



# BRUSHCUTTER

## MODEL 310 PARTS MANUAL

### BRUSHCUTTER

MODEL 310

Serial No: 26-M-02-2787 & UP

Part No: 151887

VERSION 1.8



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and operator's manuals is not to be  
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other than the intended recipient.





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## BRON 310 BRUSHCUTTER WARRANTY

### **BASE WARRANTY (12 months or 2000 hours):**

RWF Industries a Division of Roberts Welding & Fabricating Ltd. (RWF) warrants that the new BRON **Brushcutter** sold by RWF will be free from defects in material or workmanship for a period of 12 months or 2000 operating hours, whichever occurs first, starting from the date of delivery to the first user.

### **THIS WARRANTY DOES NOT APPLY TO:**

HYDRAULIC and MOUNTING INSTALLATION KIT PARTS, HOSES, OR REPLACEMENT PARTS, which are covered by other warranties

### **RWF RESPONSIBILITY:**

RWF will, at its option, repair or replace with a new or reconditioned part, any warranted part that fails by reason of defective material or workmanship, free of charge delivered at a place of business of an RWF Dealer. Note: parts replaced under warranty become the property of RWF. During the 12 month or 2000 hour BASE WARRANTY period, RWF will pay the reasonable cost of labor that is necessary to install any repaired or replacement part during normal working hours. Overtime rates and travel expenses will not be reimbursed.

### **USER RESPONSIBILITY:**

- The installer, operator, or service person, assumes responsibility to read, understand and comply with RWF's written INSTALLATION, OPERATOR, SERVICE AND WELDING INSTRUCTIONS
- All costs associated with transporting the attachment and/or equipment to an authorized location.
- RWF is not responsible for any expense incurred in field repair.
- Supplying a hydraulic oil sample from the carrier machine based on the following schedule:
  - 1st SAMPLE at the 100 HOUR SERVICE (break-in period)
  - 2nd SAMPLE at the 3 MONTH period (±4 weeks)
  - 3rd SAMPLE at the 6 MONTH period (±4 weeks)
  - 4th (last) SAMPLE at the 9 MONTH period (±4 weeks)
- All warranty claims must be submitted within sixty (60) days of the repair date. Claims submitted after this period will not be accepted.

### **THESE WARRANTIES DO NOT COVER FAILURES RESULTING FROM:**

- Installation, alteration, operation, maintenance, repair or storage which RWF judges improper.
- Not performing DAILY VISUAL INSPECTIONS AND RETIGHTENING as specified in RWF Manuals.
- Not following RWF's recommended welding procedure.
- Operation after discovery of defective or worn parts.
- Unreasonable delay in making a repair after being notified of a potential problem.
- Acts of God, war, vandalism, riot, theft, explosion, and any other act of nature or man

### **THESE WARRANTIES SPECIFICALLY EXCLUDE:**

- Installations not approved by RWF.
- Hardface welding to build up wear on surfaces.
- Replacement due to wear.
- Ground engaging tools. Points, guards, blades etc
- Repairs by other than an authorized RWF Dealer.

- Any alteration to BRON products.
- Use of parts not sold by RWF.
- Labor charges deemed excessive by RWF.
- Parts shipping charges in excess of those, which are usual and customary.
- Duty and local taxes.

#### **LIMITATIONS AND EXCLUSIONS:**

Violation of any federal, provincial, state or local laws, ordinances, rules or regulations, or removal or alteration of product serial numbers void RWF's written product warranties. The written product warranties made by RWF set forth RWF's only obligations with respect to any claims of failure, defects or deficiencies in products sold by RWF. RWF MAKES NO OTHER WARRANTIES OR REPRESENTATIONS WHATSOEVER, EXPRESS OR IMPLIED, OF THE QUALITY, PERFORMANCE, DURABILITY, MATERIALS, WORKMANSHIP, SUITABILITY, CONDITION, DESIGN OR UTILITY OF PRODUCTS SOLD BY RWF, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OR MERCHANT ABILITY AND FITNESS. ALL SUCH OTHER WARRANTIES AND REPRESENTATIONS BEING HEREBY EXPRESSLY EXCLUDED. RWF SHALL NOT BE LIABLE FOR SPECIAL INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING WITHOUT LIMITATION, COSTS, LOSSES, OR LIABILITIES ON ACCOUNT OF DELAY OR DOWNTIME.

#### **DISCLAIMER REGARDING OTHER REPRESENTATIONS OR WARRANTIES:**

No person is authorized to grant any other warranties or to assume any other liability on RWF's behalf unless made or assumed in writing by an officer of RWF. No person to grant any warranties or to assume any liabilities on the seller's behalf unless made or assumed in writing by the seller. As used in this warranty the term RWF means, RWF Industries, a division of Roberts Welding and Fabricating Ltd, Woodstock, Ontario, Canada.

#### **SOME ITEMS NOT COVERED BY WARRANTY:**

Items and service related functions that are not covered by warranty include, but are not limited to:

- Issues resulting from misuse, negligence or accident.
- Issues arising from the use of non-approved parts.
- Repair or adjustment by other than RWF or its authorized dealers.
- Engine tune-up.
- Issues resulting from the installation of unauthorized attachments or modifications.
- Air, oil and fuel filter elements.
- Tightening of nuts, bolts, screws, etc. or adjustments.
- Natural wear or defects caused by natural wear.
- Issues due to use of improper fuel, oil, grease, coolant, or other fluid or lubricant.
- Daily allowances and overtime labor rates.
- Indirect damages such as loss of earning, etc.
- Normal maintenance services. Maintenance services not directly involved with defective parts are considered normal service and should be excluded from a claim.
- These services include (but not limited to):
  - Fuel system cleaning.
  - Engine tune-up.
  - Track inspection and adjustment
- Other adjustments (but not limited to):
  - Tightening of hydraulic fittings.
  - Adding or replacing of service fluid and filters.
  - Replacement of air, hydraulic, transmission, engine fuel filters, oil, belts and breathers.
  - Hydraulic pressure adjustments.

# WARRANTY NOTICE

ALWAYS REFER TO WARRANTY STATEMENT IN THE OPERATOR'S MANUAL. TO ENSURE WARRANTY CONSIDERATION ON ALL HYDRAULIC COMPONENTS IN YOUR NEW RWF BRON TRACTOR, A HYDRAULIC OIL SAMPLE MUST BE RECEIVED BASED ON THE FOLLOWING SCHEDULE:

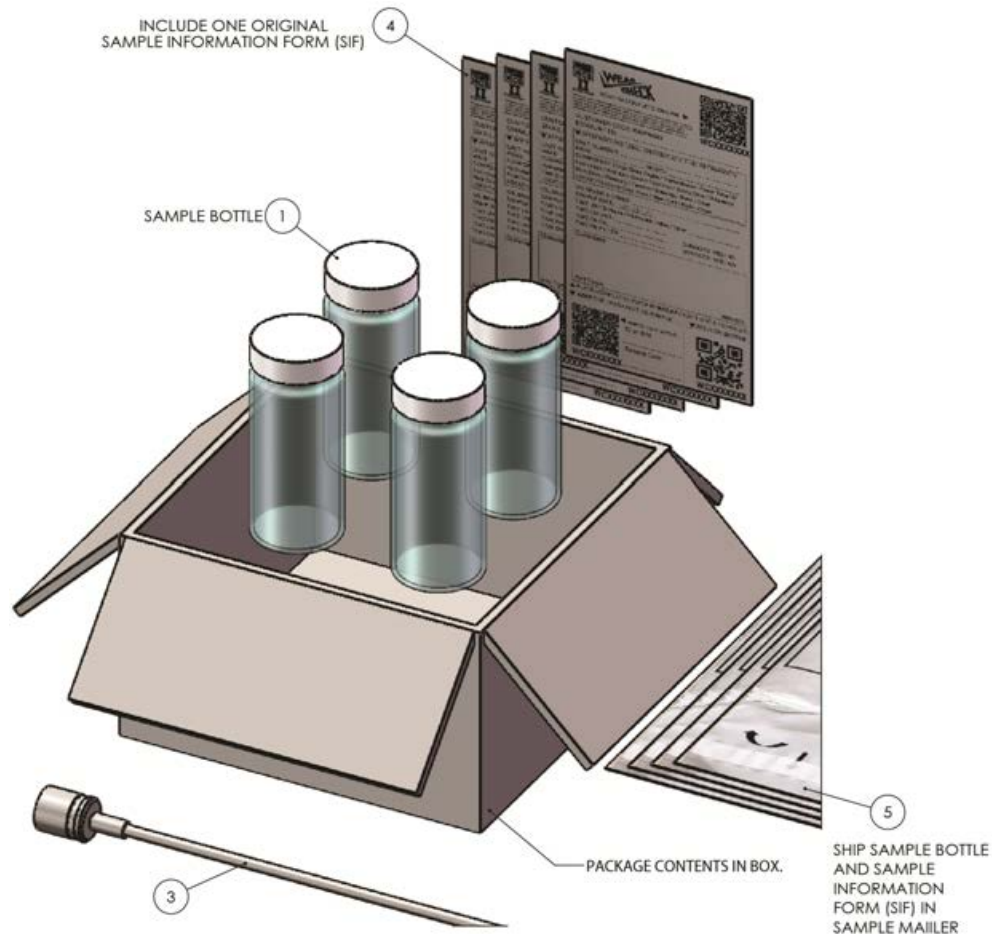
- 1st SAMPLE at the 100 HOUR SERVICE (break-in period)
- 2nd SAMPLE at the 3 MONTH period ( $\pm 4$  weeks)
- 3rd SAMPLE at the 6 MONTH period ( $\pm 4$  weeks)
- 4th (last) SAMPLE at the 9 MONTH period ( $\pm 4$  weeks)

## PROCEDURE

DO NOT SAMPLE FROM A USED FILTER OR BOTTOM OF THE HYDRAULIC TANK. REFER TO THE OPERATOR'S MANUAL FOR THE LOCATION OF THE SAMPLE PORT.

1. Clean around the sampling area before connecting the sample hose.
2. Ensure the sample hose ends are clean prior to connecting to the sample port.
3. Start the engine and set to LOW IDLE. Note: on some machines it may be necessary to raise the engine speed to increase the flow rate from the oil sample hose.
4. With the discharge end of the sample hose in a waste container, connect the sample hose and discharge a few ounces of fluid. This is to ensure the sample port and hose are flushed clean.
5. Temporarily disconnect the sample hose from the sample port.
6. Remove the discharge end of the sample hose from the waste container and ensure it is still clean.  
**DO NOT LET THE SAMPLE BOTTLE BECOME DIRTY OR CONTAMINATED.**
7. Acquire a new (unused) sample bottle from the supplied box and place the Sample QR label on the bottle from the bottom right hand portion of the Sample Information Form.
8. Remove the Sample Bottle cap and position the discharge end of the sample hose over the bottle opening (do not place inside the bottle).
9. Re-connect the sample hose to the sample port and fill the Sample Bottle.
10. When the bottle is  $\frac{3}{4}$  full, disconnect the sample hose from the sample port.
11. Ensure that the Sample Bottle cap is tightened so that no oil leaks. Wipe any excess oil off of the Sample Bottle.





12. Turn off the engine.
13. Complete the SAMPLE INFORMATION FORM (SIF), or alternatively the sample information can be completed using the Oil Analysis phone app, or on-line (WebCheck account required).
14. Keep the completed Tracking Label from the bottom left hand portion of the SIF to attach to relevant internal Work Order or Asset Tag booklet.
15. Ensure the Sample QR Label, SIF, and Tracking Label serial numbers all match each other for the specific sample before proceeding.
16. Place the Sample Bottle into the sealable pouch of the Sample Mailer. If using the Sample Form, place the completed SIF into the outer clear pouch. (Do not stick the SIF to the outside of the Sample Mailer).
17. Seal the zip-top on the inner pouch, remove plastic from adhesive strip, fold over (at dotted line) and seal. **(NOTE: The soft polypack Sample Mailer holds one (1) to six (6) Sample Bottles and Sample Forms)**
18. Attach a courier label or sufficient postage to the pouch and return to the laboratory.
19. If the sample(s) are unable to be shipped to the mailing address listed on the Sample Mailer, please contact [warranty@rwfbron.com](mailto:warranty@rwfbron.com) for alternative fluid testing solutions.

| Item | Quantity | Part Number | Description                                                             |
|------|----------|-------------|-------------------------------------------------------------------------|
| 1    | 4        | 9900930     | FLUID BOTTLE SAMPLE KIT                                                 |
| 2    | 1        | DWG         | DWG TO BE SHIPPED WITH KIT                                              |
| 3    | 0.5      | 142084      | FLUID ANALYSIS TEST HOSE                                                |
| 4    | 4        | REF         | SAMPLE INFORMATION FORM (INCLUDED WITH BOTTLE) <b>SEE SECTION 1.2.3</b> |
| 5    | 4        | REF         | SAMPLE MAILER (INCLUDED WITH BOTTLE)                                    |

### HOW TO COMPLETE THE SAMPLE INFORMATION FORM (SIF)

**MOB II WEAR CHECK**  
SCAN TO COMPLETE ON-LINE ▶

WCXXXXXXX

Write contact emails:  
Please include both  
**warranty@rwfbron.com** and  
contact email that will receive  
Wear Check Report

CUSTOMER CODE: **RWFWD00**  
EMAIL/ATTN: \_\_\_\_\_

▼ AFFIX MACHINE LABEL OR COMPLETE THIS INFORMATION

UNIT NUMBER: \_\_\_\_\_  
MAKE: \_\_\_\_\_ MODEL: \_\_\_\_\_  
Write the model number of your tractor.  
Example: 585PU

COMPONENT (Circle One): Engine / Transmission / Power Take Off  
Hydrostatic / Hydraulic System / Gearbox / Swing Drive / Differential  
Final Drive / Planetary / Tandem / Steering / Brake / Other  
LOCATION (Circle One): Front / Rear / Left / Right / Other

OIL BRAND & GRADE: \_\_\_\_\_  
Write the BRAND & TYPE OF OIL used.

SAMPLE DATE: MM/DD/YY  
Write the SAMPLE DATE: MM / DD / YY

TIME UNITS: Hours / Kilometers / Miles / Other  
Circle: HOURS

TIME ON UNIT: \_\_\_\_\_  
Write the hour meter reading on the tractor.

TIME ON OIL: \_\_\_\_\_  
Write the age of the oil in hours.

TIME ON FILTER: \_\_\_\_\_  
Write the age of the filters in hours.

CHANGED: YES / NO  
SERCICED: YES / NO  
Circle if oil was CHANGED.  
Circle if filter was CHANGED.

Comments:  
Write serial number of machine.  
Example: 22-M-01-0000  
Write additional comments as required.  
Examples: 100 HR SERVICE  
FAILED FAN PUMP

Add Tests: \_\_\_\_\_ 1000-002

▲ PLACE COMPLETED FORM **IN MAILER** (DON'T STICK TO MAILER)

▼ KEEP FOR TRACKING THIS SAMPLE ▼ STICK ON BOTTLE

Scan to track sample ID or S/N:  
Sample Date: \_\_\_\_\_  
Write the serial number of your tractor.  
Example: 22-M-01-0000  
Write the SAMPLE DATE: MM / DD / YY

Sample QR Label - Remove and apply to the relevant sample bottle.

## PERIODIC MAINTENANCE CHECKS & SERVICES (PMCS)

PMCS lists the inspection and care of equipment required to maintain your Bron machine in good operating condition. Daily checks and services should be performed in the same sequence each time so that they can be completed quickly and effectively.

### NOTE

This section only deals with maintenance instructions for your Bron unit. For instructions on the engine, cutter head, or fire suppression system please see the manual that came with your engine, cutter head, or fire suppression system.

| ITEM                                   | MAINTENANCE INTERVAL<br>(number of hours (H) or months (M) / weeks (W), whichever occurs first) |                             |                    |                     |                    |                                    |                      | REMARKS                                 |
|----------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------|--------------------|---------------------|--------------------|------------------------------------|----------------------|-----------------------------------------|
|                                        | Daily<br>or<br>10 H                                                                             | 100 H<br>Break-in<br>period | 3 W<br>or<br>125 H | 1½ M<br>or<br>250 H | 3 M<br>or<br>500 H | 6 M & 9 M<br>or<br>1000 H & 1500 H | 12 M<br>or<br>2000 H |                                         |
| Engine                                 | Refer to engine section for engine maintenance.                                                 |                             |                    |                     |                    |                                    |                      |                                         |
| Attachment (plow, mulching head, etc.) | Refer to attachment section for maintenance.                                                    |                             |                    |                     |                    |                                    |                      |                                         |
| Fire suppression                       | Refer to fire suppression section for fire suppression system maintenance.                      |                             |                    |                     |                    |                                    |                      |                                         |
| Engine coolant (cold)                  | I                                                                                               |                             | I                  | I & T               | I & T              | I & T                              | I & T                | test with a hydrometer                  |
| Engine oil (cold)                      | I                                                                                               |                             | I                  | R                   | I & R              | I & R                              | I & R                |                                         |
| Engine oil filter                      |                                                                                                 |                             |                    | R                   | R                  | R                                  | R                    |                                         |
| Heat exchangers                        | I & C                                                                                           |                             | I & C              | I & C               | I & C              | I & C                              | I & C                |                                         |
| Hydraulic fluid level                  | I                                                                                               |                             | I                  | I                   | I                  | I                                  | R                    |                                         |
| Hydraulic fluid leaks                  | I                                                                                               |                             | I                  | I                   | I                  | I                                  | I                    |                                         |
| Fuel/water separator                   | I                                                                                               |                             | I                  | R                   | I & R              | I & R                              | I & R                | drain water as required                 |
| HVAC air filter                        | I                                                                                               |                             | I                  | I                   | I & C              | I & C                              | I & C                | replace as necessary                    |
| Primary engine air filter              | I                                                                                               |                             | I                  | I                   | I                  | I                                  | I                    | replace as necessary                    |
| Safety engine air filter               | I                                                                                               |                             | I                  | I                   | I                  | I                                  | I                    | remove/replace only with primary filter |

| ITEM                                                                             | MAINTENANCE INTERVAL<br>(number of hours (H) or months (M) / weeks (W), whichever occurs first) |                             |                    |                     |                    |                                    |                      | REMARKS                      |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------|--------------------|---------------------|--------------------|------------------------------------|----------------------|------------------------------|
|                                                                                  | Daily<br>or<br>10 H                                                                             | 100 H<br>Break-in<br>period | 3 W<br>or<br>125 H | 1½ M<br>or<br>250 H | 3 M<br>or<br>500 H | 6 M & 9 M<br>or<br>1000 H & 1500 H | 12 M<br>or<br>2000 H |                              |
| Grease all fittings                                                              | X                                                                                               |                             | X                  | X                   | X                  | X                                  | X                    | after daily operations       |
| Bolts, nuts, hardware                                                            | I                                                                                               |                             | I                  | I                   | I                  | I                                  | I                    |                              |
| Cab gauges                                                                       | I                                                                                               |                             | I                  | I                   | I                  | I                                  | I                    |                              |
| Lights & indicators                                                              | I                                                                                               |                             | I                  | I                   | I                  | I                                  | I                    |                              |
| Horn                                                                             | T                                                                                               |                             | T                  | T                   | T                  | T                                  | T                    |                              |
| Backup alarm                                                                     | T                                                                                               |                             | T                  | T                   | T                  | T                                  | T                    |                              |
| Parking brake                                                                    | T                                                                                               |                             | T                  | T                   | T                  | T                                  | T                    |                              |
| Seatbelt                                                                         | I                                                                                               |                             | I                  | I                   | I                  | I                                  | I                    |                              |
| Undercarriage & chains                                                           | I & A                                                                                           |                             | I & A              | I & A               | I & A              | I & A                              | I & A                | adjust as required           |
| Overall machine                                                                  | I                                                                                               |                             | I                  | I                   | I                  | I                                  | I                    |                              |
| Engine & hydraulic compartments                                                  | C                                                                                               |                             | C                  | C                   | C                  | C                                  | C                    | use compressed air           |
| Battery electrolyte level                                                        |                                                                                                 |                             | I                  | I                   | I                  | I                                  | I                    |                              |
| Planetary drive oil level                                                        |                                                                                                 | R                           | I                  | I                   | R                  | I                                  | I                    | replace as necessary         |
| Pump drive gearbox oil level                                                     |                                                                                                 |                             | I                  | I                   | R                  | I                                  | I                    | replace as necessary         |
| Bolt torque                                                                      |                                                                                                 |                             | I                  | I                   | I                  | I                                  | I                    |                              |
| Electrical wiring                                                                |                                                                                                 |                             | I                  | I                   | I                  | I                                  | I                    |                              |
| Hose wear & chafing                                                              |                                                                                                 |                             | I                  | I                   | I                  | I                                  | I                    |                              |
| Fuel filter                                                                      |                                                                                                 |                             |                    |                     | R                  | R                                  | R                    |                              |
| Hydraulic oil filters                                                            |                                                                                                 | R                           |                    |                     | R                  | R                                  | R                    |                              |
| Hydraulic oil fluid analysis                                                     |                                                                                                 | X                           |                    |                     | X                  | X                                  |                      | send oil sample for analysis |
| Symbols: A = adjust, C = clean, I = inspect, R = replace, T = test, X = complete |                                                                                                 |                             |                    |                     |                    |                                    |                      |                              |

**DRY TORQUE** – NO PLATING, NO WASHER, NO OIL OR ANIT-SEIZE. **WET TORQUE** – FLAT WASHER, OIL, ANTI-SEIZE.  
 LOCKNUTS ARE DRY TORQUED NO LUBRICATION OR WASHERS. IF YOU USE A FLAT WASHER IT IS THE EQUIVALENT OF A WET TORQUE. TORQUE  
 VALUES SHOWN ARE FOR TURNING THE NUT. IF TIGHTENING BY THE BOLT HEAD, INCREASE THE VALUE BY 20%

**TIGHTENING TORQUE (lbf-ft)****COARSE THREAD SERIES**

| NOMINAL DIA. (IN.) | THREADS PER INCH | GRADE 5  |      |         | GRADE 8  |      |         |
|--------------------|------------------|---------------------------------------------------------------------------------------------|------|---------|---------------------------------------------------------------------------------------------|------|---------|
|                    |                  | DRY                                                                                         | WET  | LOCKNUT | DRY                                                                                         | WET  | LOCKNUT |
| 1/4                | 1/4-20 NC        | 8                                                                                           | 6    | 7       | 12                                                                                          | 9    | 10      |
| 5/16               | 1/4-28 NF        | 17                                                                                          | 13   | 15      | 25                                                                                          | 18   | 21      |
| 3/8                | 5/16-18 NC       | 31                                                                                          | 23   | 26      | 44                                                                                          | 33   | 37      |
| 7/16               | 5/16-24 NF       | 49                                                                                          | 37   | 42      | 70                                                                                          | 52   | 59      |
| 1/2                | 3/8-16 NC        | 75                                                                                          | 57   | 64      | 106                                                                                         | 80   | 90      |
| 9/16               | 3/8-24 NF        | 109                                                                                         | 82   | 92      | 154                                                                                         | 115  | 130     |
| 5/8                | 7/16-14 NC       | 150                                                                                         | 113  | 128     | 212                                                                                         | 159  | 180     |
| 3/4                | 7/16-20 NF       | 267                                                                                         | 200  | 227     | 376                                                                                         | 282  | 320     |
| 7/8                | 1/2-13 NC        | 429                                                                                         | 322  | 365     | 606                                                                                         | 455  | 515     |
| 1                  | 1/2-20 NF        | 644                                                                                         | 483  | 547     | 909                                                                                         | 681  | 772     |
| 1 1/4              | 9/16-12 NC       | 1121                                                                                        | 840  | 952     | 1817                                                                                        | 1363 | 1545    |
| 1 3/8              | 9/16-18 NF       | 1469                                                                                        | 1102 | 1249    | 2382                                                                                        | 1768 | 2025    |
| 1 1/2              | 5/8-11 NC        | 1950                                                                                        | 1462 | 1657    | 3162                                                                                        | 2371 | 2688    |

**FINE THREAD SERIES**

| NOMINAL DIA. (IN.) | THREADS PER INCH | GRADE 5  |      |         | GRADE 8  |      |         |
|--------------------|------------------|---------------------------------------------------------------------------------------------|------|---------|---------------------------------------------------------------------------------------------|------|---------|
|                    |                  | DRY                                                                                         | WET  | LOCKNUT | DRY                                                                                         | WET  | LOCKNUT |
| 1/4                | 28               | 10                                                                                          | 7    | 8       | 14                                                                                          | 10   | 12      |
| 5/16               | 24               | 19                                                                                          | 15   | 16      | 27                                                                                          | 20   | 23      |
| 3/8                | 24               | 35                                                                                          | 26   | 30      | 49                                                                                          | 37   | 42      |
| 7/16               | 20               | 55                                                                                          | 41   | 47      | 78                                                                                          | 58   | 66      |
| 1/2                | 20               | 85                                                                                          | 64   | 72      | 120                                                                                         | 90   | 102     |
| 9/16               | 18               | 121                                                                                         | 91   | 103     | 171                                                                                         | 128  | 146     |
| 5/8                | 18               | 170                                                                                         | 127  | 144     | 240                                                                                         | 180  | 204     |
| 3/4                | 16               | 297                                                                                         | 223  | 253     | 420                                                                                         | 315  | 357     |
| 7/8                | 14               | 474                                                                                         | 355  | 403     | 669                                                                                         | 502  | 568     |
| 1                  | 14               | 722                                                                                         | 542  | 614     | 1020                                                                                        | 765  | 867     |
| 1 1/4              | 12               | 1241                                                                                        | 930  | 1055    | 2012                                                                                        | 1509 | 1710    |
| 1 3/8              | 12               | 1672                                                                                        | 1254 | 1421    | 2712                                                                                        | 2034 | 2305    |
| 1 1/2              | 12               | 2194                                                                                        | 1645 | 1865    | 3557                                                                                        | 2668 | 3024    |

**FNL GRADE 9 - TORQUE SPECS (FOR SUPERTANIUM BOLTS ONLY) (FT-LBS)**

| NOMINAL DIA. (IN.) | THREADS PER INCH | FNL GRADE 9 |      |         |
|--------------------|------------------|-------------|------|---------|
|                    |                  | DRY         | WET  | LOCKNUT |
| 1/2                | 13               | 125         | 94   | 106     |
| 3/4                | 10               | 441         | 331  | 375     |
| 1                  | 8                | 1065        | 799  | 905     |
| 1 1/4              | 7                | 2130        | 1597 | 1810    |

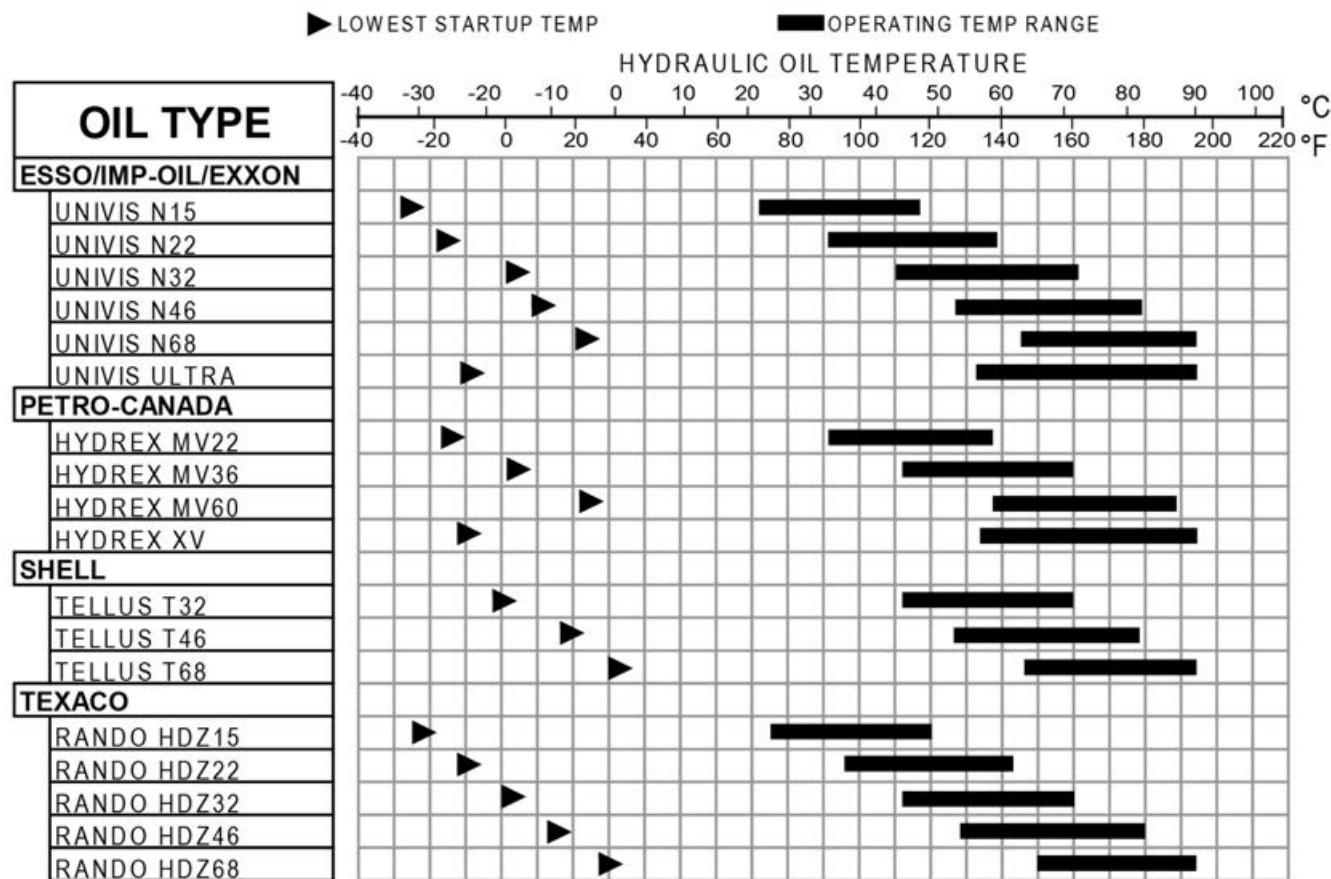
ISO METRIC TORQUE CHART (FT-LBS)

| NOMINAL DIA. (mm) | PITCH (mm) | CLASS 10.9  |      |         | CLASS 12.9  |      |         |
|-------------------|------------|------------------------------------------------------------------------------------------------|------|---------|------------------------------------------------------------------------------------------------|------|---------|
|                   |            | DRY                                                                                            | WET  | LOCKNUT | DRY                                                                                            | WET  | LOCKNUT |
| 6                 | 1          | 9                                                                                              | 7    | 7       | 12                                                                                             | 9    | 10      |
| 7                 | 1          | 14                                                                                             | 10   | 13      | 18                                                                                             | 14   | 16      |
| 8                 | 1.25       | 22                                                                                             | 17   | 20      | 30                                                                                             | 23   | 27      |
| 8                 | 1          | 24                                                                                             | 18   | 22      | 33                                                                                             | 25   | 30      |
| 10                | 1.5        | 44                                                                                             | 32   | 39      | 60                                                                                             | 45   | 54      |
| 10                | 1.25       | 48                                                                                             | 36   | 43      | 66                                                                                             | 50   | 60      |
| 12                | 1.75       | 76                                                                                             | 57   | 69      | 105                                                                                            | 79   | 94      |
| 12                | 1.25       | 85                                                                                             | 63   | 77      | 117                                                                                            | 88   | 103     |
| 14                | 2          | 122                                                                                            | 92   | 110     | 168                                                                                            | 125  | 151     |
| 14                | 1.5        | 140                                                                                            | 106  | 127     | 193                                                                                            | 145  | 169     |
| 16                | 2          | 190                                                                                            | 142  | 171     | 261                                                                                            | 196  | 235     |
| 16                | 1.5        | 214                                                                                            | 160  | 193     | 293                                                                                            | 220  | 257     |
| 18                | 2.5        | 261                                                                                            | 196  | 235     | 359                                                                                            | 269  | 323     |
| 18                | 1.5        | 286                                                                                            | 214  | 257     | 393                                                                                            | 294  | 339     |
| 20                | 2.5        | 374                                                                                            | 280  | 337     | 516                                                                                            | 387  | 464     |
| 20                | 1.5        | 411                                                                                            | 308  | 370     | 568                                                                                            | 425  | 509     |
| 22                | 2.5        | 513                                                                                            | 384  | 461     | 708                                                                                            | 531  | 638     |
| 22                | 1.5        | 564                                                                                            | 423  | 507     | 779                                                                                            | 584  | 703     |
| 24                | 3          | 659                                                                                            | 494  | 590     | 911                                                                                            | 683  | 819     |
| 24                | 2          | 734                                                                                            | 550  | 657     | 1016                                                                                           | 762  | 915     |
| 27                | 3          | 959                                                                                            | 720  | 856     | 1325                                                                                           | 993  | 1192    |
| 30                | 3.5        | 1306                                                                                           | 982  | 1173    | 1801                                                                                           | 1351 | 1624    |
| 33                | 3.5        | 1742                                                                                           | 1306 | 1565    | 2399                                                                                           | 1801 | 2162    |
| 36                | 4          | 2214                                                                                           | 1661 | 1993    | 3048                                                                                           | 2288 | 2745    |
| 39                | 4          | 2797                                                                                           | 2103 | 2517    | 3838                                                                                           | 2878 | 3454    |

THE ABOVE TORQUE SPECIFICATIONS ARE IN FT-LBS. TO CONVERT THEM TO N·M, MULTIPLY BY 1.35582.

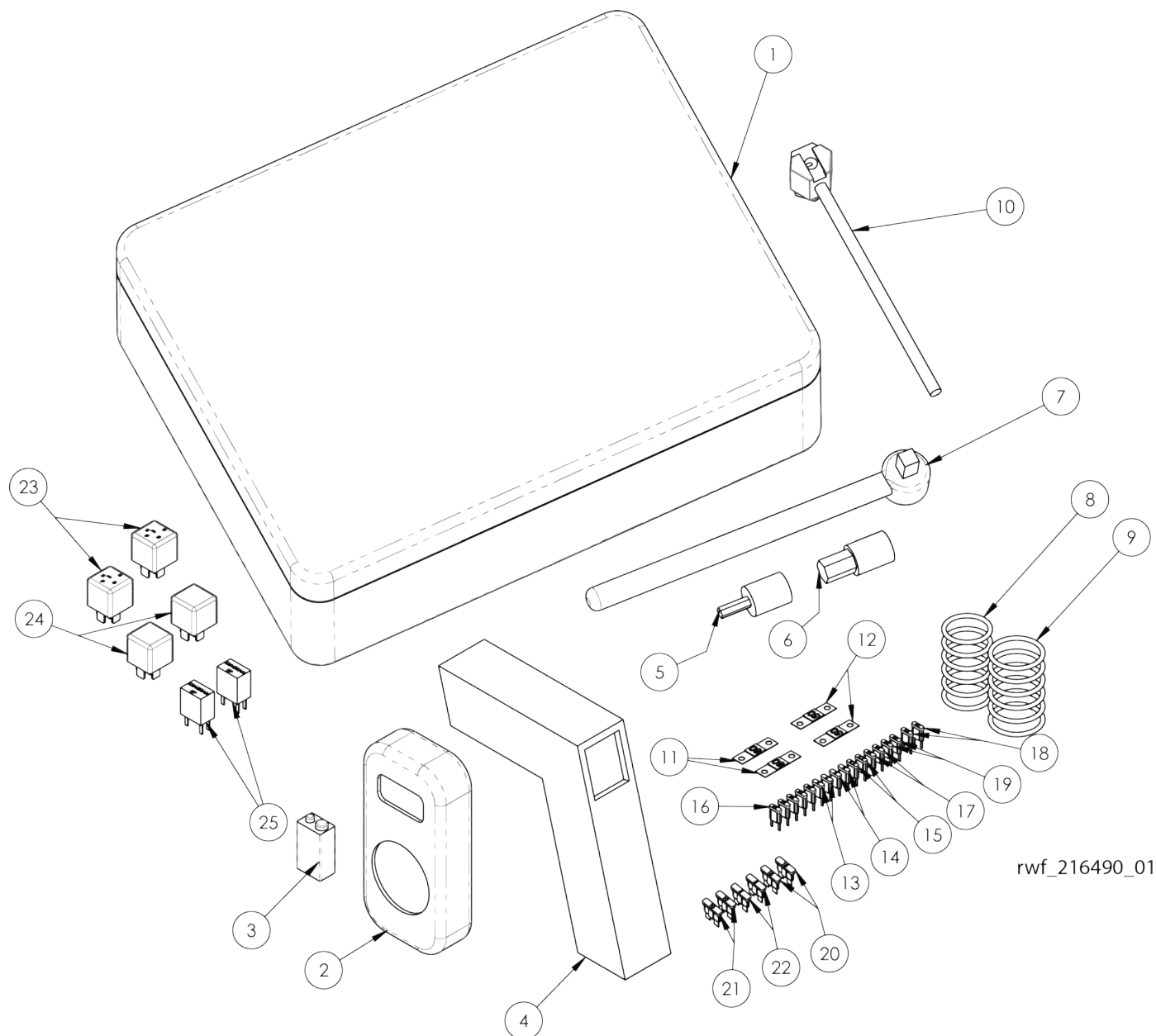
**APPROVED HYDRAULIC OILS**

|            |             |                                                                                                             |
|------------|-------------|-------------------------------------------------------------------------------------------------------------|
| <b>RWF</b> | <b>BRON</b> | <b>APPROVED HYDRAULIC OILS</b><br>(use one of the following oils to fill or replenish the hydraulic system) |
|------------|-------------|-------------------------------------------------------------------------------------------------------------|

**HYDRAULIC OIL OPERATING RANGES****CAUTION**

OPERATING MACHINE OUTSIDE LIMITS SHOWN WILL  
RESULT IN FAILURE OF HYDRAULIC COMPONENTS





| item | Qty. | P/N     | Description                  |
|------|------|---------|------------------------------|
| 1    | 1    | 9901071 | TOOLBOX, MACHINE SERVICE KIT |
| 2    | 1    | 9901039 | MULTIMETER, BASIC FUNCTION   |
| 3    | 1    | 9901643 | 9V BATTERY                   |
| 4    | 1    | 9901044 | TEMPERATURE GUN              |
| 5    | 1    | 9901045 | SOCKET, HEX, DRIVE           |
| 6    | 1    | 9901046 | SOCKET, HEX, DRIVE           |
| 7    | 1    | 9901070 | WRENCH, DRIVE RATCHET        |
| 8    | 6    | 90621   | O-RING,                      |
| 9    | 6    | 90622   | O-RING                       |
| 10   | 1    | 9901738 | COUPLER - GREASER            |
| 11   | 2    | 9900543 | BOLT IN FUSE                 |
| 12   | 2    | 9900545 | BOLT IN FUSE                 |
| 13   | 2    | 85290   | FUSE, 2 AMP                  |
| 14   | 2    | 85293   | FUSE, 5 AMP                  |
| 15   | 2    | 85294   | FUSE, 7.5 AMP                |
| 16   | 5    | 85295   | FUSE, 10 AMP                 |
| 17   | 2    | 85296   | FUSE, 15 AMP                 |
| 18   | 2    | 85297   | FUSE, 20 AMP                 |
| 19   | 2    | 85299   | FUSE, 30 AMP                 |
| 20   | 2    | 111431  | FUSE, 15 AMP                 |
| 21   | 2    | 111430  | FUSE, 10 AMP                 |
| 22   | 2    | 111429  | FUSE, 5 AMP                  |
| 23   | 2    | 9900636 | RELAY, 24VDC                 |
| 24   | 2    | 111843  | RELAY, 12VDC                 |
| 25   | 2    | 9901851 | AMP RELAY                    |

IF MODEL USES CONDENSER 9900726, ITEM 7 QUANTITY IS 1.02 kg (2 lbs 4 oz)

| item | Qty.                       | P/N      | Description          | Component                     |
|------|----------------------------|----------|----------------------|-------------------------------|
| 1    | 8L (2.1 USG)               | 99-00003 | FINAL DRIVES         | TEXACO PINNACLE EP220         |
| 2    | 17.5L (4.6 USG)            | 9900677  | ENGINE OIL           | OIL, 15W40 - PREMIUM BLUE     |
| 3    | 34L (9 USG)                | 9901190  | ENGINE COOLANT       | COOLANT - ENGINE PRE-MIX      |
| 4    | 230L (60 USG)              | 99-00008 | HYDRAULIC SYSTEM     | PETRO-CAN HYDREX XV           |
| 5    | 2L (0.5 USG)               | 9901021  | CAB TILT HAND PUMP   | PETRO-CAN HYDREX MV ARCTIC 15 |
| 6    | 9 KG (20 lbs)              | 9901094  | GREASE FITTING       | GREASE, ULTRA TACKY HD        |
| 7    | 2.04 kg (4 lbs 8 oz)       | 9902224  | A/C SYSTEM           | FREON R134A                   |
| 8    | 0.11 kg (4 oz)             | 9902229  | A/C SYSTEM           | ESTER OIL                     |
| 9    | 26L (6.85 USG) - 2.75 JUGS | 9902593  | DIESEL EXHAUST FLUID | SCR SYSTEM                    |

| item | Qty. | P/N    | Description                          |
|------|------|--------|--------------------------------------|
| 1    | 1    | 214120 | 310/450B MULTI DECAL KIT             |
| 2    | 3    | 148803 | DECAL, NOZZLE ACCESS HOLE            |
| 3    | 1    | 15073  | PLATE - SERIAL NO.                   |
| 4    | 1    | 151873 | DECAL, 310 REAR LEFT                 |
| 5    | 1    | 151874 | DECAL, 310 REAR RIGHT                |
| 6    | 2    | 150512 | DECAL, 450B CAB                      |
| 7    | 1    | 151649 | DECAL, FUSE BOX FC/FD                |
| 8    | 1    | 151650 | DECAL, FRAME FBA                     |
| 9    | 1    | 151651 | DECAL, FRAME FBB                     |
| 10   | 1    | 151652 | DECAL, FRAME FBC                     |
| 11   | 1    | 139447 | LABEL,                               |
| 12   | 1    | 152011 | DECAL, SOLENOID LAYOUT 310           |
| 13   | 1    | 152248 | DECAL - LH JOYSTICK CONTROLS         |
| 14   | 1    | 152249 | DECAL - RH JOYSTICK CONTROLS         |
| 15   | 1    | 152253 | DECAL, NON-AMMONIA BASED WIPER FLUID |

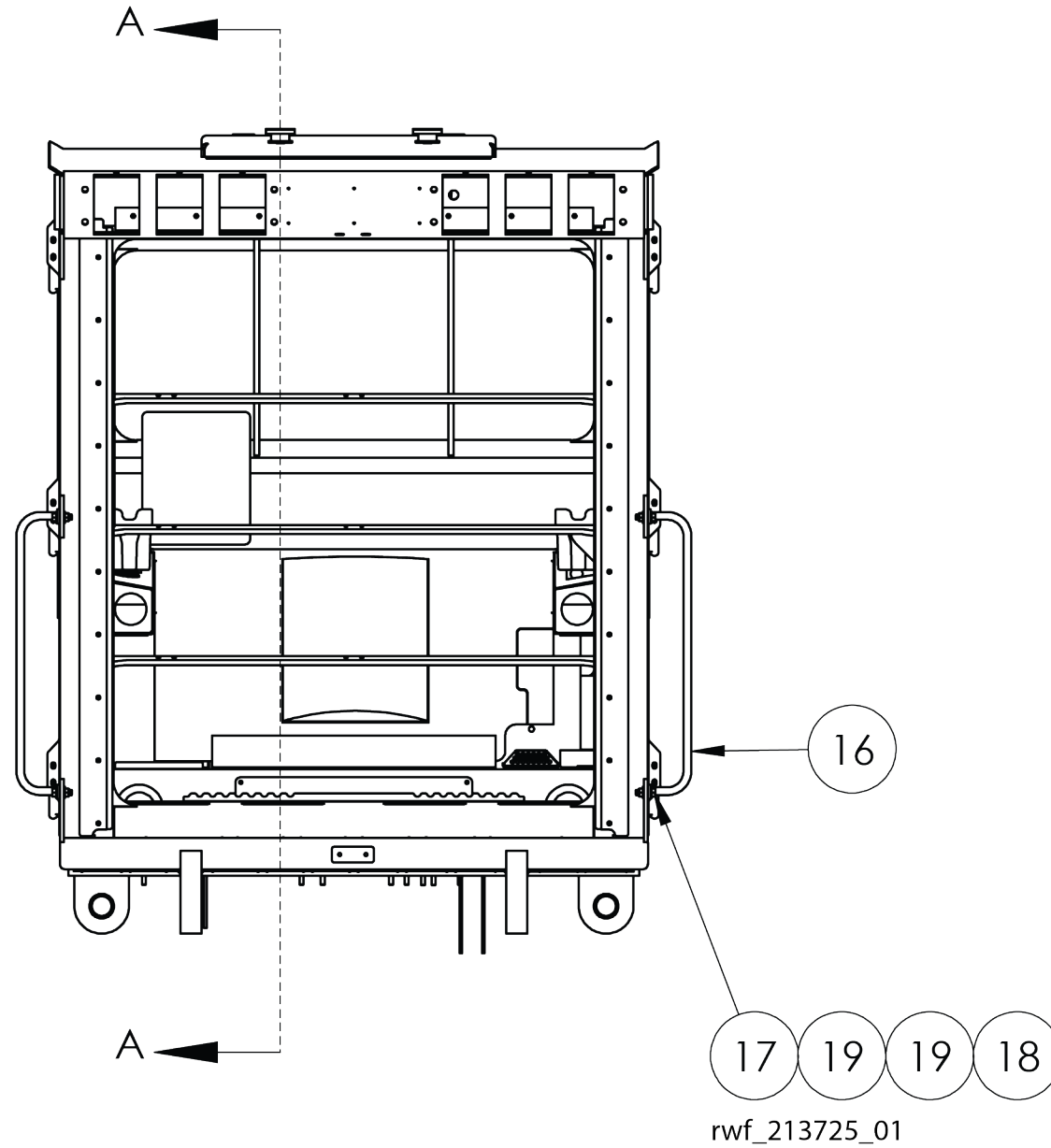
| BRON 310                       |           |
|--------------------------------|-----------|
| ITEM                           | PART #    |
| ENGINE OIL                     | SVP101306 |
| PRIMARY FUEL FILTER            | SVP101393 |
| SECONDARY FUEL FILTER          | SVP101394 |
| AIR FILTER PRIMARY ELEMENT     | SVP101326 |
| AIR FILTER SECONDARY ELEMENT   | SVP101475 |
| FUEL TANK BREATHER (1)         | 9901501   |
| MULCHER CHARGE PUMP FILTER (1) | SVP100999 |
| HYD OIL FILTER - PUMP (2)      | SVP101373 |
| AUX (VALVE) RETURN FILTER (1)  | 9900419   |
| KIDNEY LOOP FILTERS (2)        | 9900419   |
| HYDRAULIC TANK BREATHER (1)    | 9900420   |
| FRESH AIR FILTER (1)           | SVP102203 |
| RECIRCULATION FILTER (1)       | SVP102203 |



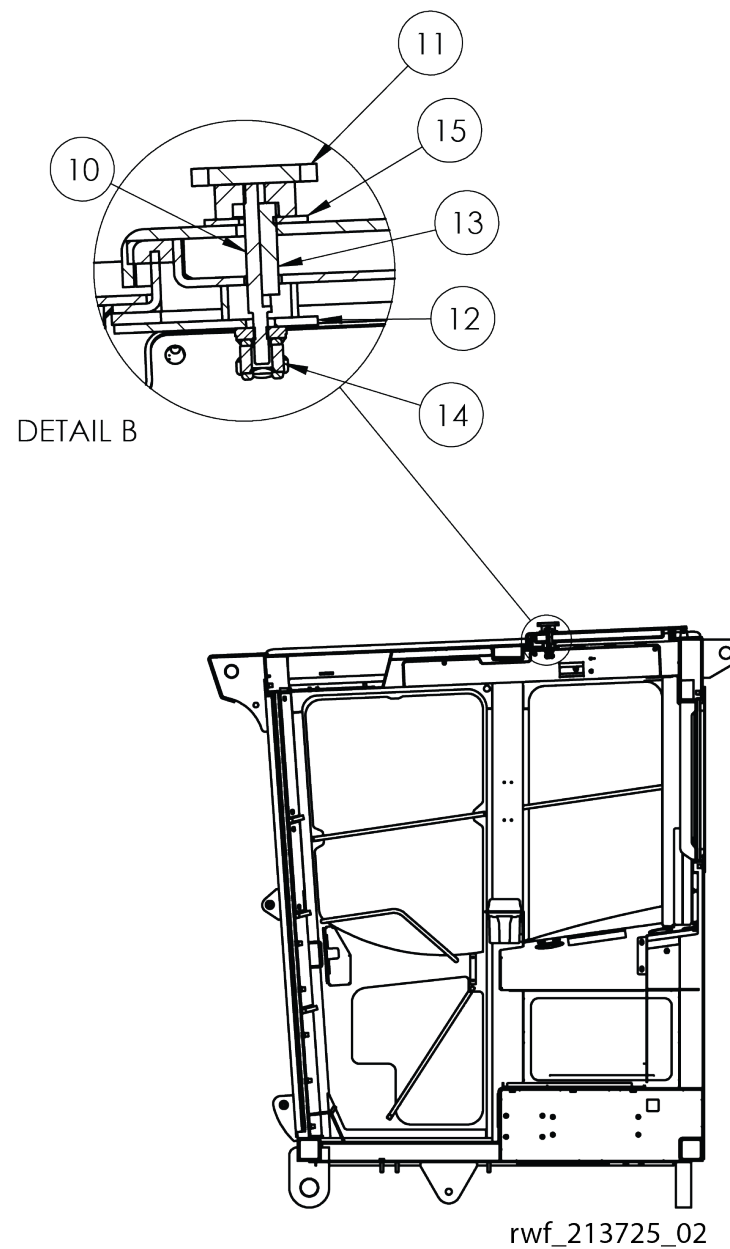
## CHAPTER 2: CAB

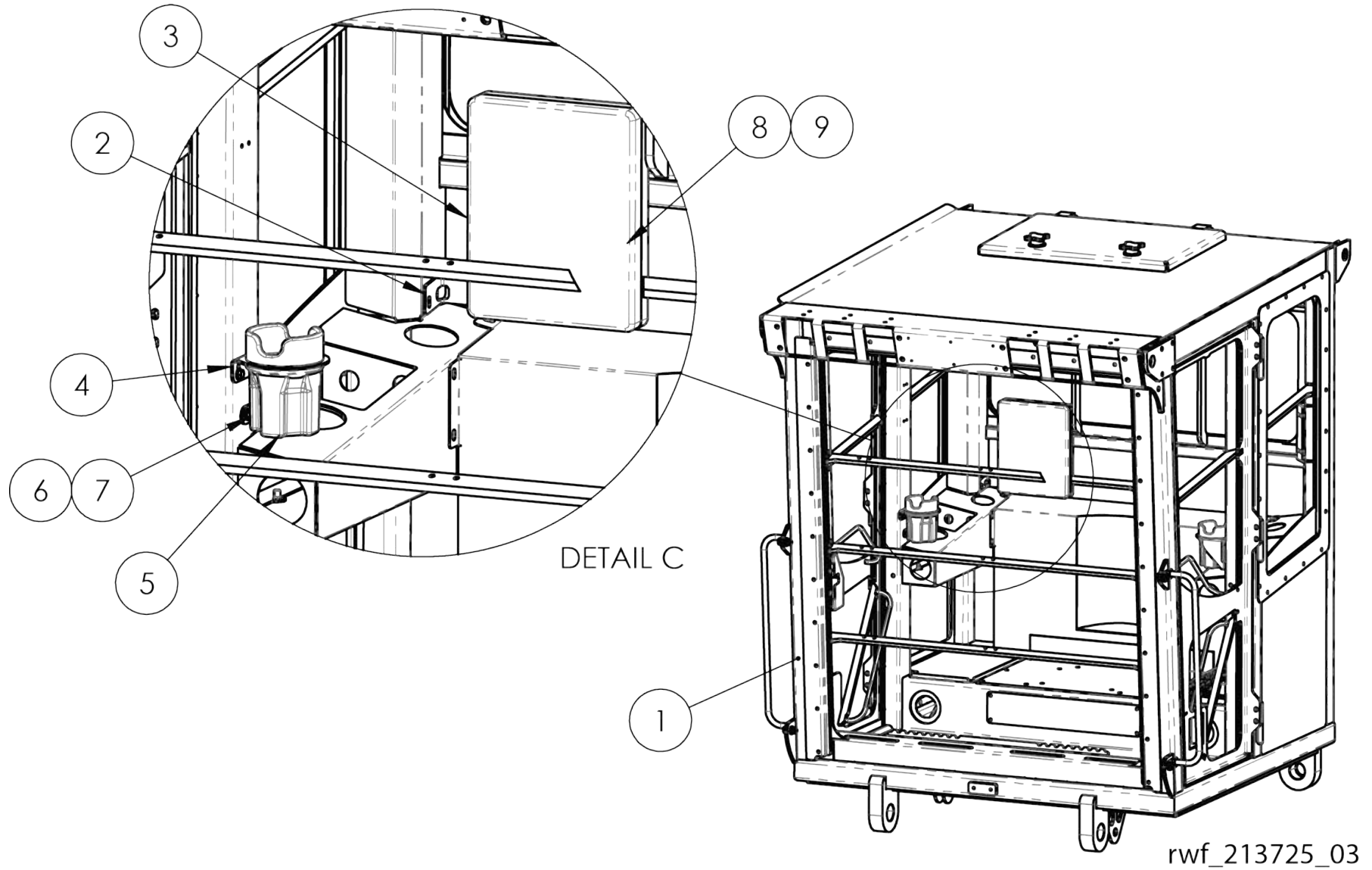
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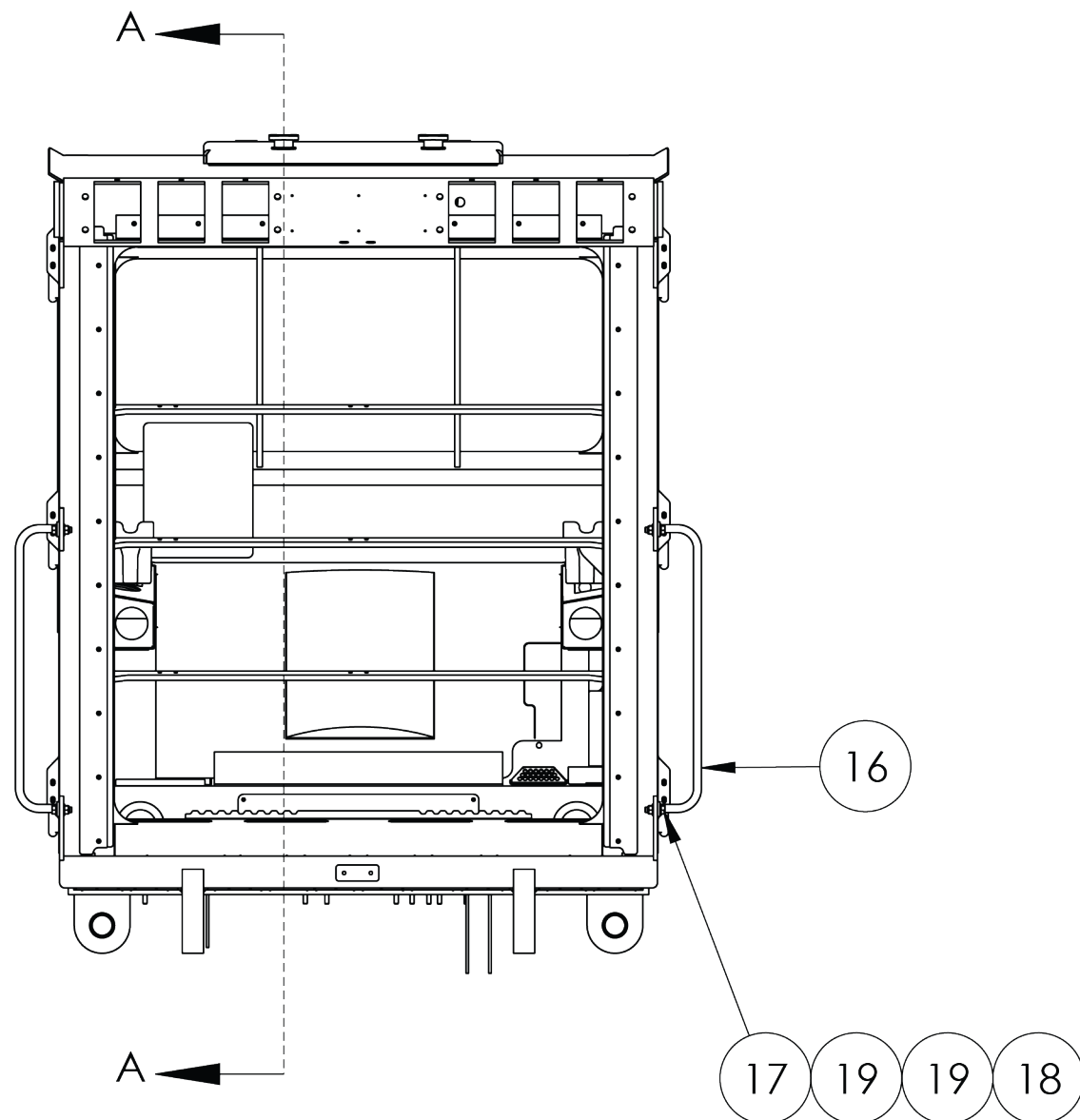




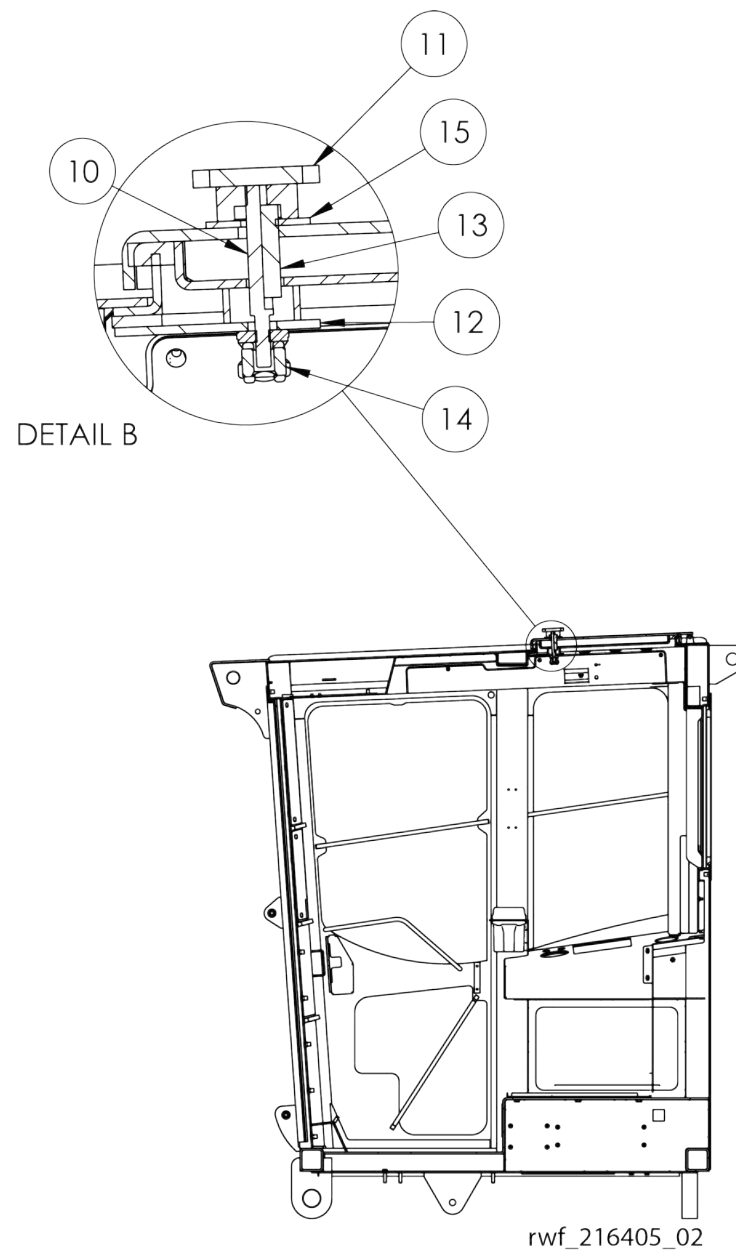


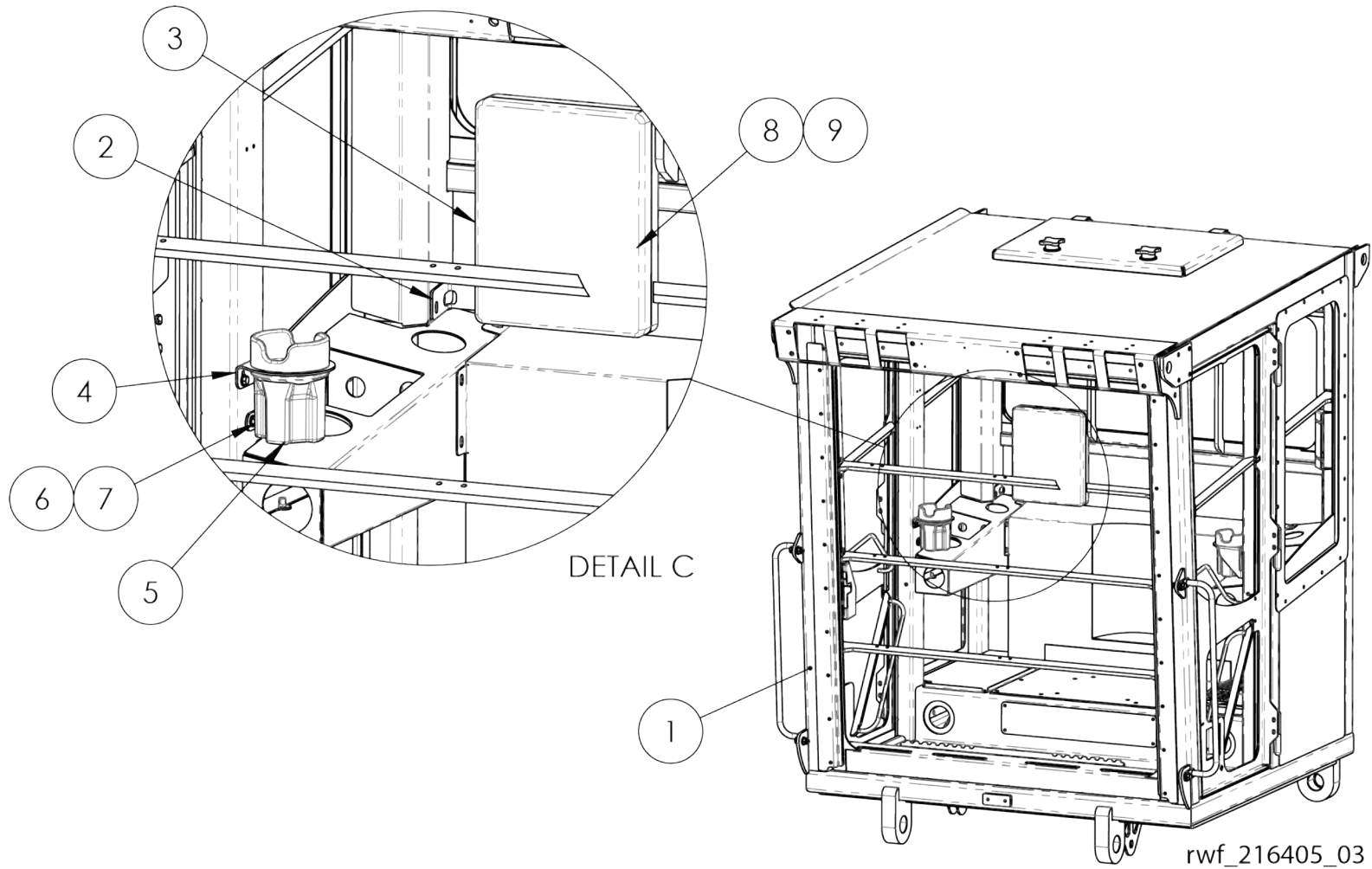


| item | Qty. | P/N     | Description                  |
|------|------|---------|------------------------------|
| 1    | 1    | 213726  | CAB                          |
| 2    | 1    | 203345  | MANUAL BOX BRACKET           |
| 3    | 1    | 119652  | MANUAL BOX                   |
| 4    | 2    | 141189  | FORM, CUPHOLDER BRACKET      |
| 5    | 2    | 9900940 | CUP HOLDER, MOLDED           |
| 6    | 6    | 80576   | WASHER - SAE                 |
| 7    | 6    | 80000   | BOLT - HEX HD                |
| 8    | 4    | 82136   | SCREW, TRUSS HEAD - PHILLIPS |
| 9    | 4    | 80511   | NUT - LOCK                   |
| 10   | 2    | 148333  | WAY BOLT                     |
| 11   | 2    | 148334  | WELDMENT, STAR KNOB          |
| 12   | 2    | 148337  | PLATE, HATCH RETAINER        |
| 13   | 2    | 148338  | KEY, HATCH BOLT              |
| 14   | 2    | 9901784 | CLAMPING HANDLE              |
| 15   | 2    | 9901785 | WASHER, REINFORCED RUBBER    |
| 16   | 2    | 208341  | WELDMENT, CAB GRAB HANDLE    |
| 17   | 4    | 80071   | BOLT - HEX HD                |
| 18   | 4    | 80515   | NUT - LOCK                   |
| 19   | 8    | 80580   | WASHER - SAE                 |

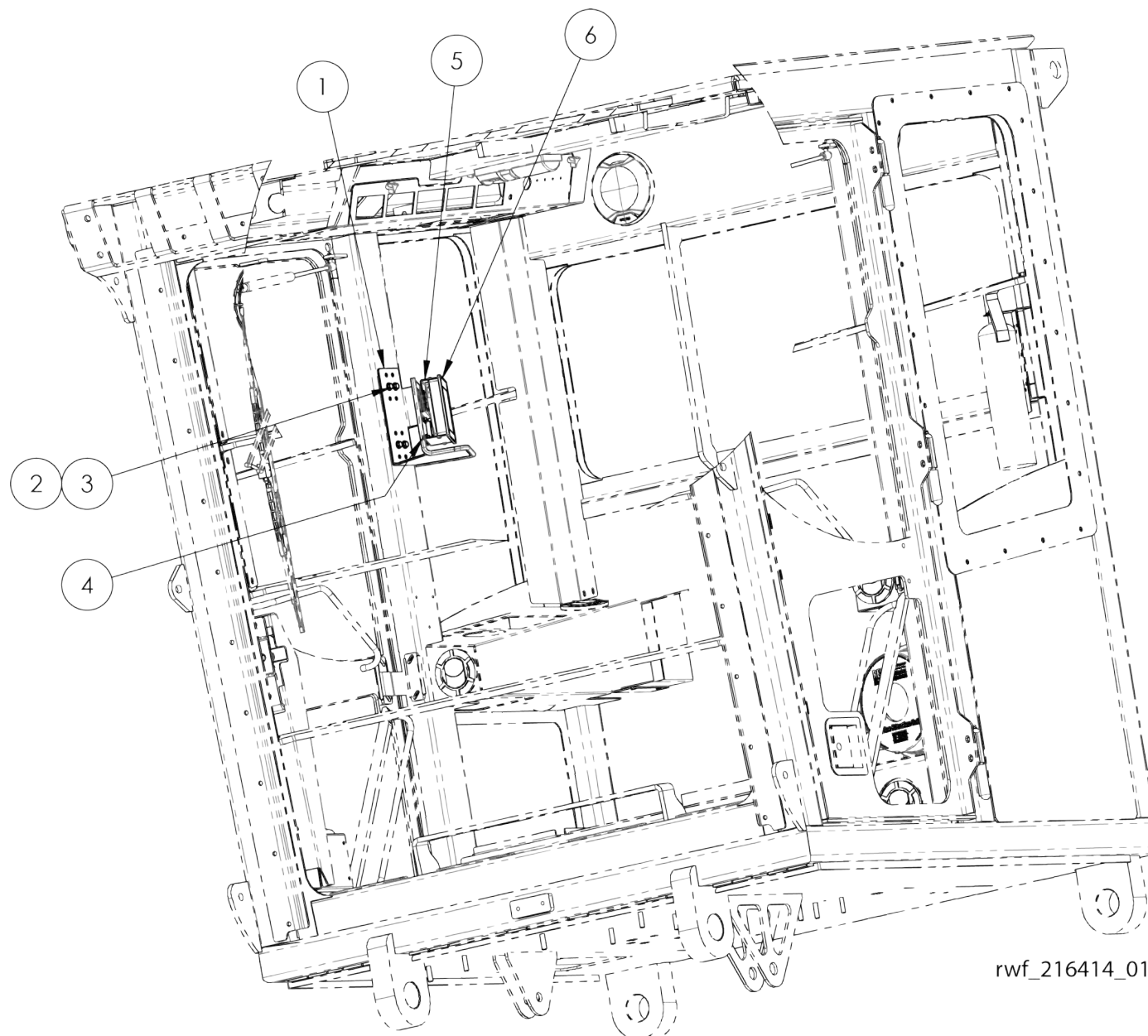


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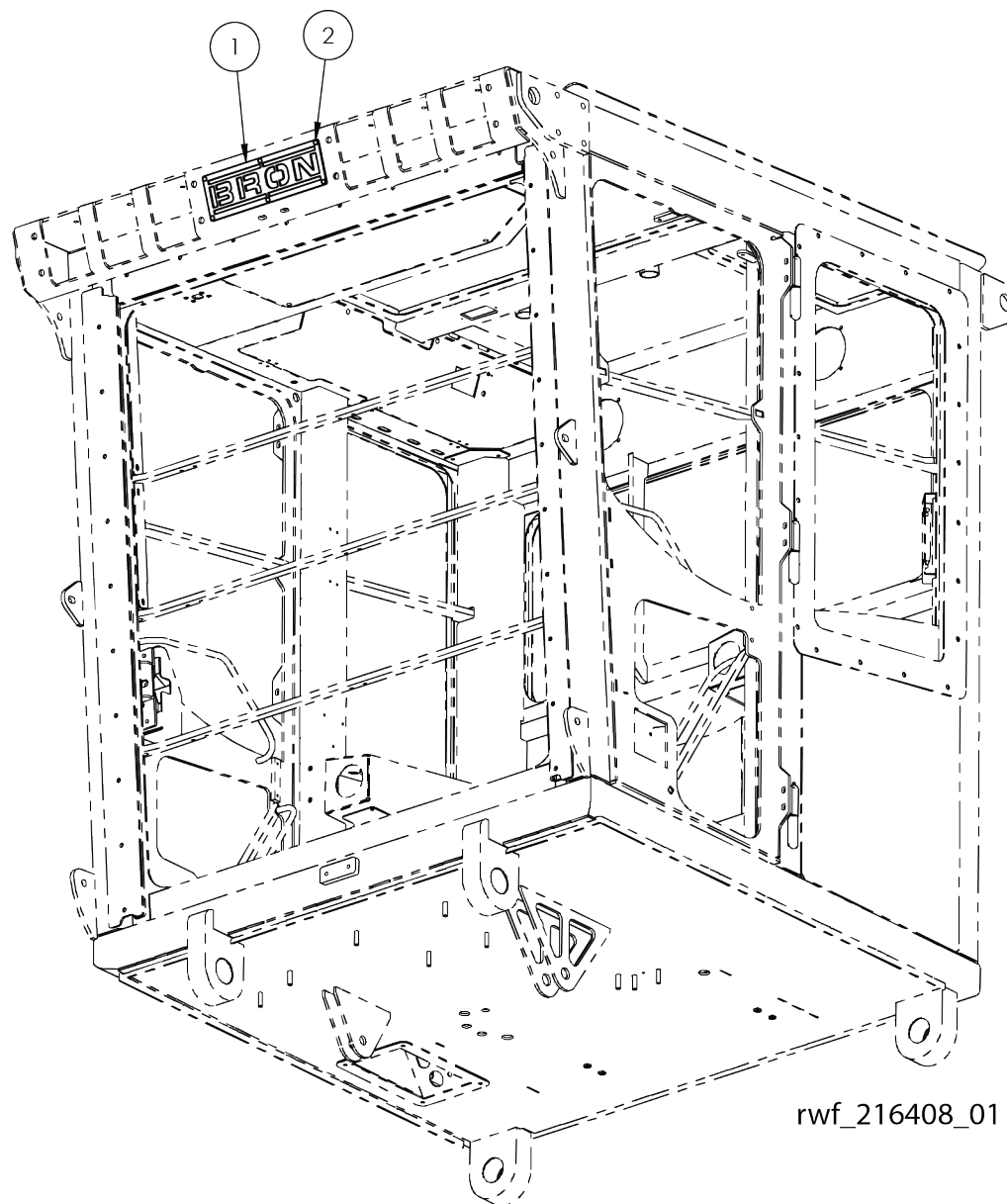
| item | Qty. | P/N     | Description                  |
|------|------|---------|------------------------------|
| 1    | 1    | 216406  | CAB, FTX300 WINDOW           |
| 2    | 1    | 203345  | MANUAL BOX BRACKET           |
| 3    | 1    | 119652  | MANUAL BOX                   |
| 4    | 2    | 141189  | FORM, CUPHOLDER BRACKET      |
| 5    | 2    | 9900940 | CUP HOLDER, MOLDED           |
| 6    | 6    | 80576   | WASHER - SAE                 |
| 7    | 6    | 80000   | BOLT - HEX HD                |
| 8    | 4    | 82136   | SCREW, TRUSS HEAD - PHILLIPS |
| 9    | 4    | 80511   | NUT - LOCK                   |
| 10   | 2    | 148333  | 2-WAY BOLT                   |
| 11   | 2    | 148334  | WELDMENT, STAR KNOB          |
| 12   | 2    | 148337  | PLATE, HATCH RETAINER        |
| 13   | 2    | 148338  | KEY, HATCH BOLT              |
| 14   | 2    | 9901784 | CLAMPING HANDLE              |
| 15   | 2    | 9901785 | WASHER, REINFORCED RUBBER    |
| 16   | 2    | 208341  | WELDMENT, CAB GRAB HANDLE    |
| 17   | 4    | 80071   | BOLT - HEX HD                |
| 18   | 4    | 80515   | NUT - LOCK                   |
| 19   | 8    | 80580   | WASHER - SAE                 |

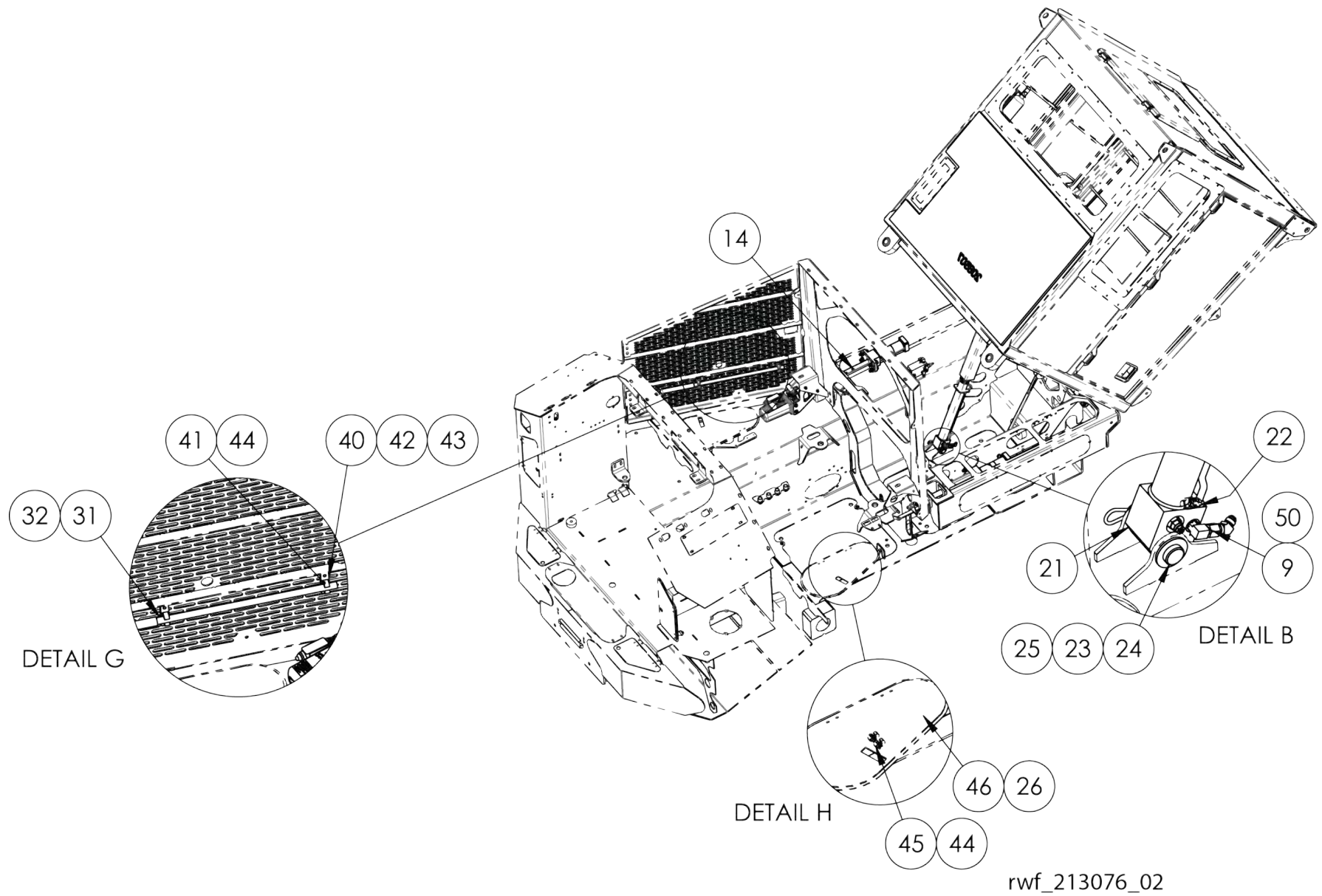


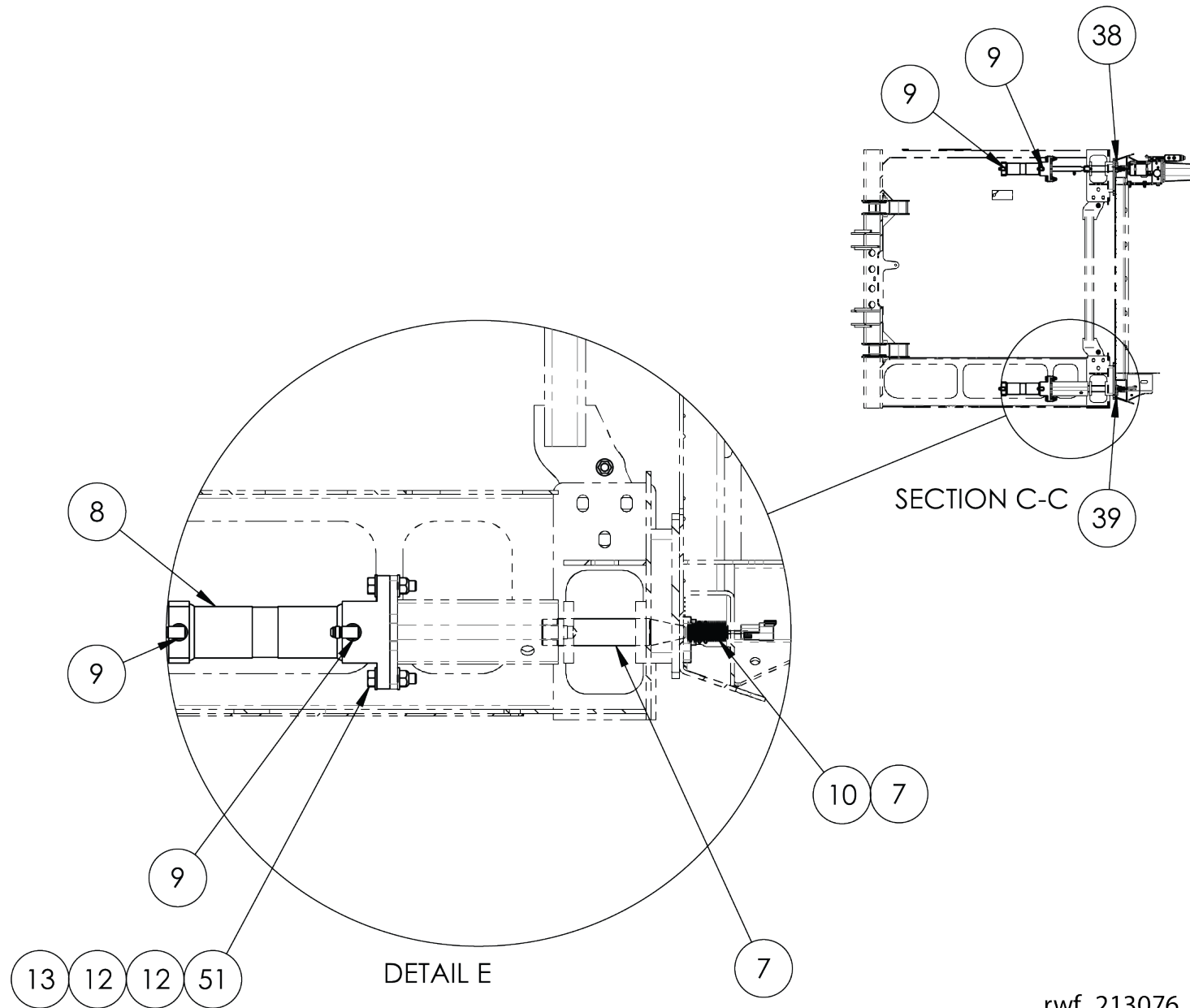
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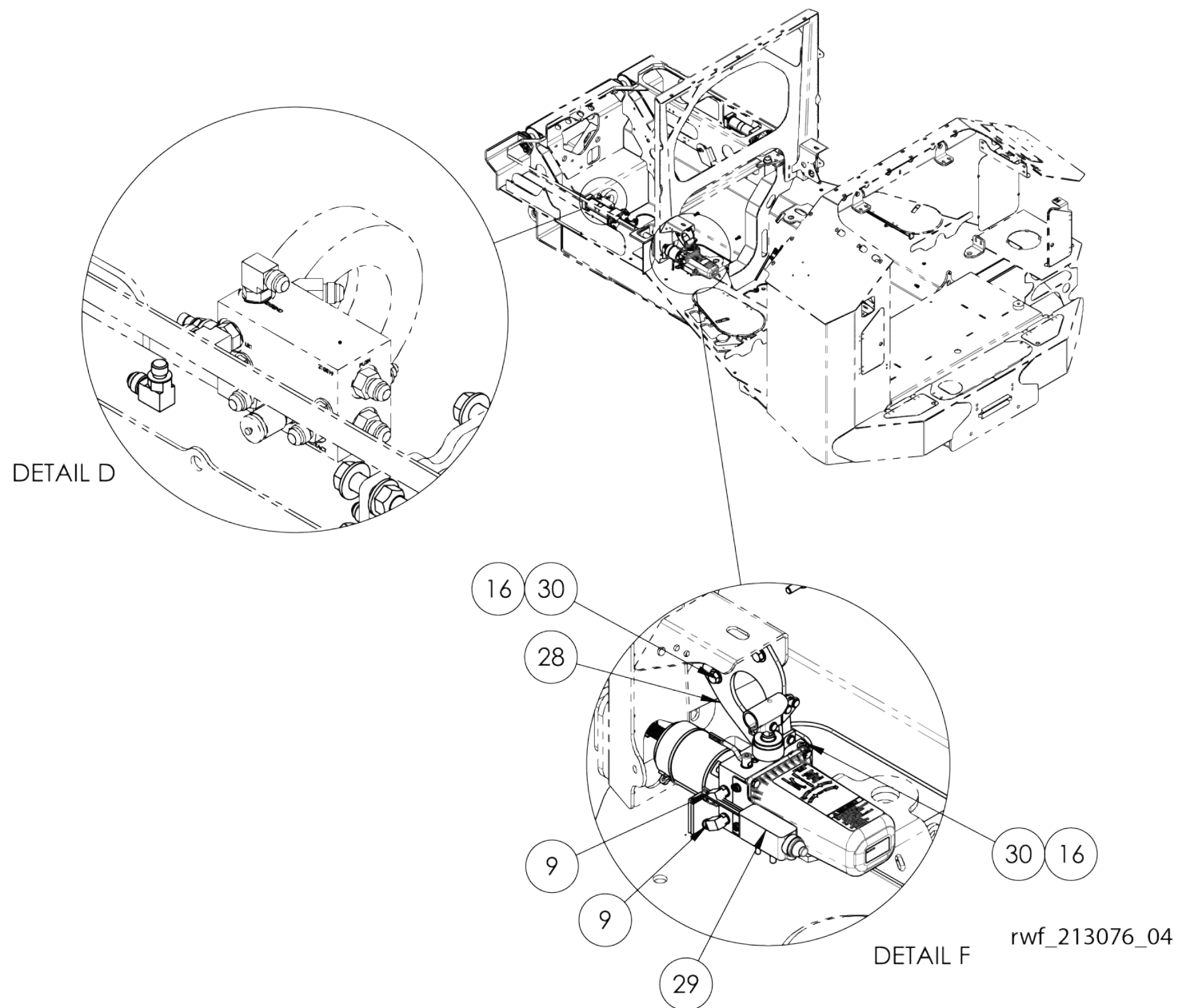
| item | Qty. | P/N     | Description                        |
|------|------|---------|------------------------------------|
| 1    | 1    | 216384  | WELDMENT, FIXED DISPLAY HORIZONTAL |
| 2    | 4    | 80576   | WASHER - SAE                       |
| 3    | 4    | 80449   | BOLT - HEX HD                      |
| 4    | 4    | 82160   | SCREW, ROUND HEAD - PHILLIPS       |
| 5    | 1    | 9901880 | MD MOUNT W/BUZZER                  |
| 6    | 1    | 9901760 | DISPLAY, IQAN                      |

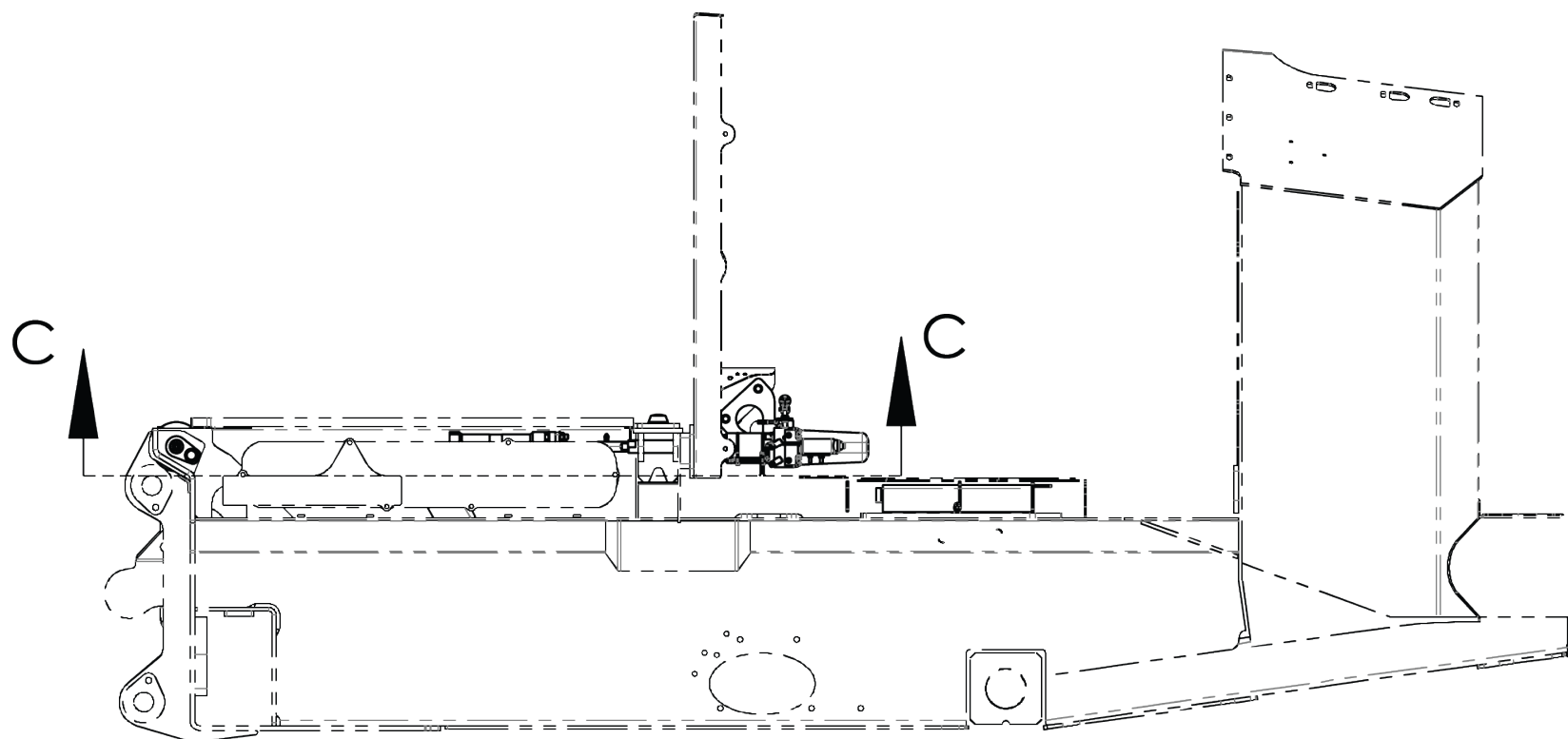






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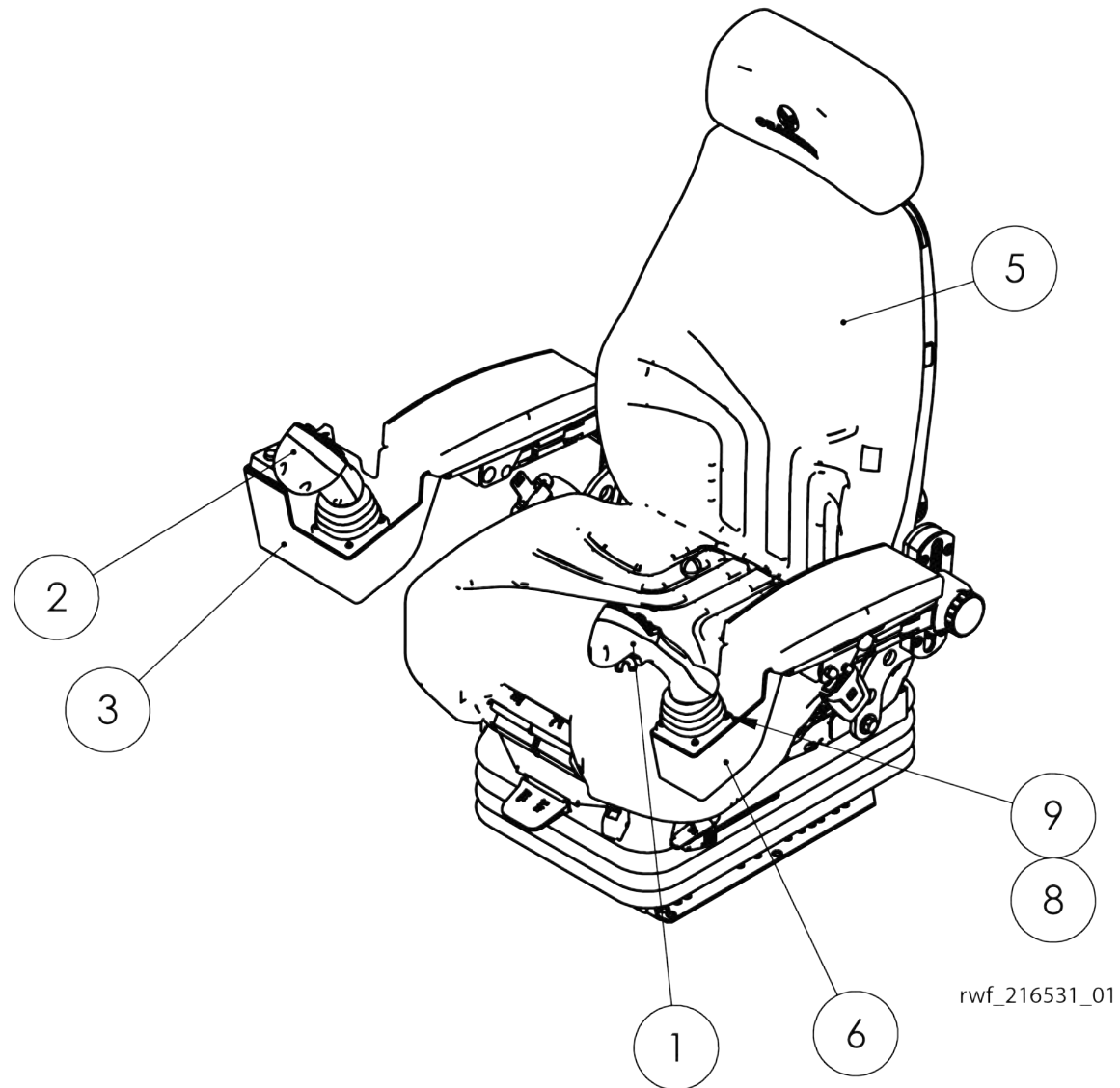


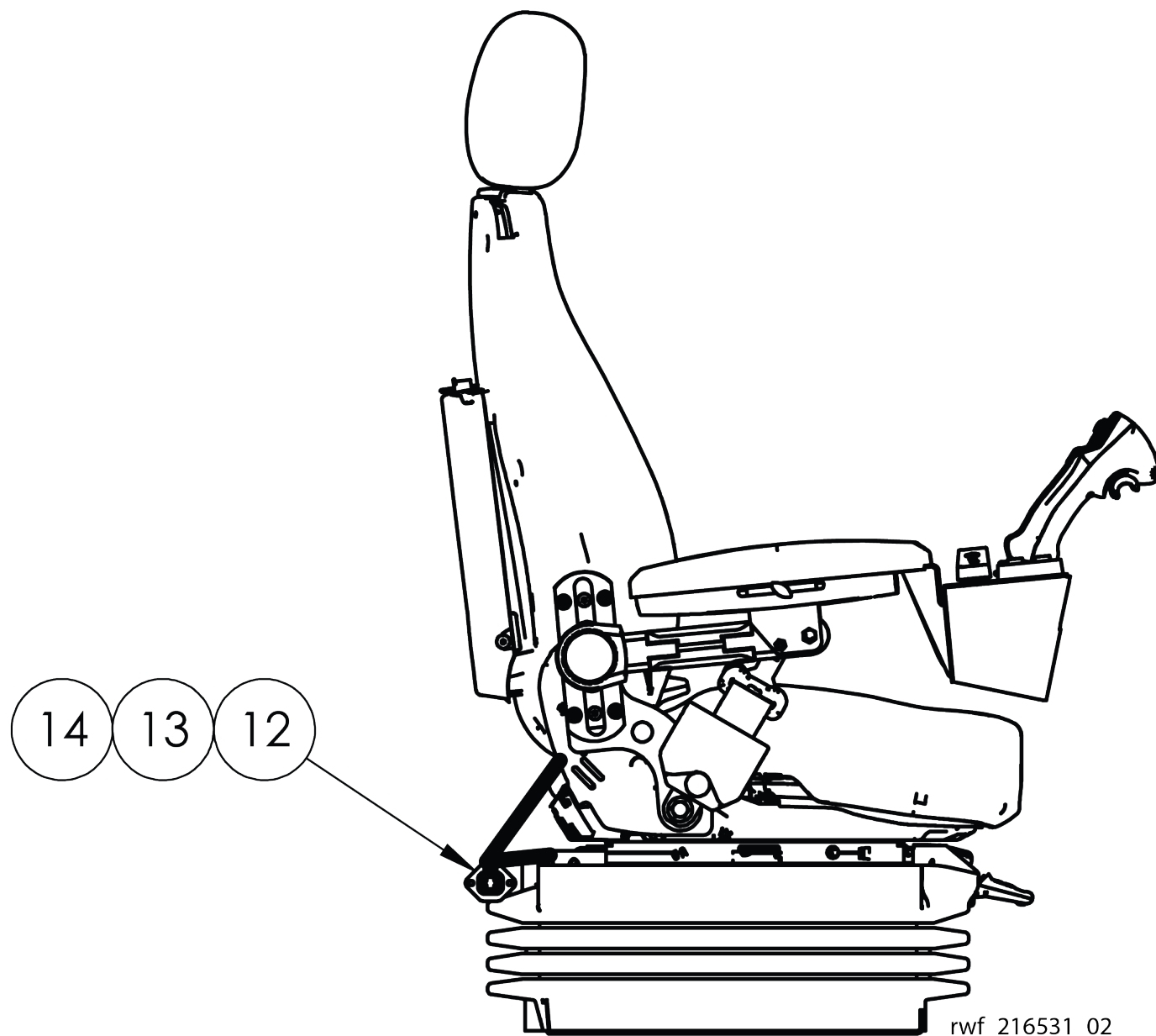
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| item | Qty. | P/N     | Description                  |
|------|------|---------|------------------------------|
| 1    | 2    | 140929  | PIN ASSY                     |
| 2    | 4    | 9900376 | BUSHING, CENTER BONDED       |
| 3    | 6    | 139254  | ISOLATOR, CAB LUG SPACING    |
| 7    | 2    | 143942  | PIN                          |
| 8    | 2    | 9902236 | CYLINDER, STROKE             |
| 9    | 7    | 90242   | ADAPTER                      |
| 10   | 2    | 148870  | HARNESS, PROX SWITCH         |
| 12   | 16   | 80580   | WASHER - SAE                 |
| 13   | 8    | 80515   | NUT - LOCK                   |
| 14   | 2    | 80680   | GREASE FITTING NPT x STR     |
| 15   | 2    | 134861  | ANTI-VIBRATION MOUNT         |
| 16   | 6    | 80578   | WASHER - SAE                 |
| 17   | 4    | 80502   | NUT - STD                    |
| 18   | 1    | 9901966 | SLING, CAB TILT              |
| 19   | 2    | 82359   | CLEVIS PIN                   |
| 20   | 2    | 80631   | COTTER PIN                   |
| 21   | 1    | 9901963 | CYL, BORE STROKE             |
| 22   | 1    | 90067   | ADAPTER, STR                 |
| 23   | 2    | 80584   | WASHER - SAE                 |
| 24   | 1    | 82360   | CLEVIS PIN                   |
| 25   | 2    | 12789   | HITCH PIN                    |
| 26   | 1    | 120845  | HITCH PIN                    |
| 27   | 1    | 82220   | CLEVIS PIN                   |
| 28   | 1    | 207458  | BRACKET, CAB TILT PUMP MOUNT |
| 29   | 1    | 9901105 | ELECTRIC PUMP, CAB TILT      |
| 30   | 4    | 80029   | BOLT - HEX HD                |
| 31   | 1    | 26963   | HANDLE, CAB TILT PUMP        |
| 32   | 1    | 9900440 | GRIP, CUSHIONED HANDLE       |
| 33   | 1    | 148557  | PLATE, SERVICE LIGHT MOUNT   |
| 34   | 1    | 144529  | ASSY, LED SERVICE LIGHT      |
| 35   | 2    | 80501   | NUT - STD                    |
| 36   | 1    | 208307  | INSULATION, CAB REAR         |
| 37   | 1    | 208439  | INSULATION, CAB BOTTOM       |

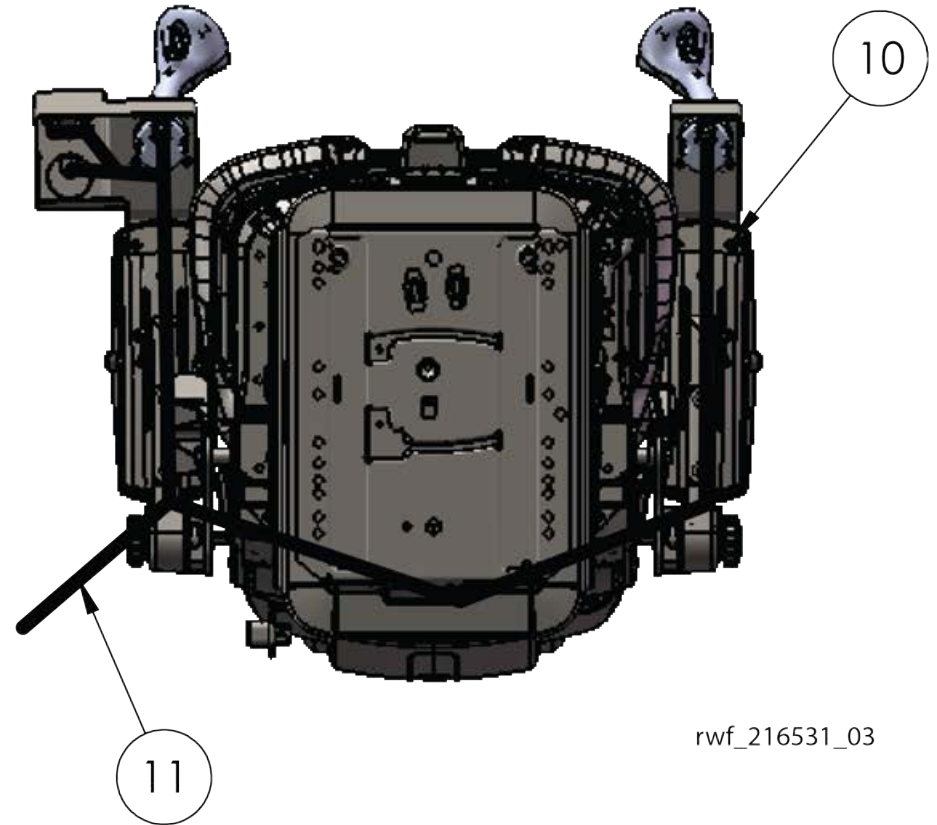
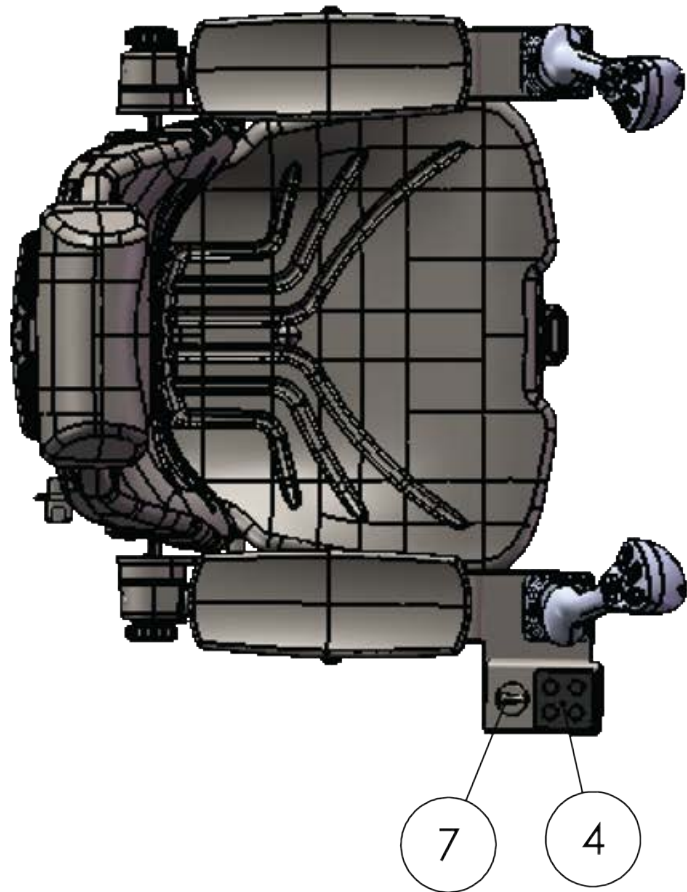
| item | Qty. | P/N     | Description                    |
|------|------|---------|--------------------------------|
| 38   | 1    | 208956  | WELDMENT, LH PROX SWITCH MOUNT |
| 39   | 1    | 208957  | WELDMENT, RH PROX SWITCH MOUNT |
| 40   | 2    | 148893  | FLATBAR, GRIPPER CLIP MOUNT    |
| 41   | 2    | 9901959 | GRIPPER CLIP                   |
| 42   | 4    | 80048   | BOLT - HEX HD                  |
| 43   | 4    | 80579   | WASHER - SAE                   |
| 44   | 4    | 82110   | SCREW, ROUND HEAD - PHILLIPS   |
| 45   | 2    | 9901040 | GRIPPER CLIP                   |
| 46   | 1    | 207960  | WELDMENT, CAB LOCK             |
| 47   | 2    | 80581   | WASHER - SAE                   |
| 48   | 2    | 80090   | BOLT - HEX HD                  |
| 49   | 2    | 115057  | SPB                            |
| 50   | 1    | 90263   | ELBOW, SWIVEL                  |
| 51   | 8    | 80073   | BOLT - HEX HD                  |
| 52   | REF  | 134385  | TRIM SEAL                      |





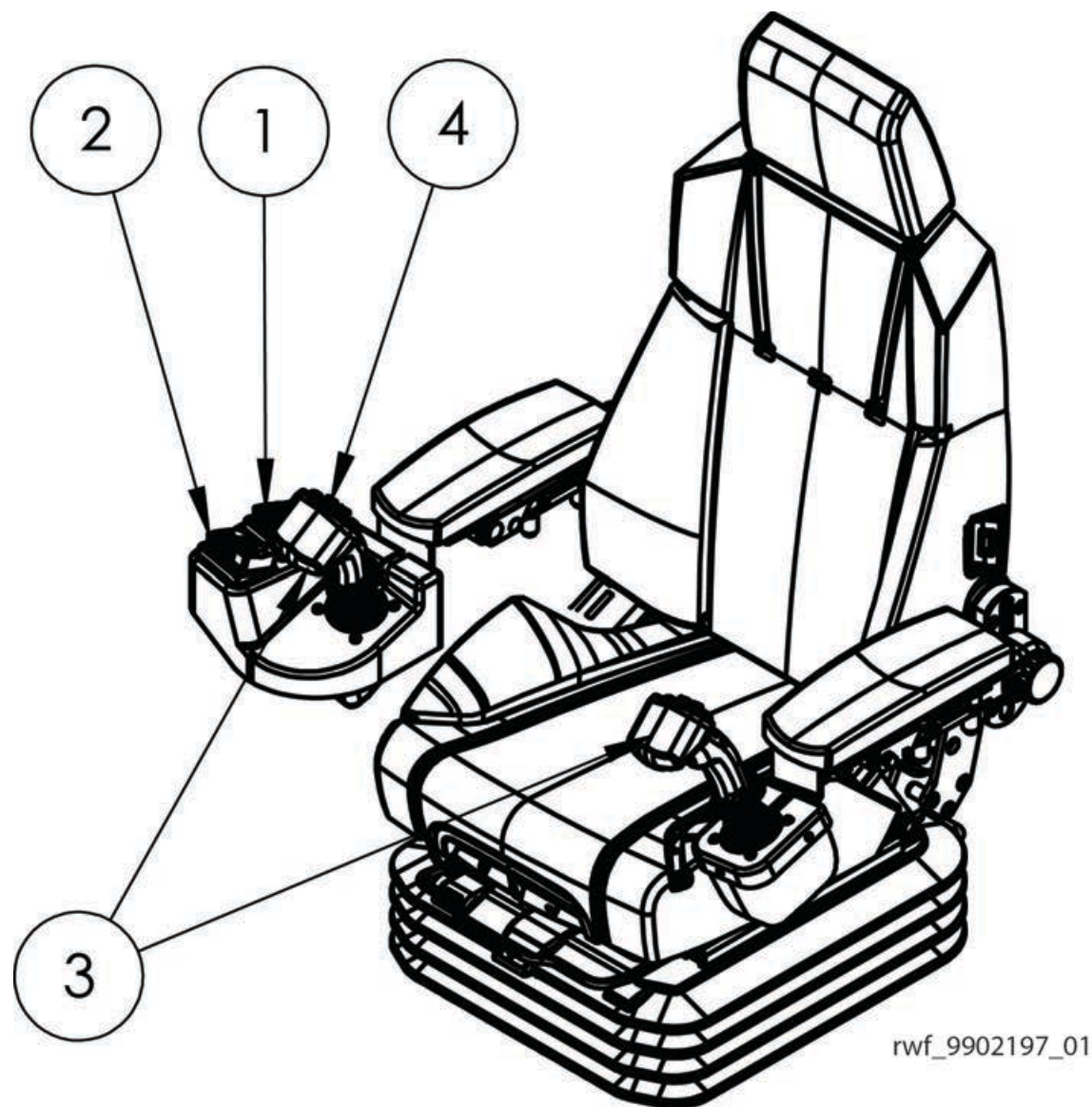


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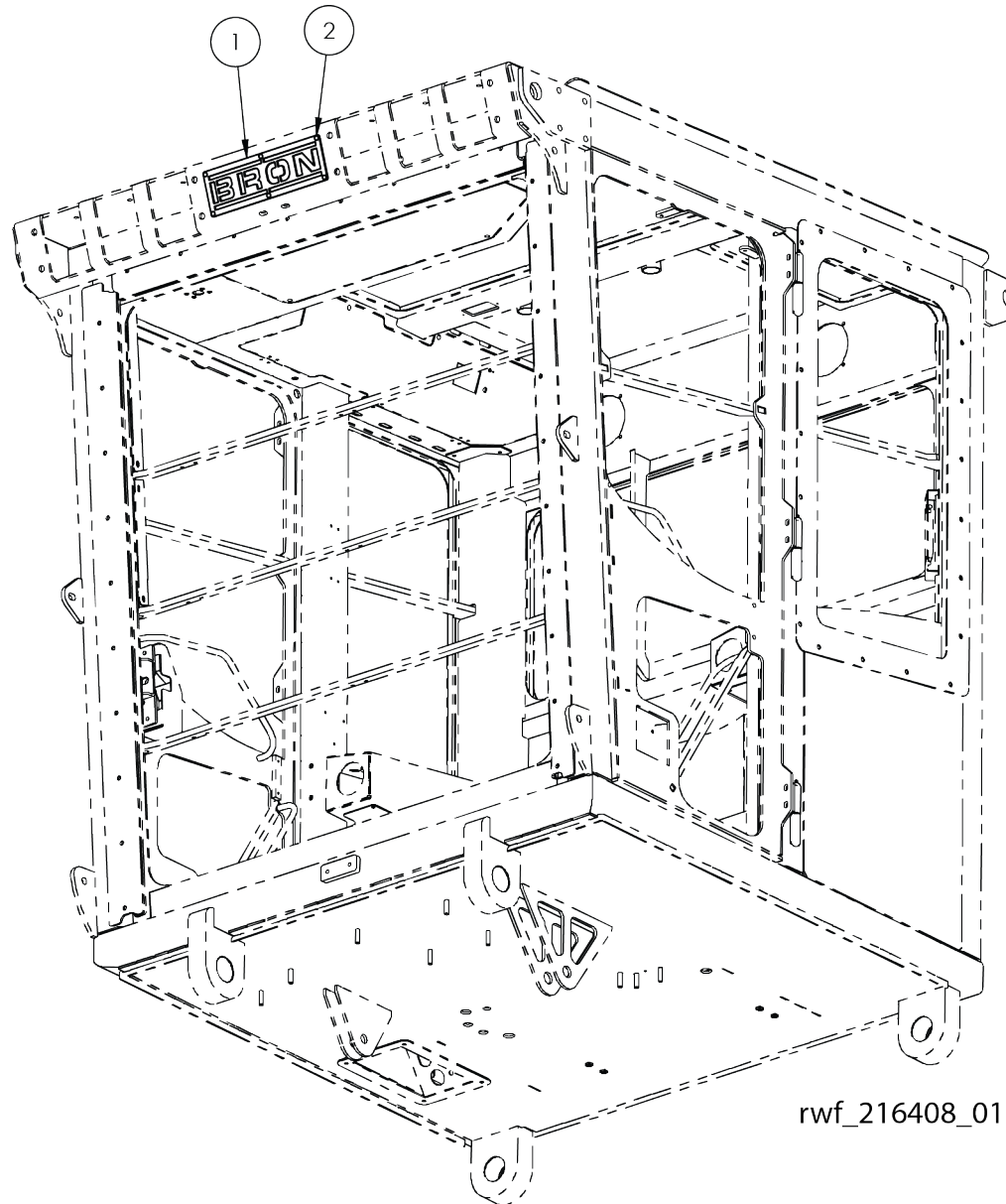


