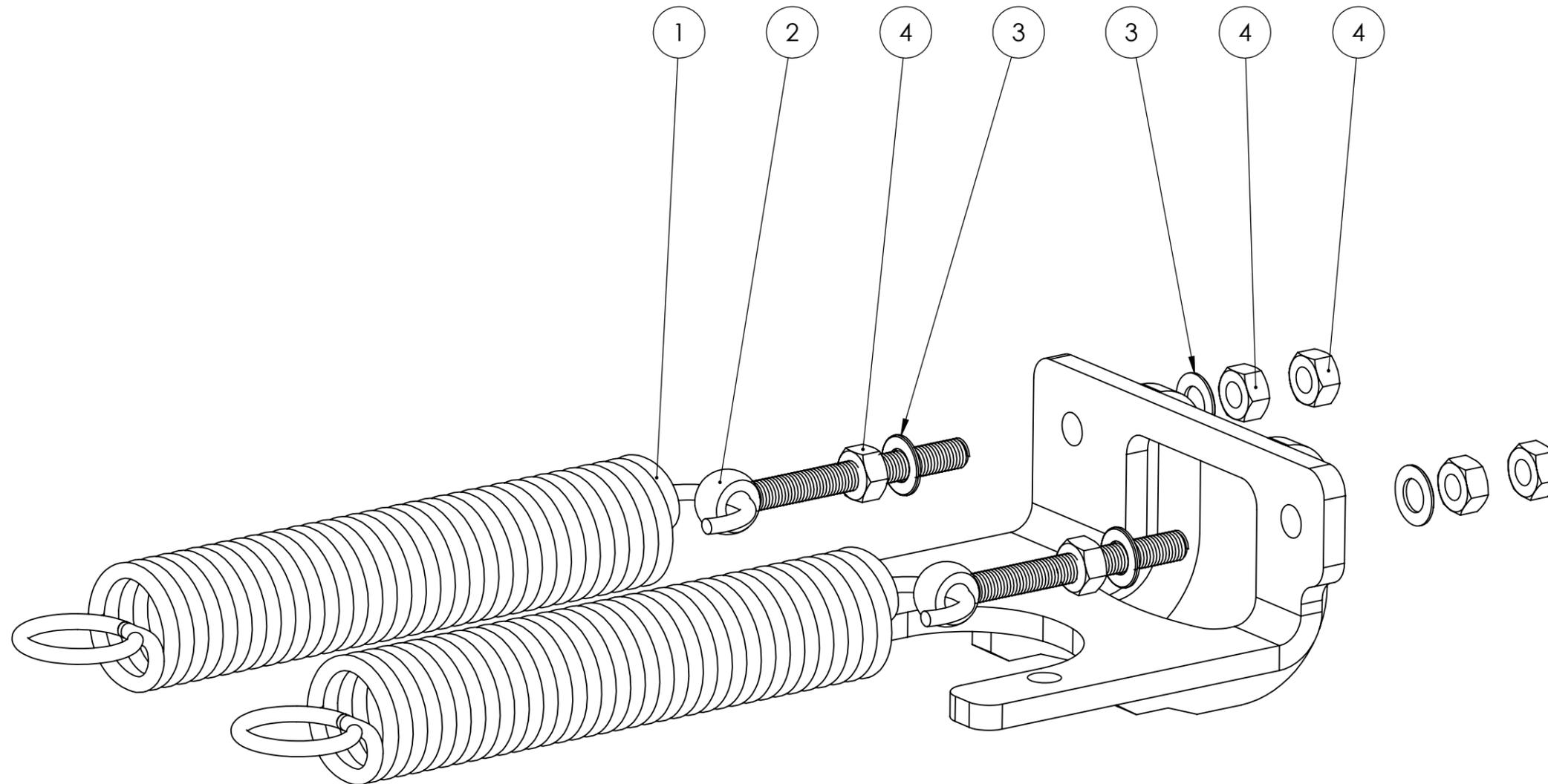
ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	301030057	STRAIGHT BLADE	6
2	301030074	TOOTHED BLADE	6
3	301030047	ROLLER DISC SPACER	1
4	301030049	DRIVE COUPLER DISC	1
7	C200207-1	HYDRAULIC MOTOR	1
8	301030121	MOTOR MOUNT PLATE	1
9	900890124	M6 GREASE NIPPLE	1
11	900910183	DOUBLE ROW SPHERICAL ROLLER BEARING	1
12	900910125	ROTARY OIL SEAL	1
13	900890122	CIRCLIP	1
15	91001	M10 NYLOC NUT	4
16	91003	M10 SPRING WASHER	6
17	STC1928-3-82	CHAMFERED SLEEVE	1
18	STC1928-3-22	BOTTOM CSK STEPPED WASHER	1
19	81230	CLAMPING BOLT	1
20	91035	M10 X 35 HEX BOLT	6
21	QC160-3-57F	DRIVE SPLINE	1
22	MK2 ST1928-3-80	BEARING HOUSING	1
23	ST1928-3-83	PLAIN SLEEVE	1
24	4003801	FIXED ROLLER BLANKING DISC	1
25	91203	M12 SPRING WASHER	2
26	71235	M12 X 35 CAP	2
27	SH62500.5	62X50X0.5 SHIM	1

FIXED ROLLER
301030044
ARB 190



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	301030043	SLIDE ROLLER	1
3	301030031	GUIDE MOUNTING PLATE	1
4	C200207-1	HYDRAULIC MOTOR	1
5	900890041	40 EXT CIRCLIP	1
7	90801	M8 NYLOC NUT	4
9	71250	M12 X 50 CAP	2
10	900930052	RETURN SPRING	2
11	80825	M8 x 25mm C/SUNK	4
12	90830	M8 x 30 BOLT	2
14	301030113	SLIDE COVER PLATE	1
16	91203	M12 SPRING WASHER	2
17	60510	M5 X 10 BUTTON	1
18	80835	M8 X 35 CSK	4
19	90803	M8 SPRING WASHER	2
20	90801P	M8 PLAIN NUT	4

SLIDE ROLLER
 301030043
 ARB190



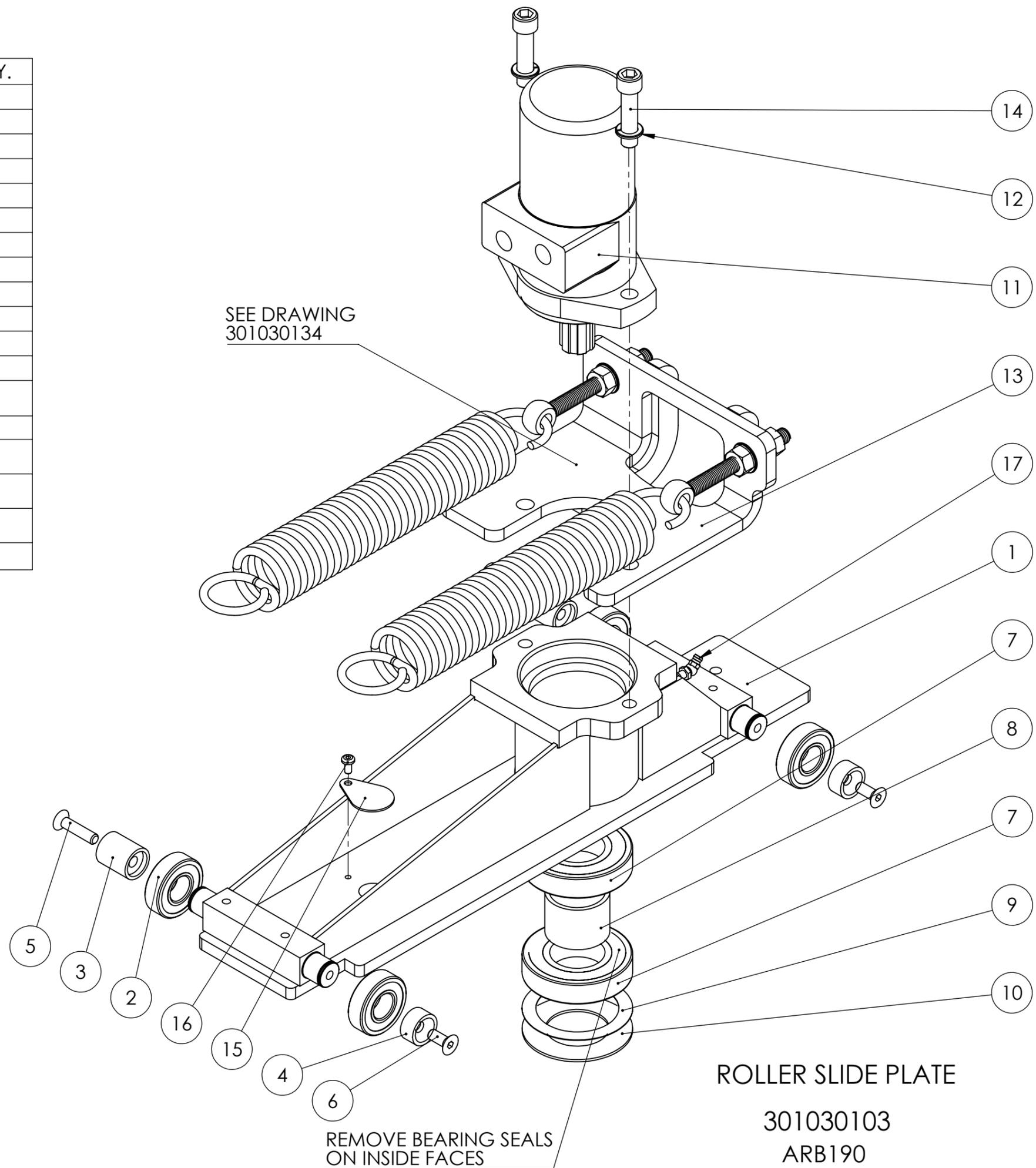
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	900930052	50 OD SLIDE ROLLER RETURN SPRING	2
2	900930404	SPRING EYE BOLT	2
3	91202B	M12 B WASHER	4
4	91201P	M12PLAIN NUT	6

DOUBLE SPRING ANCHOR PLATE

301030134

ARB190 & 200

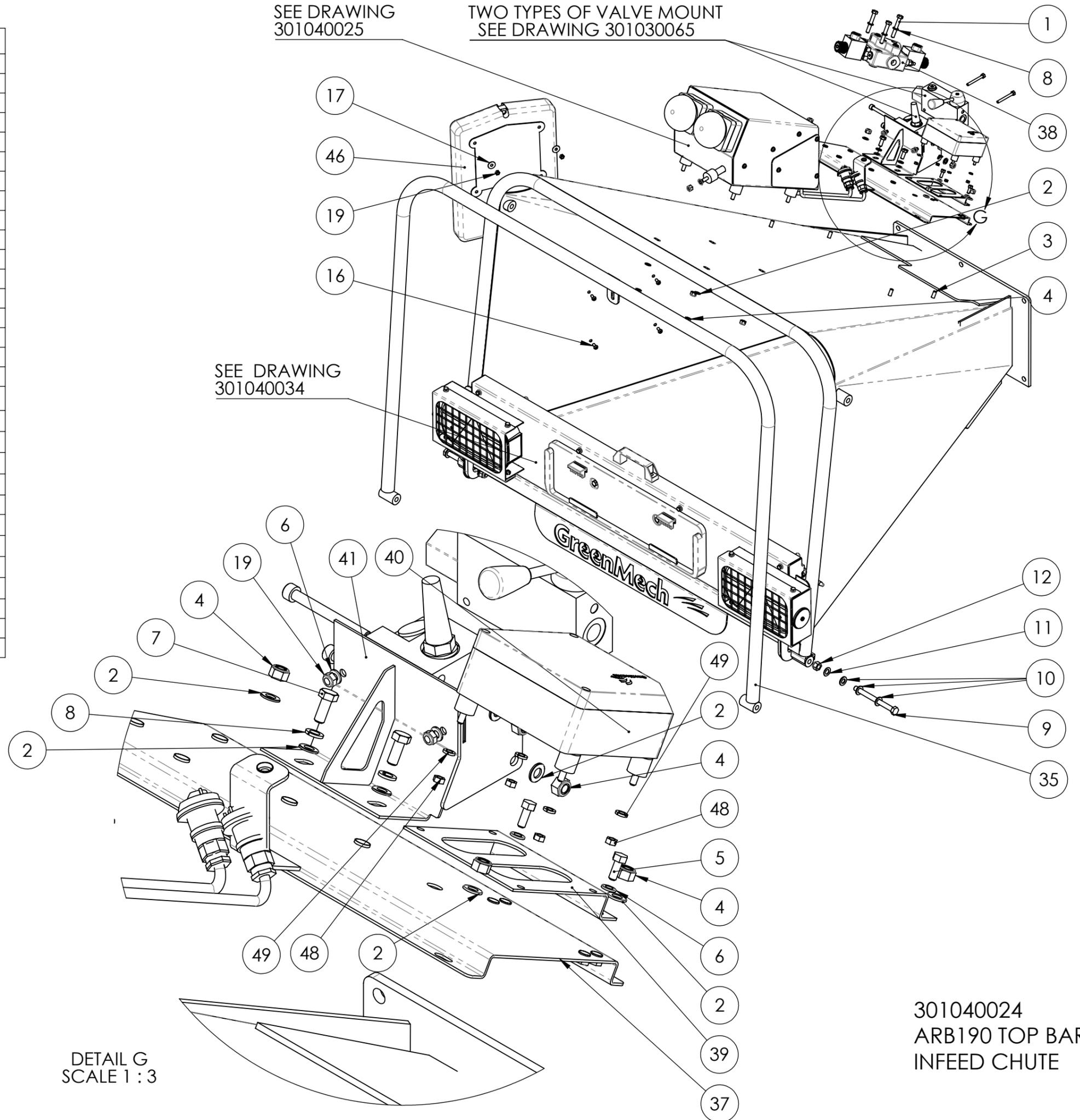
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	301030103	ROLLER SLIDE PLATE	1
2	QC160-3-1002	BEARING	4
3	301030133	NYLON ROLLER SPACER	2
4	QC160-3-43	NYLON ROLLER	2
5	80835	M8 X 35 CSK	2
6	80820	M8 X 20 CSK	2
7	C252119	ROLLER BEARING	2
8	301030062	SPACER	1
9	EC130-3-36	SHIM	1
10	EC130-3-35	END PLATE	1
11	C200207-1	HYDRAULIC MOTOR	1
12	91203	M12 S/WASHER	2
13	301030134	DOUBLE SPRING ANCHOR PLATE	1
14	71250	M12 X 50 CAP	2
15	301030076	GREASE POINT COVER	1
16	60510	M5 X 10 BUTTON	1
17	GNS135	M6-135 GREASE NIPPLE	1
18	301030164	MOTOR PLATE	1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	90855	M8 X 55	3
2	90802A	M8 A WASHER	13
3	60820	M8 X 20 BUTTON	4
4	90801	M8 NYLOC NUT	13
5	90616S	M6 X 16 SET	10
6	90602A	M6 A WASHER	4
7	90820S	M8 X 20 SET	2
8	90803	M8 SPRING WASHER	7
9	912140	M12 X 140	2
10	91202N25	M12 25MM NYLON WASHER	6
11	91202B	M12 B WASHER	2
12	91201	M12 NYLOC NUT	2
16	60615	M6x25 BUTTON	4
17	90602R20	M6 20mm OD WASHER	4
19	90601	M6 NYLOC	10
20	90825S	M8 X 25 SET	2
22	90802B	M8 B WASHER	2
35	301040027	INFEED SAFETY BAR	1
36	301040025	CONTROL BOX TOP BAR	1
37	301030064	VALVE MOUNT BRACKET	1
38	900990407	HYD VALVE SD5-1 12V	1
39	QC160-6-51	J BOX BKT	1
40	900950357	JUNCTION BOX	1
41	301030065	REDUCTION VALVE MOUNT	1
43	900990011	REDUCTION VALVE	1
44	900990316	FLOW CONTROL(FC60 K L)	1
45	30104007	INFEED BASE LOGO	1
46	C170409	DOCUMENT CASE	1
48	90501PT	M5 THIN PLAIN NUT	4
49	90503	M5 S/WASHER	4

SEE DRAWING
301040025

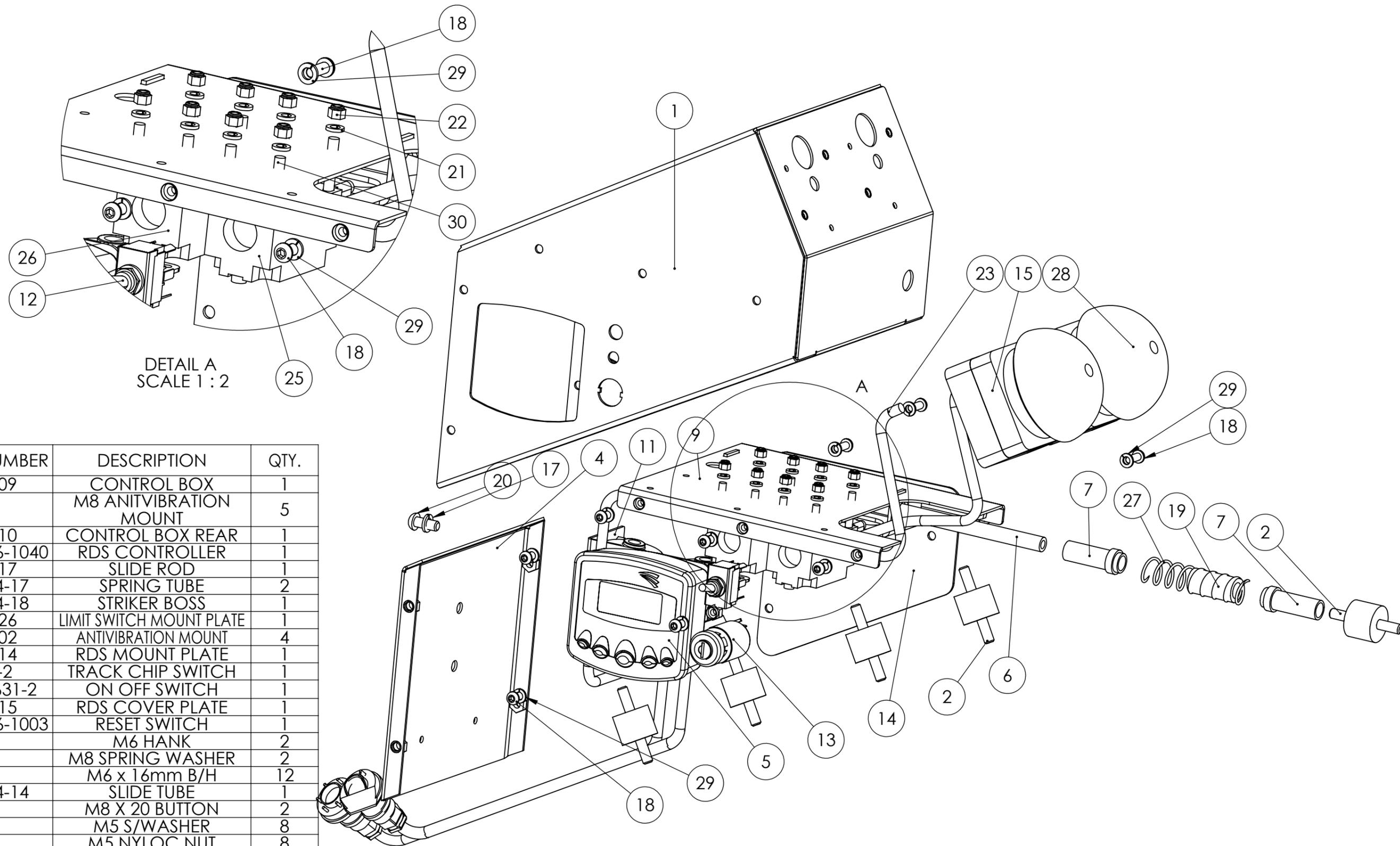
TWO TYPES OF VALVE MOUNT
SEE DRAWING 301030065



SEE DRAWING
301040034

DETAIL G
SCALE 1 : 3

301040024
ARB190 TOP BAR
INFEED CHUTE



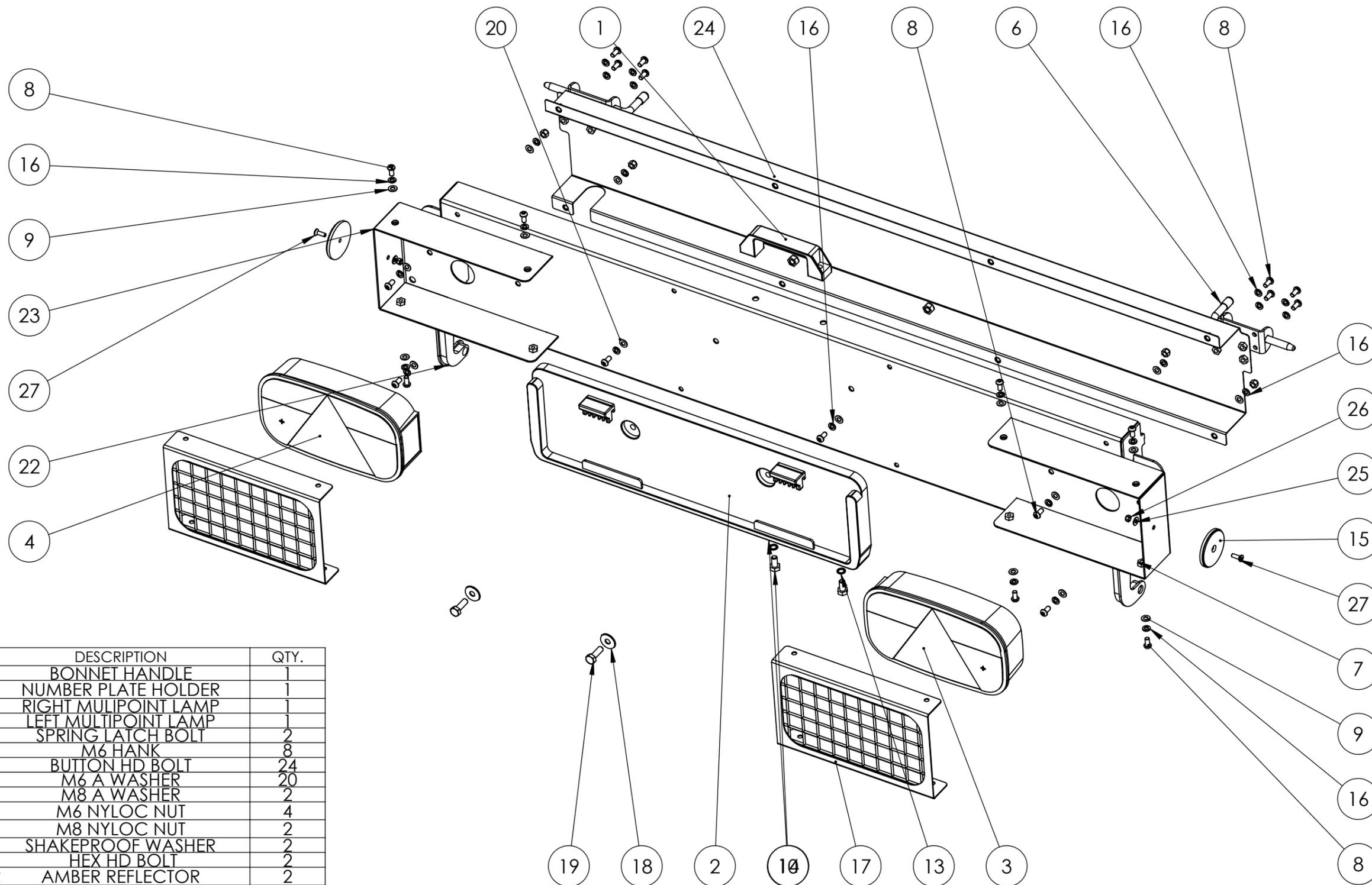
DETAIL A
SCALE 1 : 2

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	301040009	CONTROL BOX	1
2	SI20014	M8 ANIVIBRATION MOUNT	5
4	301040010	CONTROL BOX REAR	1
5	QC160-6-1040	RDS CONTROLLER	1
6	301040017	SLIDE ROD	1
7	QC160-4-17	SPRING TUBE	2
8	QC160-4-18	STRIKER BOSS	1
9	301040026	LIMIT SWITCH MOUNT PLATE	1
10	900930302	ANTIVIBRATION MOUNT	4
11	301040014	RDS MOUNT PLATE	1
12	S460714-2	TRACK CHIP SWITCH	1
13	EC1523631-2	ON OFF SWITCH	1
14	301040015	RDS COVER PLATE	1
15	QC160-6-1003	RESET SWITCH	1
16	90601H	M6 HANK	2
17	90803	M8 SPRING WASHER	2
18	60616	M6 x 16mm B/H	12
19	QC160-4-14	SLIDE TUBE	1
20	60820	M8 X 20 BUTTON	2
21	90503	M5 S/WASHER	8
22	90501	M5 NYLOC NUT	8
23	301060056	SWITCH HARNESS	1
25	C203111	REVERSE LIMIT SWITCH	1
26	C203111-1	STOP LIMIT SWITCH	1
27	900930301	SPRING D12770	1
28	STC1928954	THROTTLE SWITCH	1
29	90603	M6 SPRING WASHER	12
30	90540CH	M5 X 50 CAP	8

