



# Grass Deflector™

## Owner's Manual

REV: 2026.7.24



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## Kage Products for Lawn Mowers

KAGE offers two products that help control the grass clippings from your mower: the Grass Katcher and Grass Deflector. Both the Katcher and Deflector use the same mounting systems and wiring harnesses, making swapping from one product to the other quick and simple. The mounting assembly uses a system of manifolds and brackets, which are available for many common mower brands and styles, including zero-turns, stand-ons, and walk-behinds.

**Fig. 1 Grass Katcher on a Wright stand-on**



**Fig. 2 Grass Deflector on a FERRIS zero-turn**



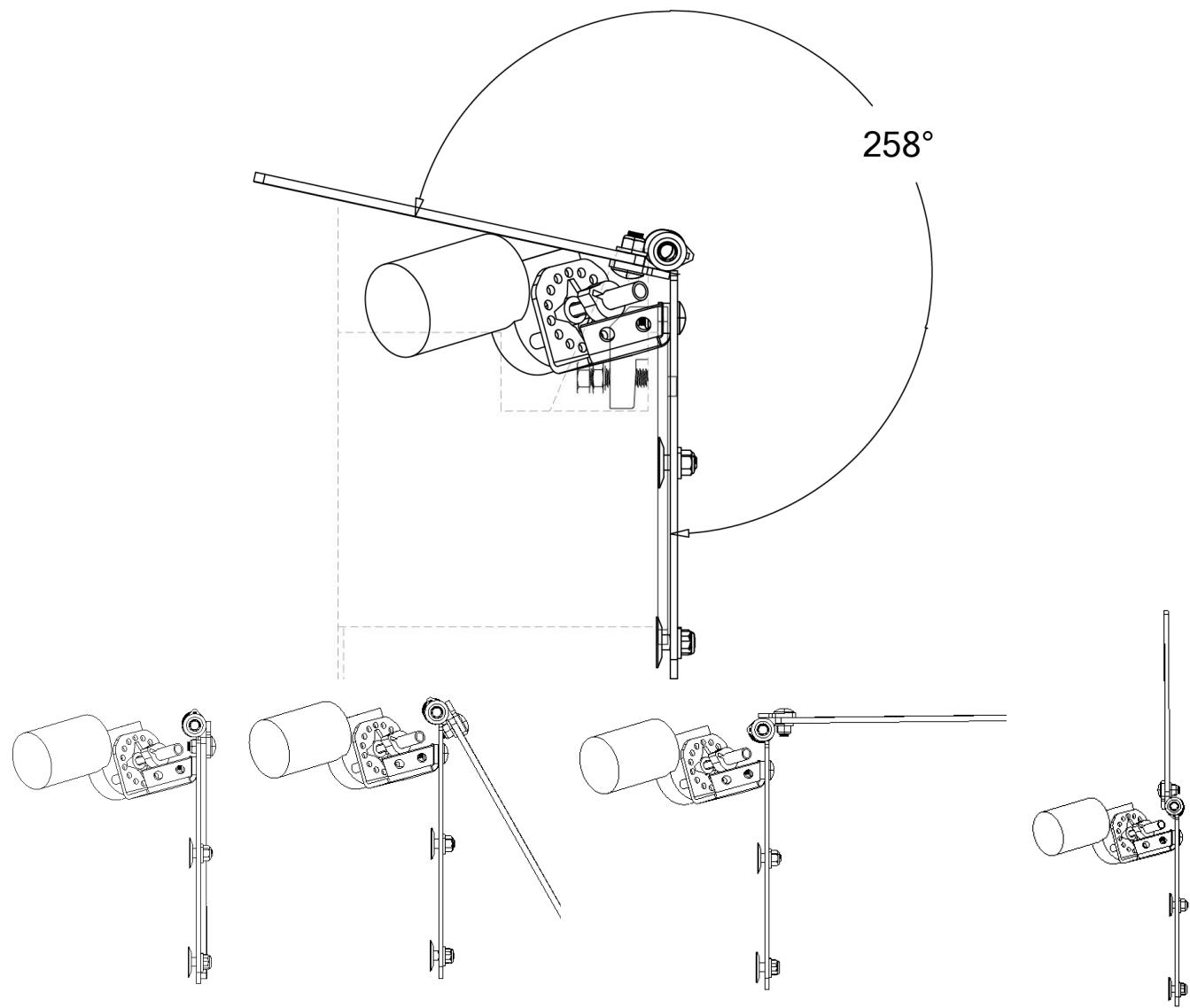
**The Kage Grass Deflector** is a robust mower chute blocker with an electric motorized open and close mechanism. The deflector flap can open up past the mower deck to a maximum to ensure the operator can get as close to obstacles as possible and reduce damage to the flap. The flap is spring loaded, which also prevents damage to the flap, mower, and obstacles.

**Fig. 3 Grass Deflector on a Wright zero-turn**



## Grass Deflector Specifications

| Available Mowers                      | Weight | Cycles per minute | Flap Rotation                                                             |
|---------------------------------------|--------|-------------------|---------------------------------------------------------------------------|
| Refer to “All intake Manifolds” sheet | 20 lbs | 38                | Can fold up to 258 degrees from the deck opening depending on mower model |



# Grass Deflector Introduction

## Features & Accessories

**Magnetic mount:** Secure the rocker switch quickly and temporarily on any metal surface on the mower (Fig. 1)

**Handlebar mount:** If you prefer a semi-permanent or more accessible switch mount, use the included zip ties to secure the handlebar mount to the mower's handlebars. (Fig. 2)

**Battery clamps:** Quickly connect and disconnect your wiring harness from the mower's battery (Fig. 3)

**Ring terminals:** If you prefer a more secure battery connection, use the provided ring terminals. You will need to cut off the battery clamps, strip the cut ends, and crimp the ring terminals onto the bare wire ends. (Fig. 4)

**Block-off plate:** If your mower has a large or curved deck opening, use the block-off plate to prevent grass from leaking (Fig. 5)

*Fig. 1 Magnetic mount*



*Fig. 2 Handlebar mount*



*Fig. 3 Battery clamps*



*Fig. 4 Ring terminals*



*Fig. 5 Block-off plate on a Grass Deflector*



# Grass Deflector Install and Setup

## Initial unpacking and setup

Included in the Grass Deflector box will be the Deflector assembly, a manifold kit that is compatible with your mower, and a bag containing the Grass Deflector wiring harness.

Locate the included elevator bolts and flange nuts. (Fig. 1)

SKIP THESE NEXT 2 STEPS IF YOU HAVE THE FERRIS SPECIFIC MANIFOLD:

Find the spacer piece. (Fig. 2)

Arrange the manifold, Frame Plate Extension, and deflector assembly in the order shown in Figure 3.