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| item | Qty. | P/N       | Description                               |
|------|------|-----------|-------------------------------------------|
| 14   | 4    | 85145     | PIN CONTACT- SOLID                        |
| 13   | 1    | 85138     | DTP WEDGE LOCK - 4 PIN                    |
| 12   | 1    | 85136     | DTP 4 PIN POWER RECEPTACLE/PIN - BULKHEAD |
| 11   | 1    | 216548    | HARNESS, SEAT CONTROLS                    |
| 10   | 8    | 74002-003 | CAP SCREW, BUTTON SOC HD                  |
| 9    | 8    | 82101     | SCREW, ROUND HEAD - PHILLIPS              |
| 8    | 8    | 82206     | NUT                                       |
| 7    | 1    | 9902550   | SWITCH, KEY 2 POS SEALED                  |
| 6    | 1    | 216532    | WELDMENT, LH JOYSTICK MOUNT               |
| 5    | 1    | 9902563   | ASM, SEAT WITH ARMS                       |
| 4    | 1    | 151934    | SWITCH ASM, CANBUS 4-POS SQUARE           |
| 3    | 1    | 216533    | WELDMENT, RH JOYSTICK MOUNT               |
| 2    | 1    | 9902548   | JOYSTICK, RH MULCHER                      |
| 1    | 1    | 9902547   | JOYSTICK, LH MULCHER                      |



| item | Qty. | P/N     | Description                   |
|------|------|---------|-------------------------------|
| 1    | REF  | 9902230 | 3 SWITCH BANK,ACCESSORIES     |
| 2    | REF  | 9902231 | 3 SWITCH BANK, ENGINE CONTROL |
| 3    | REF  | 9902232 | JOYSTICK,BRUSHCUTTER          |
| 4    | REF  | 9902233 | QUARTER TURN SWITCH           |
| 5    | REF  | 212638  | HARNESS,SEAT                  |



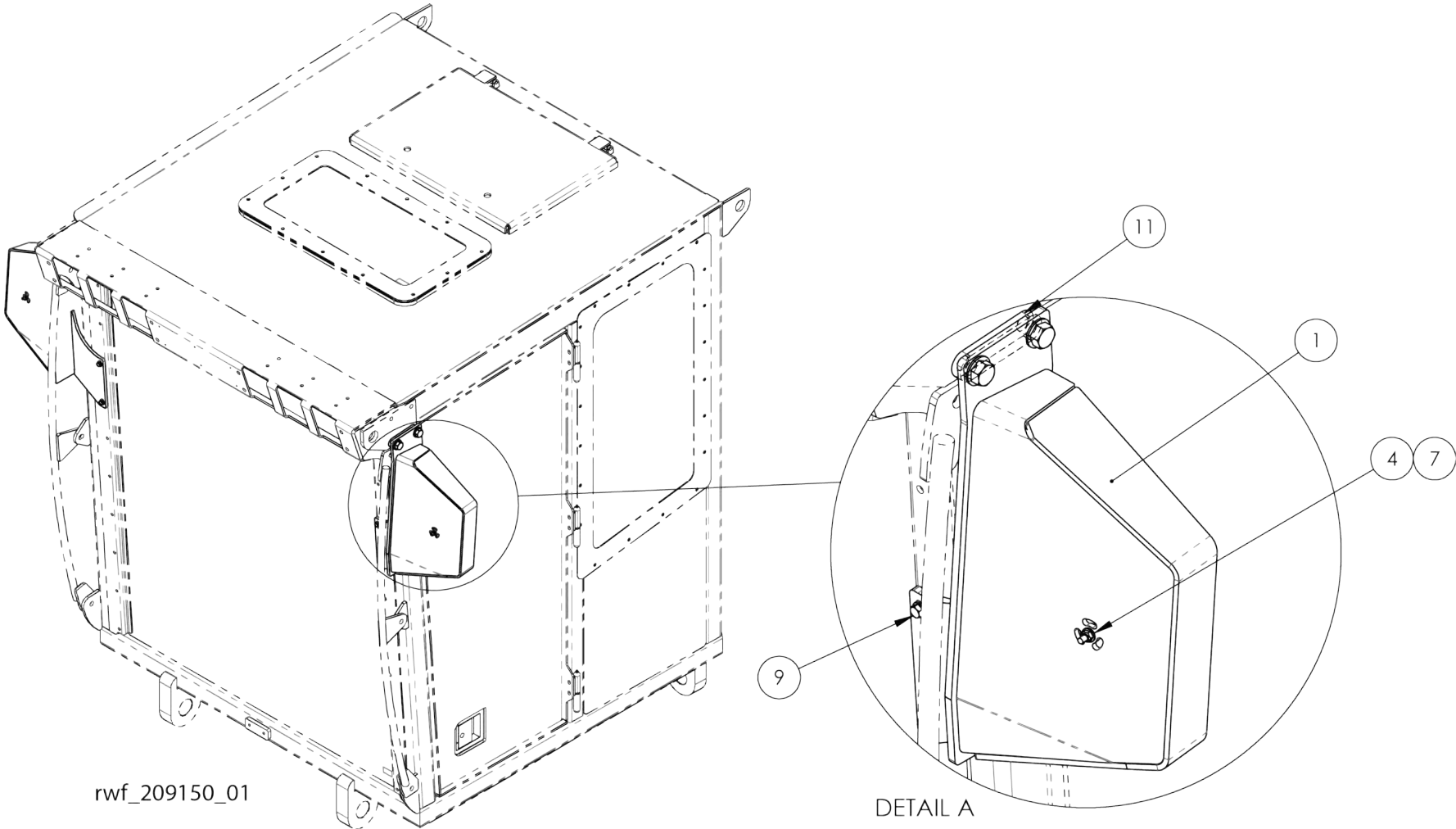
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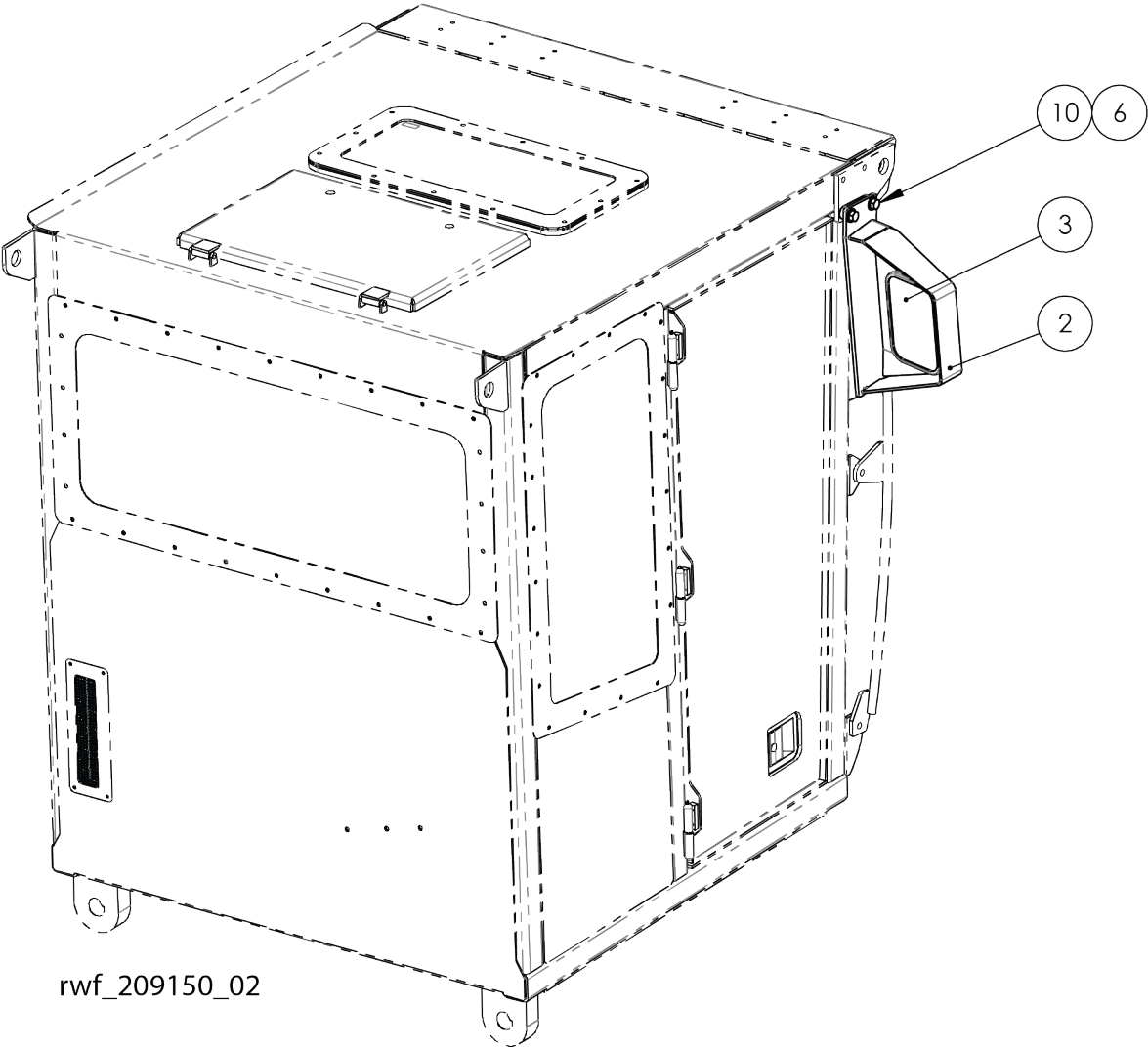
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PARTS MANUAL

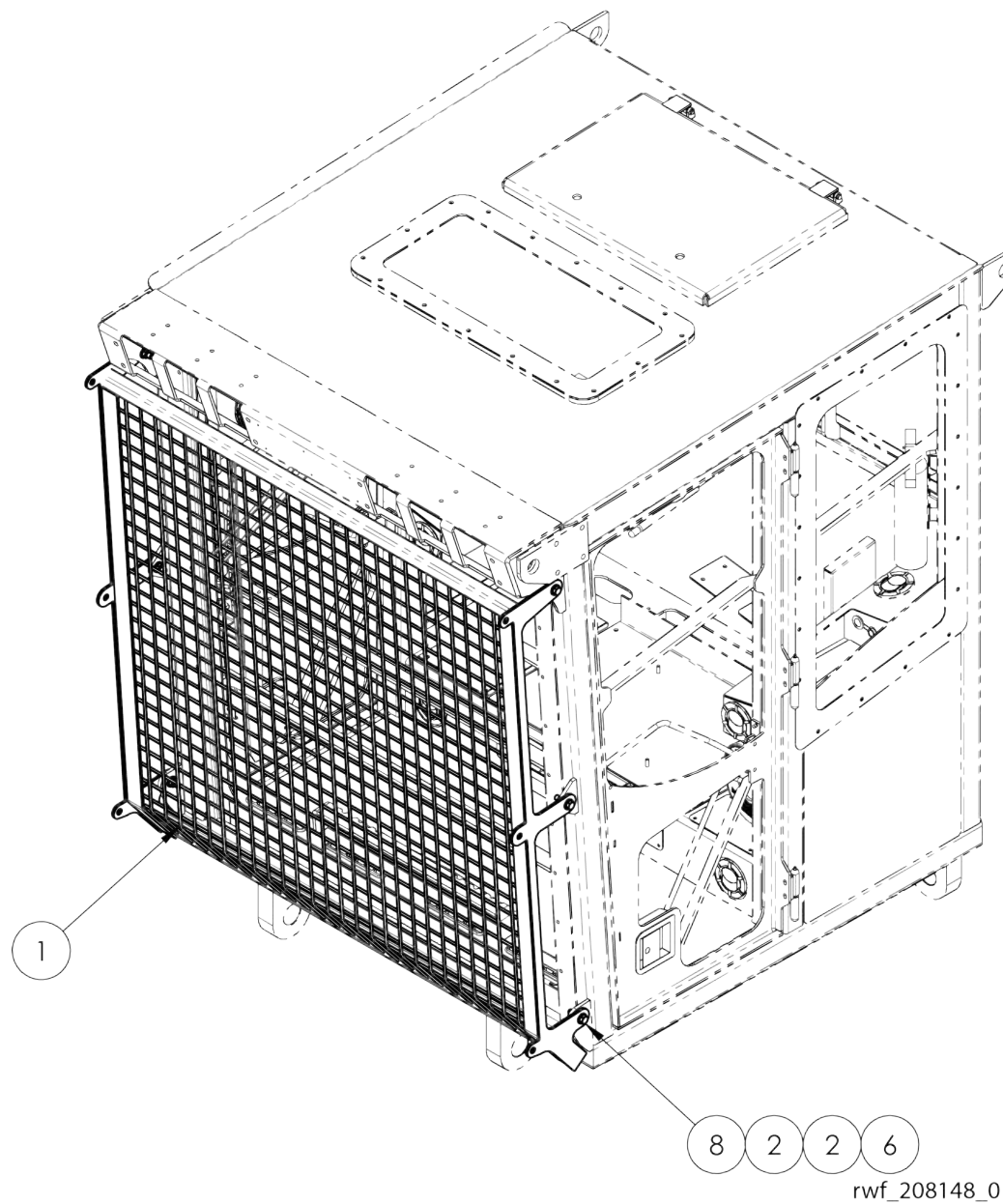
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|------|------|--------|-----------------------|
| 1    | 1    | 143137 | PLATE, BRON NAMEPLATE |
| 2    | 6    | 80770  | RIVET                 |

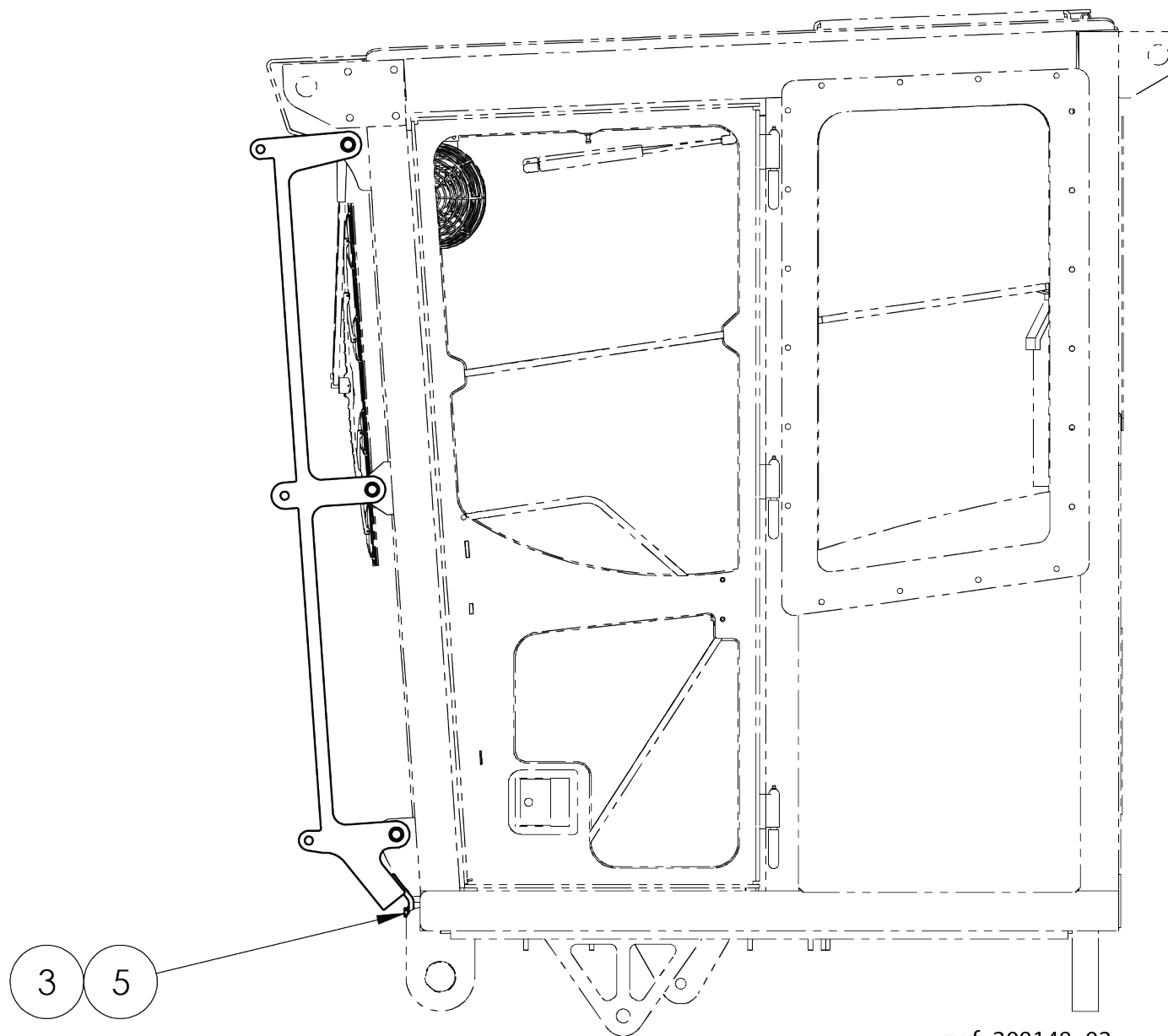






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|------|------|---------|----------------------|
| 1    | 1    | 204681  | WELDMENT, LH MIRROR  |
| 2    | 1    | 204682  | WELDMENT, RH MIRROR  |
| 3    | 2    | 9901207 | MIRROR, RECTANGULAR  |
| 4    | 2    | 80576   | WASHER               |
| 5    | REF  | 80577   | WASHER               |
| 6    | 4    | 80581   | WASHER               |
| 7    | 2    | 80511   | NUT - LOCK           |
| 8    | REF  | 80512   | NUT - LOCK           |
| 9    | 4    | 80023   | BOLT - HEX HD.       |
| 10   | 4    | 80090   | BOLT - HEX HD.       |
| 11   | 2    | 148921  | PLATE, MIRROR SPACER |





rwf\_208148\_02

| item | Qty. | P/N    | Description           |
|------|------|--------|-----------------------|
| 1    | 1    | 208149 | WELDMENT, FRONT GUARD |
| 2    | 12   | 80580  | WASHER - SAE          |
| 3    | 2    | 80578  | WASHER - SAE          |
| 5    | 2    | 80028  | BOLT - HEX HD         |
| 6    | 6    | 80515  | NUT - LOCK            |
| 8    | 6    | 80072  | BOLT - HEX HD         |

# CHAPTER 3: HEATING & COOLING SYSTEM

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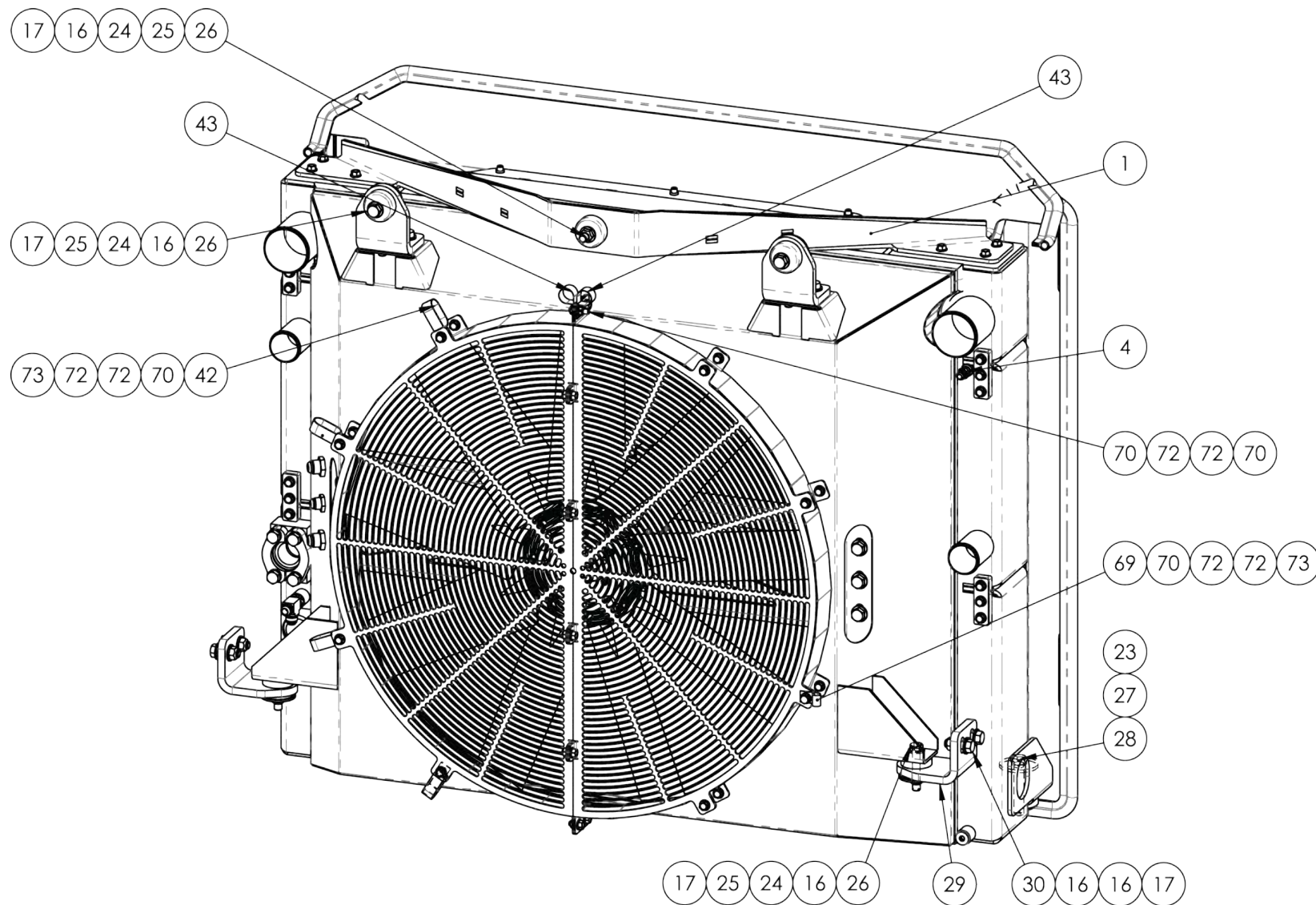
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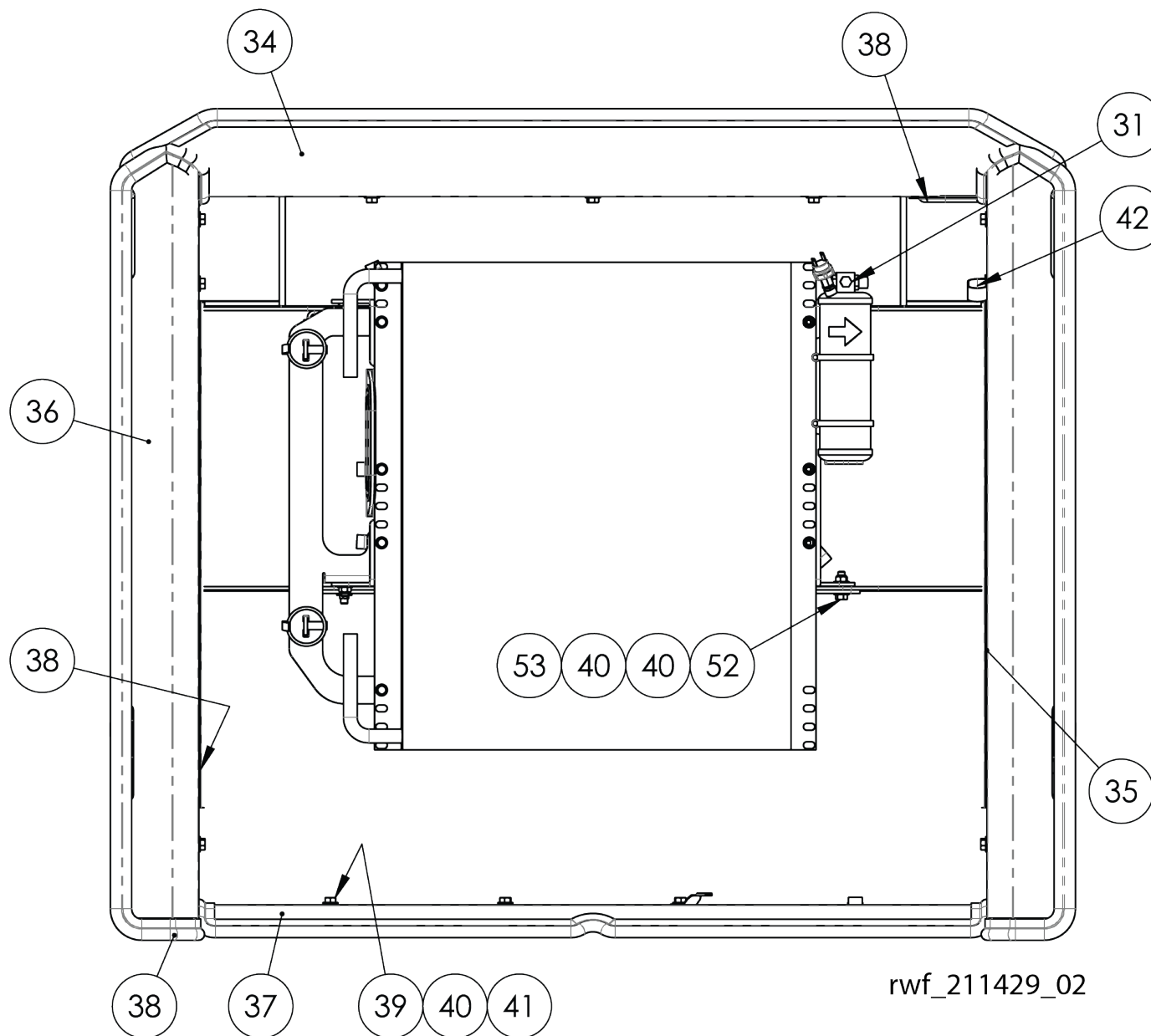
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*MOTOR KIT, AXIAL PISTON..... 3.5*

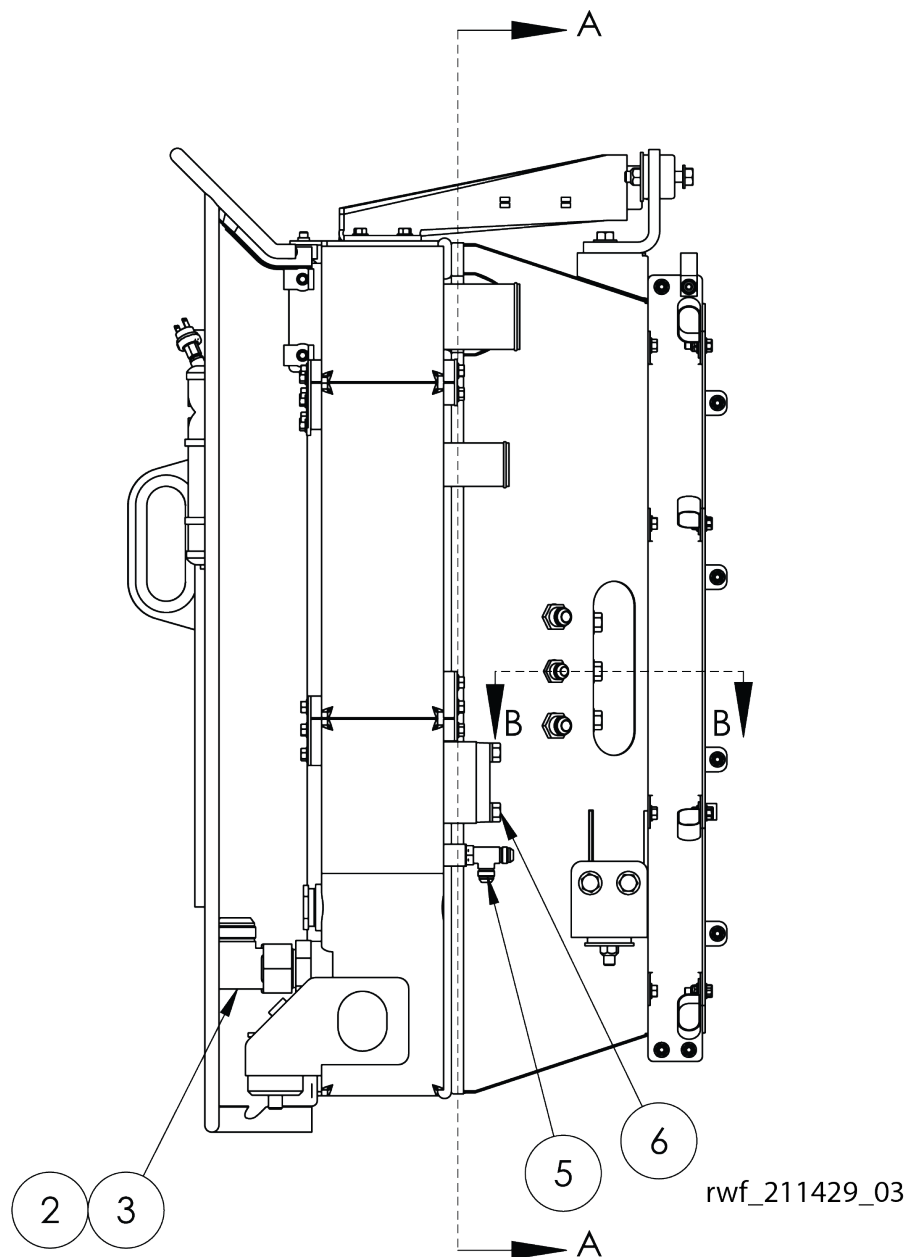


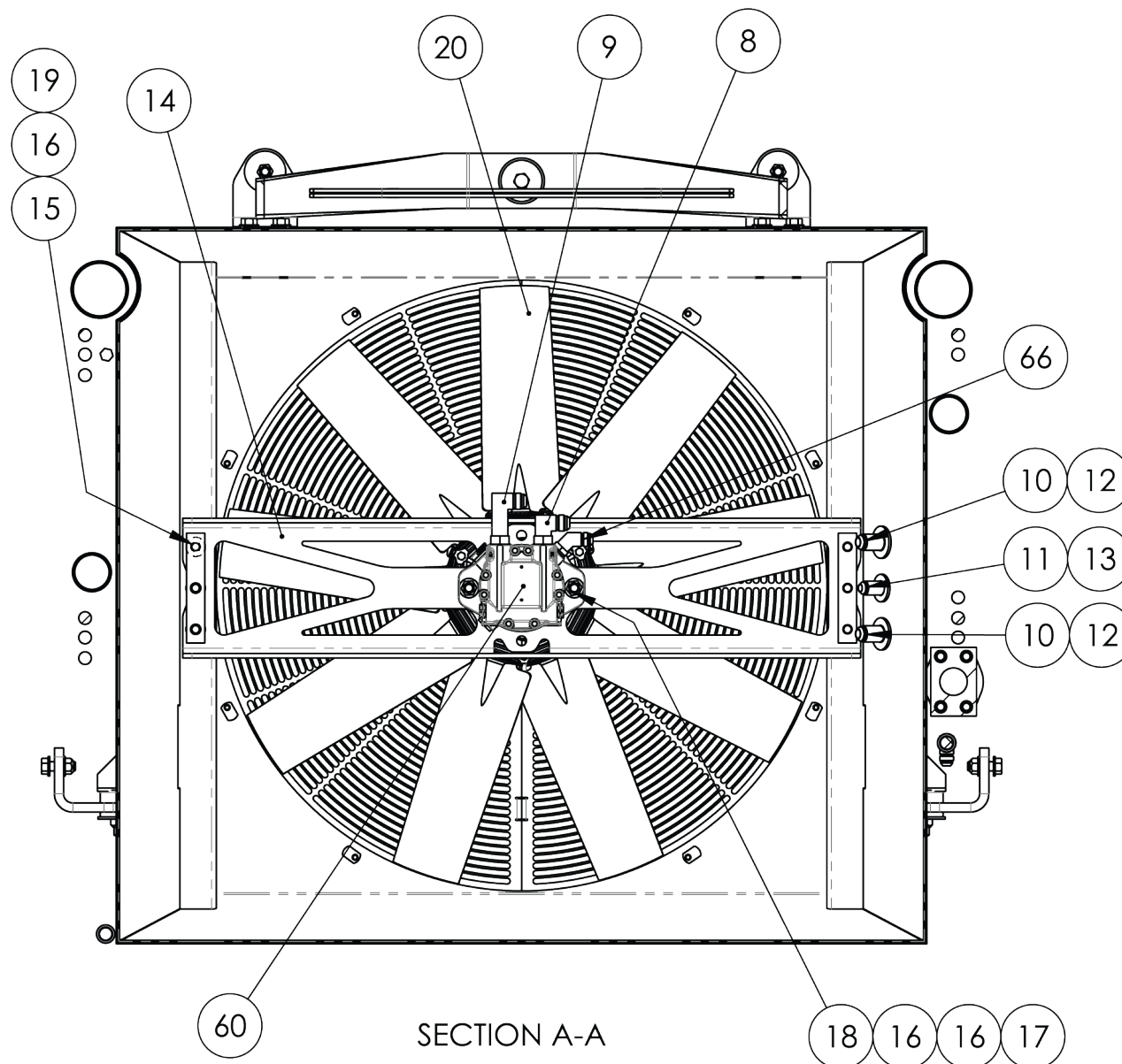
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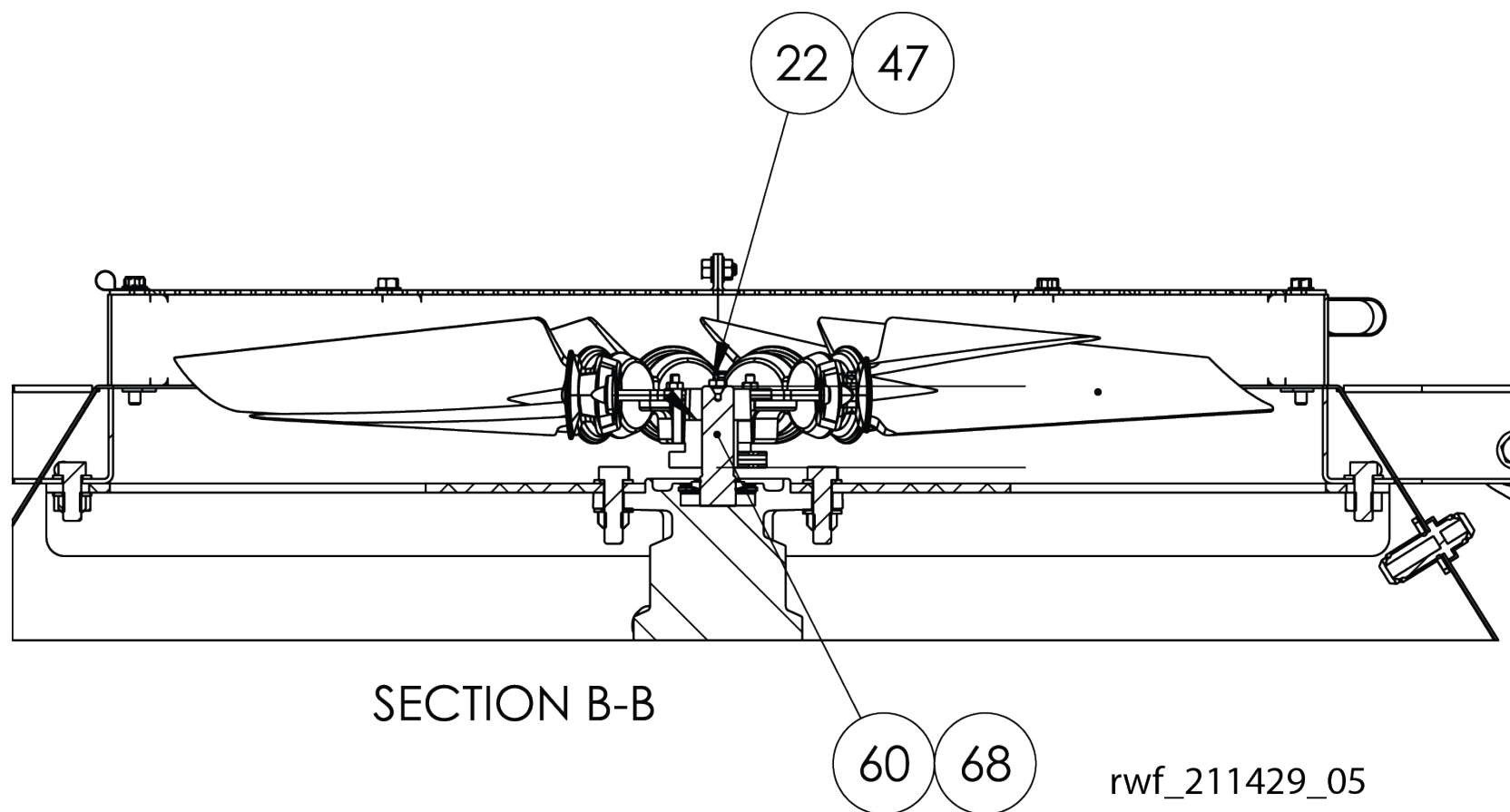


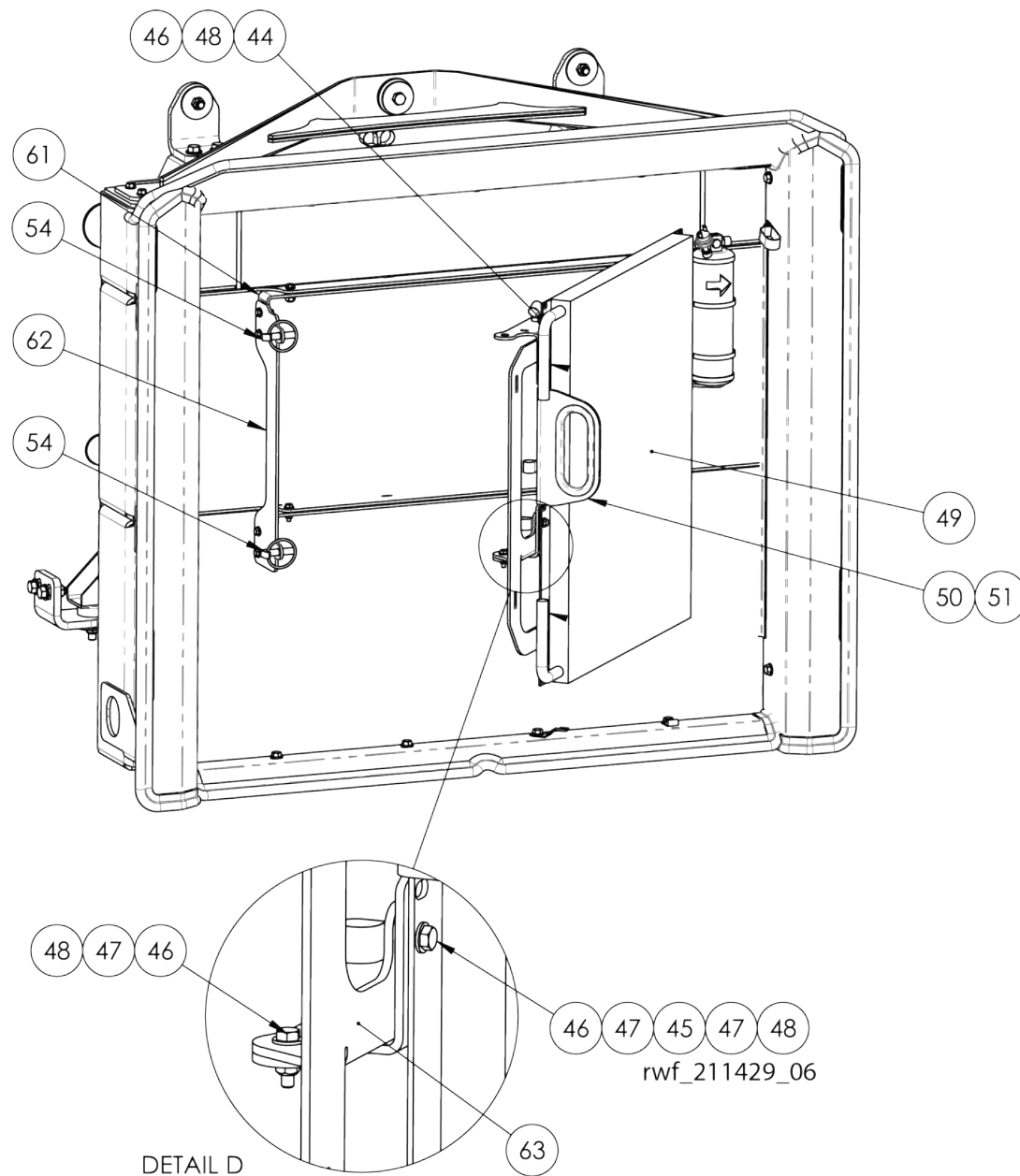
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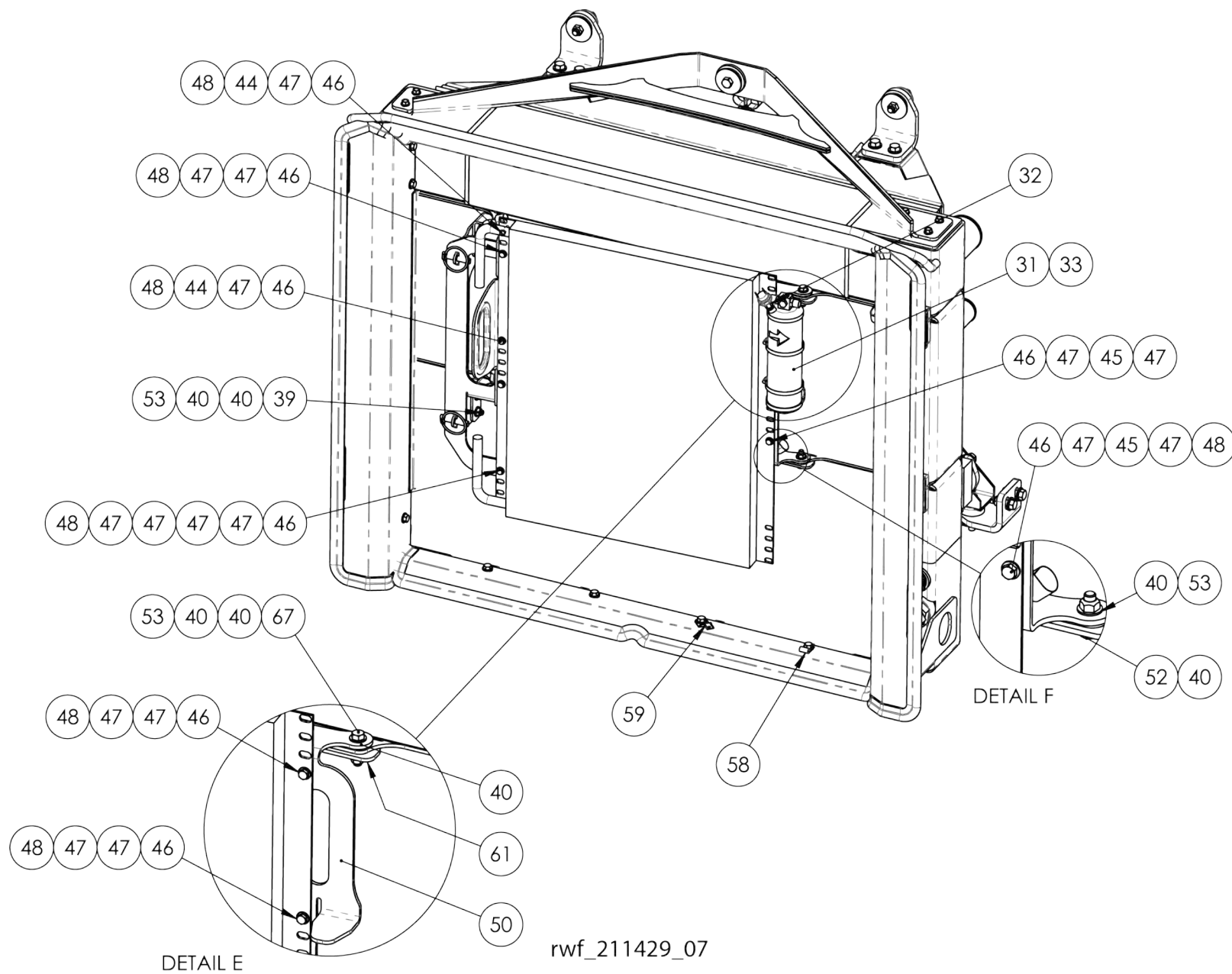




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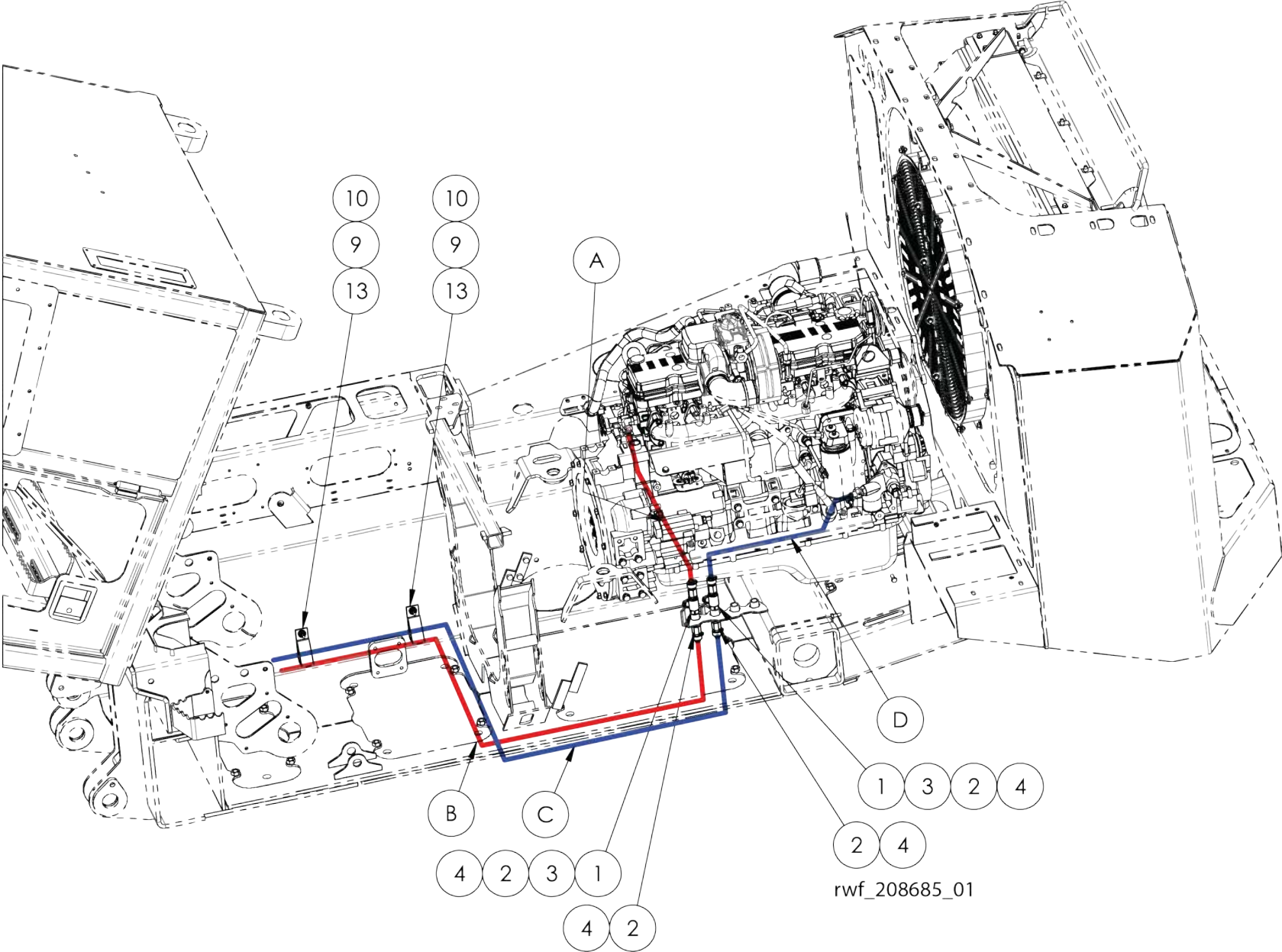


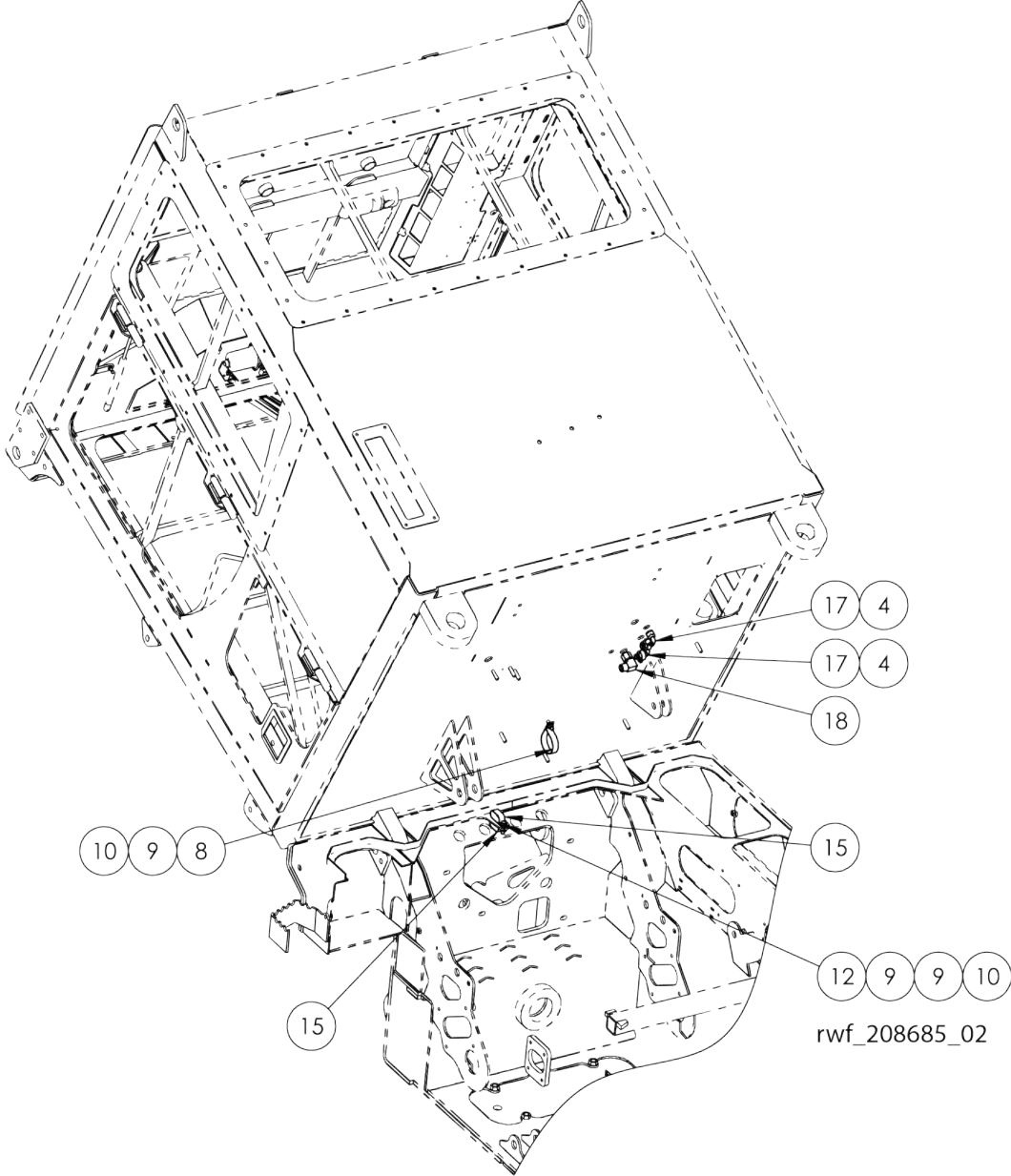


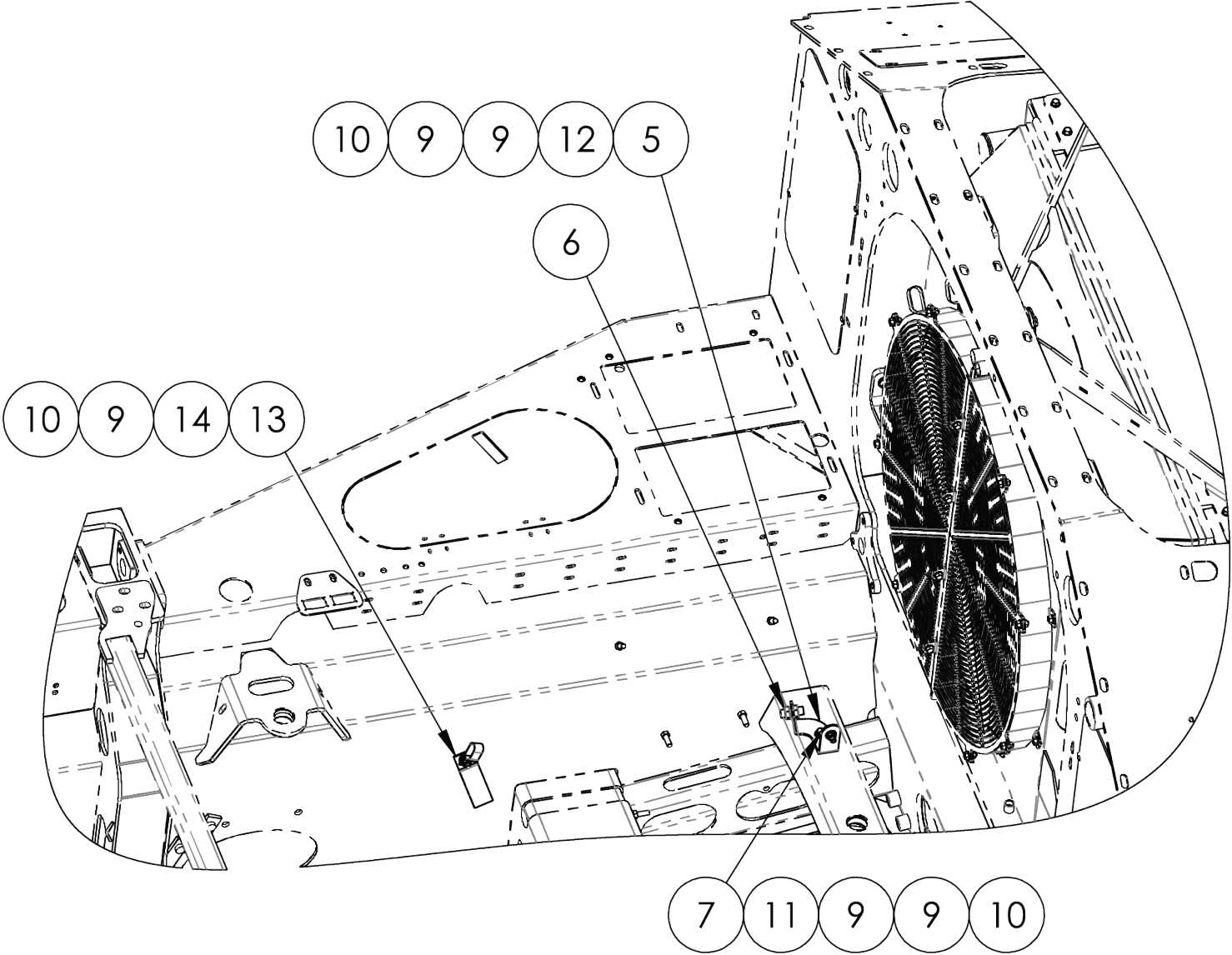
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|------|------|---------|----------------------------|
| 1    | 1    | 206883  | HEAT EXCHANGER CAC/RAD/HOC |
| 2    | 1    | 90085   | ADAPTER, STR               |
| 3    | 1    | 90277   | ELBOW, SWIVEL              |
| 4    | 1    | 90018   | ADAPTER, STR               |
| 5    | 1    | 90524   | TEE RUN                    |
| 6    | 1    | 90877   | KIT - FLANGE               |
| 8    | 1    | 90239   | ADAPTER                    |
| 9    | 1    | 94076   | ADAPTER, LONG              |
| 10   | 2    | 93990   | ADAPTER, STR BULKHEAD      |
| 11   | 1    | 90469   | ADAPTER, STR BULKHEAD      |
| 12   | 2    | 80583   | WASHER - SAE               |
| 13   | 1    | 80582   | WASHER - SAE               |
| 14   | 1    | 207553  | MOUNT, FAN MOTOR           |
| 15   | 6    | 80070   | BOLT - HEX HD              |
| 16   | 33   | 80580   | WASHER - SAE               |
| 17   | 17   | 80515   | NUT - LOCK                 |
| 18   | 2    | 80072   | BOLT - HEX HD              |
| 19   | 2    | 211202  | BOLTING BAR, FAN MOUNT     |
| 20   | 1    | 9901451 | FAN                        |
| 22   | 3    | 80006   | BOLT - HEX HD              |
| 23   | 2    | 130609  | RUBBER MOUNT ENGINE        |
| 24   | 5    | 9900459 | ISOLATOR, CENTRE BONDED    |
| 25   | 5    | 9900495 | WASHER, SERIES - TAIL      |
| 26   | 5    | 80076   | BOLT - HEX HD              |
| 27   | 2    | 130116  | WASHER                     |
| 28   | 2    | 80098   | BOLT - HEX HD              |
| 29   | 4    | 207552  | BRACKET, SHROUD MOUNT      |
| 30   | 8    | 80071   | BOLT - HEX HD              |
| 31   | 1    | 9900589 | RECEIVER DRIER             |
| 32   | 1    | 9900594 | SWITCH, BINARY             |
| 33   | 2    | 121695  | Hose Clamp                 |
| 34   | 1    | 207558  | PLENUM, TOP                |
| 35   | 1    | 207559  | PLENUM, RH                 |

| item | Qty.   | P/N        | Description                         |
|------|--------|------------|-------------------------------------|
| 36   | 1      | 207560     | PLENUM, LH                          |
| 37   | 1      | 207561     | PLENUM, BOTTOM                      |
| 38   | 24 FT  | 16799      | TRIM SEAL                           |
| 39   | 20     | 80029      | BOLT - HEX HD                       |
| 40   | 34     | 80578      | WASHER - SAE                        |
| 41   | 13     | 80705-011  | NUT, UNC CLIP-ON                    |
| 42   | 5      | 9900929-09 | CLAMP, DOUBLE TUBE                  |
| 43   | 2      | 85102      | CLAMP, TUBE                         |
| 44   | 3      | 85101      | CLAMP, TUBE                         |
| 45   | 1      | 85095      | CLAMP, TUBE                         |
| 46   | 8      | 80001      | BOLT - HEX HD                       |
| 47   | 22     | 80576      | WASHER - SAE                        |
| 48   | 9      | 80511      | NUT - LOCK                          |
| 49   | 1      | 9901917    | CONDENSER, A/C                      |
| 50   | 1      | 208745     | BRACKET, CONDENSER MOUNT            |
| 51   | 1.5 FT | 17323      | EDGE TRIM                           |
| 52   | 1      | 80030      | BOLT - HEX HD                       |
| 53   | 8      | 80513      | NUT - LOCK                          |
| 54   | 2      | 14295      | PIN, LYNCH                          |
| 58   | 1      | 85099      | CLAMP, TUBE                         |
| 59   | 1      | 9900585    | CLIP, MOUNT DEUTSCH DT/DTM/DTP/DTHD |
| 60   | 1      | 9902091    | MOTOR, AXIAL PISTON                 |
| 61   | 2      | 211407     | BRACKET, FIXED SIDE                 |
| 62   | 1      | 211408     | BRACKET, LATCHING FIXED SIDE        |
| 63   | 1      | 211409     | BRACKET, SWINGING SIDE              |
| 66   | 1      | 90232      | ADAPTER                             |



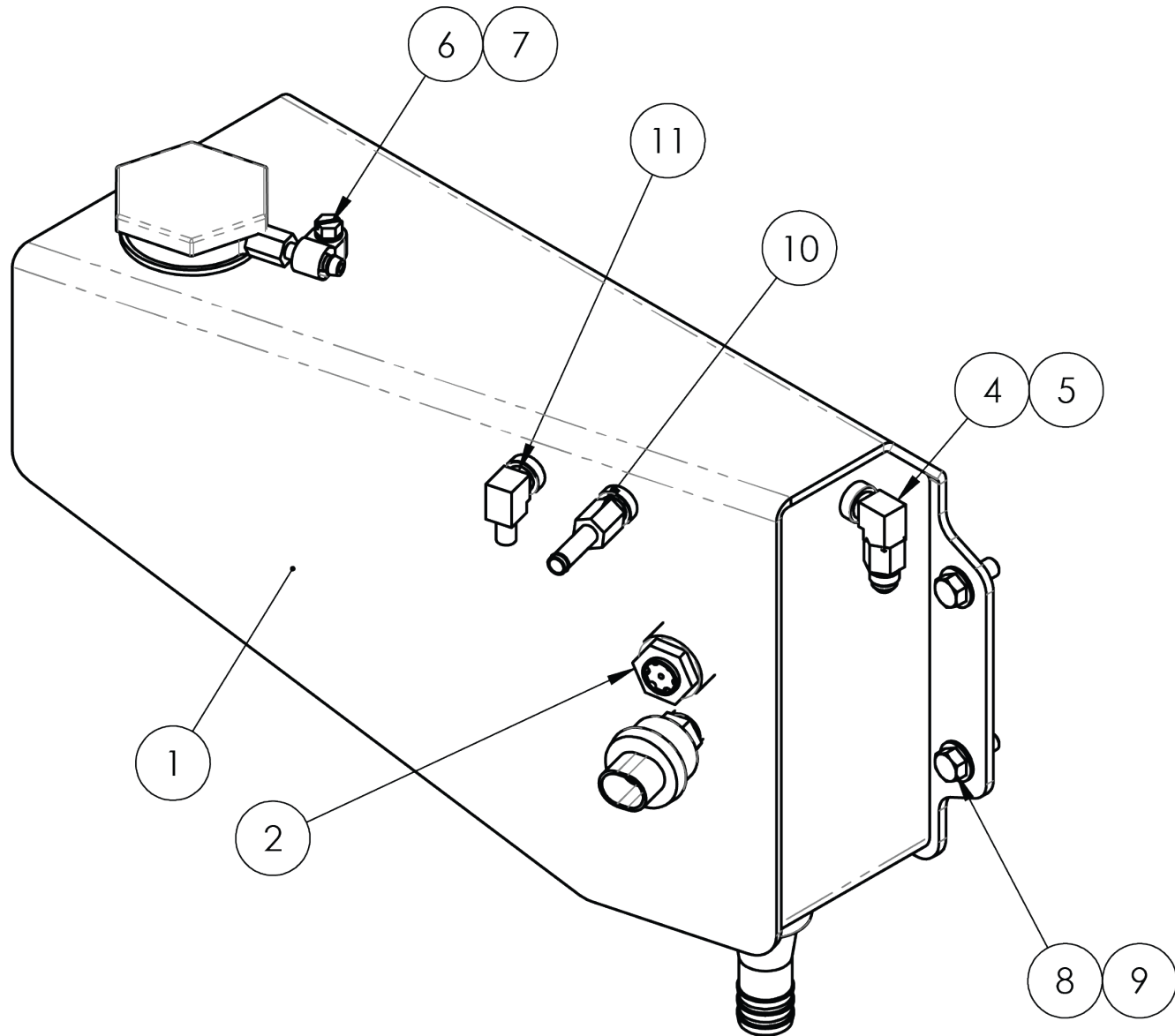




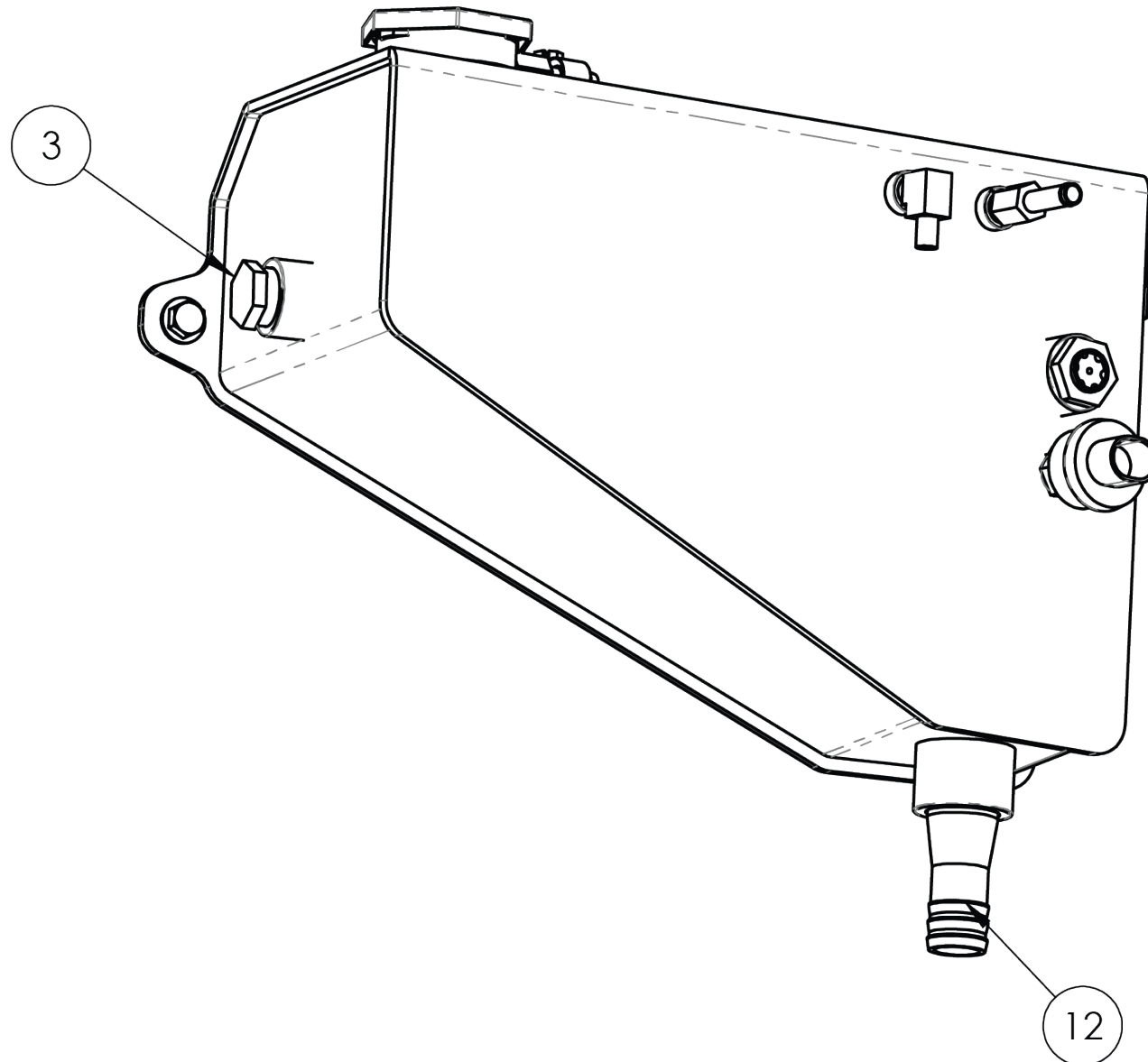


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| item | Qty. | P/N        | Description                    |
|------|------|------------|--------------------------------|
| 1    | 2    | 115293     | BALL VALVE - LOW PRESSURE      |
| 2    | 4    | 90965      | ADAPTER, STR                   |
| 3    | 2    | 91136      | PIPE NIPPLE - CLOSE SCH        |
| 4    | 6    | 82352-001  | CLAMP, GEAR                    |
| 5    | 1    | 208686     | BRACKET, A/C HOSE BULKHEAD     |
| 6    | 1    | 9900344    | BULKHEAD                       |
| 7    | 1    | 85102      | CLAMP, TUBE                    |
| 8    | 1    | 85097      | CLAMP, TUBE                    |
| 9    | 10   | 80578      | WASHER - SAE                   |
| 10   | 7    | 80513      | NUT - LOCK                     |
| 11   | 1    | 80029      | BOLT - HEX HD                  |
| 12   | 2    | 80030      | BOLT - HEX HD                  |
| 13   | 3    | 9900504    | STRAP, HD HANGING CIRC         |
| 14   | 1    | 9900929-07 | CLAMP, DOUBLE TUBE             |
| 15   | 2    | 9900929-09 | CLAMP, DOUBLE TUBE             |
| 16   | 465" | 1923       | HOSE, HEATER - (QTY IN INCHES) |
| 17   | 2    | 9900853    | HOSE END, BEADLOCK             |
| 18   | 1    | 90635-003  | ELBOW, SWIVEL                  |

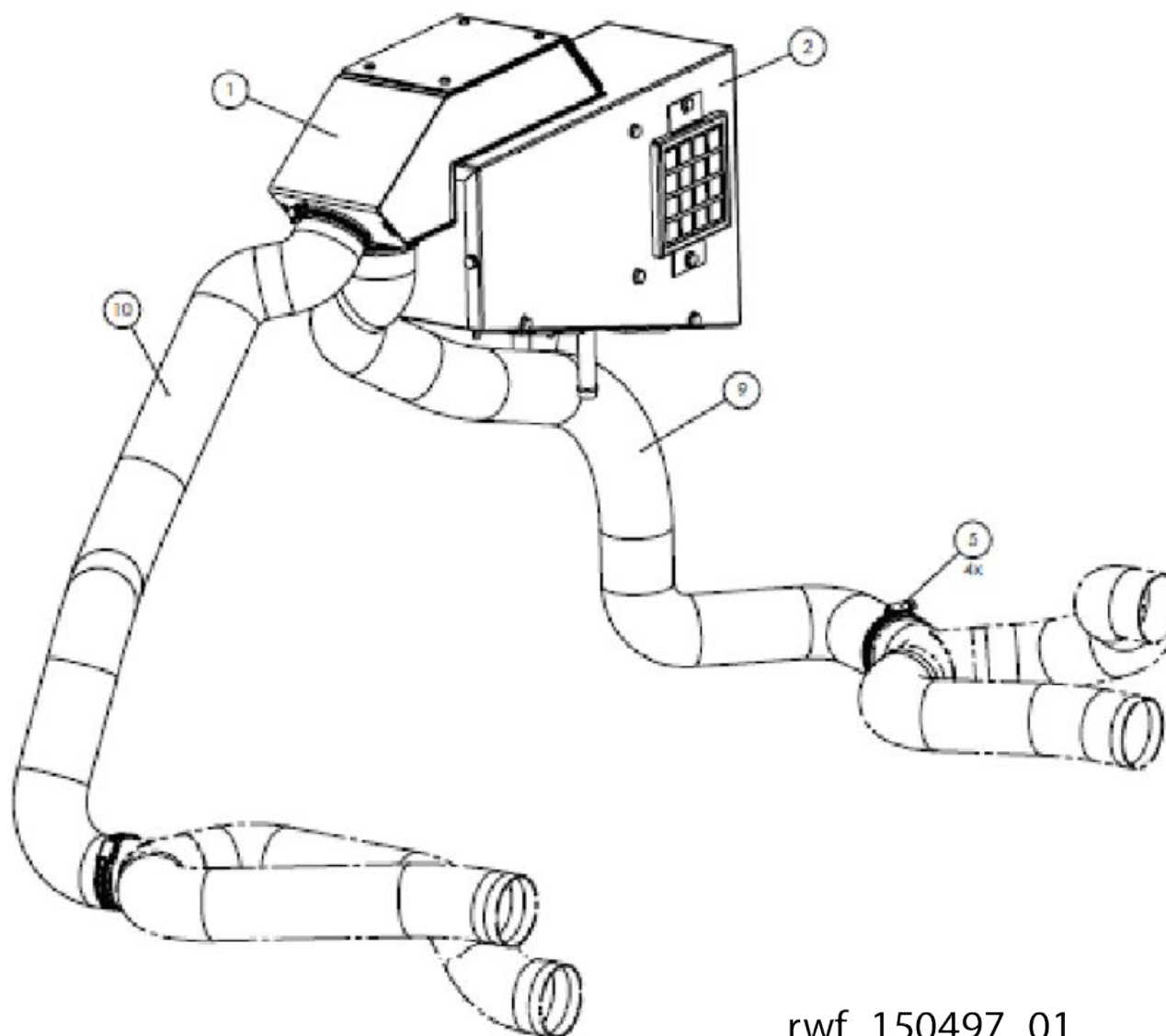


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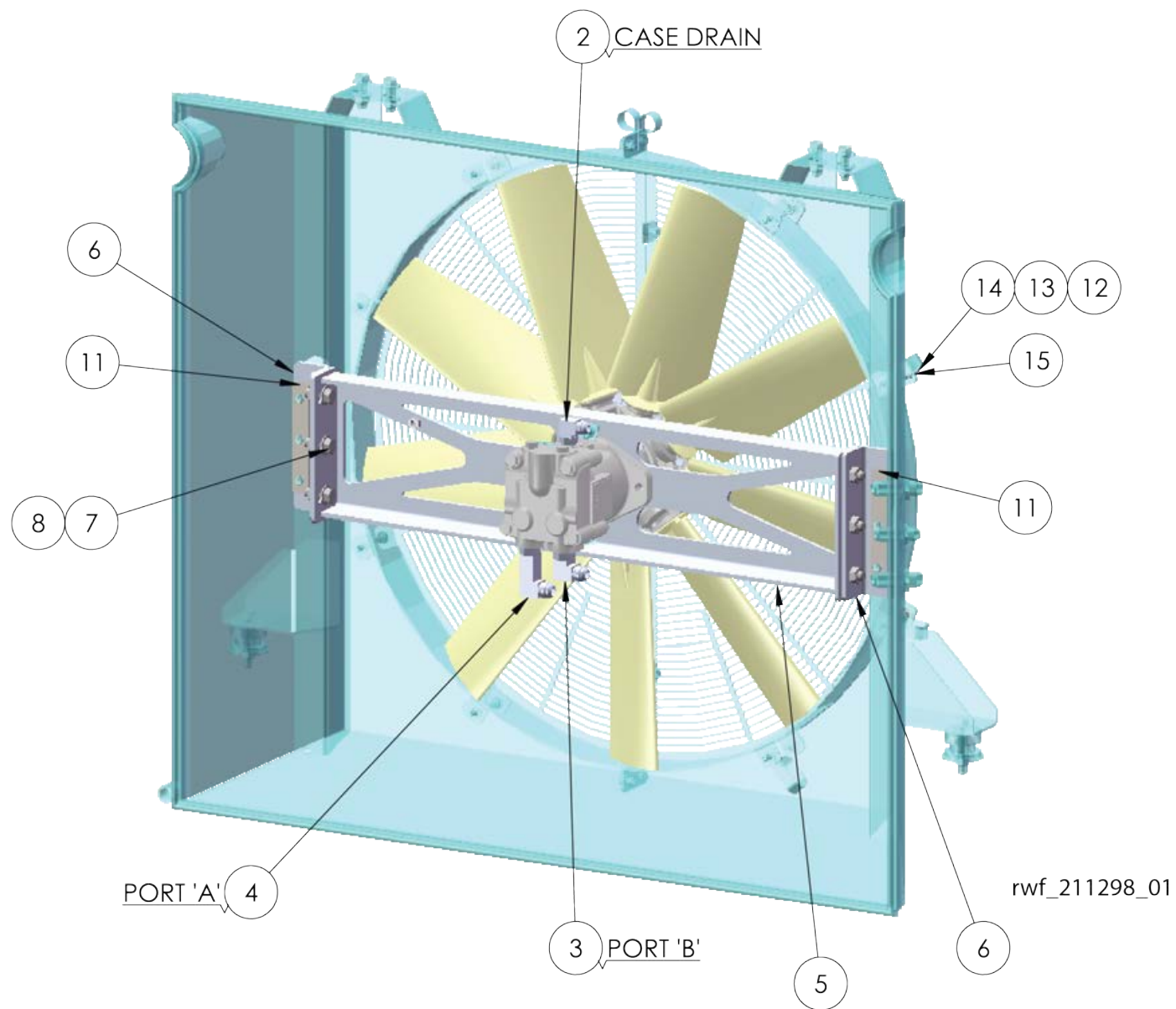
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|------|------|-----------|----------------------|
| 1    | 1    | 207501    | TANK, COOLANT        |
| 2    | 1    | 12044     | FLUID LEVEL GAUGE    |
| 3    | 1    | 91159     | PLUG                 |
| 4    | 1    | 90153     | ADAPTER              |
| 5    | 1    | 90648-012 | ADAPTER, STR ORIFICE |
| 6    | 1    | 19380     | HOSE CLAMP           |
| 7    | 4 FT | 19379     | HOSE                 |
| 8    | 3    | 80029     | BOLT - HEX HD        |
| 9    | 3    | 80578     | WASHER - SAE         |
| 10   | 1    | 93919-01  | ADAPTER, STR         |
| 11   | 1    | 94045     | ADAPTER              |
| 12   | 1    | 92160     | ADAPTER, STR         |

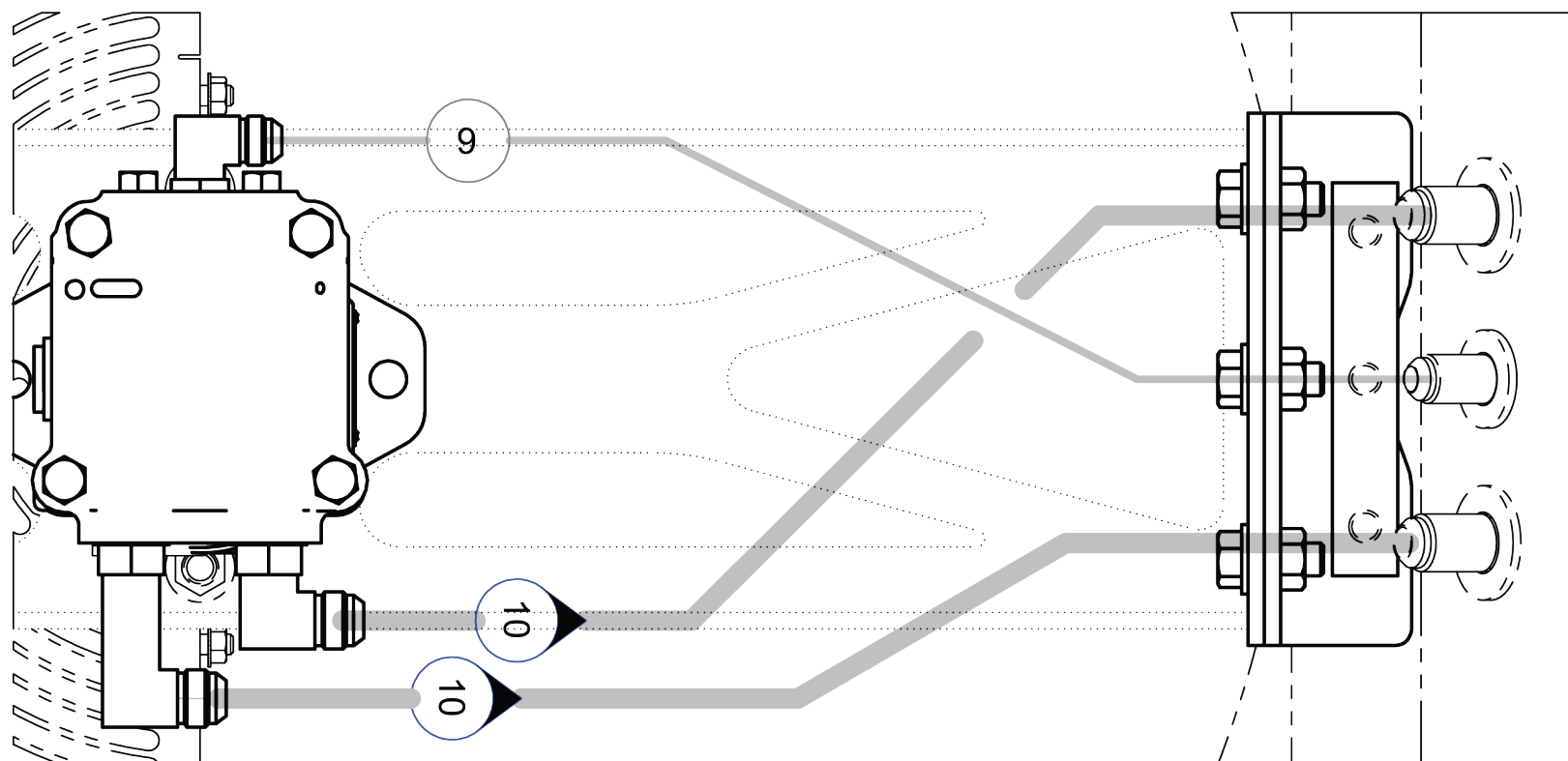


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| item | Qty. | P/N  | Description             |
|------|------|------|-------------------------|
| 1    | REF  | SVP# | NOUN, BASIC DESCRIPTION |
| 2    | REF  |      |                         |
| 3    | REF  |      |                         |
| 4    | REF  |      |                         |
| 5    | REF  |      |                         |
| 6    | REF  |      |                         |
| 7    | REF  |      |                         |
| 8    | REF  |      |                         |
| 9    | REF  |      |                         |
| 10   | REF  |      |                         |





rwf\_211298\_02

| item | Qty. | P/N       | Description                     |
|------|------|-----------|---------------------------------|
| 1    | 1    | 9902092   | MOTOR, AXIAL PISTON 25CC PISTON |
| 2    | 1    | 90246     | ADAPTER, 90                     |
| 3    | 1    | 90239     | ADAPTER, 90                     |
| 4    | 1    | 94076     | ADAPTER, 90                     |
| 5    | 1    | 211329    | MOTOR MOUNT, FAN KIT            |
| 6    | 2    | 211334    | BRACKET, MOTOR MOUNT            |
| 7    | 6    | 80070     | BOLT - HEX HD.                  |
| 8    | 6    | 80580     | WASHER - SAE                    |
| 9    | 1    | 95301Z021 | HOSE                            |
| 10   | 2    | 95340Z021 | HOSE                            |
| 11   | 2    | 211202    | BOLTING BAR, FAN MOUNT          |
| 12   | 16   | 80577     | WASHER - SAE                    |
| 13   | 8    | 80512     | NUT - LOCK                      |
| 14   | 8    | 80016     | BOLT - HEX HD.                  |
| 15   | 8    | 80502     | NUT - STD                       |

# CHAPTER 4: ELECTRICAL

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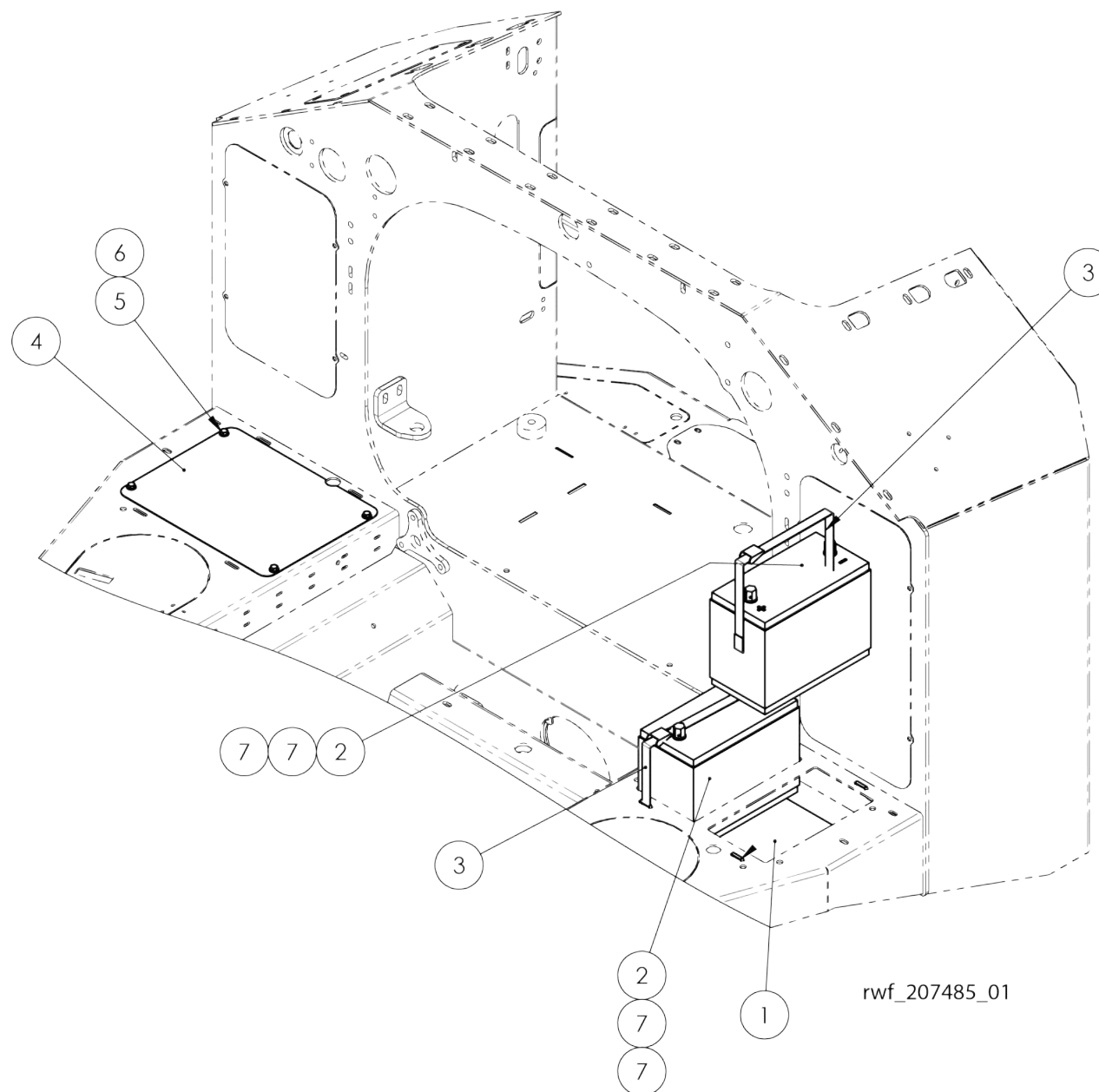
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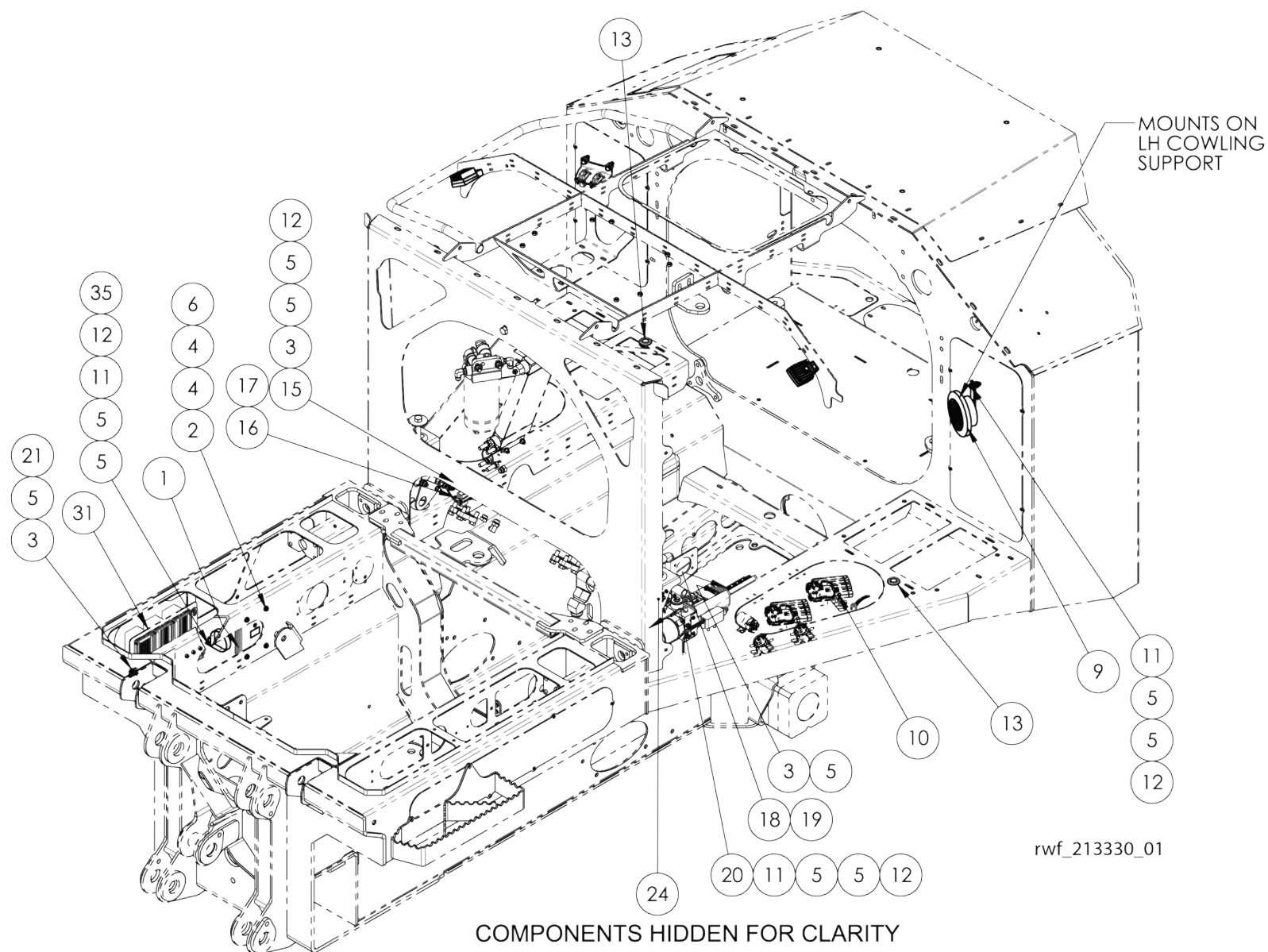
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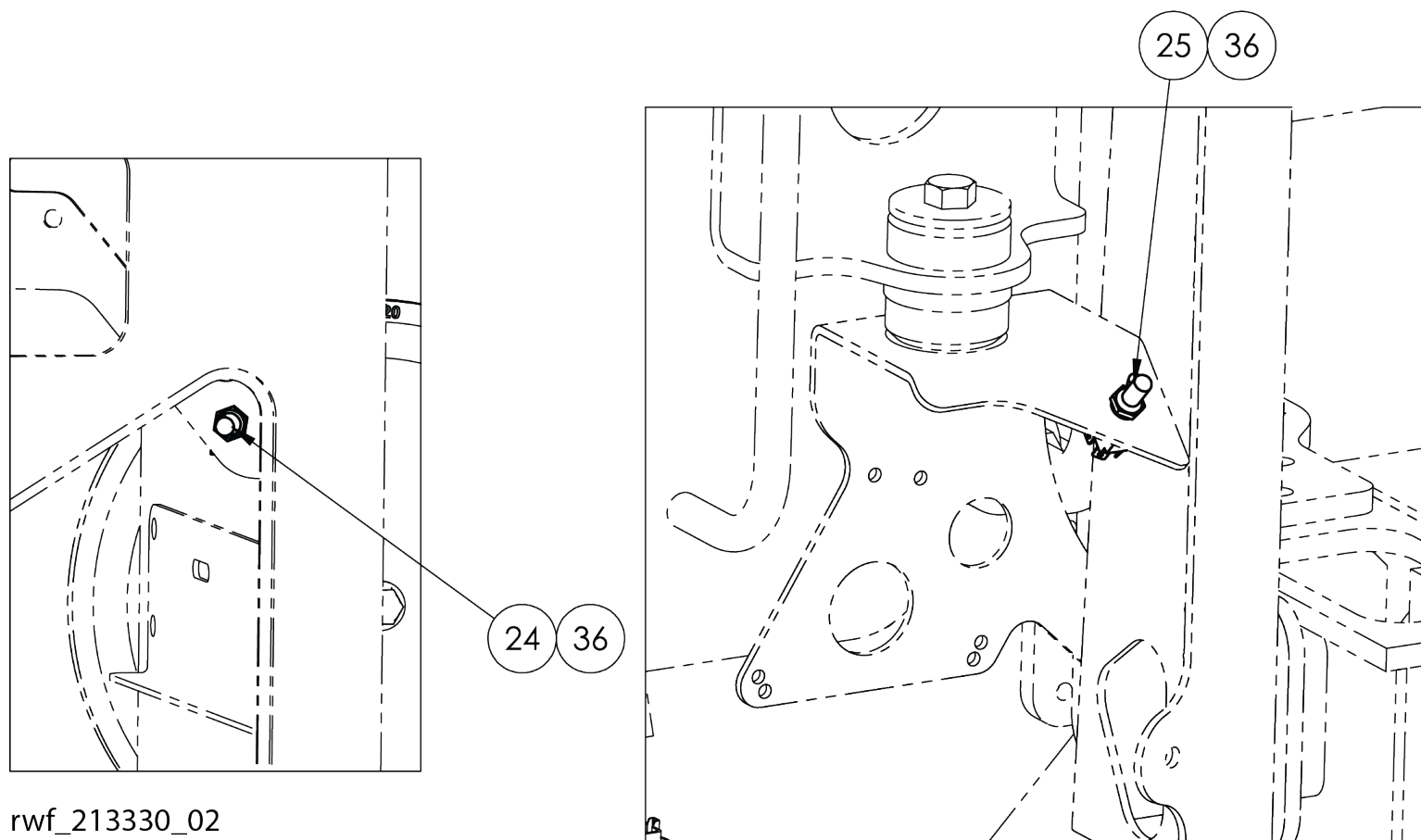
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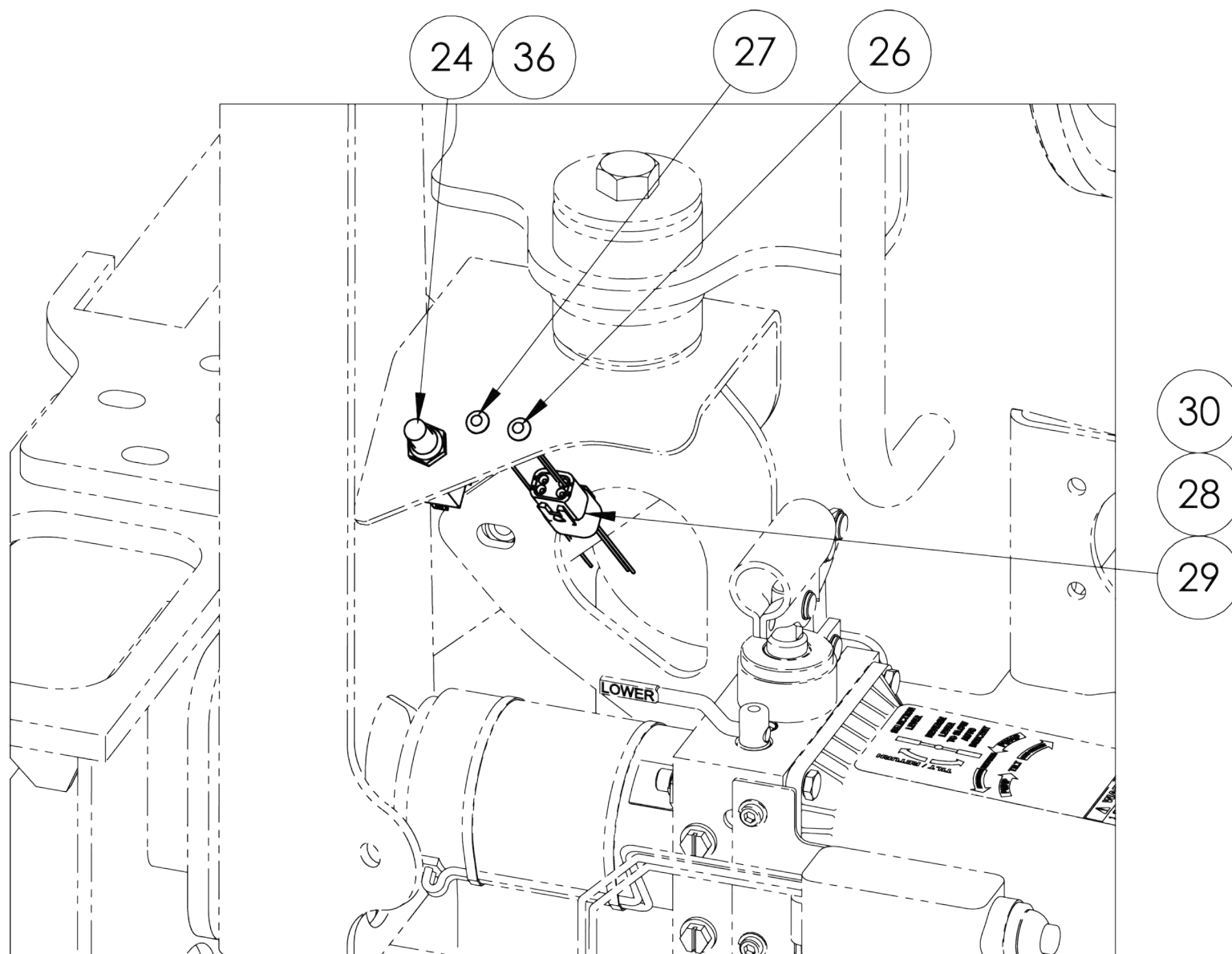
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|------|------|---------|-----------------------------|
| 1    | 1    | 144166  | MAT, BATTERY ISOLATION      |
| 2    | 2    | 9901803 | BATTERY, STUD TYPE          |
| 3    | 2    | 9901384 | STRAP, BATTERY TIE DOWN     |
| 4    | 1    | 207484  | COVER, AUX BATTERY POSITION |
| 5    | 4    | 80029   | BOLT - HEX HD               |
| 6    | 4    | 80578   | WASHER - SAE                |
| 7    | 4    | 9901852 | BATTERY NUT                 |



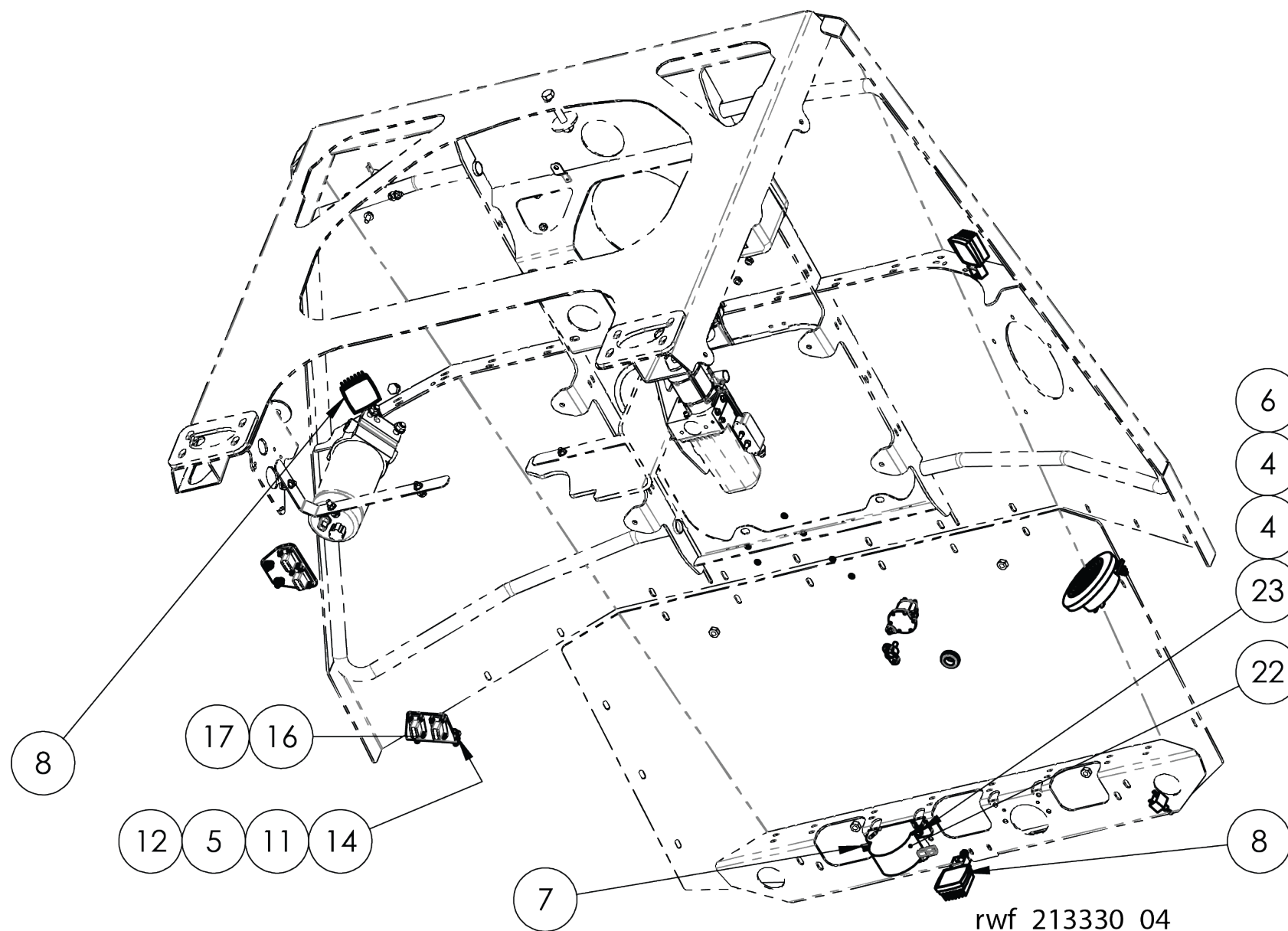


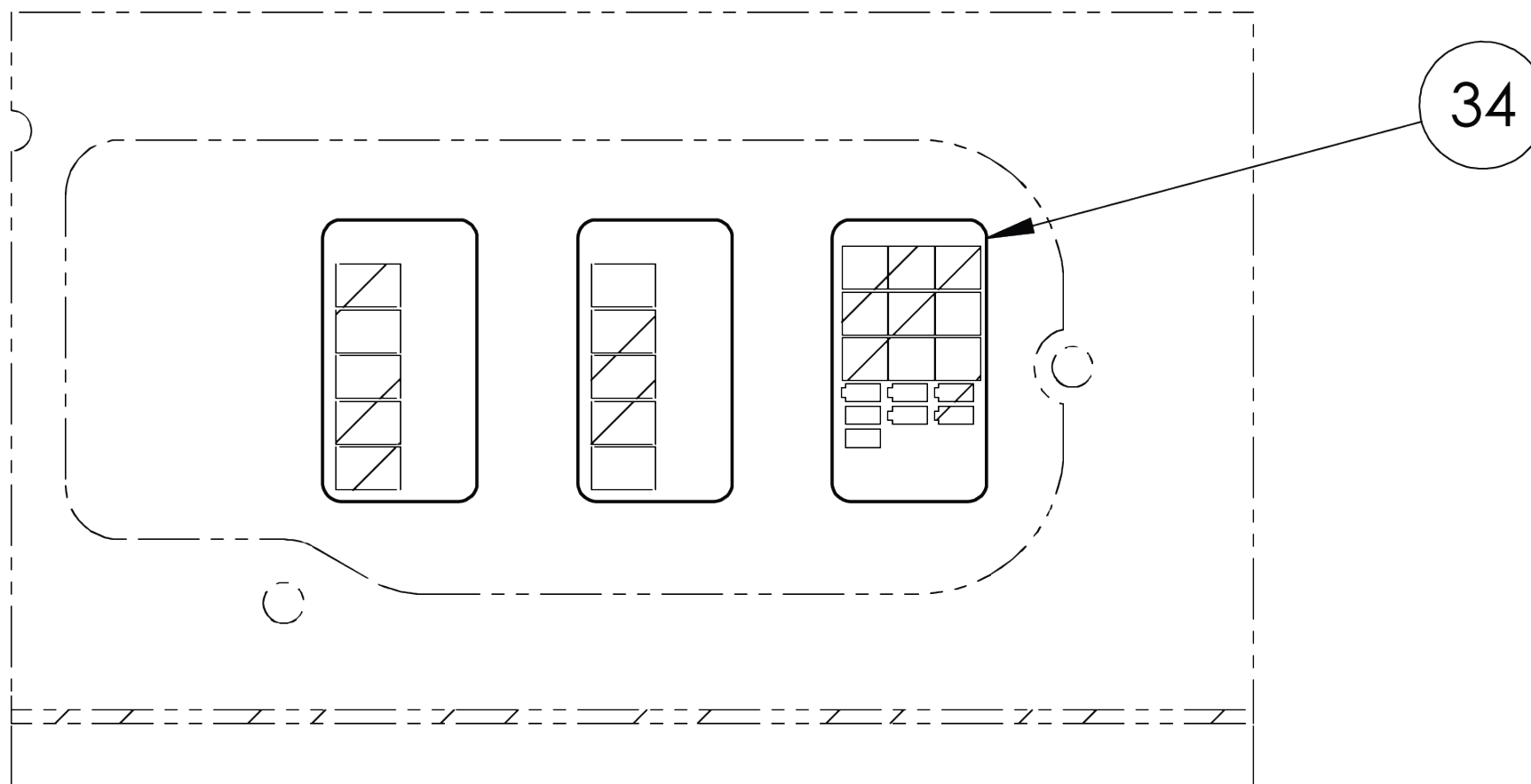


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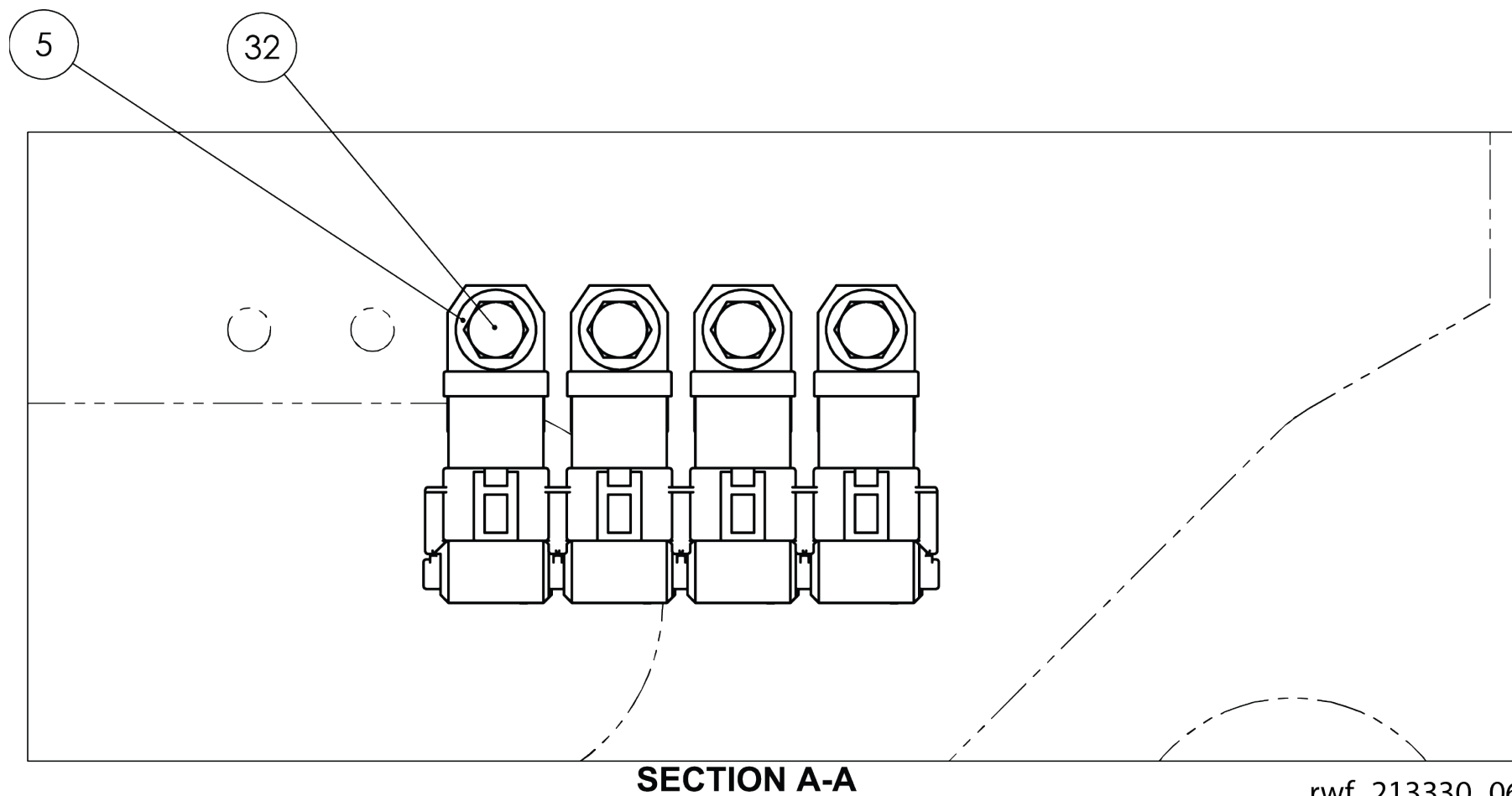


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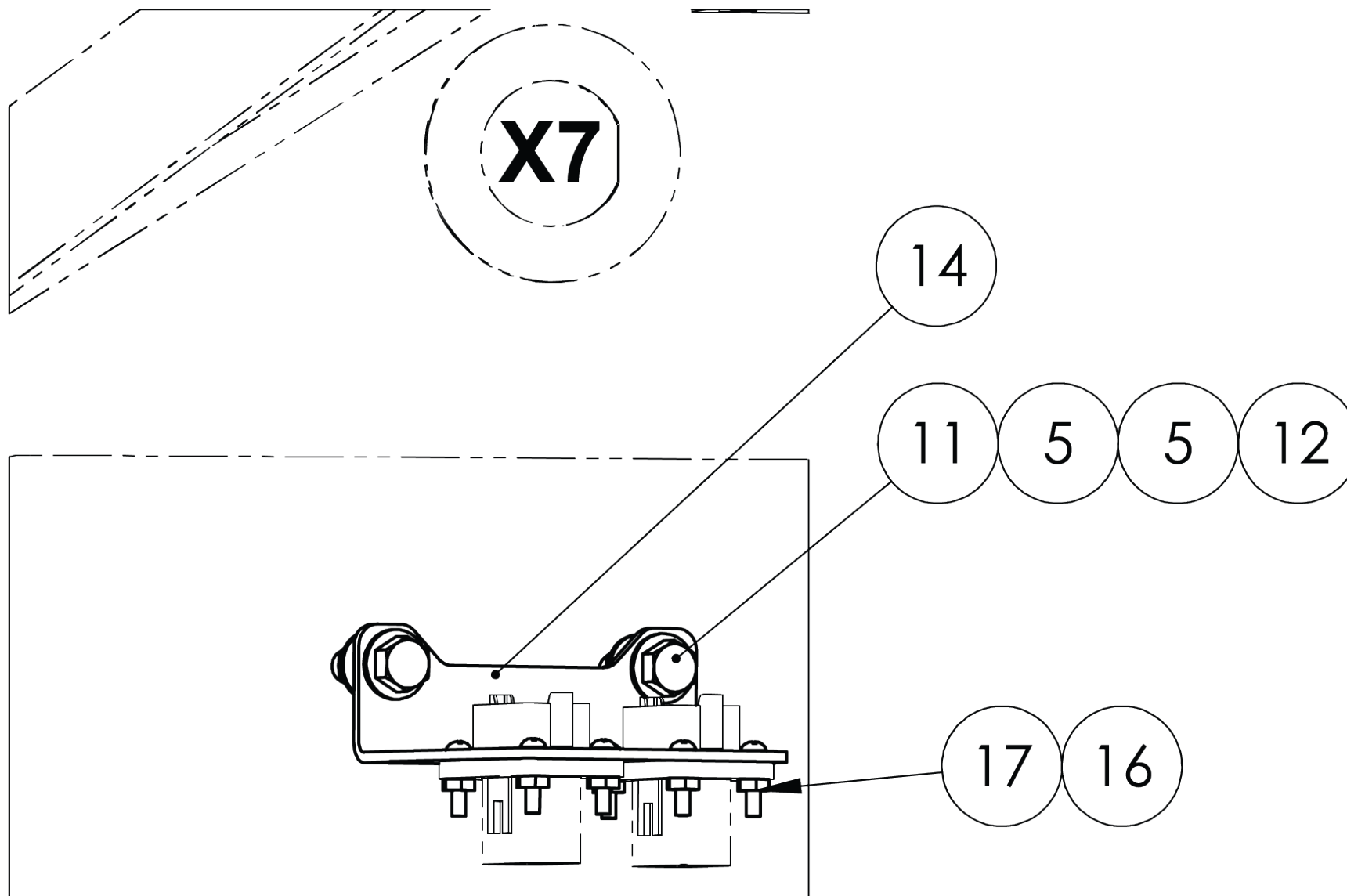