CONTROL BOX TOP BAR

301040025

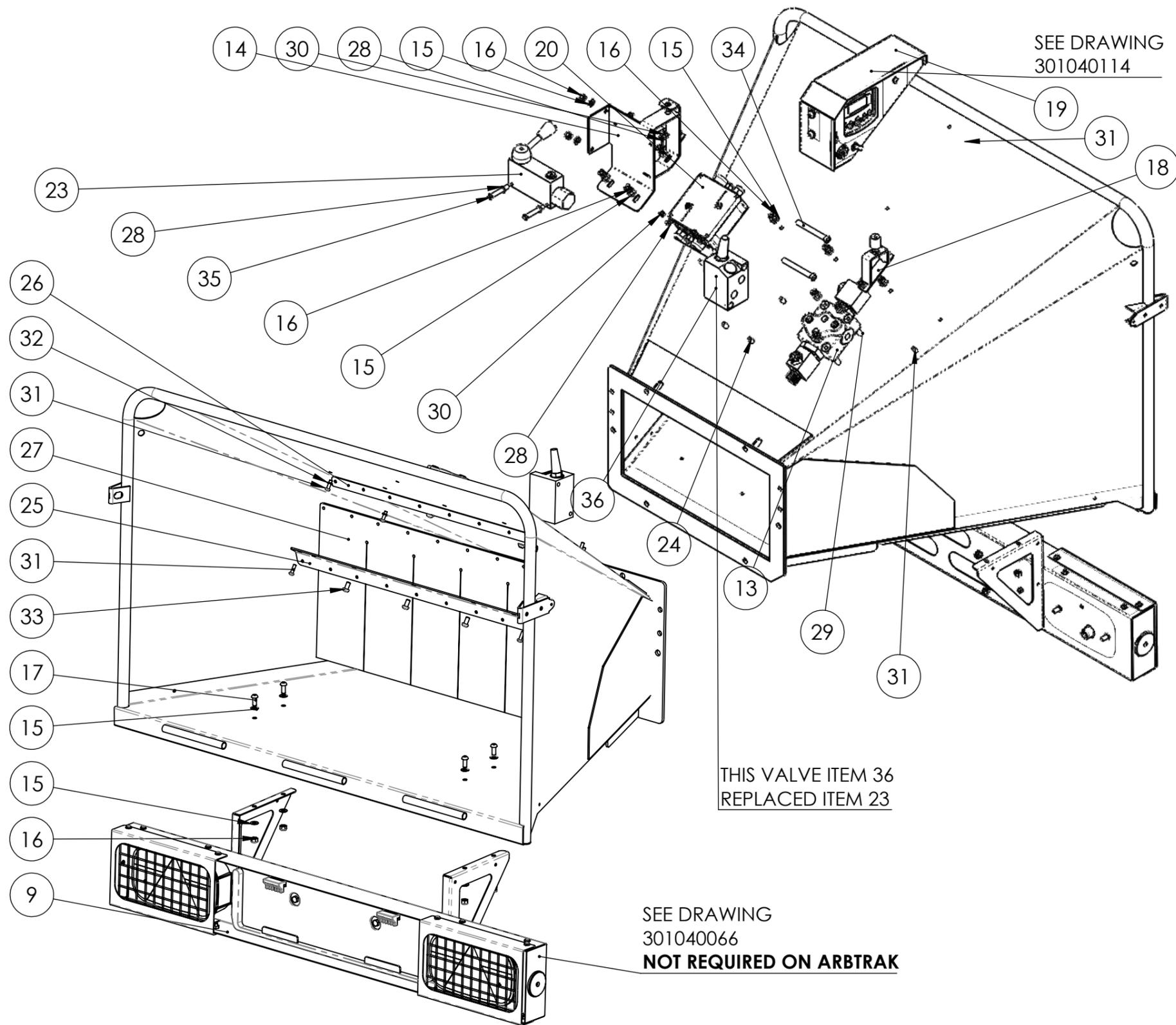
ARB190



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	EC150012	BONNET HANDLE	1
2	EC1928-464	NUMBER PLATE HOLDER	1
3	GM-1001-TLA	RIGHT MULTIPOINT LAMP	1
4	GM-1002-TLA	LEFT MULTIPOINT LAMP	1
6	900900304	SPRING LATCH BOLT	2
7	90601H	M6 HANK	8
8	60612	BUTTON HD BOLT	24
9	90602	M6 A WASHER	20
10	90802	M8 A WASHER	2
11	90601	M6 NYLOC NUT	4
12	90801	M8 NYLOC NUT	2
13	90804	SHAKEPROOF WASHER	2
14	90816	HEX HD BOLT	2
15	GM-1001-RYR	AMBER REFLECTOR	2
16	90603	M6 SPRING WASHER	28
17	301040033	LIGHT GUARD	2
18	90802R25	M8 25MM REPAIR WASHER	2
19	90825S	M8 X 25 SET	2
20	301040018	REAR FLAP	1
22	301040020	GUSSET	2
24	301040032	CABLE COVER	1
25	90502C	M5 C WASHER	2
26	90501	M5 NYLOC NUT	2
27	80516	M5 X 16 CSK	2

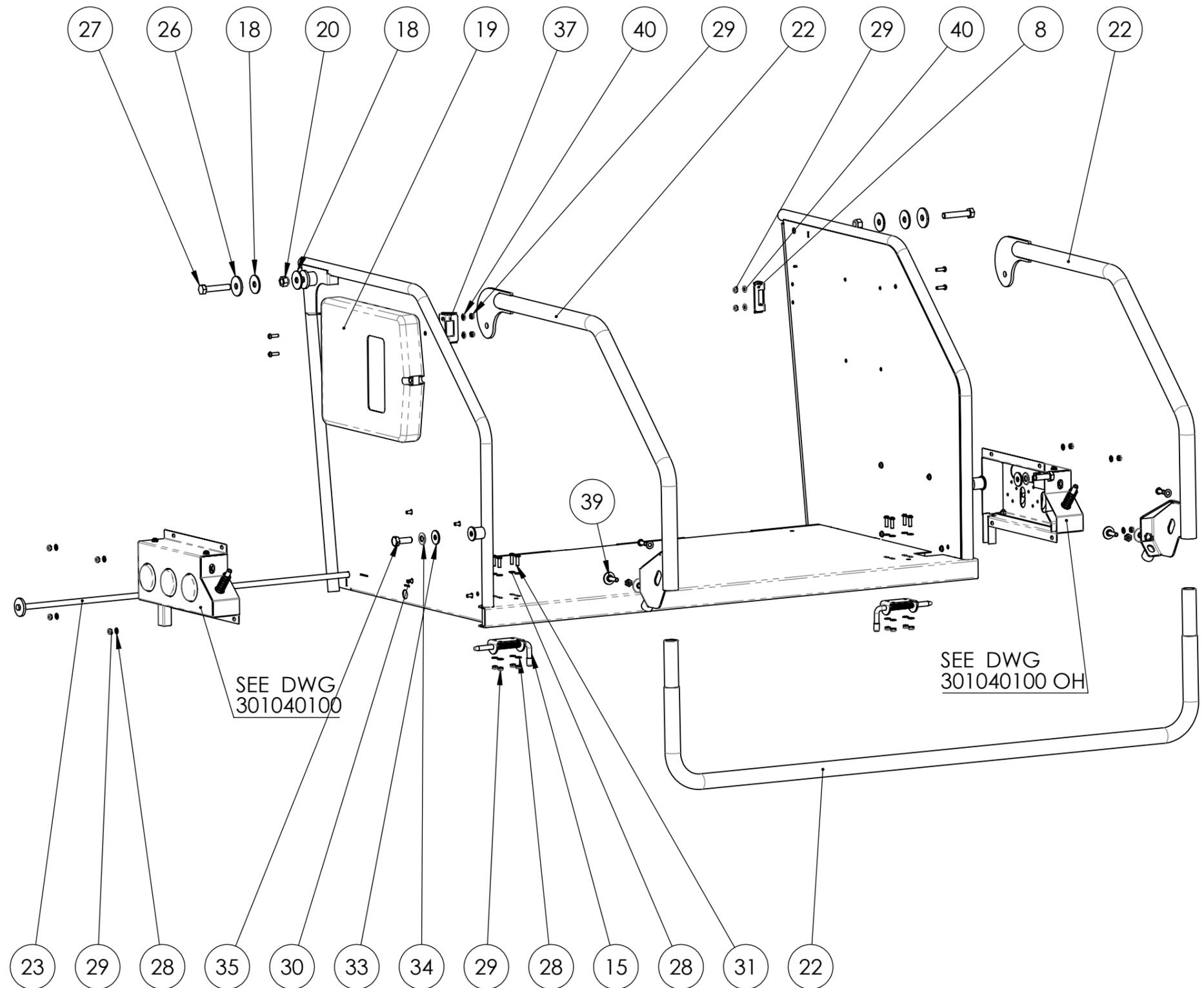
REAR FLAP
301040034
ARORIST 190 TOP BAR

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
9	301040066	LIGHT BOARD	1
13	QC160-6-9017	HYD VALVE SD5-1 12V	1
14	301040107	VALVE & COVER MOUNT	1
15	90802	M8 A WASHER	25
16	90801	M8 NYLON NUT	15
17	60820	BUTTON HD BOLT	4
18	301040112	REAR COVER CORNER STAND	2
19	301040114	RDS SURROUND BOX	1
20	QC160-6-1028	RDS JUNCTION BOX	1
23	900990011	REDUCTION VAVE	1
24	60820	BUTTON HD BOLT	3
25	315040048	CURTAIN STRIP	1
26	315040049	CURTAIN CLAMP	1
27	315040050	PVC SCREEN	1
28	90602C	M6 C WASHER	19
29	60860	M8 X 60 BUTTON	3
30	90601	M6 NYLOC NUT	17
31	60620	M6 X 20 BUTTON	8
32	90603	M6 SPRING WASHER	2
33	60816	M8 X 16 BUTTON	3
34	70890	M8 X 90 CAP	2
35	70655	M6 X 55 CAP	2
36	900990316	FLOW CONTROL (FC60 K L)	1
37	301040051	INFEED FLAP	-

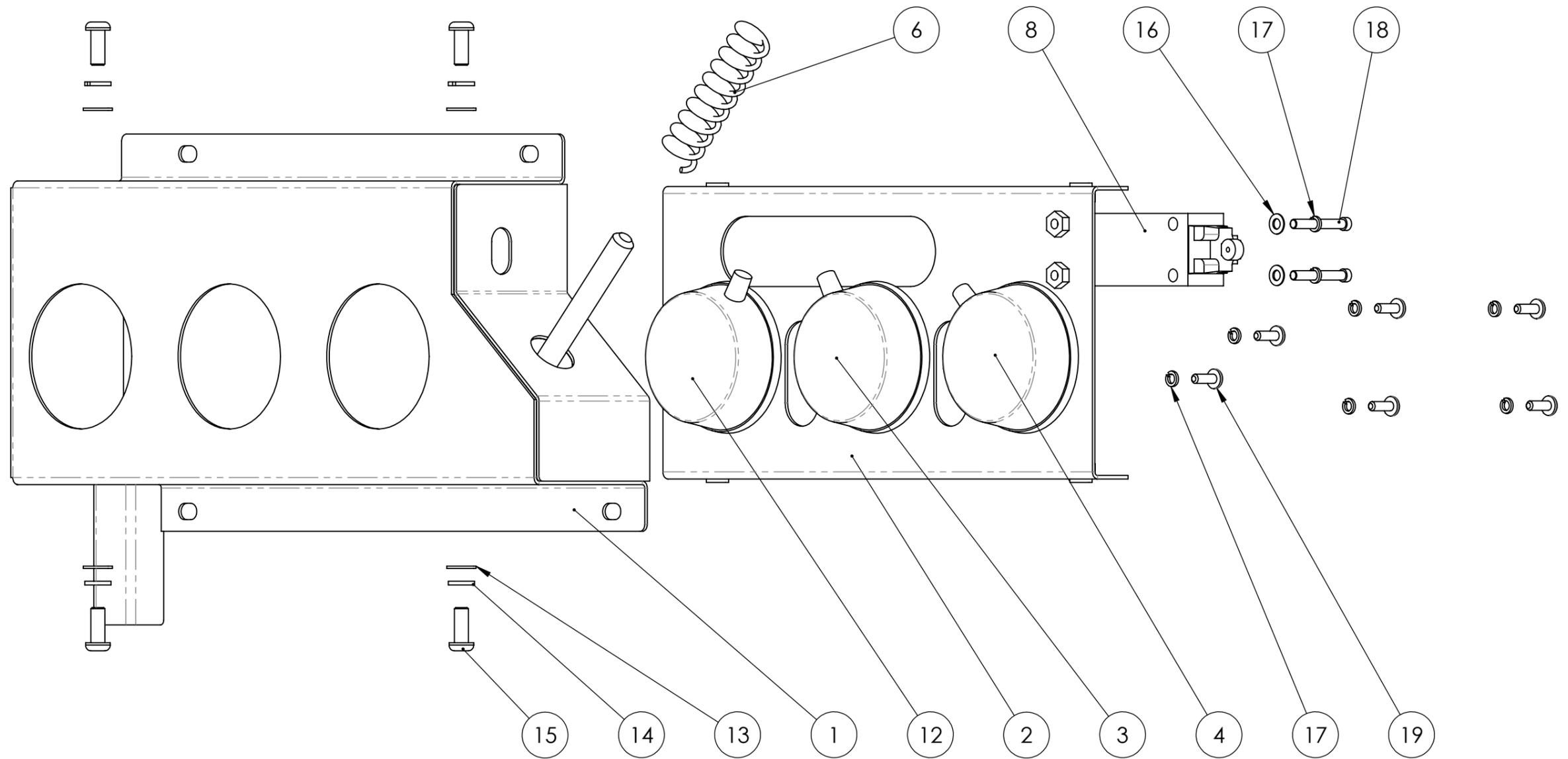


INFEED CHUTE
301040050
ARB19 NEW INFEED & FLAP

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
8	301040119	RIGHT HAND FLAP RETURN STOP	1
9	301040057	HINGE SUPPORT PLATE	1
10	301040061	FLAP HINGE TUBE	4
12	301040100	FLAP LEFT SIDE SWITCH BOX	1
13	301040055	FLAP SIDE PLATE	1
15	900900304	SPRING LATCH BOLT	2
17	302040090	FRICTION DISC	2
18	91202N40	M12 NYLON WASHER	4
19	C170409	DOCUMENT CASE	1
20	91201	M12 NYLOC NUT	2
22	301040070	SPLIT SAFETY BAR	1
23	301040098	FLAP HINGE PIN	1
26	91202R	LARGE WASHER	2
27	91265	M12 X 65	2
28	90602A	M6 A WASHER	36
29	90601	M6 NYLOC	20
30	60615	M6x25 BUTTON	12
31		M6 X 20 BUTTON	12
33	91202N25	M12 NYLON WASHER	4
34	91202	M12 A WASHER	2
35	91225	M12 X 35 SET	2
36	90603	M6 SPRING WASHER	4
37	301040129	LEFT HAND FLAP RETURN STOP	1
38	91205	M12 STARLOCK WASHER	1
39	CS100-1-36	MICRO SWITCH STRIKER	2
40	90602C	M6 C WASHER	4



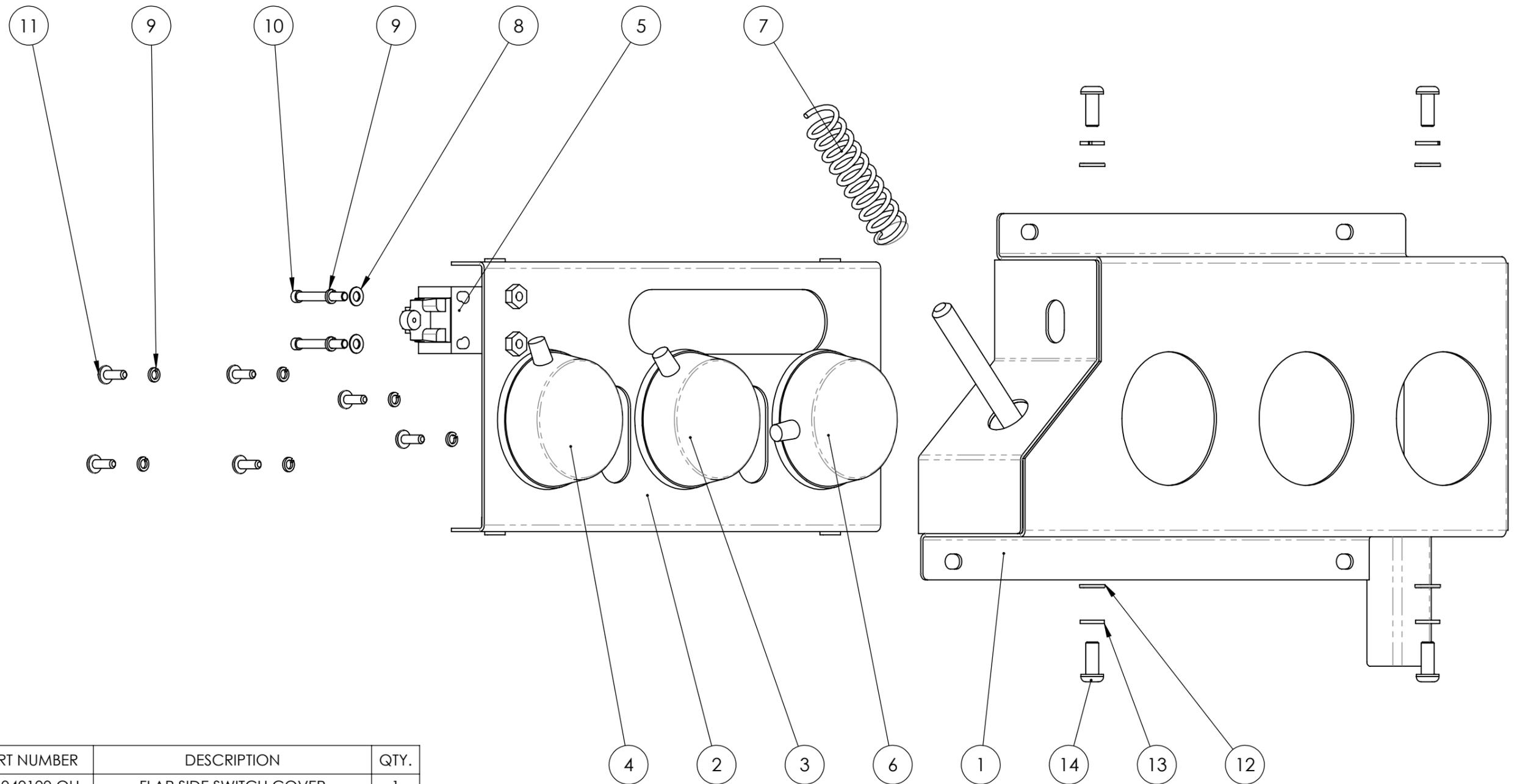
FROM SERIAL No: 160044
 INFEED FLAP
 301040051
 ARB190 / 200



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	301040100	FLAP LEFT SIDE SWITCH COVER	1
2	301040102	SWITCH MOUNT PLATE	1
3	900950327	HAND SWITCH GREEN	1
4	900950328	HAND SWITCH BLUE	1
6	900950007	SAFETY BAR COMPRESSION SPRING	1
8	ARB150-6-1044	LIMIT SWITCH	1
12	900950329	HAND SWITCH YELLOW	1
13	90602A	M6 A WASHER	4
14	90603	M6 SPRING WASHER	4
15	60615	M6x25 BUTTON	4
16	90402A	M4 A WASHER	2
17	90403	M4 SPRING WASHER	8
18	70430	M4 X 30 CAP	2
19	60412	M4 X 12 BUTTON	6