FOR THE FERRIS MANIFOLD:

Refer to page 22 for instructions on drilling the flap and installing the flap extensions.

Install the elevator bolts with the bolt heads facing toward the mower deck. (Fig. 4)

**Fig. 1 Elevator Bolts**



**Fig. 2. Frame Plate Extension**



**Fig. 3 Deflector assembly**



**Fig. 4 Bolts installed**



# Grass Deflector Install and Setup

## Initial unpacking and setup

Next, remove any chute flaps or brackets on your deck surface that will interfere with the Deflector installation or operation. After your deck is clear, install your deck bracket/adapter if one is needed for your mower model. (Fig. 1) Go to pages 9-10 to see how each manifold and bracket should look after installation.

Install the Deflector on your mower. (Fig. 2) If your manifold has one or more adjustment bolts, tighten them until the deflector is stable. (Fig. 3) If your mower requires a clamp kit instead, see page 8 to install.

If using the Universal magnetic manifold, be sure you have equal spacers on each side so that the magnets are sitting flat on the deck. Double-check that the bottom of the Deflector is even with the bottom of the deck.

Take your wiring harness out of the bag with your preferred switch mount. Make sure the switch harness is plugged into the battery harness. Attach the battery clamps to the mower's battery. Mount your switch wherever desired. (Fig. 4) If using the magnetic mount, the bolt can be cut shorter if desired.

**Fig. 1 Bracket installed on a Gravely**



**Fig. 2 Deflector installed on a Bobcat**



**Fig. 3 Tightening bolt on an Exmark manifold**



**Fig. 4 Switch placement**



# Grass Deflector Install and Setup

Additional parts for Wright and SCAG manifolds

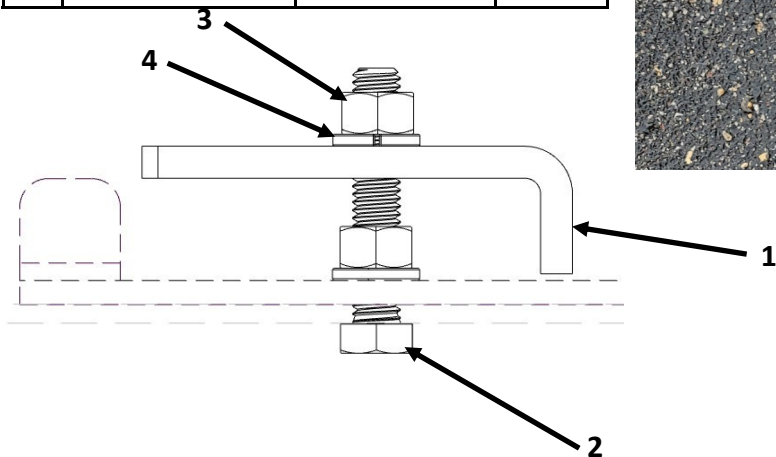
WRIGHT:

| # | Part Name:                   | Part Number | Quantity |
|---|------------------------------|-------------|----------|
| 1 | Wright Intake Manifold Brace | 230-2002    | 1        |
| 2 | Hex Bolt GR5 5/16-18 x 1     | 92865A583   | 1        |
| 3 | Flange Locknut 5/16-18       | 92018A320   | 1        |



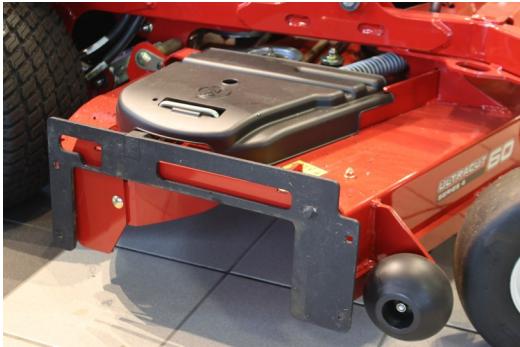
SCAG:

| # | Part Name:                 | Part Number  | Quantity |
|---|----------------------------|--------------|----------|
| 1 | Grass Deflector SCAG Clamp | 230-2001     | 1        |
| 2 | Hex Bolt GR5 3/8-16x 2     | 92865A632    | 1        |
| 3 | Hex Nut, 3/8 - 16          | 95462A031    | 2        |
| 4 | Lockwasher, 3_8            | ROC-8076-031 | 2        |



Intake Manifold Installation References

Exmark/Bobcat:



Gravely/Ariens



TORO:



Wright:



## Intake Manifold Installation References

### SCAG:

Note: Two 3/8 holes must be drilled into the deck for mounting bracket. When marking holes to drill, have the manifold installed and position it far enough over the deck that the manifold is flush and flat against the opening.

KAGE highly recommends to install your SCAG Turbo Baffle (SCAG part #424212) before installing this manifold to prevent any interference



### Gravely ZT, ZT X, ZT XL:



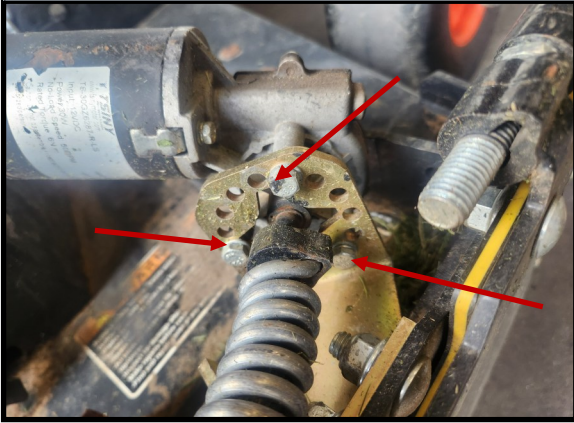
### Ferris:

### Universal Magnetic



## Motor Adjustment

**Fig. 2 Motor bolts**



To replace or adjust the motor, first move the flap into the middle of its range. This will ensure that there is no tension on the spring. (Fig. 1)

Remove the 3 bolts and rotate the motor as needed to fit your mower. (Fig. 2)

Reinstall the 3 bolts.

**Fig. 1 Flap position**



## Block-off plate

If your mower has a deck with a curved opening or gap at the back, the Block-off plate can be installed to keep the grass contained. (Fig. 3)

Bend the Block-off plate to fit your deck, either by clamping it in a vice, or bolt it to your manifold and use it as a lever on a flat surface.

Install the block-off plate so it sits between the manifold and deflector. (Fig. 4)

**Fig. 3 Block-off plate**



**Fig. 4 Block-off plate installation**



## Care and Use Instructions

If installing a Universal Magnetic Manifold, do not drop the manifold onto the mower deck. The magnets can shatter if dropped.