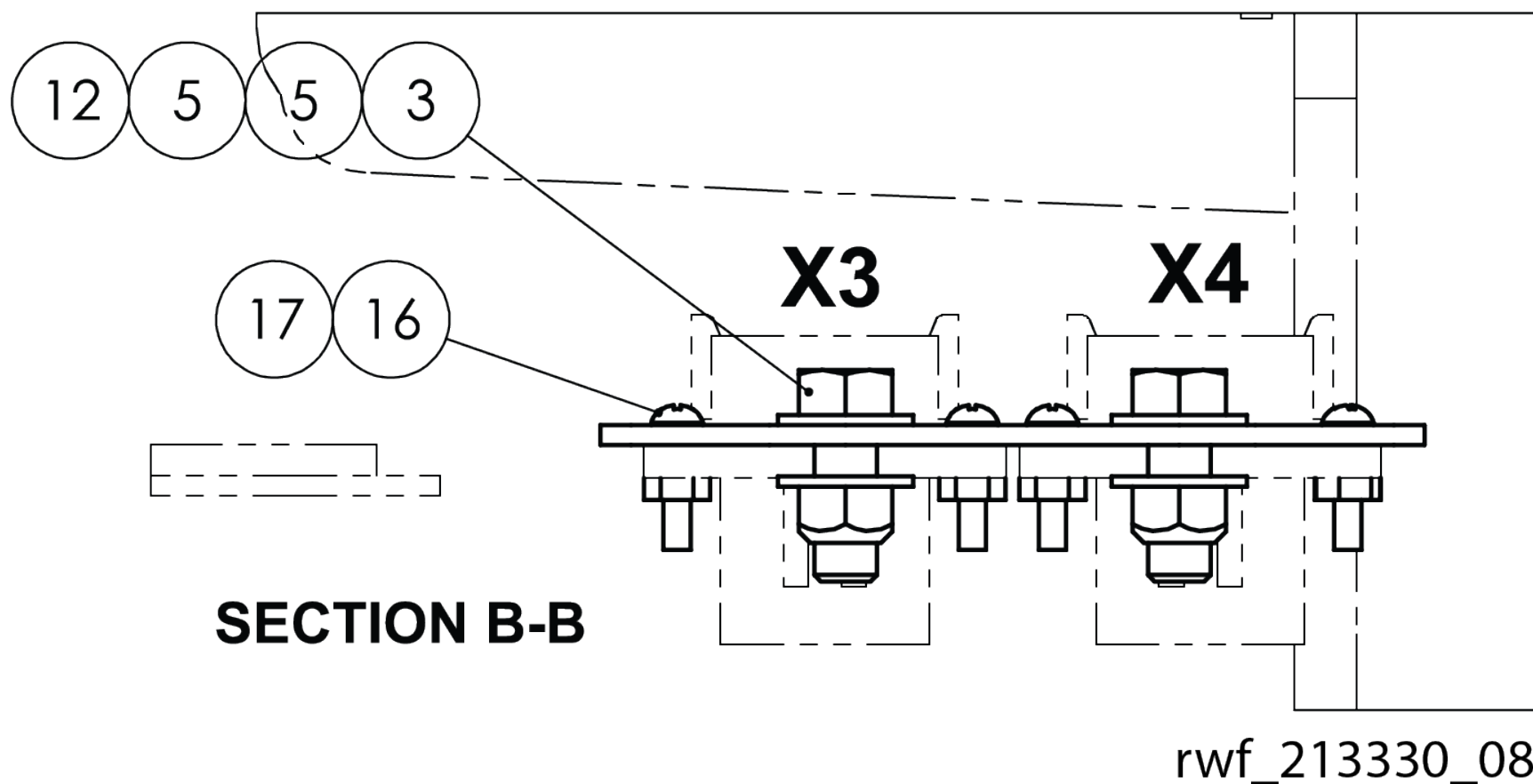
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rwf\_213330\_06



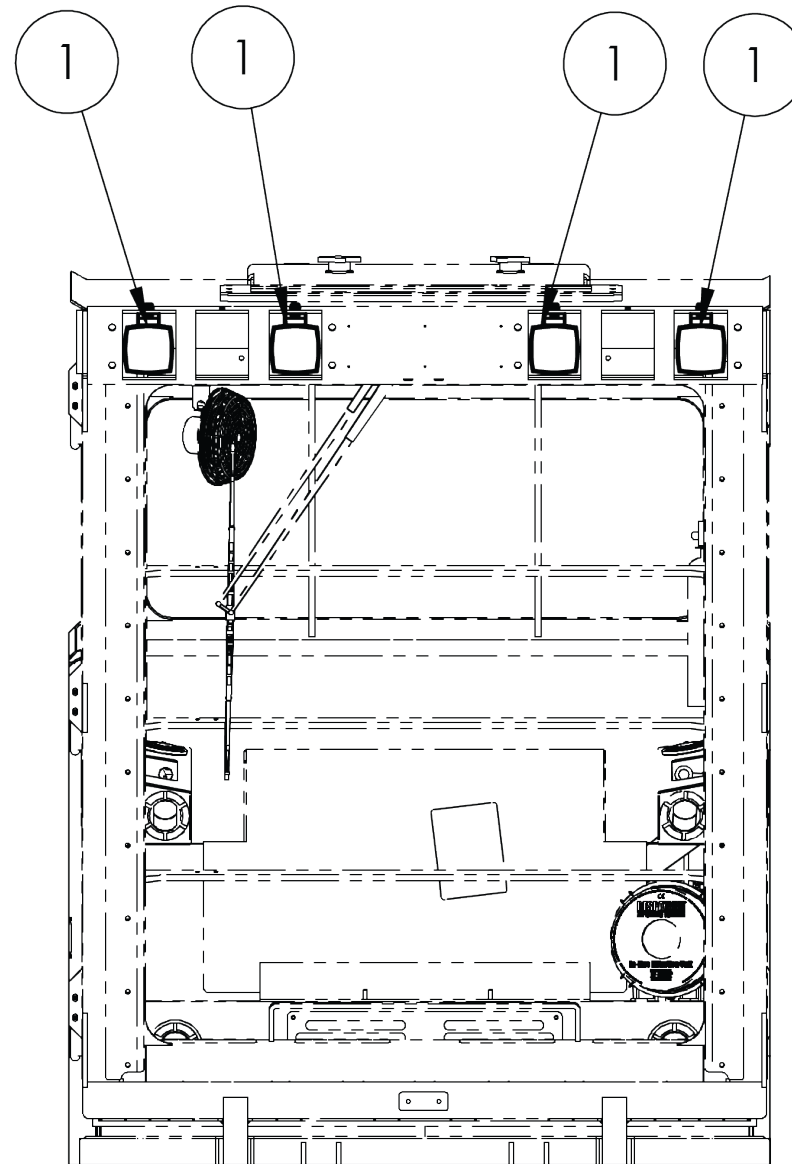
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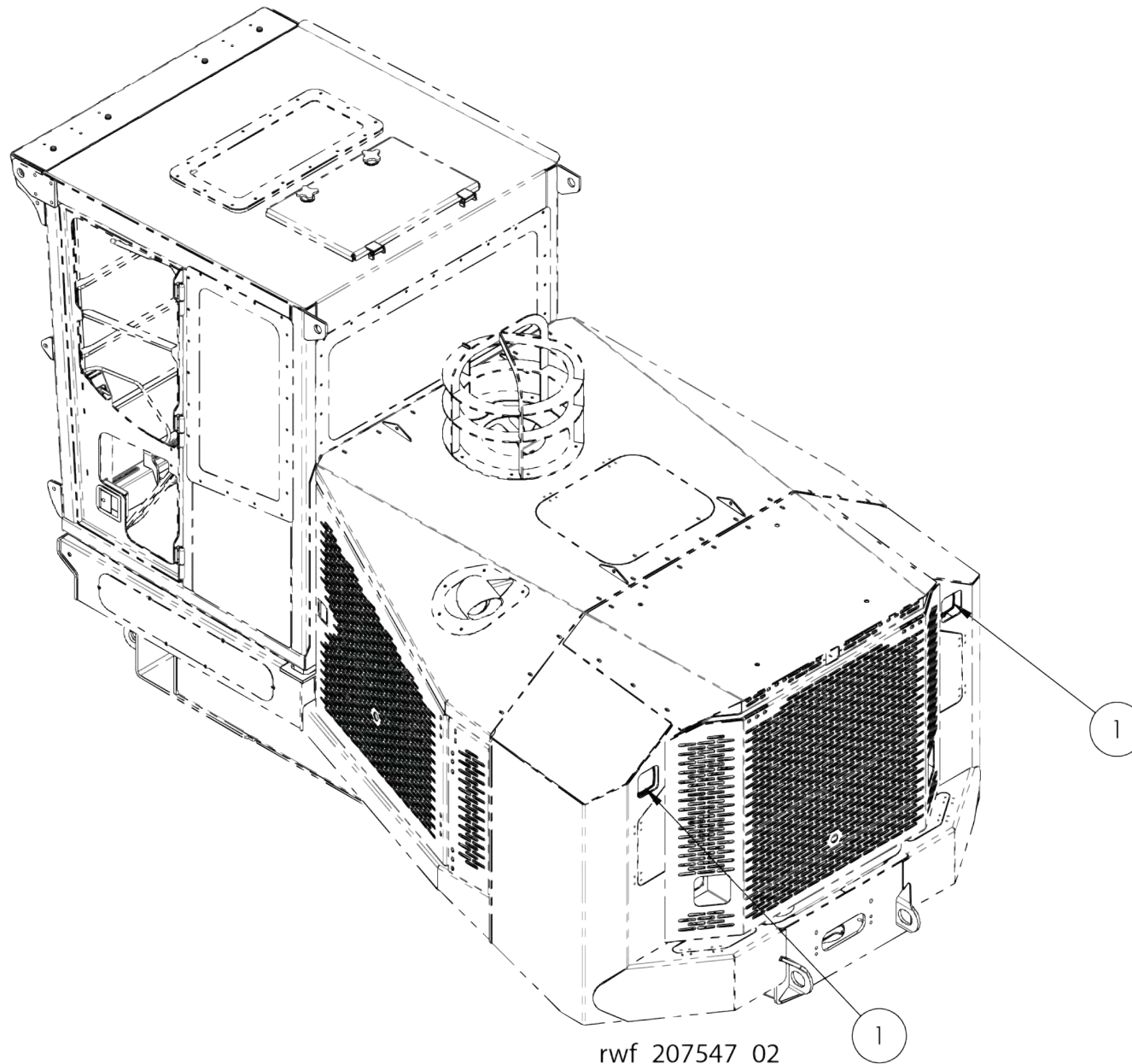


| item | Qty. | P/N       | Description                         |
|------|------|-----------|-------------------------------------|
| 1    | 1    | 9901761   | MODULE, IQAN MASTER CONTROLLER      |
| 2    | 4    | 80002     | BOLT - HEX HD                       |
| 3    | 6    | 80029     | BOLT - HEX HD                       |
| 4    | 12   | 80576     | WASHER - SAE                        |
| 5    | 22   | 80578     | WASHER - SAE                        |
| 6    | 6    | 80511     | NUT - LOCK                          |
| 7    | 1    | 9900585   | CLIP, MOUNT DEUTSCH DT/DTM/DTP/DTHD |
| 8    | 3    | 144529    | ASSY, LED SERVICE LIGHT             |
| 9    | 1    | 119410    | ELECTRIC HORN                       |
| 10   | 1    | 213152    | MAIN POWER DISTRIBUTION HUB         |
| 11   | 5    | 80030     | BOLT - HEX HD                       |
| 12   | 7    | 80513     | NUT - LOCK                          |
| 13   | 2    | 120101    | GROMMET                             |
| 14   | 1    | 205910    | BRACKET, VALVE BENCH ELECT          |
| 15   | 1    | 207868    | BRACKET, PIN BULKHEAD               |
| 16   | 16   | 82101     | SCREW, ROUND HEAD - PHILLIPS        |
| 17   | 16   | 82206     | NUT - NYLOCK                        |
| 18   | 4    | 80069     | BOLT - HEX HD                       |
| 19   | 4    | 80580     | WASHER - SAE                        |
| 20   | 1    | 85102     | CLAMP, TUBE                         |
| 21   | 2    | 80705-011 | NUT, UNC CLIP-ON                    |
| 22   | 1    | 139913    | BACKUP ALARM ASSEMBLY               |
| 23   | 2    | 80001     | BOLT - HEX HD                       |
| 24   | 2    | 110516    | SWITCH, TOGGLE - ON-ON              |
| 25   | 1    | 110820    | TOGGLE SWITCH - ON-ON               |
| 26   | 1    | 85340     | LAMP, LED PANEL - RED               |
| 27   | 1    | 85342     | LAMP, LED PANEL - GREEN             |
| 28   | 4    | 85143     | PIN CONTACT                         |
| 29   | 1    | 85112     | DT STYLE RECEPTACLE FOR 4 PINS      |
| 30   | 1    | 85167     | DT SERIES WEDGES 4 PIN              |
| 31   | REF  | 213146    | MAIN HARNESS WITH FUSE BOX          |
| 32   | 4    | 80767     | BOLT - HEX HD                       |
| 34   | 3    | 151814    | FOAM, EATON TALL COVER              |

| item | Qty. | P/N    | Description |
|------|------|--------|-------------|
| 35   | 1    | 85098  | CLAMP, TUBE |
| 36   | 3    | 110517 | TOGGLE SEAL |



rwf\_207547\_01

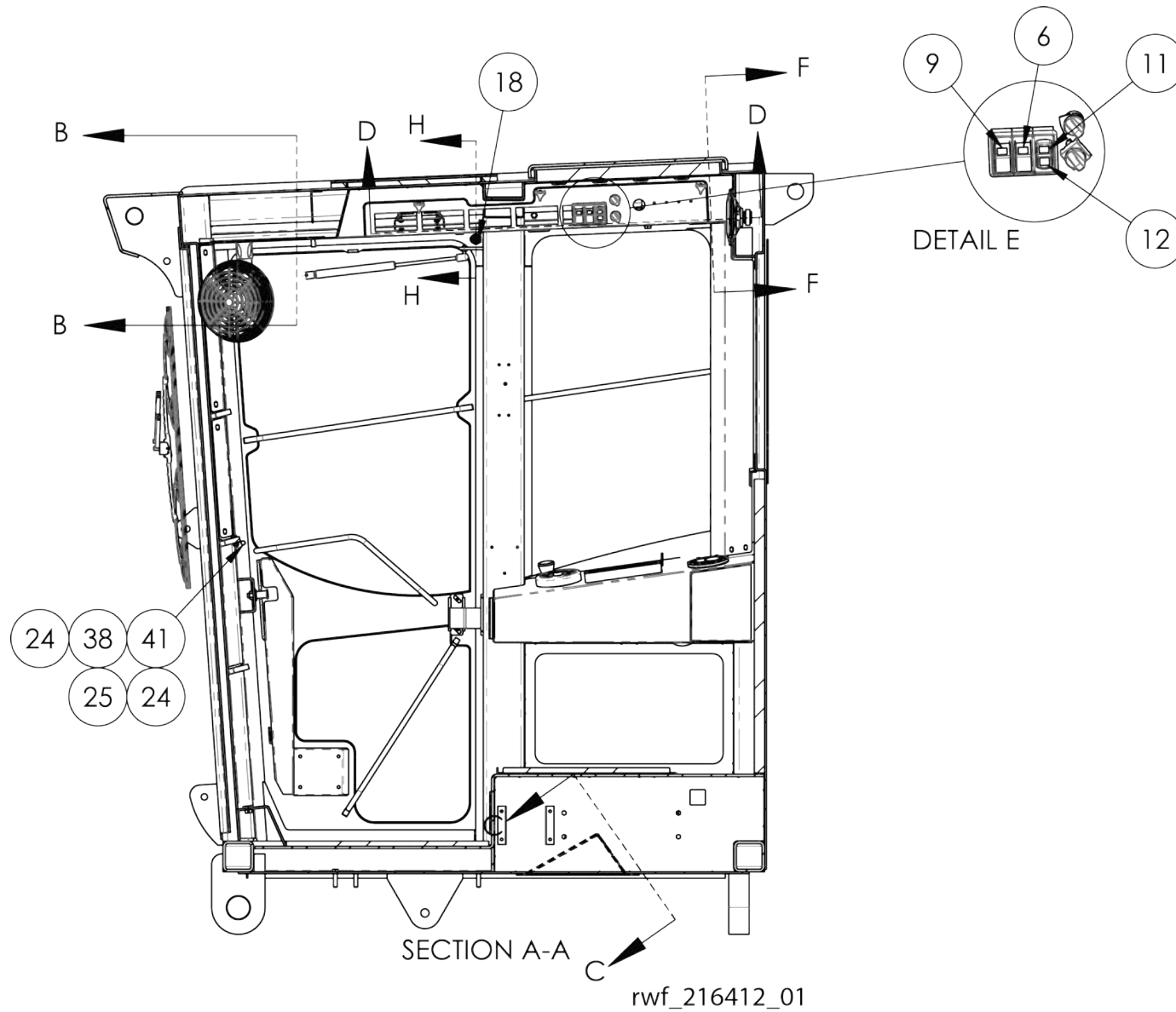


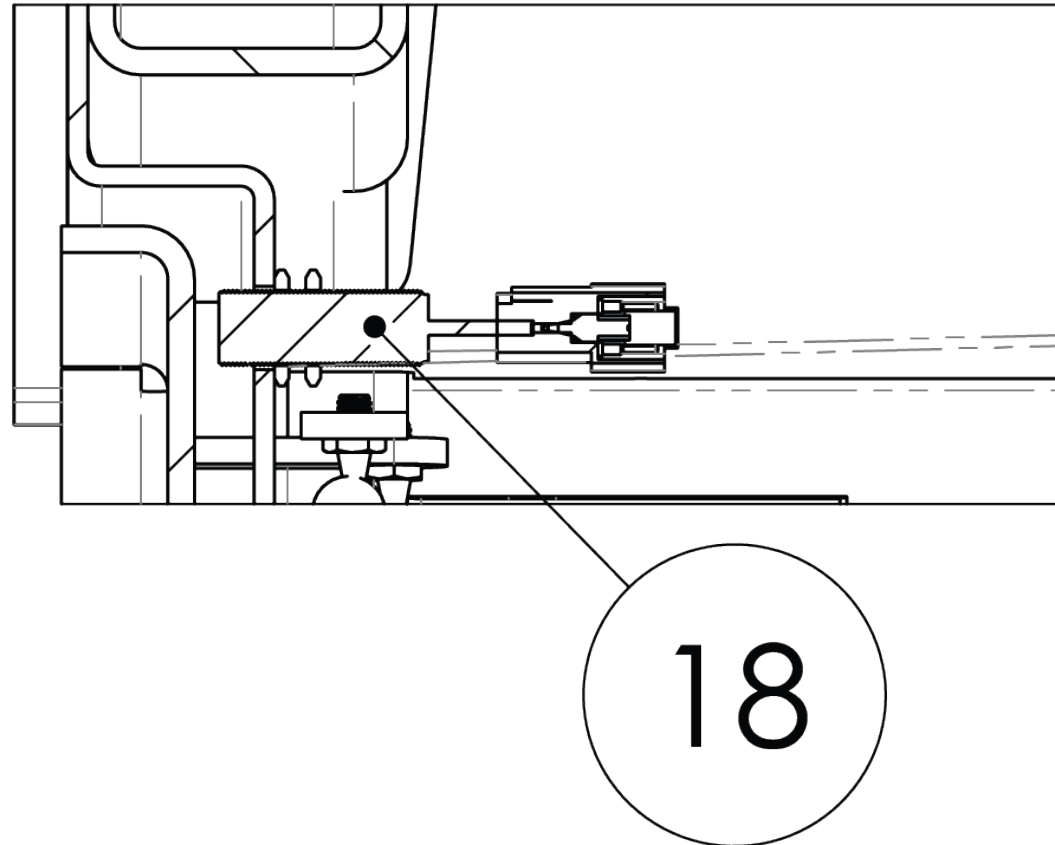
## 4.3 LED 1200 LIGHT GROUP (207547)

310

PARTS MANUAL

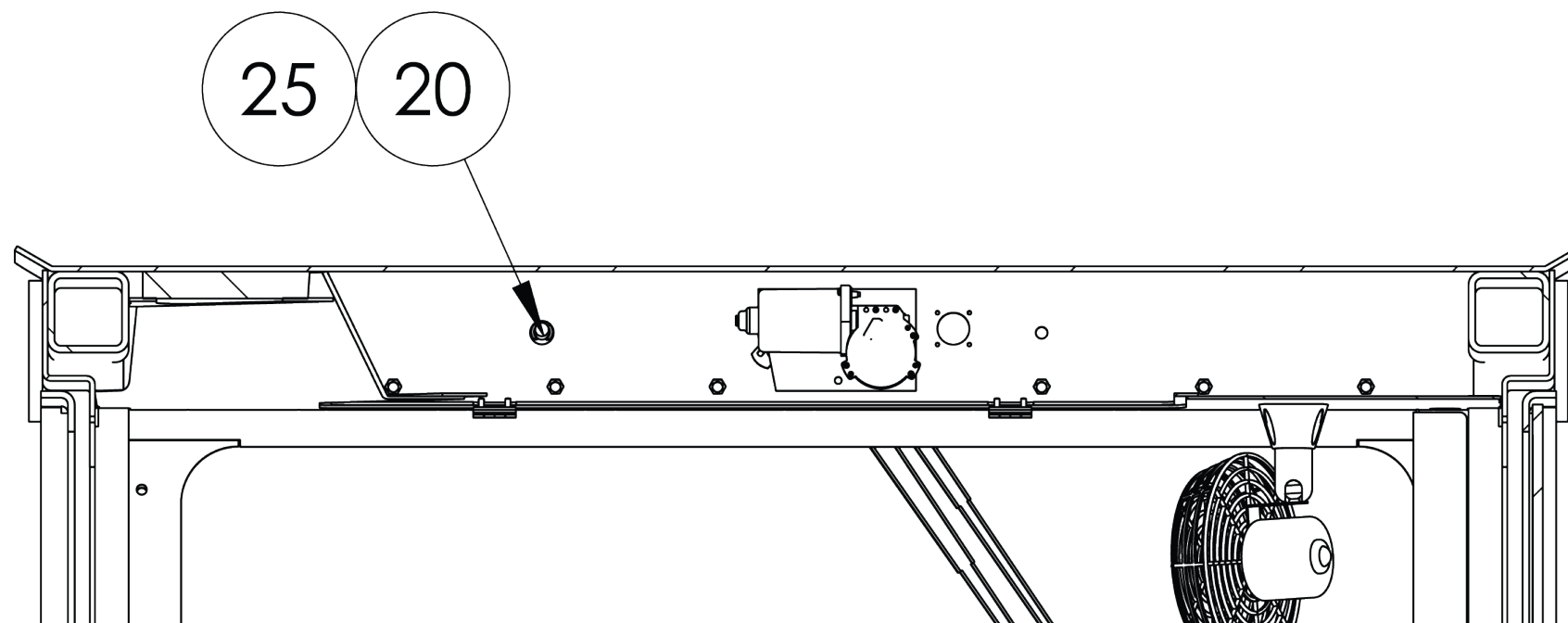
| item | Qty. | P/N     | Description                     |
|------|------|---------|---------------------------------|
| 1    | 6    | 9901052 | LED WORK LAMP, WIDE FLOOD LUMEN |





# SECTION H-H

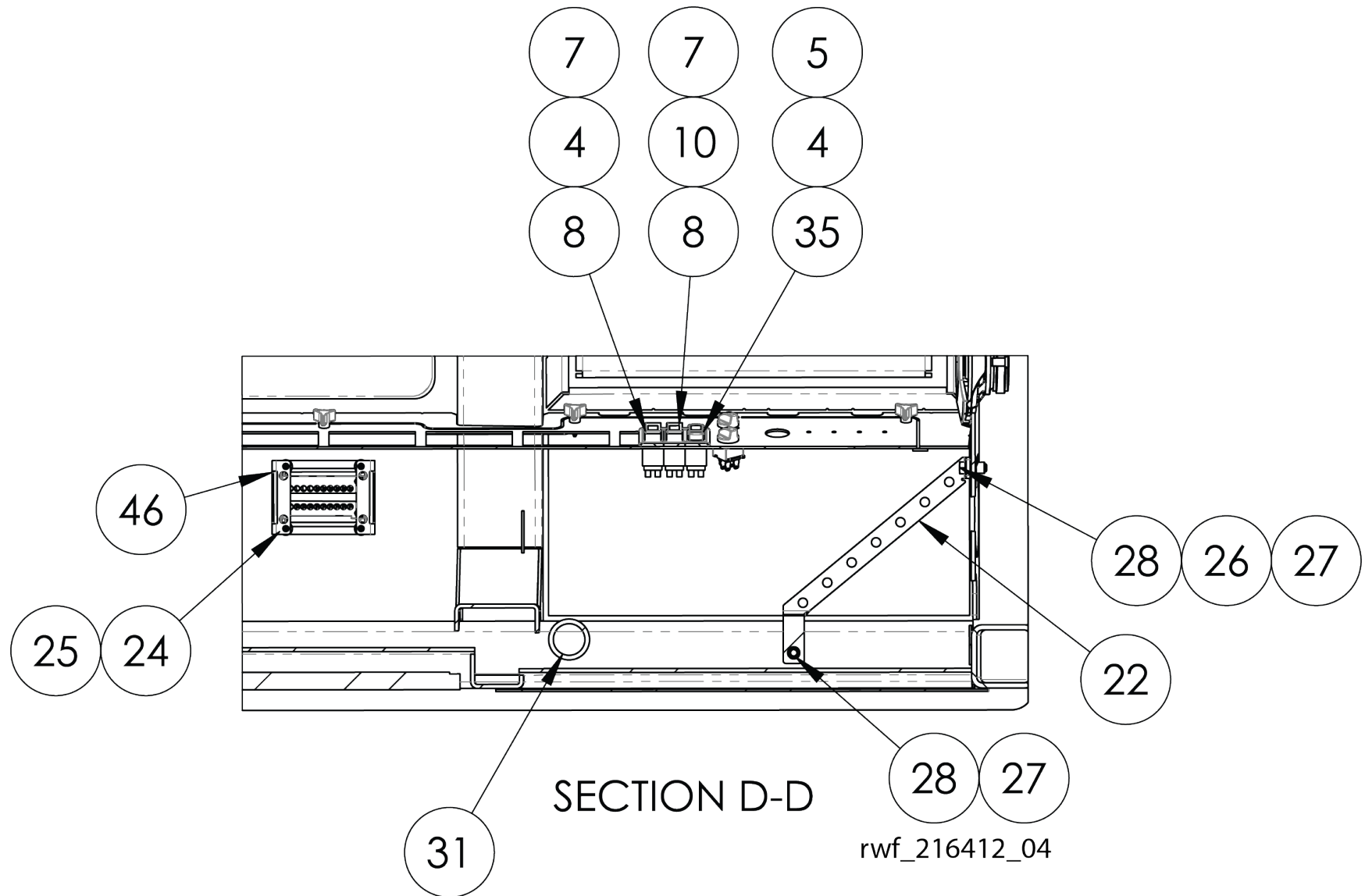
rwf\_216412\_02

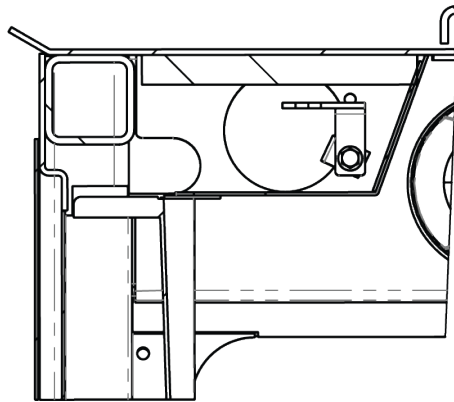


SECTION B-B

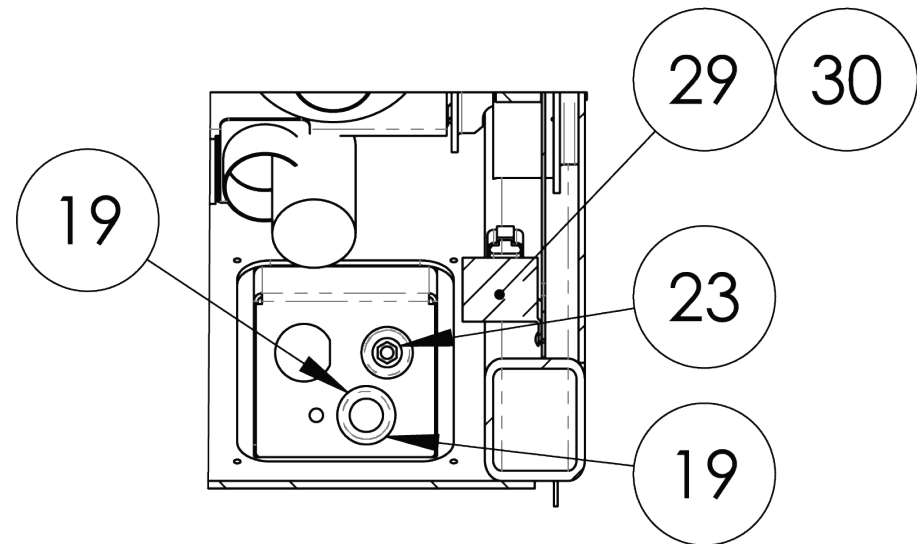
rwf\_216412\_03





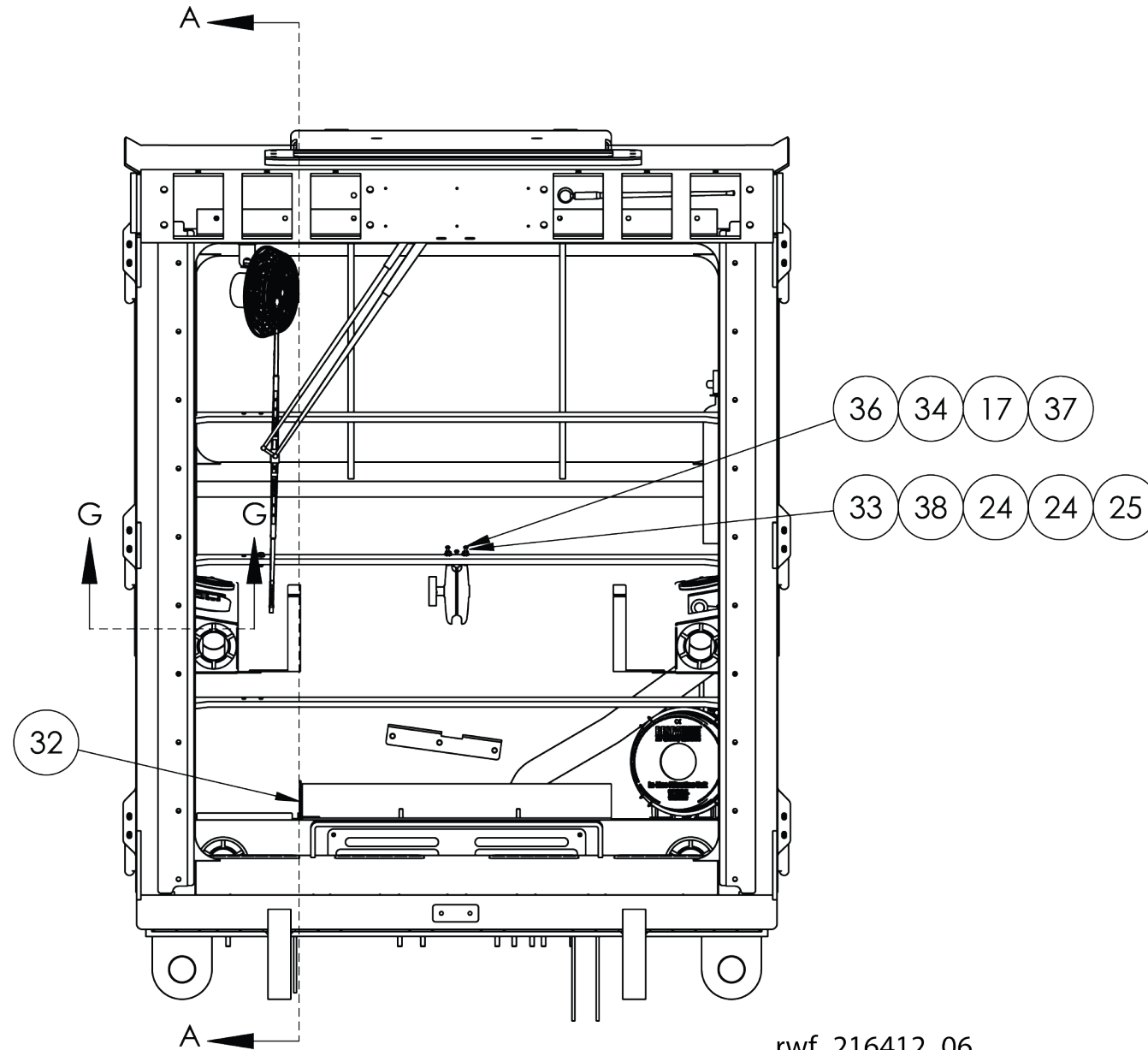


SECTION F-F

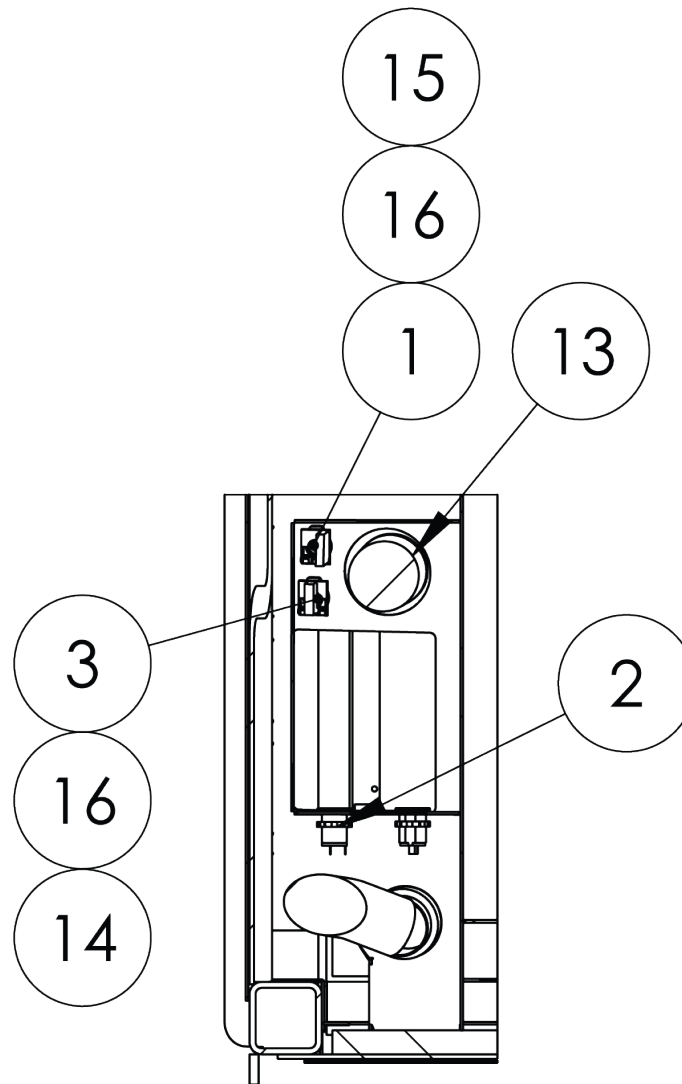


SECTION C-C

rwf\_216412\_05



rwf\_216412\_06

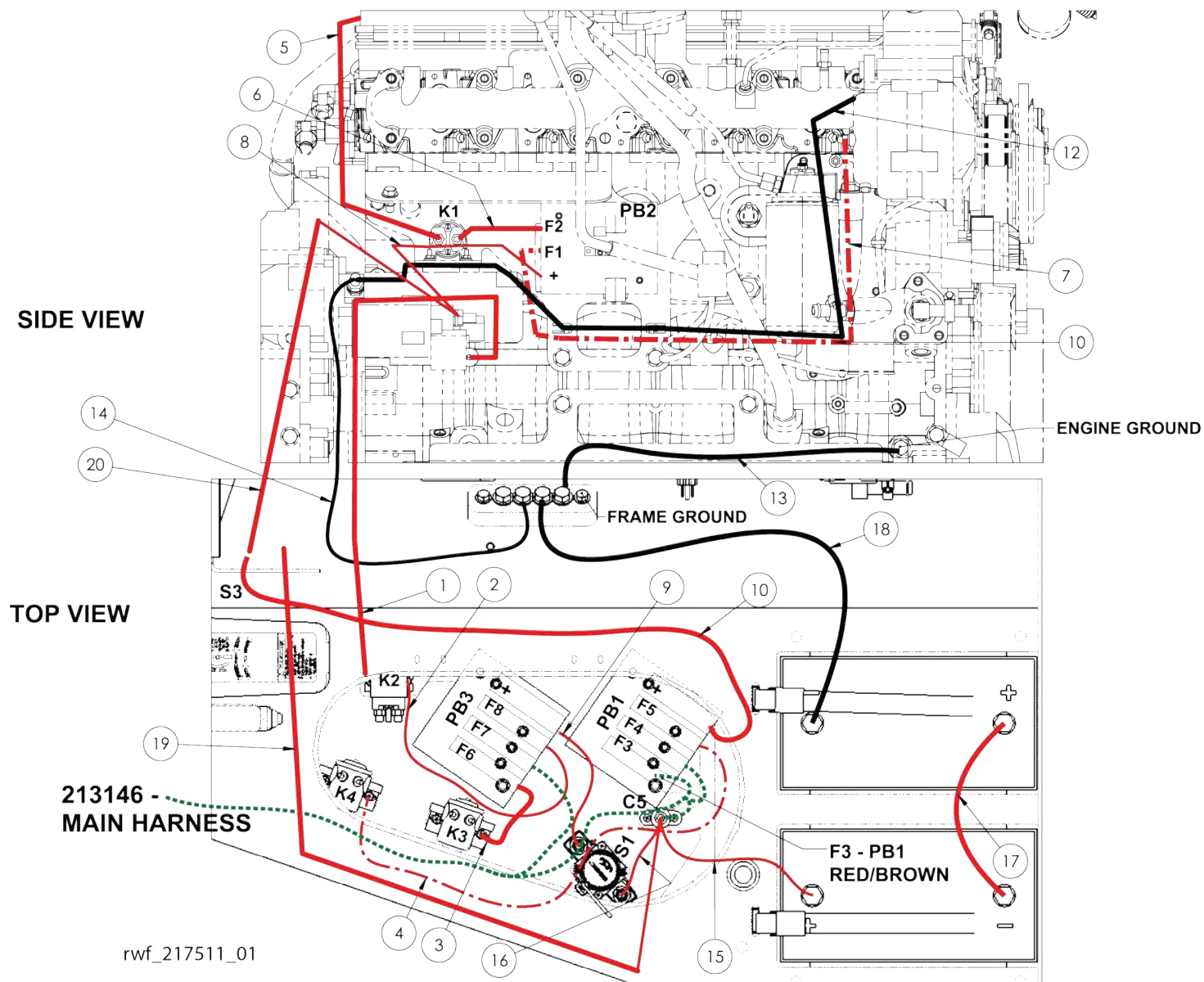


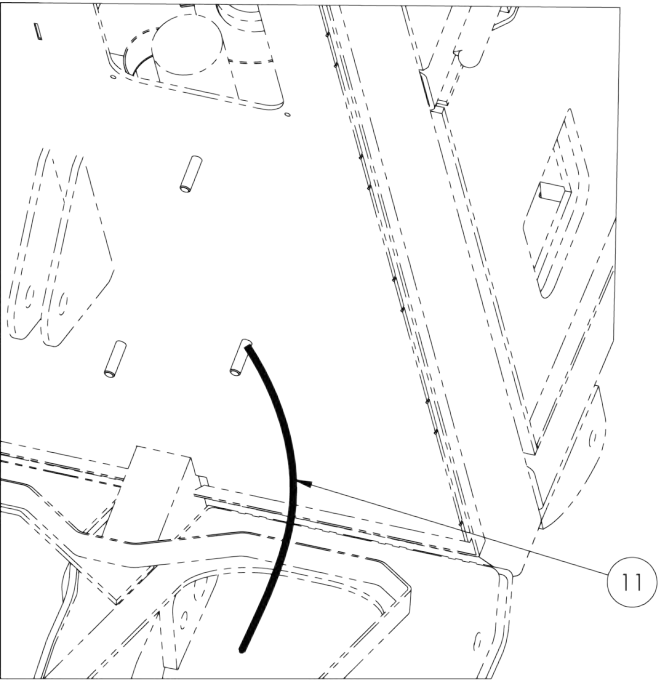
## SECTION G-G

rwf\_216412\_07

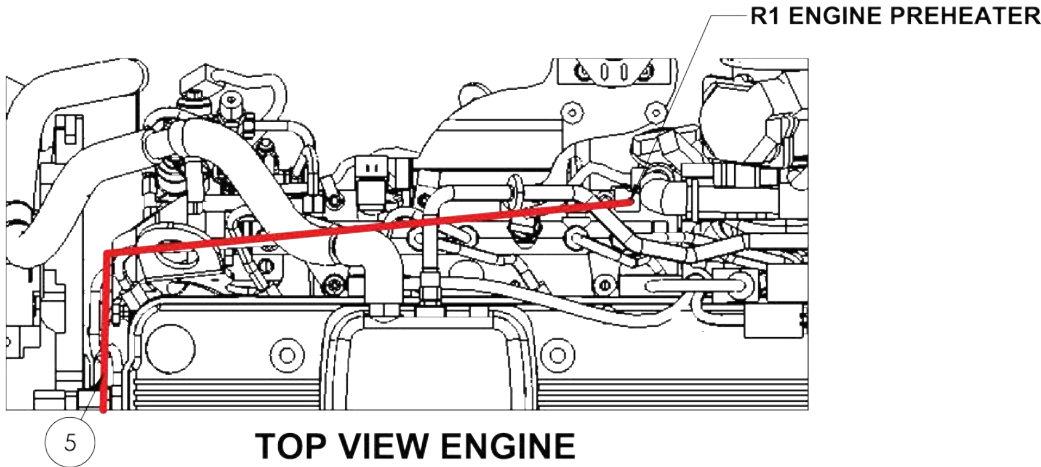
| item | Qty. | P/N       | Description                         |
|------|------|-----------|-------------------------------------|
| 1    | 1    | 9901829   | E-STOP W/ TWIST RELEASE             |
| 2    | 1    | 9901828   | USB INTERFACE & AUX INPUT JACK      |
| 3    | 1    | 9901830   | RESET PUSH BUTTON                   |
| 4    | 2    | 85441     | BEZEL, END - NGR GANG MOUNT         |
| 5    | 1    | 85422     | SWITCH BASE, NGR DPST ON-ON         |
| 6    | 1    | 85467     | LENS, GREEN TRANSP - BLOWER FAN STD |
| 7    | 2    | 85420     | SWITCH BASE, NGR DPST OFF-ON        |
| 8    | 2    | 85445     | ROCKER, NGR TOP FACE OPEN           |
| 9    | 1    | 85475     | LENS, GREEN TRANSP - CAB VENT STD   |
| 10   | 1    | 85440     | BEZEL, CENTRE - NGR GANG MOUNT      |
| 11   | 1    | 85487     | LENS, BLUE TRANSP - AIR COND STD    |
| 12   | 1    | 85457     | LENS, AMBER TRANSP - NO ICON        |
| 13   | 1    | 9901835   | RADIO, KICKER KMC                   |
| 14   | 1    | 9901836   | N/O CONTACT BLOCK                   |
| 15   | 1    | 9901837   | N/C CONTACT BLOCK                   |
| 16   | 2    | 9901838   | BUTTON MOUNTING LATCH               |
| 17   | 1    | 9900745   | RAM DBL BALL SOCKET ARM ASSY        |
| 18   | 2    | 148870    | HARNESS, PROX SWITCH                |
| 19   | 1    | 120075    | GROMMET                             |
| 20   | 1    | 9900611   | ANTENNA, AM/FM RECIEVER             |
| 21   | 1    | 9901897   | ANTENNA EXTENSION                   |
| 22   | 1    | 207920    | WELDMENT, BUS BAR HOLDER            |
| 23   | 1    | 125334    | ELECTRICAL STUD, BATTERY BULKHEAD   |
| 24   | 10   | 80576     | WASHER - SAE                        |
| 25   | 7    | 80511     | NUT - LOCK                          |
| 26   | 1    | 80705-011 | NUT, CLIP-ON                        |
| 27   | 2    | 80578     | WASHER - SAE                        |
| 28   | 2    | 80029     | BOLT - HEX HD                       |
| 29   | 1    | 9900538   | CONVERTER                           |
| 30   | 4    | 82135     | SCREW, TRUSS HEAD - PHILLIPS        |
| 31   | 1    | 130499    | GROMMET                             |
| 32   | 1    | 208340    | FORM, CONNECTOR BULKHEAD            |
| 33   | 1    | 141284    | MOUNT, DISPLAY                      |

| item | Qty. | P/N     | Description                  |
|------|------|---------|------------------------------|
| 34   | 1    | 9900744 | RAM DIA BASE                 |
| 35   | 1    | 85447   | ROCKER, NGR BOTH FACES OPEN  |
| 36   | 3    | 82111   | SCREW, ROUND HEAD - PHILLIPS |
| 37   | 3    | 82207   | NUT, NYLOCK                  |
| 38   | 3    | 80001   | BOLT - HEX HD                |
| 39   | REF  | 213147  | CAB, HARNESS WITH FUSE BOX   |
| 40   | 1    | 9901887 | GATEWAY, BLUETOOTH           |
| 41   | 1    | 85099   | CLAMP, TUBE                  |





**CAB TO FRAME GROUND**

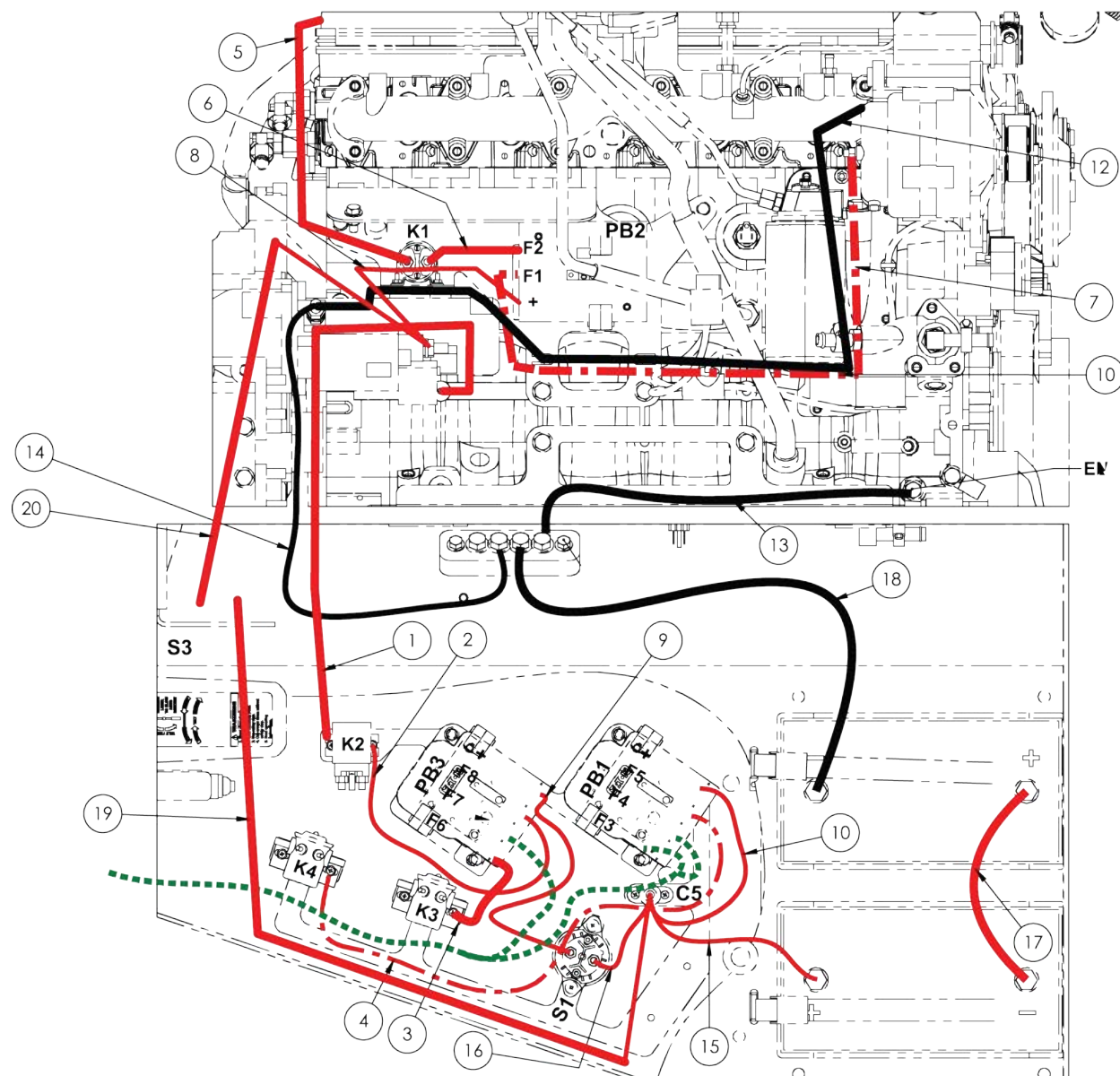


**TOP VIEW ENGINE**

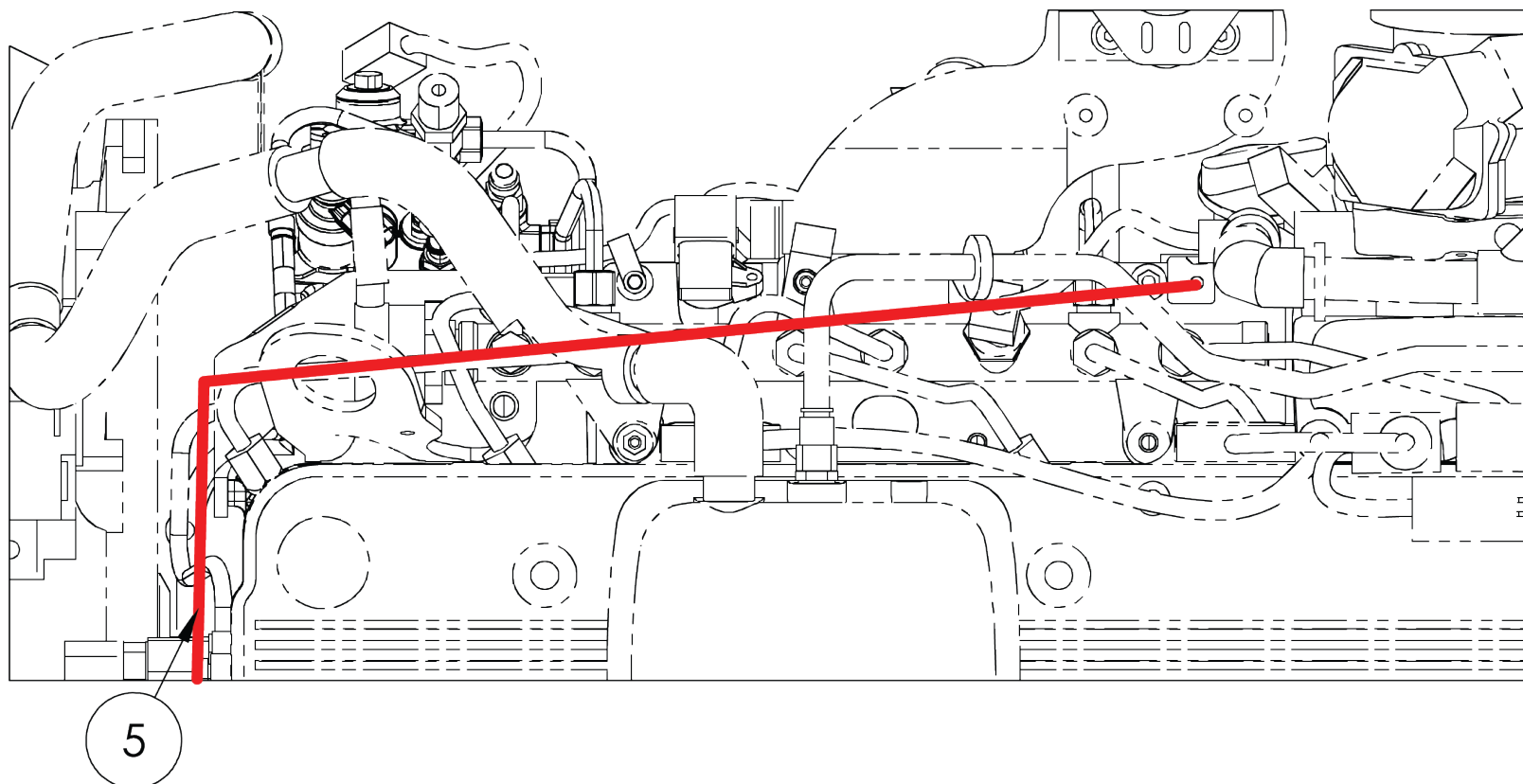
rwf\_217511\_02



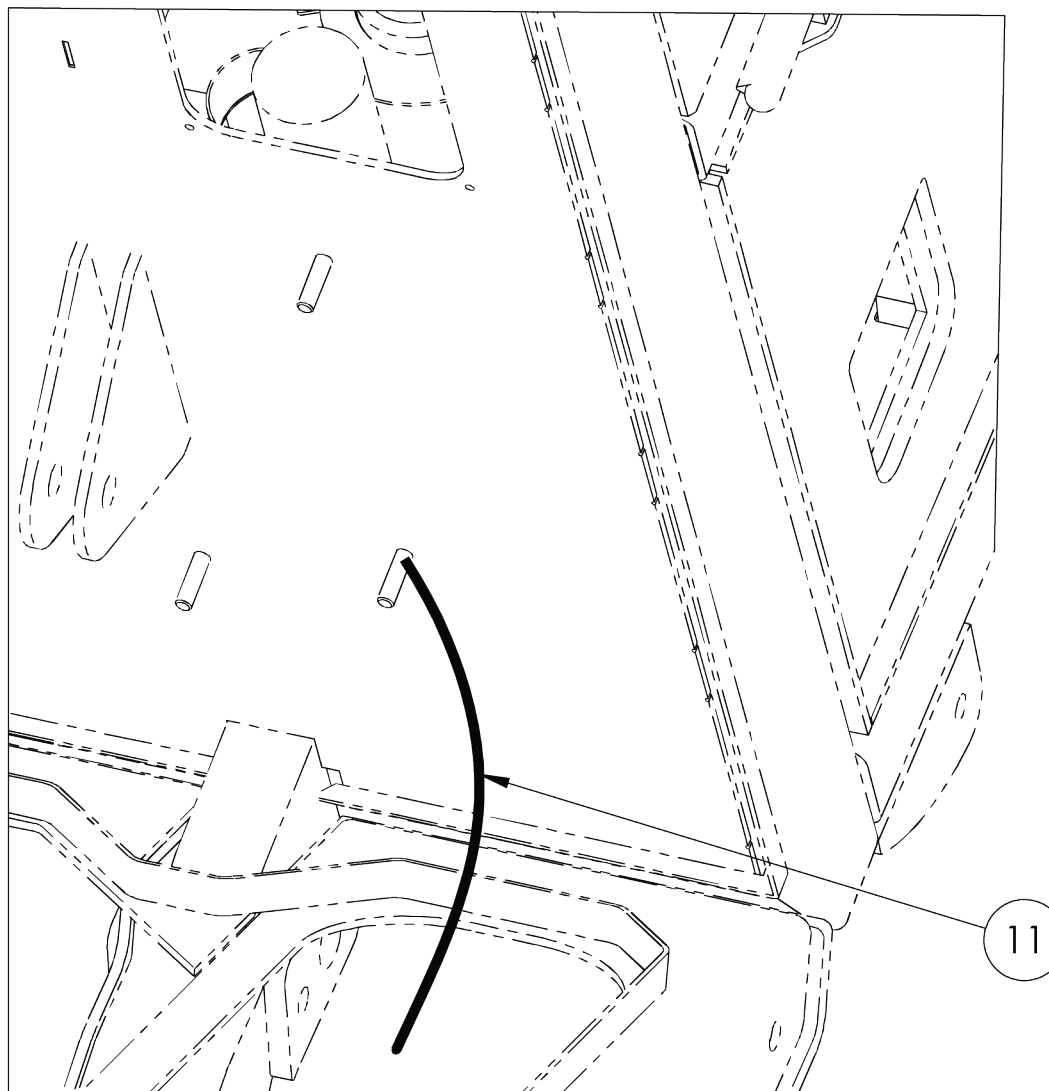
| item | Qty. | P/N    | Description                       |
|------|------|--------|-----------------------------------|
| 1    | 1    | 148593 | "156" CABLE - PS SOL/K2 SOLENOID  |
| 2    | 1    | 148592 | "155" CABLE - FUSE F8/K2 SOLENOID |
| 3    | 1    | 148591 | "150" CABLE - FUSE F6/K3 SOLENOID |
| 4    | 1    | 148590 | "130" CABLE - FUSE F5/K4 SOLENOID |
| 5    | 1    | 148589 | "107" CABLE - GRID R1/K1 SOLENOID |
| 6    | 1    | 148588 | "106" CABLE - FUSE F2/K1 SOLENOID |
| 7    | 1    | 148587 | "105" CABLE - FUSE F1/ALT B+      |
| 8    | 1    | 148586 | "104" CABLE - PB2 FEED/STARTER B- |
| 9    | 1    | 150740 | "103" CABLE - S1 OUT/PB3          |
| 10   | 1    | 152108 | "102" CABLE - S3 O/ PB1 B         |
| 11   | 1    | 148583 | "23" CABLE - CAB GN/FRAME GND     |
| 12   | 1    | 148582 | "12" CABLE - ALT B- /STARTER GND  |
| 13   | 1    | 148581 | B6 CABLE - GND TO ENGINE GND      |
| 14   | 1    | 148580 | B5 CABLE - GND TO STARTER GND     |
| 15   | 1    | 150742 | "B3" CABLE - BAT+/C5              |
| 16   | 1    | 150743 | "B8" CABLE - C5/S1B               |
| 17   | 1    | 148577 | B2 CABLE - BAT + - BAT 2 -        |
| 18   | 1    | 148576 | B1 CABLE - GND TO BAT 1 NEG       |
| 19   | 1    | 150744 | "B7" CABLE - C5/S3                |
| 20   | 1    | 150745 | "B4" CABLE - S3O/STARTER+         |



rwf\_213329\_01

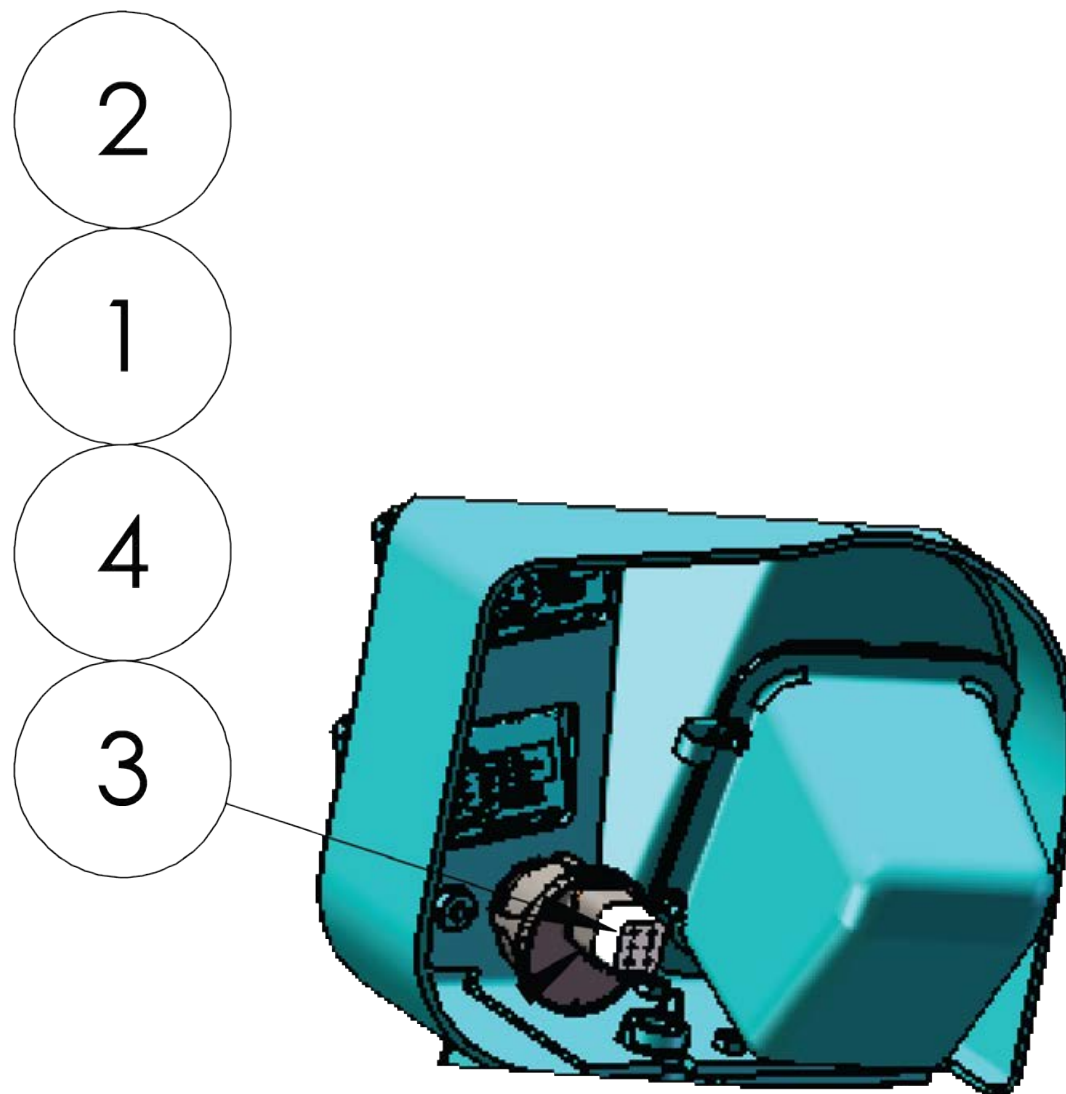


rwf\_213329\_02

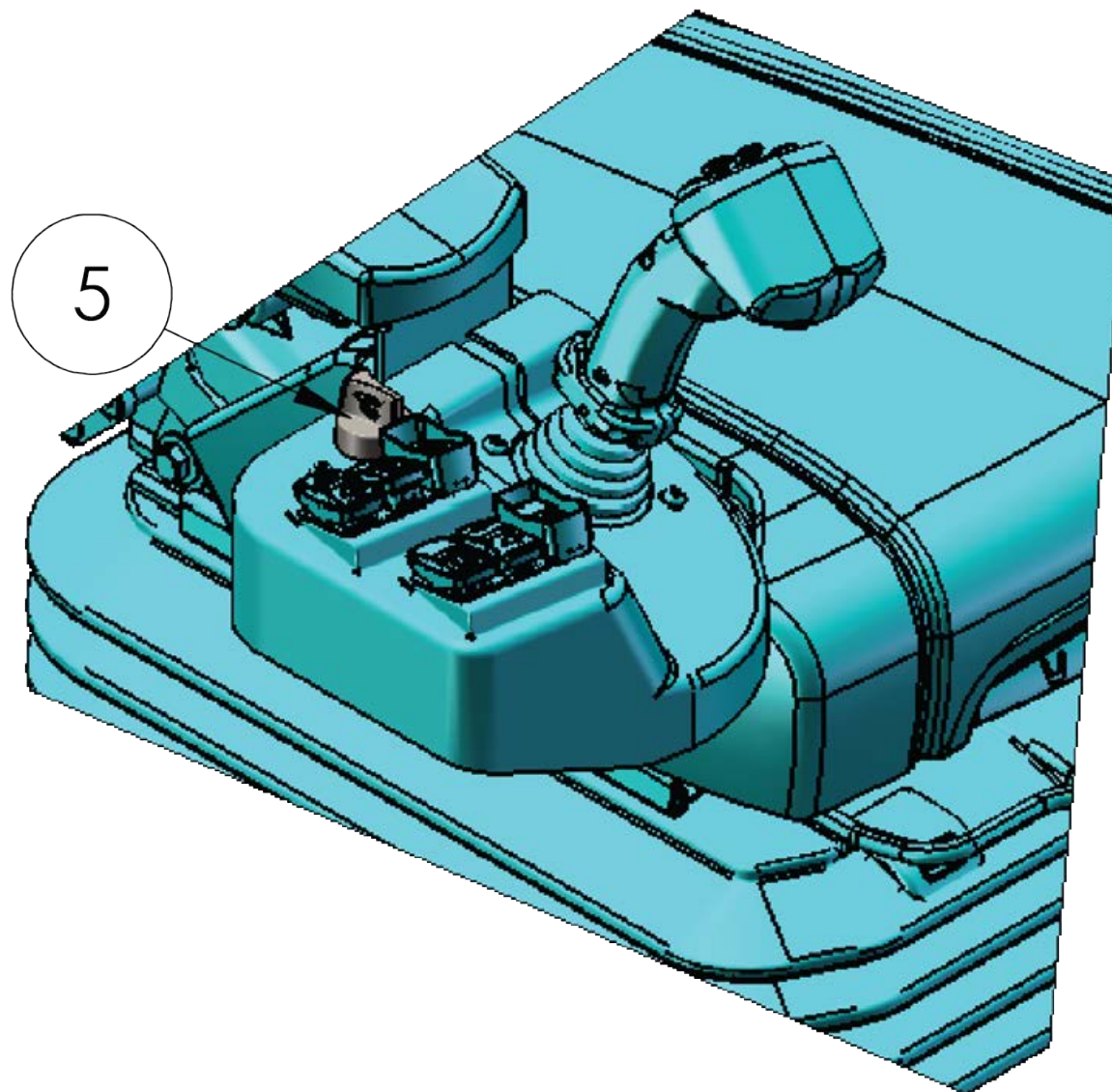


rwf\_213329\_03

| item | Qty. | P/N    | Description |
|------|------|--------|-------------|
| 1    | 1    | 148593 | CABLE       |
| 2    | 1    | 148592 | CABLE       |
| 3    | 1    | 148591 | CABLE       |
| 4    | 1    | 148590 | CABLE       |
| 5    | 1    | 148589 | CABLE       |
| 6    | 1    | 148588 | CABLE       |
| 7    | 1    | 148587 | CABLE       |
| 8    | 1    | 148586 | CABLE       |
| 9    | 1    | 150740 | CABLE       |
| 10   | 1    | 150741 | CABLE       |
| 11   | 1    | 148583 | CABLE       |
| 12   | 1    | 148582 | CABLE       |
| 13   | 1    | 148581 | CABLE       |
| 14   | 1    | 148580 | CABLE       |
| 15   | 1    | 150742 | CABLE       |
| 16   | 1    | 150743 | CABLE       |
| 17   | 1    | 148577 | CABLE       |
| 18   | 1    | 148576 | CABLE       |
| 19   | 1    | 150744 | CABLE       |
| 20   | 1    | 150745 | CABLE       |



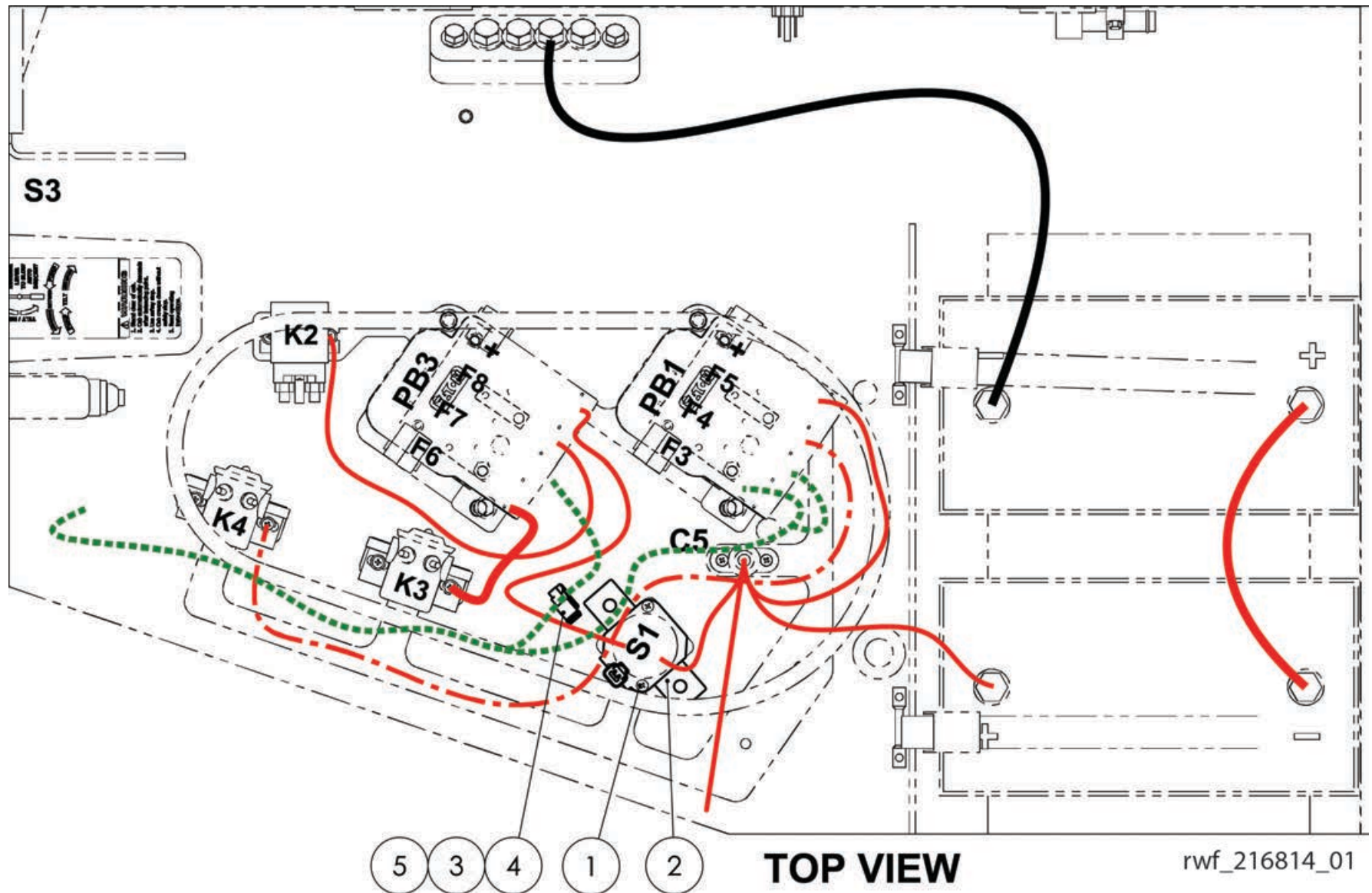
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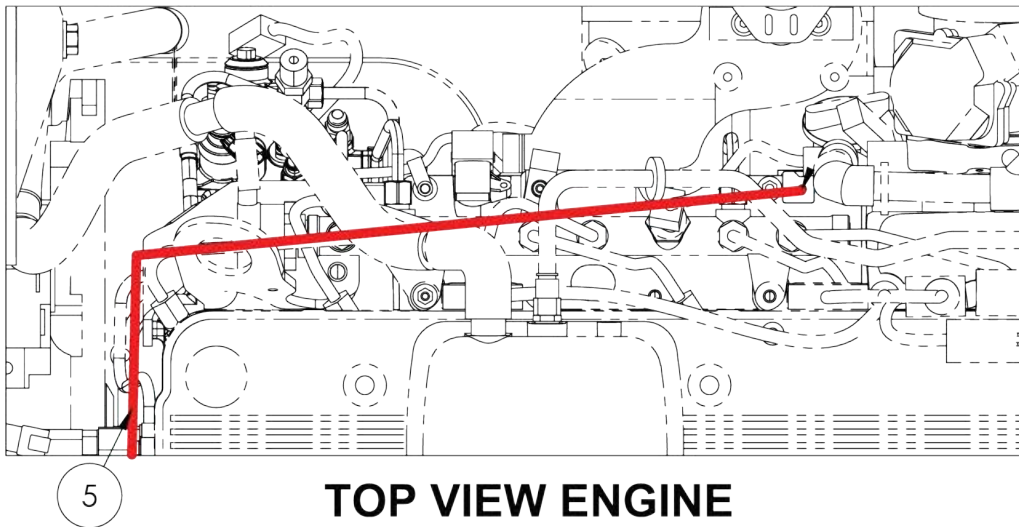


rwf\_152009\_02

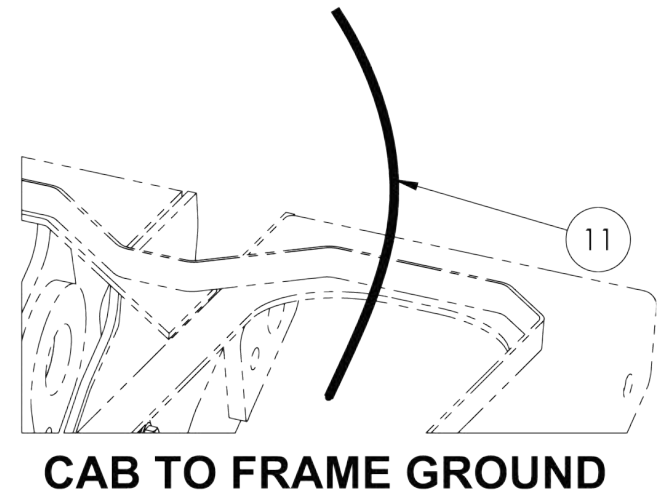
| item | Qty. | P/N     | Description                     |
|------|------|---------|---------------------------------|
| 1    | 4    | 85151   | SOCKET CONTACT- GA SOLID        |
| 2    | 2    | 85159   | SEALING PLUG SIZE               |
| 3    | 1    | 85129   | PLUG, DT 6-SOCKET               |
| 4    | 1    | 85176   | WEDGE, DT SERIES 6 SOCKET (W6S) |
| 5    | 1    | 9902550 | SWITCH, KEY 2 POS SEALED        |







rwf\_216814\_02

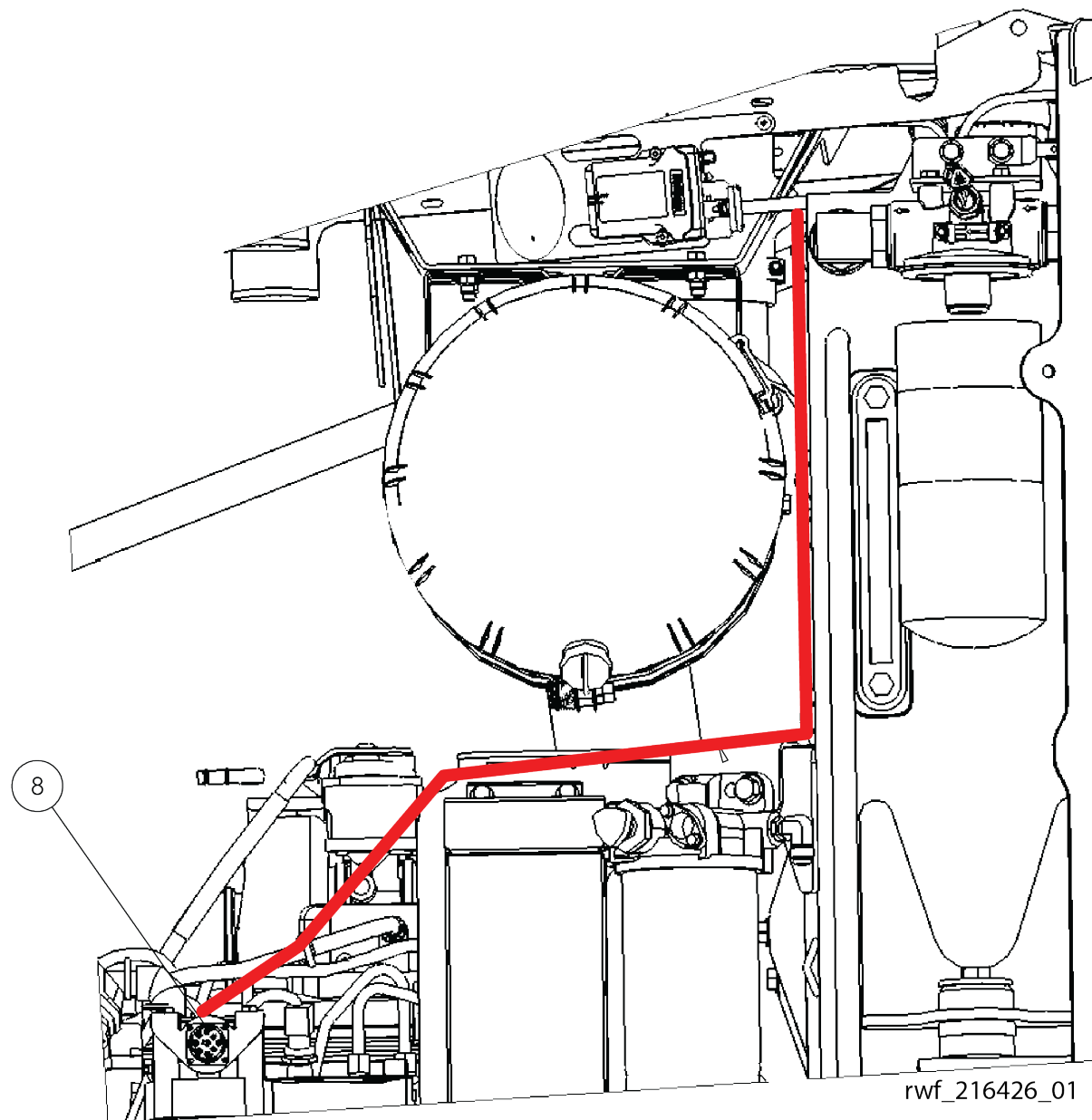


## 4.8 SWITCH CHANGE (216814)

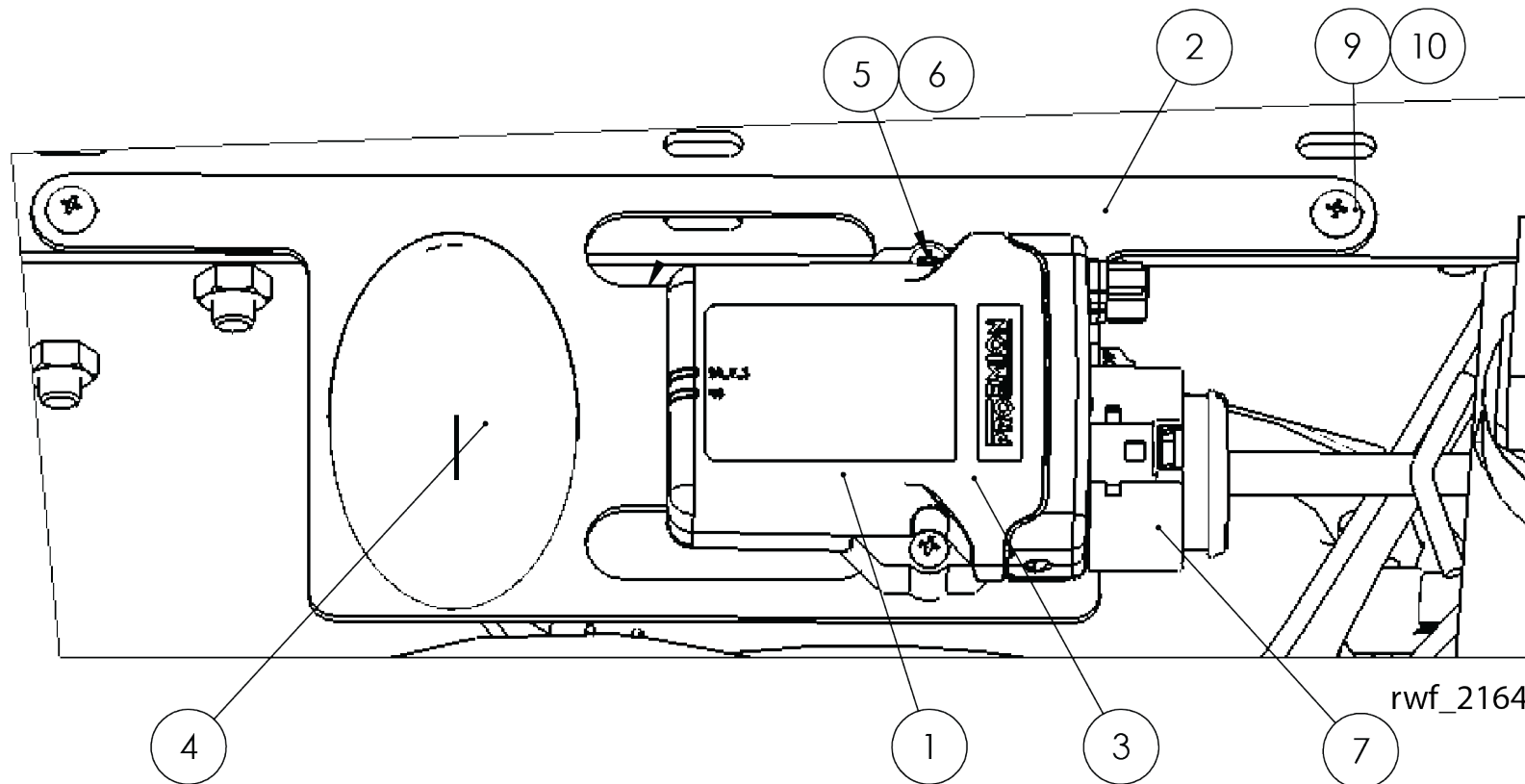
310

PARTS MANUAL

| item | Qty. | P/N    | Description               |
|------|------|--------|---------------------------|
| 1    | 2    | 82163  | SCREW                     |
| 2    | 1    | 152045 | ASM, CONTACTOR SWITCH     |
| 3    | 1    | 85173  | WEDGE, DT SERIES 2 SOCKET |
| 4    | 1    | 85126  | DT STYLE - 2 SOCKET PLUG  |
| 5    | 2    | 85151  | SOCKET CONTACT            |

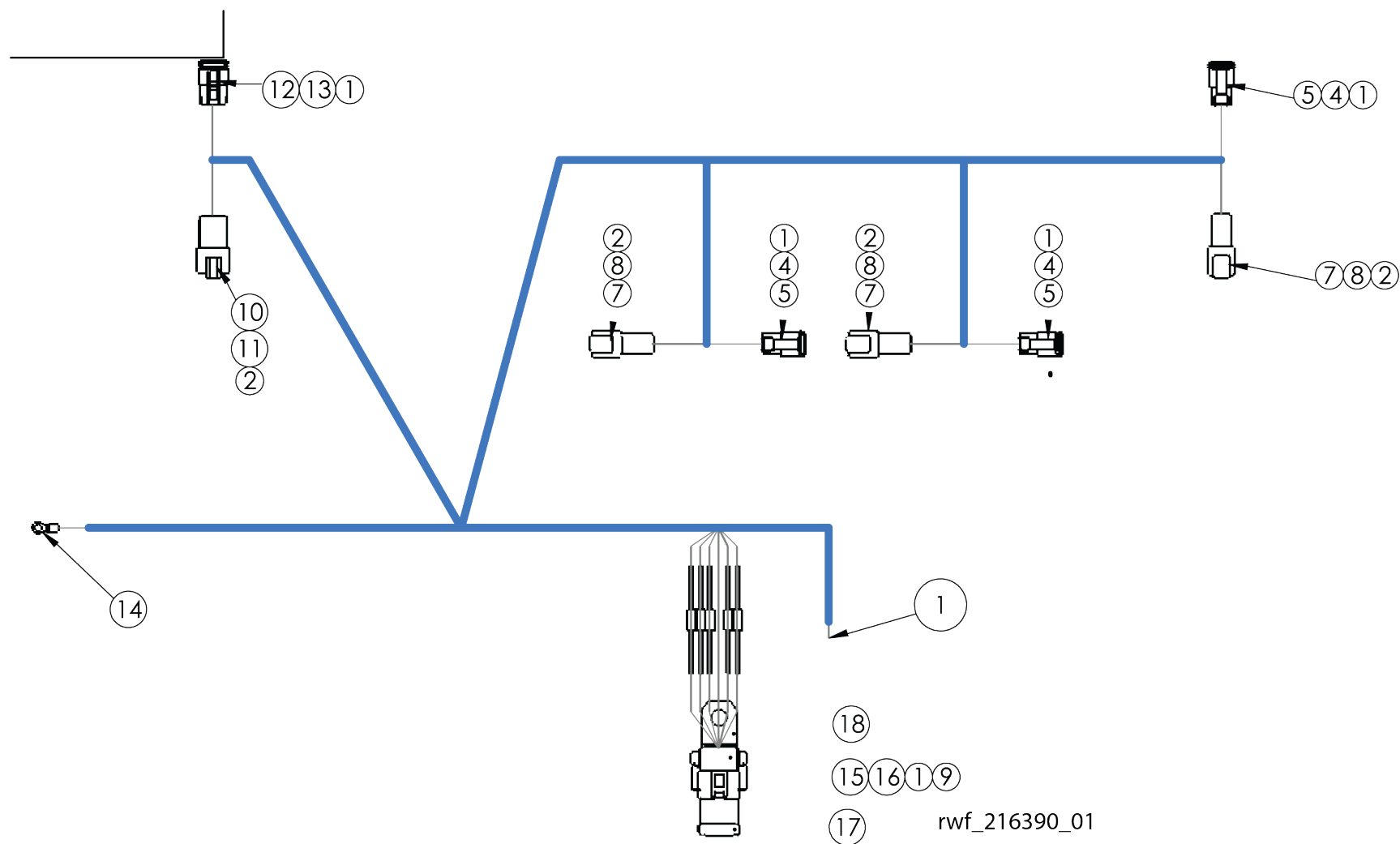


rwf\_216426\_01



rwf\_216426\_02

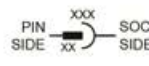
| item | Qty. | P/N     | Description                  |
|------|------|---------|------------------------------|
| 1    | REF  | 151672  | PROGRAM, DOD IQAN TELEMATICS |
| 2    | 1    | 151895  | PLATE, TELEMATICS MOUNT      |
| 3    | 1    | 9902042 | CANLINK MOBILE VAR. PLUS     |
| 4    | 1    | 9902043 | ANTENNA, LTE/GNSS            |
| 5    | 2    | 82162   | SCREW, ROUND HEAD - PHILLIPS |
| 6    | 2    | 82208   | NUT, NYLOCK                  |
| 7    | 1    | 211335  | HARNESS, TELEMATICS SERIES   |
| 8    | 1    | 151894  | HARNESS, TELEMATICS BRANCH   |
| 9    | 2    | 82131   | SCREW, ROUND HEAD - PHILLIPS |
| 10   | 2    | 80511   | NUT - LOCK                   |



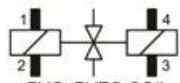
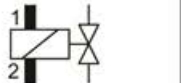
| item | Qty. | P/N     | Description                             |
|------|------|---------|-----------------------------------------|
| 1    | 16   | 85151   | SOCKET CONTACT- GA SOLID                |
| 2    | 6    | 85143   | PIN CONTACT- GA                         |
| 3    | 5    | 9902556 | RESISTOR, OHM, 3W, METAL OXIDE          |
| 4    | 3    | 85173   | WEDGE, DT SERIES SOCKET                 |
| 5    | 3    | 85126   | DT STYLE - SOCKET PLUG                  |
| 6    | 3    | 85149   | PIN CONTACT- GA SOLID-GOLD              |
| 7    | 3    | 85110   | CONNECTOR, DEUTSCH POLE                 |
| 8    | 3    | 85165   | WEDGE - DT SERIES - PIN (W2P)           |
| 9    | 2    | 85159   | SEALING PLUG SIZE                       |
| 10   | 1    | 85111   | RECEPTACLE, DT STYLE - PIN (DT04-3P)    |
| 11   | 1    | 85166   | WEDGE, DT SERIES - PIN (W3P)            |
| 12   | 1    | 85127   | PLUG, DT SOCKET                         |
| 13   | 1    | 85174   | WEDGE, DT STYLE SOCKET (W3S)            |
| 14   | 1    | 112667  | GA x RING TERMINAL                      |
| 15   | 1    | 85130   | DT STYLE PLUG FOR SOCKETS               |
| 16   | 1    | 85177   | DT SERIES WEDGES SOCKET                 |
| 17   | 1    | 85537   | DEUTSCH DT SERIES PIN BUSSES - PER PLUG |
| 18   | 1    | 9900585 | CLIP, MOUNT DEUTSCH DT/DTM/DTP/DTHD     |
| 19   | 67"  | 119663  | WIRE- STRANDED GA RED GXL               |
| 20   | 20"  | 119665  | WIRE- STRANDED GA BLACK GXL             |
| 21   | 118" | 119668  | WIRE- STRANDED GA ORANGE GXL            |
| 22   | 134" | 119669  | WIRE- STRANDED GA YELLOW GXL            |
| 24   | 329" | 119671  | WIRE- STRANDED GA WHITE GXL             |
| 25   | 138" | 119672  | WIRE- STRANDED GA TAN GXL               |



## GENERAL SYMBOLS

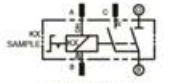
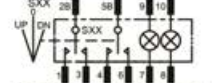
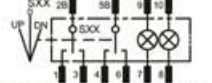
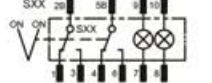
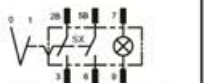
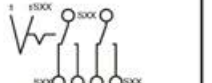
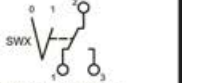
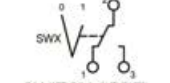
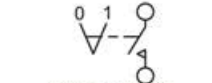
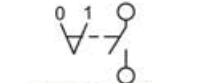
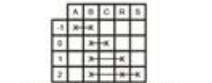
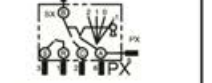
|                                                                                                             |                                                                                                                    |                                                                                                                                 |                                                                                                              |                                                                                                               |                                                                                                                          |                                                                                                                     |                                                                                                  |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <br>WIRE                   | <br>RING TERMINAL<br>OR RING STUD | <br>BUZZER / HORN                              | <br>ALTERNATOR            | <br>BATTERY                | <br>POWER CONVERTER<br>24VDC TO 12VDC | <br>POWER INVERTER<br>- DC TO AC |                                                                                                  |
| <br>LED LIGHT<br>WITH PLUG | <br>LED LIGHT                     | <br>LIGHT WITH PLUG                            | <br>POWER PORT              | <br>USB POWER PORT         | <br>POTENTIOMETER                     | <br>DIAL POTENTIOMETER           | <br>CONNECTOR |
| <br>CONNECTOR PLUG         | <br>CIRCUIT BREAKER               | <br>FUSE                                       | <br>BUSSBAR BLOCK         | <br>SPLICE / SPLICE BLOCK  | <br>RESISTOR                          | <br>DIODE                        |                                                                                                  |
| <br>OBJECT GROUND POINT    | <br>FRAME GROUND POINT            | <br>POWER PANEL<br>TERMINAL<br>MAIN FUSE PANEL | <br>SEAT LEFT<br>TERMINAL | <br>SEAT RIGHT<br>TERMINAL |                                                                                                                          |                                                                                                                     |                                                                                                  |

## VALVE COILS

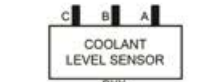
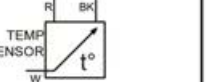
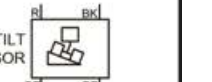
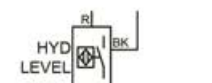
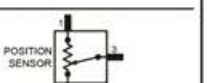
|                                                                                                                   |                                                                                                                             |                                                                                                          |                                                                                                      |  |  |  |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--|--|--|
| <br>PVG, PVEO COIL<br>(ON/OFF) | <br>PVG, PVEA/PVEH COIL<br>(RATIOMETRIC) | <br>PROPORTIONAL COIL | <br>ON/OFF COIL |  |  |  |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--|--|--|

rwf\_213218\_01

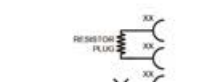
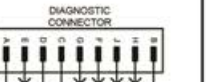
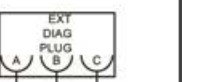
## SWITCHES

|                                                                                                                      |                                                                                                                        |                                                                                                                       |                                                                                                                        |                                                                                                                           |                                                                                                             |                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <br>MOTORIZED<br>DISCONNECT SWITCH  | <br>ROCKER SWITCH DPDT<br>MOM-OFF-MOM | <br>ROCKER SWITCH DPDT<br>ON-OFF-ON  | <br>ROCKER SWITCH DPDT<br>ON-ON      | <br>ROCKER SWITCH DPST<br>OFF-ON       | <br>SWITCH DPDT<br>ON-ON | <br>SWITCH SPDT<br>ON-ON MAINTAINED |
| <br>SWITCH SPDT<br>ON-ON MAINTAINED | <br>SWITCH SPNO<br>OFF-ON MOMENTARY   | <br>SWITCH SPNO<br>OFF-ON MAINTAINED | <br>IGNITION SWITCH<br>LOGIC DIAGRAM | <br>IGNITION SWITCH<br>CIRCUIT DIAGRAM |                                                                                                             |                                                                                                                        |

## SENSORS

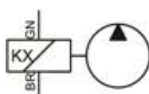
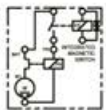
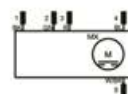
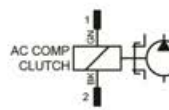
|                                                                                                                                     |                                                                                                                                      |                                                                                                                                                |                                                                                                                                        |                                                                                                                               |                                                                                                                                            |                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <br>INLET AIR<br>TEMP<br>SENSOR<br>AIR TEMP SENSOR | <br>COOLANT<br>LEVEL SENSOR<br>COOLANT LEVEL SENSOR | <br>FUEL<br>LEVEL<br>SENSOR<br>RESISTIVE FUEL LEVEL<br>SENSOR | <br>PRESSURE<br>SWITCH<br>PRESSURE SWITCH            | <br>PROX<br>SWITCH<br>PROXIMITY SWITCH     | <br>TEMP<br>SENSOR<br>TEMPERATURE SENSOR                | <br>TILT<br>SENSOR<br>TILT SENSOR                      |
| <br>VACUUM<br>SWITCH<br>VACUUM SWITCH             | <br>MOTOR<br>PROX<br>MOTOR PROX SENSOR             | <br>HYD<br>LEVEL<br>LIQUID LEVEL SENSOR                      | <br>LOOP 1<br>PRESSURE<br>SENSOR<br>PRESSURE SENSOR | <br>POSITION<br>SENSOR<br>POSITION SENSOR | <br>WATER<br>IN FUEL<br>SENSOR<br>WATER IN FUEL SENSOR | <br>ETHER<br>START AID<br>SOL<br>ETHER START SOLENOID |

## CANBUS

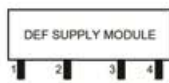
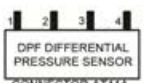
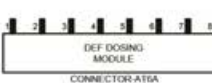
|                                                                                                              |                                                                                                                             |                                                                                                   |                                                                                                                                            |                                                                                                                           |                                                                                                                                       |                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <br>SHLD<br>SHIELDED WIRE | <br>RESISTOR<br>PLUG<br>120 OHM RESISTOR | <br>Y SPLITTER | <br>CAN2-4 CAN2-3 CAN2-2 CAN2-1<br>6 BANK CANBUS SPLIT | <br>CANBUS<br>SWITCH<br>BANK 4, 6, 8 | <br>DIAGNOSTIC<br>CONNECTOR<br>ENGINE DIAGNOSTIC | <br>EXT<br>DIAG<br>PLUG<br>J1939 RECEPTACLE PORT |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|

rwf\_213218\_02

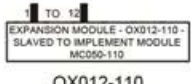
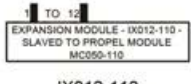
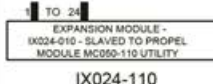
## MOTORS

|                                                                                                          |                                                                                                |                                                                                                             |                                                                                                   |                                                                                                      |  |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--|
| <br>HYDRAULIC FILL PUMP | <br>FUEL PUMP | <br>STARTER MOTOR WITH IMS | <br>WIPER MOTOR | <br>AC COMPRESSOR |  |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--|

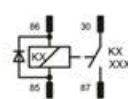
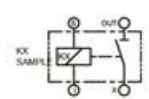
## EMISSIONS EQUIPMENT

|                                                                                                                  |                                                                                                        |                                                                                                  |                                                                                                                           |                                                                                                          |                                                                                                                            |                                                                                                             |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <br>DEF LEVEL<br>QUALITY SENSOR | <br>OUTLET NOx SENSOR | <br>EGTS SENSOR | <br>INLET NOx SENSOR<br>CONNECTOR-AT5A | <br>DEF SUPPLY MODULE | <br>DPF DIFFERENTIAL<br>PRESSURE SENSOR | <br>DEF DOSING<br>MODULE |
| <br>DEF HEATER LINE             |                                                                                                        |                                                                                                  |                                                                                                                           |                                                                                                          |                                                                                                                            |                                                                                                             |

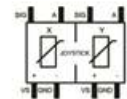
## COMPUTERS

|                                                                                                                                                                                                     |                                                                                                                                                                                                           |                                                                                                                                                                                                            |                                                                                                                                                                                                       |                                                                                                                                                                                                                |                                                                                                                               |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--|
| <br>CONTROL MODULE(PROPEL) - 50 PIN<br>CONNECTOR - MC050-110 SAUER<br>DANFOSS PLUS1<br>MC050-110 PROPEL<br>MODULE | <br>CONTROL MODULE(IMPLEMENT) - 50<br>PIN CONNECTOR - MC050-110 SAUER<br>DANFOSS PLUS1<br>MC050-110 IMPLEMENT<br>MODULE | <br>EXPANSION MODULE - OX012-110 -<br>SLAVED TO IMPLEMENT MODULE<br>MC050-110<br>OX012-110<br>SLAVED IMPLEMENT<br>MODULE | <br>EXPANSION MODULE - IX012-110 -<br>SLAVED TO PROPEL MODULE<br>MC050-110<br>IX012-110<br>SLAVED PROPEL<br>MODULE | <br>EXPANSION MODULE -<br>IX024-110 - SLAVED TO PROPEL<br>MODULE MC050-110-UTILITY<br>IX024-110<br>SLAVED PROPEL<br>MODULE | <br>DP710 DISPLAY SCREEN<br>DP710 DISPLAY |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--|

## RELAYS

|                                                                                                     |                                                                                                 |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <br>RELAYS NO/NC | <br>SOLENOID |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|

## CONTROLS

|                                                                                                  |                                                                                                             |                                                                                                |                                                                                               |
|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <br>JOYSTICK | <br>DUAL AXIS JOYSTICK | <br>LEVER | <br>DIAL |
|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|

rwf\_213218\_03

### WIRE IDENTIFICATION

EG: 2-R-"X"

2 IS WIRE NUMBER

R IS WIRE COLOR

"X" IS WIRE GAUGE SIZE IF PRESENT, 18

GAUGE IS STANDARD IF NOT USED

### COMPONENT IDENTIFICATION

PP = POWER PANEL STRIP

SR = CONSOLE TERMINAL STRIP

BB = BUSBAR

FB = FUSE BLOCK

DBD = DILL BLOX DIODE

### WIRE COLORS

BK = BLACK

BL = BLUE

BR = BROWN

GN = GREEN

GY = GREY

OR = ORANGE

PU = PURPLE

R = RED

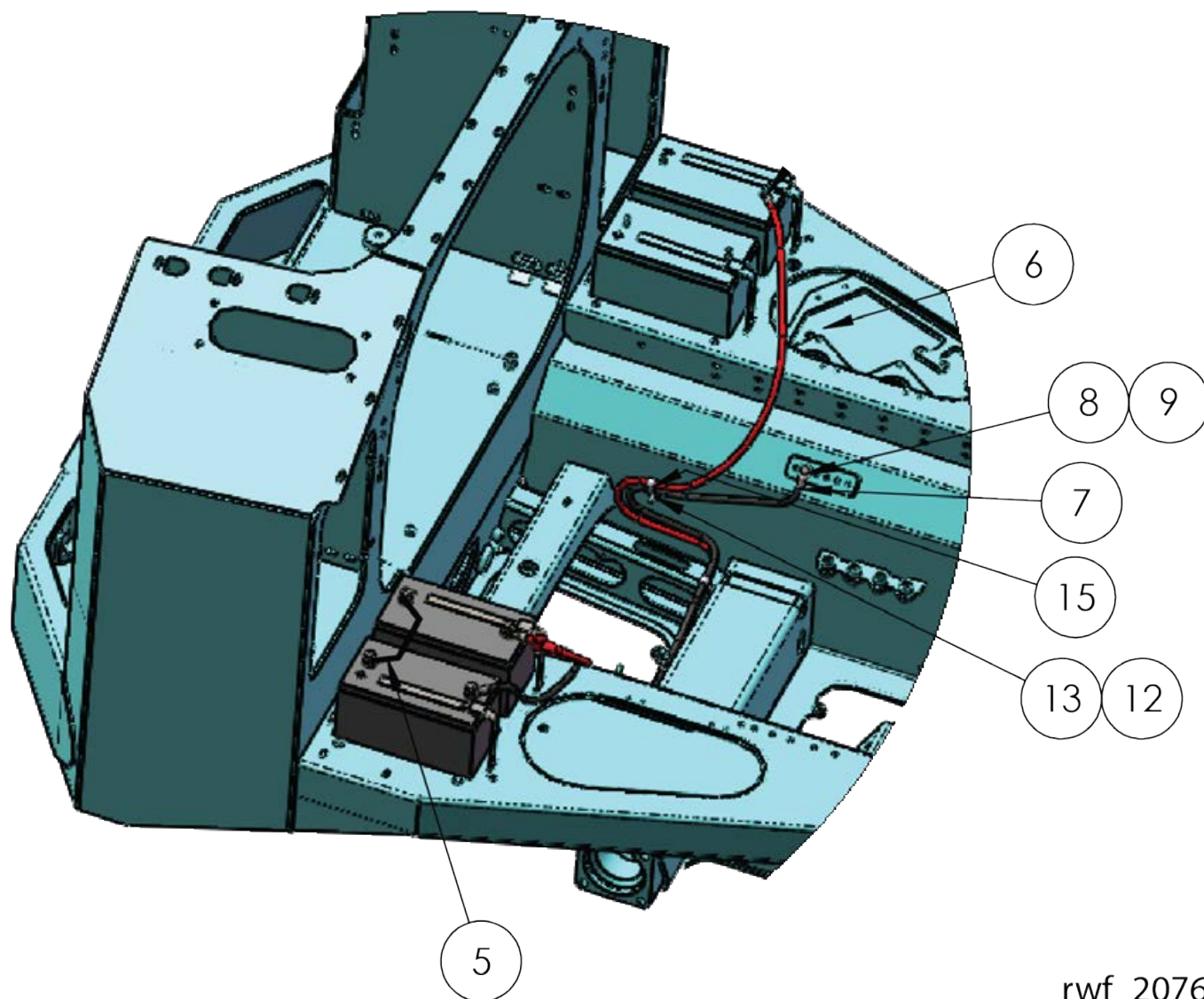
W = WHITE

Y = YELLOW

T = TAN

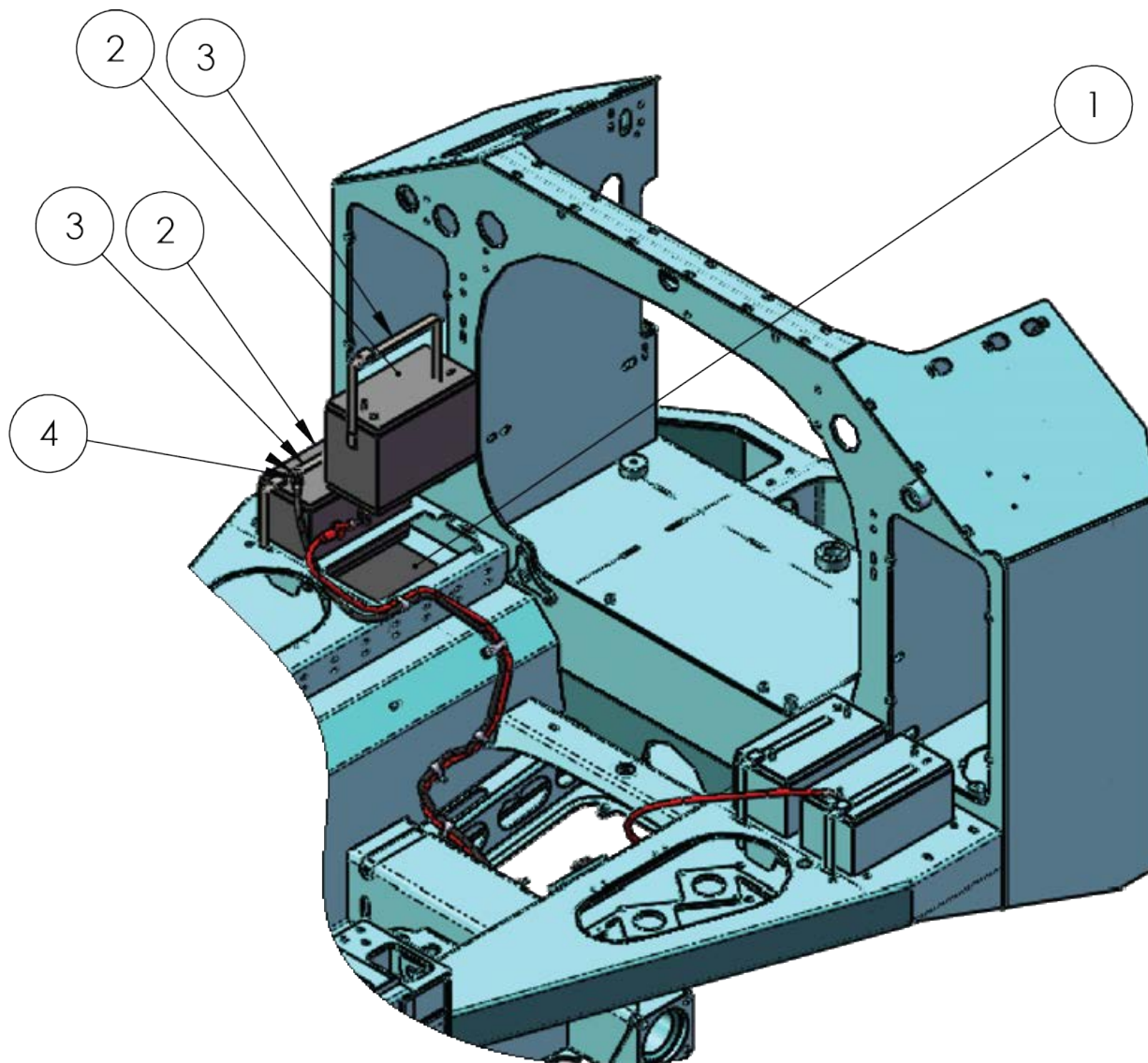
PK = PINK

rwf\_213218\_04



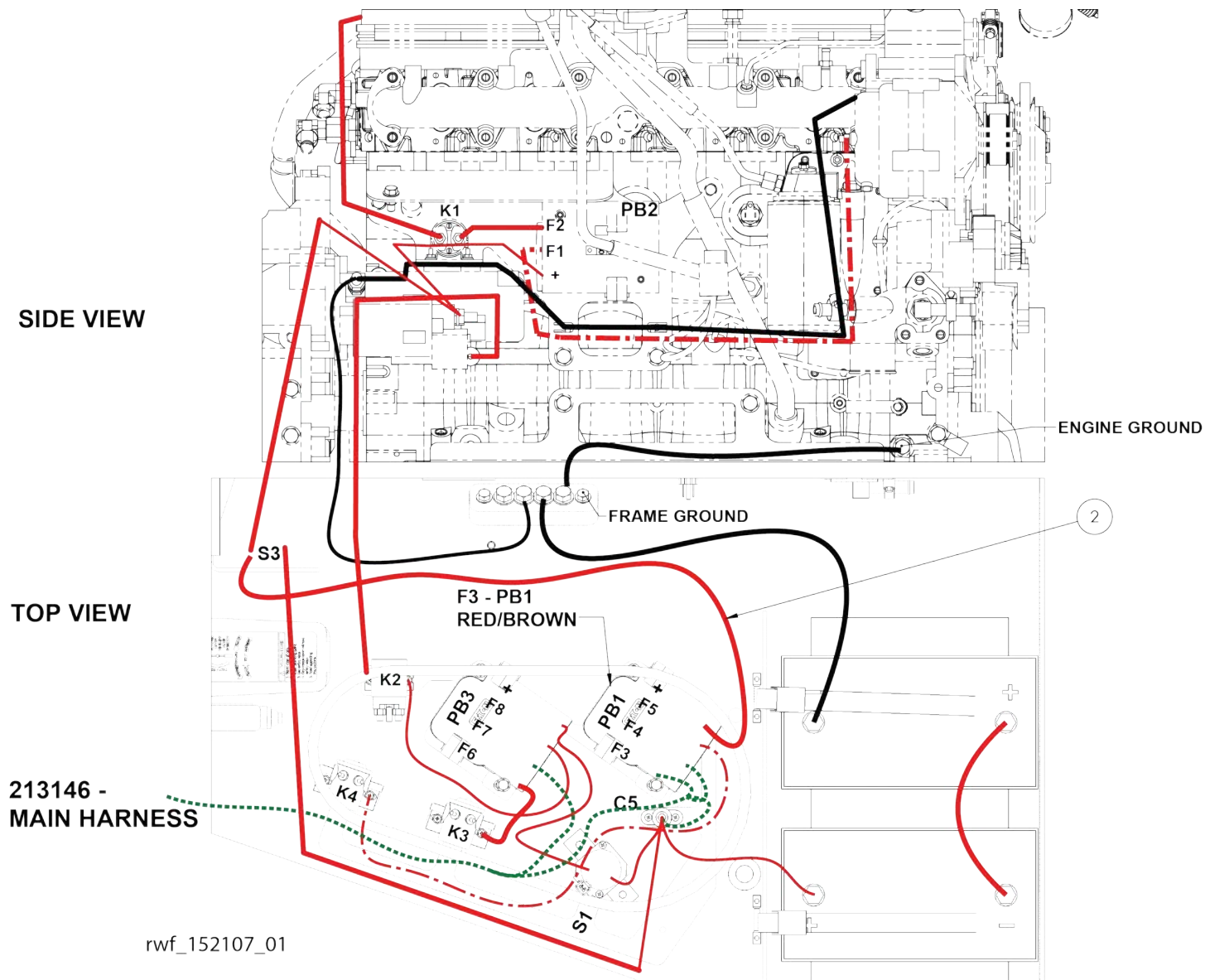
rwf\_207617\_01





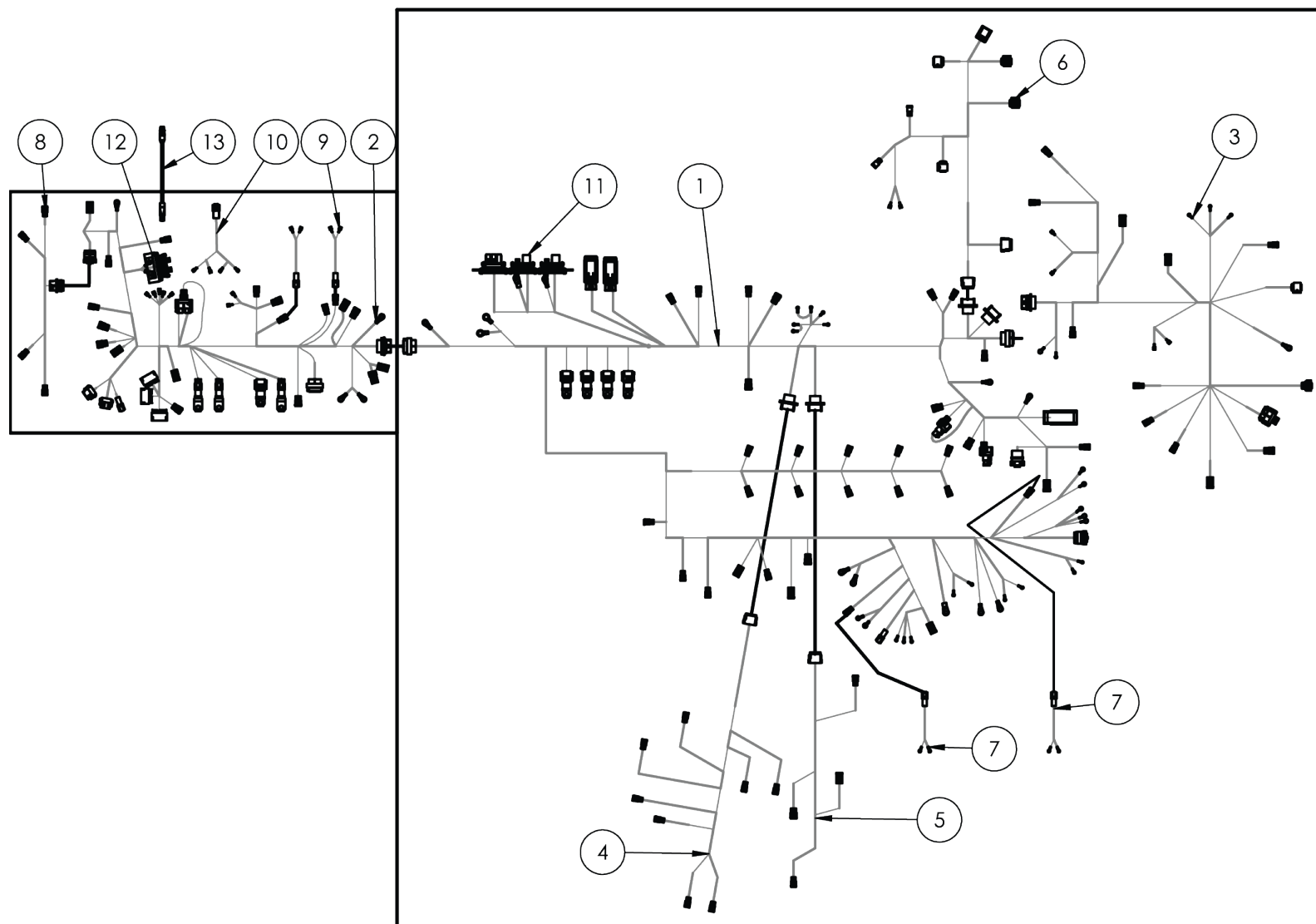
rwf\_207617\_02

| item | Qty. | P/N        | Description                |
|------|------|------------|----------------------------|
| 1    | 1    | 144166     | MAT, BATTERY ISOLATION     |
| 2    | 2    | 9901803    | BATTERY, STUD TYPE         |
| 3    | 2    | 9901384    | STRAP, BATTERY TIE DOWN    |
| 4    | 4    | 9901852    | BATTERY NUT                |
| 5    | 1    | 148577     | CABLE - BAT TO BAT         |
| 6    | 1    | 148657     | CABLE - BAT TO BAT         |
| 7    | 1    | 148656     | CABLE - GND TO BAT         |
| 8    | 1    | 80069      | BOLT - HEX H               |
| 9    | 1    | 80580      | WASHER - SAE               |
| 12   | 7    | 80578      | WASHER - SAE               |
| 13   | 7    | 80513      | NUT - LOCK                 |
| 14   | 1    | DWG        | DWG TO BE SHIPPED WITH KIT |
| 15   | 8    | 9900929-07 | CLAMP, DOUBLE TUBE         |





| item | Qty. | P/N    | Description                              |
|------|------|--------|------------------------------------------|
| 1    | REF  | 152109 | SCHEMATIC, REWORK DISCONNECT AND WEBASTO |
| 2    | 1    | 152108 | "102" CABLE - S3 O/ PB1 B                |



rwf\_213145\_01

| item | Qty. | P/N     | Description                      |
|------|------|---------|----------------------------------|
| 1    | 1    | 213146  | MAIN HARNESS WITH FUSE BOX       |
| 2    | 1    | 213147  | CAB, HARNESS WITH FUSE BOX       |
| 3    | 1    | 213148  | REAR ENGINE HARNESS              |
| 4    | 1    | 213149  | PUMP HARNESS                     |
| 5    | 1    | 213150  | TANK HARNESS                     |
| 6    | 1    | 213151  | TOP ROOF HARNESS                 |
| 7    | 2    | 148563  | EXTENSION, HARNESS               |
| 8    | 1    | 208174  | HEADLIGHT, HARNESS               |
| 9    | 2    | 148569  | EXTENSION, HARNESS               |
| 10   | 1    | 208739  | HARNESS, E-STOP AND RESET BUTTON |
| 11   | 1    | 213153  | FRAME, FUSE PANEL                |
| 12   | 1    | 210150  | CAB, FUSE PANEL                  |
| 13   | 1    | 9902188 | POS D-CODE                       |