FLAP LEFT SIDE SWITCH BOX

301040100
ARB190 / 200

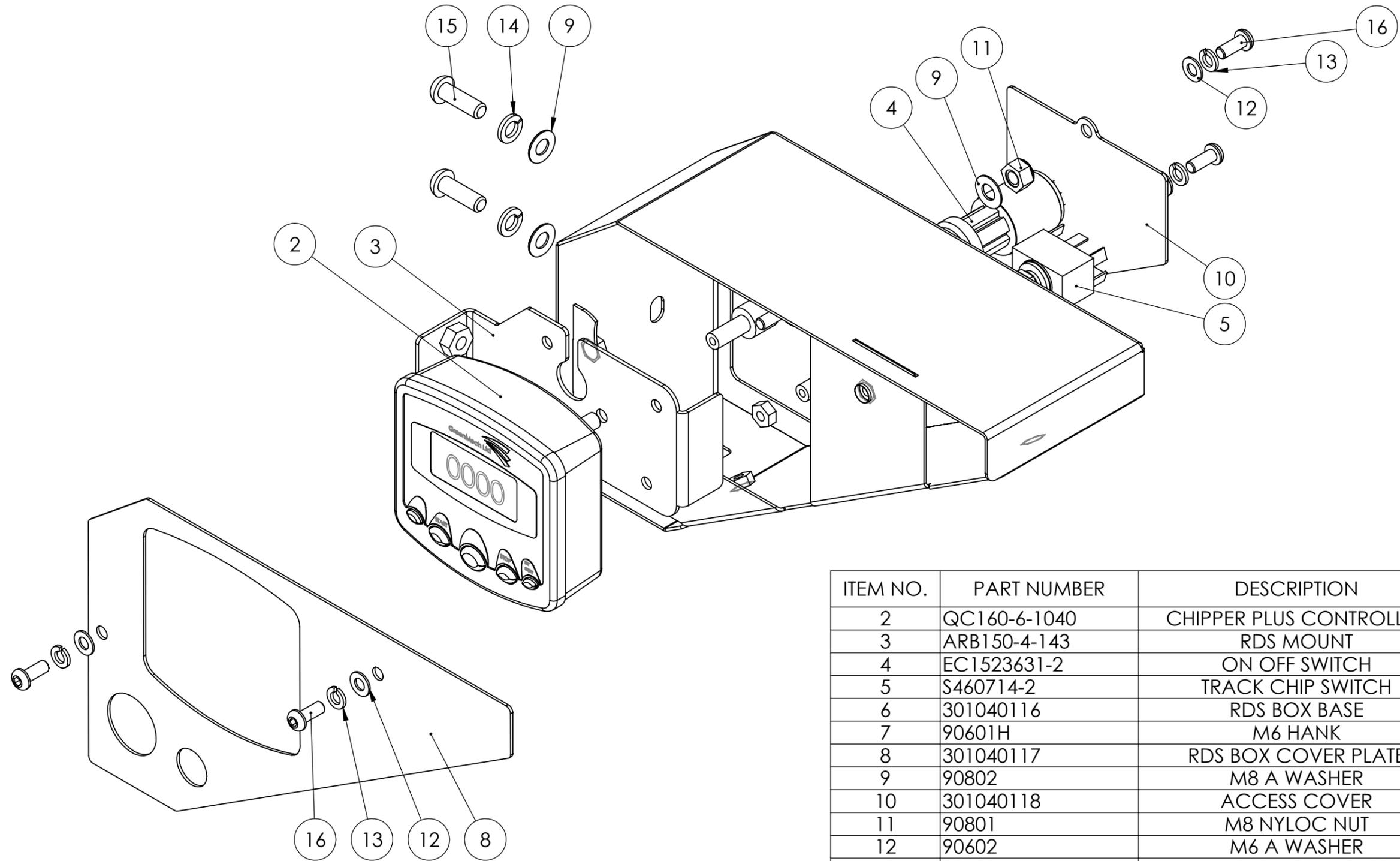


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	301040100 OH	FLAP SIDE SWITCH COVER	1
2	301040102 OH	SWITCH MOUNT PLATE	1
3	900950327	HAND SWITCH GREEN	1
4	900950328	HAND SWITCH BLUE	1
5	900950003	LIMIT SWITCH	1
6	900950329	HAND SWITCH YELLOW	1
7	900950007	SAFETY BAR COMPRESSION SPRING	1
8	90402A	M4 A WASHER	2
9	90403	M4 SPRING WASHER	8
10	70430	M4 X 30 CAP	2
11	60412	M4 X 12 BUTTON	6
12	90602A	M6 A WASHER	4
13	90603	M6 SPRING WASHER	4
14	60615	M6x25 BUTTON	4

FLAP RIGHT SIDE SWITCH BOX

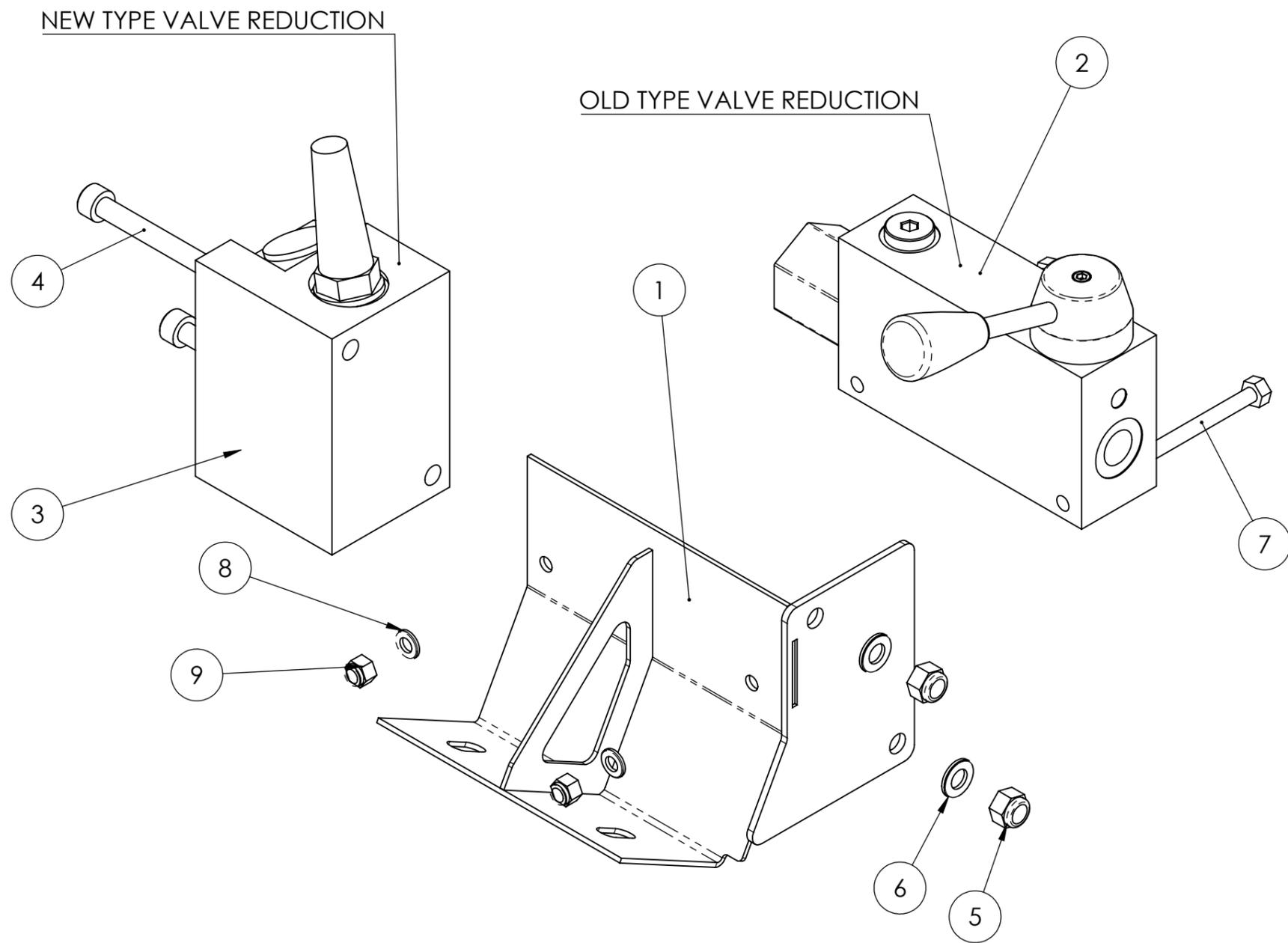
301040100 OH

ARB190 / 200



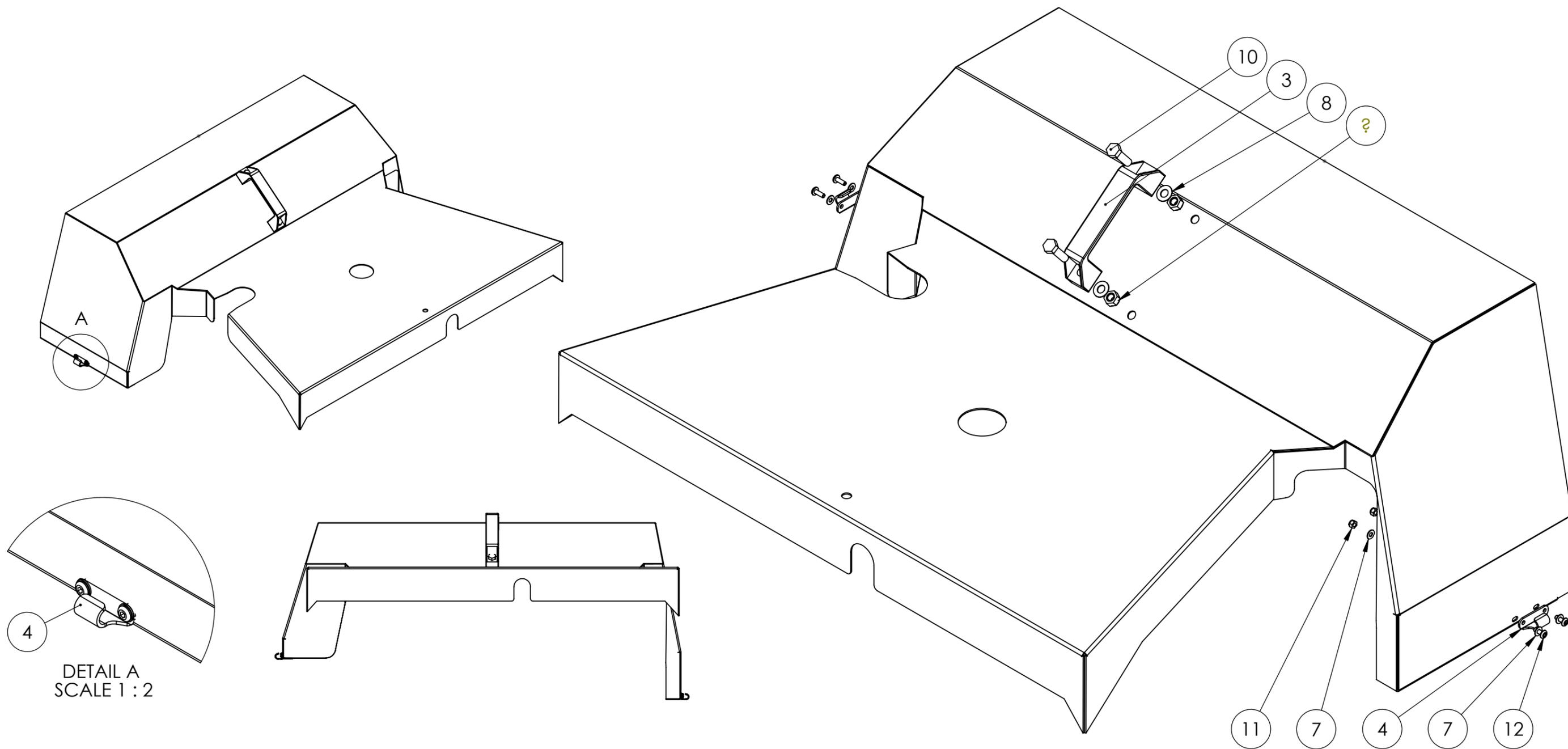
ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
2	QC160-6-1040	CHIPPER PLUS CONTROLLER	1
3	ARB150-4-143	RDS MOUNT	1
4	EC1523631-2	ON OFF SWITCH	1
5	S460714-2	TRACK CHIP SWITCH	1
6	301040116	RDS BOX BASE	1
7	90601H	M6 HANK	2
8	301040117	RDS BOX COVER PLATE	1
9	90802	M8 A WASHER	3
10	301040118	ACCESS COVER	1
11	90801	M8 NYLOC NUT	1
12	90602	M6 A WASHER	4
13	90603	M6 SPRING WASHER	4
14	90803	M8 SPRING WASHER	2
15	60825	BUTTON HD BOLT	2
16	60615	M6x25 BUTTON	4

RDS SURROUND BOX
 301040114
 ARB190 & 200



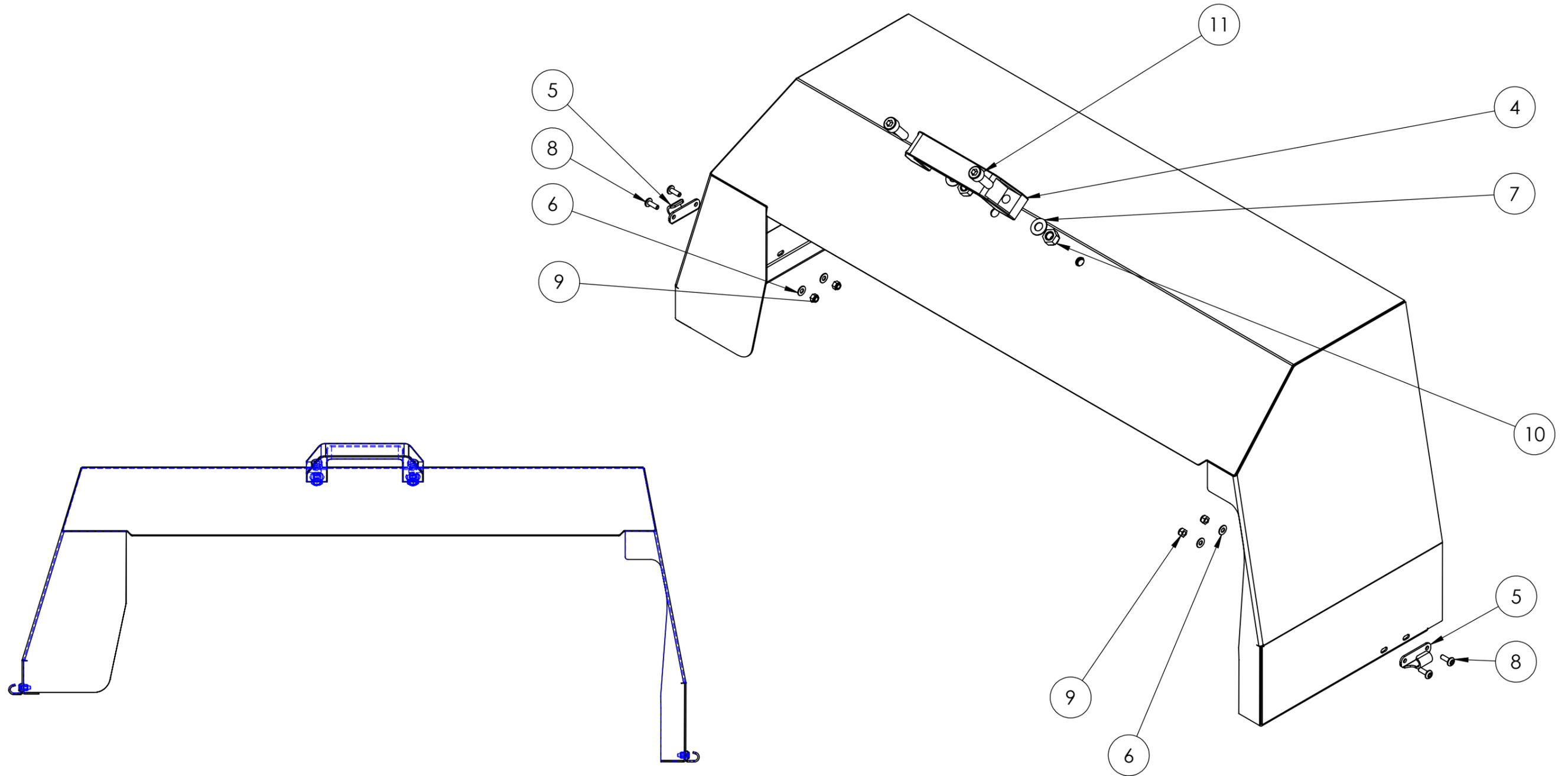
ITEM NO.	PART NUMBER	DESCRIPTION	VALVE ASSEMBLY/QTY.
1	301030065	REDUCTION VALVE MOUNT	1
2	ARB150-6-9002	REDUCTION VALVE	1
3	900990316	FLOW CONTROL (FC60 K L)	1
4	70870	M8 X 80 CAP	2
5	90801	M8 NYLOC NUT	2
6	90802A	M8 A WASHER	2
7	90645S	M6 X 55 SET	2
8	90602A	M6 A WASHER	2
9	90601	M6 NYLOC NUT	2

301030065
REDUCTION VALVE MOUNT ASSEMBLY



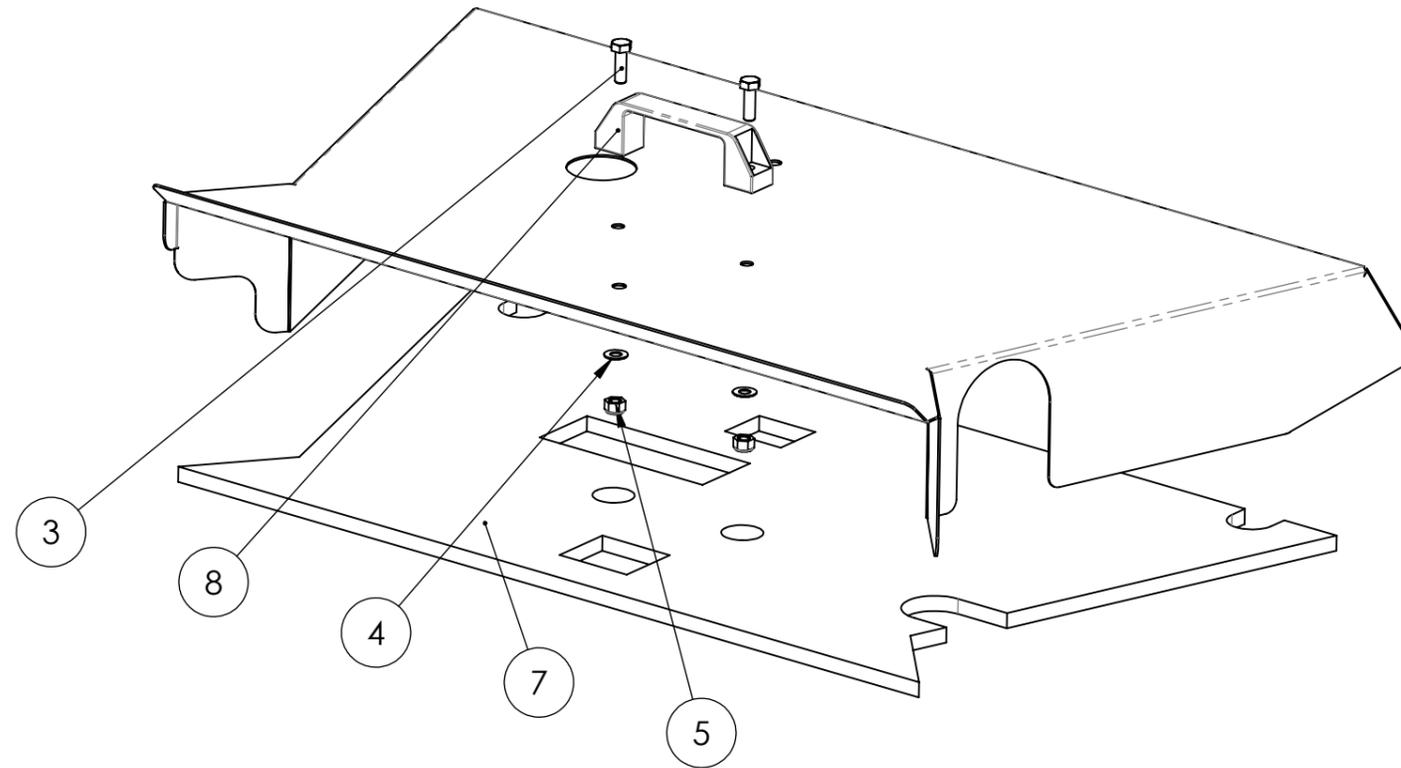
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
3	EC150012	BONNET HANDLE	1
4	ARB150-1-1025	CLAW	2
7	90402	FLAT WASHER	8
8	90802	M8 A WASHER	2
9	90801	M8 NYLOC NUT	2
10	90830S	M8 X 30 SET	2
11	90401	M4 NYLOC NUT	4
12	60412	M4 X 12 BUTTON	4