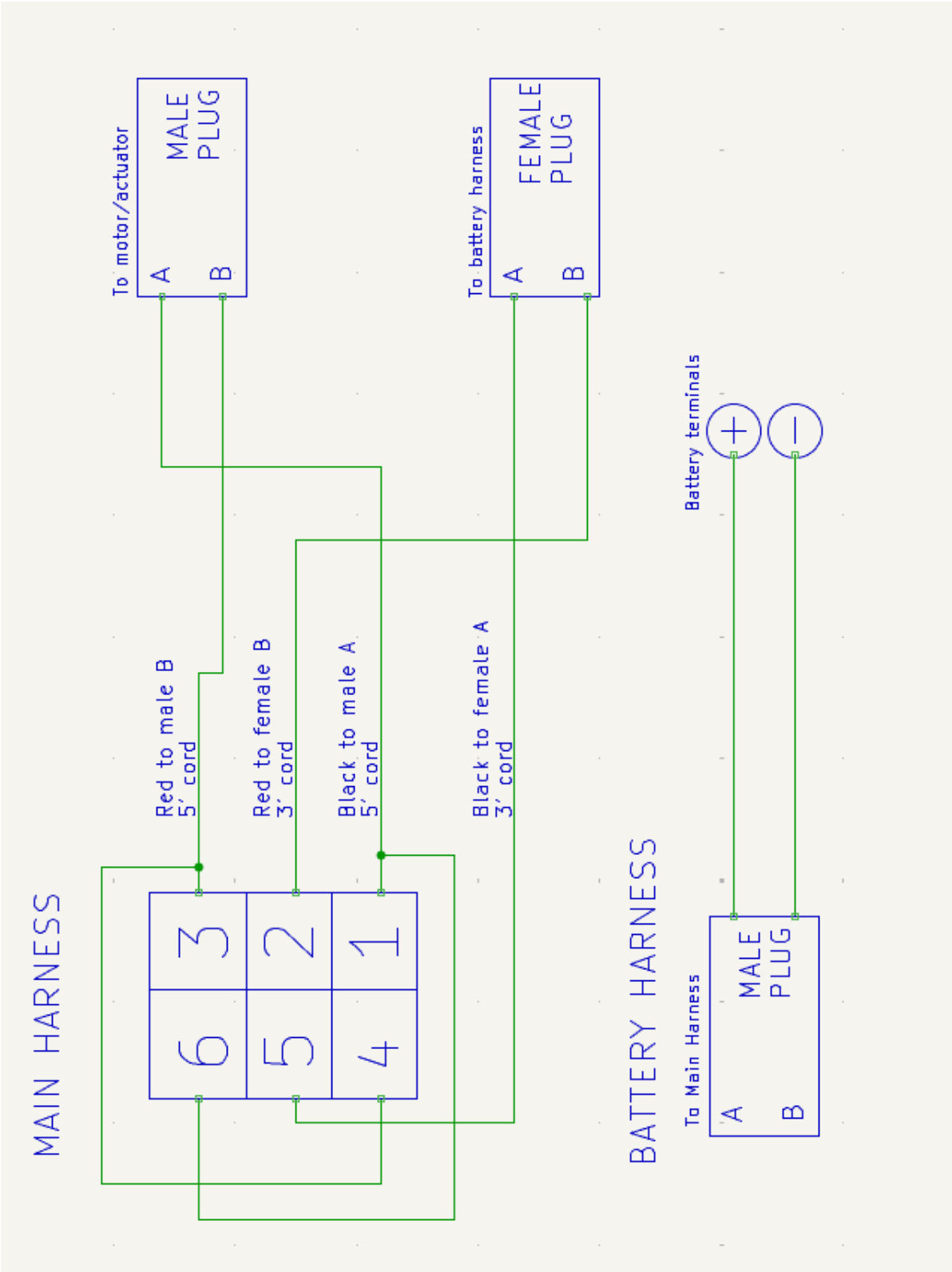
Keep the wiring harness away from moving parts, such as wheels and belts. Use zip-ties or electrical tape to keep the harness secured.

Do not hold the rocker switch in either direction longer than necessary, doing so will prevent the motor from stalling and burning out

When installing, be sure the motor is not in contact with the mower deck.

The motors are waterproof, however use caution when washing the deflector/mower with high pressure water.

Wire Harness





# All Intake Manifolds

## Exmark/Bobcat Intake Manifold

P/N: 10-762

Laser Z, Quest, Radius, Vertex, Turf-Tracer, Bobcat



## Wright Intake Manifold

P/N: 10-867

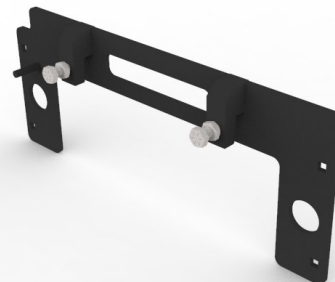
Stander B, X, ZK, Walk-Behinds, zXL, zXT



## Toro Intake Manifold

P/N: 10-756

Z Master, Titan



## Gravely/Ferris/Ariens Manifold Adaptor

P/N: 10-965

Note: Ferris w/ Grass Deflector should use P/N 10-868

Pro-Turn, ZT HD, Ariens Zenith, Apex, 300S, 500S, IS Series, ISX Series, SRS

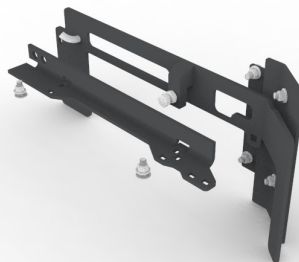


## Ferris GD Manifold Adaptor

P/N: 10-868

Note: For Grass Deflector only

300S, 500S, IS Series, ISX Series, SRS Stand-on,

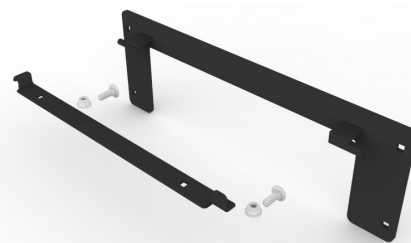


## SCAG Manifold Adaptor

P/N: 10-967

Note: We recommend using this in combination with SCAG part #424212 (Turbo Baffle w/ Catcher)