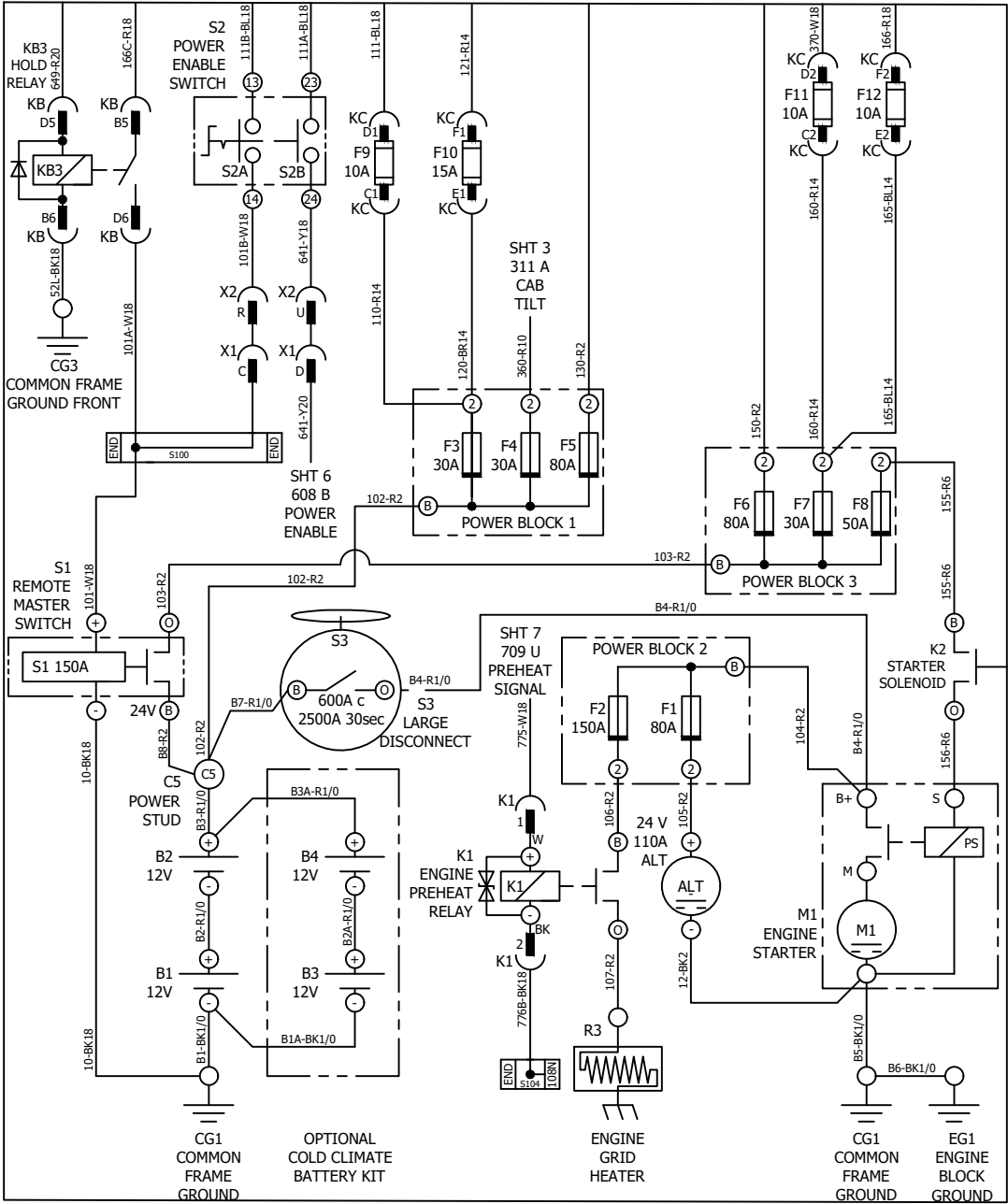


rwf\_217432\_01

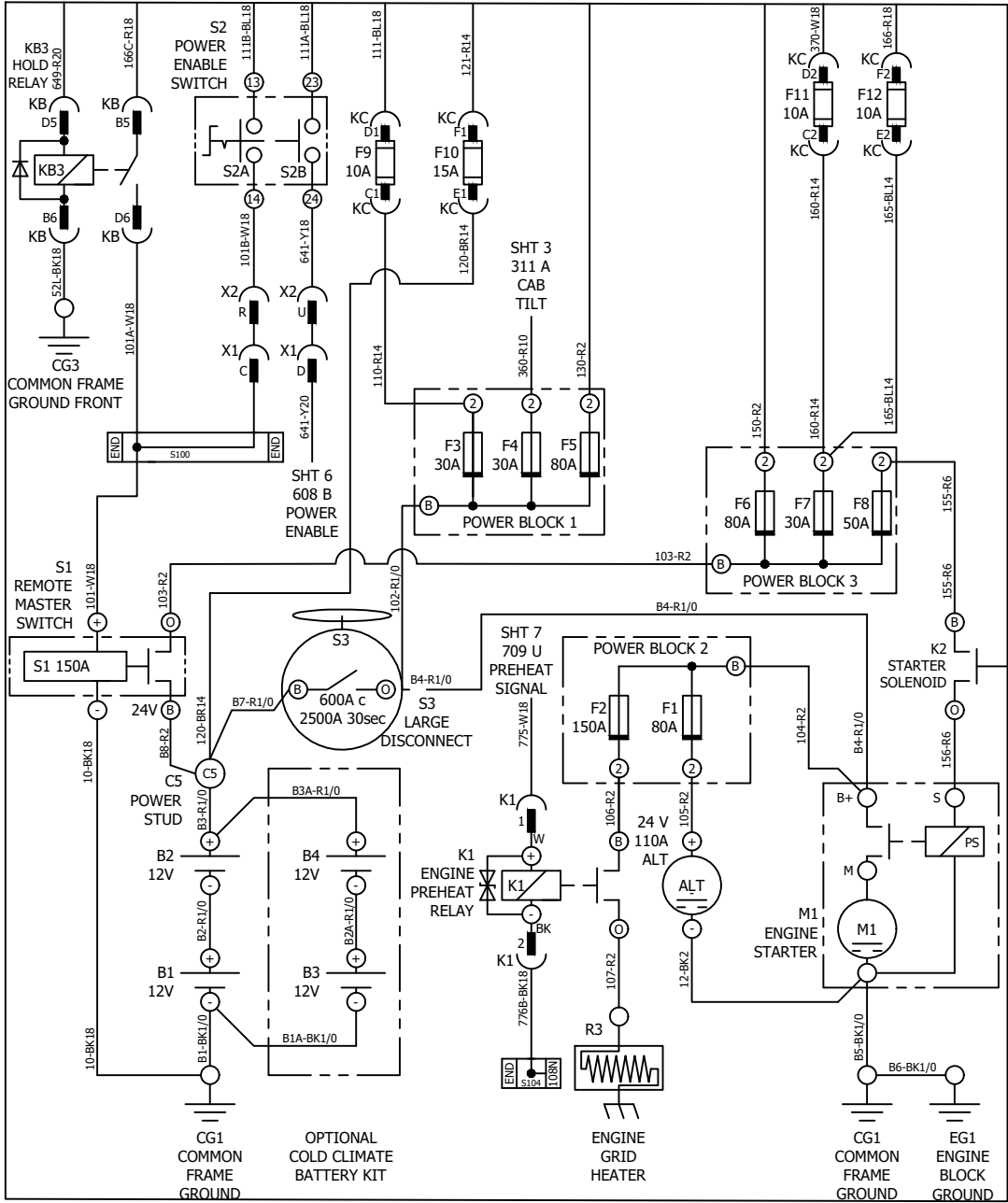
| item | Qty. | P/N    | Description               |
|------|------|--------|---------------------------|
| 1    | 1    | 152307 | CABLE, ST2 TO M10 - 162   |
| 2    | 1    | 152304 | CABLE, S7 OUT TO K7 + 159 |
| 3    | 1    | 152309 | CABLE, K7 B TO ST1 158    |
| 4    | 1    | 152308 | CABLE, K7 O TO M10 + 161  |
| 5    | 1    | 152306 | CABLE, CG2 TO ST2 163     |
| 6    | 1    | 152305 | CABLE, K7 - TO ST2 15     |
| 7    | 1    | 152303 | CABLE, ST1 TO S7 IN 157   |
| 8    | 1    | 152302 | CABLE, K3 B TO ST1 154    |



BEFORE WIRE CHANGE



AFTER WIRE CHANGE



04/17/25 FIRST RELEASE 112049 ZK

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INCH DIMENSIONS UNLESS SPECIFIED  
FRACTIONAL TOL ± .062  
TWO DECIMAL TOL ± .025  
THREE DECIMAL TOL ± .005  
ANGLE TOL ± .1  
DO NOT SCALE DRAWING DIMENSIONS

**RWF INDUSTRIES**

CHECKED BY

DRAWN BY

PRODUCT MODEL

TITLE

SCALE

DATE

ASSEMBLY NUMBER

DRAWING NUMBER

SHEET NUMBER

REVISION

EFFECTIVITY

MAN

QTY

MAN

QTY

MAN

QTY

MAN

QTY

1:1

4/17/25

152107

152109

1 OF 1

-

-

MAN

QTY

MAN

QTY

MAN

QTY

MAN

QTY





213125

9

1

213134

BUSBAR PINOUTS - PLUGS & CONNECTORS LIST

8

1

213133

FUSE / RELAY BLOCKS / BULKHEAD LAYOUTS

7

1

213132

CUMMINS STAGE 5, 6.7L ENGINE SCHEMATICS

6

1

213131

IQAN MASTER MODULE C2 / MD4-7 SCHEMATICS

5

1

213130

QAN MASTER MODULE C1 CONNECTOR

4

1

213129

IQAN CANBUS & PROGRAMMING BUS LAYOUT

3

1

213128

LIGHTING & 24V ACCESSORY SCHEMATICS

2

1

213127

CAB 12 VOLT - CAB HEAT/AC

1

1

213126

MAIN POWER DISTRIBUTION

| ITEM NO.               | NO. REQ'D | MATERIAL PART NO.                                                                                                          | DESCRIPTION |                      |     |          |                                                                                                                                                                          |          |     |          |     |
|------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|-----|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----|----------|-----|
| PART WT                |           | 0                                                                                                                          |             | REF                  |     |          |                                                                                                                                                                          |          |     |          |     |
| COMPLETED PARTS GO TO: |           | MAN                                                                                                                        | QTY         | MAN                  | QTY | MAN      | QTY                                                                                                                                                                      | MAN      | QTY | MAN      | QTY |
| W.O.                   |           | RWF INDUSTRIES                                                                                                             |             |                      |     |          |                                                                                                                                                                          |          |     |          |     |
| QTY.                   |           | UNLESS OTHERWISE SPECIFIED<br>ALL DIMENSIONS ARE IN INCHES<br>FRACTIONAL .XX ± .0625<br>DECIMAL .XXX ± .025<br>ANGLES ± .1 |             |                      |     |          | THIS DOCUMENT IS THE CONFIDENTIAL PROPERTY OF RWF INDUSTRIES.<br>IT IS NOT TO BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION AND IS TO BE RETURNED UPON OUR REQUEST. |          |     |          |     |
| DUE                    |           | SCALE 1/1                                                                                                                  |             | DO NOT SCALE DRAWING |     | APPROVED |                                                                                                                                                                          | DRAWN ZK |     | 10/19/21 |     |
|                        |           | TITLE ELECTRICAL SCHEMATICS                                                                                                |             |                      |     |          |                                                                                                                                                                          |          |     |          |     |
|                        |           | ASSY.DWG. BUILD SPEC                                                                                                       |             |                      |     |          | DWG.NO. 213125                                                                                                                                                           |          | REV |          |     |

10/18/21

FIRST RELEASE - BASED ON 149177

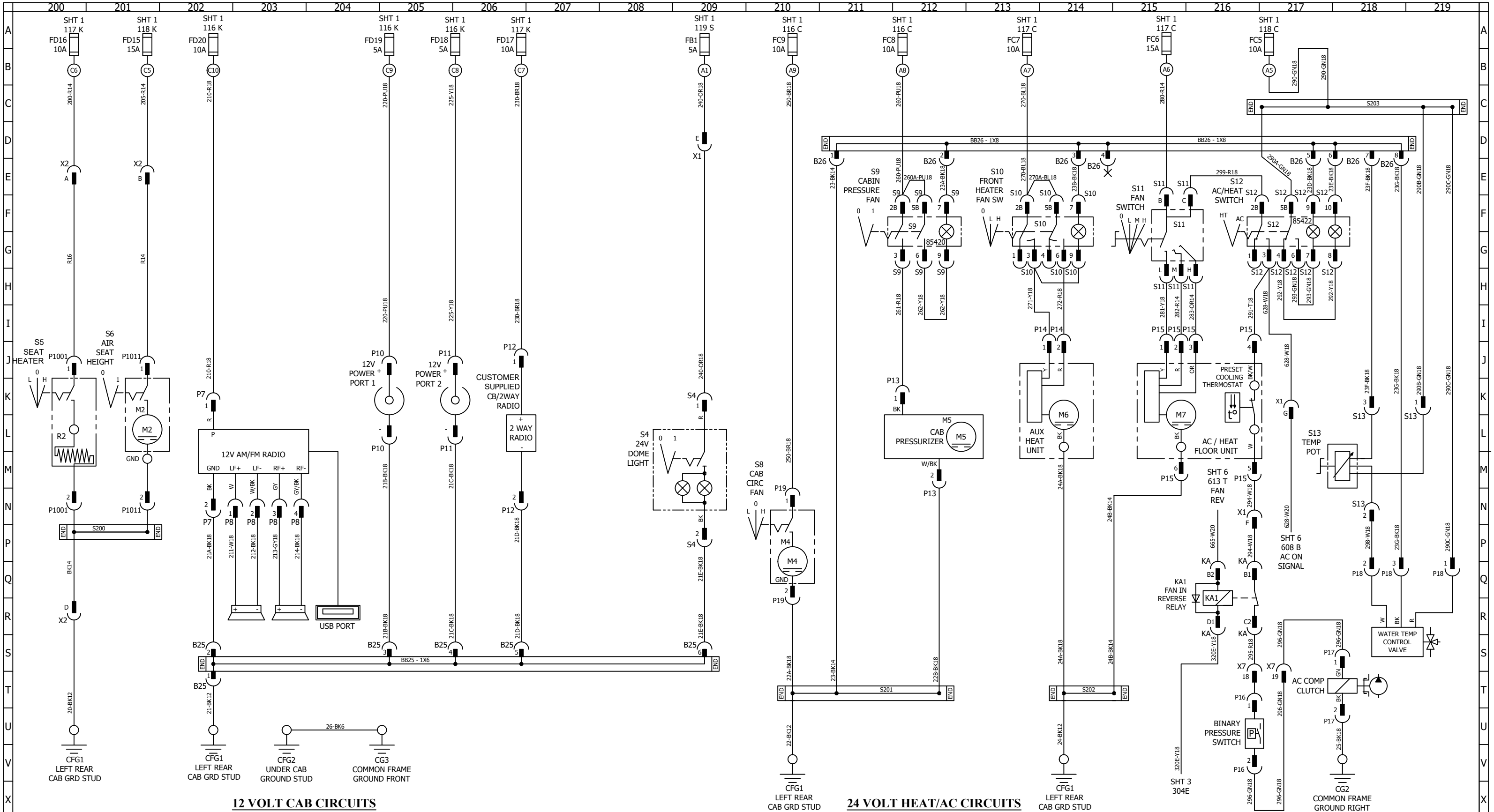
109726

ZK



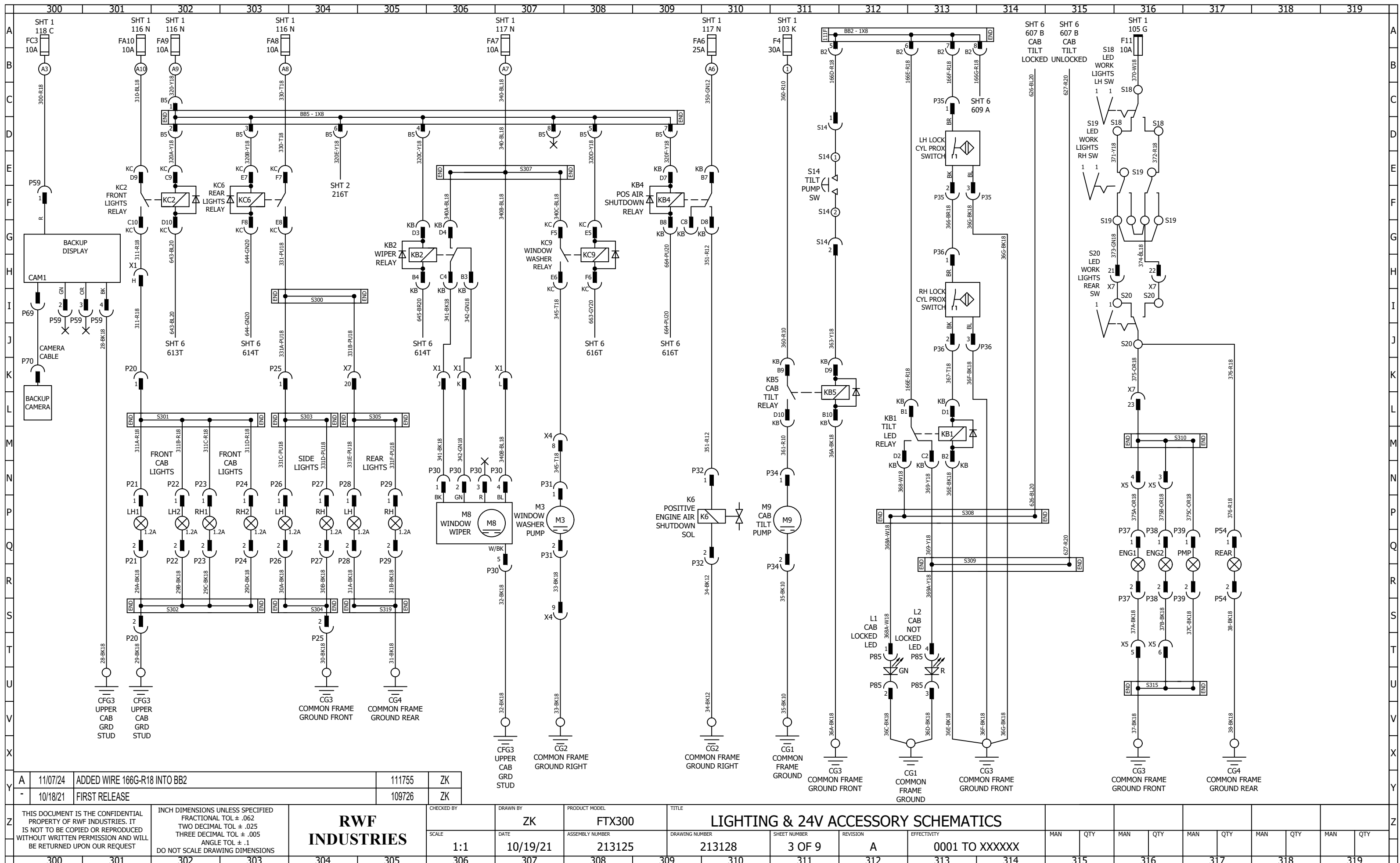






|                                                                                                                                                                     |  |                                                                                                                                                                      |  |                                 |  |            |          |                 |                |              |          |             |     |     |     |        |     |     |
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|                                                                                                                                                                     |  | 10/18/21                                                                                                                                                             |  | FIRST RELEASE - BASED ON 207691 |  |            |          |                 |                |              |          |             |     |     |     | 109726 |     | ZK  |
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|                                                                                                                                                                     |  |                                                                                                                                                                      |  |                                 |  | SCALE      | DATE     | ASSEMBLY NUMBER | DRAWING NUMBER | SHEET NUMBER | REVISION | EFFECTIVITY | MAN | QTY | MAN | QTY    | MAN | QTY |
|                                                                                                                                                                     |  |                                                                                                                                                                      |  |                                 |  | 1:1        | 10/19/21 | 213125          | 213127         | 2 OF 9       | -        | 0001 TO XXX |     |     |     |        |     |     |

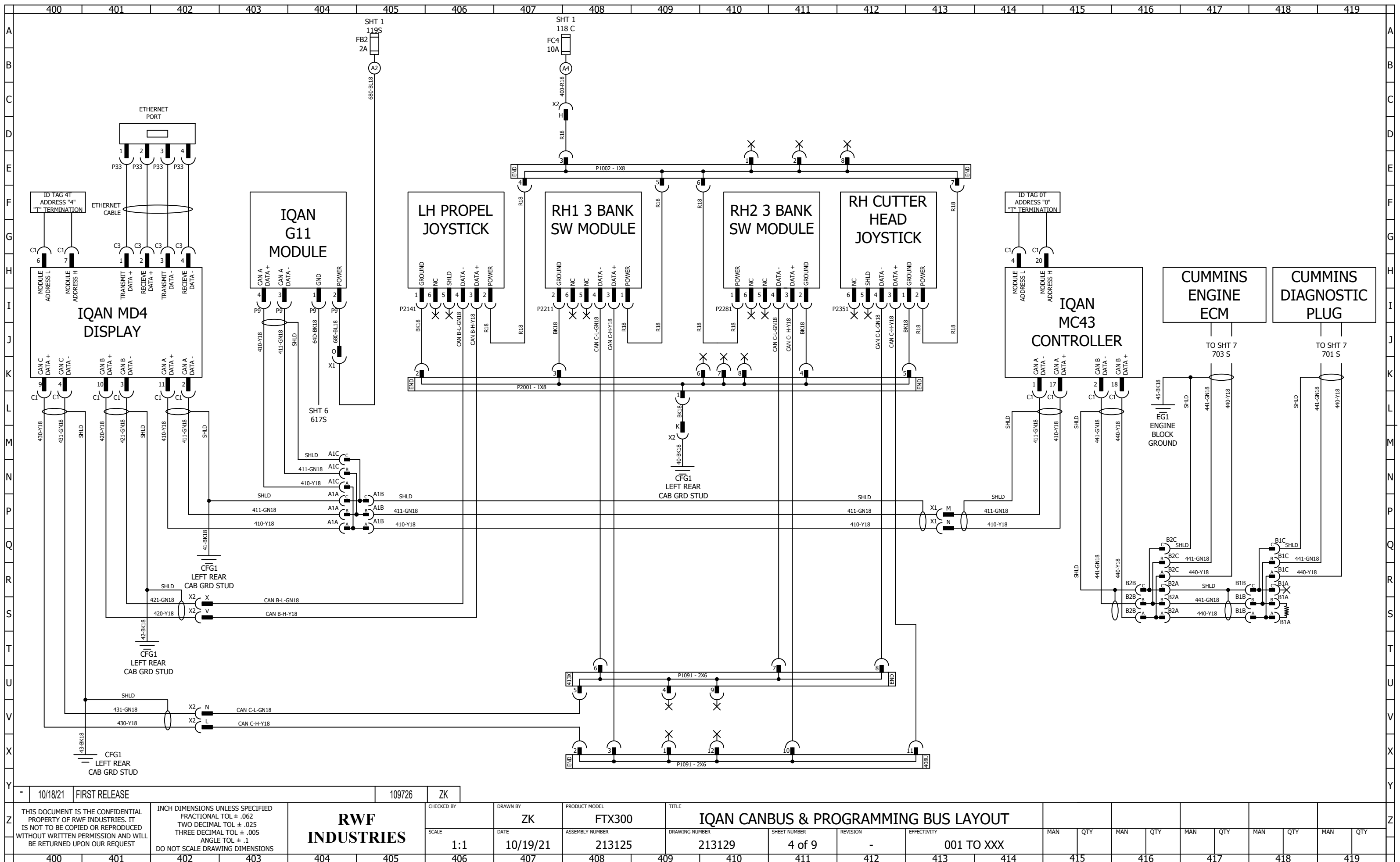














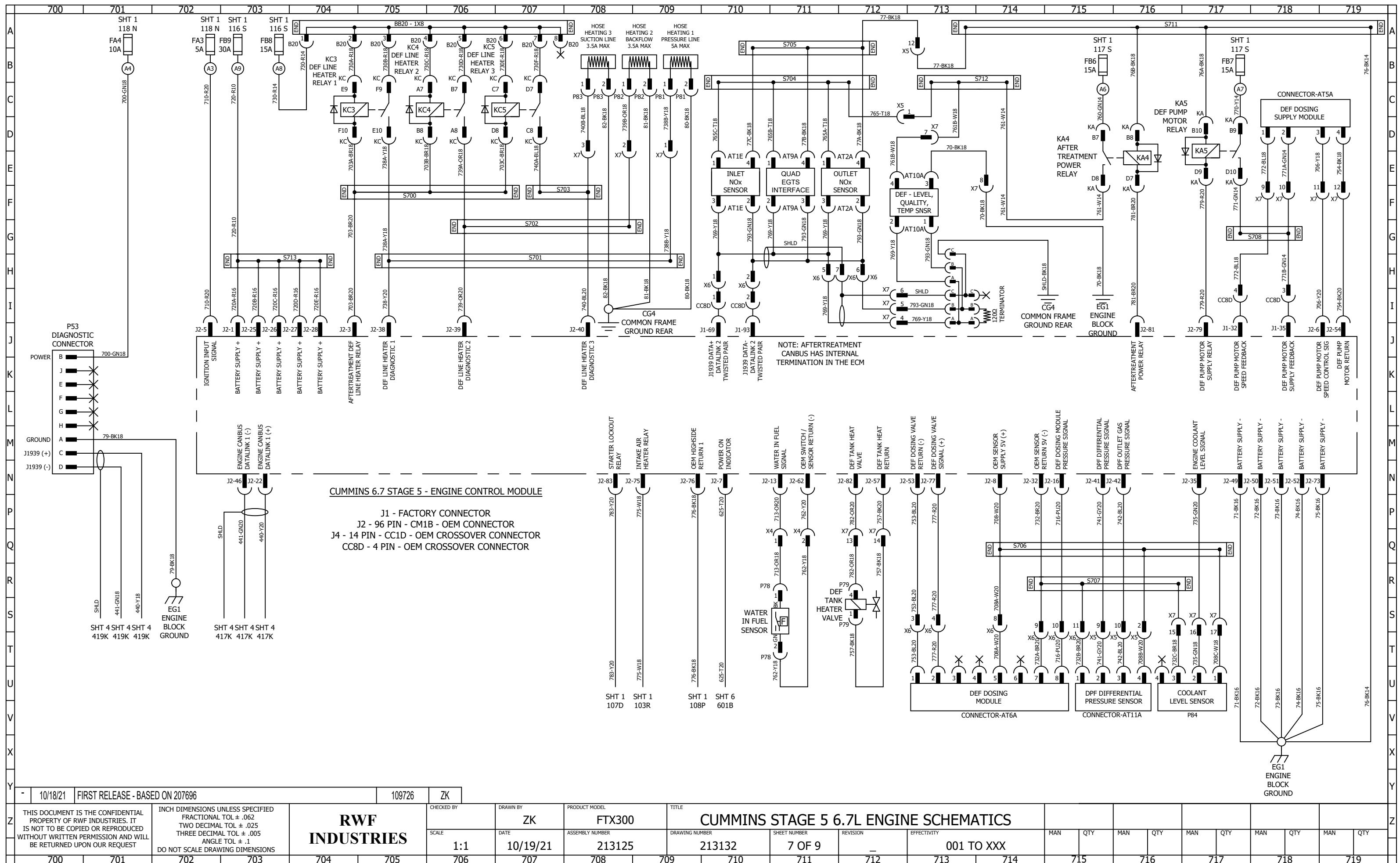






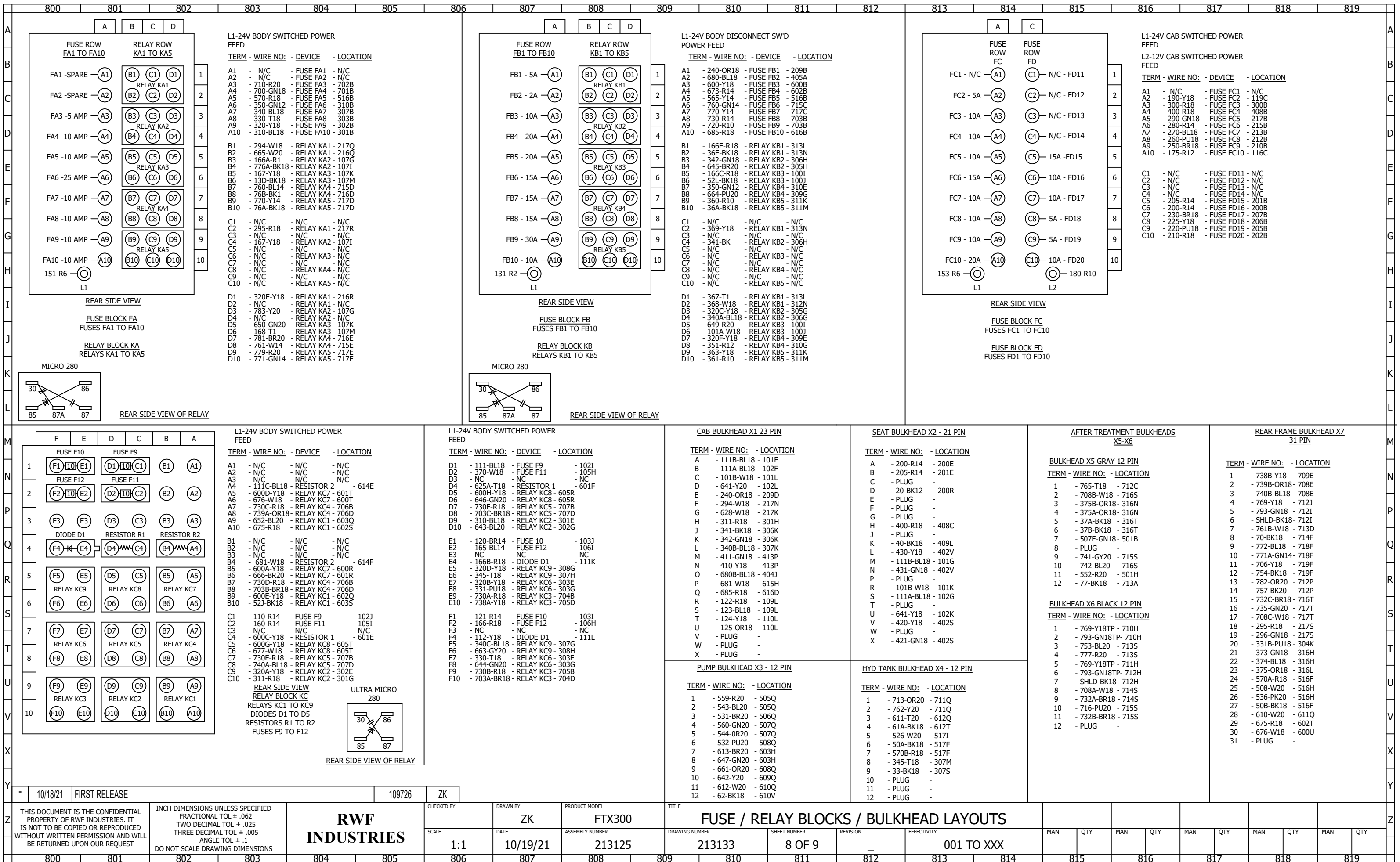














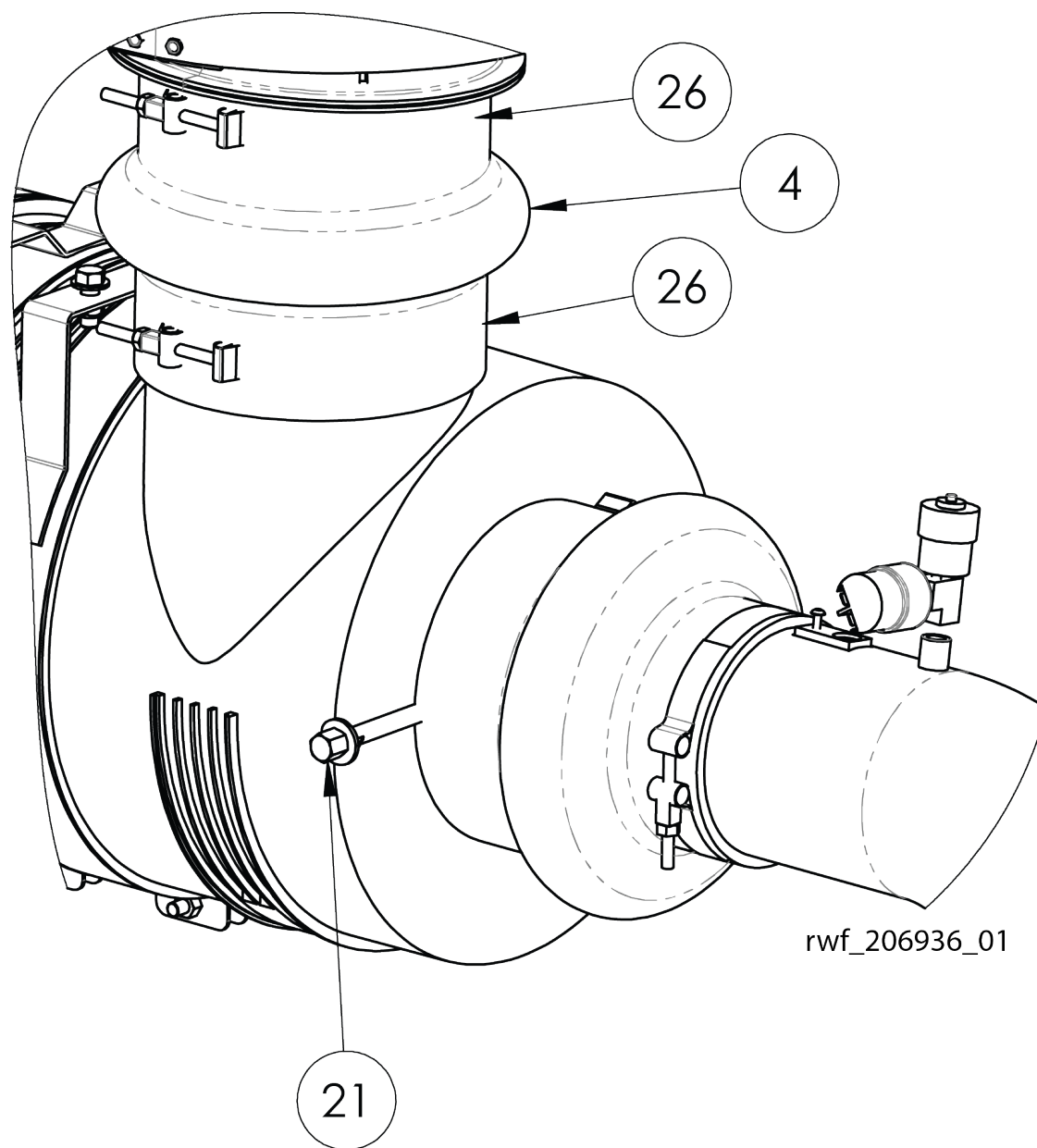
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|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------|-----|------------|----------|-----------------|----------------|--------------|----------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|   | 900                                                                                                                                                                 | 901 | 902                                                                                                                                                                  | 903 | 904                                          | 905 | 906        | 907      | 908             | 909            | 910          | 911      | 912         | 913 | 914 | 915 | 916 | 917 | 918 | 919 |     |     |     |   |
| A | <p>BB2-1X8<br/>SHT 1,3 - 105F, 311A</p>                                                                                                                             |     |                                                                                                                                                                      |     | <p>BB-P1091 - 2X6<br/>SHT 4 - 408X, 408U</p> |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | A   |     |   |
| B |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | B   |     |   |
| C |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | C   |     |   |
| D | <p>BB5-1X8<br/>SHT 3 - 302C</p>                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | D   |     |   |
| E |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | E   |     |   |
| F |                                                                                                                                                                     |     |                                                                                                                                                                      |     | <p>BB-P1002 - 1X8<br/>SHT 4 - 407E</p>       |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | F   |     |   |
| G |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | G   |     |   |
| H | <p>BB14-1X8<br/>SHT 6 - 601N</p>                                                                                                                                    |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | H   |     |   |
| I |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | I   |     |   |
| J | <p>BB17-1X6<br/>SHT 6 - 614D</p>                                                                                                                                    |     |                                                                                                                                                                      |     | <p>BB-P2001 - 1X8<br/>SHT 4 - 405K</p>       |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | J   |     |   |
| K |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | K   |     |   |
| L |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | L   |     |   |
| M | <p>BB18-1X6<br/>SHT 6 - 617Q</p>                                                                                                                                    |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | M   |     |   |
| N |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | N   |     |   |
| P | <p>BB20-1X8<br/>SHT 7 - 704A</p>                                                                                                                                    |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | P   |     |   |
| Q |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | Q   |     |   |
| R |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | R   |     |   |
| S | <p>BB25-1X6<br/>SHT 2 - 202S</p>                                                                                                                                    |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | S   |     |   |
| T |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | T   |     |   |
| U |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | U   |     |   |
| V | <p>BB26-1X8<br/>SHT 2 - 211D</p>                                                                                                                                    |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | V   |     |   |
| X |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | X   |     |   |
| Y |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     |            |          |                 |                |              |          |             |     |     |     |     |     |     |     |     | Y   |     |   |
| Z | THIS DOCUMENT IS THE CONFIDENTIAL PROPERTY OF RWF INDUSTRIES. IT IS NOT TO BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION AND WILL BE RETURNED UPON OUR REQUEST |     | INCH DIMENSIONS UNLESS SPECIFIED<br>FRACTIONAL TOL ± .062<br>TWO DECIMAL TOL ± .025<br>THREE DECIMAL TOL ± .005<br>ANGLE TOL ± .1<br>DO NOT SCALE DRAWING DIMENSIONS |     | RWF INDUSTRIES                               |     | CHECKED BY | DRAWN BY | PRODUCT MODEL   | TITLE          |              |          |             |     |     |     |     |     |     |     |     |     |     | Z |
|   |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     | SCALE      | DATE     | ASSEMBLY NUMBER | DRAWING NUMBER | SHEET NUMBER | REVISION | EFFECTIVITY | MAN | QTY | MAN | QTY | MAN | QTY | MAN | QTY | MAN | QTY |   |
|   |                                                                                                                                                                     |     |                                                                                                                                                                      |     |                                              |     | 1:1        | 10/19/21 | 213125          | 213134         | 9 OF 9       | -        | 001 TO XXX  |     |     |     |     |     |     |     |     |     |     |   |
|   | 900                                                                                                                                                                 | 901 | 902                                                                                                                                                                  | 903 | 904                                          | 905 | 906        | 907      | 908             | 909            | 910          | 911      | 912         | 913 | 914 | 915 | 916 | 917 | 918 | 919 |     |     |     |   |



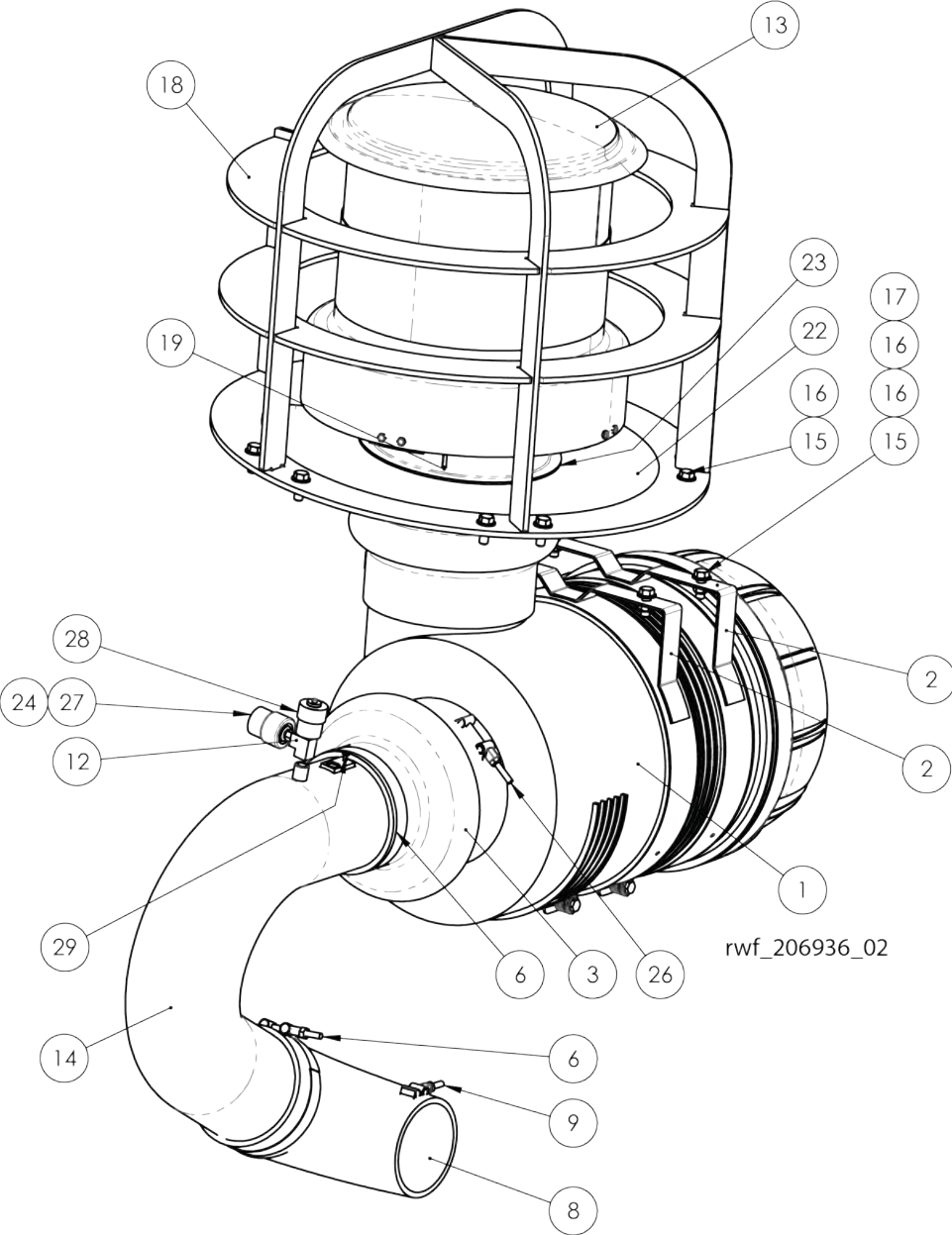
# CHAPTER 5: ENGINE, AIR INTAKE, & FUEL TANK

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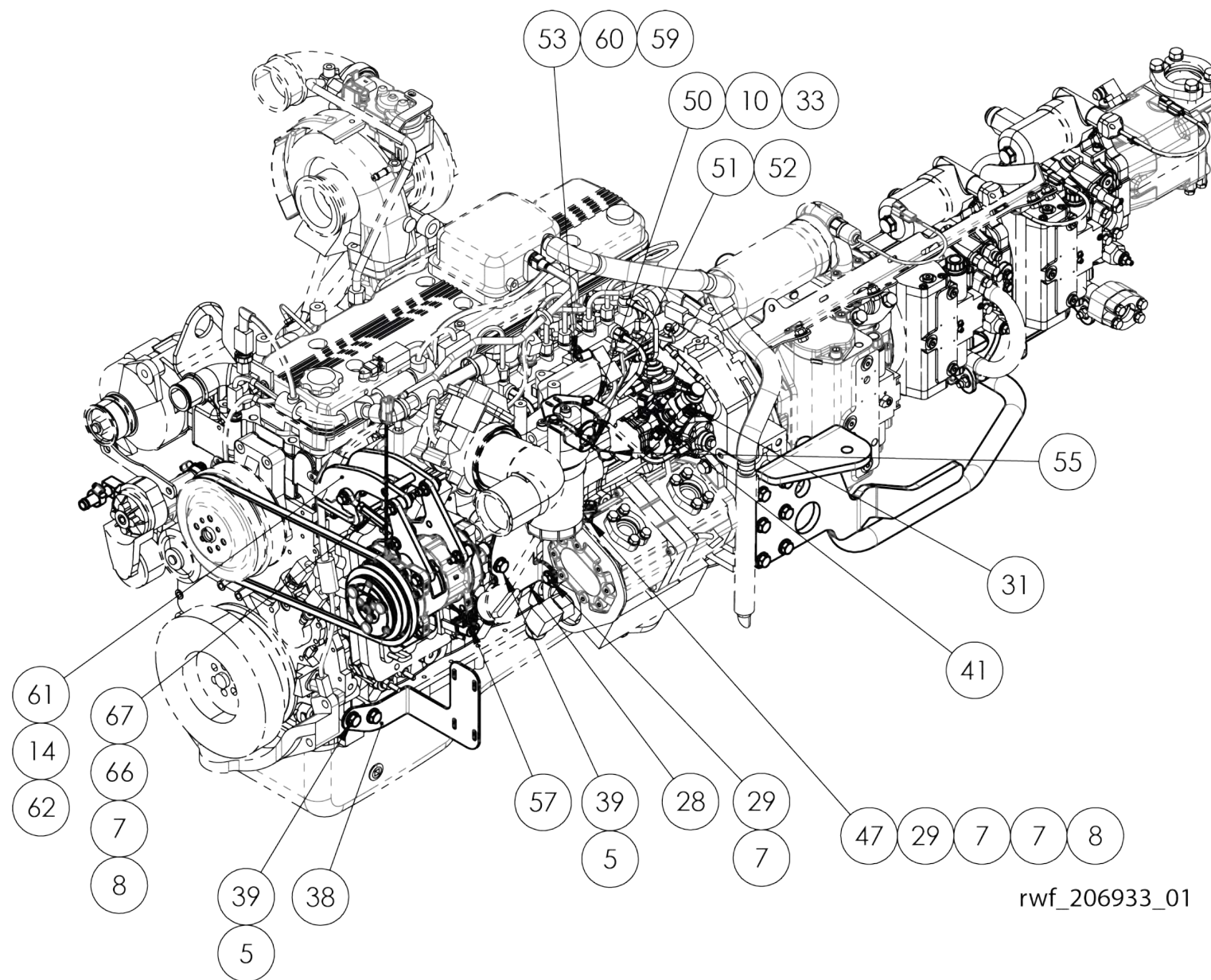


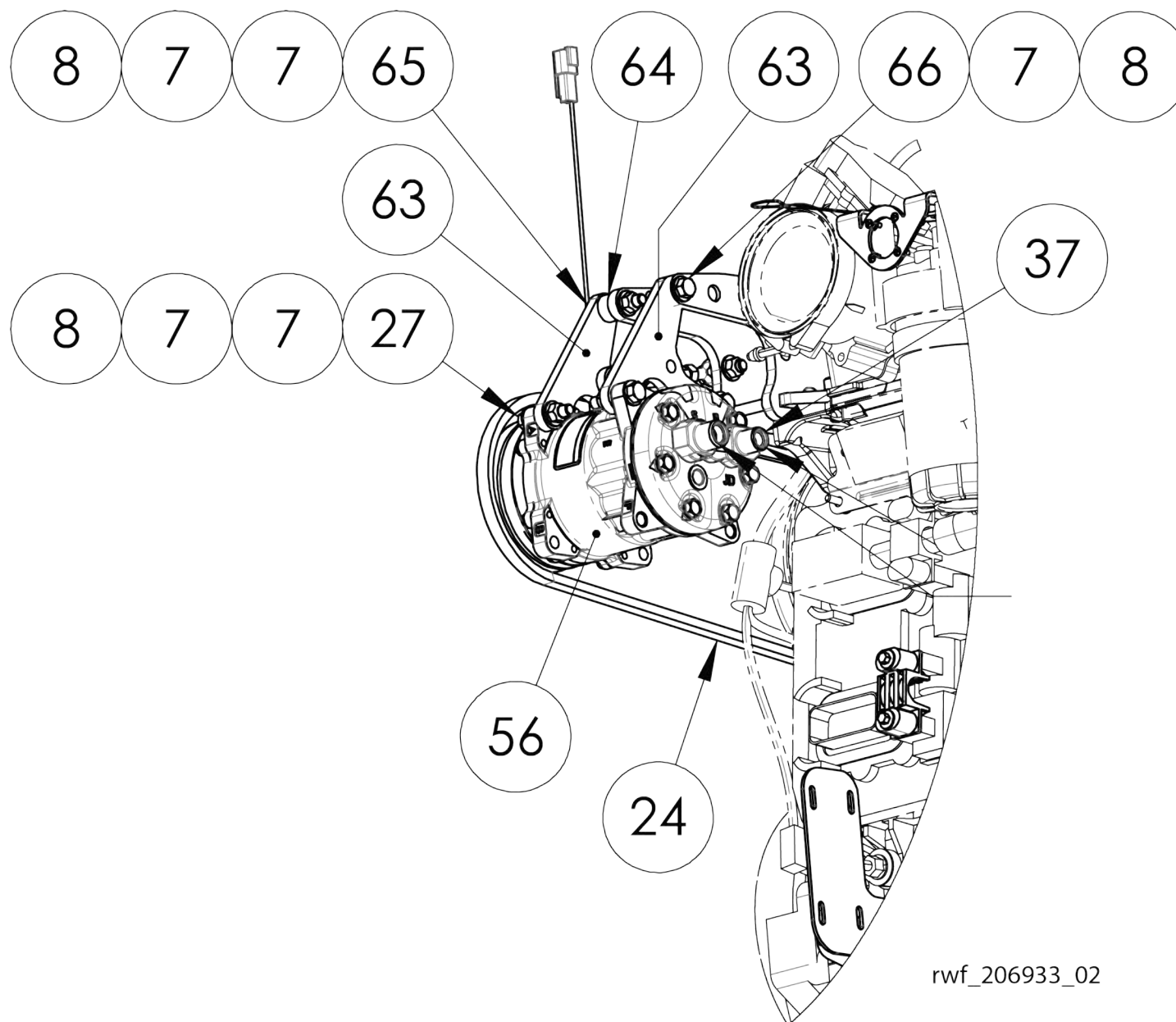
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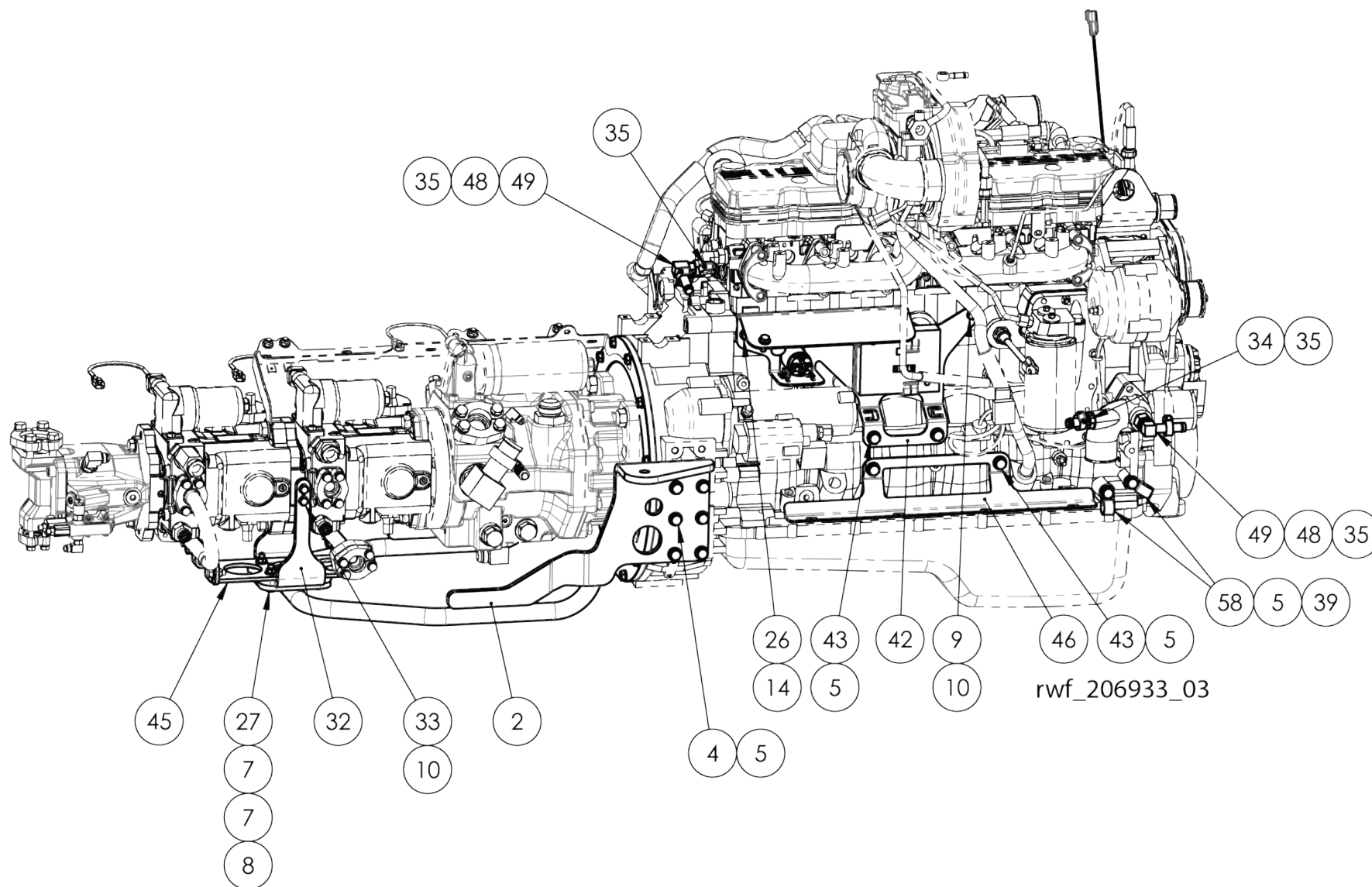
| item | Qty.    | P/N       | Description                    |
|------|---------|-----------|--------------------------------|
| 1    | REF (1) | 9901752   | AIR FILTER, FLEETGUARD         |
| 2    | REF (2) | 9901755   | BRACKET, AIR CLEANER           |
| 3    | 1       | 9901822   | HOSE, HUMP REDUCER             |
| 4    | 1       | 110529    | HOSE, HUMP STRAIGHT            |
| 6    | 2       | 119214    | CLAMP, T-BOLT                  |
| 8    | 1       | 19216     | REDUCING ELBOW DEG             |
| 9    | 1       | 119213    | CLAMP T-BOL                    |
| 12   | 1       | 90436     | TEE, RUN                       |
| 13   | 1       | 114444    | PRECLEANER, TURBO-II           |
| 14   | 1       | 207155    | TUBE, AIR INTAKE               |
| 15   | 12      | 80029     | BOLT - HEX HD                  |
| 16   | 16      | 80578     | WASHER - SAE                   |
| 17   | 4       | 80513     | NUT - LOCK                     |
| 18   | 1       | 207452    | GUARD, PRE-CLEANER             |
| 19   | 1       | 148427    | TUBE, AIR INTAKE               |
| 21   | 1       | 91012     | CAP                            |
| 22   | 1       | 207840    | COVER, AIR INTAKE SEAL         |
| 23   | 3 FT    | 16799     | TRIM SEAL                      |
| 24   | 1       | 90292     | ADAPTER, STR                   |
| 26   | 3       | 9901275   | CLAMP, T-BOLT                  |
| 27   | 1       | 9900863   | SWITCH, AIR FILTER RESTRICTION |
| 28   | 1       | 9900865   | INDICATOR, VISUAL              |
| 29   | 1       | 74001-004 | CAP SCREW, BUTTON SOC HD       |

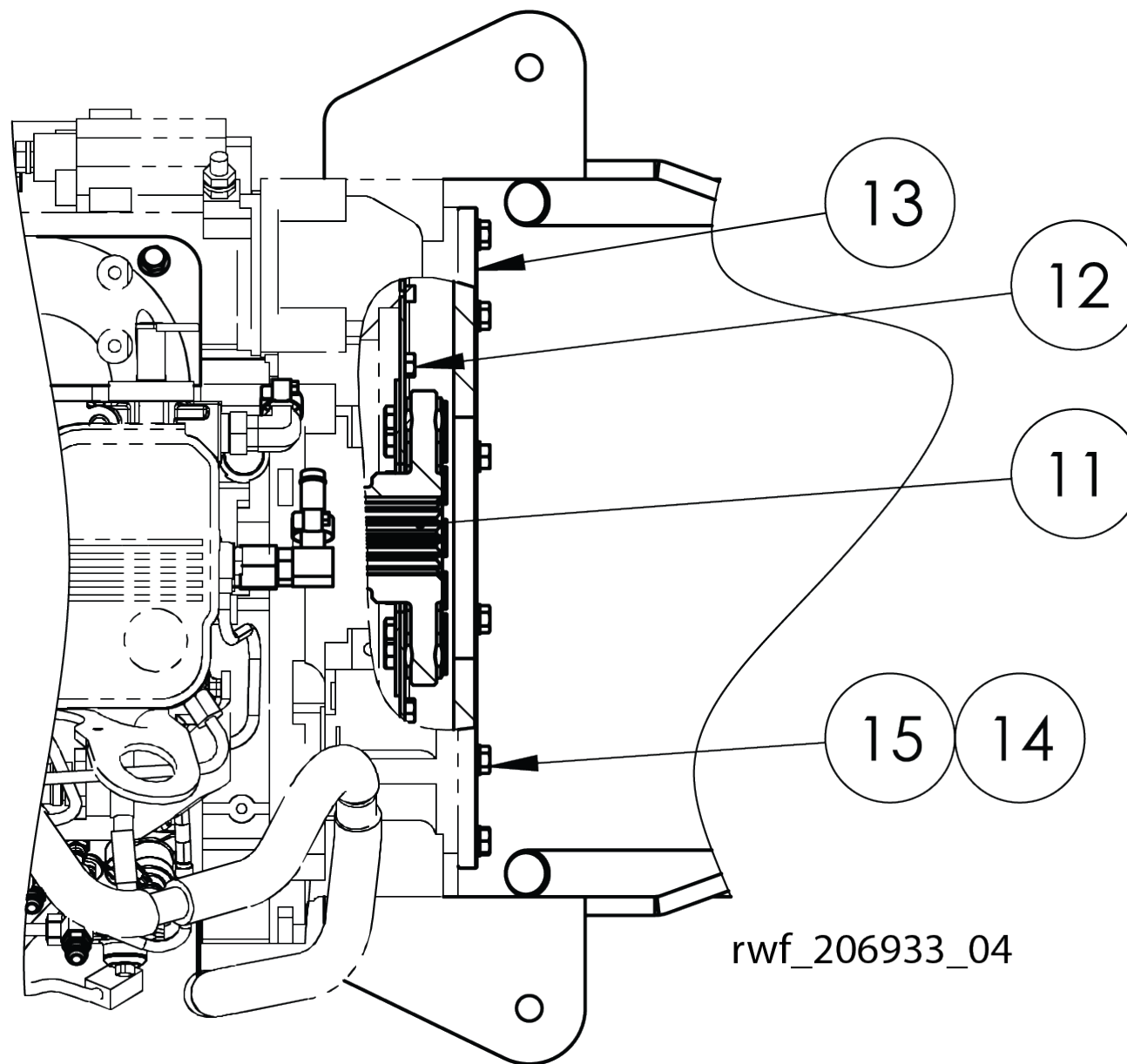






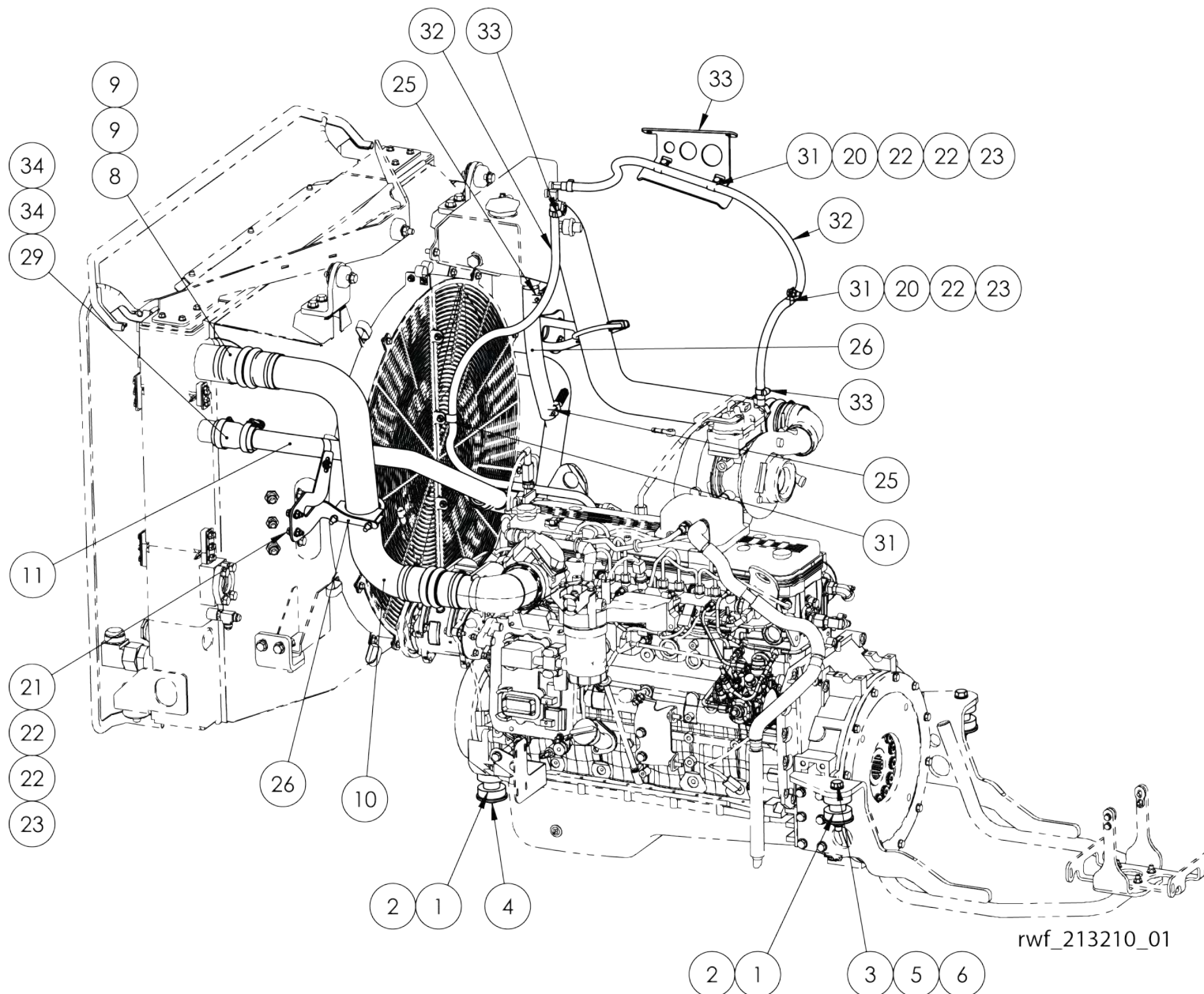
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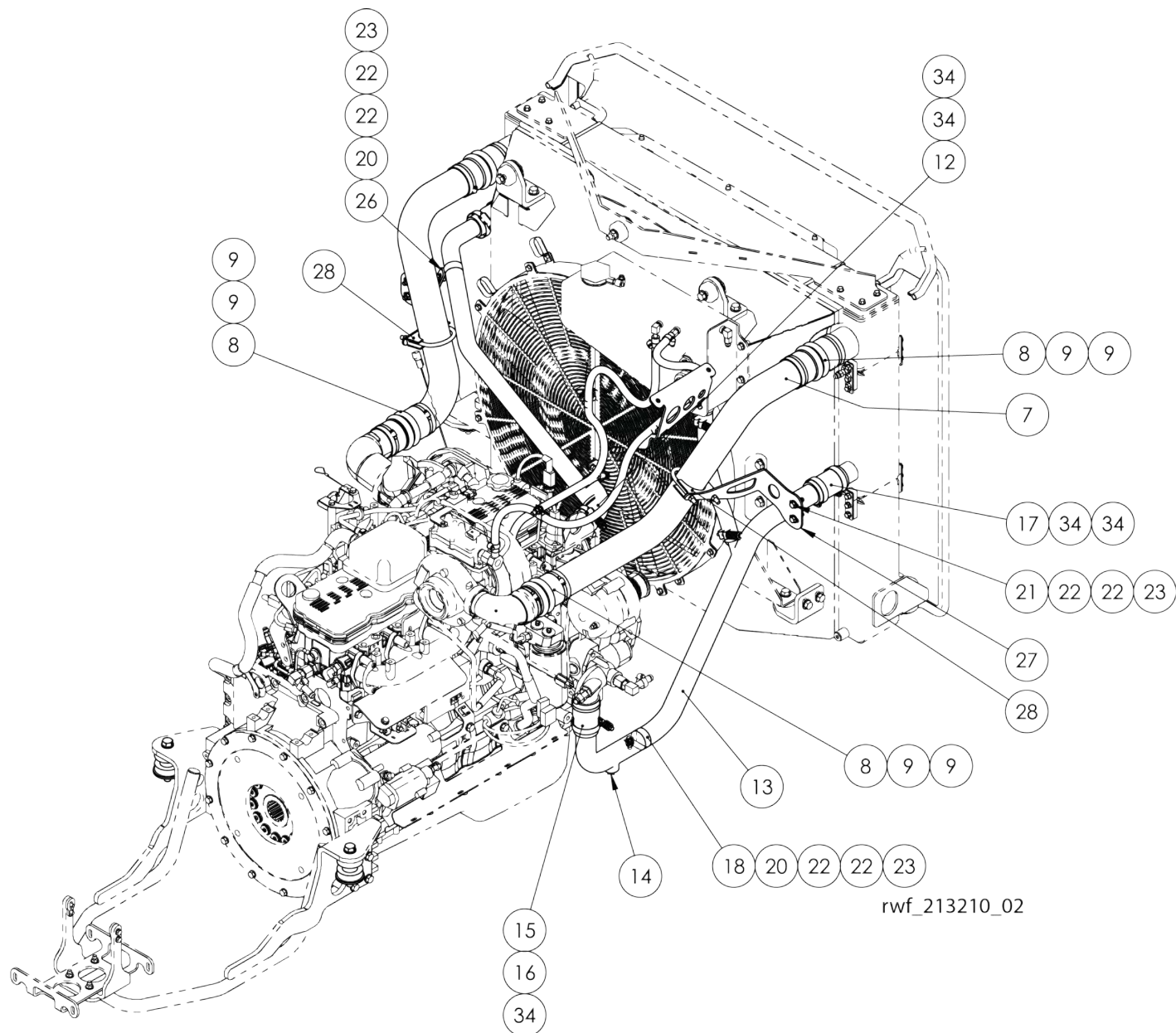


| item | Qty.    | P/N       | Description                 |
|------|---------|-----------|-----------------------------|
| 1    | REF (1) | 9901751   | ENGINE STAGE                |
| 2    | 1       | 207528    | MOUNT, REAR ENGINE          |
| 4    | 12      | 71253     | BOLT- HEX HD                |
| 5    | 22      | 73105     | FLATWASHER                  |
| 7    | 28      | 80578     | WASHER - SAE                |
| 8    | 13      | 80513     | NUT - LOCK                  |
| 9    | 1       | 71150     | BOLT- HEX HD                |
| 10   | 7       | 73103     | FLATWASHER                  |
| 11   | 1       | 9901768   | COUPLING                    |
| 12   | 8       | 80028     | BOLT - HEX HD               |
| 13   | 1       | 9901767   | PLATE, ADAPTER SAE - SAE-E  |
| 14   | 16      | 73104     | FLATWASHER M10              |
| 15   | 12      | 71204     | BOLT- HEX HD                |
| 24   | 1       | 9901831   | V-BELT, COMPRESSOR DRIVE    |
| 26   | 1       | 70201     | BOLT- HEX HD                |
| 27   | 8       | 80032     | BOLT - HEX HD               |
| 28   | 1       | 207524    | BRACKET, PTO SUPPORT        |
| 29   | 3       | 80029     | BOLT - HEX HD               |
| 31   | 1       | 90968     | ADAPTER, STR                |
| 32   | 2       | 207526    | BRACKET, PUMP SUPPORT       |
| 33   | 6       | 71151     | BOLT- HEX HD                |
| 34   | 1       | 90010-008 | ADAPTER, STR 10BEAD         |
| 35   | 4       | 82352-001 | CLAMP, GEAR                 |
| 37   | 1       | 9900593   | MANIFOLD, HORIZONTAL        |
| 38   | 1       | 207825    | BRACKET, A/C HOSES          |
| 39   | 6       | 71251     | BOLT- HEX HD                |
| 41   | 1       | 90967     | ADAPTER, STR                |
| 42   | 1       | 207891    | PANEL ASM, ENGINE POWER     |
| 43   | 4       | 71252     | BOLT- HEX HD                |
| 45   | 1       | 207706    | BRACKET, DRIVE TUBE SUPPORT |
| 46   | 1       | 207826    | BRACKET, HEATER HOSE        |
| 47   | 1       | 85101     | CLAMP, TUBE                 |
| 48   | 2       | 93888-11  | ADAPTER, STR                |

| item | Qty. | P/N       | Description                |
|------|------|-----------|----------------------------|
| 49   | 2    | 90063-009 | ELBOW                      |
| 50   | 1    | 208563    | BRACKET, DIAGNOSTICS PORT  |
| 51   | 4    | 82095     | SCREW, PAN HEAD - PHILLIPS |
| 52   | 4    | 82205     | NUT, NYLOCK                |
| 53   | 1    | 85100     | CLAMP, TUBE                |
| 55   | 1    | 9901515   | LANYARD                    |
| 56   | 1    | 212652    | COMPRESSOR                 |
| 57   | 1    | 85560     | ECM STRAIN RELIEF          |
| 58   | 2    | 85102     | CLAMP, TUBE                |
| 59   | 1    | 73001     | NUT - HEX                  |
| 60   | 1    | 73101     | FLATWASHER                 |
| 61   | 1    | 217314    | MOUNT, AC COMPRESSOR       |
| 62   | 3    | 72201     | BOLT - HEX SOCKET          |
| 63   | 2    | 217313    | LINK, AC COMPRESSOR MOUNT  |
| 64   | 1    | 115800    | BUSHING                    |
| 65   | 1    | 80033     | BOLT - HEX HD.             |
| 66   | 3    | 80031     | BOLT - HEX HD.             |
| 67   | 1    | 213691    | TIE ROD                    |



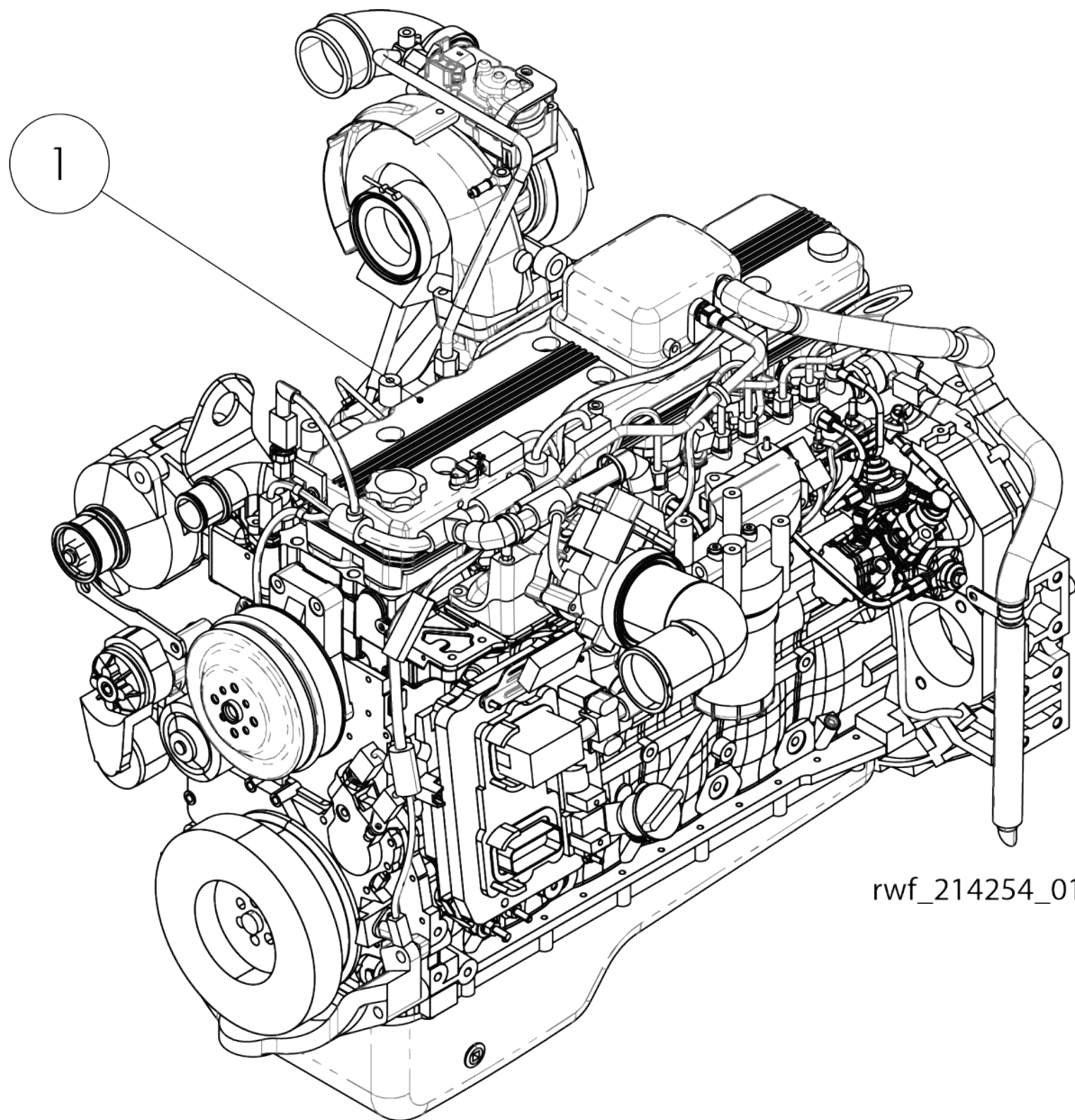




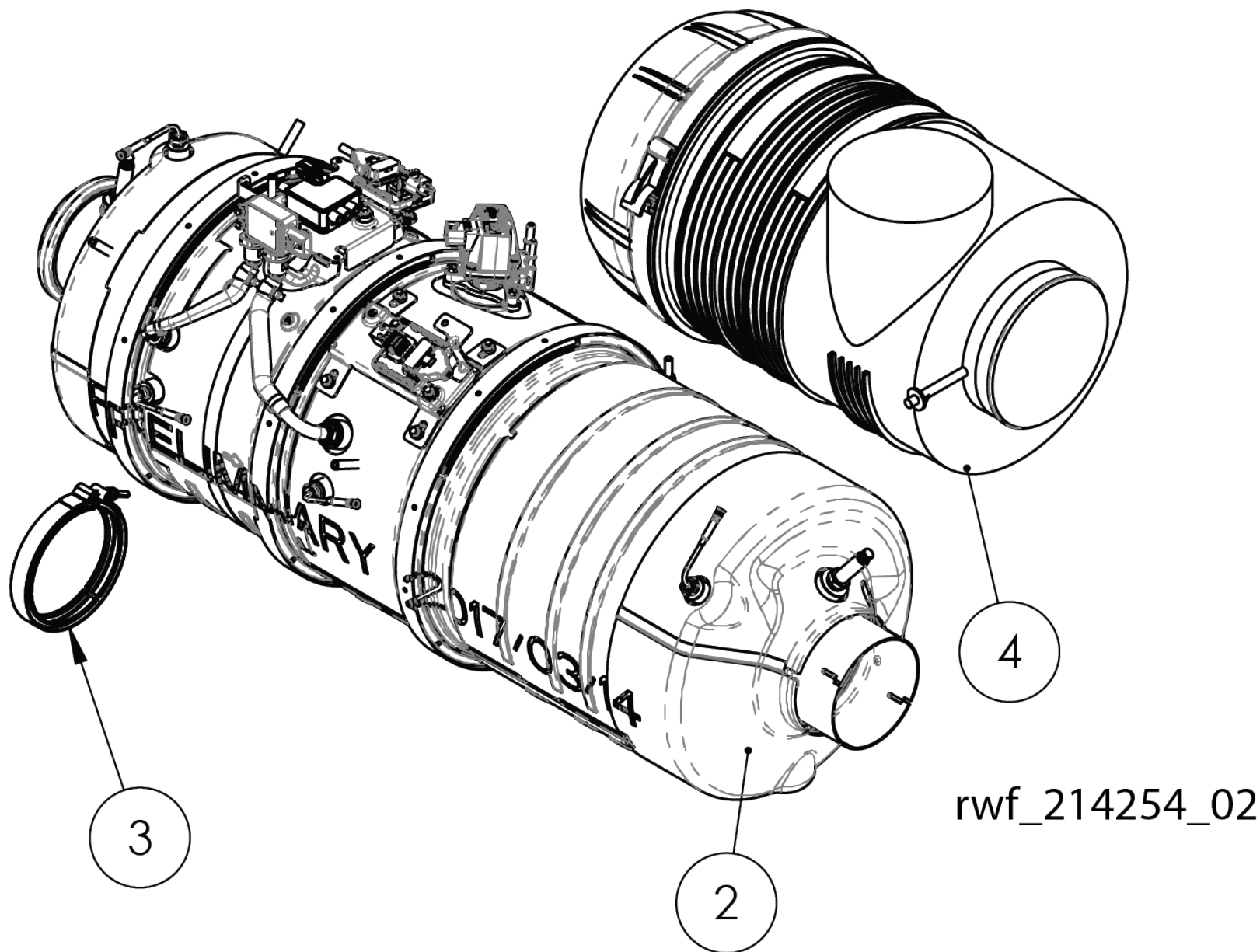


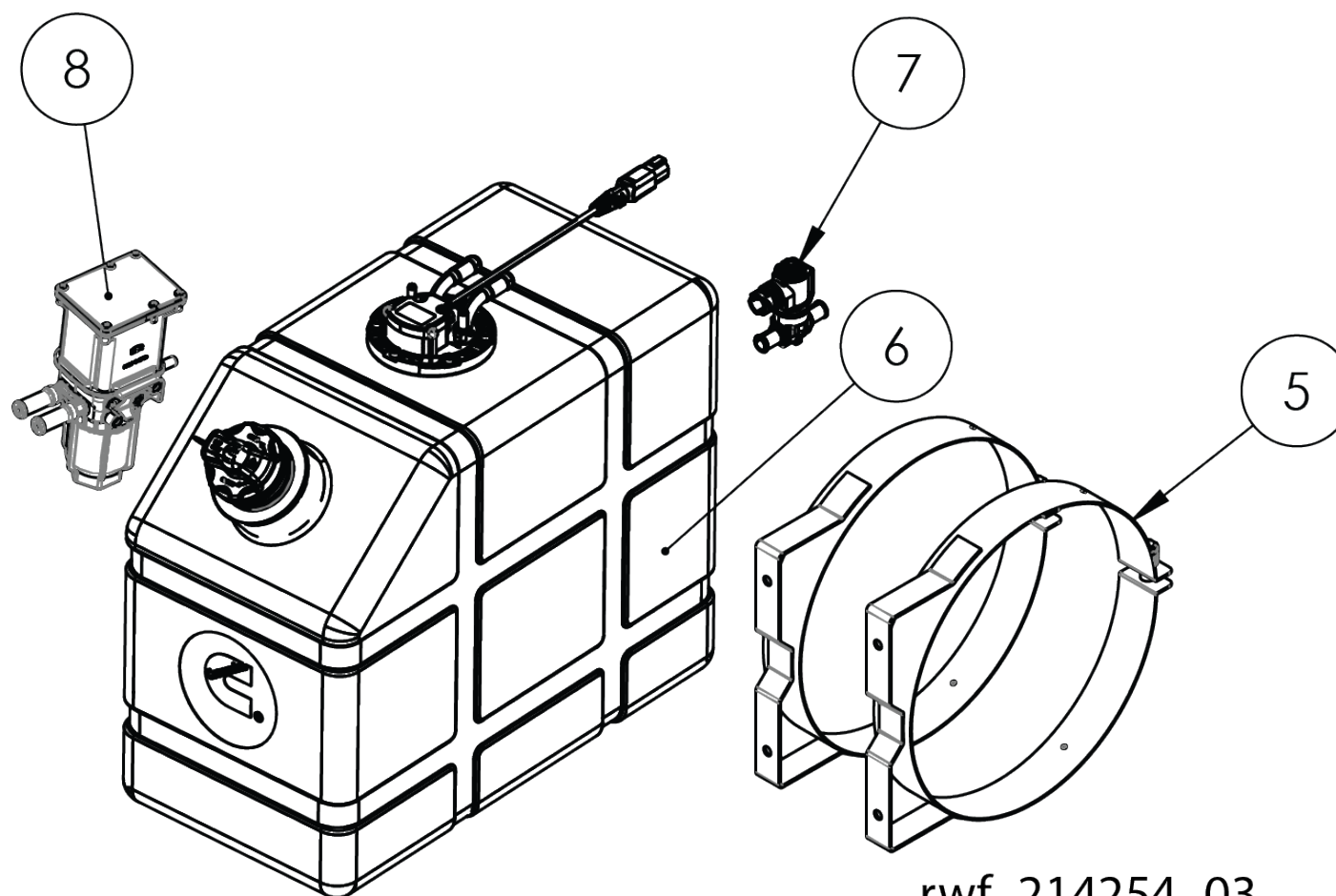
| item | Qty. | P/N     | Description                  |
|------|------|---------|------------------------------|
| 1    | 3    | 9901777 | ISOLATOR                     |
| 2    | 3    | 9901778 | WASHER                       |
| 3    | 2    | 71366   | BOLT- HEX HD                 |
| 4    | 1    | 71363   | BOLT- HEX HD                 |
| 5    | 2    | 73107   | FLATWASHER                   |
| 6    | 2    | 78054   | NUT - LOCK                   |
| 7    | 1    | 207161  | TUBE, CAC HOT                |
| 8    | 4    | 130732  | CHARGED AIR CONNECTOR        |
| 9    | 8    | 125521  | CLAMP                        |
| 10   | 1    | 207162  | TUBE, CAC COLD               |
| 11   | 1    | 207164  | TUBE, RAD HOT                |
| 12   | 1    | 207479  | MODIFIED, HOSE               |
| 13   | 1    | 207165  | TUBE, RAD COLD               |
| 14   | 1    | 92032   | PLUG, MAGNETIC               |
| 15   | 1    | 9901821 | HOSE, SILICONE               |
| 16   | 1    | 127902  | CLAMP                        |
| 17   | 1    | 9901820 | HOSE, SILICONE               |
| 18   | 1    | 85105   | CLAMP, TUBE                  |
| 19   | 1    | 85096   | CLAMP, TUBE                  |
| 20   | 5    | 80029   | BOLT - HEX HD                |
| 21   | 4    | 80030   | BOLT - HEX HD                |
| 22   | 18   | 80578   | WASHER - SAE                 |
| 23   | 9    | 80513   | NUT - LOCK                   |
| 24   | 15"  | 9902270 | HOSE, ID LOW PRESSURE        |
| 25   | 2    | 9902269 | CLAMP, T-BOLT CT             |
| 26   | 1    | 207480  | BRACKET, RH TUBE SUPPORT     |
| 27   | 1    | 207481  | BRACKET, LH TUBE SUPPORT     |
| 28   | 2    | 133888  | EXHAUST CLAMP                |
| 29   | 1    | 9901856 | HOSE, SILICONE               |
| 31   | 4    | 85101   | CLAMP, TUBE                  |
| 32   | 92"  | 9901622 | HOSE, HEATER (QTY IN INCHES) |
| 33   | 4    | 9901253 | CLAMP, GEAR                  |
| 33   | 1    | 207853  | BRACKET, VENT HOSE           |

| item | Qty. | P/N     | Description |
|------|------|---------|-------------|
| 34   | 7    | 9901930 | CLAMP       |



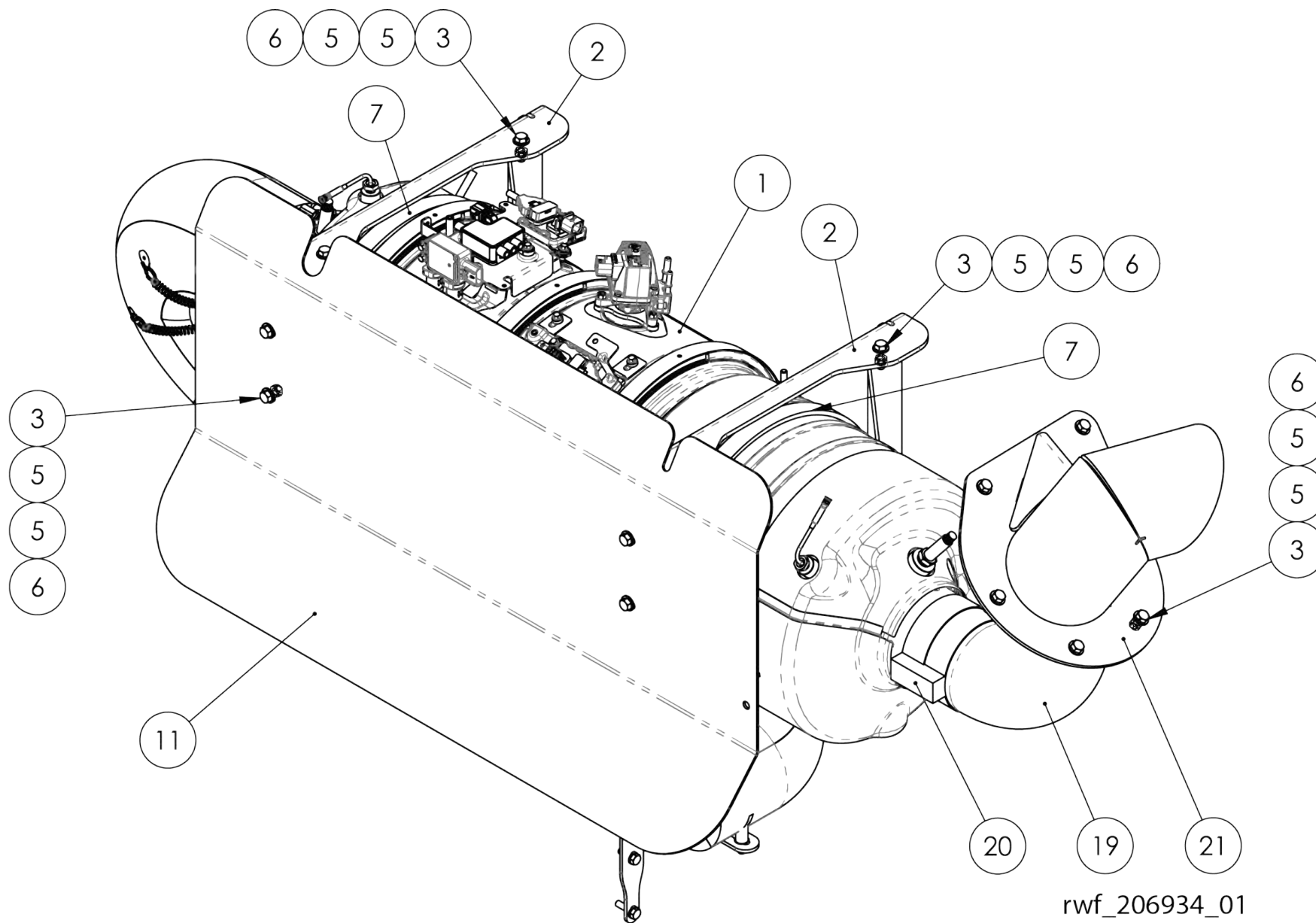
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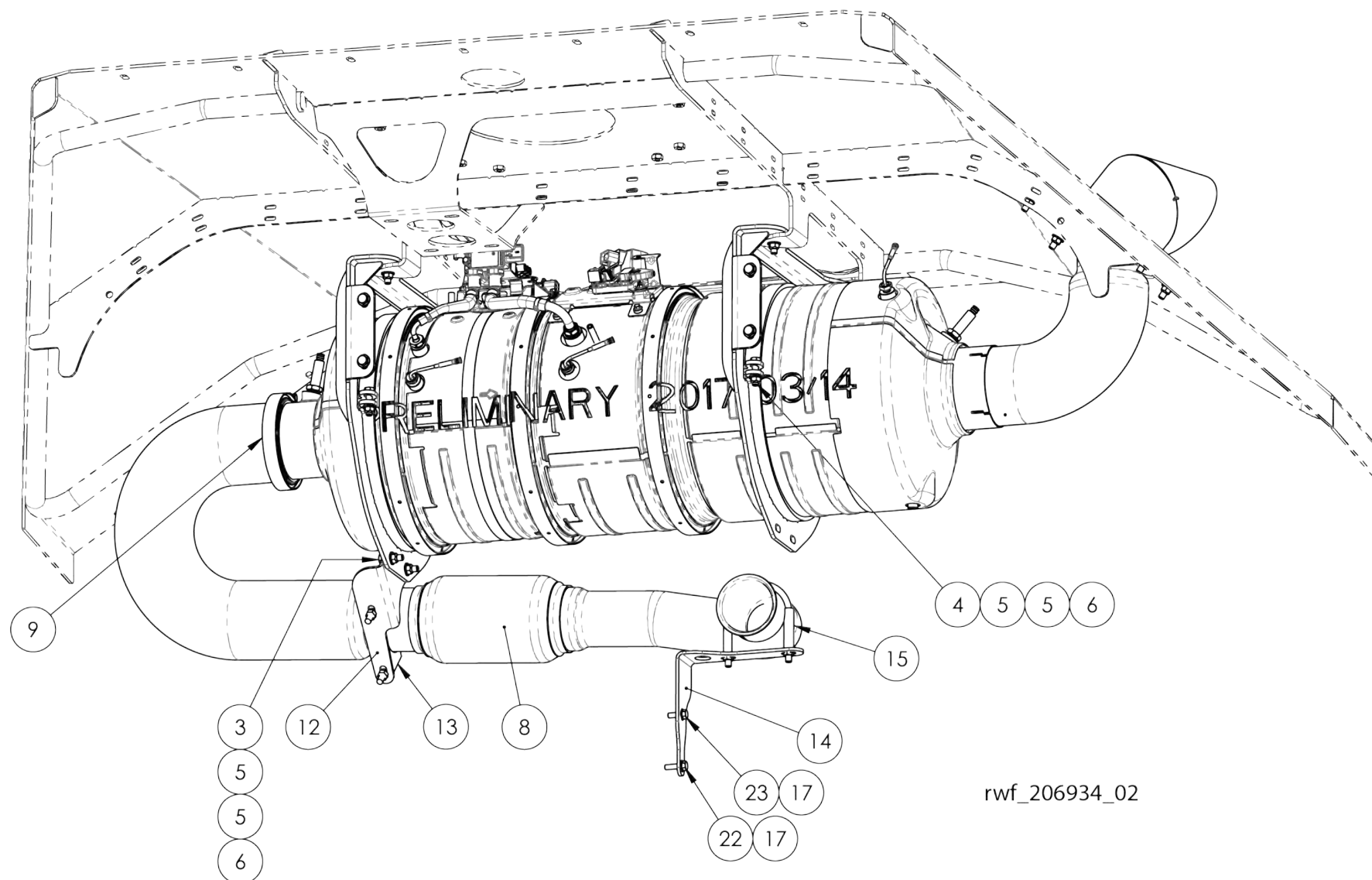


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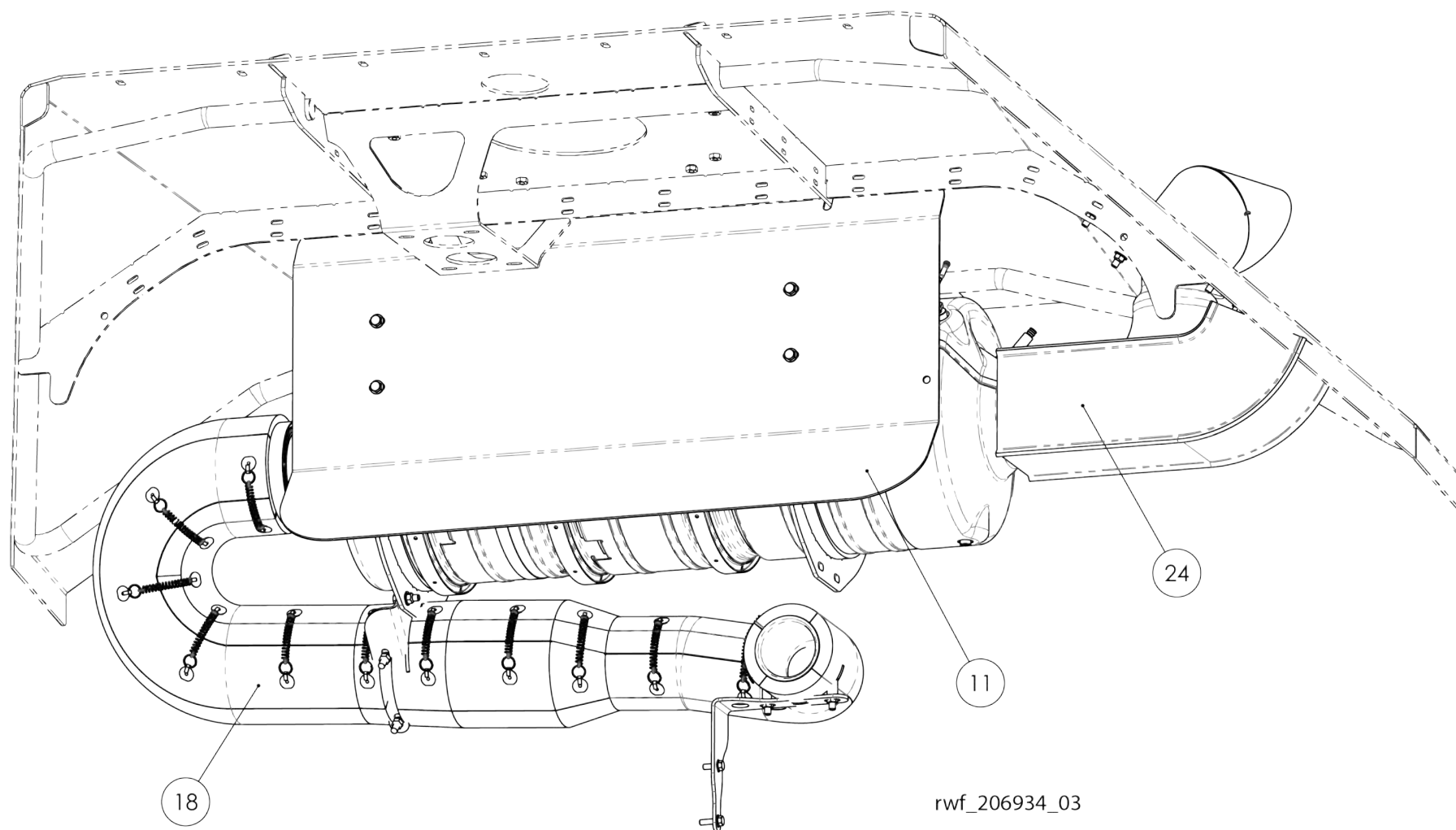
| item | Qty. | P/N     | Description                   |
|------|------|---------|-------------------------------|
| 1    | 1    | 9901751 | ENGINE                        |
| 2    | 1    | 9901753 | AFTERTREATMENT, SINGLE MODULE |
| 3    | 1    | 9901482 | V-CLAMP, STANDARD MARMON      |
| 4    | 1    | 9901752 | AIR FILTER, FLEETGUARD        |
| 5    | 2    | 9901755 | BRACKET, AIR CLEANER          |
| 6    | 1    | 9902356 | TANK, DIESEL EXHAUST FLUID    |
| 7    | 1    | 9901486 | VALVE, COOLANT CONTROL        |
| 8    | 1    | 9901754 | DEF SUPPLY MODULE             |
| 9    | 1    | 9901870 | HOSE, DEF SUCTION             |
| 10   | 1    | 9901884 | HOSE, DEF RETURN              |
| 11   | 1    | 9901885 | HOSE, DEF PRESSURE            |



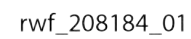
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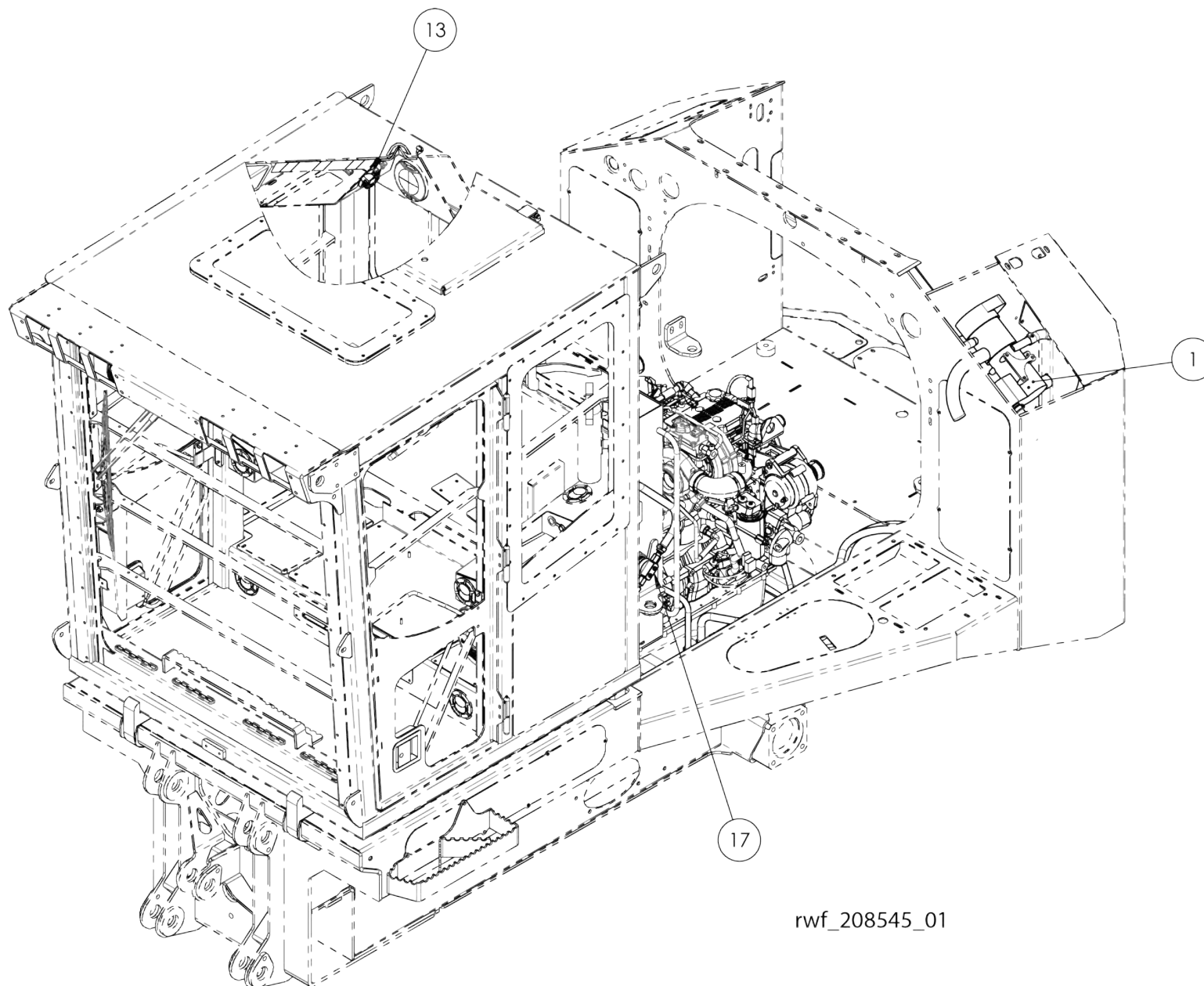




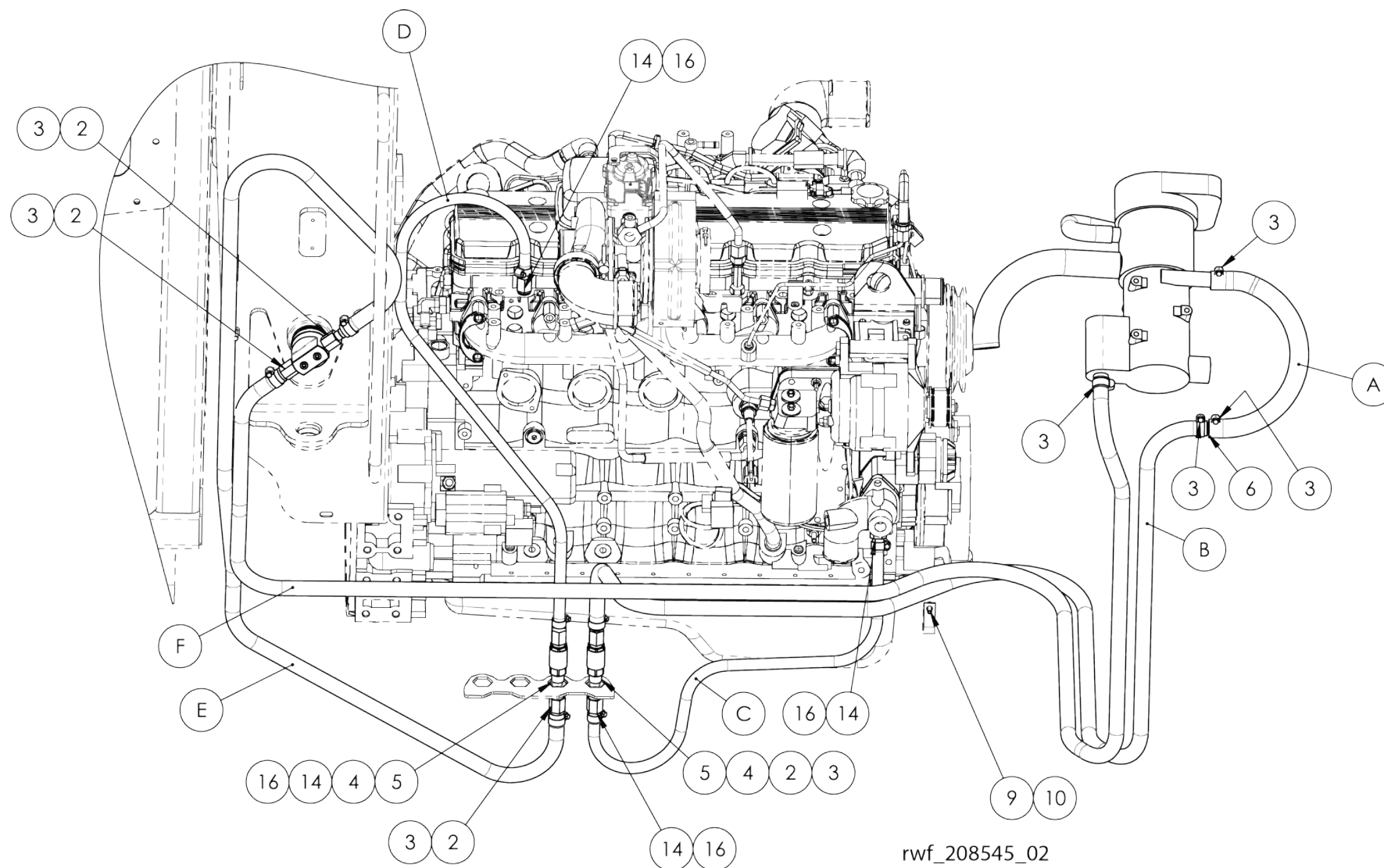
| item | Qty.   | P/N     | Description                   |
|------|--------|---------|-------------------------------|
| 1    | REF(1) | 9901753 | AFTERTREATMENT, SINGLE MODULE |
| 2    | 2      | 207486  | BRACKET, AFTERTREATMENT       |
| 3    | 15     | 80030   | BOLT - HEX HD                 |
| 4    | 4      | 80031   | BOLT - HEX HD                 |
| 5    | 38     | 80578   | WASHER - SAE                  |
| 6    | 19     | 80513   | NUT - LOCK                    |
| 7    | 2      | 207490  | CLAMP, AFTERTREATMENT         |
| 8    | 1      | 207157  | TUBE, EXHAUST                 |
| 9    | REF(1) | 9901482 | V-CLAMP, STANDARD MARMON      |
| 11   | 1      | 207494  | HEAT SHIELD, AFTERTREATMENT   |
| 12   | 1      | 207491  | BRACKET, EXHAUST TUBE         |
| 13   | 1      | 9900192 | CLAMP, SADDLE FLAT BAND       |
| 14   | 1      | 207492  | BRACKET, EXHAUST TUBE         |
| 15   | 1      | 9901824 | CLAMP, SADDLE BAND            |
| 17   | 2      | 73103   | FLATWASHER                    |
| 18   | 1      | 9901779 | INSULATION, CUMMINS DOWNTUBE  |
| 19   | 1      | 207493  | TUBE, EXHAUST OUTLET          |
| 20   | 1      | 121315  | CLAMP, EXHAUST SEAL           |
| 21   | 1      | 207459  | EXHAUST STACK                 |
| 22   | 1      | 71152   | BOLT- HEX HD                  |
| 23   | 1      | 71151   | BOLT- HEX HD                  |
| 24   | 1      | 9900872 | INSULATION                    |

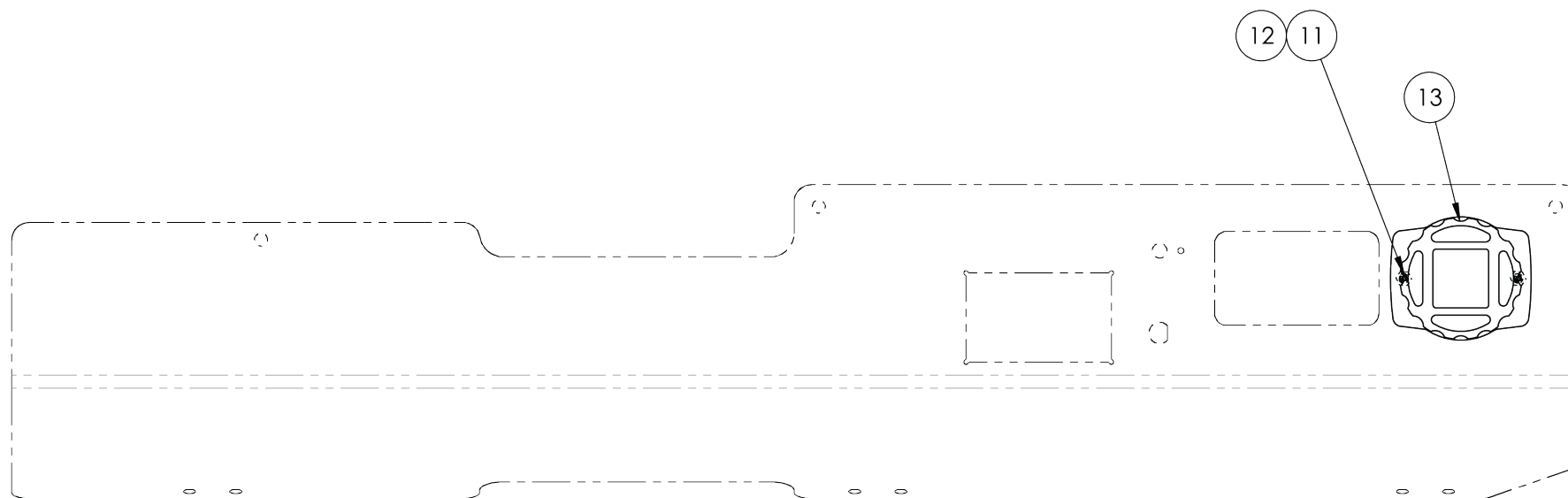


| item | Qty. | P/N     | Description                |
|------|------|---------|----------------------------|
| 1    | 1    | 19124   | CAP - VENTED               |
| 2    | 1    | 9900606 | VALVE, DRAIN RUN           |
| 3    | 1    | 9901501 | BREATHER, MICRON           |
| 4    | 1    | 91039   | COUPLING - STD STEEL       |
| 5    | 1    | 9901825 | PIPE NIPPLE SCH            |
| 6    | 3    | 9901799 | COVER, FUEL TANK           |
| 7    | 1    | 9901788 | STRAINER                   |
| 8    | 2    | 82096   | SCREW, PAN HEAD - PHILLIPS |
| 9    | 2    | 90071   | ADAPTER, STR               |
| 10   | 1    | 90307   | PLUG                       |
| 11   | 2    | 91156   | PLUG                       |
| 12   | 1    | 9901792 | LEVEL SENDER               |
| 13   | 1    | 90314   | PLUG, HEX HEAD             |
| 14   | 1    | 90489   | PLUG, HEX HEAD             |
| 15   | 1    | 90627   | O-RING                     |



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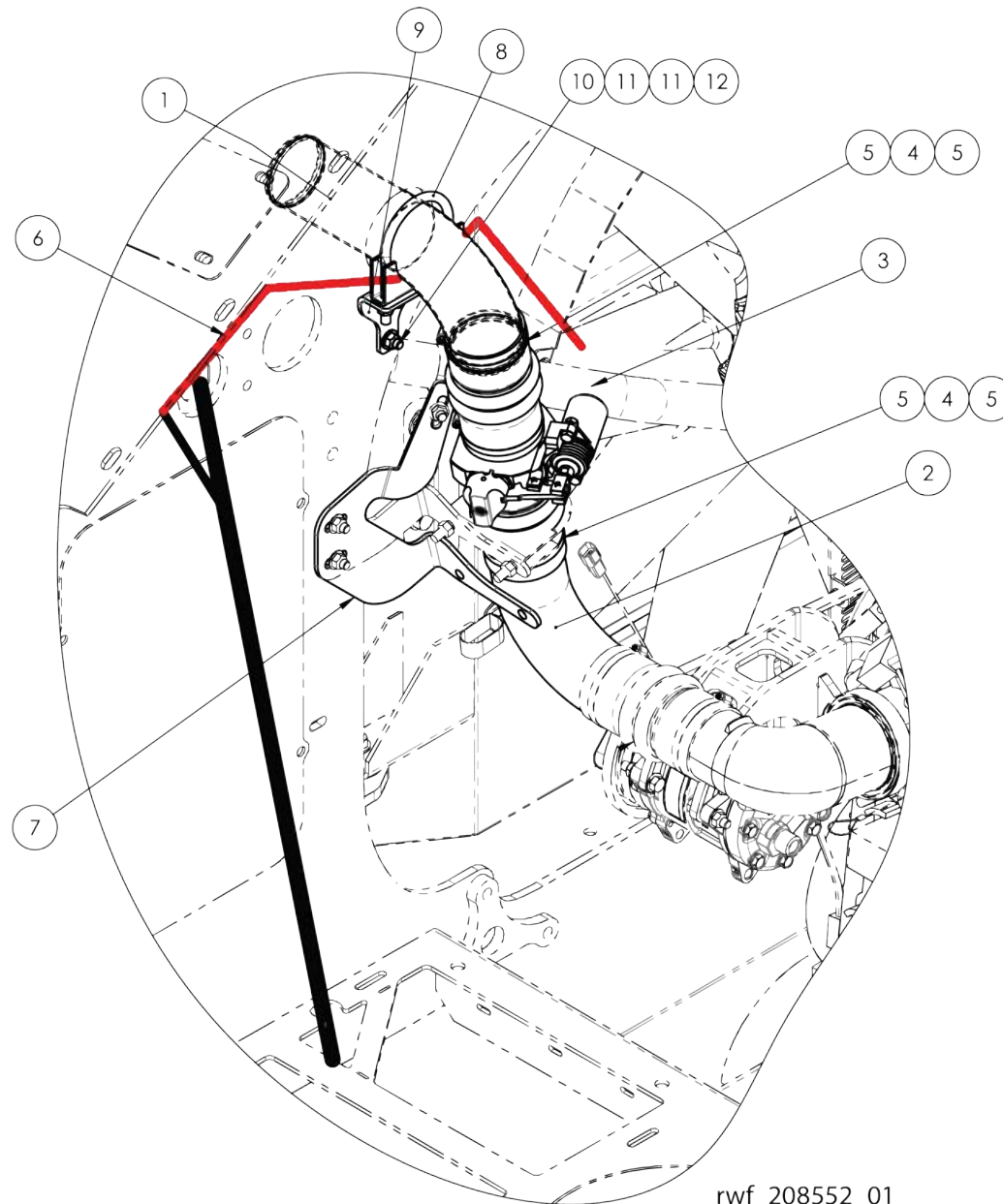
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|------|------|-----------|----------------------------------|
| 1    | 1    | 9901794   | WEBASTO THERMO PRO & INTS'LL KIT |
| 2    | 4    | 90965     | ADAPTER, STR                     |
| 3    | 8    | 82352-001 | CLAMP, GEAR                      |
| 4    | 2    | 115293    | BALL VALVE - LOW PRESSURE        |
| 5    | 2    | 91136     | PIPE NIPPLE - CLOSE SCH CS       |
| 6    | 1    | 9901277   | UNION, REDUCER                   |
| 7    | 343" | 1923      | HOSE, HEATER (QTY IN INCHES)     |
| 8    | 12"  | 1925      | HOSE, HEATER (QTY IN INCHES)     |
| 9    | 1    | 80000     | BOLT - HEX HD                    |
| 10   | 1    | 80576     | WASHER - SAE                     |
| 11   | 2    | 82204     | SCREW, PAN HEAD - PHILLIPS       |
| 12   | 2    | 82203     | NUT, NYLOCK                      |
| 13   | 1    | 148617    | WEBASTO TIMER                    |
| 14   | 4    | 90797     | ADAPTER, STR                     |
| 15   | 96"  | 9901907   | HOSE, HEATER (QTY IN INCHES)     |
| 16   | 4    | 9901253   | CLAMP, GEAR                      |
| 17   | 1    | 9901924   | HEATER CORE, LONG                |

HOSE ASSEMBLY LENGTH IS DETERMINED BY THE LAST 3 DIGITS OF THE PART NUMBER IN INCHES.