REAR TOP COVER
 ARB190
 301010116



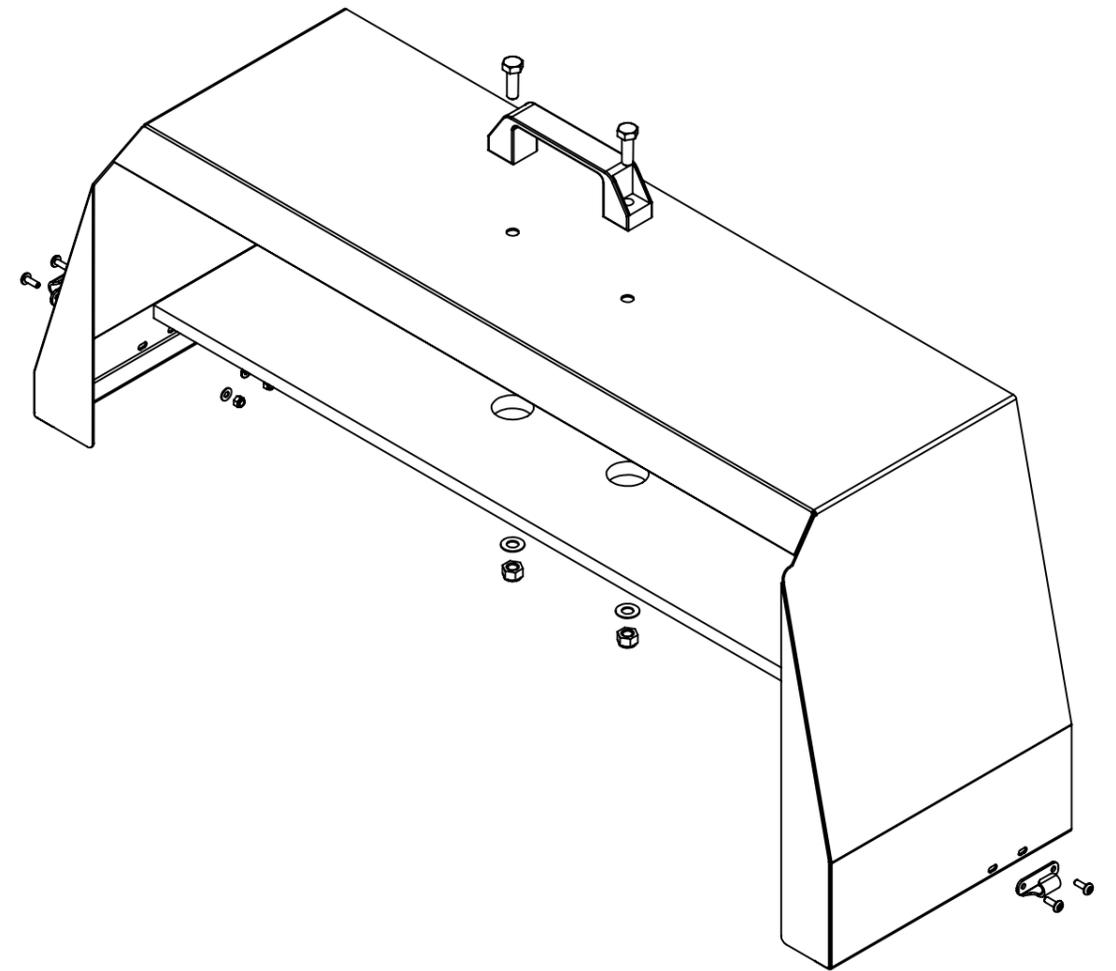
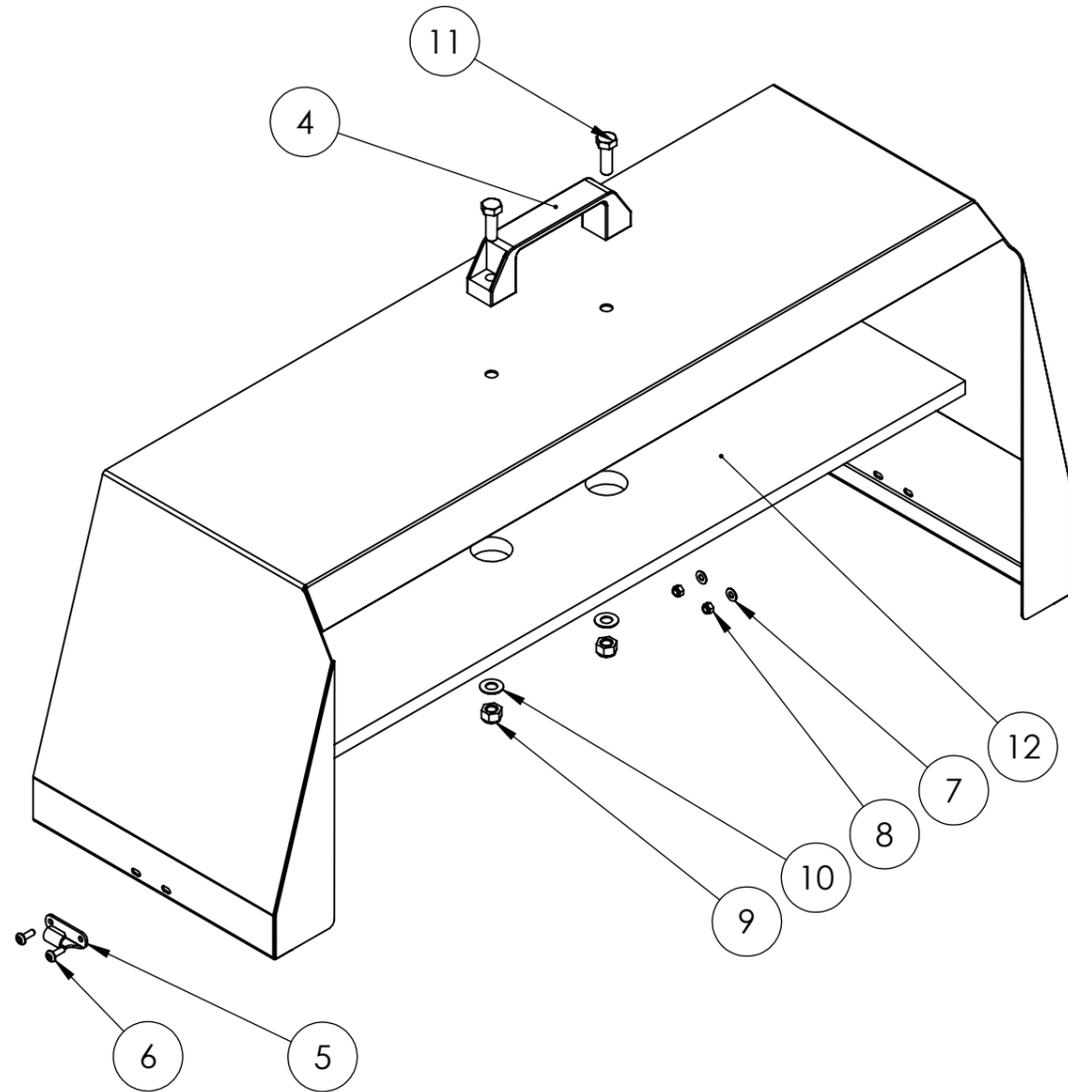
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
4	EC150012	BONNET HANDLE	1
5	ARB150-1-1025	CLAW	2
6	90402	FLAT WASHER	4
7	90802	M8 A WASHER	2
8	60412	M4 X 12 BUTTON	4
9	90401	M4 NYLOC NUT	4
10	90801	M8 NYLOC NUT	3
11	70825	M8 X 25 CAP	2

REAR COVER 2
 301010121
 PRE NEW INFEED & FLAP



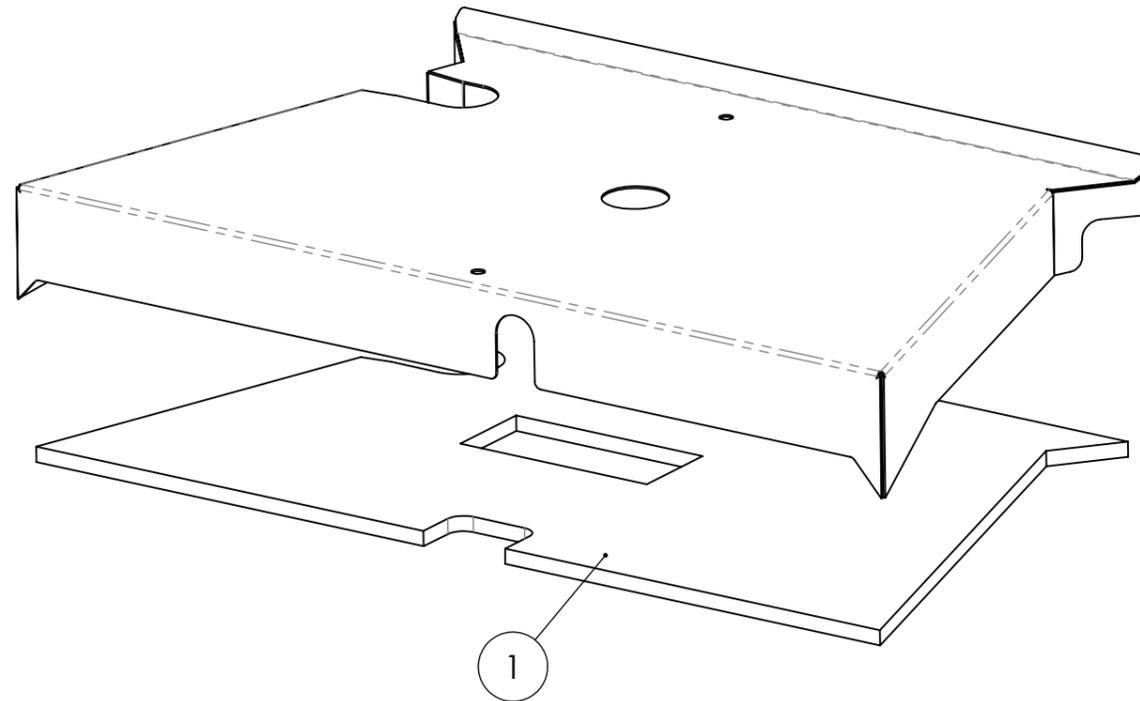
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
3	90825	M8 X 25 SET	2
4	90801A	M8 A WASHER	2
5	90801	M8 NYLOC NUT	2
7	900920057	REAR TOP COVER 2 FOAM	1
8	900900301	BONNET HANDLE	1

REAR TOP COVER 2
 BOTTOM BAR
 301010151



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
4	EC150012	BONNET HANDLE	1
5	ARB150-1-1025	CLAW	2
6	60412	M4 X 12 BUTTON	4
7	90402	FLAT WASHER	5
8	90401	M4 NYLOC NUT	4
9	90801	M8 NYLOC NUT	2
10	90802	M8 A WASHER	2
11	90825	M8 X 25 SET	2
12	900920058	REAR TOP COVER 1 FOAM	1

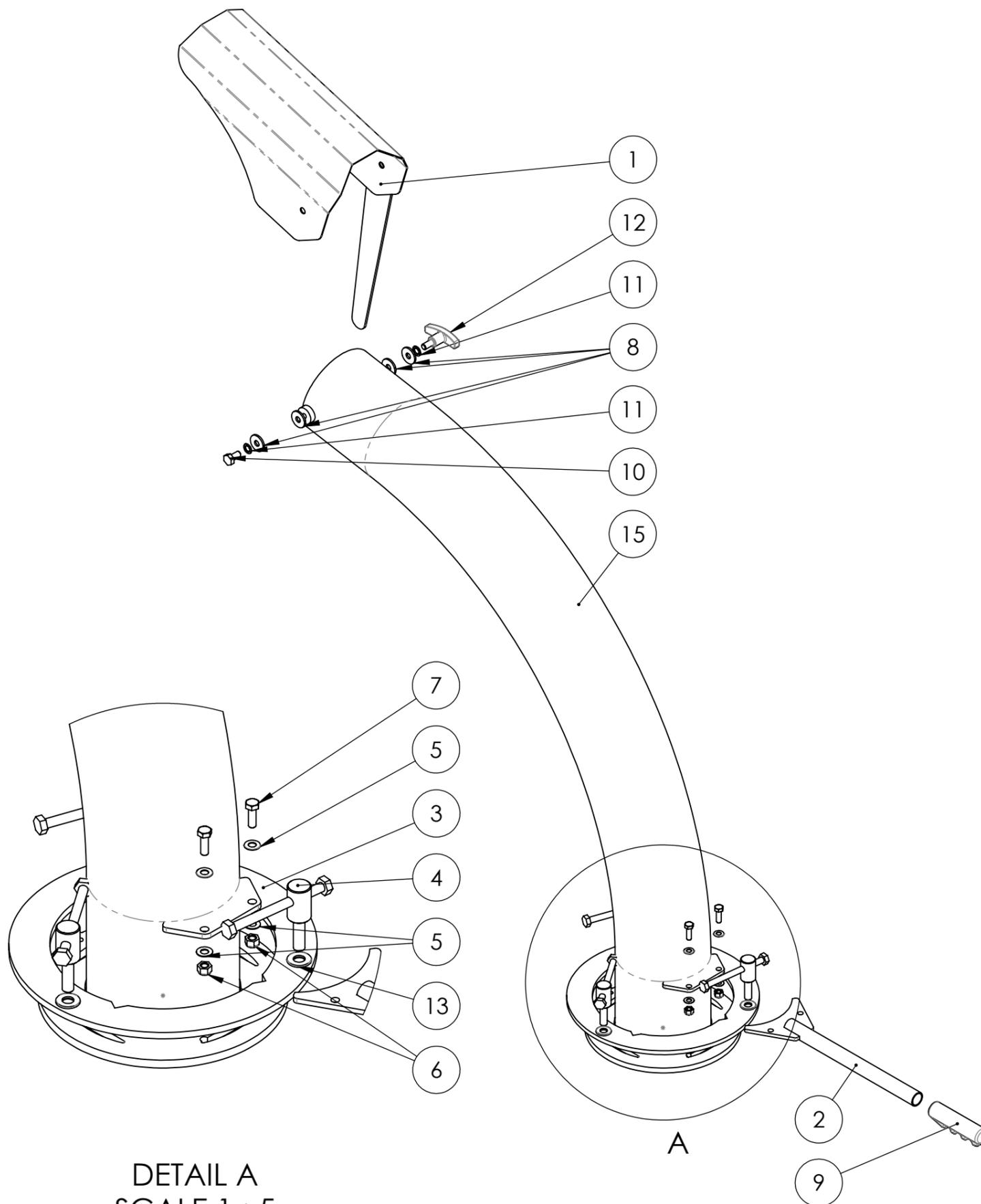
REAR COVER 1
 301010146
 ARB190



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ARB190-9-1034	REAR COVER BARRIER FAOM	1

REAR COVER 1
PRE NEW INFEEED& FLAP

301010120



DETAIL A
SCALE 1 : 5

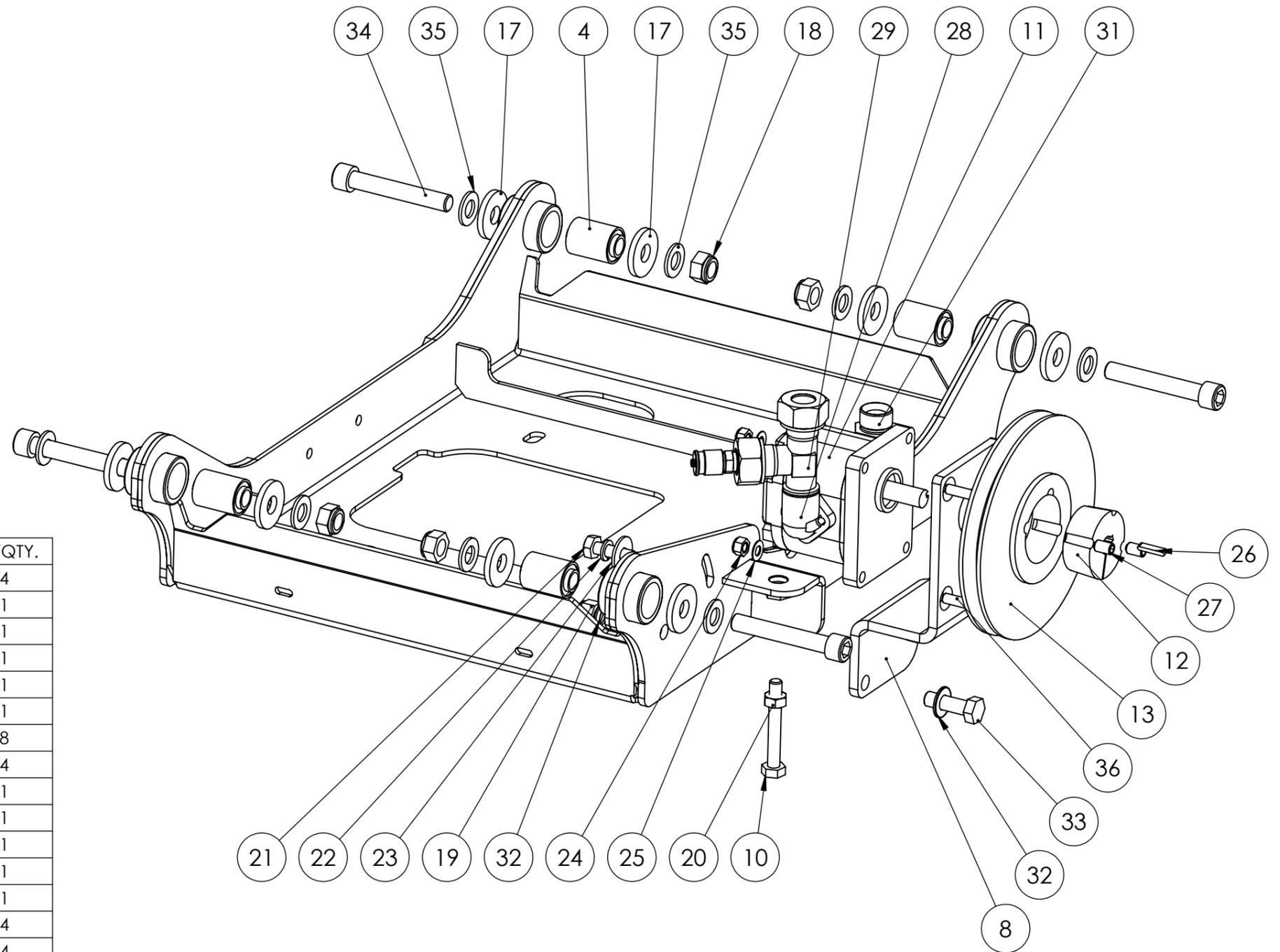
ROUND DISCHARGE
REPLACED SQUARE DISCHARGE
AS OF 10 / 2015

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	301050019	DIRECTIONAL FLAP	1
2	301050022	DISCHARGE SIDE HANDLE	1
3	CM170-5-11	DISCHARGE CLAMP RING	1
4	C200613	TEE BOLT	3
5	90802A	M8 A WASHER	4
6	90801	M8 NYLOC NUT	2
7	90825	M8 X 25 SET	2
8	91002-N	NYLON WASHER	4
9	9227	PLASTIC HANDLE	1
10	91020	M10 X 20	1
11	91004	M10 INTERNAL SHAKE PROOF WASHER	2
12	C180104	TEE HANDLE	1
13	91202A	M12 A WASHER	3

TUBULAR DISCHARGE CHUTE

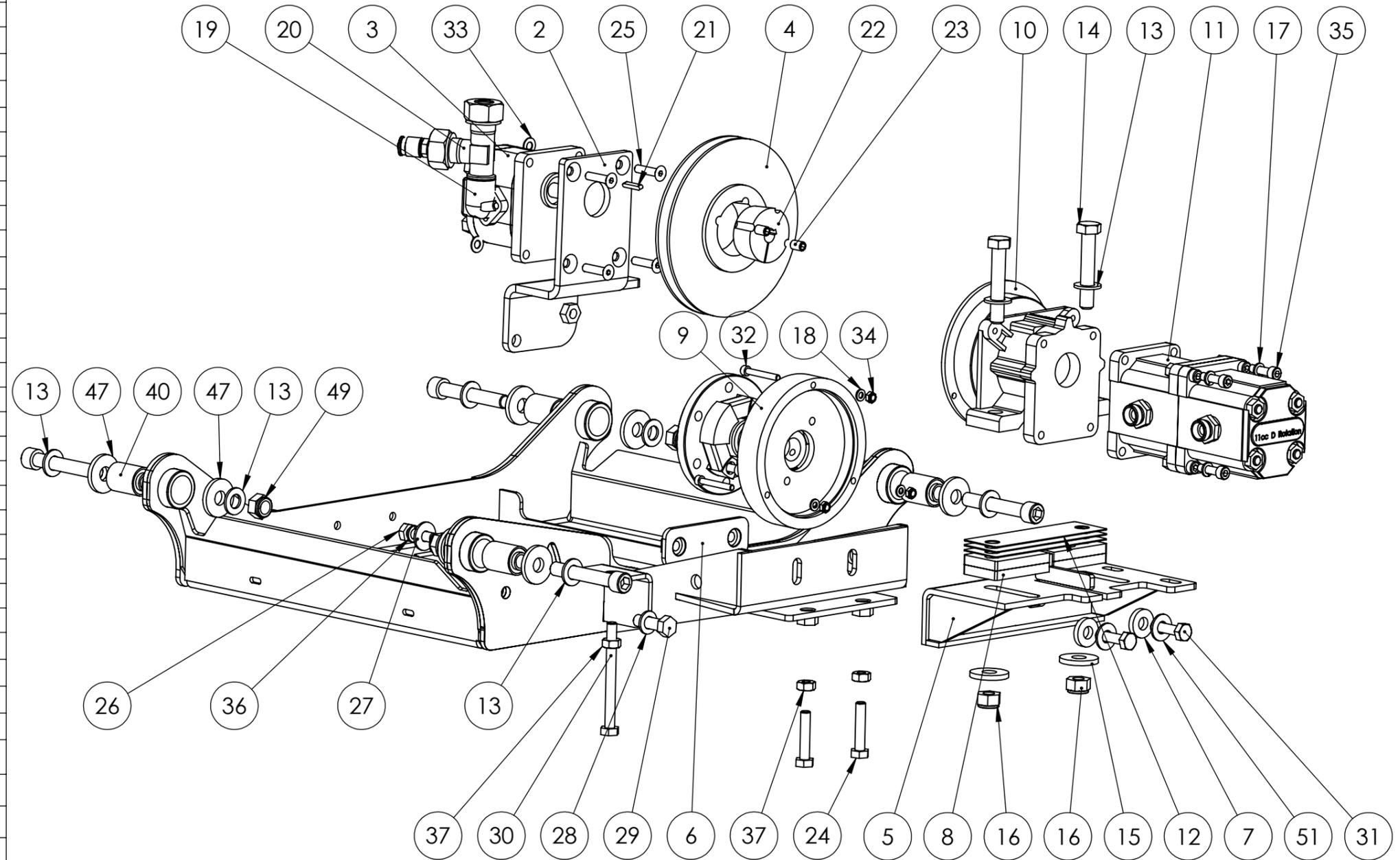
301050015
ARB190 & 200

ITEM NO.	PART NUMBER	DESCRIPTION	MT/QTY.
4	EC150006	METALASTIC BUSH ANR 3410	4
8	301060011	PUMP MOUNT BRACKET	1
10	91075S	M10 X 75 SET	1
11	ARB150-6-1015	PUMP/MOTOR 6CC	1
12	EC1523638	1610 X 15 TL Bush	1
13	ARB190-9-1004	SPA180 SINGLE PULLEY	1
17	301060052	ENGINE TRAY SPACER	8
18	91401T	M14 THIN NYLOC NUT	4
19	91201	M12 NYLOC NUT	1
20	91001P	M10 PLAIN NUT	1
21	91035S	M10 X 35 SET	1
22	91003	M10 SPRING WASHER	1
23	91002HD30	M10 30MM HD WASHER	1
24	90801	M8 NYLOC NUT	4
25	90802	M8 A WASHER	4
26	KS4425	4 X 4 X 25 KEY	1
27	3-8x5-8GS	TAPERLOCK GRUBSCREW	2
28	ARB150-6-1017	STEEL ELBOW PORT	2
29	VKA3-15-L	TEST 20 MALE X 15mm LIGHT SWIVEL F	1
30	DSSC-400-825	BONDED WASHER	1
31	MM-12-08	1/2-3/4BSP MM ADAPTOR	1
32	91202	M12 A WASHER	2
33	91240S	M12 X 40 SET	1
34	71490	M14 X 90 CAP	4
35	91602A	M14 A WASHER	8
36	80835	M8 X 35 CSK	4