Turf Tiger II, Cheetah II, Tiger Cat II, Patriot



## Gravely ZT Manifold Adaptor

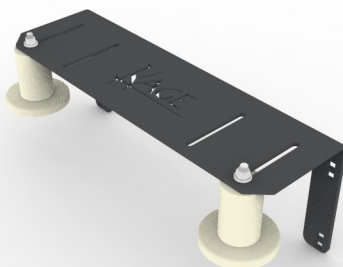
P/N: 10-971

ZT, ZT X, ZT XL



## Universal Magnetic Adaptor

P/N: 10-901



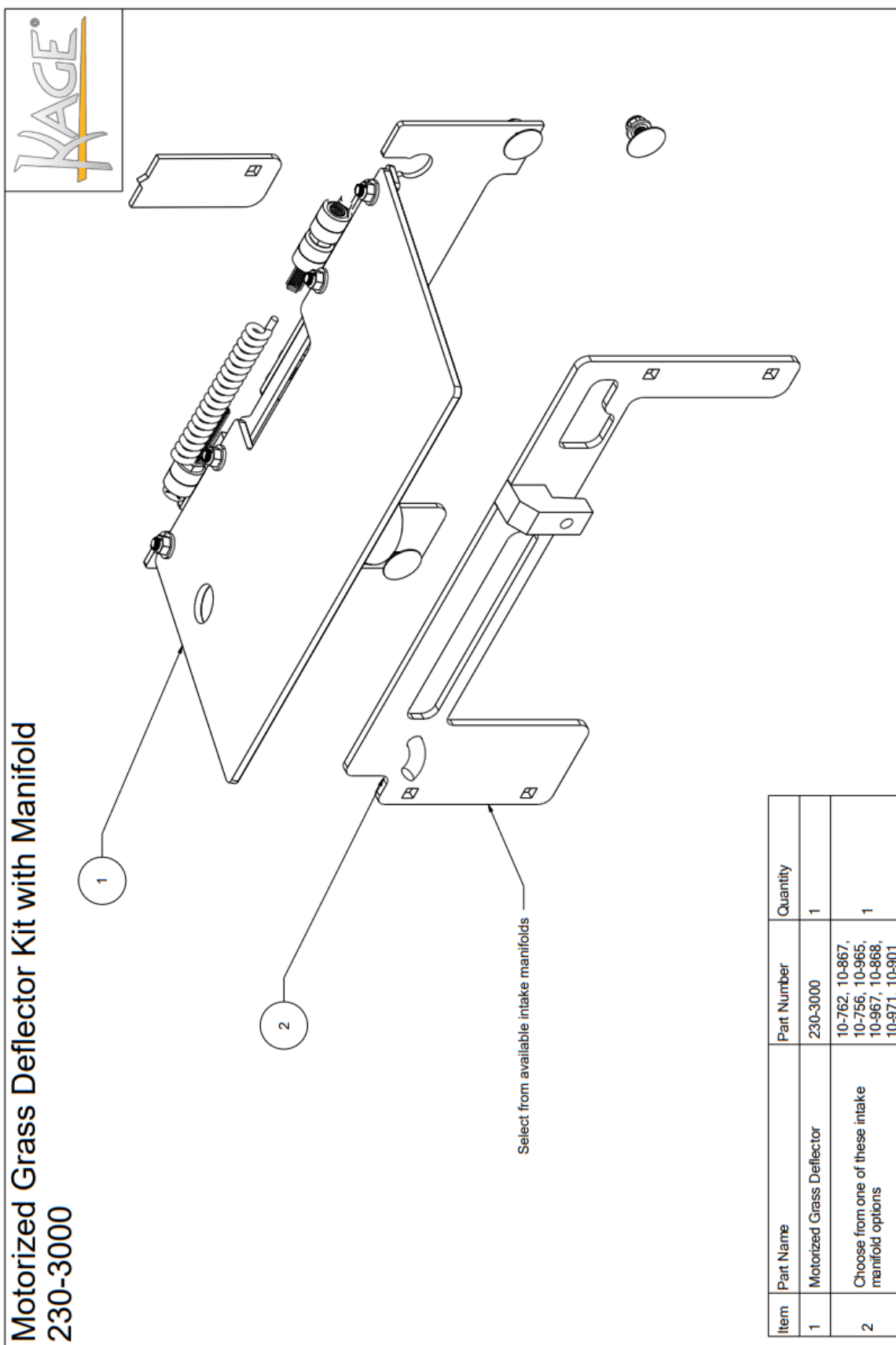
### Motorized Grass Deflector Assembly 230-4000

| Item | Part Name                                | Part Number  | Quantity |
|------|------------------------------------------|--------------|----------|
| 1    | Plastic Grass Flap                       | 122-5976     | 1        |
| 2    | Grass Deflector Frame                    | 122-8100     | 1        |
| 3    | Carriage Bolt GR5, 3/8 - 16 x 1          | ROC-2131-624 | 6        |
| 4    | Grass Catcher Harness                    | 10-200       | 1        |
| 5    | Grass Deflector Left Hand Motor Assembly | 230-3100     | 1        |
| 6    | Grass Deflector Flap Bracket             | 122-8200     | 1        |
| 7    | Flange Locknut, 3_8 -16                  | 93298A130    | 10       |
| 8    | Grass Deflector Motor Bracket            | 122-8322     | 1        |
| 9    | Hex Bolt GR5 1_2 - 13 x 3.5              | 92865A726    | 2        |
| 10   | Hex Nylock Nut 1/2 - 13                  | 90566A033    | 2        |
| 11   | Grass Deflector Torsion Spring           | 9588K59-K    | 1        |
| 12   | Elevator Bolt 3-8 -16-1                  | 92670A824    | 4        |
| 13   | Grass Deflector Owner's Manual           | 122-6200     | 1        |

The diagram illustrates the assembly of the Motorized Grass Deflector. It shows the motor (5) mounted on a bracket (8), which is then attached to the deflector frame (2). The frame is connected to the plastic grass flap (1) using carriage bolts (3) and locknuts (7). A torsion spring (11) is shown attached to the frame and the flap. An elevator bolt (12) is shown at the bottom of the frame. The KAGE logo is in the top left corner.