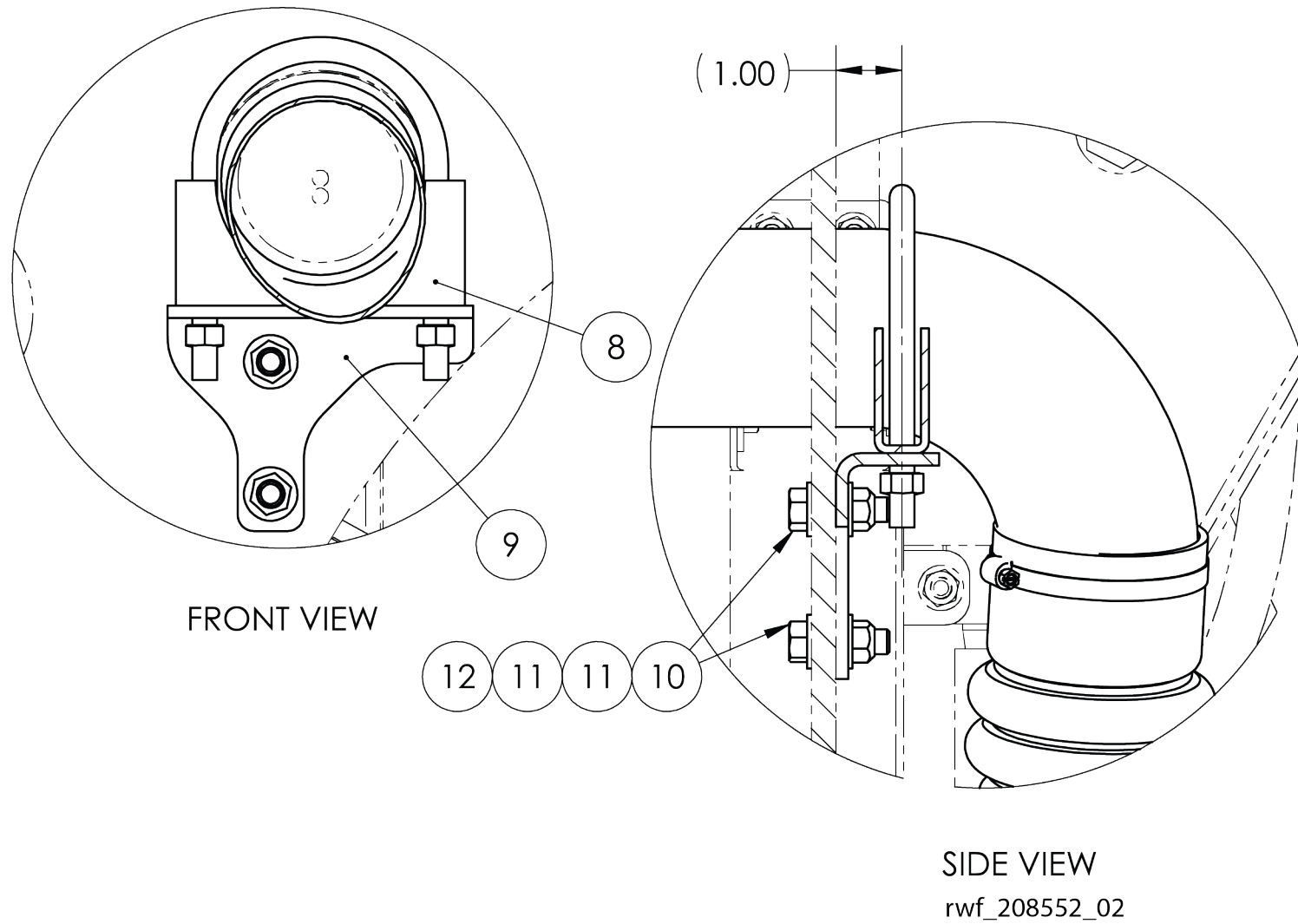
FOR EXAMPLE: **95000Z123** IS A HOSE WITH A **123 INCH** LENGTH.

| item | Qty. | P/N     | Description                         |
|------|------|---------|-------------------------------------|
| A    | 23   | 01925   | WEBASTO - UNION                     |
| B    | 105  | 01923   | UNION - SUPPLY BALL VALVE           |
| C    | 54   | 9901907 | SUPPLY BALL VALVE - ENGINE          |
| D    | 42   | 9901907 | ENGINE - OUTLET BALL VALVE          |
| E    | 113  | 01923   | OUTLET BALL VALVE - HYD TANK HEATER |
| F    | 114  | 01923   | HYD TANK HEATER - WEBASTO           |

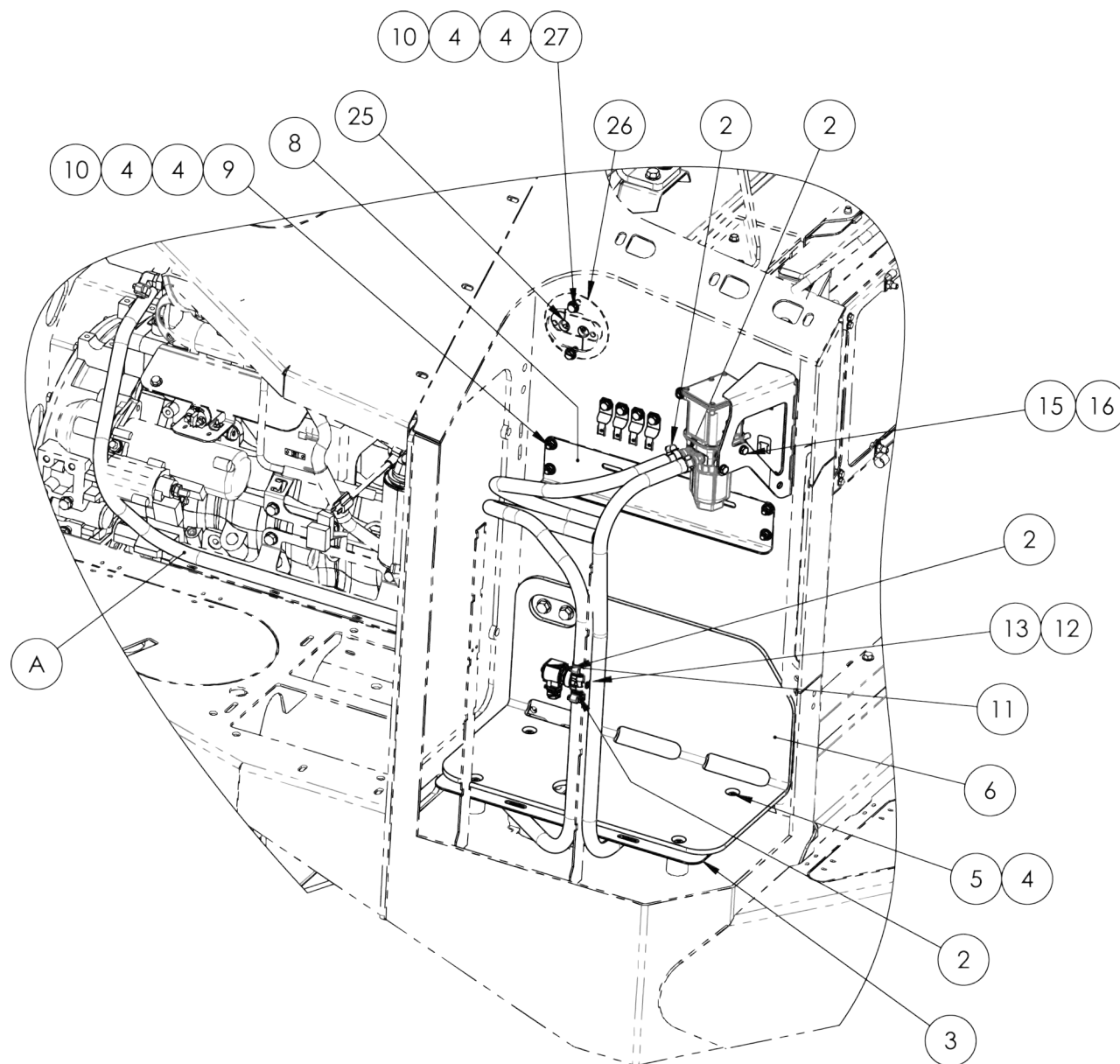




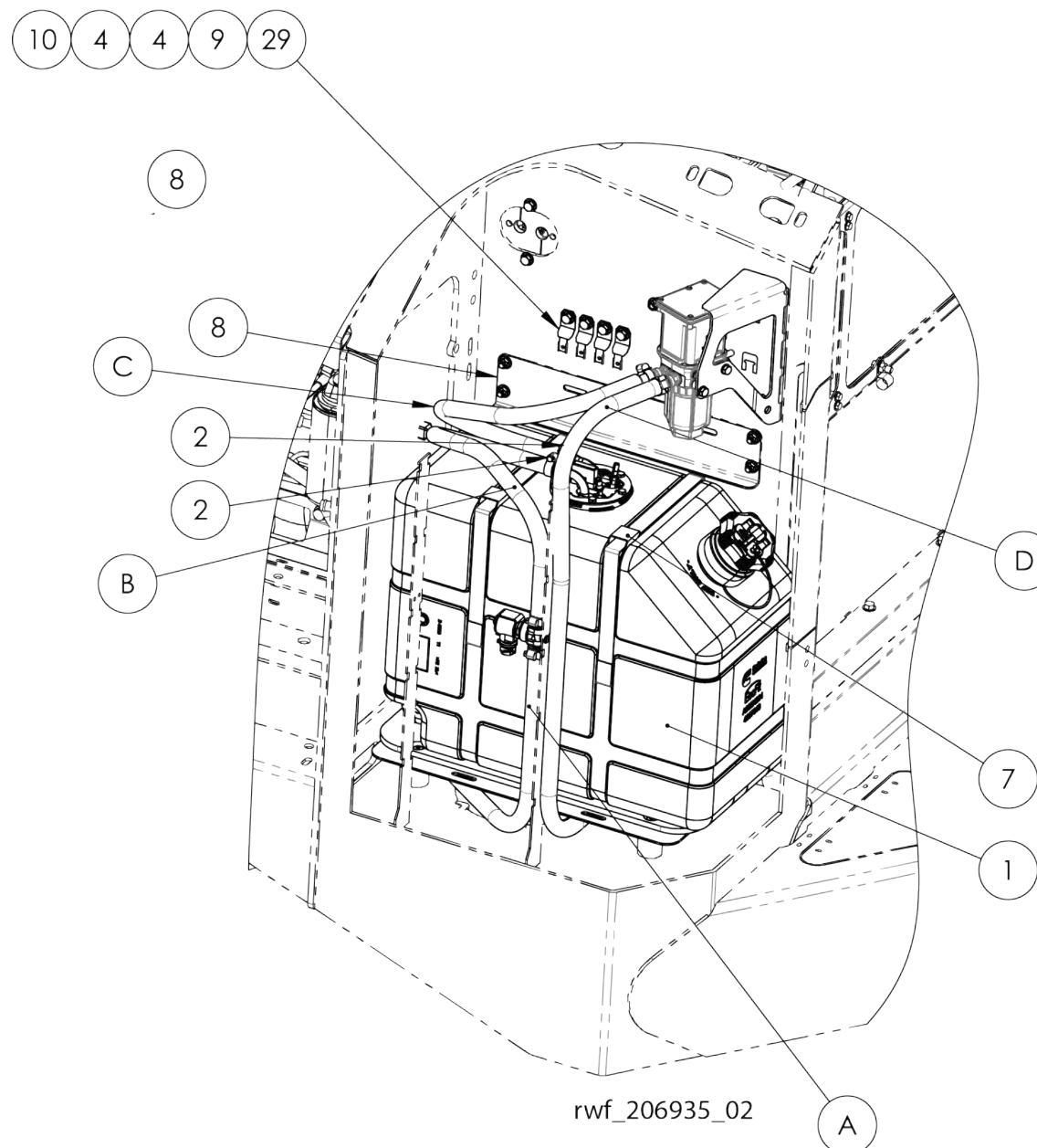
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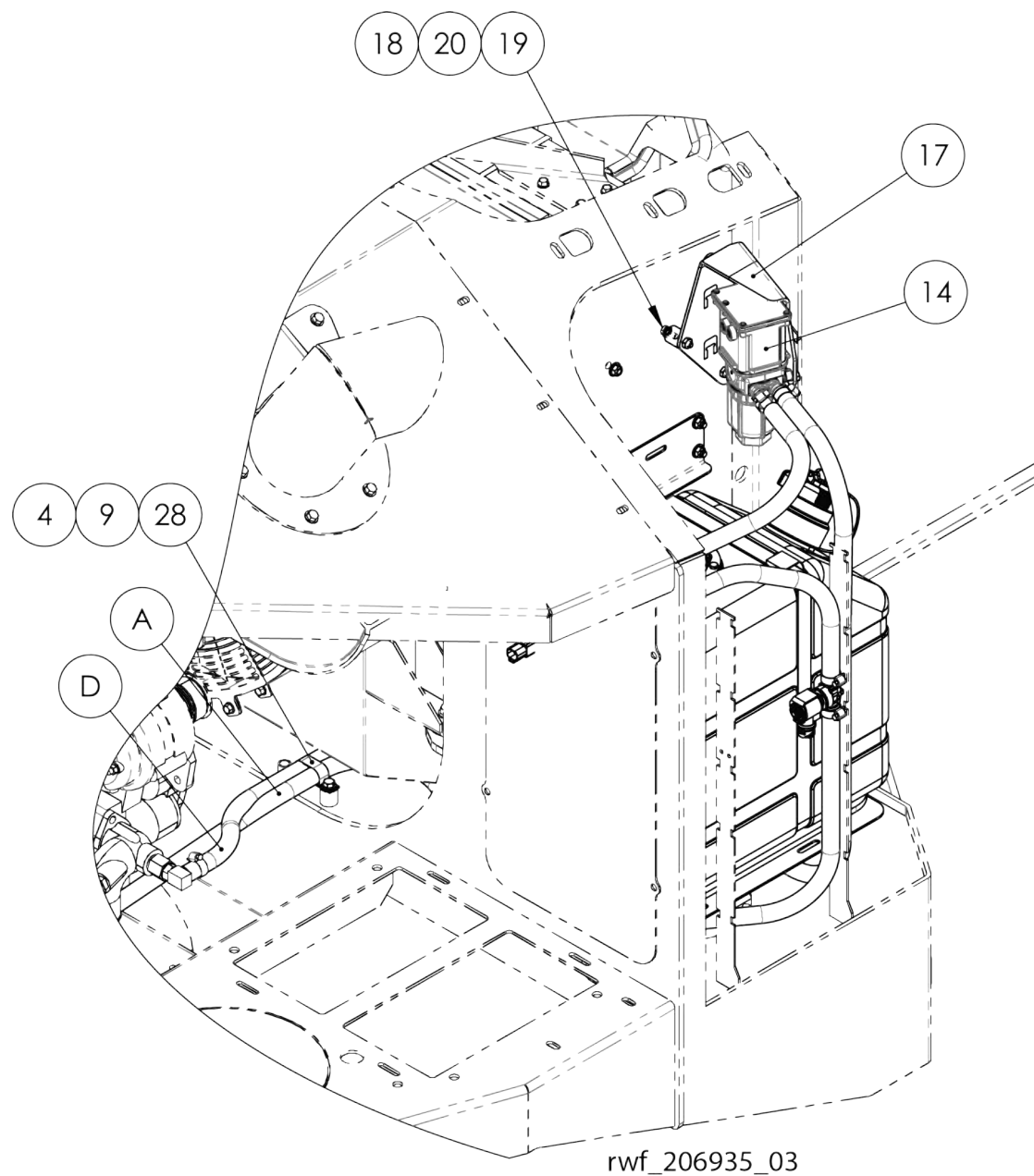


| item | Qty. | P/N     | Description                    |
|------|------|---------|--------------------------------|
| 1    | 1    | 207958  | TUBE, CAC COLD W/PAS UPPER     |
| 2    | 1    | 207959  | TUBE, CAC COLD W/PAS LOWER     |
| 3    | 1    | 9901928 | POSITIVE AIR SHUTOFF, INLINE   |
| 4    | 2    | 130732  | CHARGED AIR CONNECTOR, ID      |
| 5    | 4    | 125521  | CLAMP                          |
| 6    | 1    | 148655  | HARNESS, POSITIVE AIR SHUTOFF  |
| 7    | 1    | 210288  | BRACKET, RH TUBE SUPPORT W/PAS |
| 8    | 1    | 133888  | EXHAUST CLAMP                  |
| 9    | 1    | 213541  | BRACKET, UPPER CLAMP           |
| 10   | 2    | 80030   | BOLT - HEX HD                  |
| 11   | 4    | 80578   | WASHER - SAE                   |
| 12   | 2    | 80513   | NUT - LOCK                     |

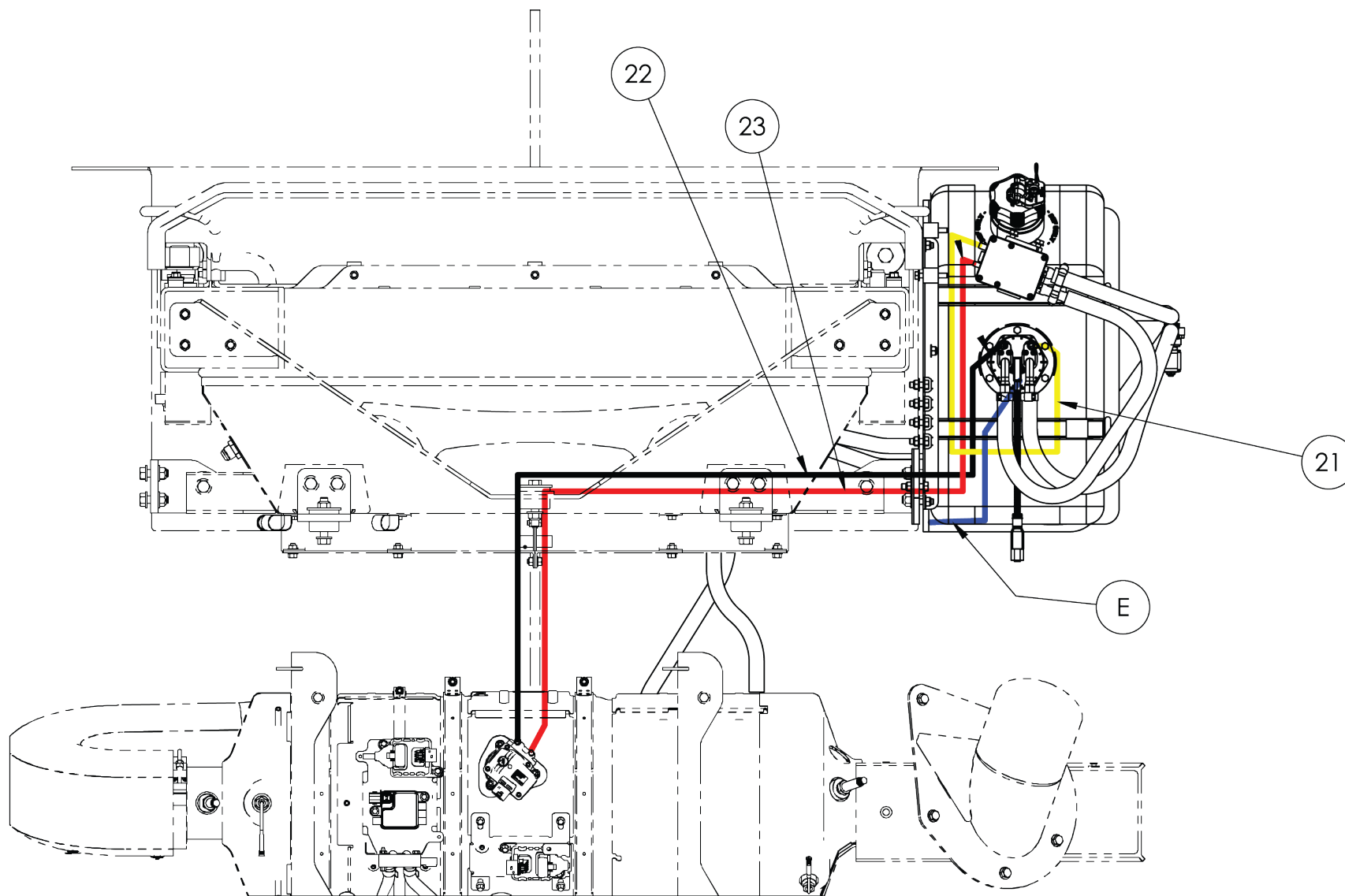


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rwf\_206935\_03



rwf\_206935\_04

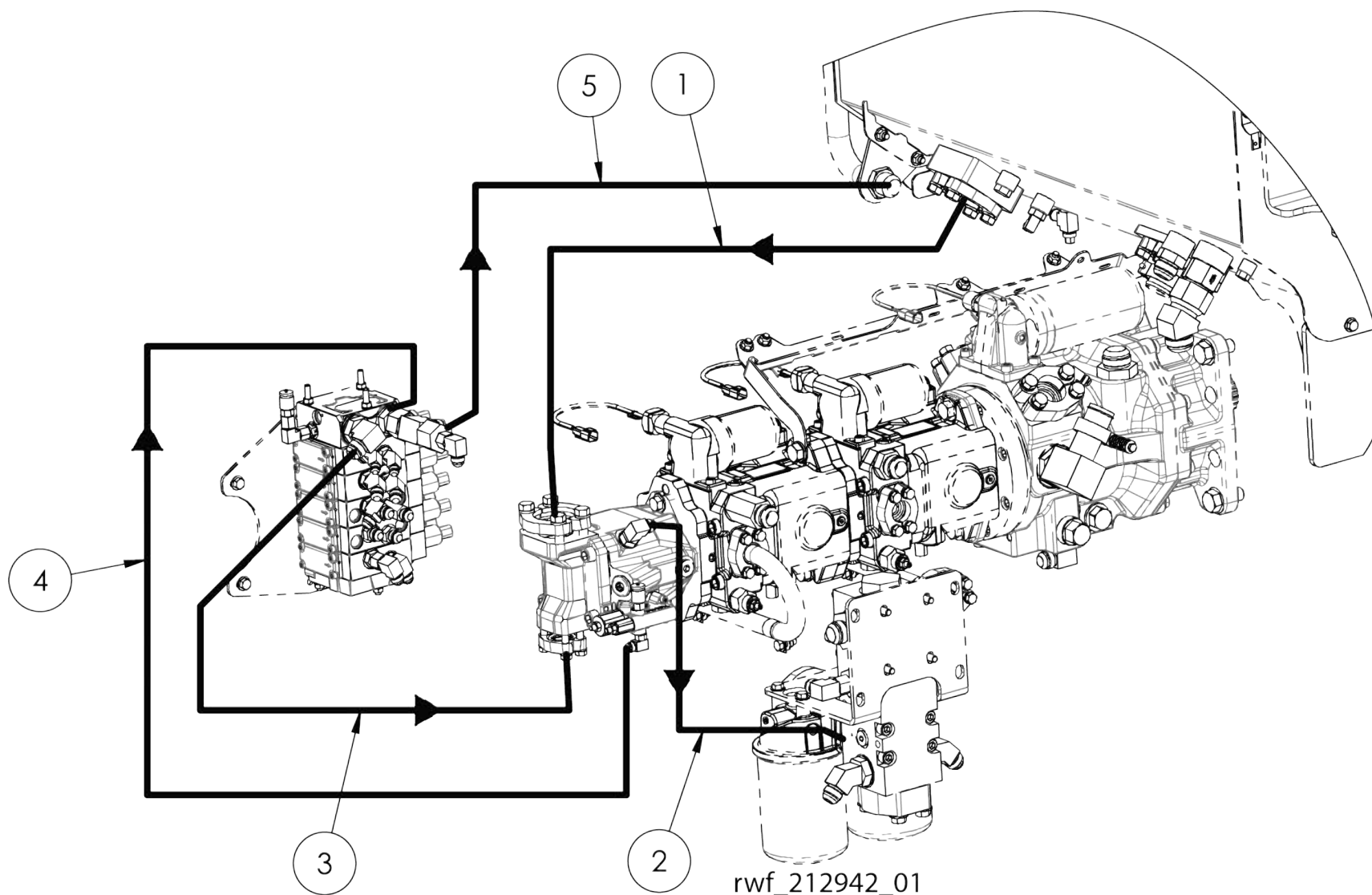
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|------|---------|----------------|-------------------------------------|
| 1    | REF (1) | SEE ENGINE KIT | TANK, DIESEL EXHAUST FLUID          |
| 2    | 6       | 82352-001      | CLAMP, GEAR                         |
| 3    | 1       | 207592         | BASE, DEF TANK                      |
| 4    | 26      | 80578          | WASHER - SAE                        |
| 5    | 4       | 80415          | SCREW, STAINLESS BUTTON - HEX SOC   |
| 6    | 1       | 207596         | MAT, DEF TANK                       |
| 7    | 2       | 9901384        | STRAP, BATTERY TIE DOWN             |
| 8    | 1       | 207593         | BRACKET, DEF TANK HOLD DOWN         |
| 9    | 9       | 80029          | BOLT - HEX HD                       |
| 10   | 11      | 80513          | NUT - LOCK                          |
| 11   | REF (1) | 9901486        | VALVE, COOLANT CONTROL              |
| 12   | 2       | 73101          | FLATWASHER                          |
| 13   | 2       | 74006-003      | CAP SCREW, BUTTON SOC HD            |
| 14   | REF (1) | 9901754        | DEF SUPPLY MODULE                   |
| 15   | 2       | 71151          | BOLT- HEX HD                        |
| 16   | 2       | 73103          | FLATWASHER                          |
| 17   | 1       | 207594         | BRACKET, SUPPLY MODULE              |
| 18   | 3       | 9901645        | ISOLATOR, NEOPRENE                  |
| 19   | 3       | 80014          | BOLT - HEX HD                       |
| 20   | 3       | 80577          | WASHER - SAE                        |
| 21   | REF(1)  | 9901870        | HOSE, DEF SUCTION                   |
| 22   | REF(1)  | 9901884        | HOSE, DEF RETURN                    |
| 23   | REF(1)  | 9901885        | HOSE, DEF PRESSURE                  |
| 24   | 243 IN  | 1923           | HOSE, HEATER                        |
| 25   | 1       | 207798         | RUBBER, DEF HOSE PASSAGE            |
| 26   | 1       | 207799         | RETAINER, DEF HOSE RUBBER           |
| 27   | 2       | 80031          | BOLT - HEX HD                       |
| 28   | 1       | 9900929-09     | CLAMP, DOUBLE TUBE                  |
| 29   | 4       | 9900585        | CLIP, MOUNT DEUTSCH DT/DTM/DTP/DTHD |
| 30   | 18 IN   | 9901622        | HOSE, HEATER                        |



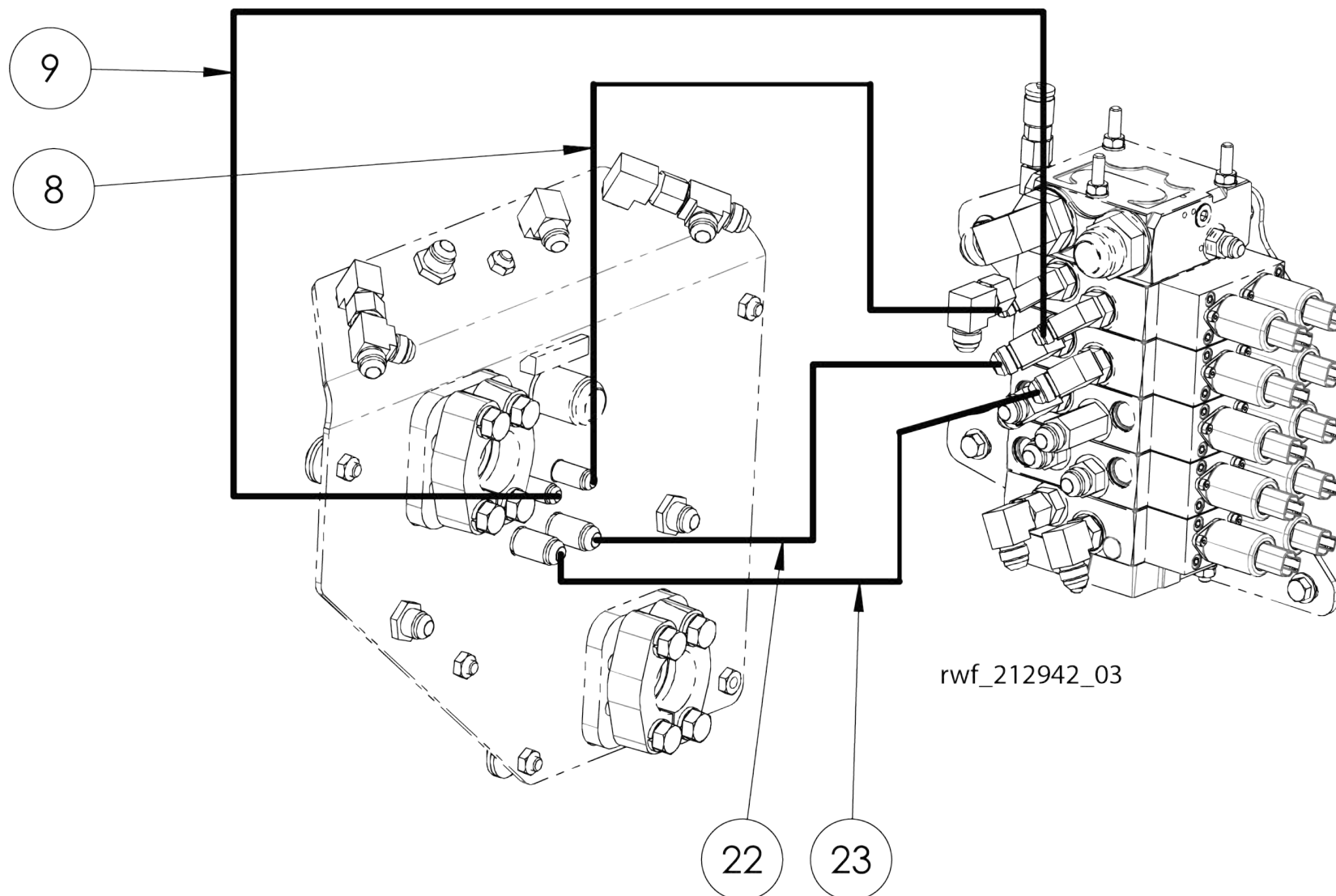
## CHAPTER 6: HOSES

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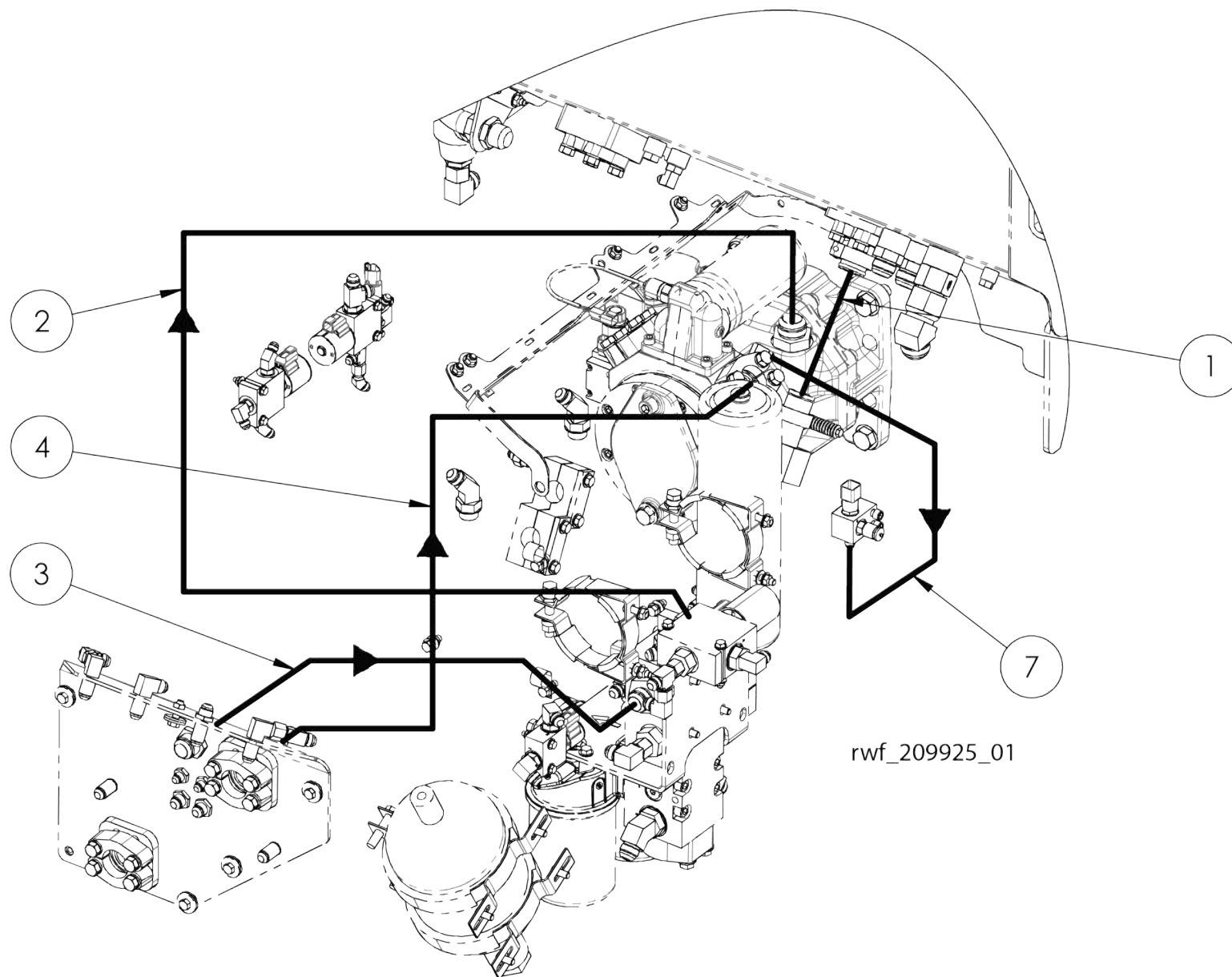
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| <i>HOSE KIT, A/C .....</i>                | <i>6.7</i>  |
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| <i>HOSE KIT, FAE 200/U-200.....</i>       | <i>6.12</i> |
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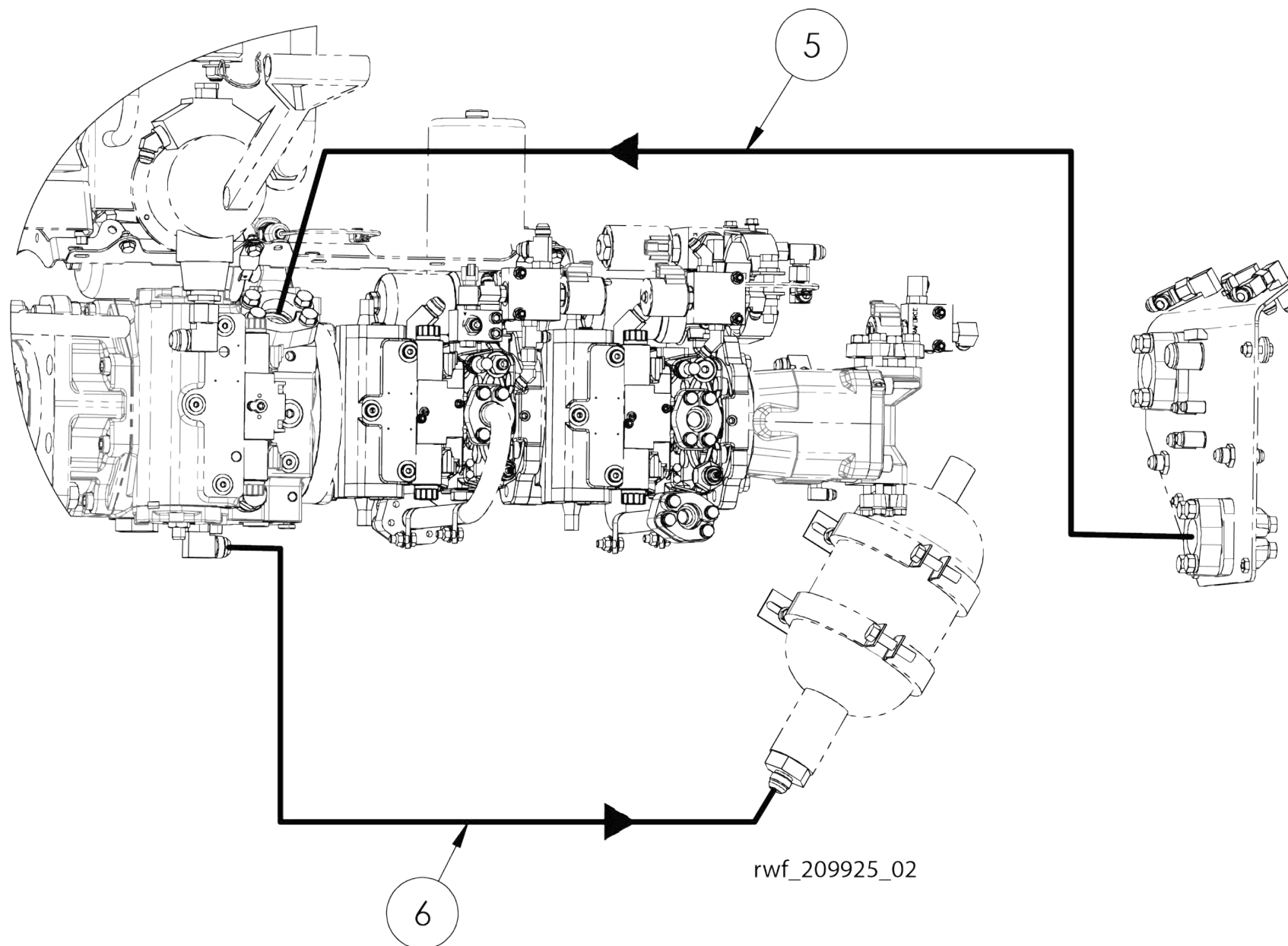






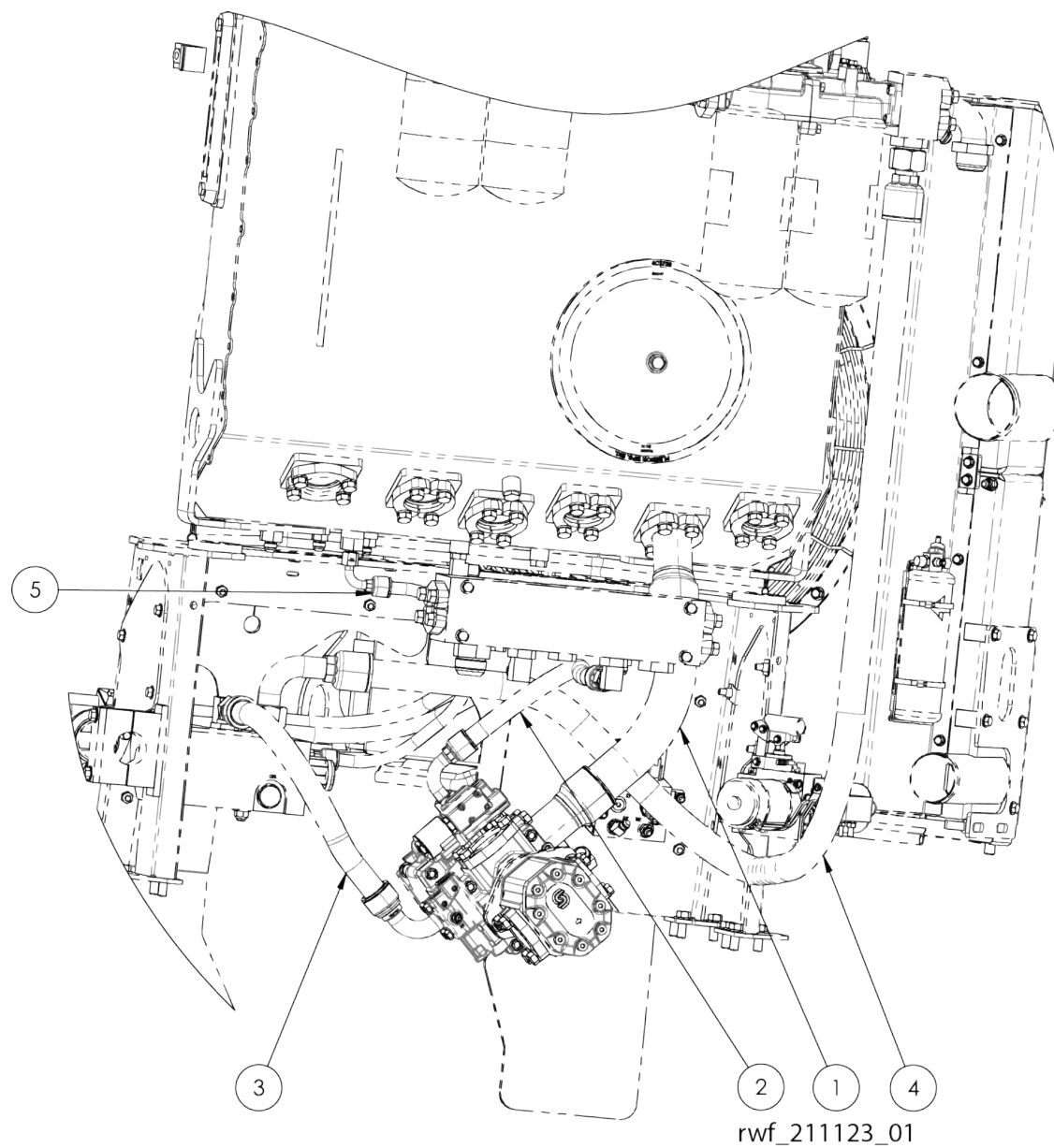
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| 1    | 1    | 95300Z045 -   | HOSE        |
| 2    | 1    | 95324Z013 -   | HOSE        |
| 3    | 1    | 95302Z029 -   | HOSE        |
| 4    | 1    | 95303Z026 -   | HOSE        |
| 5    | 1    | 95304Z042 -   | HOSE        |
| 6    | 1    | 95305Z072 -   | HOSE        |
| 7    | 1    | 95324Z041 -   | HOSE        |
| 8    | 1    | 95327Z016 -   | HOSE        |
| 9    | 1    | 95327Z018 -   | HOSE        |
| 10   | 1    | 95328Z014 -   | HOSE        |
| 11   | 1    | 95326Z015 -   | HOSE        |
| 12   | 1    | 95326Z032 -   | HOSE        |
| 13   | 1    | 95326Z031 -   | HOSE        |
| 14   | 1    | 95328Z032 SWY | HOSE        |
| 15   | 1    | 95329Z011 -   | HOSE        |
| 16   | 1    | 95326Z029 -   | HOSE        |
| 17   | 1    | 95328Z029 -   | HOSE        |
| 18   | 1    | 95332Z010 -   | HOSE        |
| 19   | 1    | 95330Z024 -   | HOSE        |
| 20   | 2    | 95333Z024 WS  | HOSE        |
| 21   | 2    | 95333Z026 WS  | HOSE        |
| 22   | 1    | 95329Z016 -   | HOSE        |
| 23   | 1    | 95329Z018 -   | HOSE        |
| 24   | 1    | 95333Z043 WS  | HOSE        |
| 25   | 1    | 95333Z047 WS  | HOSE        |

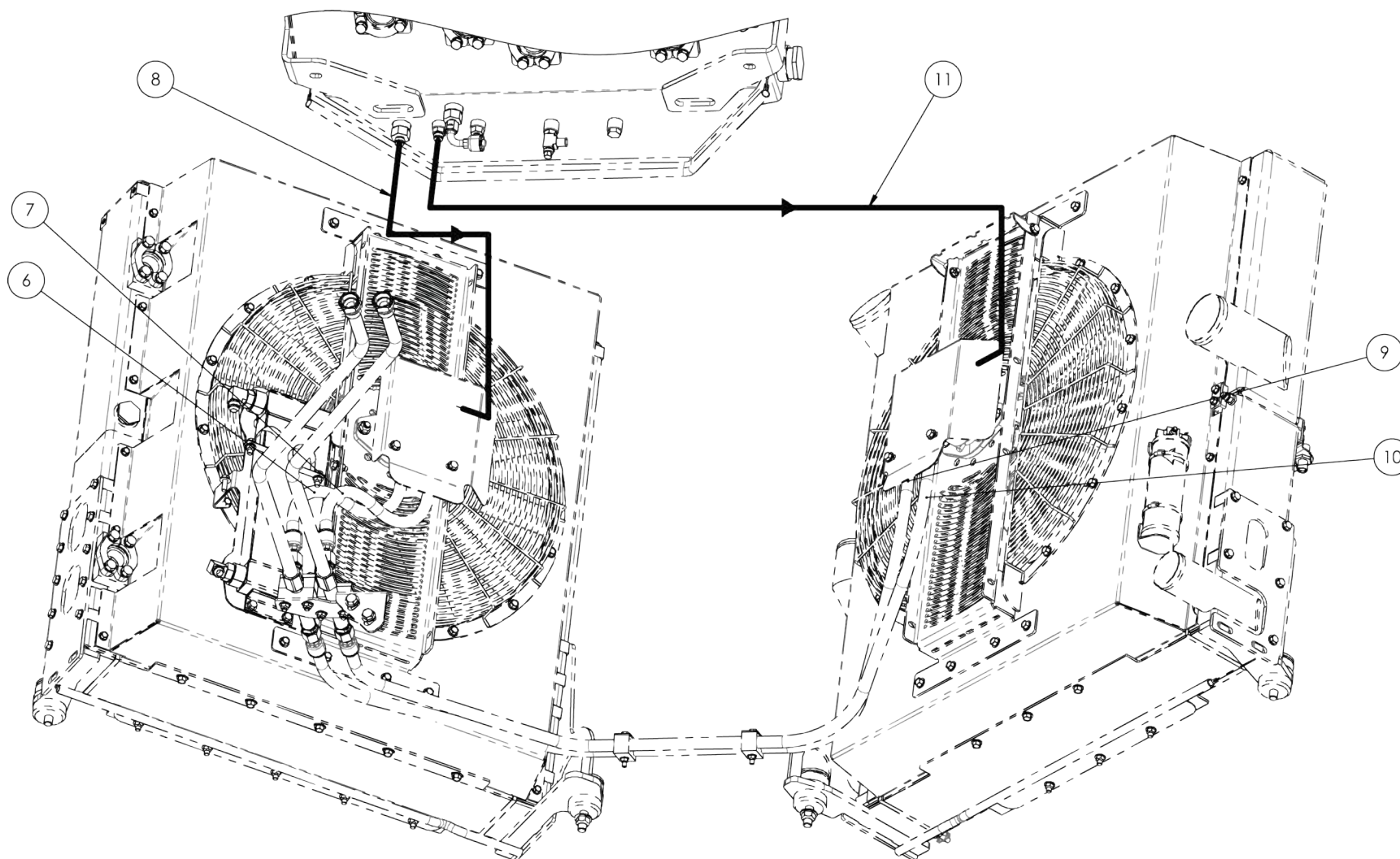




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| 2    | 1    | 95463Z027 - | HOSE        |
| 3    | 1    | 95319Z030 - | HOSE        |
| 4    | 1    | 95320Z049 - | HOSE        |
| 5    | 1    | 95320Z052 - | HOSE        |
| 6    | 1    | 95321Z041 - | HOSE        |
| 7    | 1    | 95322Z026 - | HOSE        |

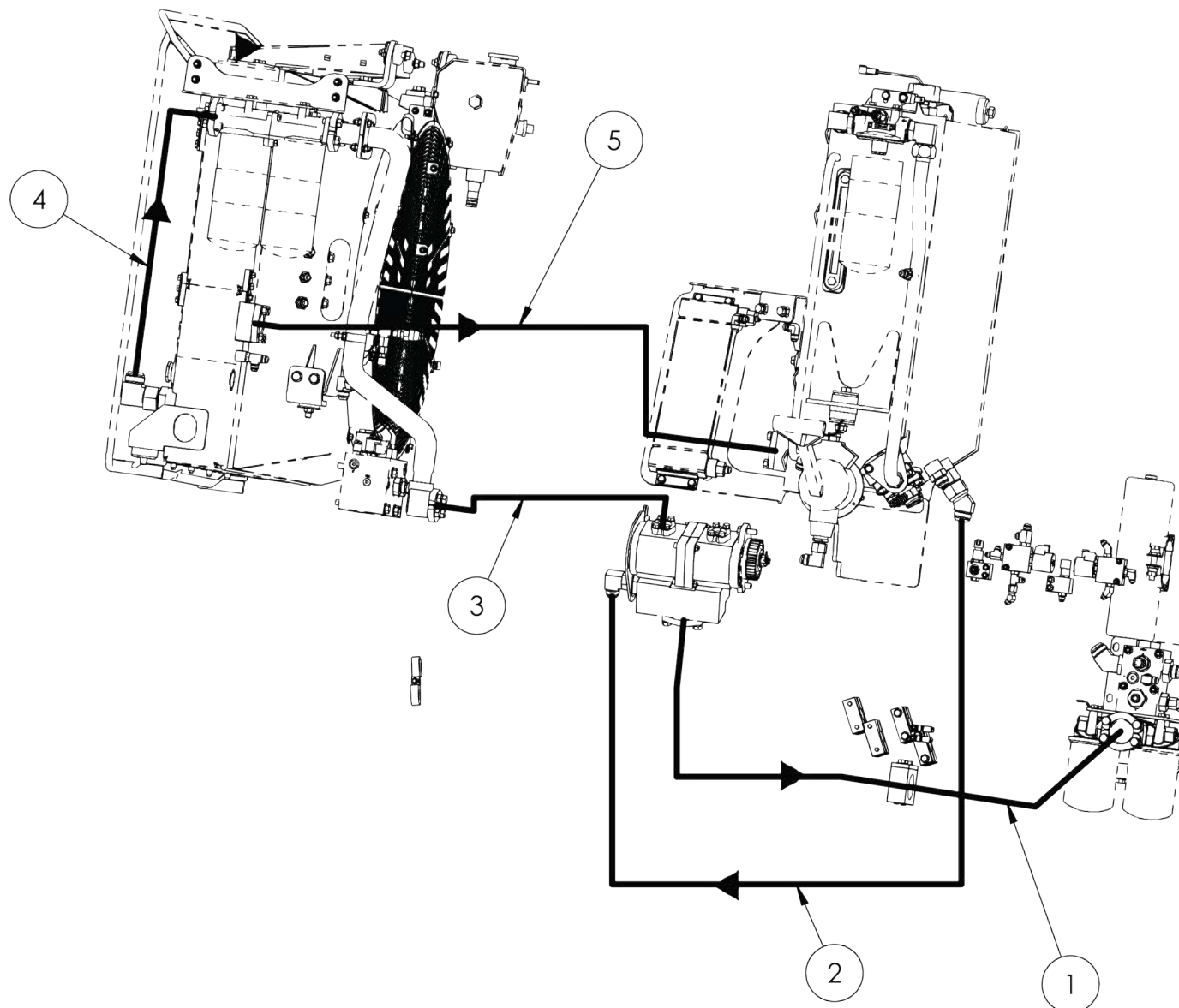




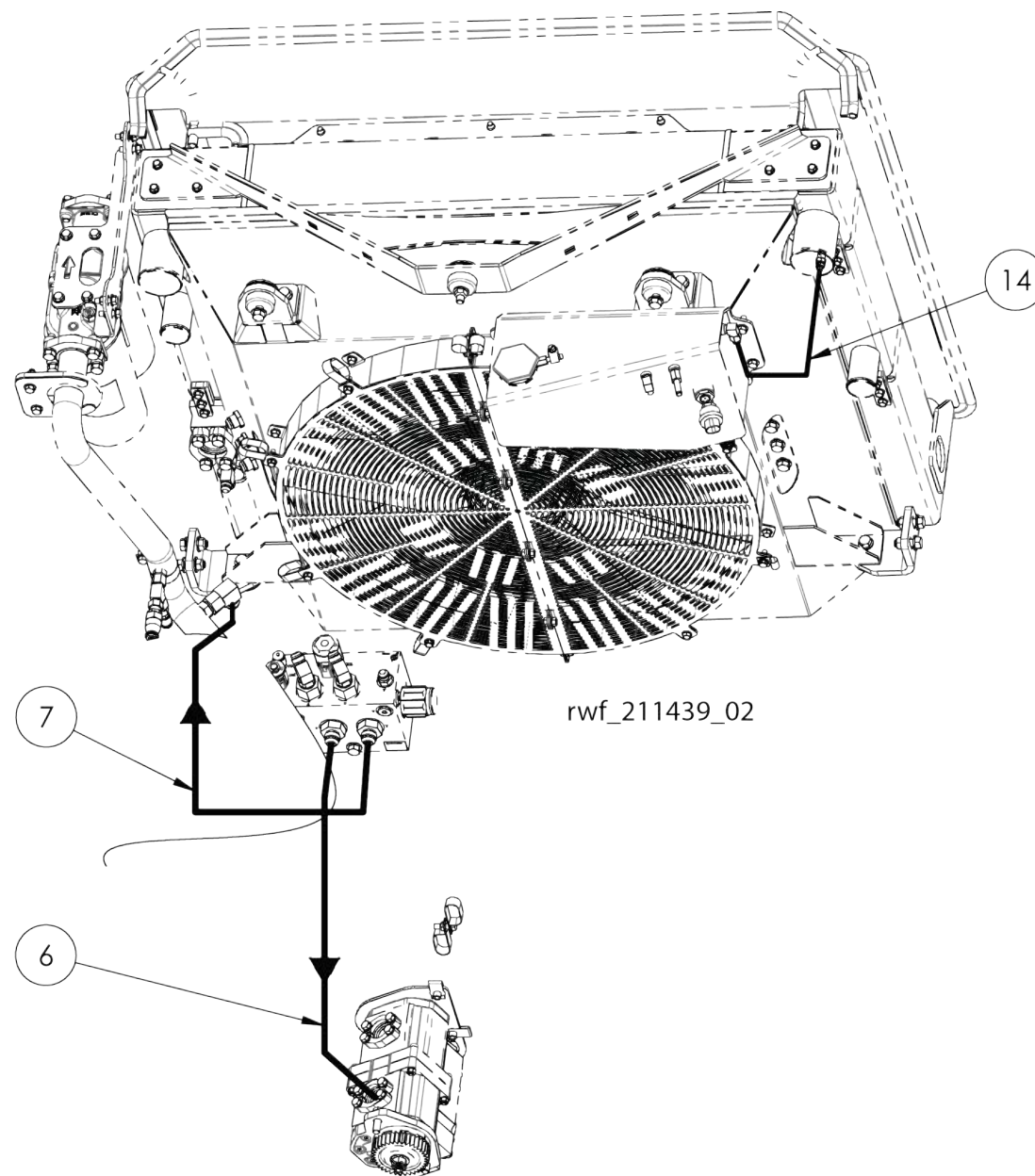


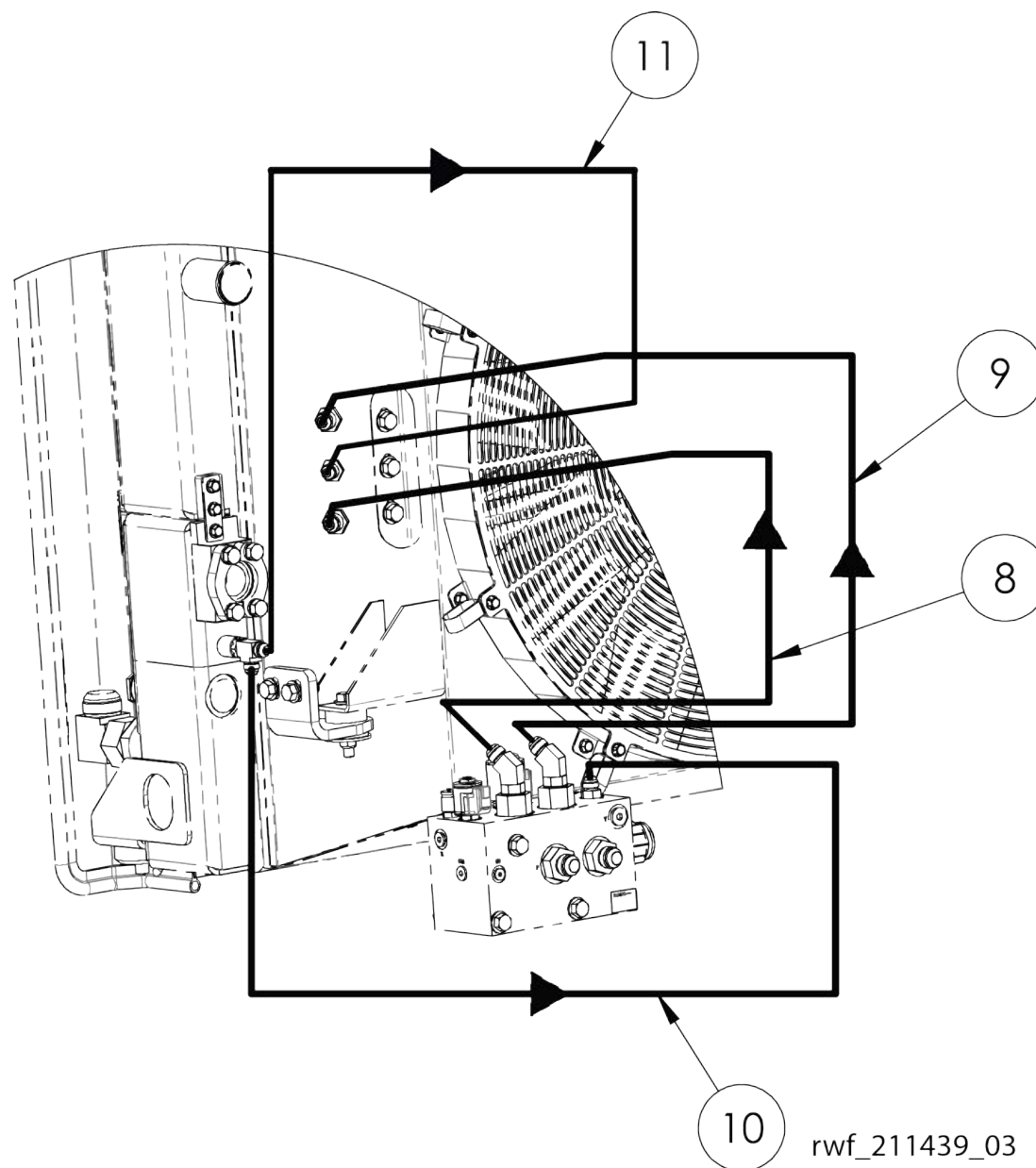
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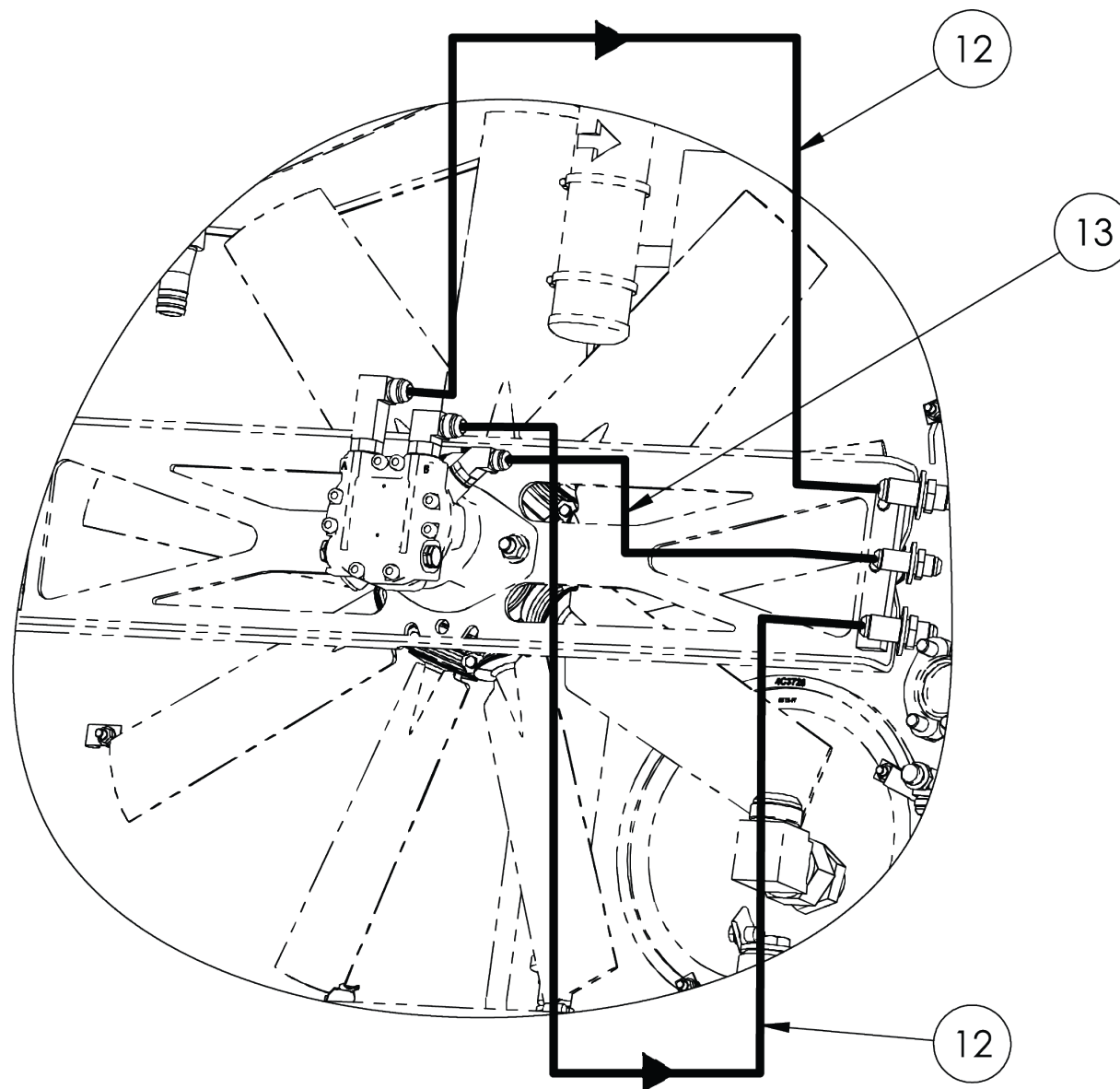
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| 2    | 1    | 95321Z024 - | HOSE        |
| 3    | 1    | 95370Z027 - | HOSE        |
| 4    | 1    | 95371Z091 - | HOSE        |
| 5    | 1    | 95324Z031 - | HOSE        |
| 6    | 1    | 95372Z025 - | HOSE        |
| 7    | 1    | 95372Z025 - | HOSE        |
| 8    | 1    | 95324Z083 - | HOSE        |
| 9    | 1    | 95372Z075 - | HOSE        |
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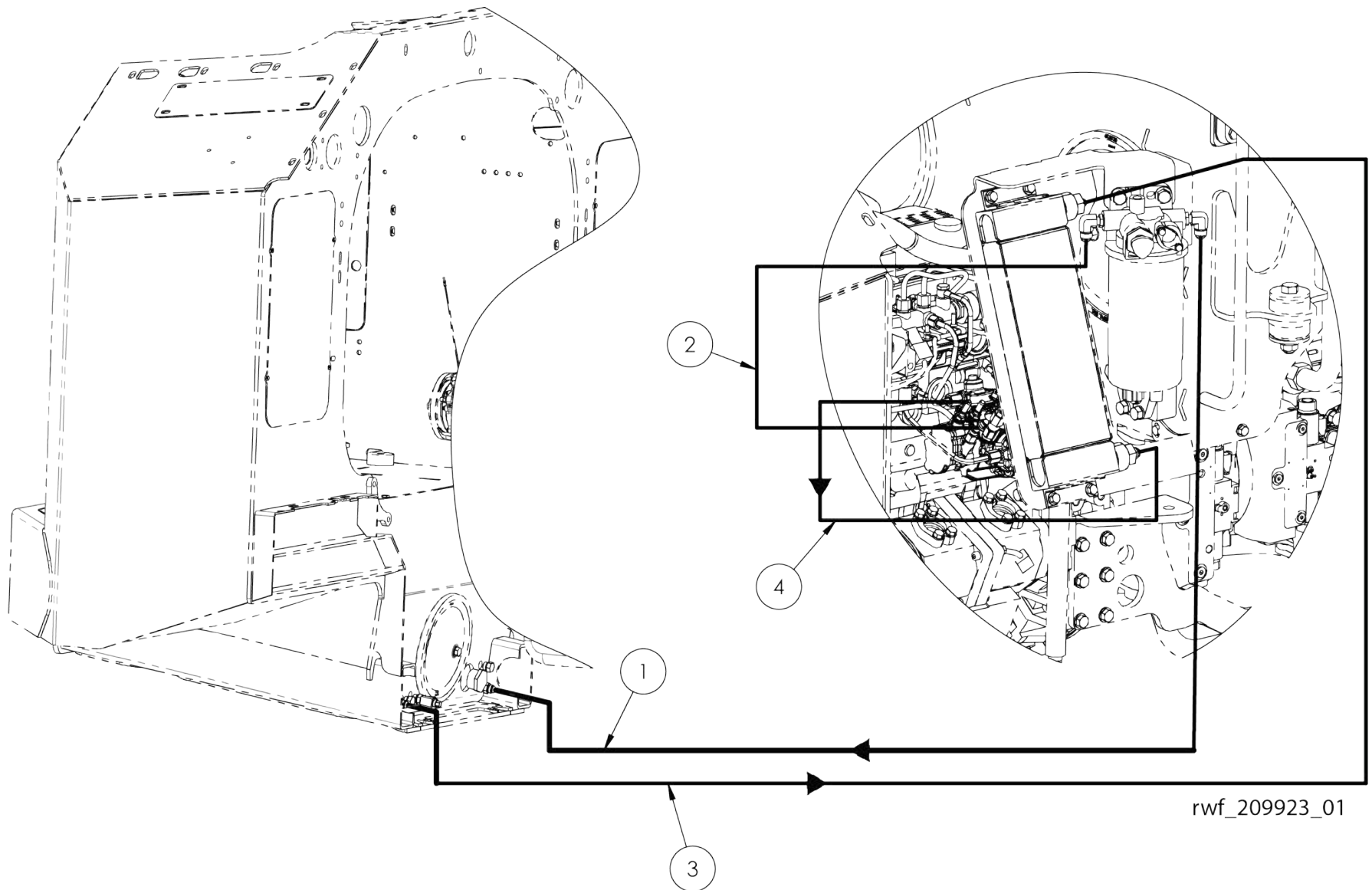




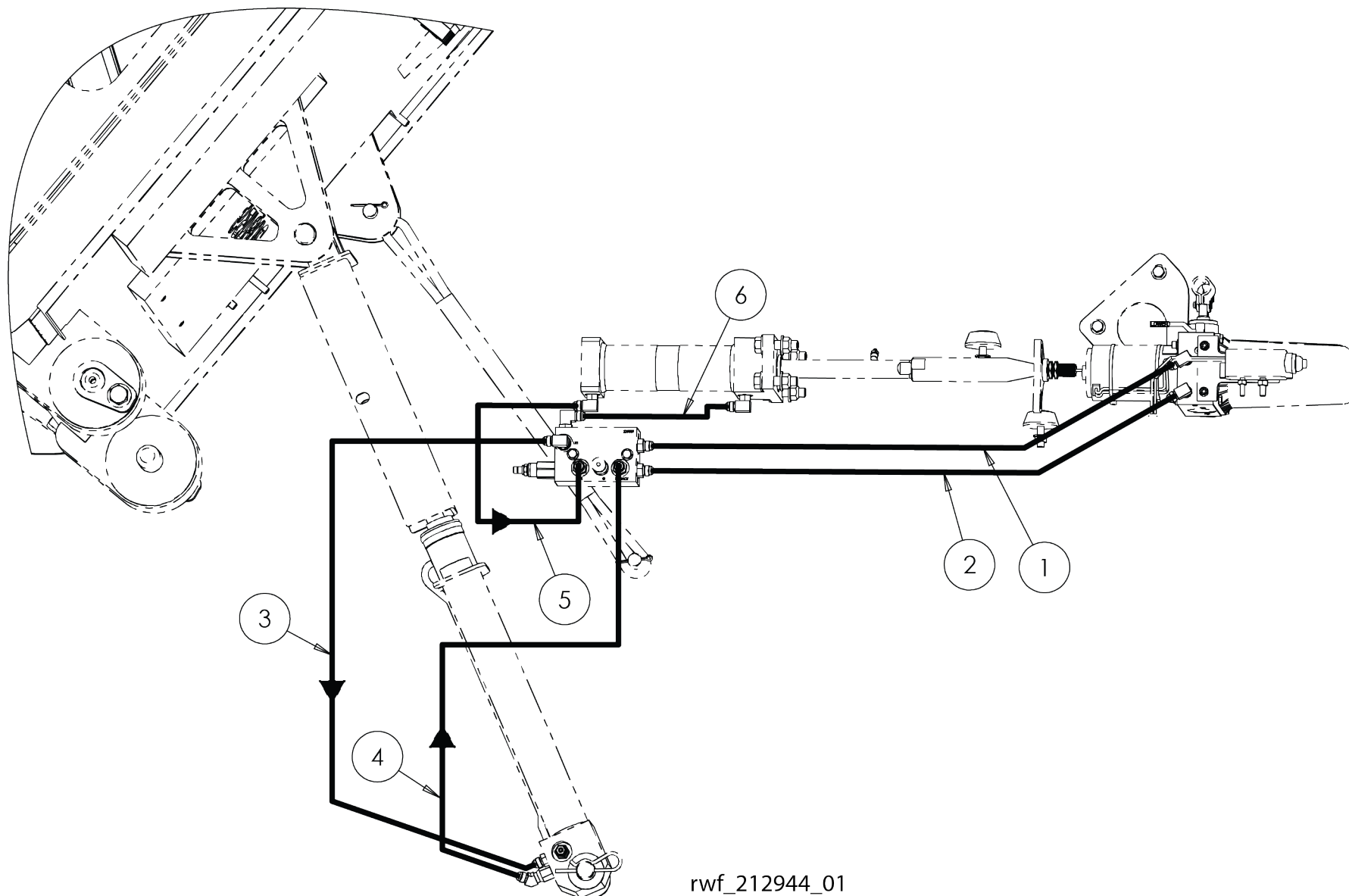
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| 7    | 1    | 95321Z029 - | HOSE        |
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| 9    | 1    | 95311Z021 - | HOSE        |
| 10   | 1    | 95324Z024 - | HOSE        |
| 11   | 1    | 95324Z022 - | HOSE        |
| 12   | 2    | 95340Z022 - | HOSE        |
| 13   | 1    | 95341Z018 - | HOSE        |
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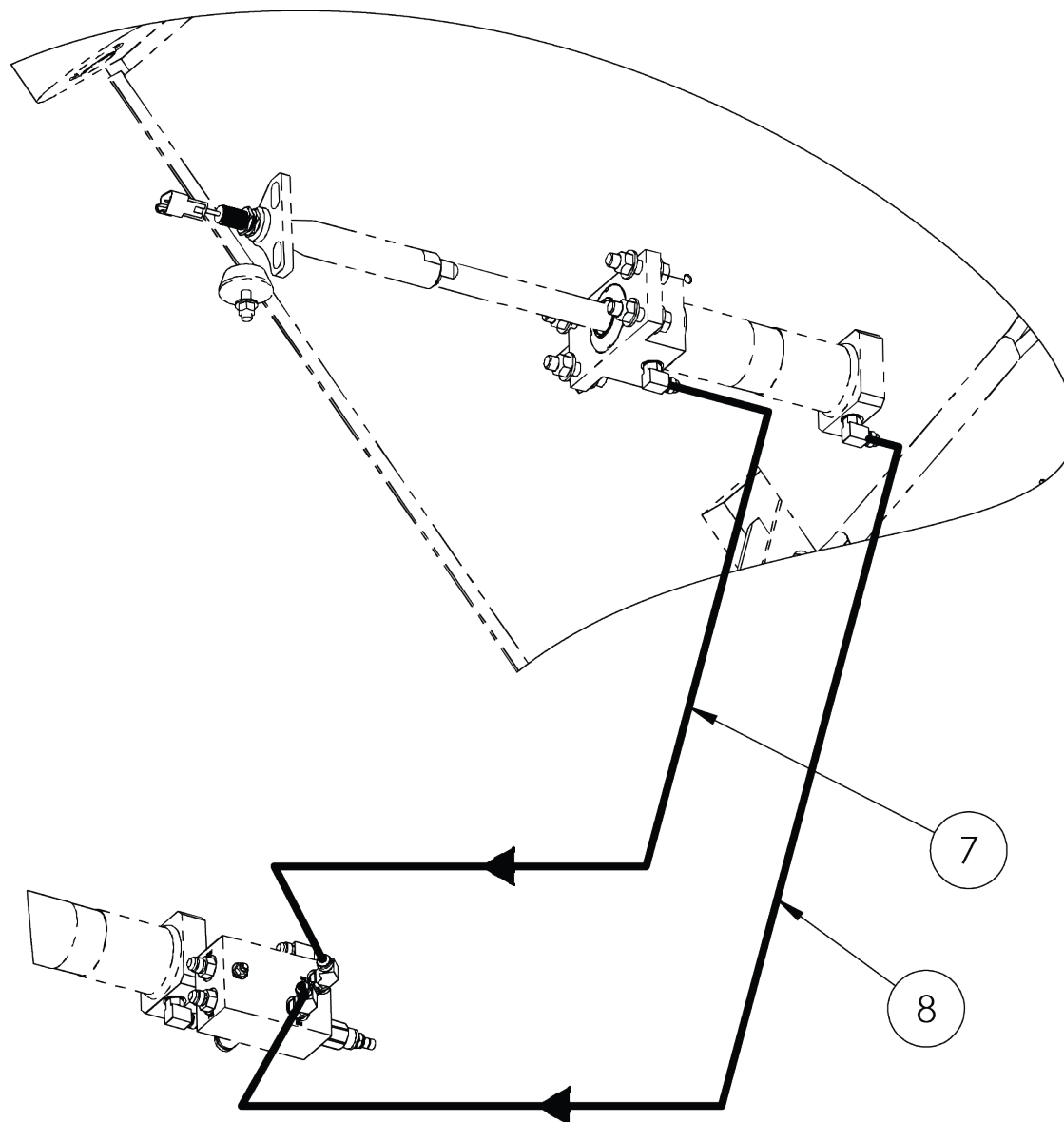




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|------|------|-------------|-------------|
| 1    | 1    | 95306Z089 - | HOSE        |
| 2    | 1    | 95307Z020 - | HOSE        |
| 3    | 1    | 95308Z075 - | HOSE        |
| 4    | 1    | 95309Z015 - | HOSE        |

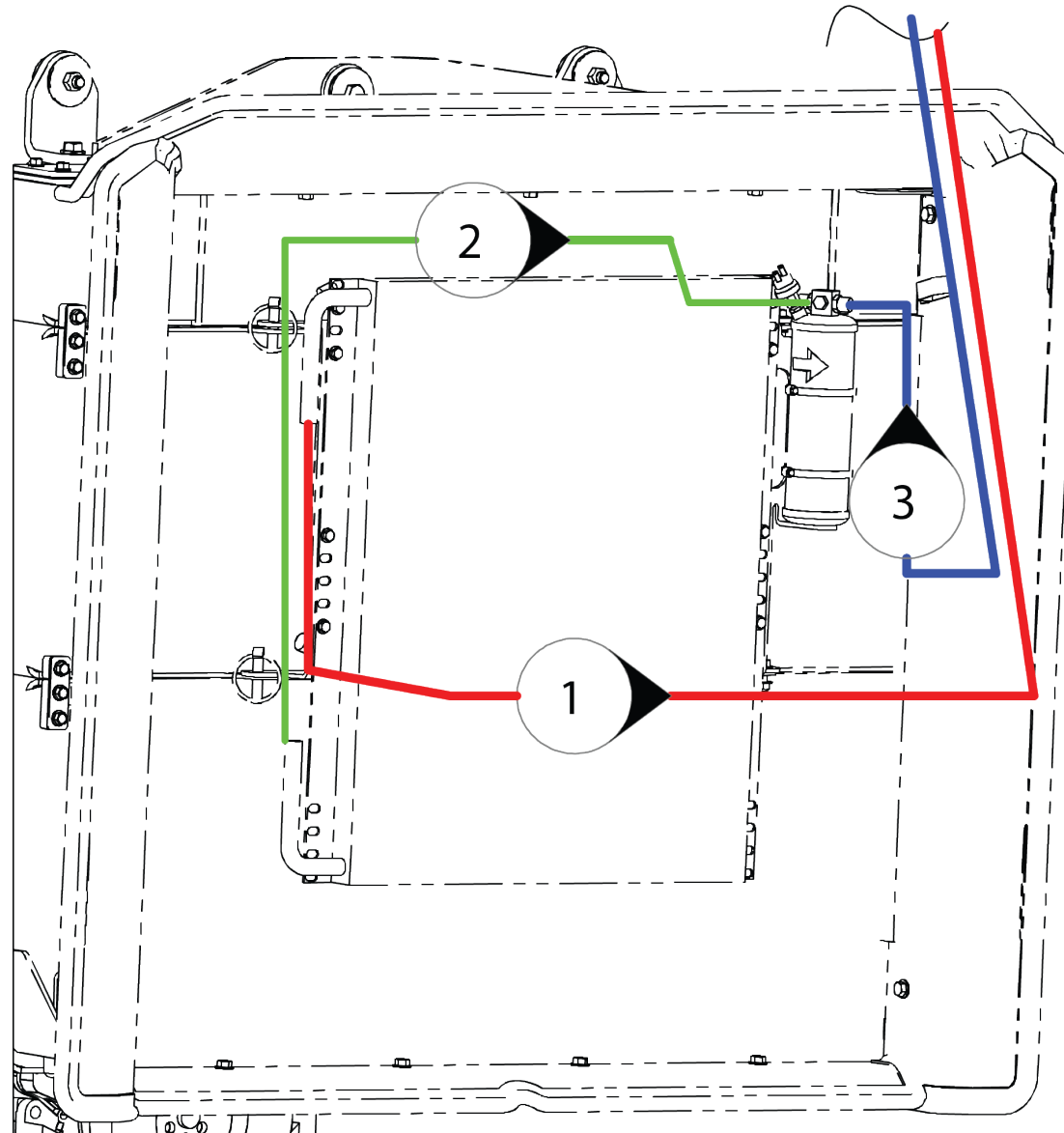


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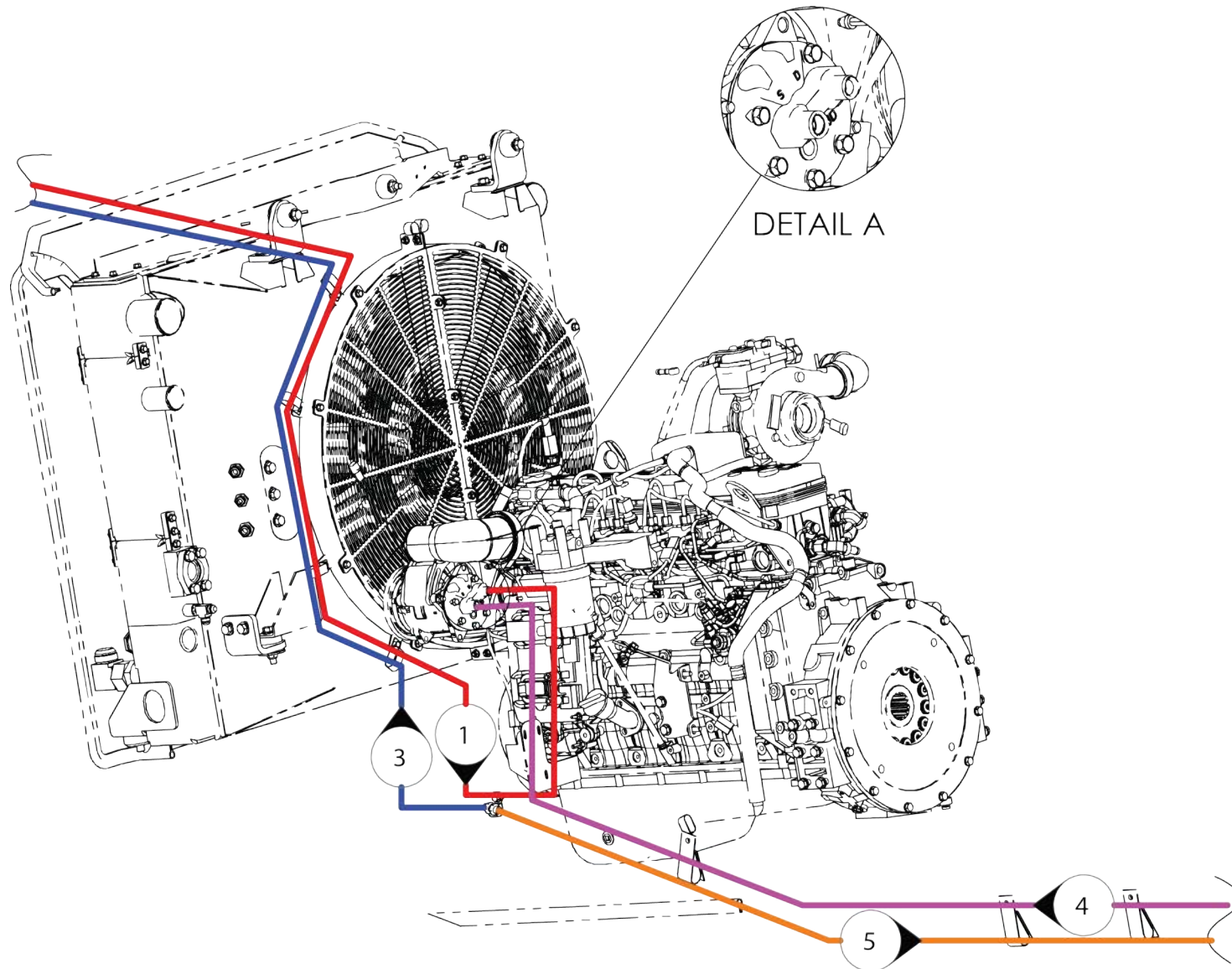


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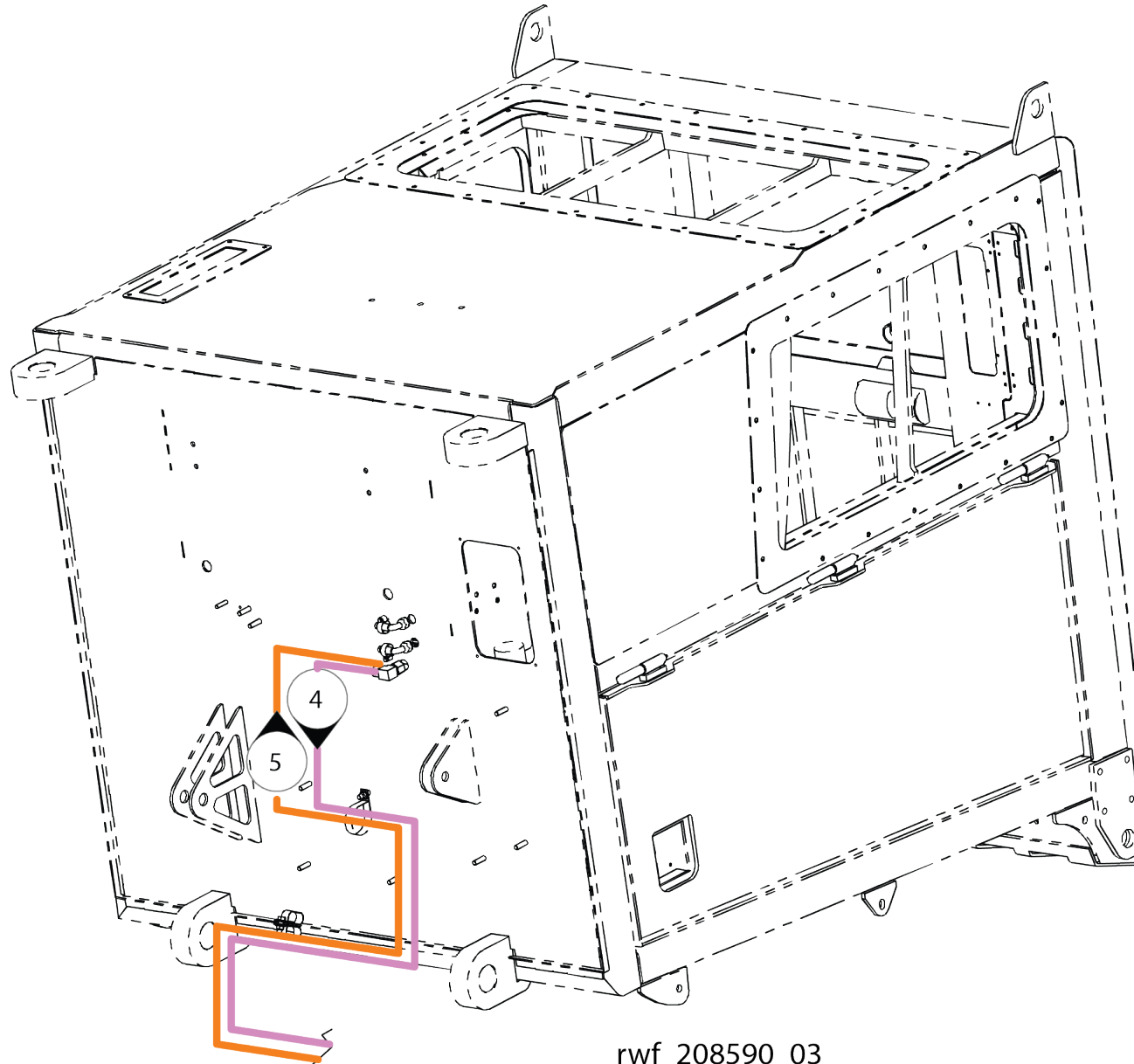
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| 1    | 1    | 95342Z039 - | HOSE        |
| 2    | 1    | 95342Z039 - | HOSE        |
| 3    | 1    | 95344Z041 - | HOSE        |
| 4    | 1    | 95343Z042 - | HOSE        |
| 5    | 1    | 95343Z017 - | HOSE        |
| 6    | 1    | 95342Z011 - | HOSE        |
| 7    | 1    | 95344Z088 - | HOSE        |
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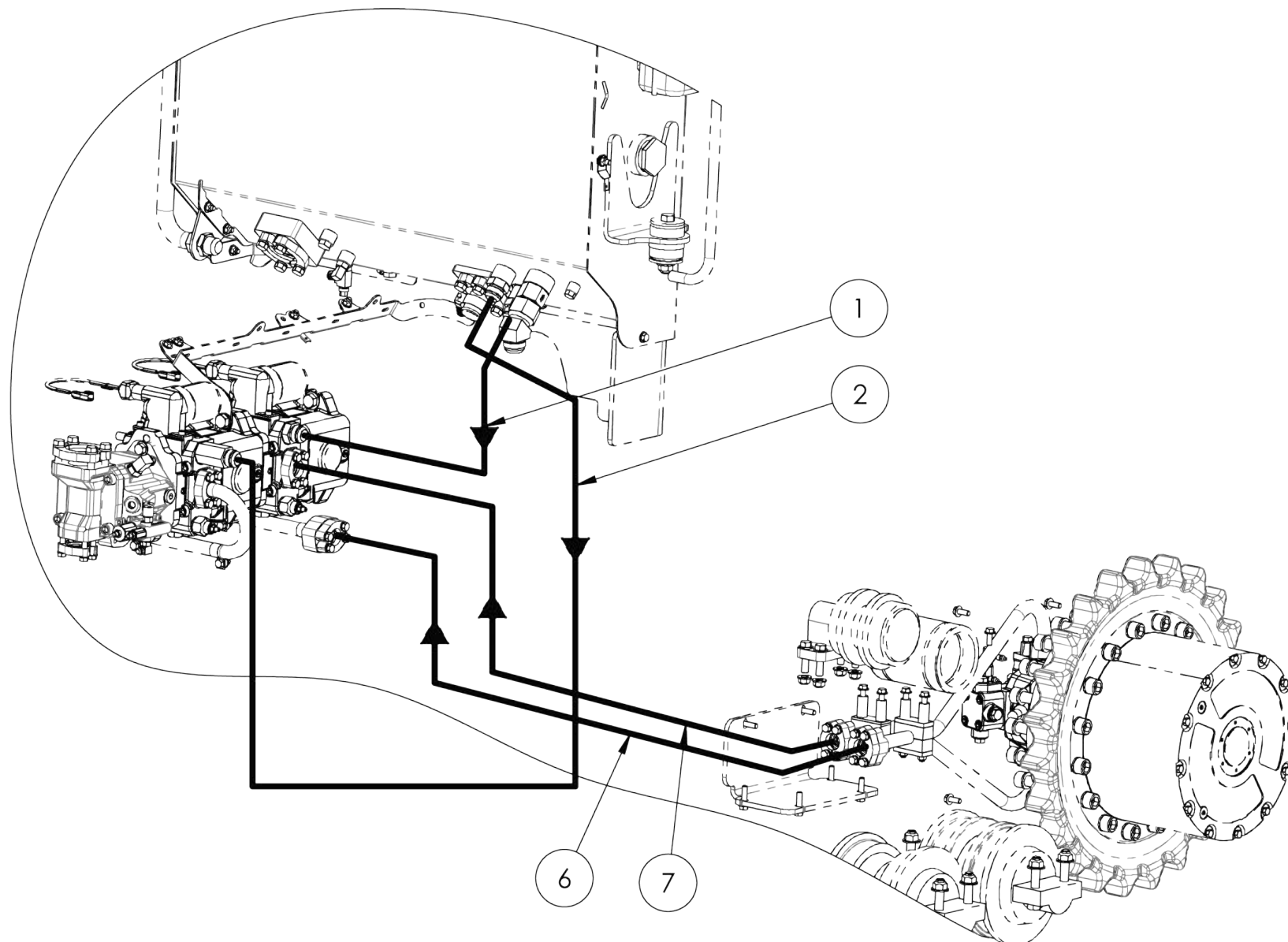
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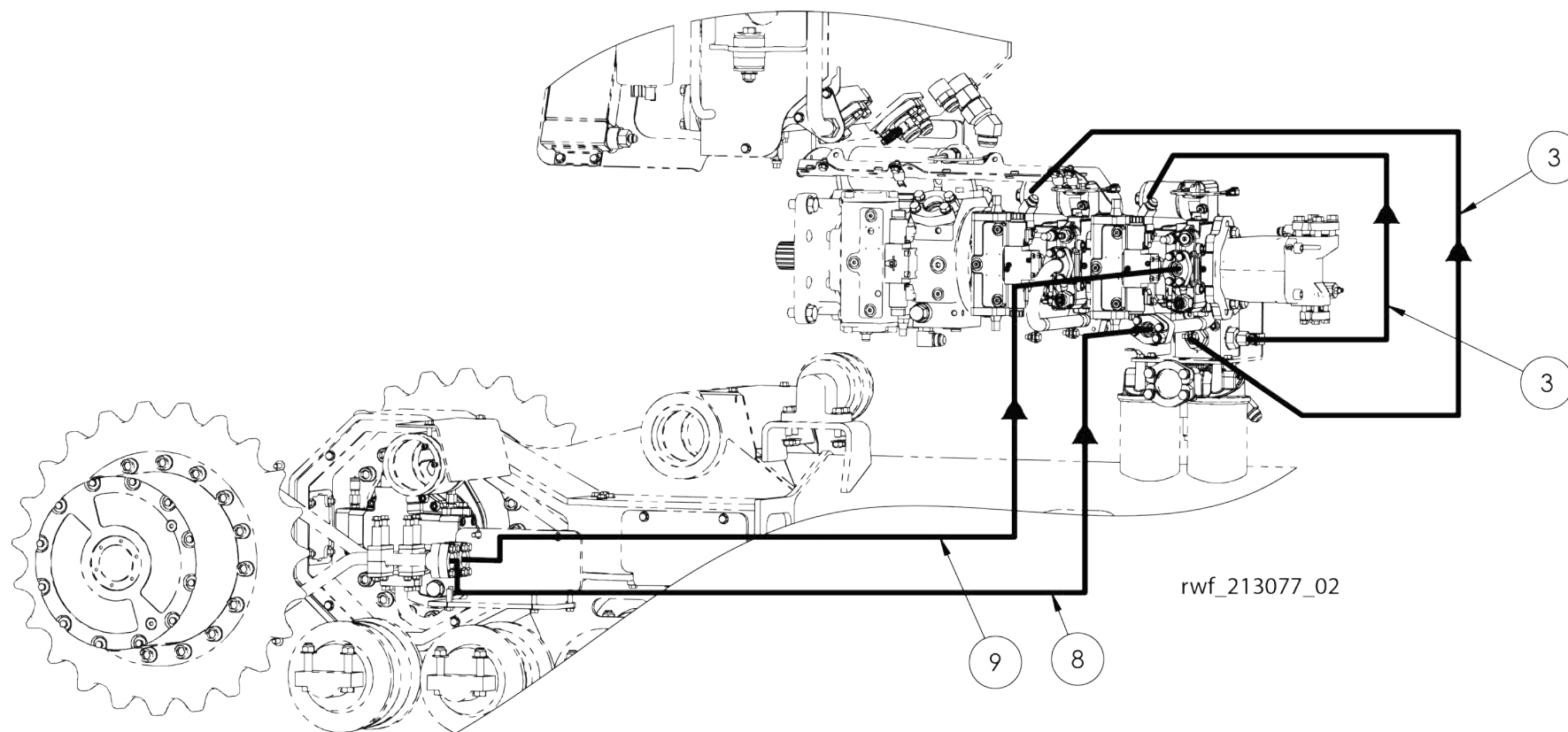
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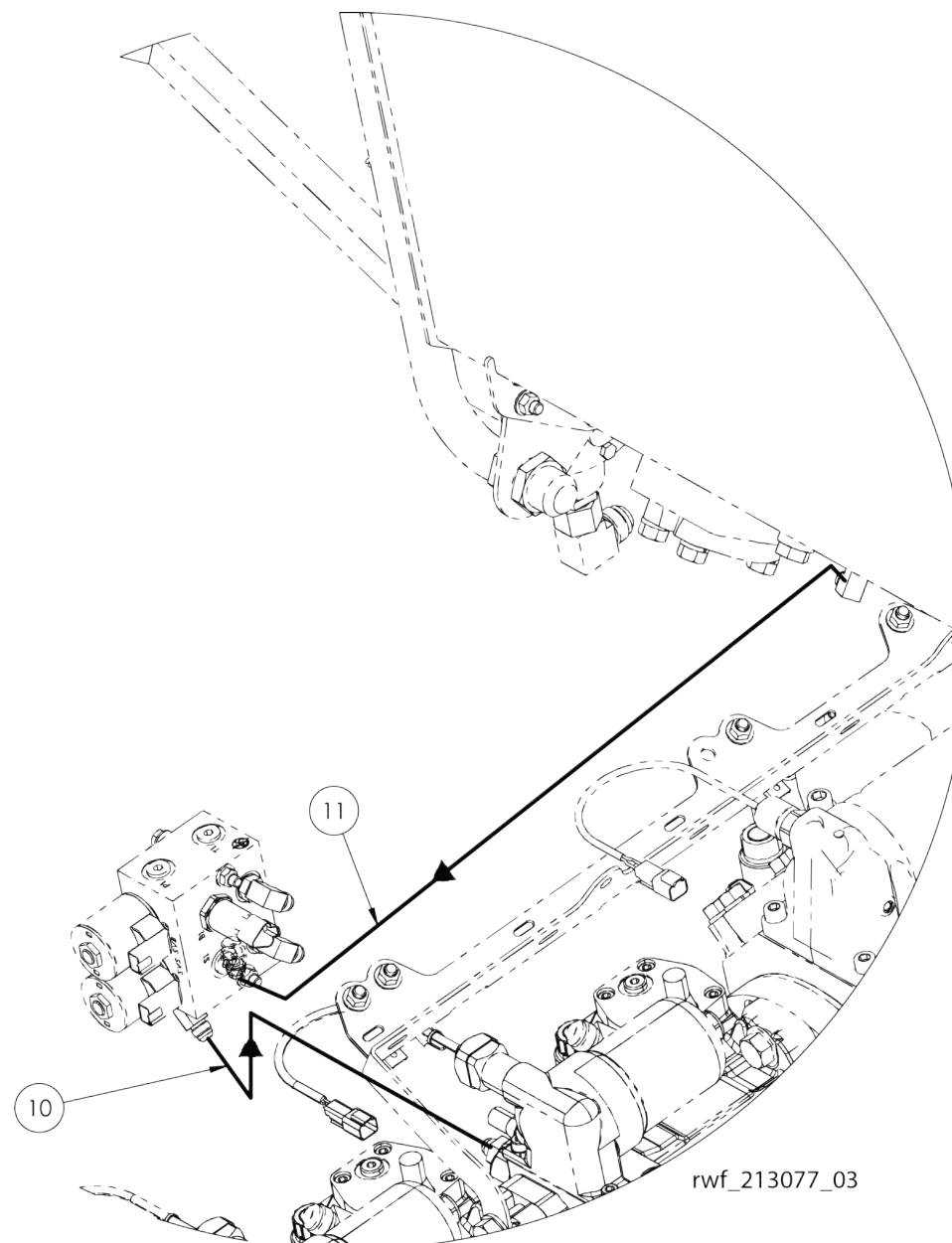


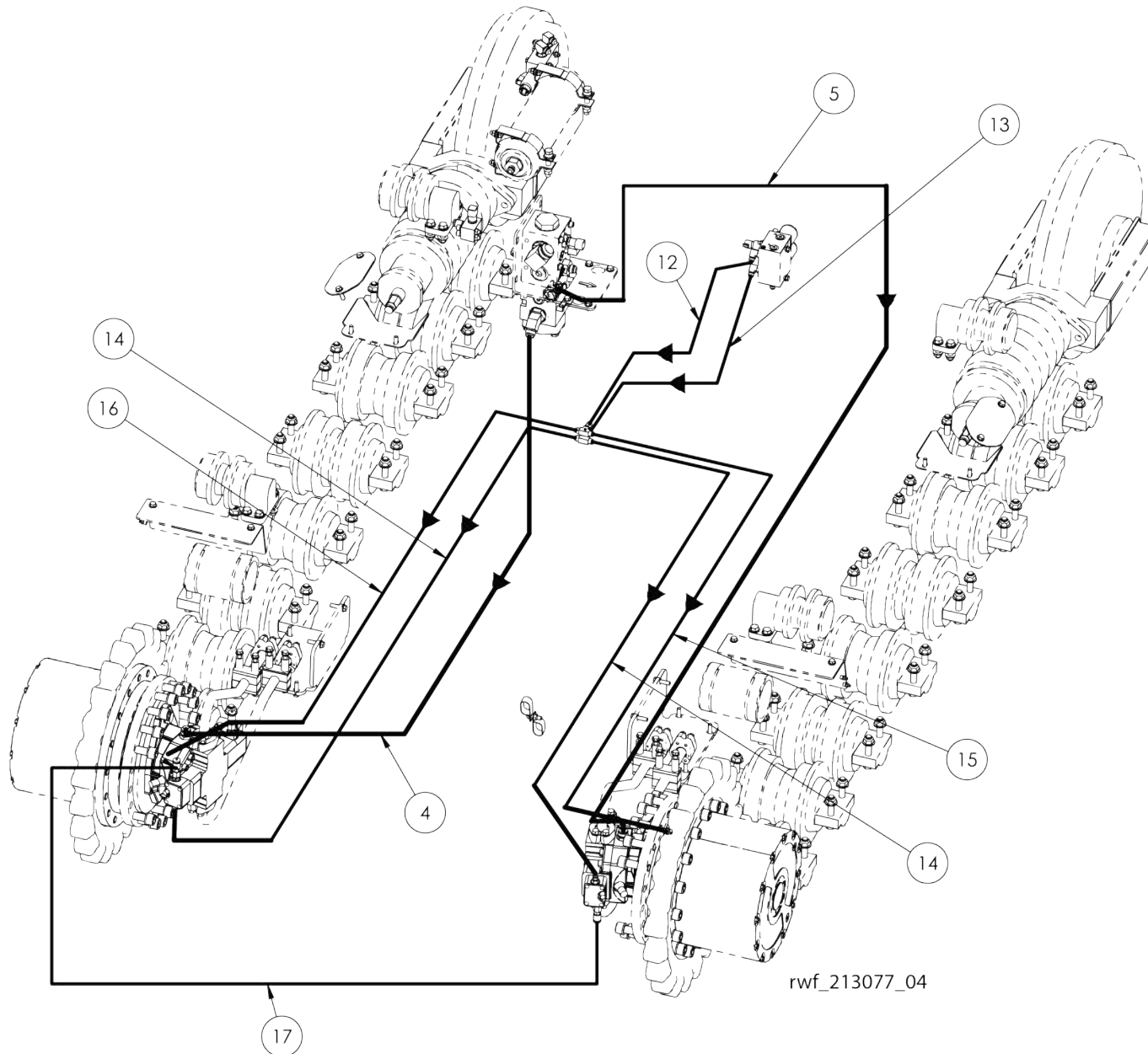
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|------|------|-----------|-------------|
| 1    | 1    | 95123Z178 | HOSE        |
| 2    | 1    | 95121Z047 | HOSE        |
| 3    | 1    | 95121Z106 | HOSE        |
| 4    | 1    | 95125Z206 | HOSE        |
| 5    | 1    | 95121Z196 | HOSE        |



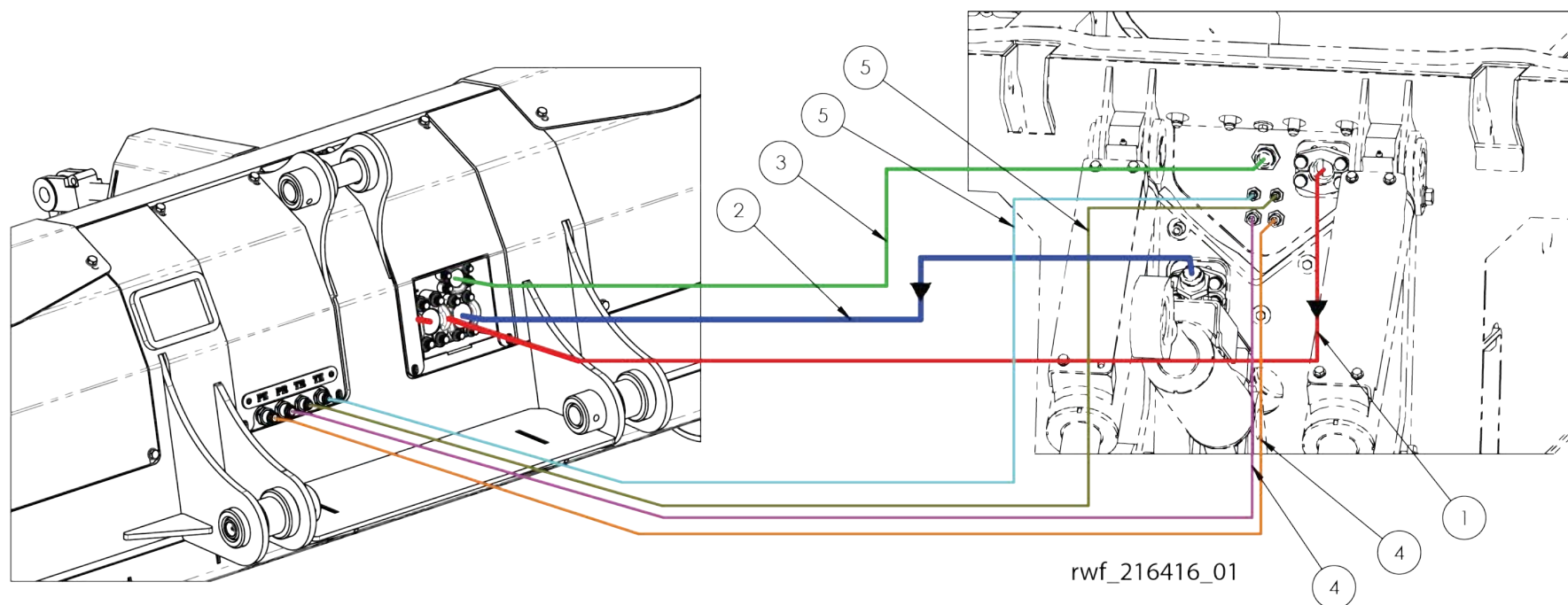
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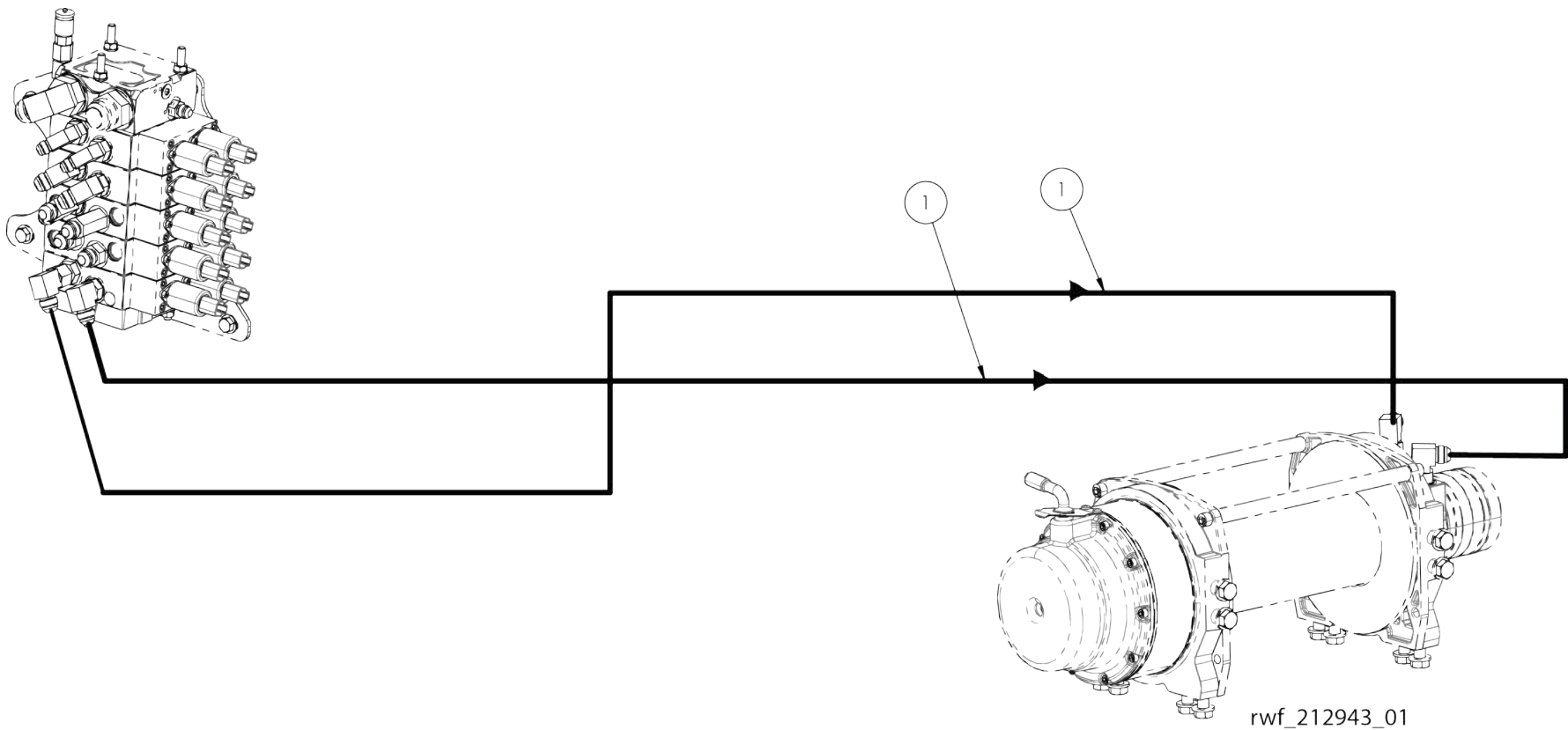
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|------|------|-------------|-------------|
| 1    | 1    | 95310Z022 - | HOSE        |
| 2    | 1    | 95310Z031 - | HOSE        |
| 3    | 2    | 95311Z031 - | HOSE        |
| 4    | 1    | 95312Z081 - | HOSE        |
| 5    | 1    | 95312Z120 - | HOSE        |
| 6    | 1    | 95313Z060 - | HOSE        |
| 7    | 1    | 95313Z063 - | HOSE        |
| 8    | 1    | 95313Z068 - | HOSE        |
| 9    | 1    | 95313Z072 - | HOSE        |
| 10   | 1    | 95315Z015 - | HOSE        |
| 11   | 1    | 95314Z028 - | HOSE        |
| 12   | 1    | 95315Z032 - | HOSE        |
| 13   | 1    | 95315Z032 - | HOSE        |
| 14   | 2    | 95315Z082 - | HOSE        |
| 15   | 1    | 95314Z075 - | HOSE        |
| 16   | 1    | 95314Z077 - | HOSE        |
| 17   | 1    | 95316Z164 - | HOSE        |



| item | Qty. | P/N          | Description |
|------|------|--------------|-------------|
| 1    | 1    | 95376Z070 WS | HOSE        |
| 2    | 1    | 95528Z068 WS | HOSE        |
| 3    | 1    | 95527Z069 WS | HOSE        |
| 4    | 2    | 95381Z070 WS | HOSE        |
| 5    | 2    | 95333Z070 WS | HOSE        |

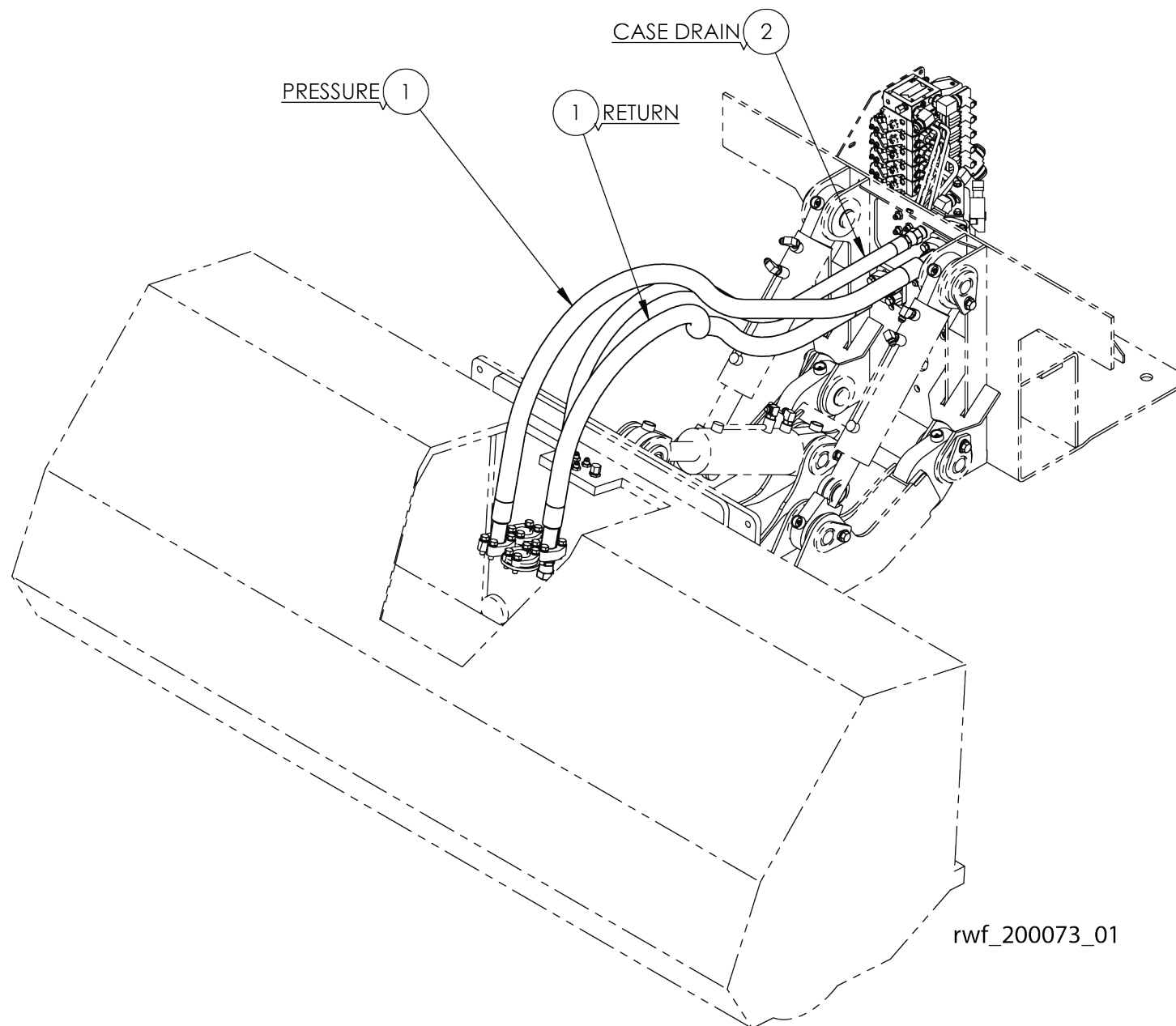


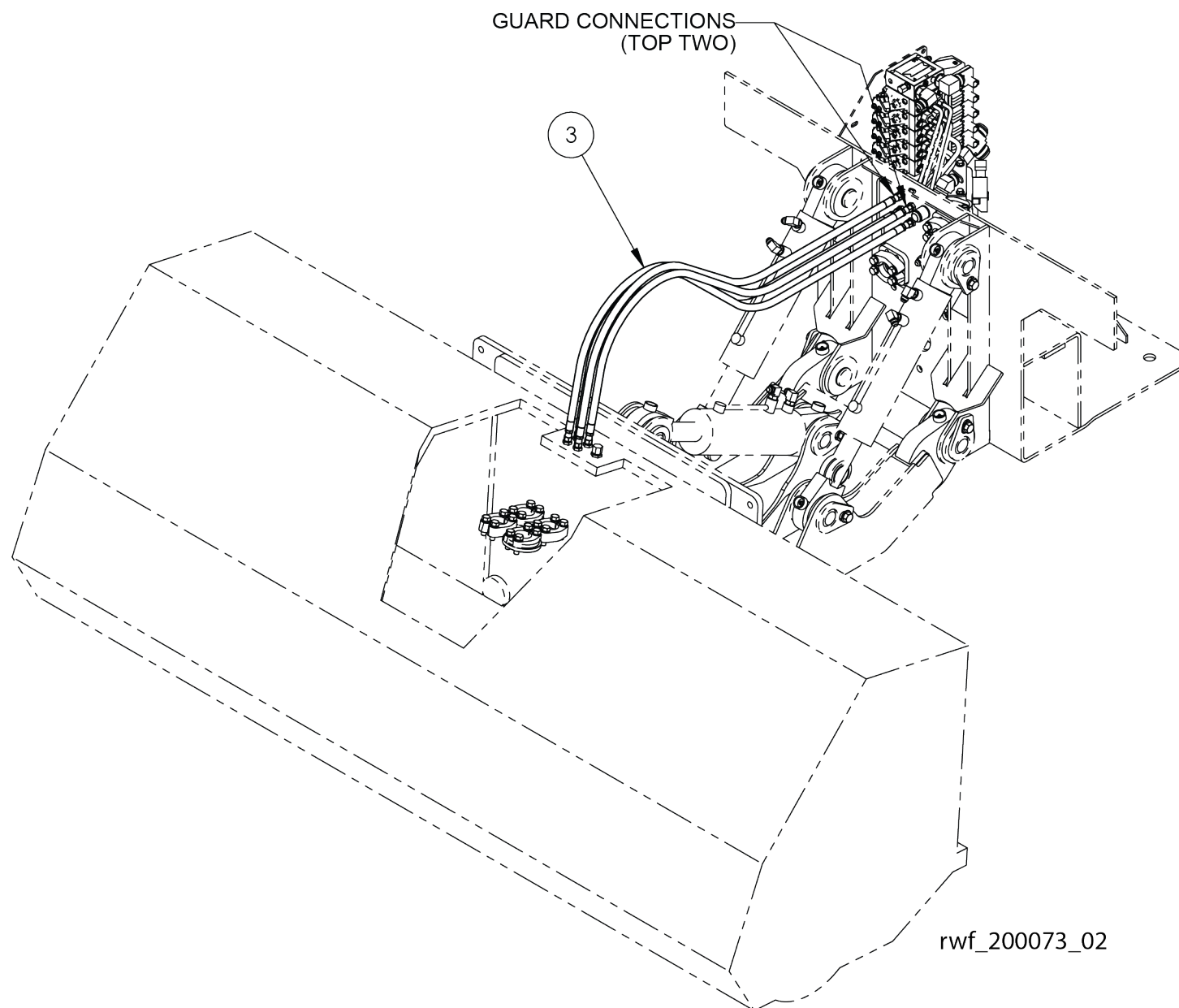
| item | Qty. | P/N       | Description             |
|------|------|-----------|-------------------------|
| 1    | REF  | SVP101556 | 90 DEG FITTING          |
| 2    | REF  | SVP101557 | STR FITTING             |
| 3    | REF  | SVP101560 | SINGLE CONE COMPRESSION |
| 4    | REF  | SVP101561 | CAP NUT                 |
| 5    | REF  | SVP101562 | TUBULAR                 |
| 6    | REF  | SVP101563 | STR TUBULAR             |



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| item | Qty. | P/N         | Description |
|------|------|-------------|-------------|
| 1    | 2    | 95326Z147 - | HOSE        |

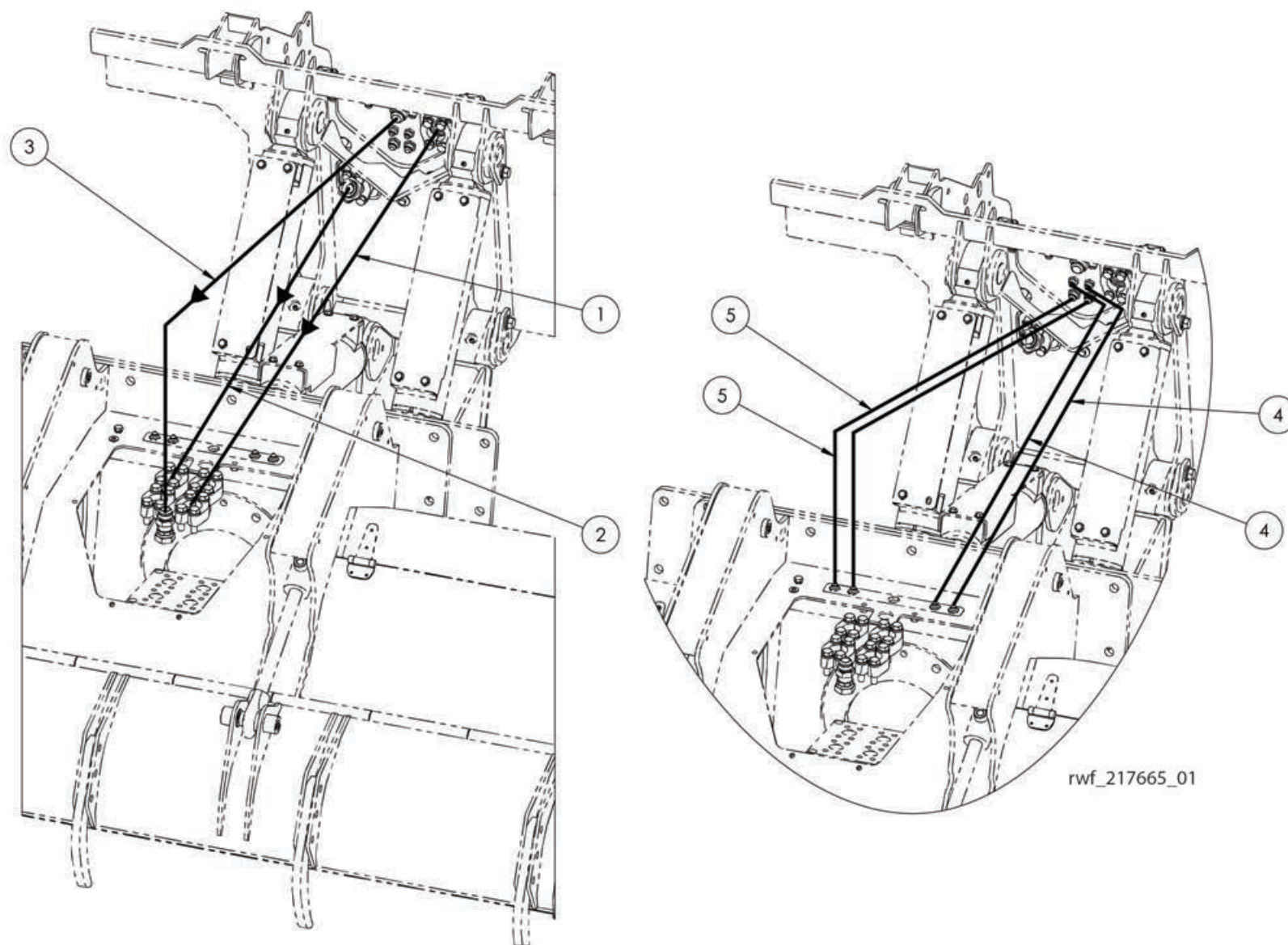




HOSE ASSEMBLY LENGTH IS DETERMINED BY THE LAST 3 DIGITS OF THE PART NUMBER IN INCHES.