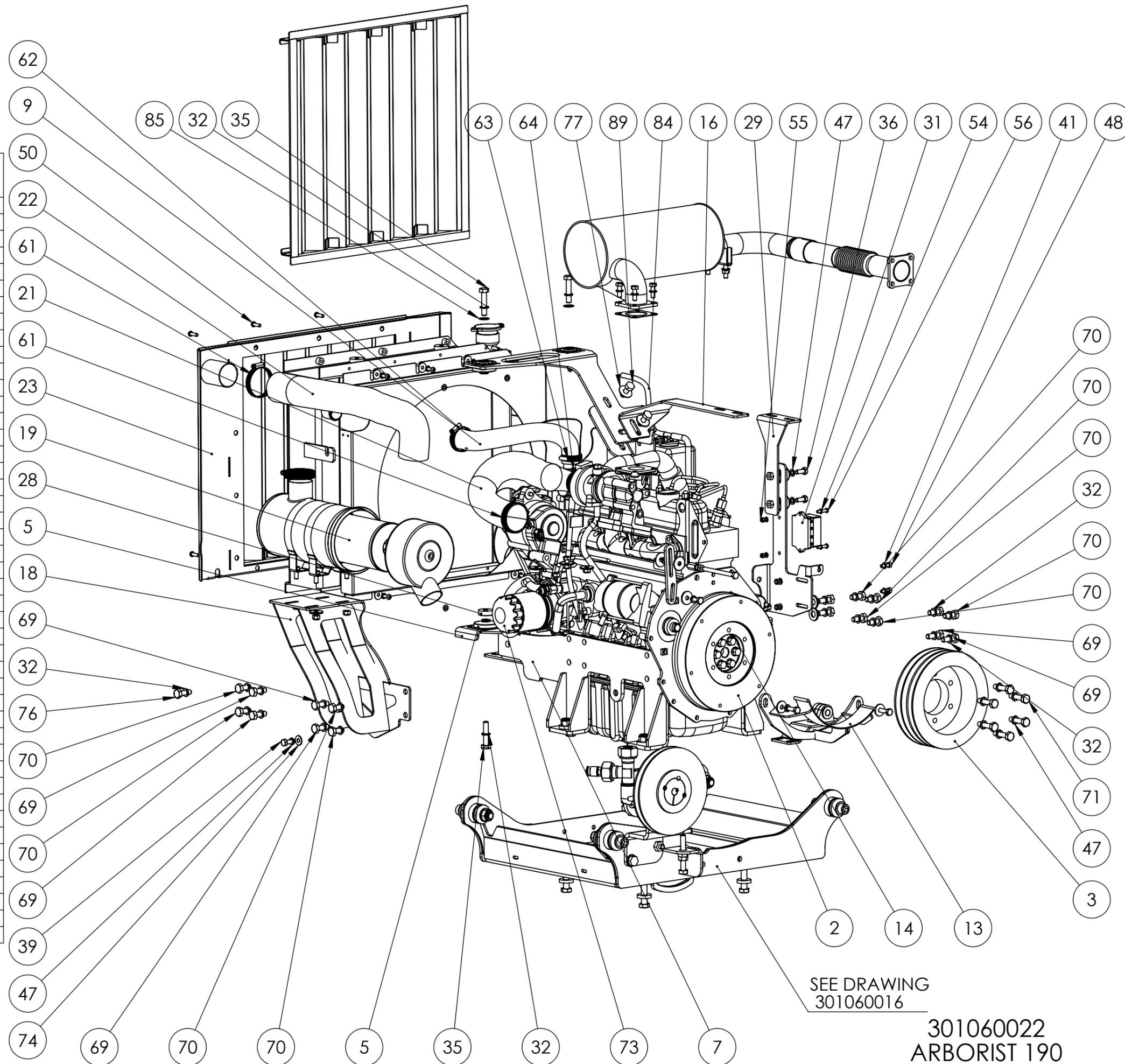
ENGINE TRAY
301060016
ARBORIST 190 & 200

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
2	301060011	PUMP MOUNT BRACKET	1
3	ARB150-6-1015	PUMP/MOTOR 6CC	1
4	ARB190-9-1004	SPA180	1
5	301060077	PUMP MOUNT	1
7	91206HD	12MM HD WASHER	2
8	301060083	PUMP PACKER & GUIDE	1
9	900990056	FLEXI DRIVE	1
10	900990448	PUMP CLUTCH	1
11	ARB190-9-1010-T	TWIN PUMP 11cc -D	1
12	301030071	PUMP PACKING SHIM	3
13	91602A	M14 A WASHER	9
14	91480	M14 X 80 BOLT	2
15	91406HD	14mm HD WASHER	2
16	91401	M14 NYLOC NUT	2
17	90803	M8 SPRING WASHER	4
19	ARB150-6-1017	STEEL ELBOW PORT	2
20	VKA3-15-L	TEST 20 MALE X 15mm LIGHT SWIVEL F	1
21	KS4425	4 X 4 X 25 KEY	1
22	900980300	1610 x 15 TL BUSH	1
23	3-8x5-8GS	TAPERLOCK GRUBSCREW	2
24	91050S	M10 X 50 SET	2
25	80835	M8 X 35 CSK	4
26	91035S	M10 X 35 SET	1
27	91002HD30	M10 30MM HD WASHER	1
28	91202A	M12 A WASHER	2
29	91240S	M12 X 40 SET	1
30	910110S	M10 X 110 SET	1
31	91040S	M10 X 40 SET	2
32	70645	M6 X 45 CAP	3
33	90802B	M8 B WASHER	4
34	90601	M6 NYLOC	3
35	70830	M8 X 30 CAP	4
36	91003	M10 SPRING WASHER	1
37	91001P	M10 PLAIN NUT	3
38	91001	M10 NYLOC NUT	1
40	900930200	METALASTIC BUSH ANR 3410	4
45	301060076	TWIN PUMP MOUNT	1
47	301060052	ENGINE TRAY SPACER	8
48	71490	M14 X 90 CAP	4
49	91401T	M14 THIN NYLOC NUT	4
50	91402	M14 FLAT WASHER	1
51	91202C	M12 C WASHER	2



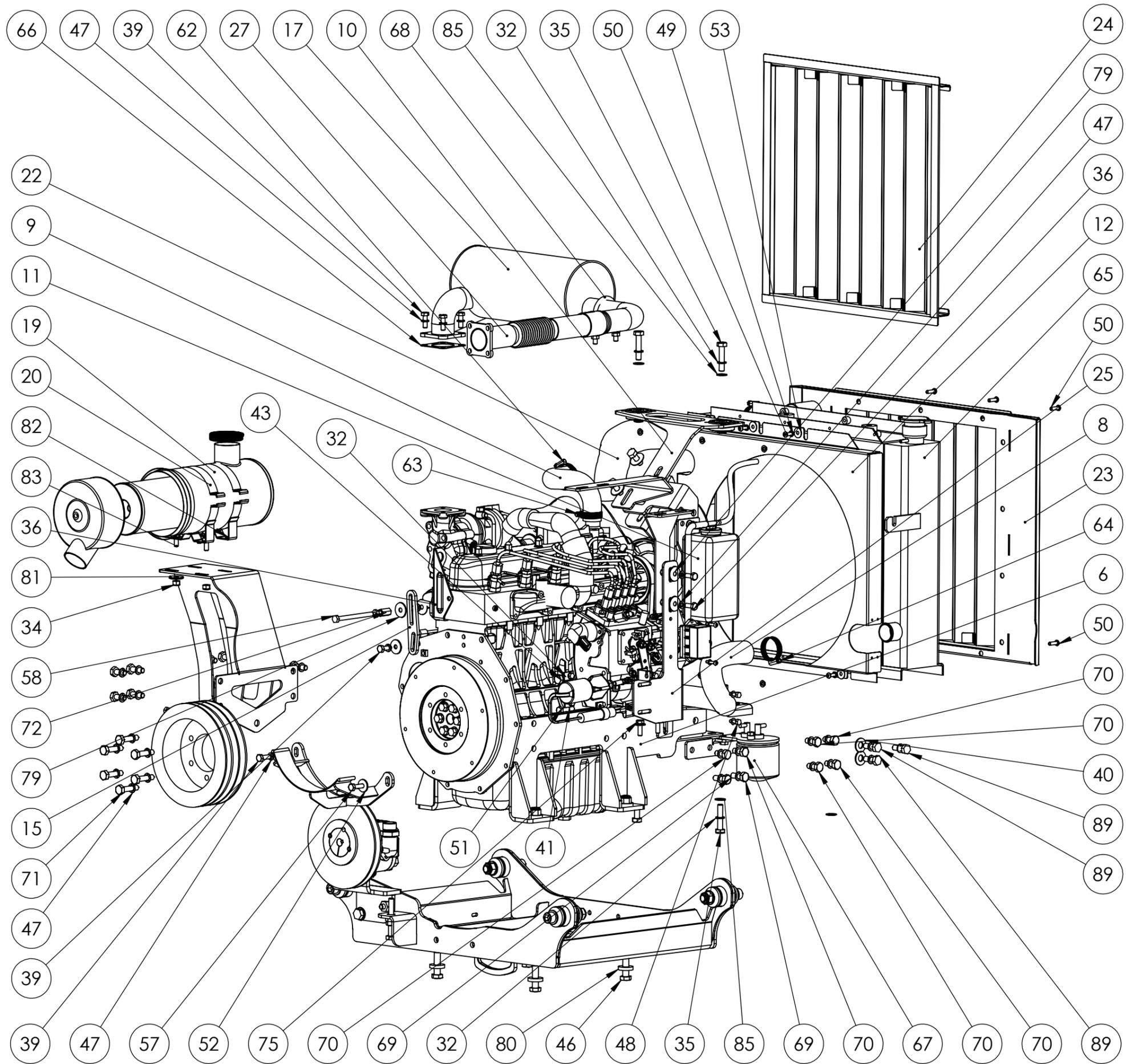
ARBTRAK 190 ENGINE TRAY
301060073

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
2	ARB190-9-1025	KUBOTA V1505-T (44hp)	1
3	ARB190-6-1007	ENGINE PULLEY	1
4	SI-20015	ANTIVIBRATION MOUNT	4
5	301060015	RADIATOR SUPPORT MOUNT	1
6	301060013	RIGHT ENGINE MOUNT LEG	1
7	301060014	LEFT ENGINE MOUNTING LEG	1
8	ARB190-9-1007	BOTTOM HOSE	1
9	ARB190-9-1008	TOP RAD HOSE	1
10	301060021	RADIATOR TOP BRACKET	1
11	900960400	EXPANSION BOTTLE	1
12	301060035	RADIATOR COWL	1
13	301060019	DRIVE PULLEY BELT GUARD	1
14	305060021	FUEL FILTER BKT	1
15	301060040	BELT FINGER SUPPORT	1
16	301060044	AIR FILTER SUPPORT BRACKET	1
17	ARB190-6-29	SILENCER	1
18	ARB190-91017	AIR FILTER MOUNT	1
19	ARB190-9-1014	AIR FILTER	1
20	900960067	AIR FILTER MOUNT (CF05-12096)	2
21	ARB190-9-1009	AIR FILTER PIPE	1
22	900960060	WIRED AIR INTAKE HOSE	1
23	301060017	COLD COMPARTMENT	1
24	301060018	RADIATOR SCREEN	1
25	301060049	EXHAUST SILENCER BRACE	1
26	301060051	RAD SUPPORT LEG	1
27	ARB190-6-13	EXHAUST EXTENSION	1
28	301060046	RADIATOR BOTTOM SPACER	2
29	301060047	EXHAUST SILENCER BRACE	1
31	900950333	FUSE HOLDER	1
32	91003	M10 SPRING WASHER	25
34	90801	M8 NYLOC NUT	8
35	91040	M10 X 40 BOLT	4
36	90820	M8 X 20 SET	3
37	90802	M8 A WASHER	2
47	90803	M8 SPRING WASHER	14
39	90825	M8 X 25 SET	9
40	91202C	M12 C WASHER	2
41	90602	M6 FLAT WASHER	18
42	90601	M6 NYLOC	6
43	91025X1.25	M10 X 1.25 X 25 LONG BOLT	1
44	91202HD	M12 HD WASHER	1
45	91201	M12 NYLOC NUT	4
46	91245	M12 X 45 HEX BOLT	4
47	91004	SHAKEPROOF WASHER	6
48	90620	M6 X 20 SET BOLT	4



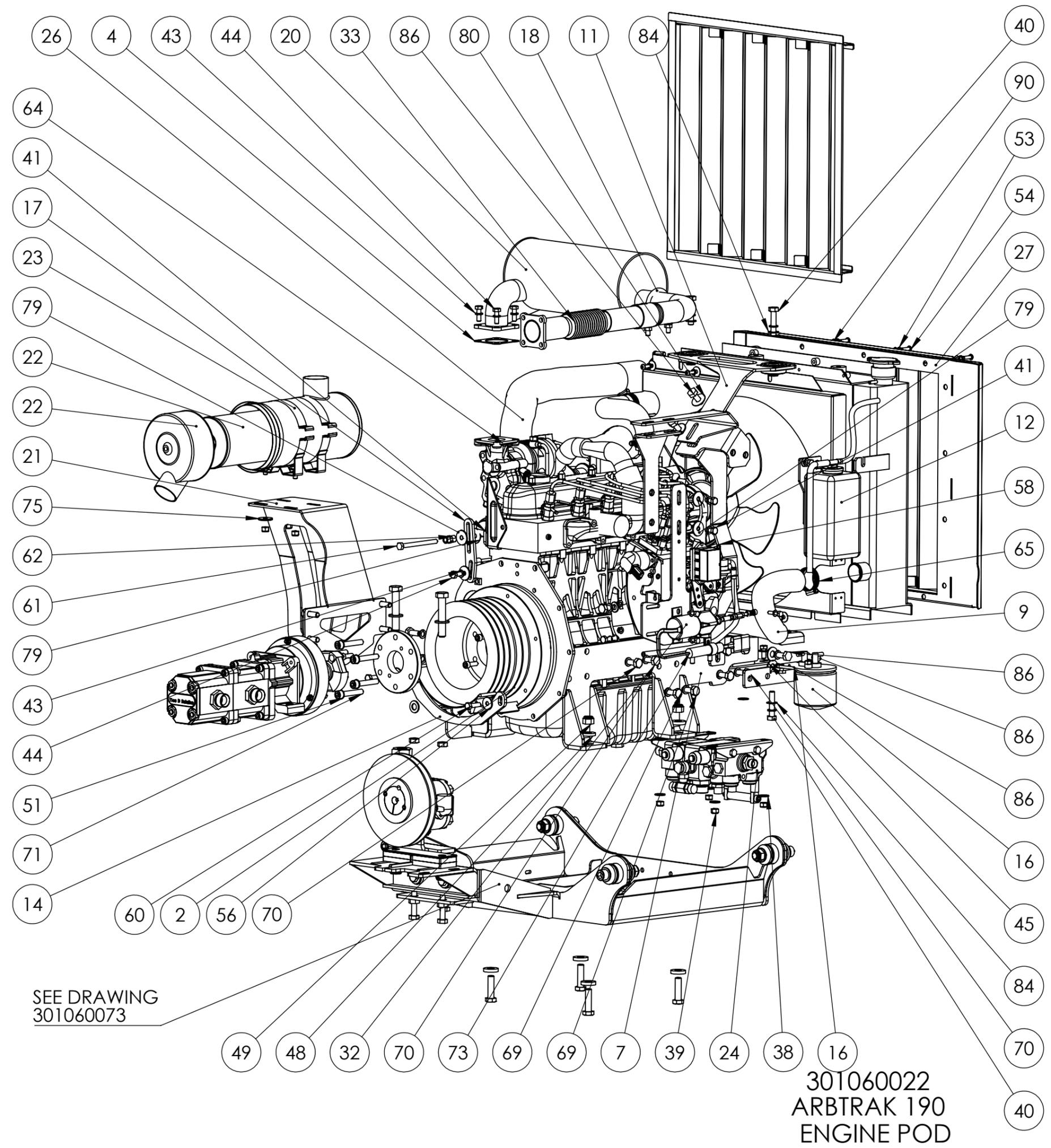
301060022
ARBORIST 190
ENGINE POD

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
50	60620	M6 X 20 BUTTON	11
51	90835	M8 X 35 SET	1
52	90802HD	M8 HD WASHER	2
53	90602	M6 x 25mm WASHER	5
54	90502	FLAT WASHER	4
55	90501	NYLOC NUT	2
56	60525	M5 x 25mm BUTTON	2
57	90830	M8 x 30 BOLT	1
58	908100	M8 X 100	1
59	90801P	M8 PLAIN NUT	1
60	900960058	FUEL HOSE	1
61	62.5	50-70 HOSE CLIP	3
62	900960315	35-50 HOSE CLIP	1
63	40	35-50 HOSE CLIP	2
64	45	35-50 HOSE CLIP	2
65	C150106-3	RADIATOR	1
66	SI20021	EXHAUST GASKET	1
67	SK21002	FUEL FILTER SK21002	1
68	C150113-2	EXHAUST CLAMP	1
69	91030SFP	M10 x 30 x 1.25 SET	6
70	91025SFP	M10 x 25 x 1.25 SET	10
71	91045SFP	M10 X 45 X 1.25 SET	6
72	90801C	M8 CONNECTOR NUT	1
73	SK21001	OIL FILTER	1
74	90802C	M8 C WASHER	3
75	90825S	M8 X 25 SET	2
76	91030S	M10 X 30 SET	1
77	91002R30	M10 30MM REPAIR WASHER	4
78	91001	M10 NYLOC NUT	2
79	90802R30	M8 30MM REPAIR WASHER	4
80	91202HD30	M12 30MM HD WASHER	7
81	90802HD28	M8 28MM HD WASHER	5
82	90802A	M8 A WASHER	4
83	90820S	M8 X 20 SET	4
84	900960322	RAD OVER FLOW HOSE	1
85	91002B	M10 B WASHER	4
86	90630S	M6 X 30 SET	1
88	SI20032	2 SPEED SOLENOID Sg-4793-12	1
89	91030	HEX HD BOLT	5
90	91002	FLAT WASHER	1

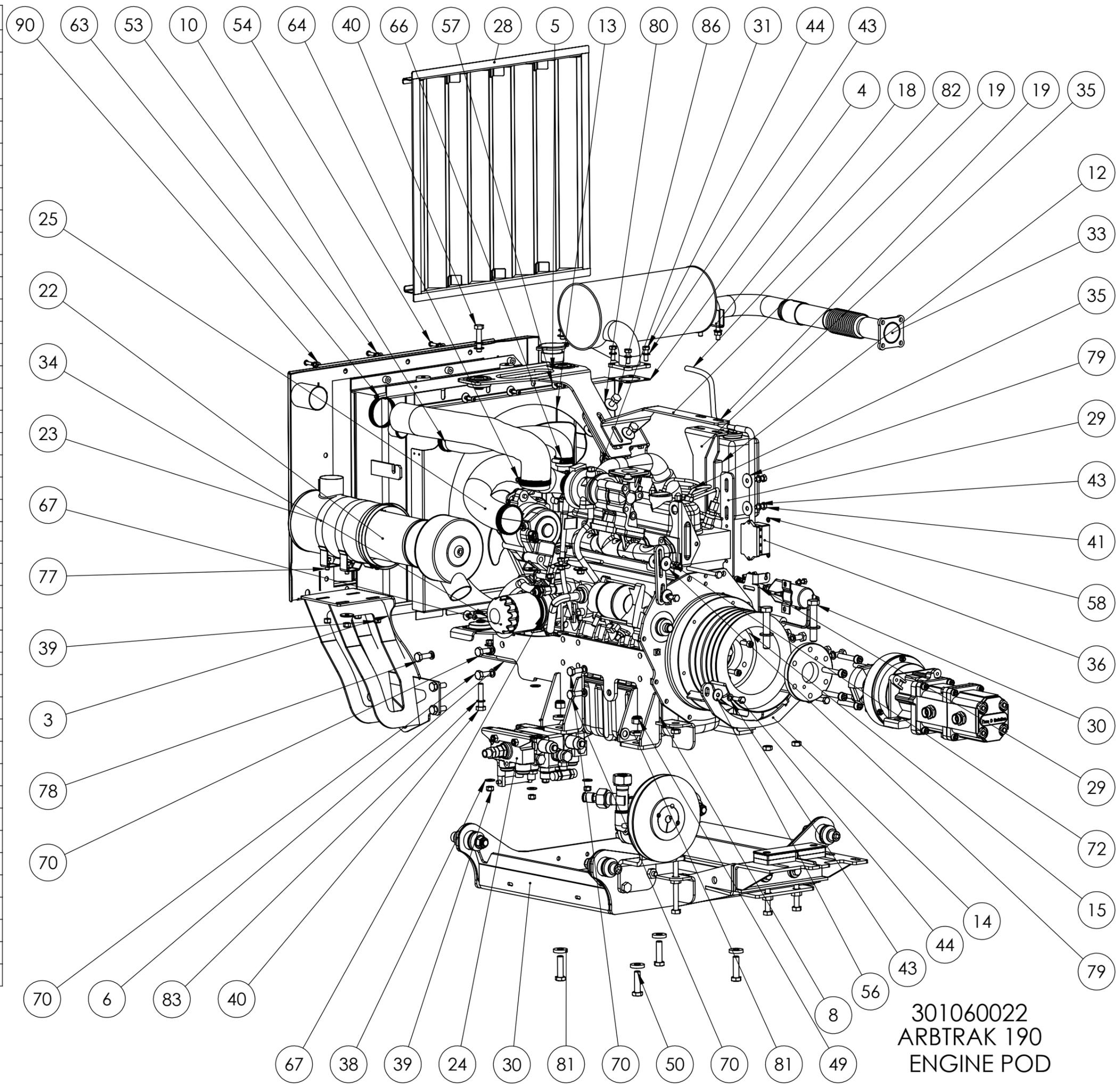


301060022
ARBORIST 190
ENGINE POD

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
2	900970021	KUBOTA V1505-T (44hp)	1
3	900960317	RADIATOR	1
4	900960412	EXHAUST GASKET	1
5	900930302	ANTIVIBRATION MOUNT	2
6	301060015	RADIATOR SUPPORT MOUNT	1
7	301060013	RIGHT ENGINE MOUNT LEG	1
8	301060014	LEFT ENGINE MOUNT LEG	1
9	900960056	BOTTOM HOSE	1
10	900960057	TOP RADIATOR HOSE	1
11	301060021	RADIATOR TOP BRACKET	1
12	900960400	EXPANSION BOTTLE	1
13	301060035	RADIATOR COWL	1
14	301060019	DRIVE PULLEY BELT GUARD	1
15	305060021	FUEL FILTER BKT	1
16	900960414	FUEL FILTER SK21002	1
17	301060040	BELT FINGER SUPPORT	1
18	900960408	EXHAUST CLAMP	1
19	301060044	AIR FILTER SUPPORT BRACKET	1
20	301060058	SILENCER	1
21	301060020	AIR FILTER MOUNT	1
22	900960066	AIR FILTER	1
23	900960067	AIR FILTER MOUNT (CF05-12096)	2
24	900990453	TRACK CONTROL VALVE	1
25	900960059	AIR FILTER PIPE	1
26	900960060	WIRED AIR INTAKE HOSE	1
27	301060017	COLD COMPARTMENT	1
28	301060018	RADIATOR SCREEN	1
29	301060049	EXHAUST SILENCER BRACE	1
30	301060073	ARBTRAK 190 ENGINE TRAY	1
31	301060051	RAD SUPPORT LEG	1
32	900950334	2 SPEED SOLENOID Sa-4793-12	1
33	900960055	EXHAUST EXTENSION	1
34	301060046	RADIATOR BOTTOM SPACER	2
35	301060047	EXHAUST SILENCER BRACE	1
36	900950333	ENG FUSE HOLDER	1
38	90802-c	LARGE WASHER	9
39	90801	M8 NYLOC NUT	12
40	91040	M10 BOLT	4
41	90820	M8 X 20 SET	7
42	90802	M8 A WASHER	2
43	90803	M8 SPRING WASHER	14
44	90825	M8 X 25 SET	9
45	91202C	M12 C WASHER	2
46	90601	M6 NYLOC	3
47	91025X1.25	M10 X 1.25 X 25 LONG BOLT	1
48	91202HD	M12 HD WASHER	1