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## Motorized Grass Deflector Kit with Manifold 230-3000



| Item | Part Name                                        | Part Number                                                             | Quantity |
|------|--------------------------------------------------|-------------------------------------------------------------------------|----------|
| 1    | Motorized Grass Deflector                        | 230-3000                                                                | 1        |
| 2    | Choose from one of these intake manifold options | 10-762, 10-867,<br>10-756, 10-965,<br>10-967, 10-868,<br>10-971, 10-901 | 1        |

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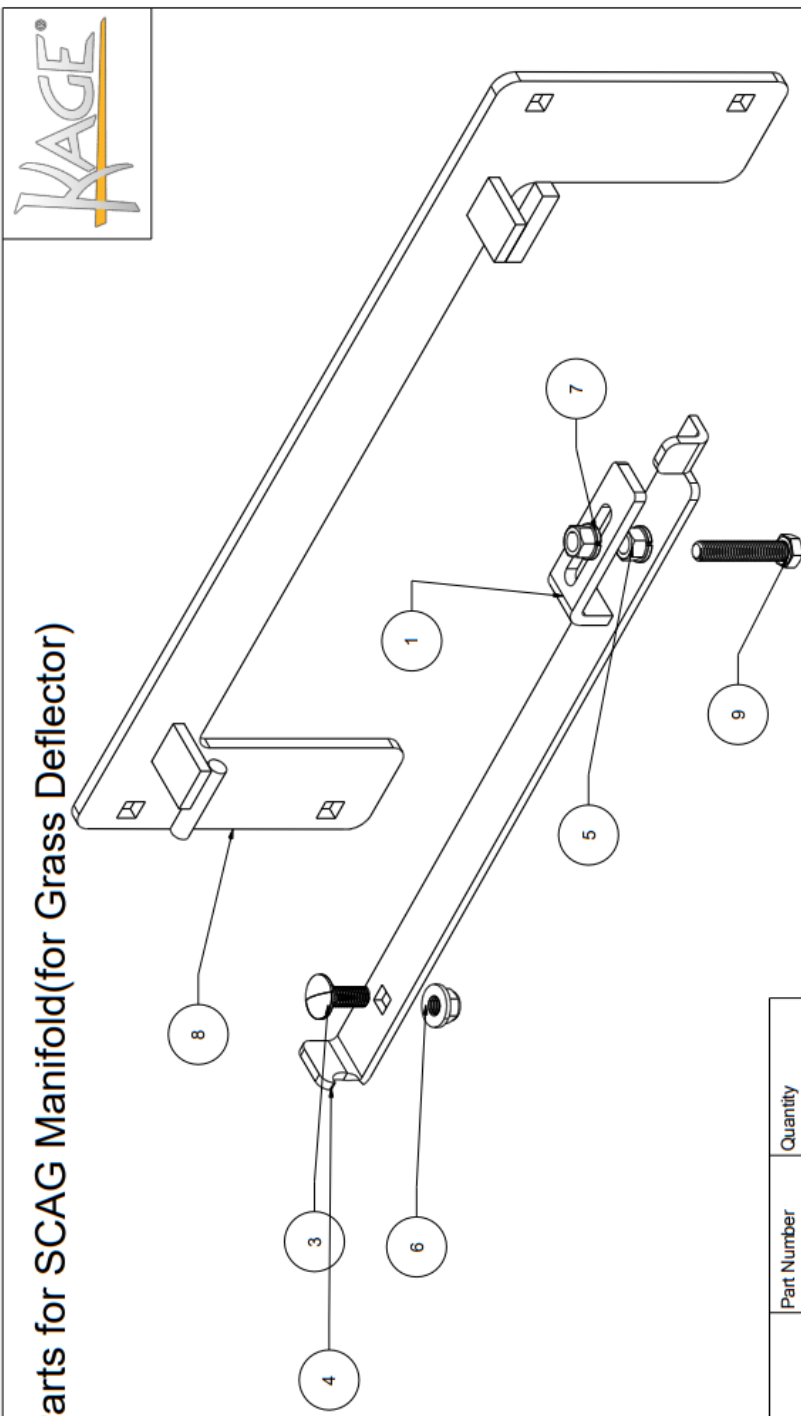
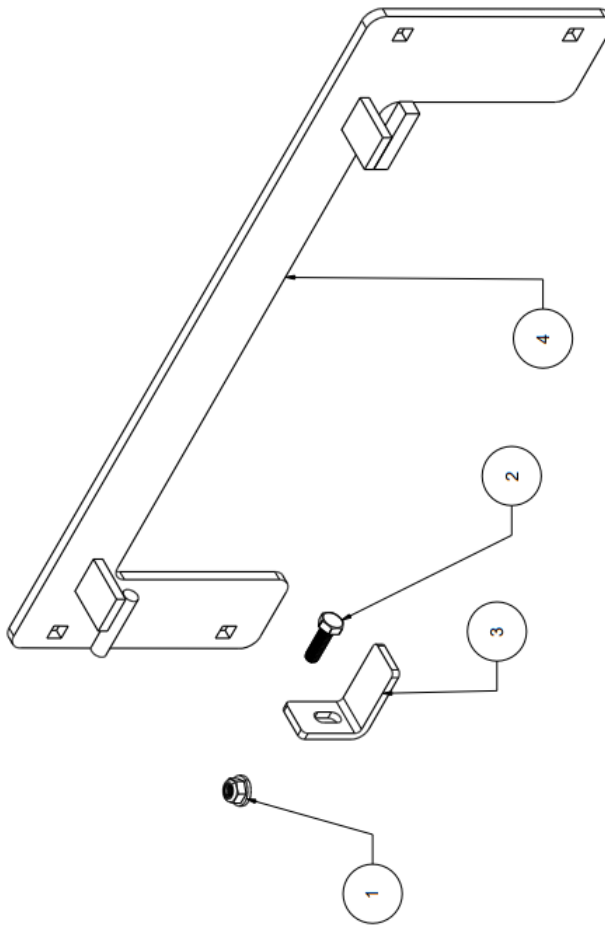


Diagram illustrating the replacement parts for the SCAG Manifold (for Grass Deflector). The diagram shows the manifold assembly with numbered callouts 1 through 9.

| Item | Part Name                       | Part Number  | Quantity |
|------|---------------------------------|--------------|----------|
| 1    | Grass Deflector Scag Clamp      | 230-2001     | 1        |
| 3    | Carriage Bolt GR5, 3/8 - 16 x 1 | ROC-2131-624 | 1        |
| 4    | Wright to Scag Adaptor bracket  | 10-966       | 1        |
| 5    | Hex Nut, 3/8 - 16               | 95462A031    | 2        |
| 6    | Flange Locknut, 3_8 -16         | 93298A130    | 1        |
| 7    | Lockwasher, 3_8                 | ROC-8076-031 | 2        |
| 8    | Wright intake manifold          | 10-867       | 1        |
| 9    | Hex Bolt GR5 3_8-16 x 2         | 92865A632    | 1        |

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| Item | Part Name                    | Part Number | Quantity |
|------|------------------------------|-------------|----------|
| 1    | Flange Locknut 5/16-18       | 92018A320   | 1        |
| 2    | Hex Bolt GR5 5/16-18 x 1     | 92865A583   | 1        |
| 3    | Wright Intake Manifold Brace | 230-2002    | 1        |
| 4    | Wright intake manifold       | 10-867      | 1        |