FOR EXAMPLE: **95000Z123** IS A HOSE WITH A **123 INCH** LENGTH.

| Item | Quantity | Part Number | Description |
|------|----------|-------------|-------------|
| 1    | 2        | 95011Z114   | HOSE        |
| 2    | 1        | 95035Z114   | HOSE        |
| 3    | 4        | 95068Z083   | HOSE        |



HOSE ASSEMBLY LENGTH IS DETERMINED BY THE LAST 3 DIGITS OF THE PART NUMBER IN INCHES.

FOR EXAMPLE: **95000Z123** IS A HOSE WITH A **123 INCH** LENGTH.

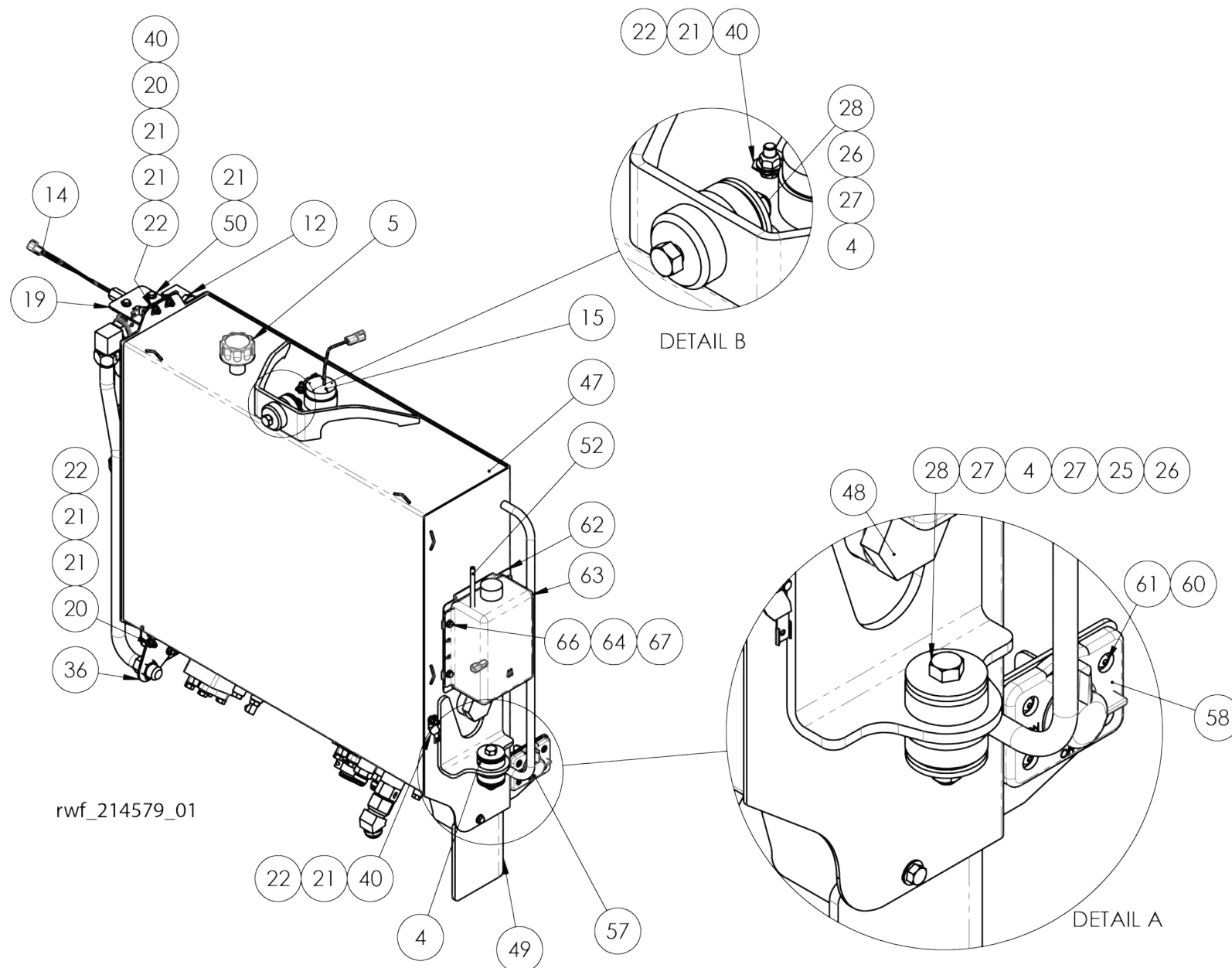
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|------|------|-------------|-------------|--------------------------------|
| 1    | 1    | 95376Z096 - | HOSE        | BRON - MULCHER HEAD SUPPLY     |
| 2    | 1    | 95549Z092 - | HOSE        | BRON - MULCHER HEAD RETURN     |
| 3    | 1    | 95319Z101 - | HOSE        | BRON - MULCHER HEAD CASE DRAIN |
| 4    | 2    | 95327Z101 - | HOSE        | BRON - MULCHER HEAD TRAP DOOR  |
| 5    | 2    | 95550Z101 - | HOSE        | BRON - MULCHER HEAD PUSH BAR   |

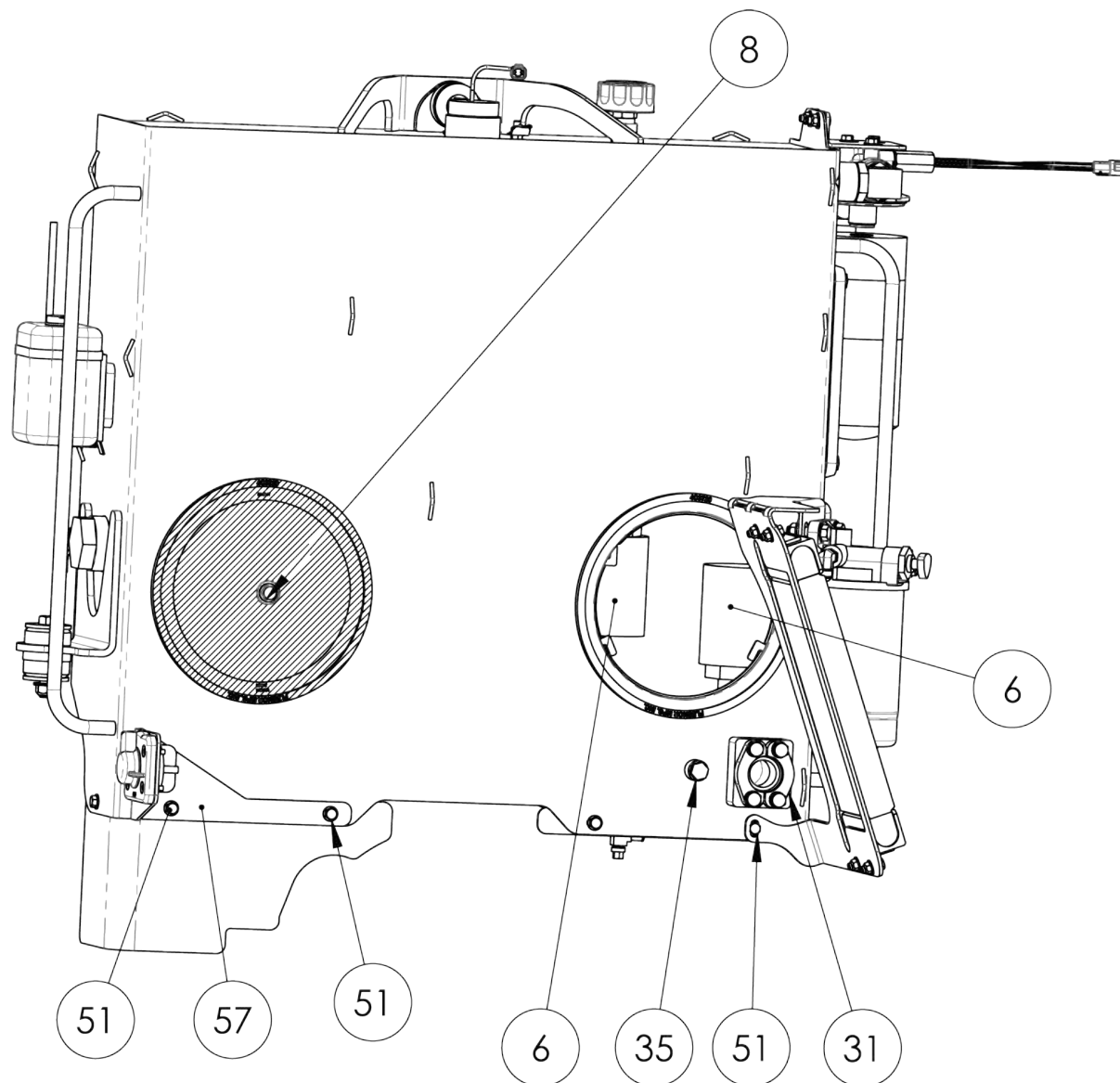


# CHAPTER 7: HYDRAULICS & PNEUMATICS

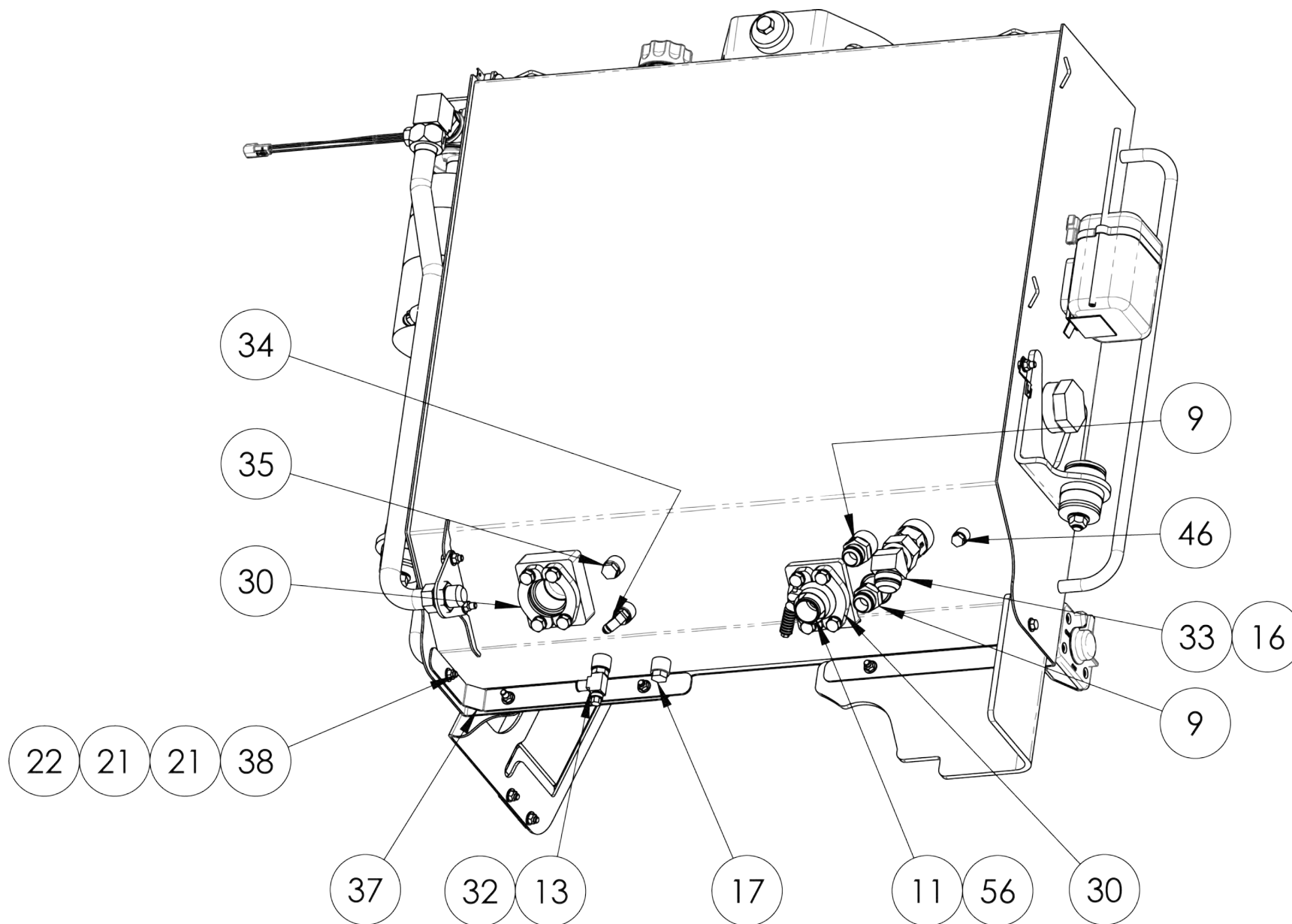
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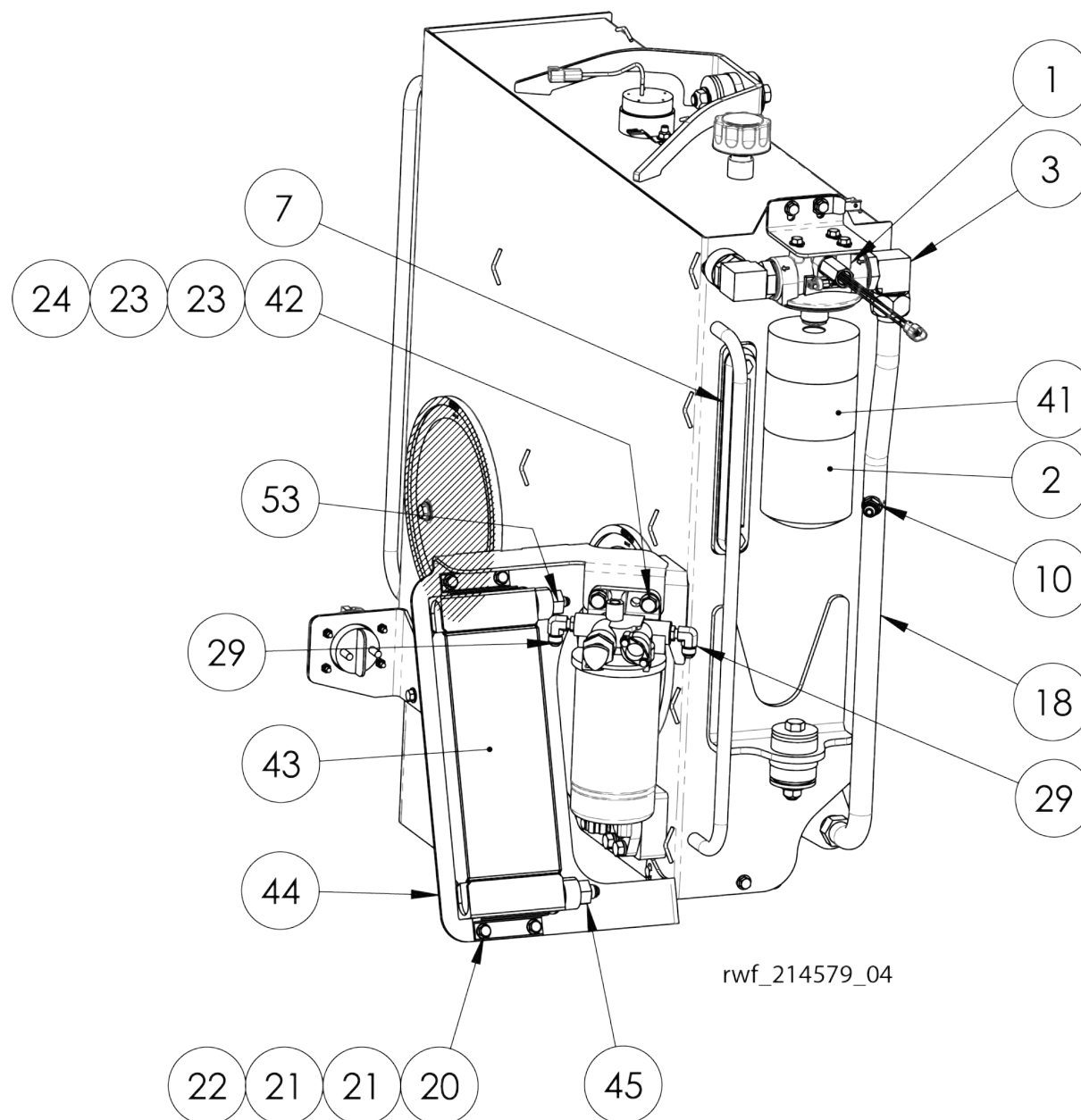




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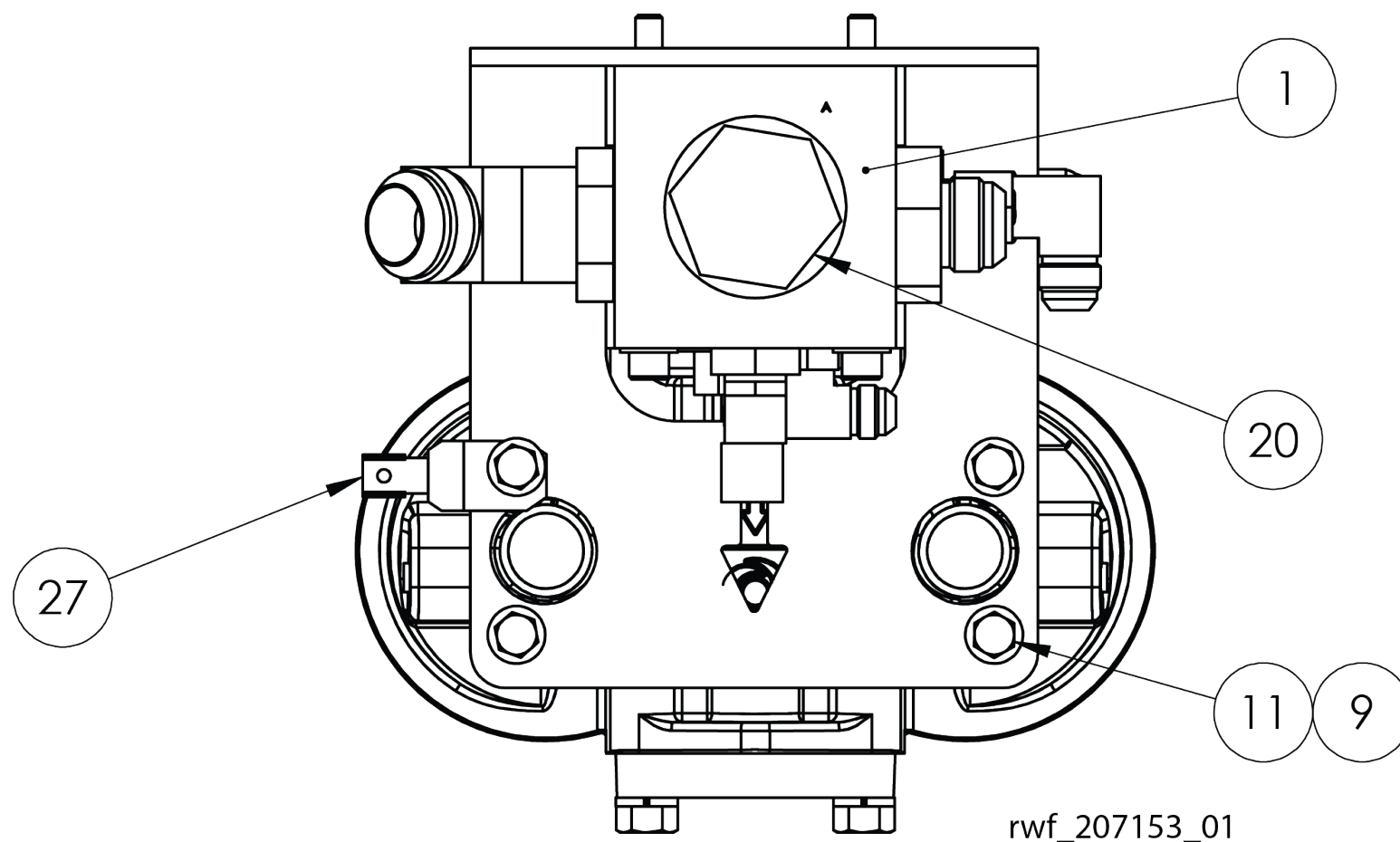


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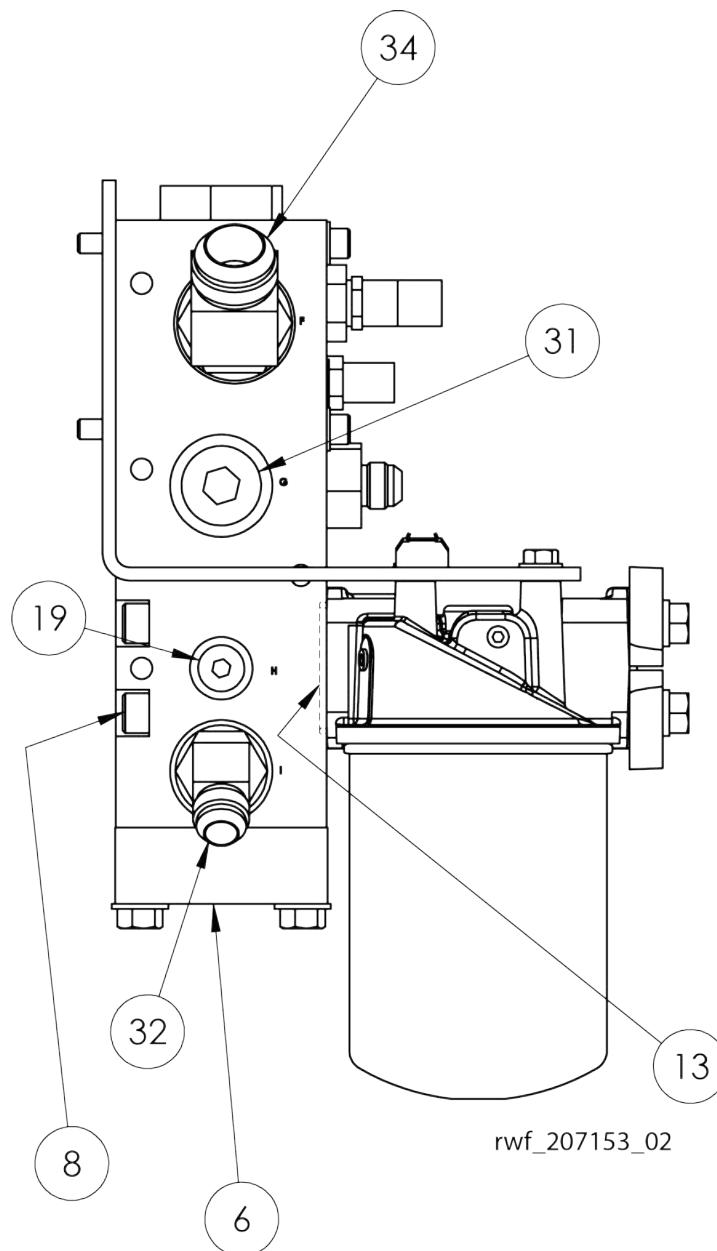


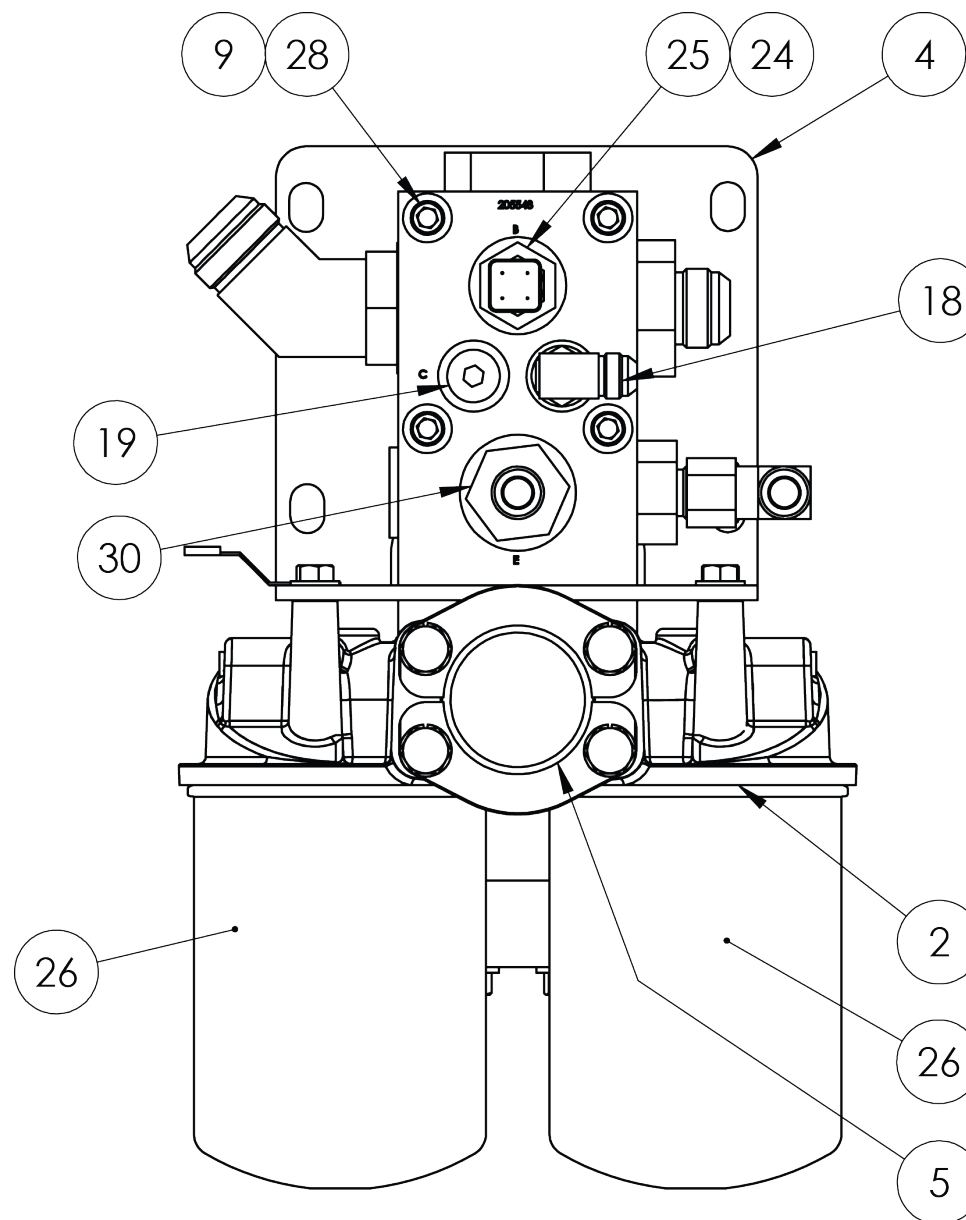
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|------|------|-----------|----------------------------------------------|
| 1    | 1    | 9900418   | HEAD, BYPASS                                 |
| 2    | 1    | 9900419   | FILTER, SPIN                                 |
| 3    | 1    | 90257     | ADAPTER                                      |
| 4    | 3    | 130609    | RUBBER MOUNT ENGINE                          |
| 5    | 1    | 9900420   | BREATHER                                     |
| 6    | 2    | 9901206   | DIFFUSER                                     |
| 7    | 1    | 9900421   | GAUGE, SIGHT LEVEL                           |
| 8    | REF  | 9901797   | COVER, HYD TANK                              |
| 9    | 2    | 90079     | ADAPTER, STR                                 |
| 10   | 1    | 9901782   | CHECK VALVE                                  |
| 11   | 1    | 9901222   | ADAPTER, STR                                 |
| 12   | 1    | 94029-010 | ADAPTER                                      |
| 13   | 1    | 9900606   | VALVE, RUN                                   |
| 14   | 1    | 145329    | REWORK, PRESSURE SWITCH - TANK FILTER RETURN |
| 15   | 1    | 9901624   | FUEL LEVEL SENDER                            |
| 16   | 1    | 9901781   | CHECK VALVE                                  |
| 17   | 1    | 90489     | PLUG, HEX HEAD                               |
| 18   | 1    | 207367    | TUBE, AUX RETURN                             |
| 19   | 1    | 207373    | FORMED, OIL MOUNT                            |
| 20   | 8    | 80029     | BOLT - HEX HD                                |
| 21   | 33   | 80578     | WASHER - SAE                                 |
| 22   | 16   | 80513     | NUT - LOCK                                   |
| 23   | 4    | 80580     | WASHER - SAE                                 |
| 24   | 2    | 80515     | NUT - LOCK                                   |
| 25   | 3    | 80516     | NUT - LOCK                                   |
| 26   | 3    | 80581     | WASHER - SAE                                 |
| 27   | 5    | 130116    | WASHER                                       |
| 28   | 3    | 80100     | BOLT - HEX HD                                |
| 29   | 2    | 94031     | ADAPTER                                      |
| 30   | 2    | 90878     | KIT - FLANGE                                 |
| 31   | 1    | 90877     | KIT - FLANGE                                 |
| 32   | 1    | 90627     | O-RING                                       |
| 33   | 1    | 90267     | ELBOW, SWIVEL                                |

| item | Qty.       | P/N       | Description                         |
|------|------------|-----------|-------------------------------------|
| 34   | 1          | 90245     | ADAPTER                             |
| 35   | 2          | 90314     | PLUG, HEX HEAD                      |
| 36   | 1          | 207805    | BRACKET, TUBE MOUNT                 |
| 37   | 2          | 207804    | RETAINER, SPRAY SHIELD              |
| 38   | 3          | 80030     | BOLT - HEX HD                       |
| 39   | 2          | 80576     | WASHER - SAE                        |
| 40   | 3          | 9900585   | CLIP, MOUNT DEUTSCH DT/DTM/DTP/DTHD |
| 41   | 1          | 138637    | DECAL, FACTORY INSTALLED            |
| 42   | 2          | 80073     | BOLT - HEX HD                       |
| 43   | 1          | 9901904   | COOLER                              |
| 44   | 1          | 208324    | BRACKET, FUEL COOLER                |
| 45   | 1          | 90075     | ADAPTER, STR                        |
| 46   | 1          | 90313     | PLUG, HEX HEAD HEX HEAD             |
| 47   | 1          | 208544    | TANK, HYDRAULIC                     |
| 48   | 1          | 90321     | PLUG, HEX HEAD HEX HEAD             |
| 49   | 2          | 207803    | SPRAY SHIELD, RUBBER                |
| 50   | 3          | 80028     | BOLT - HEX HD                       |
| 51   | 3          | 80031     | BOLT - HEX HD                       |
| 52   | 0.5 (25FT) | 9901894   | WASHER HOSE LENGTH                  |
| 53   | 1          | 90093     | ADAPTER, STR                        |
| 55   | 2          | 80449     | BOLT - HEX HD                       |
| 56   | 1          | 9900720   | CLAMP, T-BOLT CT                    |
| 57   | 1          | 214554    | FORMED, STARTER DISCONNECT          |
| 58   | 1          | 9902296   | SWITCH                              |
| 60   | 4          | 80511     | NUT - LOCK                          |
| 61   | 4          | 80410     | SCREW                               |
| 62   | 1          | 217288    | FORMED, WASHER TANK MOUNT           |
| 63   | 1          | 152250    | REWORK, 4.5L WASHER RESERVOIR       |
| 64   | 4          | 80577     | WASHER - SAE                        |
| 66   | 4          | 80014     | BOLT - HEX HD.                      |
| 67   | 4          | 80705-007 | NUT                                 |

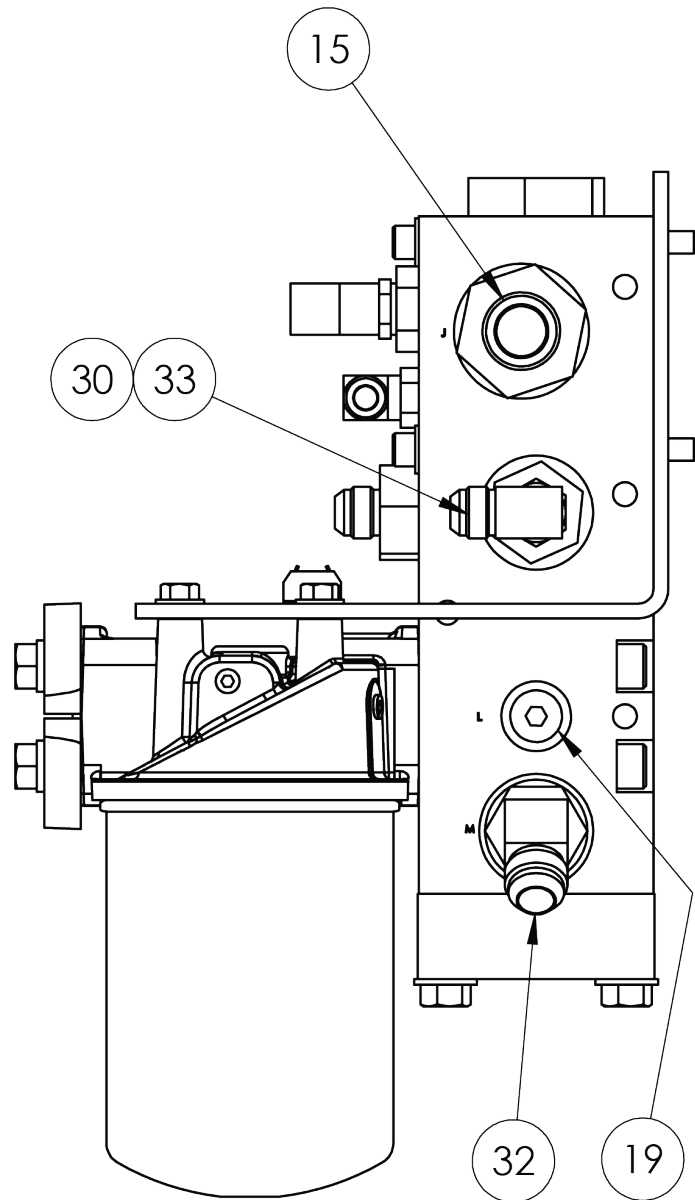






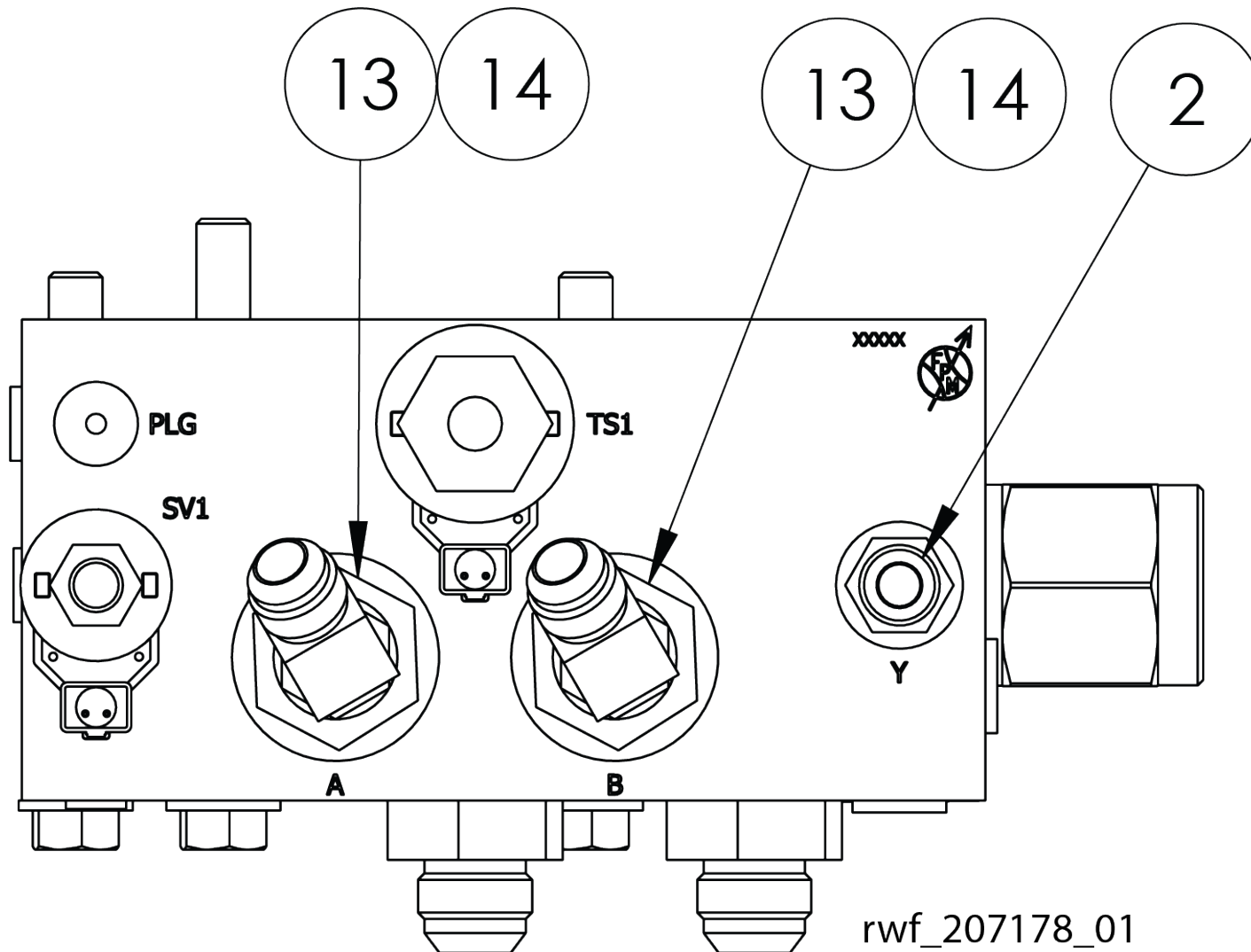


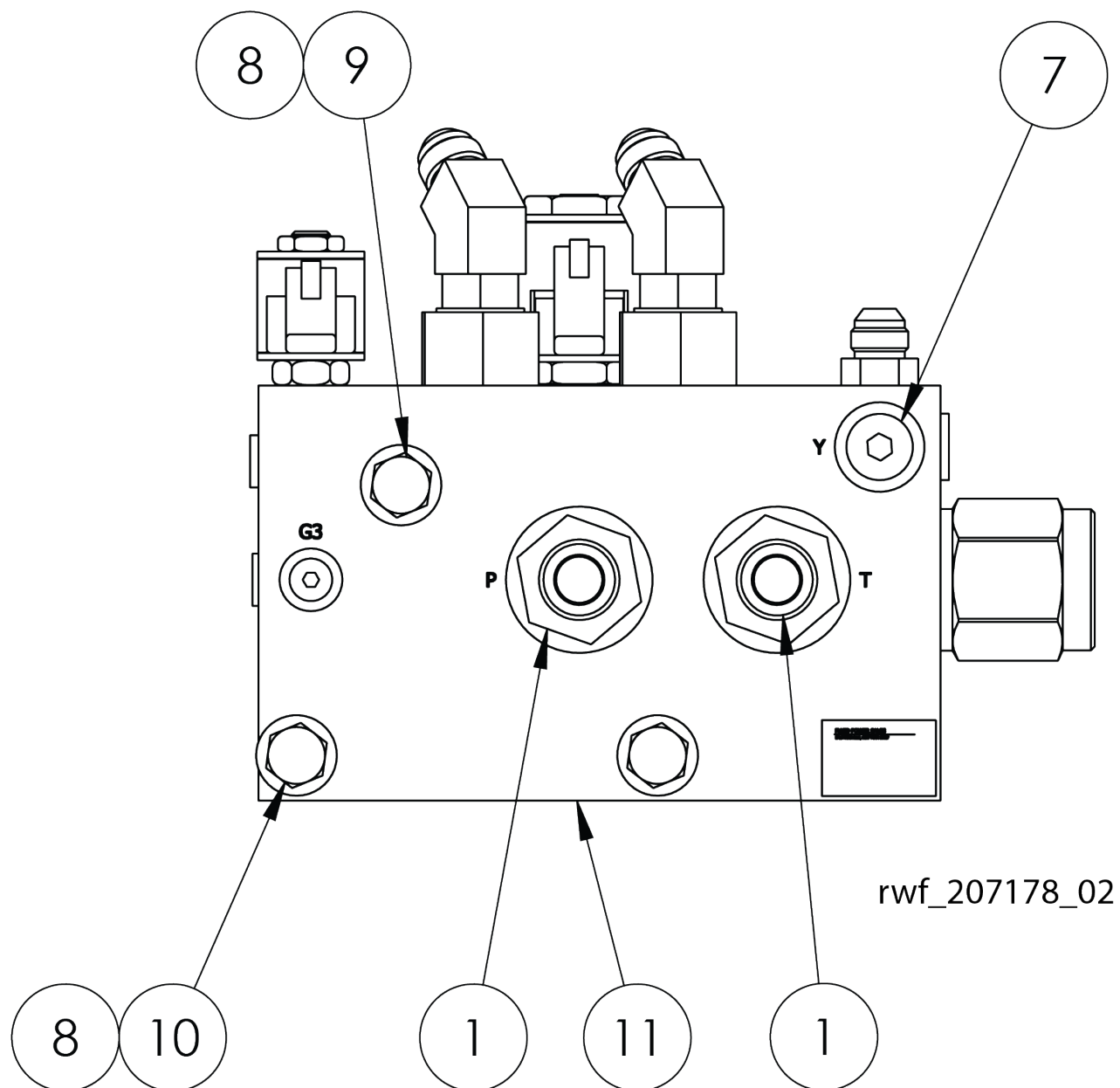
rwf\_207153\_03

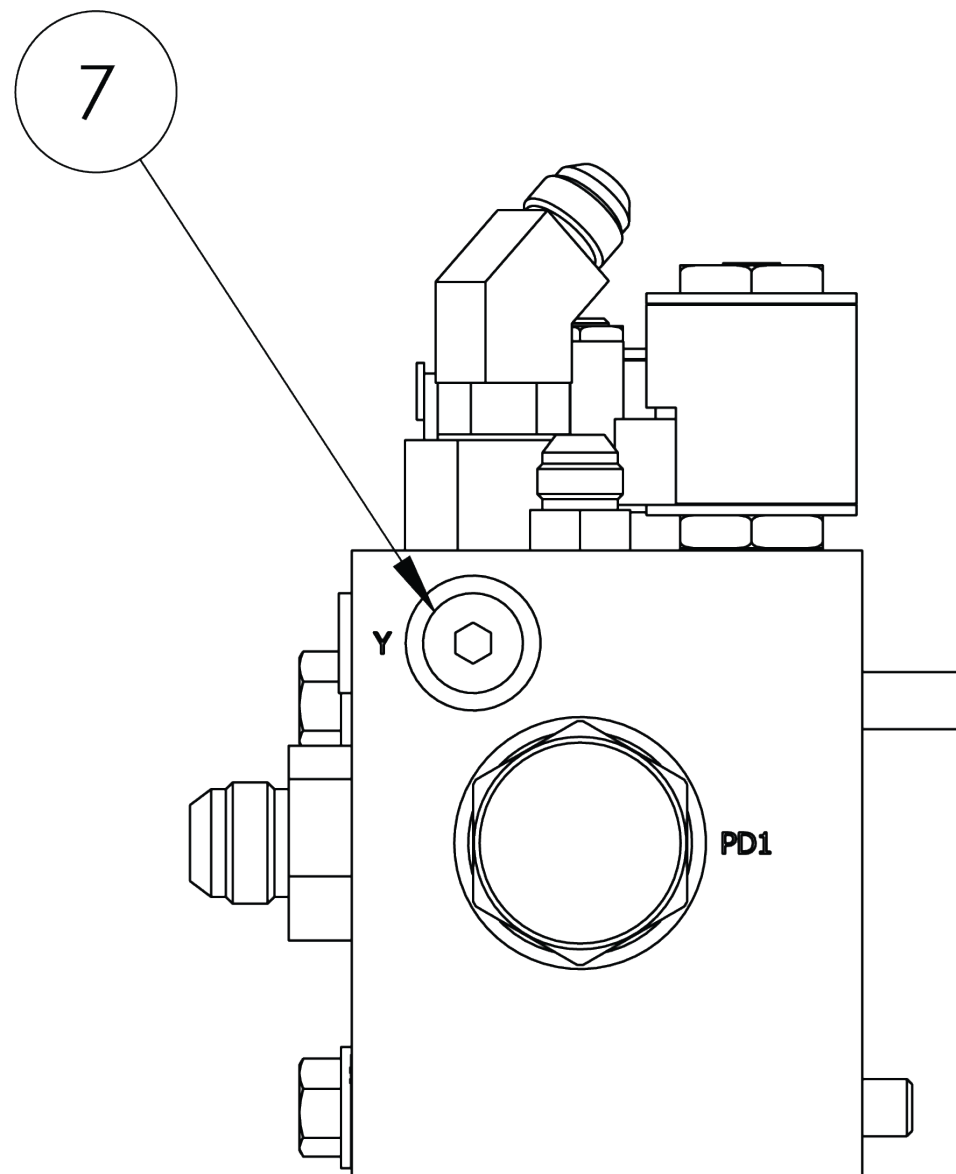


rwf\_207153\_04

| item | Qty. | P/N      | Description                         |
|------|------|----------|-------------------------------------|
| 1    | 1    | 205548   | MANIFOLD, CASE DRAIN COLLECTOR      |
| 2    | 1    | 9900526  | HEAD, DUAL SPIN-ON FILTERS          |
| 4    | 1    | 205551   | BRACKET, STRAINER ASM               |
| 5    | 1    | 90878    | KIT - FLANGE                        |
| 6    | 1    | 93957-09 | CAP, O-RING                         |
| 8    | 4    | 80314    | BOLT - HEX SOCKET                   |
| 9    | 8    | 80578    | WASHER - SAE                        |
| 11   | 4    | 80028    | BOLT - HEX HD                       |
| 13   | 1    | 90624    | O-RING                              |
| 15   | 1    | 90081    | ADAPTER, STR                        |
| 18   | 1    | 90246    | ADAPTER                             |
| 19   | 3    | 90483    | PLUG, SOCKET HEAD                   |
| 20   | 1    | 90320    | PLUG, HEX HEAD - HEX HEAD           |
| 24   | 1    | 9901786  | SENSOR, TEMP                        |
| 25   | 1    | 93934    | REDUCER, STR                        |
| 26   | 2    | 9901791  | STRAINER, SPIN-ON                   |
| 27   | 1    | 9900585  | CLIP, MOUNT DEUTSCH DT/DTM/DTP/DTHD |
| 28   | 4    | 80792    | BOLT - HEX SOCKET                   |
| 30   | 2    | 94030    | ADAPTER, STR                        |
| 31   | 1    | 90486    | PLUG, SOCKET HEAD                   |
| 32   | 2    | 90983    | ADAPTER                             |
| 33   | 1    | 90278    | ELBOW, SWIVEL                       |
| 34   | 1    | 90235    | ADAPTER                             |







rwf\_207178\_03

| item | Qty. | P/N    | Description                    |
|------|------|--------|--------------------------------|
| 1    | 2    | 90078  | ADAPTER, STR                   |
| 2    | 1    | 90071  | ADAPTER, STR                   |
| 7    | 2    | 90483  | PLUG, SOCKET HEAD              |
| 8    | 3    | 80580  | WASHER - SAE                   |
| 9    | 1    | 80084  | BOLT - HEX HD                  |
| 10   | 2    | 80083  | BOLT - HEX HD                  |
| 11   | 1    | 207470 | MODIFIED, FAN MFLD W/INT PILOT |
| 13   | 2    | 94032  | REDUCER                        |
| 14   | 2    | 90229  | ADAPTER                        |





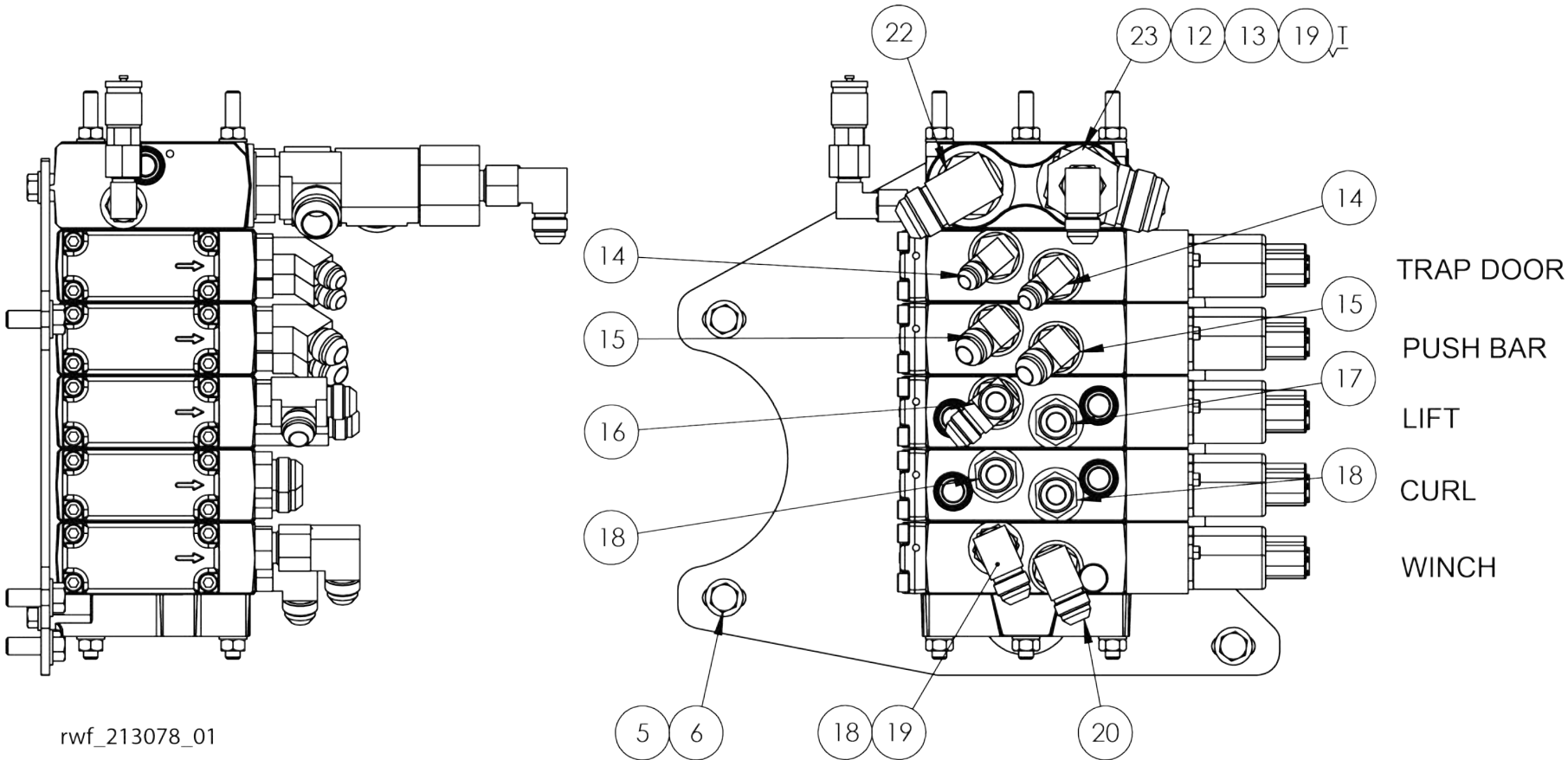
rwf\_151886\_01

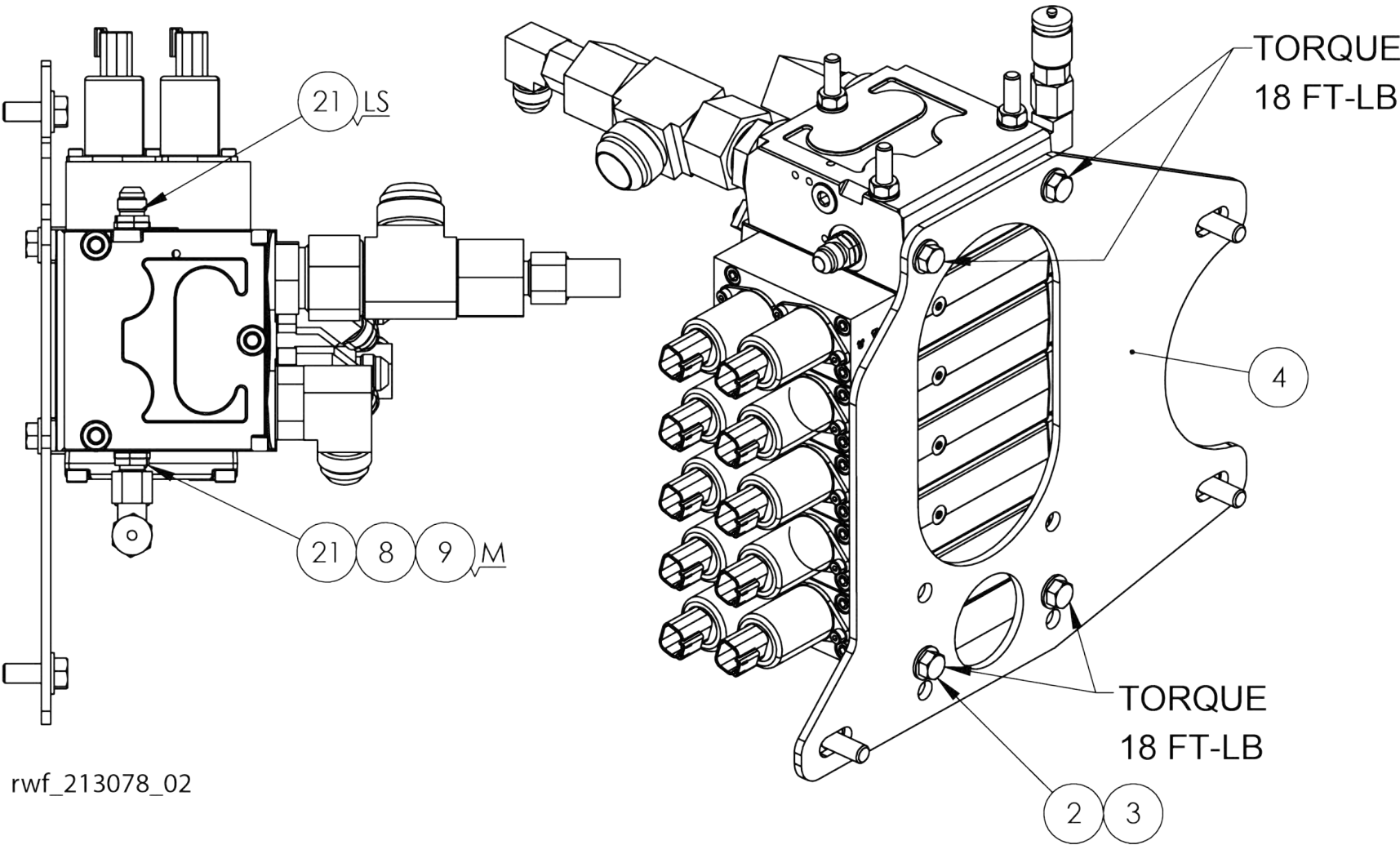
## 7.4 FILTER KIT, 100HR SERVICE (151886)

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PARTS MANUAL

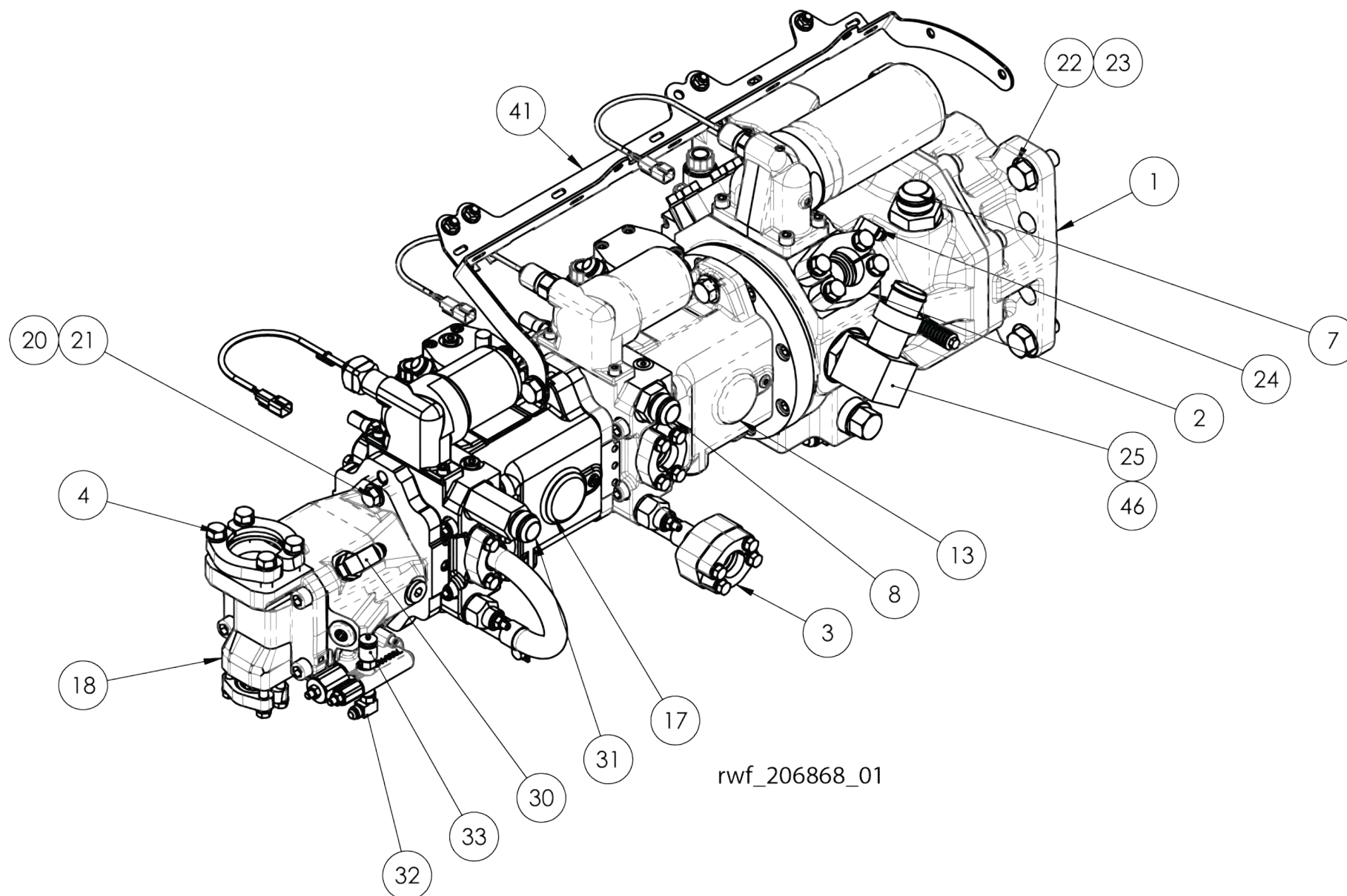
| item | Qty. | P/N       | Description                   |
|------|------|-----------|-------------------------------|
| 1    | 3    | 9900419   | FILTER, SPIN-ON LONG          |
| 2    | 2    | SVP101373 | HYD OIL FILTER - PUMP         |
| 3    | 1    | SVP100999 | FILTER CARTRIDGE (BOOST PUMP) |
| 4    | 1    | DWG       | DWG TO BE SHIPPED WITH KIT    |

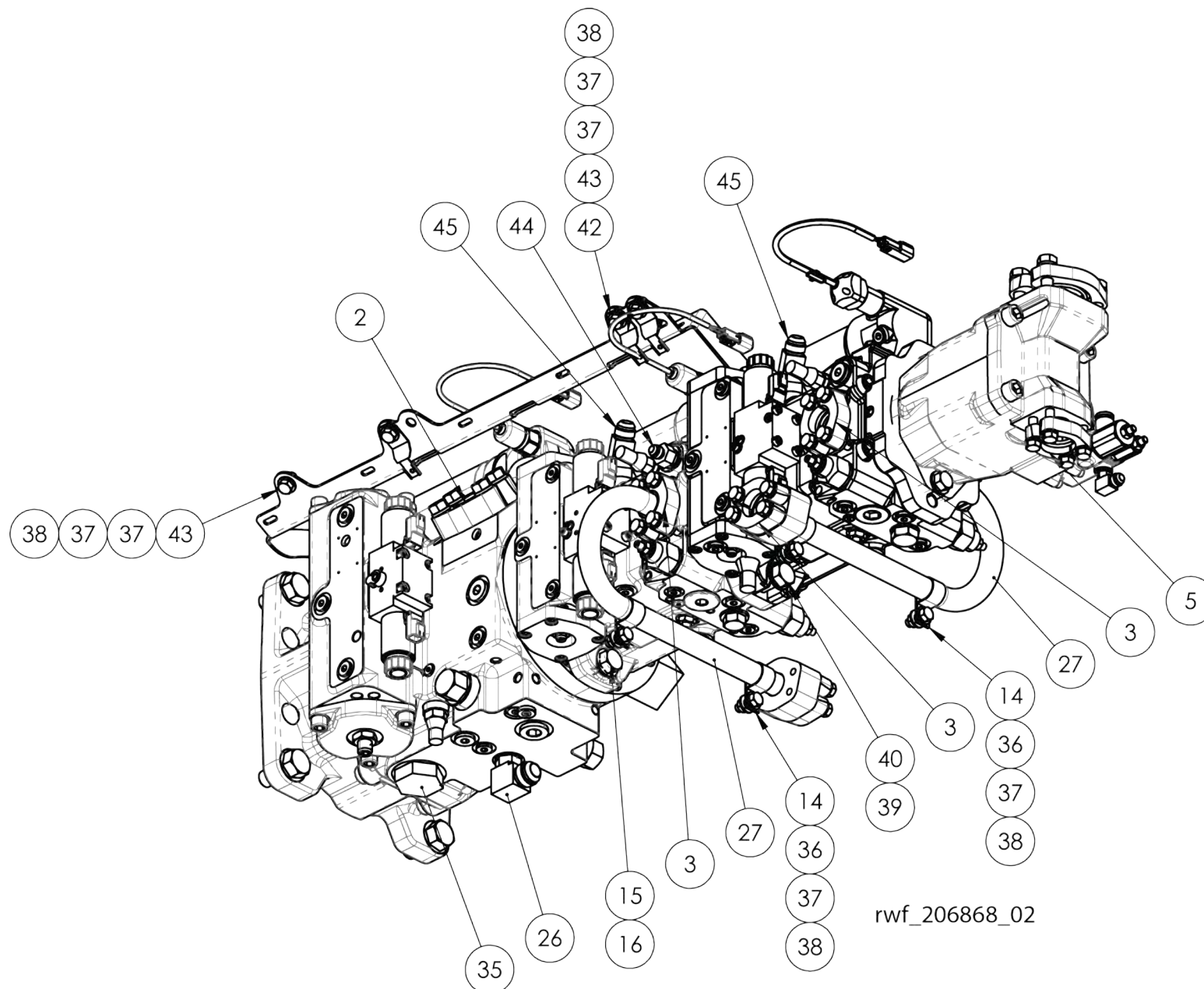




rwf\_213078\_02

| item | Qty. | P/N     | Description                 |
|------|------|---------|-----------------------------|
| 1    | 1    | 9902257 | VALVE, SECT MULCHER         |
| 2    | 4    | 80014   | BOLT - HEX HD               |
| 3    | 4    | 80577   | WASHER - SAE                |
| 4    | 1    | 207616  | PLATE, VALVE MOUNT          |
| 5    | 3    | 80578   | WASHER - SAE                |
| 6    | 3    | 80029   | BOLT - HEX HD               |
| 8    | 1    | 90272   | ELBOW, SWIVEL               |
| 9    | 1    | 90644   | ADAPTER, TEST PORT          |
| 12   | 1    | 90415   | TEE, RUN - SWIVEL           |
| 13   | 1    | 90364   | ADAPTER, STR SWIVEL REDUCER |
| 14   | 2    | 90226   | ADAPTER                     |
| 15   | 2    | 90232   | ADAPTER                     |
| 16   | 1    | 90524   | TEE RUN                     |
| 17   | 1    | 90094   | ADAPTER, STR LONG           |
| 18   | 3    | 90071   | ADAPTER                     |
| 19   | 2    | 90273   | ELBOW, SWIVEL               |
| 20   | 1    | 90246   | ADAPTER                     |
| 21   | 2    | 90065   | ADAPTER, STR                |
| 22   | 1    | 90251   | ADAPTER, 90                 |
| 23   | 1    | 90077   | ADAPTER, STR                |

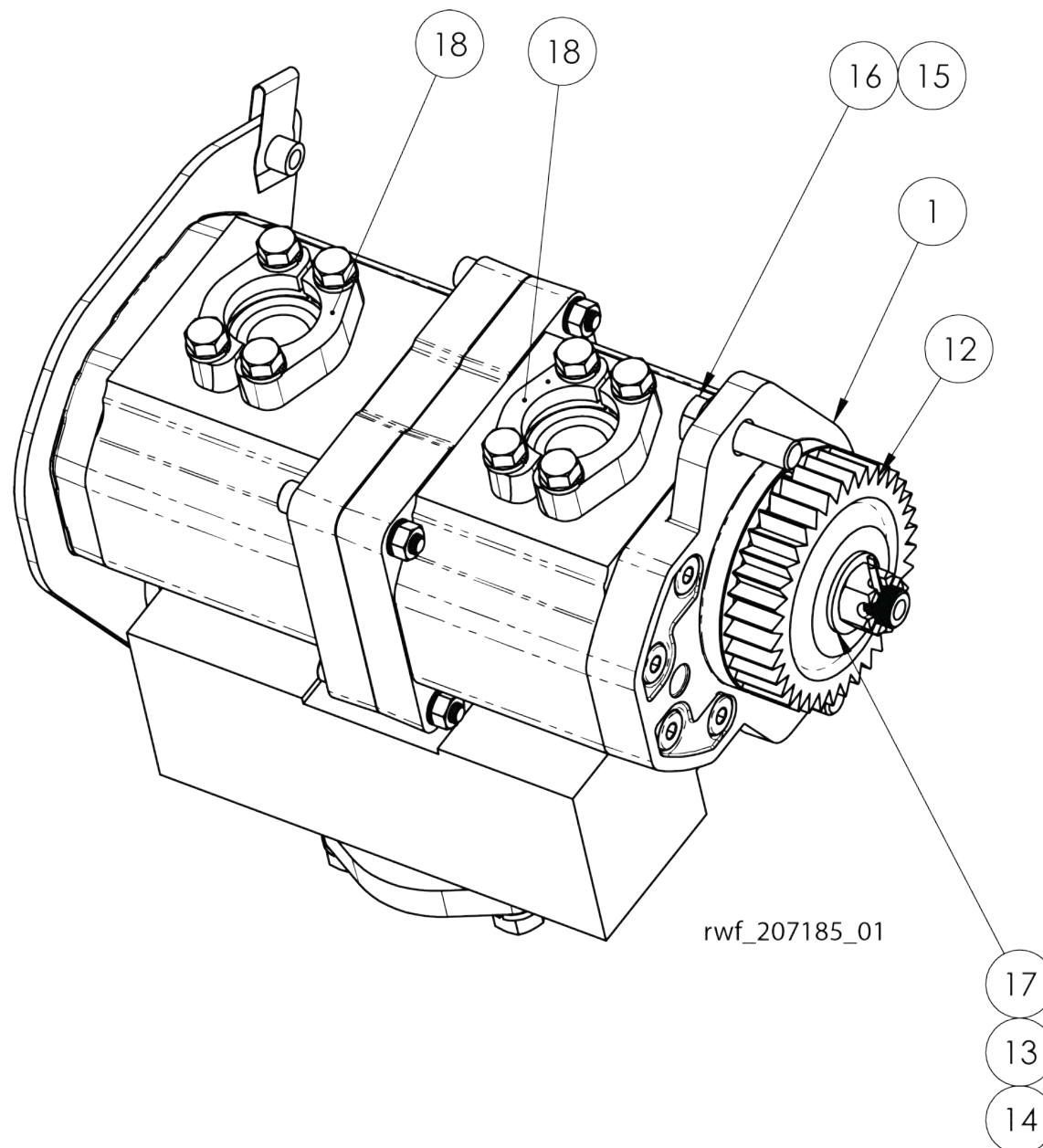




| item | Qty. | P/N       | Description                         |
|------|------|-----------|-------------------------------------|
| 1    | 1    | 9901748   | PUMP                                |
| 2    | 2    | 90879     | KIT - FLANGE                        |
| 3    | 6    | 93976     | KIT - FLANGE                        |
| 4    | 1    | 90878     | KIT - FLANGE                        |
| 5    | 1    | 90875     | KIT - FLANGE                        |
| 7    | 1    | 90082     | ADAPTER, STR                        |
| 8    | 1    | 90079     | ADAPTER, STR                        |
| 13   | 1    | 9901746   | PUMP, SHAFT                         |
| 14   | 4    | 85102     | CLAMP, TUBE                         |
| 15   | 2    | 80092     | BOLT - HEX HD                       |
| 16   | 2    | 80581     | WASHER - SAE                        |
| 17   | 1    | 9901747   | PUMP, SHAFT                         |
| 18   | 1    | 9901750   | PUMP, P-COMP LS                     |
| 20   | 2    | 80580     | WASHER - SAE                        |
| 21   | 2    | 80070     | BOLT - HEX HD                       |
| 22   | 4    | 80110     | BOLT - HEX HD                       |
| 23   | 4    | 80582     | WASHER - SAE                        |
| 24   | 1    | 90243     | ADAPTER                             |
| 25   | 1    | 90063-035 | ELBOW                               |
| 26   | 1    | 90249     | ADAPTER                             |
| 27   | 2    | 207365    | TUBE, DRIVE PRESSURE                |
| 30   | 1    | 90248     | ADAPTER                             |
| 31   | 1    | 90870     | ADAPTER, STR LONG                   |
| 32   | 1    | 90242     | ADAPTER                             |
| 33   | 1    | 90645     | ADAPTER, TEST PORT                  |
| 35   | 1    | 90317     | PLUG, HEX HEAD                      |
| 36   | 4    | 80029     | BOLT - HEX HD                       |
| 37   | 16   | 80578     | WASHER - SAE                        |
| 38   | 8    | 80513     | NUT - LOCK                          |
| 39   | 2    | 73107     | FLATWASHER                          |
| 40   | 2    | 71355     | BOLT- HEX HD                        |
| 41   | 1    | 207860    | BRACKET, PUMP HARNESS               |
| 42   | 3    | 9900585   | CLIP, MOUNT DEUTSCH DT/DTM/DTP/DTHD |

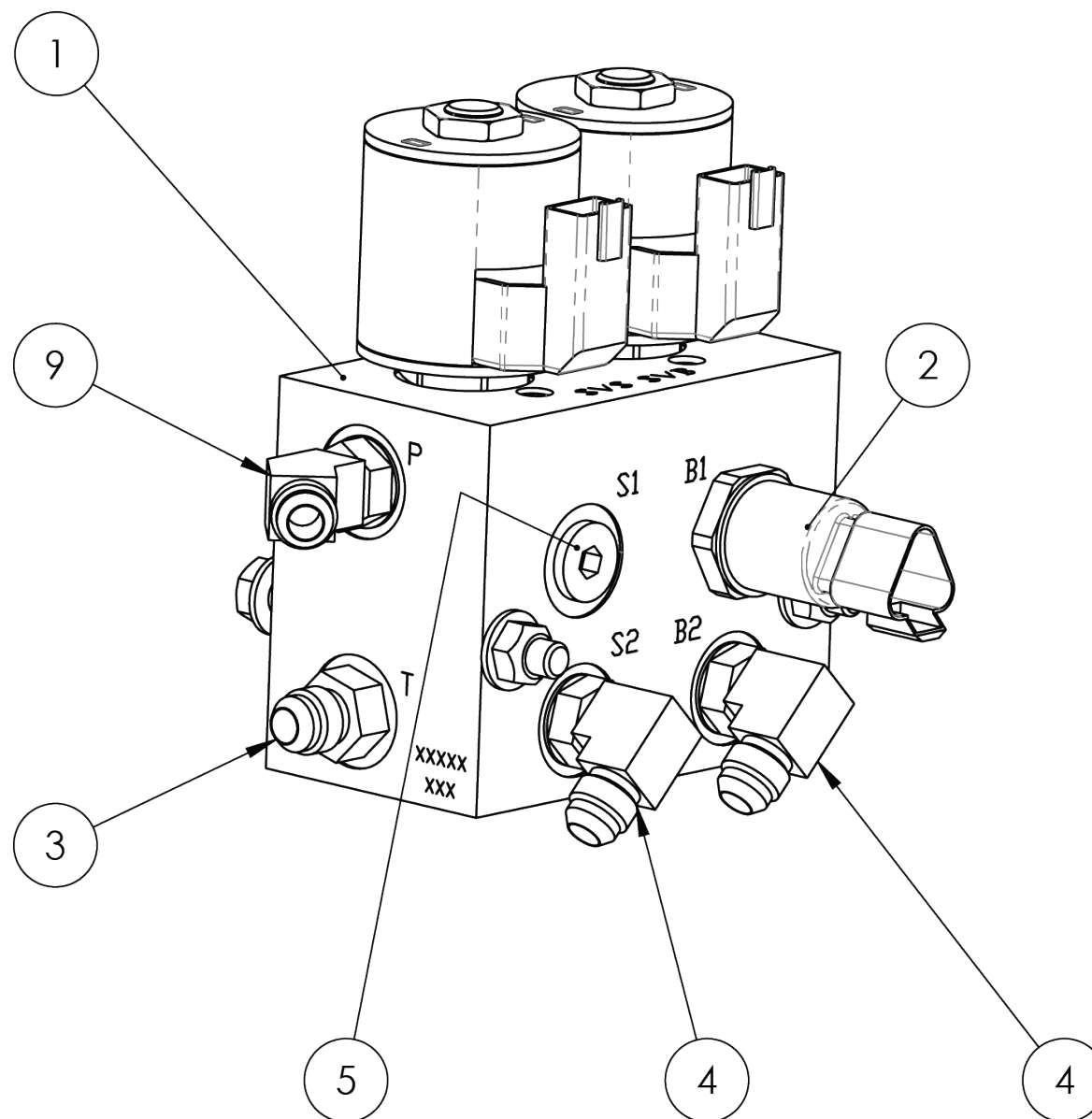


| item | Qty. | P/N     | Description      |
|------|------|---------|------------------|
| 43   | 4    | 80028   | BOLT - HEX HD    |
| 44   | 1    | 90070   | ADAPTER, STR     |
| 45   | 2    | 90230   | ADAPTER          |
| 46   | 1    | 9900720 | CLAMP, T-BOLT CT |

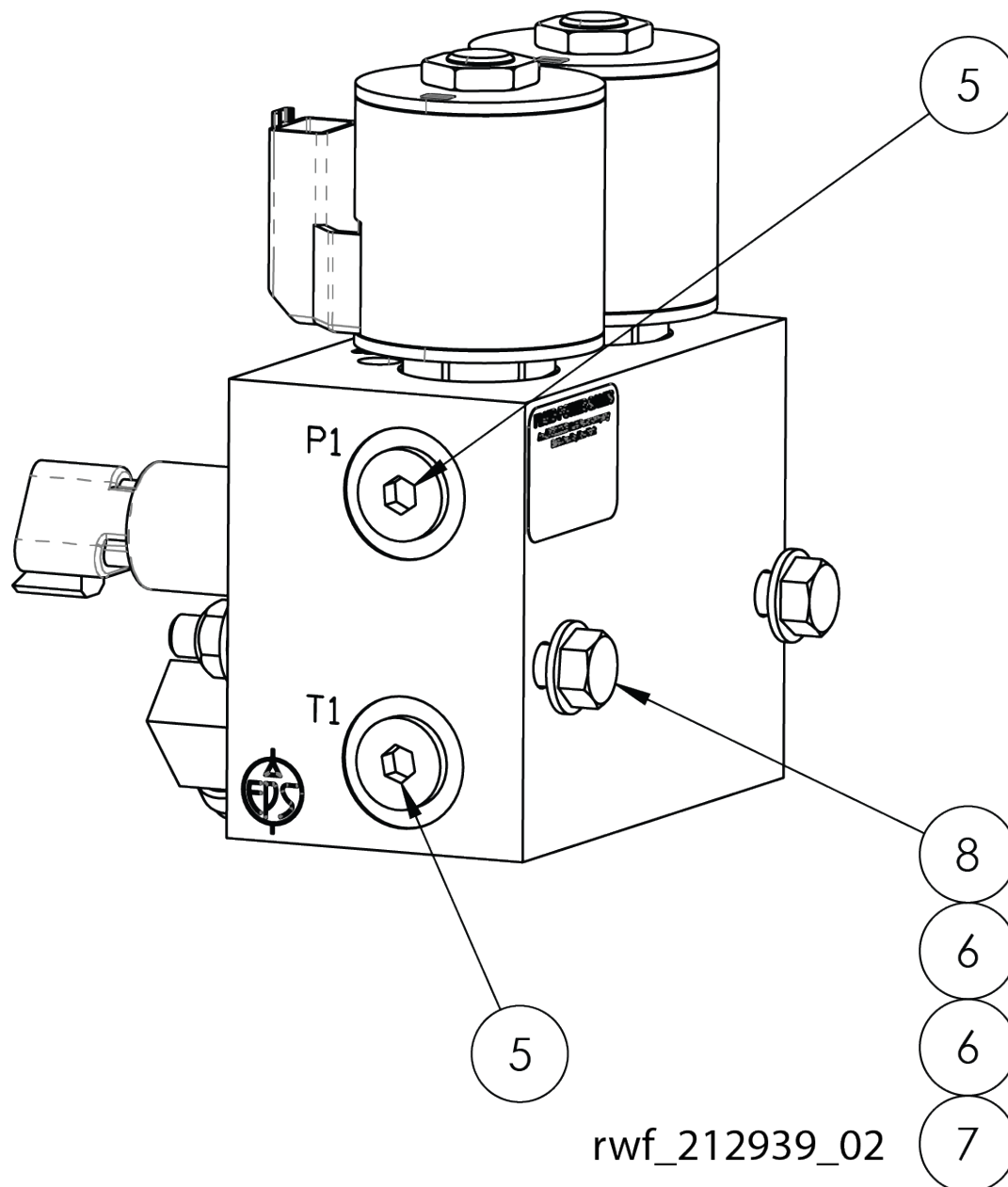


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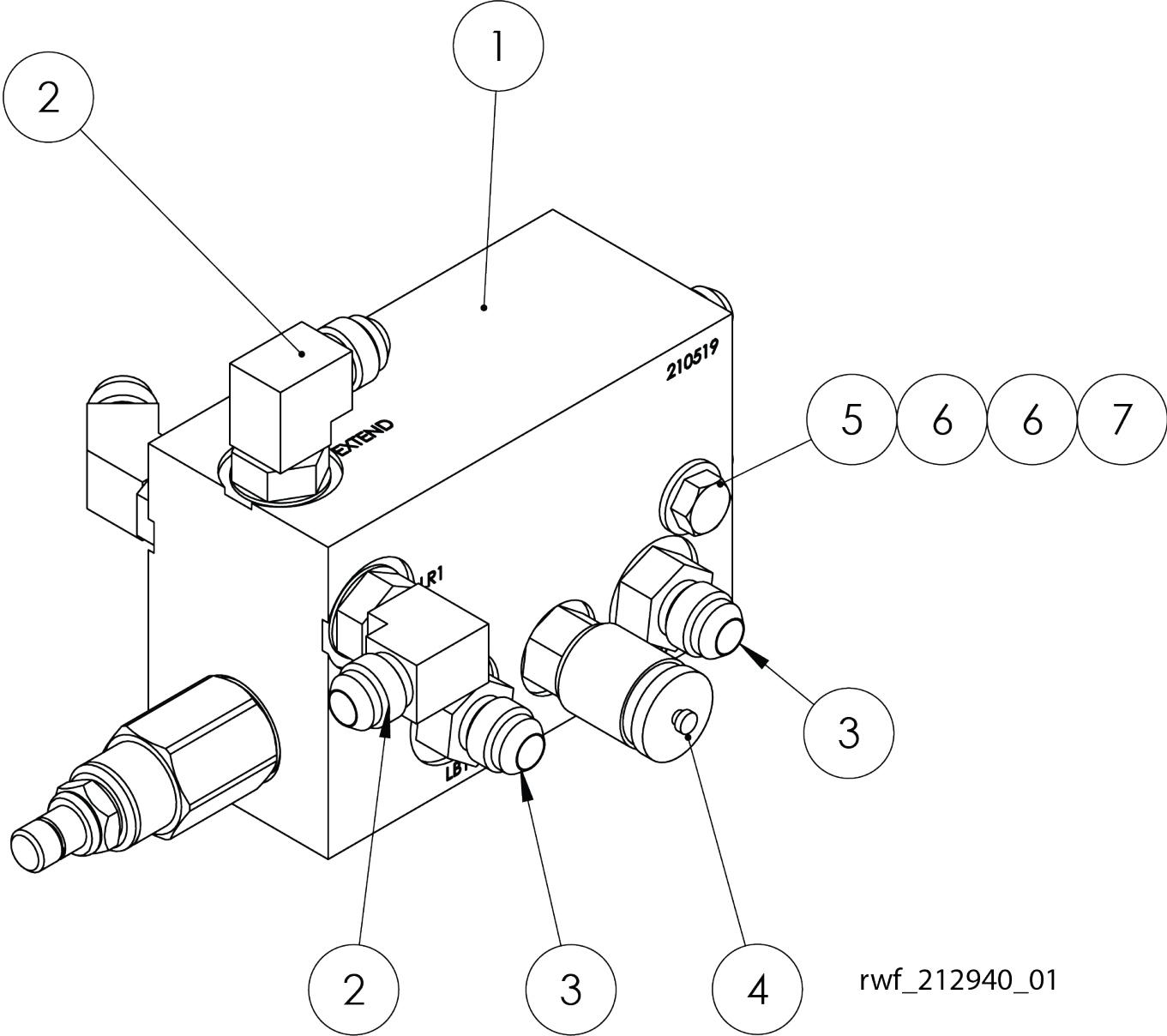
| item | Qty. | P/N       | Description               |
|------|------|-----------|---------------------------|
| 20   | 2    | 80705-012 | NUT, CLIP-ON              |
| 19   | 1    | 90275     | ELBOW, SWIVEL             |
| 18   | 2    | 90875     | KIT - FLANGE              |
| 17   | 1    | 80581     | WASHER - SAE              |
| 16   | 1    | 71254     | BOLT- HEX HD              |
| 15   | 1    | 73105     | FLATWASHER                |
| 14   | 1    | 80630     | COTTER PIN                |
| 13   | 1    | 81538     | NUT- SLOTTED              |
| 12   | REF  | SVP101378 | GEAR, PTO                 |
| 11   | 1    | 207525    | MOUNT, PTO SUPPORT        |
| 10   | 2    | 90622     | O-RING                    |
| 9    | 1    | 90482     | PLUG, SOCKET HEAD         |
| 8    | 1    | 90092     | ADAPTER, STR              |
| 7    | 8    | 80296     | BOLT - HEX SOCKET         |
| 4    | 1    | 207179    | MFLD, TANDEM PUMP SUCTION |
| 3    | 1    | 90878     | KIT - FLANGE              |
| 1    | 1    | 9901745   | PUMP, TANDEM GEAR         |



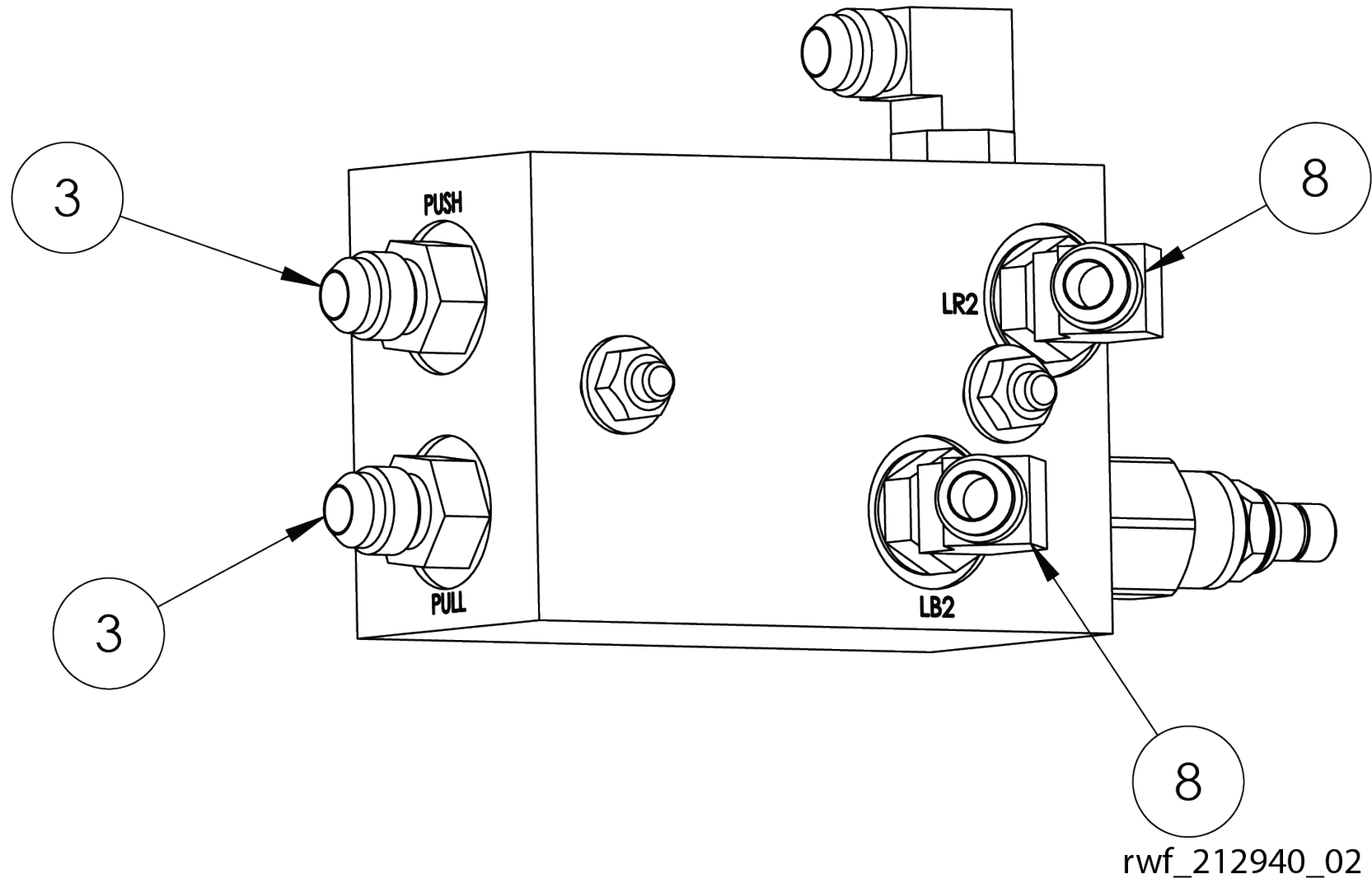
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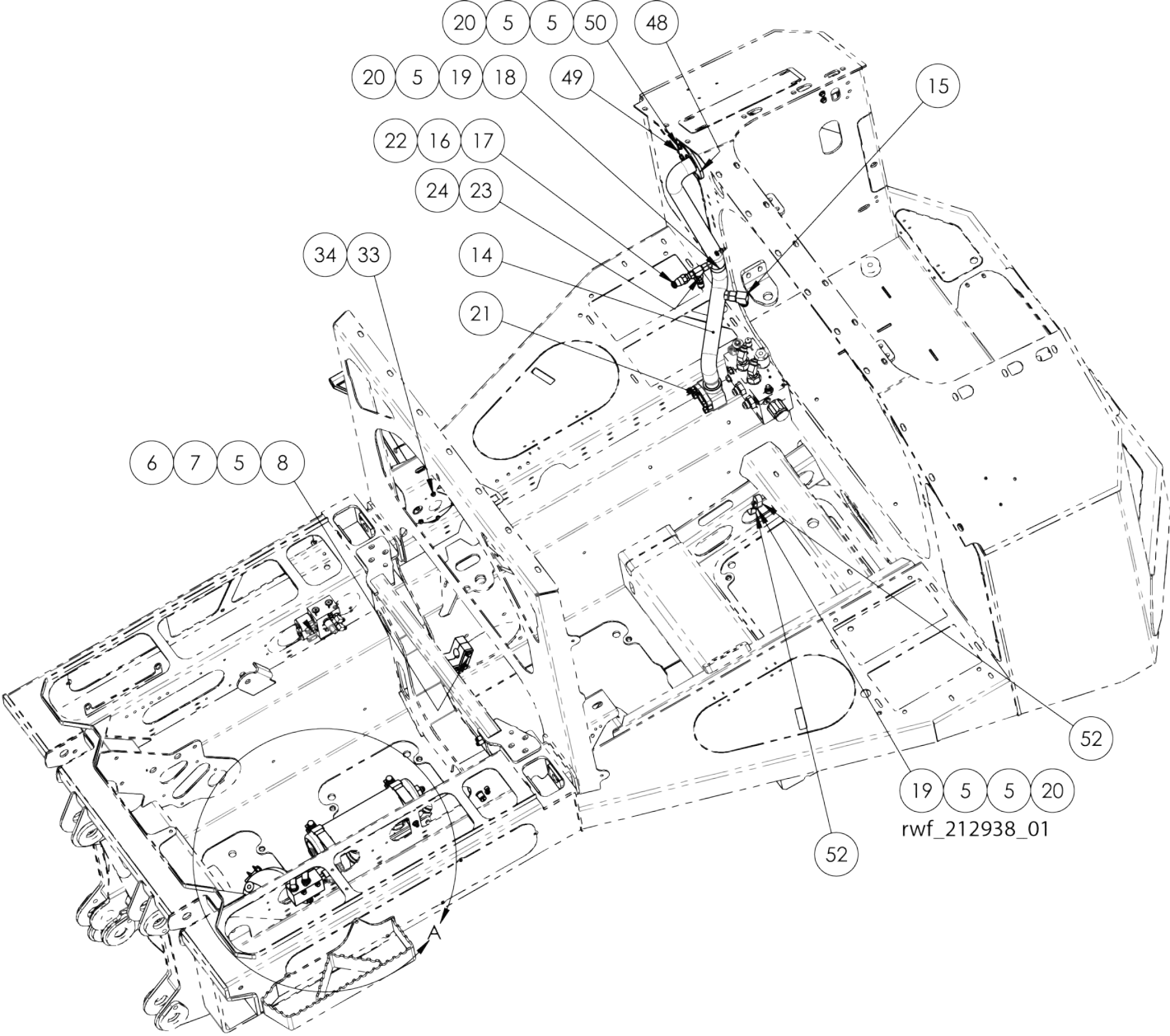
| item | Qty. | P/N     | Description         |
|------|------|---------|---------------------|
| 1    | 1    | 210474  | MANIFOLD, PILOT     |
| 2    | 1    | 9901843 | PRESSURE TRANSDUCER |
| 3    | 1    | 90068   | ADAPTER, STR        |
| 4    | 2    | 90243   | ADAPTER             |
| 5    | 3    | 90482   | PLUG, SOCKET HEAD   |
| 6    | 4    | 80577   | WASHER - SAE        |
| 7    | 2    | 80512   | NUT - LOCK          |
| 8    | 2    | 80024   | BOLT - HEX HD       |
| 9    | 1    | 90231   | ADAPTER             |

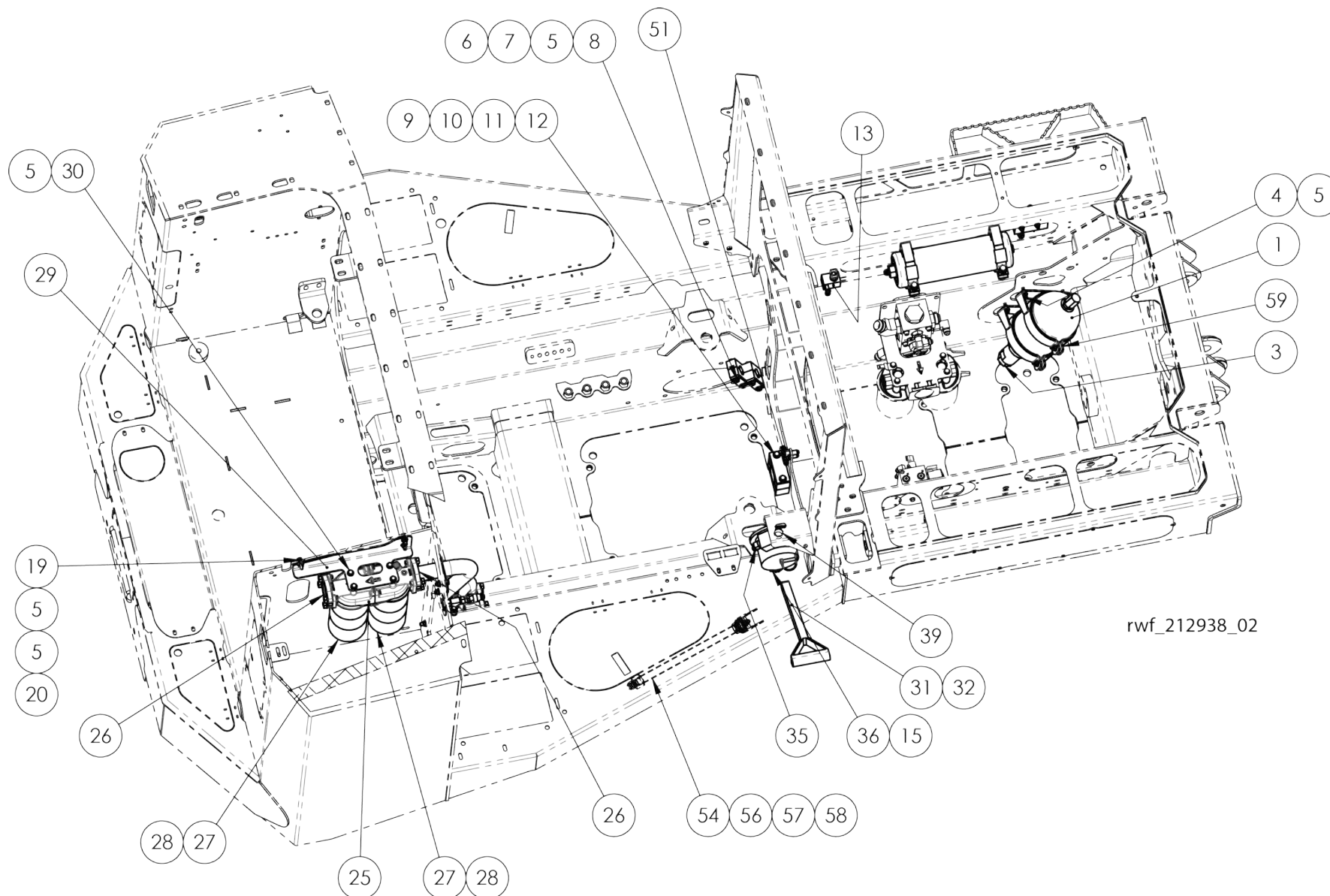




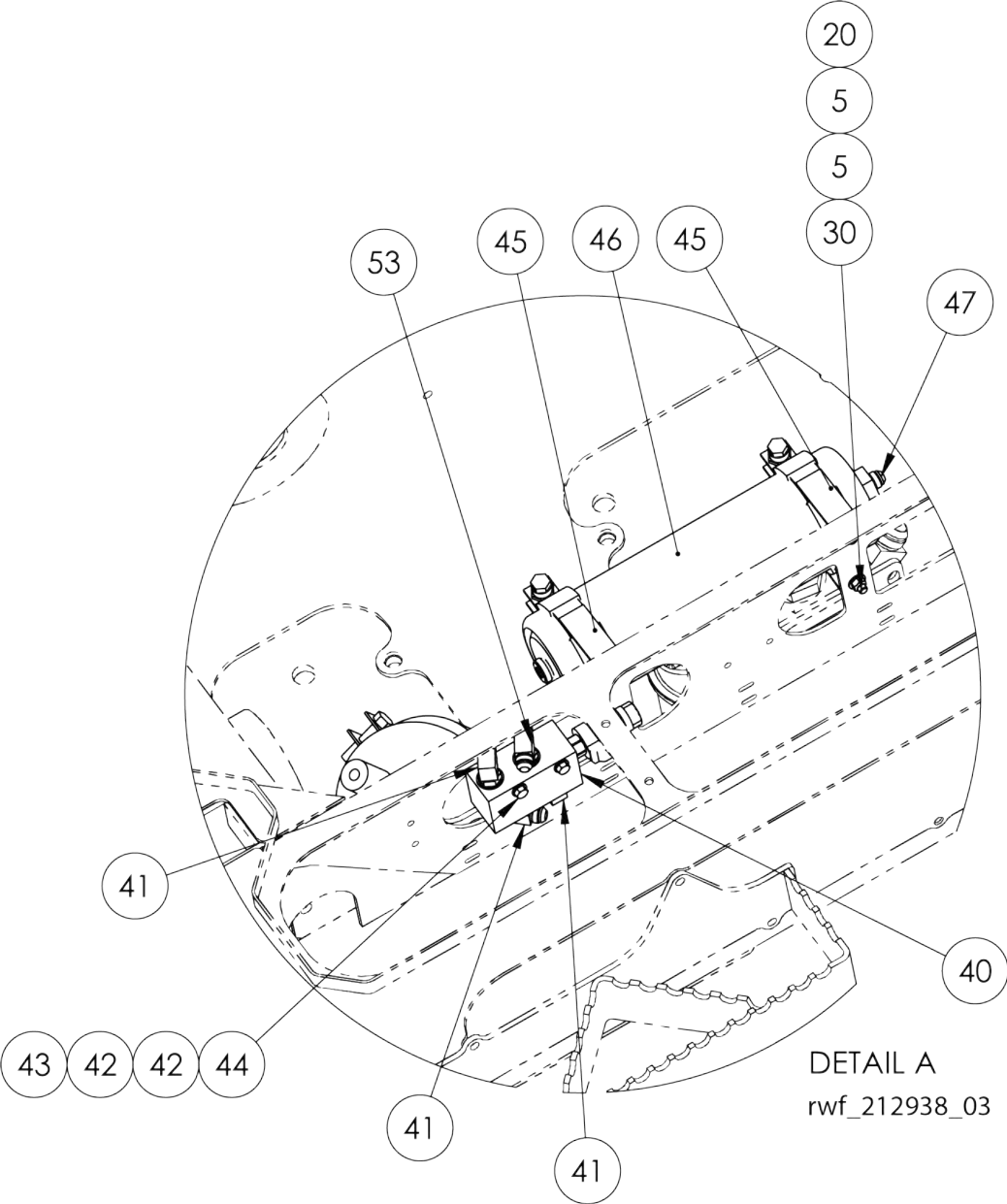


| item | Qty. | P/N    | Description        |
|------|------|--------|--------------------|
| 1    | 1    | 210518 | VALVE, CAB TILT    |
| 2    | 2    | 90243  | ADAPTER            |
| 3    | 4    | 90068  | ADAPTER, STR       |
| 4    | 1    | 90645  | ADAPTER, TEST PORT |
| 5    | 2    | 80008  | BOLT - HEX HD      |
| 6    | 4    | 80576  | WASHER - SAE       |
| 7    | 2    | 80511  | NUT - LOCK         |
| 8    | 2    | 90231  | ADAPTER            |