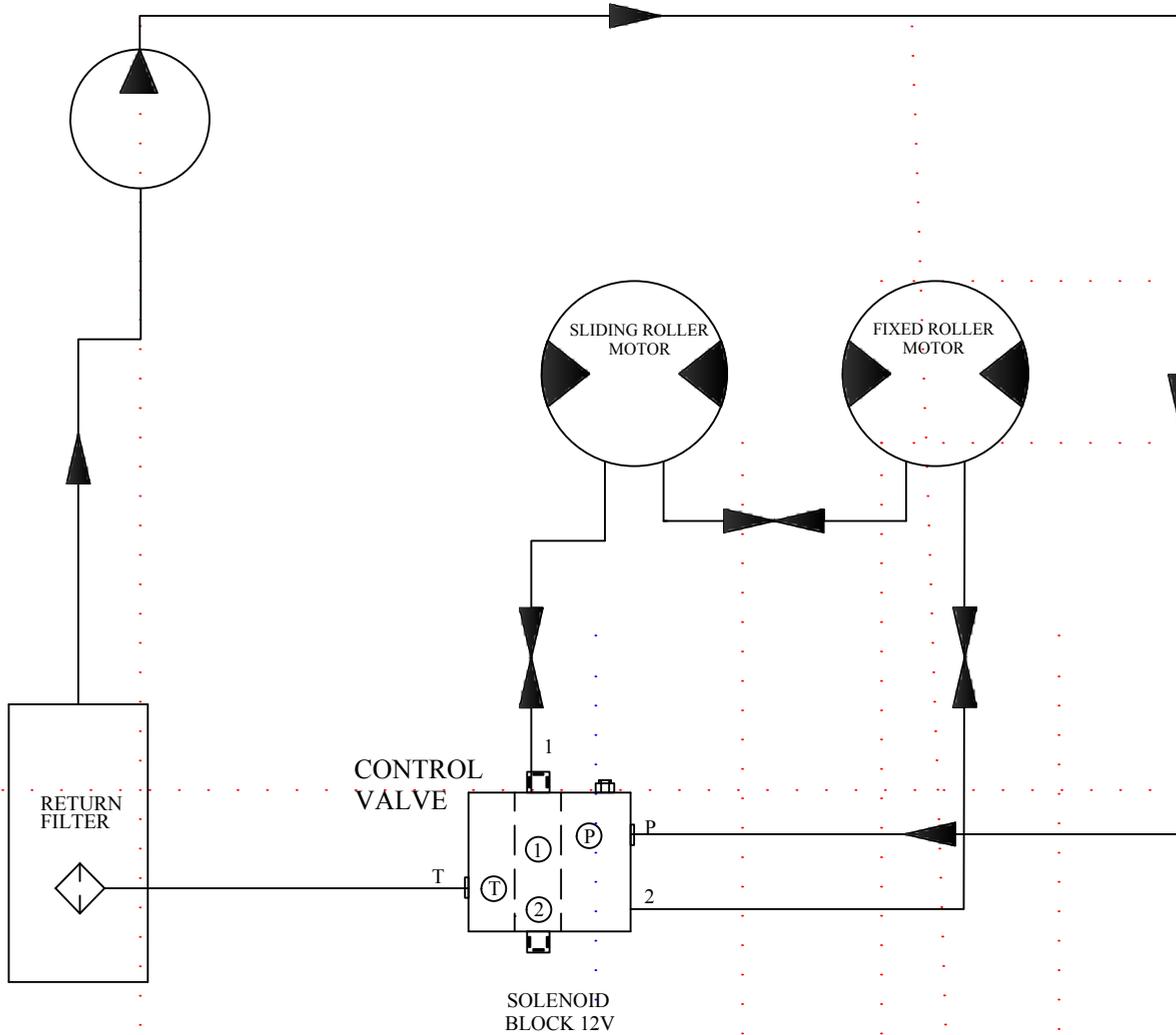
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
49	91201	M12 NYLOC NUT	4
50	91245	M12 X 45 HEX BOLT	4
51	91004	M10 INTERNAL SHAKE PROOF WASHER	6
52	90620	M6 X 20 SET BOLT	2
53	90604	SHAKEPROOF WASHER	11
54	60620	M6 X 20 BUTTON	11
55	90835	M8 X 35 SET	1
56	90802HD	HD WASHER	2
57	90602	M6 x 25mm WASHER	5
58	90502	FLAT WASHER	4
59	90501	M5 NYLOC NUT	2
60	90830	M8 x 30 BOLT	1
61	908100	M8 X 100	1
62	90801P	M8 PLAIN NUT	1
63	62.5	50-70 HOSE CLIP	2
64	65	50-70 HOSE CLIP	1
65	45	35-50 HOSE CLIP	3
66	40	35-50 HOSE CLIP	2
67	900960415	OIL FILTER	1
68	900960058	FUEL HOSE	1
69	91030SFP	M10 x 30 x 1.25 SET	6
70	91025SFP	M10 x 25 x 1.25 SET	10
71	71060FP	M10 X 60 X 1.25 CAP	6
72	90801C	M8 CONNECTOR NUT	1
73	90802C	M8 C WASHER	3
74	90825S	M8 X 25 SET	2
75	90802HD28	M8 28MM HD WASHER	5
76	90802A	M8 A WASHER	4
77	90820S	M8 X 20 SET	4
78	91030S	M10 X 30 SET	1
79	90802R30	M8 30MM REPAIR WASHER	4
80	91002R30	M10 30MM REPAIR WASHER	4
81	91202HD30	M12 30MM HD WASHER	7
82	900960322	RADIATOR OVERFLOW HOSE	1
83	91003	M10 SPRING WASHER	25
84	91002B	M10 B WASHER	4
85	90630S	M6 X 30 SET	1
86	91030	HEX HD BOLT	5
87	315060005	ENGINE PULLEY	1
88	315060012	PUMP PIVOT BRACKET	1
89	900980056	ARBTRAK TWIN PUMP SPA	2
90	90602	FLAT WASHER	13
91	90603	M6 SPRING WASHER	1



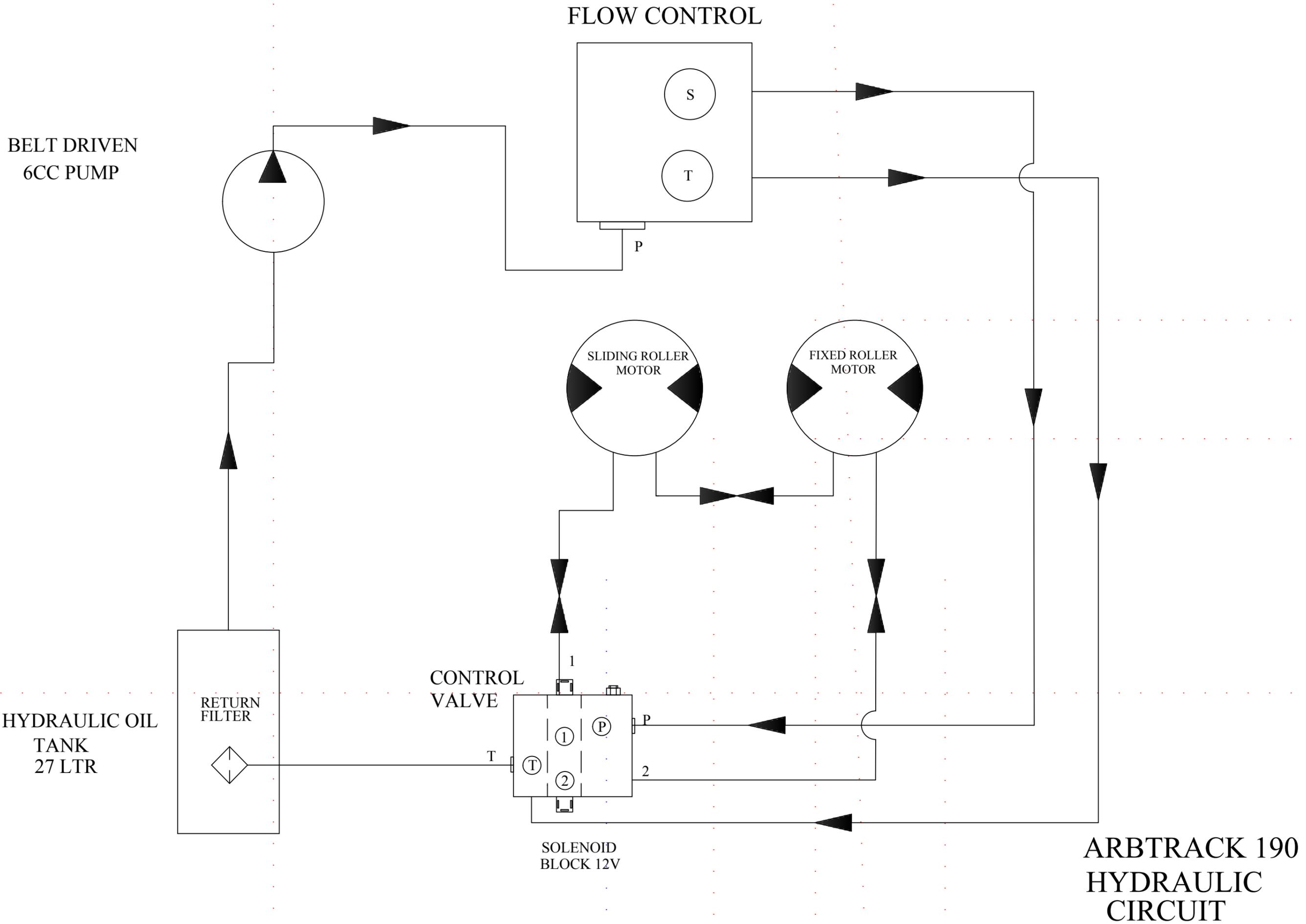
301060022
ARBTRAK 190
ENGINE POD

BELT DRIVEN
6CC PUMP

HYDRAULIC OIL
TANK
27 LTR

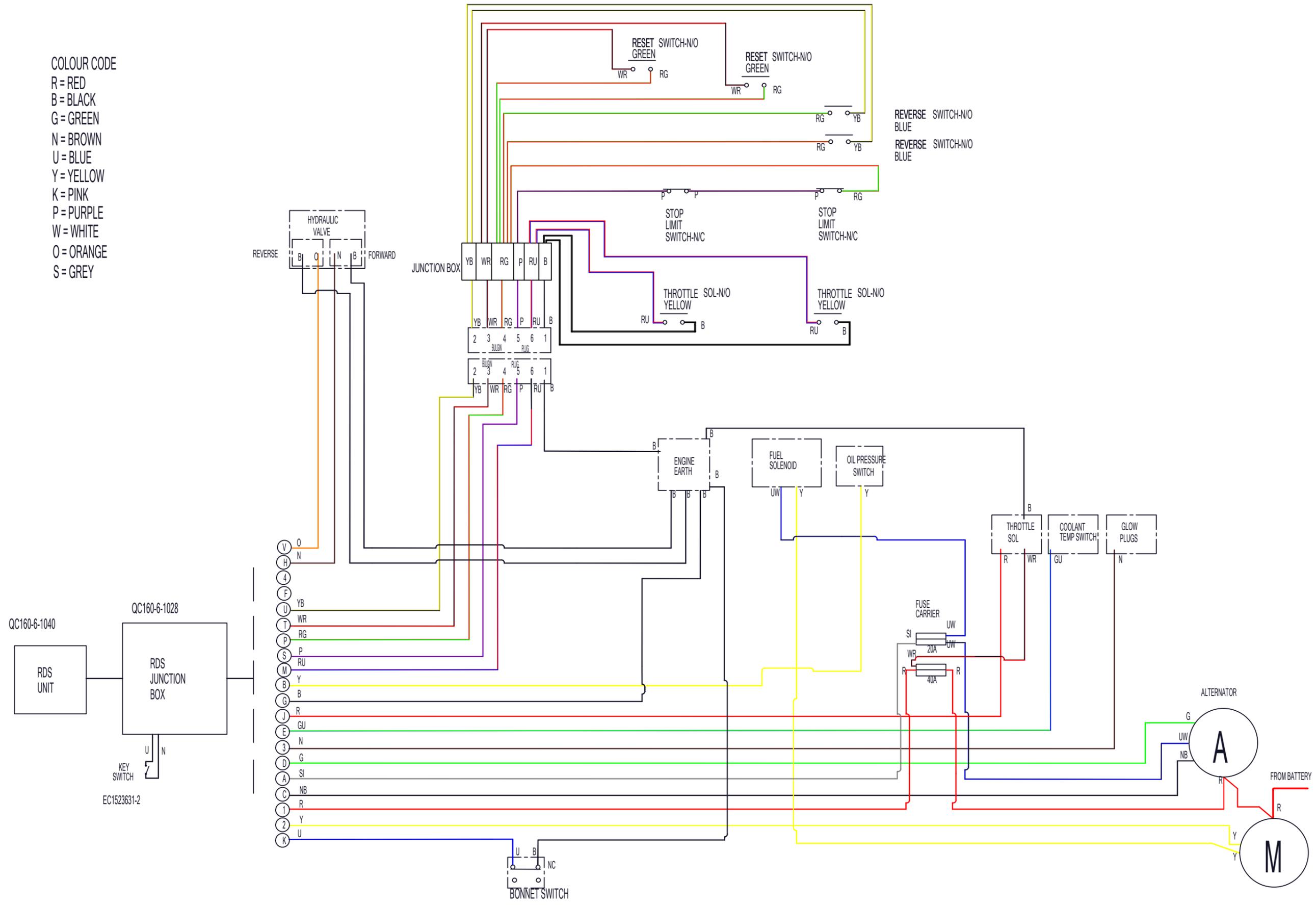


ARBORIST 190
HYDRAULIC
CIRCUIT



COLOUR CODE

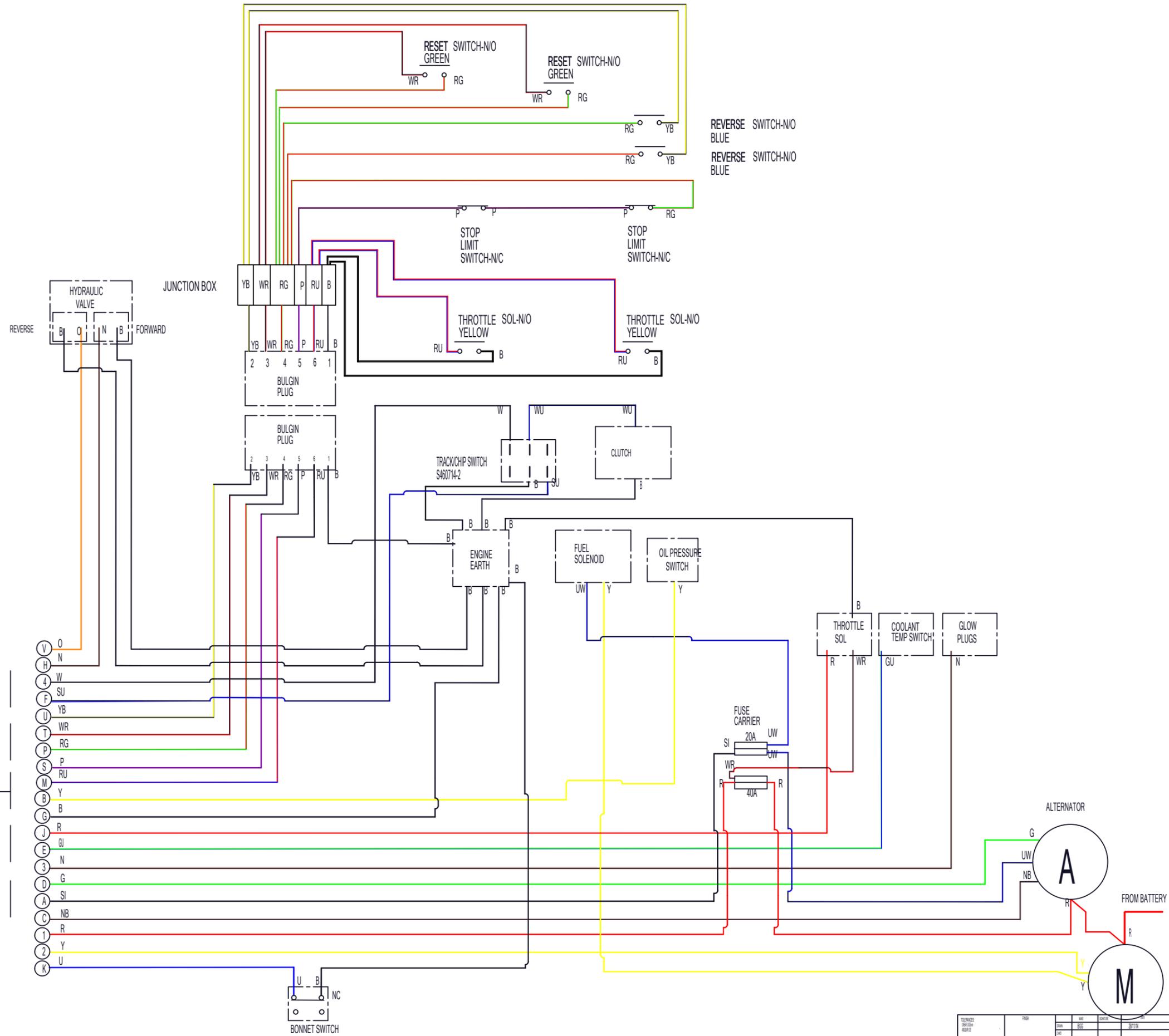
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- G = GREEN
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- Y = YELLOW
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- W = WHITE
- O = ORANGE
- S = GREY



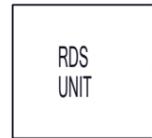
DESIGNED BY REVISED BY	DATE	SCALE	APP'D	DATE	TOLERANCES DIMENSIONS: ±0.1mm HOLE DIMENSIONS: ±0.1mm
GreenMech The Millers Road Kings Langley Herts. SG14 3NF					TITLE ARBORIST 190 MT ELECTRICAL FROM DEC 2015
REV A	AFTER SERIAL 17000 JUNCTION BOX REMOVED CONNECTIONS IN HARNESS	DR	APPRO	DATE	
REV B	MODIFICATION	DR	APPRO	DATE	

COLOUR CODE

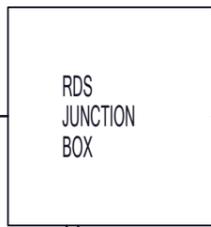
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- B = BLACK
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- W = WHITE
- O = ORANGE
- S = GREY



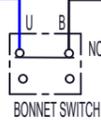
QC160-6-1040



QC160-6-1028



EC1523631-2



REV	DESCRIPTION	DATE	BY	APPD
1	AFTER SERIAL 17000 JUNCTION BOX REMOVED, CONNECTIONS IN HARNESS	08/01/14	AK	AK
2	MODIFICATION	08/01/14	AK	AK