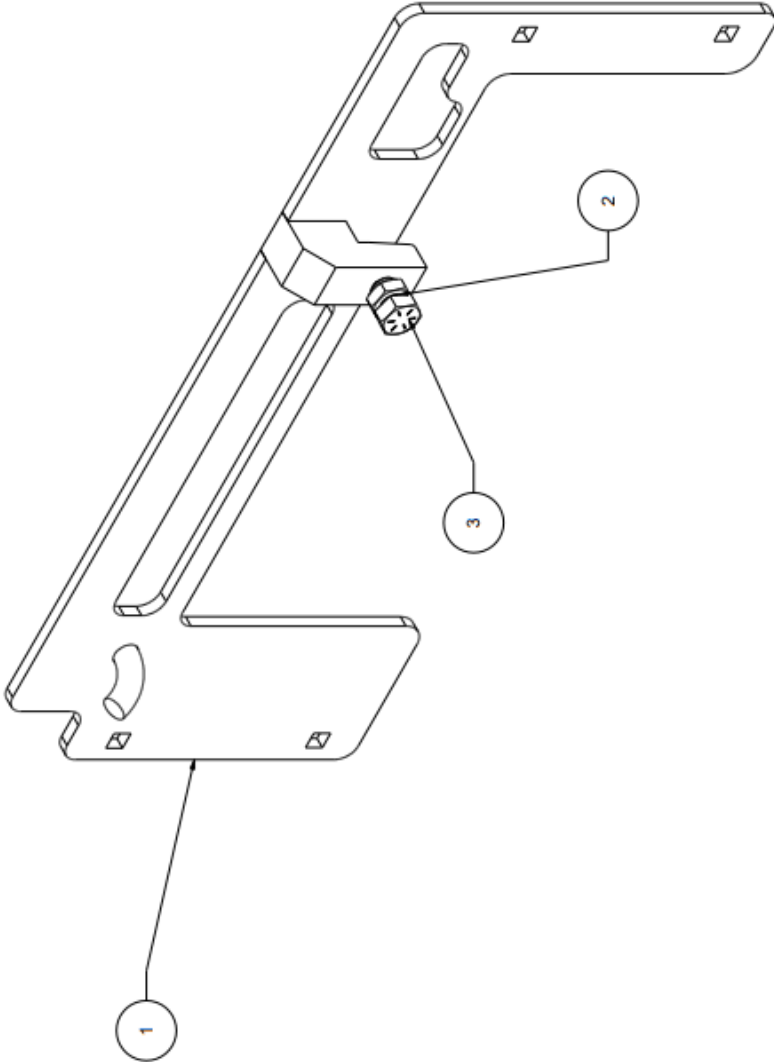


Replacement Parts for Wright Manifold(for Grass Deflector)

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Replacement Parts for Exmark/Bobcat Manifold  
(for Katcher AND Grass deflector)

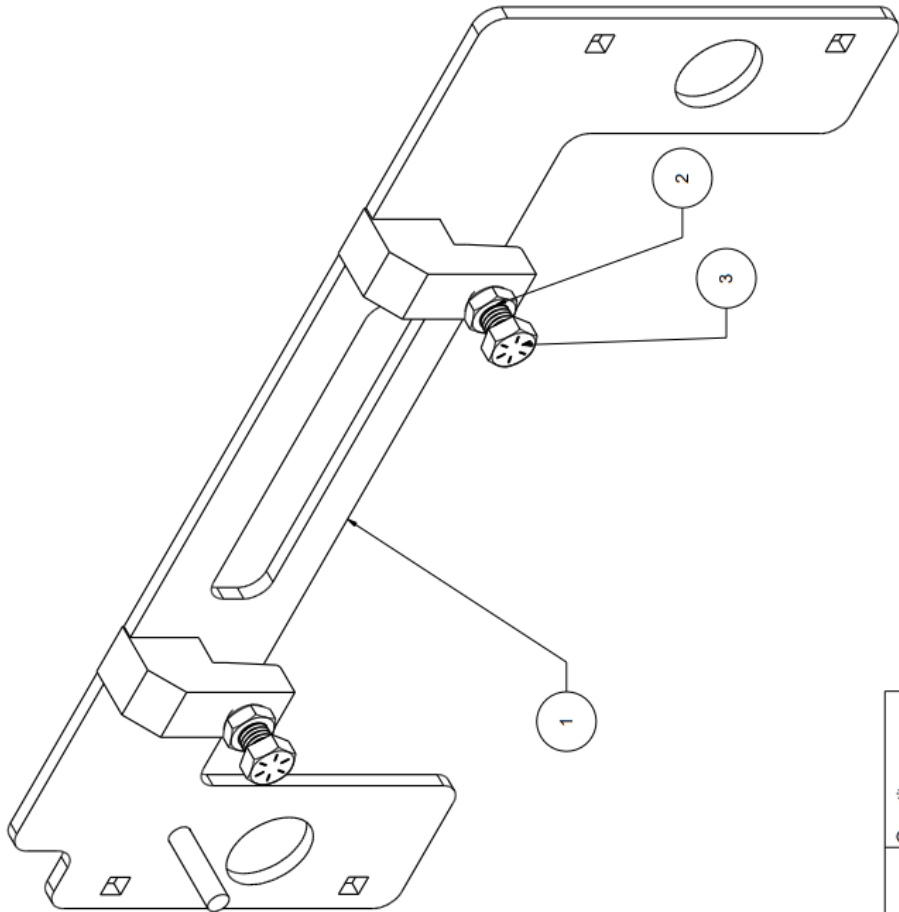


| Item | Part Name                     | Part Number | Quantity |
|------|-------------------------------|-------------|----------|
| 1    | Exmark-Bobcat Intake Manifold | 10-762      | 1        |
| 2    | Hex Nylock Nut 1/2 - 13       | 90566A033   | 1        |
| 3    | Hex Bolt GR5 1/2-13x1.5       | 92865A716   | 1        |

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Replacement Parts for TORO Manifold  
(Katcher AND Grass deflector)