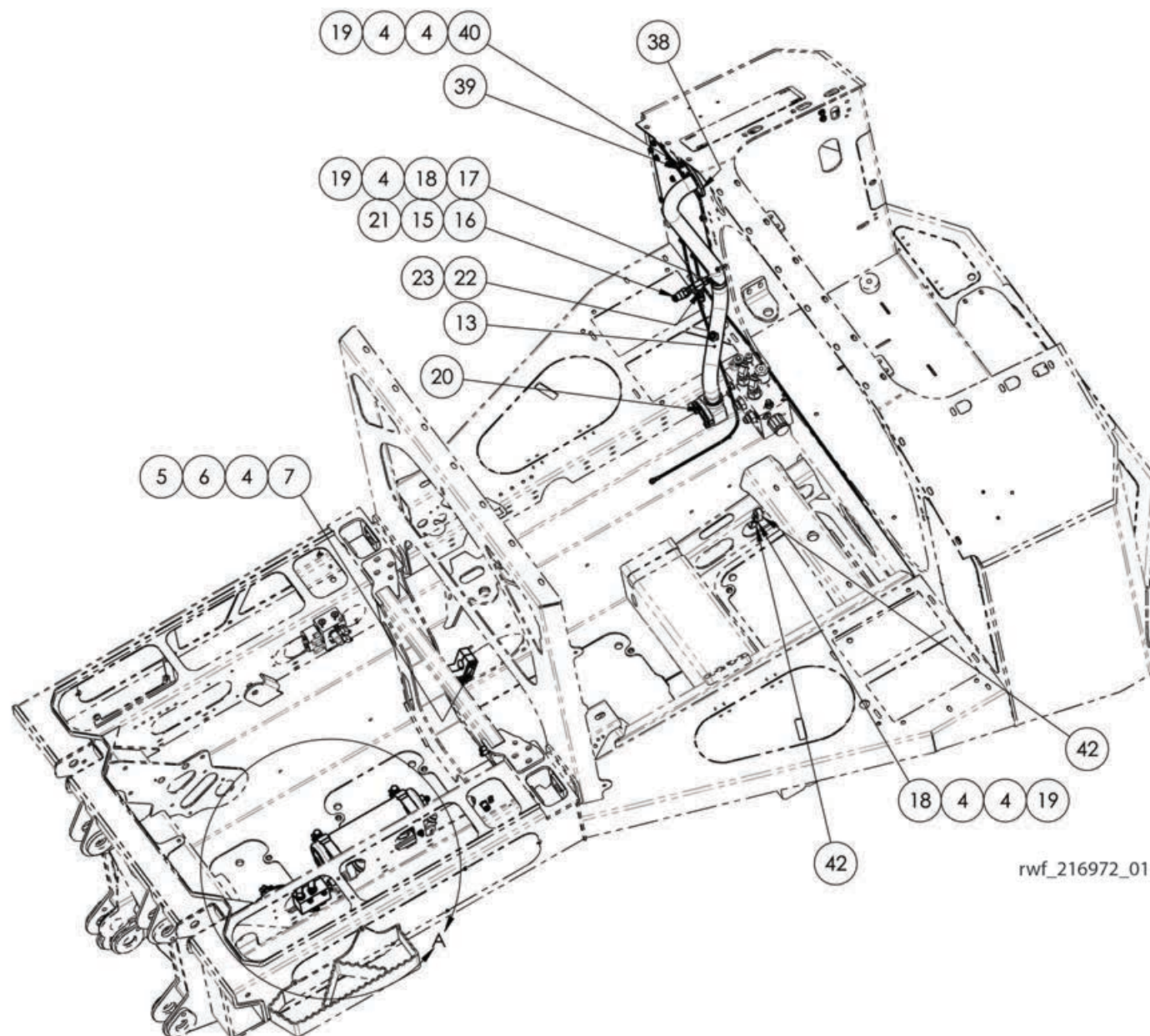


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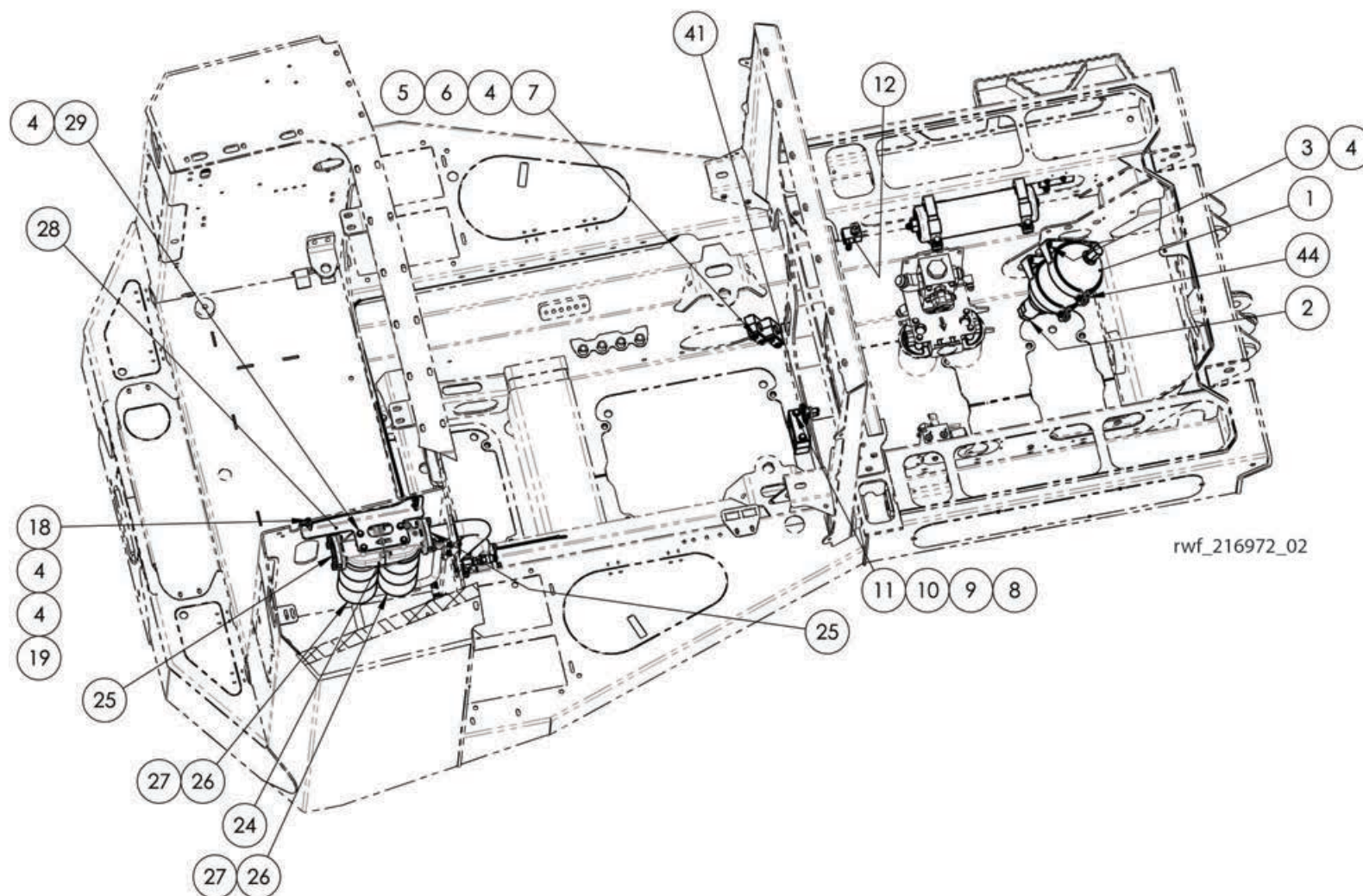


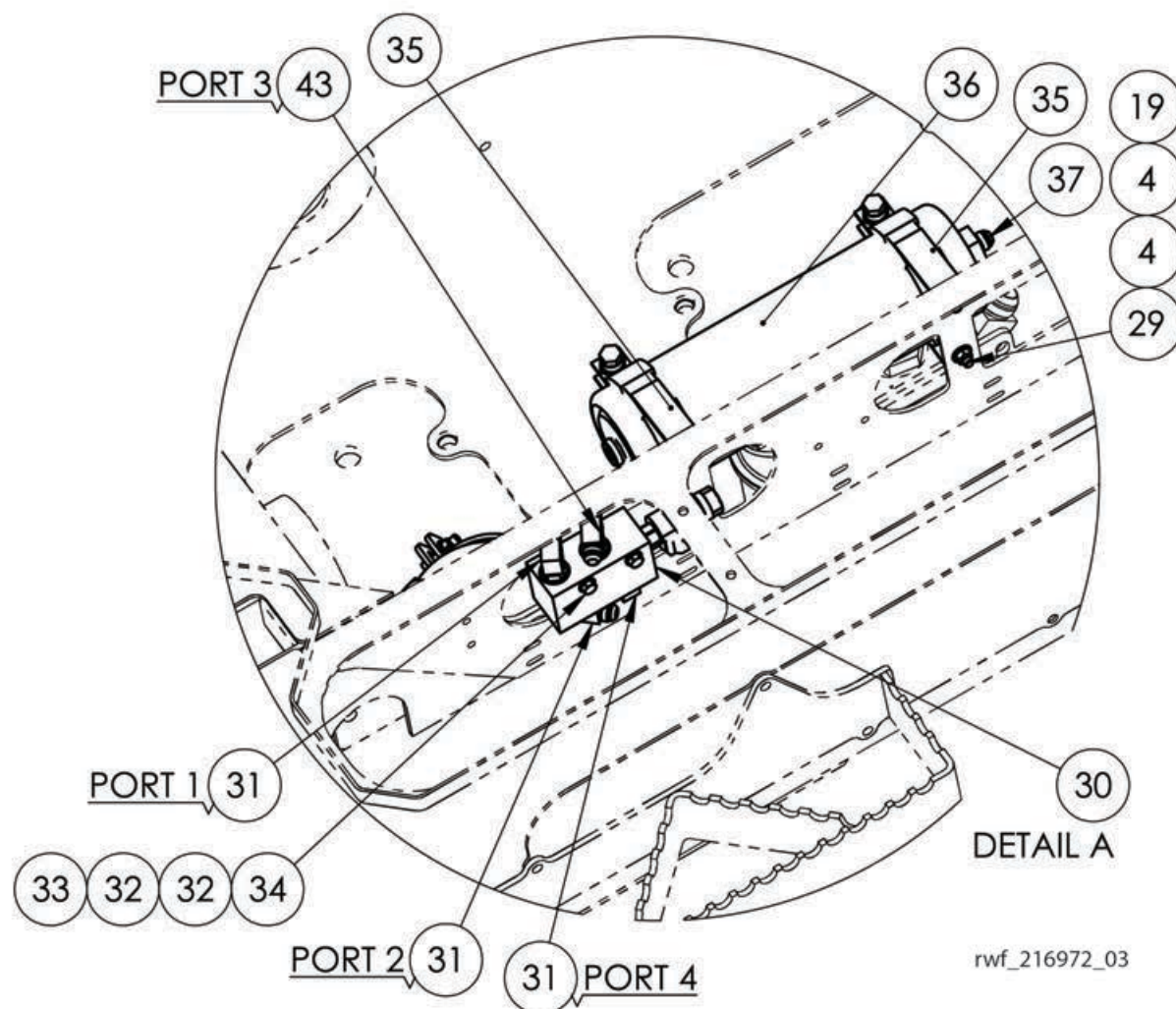
| item | Qty. | P/N       | Description                        |
|------|------|-----------|------------------------------------|
| 1    | 1    | 99-00144  | ACCUMULATOR - NITROGEN             |
| 3    | 1    | 90091     | ADAPTER, STR                       |
| 4    | 4    | 80028     | BOLT - HEX HD                      |
| 5    | 40   | 80578     | WASHER - SAE                       |
| 6    | 4    | 82350-011 | CLAMP, STAUFF SINGLE               |
| 7    | 4    | 82351-002 | COVERPLATE, STAUFF SINGLE          |
| 8    | 8    | 80037     | BOLT - HEX HD                      |
| 9    | 1    | 82350-010 | CLAMP, STAUFF SINGLE               |
| 10   | 1    | 82351-001 | COVERPLATE, STAUFF SINGLE          |
| 11   | 2    | 80579     | WASHER - SAE                       |
| 12   | 2    | 80061     | BOLT - HEX HD                      |
| 13   | 1    | 141537    | MANIFOLD ASM, TRANSDUCER           |
| 14   | 1    | 207366    | TUBE, OIL FILTER SUPPLY            |
| 15   | 1    | 90274     | ELBOW, SWIVEL                      |
| 16   | 1    | 90991     | ADAPTER, STR                       |
| 17   | 1    | 90942     | ADAPTER, STR - HYDRAULIC           |
| 18   | 1    | 85105     | CLAMP, TUBE                        |
| 19   | 6    | 80030     | BOLT - HEX HD                      |
| 20   | 12   | 80513     | NUT - LOCK                         |
| 21   | 1    | 90877     | KIT - FLANGE                       |
| 22   | 1    | 90413     | TEE, RUN - SWIVEL                  |
| 23   | 1    | 90359     | ADAPTER, STR SWIVEL REDUCER        |
| 24   | 1    | 90644     | ADAPTER, TEST PORT                 |
| 25   | 1    | 9900529   | HEAD, DUAL FILTER                  |
| 26   | 2    | 90878     | KIT - FLANGE                       |
| 27   | 2    | 9901660   | FILTER, SPIN-ON MICRON             |
| 28   | 2    | 138637    | DECAL, FACTORY INSTALLED           |
| 29   | 1    | 207549    | BRACKET, FILTER MOUNT              |
| 30   | 8    | 80029     | BOLT - HEX HD                      |
| 31   | 1    | 9900406   | PUMP, MANUAL PISTON FLUID TRANSFER |
| 32   | 1    | 9900632   | PIN, DIA. TAB LOCK                 |
| 33   | 3    | 80000     | BOLT - HEX HD                      |
| 34   | 3    | 80576     | WASHER - SAE                       |

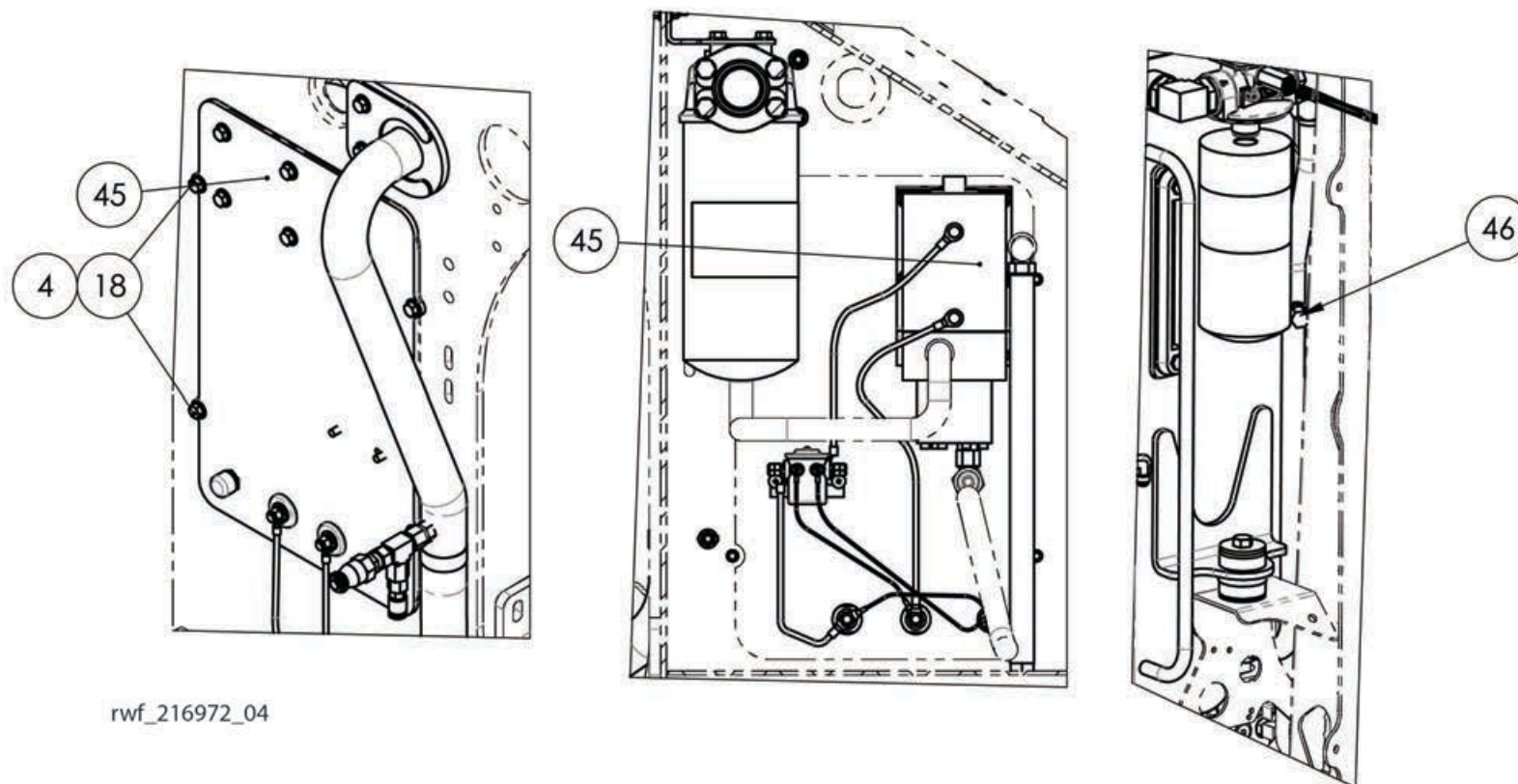
| item | Qty. | P/N        | Description                     |
|------|------|------------|---------------------------------|
| 35   | 1    | 90138      | ELBOW                           |
| 36   | 1    | 90028      | ADAPTER, STR                    |
| 39   | 1    | 91159      | PLUG NPT                        |
| 40   | 1    | 9902046    | VALVE, RIDE CONTROL             |
| 41   | 3    | 90246      | ADAPTER                         |
| 42   | 4    | 80577      | WASHER - SAE                    |
| 43   | 2    | 80512      | NUT - LOCK                      |
| 44   | 2    | 80022      | BOLT - HEX HD                   |
| 45   | 2    | 115381     | ACCUMULATOR BRACKET             |
| 46   | 1    | 9901817    | ACCUMULATOR, LITRE PISTON       |
| 47   | 1    | 90999      | ADAPTER, STR                    |
| 48   | 1    | 207801     | RUBBER, RH COMPARTMENT SEAL     |
| 49   | 1    | 207802     | RETAINER, RH COMPARTMENT RUBBER |
| 50   | 2    | 80031      | BOLT - HEX HD                   |
| 51   | 2    | 90502      | TEE, BULKHEAD - BRANCH          |
| 52   | 2    | 9900929-09 | CLAMP, DOUBLE TUBE              |
| 53   | 1    | 90513      | TEE BRANCH                      |
| 54   | 1    | 9901940    | NPT PIPE                        |
| 56   | 1    | 90056      | CONNECTOR, STR                  |
| 57   | 1    | 9901938    | NPT CAM AND GROOVE TUBE END     |
| 58   | 1    | 9901939    | CAM AND GROOVE SOCKET CAP       |
| 59   | 2    | 216969     | BRACKET, ACCUMULATOR            |







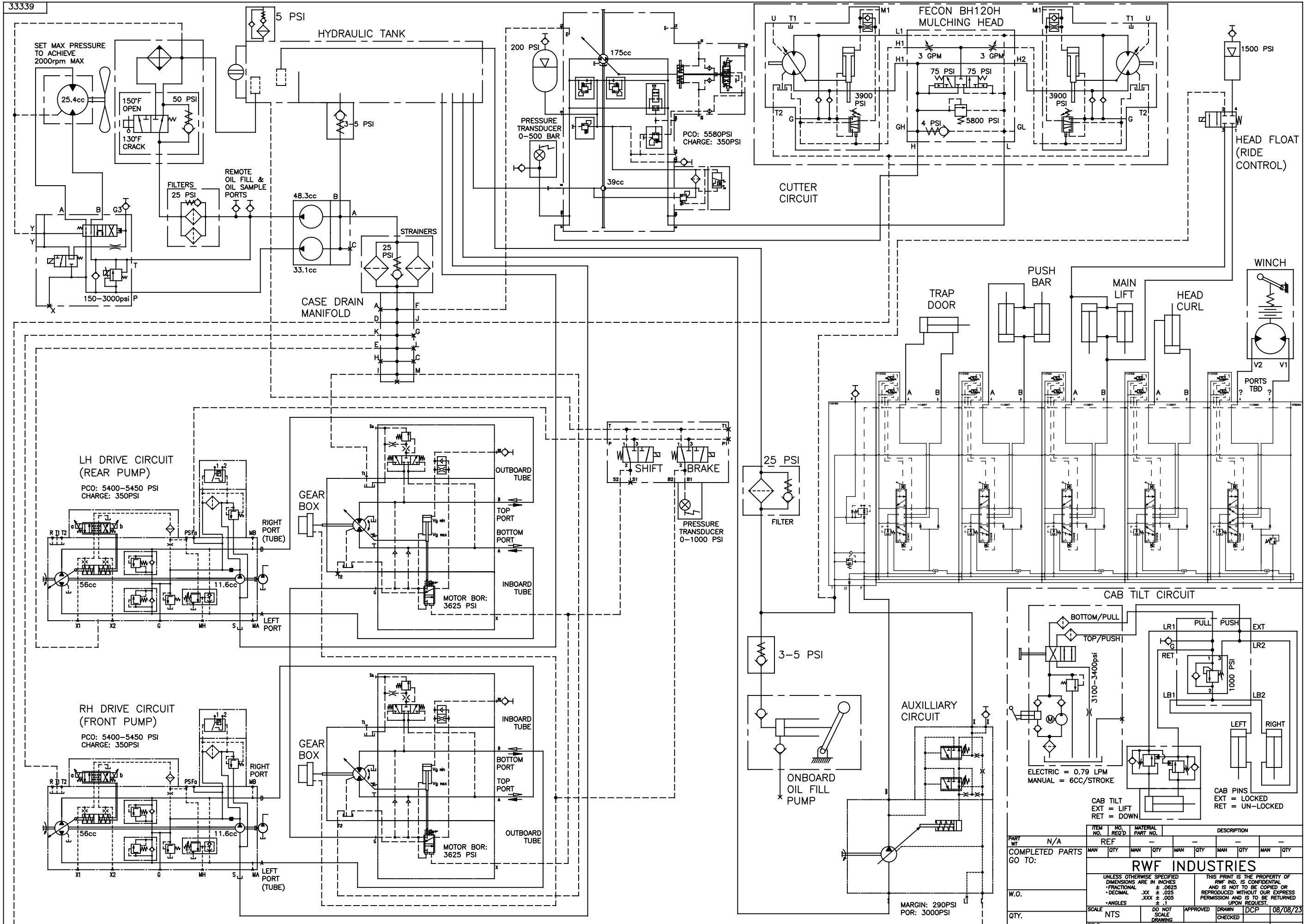




| item | Qty. | P/N       | Description                   |
|------|------|-----------|-------------------------------|
| 1    | 1    | 99-00144  | ACCUMULATOR - NITROGEN, 1 GAL |
| 2    | 1    | 90091     | ADAPTER, STR                  |
| 3    | 4    | 80028     | BOLT - HEX HD.                |
| 4    | 44   | 80578     | WASHER - SAE                  |
| 5    | 4    | 82350-011 | CLAMP, STAUFF SINGLE          |
| 6    | 4    | 82351-002 | COVERPLATE, STAUFF SINGLE 5S  |
| 7    | 8    | 80037     | BOLT - HEX HD.                |
| 8    | 1    | 82350-010 | CLAMP, STAUFF SINGLE          |
| 9    | 1    | 82351-001 | COVERPLATE, STAUFF SINGLE 6S  |
| 10   | 2    | 80579     | WASHER - SAE                  |
| 11   | 2    | 80061     | BOLT - HEX HD.                |
| 12   | 1    | 141537    | MANIFOLD ASM, TRANSDUCER      |
| 13   | 1    | 207366    | TUBE, OIL FILTER SUPPLY       |
| 15   | 1    | 90991     | ADAPTER, STR                  |
| 16   | 1    | 90942     | ADAPTER, STR - HYDRAULIC      |
| 17   | 1    | 85105     | CLAMP, TUBE                   |
| 18   | 10   | 80030     | BOLT - HEX HD.                |
| 19   | 12   | 80513     | NUT - LOCK                    |
| 20   | 1    | 90877     | KIT - FLANGE                  |
| 21   | 1    | 90413     | TEE, RUN - SWIVEL             |
| 22   | 1    | 90359     | ADAPTER, STR SWIVEL REDUCER   |
| 23   | 1    | 90644     | ADAPTER, TEST PORT            |
| 24   | 1    | 9900529   | HEAD, DUAL FILTER             |
| 25   | 2    | 90878     | KIT - FLANGE                  |
| 26   | 2    | 9901660   | FILTER, SPIN-ON 6-MICRON      |
| 27   | 2    | 138637    | DECAL, FACTORY INSTALLED      |
| 28   | 1    | 207549    | BRACKET, FILTER MOUNT         |
| 29   | 8    | 80029     | BOLT - HEX HD.                |
| 30   | 1    | 9902046   | VALVE, RIDE CONTROL           |
| 31   | 3    | 90246     | ADAPTER, 90                   |
| 32   | 4    | 80577     | WASHER - SAE                  |
| 33   | 2    | 80512     | NUT - LOCK                    |
| 34   | 2    | 80022     | BOLT - HEX HD.                |

| item | Qty. | P/N        | Description                     |
|------|------|------------|---------------------------------|
| 35   | 2    | 115381     | ACCUMULATOR BRACKET             |
| 36   | 1    | 9901817    | ACCUMULATOR, 2-LITRE PISTON     |
| 37   | 1    | 90999      | ADAPTER, STR                    |
| 38   | 1    | 207801     | RUBBER, RH COMPARTMENT SEAL     |
| 39   | 1    | 207802     | RETAINER, RH COMPARTMENT RUBBER |
| 40   | 2    | 80031      | BOLT - HEX HD.                  |
| 41   | 2    | 90502      | TEE, 06JIC(M) BULKHEAD - BRANCH |
| 42   | 2    | 9900929-09 | CLAMP, DOUBLE TUBE              |
| 43   | 1    | 90513      | TEE BRANCH                      |
| 44   | 2    | 216969     | BRACKET, ACCUMULATOR            |
| 45   | 1    | 217401     | ASM, ELEC HYD FILL PUMP         |
| 46   | 1    | 90003      | CAP                             |





|                 |  |                                                        |  |                             |  |                         |  |                                                                                                                                                                                |  |         |  |              |  |       |  |
|-----------------|--|--------------------------------------------------------|--|-----------------------------|--|-------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------|--|--------------|--|-------|--|
|                 |  | ITEM NO.                                               |  | NO. REQ'D                   |  | MATERIAL PART NO.       |  | DESCRIPTION                                                                                                                                                                    |  |         |  |              |  |       |  |
| PART WT         |  | N/A                                                    |  | REF                         |  | —                       |  | —                                                                                                                                                                              |  | —       |  | —            |  |       |  |
| COMPLETED PARTS |  | MAN                                                    |  | QTY                         |  | MAN                     |  | QTY                                                                                                                                                                            |  | MAN     |  | QTY          |  |       |  |
| GO TO:          |  | RWF INDUSTRIES                                         |  |                             |  |                         |  |                                                                                                                                                                                |  |         |  |              |  |       |  |
| W.O.            |  | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |  |                             |  |                         |  | THIS PRINT IS THE PROPERTY OF<br>RWF IND. IS CONFIDENTIAL<br>AND IS NOT TO BE COPIED OR<br>REPRODUCED WITHOUT OUR EXPRESS<br>PERMISSION AND IS TO BE RETURNED<br>UPON REQUEST. |  |         |  |              |  |       |  |
|                 |  | • FRACTIONAL ± .015                                    |  |                             |  |                         |  |                                                                                                                                                                                |  |         |  |              |  |       |  |
|                 |  | • DECIMAL .XX ± .025<br>.XXX ± .005                    |  |                             |  |                         |  |                                                                                                                                                                                |  |         |  |              |  |       |  |
|                 |  | • ANGLES ± .1                                          |  |                             |  |                         |  |                                                                                                                                                                                |  |         |  |              |  |       |  |
| QTY.            |  | SCALE                                                  |  | NTS                         |  | DO NOT SCALE<br>DRAWING |  | APPROVED                                                                                                                                                                       |  | DRAWN   |  | DCP 08/08/23 |  |       |  |
|                 |  |                                                        |  |                             |  |                         |  |                                                                                                                                                                                |  | CHECKED |  |              |  |       |  |
| DUE             |  | TITLE                                                  |  | SCHEMATIC, HYDRAULIC FTX300 |  |                         |  |                                                                                                                                                                                |  |         |  | FTX300       |  |       |  |
|                 |  | ASSY.DWG.                                              |  | BUILD SPEC                  |  |                         |  | DWG.NO.                                                                                                                                                                        |  |         |  | 33339        |  | REV — |  |





CHAPTER 8: MAIN FRAME

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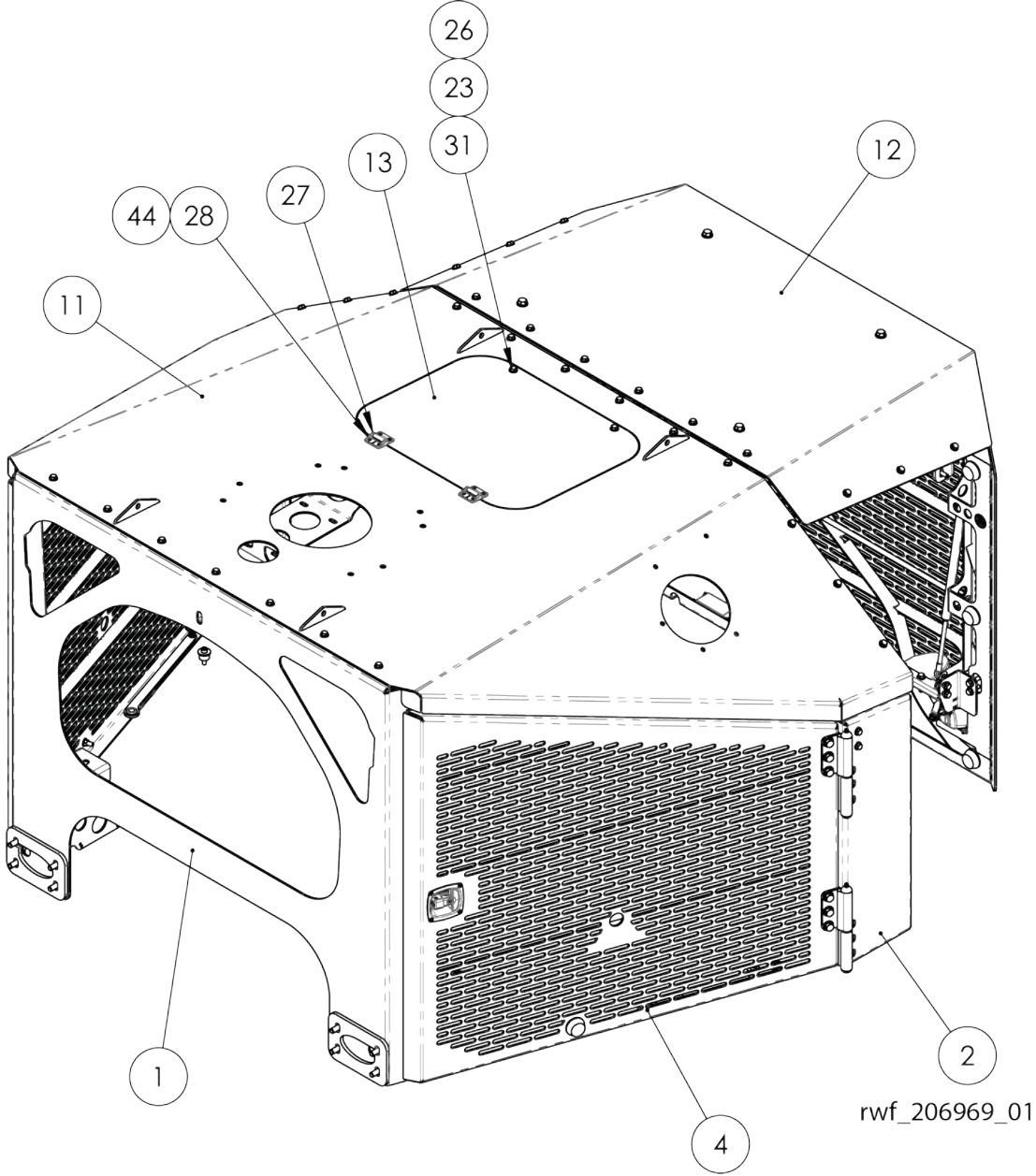
*COWLING GROUP ..... 8.1*

*MAIN FRAME ..... 8.2*

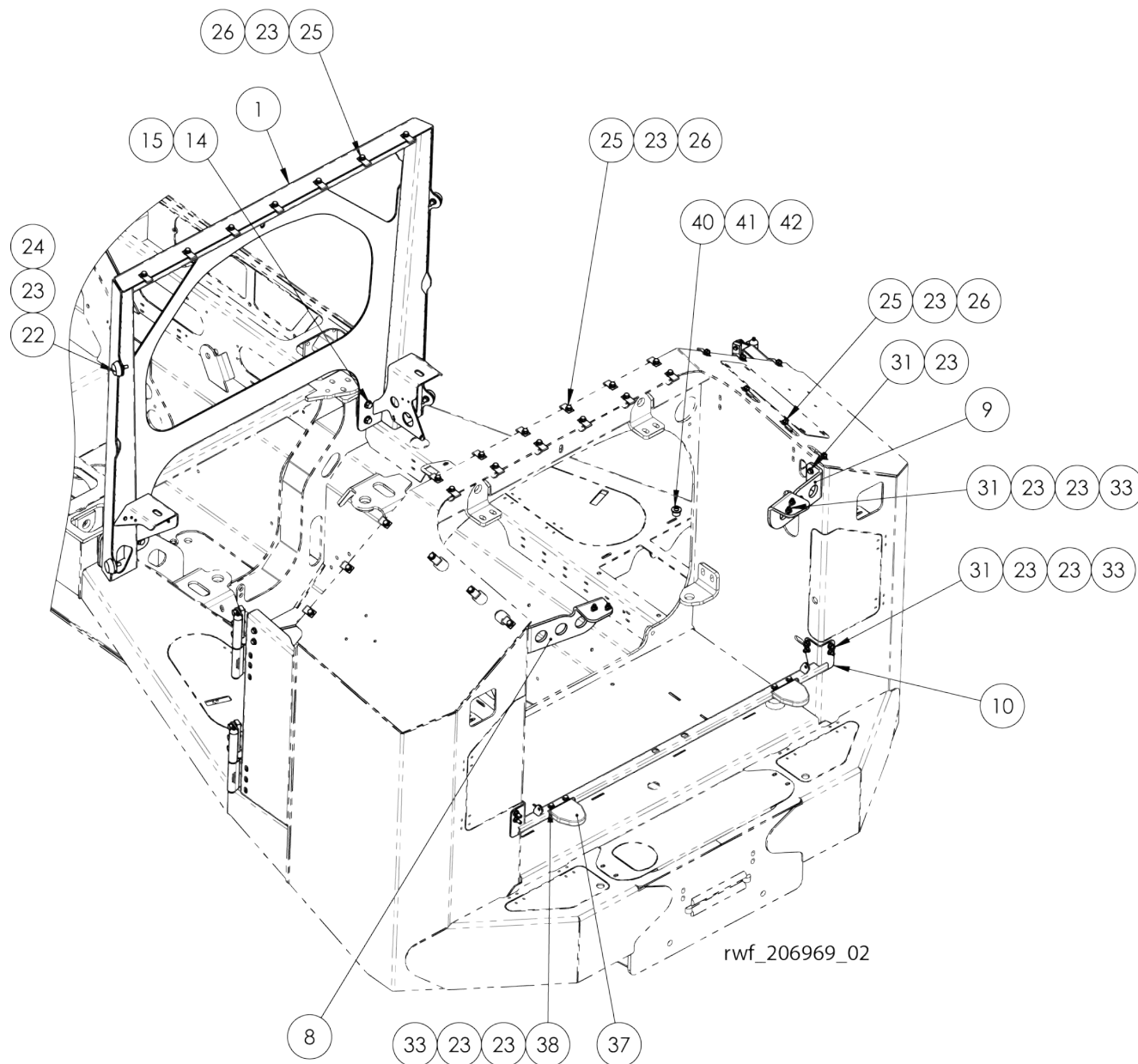
*MAIN FRAME ..... 8.3*

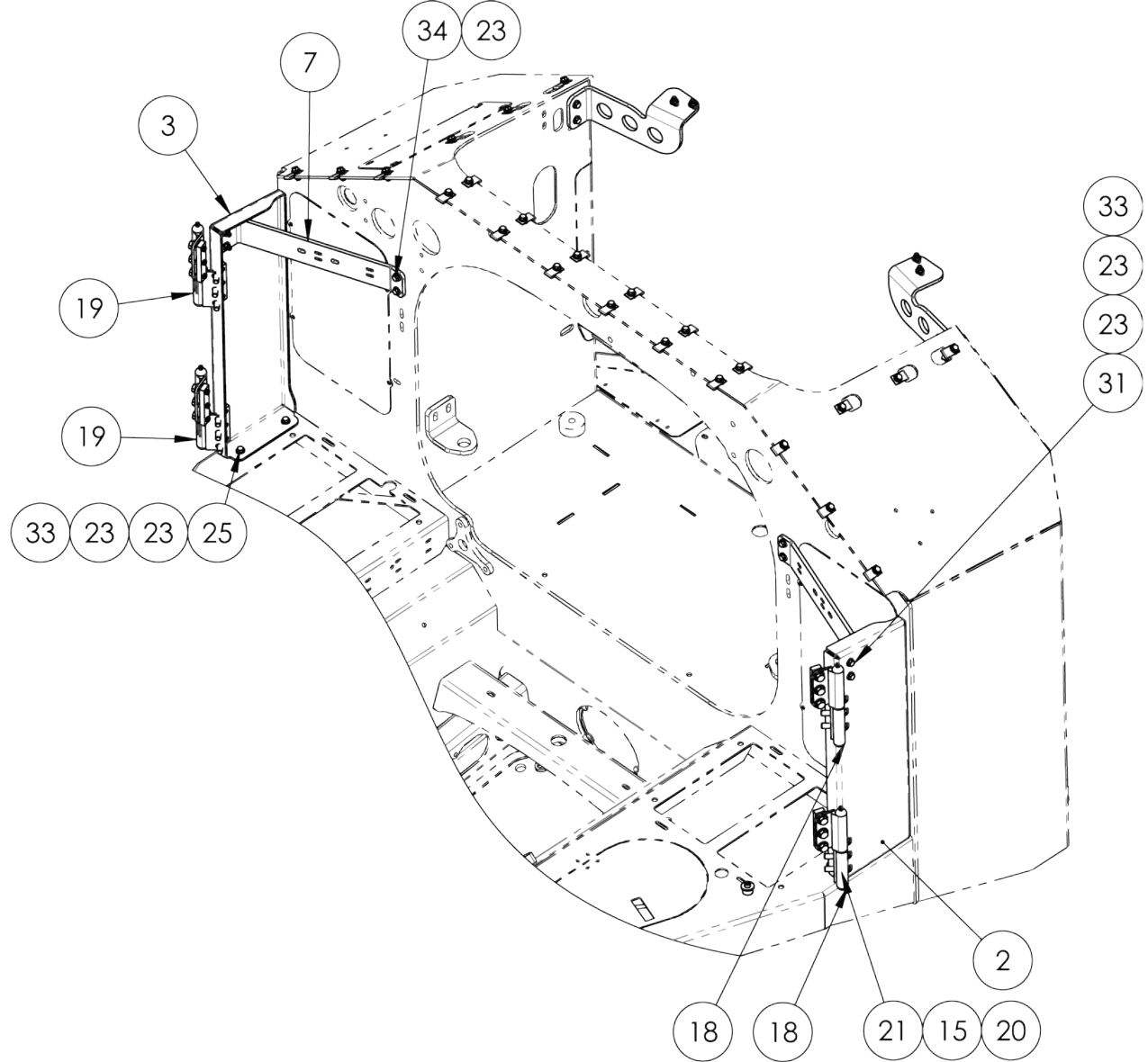
*D-LUG HEAD LIFT ..... 8.4*

*FRONT PLATE ASM ..... 8.5*

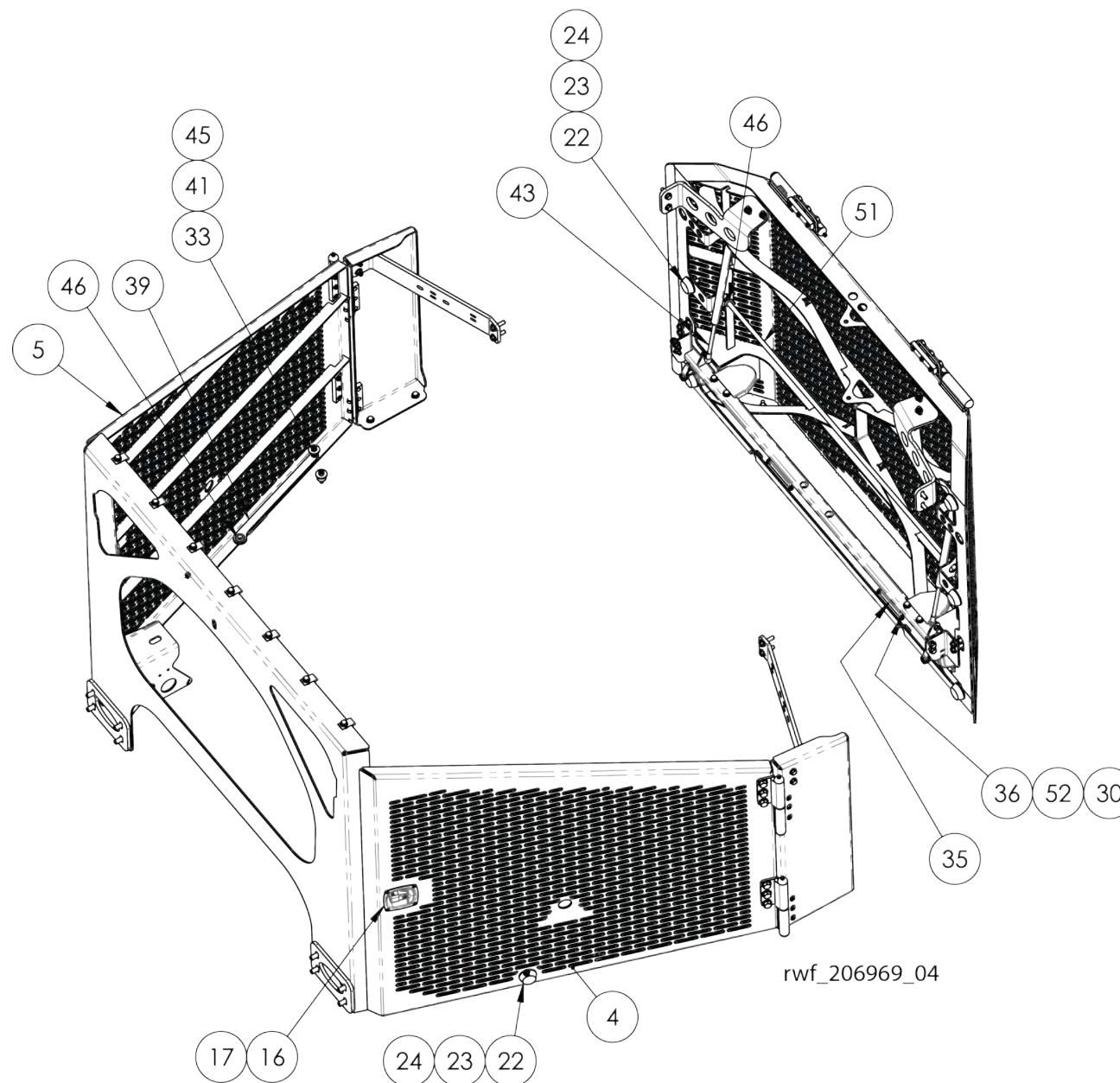


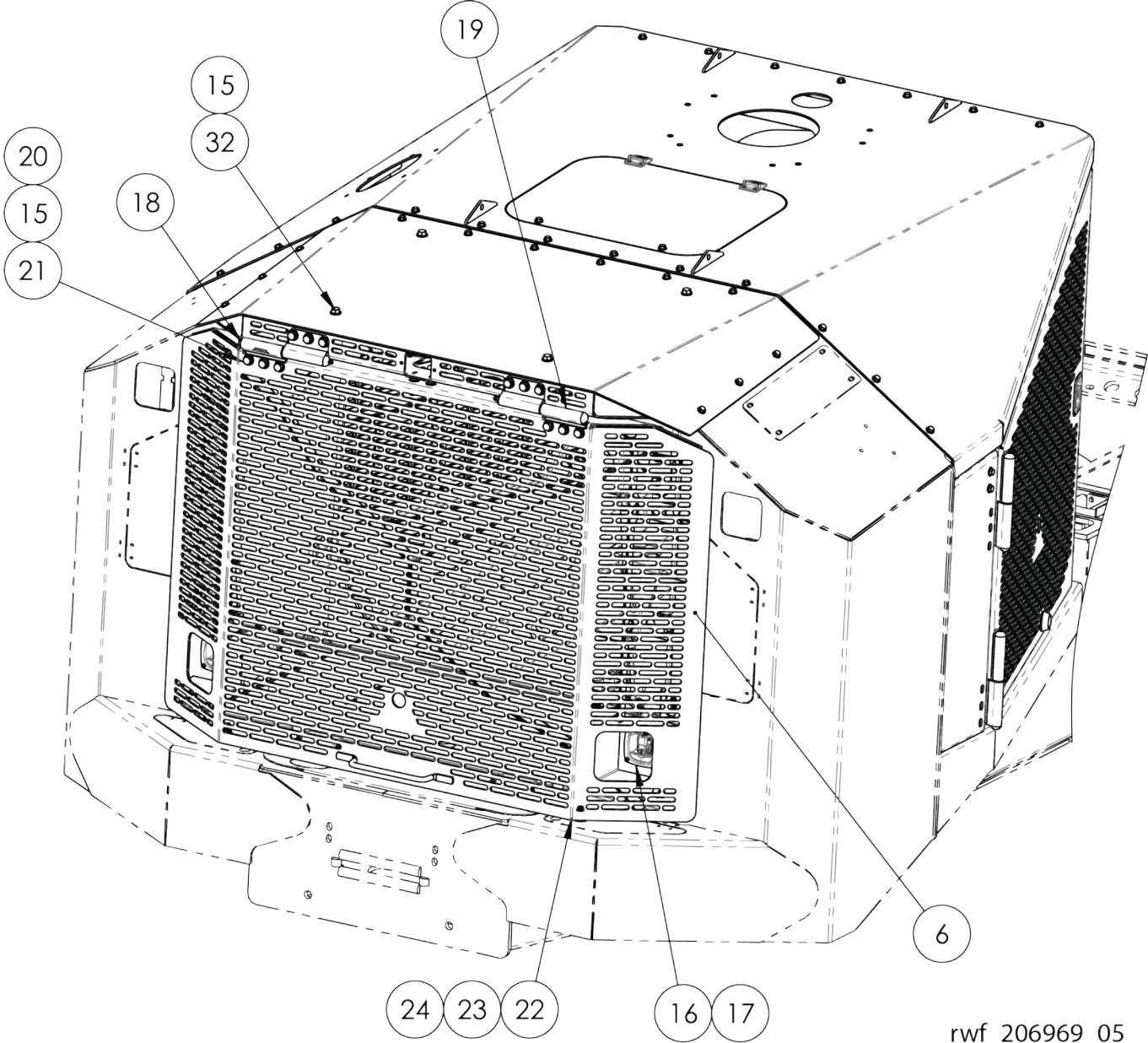
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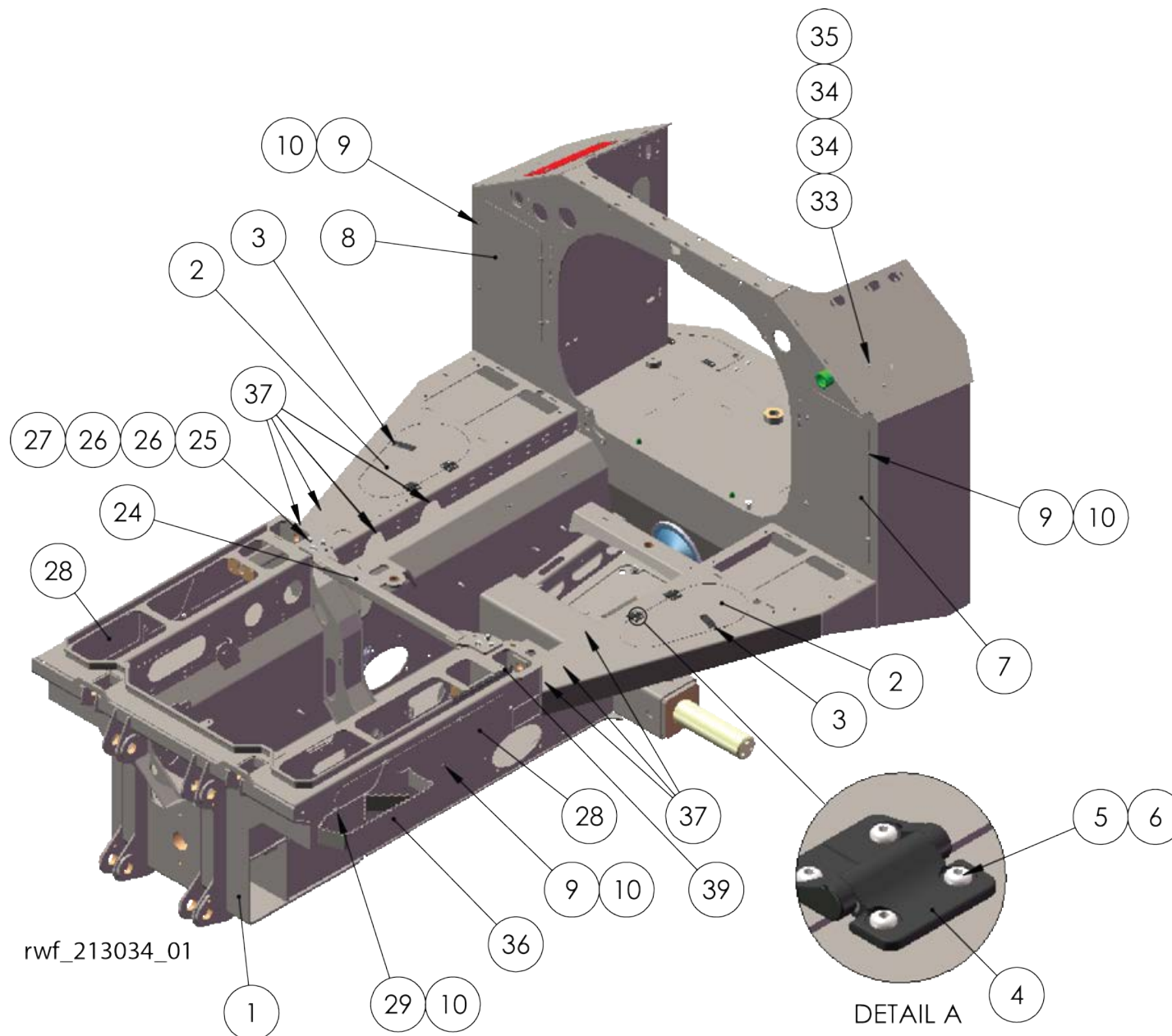


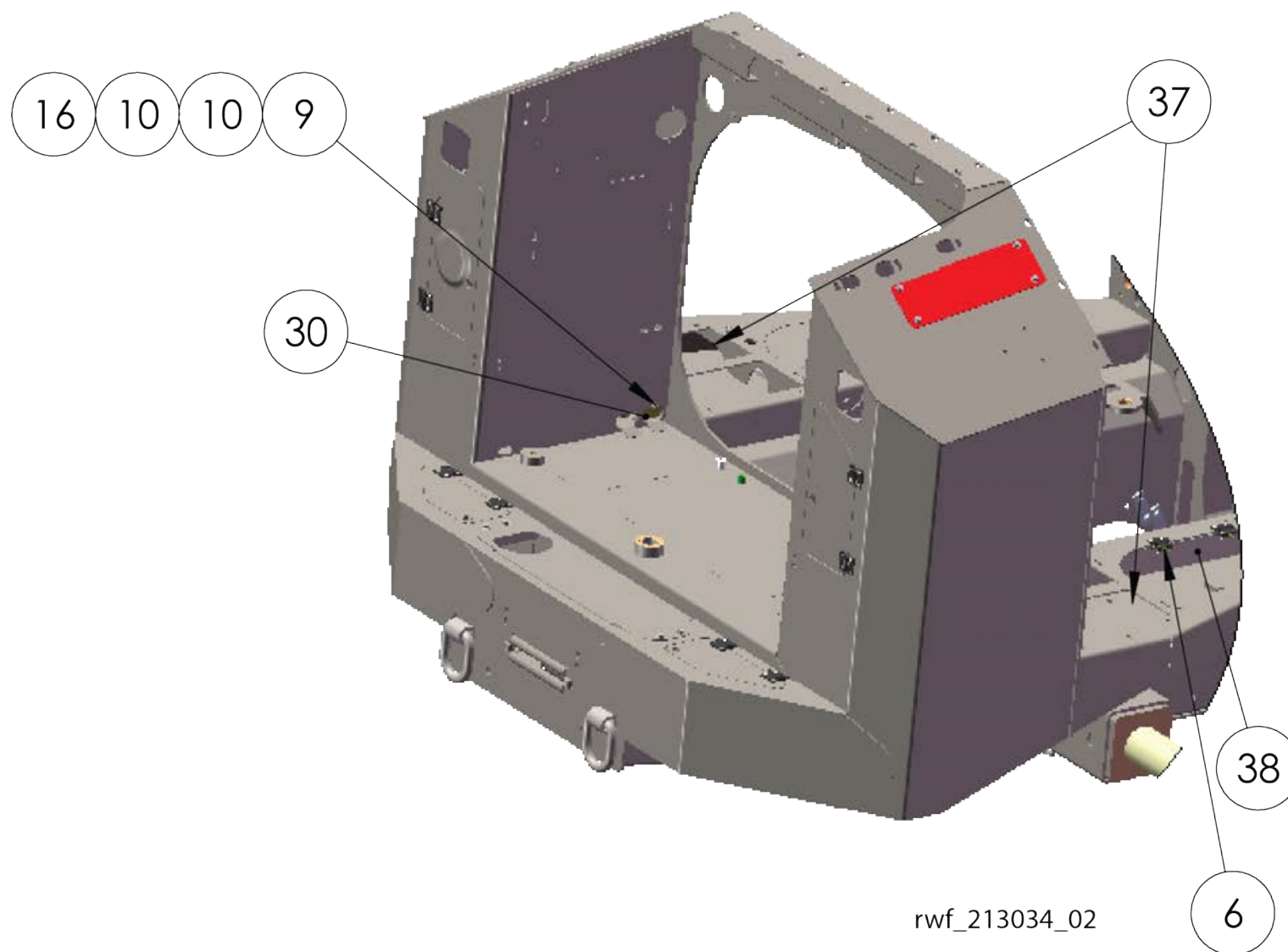
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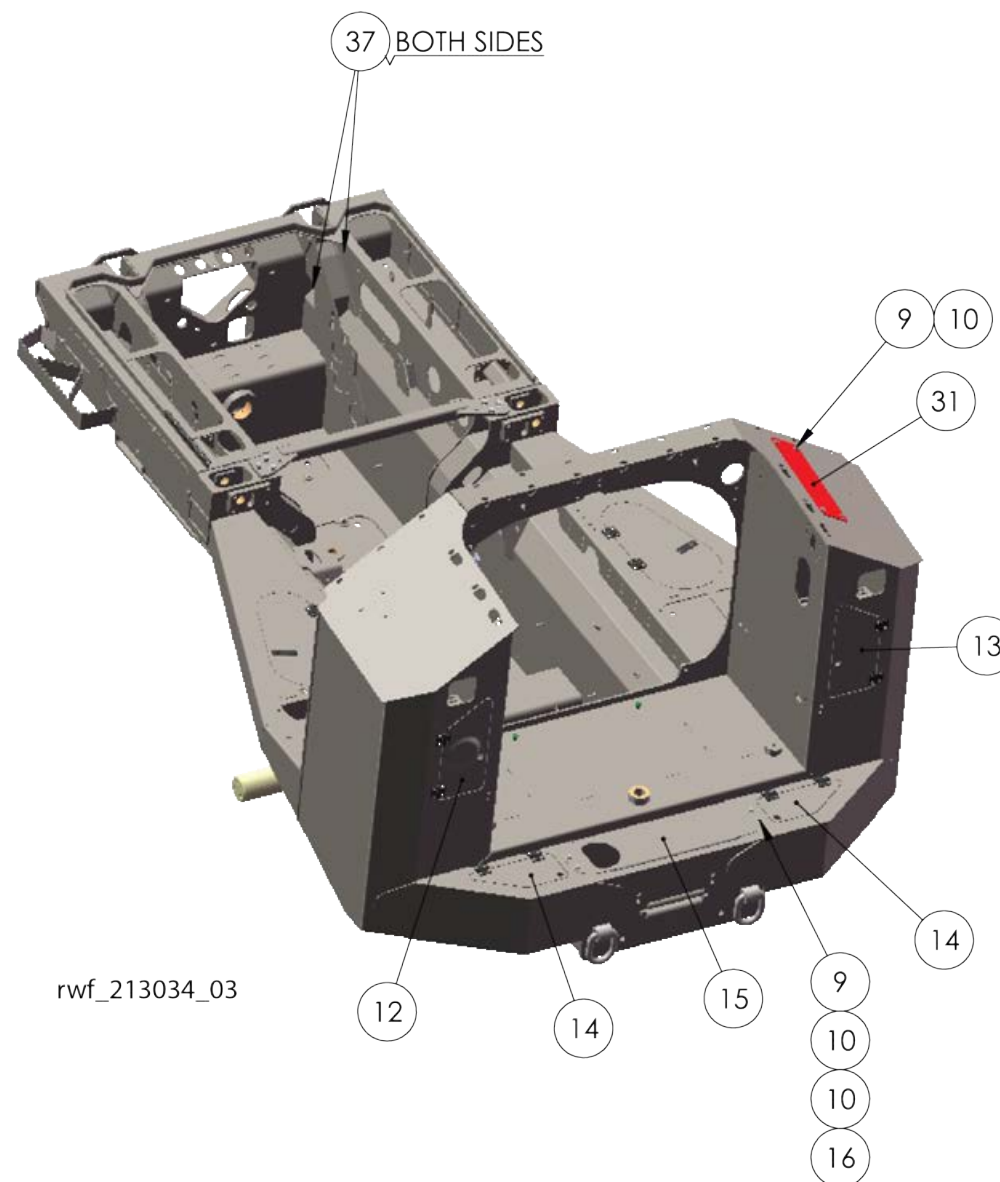
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|------|------|------------|-----------------------------------|
| 1    | 1    | 207377     | FRONT COWLING SUPPORT             |
| 2    | 1    | 207378     | LH FIXED PANEL                    |
| 3    | 1    | 207379     | RH FIXED PANEL                    |
| 4    | 1    | 207380     | LH SIDE DOOR                      |
| 5    | 1    | 207381     | RH SIDE DOOR                      |
| 6    | 1    | 207382     | REAR DOOR                         |
| 7    | 2    | 207383     | BRACKET, FIXED PANEL              |
| 8    | 1    | 207384     | BRACKET, LH REAR ROOF             |
| 9    | 1    | 207385     | BRACKET, RH REAR ROOF             |
| 10   | 1    | 207386     | CROSSMEMBER, REAR ACCESS          |
| 11   | 1    | 207387     | FRONT ROOF                        |
| 12   | 1    | 207388     | REAR ROOF                         |
| 13   | 1    | 207389     | DOOR, ROOF                        |
| 14   | 8    | 80071      | BOLT - HEX HD.                    |
| 15   | 48   | 80580      | WASHER - SAE                      |
| 16   | 4    | 9900415    | LATCH, LIFT AND TURN COMPRESSION  |
| 17   | 4    | 9900416    | CAM, OFFSET COMPRESSION LATCH     |
| 18   | 3    | 139643-002 | WELD/BOLT HINGE, L,S,S            |
| 19   | 3    | 139643-102 | WELD/BOLT HINGE, R,S,S            |
| 20   | 12   | 139716     | BOLTING BAR, HINGE                |
| 21   | 36   | 80070      | BOLT - HEX HD.                    |
| 22   | 14   | 134861     | ANTI-VIBRATION MOUNT              |
| 23   | 97   | 80578      | WASHER                            |
| 24   | 14   | 80502      | NUT - STD                         |
| 25   | 35   | 80029      | BOLT - HEX HD.                    |
| 26   | 33   | 80705-012  | NUT                               |
| 27   | 2    | 9901564    | HINGE, CONSTANT TORQUE            |
| 28   | 8    | 80416      | SCREW, STAINLESS BUTTON - HEX SOC |
| 30   | 8    | 82208      | NUT                               |
| 31   | 14   | 80030      | BOLT - HEX HD.                    |
| 32   | 4    | 80068      | BOLT - HEX HD.                    |
| 33   | 26   | 80513      | NUT - LOCK                        |
| 34   | 4    | 80031      | BOLT - HEX HD.                    |

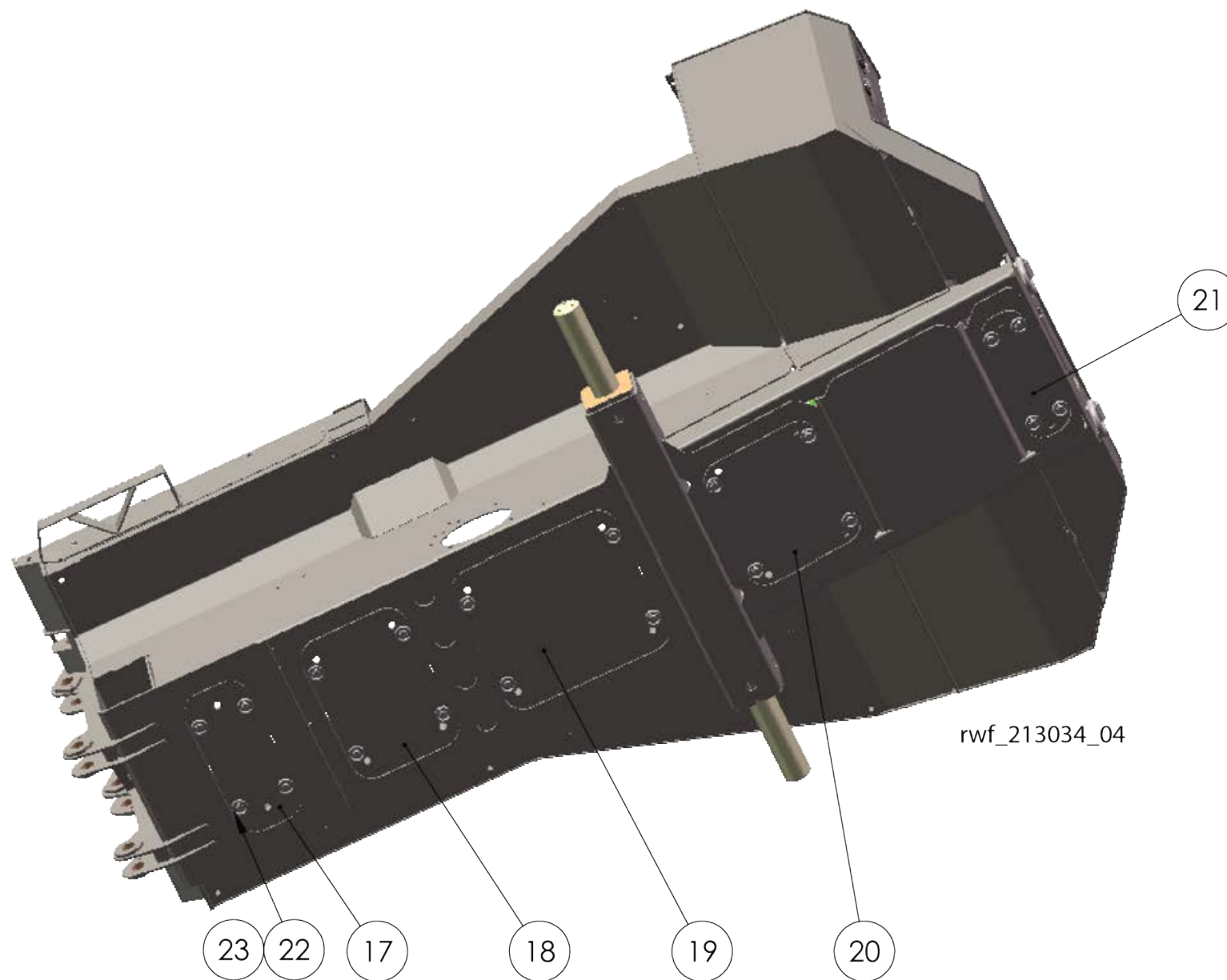
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|------|------|---------|-----------------------------------|
| 35   | 2    | 9900896 | GRAB HANDLE, RECESSED             |
| 36   | 8    | 81434   | SCREW, FLAT HEAD                  |
| 37   | 2    | 207471  | GUIDE, REAR DOOR                  |
| 38   | 4    | 80032   | BOLT - HEX HD.                    |
| 39   | 2    | 207472  | PROP ROD, SIDE DOOR               |
| 40   | 2    | 80275   | BOLT - HEX SOCKET                 |
| 41   | 4    | 80488   | WASHER, FENDER                    |
| 42   | 2    | 114862  | WASHER                            |
| 43   | 2    | 9901823 | SPRING, STROKE                    |
| 44   | 4    | 147509  | RETAINER, HINGE                   |
| 45   | 2    | 9901889 | SPRING                            |
| 46   | 4    | 131991  | GROMMET                           |
| 51   | 1    | 208202  | PROP ROD, REAR DOOR               |
| 52   | 8    | 73101   | FLATWASHER M6                     |
| 53   | 8    | 80720   | SCREW, STAINLESS BUTTON - HEX SOC |
| 54   | REF  | 207853  | BRACKET, VENT HOSE                |





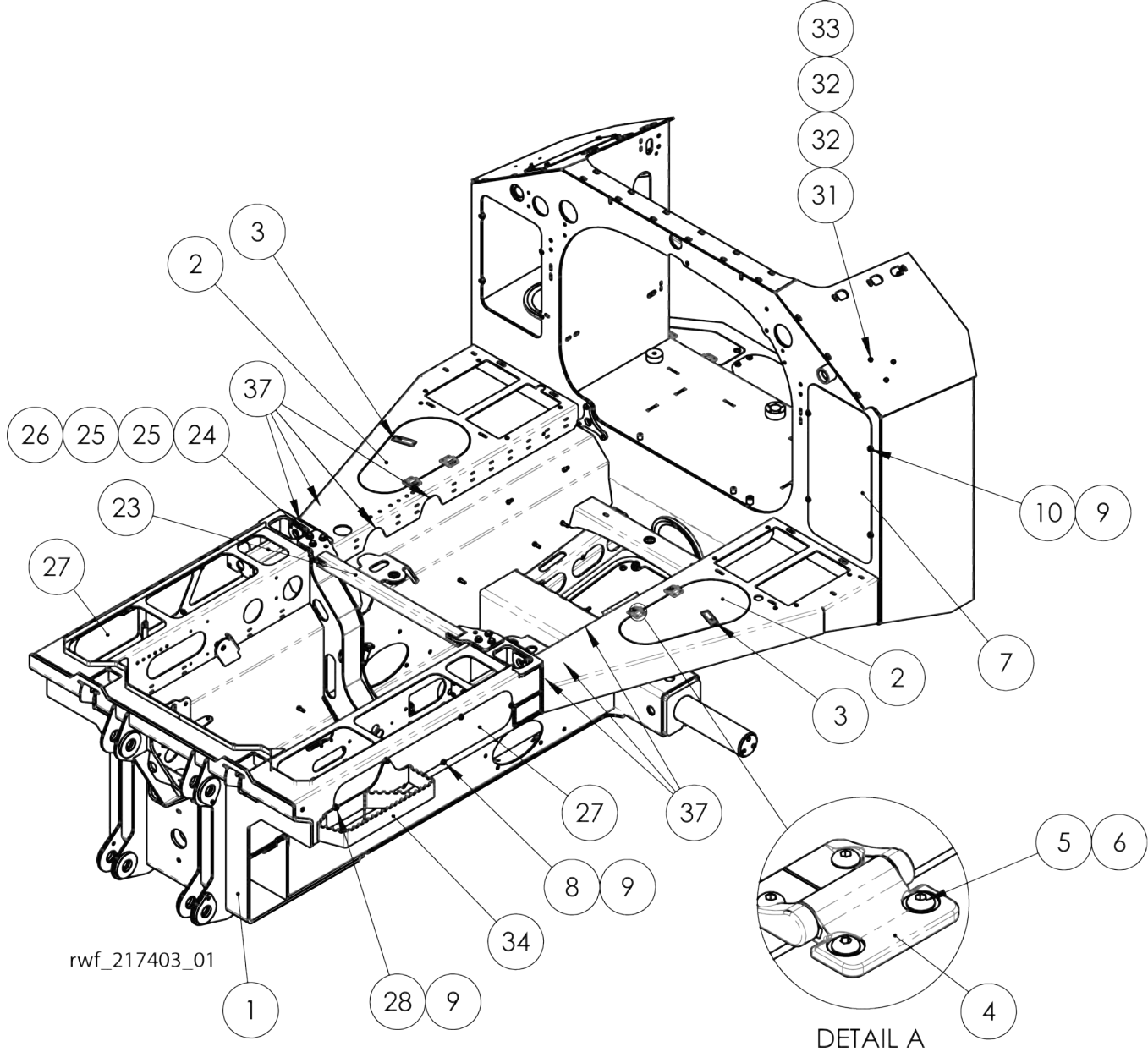


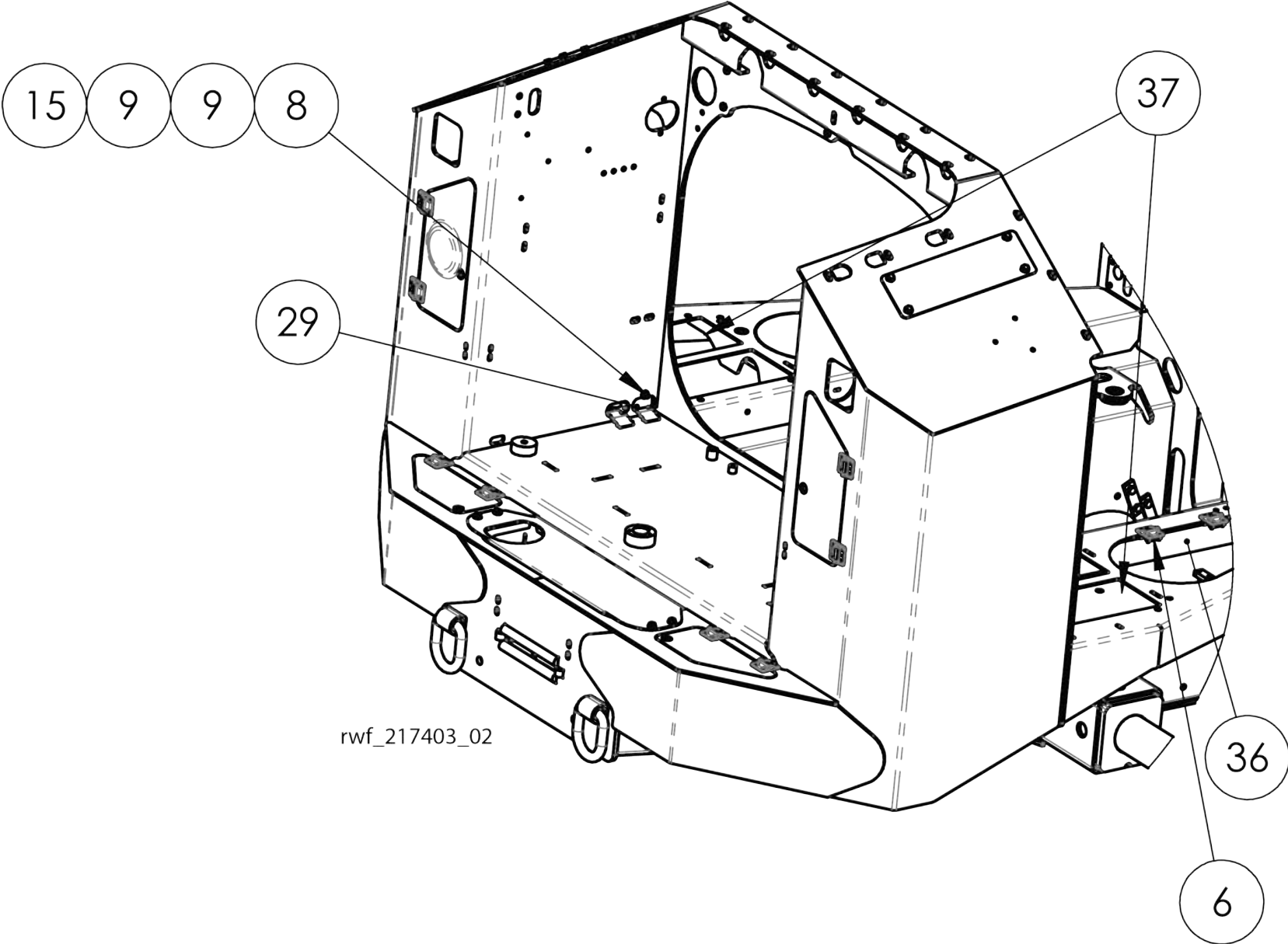




| item | Qty. | P/N     | Description                       |
|------|------|---------|-----------------------------------|
| 1    | 1    | 33264   | MAIN FRAME WELDMENT               |
| 2    | 2    | 207280  | DOOR, MID BOX                     |
| 3    | 2    | 9901570 | LATCH, COMPRESSION LEVER          |
| 4    | 12   | 9901564 | HINGE, CONSTANT TORQUE            |
| 5    | 48   | 80416   | SCREW, STAINLESS BUTTON - HEX SOC |
| 6    | 26   | 147509  | RETAINER, HINGE                   |
| 7    | 1    | 207281  | PANEL, LH                         |
| 8    | 1    | 207282  | PANEL, RH                         |
| 9    | 26   | 80029   | BOLT - HEX HD                     |
| 10   | 34   | 80578   | WASHER – SAE                      |
| 12   | 1    | 213071  | DOOR, LH REAR                     |
| 13   | 1    | 213072  | DOOR, RH REAR                     |
| 14   | 2    | 207285  | DOOR, REAR BUMPER                 |
| 15   | 1    | 207286  | PANEL, WINCH ACCESS               |
| 16   | 5    | 80513   | NUT – LOCK                        |
| 17   | 1    | 207287  | BELLYPAN                          |
| 18   | 1    | 207289  | BELLYPAN                          |
| 19   | 1    | 207291  | BELLYPAN                          |
| 20   | 1    | 207293  | BELLYPAN                          |
| 21   | 1    | 207295  | BELLYPAN                          |
| 22   | 20   | 80090   | BOLT - HEX HD                     |
| 23   | 20   | 80581   | WASHER – SAE                      |
| 24   | 1    | 207317  | CROSSMEMBER, MAIN FRAME           |
| 25   | 6    | 80073   | BOLT - HEX HD                     |
| 26   | 12   | 80580   | WASHER – SAE                      |
| 27   | 6    | 80515   | NUT – LOCK                        |
| 28   | 2    | 207331  | PANEL, UNDERCAB                   |
| 29   | 3    | 80030   | BOLT - HEX HD                     |
| 30   | 1    | 207854  | BLANK, HOSE PASSAGE               |
| 31   | 1    | 208214  | COVER, FILTER HEAD ACCESS         |
| 33   | 3    | 71153   | BOLT- HEX HD                      |
| 34   | 6    | 73103   | FLATWASHER                        |
| 35   | 3    | 73003   | NUT – HEX                         |

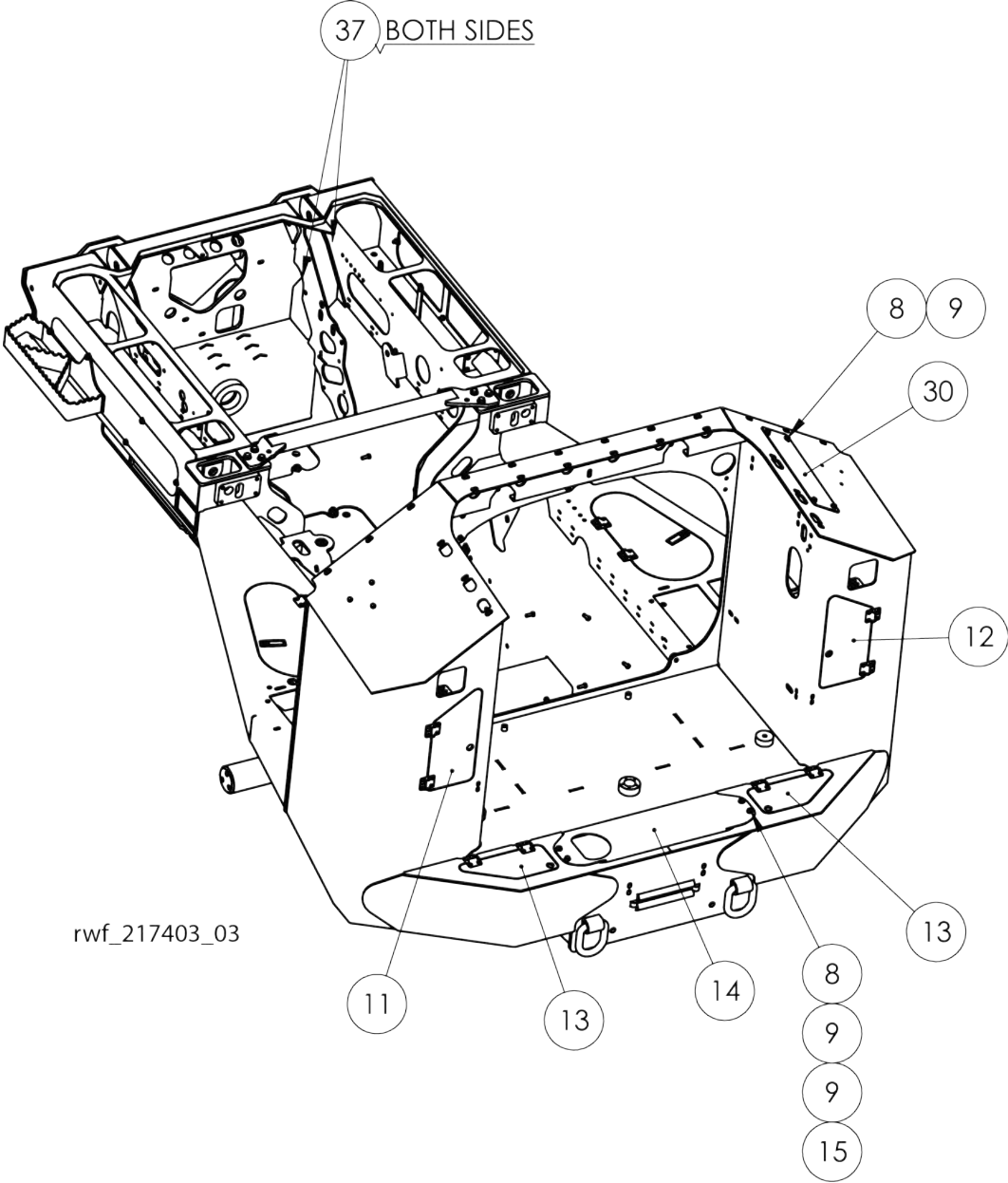
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|------|------|---------|-------------------------|
| 36   | 1    | 208191  | STEP, LEFT SIDE         |
| 37   | 96"  | 9901932 | U-CHANNEL PUSH -ON TRIM |
| 38   | 1    | 148867  | FORM, HARNESS GUARD     |
| 39   | 146" | 134385  | TRIM SEAL               |

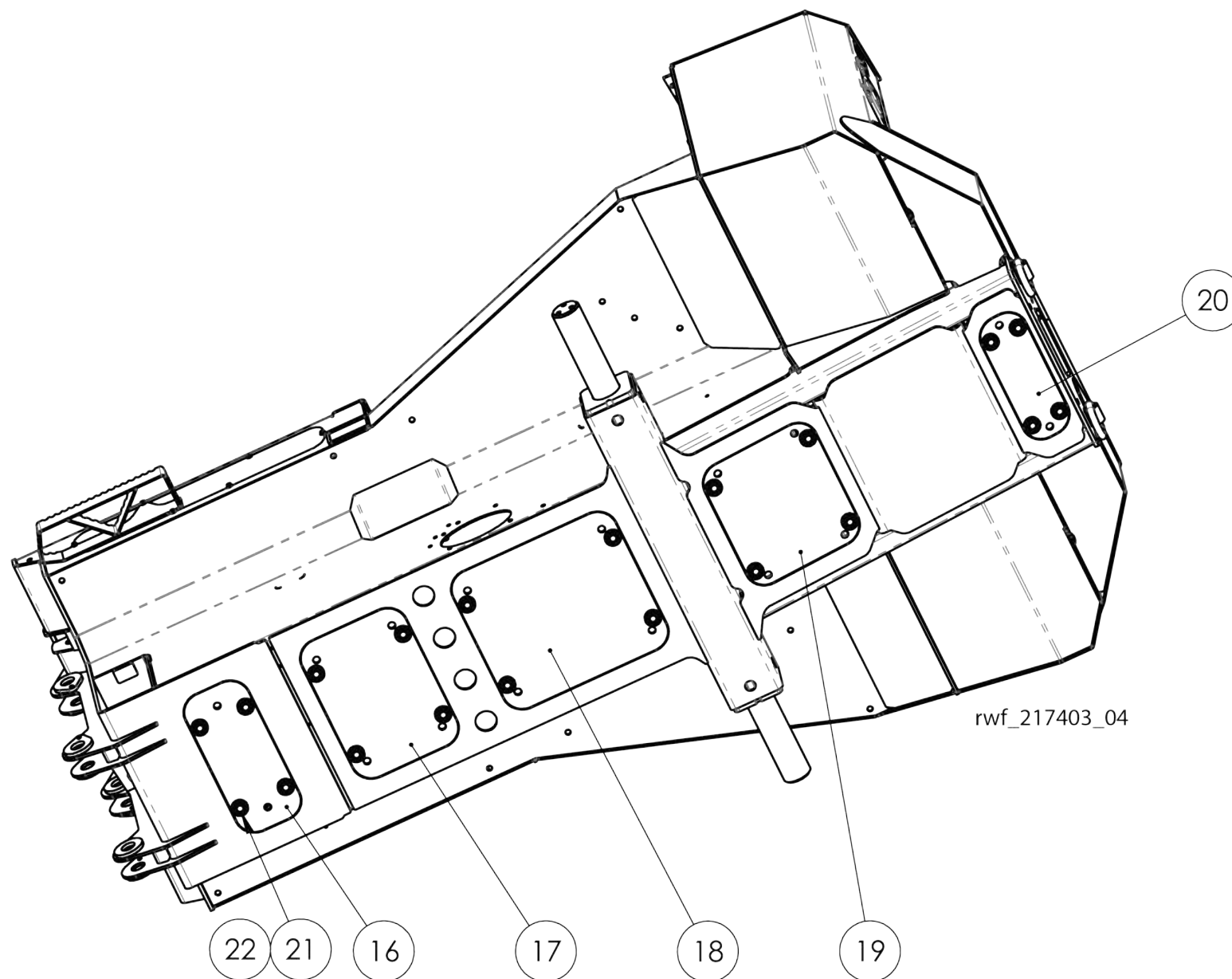




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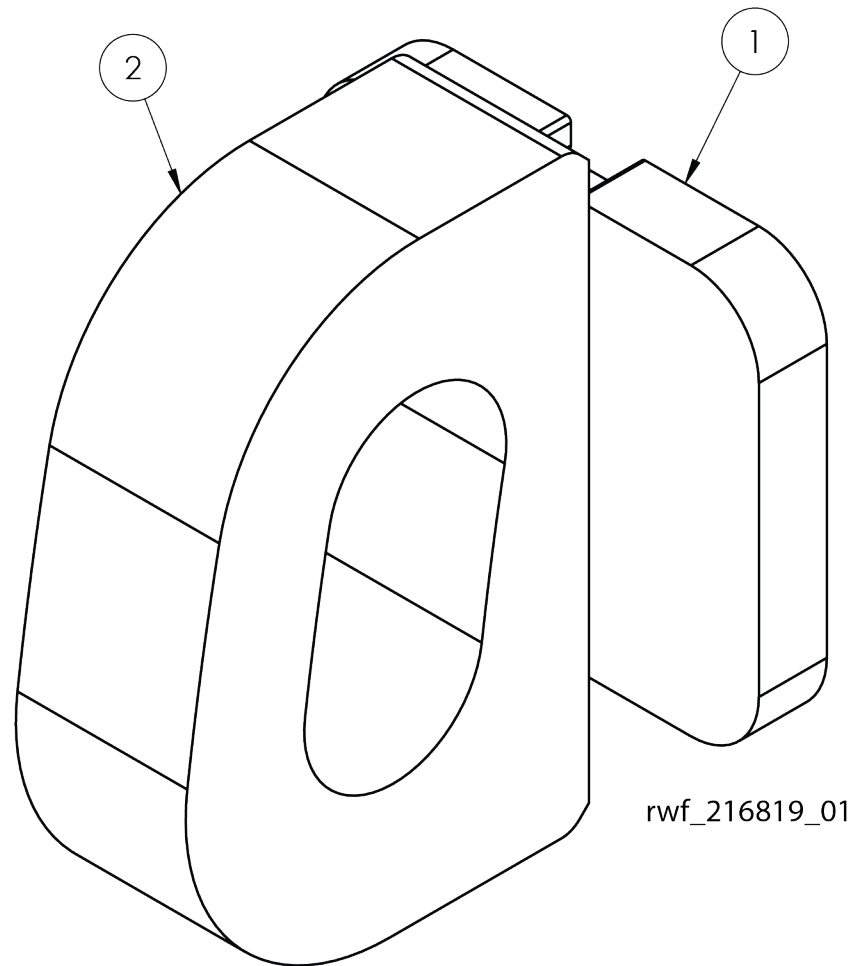




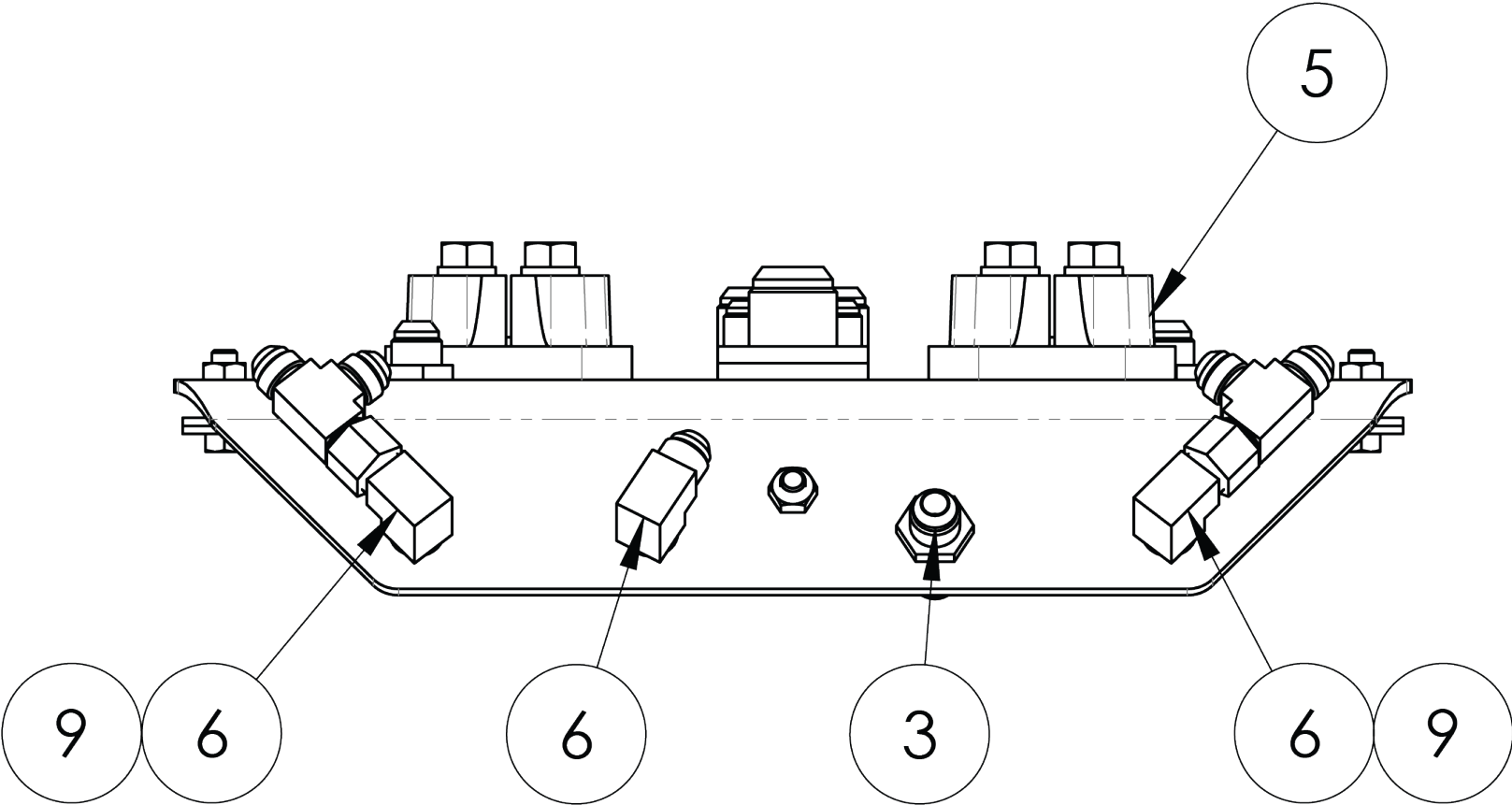


| item | Qty. | P/N     | Description                                   |
|------|------|---------|-----------------------------------------------|
| 1    | 1    | 33264   | MAIN FRAME WELDMENT, FTX300                   |
| 2    | 2    | 207280  | DOOR, MID BOX                                 |
| 3    | 2    | 9901570 | LATCH, COMPRESSION LEVER                      |
| 4    | 12   | 9901564 | HINGE, CONSTANT TORQUE                        |
| 5    | 48   | 80416   | SCREW, 10-32 x .75 STAINLESS BUTTON - HEX SOC |
| 6    | 26   | 147509  | RETAINER, HINGE                               |
| 7    | 1    | 207281  | PANEL, LH                                     |
| 8    | 18   | 80029   | BOLT - HEX HD.                                |
| 9    | 30   | 80578   | WASHER                                        |
| 10   | 4    | 80028   | BOLT - HEX HD.                                |
| 11   | 1    | 213071  | DOOR, LH REAR                                 |
| 12   | 1    | 213072  | DOOR, RH REAR                                 |
| 13   | 2    | 207285  | DOOR, REAR BUMPER                             |
| 14   | 1    | 207286  | PANEL, WINCH ACCESS                           |
| 15   | 5    | 80513   | NUT - LOCK                                    |
| 16   | 1    | 207287  | BELLYPAN 1                                    |
| 17   | 1    | 207289  | BELLYPAN 2                                    |
| 18   | 1    | 207291  | BELLYPAN 3                                    |
| 19   | 1    | 207293  | BELLYPAN 4                                    |
| 20   | 1    | 207295  | BELLYPAN 5                                    |
| 21   | 20   | 80090   | BOLT - HEX HD.                                |
| 22   | 20   | 80581   | WASHER - SAE                                  |
| 23   | 1    | 207317  | CROSSMEMBER, MAIN FRAME                       |
| 24   | 6    | 80073   | BOLT - HEX HD.                                |
| 25   | 12   | 80580   | WASHER - SAE                                  |
| 26   | 6    | 80515   | NUT                                           |
| 27   | 2    | 207331  | PANEL, UNDERCAB                               |
| 28   | 3    | 80030   | BOLT - HEX HD.                                |
| 29   | 1    | 207854  | BLANK, HOSE PASSAGE                           |
| 30   | 1    | 208214  | COVER, FILTER HEAD ACCESS                     |
| 31   | 3    | 71153   | BOLT- HEX HD                                  |
| 32   | 6    | 73103   | FLATWASHER                                    |
| 33   | 3    | 73003   | NUT - HEX                                     |

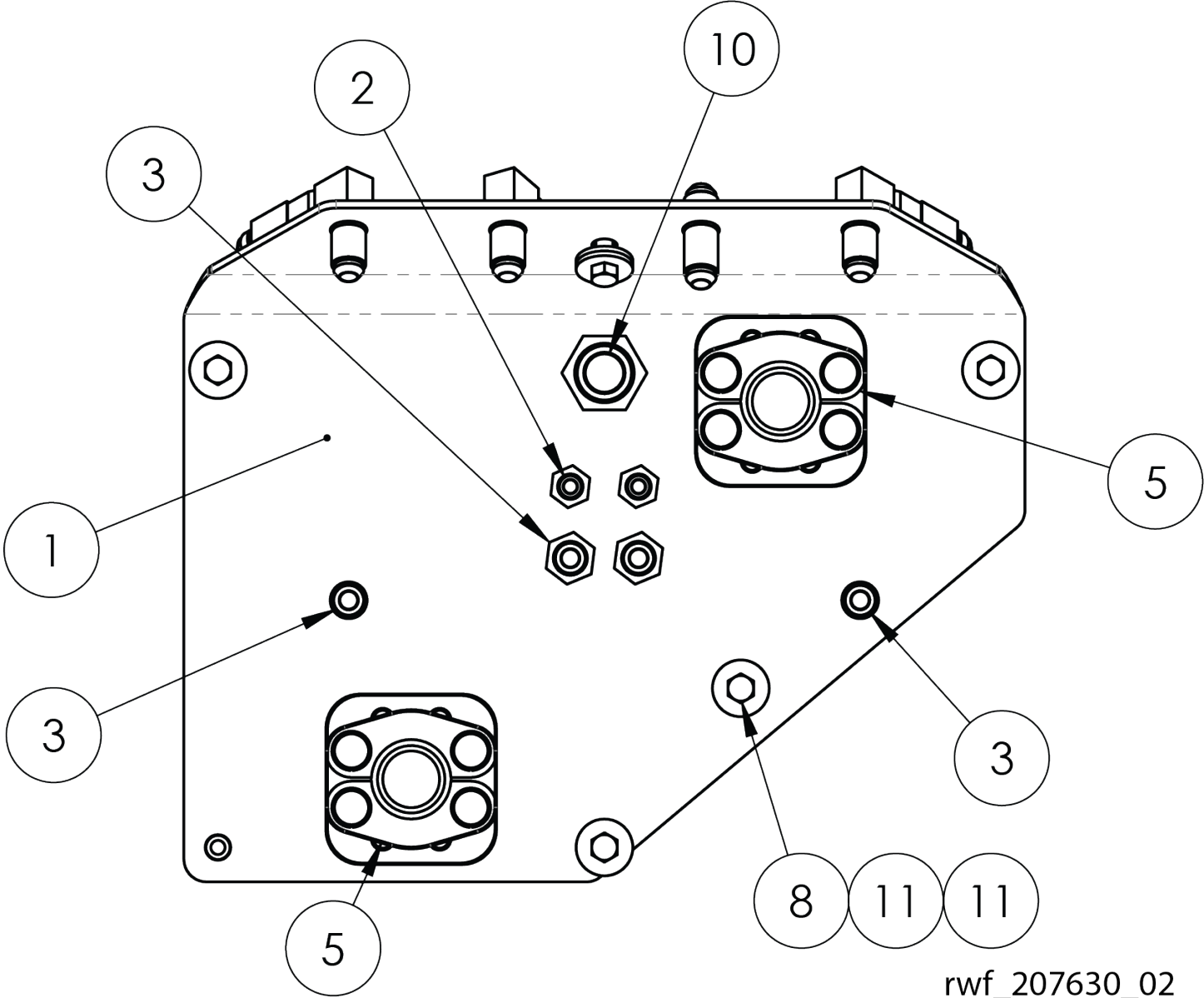
| item | Qty. | P/N     | Description             |
|------|------|---------|-------------------------|
| 34   | 1    | 208191  | STEP, LEFT SIDE         |
| 35   | 96"  | 9901932 | U-CHANNEL PUSH -ON TRIM |
| 36   | 1    | 148867  | FORM, HARNESS GUARD     |



| item | Qty. | P/N    | Description          |
|------|------|--------|----------------------|
| 1    | 1    | 217264 | PLATE, D-LUG BASE    |
| 2    | 1    | 27769  | PLATE, HEAD LIFT LUG |



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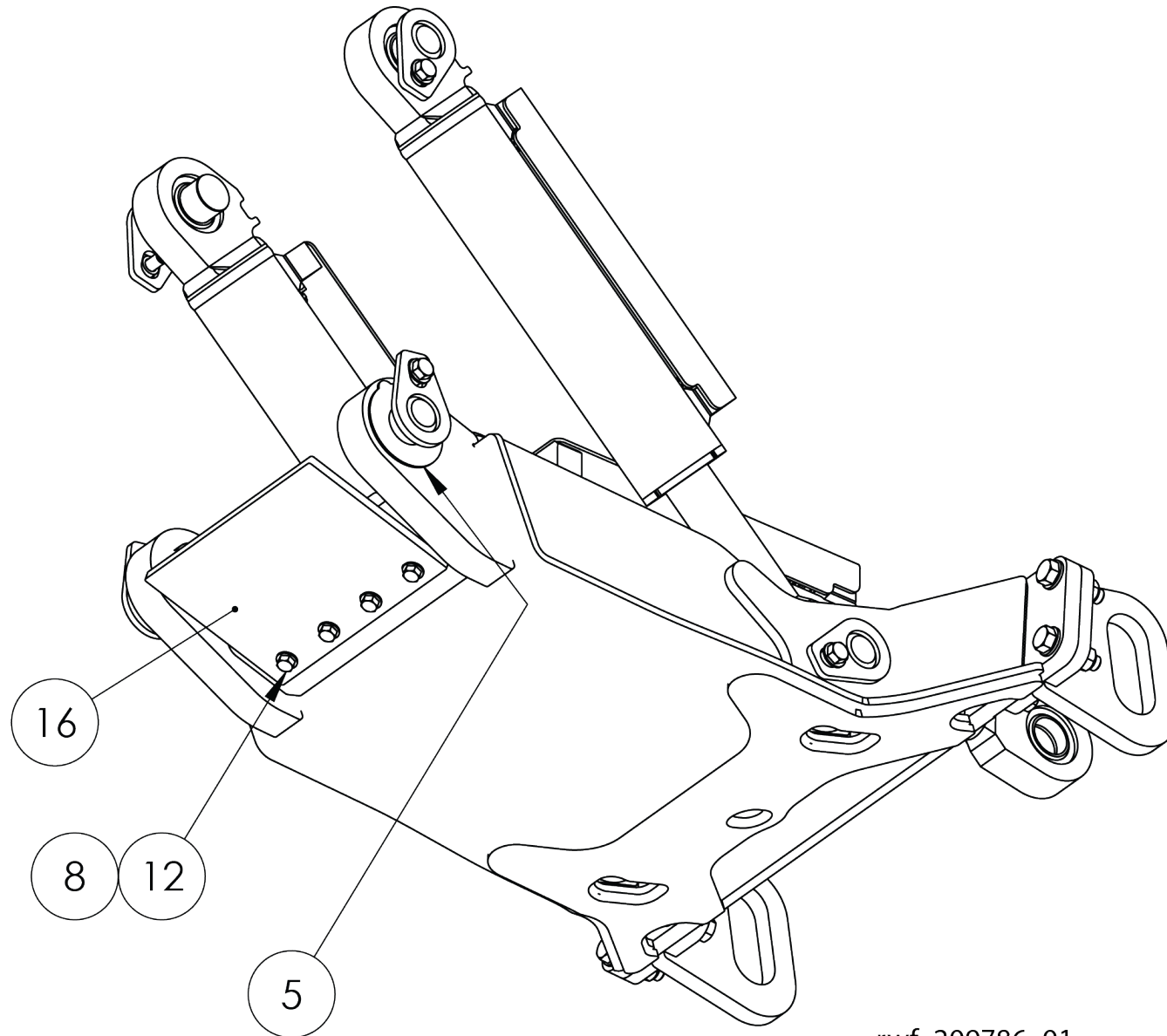
| item | Qty. | P/N    | Description           |
|------|------|--------|-----------------------|
| 1    | 1    | 207108 | BULKHEAD WELDMENT     |
| 2    | 2    | 90468  | ADAPTER, STR BULKHEAD |
| 3    | 5    | 90469  | ADAPTER, STR BULKHEAD |
| 5    | 4    | 90879  | KIT - FLANGE          |
| 6    | 3    | 90203  | ADAPTER BULKHEAD      |
| 8    | 5    | 80030  | BOLT - HEX HD         |
| 9    | 2    | 90413  | TEE, RUN - SWIVEL     |
| 10   | 1    | 90471  | ADAPTER, STR BULKHEAD |
| 11   | 10   | 80488  | WASHER, FENDER        |



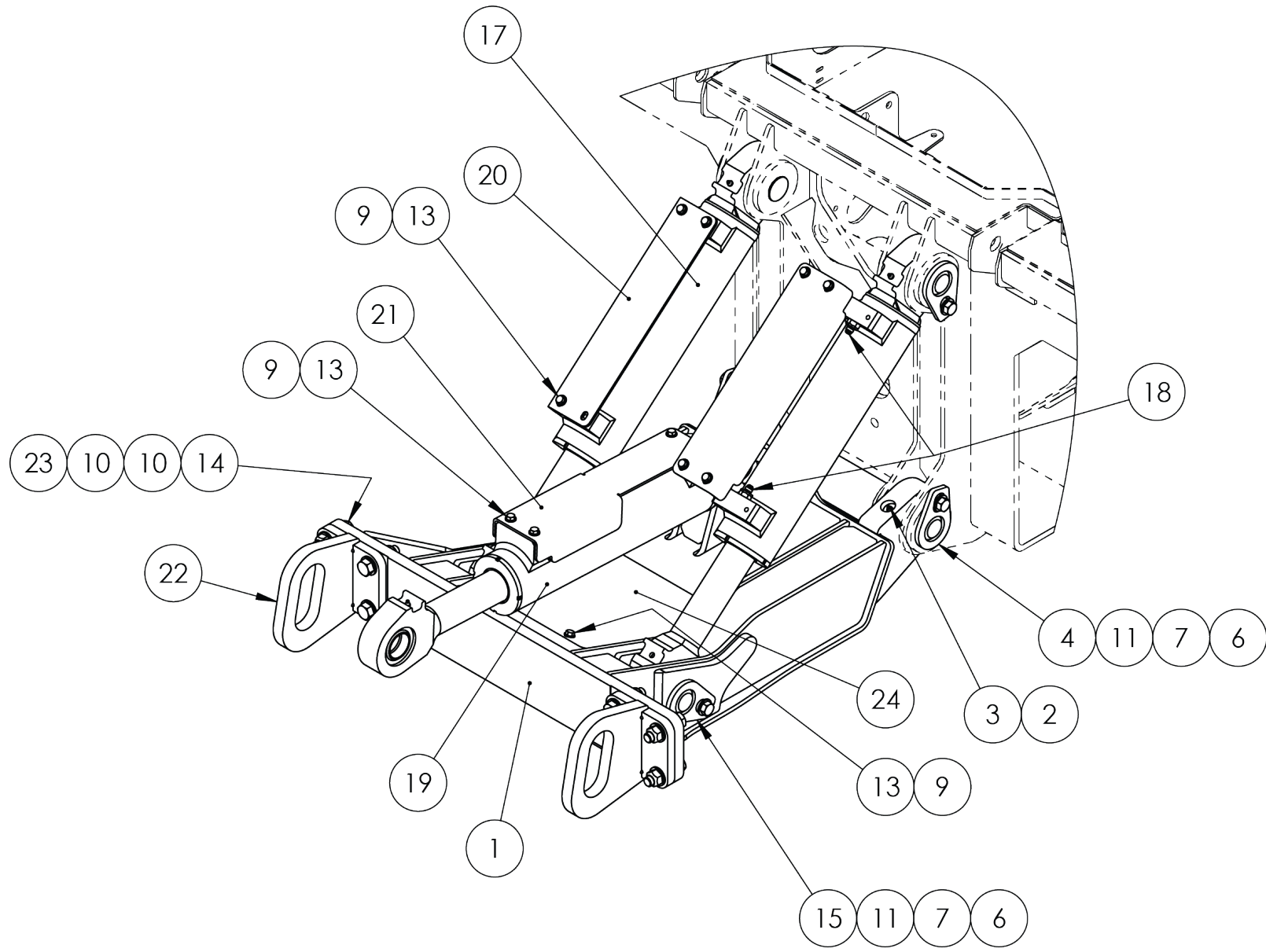
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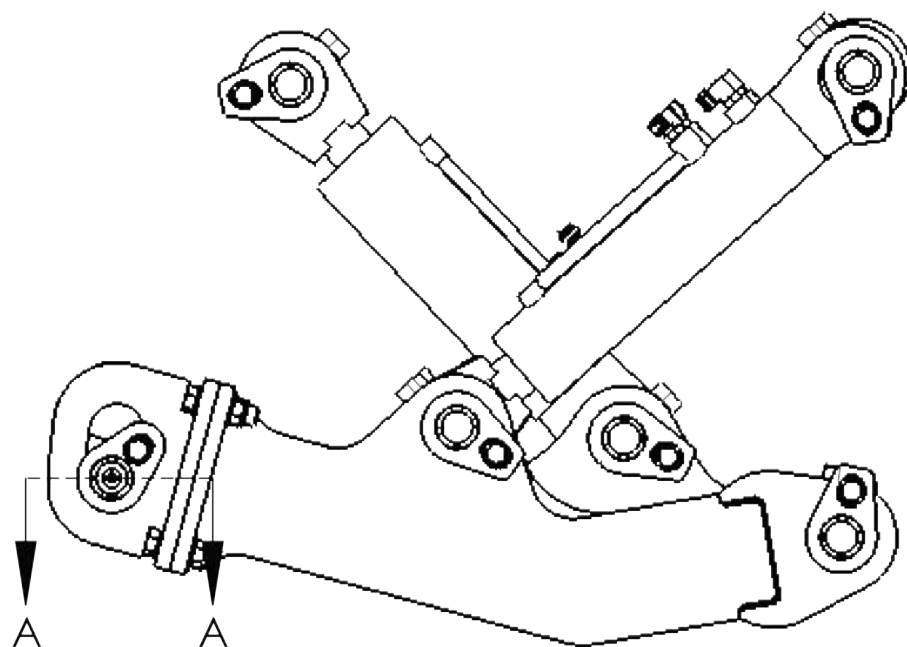


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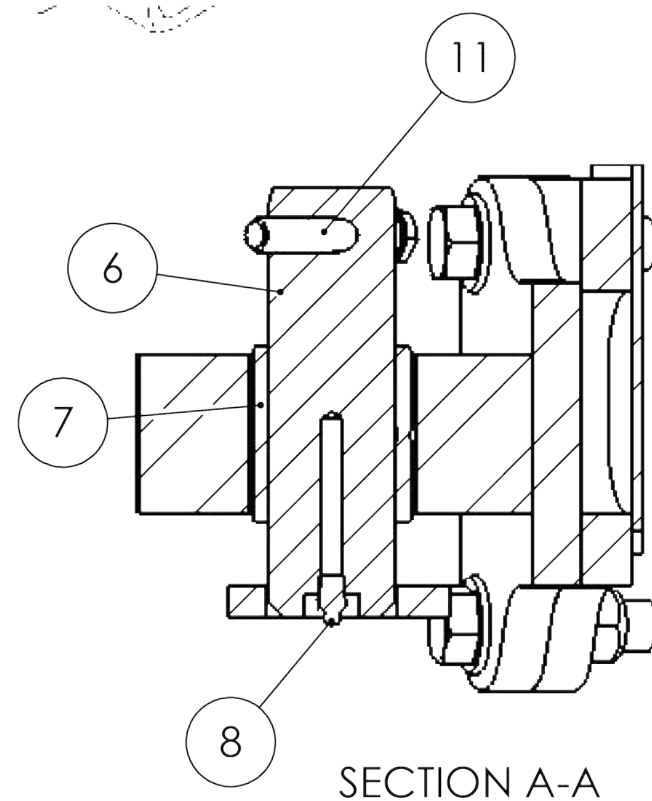


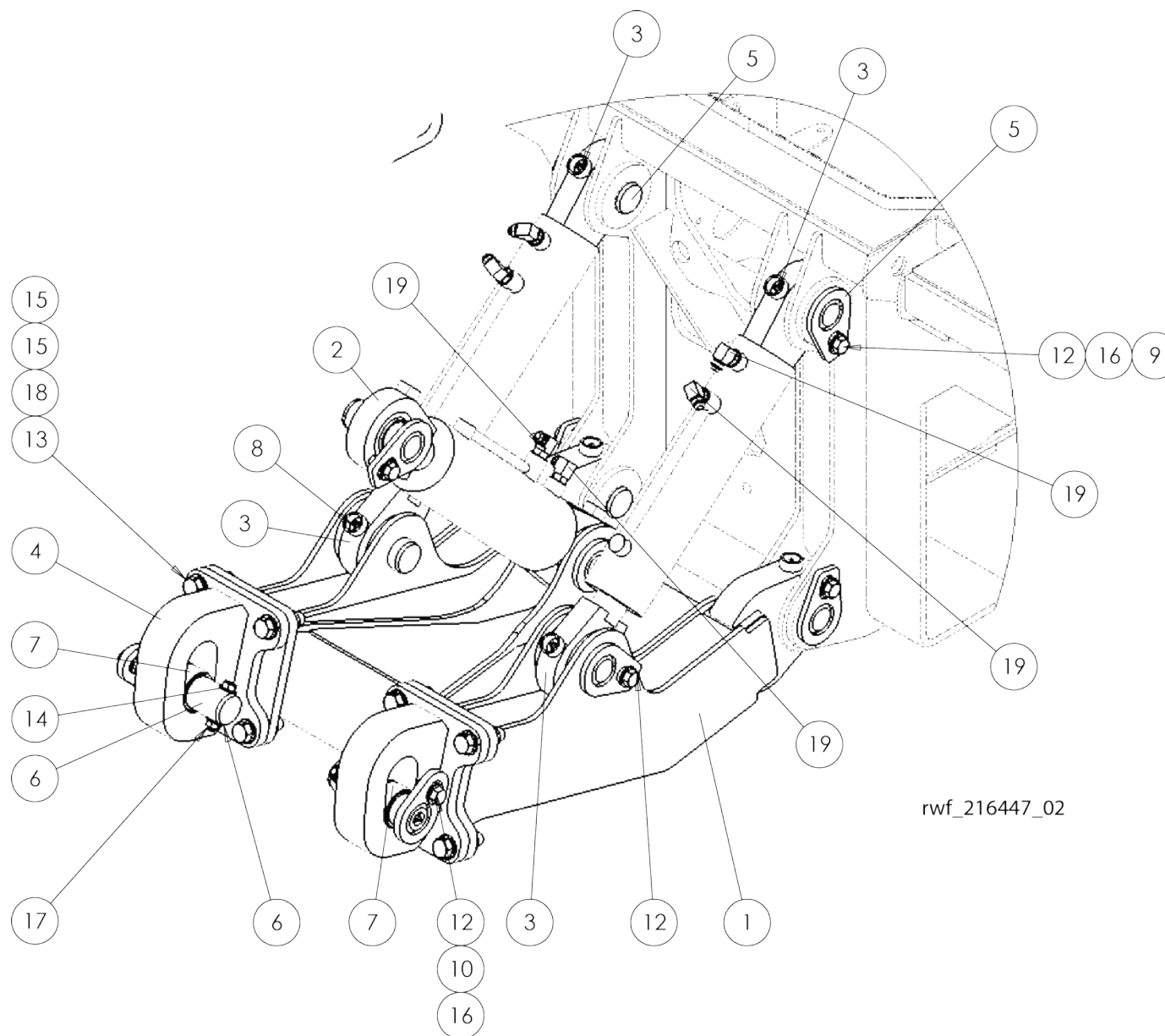
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| item | Qty. | P/N    | Description              |
|------|------|--------|--------------------------|
| 1    | 1    | 209787 | LIFT ARM                 |
| 2    | 2    | 15459  | BUSHING SWIVEL           |
| 3    | 2    | 80680  | GREASE FITTING STR       |
| 4    | 5    | 207717 | PIN ASM                  |
| 5    | REF  | 148424 | SHIM, PIN                |
| 6    | 7    | 115057 | BUSHING                  |
| 7    | 7    | 80581  | WASHER – SAE             |
| 8    | 4    | 80580  | WASHER - SAE             |
| 9    | 14   | 80578  | WASHER - SAE             |
| 10   | 16   | 80582  | WASHER - SAE             |
| 11   | 7    | 80090  | BOLT - HEX HD            |
| 12   | 4    | 80071  | BOLT - HEX HD            |
| 13   | 14   | 80029  | BOLT - HEX HD            |
| 14   | 8    | 80115  | BOLT - HEX HD            |
| 15   | 2    | 12267  | PIN ASM                  |
| 16   | 1    | 208180 | PLATE, REAR GUARD        |
| 17   | 2    | 148777 | ASM, LIFT ARM CYLINDER   |
| 18   | 6    | 90070  | ADAPTER, STR             |
| 19   | 1    | 148778 | ASM, CURL CYLINDER       |
| 20   | 2    | 208211 | GUARD, LIFT ARM CYLINDER |
| 21   | 1    | 208922 | GUARD, CURL CYLINDER     |
| 22   | 2    | 209804 | D-LUG                    |
| 23   | 8    | 80517  | NUT - LOCK               |
| 24   | 1    | 209901 | COVER, LIFT ARM          |