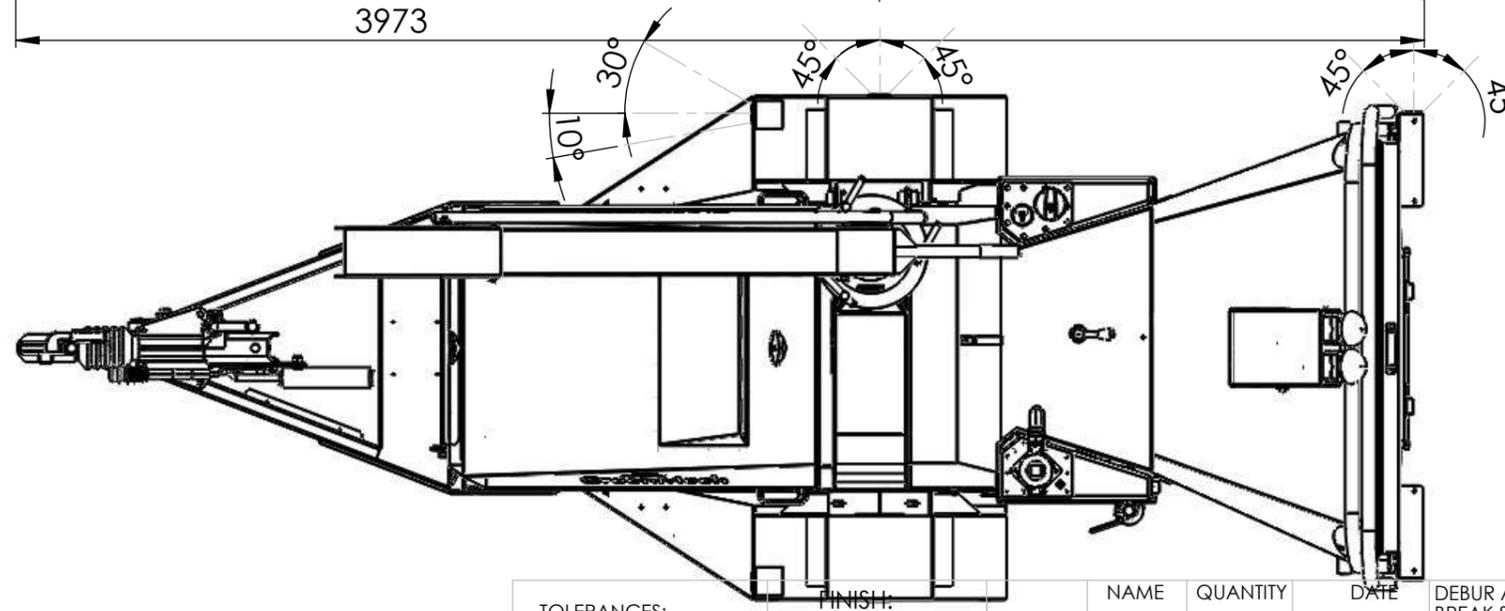
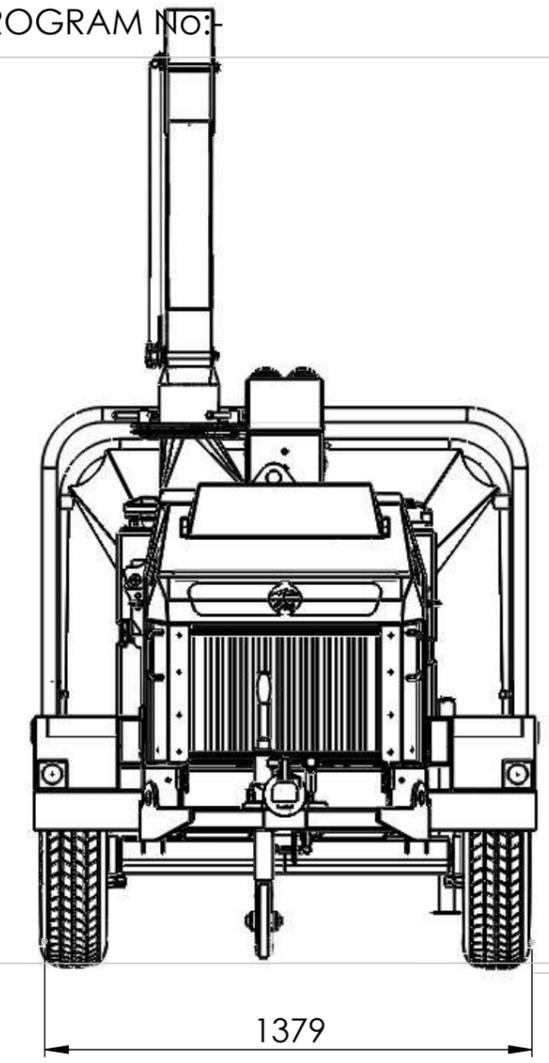
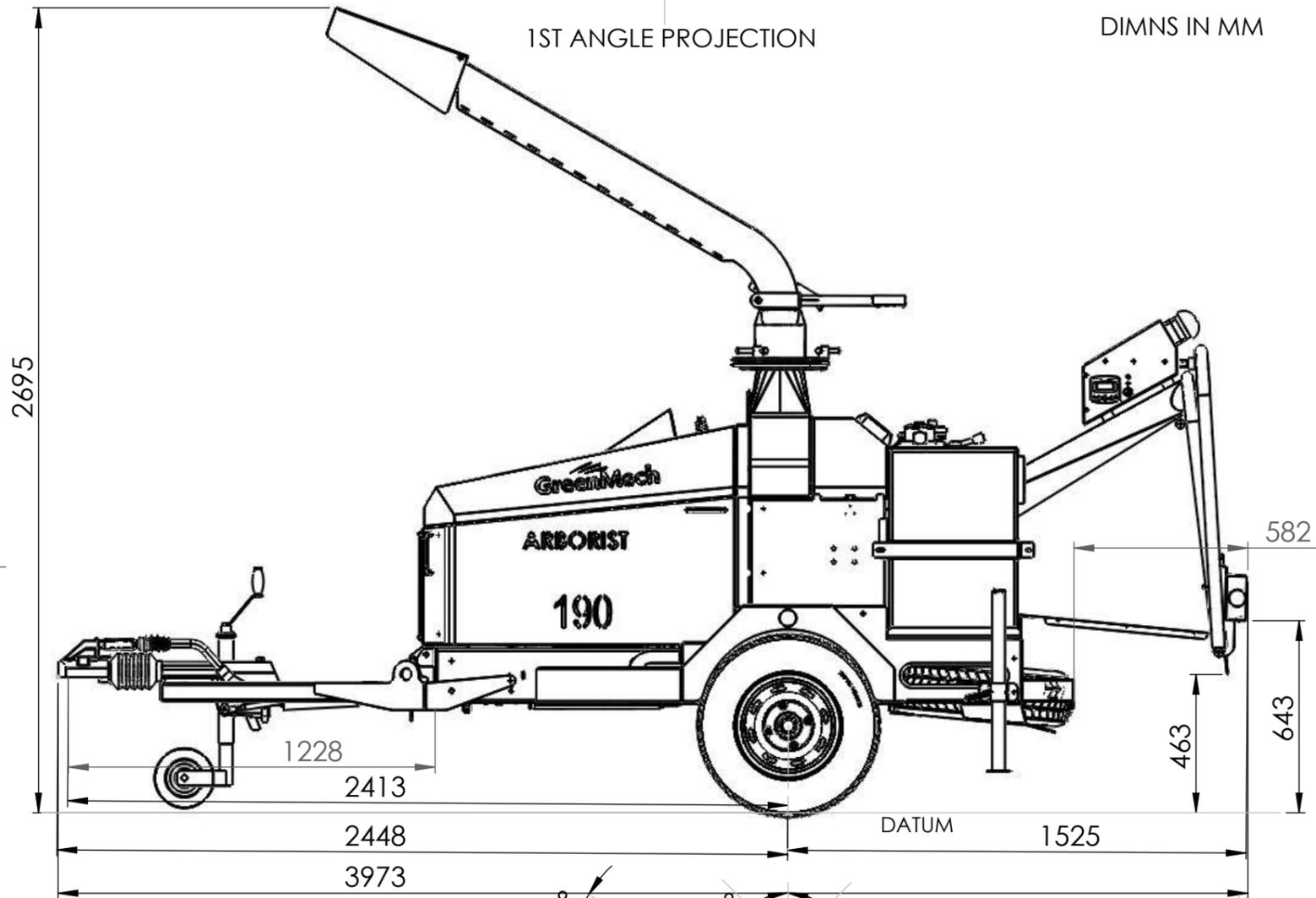
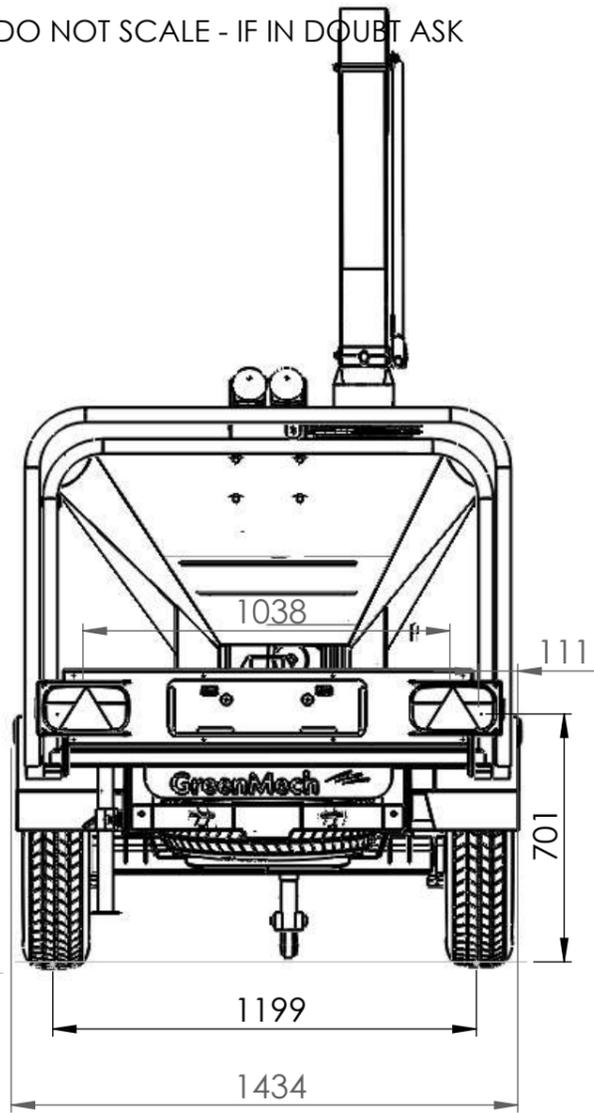
<p>GreenMech</p> <p>The Mill Industrial Park Kings Clough Alderley Tel: 01293 520000</p>	<p>TOLERANCES DIMENSIONS UNLESS OTHERWISE SPECIFIED</p> <p>ISO 28114</p> <p>ISO 28114</p> <p>ISO 28114</p>	<p>TOLERANCES DIMENSIONS UNLESS OTHERWISE SPECIFIED</p> <p>ISO 28114</p> <p>ISO 28114</p> <p>ISO 28114</p>	<p>TITLE</p> <p>ARBTRAK 190 ELECTRICAL FROM DEC 2015</p>
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DO NOT SCALE - IF IN DOUBT ASK

1ST ANGLE PROJECTION

DIMNS IN MM

PROGRAM NO.:



TOLERANCES:
LINEAR: 0.025MM
ANGULAR: 0.25°

FINISH:

NAME	QUANTITY	DATE	DEBUR AND BREAK SHARP EDGES
DRAWN RVMR		14/05/2014	
CHK'D			
APPVD BGG			

TOLERANCES
MACHINED PARTS +/- 0.025mm
FABRICATED PARTS +/- 1.0mm

ISSUE NO.

GreenMech Ltd
The Mill Industrial Park
Kings Coughton
Alcester
Warks B49 5QG Tel 01789 400044

Material & Thickness

TITLE:

Main assembly

Weight:

jig no:

DWG NO.
ARB190-MT Homologation

A3

REV	MODIFICATION	DRN	APPD	DATE
1				
2				
3				

SCALE:1:50

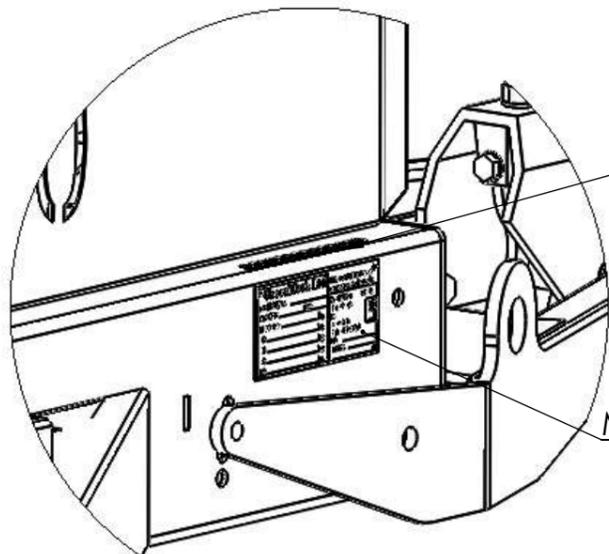
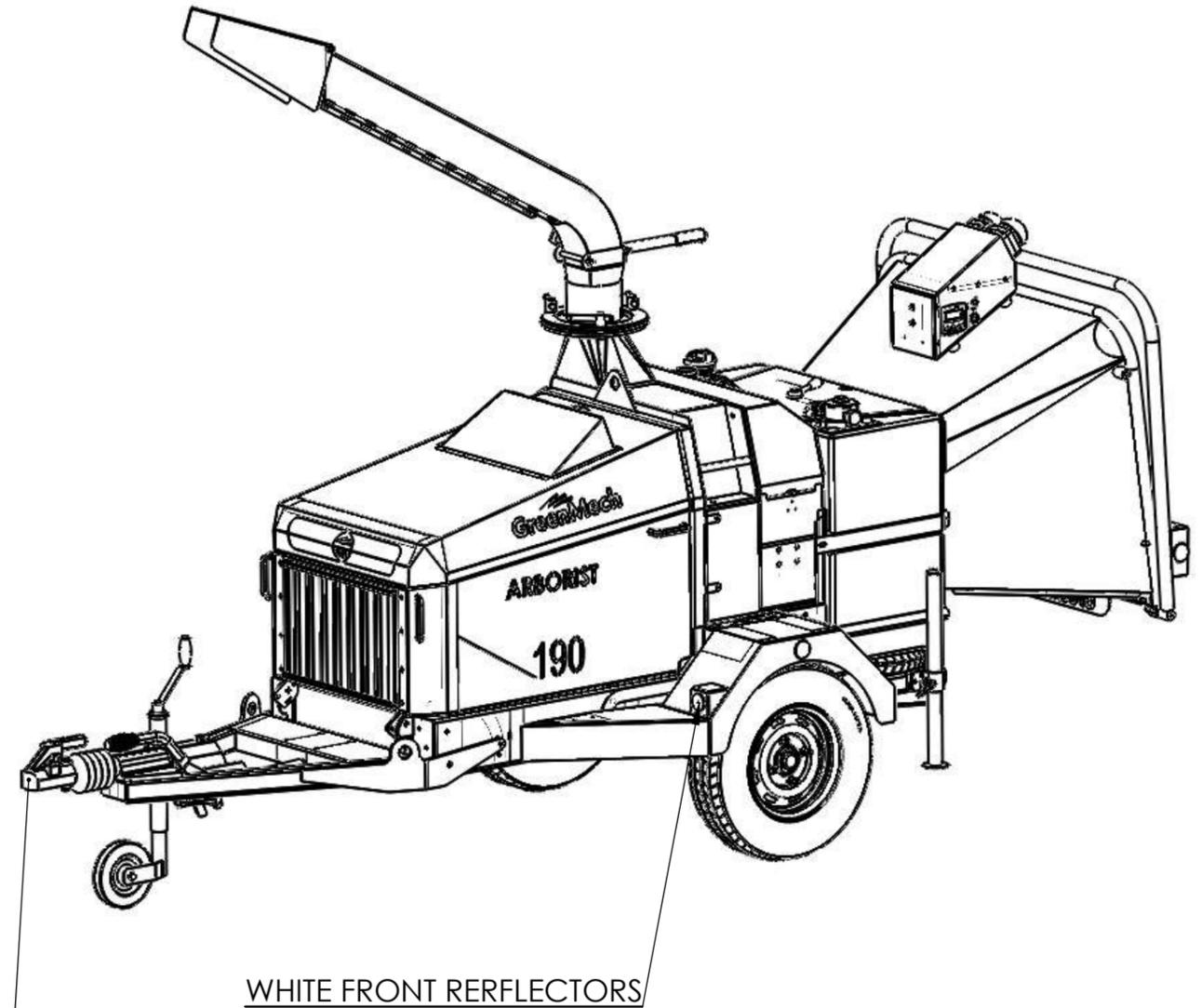
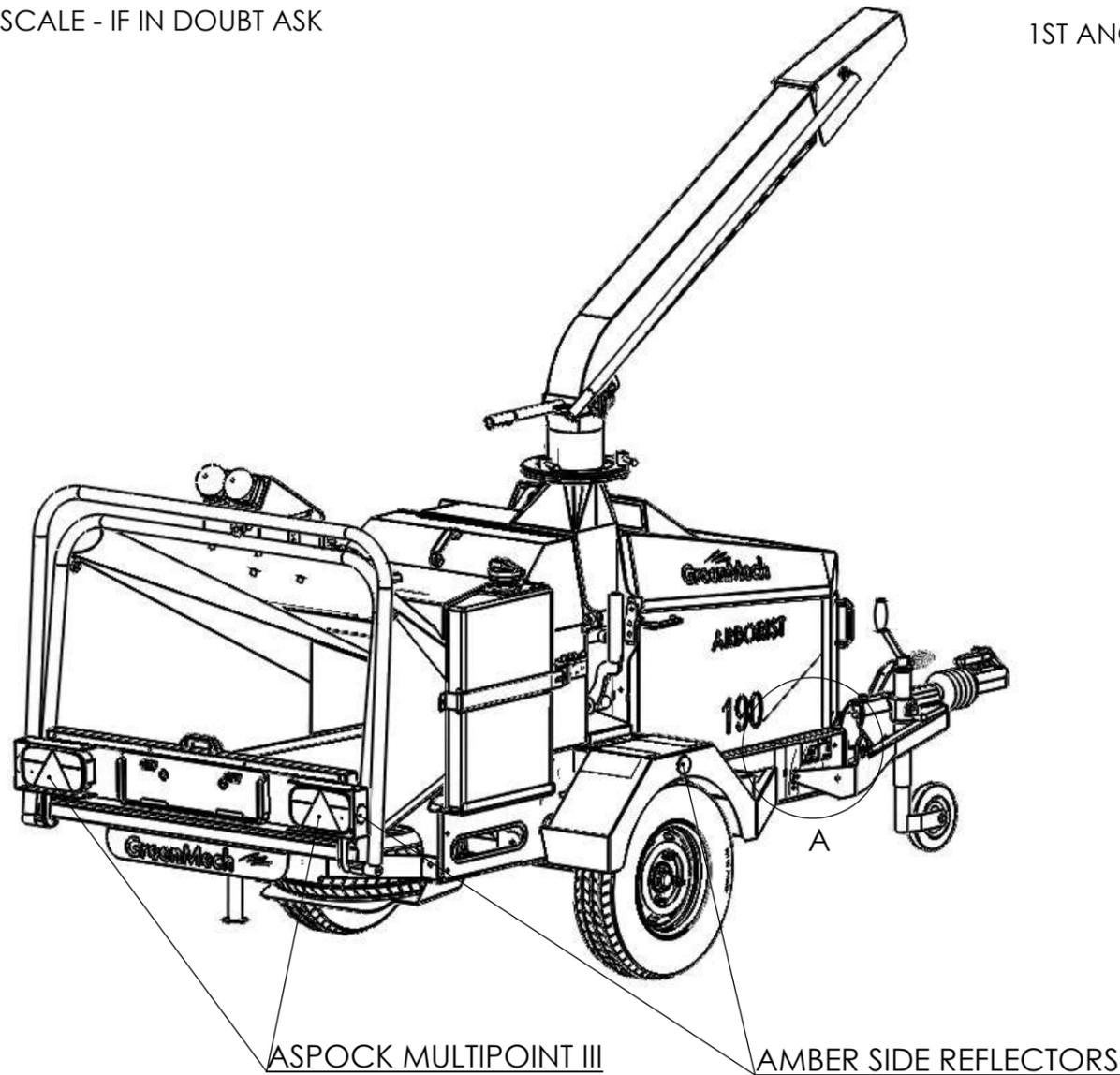
SHEET 1 OF 2

DO NOT SCALE - IF IN DOUBT ASK

1ST ANGLE PROJECTION

DIMNS IN MM

PROGRAM No:-



HARD STAMPED VIN NUMBER

MANUFACTURERS TYPE PLATE

DETAIL A
SCALE 1 : 5

AXLE DETAIL: INDESPENSION
BRAKES: KNOTT 20-2425/1
TYRES: 175R13C
COUPLING: BRADLEY MKIII HU3H

BRADLEY HU3H
HYDRATOW MKIII

TOLERANCES: LINEAR: 0.025MM ANGULAR: 0.25°	FINISH:	NAME	QUANTITY	DATE	DEBUR AND BREAK SHARP EDGES	TOLERANCES MACHINED PARTS +/- 0.025mm FABRICATED PARTS +/-1.0mm	ISSUE NO.
		DRAWN	RVMR	14/05/2014			
		CHK'D	BGG				

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TITLE:
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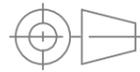
REV	MODIFICATION	DRN	APPD	DATE
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2				
3				

SCALE:1:50

SHEET 2 OF 2

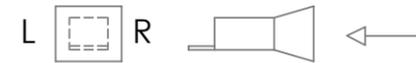
JIG NUMBER:
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DO NOT SCALE - IF IN DOUBT ASK