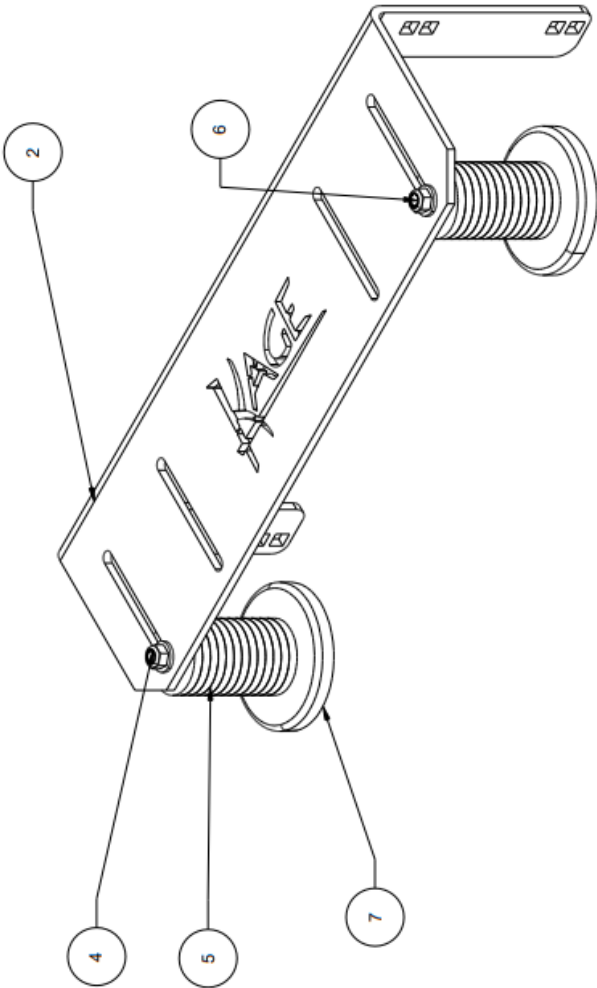


| Item | Part Name               | Part Number | Quantity |
|------|-------------------------|-------------|----------|
| 1    | Toro intake Weldment    | 10-756      | 1        |
| 2    | Hex Nylock Nut 1/2 - 13 | 90566A033   | 2        |
| 3    | Hex Bolt 1-2-13 x 1.5   | 92865A716   | 2        |

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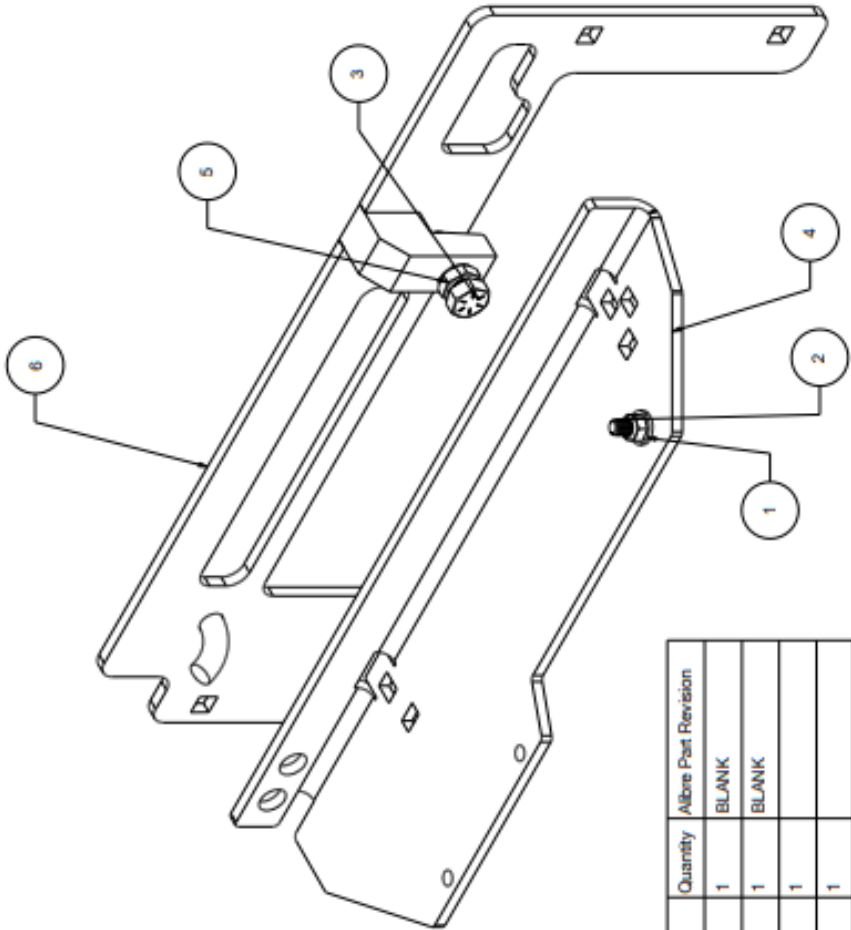


Replacement Parts for Universal Manifold  
(Grass Deflector Only)



| Item | Part Name                        | Part Number | Quantity |
|------|----------------------------------|-------------|----------|
| 2    | Universal Deflector Mount        | 10-501      | 1        |
| 4    | Flange Locknut, 3/8-16           | 93298A130   | 2        |
| 5    | Universal Mount Magnet Spacer    | 10-502      | 26       |
| 6    | Hex Bolt 3/8-16 x 4              | 92865A641   | 2        |
| 7    | Universal Deflector Mount Magnet | 5685K44     | 2        |