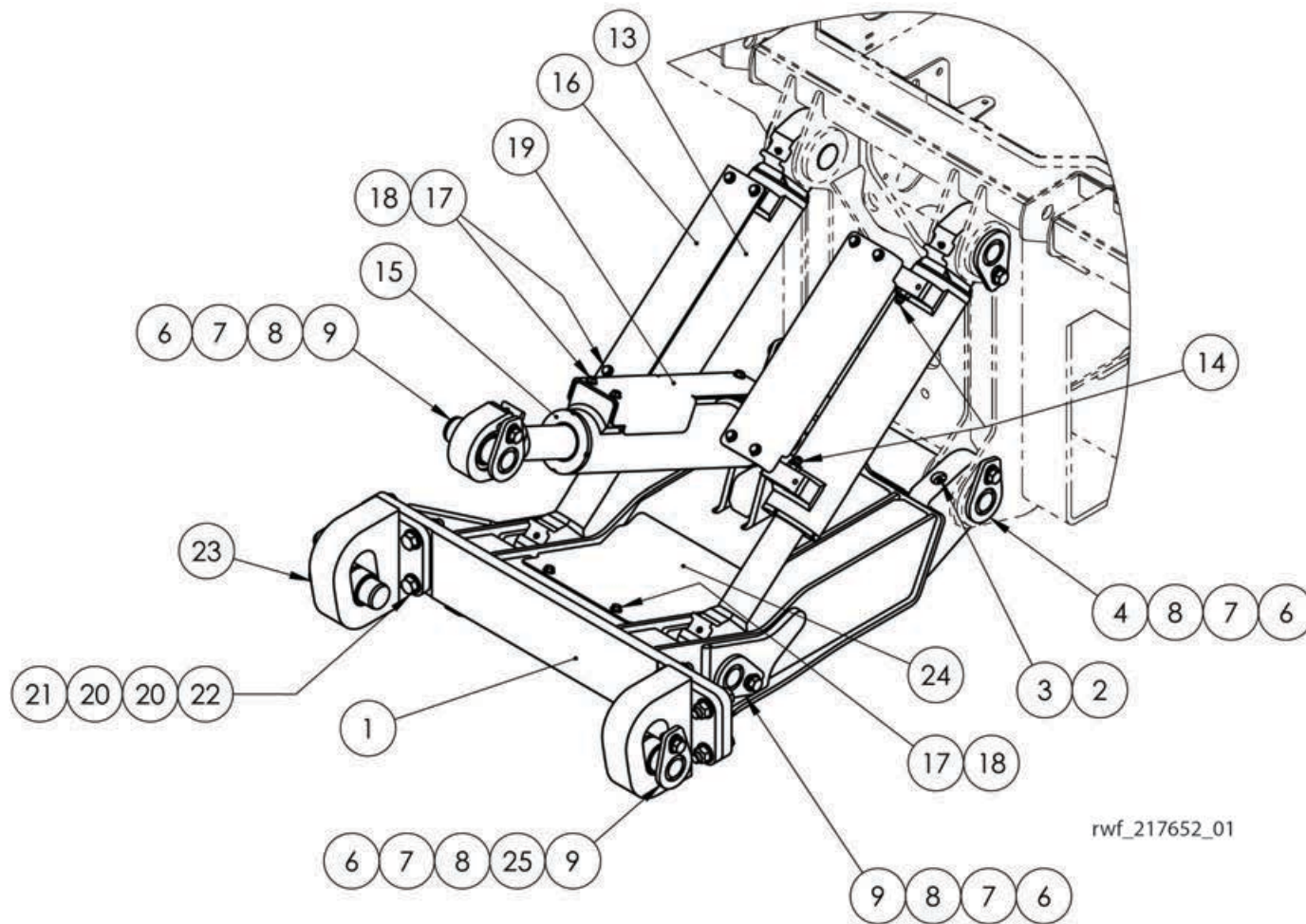
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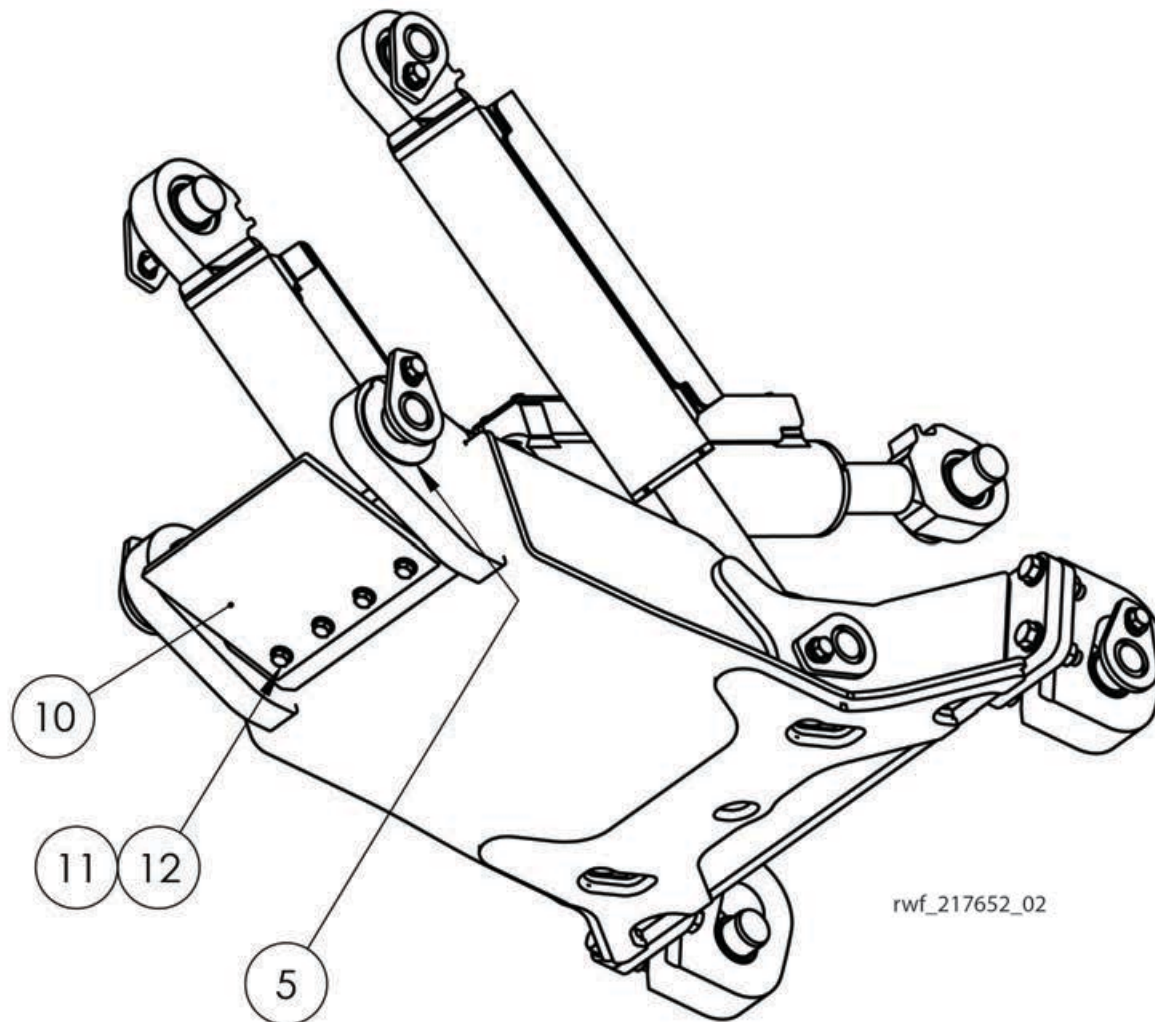


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| item | Qty. | P/N    | Description               |
|------|------|--------|---------------------------|
| 2    | 1    | 201490 | ASSY, CURL CYLINDER, 275B |
| 3    | 2    | 201489 | ASSY, LIFT CYLINDER, 275B |
| 4    | 2    | 27768  | LUG, HEAD LIFT            |
| 5    | 8    | 13891  | PIN ASM                   |
| 6    | 2    | 29642  | PIN ASSEMBLY              |
| 7    | 2    | 117555 | BUSHING                   |
| 8    | 10   | 80680  | GREASE FITTING            |
| 9    | 8    | 115057 | BUSHING                   |
| 10   | 2    | 114862 | BUSHING                   |
| 11   | 2    | 80076  | BOLT - HEX HD.            |
| 12   | 10   | 80090  | BOLT - HEX HD.            |
| 13   | 8    | 80115  | BOLT - HEX HD.            |
| 14   | 4    | 80580  | WASHER - SAE              |
| 15   | 16   | 80582  | WASHER - SAE              |
| 16   | 10   | 80581  | WASHER - SAE              |
| 17   | 2    | 80515  | NUT - LOCK                |
| 18   | 8    | 80517  | NUT - LOCK                |
| 19   | 6    | 90246  | ADAPTER, 90               |

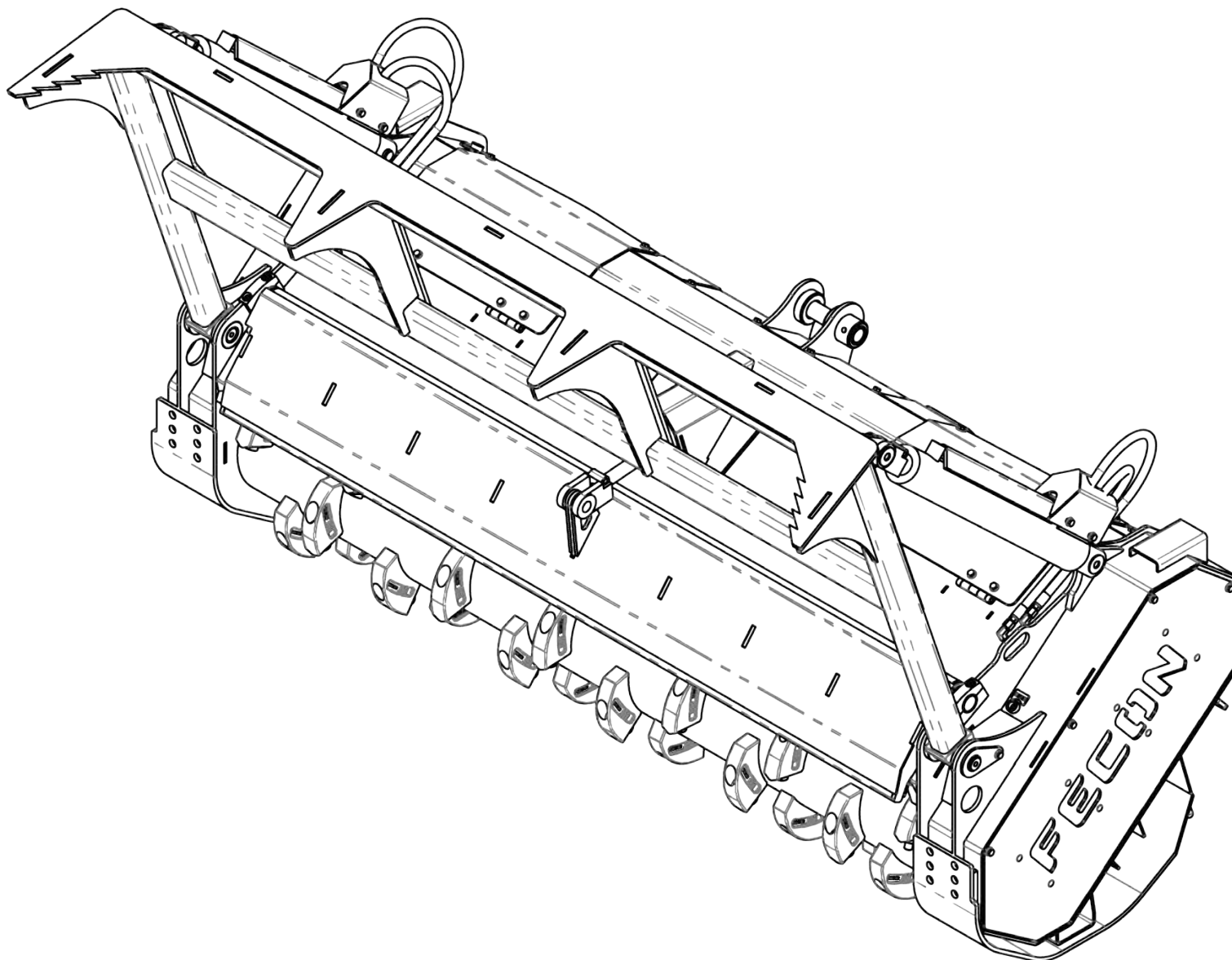






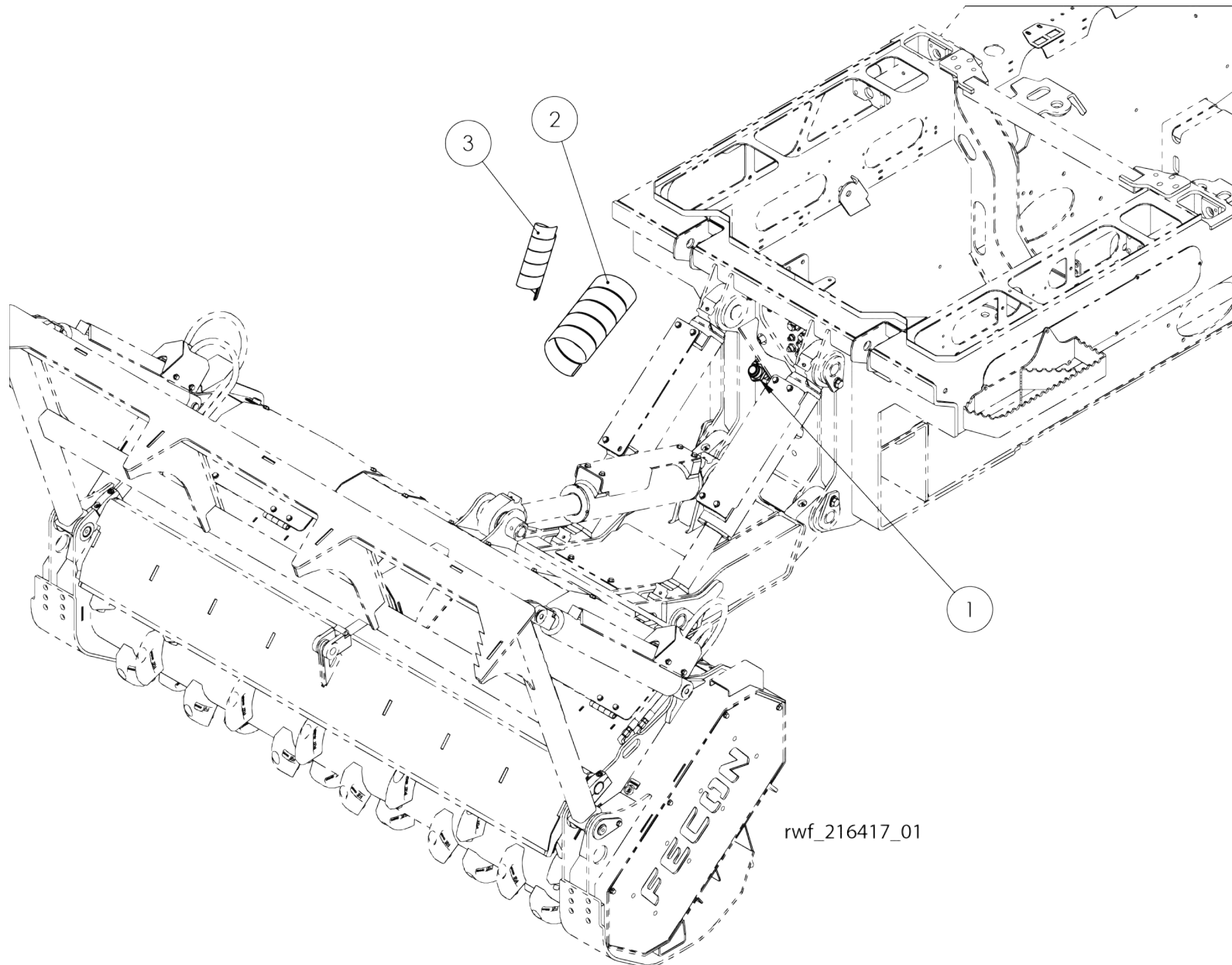
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| item | Qty. | P/N    | Description                     |
|------|------|--------|---------------------------------|
| 1    | 1    | 209787 | LIFT ARM                        |
| 2    | 1    | 15459  | BUSHING SWIVEL                  |
| 3    | 2    | 80680  | GREASE FITTING                  |
| 4    | 2    | 207717 | PIN ASM                         |
| 5    | 5    | 148424 | SHIM, PIN                       |
| 6    | REF  | 115057 | BUSHING                         |
| 7    | 10   | 80581  | WASHER - SAE                    |
| 8    | 10   | 80090  | BOLT - HEX HD.                  |
| 9    | 10   | 12267  | PIN ASM                         |
| 10   | 5    | 208180 | PLATE, REAR GUARD               |
| 11   | 1    | 80580  | WASHER - SAE                    |
| 12   | 4    | 80071  | BOLT - HEX HD.                  |
| 13   | 4    | 148777 | ASM, FTX300 LIFT ARM CYLINDER   |
| 14   | 2    | 90070  | ADAPTER, STR                    |
| 15   | 6    | 148778 | ASM, FTX300 CURL CYLINDER       |
| 16   | 1    | 208211 | GUARD, FTX300 LIFT ARM CYLINDER |
| 17   | 2    | 80029  | BOLT - HEX HD.                  |
| 18   | 14   | 80578  | WASHER - SAE                    |
| 19   | 14   | 208922 | GUARD, FTX300 CURL CYLINDER     |
| 20   | 1    | 80582  | WASHER - SAE                    |
| 21   | 16   | 80517  | NUT - LOCK                      |
| 22   | 8    | 80115  | BOLT - HEX HD.                  |
| 23   | 8    | 217657 | WELD'T, HEAD LIFT D-LUG         |
| 24   | 2    | 209901 | COVER, LIFT ARM                 |
| 25   | 1    | 117555 | BUSHING                         |

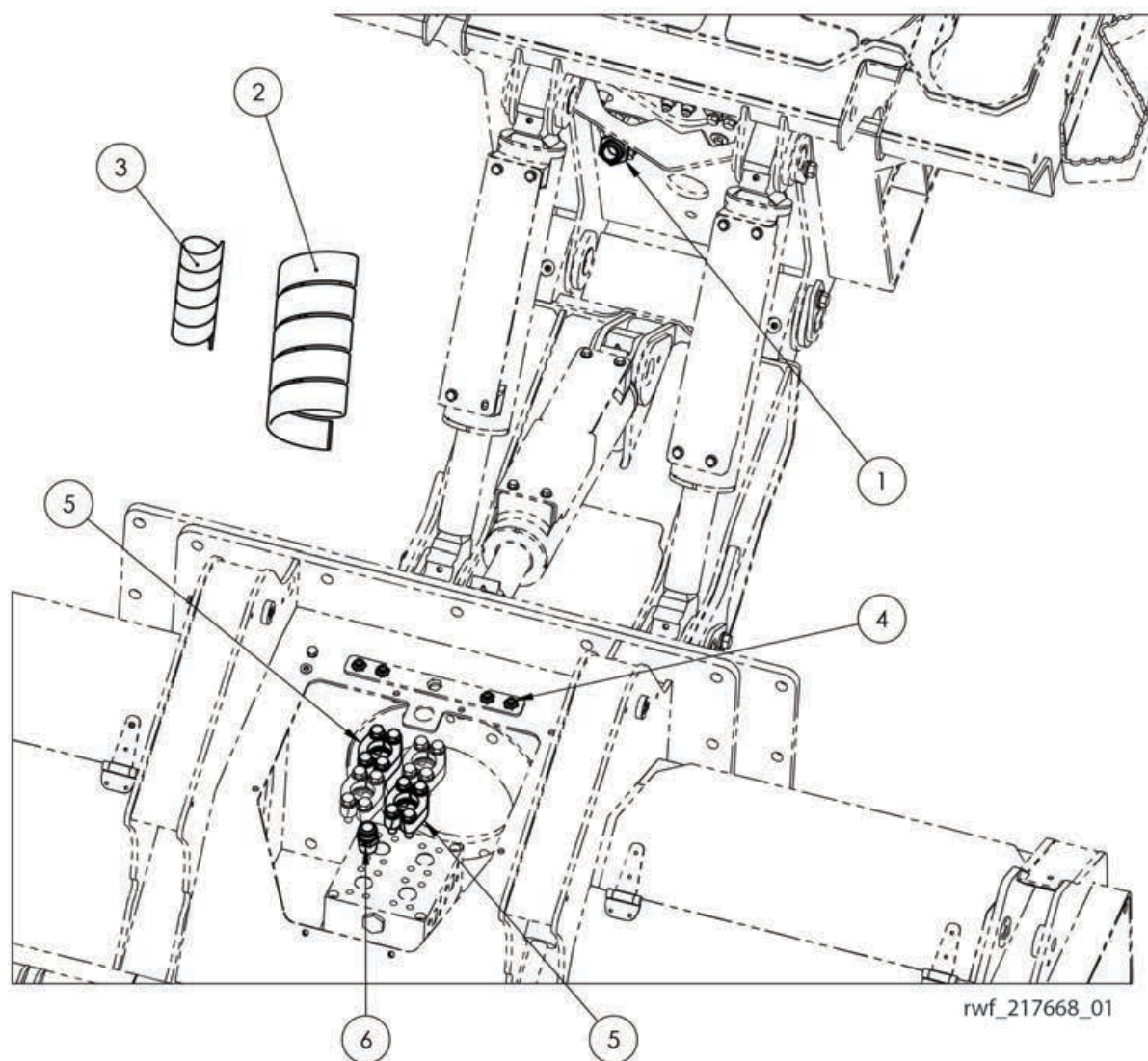


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| item | Qty. | P/N     | Description          |
|------|------|---------|----------------------|
| 1    | 1    | 9902558 | MULCHING HEAD, FECON |

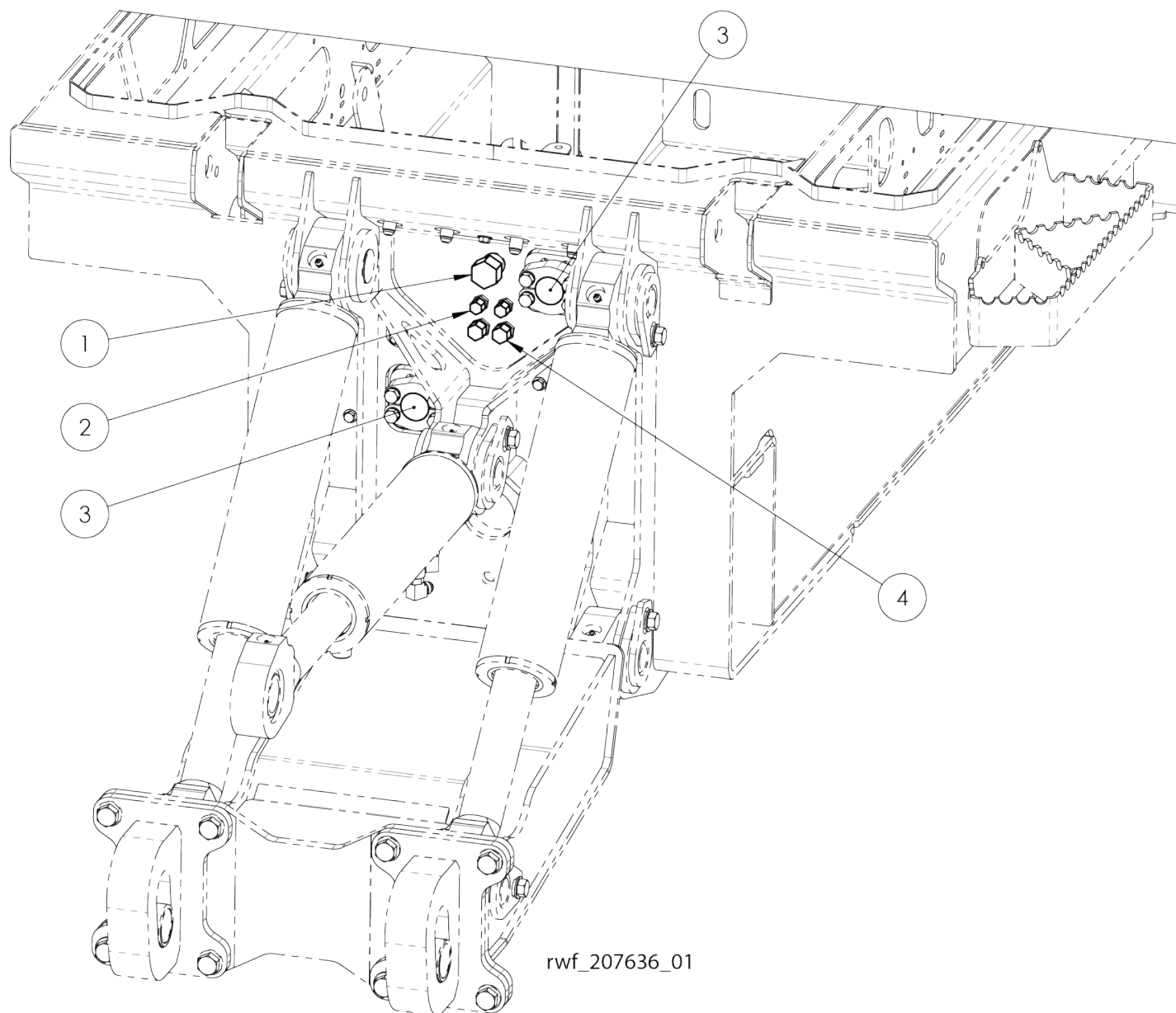


| item | Qty.  | P/N        | Description                 |
|------|-------|------------|-----------------------------|
| 1    | 1     | 90918      | ADAPTER                     |
| 2    | 5 FT  | 138568-001 | WRAP, SPIRAL SMOOTH PROFILE |
| 3    | 10 FT | 138568-005 | WRAP, SPIRAL SMOOTH PROFILE |

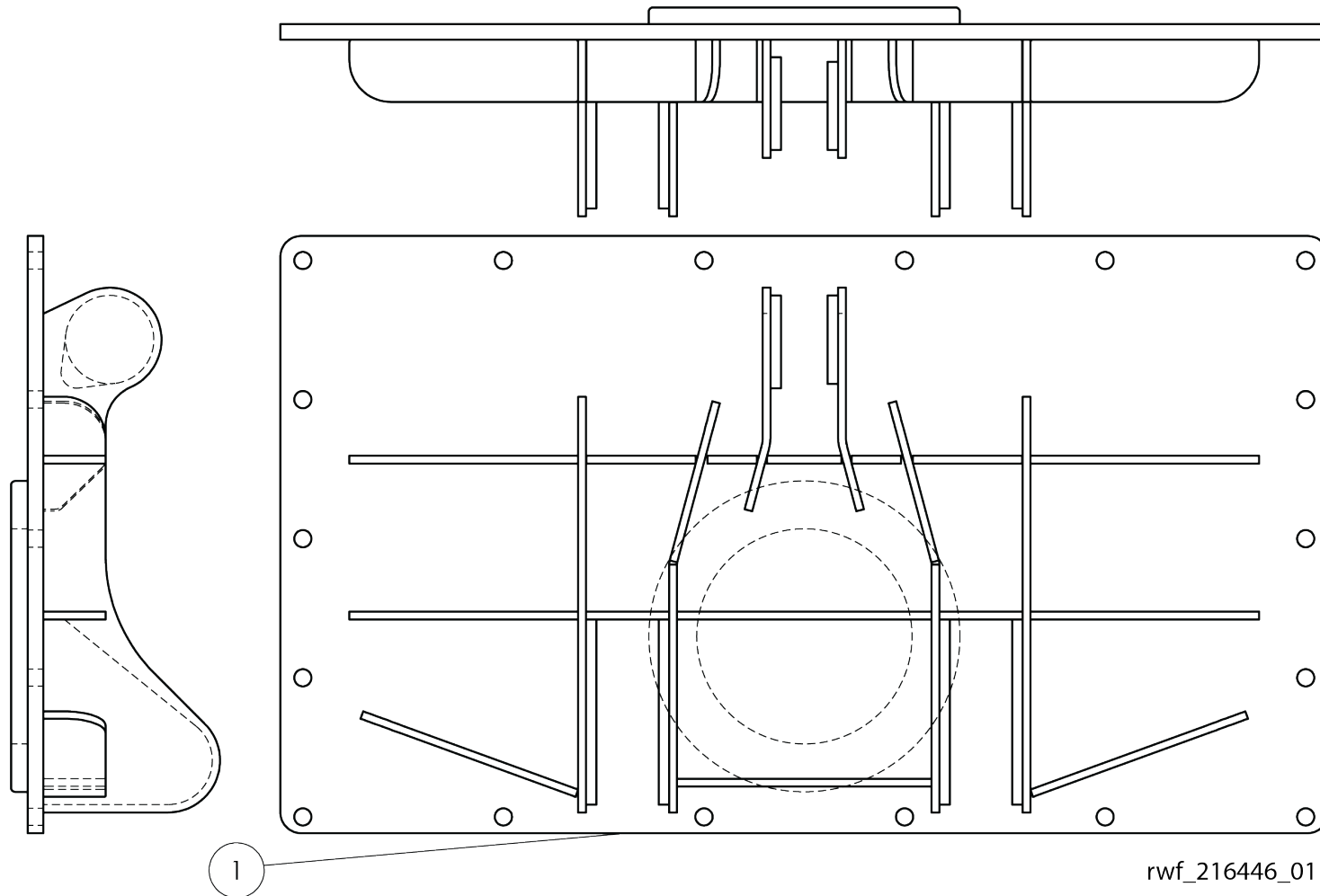


| item | Qty. | P/N        | Description                 |
|------|------|------------|-----------------------------|
| 1    | 1    | 90918      | ADAPTER, 45                 |
| 2    | 5 FT | 138568-001 | WRAP, SPIRAL SMOOTH PROFILE |
| 3    | 5 FT | 138568-005 | WRAP, SPIRAL SMOOTH PROFILE |
| 4    | 4    | 94143      | ADAPTER, STR                |
| 5    | 2    | 90881      | KIT - FLANGE                |
| 6    | 1    | 93956      | ADAPTER, STR                |



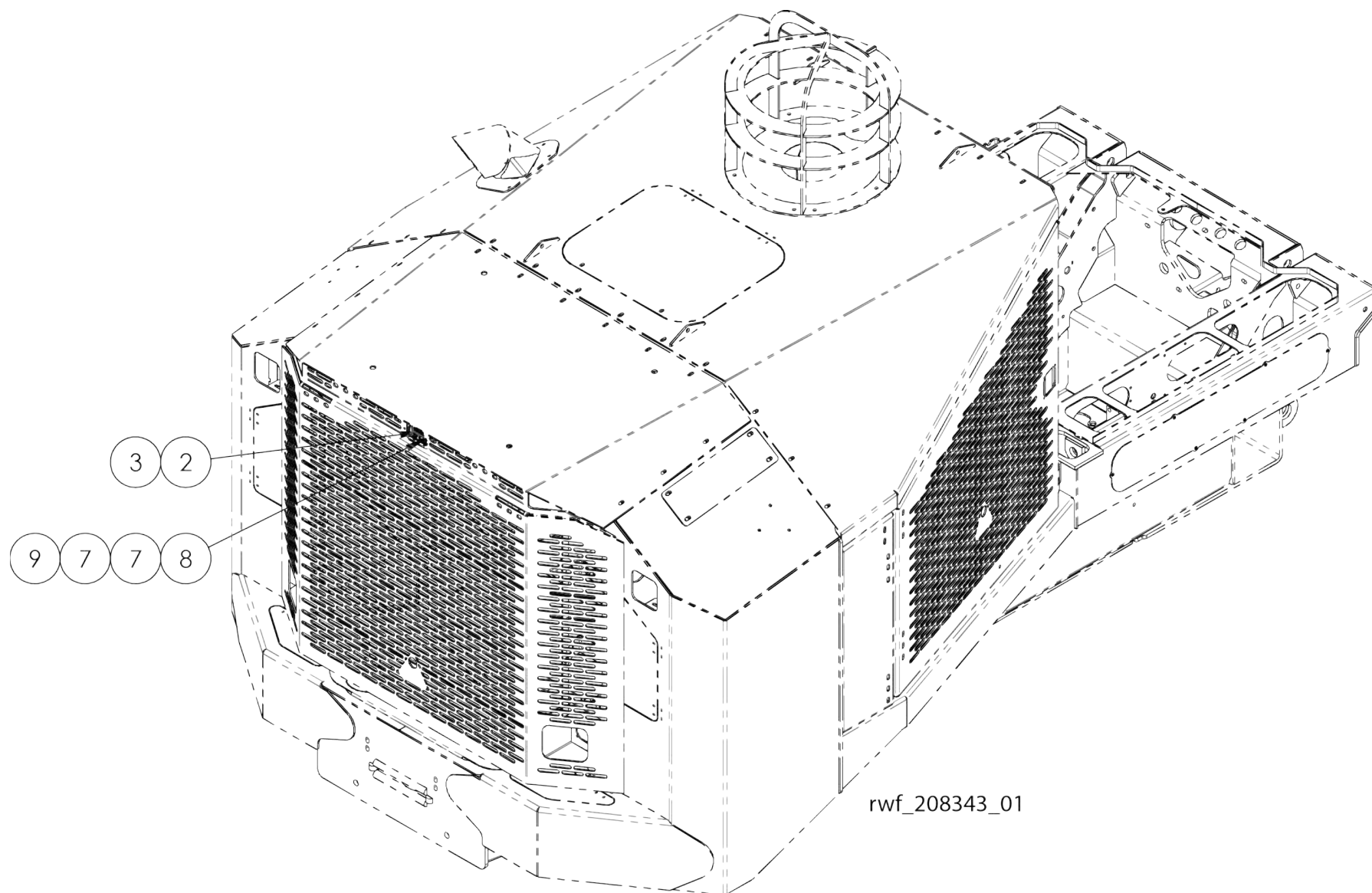


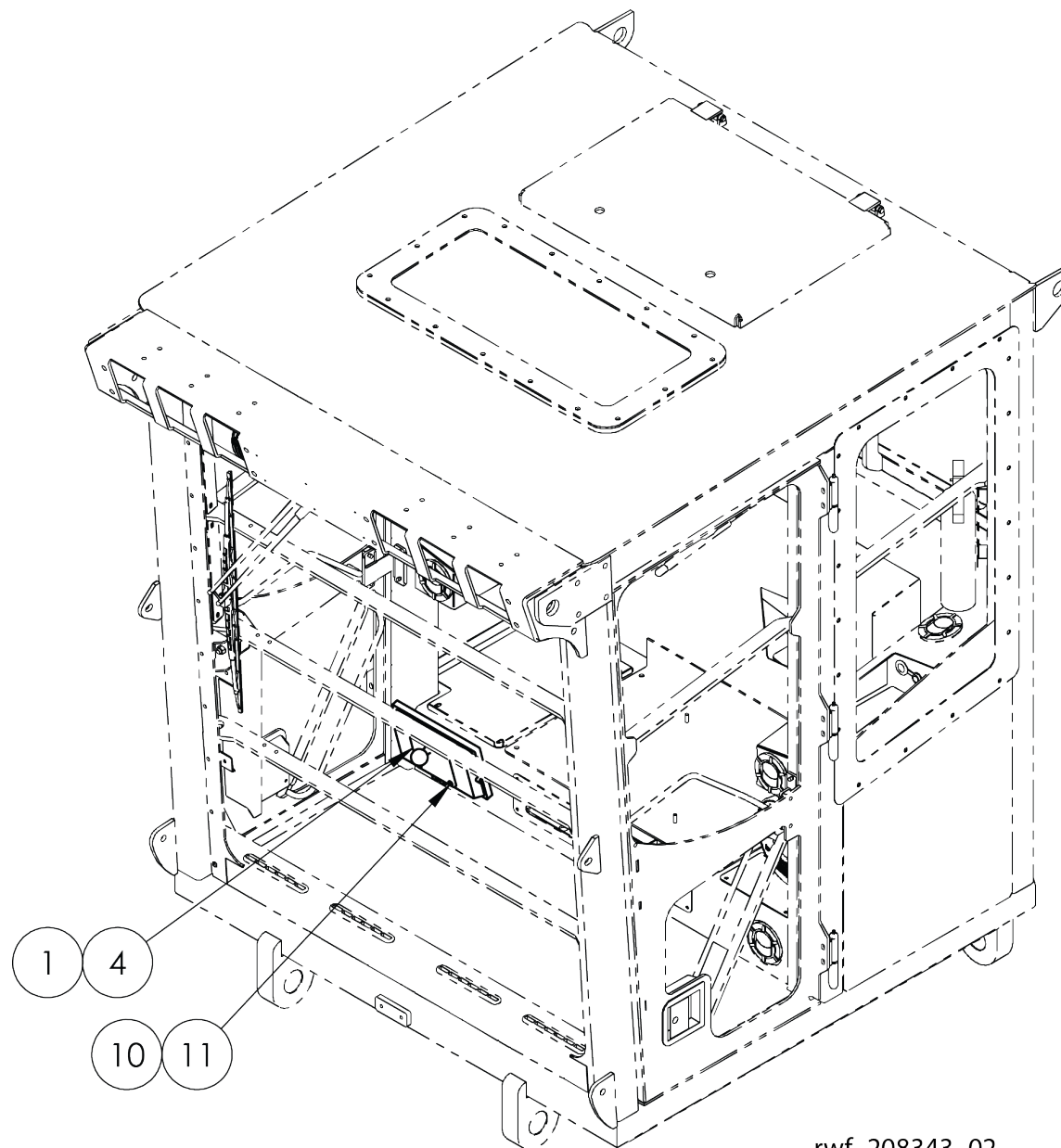
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|------|------|-------|-------------|
| 4    | 2    | 90003 | CAP         |
| 3    | 2    | 90009 | CAP         |
| 2    | 2    | 90002 | CAP         |
| 1    | 1    | 90005 | CAP         |



rwf\_216446\_01

| item | Qty. | P/N    | Description         |
|------|------|--------|---------------------|
| 1    | 1    | 216446 | MOUNTING PLATE, FAE |





rwf\_208343\_02

| item | Qty. | P/N       | Description              |
|------|------|-----------|--------------------------|
| 1    | 1    | 9901911   | REAR VIEW CAMERA MONITOR |
| 2    | 1    | 9901577   | CAMERA, HD COLOUR CCD    |
| 3    | 1    | 9901578   | CABLE, CAMERA            |
| 4    | 1    | 9901954   | RAM VESA W/ C SIZE BALL  |
| 7    | 4    | 80576     | WASHER - SAE             |
| 8    | 2    | 80000     | BOLT - HEX HD            |
| 9    | 2    | 80511     | NUT - LOCK               |
| 10   | 4    | 73101     | FLATWASHER               |
| 11   | 4    | 74006-004 | CAP SCREW, BUTTON SOC HD |



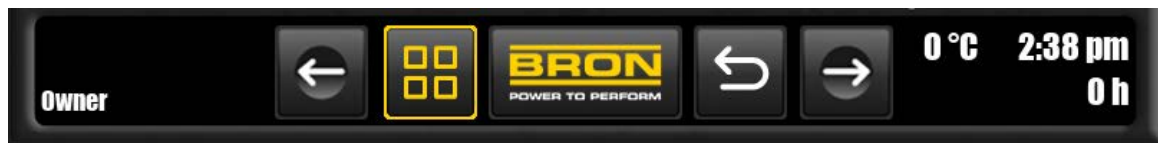
## OPERATIONS GUIDE – STUMP GRINDER

| REV | ECN    | DATE (mm/dd/yy) | DESCRIPTION   |
|-----|--------|-----------------|---------------|
| -   | 112639 | 04/13/26        | FIRST RELEASE |
|     |        |                 |               |
|     |        |                 |               |

This guide provides instructions on switching from mulching mode to stump grinder mode, along with an overview of the control changes in stump grinder mode.

### CHANGE MODE:

1. On the home screen, press the **MAIN MENU** button.



2. In the main menu screen, press the **LIFT ARM/MULCHER** button.



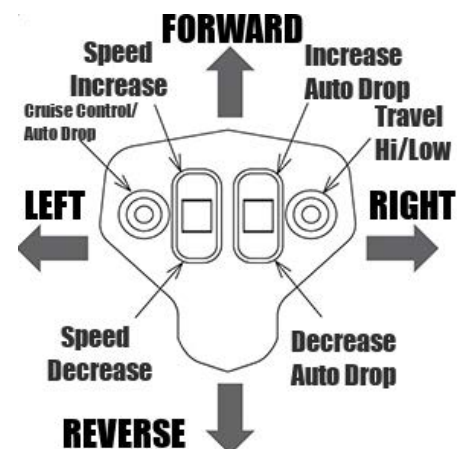


- On the next screen, toggle the switch from **MULCHER** to **STUMP GRINDER**. If the **SWEEP LOAD CONTROL** is not on already, toggle it on. The mode is switched from **MULCHER** to **STUMP GRINDER**.



## STUMP GRINDER MODE JOYSTICK CONTROLS:

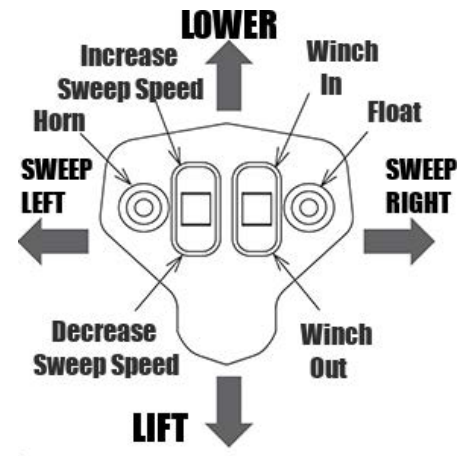
**Left Joystick** – Pressing the auto drop button will drop the stump grinder 3-4 inches. It can be increased or decreased by the right-side rocker switch. Auto drop will not work while the machine is moving.







**Right Joystick** – Moving the right joystick from side to side will sweep the head from side to side. The speed of the sweep can be adjusted by the left-side rocker switch. Speed is displayed on the home screen.





# CHAPTER 10: UNDERCARRIAGE

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*AXLE GROUP ..... 10.1*

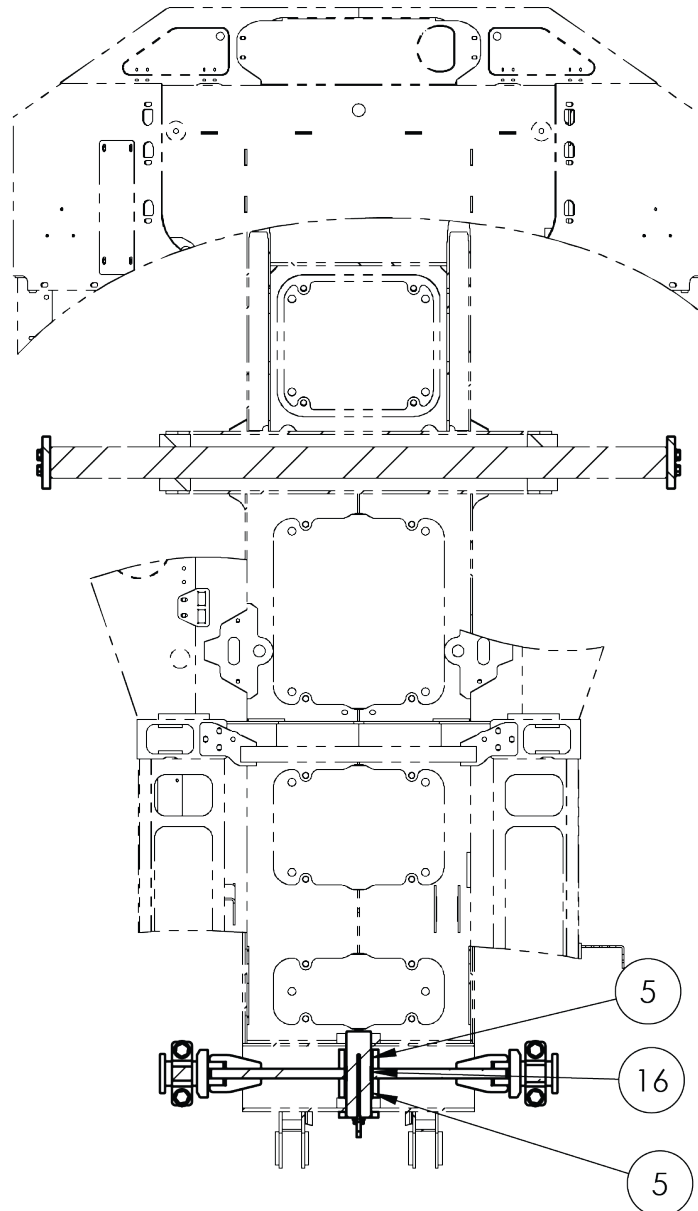
*TRACK FRAME ASSEMBLY, D4 LH ..... 10.2*

*TRACK FRAME ASSEMBLY, D4 RH..... 10.3*

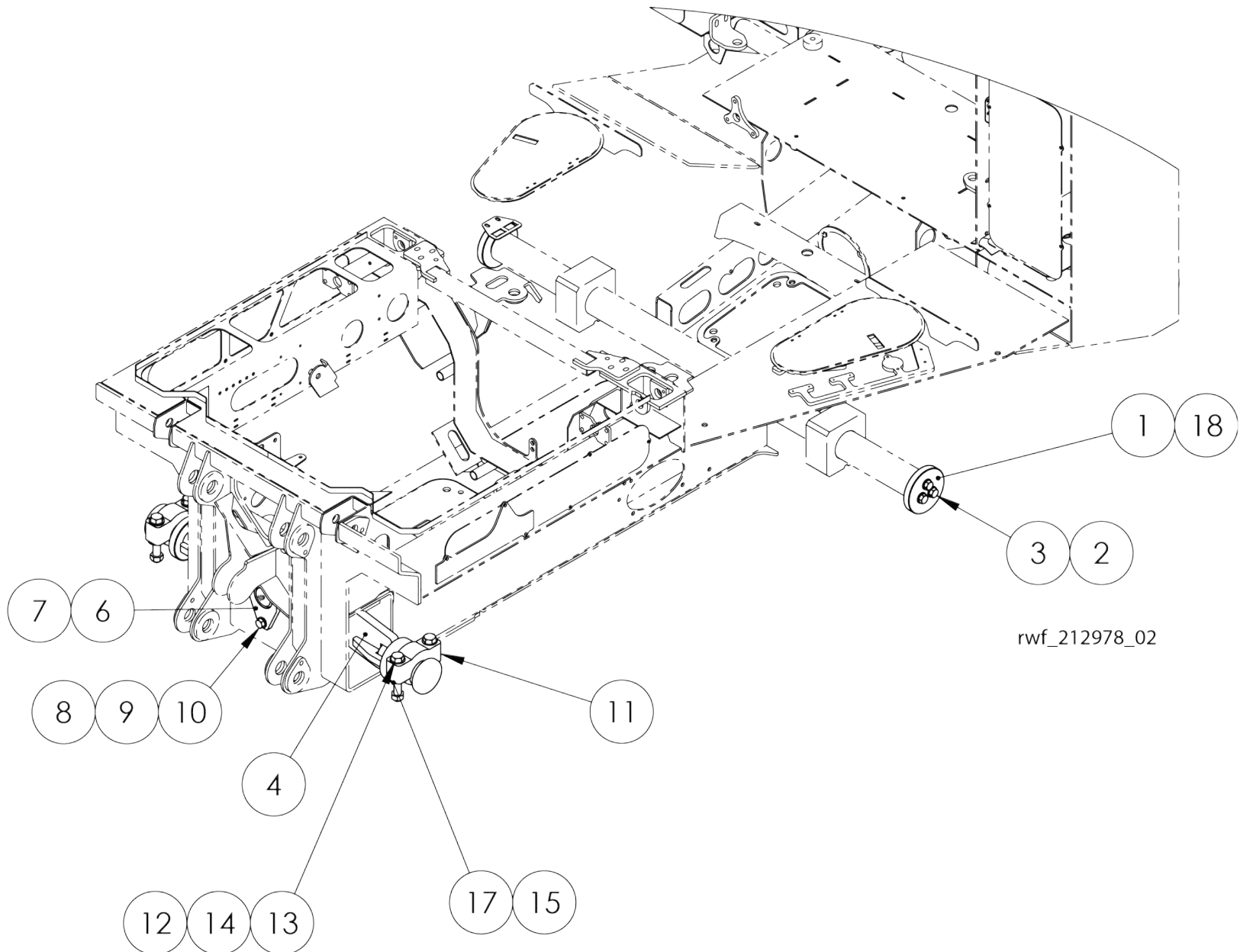
*GUARD GROUP, DRIVE HOSE ..... 10.4*

*BOLT-ON FORESTRY SKID ..... 10.5*

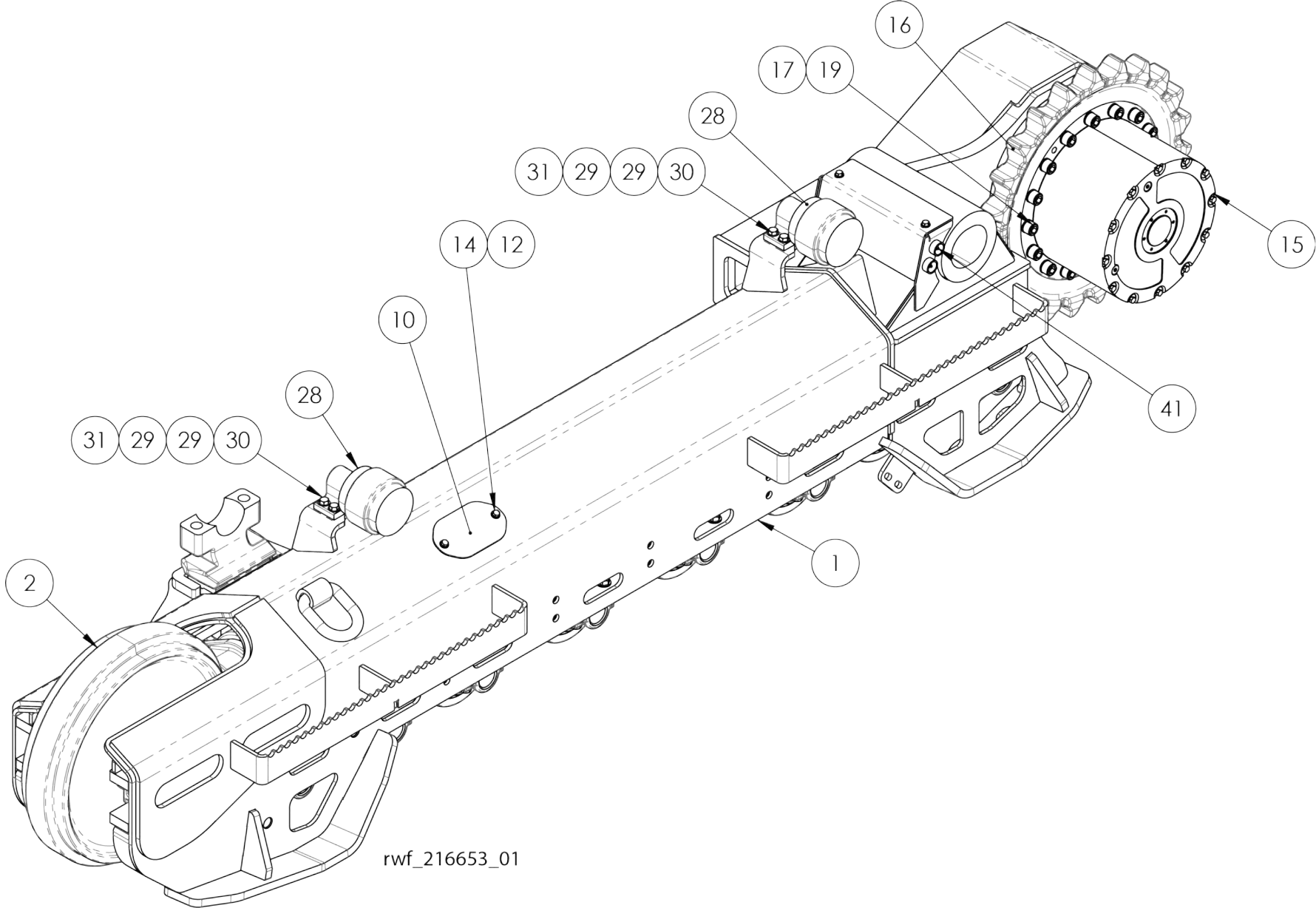
*STANDARD MID-TRACK GUIDES ..... 10.6*



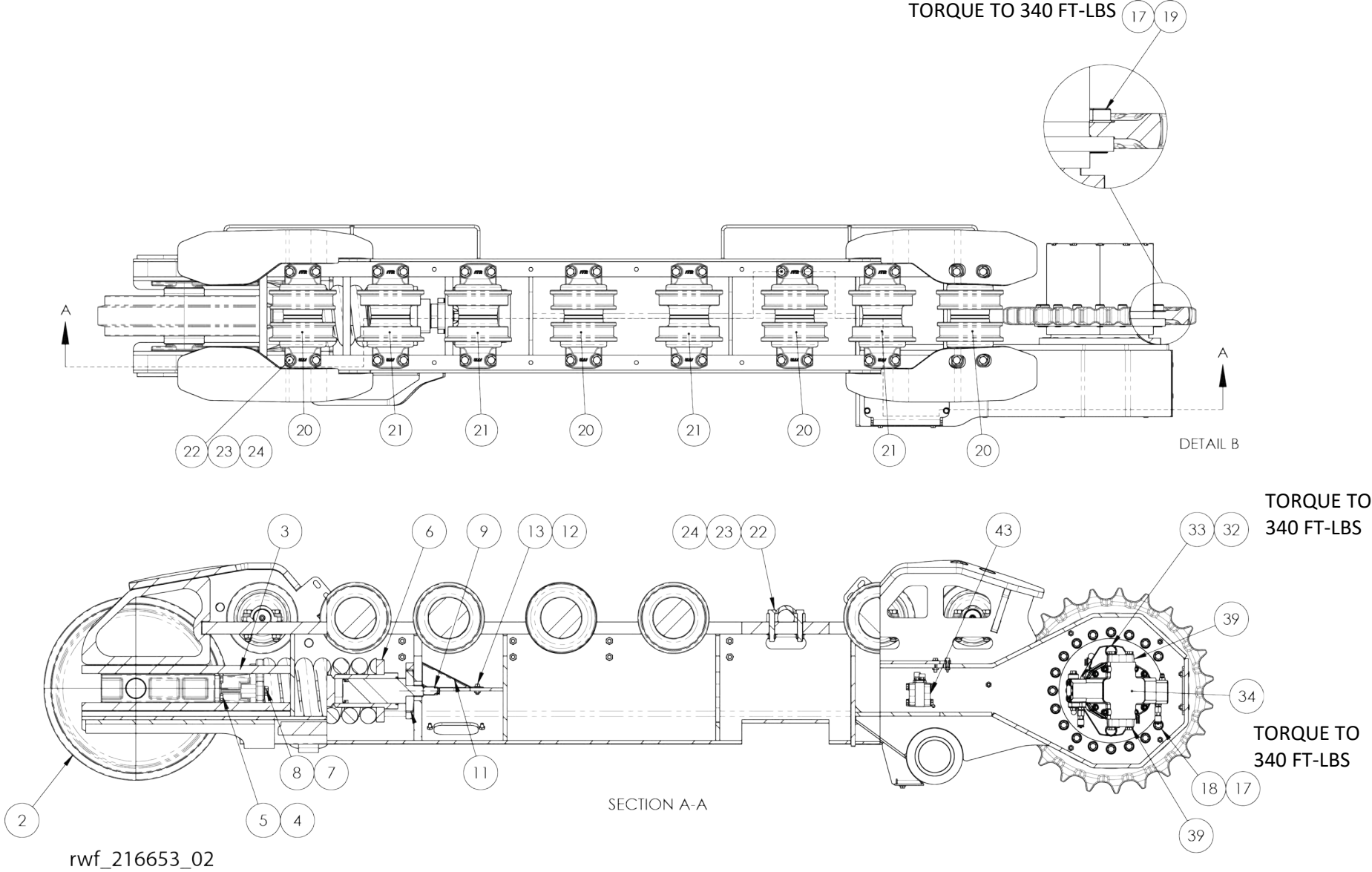
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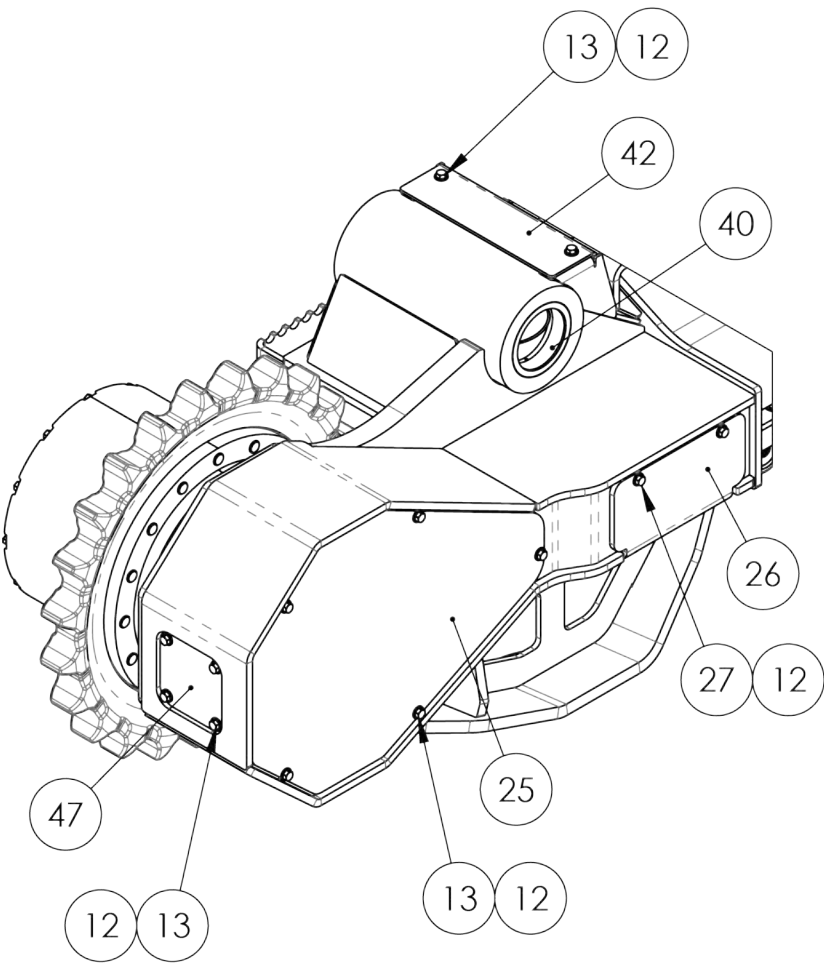
| item | Qty. | P/N      | Description               |
|------|------|----------|---------------------------|
| 1    | 2    | 17877    | PLATE, OUTER END CAP      |
| 2    | 6    | 80974    | WASHER- NORDLOCK          |
| 3    | 6    | 80113    | BOLT - HEX HD             |
| 4    | 1    | 26635    | FRONT AXLE WELDMENT       |
| 5    | 2    | 15098    | BUSHING                   |
| 6    | 1    | 137474   | PIN ASSEMBLY              |
| 7    | 1    | 80682    | FITTING - GREASE          |
| 8    | 1    | 115973   | SPB                       |
| 9    | 1    | 80582    | WASHER - SAE              |
| 10   | 1    | 80112    | BOLT - HEX HD             |
| 11   | 2    | 17646    | BEARING CAP               |
| 12   | 4    | 80519    | NUT - LOCK                |
| 13   | 4    | 80170    | BOLT - HEX HD             |
| 14   | 4    | 80584    | WASHER - SAE              |
| 15   | 4    | 9900438  | SHIM, TRUNION CAP         |
| 16   | 1    | 151581   | PIPE, SPACER - AXLE PIVOT |
| 17   | 4    | 151875   | SHIM, TRUNION CAP         |
| 18   | 2    | 148435-5 | SHIM, REAR AXLE           |



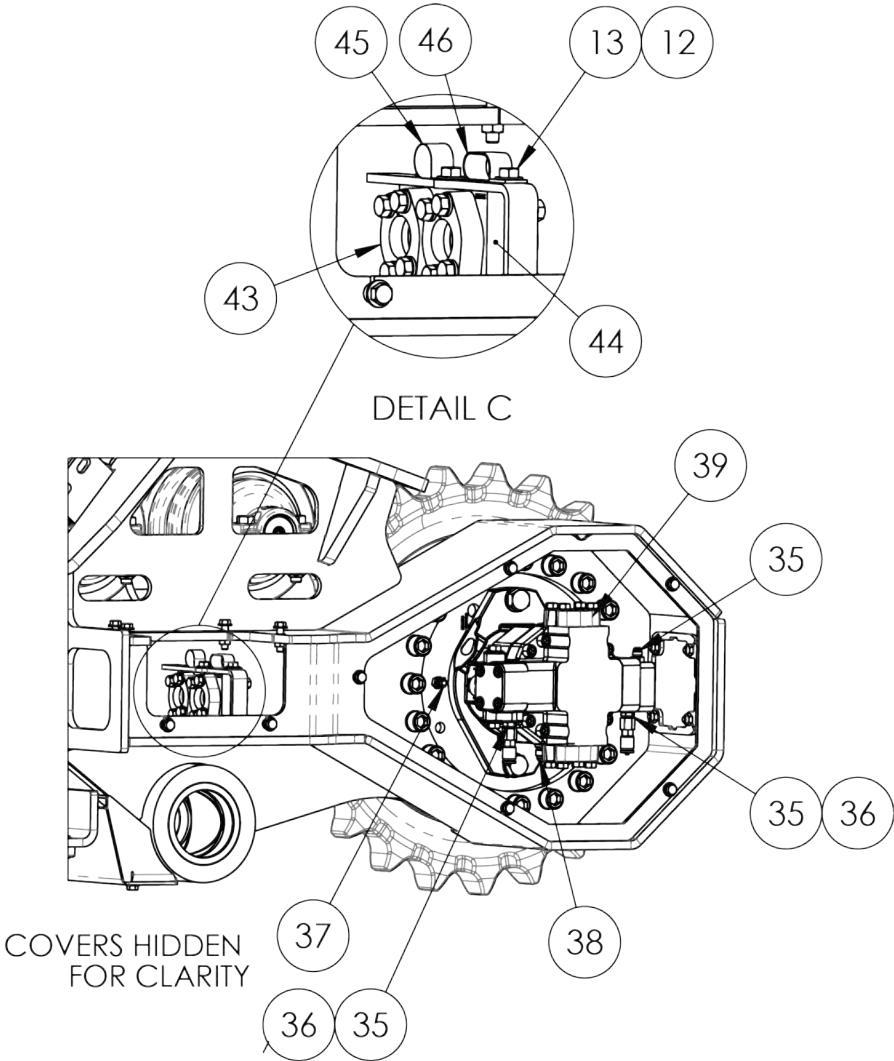
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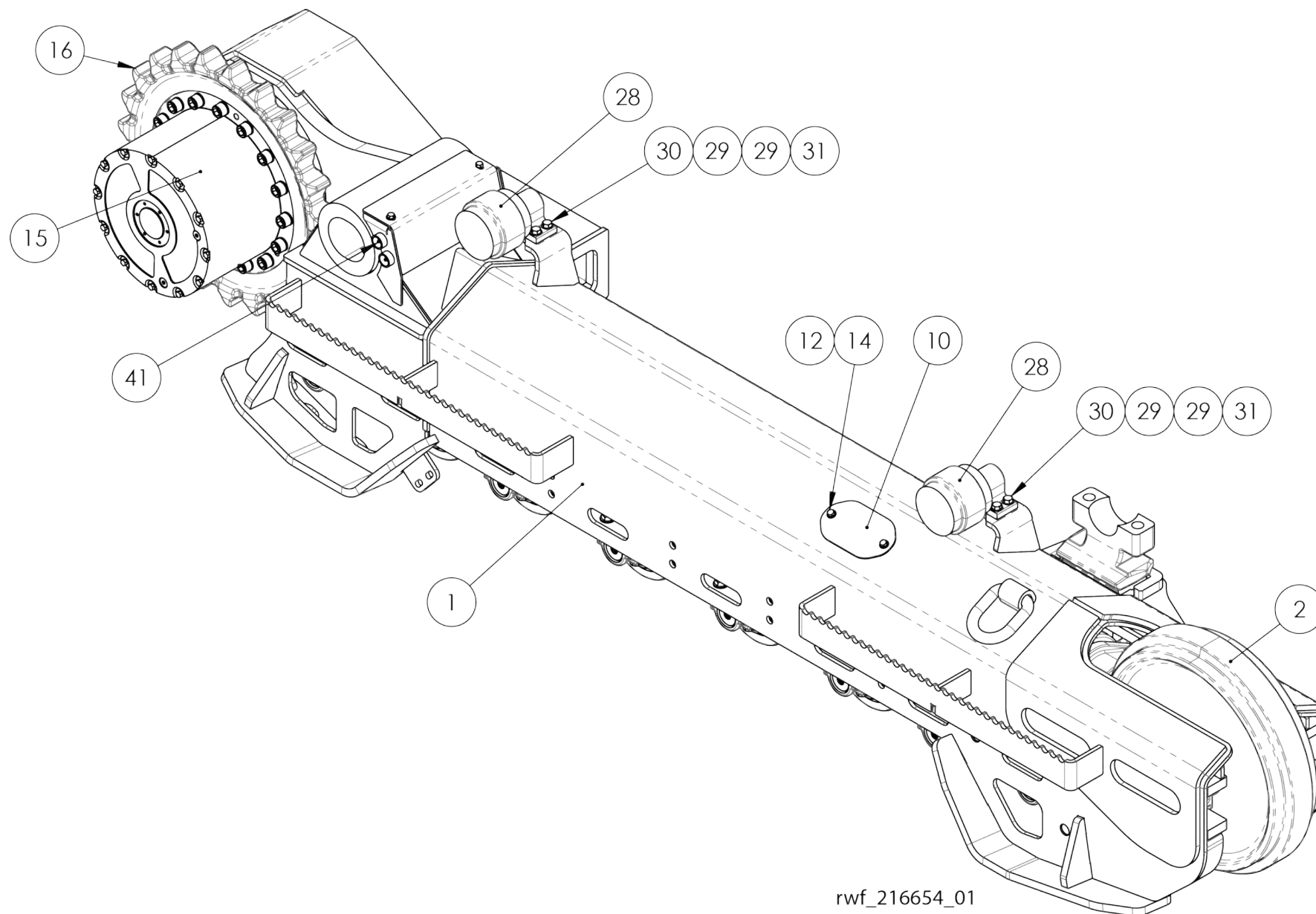


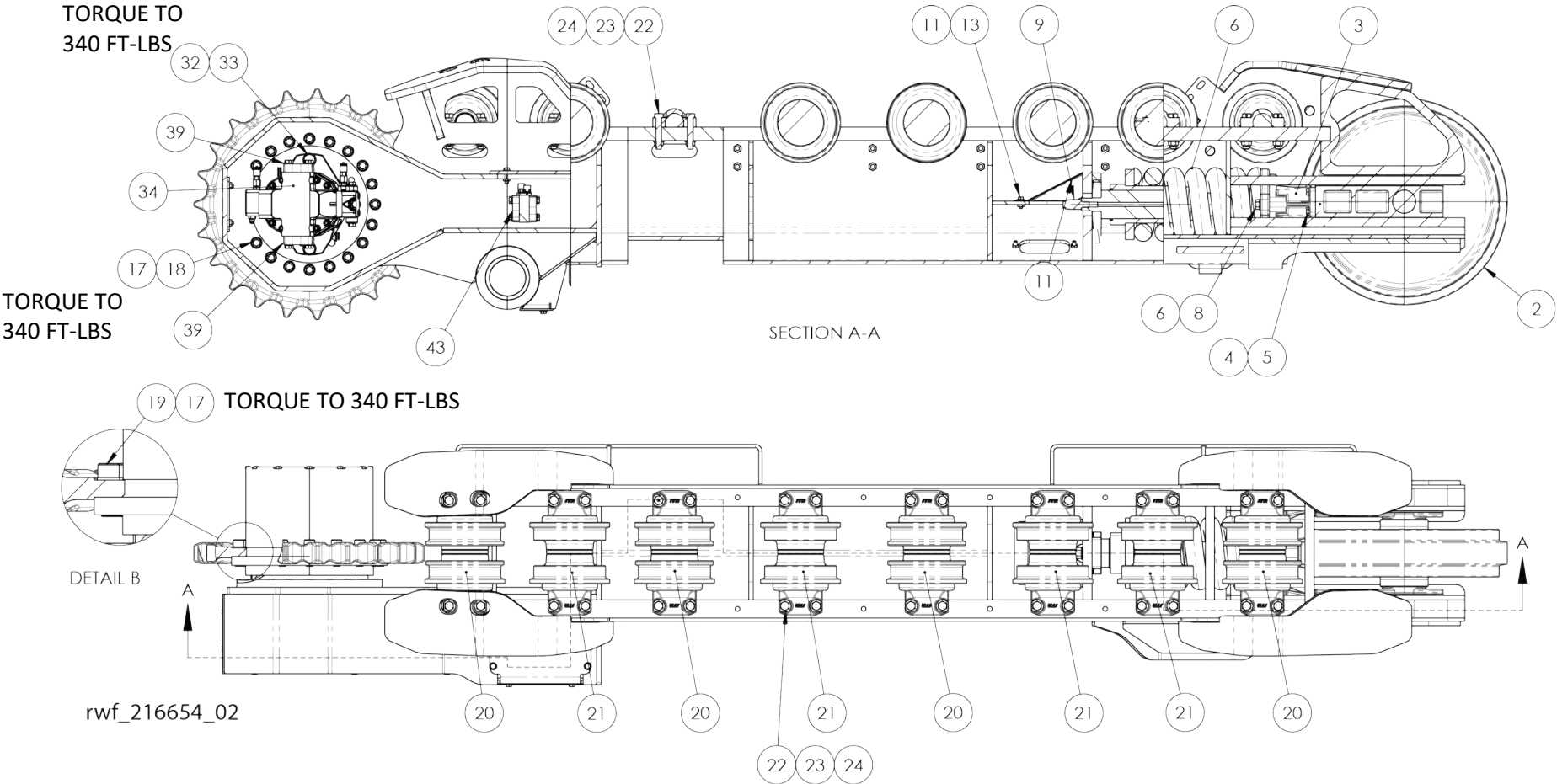
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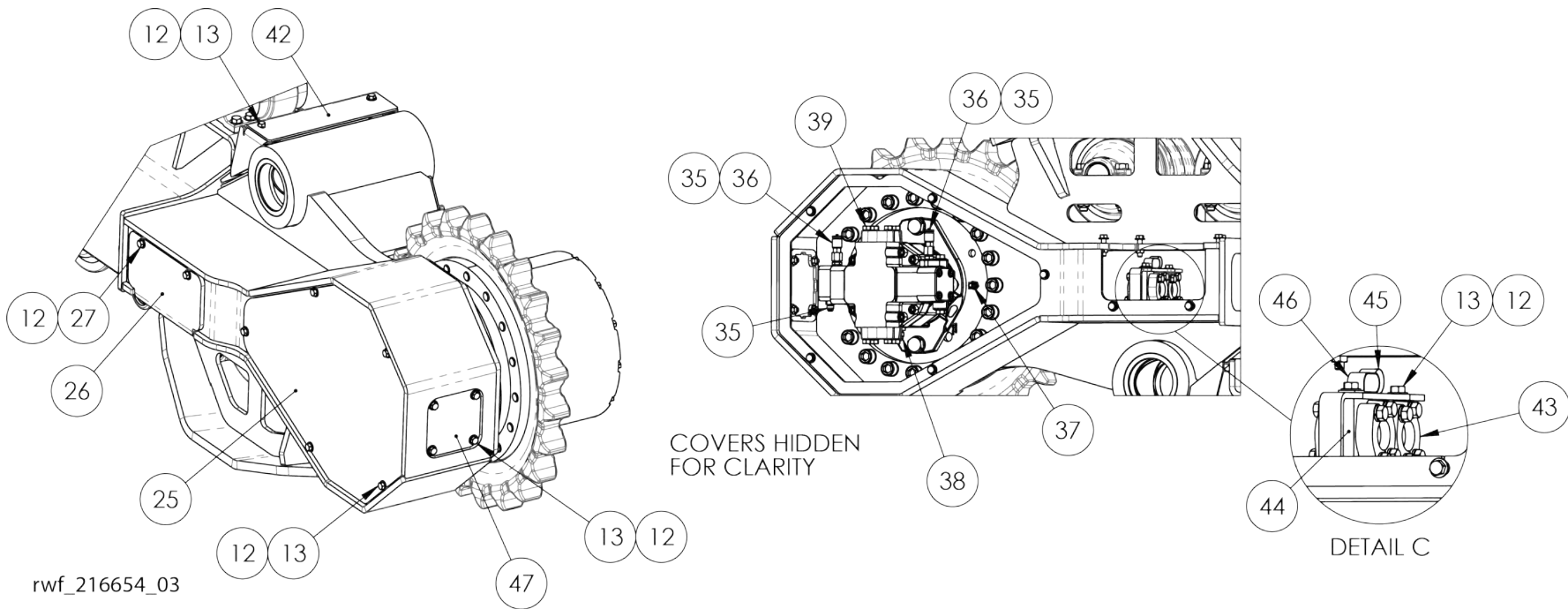


| item | Qty. | P/N     | Description                   |
|------|------|---------|-------------------------------|
| 1    | 1    | 33269   | TRACK FRAME WELDMENT, D4 LH   |
| 2    | 1    | 9902277 | IDLER, D4 ITR                 |
| 3    | 1    | 9902278 | FORK ADAPTER, D4 ITR          |
| 4    | 4    | 73105   | FLATWASHER                    |
| 5    | 4    | 71254   | BOLT- HEX HD                  |
| 6    | 1    | 9902279 | TENSIONER, SPRING D4 ITR      |
| 7    | 2    | 73107   | FLATWASHER M16                |
| 8    | 2    | 71355   | BOLT- HEX HD                  |
| 9    | 1    | 9901737 | VALVE GREASE ADJUSTER W/ SEAL |
| 10   | 1    | 26641   | COVER, GREASER ACCESS         |
| 11   | 1    | 207121  | FORM, GREASE ADJUSTER GUARD   |
| 12   | 24   | 80578   | WASHER - SAE                  |
| 13   | 16   | 80029   | BOLT - HEX HD.                |
| 14   | 2    | 80030   | BOLT - HEX HD.                |
| 15   | 1    | 9901740 | PLANETARY ASM                 |
| 16   | 1    | 213181  | SPROCKET, REWORK              |
| 17   | 33   | 78027   | M20 NORD LOCK WASHER          |
| 18   | 17   | 72458   | BOLT - HEX SOCKET             |
| 19   | 16   | 72456   | BOLT - HEX SOCKET             |
| 20   | 4    | 9902274 | ROLLER, DF D4 ITR             |
| 21   | 4    | 9902273 | ROLLER, SF D4 ITR             |
| 22   | 32   | 80098   | BOLT - HEX HD.                |
| 23   | 32   | 80581   | WASHER - SAE                  |
| 24   | 32   | 80516   | NUT - LOCK                    |
| 25   | 1    | 148270  | PLATE, MOTOR COVER            |
| 26   | 1    | 148271  | FORM, COVER                   |
| 27   | 6    | 80031   | BOLT - HEX HD.                |
| 28   | 2    | 9902275 | ROLLER, CARRIER D4 ITR        |
| 29   | 16   | 80580   | WASHER - SAE                  |
| 30   | 8    | 80073   | BOLT - HEX HD.                |
| 31   | 8    | 80515   | NUT - LOCK                    |
| 32   | 2    | 73109   | FLATWASHER M20                |
| 33   | 2    | 71453   | BOLT- HEX HD                  |

| item | Qty. | P/N        | Description             |
|------|------|------------|-------------------------|
| 34   | 1    | 9901741    | MOTOR, 115CC BENT AXIS  |
| 35   | 3    | 90068      | ADAPTER, STR            |
| 36   | 2    | 90644      | ADAPTER, TEST PORT      |
| 37   | 1    | 90968      | ADAPTER, STR            |
| 38   | 1    | 90074      | ADAPTER, STR            |
| 39   | 2    | 90880      | KIT - FLANGE            |
| 40   | 1    | 150142     | BUSHING - BRONZE        |
| 41   | 2    | 80680      | GREASE FITTING          |
| 42   | 1    | 207124     | FORM, GREASE HOSE COVER |
| 43   | 4    | 93976      | KIT - FLANGE            |
| 44   | 1    | 216572     | MANIFOLD, TRACK DRIVE   |
| 45   | 1    | 85102      | CLAMP, TUBE             |
| 46   | 1    | 9900929-07 | CLAMP, DOUBLE TUBE      |
| 47   | 1    | 148272     | PLATE, REAR MOTOR COVER |



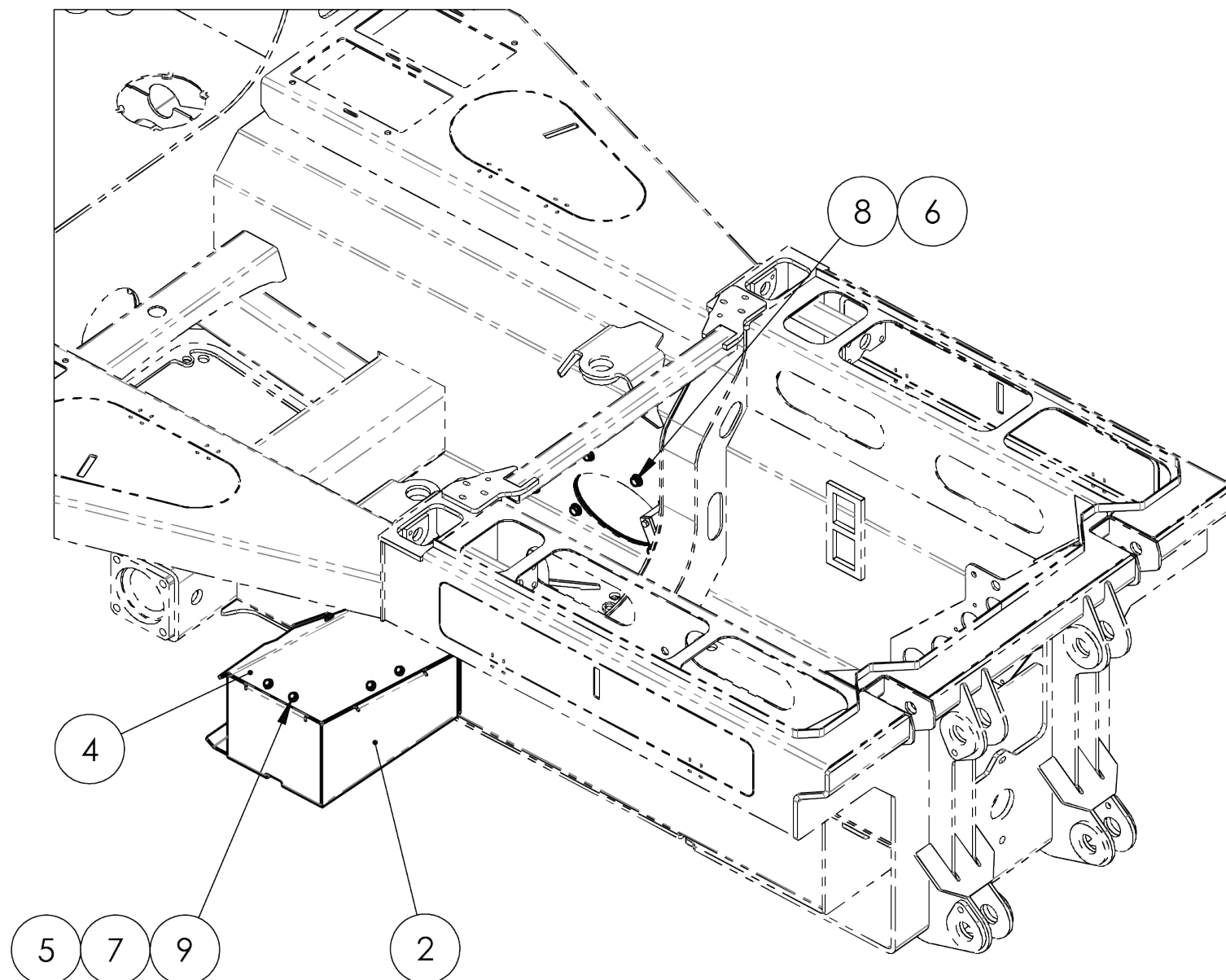




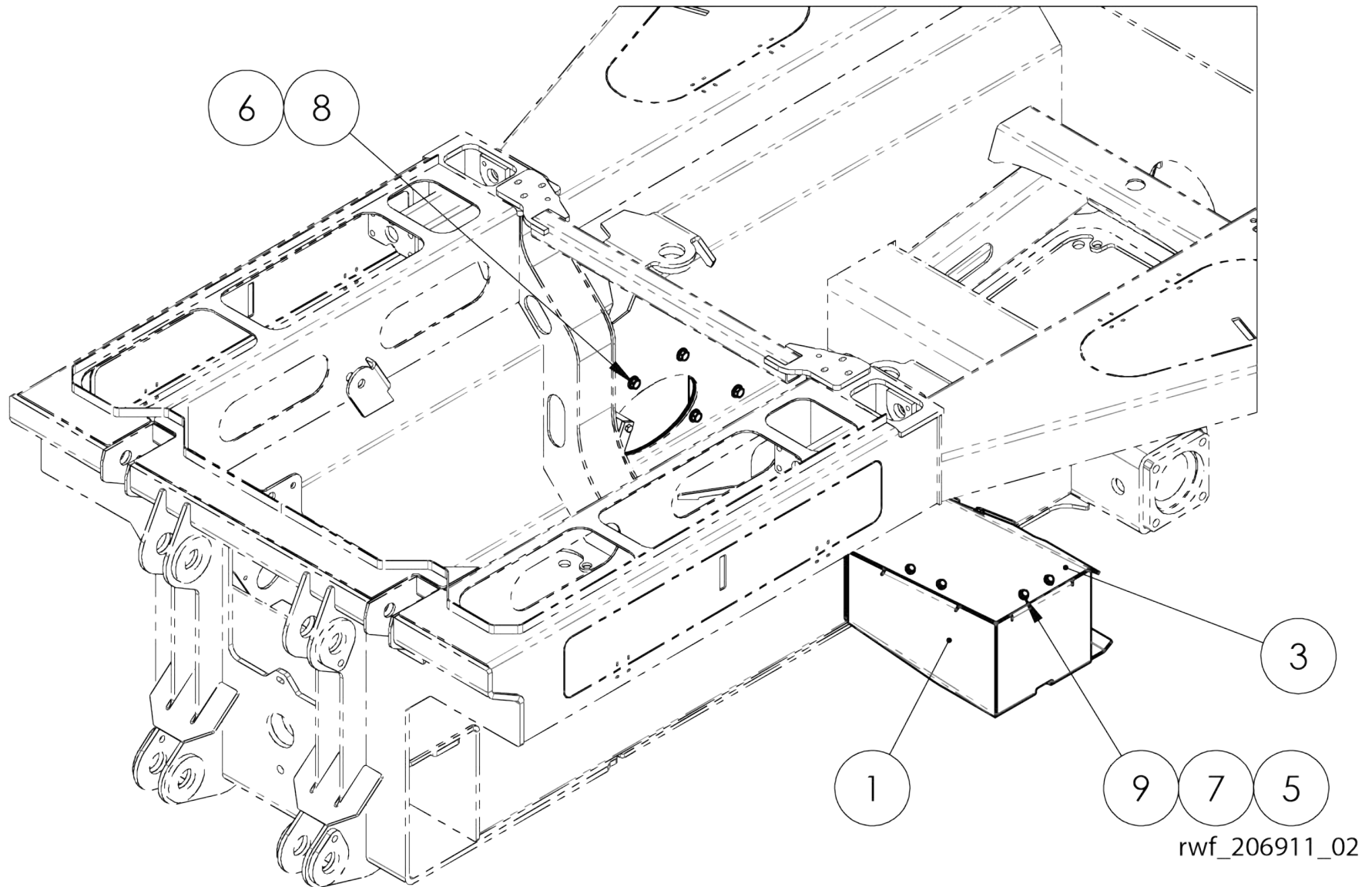
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|------|------|---------|-------------------------------|
| 1    | 1    | 33270   | TRACK FRAME WELDMENT, D4 RH   |
| 2    | 1    | 9902277 | IDLER, D4 ITR                 |
| 3    | 1    | 9902278 | FORK ADAPTER, D4 ITR          |
| 4    | 4    | 73105   | FLATWASHER                    |
| 5    | 4    | 71254   | BOLT- HEX HD                  |
| 6    | 1    | 9902279 | TENSIONER, SPRING D4 ITR      |
| 7    | 2    | 73107   | FLATWASHER                    |
| 8    | 2    | 71355   | BOLT- HEX HD                  |
| 9    | 1    | 9901737 | VALVE GREASE ADJUSTER W/ SEAL |
| 10   | 1    | 26641   | COVER, GREASER ACCESS         |
| 11   | 1    | 207121  | FORM, GREASE ADJUSTER GUARD   |
| 12   | 23   | 80578   | WASHER - SAE                  |
| 13   | 16   | 80029   | BOLT - HEX HD.                |
| 14   | 2    | 80030   | BOLT - HEX HD.                |
| 15   | 1    | 9901740 | PLANETARY ASM                 |
| 16   | 1    | 213181  | SPROCKET, REWORK              |
| 17   | 33   | 78027   | M20 NORD LOCK WASHER          |
| 18   | 17   | 72458   | BOLT - HEX SOCKET             |
| 19   | 16   | 72456   | BOLT - HEX SOCKET             |
| 20   | 4    | 9902274 | ROLLER, DF D4 ITR             |
| 21   | 4    | 9902273 | ROLLER, SF D4 ITR             |
| 22   | 32   | 80098   | BOLT - HEX HD.                |
| 23   | 32   | 80581   | WASHER - SAE                  |
| 24   | 32   | 80516   | NUT - LOCK                    |
| 25   | 1    | 148270  | PLATE, MOTOR COVER            |
| 26   | 1    | 148271  | FORM, COVER                   |
| 27   | 6    | 80031   | BOLT - HEX HD.                |
| 28   | 2    | 9902275 | ROLLER, CARRIER               |
| 29   | 16   | 80580   | WASHER - SAE                  |
| 30   | 8    | 80073   | BOLT - HEX HD.                |
| 31   | 8    | 80515   | NUT - LOCK                    |
| 32   | 2    | 73109   | FLATWASHER                    |
| 33   | 2    | 71453   | BOLT- HEX HD                  |

| item | Qty. | P/N        | Description             |
|------|------|------------|-------------------------|
| 34   | 1    | 9901741    | MOTOR, 115CC BENT AXIS  |
| 35   | 3    | 90068      | ADAPTER, STR            |
| 36   | 2    | 90644      | ADAPTER, TEST PORT      |
| 37   | 1    | 90968      | ADAPTER, STR            |
| 38   | 1    | 90074      | ADAPTER, STR            |
| 39   | 2    | 90880      | KIT - FLANGE            |
| 40   | 1    | 150142     | BUSHING - BRONZE        |
| 41   | 2    | 80680      | GREASE FITTING          |
| 42   | 1    | 207124     | FORM, GREASE HOSE COVER |
| 43   | 4    | 93976      | KIT - FLANGE            |
| 44   | 1    | 216572     | MANIFOLD, TRACK DRIVE   |
| 45   | 1    | 85102      | CLAMP, TUBE             |
| 46   | 1    | 9900929-07 | CLAMP, DOUBLE TUBE      |
| 47   | 1    | 148272     | PLATE, REAR MOTOR COVER |

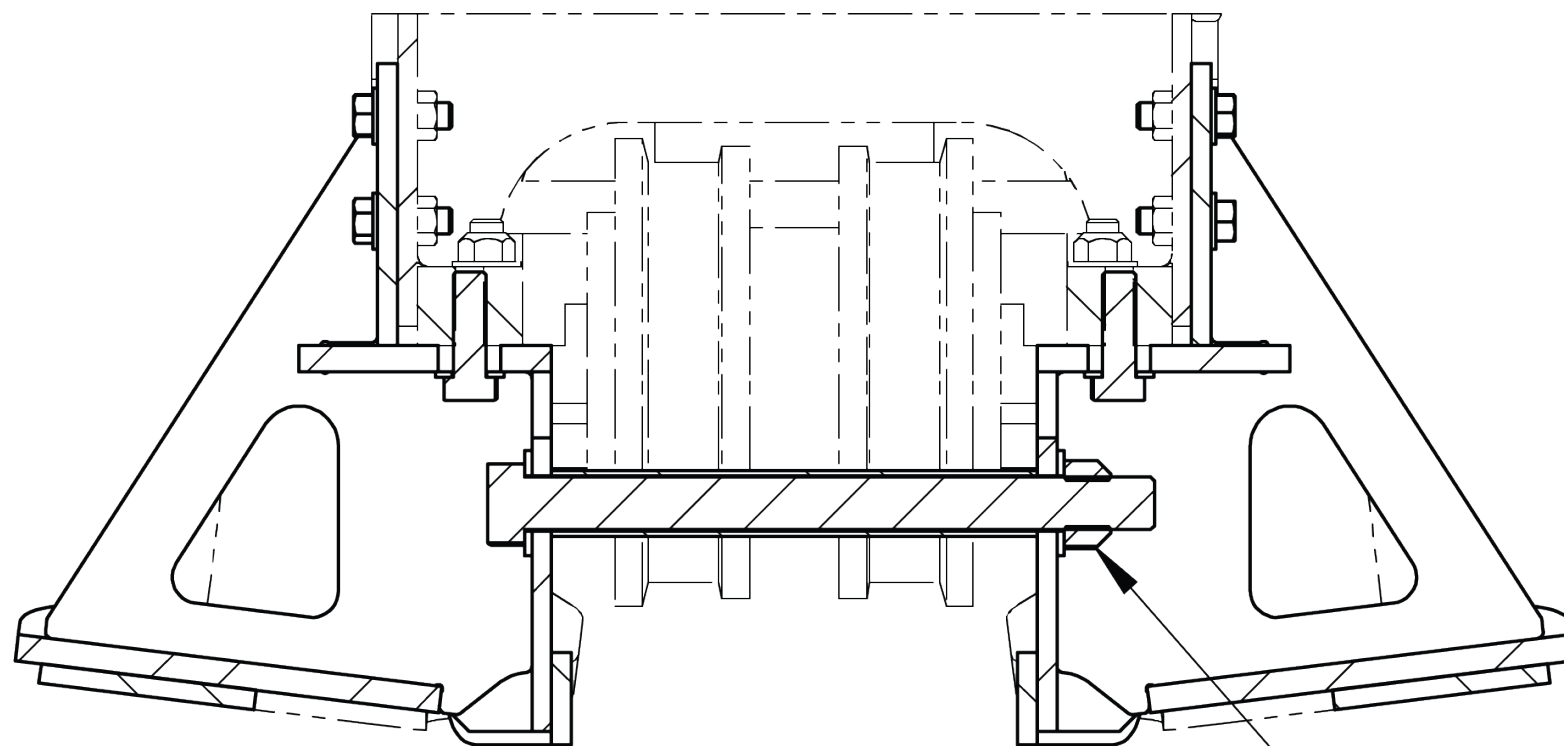




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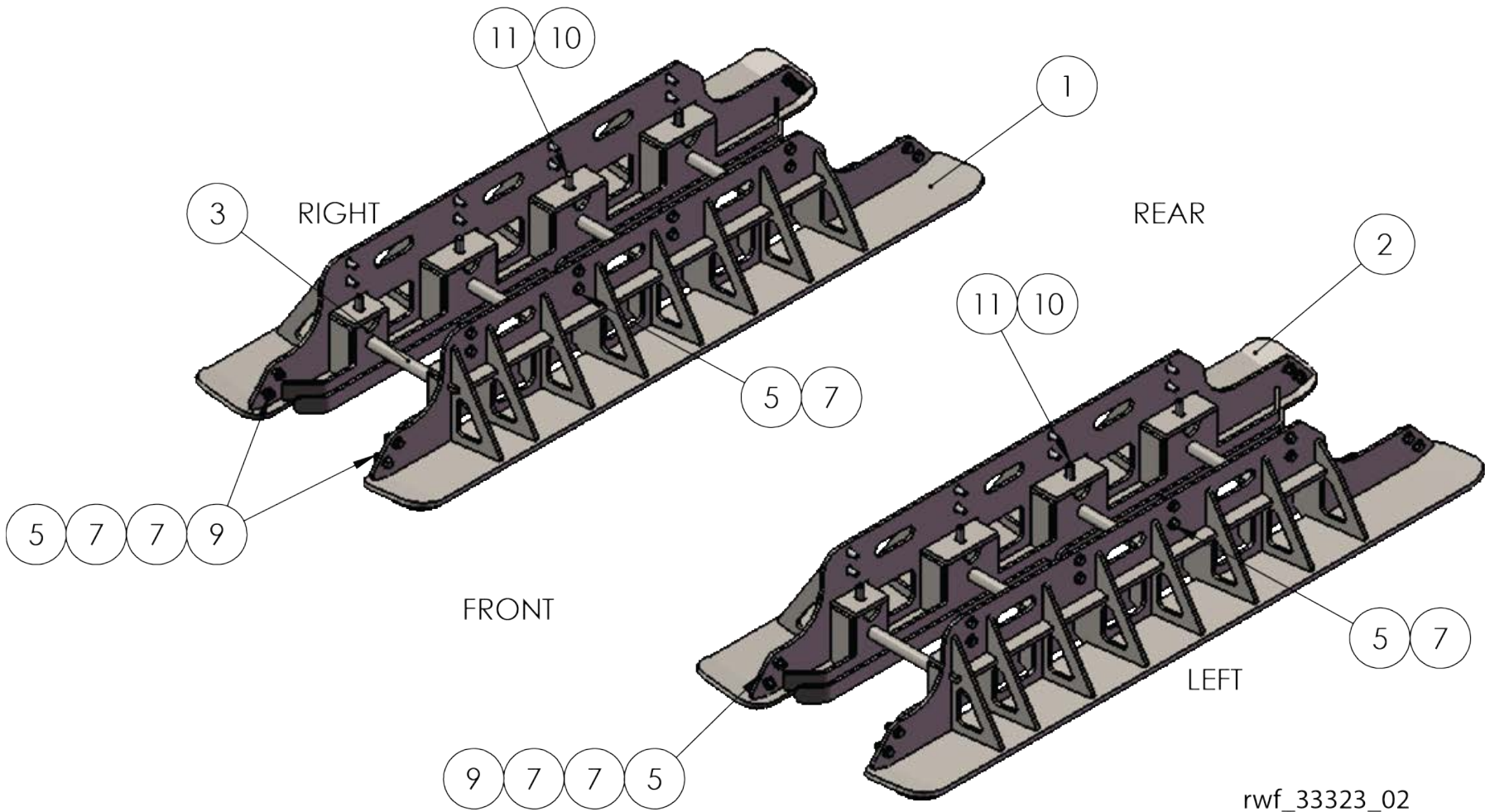
| item | Qty. | P/N       | Description        |
|------|------|-----------|--------------------|
| 1    | 1    | 207039    | WELDMENT, LH COVER |
| 2    | 1    | 207040    | WELDMENT, RH COVER |
| 3    | 1    | 207142    | FORM, LH COVER     |
| 4    | 1    | 207143    | FORM, RH COVER     |
| 5    | 10   | 80705-011 | NUT, UNC CLIP-ON   |
| 6    | 10   | 80580     | WASHER - SAE       |
| 7    | 10   | 80578     | WASHER - SAE       |
| 8    | 10   | 80069     | BOLT - HEX HD      |
| 9    | 10   | 80029     | BOLT - HEX HD      |



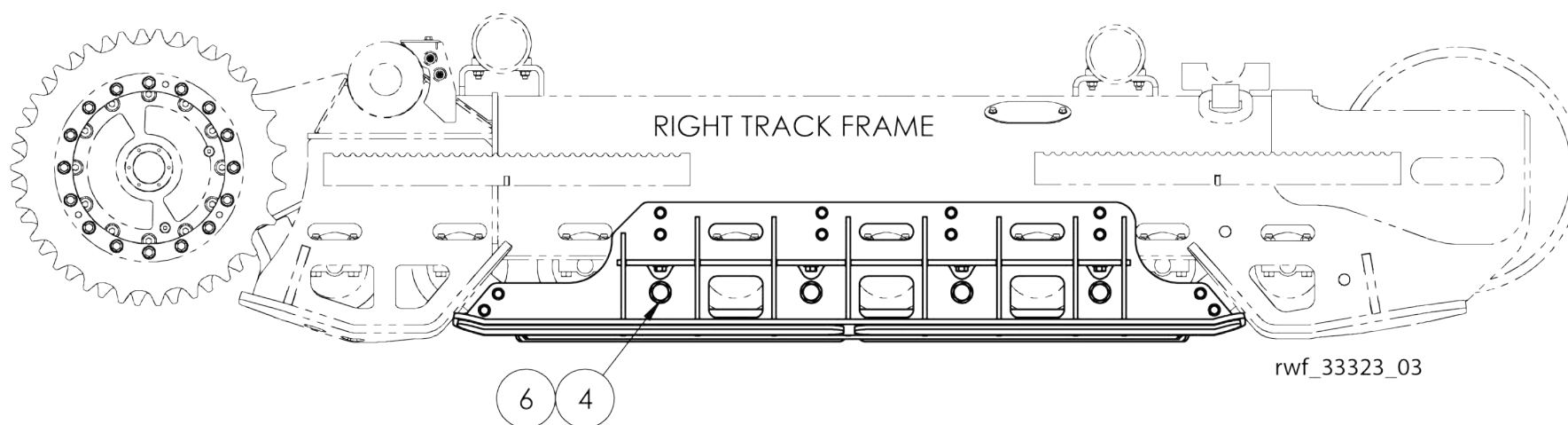
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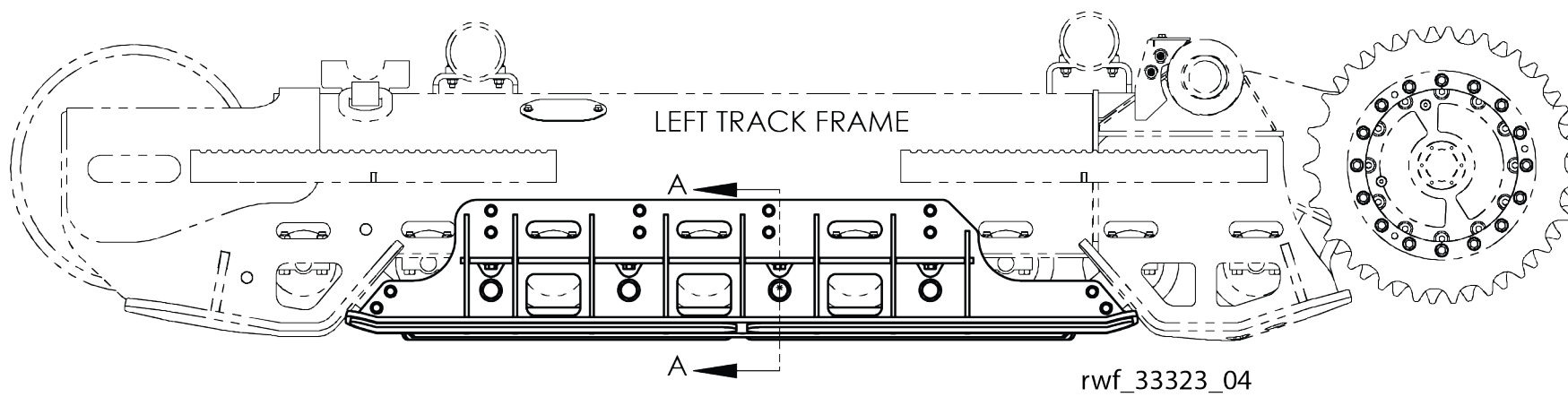
SECTION A-A

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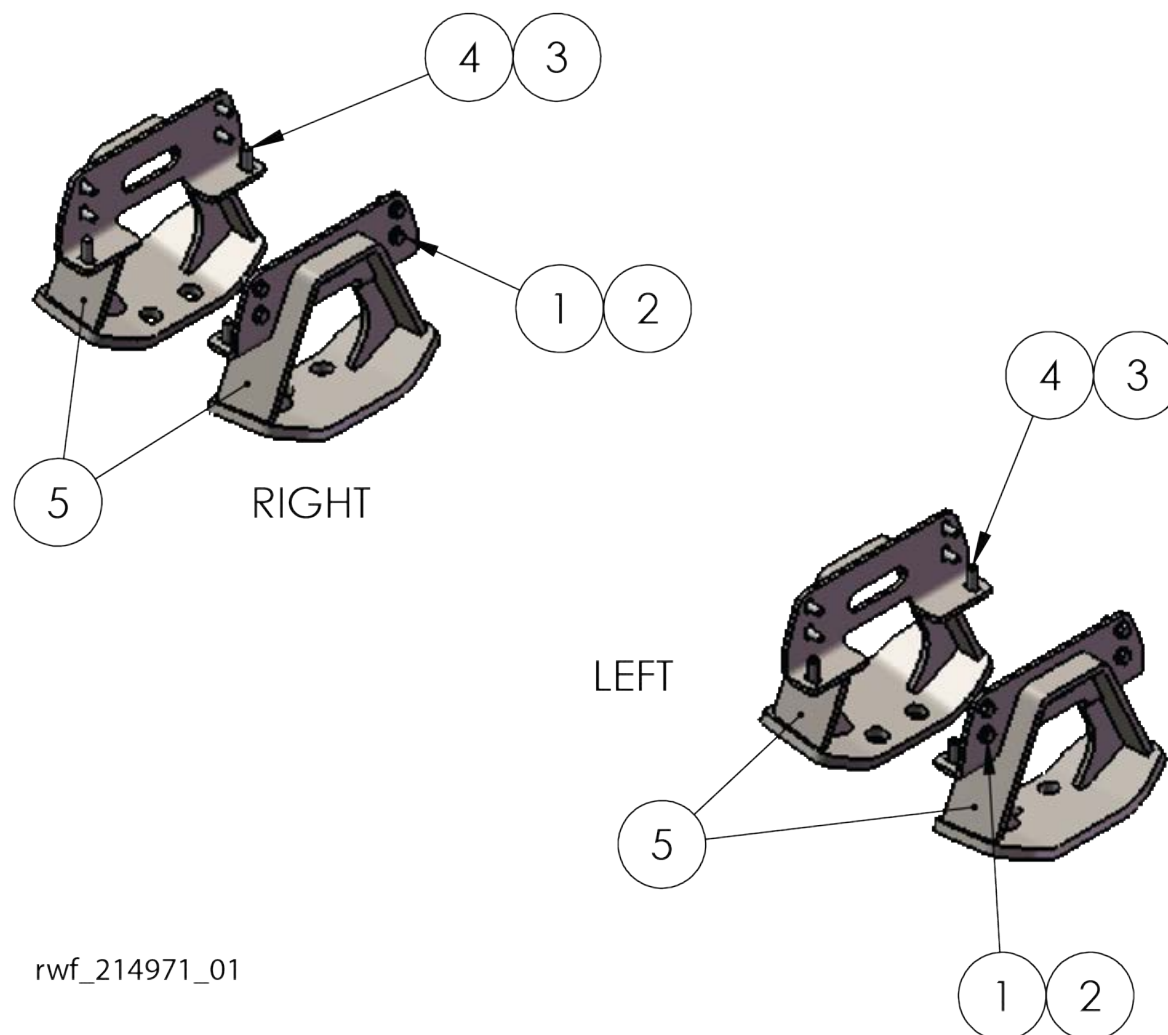
rwf\_33323\_02





| item | Qty. | P/N    | Description                |
|------|------|--------|----------------------------|
| 1    | 2    | 214720 | WELDMENT, FORESTRY SKID LH |
| 2    | 2    | 214721 | WELDMENT, FORESTRY SKID RH |
| 3    | 8    | 150905 | CONN. ROD, DIA             |
| 4    | 8    | 80446  | BOLT - HEX HD              |
| 5    | 48   | 80071  | BOLT - HEX HD              |
| 6    | 16   | 80584  | WASHER - SAE               |
| 7    | 64   | 80580  | WASHER - SAE               |
| 8    | 8    | 80519  | NUT - LOCK                 |
| 9    | 16   | 80515  | NUT - LOCK                 |
| 10   | 16   | 80581  | WASHER - SAE               |
| 11   | 16   | 80092  | BOLT - HEX HD              |





rwf\_214971\_01

| item | Qty. | P/N    | Description      |
|------|------|--------|------------------|
| 1    | 16   | 80071  | BOLT - HEX HD.   |
| 2    | 16   | 80580  | WASHER - SAE     |
| 3    | 8    | 80581  | WASHER - SAE     |
| 4    | 8    | 80092  | BOLT - HEX HD.   |
| 5    | 4    | 213192 | TRACK GUIDE, MID |

# CHAPTER 11: FIRE SUPPRESSION

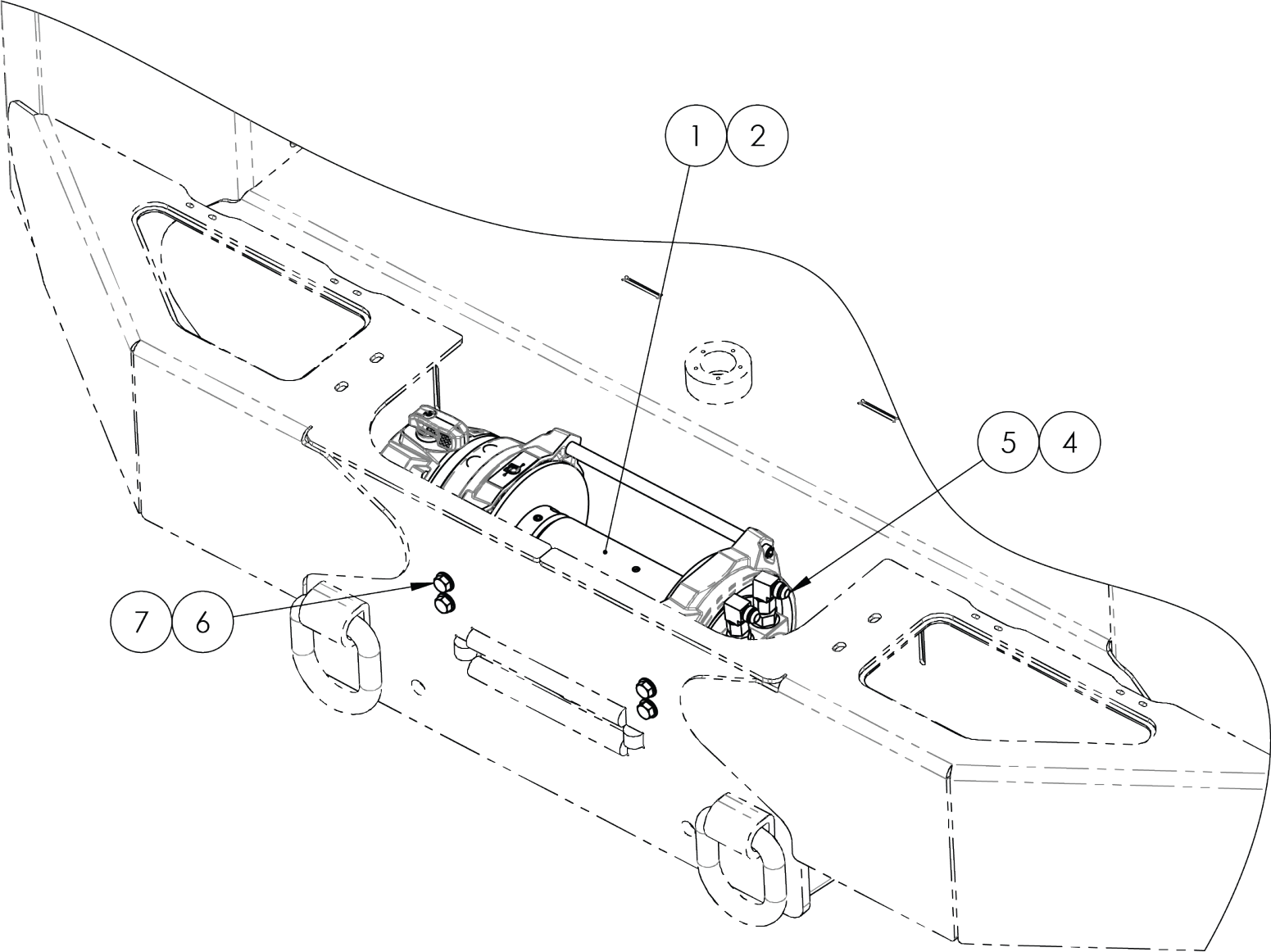
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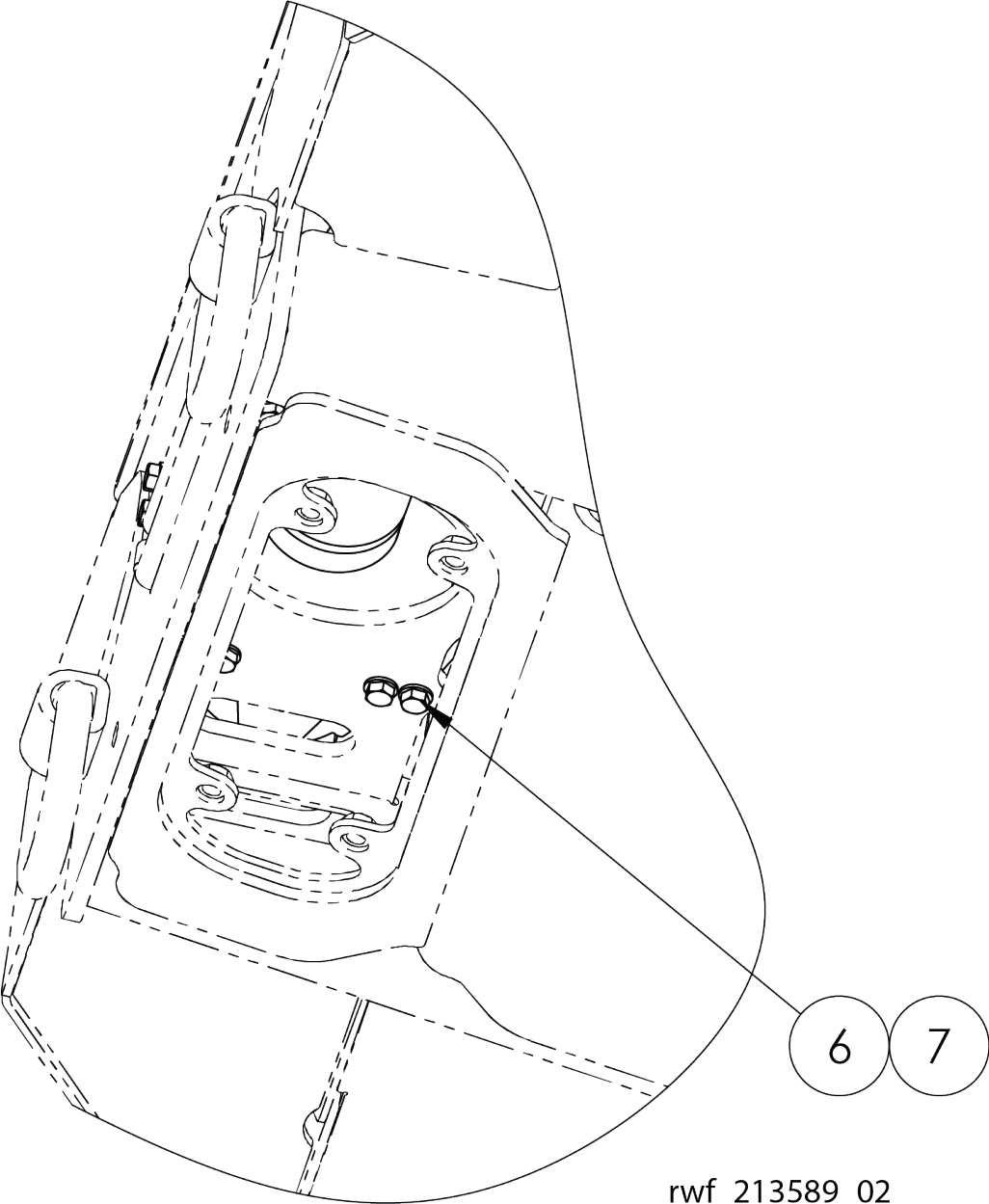
# CHAPTER 12: WINCH

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|                         |             |
|-------------------------|-------------|
| <b>WINCH GROUP.....</b> | <b>12.1</b> |
|-------------------------|-------------|



rwf\_213589\_01



rwf\_213589\_02

| item | Qty. | P/N     | Description     |
|------|------|---------|-----------------|
| 1    | 1    | 9902310 | WINCH           |
| 2    | 1    | 9900946 | WIRE ROPE ASS'Y |
| 4    | 2    | 90073   | ADAPTER, STR    |
| 5    | 2    | 90273   | ELBOW, SWIVEL   |
| 6    | 12   | 71252   | BOLT- HEX HD    |
| 7    | 12   | 73105   | FLATWASHER      |