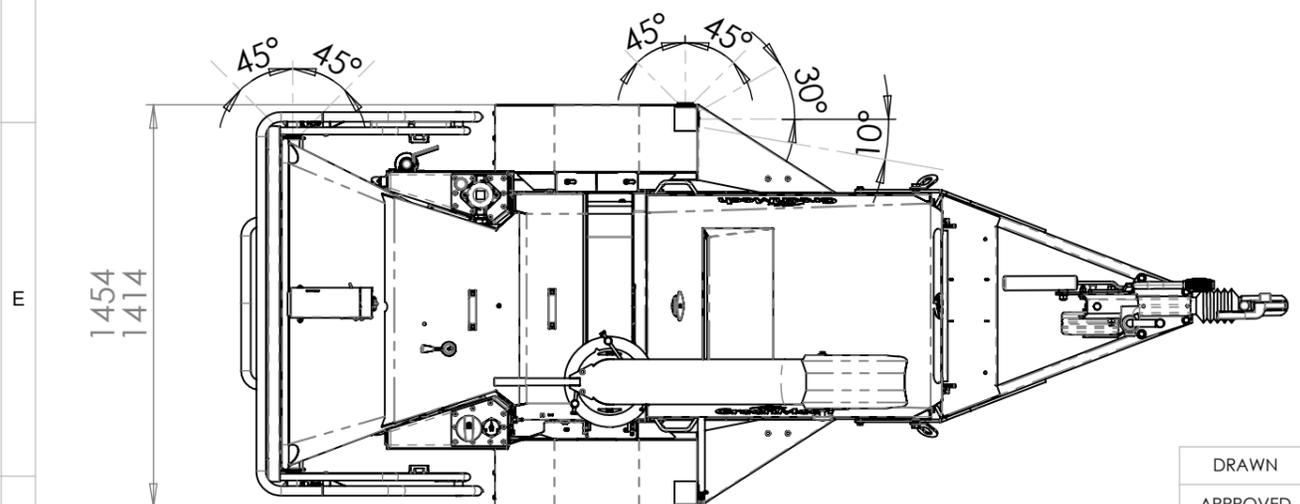
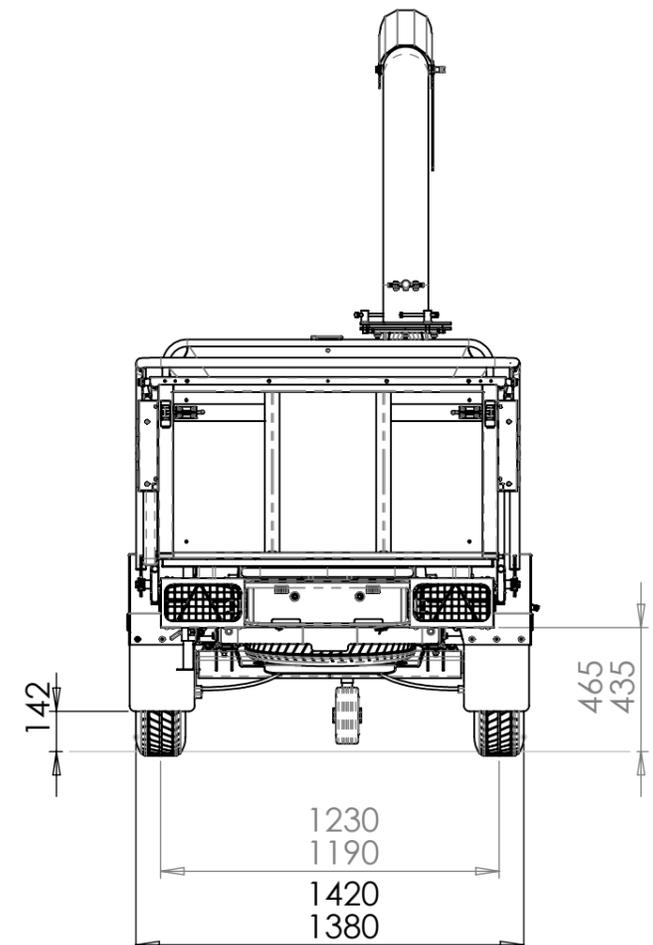
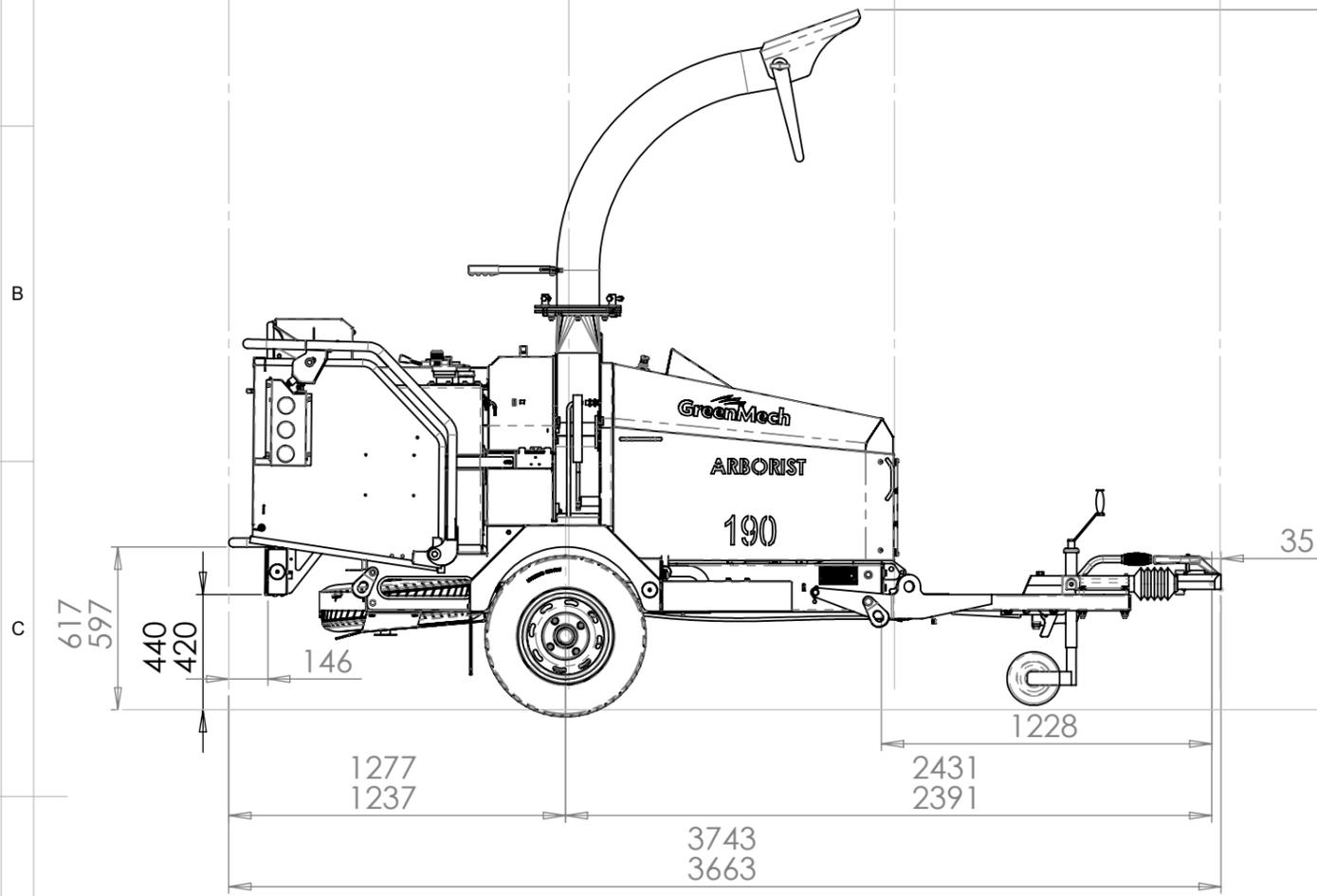


1ST ANGLE PROJECTION

DIMENSIONS IN mm



BARCODE:

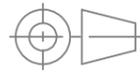


NAME	DATE	UNSPECIFIED TOLERANCES		FINISH:	REVISION:
RR	14/07/2017	MACHINED PARTS LINEAR: 0.25mm ANGULAR: 0.25°	FABRICATED PARTS LINEAR: +/- 1.0mm ANGULAR: 0.5°	N/A	1
GreenMech Ltd The Mill Industrial Park Kings Coughton Warwickshire B49 5QG United Kingdom Tel: +44(0)1789 400044 Fax: +44(0)1789 400167 E-mail: sales@greenmech.co.uk				DEBURR AND BREAK SHARP EDGES DESCRIPTION: ARBORIST 190 DRAWING NUMBER: REFERENCE NUMBER: 301001001	
APPROVED  GreenMech The Professionals' Choice COPYRIGHT GREENMECH LTD				MATERIAL SPECIFICATION: THICKNESS (mm): N/A SIZE (mm): N/A WEIGHT: 1260 KGkg	

REVISION	MODIFICATION	ORIGINATOR	DRAWN	DATE
E	ADDITION OF VARIABLE DIMENSIONS	RR	RR	14/07/2017
C	ADDITION OF ADJUSTABLE HITCH	RR	RR	14/07/2017
B	ADDITION OF ROUND DISCHARGE OPTION	RR	RR	14/07/2017
A	PREVIOUSLY CALLED 301001000 REAR FLAP	RR	RR	14/07/2017

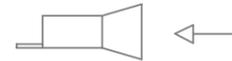
JIG NUMBER:
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DO NOT SCALE - IF IN DOUBT ASK

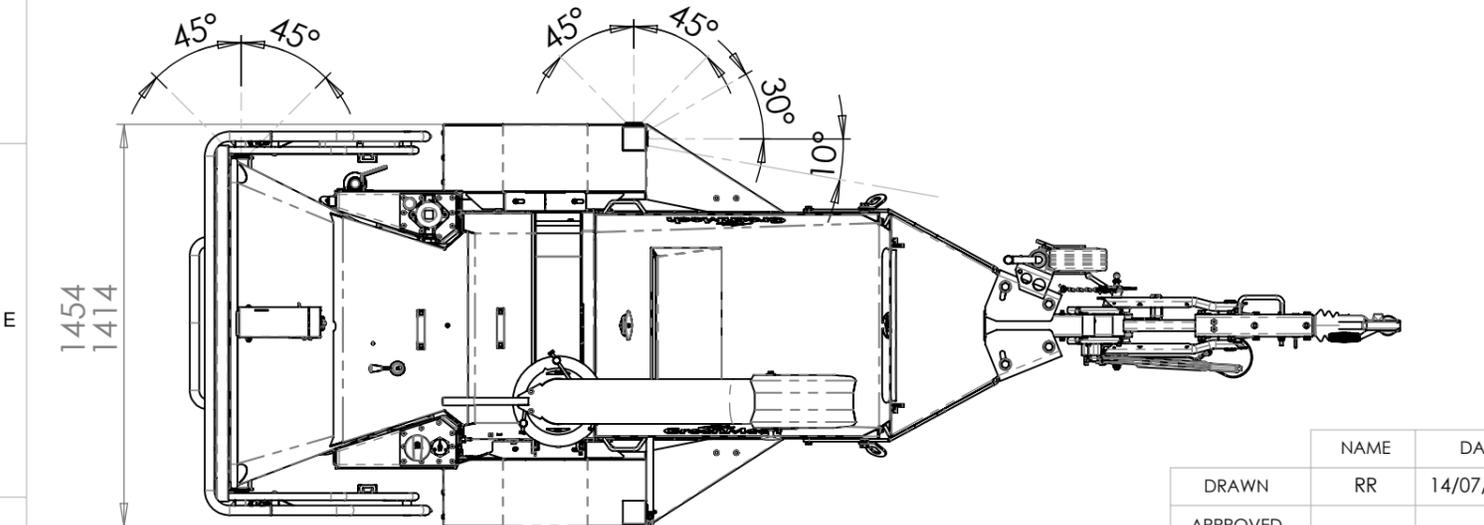
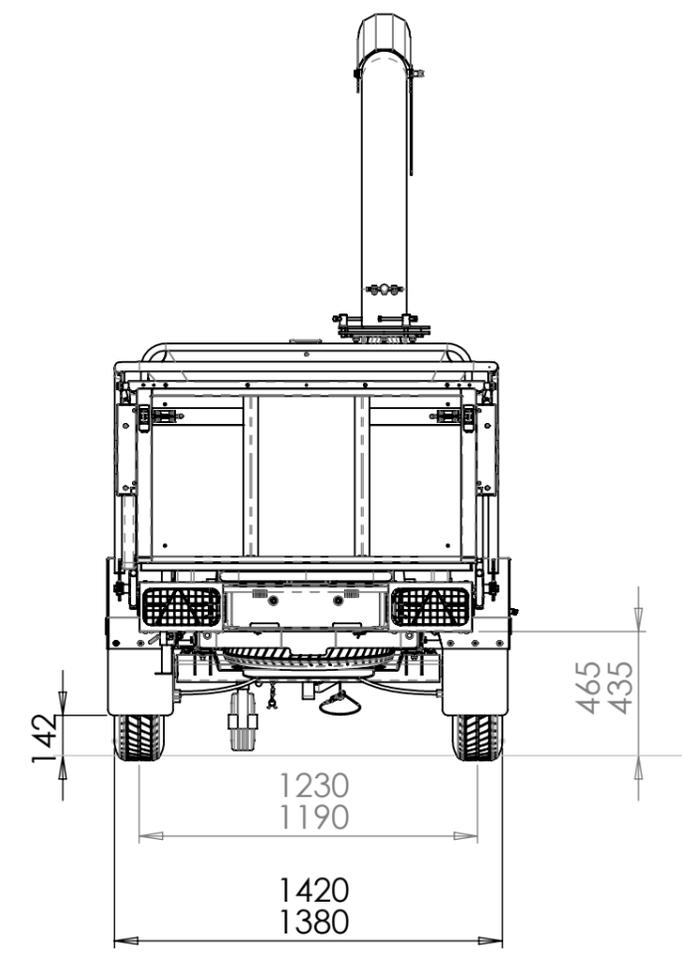
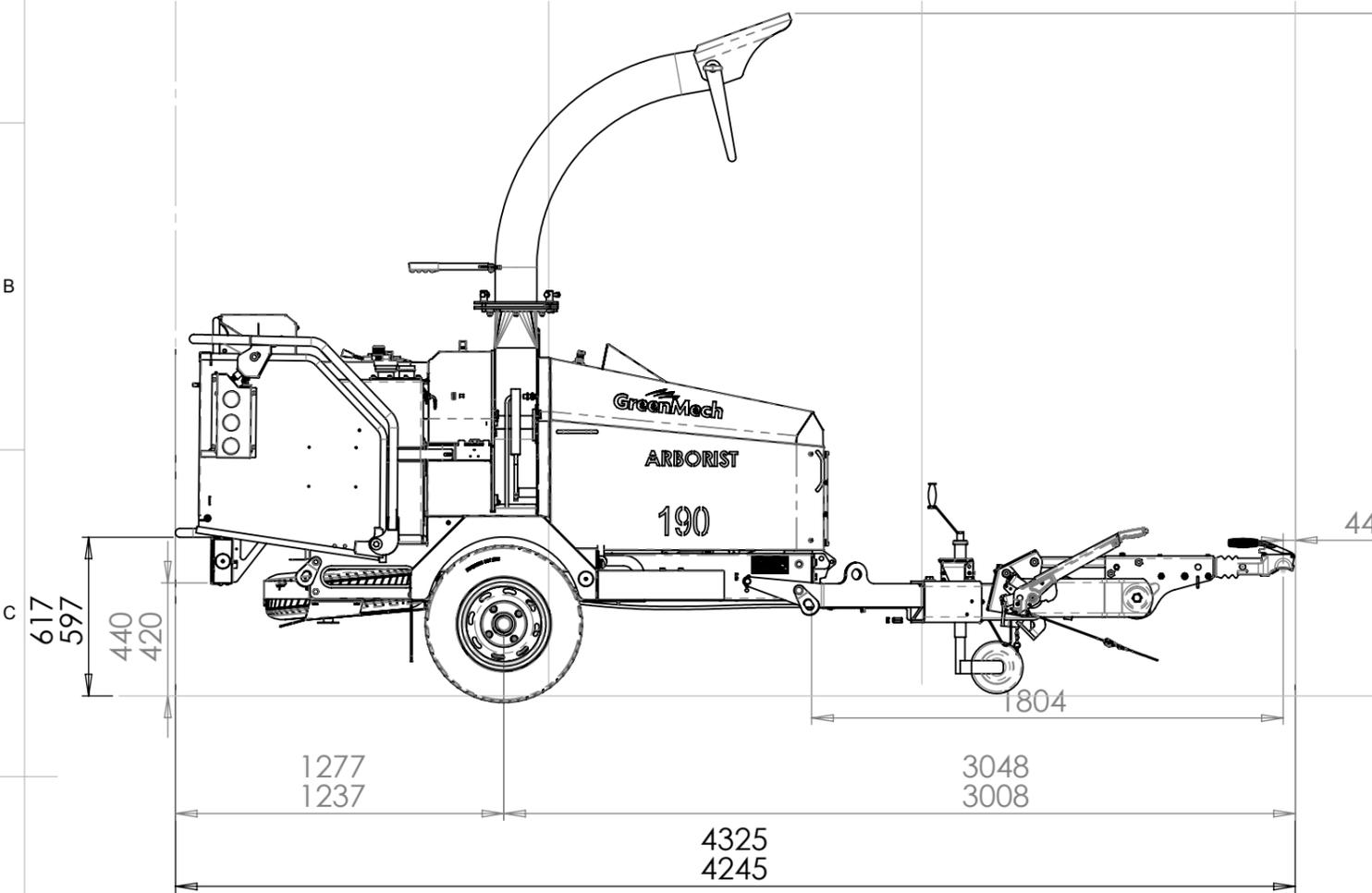


1ST ANGLE PROJECTION

DIMENSIONS IN mm



BARCODE:



NAME	DATE	UNSPECIFIED TOLERANCES		FINISH:	DEBURR AND BREAK SHARP EDGES	REVISION:
RR	14/07/2017	MACHINED PARTS LINEAR: 0.25mm ANGULAR: 0.25°	FABRICATED PARTS LINEAR: +/- 1.0mm ANGULAR: 0.5°	N/A		1
DRAWN					MATERIAL SPECIFICATION:	DESCRIPTION:
APPROVED						ARBORIST 190
GreenMech Ltd The Mill Industrial Park Kings Coughton Warwickshire B49 5QG United Kingdom Tel: +44(0)1789 400044 Fax: +44(0)1789 400167 E-mail: sales@greenmech.co.uk					THICKNESS (mm): N/A	DRAWING NUMBER:
COPYRIGHT GREENMECH LTD					SIZE (mm): N/A	REFERENCE NUMBER:
					WEIGHT: 1260 KGkg	301001001
						SCALE: 1:25
						SHEET 2 OF 3
						A3

REVISION	MODIFICATION	ORIGINATOR	DRAWN	DATE
E	ADDITION OF VARIABLE DIMENSIONS	RR	RR	14/07/2017
C	ADDITION OF ADJUSTABLE HITCH	RR	RR	14/07/2017
B	ADDITION OF ROUND DISCHARGE OPTION	RR	RR	14/07/2017
A	PRVIOUSLY CALLED 301001000 REAR FLAP	RR	RR	14/07/2017

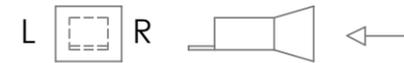
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DO NOT SCALE - IF IN DOUBT ASK

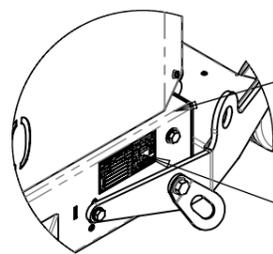


1ST ANGLE PROJECTION

DIMENSIONS IN mm



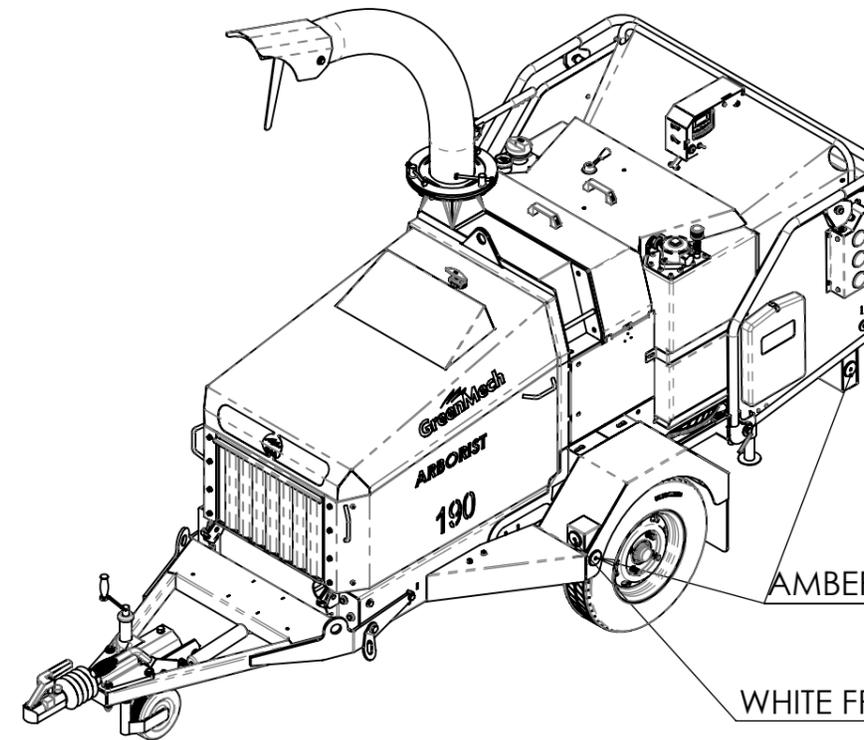
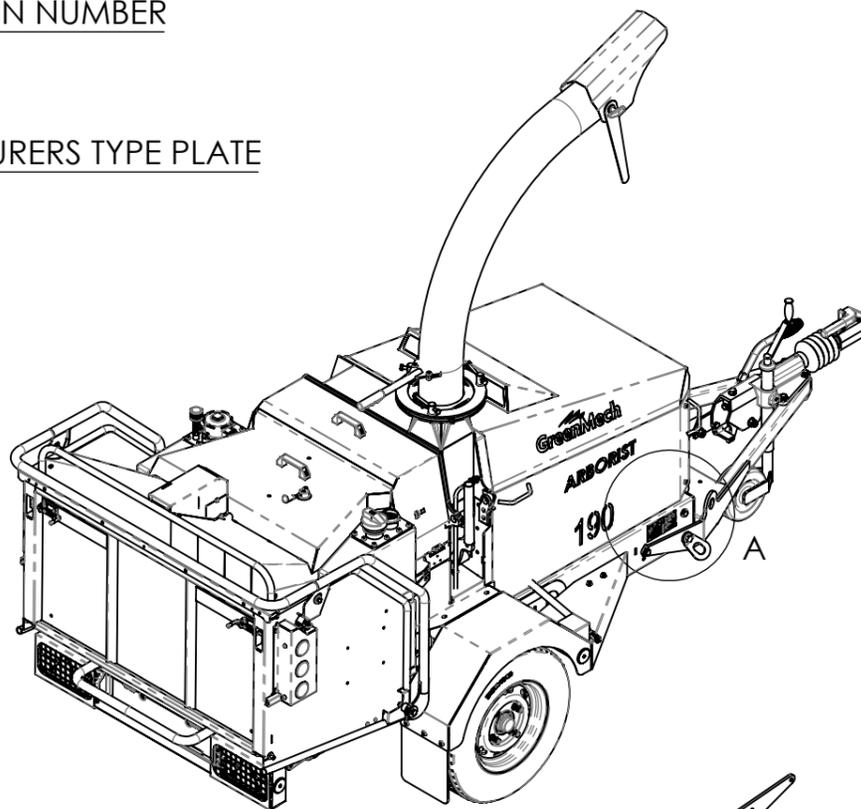
BARCODE:



STAMPED VIN NUMBER

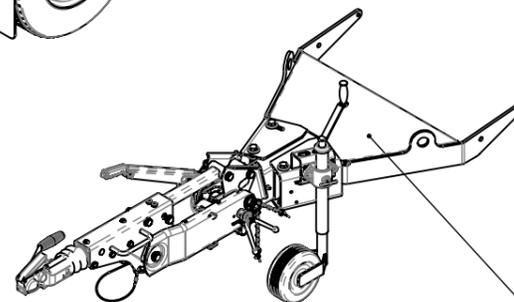
MANUFACTURERS TYPE PLATE

DETAIL A
SCALE 2 : 25



AMBER SIDE REFLECTORS

WHITE FRONT REFLECTORS



SEE DRAWING
4005215

REAR LAMP OPTIONS
FILAMENT
ASPOCK MULTIPOINT III
ASPOCK REGPOINT

LED
ASPOCK 41-1310-010
ASPOCK REGPOINT

AXLE DETAILS : INDESPENSION
BRAKES : KNOTT 20 - 2425/1
TYRES : 175 R13C
COUPLING : BRADLEY MKIII HUEH
: ALKO 161VB-2 M ADAPTER

REVISION	MODIFICATION	ORIGINATOR	DRAWN	DATE
E	ADDITION OF VARIABLE DIMENSIONS	RR	RR	14/07/2017
C	ADDITION OF ADJUSTABLE HITCH	RR	RR	14/07/2017
B	ADDITION OF ROUND DISCHARGE OPTION	RR	RR	14/07/2017
A	PRVIOUSLY CALLED 301001000 REAR FLAP	RR	RR	14/07/2017

NAME	DATE	UNSPECIFIED TOLERANCES		FINISH:	REVISION:
RR	14/07/2017	MACHINED PARTS LINEAR: 0.25mm ANGULAR: 0.25°	FABRICATED PARTS LINEAR: +/- 1.0mm ANGULAR: 0.5°	N/A	1
GreenMech Ltd The Mill Industrial Park Kings Coughton Warwickshire B49 5QG United Kingdom Tel: +44(0)1789 400044 Fax: +44(0)1789 400167 E-mail: sales@greenmech.co.uk				MATERIAL SPECIFICATION: THICKNESS (mm): N/A SIZE (mm): N/A WEIGHT: 1260 KGkg	



DEBURR AND BREAK SHARP EDGES		REVISION:
DESCRIPTION:		1
DRAWING NUMBER:		
REFERENCE NUMBER:		
ARBORIST 190		
301001001		
SCALE: 1:25	SHEET 3 OF 3	A3




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