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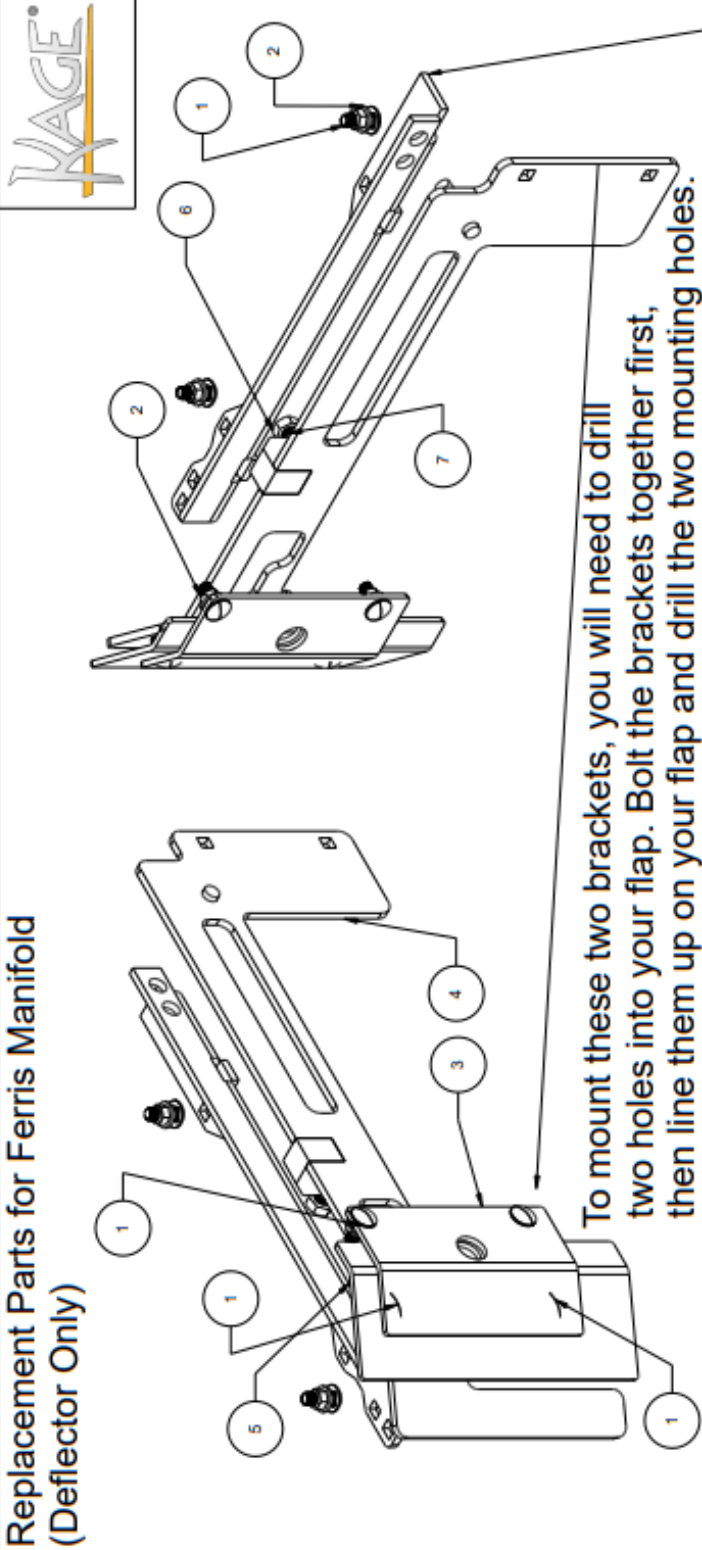


| Item | Part Name                        | Part Number | Quantity | Alt/Rev Part Revision |
|------|----------------------------------|-------------|----------|-----------------------|
| 1    | Flange Locknut<br>5/16-18        | 92018A320   | 1        | BLANK                 |
| 2    | Carrage Bolt<br>5/16-18 x 1      | 90185A583   | 1        | BLANK                 |
| 3    | Hex Bolt<br>1/2-13<br>x 1.5      | 92865A716   | 1        |                       |
| 4    | Gravely ZT<br>Manifold           | 10-974      | 1        |                       |
| 5    | Hex Nylock Nut<br>1/2 - 13       | 90566A033   | 1        | BLANK                 |
| 6    | Extrak-Bolcat<br>Intake Manifold | 10-762      | 1        |                       |



Gravely ZT Replacement Parts  
(Grass Deflector and Grass Katcher)

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**Replacement Parts for Ferris Manifold (Deflector Only)**

To mount these two brackets, you will need to drill two holes into your flap. Bolt the brackets together first, then line them up on your flap and drill the two mounting holes.



| Item | Part Name                         | Part Number  | Quantity |
|------|-----------------------------------|--------------|----------|
| 1    | Carriage Bolt GR5, 3/8 - 16 x 1   | ROC-2131-624 | 6        |
| 2    | Flange Locknut, 3/8 - 16          | 93298A130    | 6        |
| 3    | Grass deflector Extension Bracket | 10-101       | 1        |
| 4    | Ferris Intake Manifold Weldment   | 10-223       | 1        |
| 5    | Grass Deflector Extension         | 10-102       | 1        |
| 6    | Hex Bolt 1/2-13 x 1.5             | 92865A716    | 1        |
| 7    | Hex Nylock Nut 1/2 - 13           | 90566A033    | 1        |
| 8    | Gravley/ Ferris adaptor           | 10-964       | 1        |

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## Kage Limited Warranty

Kage Innovation will repair or, at the option of Kage Innovation, replace those parts which prove defective due to material or workmanship under normal use for a period of two (2) years from the date of retail sale or date of invoice from Kage Innovation, whichever is later. Expendable items, such as rubber, or polyurethane are excluded from this warranty.

Kage Innovation warrants that the products manufactured by us to be in accordance with our published specifications or those specifications agreed to by us in writing at the time of sale. The obligation of Kage Innovation is expressly limited to repairing or replacing, at its option, any product not meeting such specifications within the warranty period.

### LIMITATIONS OF WARRANTY AND DAMAGES

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IN NO EVENT SHALL KAGE INNOVATION, BE HELD LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR DAMAGES RESULTING FROM MISAPPLICATION, ABUSE, MISUSE, ACTS OF GOD, UNAUTHORIZED ALTERATION OF THE KAGE INNOVATION PRODUCT, OR SUBSTITUTION OF PARTS NOT AUTHORIZED IN WRITING BY KAGE INNOVATION.

To obtain service under this warranty the consumer must return the defective Kage Innovation product to Kage Innovation directly, the dealer from which the product was purchased or to any authorized Kage Innovation dealer, transportation and freight charges prepaid. Only Kage Innovation dealers are authorized to perform the obligations under this warranty with pre-authorization from Kage Innovation.

No person is authorized to alter or amend this warranty or to create any warranty other than that set forth herein without the expressed written consent of Kage Innovation.

Kage Innovation reserves the right to make improvement changes on any of our products without prior notice.

## Revision Comments

| Date      | Name  | Description                                                                                                         |
|-----------|-------|---------------------------------------------------------------------------------------------------------------------|
| 7/8/2022  | Josh  | First Revision                                                                                                      |
| 7/18/2024 | Mike  | Updated Wright Manifold pic                                                                                         |
| 10-5-2024 | Josh  | Added Breakdowns corresponding to each 200-3000 revision                                                            |
| 4/7/2025  | Kyler | Added pictures of all manifolds on each mower deck, made Scag breakdown more detailed, and added Scag instructions. |
| 5/6/2025  | Josh  | Updated scag replacement parts page, fixed error on additional parts, page 6, page 11                               |
| 7/2/2025  | Kyler | Added new Ferris, Gravely, and Universal breakdowns and got rid of the old Ferris breakdown.                        |
| 7/11/2025 | Josh  | Updated All intake manifolds, page 5, updated page 12, 14, 15                                                       |
| 8/7/2025  | Josh  | Fixed part number on All intake manifolds, page 5                                                                   |
| 9/12/2025 | Josh  | Added reference to scag turbo baffle, page 15                                                                       |
| 12/8/2025 | Josh  | Updated 230-3000 breakdown, page 3                                                                                  |
| 8/3/2026  | Josh  | Updated to new format and changed rev to 2026.7.24                                                                  |